Analytical Resources, LLC
Analytical Chemists and Consultants

18 May 2023

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

RE: AOC5 MR Phase 1

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

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

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

Associated Work Order(s)	Associated SDG ID(s)
23B0276	N/A

Susan Dunnihoo
Digitally signed by Susan Dunnihoo
Date: 2023.05.18 16:37:55 -07'00'

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

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

Analytical Resources, LLC

Susan Dunnihoo, Director, Client Services

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

Cert# 100006-012

1 of 2 22L0384

CHAIN-OF-CUSTODY/TEST REQUEST FORM

TIER 2

№ 3350

Project/Client Name: AOC 5 MR Phase 1
Project Number: 210075.01.02
Contact Name: Amara Vandervort
Sampled By: Windward

Ship to: ARL
Attn: Sue Dunninoo
Shipper: Courier
Form filled out by: AV/CC

Shipping Date: 12/14/22
Airbill Number: —
Turnaround requested: std

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required) Archive							Comments / Instructions [Jar tag number(s)]
12/14/22	0804	LDW23-SC1177A	~~4~~ 3	sediment	X							HOLD ALL
	0804	LDW23-SC1177B	~~4~~ 3		X							
	0804	LDW23-SC1177D	~~4~~ 3		X							
	0903	LDW23-SC1150A	3		X							
	0903	LDW23-SC1150B	3		X							
	0903	LDW23-SC1150D	3		X							
	0945	LDW23-SC1137A	3		X							
	0945	LDW23-SC1137B	3		X							
	0945	LDW23-SC1137D	3		X							
	1044	LDW23-SC1156A	3		X							
	1044	LDW23-SC1156B	3		X							
	1331	LDW23-SC1191A	4		X							
		Total Number of Containers	37	Purchase Order / Statement of Work # APJ-110222-AOC5-ARL								

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: Amara Vandervort	YARD	Print name: YARD	
Signature:	Company: YA YA SAFETY	Signature:	Company: ARI
Company: Windward	Date/Time: 12/14/22 4:28	Company: YA YA SAFETY	Date/Time: 12/14/22 1647
Date/Time: 12/14/22 1625		Date/Time: 12/14/22	

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

Wind Ward environmental LLC

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

206.378.1364

To be completed by Laboratory upon sample receipt:

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

22L0384

2 of 2

CHAIN-OF-CUSTODY/TEST REQUEST FORM

TIER 2

№ 3355

Project/Client Name: AOC5 MR Phase 1
Project Number: ~~21005~~ 210075.01.02
Contact Name: Amara Vanderwort
Sampled By: Windward

Ship to: ARL
Attn: Sue Dunnihoo
Shipper: Courier
Form filled out by: AV/CC

Shipping Date: 12/14/2022
Airbill Number: —
Turnaround requested: std

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required) Archive							Comments / Instructions [Jar tag number(s)]
12/14/22	1331	LDW23-SC1191C	4	sediment	X							
	1409	LDW23-SC1183A	3		X							
	1409	LDW23-SC1183B	3		X							
	1409	LDW23-SC1183C	3		X							
	1409	LDW23-SC1183E	3		X							
		Total Number of Containers	16		Purchase Order / Statement of Work # APJ-110222-AOC5-ARL							

AV 12/14/22

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: A Vanderwort	YARED	YARED	
Signature:			
Company: Windward	YA YA SAFETY	YA YA SAFETY	ARL
Date/Time: 12/14/22 1625	12/14/22 4:25	12/14/22 4:25	12/14/22 1647

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

To be completed by Laboratory upon sample receipt:

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

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

Additional sample analysis and questions about WO 22L0383

Amara Vandervort <amarav@windwardenv.com>

Fri 2/10/2023 4:01 PM

To: Sue Dunnihoo <limsadm@arilabs.com>
Cc: Kim Goffman <KimG@windwardenv.com>

Hi Sue,

The sample that we need to add for analysis is **22L0384-05 LDW23-SC1150B.** It should be analyzed for PCB Aroclors, SMS SVOCs, SMS metals, mercury, TOC, and percent solids (the same list as 22L0383-05 SC1150C).

We would like this sample to be moved to the front of the queue and analyzed with the next group of AOC5 samples, please. Will it be analyzed under it's current ID or will it need to be re-logged? Also, since it is a solo sample, will it have it's own report and EDD or can it be merged with the other batch?

We also have some questions about WO 22L0383. Were the SVOCs (both SIM and regular) diluted due to interference (color or otherwise)? Which dilution would you recommend reporting? I am leaning towards only reporting the detects from the diluted sample and everything else from the undiluted sample unless there is a reason not to.

There are also a couple of items in the EDD that we wanted to check in with you about, I have attached a table with the items in questions. Thanks!

Amara Vandervort
Associate
Direct line: 206-812-5415
E-mail: amarav@windwardenv.com | www.windwardenv.com
200 First Avenue West, Suite 500 | Seattle, WA 98119

Analytical Resources, LLC
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Windward
COC No(s): 3354, 3355 NA JBm
Assigned ARI Job No: 224384

Project Name: W2 ACS MR phase 1
Delivered by: Fed-Ex UPS Courier Hand Delivered Other:
Tracking No: NA

Preliminary Examination Phase:

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

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)
2.3 2.1 1.1 ___ ___
Time 1641
If cooler temperature is out of compliance fill out form 00070F
Temp Gun ID#: 9708

Cooler Accepted by: RC Date: 12/14/22 Time: 1647

Complete custody forms and attach all shipping documents

Log-In Phase:

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

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

Samples Logged by: JBm Date: 12/15/22 Time: 1034 Labels checked by: JBm

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

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

Additional Notes, Discrepancies, & Resolutions:

By: Date:

Anchor QEA, LLC	Project: AOC5 MR Phase 1	
1201 3rd Ave, Suite 2600	Project Number: 210075-01.02	**Reported:**
Seattle, WA 98101	Project Manager: Ali Judkins	05/18/2023 15:34

ANALYTICAL REPORT FOR SAMPLES

Laboratory ID	Sample ID	Matrix	Date Sampled	Date Received
23B0276-01	LDW23-SC1150B	Solid	12/14/22 09:03	12/14/22 16:47

Anchor QEA, LLC	Project: AOC5 MR Phase 1	
1201 3rd Ave, Suite 2600	Project Number: 210075-01.02	**Reported:**
Seattle WA, 98101	Project Manager: Ali Judkins	18-May-2023 15:34

Case Narrative

Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Work Order: 23B0276

Sample receipt

One sample as listed on the preceding page(s) were pulled from frozen archive and logged under ARI work order 23B0276. For details regarding sample receipt, please refer to the original Cooler Receipt Forms.

Semivolatiles - EPA Method SW8270E

The sample was extracted and analyzed within the recommended holding times for samples stored frozen.

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

Internal standards outside limits are attributed to matrix effect, with areas <50% in samples when compared to the SCL0335-ICV2.

The surrogate percent recoveries for d-14-p-terphenyl were high of control limits where flagged on the summary sheet, attributed to continued issues with the samples matrix.

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

The blank spike and blank spike duplicate (BS/LCS and BSD/LCSD) spike recoveries for butyl benzyl phthalate were just high of control limits and the relative percent difference (RPD) were within control limits. As the SRM recoveries were within limits and sample results were low, the outlier is flagged and no further action was taken.

The matrix spike/matrix spike duplicate (MS/MSD) percent recoveries and relative percent difference (RPD) were outside advisory control limits where flagged on the summary sheet.

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

Semivolatiles - EPA Method SW8270E-SIM

The sample was extracted and analyzed within the recommended holding times for samples stored frozen.

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

Internal standard areas were outside limits for d12-perylene. As no target analytes are associated with this internal standard and multiple analyses has shown this to be due to the matrix, no further actions was taken.

The surrogate percent recoveries were within control limits.

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

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

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

Anchor QEA, LLC	Project: AOC5 MR Phase 1	
1201 3rd Ave, Suite 2600	Project Number: 210075-01.02	**Reported:**
Seattle WA, 98101	Project Manager: Ali Judkins	18-May-2023 15:34

Case Narrative

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

Pesticides - EPA Method SW8081B (Hexachlorobenzene)

The sample was extracted and analyzed within the recommended holding times for samples stored frozen. The initial analysis from batch BLB0422 showed poor surrogate recovery, and the sample was re-extracted in batch BLC0155.

Initial and continuing calibrations were within method requirements for the target analyte.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

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

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

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

PCB Aroclors - EPA Method SW8082A

The sample was extracted and analyzed within the recommended holding times for samples stored frozen.

The analyst noted SLC0014-ICV2, SLC0014-CCV2,SLC0014-CCV4 and SLC0014-CCV6 fail high for 1260 on the ZB5 column, so all associated data is reported from ZB35 as he primary column.
Internal standard areas were within limits.

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

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

The batch BLB0391 matrix spike/matrix spike duplicate (MS/MSD) percent recoveries and relative percent difference (RPD) were within advisory control limits, reported under work order 23A0420.

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

The analyst noted aroclors are reported on the best fit, with miscellaneous interferences throughout the run inflating some individual peak responses.

Total Metals - EPA Method 6020B

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

Calibration SLC0078-CAL6 show scandium and the associated metals group to be slightly noisy. Intensities and R-values, as well as QC were noted to be okay and no further action was taken. The analyst noted internal standards were frequently noisy as recorded in the run log. SLC0078-IFA showed high response for chromium and chromium-53. The standard was rerun with passing results. The linear range check SLC0078-HCV2 showed low response for lead (<200%).

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

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

Anchor QEA, LLC	Project: AOC5 MR Phase 1	
1201 3rd Ave, Suite 2600	Project Number: 210075-01.02	**Reported:**
Seattle WA, 98101	Project Manager: Ali Judkins	18-May-2023 15:34

Case Narrative

The batch BLB0518 matrix spike (MS) percent recoveries for lead and zinc were high of advisory control limits. and the matrix spike duplicate (MSD) percent recovery for copper was low of advisory limits. The relative percent difference (RPD) was outside advisory limits for lead. Post spikes for all elements were in control, reported under work order 23A0032.

The batch BLB0518 duplicate (DUP) relative percent difference (RPD) were within advisory control limits, reported under work order 23A0032.

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

Total Mercury - EPA Method 7471B

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

Initial and continuing calibrations were within method requirements.

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

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

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

The batch BLB0517 matrix spike (MS) percent recoveries and the duplicate (DUP) relative percent difference (RPD) were within advisory control limits, reported under work order 23A0032.

The batch BLB0517 duplicate (DUP) relative percent difference (RPD) were within advisory control limits, reported under work order 23A0032.

Wet Chemistry (Total Organic Carbon and Total Solids)

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

Initial and continuing calibrations were within method requirements.

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

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

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

The batch BLB0342 matrix spike (MS) percent recoveries and the duplicate (DUP) relative percent difference (RPD) were within advisory control limits, reported under work order 23B0229.

Revised 05/18/2023 to correct calibration reference for CCAL in sequence SLB0179 and add FD00070 ICAL summary form and raw data.

QUALIFIERS AND NOTES

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

Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-SC1150B

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E

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

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23B0276-01 A	SDG:	23B0276
Sampled:	12/14/22 09:03	Prepared:	02/17/23 15:00	File ID:	NT1403172327.D
% Solids:	63.63	Preparation:	EPA 3546 (Microwave)	Analyzed:	03/18/23 06:06
Batch:	BLB0424	Sequence:	SLC0335	Initial/Final:	15.72 g Wet / 1 mL
Instrument:	NT14	Column:	ZB-5MS	Calibration:	GC00048
Cleanups:	GPC				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
108-95-2	Phenol	1	12.1	J	4.4	20.0
106-44-5	4-Methylphenol	1	20.0	U	7.4	20.0
91-20-3	Naphthalene	1	8.5	J	4.2	20.0
91-57-6	2-Methylnaphthalene	1	9.1	J	4.5	20.0
208-96-8	Acenaphthylene	1	20.0	U	6.2	20.0
131-11-3	Dimethylphthalate	1	8.3	J	4.4	20.0
83-32-9	Acenaphthene	1	6.2	J	5.2	20.0
132-64-9	Dibenzofuran	1	20.0	U	14.1	20.0
86-73-7	Fluorene	1	20.0	U	14.6	20.0
85-01-8	Phenanthrene	1	67.7		8.7	20.0
120-12-7	Anthracene	1	17.9	J	7.2	20.0
206-44-0	Fluoranthene	1	244	Q	6.1	20.0
129-00-0	Pyrene	1	430		5.7	20.0
85-68-7	Butylbenzylphthalate	1	26.7	Q	9.4	20.0
56-55-3	Benzo(a)anthracene	1	66.7		6.0	20.0
218-01-9	Chrysene	1	90.8		6.1	20.0
117-81-7	bis(2-Ethylhexyl)phthalate	1	207		5.5	50.0
	Benzofluoranthenes, Total	1	251		10.0	40.0
50-32-8	Benzo(a)pyrene	1	106		4.2	20.0
193-39-5	Indeno(1,2,3-cd)pyrene	1	58.2		14.6	20.0
53-70-3	Dibenzo(a,h)anthracene	1	19.6	J	17.2	20.0
191-24-2	Benzo(g,h,i)perylene	1	62.3	Q	13.6	20.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	749.80	553	73.7	27 - 120	
Phenol-d5	749.80	553	73.7	29 - 120	
2-Chlorophenol-d4	749.80	608	81.1	31 - 120	
1,2-Dichlorobenzene-d4	499.87	383	76.7	32 - 120	
Nitrobenzene-d5	499.87	405	81.0	30 - 120	
2-Fluorobiphenyl	499.87	439	87.7	35 - 120	

LDW23-SC1150B

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E

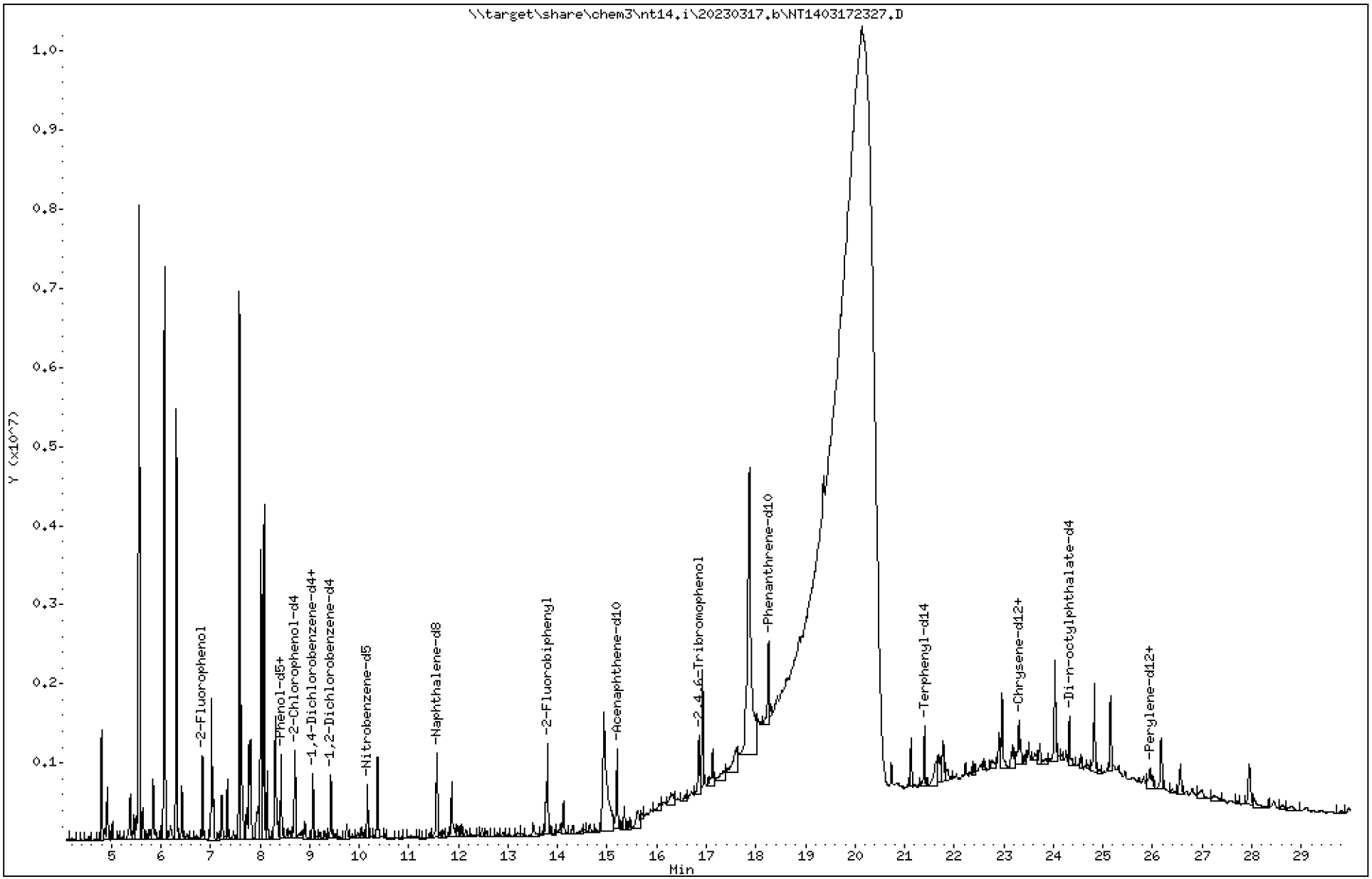
Semivolatiles (20ug/kg - 0.2ug/L SepF)

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23B0276-01 A	SDG:	23B0276
Sampled:	12/14/22 09:03	Prepared:	02/17/23 15:00	File ID:	NT1403172327.D
% Solids:	63.63	Preparation:	EPA 3546 (Microwave)	Analyzed:	03/18/23 06:06
Batch:	BLB0424	Sequence:	SLC0335	Initial/Final:	15.72 g Wet / 1 mL
Instrument:	NT14	Column:	ZB-5MS	Calibration:	GC00048
Cleanups:	GPC				

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2,4,6-Tribromophenol	749.80	667	88.9	24 - 134	
p-Terphenyl-d14	499.87	728	146	37 - 120	*,Q

Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172327.D
Date : 18-MAR-2023 06:06
Client ID:
Sample Info: 23B0276-01

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



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Date : 18-MAR-2023 06:06

Client ID:

Instrument: nt14.i

Sample Info: 23B0276-01

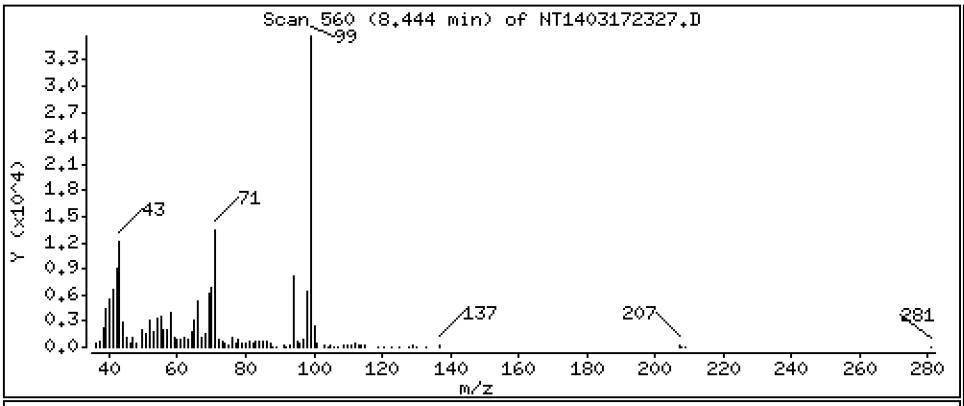
Operator: JGR

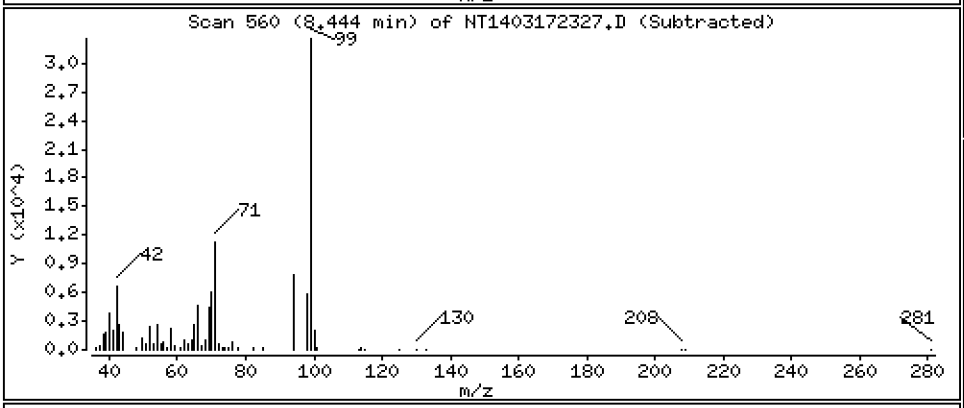
Column phase: ZB-5msi

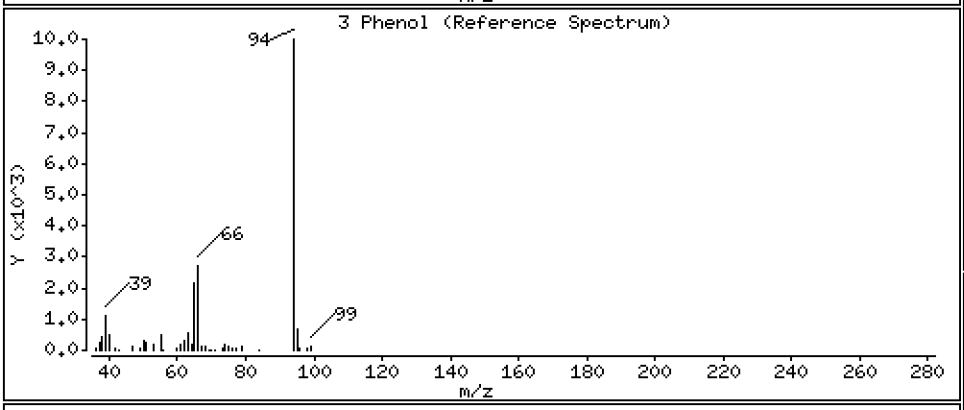
Column diameter: 0.25

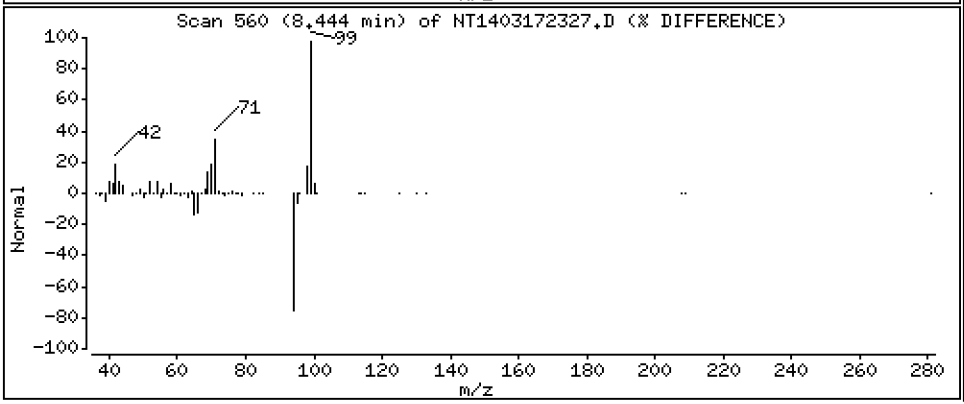
3 Phenol

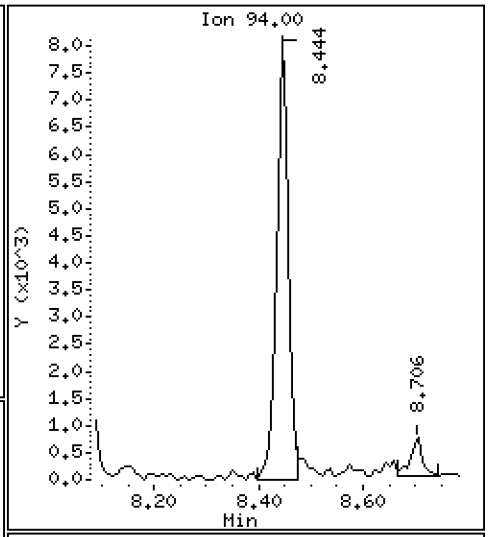
Concentration: 0.1209 ug/mL

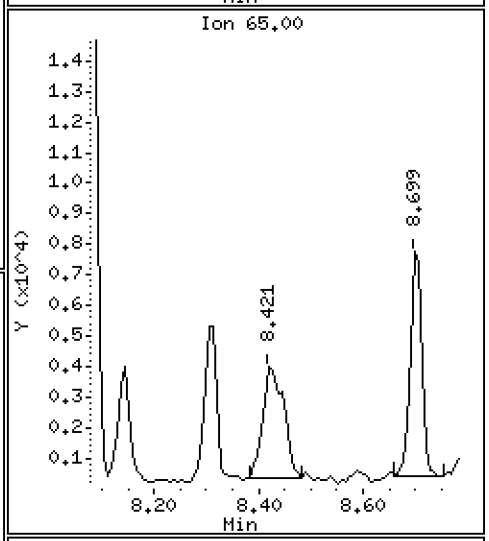


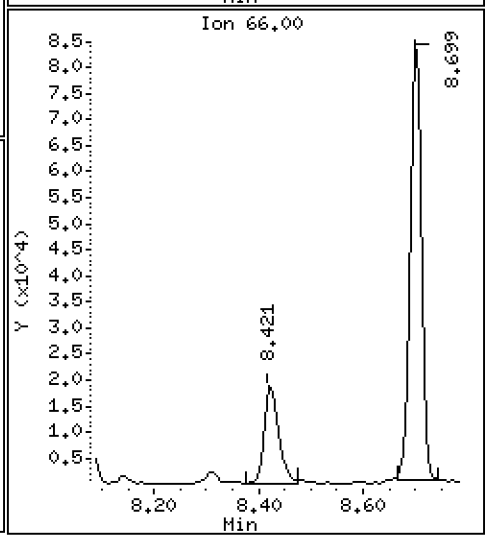












Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172327.D

Date : 18-MAR-2023 06:06

Client ID:

Instrument: nt14.i

Sample Info: 23B0276-01

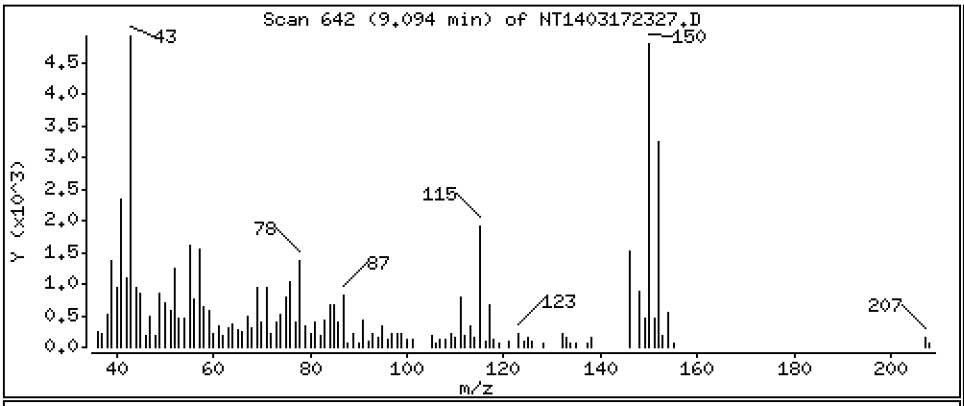
Operator: JGR

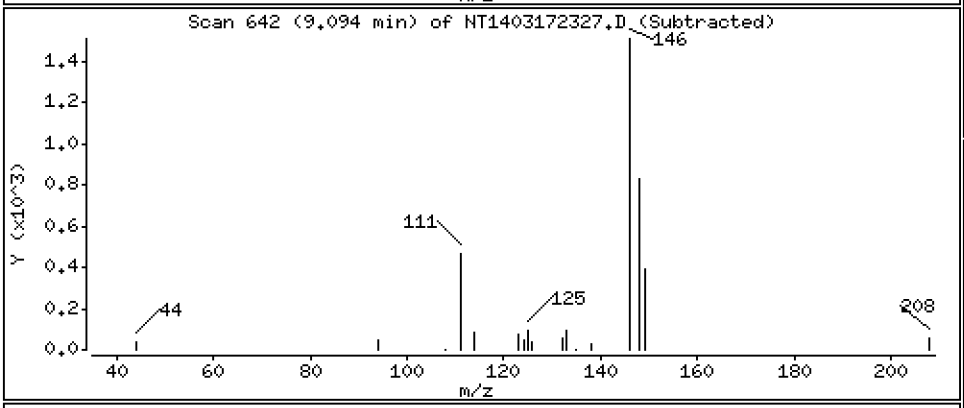
Column phase: ZB-5msi

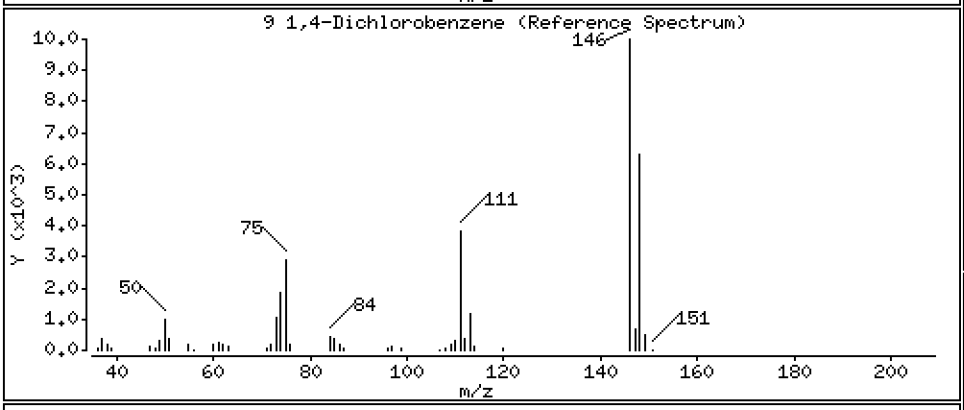
Column diameter: 0.25

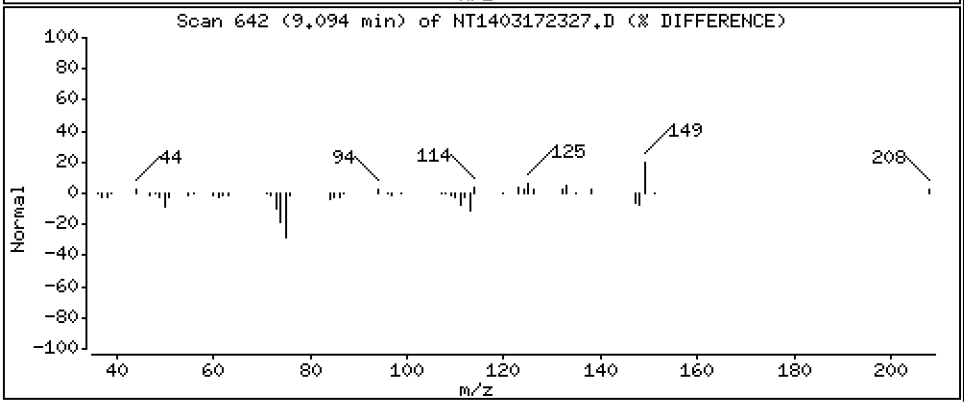
9 1,4-Dichlorobenzene

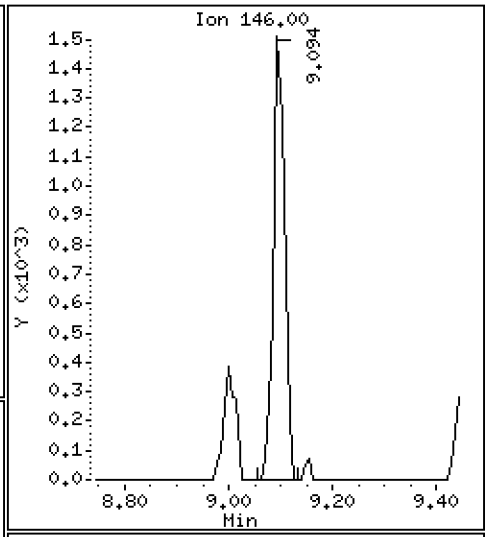
Concentration: 0.02662 ug/mL

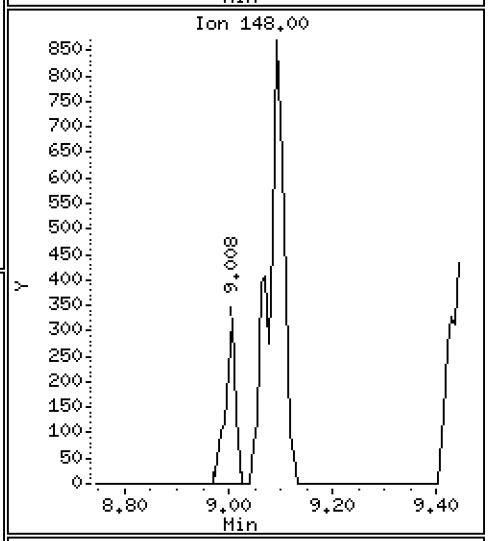


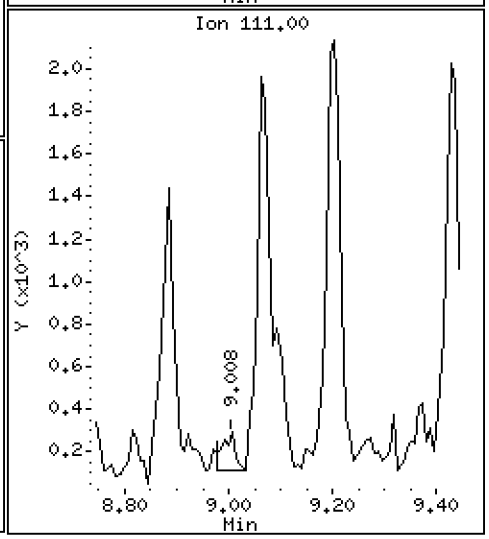












Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172327.D

Date : 18-MAR-2023 06:06

Client ID:

Instrument: nt14.i

Sample Info: 23B0276-01

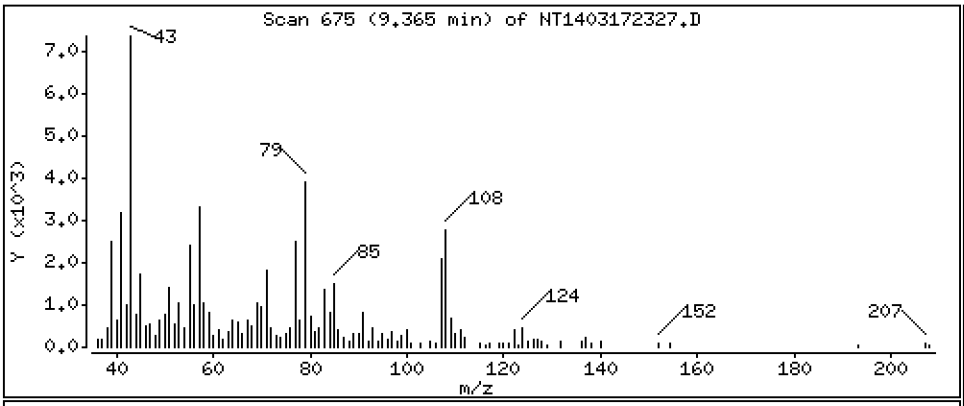
Operator: JGR

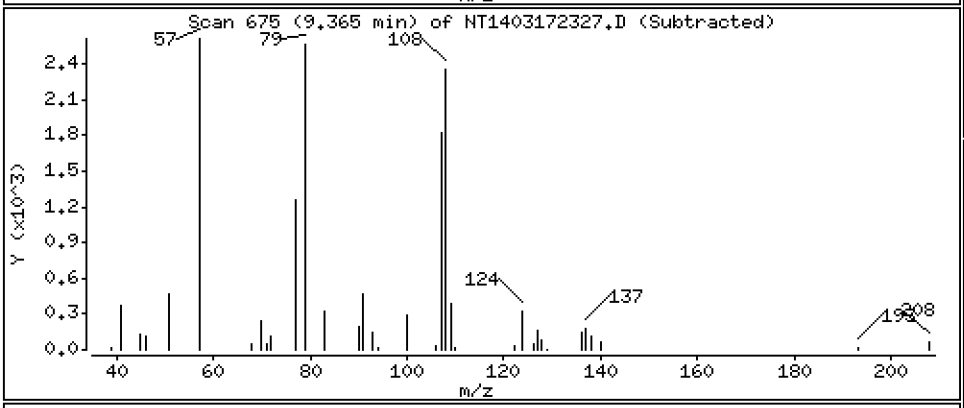
Column phase: ZB-5msi

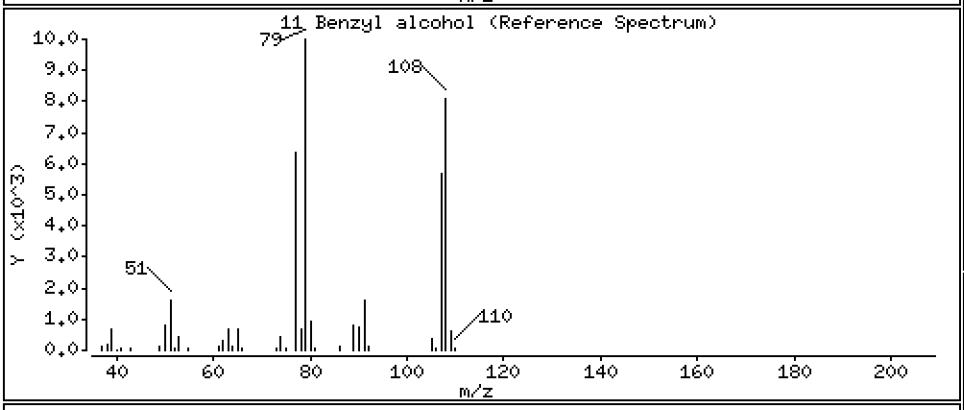
Column diameter: 0.25

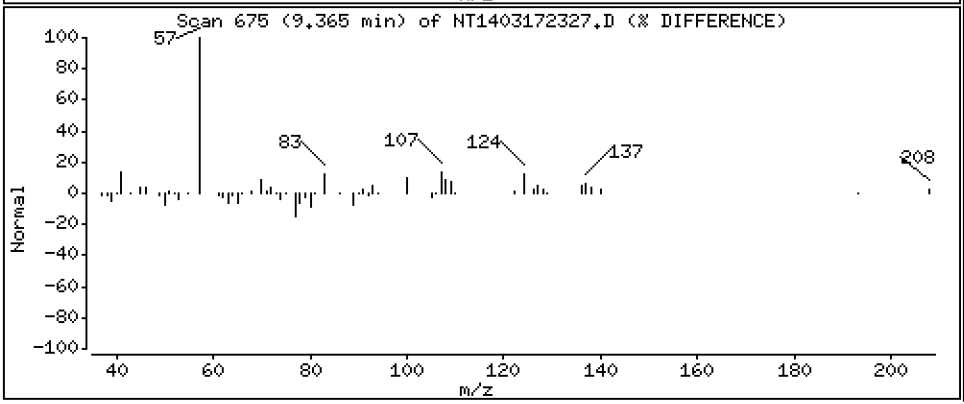
11 Benzyl alcohol

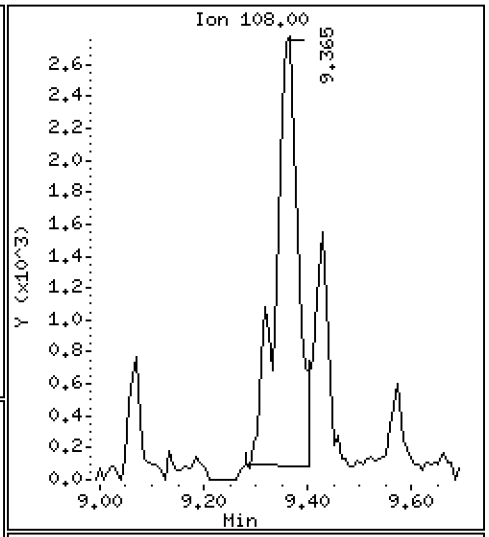
Concentration: 0.1712 ug/mL

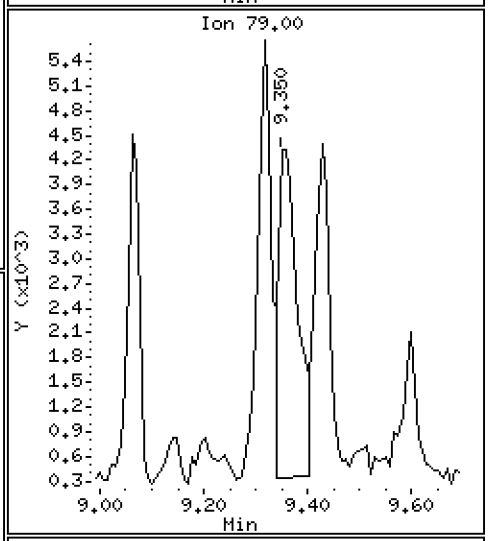


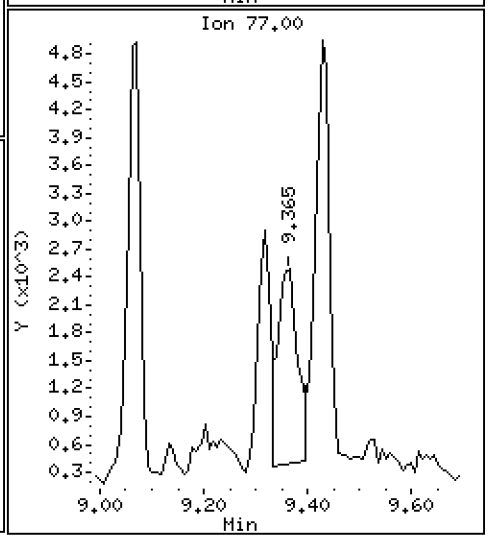












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Date : 18-MAR-2023 06:06

Client ID:

Instrument: nt14.i

Sample Info: 23B0276-01

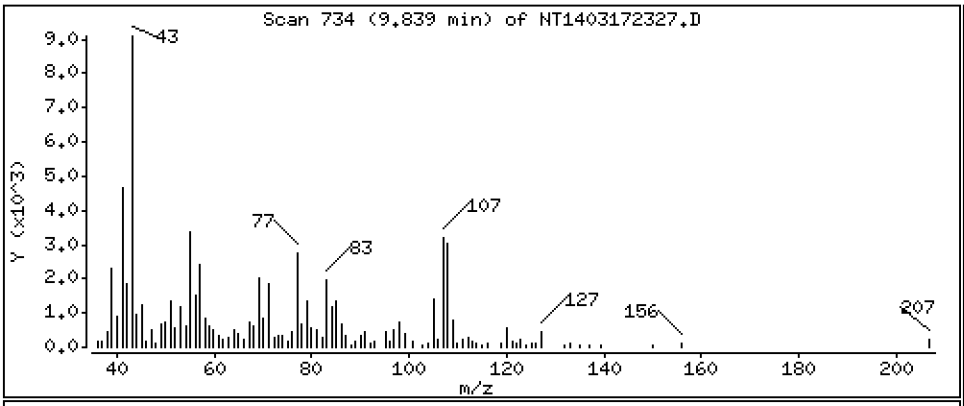
Operator: JGR

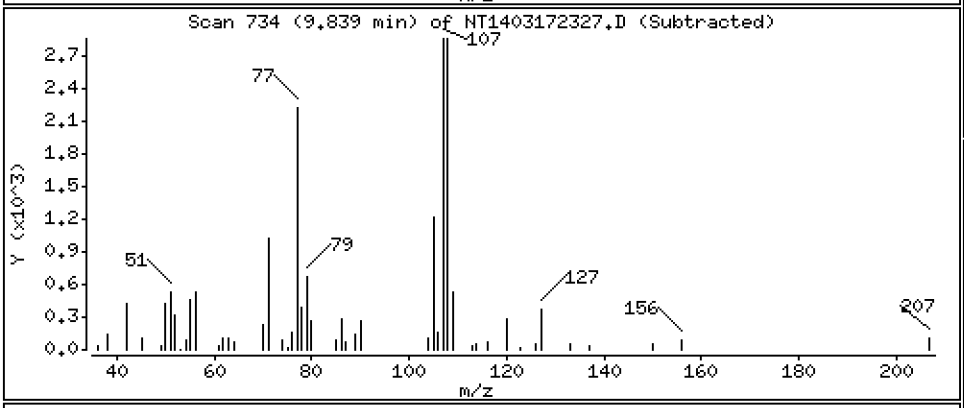
Column phase: ZB-5msi

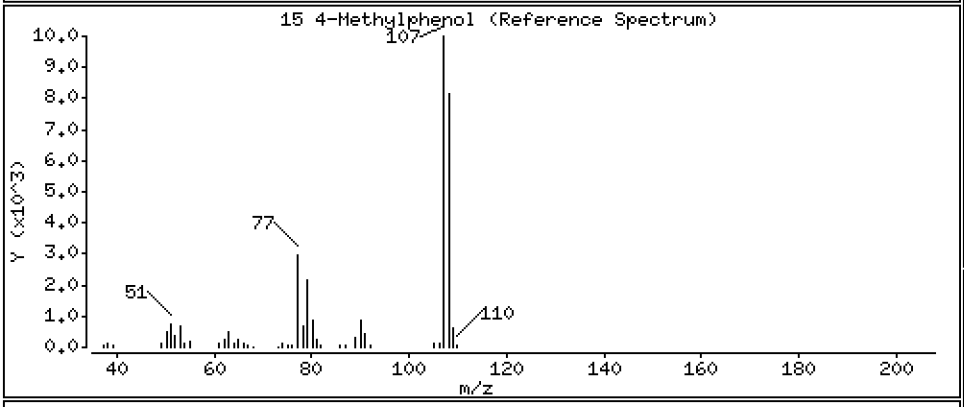
Column diameter: 0.25

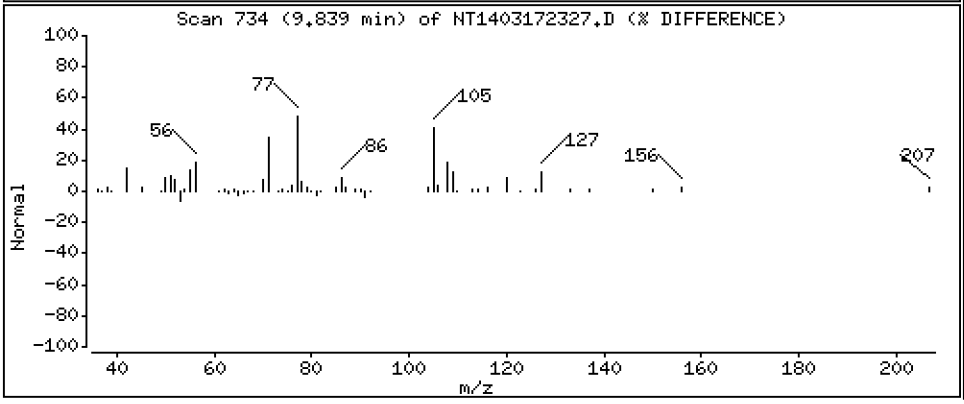
15 4-Methylphenol

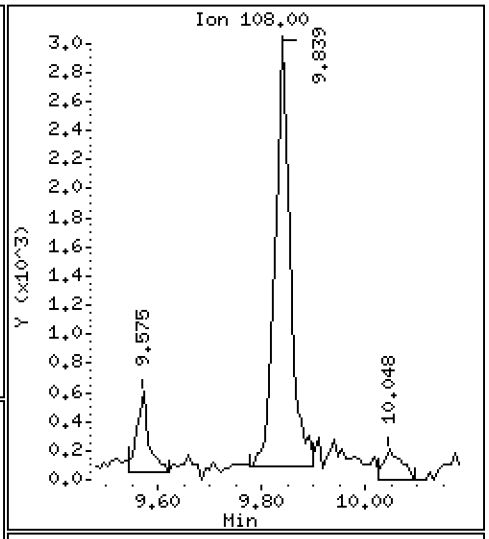
Concentration: 0.06851 ug/mL

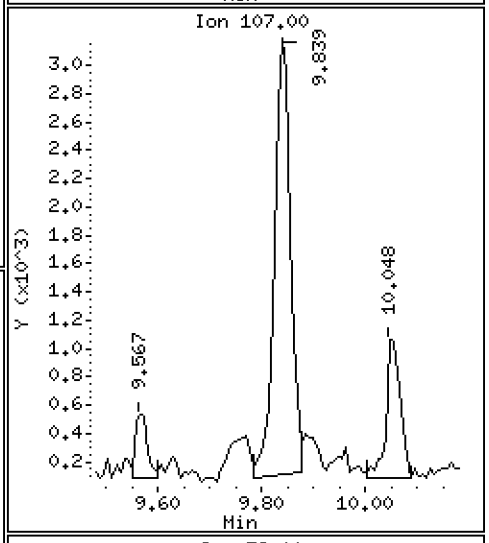


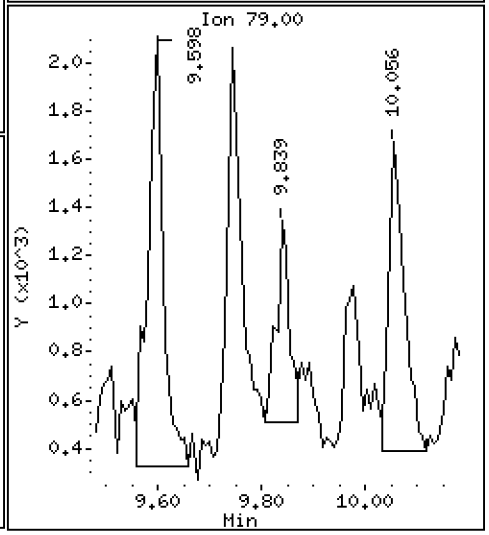












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Date : 18-MAR-2023 06:06

Client ID:

Instrument: nt14.i

Sample Info: 23B0276-01

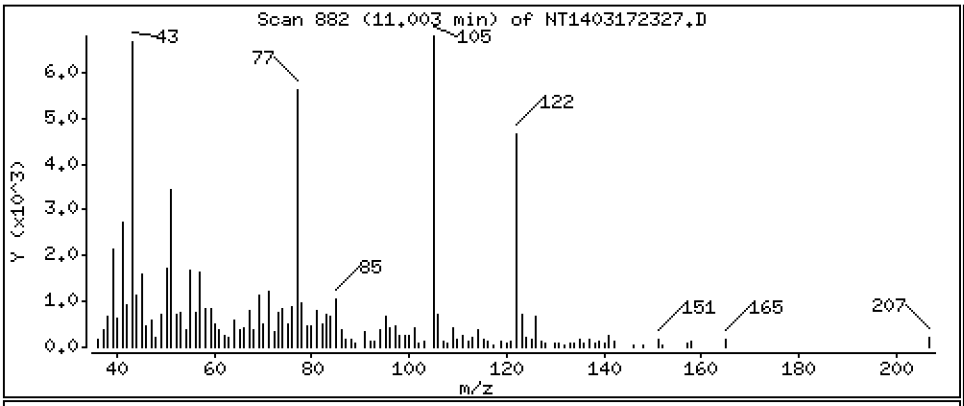
Operator: JGR

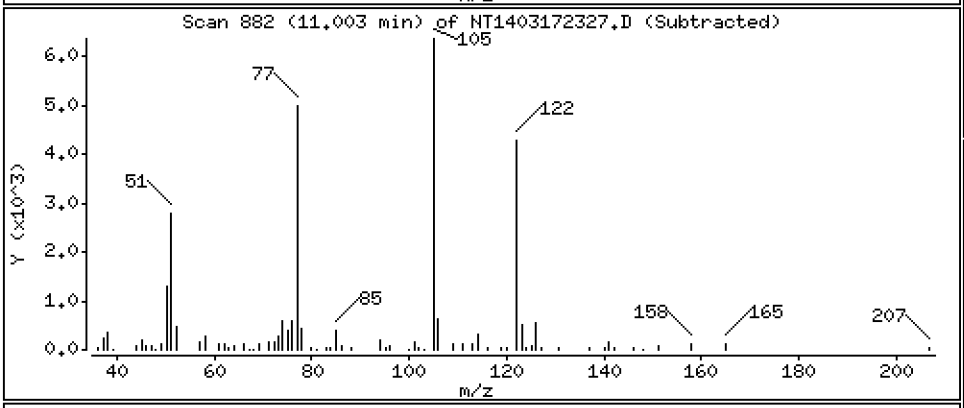
Column phase: ZB-5msi

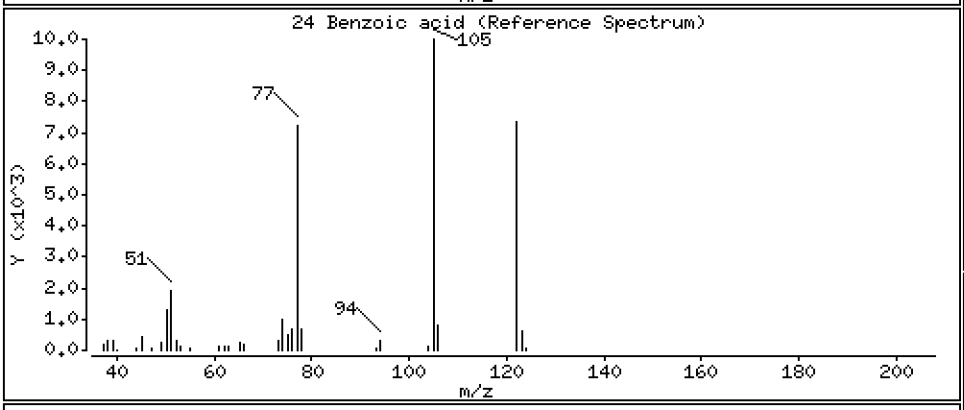
Column diameter: 0.25

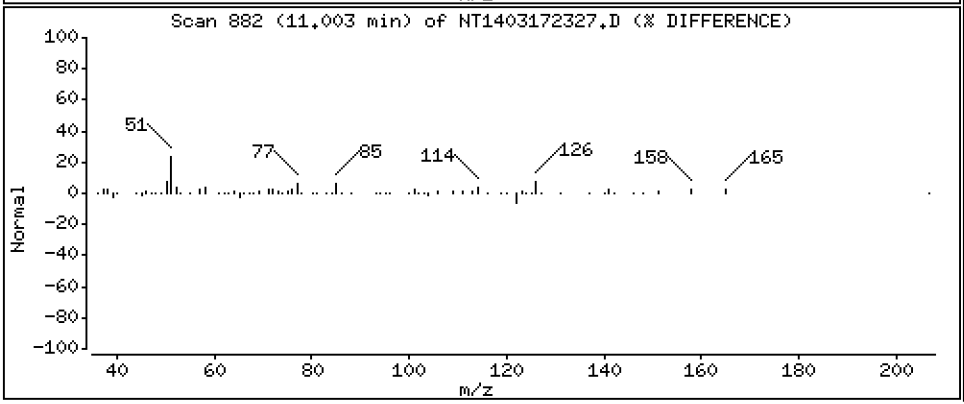
24 Benzoic acid

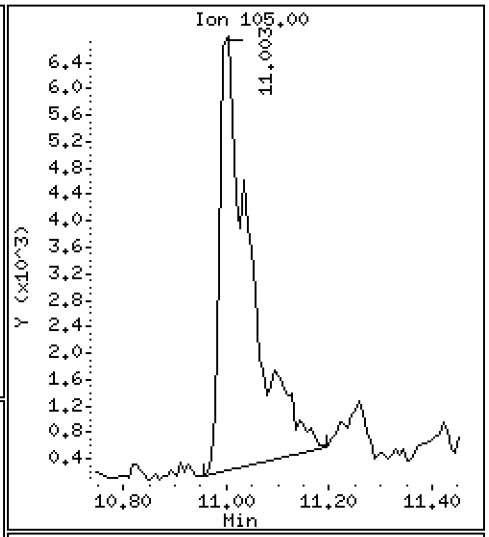
Concentration: 0.4228 ug/mL

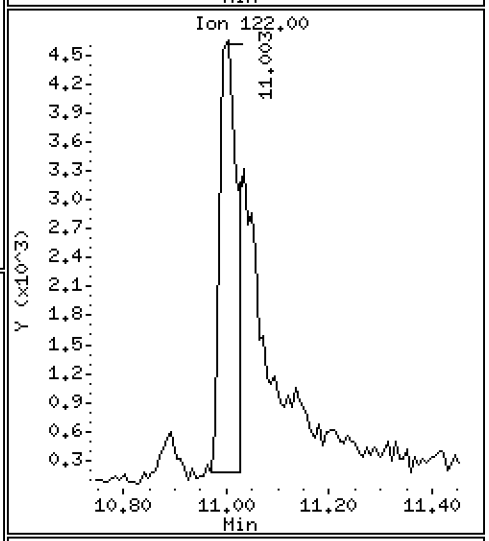


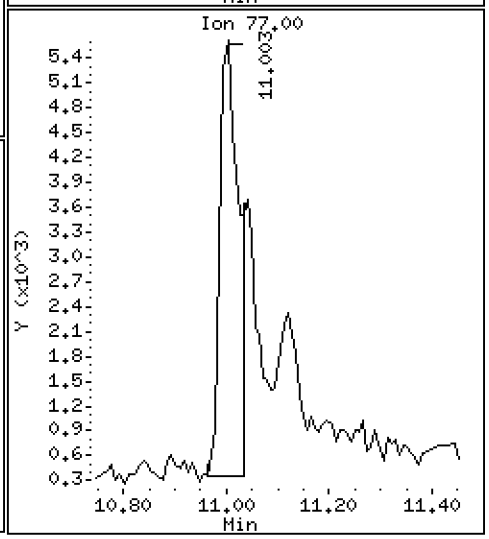












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Date : 18-MAR-2023 06:06

Client ID:

Instrument: nt14.i

Sample Info: 23B0276-01

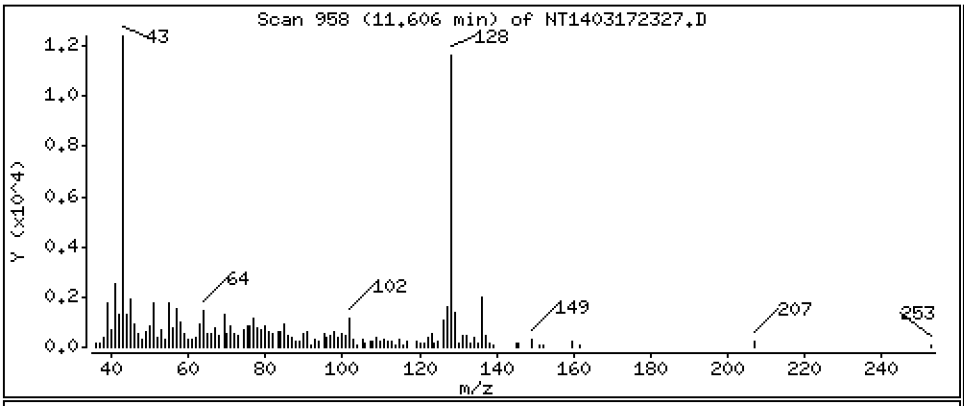
Operator: JGR

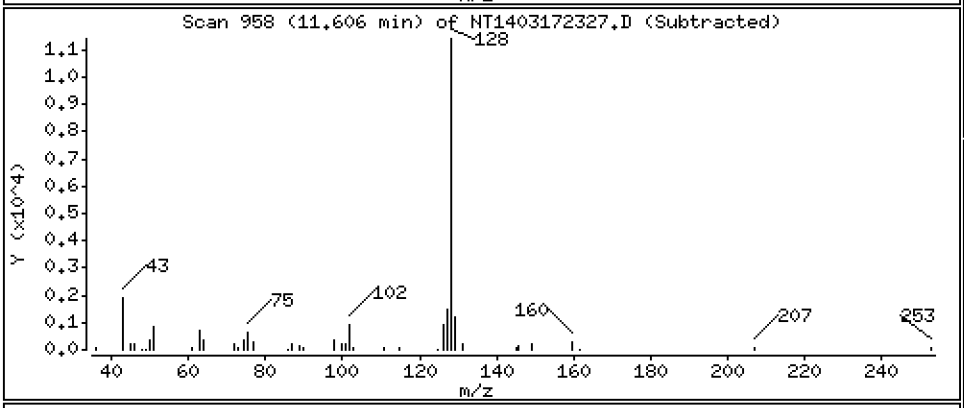
Column phase: ZB-5msi

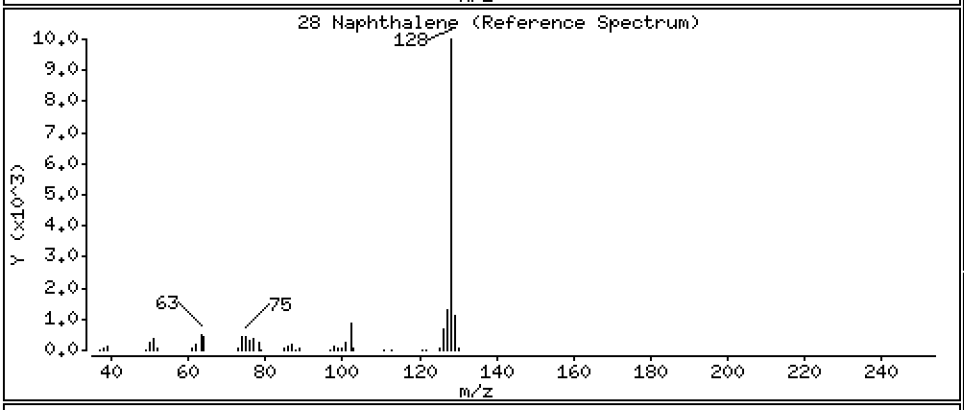
Column diameter: 0.25

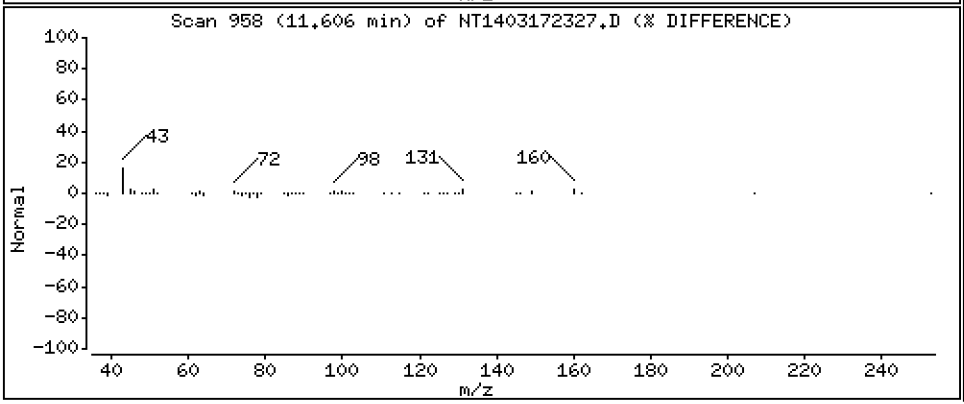
28 Naphthalene

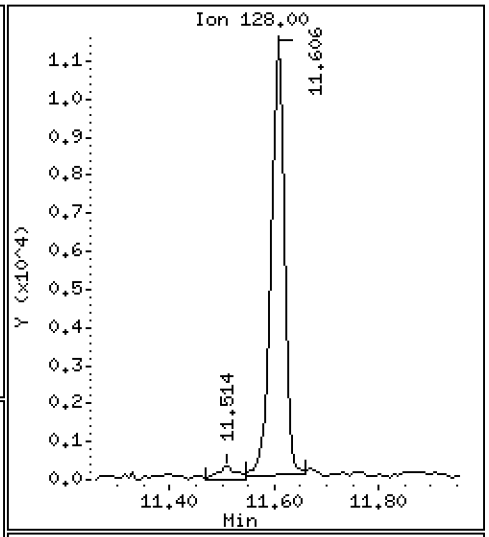
Concentration: 0.08465 ug/mL

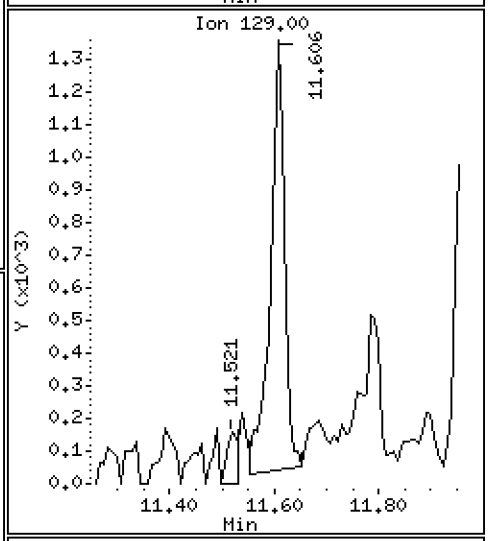


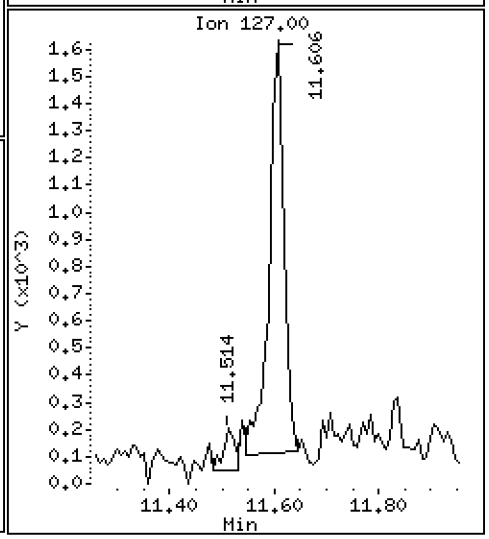












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Date : 18-MAR-2023 06:06

Client ID:

Instrument: nt14.i

Sample Info: 23B0276-01

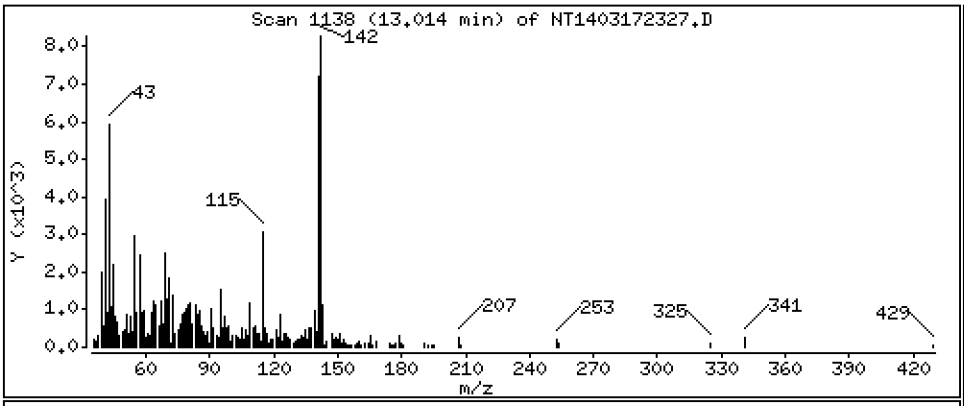
Operator: JGR

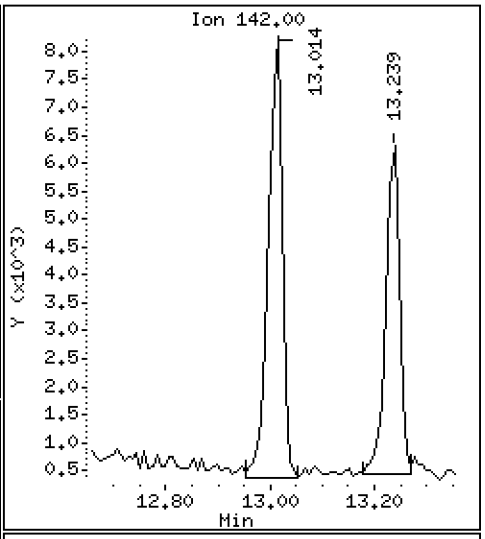
Column phase: ZB-5msi

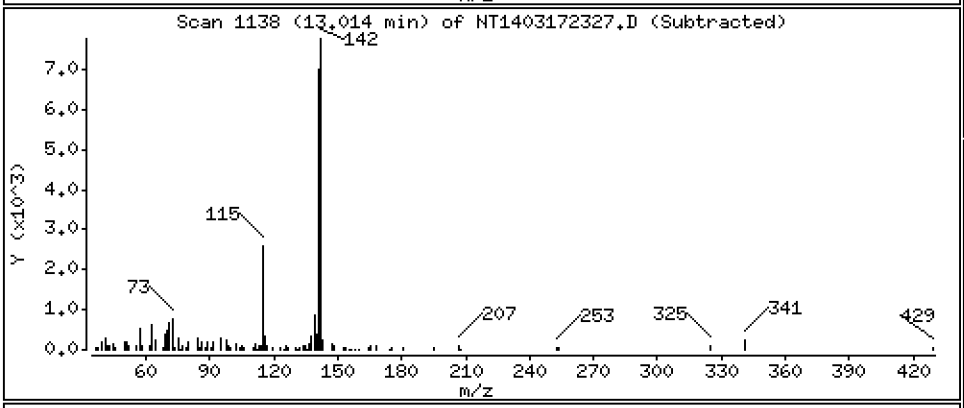
Column diameter: 0.25

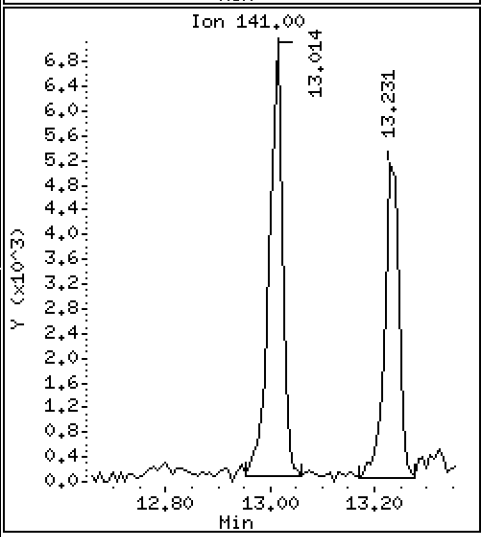
32 2-Methylnaphthalene

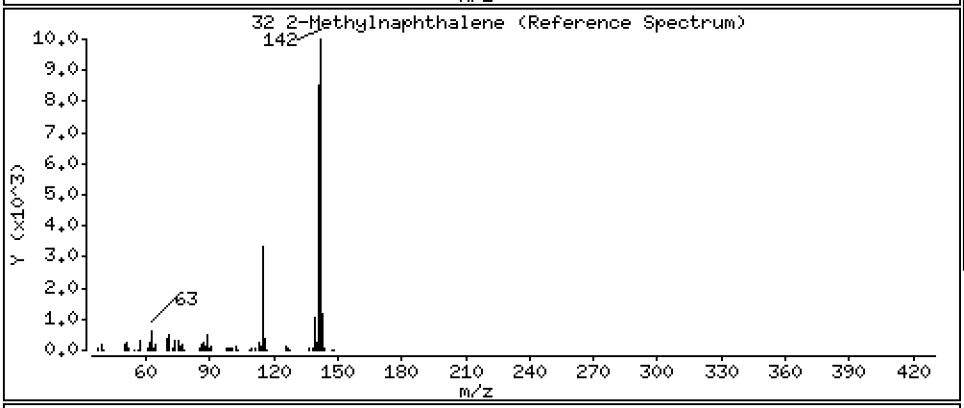
Concentration: 0.09073 ug/mL

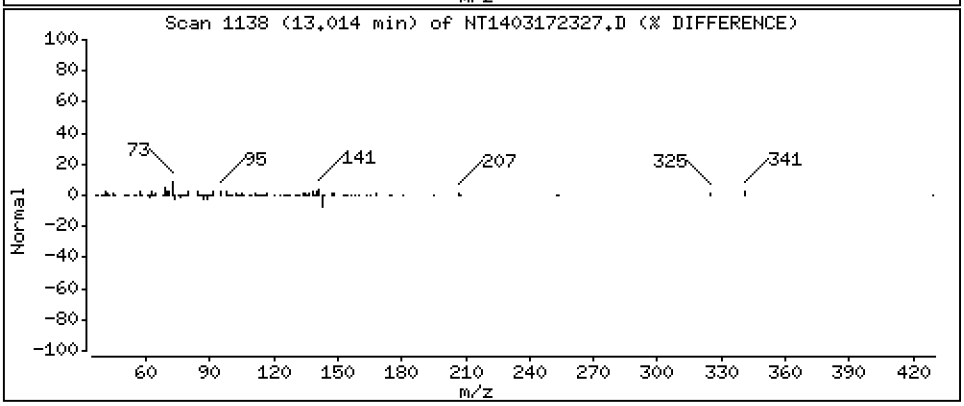












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Date : 18-MAR-2023 06:06

Client ID:

Instrument: nt14.i

Sample Info: 23B0276-01

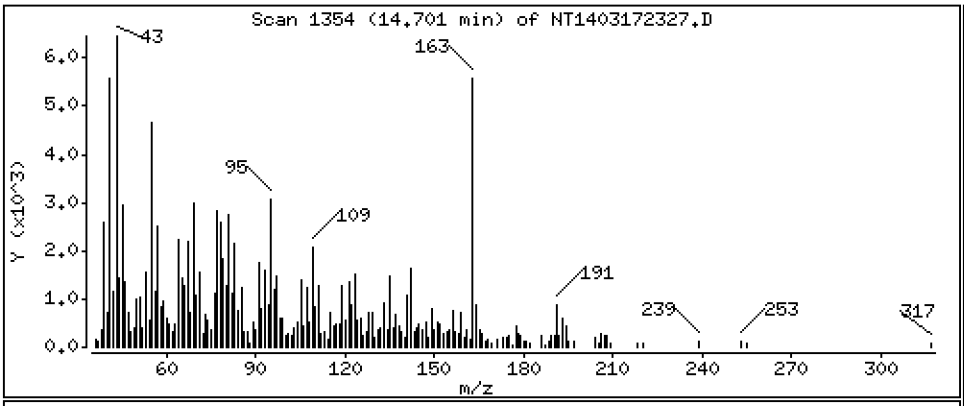
Operator: JGR

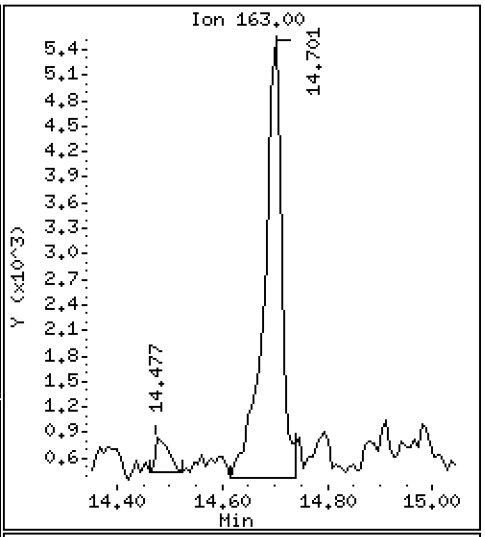
Column phase: ZB-5msi

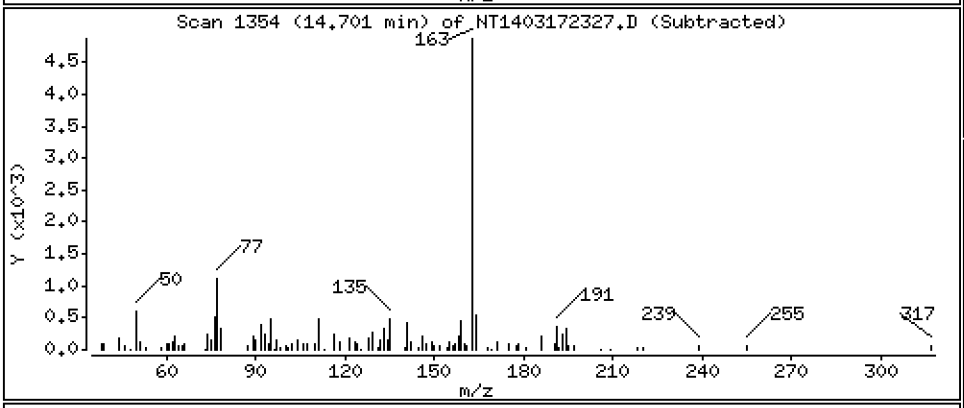
Column diameter: 0.25

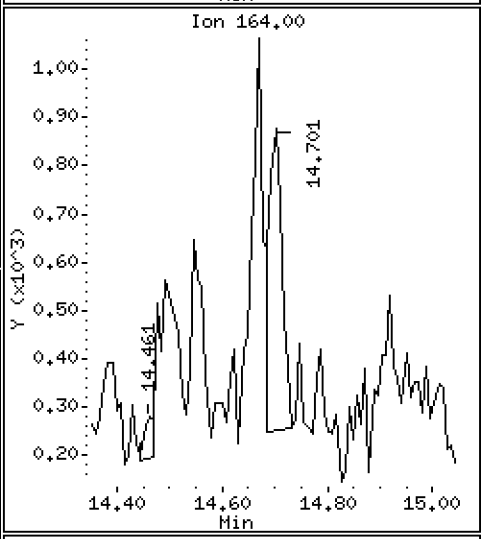
39 Dimethylphthalate

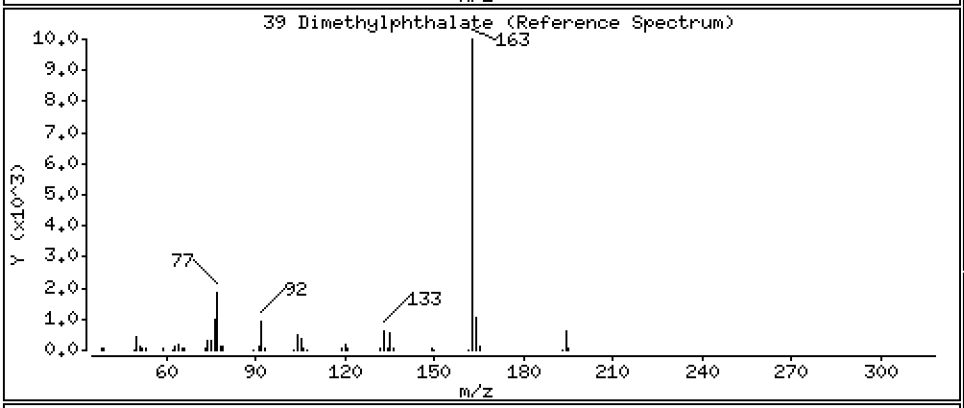
Concentration: 0.08336 ug/mL

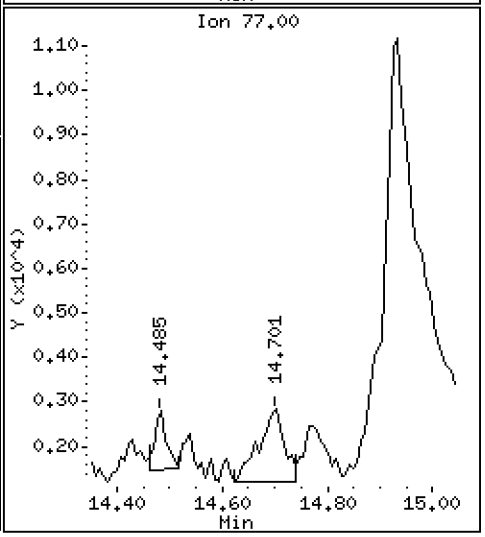


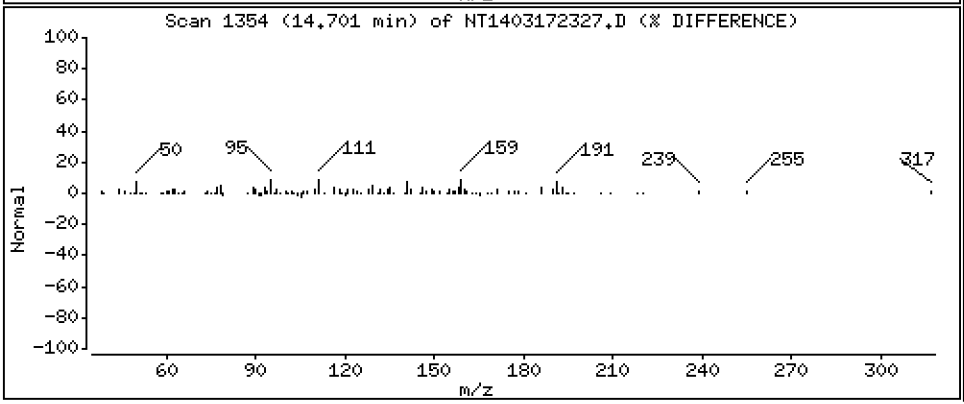












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Date : 18-MAR-2023 06:06

Client ID:

Instrument: nt14.i

Sample Info: 23B0276-01

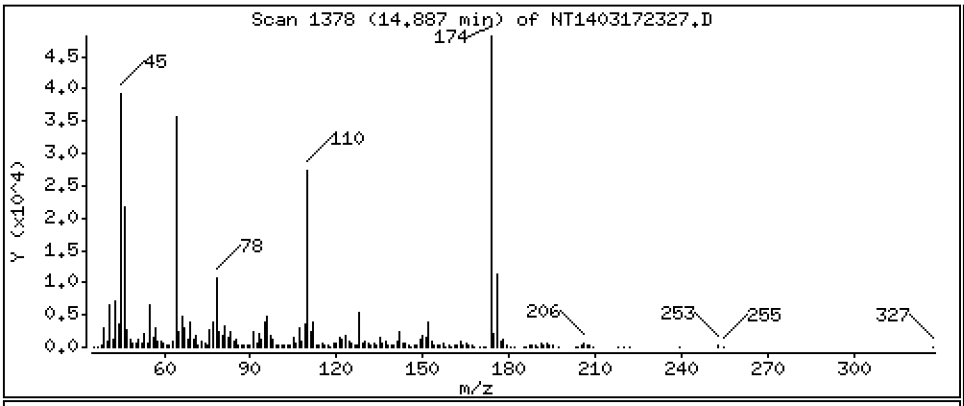
Operator: JGR

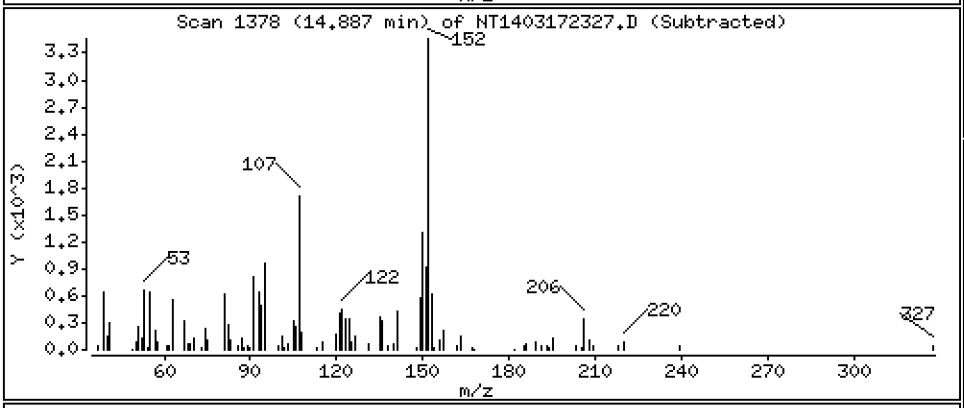
Column phase: ZB-5msi

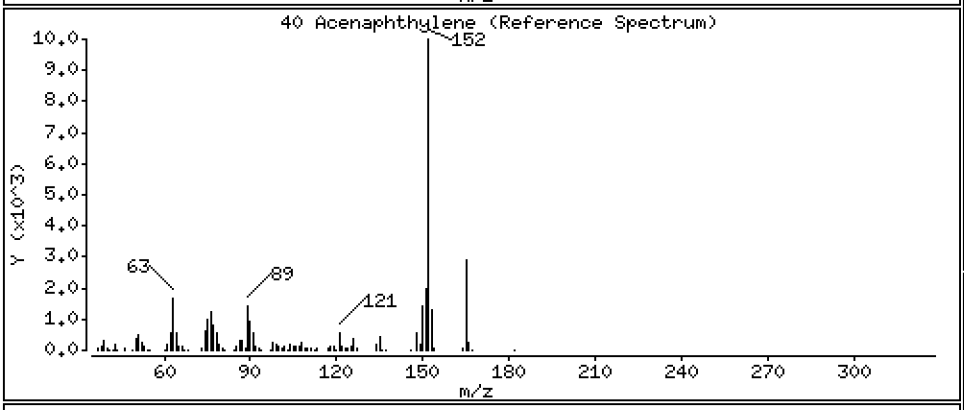
Column diameter: 0.25

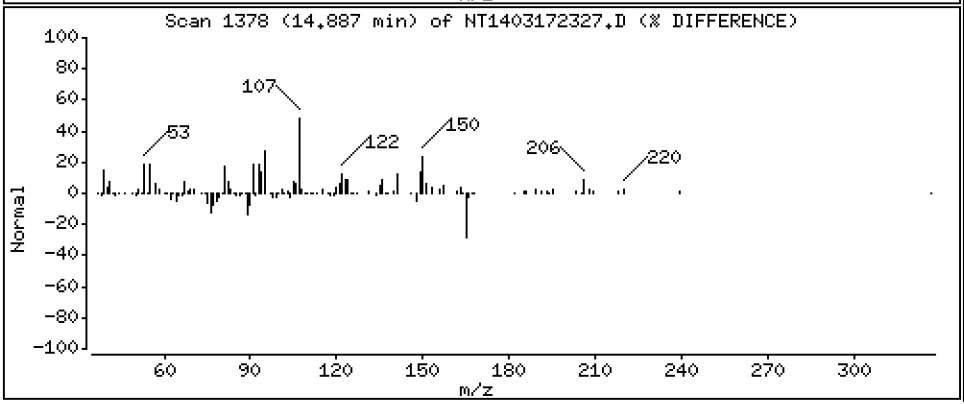
40 Acenaphthylene

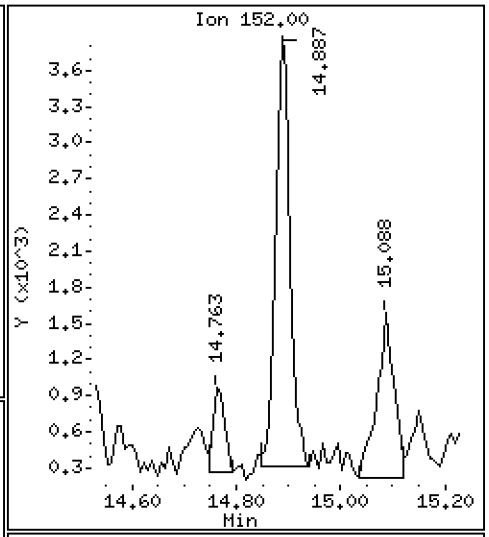
Concentration: 0.03100 ug/mL

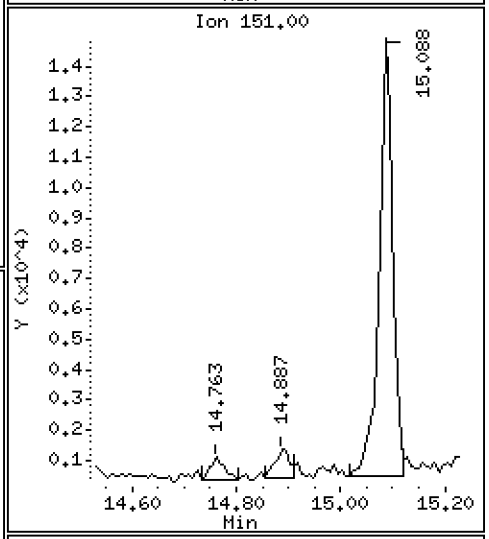


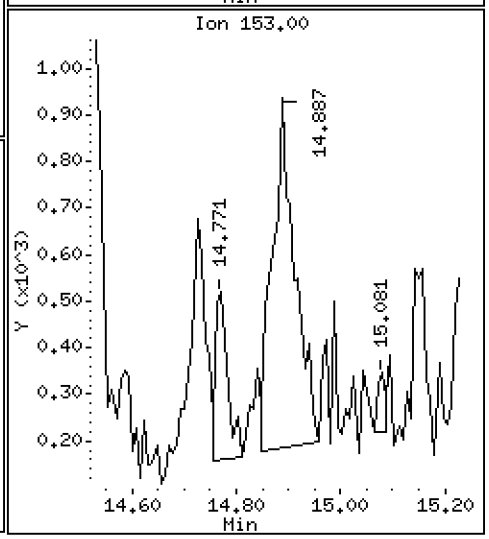












Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172327.D

Date : 18-MAR-2023 06:06

Client ID:

Instrument: nt14.i

Sample Info: 23B0276-01

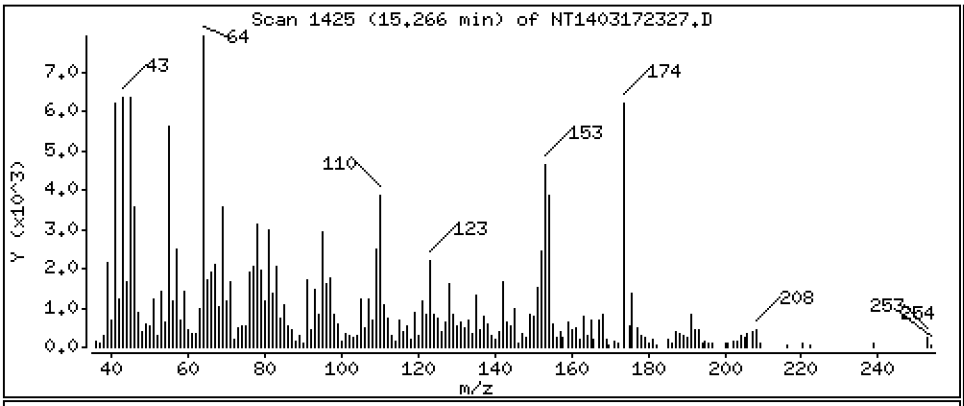
Operator: JGR

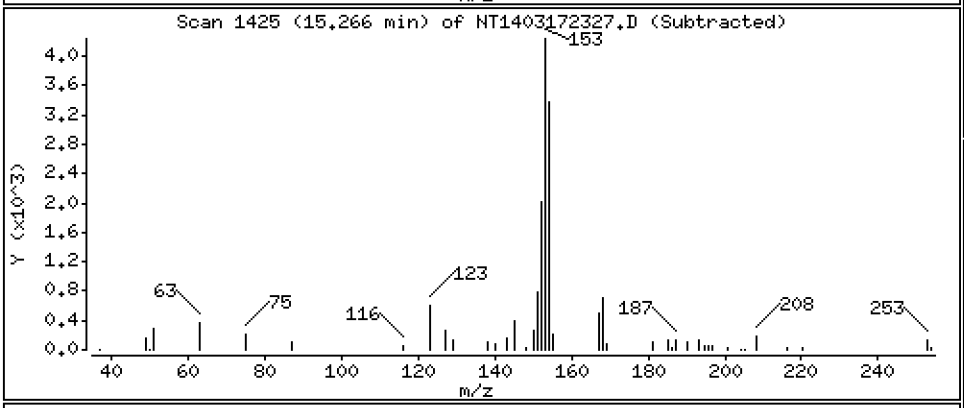
Column phase: ZB-5msi

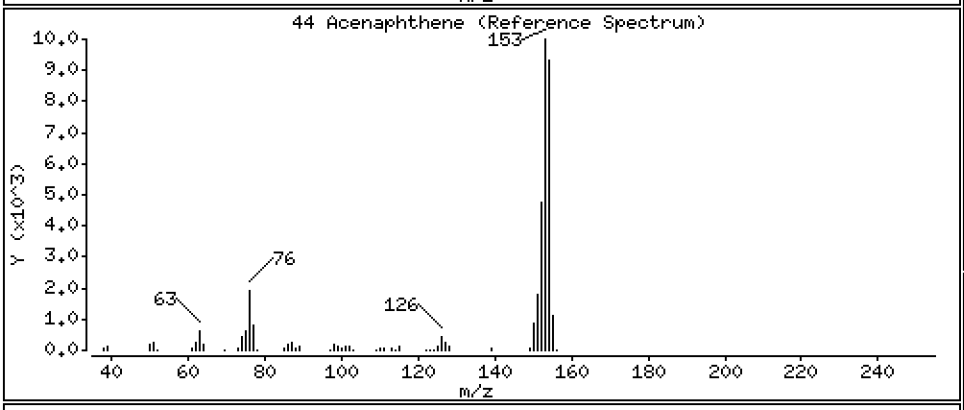
Column diameter: 0.25

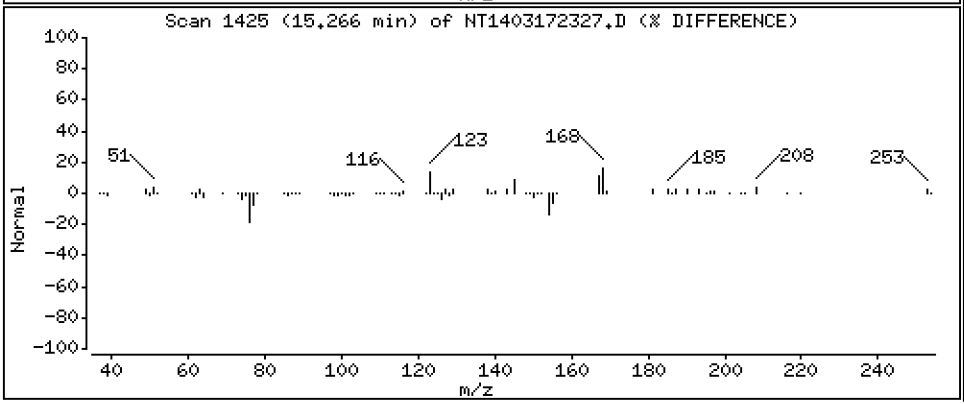
44 Acenaphthene

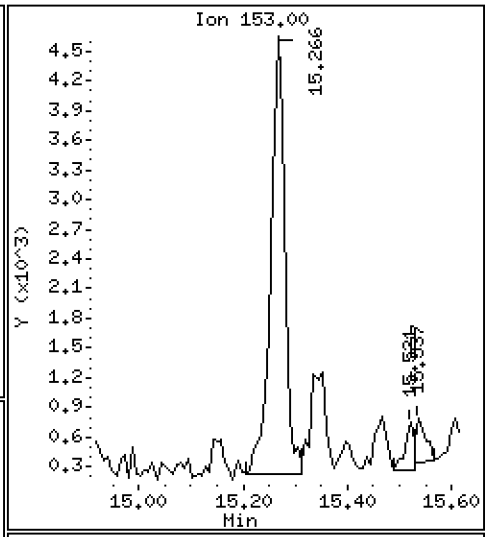
Concentration: 0.06181 ug/mL

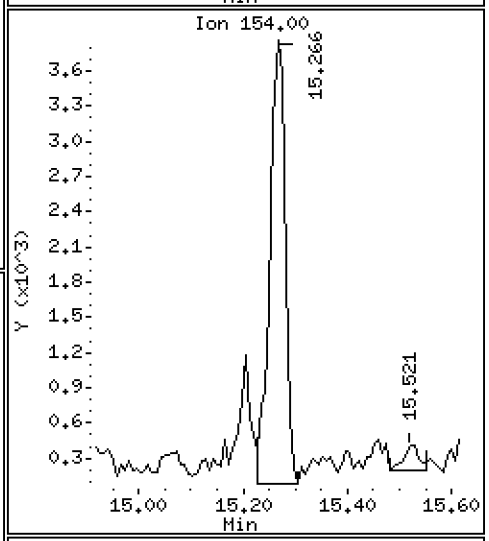


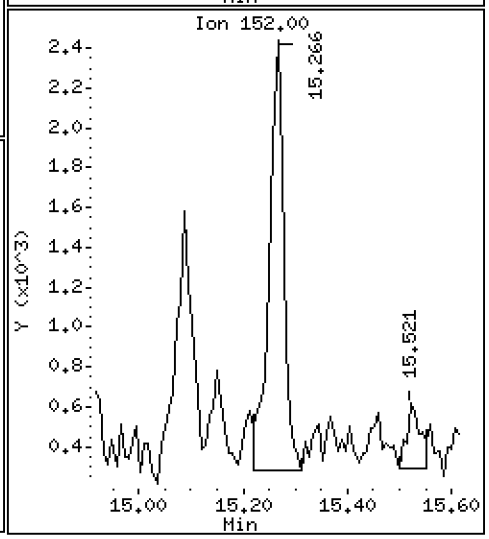












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Date : 18-MAR-2023 06:06

Client ID:

Instrument: nt14.i

Sample Info: 23B0276-01

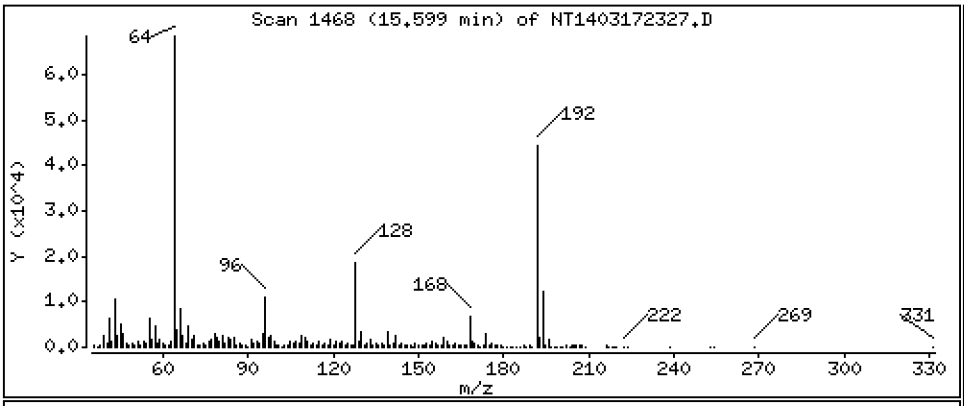
Operator: JGR

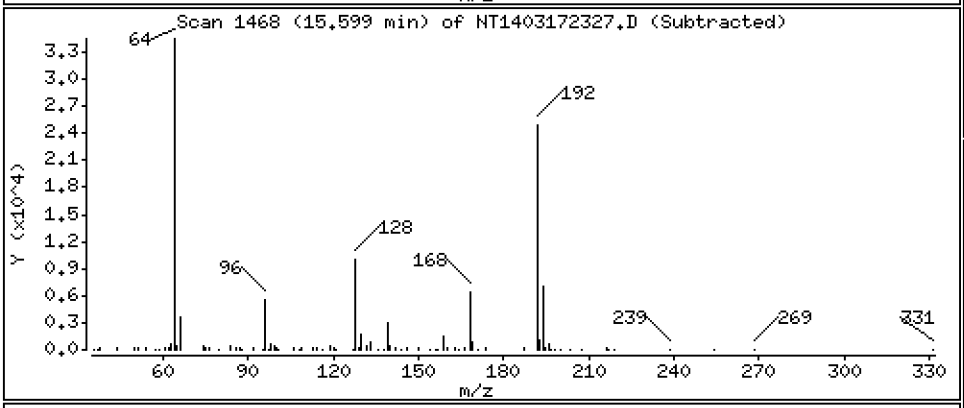
Column phase: ZB-5msi

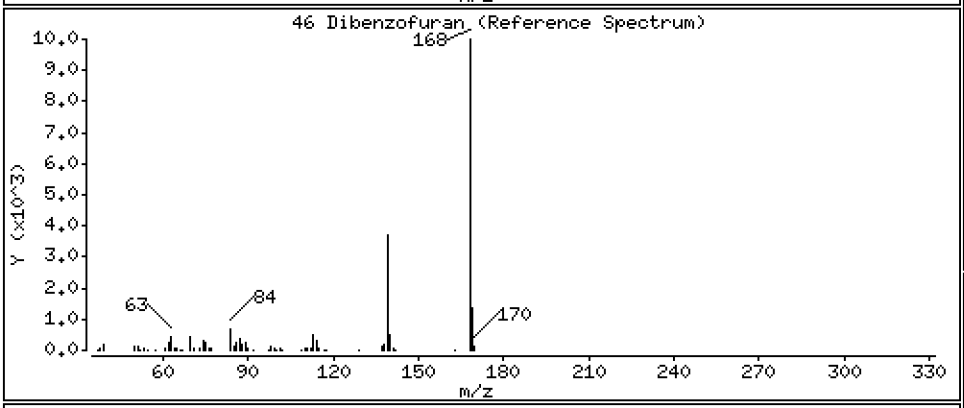
Column diameter: 0.25

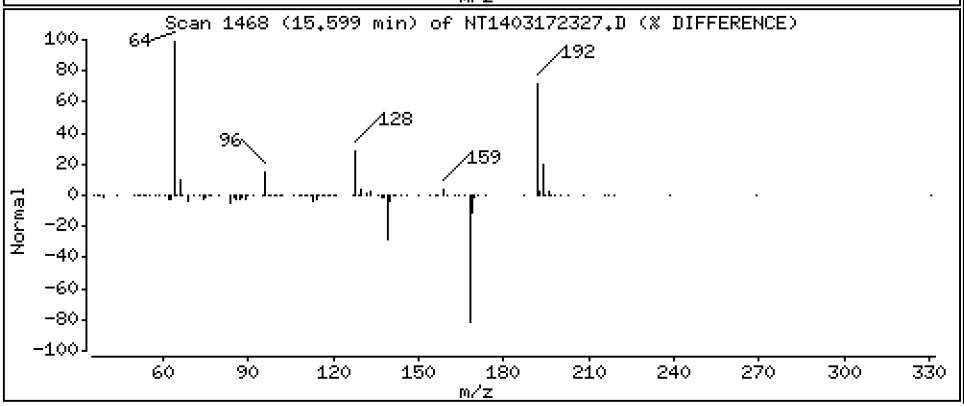
46 Dibenzofuran

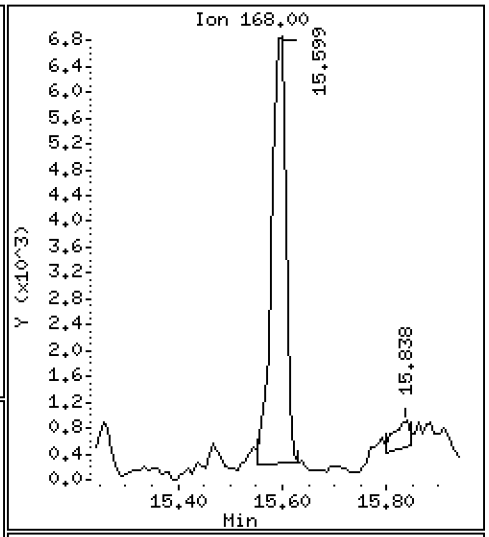
Concentration: 0.06666 ug/mL

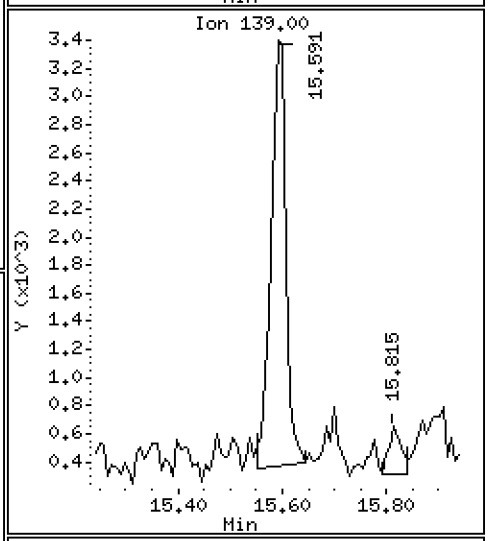


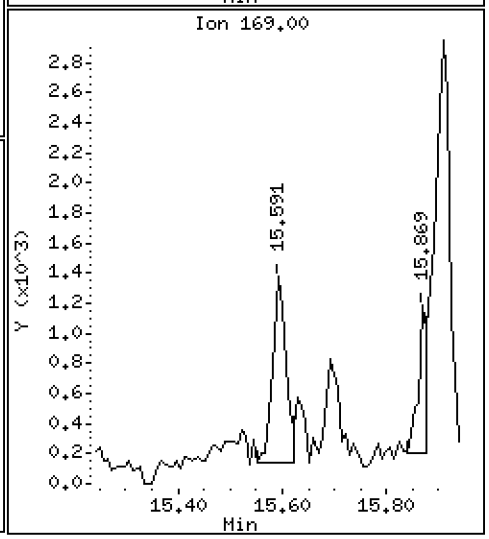












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Date : 18-MAR-2023 06:06

Client ID:

Instrument: nt14.i

Sample Info: 23B0276-01

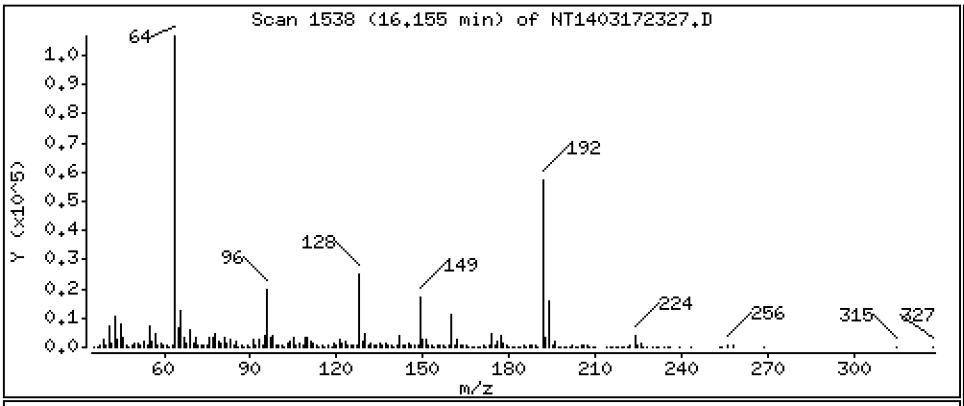
Operator: JGR

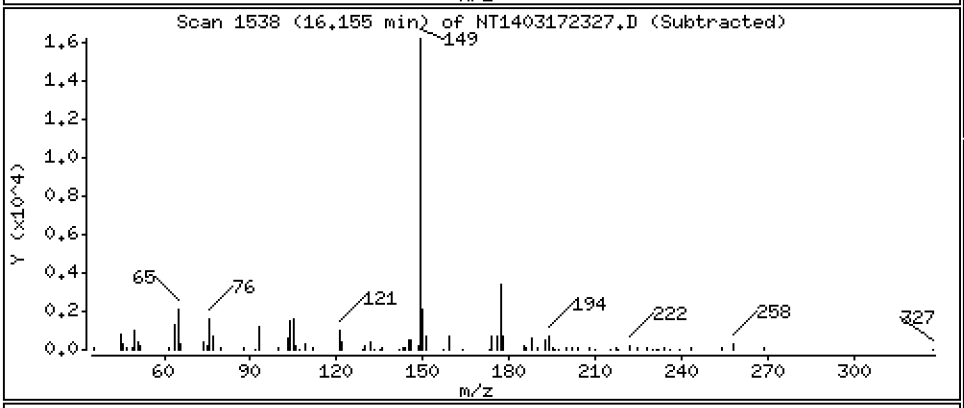
Column phase: ZB-5msi

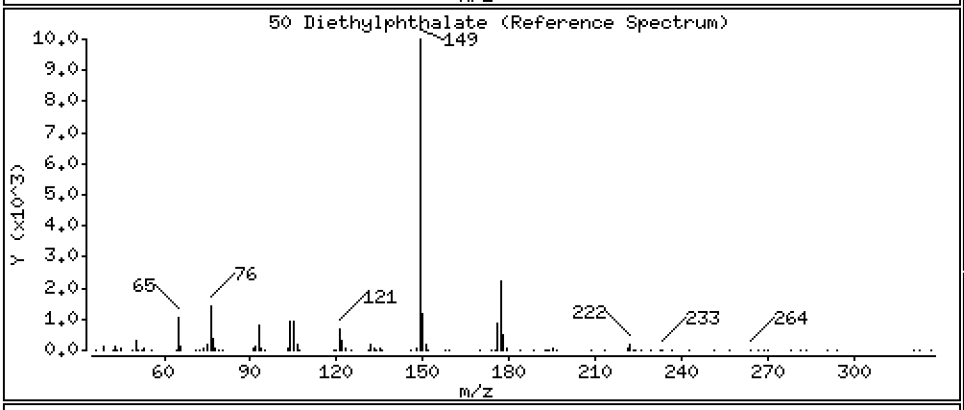
Column diameter: 0.25

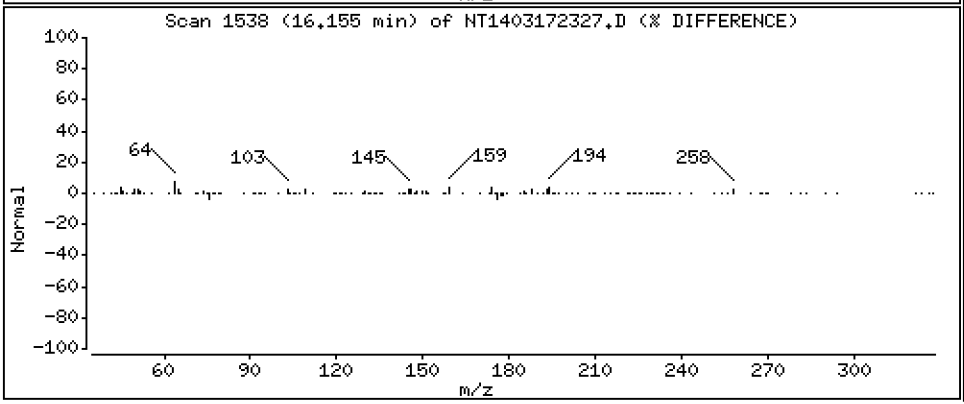
50 Diethylphthalate

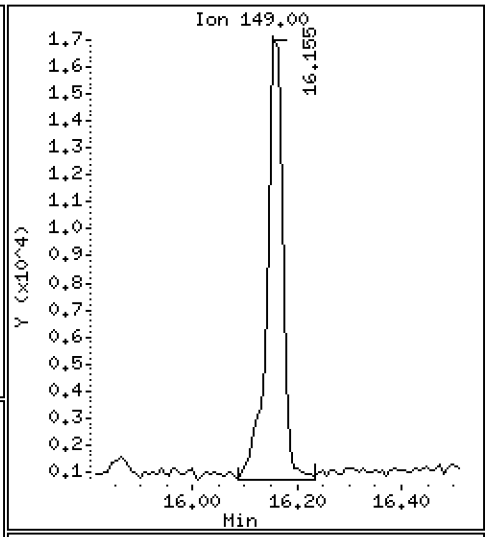
Concentration: 0.2534 ug/mL

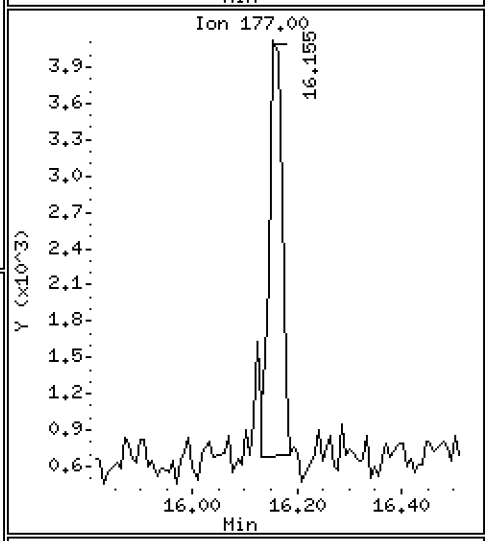


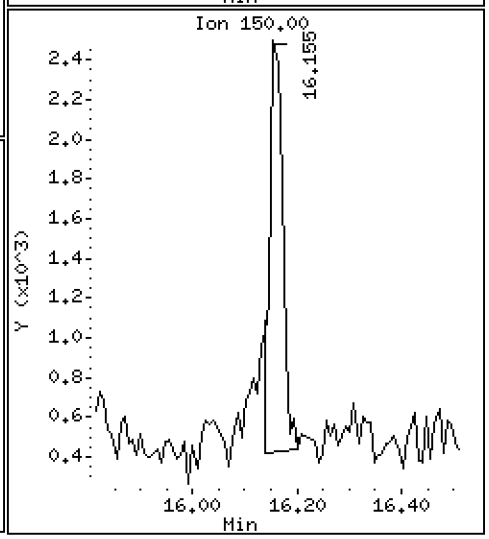












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Date : 18-MAR-2023 06:06

Client ID:

Instrument: nt14.i

Sample Info: 23B0276-01

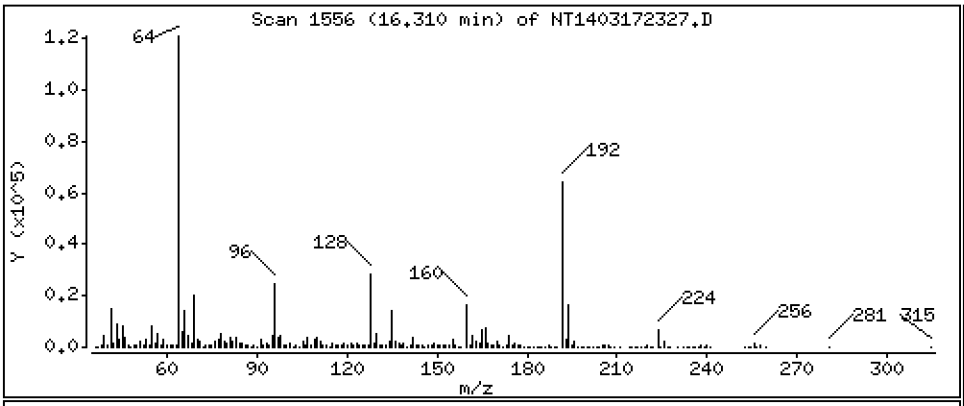
Operator: JGR

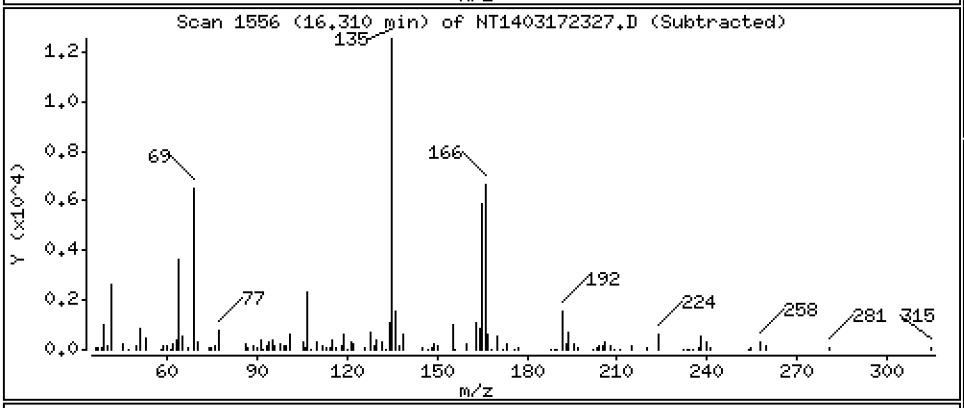
Column phase: ZB-5msi

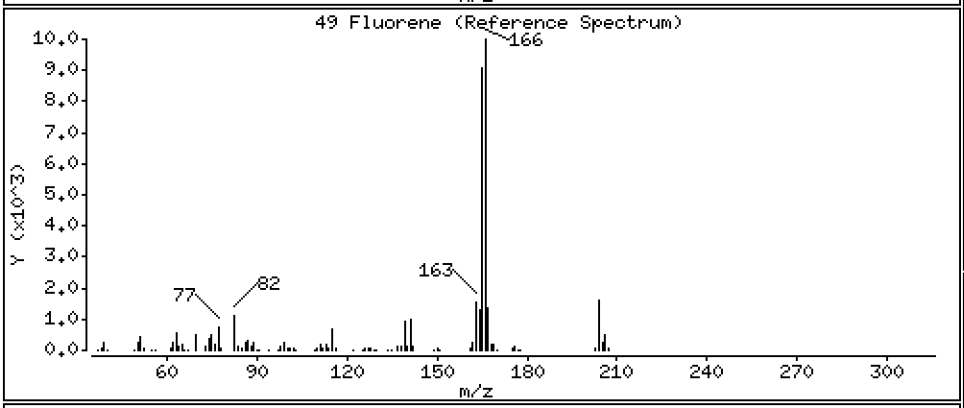
Column diameter: 0.25

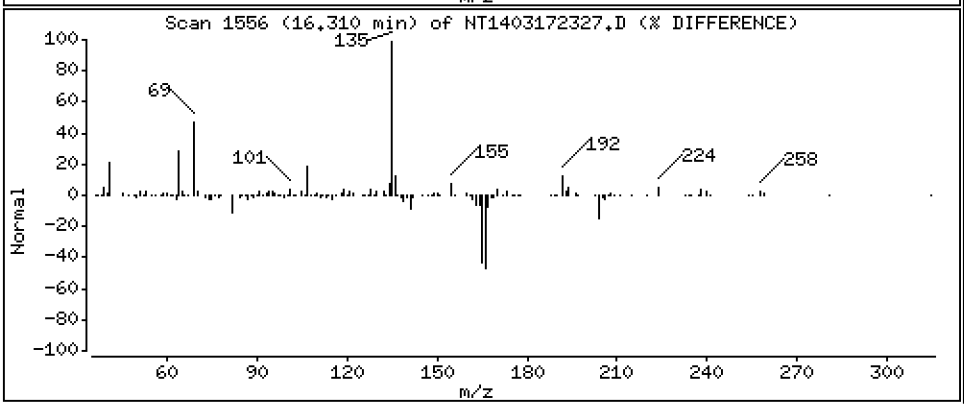
49 Fluorene

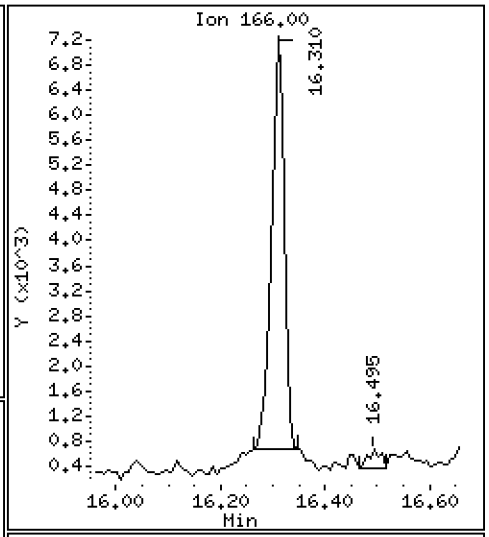
Concentration: 0.06266 ug/mL

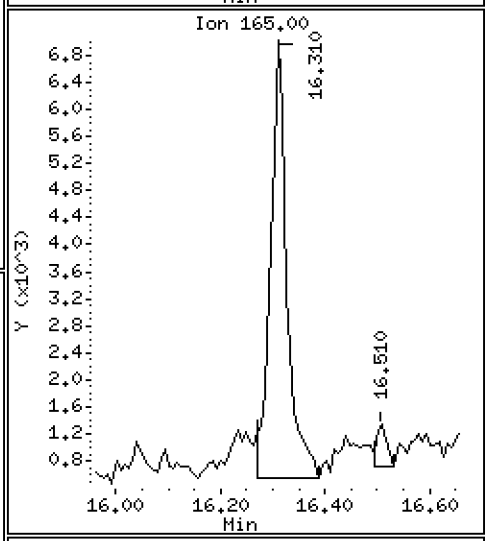


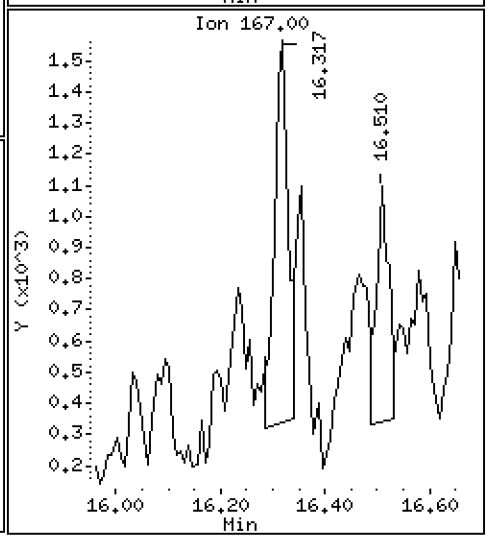












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Date : 18-MAR-2023 06:06

Client ID:

Instrument: nt14.i

Sample Info: 23B0276-01

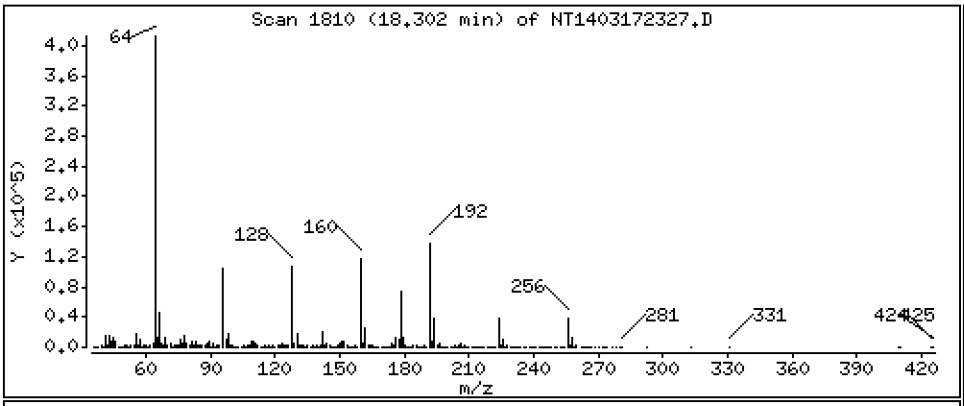
Operator: JGR

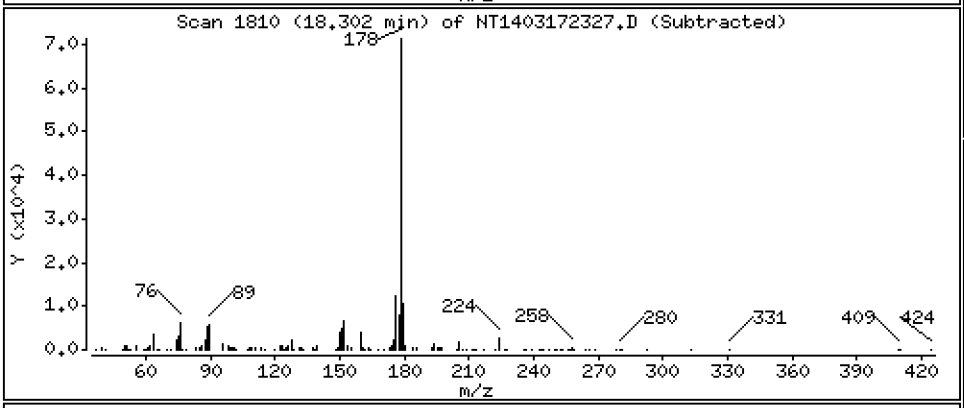
Column phase: ZB-5msi

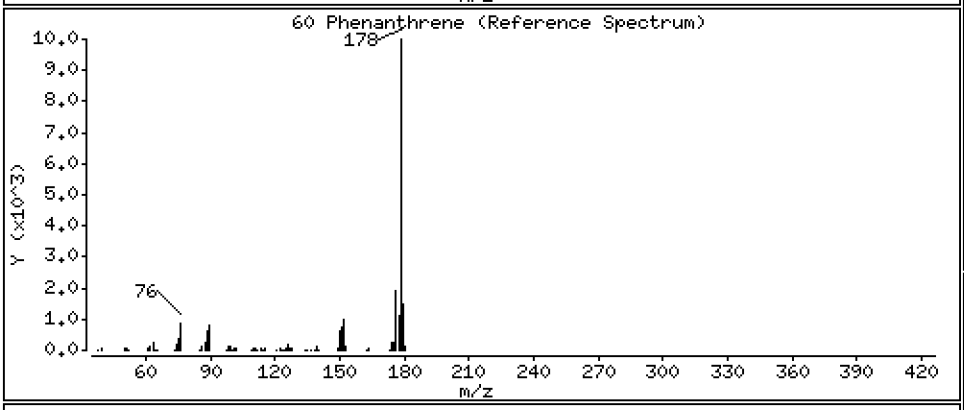
Column diameter: 0.25

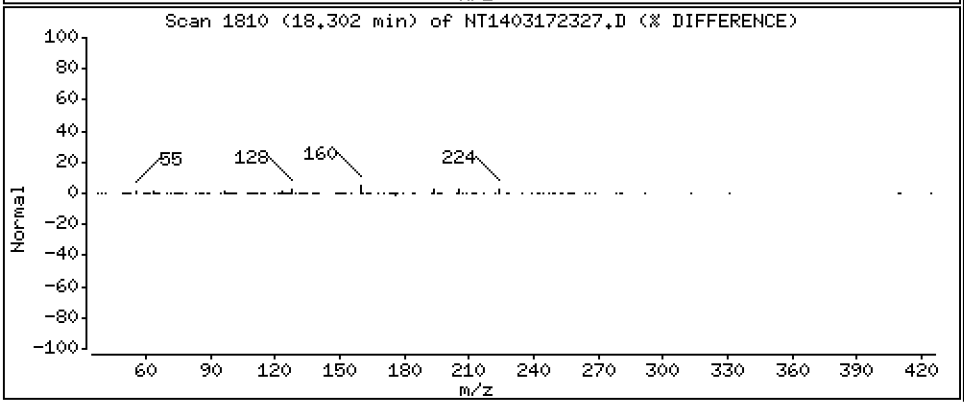
60 Phenanthrene

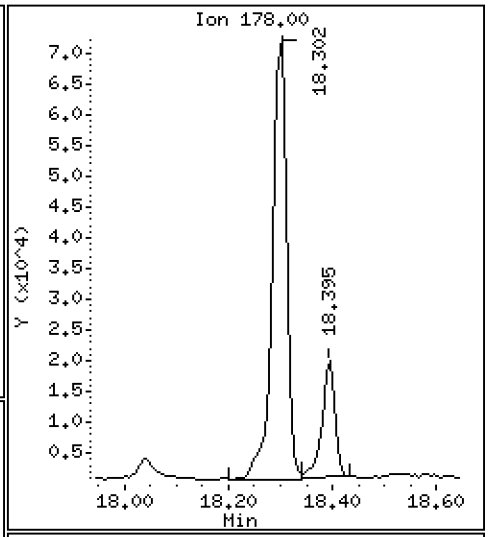
Concentration: 0.6769 ug/mL

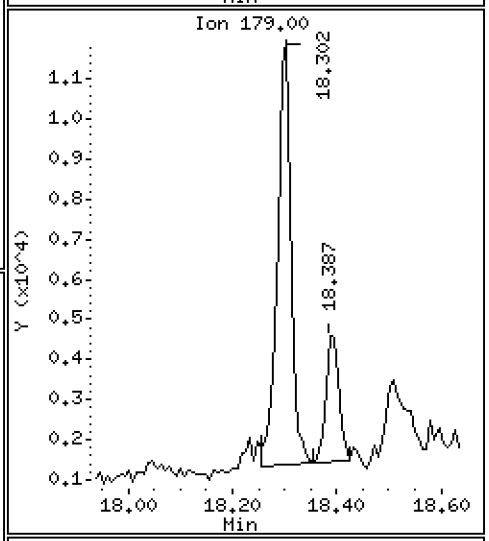


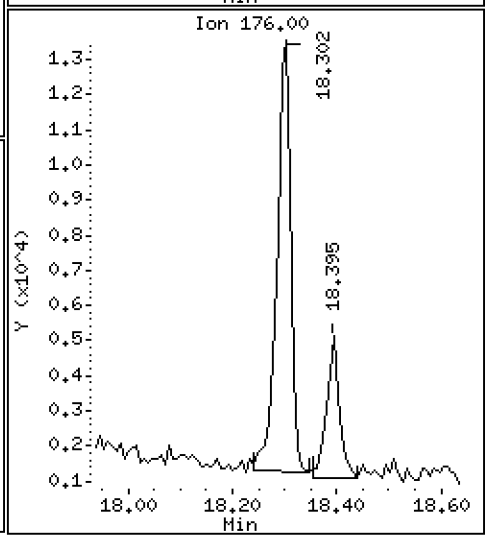












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Date : 18-MAR-2023 06:06

Client ID:

Instrument: nt14.i

Sample Info: 23B0276-01

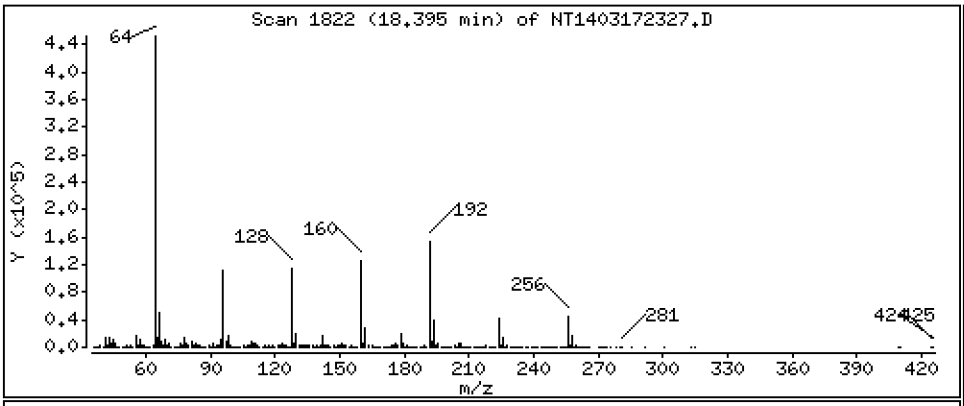
Operator: JGR

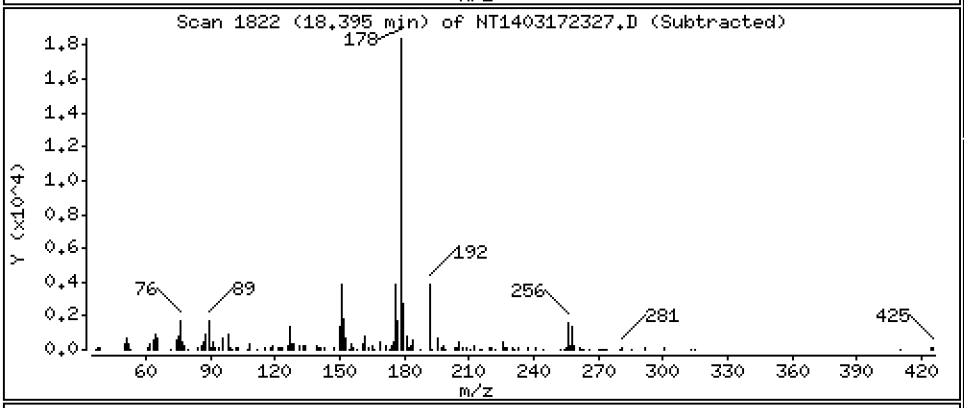
Column phase: ZB-5msi

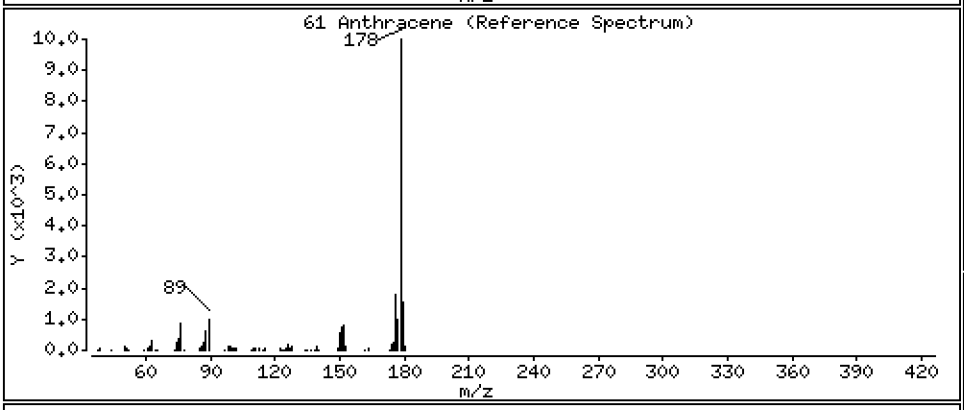
Column diameter: 0.25

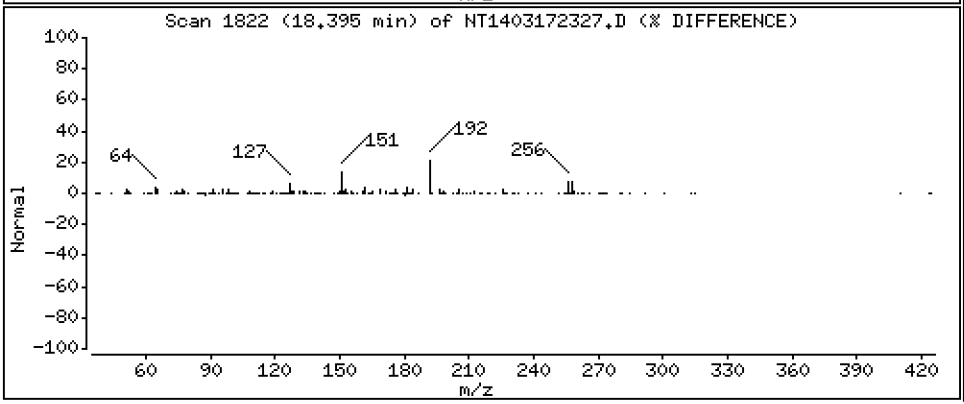
61 Anthracene

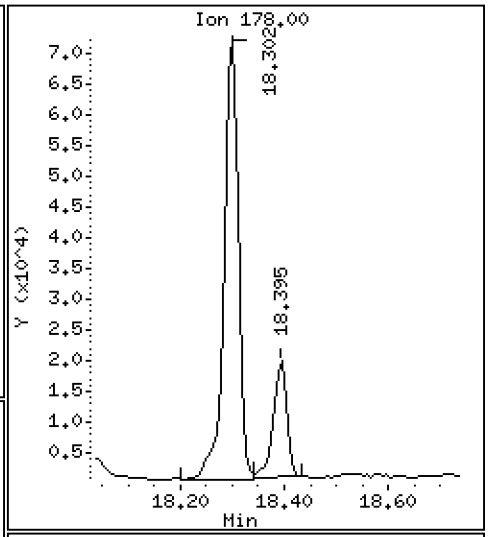
Concentration: 0.1789 ug/mL

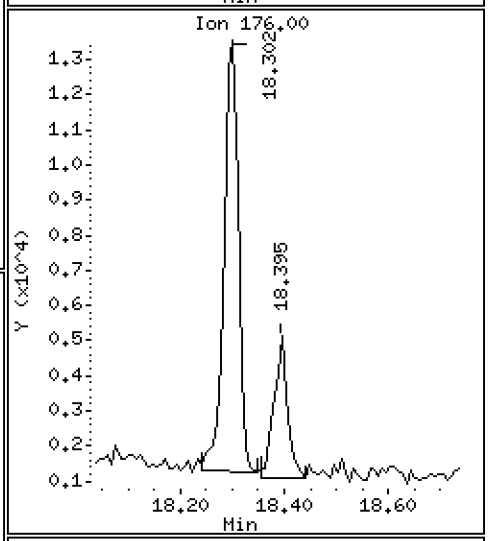


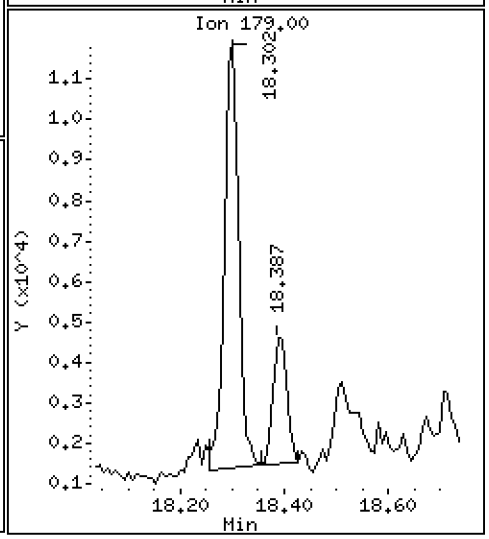












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Date : 18-MAR-2023 06:06

Client ID:

Instrument: nt14.i

Sample Info: 23B0276-01

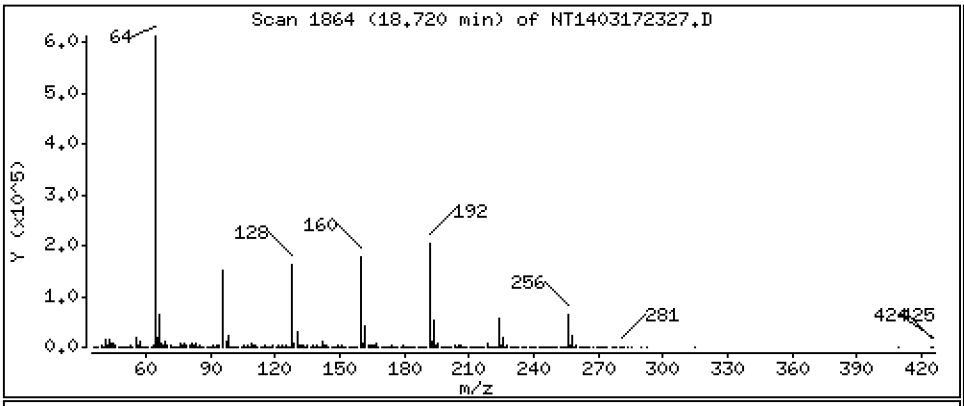
Operator: JGR

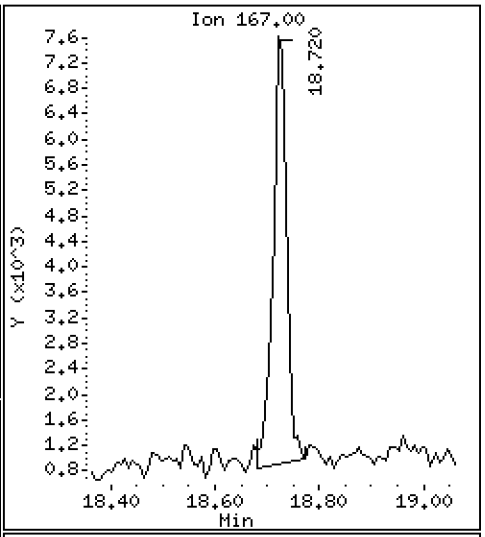
Column phase: ZB-5msi

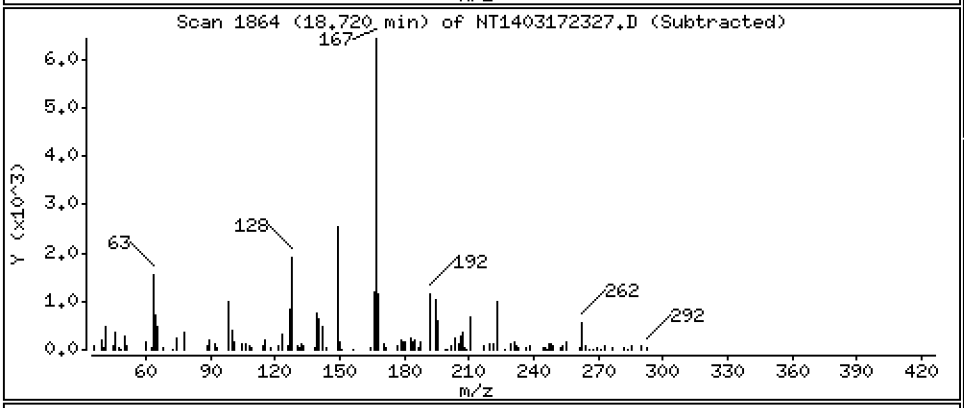
Column diameter: 0.25

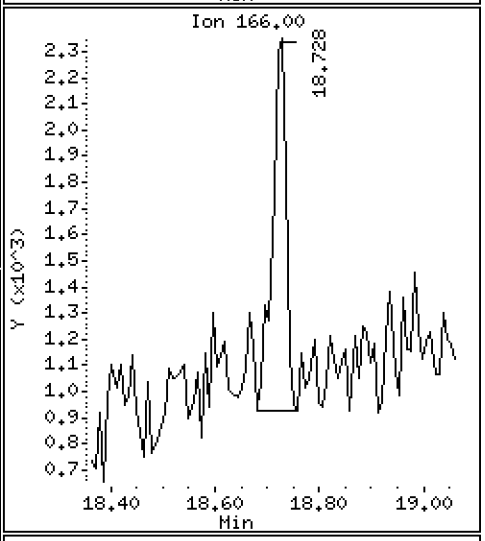
62 Carbazole

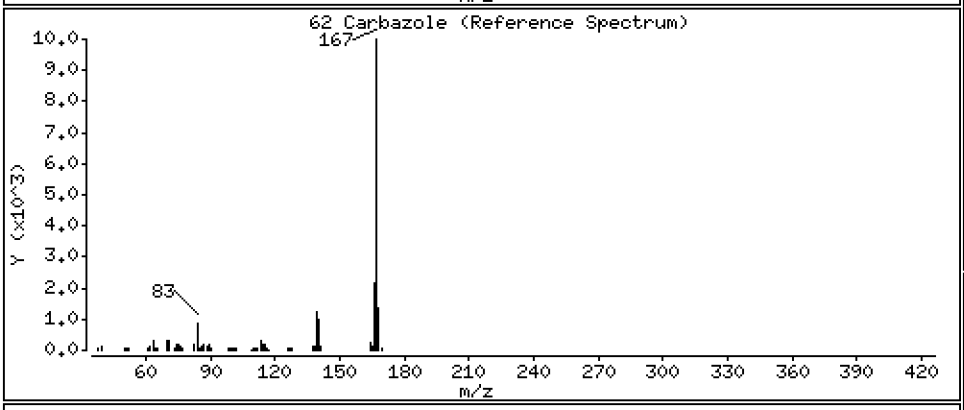
Concentration: 0.07398 ug/mL

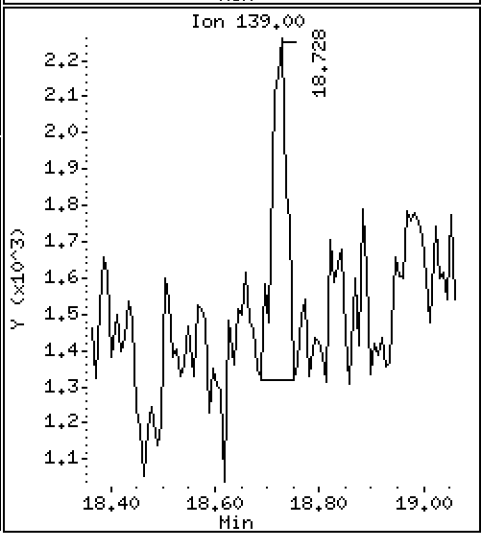


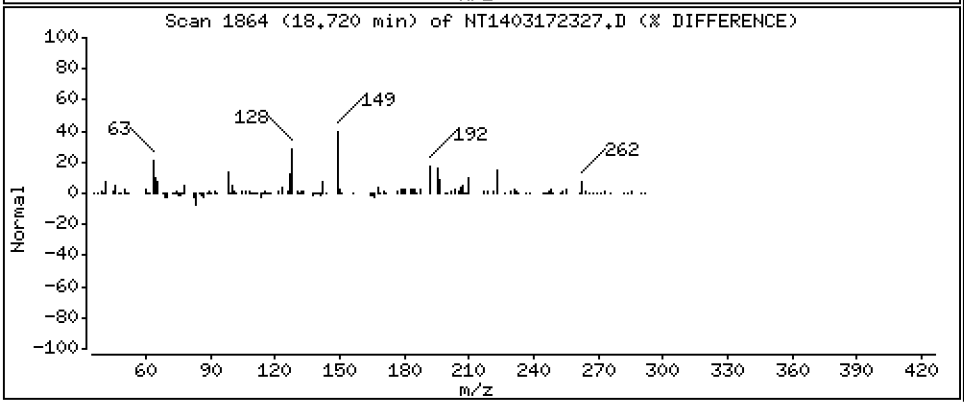












Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172327.D

Date : 18-MAR-2023 06:06

Client ID:

Instrument: nt14.i

Sample Info: 23B0276-01

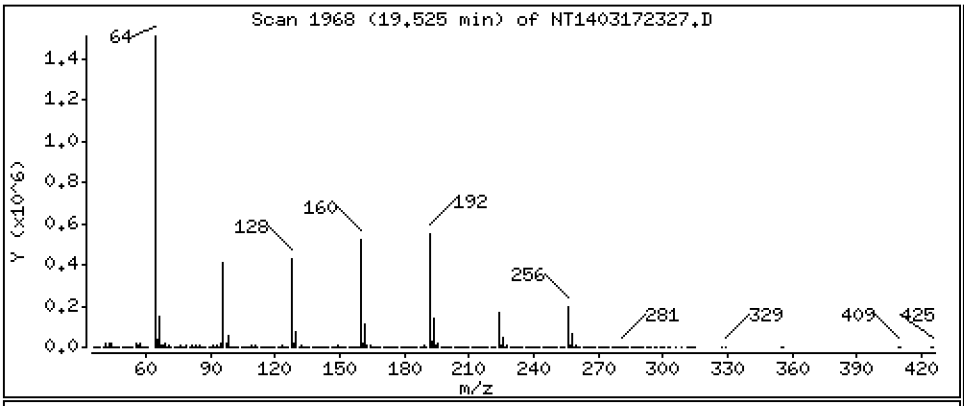
Operator: JGR

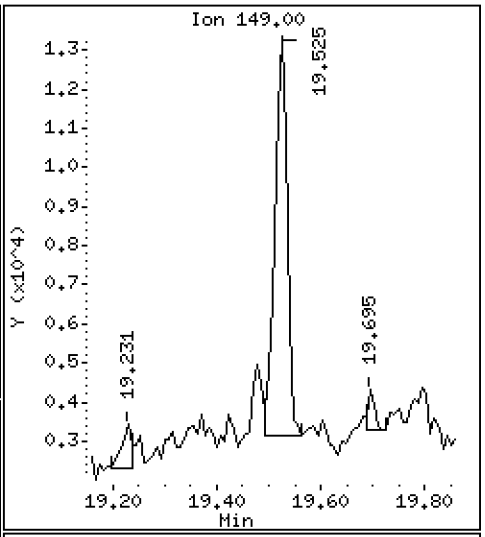
Column phase: ZB-5msi

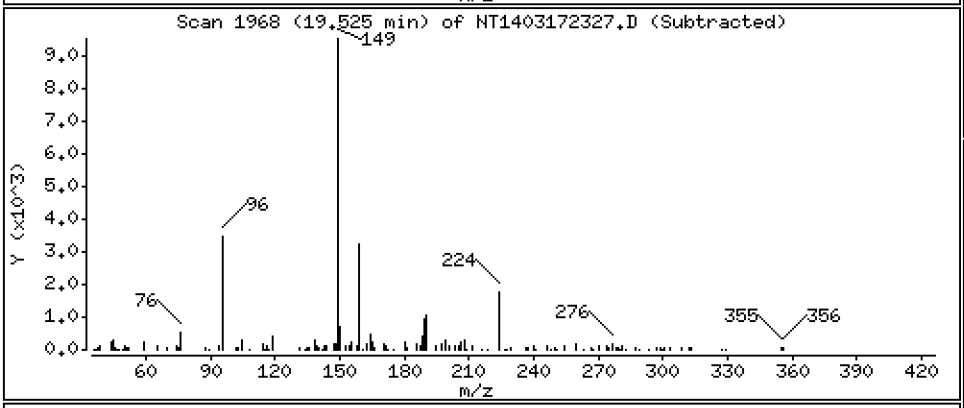
Column diameter: 0.25

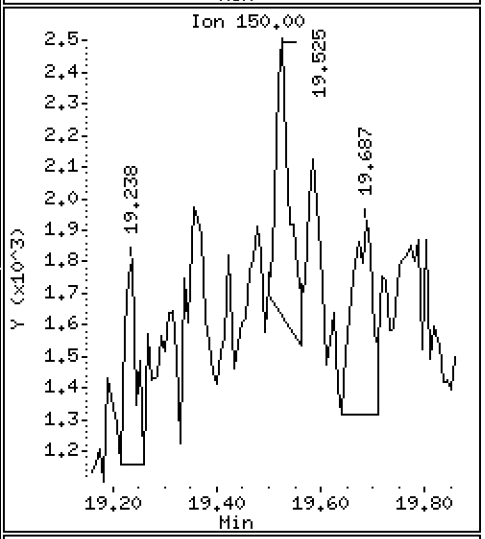
63 Di-n-butylphthalate

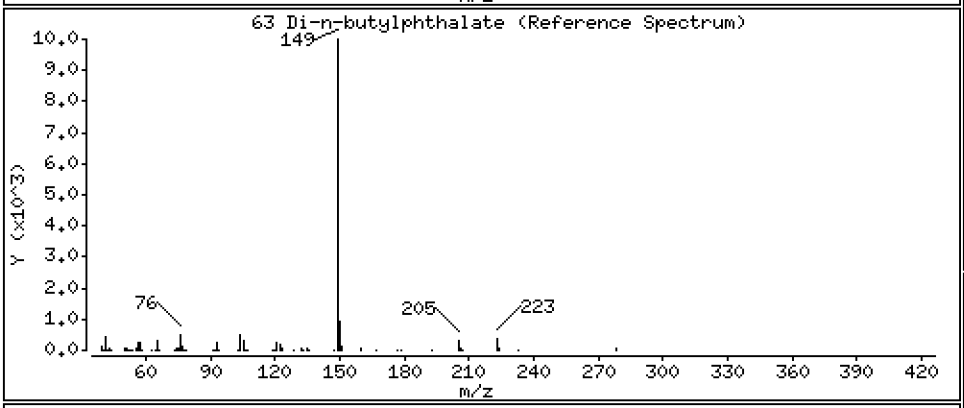
Concentration: 0.07894 ug/mL

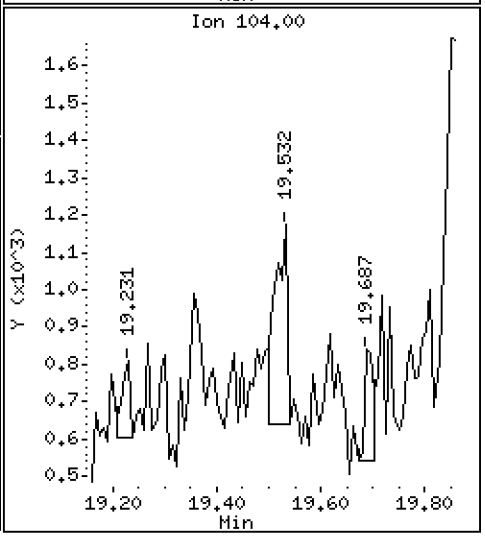


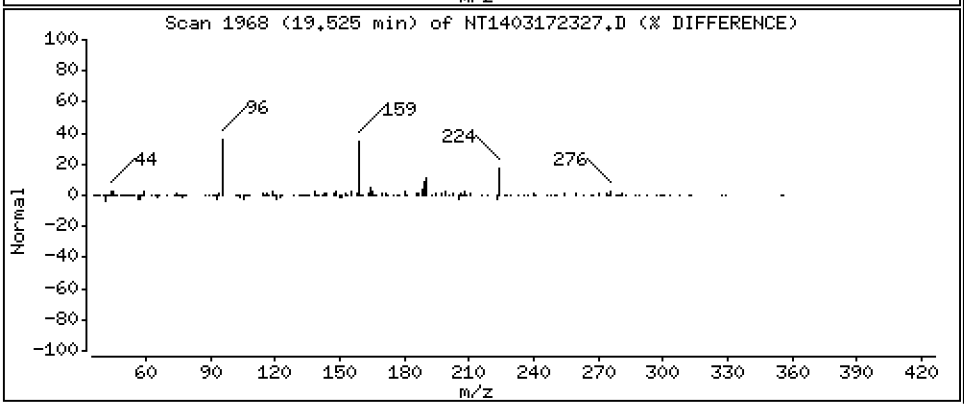












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Date : 18-MAR-2023 06:06

Client ID:

Instrument: nt14.i

Sample Info: 23B0276-01

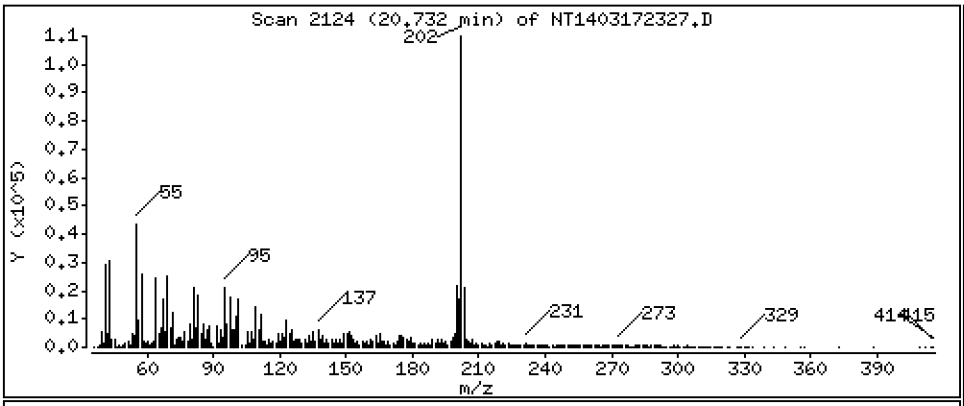
Operator: JGR

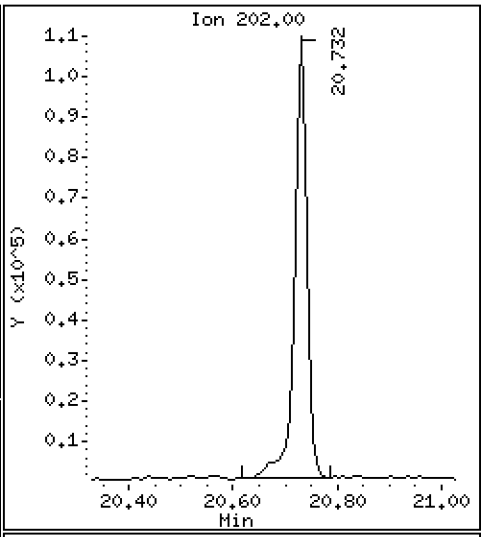
Column phase: ZB-5msi

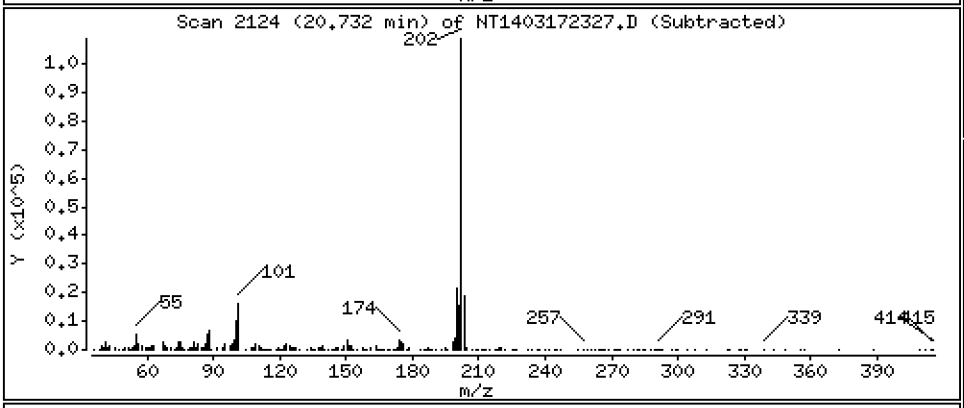
Column diameter: 0.25

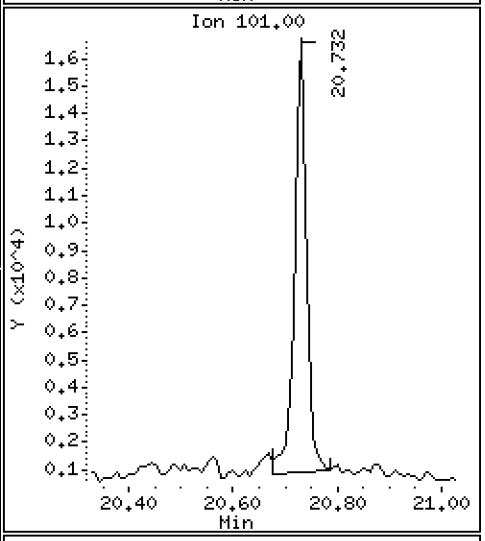
64 Fluoranthene

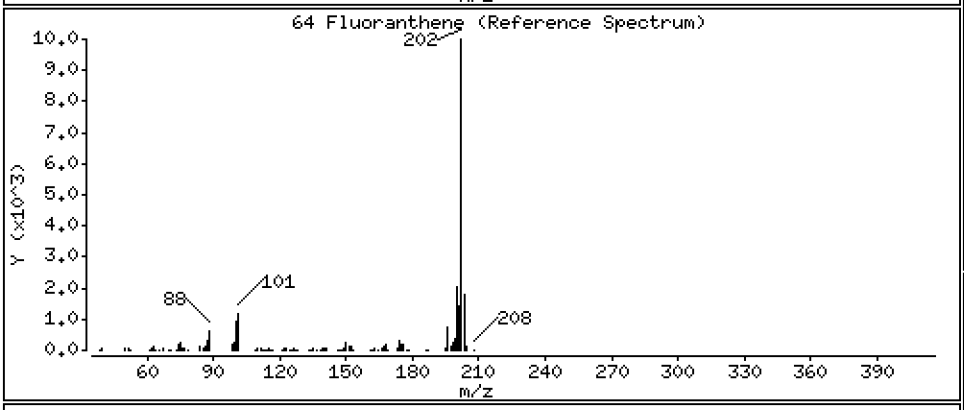
Concentration: 2.436 ug/mL

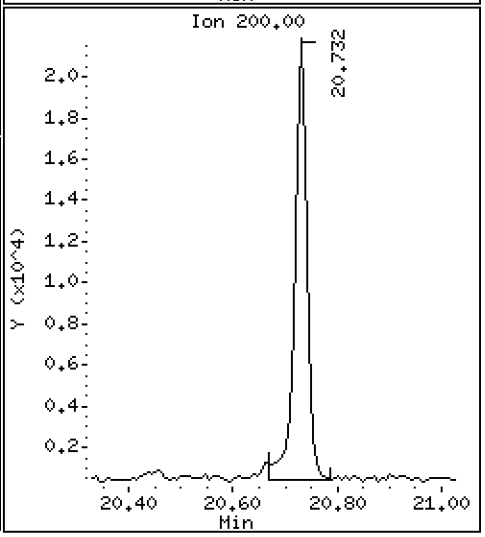


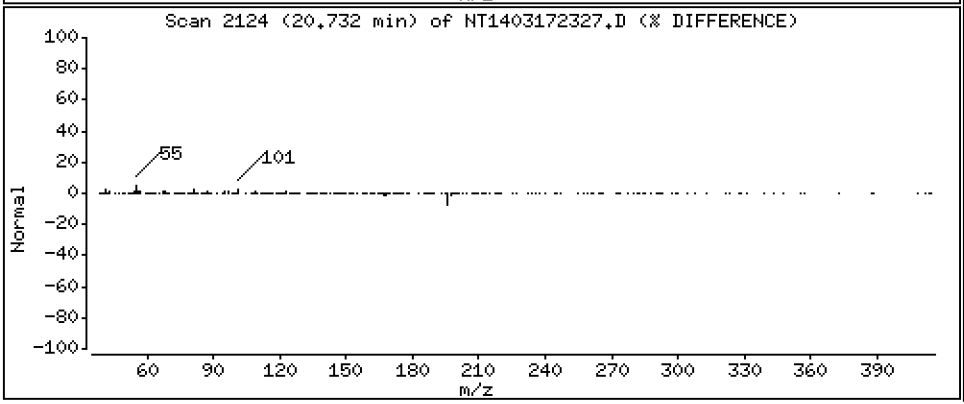












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Date : 18-MAR-2023 06:06

Client ID:

Instrument: nt14.i

Sample Info: 23B0276-01

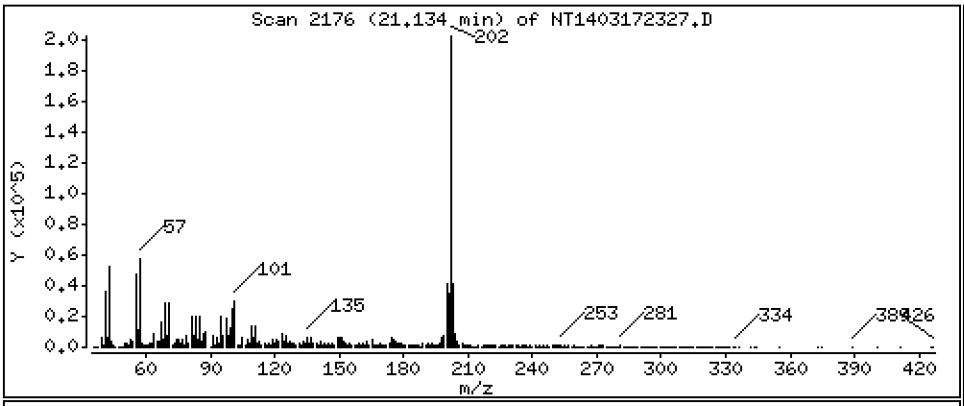
Operator: JGR

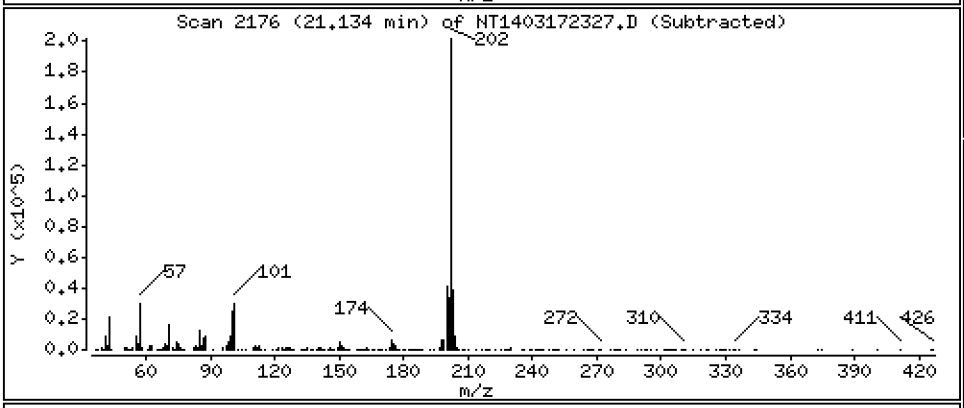
Column phase: ZB-5msi

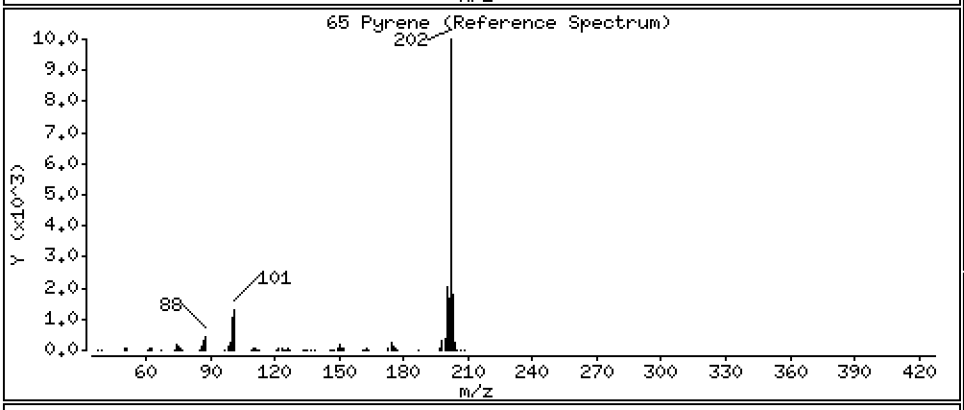
Column diameter: 0.25

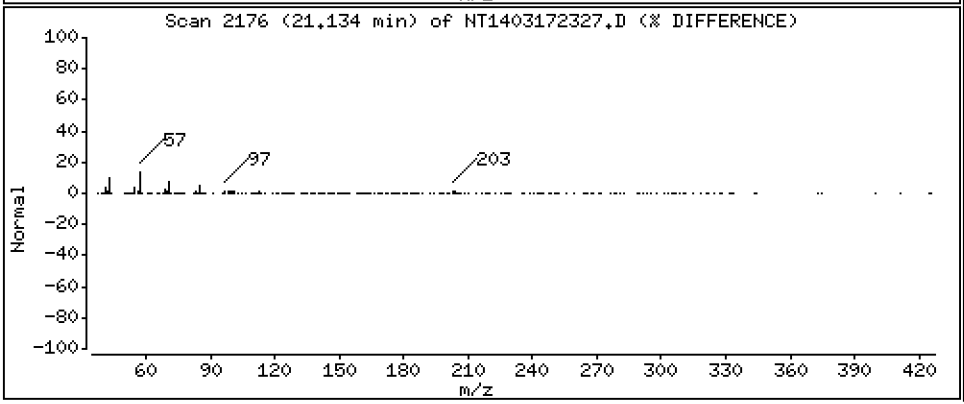
65 Pyrene

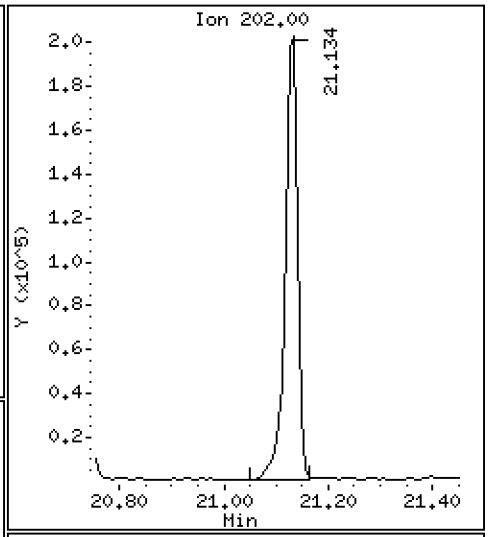
Concentration: 4.298 ug/mL

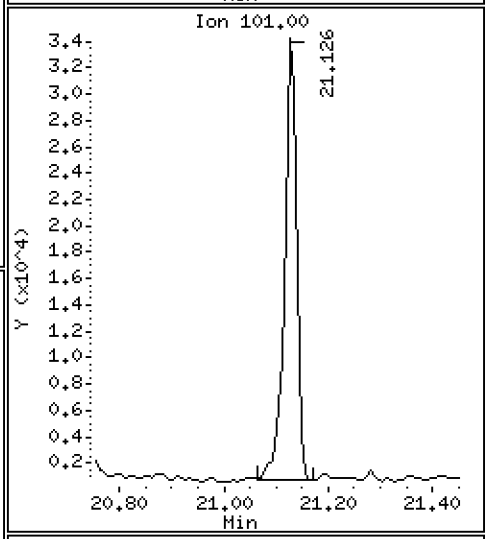


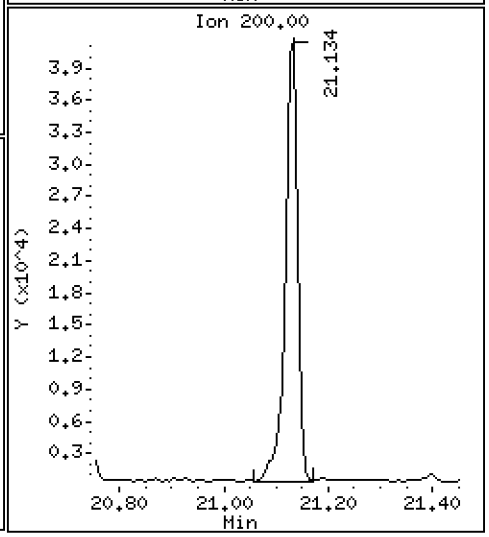












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Date : 18-MAR-2023 06:06

Client ID:

Instrument: nt14.i

Sample Info: 23B0276-01

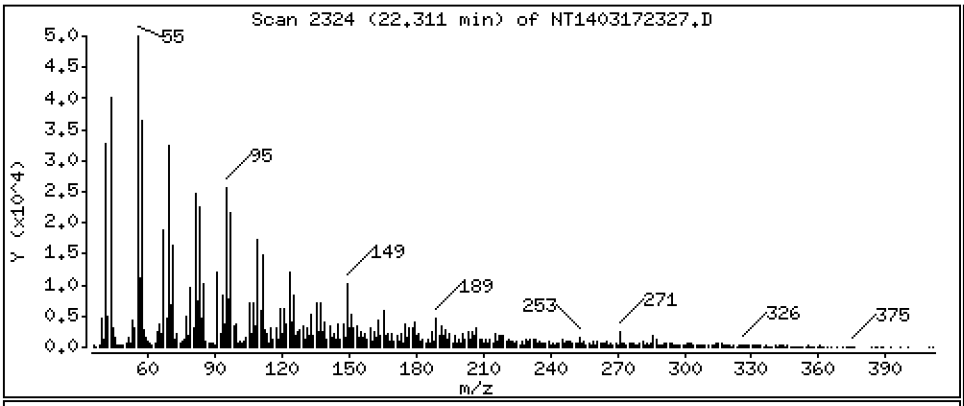
Operator: JGR

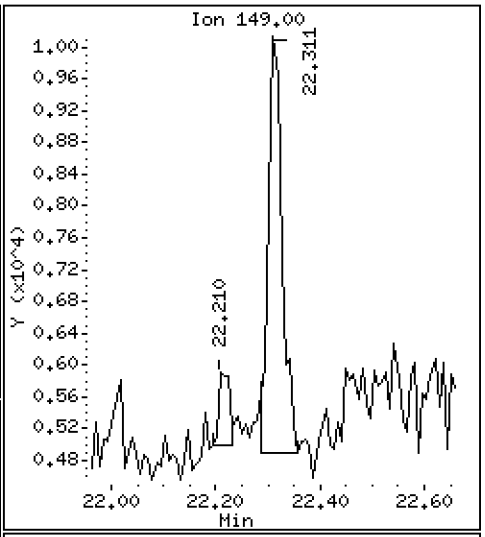
Column phase: ZB-5msi

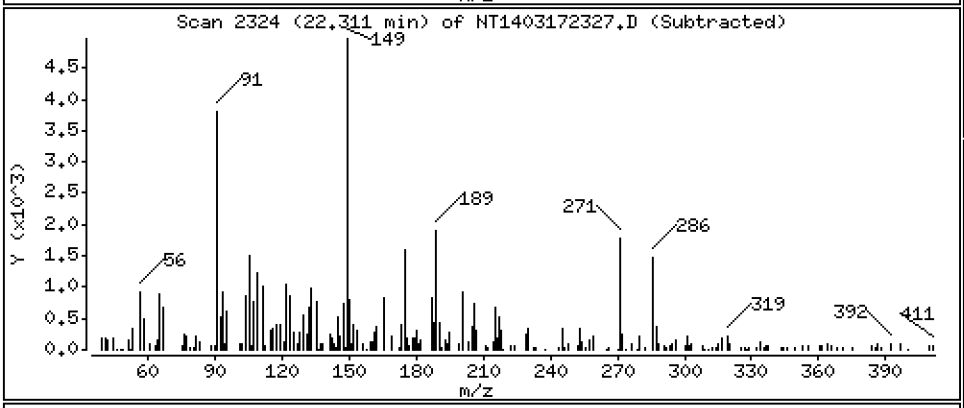
Column diameter: 0.25

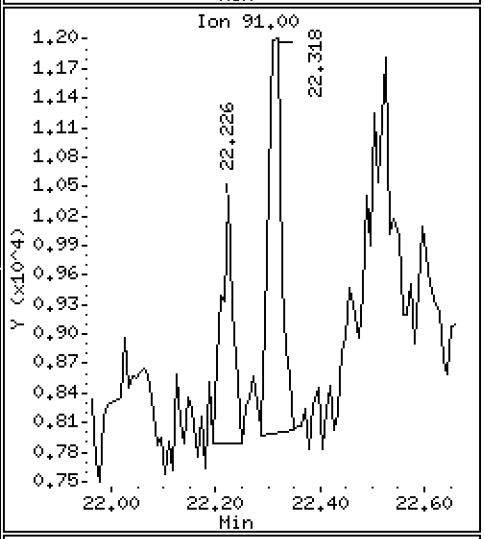
67 Butylbenzylphthalate

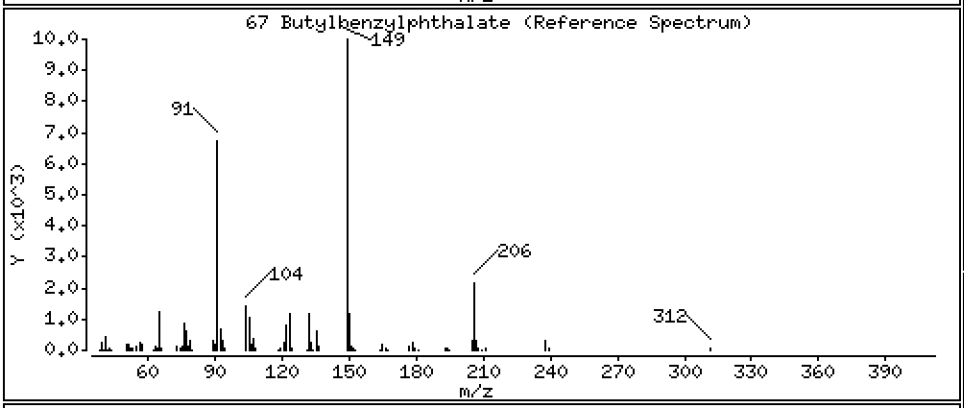
Concentration: 0.2668 ug/mL

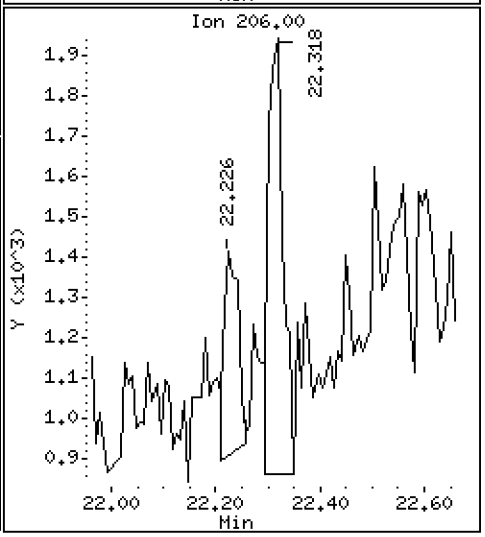


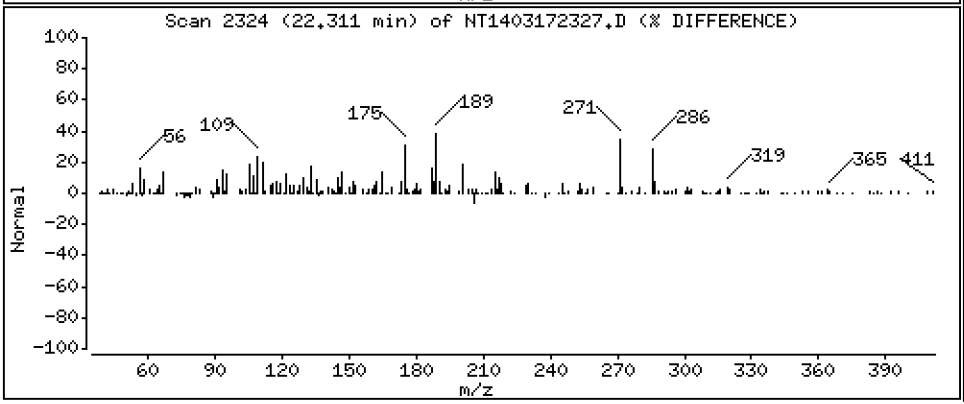












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Date : 18-MAR-2023 06:06

Client ID:

Instrument: nt14.i

Sample Info: 23B0276-01

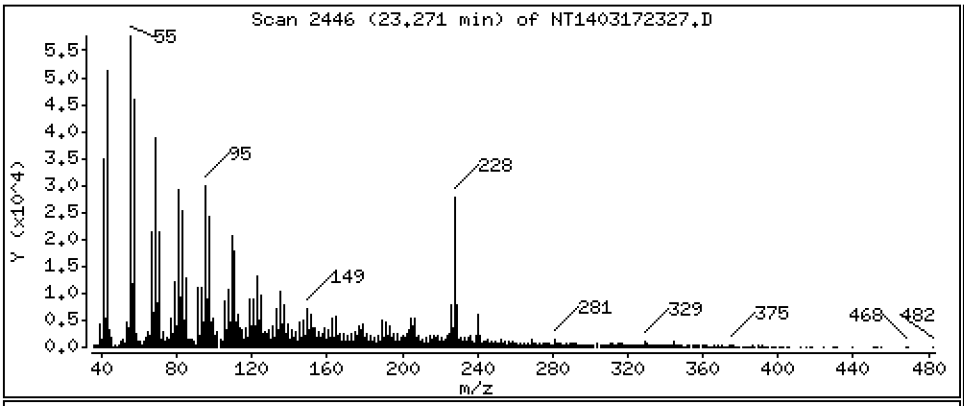
Operator: JGR

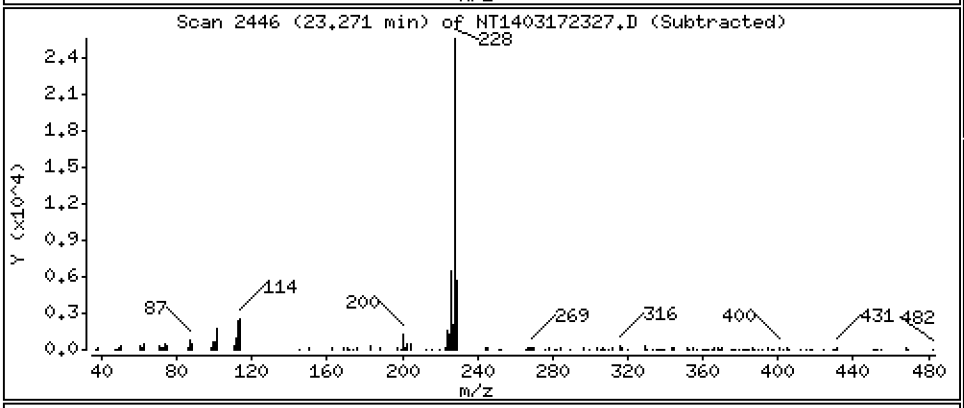
Column phase: ZB-5msi

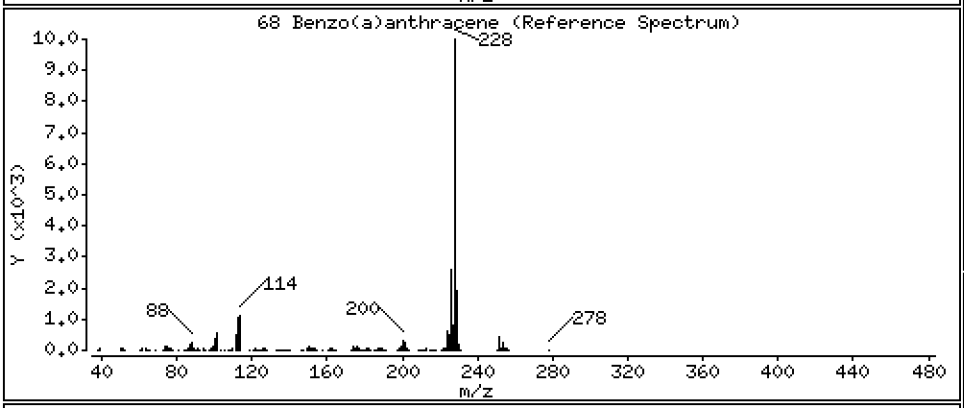
Column diameter: 0.25

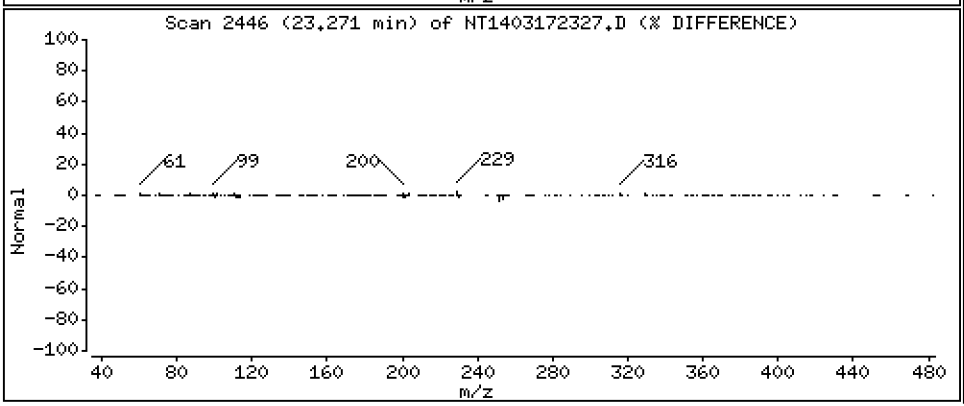
68 Benzo(a)anthracene

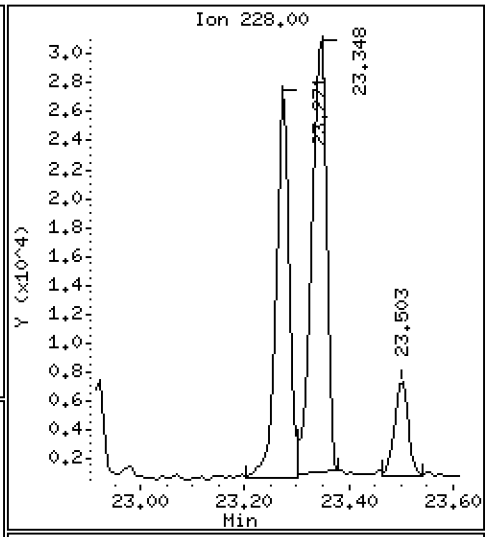
Concentration: 0.6672 ug/mL

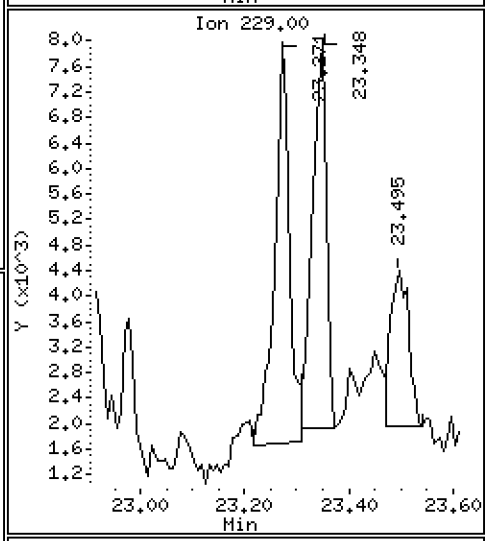


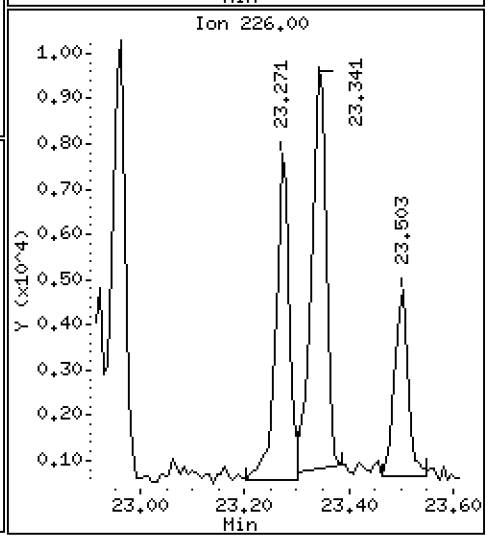












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Date : 18-MAR-2023 06:06

Client ID:

Instrument: nt14.i

Sample Info: 23B0276-01

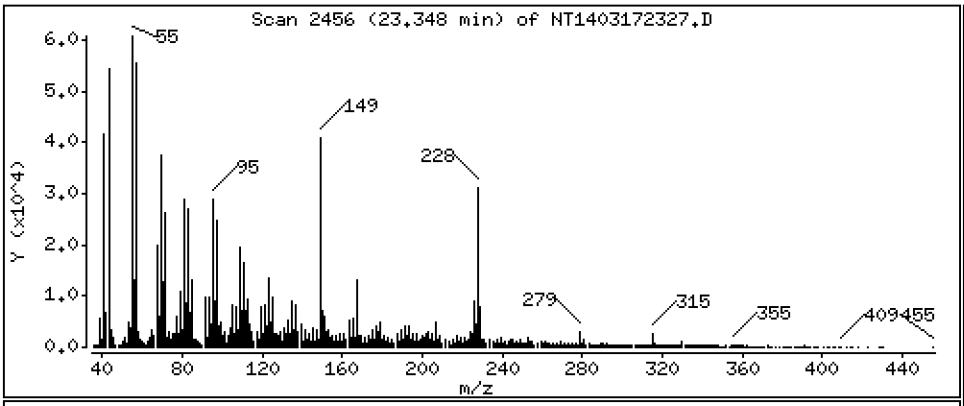
Operator: JGR

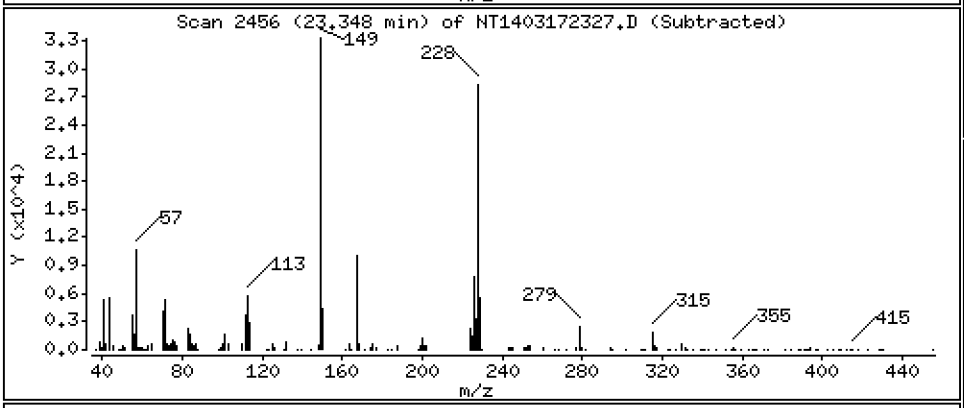
Column phase: ZB-5msi

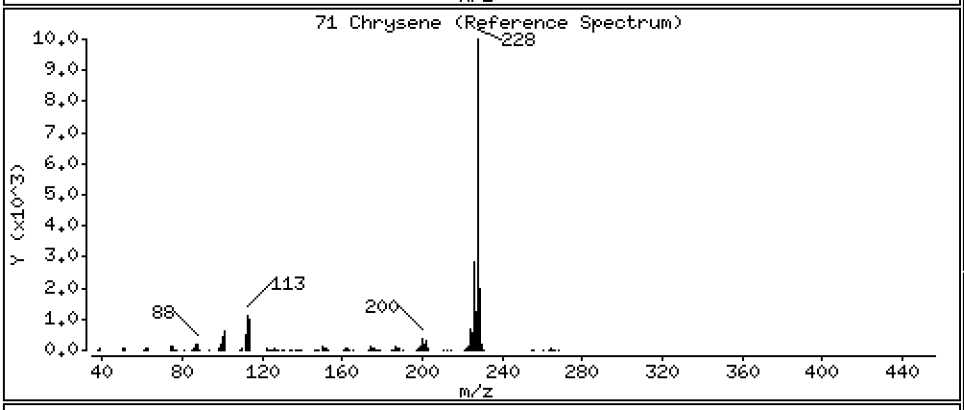
Column diameter: 0.25

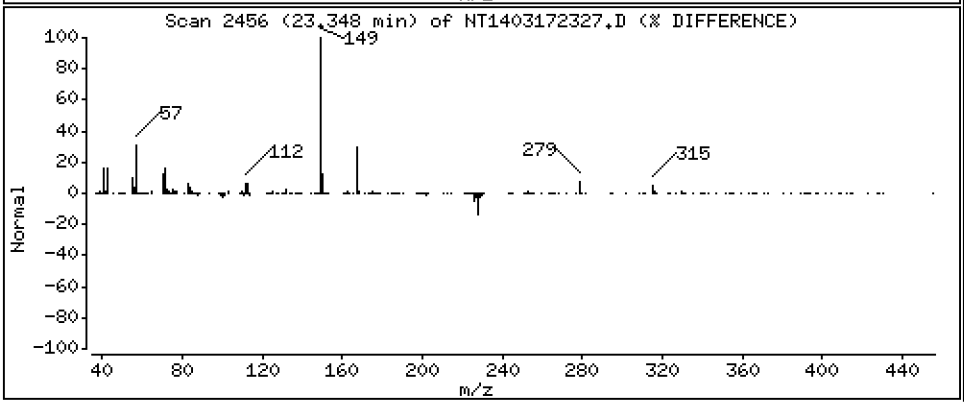
71 Chrysene

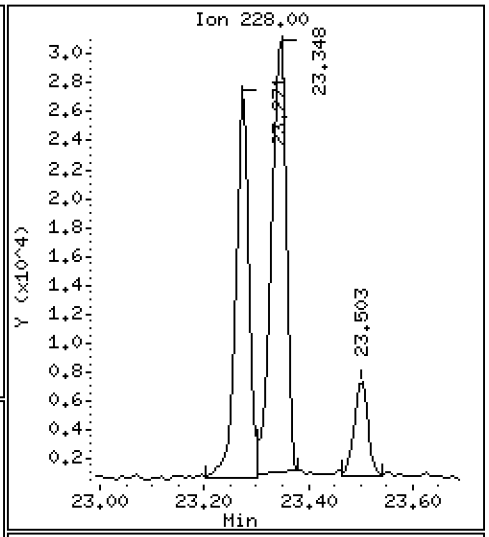
Concentration: 0.9078 ug/mL

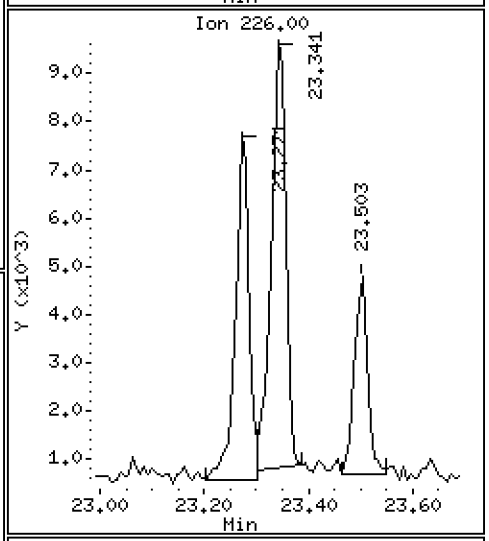


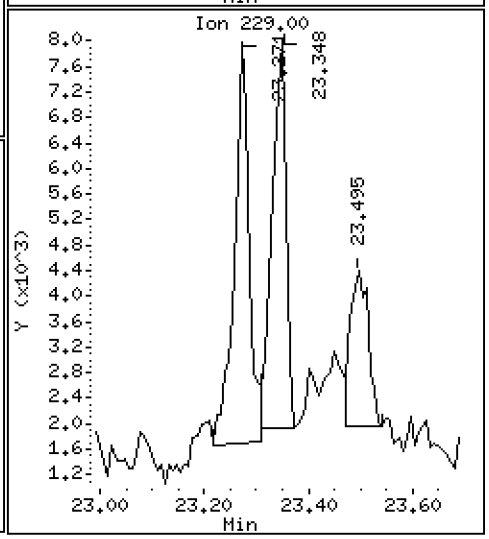












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Date : 18-MAR-2023 06:06

Client ID:

Instrument: nt14.i

Sample Info: 23B0276-01

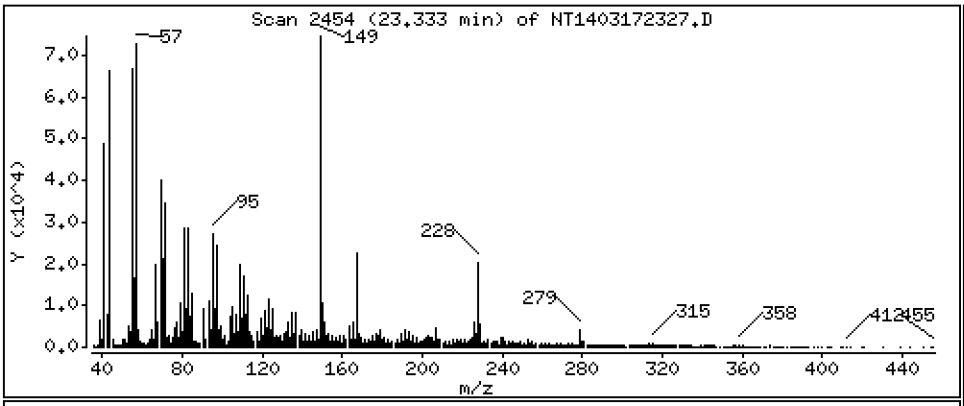
Operator: JGR

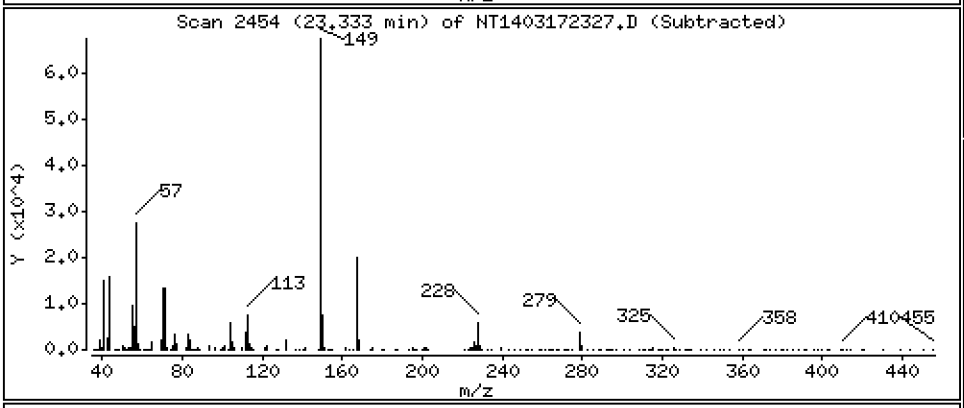
Column phase: ZB-5msi

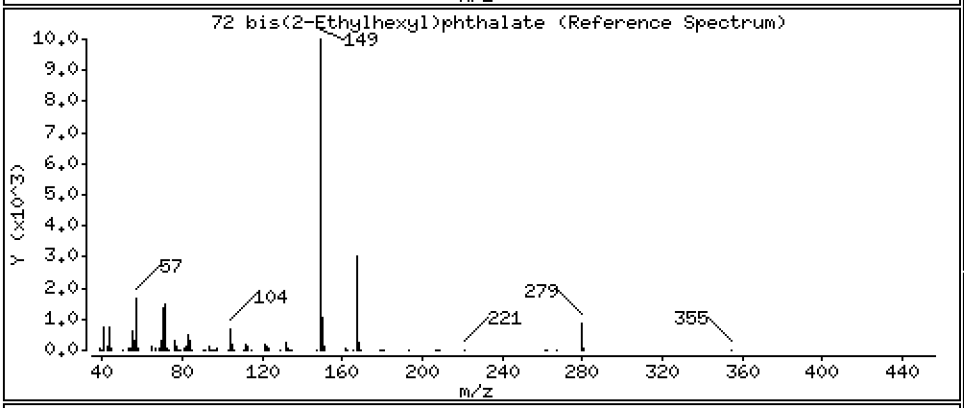
Column diameter: 0.25

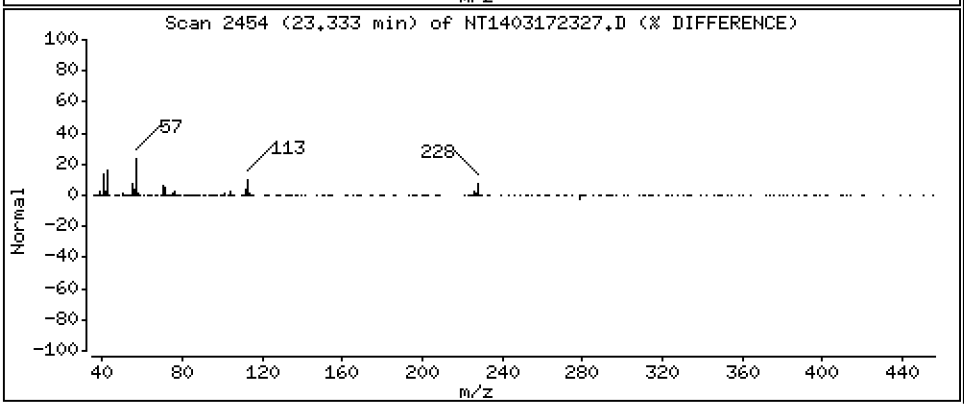
72 bis(2-Ethylhexyl)phthalate

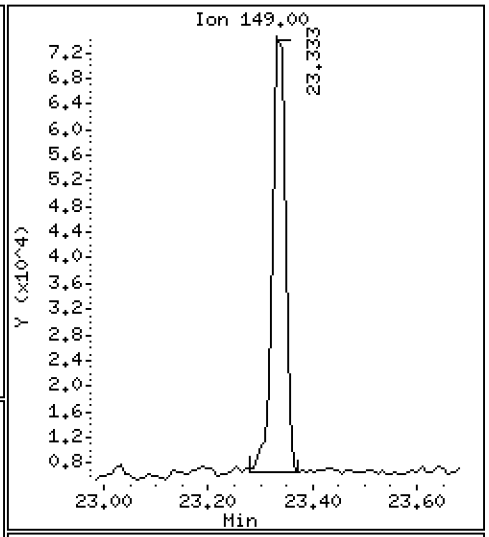
Concentration: 2.068 ug/mL

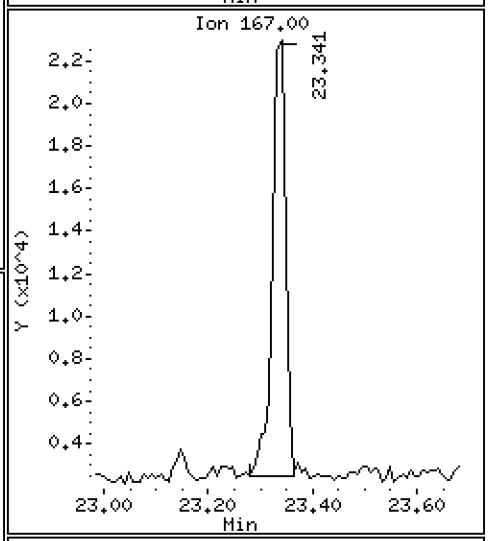


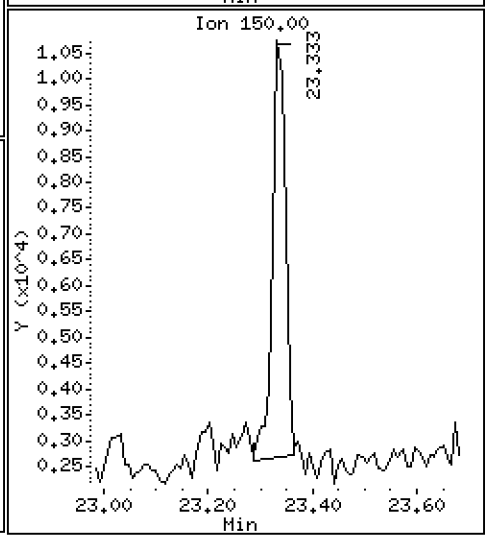












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Date : 18-MAR-2023 06:06

Client ID:

Instrument: nt14.i

Sample Info: 23B0276-01

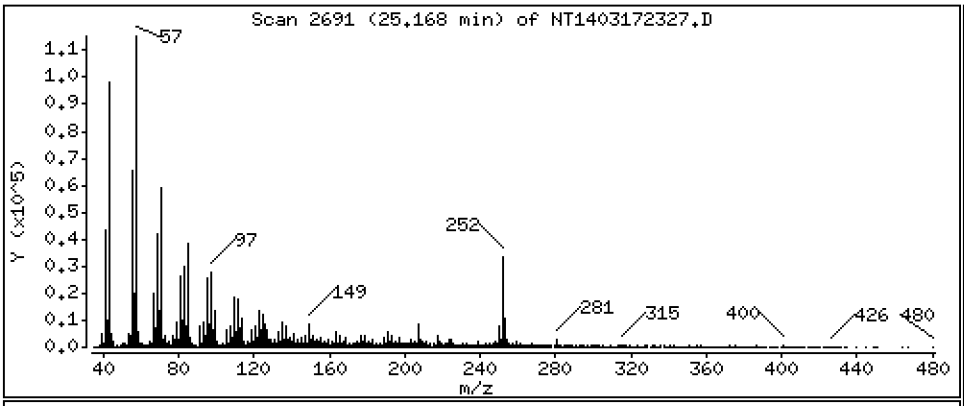
Operator: JGR

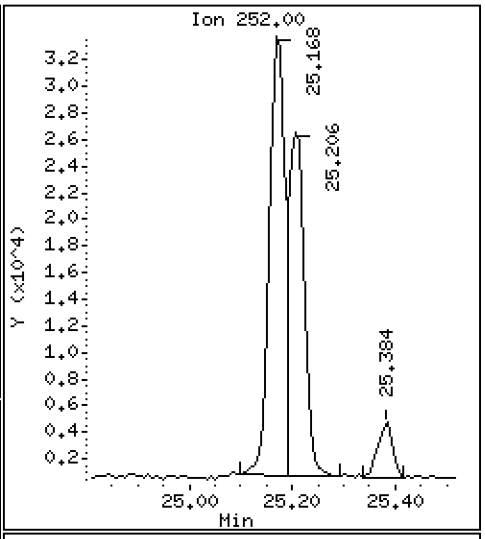
Column phase: ZB-5msi

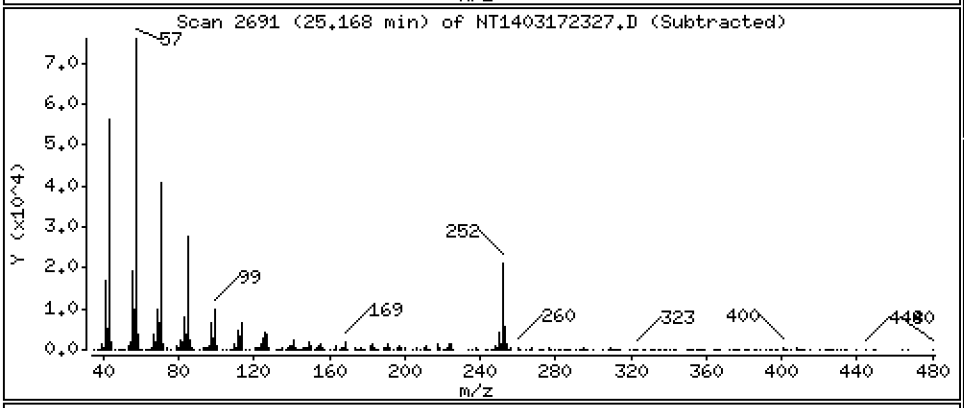
Column diameter: 0.25

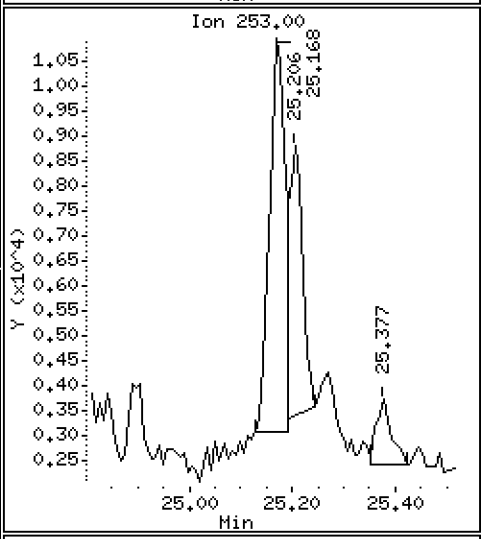
74 Benzo(b)fluoranthene

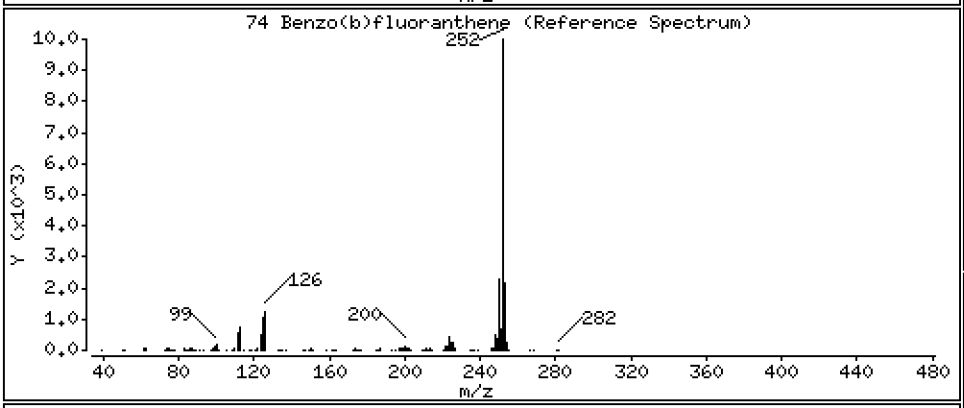
Concentration: 1.376 ug/mL

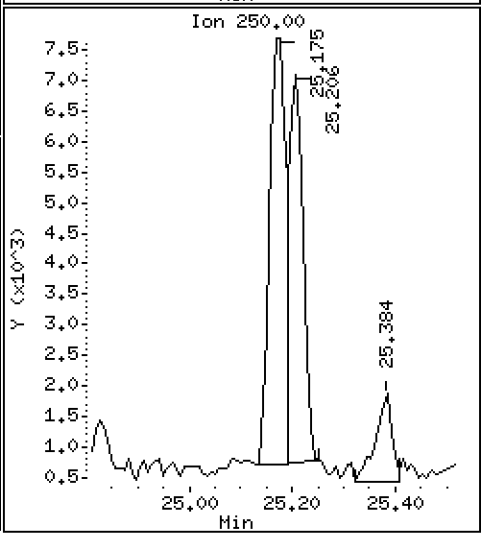


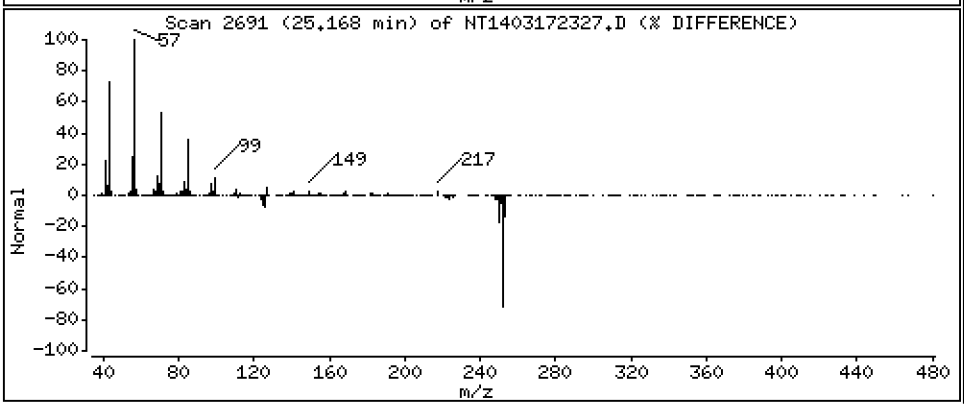












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Date : 18-MAR-2023 06:06

Client ID:

Instrument: nt14.i

Sample Info: 23B0276-01

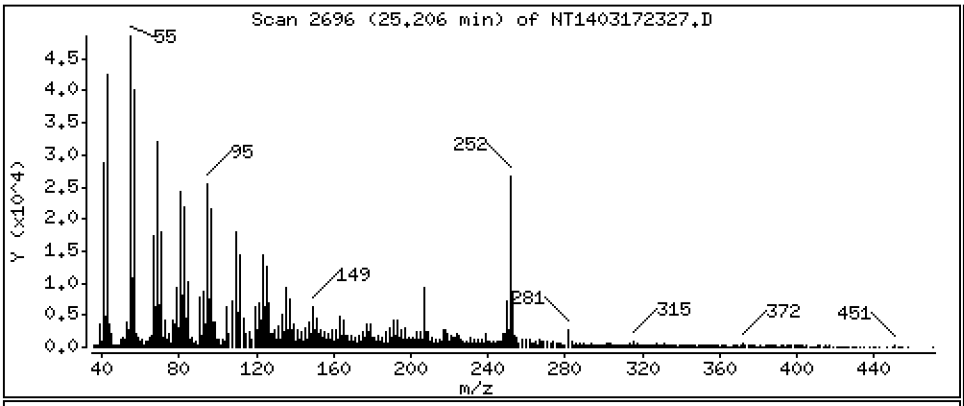
Operator: JGR

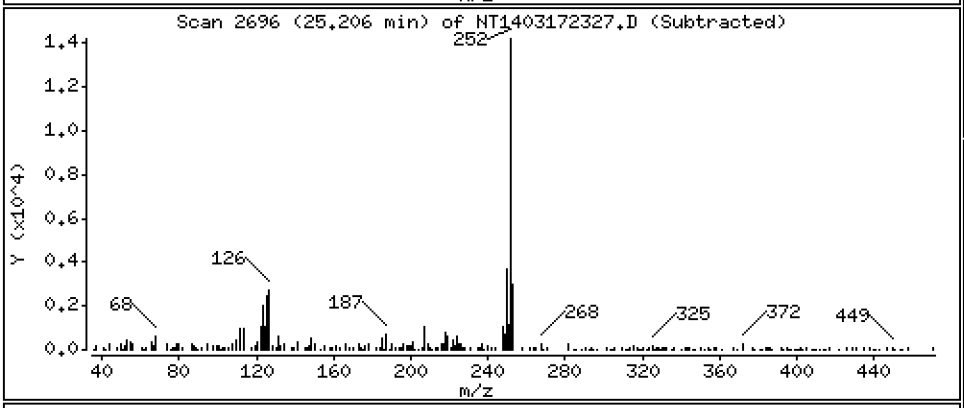
Column phase: ZB-5msi

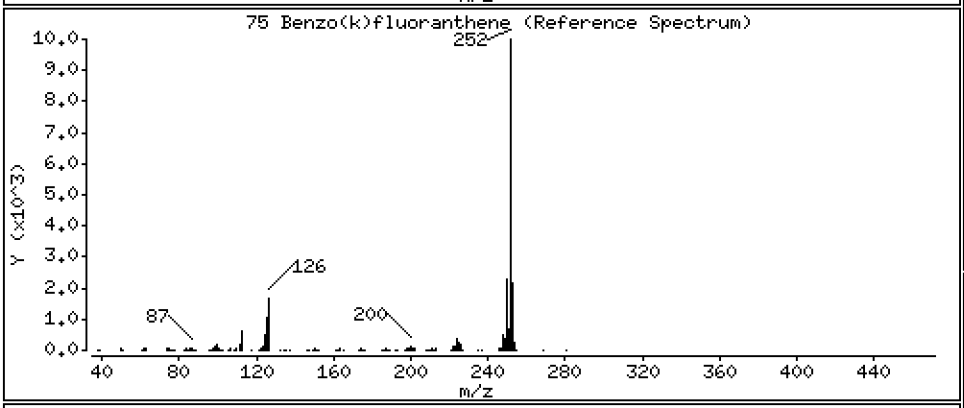
Column diameter: 0.25

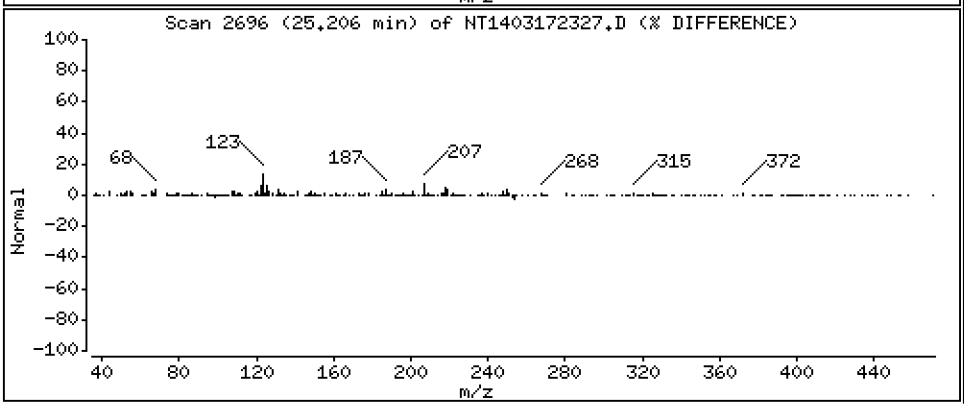
75 Benzo(k)fluoranthene

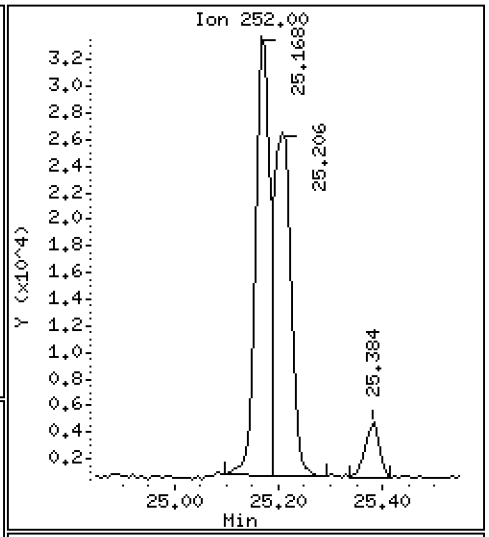
Concentration: 1.179 ug/mL

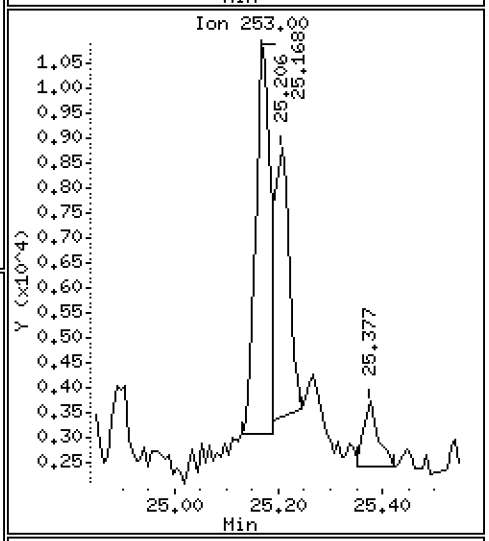


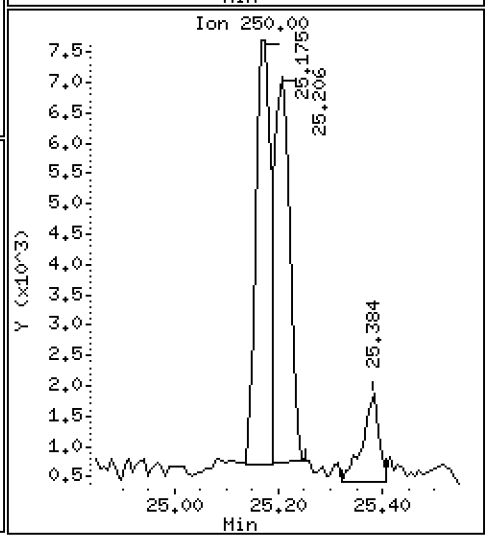












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Date : 18-MAR-2023 06:06

Client ID:

Instrument: nt14.i

Sample Info: 23B0276-01

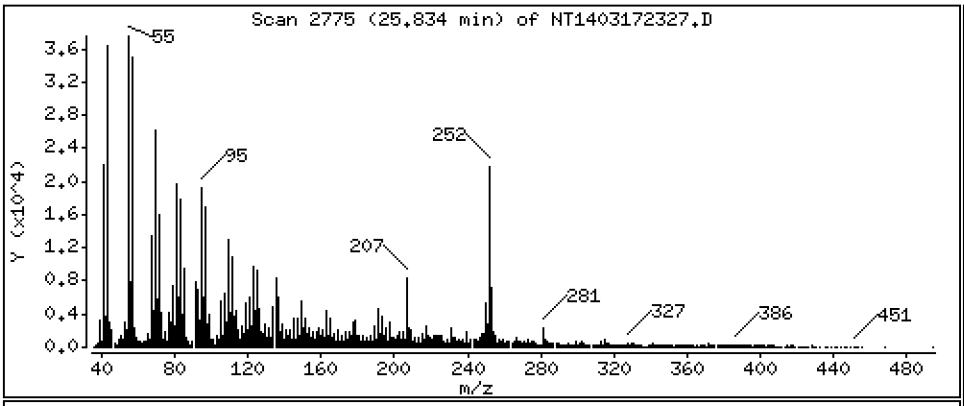
Operator: JGR

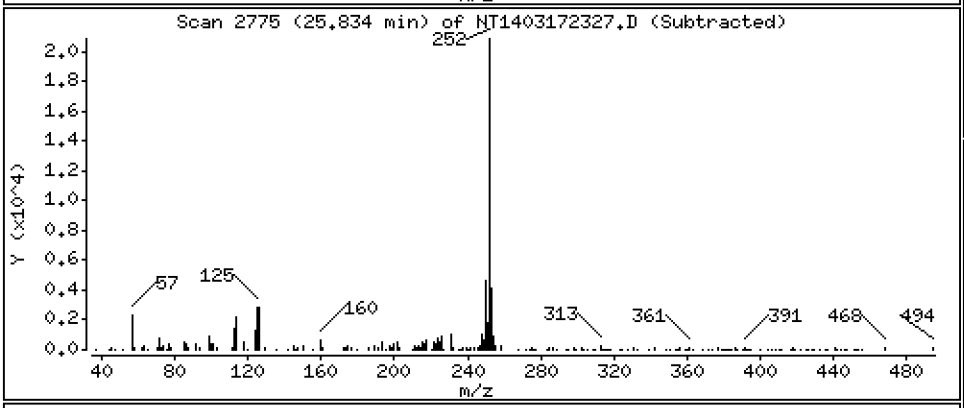
Column phase: ZB-5msi

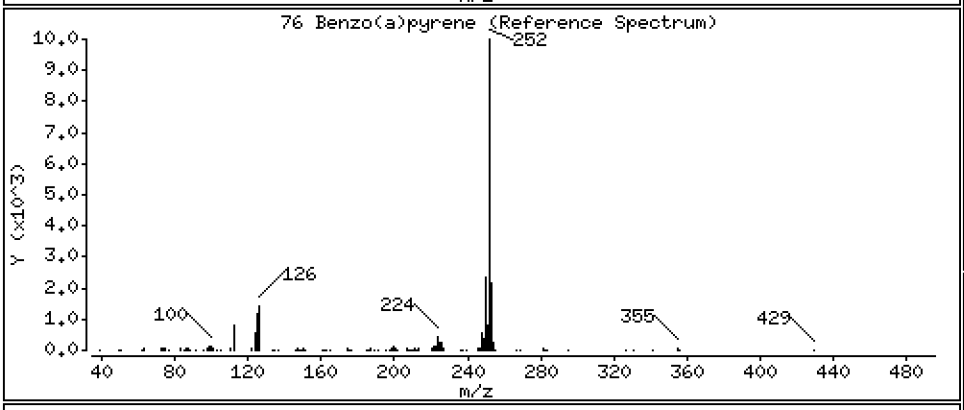
Column diameter: 0.25

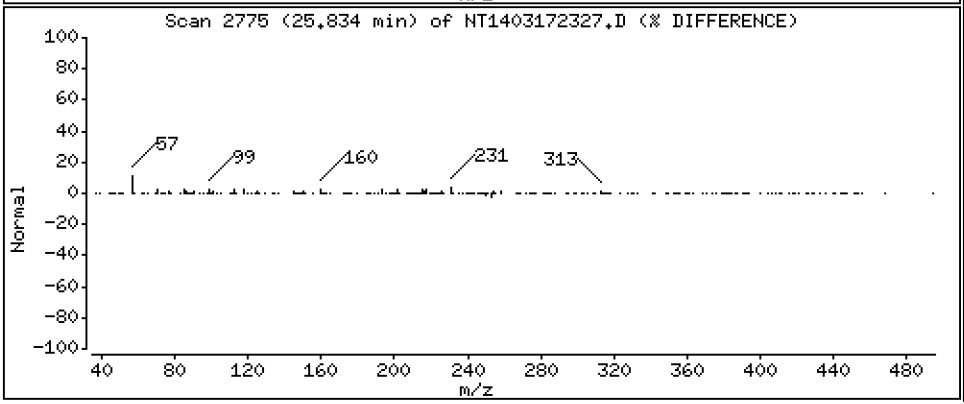
76 Benzo(a)pyrene

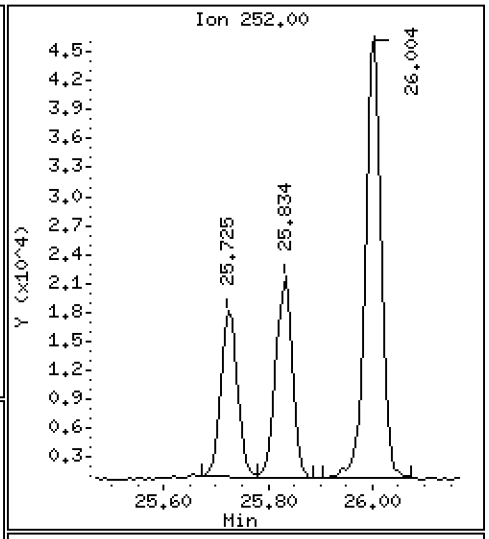
Concentration: 1.058 ug/mL

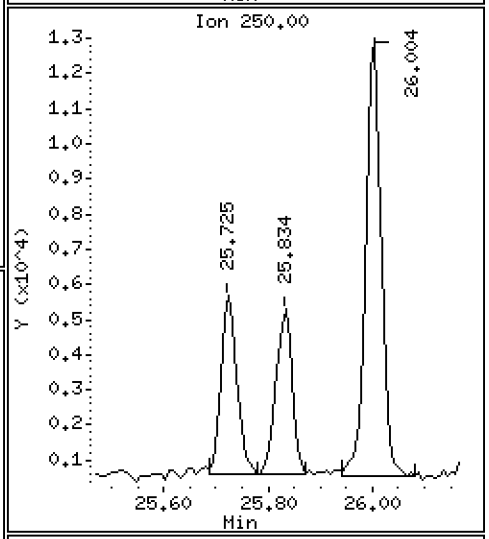


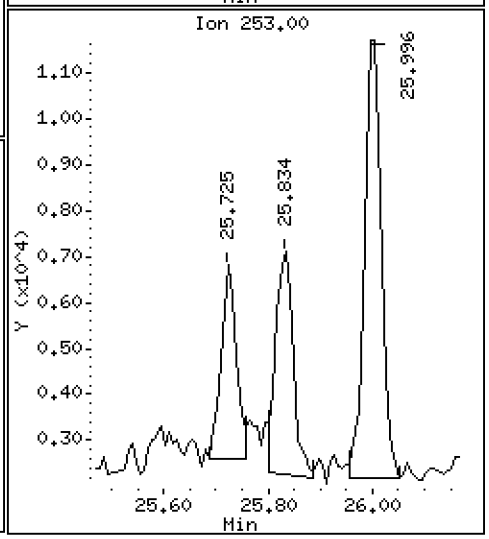












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Date : 18-MAR-2023 06:06

Client ID:

Instrument: nt14.i

Sample Info: 23B0276-01

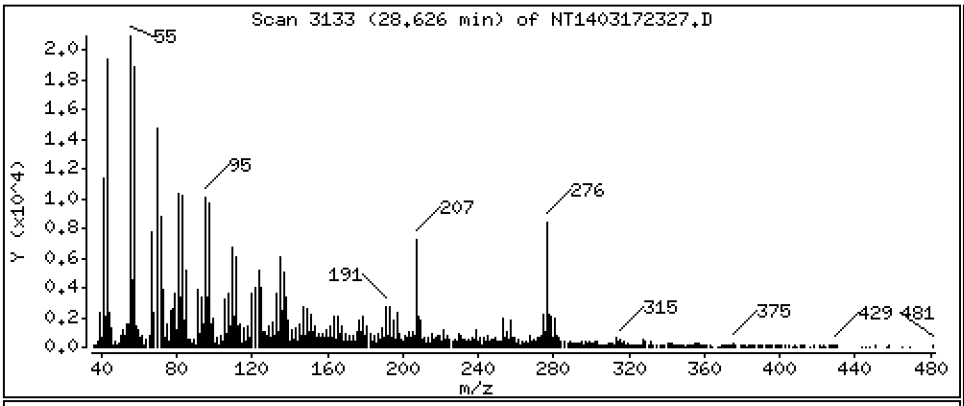
Operator: JGR

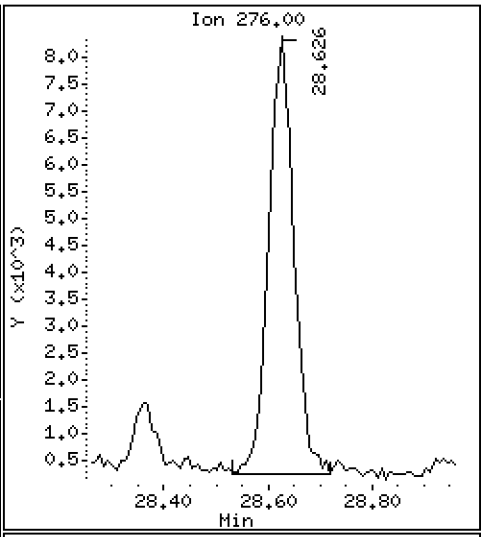
Column phase: ZB-5msi

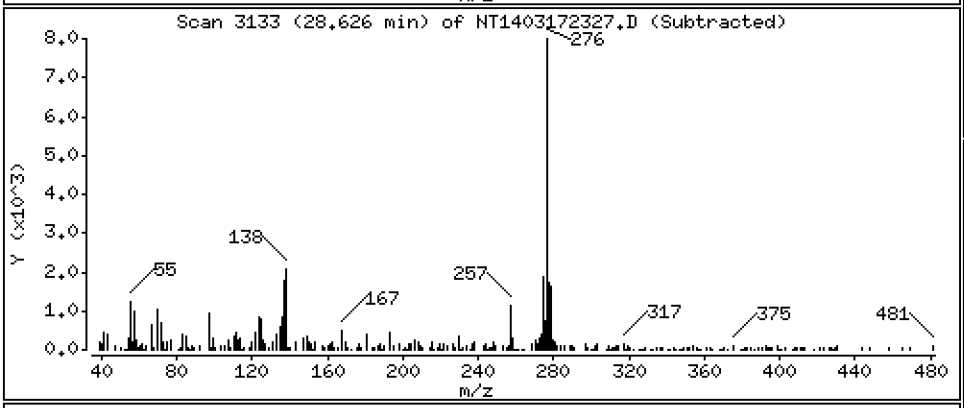
Column diameter: 0.25

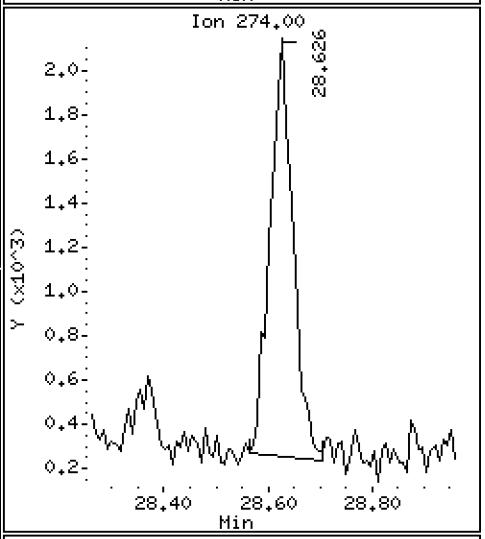
78 Indeno(1,2,3-cd)pyrene

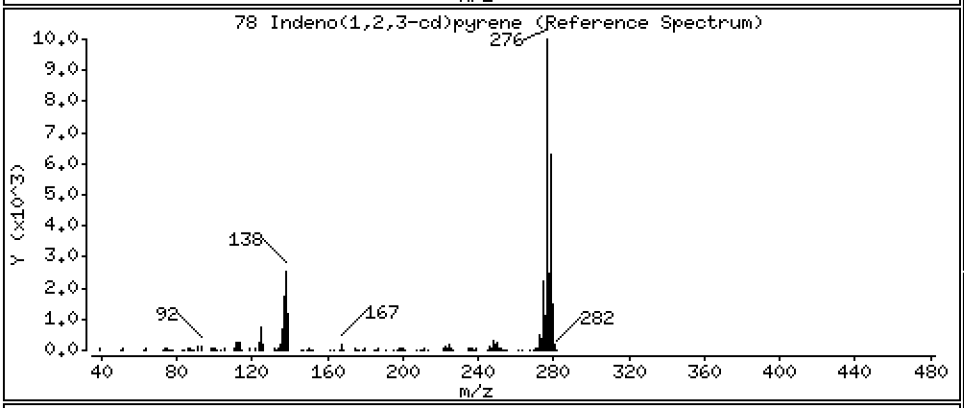
Concentration: 0.5819 ug/mL

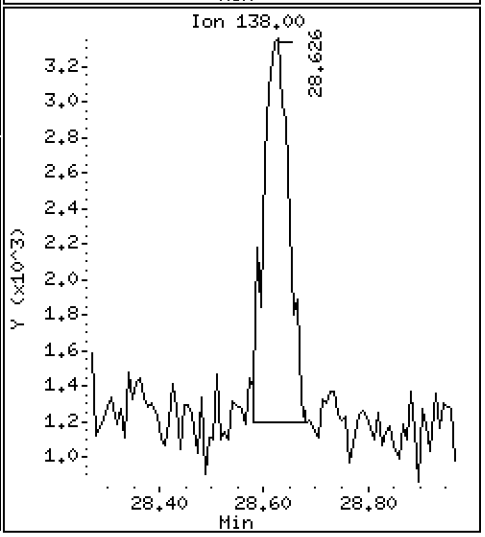


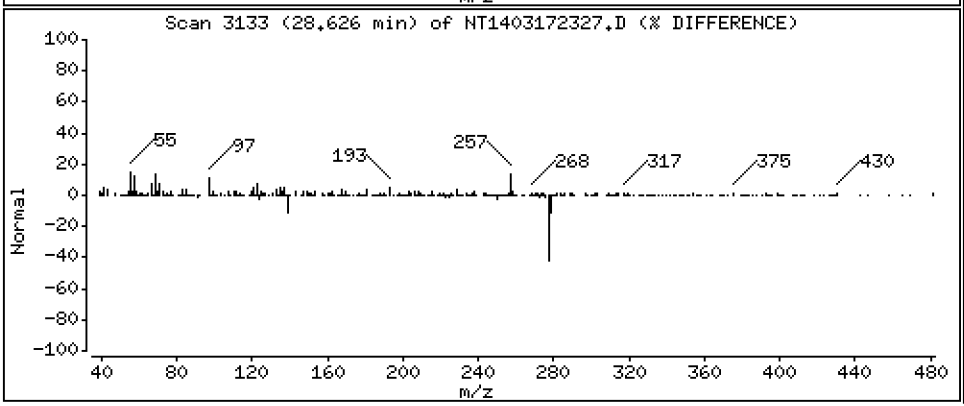












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Date : 18-MAR-2023 06:06

Client ID:

Instrument: nt14.i

Sample Info: 23B0276-01

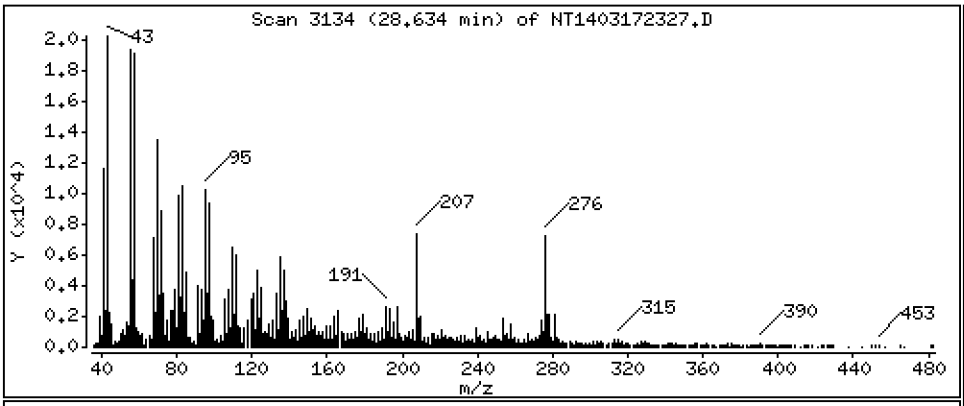
Operator: JGR

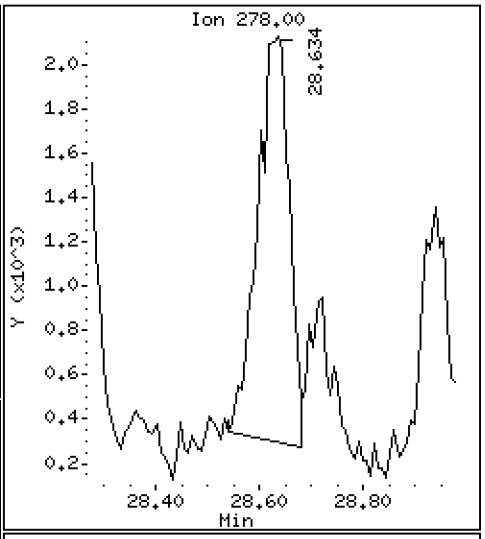
Column phase: ZB-5msi

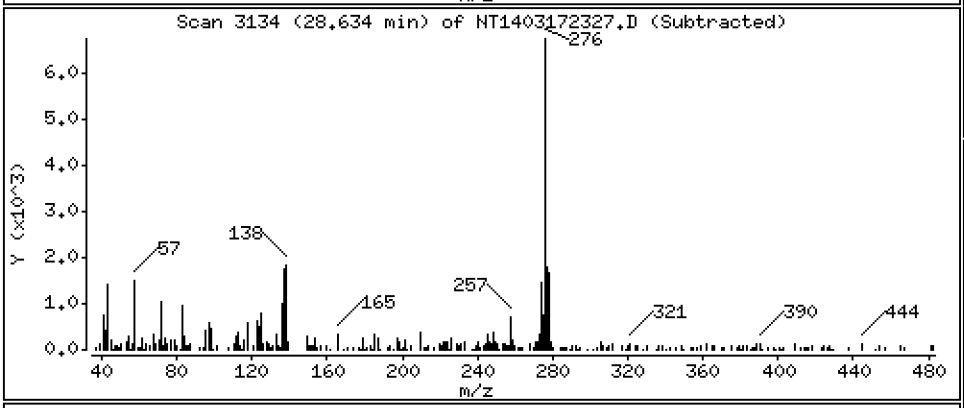
Column diameter: 0.25

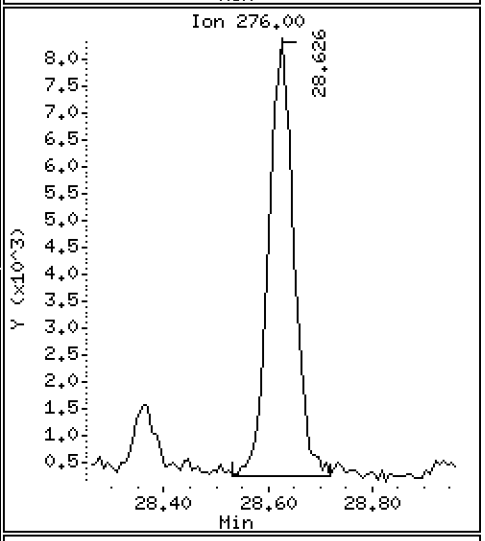
79 Dibenzo(a,h)anthracene

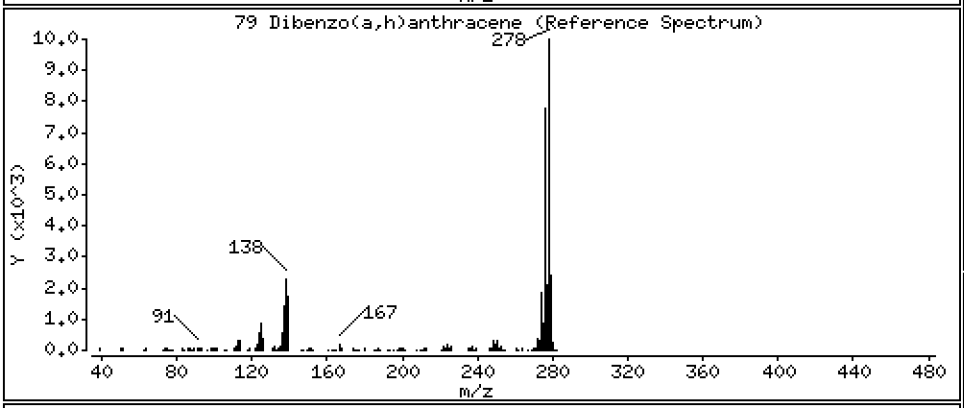
Concentration: 0.1956 ug/mL

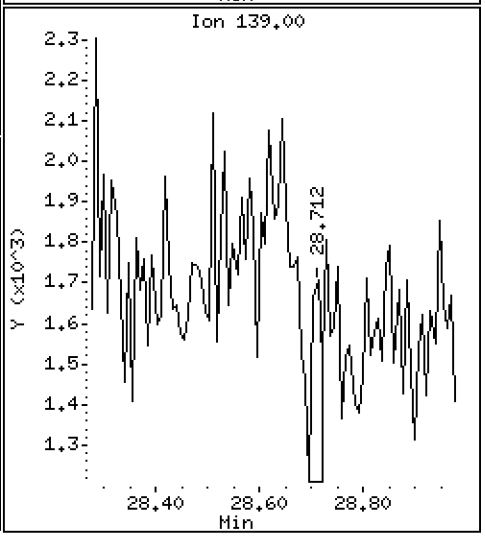


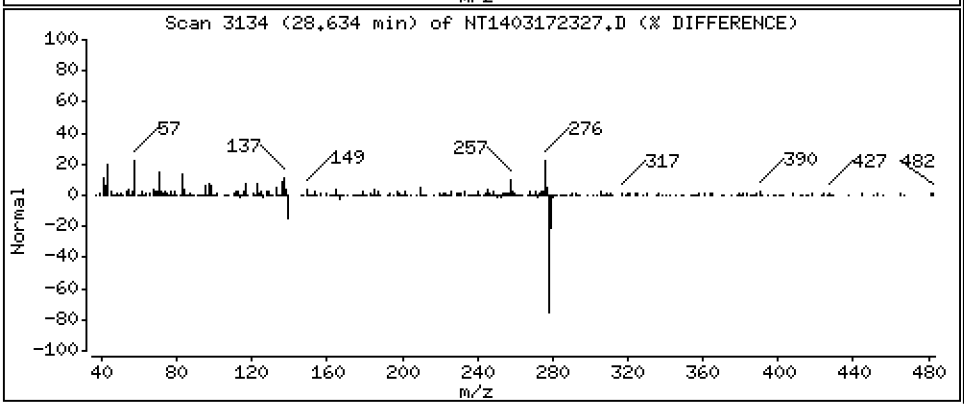












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Date : 18-MAR-2023 06:06

Client ID:

Instrument: nt14.i

Sample Info: 23B0276-01

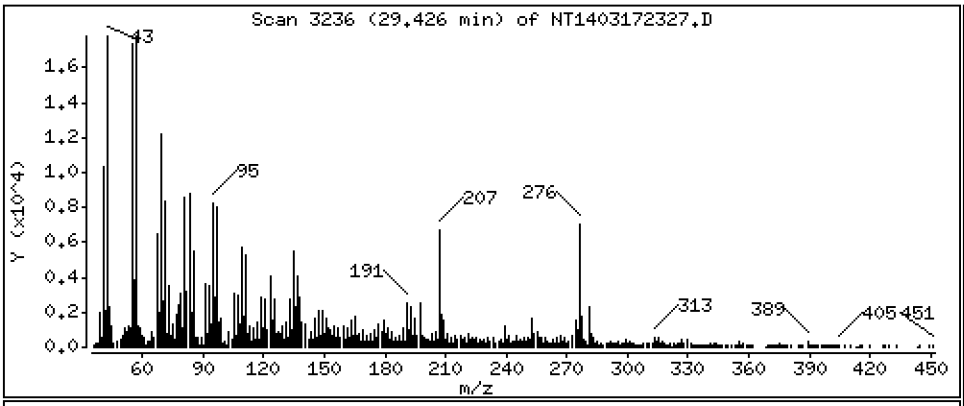
Operator: JGR

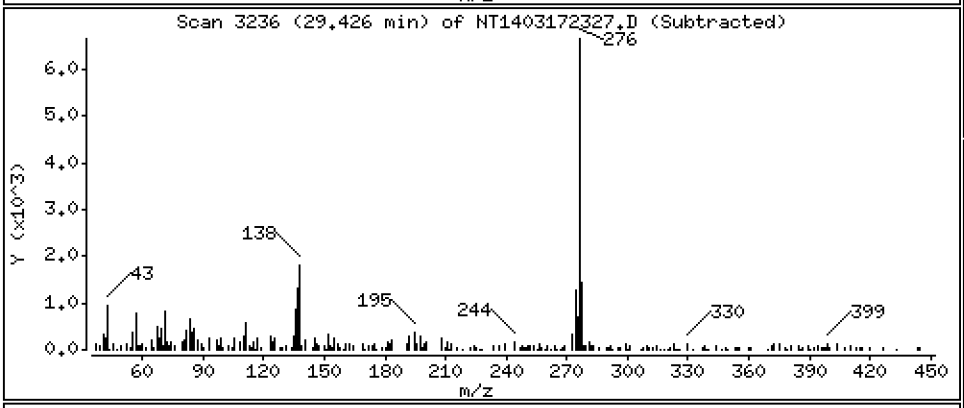
Column phase: ZB-5msi

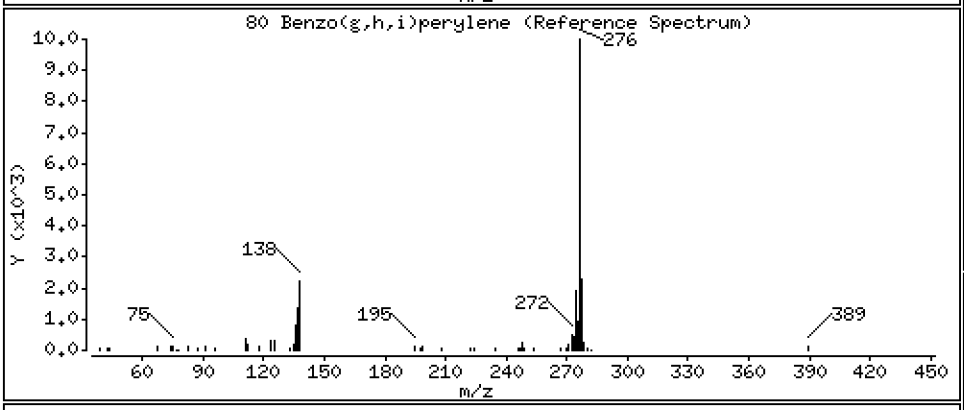
Column diameter: 0.25

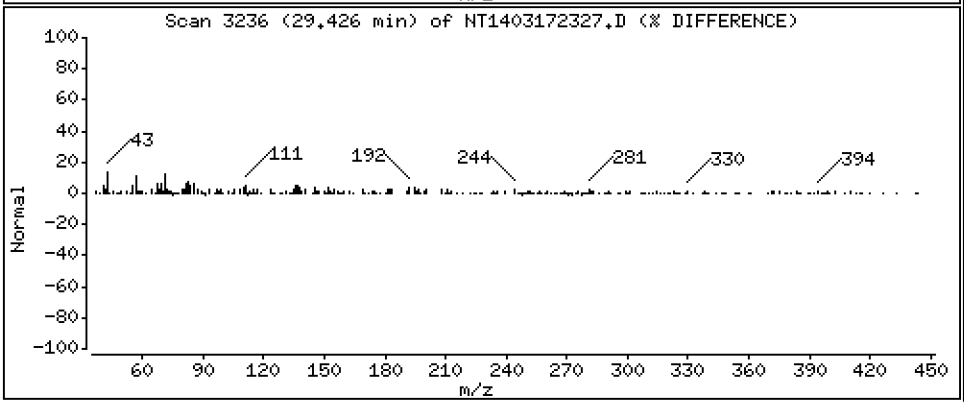
80 Benzo(g,h,i)perylene

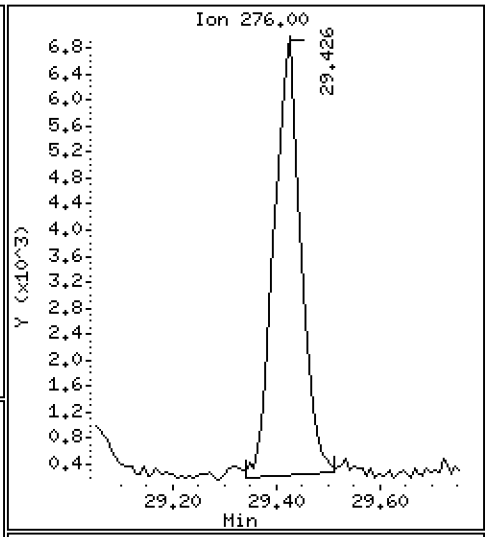
Concentration: 0.6235 ug/mL

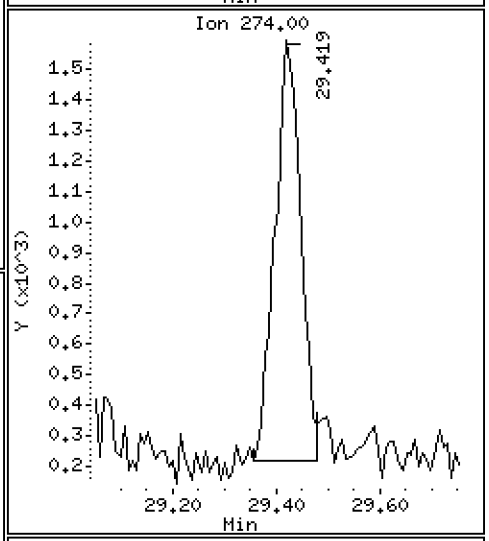


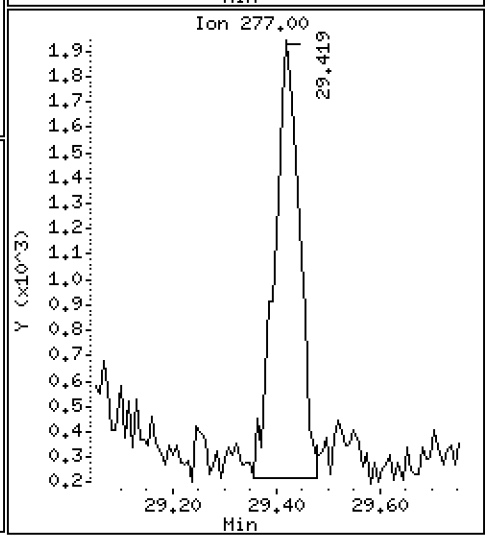












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Date : 18-MAR-2023 06:06

Client ID:

Instrument: nt14.i

Sample Info: 23B0276-01

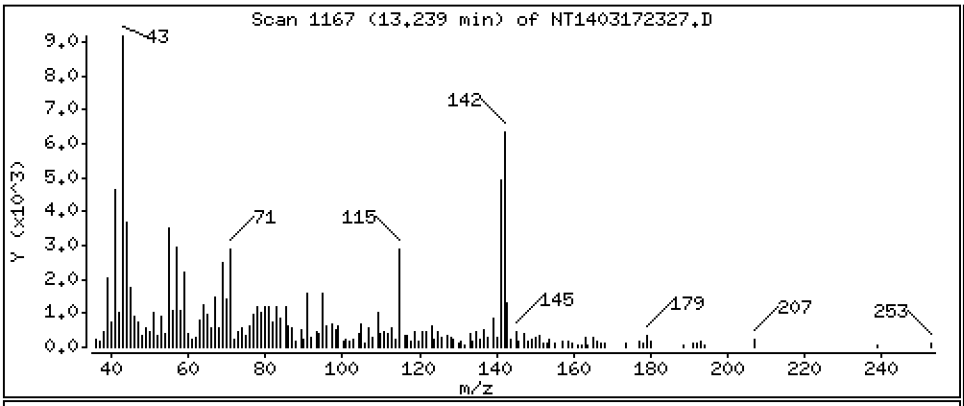
Operator: JGR

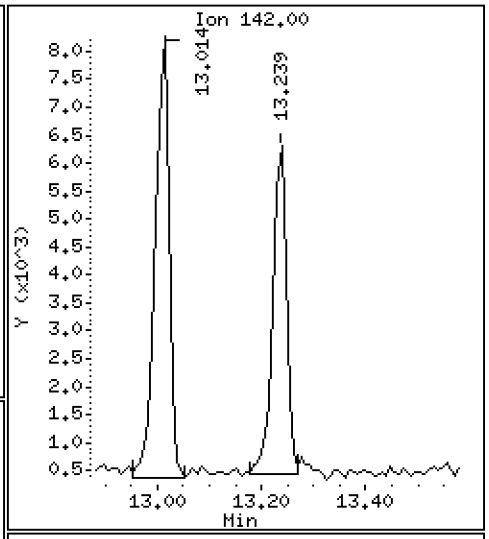
Column phase: ZB-5msi

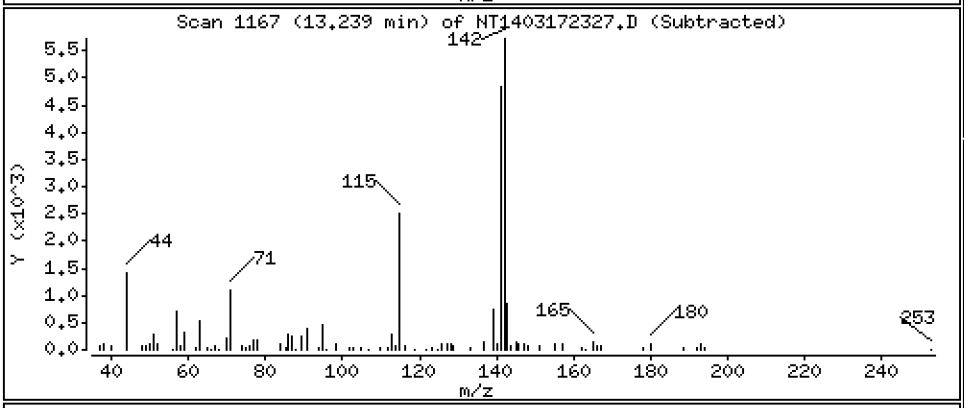
Column diameter: 0.25

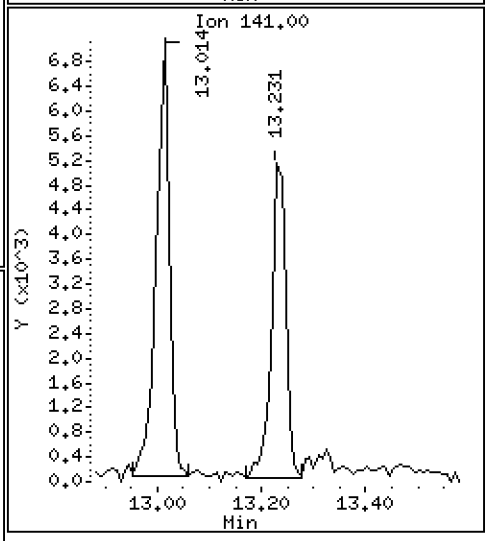
105 1-methylnaphthalene

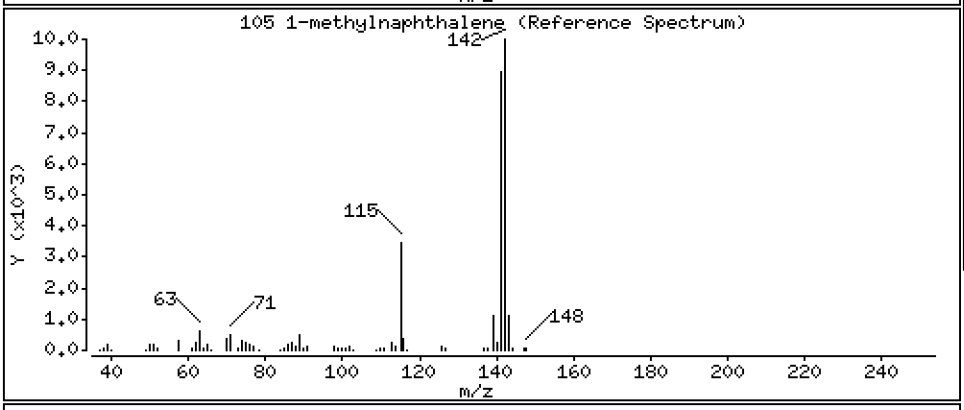
Concentration: 0.07178 ug/mL

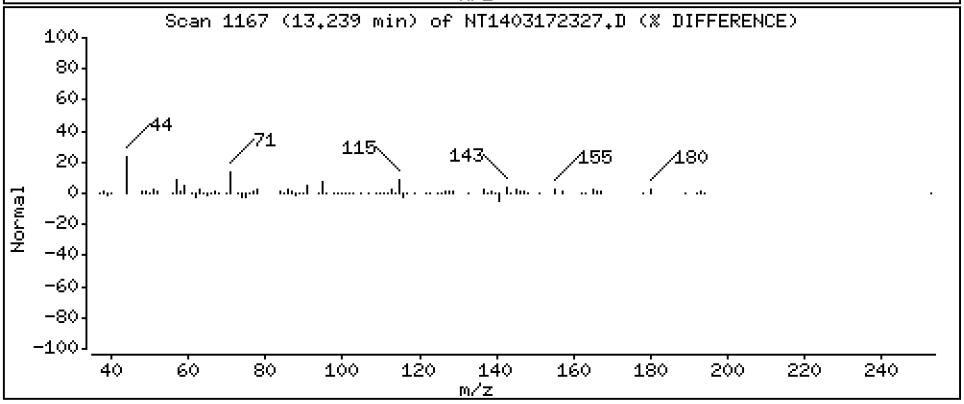












Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172327.D

Date : 18-MAR-2023 06:06

Client ID:

Instrument: nt14.i

Sample Info: 23B0276-01

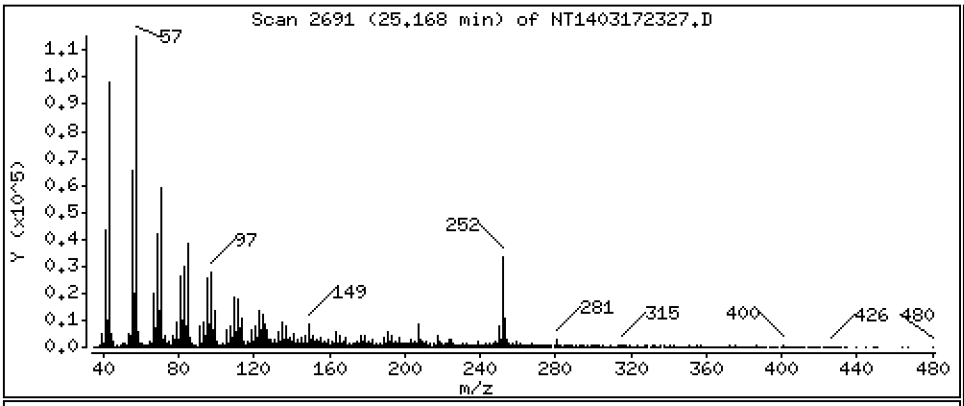
Operator: JGR

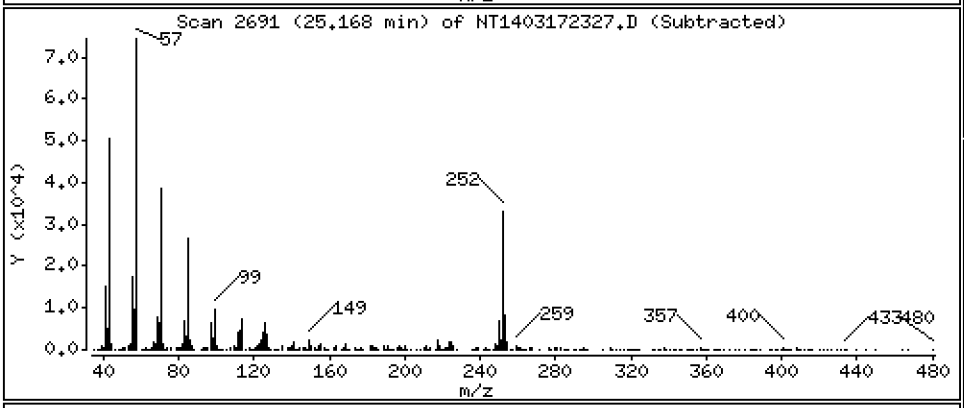
Column phase: ZB-5msi

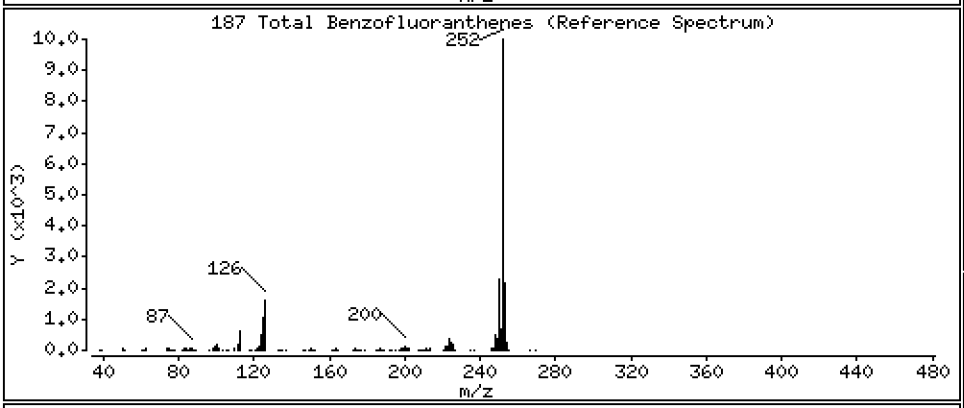
Column diameter: 0.25

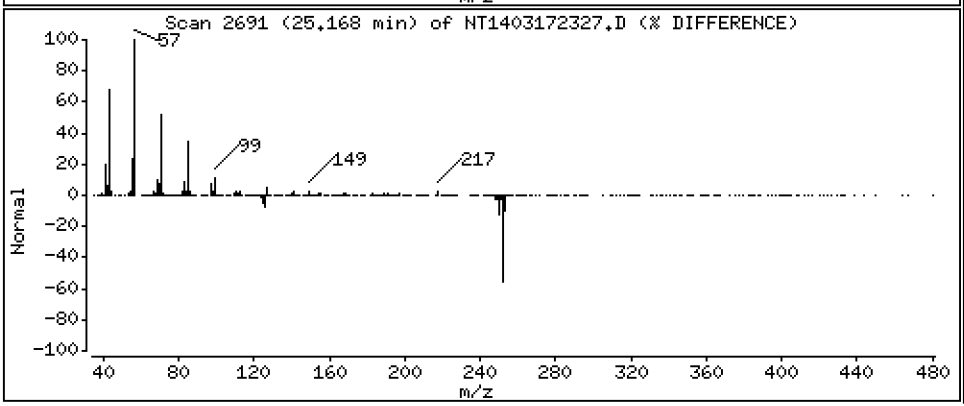
187 Total Benzofluoranthenes

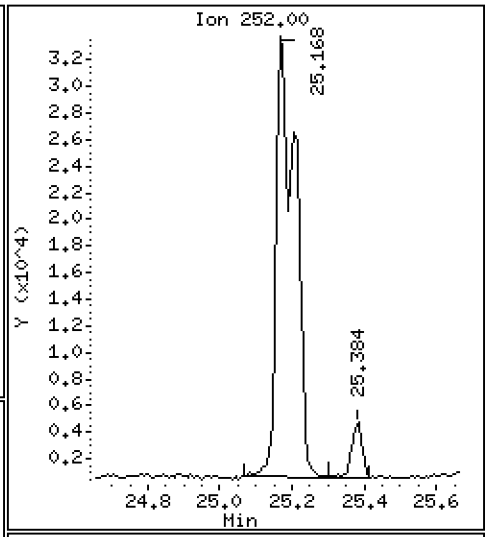
Concentration: 2.510 ug/mL

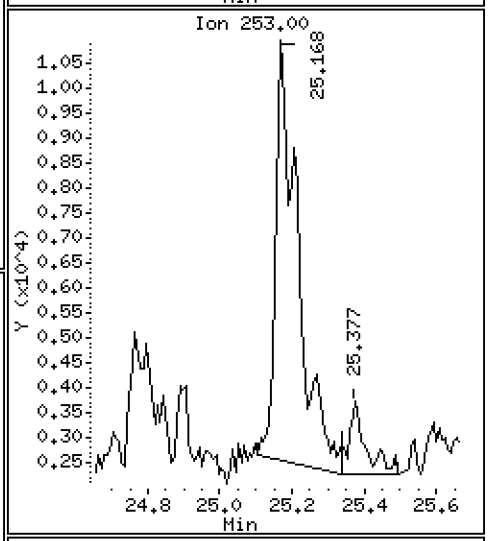


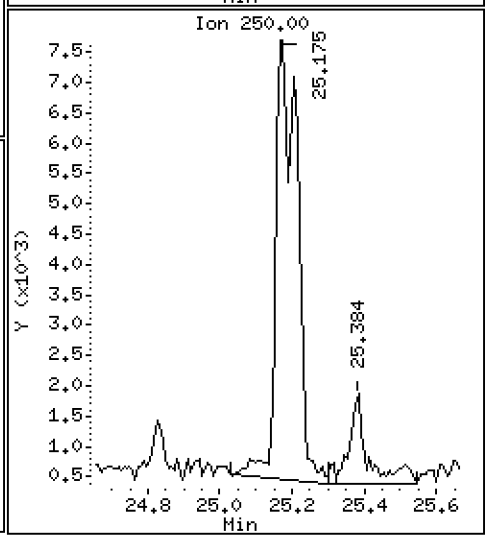












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230317.b\NT1403172327.D
Lab Smp Id: 23B0276-01
Inj Date : 18-MAR-2023 06:06 MS Autotune Date: 11-MAR-2023 16:01
Operator : JGR Inst ID: nt14.i
Smp Info : 23B0276-01
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230317.b\ABN.m
Meth Date : 22-Mar-2023 08:57 van Quant Type: ISTD
Cal Date : 15-MAR-2023 15:50 Cal File: NT1403152308.D
Als bottle: 23
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.844	6.821	(1.000)	407224	5.52980	5.530
$	2 Phenol-d5	99	8.420	8.412	(1.000)	536151	5.52992	5.530
	3 Phenol	94	8.443	8.436	(1.000)	12458	0.12090	0.1209
$	5 2-Chlorophenol-d4	132	8.698	8.698	(1.000)	465178	6.08579	6.086
	4 Bis(2-Chloroethyl)ether	93	Compound Not Detected.					
	6 2-Chlorophenol	128	Compound Not Detected.					
	7 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8 1,4-Dichlorobenzene-d4	152	9.070	9.062	(1.000)	216795	4.00000	(M)
	9 1,4-Dichlorobenzene	146	9.093	9.093	(1.003)	2105	0.02662	0.02662(M)
$	10 1,2-Dichlorobenzene-d4	152	9.427	9.427	(1.000)	195866	3.83556	3.836
	12 1,2-Dichlorobenzene	146	Compound Not Detected.					
	11 Benzyl alcohol	108	9.365	9.341	(1.033)	8210	0.17115	0.1712(MH)
	14 2,2'-oxybis(1-Chloropropane)	121	Compound Not Detected.					
	13 2-Methylphenol	108	Compound Not Detected.					
	17 Hexachloroethane	117	Compound Not Detected.					
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	15 4-Methylphenol	108	9.838	9.830	(1.000)	5909	0.06851	0.06851
$	18 Nitrobenzene-d5	82	10.164	10.164	(0.879)	366902	4.04938	4.049
	19 Nitrobenzene	77	Compound Not Detected.					
	20 Isophorone	82	Compound Not Detected.					
	21 2-Nitrophenol	139	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	Compound Not Detected.					
	23 Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
	24 Benzoic acid	105	11.002	11.103	(0.951)	26575	0.42282	0.4228(M)
	25 2,4-Dichlorophenol	162	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	11.567	11.567	(1.000)	856195	4.00000	
	28 Naphthalene	128	11.606	11.606	(1.003)	19362	0.08465	0.08465
	29 4-Chloroaniline	127	Compound Not Detected.					
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	31 4-Chloro-3-methylphenol	107	Compound Not Detected.					
	32 2-Methylnaphthalene	142	13.014	13.006	(1.125)	14473	0.09073	0.09073
	33 Hexachlorocyclopentadiene	237	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
34	2,4,6-Trichlorophenol	196	Compound Not Detected.					
35	2,4,5-Trichlorophenol	196	Compound Not Detected.					
$ 36	2-Fluorobiphenyl	172	13.795	13.795	(0.907)	668385	4.38716	4.387
37	2-Chloronaphthalene	162	Compound Not Detected.					
38	2-Nitroaniline	65	Compound Not Detected.					
39	Dimethylphthalate	163	14.701	14.701	(0.967)	11694	0.08336	0.08336
40	Acenaphthylene	152	14.887	14.879	(0.979)	6799	0.03100	0.03100
41	2,6-Dinitrotoluene	165	Compound Not Detected.					
* 42	Acenaphthene-d10	164	15.204	15.196	(1.000)	420684	4.00000	
43	3-Nitroaniline	138	Compound Not Detected.					
44	Acenaphthene	153	15.266	15.266	(1.004)	7915	0.06181	0.06181
45	2,4-Dinitrophenol	184	Compound Not Detected.					
46	Dibenzofuran	168	15.598	15.590	(1.026)	12186	0.06666	0.06666
47	4-Nitrophenol	109	Compound Not Detected.					
48	2,4-Dinitrotoluene	165	Compound Not Detected.					
50	Diethylphthalate	149	16.155	16.163	(1.063)	36749	0.25338	0.2534
49	Fluorene	166	16.309	16.309	(1.073)	10859	0.06266	0.06266
51	4-Chlorophenyl-phenylether	204	Compound Not Detected.					
52	4-Nitroaniline	138	Compound Not Detected.					
53	4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
54	N-Nitrosodiphenylamine	169	Compound Not Detected.					
$ 55	2,4,6-Tribromophenol	330	16.849	16.841	(1.108)	106486	6.66718	6.667
56	4-Bromophenyl-phenylether	248	Compound Not Detected.					
57	Hexachlorobenzene	284	Compound Not Detected.					
58	Pentachlorophenol	266	Compound Not Detected.					
* 59	Phenanthrene-d10	188	18.255	18.240	(1.000)	676256	4.00000	
60	Phenanthrene	178	18.302	18.294	(1.003)	130789	0.67691	0.6769
61	Anthracene	178	18.395	18.387	(1.008)	33308	0.17893	0.1789
62	Carbazole	167	18.720	18.712	(1.025)	12252	0.07398	0.07398
63	Di-n-butylphthalate	149	19.524	19.509	(1.070)	16572	0.07894	0.07894
64	Fluoranthene	202	20.731	20.677	(0.890)	189537	2.43642	2.436
65	Pyrene	202	21.133	21.103	(0.907)	342921	4.29844	4.298
$ 66	Terphenyl-d14	244	21.397	21.389	(0.918)	393038	7.27751	7.278
67	Butylbenzylphthalate	149	22.310	22.310	(0.957)	9325	0.26680	0.2668
68	Benzo(a)anthracene	228	23.270	23.263	(0.999)	47038	0.66717	0.6672
* 69	Chrysene-d12	240	23.301	23.294	(1.000)	191213	4.00000	
70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
71	Chrysene	228	23.348	23.340	(1.002)	57927	0.90782	0.9078
72	bis(2-Ethylhexyl)phthalate	149	23.332	23.332	(0.959)	112191	2.06798	2.068
* 134	Di-n-octylphthalate-d4	153	24.323	24.316	(1.000)	412116	4.00000	
73	Di-n-octylphthalate	149	Compound Not Detected.					
74	Benzo(b)fluoranthene	252	25.167	25.159	(0.970)	69590	1.37633	1.376
75	Benzo(k)fluoranthene	252	25.206	25.198	(0.971)	59085	1.17883	1.179
76	Benzo(a)pyrene	252	25.833	25.818	(0.996)	45762	1.05839	1.058
* 77	Perylene-d12	264	25.949	25.934	(1.000)	143085	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.626	28.610	(1.103)	27383	0.58188	0.5819
79	Dibenzo(a,h)anthracene	278	28.634	28.626	(1.103)	7756	0.19556	0.1956(M)
80	Benzo(g,h,i)perylene	276	29.426	29.403	(1.134)	24181	0.62349	0.6235
90	N-Nitrosodimethylamine	74	Compound Not Detected.					
91	Aniline	93	Compound Not Detected.					
93	Benzidine	184	Compound Not Detected.					
103	Pyridine	79	Compound Not Detected.					
105	1-methylnaphthalene	142	13.238	13.230	(1.144)	10374	0.07178	0.07178
111	Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.167	25.159	(0.970)	120516	2.50970	2.510
120 2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					

QC Flag Legend

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

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1403172327.D
Lab Smp Id: 23B0276-01
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt14.i\20230317.b\ABN.m
Misc Info:

Calibration Date: 17-MAR-2023
Calibration Time: 23:31
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	231017	115509	462034	216795	-6.16
27 Naphthalene-d8	843789	421895	1687578	856195	1.47
42 Acenaphthene-d10	432455	216228	864910	420684	-2.72
59 Phenanthrene-d10	793780	396890	1587560	676256	-14.81
69 Chrysene-d12	411057	205529	822114	191213	-53.48 <-
134 Di-n-octylphthala	799010	399505	1598020	412116	-48.42
77 Perylene-d12	254782	127391	509564	143085	-43.84

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.06	8.56	9.56	9.07	0.09
27 Naphthalene-d8	11.57	11.07	12.07	11.57	0.00
42 Acenaphthene-d10	15.20	14.70	15.70	15.20	0.05
59 Phenanthrene-d10	18.24	17.74	18.74	18.26	0.08
69 Chrysene-d12	23.29	22.79	23.79	23.30	0.03
134 Di-n-octylphthala	24.32	23.82	24.82	24.32	0.03
77 Perylene-d12	25.93	25.43	26.43	25.95	0.06

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

REVIEW SUMMARY FOR FILE - NT1403172327.D

Lab ID: 23B0276-01
nt14.i, ABN.m, 18-MAR-2023 06:06

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
1.033	1.000	0.0325	Benzyl alcohol
0.951	0.960	-0.0087	Benzoic acid

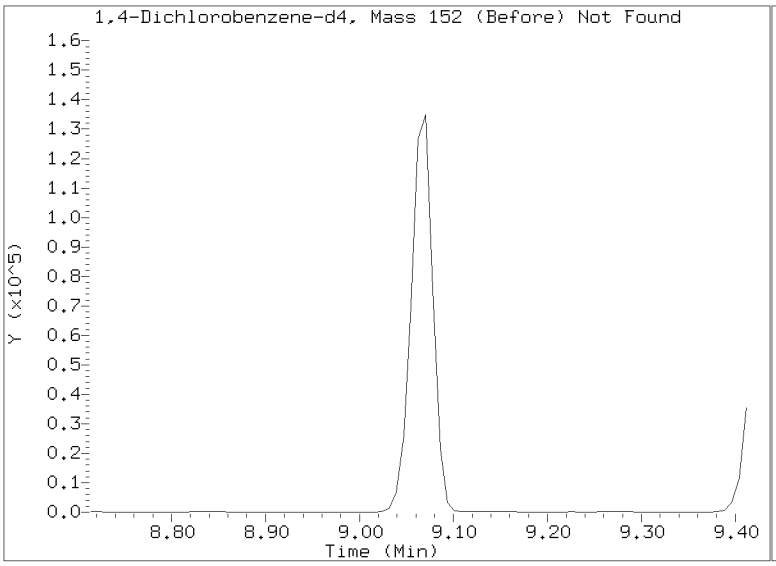
RRT check based on Ccal File: NT1403172316.D

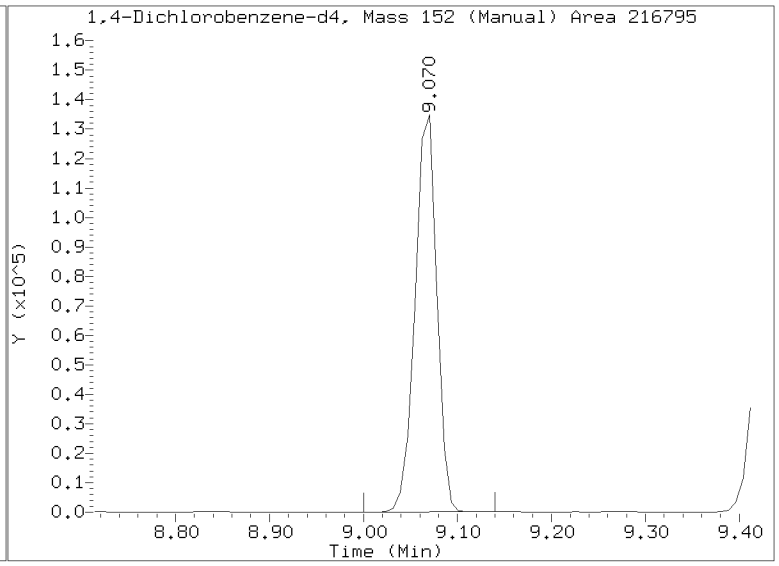
On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

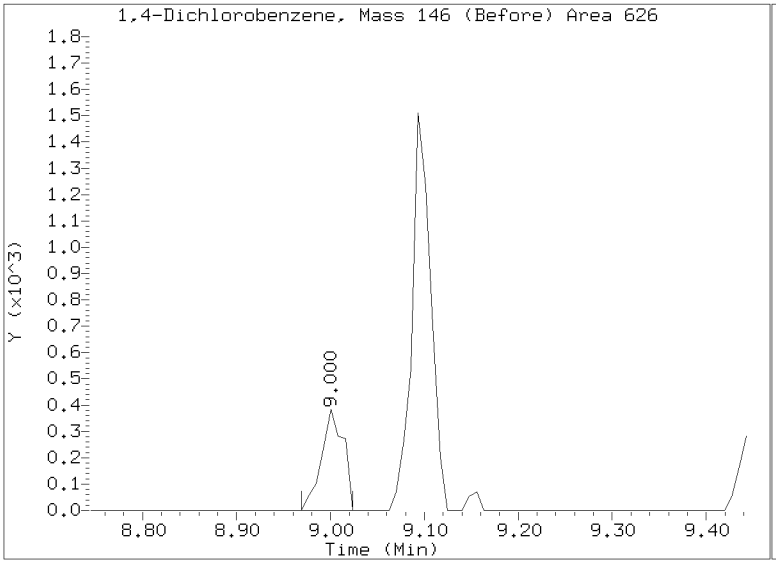
* Only compounds listed in the work order have been verified by the analyst *

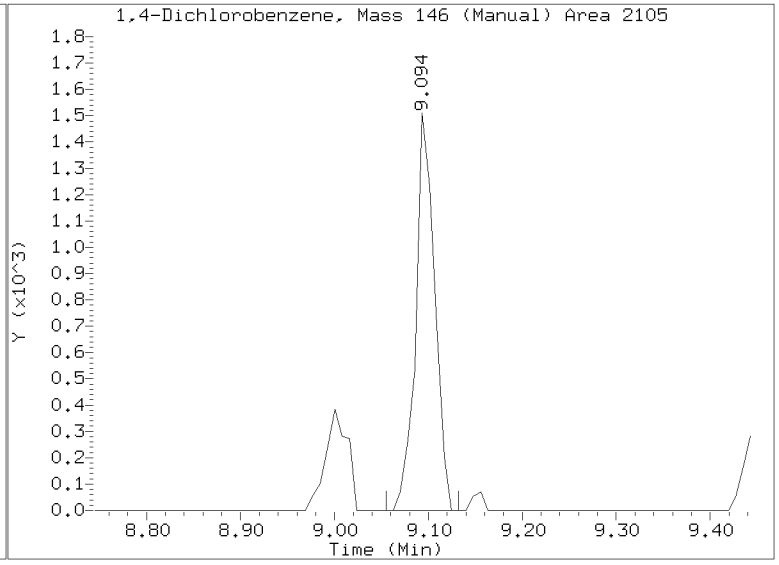
Quant Ion Manual Peak Adjustment Report

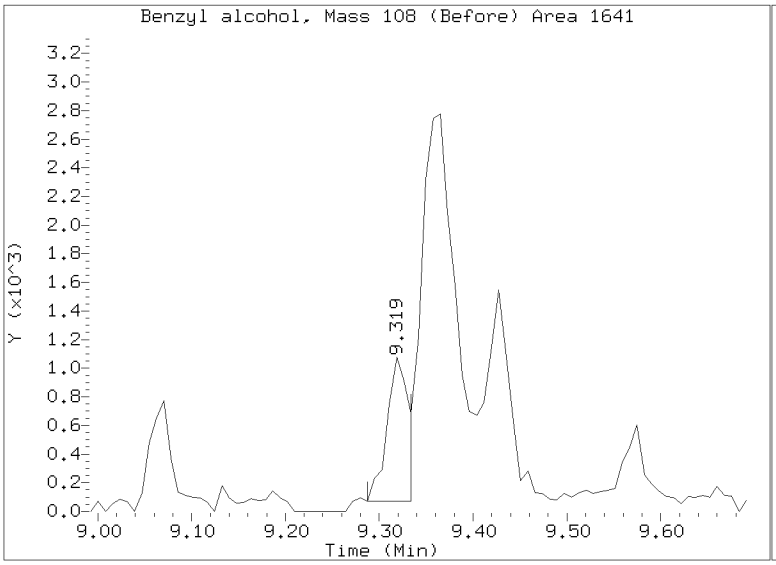
Datafile: //target/share/chem3/nt14.i/20230317.b/NT1403172327.D
Injection Date: 18-MAR-2023 06:06
Lab ID:23B0276-01 Client ID:
Report Date: 03/22/2023 09:50

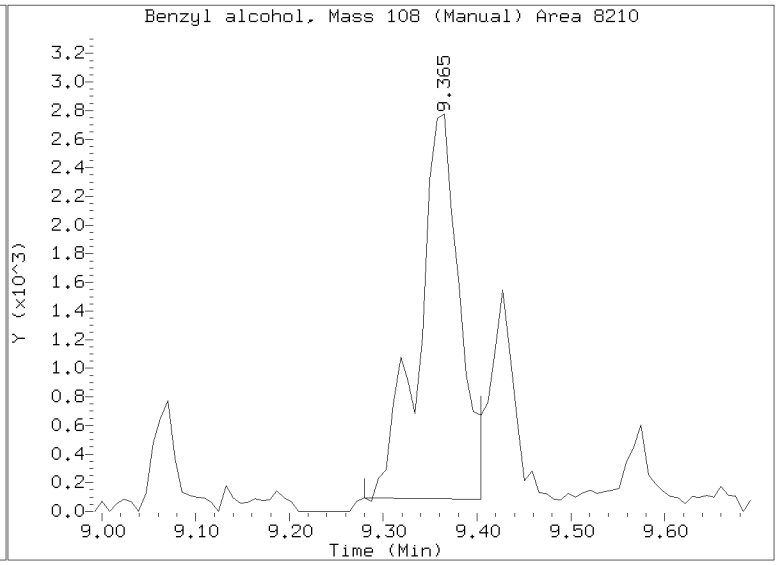












Quant Ion Manual Peak Adjustment Report

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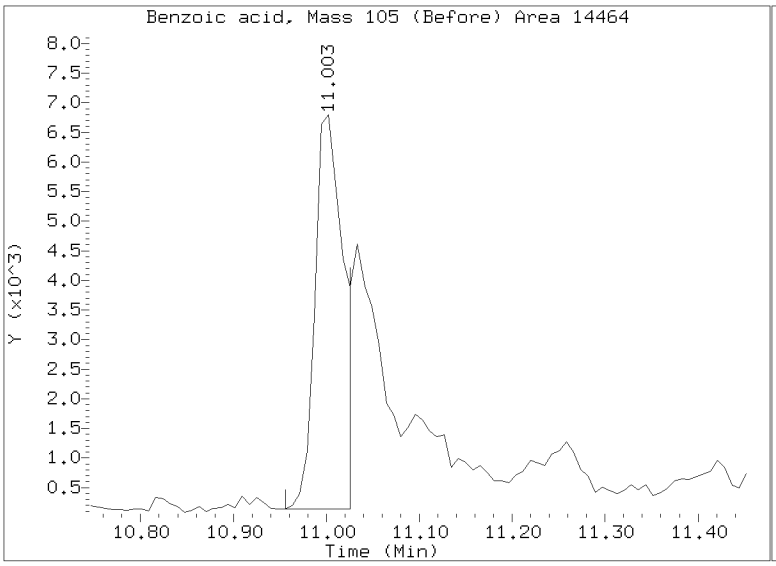
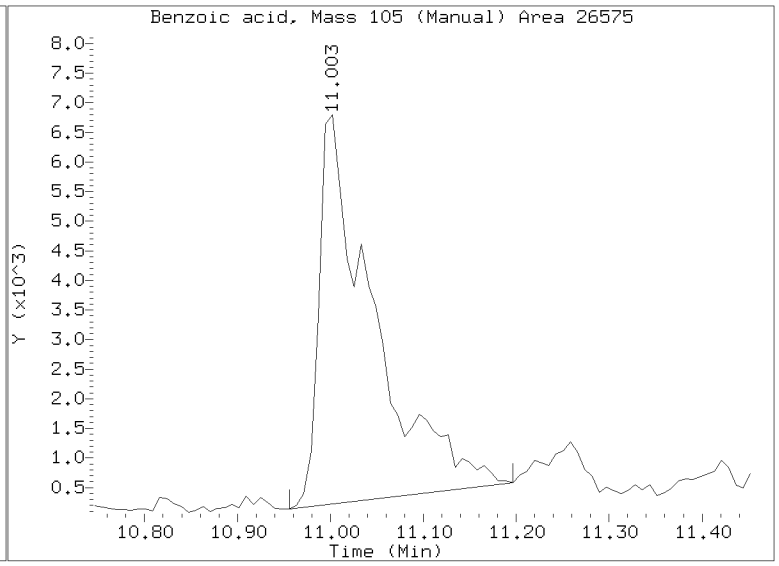
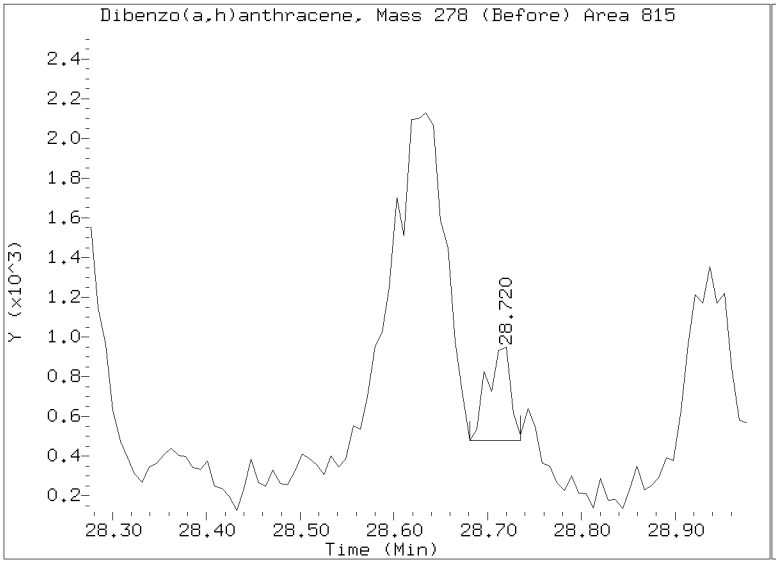
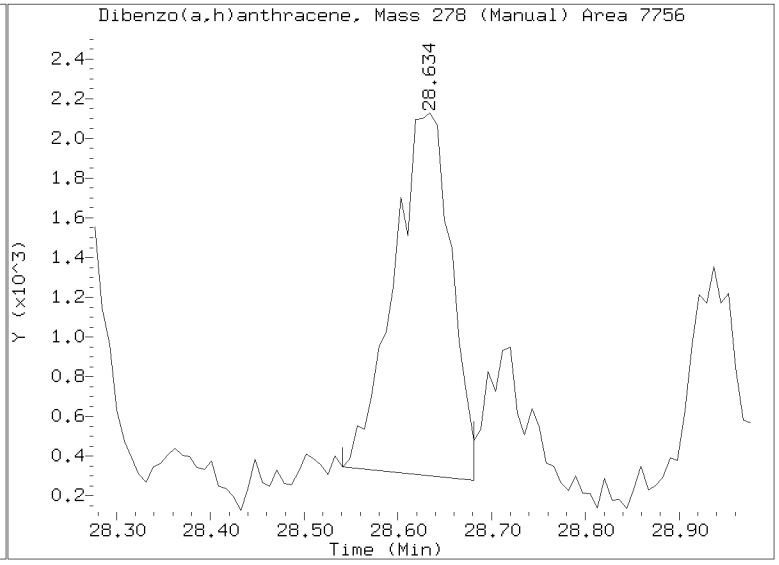
Injection Date: 18-MAR-2023 06:06
Lab ID:23B0276-01 Client ID:
Report Date: 03/22/2023 09:50









PREPARATION BATCH SUMMARY

EPA 8270E

Laboratory: Analytical Resources, LLC SDG: 23B0276

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

Batch: BLB0424 Batch Matrix: Solid Preparation: EPA 3546 (Microwave)

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SC1150B	23B0276-01	NT1403172327.D	02/17/23 15:00	
Blank	BLB0424-BLK1	NT1403172312.D	02/17/23 15:00	
Blank	BLB0424-BLK3	NT1403182306.D	02/17/23 15:00	Added for full scan
LCS	BLB0424-BS1	NT1403172313.D	02/17/23 15:00	
LCS Dup	BLB0424-BSD1	NT1403172314.D	02/17/23 15:00	
LDW23-SC1150B	BLB0424-MS1	NT1403172328.D	02/17/23 15:00	
LDW23-SC1150B	BLB0424-MSD1	NT1403172329.D	02/17/23 15:00	
Reference	BLB0424-SRM1	NT1403172315.D	02/17/23 15:00	

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLB0424

Prepared using: EPA 3546 (Microwave)

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

Matrix: Solid Date Prepared: 2/17/23 Balance ID: B139298002 Set Up By: CTO 2/16/23

WO Comments

23A0099: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)
23B0229: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM H002055, SIM RM H010158, PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)
23B0276: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM H002055, SIM RM H010158, PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H>Please push this to front of LDW line of samples

The following standards may be missing from this batch!

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

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

Lab Number & Container	% Solids	Initial (g) Target Dry: 10 (Wet) Actual	(REQ) GPC C/U (1:1) 1 2 3	Water Wash 1mL	Final Effective Vol (mL)	Vol (mL) to Lab	Extraction Comments
23A0099-04 A	54.8	(18.26) 18.71	(1:1)	1mL	1	0.5	From BLA0288 by CTO on 16-Feb-2023
23B0229-02 A	56.0	(17.86) 17.89	(1:1)	1mL	1	0.5	
23B0229-03 A	54.8	(18.25) 18.45	(1:1)	1mL	1	0.5	
23B0229-04 A	52.2	(19.17) 19.43	(1:1)	1mL	1	0.5	
23B0229-05 A	44.9	(22.26) 22.74	(1:1)	1mL	1	0.5	
23B0229-06 A	48.6	(20.57) 20.78	(1:1)	1mL	1	0.5	
23B0229-08 A	49.7	(20.13) 20.78	(1:1)	1mL	1	0.5	
23B0276-01 A	63.6	(15.72) 15.72	(1:1)	1mL	1	0.5	

Batch QC

Lab Number	% Solids	Initial (g) Target Dry: 10 (Wet) Actual	(REQ) GPC C/U (1:1) 1 2 3	Water Wash 1mL	Final Effective Vol (mL)	Vol (mL) to Lab	Extraction Comments
BLB0424-BLK1	100.0	(10.00) 10.00	(1:1)	1mL	1	0.5	Use 5g Neutral Sodium Sulfate for Blanks
BLB0424-BS1	100.0	(10.00) 10.00	(1:1)	1mL	1	0.5	Use 5g Neutral Sodium Sulfate for Blanks
BLB0424-BSD1	100.0	(10.00) 10.00	(1:1)	1mL	1	0.5	Use 5g Neutral Sodium Sulfate for Blanks
BLB0424-MS1	63.6	(15.72) 15.72	(1:1)	1mL	1	0.5	Use 23B0276-01
BLB0424-MSD1	63.6	(15.72) 15.72	(1:1)	1mL	1	0.5	Use 23B0276-01
BLB0424-SRM1	100.0	~~(10.00)~~ (1.00) 1.00	(1:1)	1mL	1	0.5	Use K003477

+1g DI WATER

Client ID verified By	Date	Preparation Reviewed By	Date	Extraction Date and Time
CR	2/17/23	MRS	2/20/23	2/17/23 15:00

Printed: 2/16/2023 11:49:00AM

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLB0424

Prepared using: EPA 3546 (Microwave)

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

WO Comments

23A0099: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)
23B0229: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM H002055, SIM RM H010158, PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)
23B0276: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM H002055, SIM RM H010158, PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H>Please push this to front of LDW line of samples

Prep Steps	Reagents Used		
Microwave 0 (1) 2 3 CT UR 2/17 Analyst/Date	**Station/Reagent**	**Standard ID**	
	Microwave **Analyst:** UR/CT **Date:** 2/17/23		
	Anhydrous Sodium Sulfate	L000285	
	1:1 Methylene Chloride/Acetone	L001416	
	Methylene Chloride	L000808	
	Pre-Deactivated Glass Wool	L000252	
Pre-GPC KD 100°C **Exchange to Hexane** **(add 10 mL to KD)** 0 2 4 (5) 6 NRB 2/18/23 Analyst/Date	**Pre GPC KD** **Analyst:** NRB **Date:** 2/18/23		
	Pre-Deactivated Glass Wool	N/A	
	Anhydrous Sodium Sulfate	L000980	
	Methylene Chloride	L005941	
	Hexane	L000899	
TurboVap **Pre GPC** 1 2 3 (4) 5 TWC 2/18/23 Analyst/Date	**GPC Filter Prep** **Analyst:** TWC **Date:** 2/18/~~23~~ 23 TWC		
	Methylene Chloride	L005941	
	GPC Filter		
Post GPC KD 80-85°C 0 (2) 4 5 (6) LO 2-20 Analyst/Date	**GPC** **Analyst:** TWC **Date:** 2/18/23		
	Methylene Chloride	L005941	
	GPC Calibration File	CLB0132-GPC2	
TurboVap 1 2 3 (4) 5 NRB 2/20/23 Analyst/Date	**Post GPC KD** **Analyst:** LO **Date:** 2-20-23		
	Methylene Chloride	L005941	
Water Wash NRB 2/20/23 Analyst/Date	**Vialing** **Analyst:** NRB **Date:** 2/20/23		
	Methylene Chloride	L005941	

Surrogates & Spike Standards Used

Type	Vial ID / Standard ID	Vol uL	Analyst	Witness
Surrogate 100/150µg/mL	A K010466 Exp Date: 8/1/23	50µL	CT	
Full List Spike (Freezer) 100µg/mL	7 K011369 (V) Exp Date: K011297 8/31/23	50µL	CT	
Base Spike 200µg/mL	56 K011369 (V) Exp Date: K003759 4/19/23	50µL	CT	
Acid Spike 100/200µg/mL	38 K011369 (V) Exp Date: K003760 4/19/23	50µL	CT	

MANUALLY ENTER EXPIRATION DATES!

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

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

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLB0424

Prepared using: EPA 3546 (Microwave)

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

WO Comments

23A0099: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)
23B0229: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM H002055, SIM RM H010158, PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)
23B0276: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM H002055, SIM RM H010158, PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H>Please push this to front of LDW line of samples

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

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

Extraction Parameter: 5VOA Extraction Batch: BLB0424

Total Solids Batch: BLB0338 Work Order(s): 23B0261, 276

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☒ No Anomalies (standard soil/wet sediment/sand/gravel)= Φ1, 04, 07, 14, 13, 16, 19, 22, 276=Φ1	YP Φ2/14/23
☒ Standing Water Decanted (Not shared)= 23B0261 Φ1, Φ4, Φ7, 10, 13, 16, 19, 22, 25, 28, 31, 34	MP Φ2/14/23
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☒ Oily, obvious fuel/sulfur odors= 276 Φ1.	MP Φ2/14/23
☐ Received in 32oz jar(s)=Homogenized in Pyrex dish=	
☐ Previously Frozen =	
☒ Other (Details)= shell pieces = 10 of 25, 28, 31, 34.	MP Φ2/14/23
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
☐ Received in 1.0L Bottle(s)=No Bottle Rinse=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	
☒ Share Samples Y / N	YP Φ2/14/23
☒ Multiple Jars Y / N	MP Φ2/14/23
☐ Sample Pre-Screens indicate analyte activity=	
☐ Sample weights/volumes reduced based on Pre-Screen=	

3056F

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

Extraction Parameter: SVOA Extraction Batch: BLB0424

Total Solids Batch: BLB0340 Work Order(s): 23B0229 01-08

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☒ No Anomalies (standard soil/wet sediment/sand/gravel)= 01-08	VR 2/15/23
☒ Standing Water Decanted (Not shared)= 01-08	VR 2/15/23
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Received in 32oz jar(s)=Homogenized in Pyrex dish=	
☒ Previously Frozen = 01-08	VR 2/15/23
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
☐ Received in 1.0L Bottle(s)=No Bottle Rinse=	
☒ Other Notes/Comments= (Note problems, concerns, corrective actions).	
- lost 5% when transferring to KD 229 08	AKB 2/18/23
☒ Share Samples Y / (N)	VR 2/15/23
☒ Multiple Jars Y / (N)	VR 2/15/23
☐ Sample Pre-Screens indicate analyte activity=	
☐ Sample weights/volumes reduced based on Pre-Screen=	

BLA0424/BLB0429 23A0099/23B0229/276/263/278 SVOC

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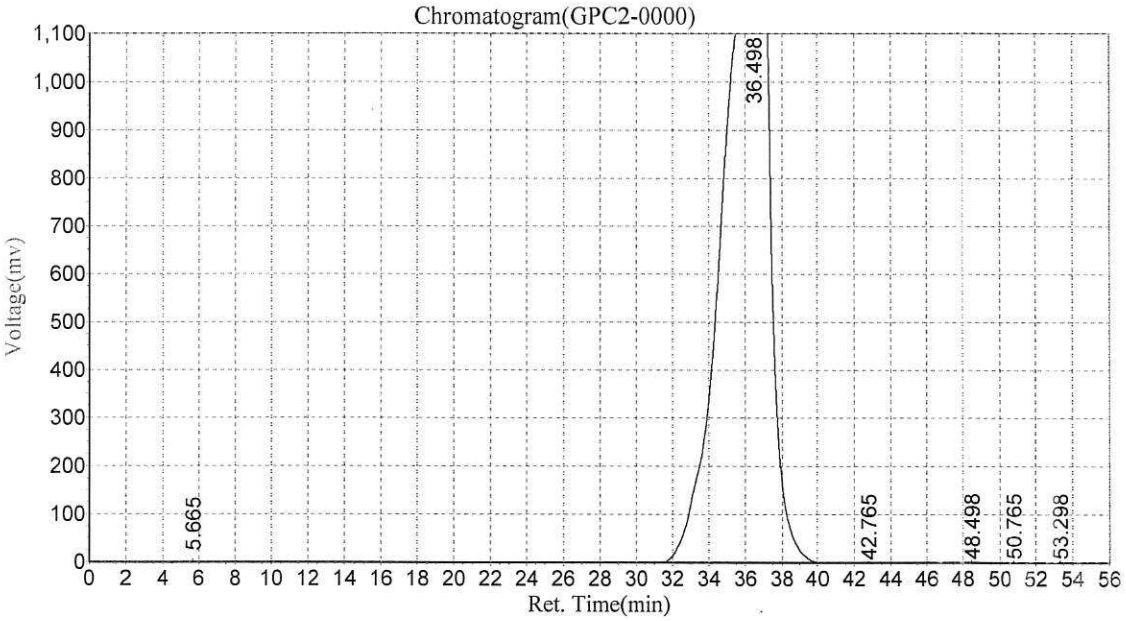

Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		5.665	1631.788	107198.344	0.0444
2		36.498	1230302.750	240853856.000	99.7231
3		42.765	2088.653	154681.250	0.0640
4		48.498	1457.462	110338.313	0.0457
5		50.765	2106.192	187223.906	0.0775
6		53.298	1412.538	109227.227	0.0452
Total			1238999.383	241522525.039	100.000

Ingredient Table

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

BLA0424/BLB0429 23A0099/23B0229/276/263/278 SVOC

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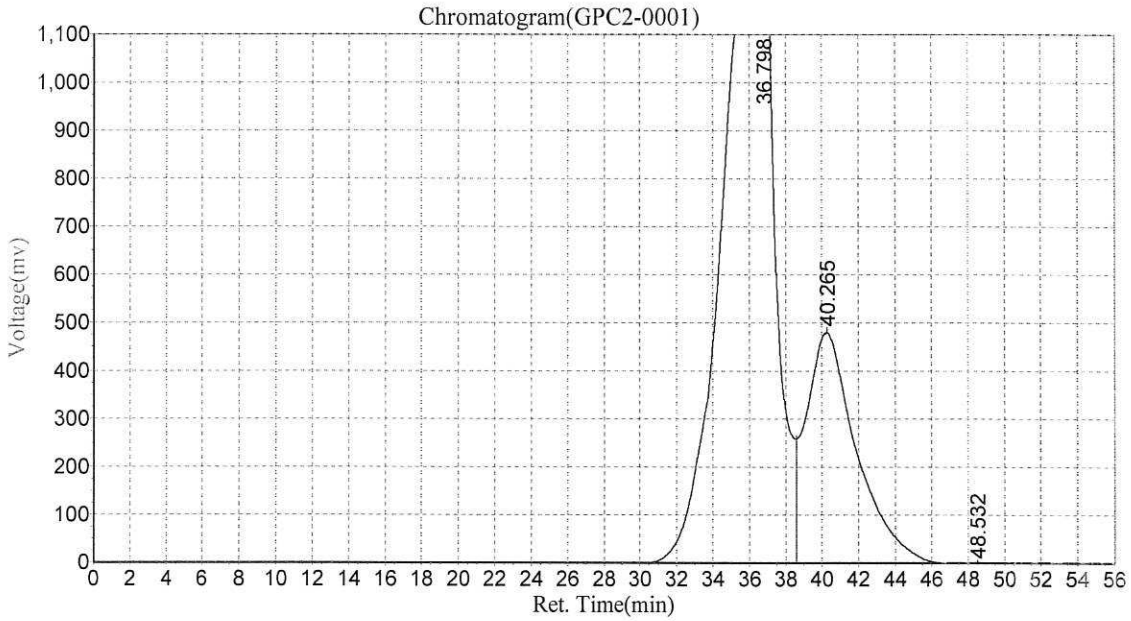

Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		36.798	1253720.750	266495296.000	73.7152
2		40.265	484494.875	94906336.000	26.2520
3		48.532	1706.172	118466.180	0.0328
Total			1739921.797	361520098.180	100.000

Ingredient Table

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

BLA0424/BLB0429 23A0099/23B0229/276/263/278 SVOC

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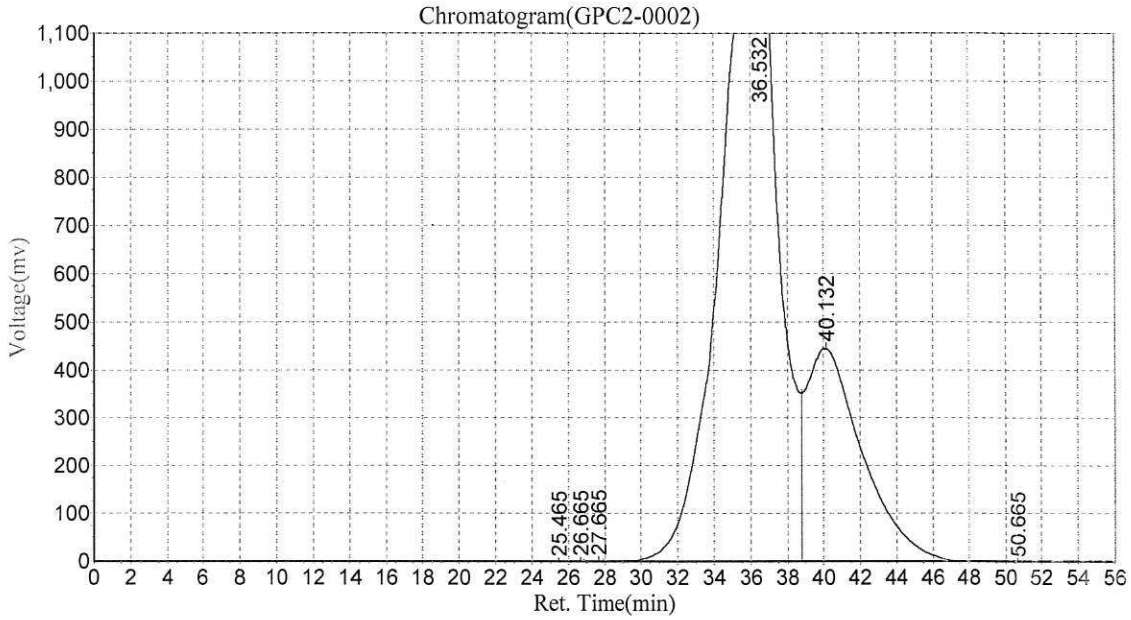

Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		25.465	2937.737	160704.563	0.0408
2		26.665	4304.507	230034.438	0.0584
3		27.665	5633.149	315938.625	0.0802
4		36.532	1254572.500	294632704.000	74.7901
5		40.132	451142.813	98411416.000	24.9809
6		50.665	2140.918	195131.297	0.0495
Total			1720731.624	393945928.922	100.000

Ingredient Table

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

BLA0424/BLB0429 23A0099/23B0229/276/263/278 SVOC

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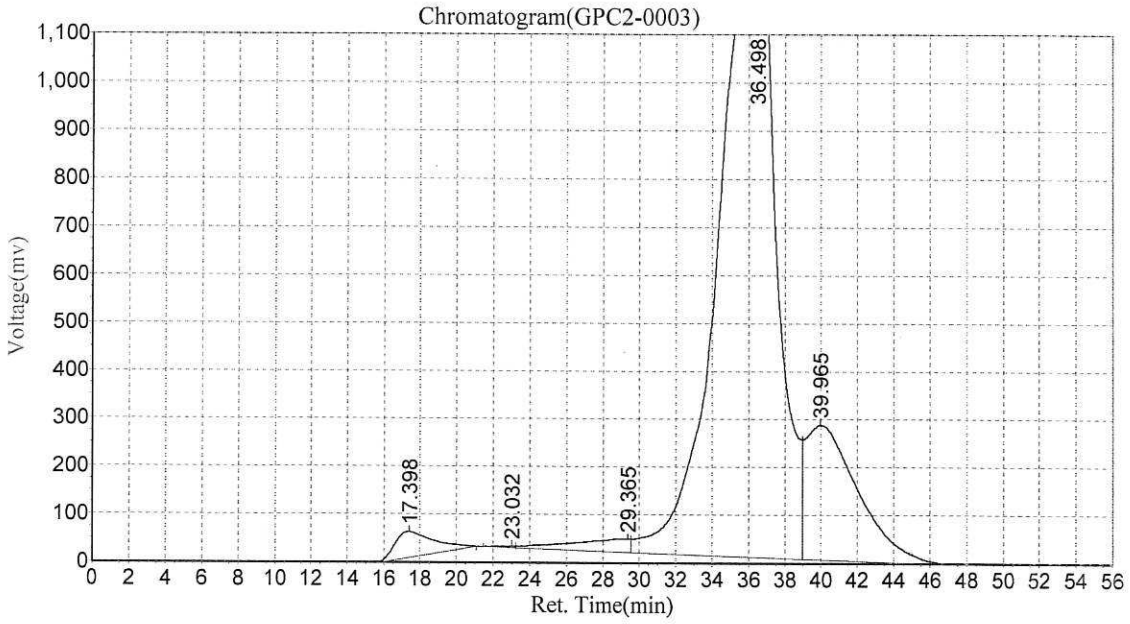

Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		17.398	53985.484	7958088.000	2.2576
2		23.032	3286.524	187231.641	0.0531
3		29.365	27916.904	5955562.500	1.6895
4		36.498	1211286.375	281602848.000	79.8879
5		39.965	281303.063	56793604.000	16.1118
Total			1577778.350	352497334.141	100.000

Ingredient Table

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

BLA0424/BLB0429 23A0099/23B0229/276/263/278 SVOC

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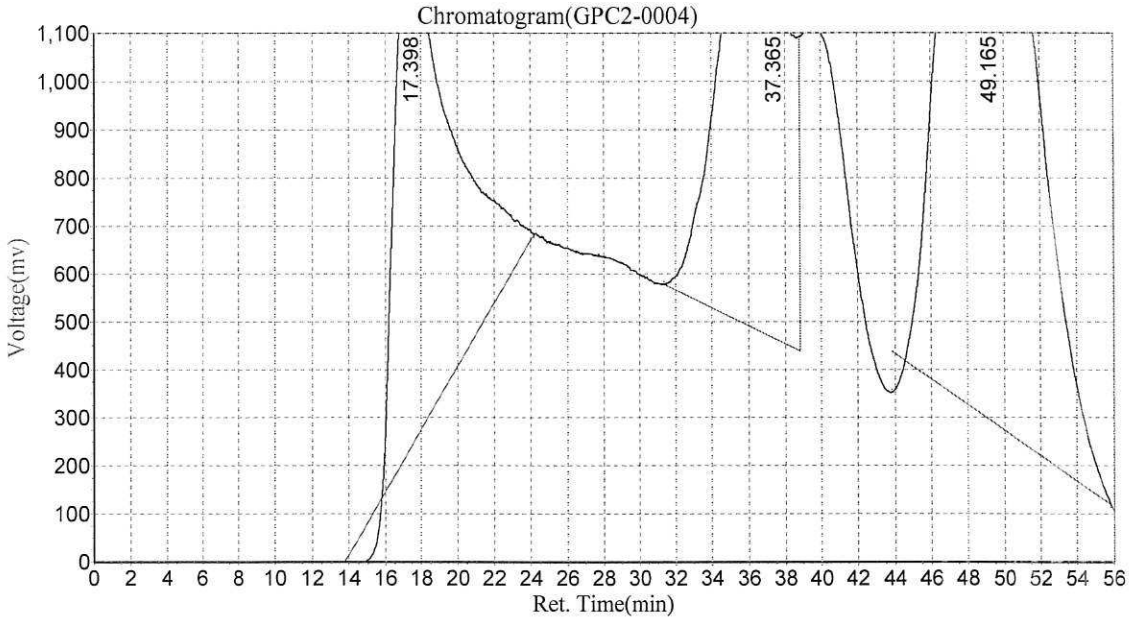

Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		17.398	1016836.250	225737472.000	25.5168
2		37.365	783191.938	222387792.000	25.1382
3		49.165	1003920.063	436537216.000	49.3451
Total			2803948.250	884662480.000	100.000

Ingredient Table

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

BLA0424/BLB0429 23A0099/23B0229/276/263/278 SVOC

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Analyst£°TWC
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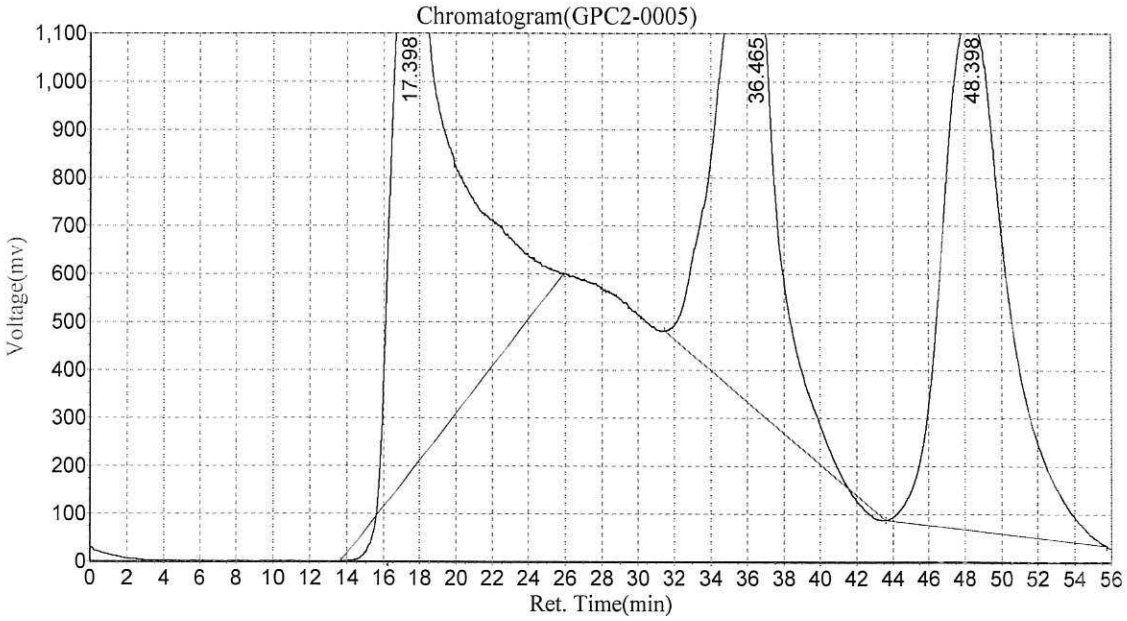

Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		17.398	1071547.750	277728192.000	36.1965
2		36.465	929063.625	223717056.000	29.1572
3		48.398	1069004.500	265834128.000	34.6463
Total			3069615.875	767279376.000	100.000

Ingredient Table

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

BLA0424/BLB0429 23A0099/23B0229/276/263/278 SVOC

Date:2023-02-18,8:25:52 PM
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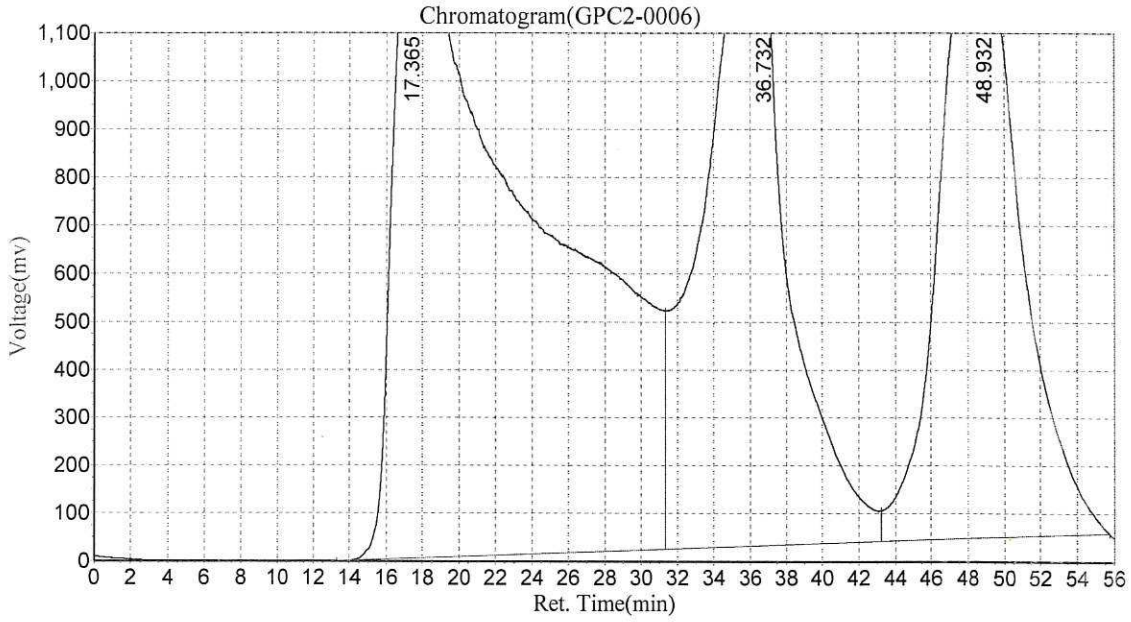

Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		17.365	1248008.875	738091264.000	47.7380
2		36.732	1214440.000	424203680.000	27.4365
3		48.932	1192651.500	383834848.000	24.8255
Total			3655100.375	1546129792.000	100.000

Ingredient Table

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

BLA0424/BLB0429 23A0099/23B0229/276/263/278 SVOC

Date:2023-02-18,9:23:35 PM
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Method File:E:\GPC2_InHouse.mtd

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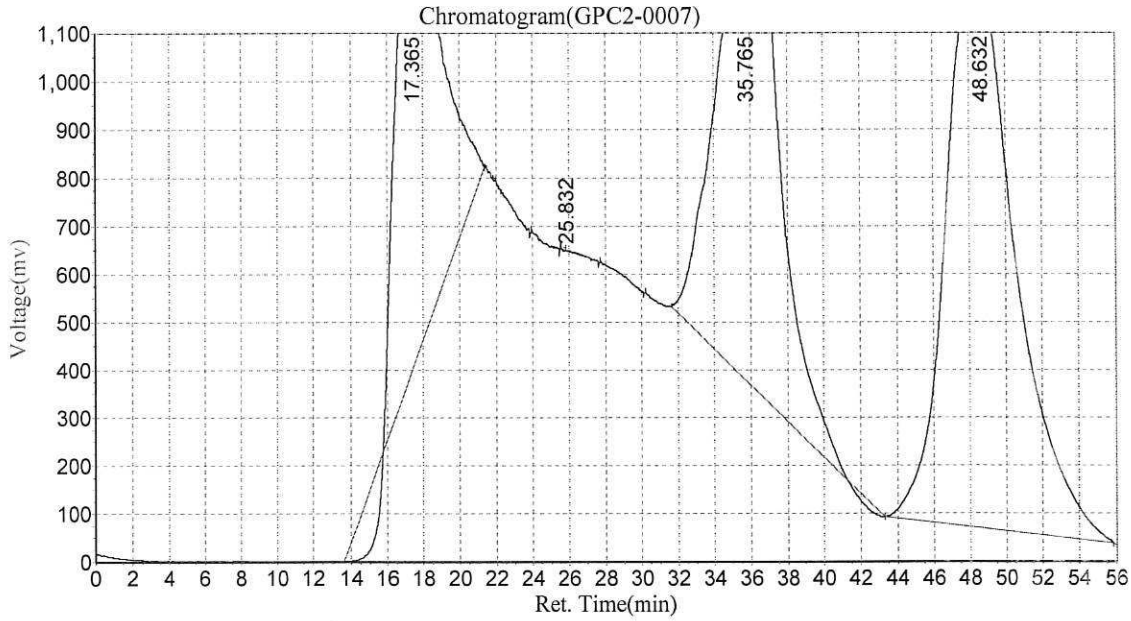

Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		17.365	857413.500	153276576.000	22.1687
2		25.832	1384.370	176419.594	0.0255
3		35.765	869755.750	231706384.000	33.5122
4		48.632	1129357.875	306249568.000	44.2936
Total			2857911.495	691408947.594	100.000

Ingredient Table

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

BLA0424/BLB0429 23A0099/23B0229/276/263/278 SVOC

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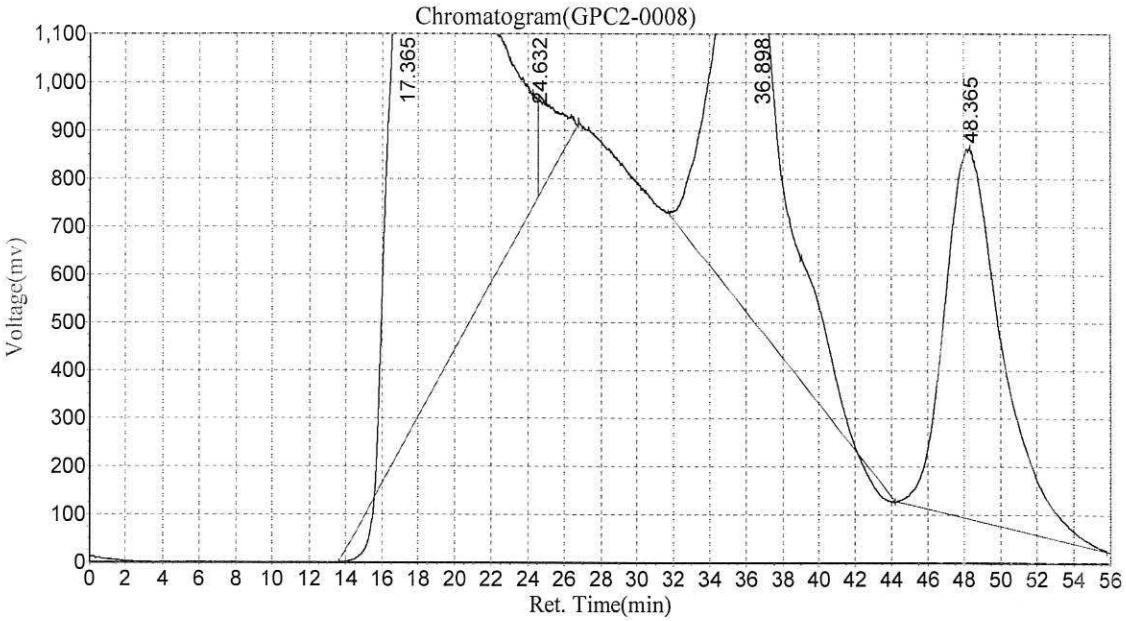

Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		17.365	994261.438	351921824.000	47.0272
2		24.632	200525.750	13799422.000	1.8440
3		36.898	769164.750	213070368.000	28.4725
4		48.365	768088.563	169545696.000	22.6563
Total			2732040.500	748337310.000	100.000

Ingredient Table

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

BLA0424/BLB0429 23A0099/23B0229/276/263/278 SVOC

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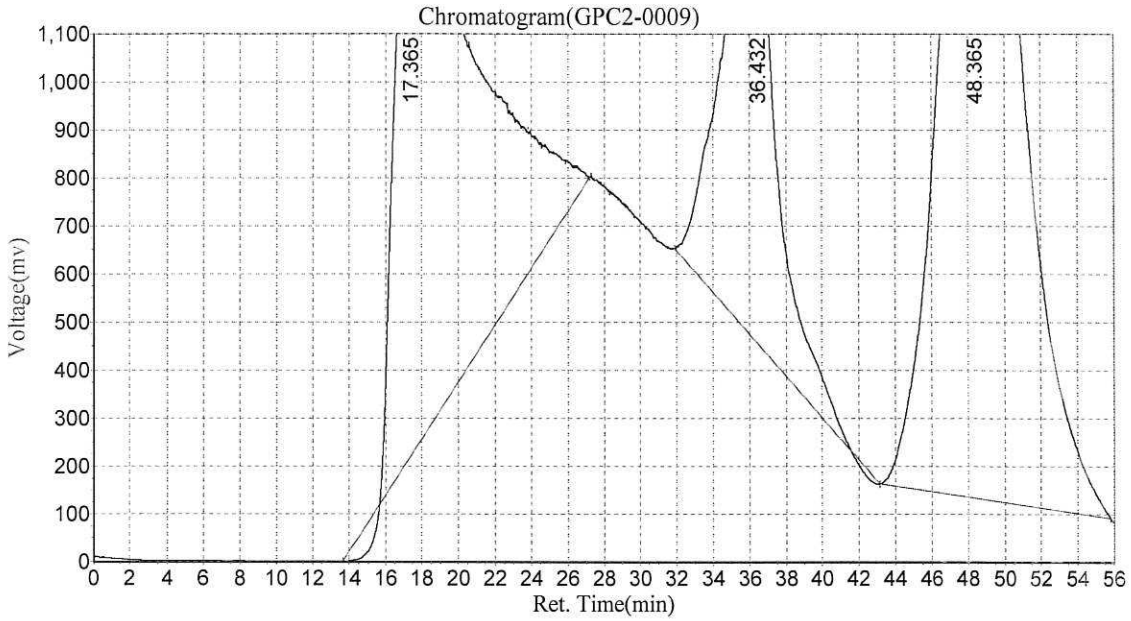
Date/Time2023-02-18,11:19:05 PM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		17.365	1033673.438	358779936.000	36.5983
2		36.432	791781.375	188223424.000	19.2002
3		48.365	1114773.125	433315712.000	44.2015
Total			2940227.938	980319072.000	100.000

Ingredient Table

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

BLA0424/BLB0429 23A0099/23B0229/276/263/278 SVOC

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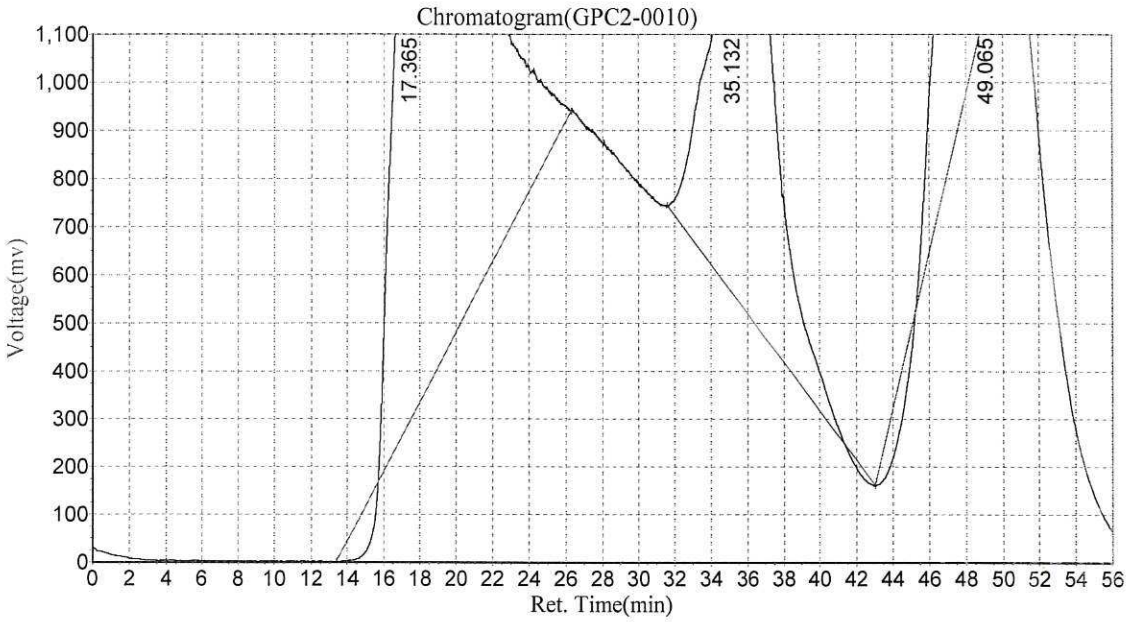

Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		17.365	965013.063	341510112.000	56.3145
2		35.132	683606.250	205736944.000	33.9257
3		49.065	109773.992	59186188.000	9.7597
Total			1758393.305	606433244.000	100.000

Ingredient Table

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

BLA0424/BLB0429 23A0099/23B0229/276/263/278 SVOC

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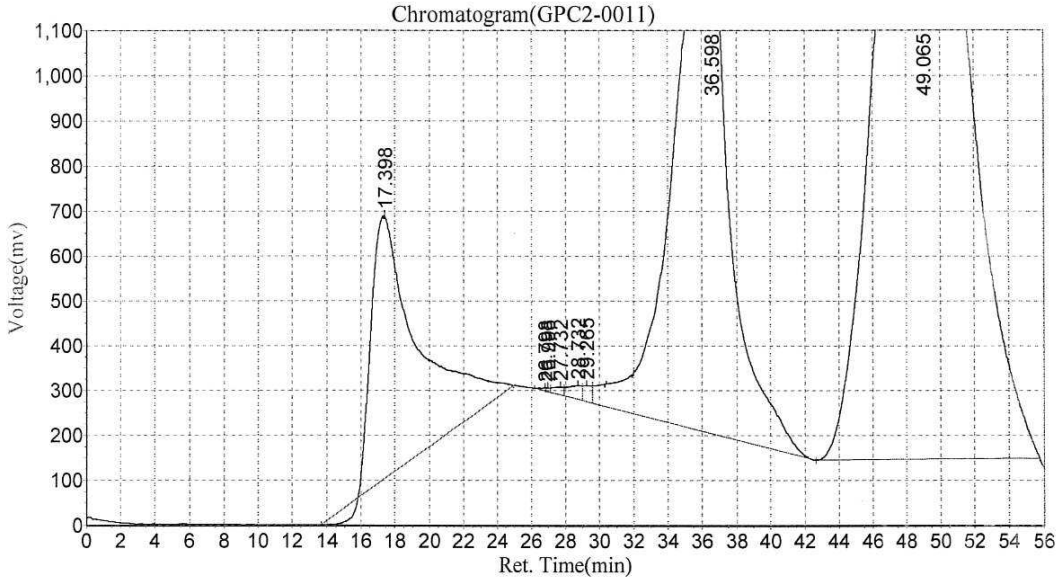

Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		17.398	585885.438	109560784.000	12.7080
2		26.798	6820.461	147395.281	0.0171
3		26.998	8978.615	139675.344	0.0162
4		27.732	17683.846	729162.625	0.0846
5		28.732	31140.615	1715067.375	0.1989
6		29.265	36273.691	1307129.250	0.1516
7		36.598	1034882.000	256462240.000	29.7471
8		49.065	1100757.625	492080384.000	57.0765
Total			2822422.292	862141837.875	100.000

Ingredient Table

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

BLA0424/BLB0429 23A0099/23B0229/276/263/278 SVOC

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Analyst£ºTWC
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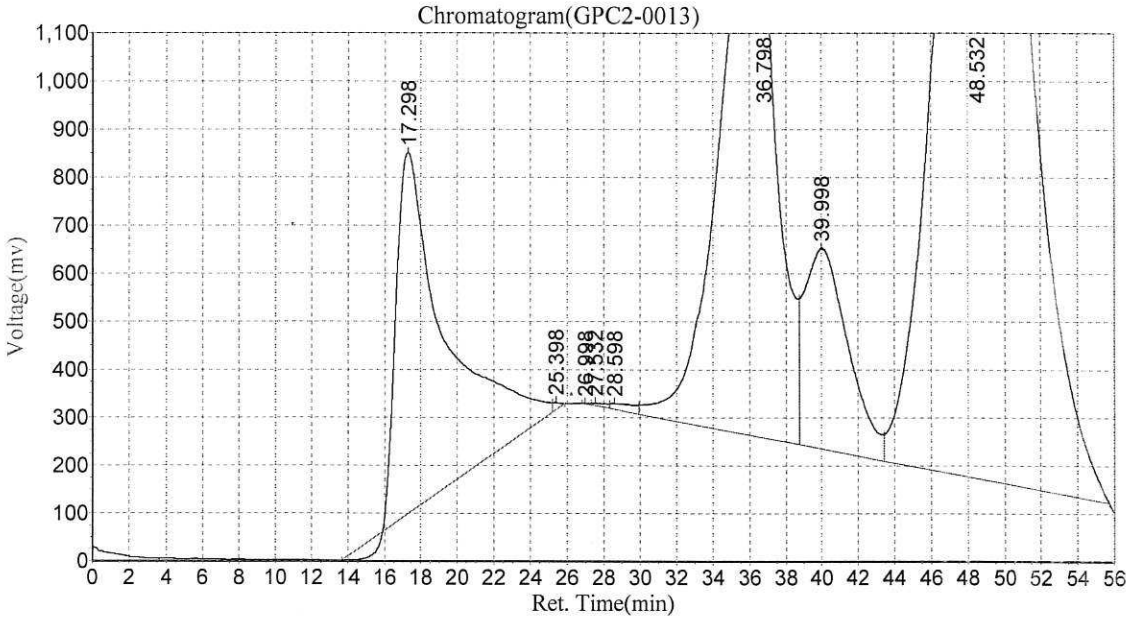


Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		17.298	751568.625	142783888.000	15.4520
2		25.398	14418.507	396625.563	0.0429
3		26.998	5714.335	188218.094	0.0204
4		27.532	9444.761	654233.875	0.0708
5		28.598	16321.611	1752119.750	0.1896
6		36.798	991074.875	236902912.000	25.6374
7		39.998	416866.469	70516224.000	7.6312
8		48.532	1076129.250	470856704.000	50.9557
Total			3281538.433	924050925.281	100.000

Ingredient Table

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

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Cleanup Batch:	CLB0176	Cleanup Type:	GPC
Cleanup Method:	EPA 3640A GPC Cleanup 1:1	Analysis:	EPA 8270E

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
Reference	BLB0424-SRM1	NT1403172315.D	02/20/2023	
Matrix Spike Dup	BLB0424-MSD1	NT1403172329.D	02/20/2023	
Matrix Spike	BLB0424-MS1	NT1403172328.D	02/20/2023	
LCS Dup	BLB0424-BSD1	NT1403172314.D	02/20/2023	
LCS	BLB0424-BS1	NT1403172313.D	02/20/2023	
Blank	BLB0424-BLK1	NT1403172312.D	02/20/2023	
LDW23-SC1150B	23B0276-01	NT1403172327.D	02/20/2023	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BENCH SHEET

CLB0176

Matrix: Solid **Cleanup using: Organics - EPA 3640A GPC Cleanup 1:1** **Check Standard: CLB0150-GPC1** **Printed: 2/20/2023 3:54:24PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23A0099-04	A	LDW23-SC1186	A 05	1	1	SVOC (20ug/kg solid or 0.2ug/L low H2	2/20/2023	NRB	
23B0229-02	A	LDW23-SS1236	A 03	1	1	SVOC (20ug/kg solid or 0.2ug/L low H2	2/20/2023	NRB	
23B0229-03	A	LDW23-SS1237	A 03	1	1	SVOC (20ug/kg solid or 0.2ug/L low H2	2/20/2023	NRB	
23B0229-04	A	LDW23-SS1150	A 03	1	1	SVOC (20ug/kg solid or 0.2ug/L low H2	2/20/2023	NRB	
23B0229-05	A	LDW23-SS1008	A 03	1	1	SVOC (20ug/kg solid or 0.2ug/L low H2	2/20/2023	NRB	
23B0229-06	A	LDW23-SC1008	A 03	1	1	SVOC (20ug/kg solid or 0.2ug/L low H2	2/20/2023	NRB	
23B0229-08	A	LDW23-SC1013	A 03	1	1	SVOC (20ug/kg solid or 0.2ug/L low H2	2/20/2023	NRB	
23B0276-01	A	LDW23-SC1150B	A 03	1	1	SVOC (20ug/kg solid or 0.2ug/L low H2	2/20/2023	NRB	
BLB0424-BLK1	-	Blank	-	1	1	-	2/20/2023	NRB	
BLB0424-BS1	-	LCS	-	1	1	-	2/20/2023	NRB	
BLB0424-BSD1	-	LCS Dup	-	1	1	-	2/20/2023	NRB	
BLB0424-MS1	-	Matrix Spike	-	1	1	-	2/20/2023	NRB	
BLB0424-MSD1	-	Matrix Spike Dup	-	1	1	-	2/20/2023	NRB	
BLB0424-SRM1	-	Reference	-	1	1	-	2/20/2023	NRB	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I

METHOD BLANK DATA SHEET

EPA 8270E

Blank

Laboratory:	Analytical Resources, LLC			SDG:	23B0276
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Solid	Laboratory ID:	BLB0424-BLK1	File ID:	NT1403172312.D
Sampled:	N/A	Prepared:	02/17/23 15:00	Analyzed:	03/17/23 21:06
Solids:		Preparation:	EPA 3546 (Microwave)	Initial/Final:	10 g / 1 mL
Batch:	BLB0424	Sequence:	SLC0335	Calibration:	GC00048
Instrument:	NT14	Column:	ZB-5MS	Cleanups:	GPC

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

SURROGATES	ADDED: (ug/kg wet)	FOUND: (ug/kg wet)	% REC	QC LIMITS	Q
2-Fluorophenol	750.00	409	54.5	27 - 120	
Phenol-d5	750.00	452	60.3	29 - 120	
2-Chlorophenol-d4	750.00	505	67.3	31 - 120	
1,2-Dichlorobenzene-d4	500.00	388	77.5	32 - 120	
Nitrobenzene-d5	500.00	396	79.2	30 - 120	
2-Fluorobiphenyl	500.00	403	80.6	35 - 120	
2,4,6-Tribromophenol	750.00	344	45.9	24 - 134	
p-Terphenyl-d14	500.00	571	114	37 - 120	

Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172312.D

Date : 17-MAR-2023 21:06

Client ID:

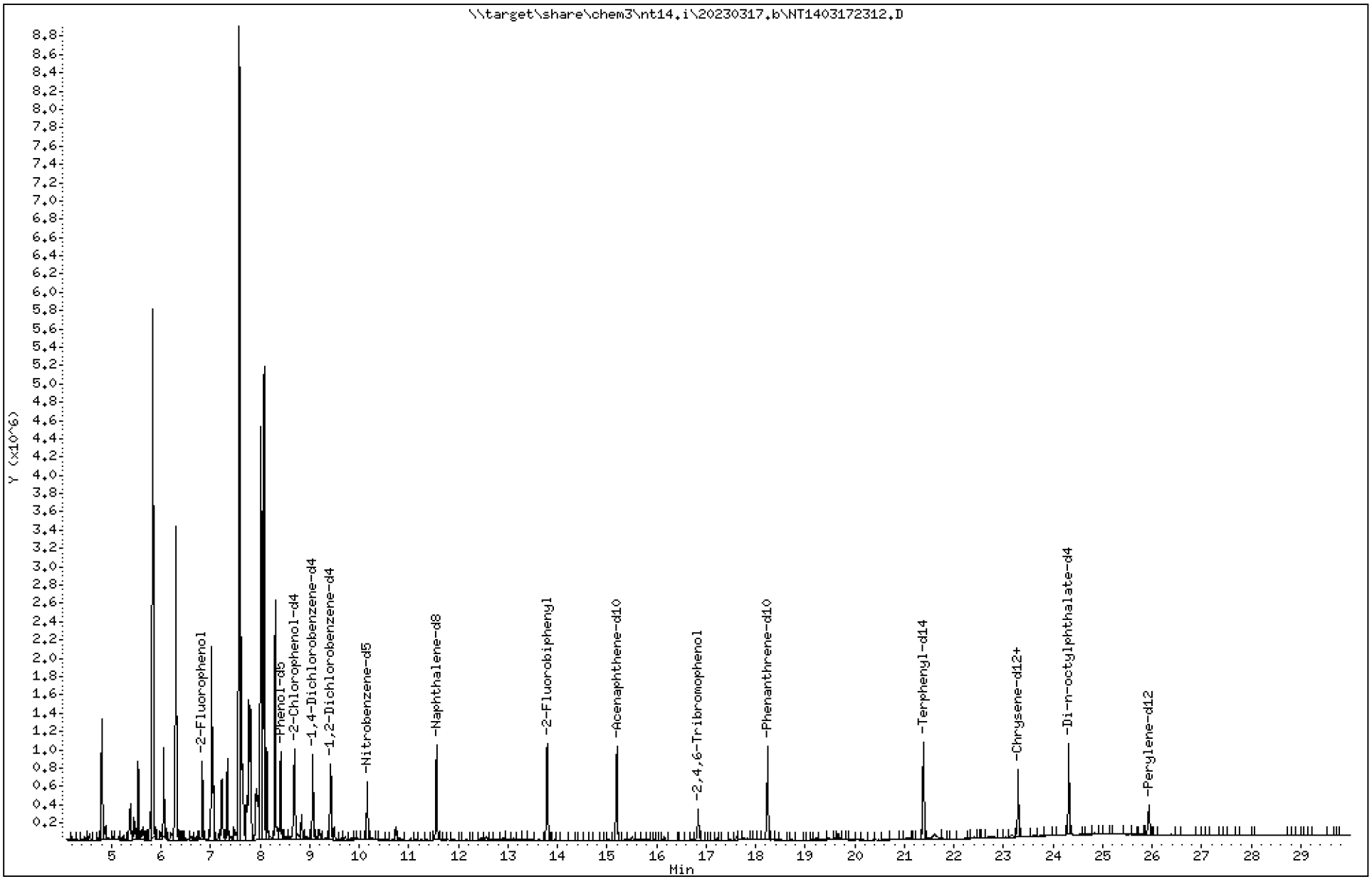
Instrument: nt14.i

Sample Info: BLB0424-BLK1

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



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Date : 17-MAR-2023 21:06

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BLK1

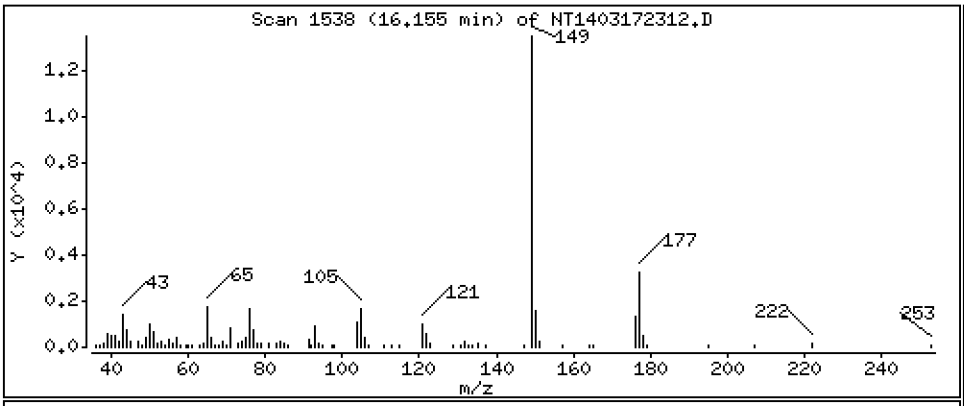
Operator: JGR

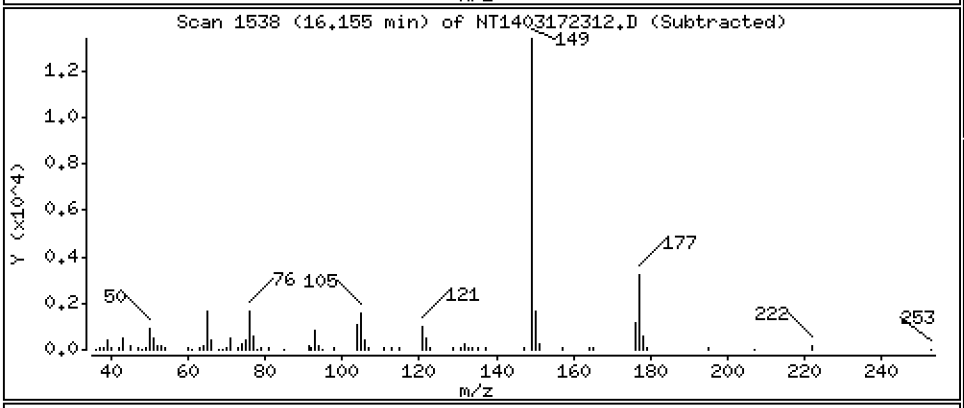
Column phase: ZB-5msi

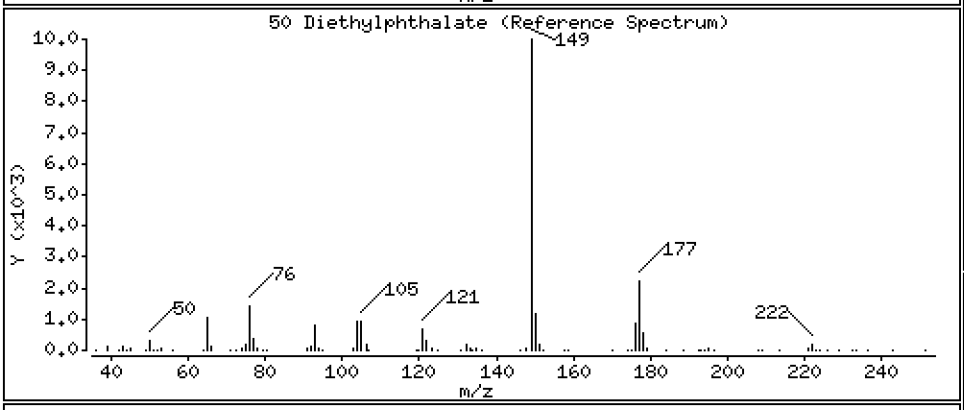
Column diameter: 0.25

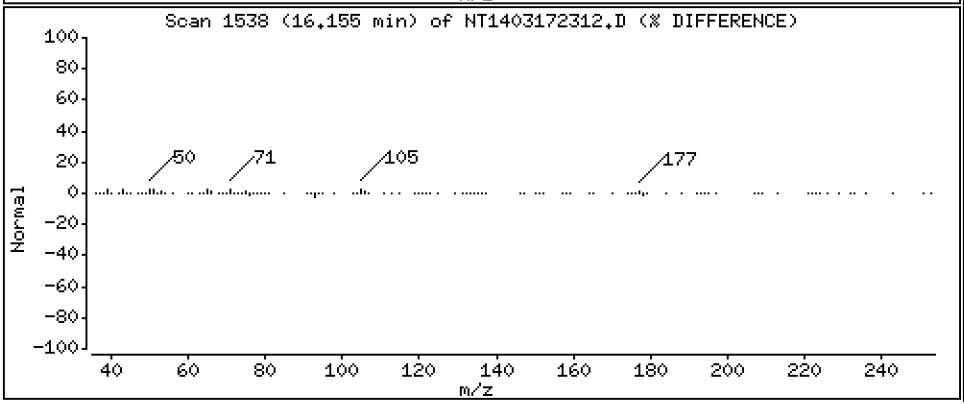
50 Diethylphthalate

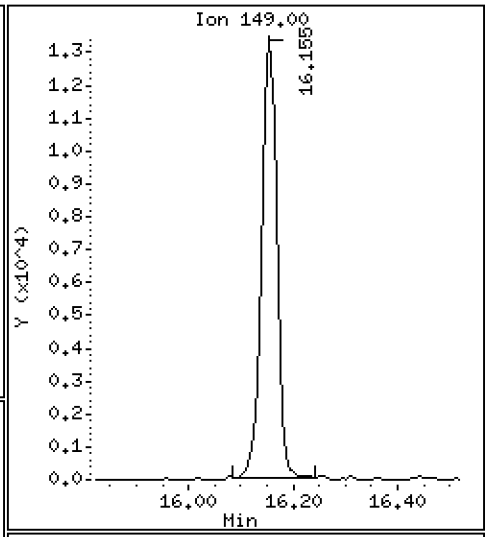
Concentration: 0.1898 ug/mL

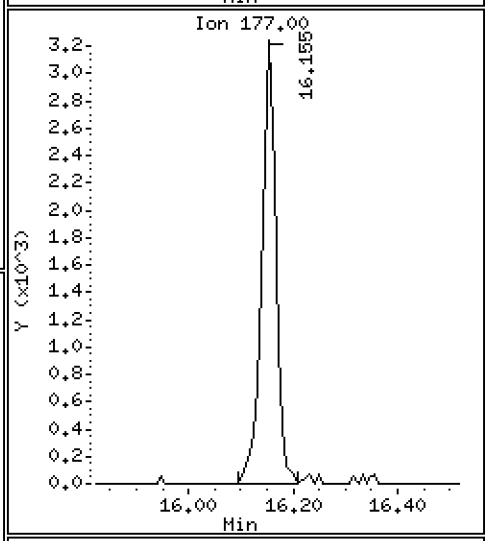


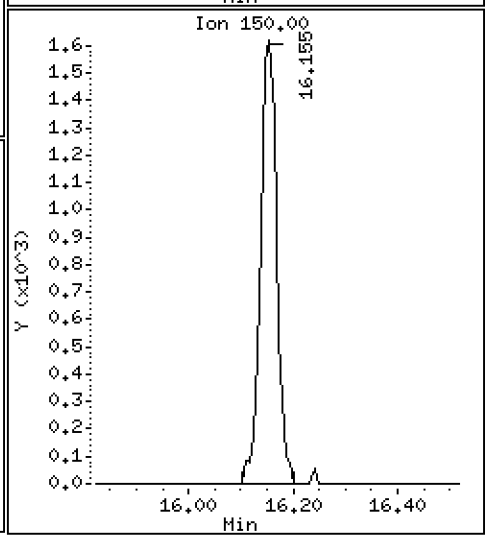












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Date : 17-MAR-2023 21:06

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BLK1

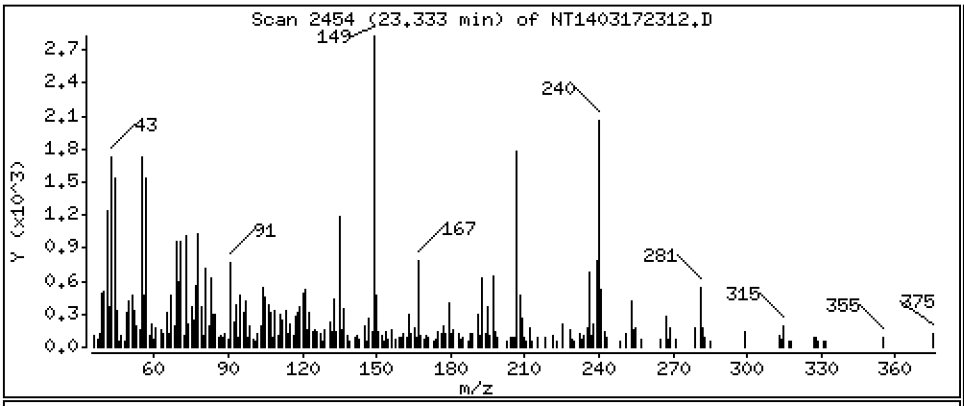
Operator: JGR

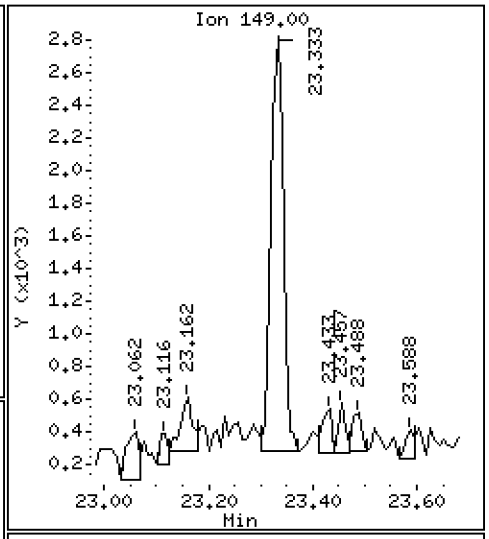
Column phase: ZB-5msi

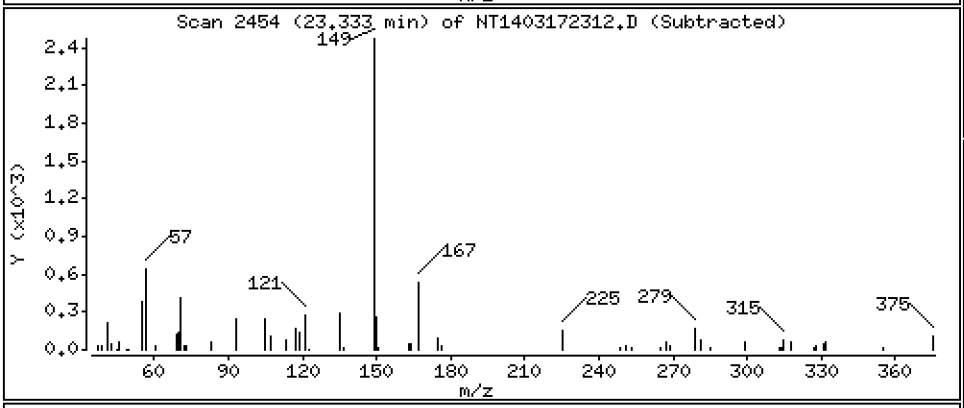
Column diameter: 0.25

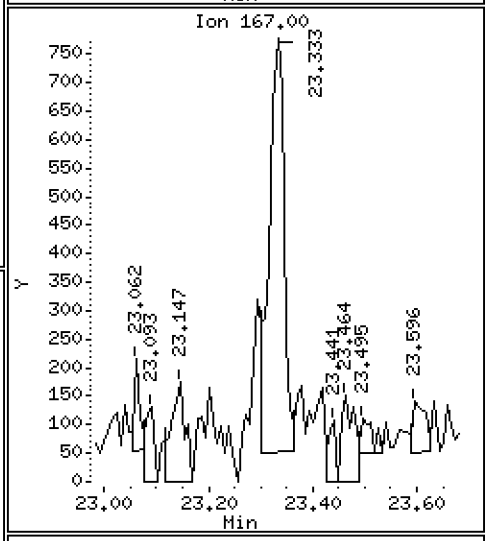
72 bis(2-Ethylhexyl)phthalate

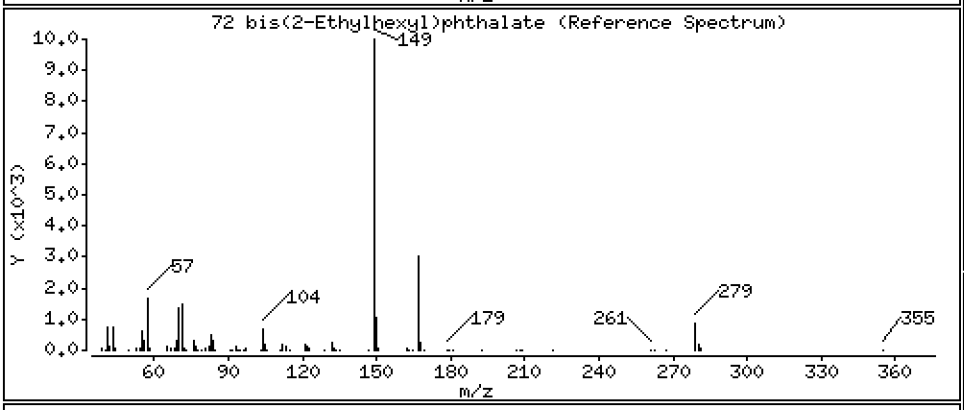
Concentration: 0.04098 ug/mL

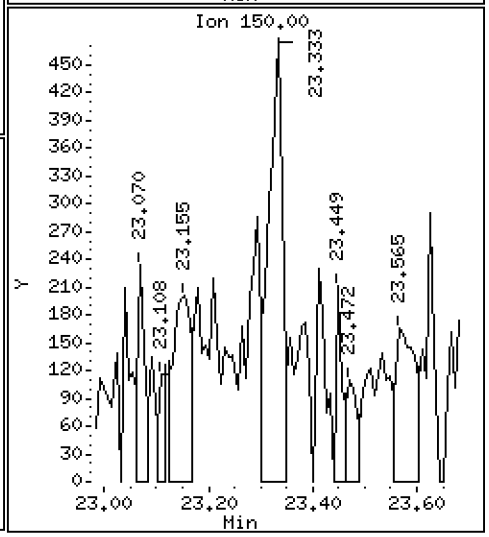


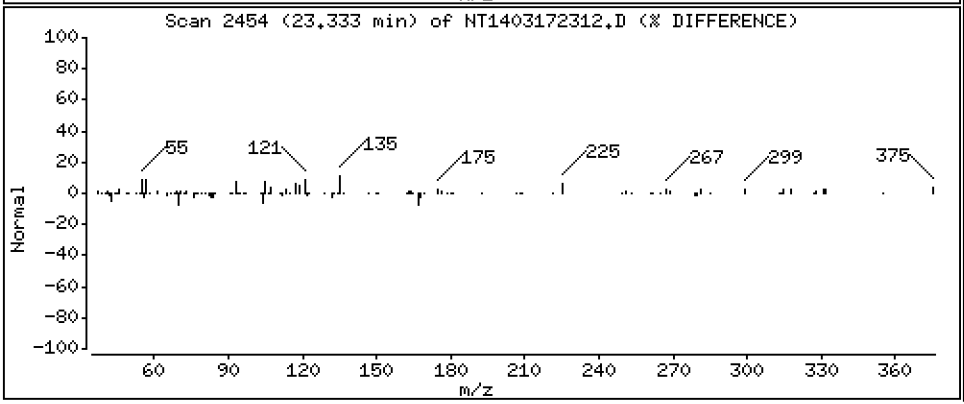












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230317.b\NT1403172312.D
Lab Smp Id: BLB0424-BLK1
Inj Date : 17-MAR-2023 21:06 MS Autotune Date: 11-MAR-2023 16:01
Operator : JGR Inst ID: nt14.i
Smp Info : BLB0424-BLK1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230317.b\ABN.m
Meth Date : 22-Mar-2023 08:03 van Quant Type: ISTD
Cal Date : 15-MAR-2023 15:50 Cal File: NT1403152308.D
Als bottle: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

			QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)	
$	1	2-Fluorophenol	112	6.836	6.821	(1.000)	306577	4.09080	4.091	
$	2	Phenol-d5	99	8.412	8.412	(1.000)	446343	4.52369	4.524	
	3	Phenol	94	Compound Not Detected.						
$	5	2-Chlorophenol-d4	132	8.698	8.698	(1.000)	392913	5.05111	5.051	
	4	Bis(2-Chloroethyl)ether	93	Compound Not Detected.						
	6	2-Chlorophenol	128	Compound Not Detected.						
	7	1,3-Dichlorobenzene	146	Compound Not Detected.						
*	8	1,4-Dichlorobenzene-d4	152	9.062	9.062	(1.000)	220626	4.00000		(M)
	9	1,4-Dichlorobenzene	146	Compound Not Detected.						
$	10	1,2-Dichlorobenzene-d4	152	9.427	9.426	(1.000)	201487	3.87712	3.877	
	12	1,2-Dichlorobenzene	146	Compound Not Detected.						
	11	Benzyl alcohol	108	Compound Not Detected.						
	14	2,2'-oxybis(1-Chloropropane)	121	Compound Not Detected.						
	13	2-Methylphenol	108	Compound Not Detected.						
	17	Hexachloroethane	117	Compound Not Detected.						
	16	N-Nitroso-di-n-propylamine	70	Compound Not Detected.						
	15	4-Methylphenol	108	Compound Not Detected.						
$	18	Nitrobenzene-d5	82	10.164	10.164	(0.879)	372079	3.96112	3.961	
	19	Nitrobenzene	77	Compound Not Detected.						
	20	Isophorone	82	Compound Not Detected.						
	21	2-Nitrophenol	139	Compound Not Detected.						
	22	2,4-Dimethylphenol	107	Compound Not Detected.						
	23	Bis(2-Chloroethoxy)methane	93	Compound Not Detected.						
	24	Benzoic acid	105	Compound Not Detected.						
	25	2,4-Dichlorophenol	162	Compound Not Detected.						
	26	1,2,4-Trichlorobenzene	180	Compound Not Detected.						
*	27	Naphthalene-d8	136	11.559	11.567	(1.000)	887622	4.00000		
	28	Naphthalene	128	Compound Not Detected.						
	29	4-Chloroaniline	127	Compound Not Detected.						
	30	Hexachlorobutadiene	225	Compound Not Detected.						
	31	4-Chloro-3-methylphenol	107	Compound Not Detected.						
	32	2-Methylnaphthalene	142	Compound Not Detected.						
	33	Hexachlorocyclopentadiene	237	Compound Not Detected.						

			QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
	34	2,4,6-Trichlorophenol	196	Compound Not Detected.					
	35	2,4,5-Trichlorophenol	196	Compound Not Detected.					
$	36	2-Fluorobiphenyl	172	13.795	13.795	(0.908)	646034	4.02995	4.030
	37	2-Chloronaphthalene	162	Compound Not Detected.					
	38	2-Nitroaniline	65	Compound Not Detected.					
	39	Dimethylphthalate	163	Compound Not Detected.					
	40	Acenaphthylene	152	Compound Not Detected.					
	41	2,6-Dinitrotoluene	165	Compound Not Detected.					
*	42	Acenaphthene-d10	164	15.196	15.196	(1.000)	442658	4.00000	
	43	3-Nitroaniline	138	Compound Not Detected.					
	44	Acenaphthene	153	Compound Not Detected.					
	45	2,4-Dinitrophenol	184	Compound Not Detected.					
	46	Dibenzofuran	168	Compound Not Detected.					
	47	4-Nitrophenol	109	Compound Not Detected.					
	48	2,4-Dinitrotoluene	165	Compound Not Detected.					
	50	Diethylphthalate	149	16.155	16.170	(1.063)	28970	0.18983	0.1898
	49	Fluorene	166	Compound Not Detected.					
	51	4-Chlorophenyl-phenylether	204	Compound Not Detected.					
	52	4-Nitroaniline	138	Compound Not Detected.					
	53	4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54	N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55	2,4,6-Tribromophenol	330	16.841	16.841	(1.108)	57889	3.44456	3.445
	56	4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57	Hexachlorobenzene	284	Compound Not Detected.					
	58	Pentachlorophenol	266	Compound Not Detected.					
*	59	Phenanthrene-d10	188	18.240	18.247	(1.000)	744696	4.00000	
	60	Phenanthrene	178	Compound Not Detected.					
	61	Anthracene	178	Compound Not Detected.					
	62	Carbazole	167	Compound Not Detected.					
	63	Di-n-butylphthalate	149	Compound Not Detected.					
	64	Fluoranthene	202	Compound Not Detected.					
	65	Pyrene	202	Compound Not Detected.					
$	66	Terphenyl-d14	244	21.389	21.389	(0.918)	617908	5.70923	5.709
	67	Butylbenzylphthalate	149	Compound Not Detected.					
	68	Benzo(a)anthracene	228	Compound Not Detected.					
*	69	Chrysene-d12	240	23.294	23.293	(1.000)	383188	4.00000	
	70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
	71	Chrysene	228	Compound Not Detected.					
	72	bis(2-Ethylhexyl)phthalate	149	23.332	23.332	(0.960)	3993	0.04098	0.04098
*	134	Di-n-octylphthalate-d4	153	24.315	24.323	(1.000)	740264	4.00000	
	73	Di-n-octylphthalate	149	Compound Not Detected.					
	74	Benzo(b)fluoranthene	252	Compound Not Detected.					
	75	Benzo(k)fluoranthene	252	Compound Not Detected.					
	76	Benzo(a)pyrene	252	Compound Not Detected.					
*	77	Perylene-d12	264	25.934	25.933	(1.000)	251086	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
	79	Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	80	Benzo(g,h,i)perylene	276	Compound Not Detected.					
	90	N-Nitrosodimethylamine	74	Compound Not Detected.					
	91	Aniline	93	Compound Not Detected.					
	93	Benzidine	184	Compound Not Detected.					
	103	Pyridine	79	Compound Not Detected.					
	105	1-methylnaphthalene	142	Compound Not Detected.					
	111	Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					

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

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1403172312.D
Lab Smp Id: BLB0424-BLK1
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt14.i\20230317.b\ABN.m
Misc Info:

Calibration Date: 17-MAR-2023
Calibration Time: 15:03
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	221219	110610	442438	220626	-0.27
27 Naphthalene-d8	809500	404750	1619000	887622	9.65
42 Acenaphthene-d10	420689	210345	841378	442658	5.22
59 Phenanthrene-d10	757520	378760	1515040	744696	-1.69
69 Chrysene-d12	450500	225250	901000	383188	-14.94
134 Di-n-octylphthala	828388	414194	1656776	740264	-10.64
77 Perylene-d12	339914	169957	679828	251086	-26.13

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.06	8.56	9.56	9.06	0.00
27 Naphthalene-d8	11.57	11.07	12.07	11.56	-0.07
42 Acenaphthene-d10	15.20	14.70	15.70	15.20	0.00
59 Phenanthrene-d10	18.25	17.75	18.75	18.24	-0.04
69 Chrysene-d12	23.29	22.79	23.79	23.29	0.00
134 Di-n-octylphthala	24.32	23.82	24.82	24.32	-0.03
77 Perylene-d12	25.93	25.43	26.43	25.93	0.00

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

REVIEW SUMMARY FOR FILE - NT1403172312.D

Lab ID: BLB0424-BLK1
nt14.i, ABN.m, 17-MAR-2023 21:06

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

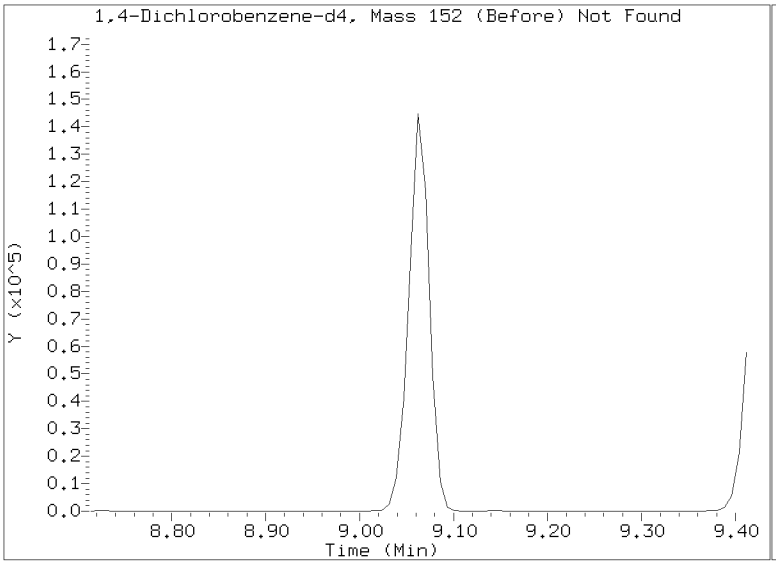
RRT check based on Ccal File: NT1403172302.D

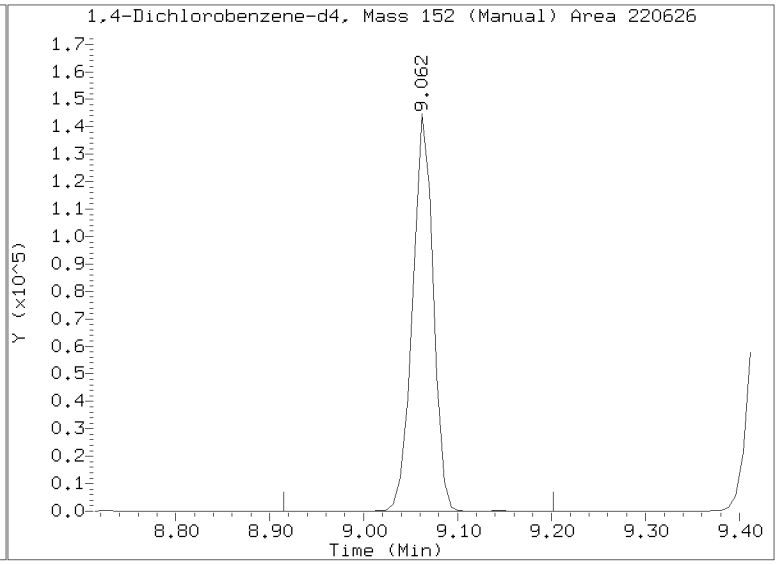
On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

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

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230317.b/NT1403172312.D
Injection Date: 17-MAR-2023 21:06
Lab ID:BLB0424-BLK1 Client ID:
Report Date: 03/22/2023 08:12





Analytical Resources, LLC
Analytical Chemists and Consultants

Form I

METHOD BLANK DATA SHEET

EPA 8270E

Blank

Laboratory:	Analytical Resources, LLC			SDG:	23B0276
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Solid	Laboratory ID:	BLB0424-BLK3	File ID:	NT1403182306.D
Sampled:	N/A	Prepared:	02/17/23 15:00	Analyzed:	03/18/23 20:03
Solids:		Preparation:	EPA 3546 (Microwave)	Initial/Final:	10 g / 1 mL
Batch:	BLB0424	Sequence:	SLC0355	Calibration:	GC00048
Instrument:	NT14	Column:	ZB-5MS		

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

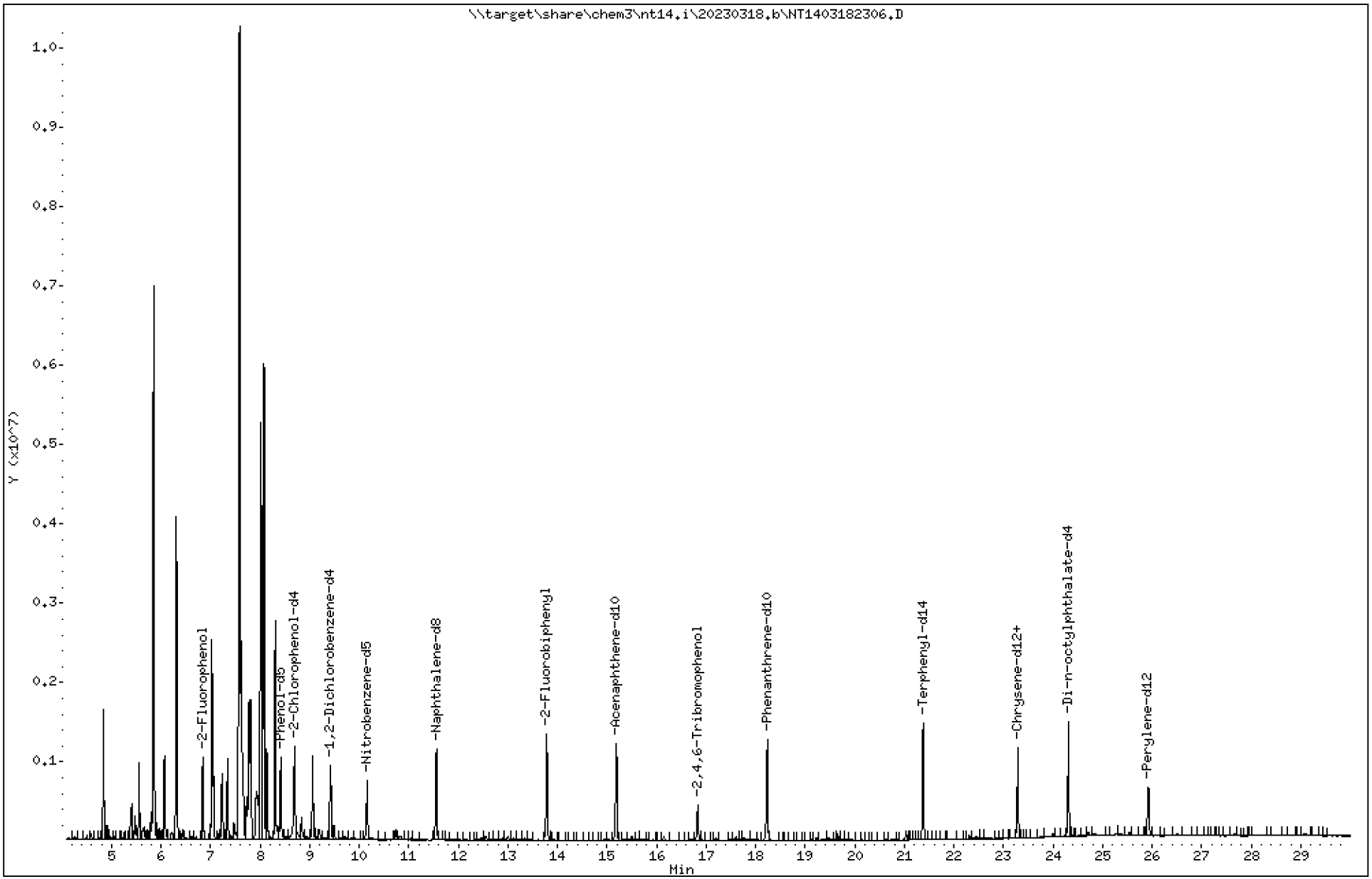
SURROGATES	ADDED: (ug/kg wet)	FOUND: (ug/kg wet)	% REC	QC LIMITS	Q
2-Fluorophenol	750.00	413	55.1	27 - 120	
Phenol-d5	750.00	453	60.4	29 - 120	
2-Chlorophenol-d4	750.00	500	66.7	31 - 120	
1,2-Dichlorobenzene-d4	500.00	390	78.0	32 - 120	
Nitrobenzene-d5	500.00	393	78.5	30 - 120	
2-Fluorobiphenyl	500.00	401	80.2	35 - 120	
2,4,6-Tribromophenol	750.00	352	46.9	24 - 134	
p-Terphenyl-d14	500.00	490	98.1	37 - 120	

Data File: \\target\share\chem3\nt14.i\20230318.b\NT1403182306.D
Date : 18-MAR-2023 20:03
Client ID:
Sample Info: BLB0424-BLK3

Column phase: ZB-5msi

Instrument: nt14.i

Operator: JGR
Column diameter: 0.25



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Date : 18-MAR-2023 20:03

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BLK3

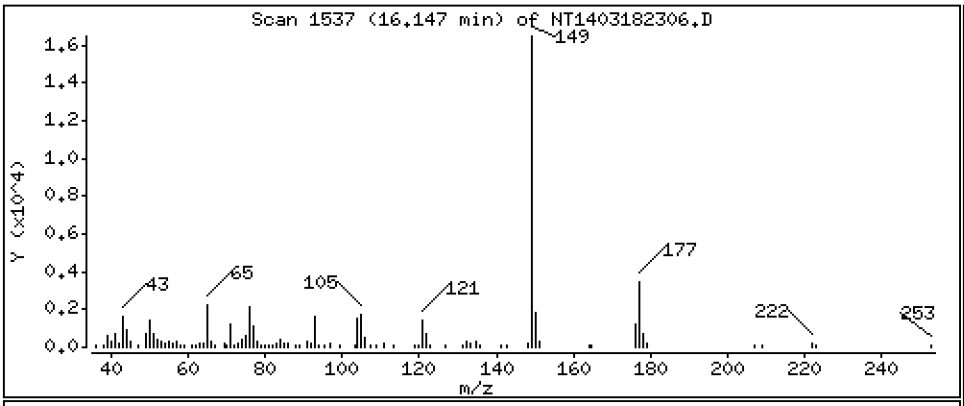
Operator: JGR

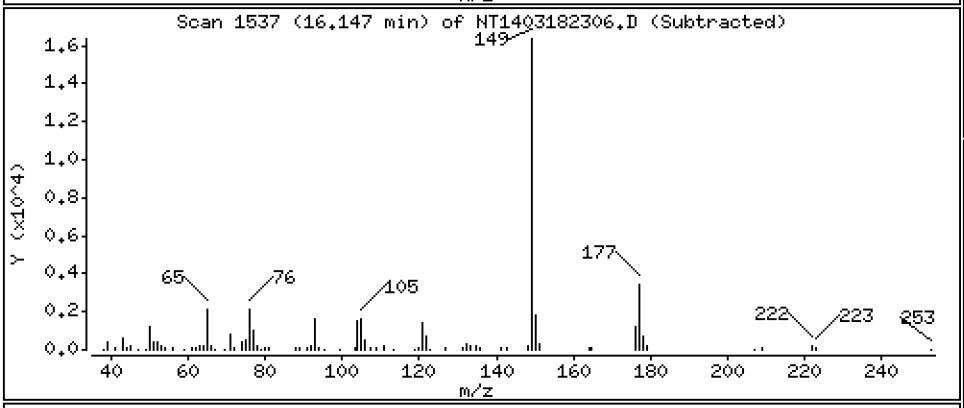
Column phase: ZB-5msi

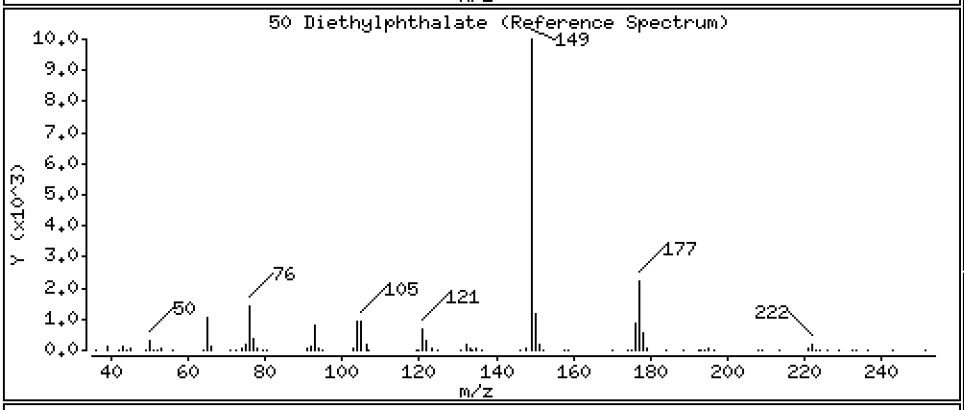
Column diameter: 0.25

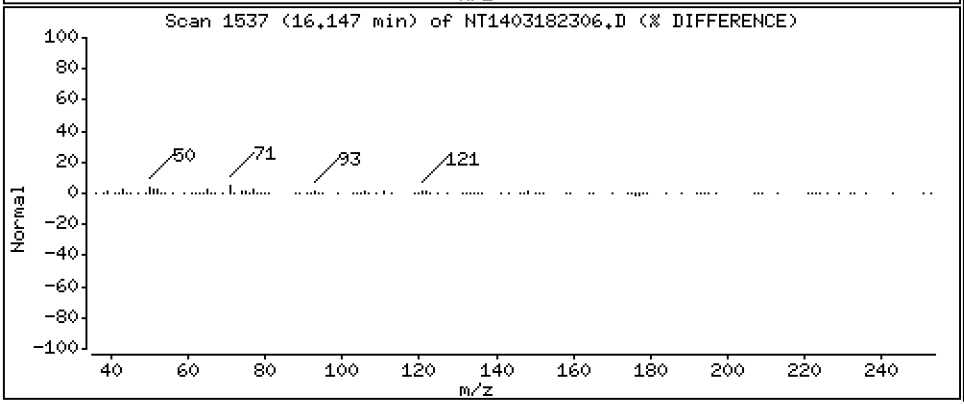
50 Diethylphthalate

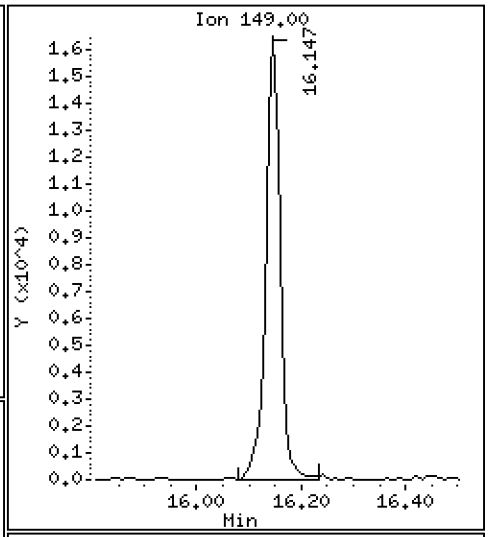
Concentration: 0.1794 ug/mL

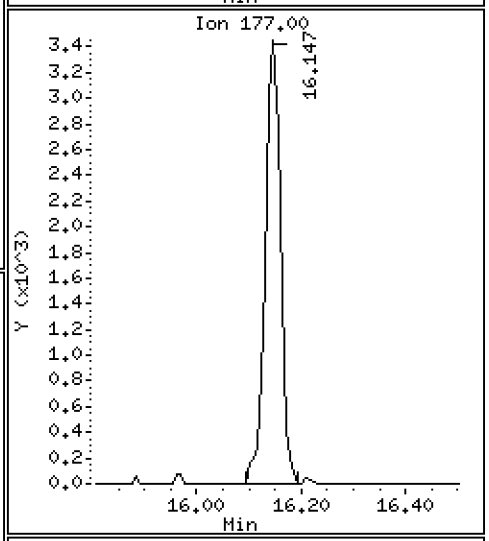


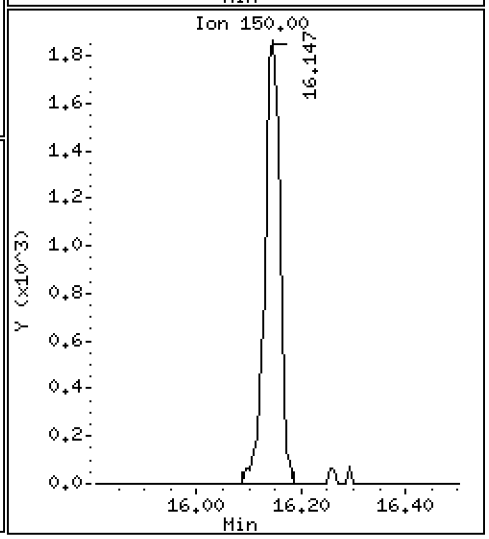












Data File: \\target\share\chem3\nt14.i\20230318.b\NT1403182306.D

Date : 18-MAR-2023 20:03

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BLK3

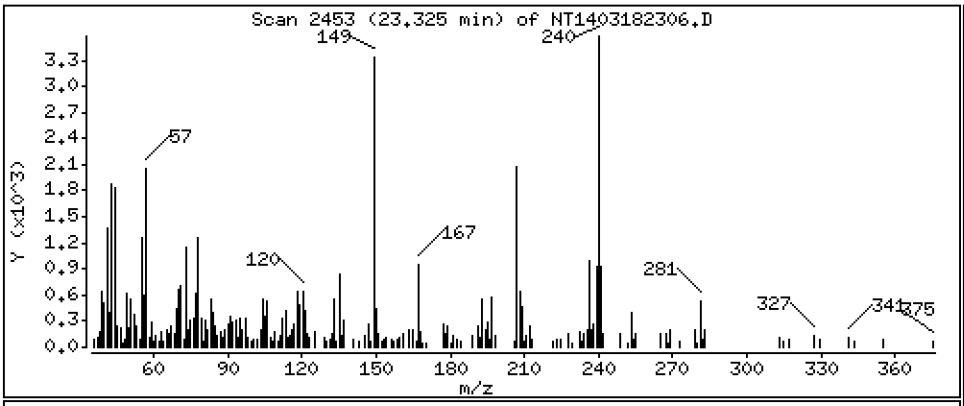
Operator: JGR

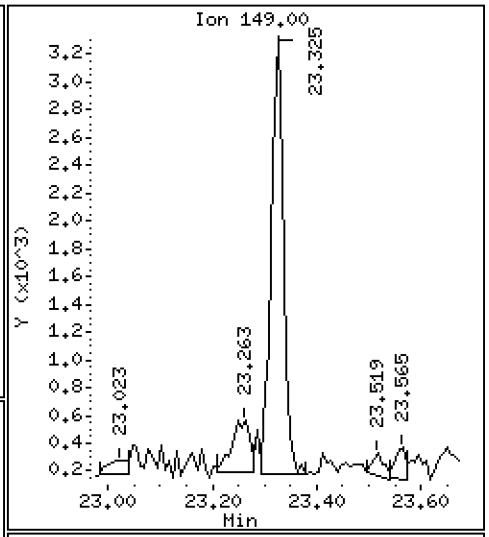
Column phase: ZB-5msi

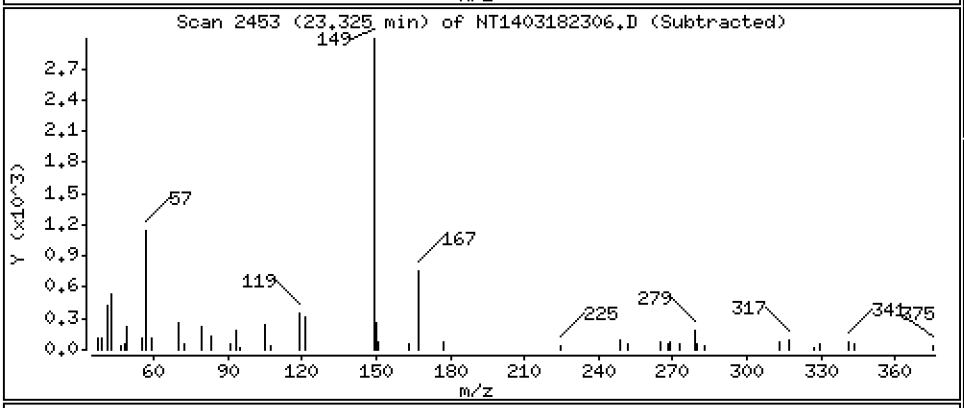
Column diameter: 0.25

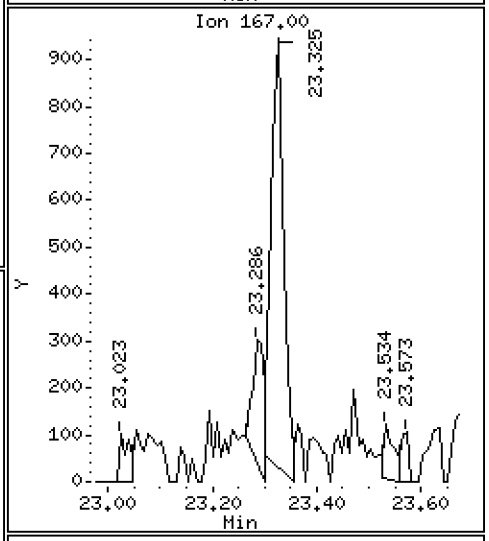
72 bis(2-Ethylhexyl)phthalate

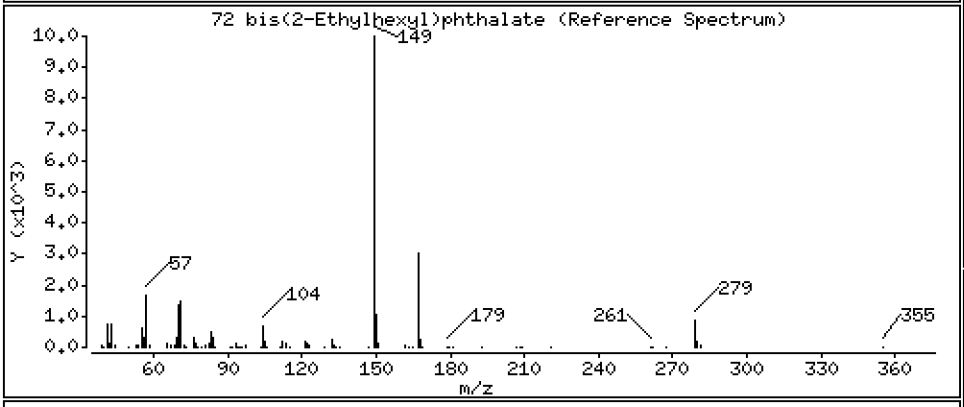
Concentration: 0.03586 ug/mL

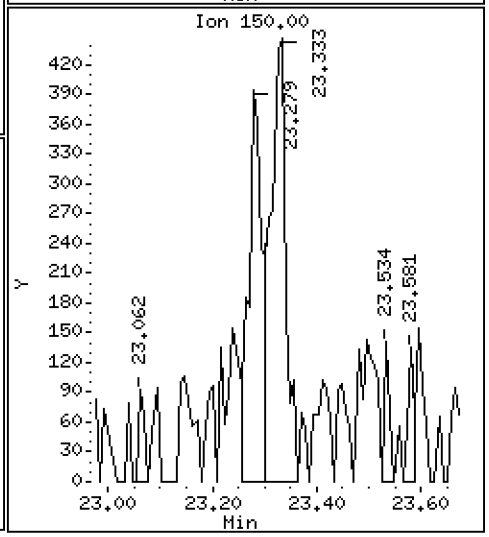


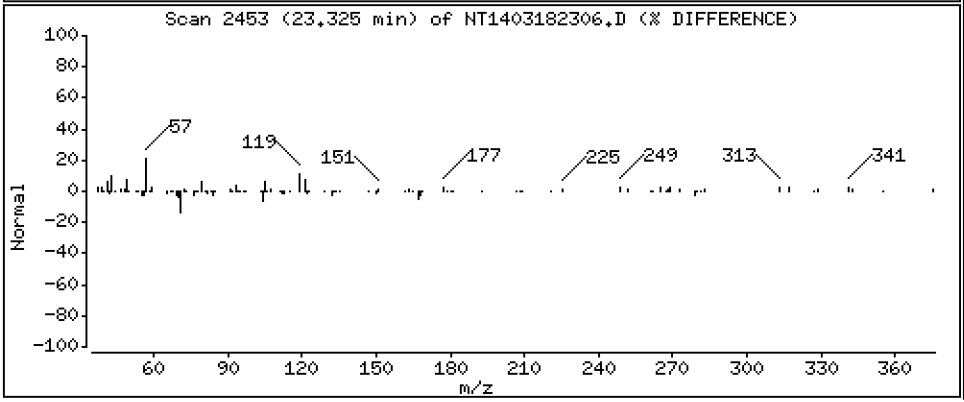












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230318.b\NT1403182306.D
Lab Smp Id: BLB0424-BLK3
Inj Date : 18-MAR-2023 20:03 MS Autotune Date: 11-MAR-2023 16:01
Operator : JGR Inst ID: nt14.i
Smp Info : BLB0424-BLK3
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230318.b\ABN.m
Meth Date : 23-Mar-2023 10:18 van Quant Type: ISTD
Cal Date : 15-MAR-2023 15:50 Cal File: NT1403152308.D
Als bottle: 17
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)	
$	1 2-Fluorophenol	112	6.844	6.829	(1.000)	371191	4.13448	4.134	
$	2 Phenol-d5	99	8.412	8.420	(1.000)	535881	4.53364	4.534	
	3 Phenol	94	Compound Not Detected.						
$	5 2-Chlorophenol-d4	132	8.698	8.698	(1.000)	466172	5.00255	5.003	
	4 Bis(2-Chloroethyl)ether	93	Compound Not Detected.						
	6 2-Chlorophenol	128	Compound Not Detected.						
	7 1,3-Dichlorobenzene	146	Compound Not Detected.						
*	8 1,4-Dichlorobenzene-d4	152	9.062	9.062	(1.000)	264303	4.00000		(M)
	9 1,4-Dichlorobenzene	146	Compound Not Detected.						
$	10 1,2-Dichlorobenzene-d4	152	9.419	9.427	(1.000)	242788	3.89982	3.900	
	12 1,2-Dichlorobenzene	146	Compound Not Detected.						
	11 Benzyl alcohol	108	Compound Not Detected.						
	14 2,2'-oxybis(1-Chloropropane)	121	Compound Not Detected.						
	13 2-Methylphenol	108	Compound Not Detected.						
	17 Hexachloroethane	117	Compound Not Detected.						
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.						
	15 4-Methylphenol	108	Compound Not Detected.						
$	18 Nitrobenzene-d5	82	10.156	10.156	(0.879)	439218	3.92529	3.925	
	19 Nitrobenzene	77	Compound Not Detected.						
	20 Isophorone	82	Compound Not Detected.						
	21 2-Nitrophenol	139	Compound Not Detected.						
	22 2,4-Dimethylphenol	107	Compound Not Detected.						
	23 Bis(2-Chloroethoxy)methane	93	Compound Not Detected.						
	24 Benzoic acid	105	Compound Not Detected.						
	25 2,4-Dichlorophenol	162	Compound Not Detected.						
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.						
*	27 Naphthalene-d8	136	11.559	11.559	(1.000)	1057352	4.00000		
	28 Naphthalene	128	Compound Not Detected.						
	29 4-Chloroaniline	127	Compound Not Detected.						
	30 Hexachlorobutadiene	225	Compound Not Detected.						
	31 4-Chloro-3-methylphenol	107	Compound Not Detected.						
	32 2-Methylnaphthalene	142	Compound Not Detected.						
	33 Hexachlorocyclopentadiene	237	Compound Not Detected.						

		QUANT SIG					CONCENTRATIONS ON-COLUMN	FINAL
Compounds		MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
34	2,4,6-Trichlorophenol	196	Compound Not Detected.					
35	2,4,5-Trichlorophenol	196	Compound Not Detected.					
$ 36	2-Fluorobiphenyl	172	13.788	13.787	(0.908)	783067	4.01030	4.010
37	2-Chloronaphthalene	162	Compound Not Detected.					
38	2-Nitroaniline	65	Compound Not Detected.					
39	Dimethylphthalate	163	Compound Not Detected.					
40	Acenaphthylene	152	Compound Not Detected.					
41	2,6-Dinitrotoluene	165	Compound Not Detected.					
* 42	Acenaphthene-d10	164	15.188	15.188	(1.000)	539181	4.00000	
43	3-Nitroaniline	138	Compound Not Detected.					
44	Acenaphthene	153	Compound Not Detected.					
45	2,4-Dinitrophenol	184	Compound Not Detected.					
46	Dibenzofuran	168	Compound Not Detected.					
47	4-Nitrophenol	109	Compound Not Detected.					
48	2,4-Dinitrotoluene	165	Compound Not Detected.					
50	Diethylphthalate	149	16.147	16.155	(1.063)	33348	0.17940	0.1794
49	Fluorene	166	Compound Not Detected.					
51	4-Chlorophenyl-phenylether	204	Compound Not Detected.					
52	4-Nitroaniline	138	Compound Not Detected.					
53	4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
54	N-Nitrosodiphenylamine	169	Compound Not Detected.					
$ 55	2,4,6-Tribromophenol	330	16.834	16.833	(1.108)	74616	3.51978	3.520
56	4-Bromophenyl-phenylether	248	Compound Not Detected.					
57	Hexachlorobenzene	284	Compound Not Detected.					
58	Pentachlorophenol	266	Compound Not Detected.					
* 59	Phenanthrene-d10	188	18.232	18.232	(1.000)	935636	4.00000	
60	Phenanthrene	178	Compound Not Detected.					
61	Anthracene	178	Compound Not Detected.					
62	Carbazole	167	Compound Not Detected.					
63	Di-n-butylphthalate	149	Compound Not Detected.					
64	Fluoranthene	202	Compound Not Detected.					
65	Pyrene	202	Compound Not Detected.					
$ 66	Terphenyl-d14	244	21.381	21.381	(0.918)	819908	4.90410	4.904
67	Butylbenzylphthalate	149	Compound Not Detected.					
68	Benzo(a)anthracene	228	Compound Not Detected.					
* 69	Chrysene-d12	240	23.286	23.294	(1.000)	591932	4.00000	
70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
71	Chrysene	228	Compound Not Detected.					
72	bis(2-Ethylhexyl)phthalate	149	23.325	23.324	(0.960)	4884	0.03586	0.03586
* 134	Di-n-octylphthalate-d4	153	24.308	24.315	(1.000)	1034580	4.00000	
73	Di-n-octylphthalate	149	Compound Not Detected.					
74	Benzo(b)fluoranthene	252	Compound Not Detected.					
75	Benzo(k)fluoranthene	252	Compound Not Detected.					
76	Benzo(a)pyrene	252	Compound Not Detected.					
* 77	Perylene-d12	264	25.918	25.926	(1.000)	463088	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
79	Dibenzo(a,h)anthracene	278	Compound Not Detected.					
80	Benzo(g,h,i)perylene	276	Compound Not Detected.					
90	N-Nitrosodimethylamine	74	Compound Not Detected.					
91	Aniline	93	Compound Not Detected.					
93	Benzidine	184	Compound Not Detected.					
103	Pyridine	79	Compound Not Detected.					
105	1-methylnaphthalene	142	Compound Not Detected.					
111	Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					

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

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1403182306.D
Lab Smp Id: BLB0424-BLK3
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt14.i\20230318.b\ABN.m
Misc Info:

Calibration Date: 18-MAR-2023
Calibration Time: 17:38
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	247621	123811	495242	264303	6.74
27 Naphthalene-d8	955275	477638	1910550	1057352	10.69
42 Acenaphthene-d10	510589	255295	1021178	539181	5.60
59 Phenanthrene-d10	920812	460406	1841624	935636	1.61
69 Chrysene-d12	546688	273344	1093376	591932	8.28
134 Di-n-octylphthala	1067789	533895	2135578	1034580	-3.11
77 Perylene-d12	445520	222760	891040	463088	3.94

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.06	8.56	9.56	9.06	0.00
27 Naphthalene-d8	11.56	11.06	12.06	11.56	0.00
42 Acenaphthene-d10	15.19	14.69	15.69	15.19	0.00
59 Phenanthrene-d10	18.23	17.73	18.73	18.23	0.00
69 Chrysene-d12	23.29	22.79	23.79	23.29	-0.03
134 Di-n-octylphthala	24.32	23.82	24.82	24.31	-0.03
77 Perylene-d12	25.93	25.43	26.43	25.92	-0.03

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

REVIEW SUMMARY FOR FILE - NT1403182306.D

Lab ID: BLB0424-BLK3
nt14.i, ABN.m, 18-MAR-2023 20:03

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

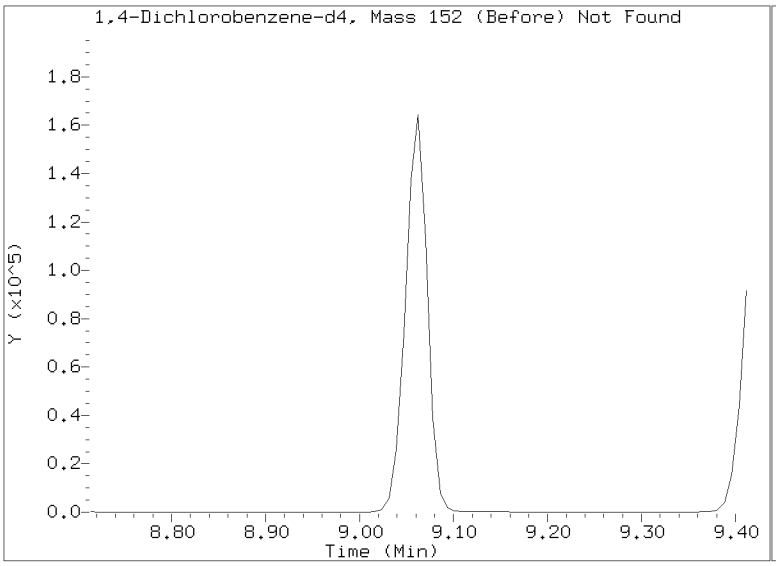
RRT check based on Ccal File: NT1403182302.D

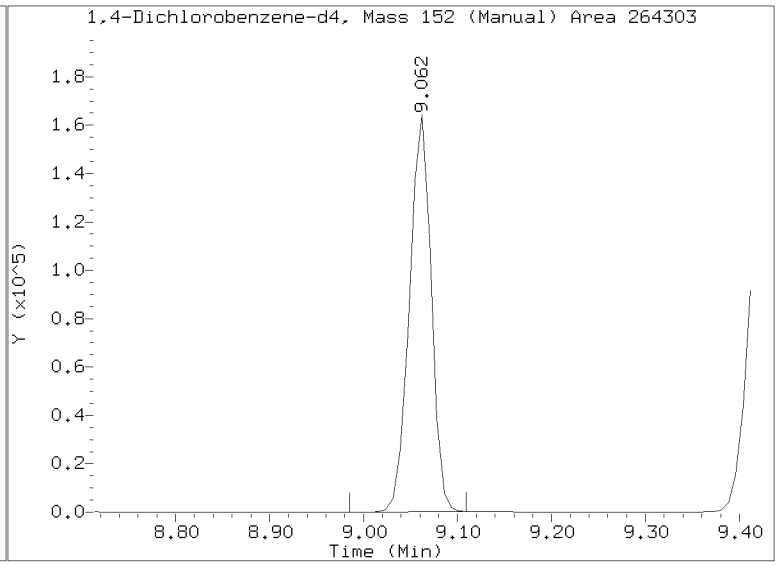
On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

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

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230318.b/NT1403182306.D
Injection Date: 18-MAR-2023 20:03
Lab ID:BLB0424-BLK3 Client ID:
Report Date: 03/23/2023 11:34





LCS / LCS DUPLICATE RECOVERY

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	03/17/23 21:42
Batch:	BLB0424	Laboratory ID:	BLB0424-BS1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	LCS
Initial/Final:	10 g / 1 mL		

COMPOUND	SPIKE ADDED (ug/kg wet)	LCS CONCENTRATION (ug/kg wet)	Q	LCS % REC. #	QC LIMITS REC.
Phenol	500	371		74.1	34 - 120
4-Methylphenol	500	346		69.3	29 - 120
Naphthalene	500	403		80.7	43 - 120
2-Methylnaphthalene	500	407		81.4	43 - 120
Acenaphthylene	500	402		80.5	42 - 120
Dimethylphthalate	500	469		93.8	43 - 120
Acenaphthene	500	420		84.0	45 - 120
Dibenzofuran	500	432		86.4	43 - 120
Fluorene	500	422		84.4	45 - 120
Phenanthrene	500	446		89.2	49 - 120
Anthracene	500	379		75.8	45 - 120
Fluoranthene	500	627		125	53 - 145
Pyrene	500	598		120	52 - 134
Butylbenzylphthalate	500	668	*	134 *	45 - 132
Benzo(a)anthracene	500	456		91.3	49 - 120
Chrysene	500	462		92.4	47 - 120
bis(2-Ethylhexyl)phthalate	500	608		122	34 - 130
Benzofluoranthenes, Total	1000	1040		104	30 - 160
Benzo(a)pyrene	500	446		89.2	42 - 120
Indeno(1,2,3-cd)pyrene	500	397		79.3	42 - 163
Dibenzo(a,h)anthracene	500	405		81.1	30 - 133
Benzo(g,h,i)perylene	500	373	Q	74.5	46 - 148

* Indicates values outside of QC limits

COMPOUND	SPIKE ADDED (ug/kg wet)	LCSD CONCENTRATION (ug/kg wet)	Q	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Phenol	500	400		79.9	7.51	30	34 - 120
4-Methylphenol	500	365		73.0	5.25	30	29 - 120
Naphthalene	500	423		84.6	4.71	30	43 - 120
2-Methylnaphthalene	500	423		84.6	3.87	30	43 - 120
Acenaphthylene	500	419		83.8	4.06	30	42 - 120
Dimethylphthalate	500	479		95.7	2.04	30	43 - 120
Acenaphthene	500	439		87.8	4.35	30	45 - 120

* Indicates values outside of QC limits

LCS / LCS DUPLICATE RECOVERY

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	03/17/23 22:19
Batch:	BLB0424	Laboratory ID:	BLB0424-BSD1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	LCS Dup
Initial/Final:	10 g / 1 mL		

COMPOUND	SPIKE ADDED (ug/kg wet)	LCSD CONCENTRATION (ug/kg wet)	Q	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Dibenzofuran	500	452		90.3	4.52	30	43 - 120
Fluorene	500	436		87.2	3.23	30	45 - 120
Phenanthrene	500	452		90.4	1.34	30	49 - 120
Anthracene	500	386		77.2	1.80	30	45 - 120
Fluoranthene	500	631		126	0.738	30	53 - 145
Pyrene	500	598		120	0.0380	30	52 - 134
Butylbenzylphthalate	500	673	*	135 *	0.795	30	45 - 132
Benzo(a)anthracene	500	463		92.5	1.40	30	49 - 120
Chrysene	500	464		92.8	0.478	30	47 - 120
bis(2-Ethylhexyl)phthalate	500	605		121	0.407	30	34 - 130
Benzofluoranthenes, Total	1000	1060		106	1.58	30	30 - 160
Benzo(a)pyrene	500	449		89.7	0.551	30	42 - 120
Indeno(1,2,3-cd)pyrene	500	397		79.3	0.0151	30	42 - 163
Dibenzo(a,h)anthracene	500	406		81.2	0.192	30	30 - 133
Benzo(g,h,i)perylene	500	361	Q	72.2	3.09	30	46 - 148

* Indicates values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172313.D

Date : 17-MAR-2023 21:42

Client ID:

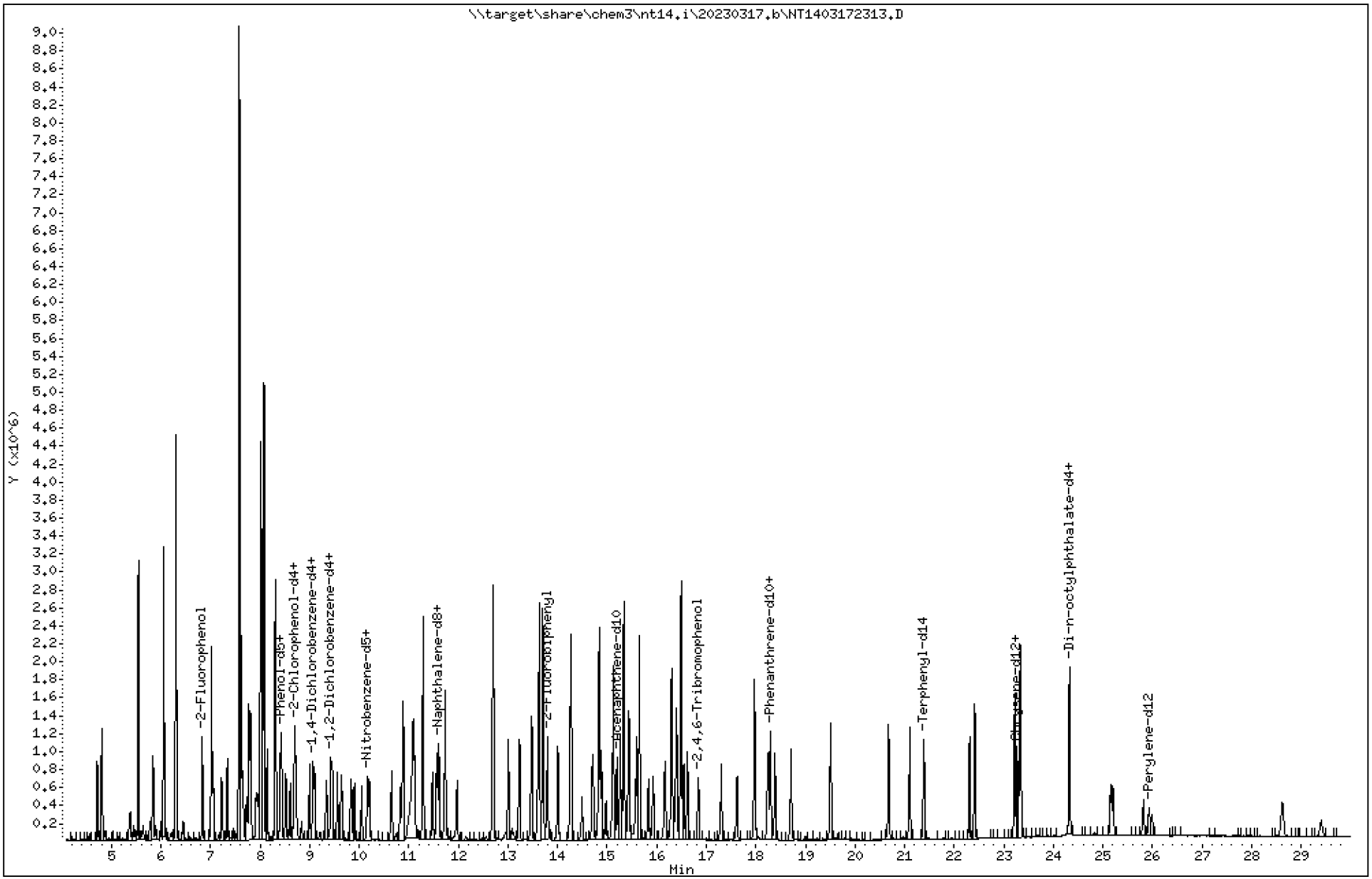
Instrument: nt14.i

Sample Info: BLB0424-BS1

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

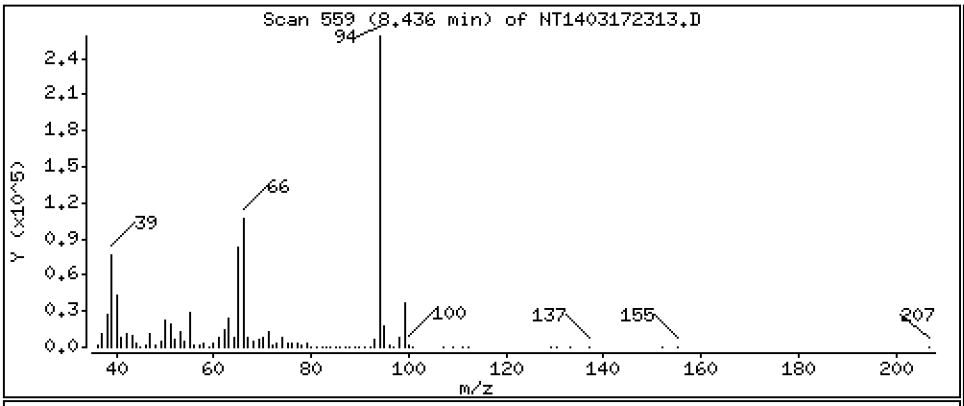
Operator: JGR

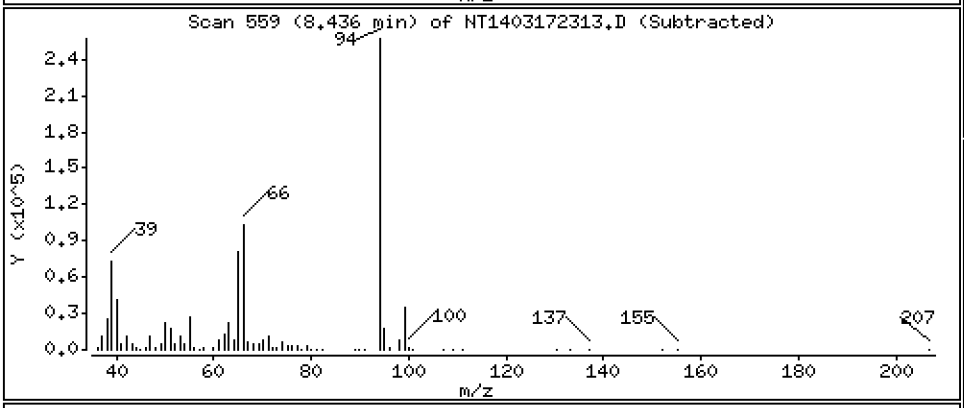
Column phase: ZB-5msi

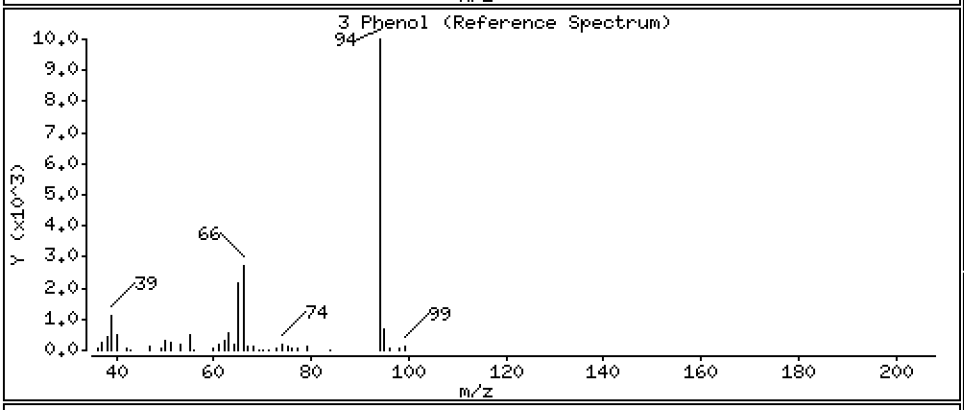
Column diameter: 0.25

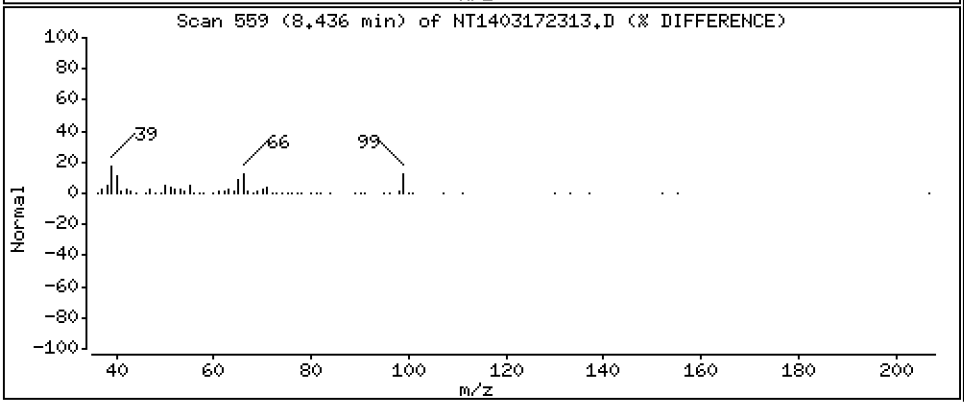
3 Phenol

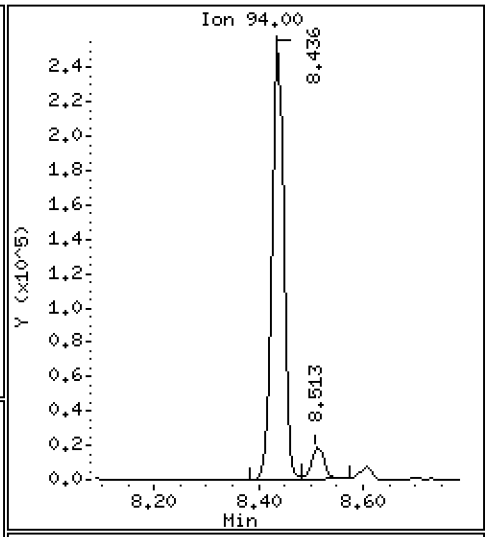
Concentration: 3.707 ug/mL

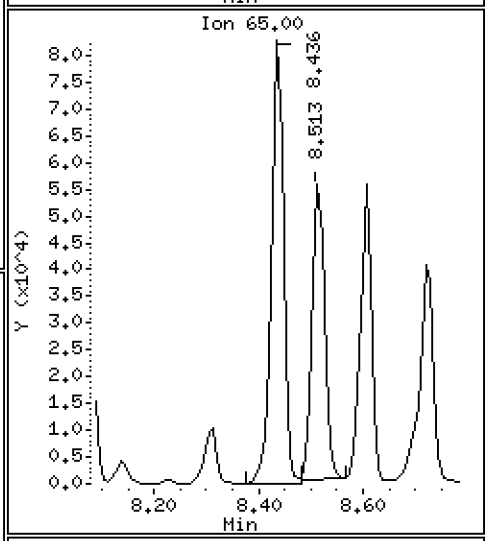


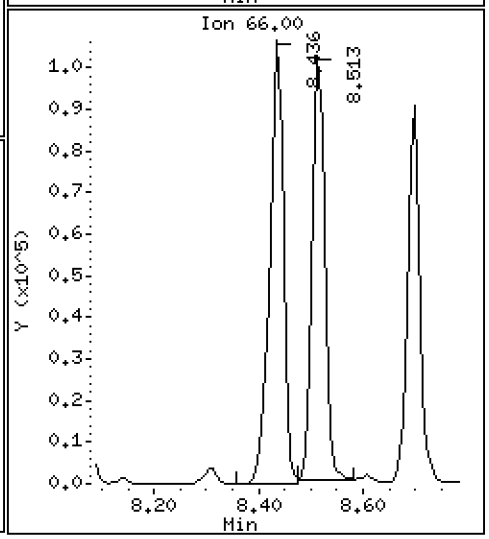












Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172313.D

Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

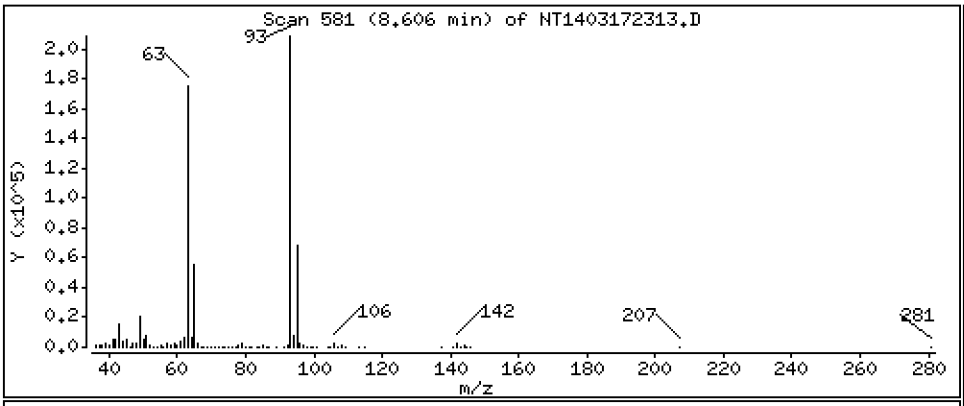
Operator: JGR

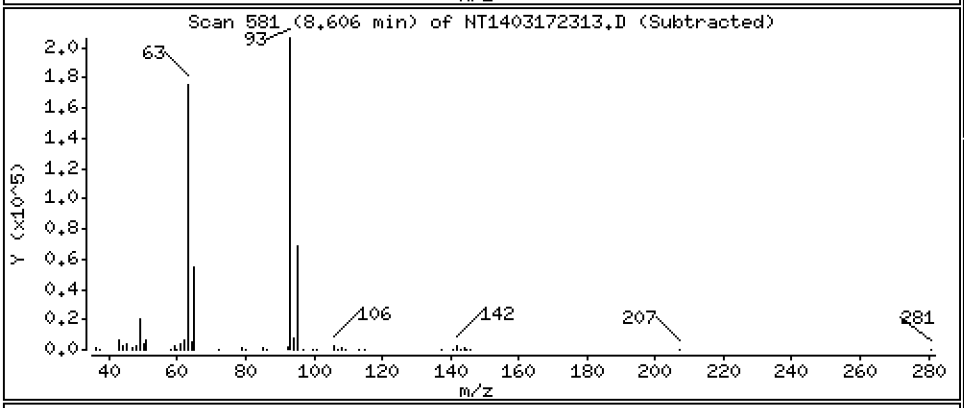
Column phase: ZB-5msi

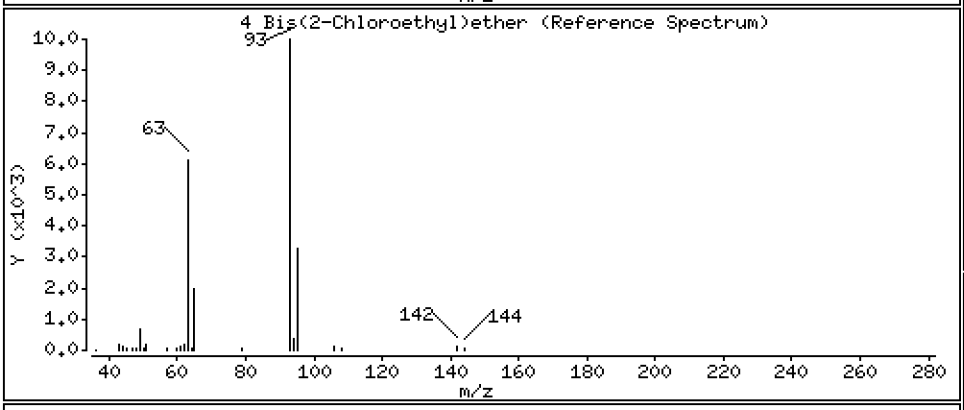
Column diameter: 0.25

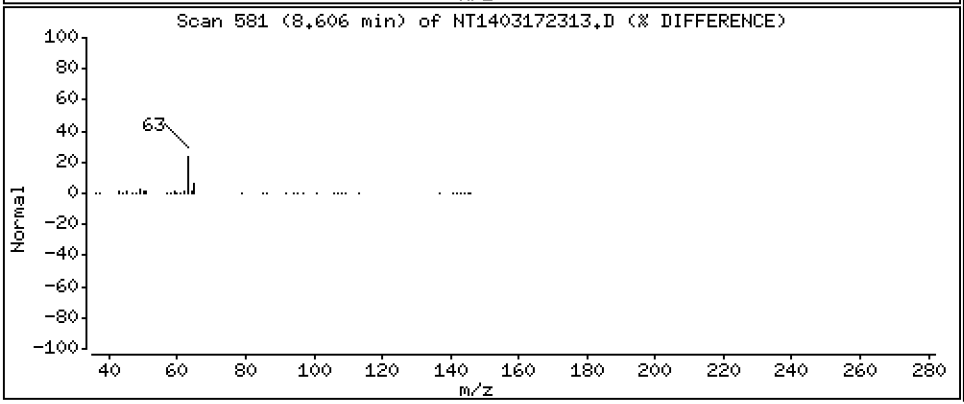
4 Bis(2-Chloroethyl)ether

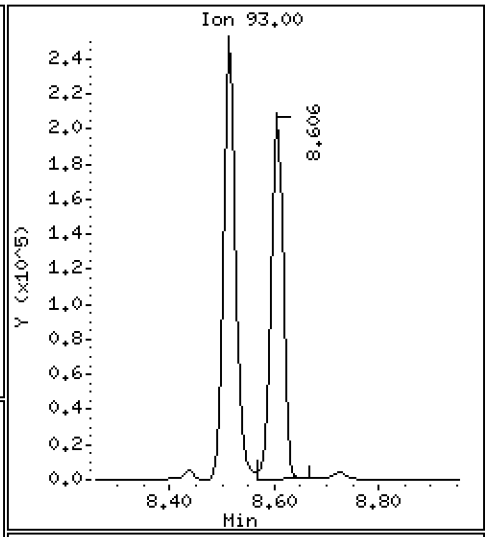
Concentration: 4.316 ug/mL

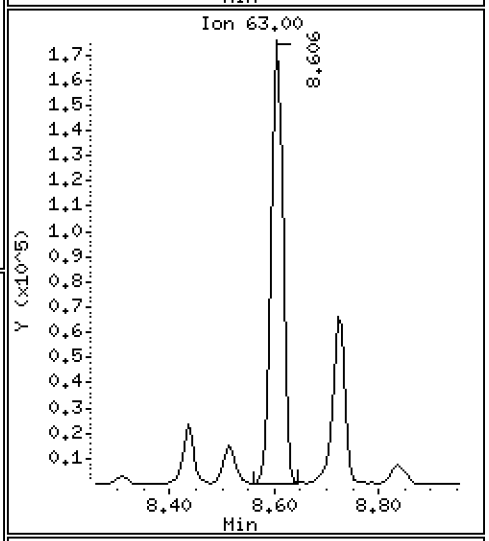


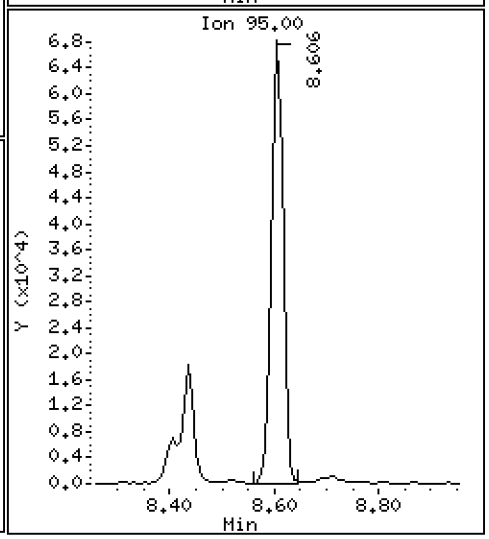












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

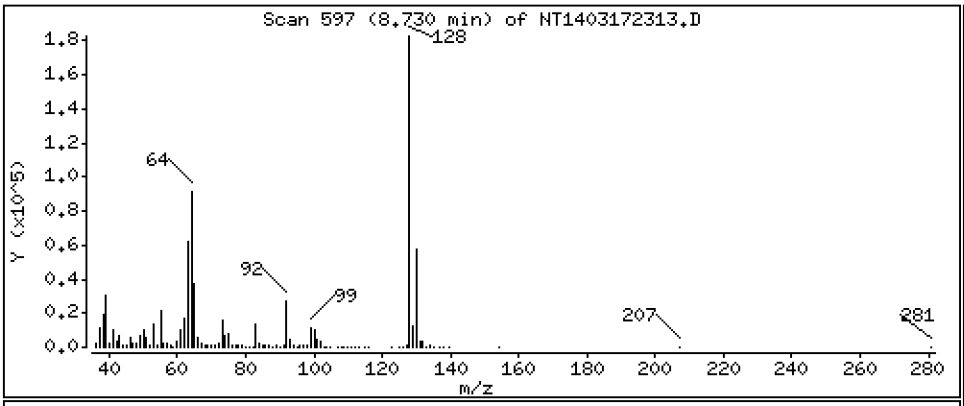
Operator: JGR

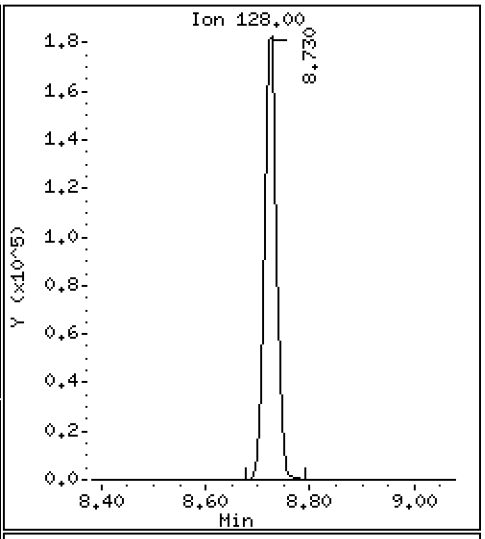
Column phase: ZB-5msi

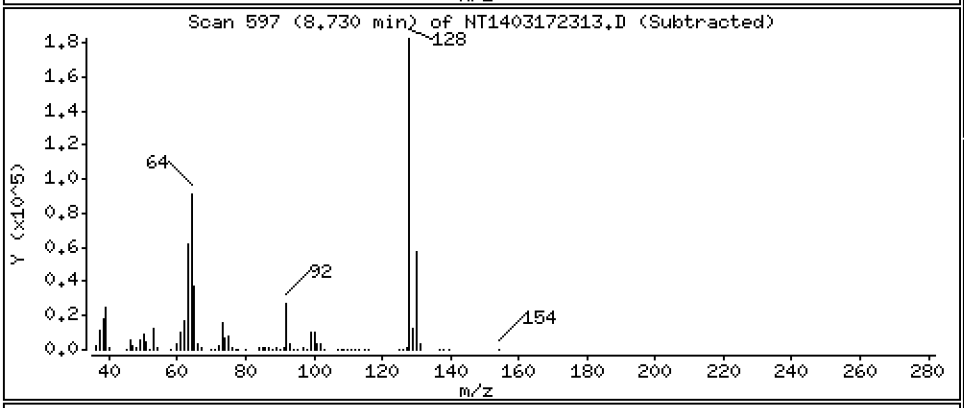
Column diameter: 0.25

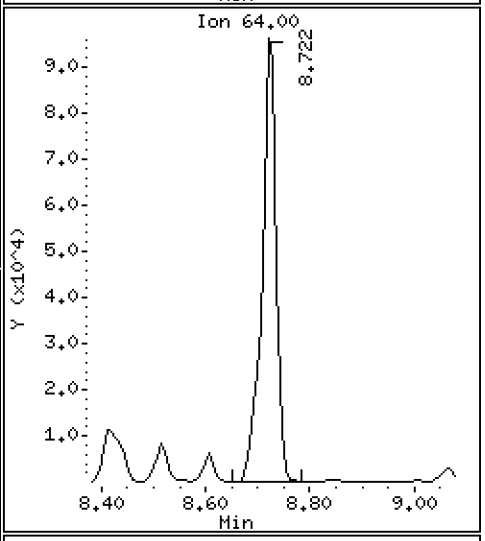
6 2-Chlorophenol

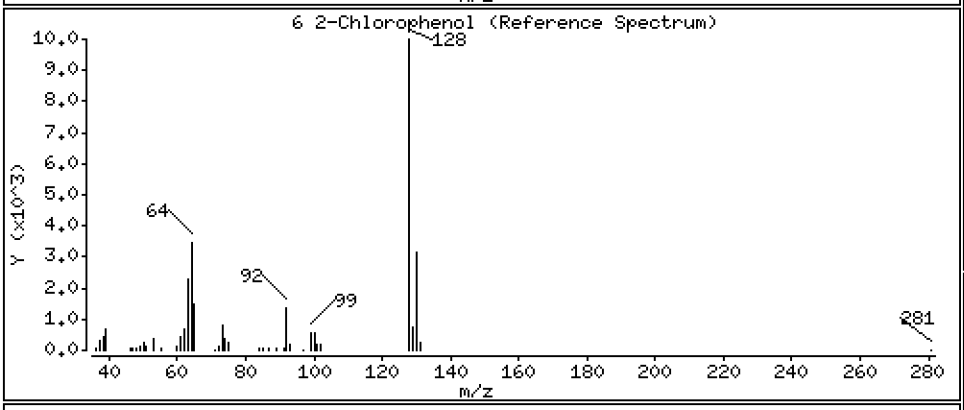
Concentration: 3.775 ug/mL

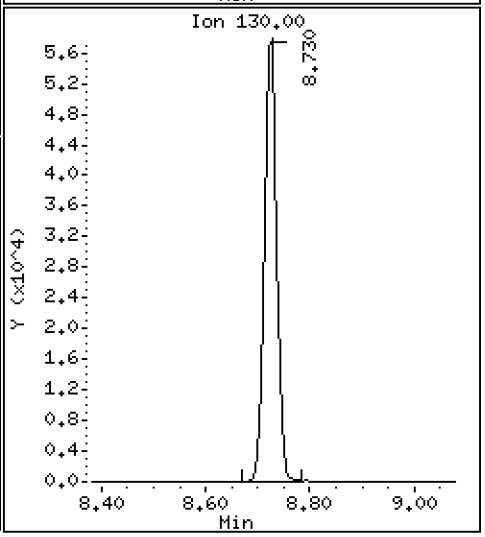


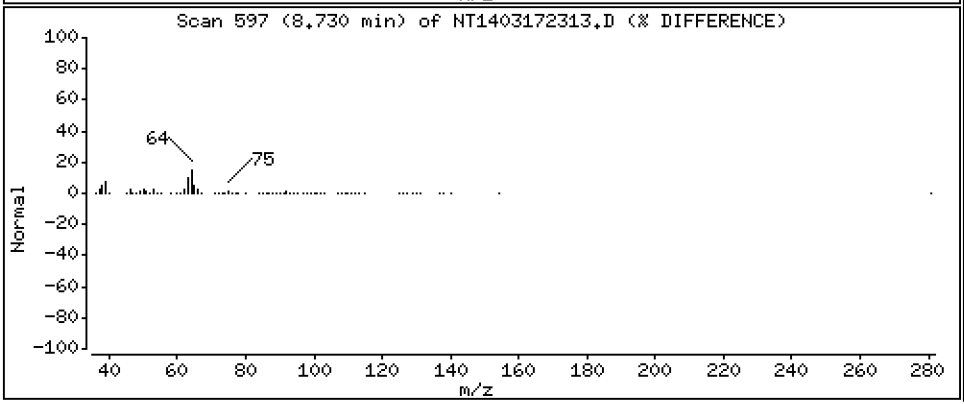












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

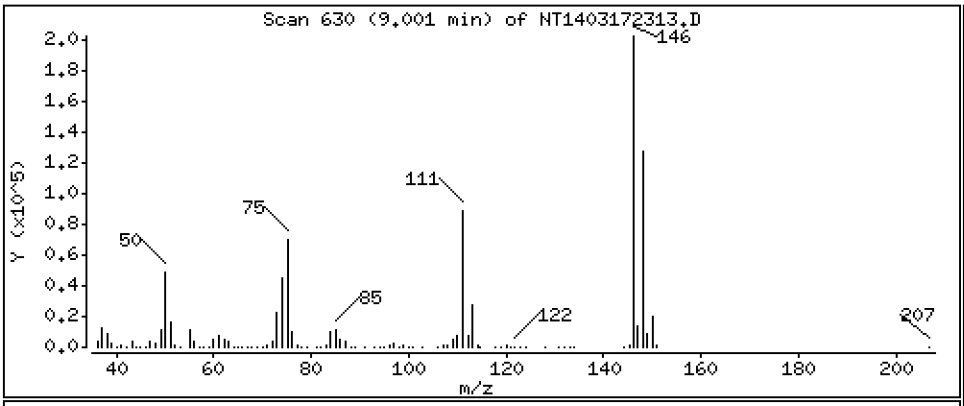
Operator: JGR

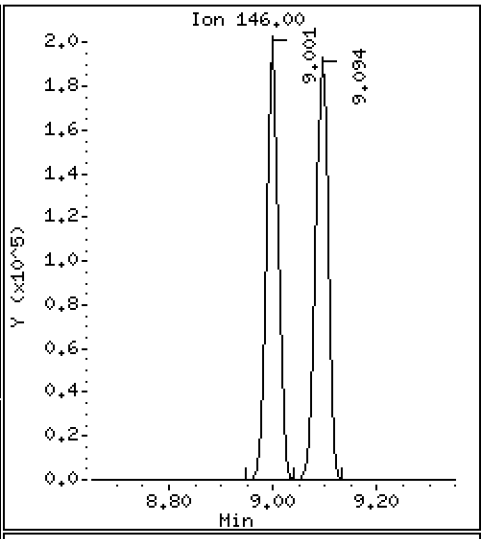
Column phase: ZB-5msi

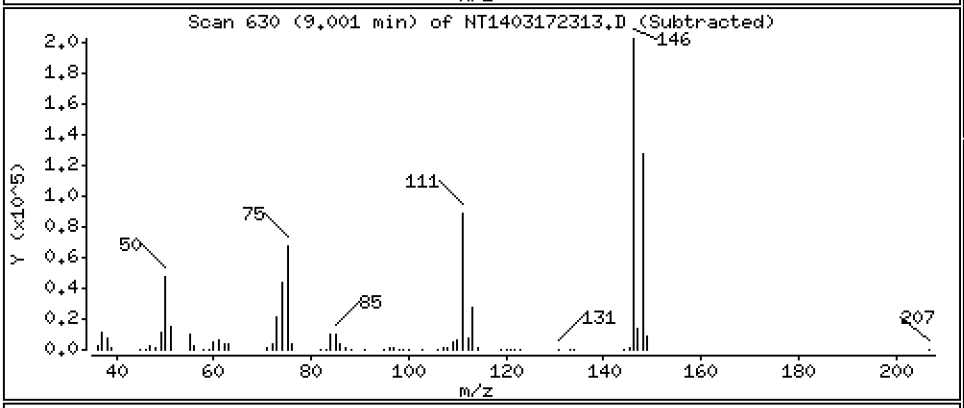
Column diameter: 0.25

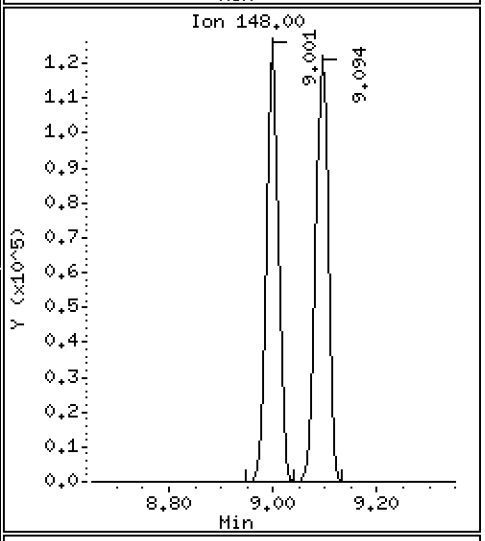
7 1,3-Dichlorobenzene

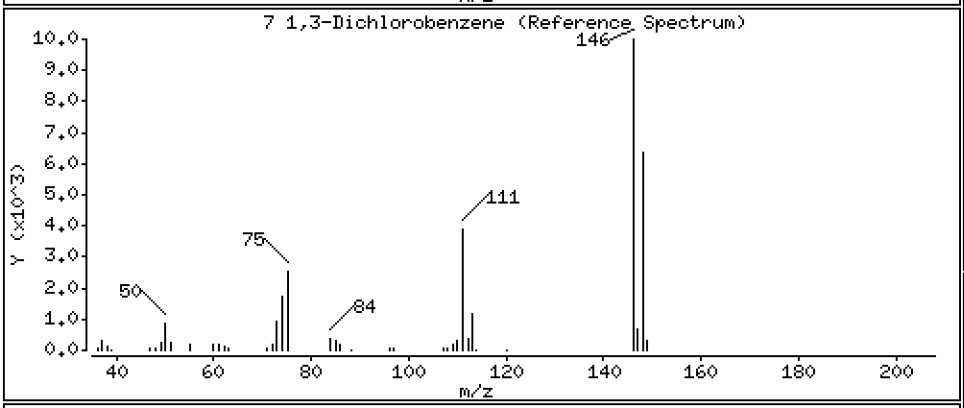
Concentration: 3.893 ug/mL

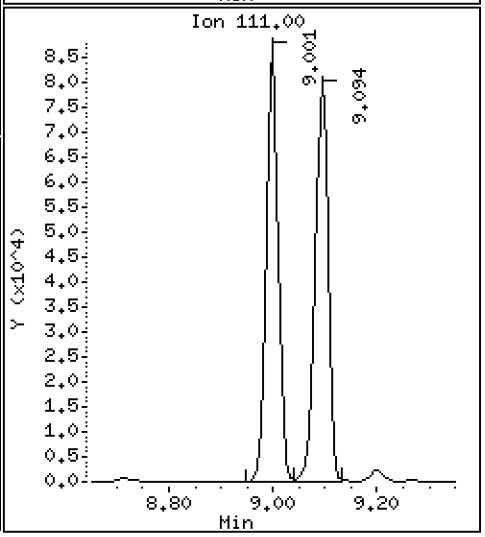


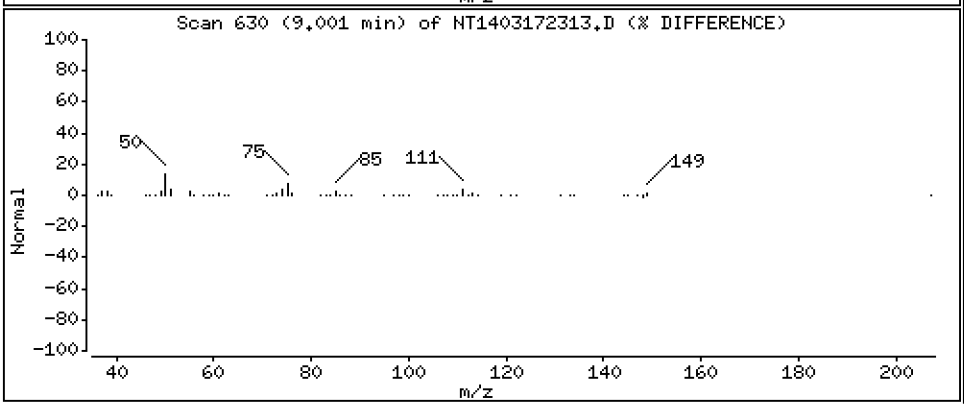












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

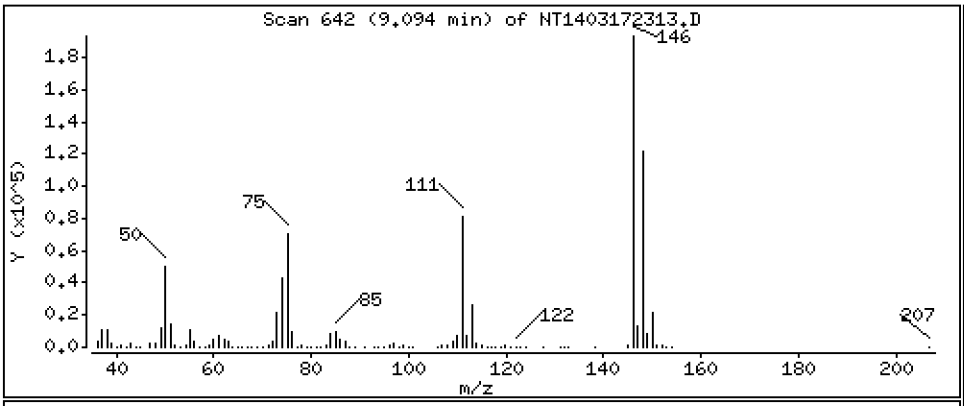
Operator: JGR

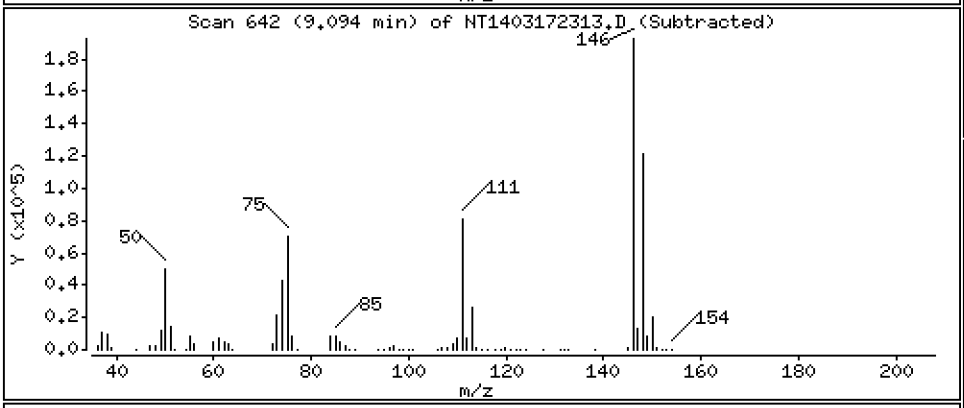
Column phase: ZB-5msi

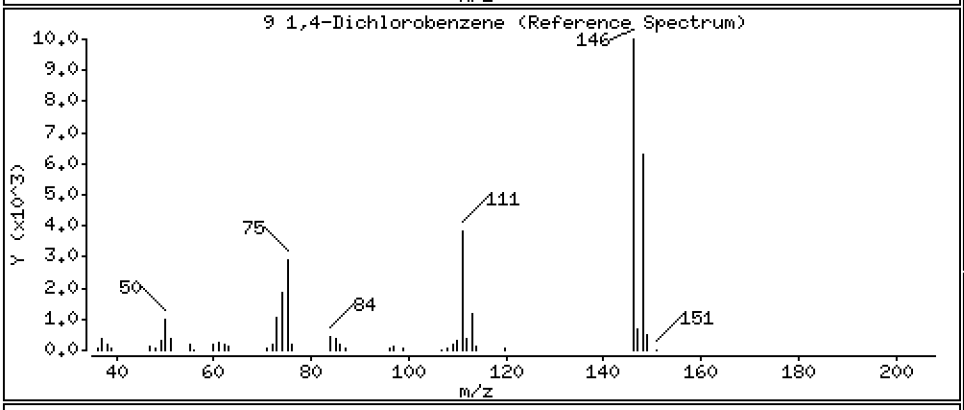
Column diameter: 0.25

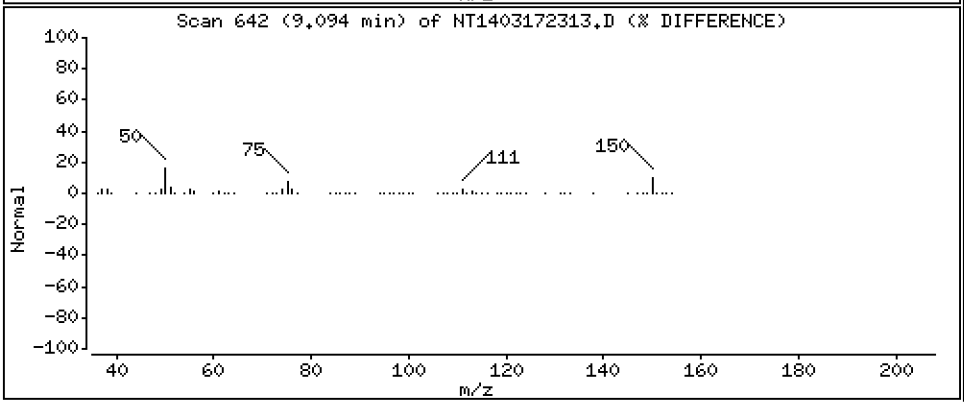
9 1,4-Dichlorobenzene

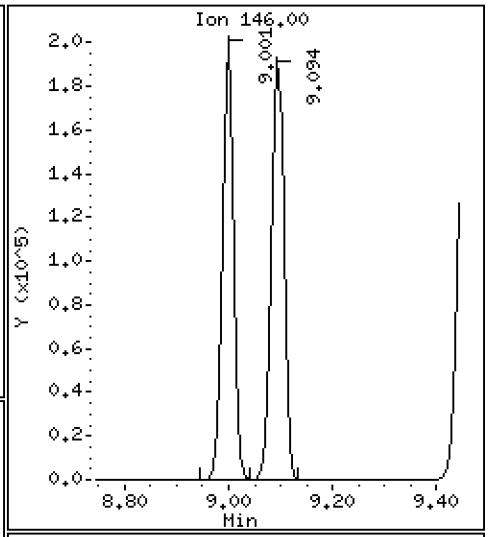
Concentration: 3.988 ug/mL

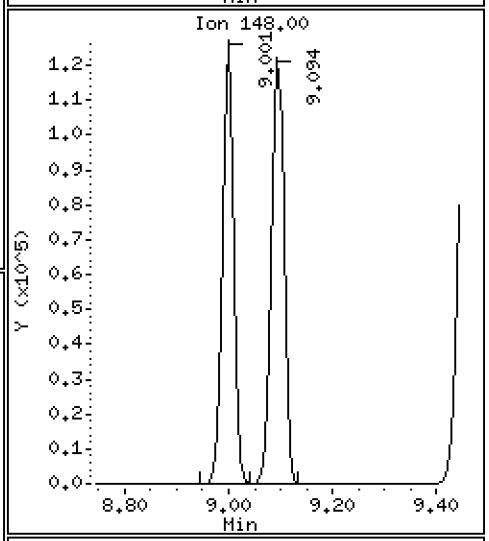


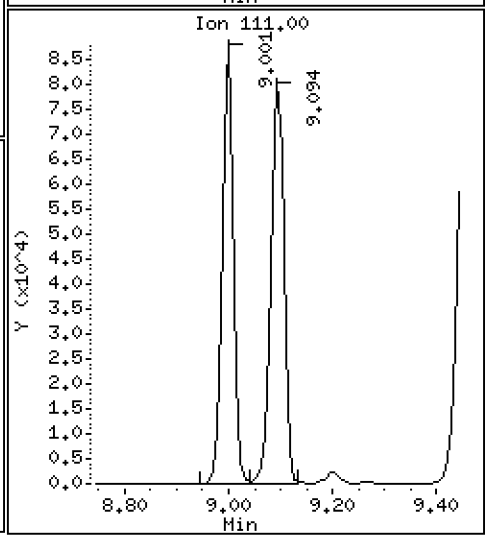












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

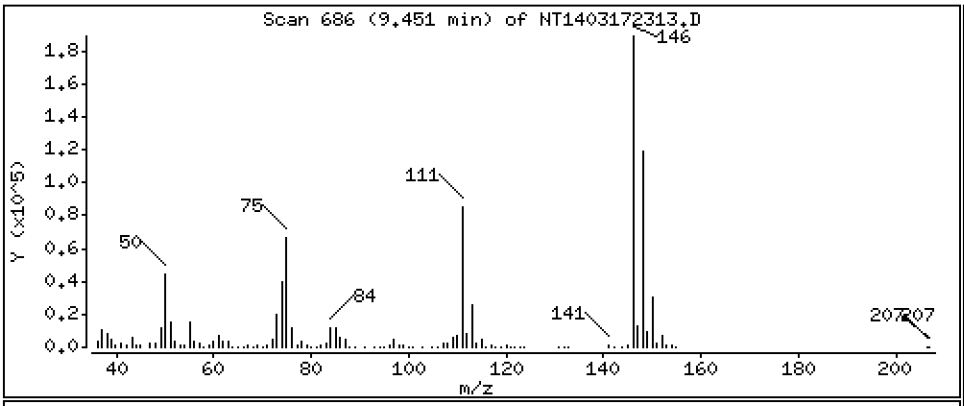
Operator: JGR

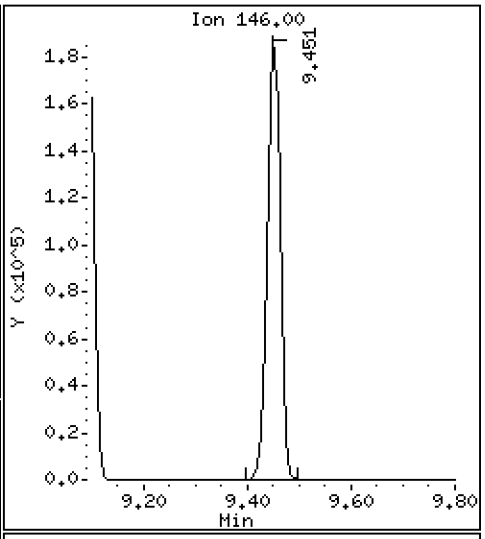
Column phase: ZB-5msi

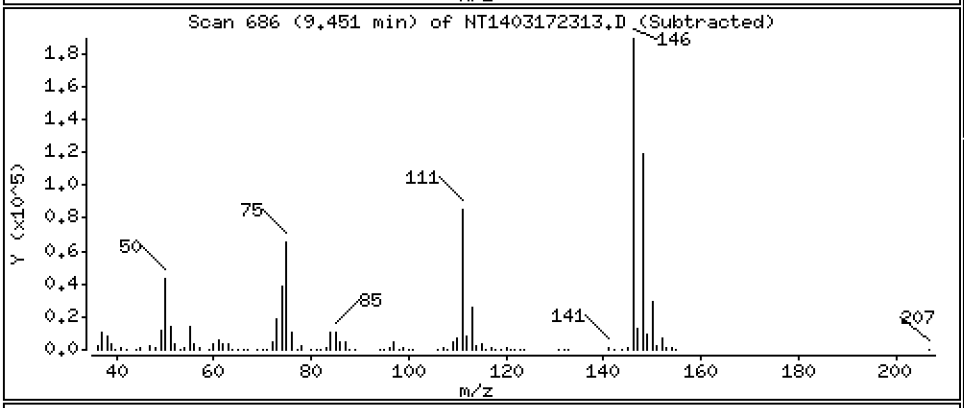
Column diameter: 0.25

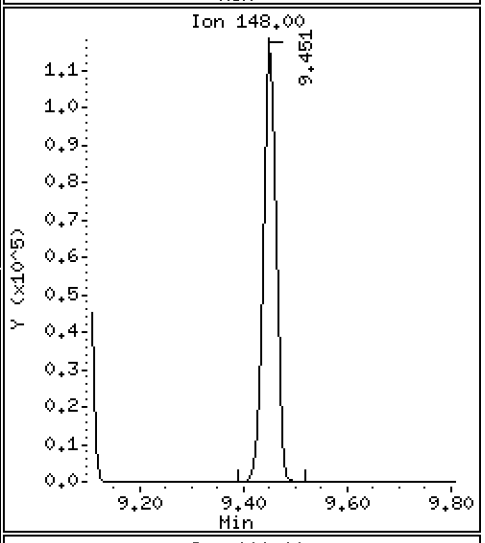
12 1,2-Dichlorobenzene

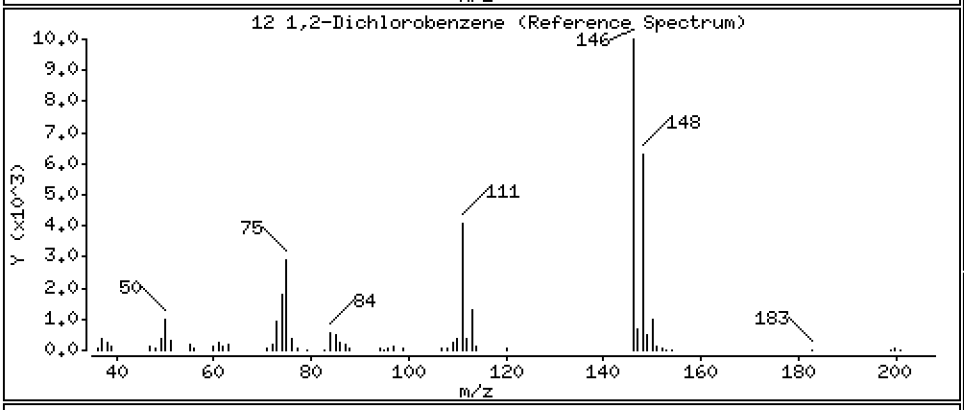
Concentration: 4.040 ug/mL

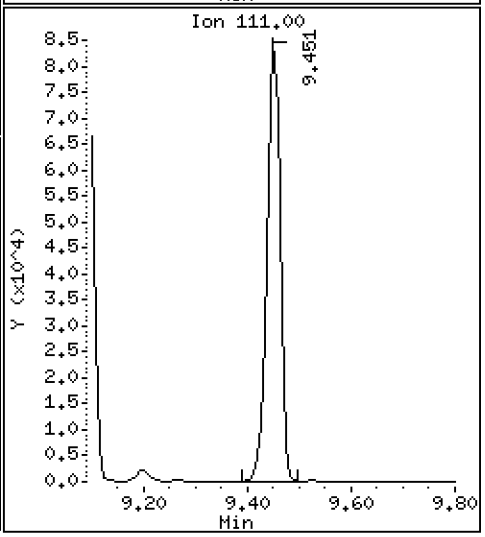


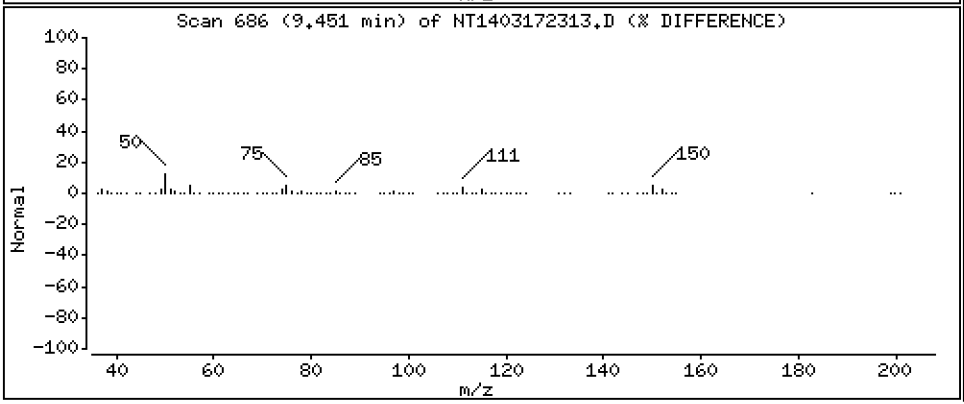












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

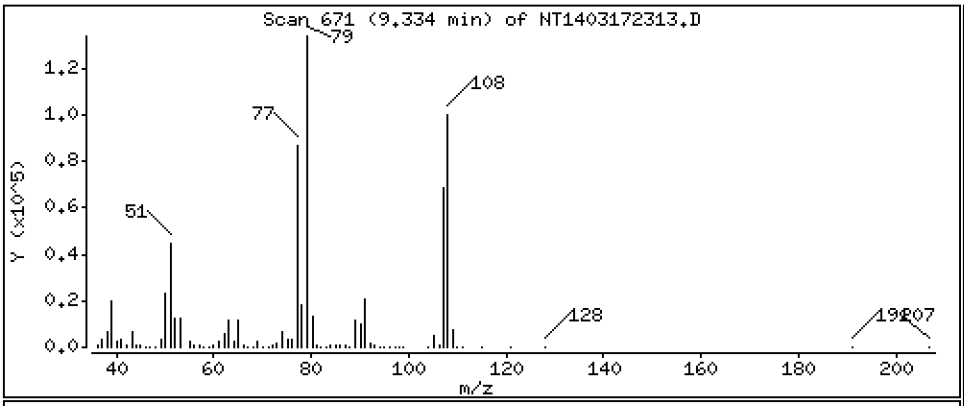
Operator: JGR

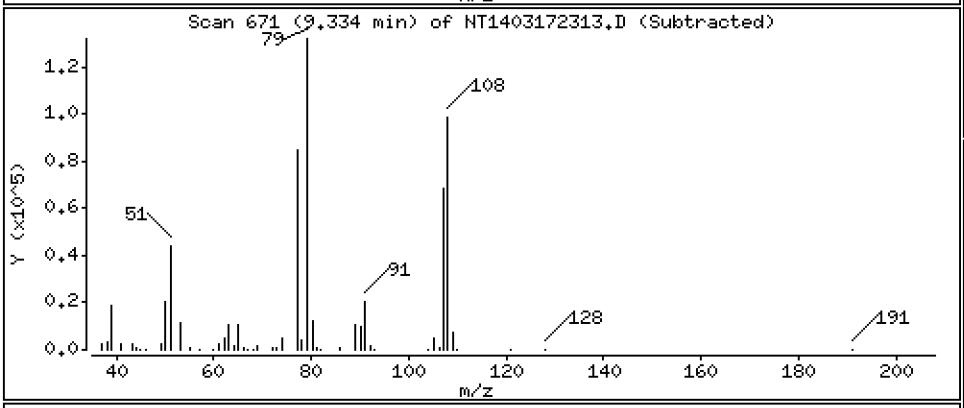
Column phase: ZB-5msi

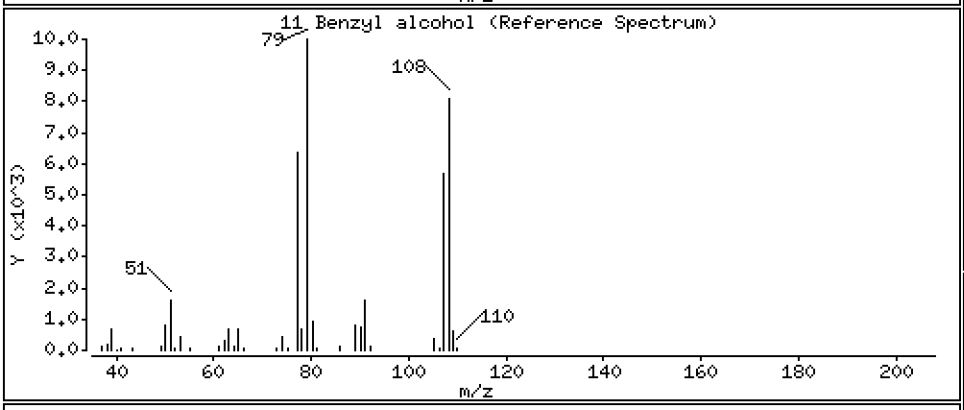
Column diameter: 0.25

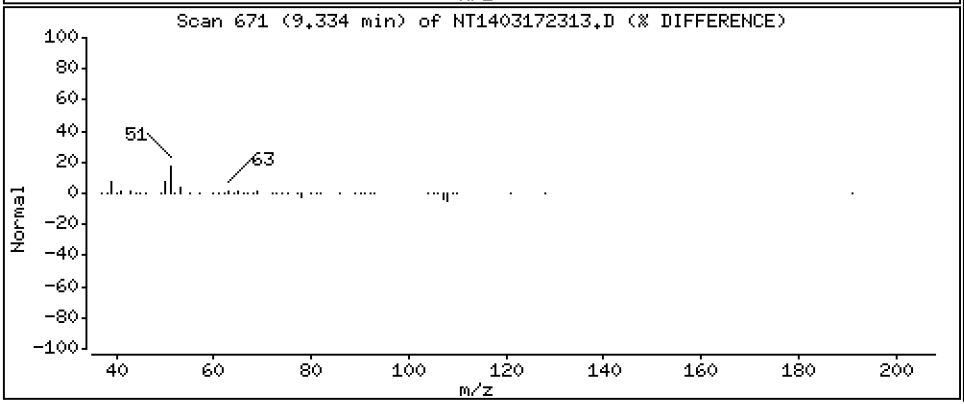
11 Benzyl alcohol

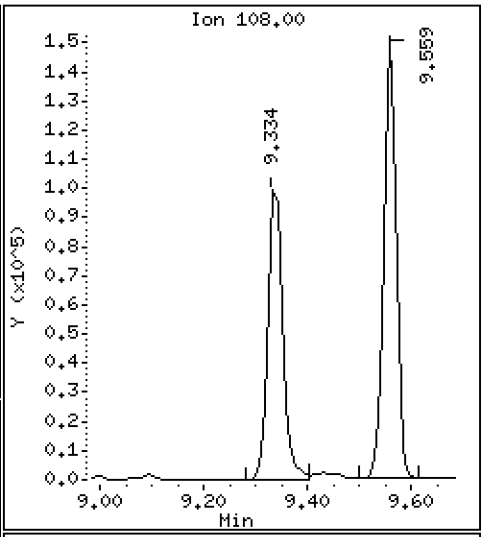
Concentration: 4.067 ug/mL

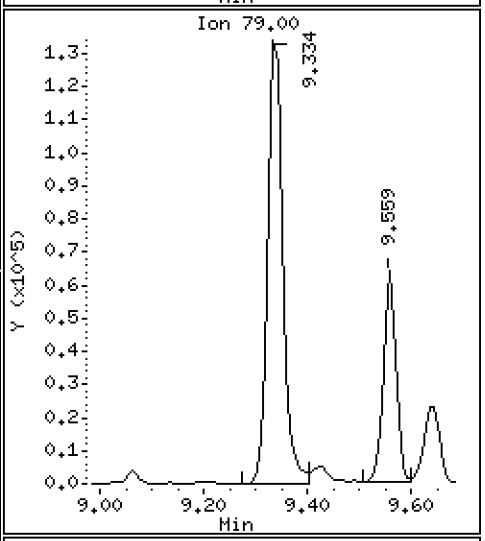


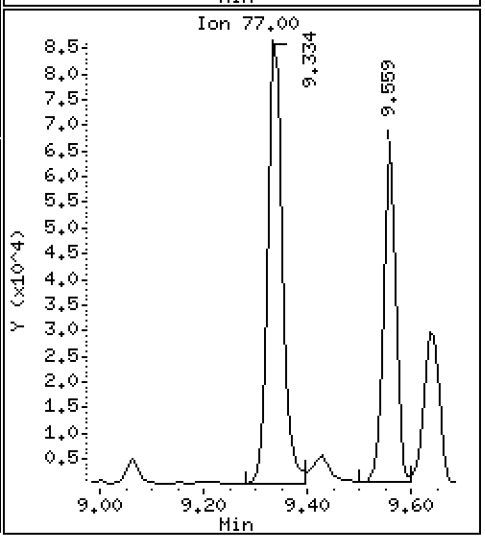












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

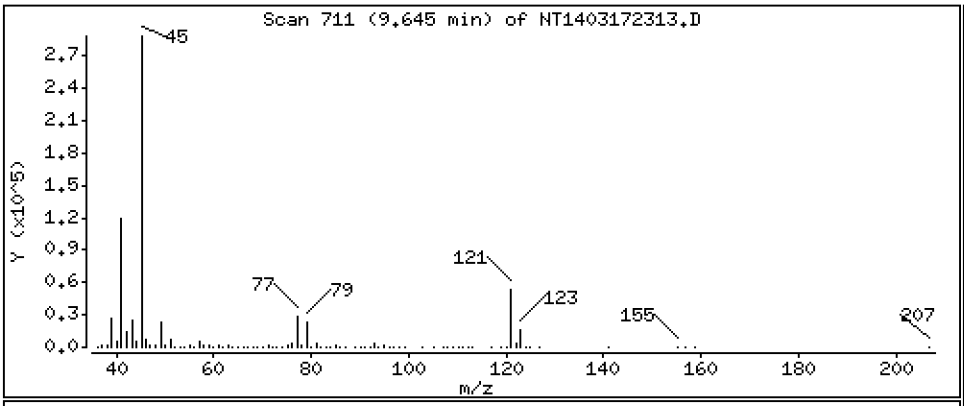
Operator: JGR

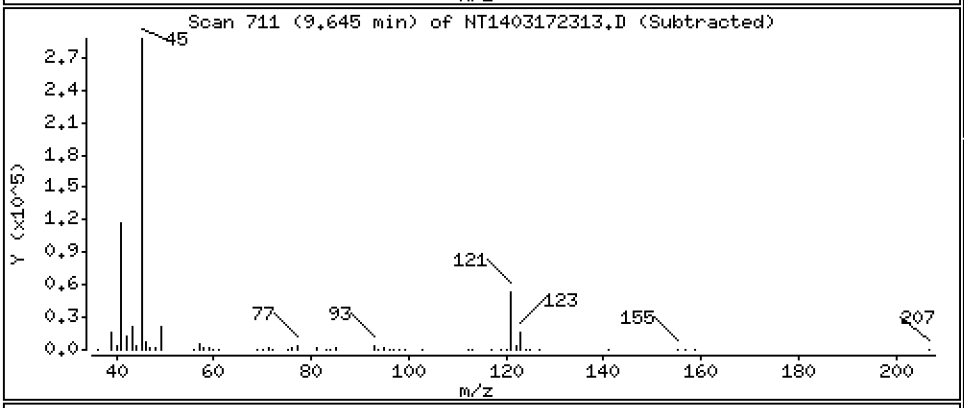
Column phase: ZB-5msi

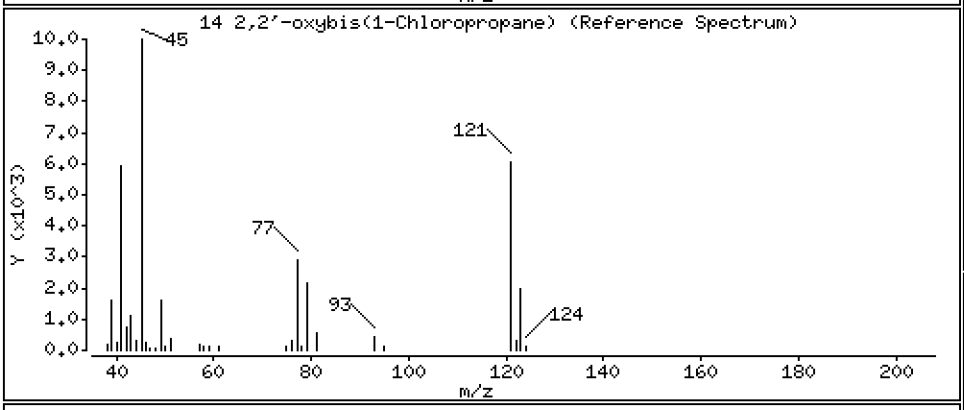
Column diameter: 0.25

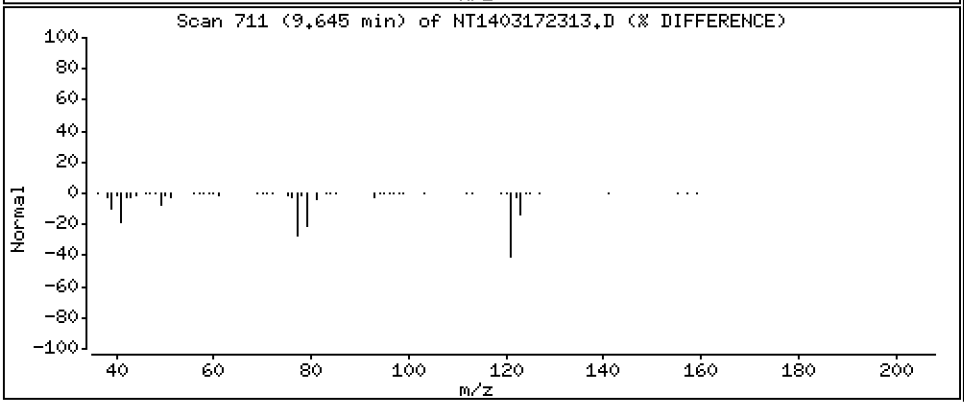
14 2,2'-oxybis(1-Chloropropane)

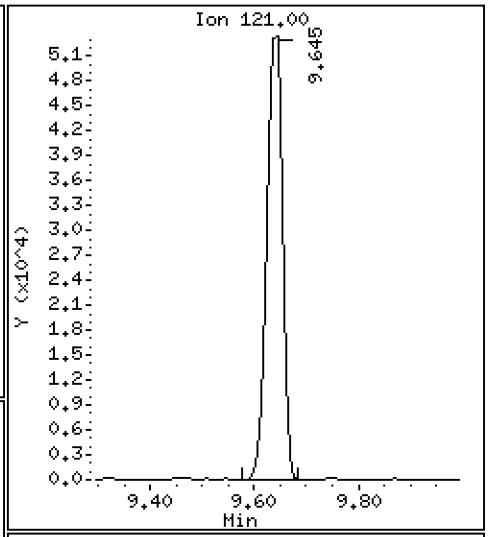
Concentration: 4.701 ug/mL

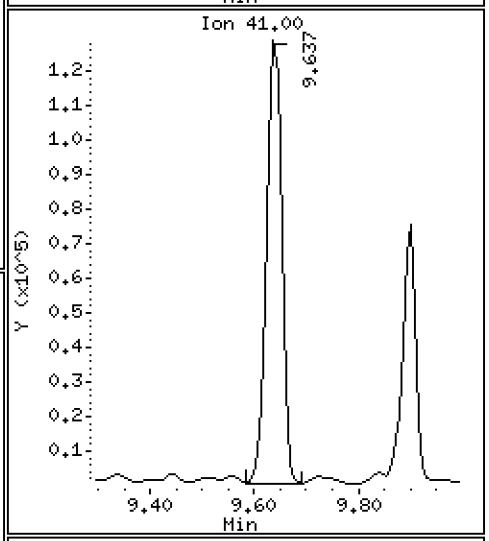


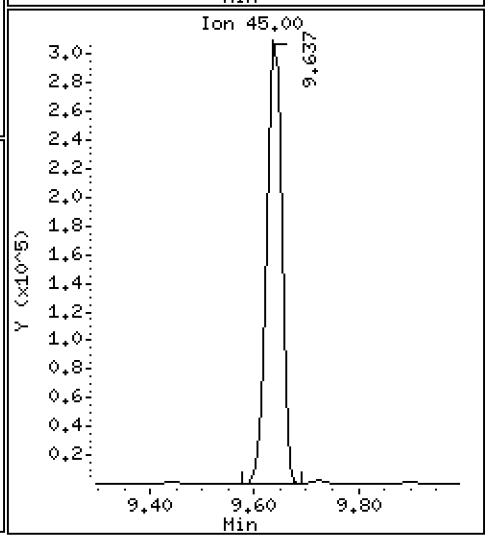












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

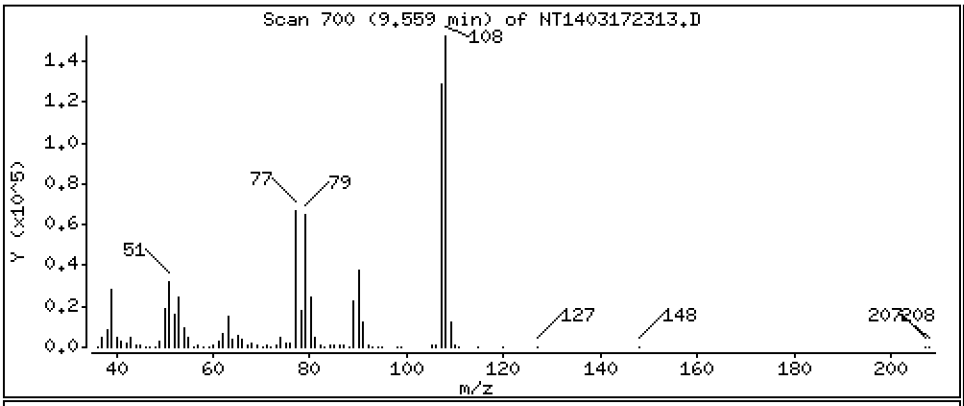
Operator: JGR

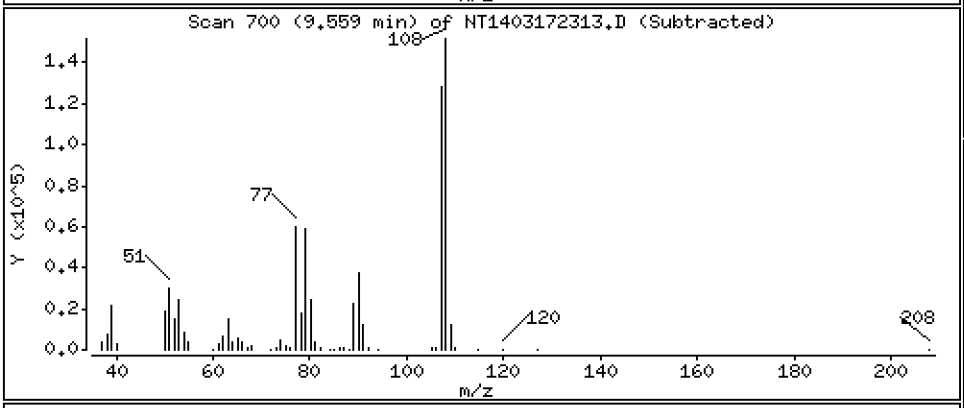
Column phase: ZB-5msi

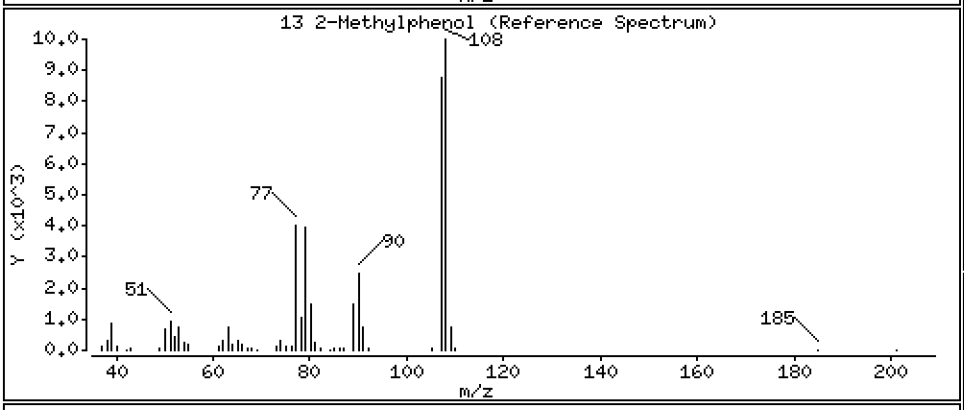
Column diameter: 0.25

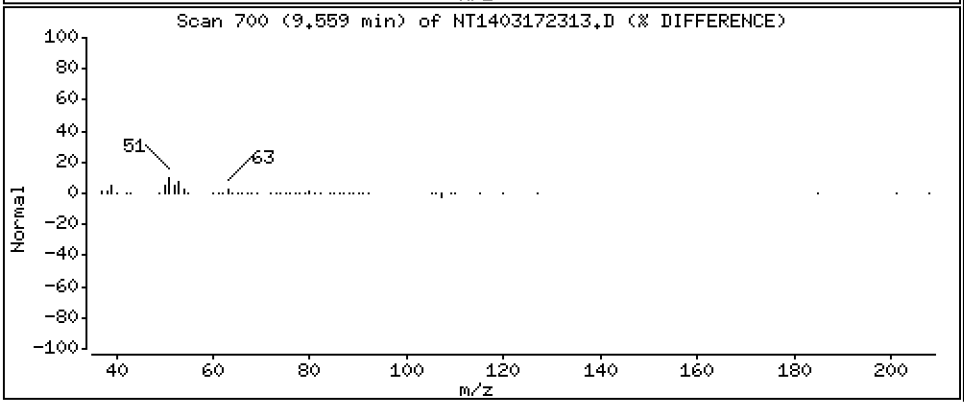
13 2-Methylphenol

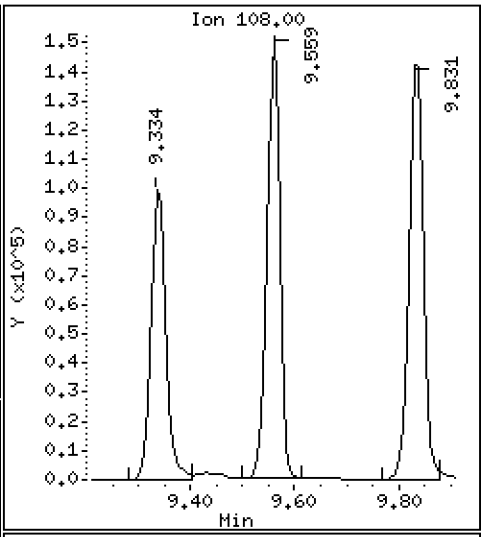
Concentration: 3.456 ug/mL

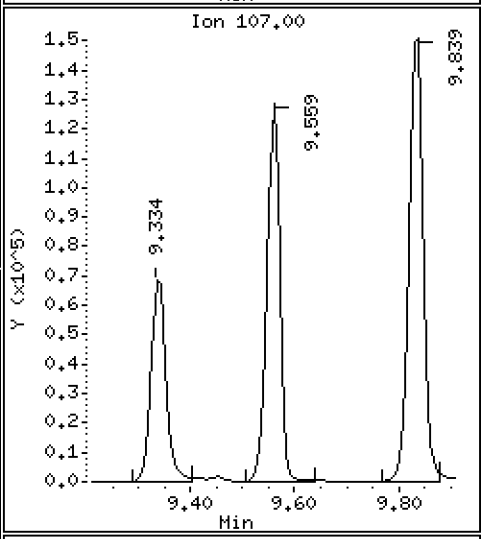


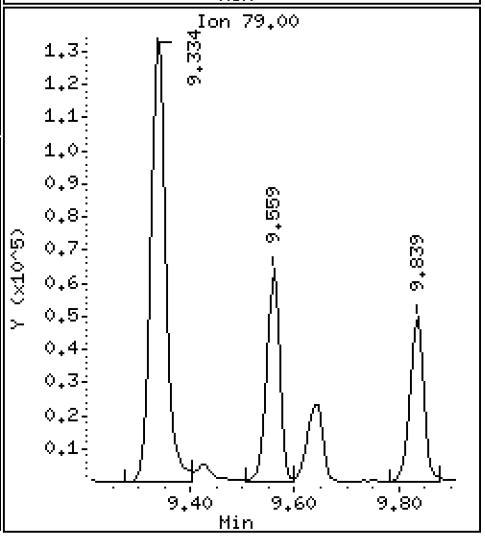












Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172313.D

Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

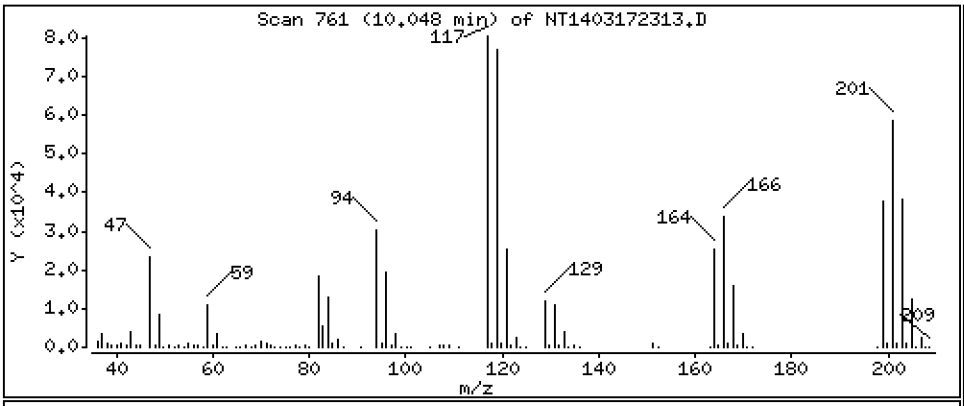
Operator: JGR

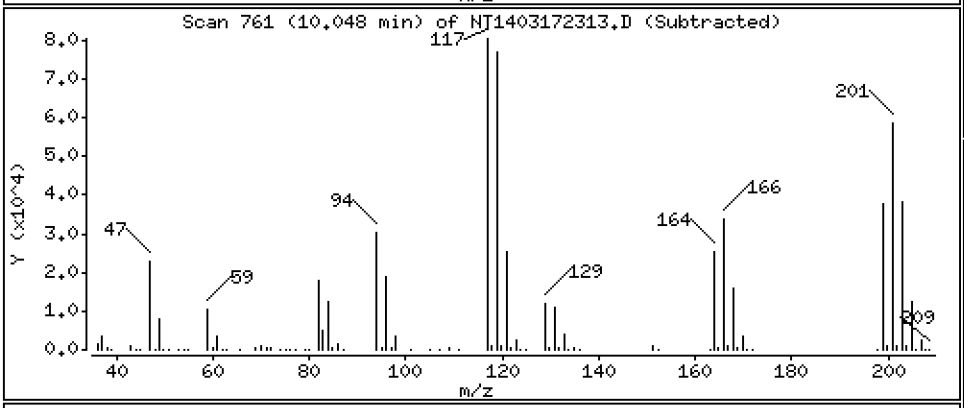
Column phase: ZB-5msi

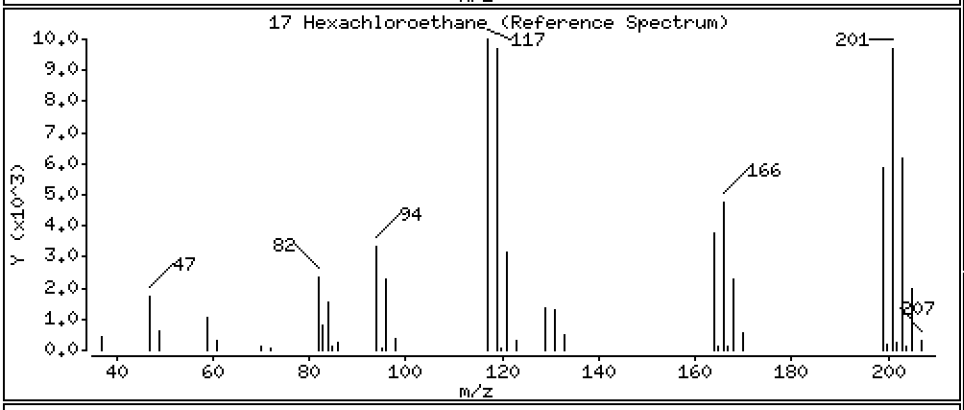
Column diameter: 0.25

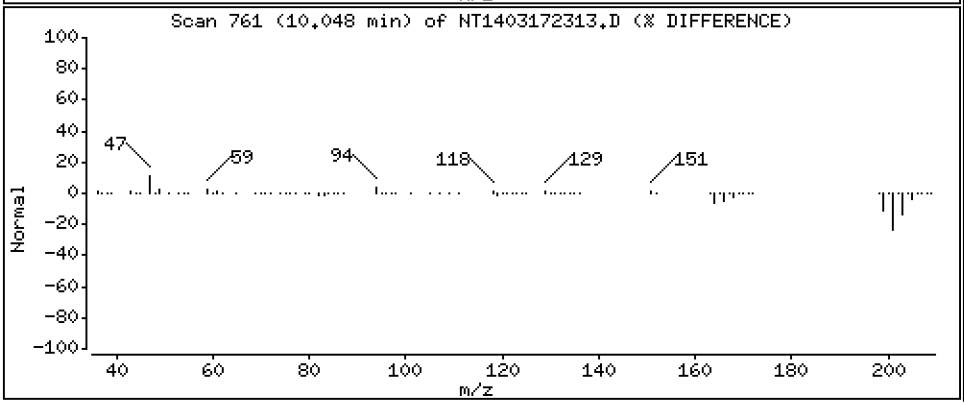
17 Hexachloroethane

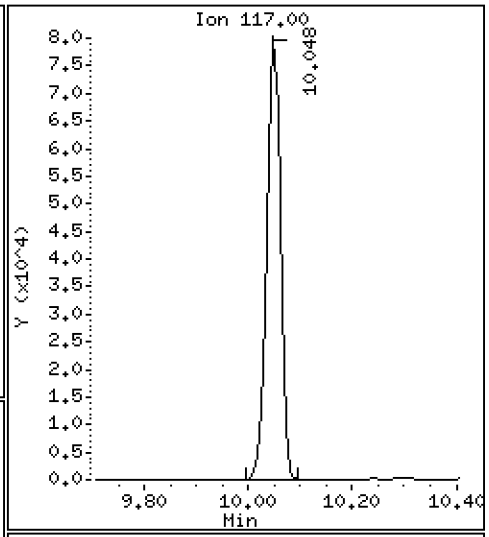
Concentration: 4.232 ug/mL

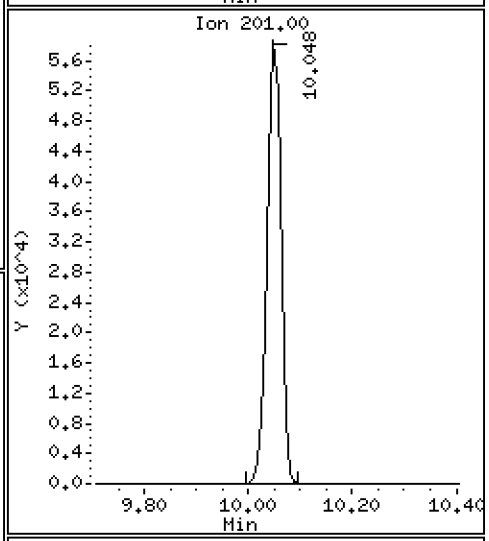


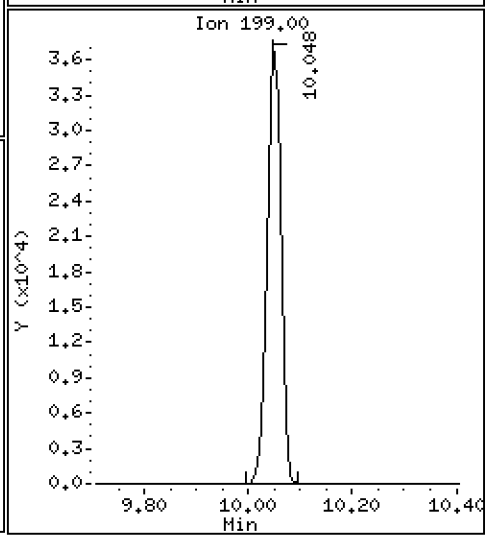












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

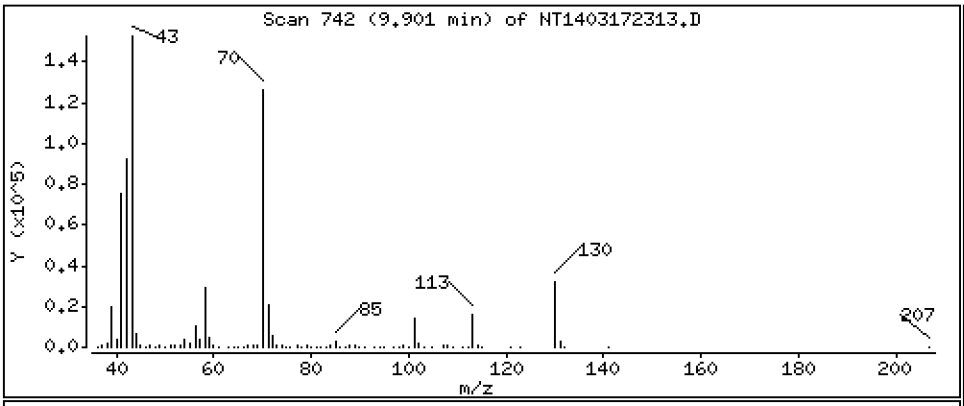
Operator: JGR

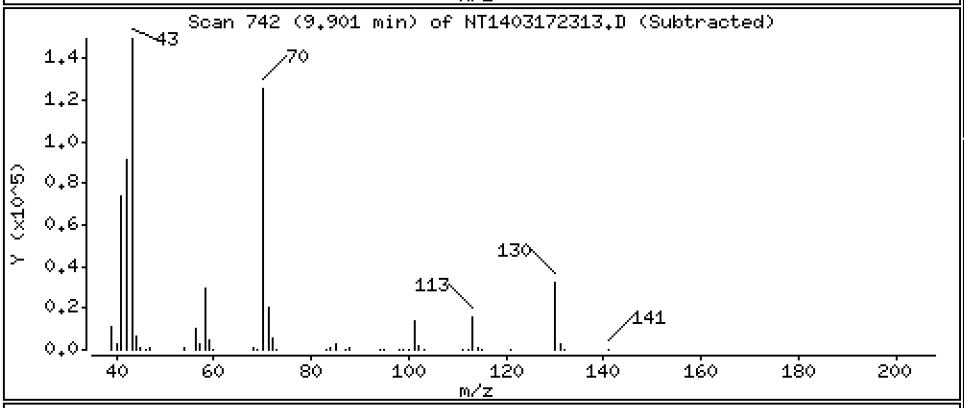
Column phase: ZB-5msi

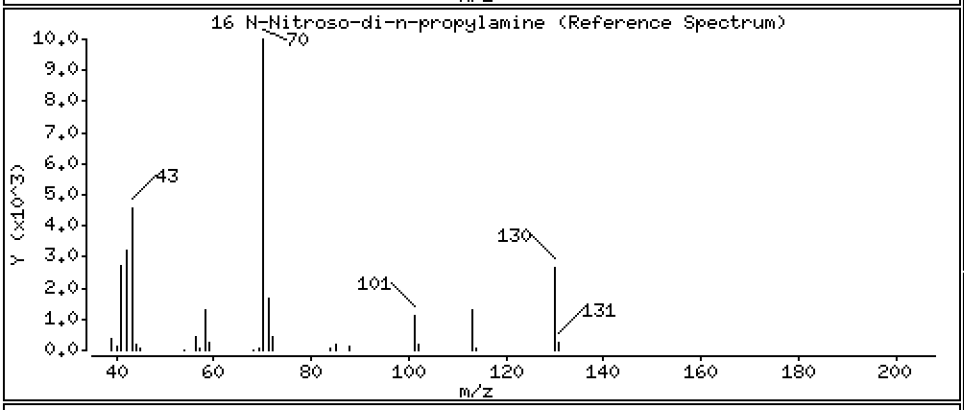
Column diameter: 0.25

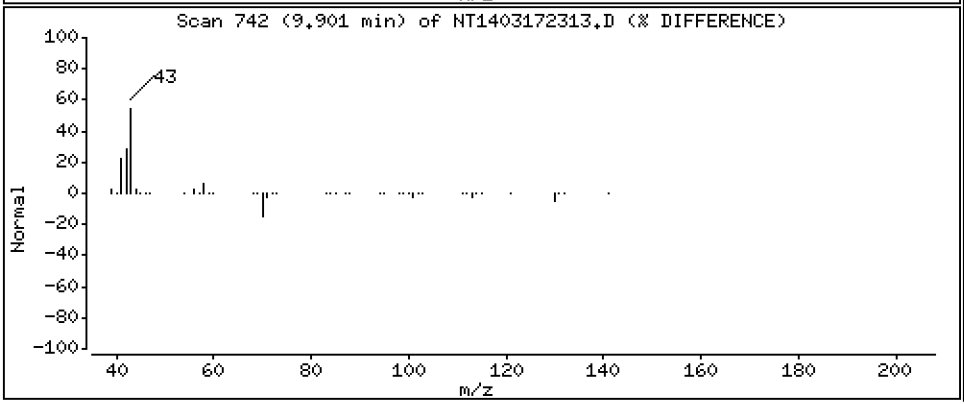
16 N-Nitroso-di-n-propylamine

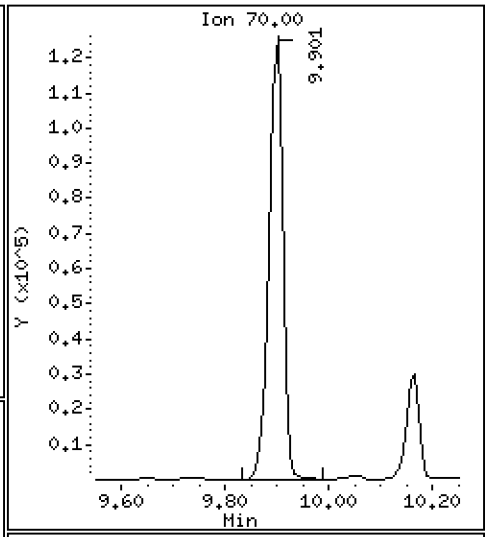
Concentration: 3.970 ug/mL

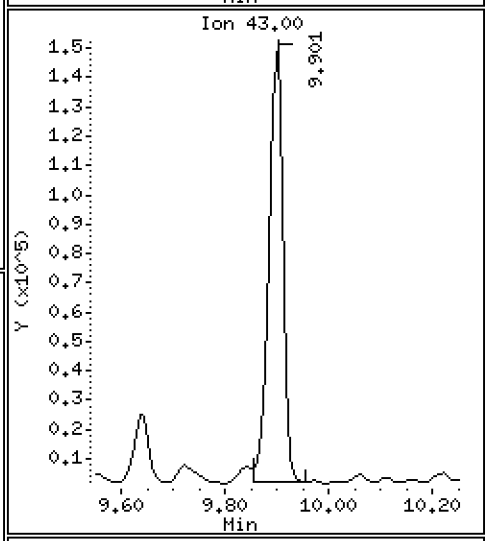


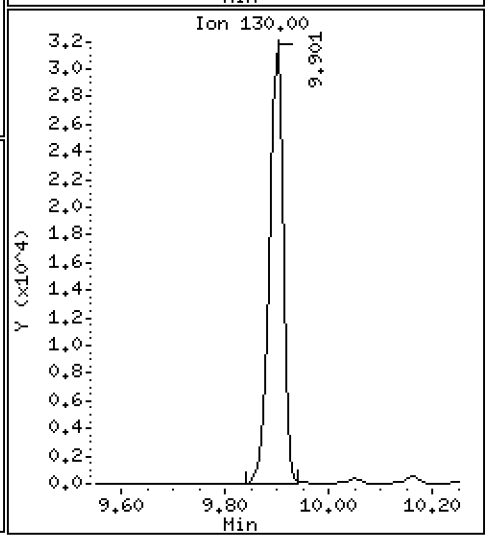












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

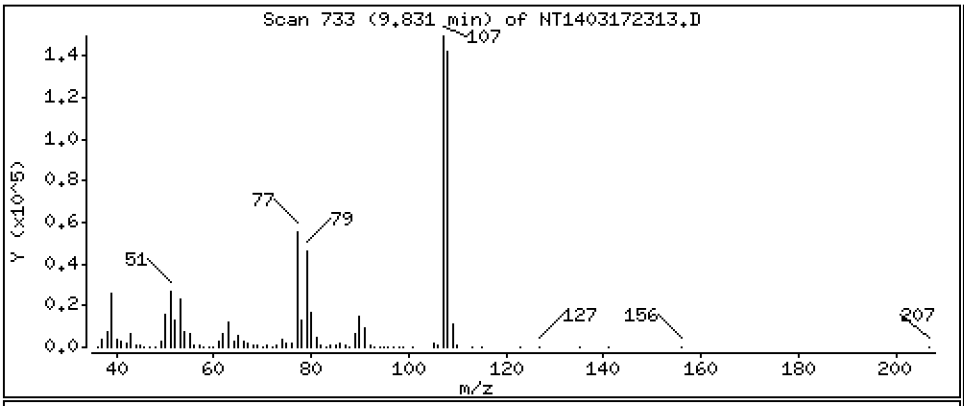
Operator: JGR

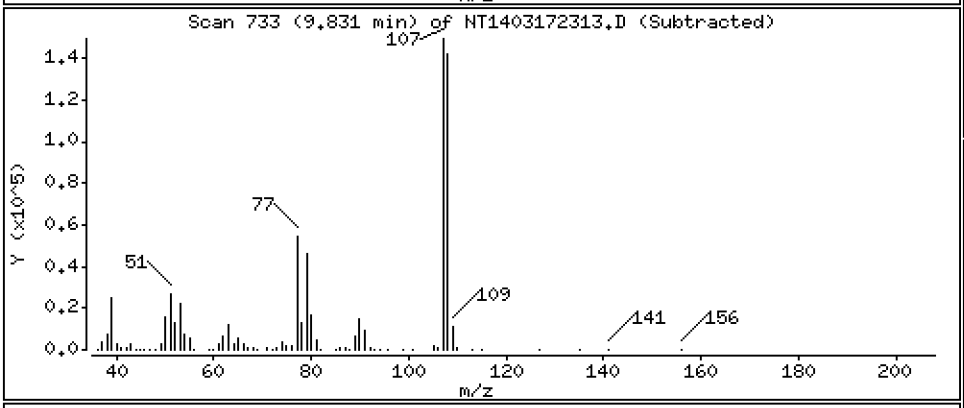
Column phase: ZB-5msi

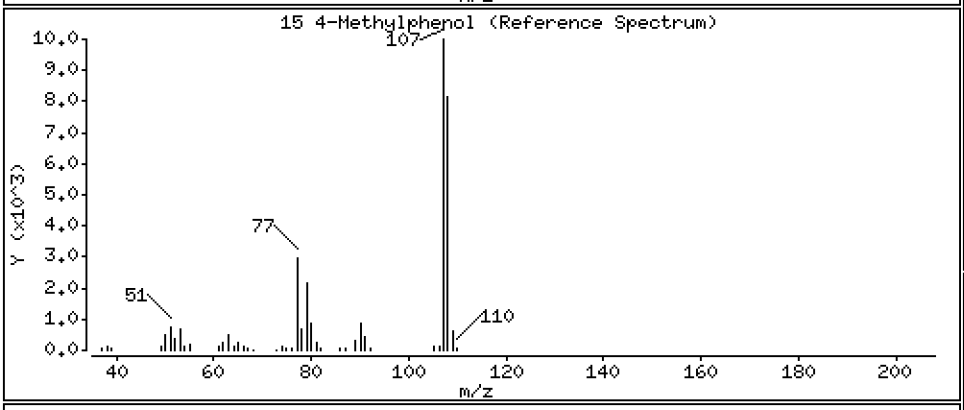
Column diameter: 0.25

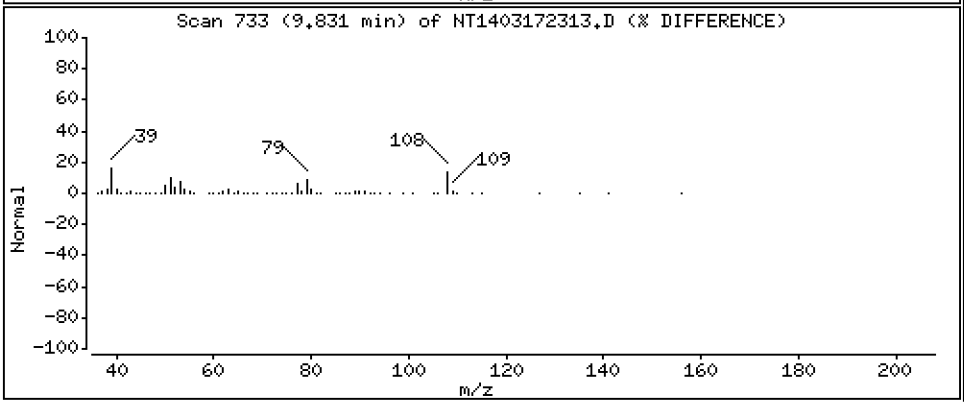
15 4-Methylphenol

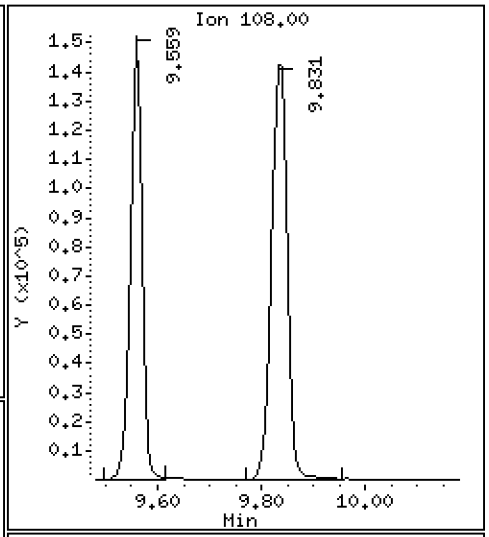
Concentration: 3.464 ug/mL

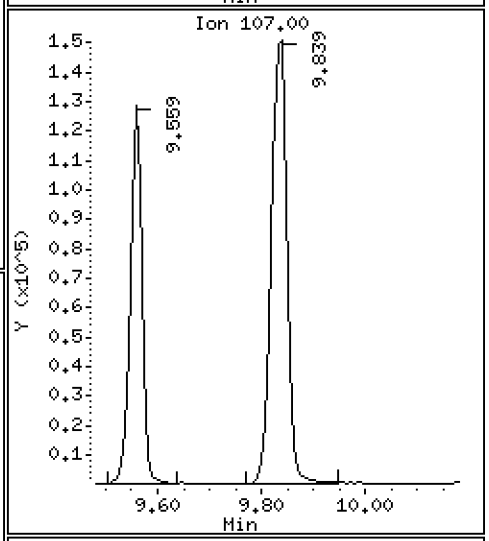


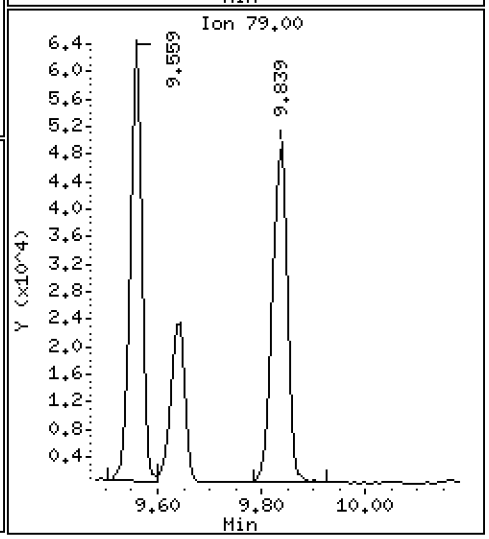












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

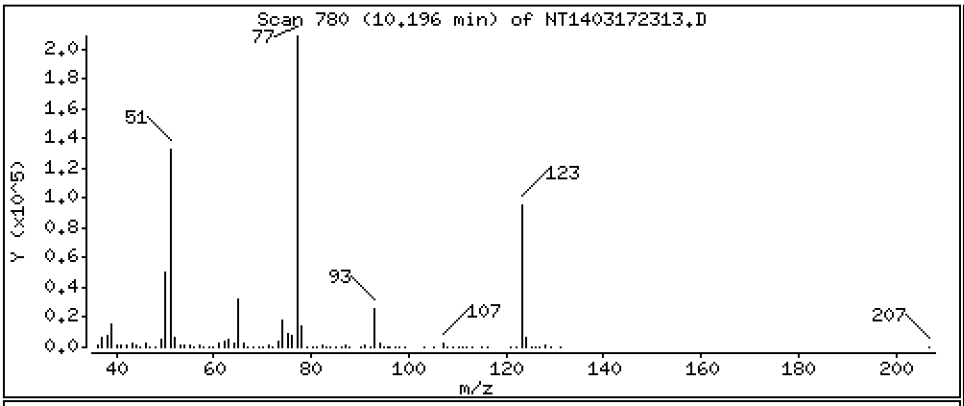
Operator: JGR

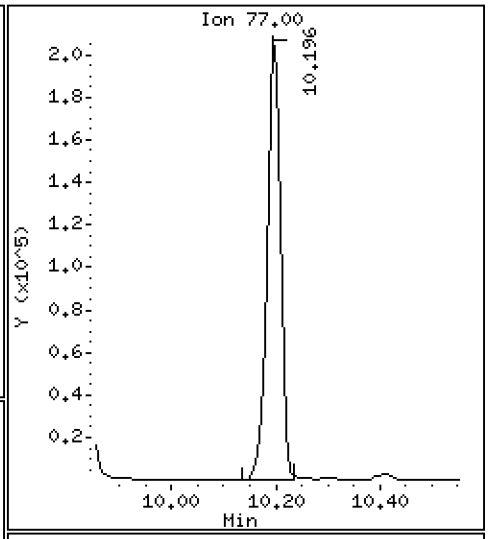
Column phase: ZB-5msi

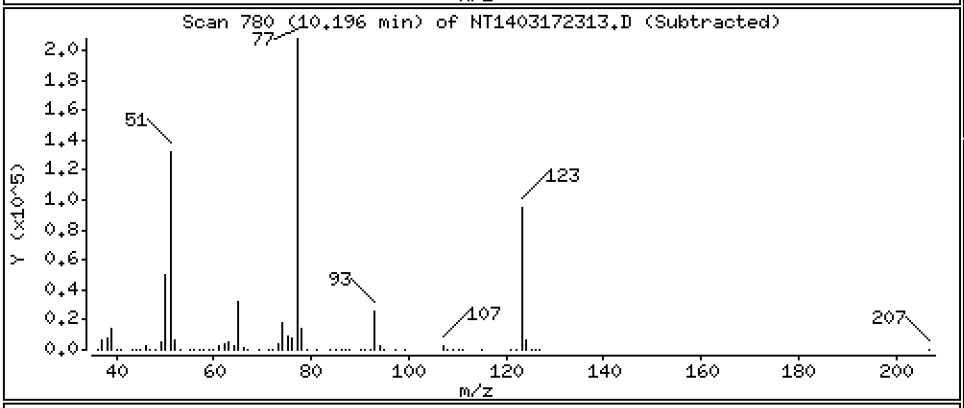
Column diameter: 0.25

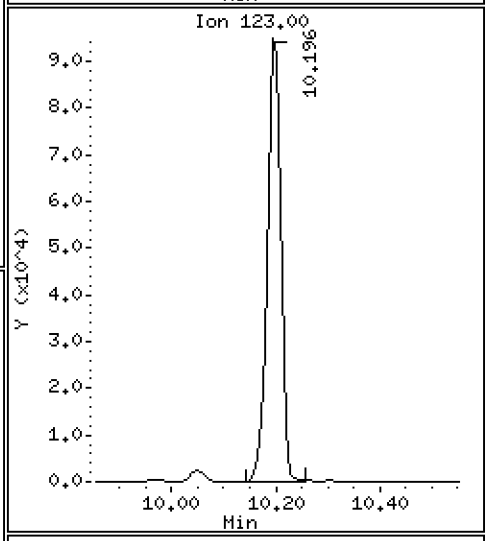
19 Nitrobenzene

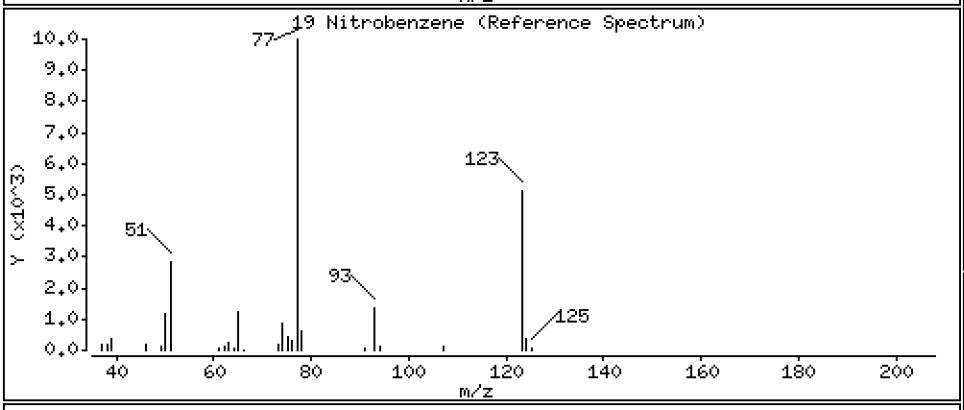
Concentration: 4.265 ug/mL

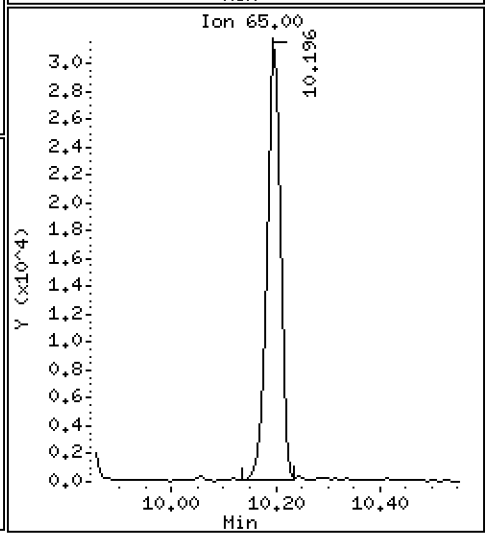


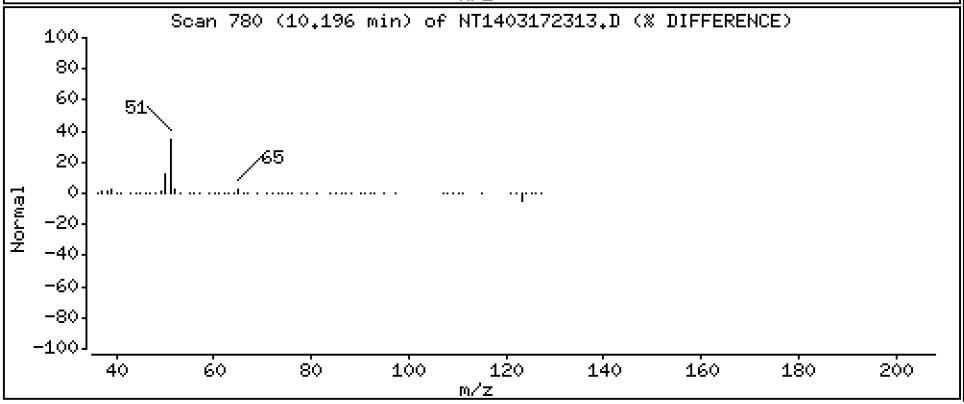












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

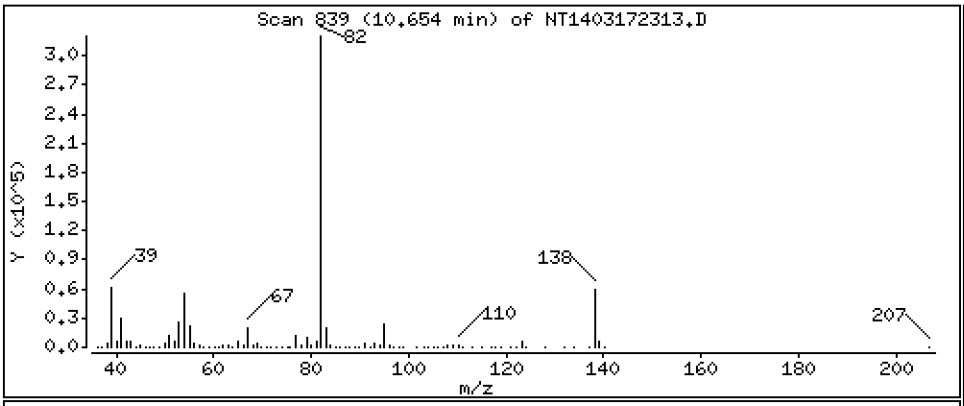
Operator: JGR

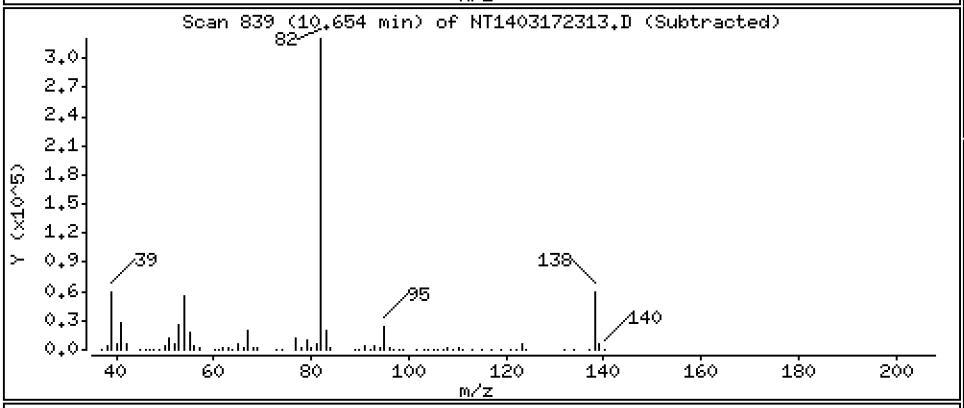
Column phase: ZB-5msi

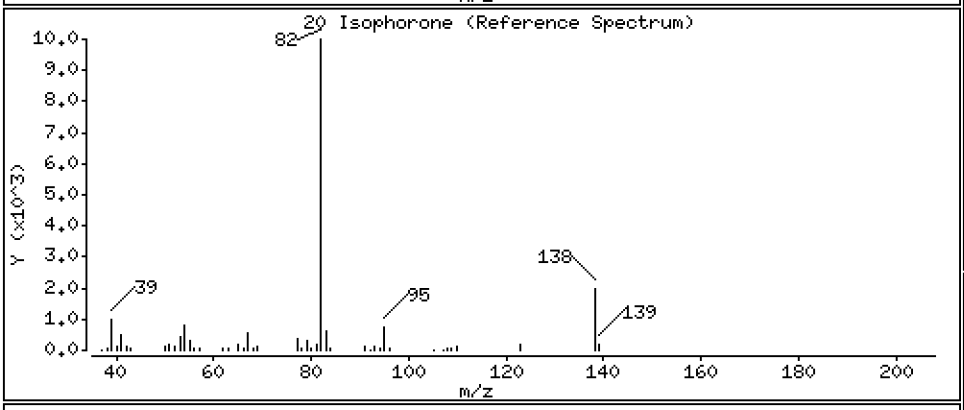
Column diameter: 0.25

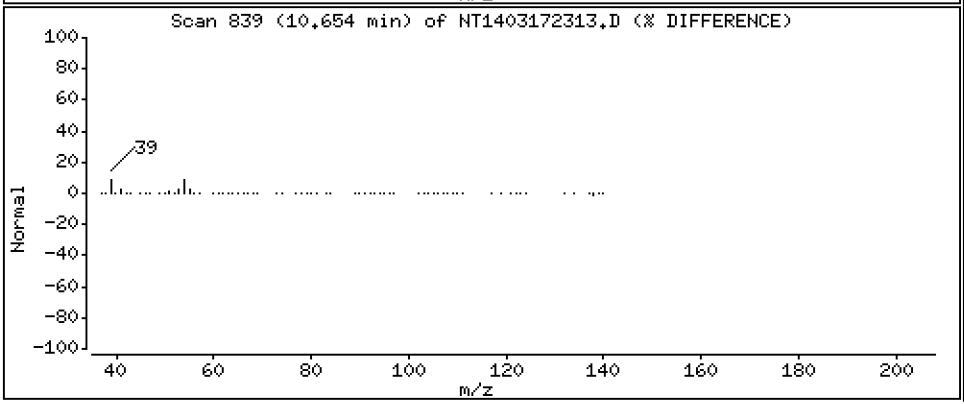
20 Isophorone

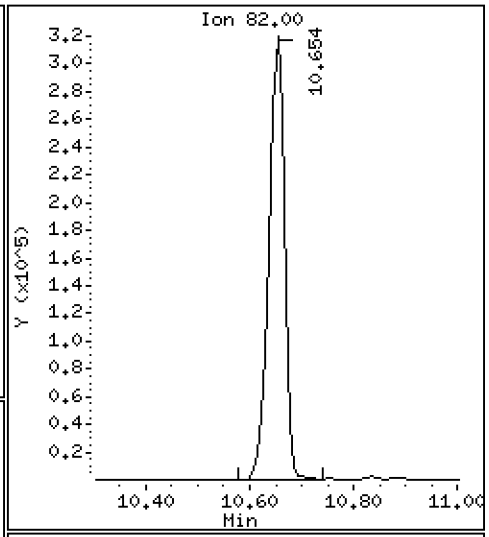
Concentration: 5.606 ug/mL

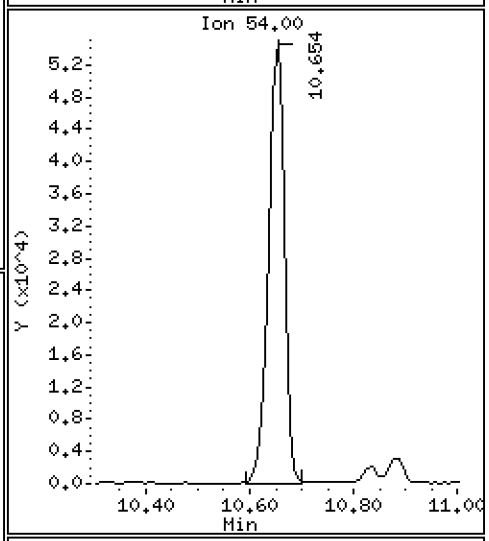


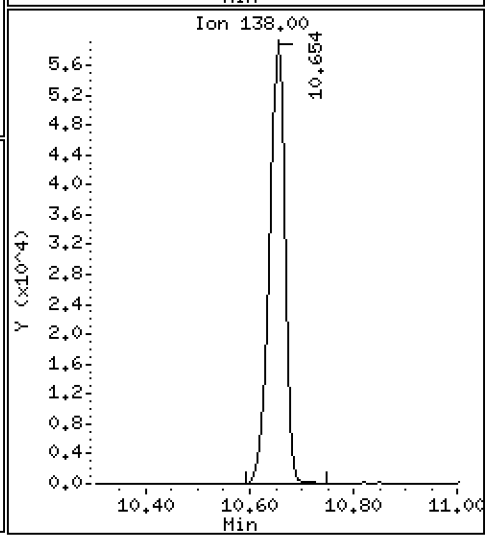












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

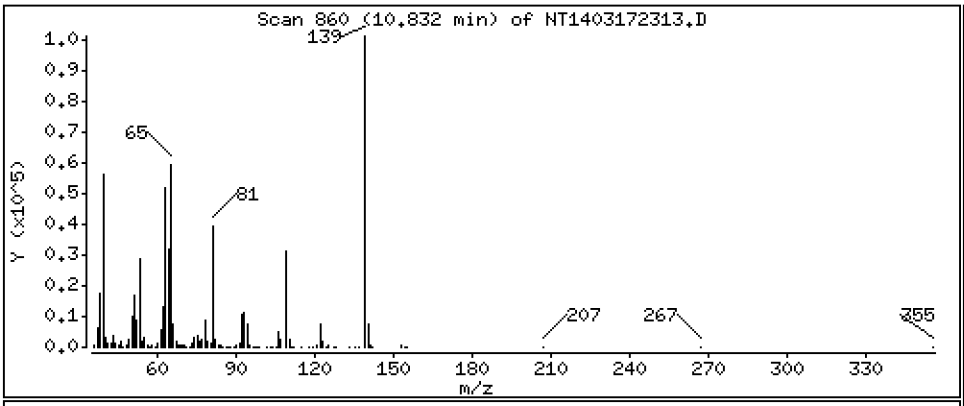
Operator: JGR

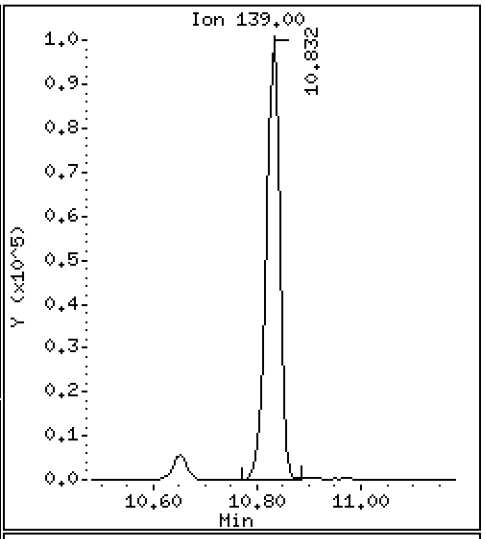
Column phase: ZB-5msi

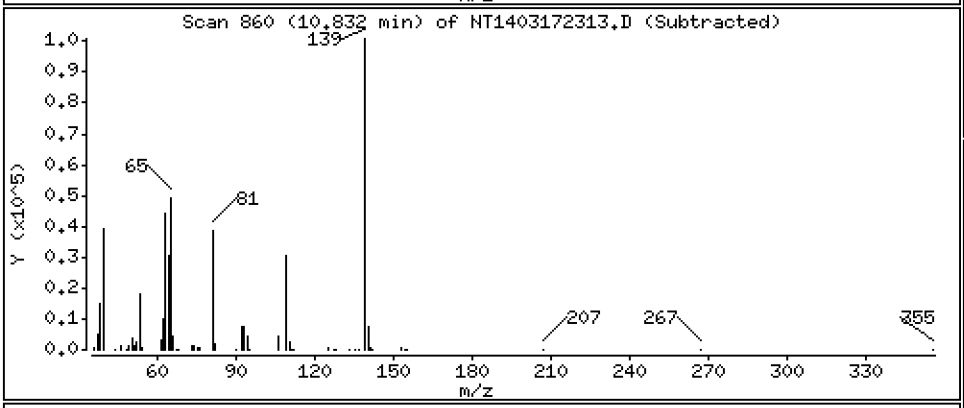
Column diameter: 0.25

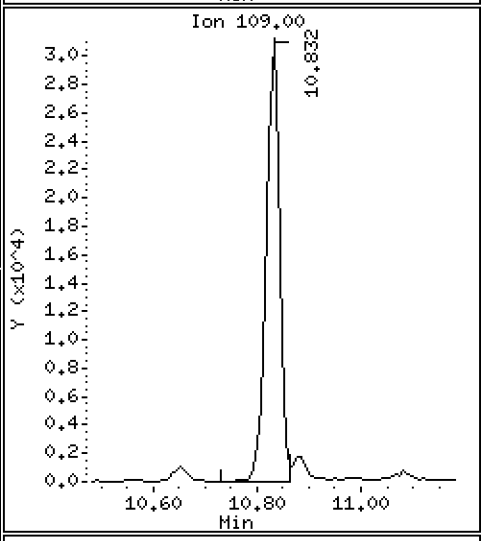
21 2-Nitrophenol

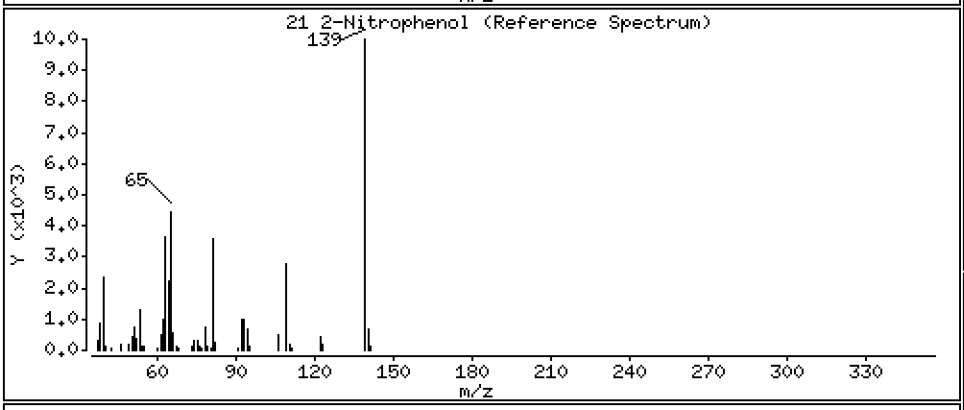
Concentration: 3.591 ug/mL

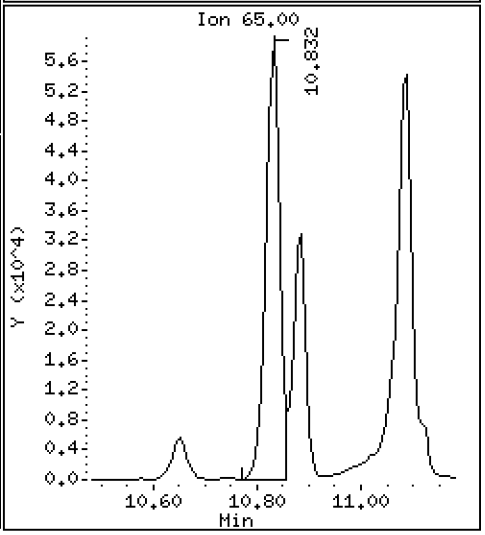


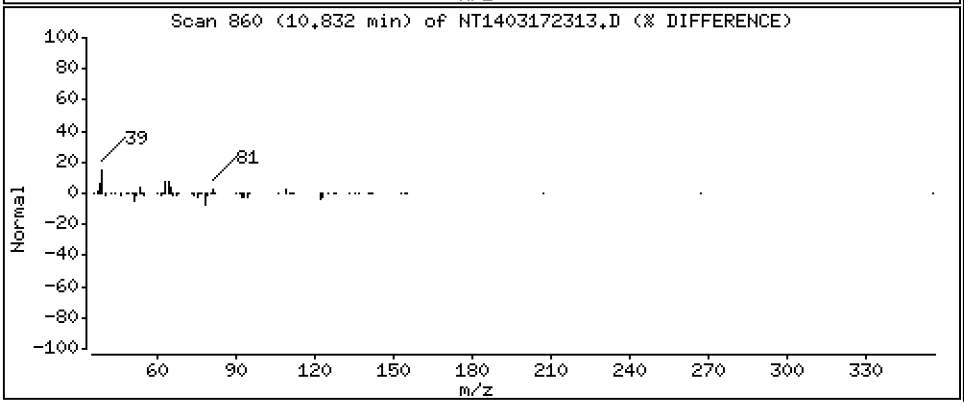












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

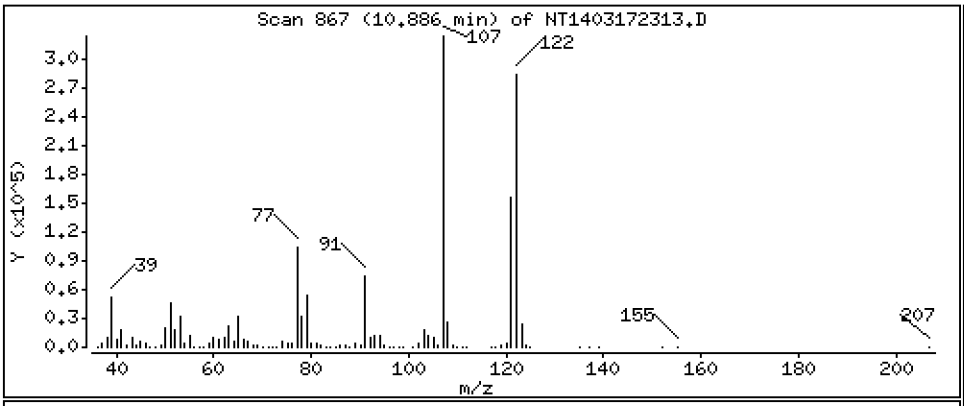
Operator: JGR

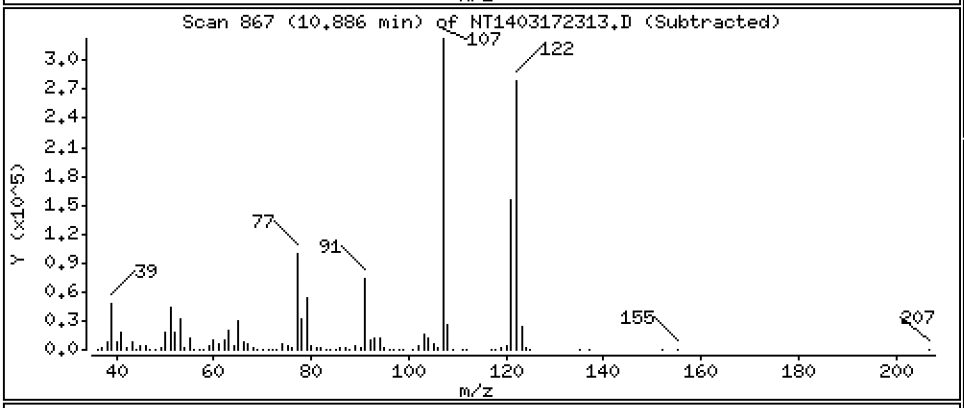
Column phase: ZB-5msi

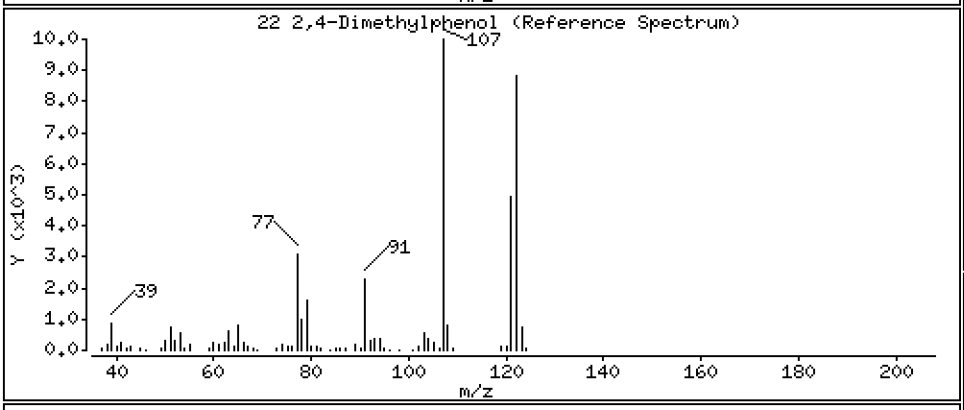
Column diameter: 0.25

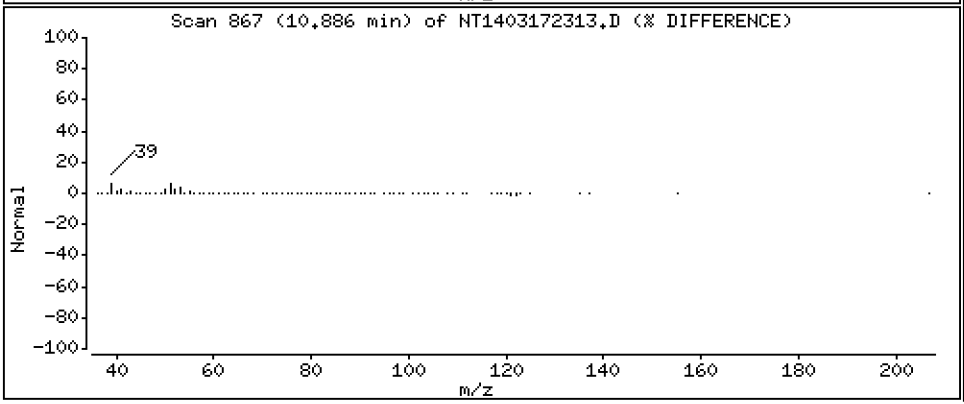
22 2,4-Dimethylphenol

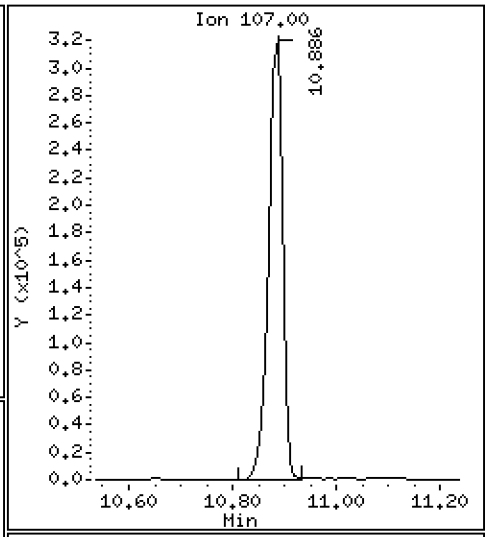
Concentration: 8.023 ug/mL

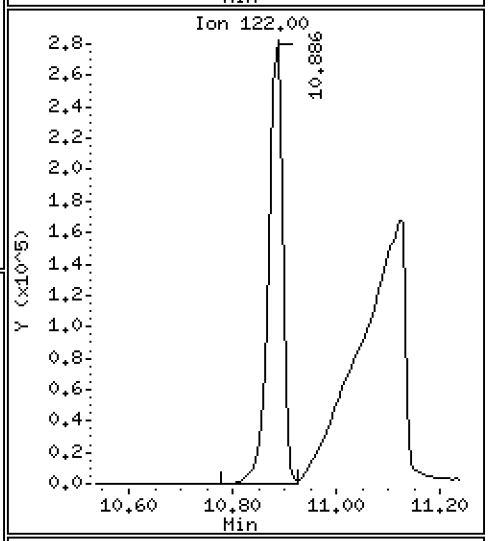


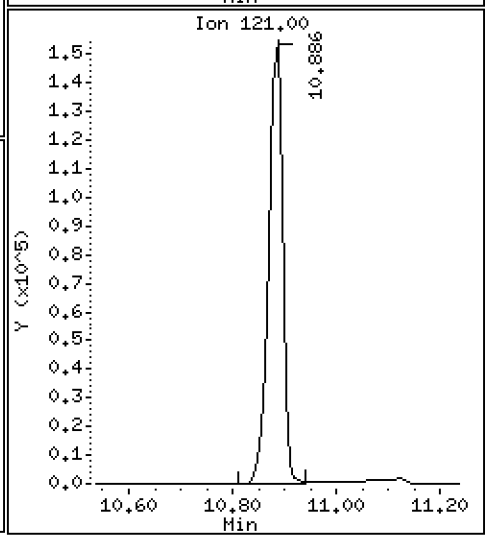












Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172313.D

Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

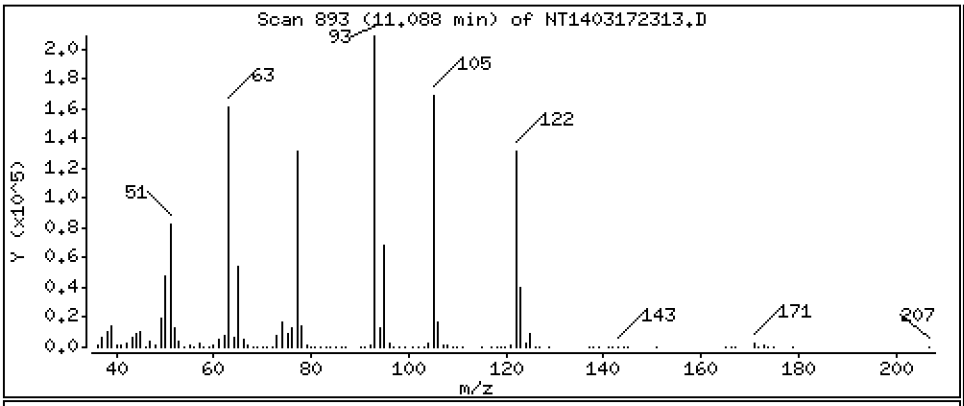
Operator: JGR

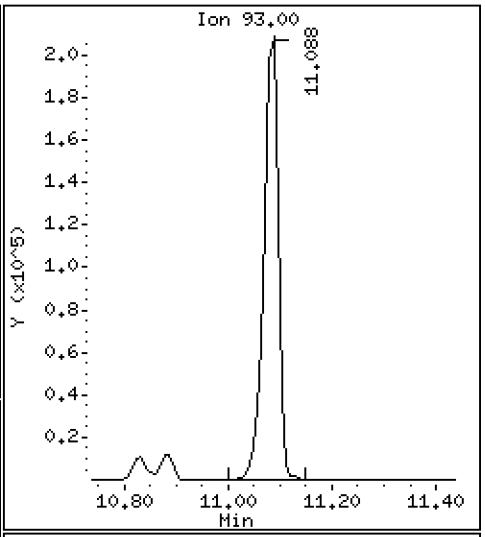
Column phase: ZB-5msi

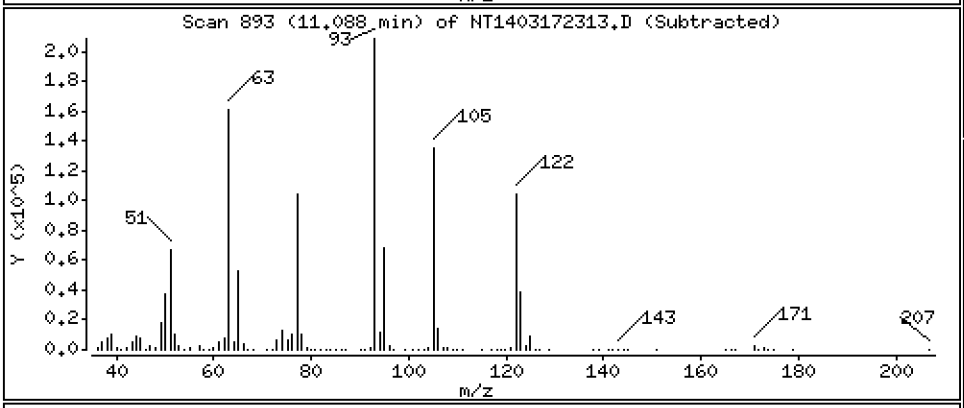
Column diameter: 0.25

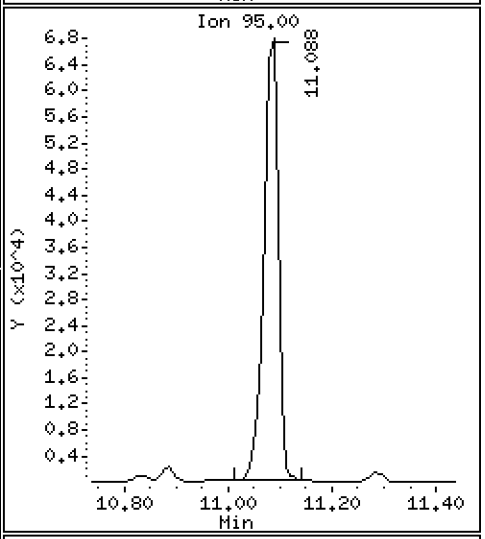
23 Bis(2-Chloroethoxy)methane

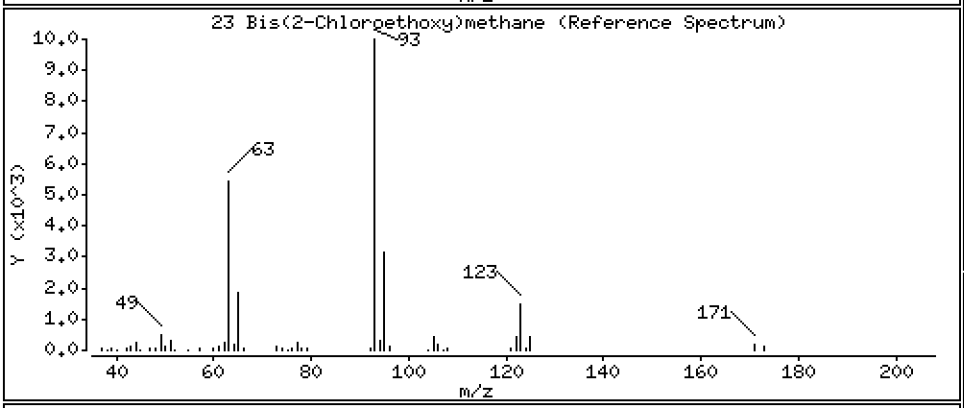
Concentration: 4.977 ug/mL

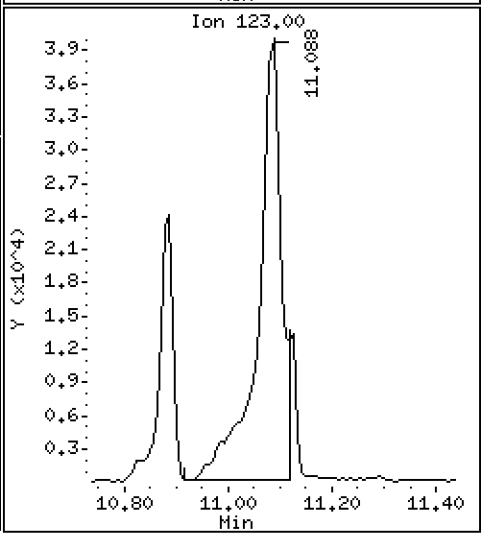


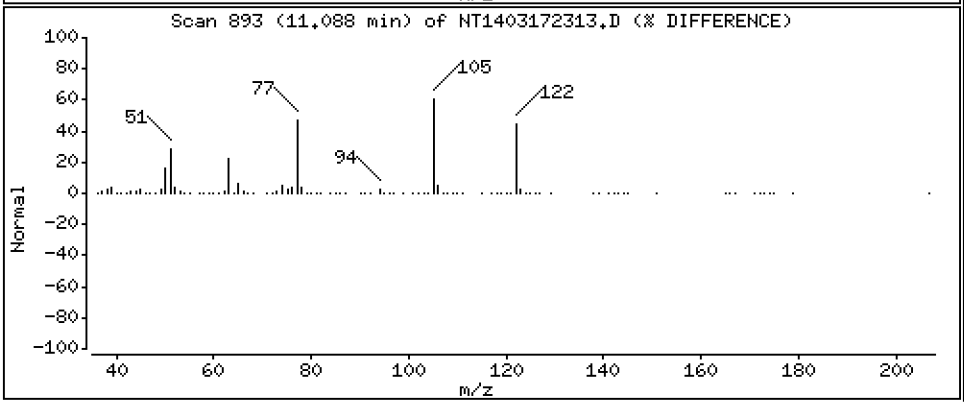












Date : 17-MAR-2023 21:42

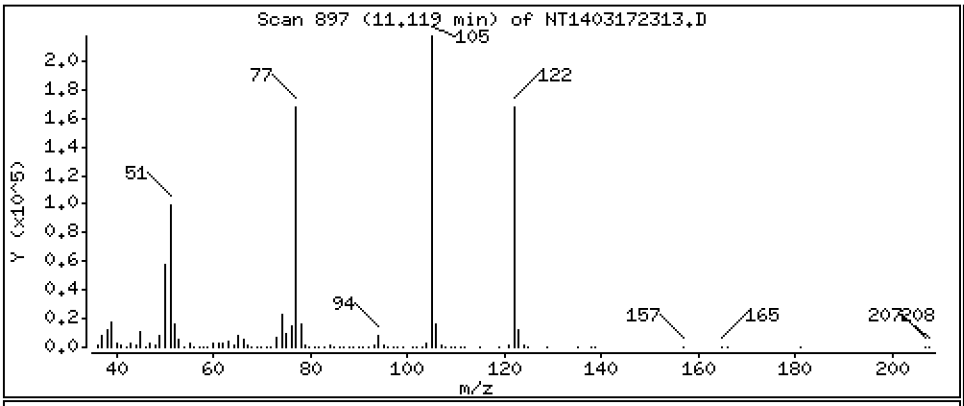
Client ID: Instrument: nt14.i

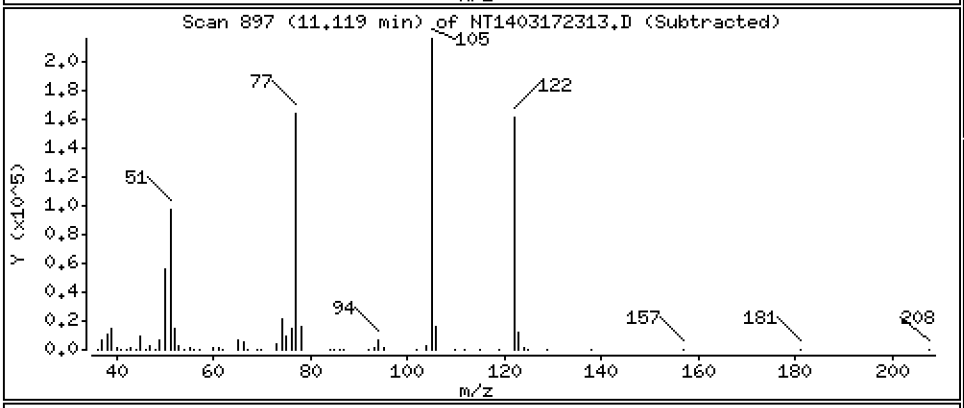
Sample Info: BLB0424-BS1

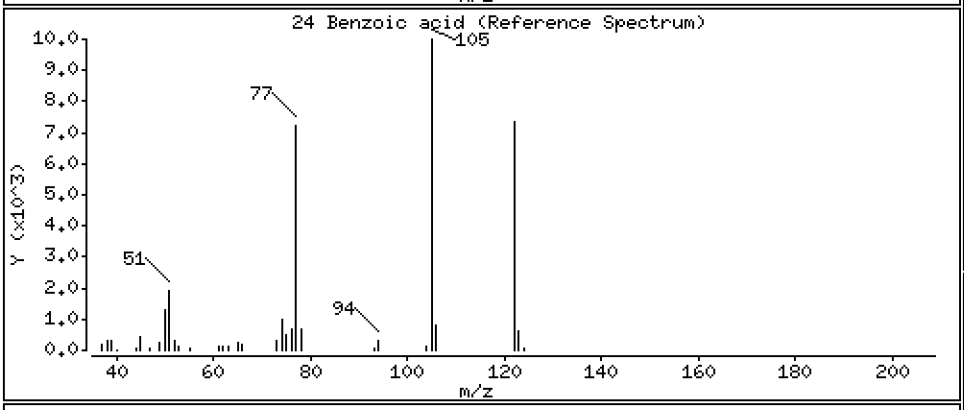
Operator: JGR

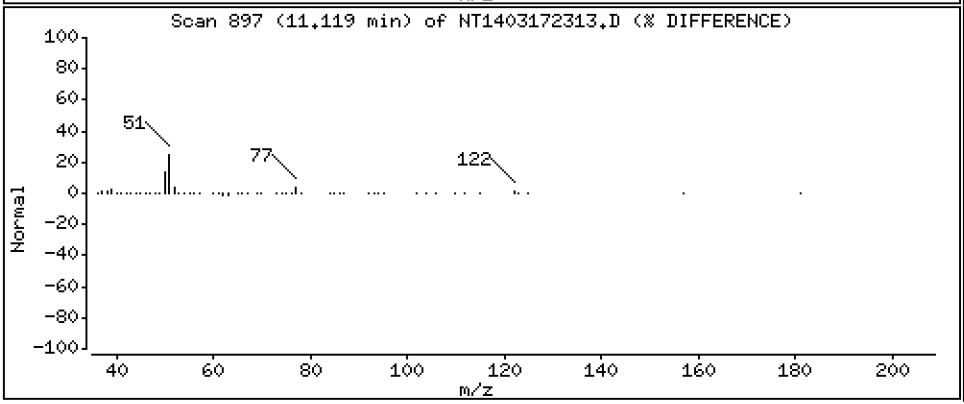
Column phase: ZB-5msi Column diameter: 0.25

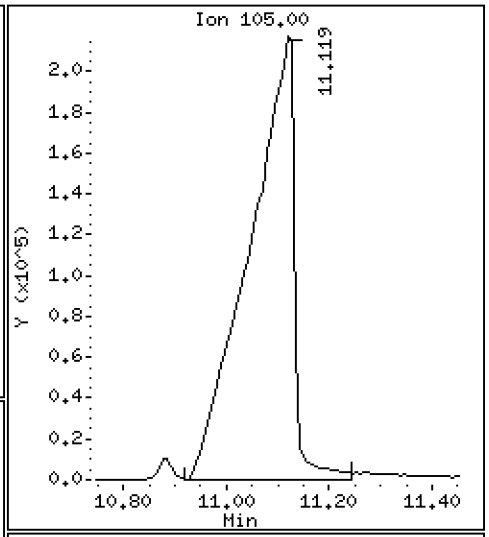
24 Benzoic acid Concentration: 21.24 ug/mL

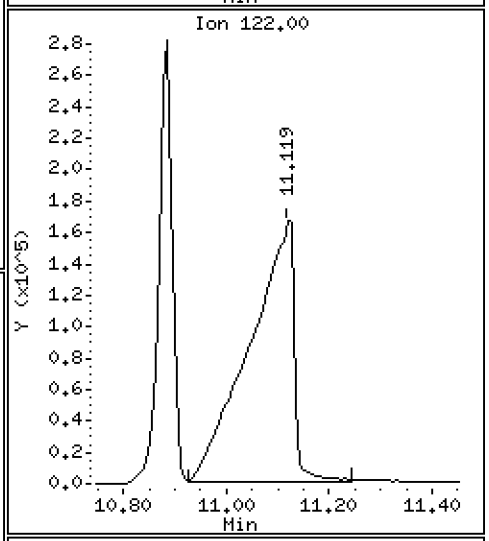


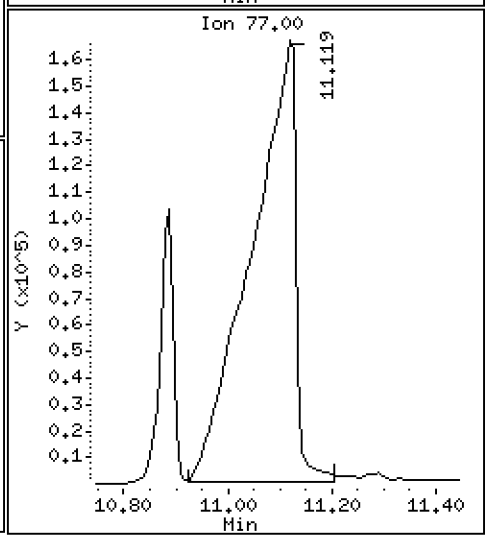












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

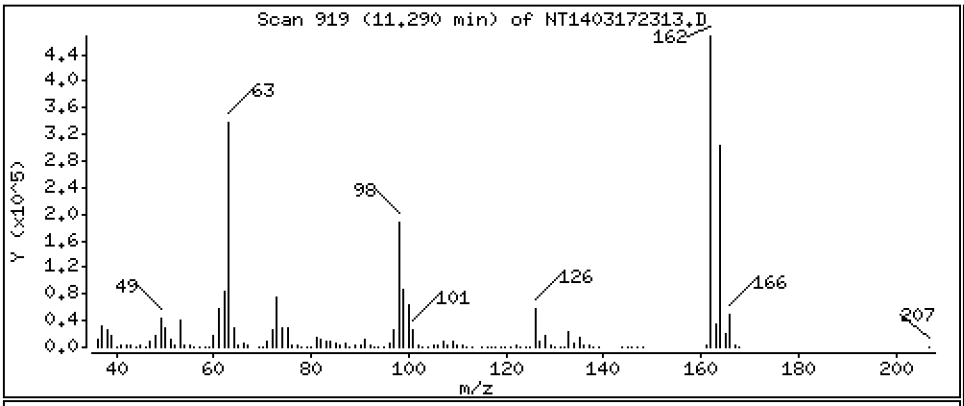
Operator: JGR

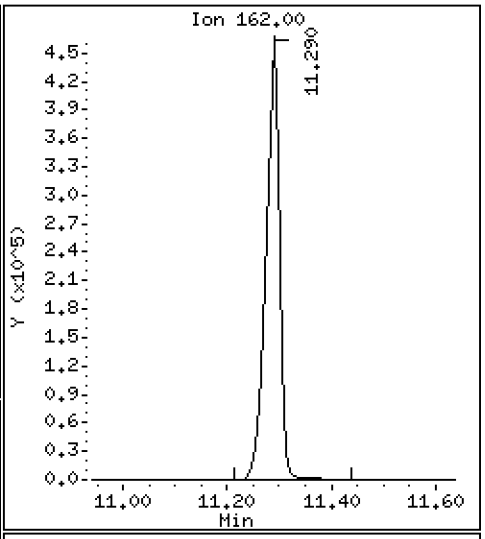
Column phase: ZB-5msi

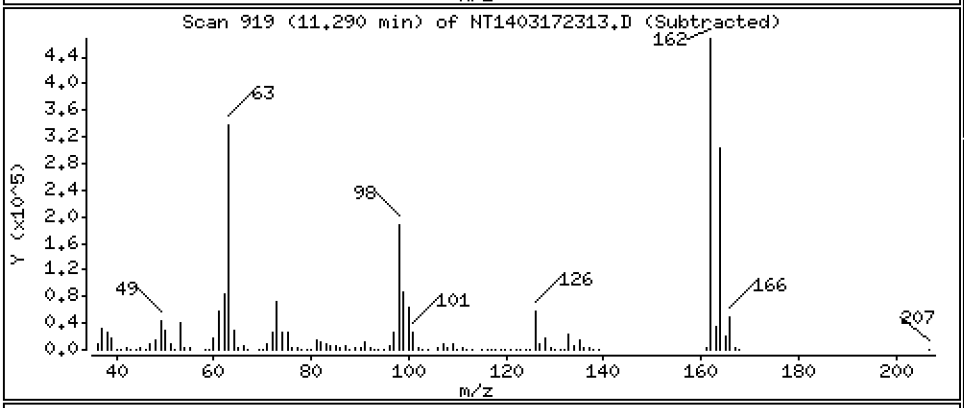
Column diameter: 0.25

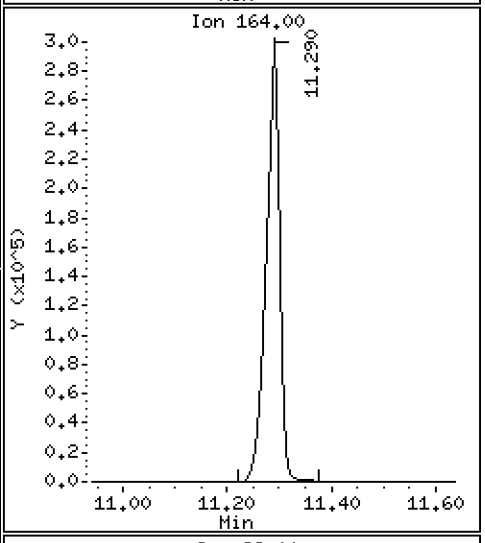
25 2,4-Dichlorophenol

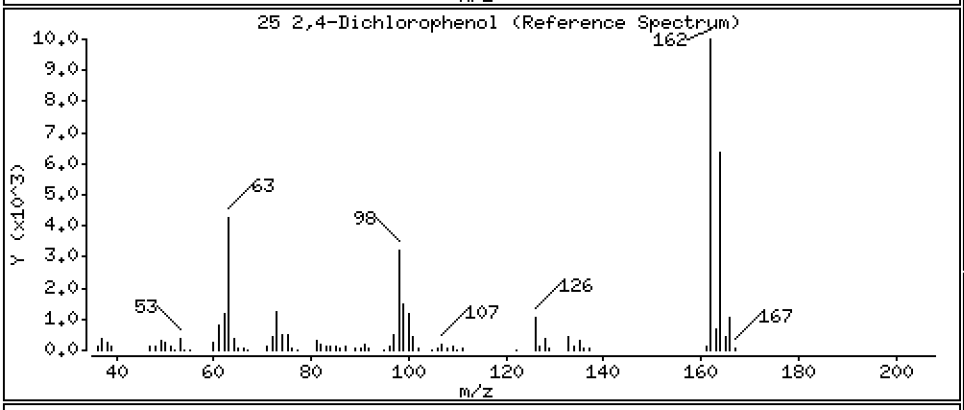
Concentration: 15.42 ug/mL

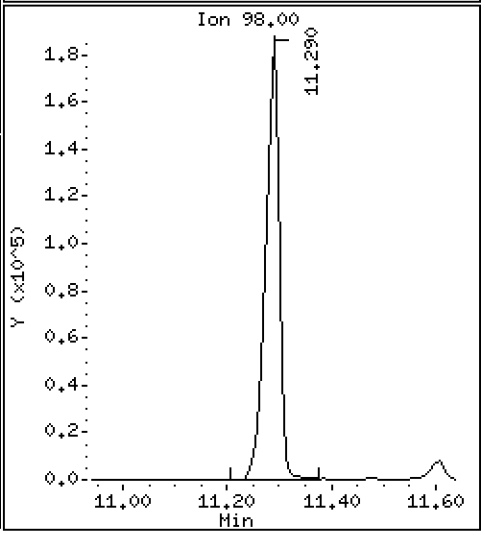


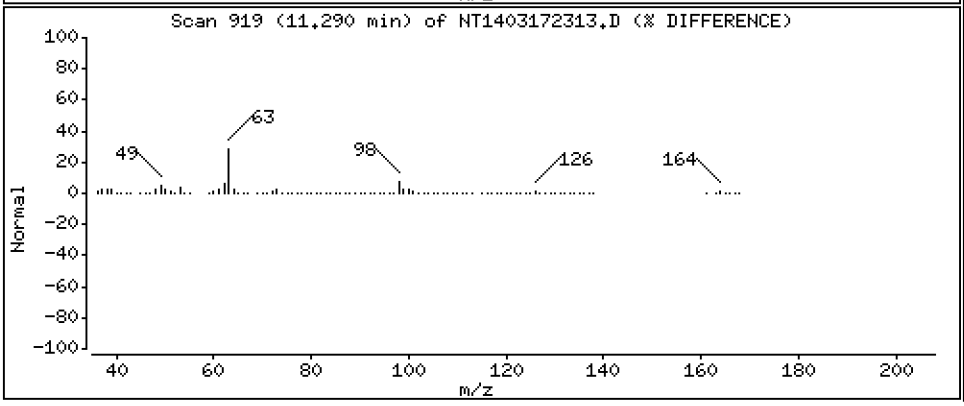












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

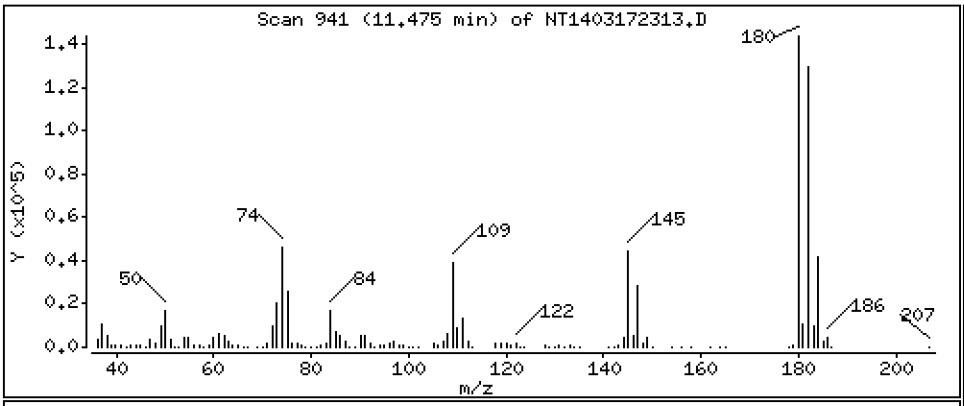
Operator: JGR

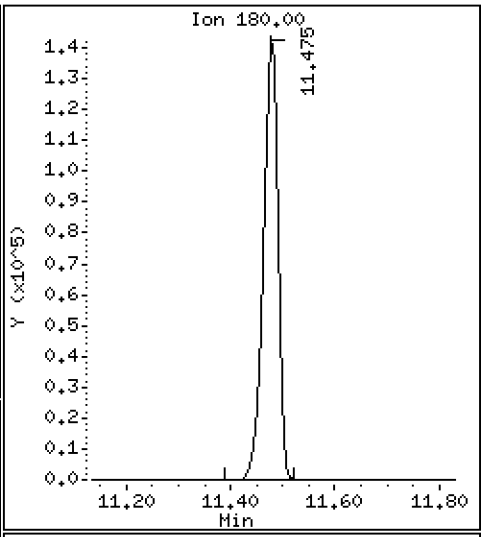
Column phase: ZB-5msi

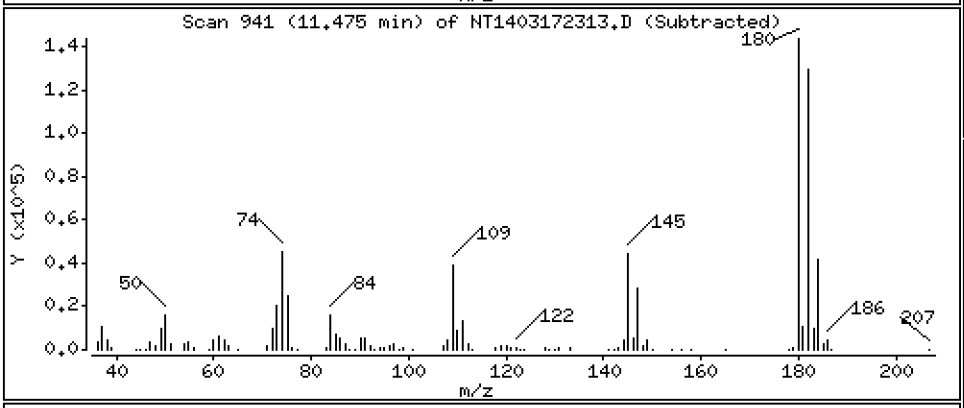
Column diameter: 0.25

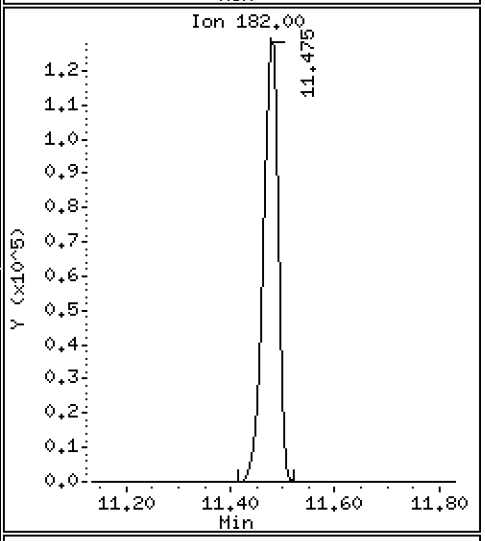
26 1,2,4-Trichlorobenzene

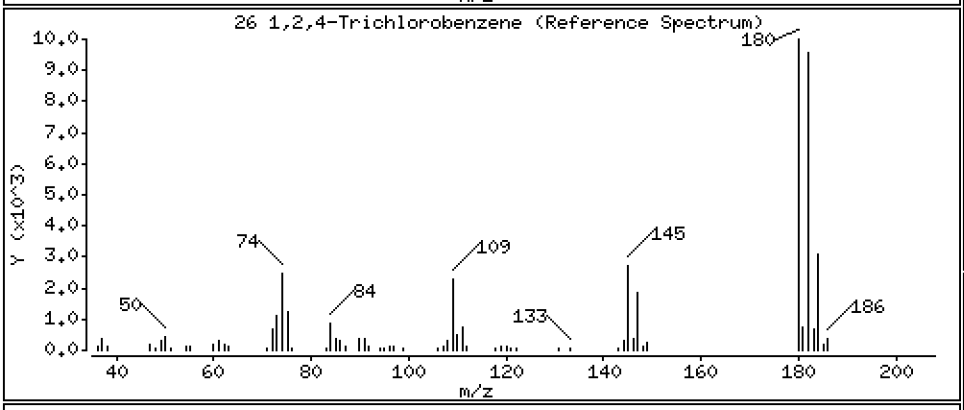
Concentration: 4.300 ug/mL

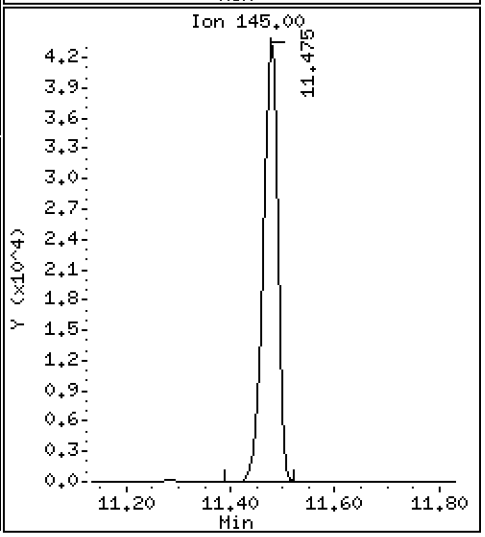


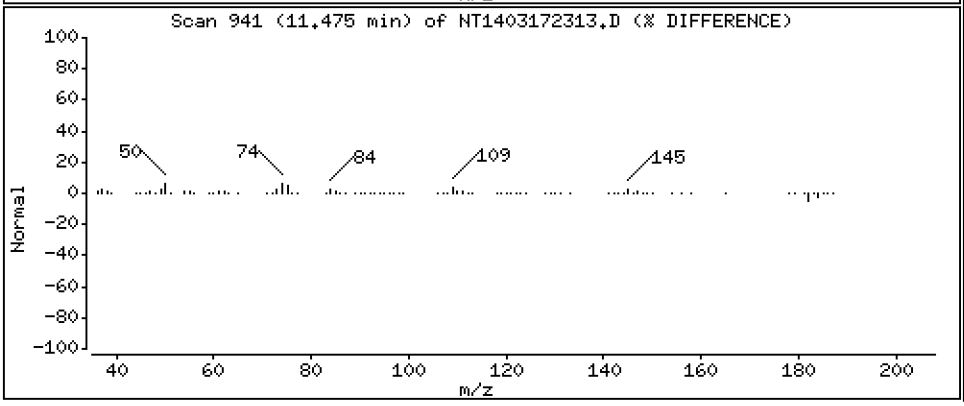












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

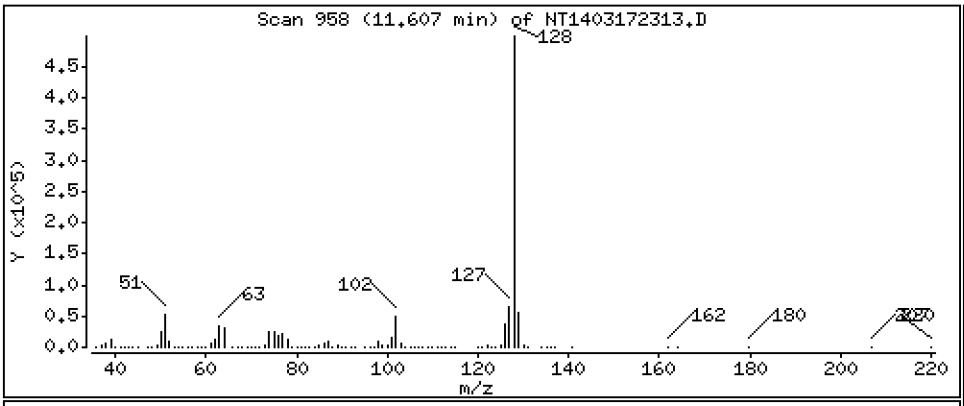
Operator: JGR

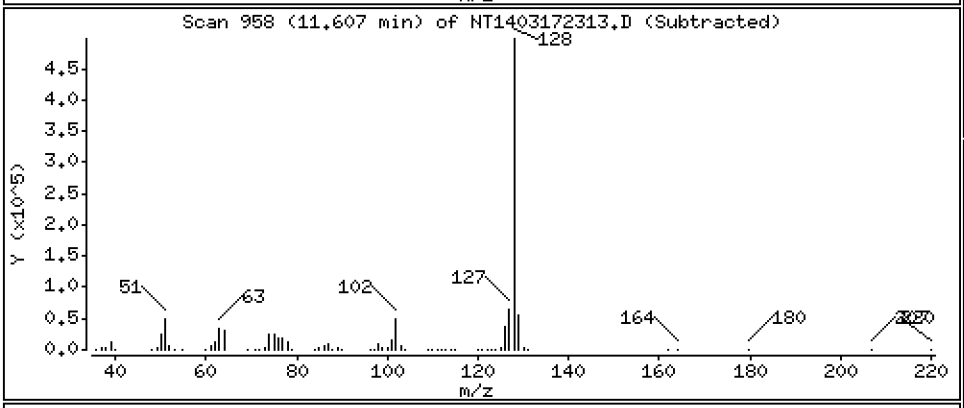
Column phase: ZB-5msi

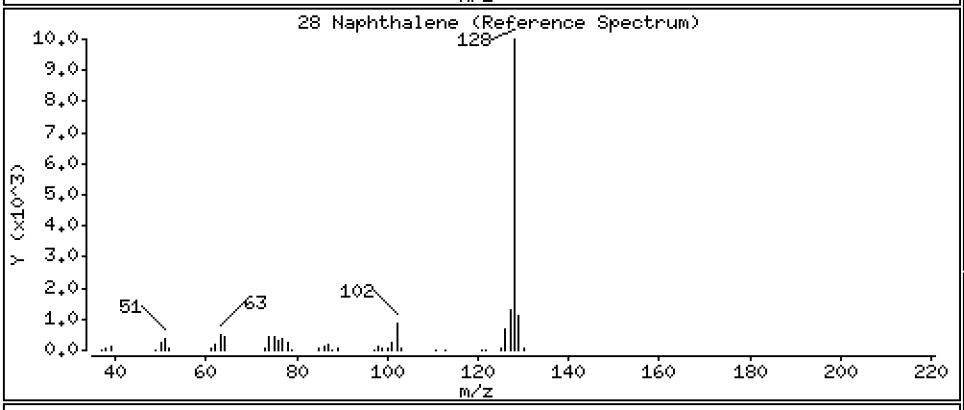
Column diameter: 0.25

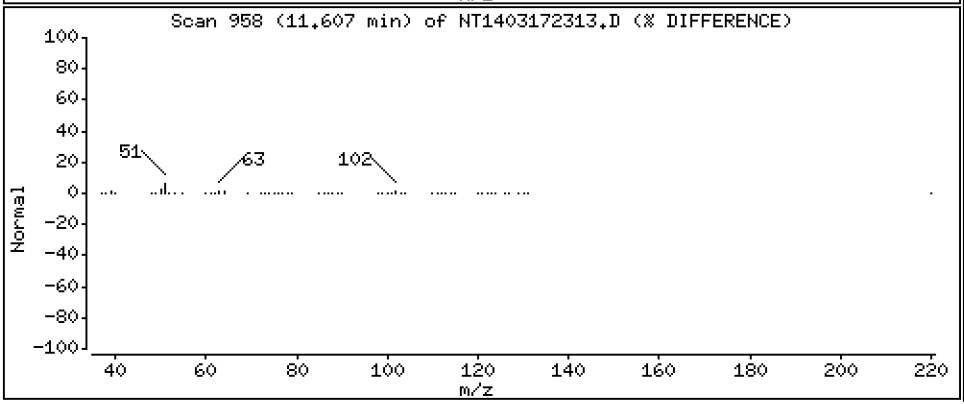
28 Naphthalene

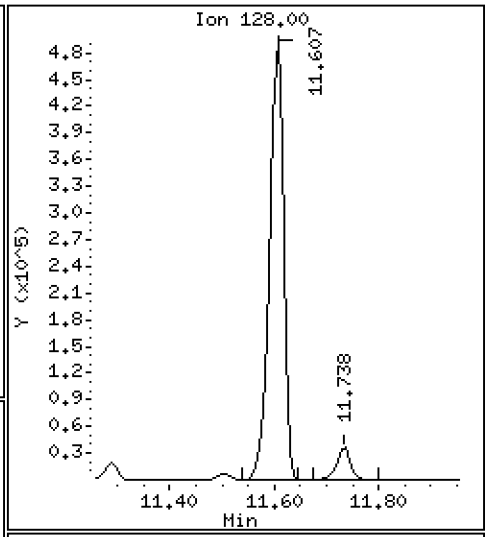
Concentration: 4.034 ug/mL

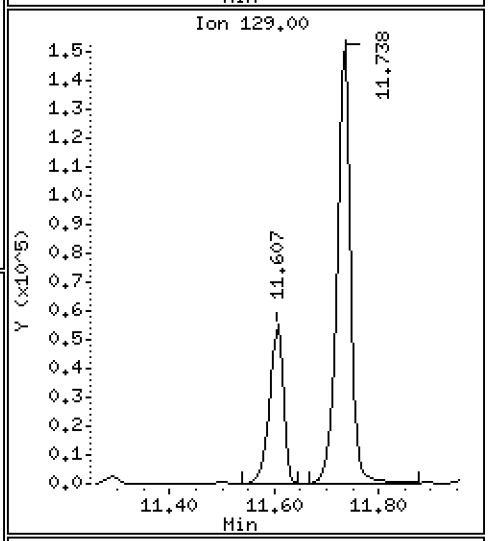


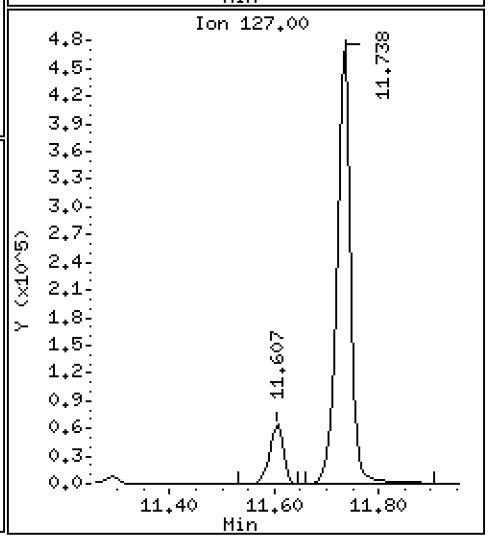












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

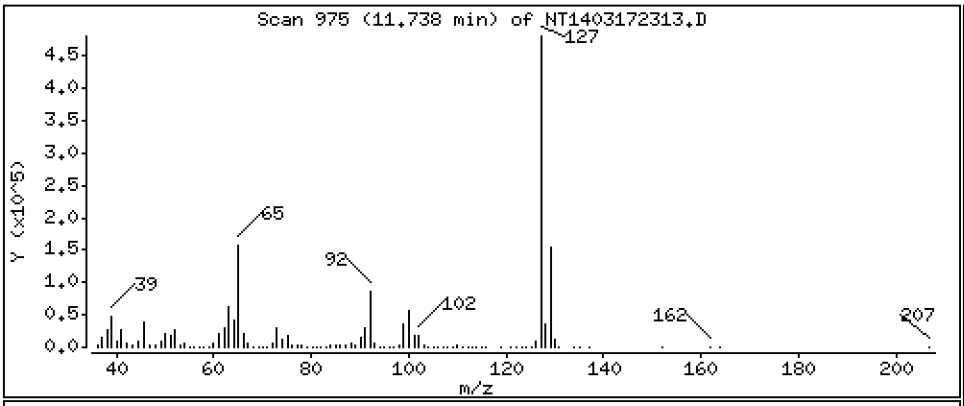
Operator: JGR

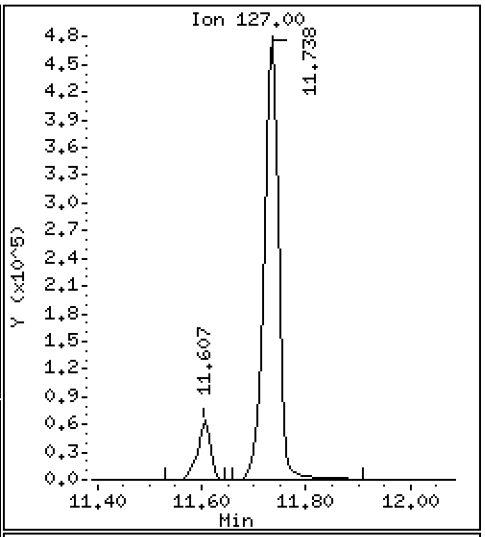
Column phase: ZB-5msi

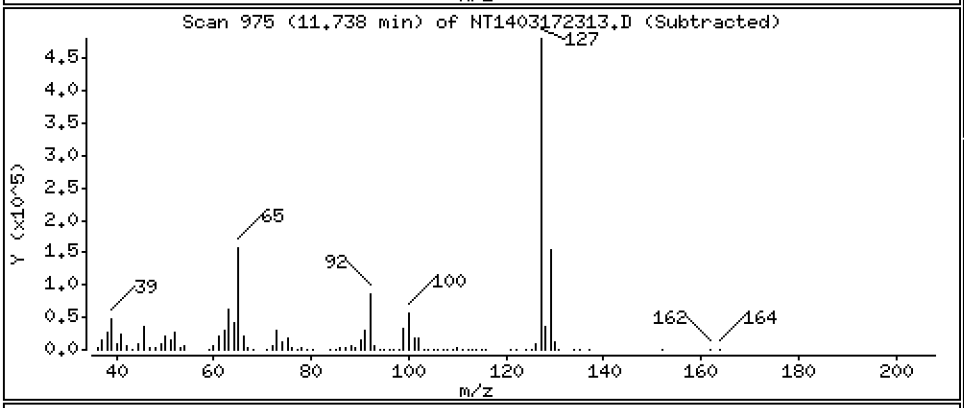
Column diameter: 0.25

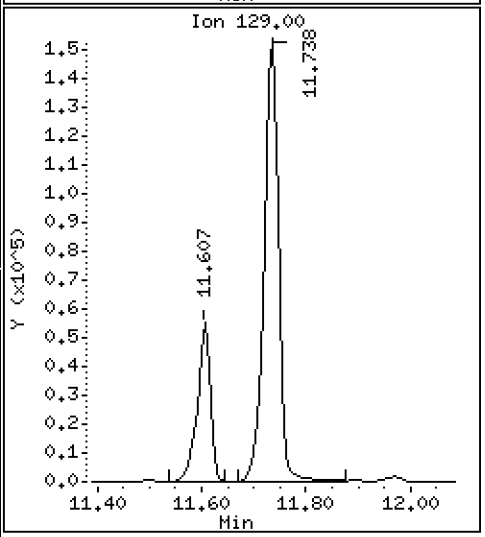
29 4-Chloroaniline

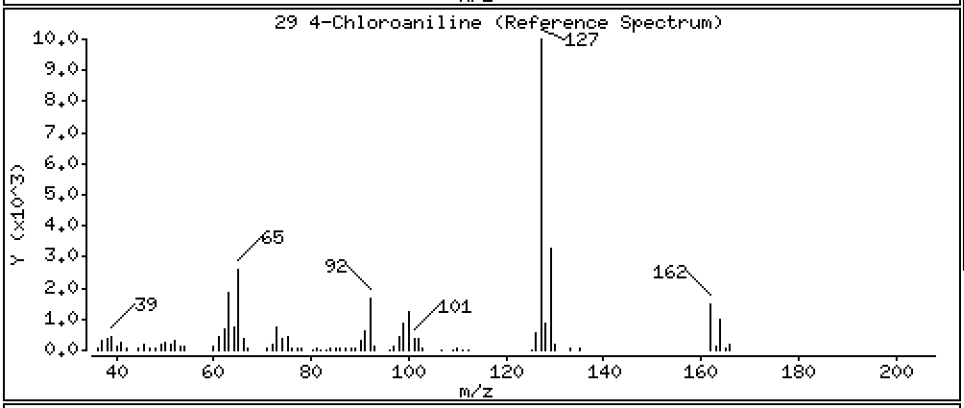
Concentration: 10.37 ug/mL

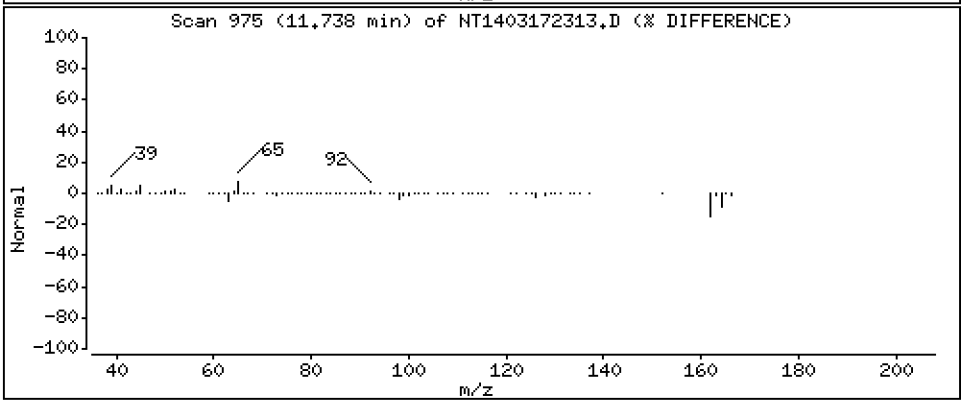












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

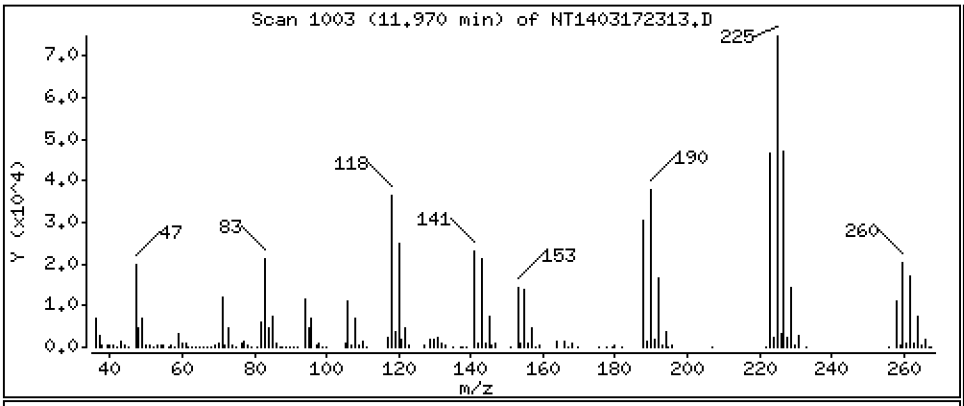
Operator: JGR

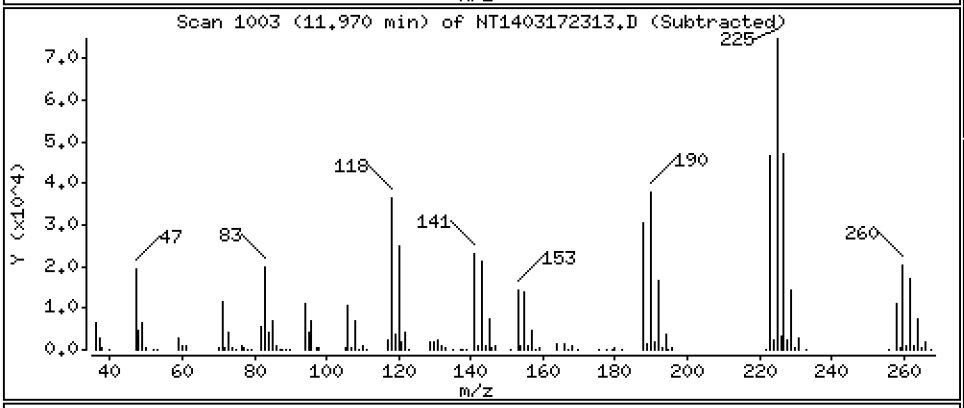
Column phase: ZB-5msi

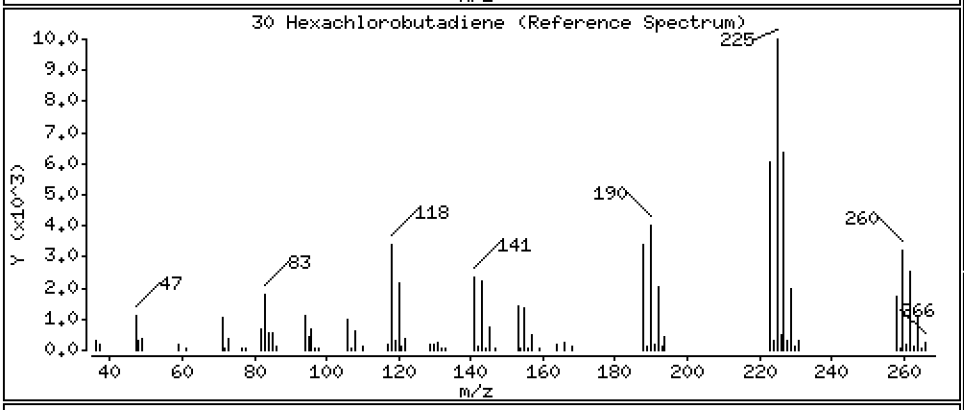
Column diameter: 0.25

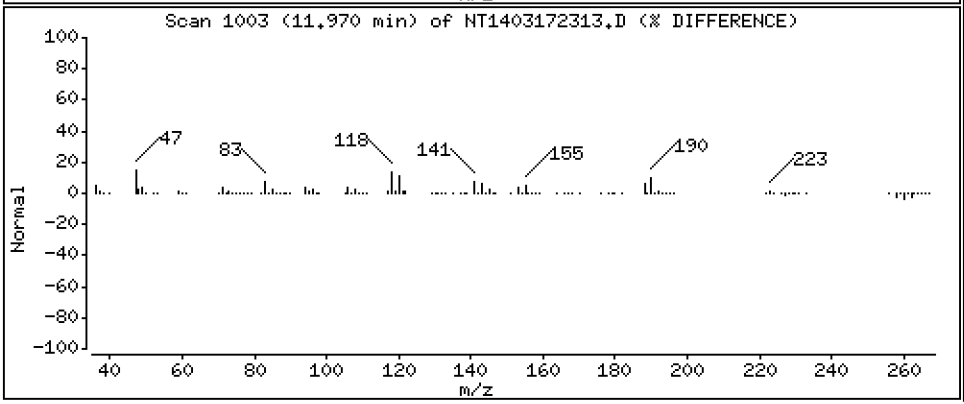
30 Hexachlorobutadiene

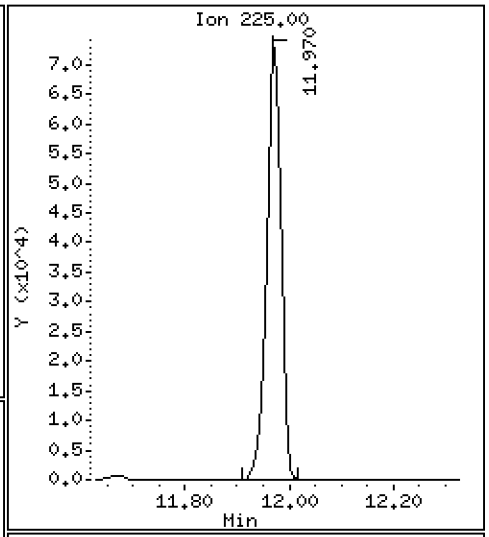
Concentration: 4.307 ug/mL

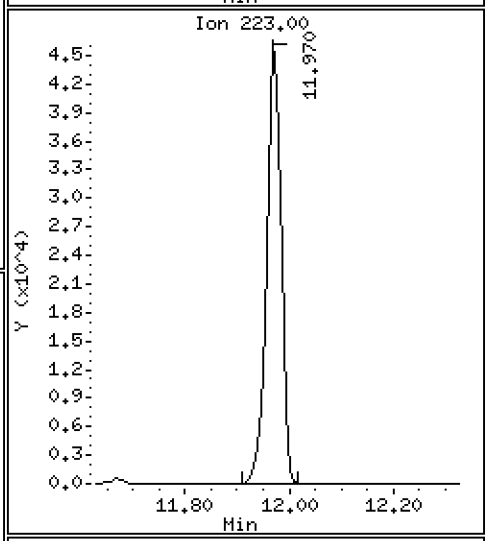


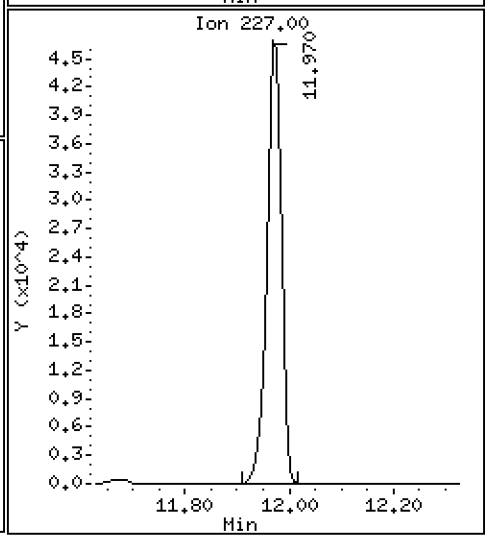












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

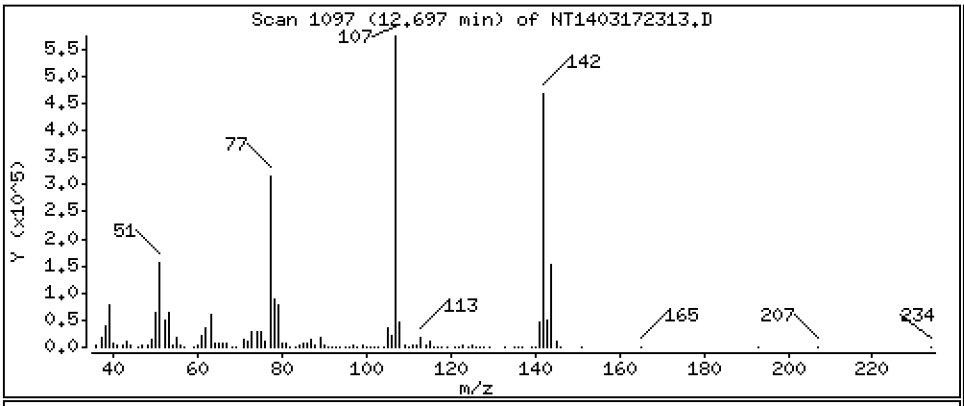
Operator: JGR

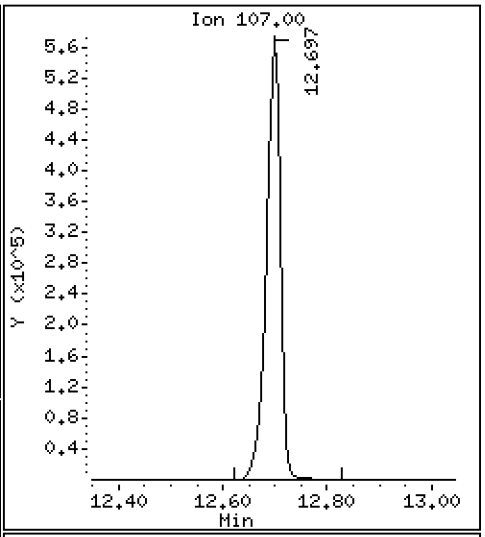
Column phase: ZB-5msi

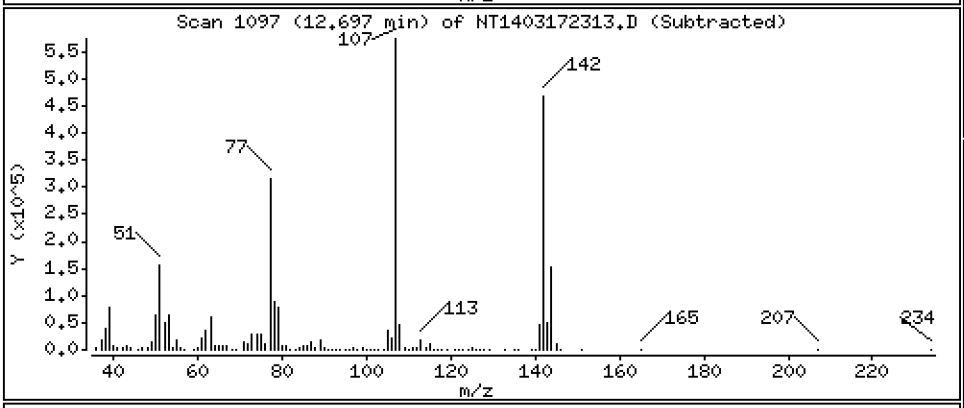
Column diameter: 0.25

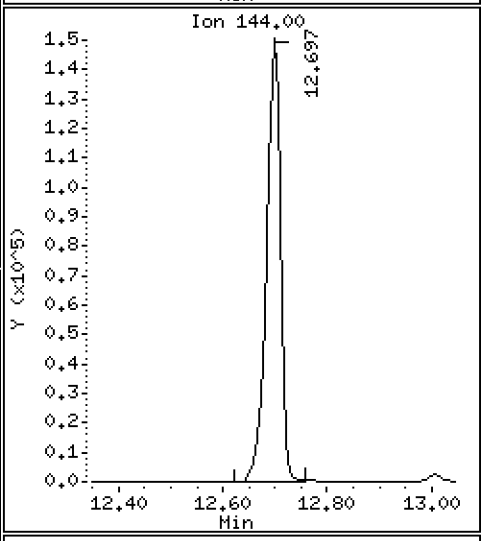
31 4-Chloro-3-methylphenol

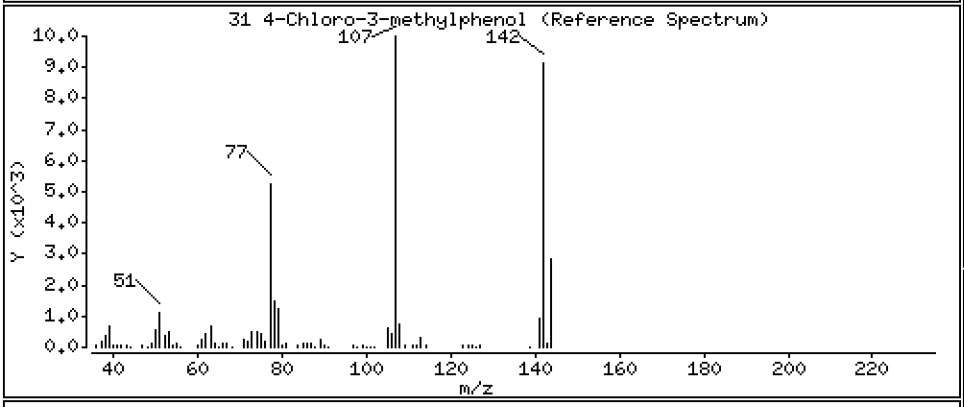
Concentration: 14.79 ug/mL

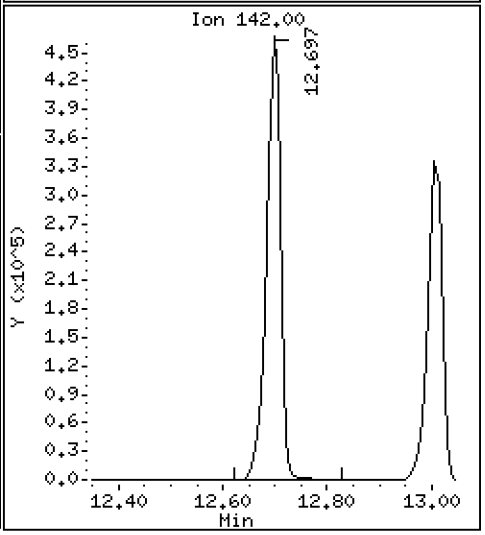


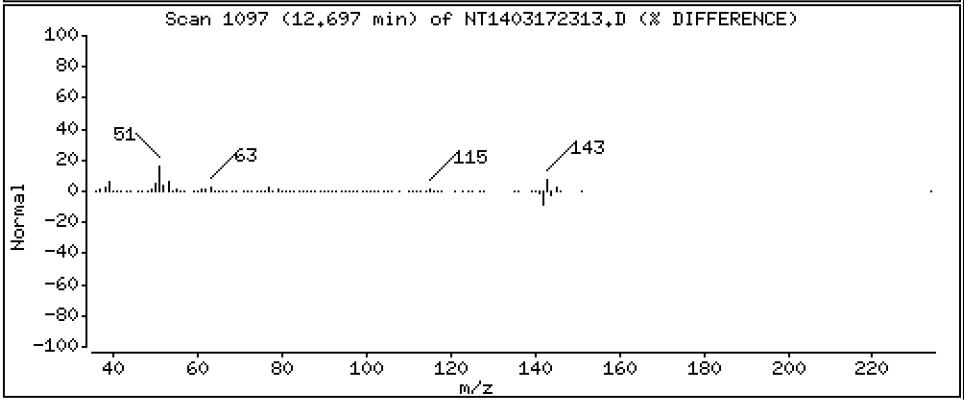












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

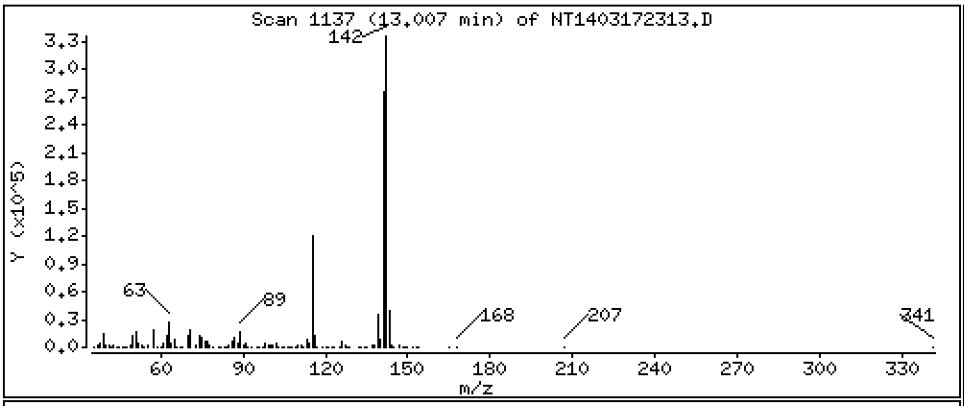
Operator: JGR

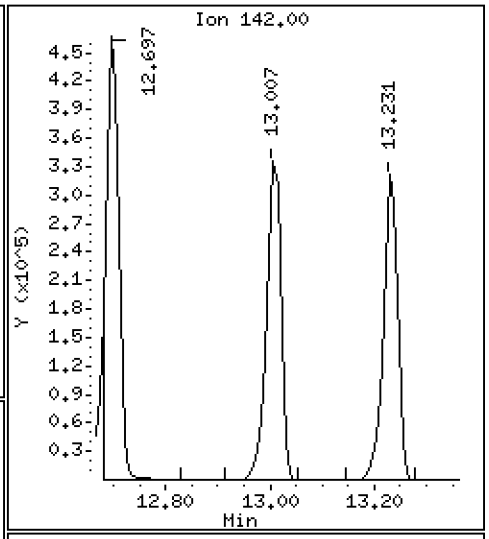
Column phase: ZB-5msi

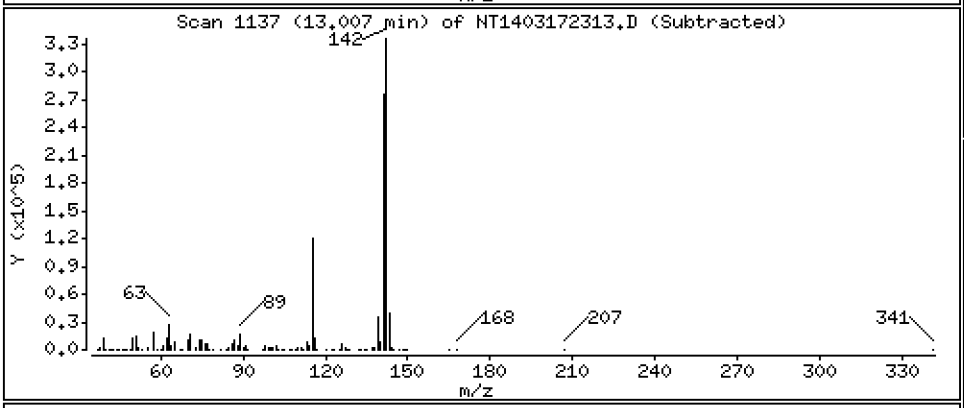
Column diameter: 0.25

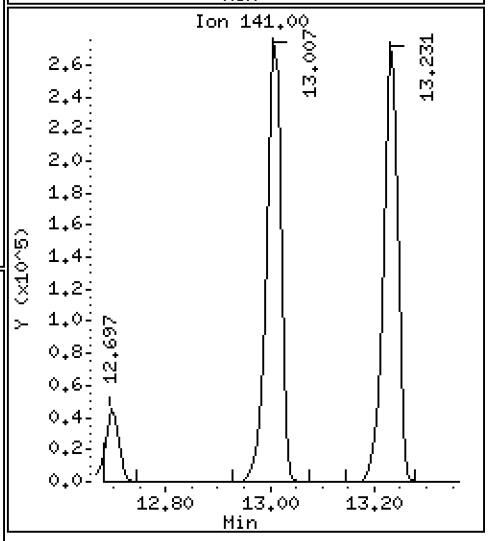
32 2-Methylnaphthalene

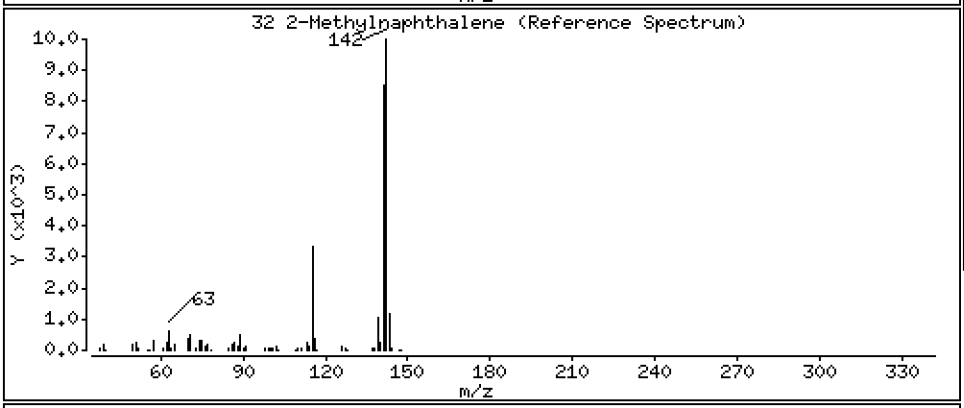
Concentration: 4.068 ug/mL

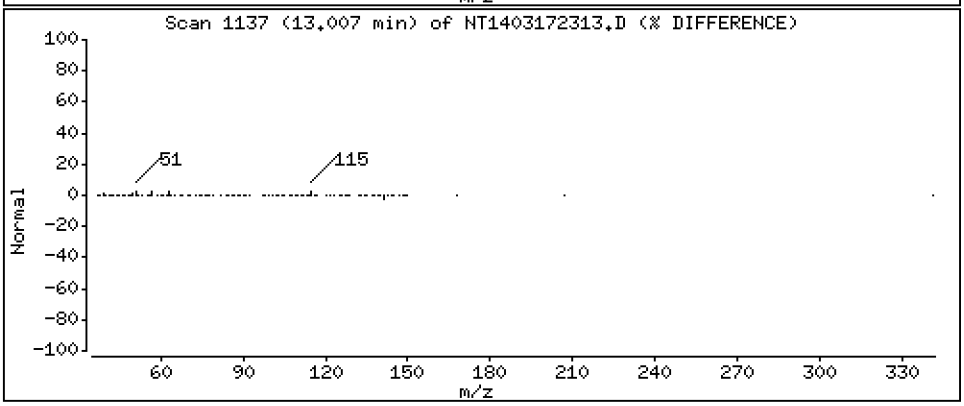












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

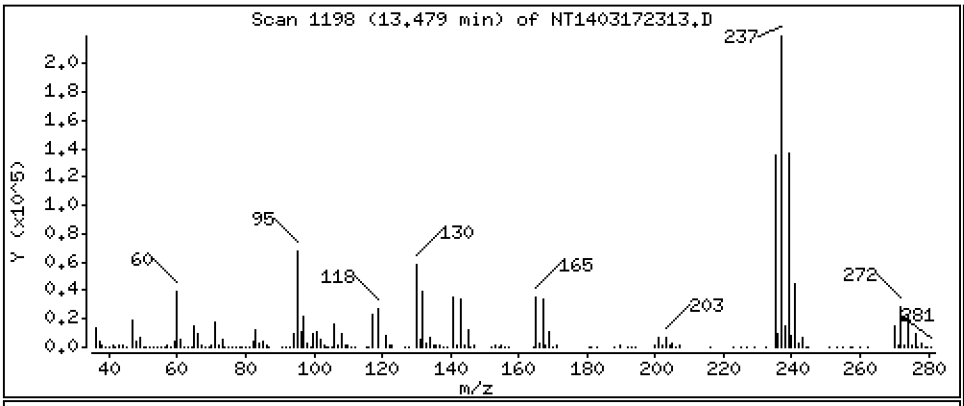
Operator: JGR

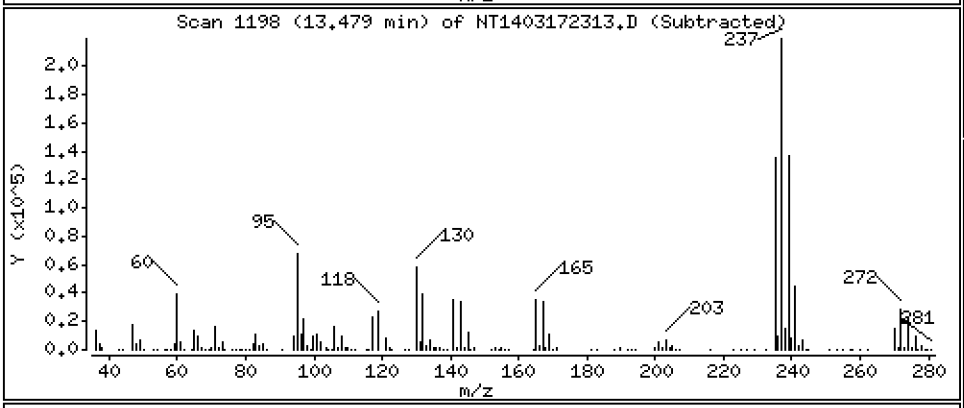
Column phase: ZB-5msi

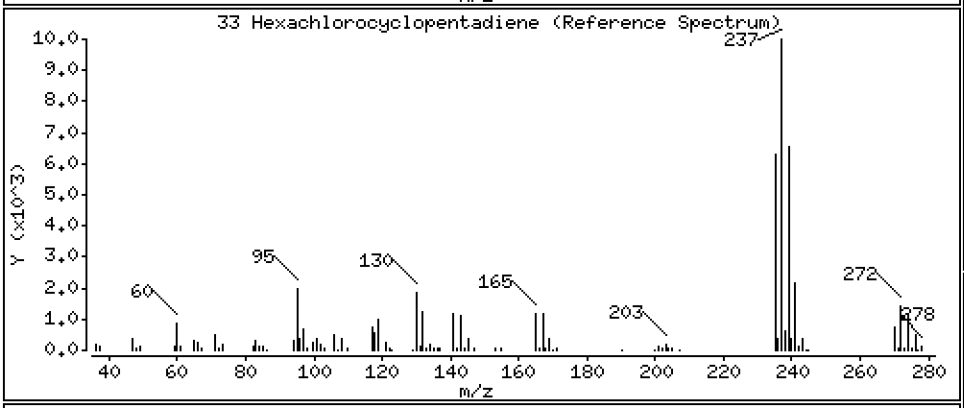
Column diameter: 0.25

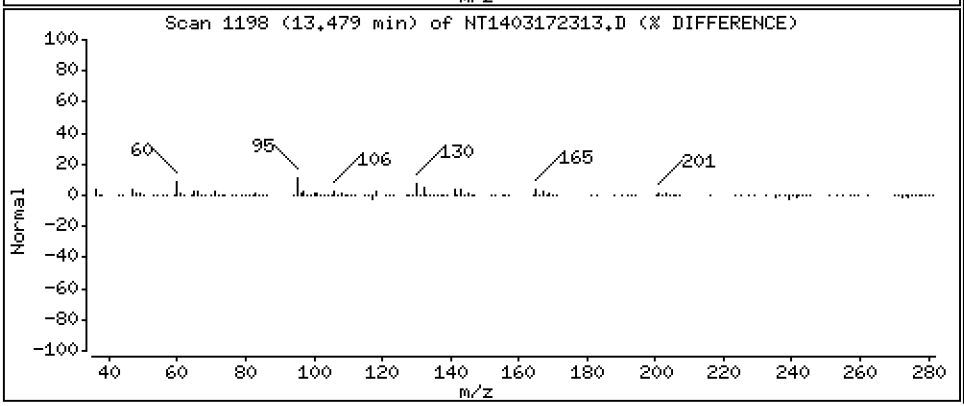
33 Hexachlorocyclopentadiene

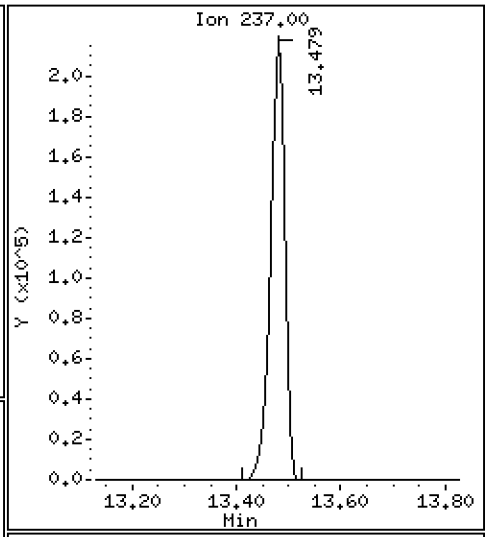
Concentration: 11.28 ug/mL

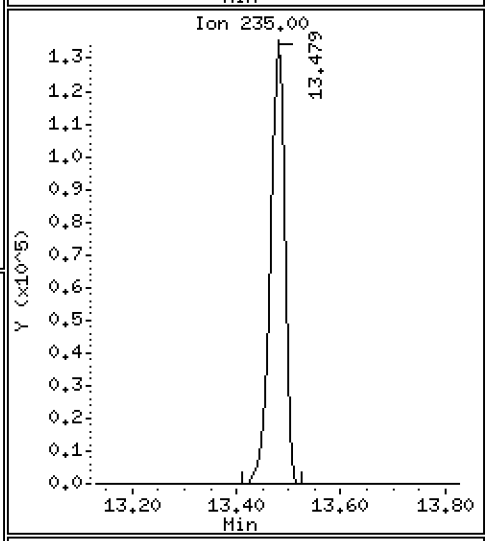


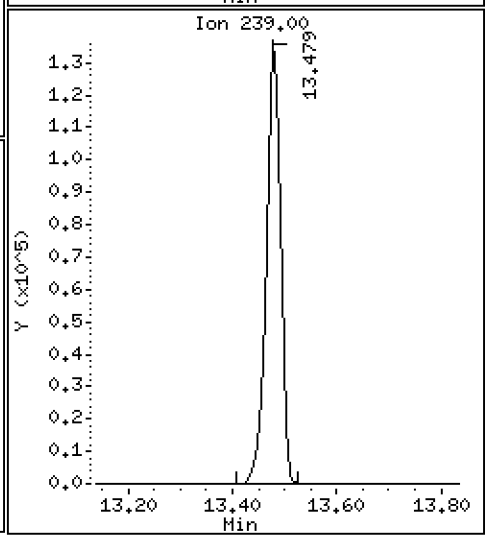












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

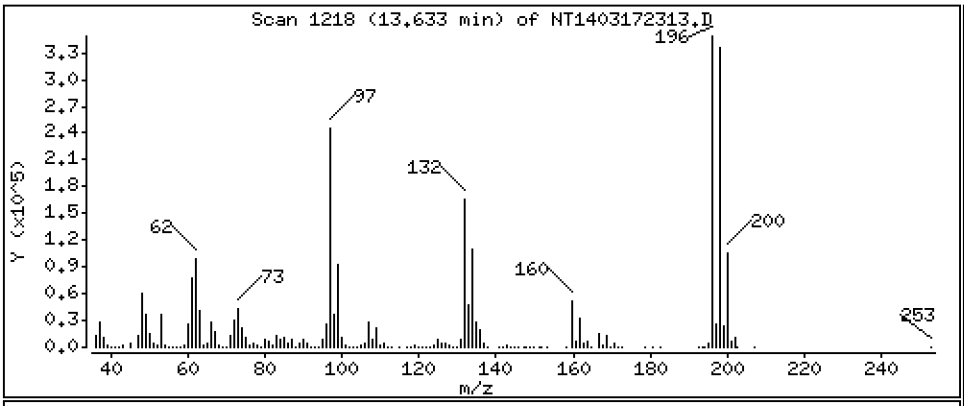
Operator: JGR

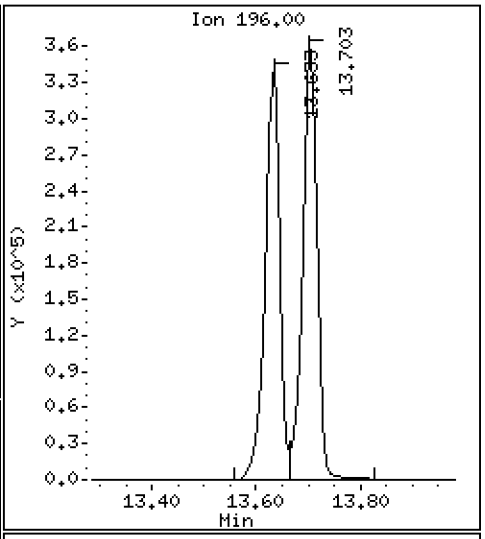
Column phase: ZB-5msi

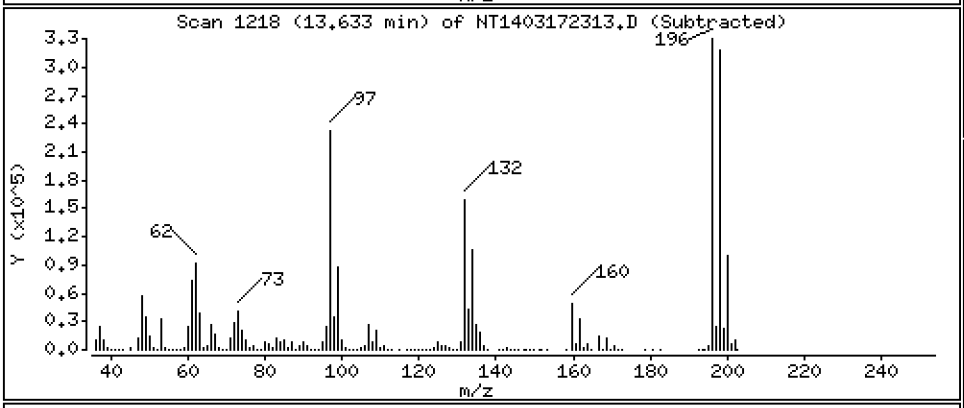
Column diameter: 0.25

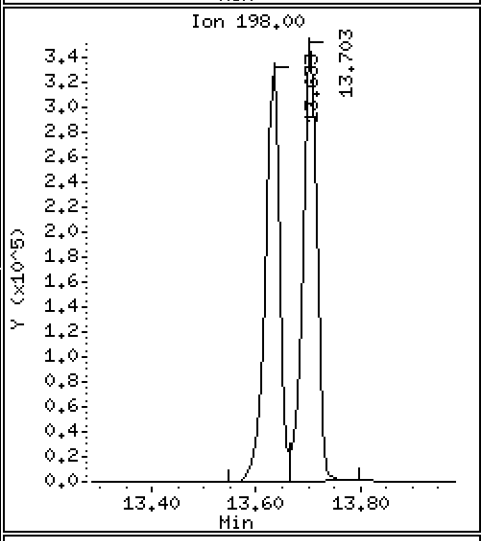
34 2,4,6-Trichlorophenol

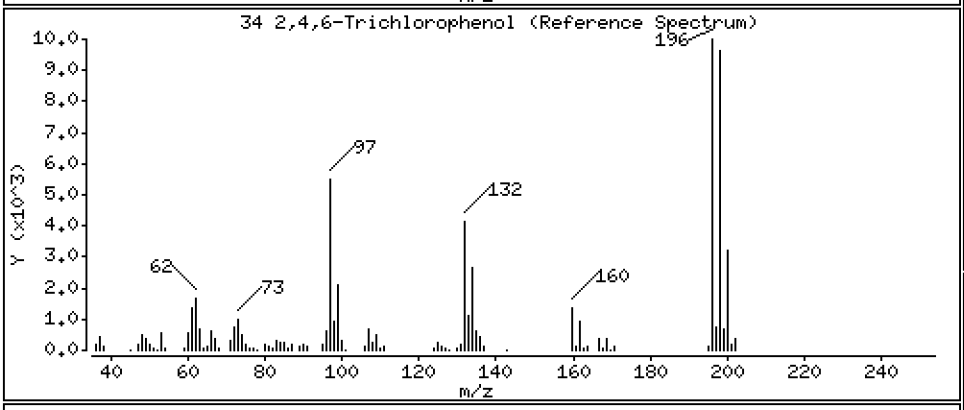
Concentration: 14.85 ug/mL

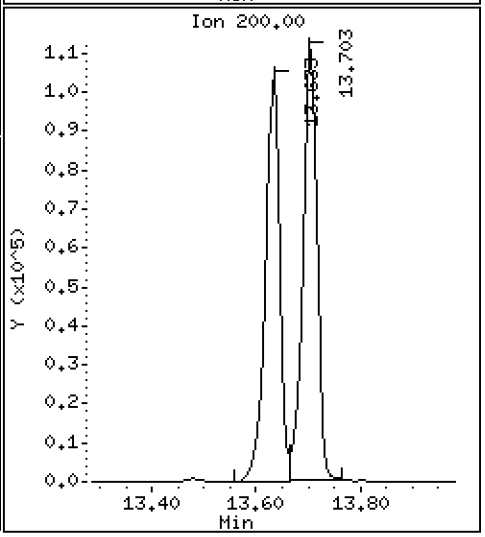


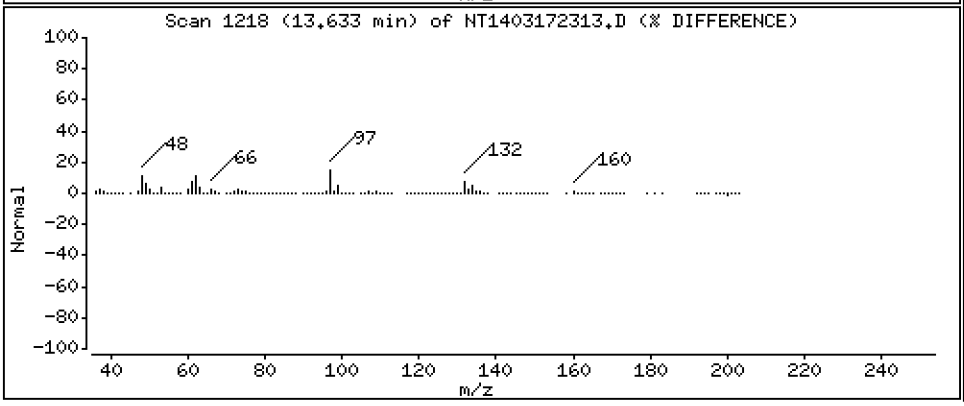












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

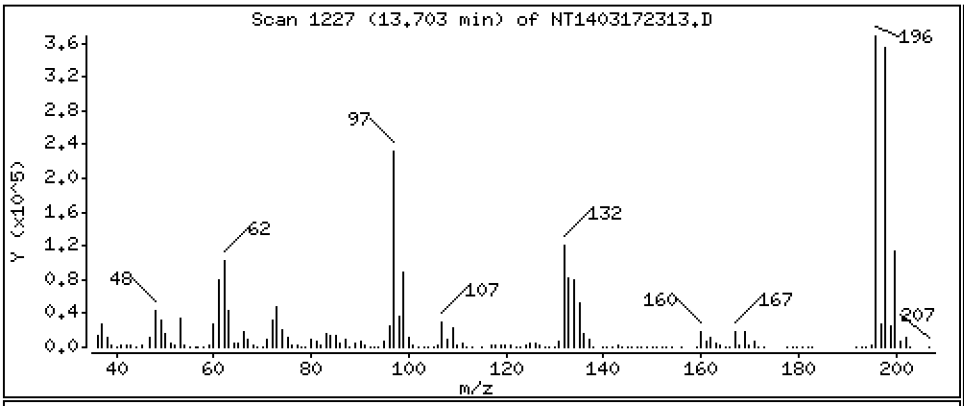
Operator: JGR

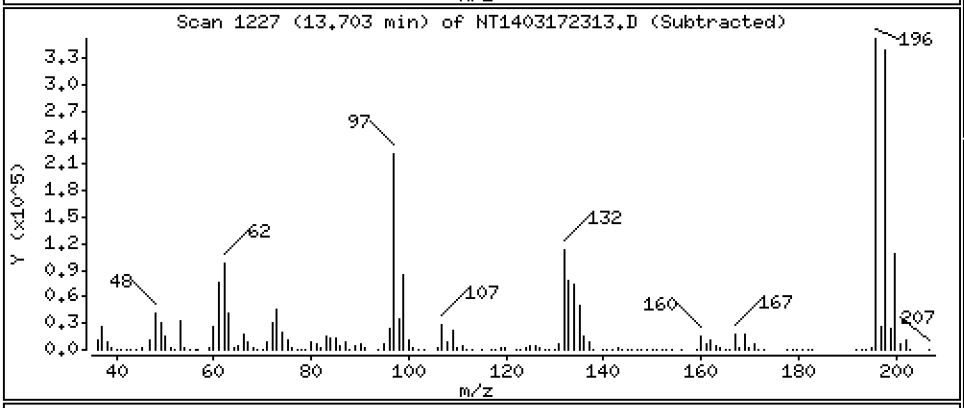
Column phase: ZB-5msi

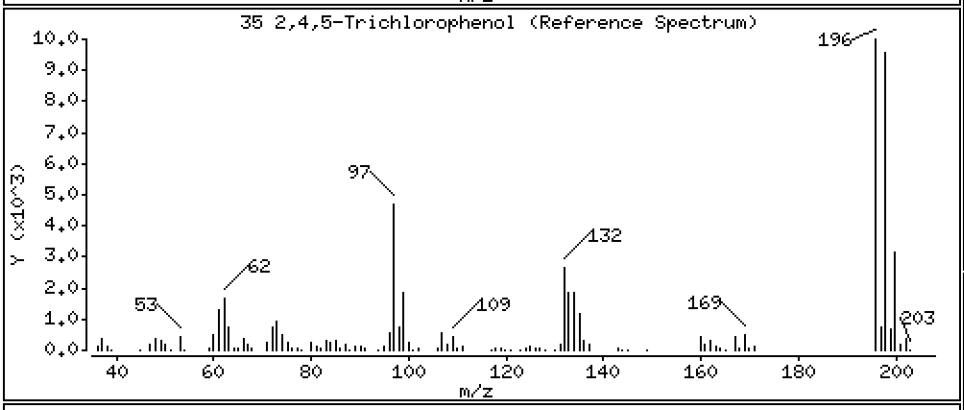
Column diameter: 0.25

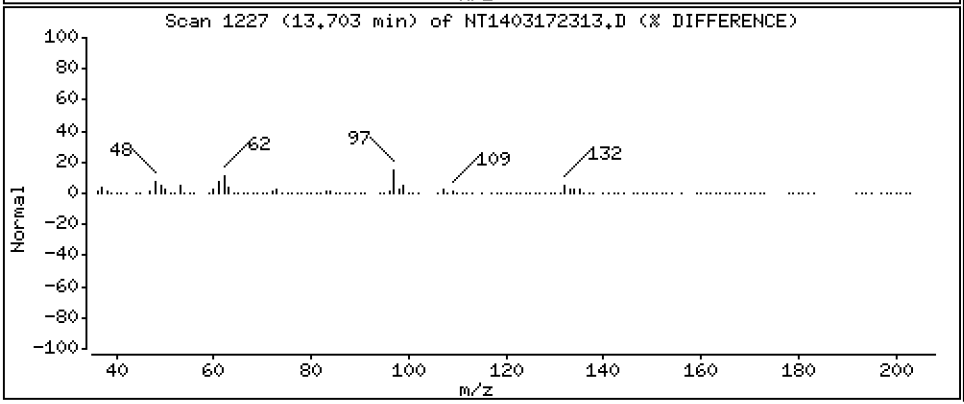
35 2,4,5-Trichlorophenol

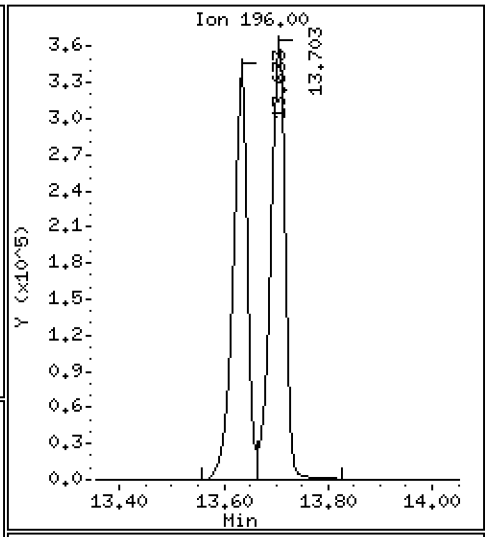
Concentration: 15.19 ug/mL

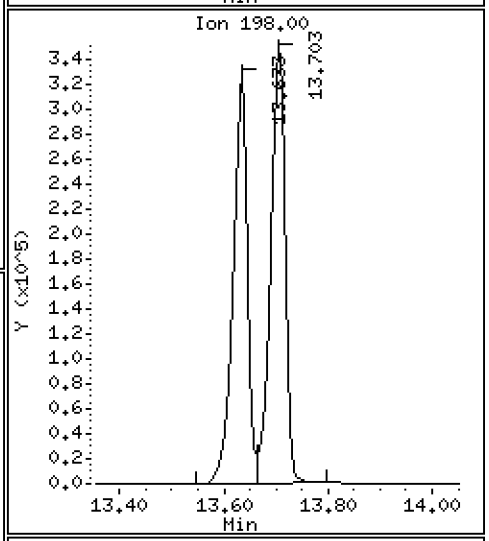


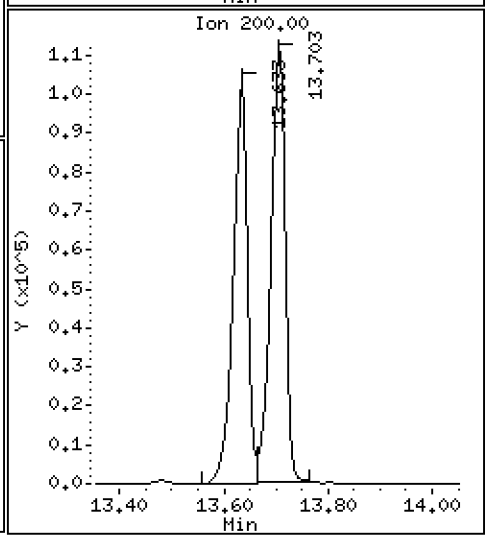












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

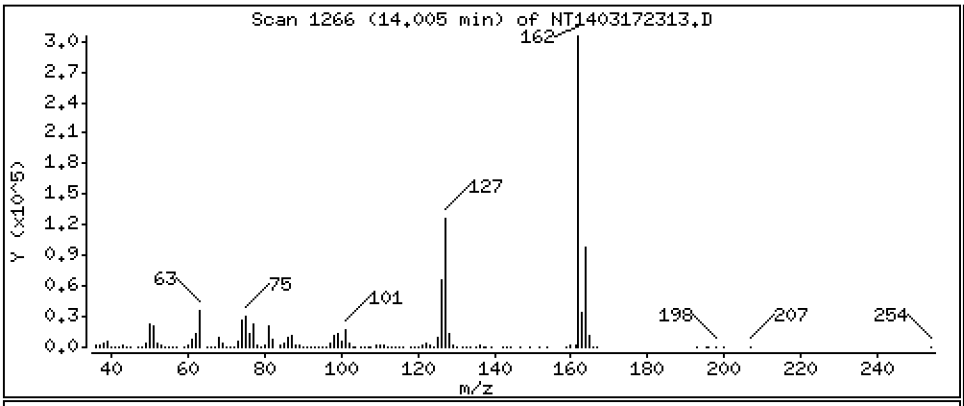
Operator: JGR

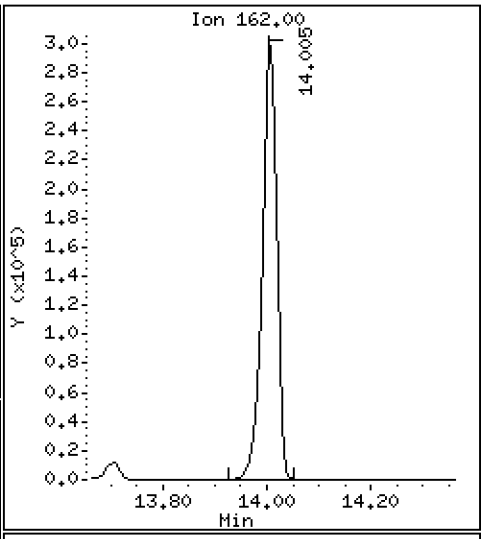
Column phase: ZB-5msi

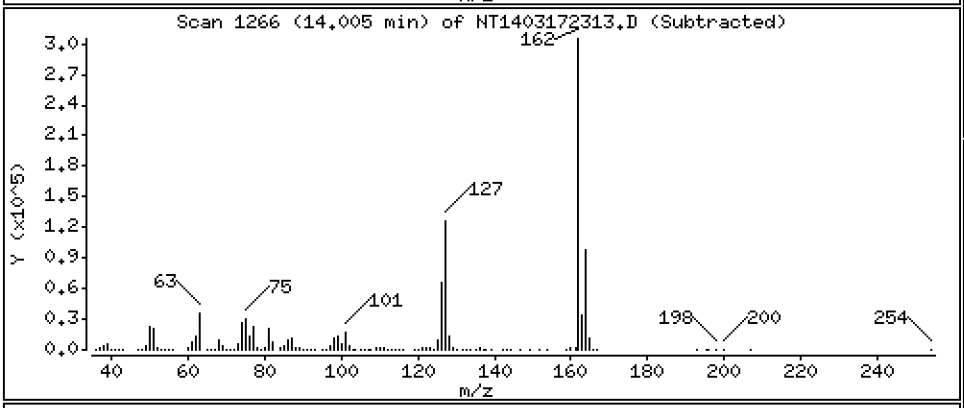
Column diameter: 0.25

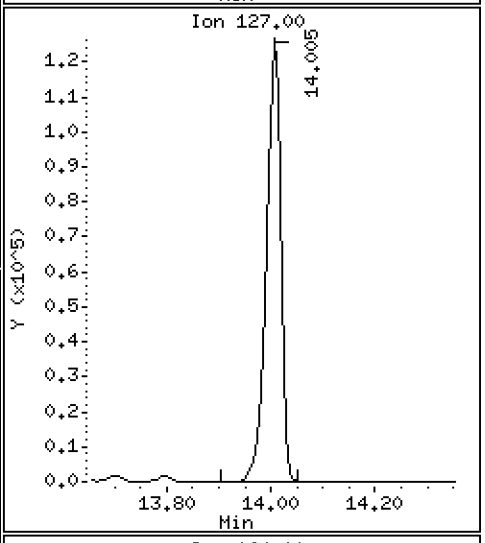
37 2-Chloronaphthalene

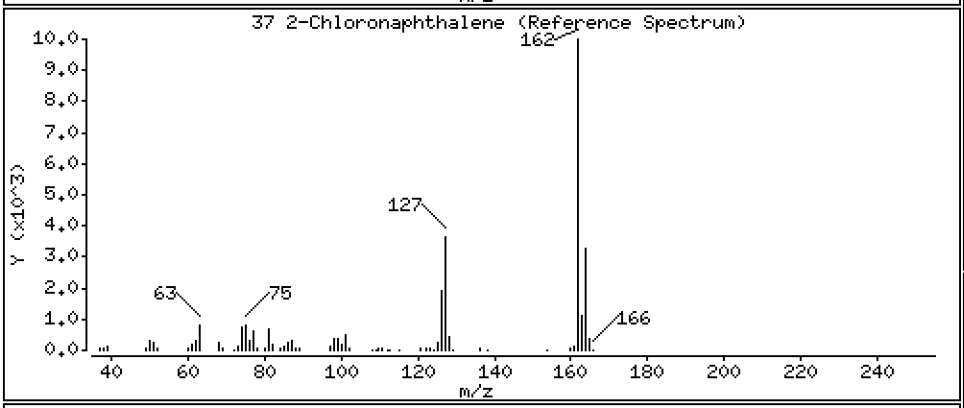
Concentration: 4.300 ug/mL

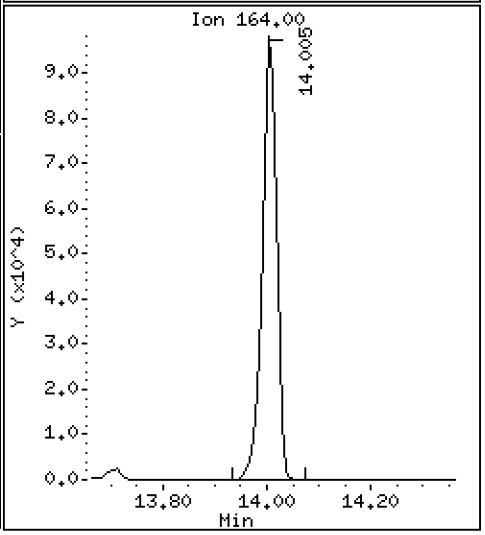


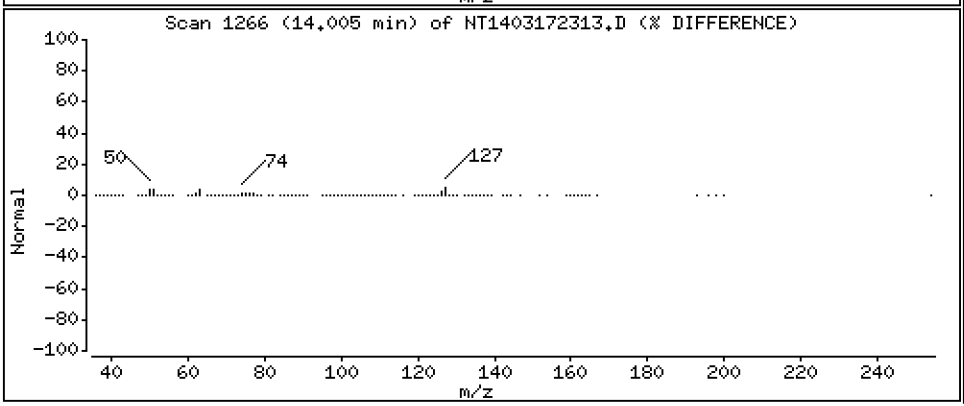












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

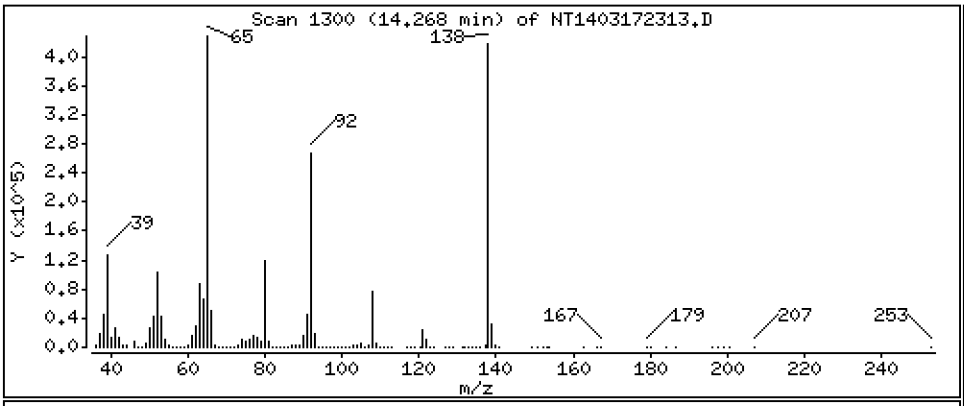
Operator: JGR

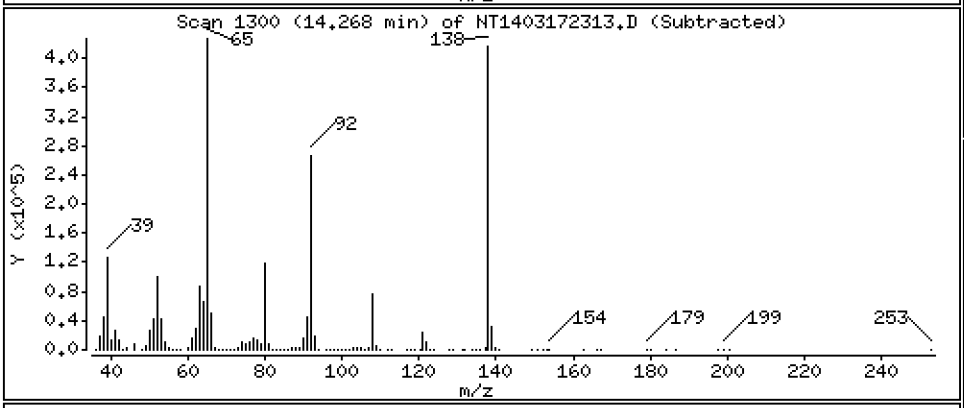
Column phase: ZB-5msi

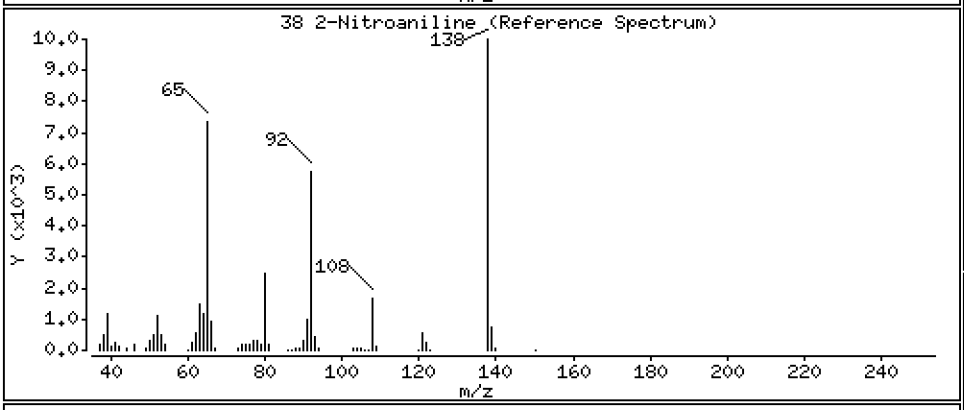
Column diameter: 0.25

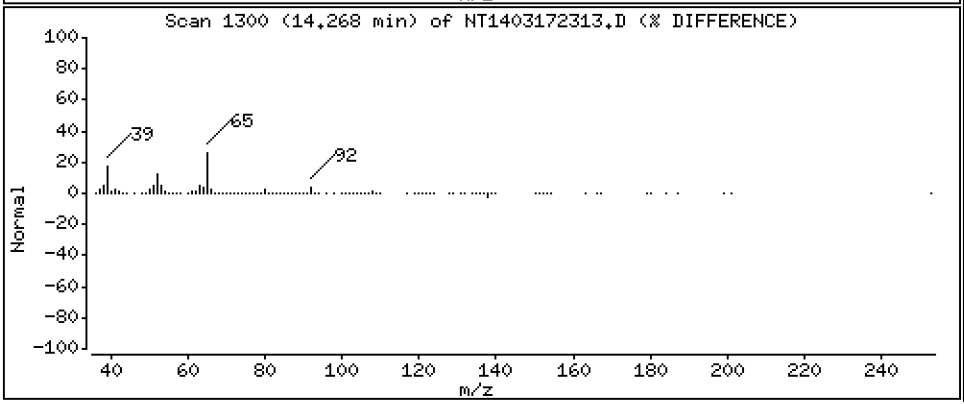
38 2-Nitroaniline

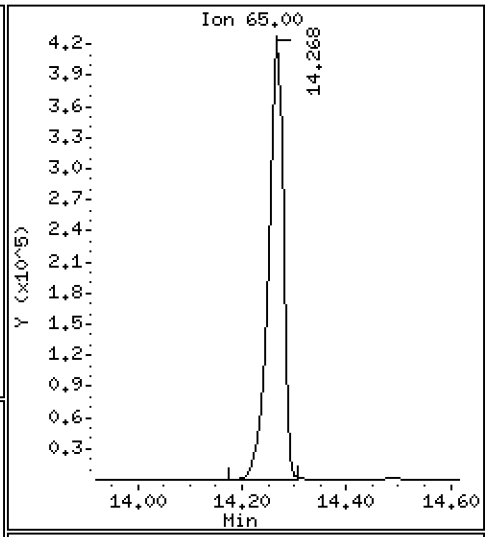
Concentration: 15.87 ug/mL

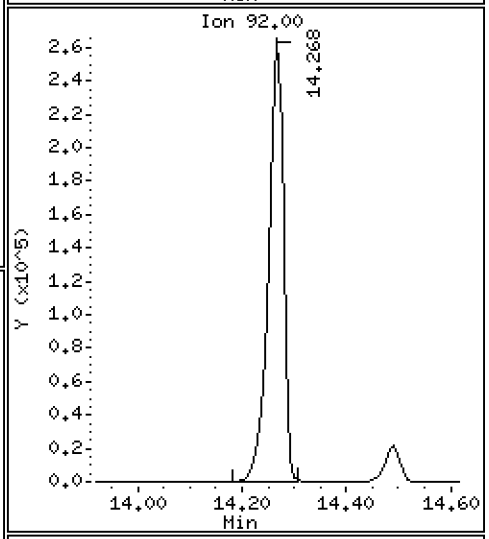


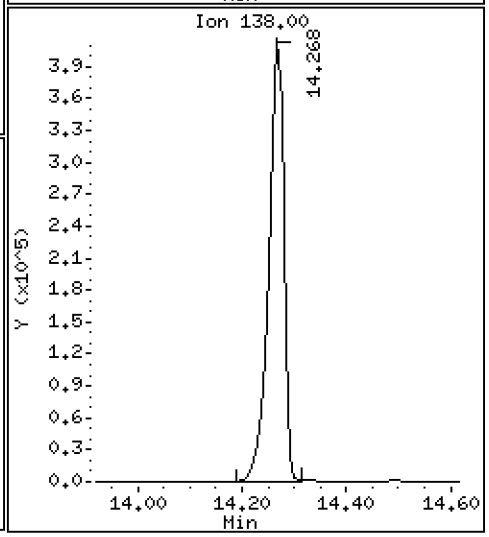












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

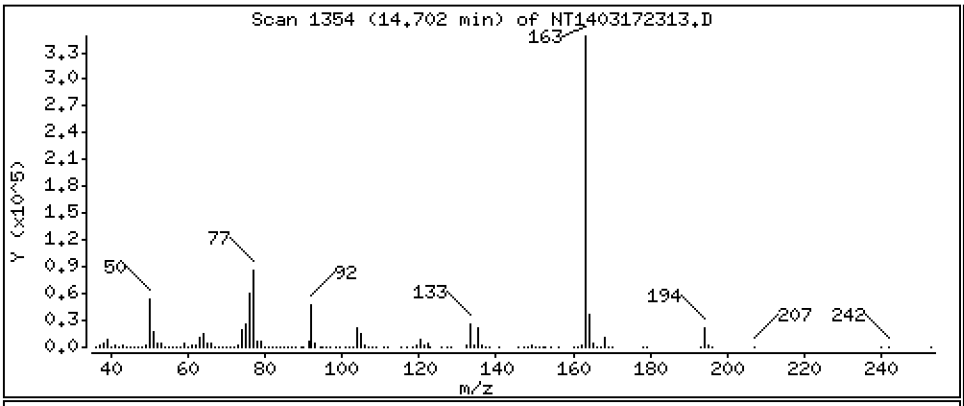
Operator: JGR

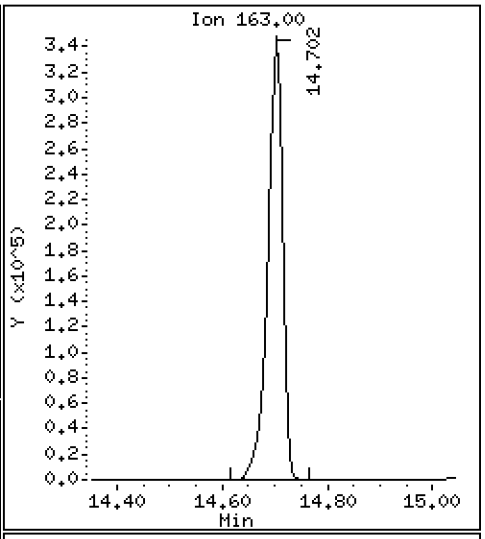
Column phase: ZB-5msi

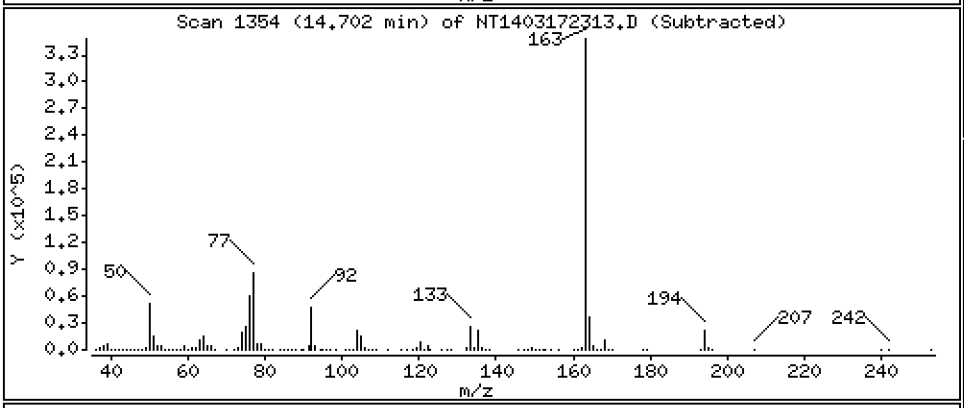
Column diameter: 0.25

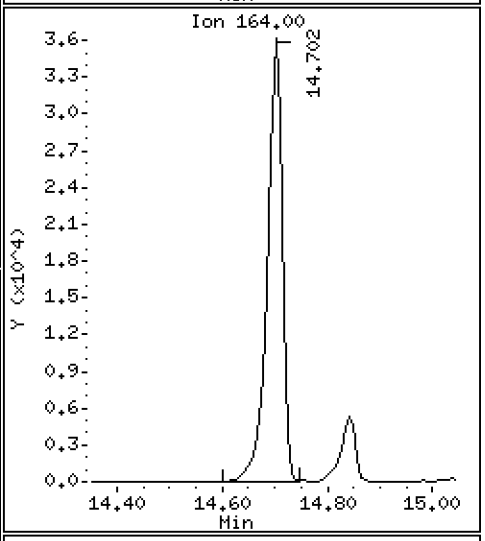
39 Dimethylphthalate

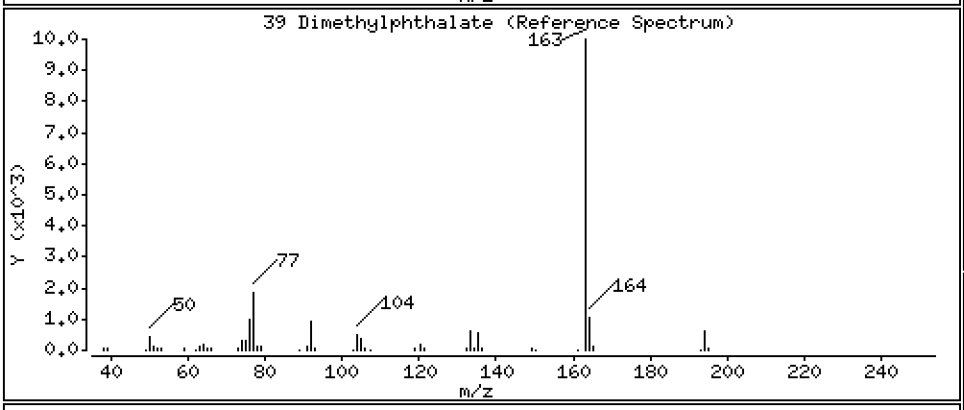
Concentration: 4.689 ug/mL

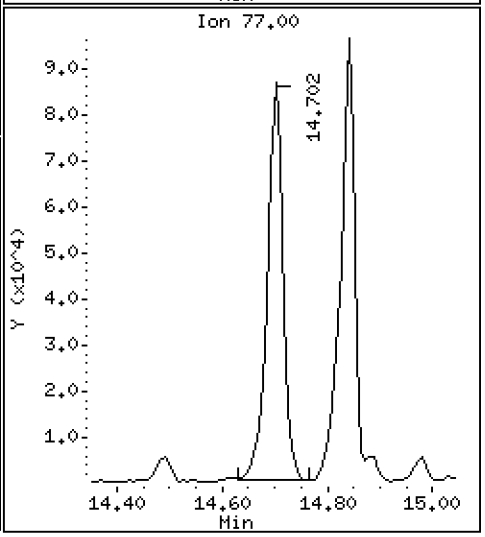


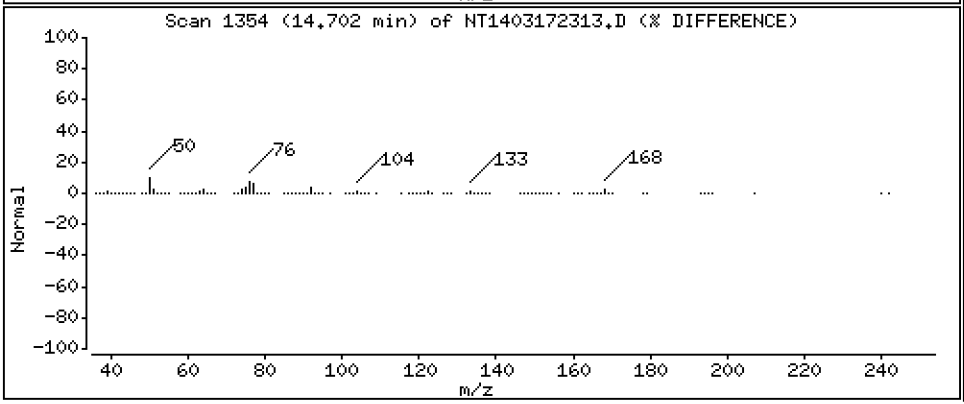












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

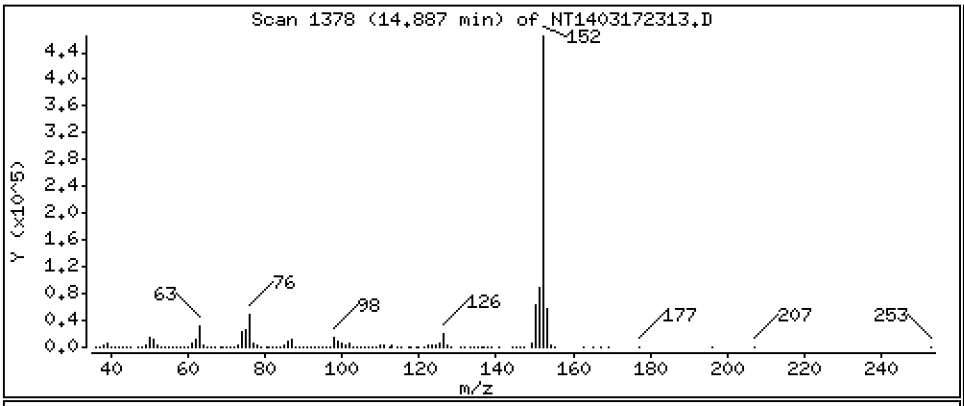
Operator: JGR

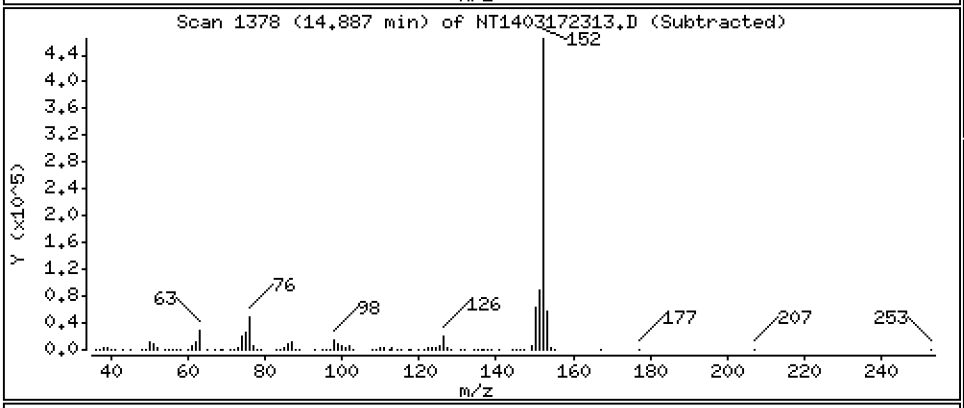
Column phase: ZB-5msi

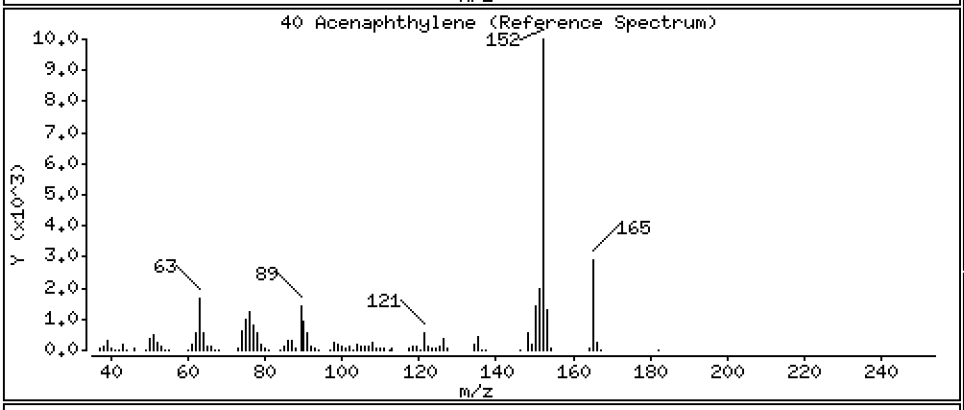
Column diameter: 0.25

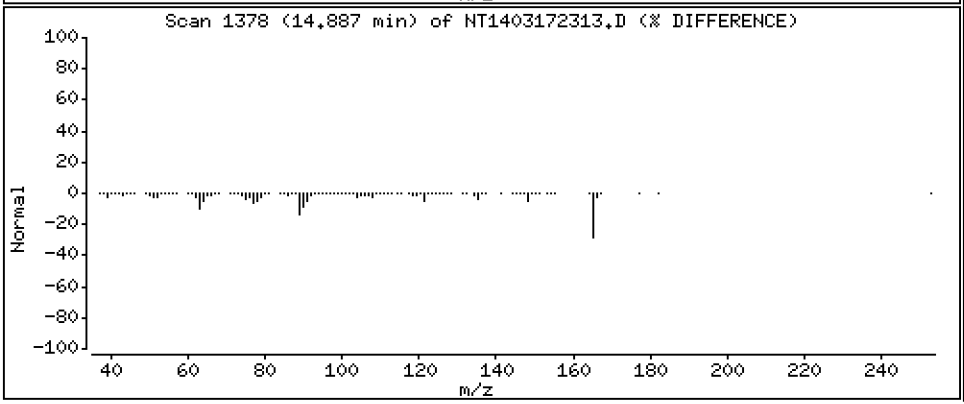
40 Acenaphthylene

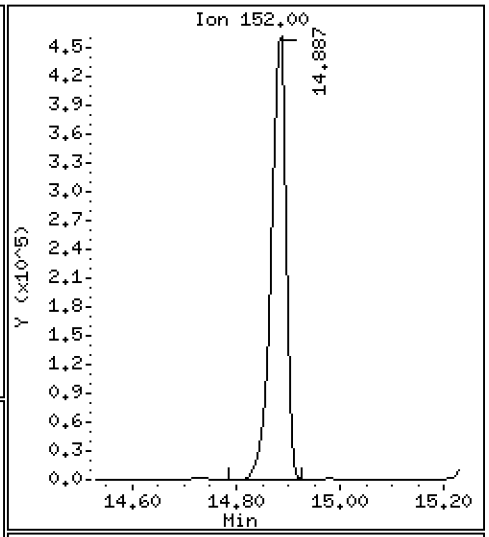
Concentration: 4.025 ug/mL

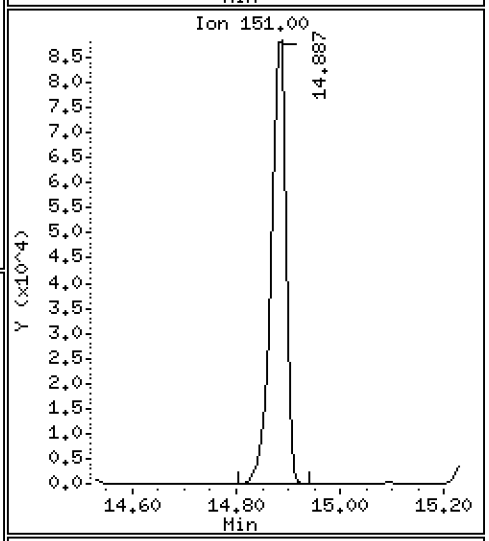


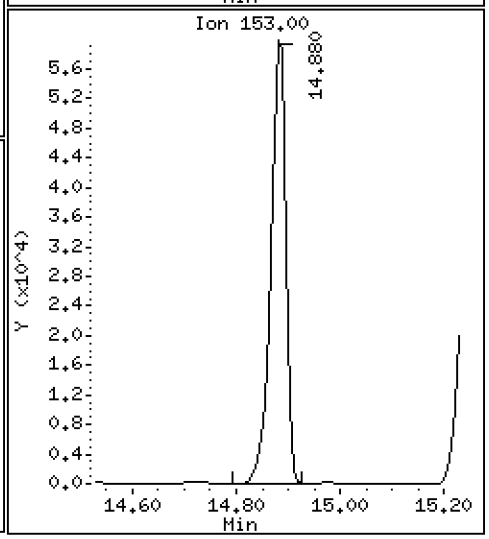












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

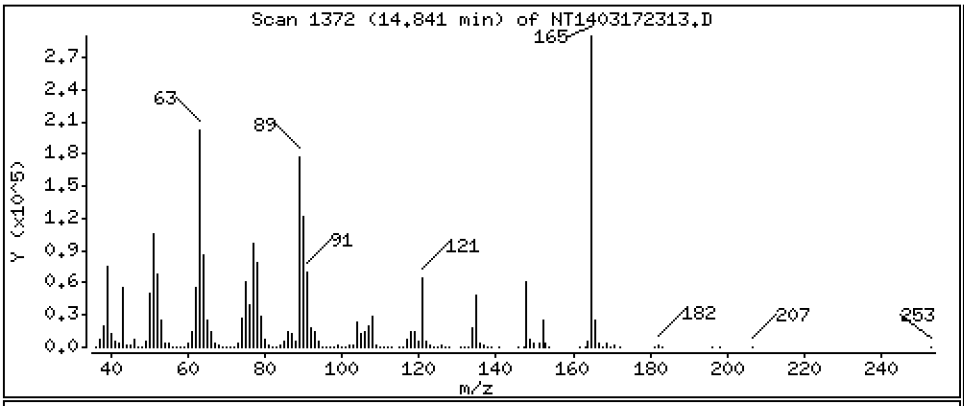
Operator: JGR

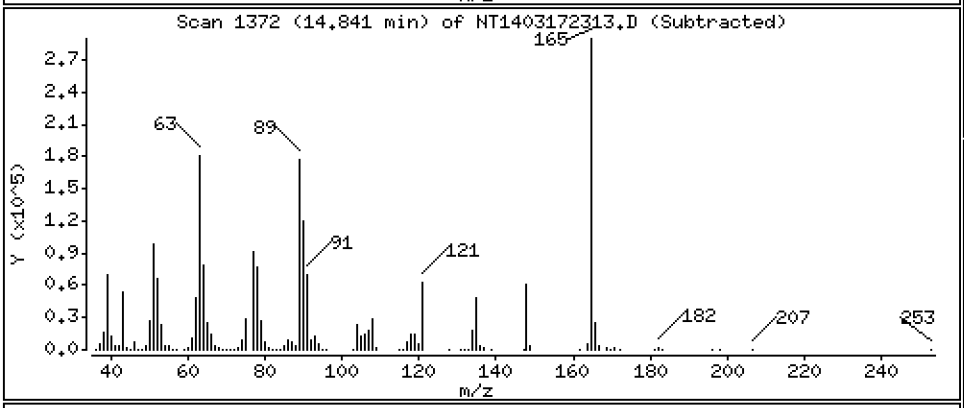
Column phase: ZB-5msi

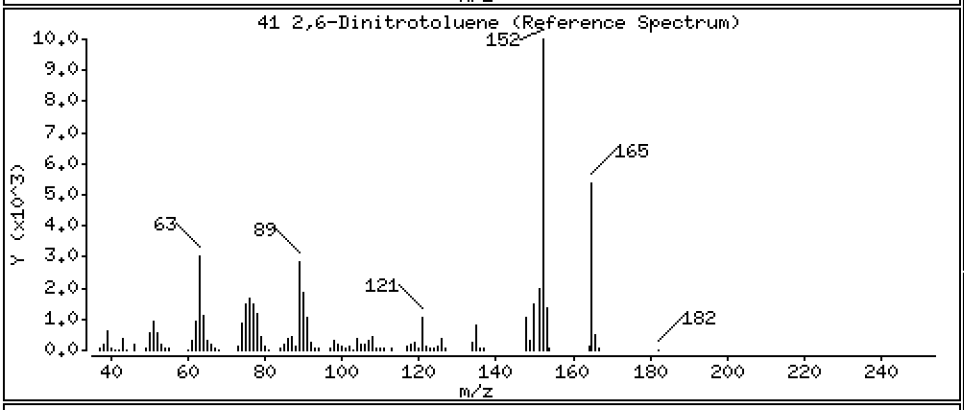
Column diameter: 0.25

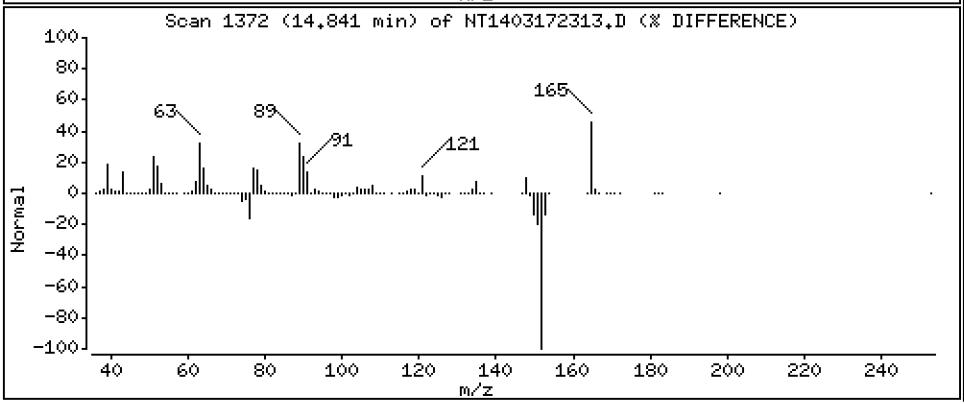
41 2,6-Dinitrotoluene

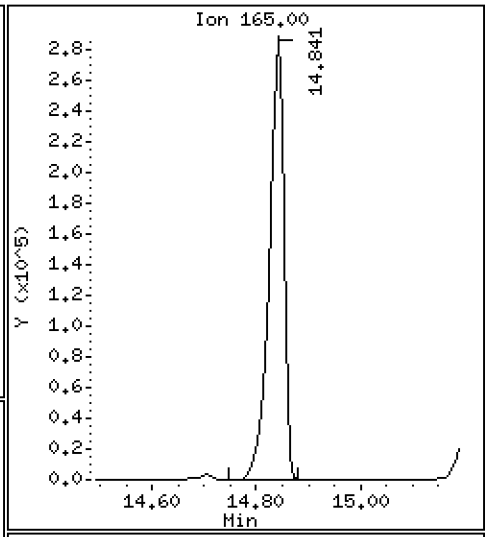
Concentration: 16.50 ug/mL

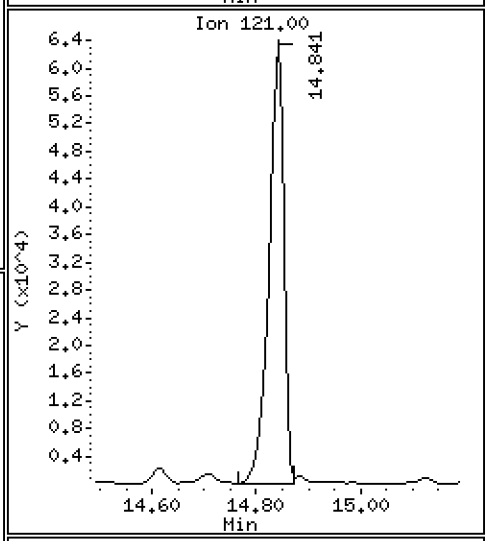


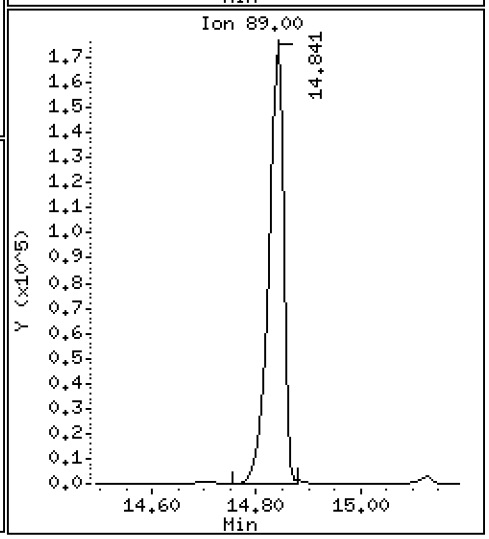












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

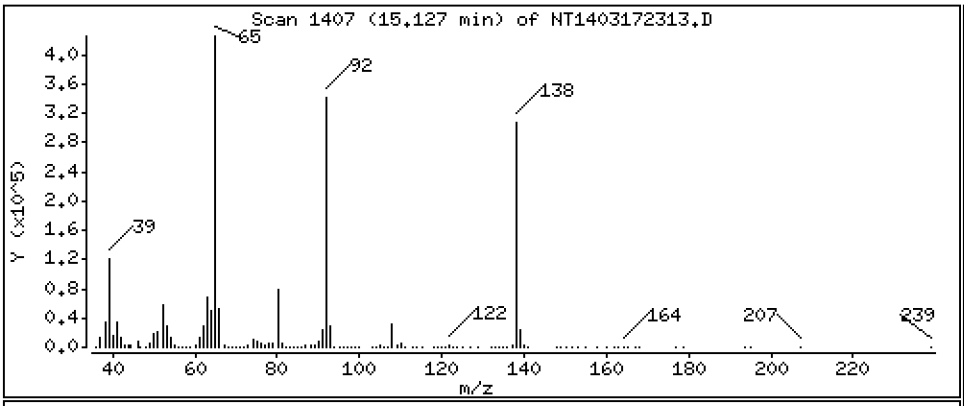
Operator: JGR

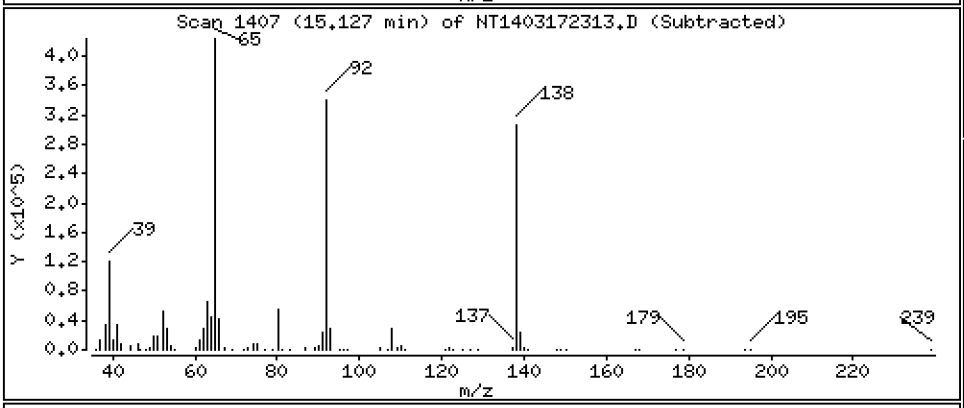
Column phase: ZB-5msi

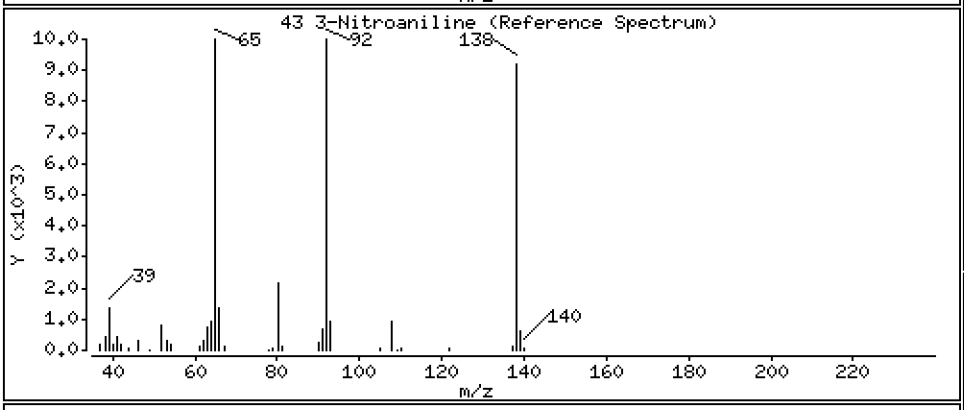
Column diameter: 0.25

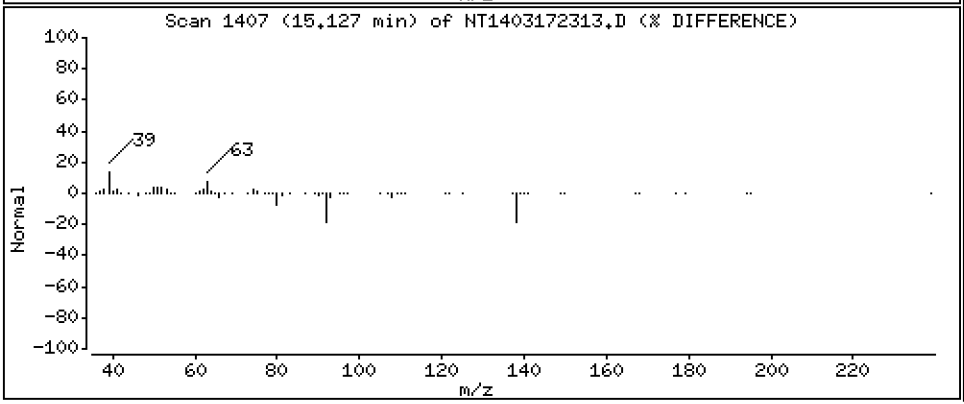
43 3-Nitroaniline

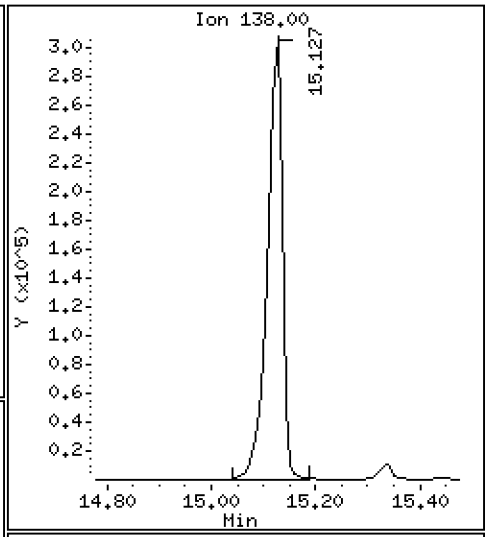
Concentration: 14.58 ug/mL

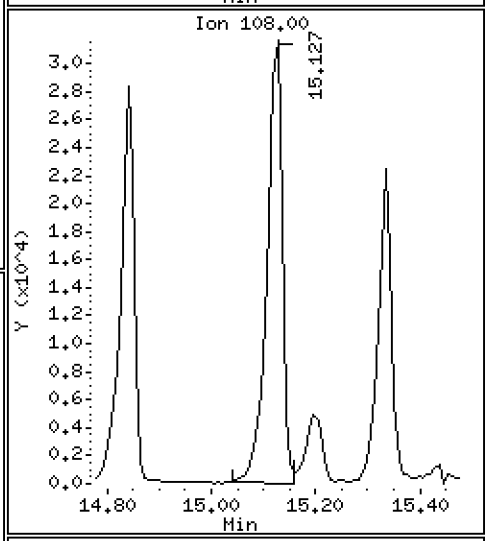


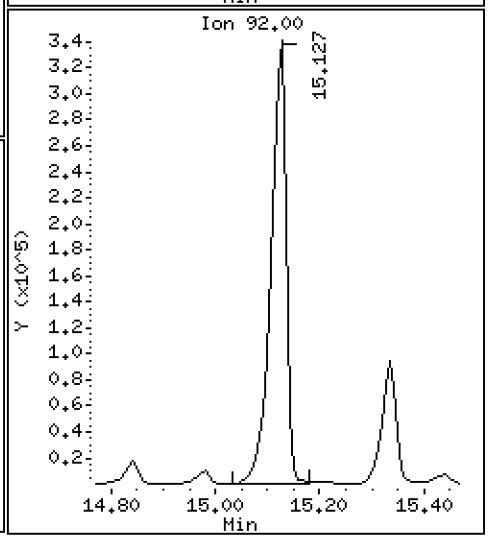












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

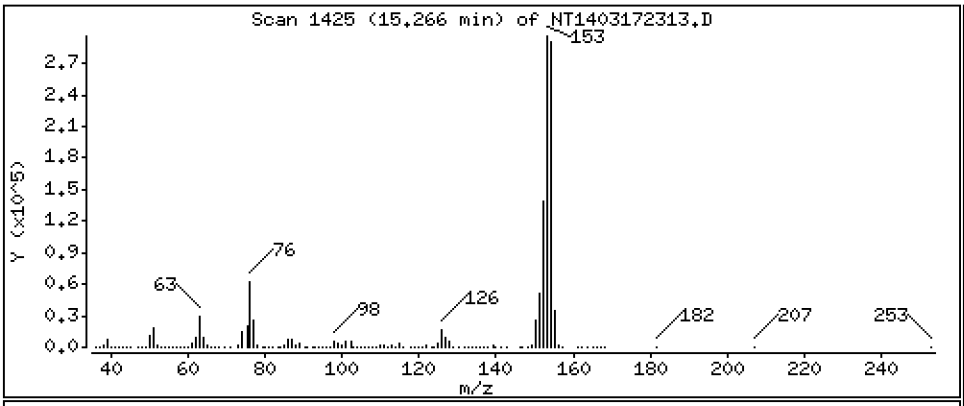
Operator: JGR

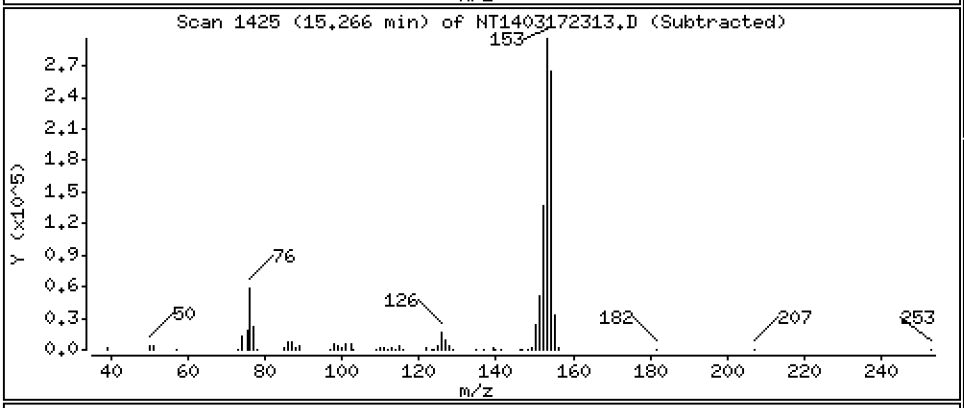
Column phase: ZB-5msi

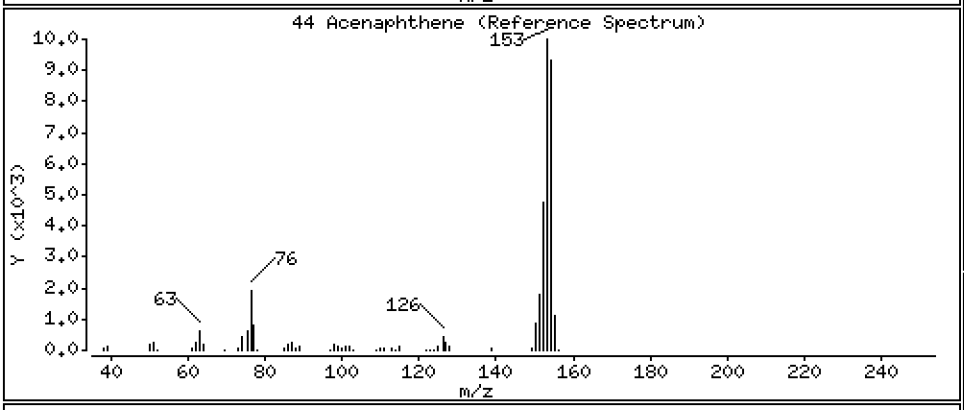
Column diameter: 0.25

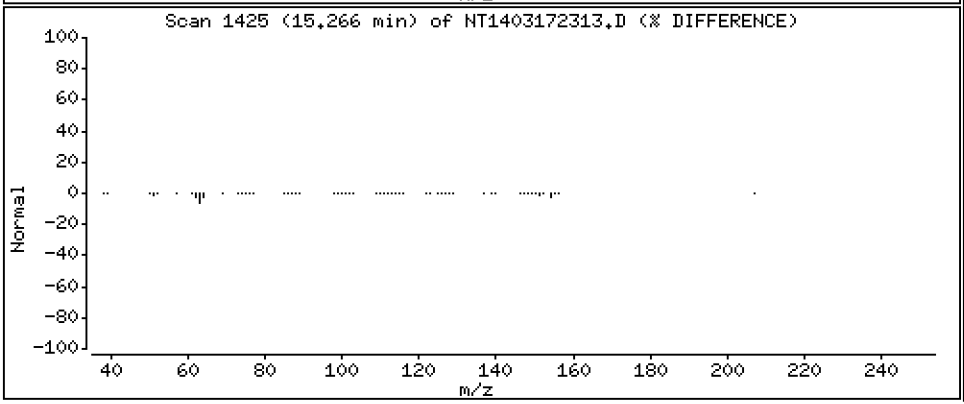
44 Acenaphthene

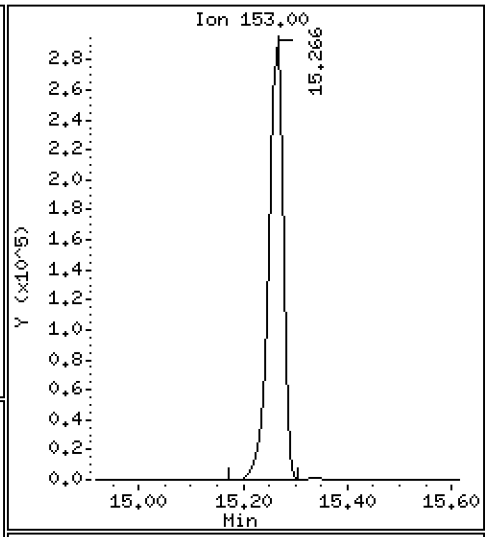
Concentration: 4.202 ug/mL

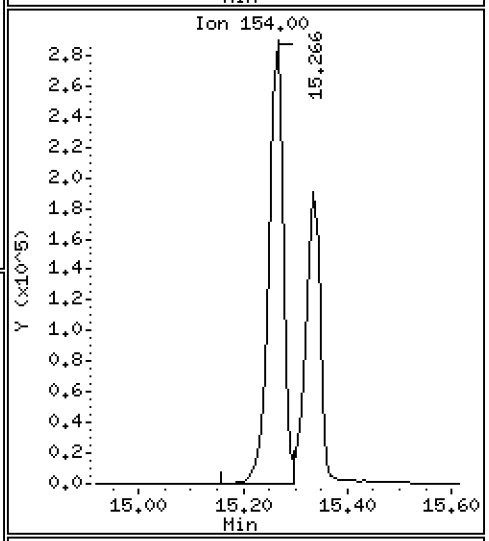


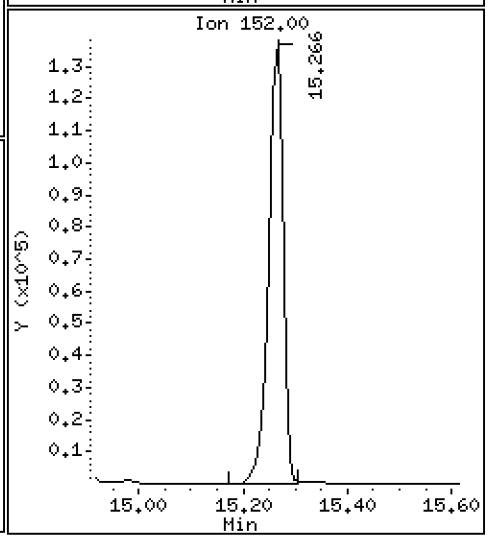












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

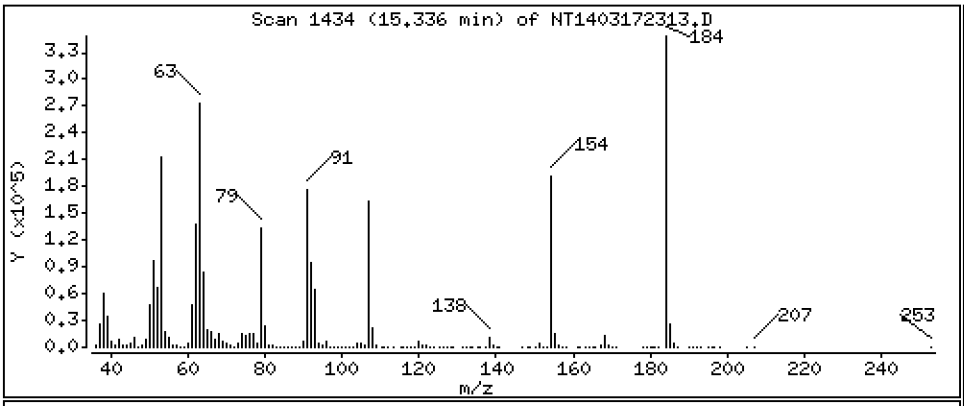
Operator: JGR

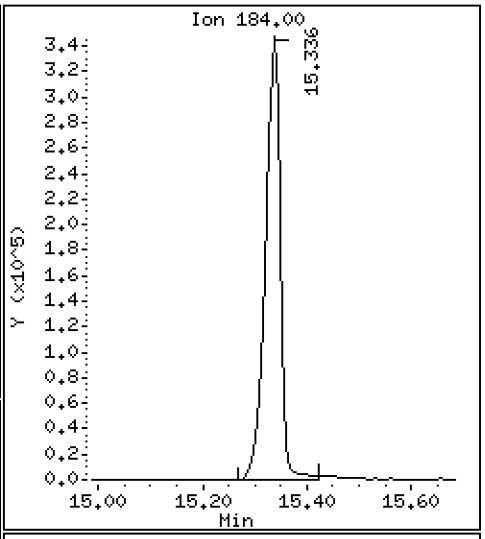
Column phase: ZB-5msi

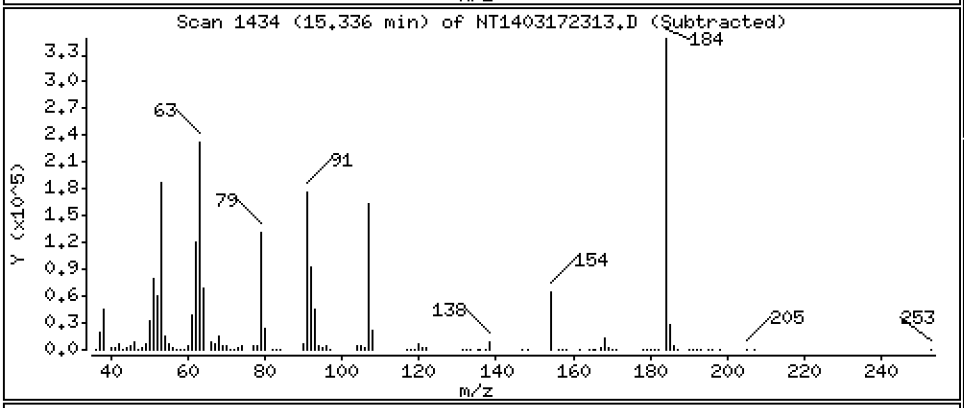
Column diameter: 0.25

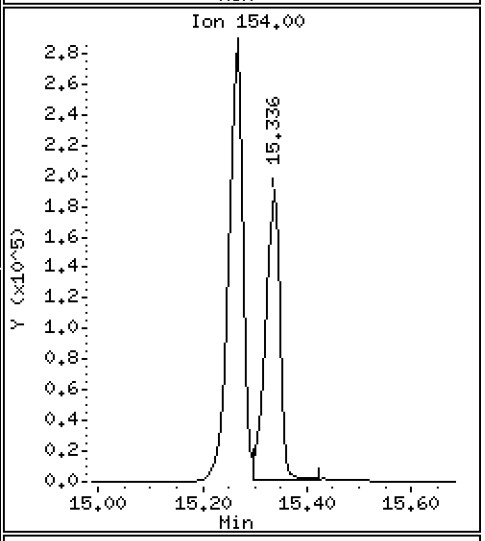
45 2,4-Dinitrophenol

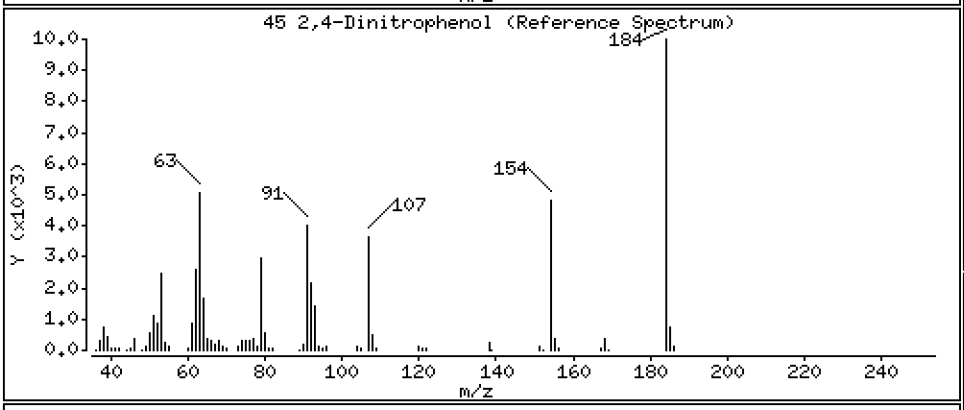
Concentration: 25.01 ug/mL

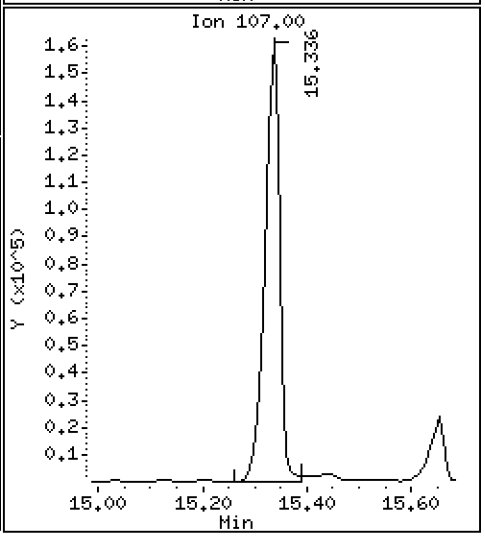


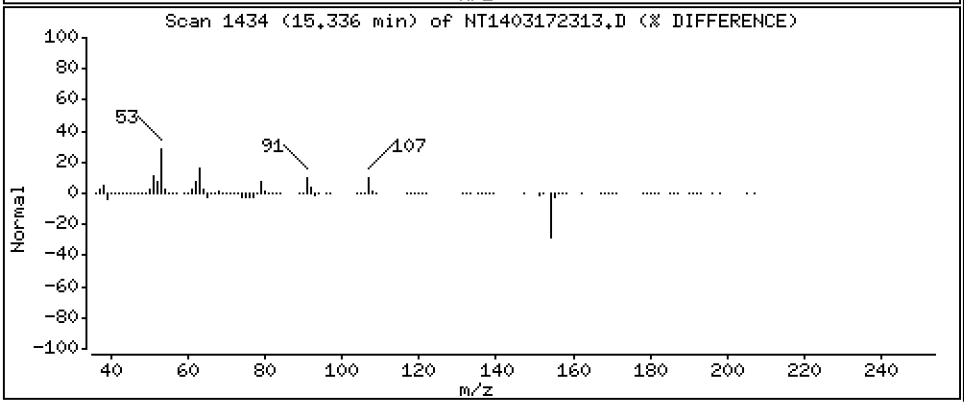












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

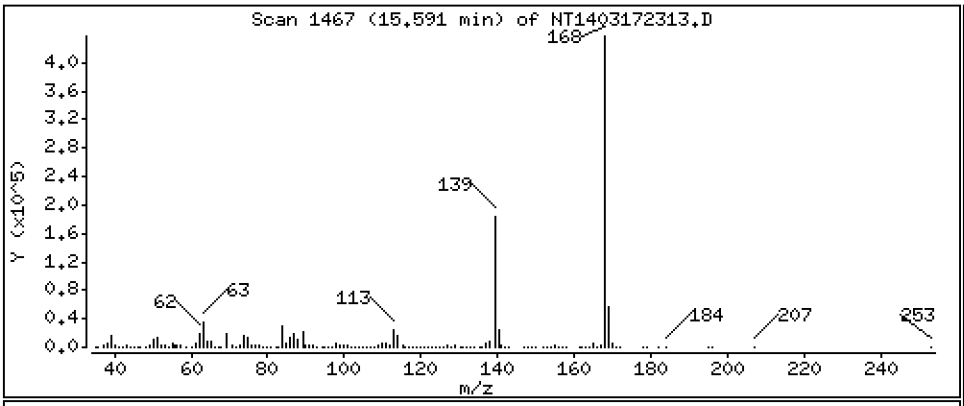
Operator: JGR

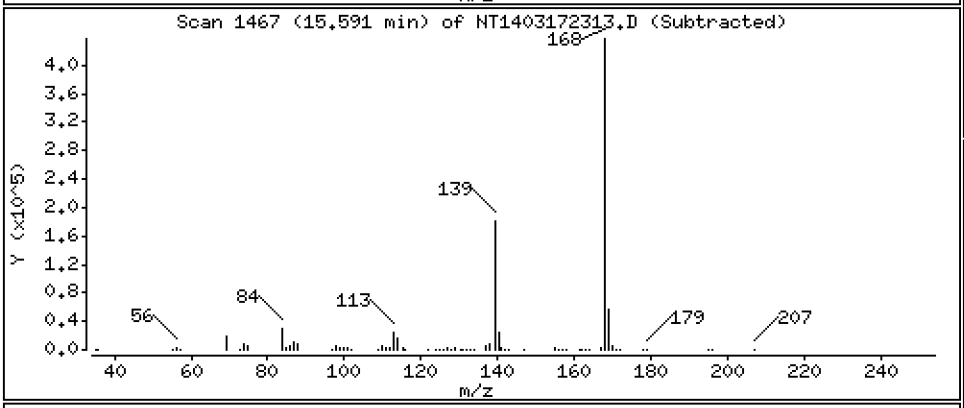
Column phase: ZB-5msi

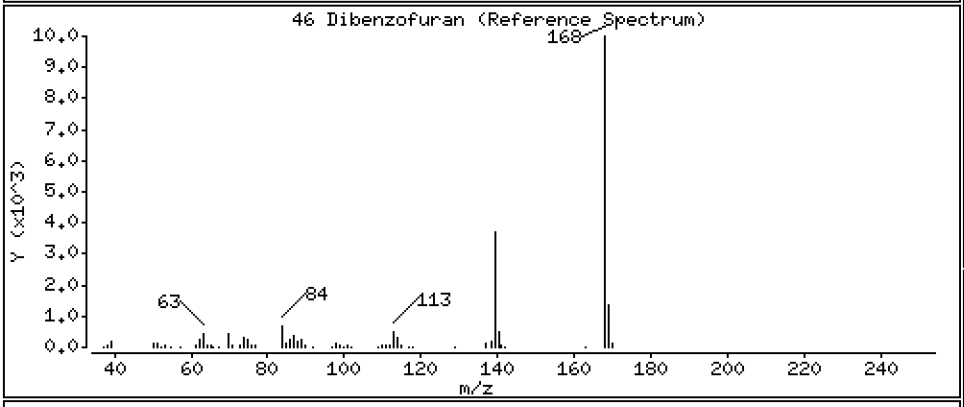
Column diameter: 0.25

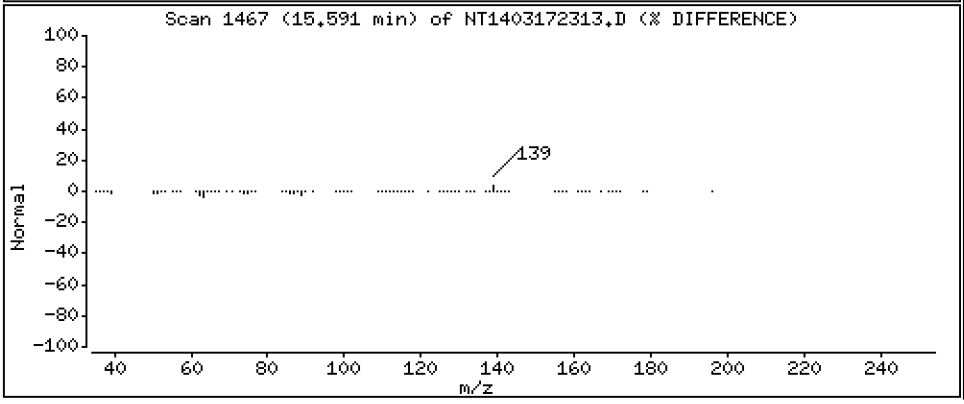
46 Dibenzofuran

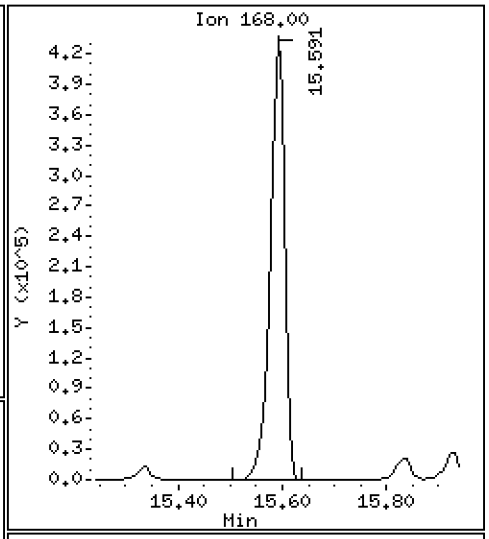
Concentration: 4.318 ug/mL

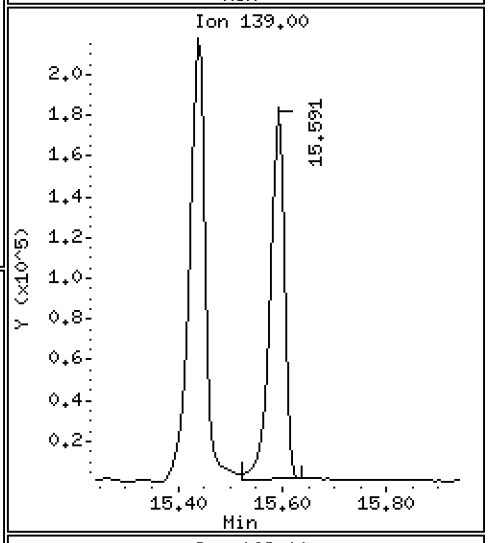


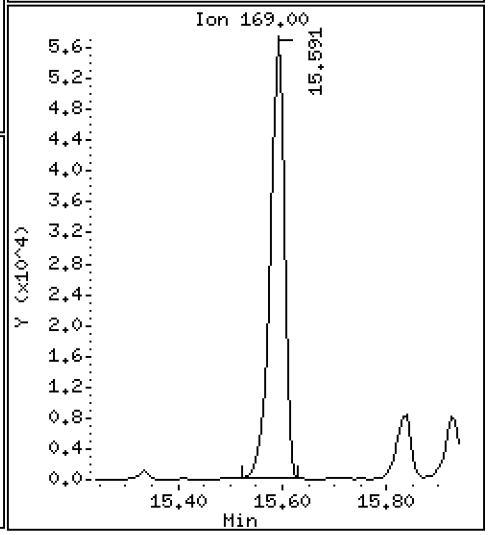












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

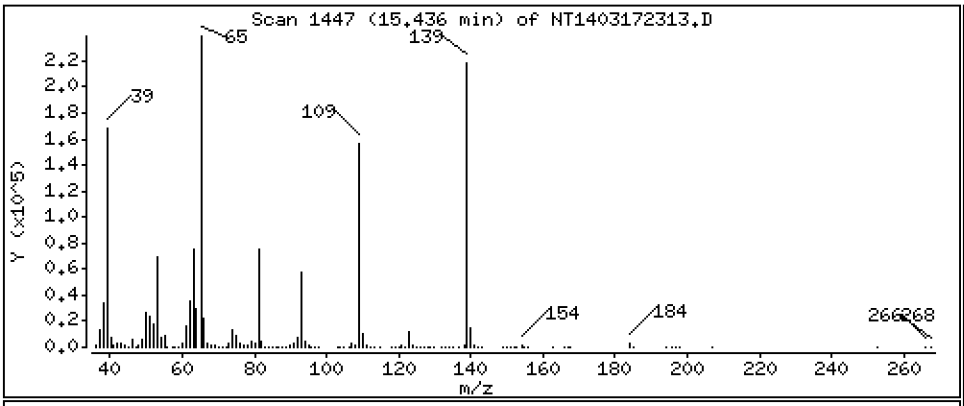
Operator: JGR

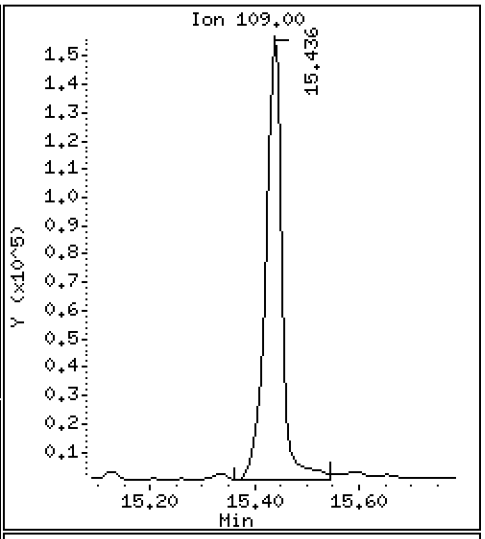
Column phase: ZB-5msi

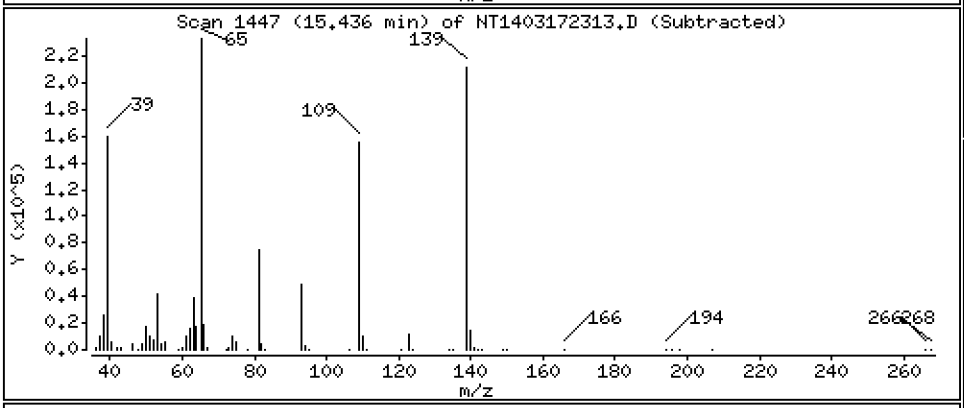
Column diameter: 0.25

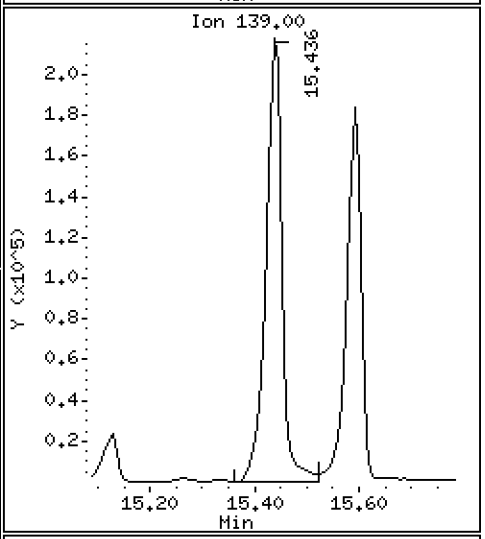
47 4-Nitrophenol

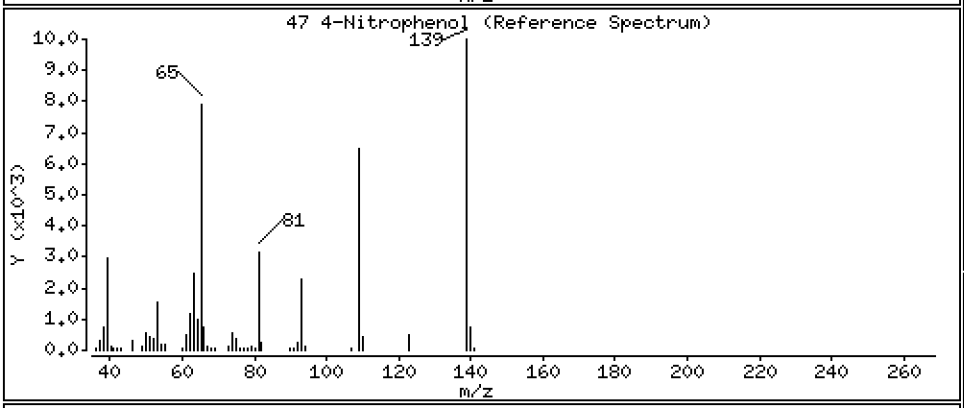
Concentration: 13.78 ug/mL

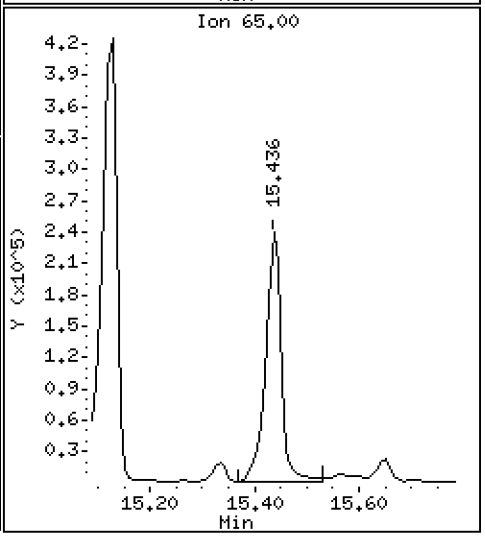


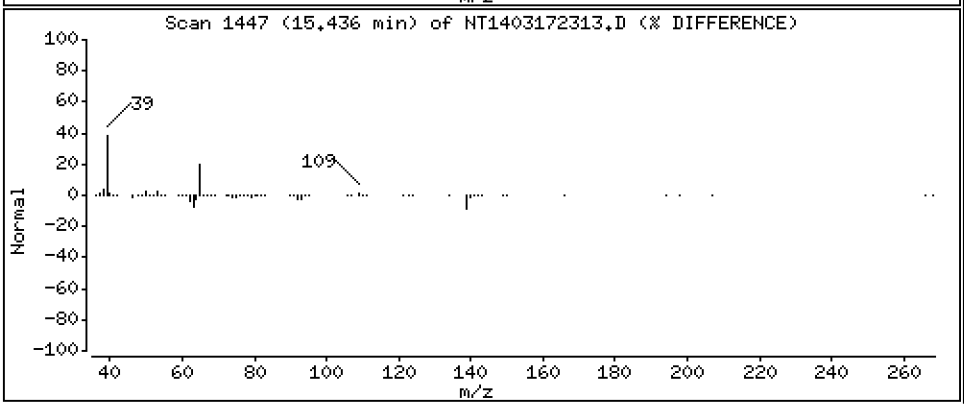












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

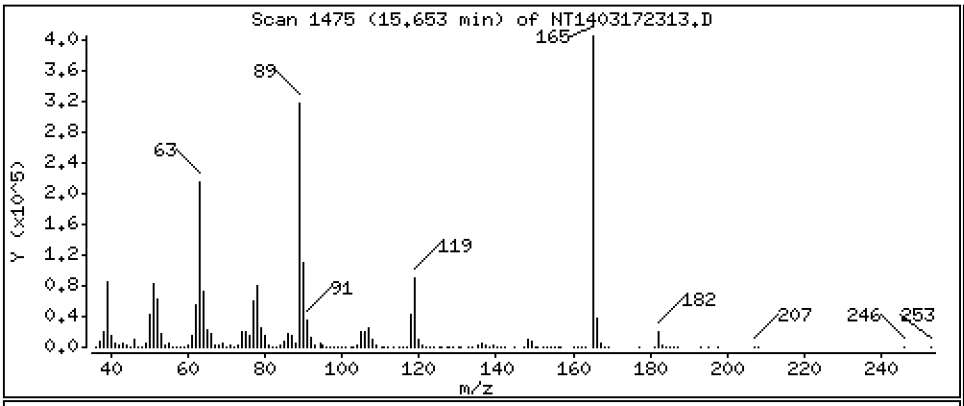
Operator: JGR

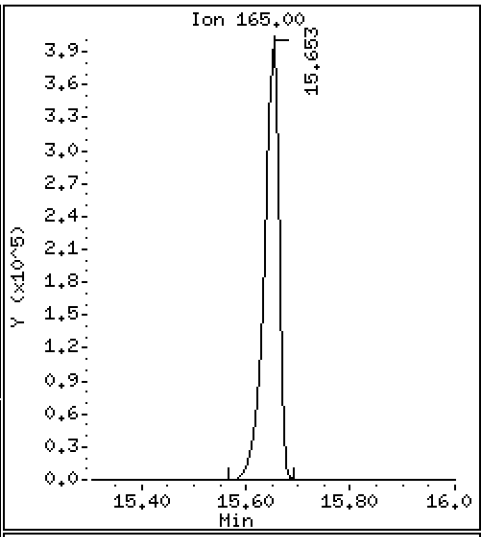
Column phase: ZB-5msi

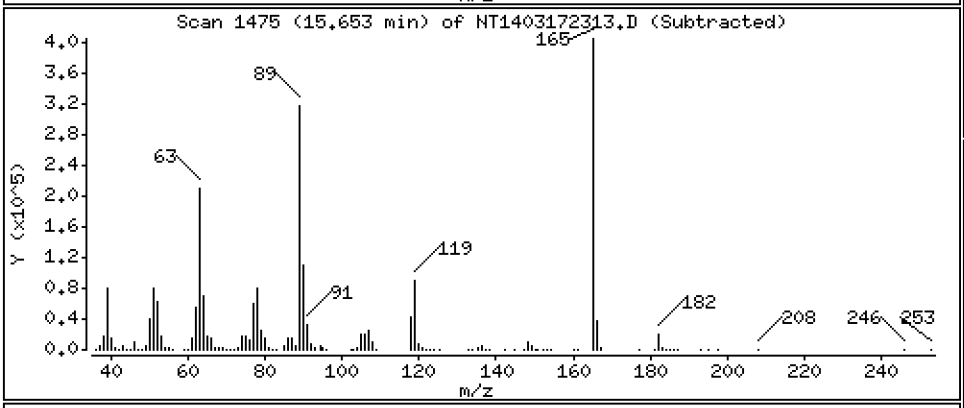
Column diameter: 0.25

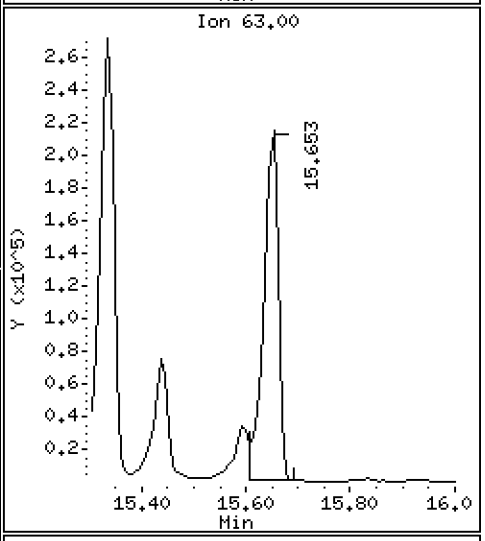
48 2,4-Dinitrotoluene

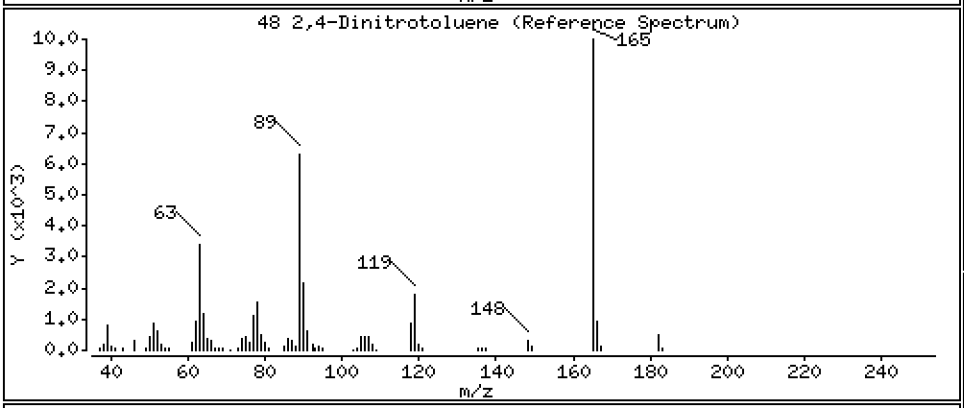
Concentration: 16.14 ug/mL

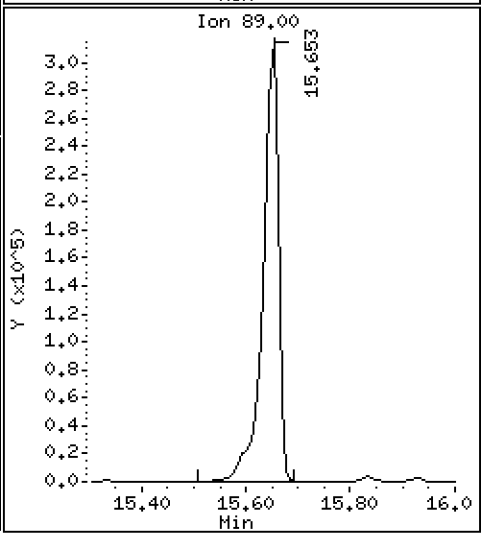


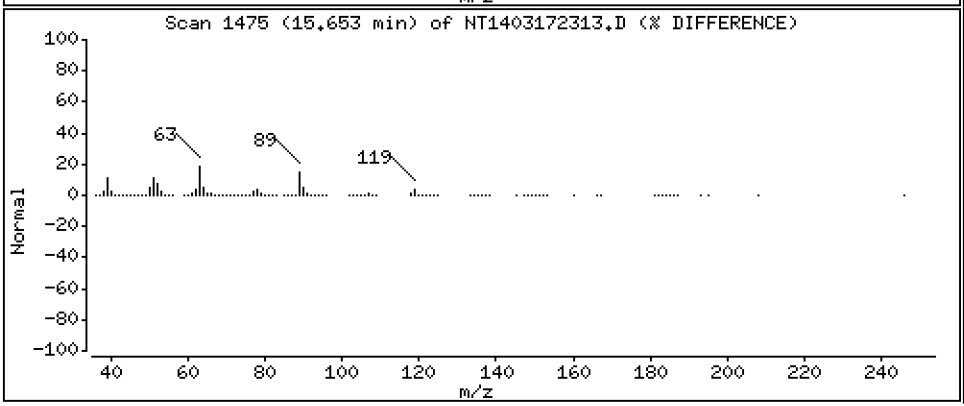












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

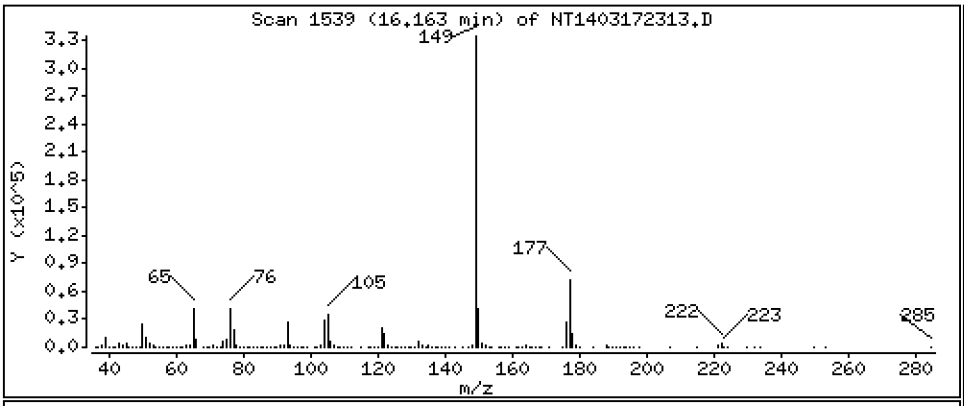
Operator: JGR

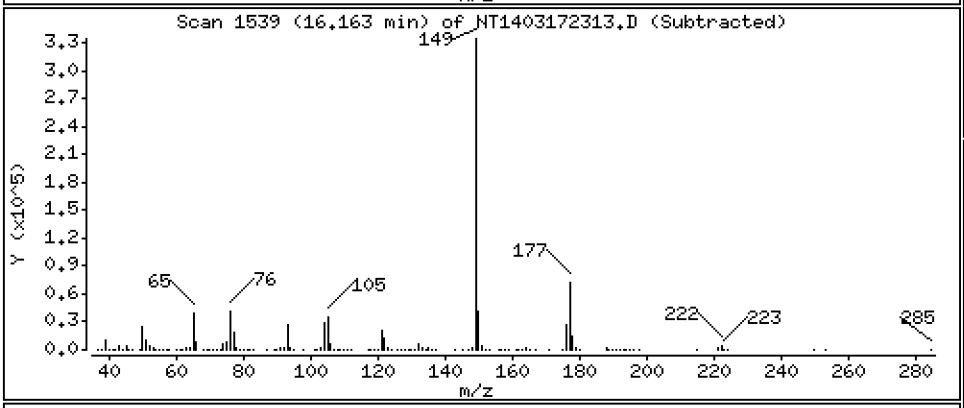
Column phase: ZB-5msi

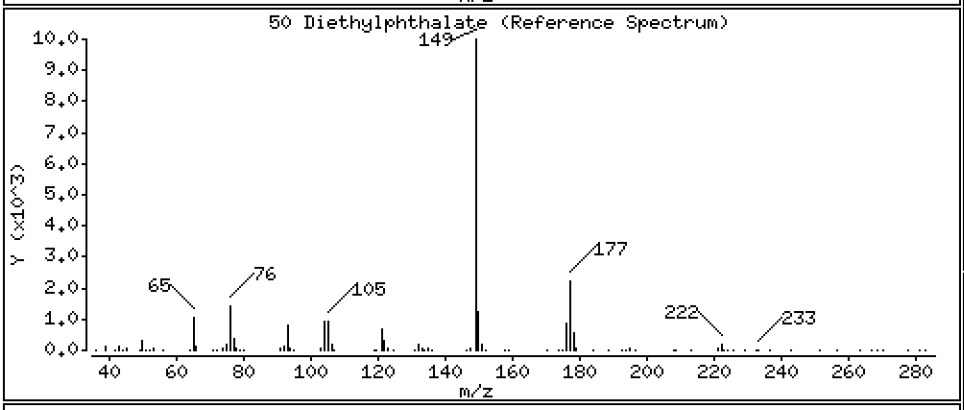
Column diameter: 0.25

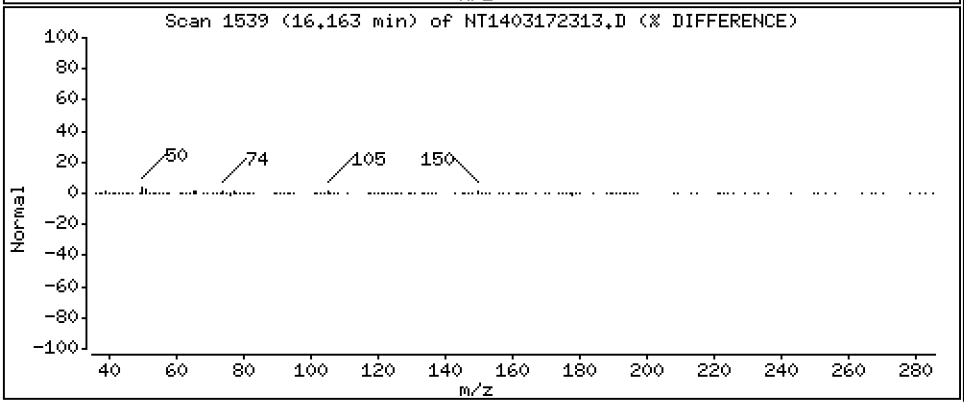
50 Diethylphthalate

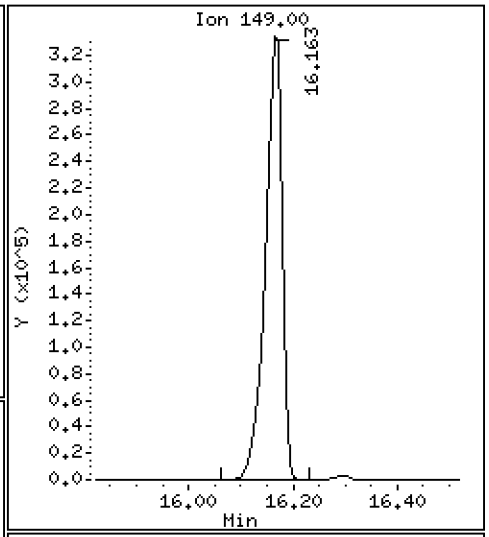
Concentration: 5.494 ug/mL

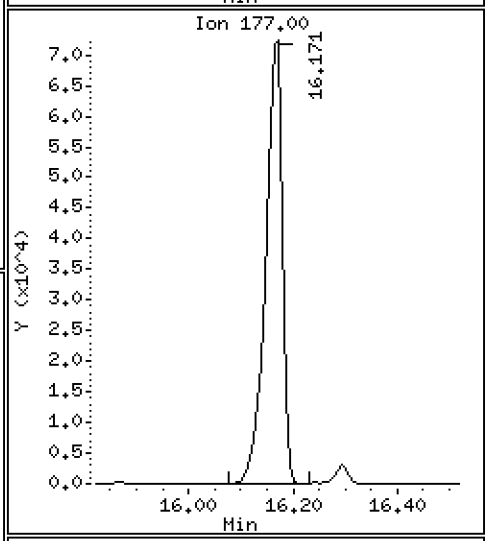


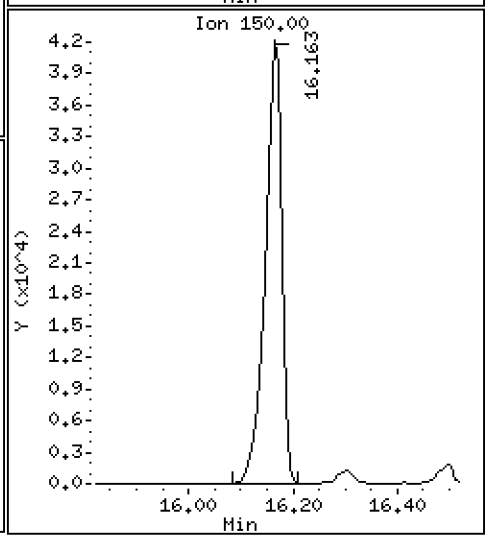












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

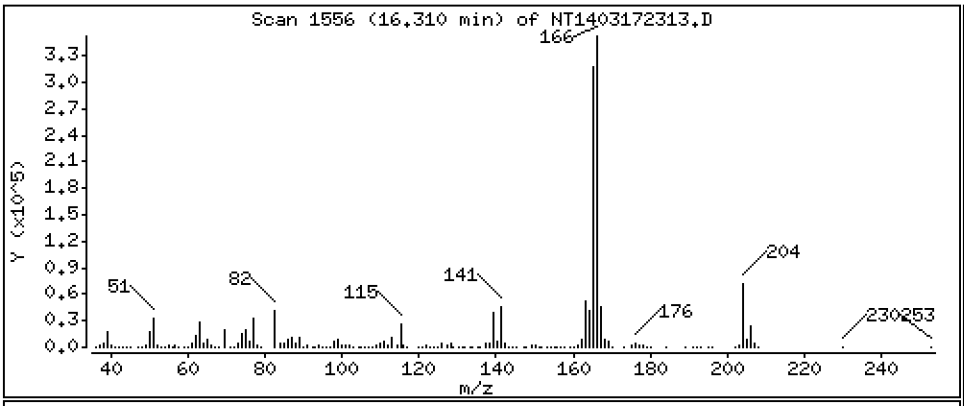
Operator: JGR

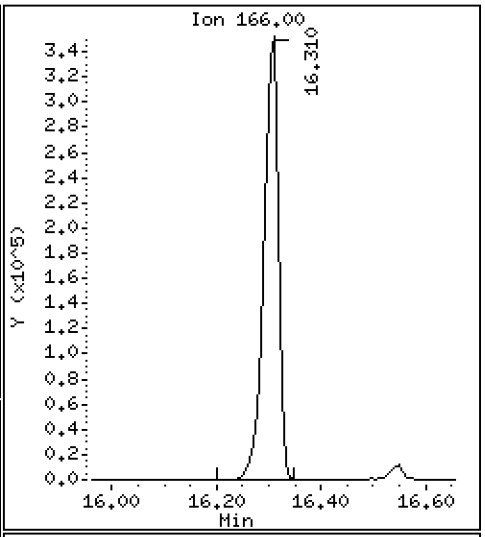
Column phase: ZB-5msi

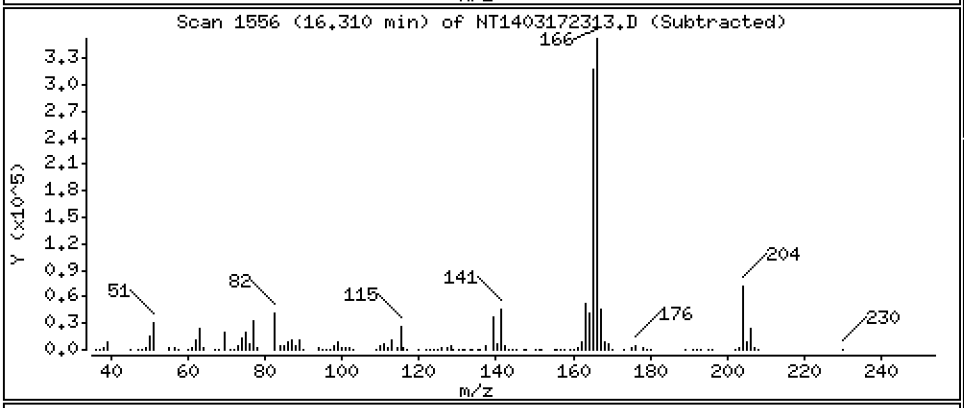
Column diameter: 0.25

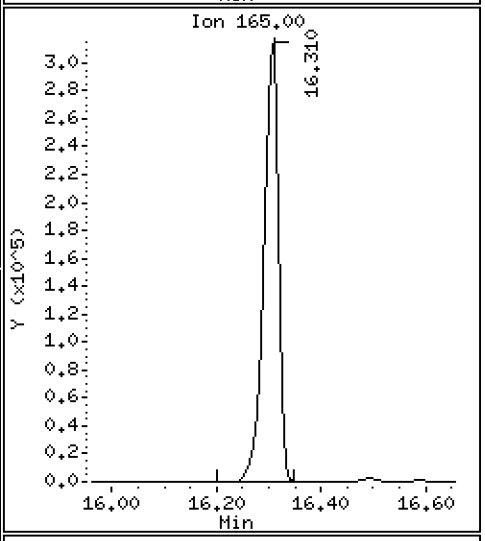
49 Fluorene

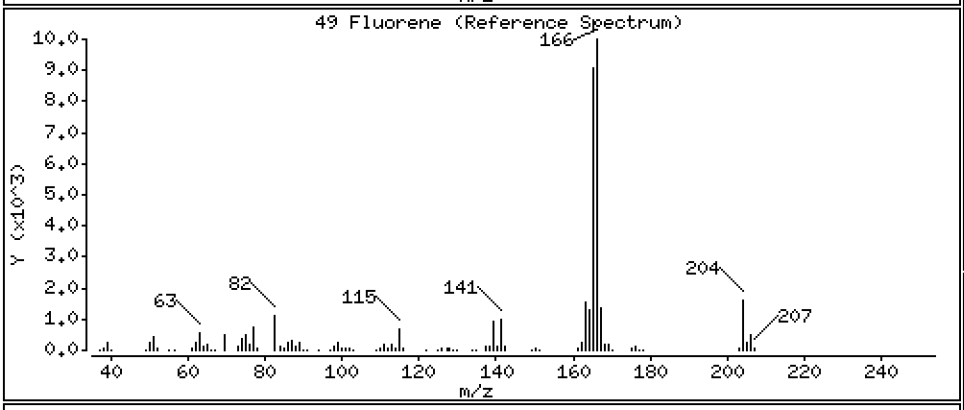
Concentration: 4.221 ug/mL

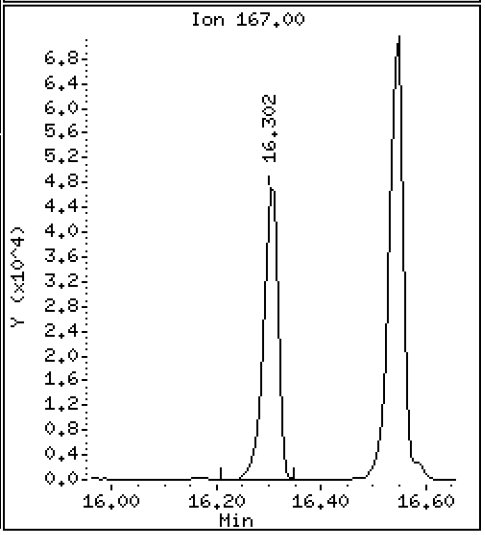


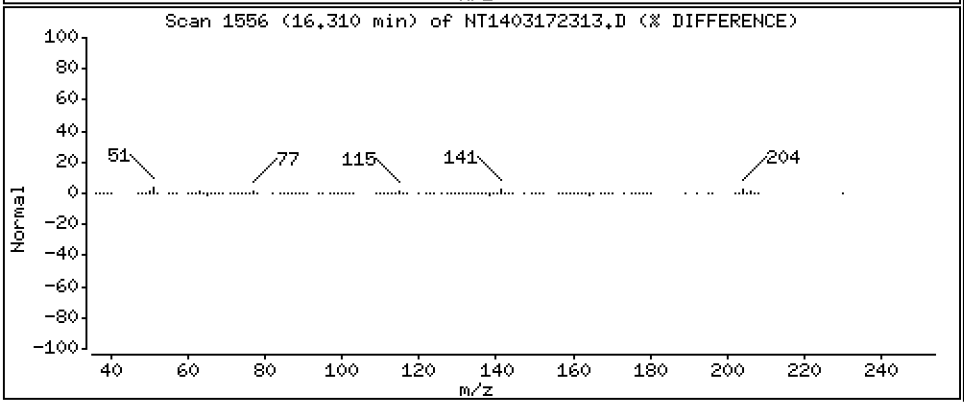












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

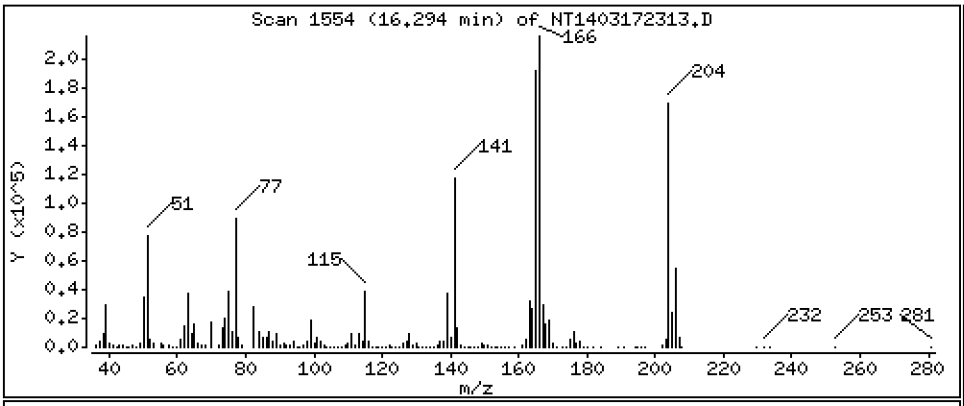
Operator: JGR

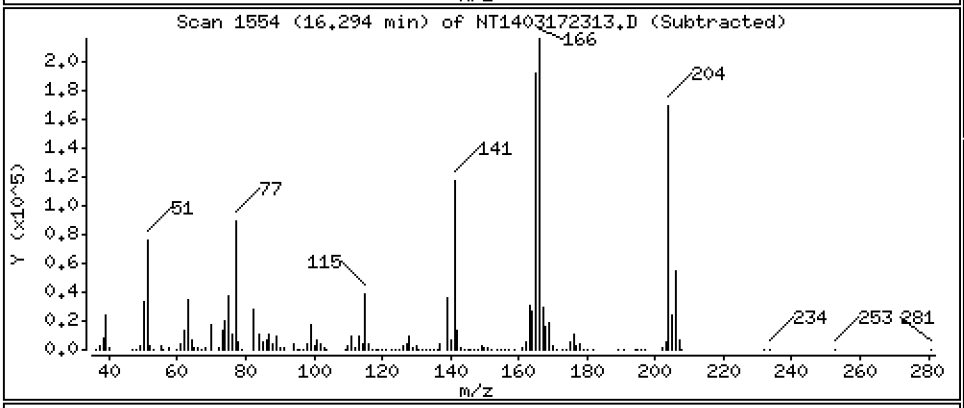
Column phase: ZB-5msi

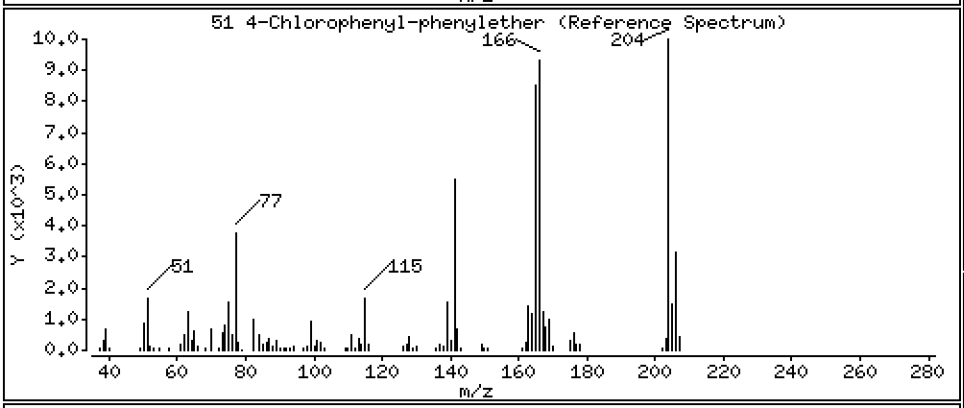
Column diameter: 0.25

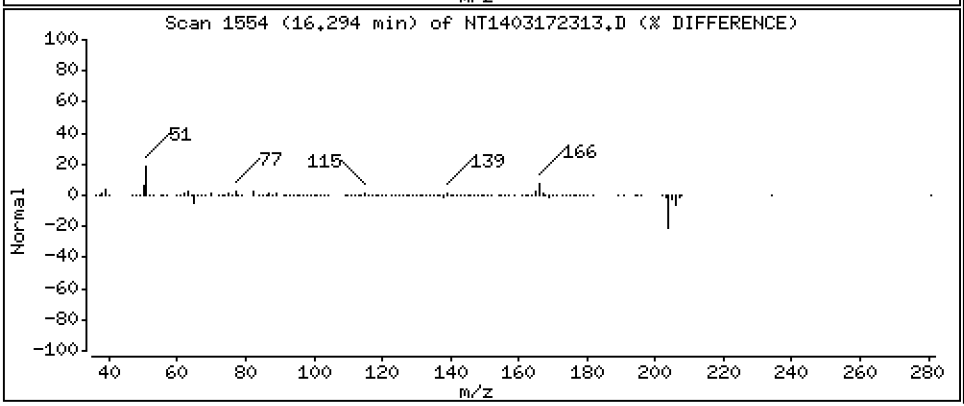
51 4-Chlorophenyl-phenylether

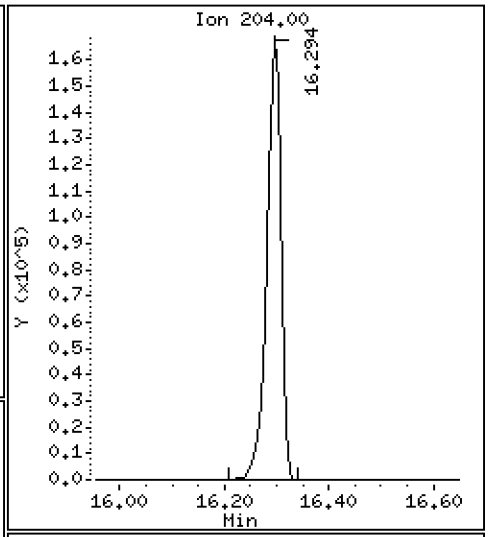
Concentration: 4.575 ug/mL

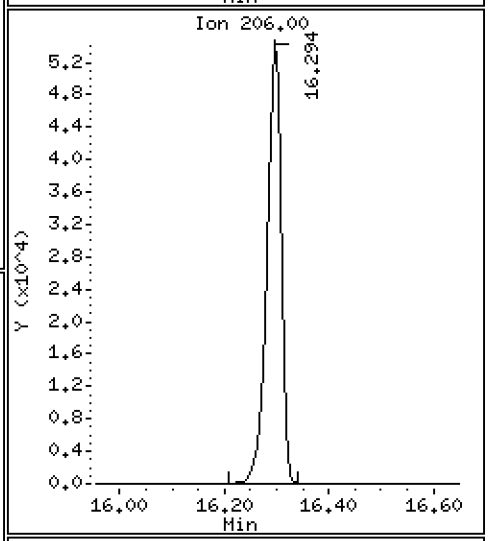


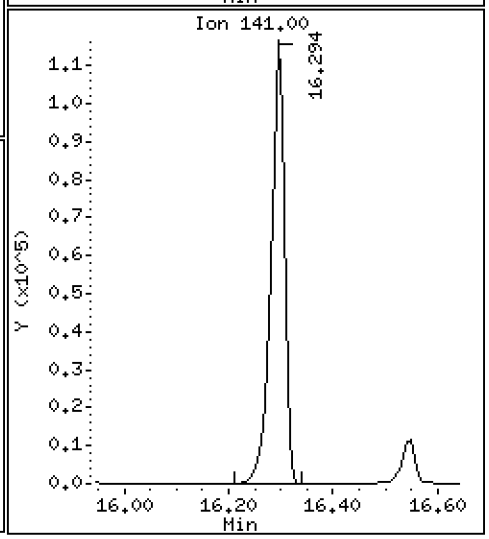












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

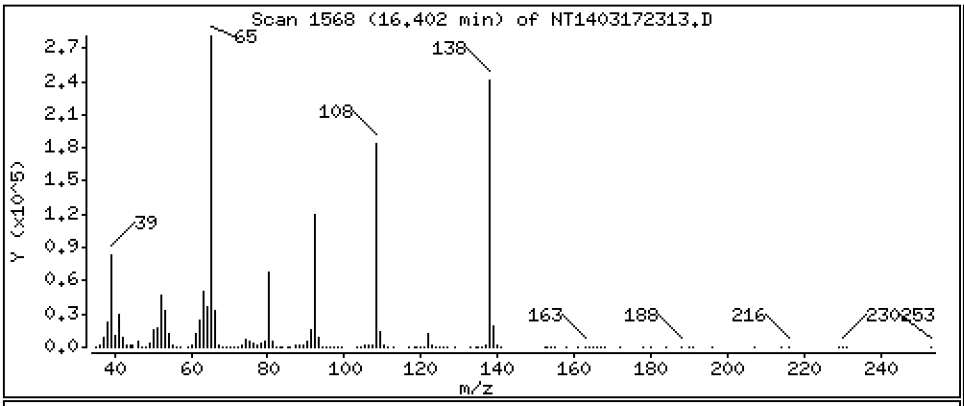
Operator: JGR

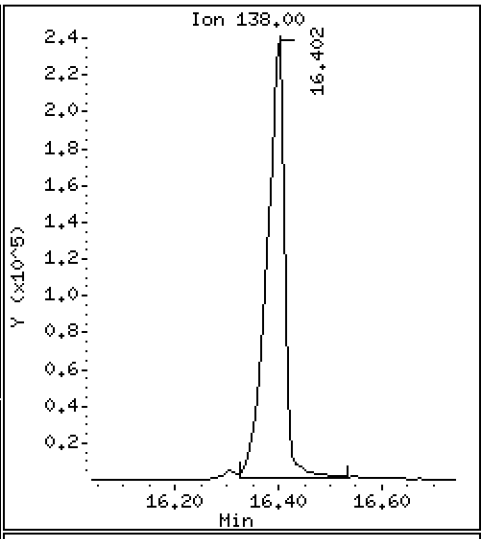
Column phase: ZB-5msi

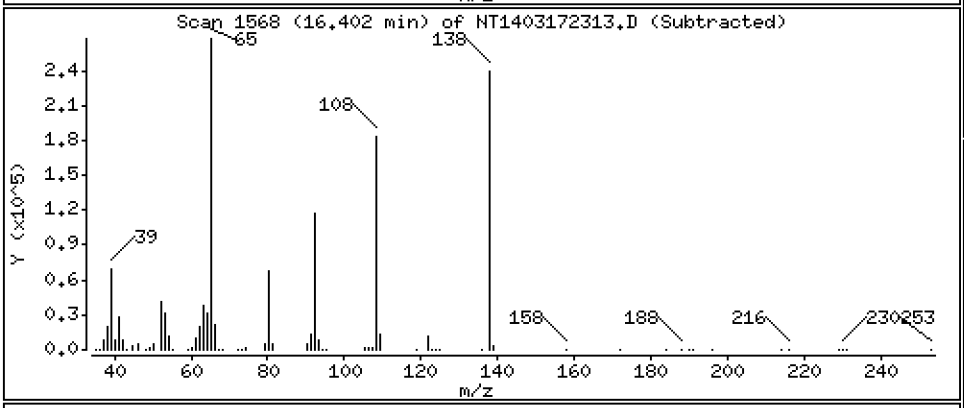
Column diameter: 0.25

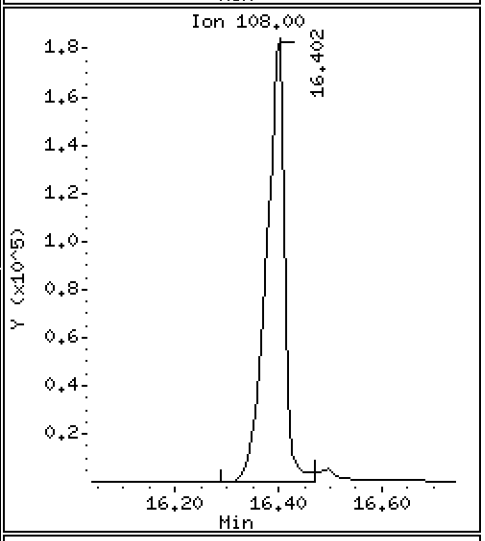
52 4-Nitroaniline

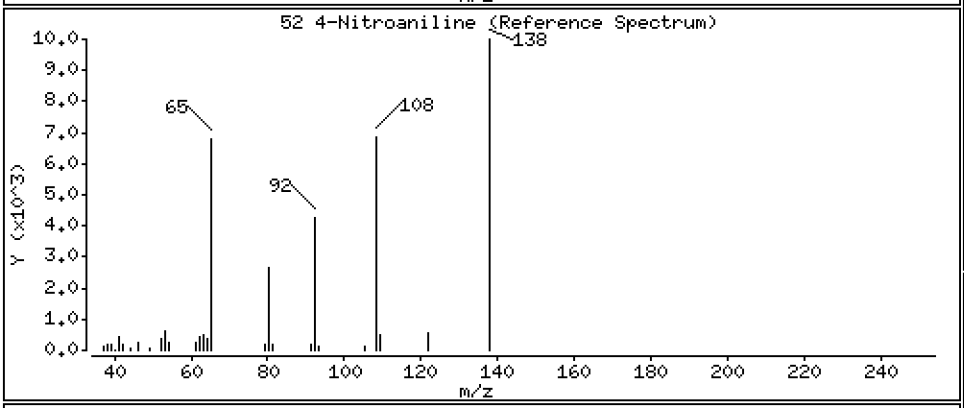
Concentration: 14.28 ug/mL

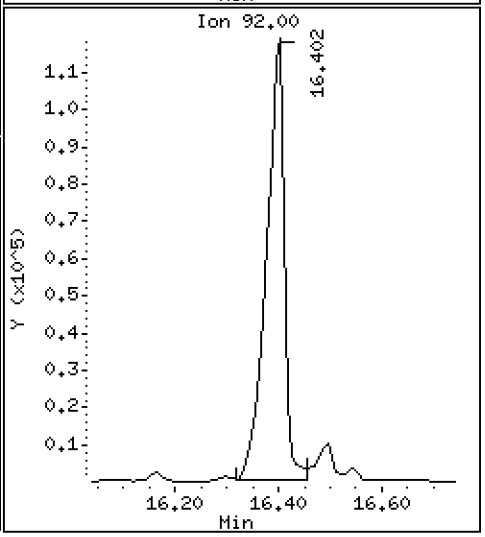


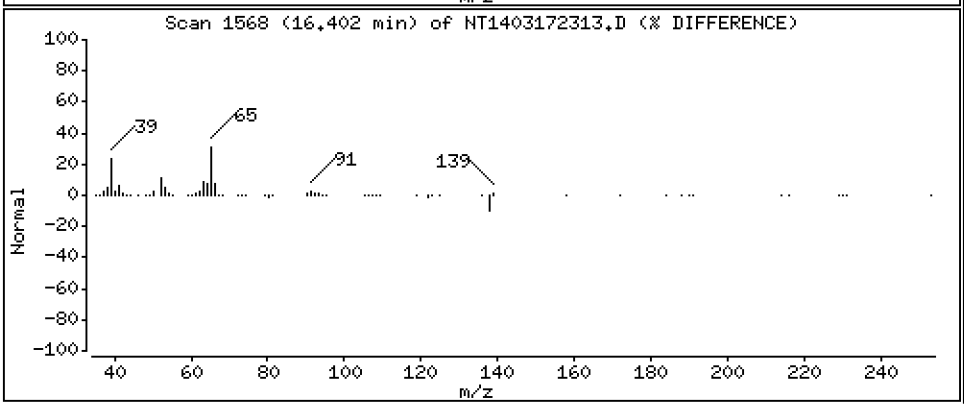












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

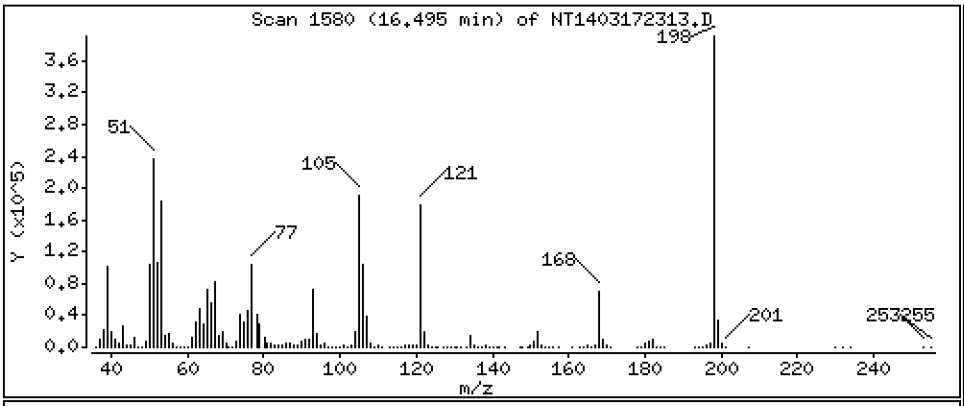
Operator: JGR

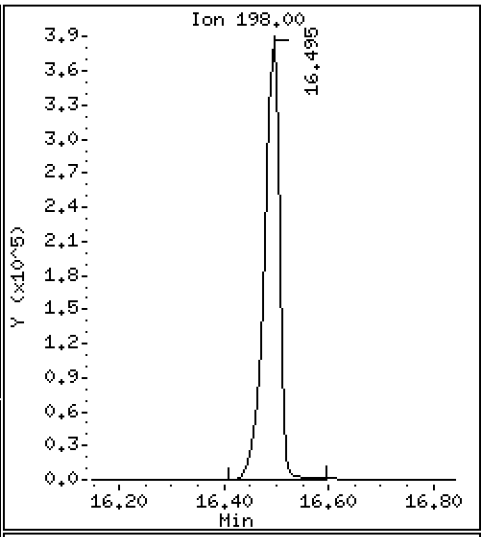
Column phase: ZB-5msi

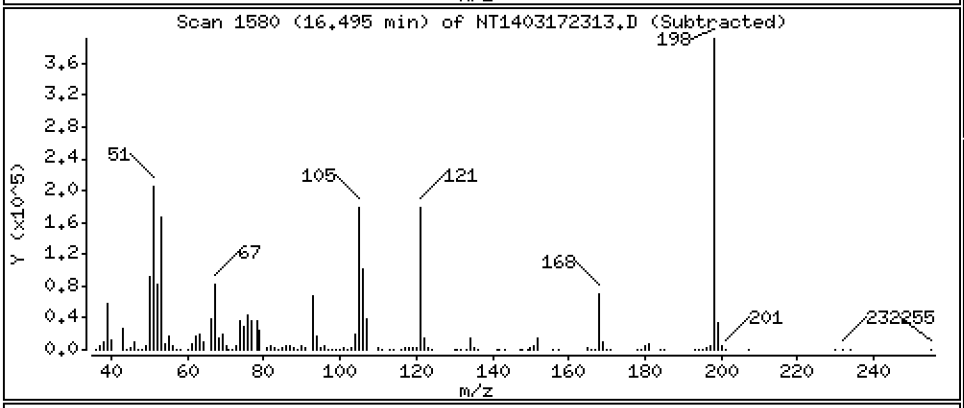
Column diameter: 0.25

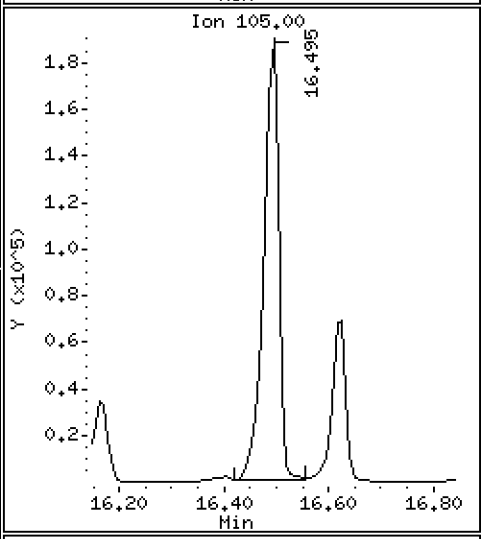
53 4,6-Dinitro-2-methylphenol

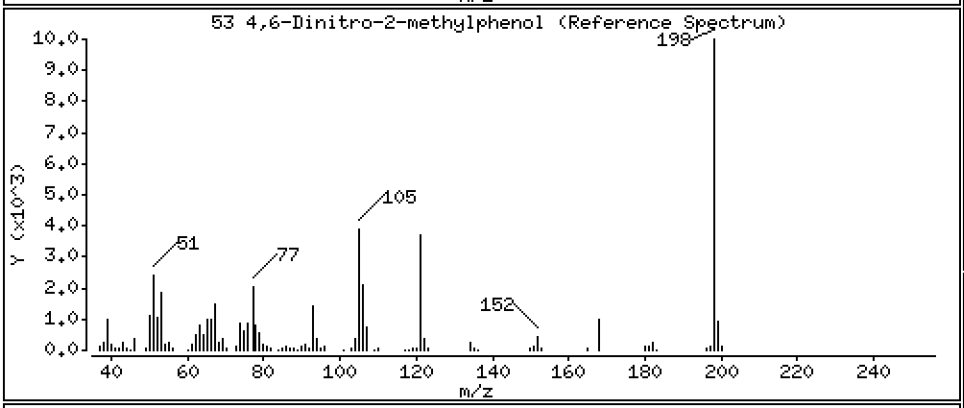
Concentration: 29.72 ug/mL

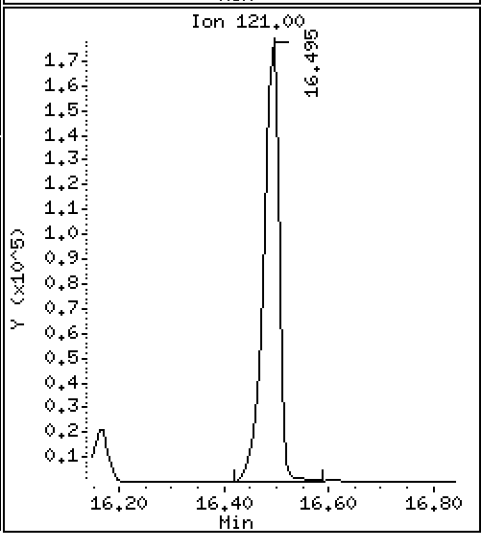


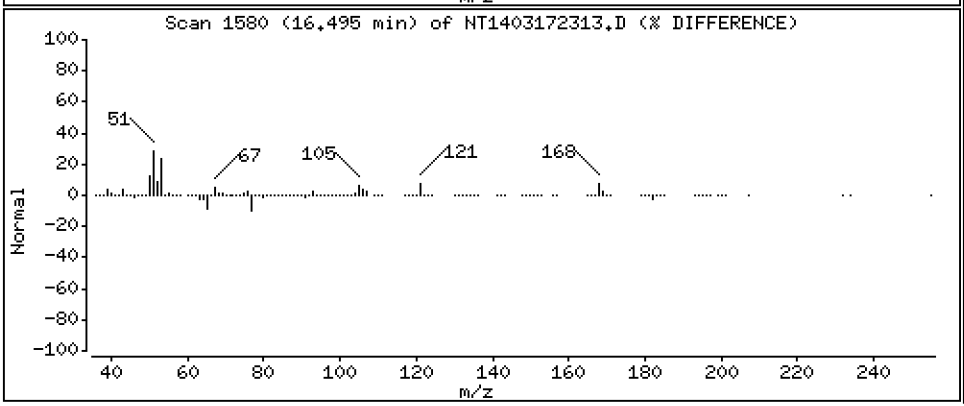












Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172313.D

Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

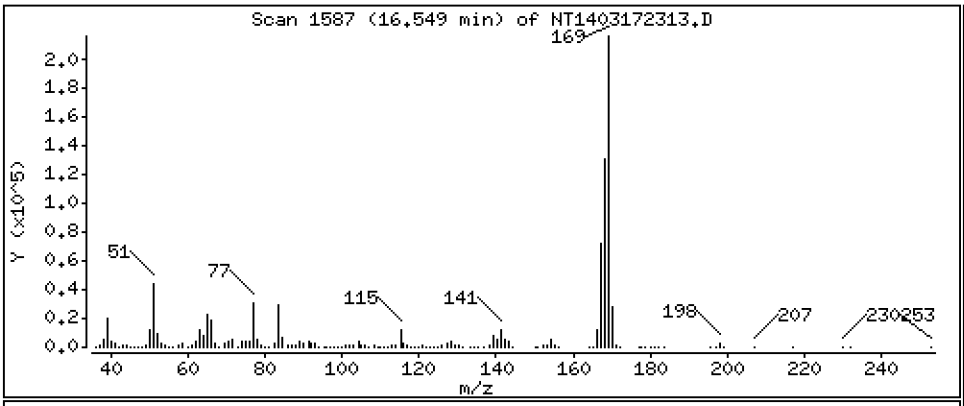
Operator: JGR

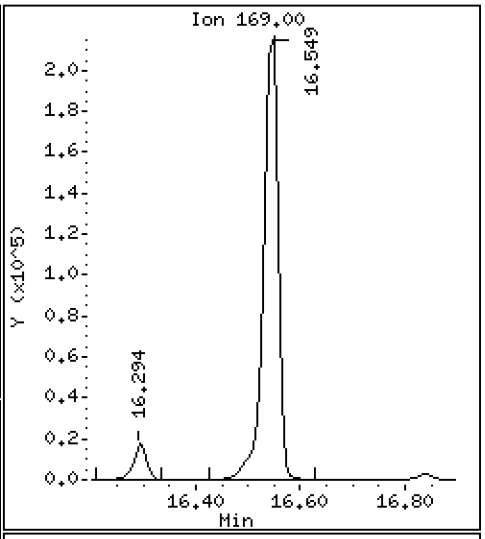
Column phase: ZB-5msi

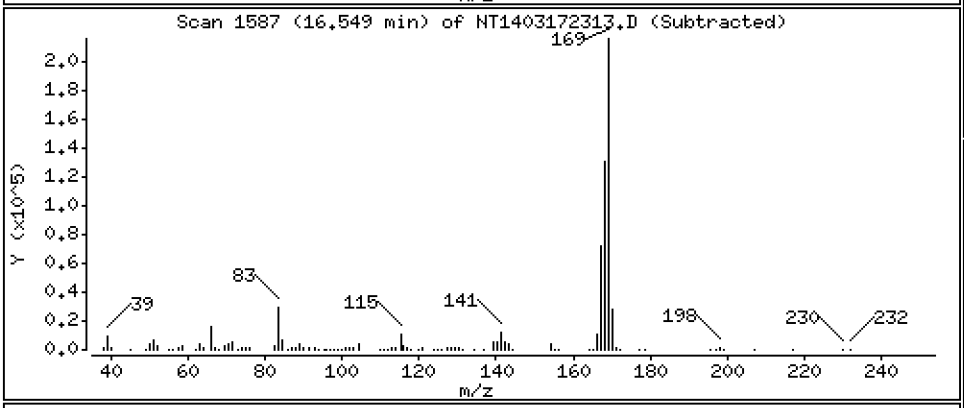
Column diameter: 0.25

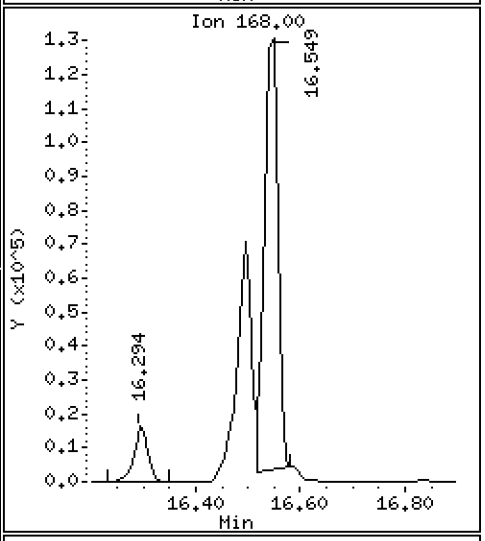
54 N-Nitrosodiphenylamine

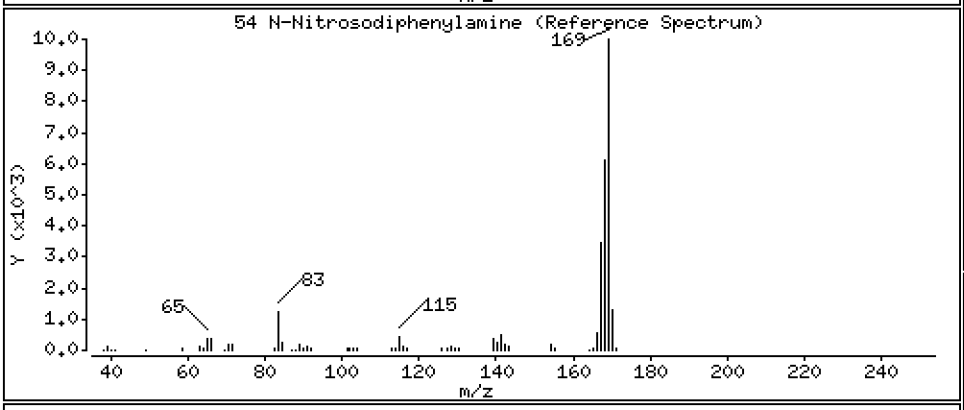
Concentration: 4.204 ug/mL

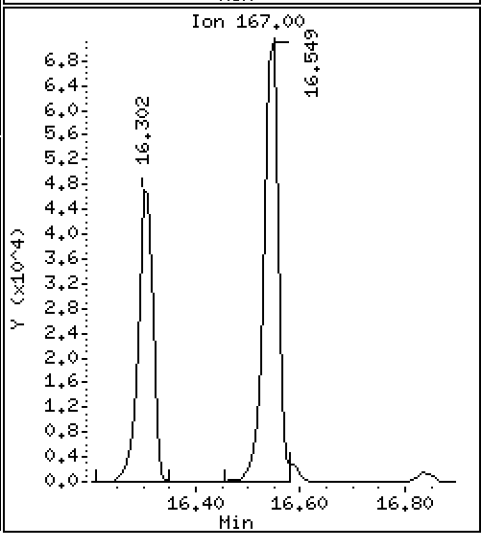


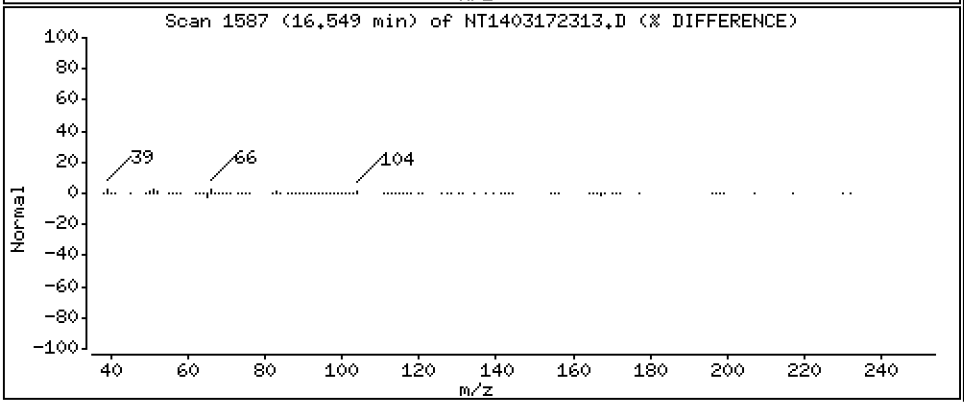












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

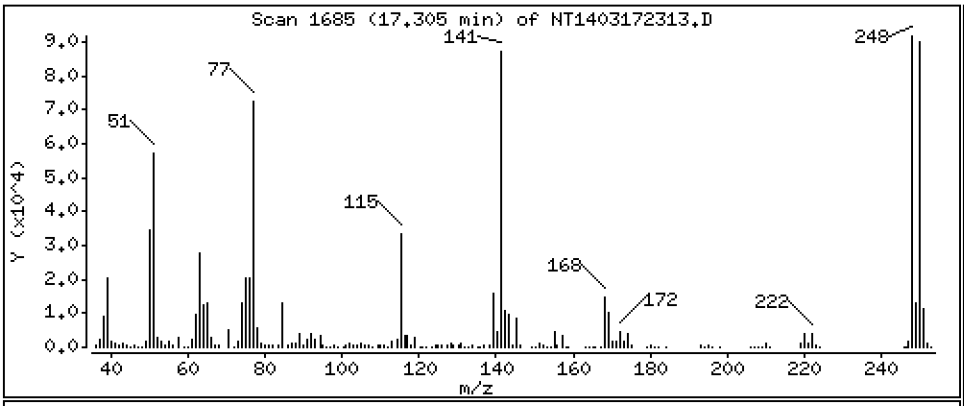
Operator: JGR

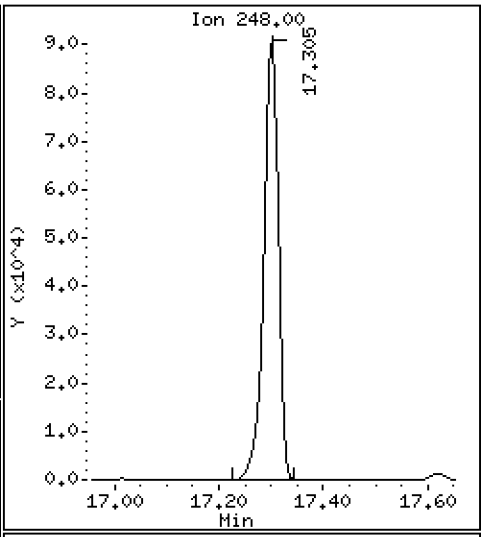
Column phase: ZB-5msi

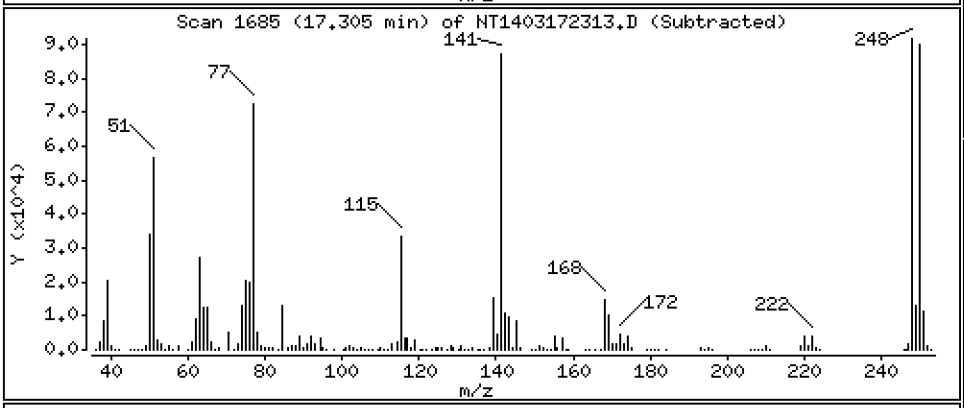
Column diameter: 0.25

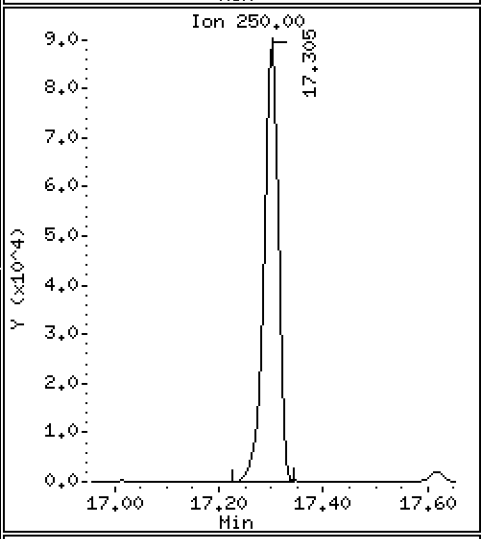
56 4-Bromophenyl-phenylether

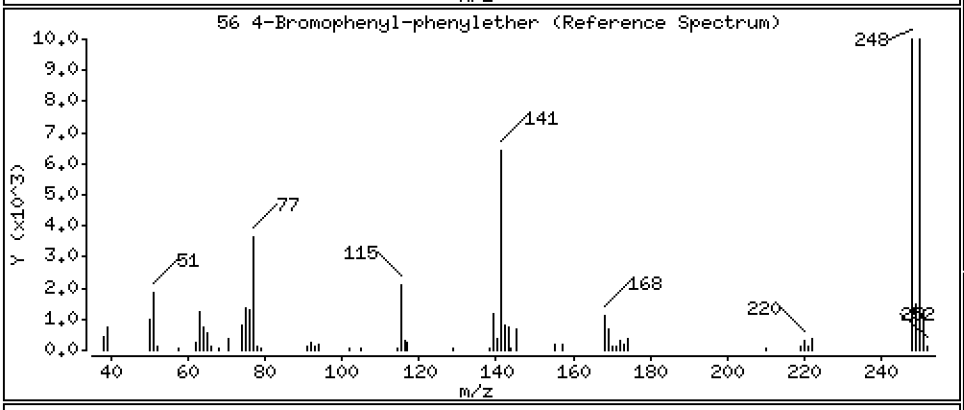
Concentration: 5.236 ug/mL

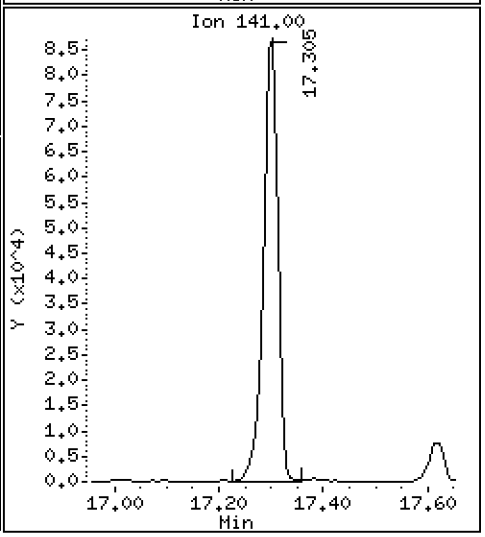


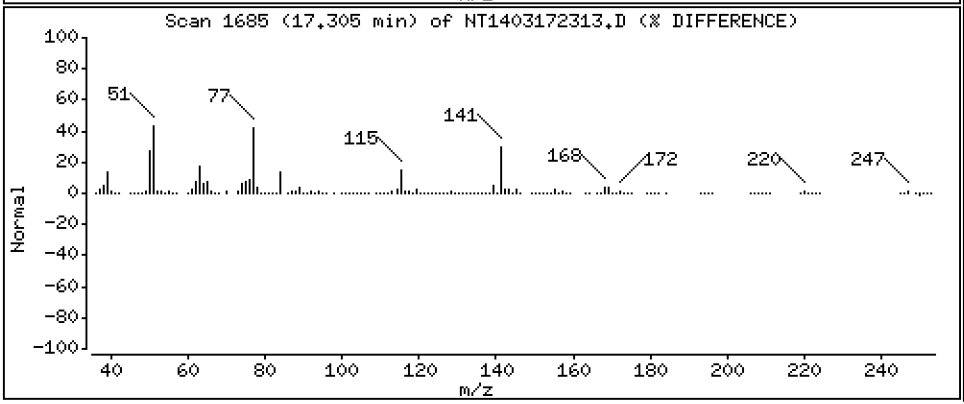












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

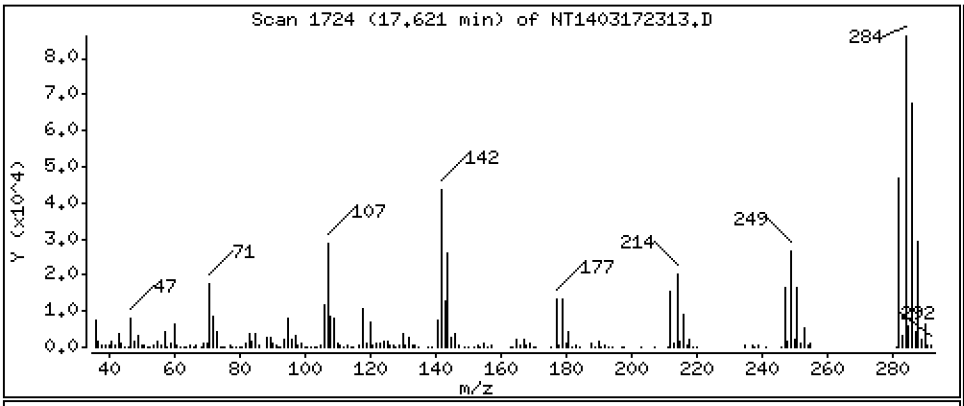
Operator: JGR

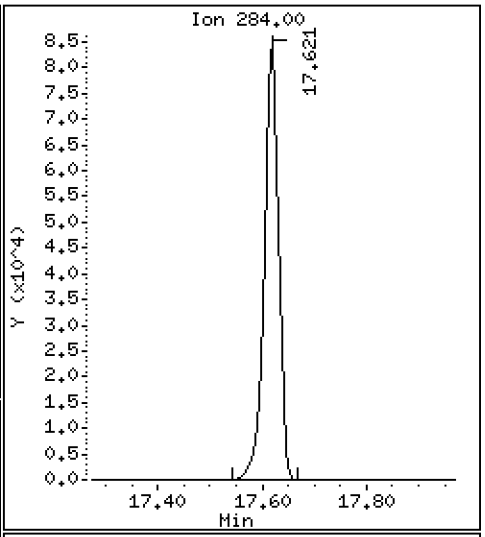
Column phase: ZB-5msi

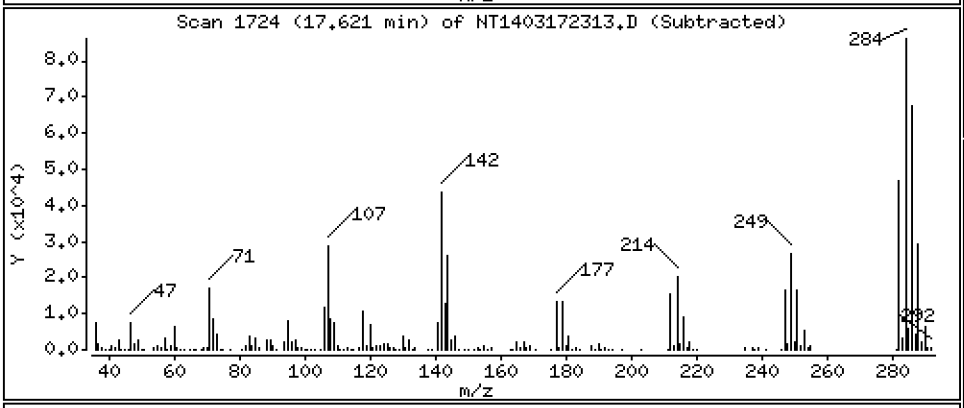
Column diameter: 0.25

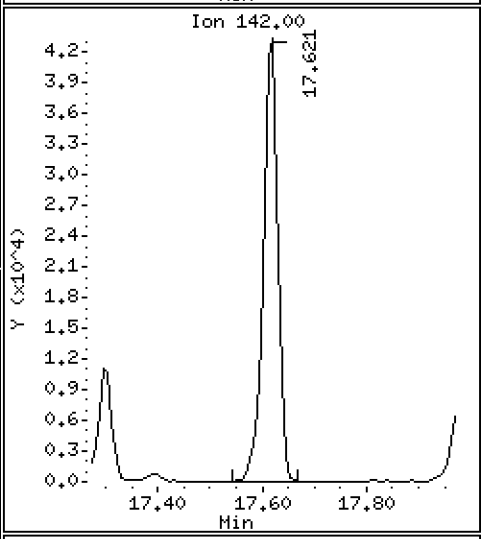
57 Hexachlorobenzene

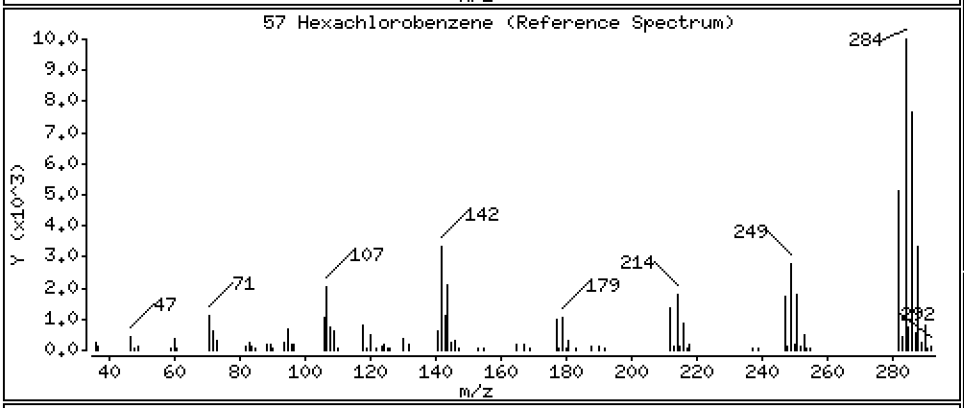
Concentration: 4.679 ug/mL

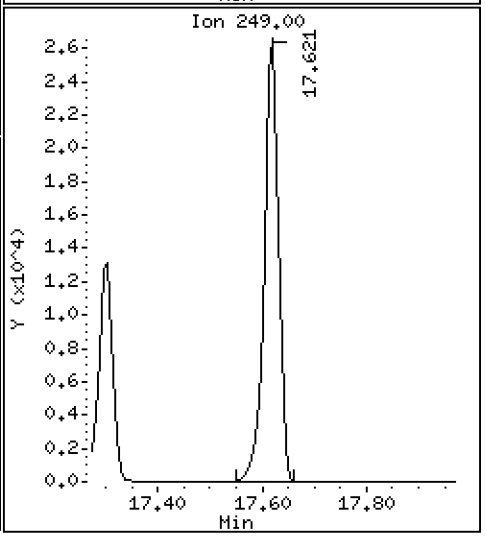


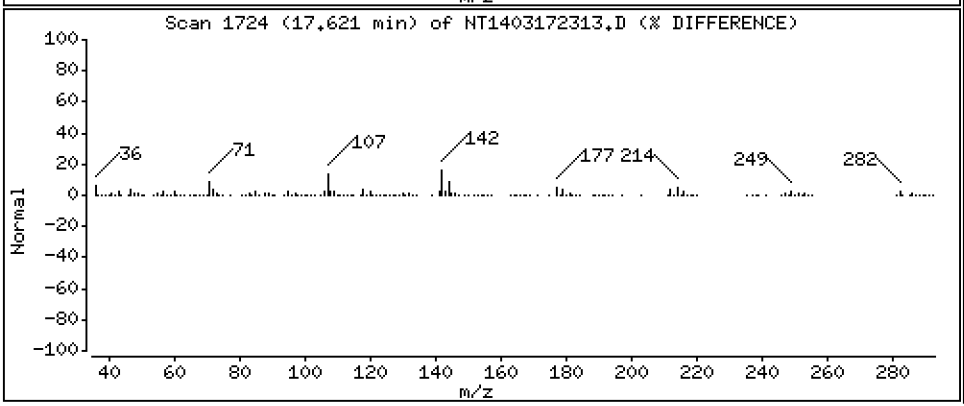












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

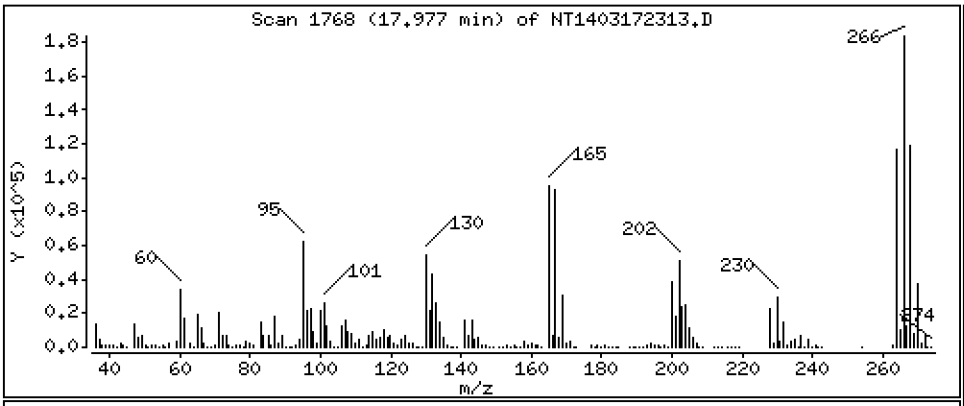
Operator: JGR

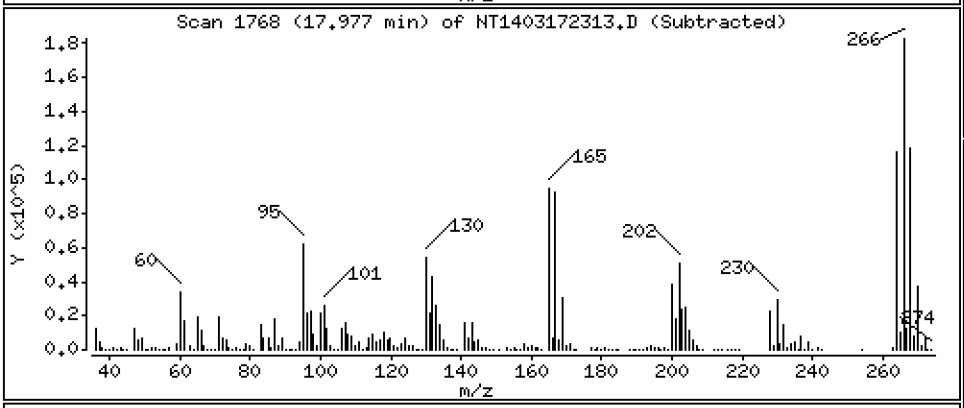
Column phase: ZB-5msi

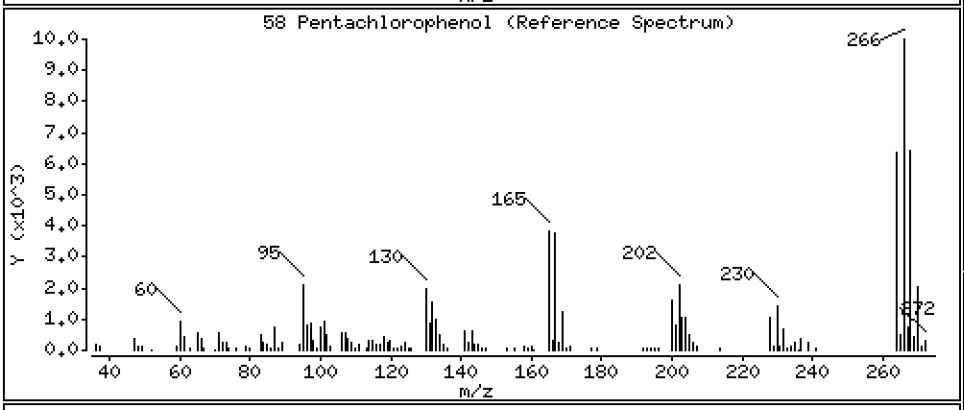
Column diameter: 0.25

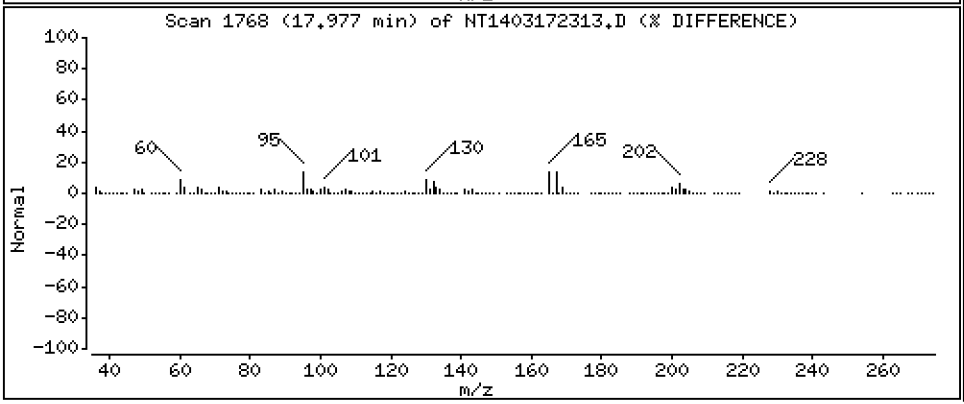
58 Pentachlorophenol

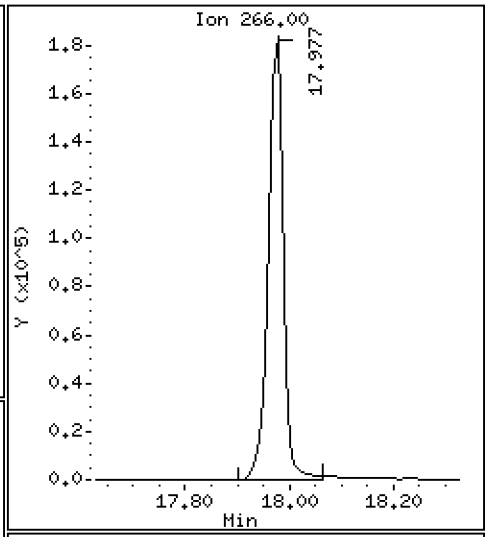
Concentration: 14.25 ug/mL

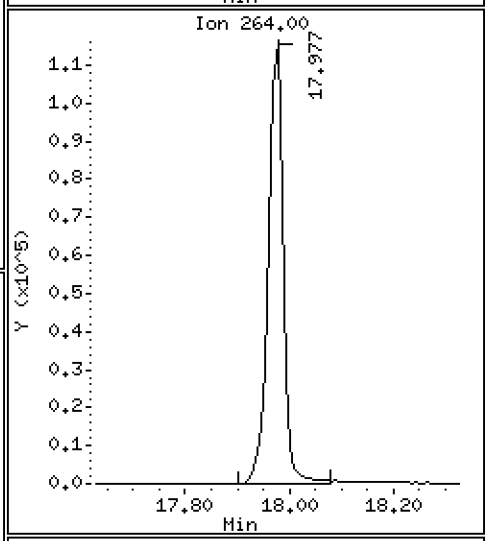


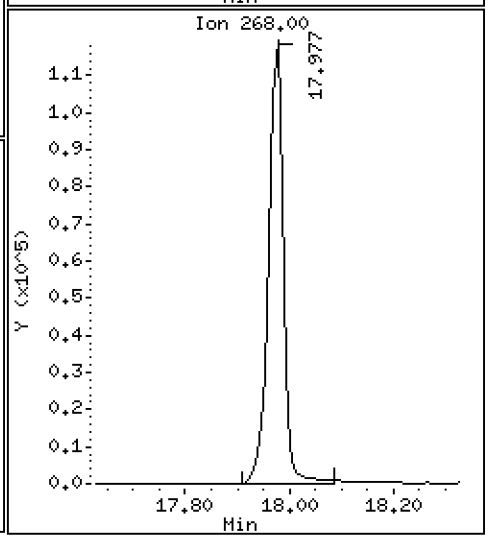












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

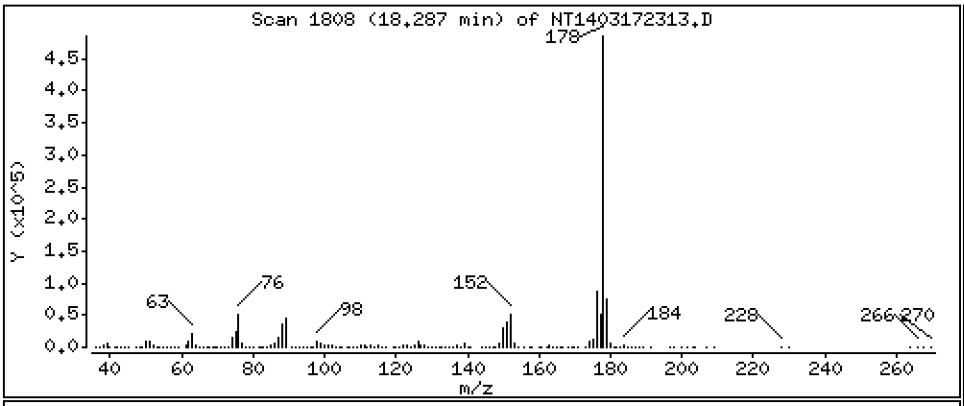
Operator: JGR

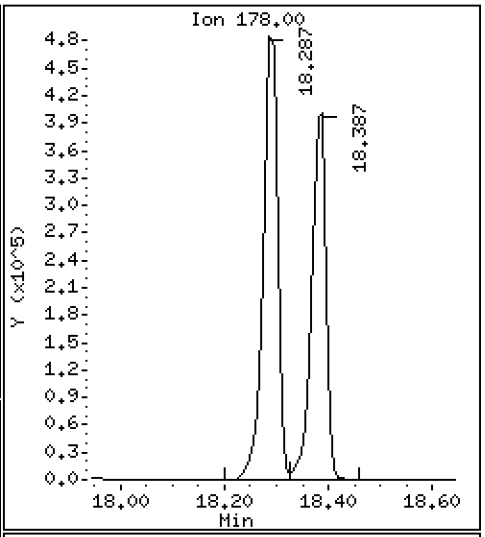
Column phase: ZB-5msi

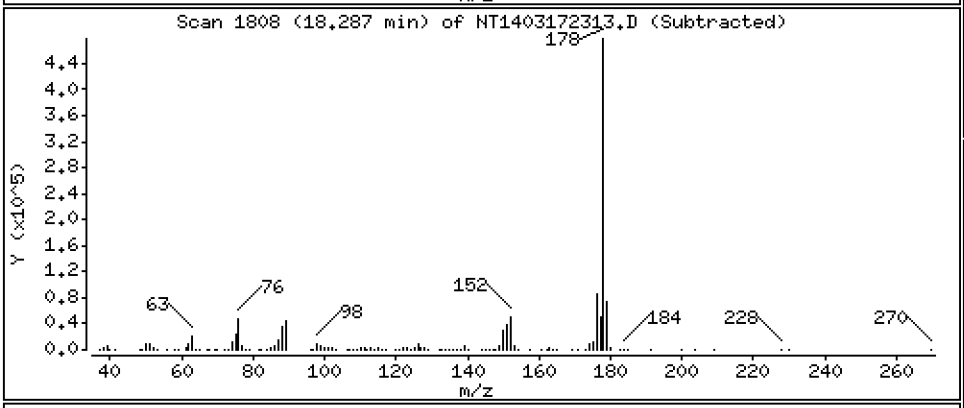
Column diameter: 0.25

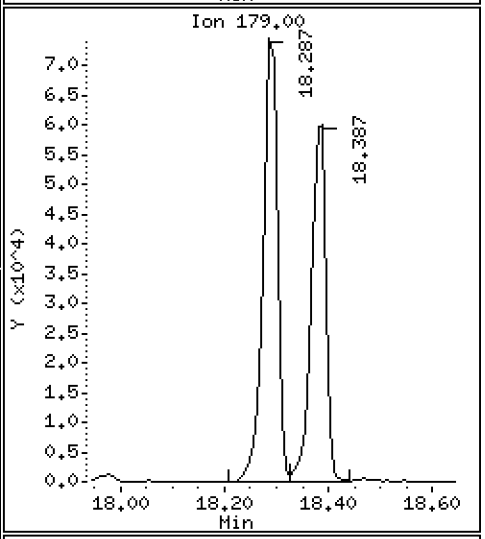
60 Phenanthrene

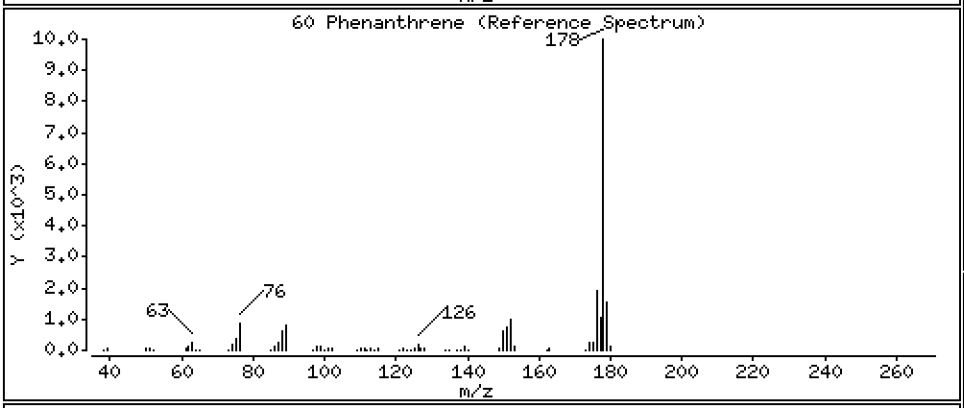
Concentration: 4.458 ug/mL

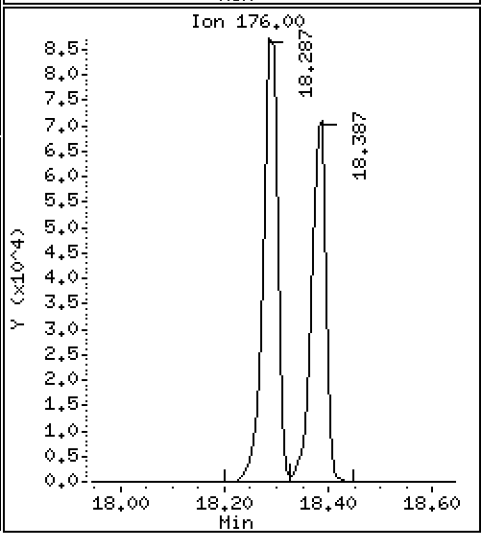


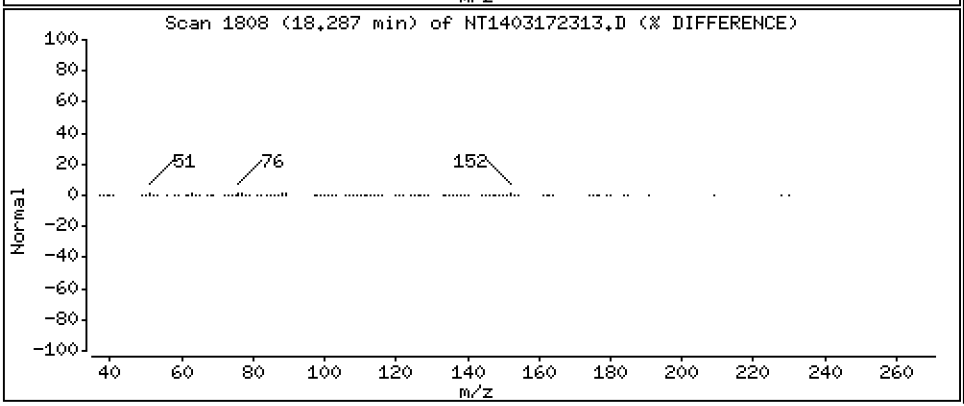












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

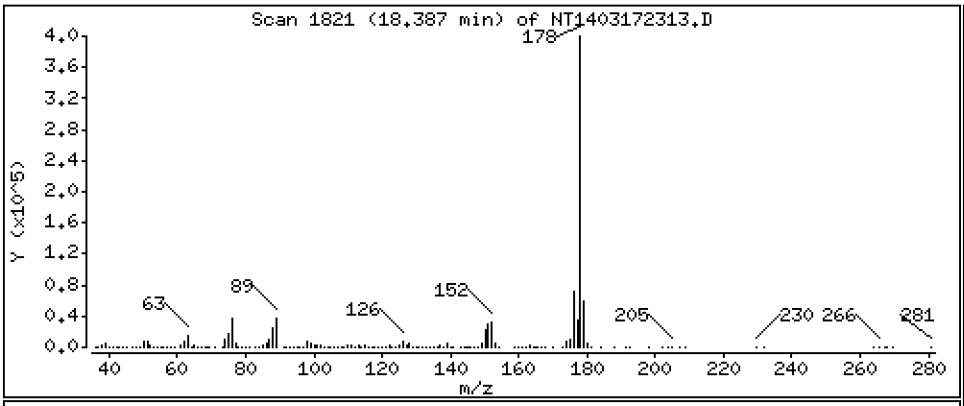
Operator: JGR

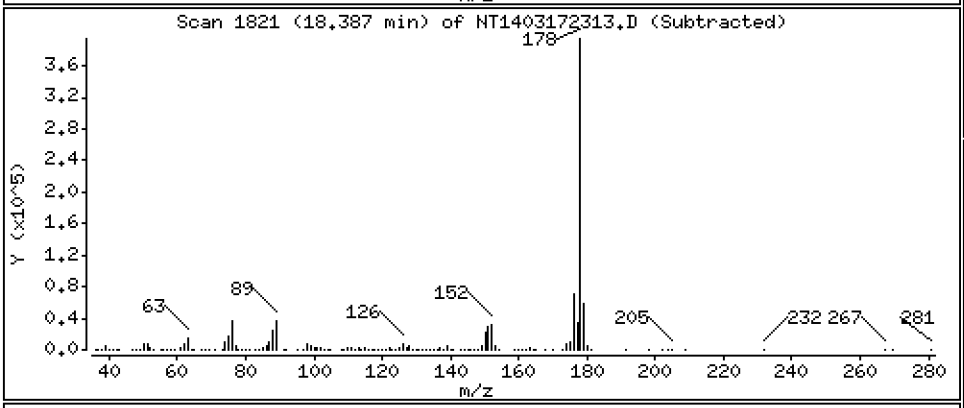
Column phase: ZB-5msi

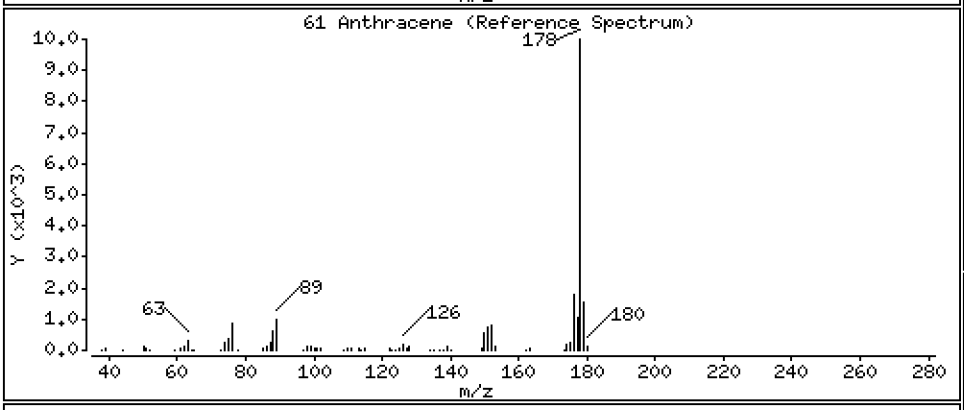
Column diameter: 0.25

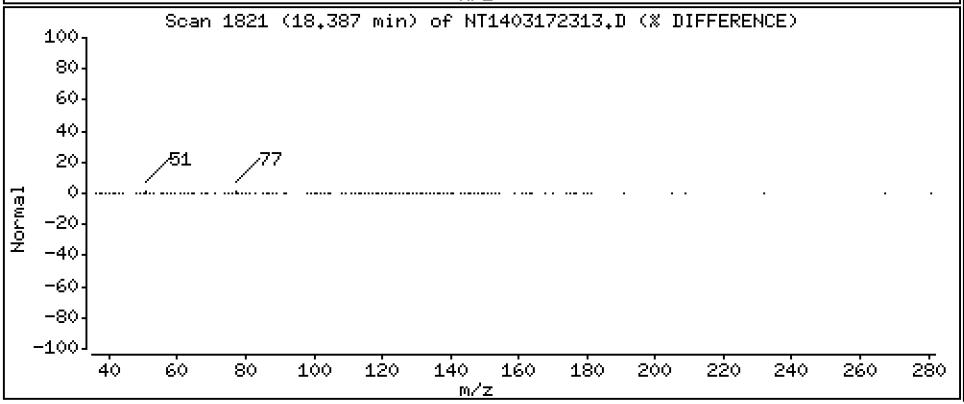
61 Anthracene

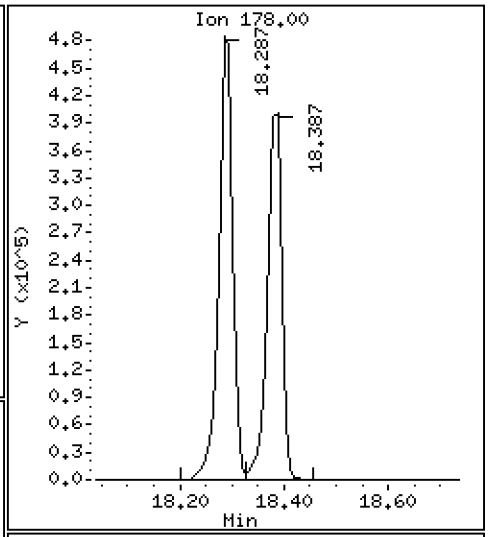
Concentration: 3.789 ug/mL

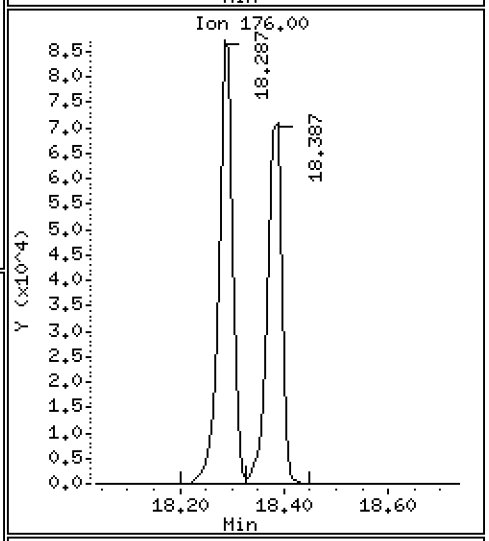


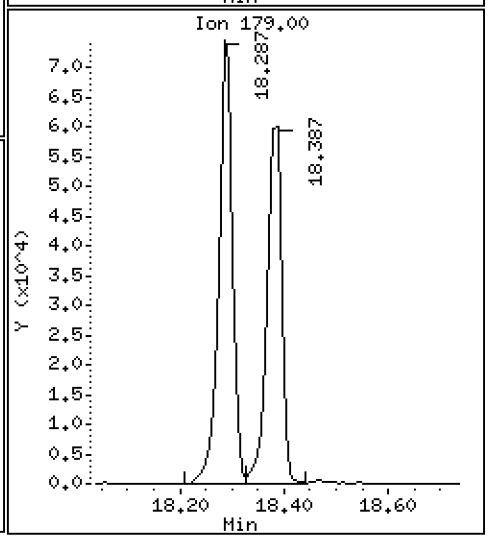












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

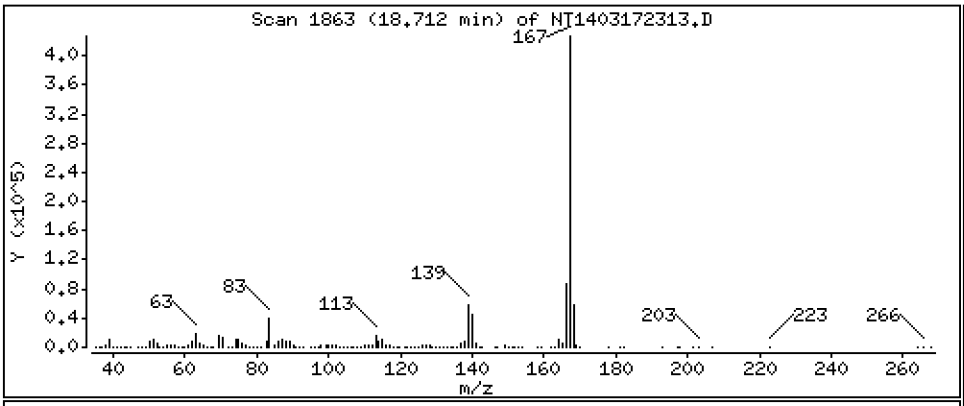
Operator: JGR

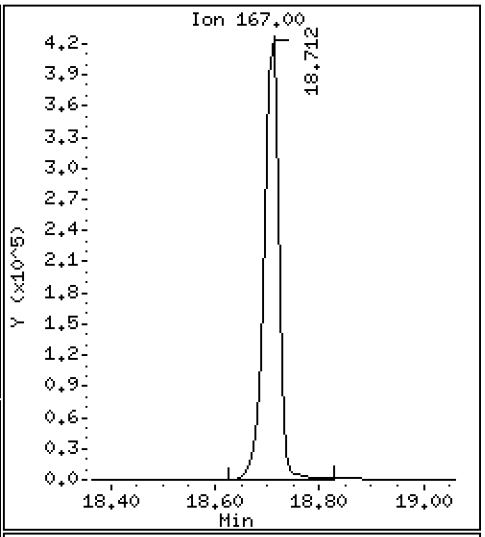
Column phase: ZB-5msi

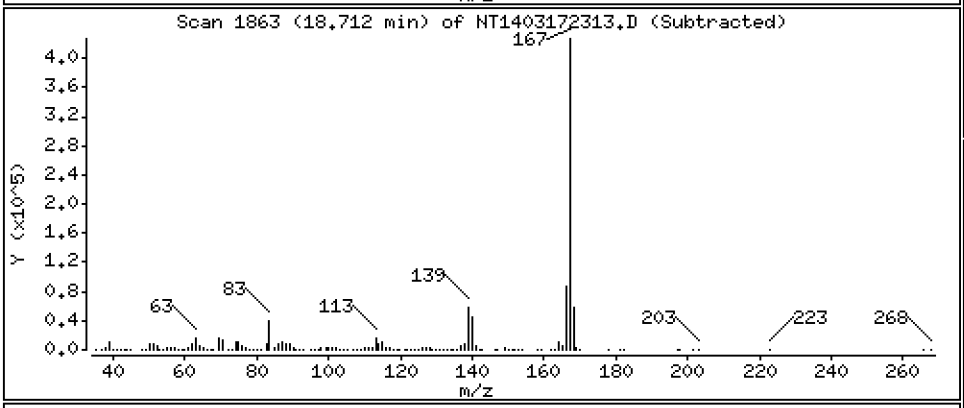
Column diameter: 0.25

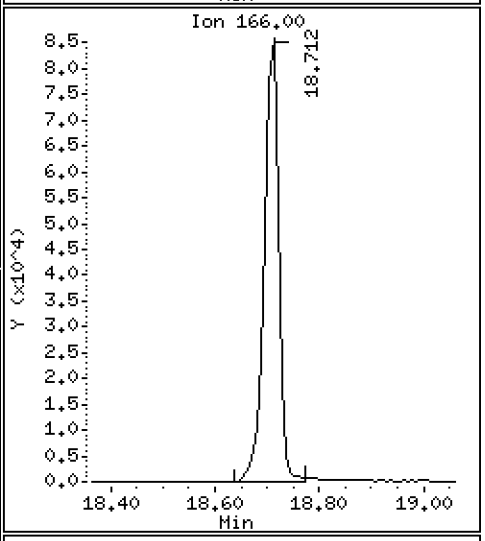
62 Carbazole

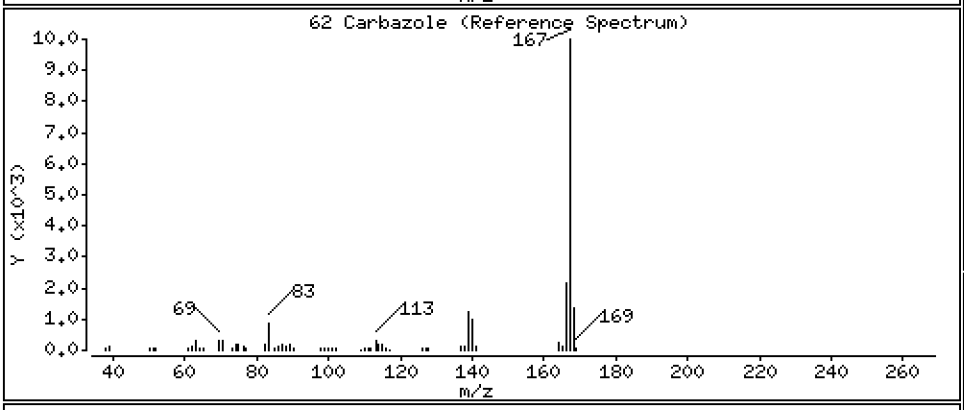
Concentration: 4.646 ug/mL

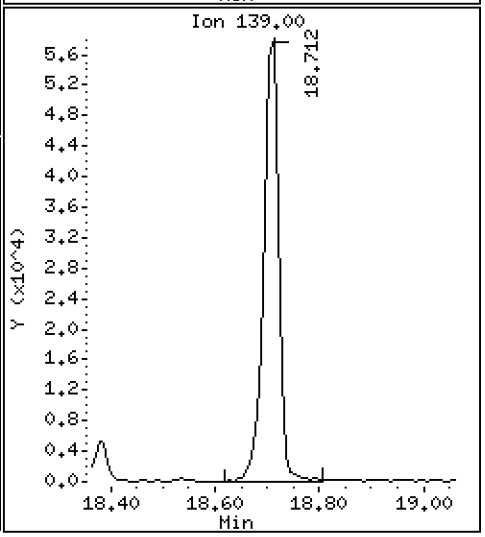


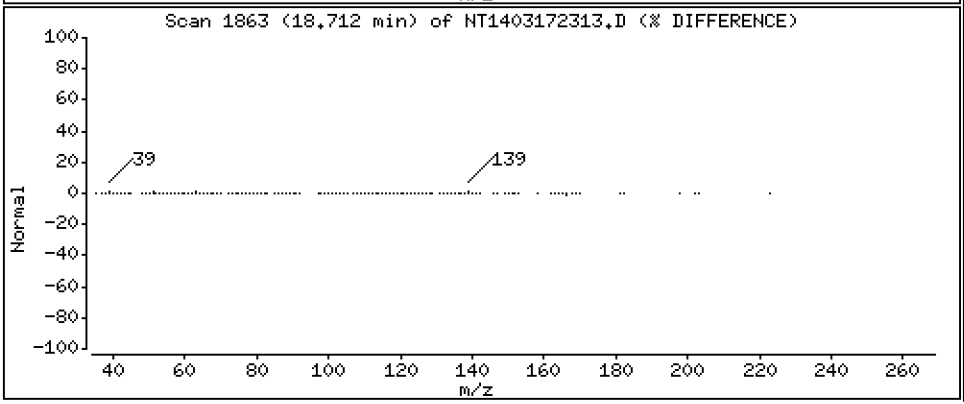












Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172313.D

Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

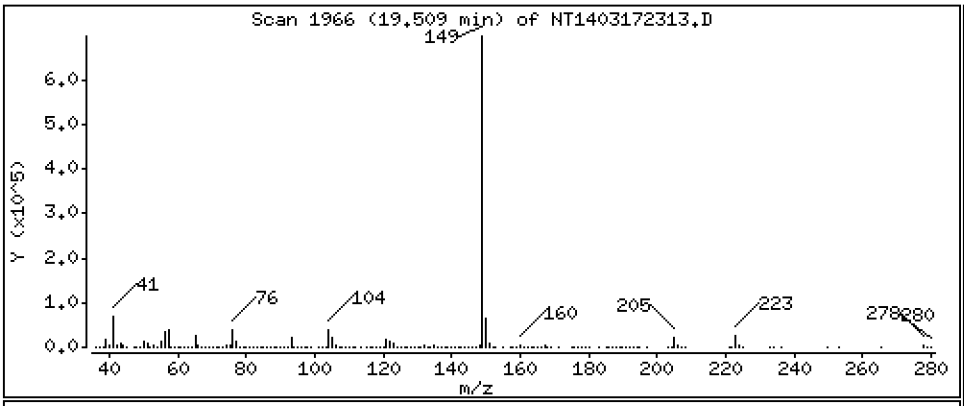
Operator: JGR

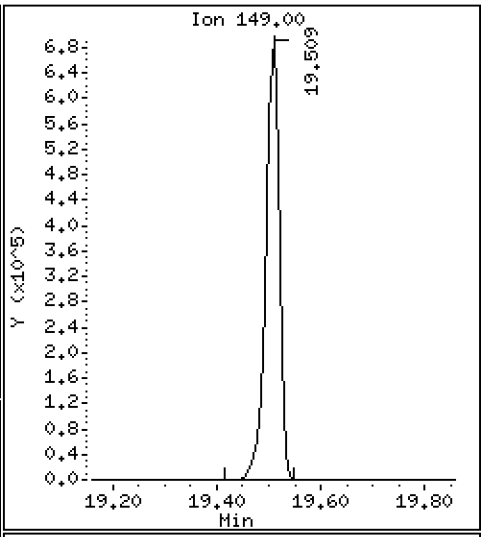
Column phase: ZB-5msi

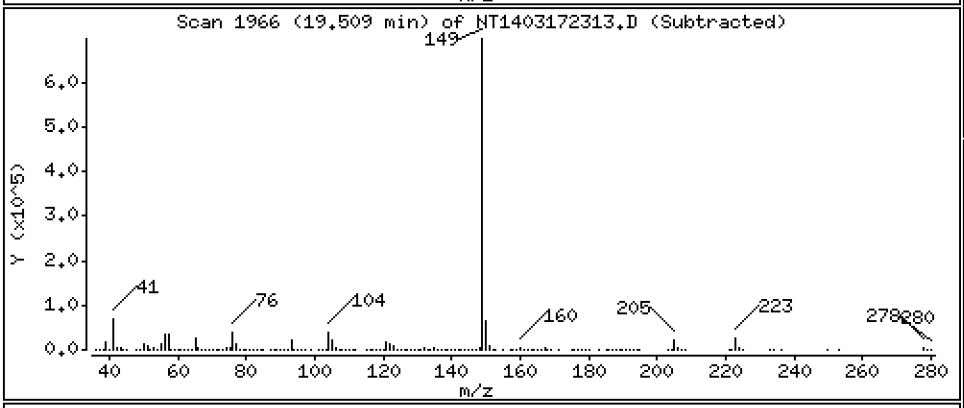
Column diameter: 0.25

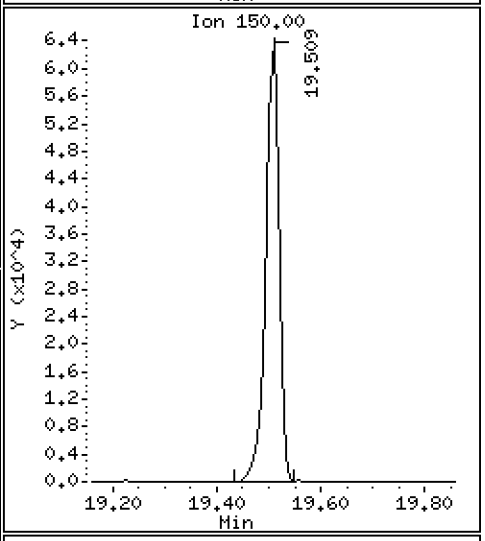
63 Di-n-butylphthalate

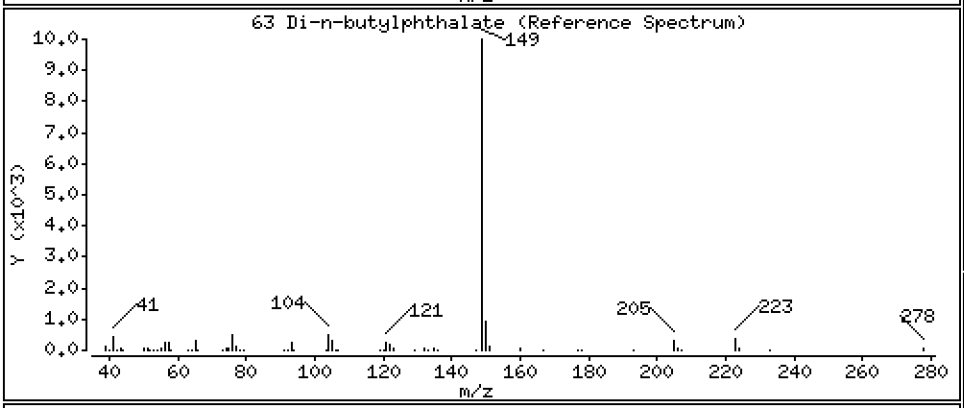
Concentration: 5.397 ug/mL

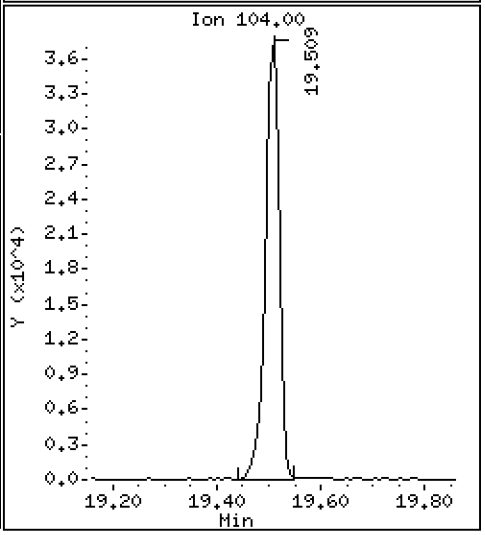


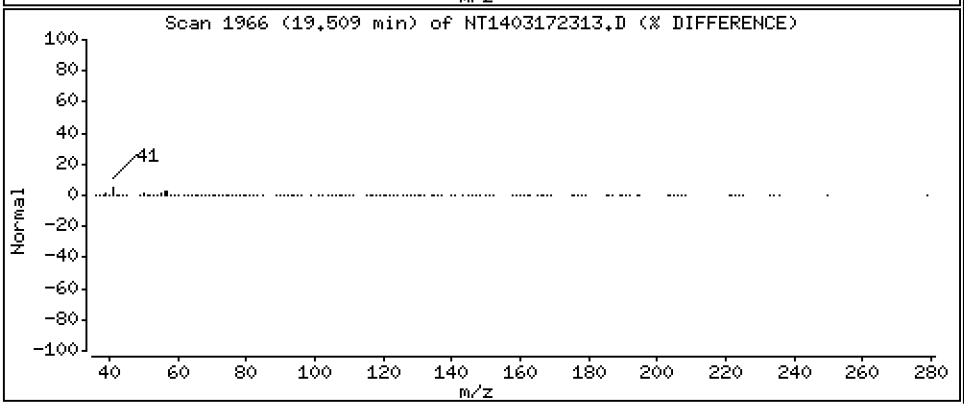












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

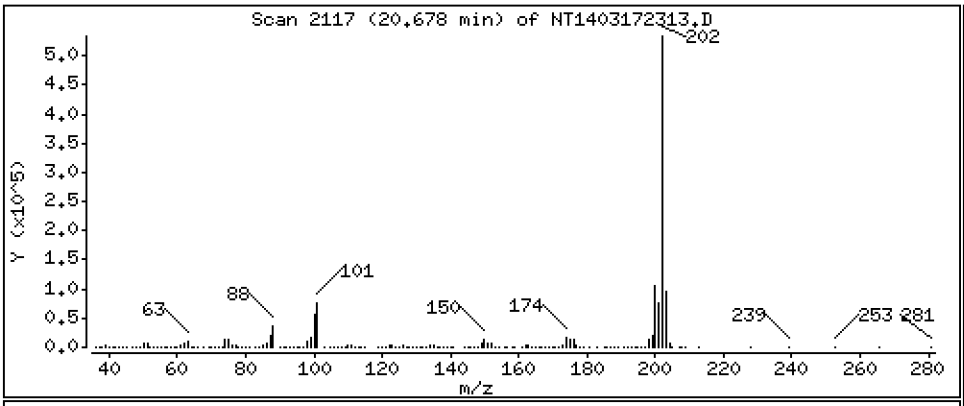
Operator: JGR

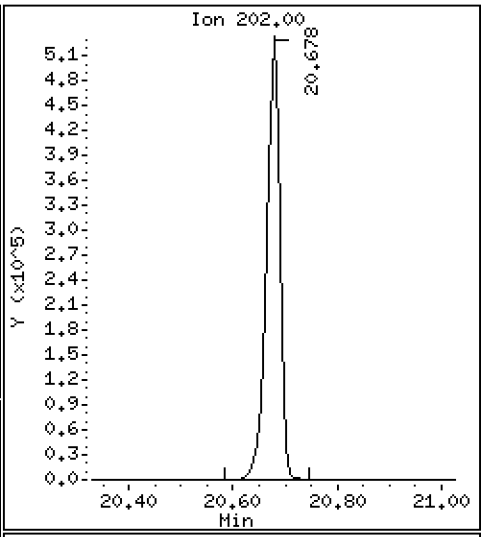
Column phase: ZB-5msi

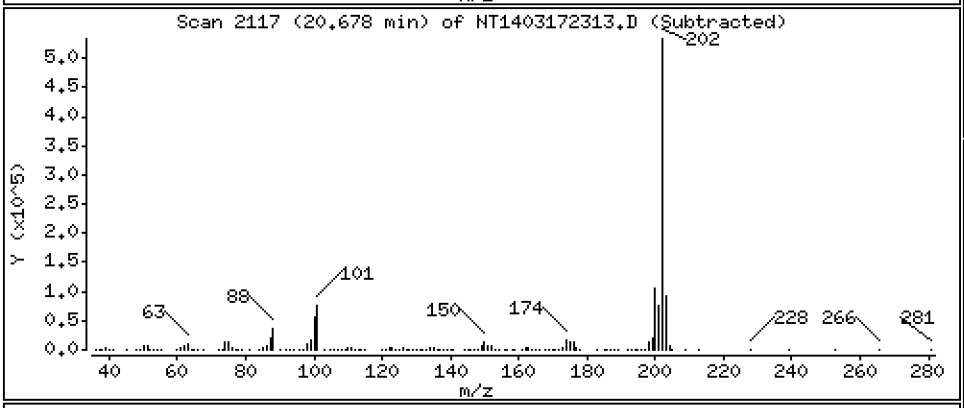
Column diameter: 0.25

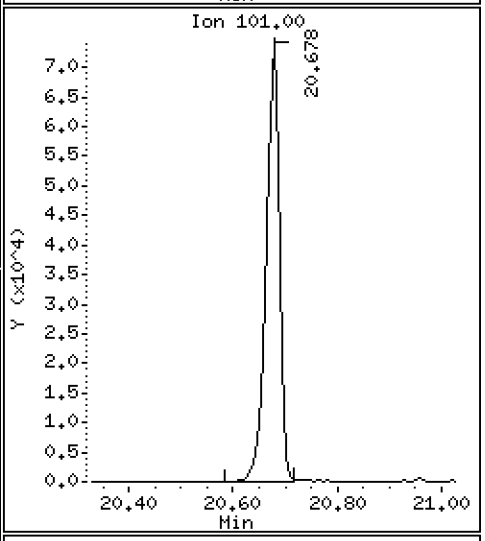
64 Fluoranthene

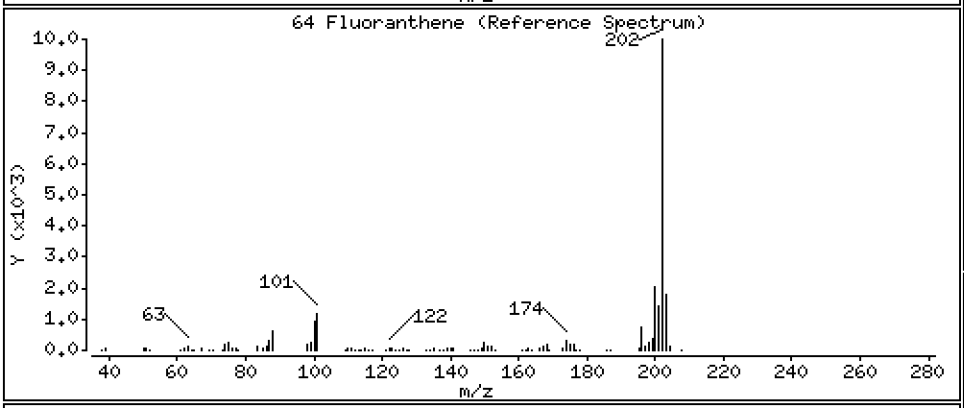
Concentration: 6.268 ug/mL

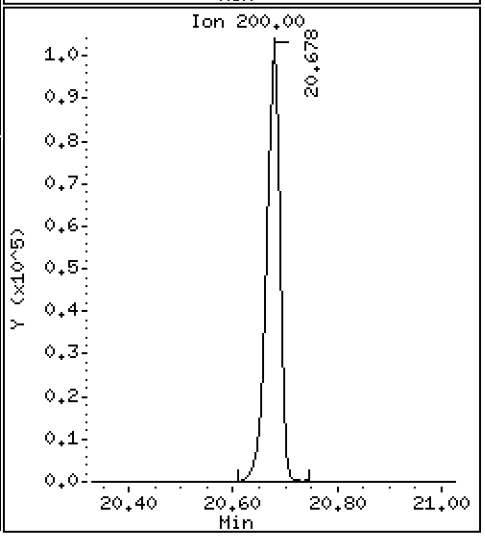


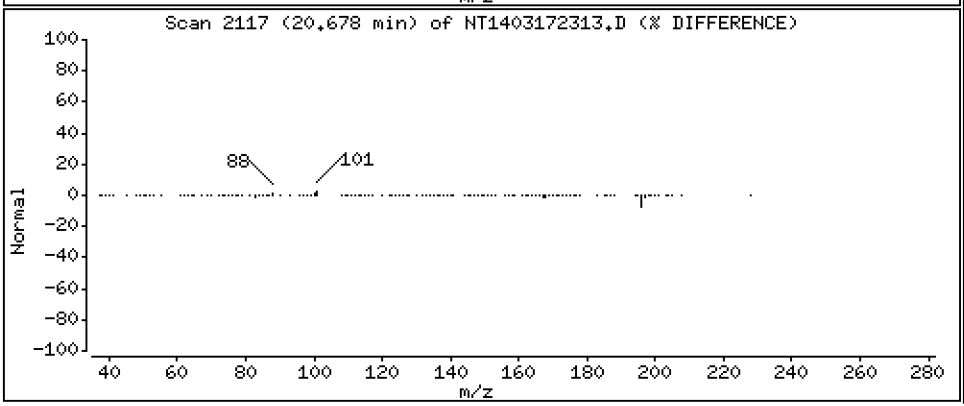












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

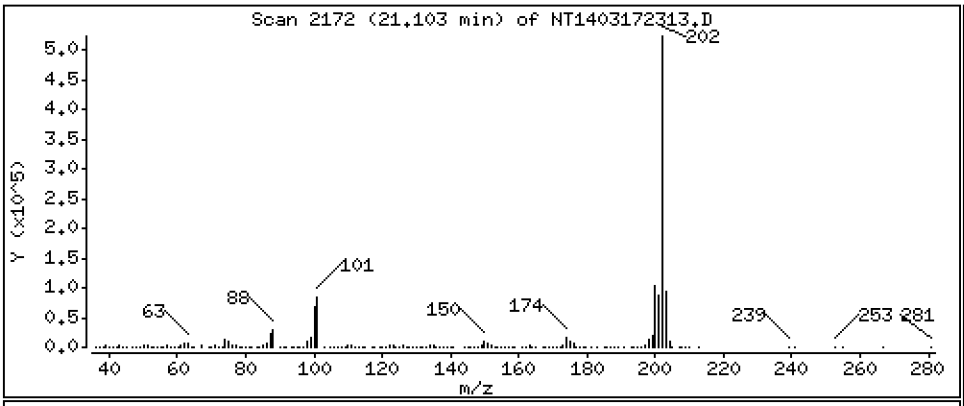
Operator: JGR

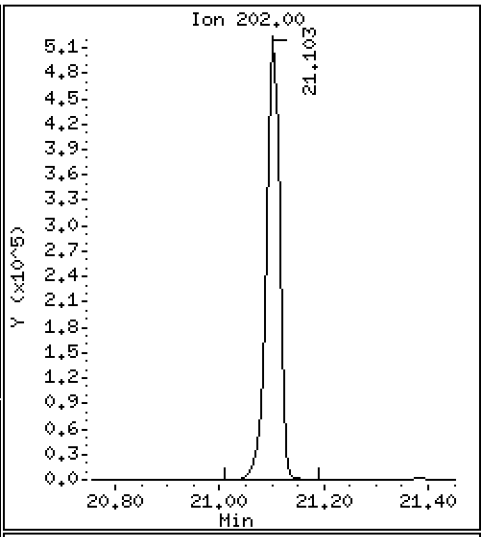
Column phase: ZB-5msi

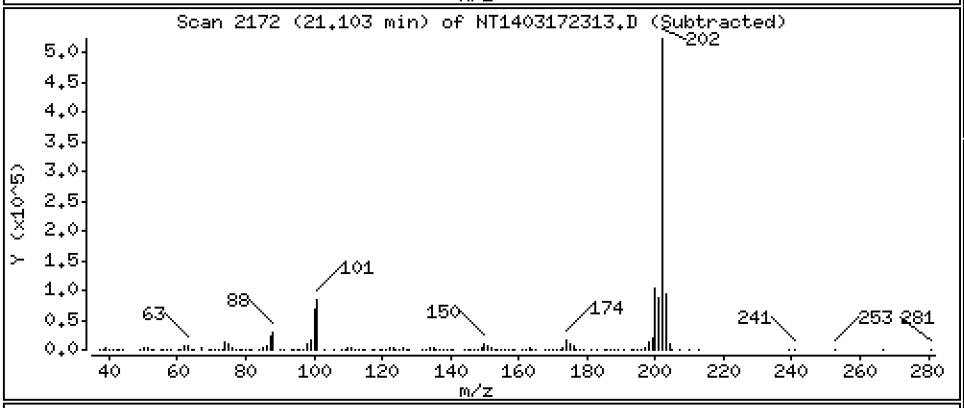
Column diameter: 0.25

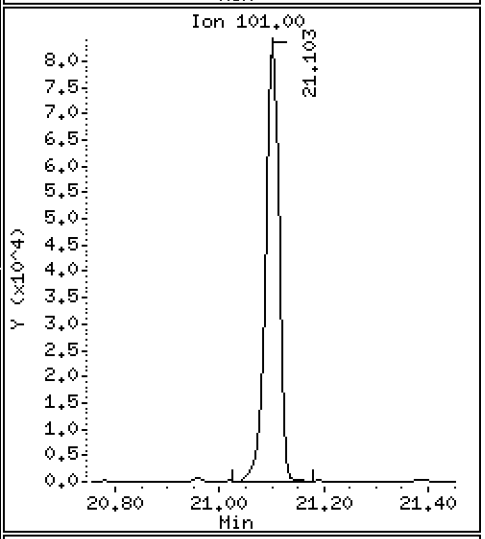
65 Pyrene

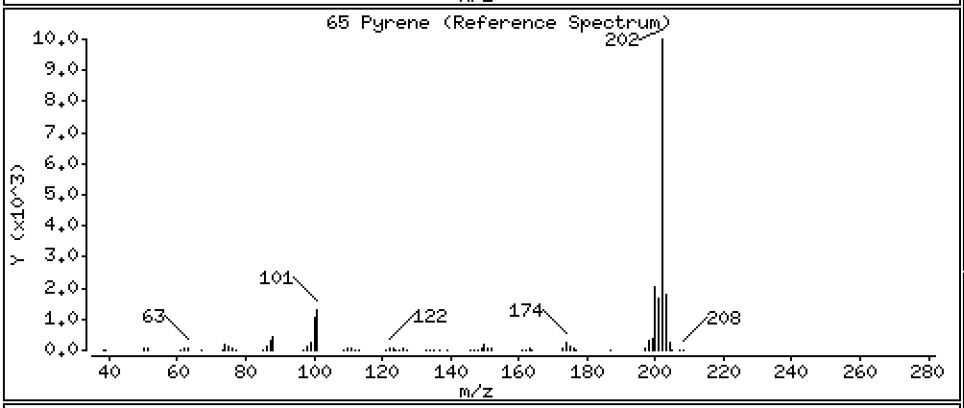
Concentration: 5.979 ug/mL

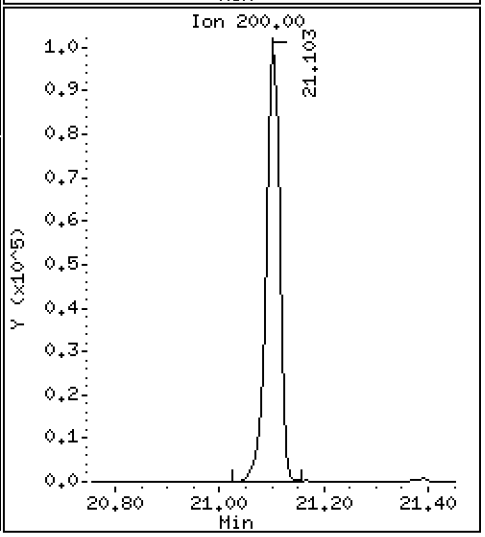


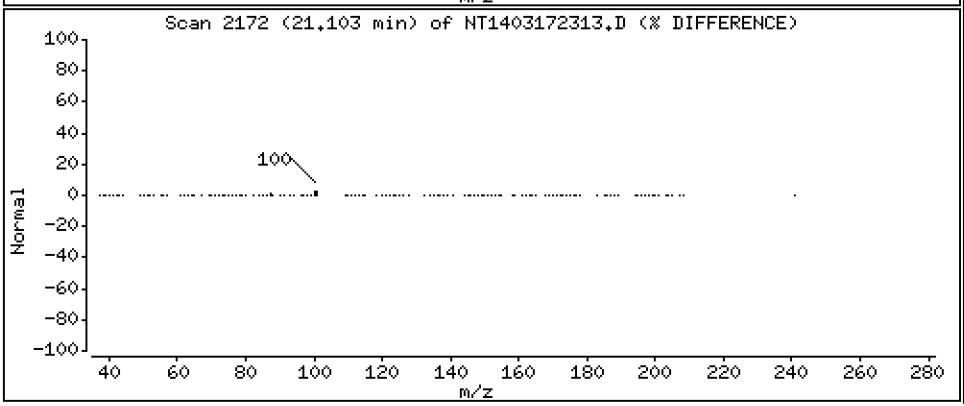












Date : 17-MAR-2023 21:42

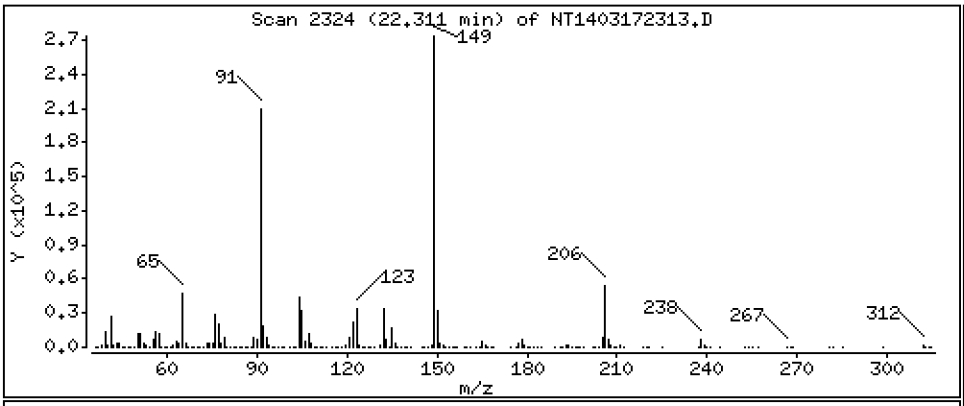
Client ID: Instrument: nt14.i

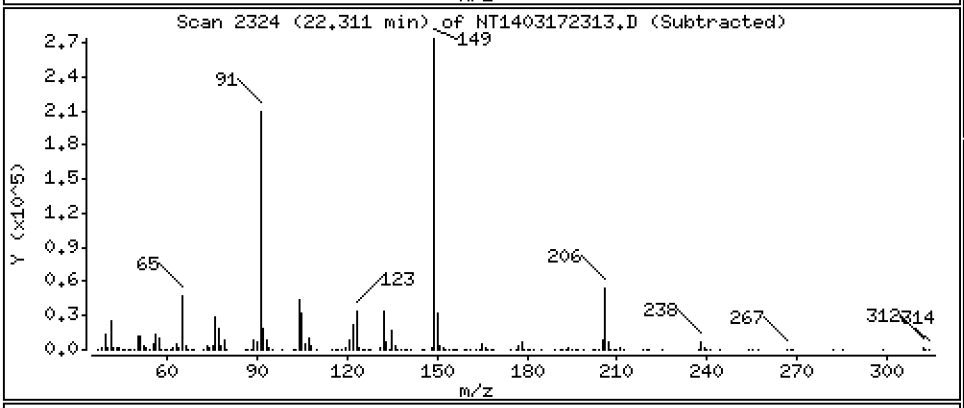
Sample Info: BLB0424-BS1

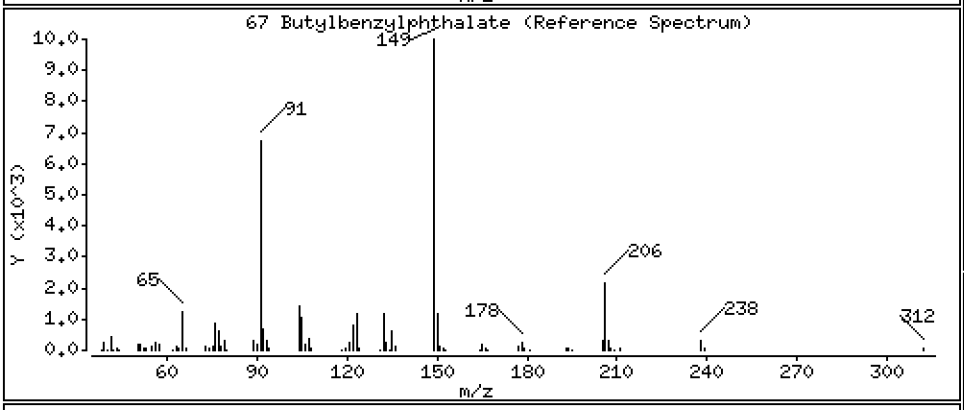
Operator: JGR

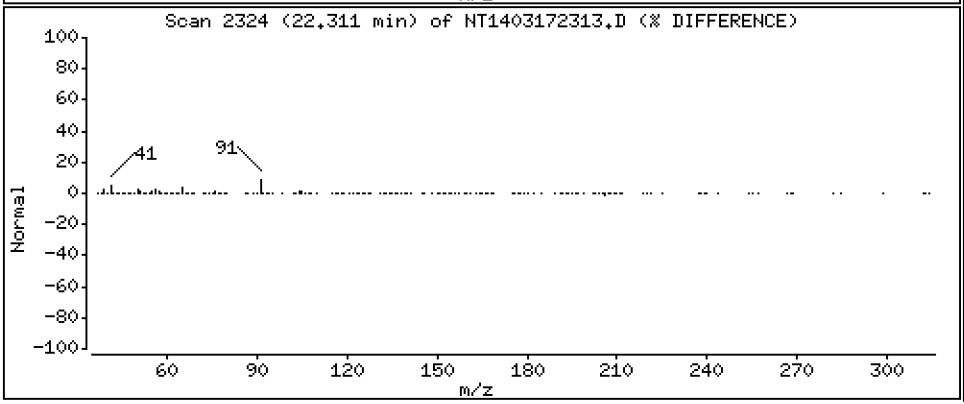
Column phase: ZB-5msi Column diameter: 0.25

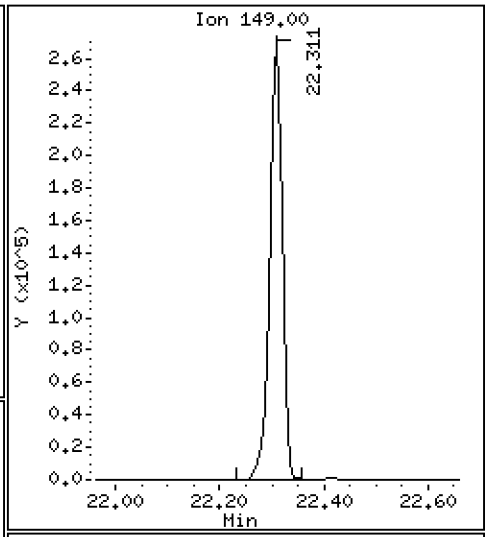
67 Butylbenzylphthalate Concentration: 6.676 ug/mL

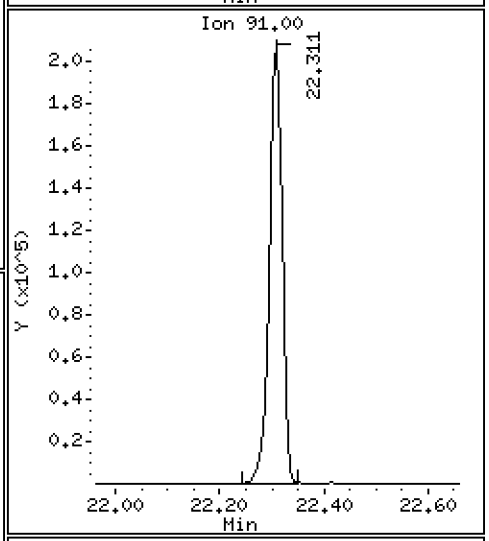


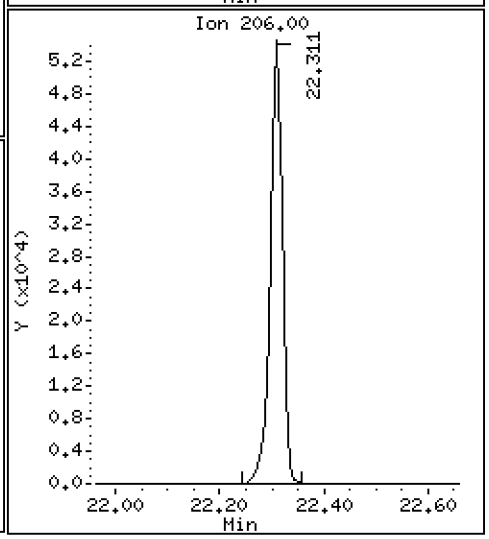












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

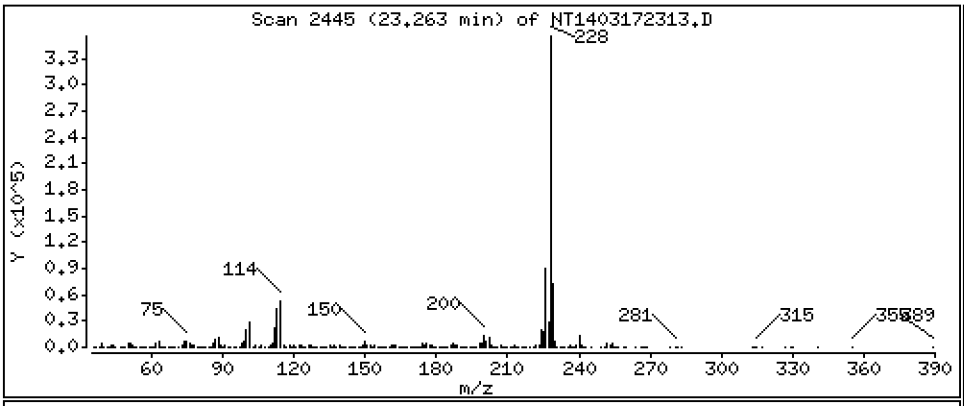
Operator: JGR

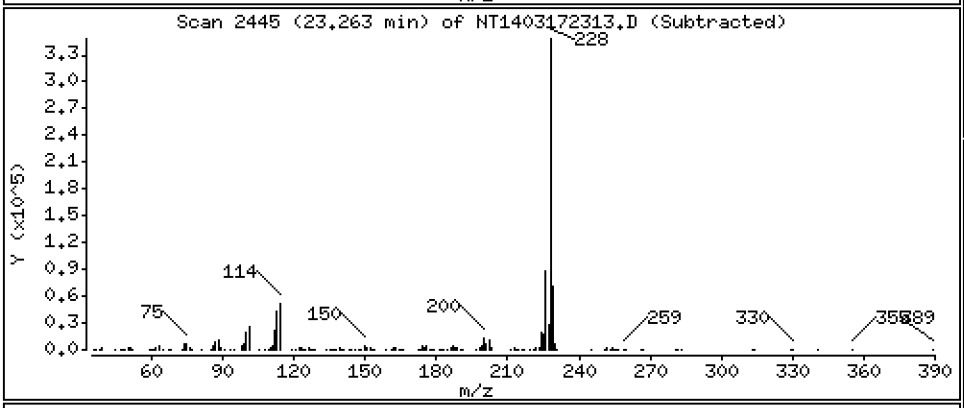
Column phase: ZB-5msi

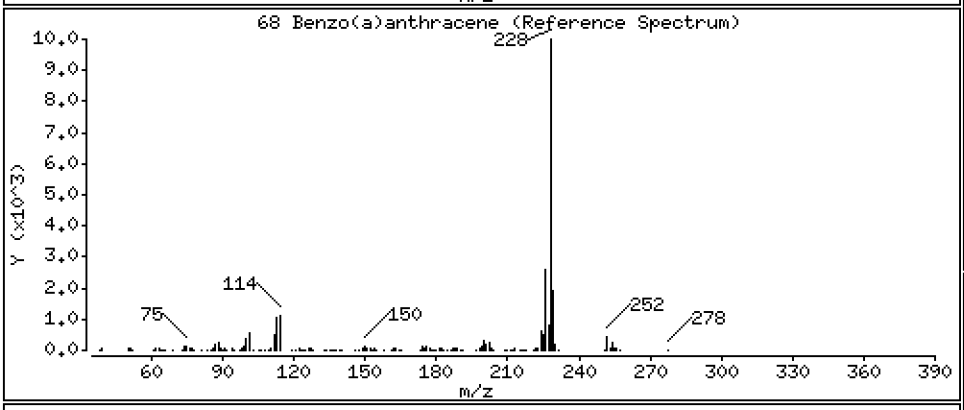
Column diameter: 0.25

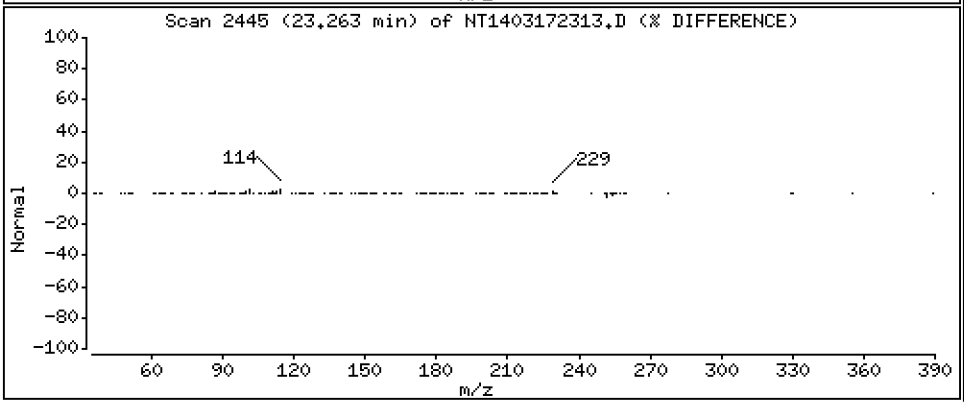
68 Benzo(a)anthracene

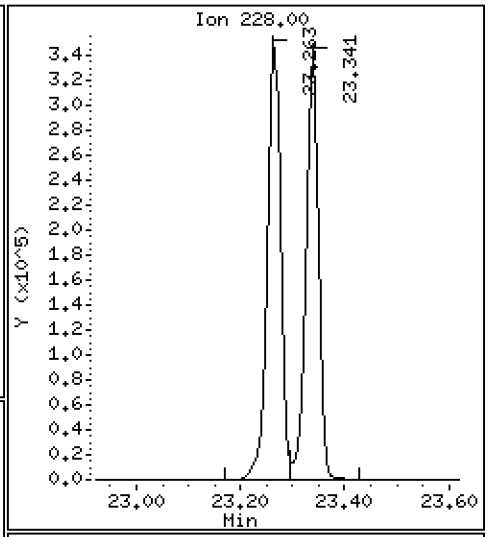
Concentration: 4.563 ug/mL

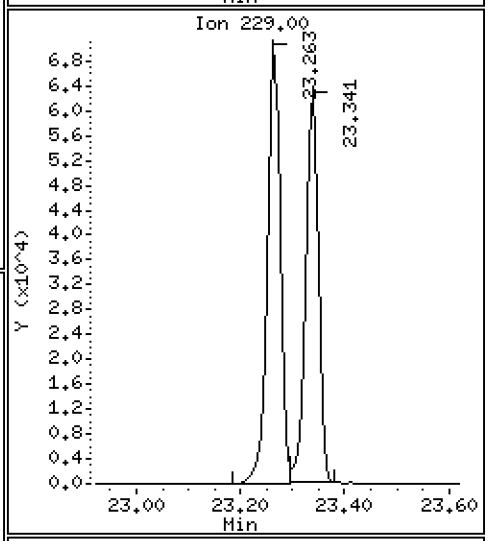


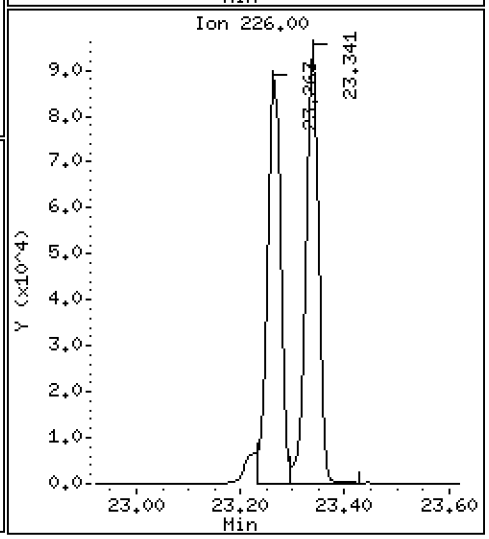












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

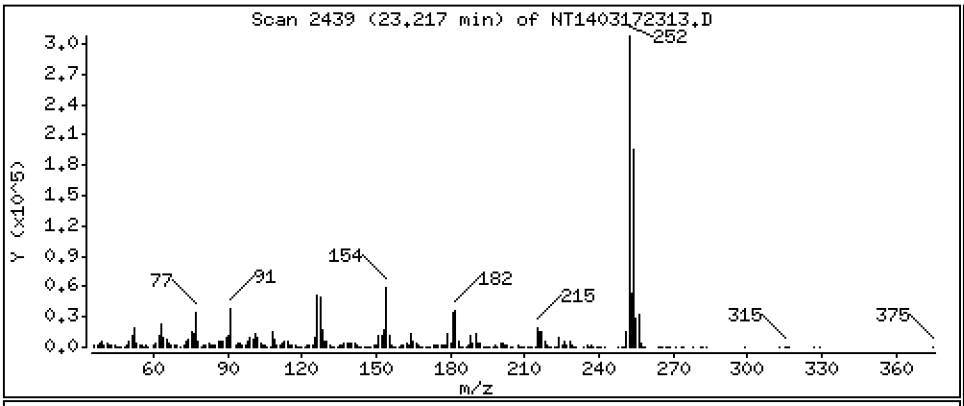
Operator: JGR

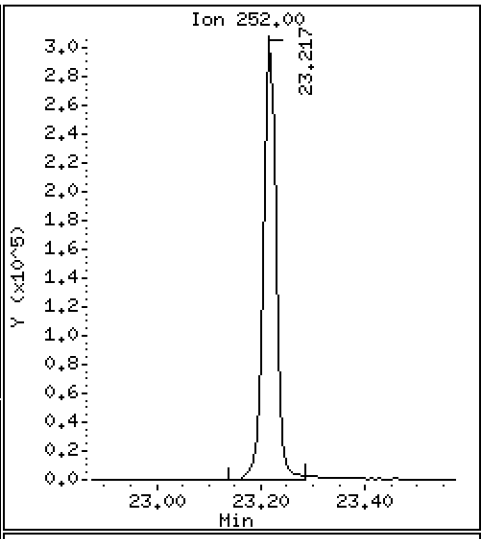
Column phase: ZB-5msi

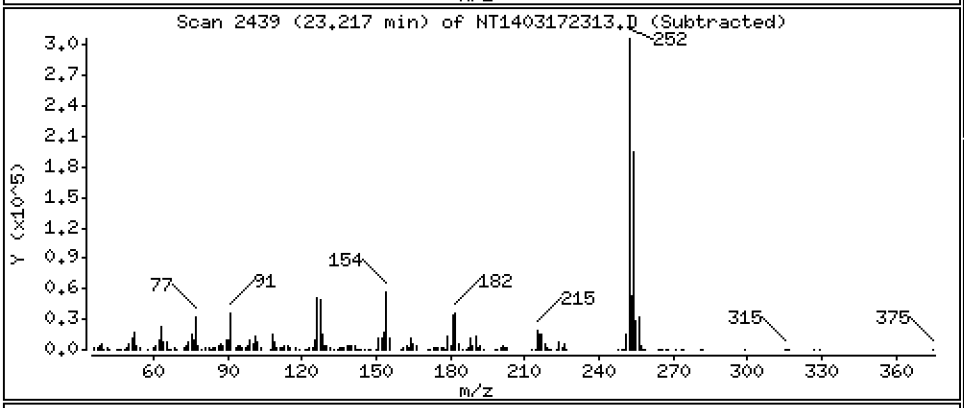
Column diameter: 0.25

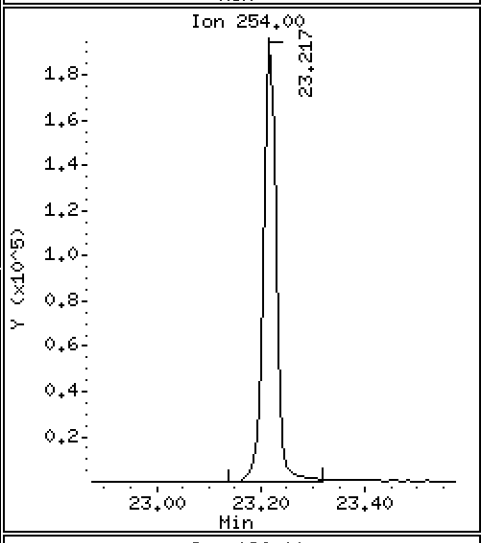
70 3,3'-Dichlorobenzidine

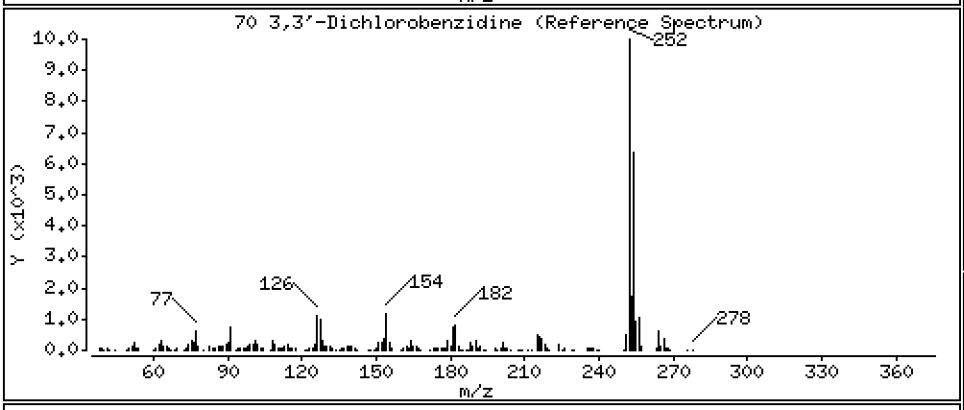
Concentration: 12.65 ug/mL

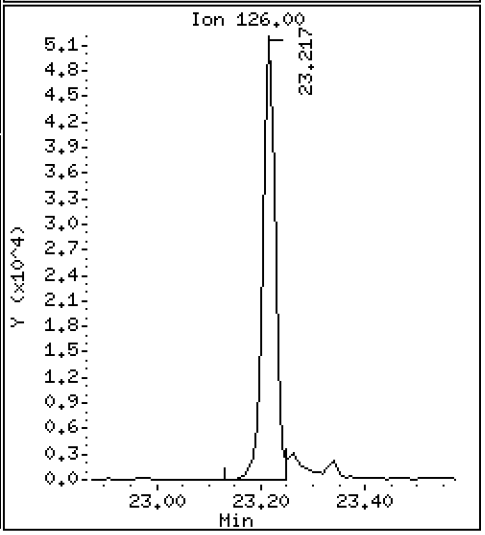


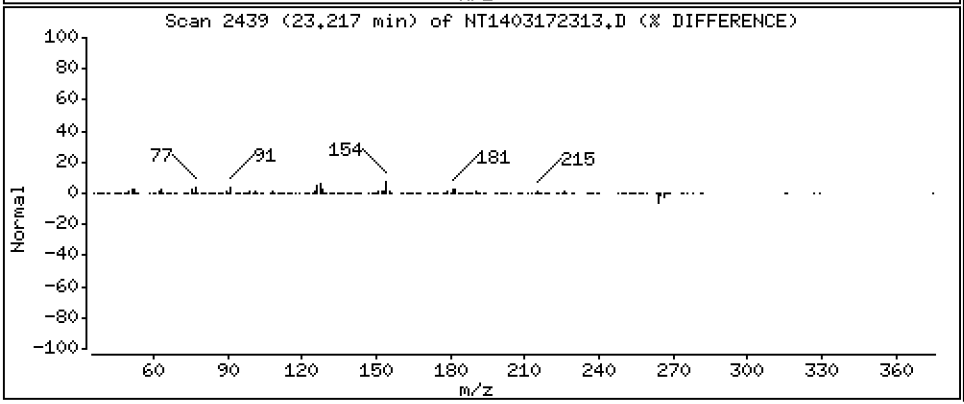












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

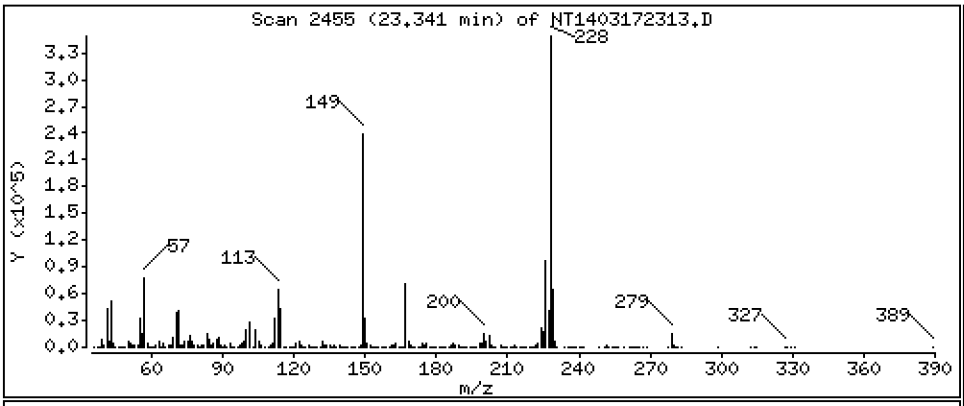
Operator: JGR

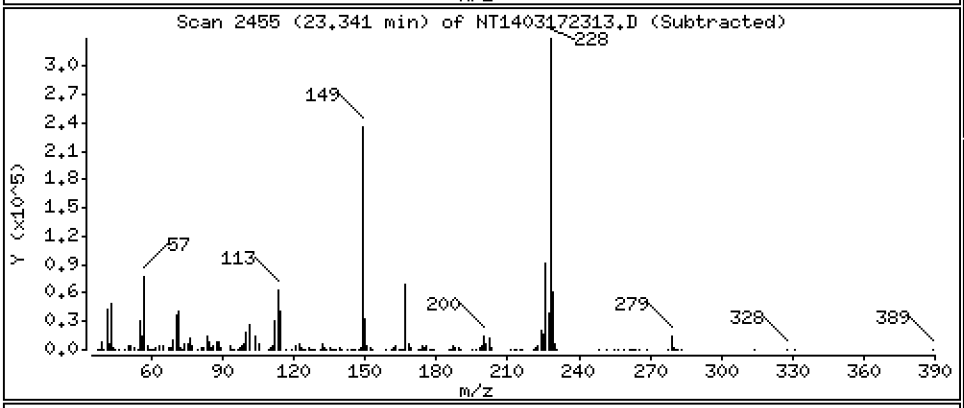
Column phase: ZB-5msi

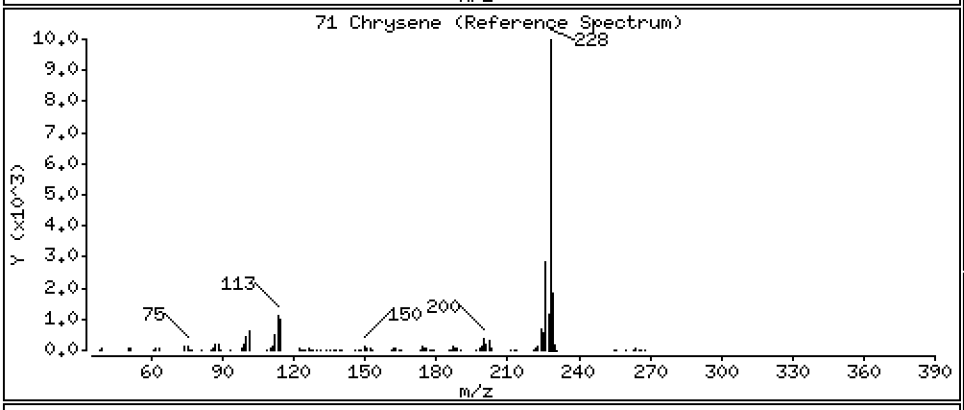
Column diameter: 0.25

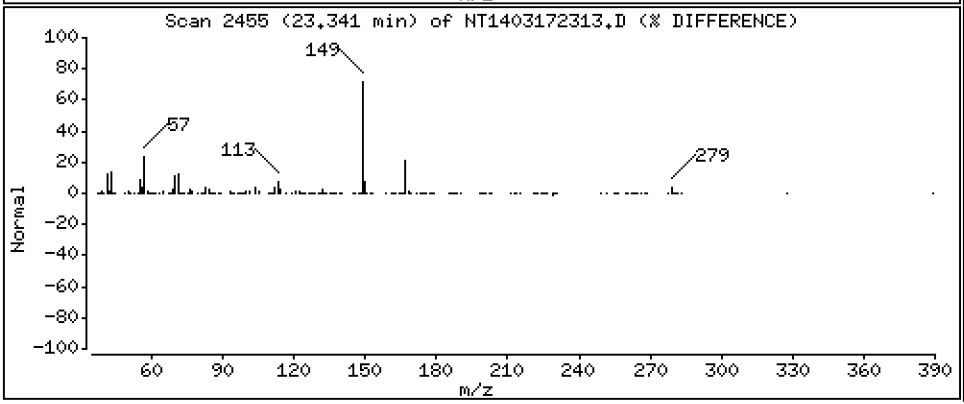
71 Chrysene

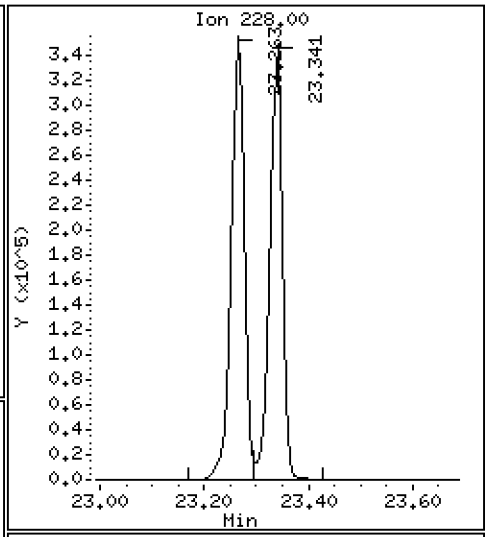
Concentration: 4.620 ug/mL

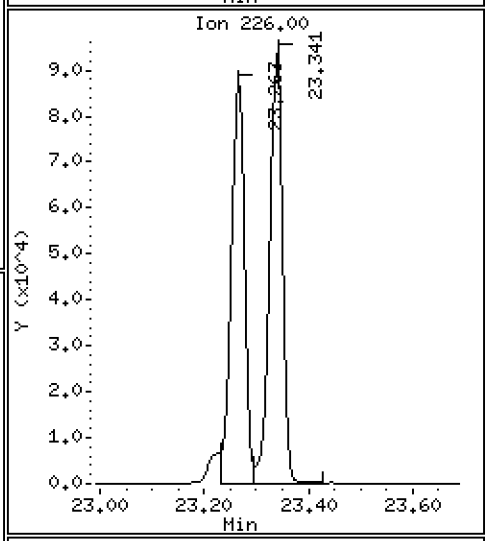


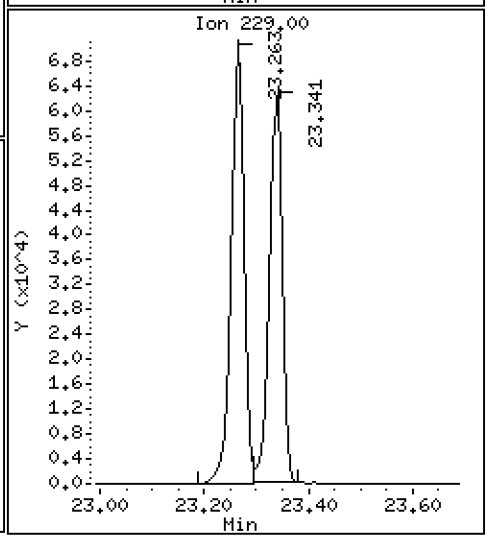












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

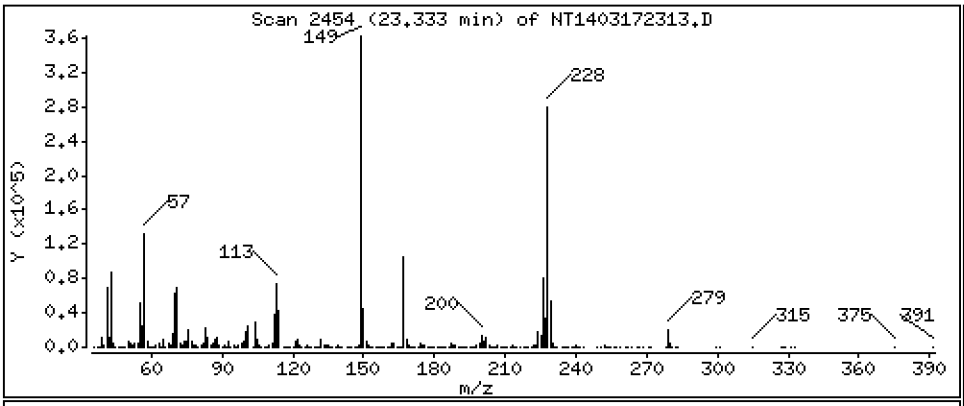
Operator: JGR

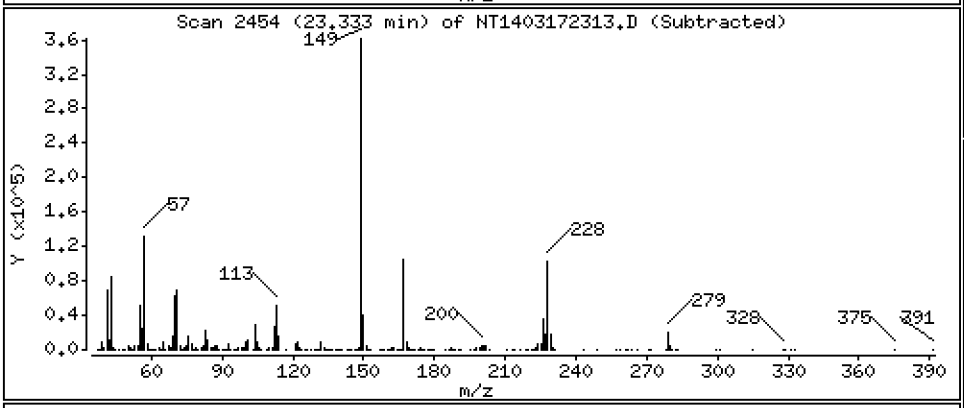
Column phase: ZB-5msi

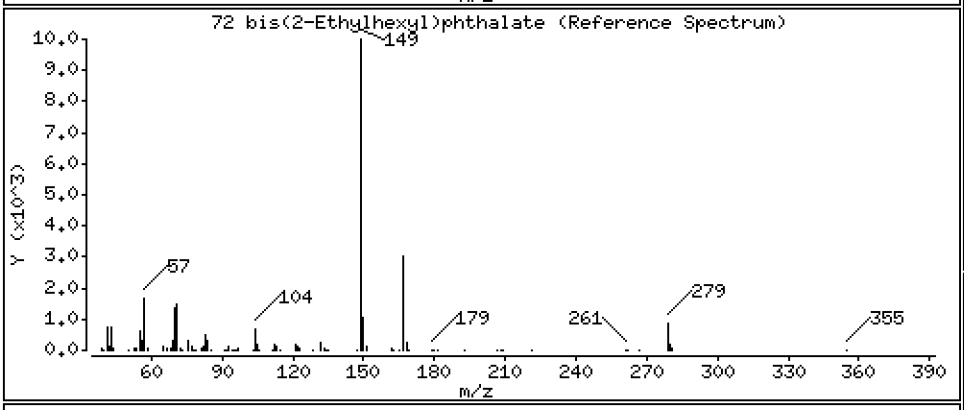
Column diameter: 0.25

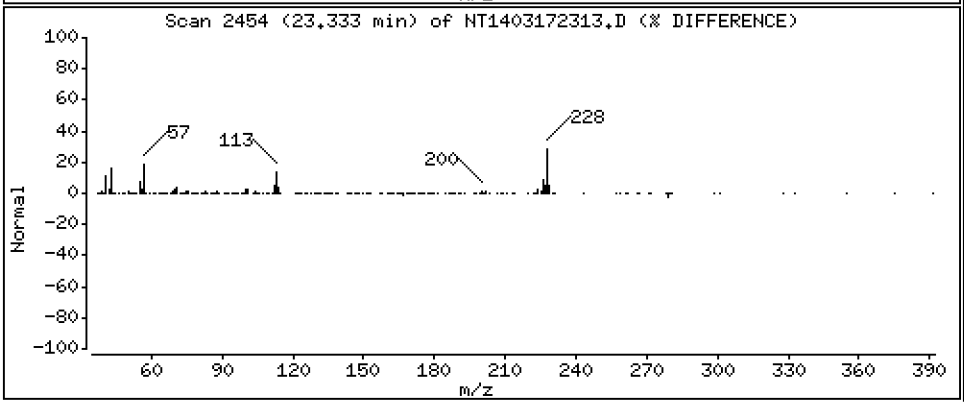
72 bis(2-Ethylhexyl)phthalate

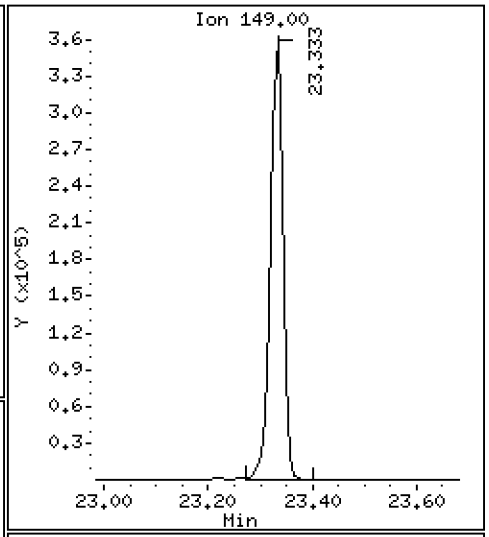
Concentration: 6.076 ug/mL

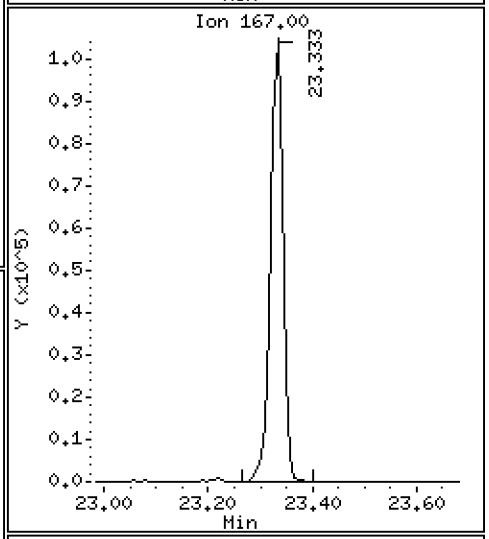


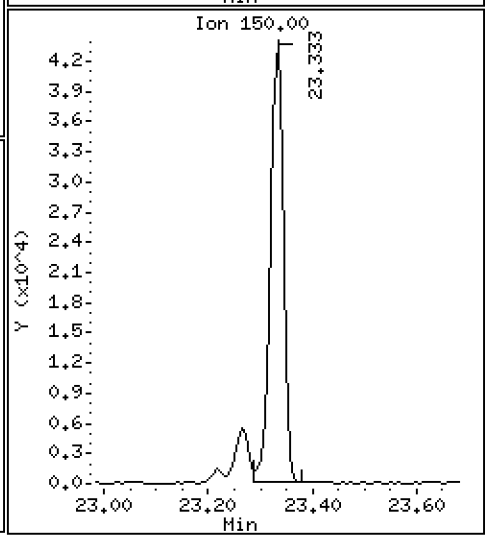












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

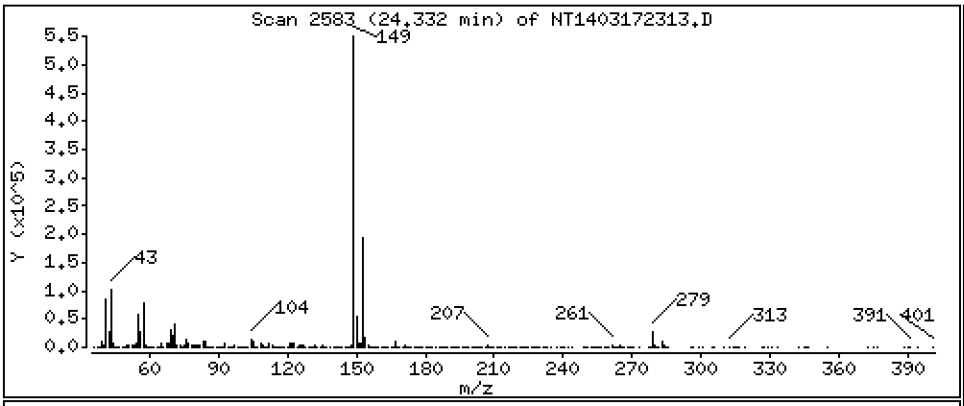
Operator: JGR

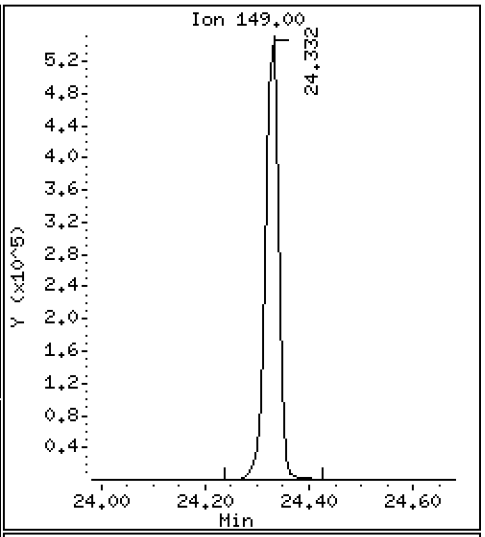
Column phase: ZB-5msi

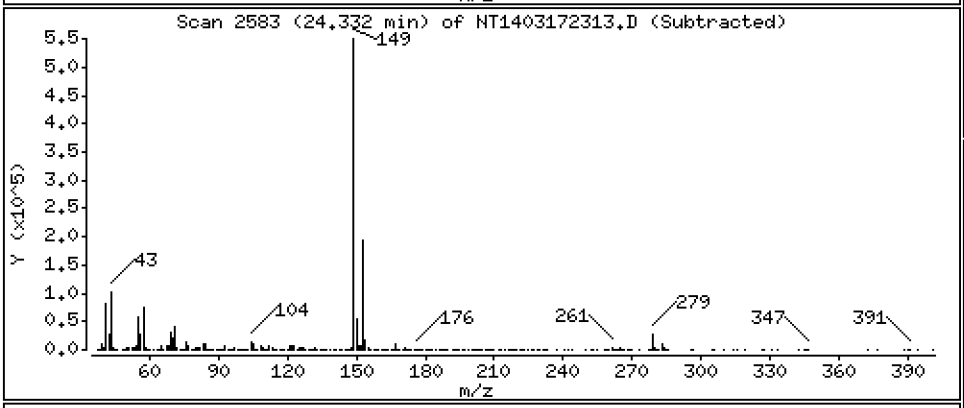
Column diameter: 0.25

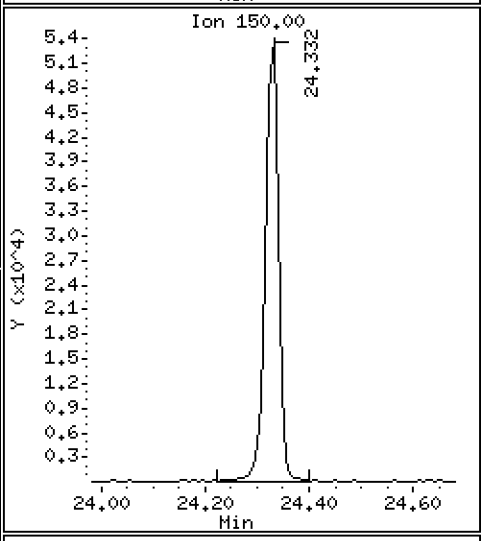
73 Di-n-octylphthalate

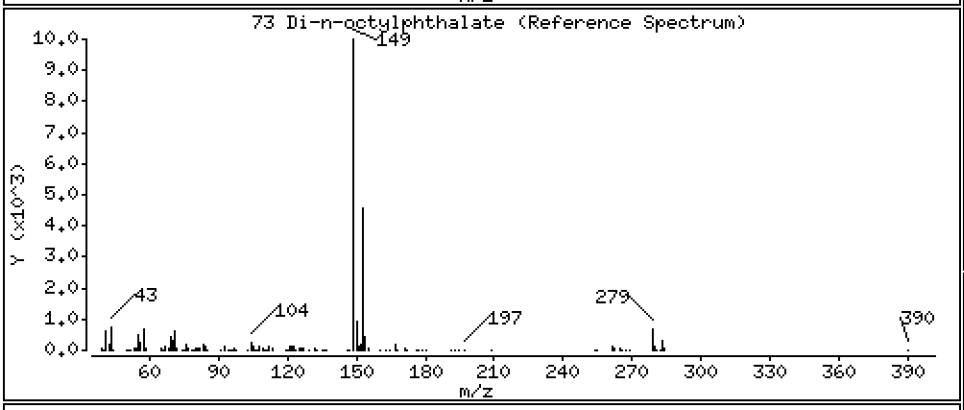
Concentration: 5.044 ug/mL

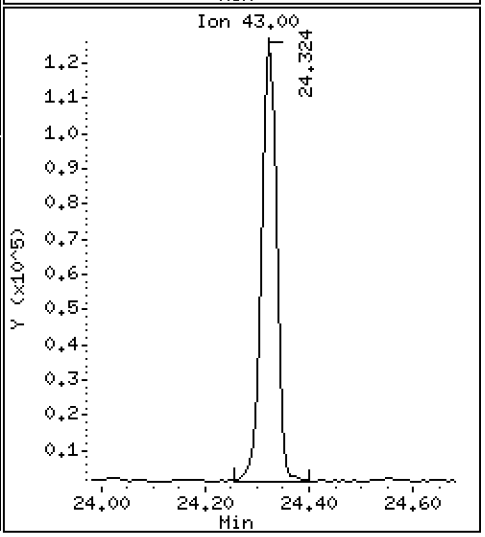


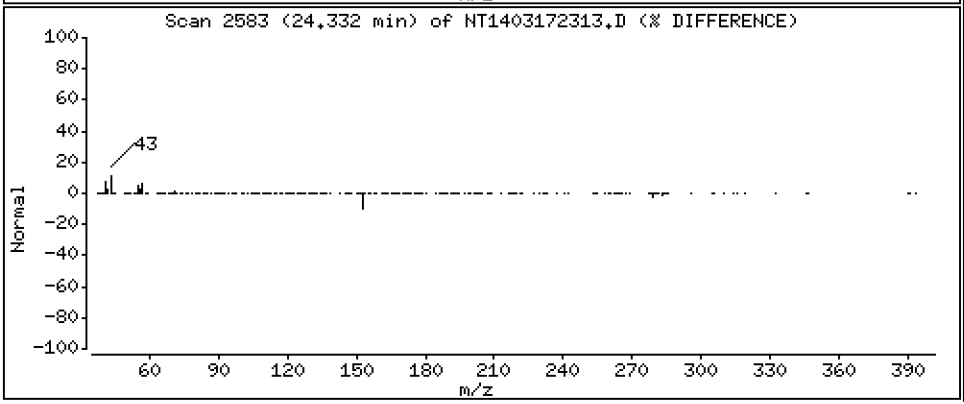












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

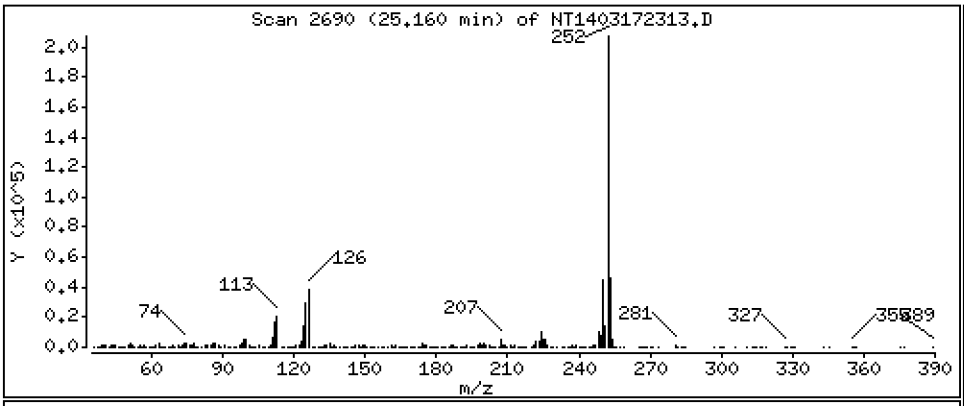
Operator: JGR

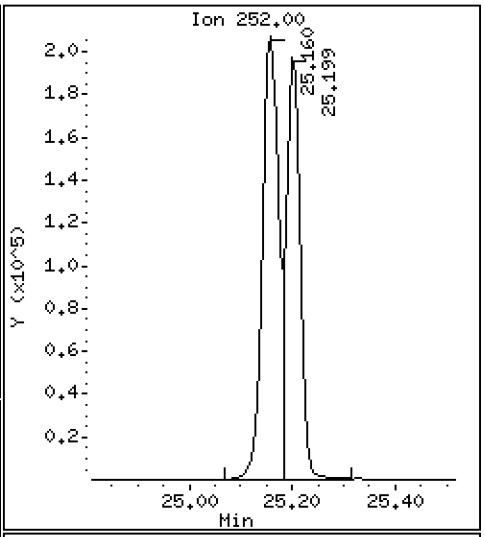
Column phase: ZB-5msi

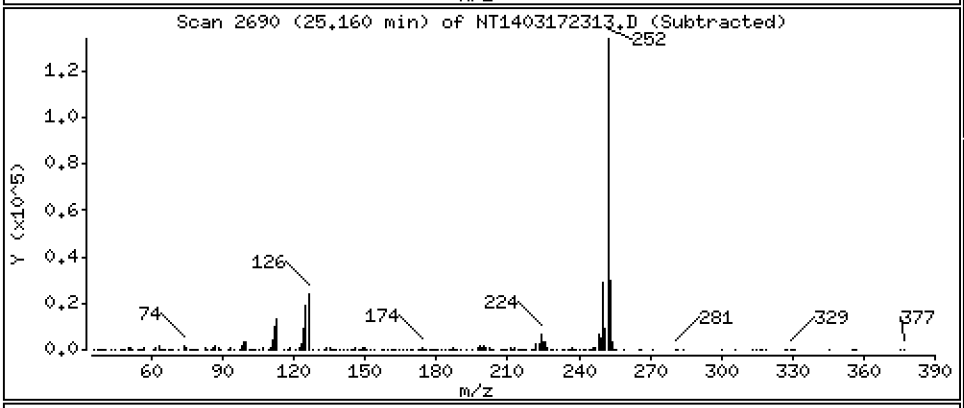
Column diameter: 0.25

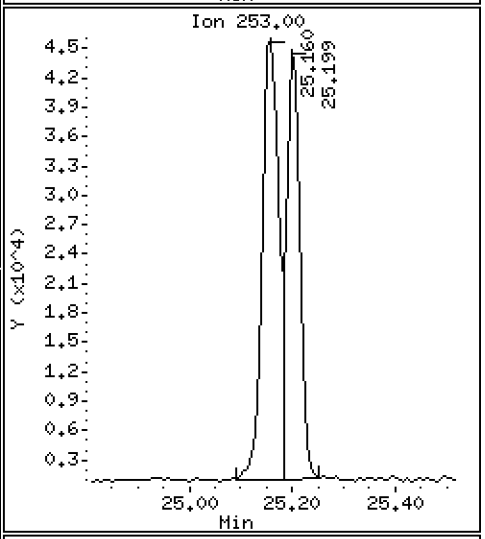
74 Benzo(b)fluoranthene

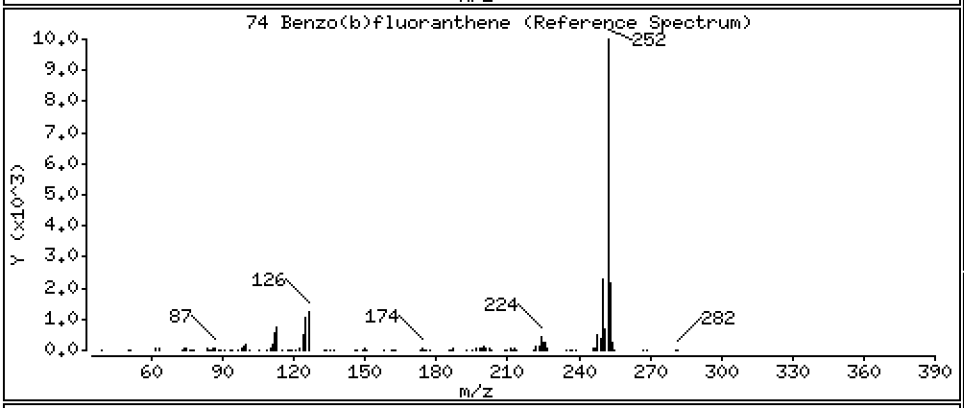
Concentration: 5.652 ug/mL

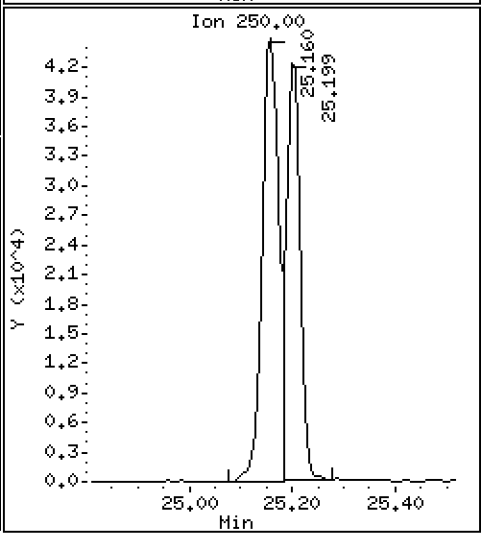


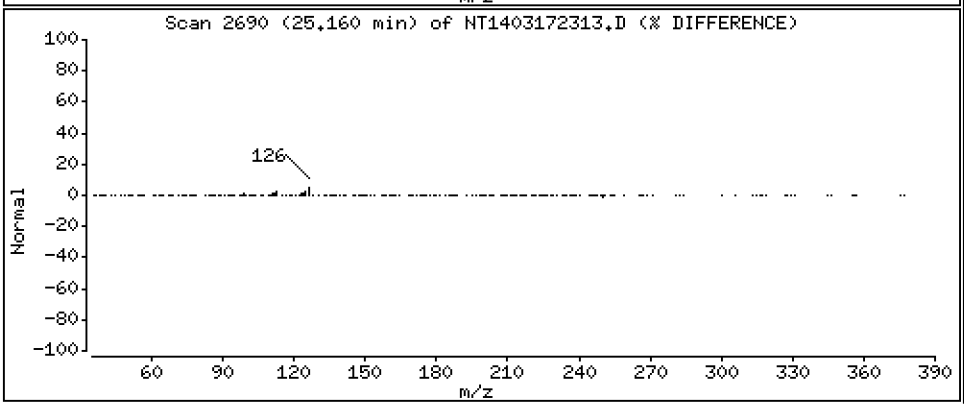












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

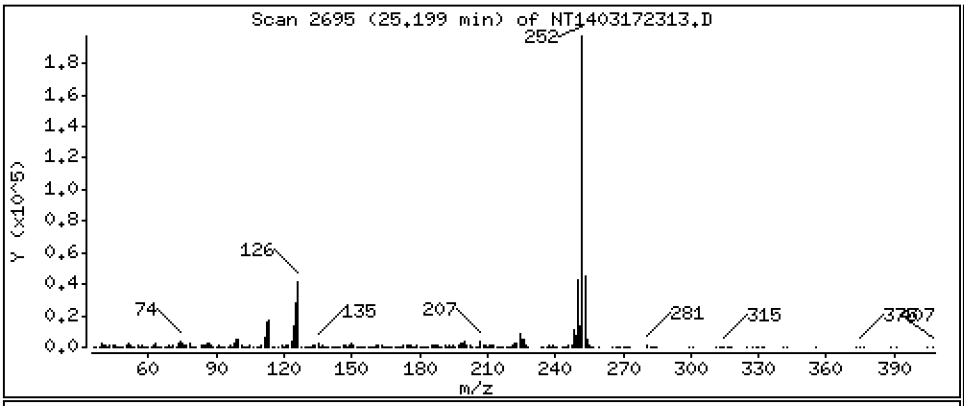
Operator: JGR

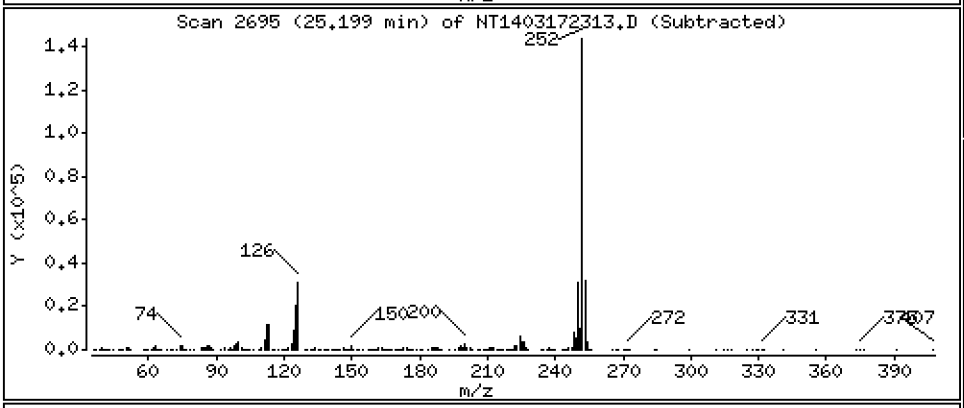
Column phase: ZB-5msi

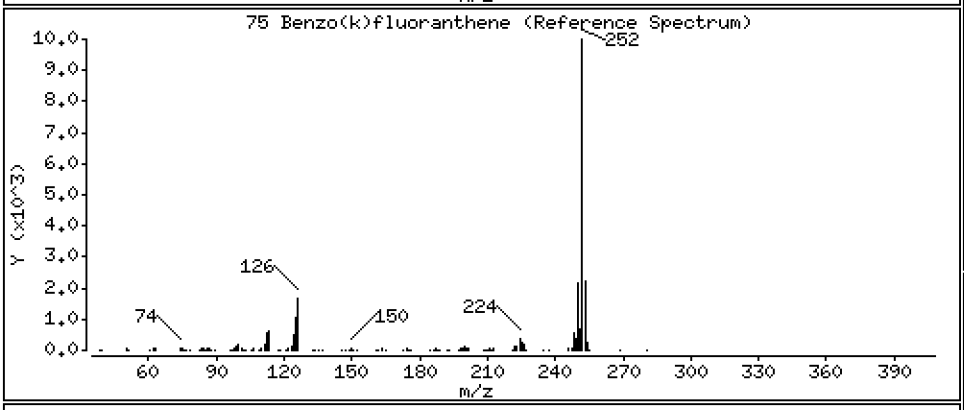
Column diameter: 0.25

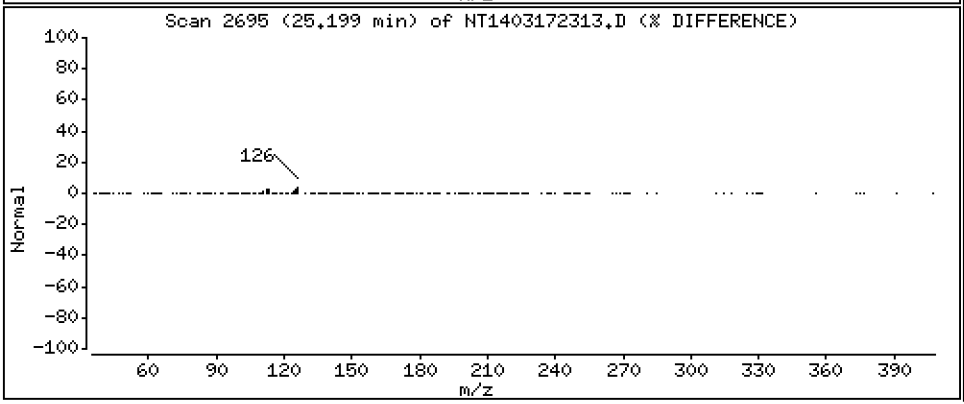
75 Benzo(k)fluoranthene

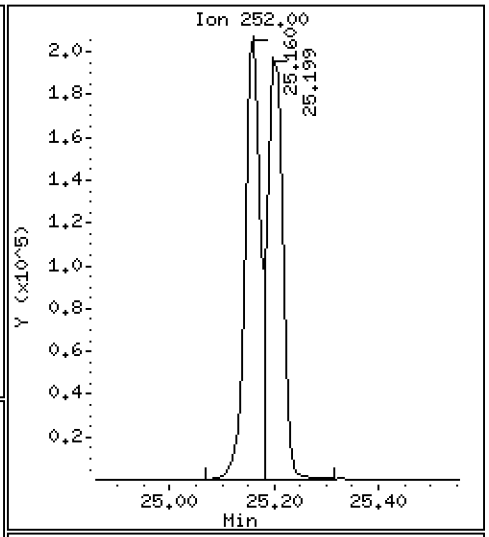
Concentration: 4.848 ug/mL

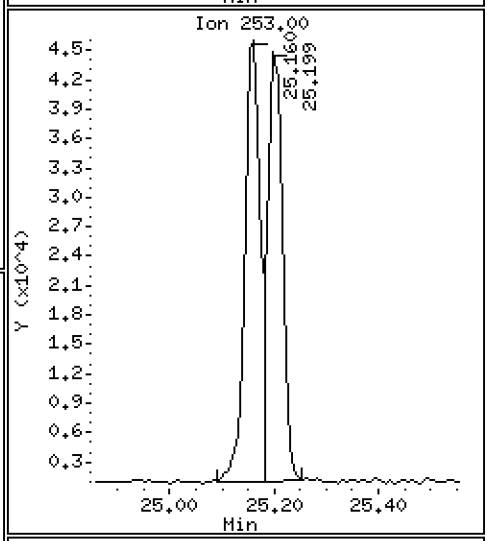


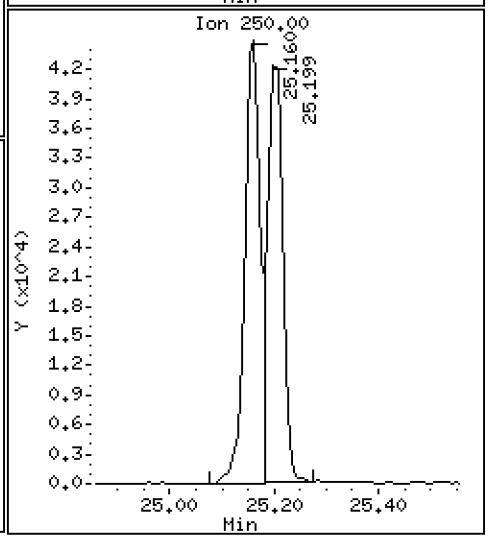












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

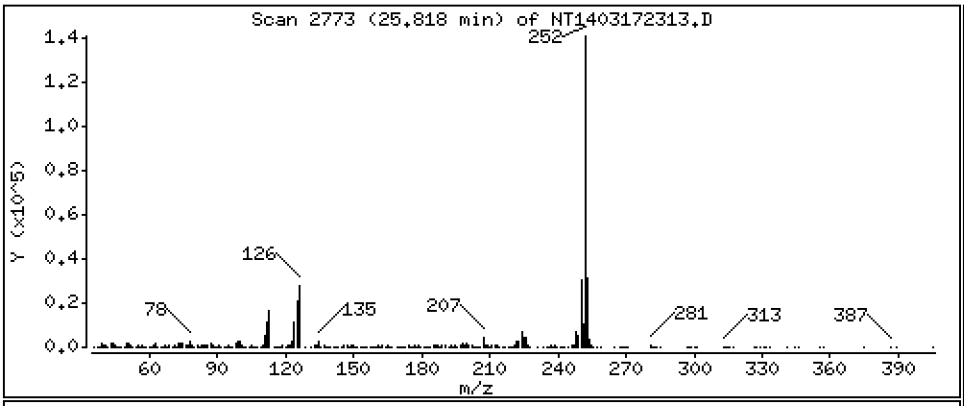
Operator: JGR

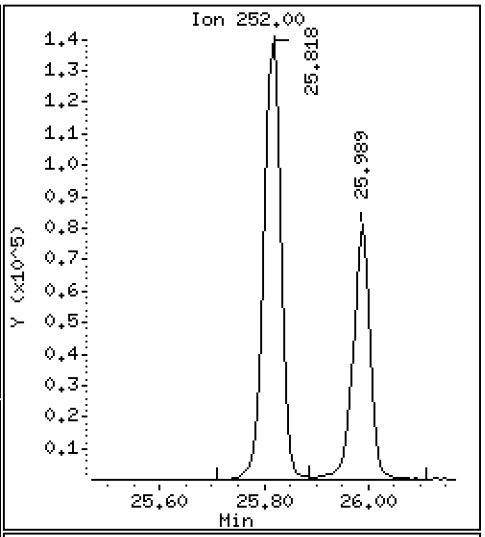
Column phase: ZB-5msi

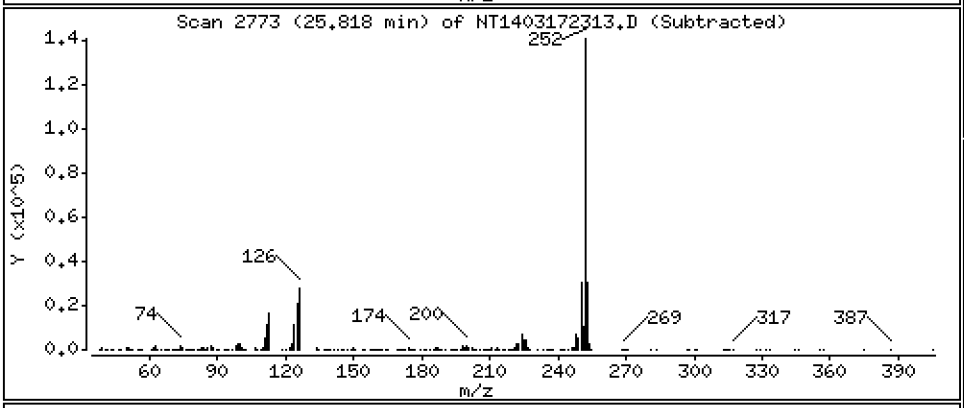
Column diameter: 0.25

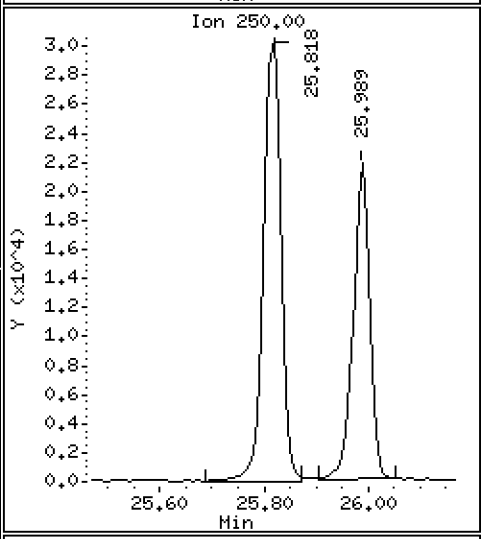
76 Benzo(a)pyrene

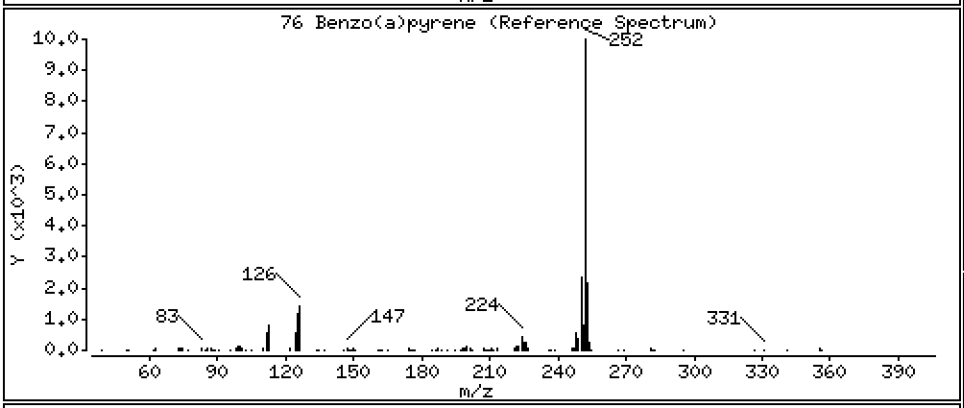
Concentration: 4.462 ug/mL

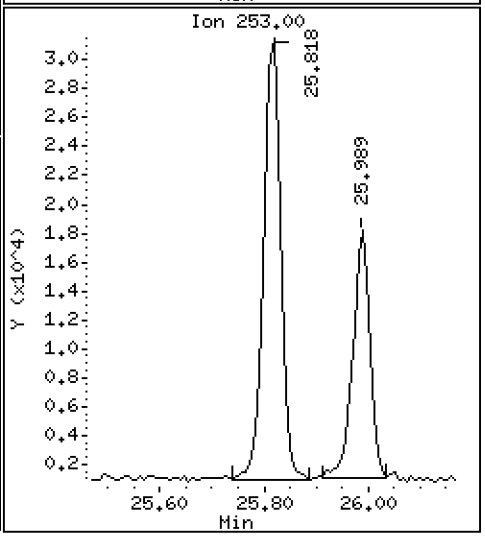


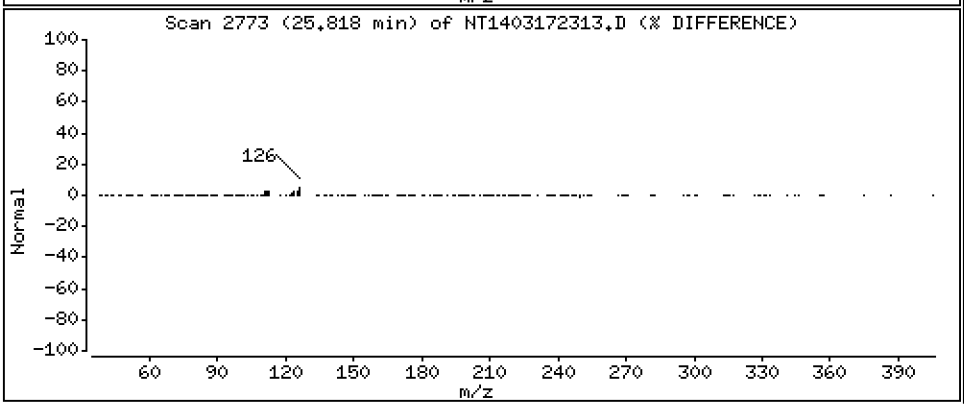












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

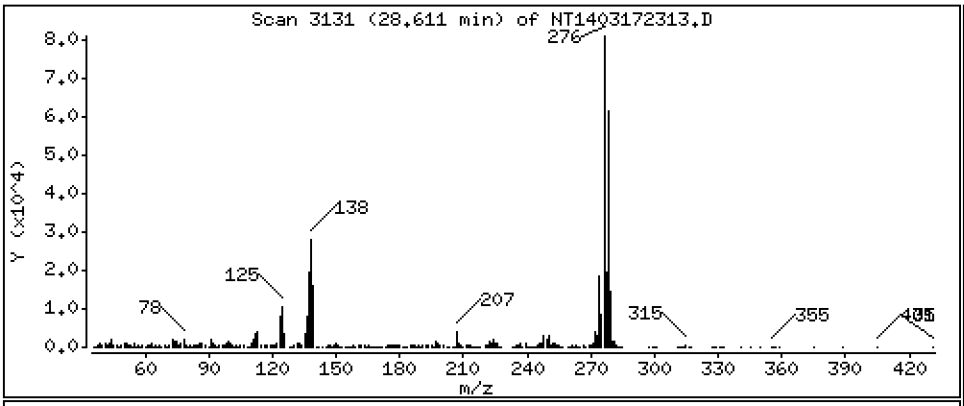
Operator: JGR

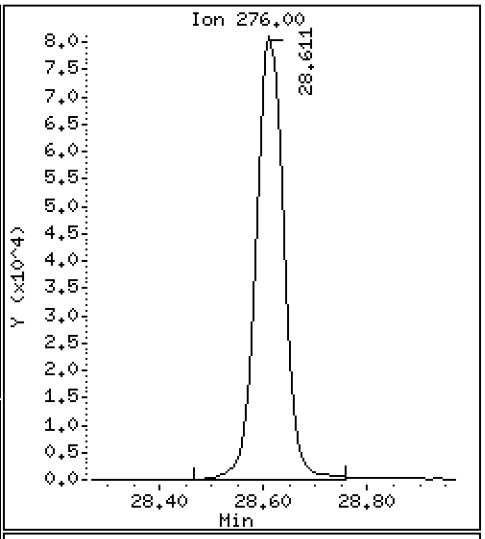
Column phase: ZB-5msi

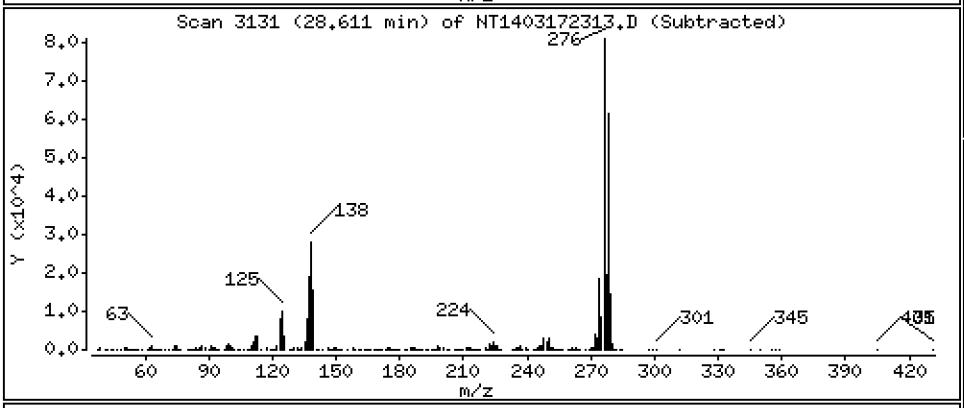
Column diameter: 0.25

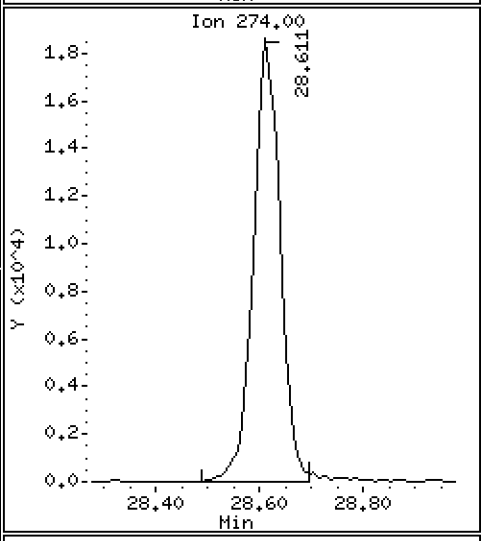
78 Indeno(1,2,3-cd)pyrene

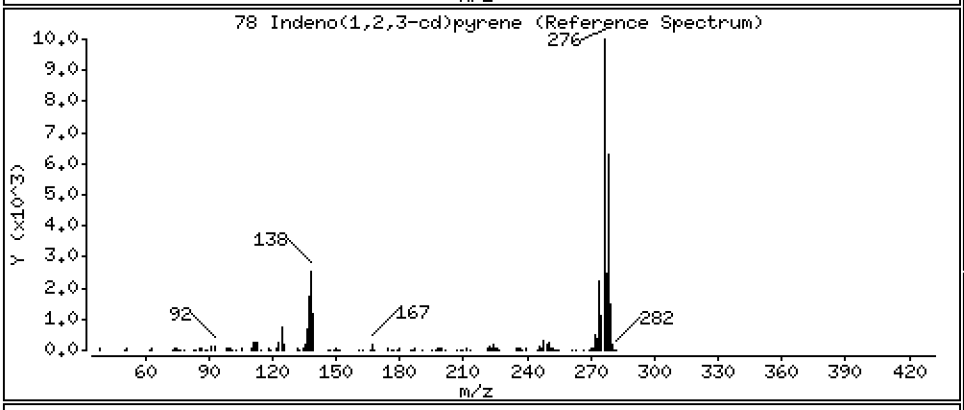
Concentration: 3.967 ug/mL

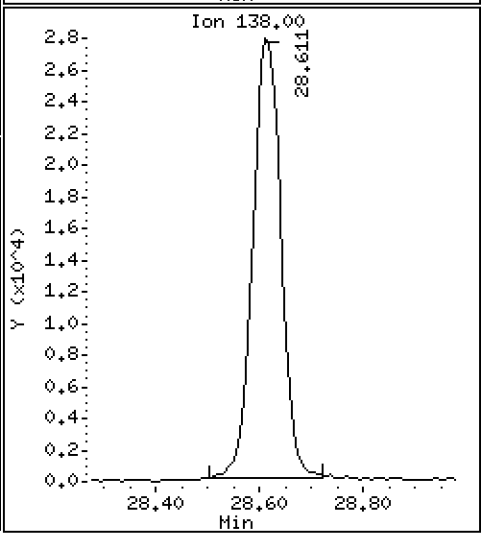


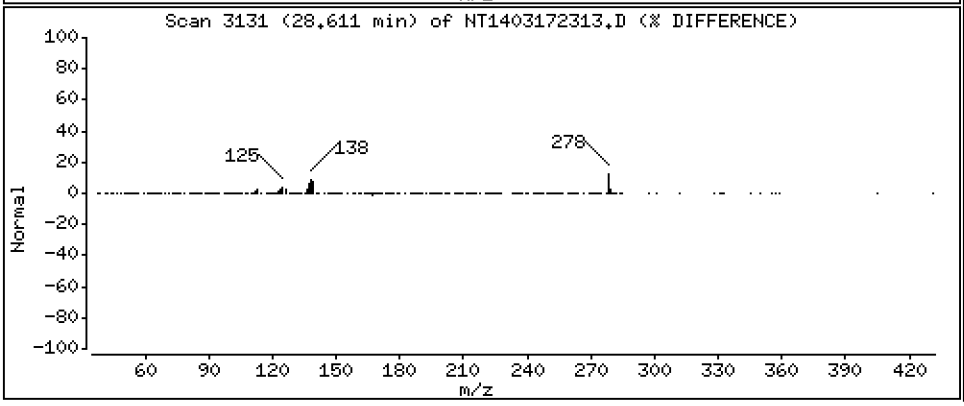












Date : 17-MAR-2023 21:42

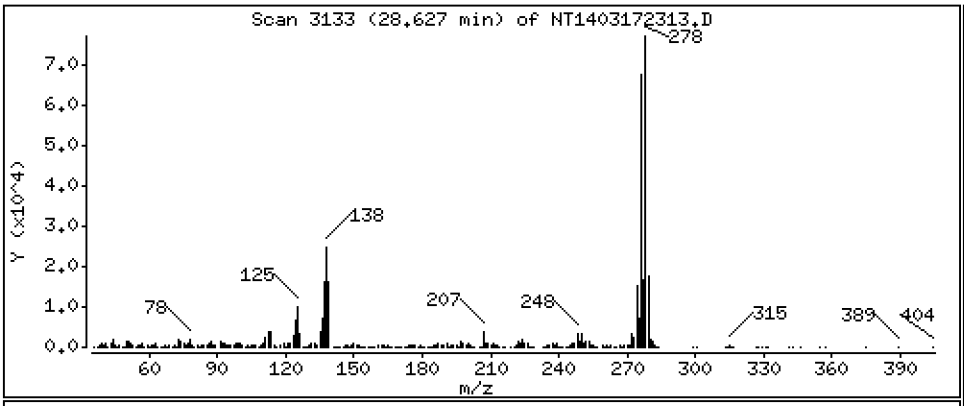
Client ID: Instrument: nt14.i

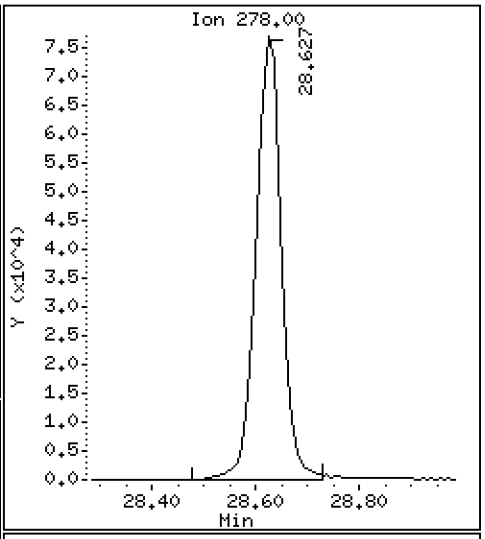
Sample Info: BLB0424-BS1

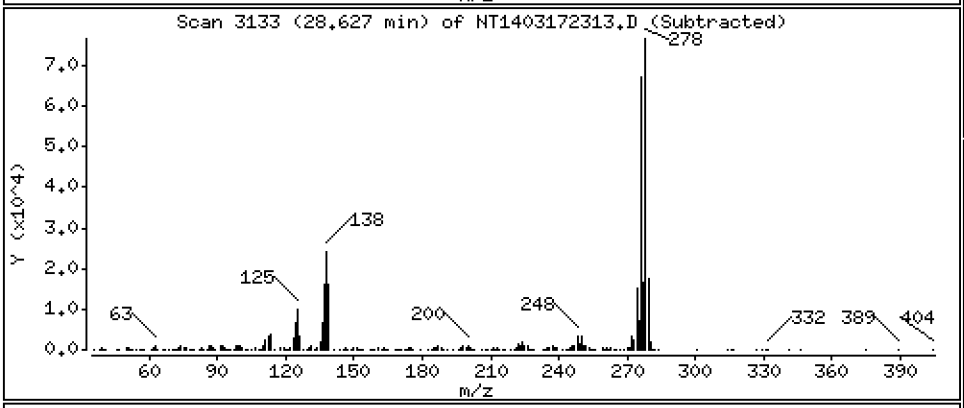
Operator: JGR

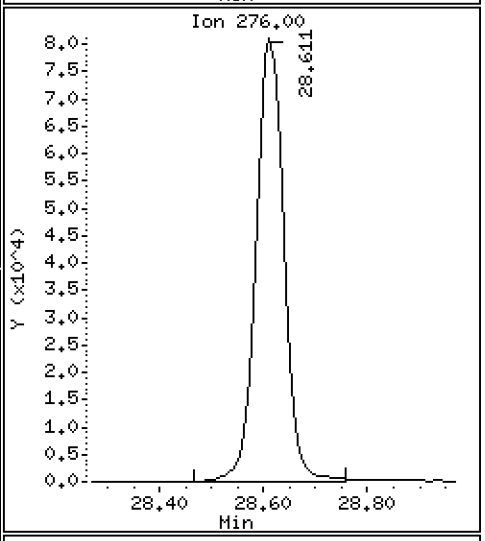
Column phase: ZB-5msi Column diameter: 0.25

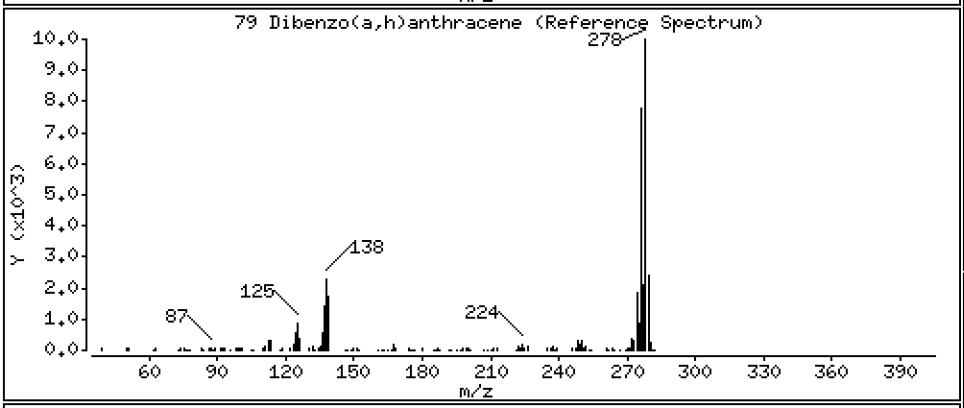
79 Dibenzo(a,h)anthracene Concentration: 4.053 ug/mL

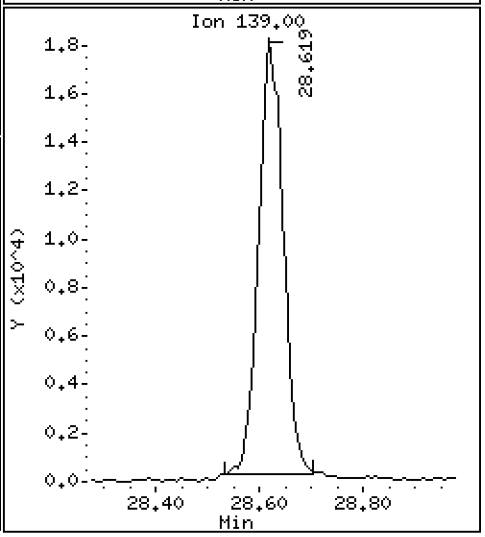


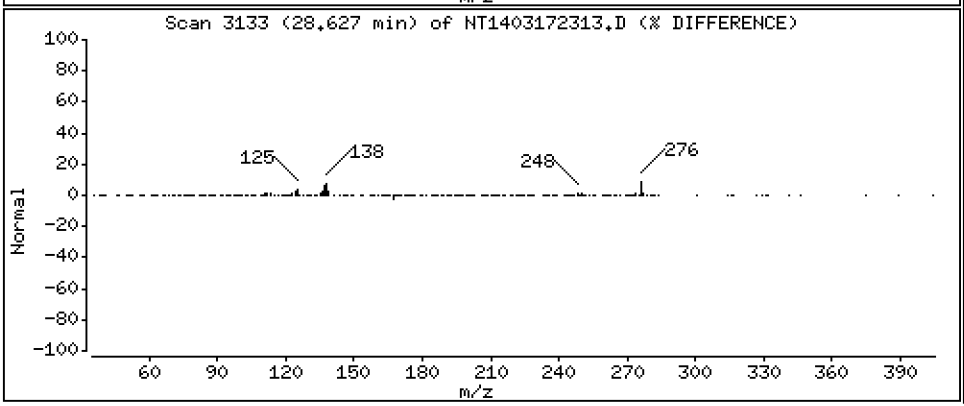












Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172313.D

Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

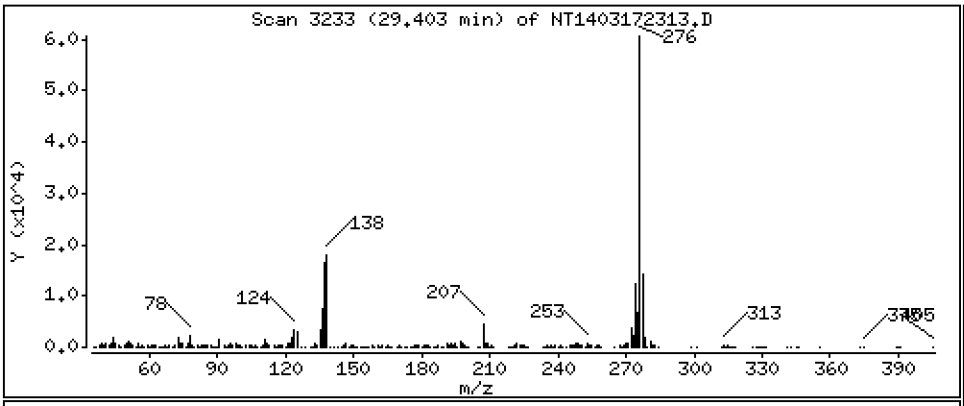
Operator: JGR

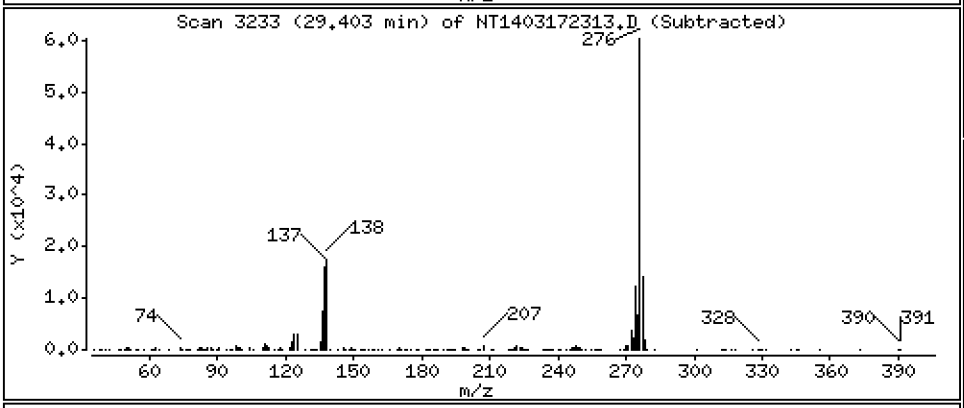
Column phase: ZB-5msi

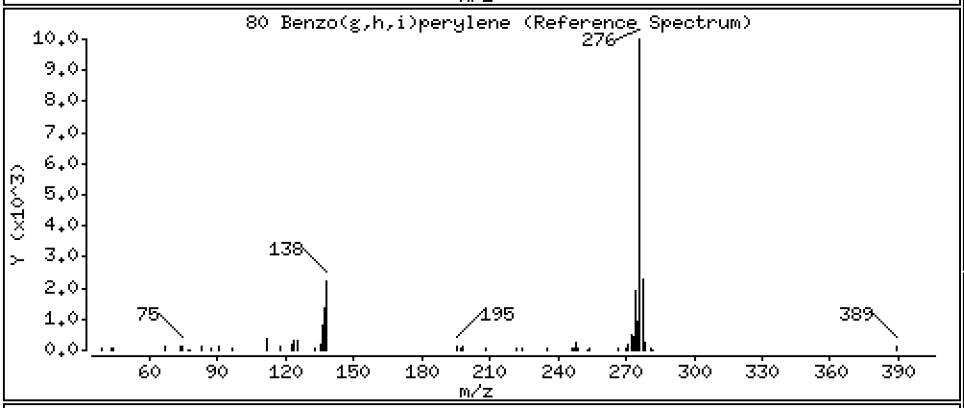
Column diameter: 0.25

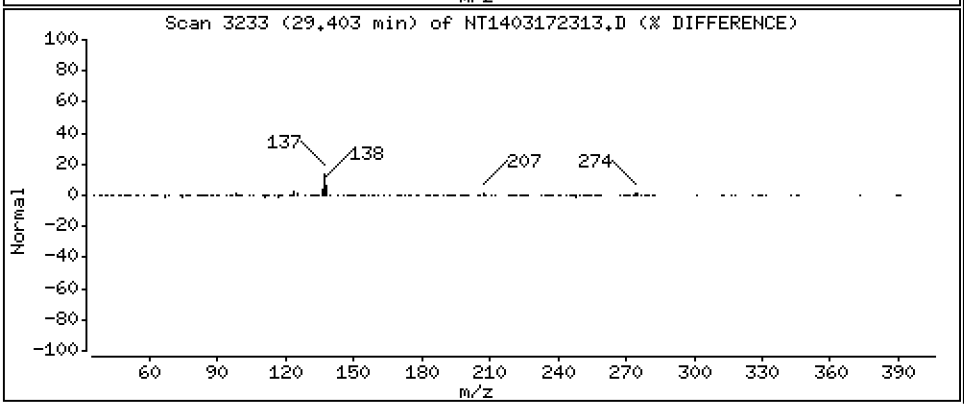
80 Benzo(g,h,i)perylene

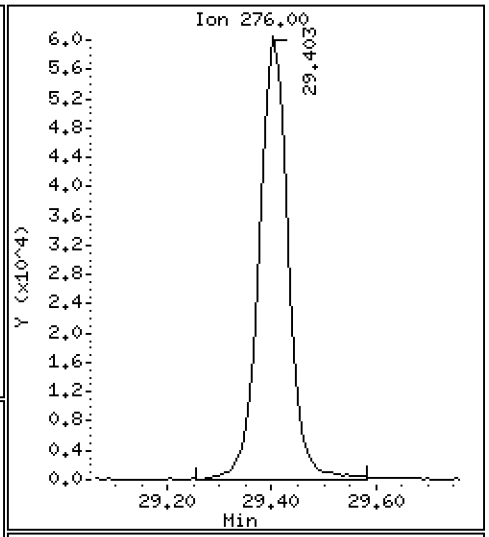
Concentration: 3.726 ug/mL

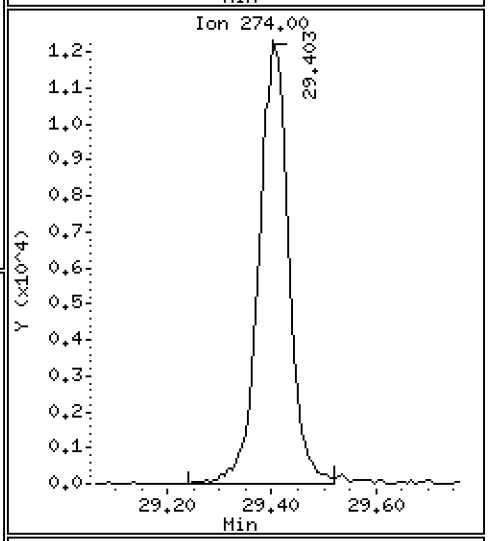


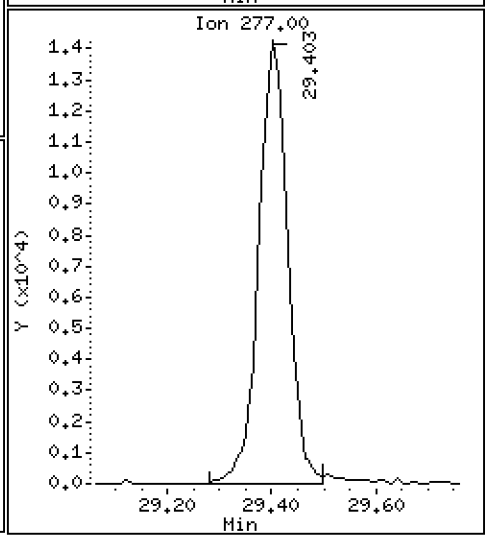












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

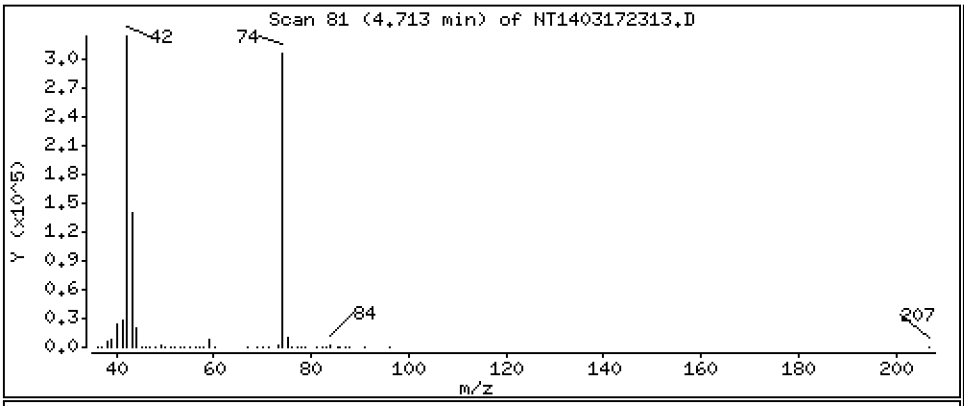
Operator: JGR

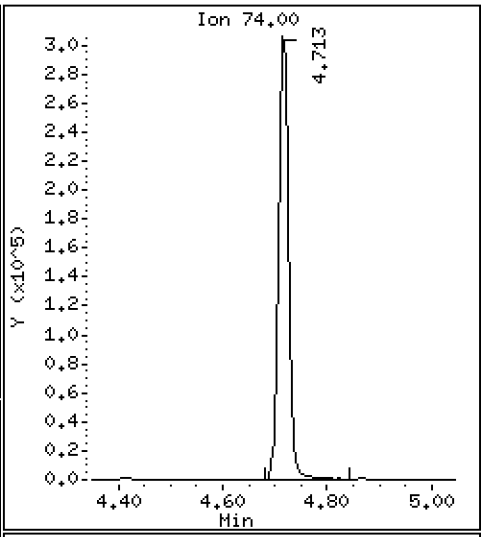
Column phase: ZB-5msi

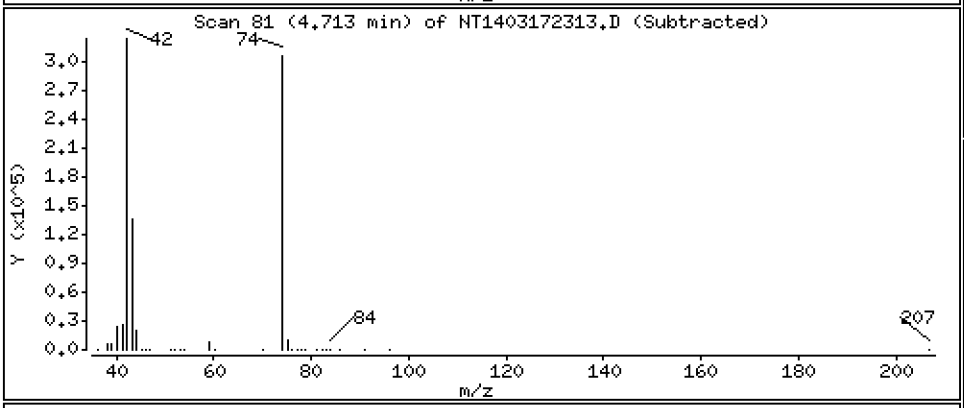
Column diameter: 0.25

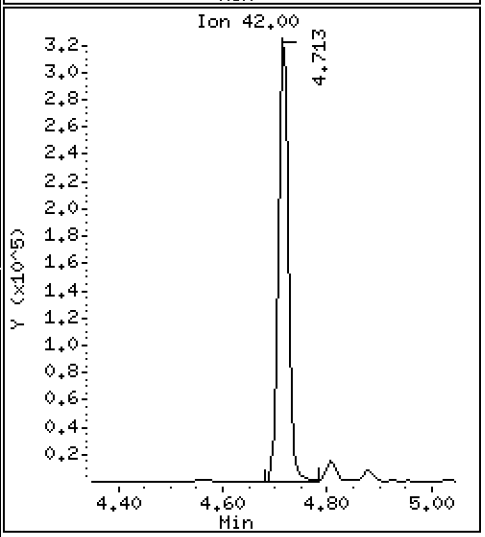
90 N-Nitrosodimethylamine

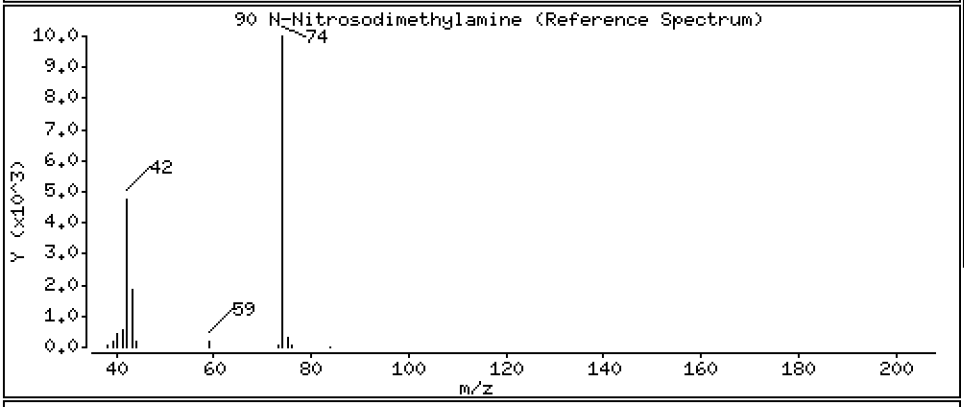
Concentration: 9.491 ug/mL

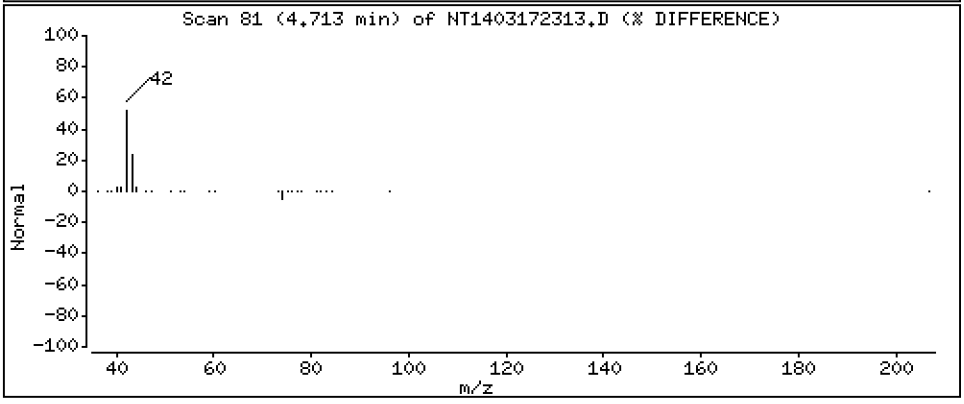












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

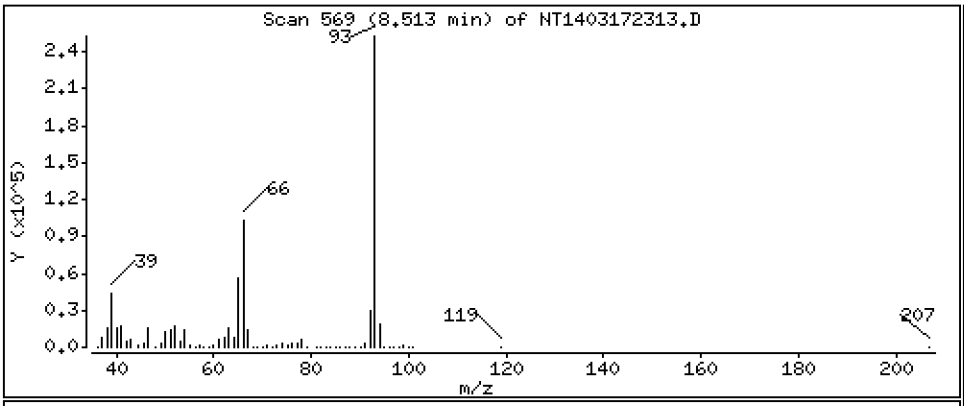
Operator: JGR

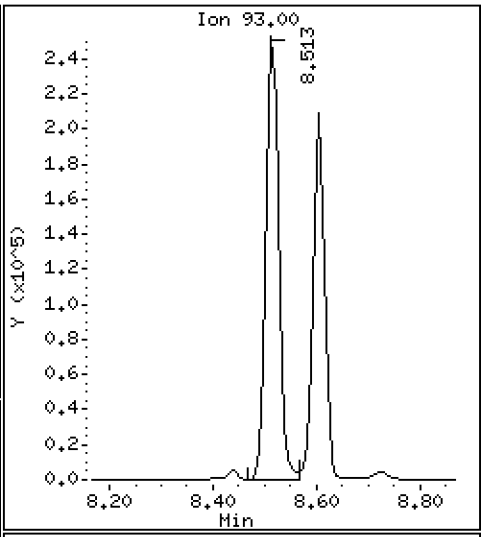
Column phase: ZB-5msi

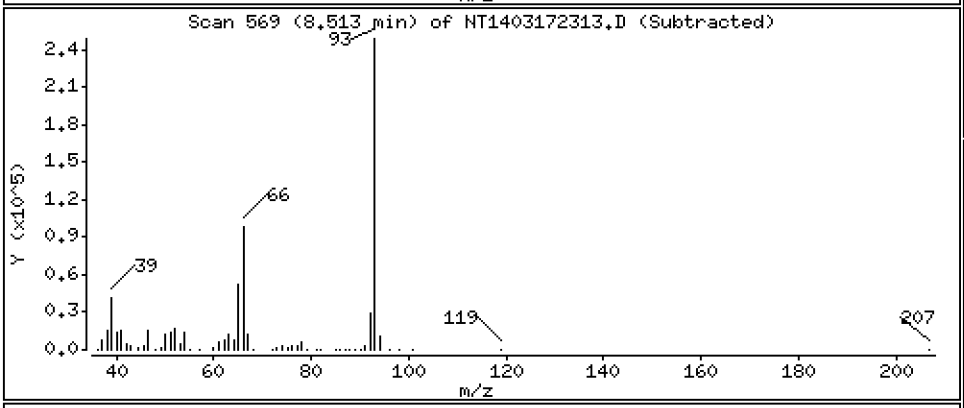
Column diameter: 0.25

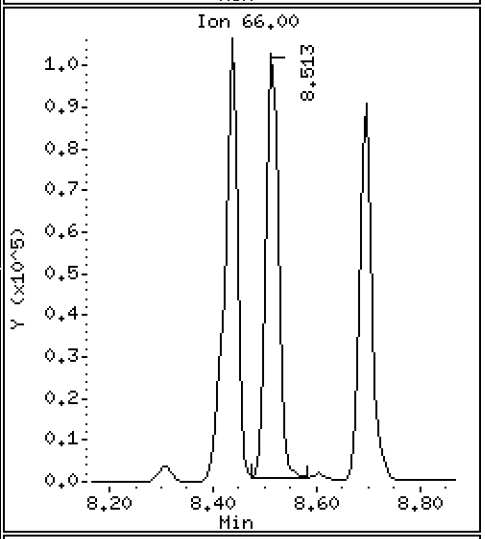
91 Aniline

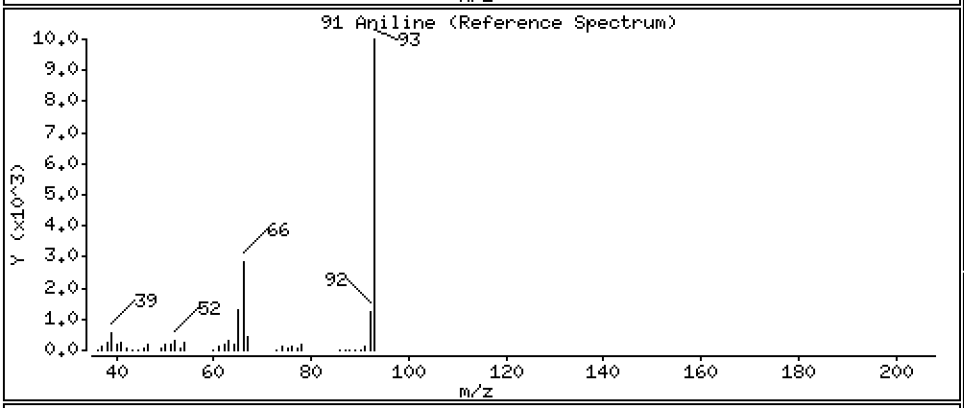
Concentration: 4.052 ug/mL

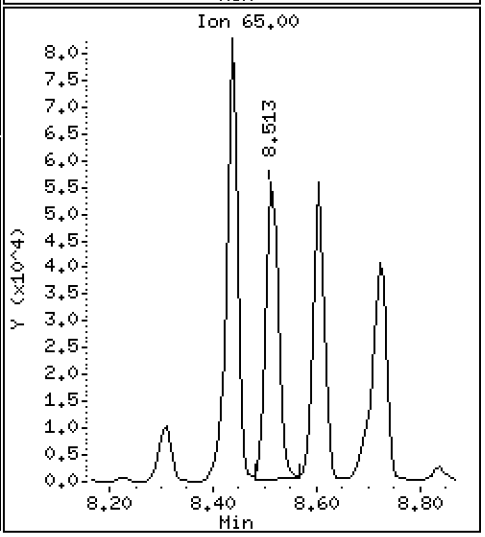


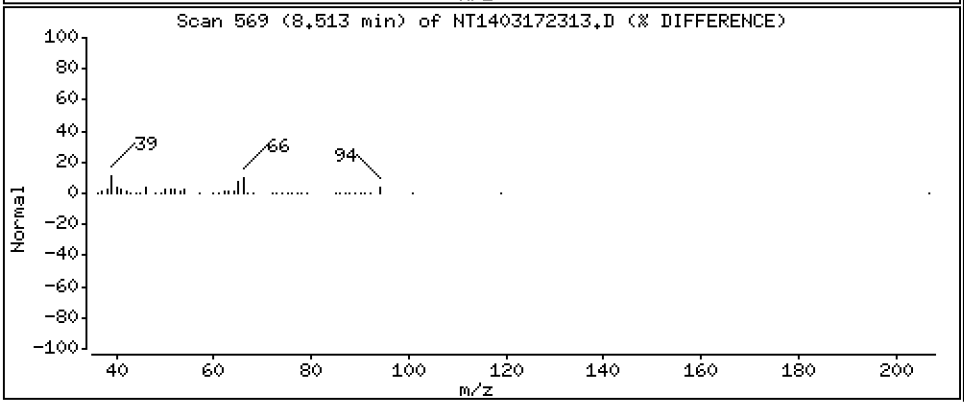












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

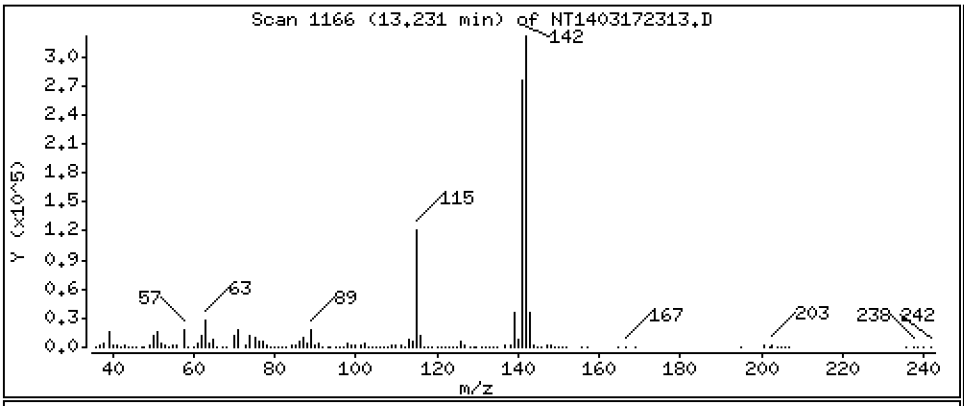
Operator: JGR

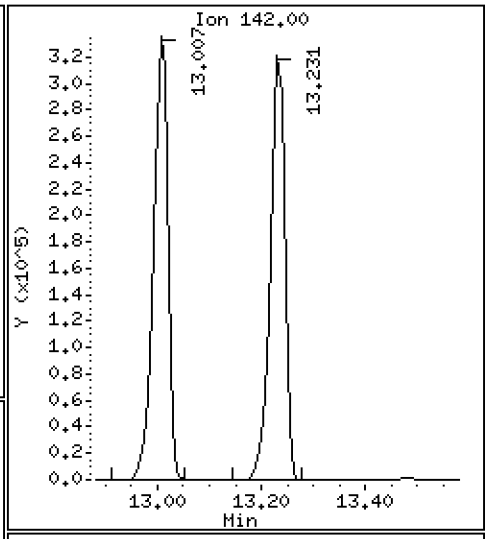
Column phase: ZB-5msi

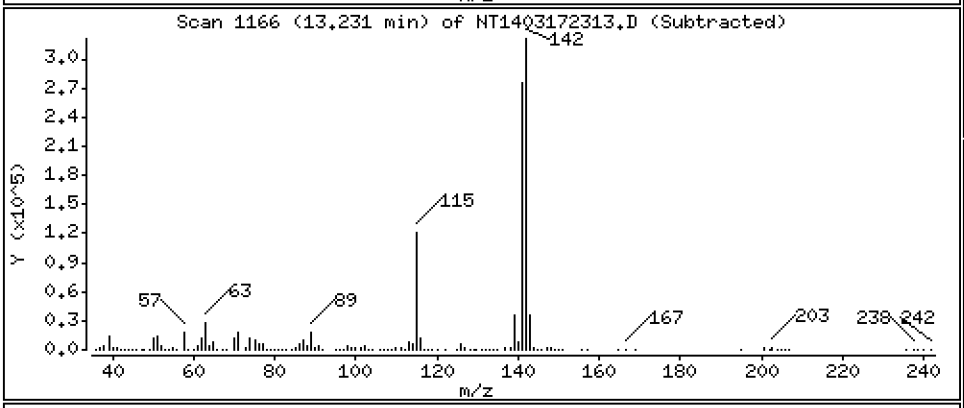
Column diameter: 0.25

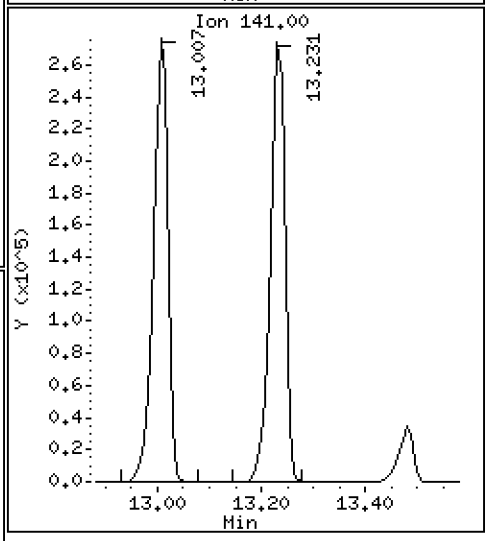
105 1-methylnaphthalene

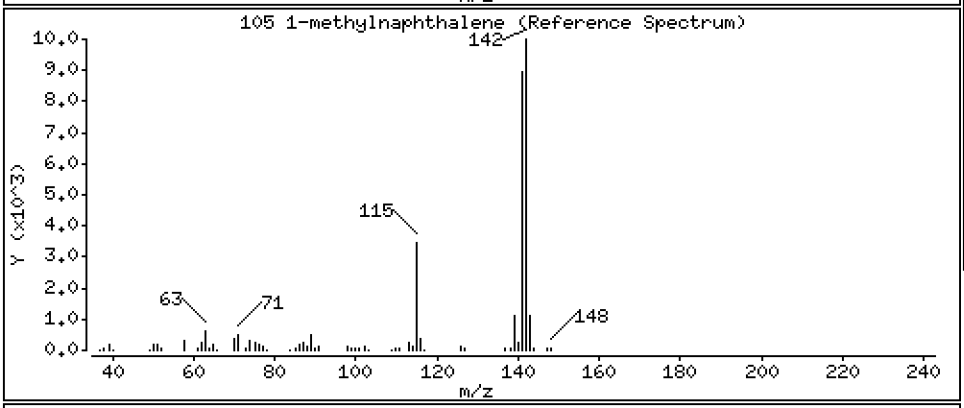
Concentration: 4.308 ug/mL

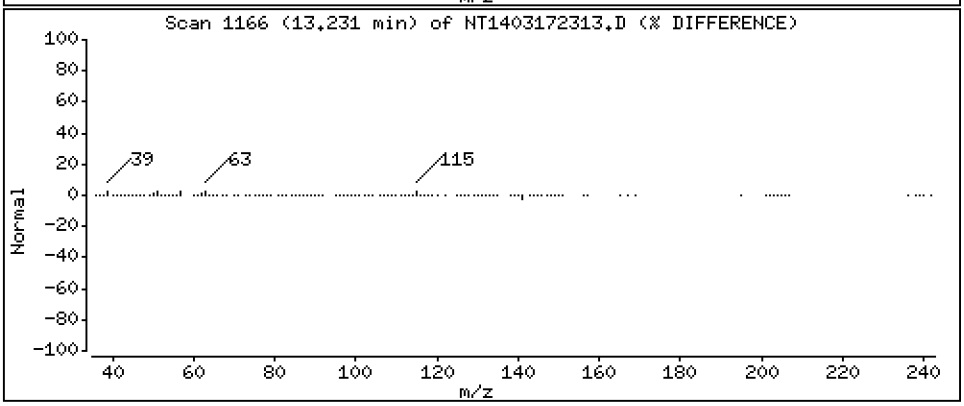












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

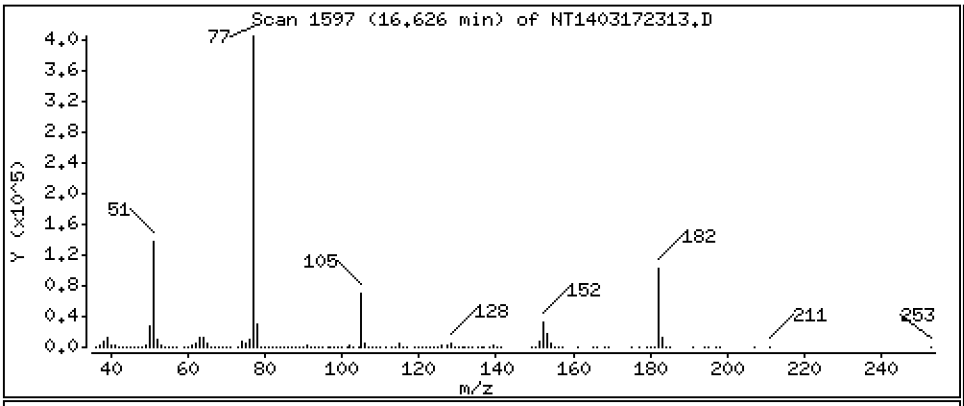
Operator: JGR

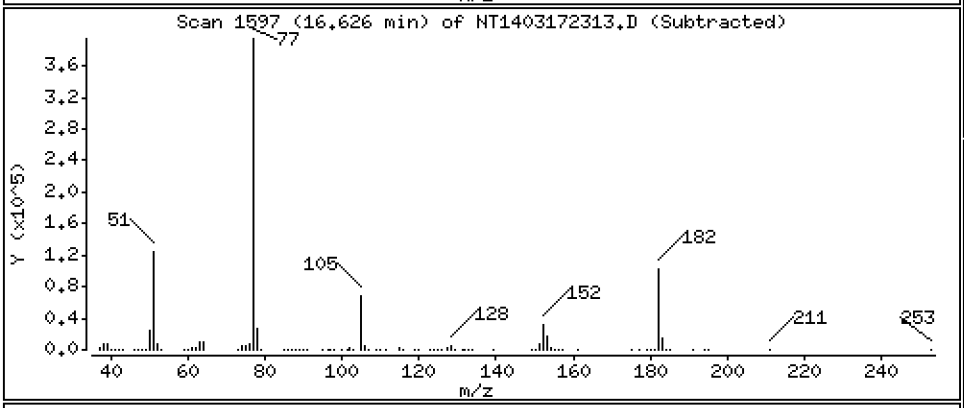
Column phase: ZB-5msi

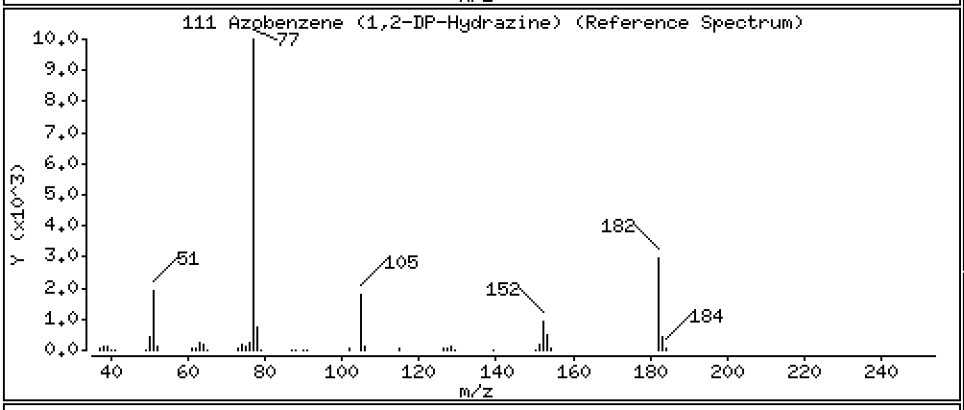
Column diameter: 0.25

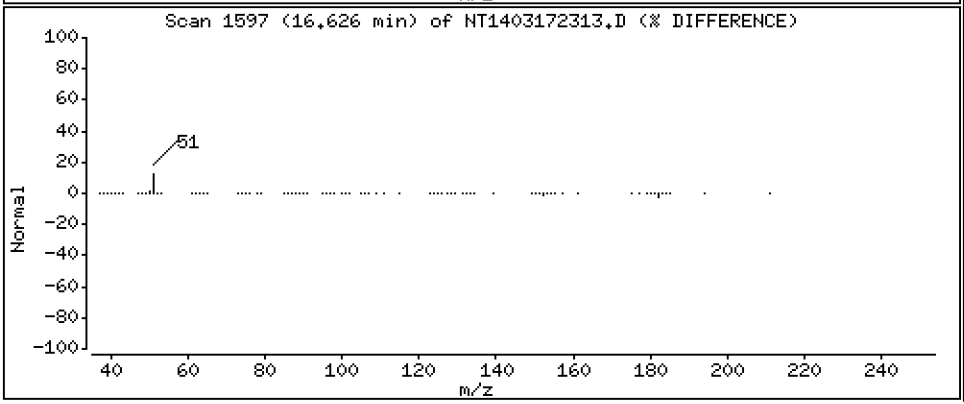
111 Azobenzene (1,2-DP-Hydrazine)

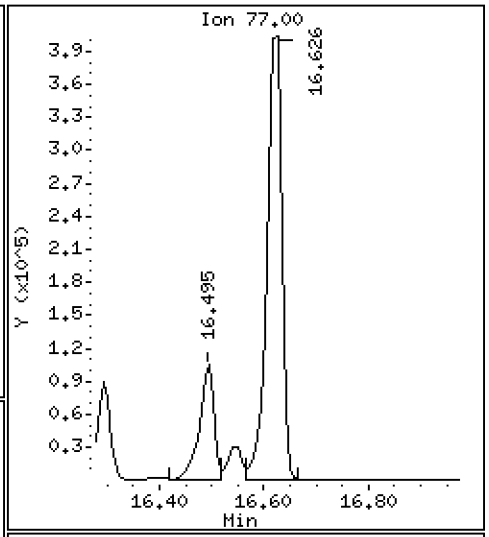
Concentration: 4.380 ug/mL

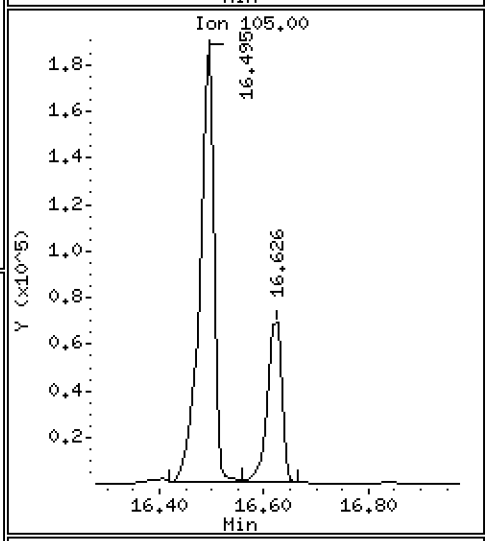


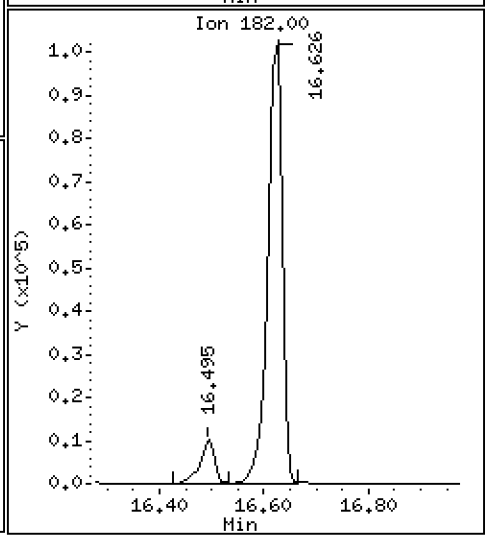












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

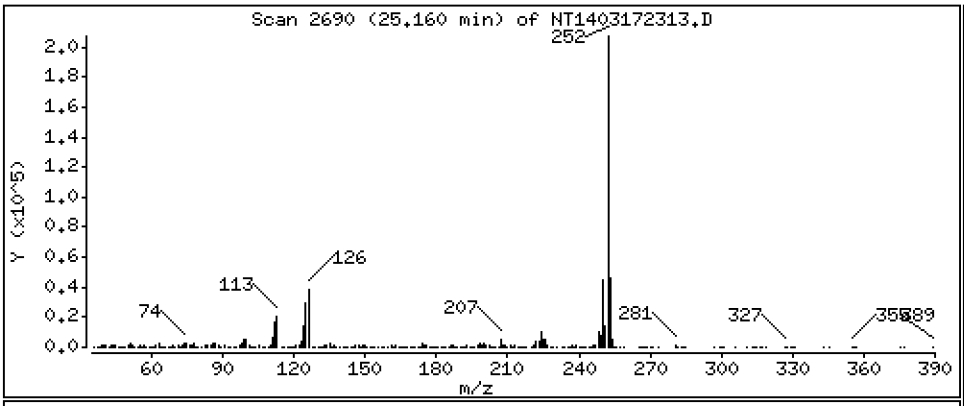
Operator: JGR

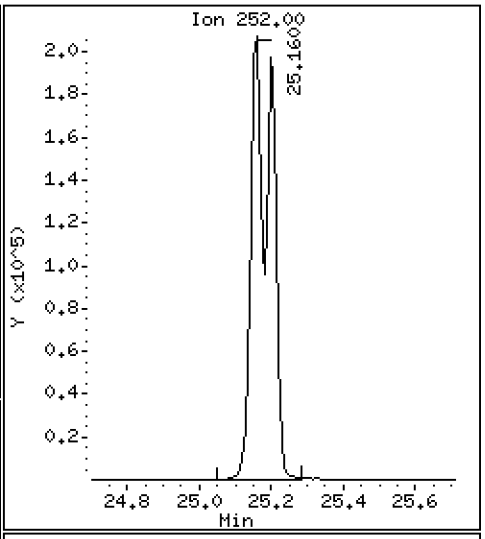
Column phase: ZB-5msi

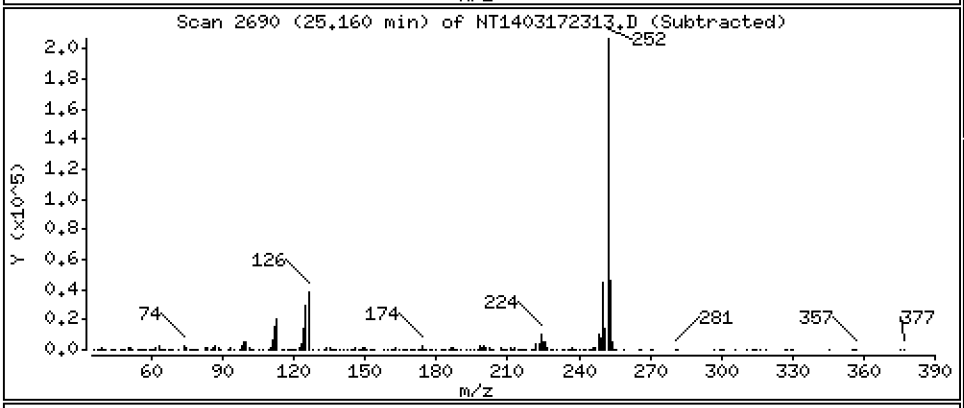
Column diameter: 0.25

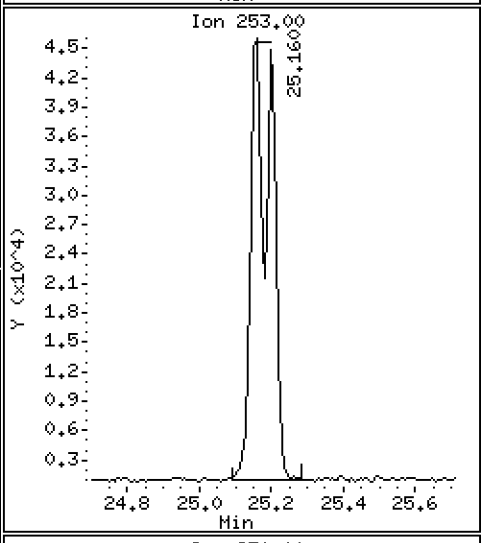
187 Total Benzofluoranthenes

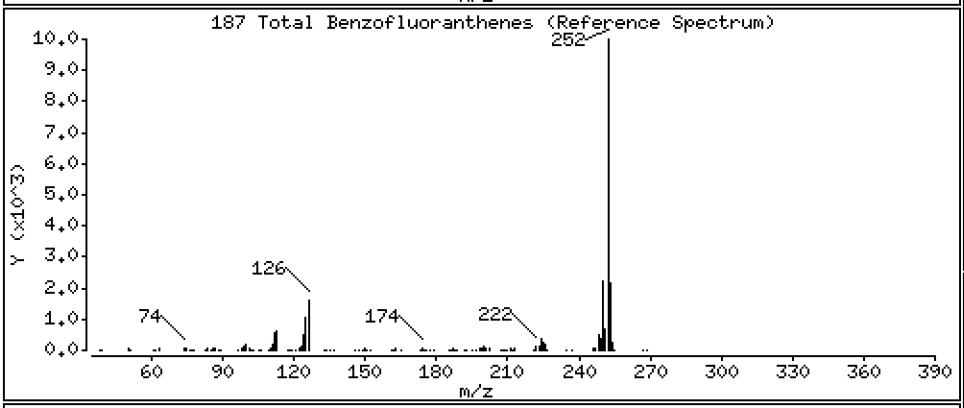
Concentration: 10.45 ug/mL

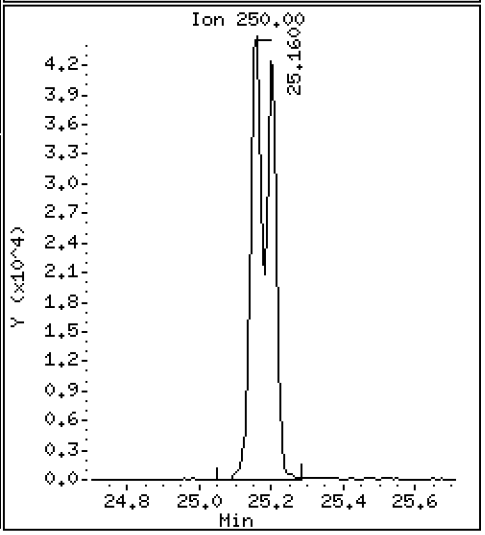


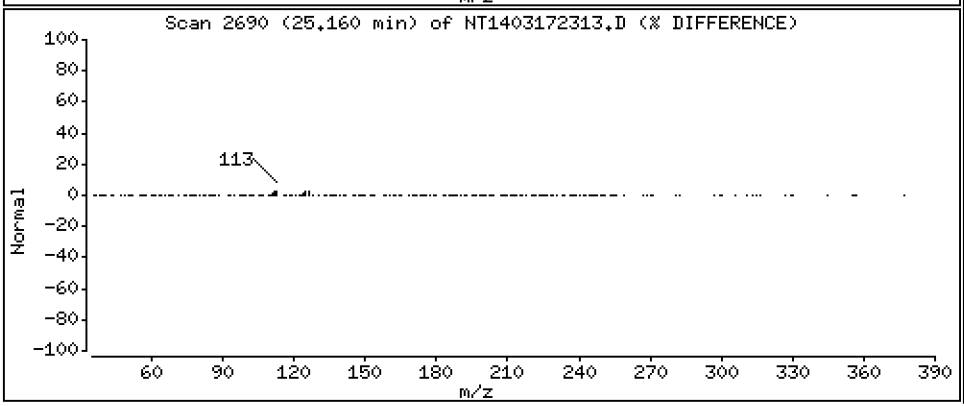












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS1

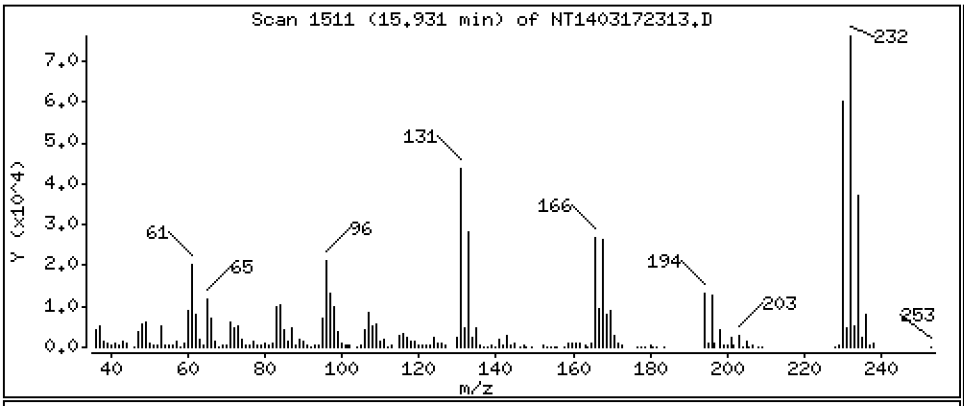
Operator: JGR

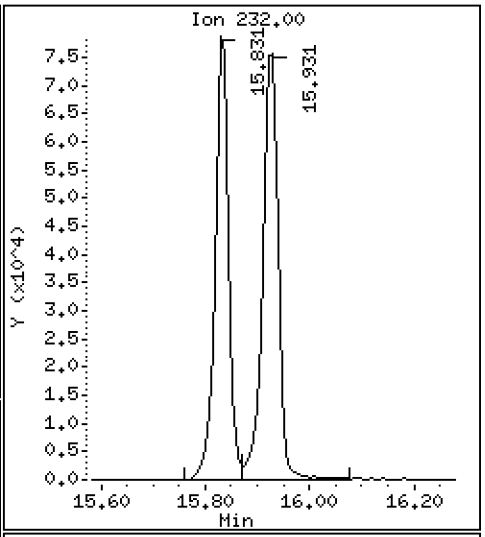
Column phase: ZB-5msi

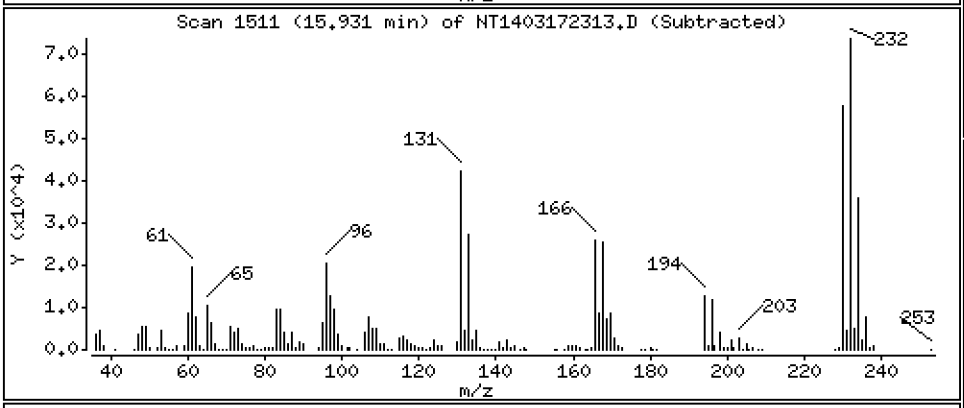
Column diameter: 0.25

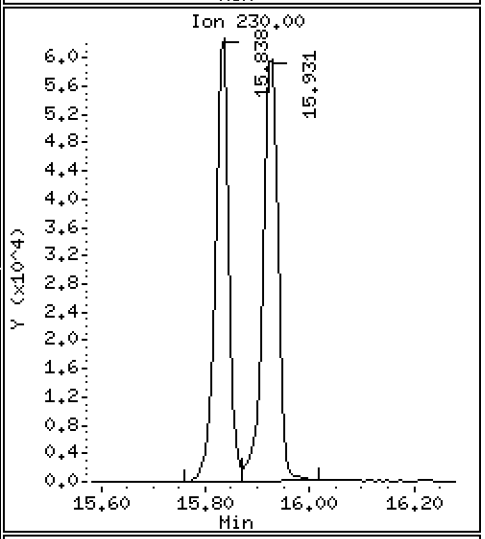
120 2,3,4,6-Tetrachlorophenol

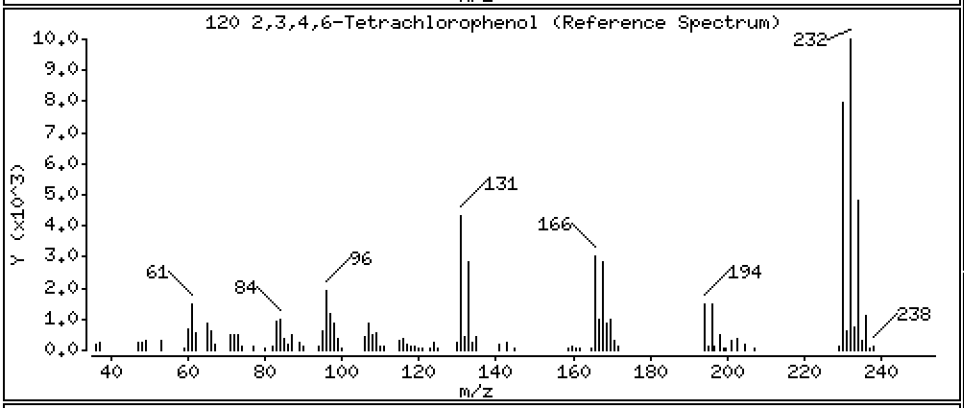
Concentration: 3.779 ug/mL

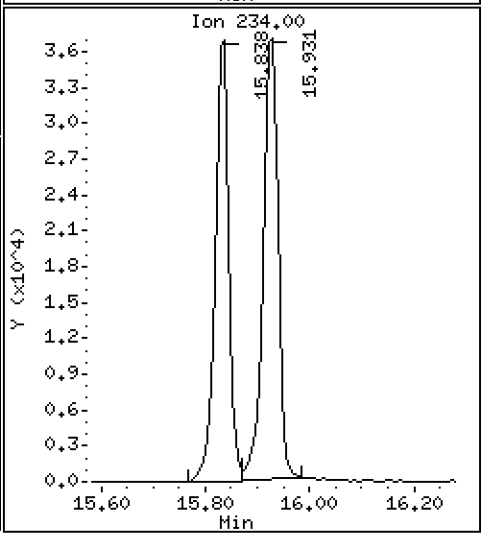


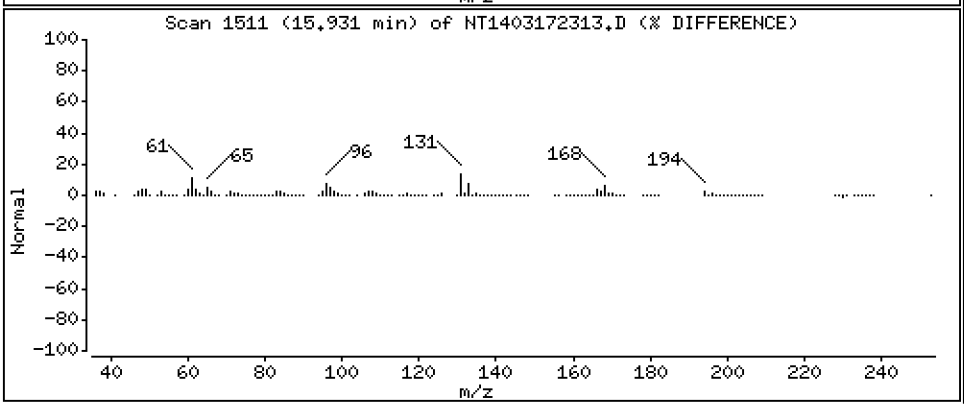












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230317.b\NT1403172313.D
Lab Smp Id: BLB0424-BS1
Inj Date : 17-MAR-2023 21:42 MS Autotune Date: 11-MAR-2023 16:01
Operator : JGR Inst ID: nt14.i
Smp Info : BLB0424-BS1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230317.b\ABN.m
Meth Date : 22-Mar-2023 08:03 van Quant Type: ISTD
Cal Date : 15-MAR-2023 15:50 Cal File: NT1403152308.D
Als bottle: 13
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)	
$	1 2-Fluorophenol	112	6.837	6.821	(1.000)	437850	6.11494	6.115	
$	2 Phenol-d5	99	8.413	8.412	(1.000)	560021	5.94055	5.941	
	3 Phenol	94	8.436	8.435	(1.000)	371418	3.70723	3.707	
$	5 2-Chlorophenol-d4	132	8.698	8.698	(1.000)	481517	6.47889	6.479	
	4 Bis(2-Chloroethyl)ether	93	8.606	8.605	(1.000)	311400	4.31637	4.316	
	6 2-Chlorophenol	128	8.729	8.729	(1.000)	297681	3.77505	3.775	
	7 1,3-Dichlorobenzene	146	9.000	9.000	(1.000)	310763	3.89314	3.893	
*	8 1,4-Dichlorobenzene-d4	152	9.062	9.062	(1.000)	210794	4.00000	(M)	
	9 1,4-Dichlorobenzene	146	9.093	9.093	(1.000)	306571	3.98753	3.988	
$	10 1,2-Dichlorobenzene-d4	152	9.427	9.426	(1.000)	206757	4.16410	4.164	
	12 1,2-Dichlorobenzene	146	9.450	9.450	(1.000)	306998	4.03982	4.040	
	11 Benzyl alcohol	108	9.334	9.333	(1.000)	189673	4.06661	4.067	
	14 2,2'-oxybis(1-Chloropropane)	121	9.644	9.644	(1.000)	107794	4.70086	4.701	
	13 2-Methylphenol	108	9.559	9.558	(1.000)	244801	3.45602	3.456	
	17 Hexachloroethane	117	10.048	10.055	(1.000)	139166	4.23228	4.232	
	16 N-Nitroso-di-n-propylamine	70	9.900	9.900	(1.000)	221411	3.97020	3.970	
	15 4-Methylphenol	108	9.831	9.830	(1.000)	290502	3.46387	3.464	
$	18 Nitrobenzene-d5	82	10.164	10.164	(0.879)	381804	4.43831	4.438	
	19 Nitrobenzene	77	10.195	10.203	(0.881)	357121	4.26475	4.265	
	20 Isophorone	82	10.653	10.653	(0.921)	640964	5.60603	5.606	
	21 2-Nitrophenol	139	10.832	10.831	(0.936)	172221	3.59093	3.591	
	22 2,4-Dimethylphenol	107	10.886	10.885	(0.941)	574647	8.02340	8.023	
	23 Bis(2-Chloroethoxy)methane	93	11.087	11.087	(0.959)	383095	4.97697	4.977	
	24 Benzoic acid	105	11.118	11.103	(0.961)	1308732	21.2378	21.24	
	25 2,4-Dichlorophenol	162	11.289	11.289	(0.976)	878093	15.4163	15.42	
	26 1,2,4-Trichlorobenzene	180	11.475	11.482	(0.992)	301082	4.29991	4.300	
*	27 Naphthalene-d8	136	11.567	11.567	(1.000)	812894	4.00000		
	28 Naphthalene	128	11.606	11.606	(1.003)	876120	4.03428	4.034	
	29 4-Chloroaniline	127	11.737	11.737	(1.015)	942915	10.3716	10.37	
	30 Hexachlorobutadiene	225	11.969	11.976	(1.035)	136157	4.30683	4.307	
	31 4-Chloro-3-methylphenol	107	12.697	12.696	(1.098)	1018084	14.7916	14.79	
	32 2-Methylnaphthalene	142	13.006	13.013	(1.124)	616101	4.06794	4.068	
	33 Hexachlorocyclopentadiene	237	13.478	13.478	(0.887)	395147	11.2794	11.28	

			QUANT SIG					CONCENTRATIONS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
	34	2,4,6-Trichlorophenol	196	13.633	13.633	(0.897)	635082	14.8538	14.85
	35	2,4,5-Trichlorophenol	196	13.703	13.702	(0.902)	676685	15.1882	15.19
$	36	2-Fluorobiphenyl	172	13.795	13.795	(0.908)	665357	4.35918	4.359
	37	2-Chloronaphthalene	162	14.004	14.012	(0.922)	562470	4.29955	4.300
	38	2-Nitroaniline	65	14.268	14.267	(0.939)	801878	15.8741	15.87
	39	Dimethylphthalate	163	14.701	14.701	(0.967)	659036	4.68923	4.689
	40	Acenaphthylene	152	14.887	14.879	(0.980)	884377	4.02478	4.025
	41	2,6-Dinitrotoluene	165	14.840	14.840	(0.977)	535593	16.4968	16.50
*	42	Acenaphthene-d10	164	15.196	15.196	(1.000)	421466	4.00000	
	43	3-Nitroaniline	138	15.127	15.126	(0.995)	652952	14.5781	14.58
	44	Acenaphthene	153	15.266	15.265	(1.005)	539080	4.20201	4.202
	45	2,4-Dinitrophenol	184	15.335	15.335	(1.009)	656970	25.0126	25.01
	46	Dibenzofuran	168	15.591	15.590	(1.026)	790831	4.31785	4.318
	47	4-Nitrophenol	109	15.436	15.435	(1.016)	326648	13.7780	13.78
	48	2,4-Dinitrotoluene	165	15.652	15.652	(1.030)	742584	16.1352	16.14
	50	Diethylphthalate	149	16.163	16.170	(1.064)	798353	5.49429	5.494
	49	Fluorene	166	16.309	16.309	(1.073)	732759	4.22063	4.221
	51	4-Chlorophenyl-phenylether	204	16.294	16.301	(1.072)	340916	4.57456	4.575
	52	4-Nitroaniline	138	16.402	16.394	(1.079)	556256	14.2789	14.28
	53	4,6-Dinitro-2-methylphenol	198	16.494	16.494	(0.904)	755914	29.7240	29.72
	54	N-Nitrosodiphenylamine	169	16.548	16.548	(0.907)	402868	4.20383	4.204
$	55	2,4,6-Tribromophenol	330	16.841	16.841	(1.108)	114761	7.17195	7.172
	56	4-Bromophenyl-phenylether	248	17.304	17.304	(0.949)	169160	5.23557	5.236
	57	Hexachlorobenzene	284	17.621	17.620	(0.966)	159532	4.67949	4.679
	58	Pentachlorophenol	266	17.977	17.976	(0.986)	348747	14.2506	14.25
*	59	Phenanthrene-d10	188	18.240	18.247	(1.000)	705582	4.00000	
	60	Phenanthrene	178	18.286	18.294	(1.003)	898725	4.45810	4.458
	61	Anthracene	178	18.387	18.387	(1.008)	735933	3.78913	3.789
	62	Carbazole	167	18.712	18.711	(1.026)	802835	4.64592	4.646
	63	Di-n-butylphthalate	149	19.509	19.508	(1.070)	1182085	5.39669	5.397
	64	Fluoranthene	202	20.677	20.677	(0.888)	897485	6.26762	6.268
	65	Pyrene	202	21.103	21.102	(0.906)	878033	5.97924	5.979
$	66	Terphenyl-d14	244	21.389	21.389	(0.918)	638570	6.42355	6.424
	67	Butylbenzylphthalate	149	22.310	22.310	(0.958)	429507	6.67604	6.676
	68	Benzo(a)anthracene	228	23.263	23.270	(0.999)	592200	4.56322	4.563
*	69	Chrysene-d12	240	23.294	23.293	(1.000)	351965	4.00000	
	70	3,3'-Dichlorobenzidine	252	23.216	23.224	(0.997)	489256	12.6493	12.65
	71	Chrysene	228	23.340	23.340	(1.002)	542595	4.61967	4.620
	72	bis(2-Ethylhexyl)phthalate	149	23.332	23.332	(0.960)	566153	6.07579	6.076
*	134	Di-n-octylphthalate-d4	153	24.316	24.323	(1.000)	707847	4.00000	
	73	Di-n-octylphthalate	149	24.331	24.331	(1.001)	917814	5.04391	5.044
	74	Benzo(b)fluoranthene	252	25.160	25.159	(0.970)	459704	5.65195	5.652
	75	Benzo(k)fluoranthene	252	25.198	25.205	(0.972)	390865	4.84778	4.848
	76	Benzo(a)pyrene	252	25.818	25.817	(0.996)	310339	4.46192	4.462
*	77	Perylene-d12	264	25.934	25.933	(1.000)	230171	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	28.611	28.618	(1.103)	300281	3.96666	3.967
	79	Dibenzo(a,h)anthracene	278	28.626	28.633	(1.104)	258576	4.05291	4.053
	80	Benzo(g,h,i)perylene	276	29.403	29.410	(1.134)	232435	3.72562	3.726
	90	N-Nitrosodimethylamine	74	4.712	4.697	(1.000)	430431	9.49134	9.491
	91	Aniline	93	8.513	8.513	(1.000)	408299	4.05190	4.052
	93	Benzidine	184	Compound Not Detected.					
	103	Pyridine	79	Compound Not Detected.					
	105	1-methylnaphthalene	142	13.231	13.230	(1.144)	591140	4.30812	4.308
	111	Azobenzene (1,2-DP-Hydrazine)	77	16.626	16.625	(1.094)	759987	4.37995	4.380

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.160	25.205	(0.970)	807123	10.4487	10.45
120 2,3,4,6-Tetrachlorophenol	232	15.931	15.930	(1.048)	164904	3.77863	3.779

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1403172313.D
Lab Smp Id: BLB0424-BS1
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt14.i\20230317.b\ABN.m
Misc Info:

Calibration Date: 17-MAR-2023
Calibration Time: 15:03
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	221219	110610	442438	210794	-4.71
27 Naphthalene-d8	809500	404750	1619000	812894	0.42
42 Acenaphthene-d10	420689	210345	841378	421466	0.18
59 Phenanthrene-d10	757520	378760	1515040	705582	-6.86
69 Chrysene-d12	450500	225250	901000	351965	-21.87
134 Di-n-octylphthala	828388	414194	1656776	707847	-14.55
77 Perylene-d12	339914	169957	679828	230171	-32.29

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.06	8.56	9.56	9.06	0.00
27 Naphthalene-d8	11.57	11.07	12.07	11.57	0.00
42 Acenaphthene-d10	15.20	14.70	15.70	15.20	0.00
59 Phenanthrene-d10	18.25	17.75	18.75	18.24	-0.04
69 Chrysene-d12	23.29	22.79	23.79	23.29	0.00
134 Di-n-octylphthala	24.32	23.82	24.82	24.32	-0.03
77 Perylene-d12	25.93	25.43	26.43	25.93	0.00

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

REVIEW SUMMARY FOR FILE - NT1403172313.D

Lab ID: BLB0424-BS1
nt14.i, ABN.m, 17-MAR-2023 21:42

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

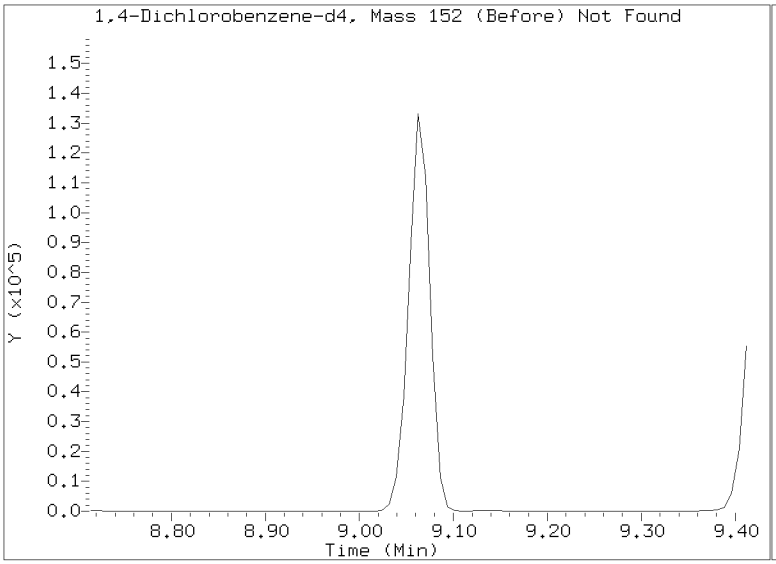
RRT check based on Ccal File: NT1403172302.D

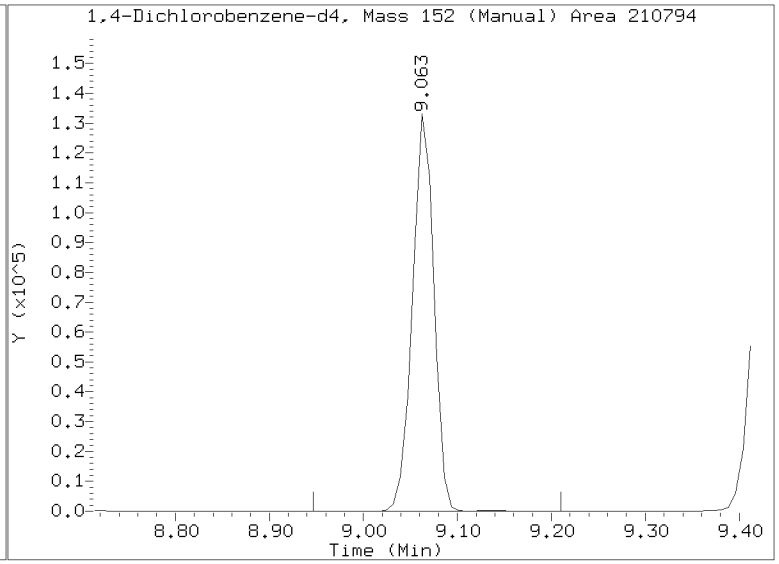
On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

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

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230317.b/NT1403172313.D
Injection Date: 17-MAR-2023 21:42
Lab ID:BLB0424-BS1 Client ID:
Report Date: 03/22/2023 08:12





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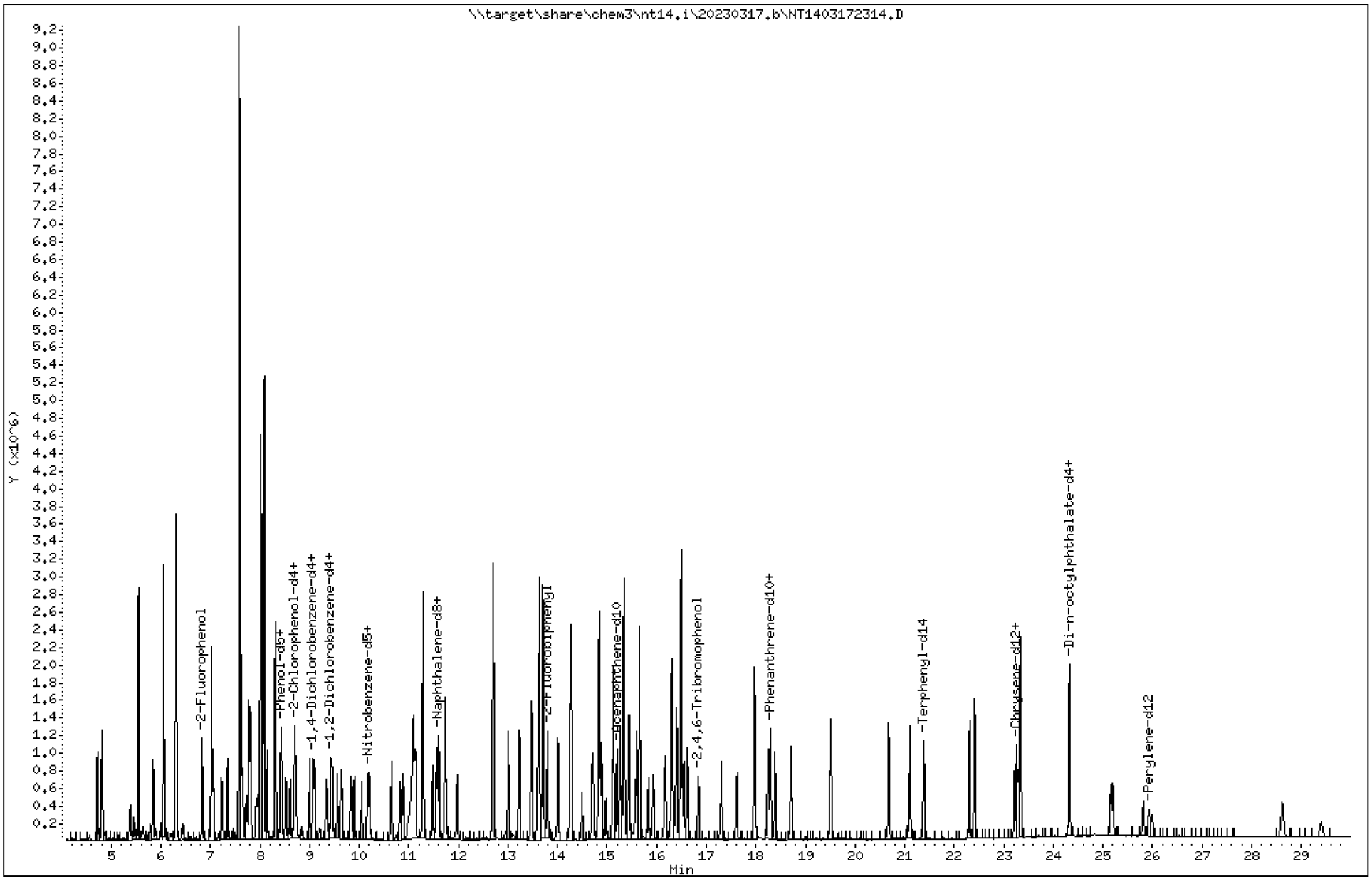
Date : 17-MAR-2023 22:19
Client ID:
Sample Info: BLB0424-BSD1

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



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Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

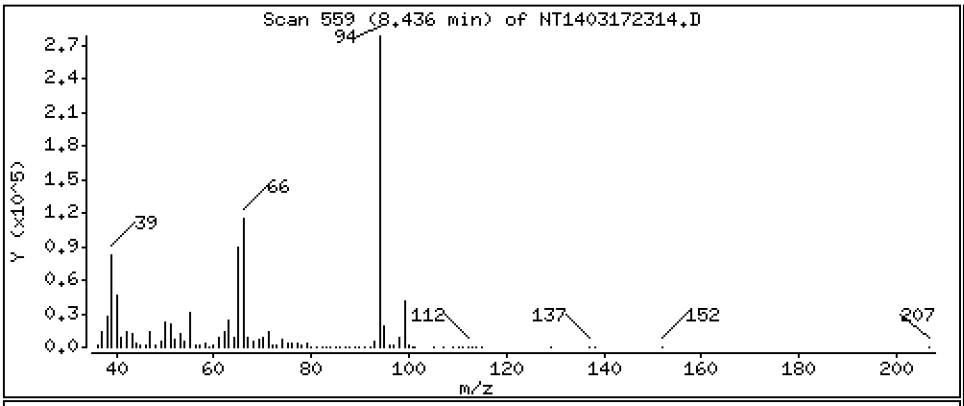
Operator: JGR

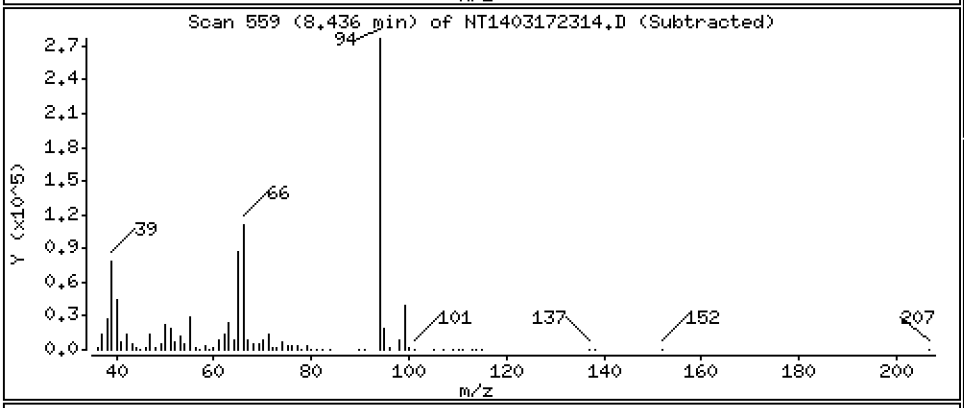
Column phase: ZB-5msi

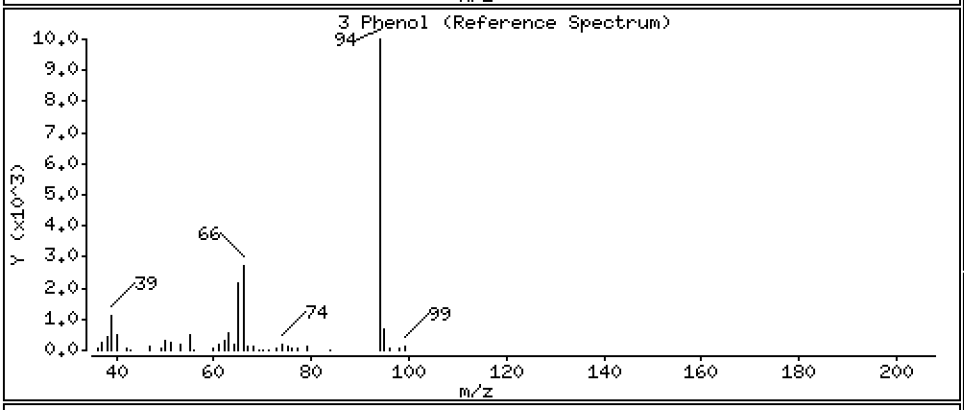
Column diameter: 0.25

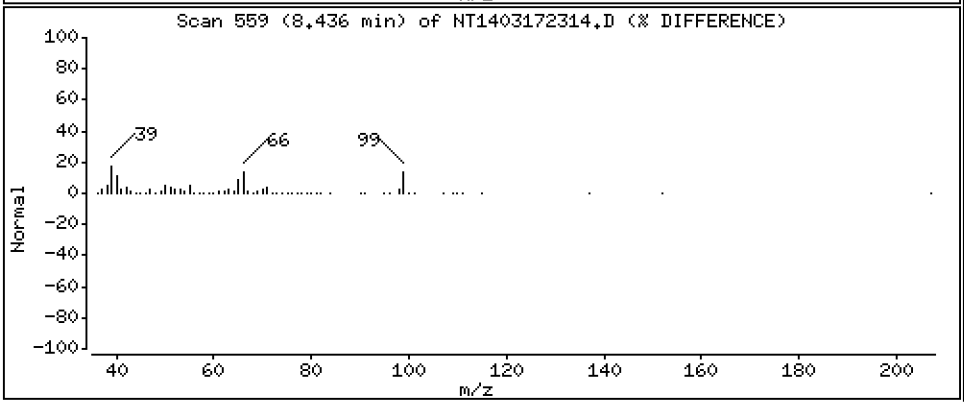
3 Phenol

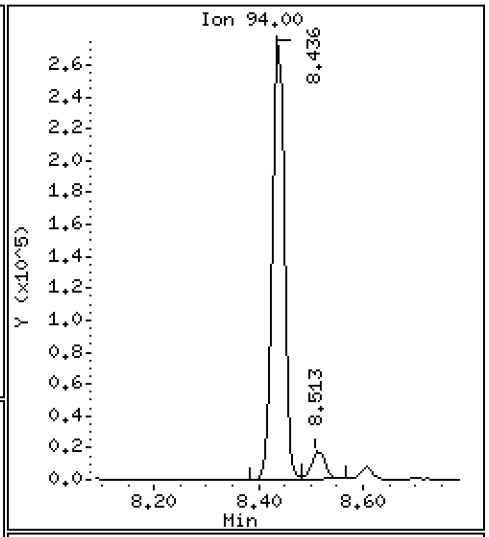
Concentration: 3.996 ug/mL

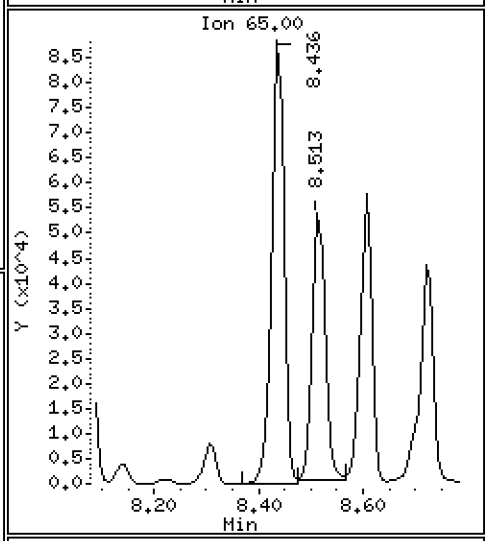


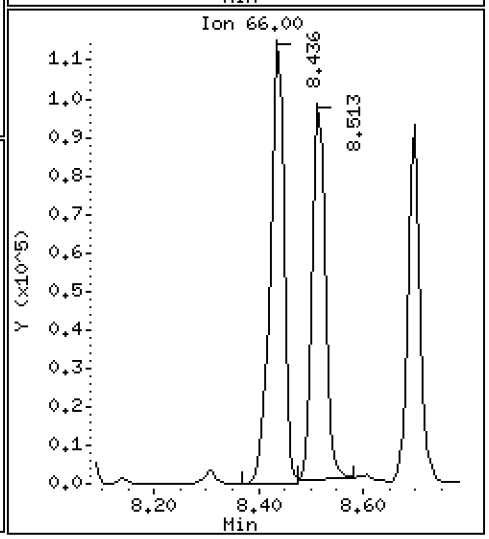












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Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

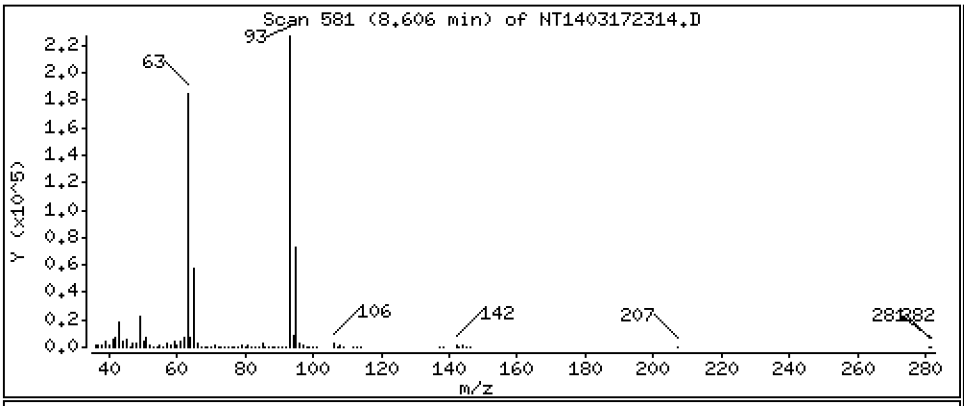
Operator: JGR

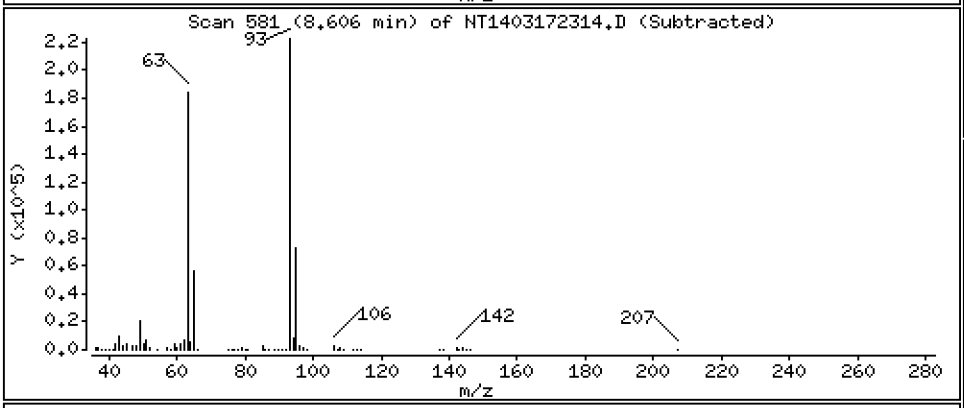
Column phase: ZB-5msi

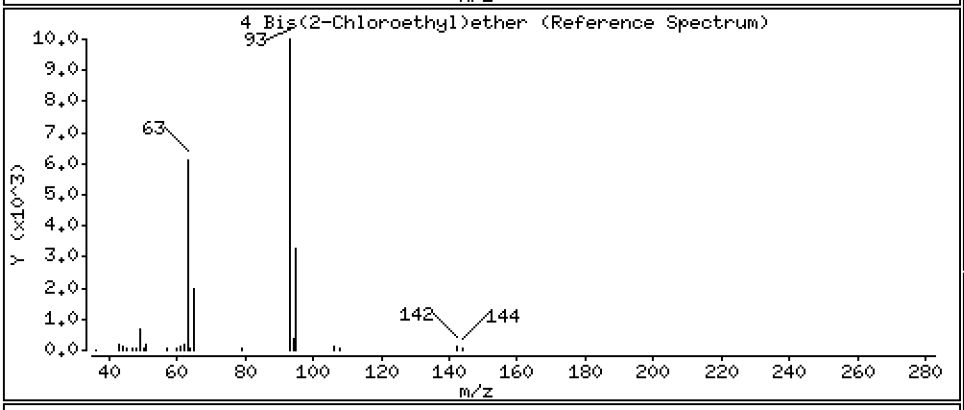
Column diameter: 0.25

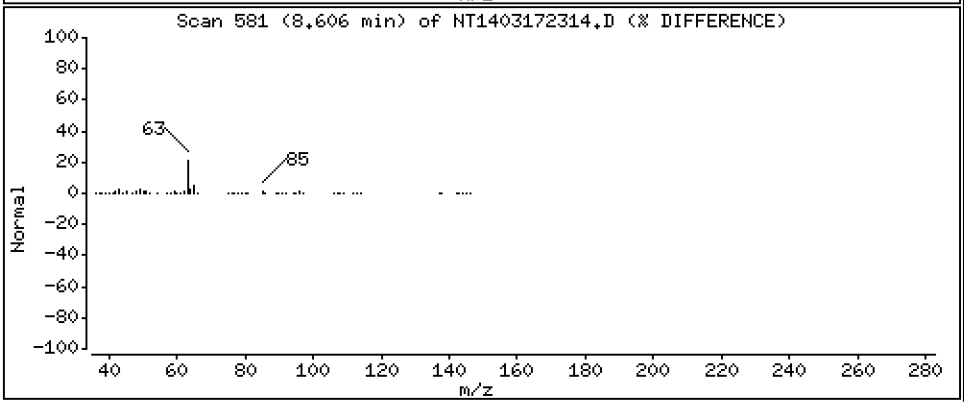
4 Bis(2-Chloroethyl)ether

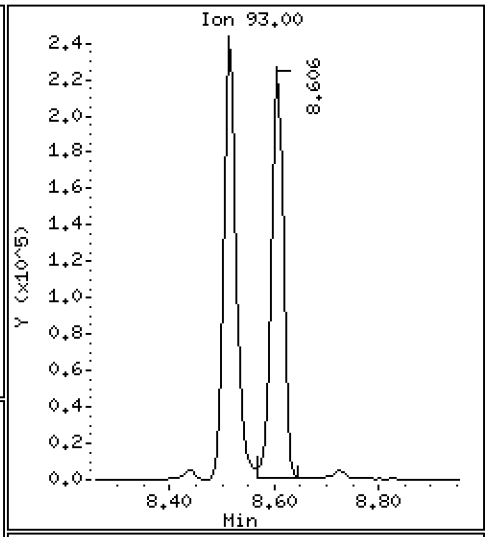
Concentration: 4.510 ug/mL

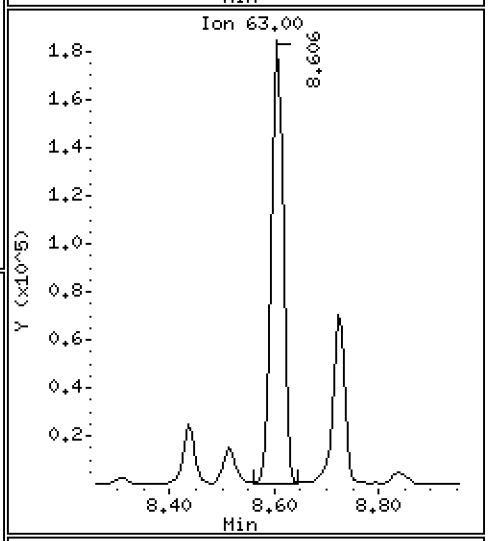


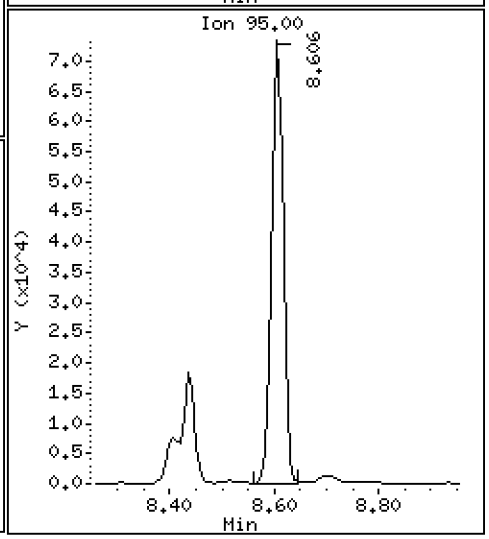












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Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

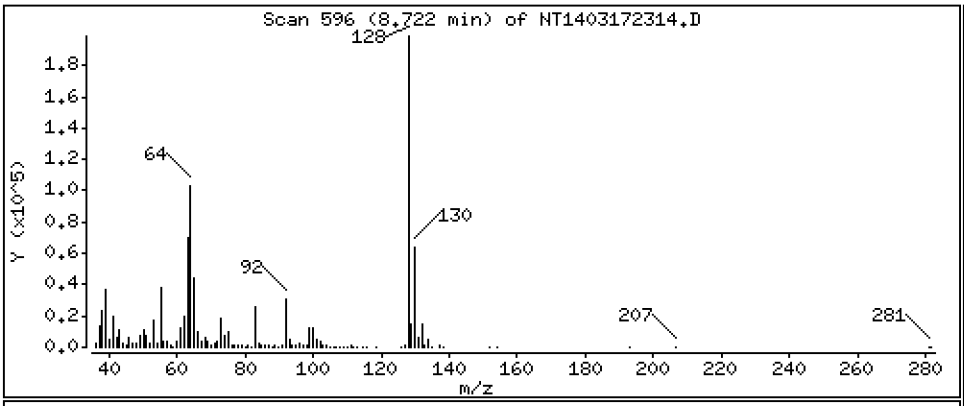
Operator: JGR

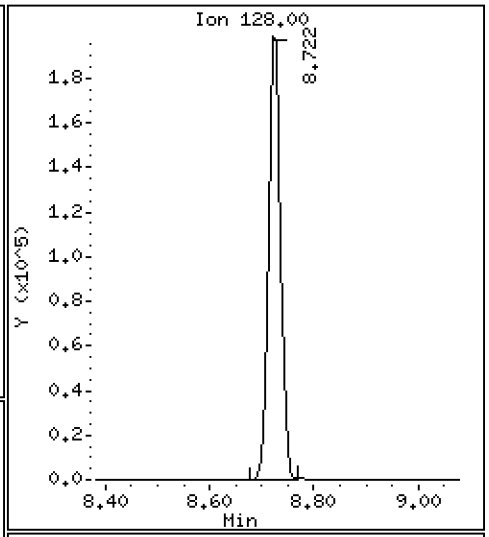
Column phase: ZB-5msi

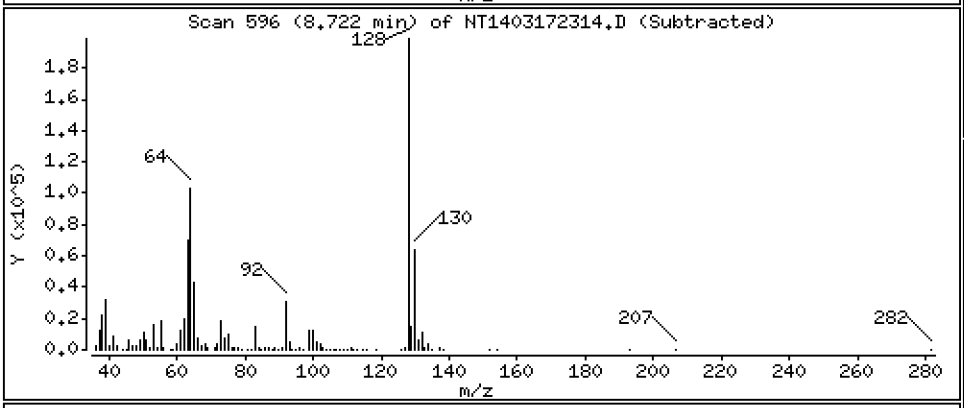
Column diameter: 0.25

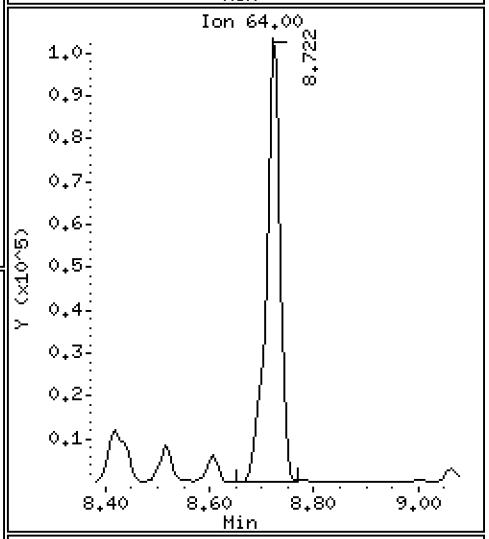
6 2-Chlorophenol

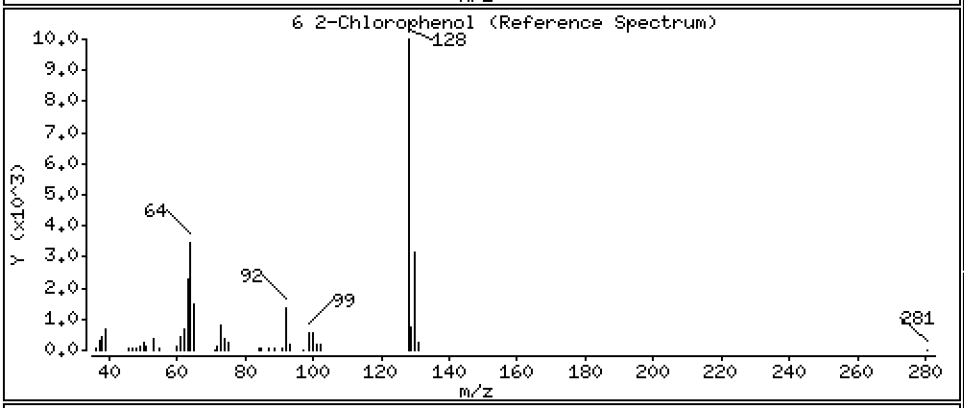
Concentration: 3.948 ug/mL

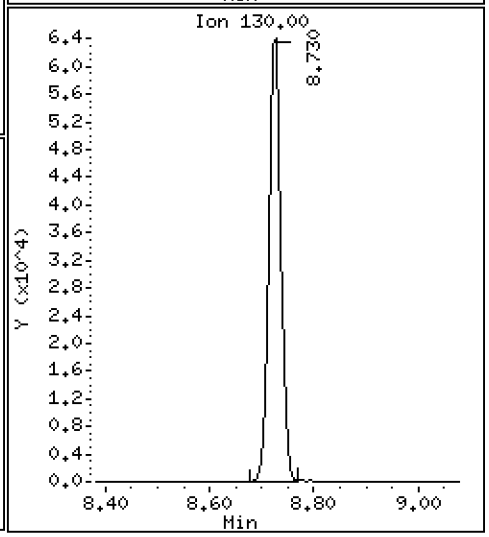


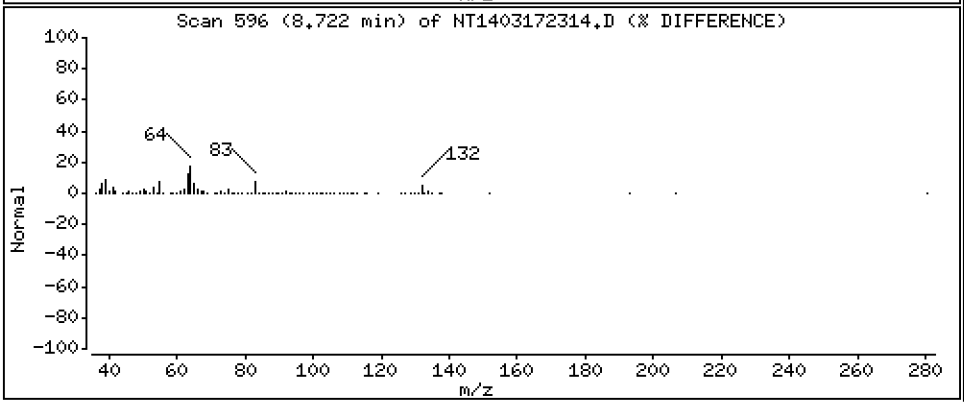












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Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

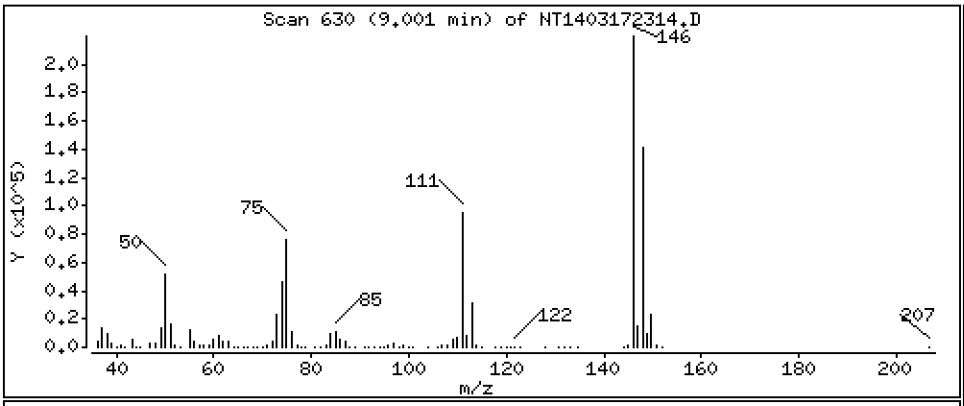
Operator: JGR

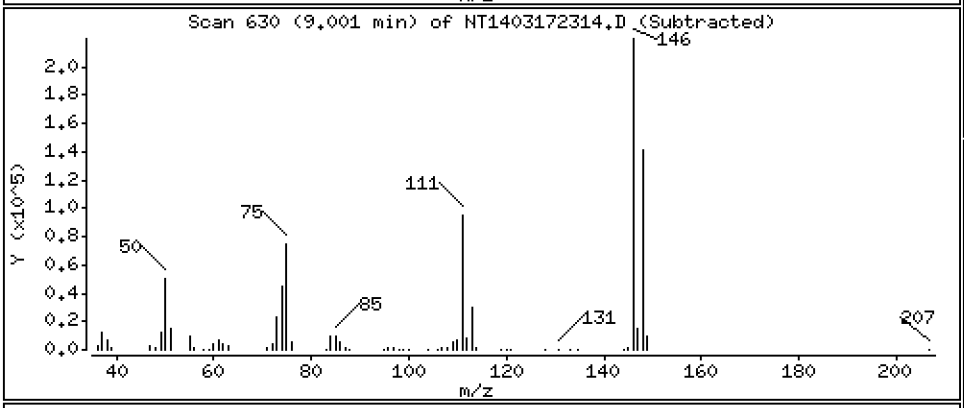
Column phase: ZB-5msi

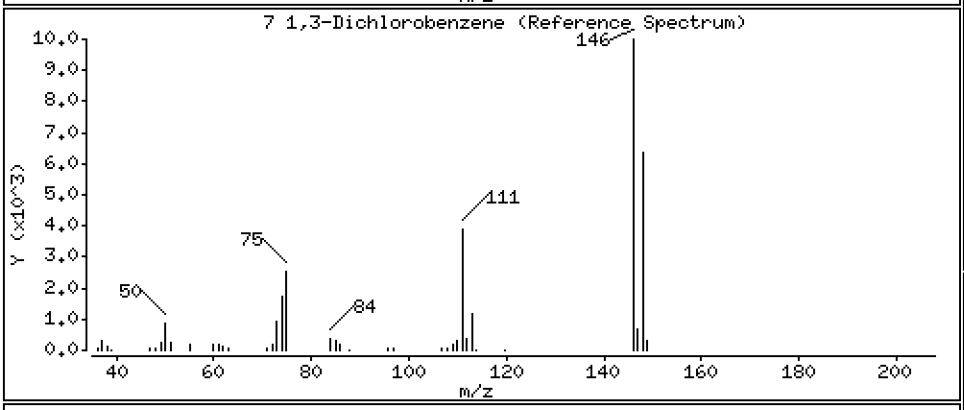
Column diameter: 0.25

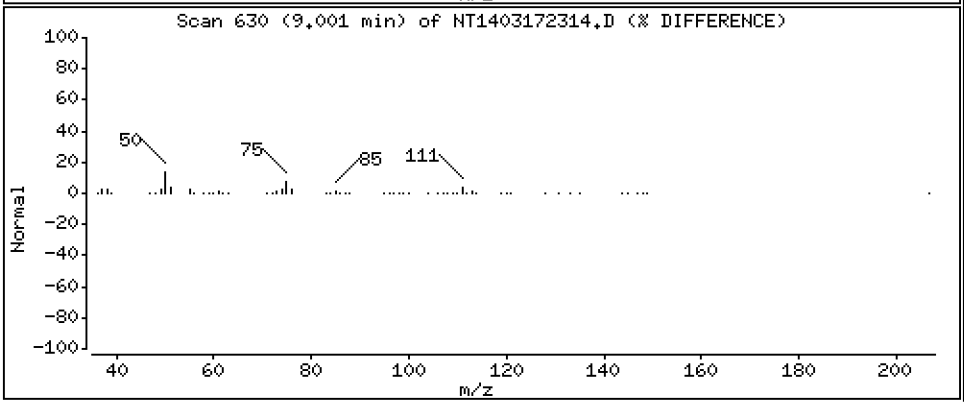
7 1,3-Dichlorobenzene

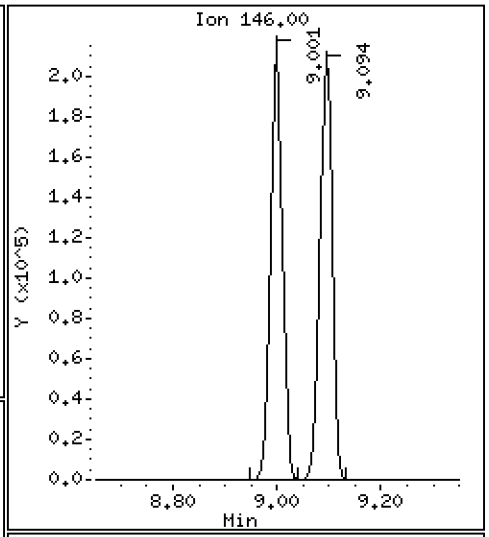
Concentration: 4.031 ug/mL

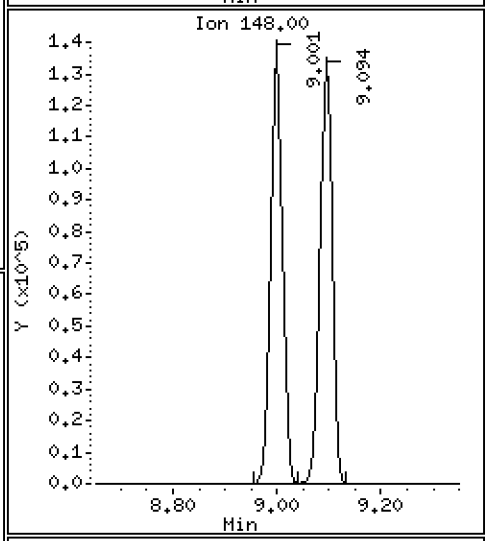


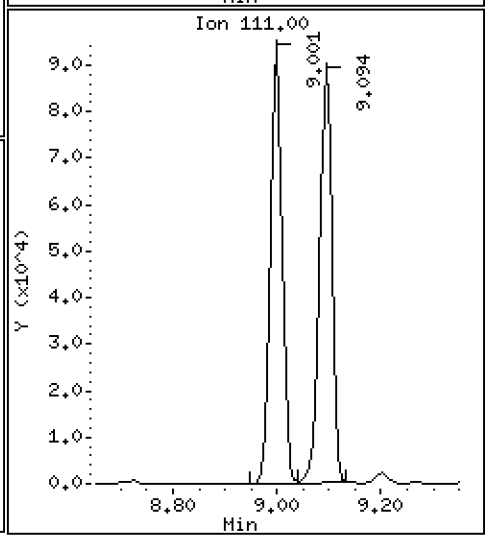












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Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

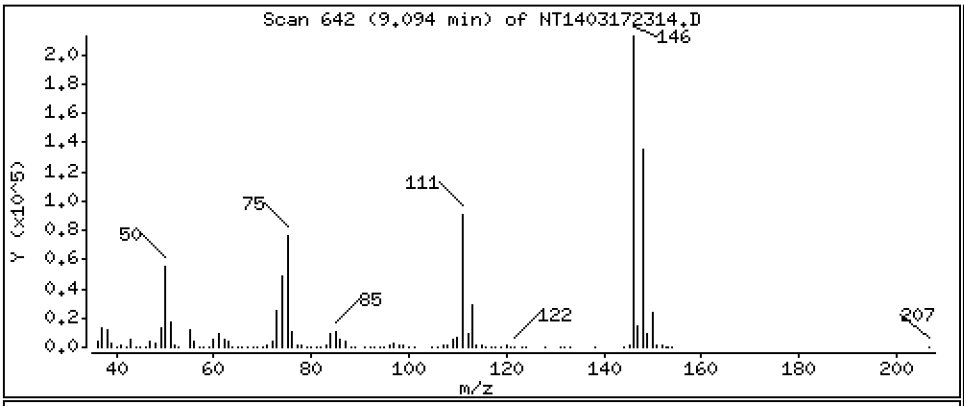
Operator: JGR

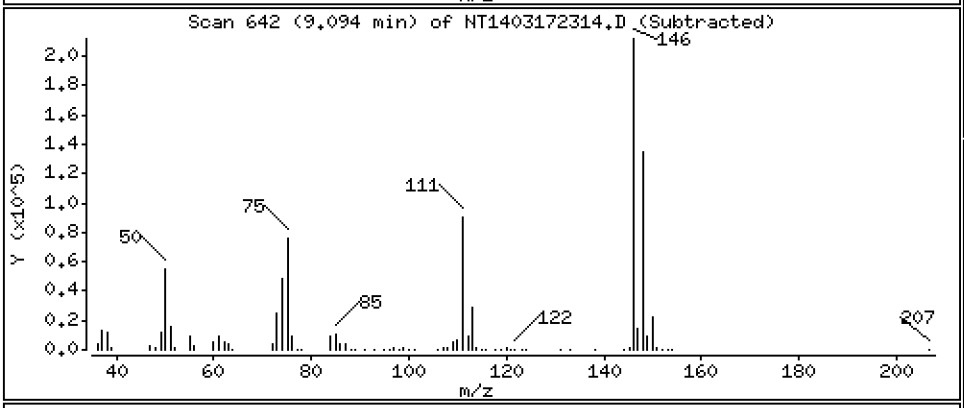
Column phase: ZB-5msi

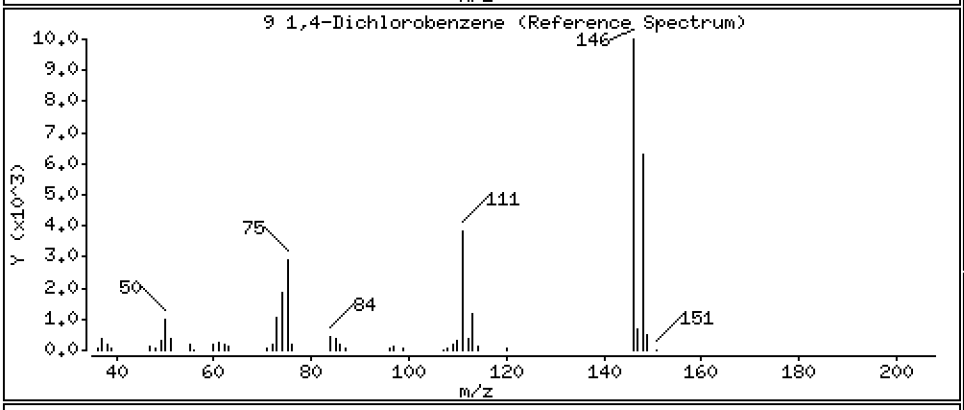
Column diameter: 0.25

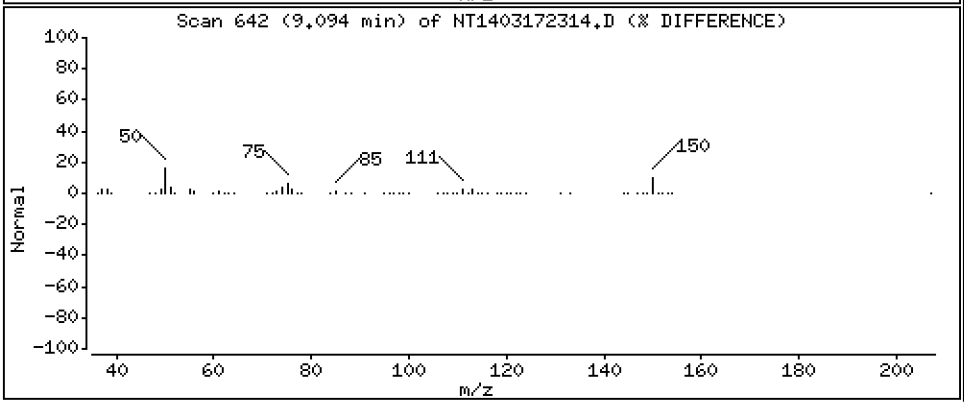
9 1,4-Dichlorobenzene

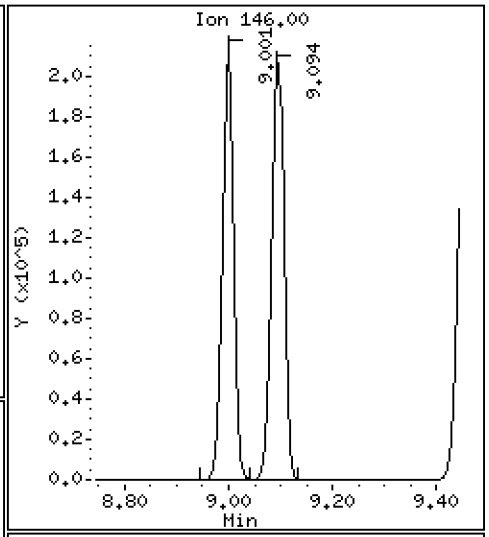
Concentration: 4.126 ug/mL

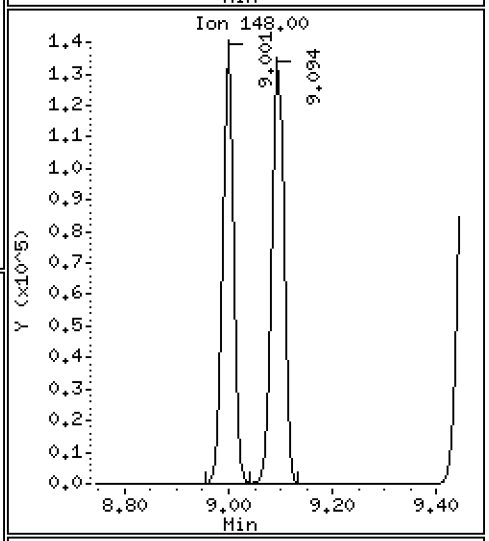


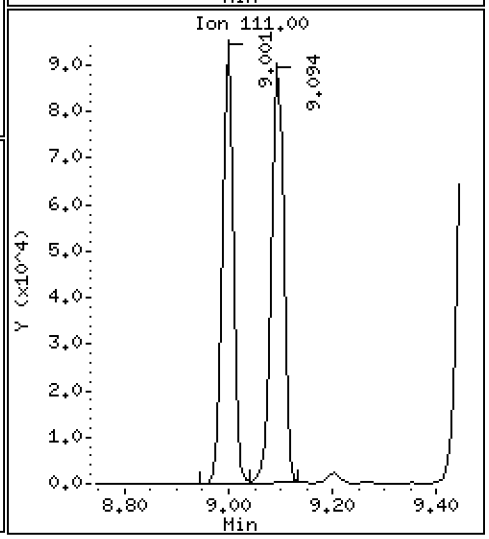












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Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

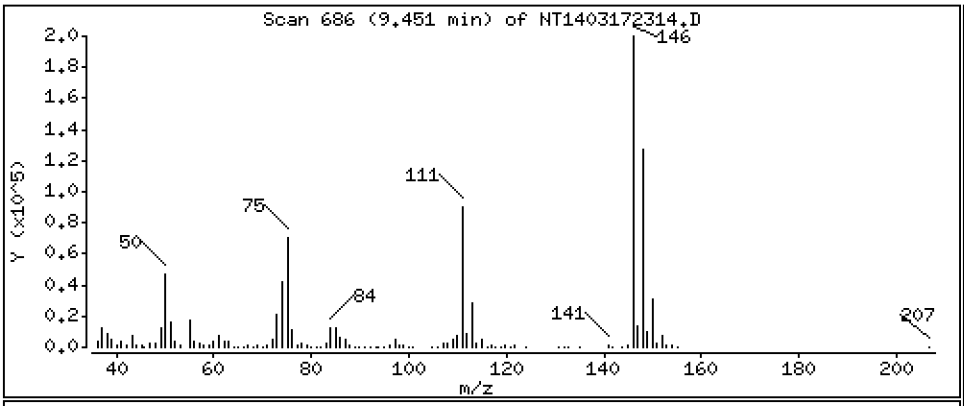
Operator: JGR

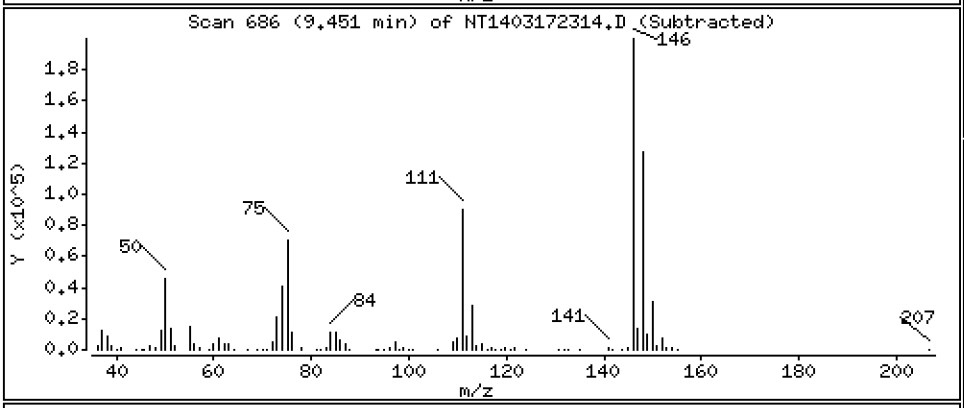
Column phase: ZB-5msi

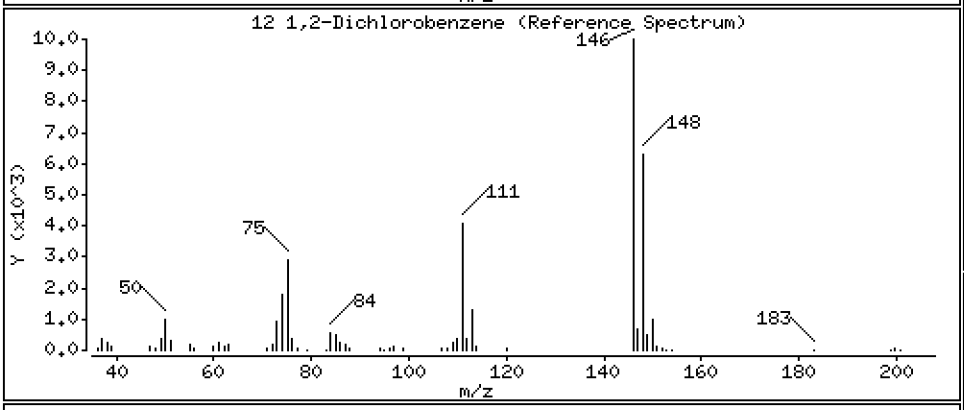
Column diameter: 0.25

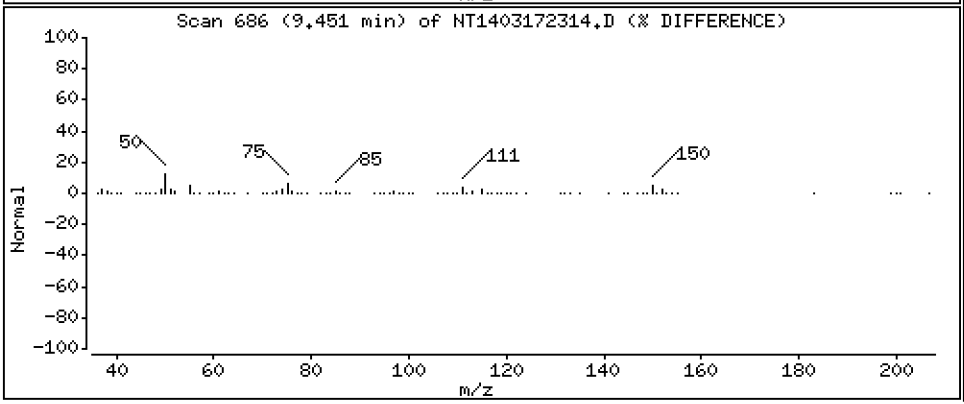
12 1,2-Dichlorobenzene

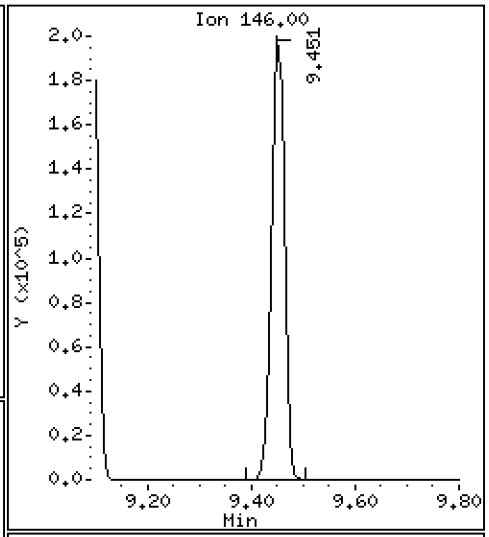
Concentration: 4.141 ug/mL

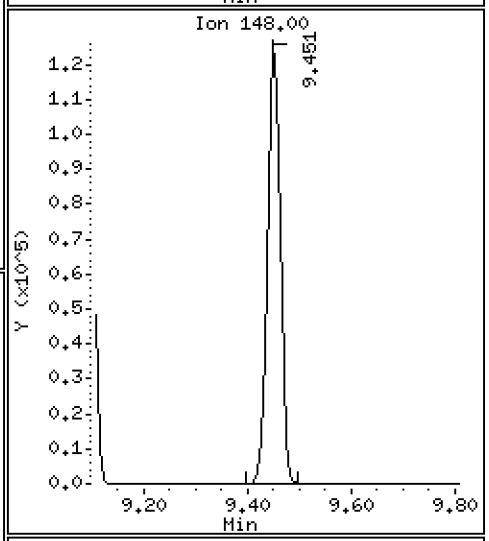


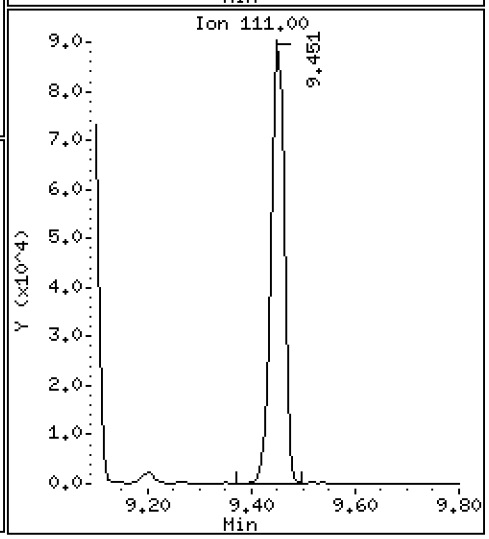












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Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

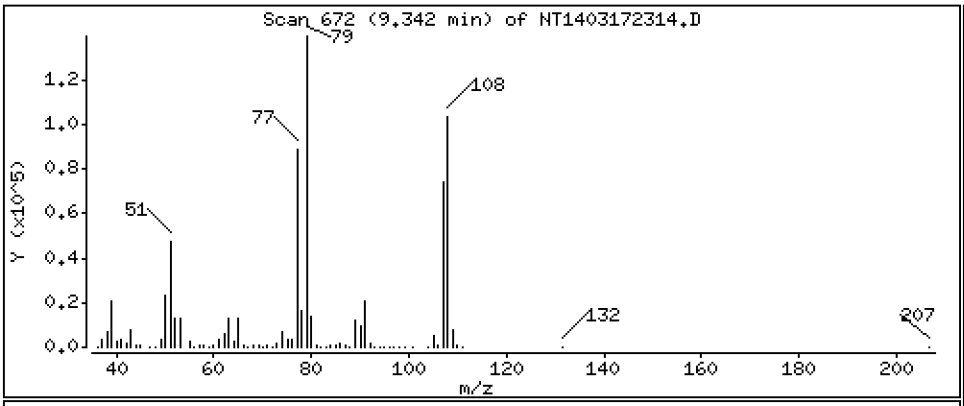
Operator: JGR

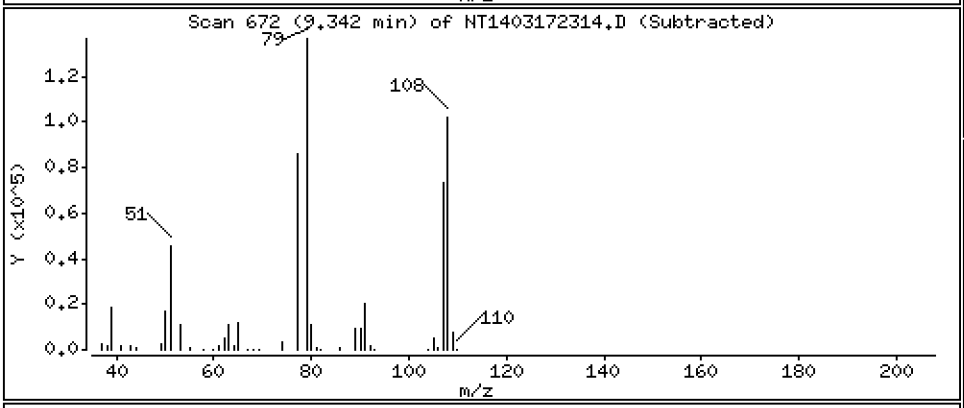
Column phase: ZB-5msi

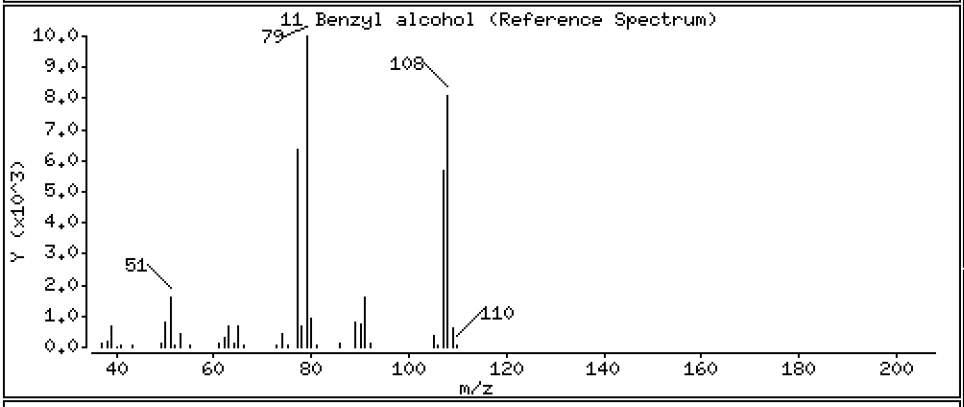
Column diameter: 0.25

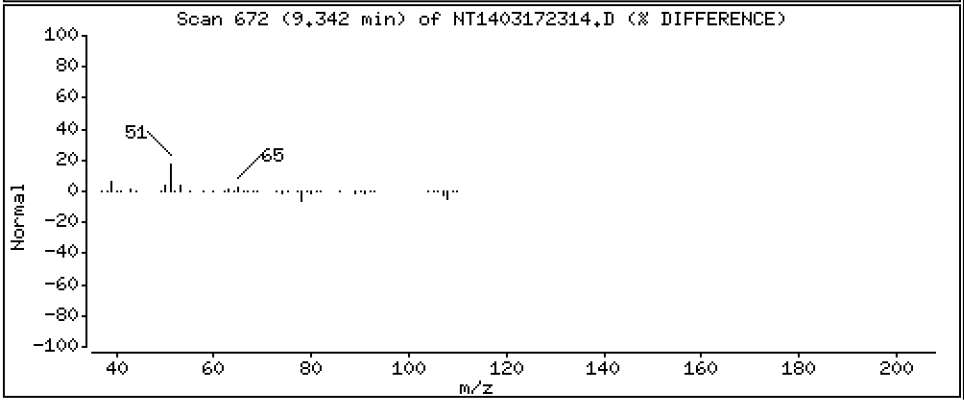
11 Benzyl alcohol

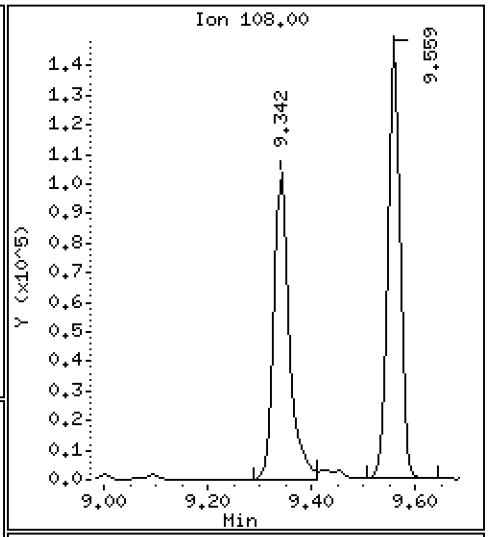
Concentration: 4.313 ug/mL

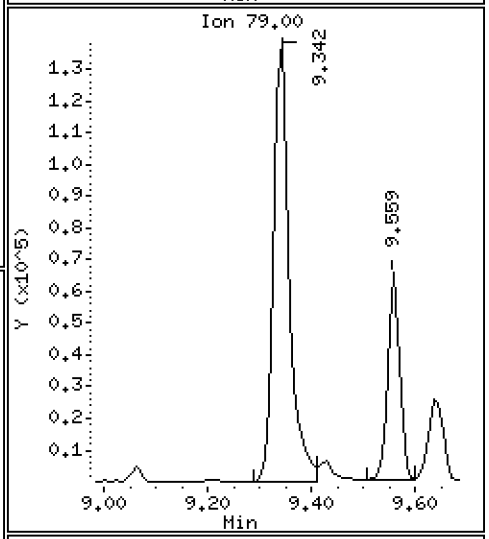


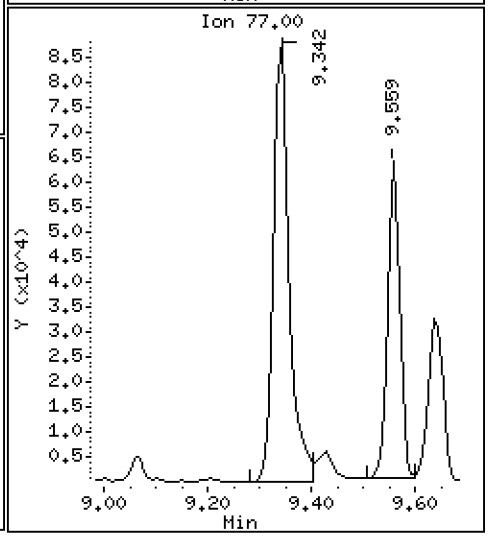












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Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

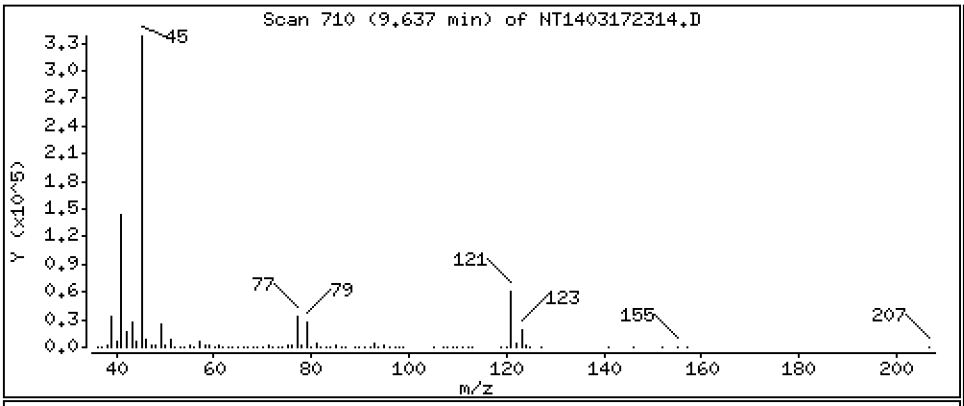
Operator: JGR

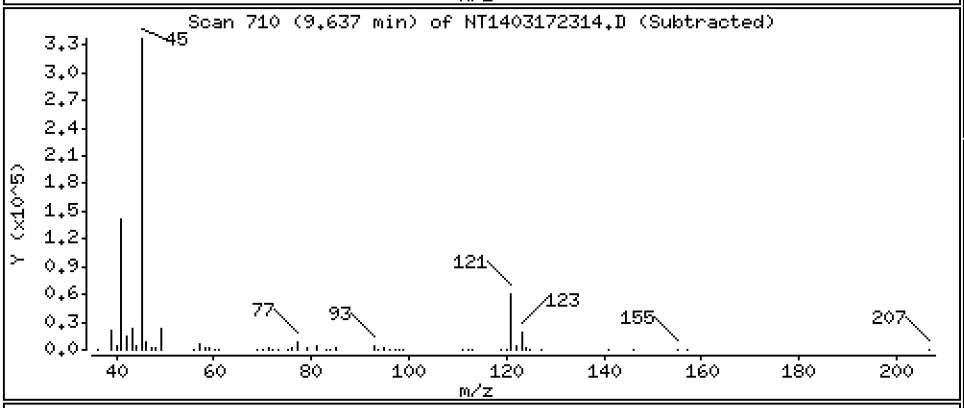
Column phase: ZB-5msi

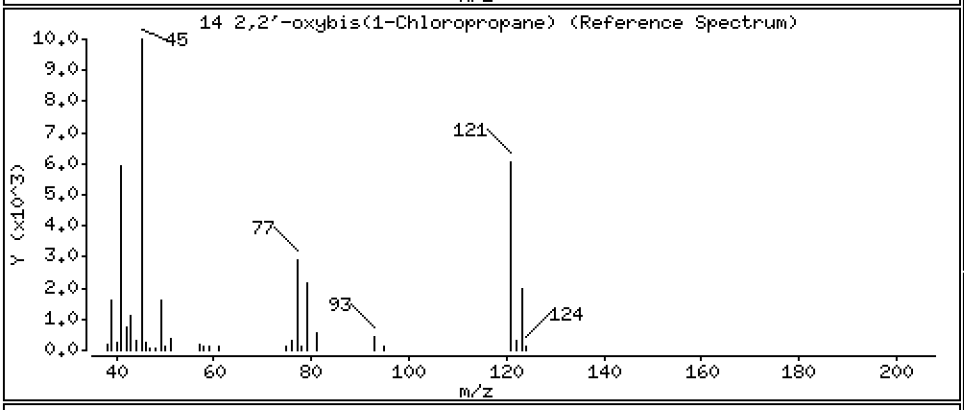
Column diameter: 0.25

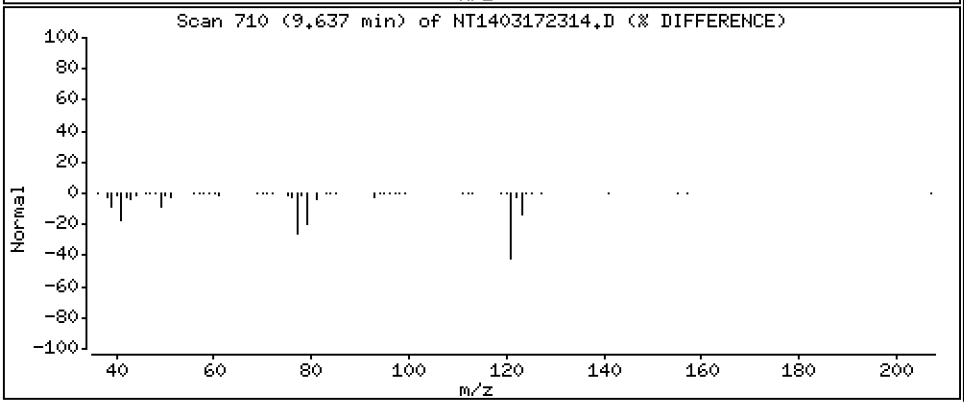
14 2,2'-oxybis(1-Chloropropane)

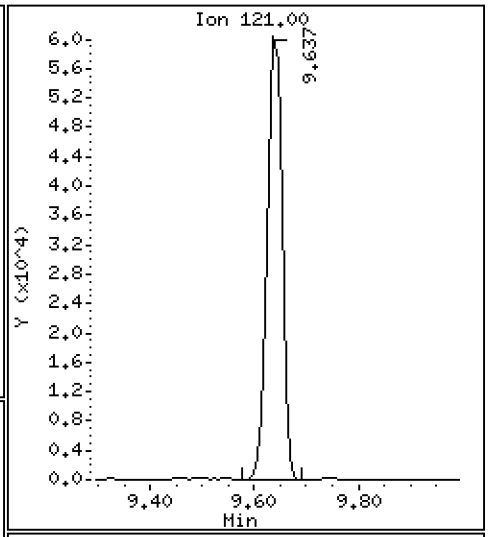
Concentration: 4.916 ug/mL

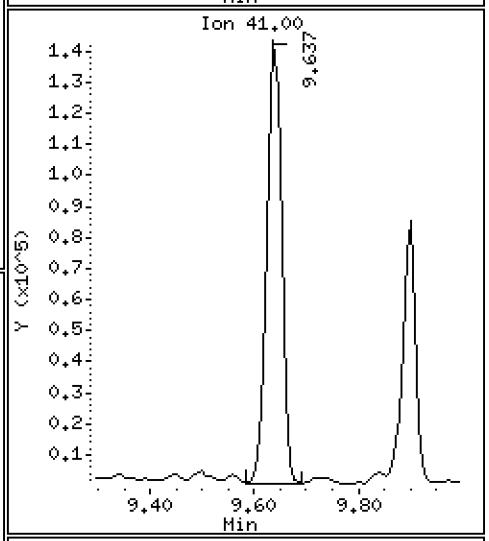


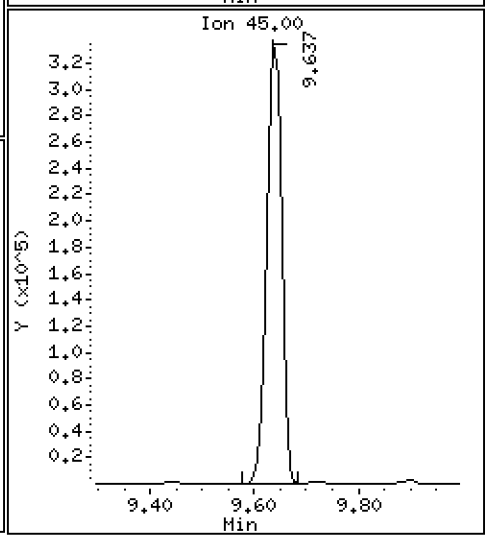












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Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

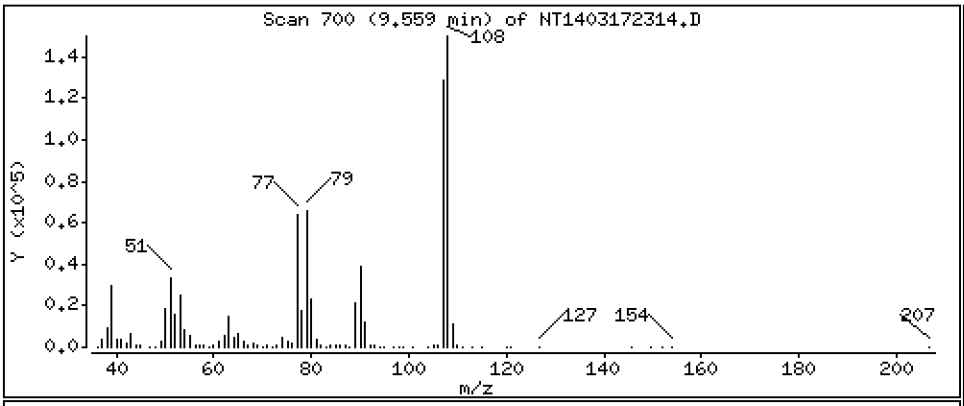
Operator: JGR

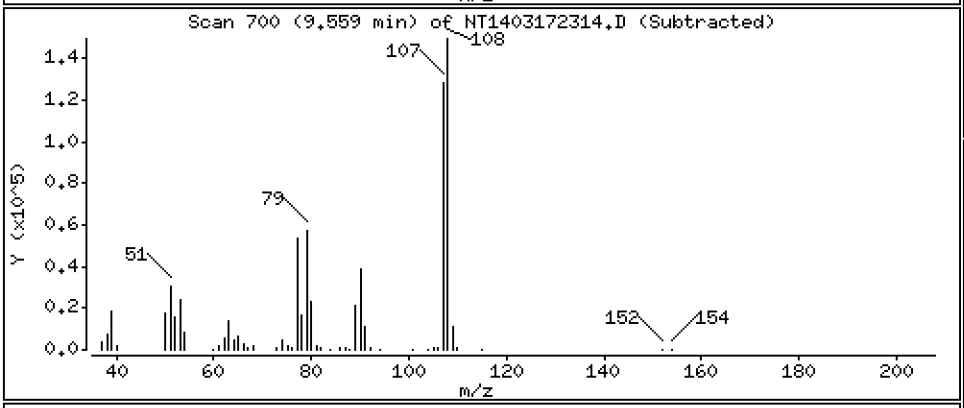
Column phase: ZB-5msi

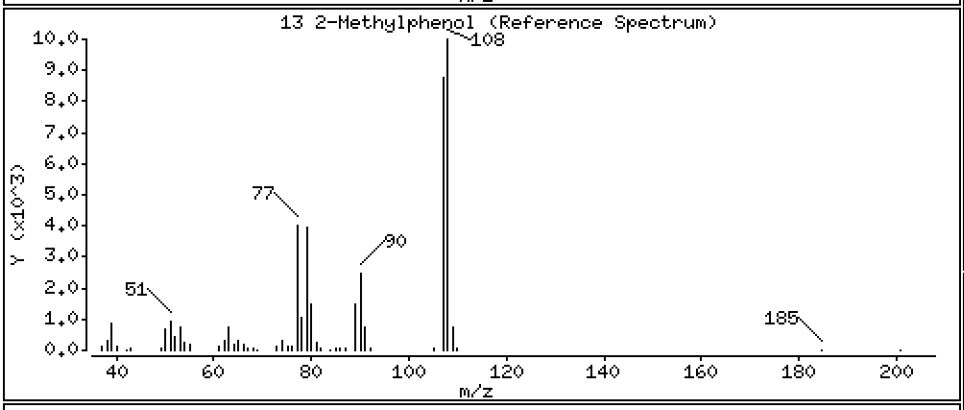
Column diameter: 0.25

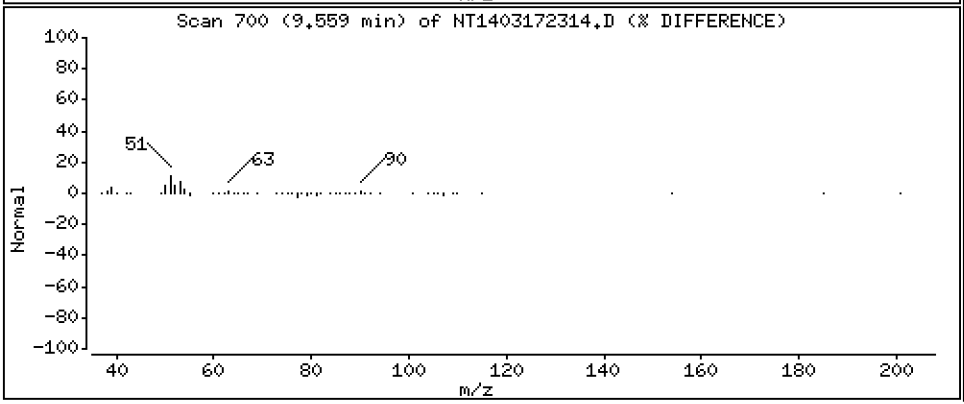
13 2-Methylphenol

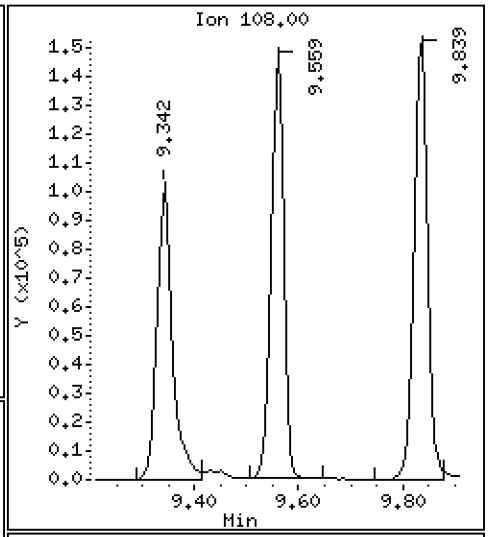
Concentration: 3.230 ug/mL

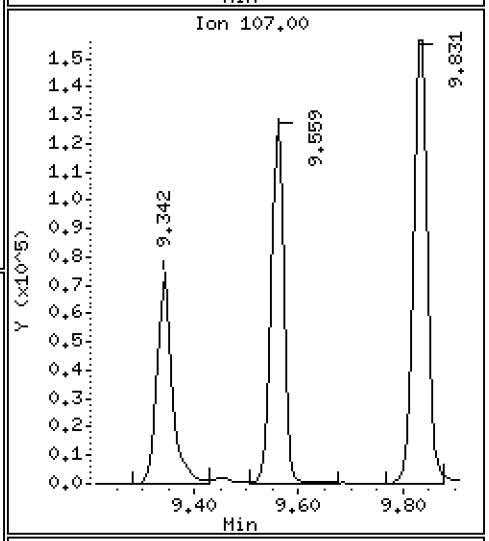


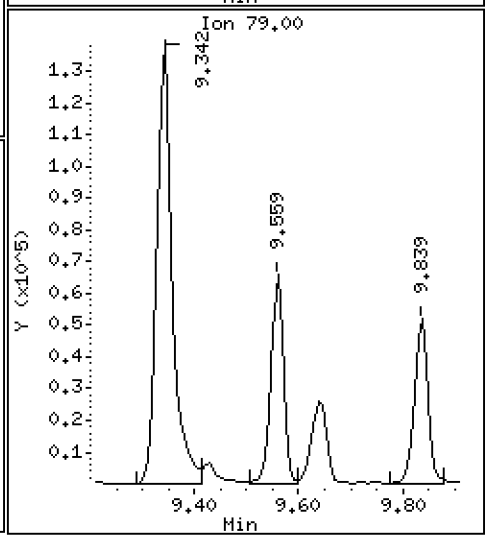












Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172314.D

Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

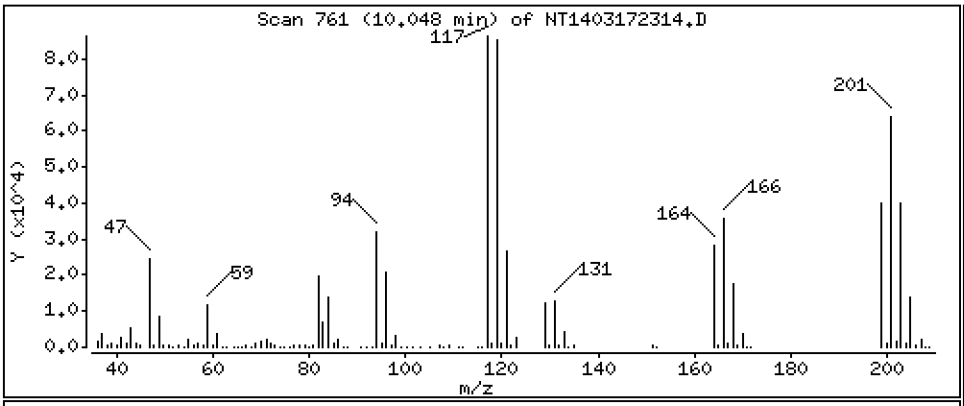
Operator: JGR

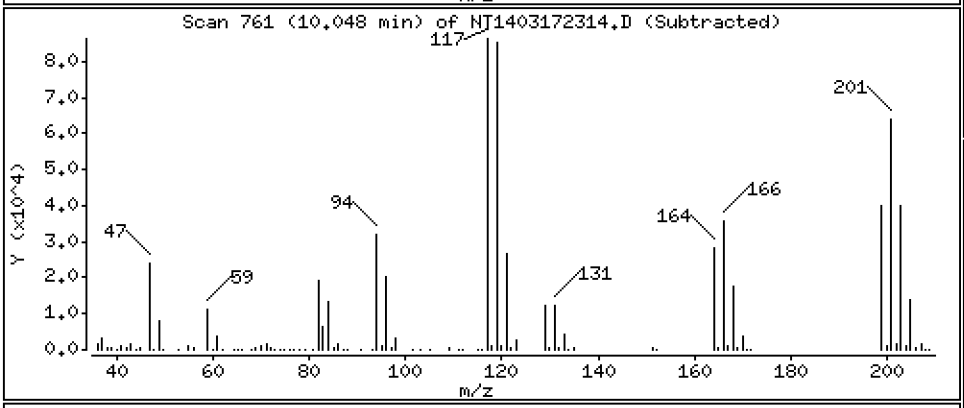
Column phase: ZB-5msi

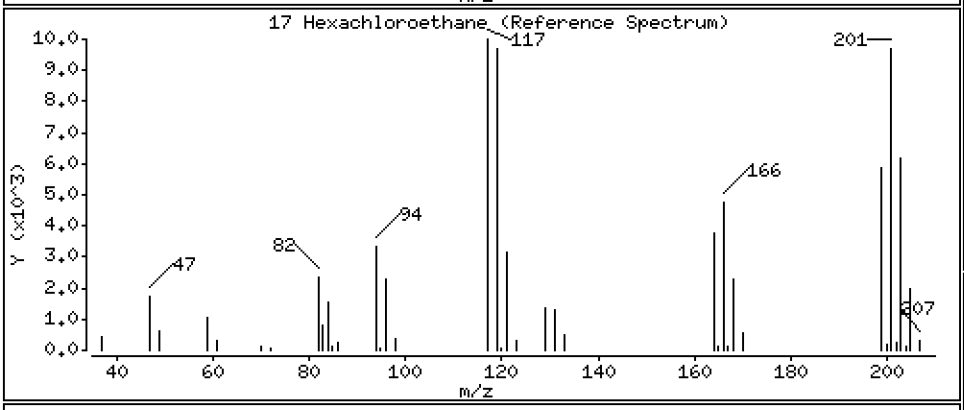
Column diameter: 0.25

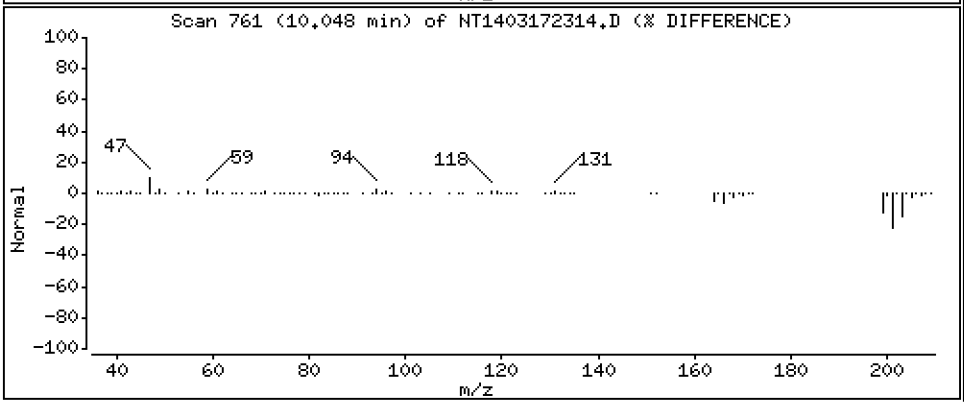
17 Hexachloroethane

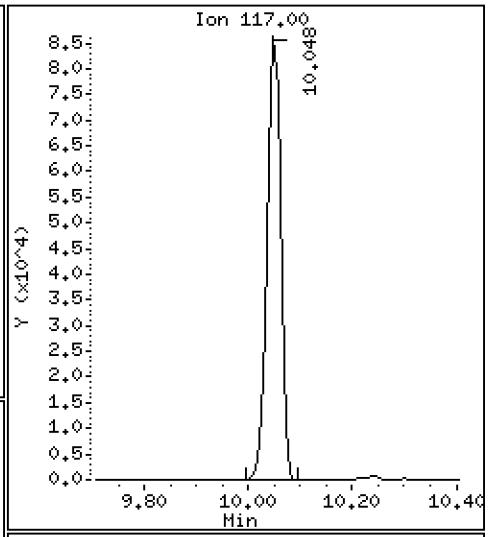
Concentration: 4.407 ug/mL

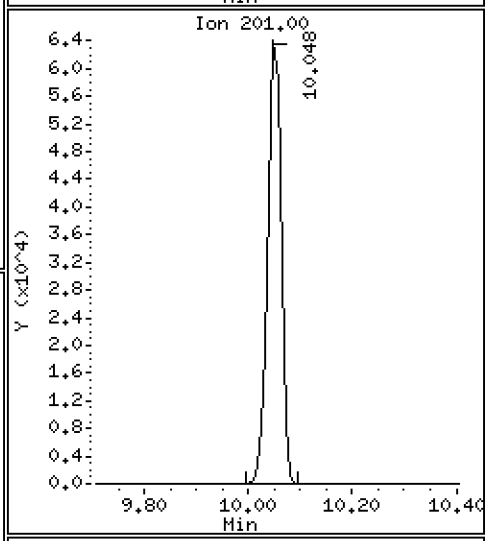


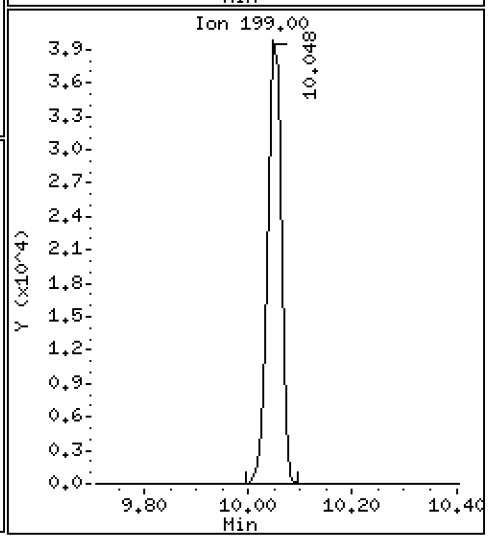












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Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

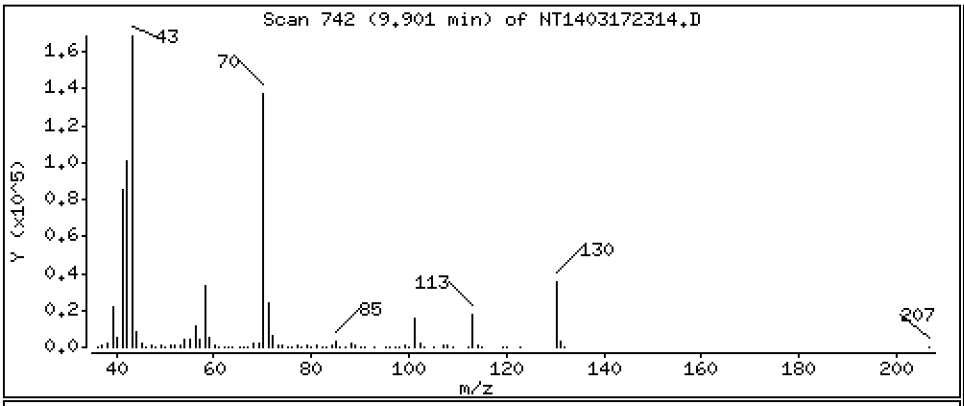
Operator: JGR

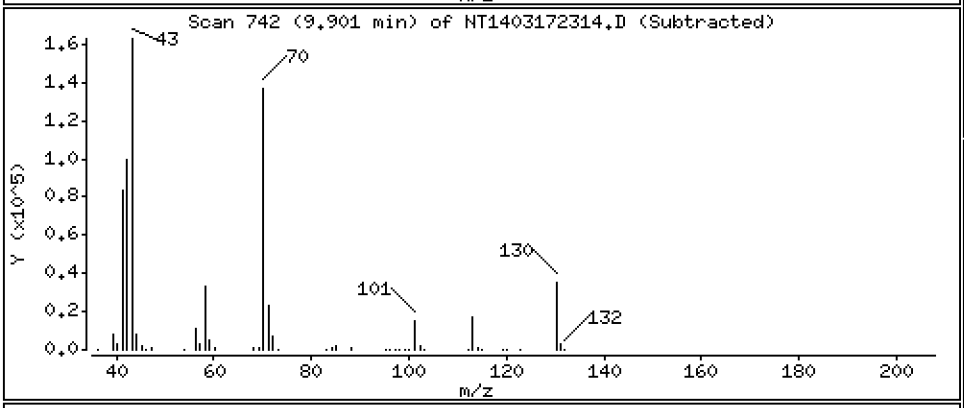
Column phase: ZB-5msi

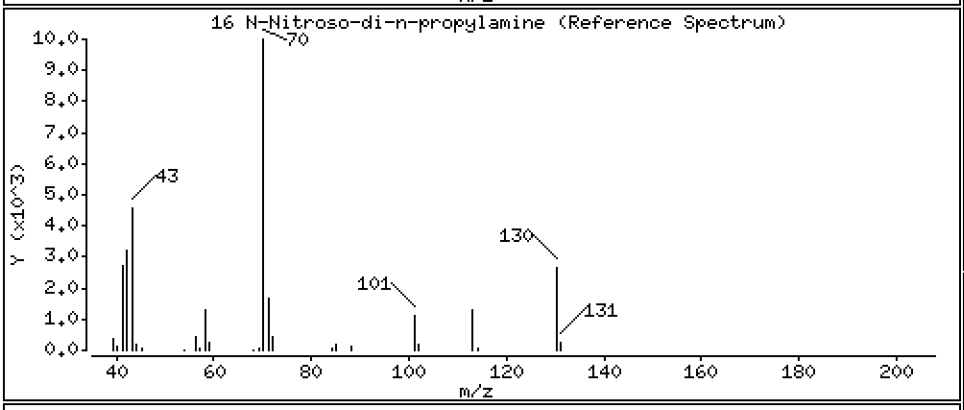
Column diameter: 0.25

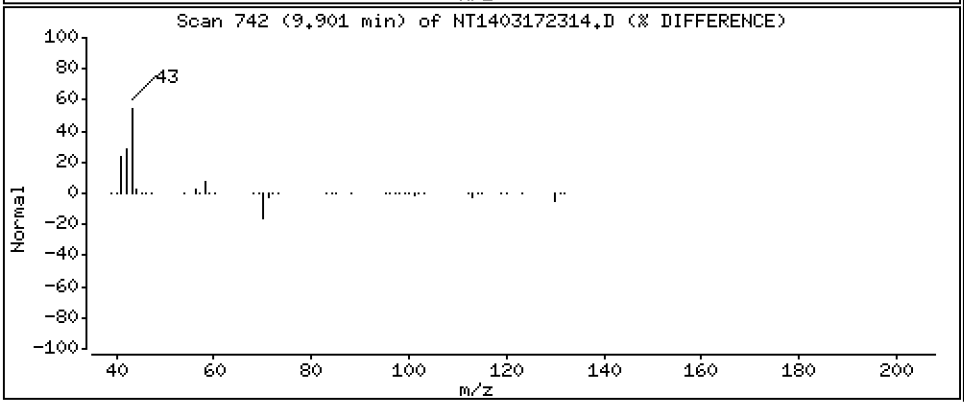
16 N-Nitroso-di-n-propylamine

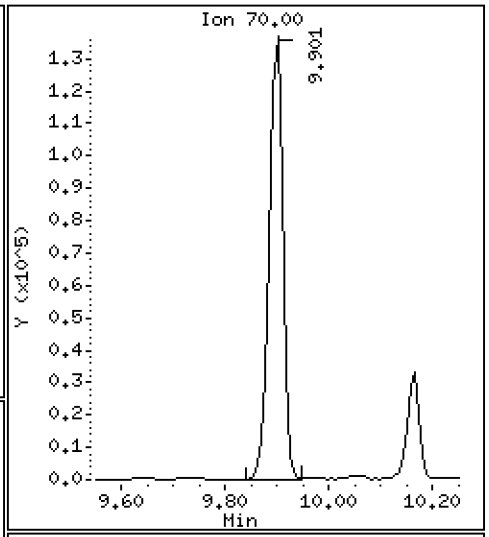
Concentration: 4.148 ug/mL

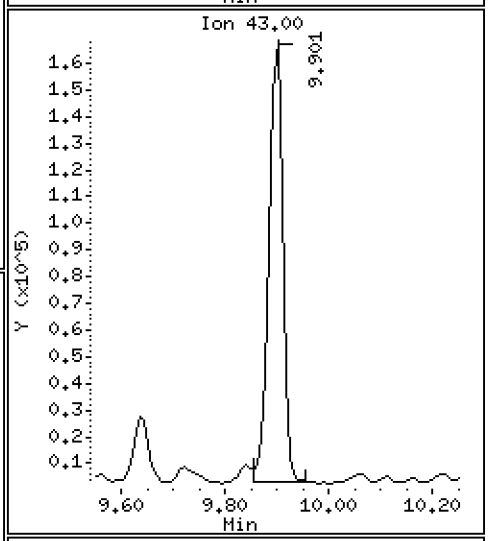


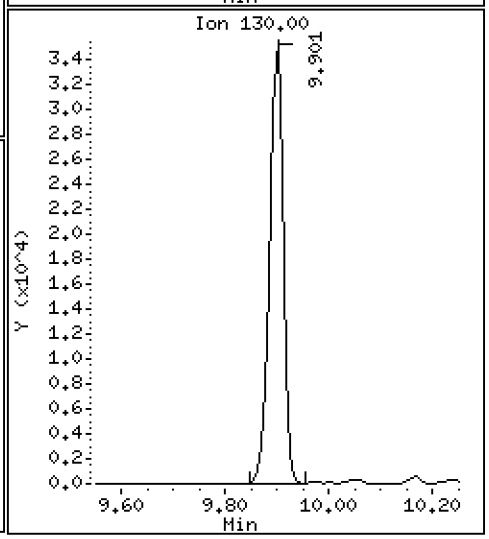












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Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

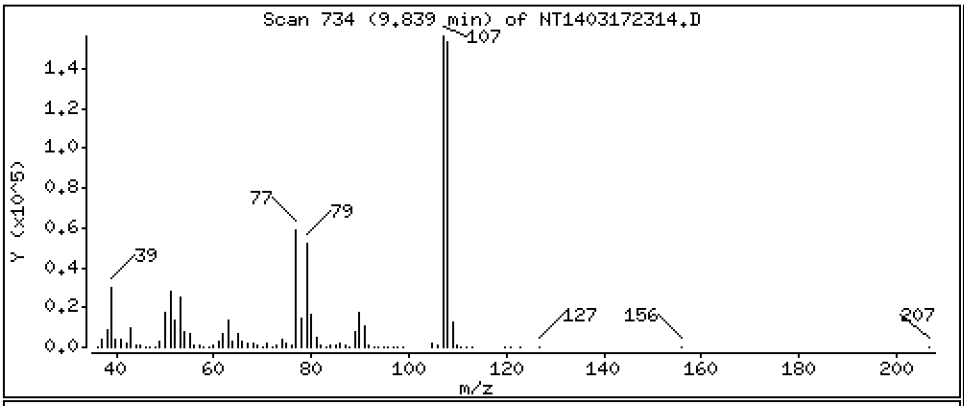
Operator: JGR

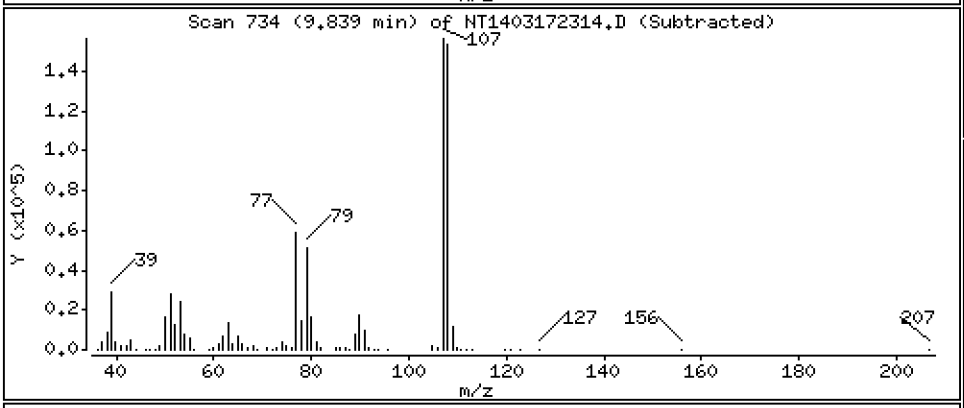
Column phase: ZB-5msi

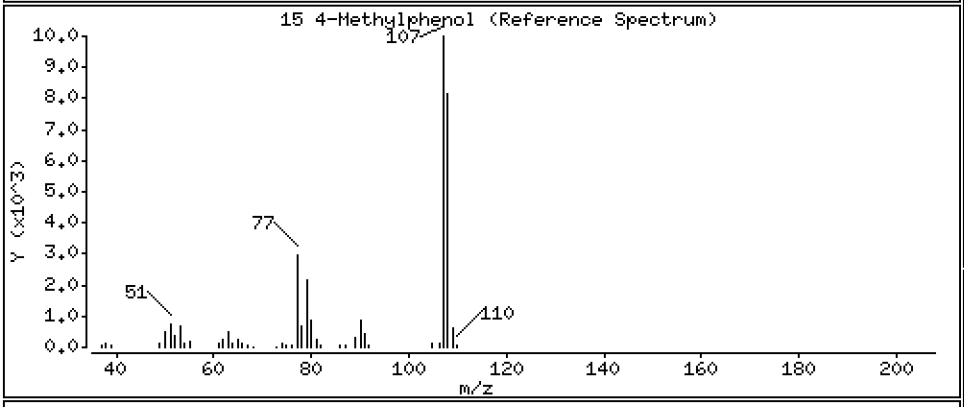
Column diameter: 0.25

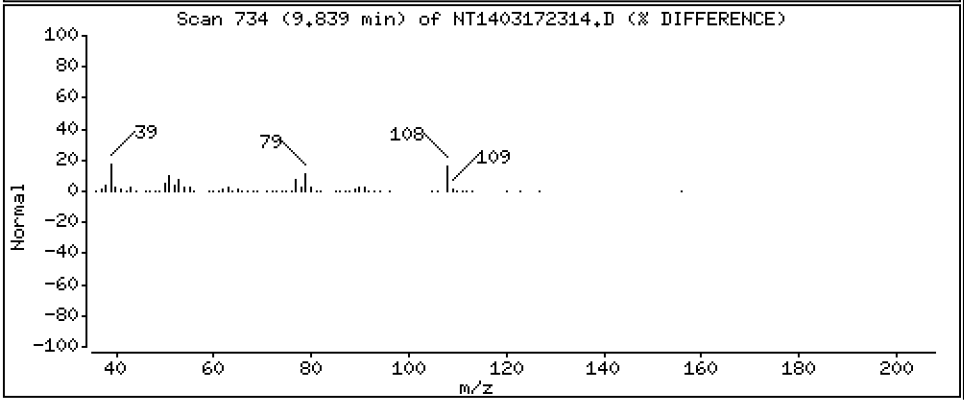
15 4-Methylphenol

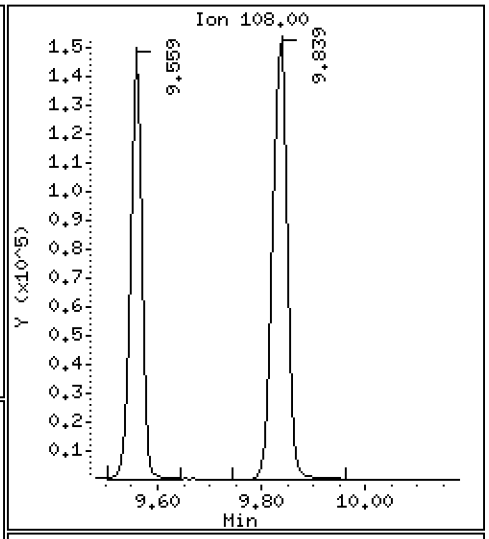
Concentration: 3.650 ug/mL

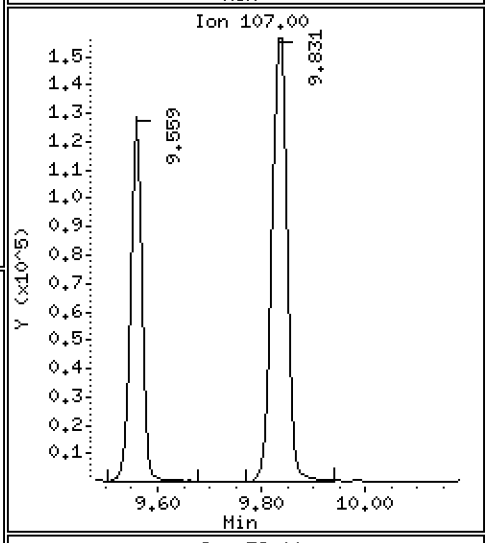


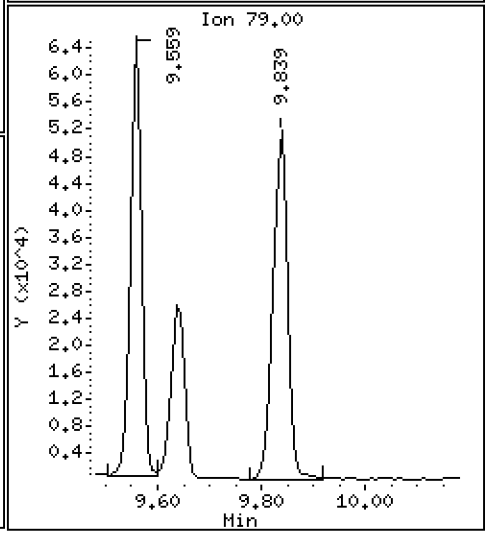












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Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

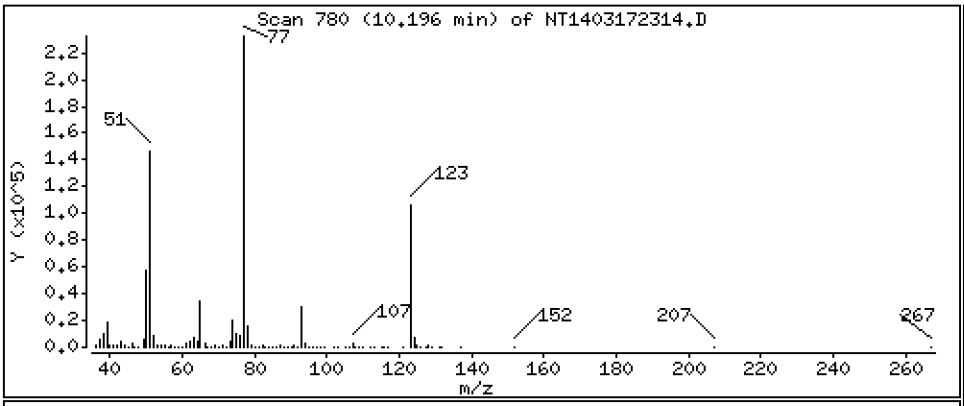
Operator: JGR

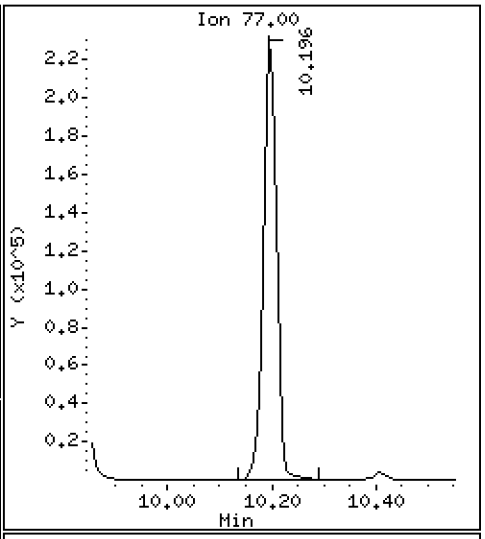
Column phase: ZB-5msi

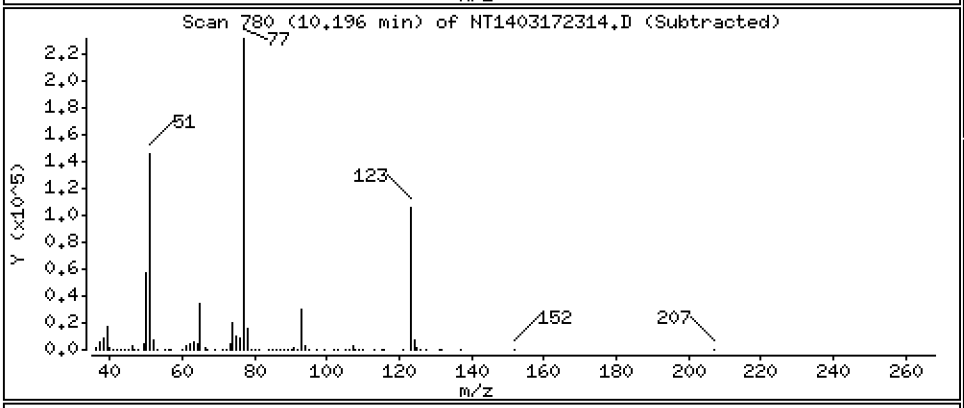
Column diameter: 0.25

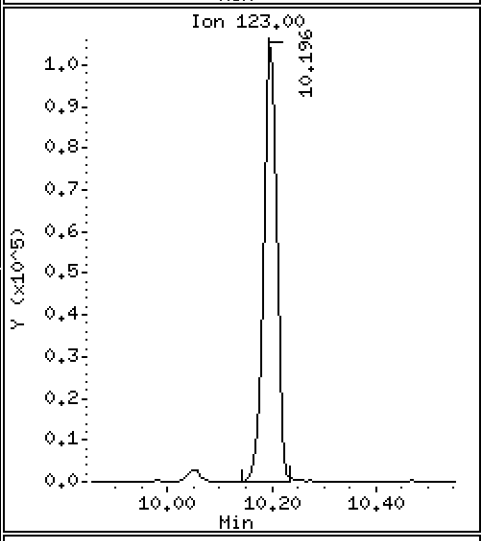
19 Nitrobenzene

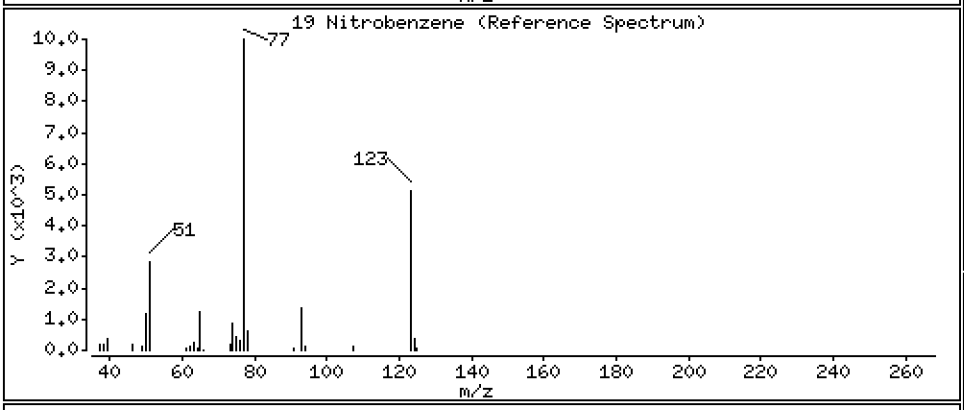
Concentration: 4.540 ug/mL

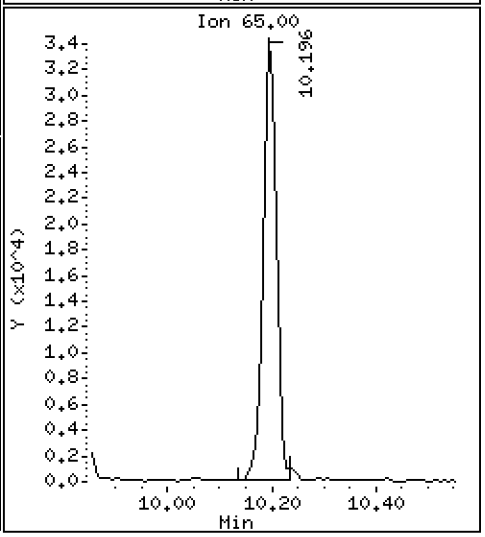


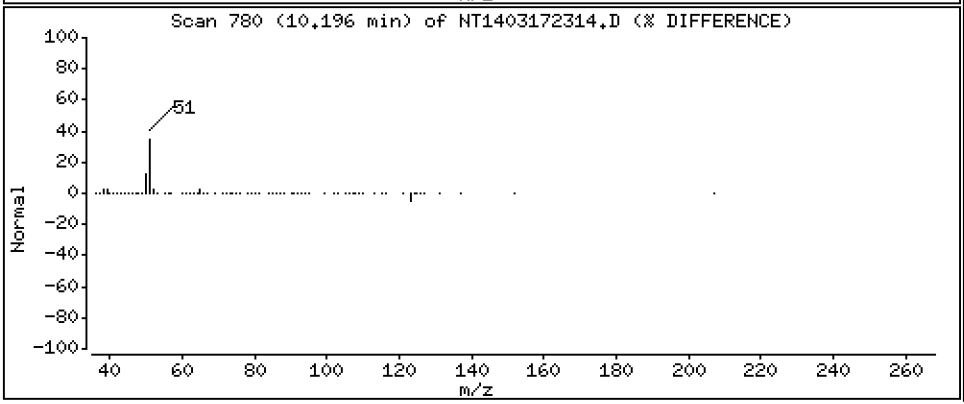












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Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

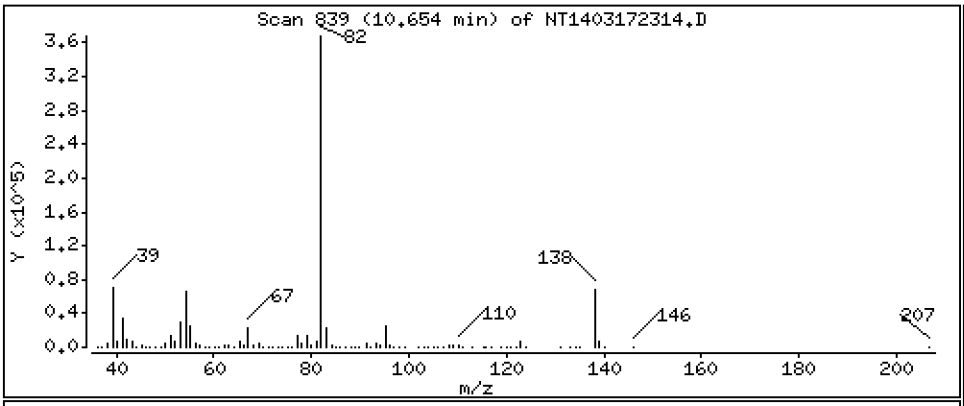
Operator: JGR

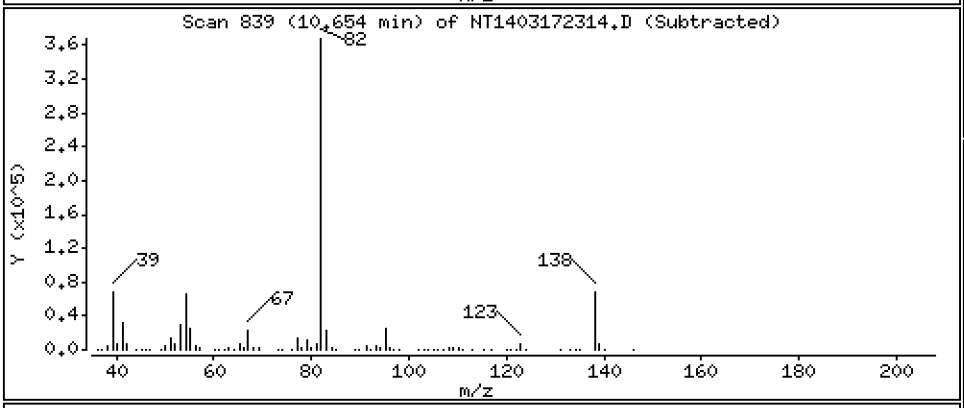
Column phase: ZB-5msi

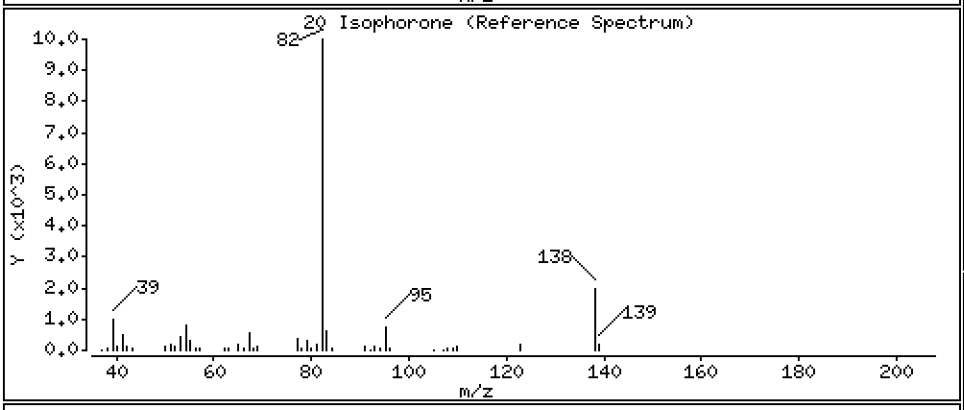
Column diameter: 0.25

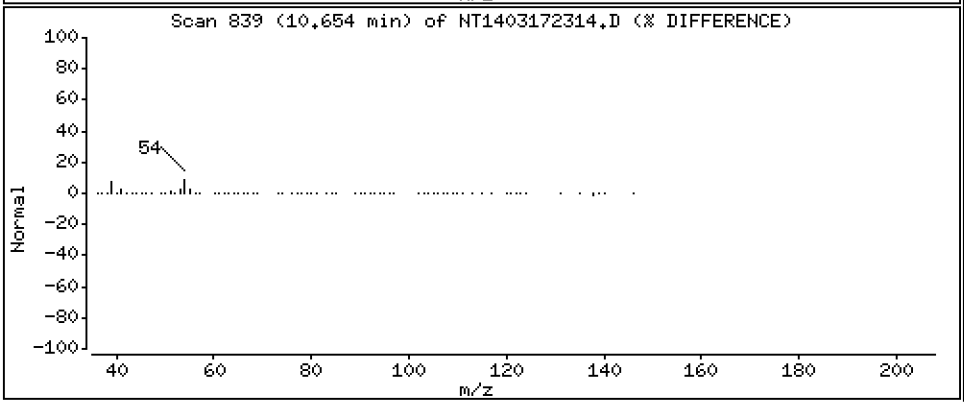
20 Isophorone

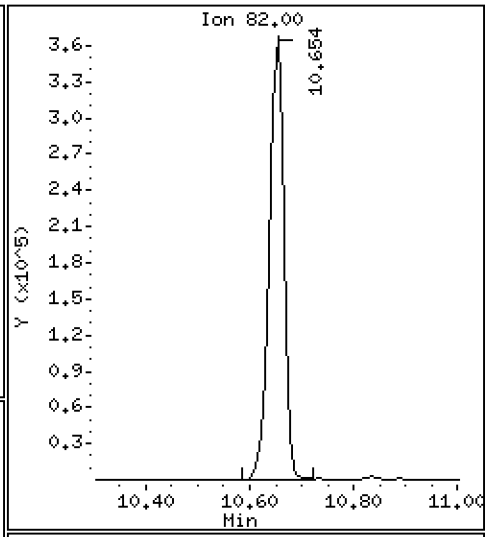
Concentration: 5.830 ug/mL

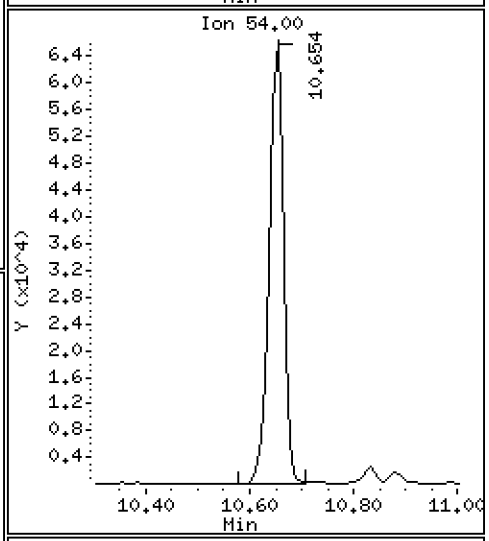


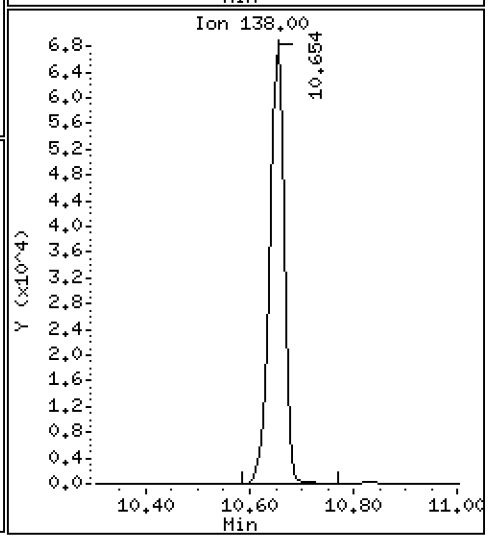












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Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

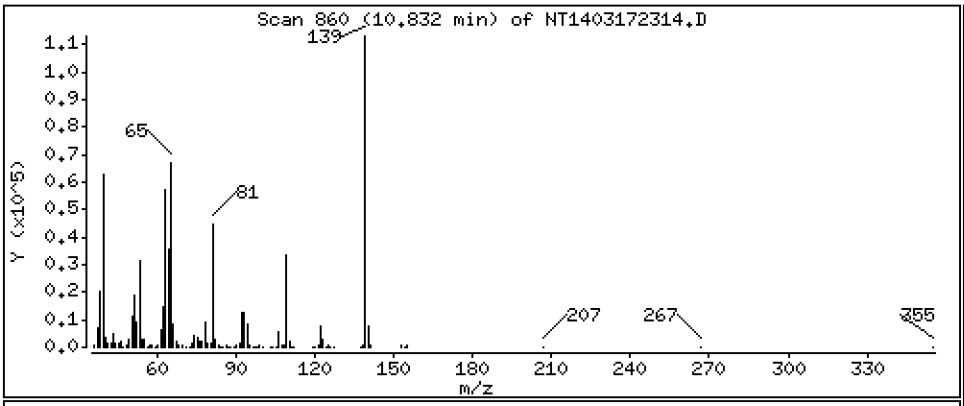
Operator: JGR

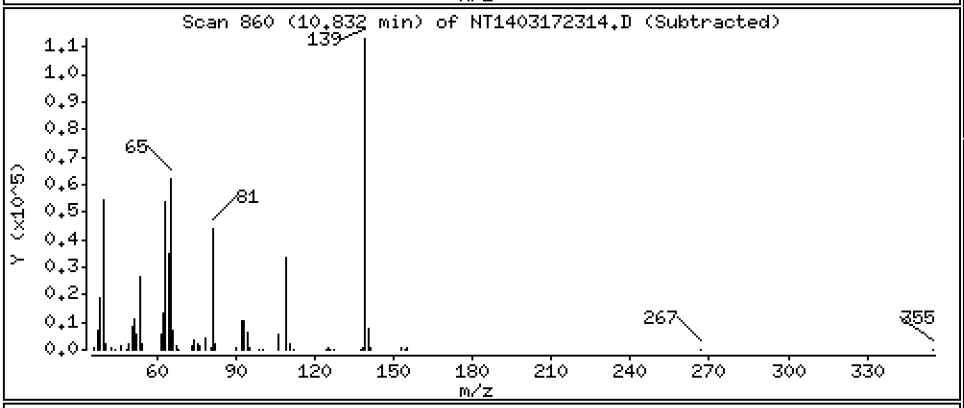
Column phase: ZB-5msi

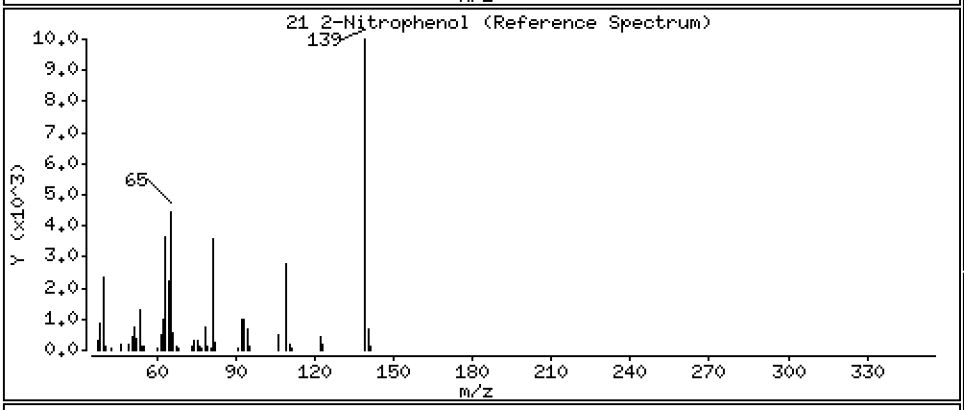
Column diameter: 0.25

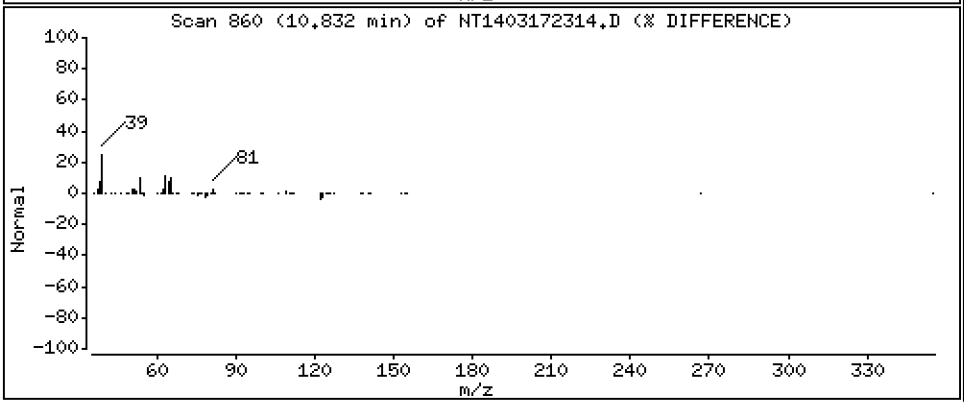
21 2-Nitrophenol

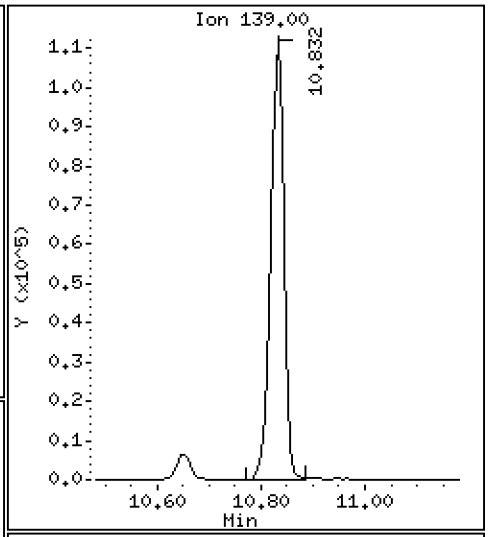
Concentration: 3.767 ug/mL

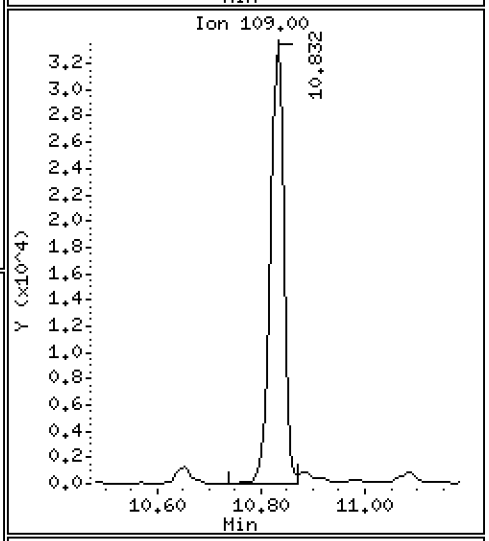


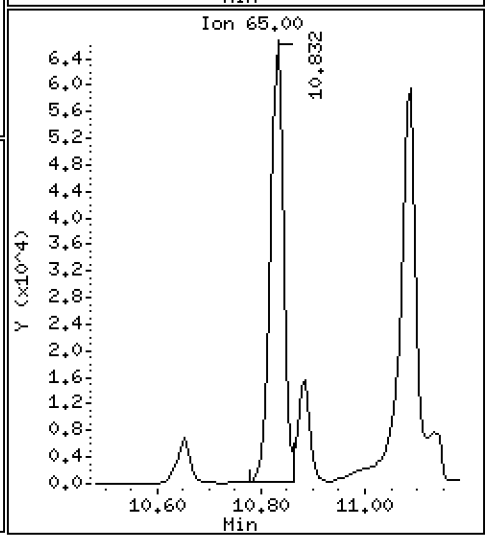












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Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

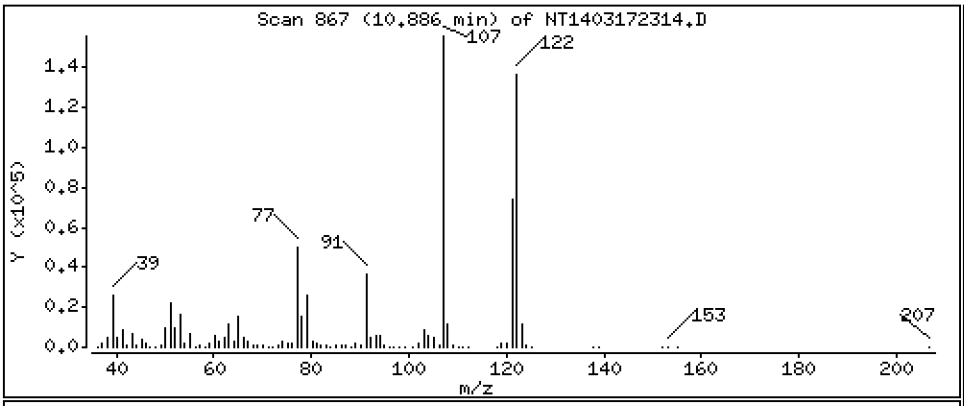
Operator: JGR

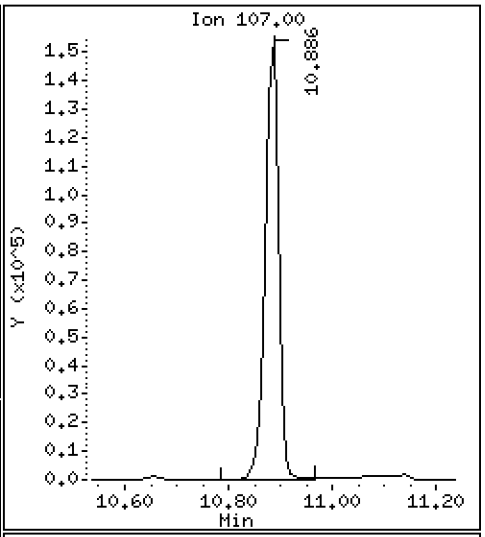
Column phase: ZB-5msi

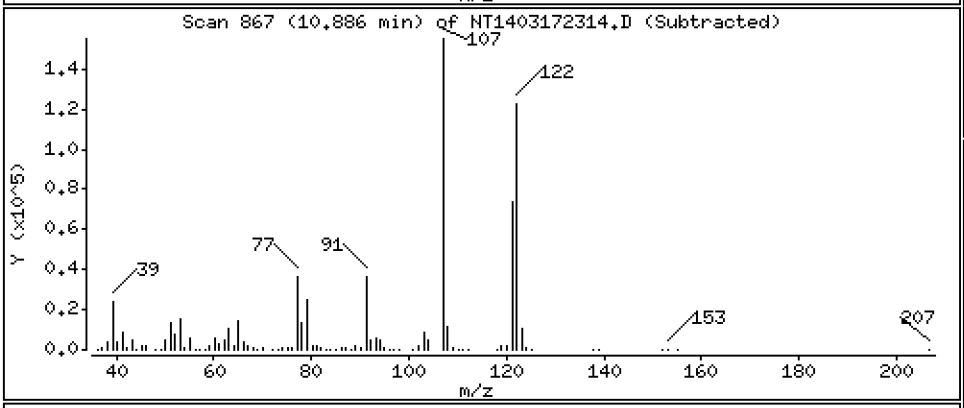
Column diameter: 0.25

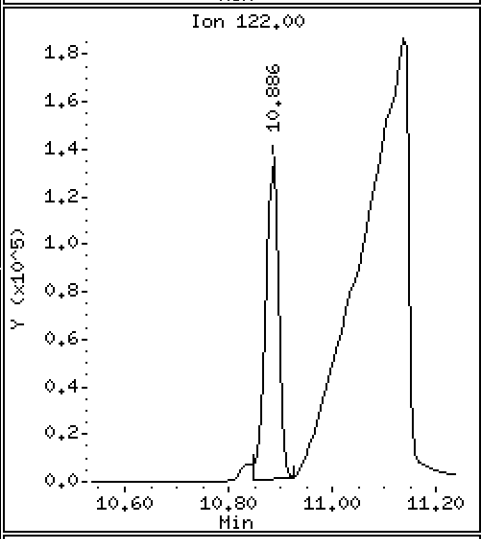
22 2,4-Dimethylphenol

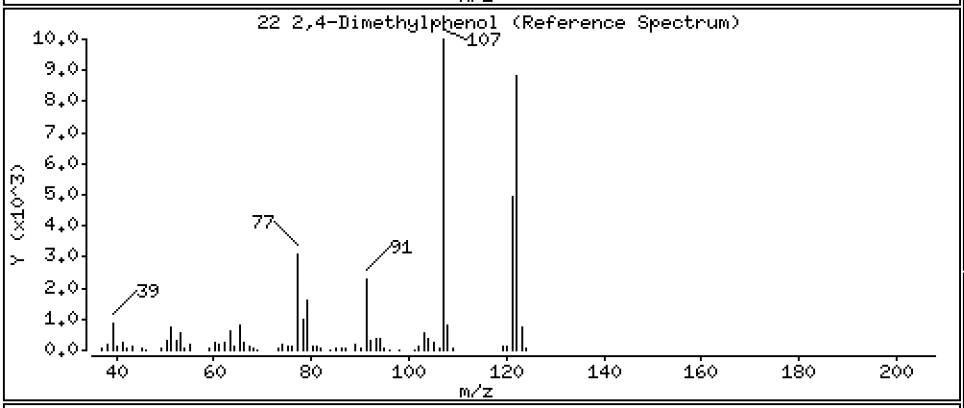
Concentration: 3.545 ug/mL

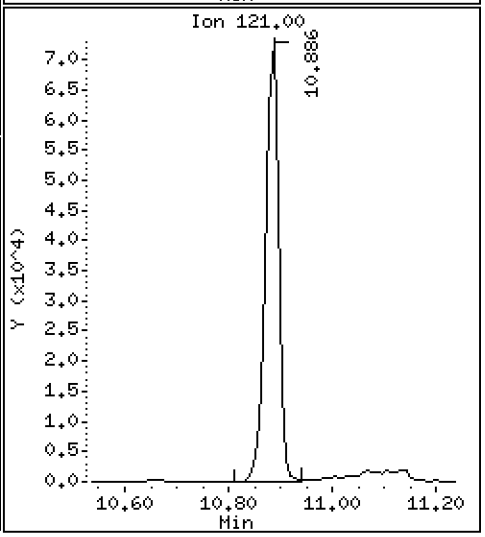


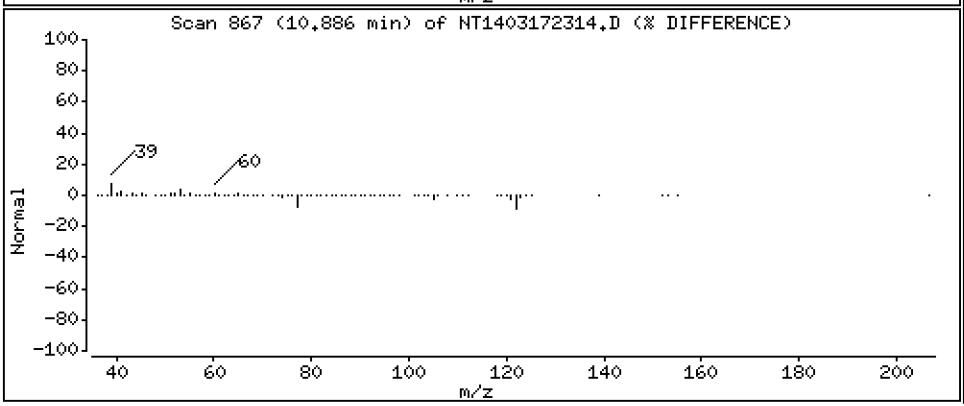












Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172314.D

Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

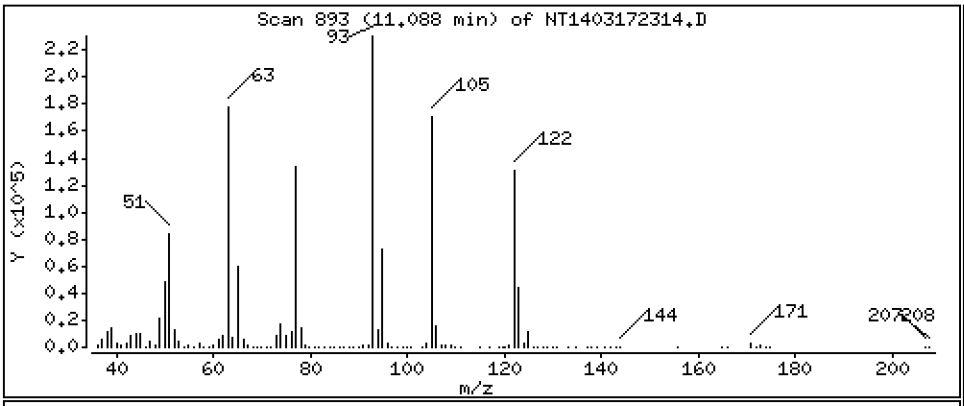
Operator: JGR

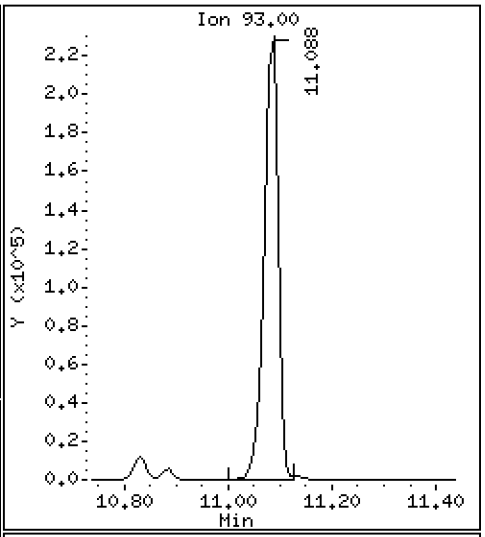
Column phase: ZB-5msi

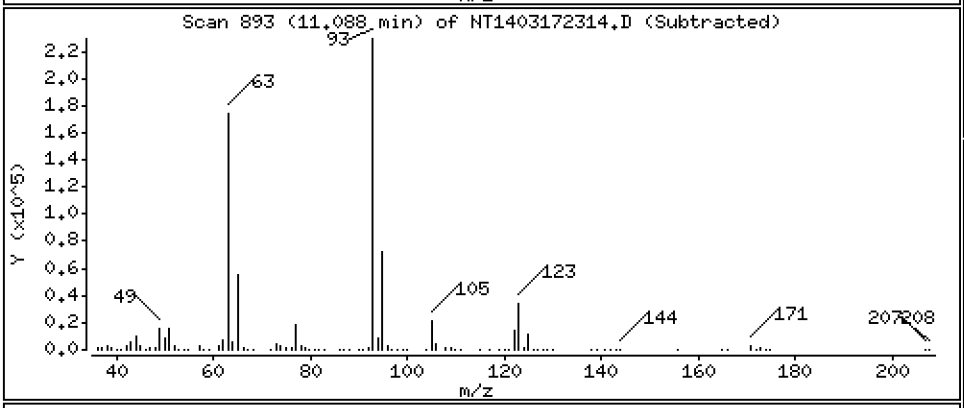
Column diameter: 0.25

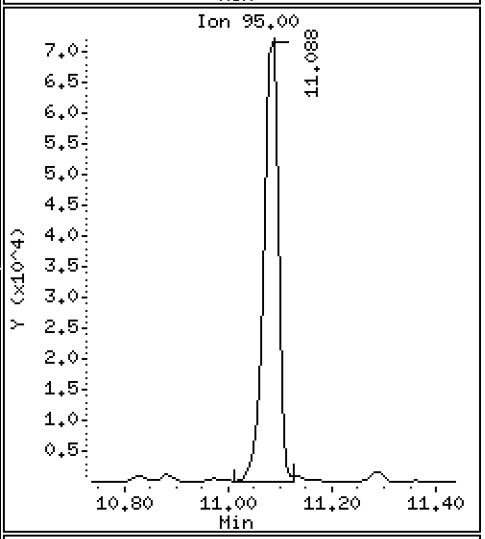
23 Bis(2-Chloroethoxy)methane

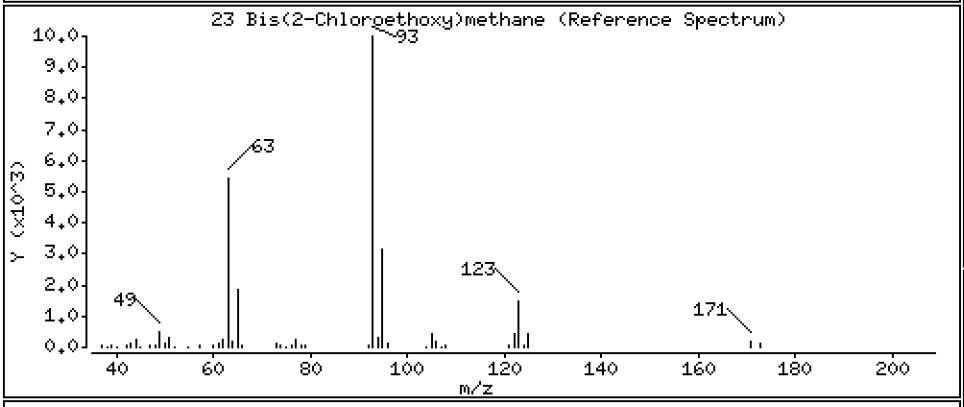
Concentration: 5.141 ug/mL

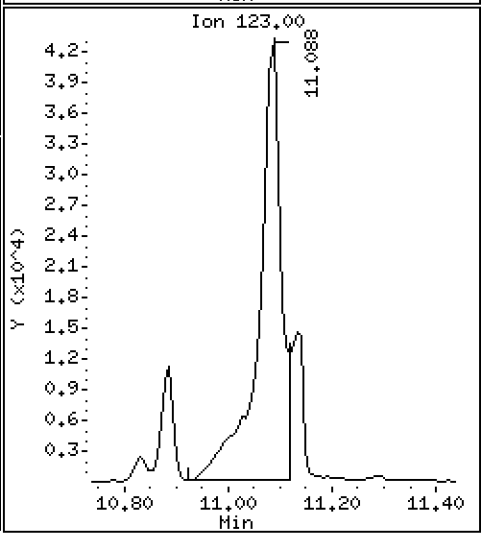


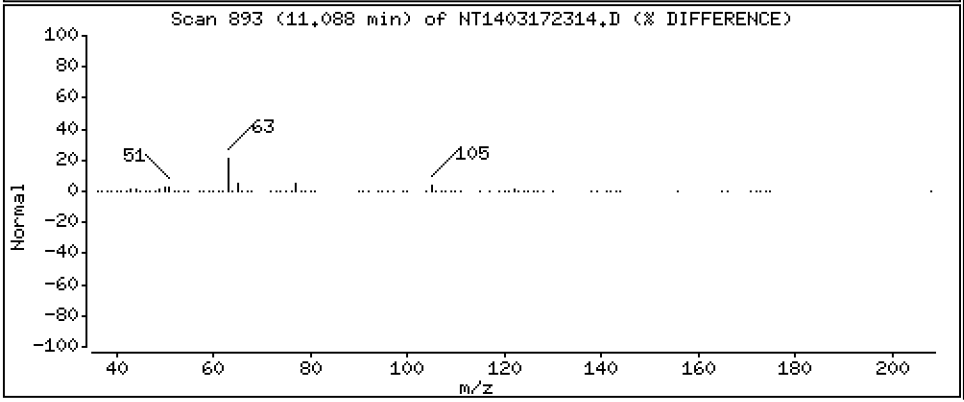












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Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

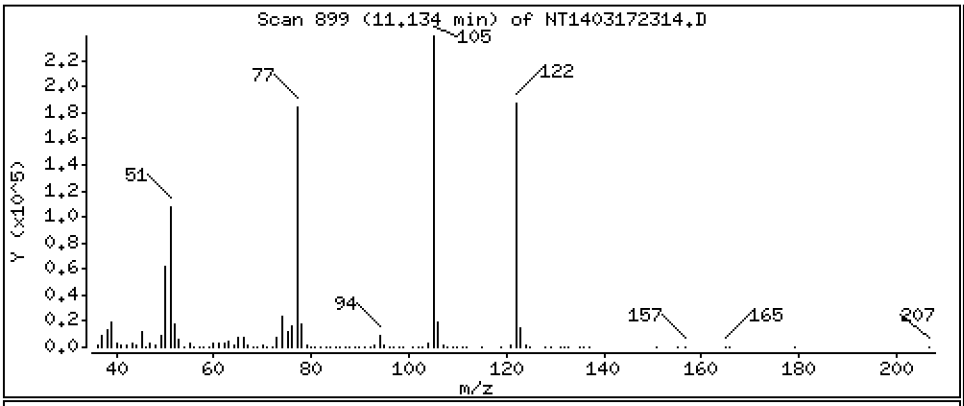
Operator: JGR

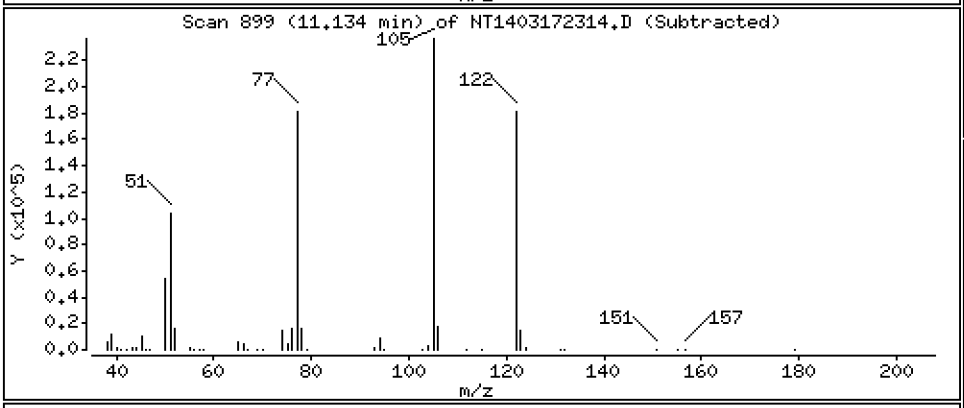
Column phase: ZB-5msi

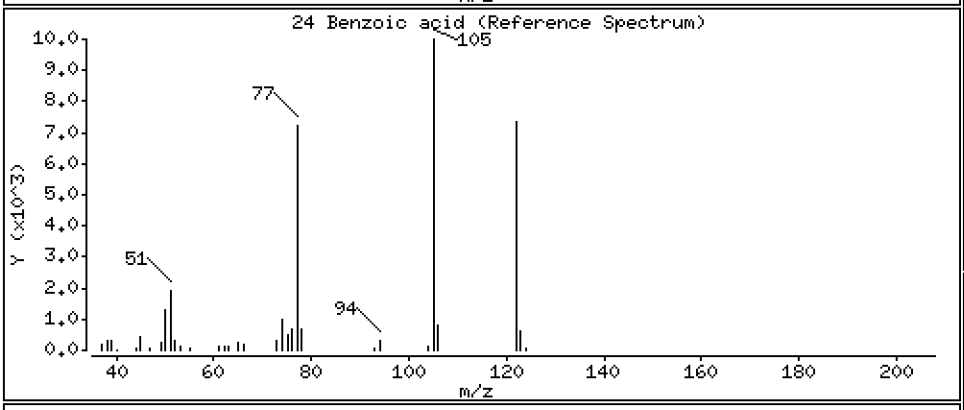
Column diameter: 0.25

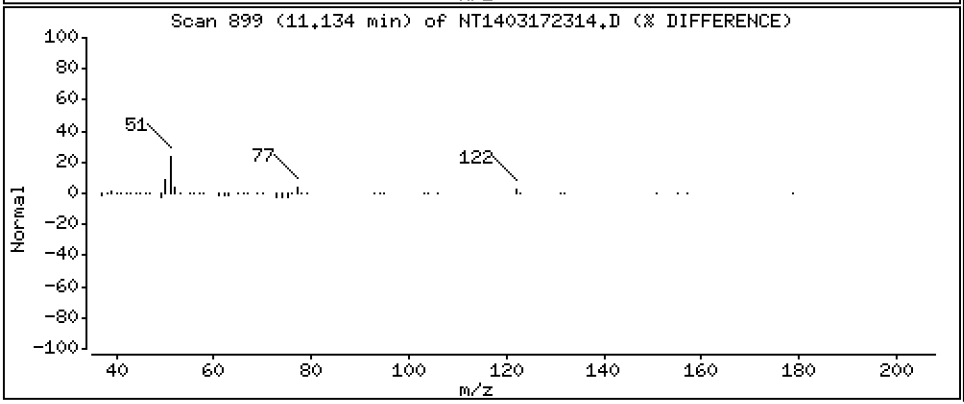
24 Benzoic acid

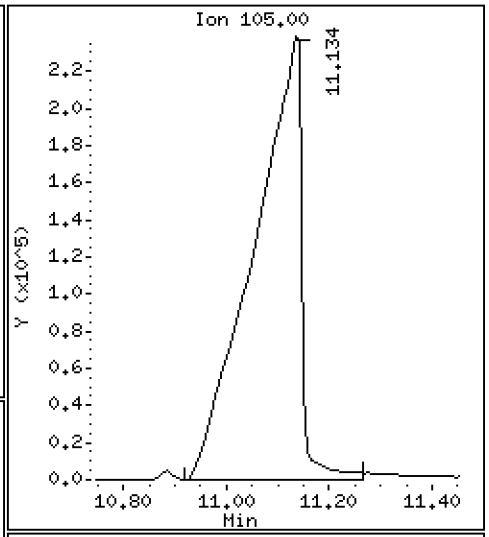
Concentration: 23.99 ug/mL

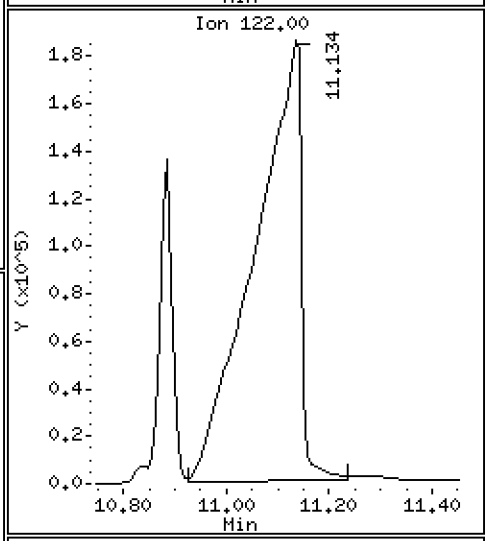


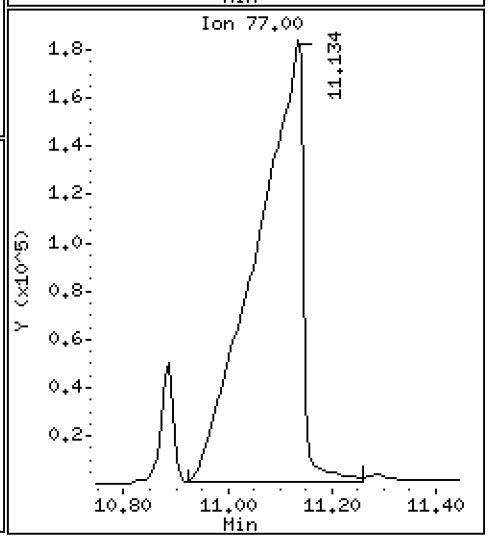












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Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

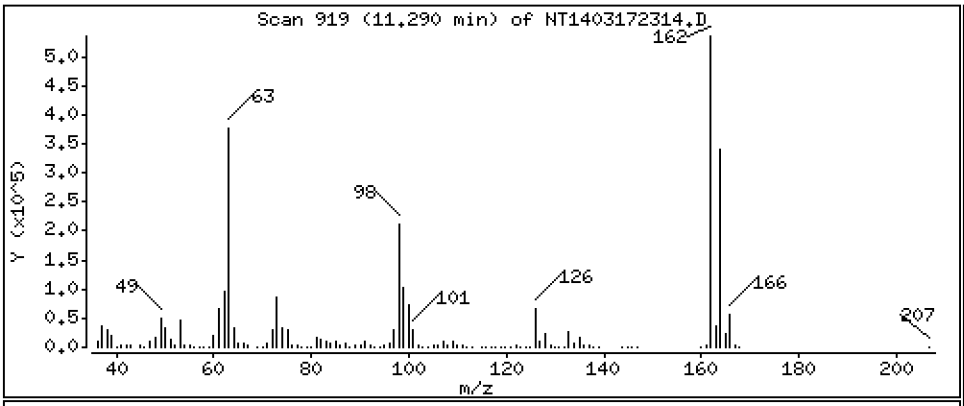
Operator: JGR

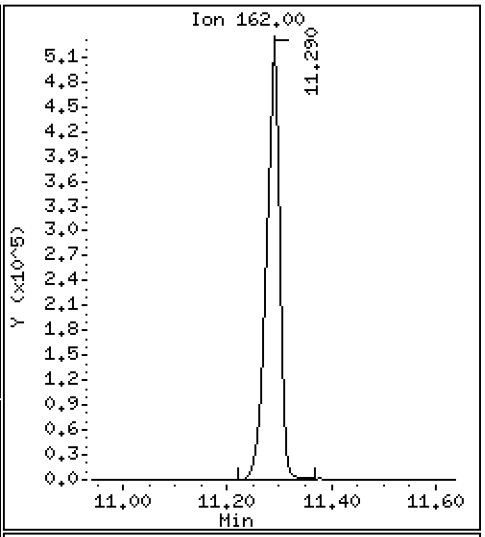
Column phase: ZB-5msi

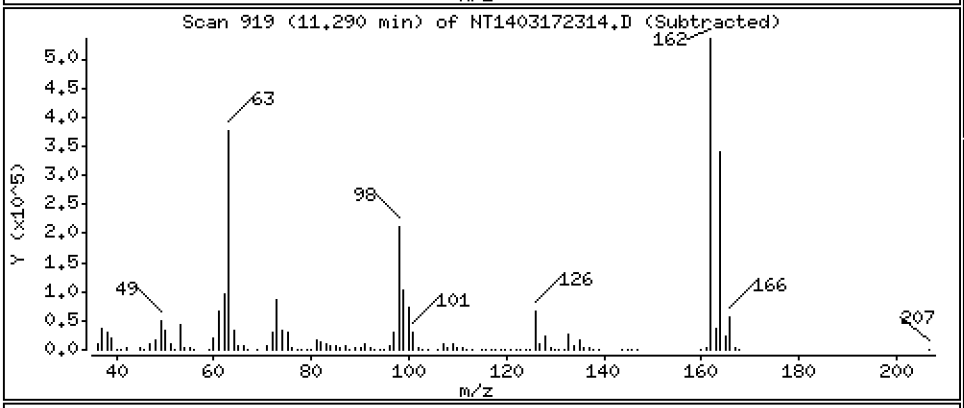
Column diameter: 0.25

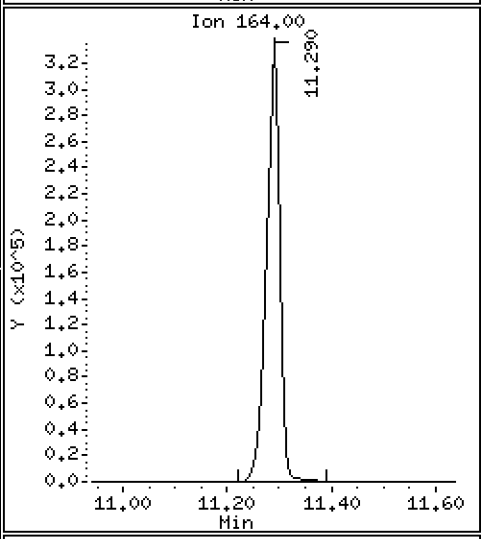
25 2,4-Dichlorophenol

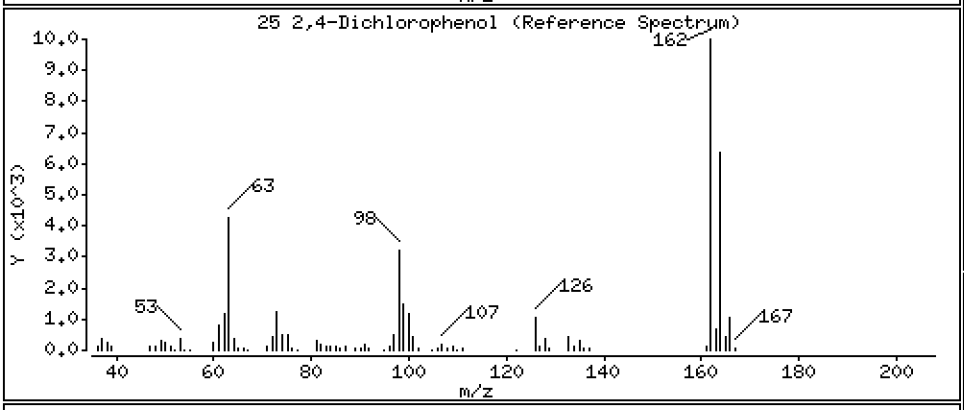
Concentration: 15.50 ug/mL

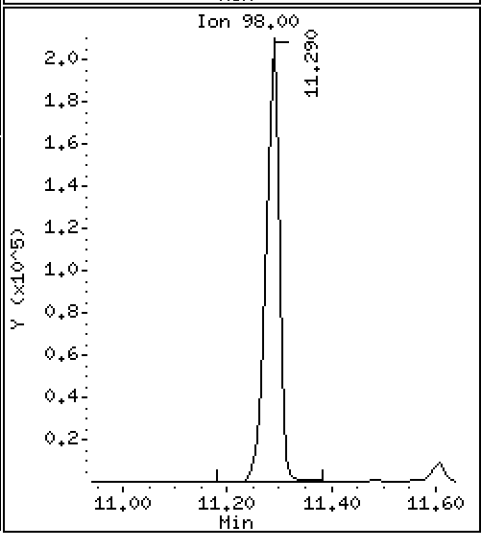


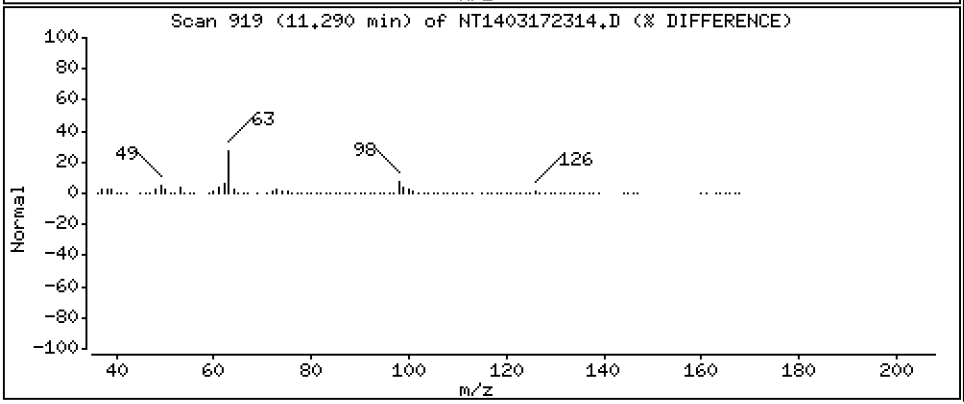












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Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

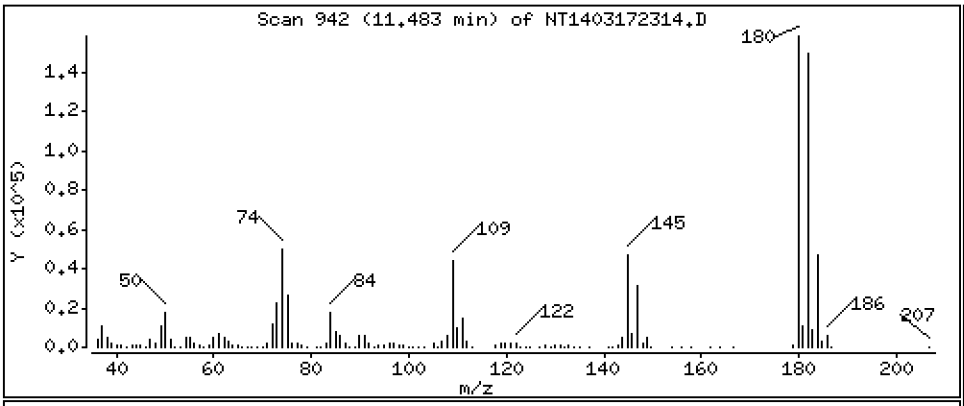
Operator: JGR

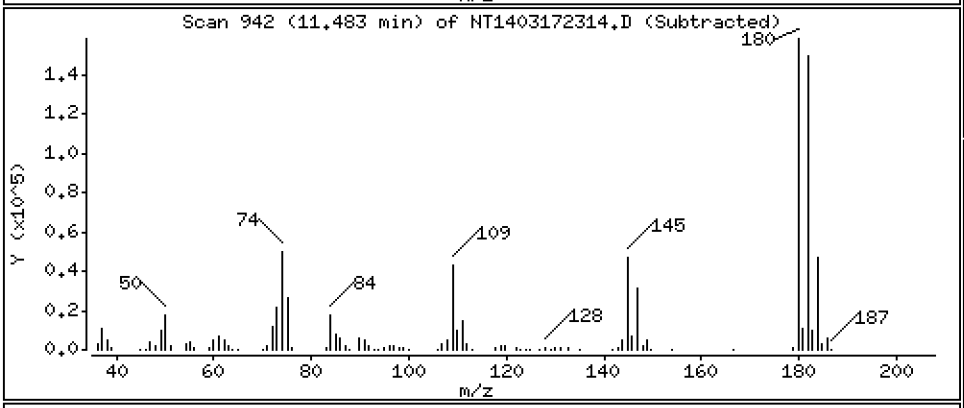
Column phase: ZB-5msi

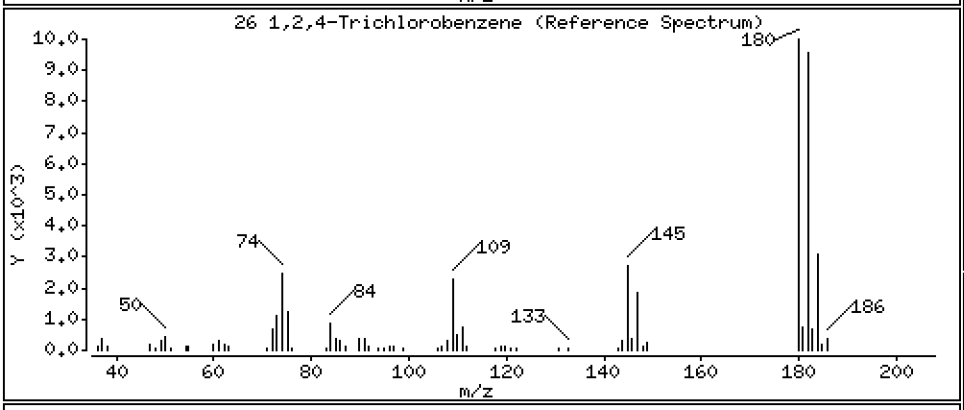
Column diameter: 0.25

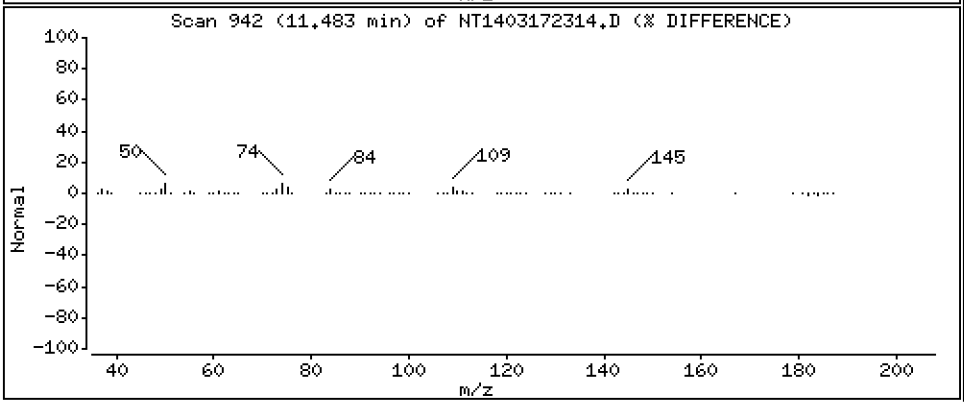
26 1,2,4-Trichlorobenzene

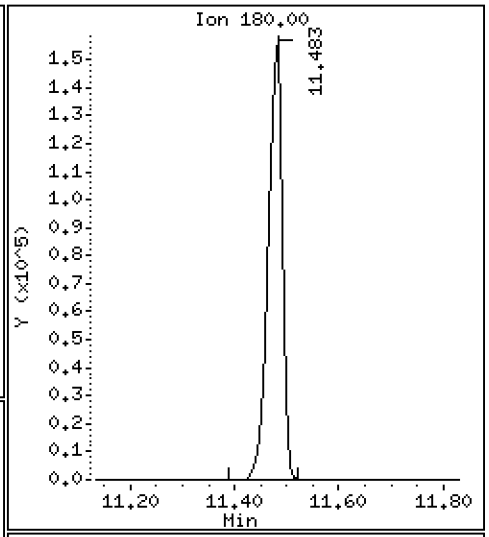
Concentration: 4.433 ug/mL

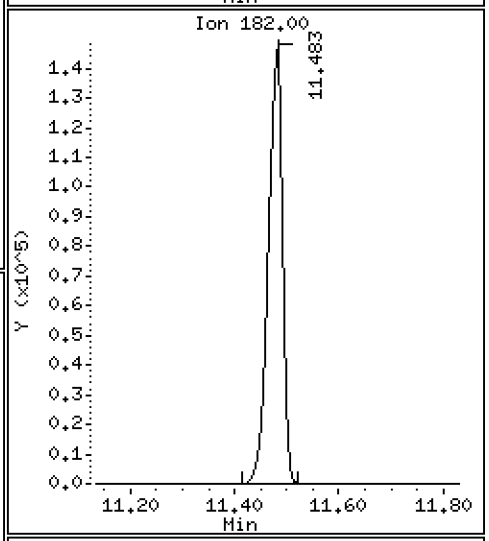


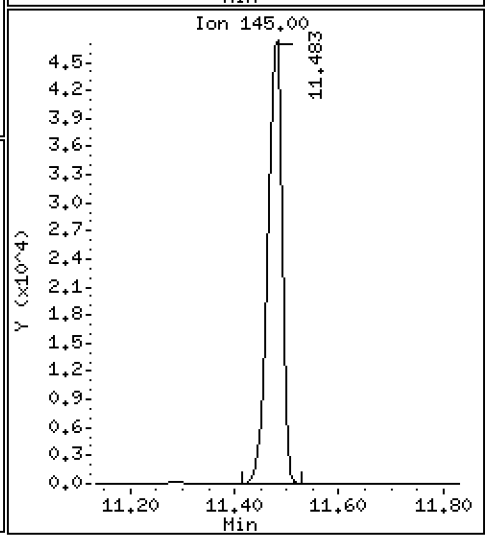












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Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

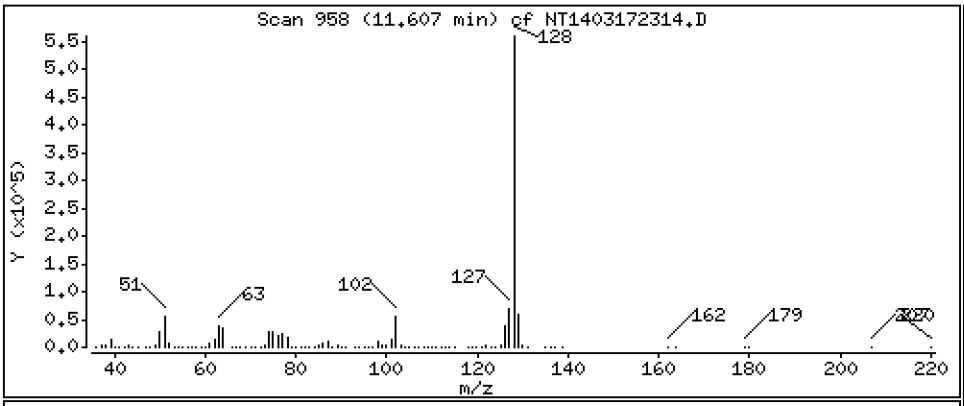
Operator: JGR

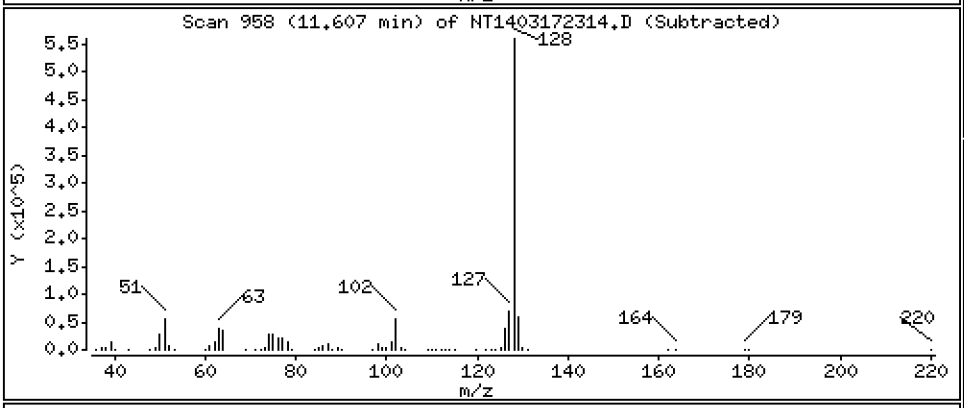
Column phase: ZB-5msi

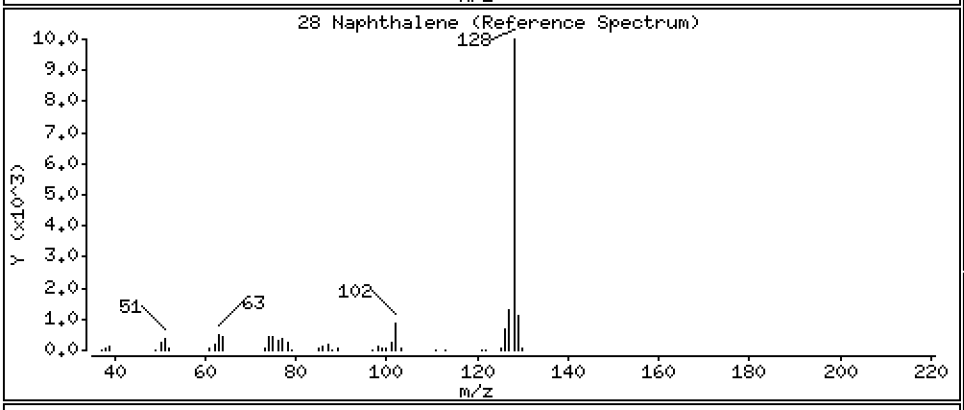
Column diameter: 0.25

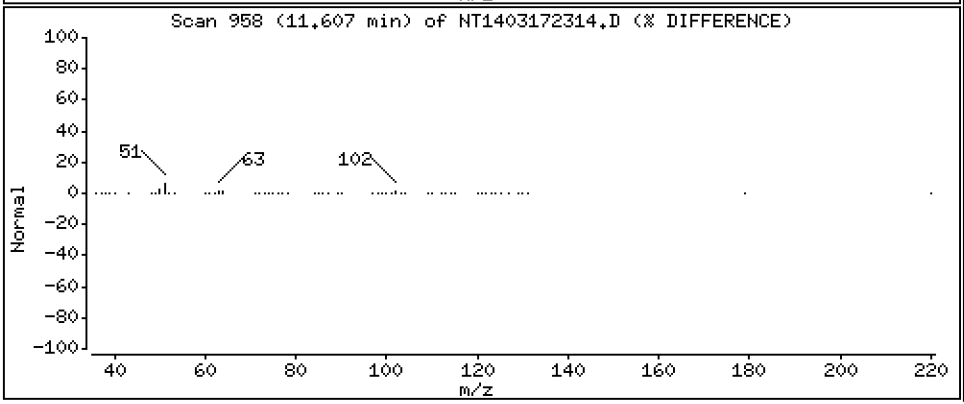
28 Naphthalene

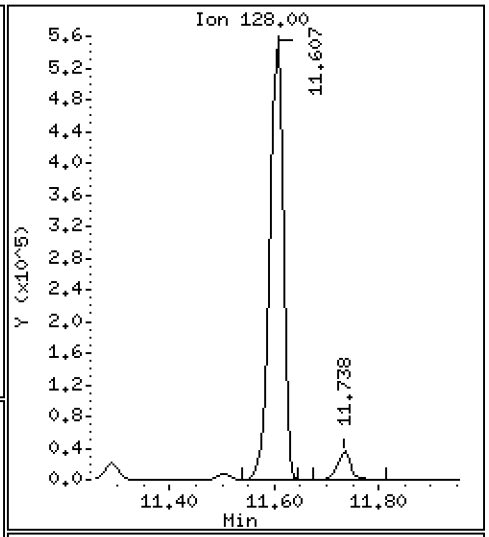
Concentration: 4.229 ug/mL

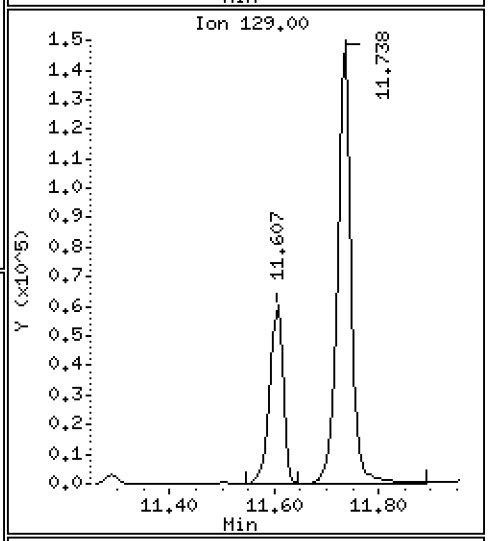


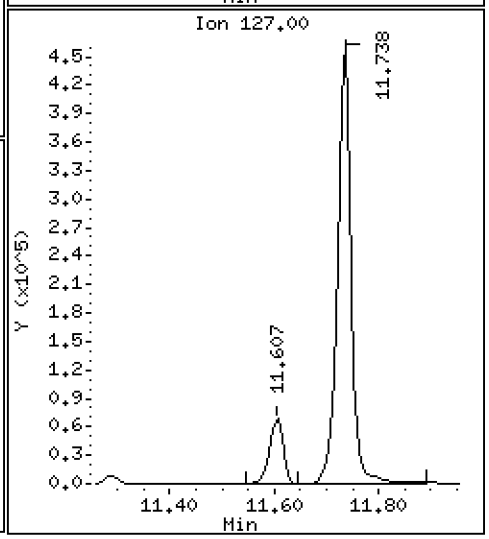












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Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

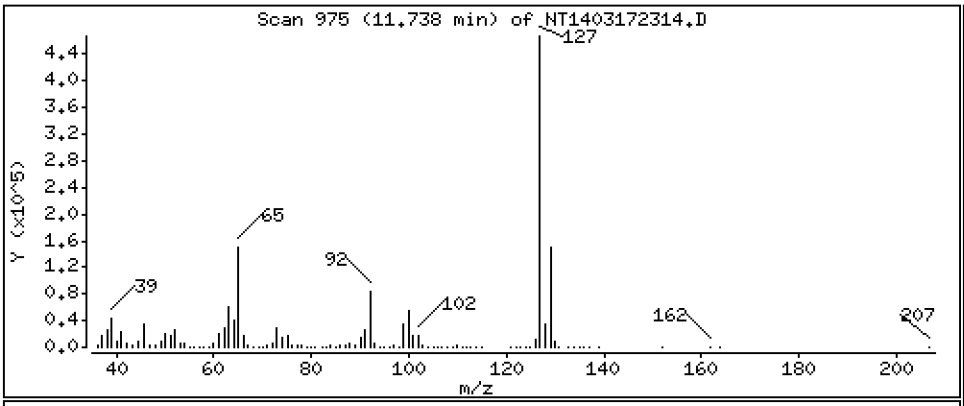
Operator: JGR

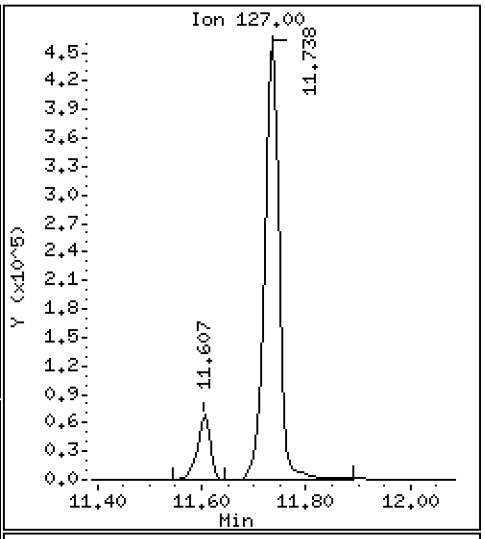
Column phase: ZB-5msi

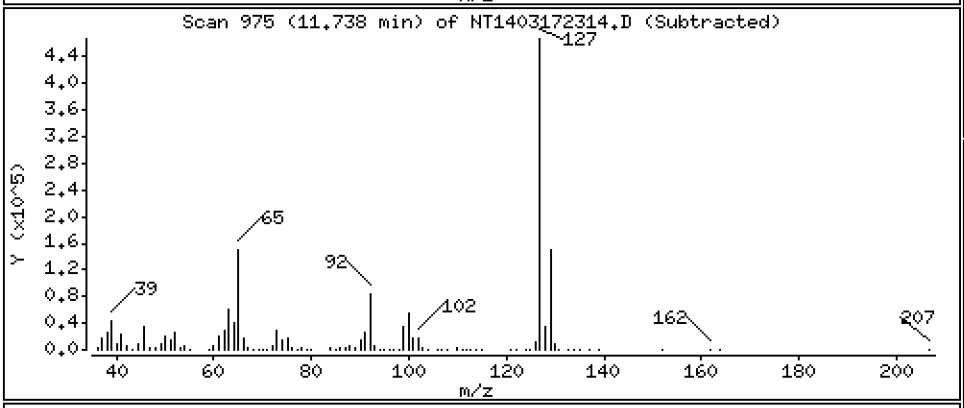
Column diameter: 0.25

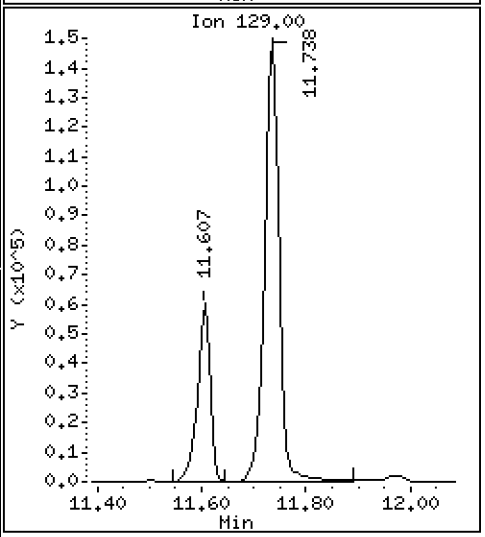
29 4-Chloroaniline

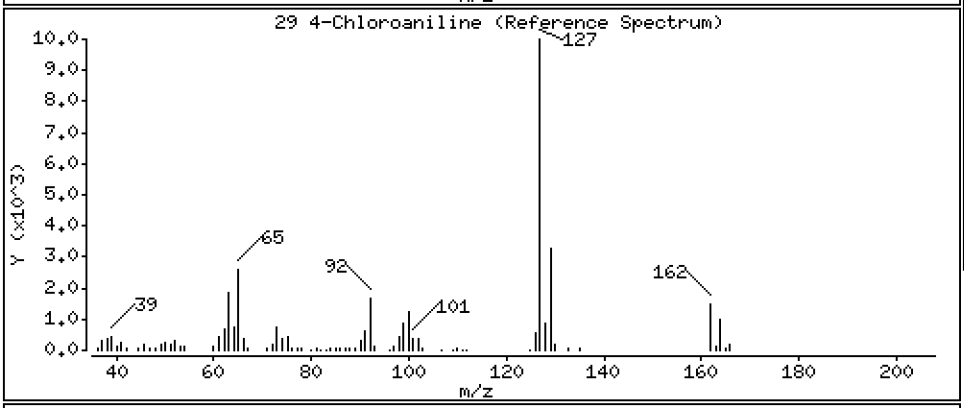
Concentration: 9.714 ug/mL

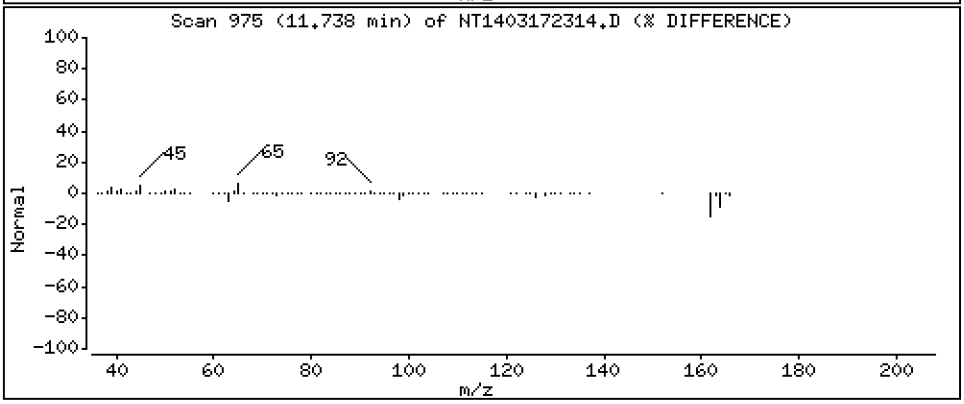












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Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

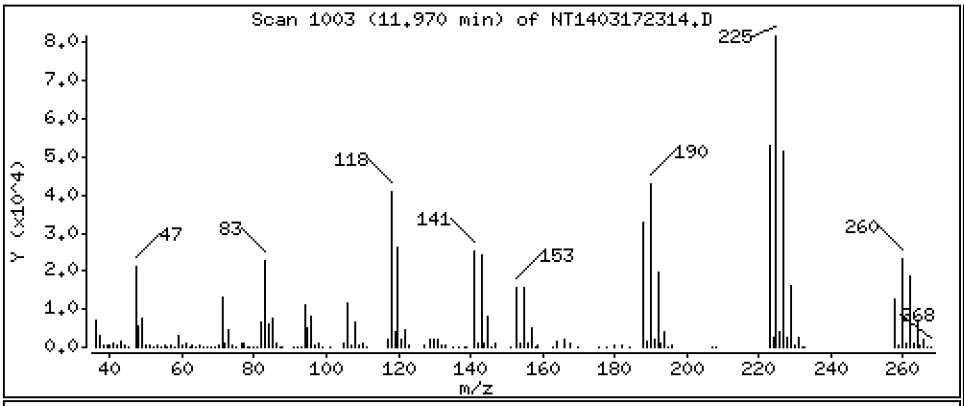
Operator: JGR

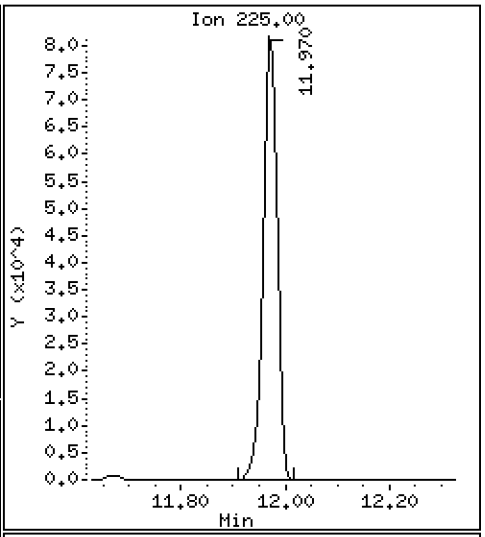
Column phase: ZB-5msi

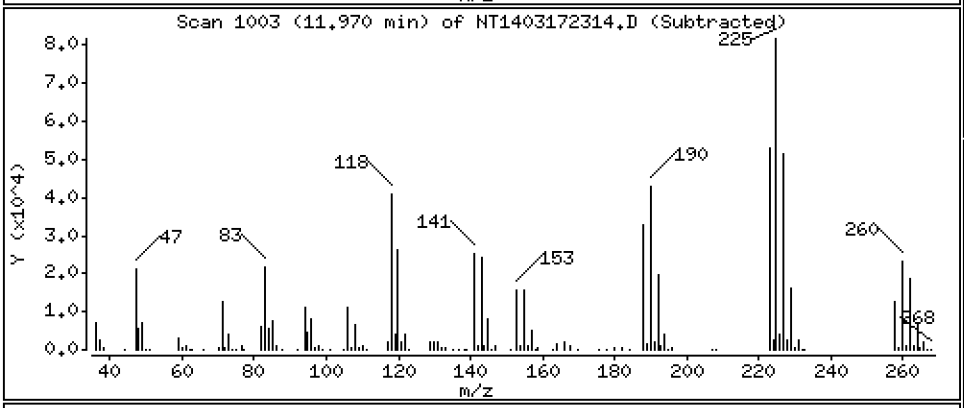
Column diameter: 0.25

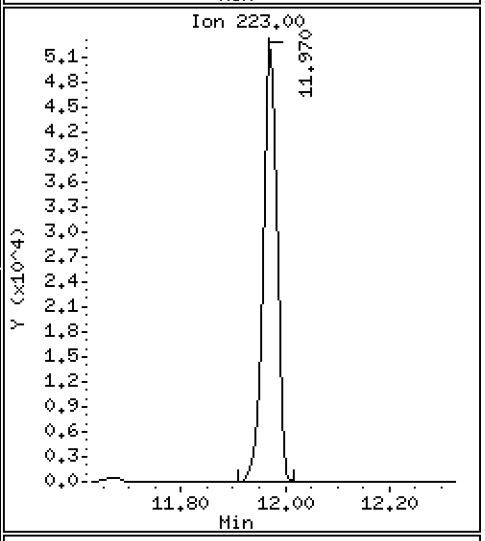
30 Hexachlorobutadiene

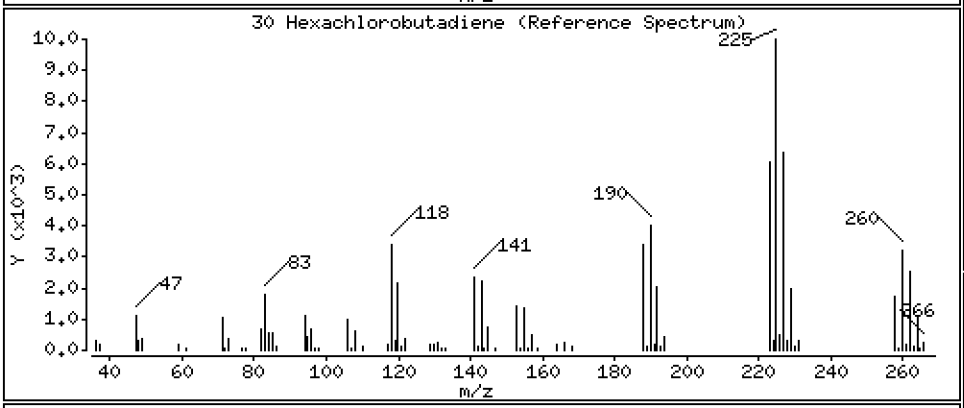
Concentration: 4.540 ug/mL

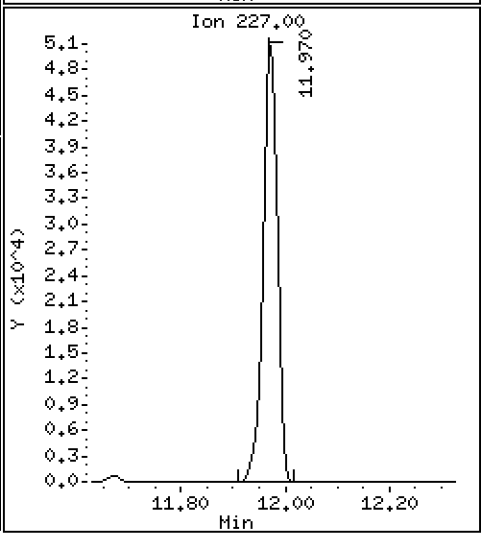


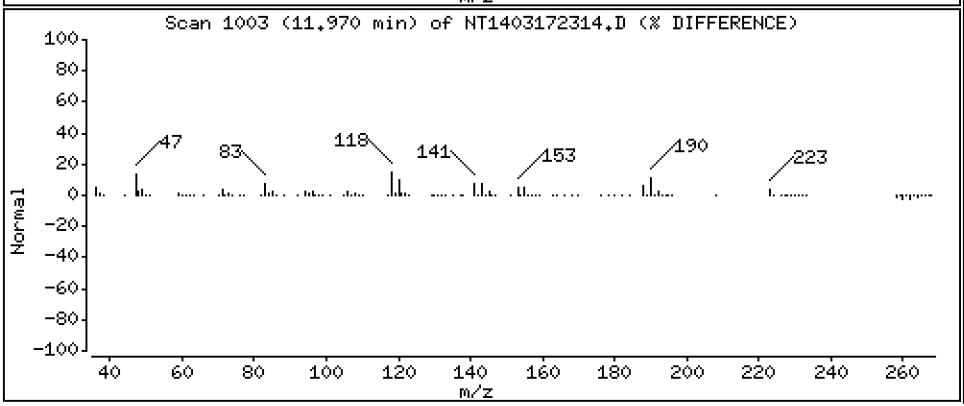












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Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

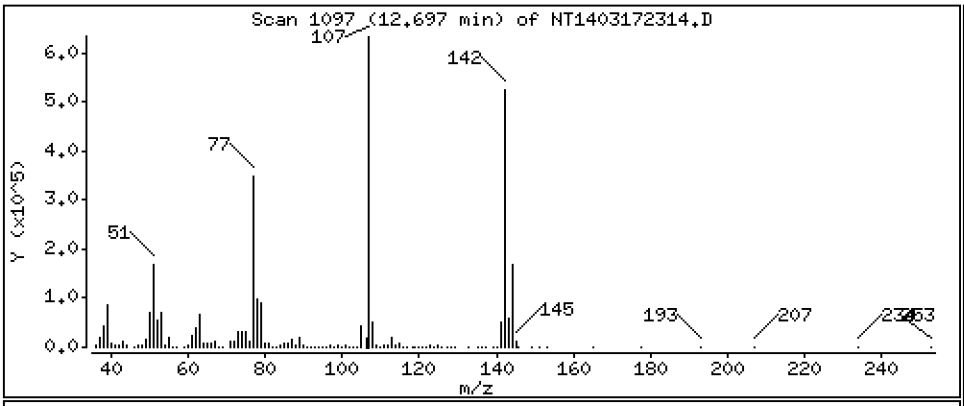
Operator: JGR

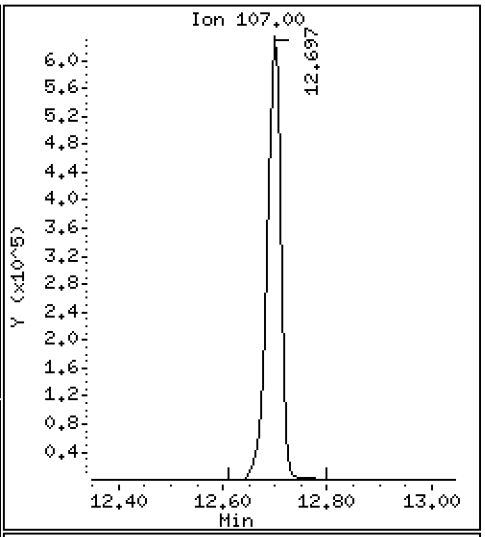
Column phase: ZB-5msi

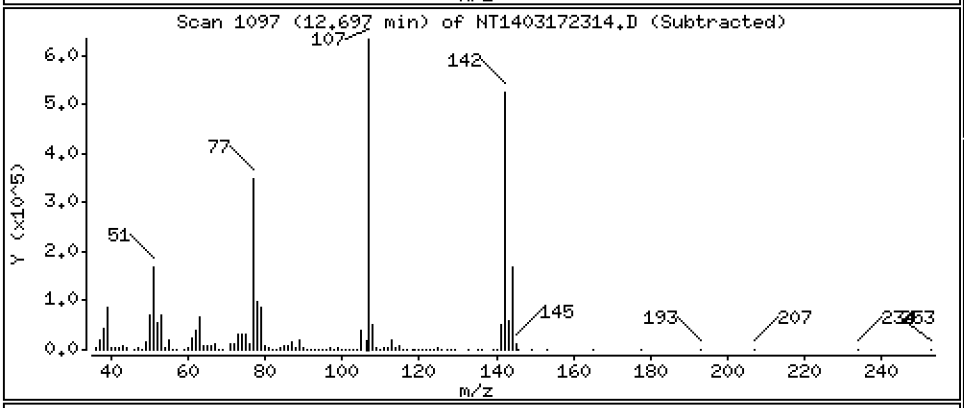
Column diameter: 0.25

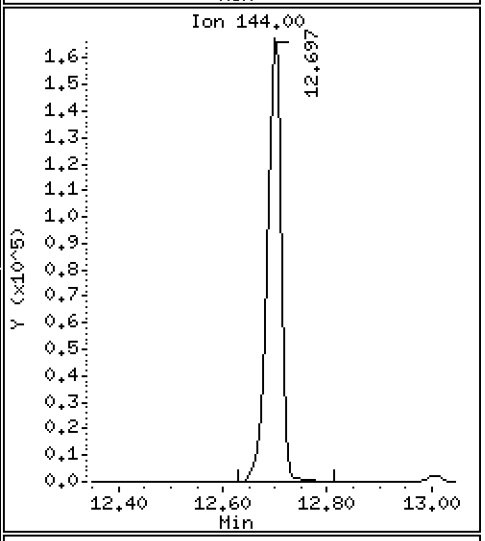
31 4-Chloro-3-methylphenol

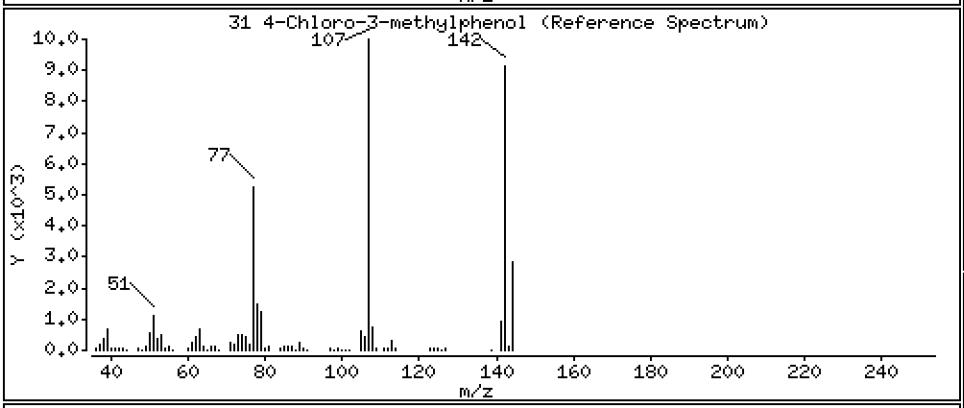
Concentration: 15.68 ug/mL

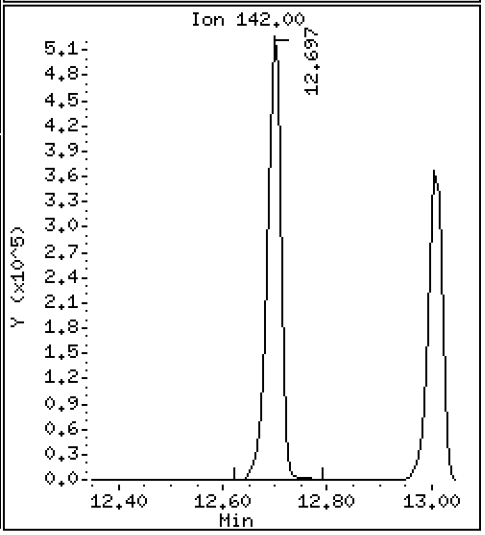


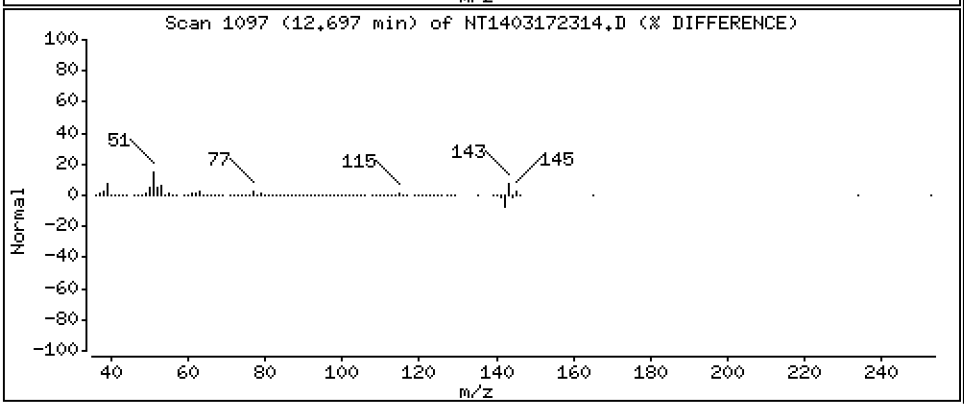












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Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

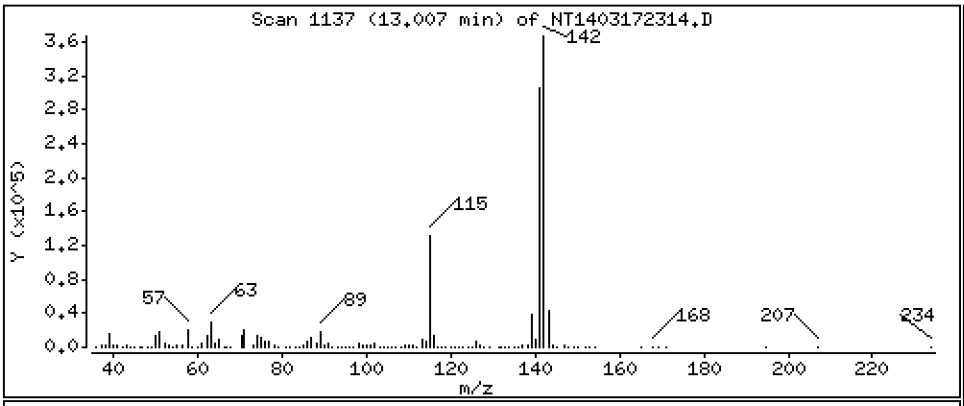
Operator: JGR

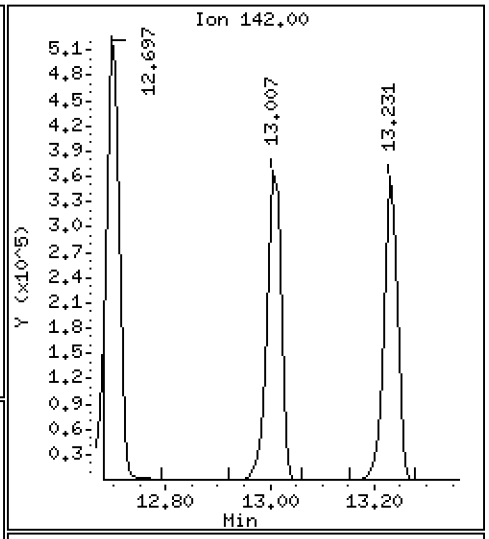
Column phase: ZB-5msi

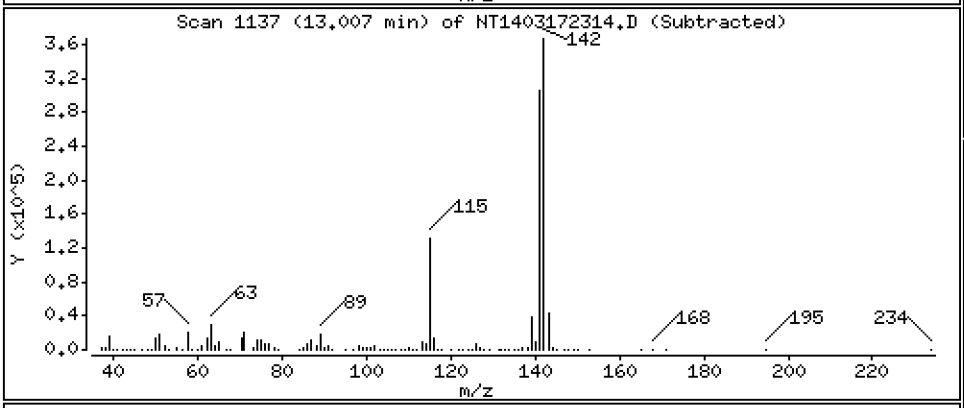
Column diameter: 0.25

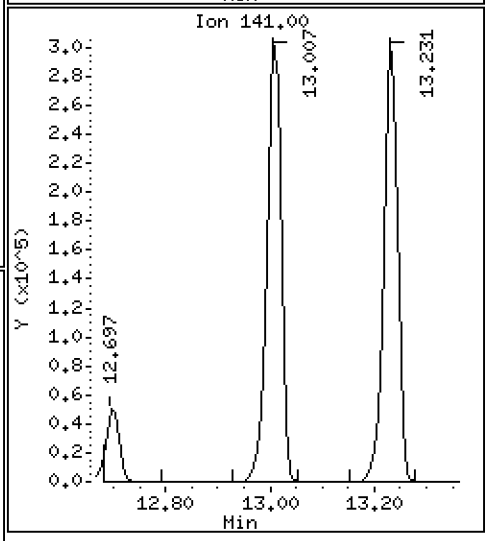
32 2-Methylnaphthalene

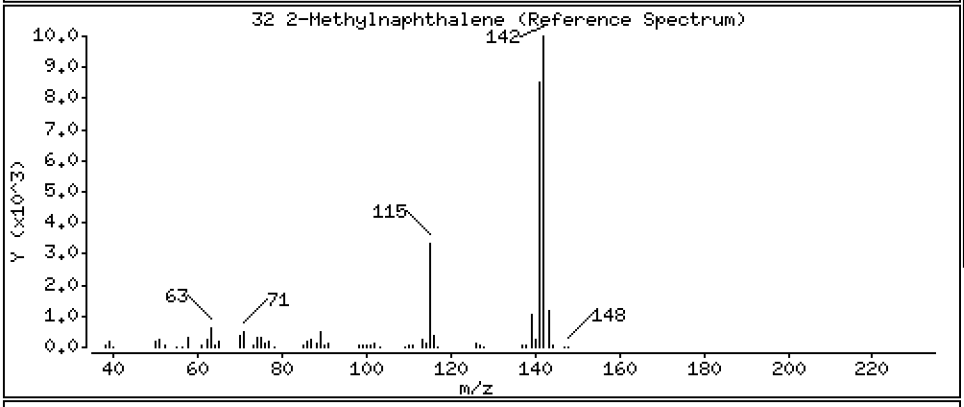
Concentration: 4.229 ug/mL

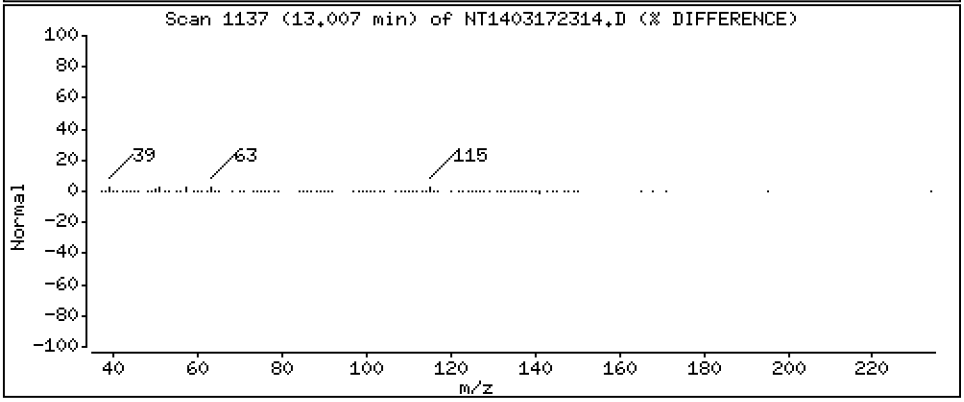












Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172314.D

Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

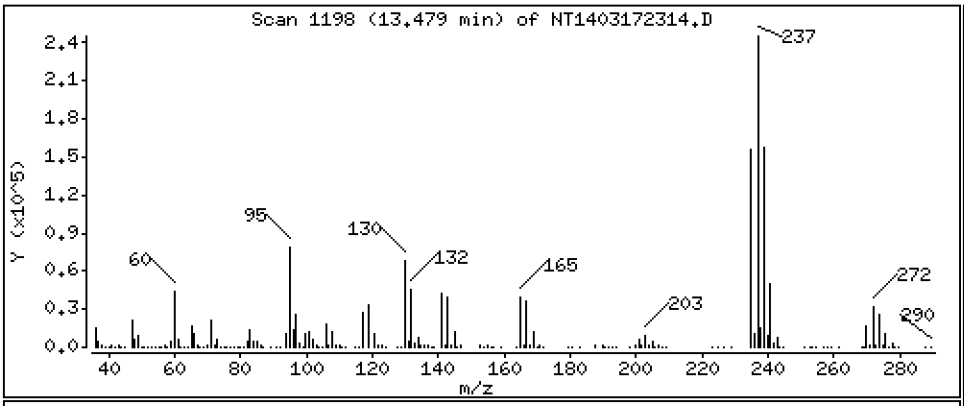
Operator: JGR

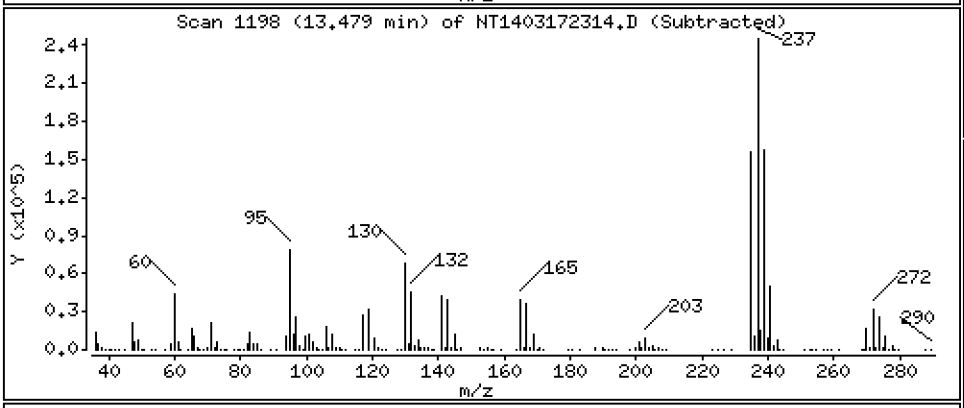
Column phase: ZB-5msi

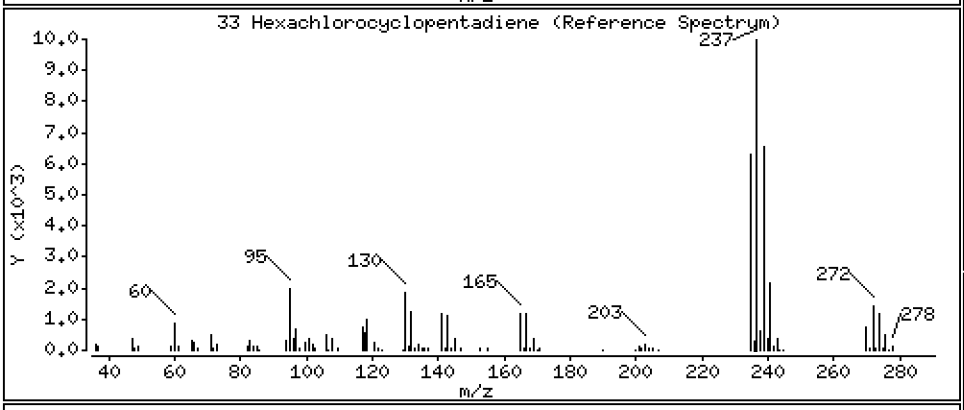
Column diameter: 0.25

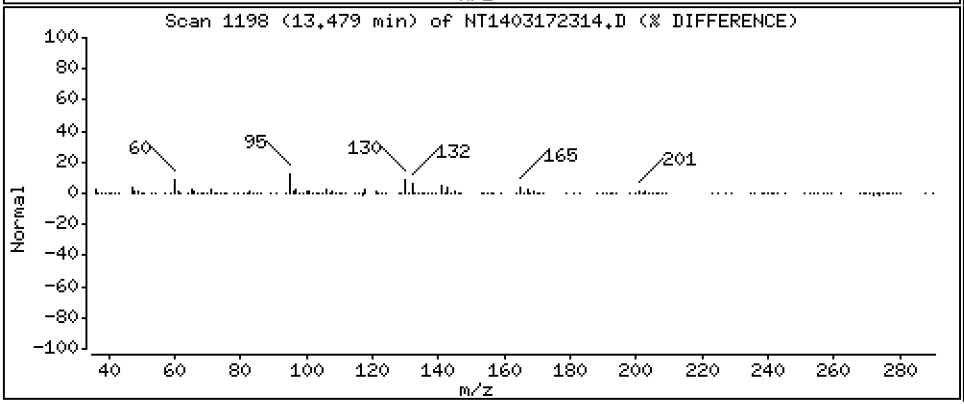
33 Hexachlorocyclopentadiene

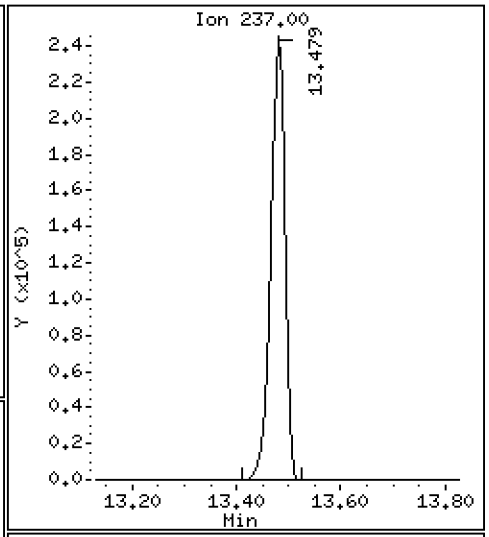
Concentration: 12.28 ug/mL

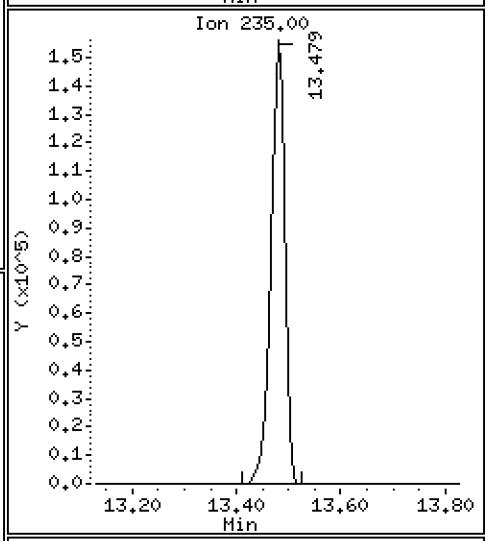


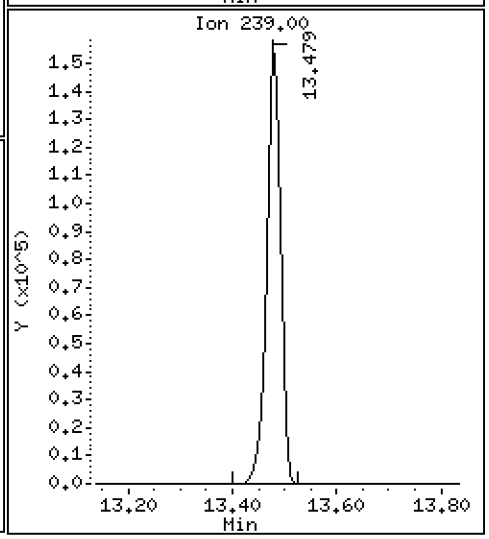












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Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

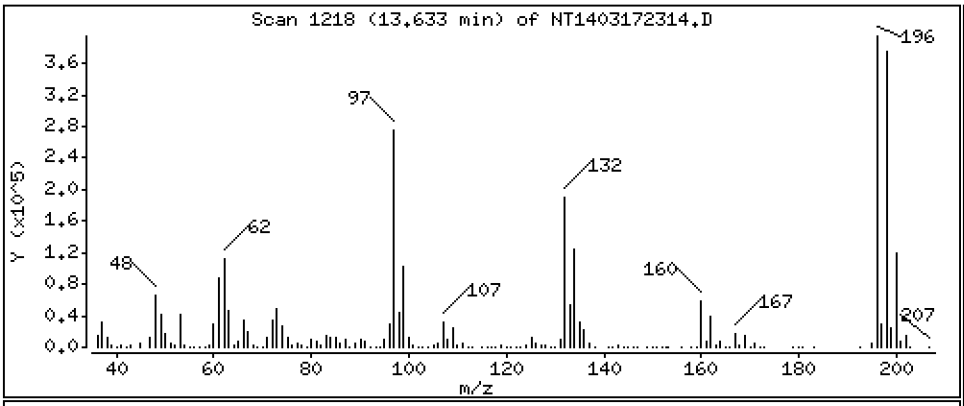
Operator: JGR

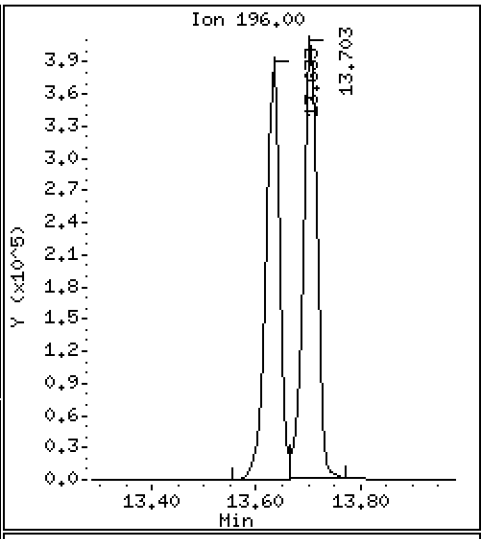
Column phase: ZB-5msi

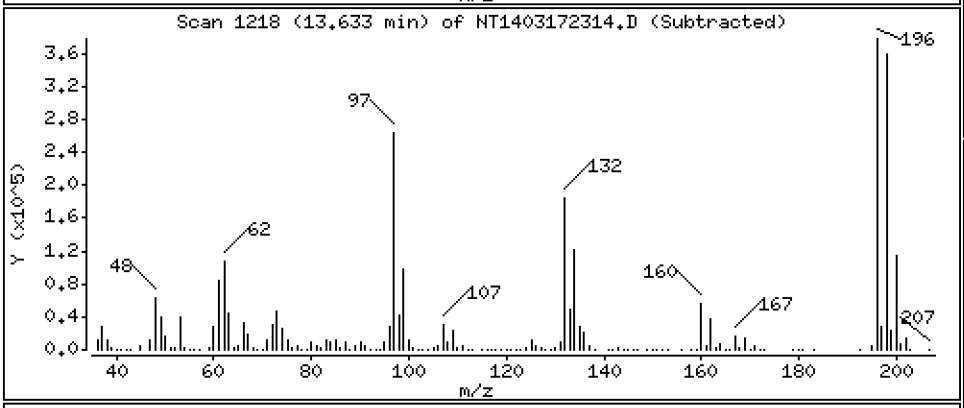
Column diameter: 0.25

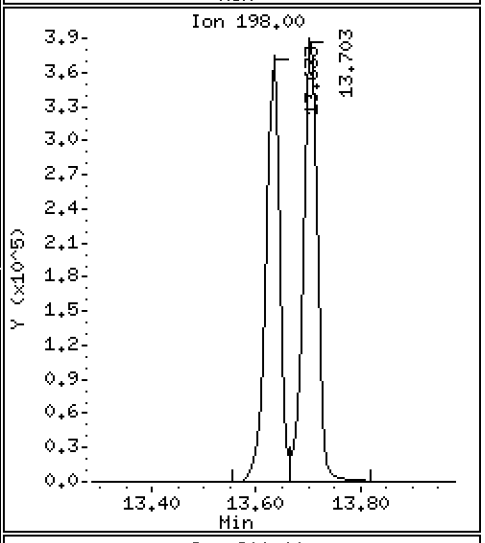
34 2,4,6-Trichlorophenol

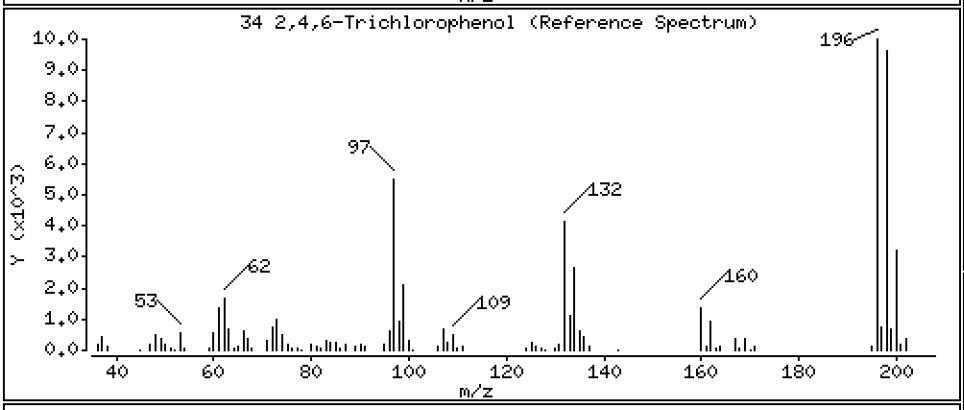
Concentration: 15.73 ug/mL

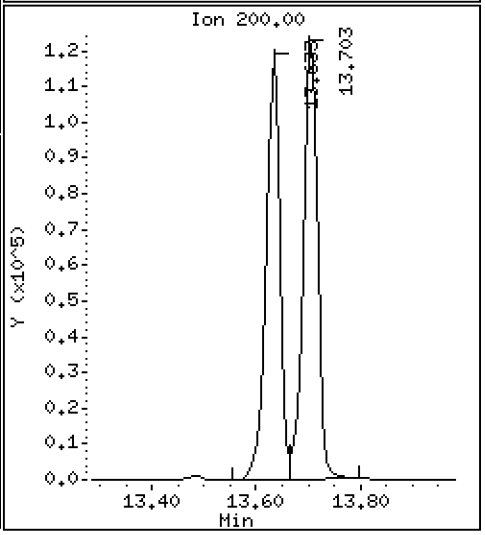


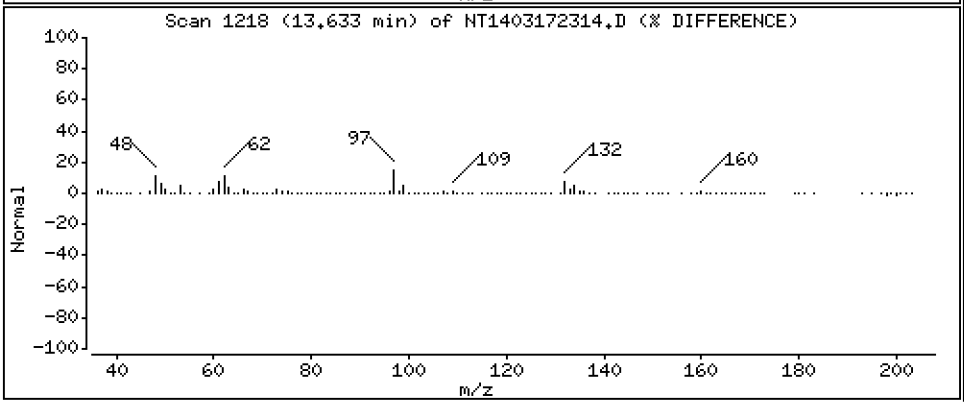












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Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

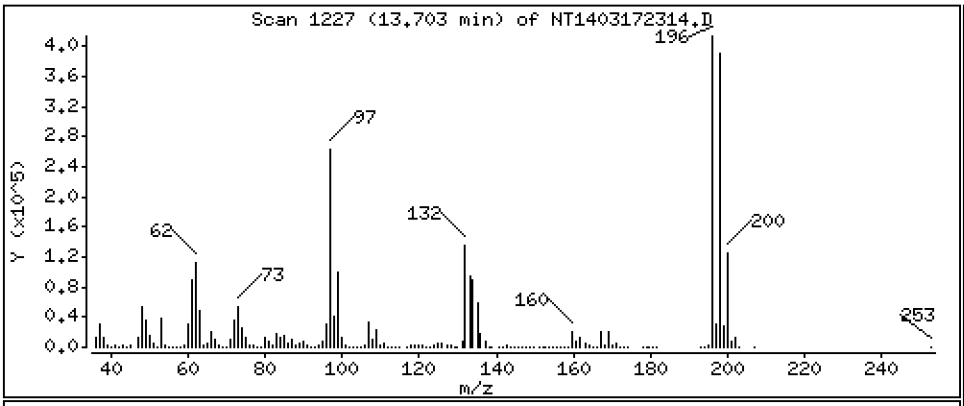
Operator: JGR

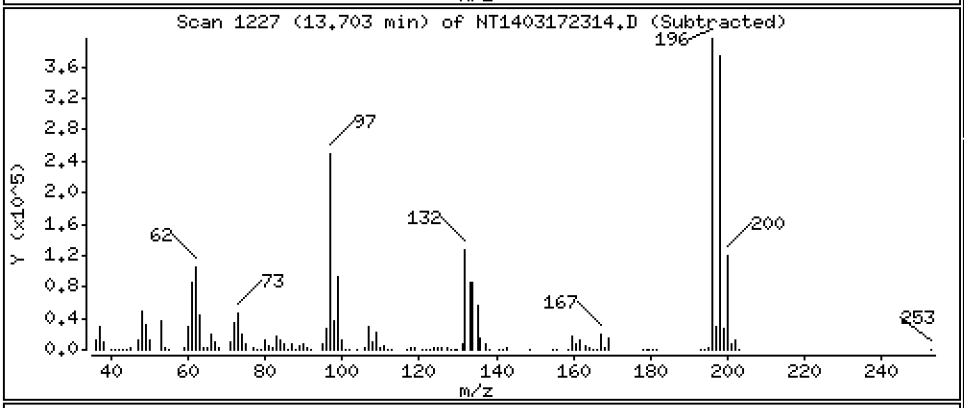
Column phase: ZB-5msi

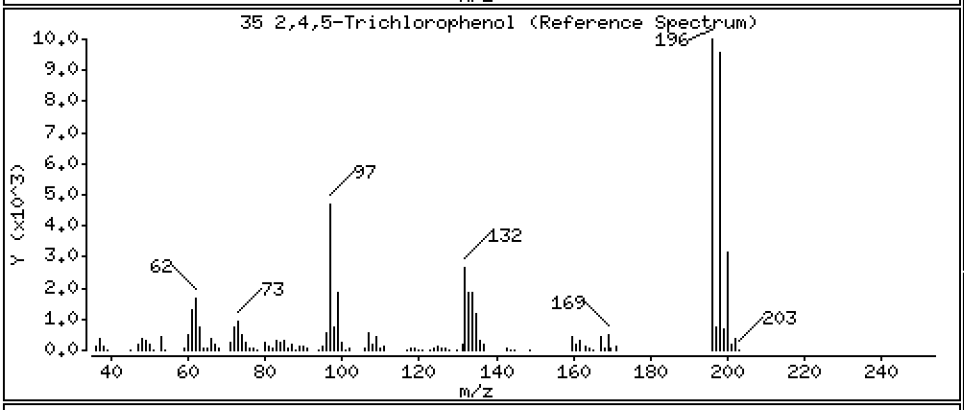
Column diameter: 0.25

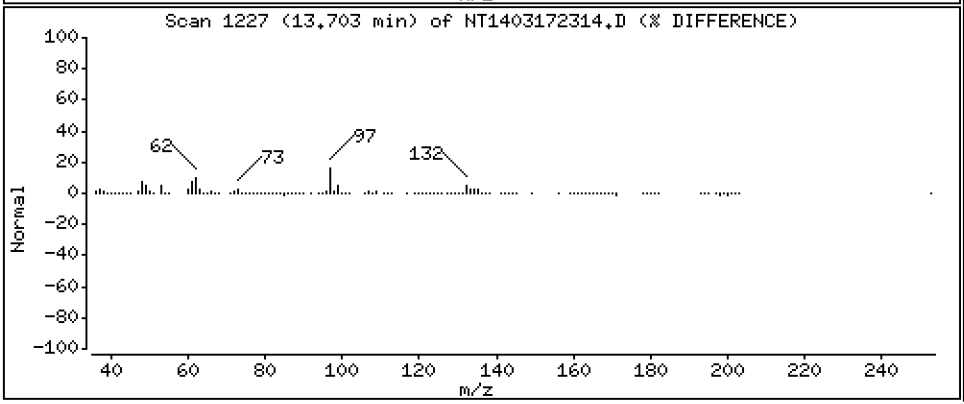
35 2,4,5-Trichlorophenol

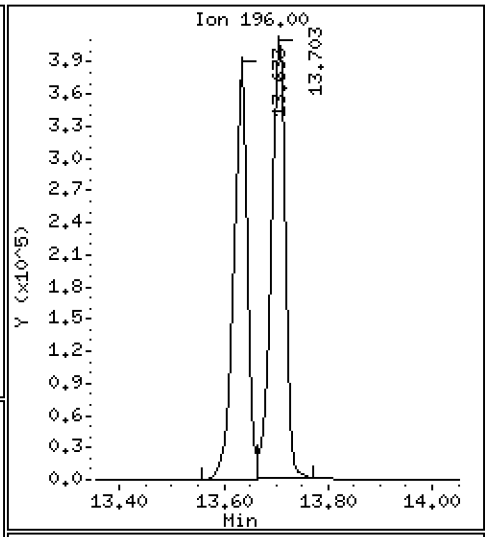
Concentration: 16.30 ug/mL

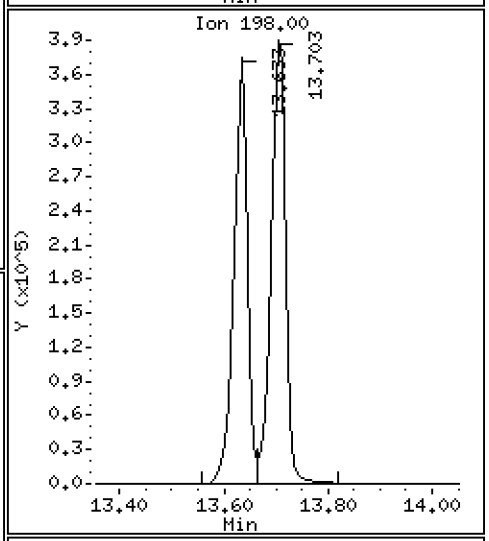


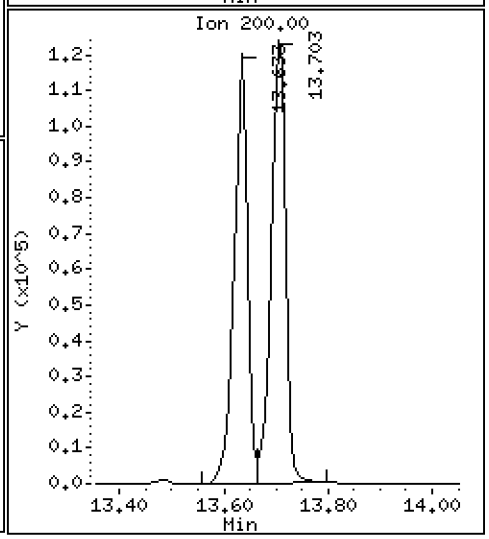












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Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

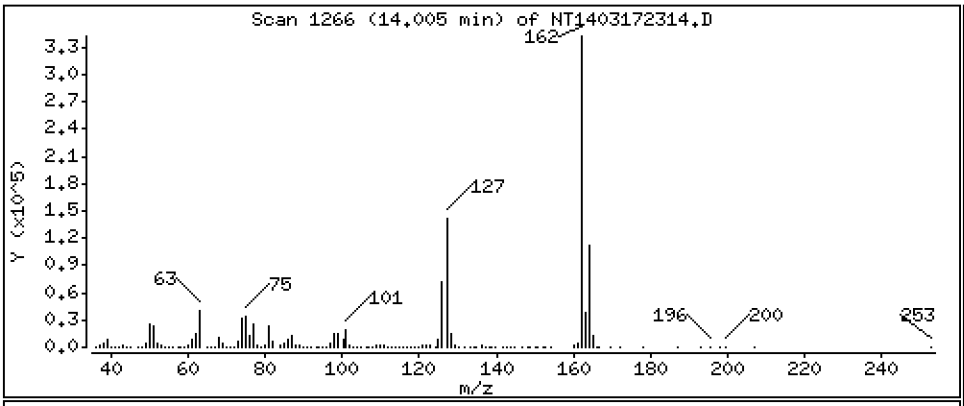
Operator: JGR

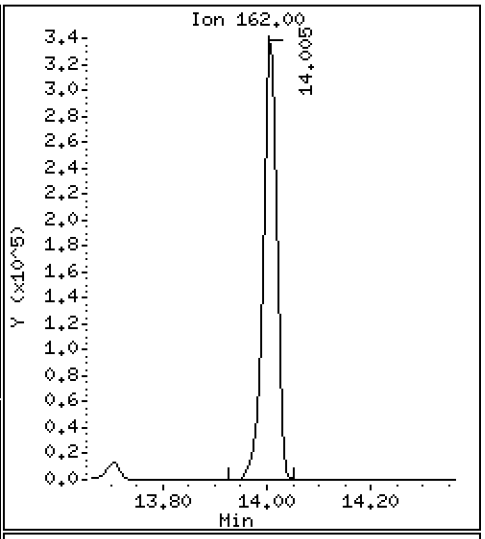
Column phase: ZB-5msi

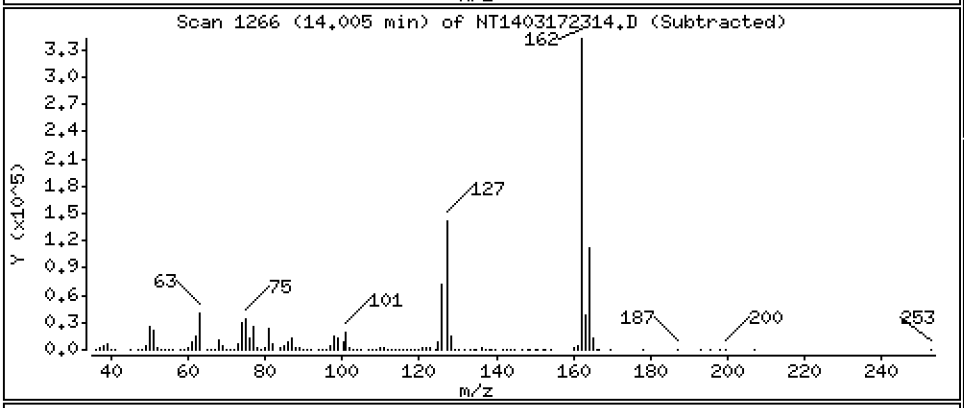
Column diameter: 0.25

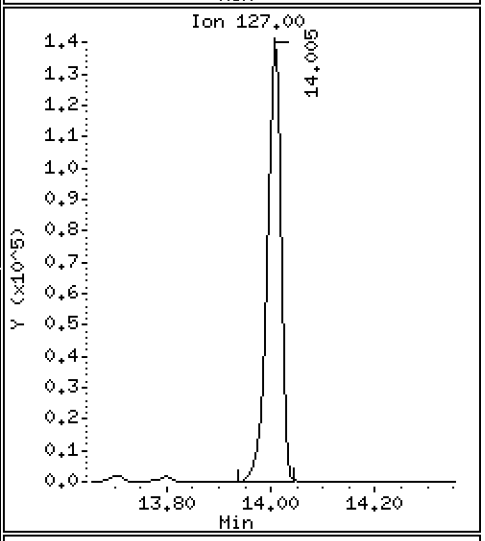
37 2-Chloronaphthalene

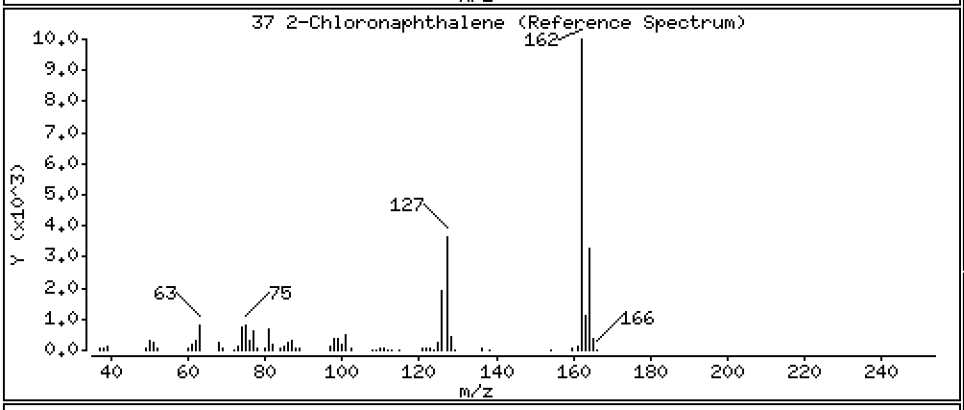
Concentration: 4.484 ug/mL

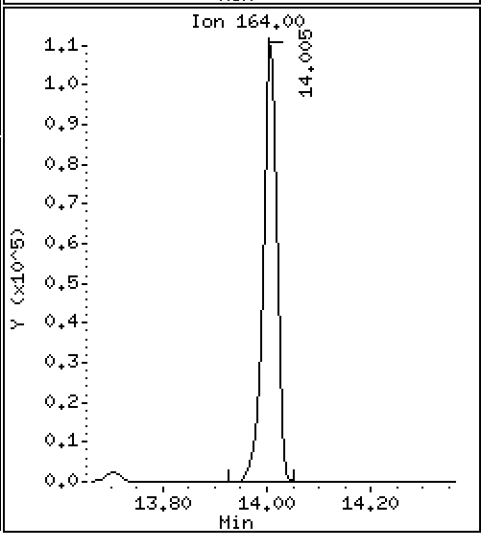


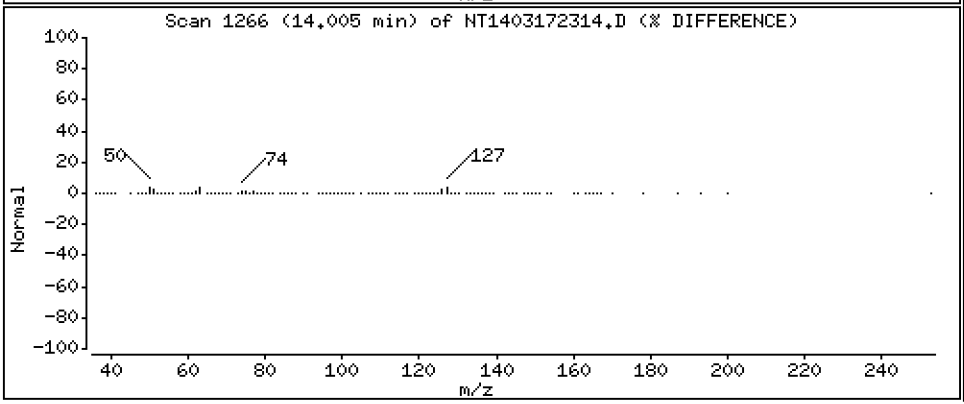












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Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

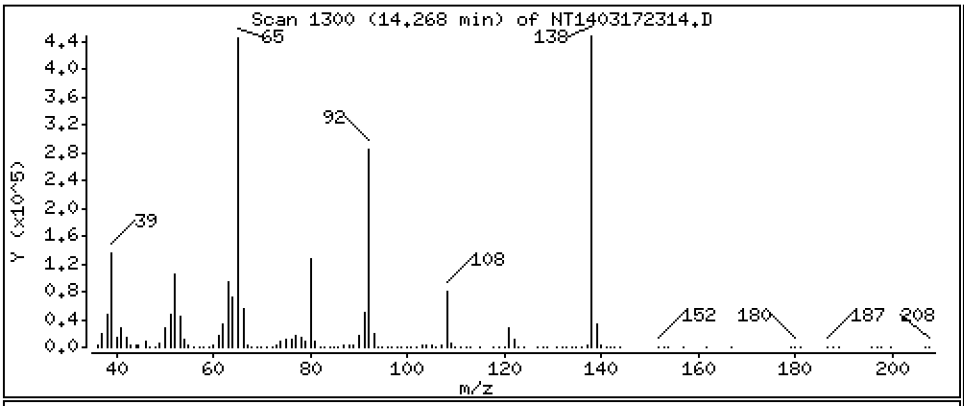
Operator: JGR

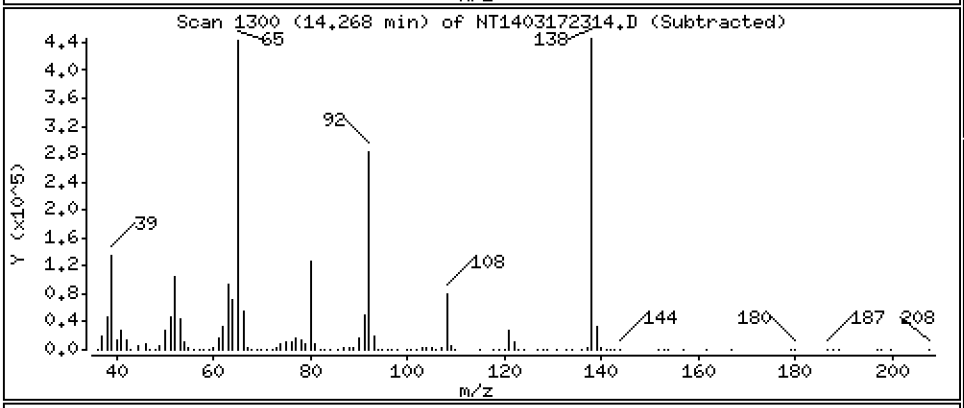
Column phase: ZB-5msi

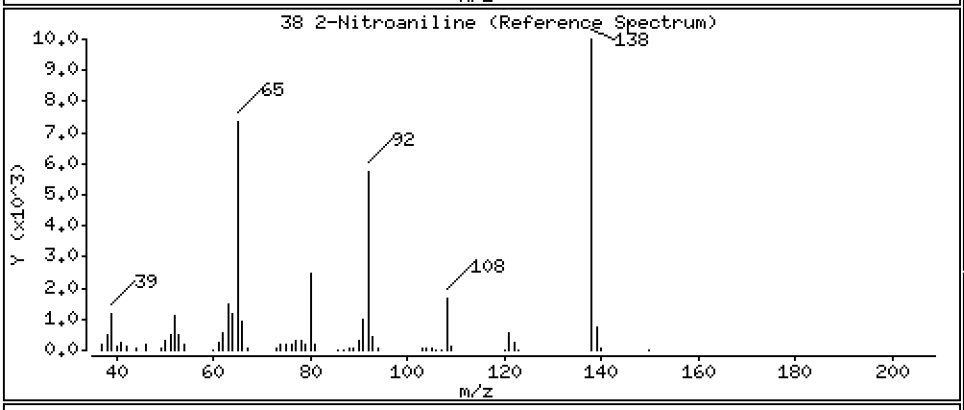
Column diameter: 0.25

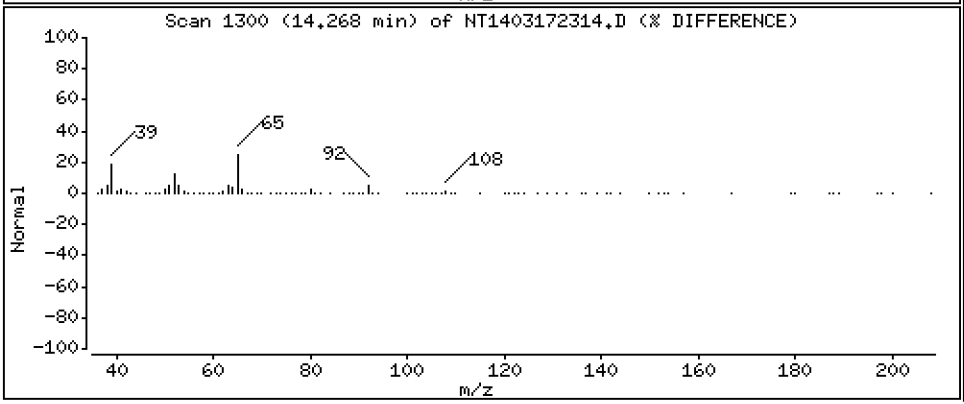
38 2-Nitroaniline

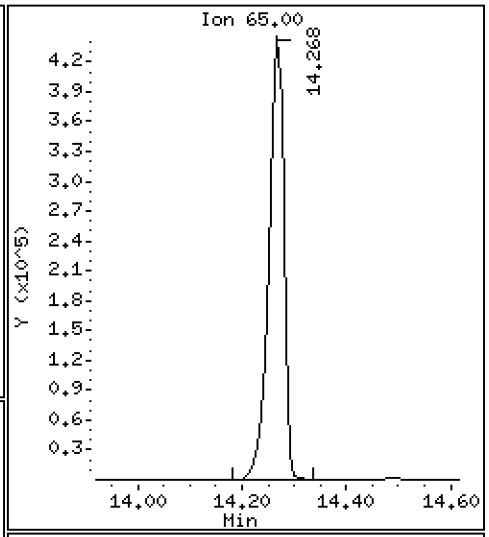
Concentration: 16.43 ug/mL

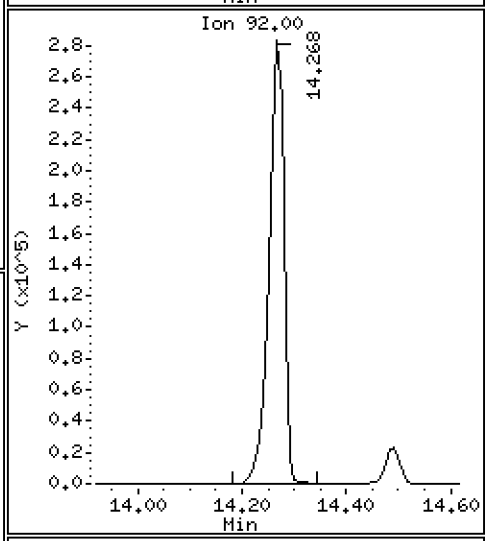


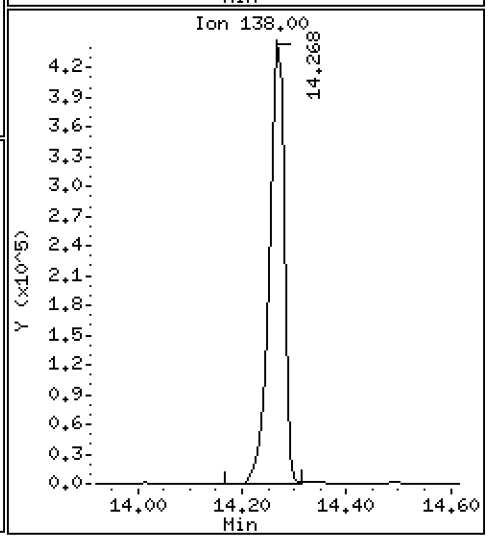












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Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

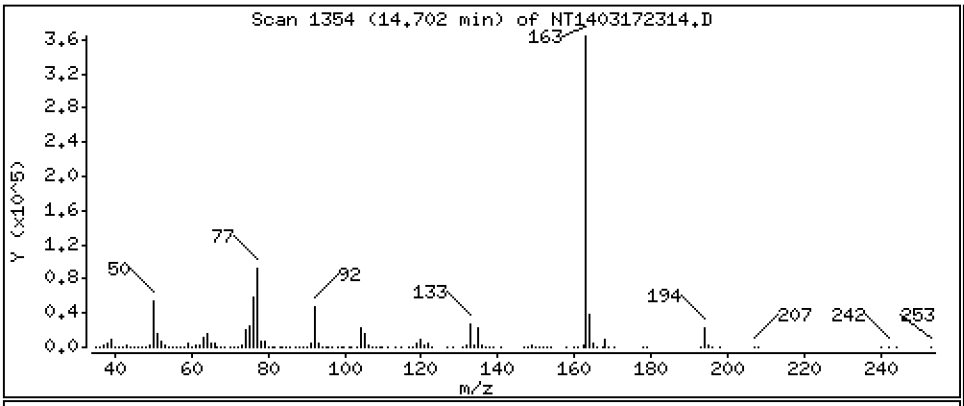
Operator: JGR

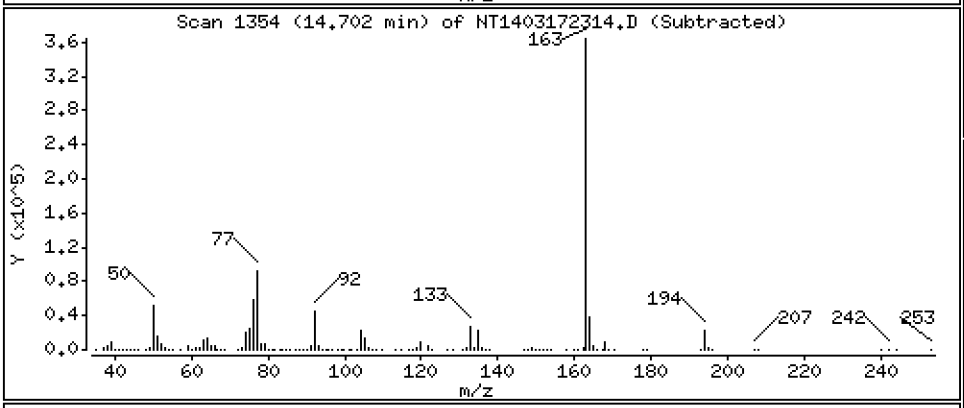
Column phase: ZB-5msi

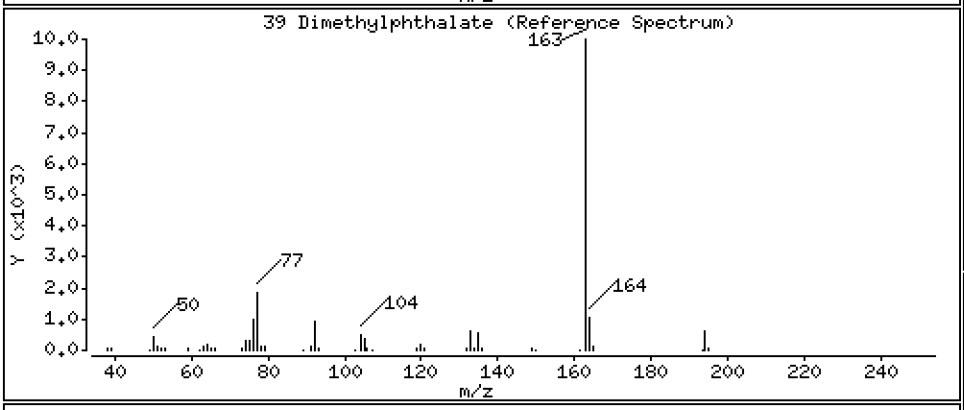
Column diameter: 0.25

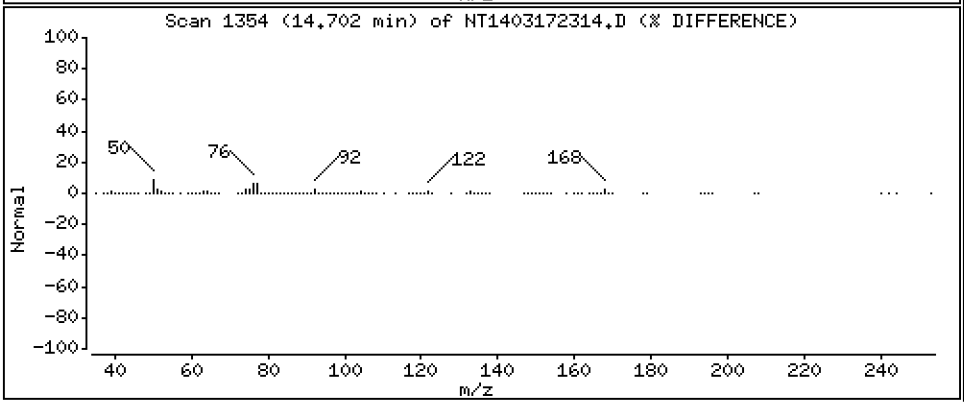
39 Dimethylphthalate

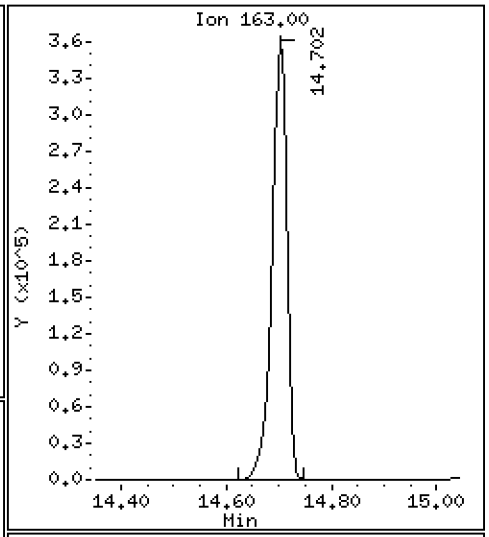
Concentration: 4.786 ug/mL

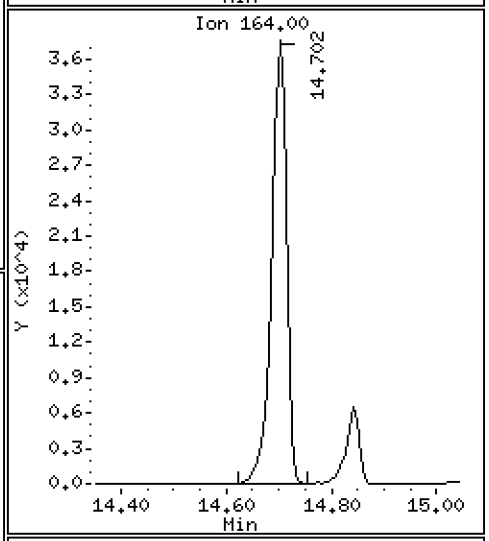


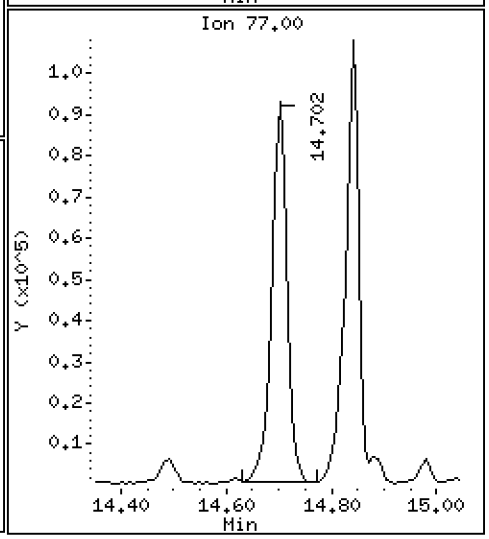












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Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

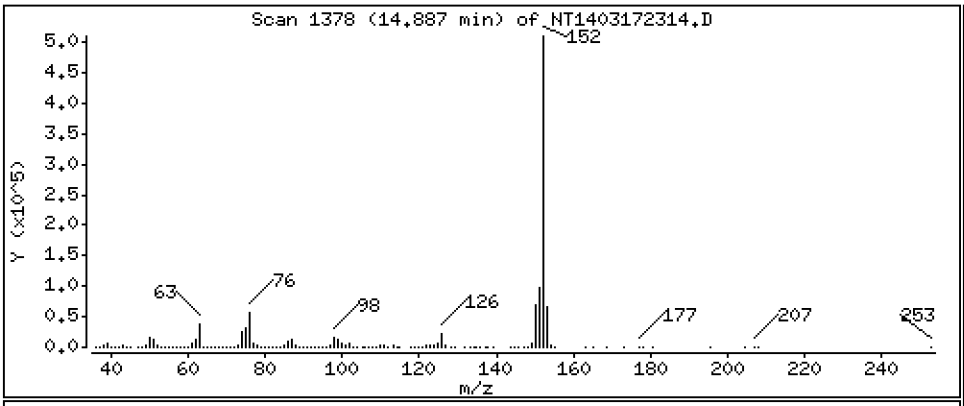
Operator: JGR

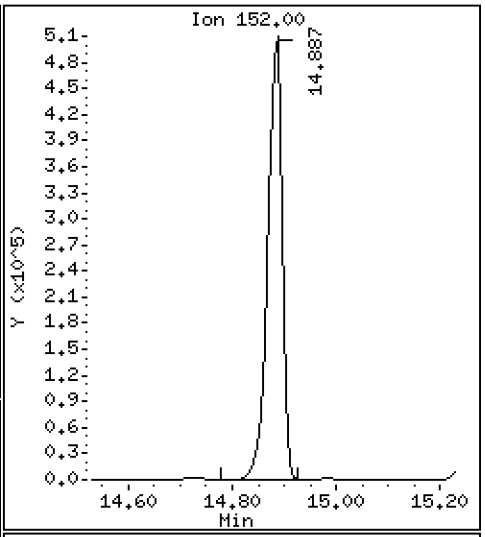
Column phase: ZB-5msi

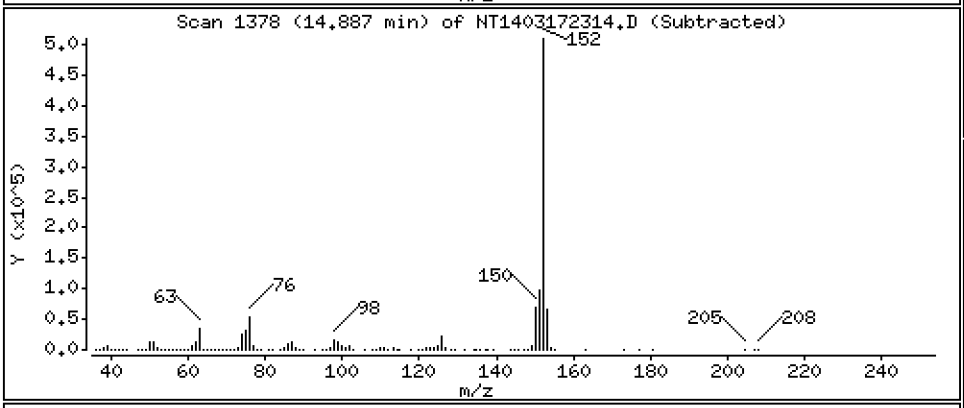
Column diameter: 0.25

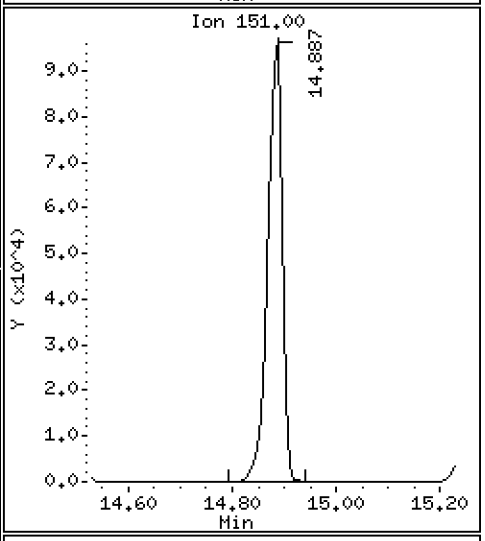
40 Acenaphthylene

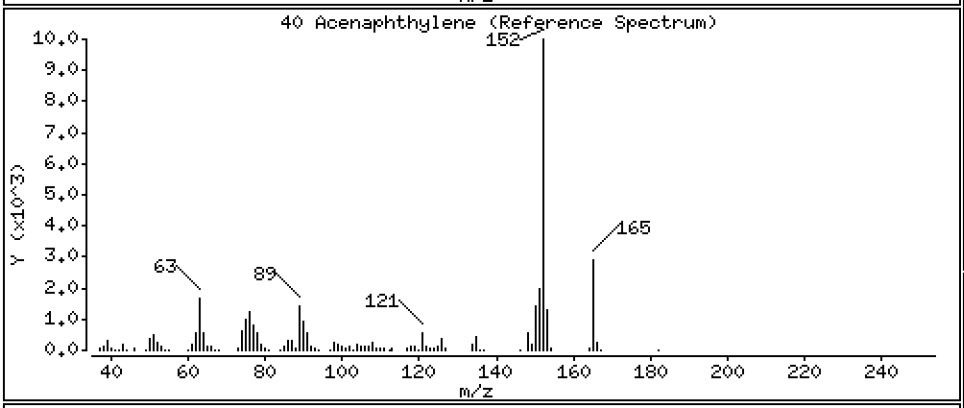
Concentration: 4.191 ug/mL

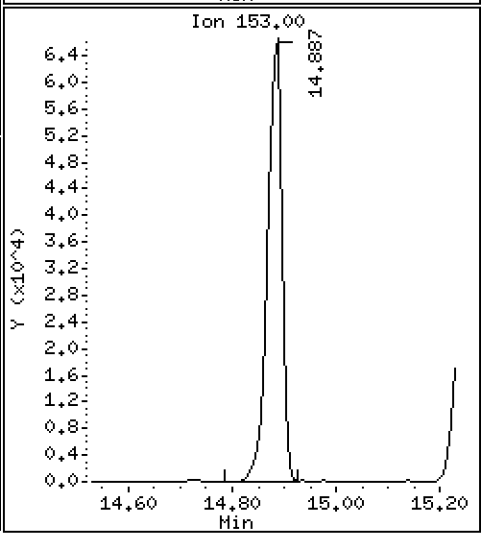


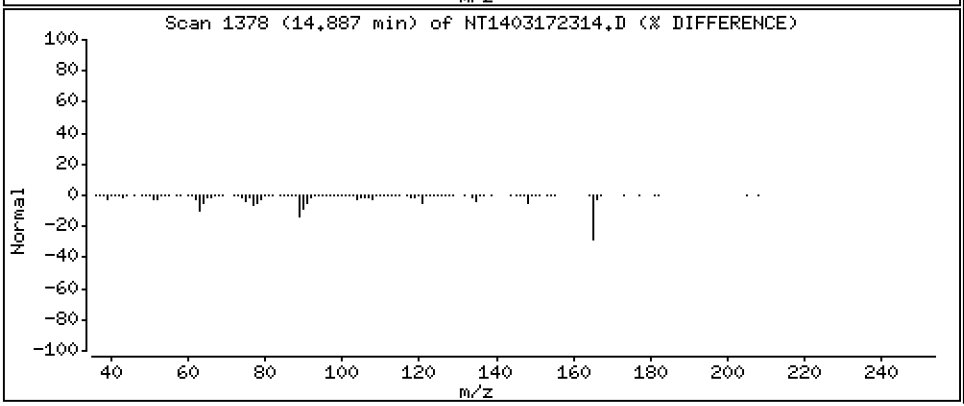












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Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

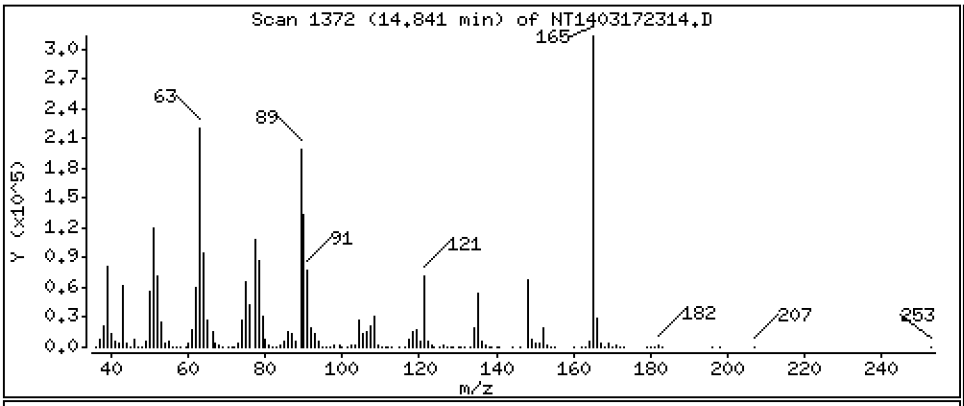
Operator: JGR

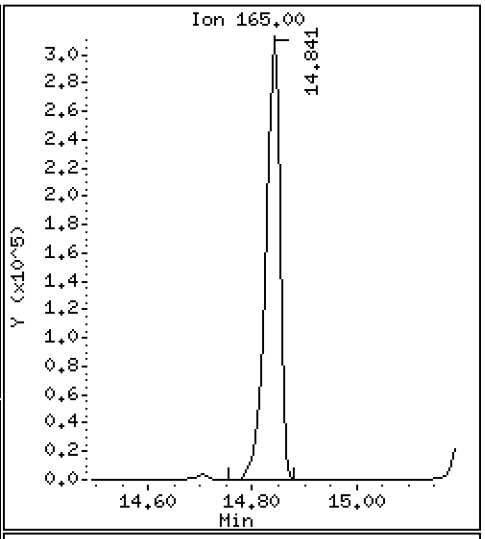
Column phase: ZB-5msi

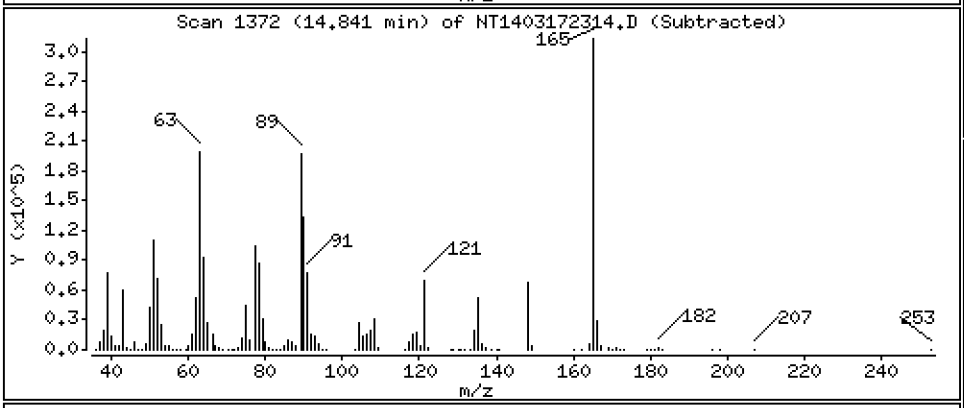
Column diameter: 0.25

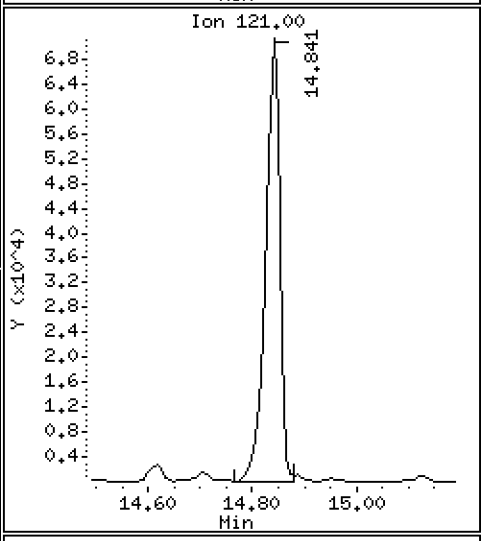
41 2,6-Dinitrotoluene

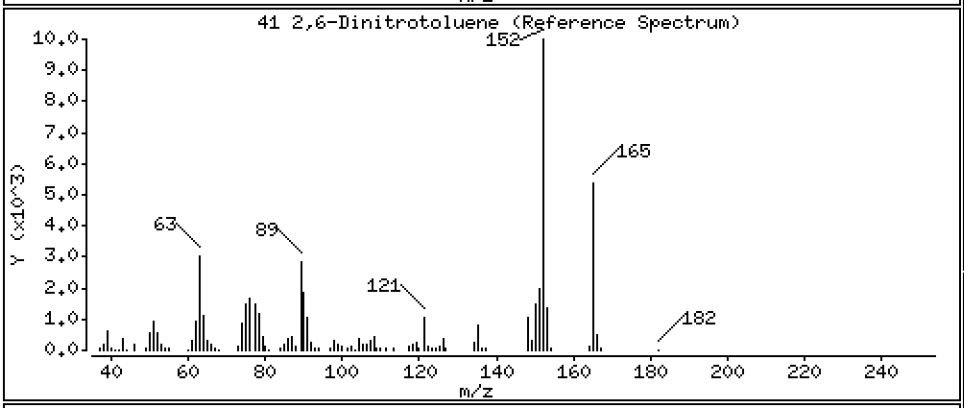
Concentration: 17.10 ug/mL

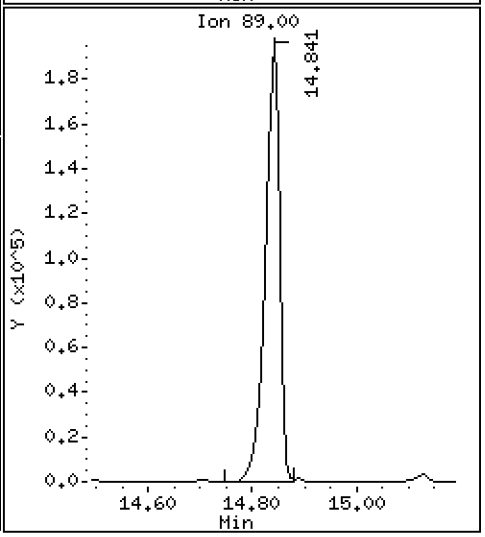


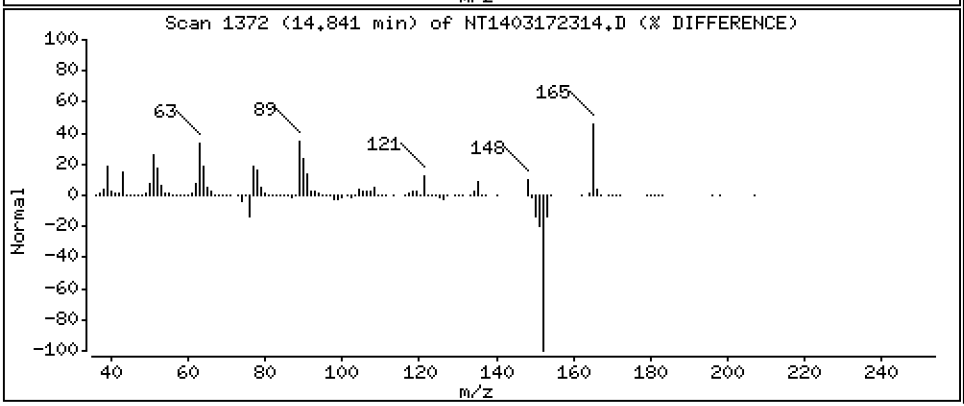












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Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

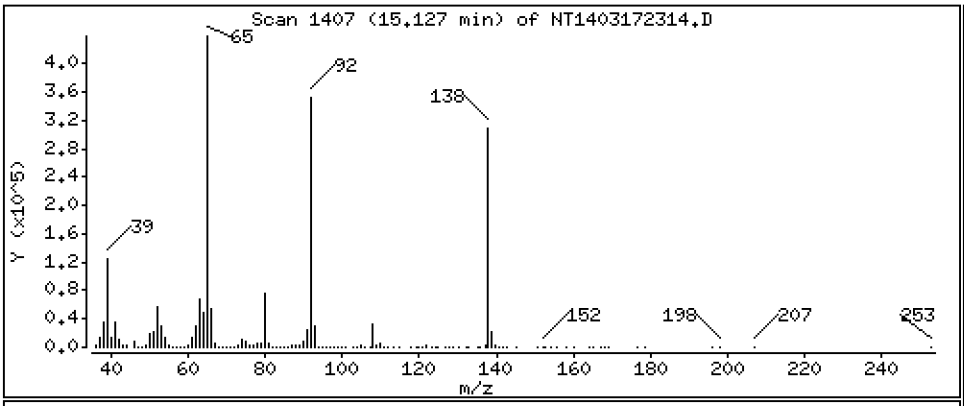
Operator: JGR

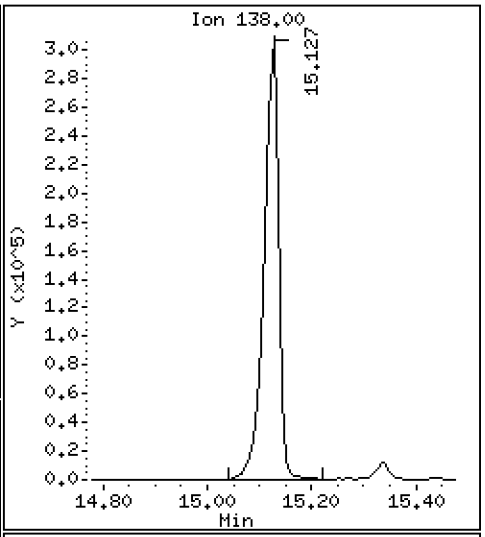
Column phase: ZB-5msi

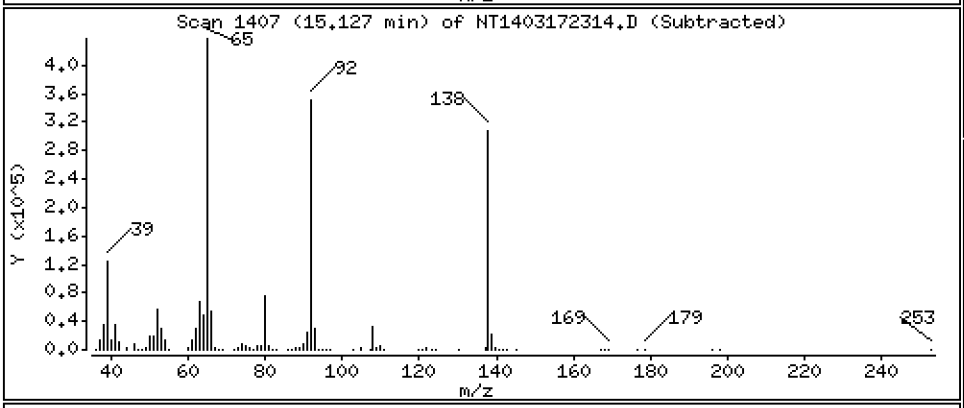
Column diameter: 0.25

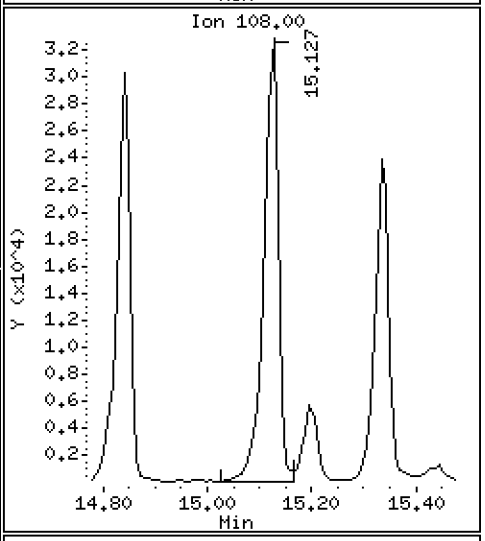
43 3-Nitroaniline

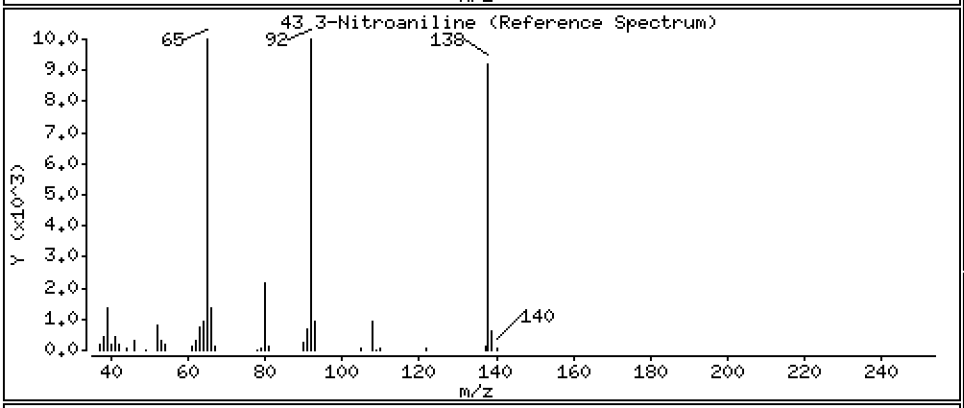
Concentration: 13.54 ug/mL

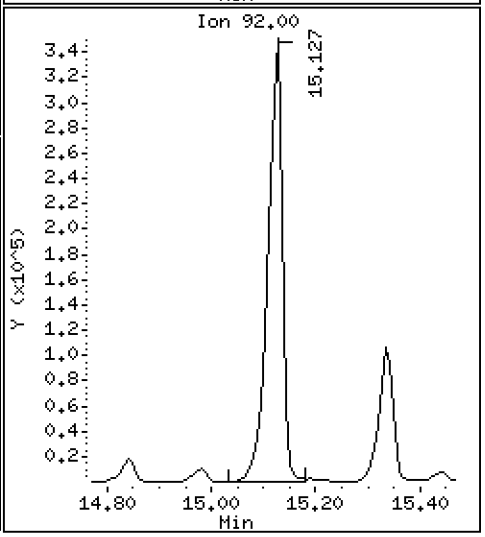


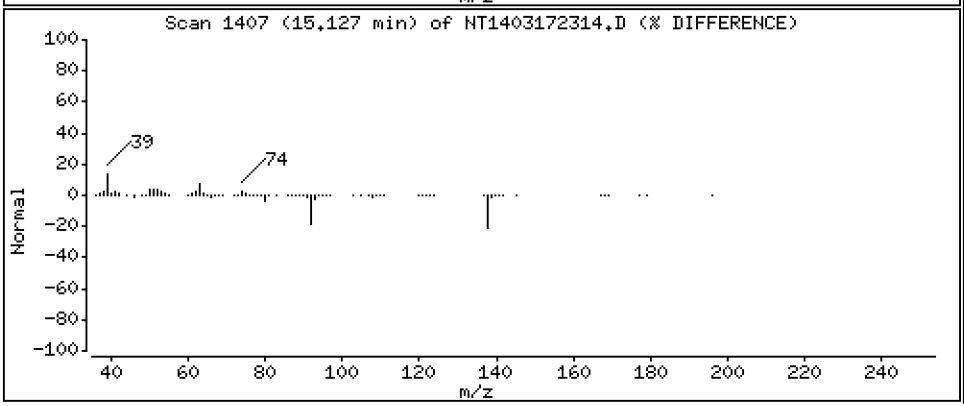












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Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

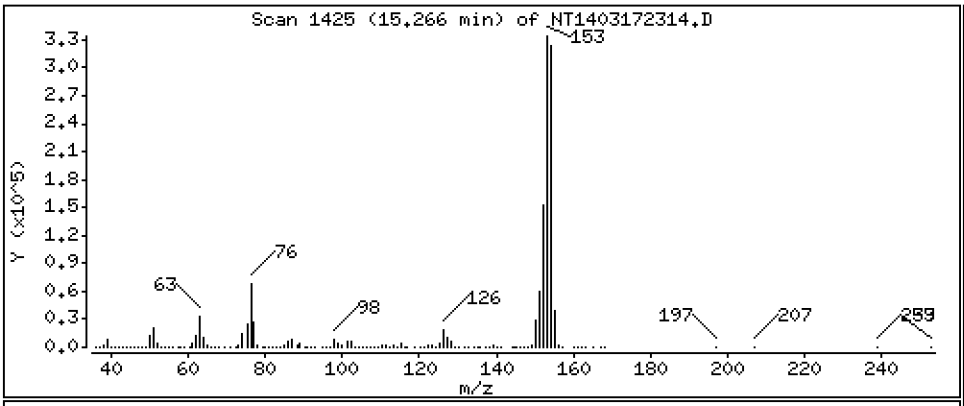
Operator: JGR

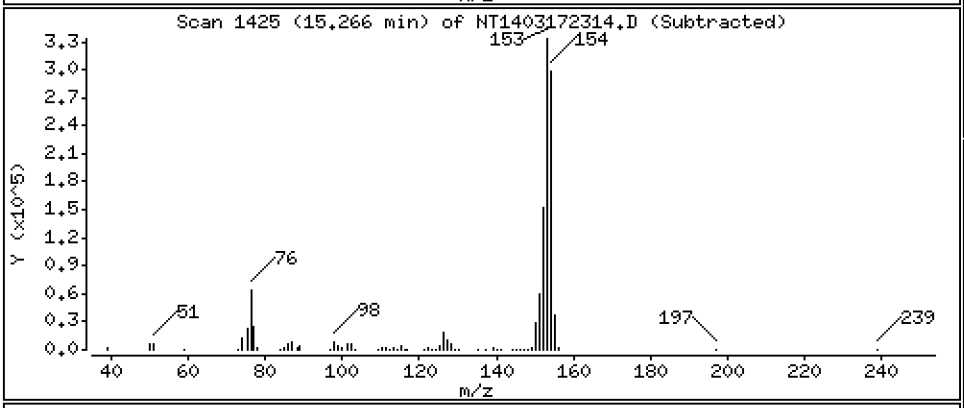
Column phase: ZB-5msi

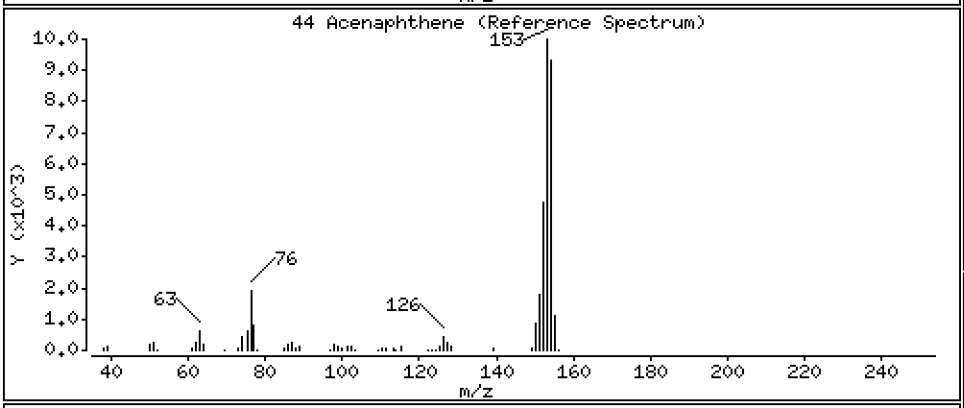
Column diameter: 0.25

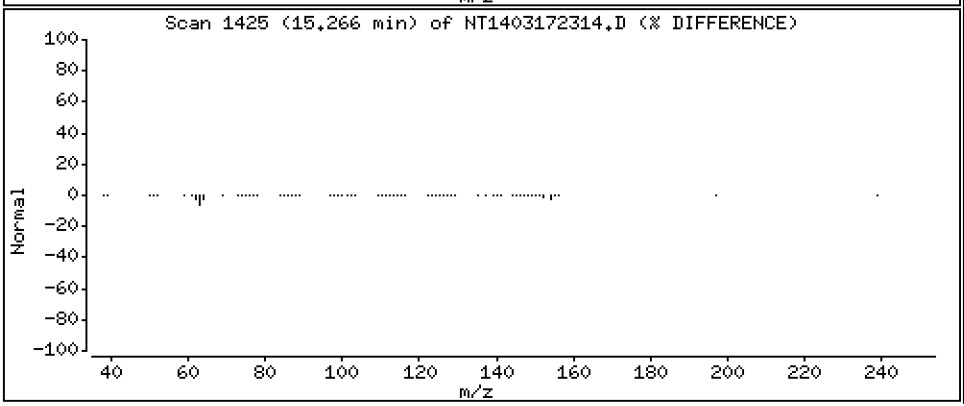
44 Acenaphthene

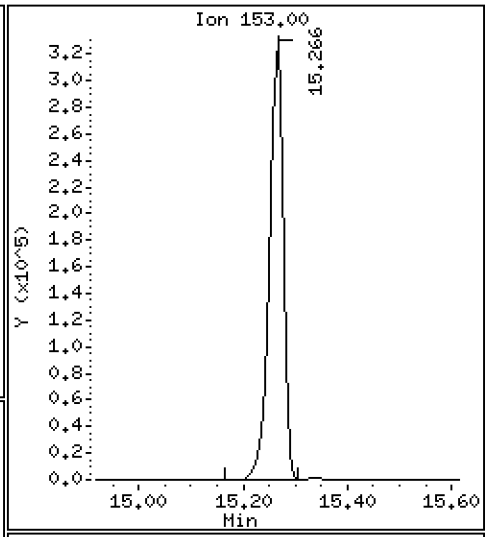
Concentration: 4.389 ug/mL

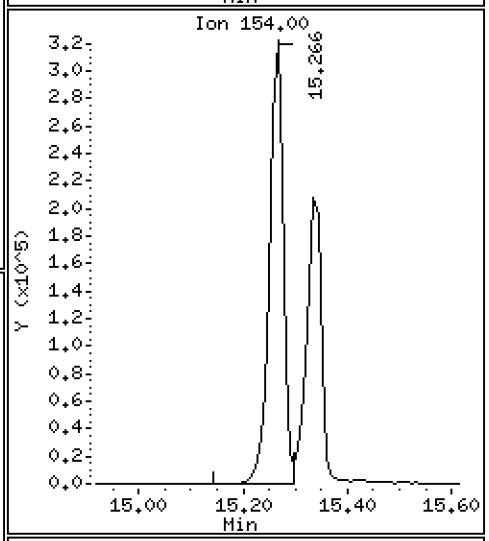


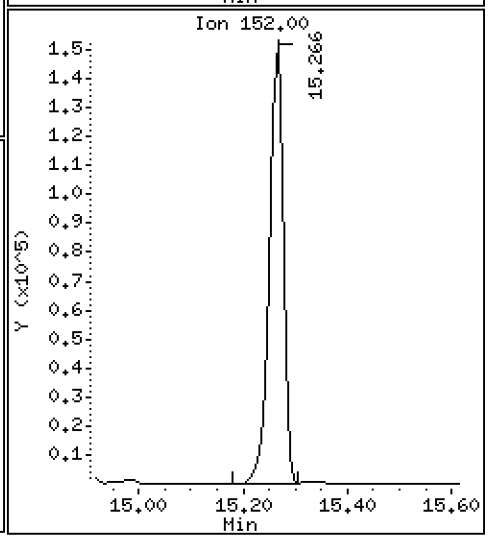












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Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

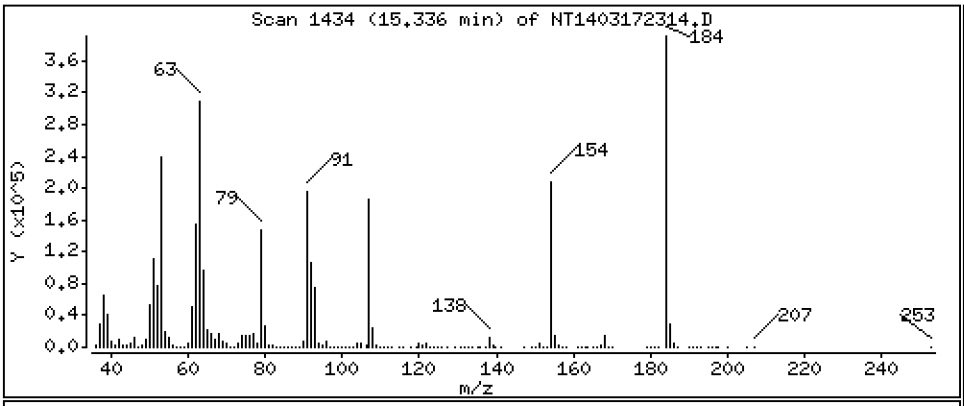
Operator: JGR

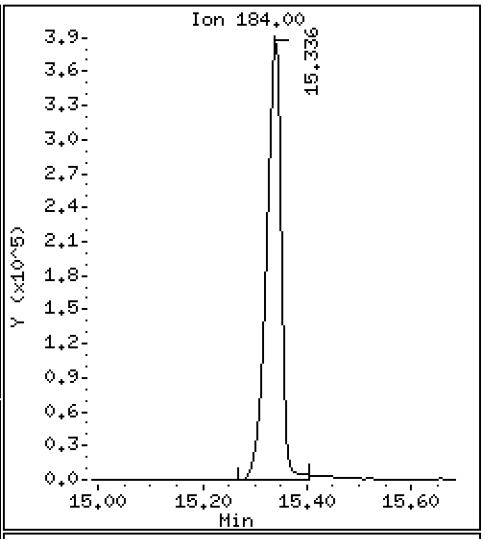
Column phase: ZB-5msi

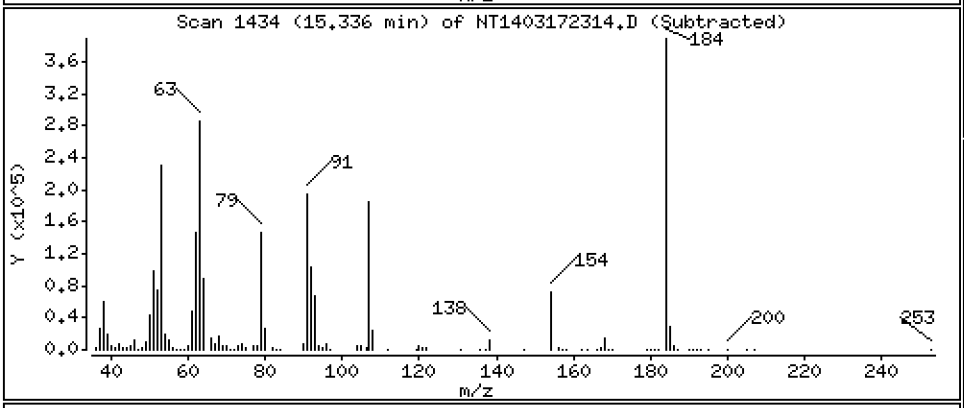
Column diameter: 0.25

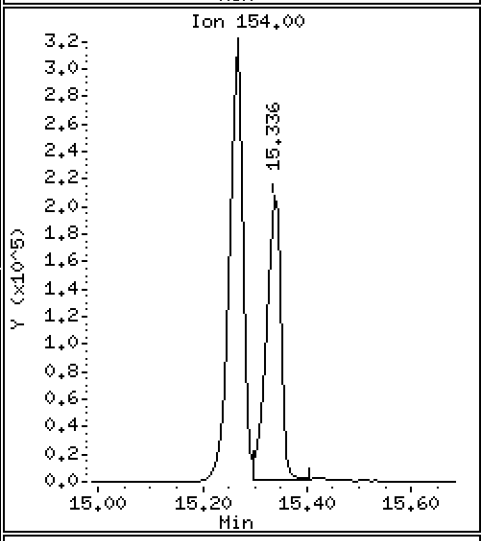
45 2,4-Dinitrophenol

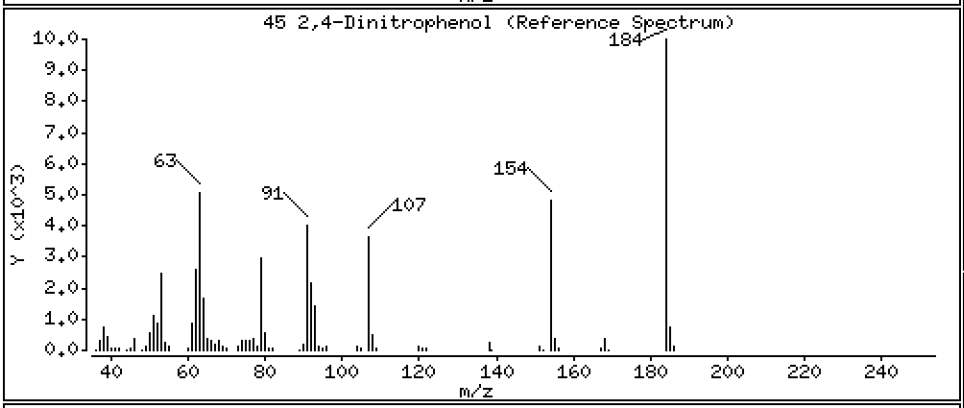
Concentration: 27.18 ug/mL

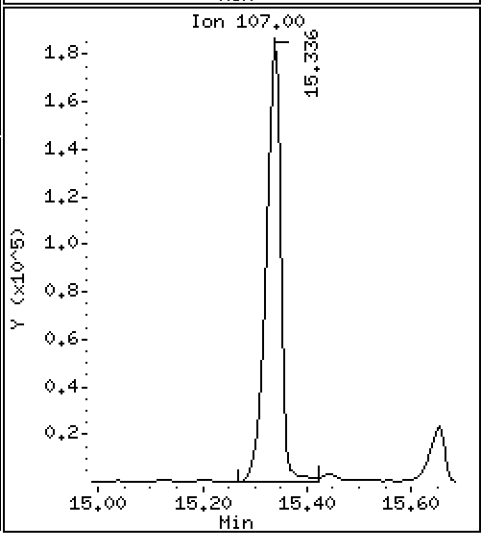


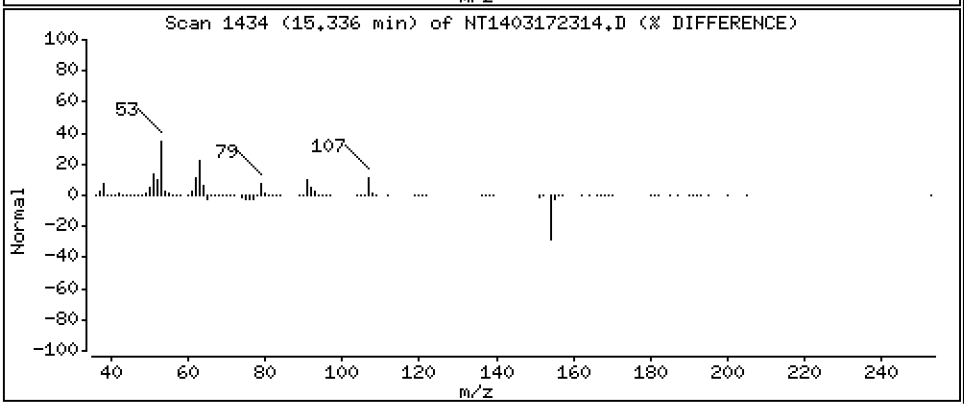












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Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

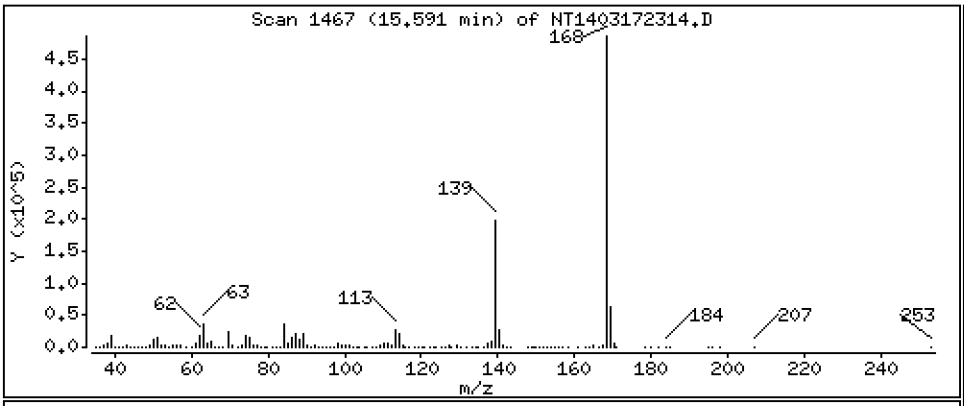
Operator: JGR

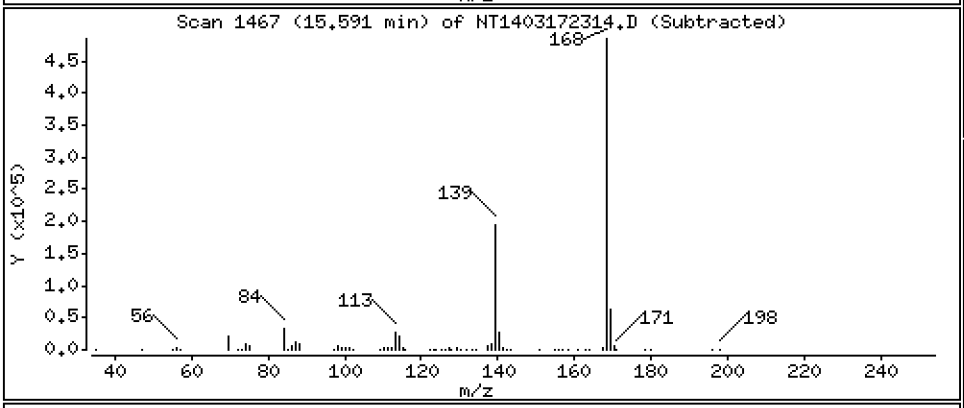
Column phase: ZB-5msi

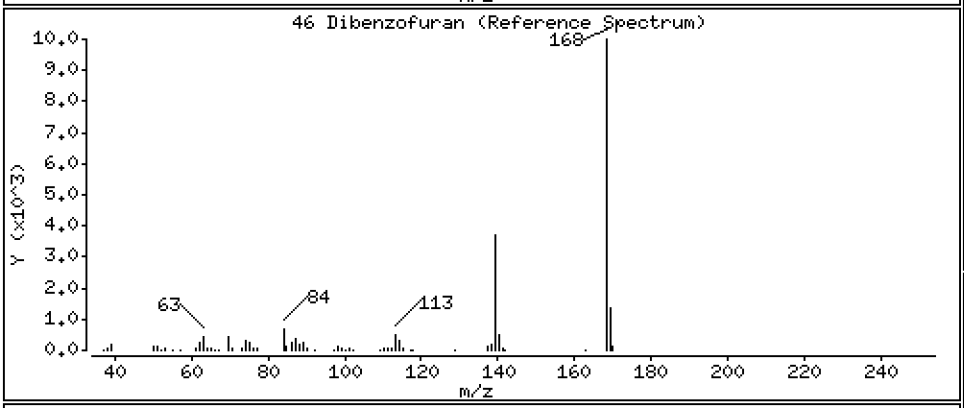
Column diameter: 0.25

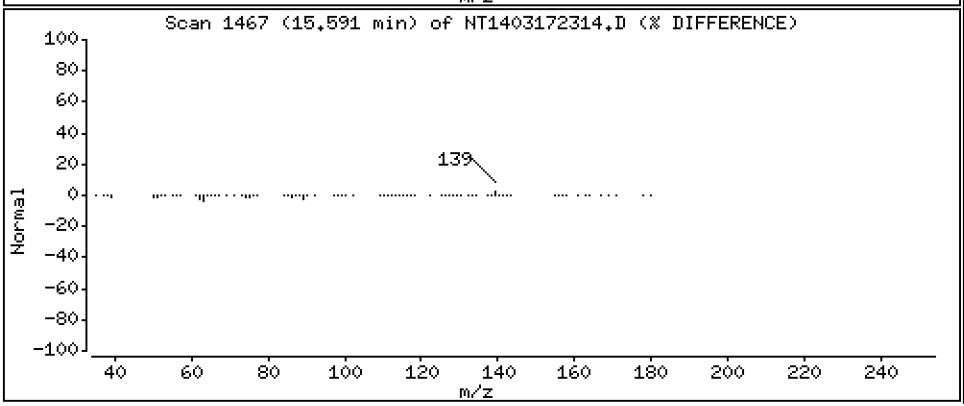
46 Dibenzofuran

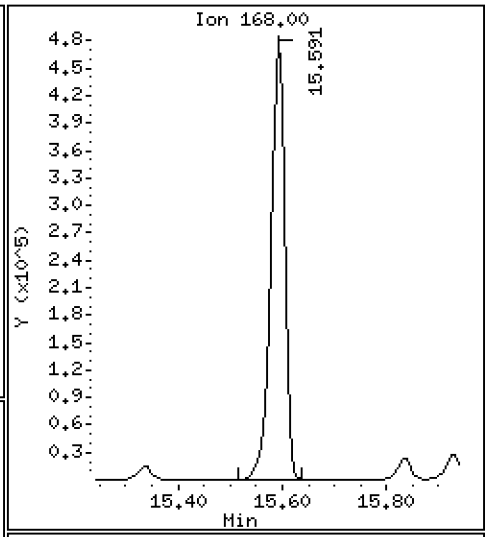
Concentration: 4.517 ug/mL

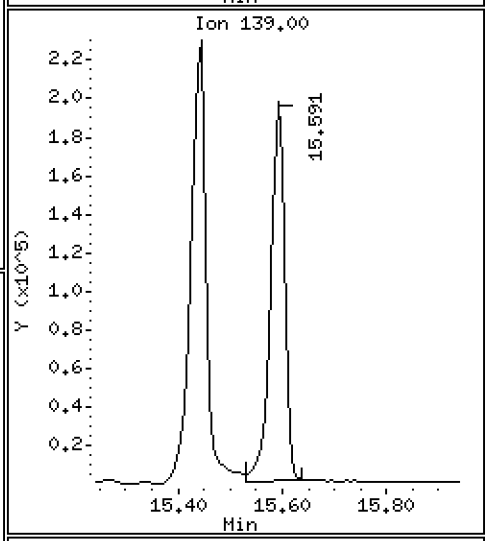


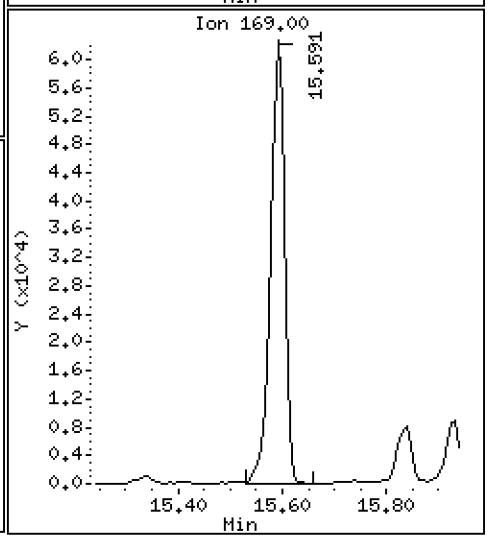












Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172314.D

Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

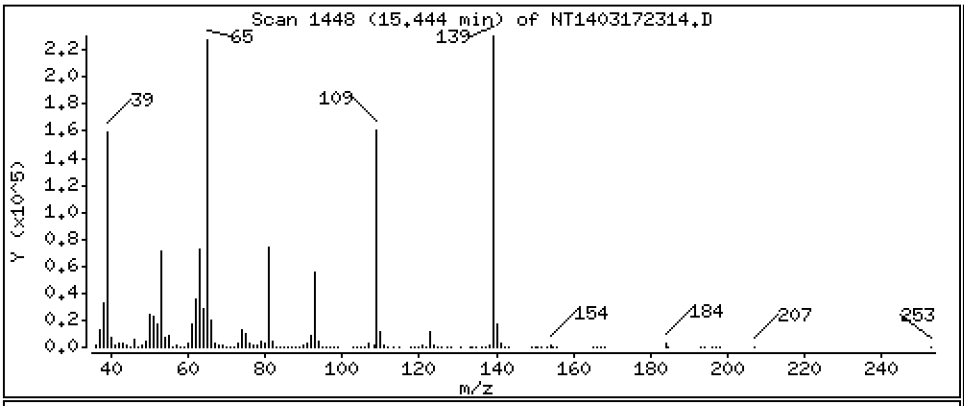
Operator: JGR

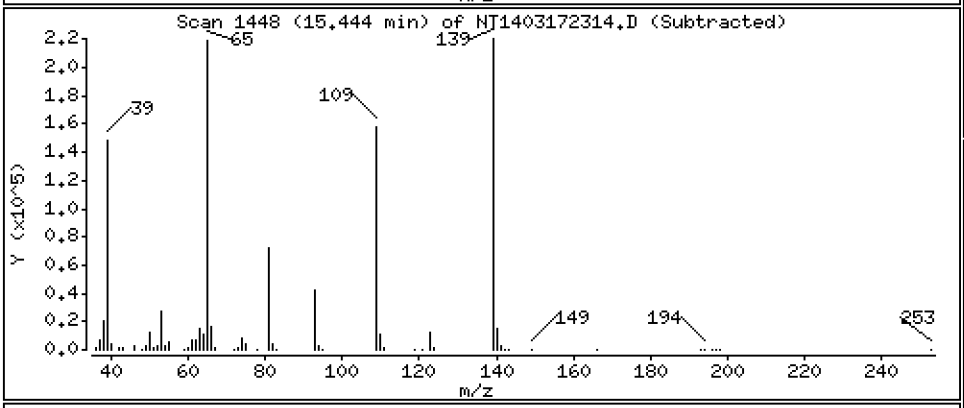
Column phase: ZB-5msi

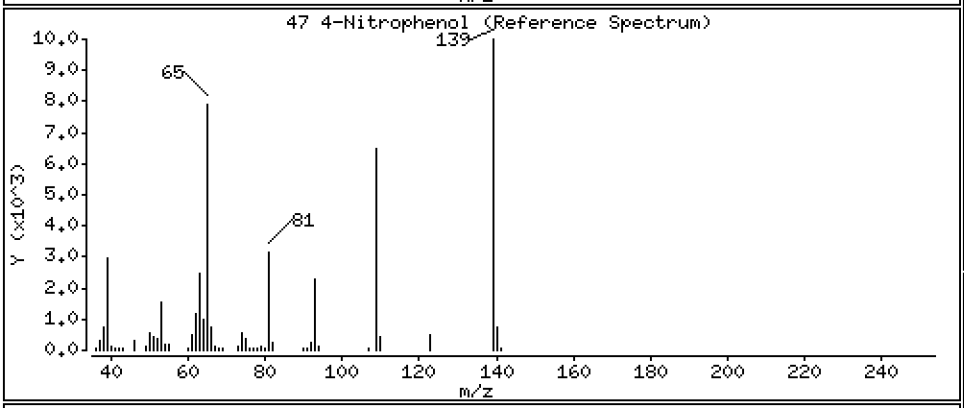
Column diameter: 0.25

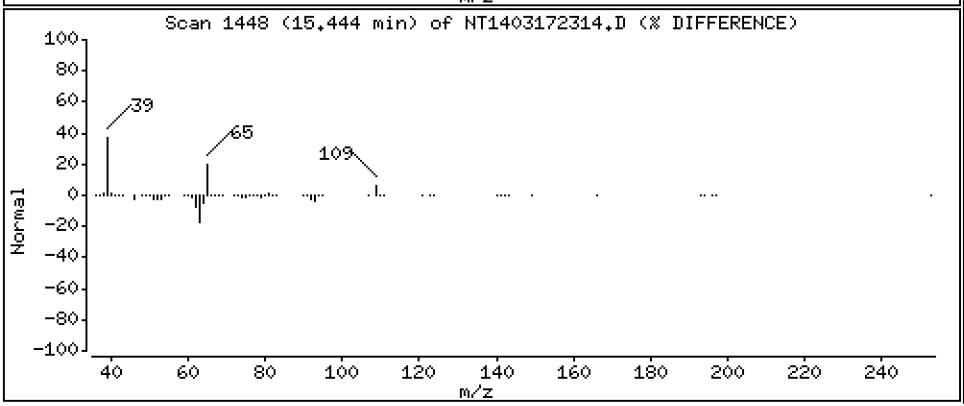
47 4-Nitrophenol

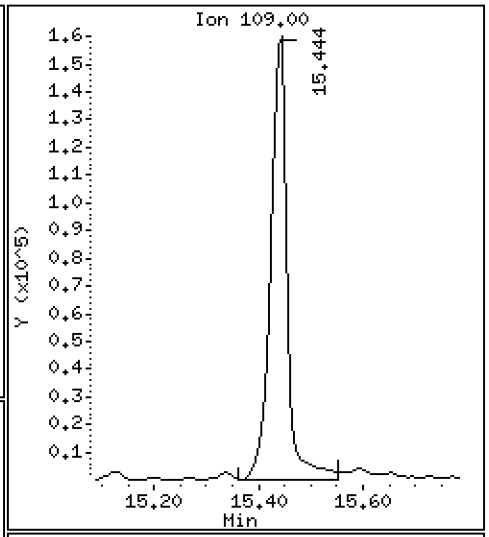
Concentration: 13.97 ug/mL

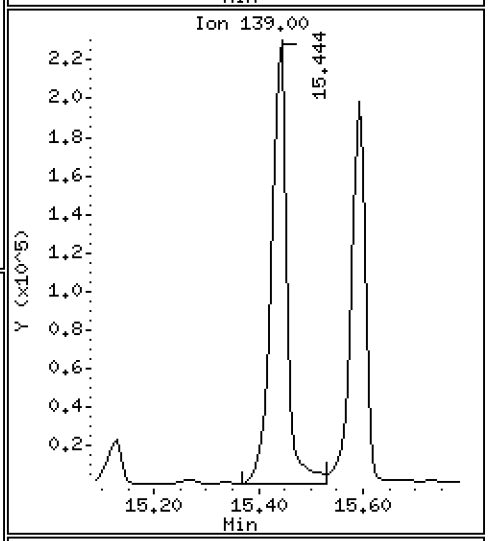


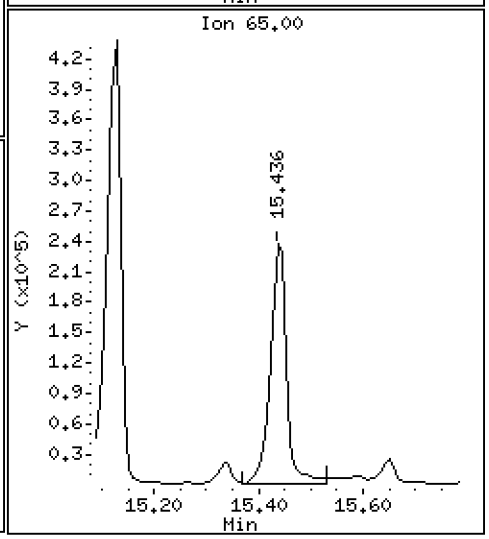












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Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

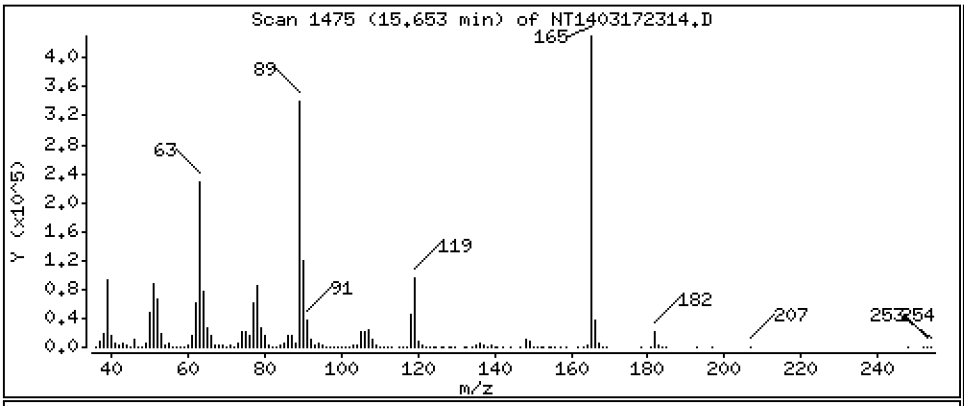
Operator: JGR

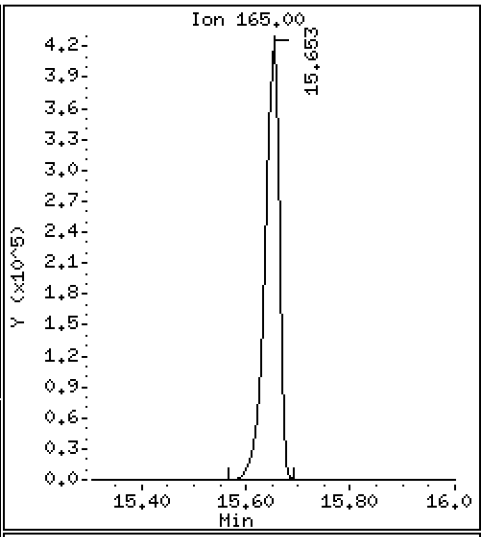
Column phase: ZB-5msi

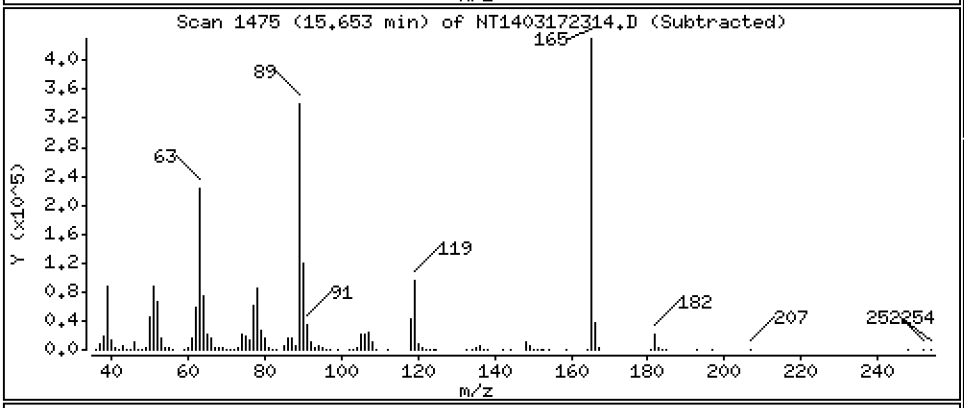
Column diameter: 0.25

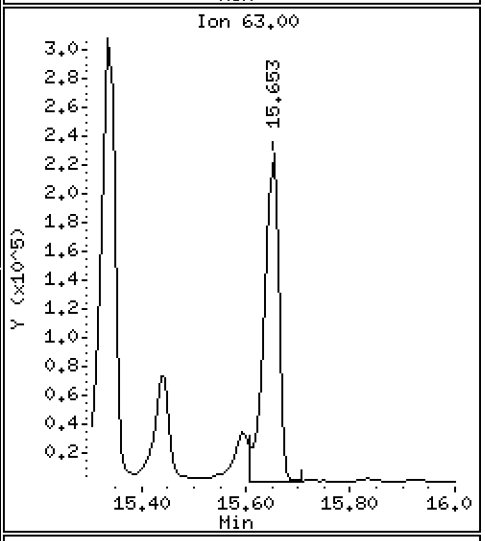
48 2,4-Dinitrotoluene

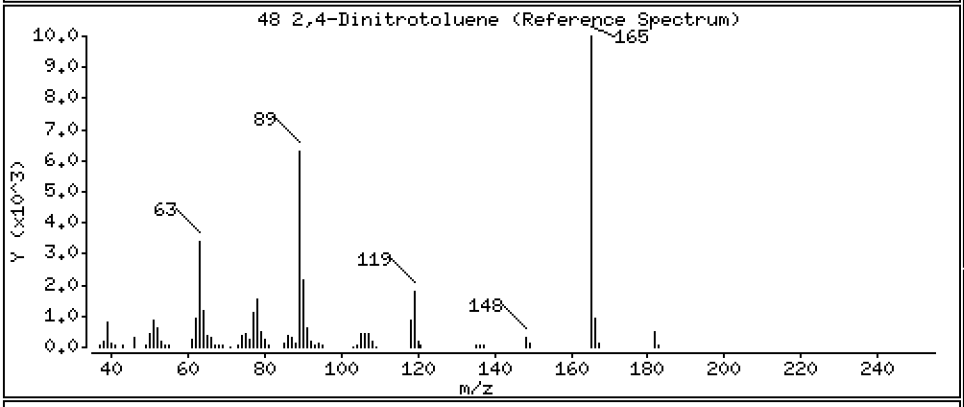
Concentration: 16.46 ug/mL

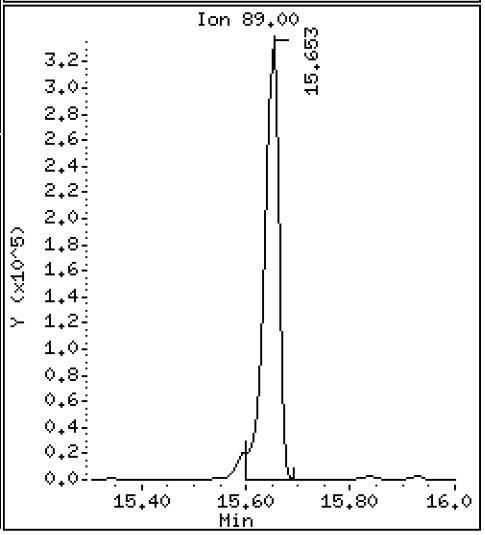


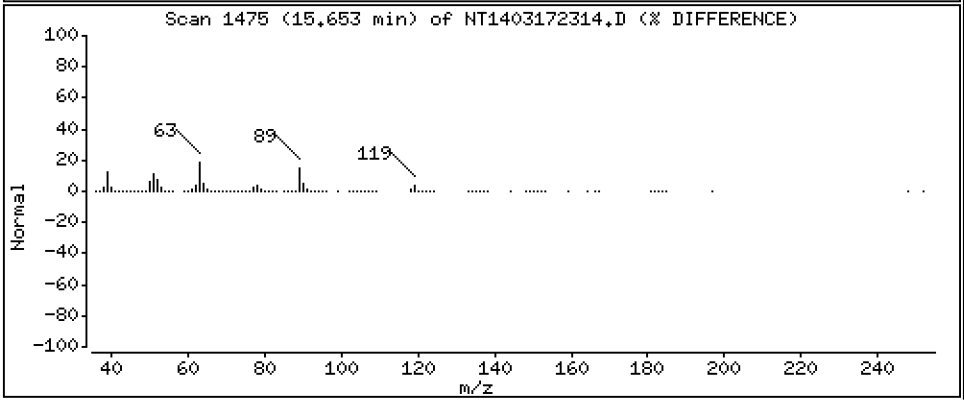












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Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

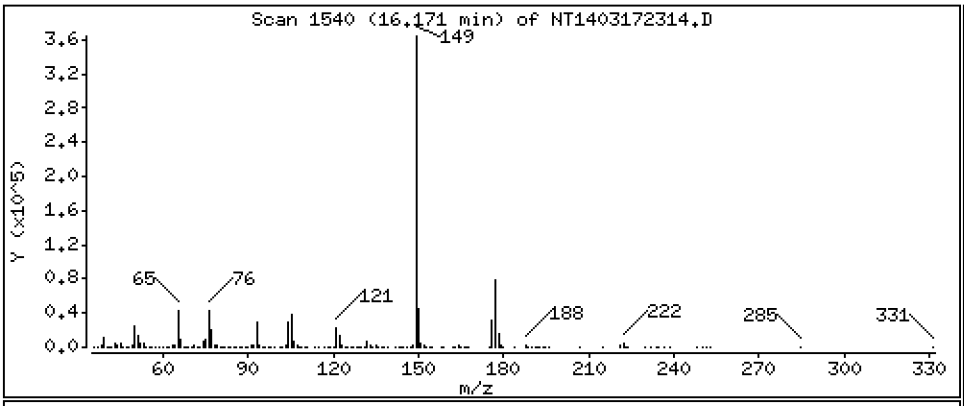
Operator: JGR

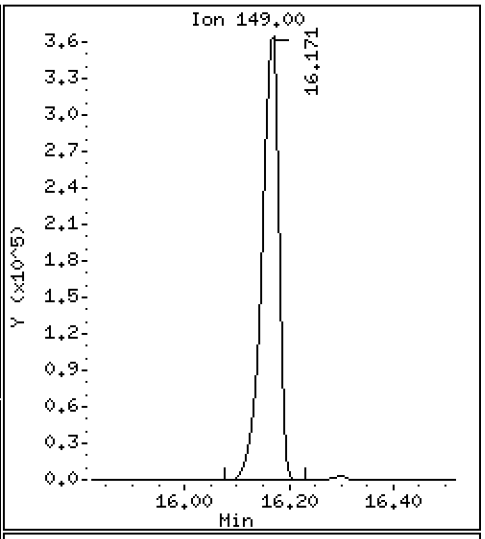
Column phase: ZB-5msi

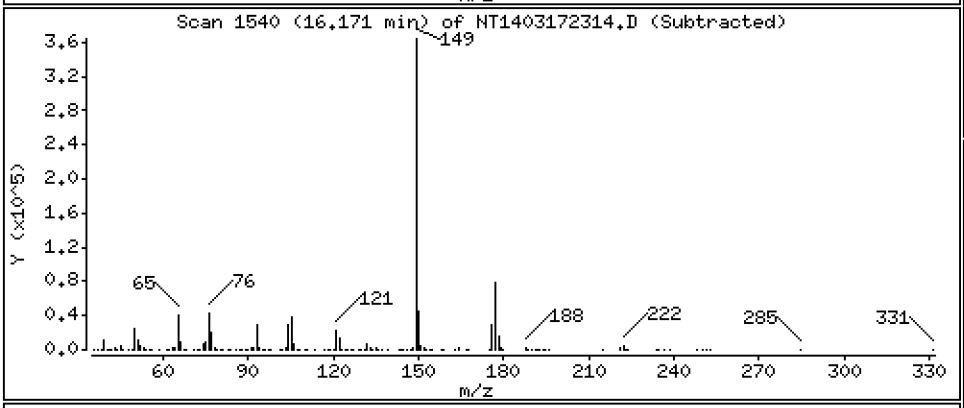
Column diameter: 0.25

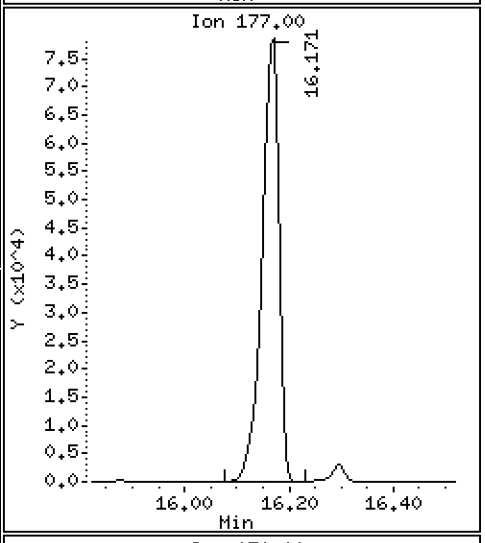
50 Diethylphthalate

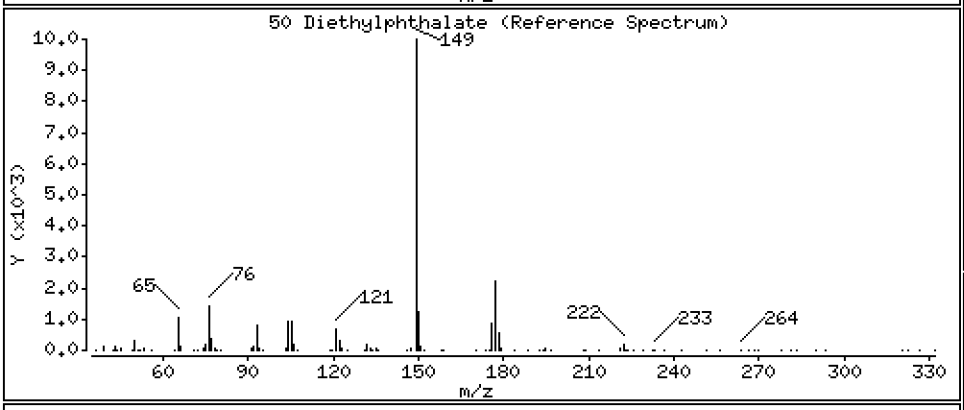
Concentration: 5.974 ug/mL

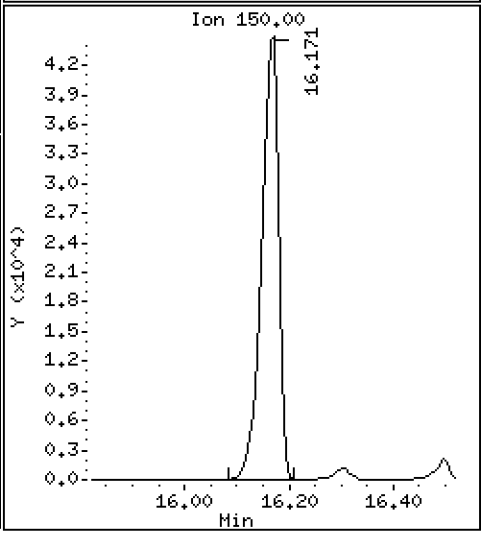


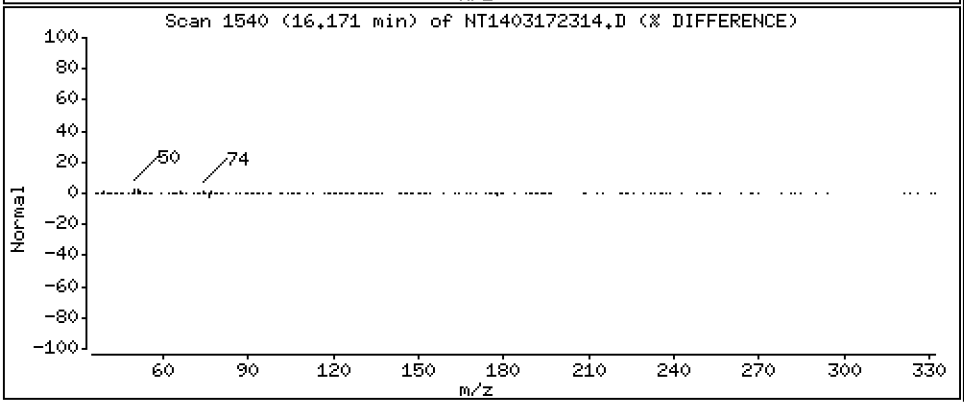












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Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

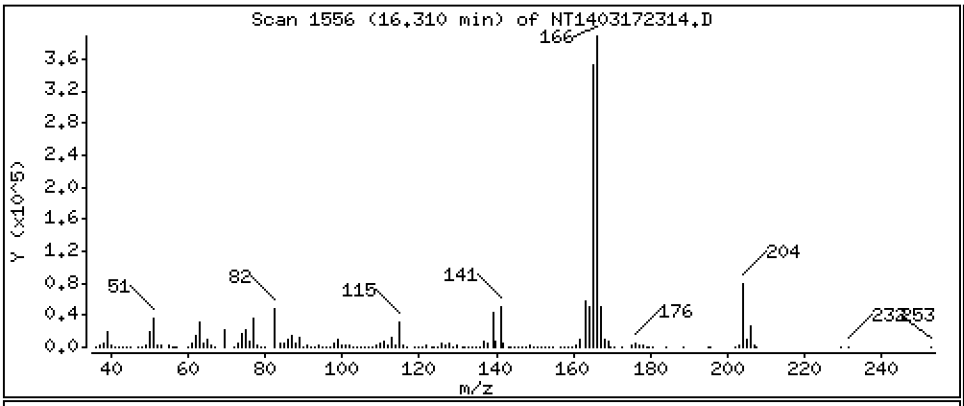
Operator: JGR

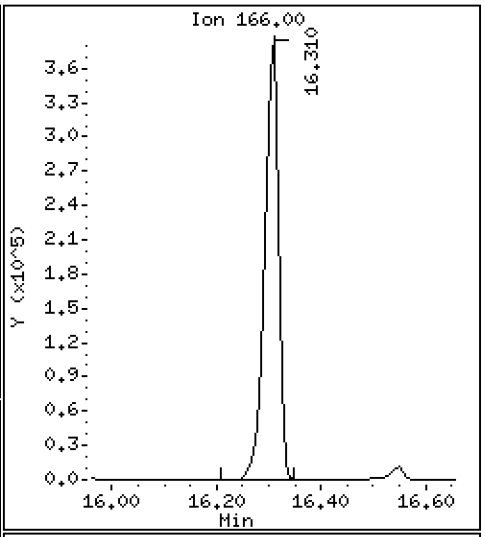
Column phase: ZB-5msi

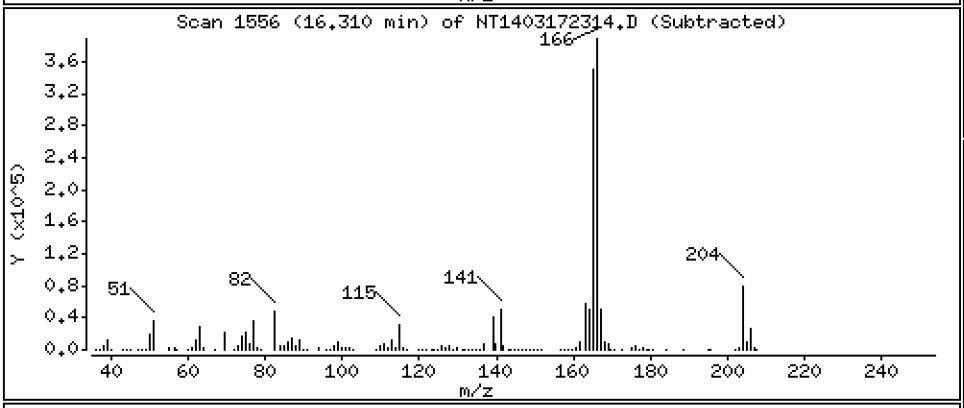
Column diameter: 0.25

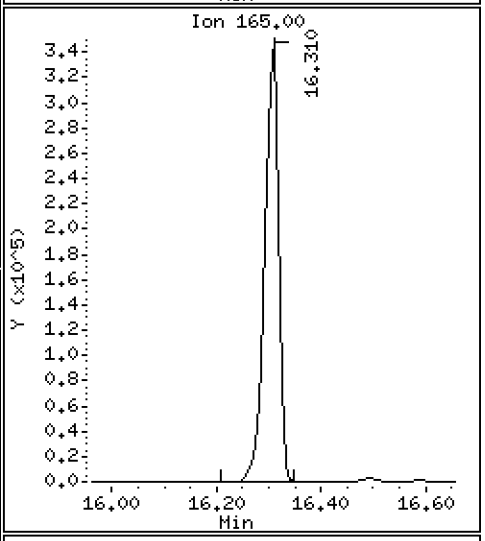
49 Fluorene

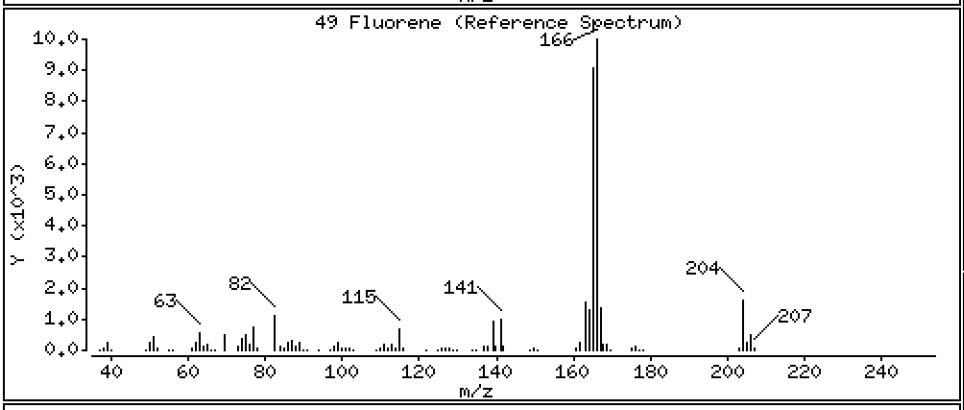
Concentration: 4.359 ug/mL

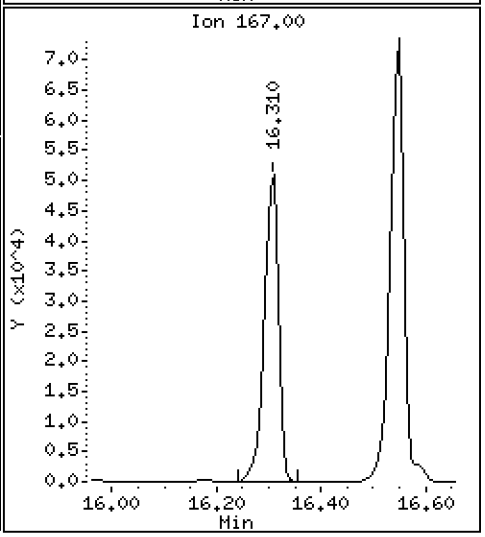


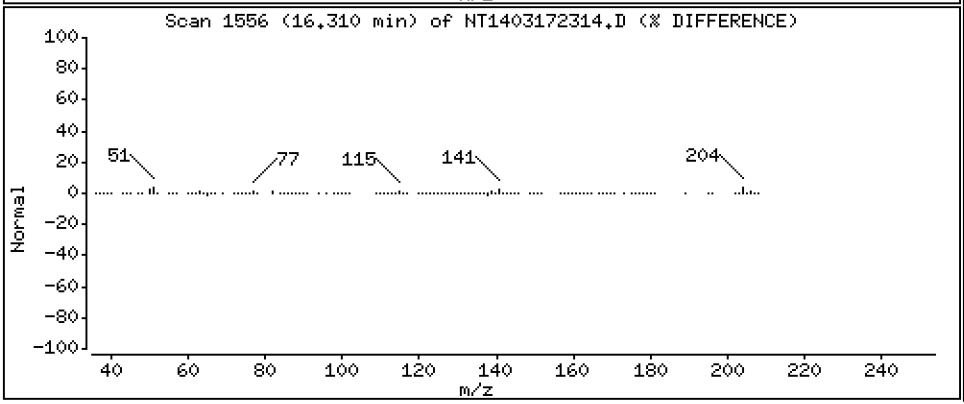












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Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

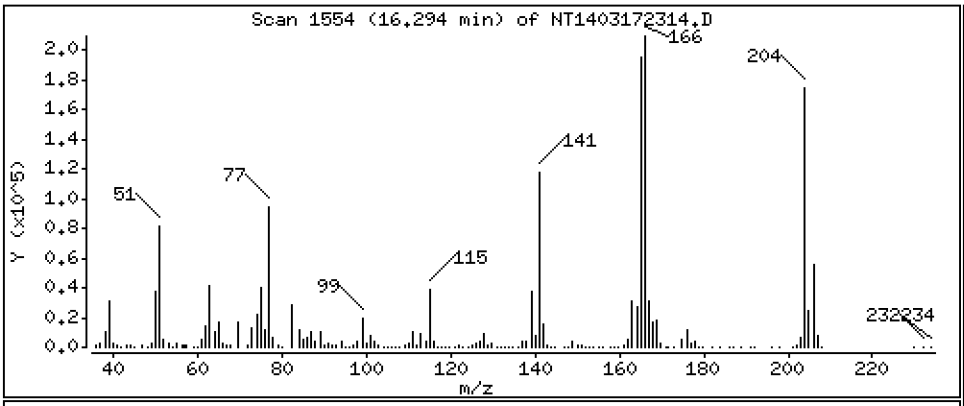
Operator: JGR

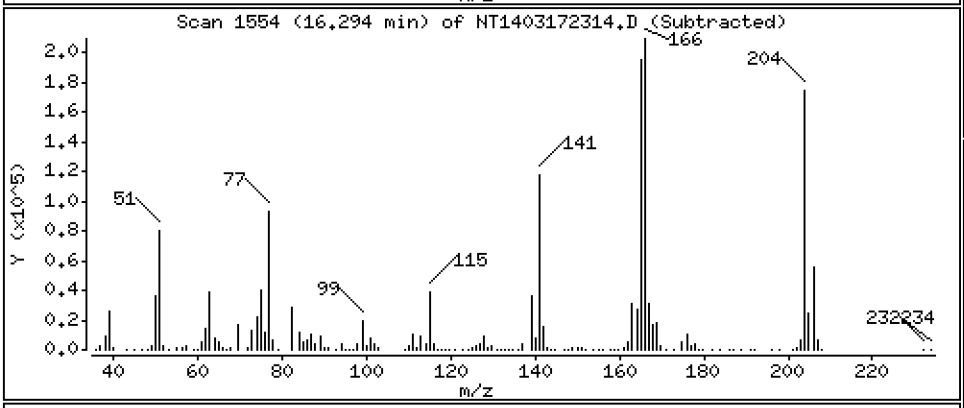
Column phase: ZB-5msi

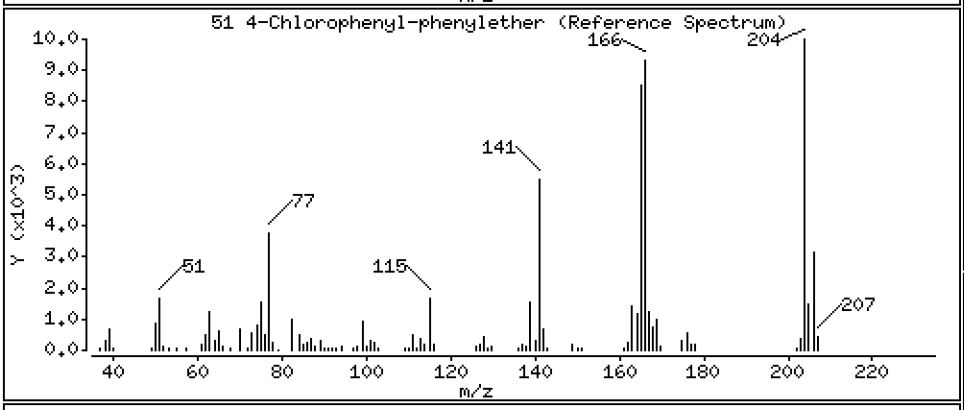
Column diameter: 0.25

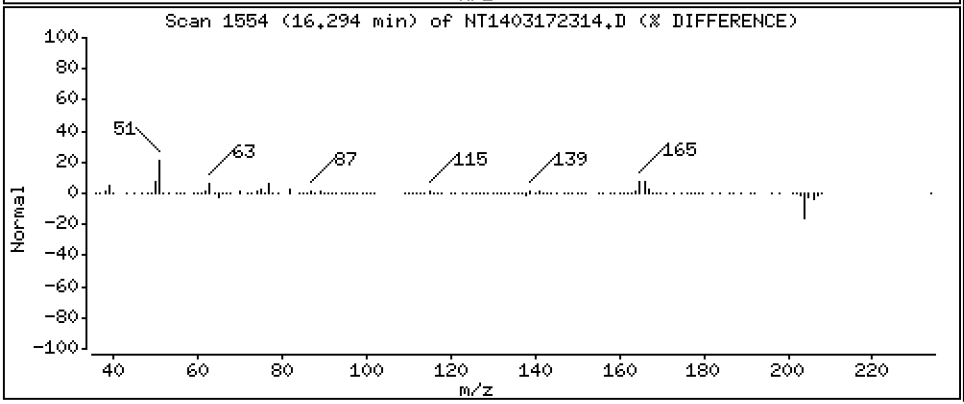
51 4-Chlorophenyl-phenylether

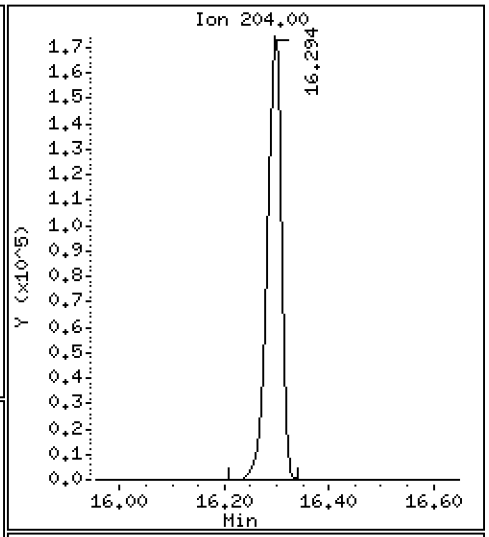
Concentration: 4.677 ug/mL

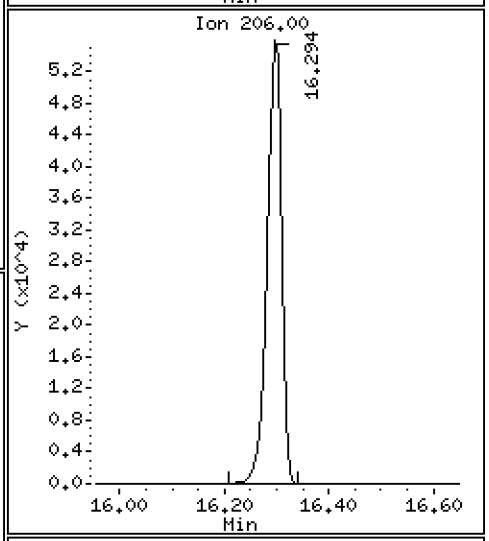


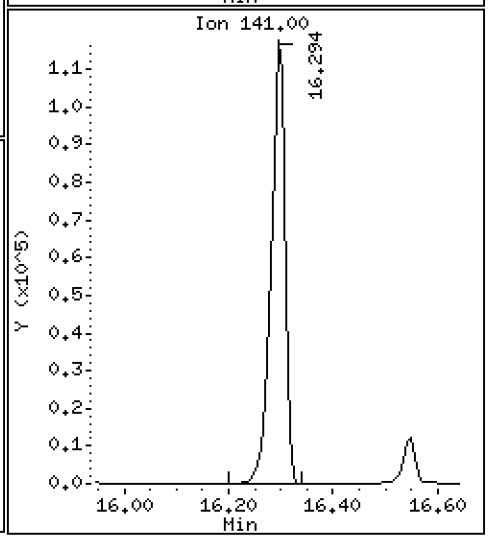












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Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

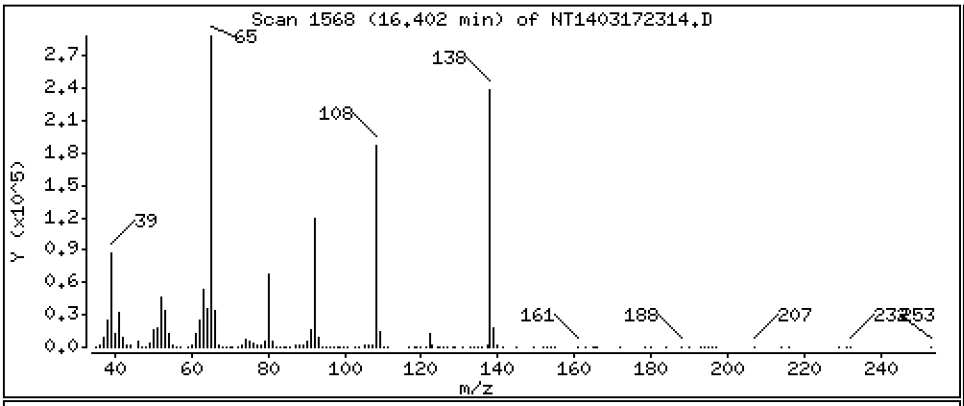
Operator: JGR

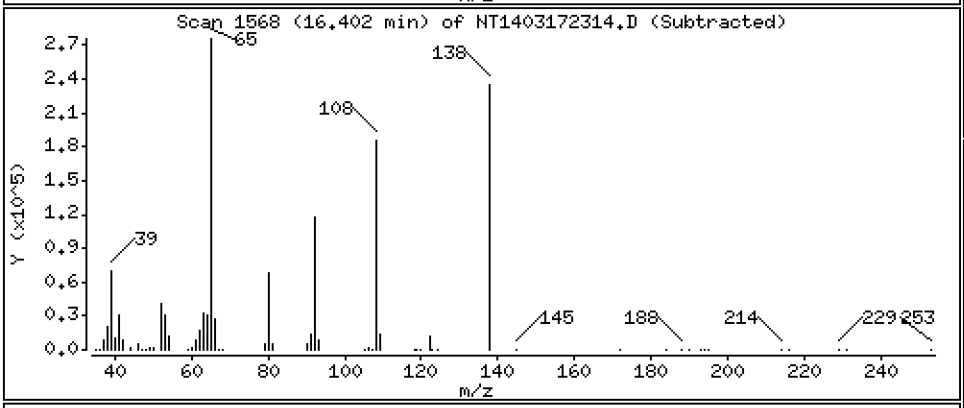
Column phase: ZB-5msi

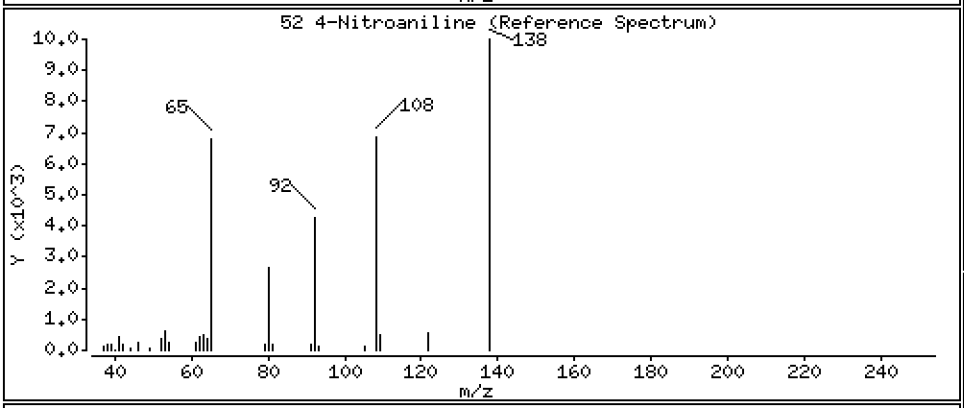
Column diameter: 0.25

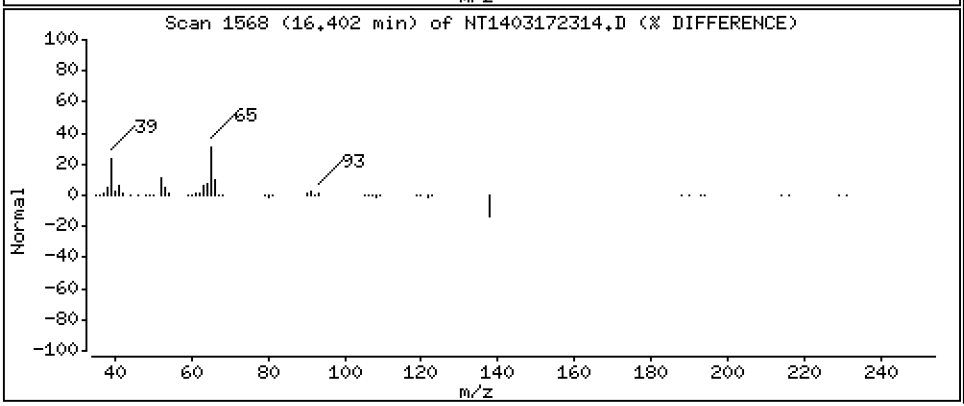
52 4-Nitroaniline

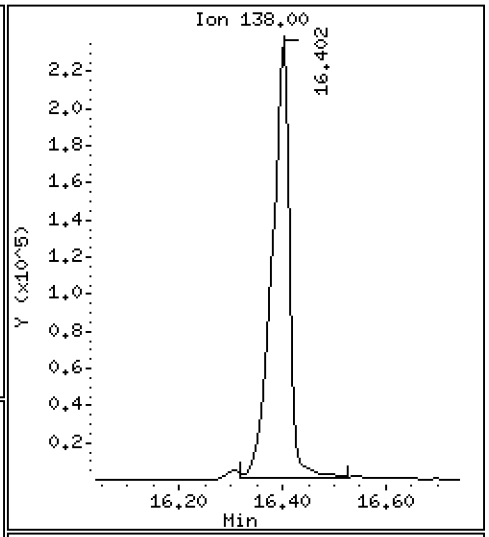
Concentration: 13.69 ug/mL

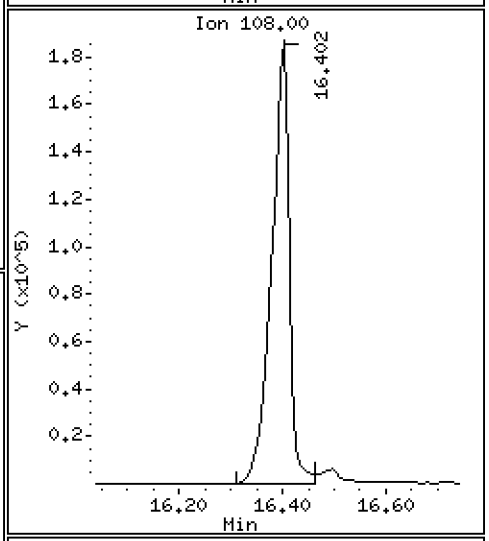


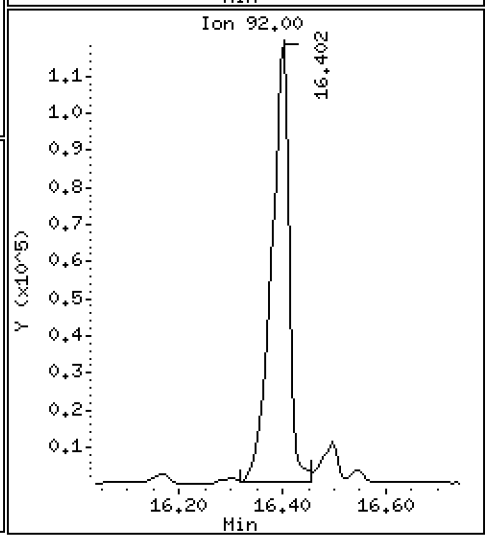












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Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

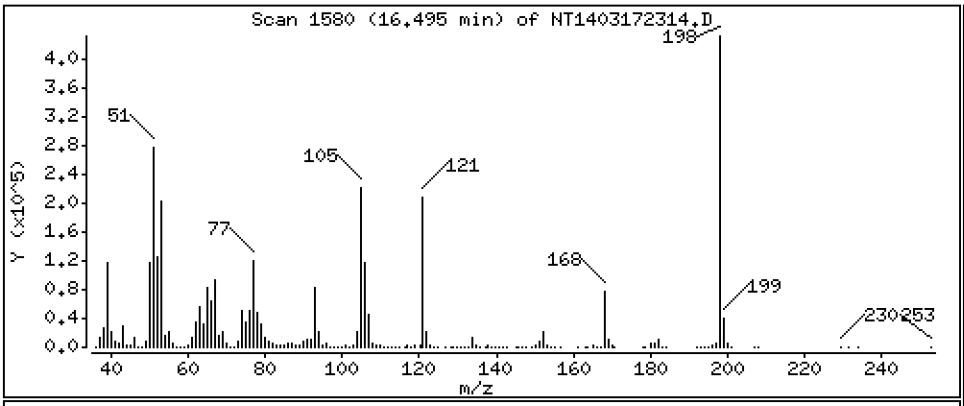
Operator: JGR

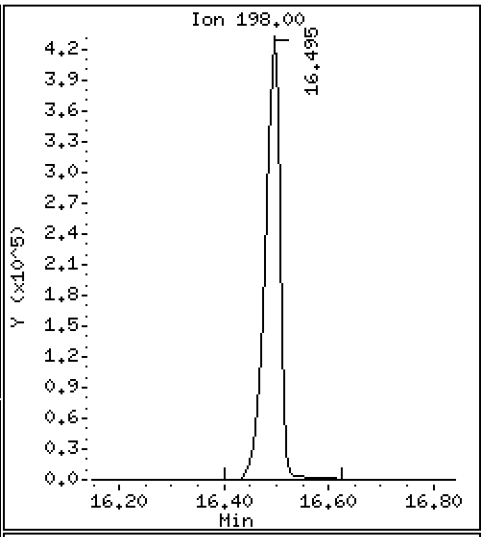
Column phase: ZB-5msi

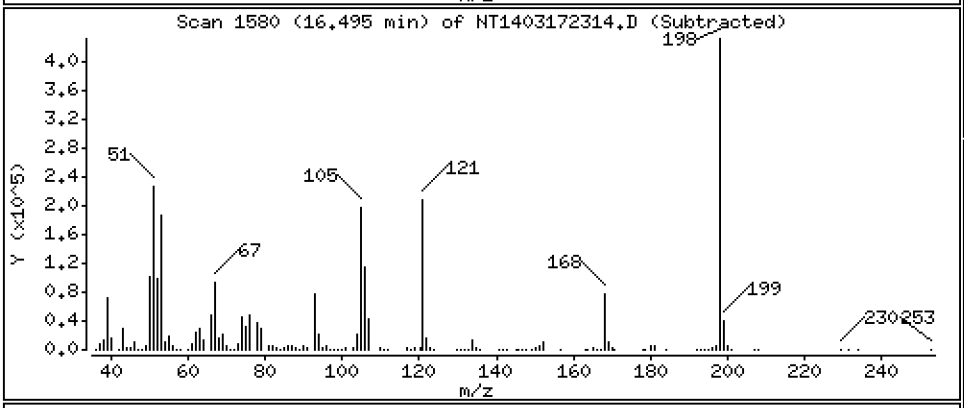
Column diameter: 0.25

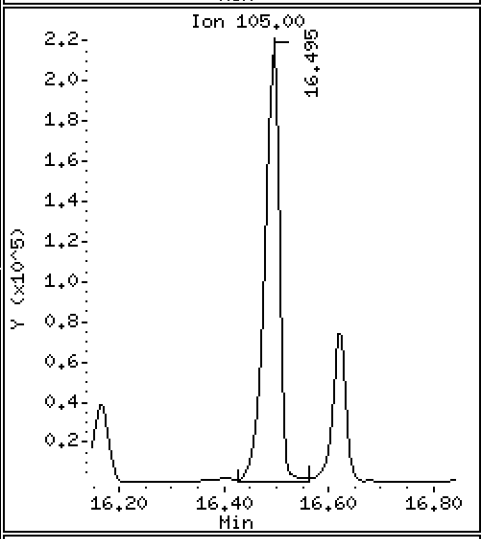
53 4,6-Dinitro-2-methylphenol

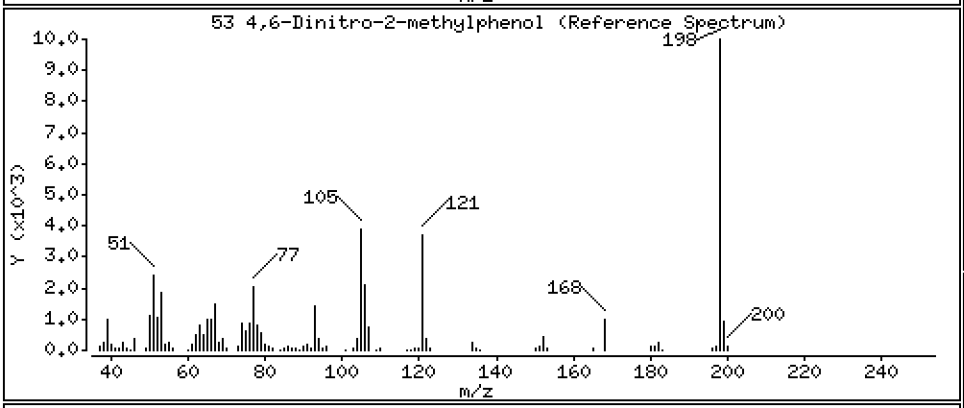
Concentration: 31.70 ug/mL

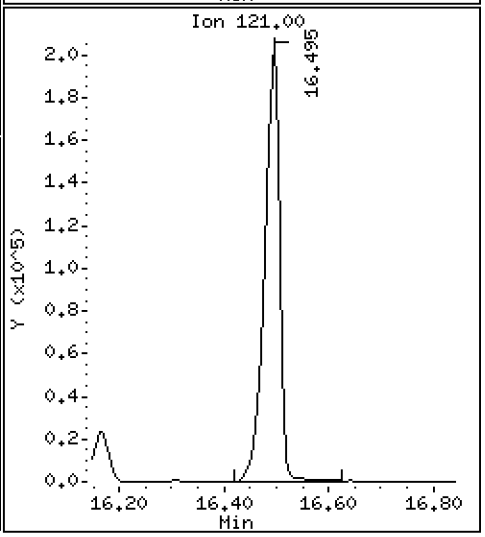


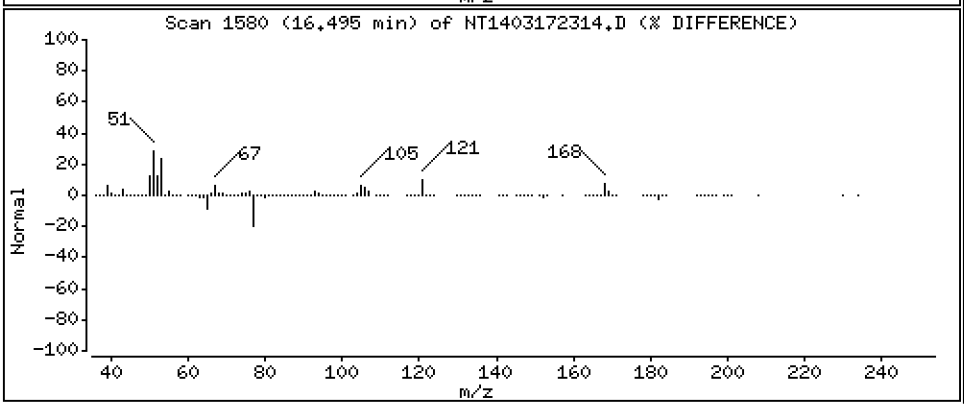












Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172314.D

Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

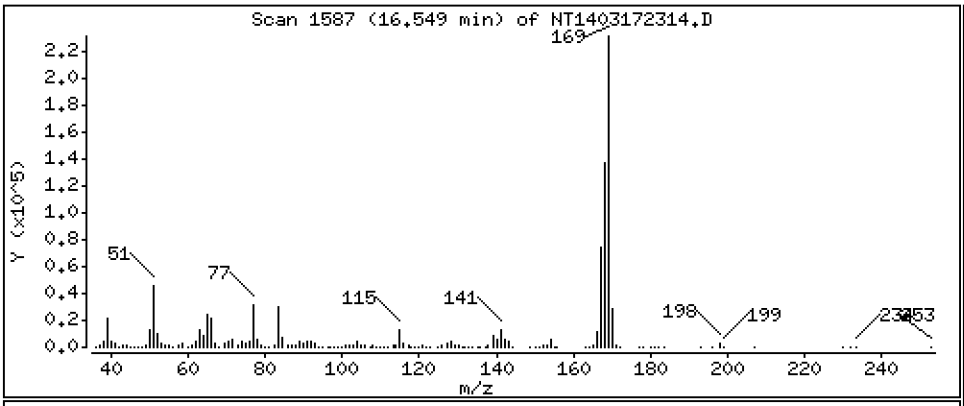
Operator: JGR

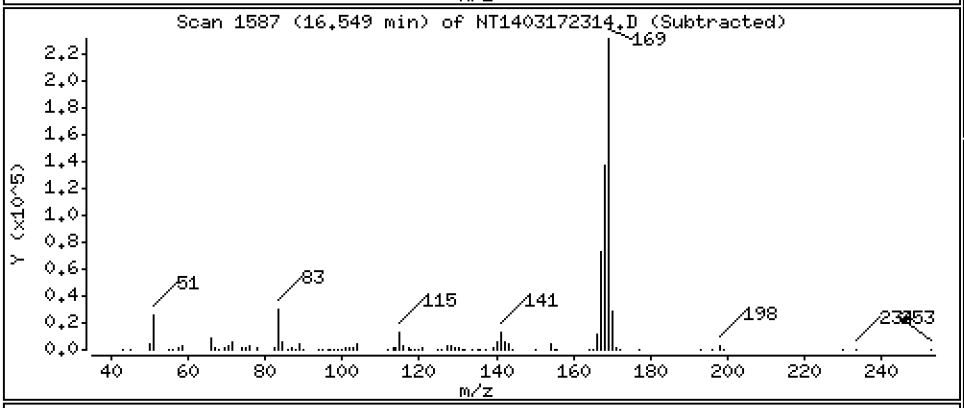
Column phase: ZB-5msi

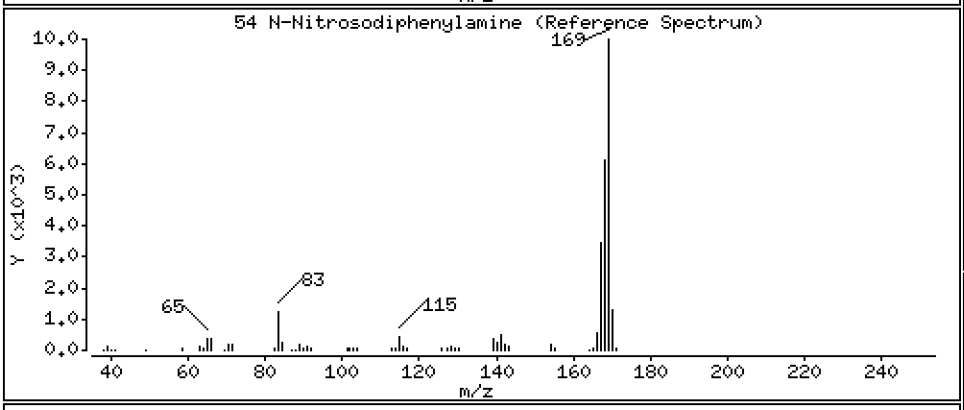
Column diameter: 0.25

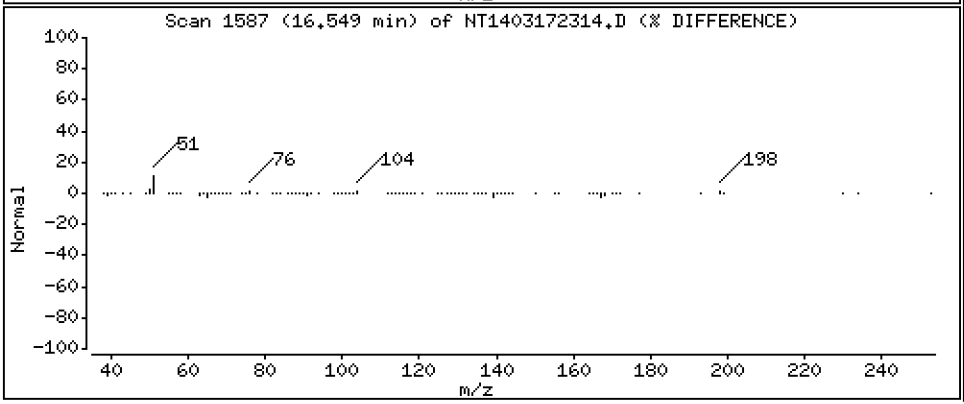
54 N-Nitrosodiphenylamine

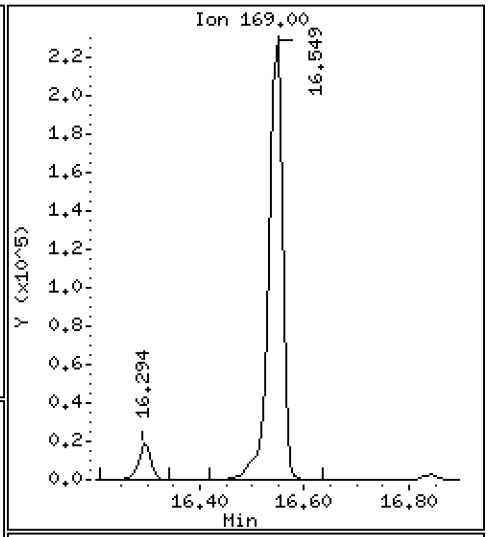
Concentration: 4.151 ug/mL

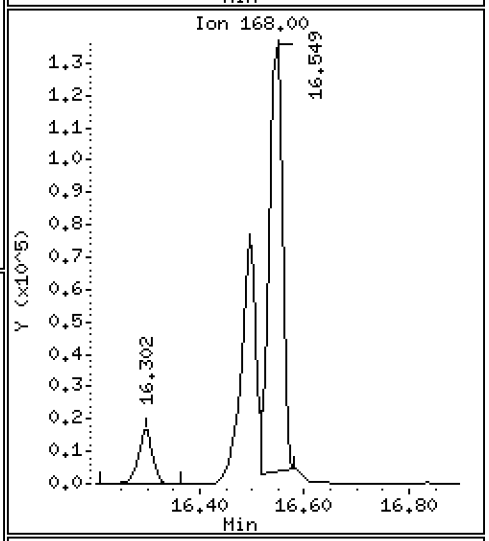


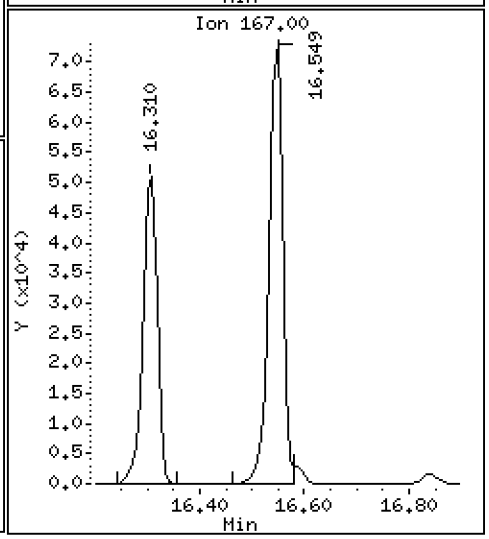












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Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

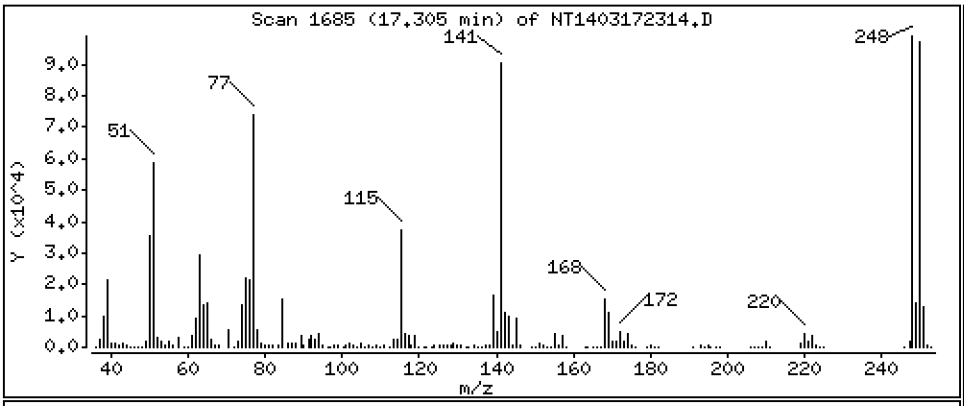
Operator: JGR

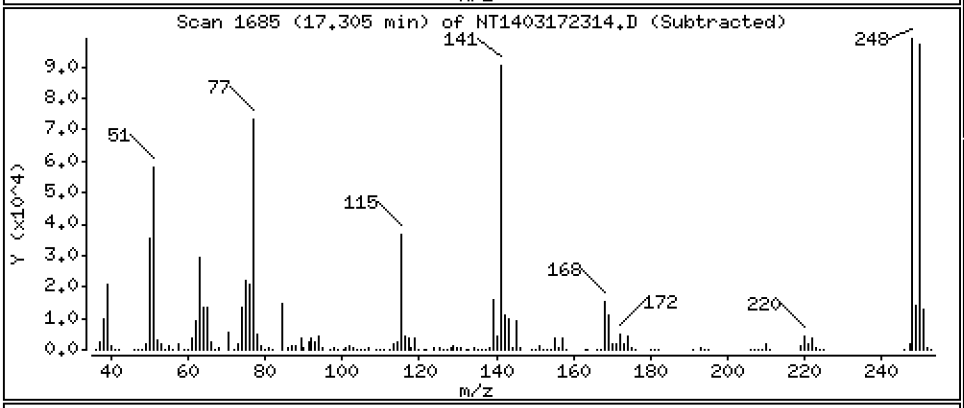
Column phase: ZB-5msi

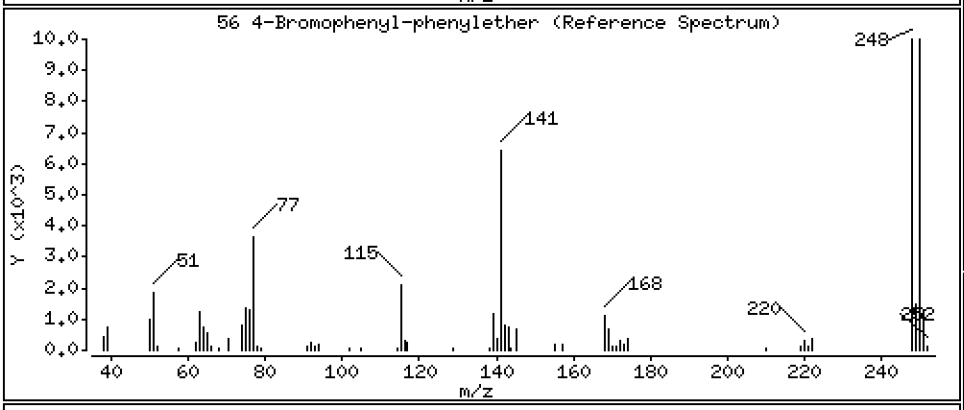
Column diameter: 0.25

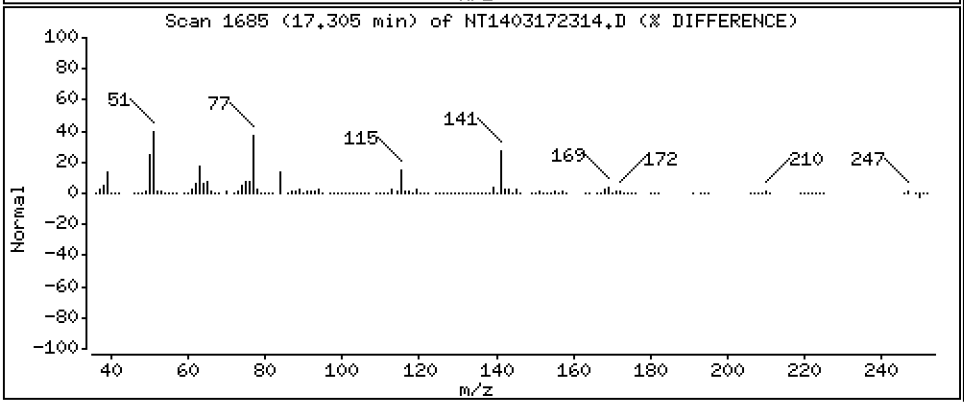
56 4-Bromophenyl-phenylether

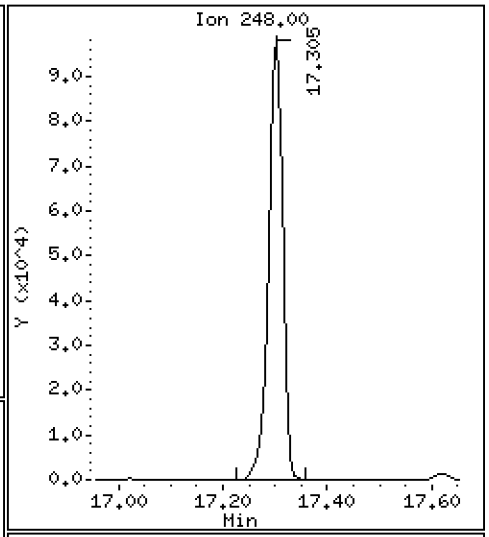
Concentration: 5.347 ug/mL

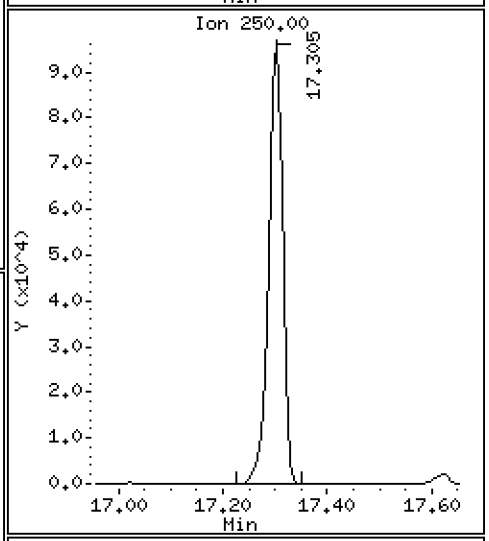


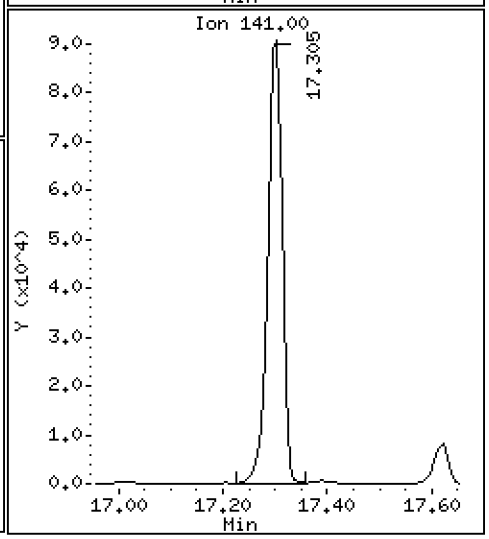












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Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

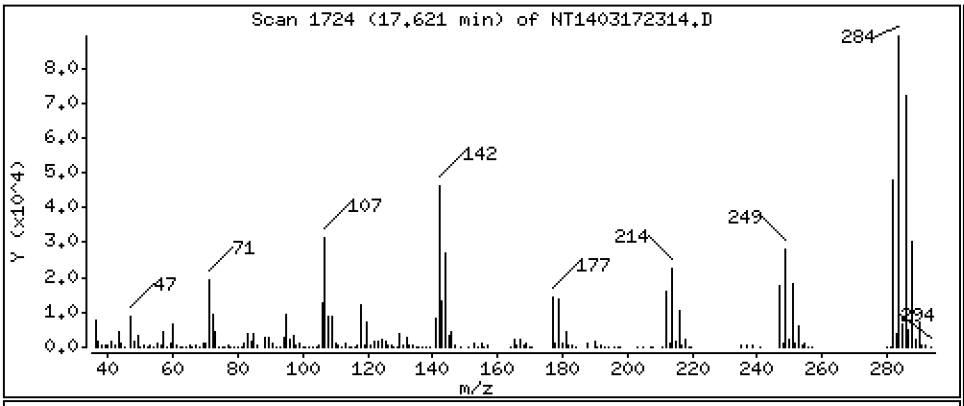
Operator: JGR

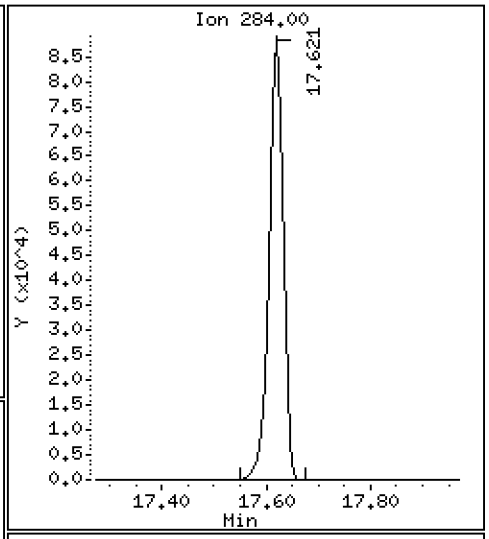
Column phase: ZB-5msi

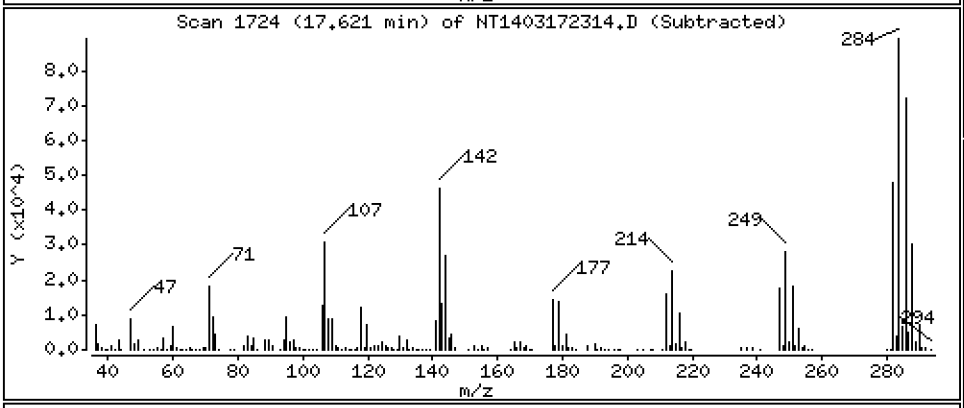
Column diameter: 0.25

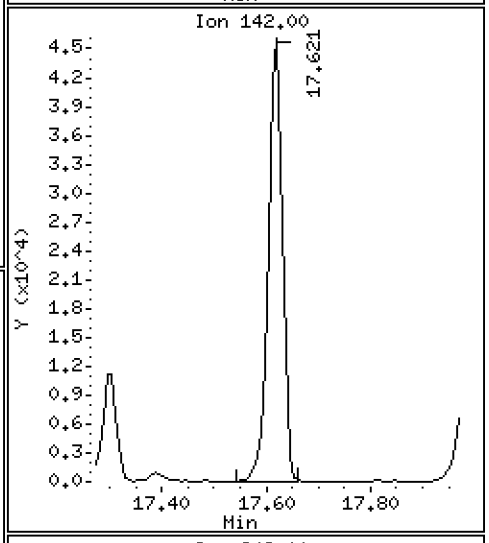
57 Hexachlorobenzene

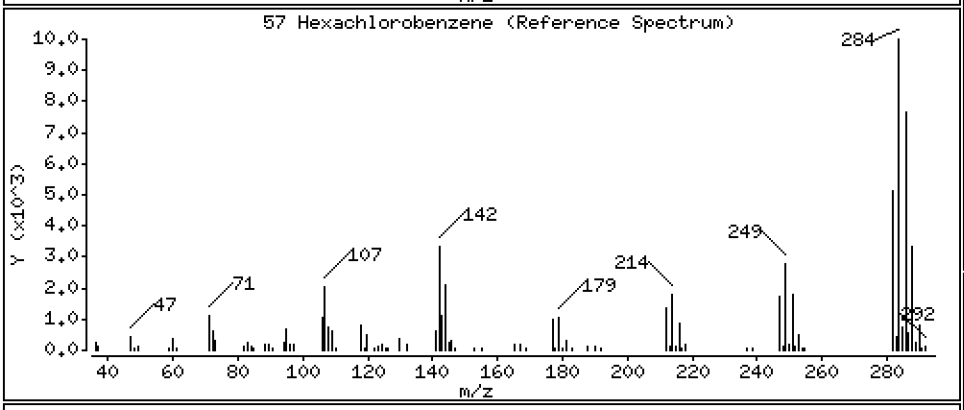
Concentration: 4.764 ug/mL

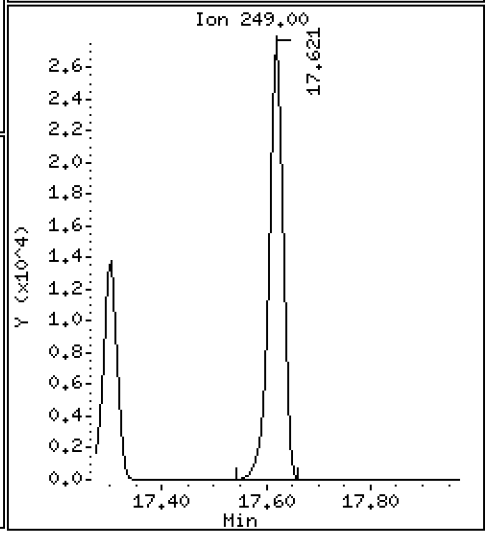


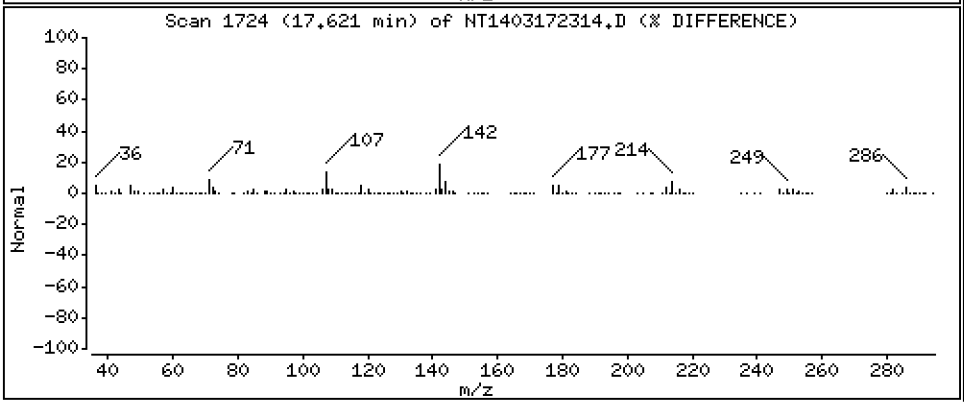












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Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

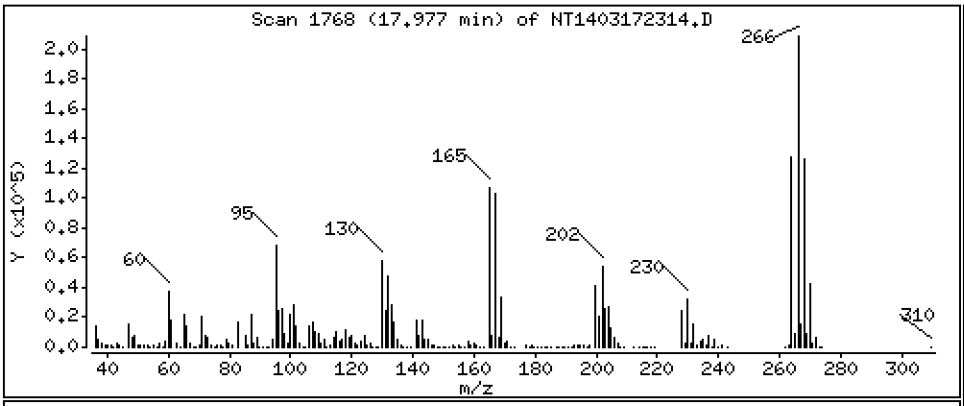
Operator: JGR

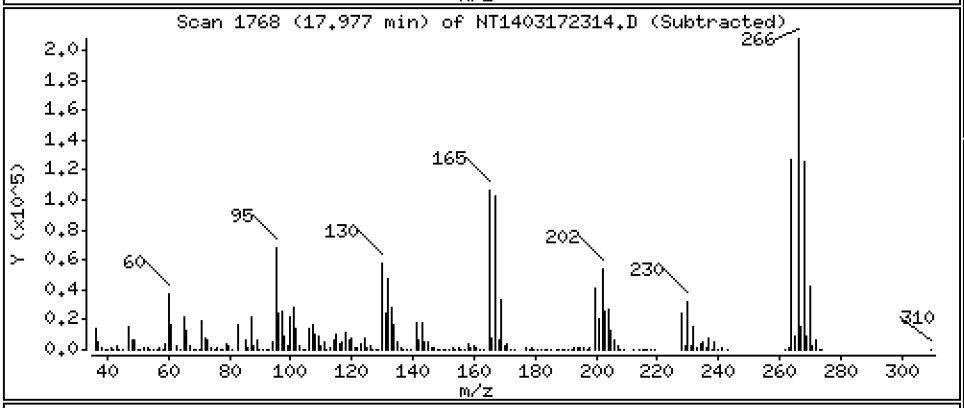
Column phase: ZB-5msi

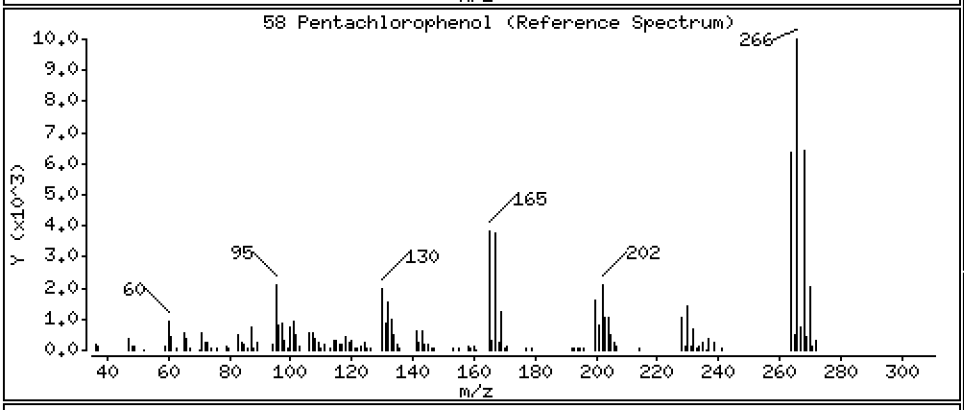
Column diameter: 0.25

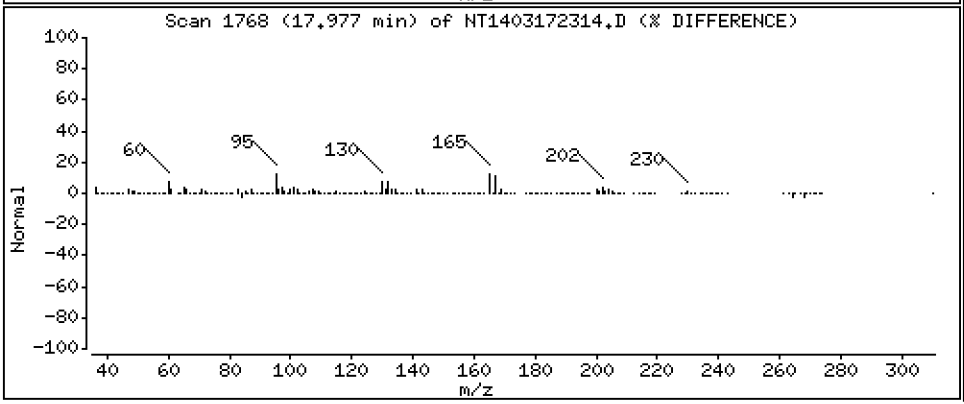
58 Pentachlorophenol

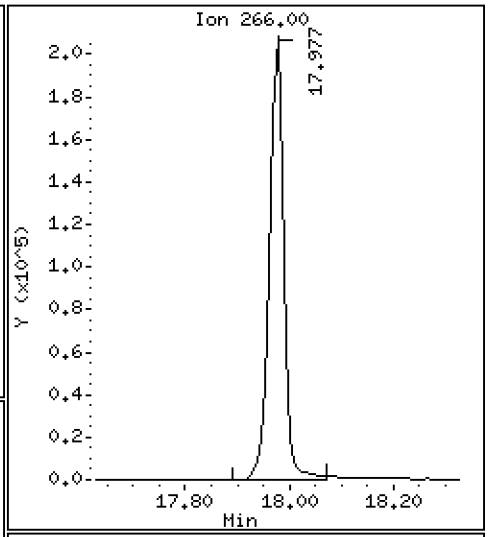
Concentration: 15.05 ug/mL

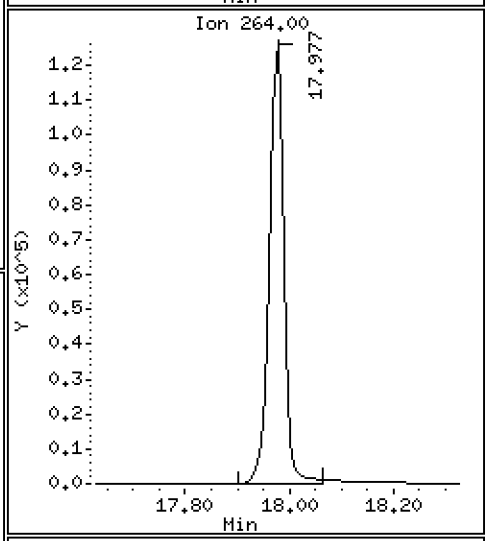


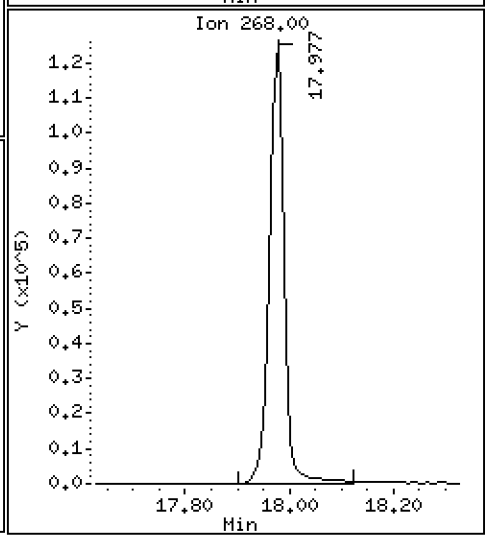












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Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

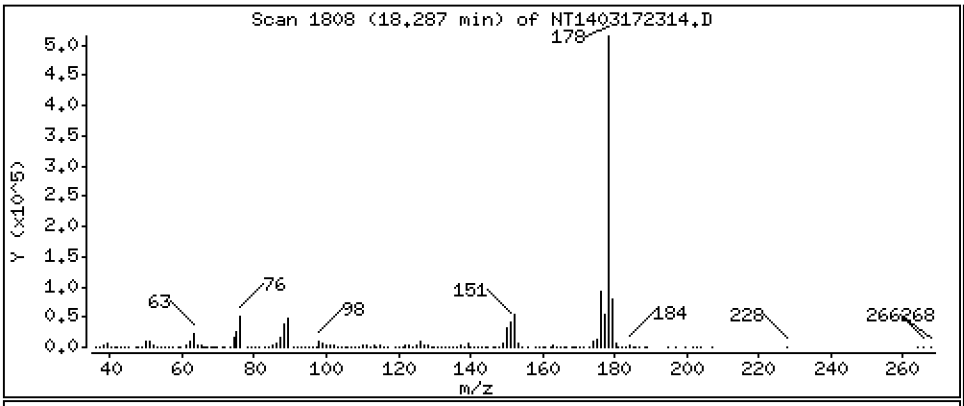
Operator: JGR

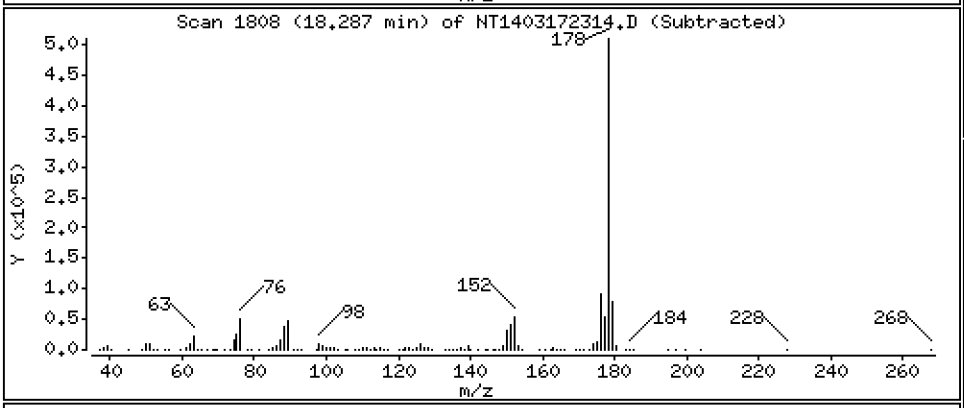
Column phase: ZB-5msi

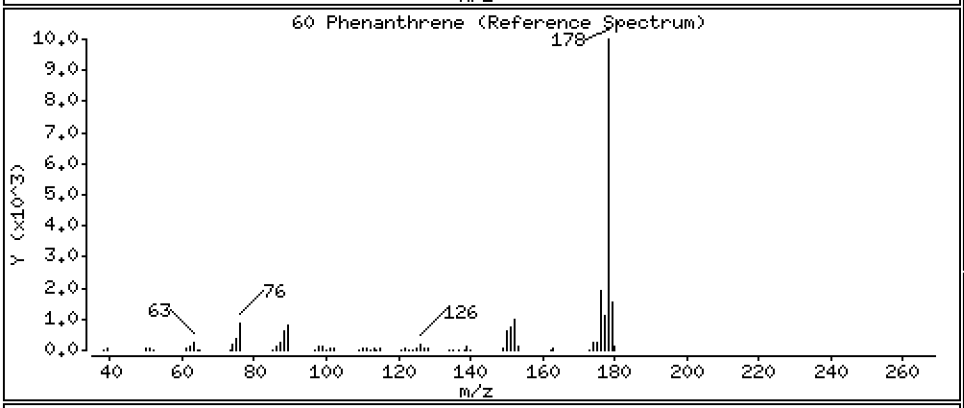
Column diameter: 0.25

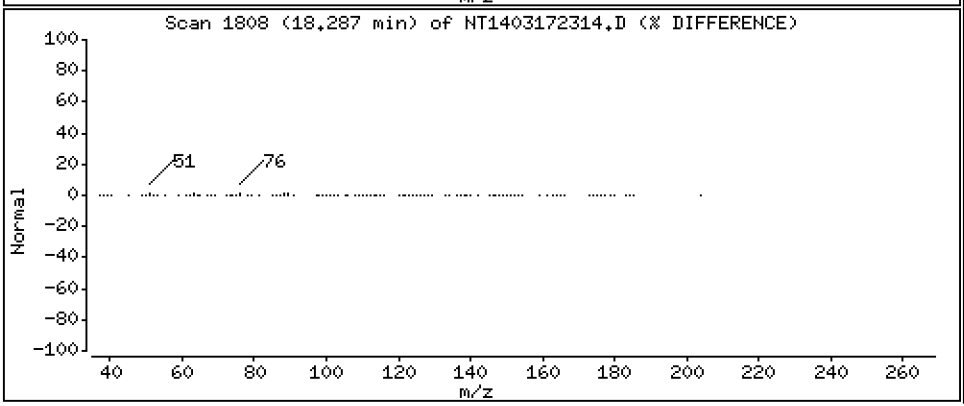
60 Phenanthrene

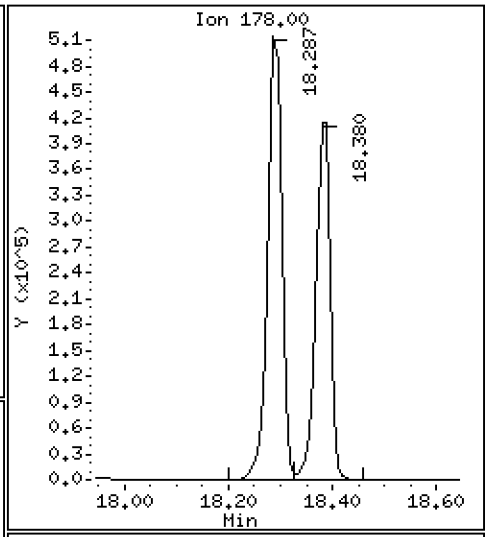
Concentration: 4.518 ug/mL

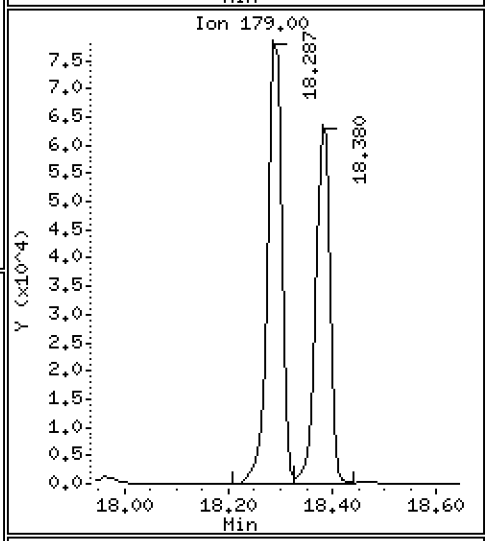


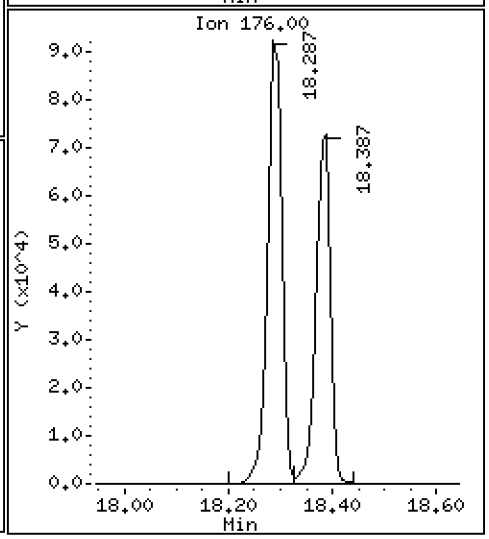












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Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

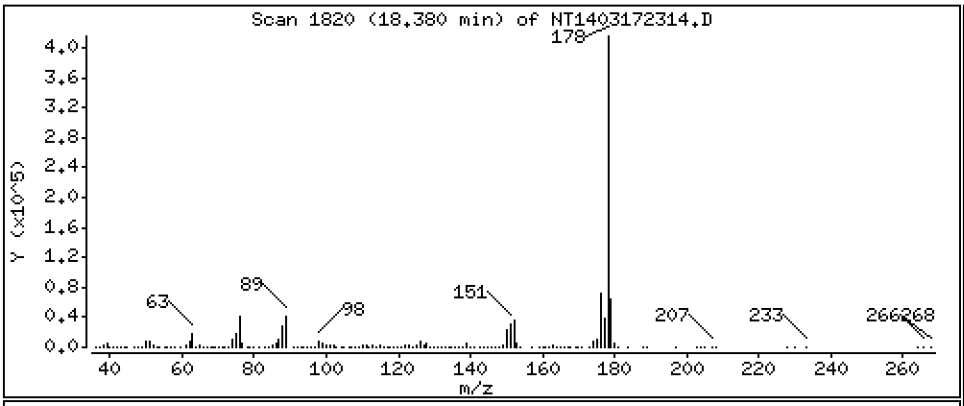
Operator: JGR

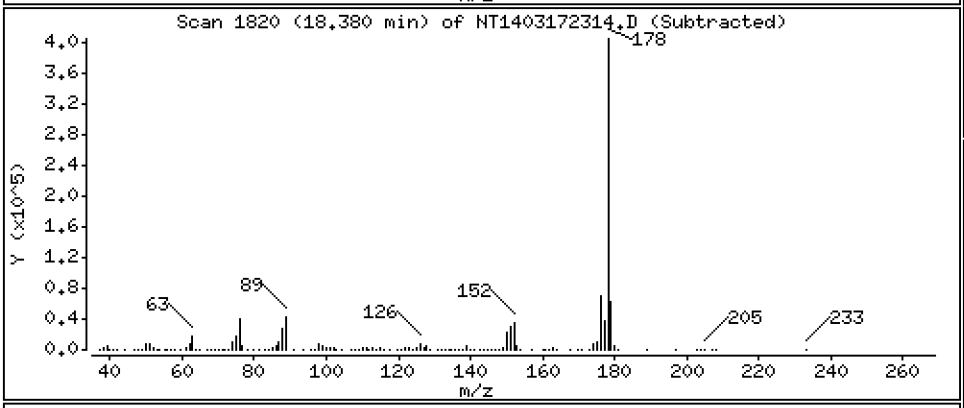
Column phase: ZB-5msi

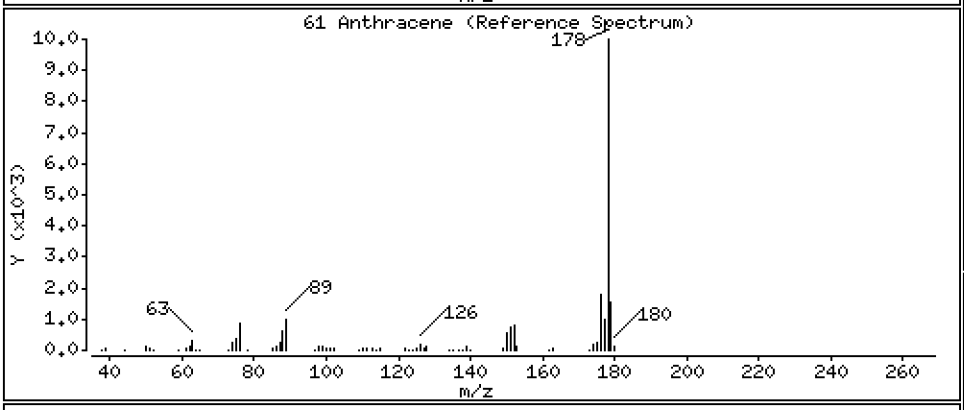
Column diameter: 0.25

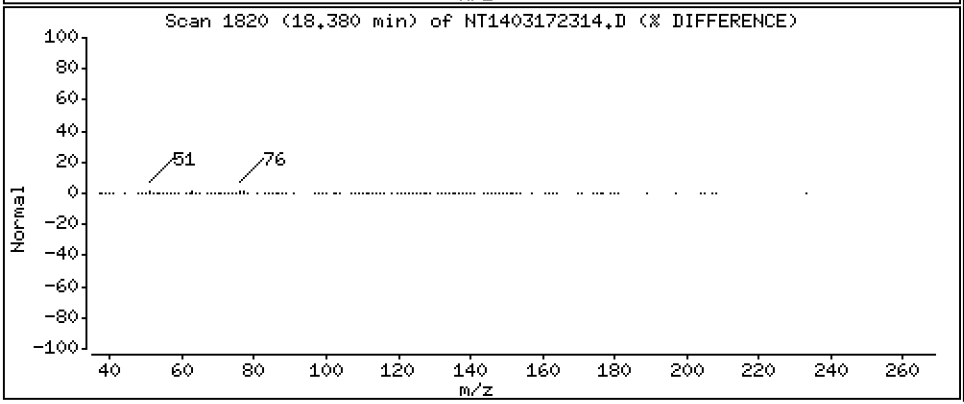
61 Anthracene

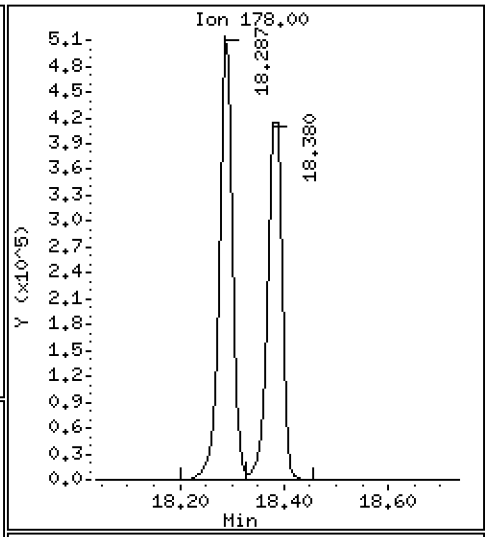
Concentration: 3.858 ug/mL

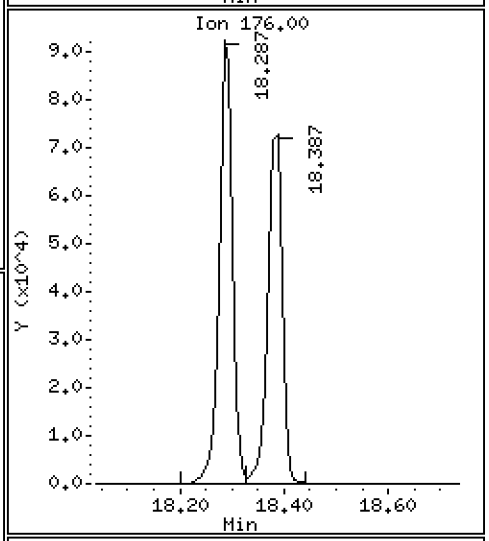


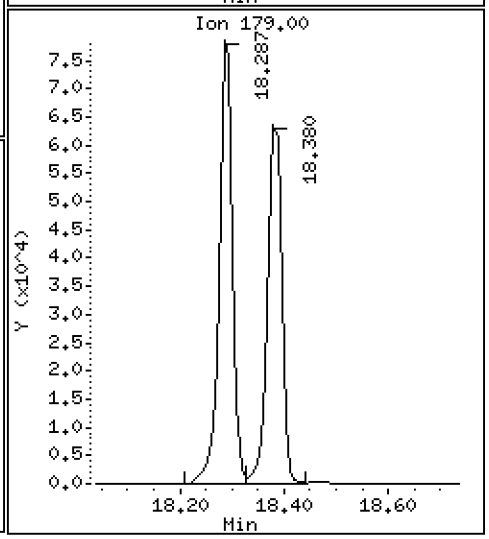












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Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

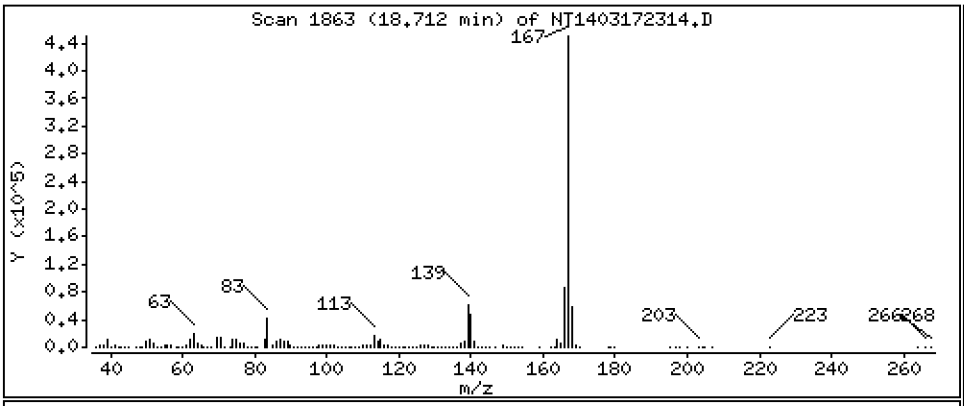
Operator: JGR

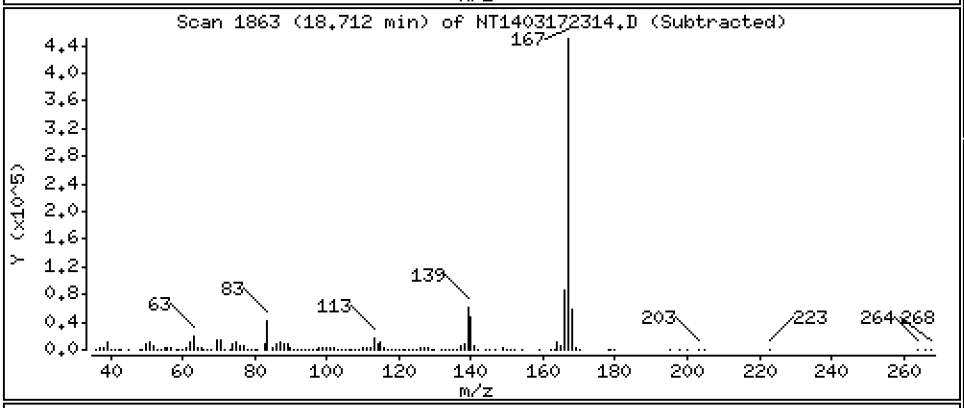
Column phase: ZB-5msi

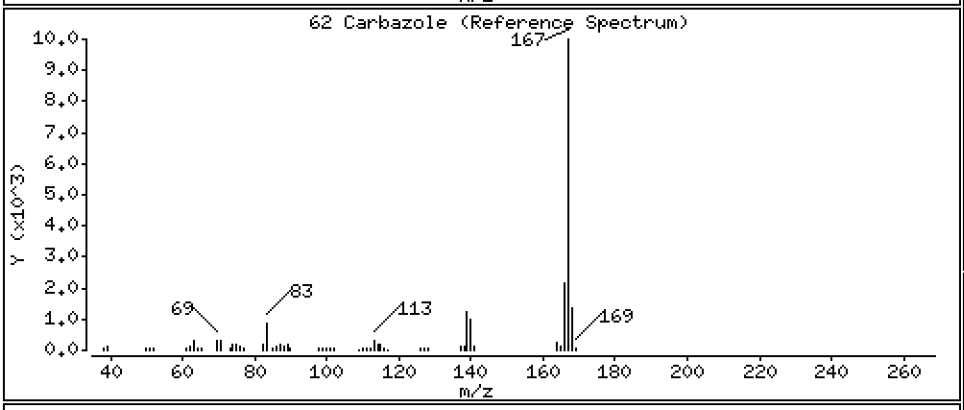
Column diameter: 0.25

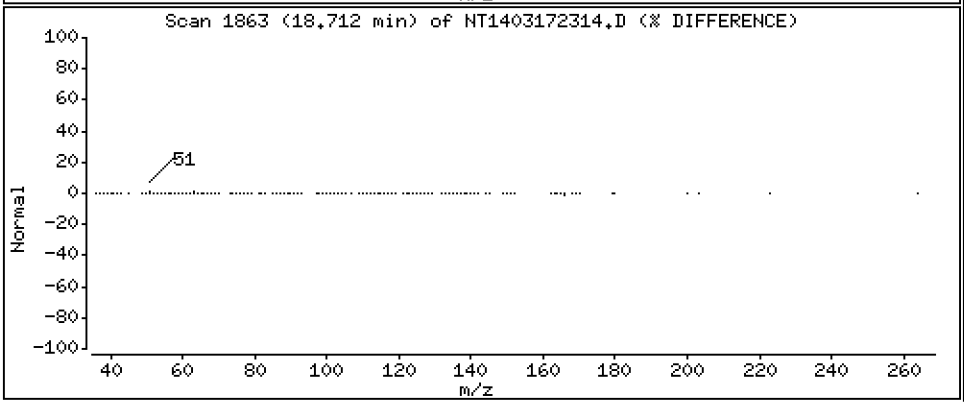
62 Carbazole

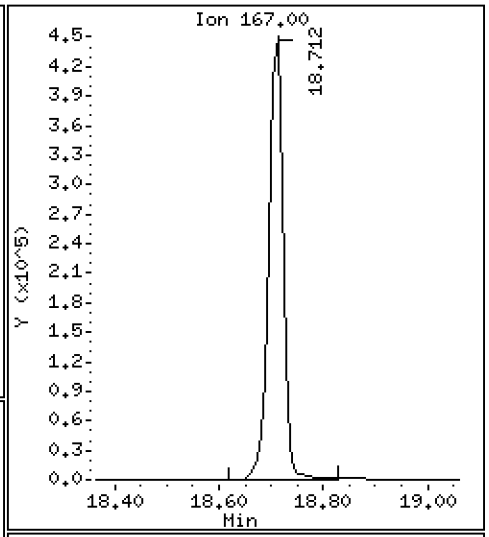
Concentration: 4.706 ug/mL

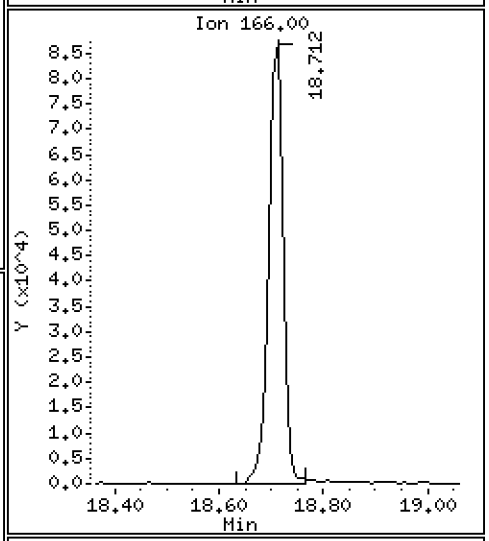


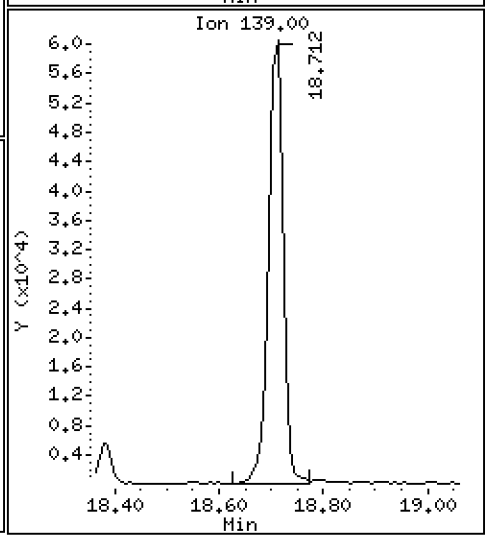












Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172314.D

Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

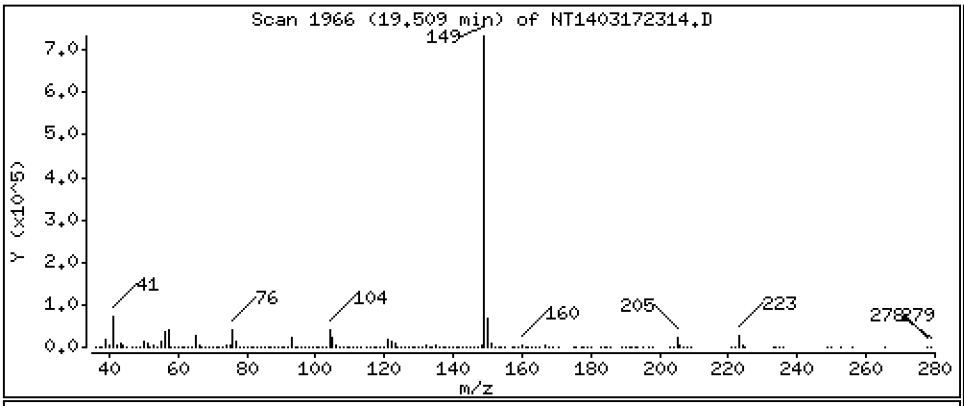
Operator: JGR

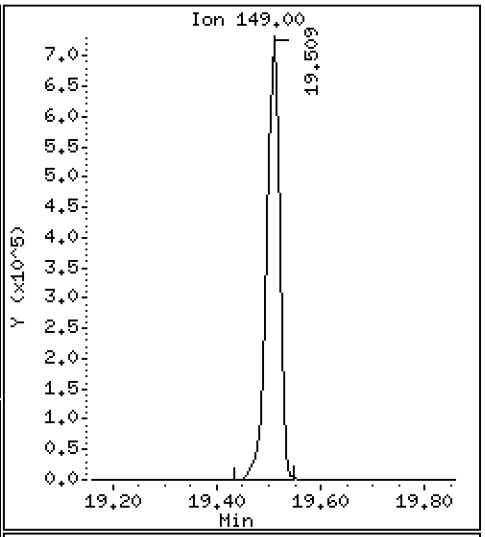
Column phase: ZB-5msi

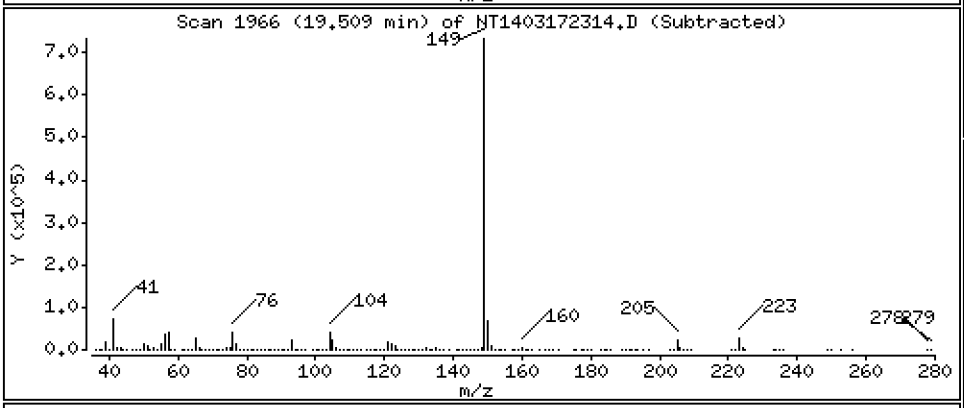
Column diameter: 0.25

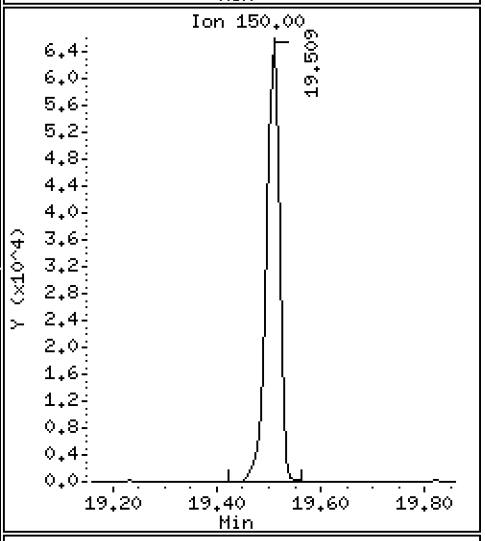
63 Di-n-butylphthalate

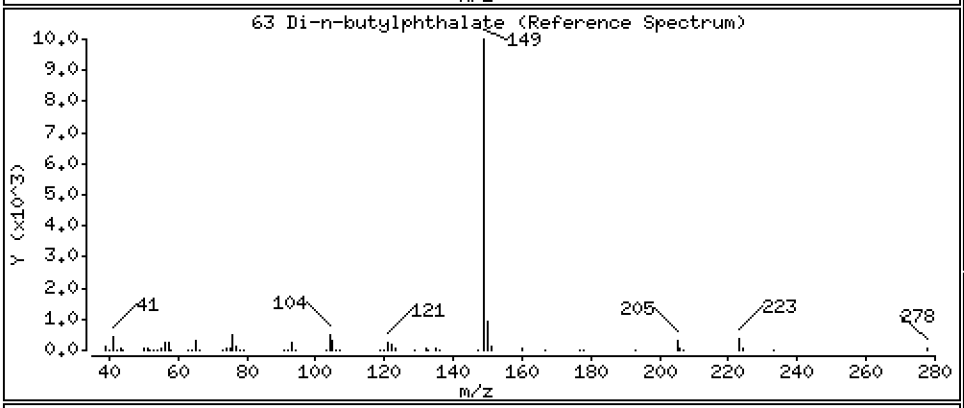
Concentration: 5.370 ug/mL

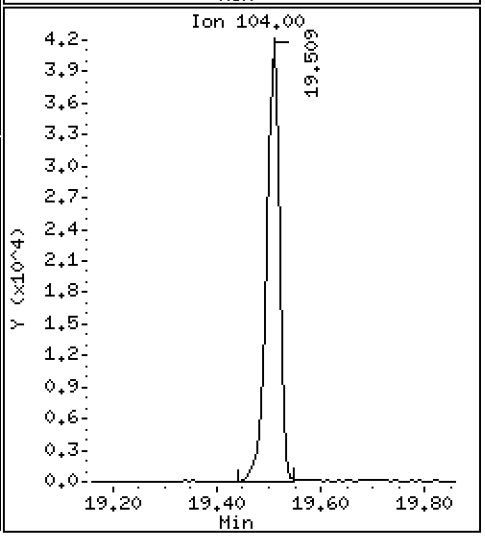


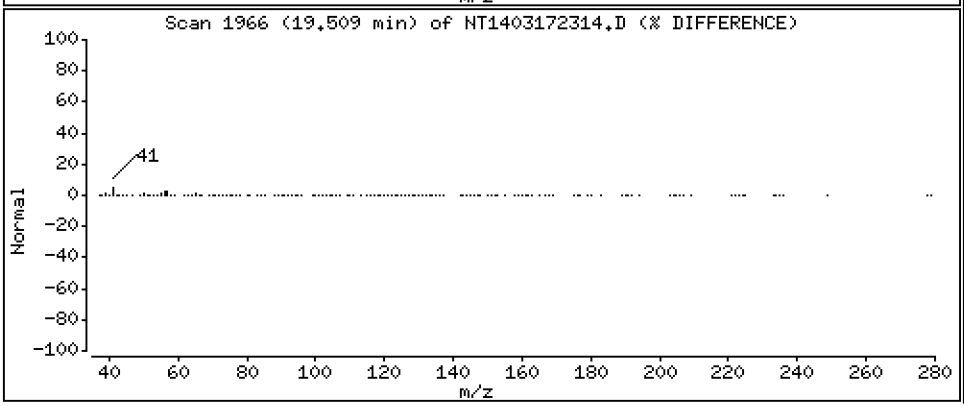












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Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

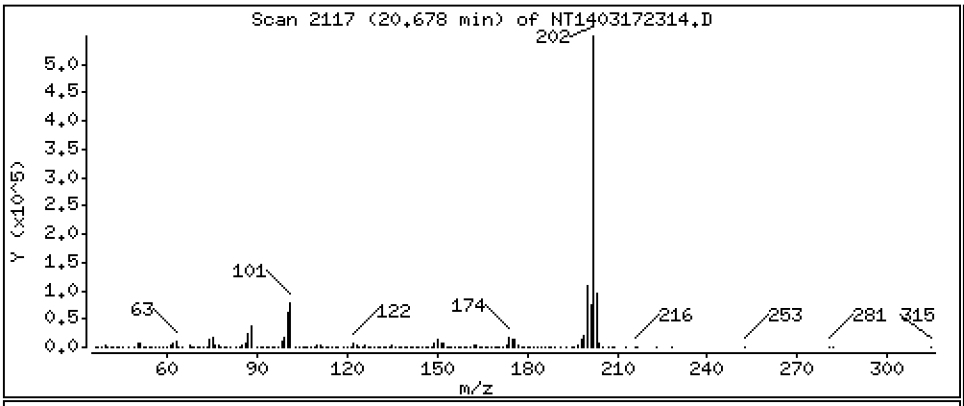
Operator: JGR

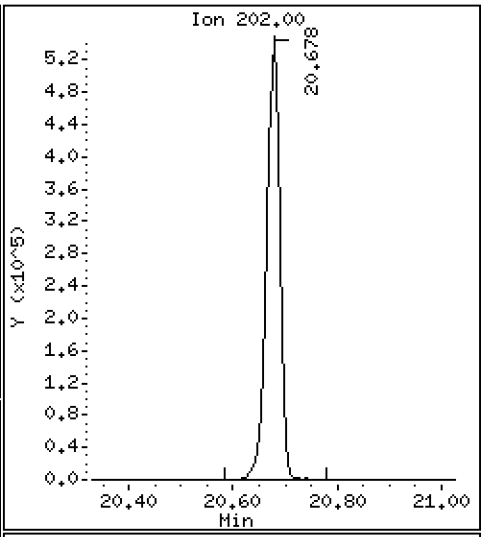
Column phase: ZB-5msi

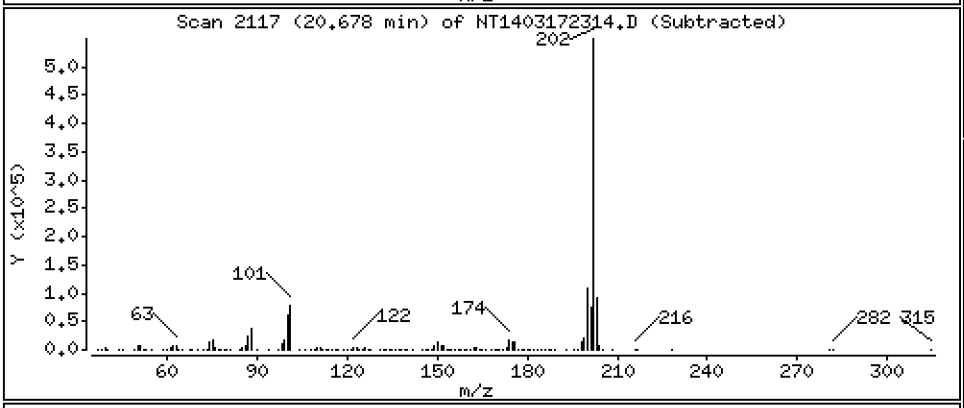
Column diameter: 0.25

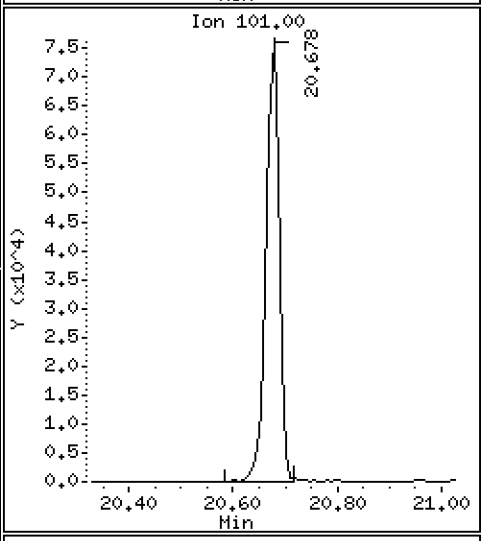
64 Fluoranthene

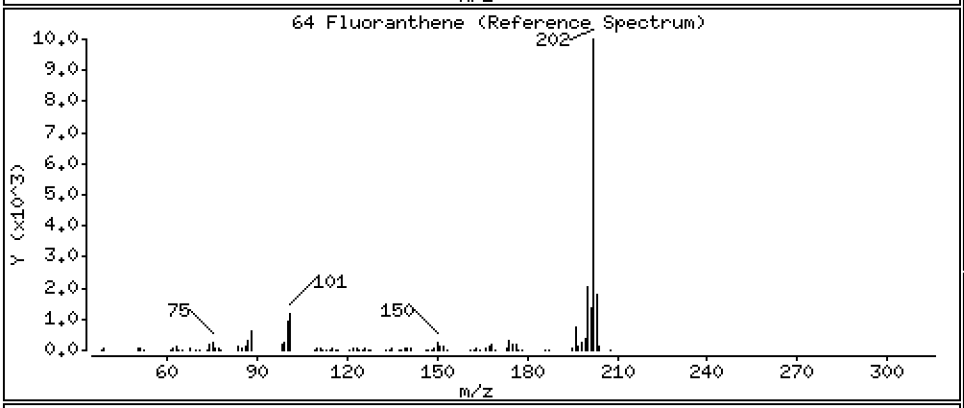
Concentration: 6.314 ug/mL

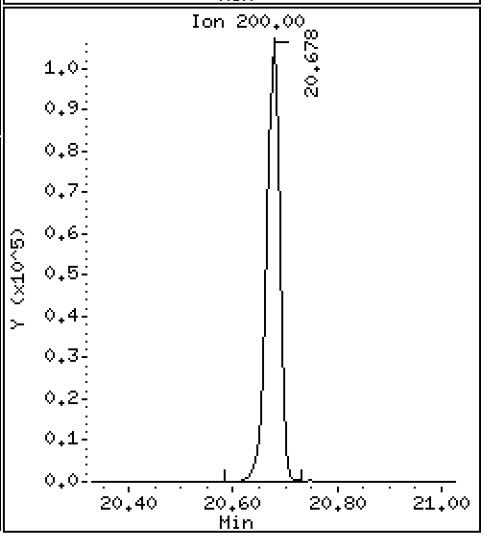


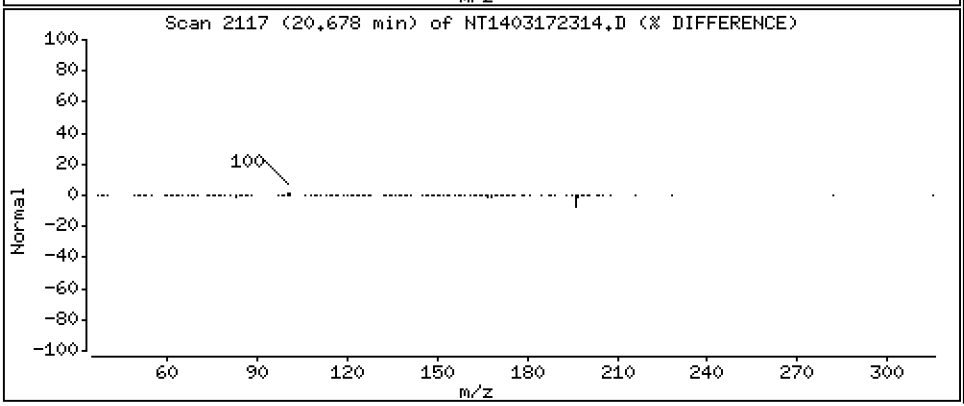












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Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

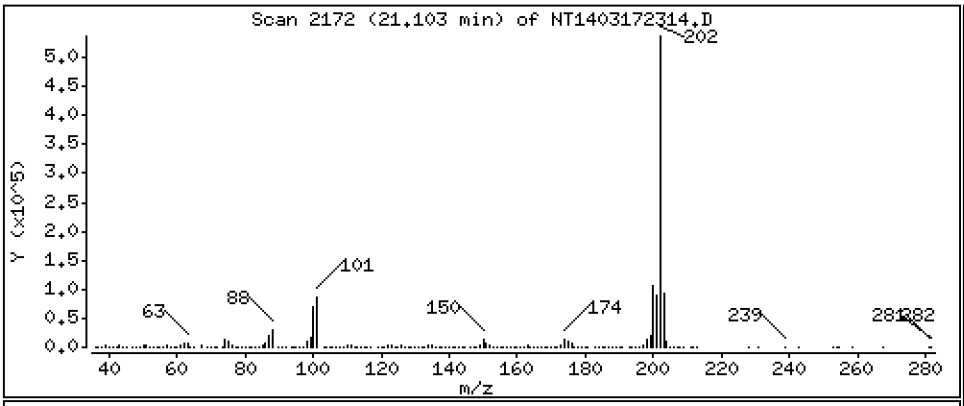
Operator: JGR

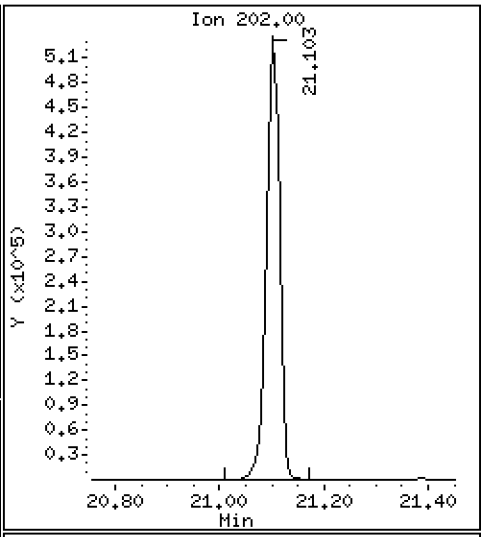
Column phase: ZB-5msi

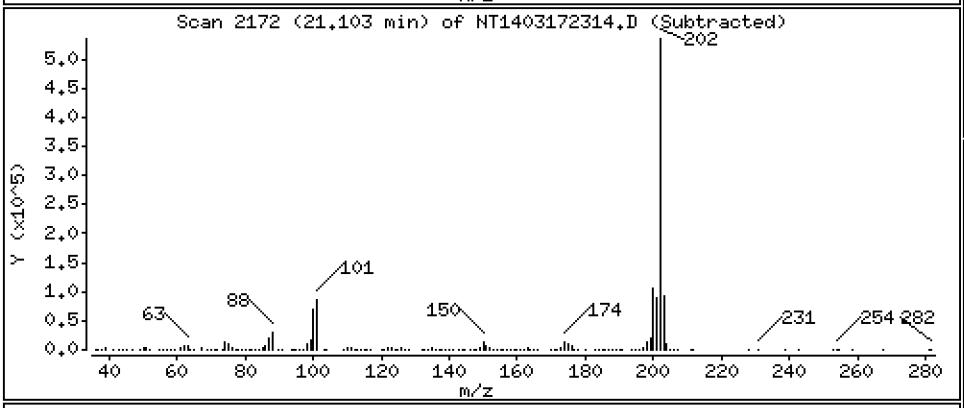
Column diameter: 0.25

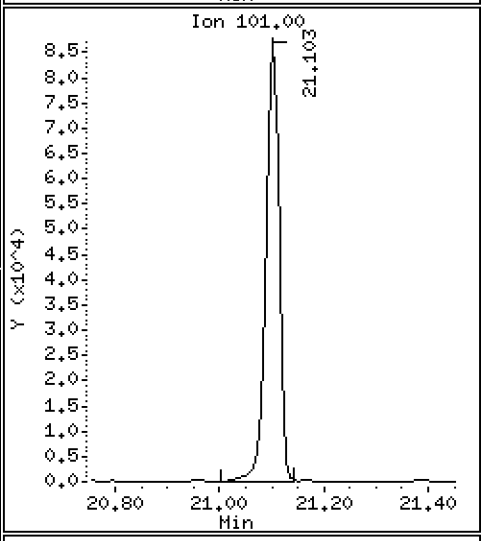
65 Pyrene

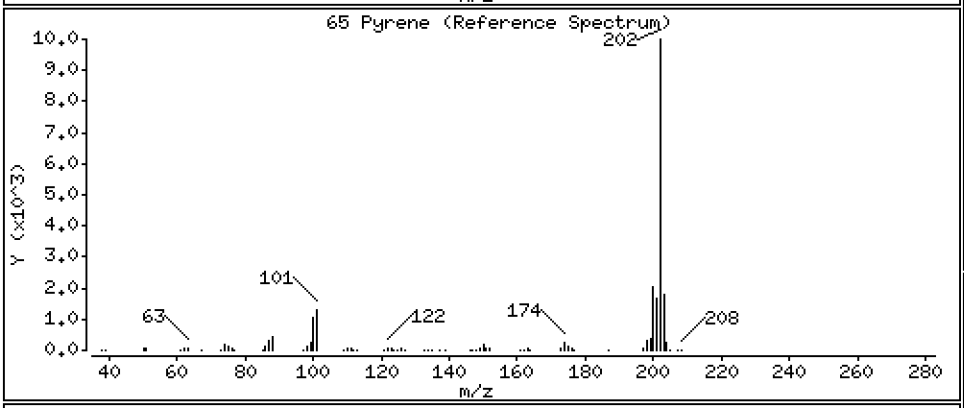
Concentration: 5.977 ug/mL

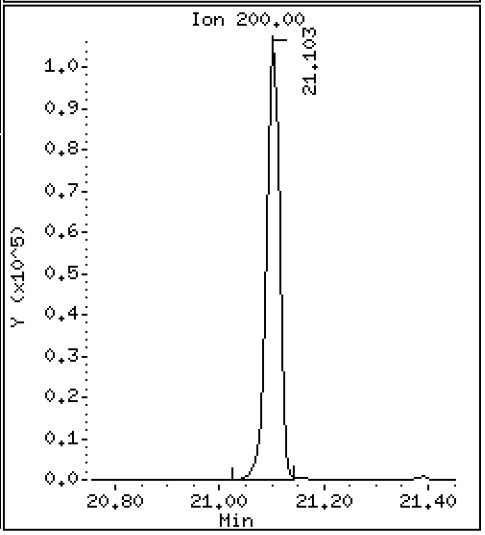


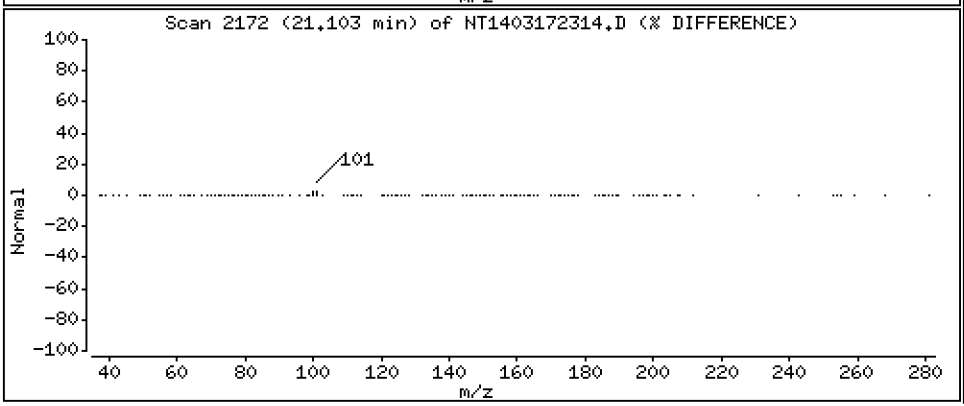












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Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

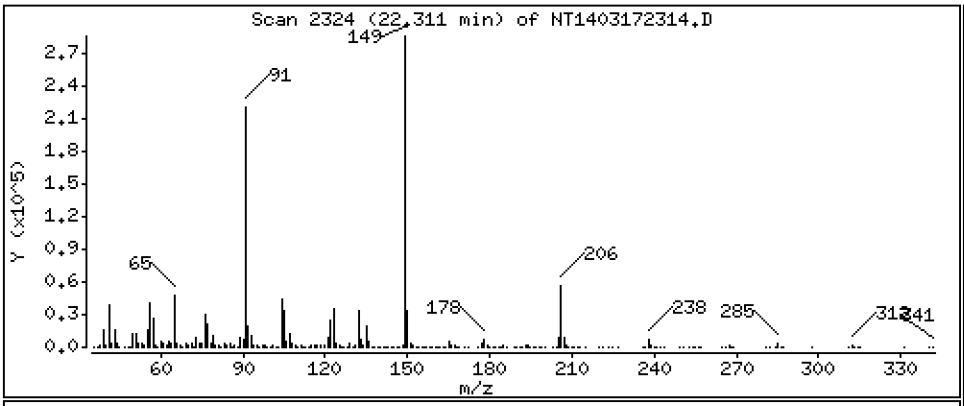
Operator: JGR

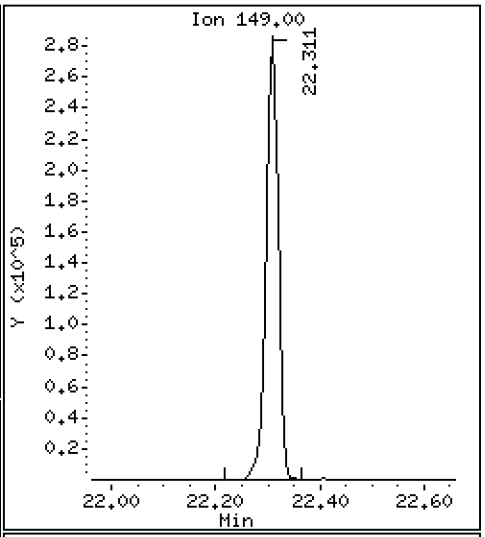
Column phase: ZB-5msi

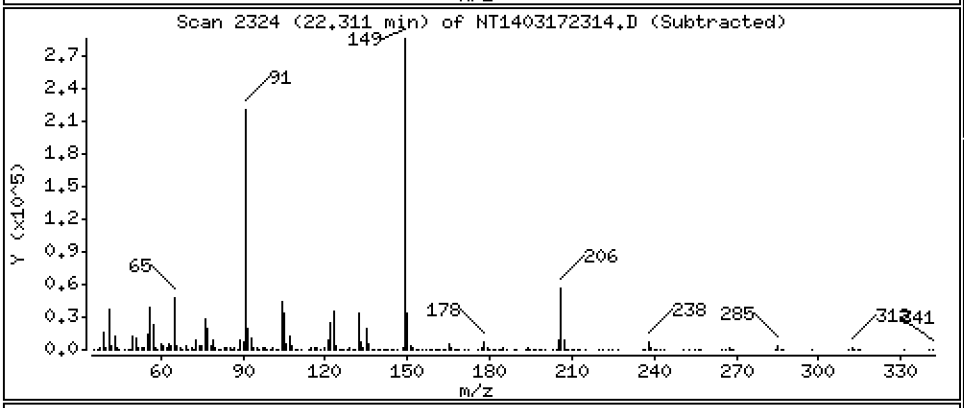
Column diameter: 0.25

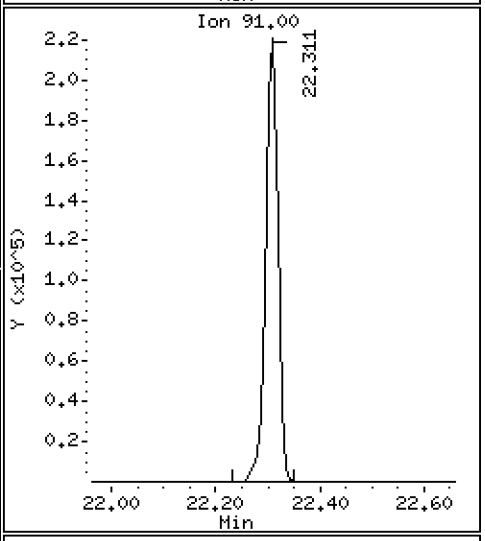
67 Butylbenzylphthalate

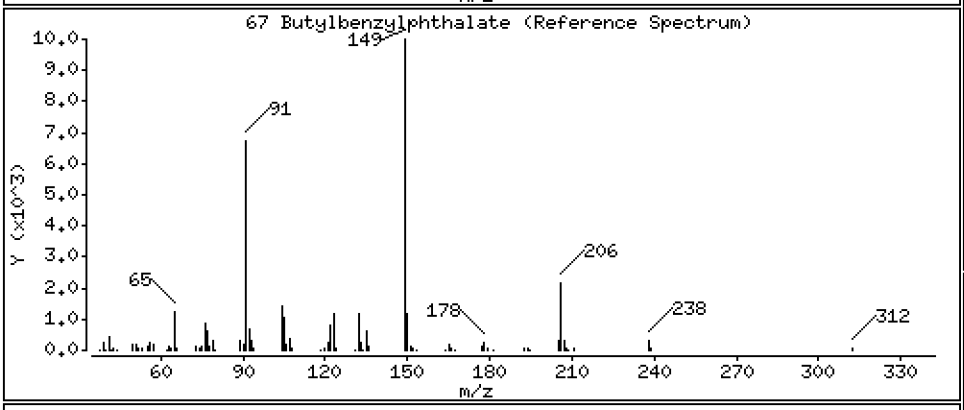
Concentration: 6.729 ug/mL

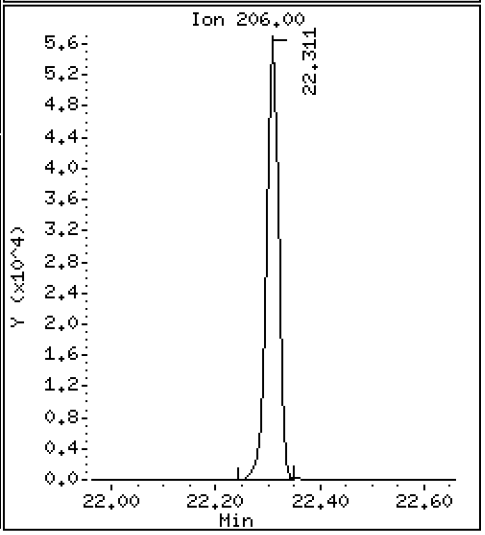


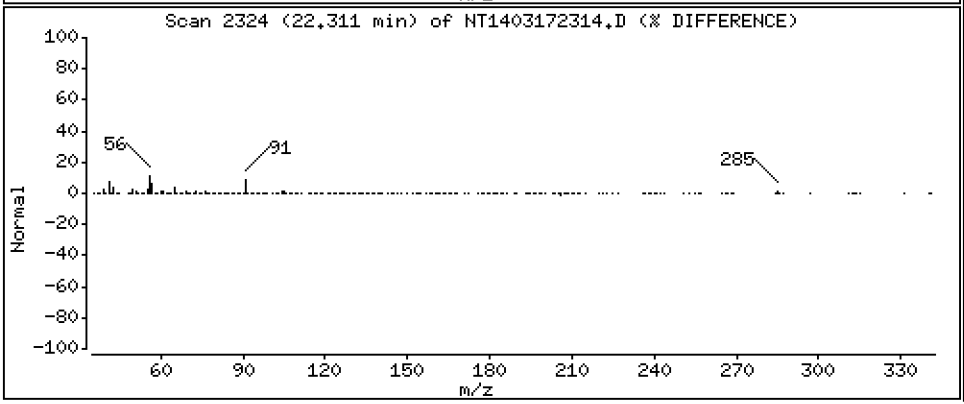












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Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

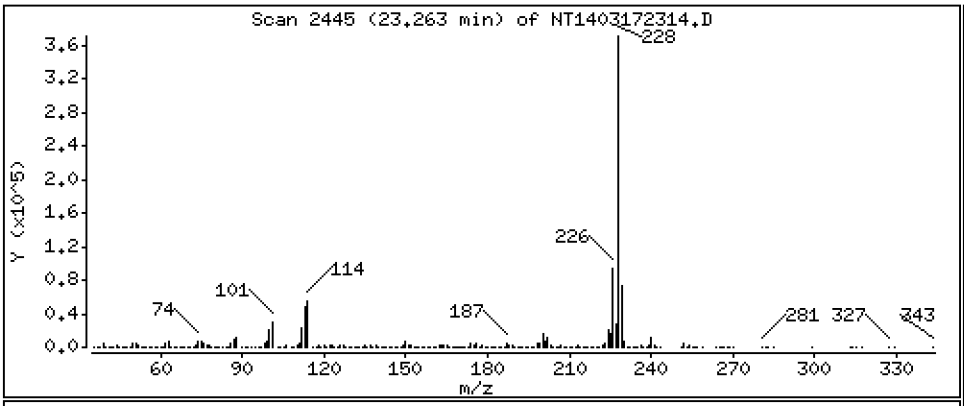
Operator: JGR

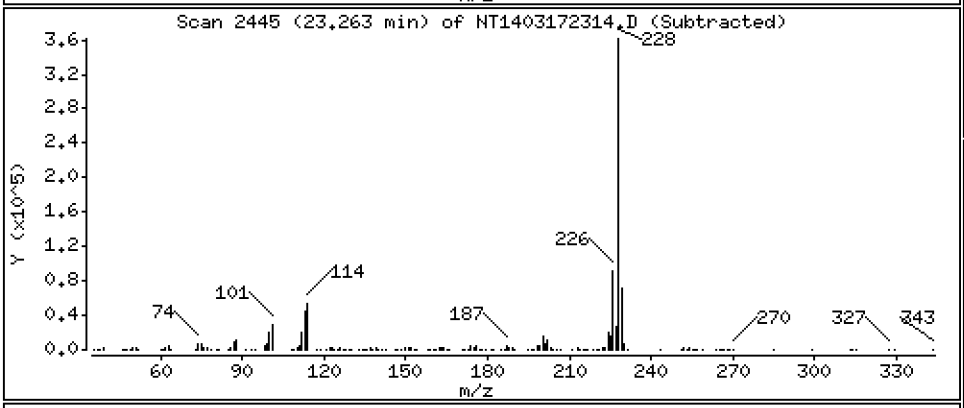
Column phase: ZB-5msi

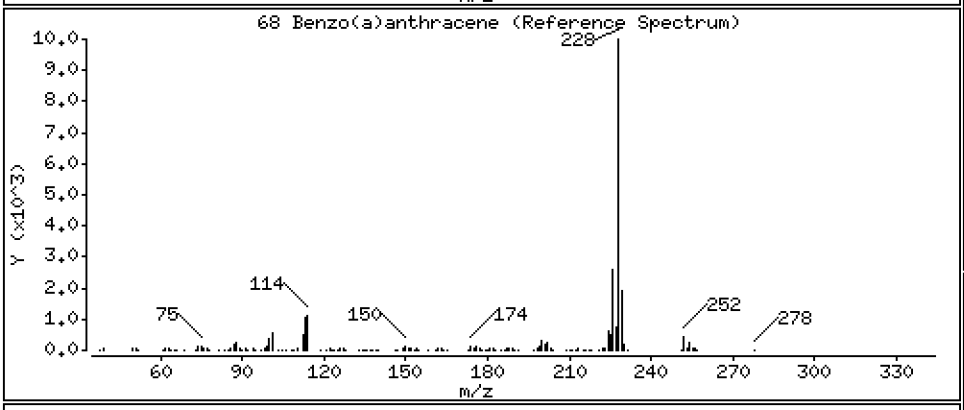
Column diameter: 0.25

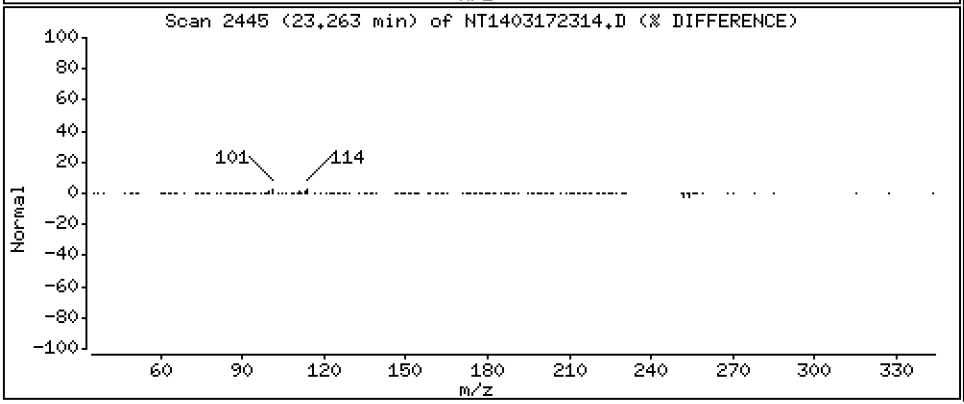
68 Benzo(a)anthracene

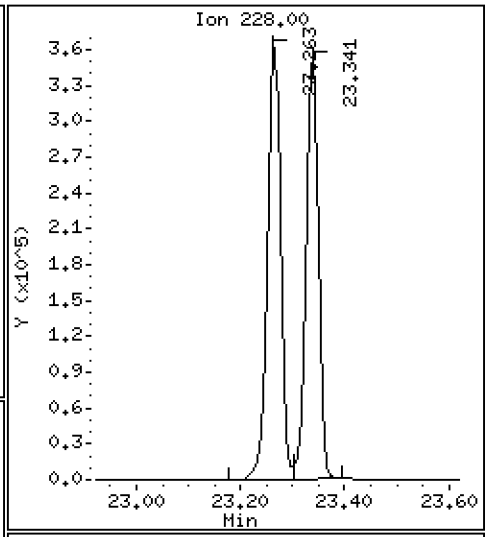
Concentration: 4.627 ug/mL

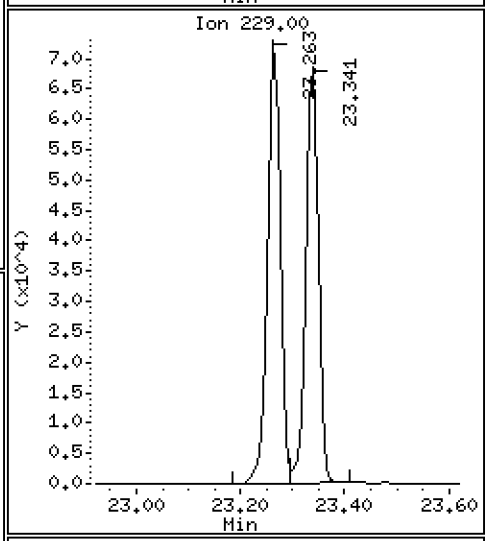


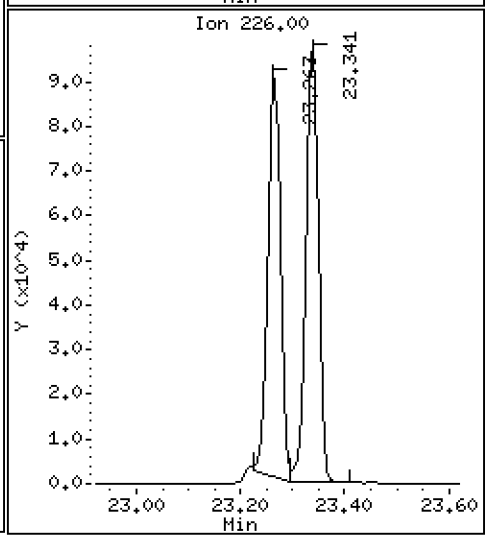












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Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

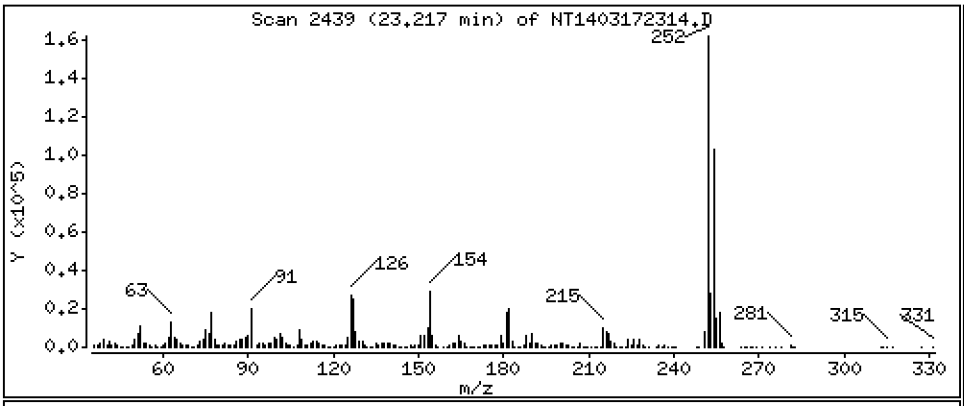
Operator: JGR

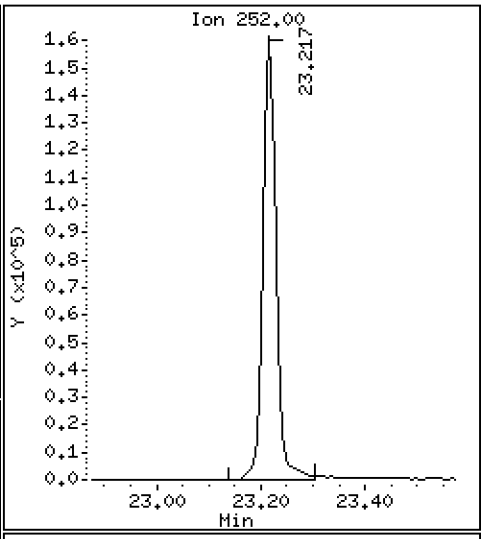
Column phase: ZB-5msi

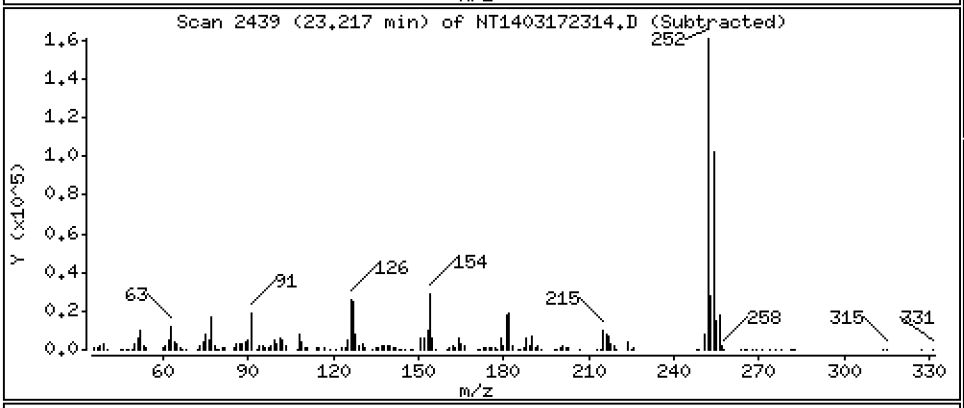
Column diameter: 0.25

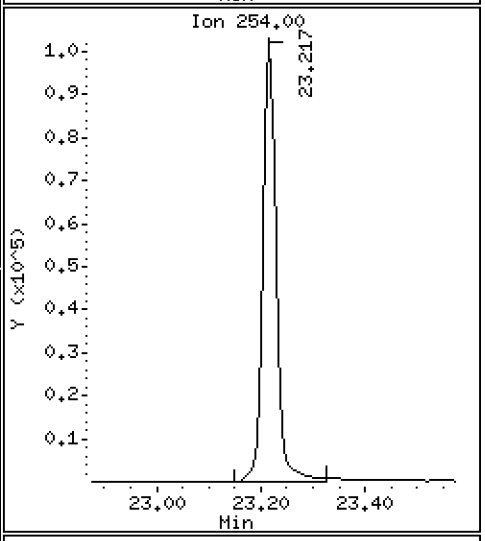
70 3,3'-Dichlorobenzidine

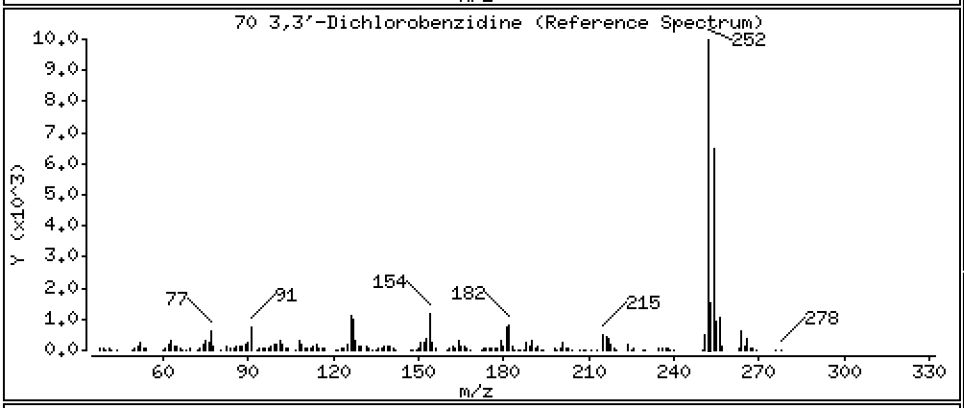
Concentration: 6.936 ug/mL

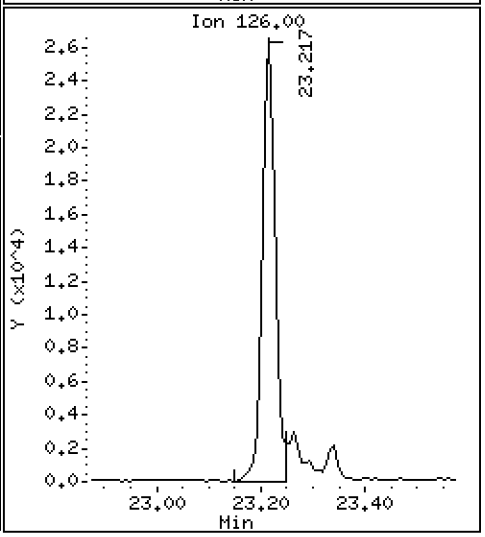


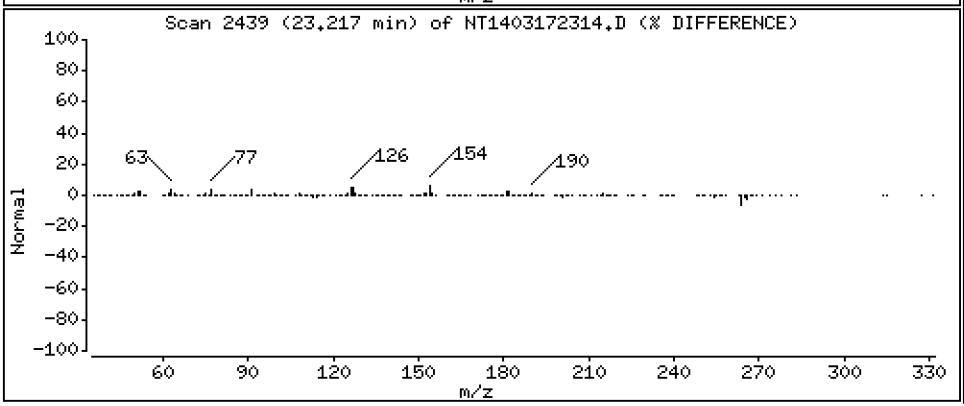












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Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

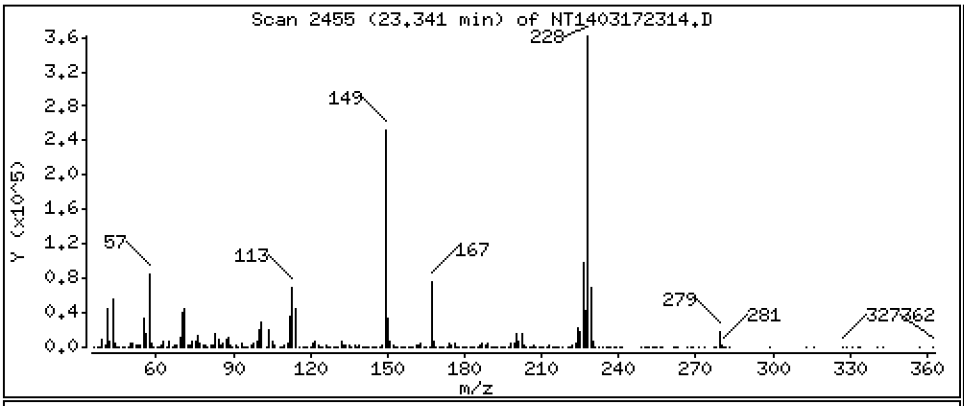
Operator: JGR

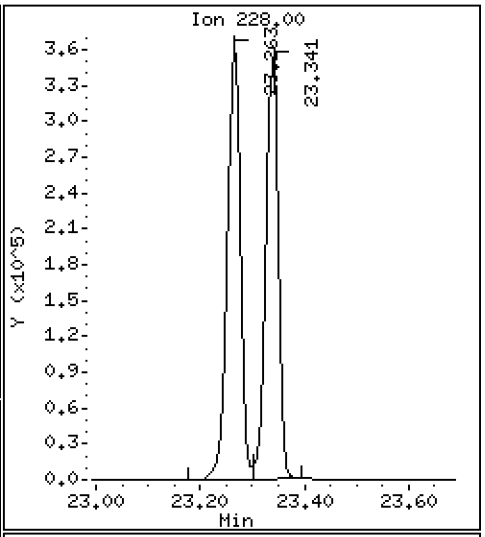
Column phase: ZB-5msi

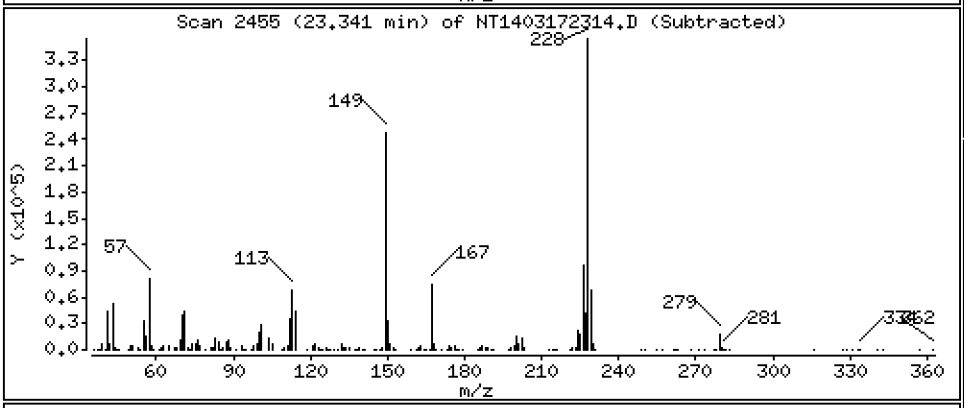
Column diameter: 0.25

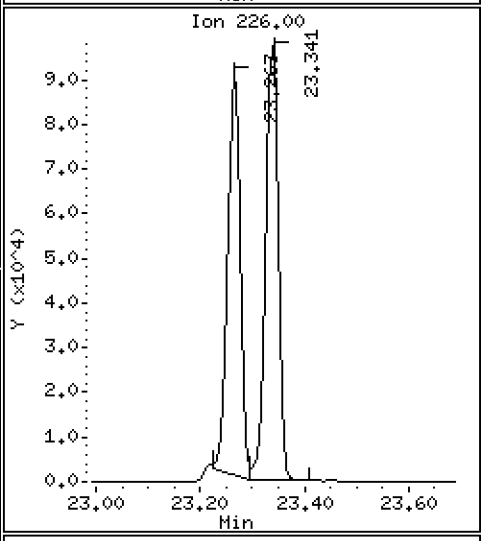
71 Chrysene

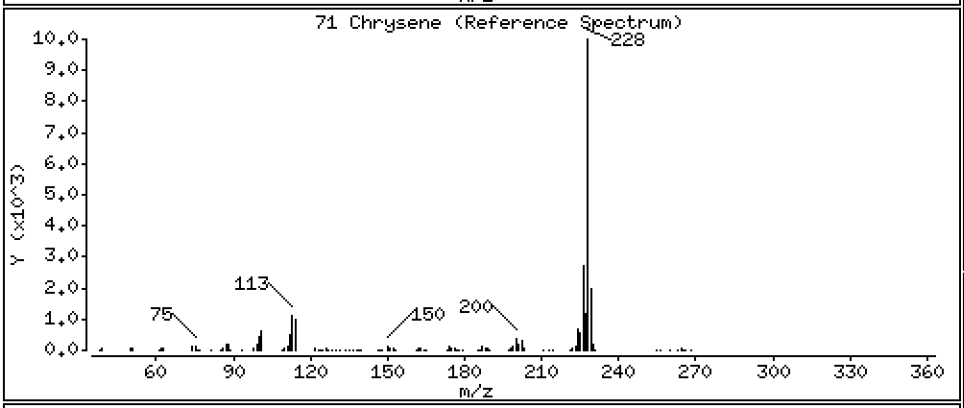
Concentration: 4.642 ug/mL

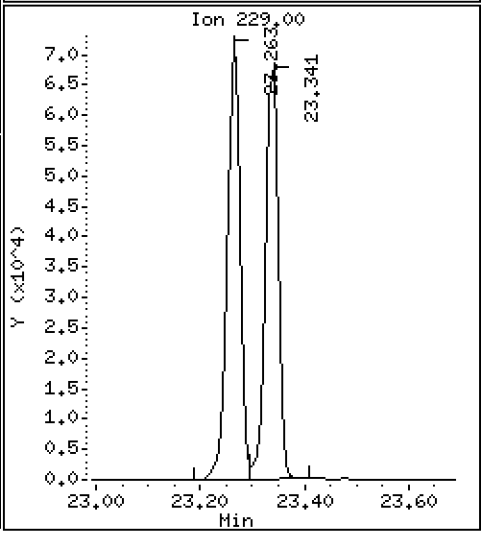


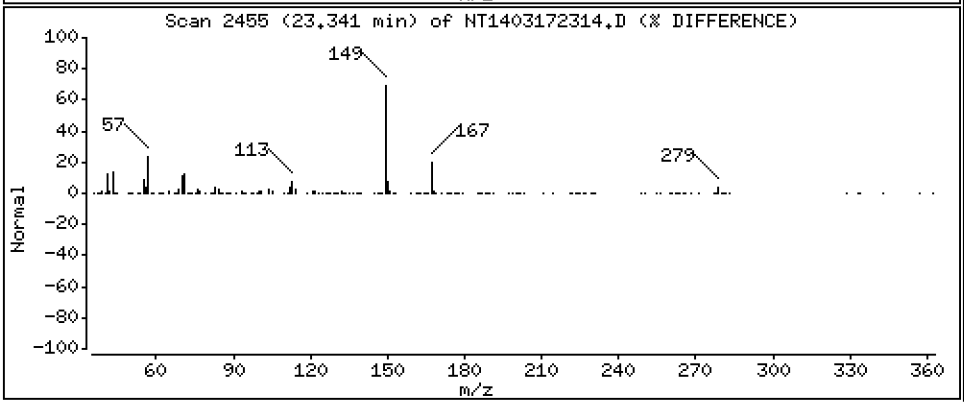












Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172314.D

Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

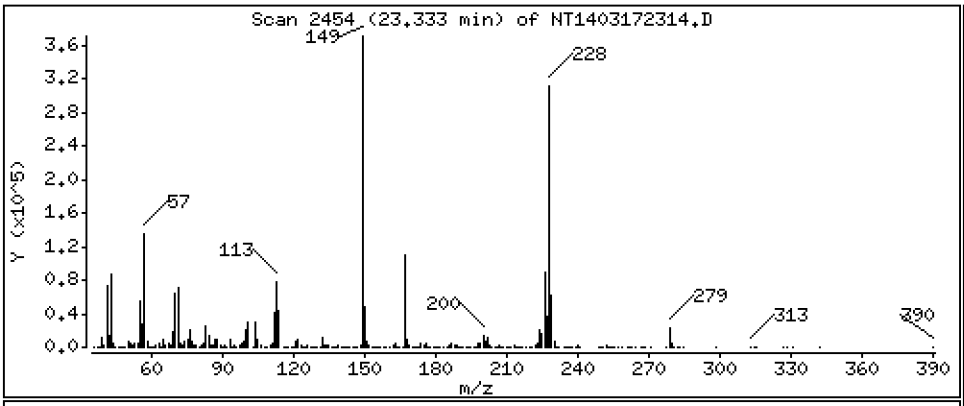
Operator: JGR

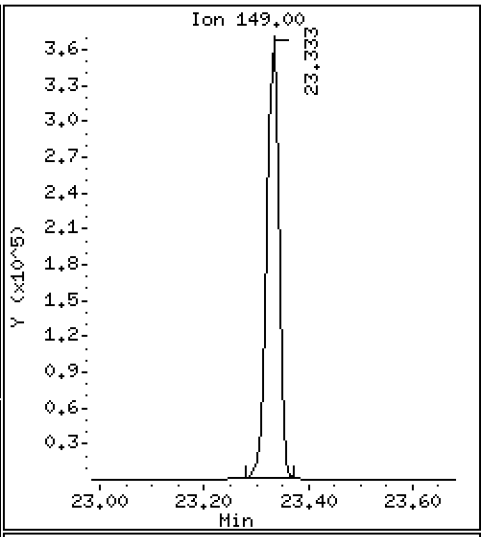
Column phase: ZB-5msi

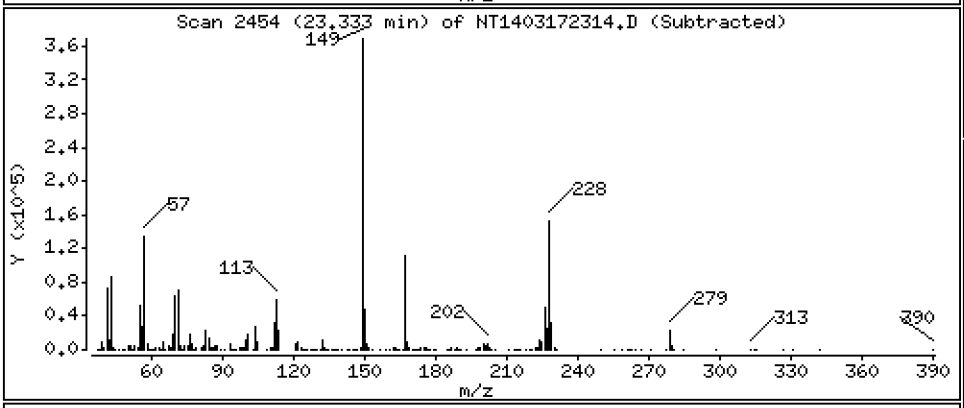
Column diameter: 0.25

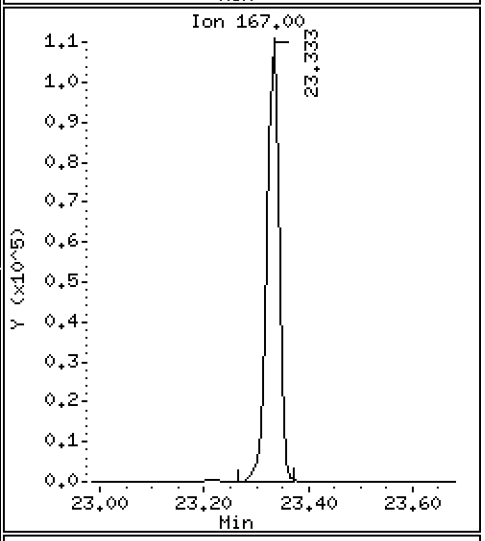
72 bis(2-Ethylhexyl)phthalate

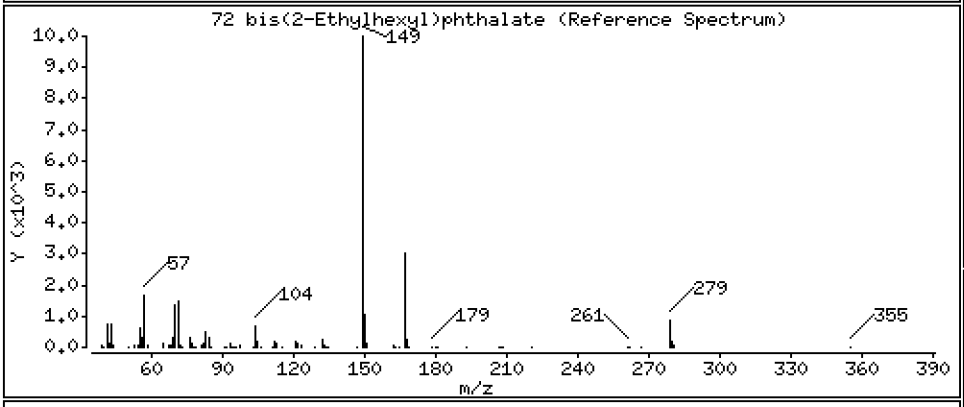
Concentration: 6.051 ug/mL

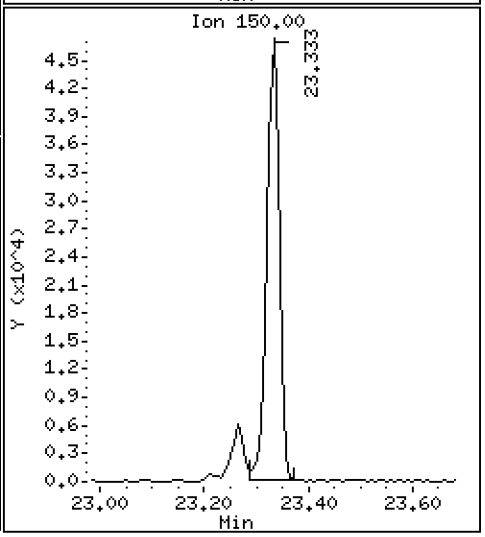


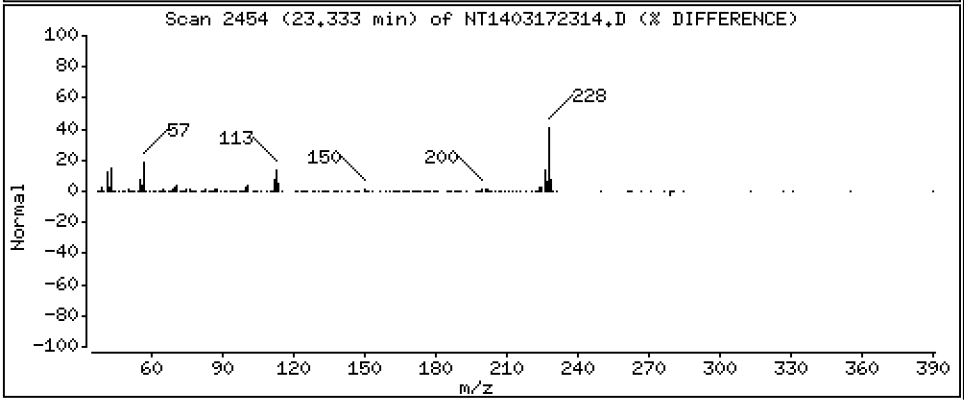












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Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

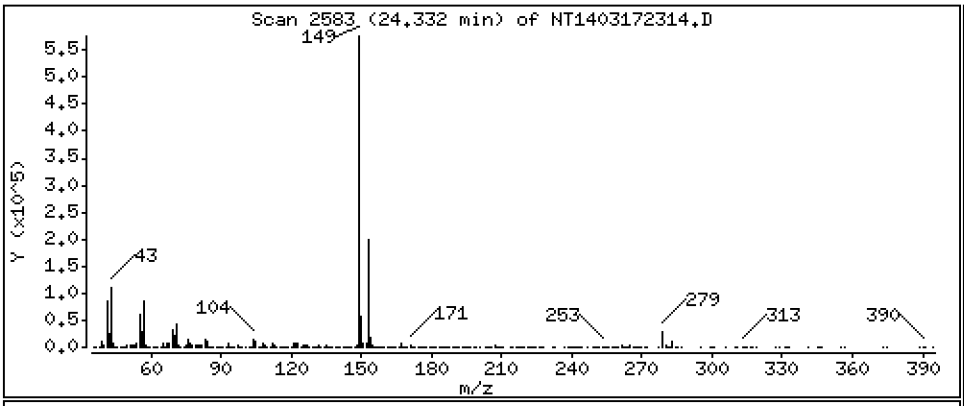
Operator: JGR

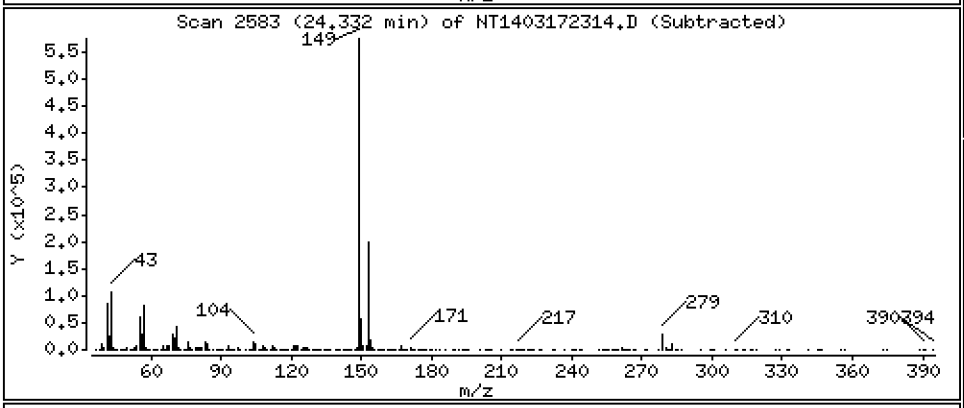
Column phase: ZB-5msi

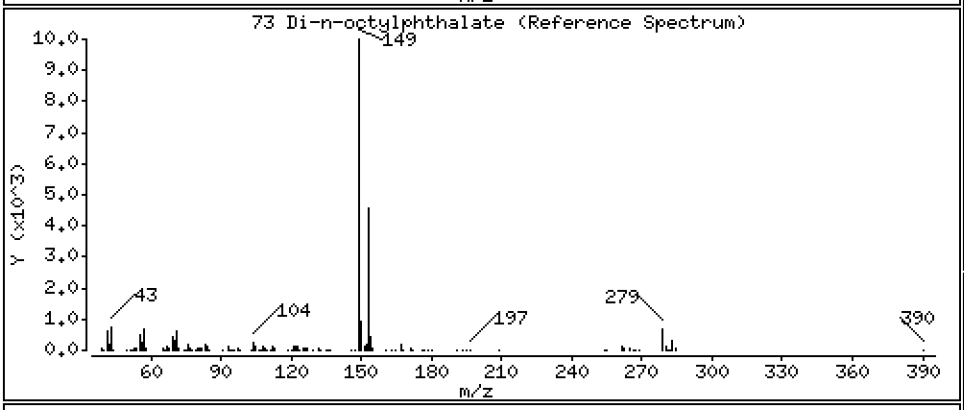
Column diameter: 0.25

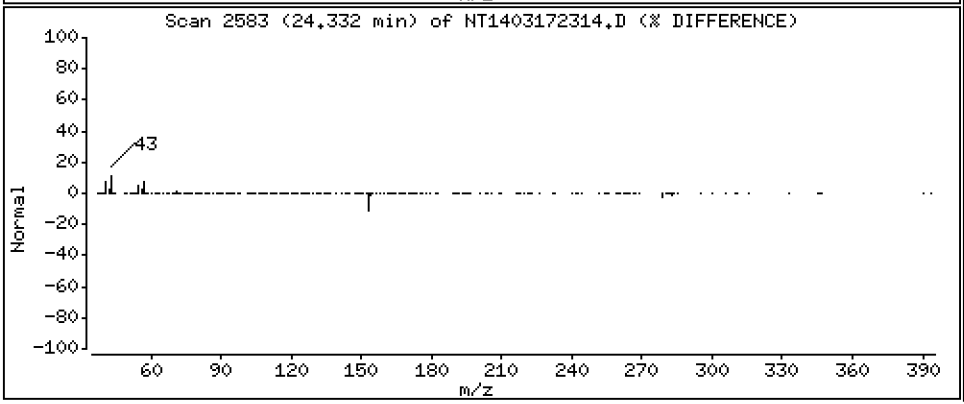
73 Di-n-octylphthalate

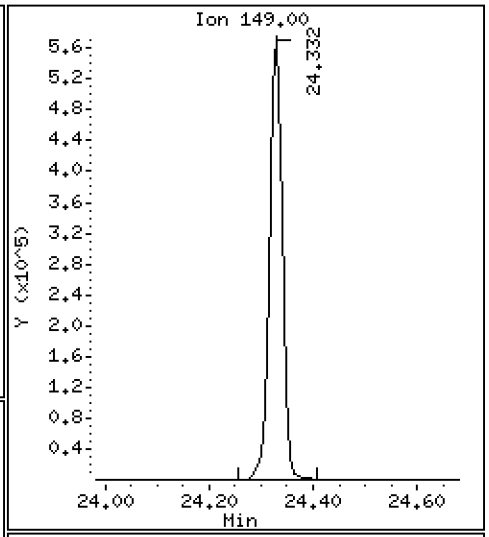
Concentration: 5.102 ug/mL

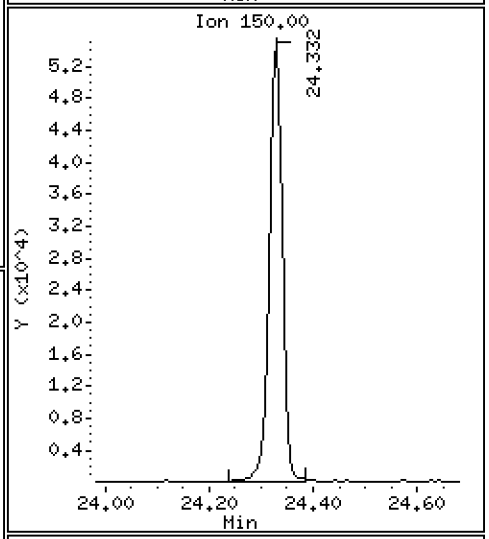


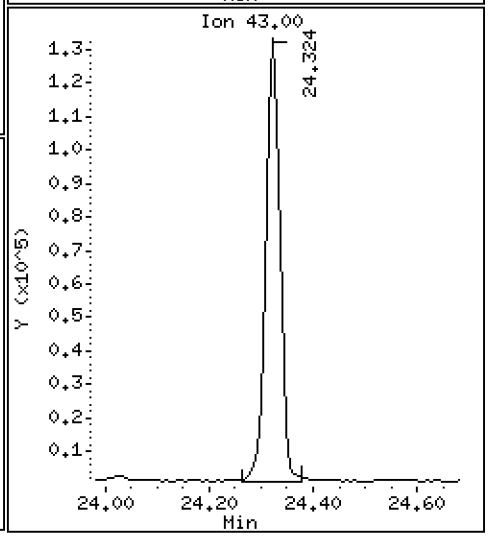












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Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

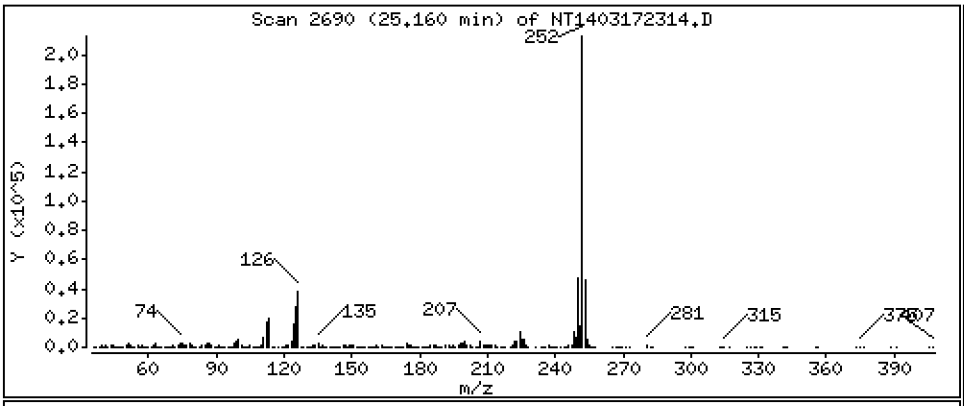
Operator: JGR

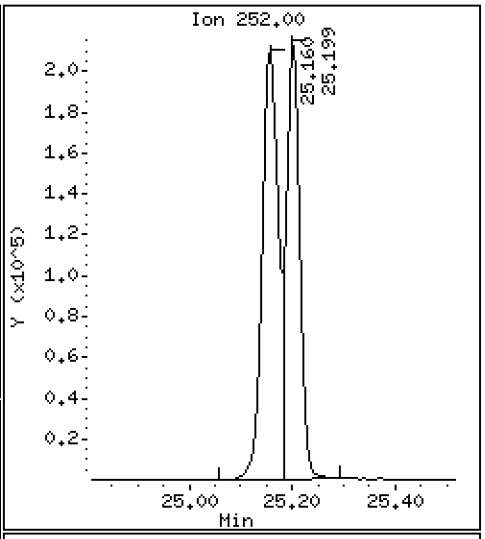
Column phase: ZB-5msi

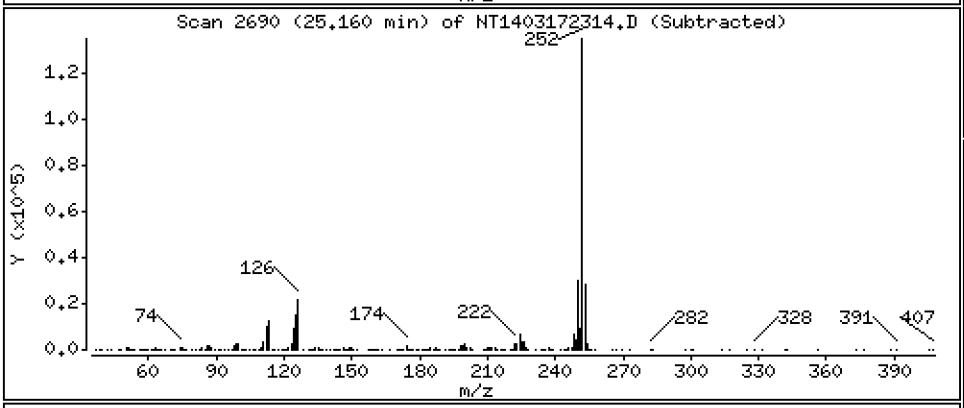
Column diameter: 0.25

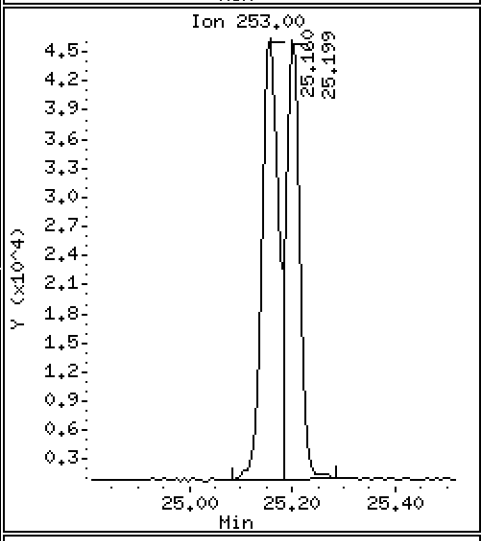
74 Benzo(b)fluoranthene

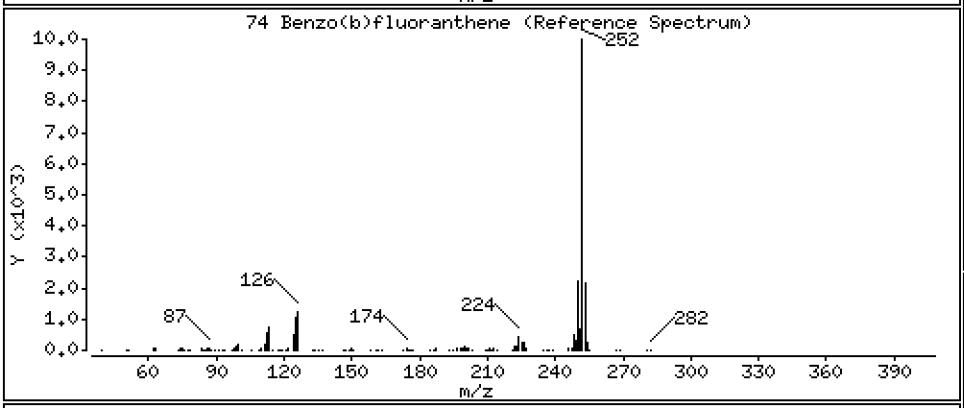
Concentration: 5.664 ug/mL

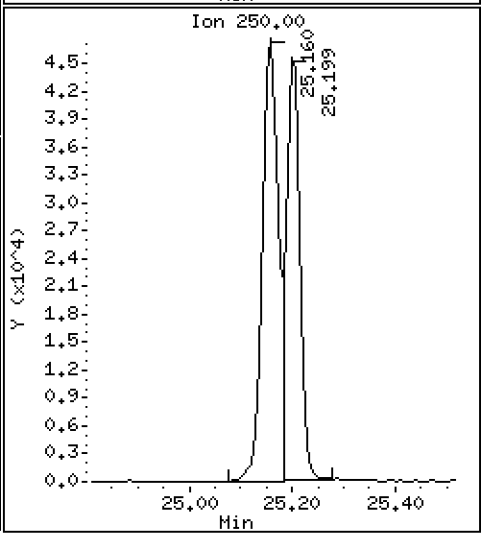


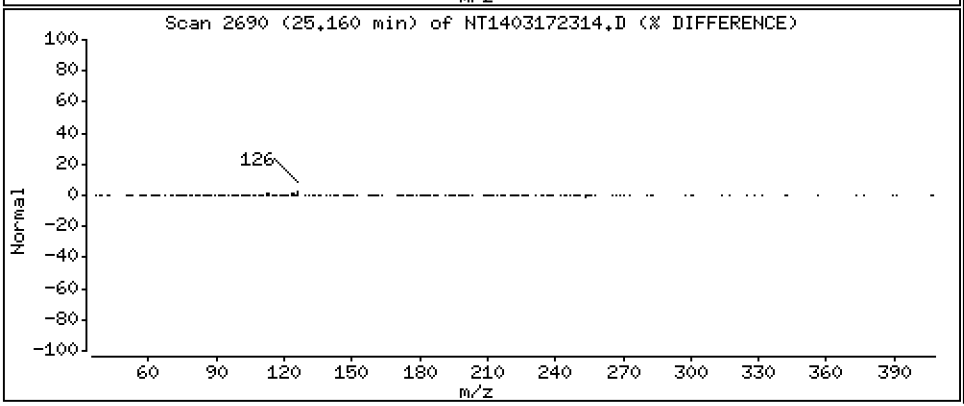












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Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

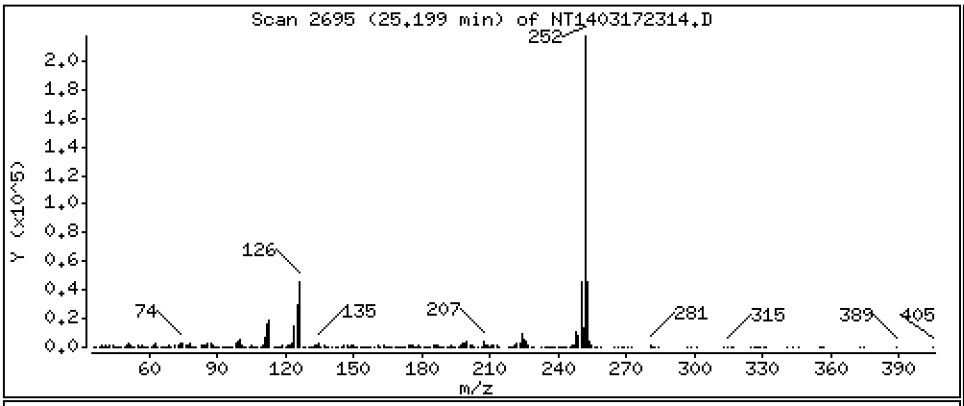
Operator: JGR

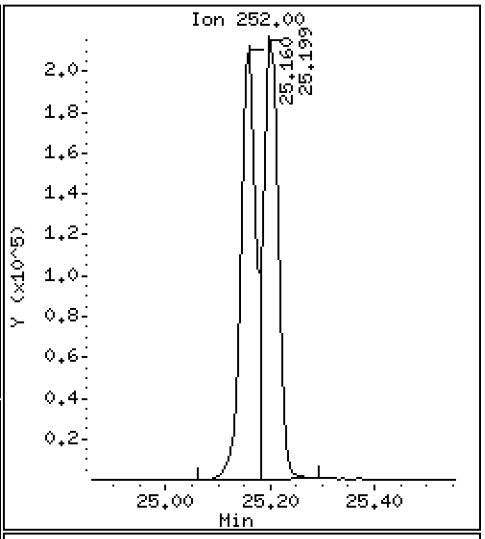
Column phase: ZB-5msi

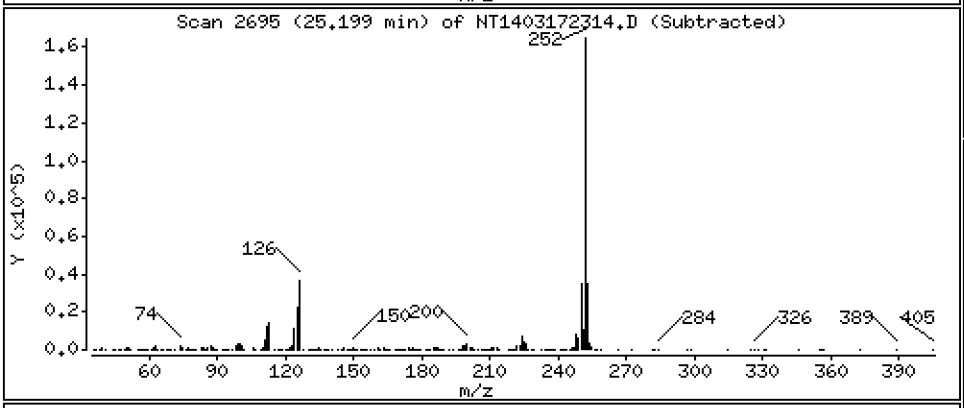
Column diameter: 0.25

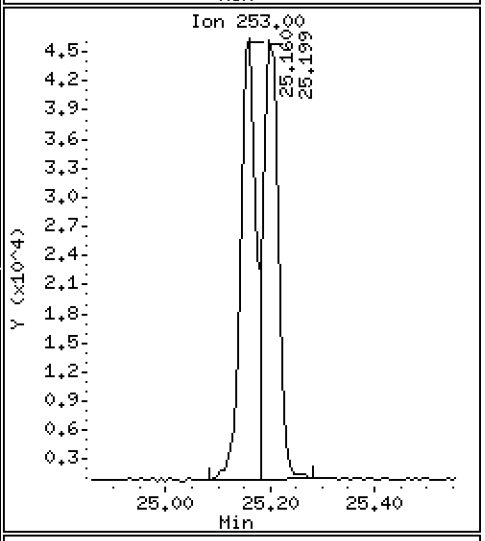
75 Benzo(k)fluoranthene

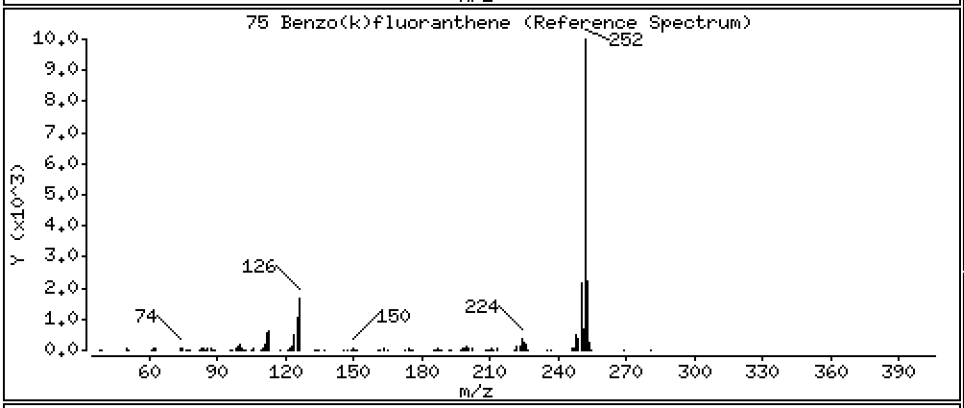
Concentration: 5.001 ug/mL

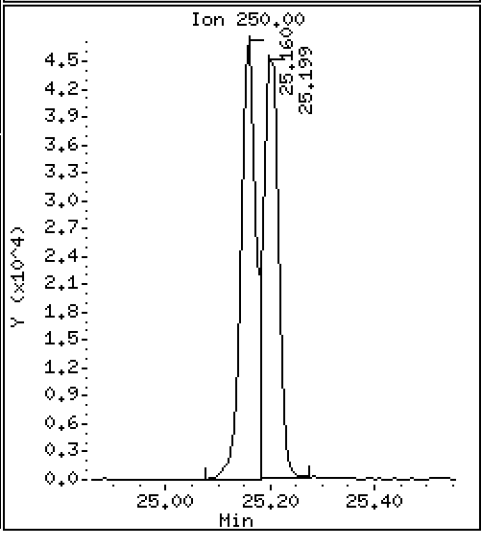


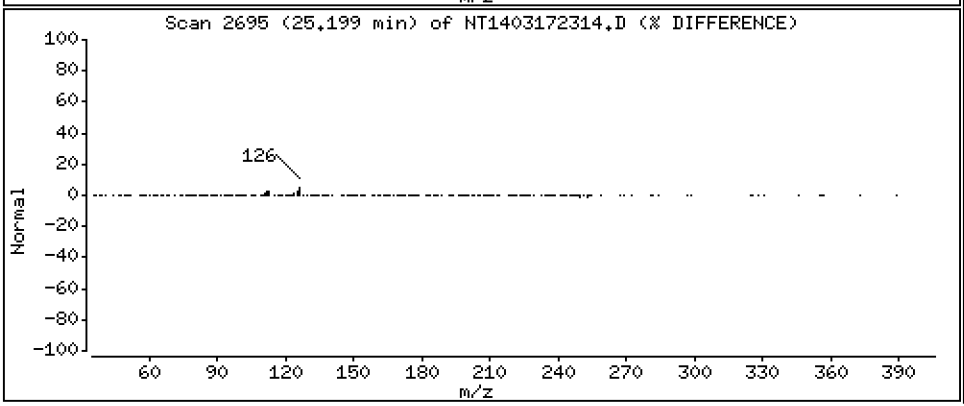












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Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

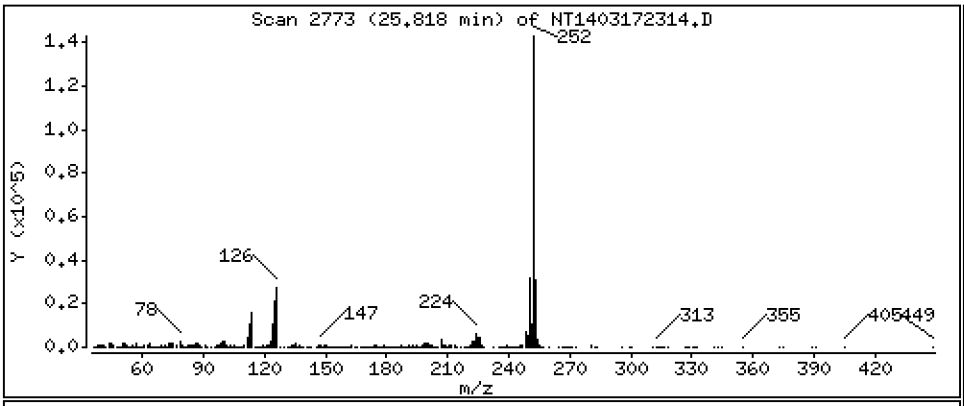
Operator: JGR

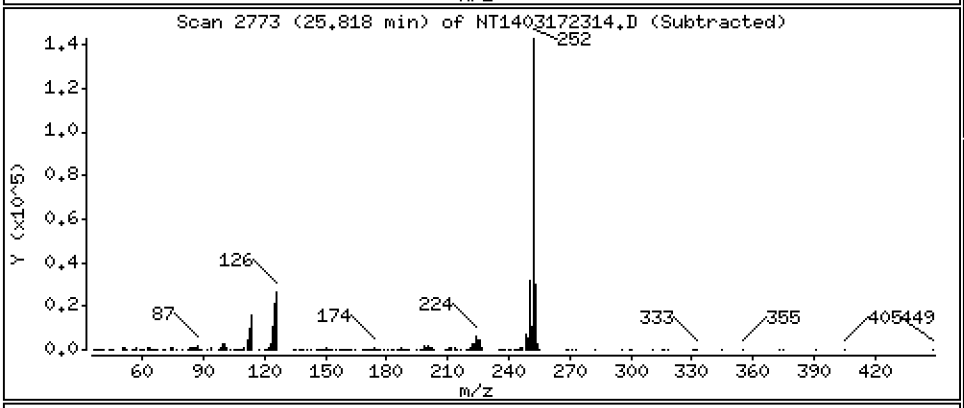
Column phase: ZB-5msi

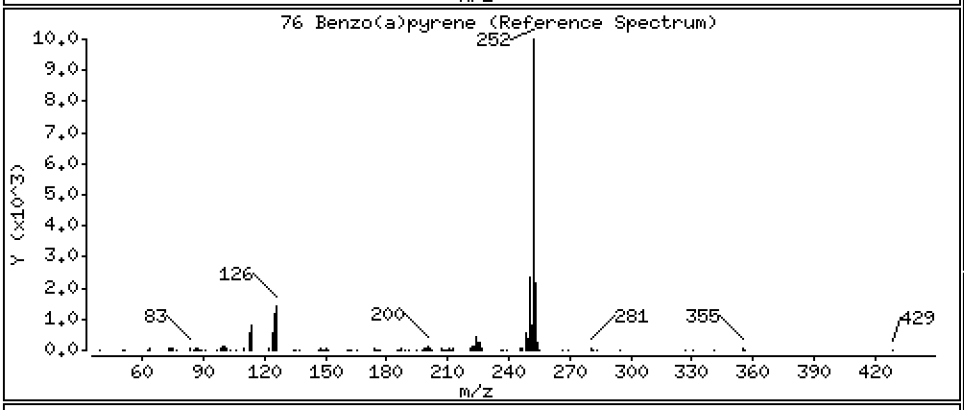
Column diameter: 0.25

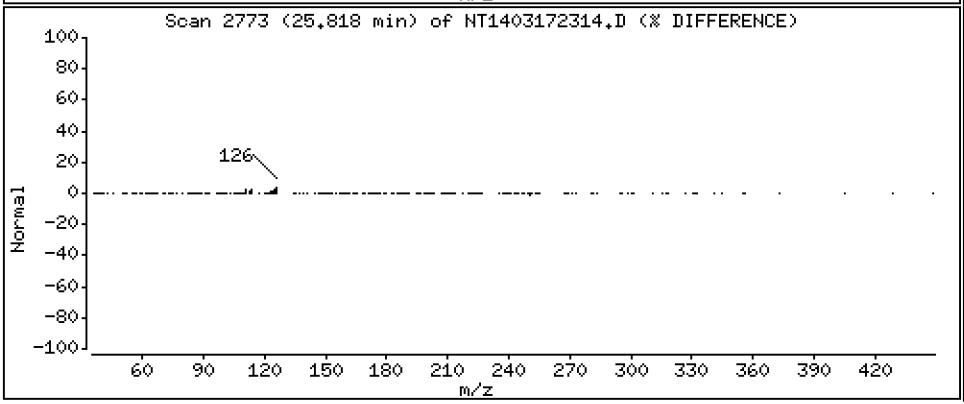
76 Benzo(a)pyrene

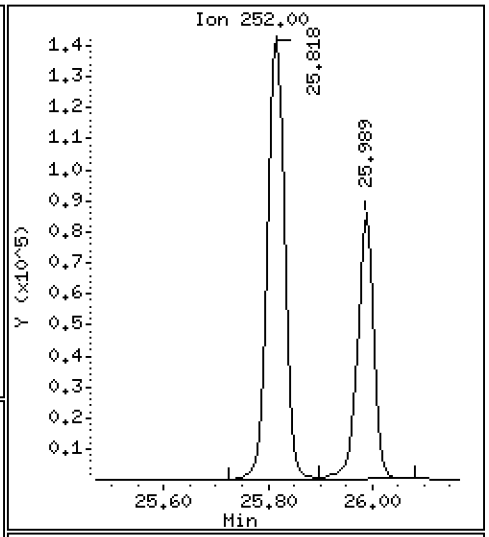
Concentration: 4.487 ug/mL

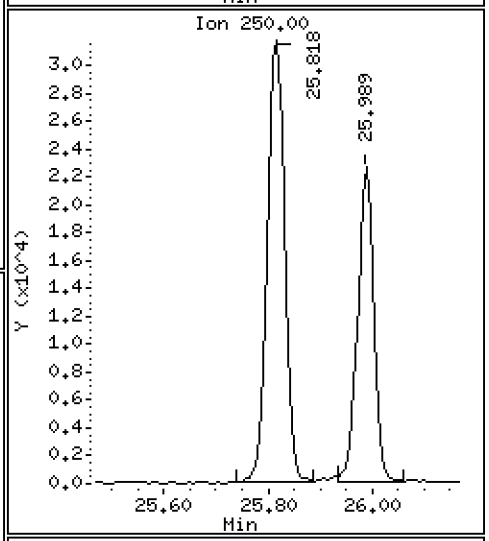


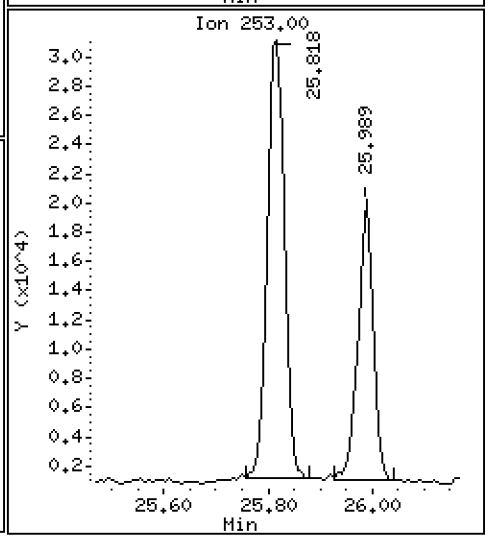












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Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

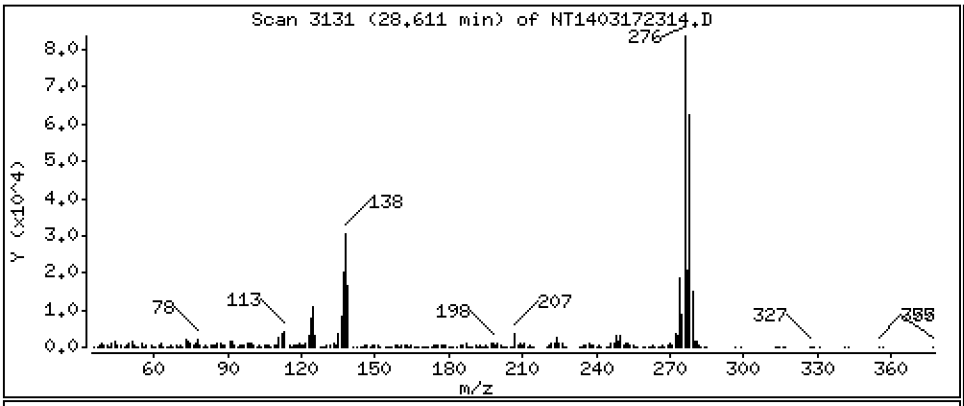
Operator: JGR

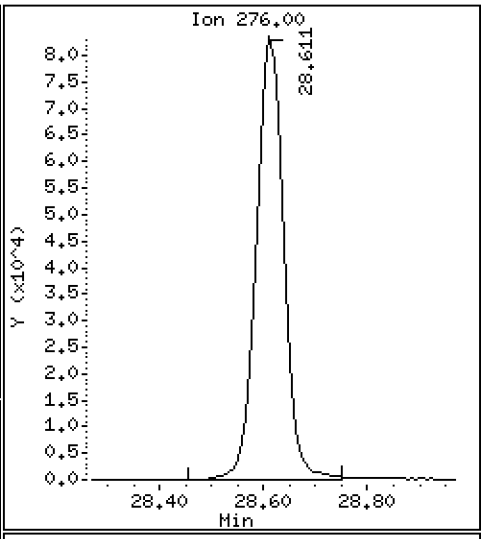
Column phase: ZB-5msi

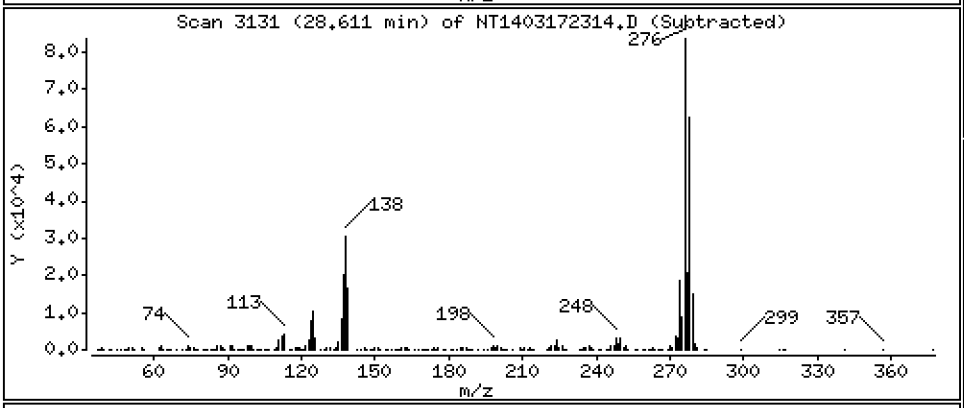
Column diameter: 0.25

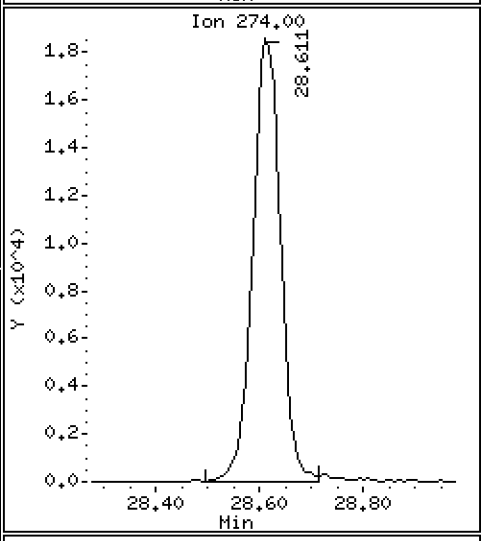
78 Indeno(1,2,3-cd)pyrene

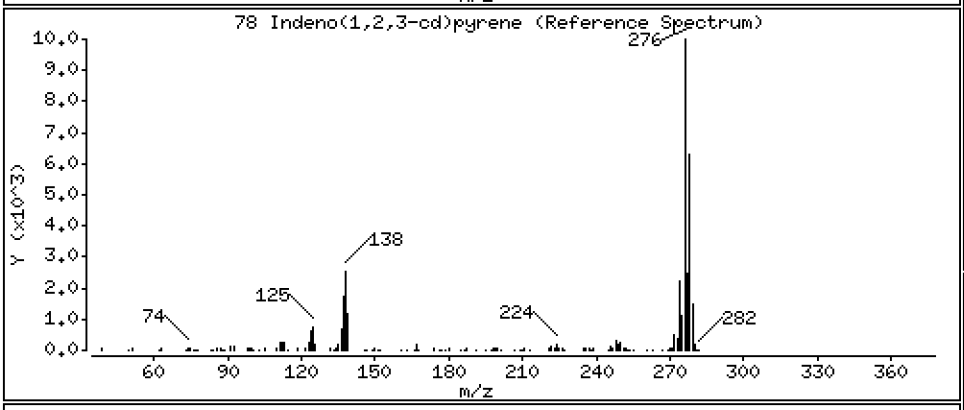
Concentration: 3.966 ug/mL

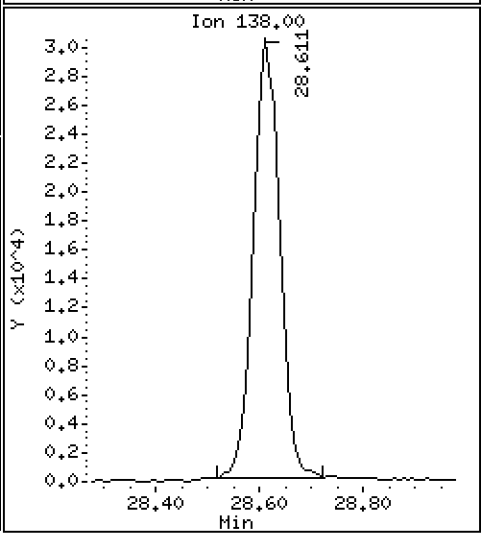


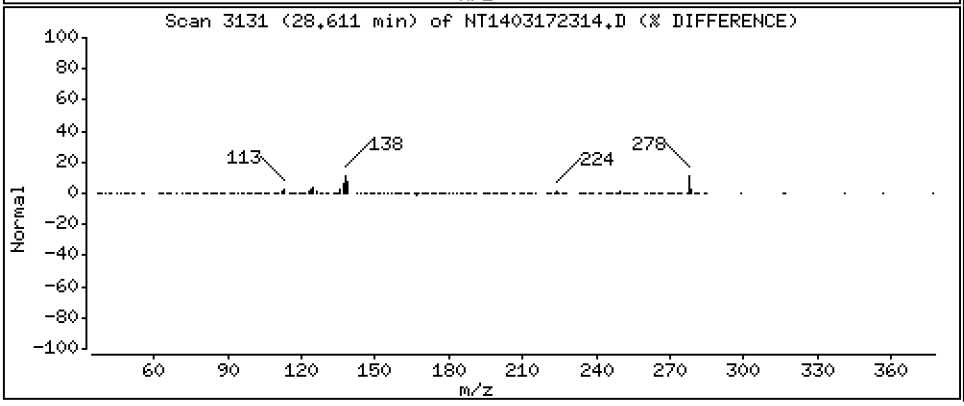












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Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

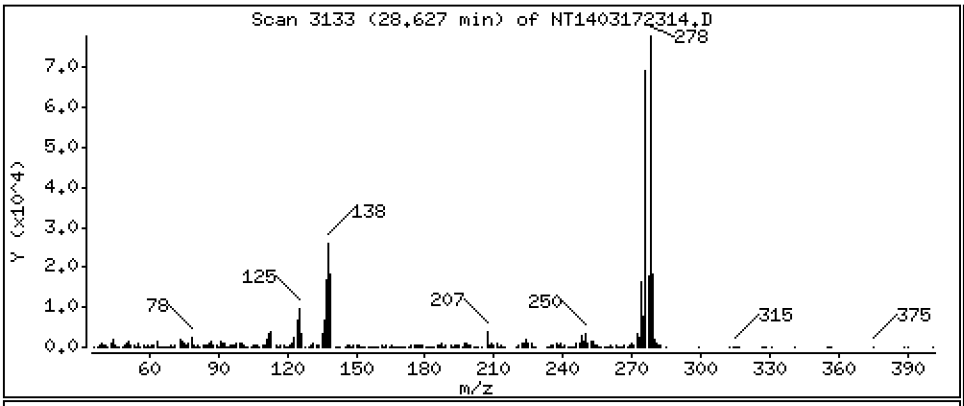
Operator: JGR

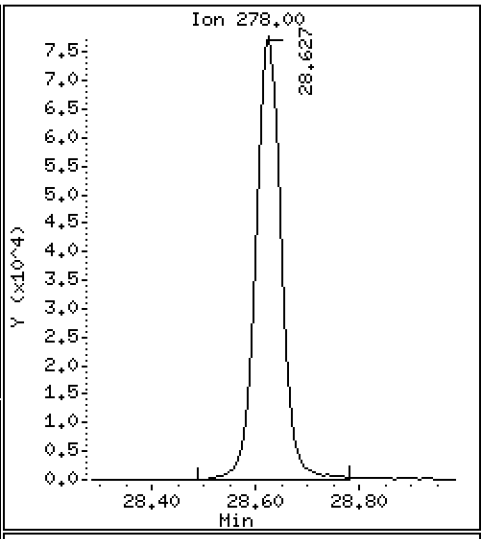
Column phase: ZB-5msi

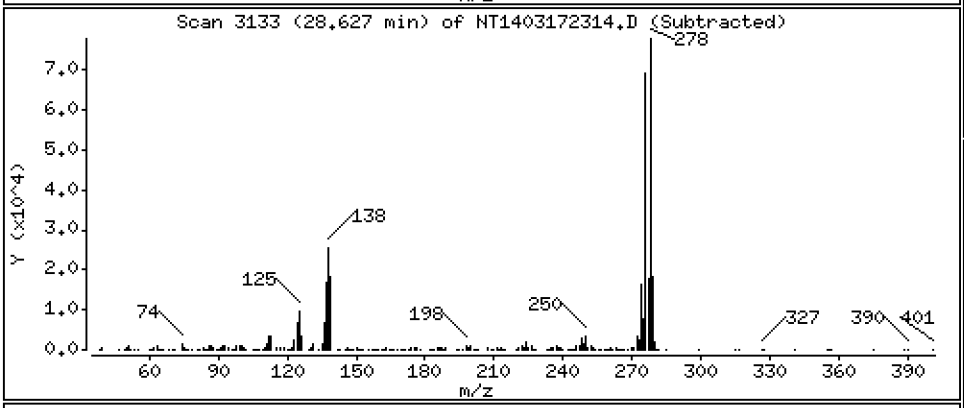
Column diameter: 0.25

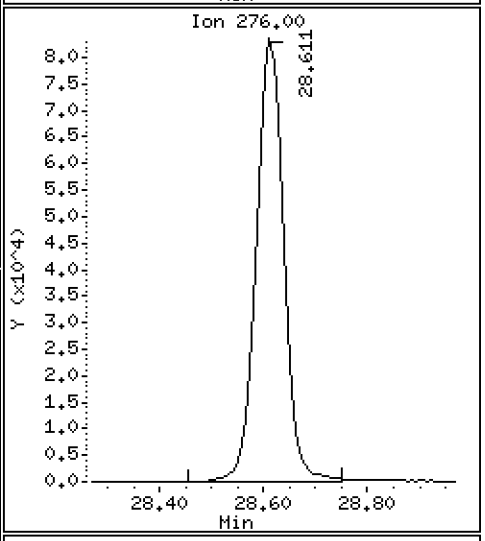
79 Dibenzo(a,h)anthracene

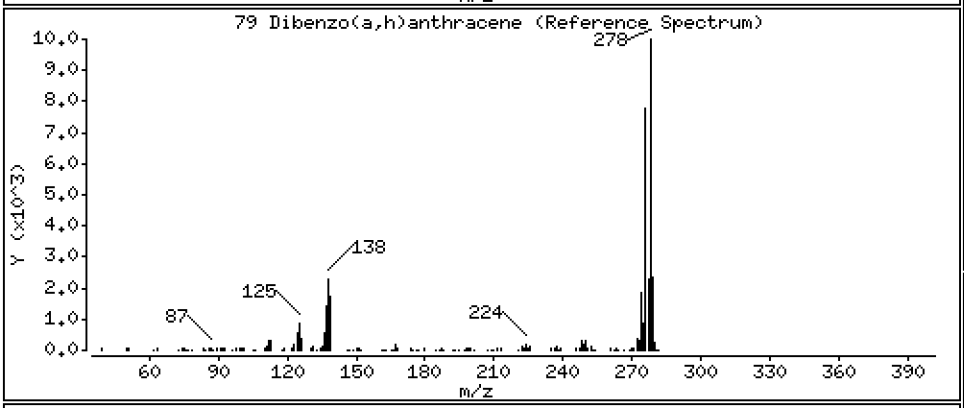
Concentration: 4.061 ug/mL

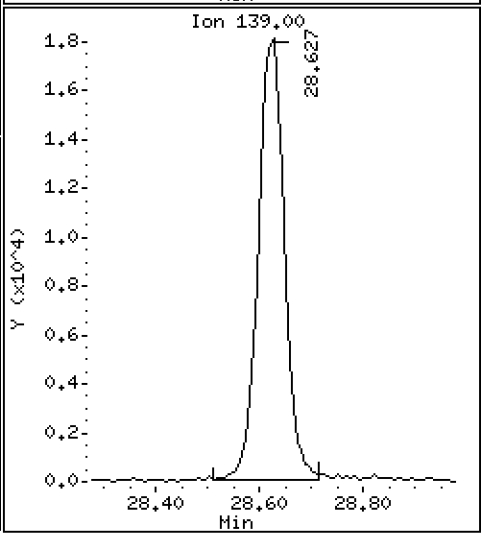


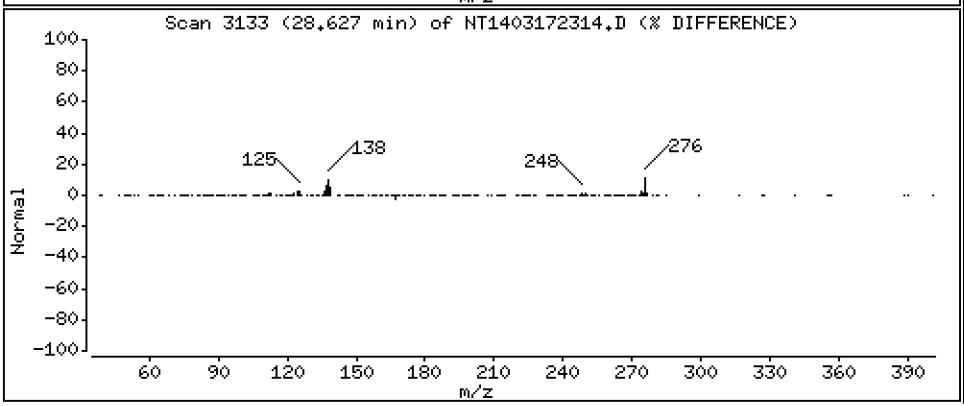












Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172314.D

Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

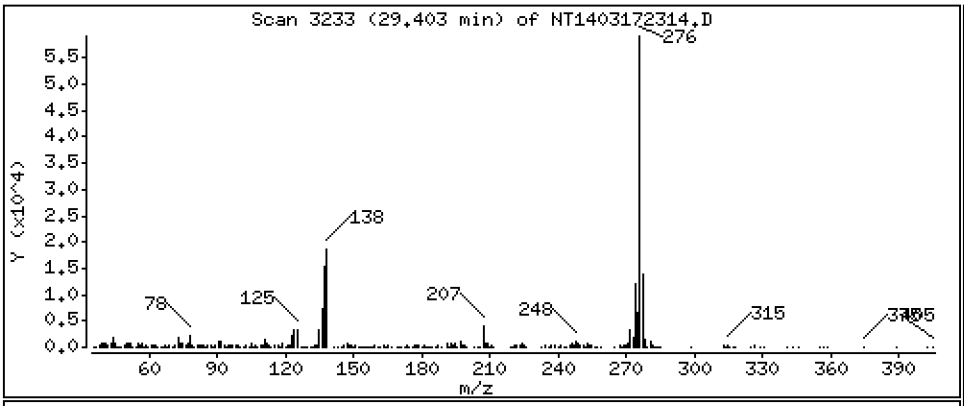
Operator: JGR

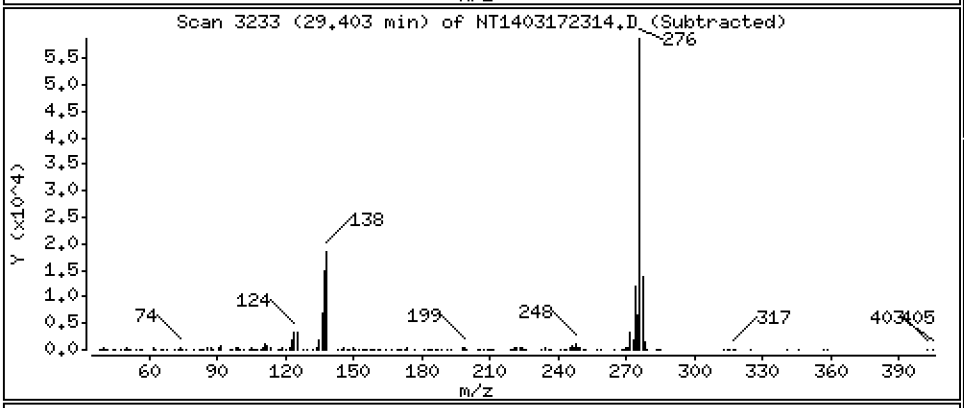
Column phase: ZB-5msi

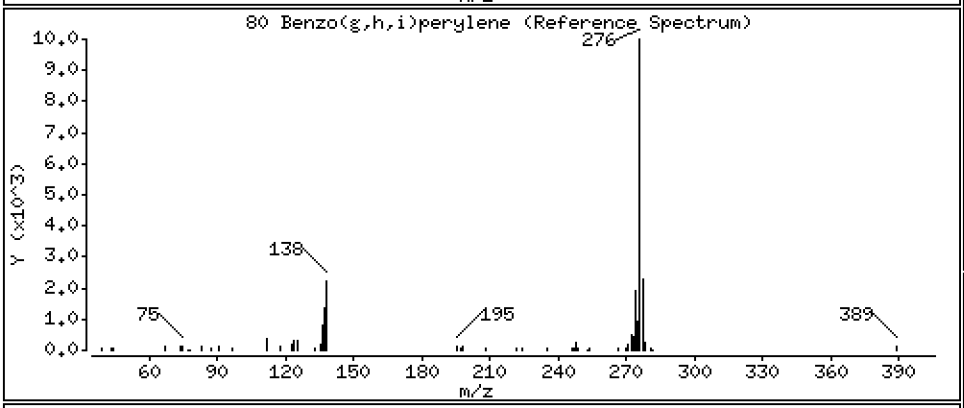
Column diameter: 0.25

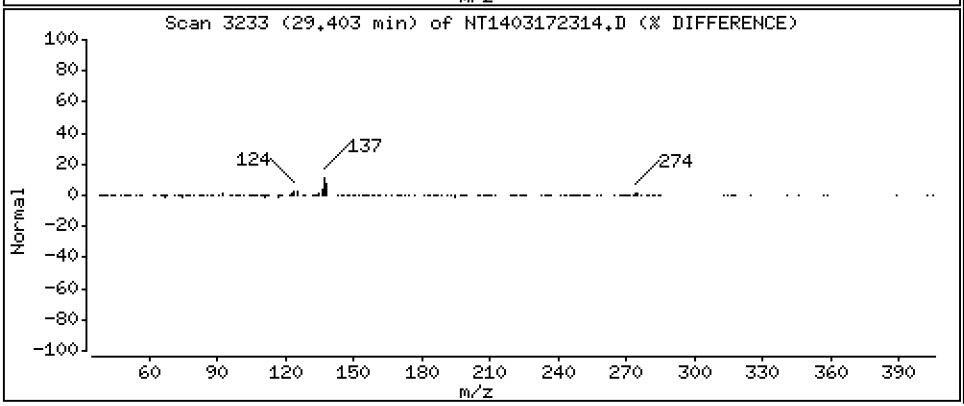
80 Benzo(g,h,i)perylene

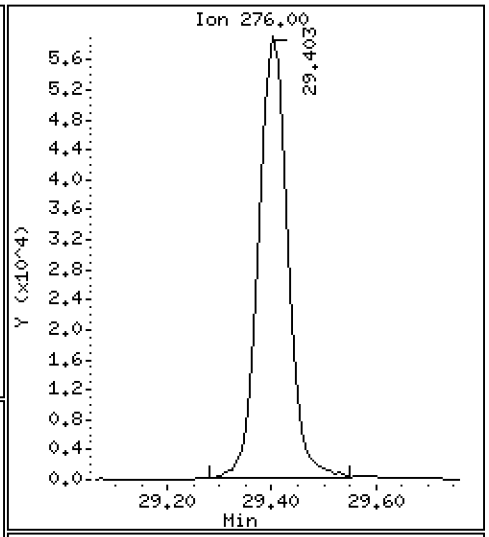
Concentration: 3.612 ug/mL

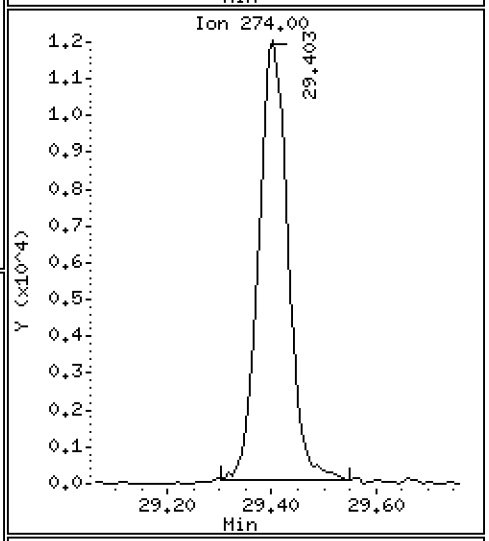


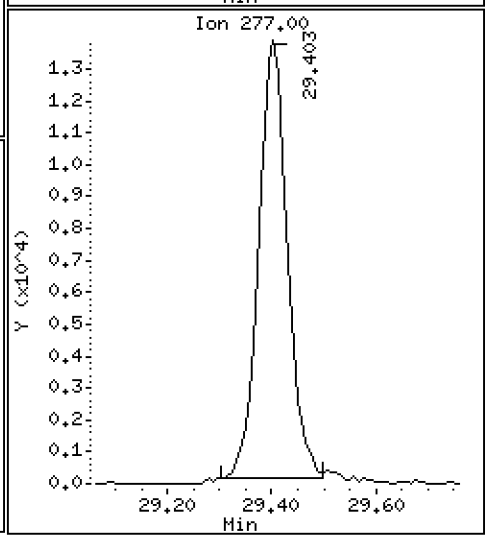












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Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

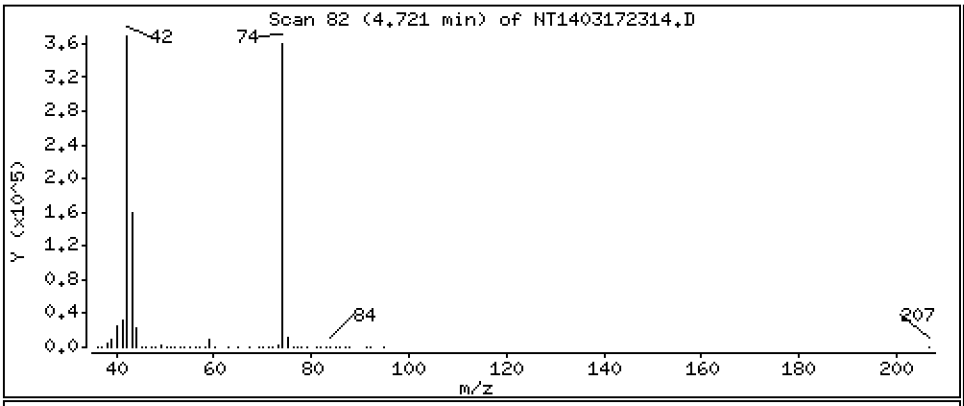
Operator: JGR

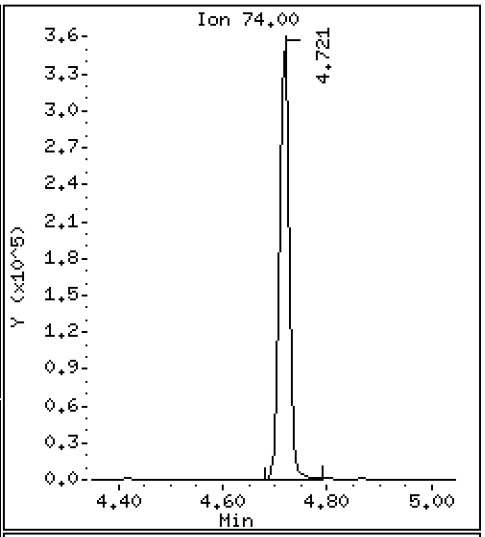
Column phase: ZB-5msi

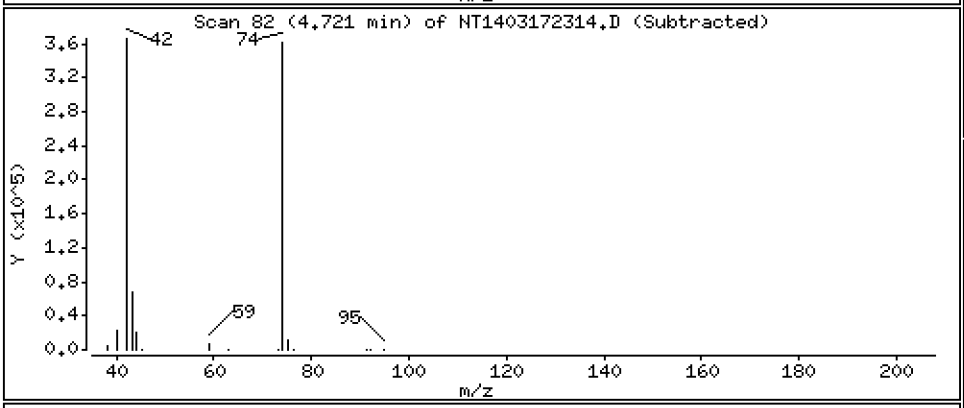
Column diameter: 0.25

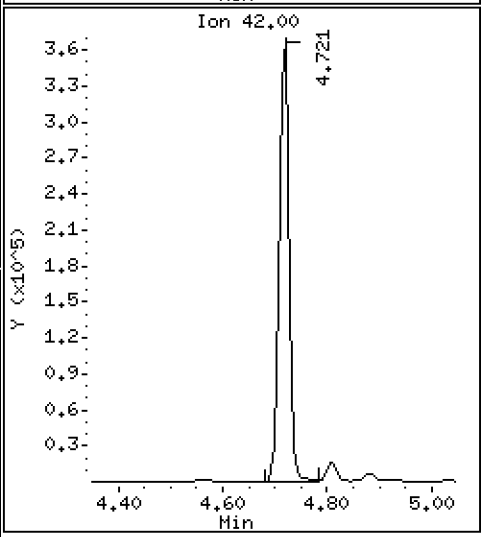
90 N-Nitrosodimethylamine

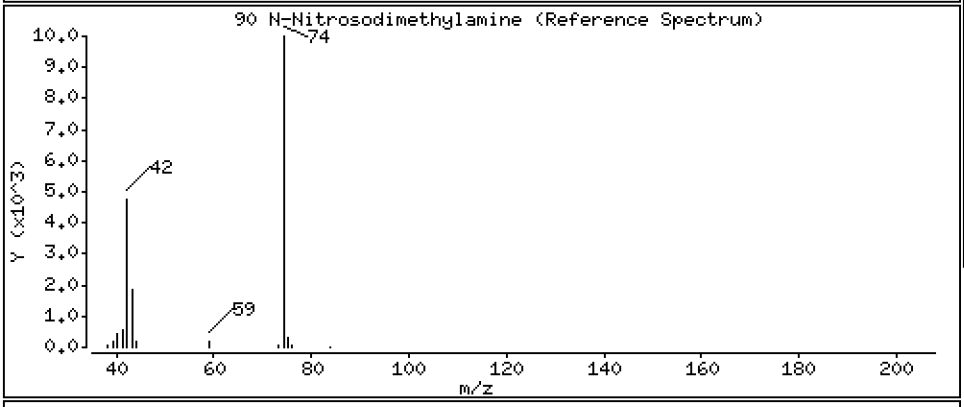
Concentration: 10.37 ug/mL

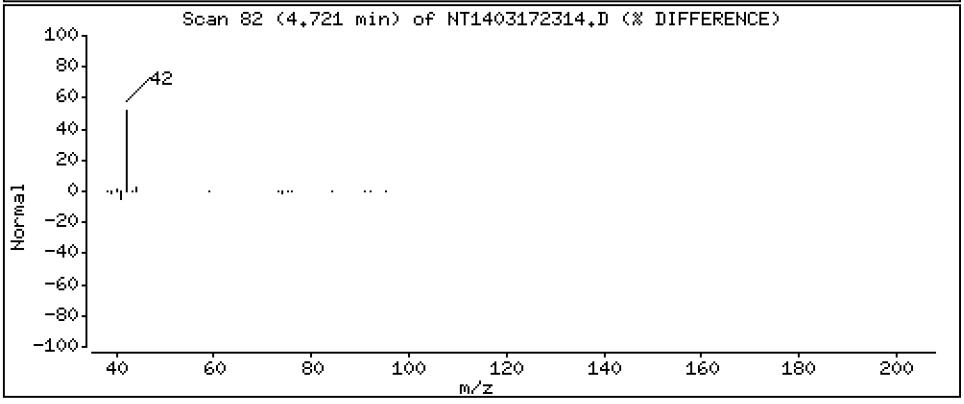












Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172314.D

Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

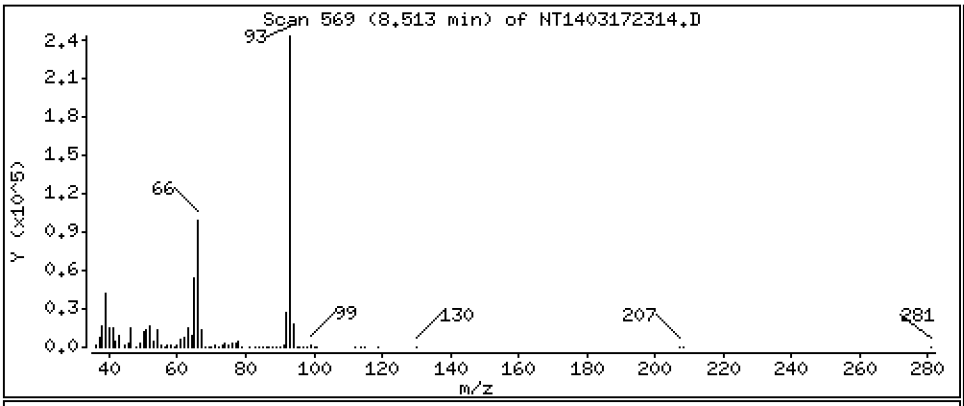
Operator: JGR

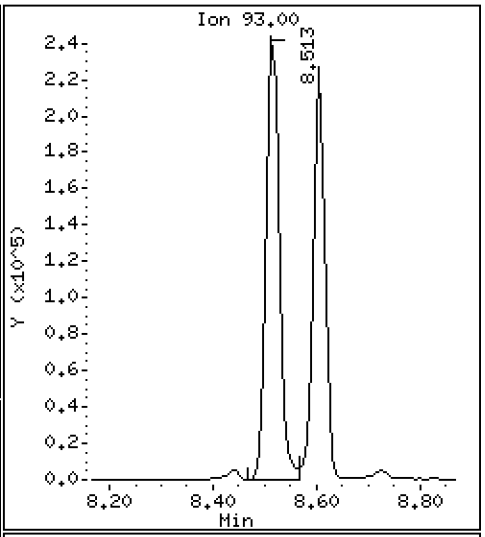
Column phase: ZB-5msi

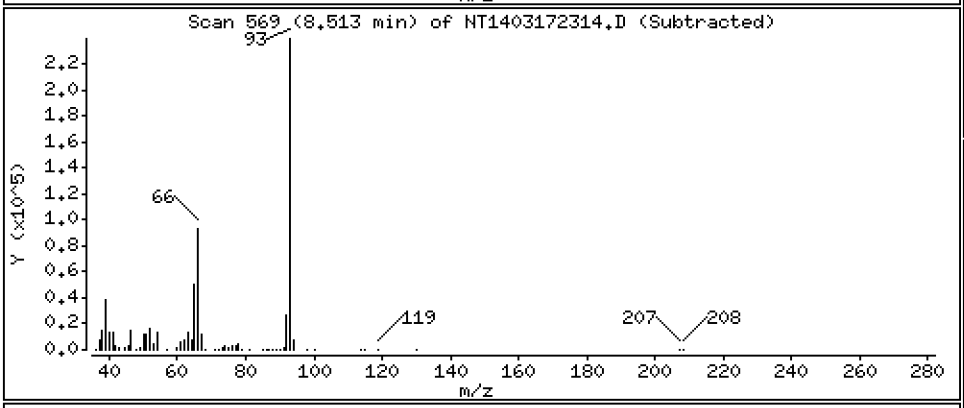
Column diameter: 0.25

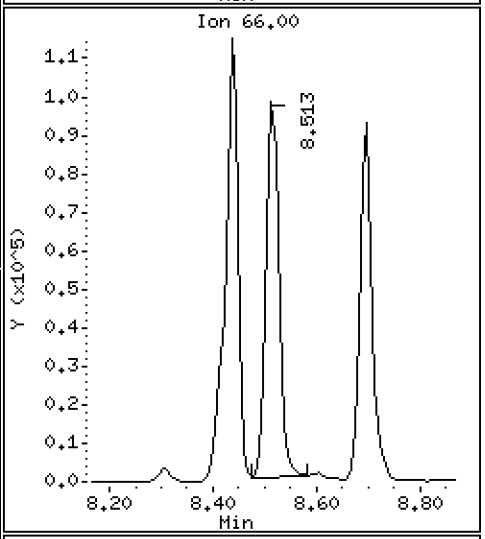
91 Aniline

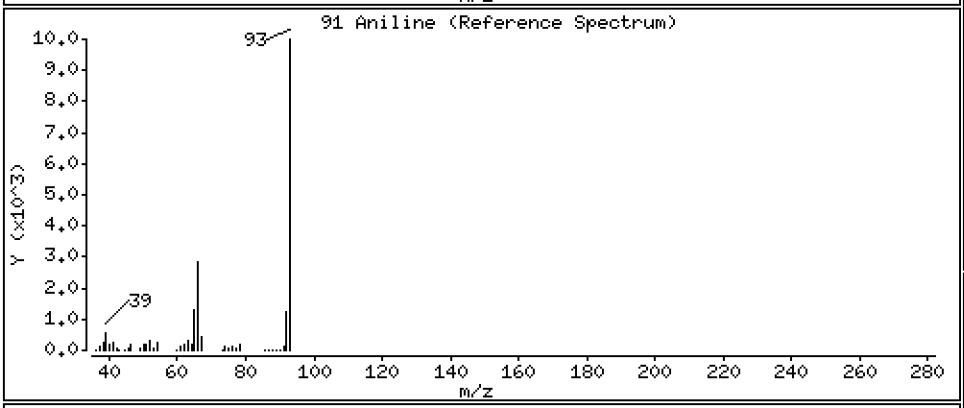
Concentration: 3.937 ug/mL

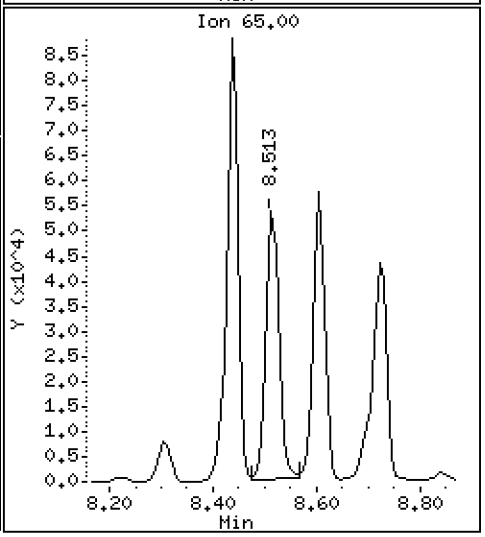


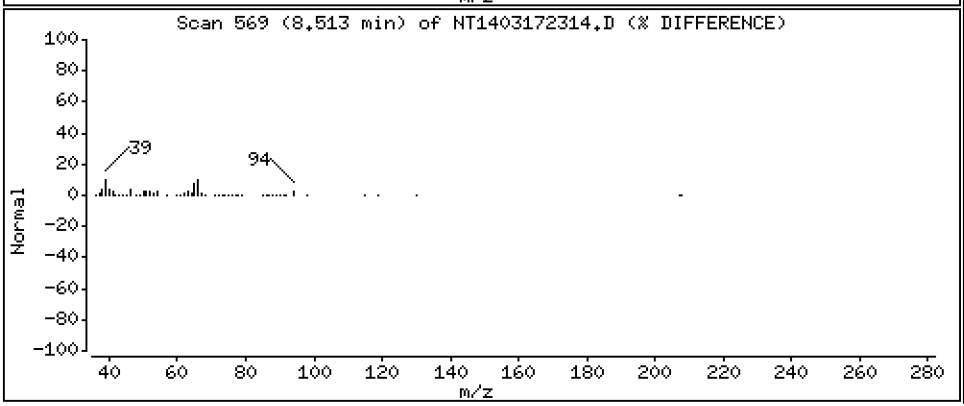












Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172314.D

Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

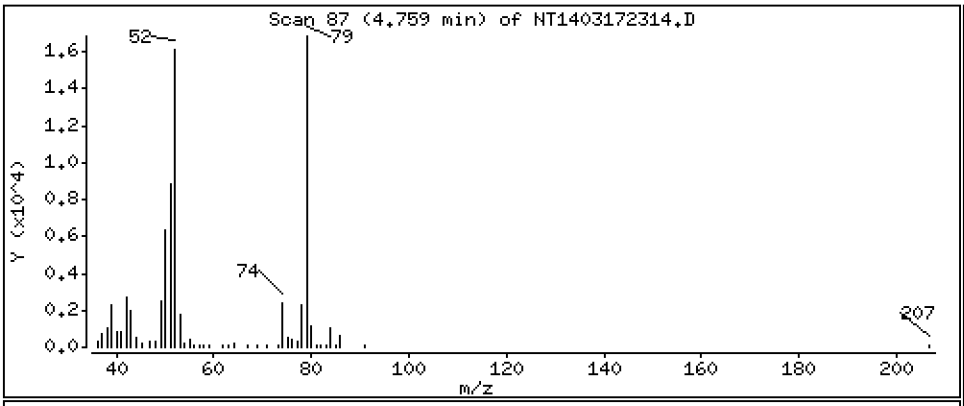
Operator: JGR

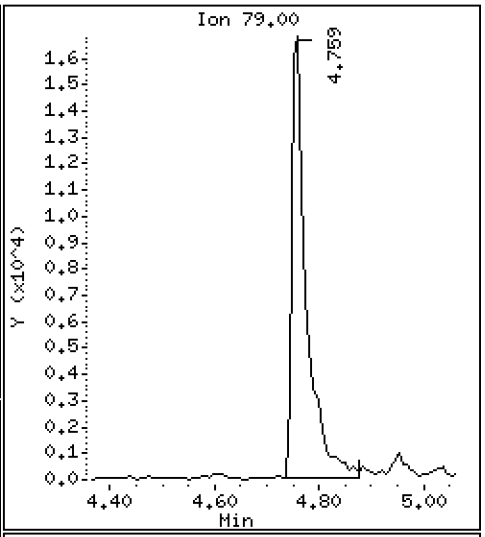
Column phase: ZB-5msi

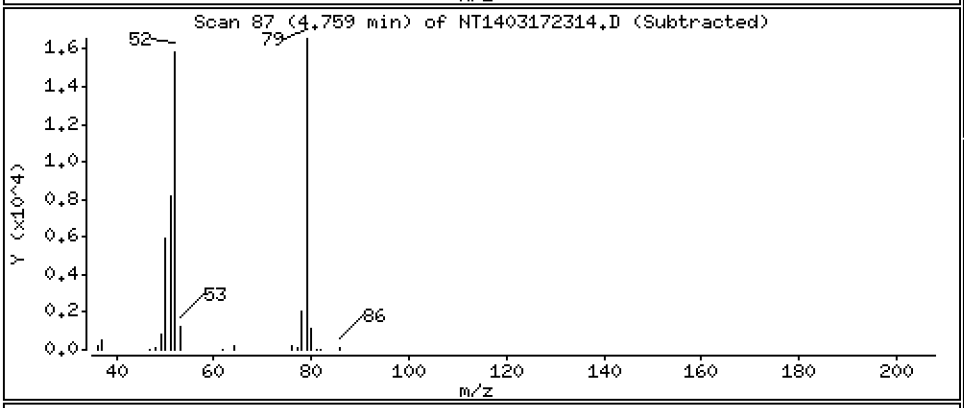
Column diameter: 0.25

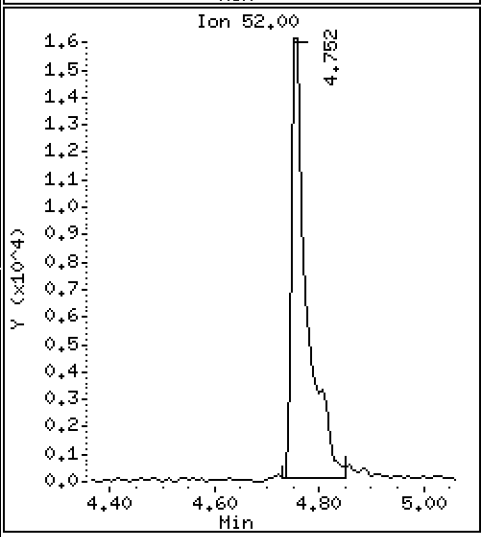
103 Pyridine

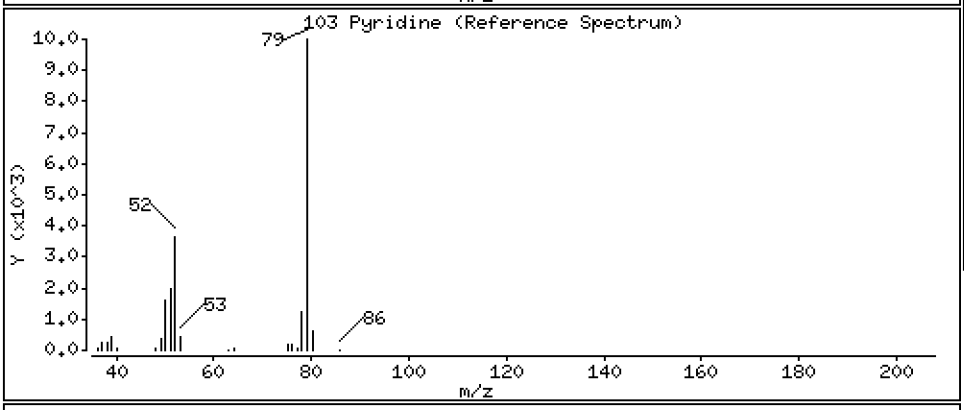
Concentration: 0.2330 ug/mL

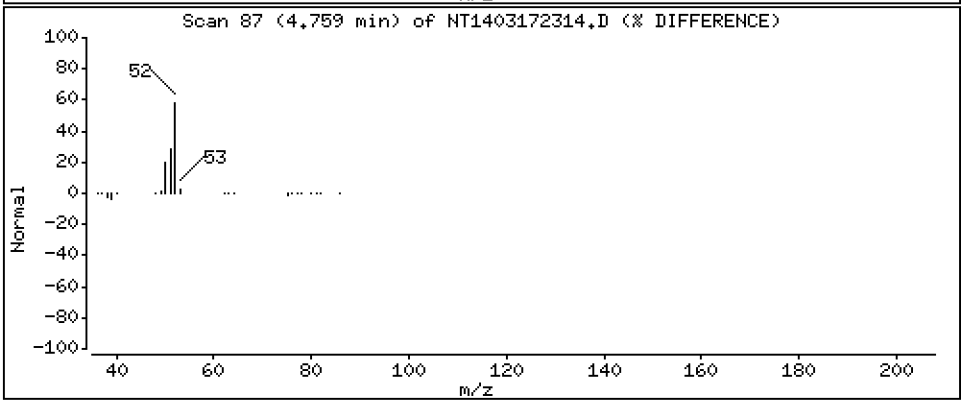












Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172314.D

Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

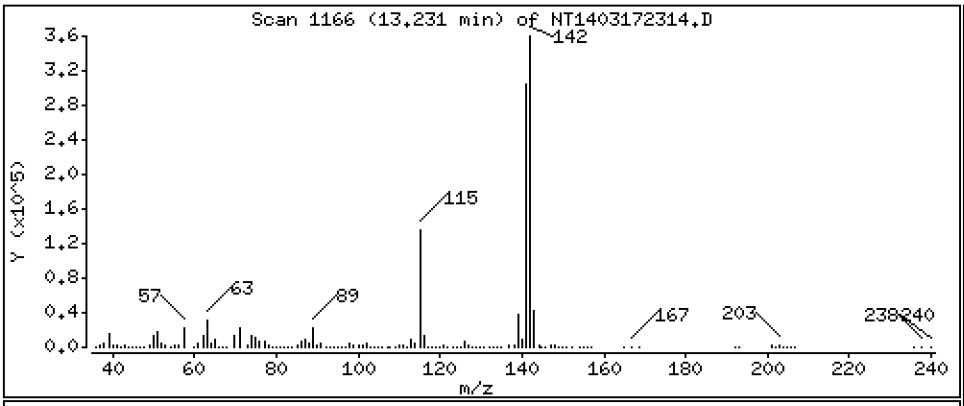
Operator: JGR

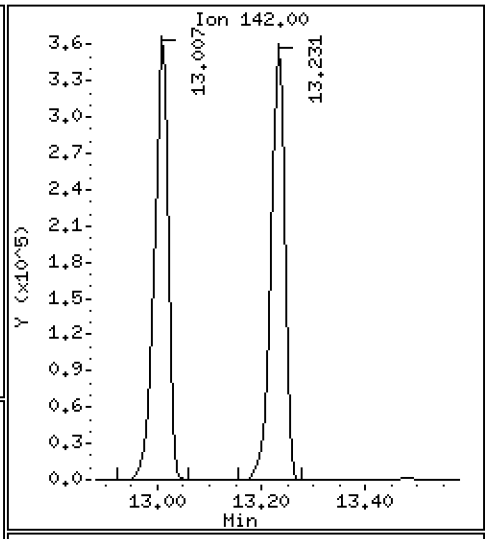
Column phase: ZB-5msi

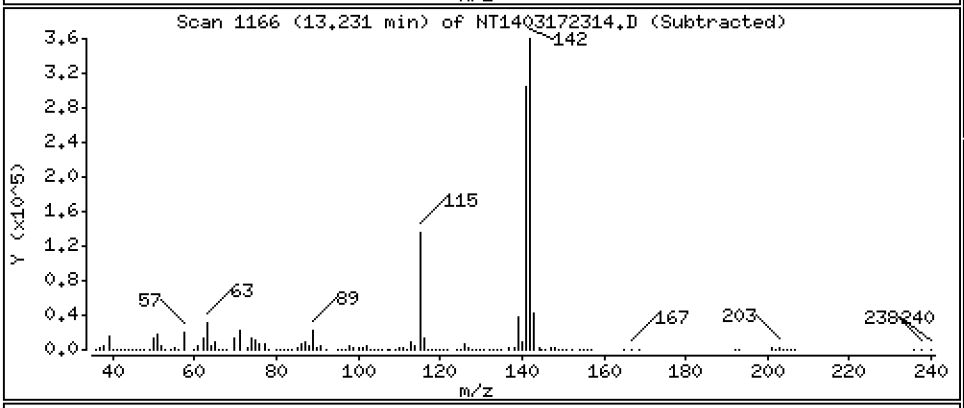
Column diameter: 0.25

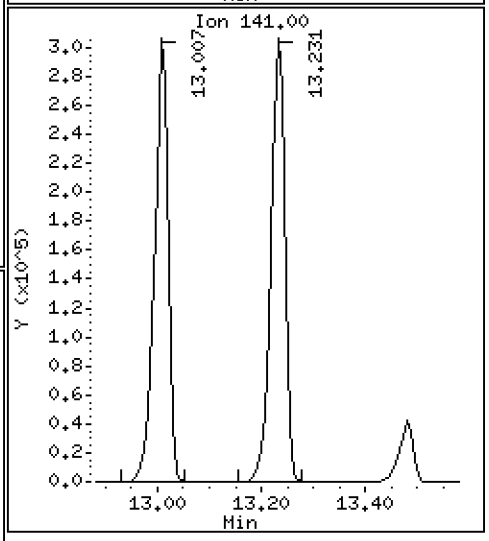
105 1-methylnaphthalene

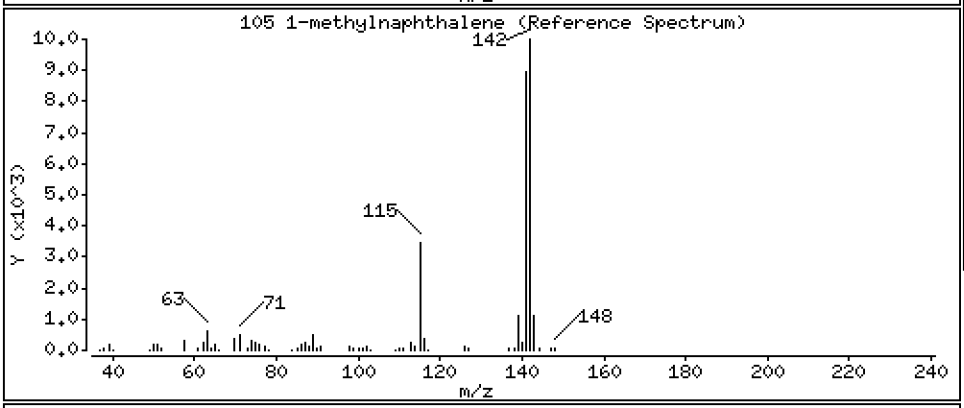
Concentration: 4.463 ug/mL

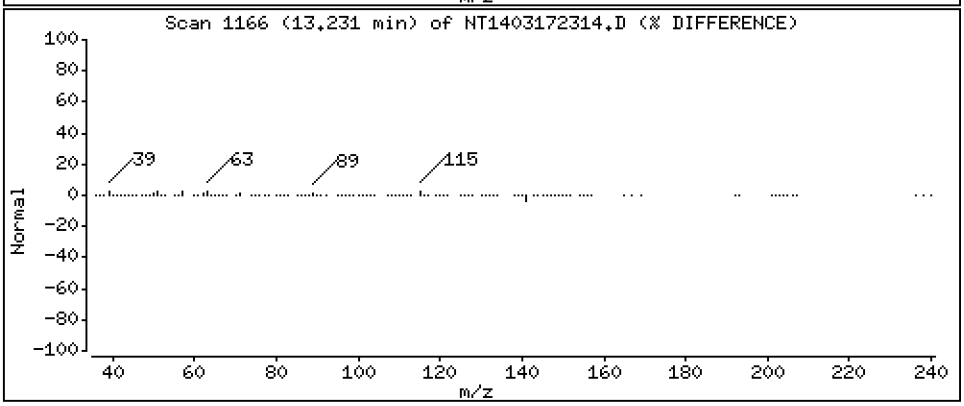












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Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

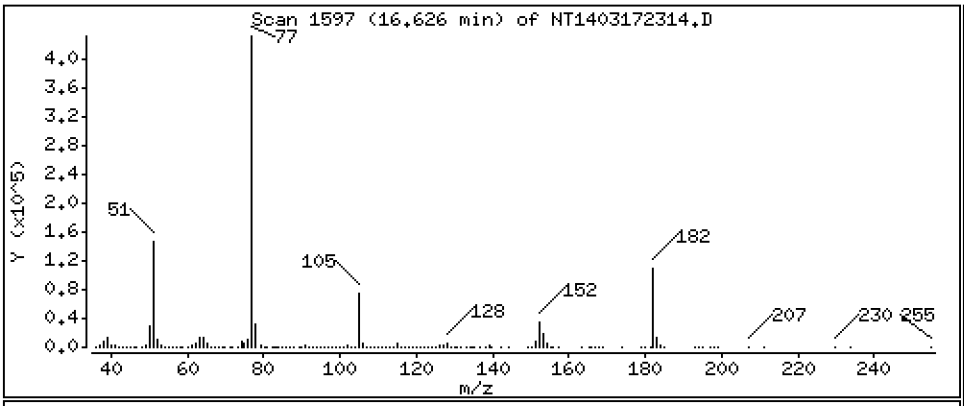
Operator: JGR

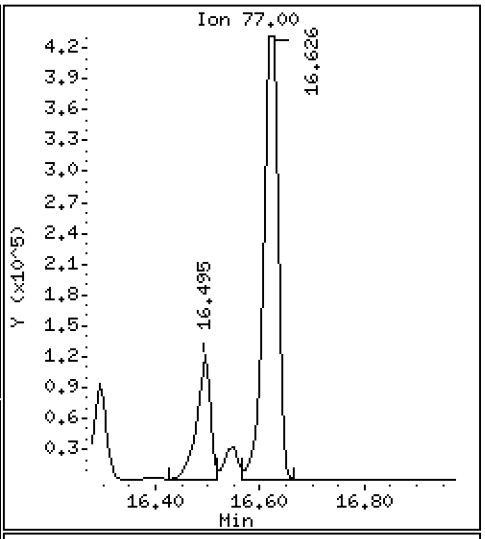
Column phase: ZB-5msi

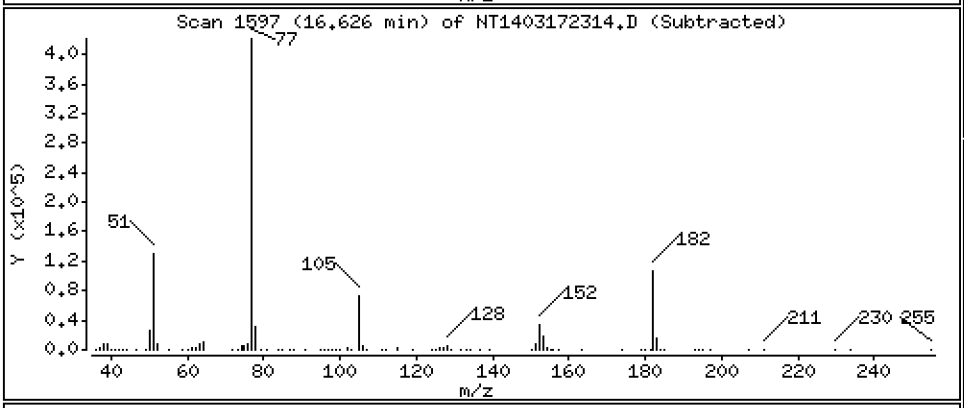
Column diameter: 0.25

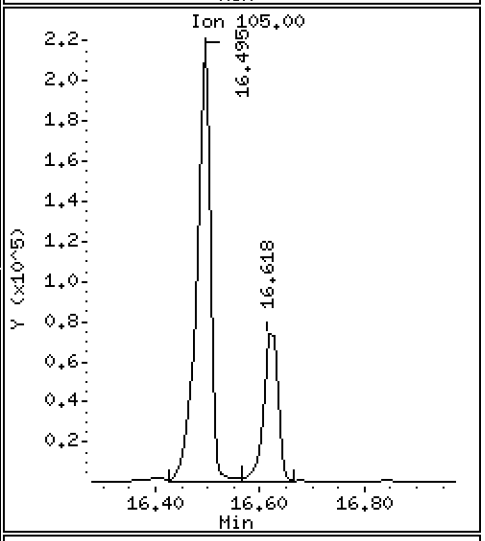
111 Azobenzene (1,2-DP-Hydrazine)

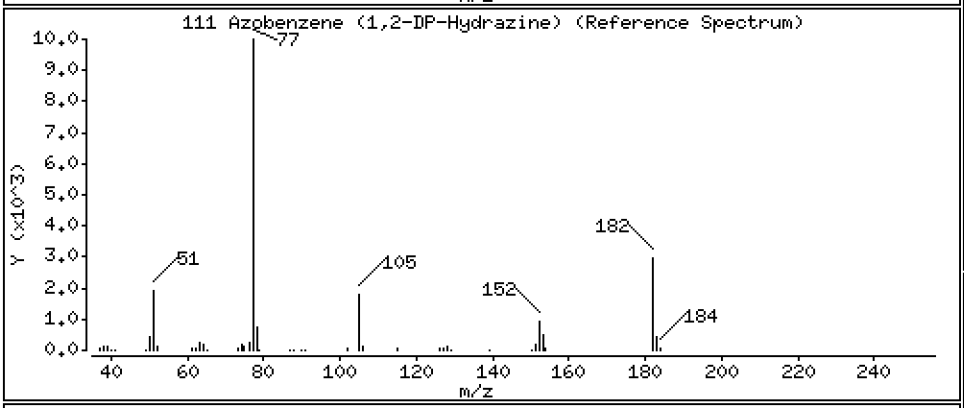
Concentration: 4.517 ug/mL

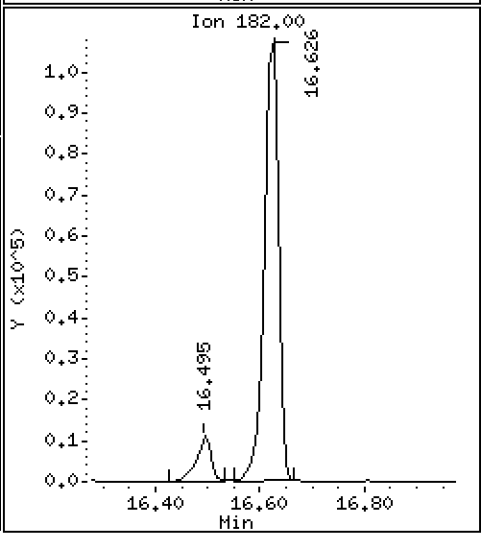


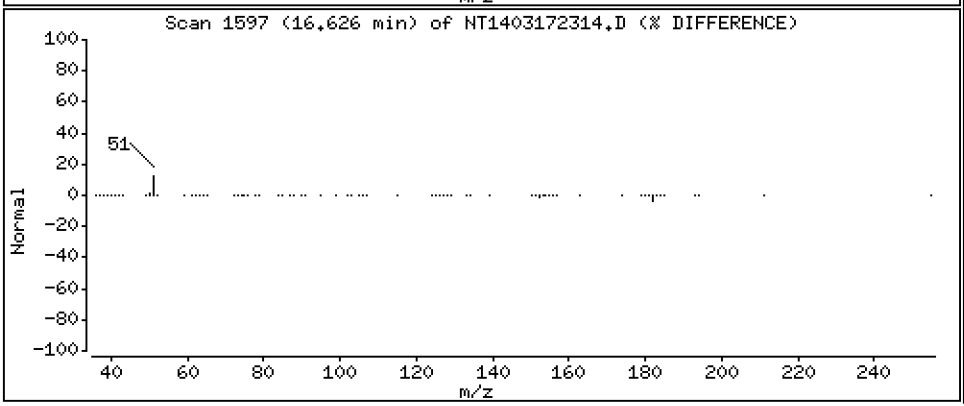












Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172314.D

Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

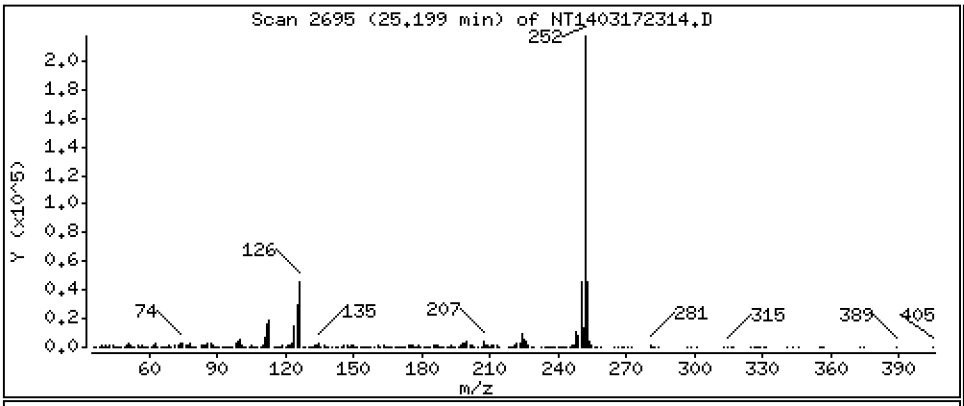
Operator: JGR

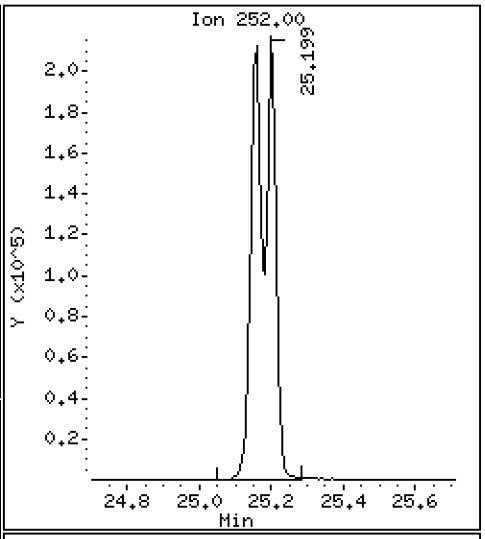
Column phase: ZB-5msi

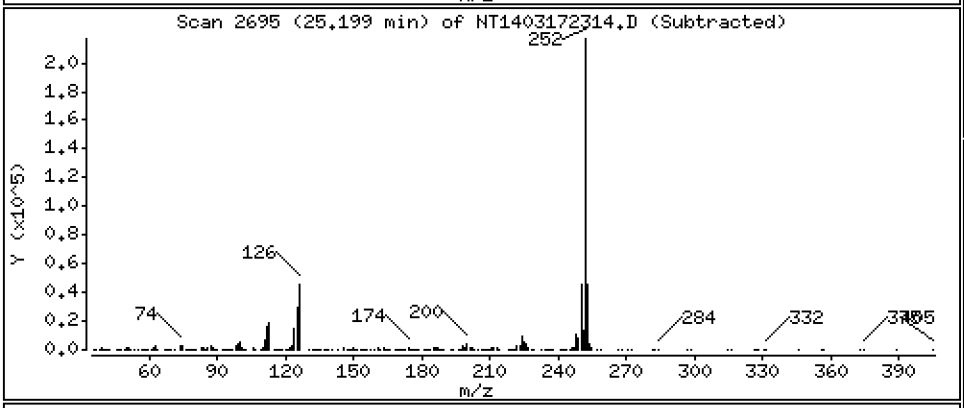
Column diameter: 0.25

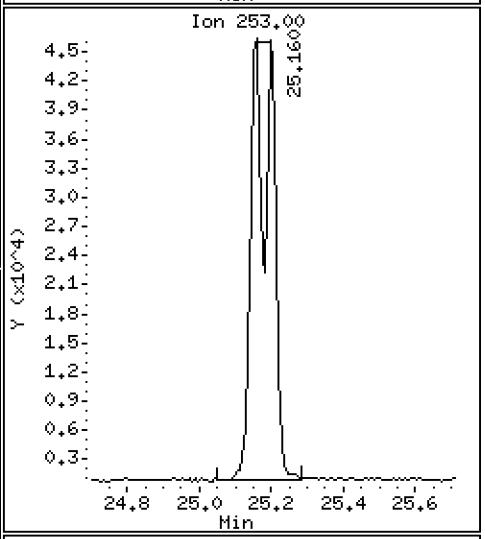
187 Total Benzofluoranthenes

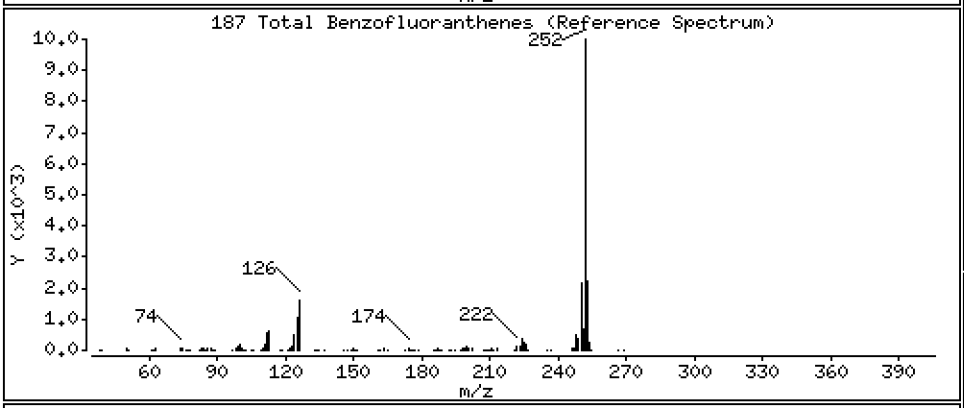
Concentration: 10.61 ug/mL

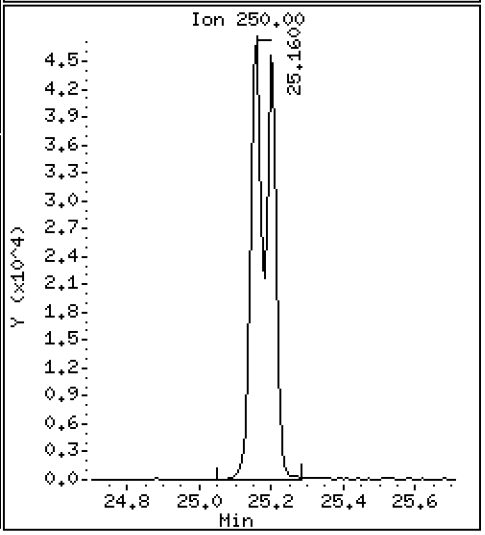


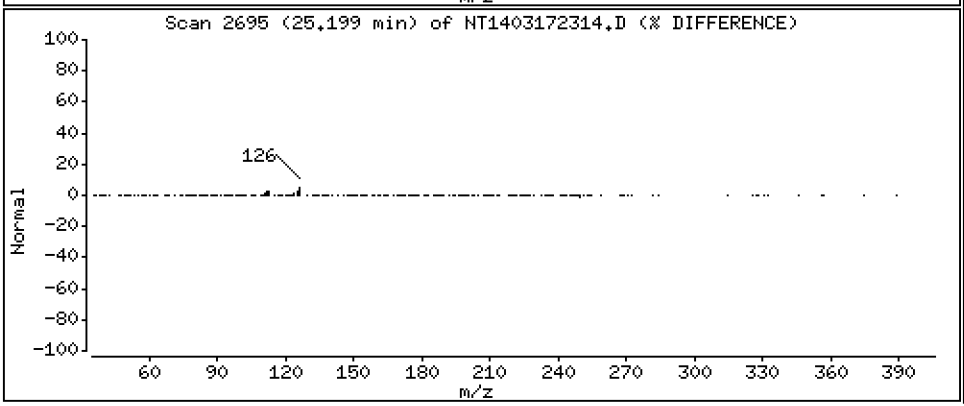












Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172314.D

Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD1

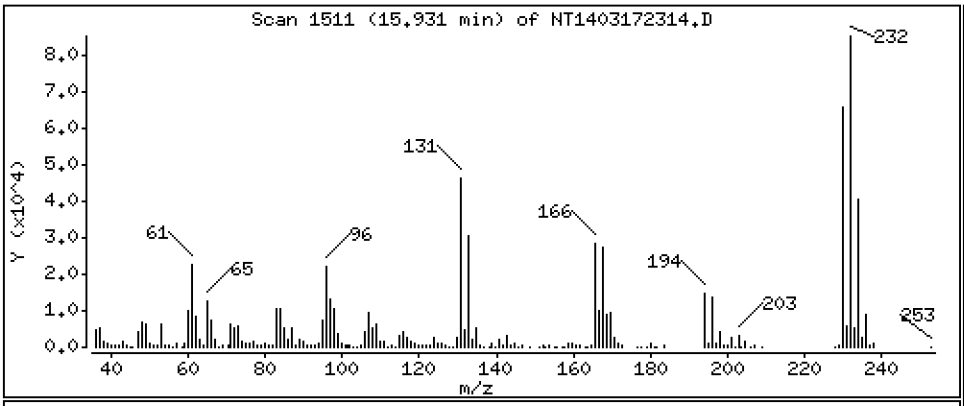
Operator: JGR

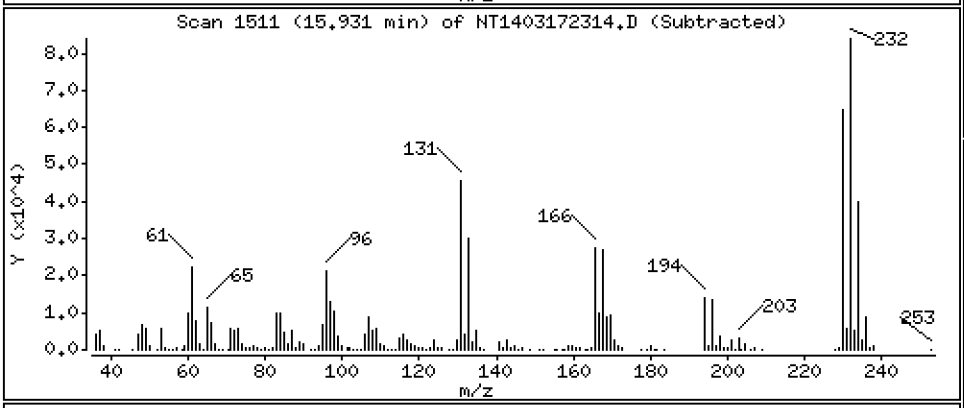
Column phase: ZB-5msi

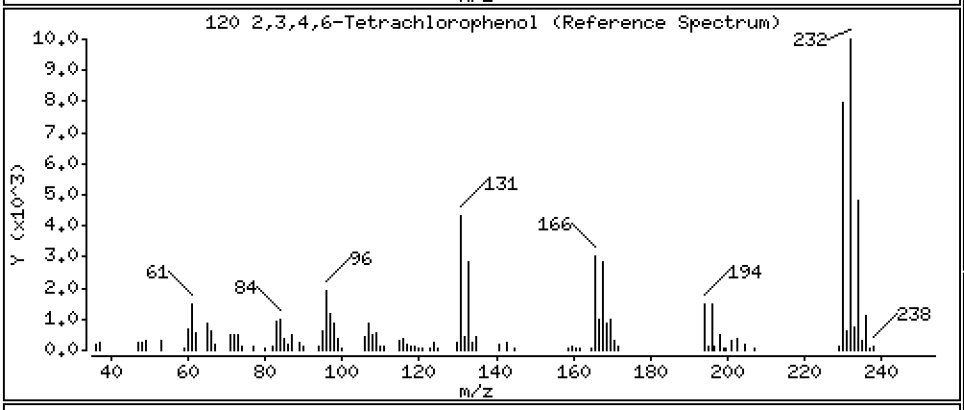
Column diameter: 0.25

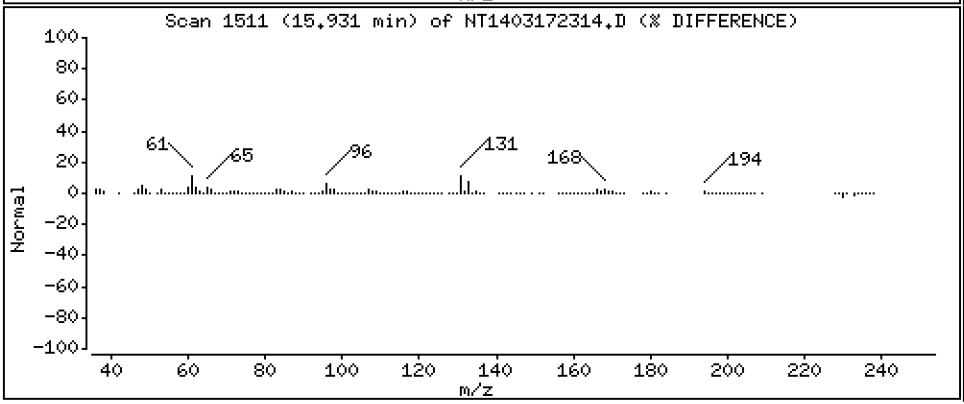
120 2,3,4,6-Tetrachlorophenol

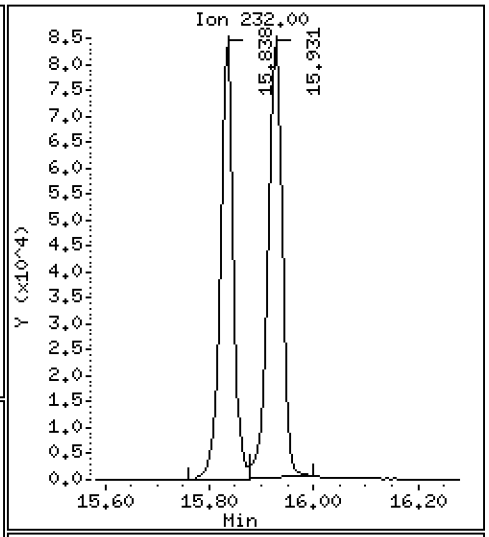
Concentration: 3.484 ug/mL

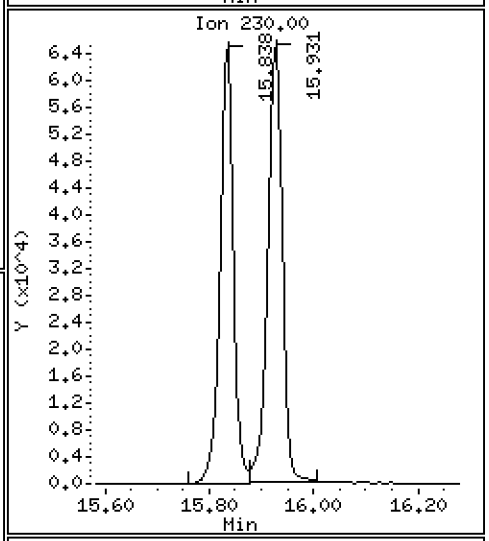


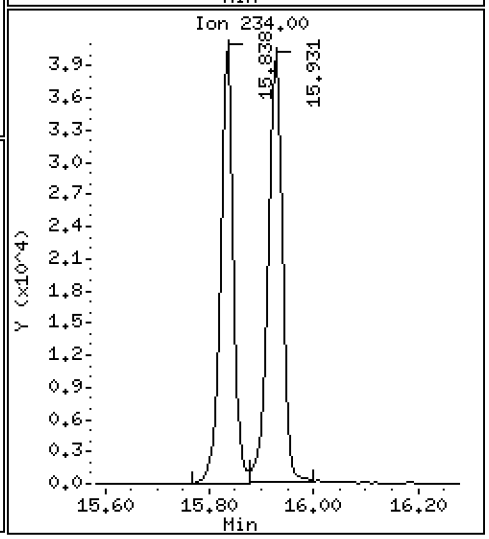












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230317.b\NT1403172314.D
Lab Smp Id: BLB0424-BSD1
Inj Date : 17-MAR-2023 22:19 MS Autotune Date: 11-MAR-2023 16:01
Operator : JGR Inst ID: nt14.i
Smp Info : BLB0424-BSD1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230317.b\ABN.m
Meth Date : 22-Mar-2023 08:03 van Quant Type: ISTD
Cal Date : 15-MAR-2023 15:50 Cal File: NT1403152308.D
Als bottle: 14
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)	
$	1 2-Fluorophenol	112	6.837	6.821	(1.000)	446158	6.05026	6.050	
$	2 Phenol-d5	99	8.413	8.412	(1.000)	584369	6.01905	6.019	
	3 Phenol	94	8.436	8.435	(1.000)	412347	3.99639	3.996	
$	5 2-Chlorophenol-d4	132	8.698	8.698	(1.000)	493626	6.44919	6.449	
	4 Bis(2-Chloroethyl)ether	93	8.606	8.605	(1.000)	335090	4.51004	4.510	
	6 2-Chlorophenol	128	8.722	8.729	(1.000)	320579	3.94752	3.948	
	7 1,3-Dichlorobenzene	146	9.000	9.000	(1.000)	331373	4.03094	4.031	
*	8 1,4-Dichlorobenzene-d4	152	9.062	9.062	(1.000)	217090	4.00000		(M)
	9 1,4-Dichlorobenzene	146	9.093	9.093	(1.000)	326655	4.12553	4.126	
$	10 1,2-Dichlorobenzene-d4	152	9.427	9.426	(1.000)	208153	4.07063	4.071	
	12 1,2-Dichlorobenzene	146	9.450	9.450	(1.000)	324115	4.14137	4.141	
	11 Benzyl alcohol	108	9.341	9.333	(1.000)	207158	4.31268	4.313	
	14 2,2'-oxybis(1-Chloropropane)	121	9.637	9.644	(1.000)	116084	4.91556	4.916	
	13 2-Methylphenol	108	9.559	9.558	(1.000)	235613	3.22984	3.230	
	17 Hexachloroethane	117	10.048	10.055	(1.000)	149229	4.40669	4.407	
	16 N-Nitroso-di-n-propylamine	70	9.900	9.900	(1.000)	238250	4.14824	4.148	
	15 4-Methylphenol	108	9.838	9.830	(1.000)	315298	3.65050	3.650	
$	18 Nitrobenzene-d5	82	10.164	10.164	(0.879)	390025	4.39471	4.395	
	19 Nitrobenzene	77	10.195	10.203	(0.881)	392185	4.53972	4.540	
	20 Isophorone	82	10.653	10.653	(0.921)	687638	5.82965	5.830	
	21 2-Nitrophenol	139	10.832	10.831	(0.936)	186521	3.76692	3.767	
	22 2,4-Dimethylphenol	107	10.886	10.885	(0.941)	261941	3.54504	3.545	
	23 Bis(2-Chloroethoxy)methane	93	11.087	11.087	(0.959)	408276	5.14130	5.141	
	24 Benzoic acid	105	11.134	11.103	(0.963)	1531820	23.9871	23.99	
	25 2,4-Dichlorophenol	162	11.289	11.289	(0.976)	910582	15.4960	15.50	
	26 1,2,4-Trichlorobenzene	180	11.482	11.482	(0.993)	320218	4.43283	4.433	
*	27 Naphthalene-d8	136	11.567	11.567	(1.000)	838636	4.00000		
	28 Naphthalene	128	11.606	11.606	(1.003)	947419	4.22868	4.229	
	29 4-Chloroaniline	127	11.737	11.737	(1.015)	911121	9.71423	9.714	
	30 Hexachlorobutadiene	225	11.969	11.976	(1.035)	148075	4.54004	4.540	
	31 4-Chloro-3-methylphenol	107	12.697	12.696	(1.098)	1113506	15.6813	15.68	
	32 2-Methylnaphthalene	142	13.006	13.013	(1.124)	660708	4.22856	4.229	
	33 Hexachlorocyclopentadiene	237	13.478	13.478	(0.887)	439456	12.2752	12.28	

		QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
Compounds								
34	2,4,6-Trichlorophenol	196	13.633	13.633	(0.897)	687209	15.7283	15.73
35	2,4,5-Trichlorophenol	196	13.703	13.702	(0.902)	742131	16.3000	16.30
$ 36	2-Fluorobiphenyl	172	13.795	13.795	(0.908)	677476	4.34339	4.343
37	2-Chloronaphthalene	162	14.004	14.012	(0.922)	599511	4.48442	4.484
38	2-Nitroaniline	65	14.268	14.267	(0.939)	847965	16.4265	16.43
39	Dimethylphthalate	163	14.701	14.701	(0.967)	687365	4.78591	4.786
40	Acenaphthylene	152	14.887	14.879	(0.980)	941194	4.19149	4.191
41	2,6-Dinitrotoluene	165	14.840	14.840	(0.977)	567271	17.0978	17.10
* 42	Acenaphthene-d10	164	15.196	15.196	(1.000)	430703	4.00000	
43	3-Nitroaniline	138	15.127	15.126	(0.995)	619898	13.5433	13.54
44	Acenaphthene	153	15.266	15.265	(1.005)	575372	4.38871	4.389
45	2,4-Dinitrophenol	184	15.335	15.335	(1.009)	732537	27.1792	27.18
46	Dibenzofuran	168	15.591	15.590	(1.026)	845522	4.51745	4.517
47	4-Nitrophenol	109	15.444	15.435	(1.016)	338553	13.9739	13.97
48	2,4-Dinitrotoluene	165	15.652	15.652	(1.030)	774262	16.4627	16.46
50	Diethylphthalate	149	16.170	16.170	(1.064)	887084	5.97401	5.974
49	Fluorene	166	16.309	16.309	(1.073)	773421	4.35930	4.359
51	4-Chlorophenyl-phenylether	204	16.294	16.301	(1.072)	356154	4.67654	4.677
52	4-Nitroaniline	138	16.402	16.394	(1.079)	544984	13.6895	13.69
53	4,6-Dinitro-2-methylphenol	198	16.494	16.494	(0.904)	824793	31.6963	31.70
54	N-Nitrosodiphenylamine	169	16.548	16.548	(0.907)	405886	4.15134	4.151
$ 55	2,4,6-Tribromophenol	330	16.841	16.841	(1.108)	111328	6.80819	6.808
56	4-Bromophenyl-phenylether	248	17.304	17.304	(0.949)	176244	5.34666	5.347
57	Hexachlorobenzene	284	17.621	17.620	(0.966)	165714	4.76444	4.764
58	Pentachlorophenol	266	17.977	17.976	(0.986)	376751	15.0520	15.05
* 59	Phenanthrene-d10	188	18.240	18.247	(1.000)	719856	4.00000	
60	Phenanthrene	178	18.286	18.294	(1.003)	929301	4.51836	4.518
61	Anthracene	178	18.379	18.387	(1.008)	764472	3.85802	3.858
62	Carbazole	167	18.712	18.711	(1.026)	829745	4.70644	4.706
63	Di-n-butylphthalate	149	19.509	19.508	(1.070)	1200053	5.37008	5.370
64	Fluoranthene	202	20.677	20.677	(0.888)	917821	6.31403	6.314
65	Pyrene	202	21.103	21.102	(0.906)	890988	5.97697	5.977
$ 66	Terphenyl-d14	244	21.389	21.389	(0.918)	626428	6.20742	6.207
67	Butylbenzylphthalate	149	22.310	22.310	(0.958)	439490	6.72933	6.729
68	Benzo(a)anthracene	228	23.263	23.270	(0.999)	609612	4.62733	4.627
* 69	Chrysene-d12	240	23.294	23.293	(1.000)	357294	4.00000	
70	3,3'-Dichlorobenzidine	252	23.216	23.224	(0.997)	267289	6.93590	6.936
71	Chrysene	228	23.340	23.340	(1.002)	553448	4.64179	4.642
72	bis(2-Ethylhexyl)phthalate	149	23.332	23.332	(0.960)	563044	6.05111	6.051
* 134	Di-n-octylphthalate-d4	153	24.316	24.323	(1.000)	706831	4.00000	
73	Di-n-octylphthalate	149	24.331	24.331	(1.001)	927087	5.10219	5.102
74	Benzo(b)fluoranthene	252	25.160	25.159	(0.970)	467904	5.66362	5.664
75	Benzo(k)fluoranthene	252	25.198	25.205	(0.972)	409528	5.00054	5.001
76	Benzo(a)pyrene	252	25.818	25.817	(0.996)	316965	4.48657	4.487
* 77	Perylene-d12	264	25.934	25.933	(1.000)	233794	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.611	28.618	(1.103)	304962	3.96606	3.966
79	Dibenzo(a,h)anthracene	278	28.626	28.633	(1.104)	263151	4.06070	4.061
80	Benzo(g,h,i)perylene	276	29.403	29.410	(1.134)	228899	3.61208	3.612
90	N-Nitrosodimethylamine	74	4.720	4.697	(1.000)	484529	10.3744	10.37
91	Aniline	93	8.513	8.513	(1.000)	408569	3.93699	3.937
93	Benzidine	184	Compound Not Detected.					
103	Pyridine	79	4.759	4.712	(1.000)	33702	0.23302	0.2330
105	1-methylnaphthalene	142	13.231	13.230	(1.144)	631829	4.46331	4.463
111	Azobenzene (1,2-DP-Hydrazine)	77	16.626	16.625	(1.094)	800988	4.51724	4.517

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.198	25.205	(0.972)	832849	10.6146	10.61
120 2,3,4,6-Tetrachlorophenol	232	15.931	15.930	(1.048)	155081	3.48363	3.484

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1403172314.D
Lab Smp Id: BLB0424-BSD1
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt14.i\20230317.b\ABN.m
Misc Info:

Calibration Date: 17-MAR-2023
Calibration Time: 15:03
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	221219	110610	442438	217090	-1.87
27 Naphthalene-d8	809500	404750	1619000	838636	3.60
42 Acenaphthene-d10	420689	210345	841378	430703	2.38
59 Phenanthrene-d10	757520	378760	1515040	719856	-4.97
69 Chrysene-d12	450500	225250	901000	357294	-20.69
134 Di-n-octylphthala	828388	414194	1656776	706831	-14.67
77 Perylene-d12	339914	169957	679828	233794	-31.22

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.06	8.56	9.56	9.06	0.00
27 Naphthalene-d8	11.57	11.07	12.07	11.57	0.00
42 Acenaphthene-d10	15.20	14.70	15.70	15.20	0.00
59 Phenanthrene-d10	18.25	17.75	18.75	18.24	-0.04
69 Chrysene-d12	23.29	22.79	23.79	23.29	0.00
134 Di-n-octylphthala	24.32	23.82	24.82	24.32	-0.03
77 Perylene-d12	25.93	25.43	26.43	25.93	0.00

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

REVIEW SUMMARY FOR FILE - NT1403172314.D

Lab ID: BLB0424-BSD1
nt14.i, ABN.m, 17-MAR-2023 22:19

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

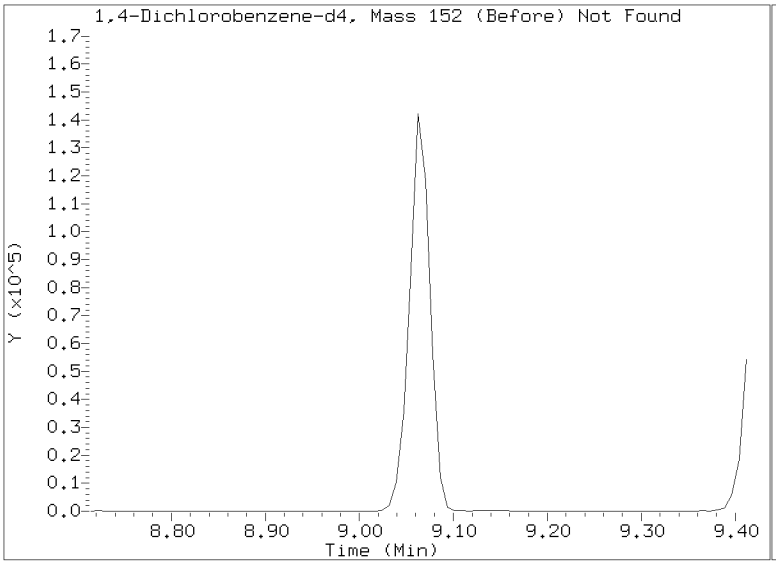
RRT check based on Ccal File: NT1403172302.D

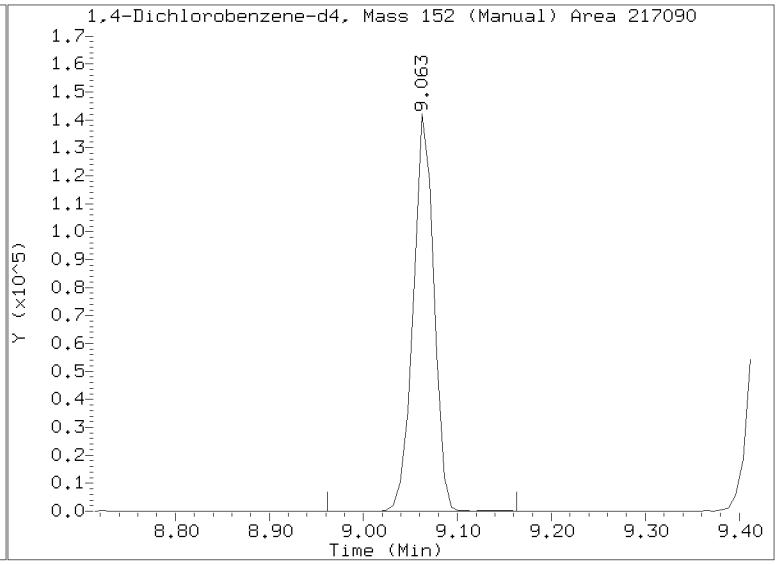
On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

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

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230317.b/NT1403172314.D
Injection Date: 17-MAR-2023 22:19
Lab ID:BLB0424-BSD1 Client ID:
Report Date: 03/22/2023 08:12





Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-SC1150B

MS / MS DUPLICATE RECOVERY
EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	03/18/23 06:42
Batch:	BLB0424	Laboratory ID:	BLB0424-MS1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	Matrix Spike
Initial/Final:	15.72 g / 1 mL	Source Sample:	LDW23-SC1150B

COMPOUND	SPIKE ADDED (ug/kg dry)	SAMPLE CONCENTRATION (ug/kg dry)	Q	MS CONCENTRATION (ug/kg dry)	Q	MS % REC. #	QC LIMITS REC.
Phenol	500	12.1	J	350		67.5	34 - 120
4-Methylphenol	500	ND	U	342		68.5	29 - 120
Naphthalene	500	8.5	J	385		75.3	43 - 120
2-Methylnaphthalene	500	9.1	J	400		78.1	43 - 120
Acenaphthylene	500	ND	U	353		70.6	42 - 120
Dimethylphthalate	500	8.3	J	442		86.8	43 - 120
Acenaphthene	500	6.2	J	411		81.0	45 - 120
Dibenzofuran	500	ND	U	423		84.6	43 - 120
Fluorene	500	ND	U	412		82.4	45 - 120
Phenanthrene	500	67.7		457		77.9	49 - 120
Anthracene	500	17.9	J	368		70.1	45 - 120
Fluoranthene	500	244	Q	1060	*, Q	163 *	53 - 145
Pyrene	500	430		1180	*	149 *	52 - 134
Butylbenzylphthalate	500	26.7	Q	766	*, Q	148 *	45 - 132
Benzo(a)anthracene	500	66.7		505		87.6	49 - 120
Chrysene	500	90.8		546		91.1	47 - 120
bis(2-Ethylhexyl)phthalate	500	207		778		114	34 - 130
Benzofluoranthenes, Total	1000	251		1180		93.1	30 - 160
Benzo(a)pyrene	500	106		528		84.4	42 - 120
Indeno(1,2,3-cd)pyrene	500	58.2		428		74.0	42 - 163
Dibenzo(a,h)anthracene	500	19.6	J	399	Q	75.9	30 - 133
Benzo(g,h,i)perylene	500	62.3	Q	393	Q	66.2	46 - 148

* Values outside of QC limits

MS / MS DUPLICATE RECOVERY
EPA 8270E

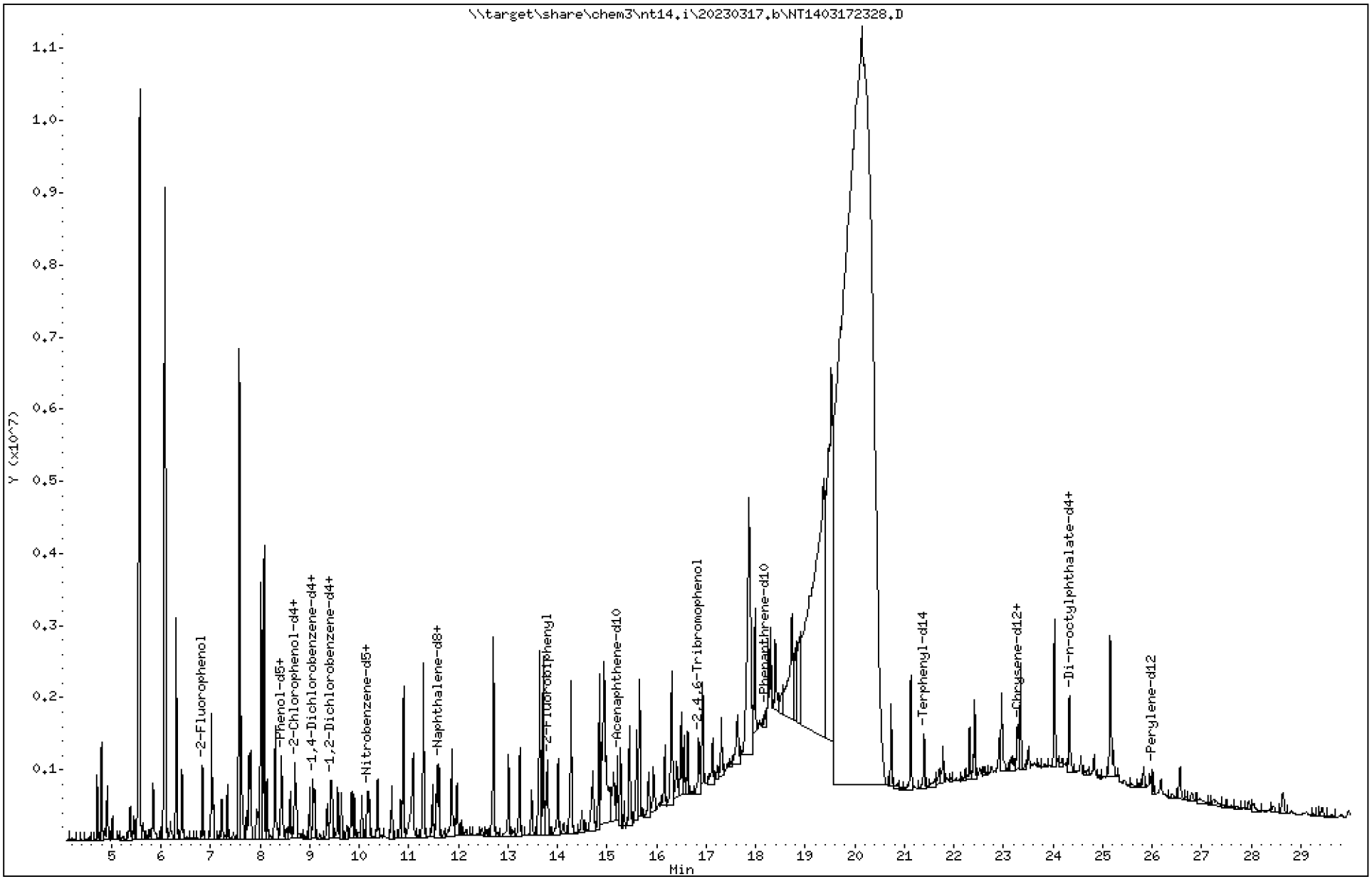
Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	03/18/23 07:18
Batch:	BLB0424	Laboratory ID:	BLB0424-MSD1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	Matrix Spike Dup
Initial/Final:	15.72 g / 1 mL	Source Sample:	LDW23-SC1150B

COMPOUND	SPIKE ADDED (ug/kg dry)	MSD CONCENTRATION (ug/kg dry)	Q	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Phenol	500	335		64.6	4.22	30	34 - 120
4-Methylphenol	500	329		65.8	4.02	30	29 - 120
Naphthalene	500	377		73.7	2.13	30	43 - 120
2-Methylnaphthalene	500	388		75.8	2.94	30	43 - 120
Acenaphthylene	500	339		67.7	4.19	30	42 - 120
Dimethylphthalate	500	443		87.1	0.281	30	43 - 120
Acenaphthene	500	401		79.1	2.45	30	45 - 120
Dibenzofuran	500	416		83.2	1.60	30	43 - 120
Fluorene	500	405		81.0	1.60	30	45 - 120
Phenanthrene	500	469		80.3	2.52	30	49 - 120
Anthracene	500	363		69.0	1.49	30	45 - 120
Fluoranthene	500	1060	*, Q	163 *	0.0952	30	53 - 145
Pyrene	500	1160	*	147 *	0.944	30	52 - 134
Butylbenzylphthalate	500	733	*, Q	141 *	4.42	30	45 - 132
Benzo(a)anthracene	500	476		81.9	5.79	30	49 - 120
Chrysene	500	520		85.8	4.95	30	47 - 120
bis(2-Ethylhexyl)phthalate	500	774		113	0.519	30	34 - 130
Benzofluoranthenes, Total	1000	1120		87.4	5.00	30	30 - 160
Benzo(a)pyrene	500	490		76.9	7.34	30	42 - 120
Indeno(1,2,3-cd)pyrene	500	397		67.9	7.41	30	42 - 163
Dibenzo(a,h)anthracene	500	373	Q	70.7	6.82	30	30 - 133
Benzo(g,h,i)perylene	500	353	Q	58.1	10.8	30	46 - 148

* Values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172328.D
Date : 18-MAR-2023 06:42
Client ID:
Sample Info: BLB0424-MS1

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



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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS1

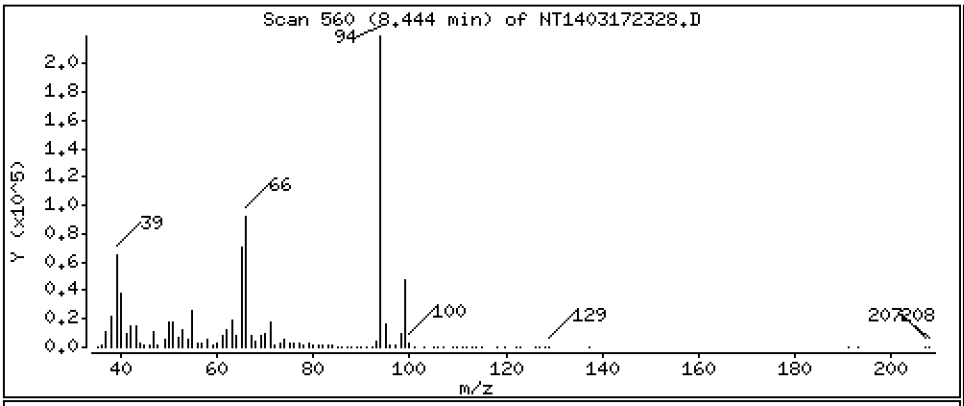
Operator: JGR

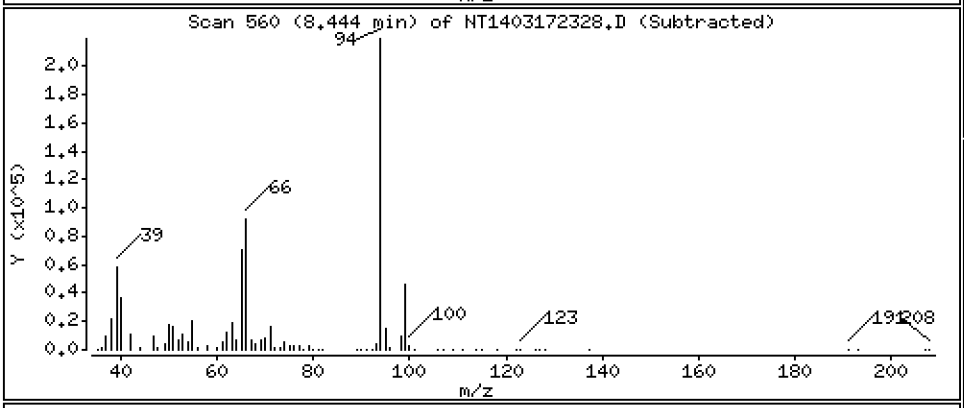
Column phase: ZB-5msi

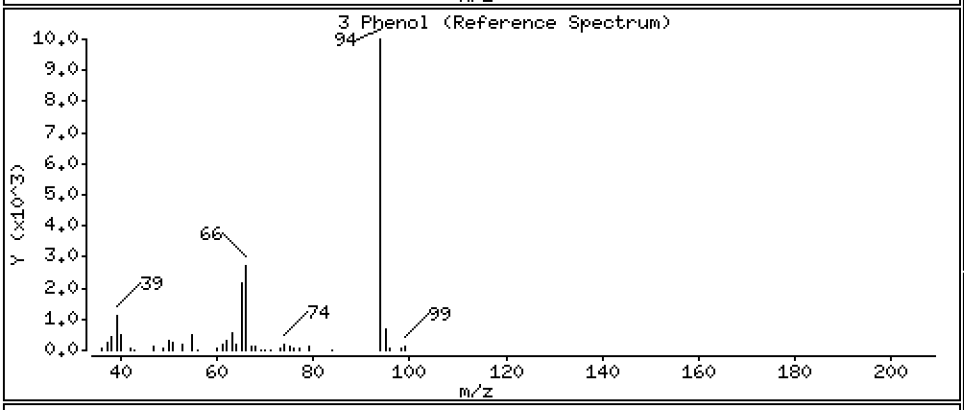
Column diameter: 0.25

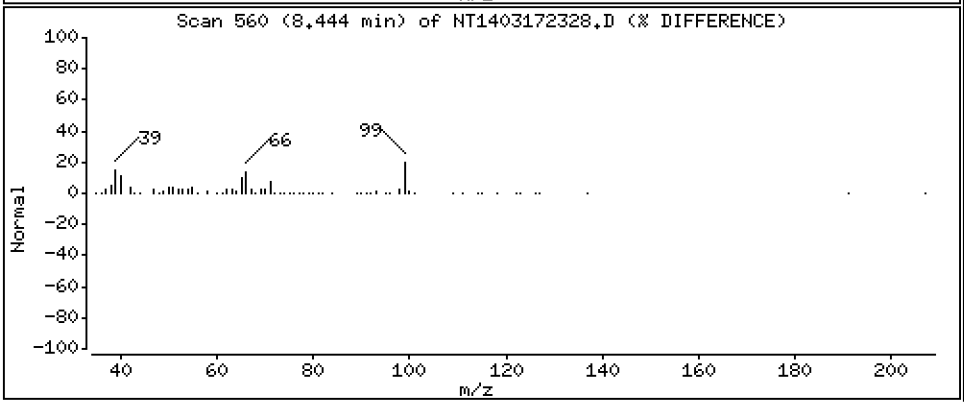
3 Phenol

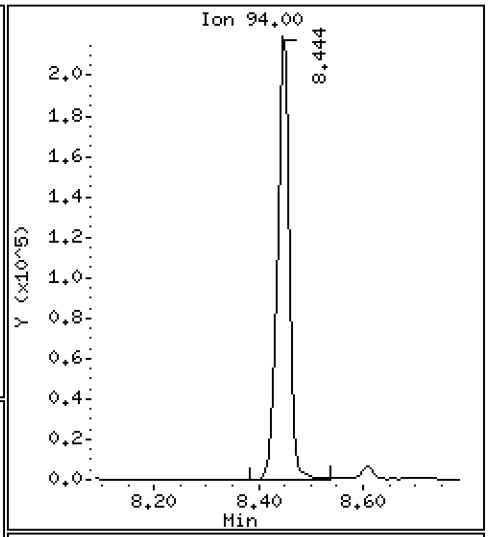
Concentration: 3.497 ug/mL

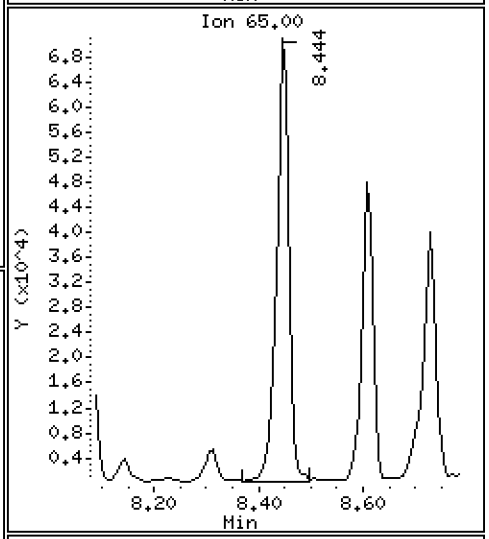


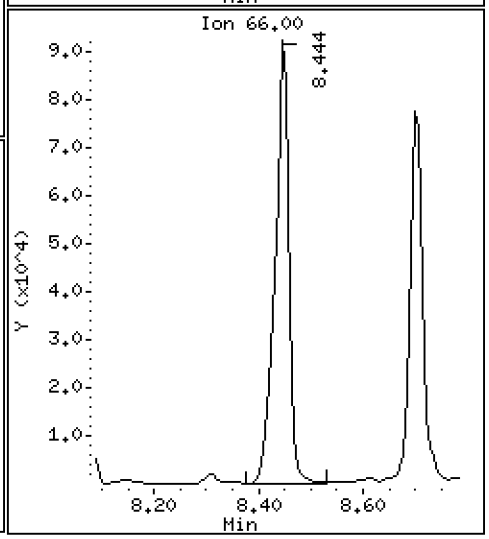












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS1

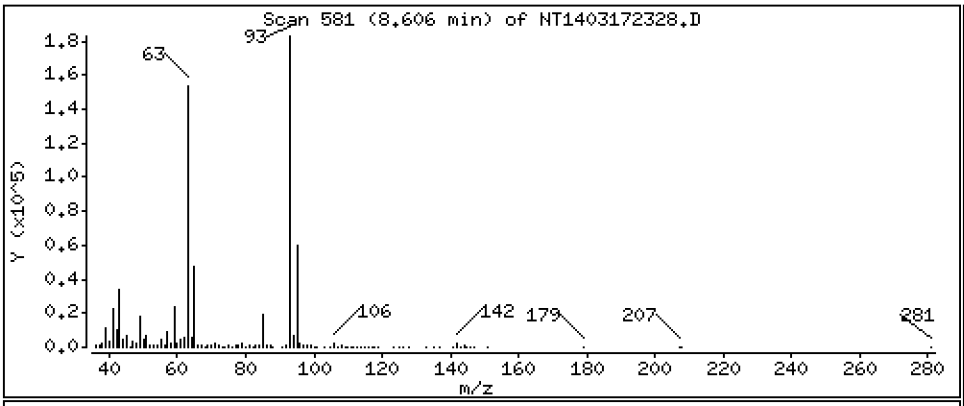
Operator: JGR

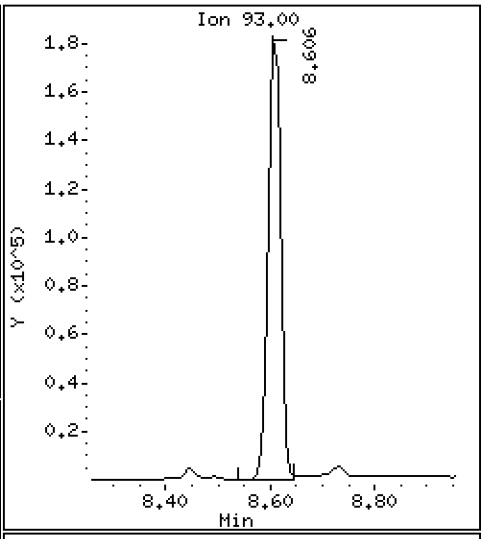
Column phase: ZB-5msi

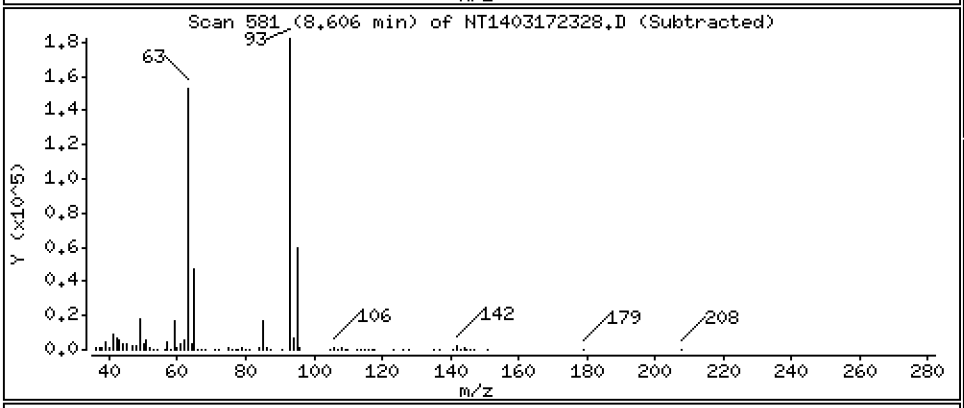
Column diameter: 0.25

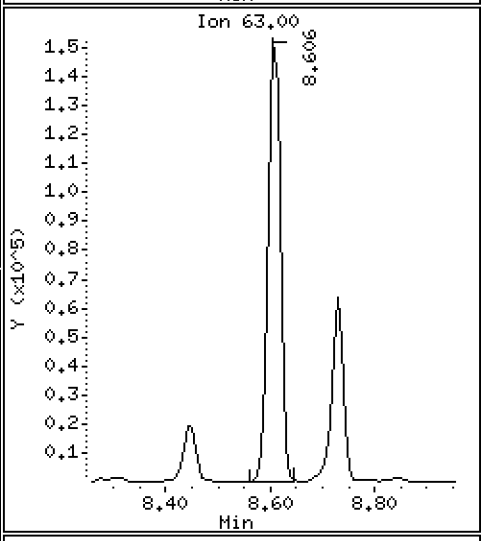
4 Bis(2-Chloroethyl)ether

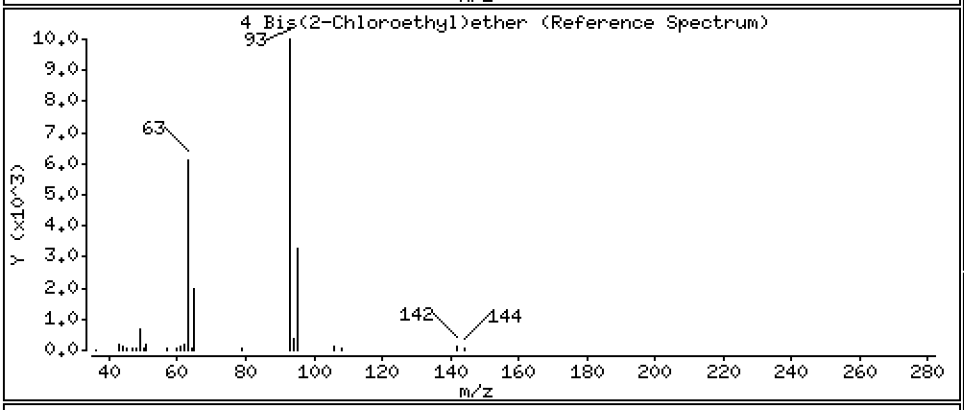
Concentration: 3.998 ug/mL

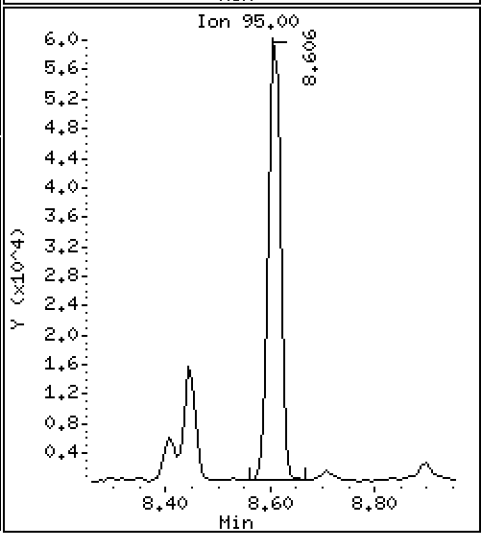


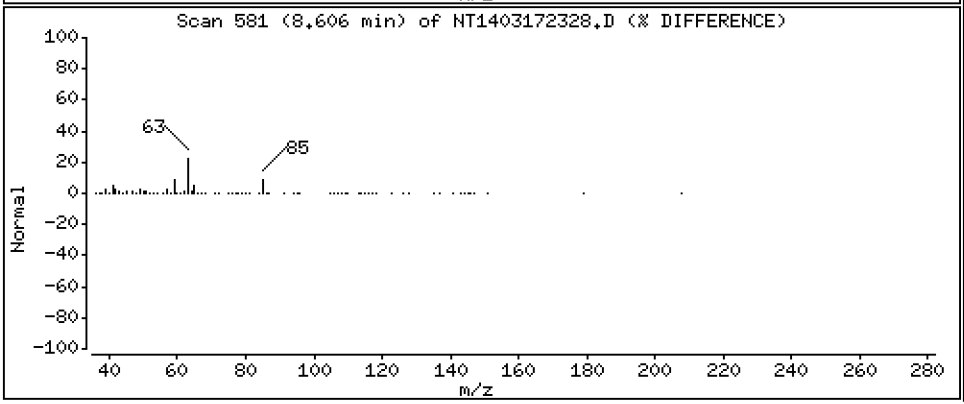












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS1

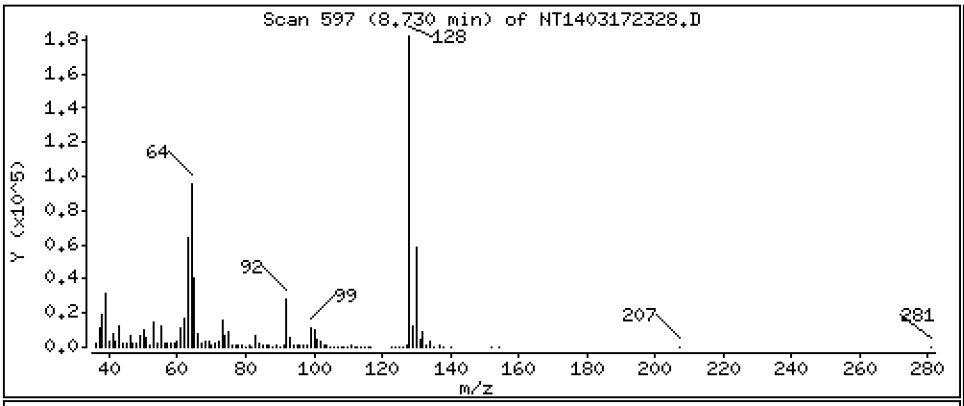
Operator: JGR

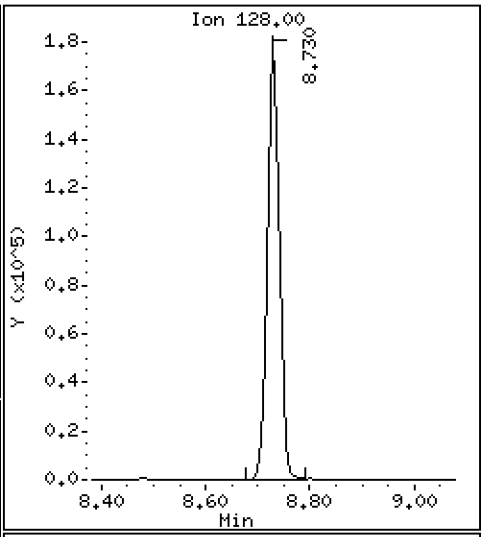
Column phase: ZB-5msi

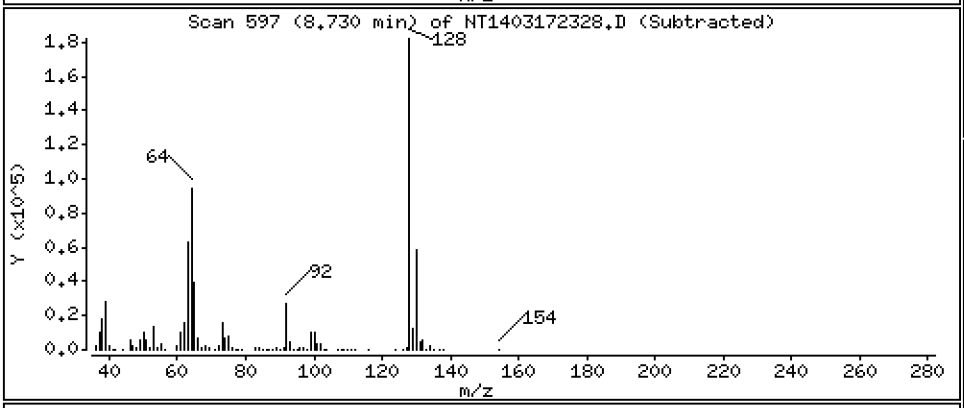
Column diameter: 0.25

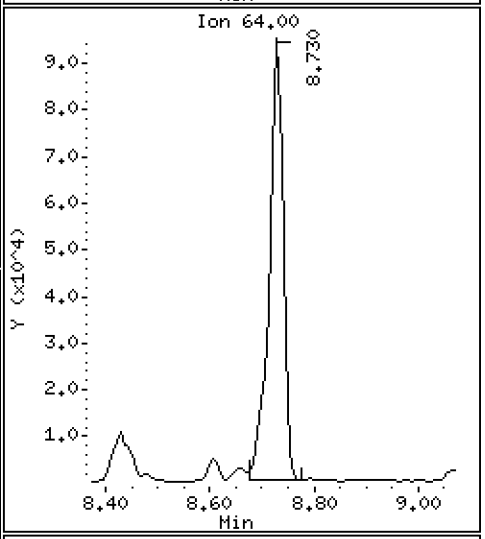
6 2-Chlorophenol

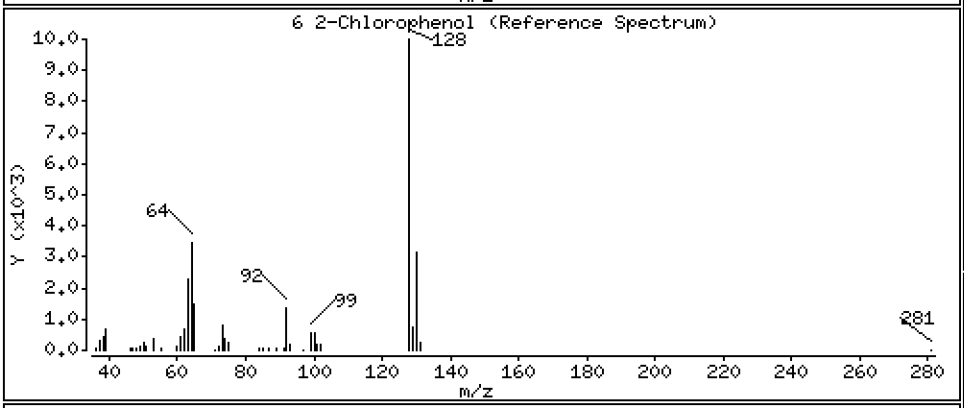
Concentration: 3.553 ug/mL

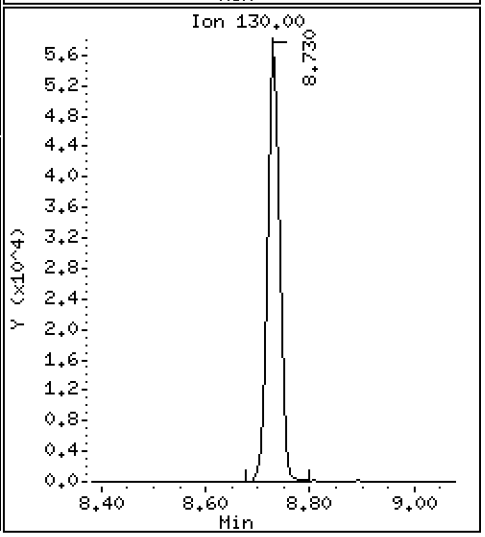


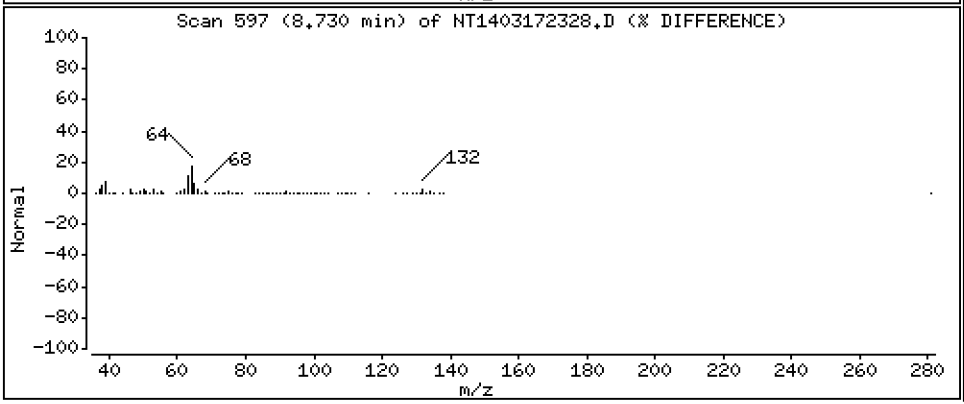












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS1

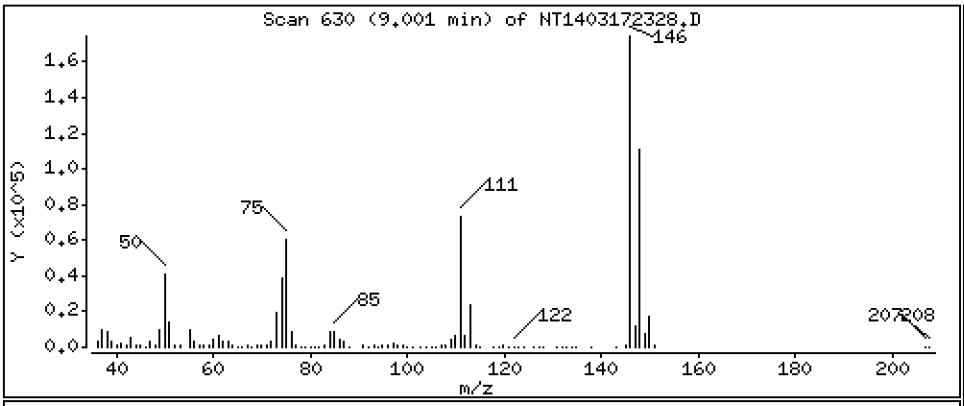
Operator: JGR

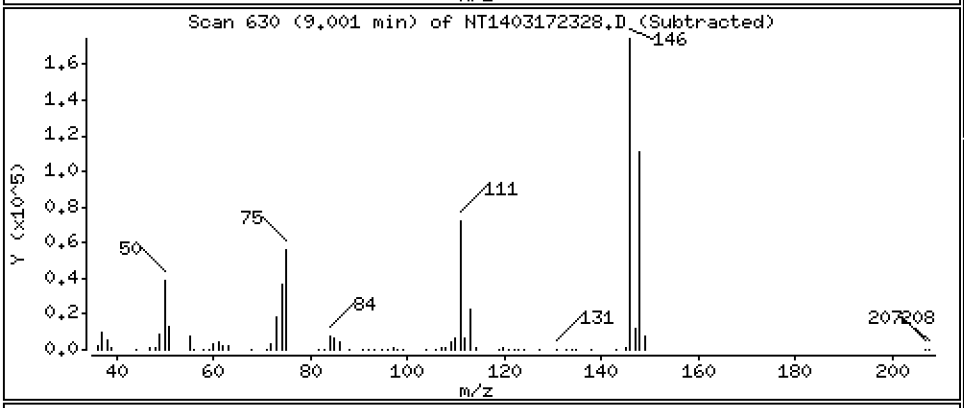
Column phase: ZB-5msi

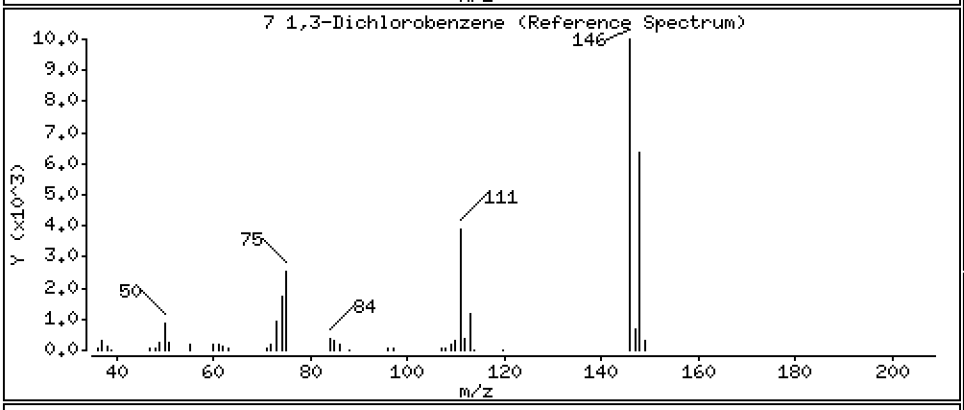
Column diameter: 0.25

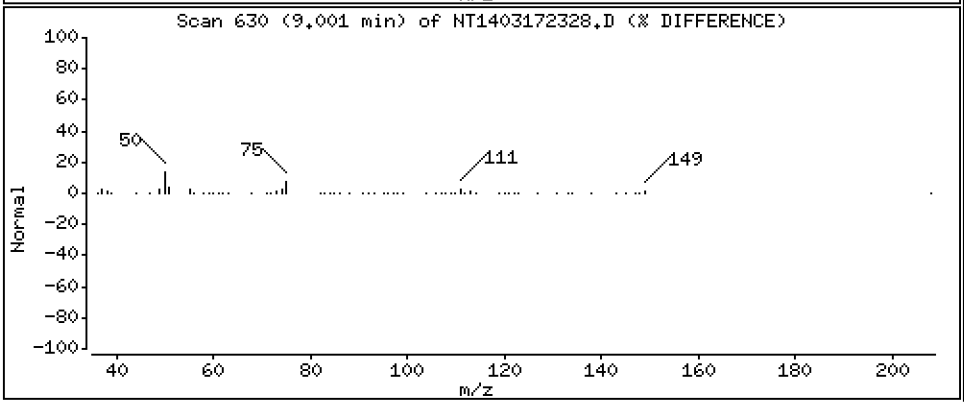
7 1,3-Dichlorobenzene

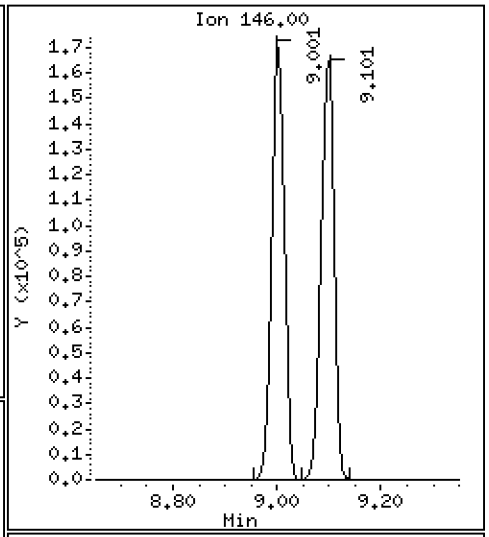
Concentration: 3.558 ug/mL

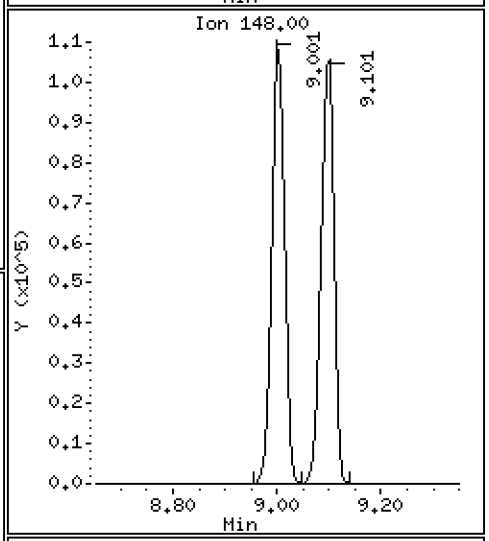


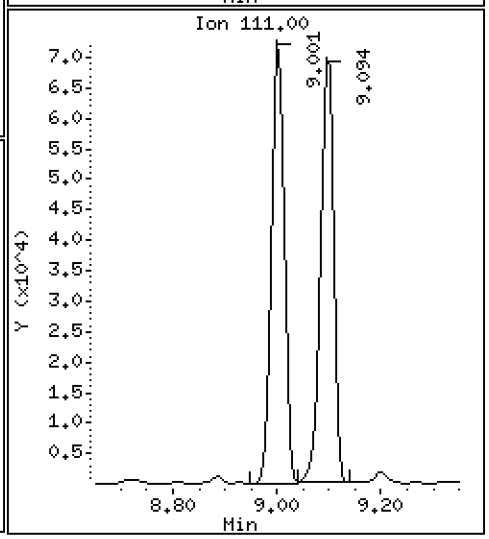












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS1

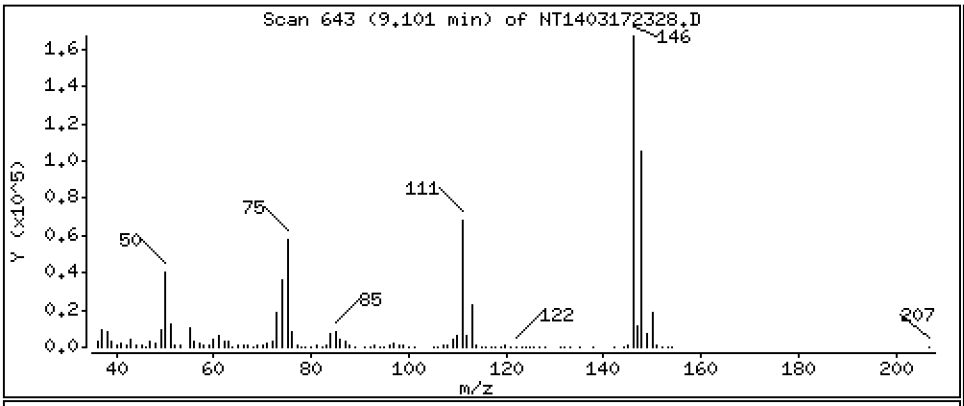
Operator: JGR

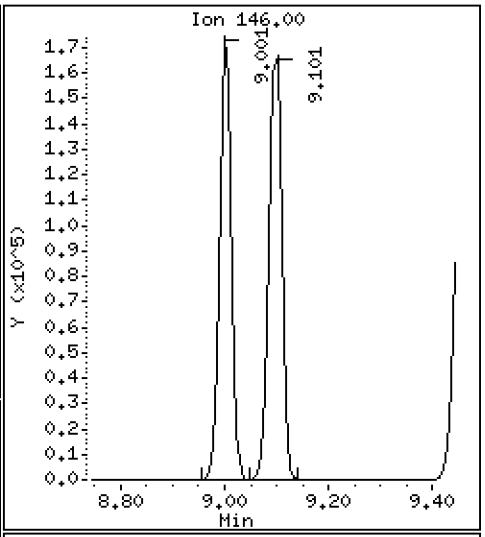
Column phase: ZB-5msi

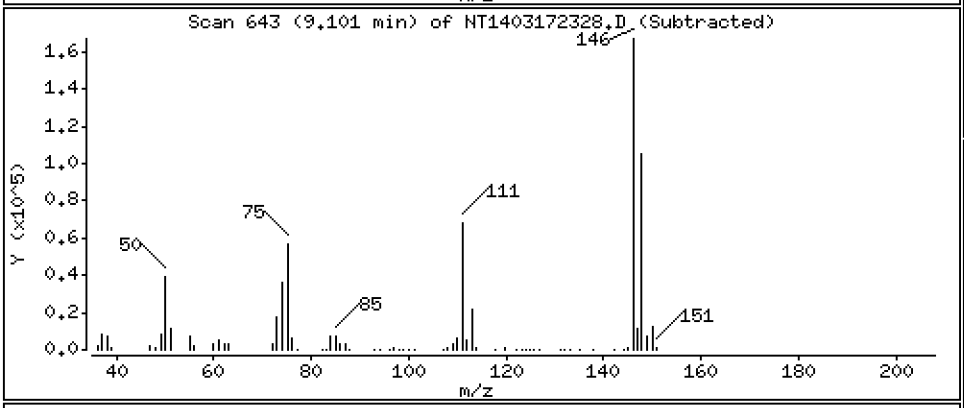
Column diameter: 0.25

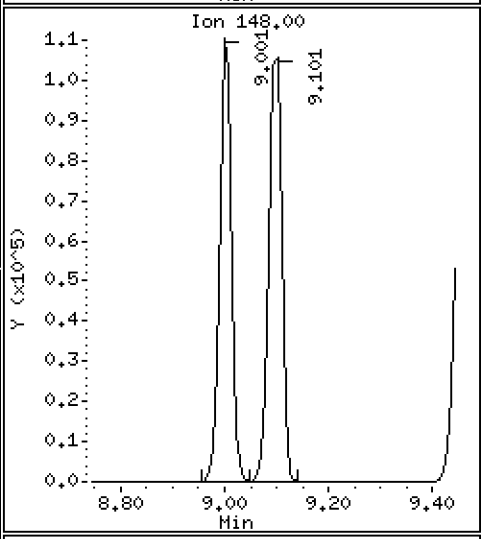
9 1,4-Dichlorobenzene

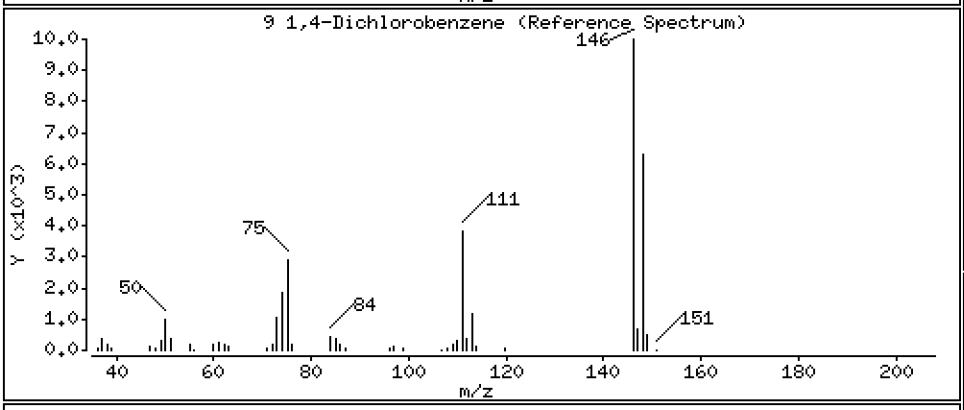
Concentration: 3.628 ug/mL

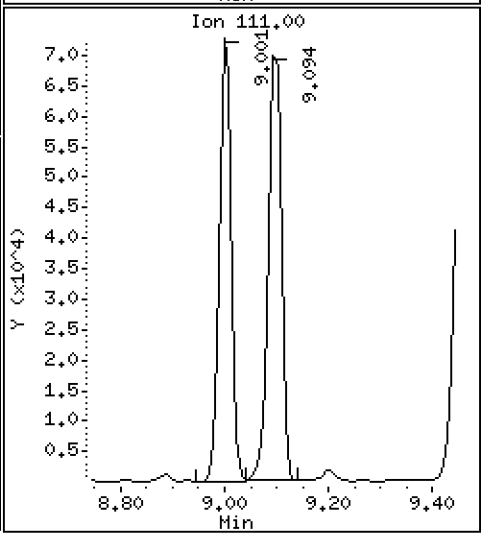


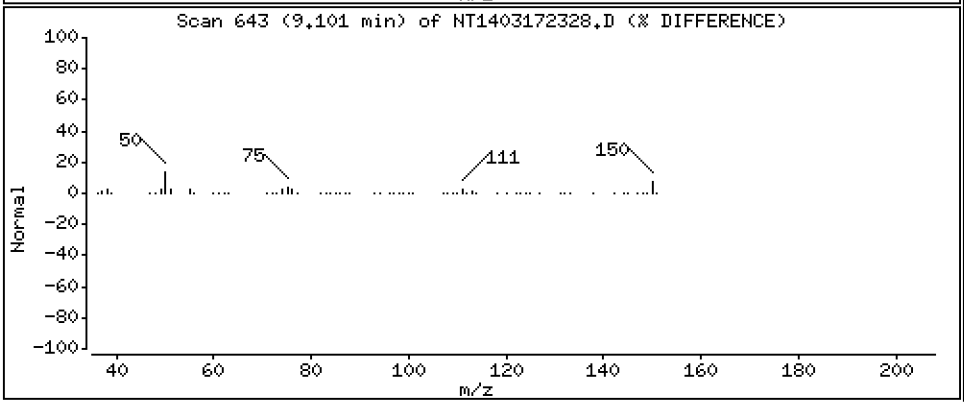












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS1

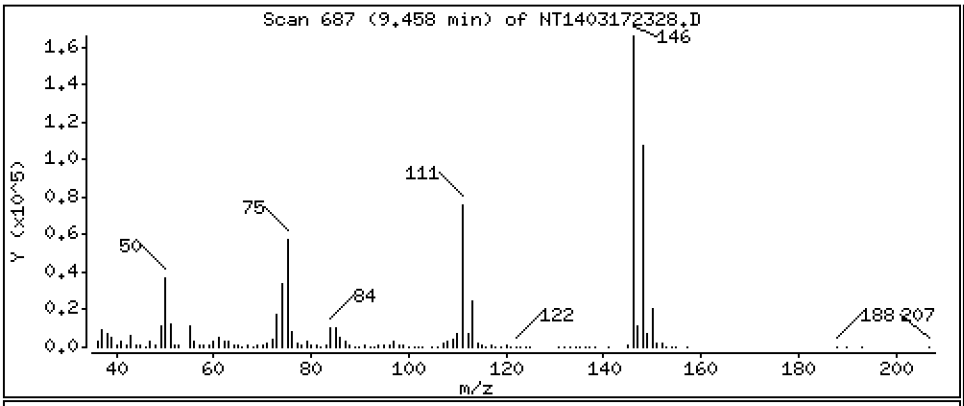
Operator: JGR

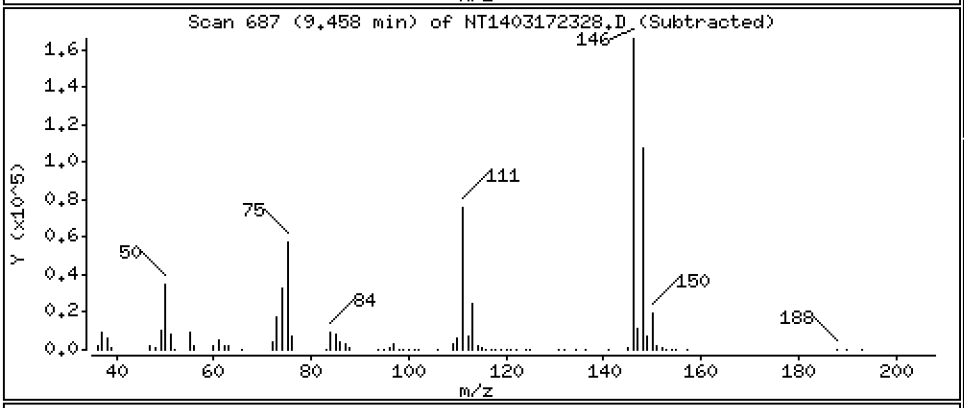
Column phase: ZB-5msi

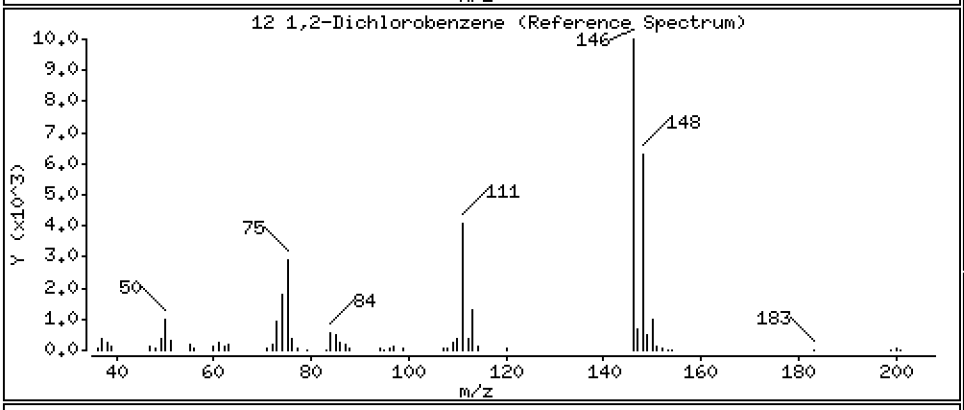
Column diameter: 0.25

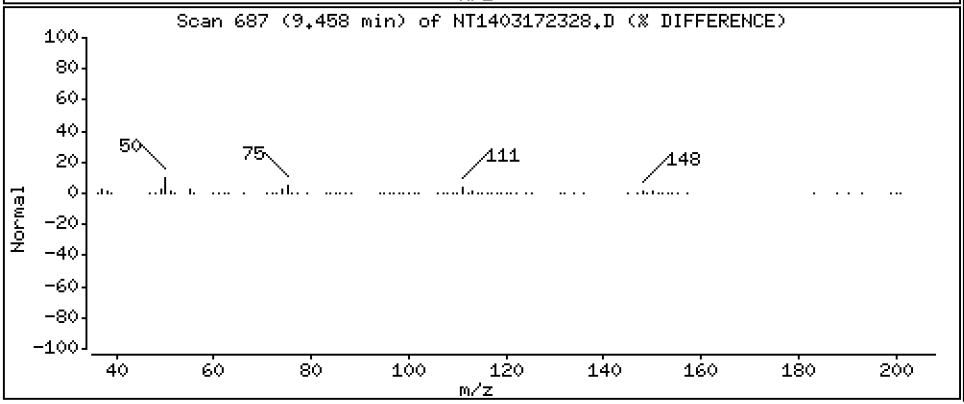
12 1,2-Dichlorobenzene

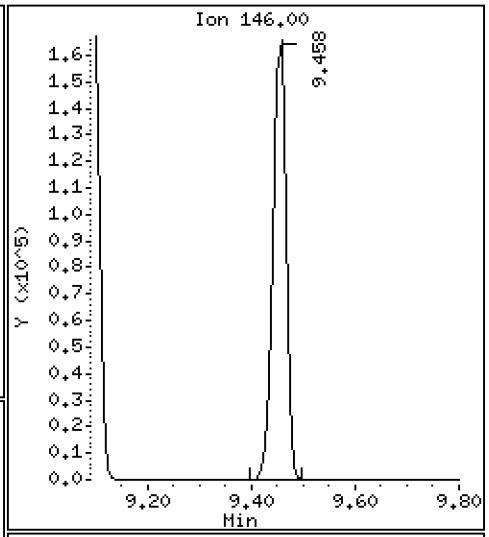
Concentration: 3.668 ug/mL

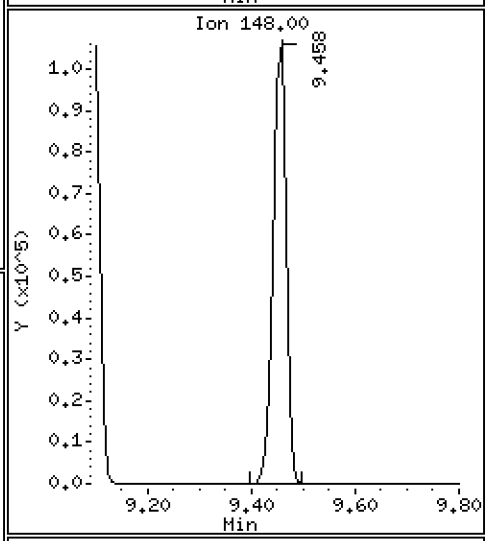


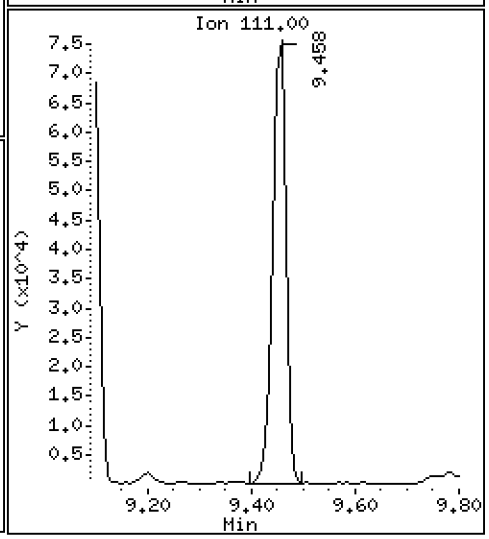












Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS1

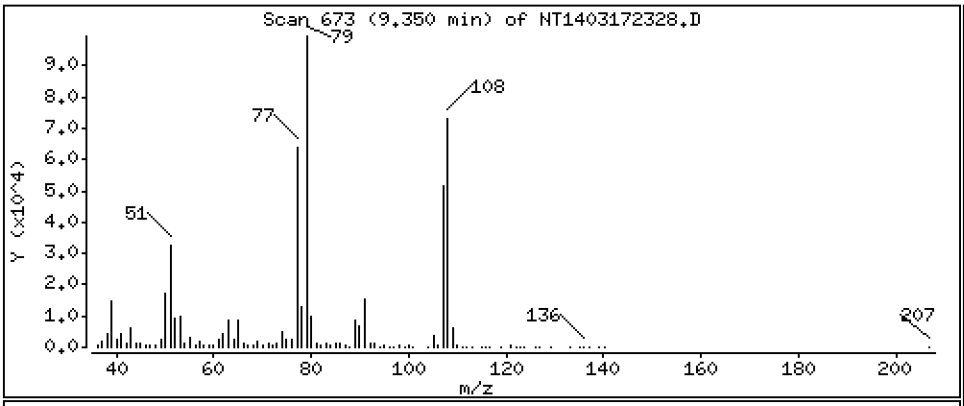
Operator: JGR

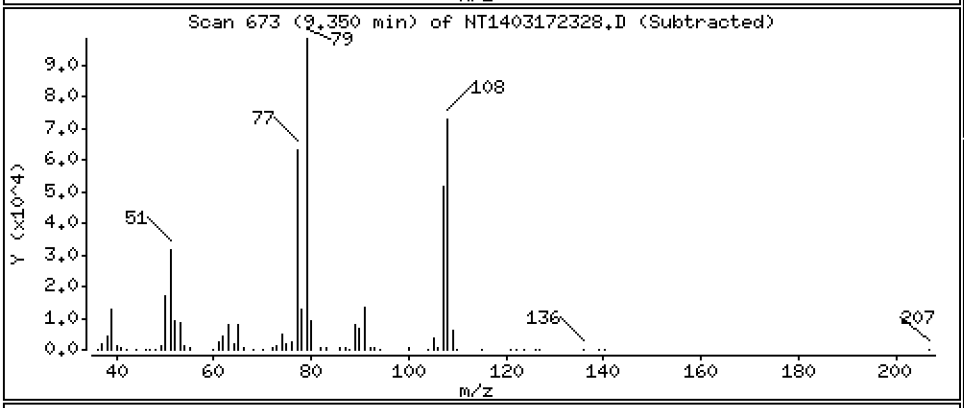
Column phase: ZB-5msi

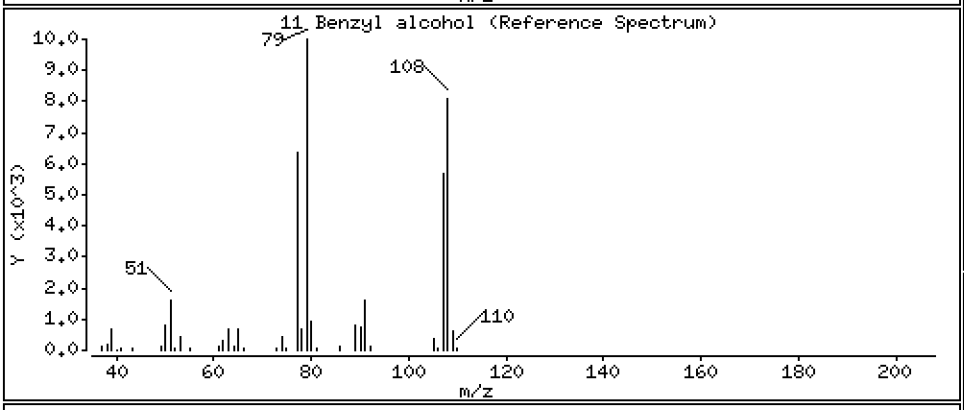
Column diameter: 0.25

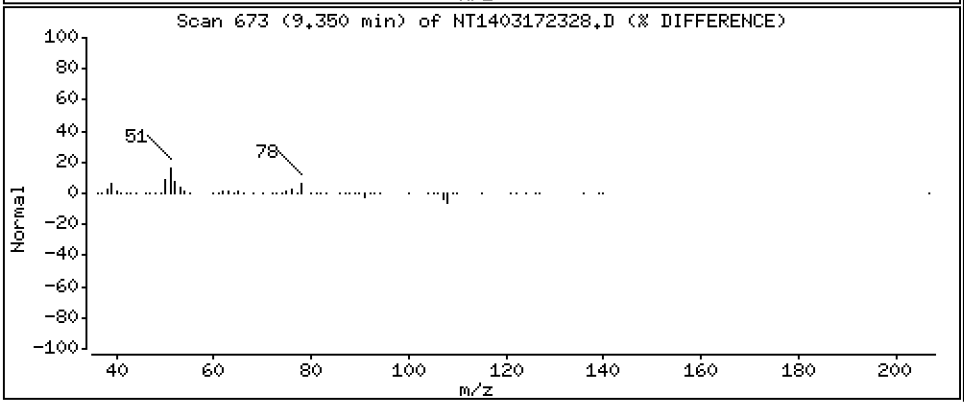
11 Benzyl alcohol

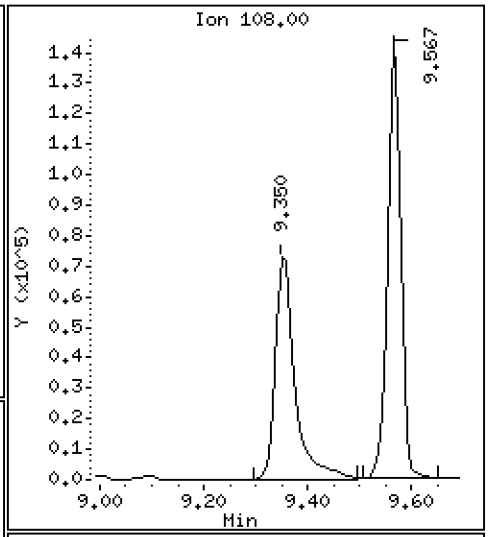
Concentration: 4.063 ug/mL

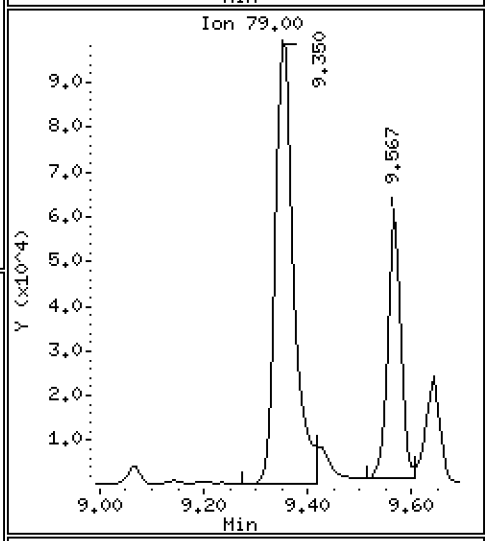


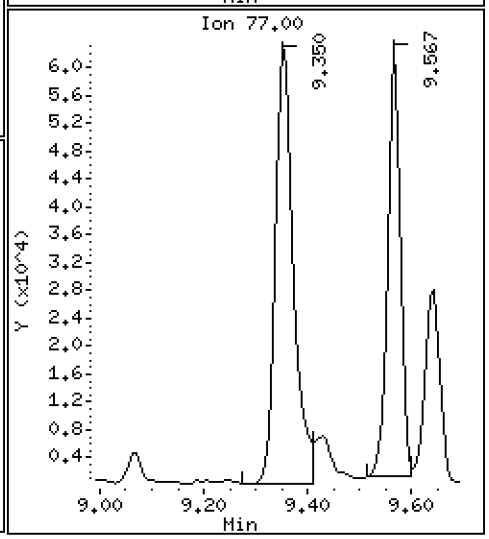












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS1

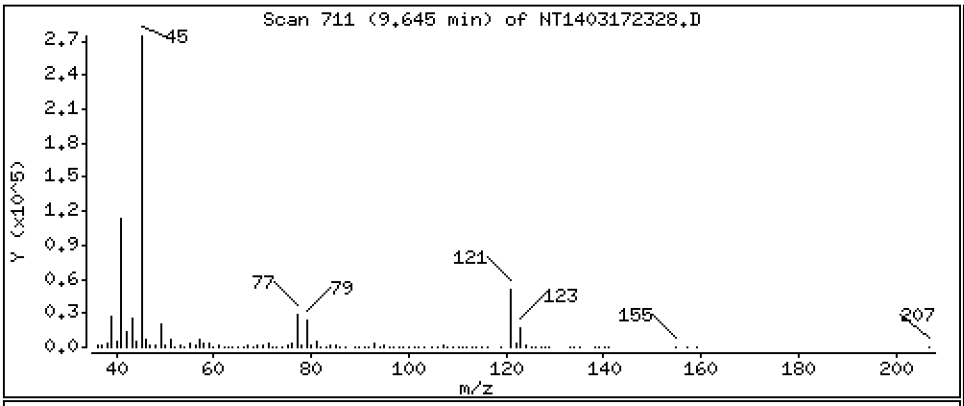
Operator: JGR

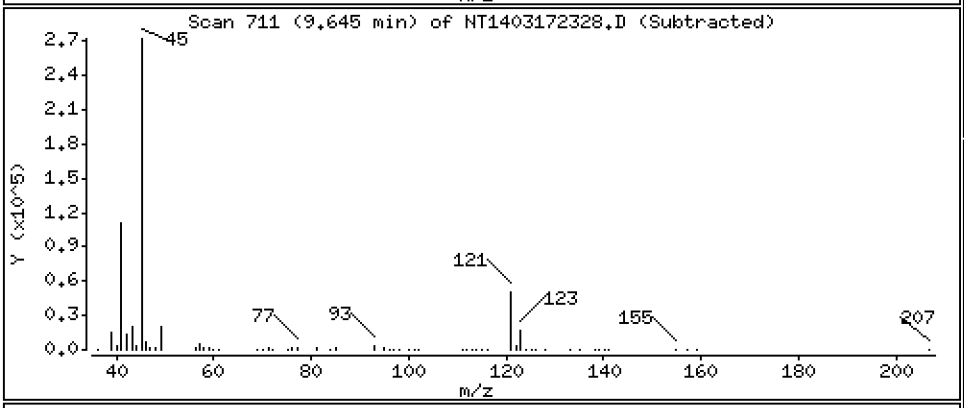
Column phase: ZB-5msi

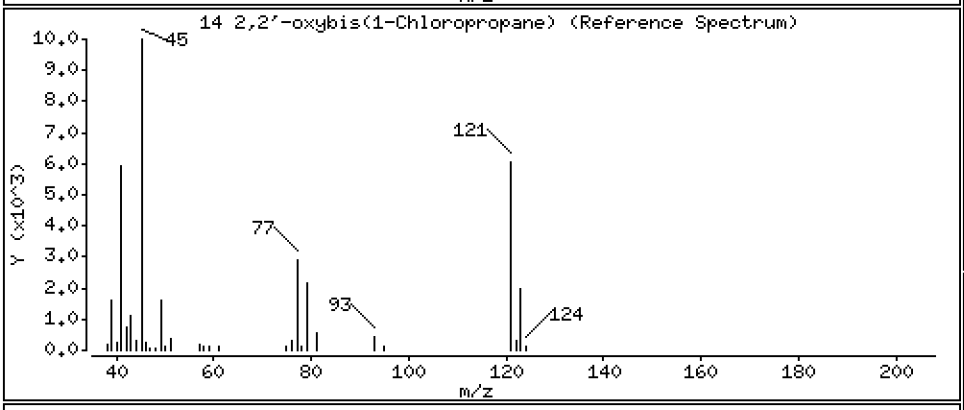
Column diameter: 0.25

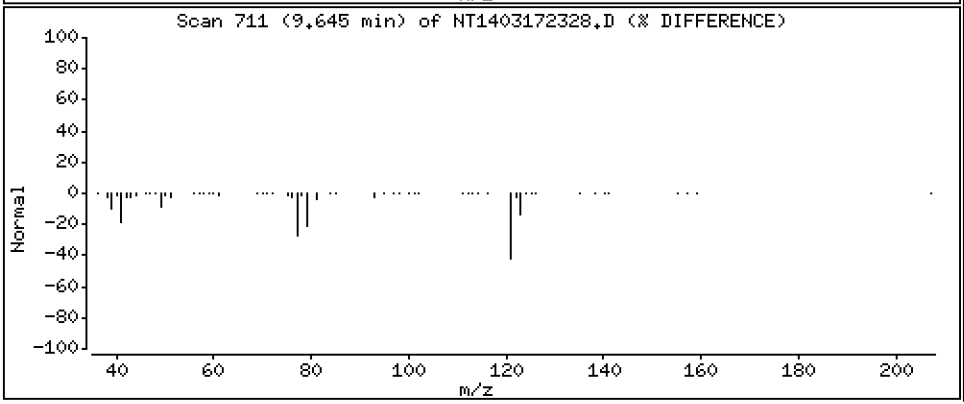
14 2,2'-oxybis(1-Chloropropane)

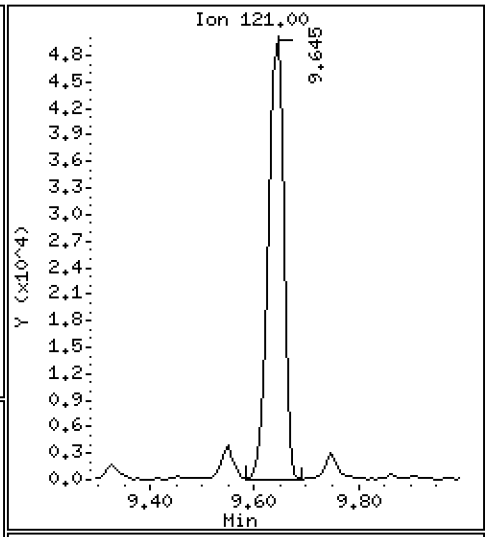
Concentration: 4.374 ug/mL

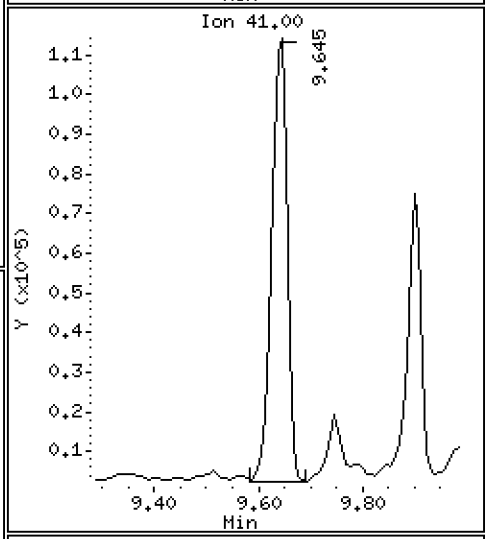


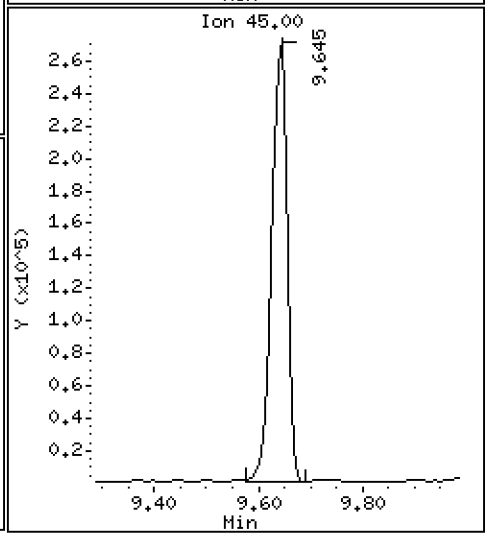












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS1

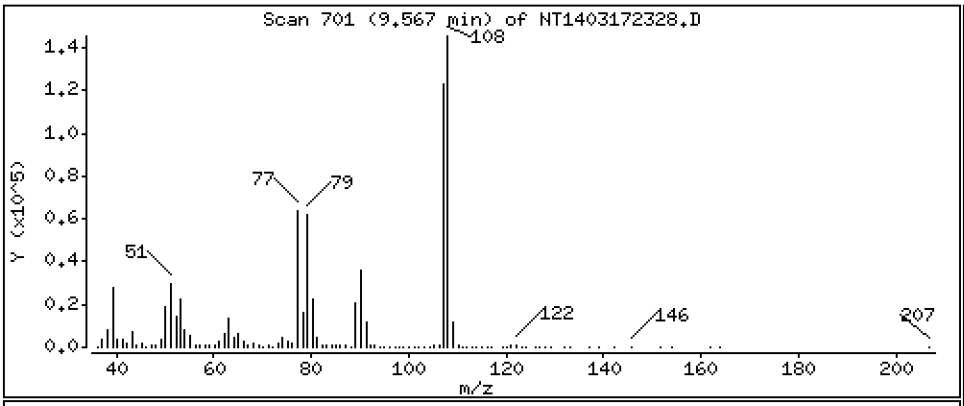
Operator: JGR

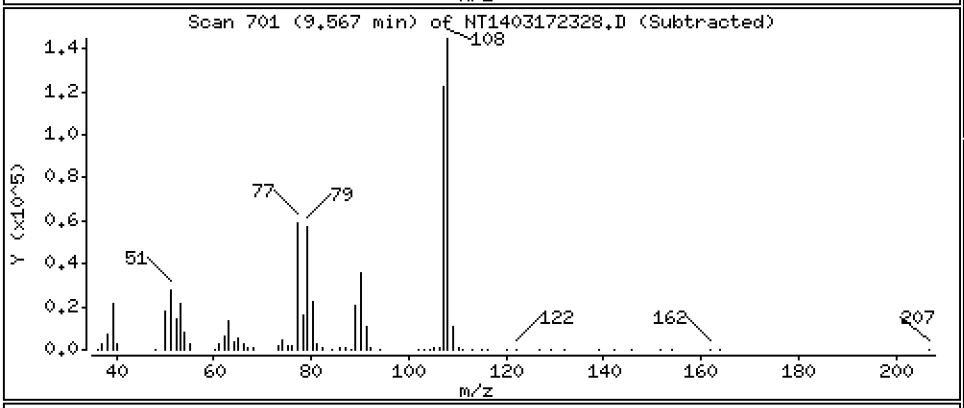
Column phase: ZB-5msi

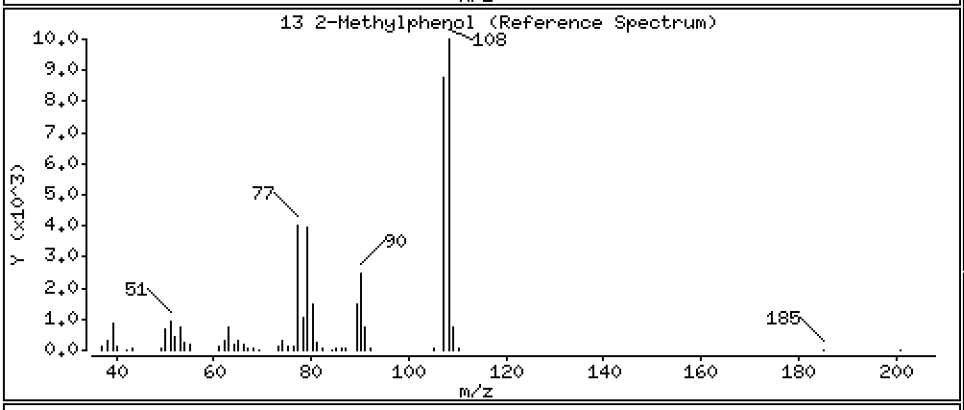
Column diameter: 0.25

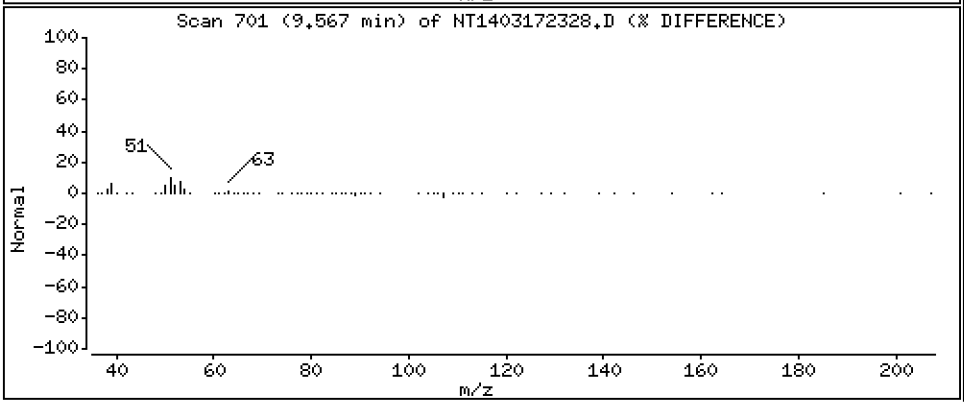
13 2-Methylphenol

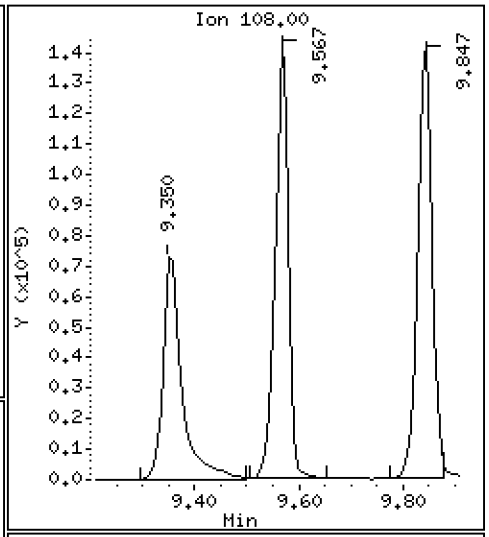
Concentration: 3.480 ug/mL

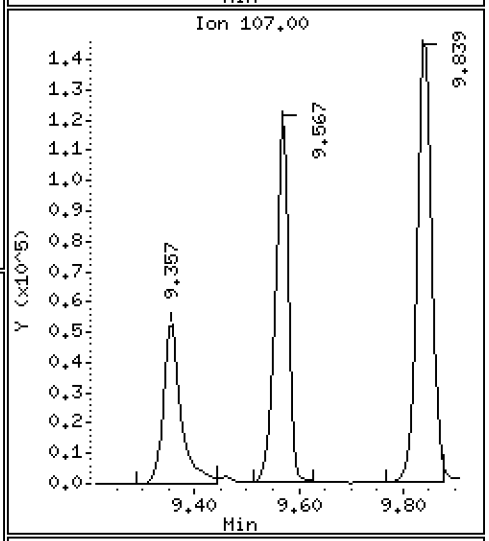


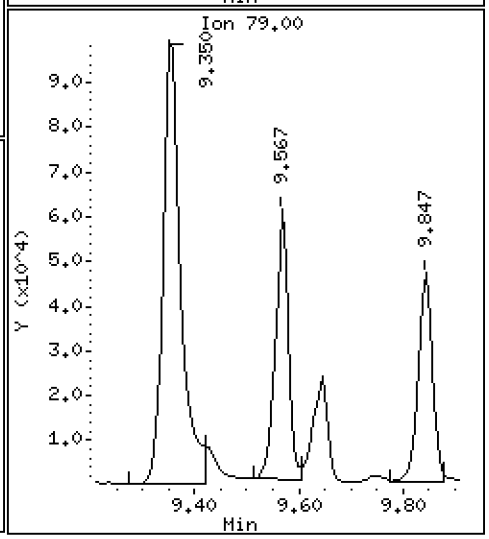












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS1

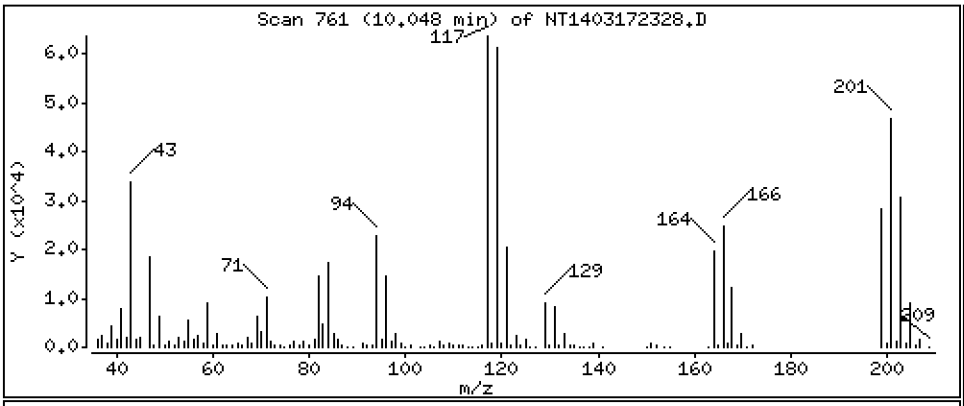
Operator: JGR

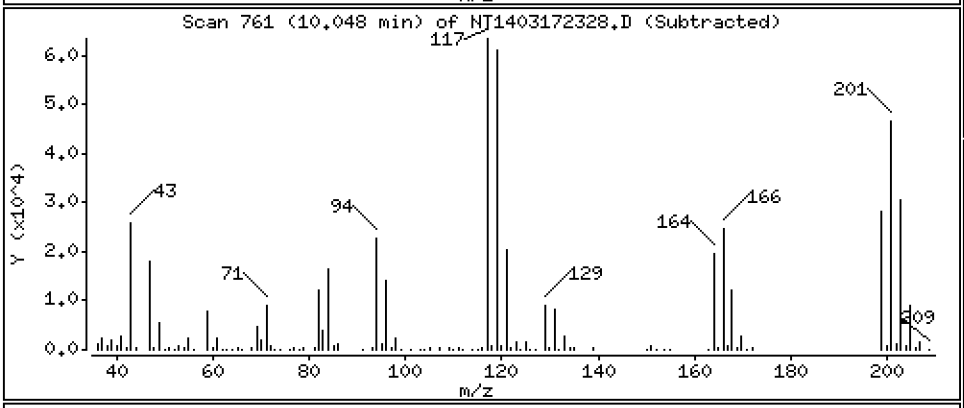
Column phase: ZB-5msi

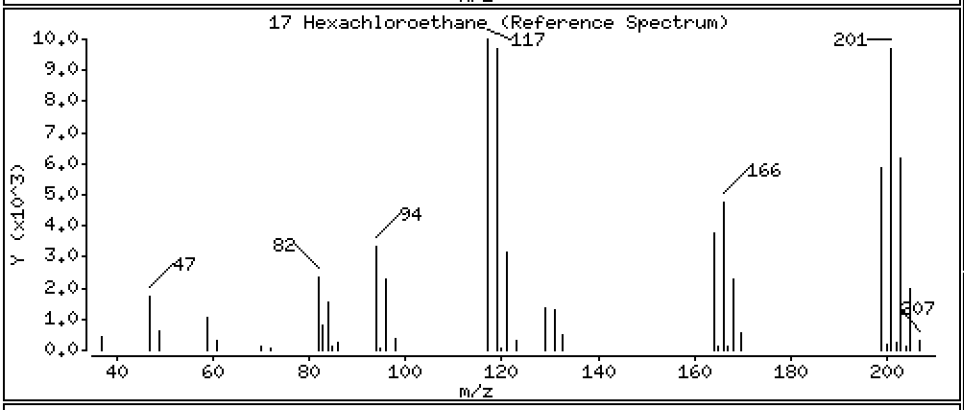
Column diameter: 0.25

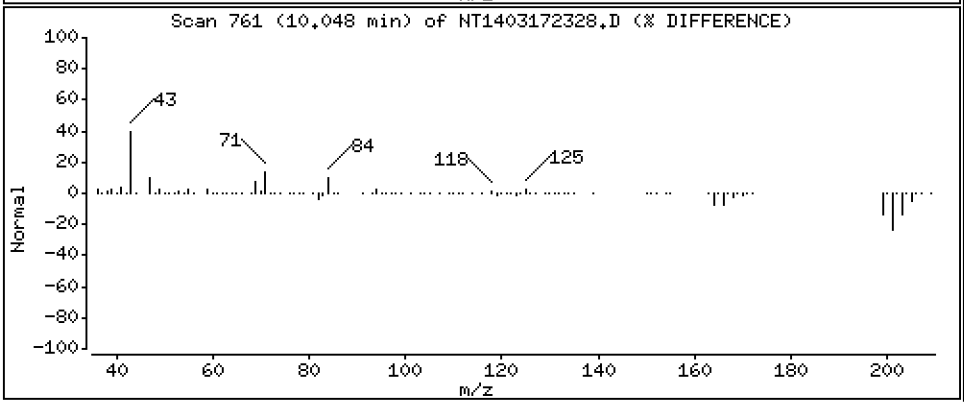
17 Hexachloroethane

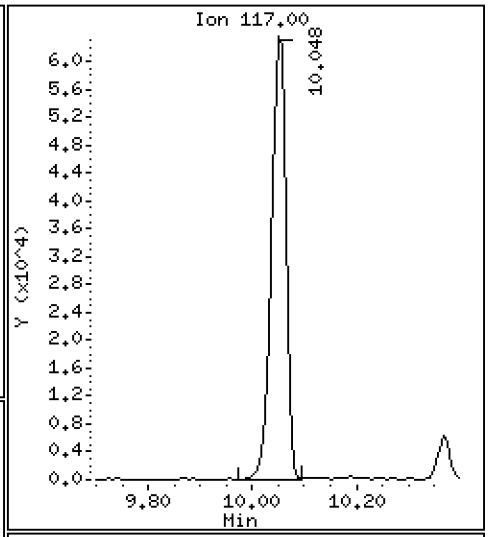
Concentration: 3.666 ug/mL

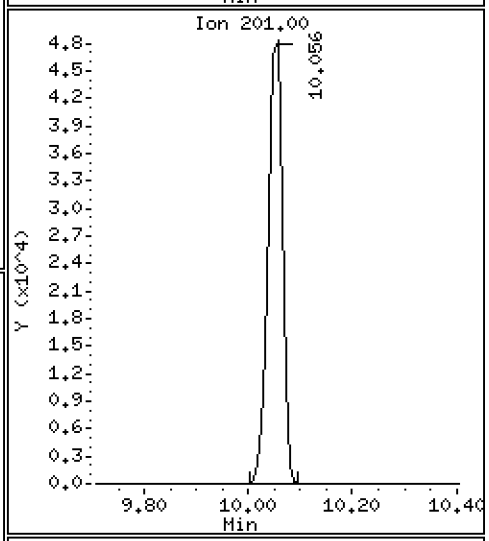


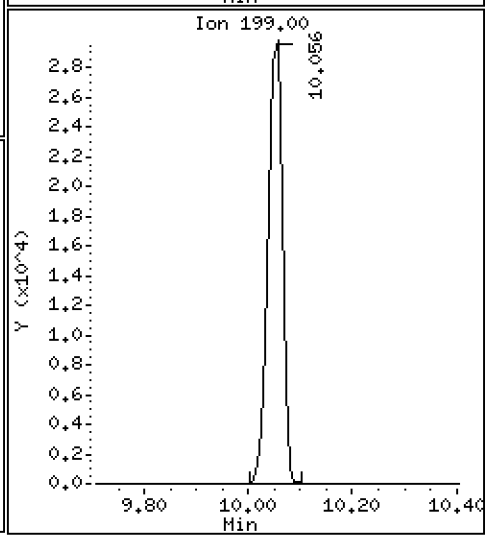












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS1

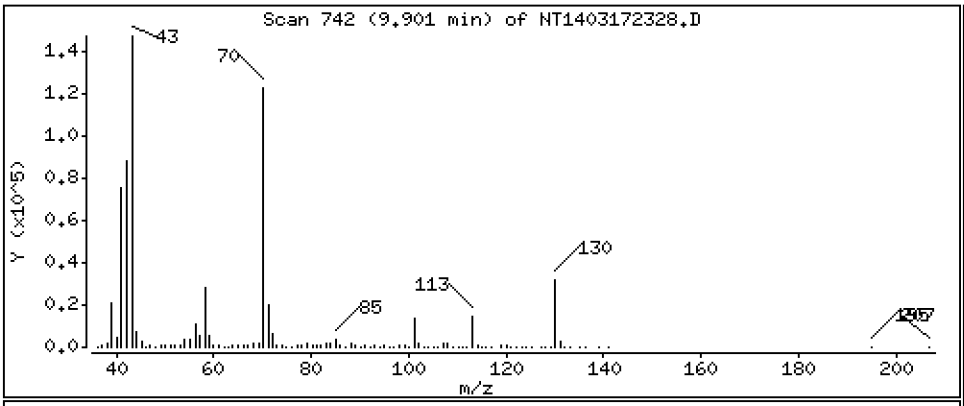
Operator: JGR

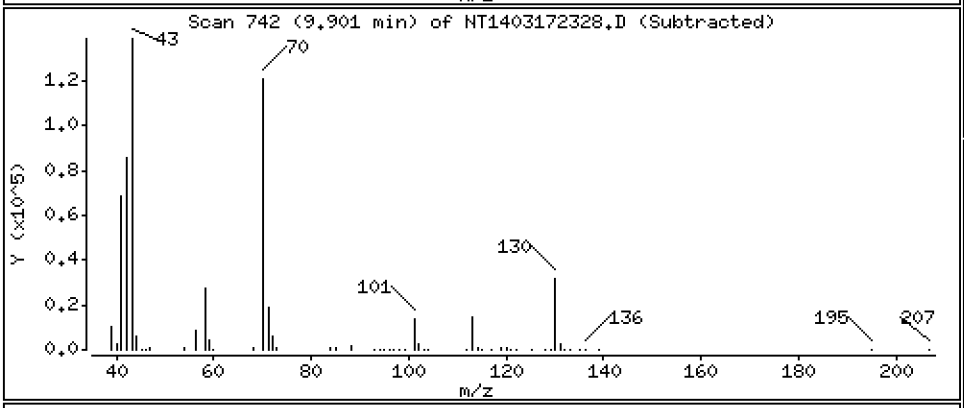
Column phase: ZB-5msi

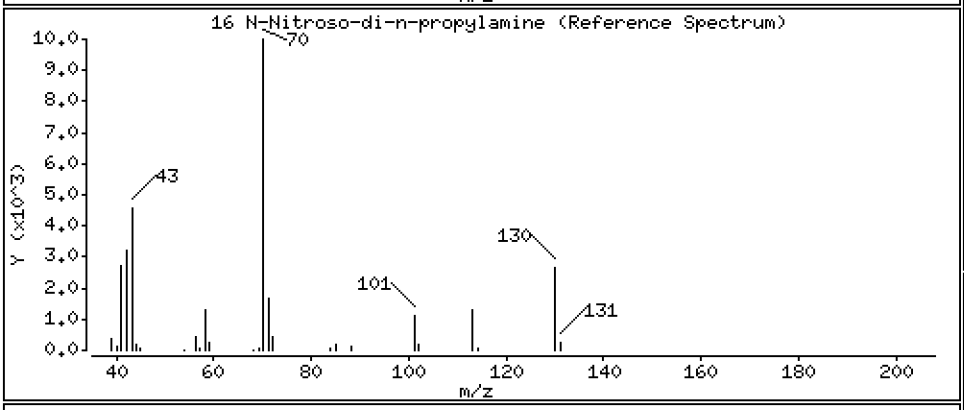
Column diameter: 0.25

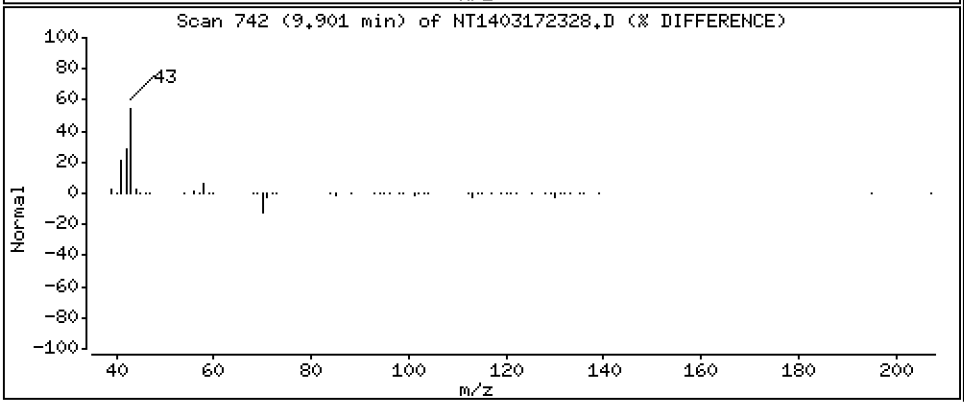
16 N-Nitroso-di-n-propylamine

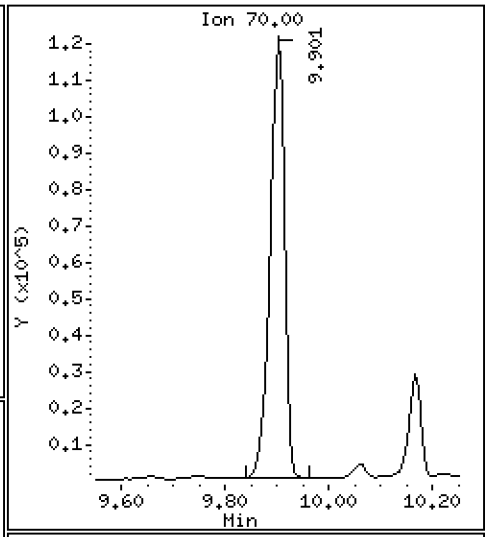
Concentration: 4.042 ug/mL

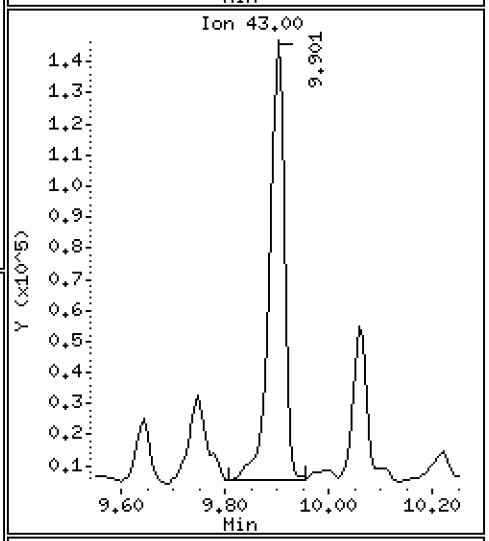


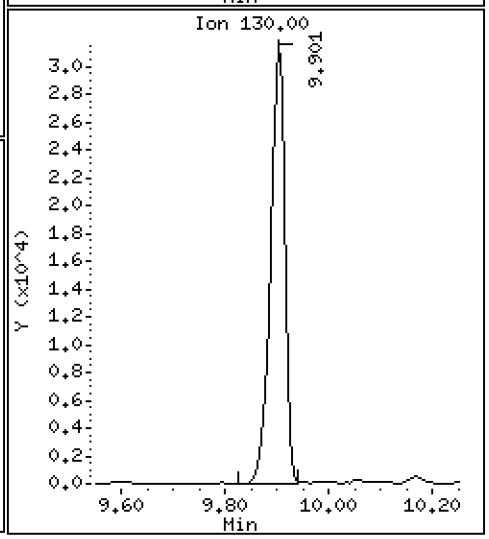












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS1

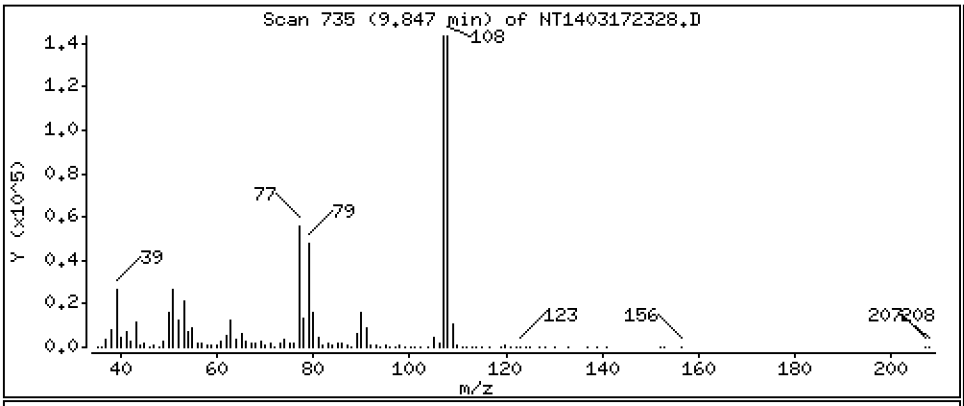
Operator: JGR

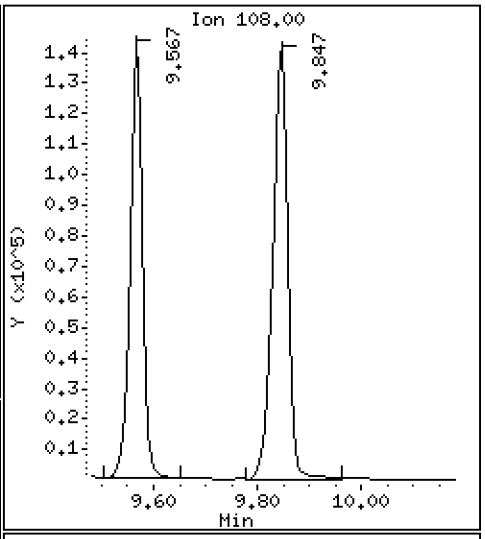
Column phase: ZB-5msi

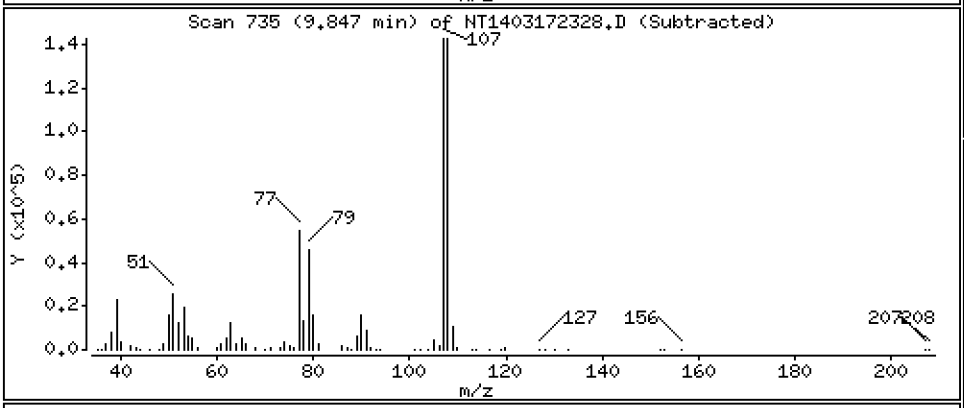
Column diameter: 0.25

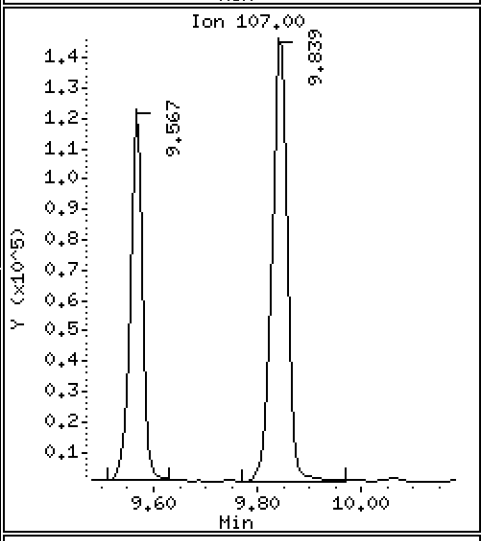
15 4-Methylphenol

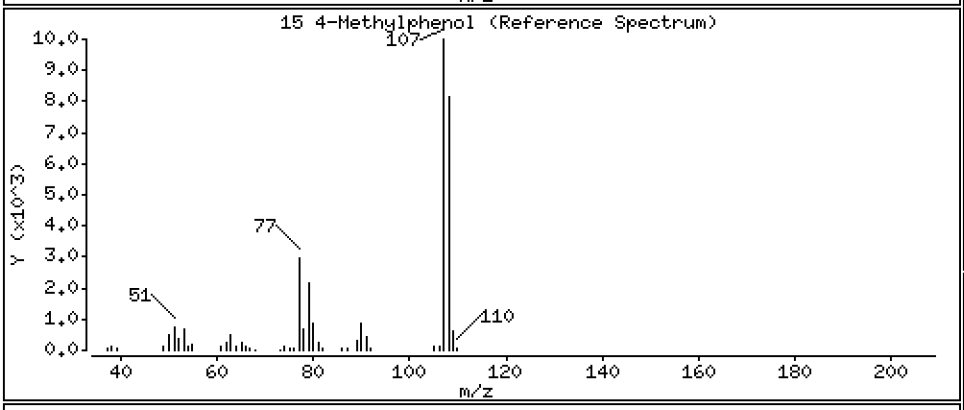
Concentration: 3.426 ug/mL

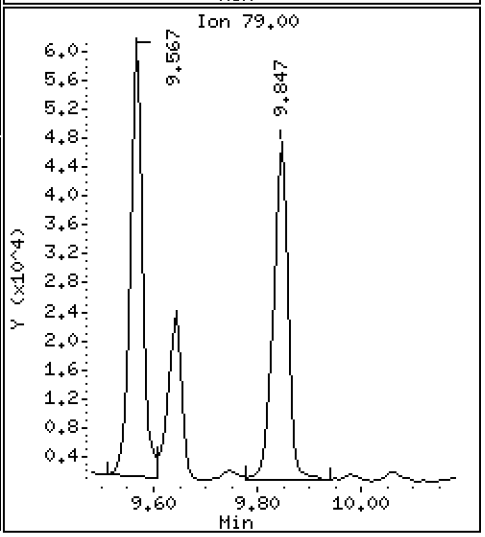


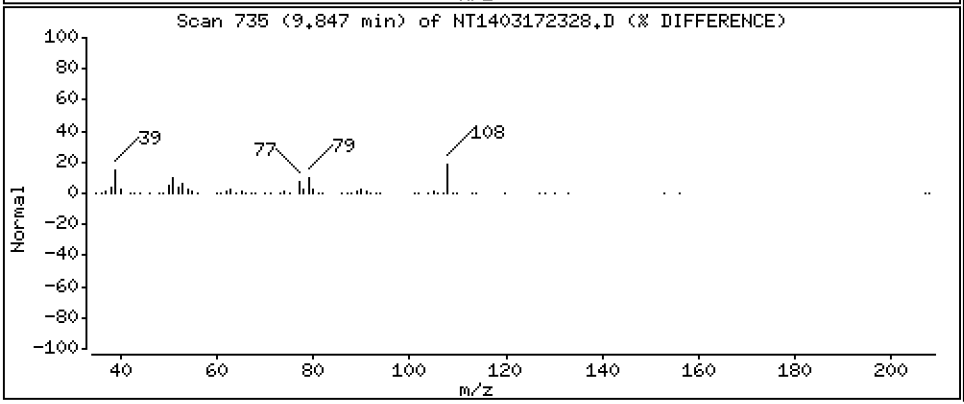












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS1

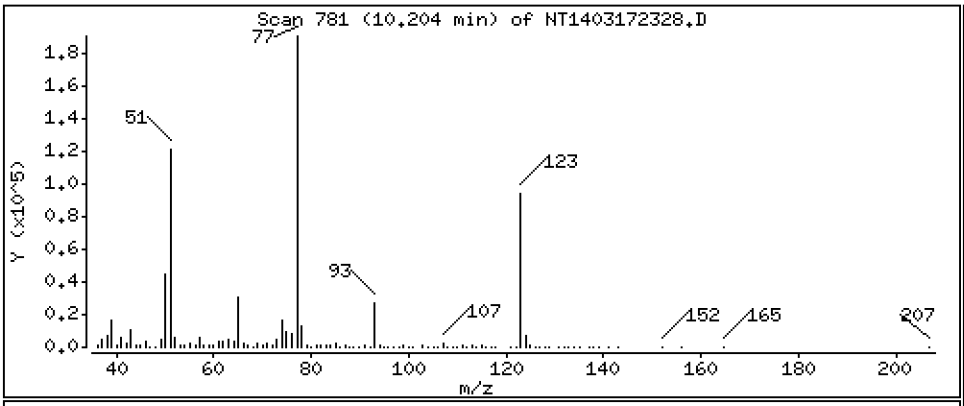
Operator: JGR

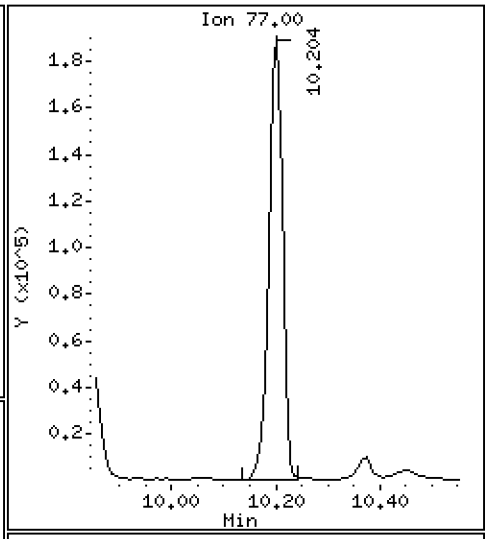
Column phase: ZB-5msi

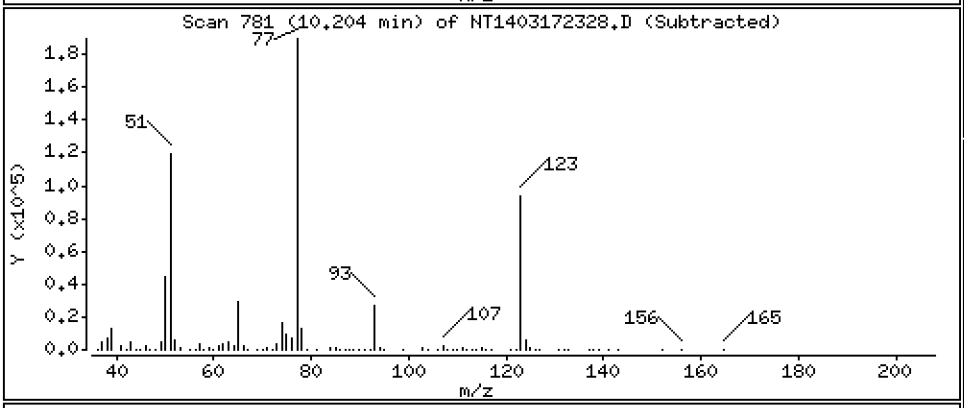
Column diameter: 0.25

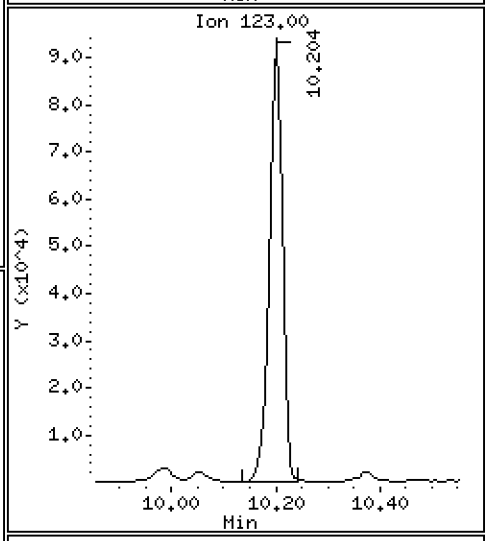
19 Nitrobenzene

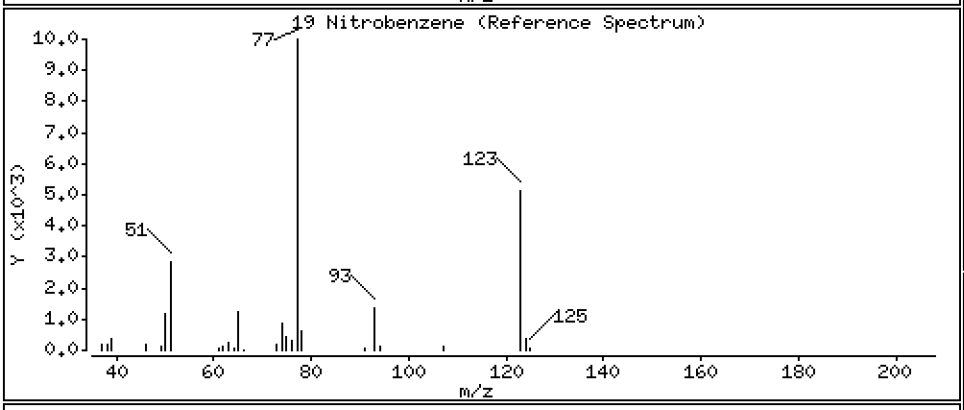
Concentration: 3.910 ug/mL

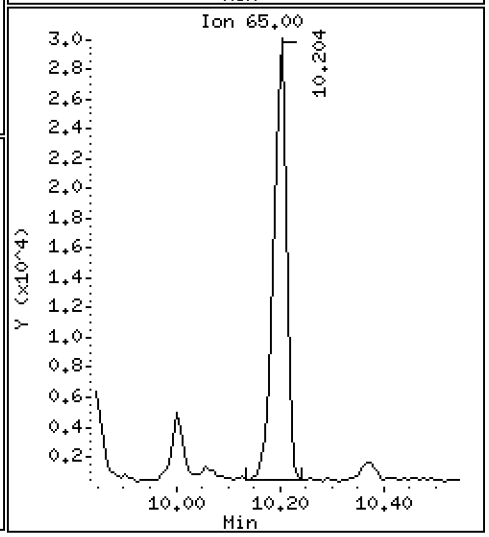


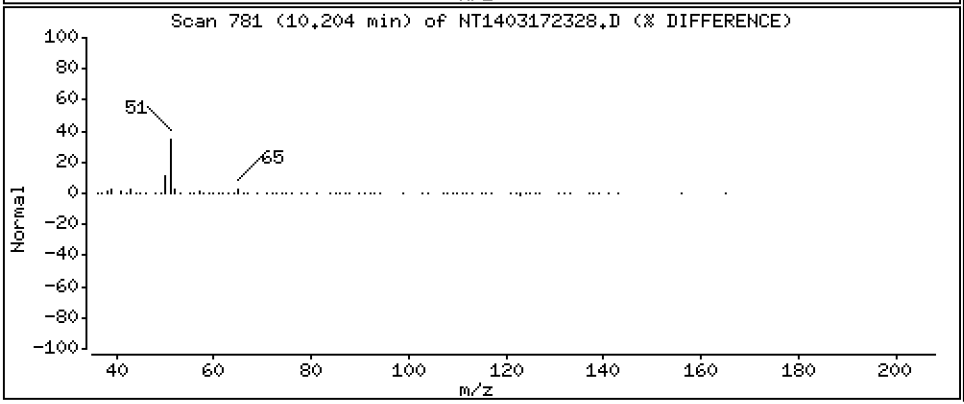












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS1

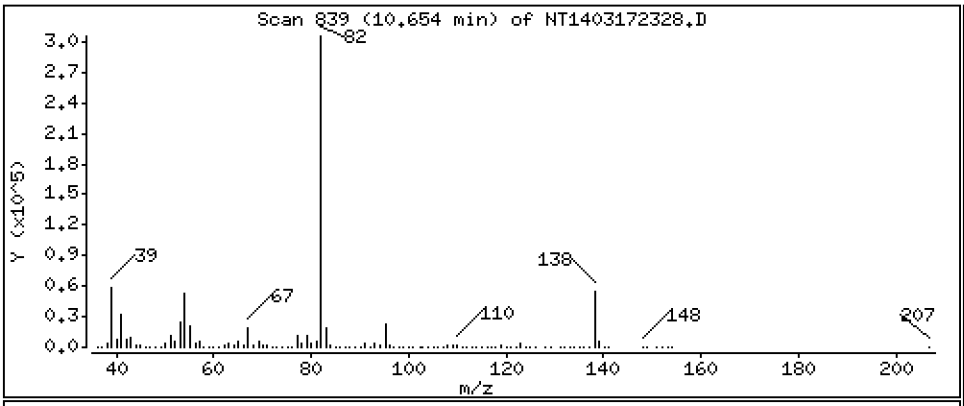
Operator: JGR

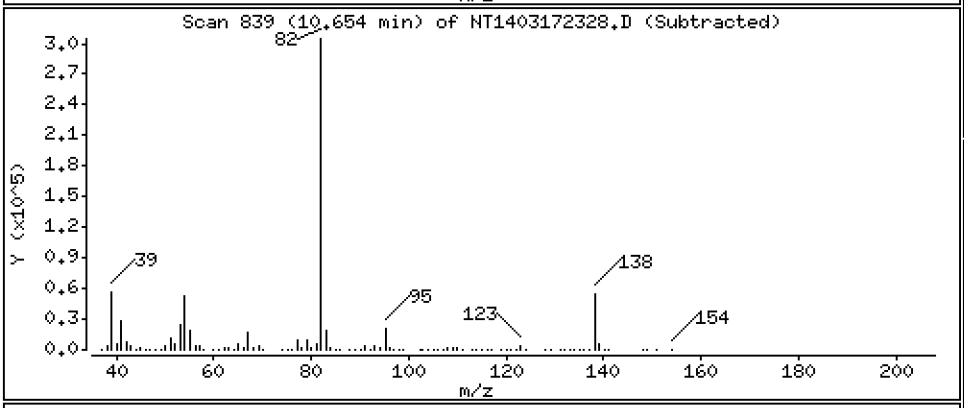
Column phase: ZB-5msi

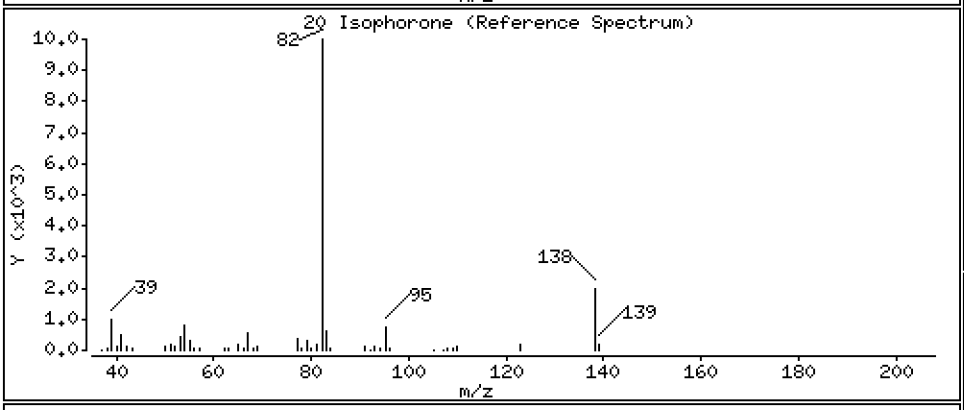
Column diameter: 0.25

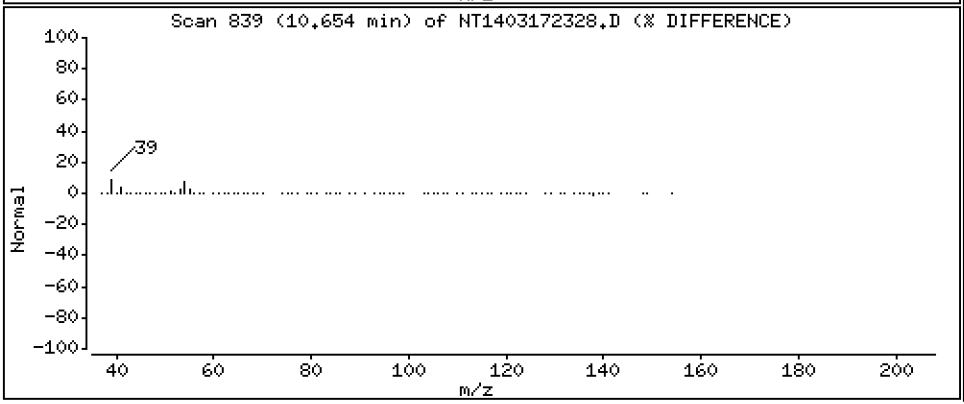
20 Isophorone

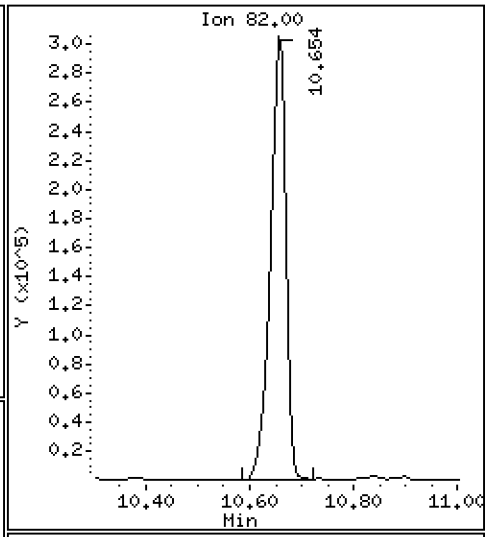
Concentration: 5.206 ug/mL

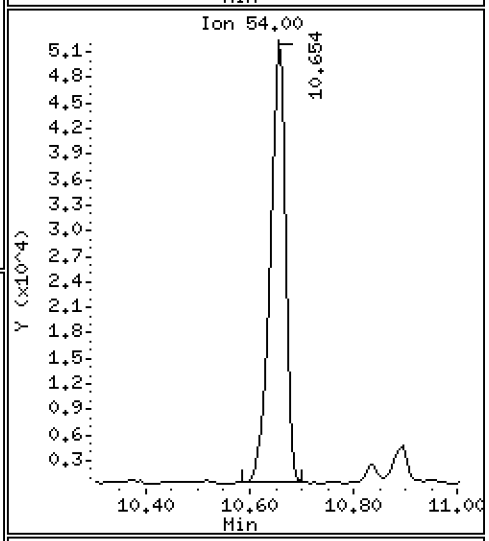


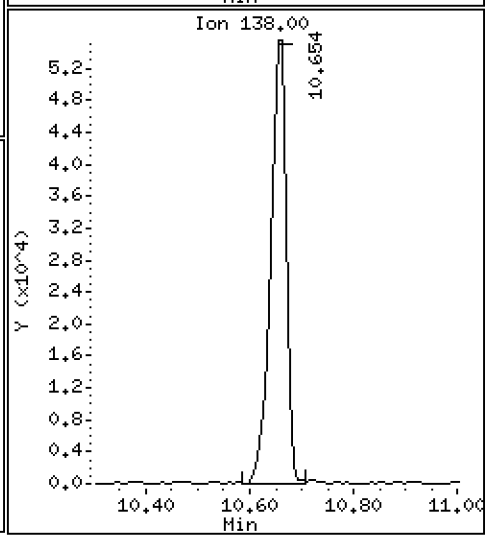












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS1

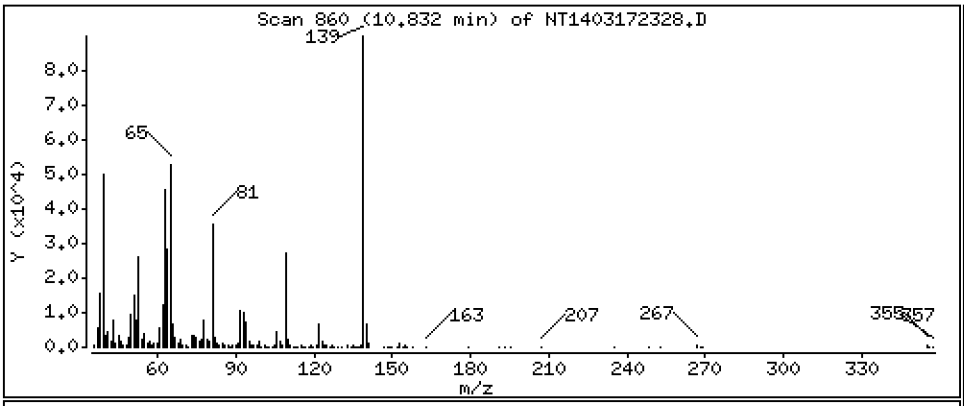
Operator: JGR

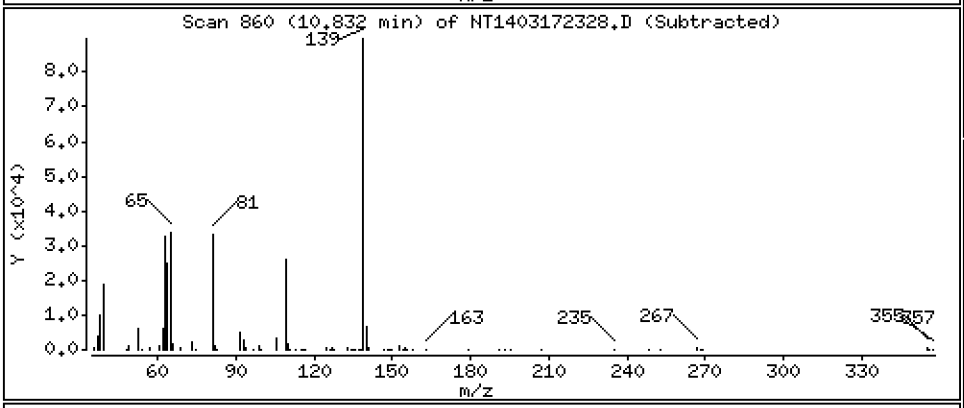
Column phase: ZB-5msi

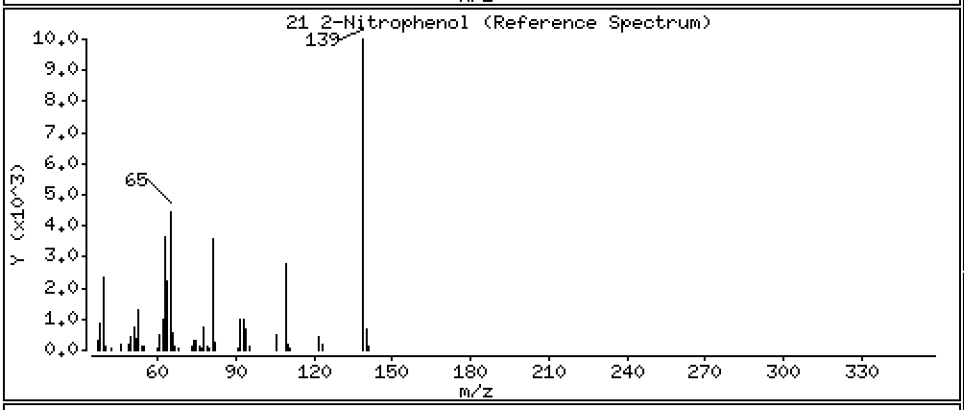
Column diameter: 0.25

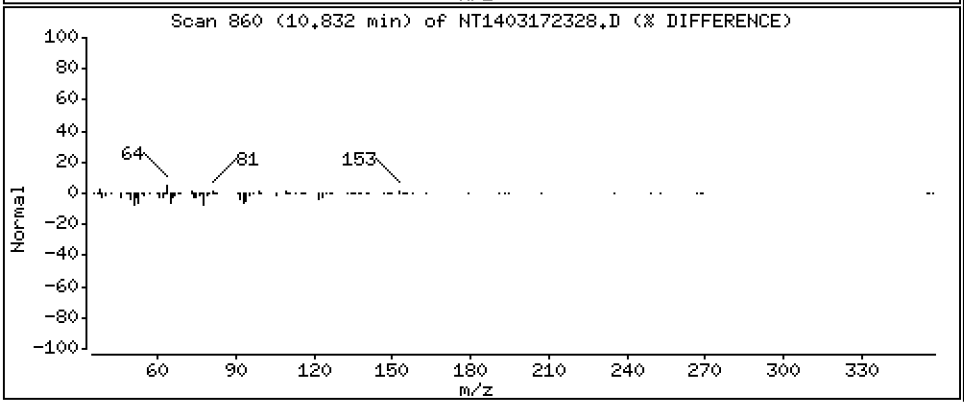
21 2-Nitrophenol

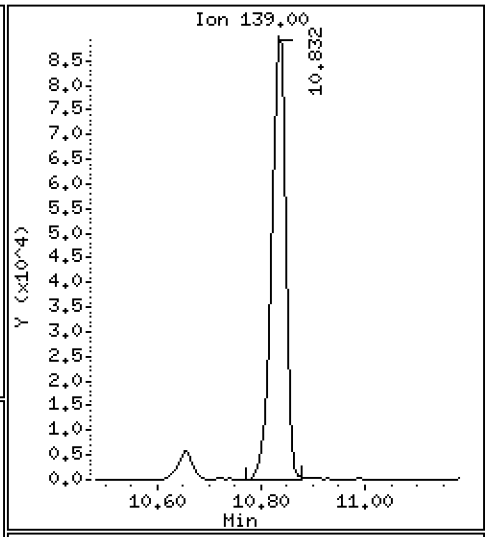
Concentration: 3.341 ug/mL

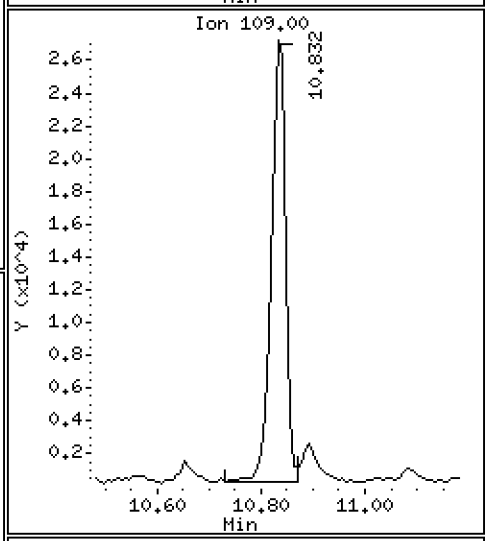


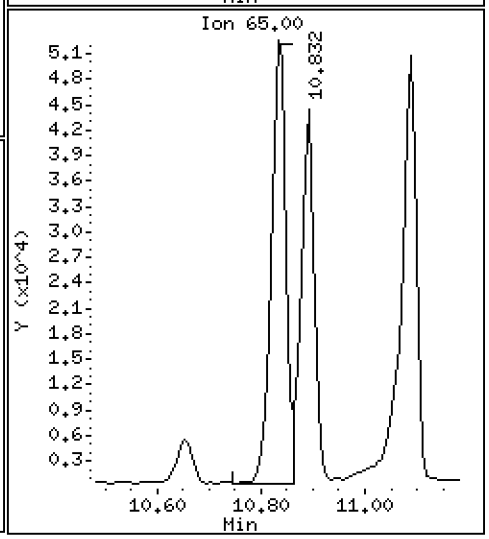












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS1

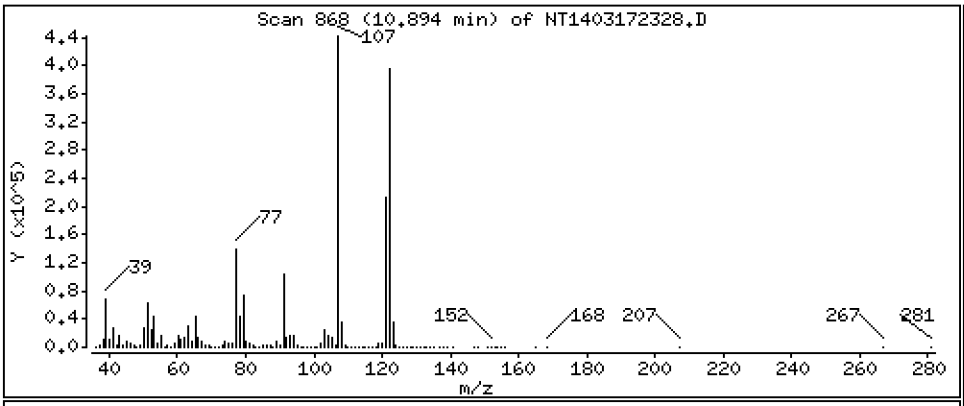
Operator: JGR

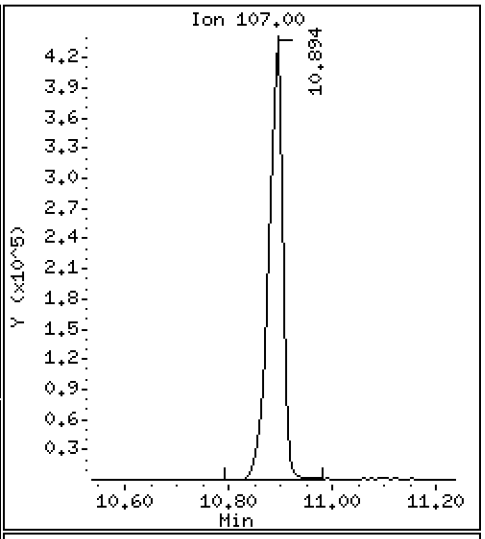
Column phase: ZB-5msi

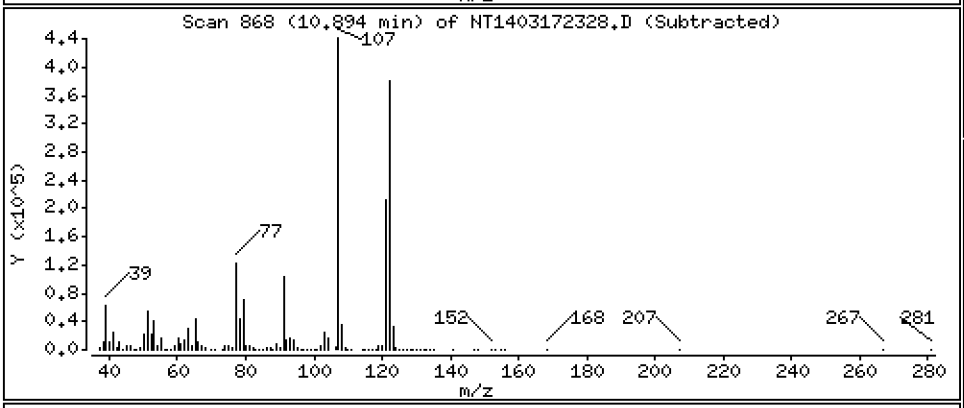
Column diameter: 0.25

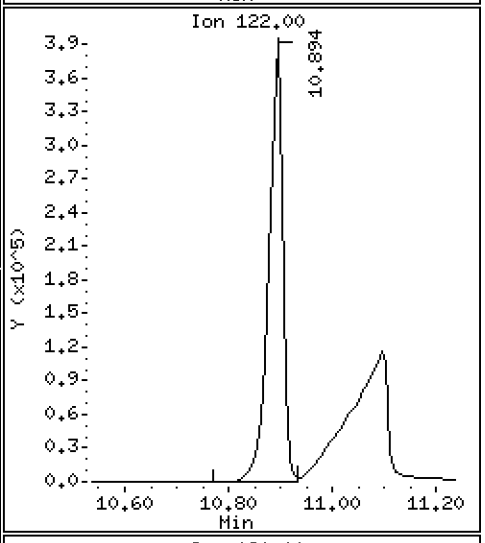
22 2,4-Dimethylphenol

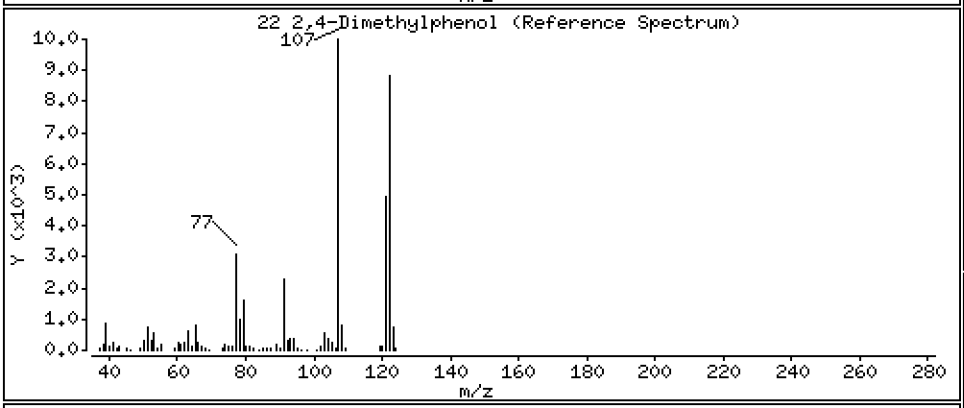
Concentration: 11.00 ug/mL

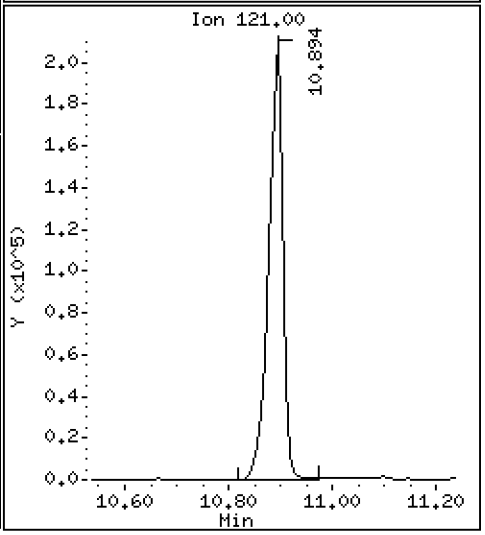


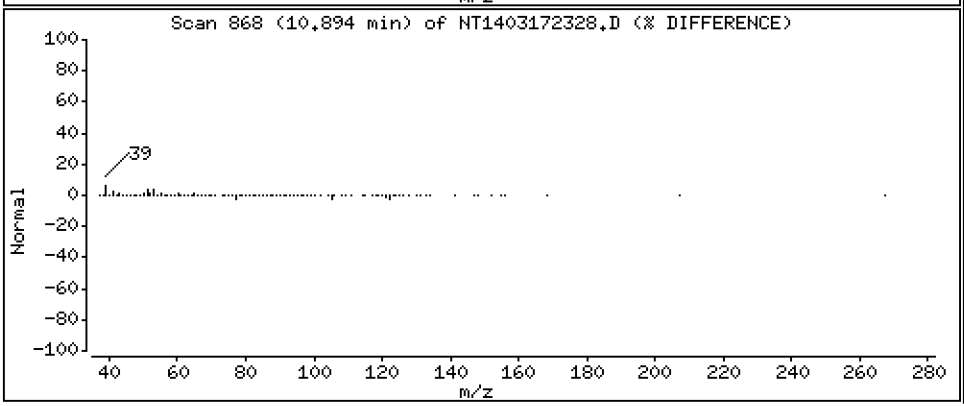












Date : 18-MAR-2023 06:42

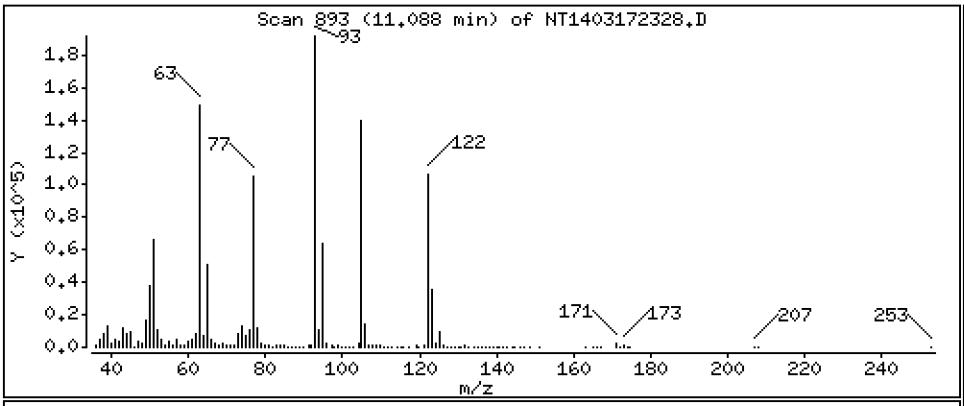
Client ID: Instrument: nt14.i

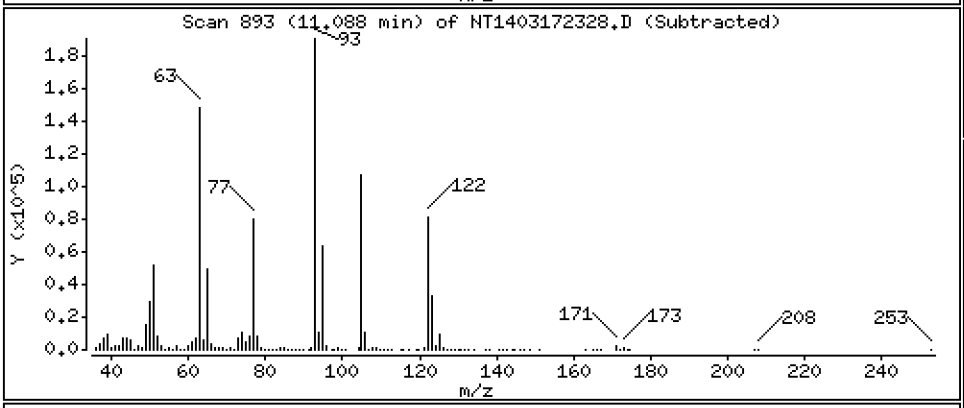
Sample Info: BLB0424-MS1

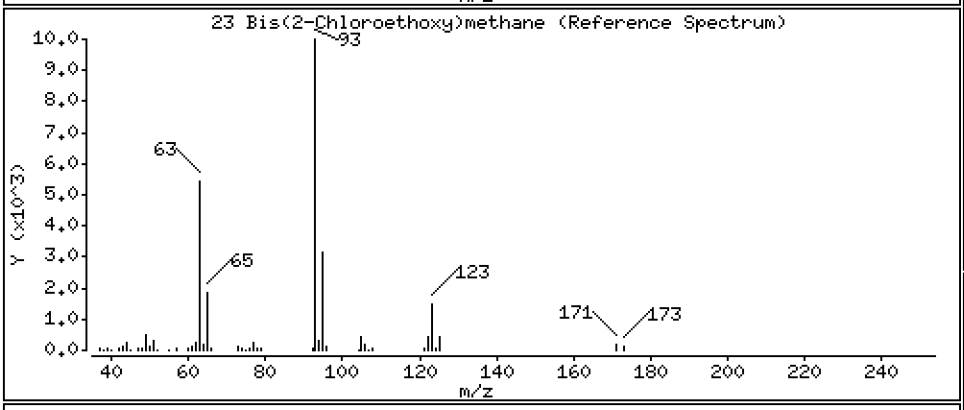
Operator: JGR

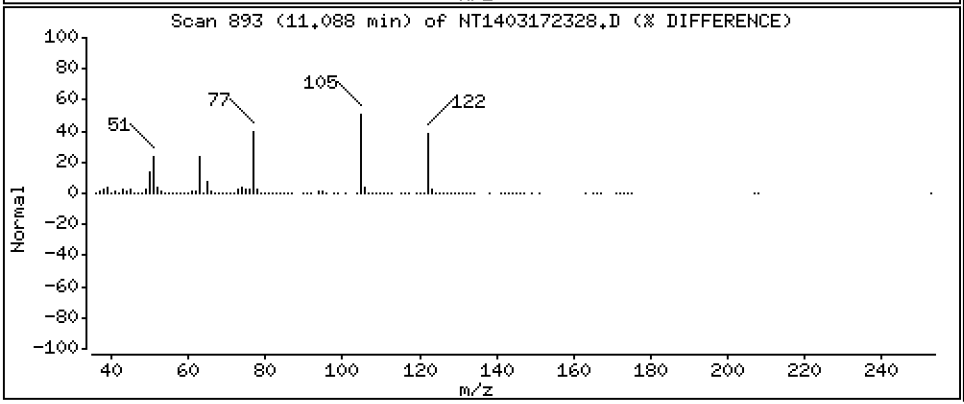
Column phase: ZB-5msi Column diameter: 0.25

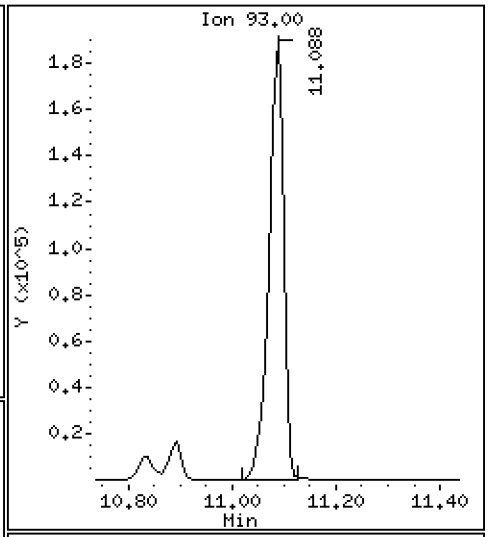
23 Bis(2-Chloroethoxy)methane Concentration: 4.518 ug/mL

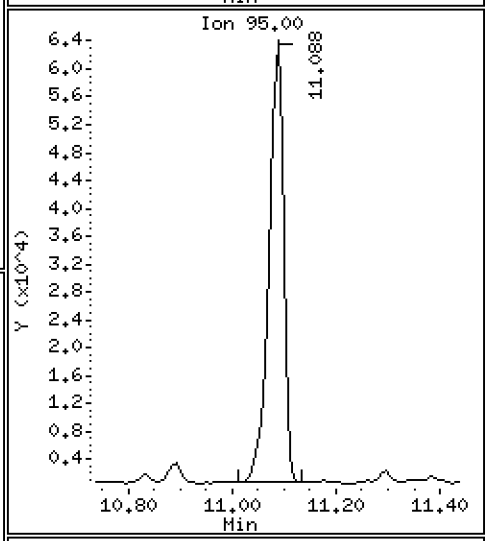


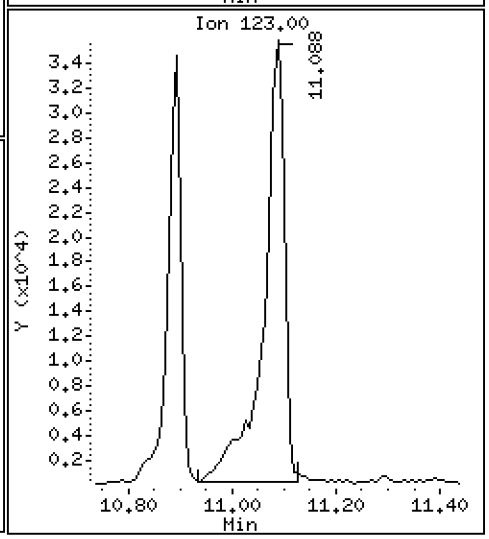












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS1

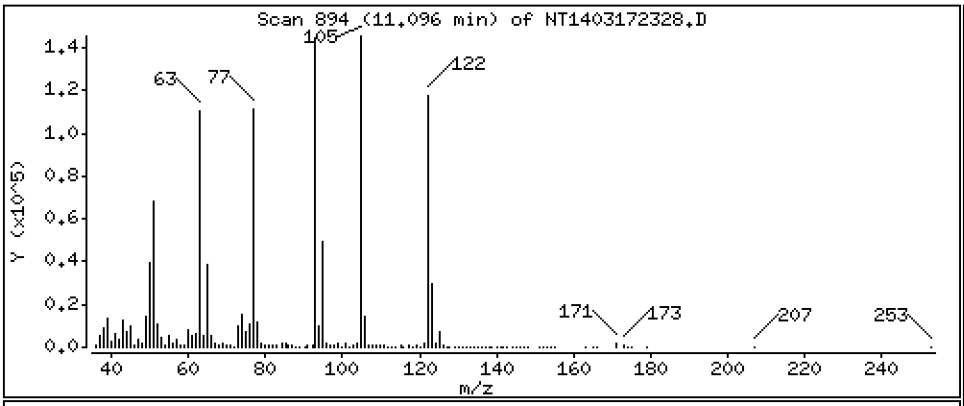
Operator: JGR

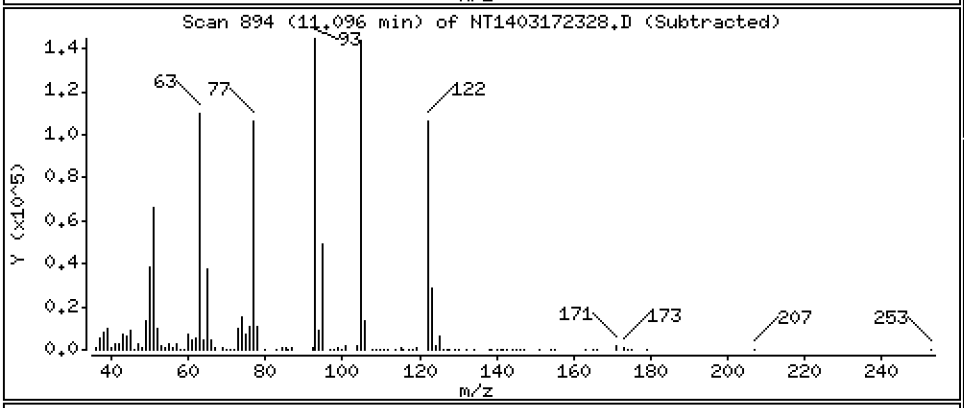
Column phase: ZB-5msi

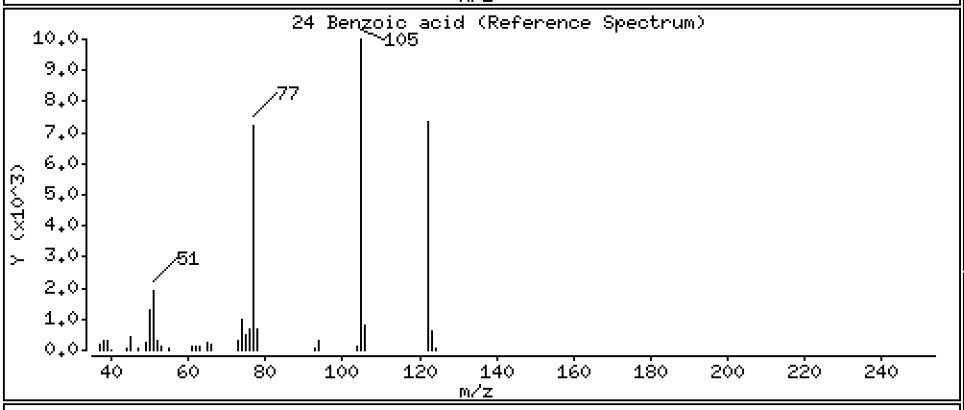
Column diameter: 0.25

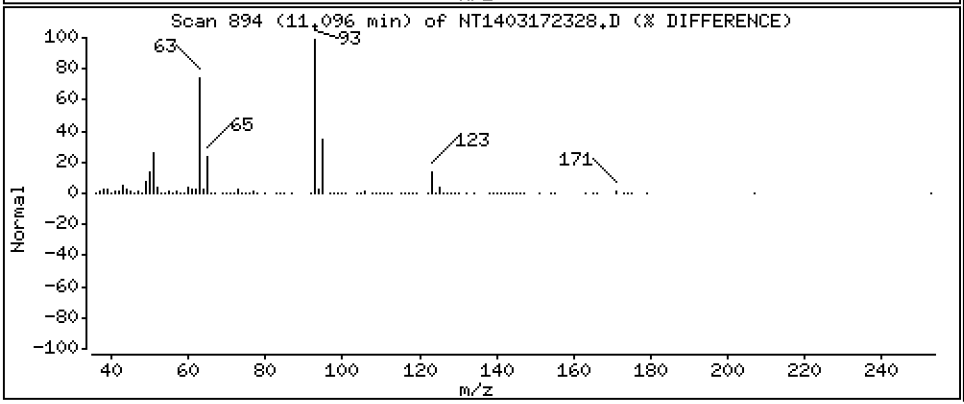
24 Benzoic acid

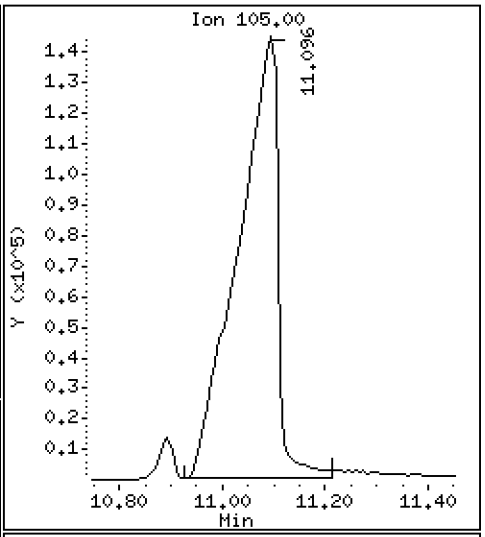
Concentration: 12.52 ug/mL

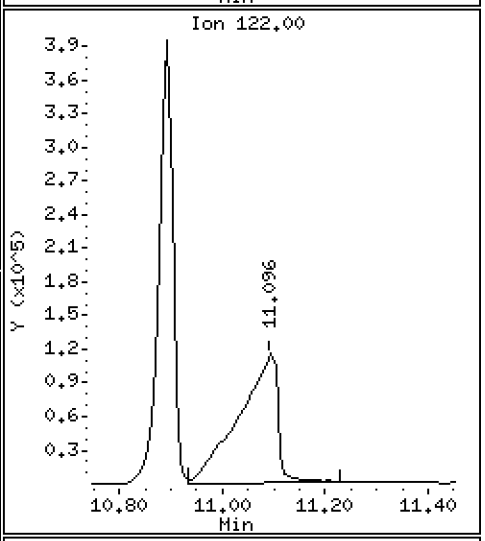


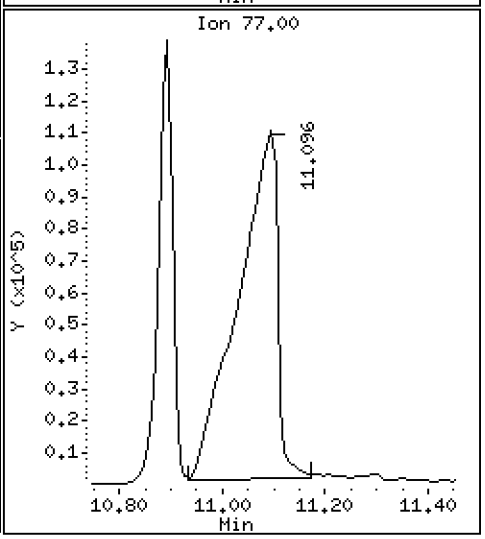












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS1

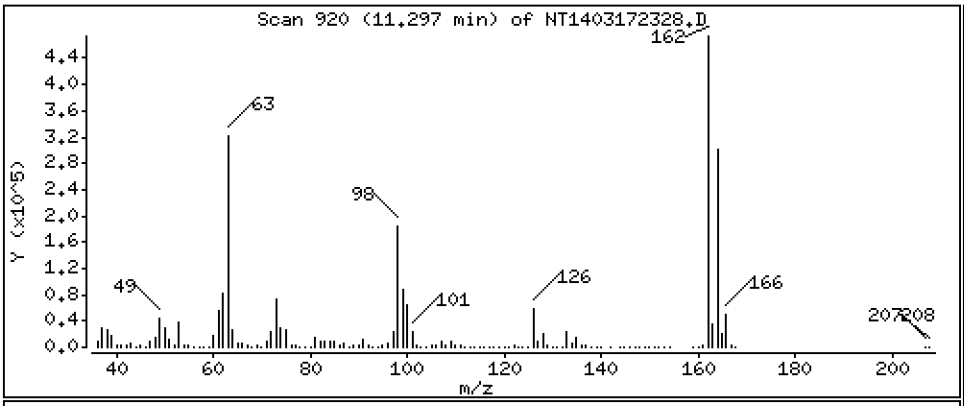
Operator: JGR

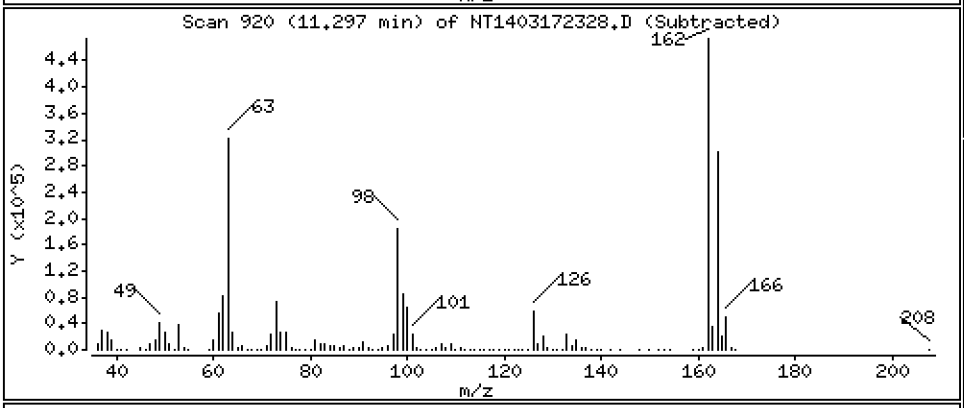
Column phase: ZB-5msi

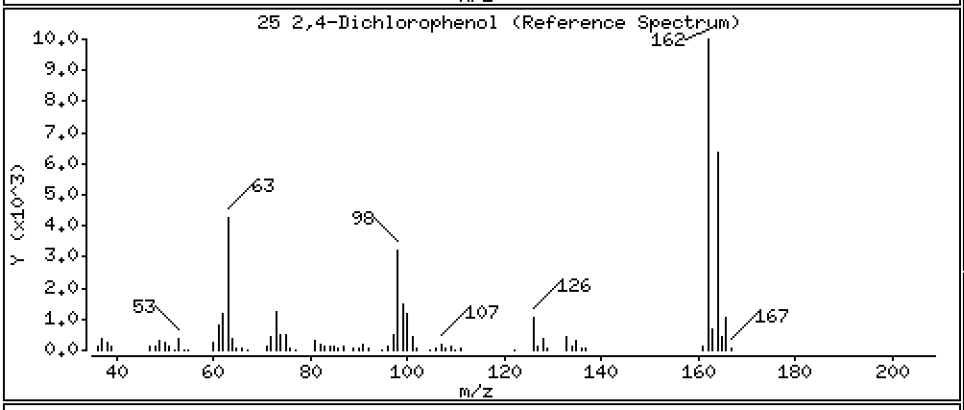
Column diameter: 0.25

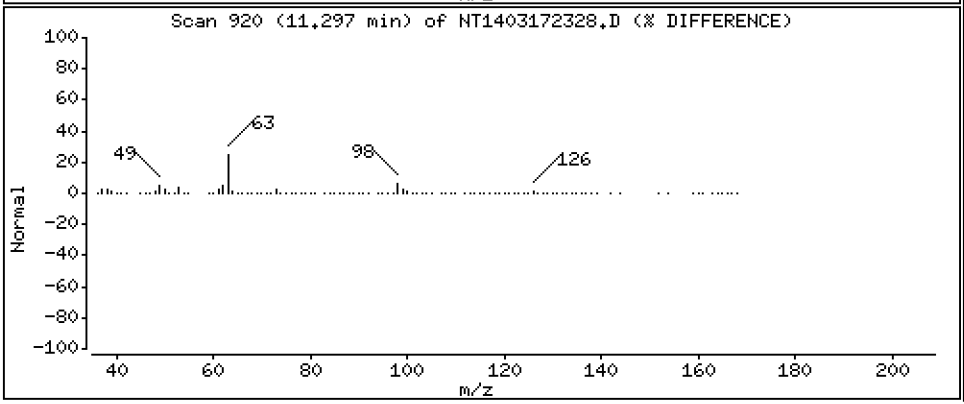
25 2,4-Dichlorophenol

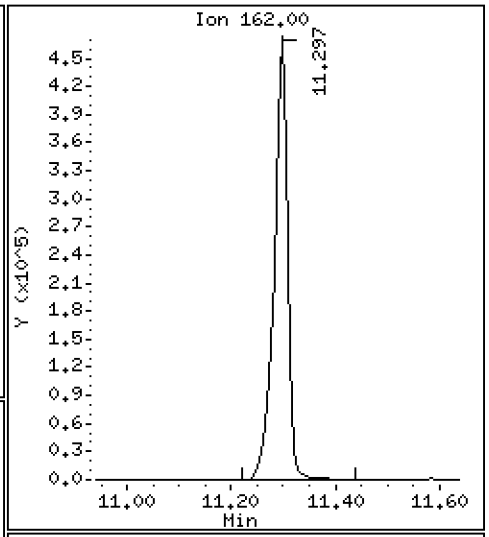
Concentration: 15.93 ug/mL

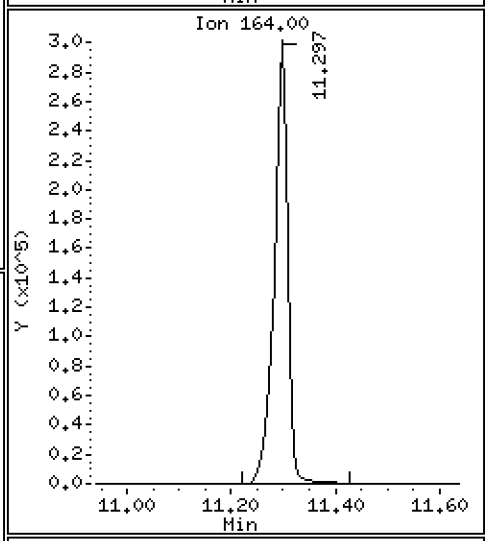


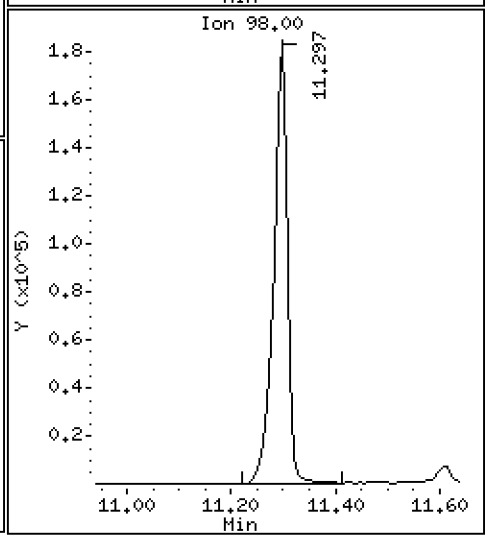












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS1

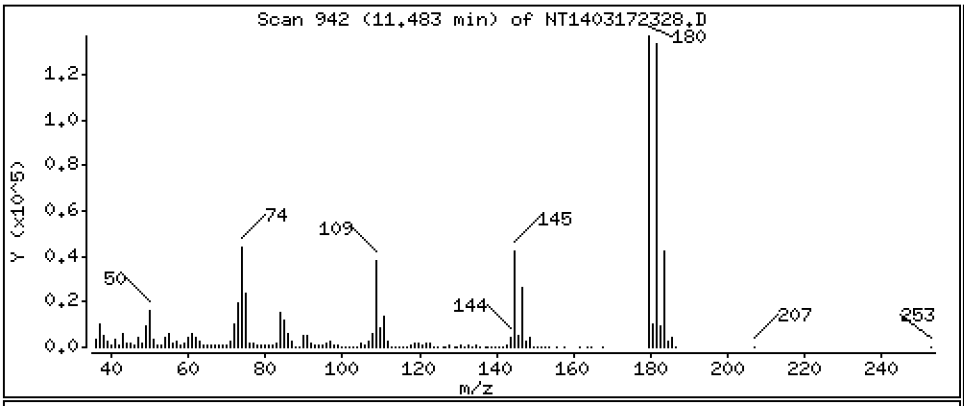
Operator: JGR

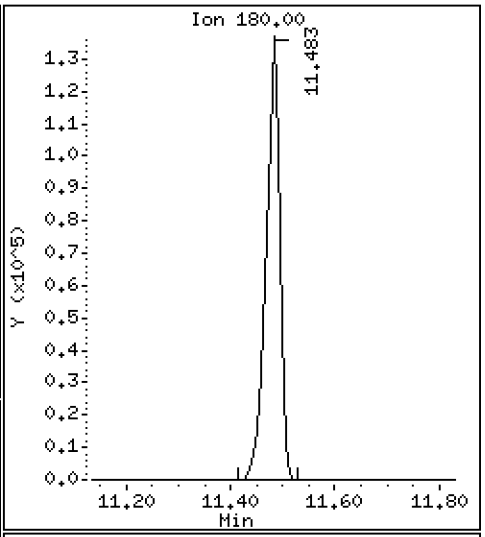
Column phase: ZB-5msi

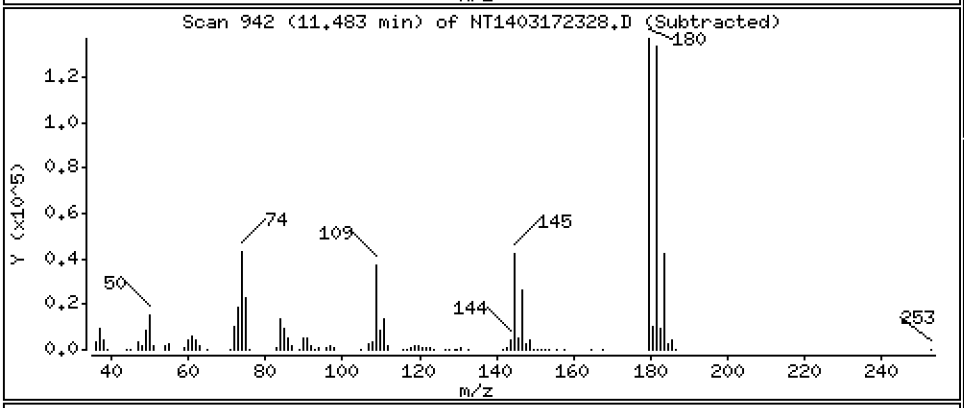
Column diameter: 0.25

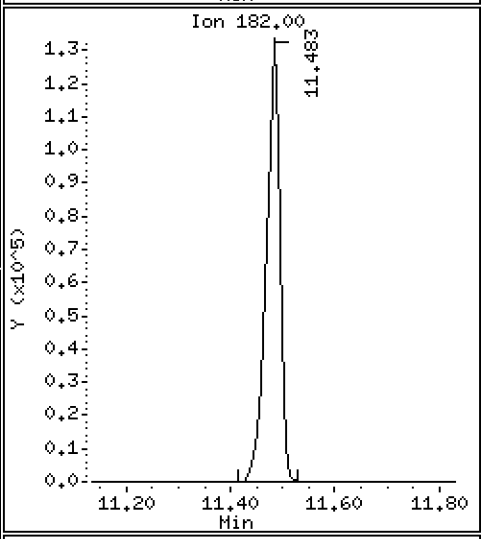
26 1,2,4-Trichlorobenzene

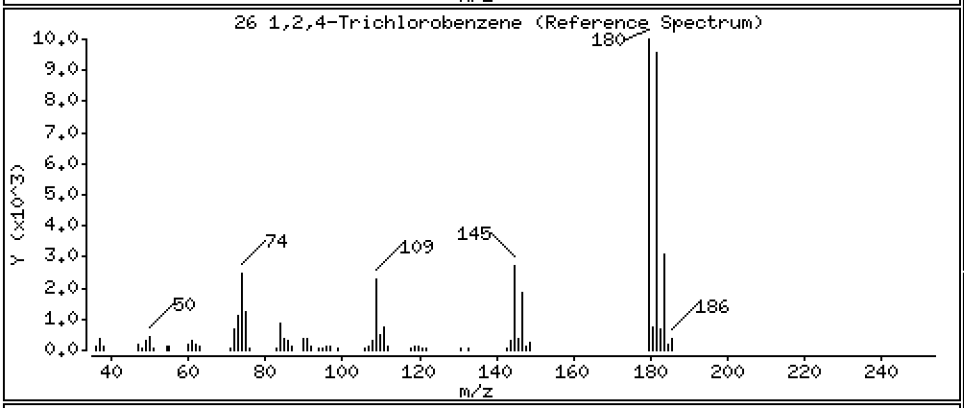
Concentration: 3.426 ug/mL

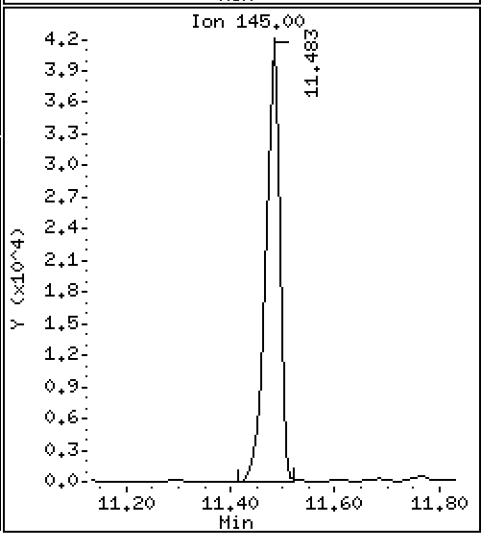


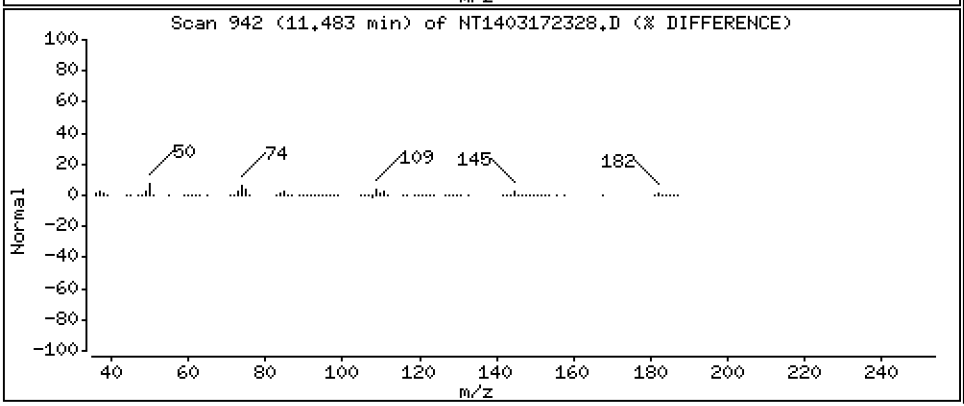












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS1

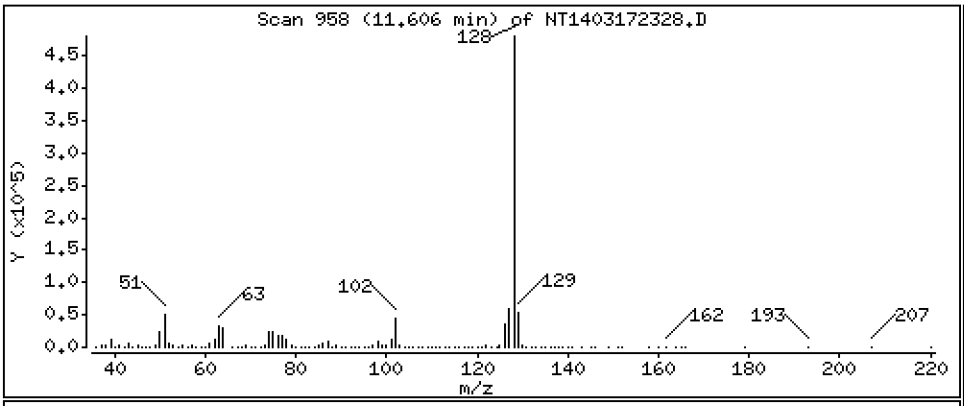
Operator: JGR

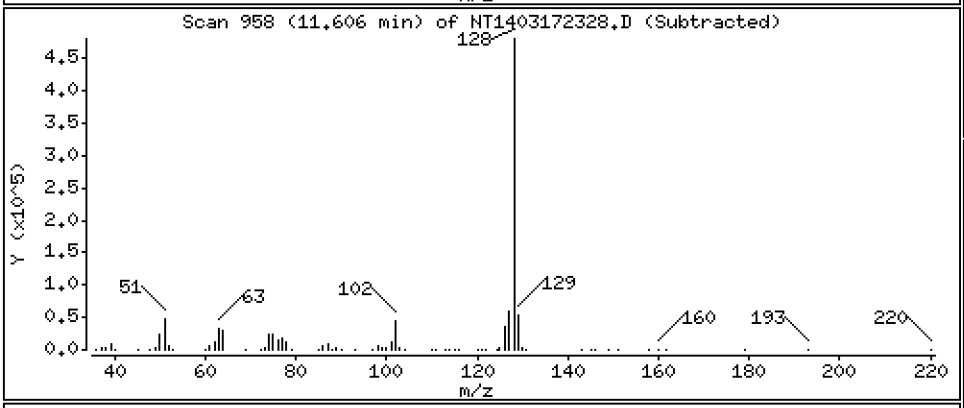
Column phase: ZB-5msi

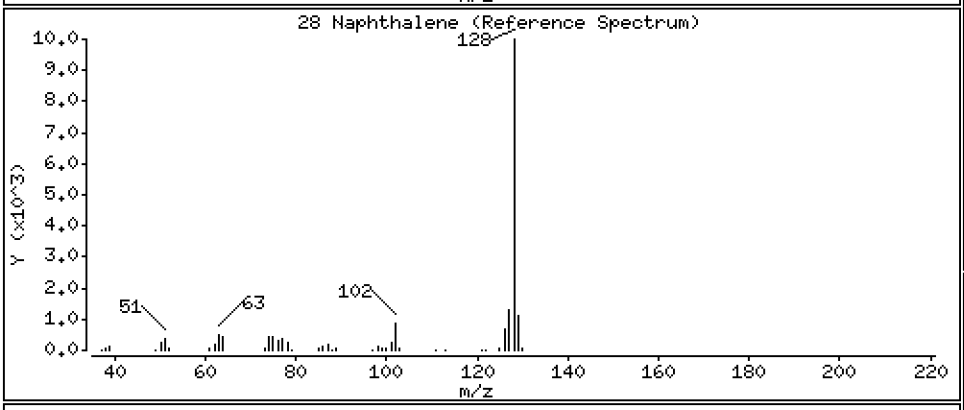
Column diameter: 0.25

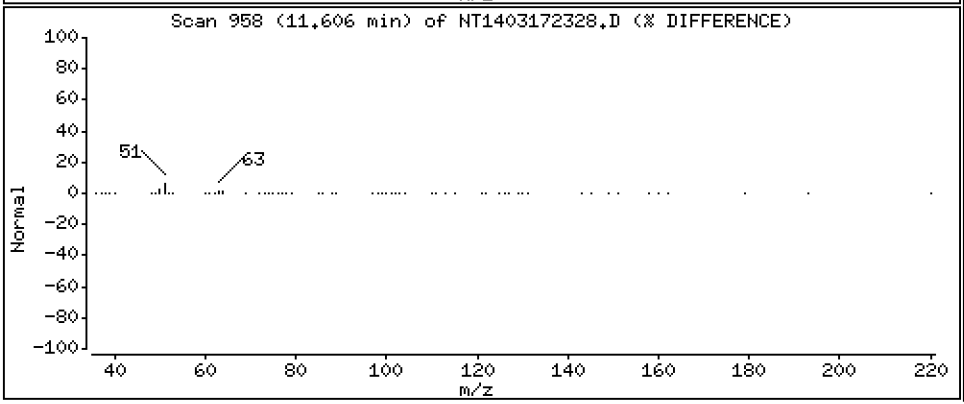
28 Naphthalene

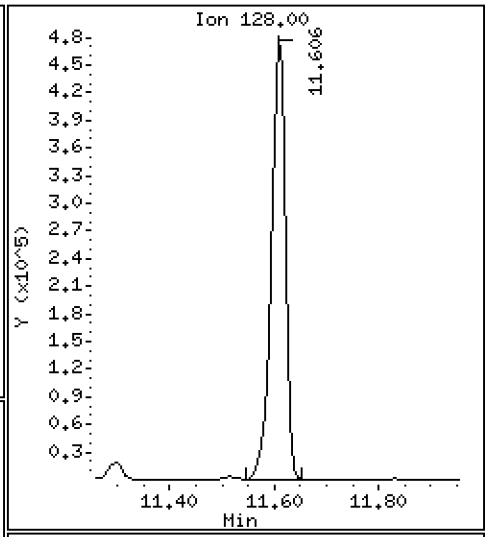
Concentration: 3.848 ug/mL

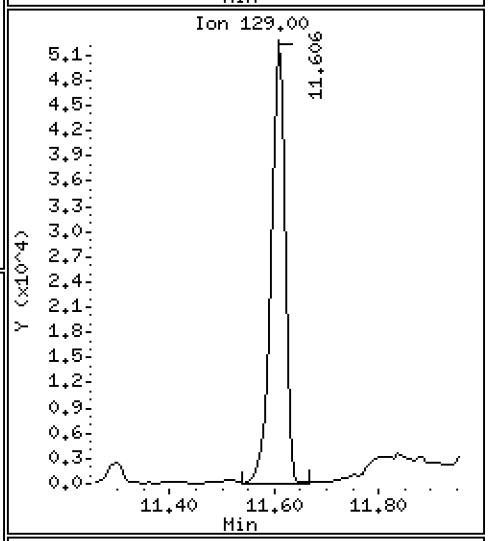


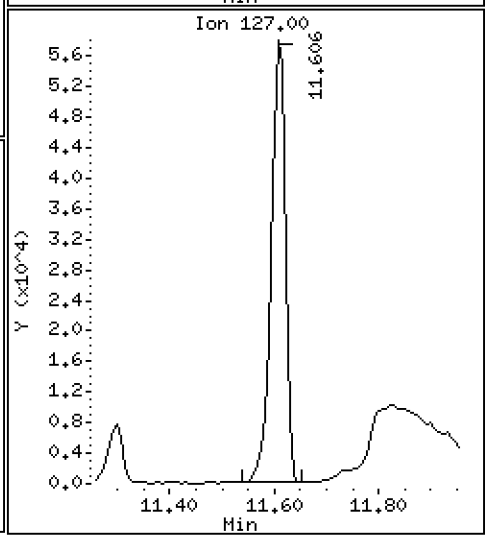












Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172328.D

Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS1

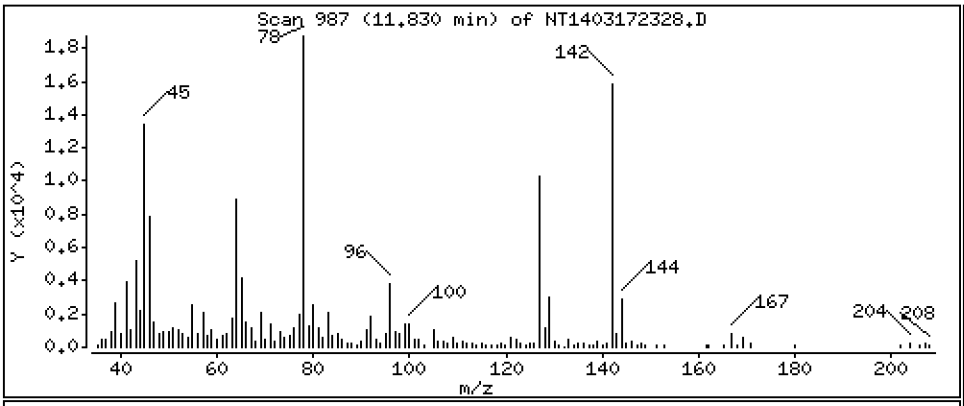
Operator: JGR

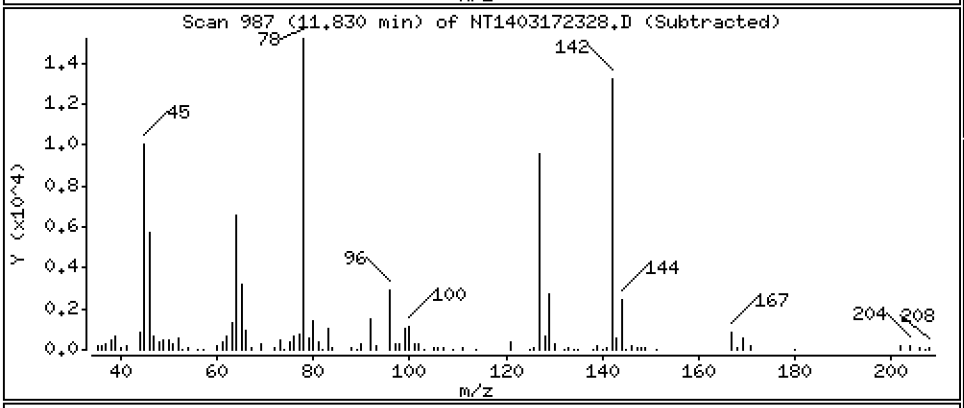
Column phase: ZB-5msi

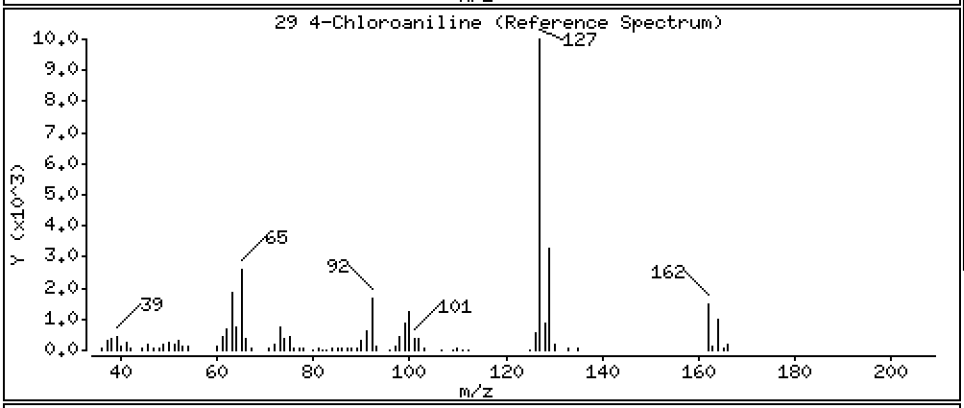
Column diameter: 0.25

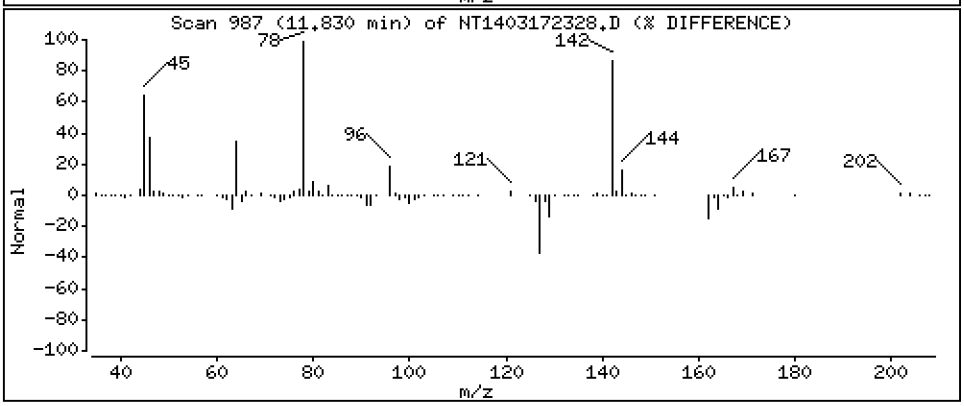
29 4-Chloroaniline

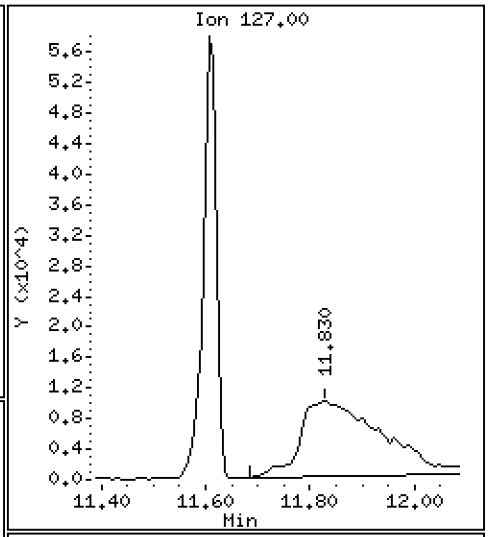
Concentration: 1.152 ug/mL

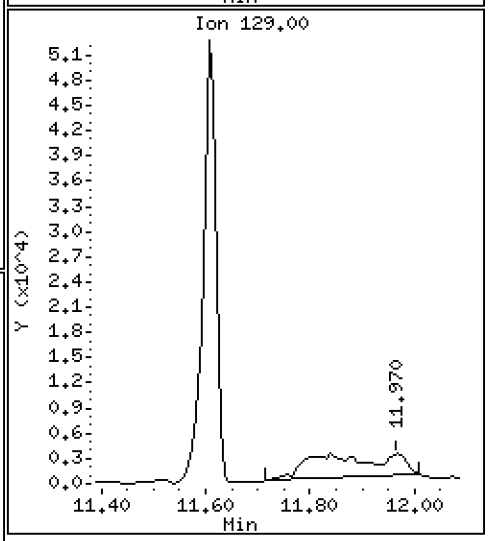












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS1

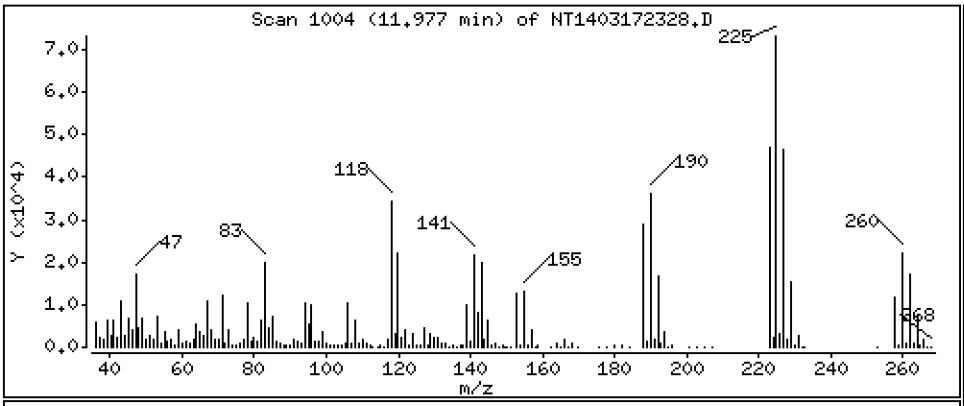
Operator: JGR

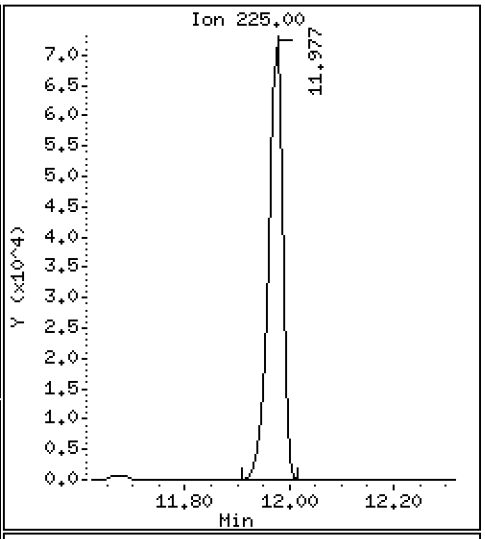
Column phase: ZB-5msi

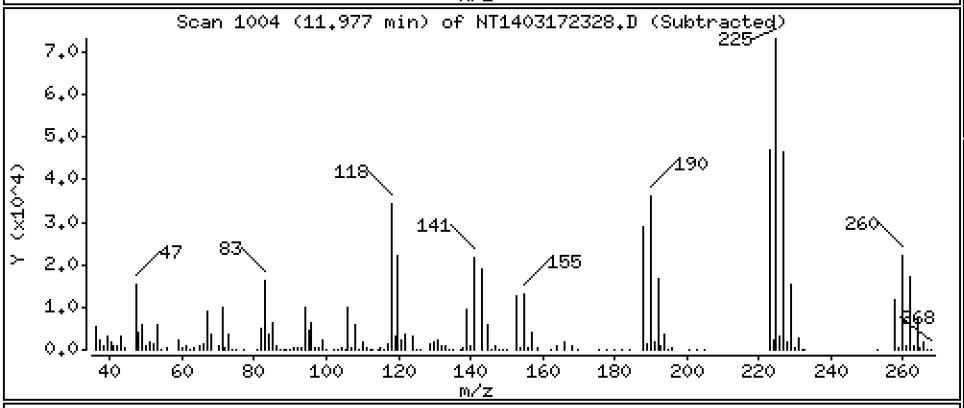
Column diameter: 0.25

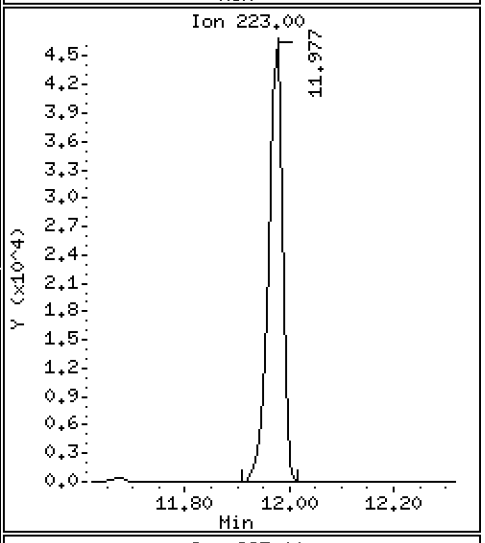
30 Hexachlorobutadiene

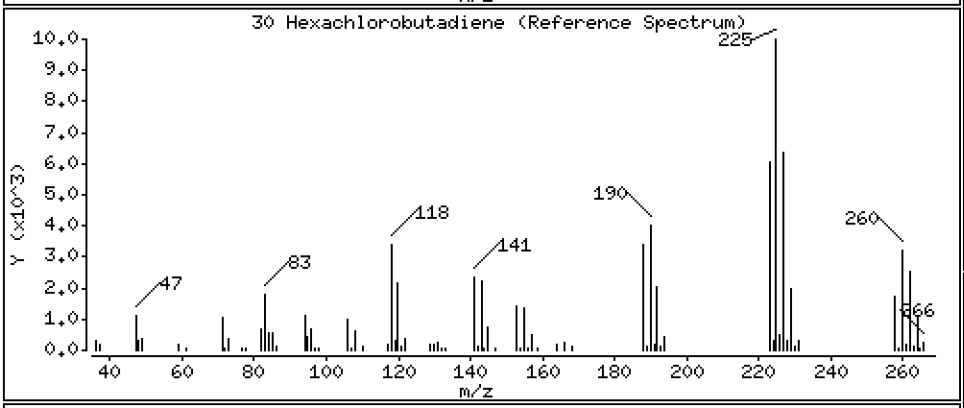
Concentration: 4.057 ug/mL

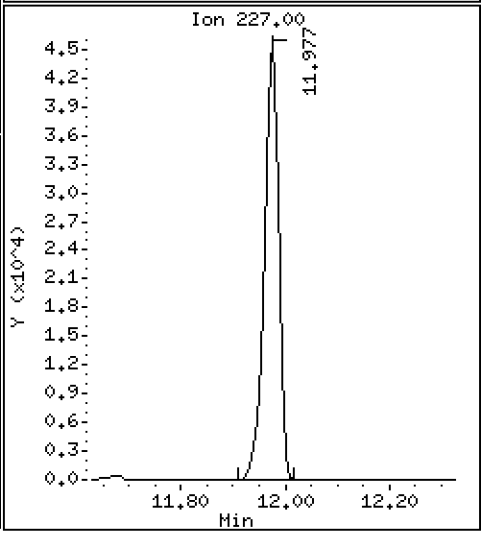


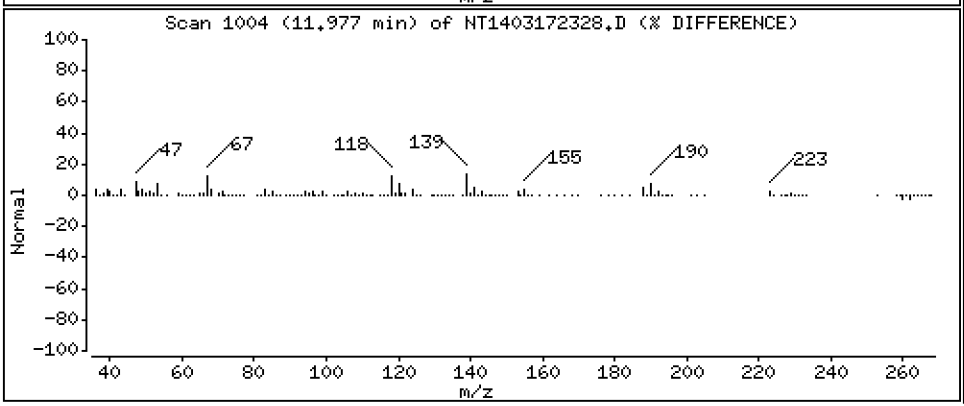












Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172328.D

Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS1

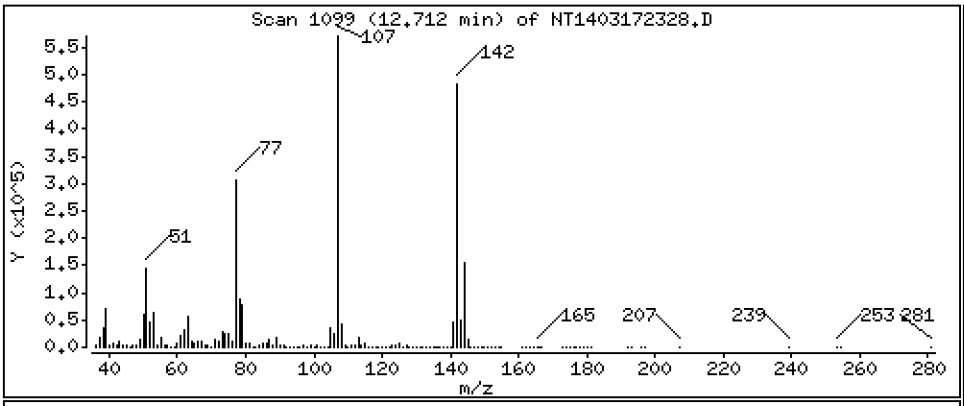
Operator: JGR

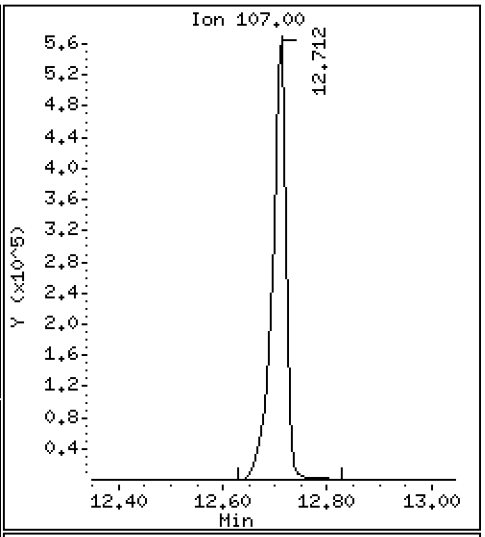
Column phase: ZB-5msi

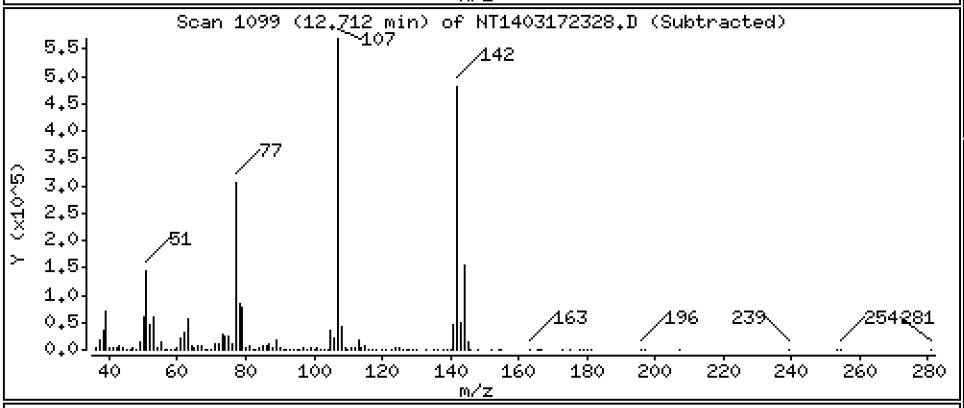
Column diameter: 0.25

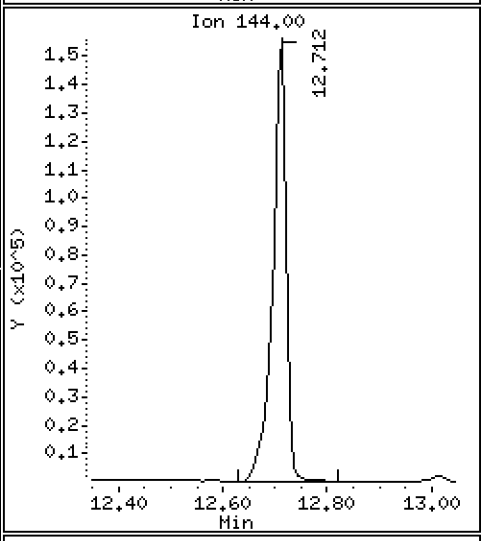
31 4-Chloro-3-methylphenol

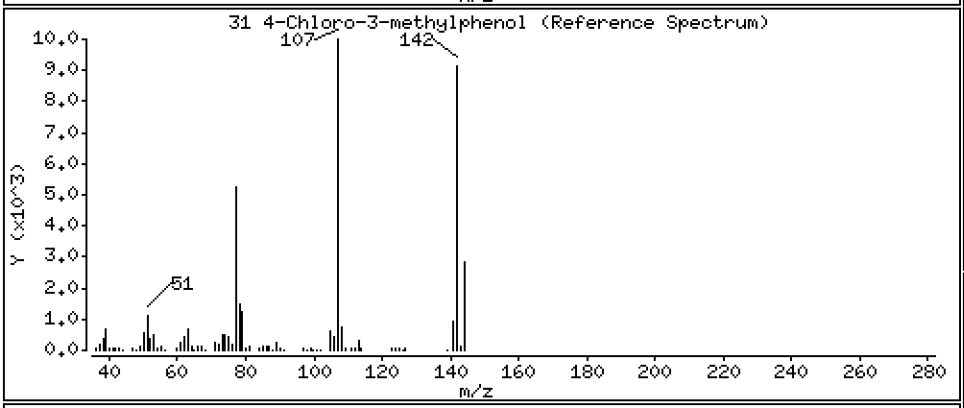
Concentration: 14.88 ug/mL

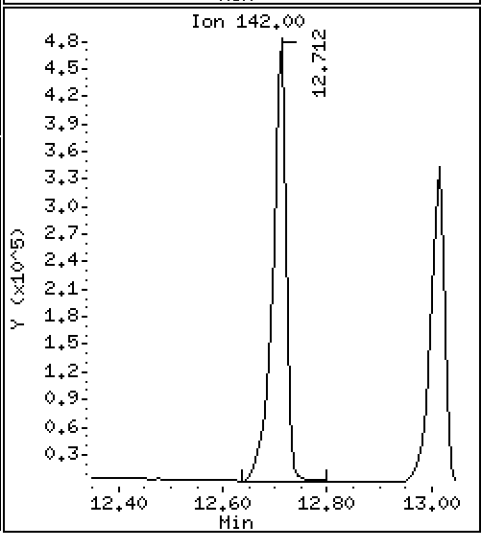


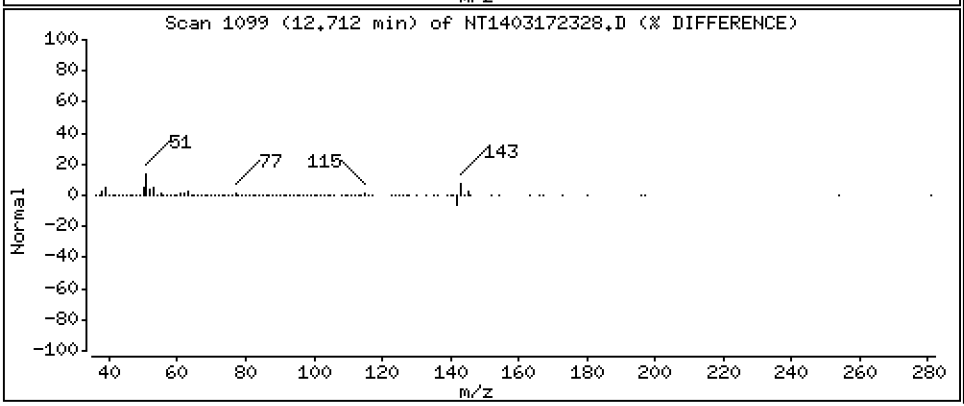












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS1

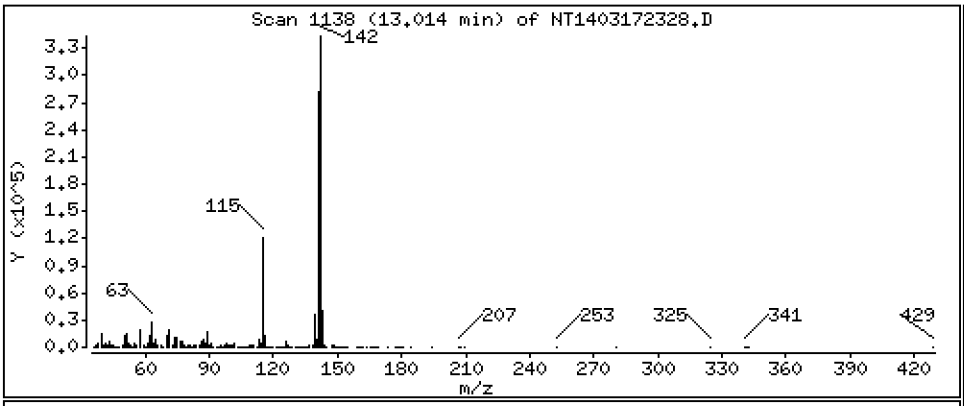
Operator: JGR

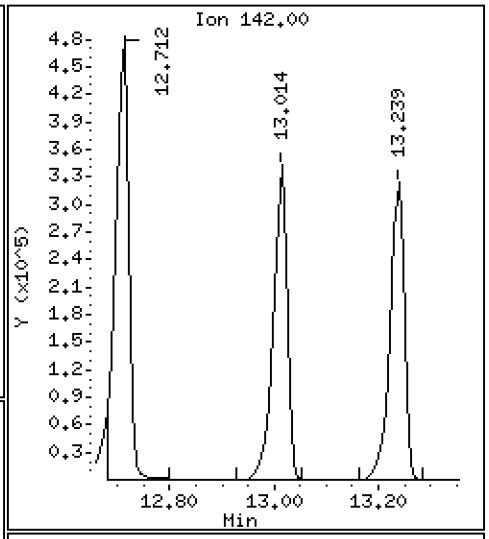
Column phase: ZB-5msi

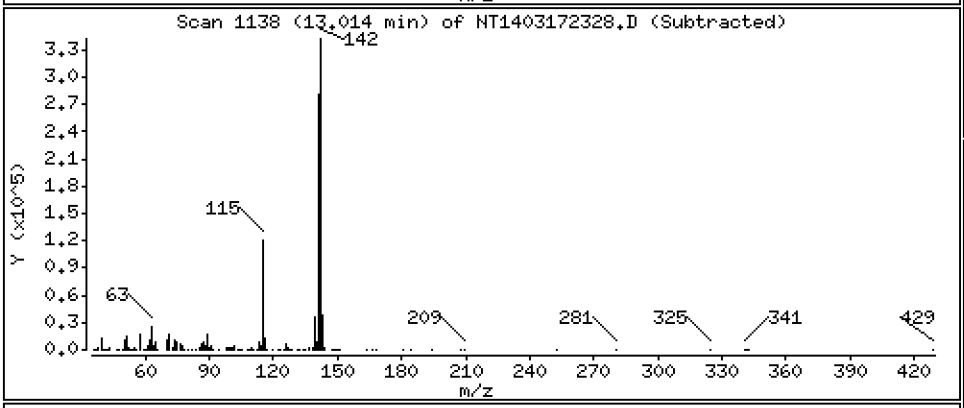
Column diameter: 0.25

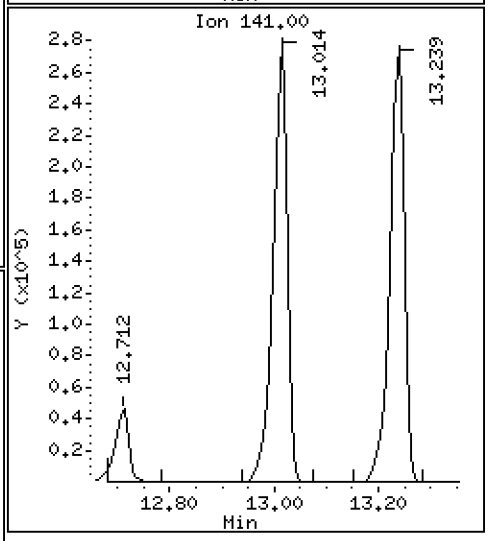
32 2-Methylnaphthalene

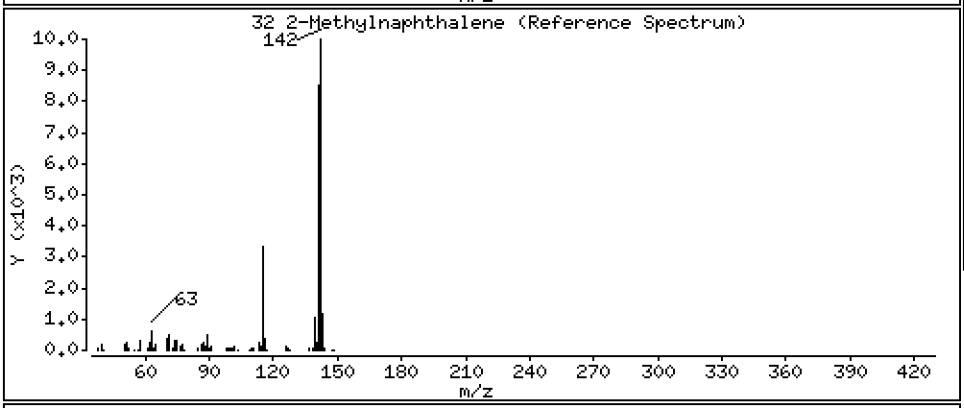
Concentration: 3.998 ug/mL

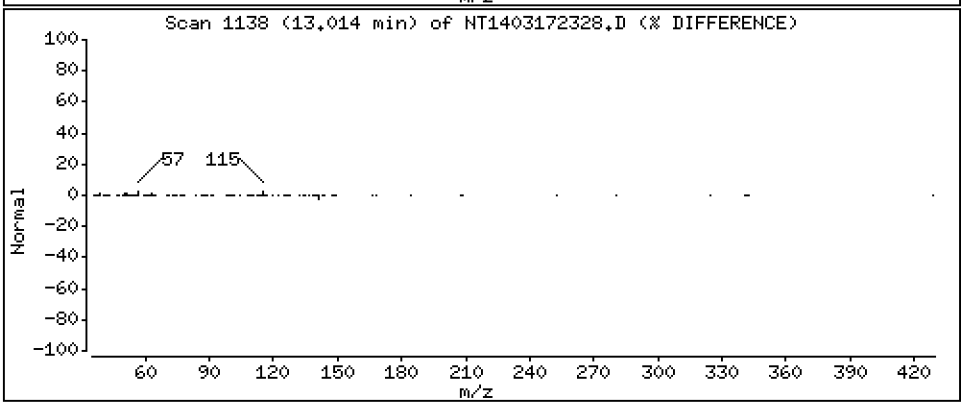












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS1

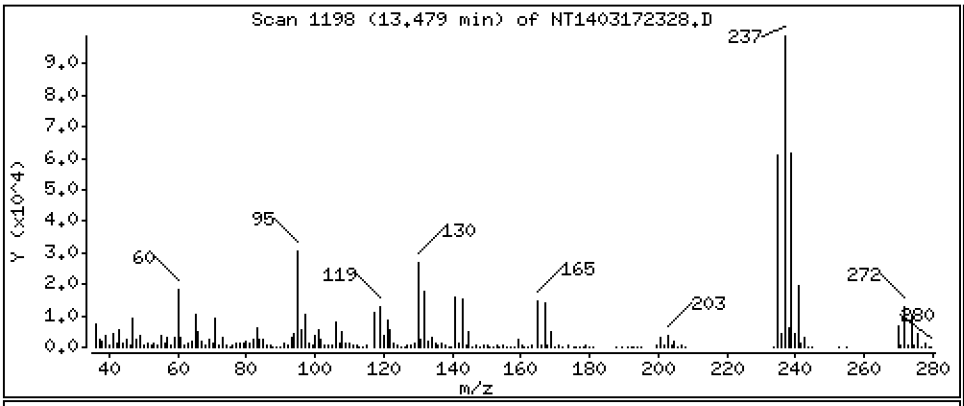
Operator: JGR

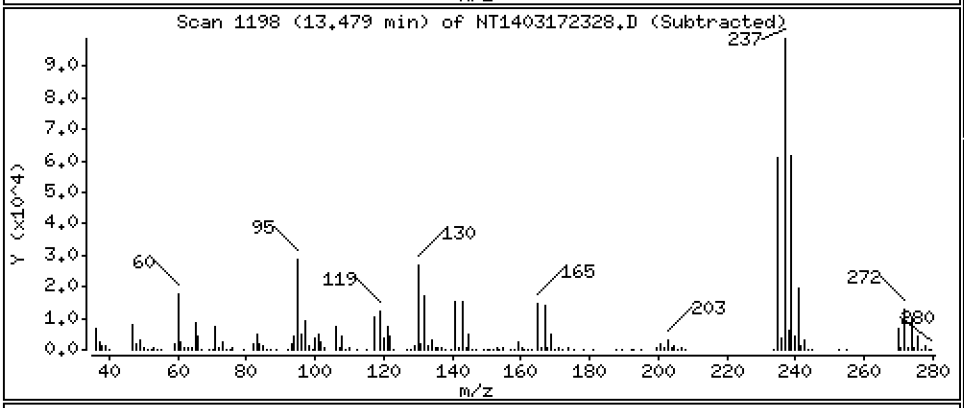
Column phase: ZB-5msi

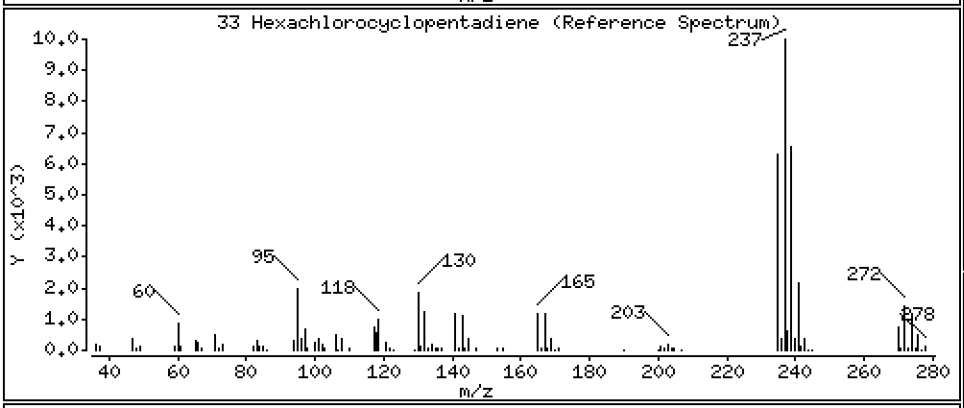
Column diameter: 0.25

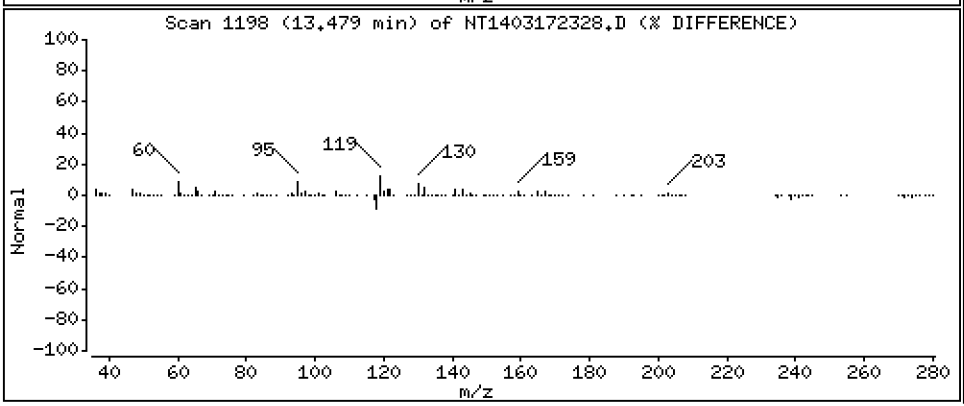
33 Hexachlorocyclopentadiene

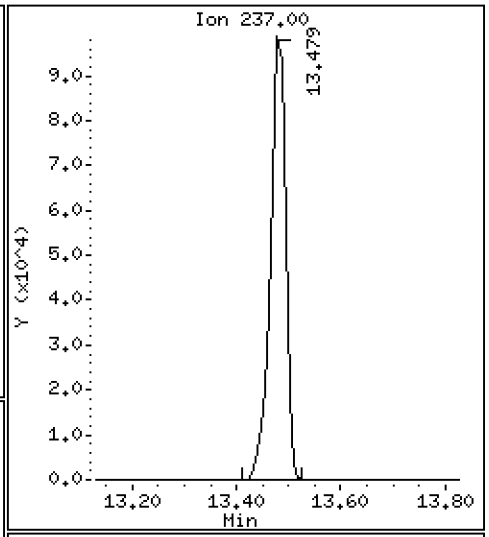
Concentration: 5.537 ug/mL

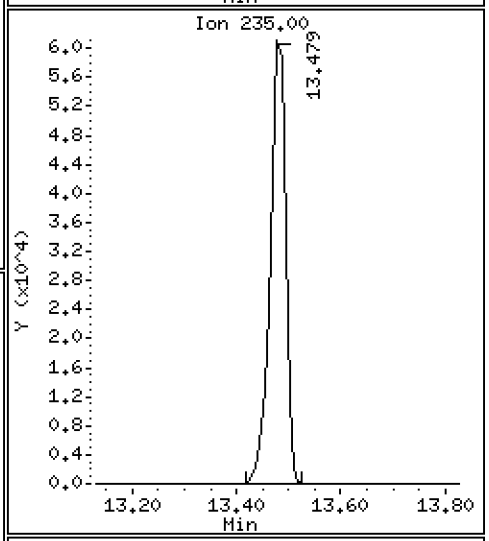


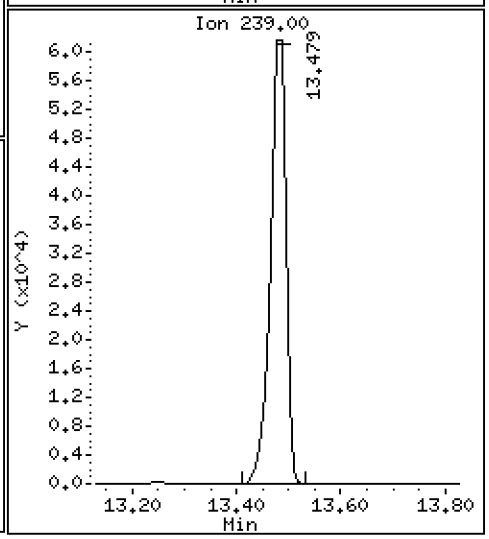












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS1

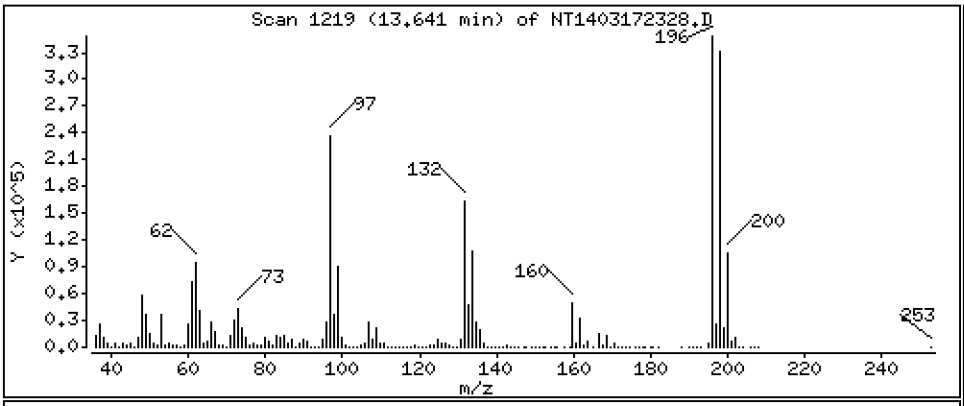
Operator: JGR

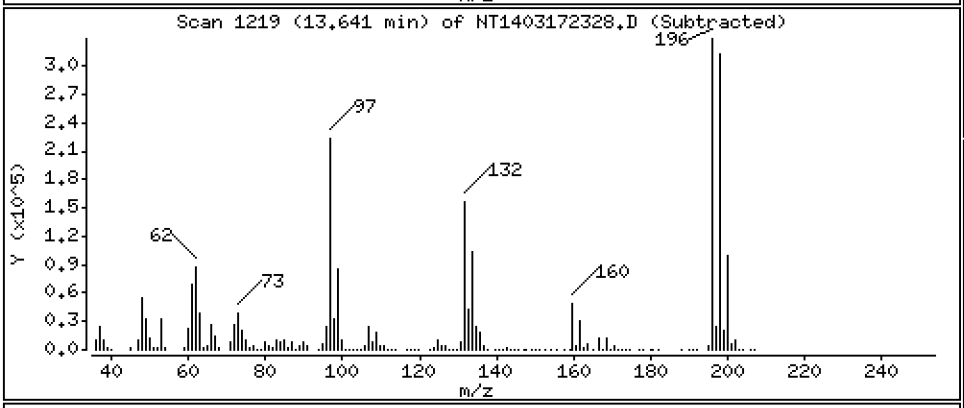
Column phase: ZB-5msi

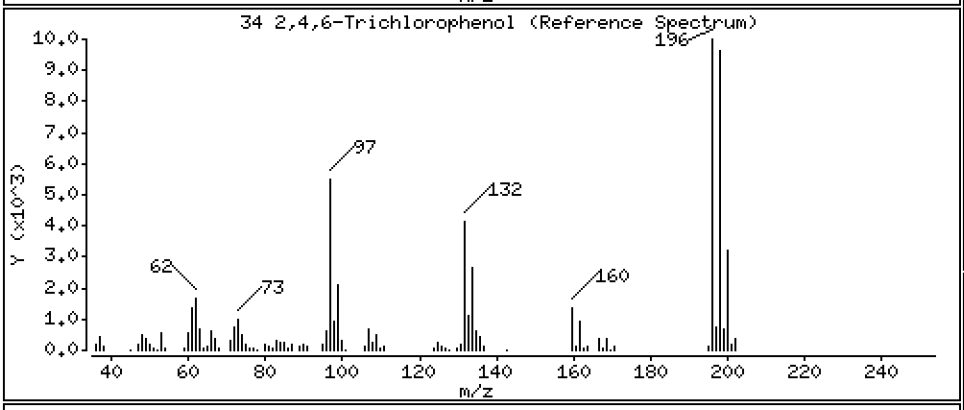
Column diameter: 0.25

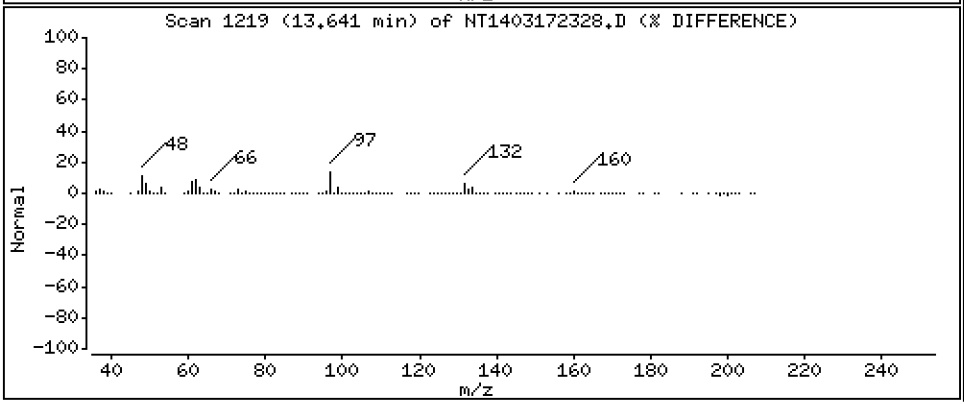
34 2,4,6-Trichlorophenol

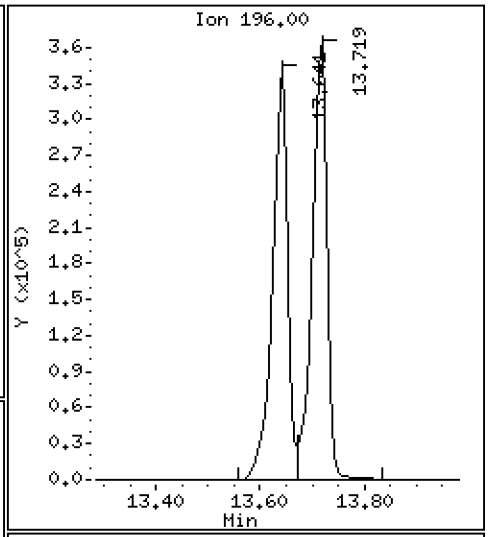
Concentration: 15.76 ug/mL

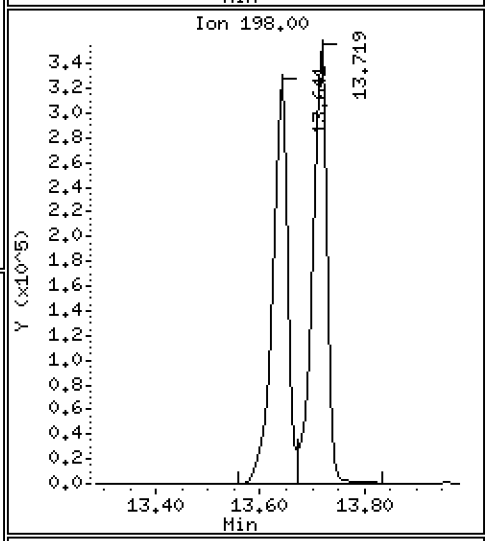


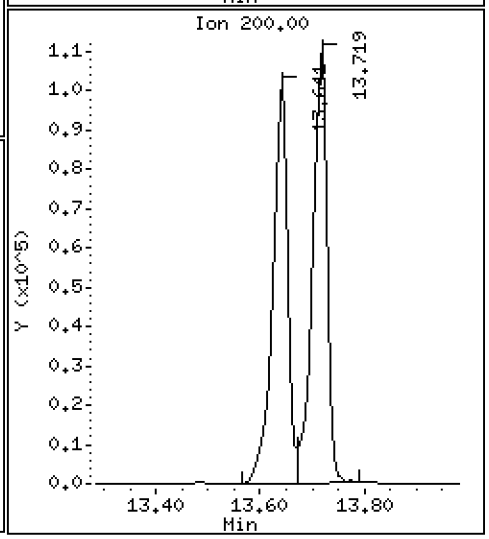












Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172328.D

Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS1

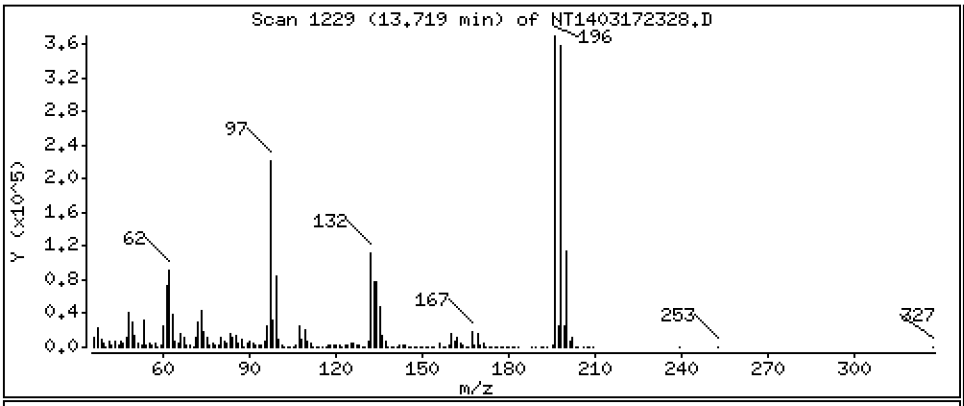
Operator: JGR

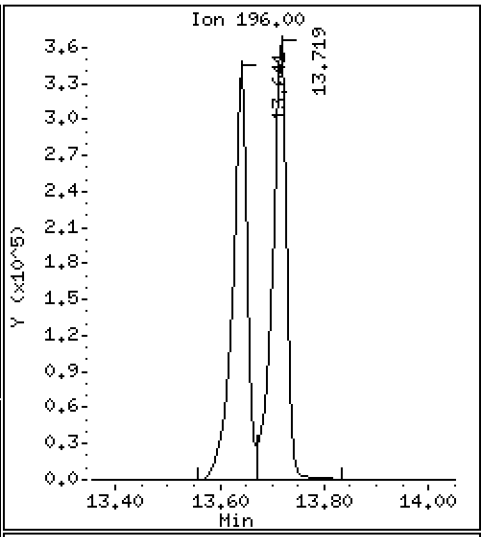
Column phase: ZB-5msi

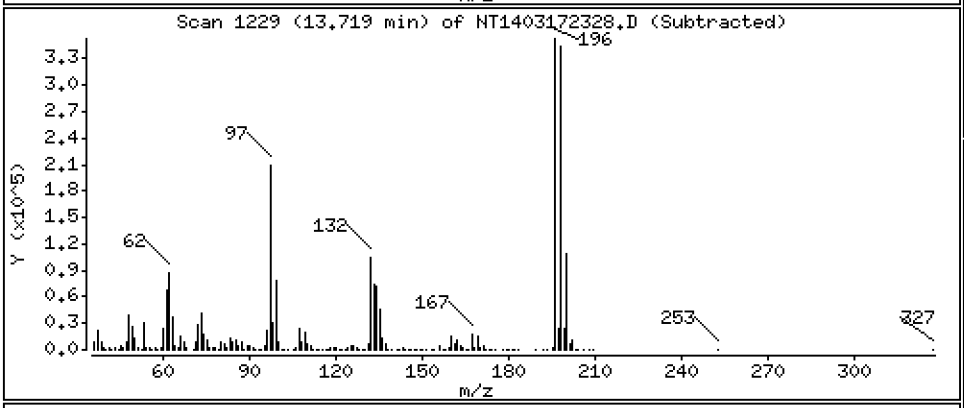
Column diameter: 0.25

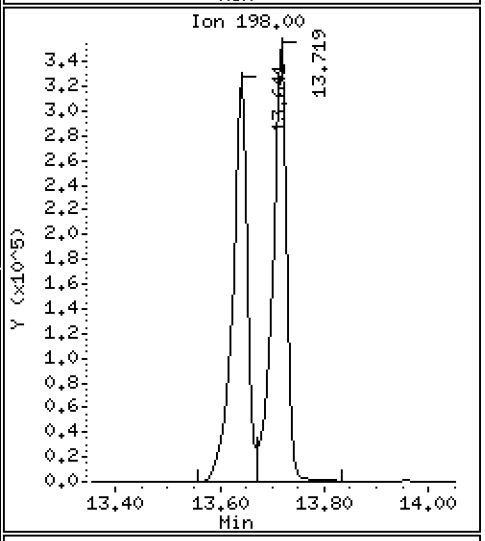
35 2,4,5-Trichlorophenol

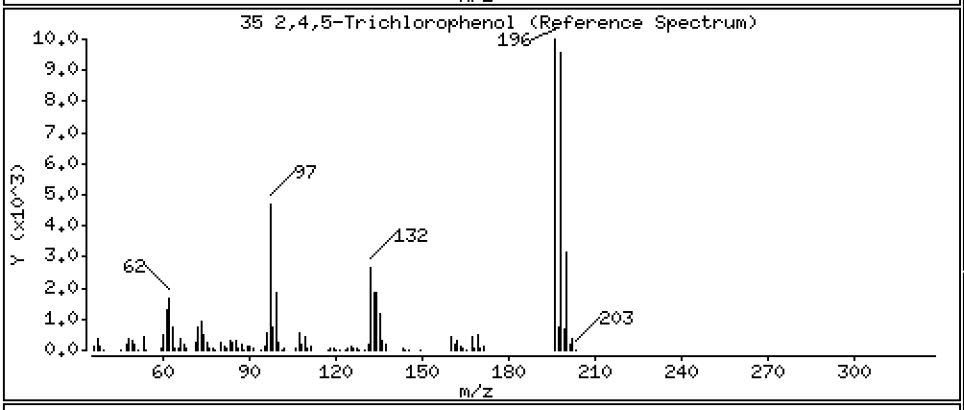
Concentration: 15.72 ug/mL

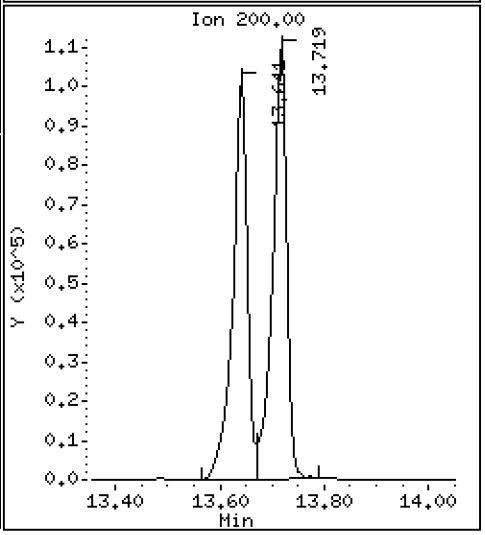


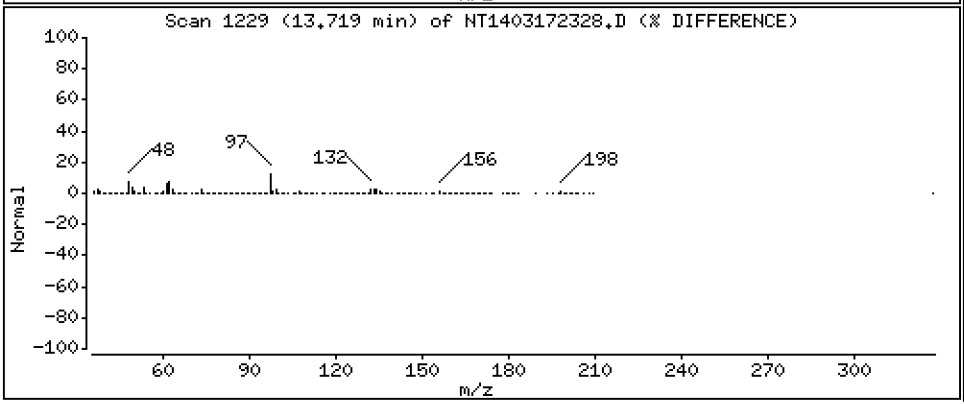












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS1

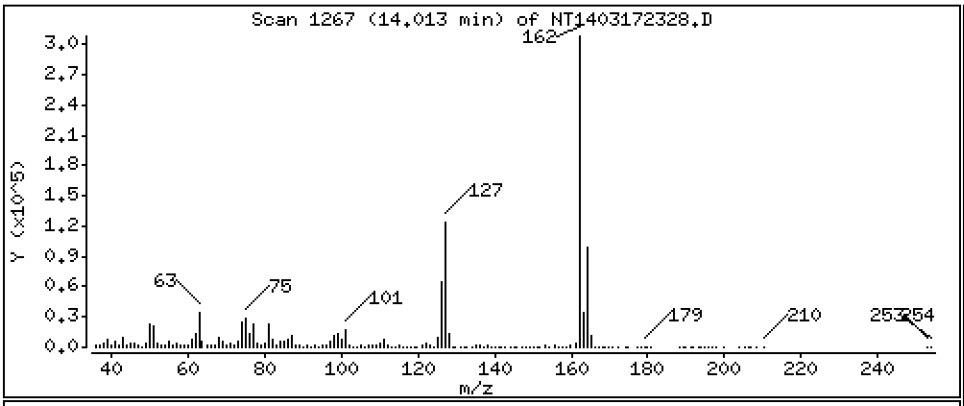
Operator: JGR

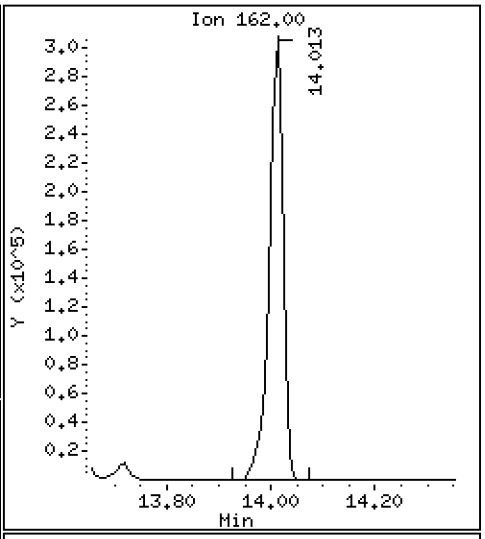
Column phase: ZB-5msi

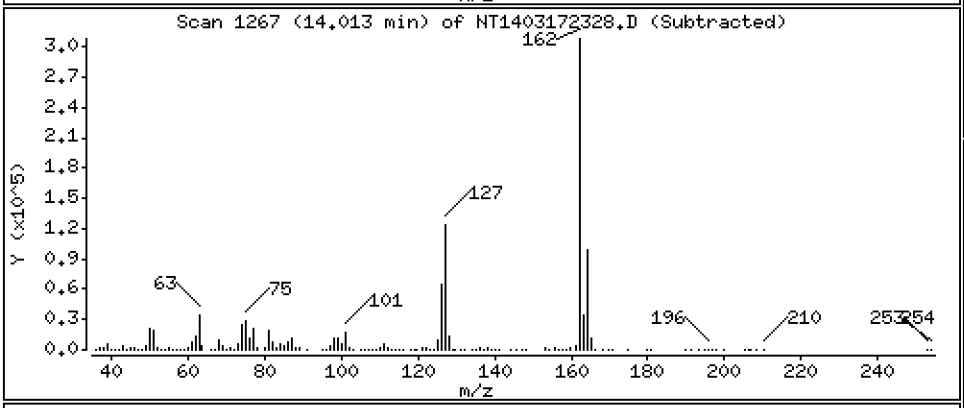
Column diameter: 0.25

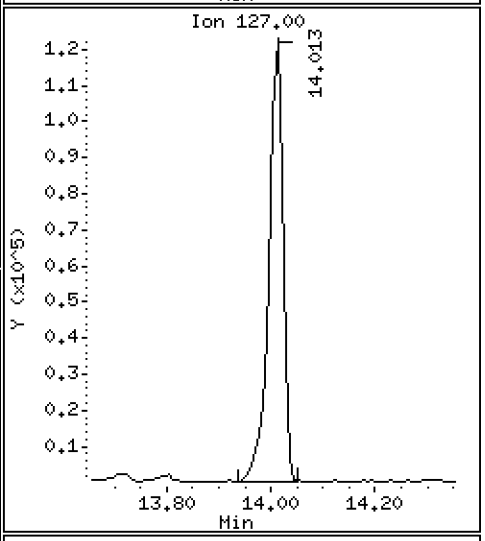
37 2-Chloronaphthalene

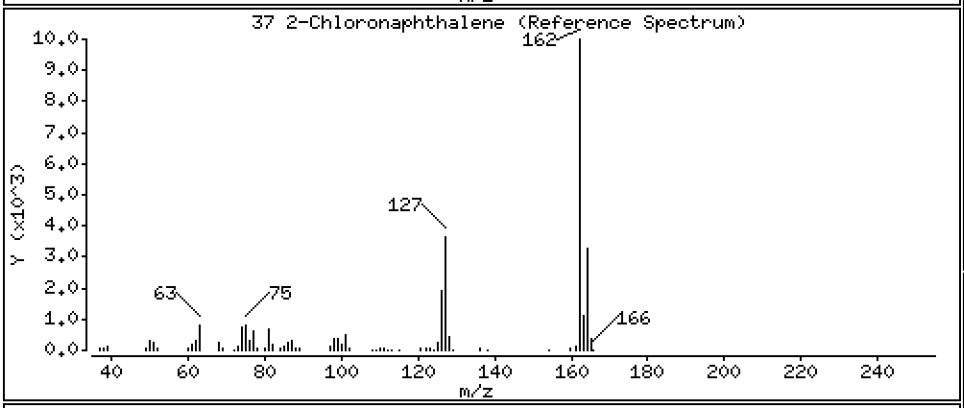
Concentration: 4.158 ug/mL

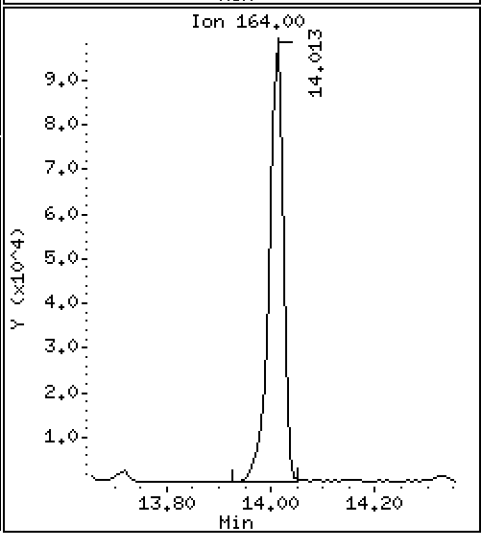


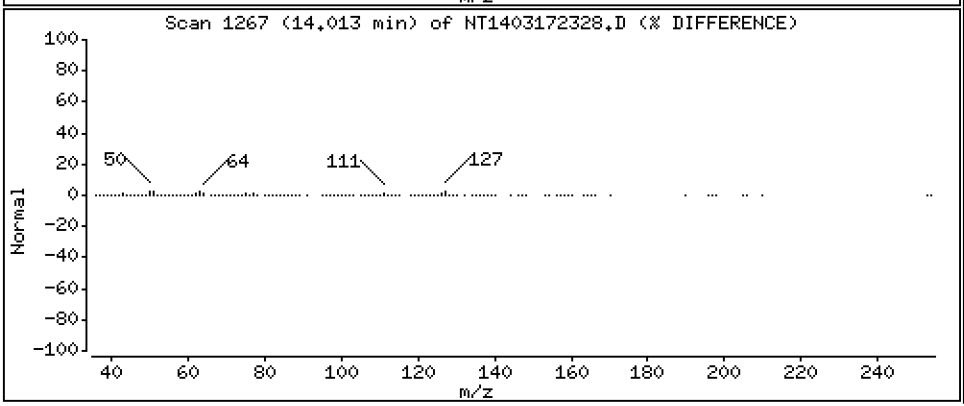












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS1

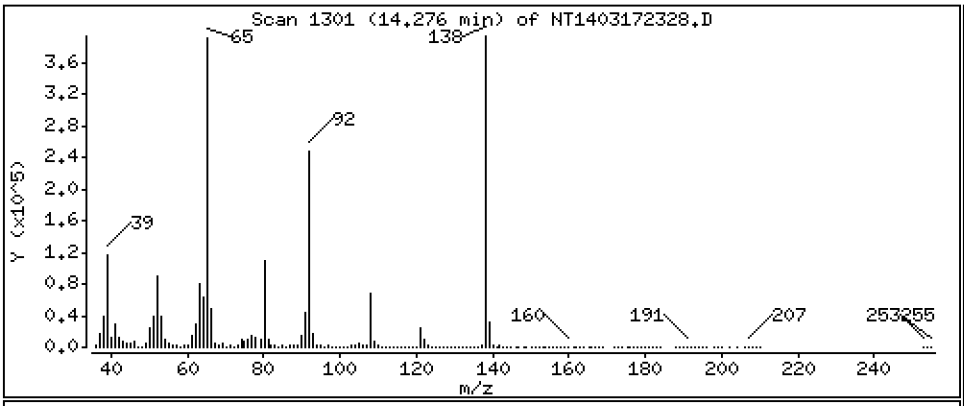
Operator: JGR

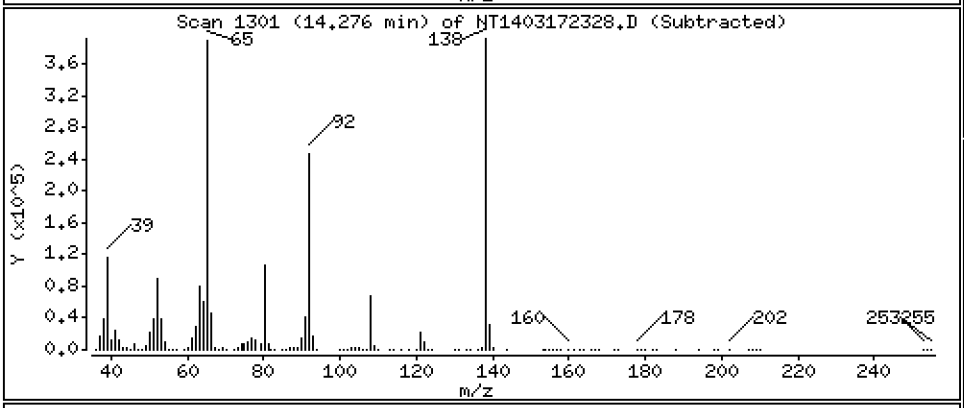
Column phase: ZB-5msi

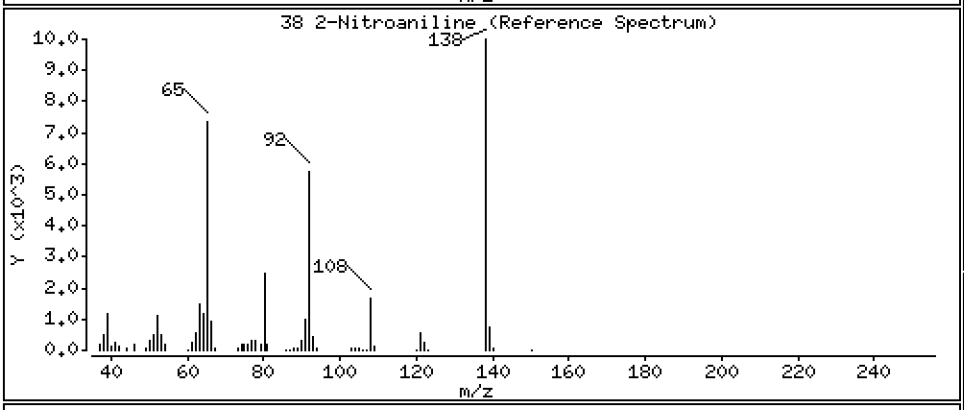
Column diameter: 0.25

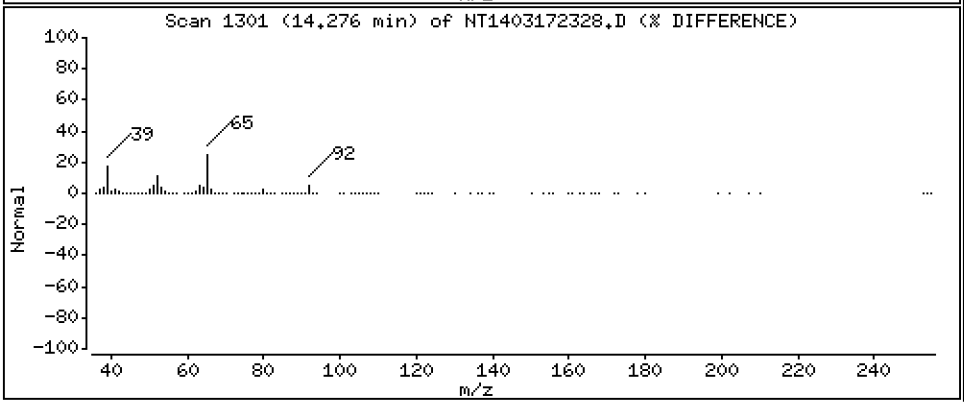
38 2-Nitroaniline

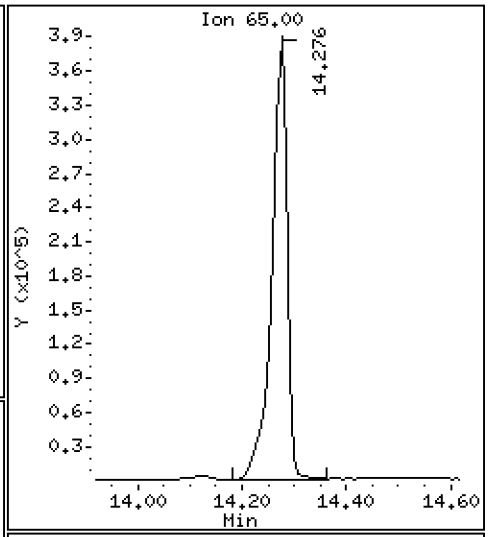
Concentration: 15.06 ug/mL

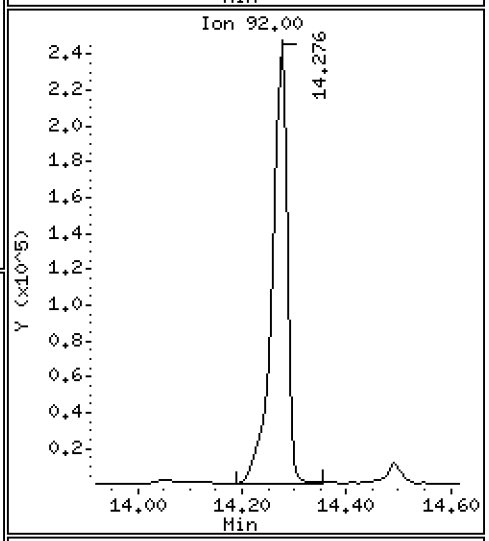


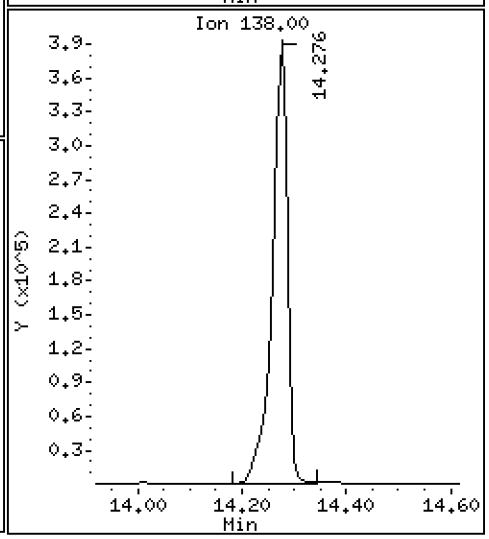












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS1

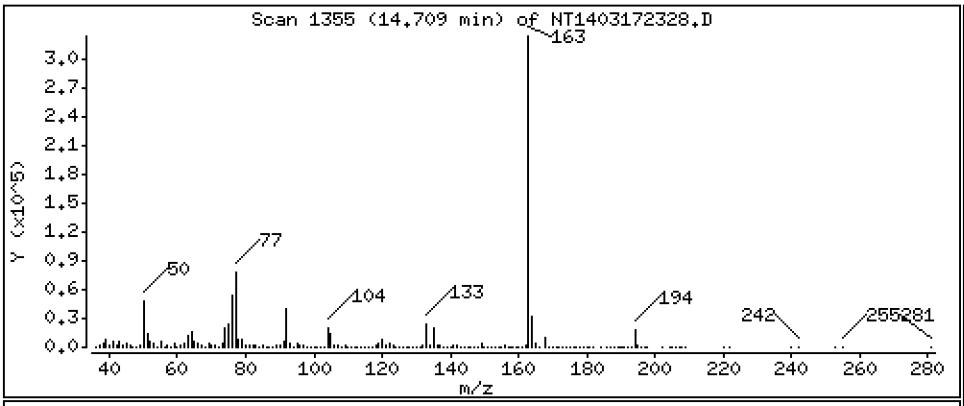
Operator: JGR

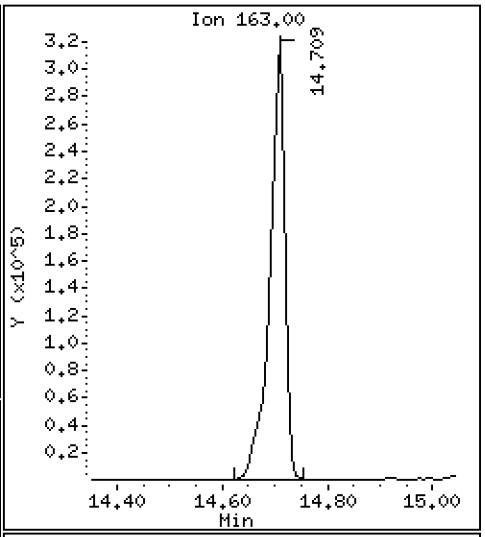
Column phase: ZB-5msi

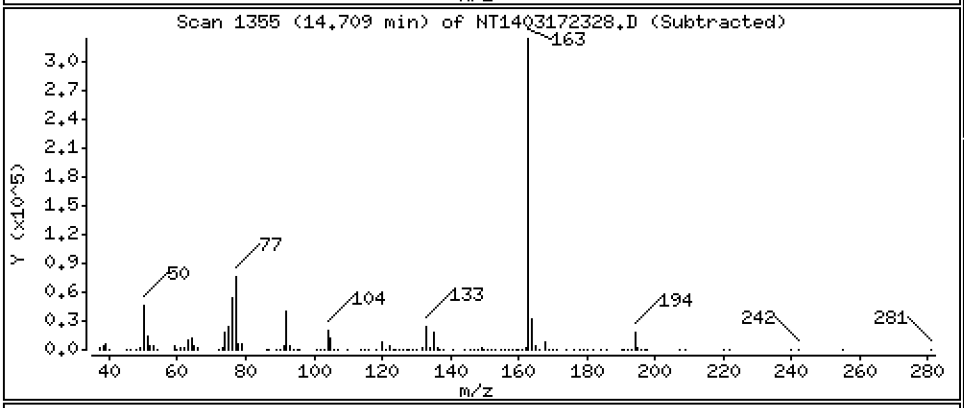
Column diameter: 0.25

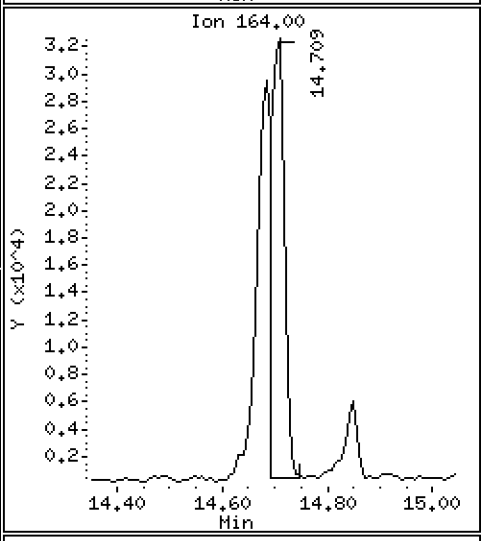
39 Dimethylphthalate

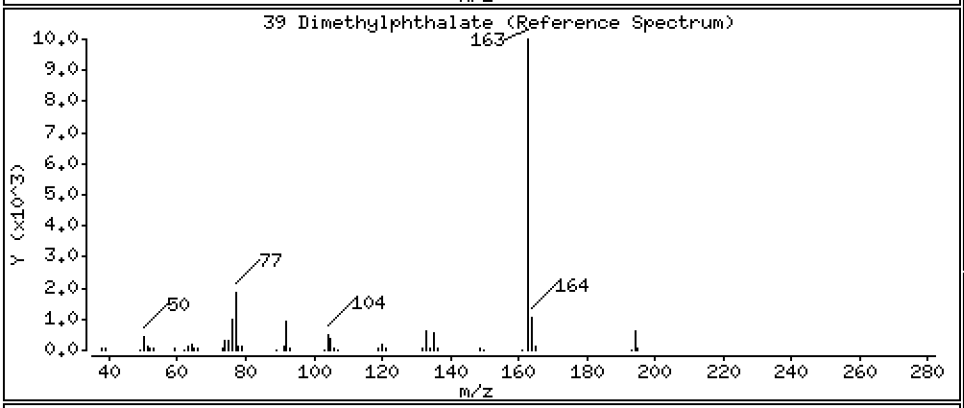
Concentration: 4.424 ug/mL

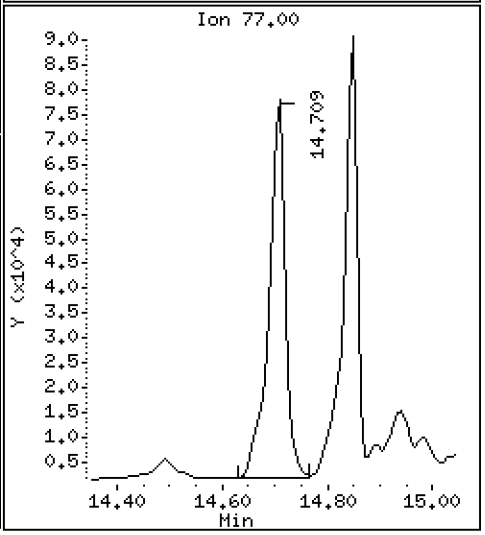


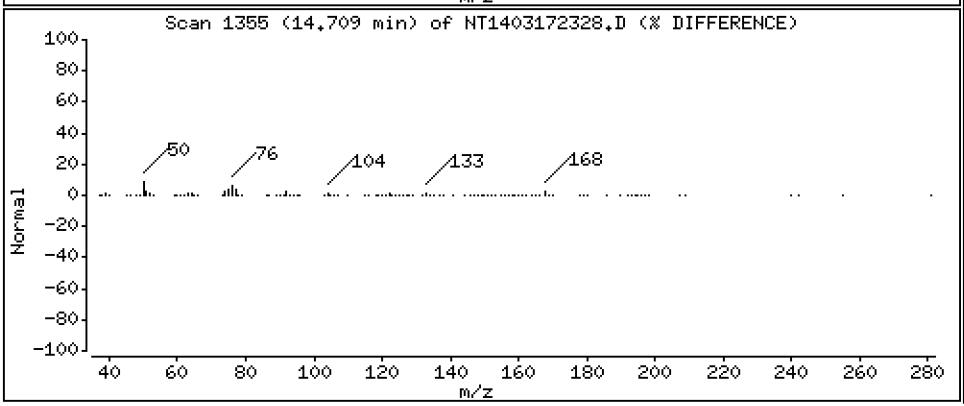












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS1

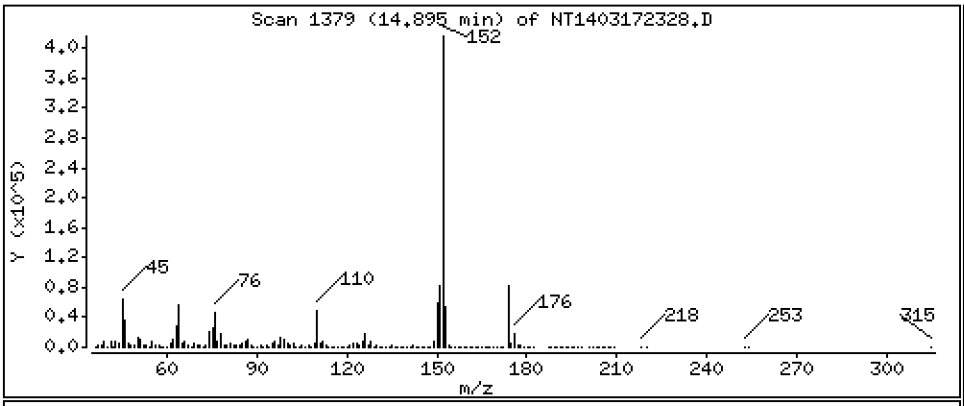
Operator: JGR

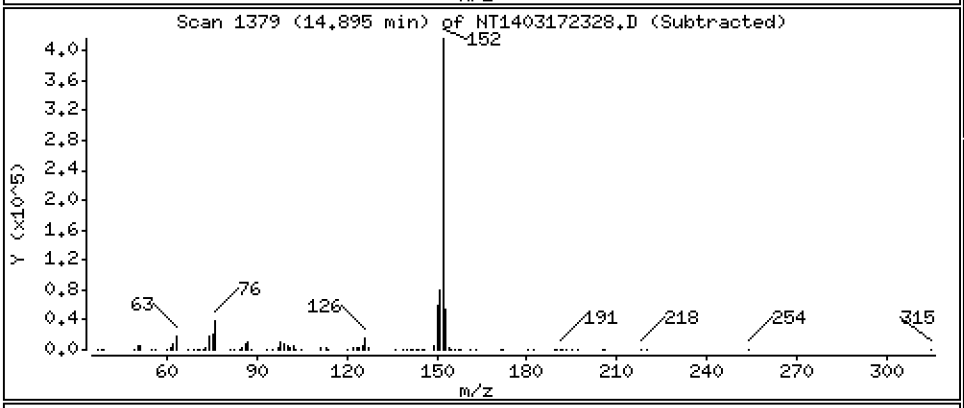
Column phase: ZB-5msi

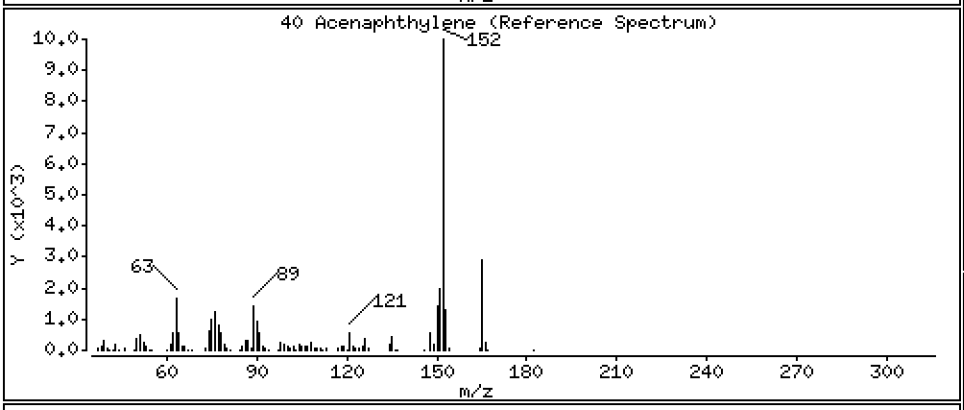
Column diameter: 0.25

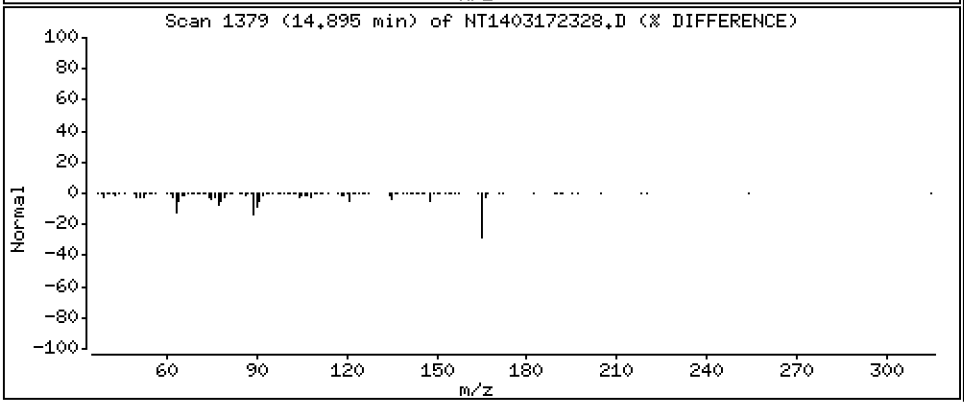
40 Acenaphthylene

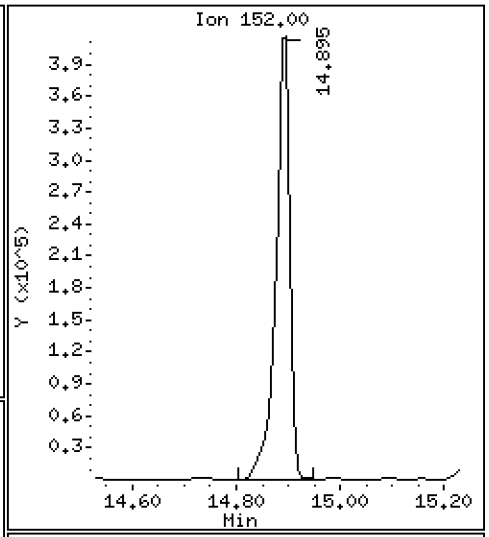
Concentration: 3.532 ug/mL

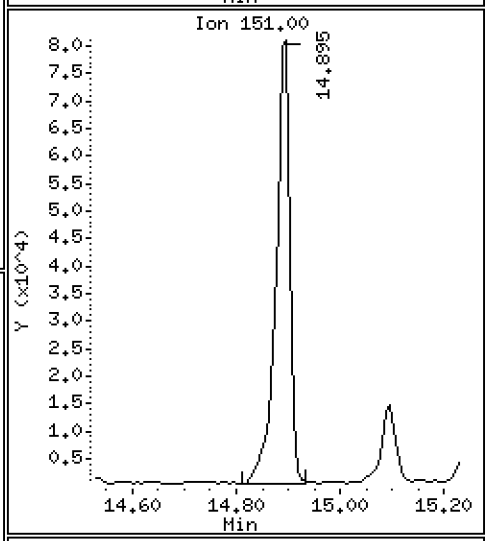


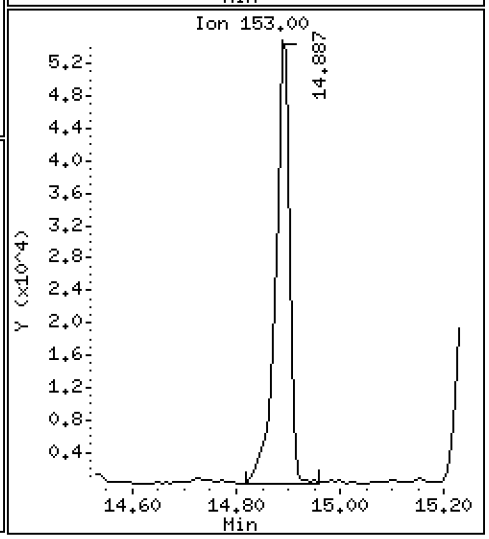












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS1

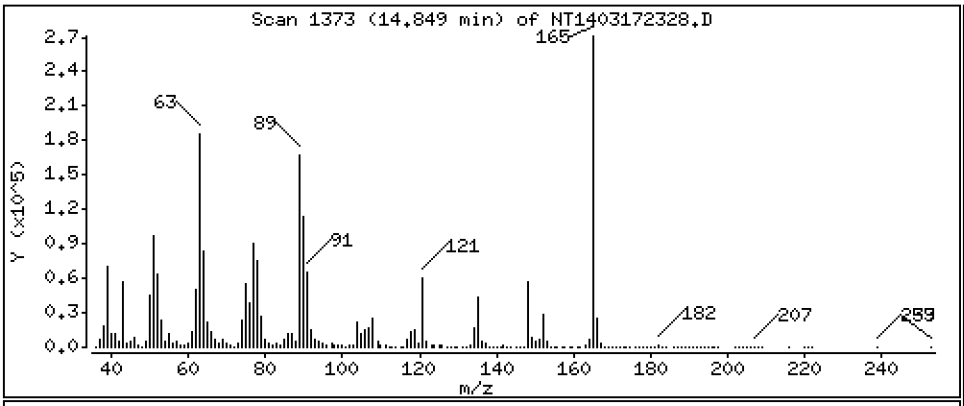
Operator: JGR

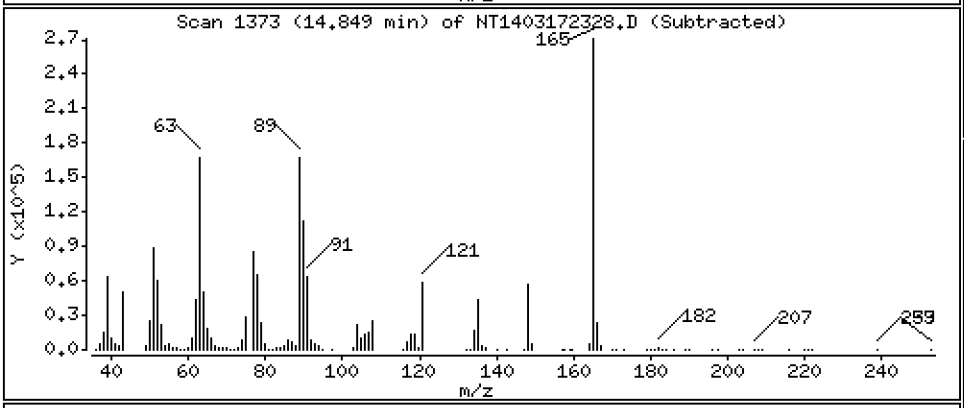
Column phase: ZB-5msi

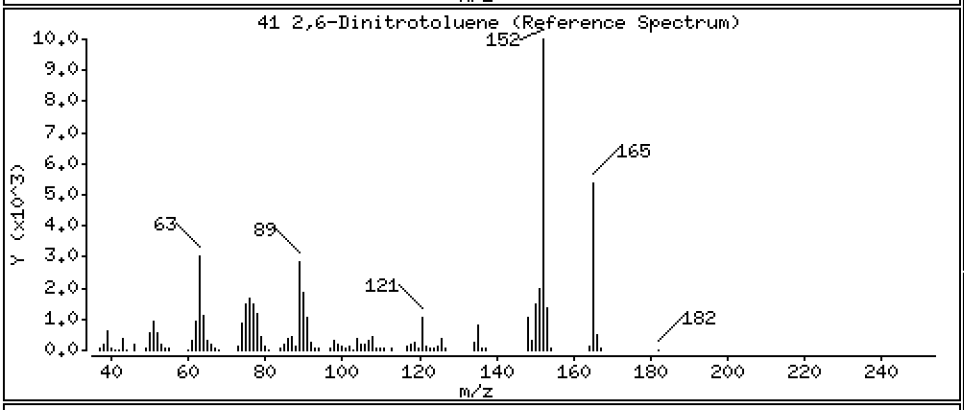
Column diameter: 0.25

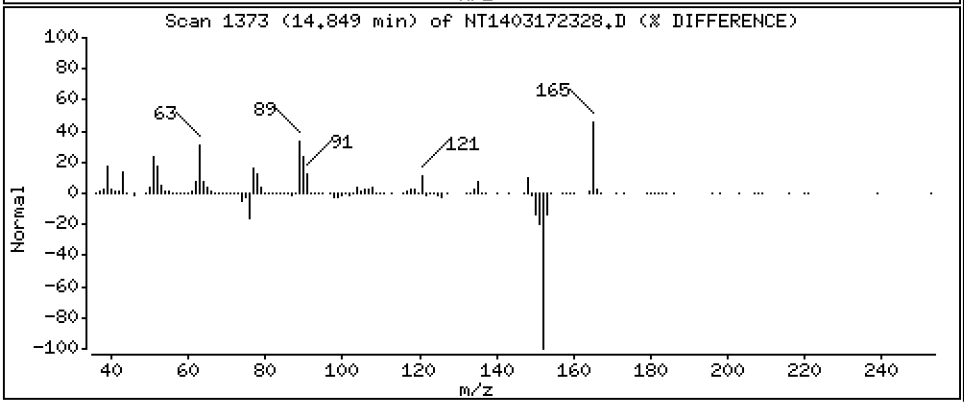
41 2,6-Dinitrotoluene

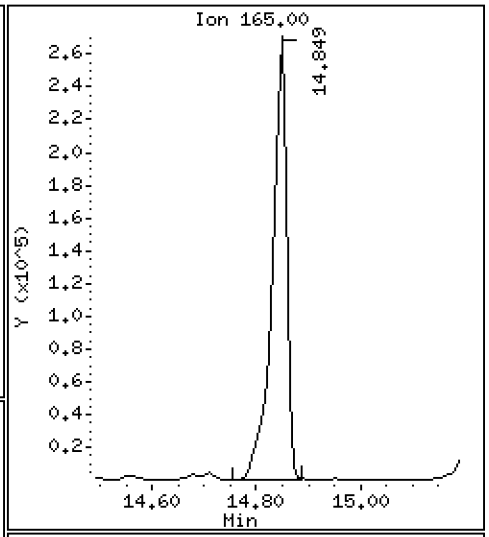
Concentration: 15.54 ug/mL

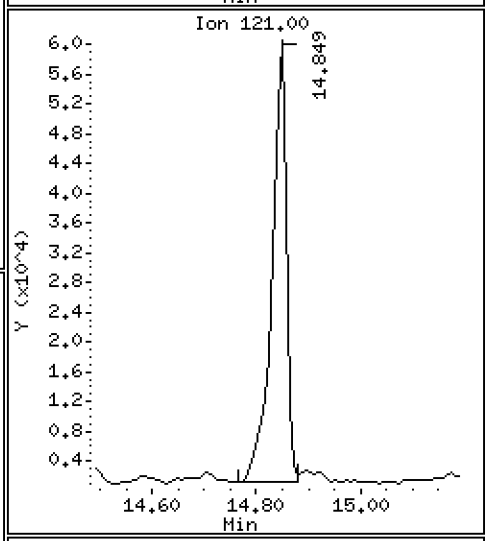


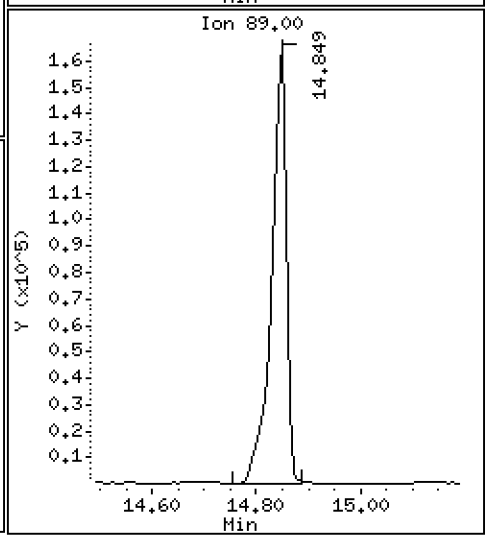












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS1

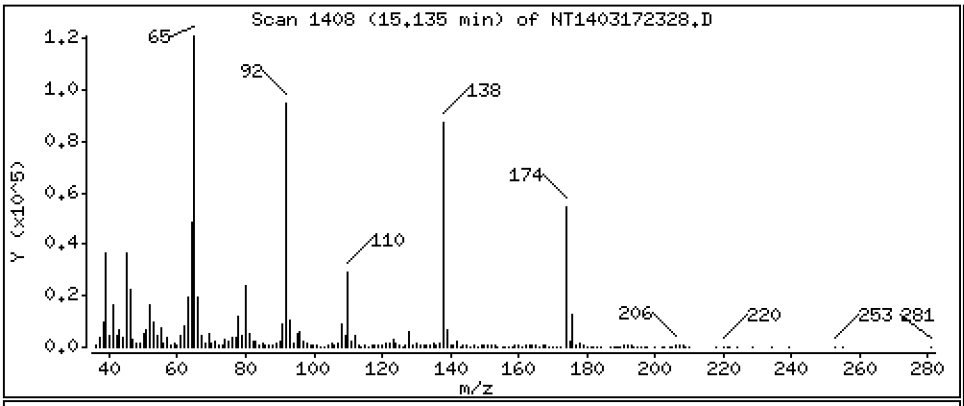
Operator: JGR

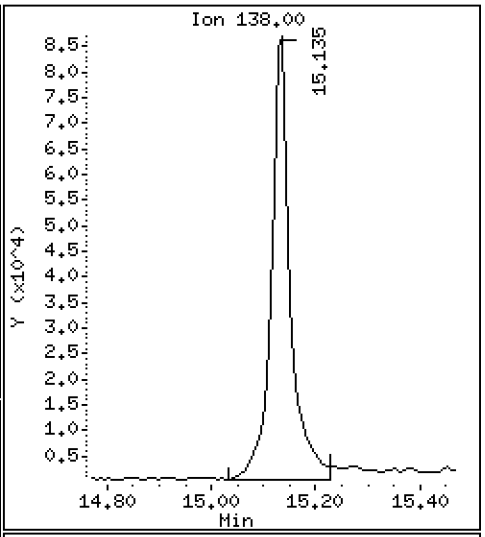
Column phase: ZB-5msi

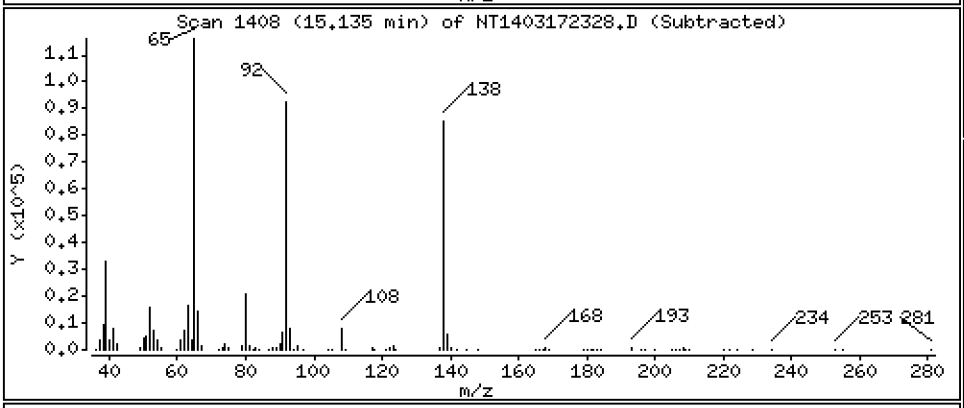
Column diameter: 0.25

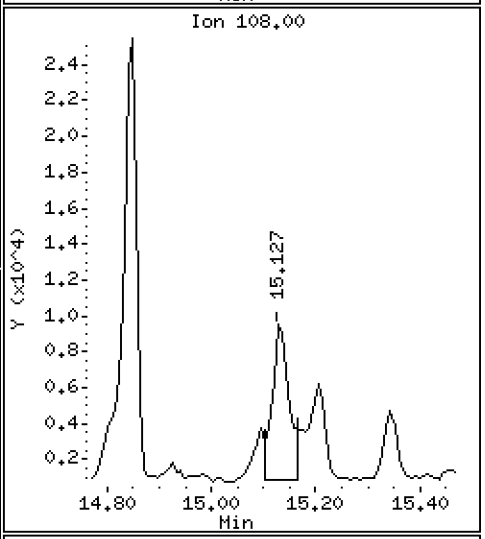
43 3-Nitroaniline

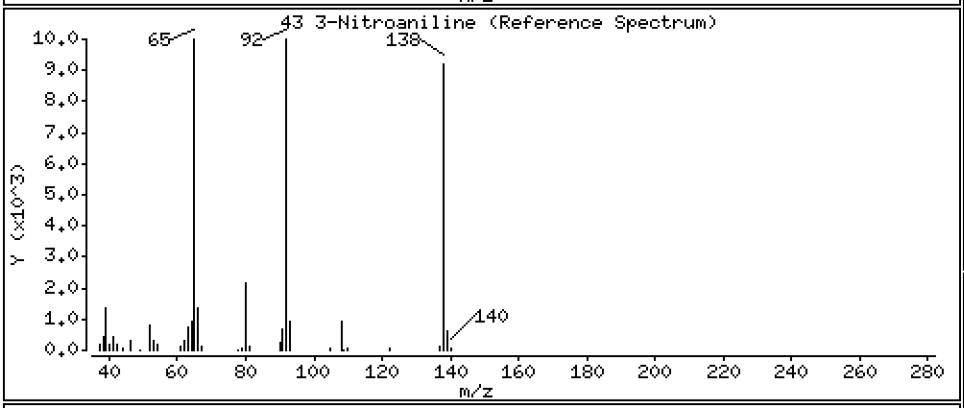
Concentration: 5.330 ug/mL

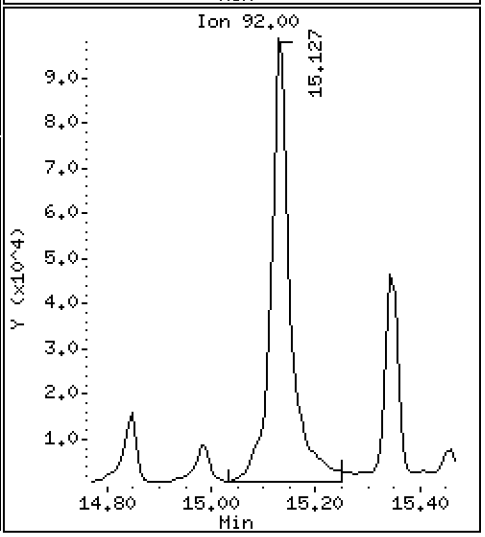


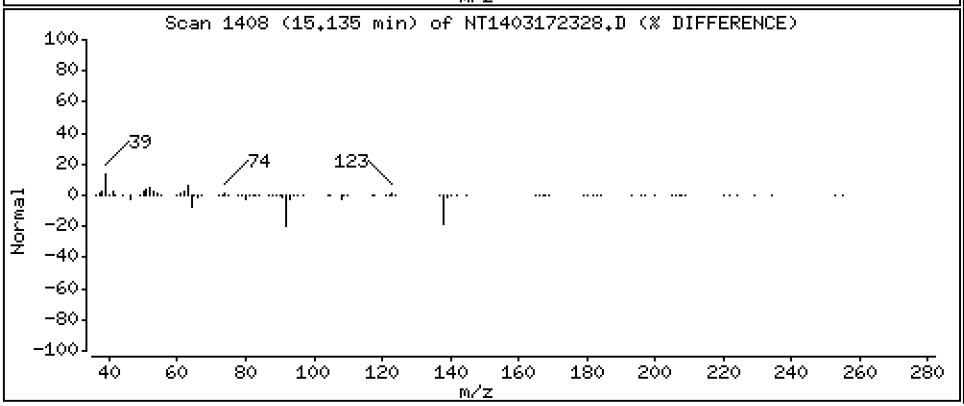












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS1

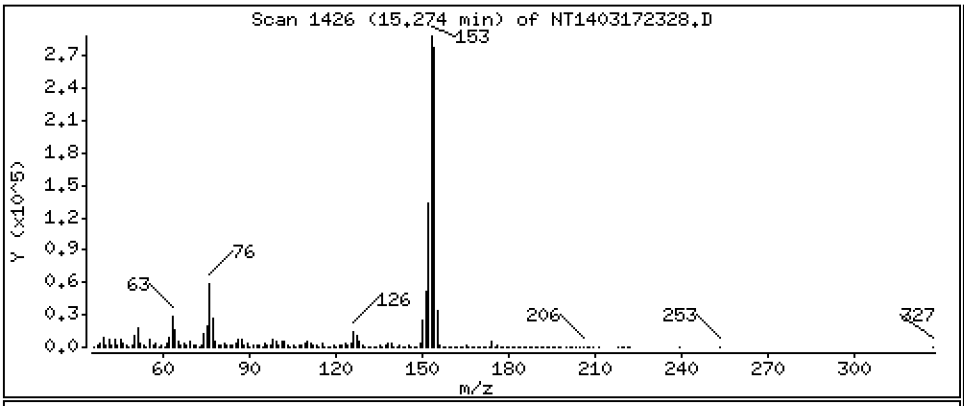
Operator: JGR

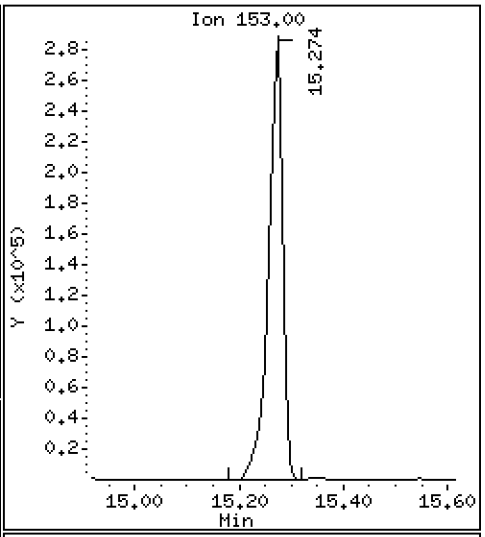
Column phase: ZB-5msi

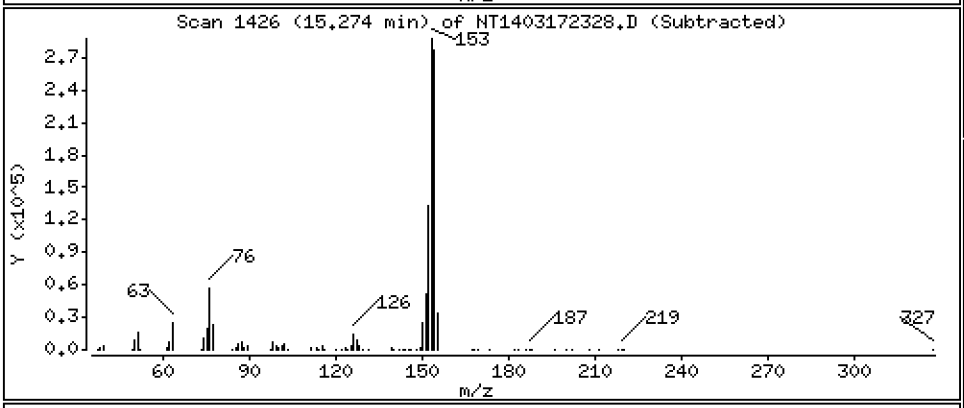
Column diameter: 0.25

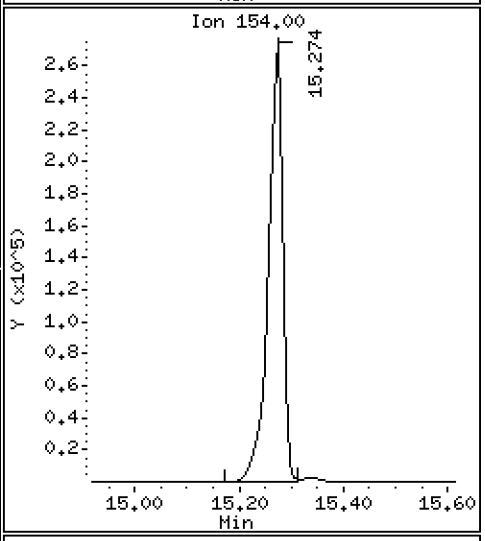
44 Acenaphthene

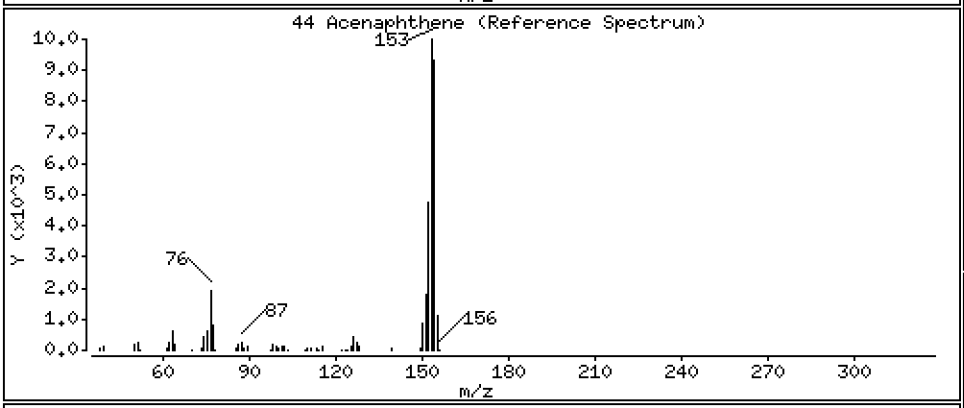
Concentration: 4.114 ug/mL

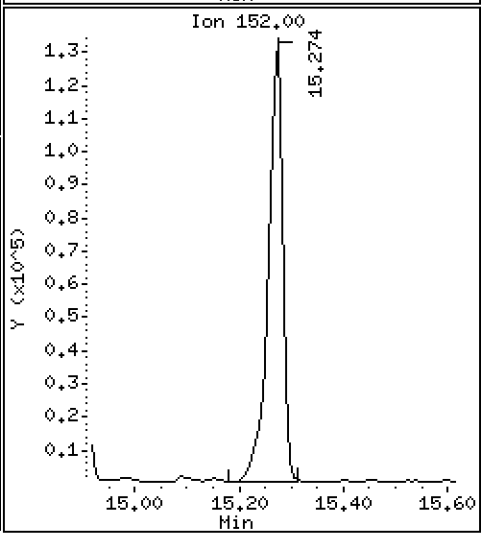


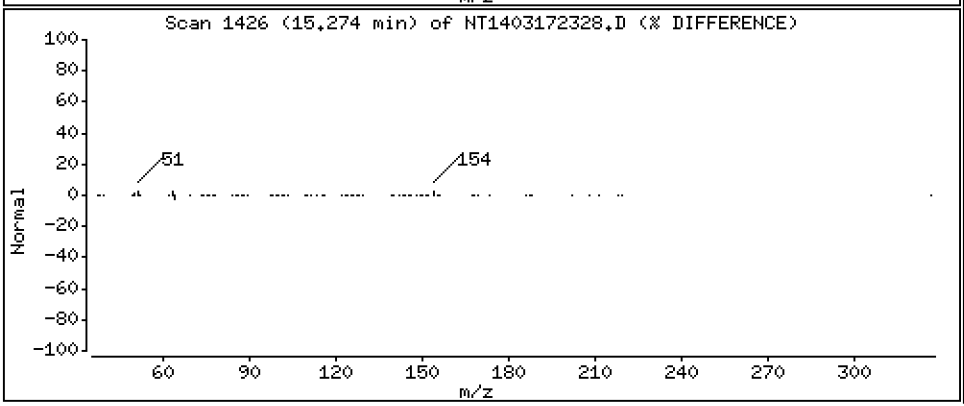












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS1

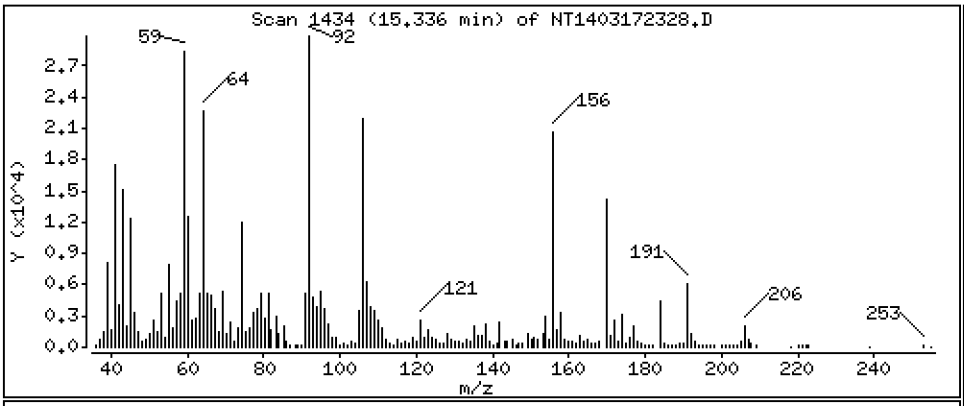
Operator: JGR

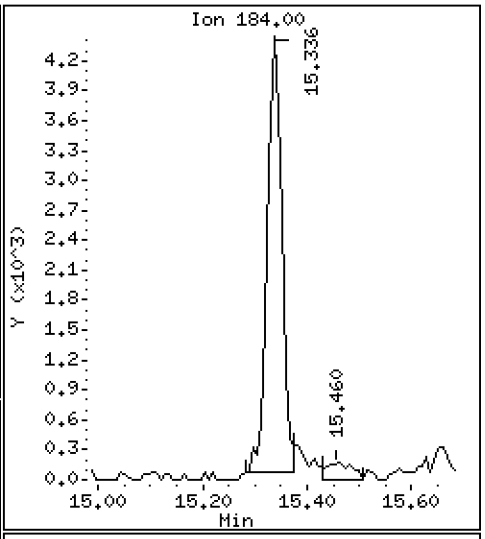
Column phase: ZB-5msi

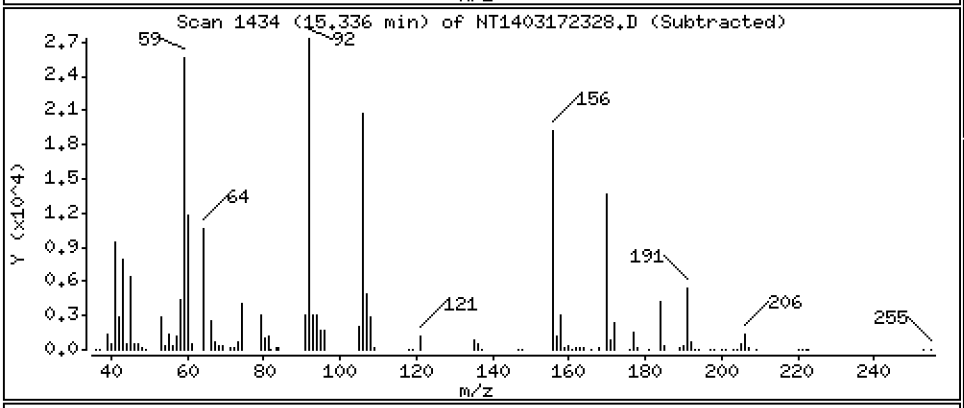
Column diameter: 0.25

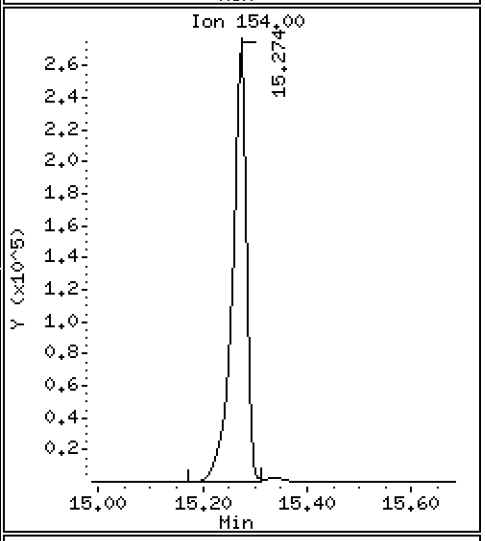
45 2,4-Dinitrophenol

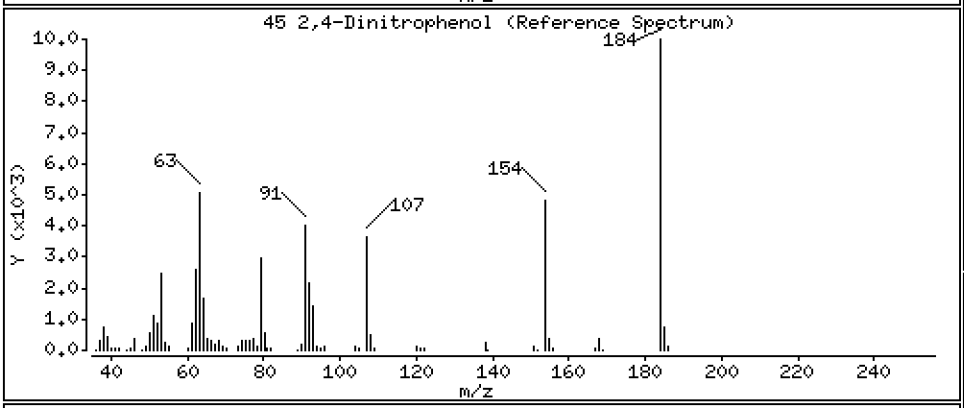
Concentration: 0.3258 ug/mL

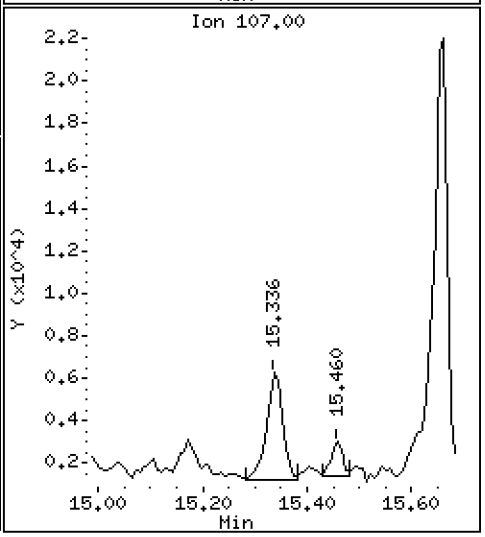


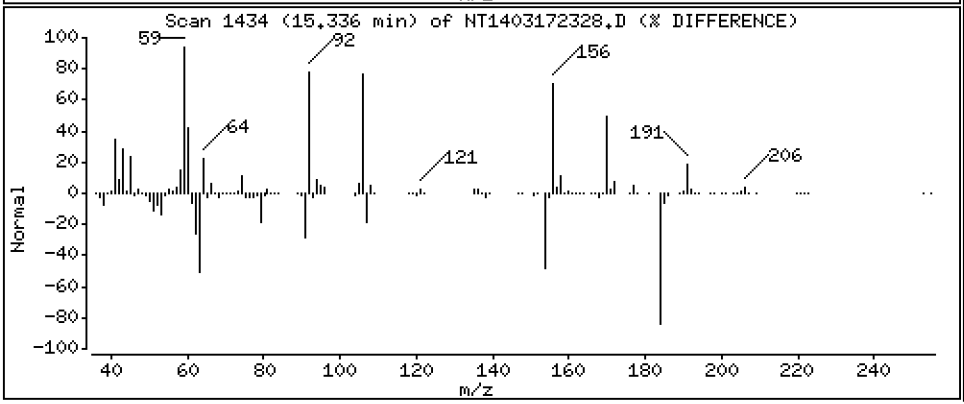












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS1

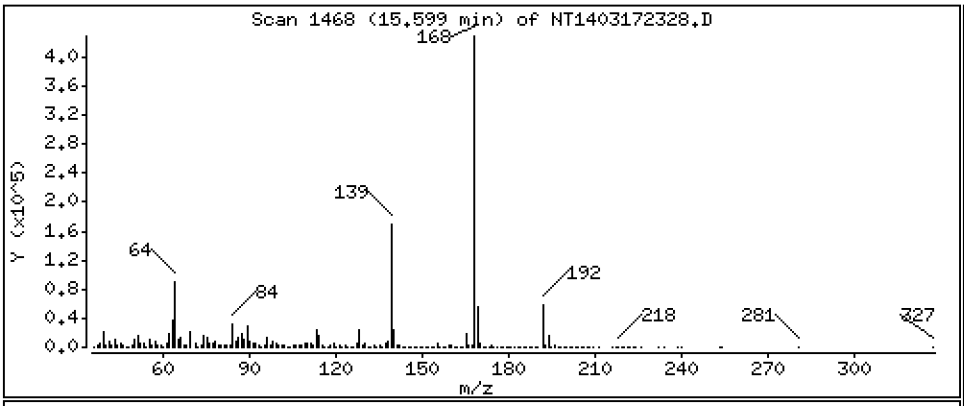
Operator: JGR

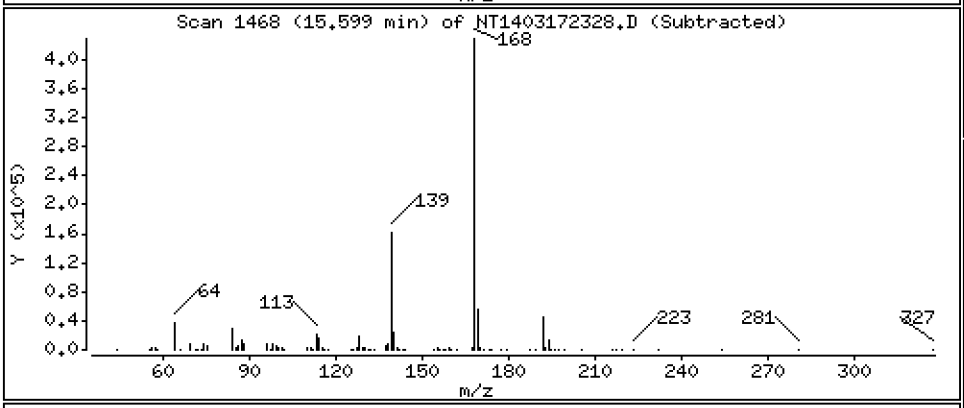
Column phase: ZB-5msi

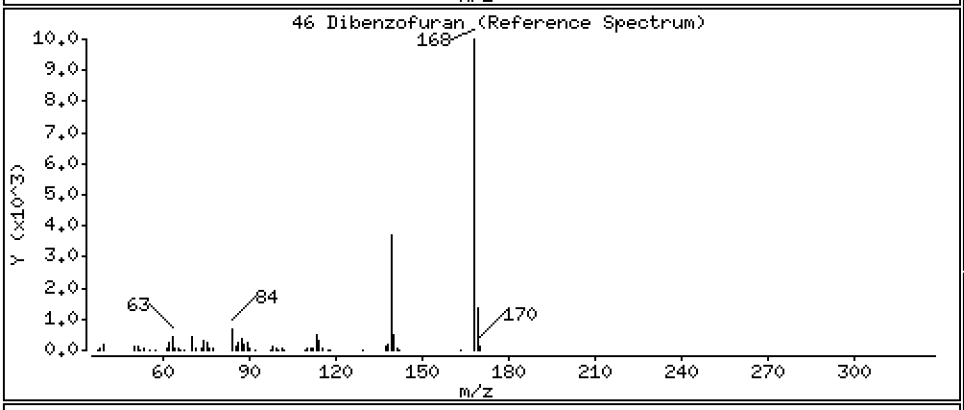
Column diameter: 0.25

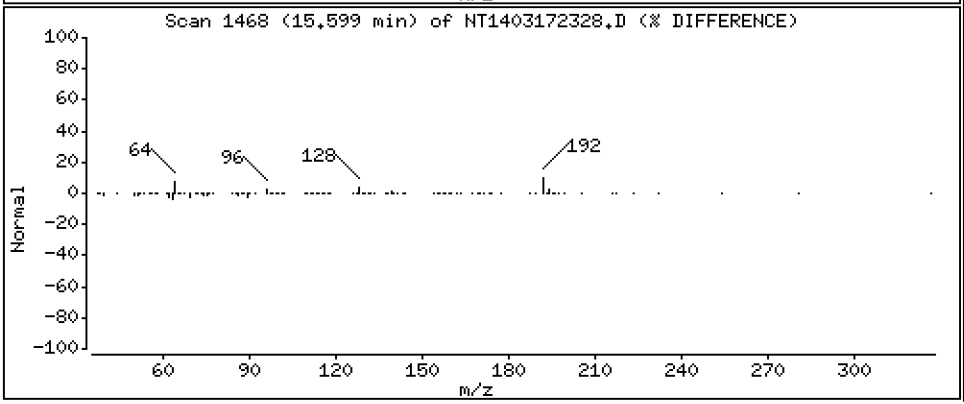
46 Dibenzofuran

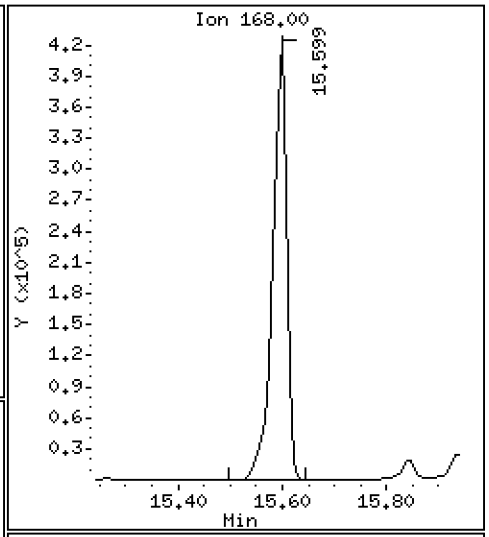
Concentration: 4.229 ug/mL

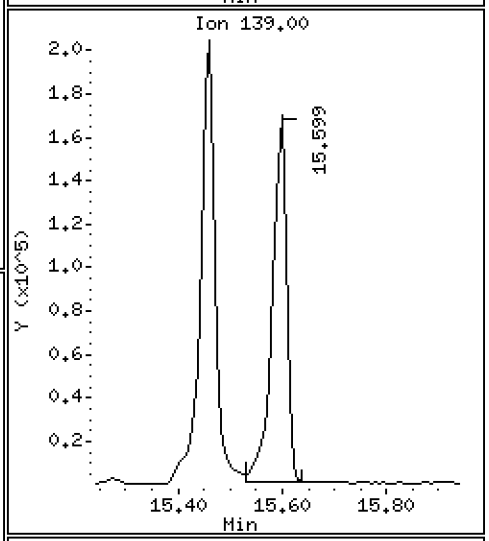


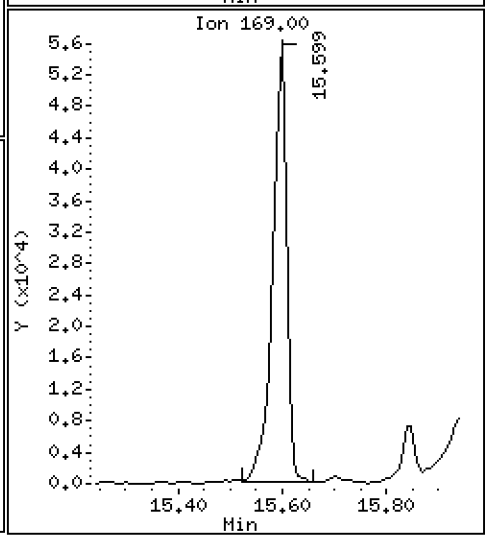












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS1

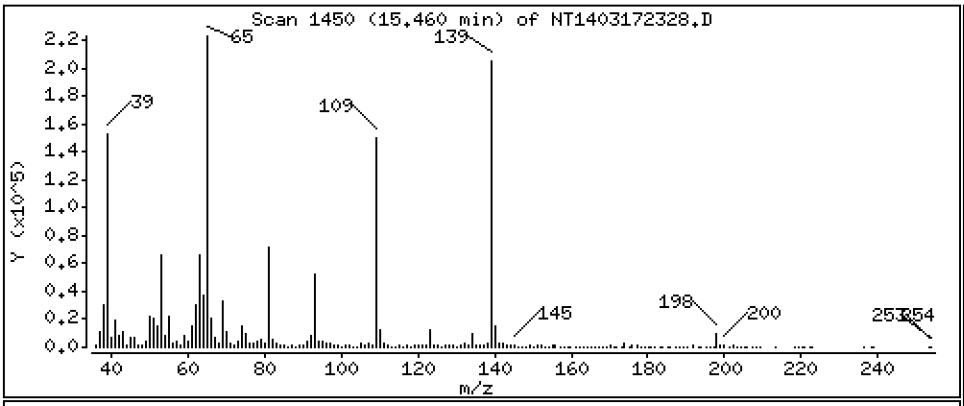
Operator: JGR

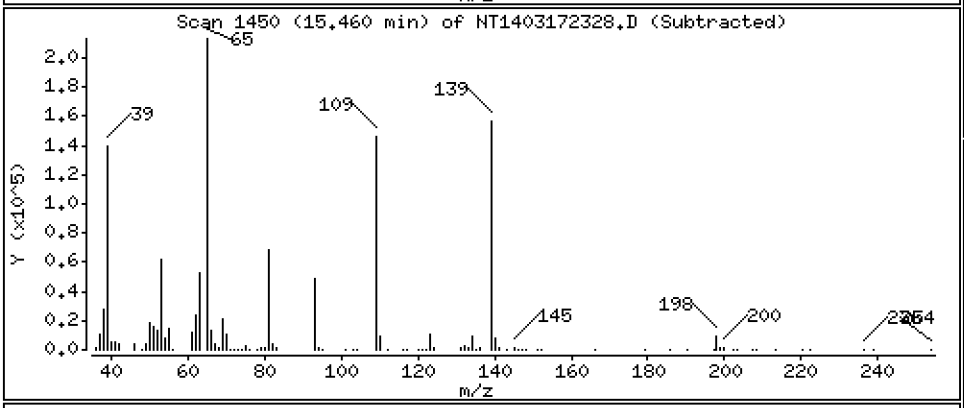
Column phase: ZB-5msi

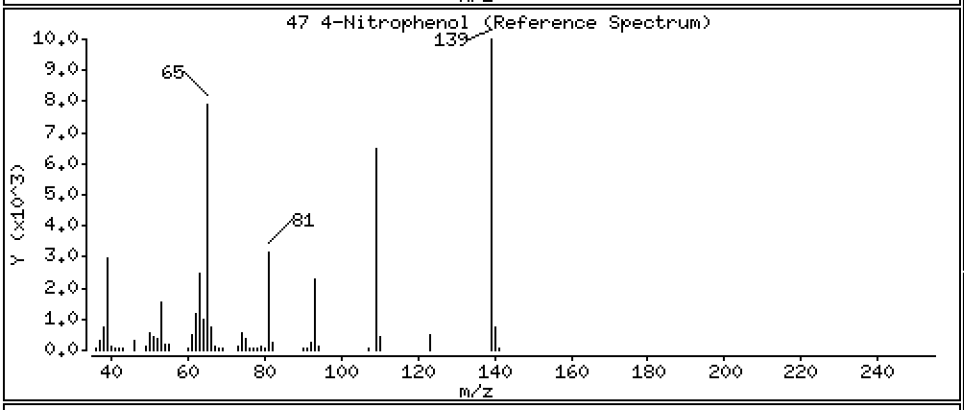
Column diameter: 0.25

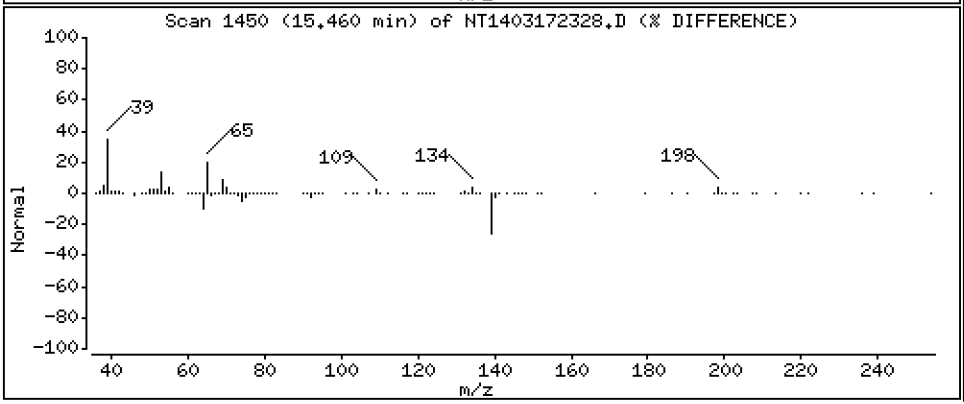
47 4-Nitrophenol

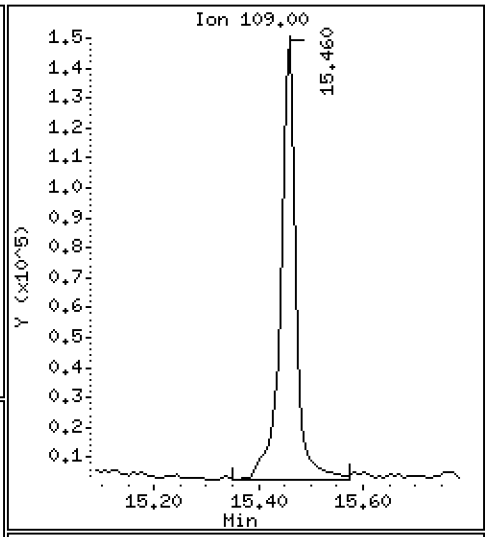
Concentration: 12.84 ug/mL

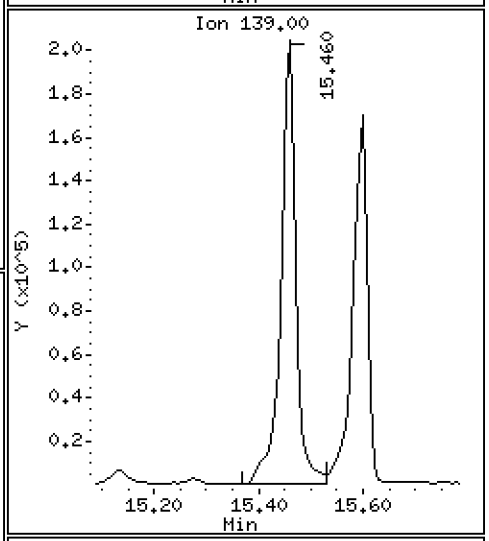


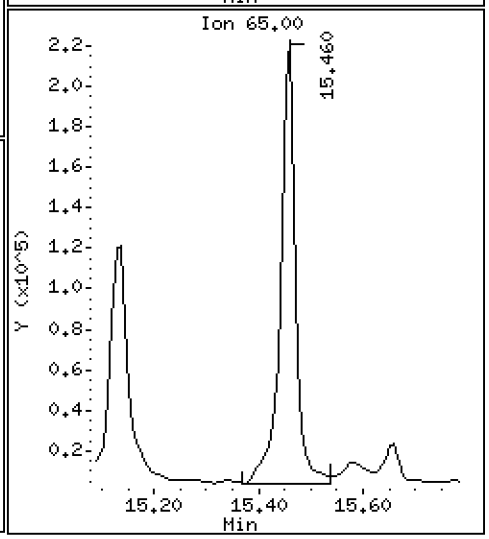












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS1

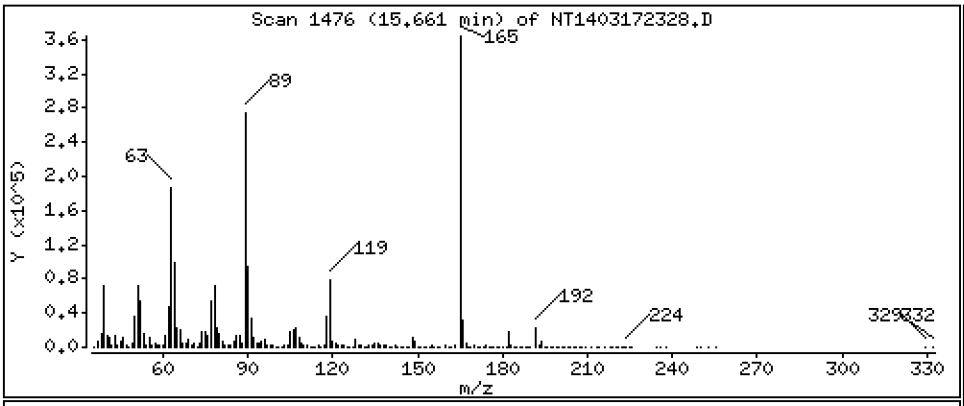
Operator: JGR

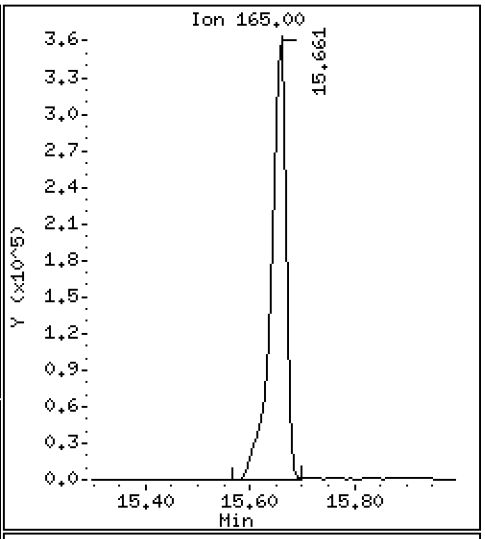
Column phase: ZB-5msi

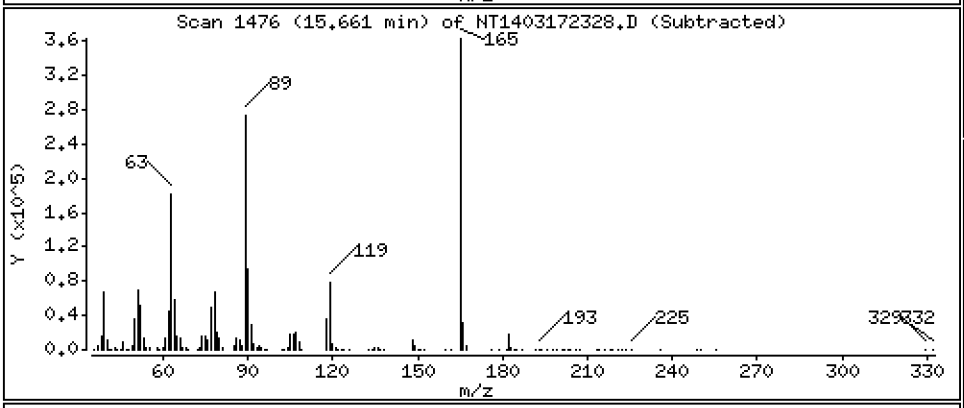
Column diameter: 0.25

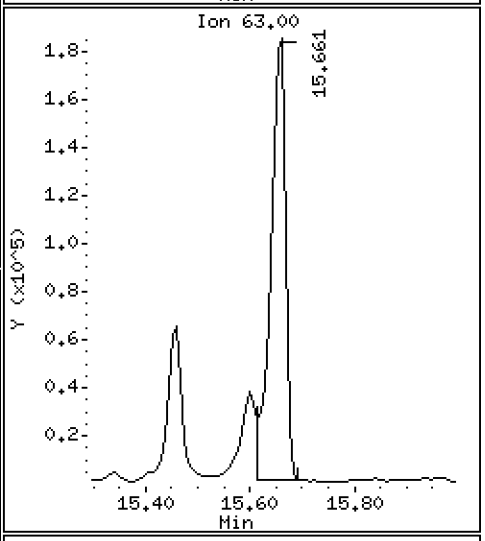
48 2,4-Dinitrotoluene

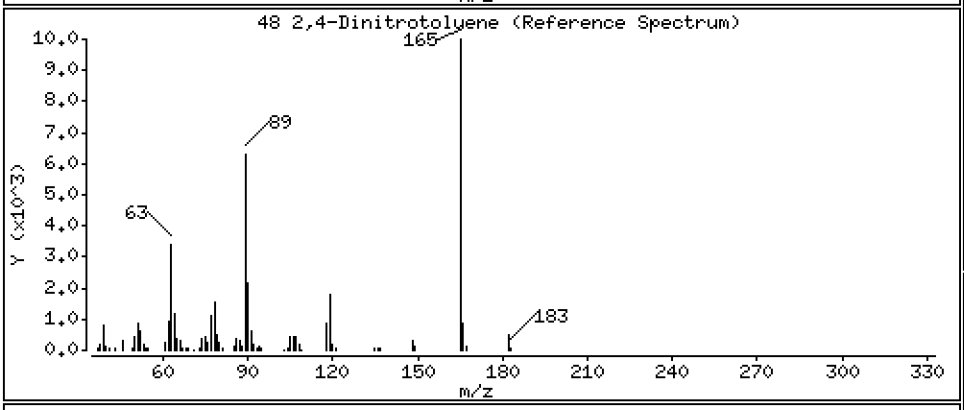
Concentration: 15.22 ug/mL

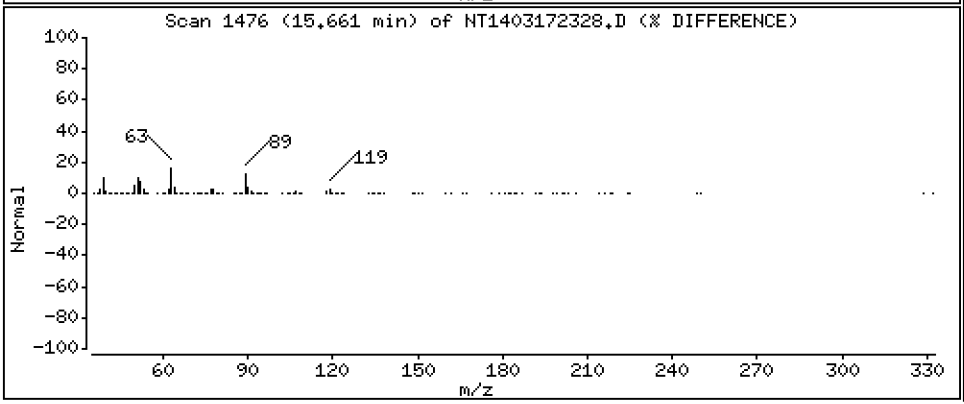


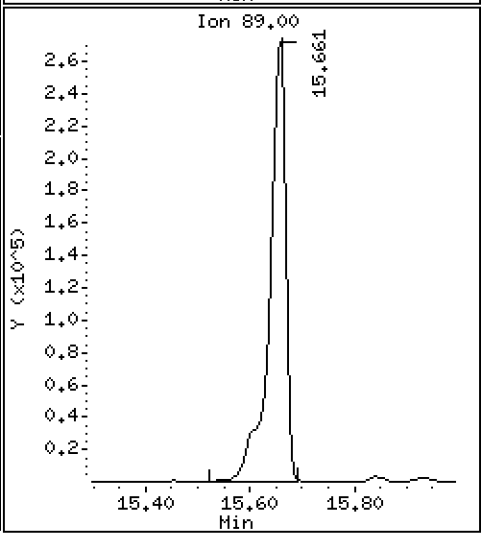












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS1

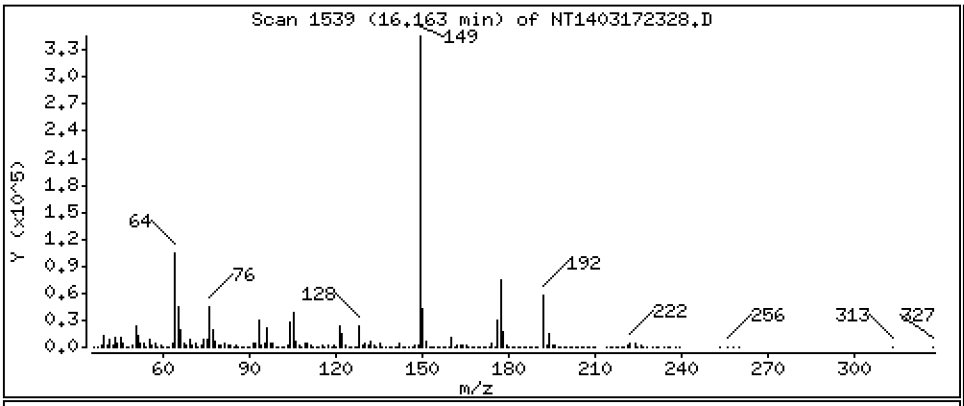
Operator: JGR

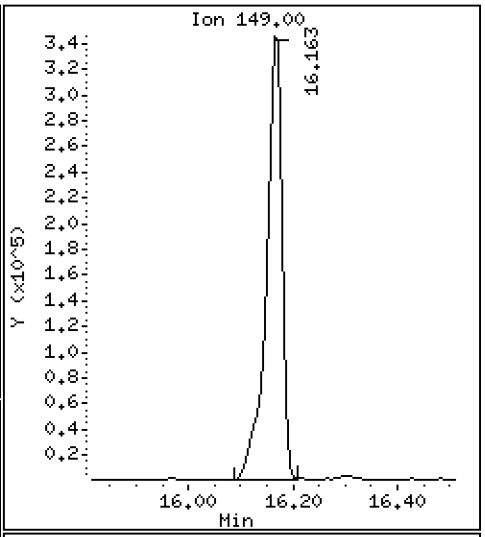
Column phase: ZB-5msi

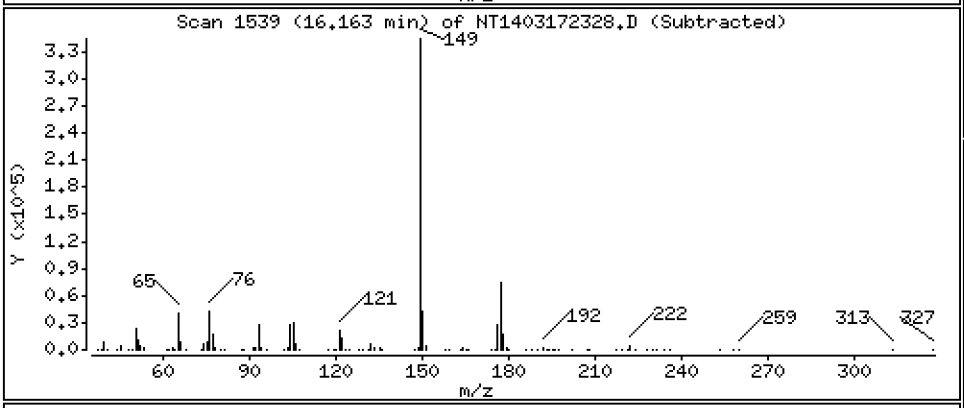
Column diameter: 0.25

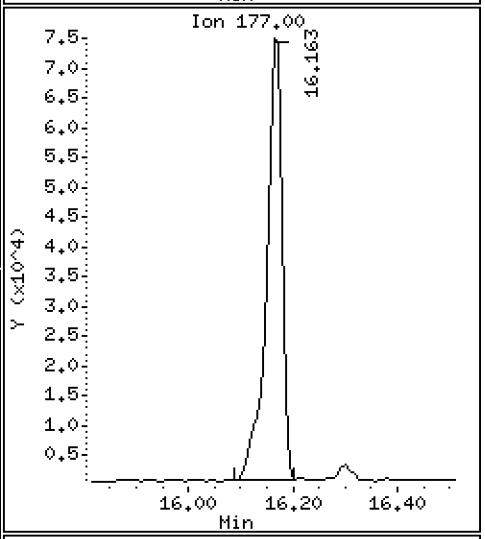
50 Diethylphthalate

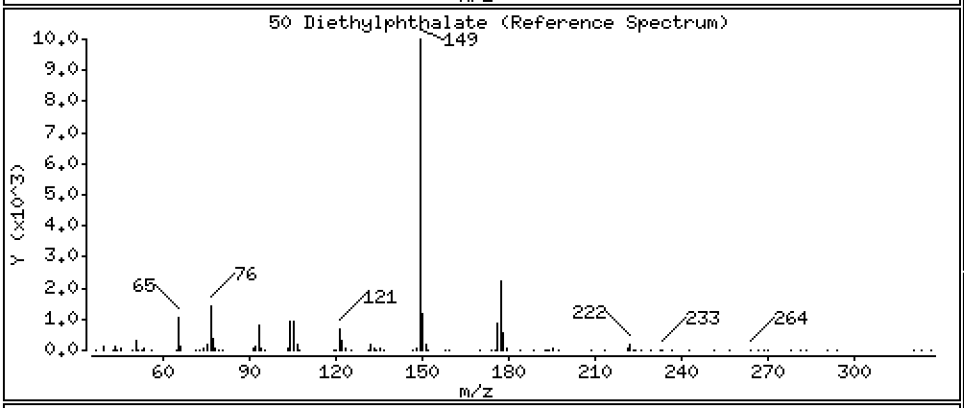
Concentration: 4.795 ug/mL

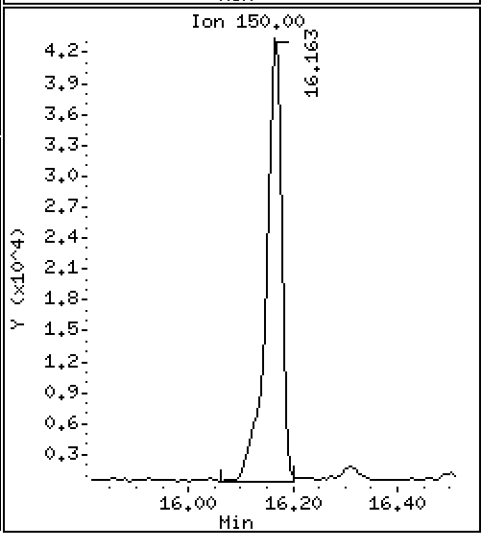


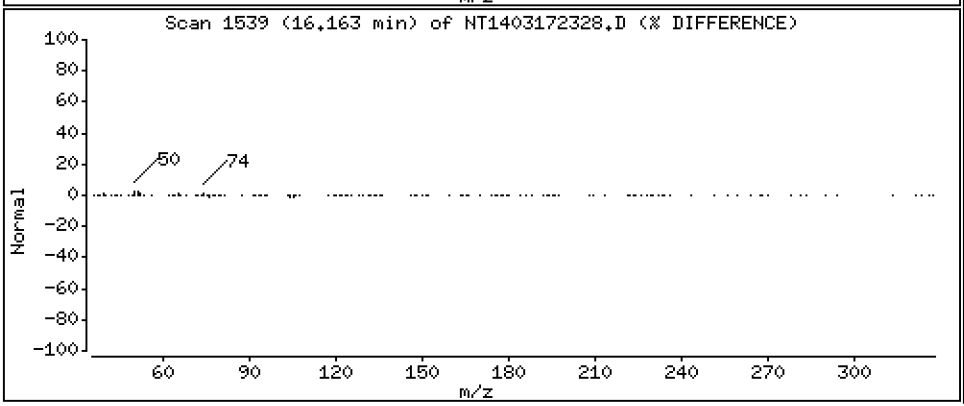












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS1

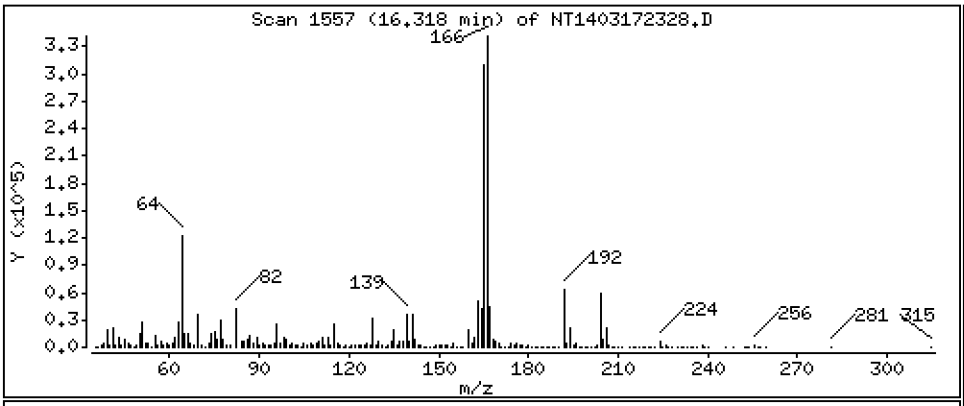
Operator: JGR

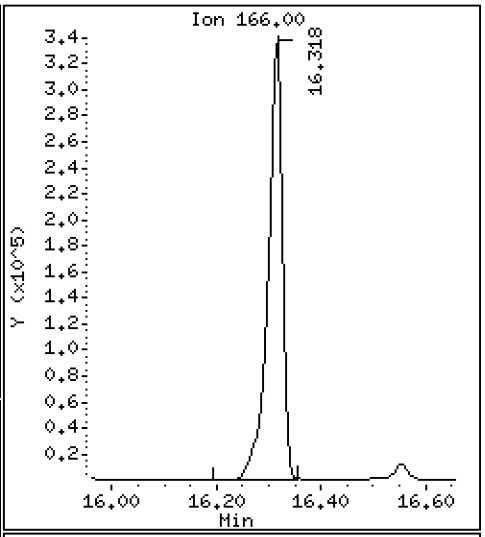
Column phase: ZB-5msi

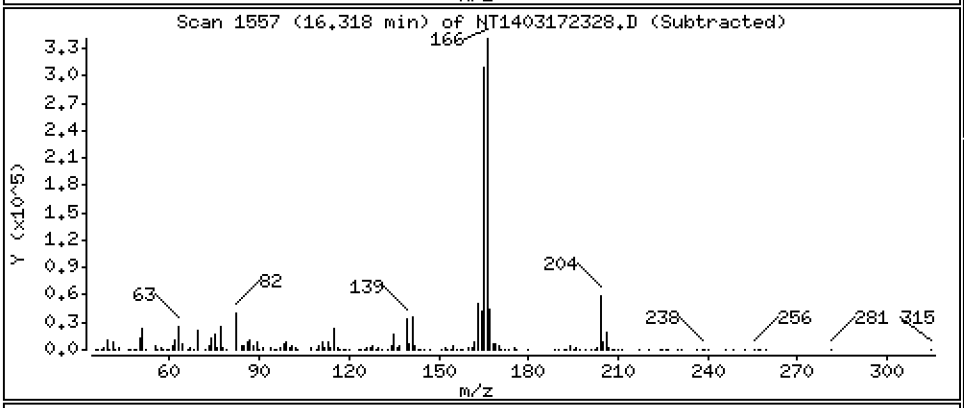
Column diameter: 0.25

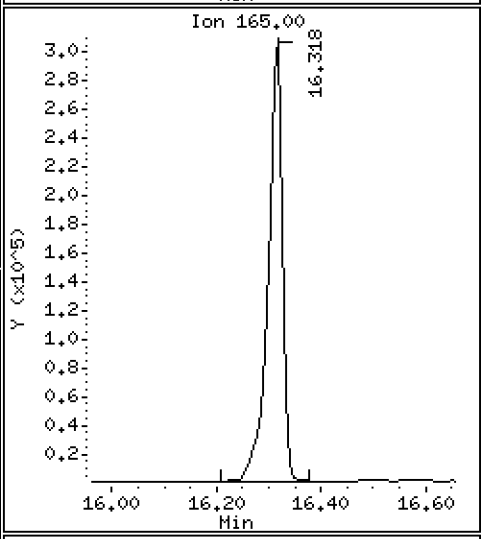
49 Fluorene

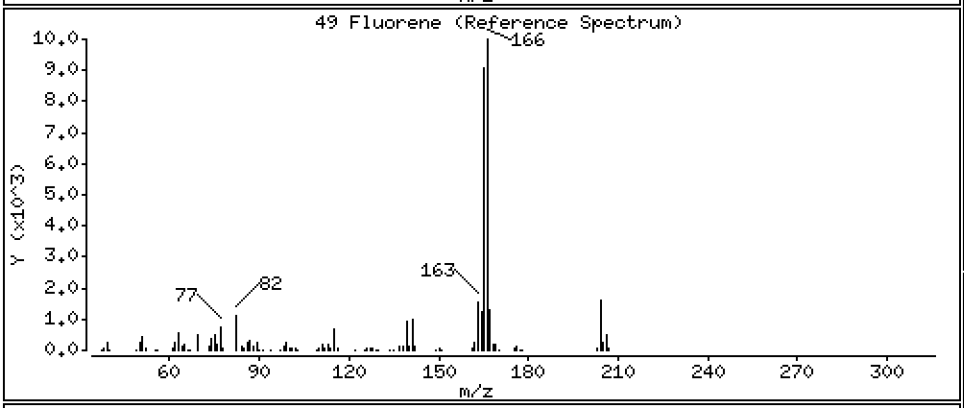
Concentration: 4.118 ug/mL

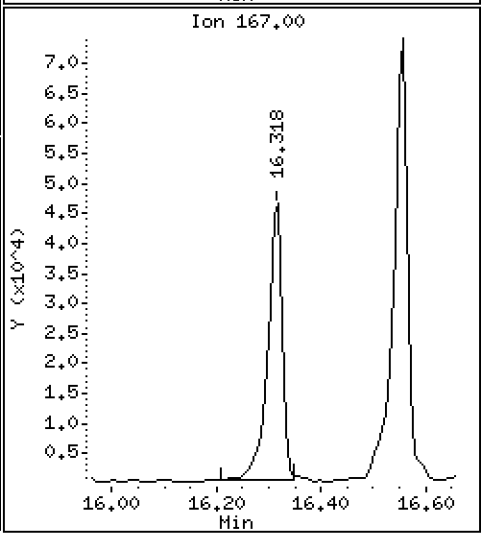


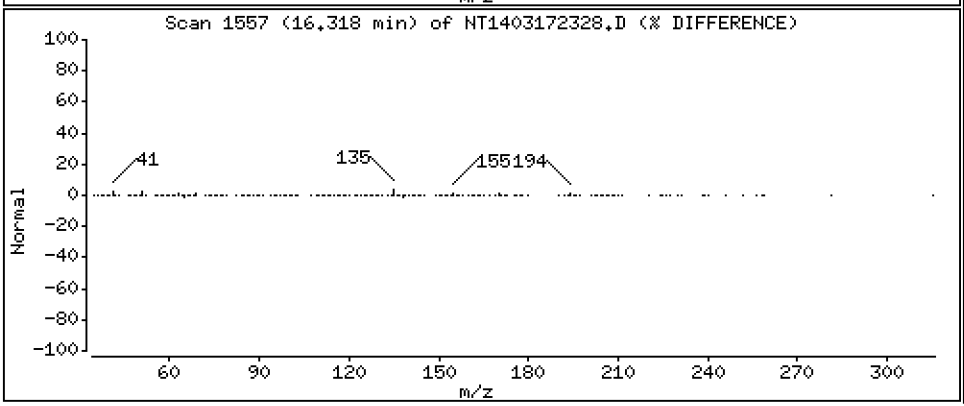












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS1

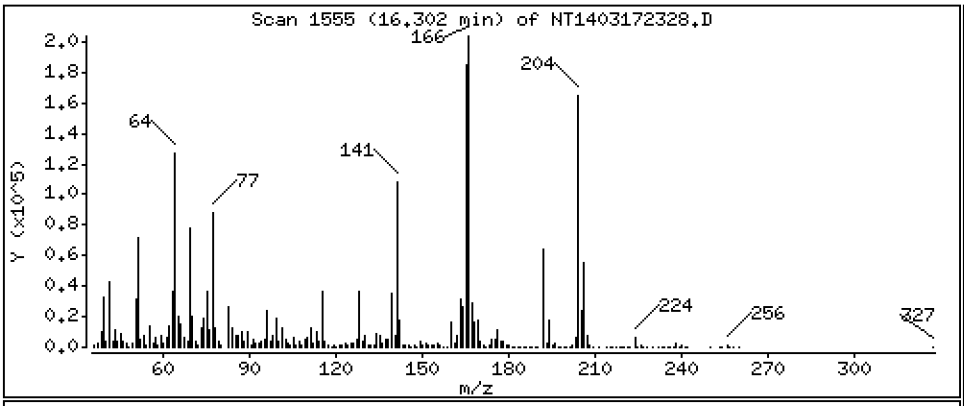
Operator: JGR

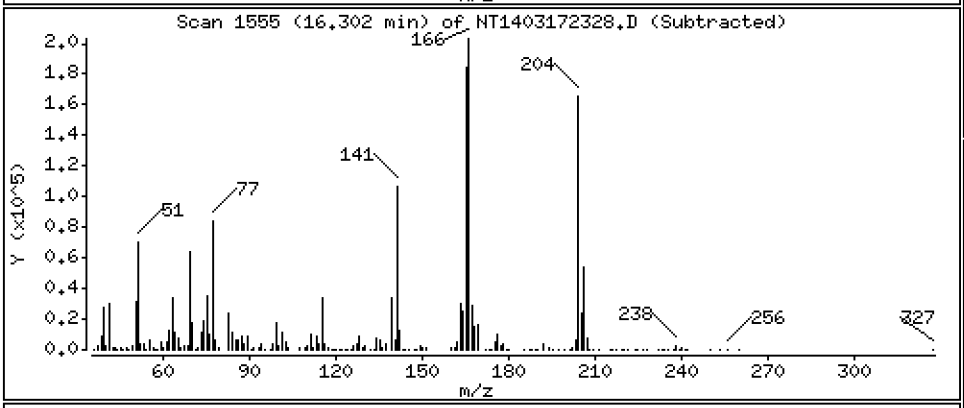
Column phase: ZB-5msi

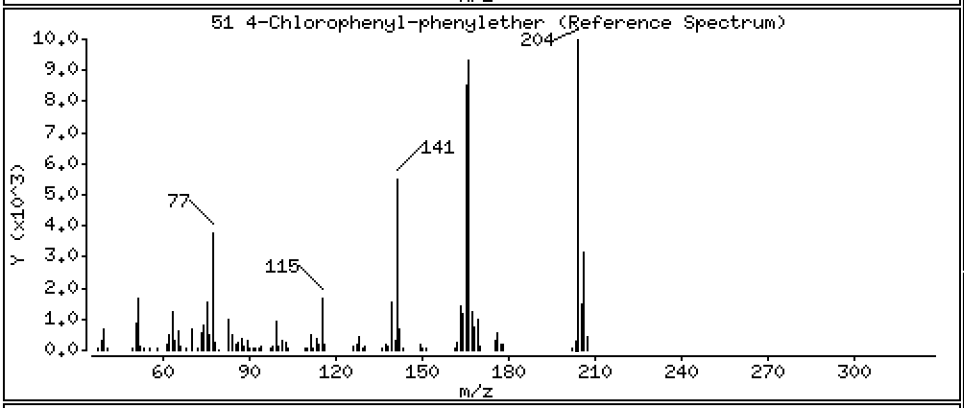
Column diameter: 0.25

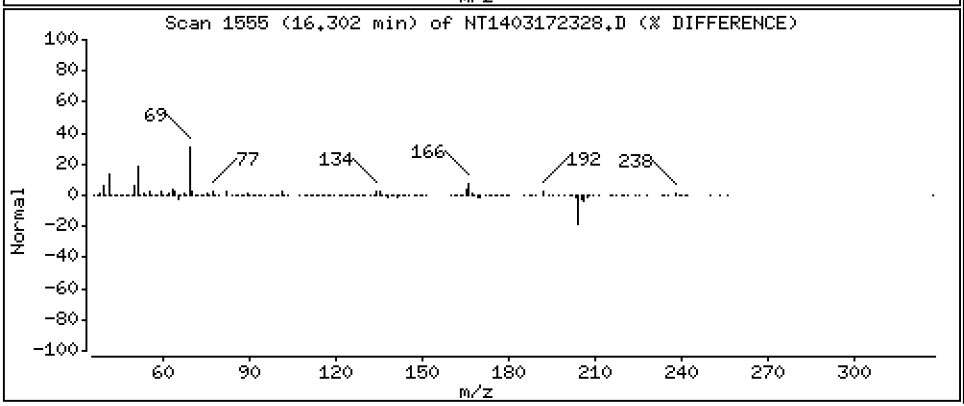
51 4-Chlorophenyl-phenylether

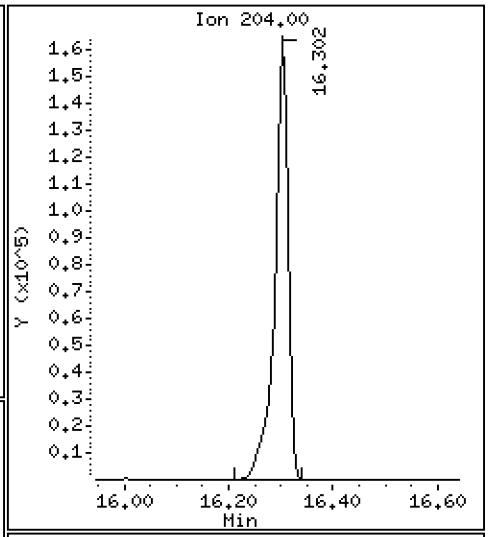
Concentration: 4.516 ug/mL

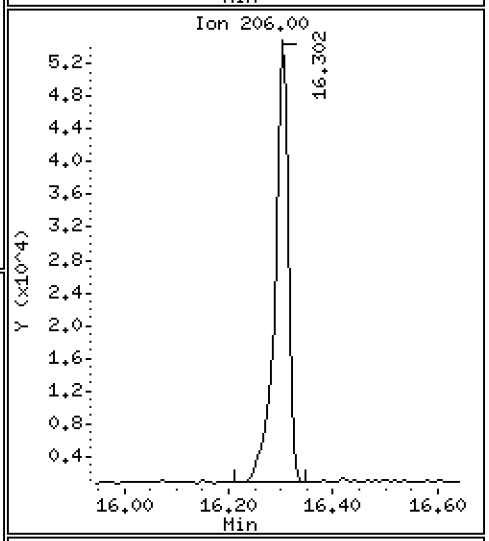


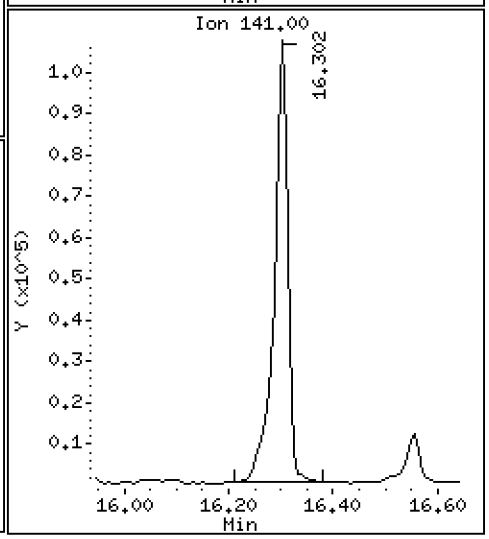












Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172328.D

Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS1

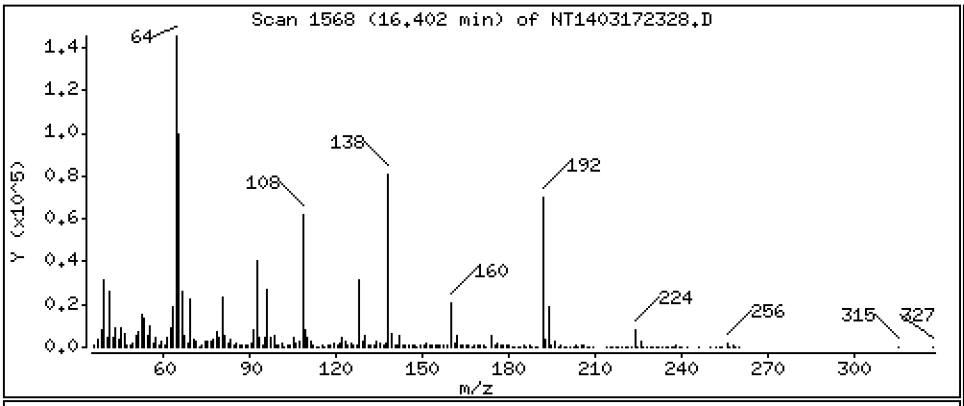
Operator: JGR

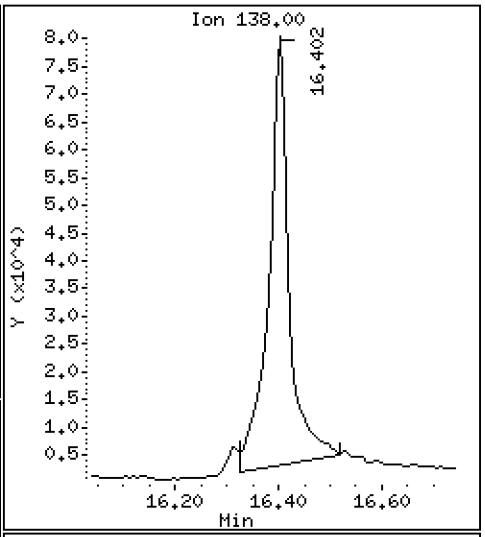
Column phase: ZB-5msi

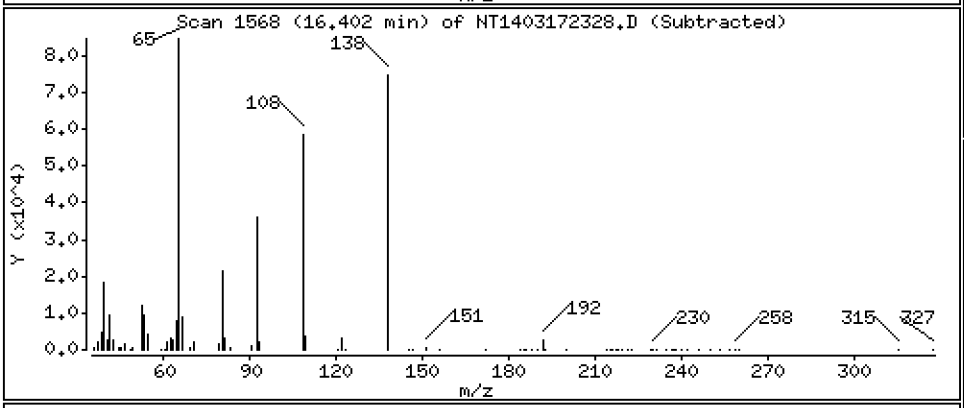
Column diameter: 0.25

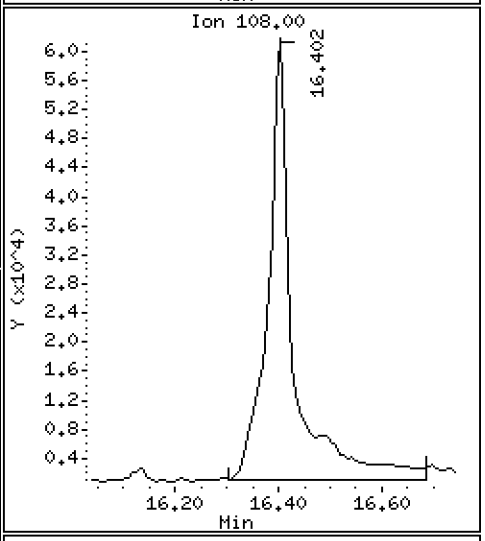
52 4-Nitroaniline

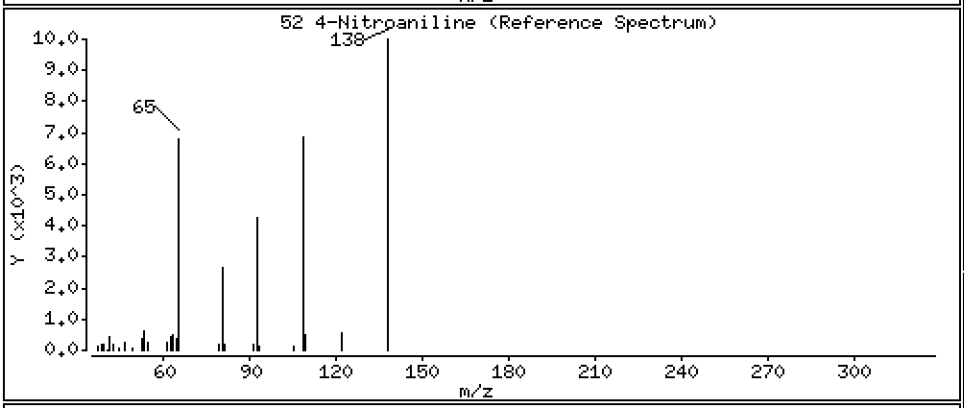
Concentration: 5.414 ug/mL

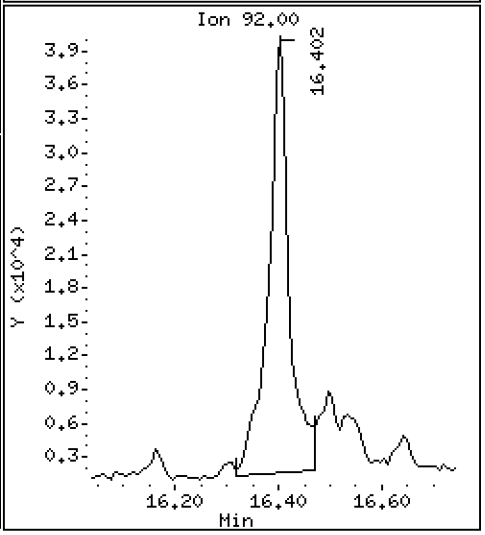


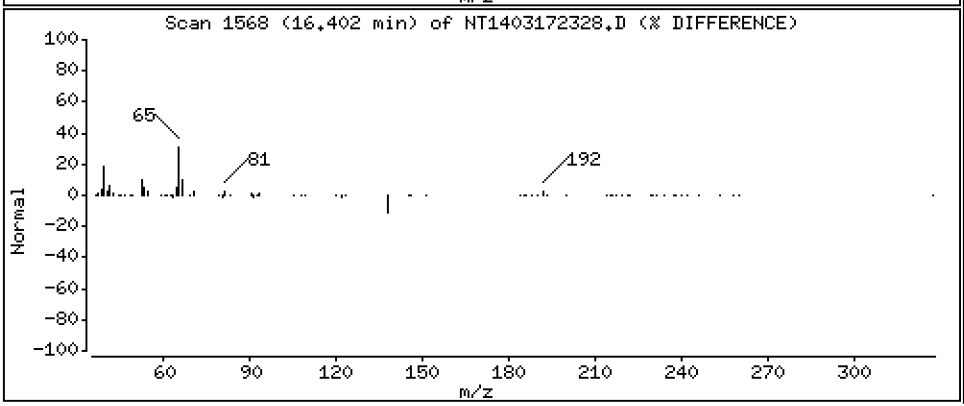












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS1

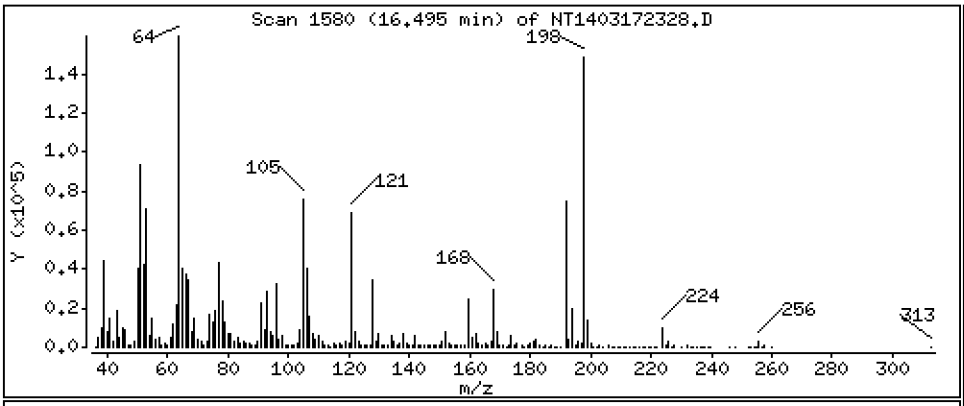
Operator: JGR

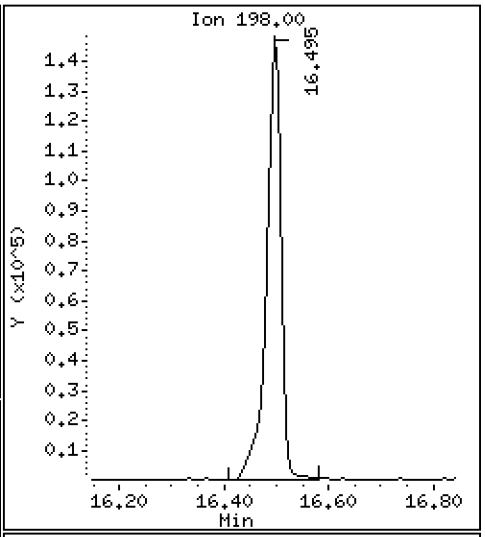
Column phase: ZB-5msi

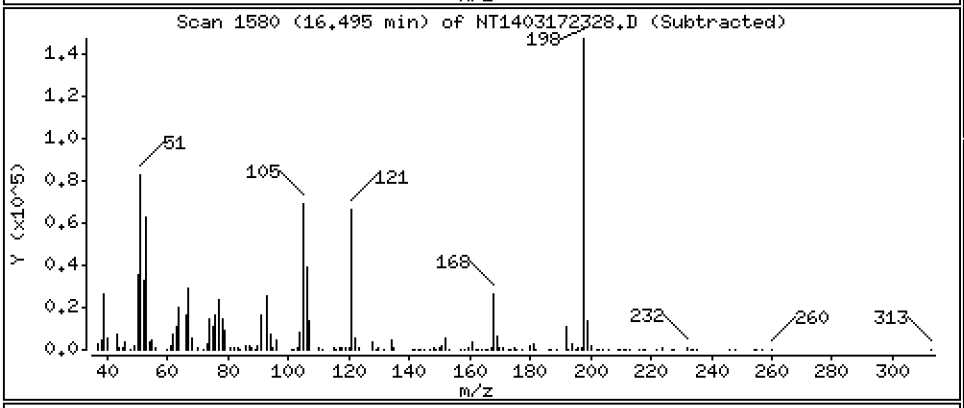
Column diameter: 0.25

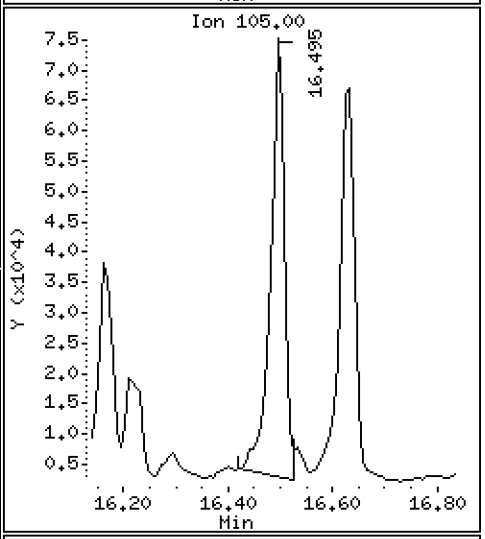
53 4,6-Dinitro-2-methylphenol

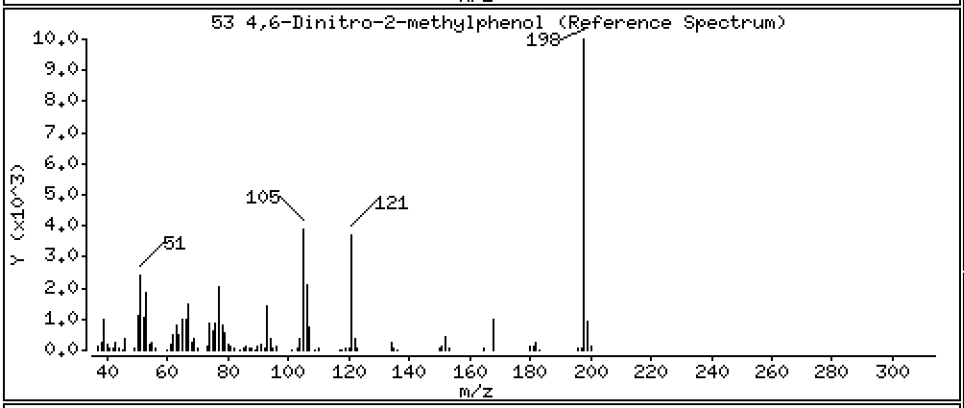
Concentration: 11.18 ug/mL

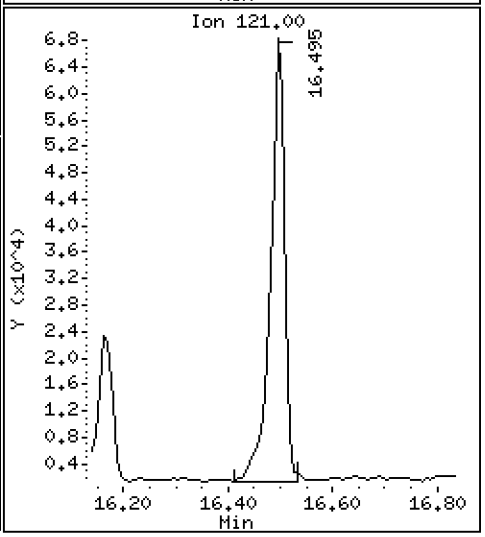


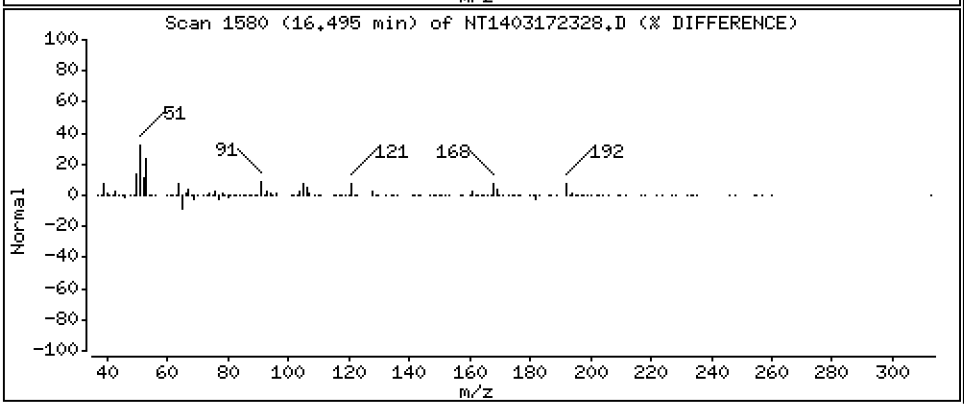












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS1

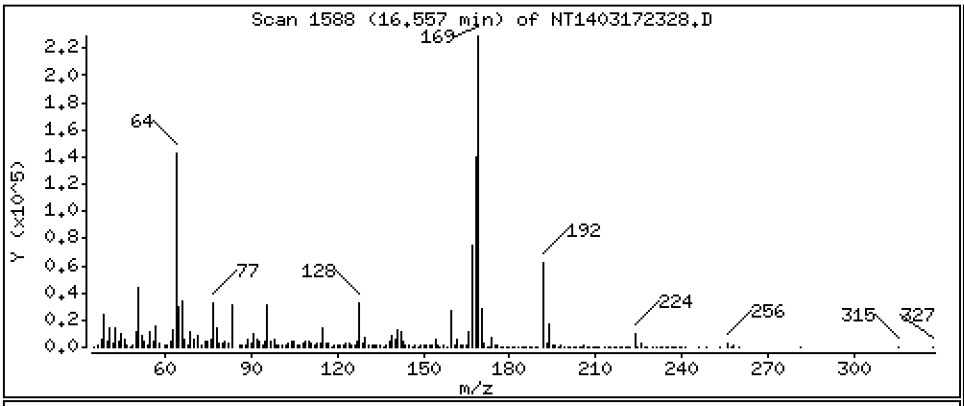
Operator: JGR

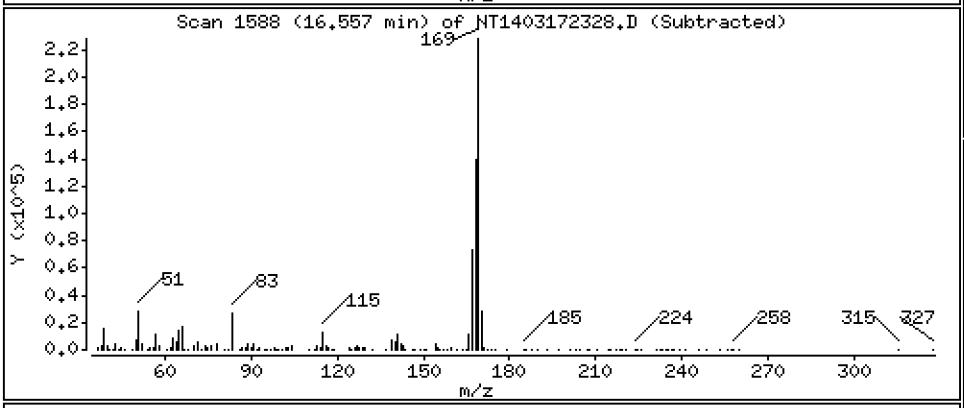
Column phase: ZB-5msi

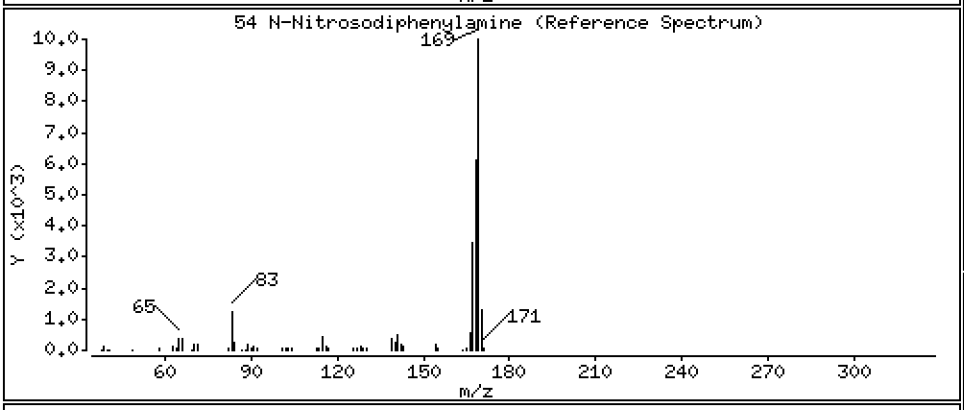
Column diameter: 0.25

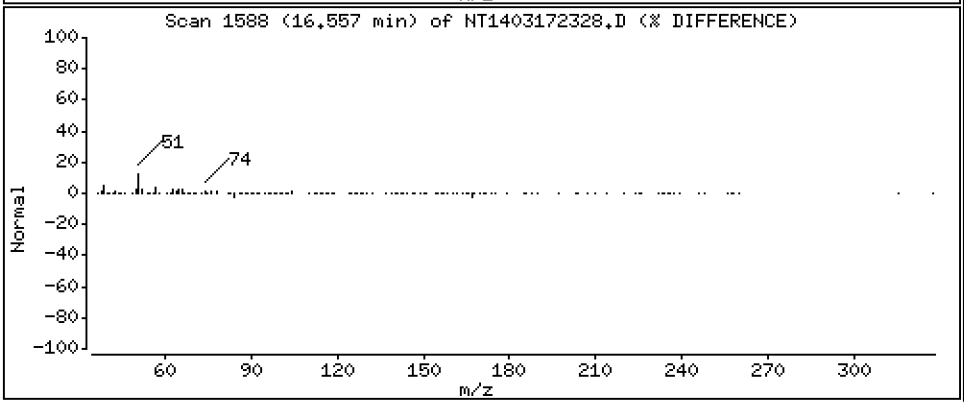
54 N-Nitrosodiphenylamine

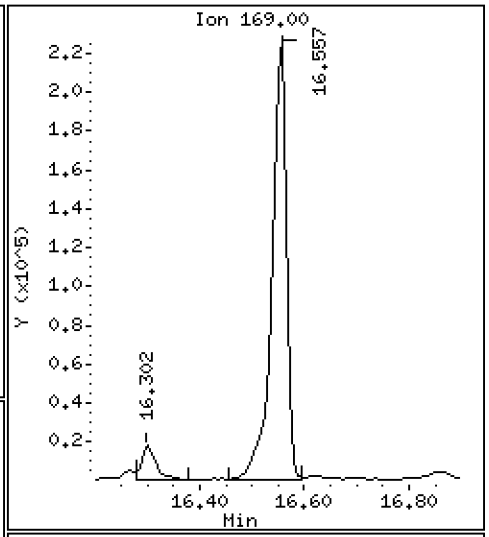
Concentration: 4.477 ug/mL

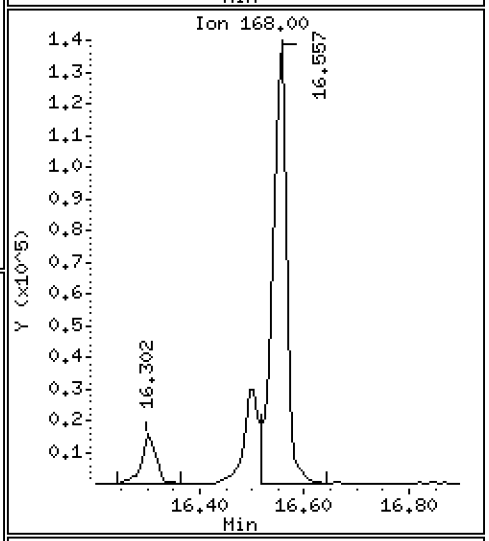


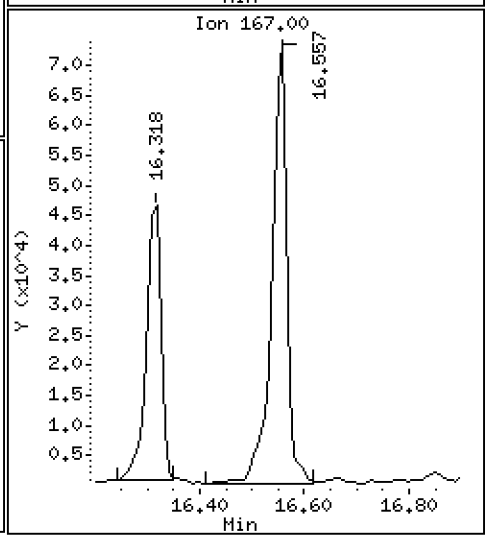












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS1

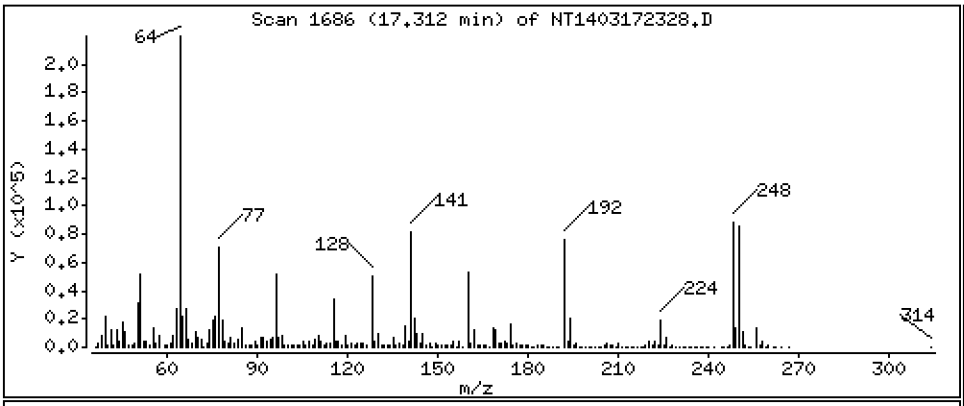
Operator: JGR

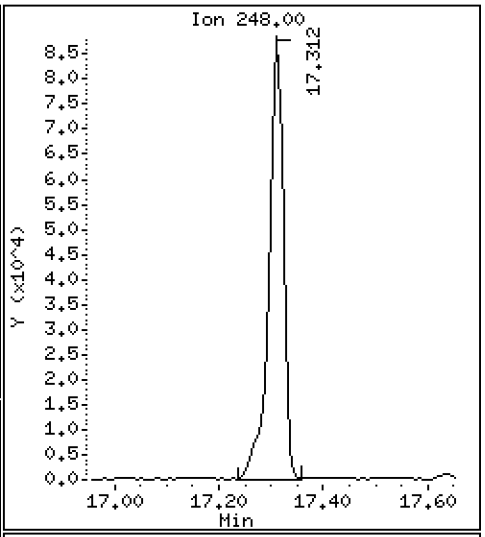
Column phase: ZB-5msi

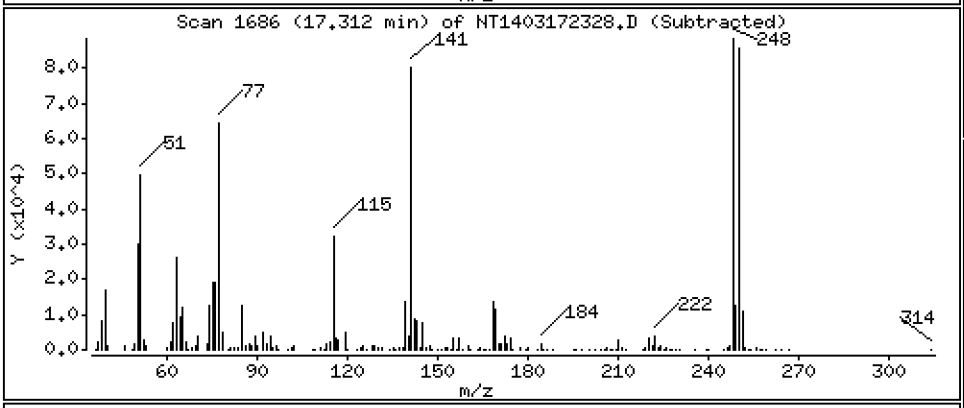
Column diameter: 0.25

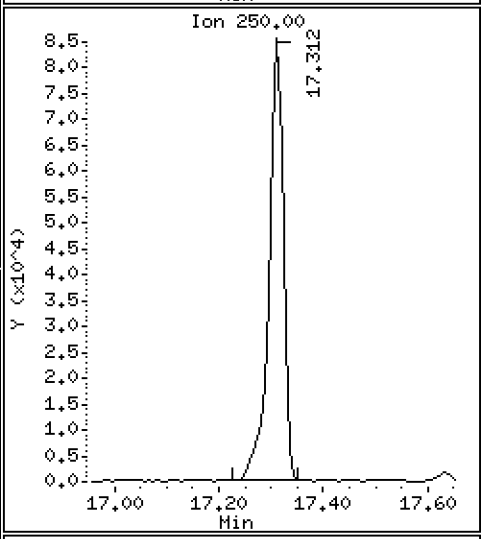
56 4-Bromophenyl-phenylether

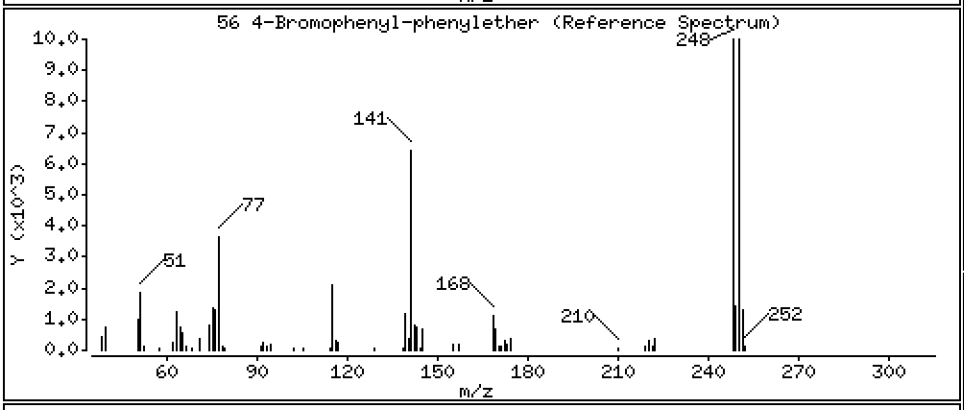
Concentration: 5.071 ug/mL

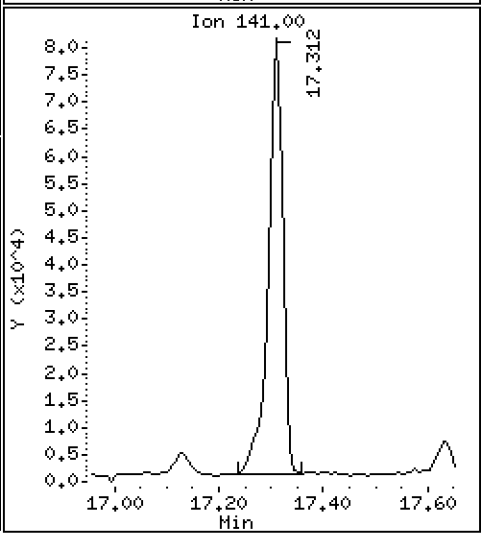


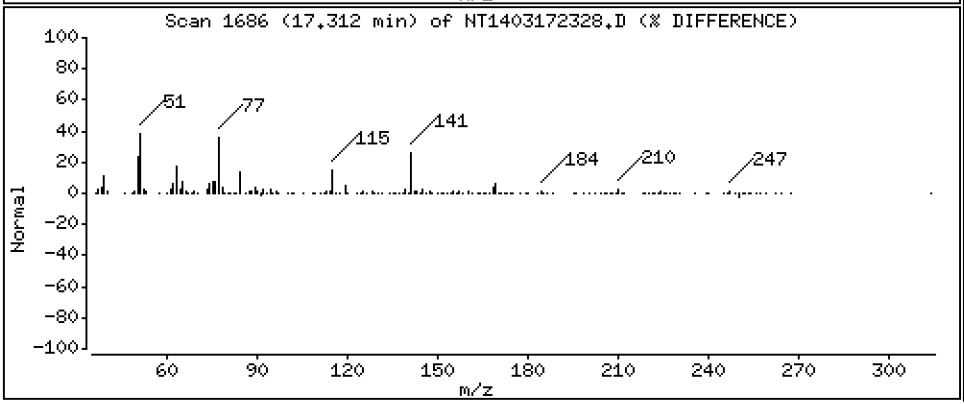












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS1

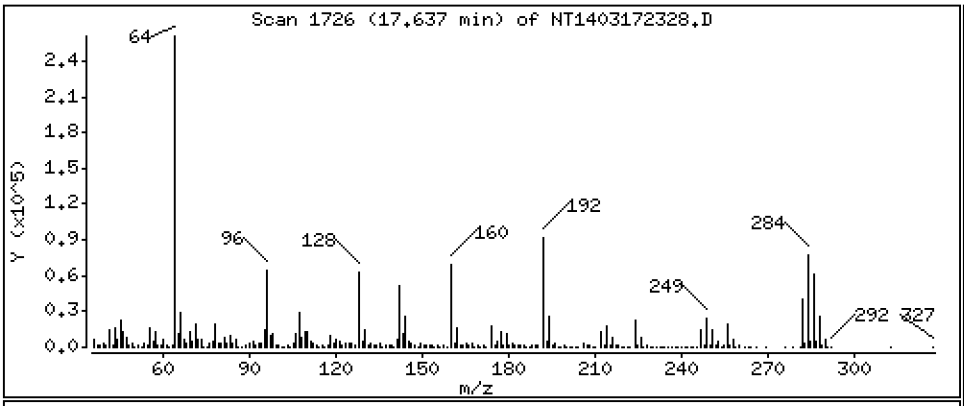
Operator: JGR

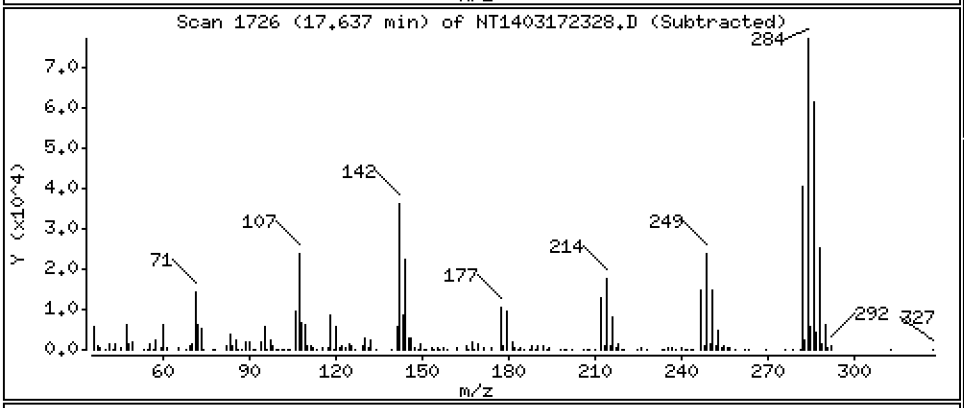
Column phase: ZB-5msi

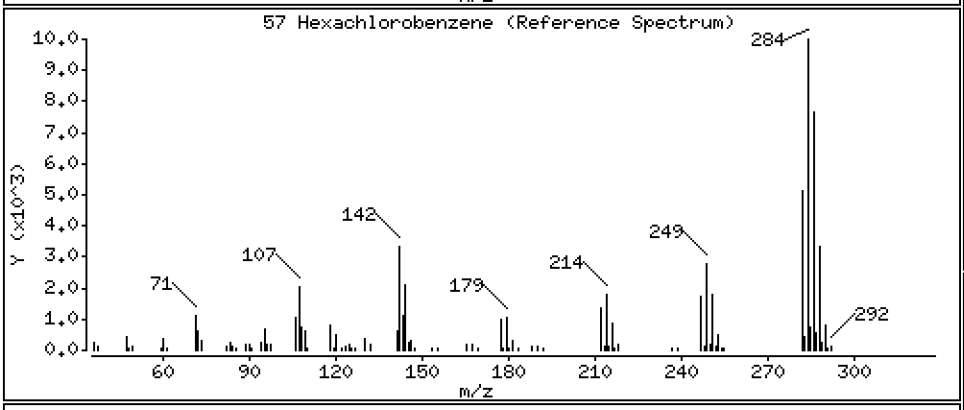
Column diameter: 0.25

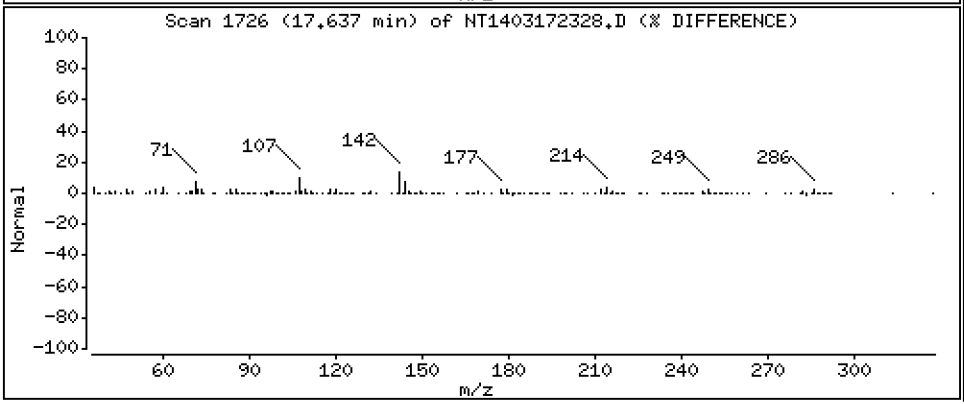
57 Hexachlorobenzene

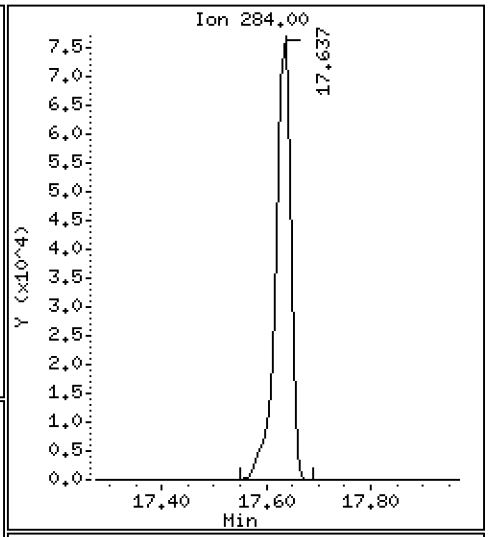
Concentration: 4.462 ug/mL

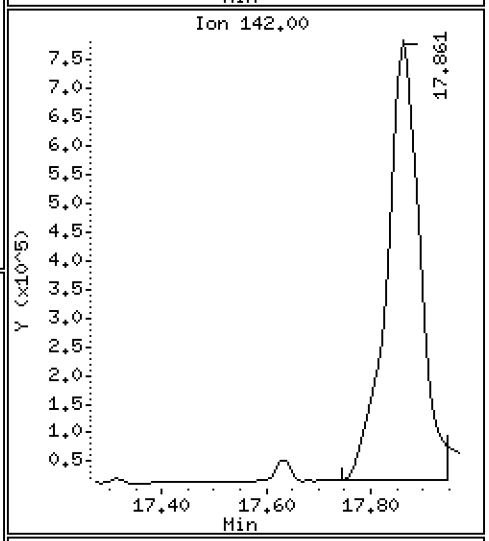


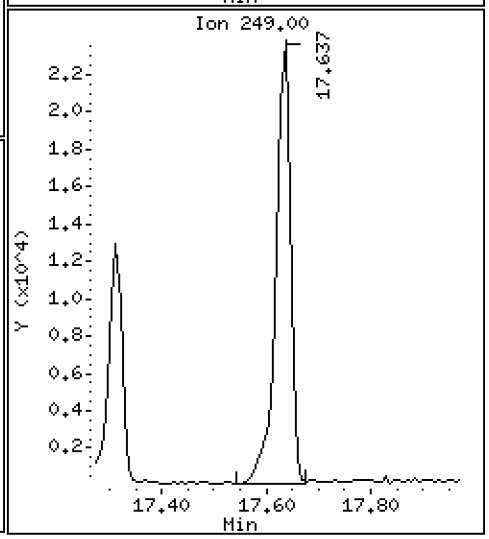












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS1

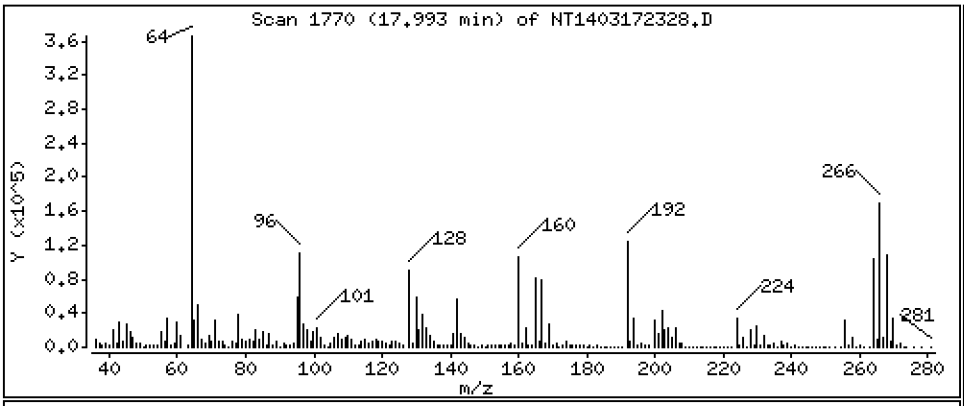
Operator: JGR

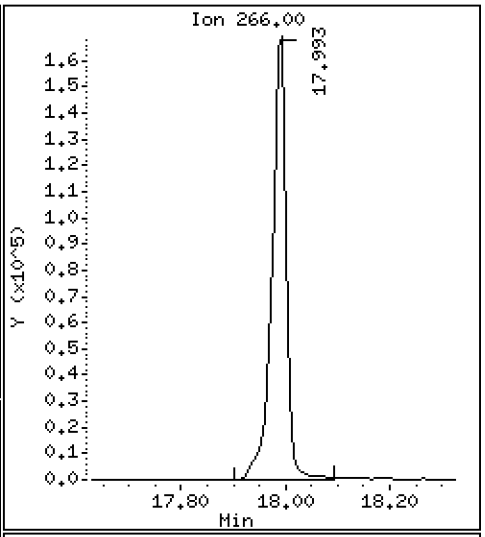
Column phase: ZB-5msi

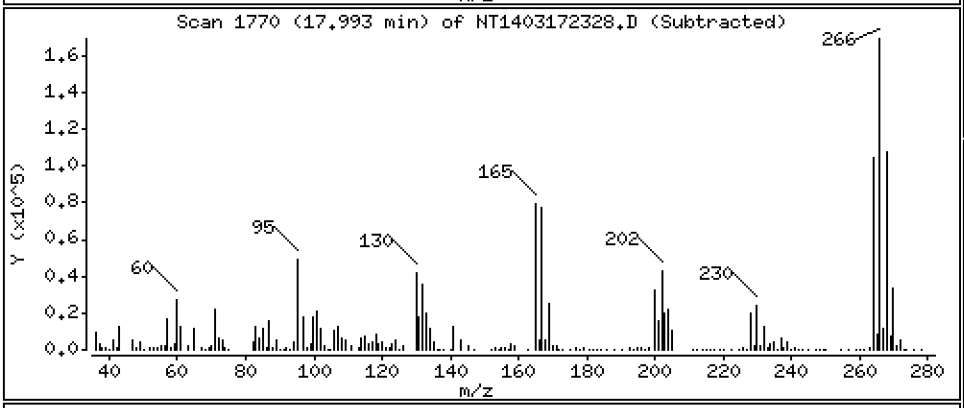
Column diameter: 0.25

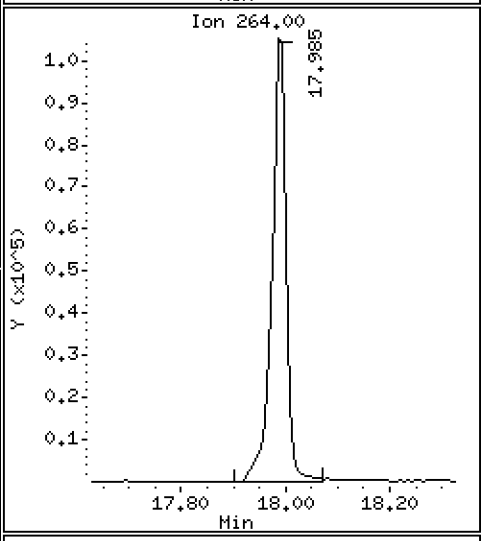
58 Pentachlorophenol

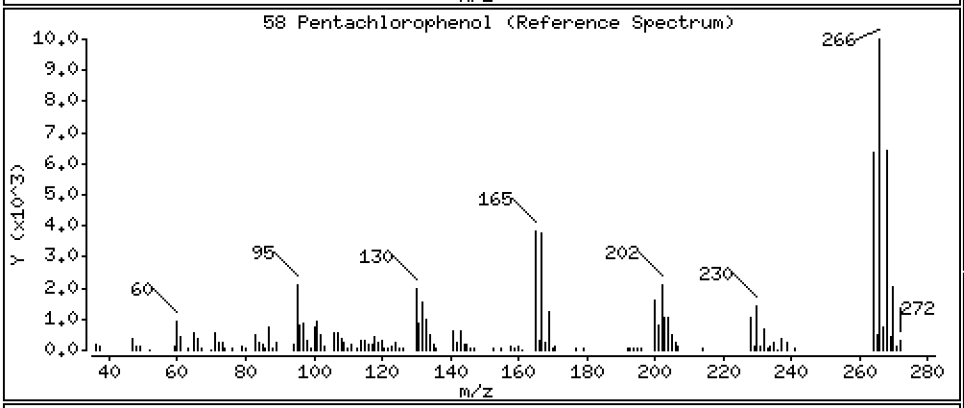
Concentration: 13.50 ug/mL

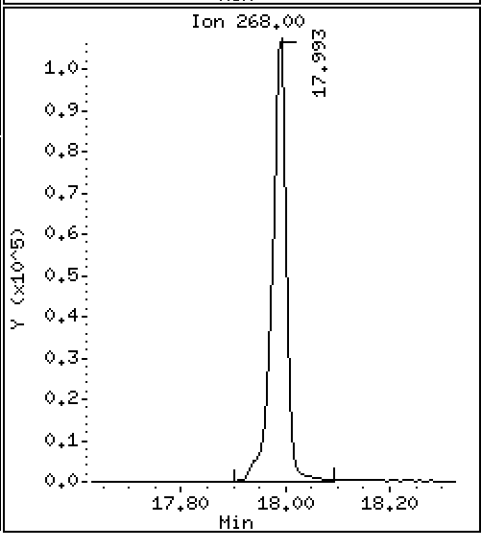


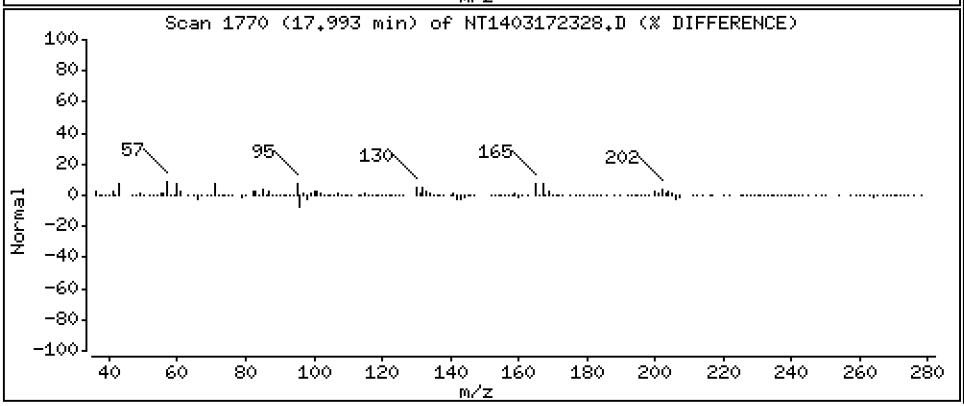












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS1

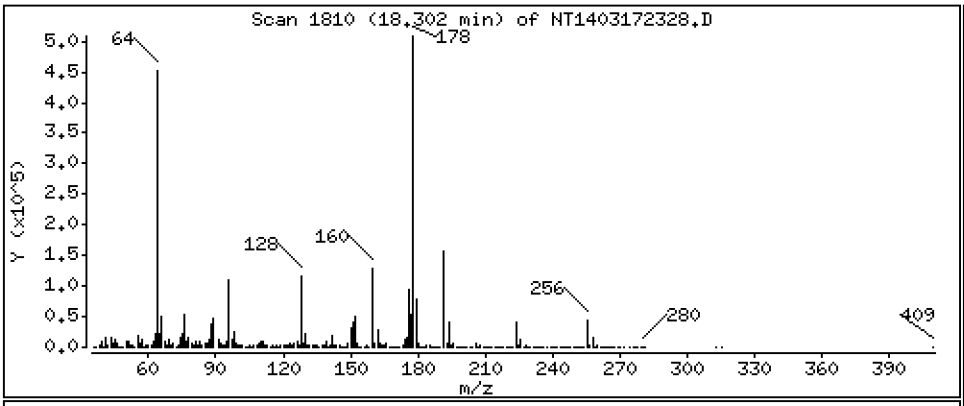
Operator: JGR

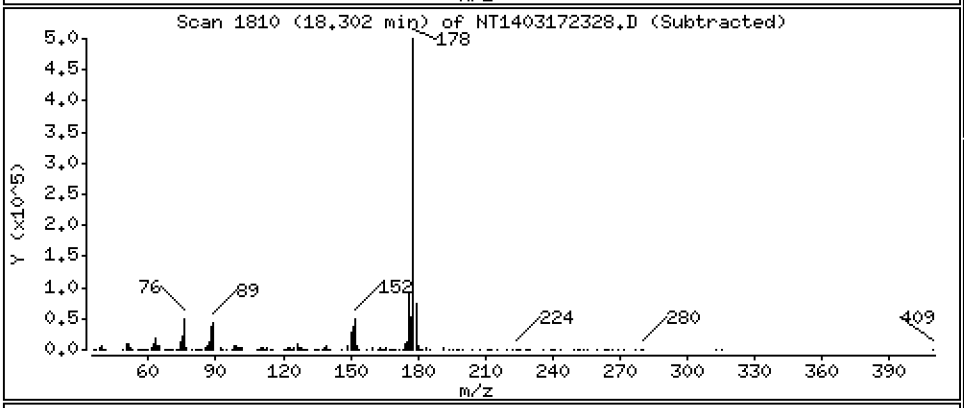
Column phase: ZB-5msi

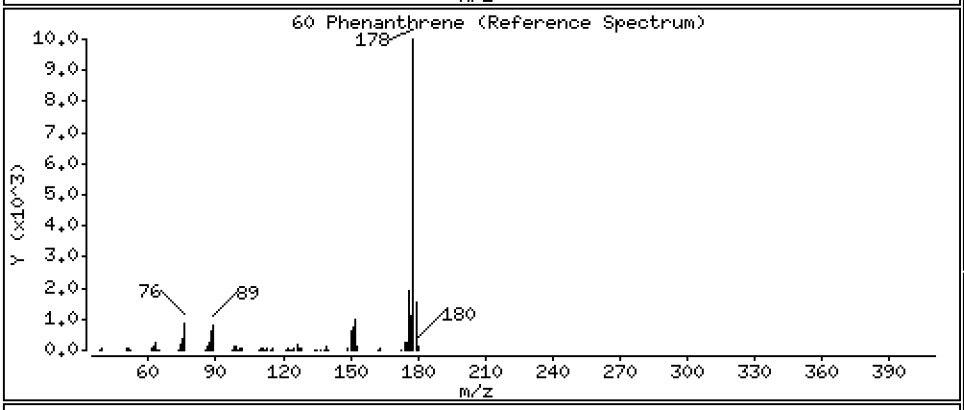
Column diameter: 0.25

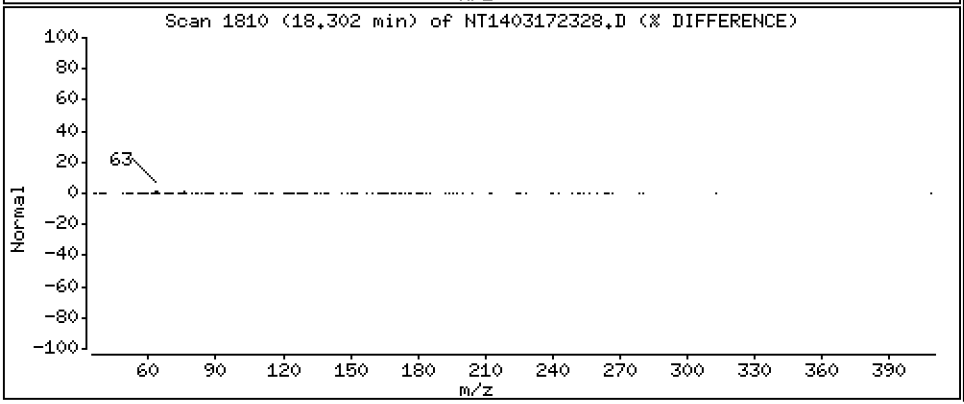
60 Phenanthrene

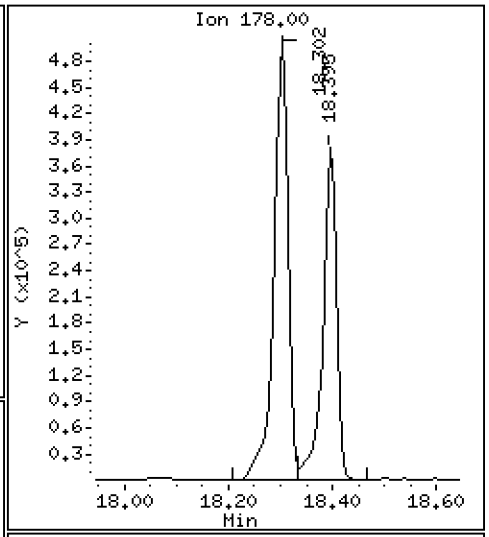
Concentration: 4.574 ug/mL

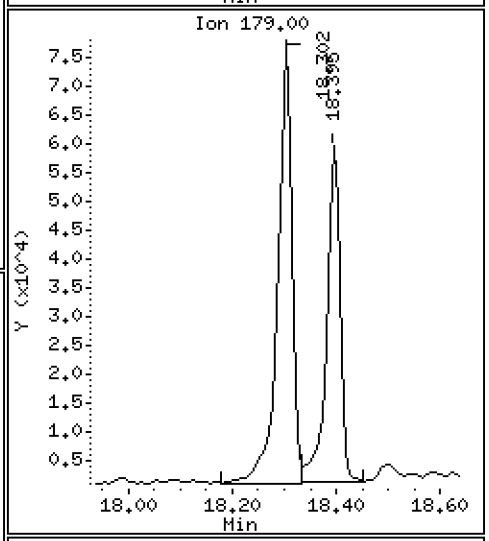


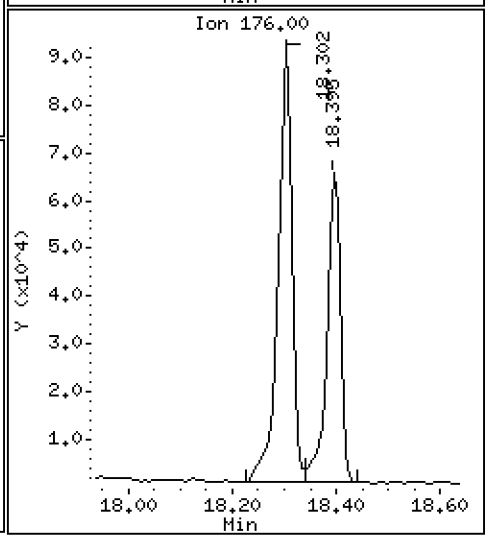












Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172328.D

Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS1

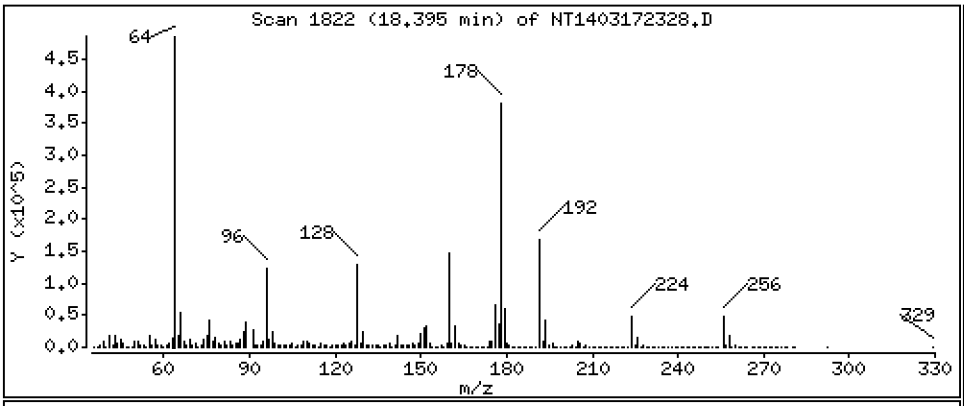
Operator: JGR

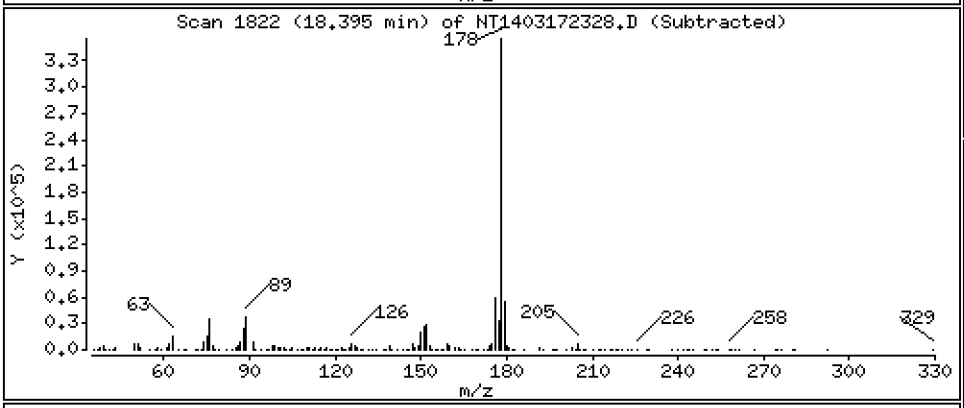
Column phase: ZB-5msi

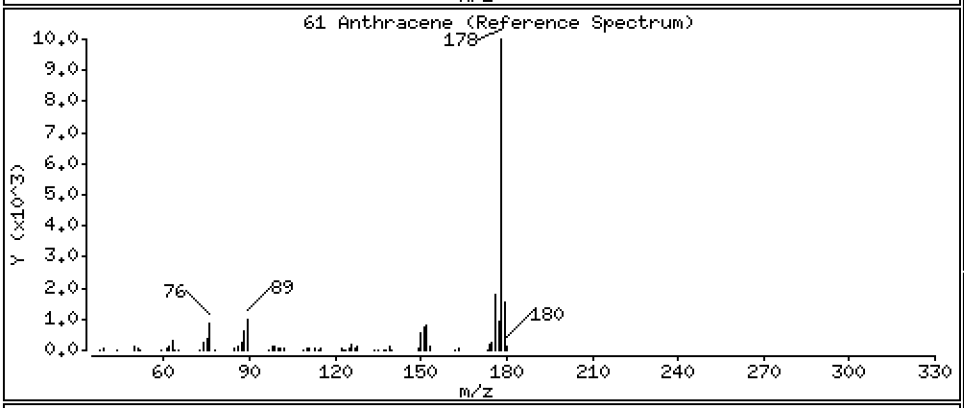
Column diameter: 0.25

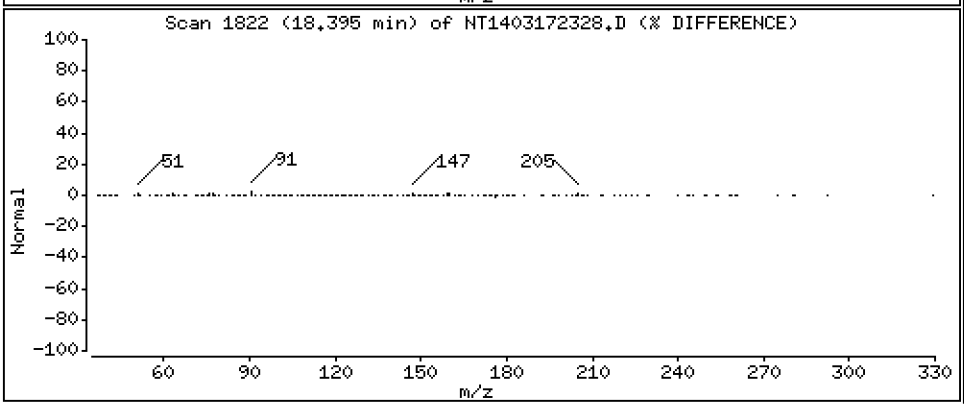
61 Anthracene

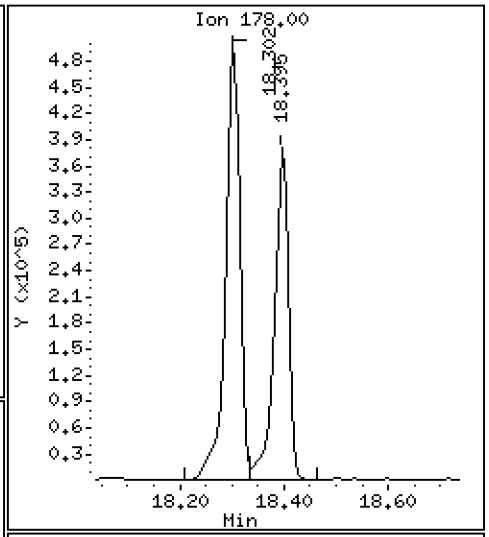
Concentration: 3.684 ug/mL

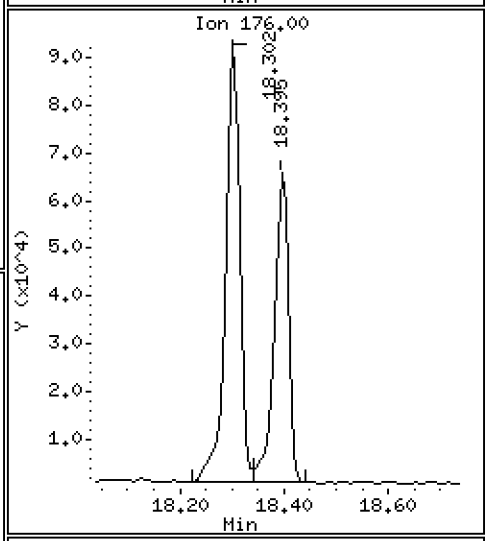


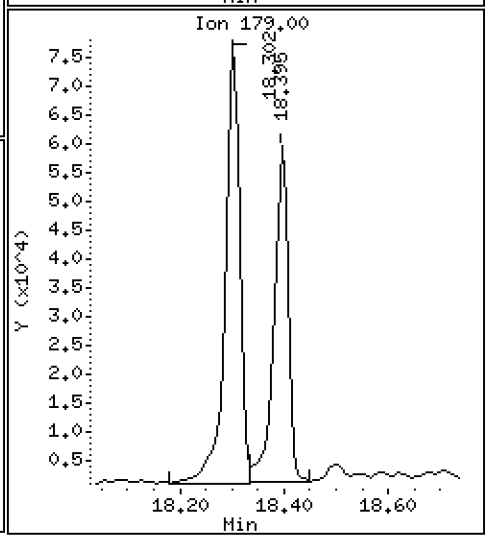












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS1

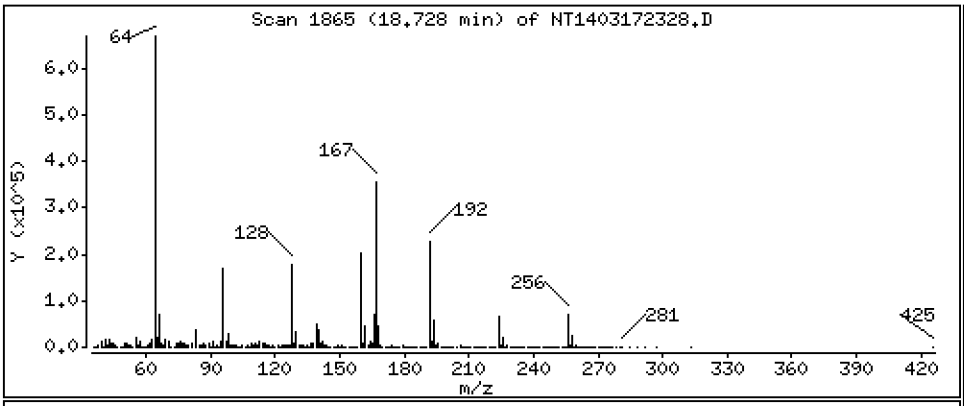
Operator: JGR

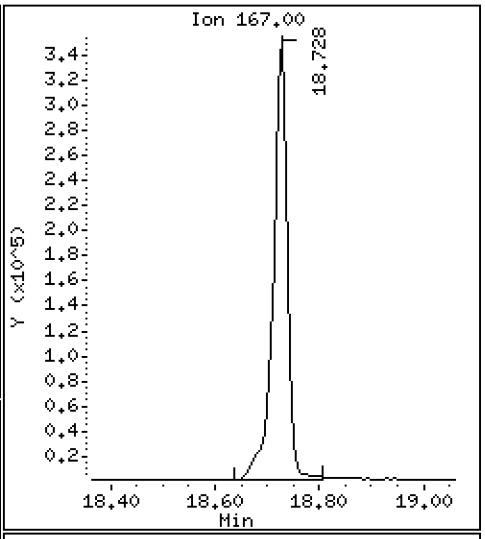
Column phase: ZB-5msi

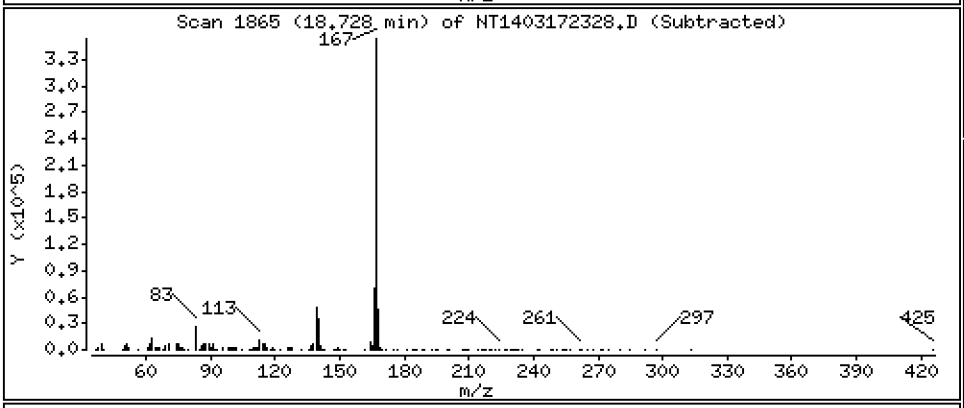
Column diameter: 0.25

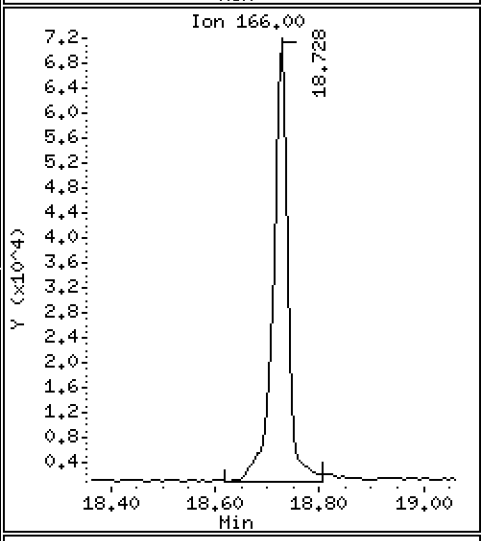
62 Carbazole

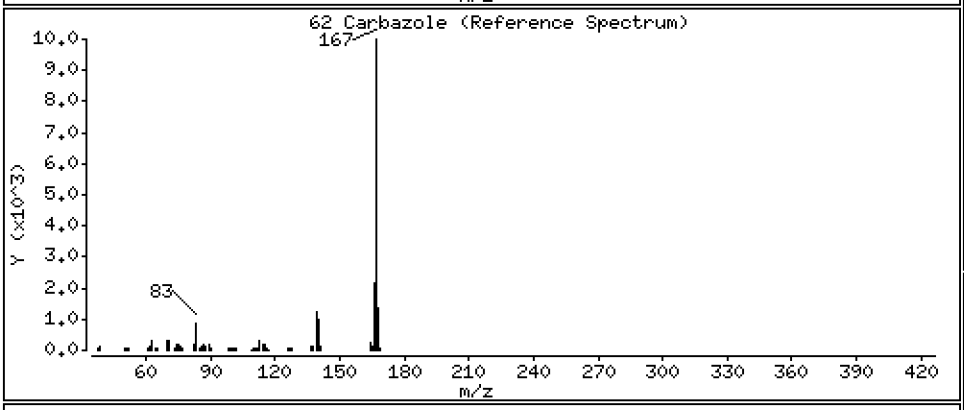
Concentration: 3.908 ug/mL

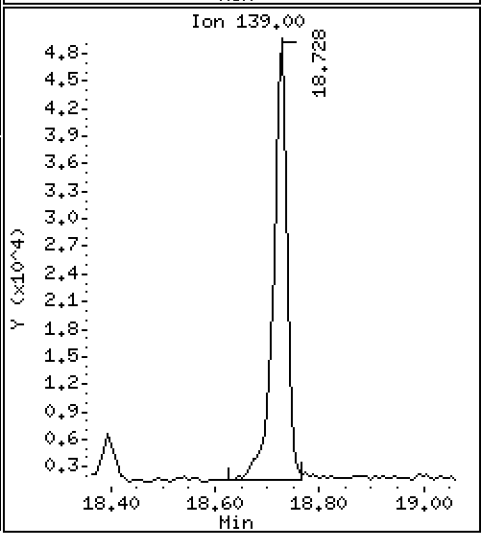


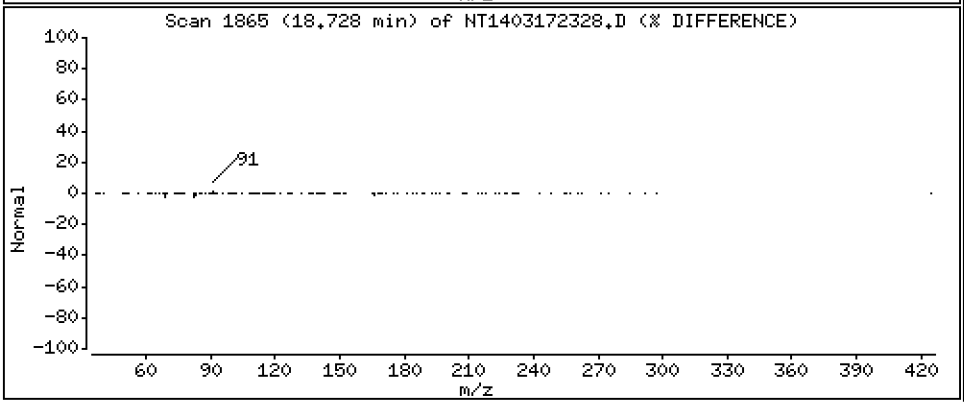












Date : 18-MAR-2023 06:42

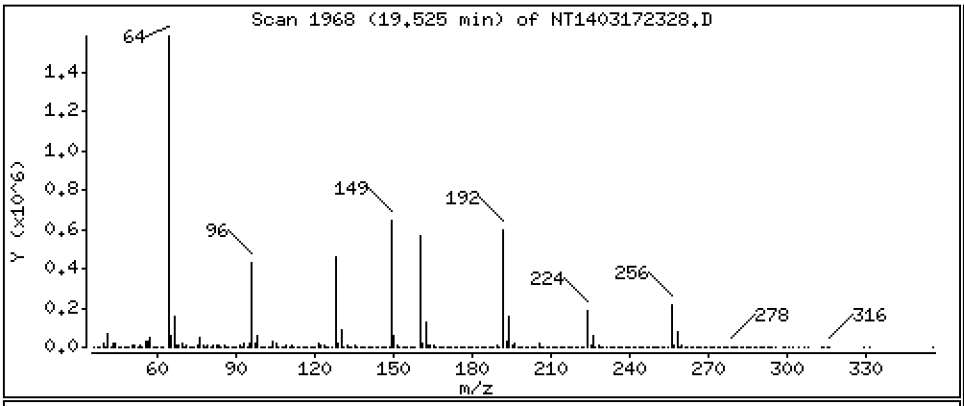
Client ID: Instrument: nt14.i

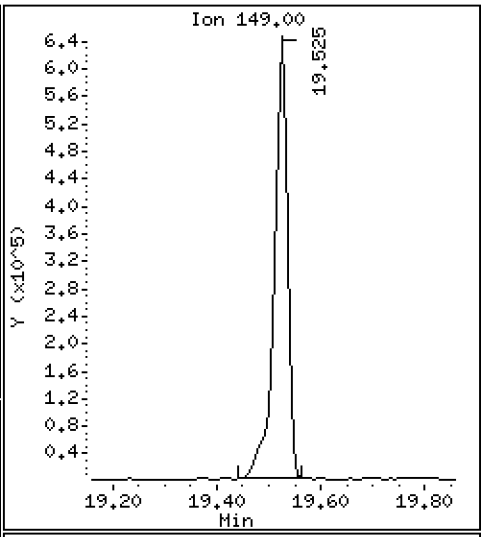
Sample Info: BLB0424-MS1

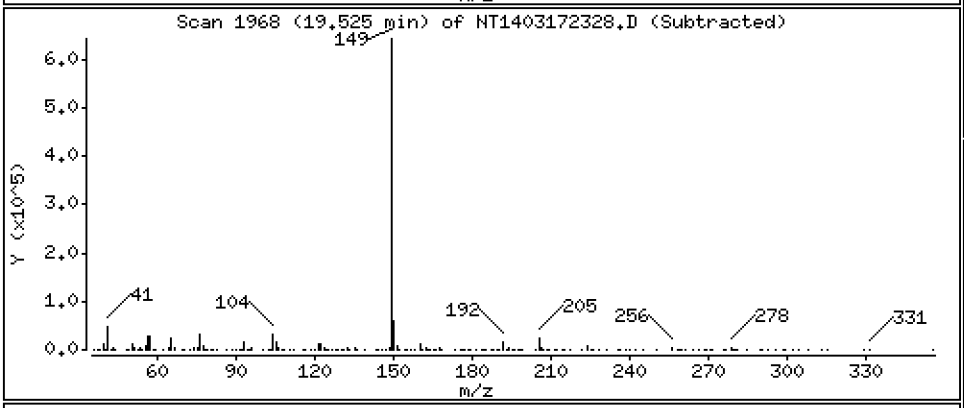
Operator: JGR

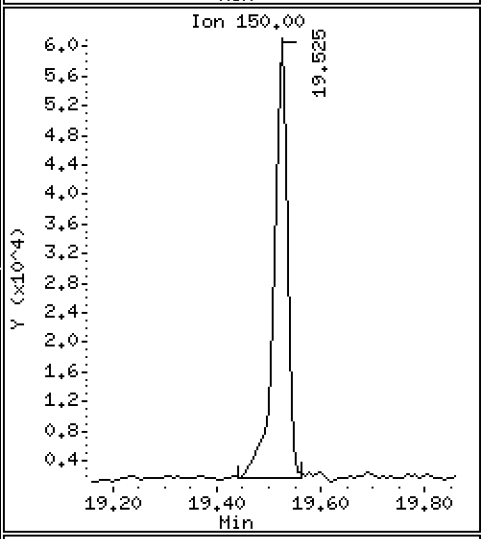
Column phase: ZB-5msi Column diameter: 0.25

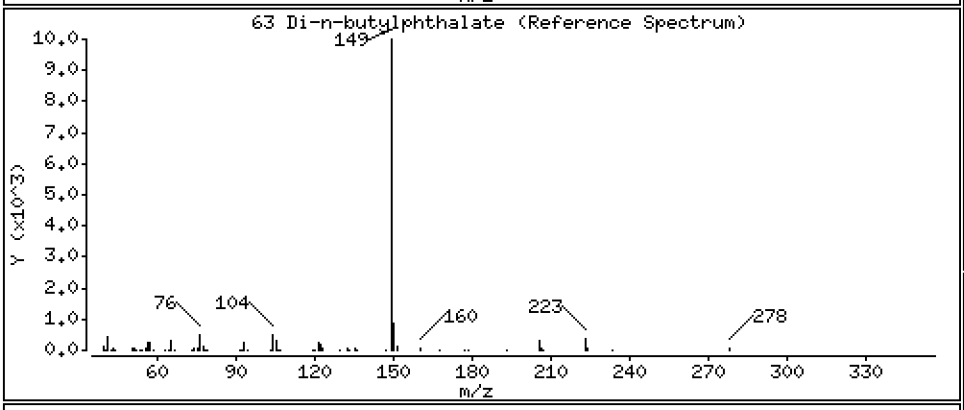
63 Di-n-butylphthalate Concentration: 5.163 ug/mL

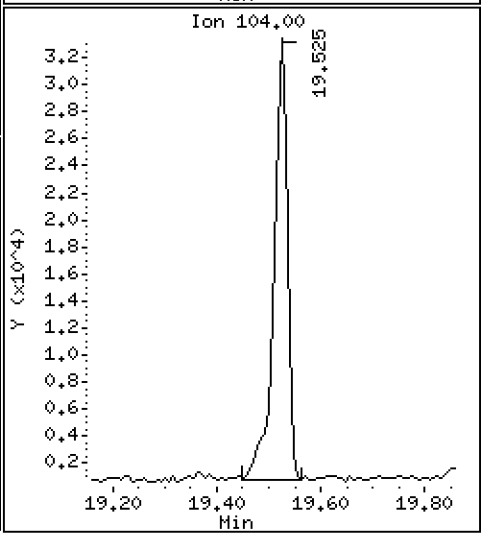


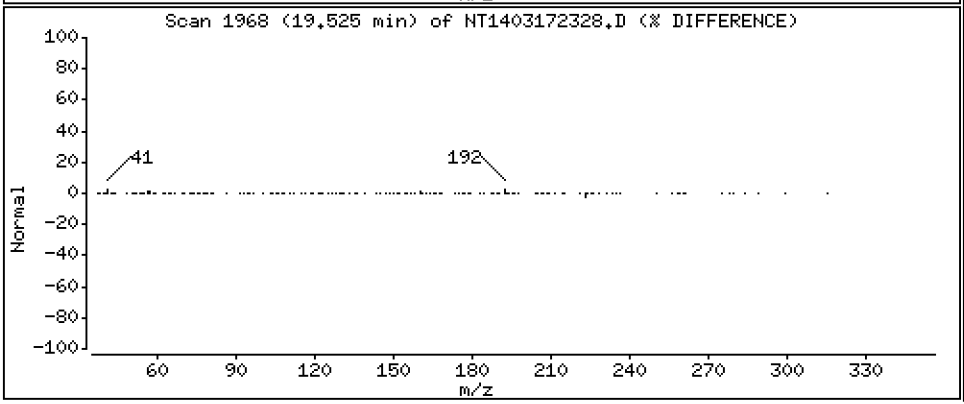












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS1

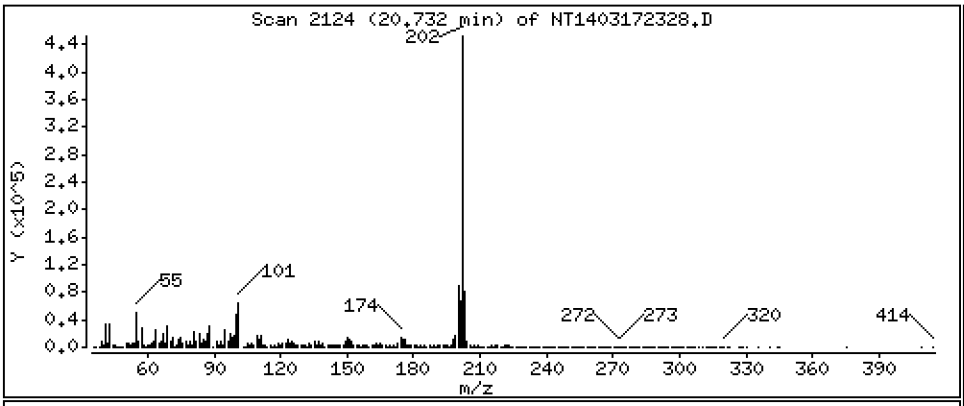
Operator: JGR

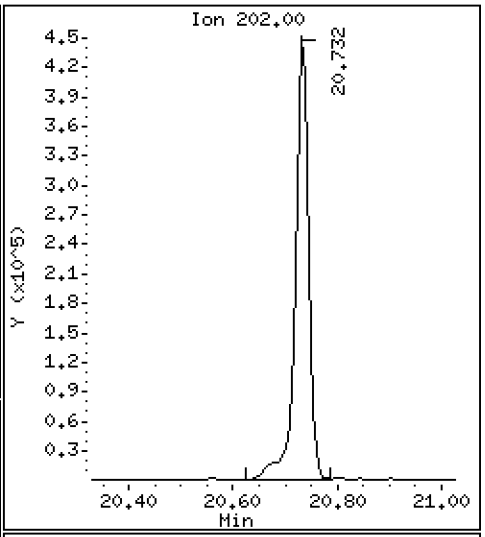
Column phase: ZB-5msi

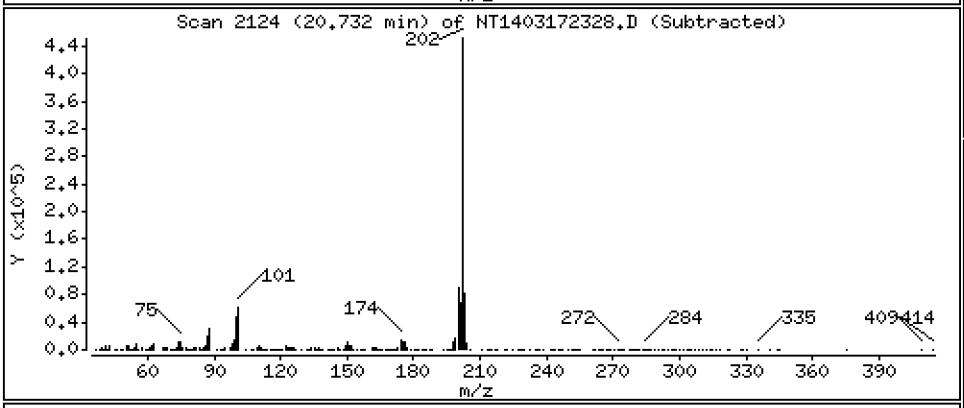
Column diameter: 0.25

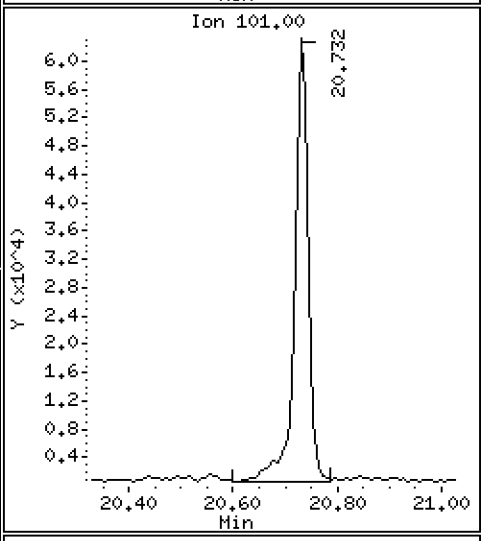
64 Fluoranthene

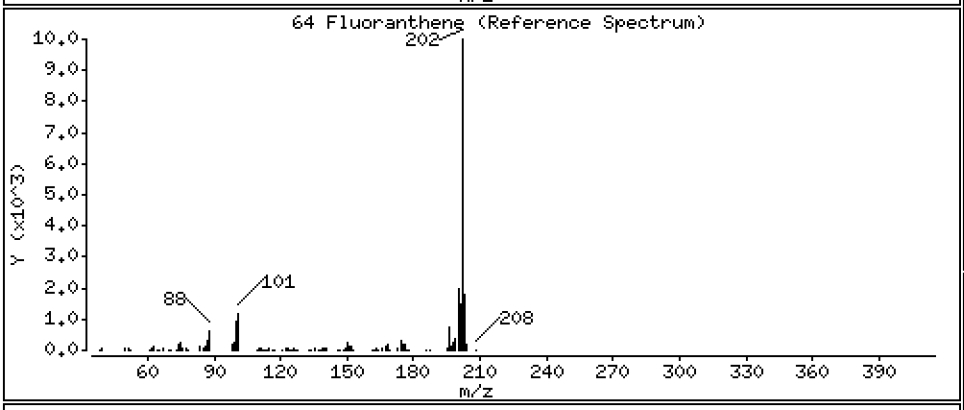
Concentration: 10.61 ug/mL

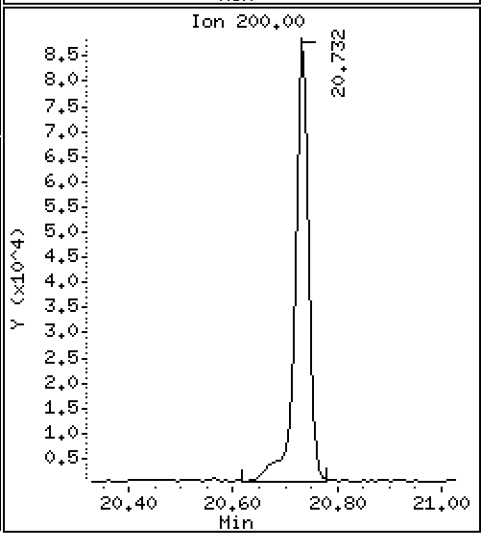


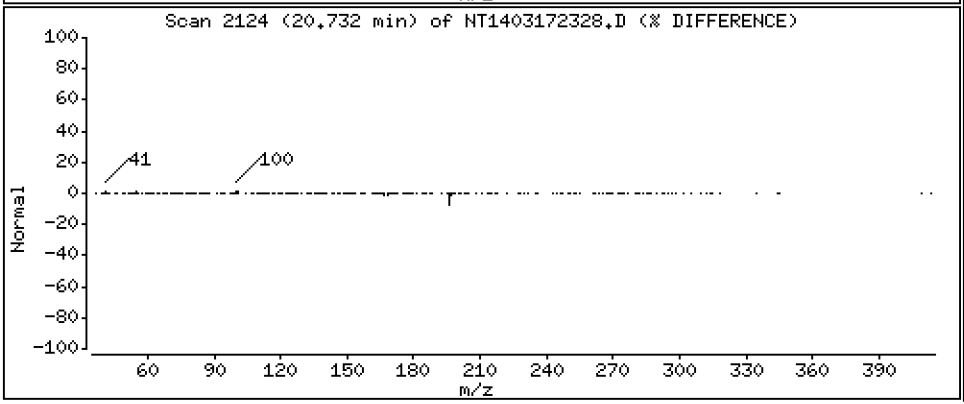












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS1

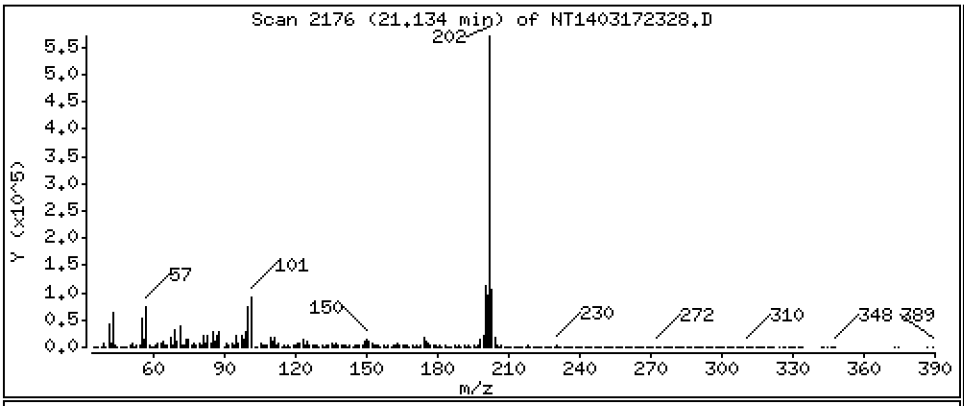
Operator: JGR

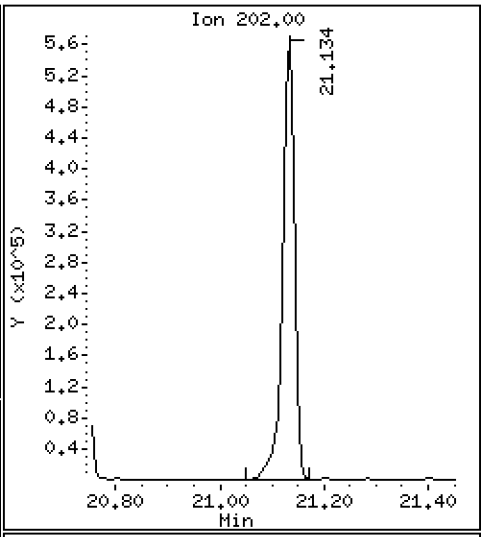
Column phase: ZB-5msi

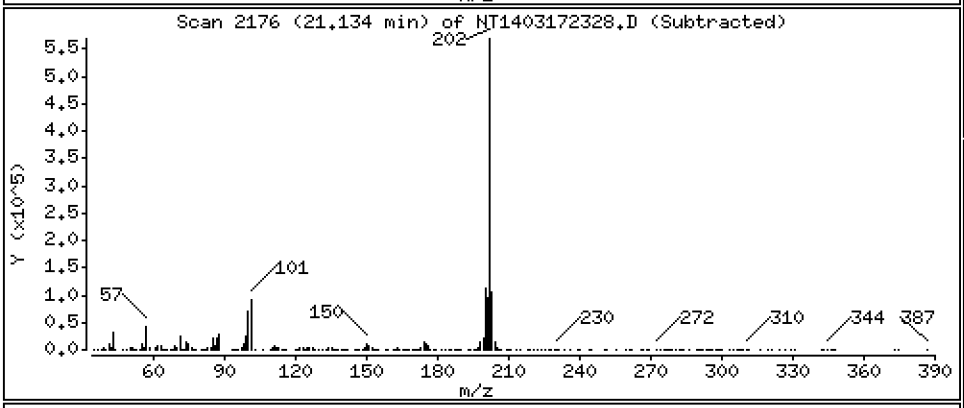
Column diameter: 0.25

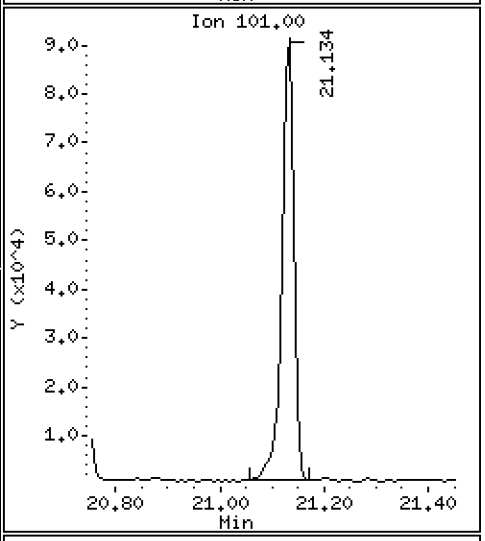
65 Pyrene

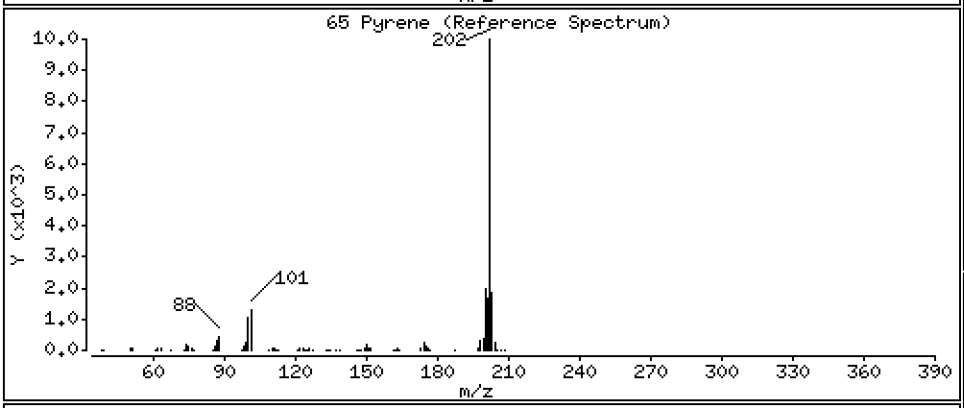
Concentration: 11.75 ug/mL

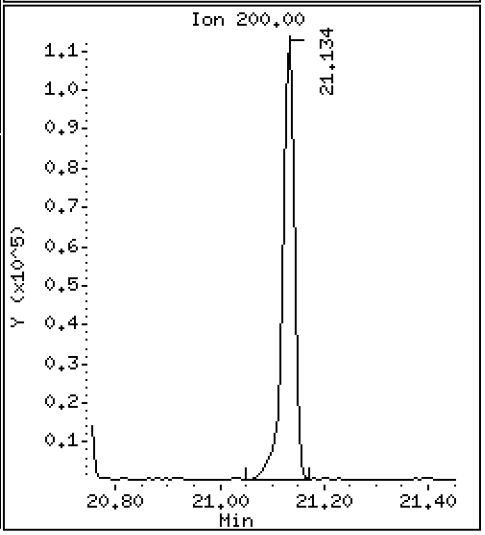


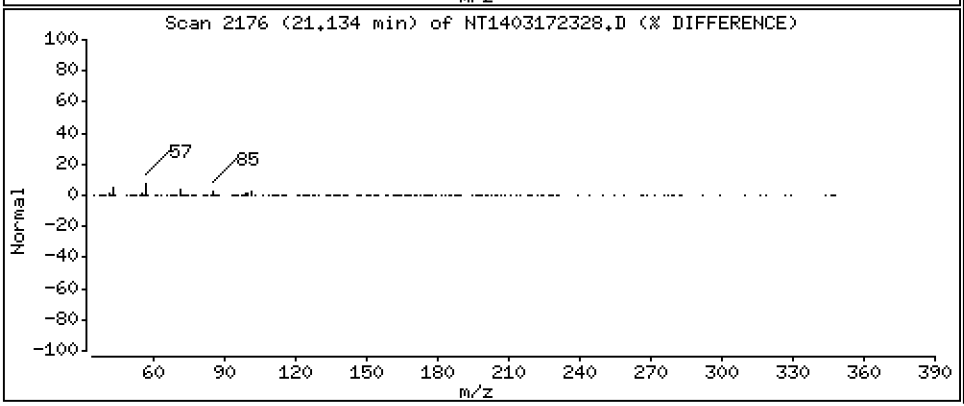












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS1

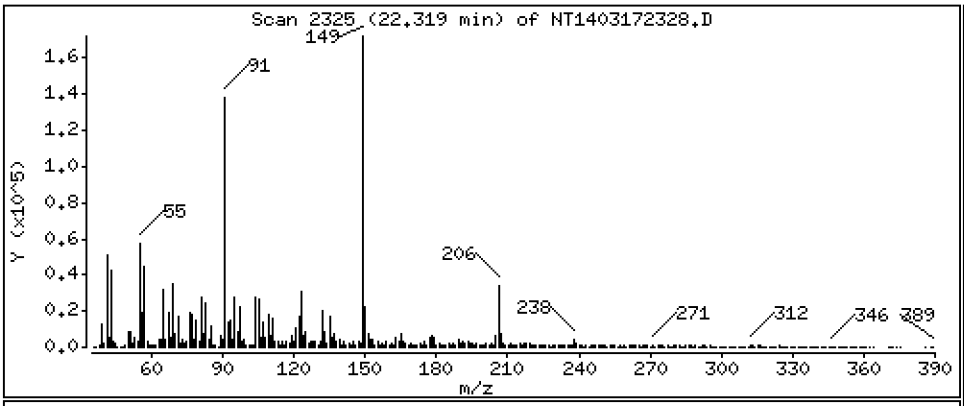
Operator: JGR

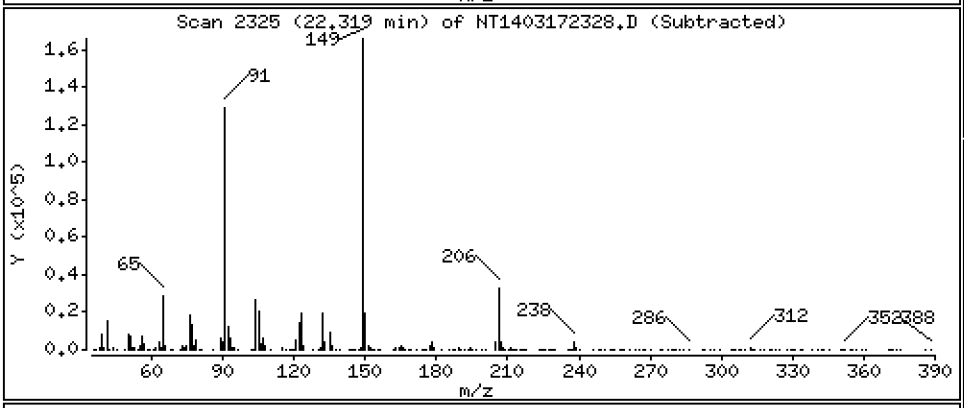
Column phase: ZB-5msi

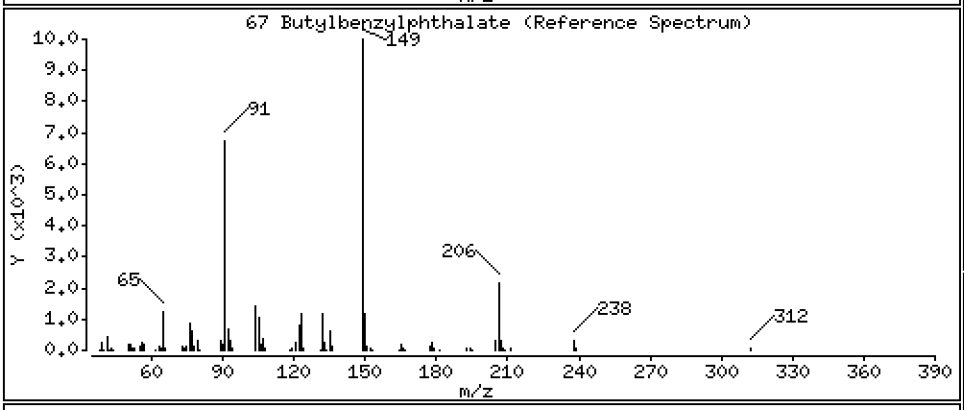
Column diameter: 0.25

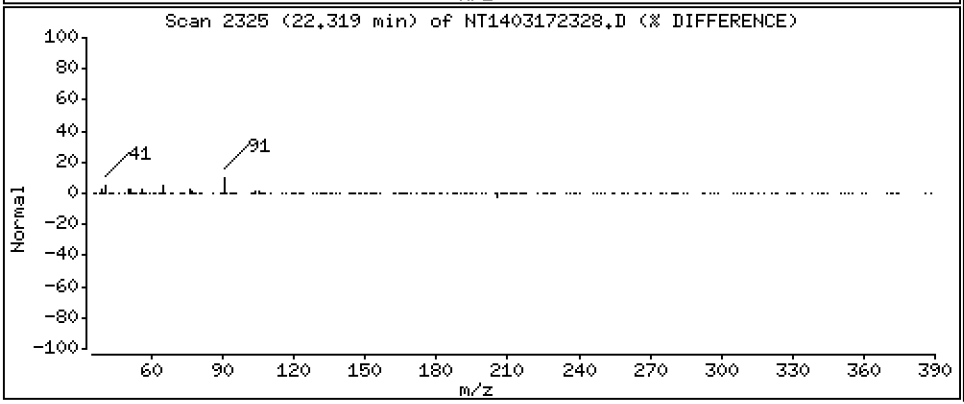
67 Butylbenzylphthalate

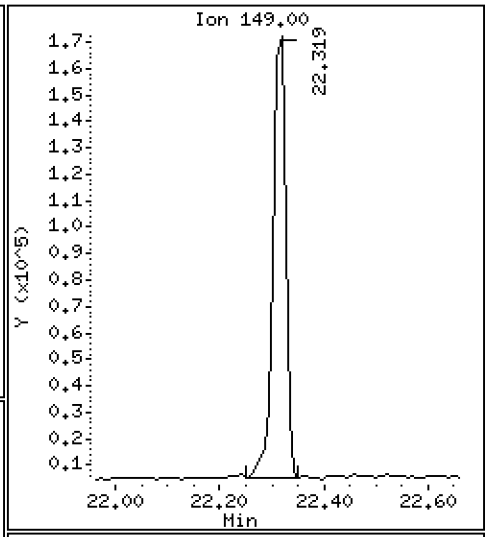
Concentration: 7.665 ug/mL

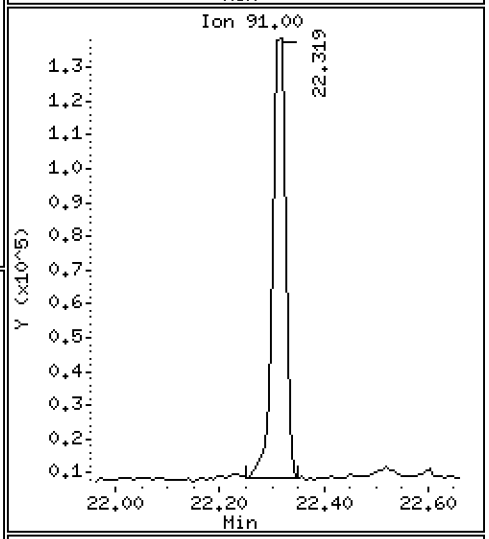


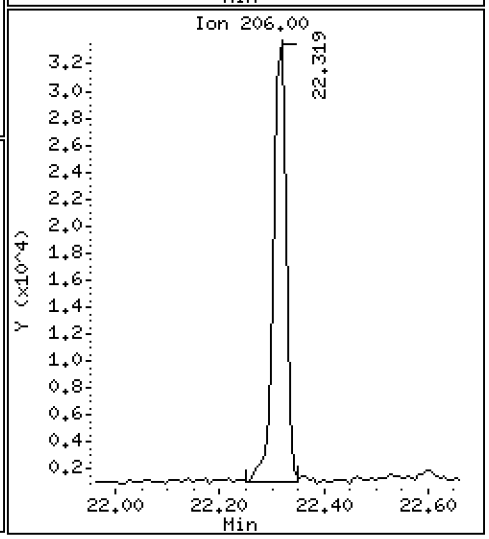












Date : 18-MAR-2023 06:42

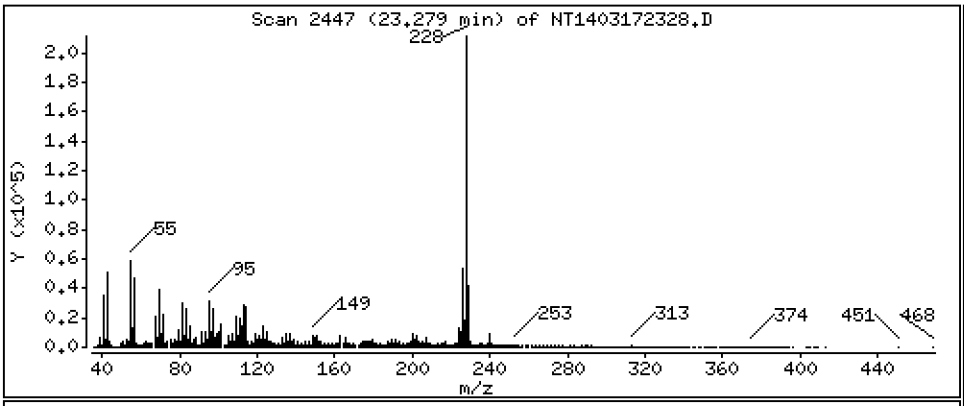
Client ID: Instrument: nt14.i

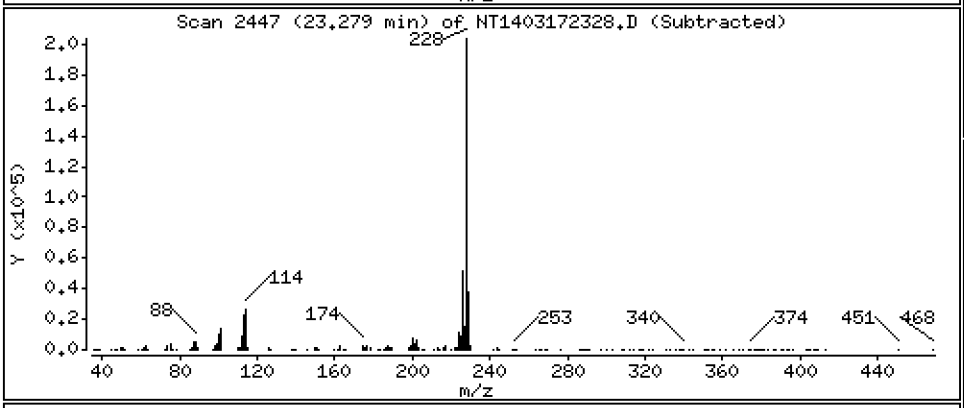
Sample Info: BLB0424-MS1

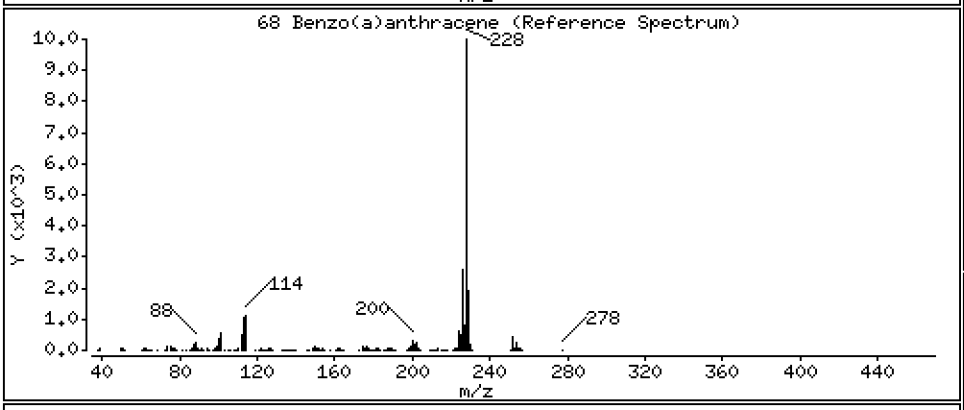
Operator: JGR

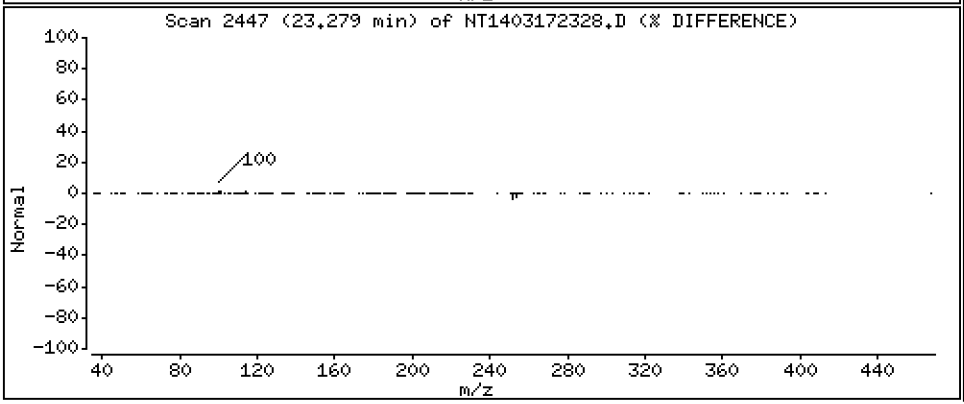
Column phase: ZB-5msi Column diameter: 0.25

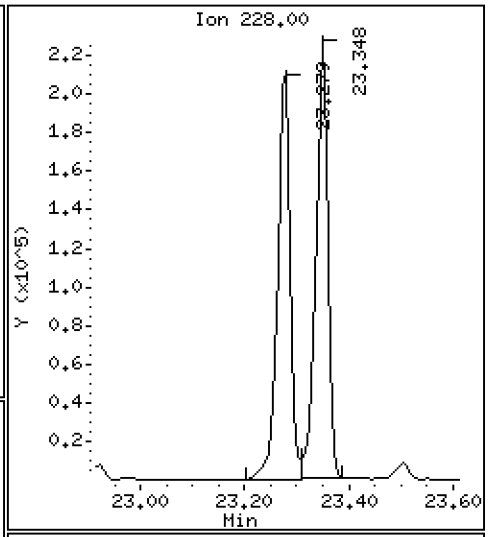
68 Benzo(a)anthracene Concentration: 5.047 ug/mL

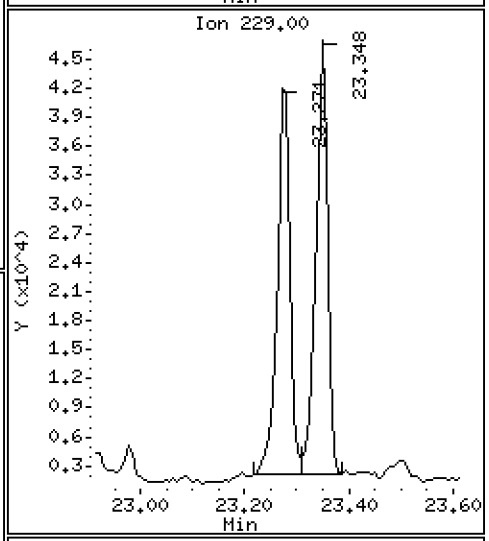


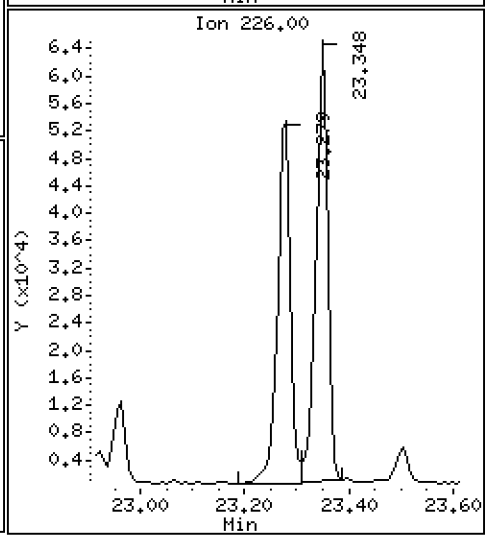












Date : 18-MAR-2023 06:42

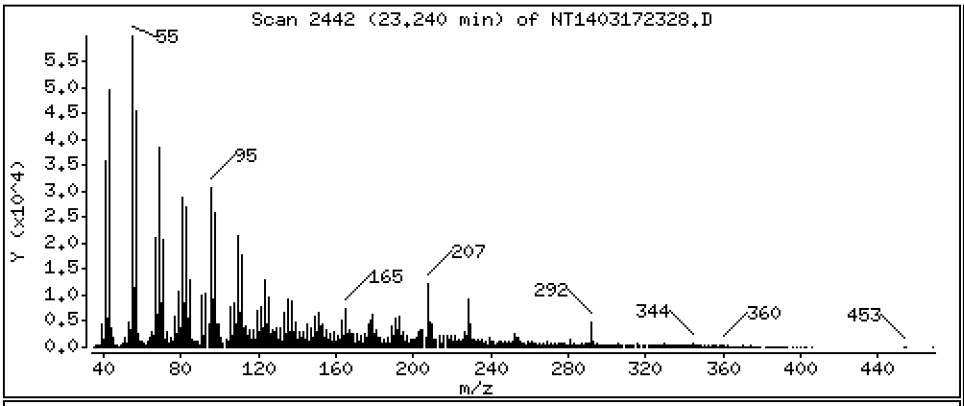
Client ID: Instrument: nt14.i

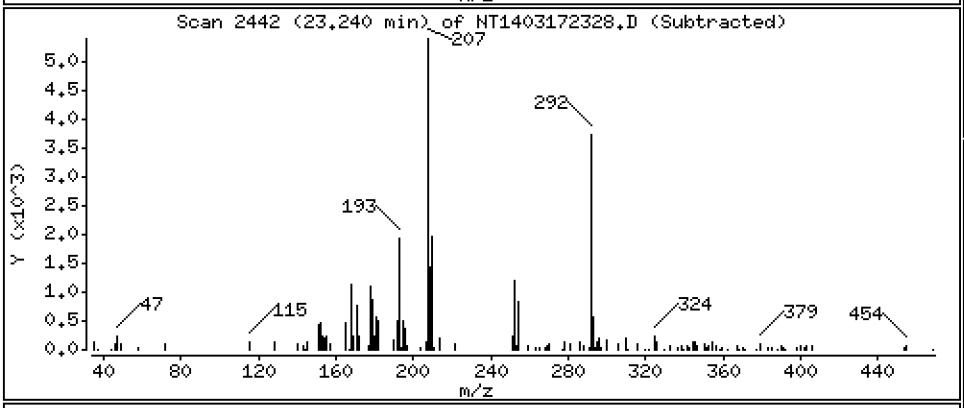
Sample Info: BLB0424-MS1

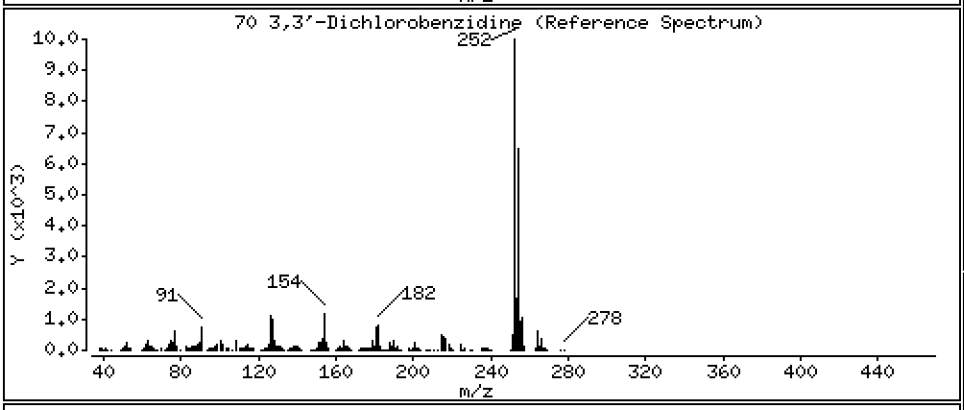
Operator: JGR

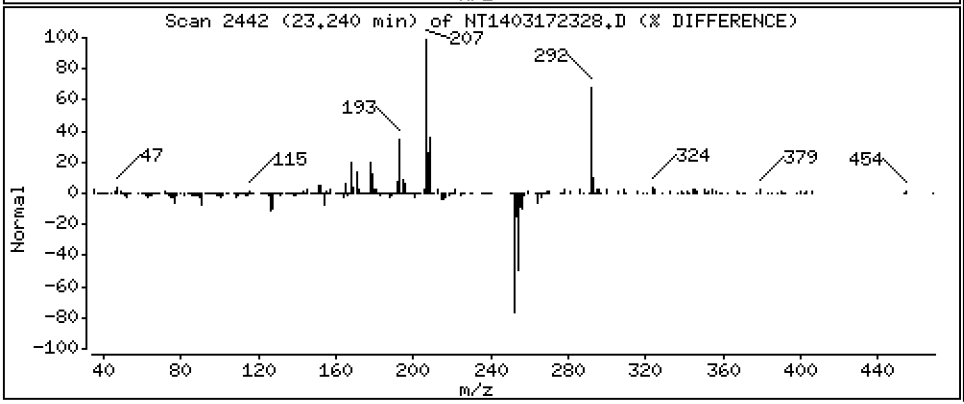
Column phase: ZB-5msi Column diameter: 0.25

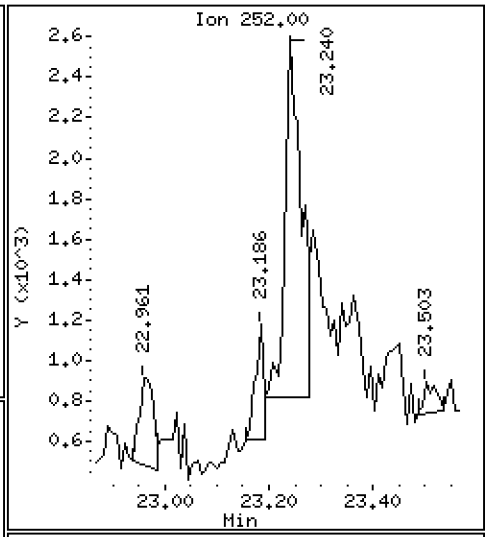
70 3,3'-Dichlorobenzidine Concentration: 0.2022 ug/mL

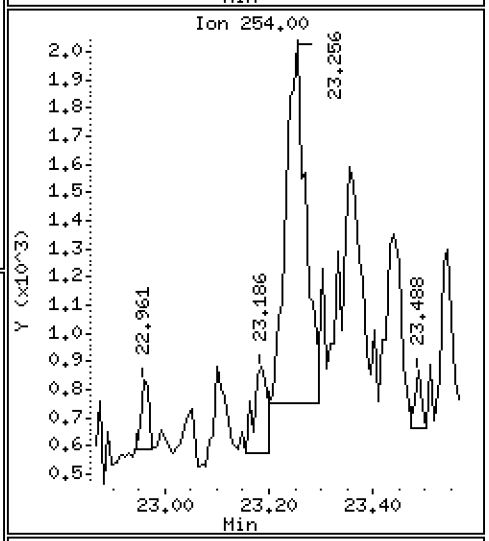


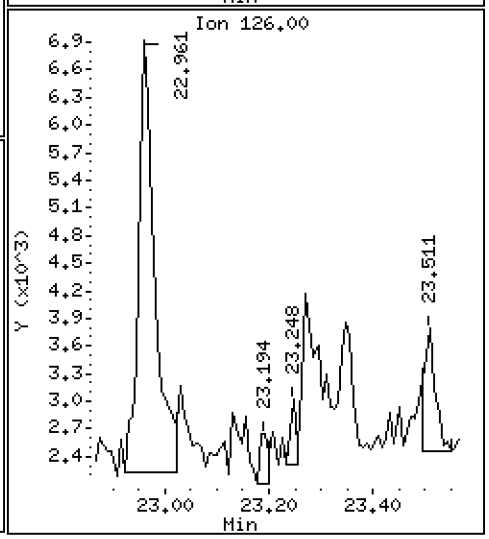












Date : 18-MAR-2023 06:42

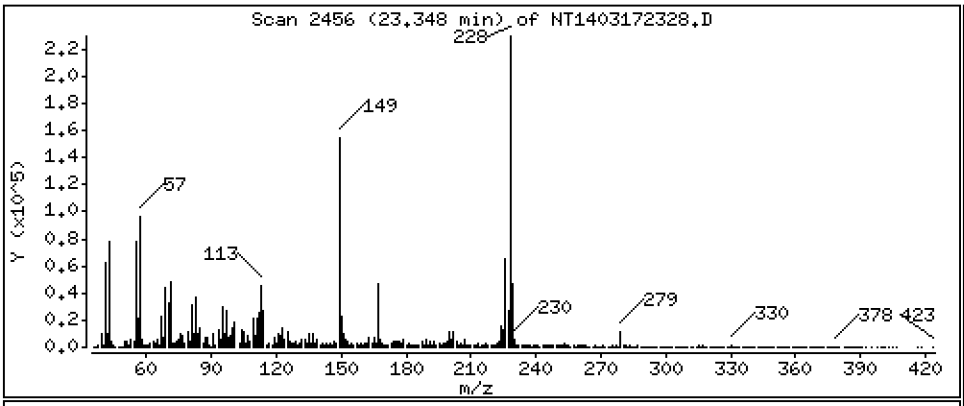
Client ID: Instrument: nt14.i

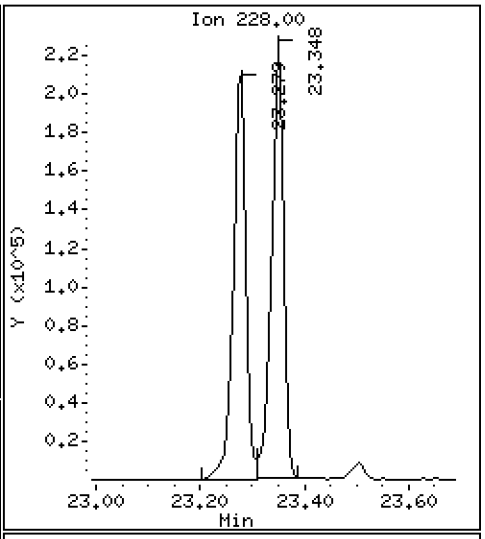
Sample Info: BLB0424-MS1

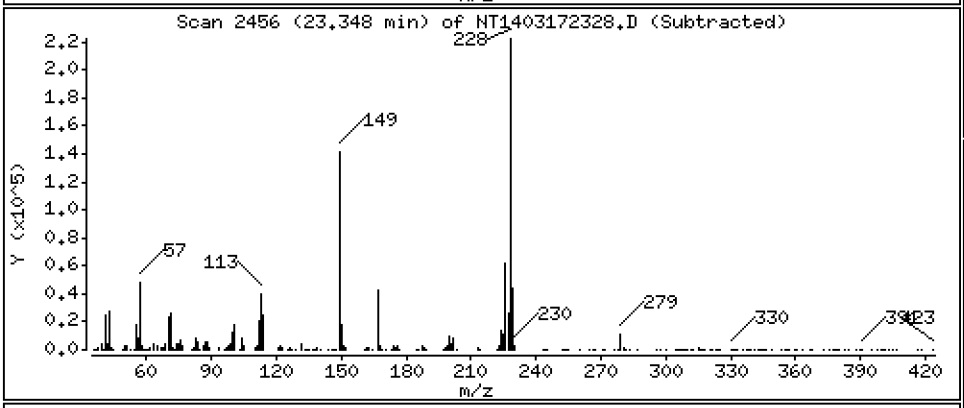
Operator: JGR

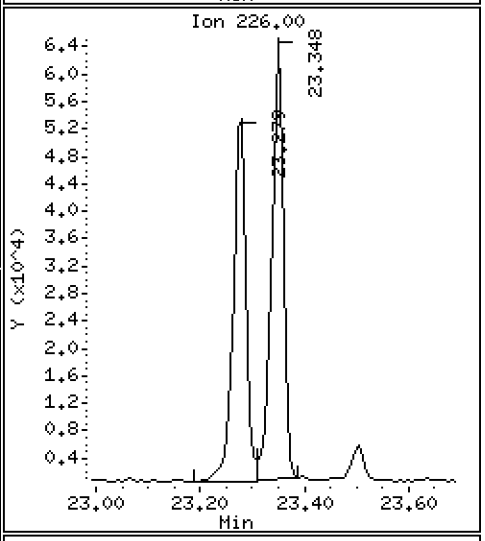
Column phase: ZB-5msi Column diameter: 0.25

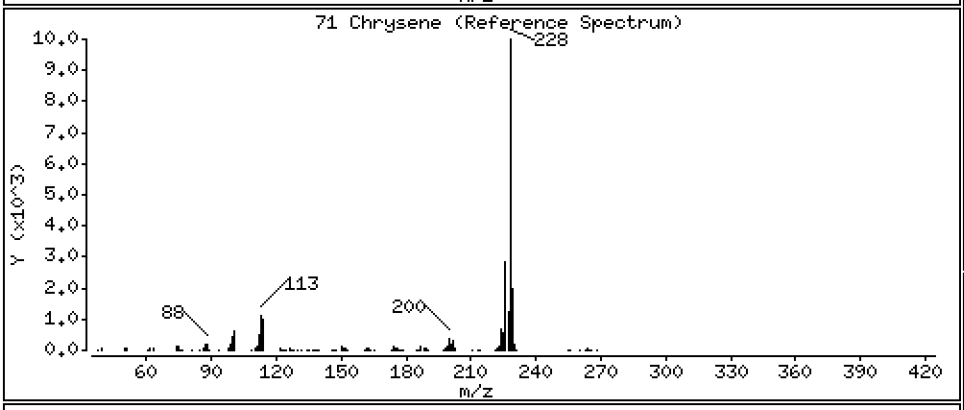
71 Chrysene Concentration: 5.464 ug/mL

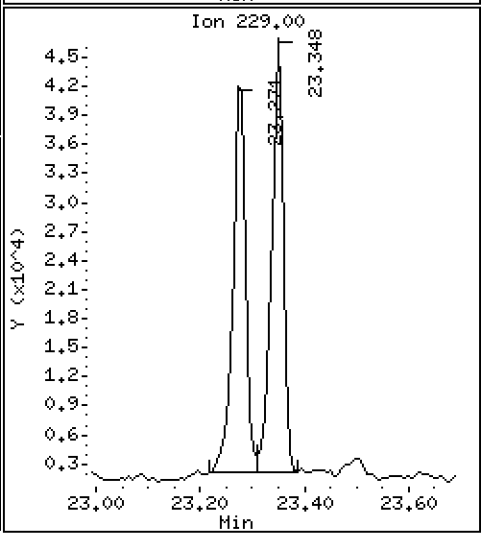


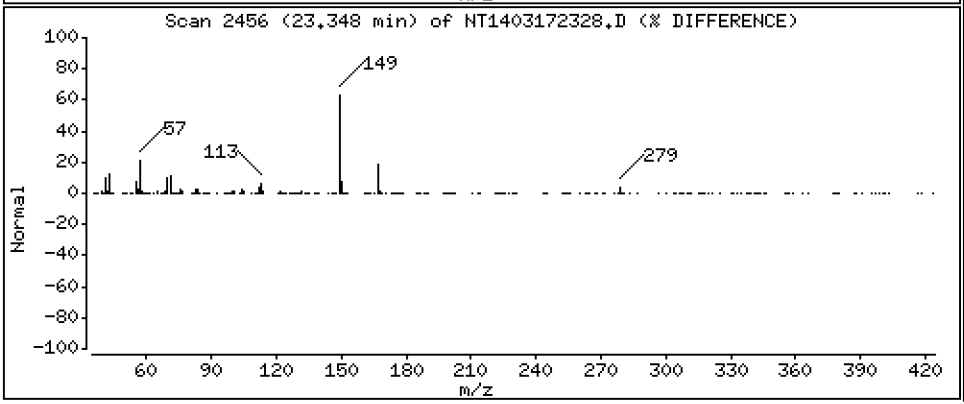












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS1

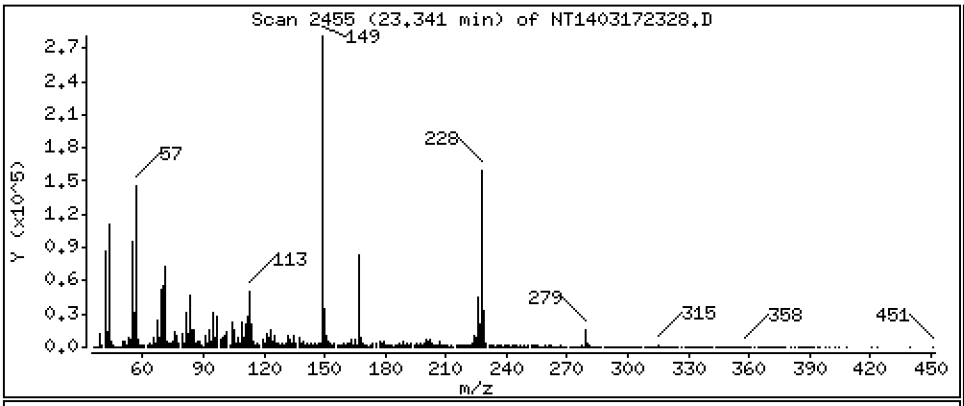
Operator: JGR

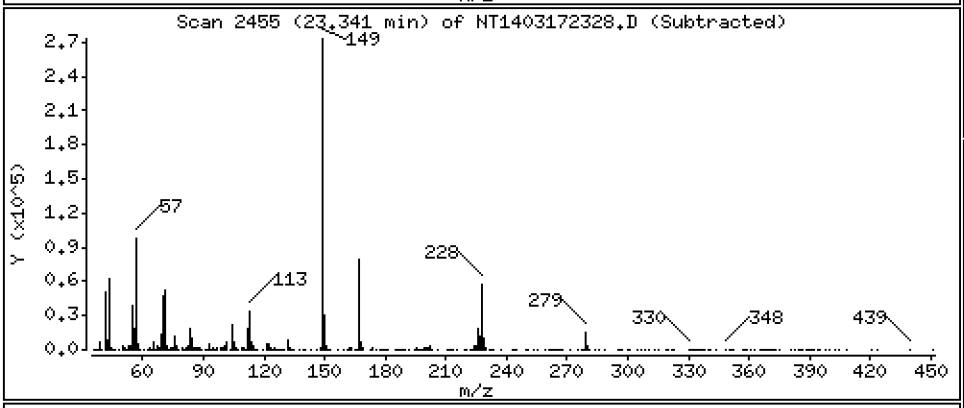
Column phase: ZB-5msi

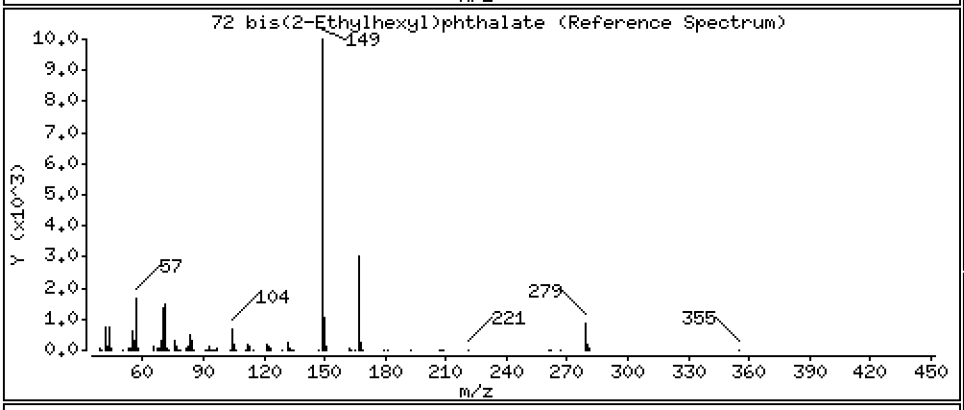
Column diameter: 0.25

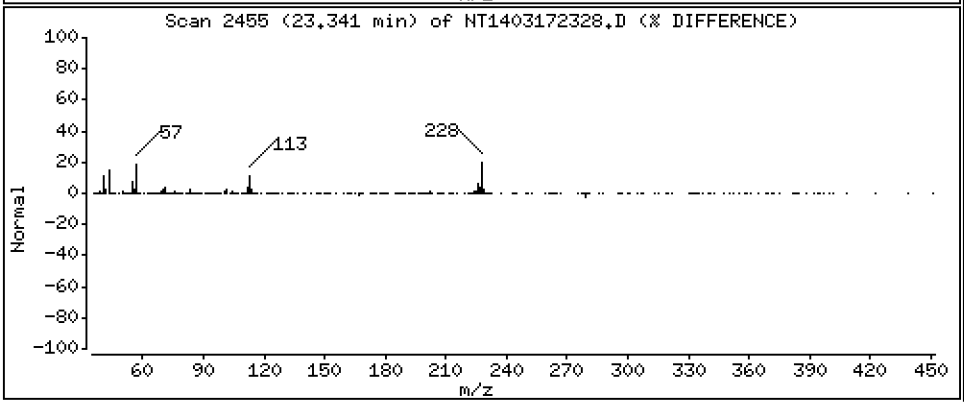
72 bis(2-Ethylhexyl)phthalate

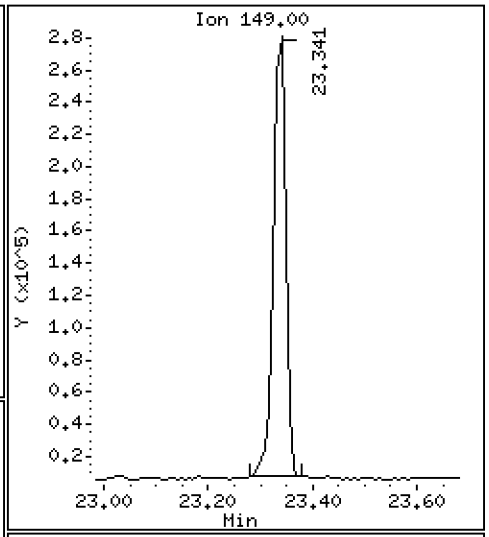
Concentration: 7.780 ug/mL

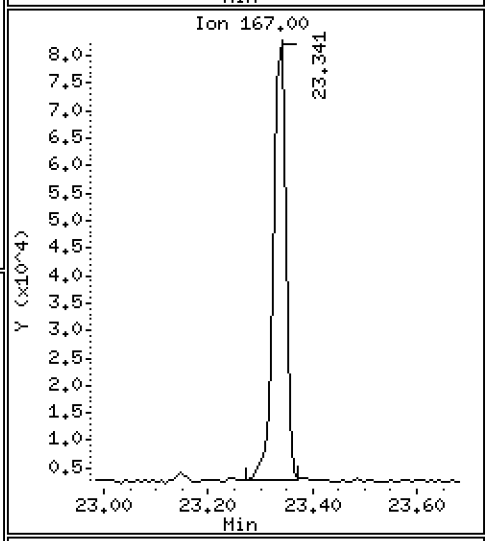


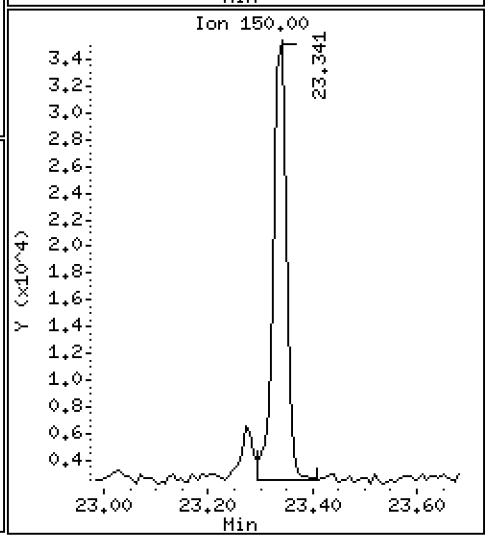












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS1

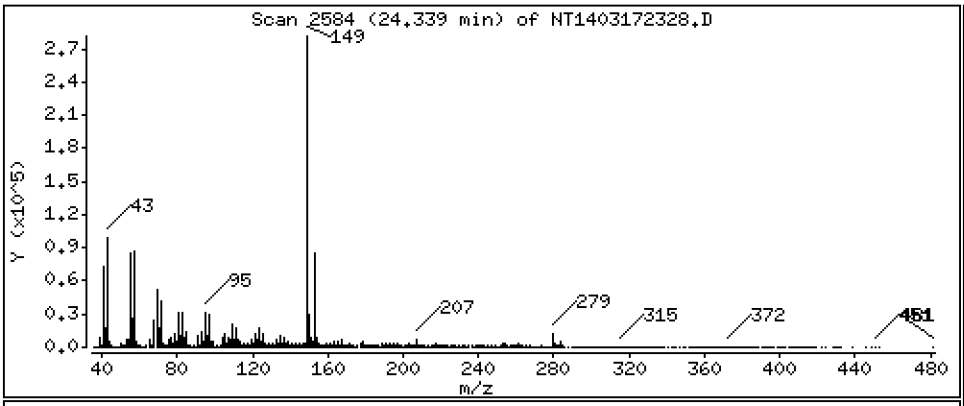
Operator: JGR

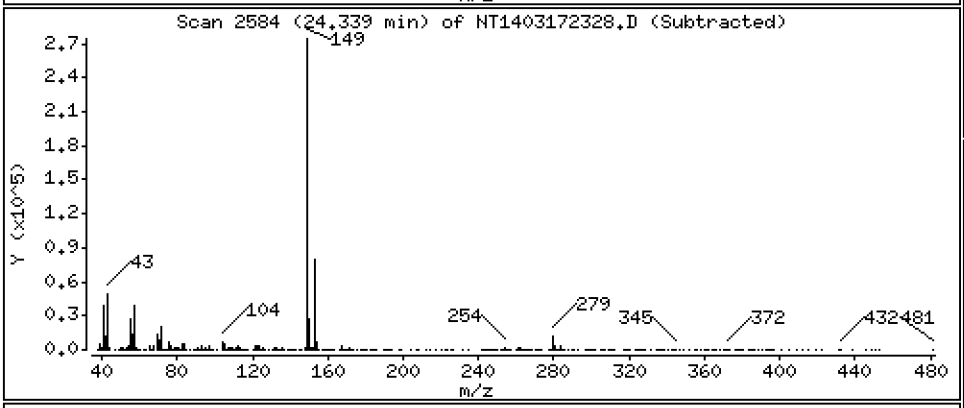
Column phase: ZB-5msi

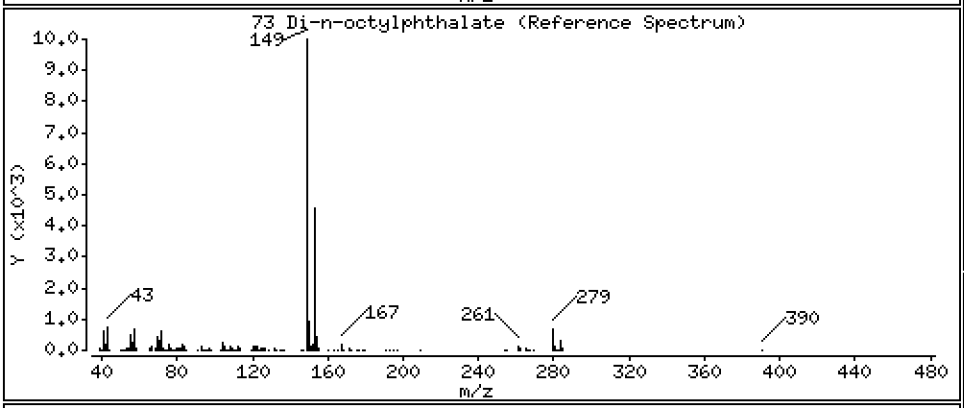
Column diameter: 0.25

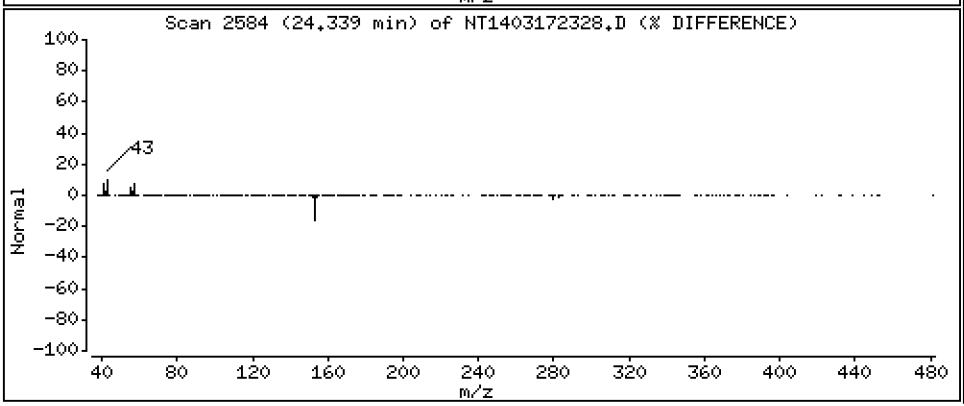
73 Di-n-octylphthalate

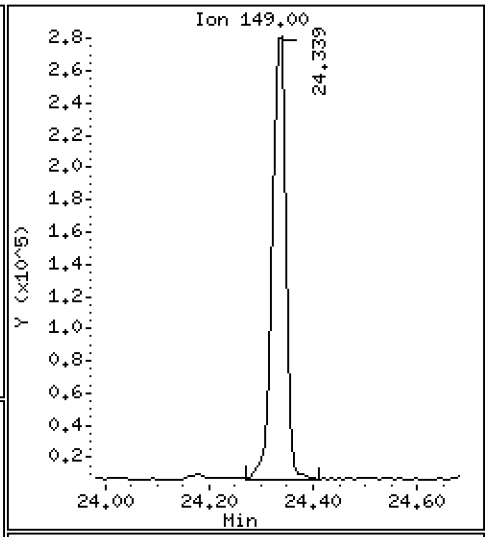
Concentration: 4.498 ug/mL

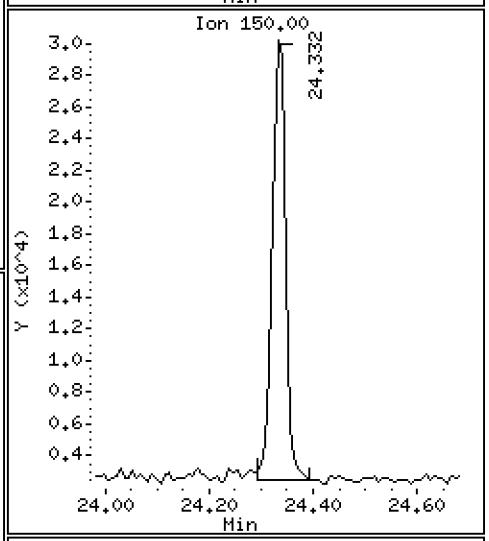


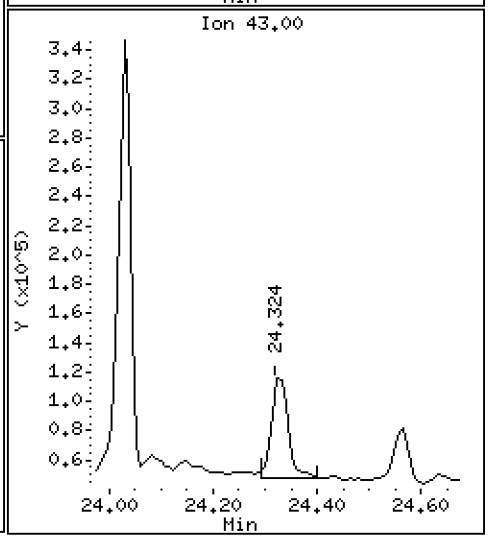












Date : 18-MAR-2023 06:42

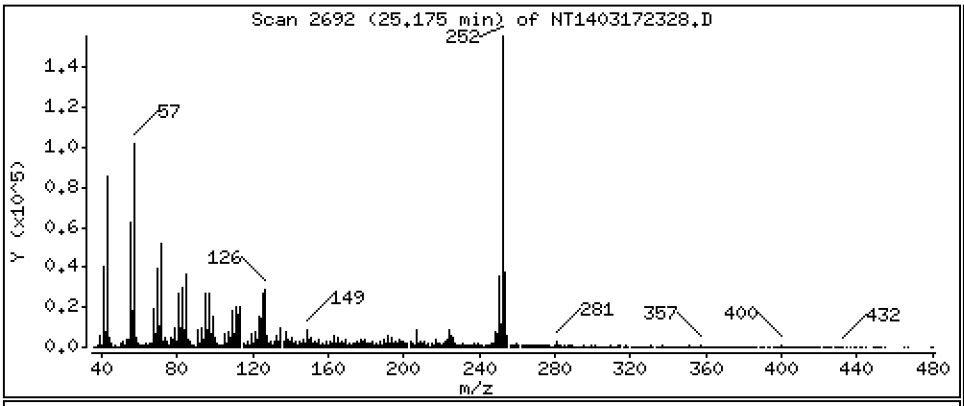
Client ID: Instrument: nt14.i

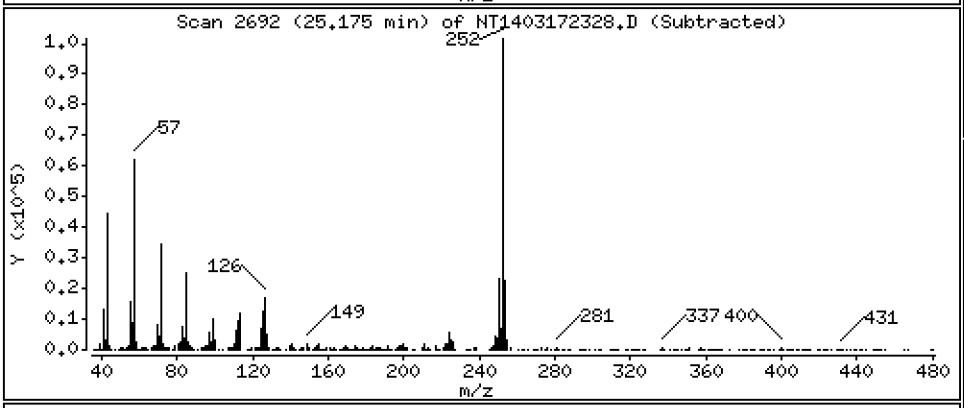
Sample Info: BLB0424-MS1

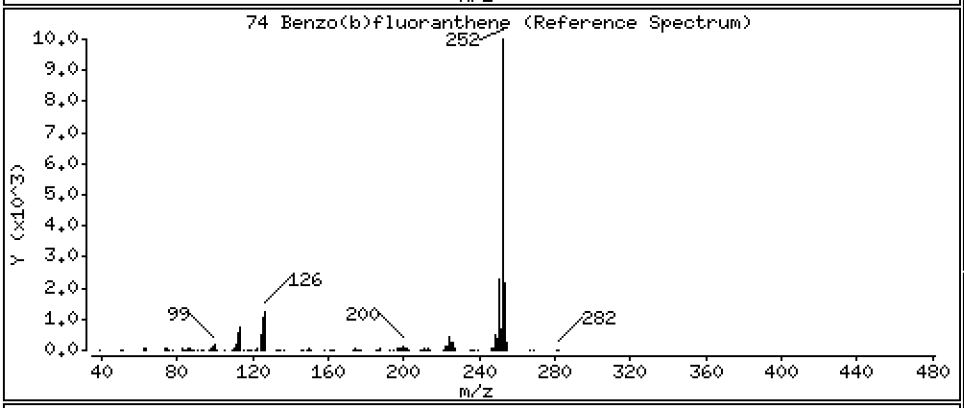
Operator: JGR

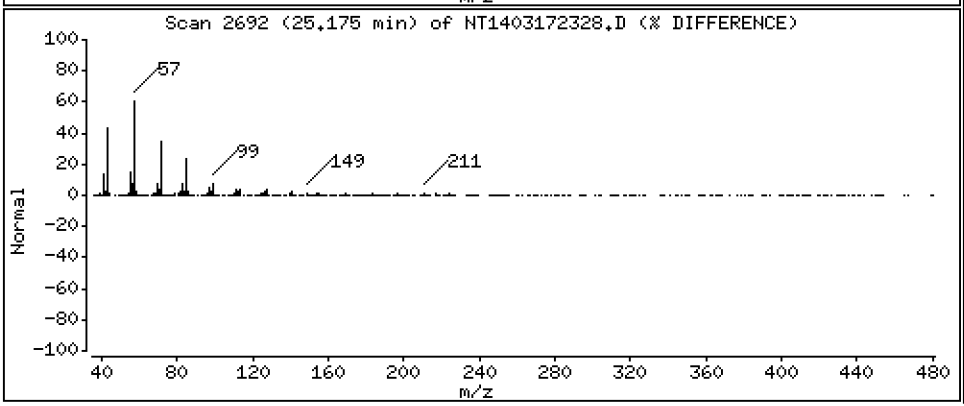
Column phase: ZB-5msi Column diameter: 0.25

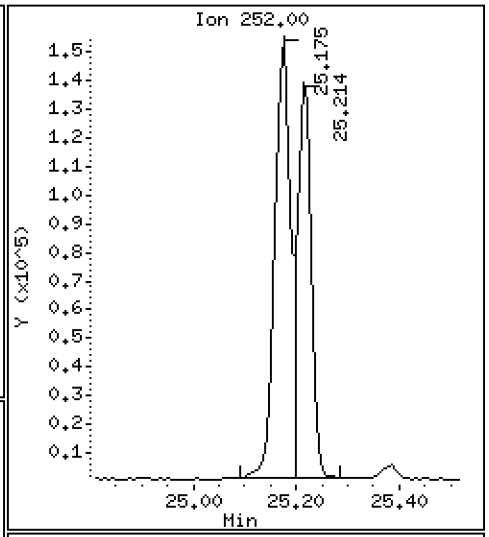
74 Benzo(b)fluoranthene Concentration: 6.503 ug/mL

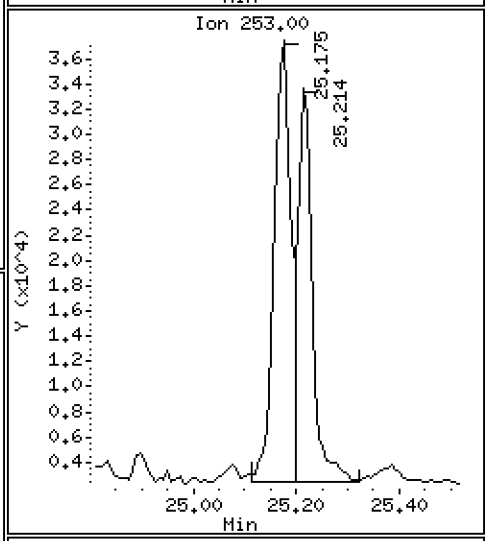


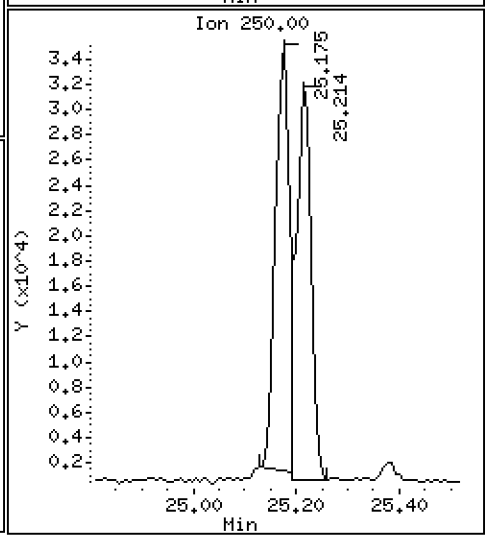












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS1

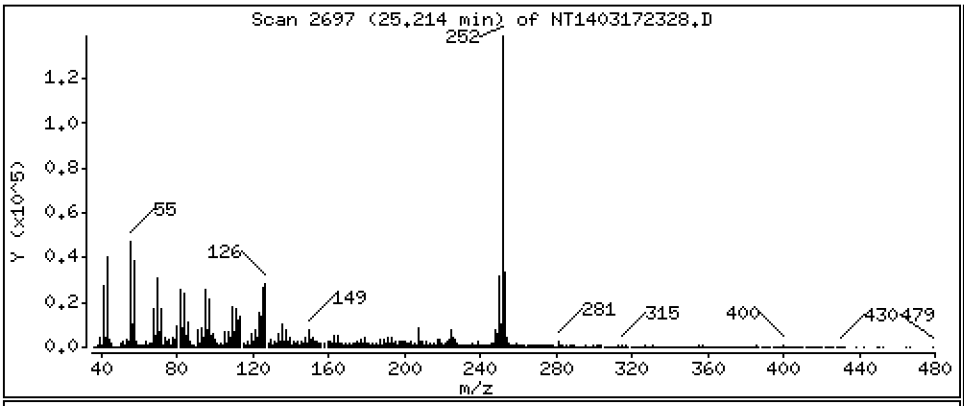
Operator: JGR

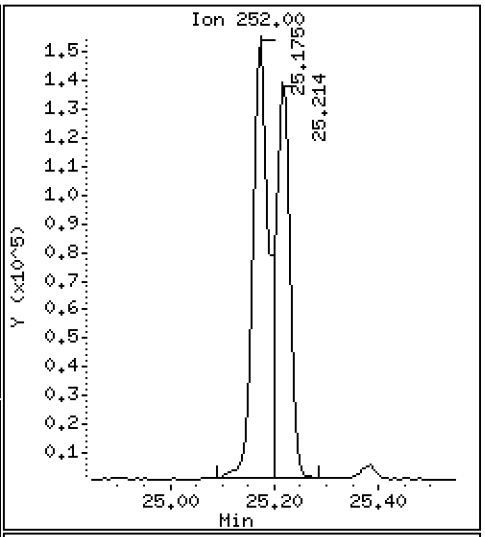
Column phase: ZB-5msi

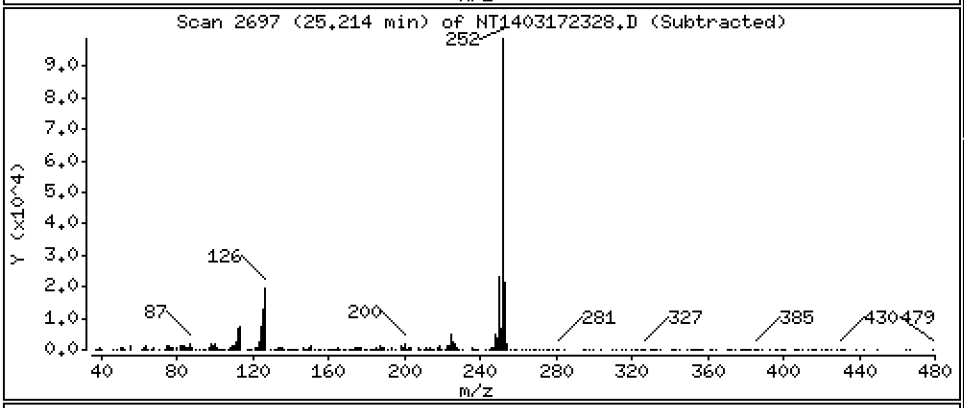
Column diameter: 0.25

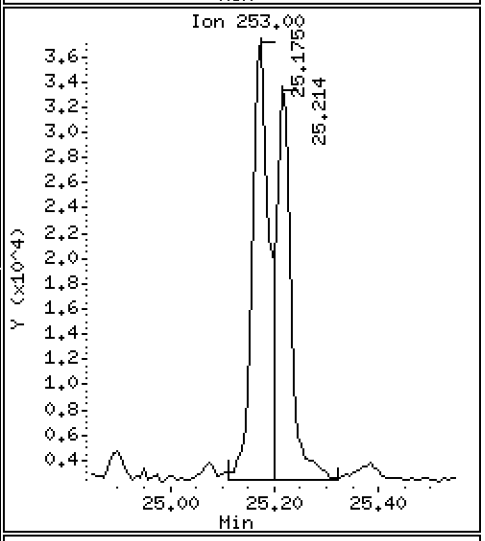
75 Benzo(k)fluoranthene

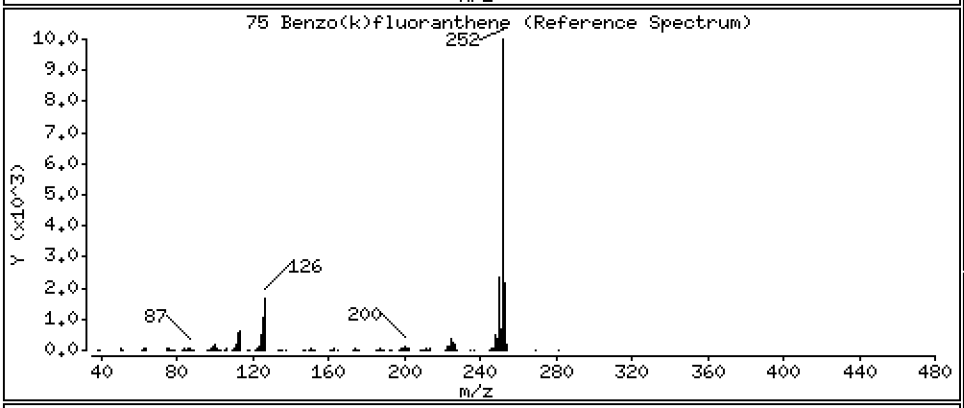
Concentration: 5.279 ug/mL

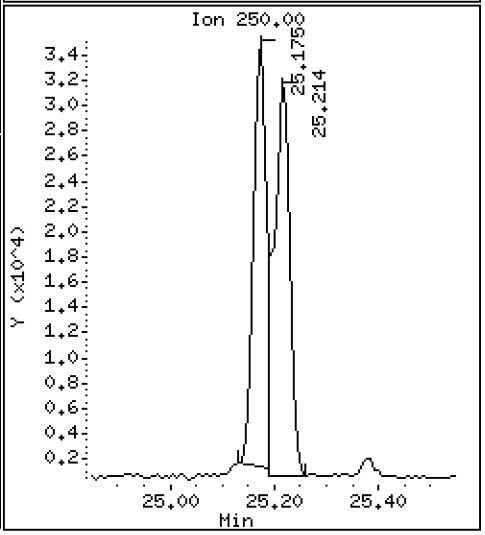


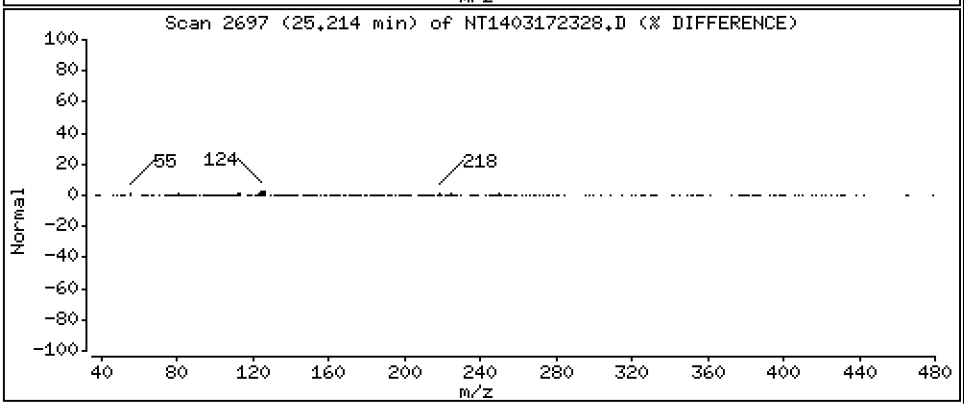












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS1

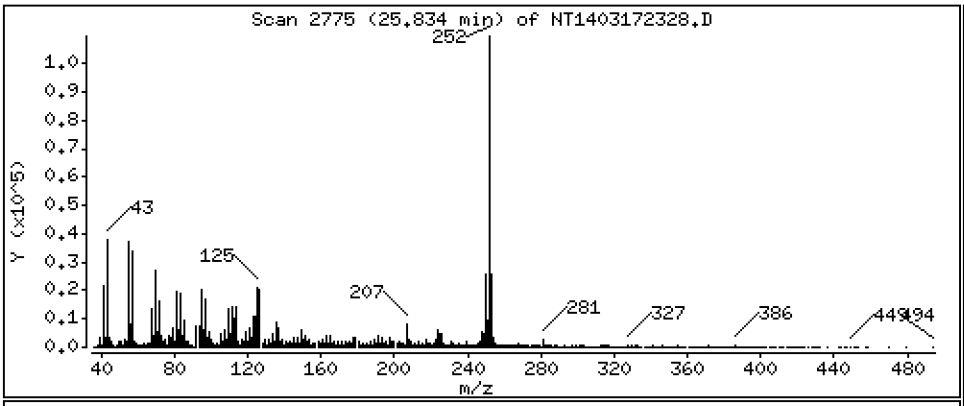
Operator: JGR

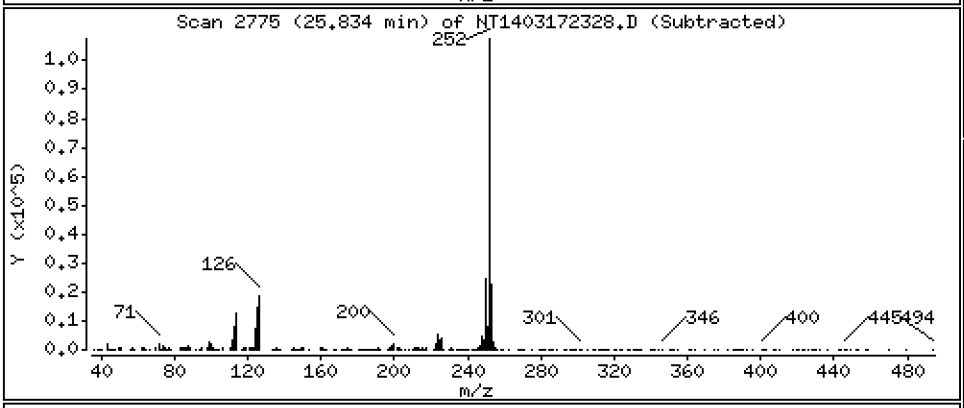
Column phase: ZB-5msi

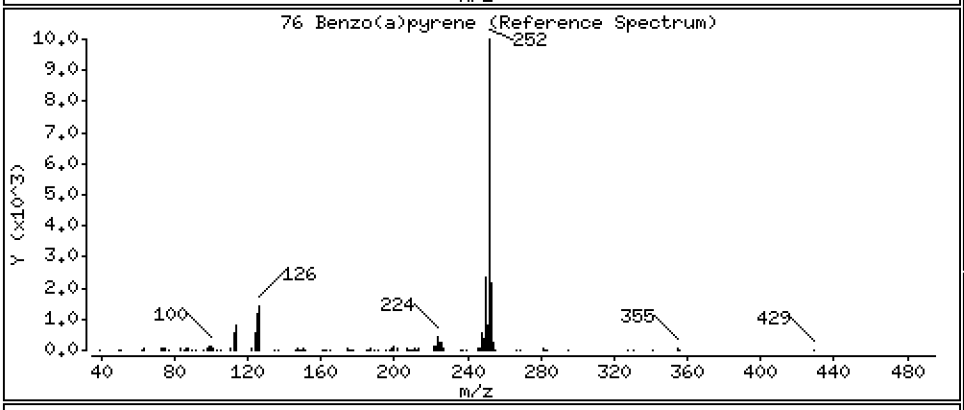
Column diameter: 0.25

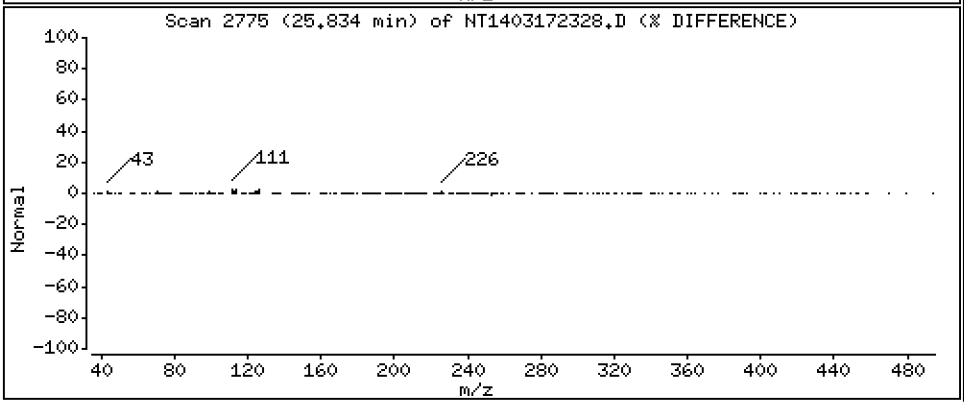
76 Benzo(a)pyrene

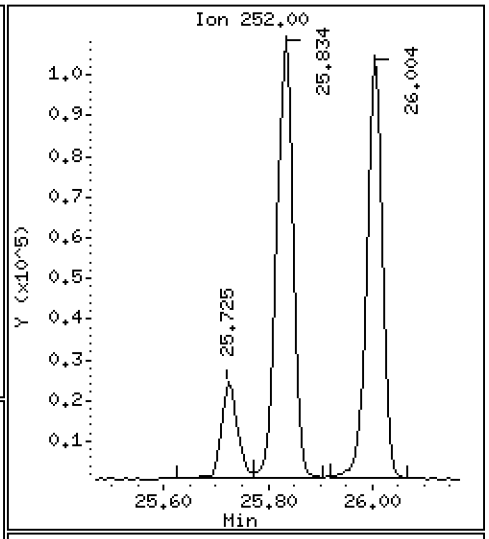
Concentration: 5.279 ug/mL

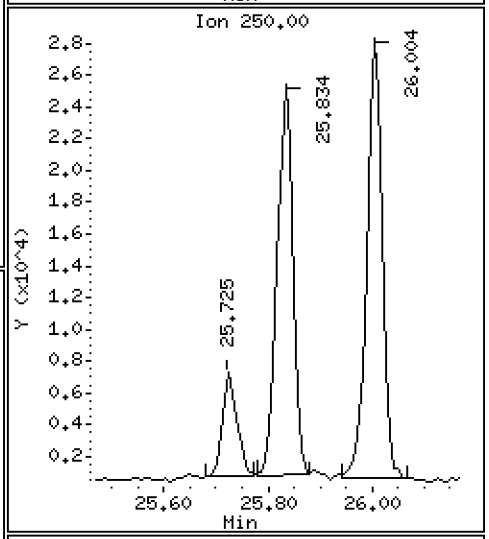


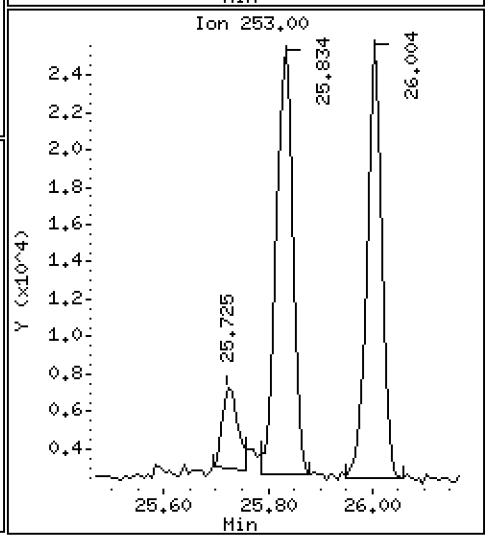












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS1

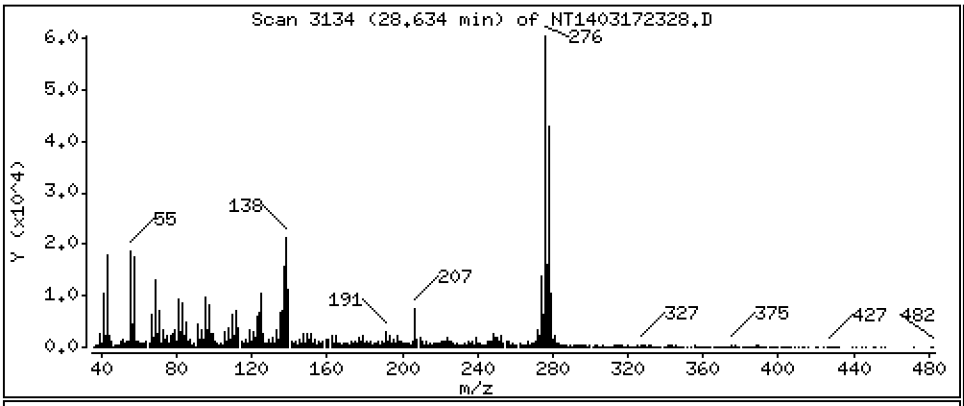
Operator: JGR

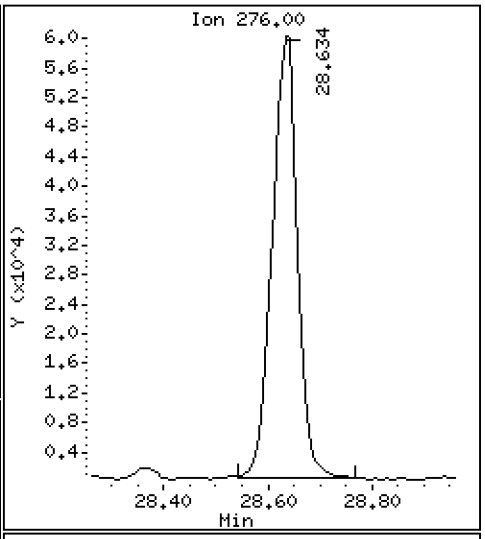
Column phase: ZB-5msi

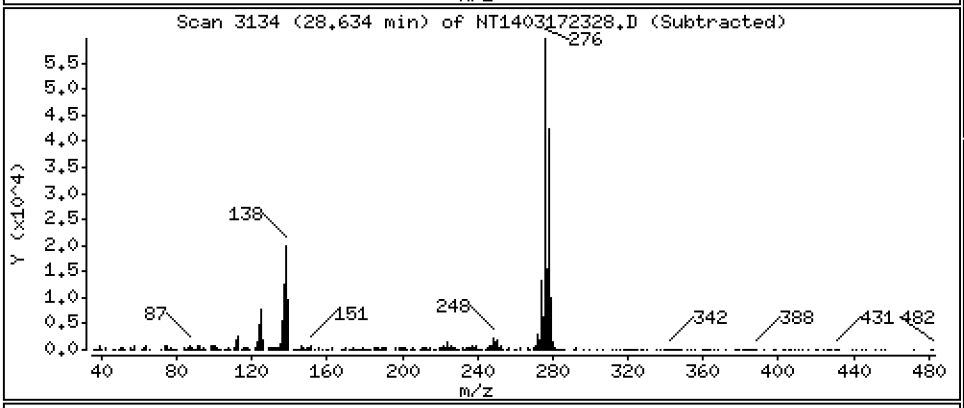
Column diameter: 0.25

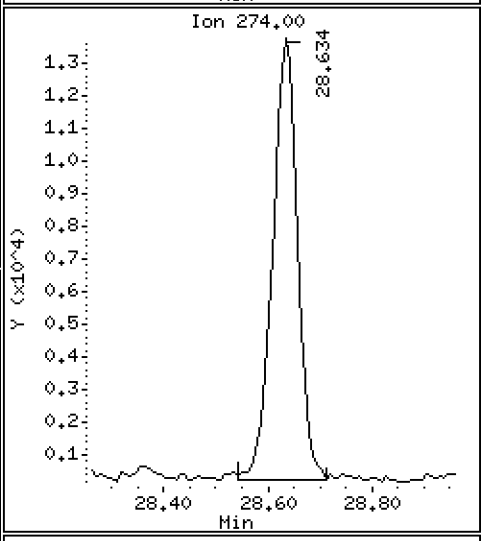
78 Indeno(1,2,3-cd)pyrene

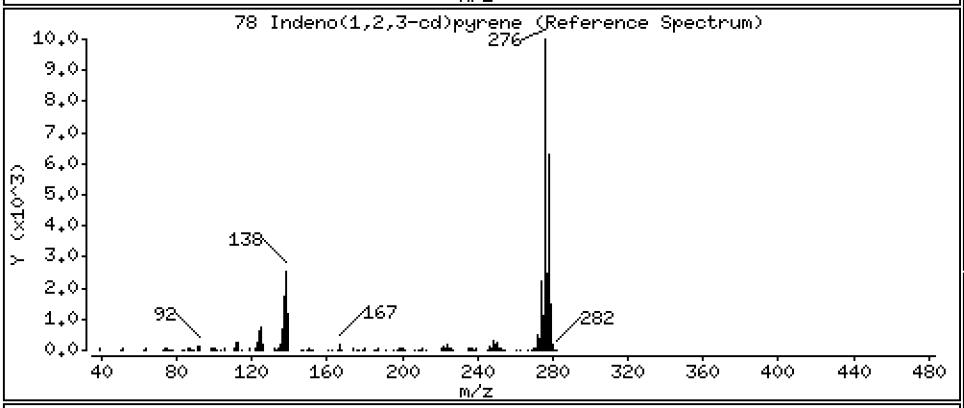
Concentration: 4.281 ug/mL

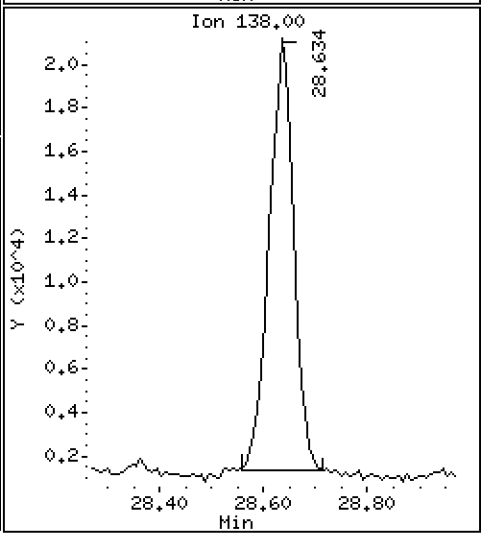


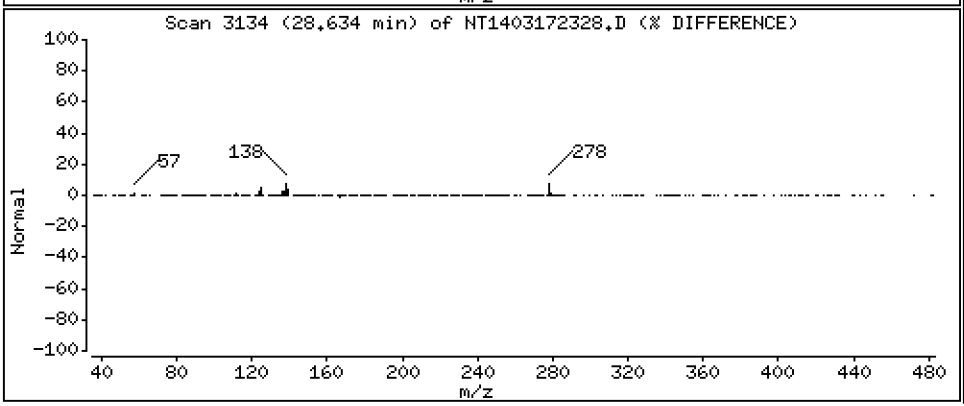












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS1

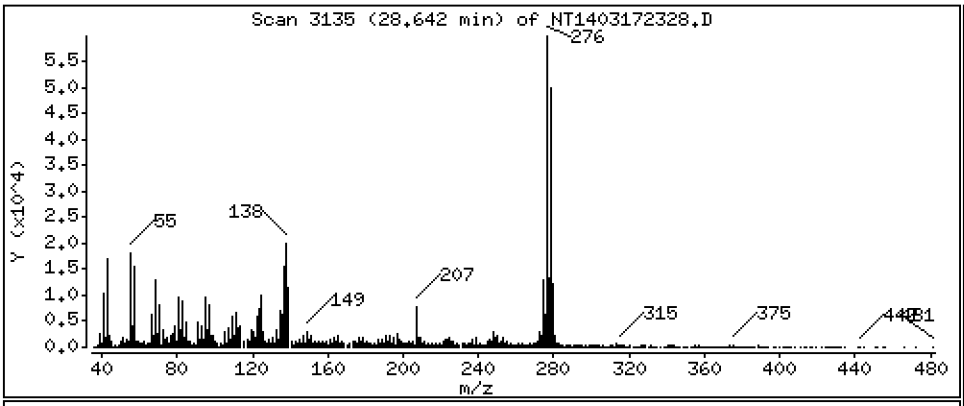
Operator: JGR

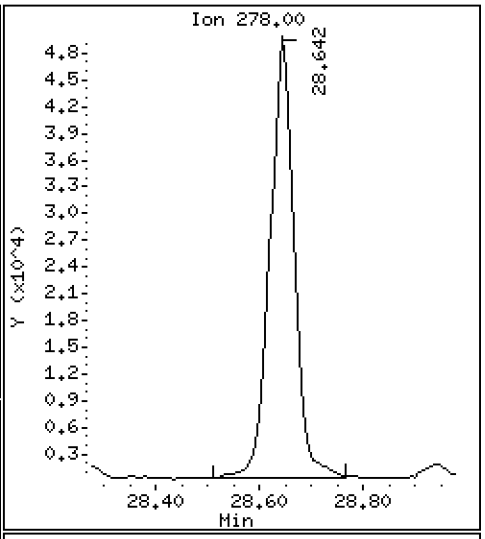
Column phase: ZB-5msi

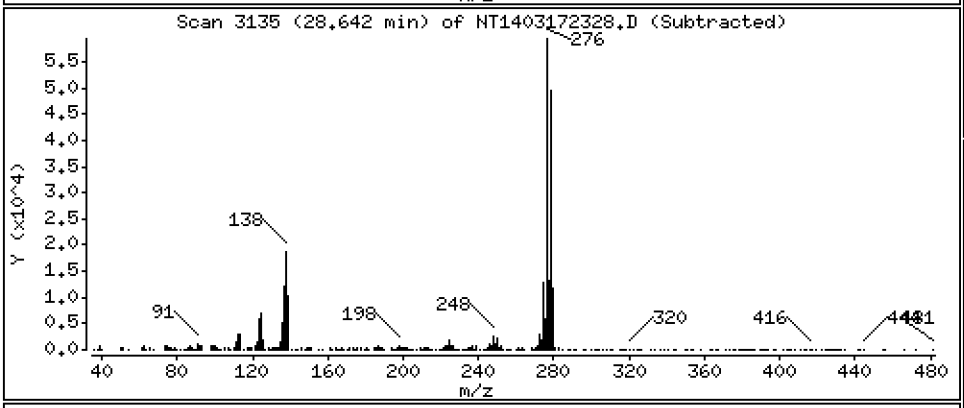
Column diameter: 0.25

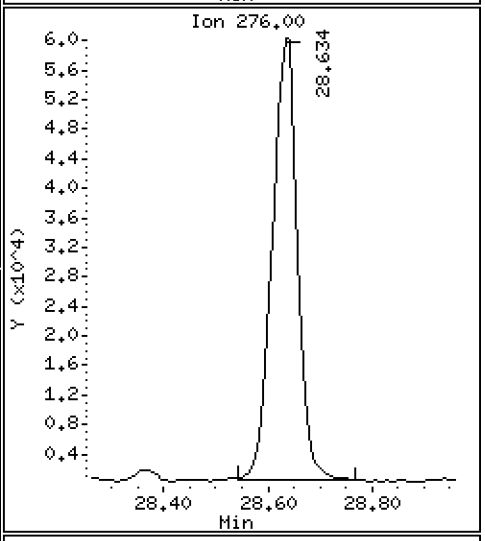
79 Dibenzo(a,h)anthracene

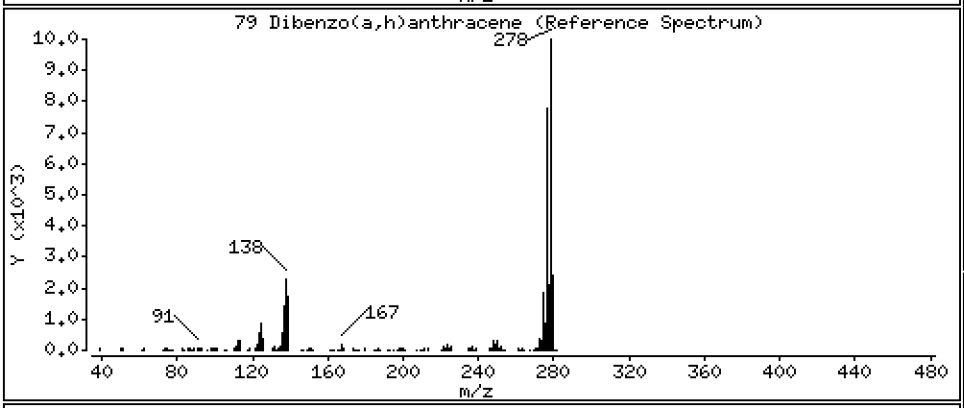
Concentration: 3.993 ug/mL

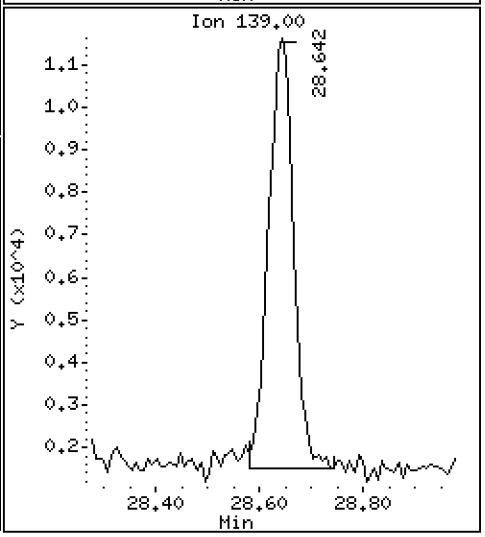


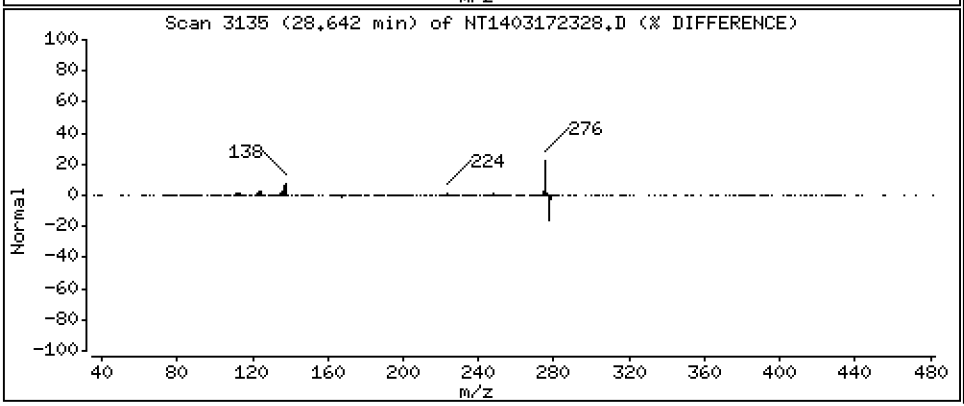












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS1

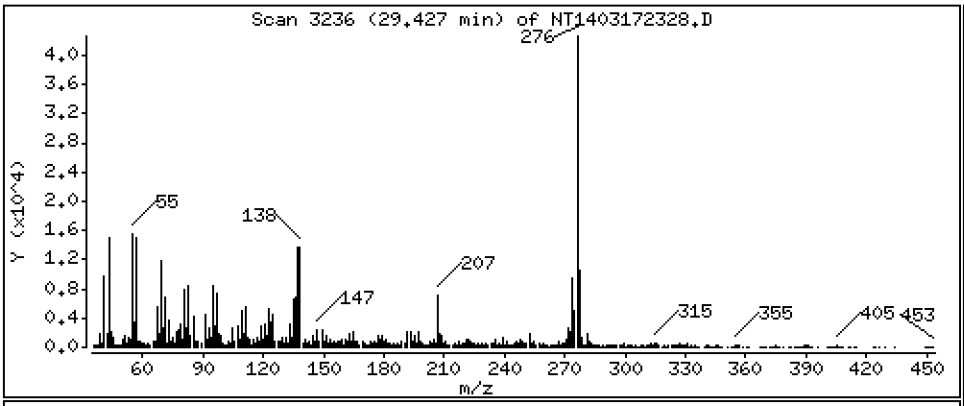
Operator: JGR

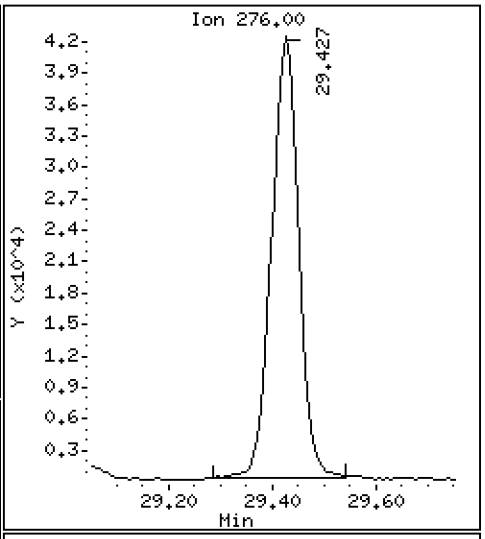
Column phase: ZB-5msi

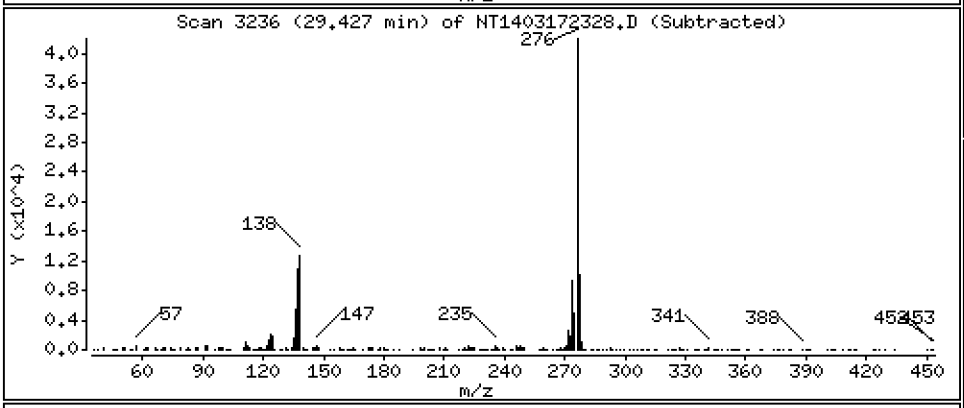
Column diameter: 0.25

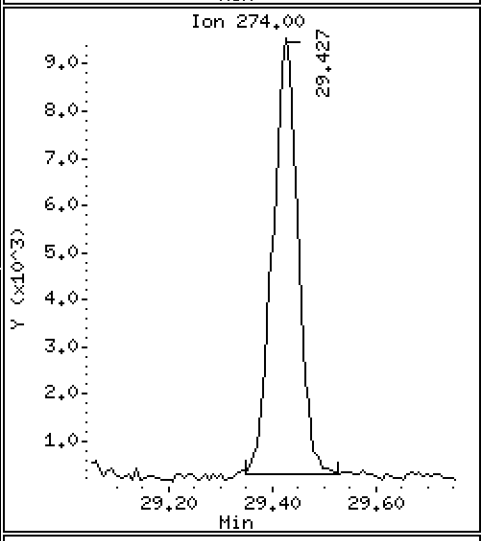
80 Benzo(g,h,i)perylene

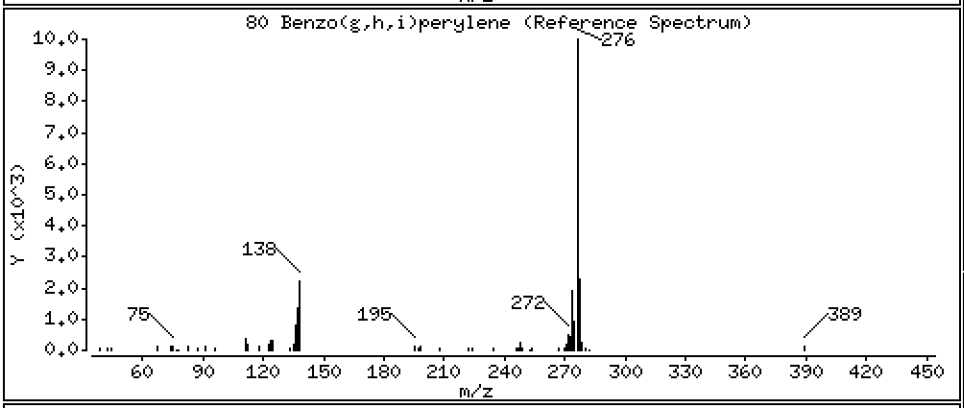
Concentration: 3.934 ug/mL

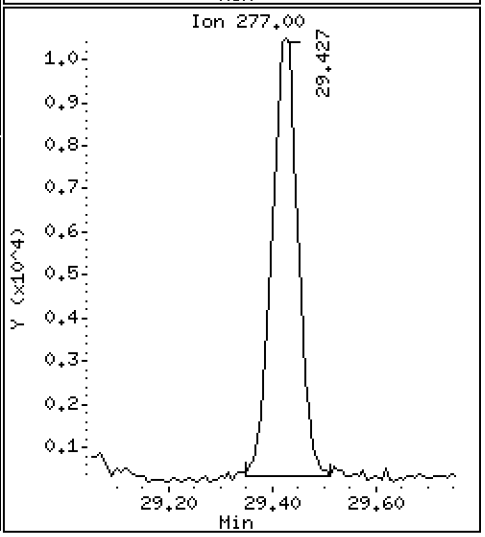


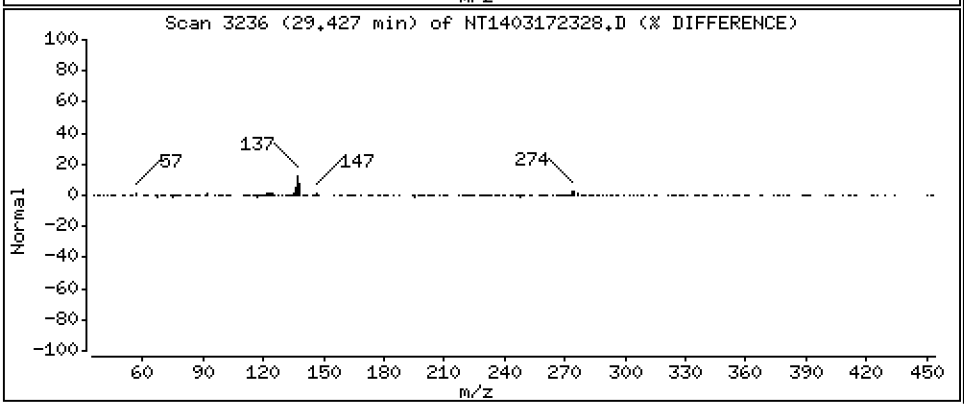












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS1

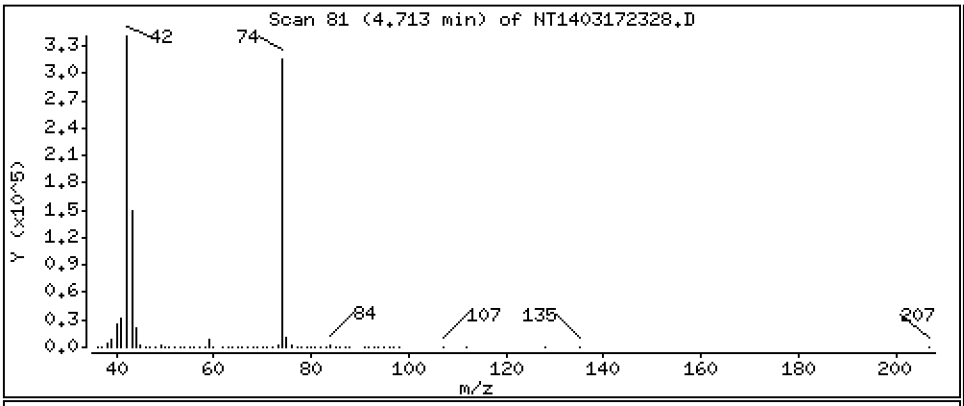
Operator: JGR

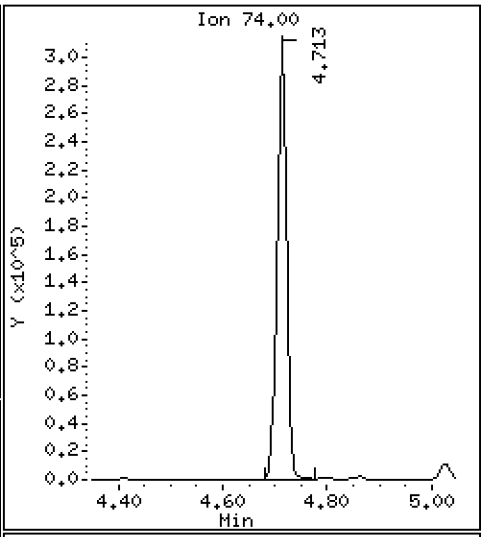
Column phase: ZB-5msi

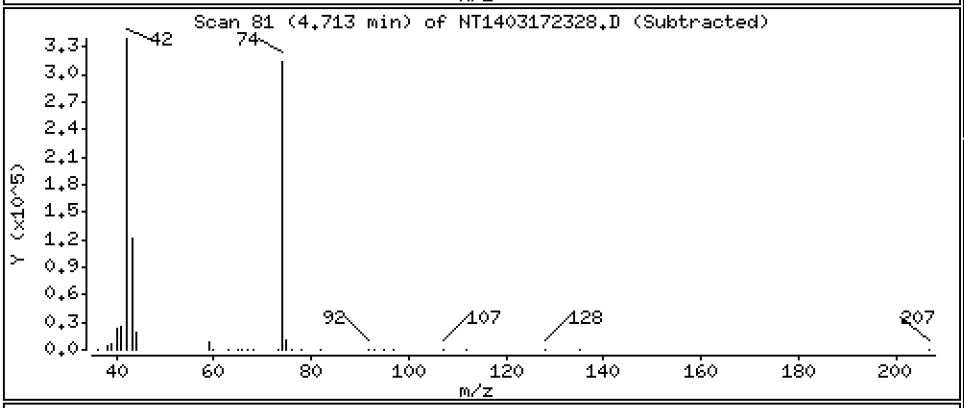
Column diameter: 0.25

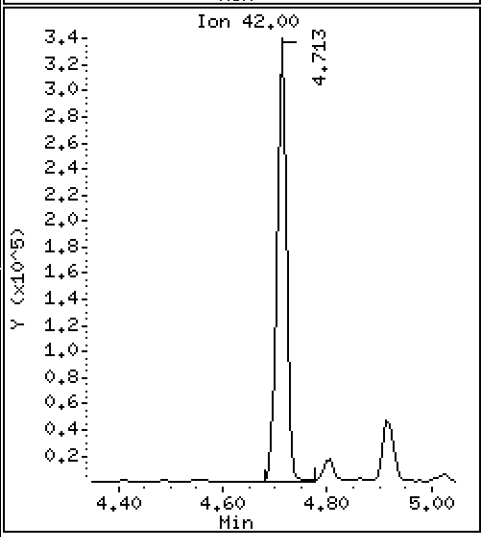
90 N-Nitrosodimethylamine

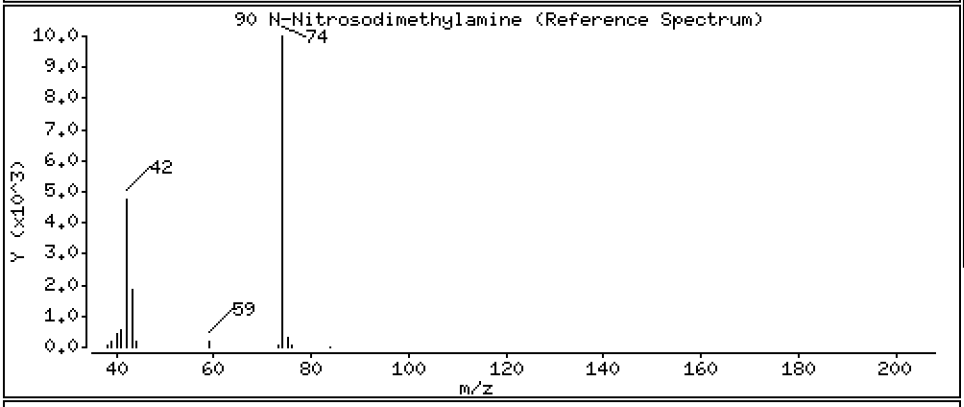
Concentration: 8.912 ug/mL

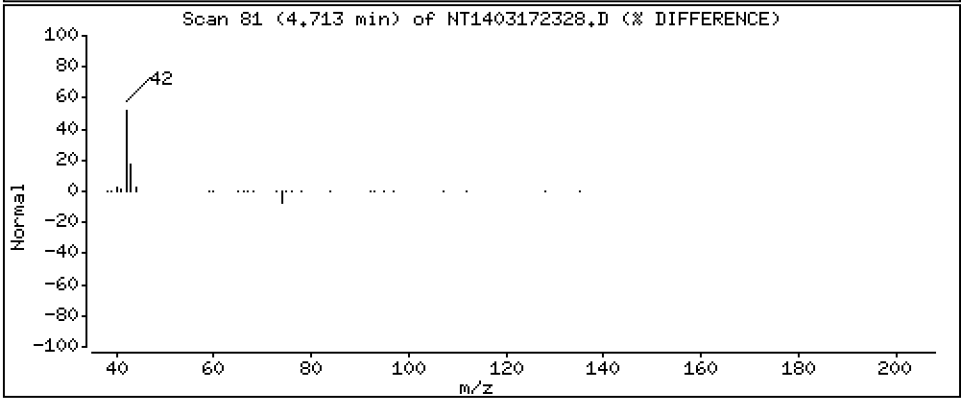












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS1

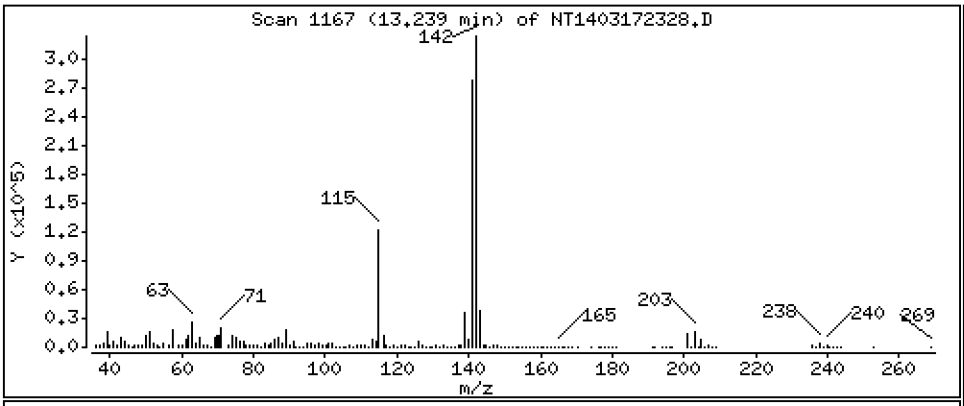
Operator: JGR

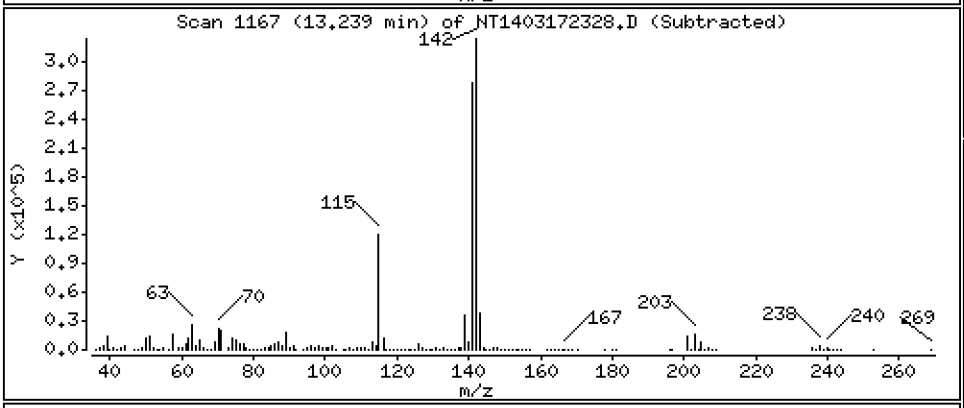
Column phase: ZB-5msi

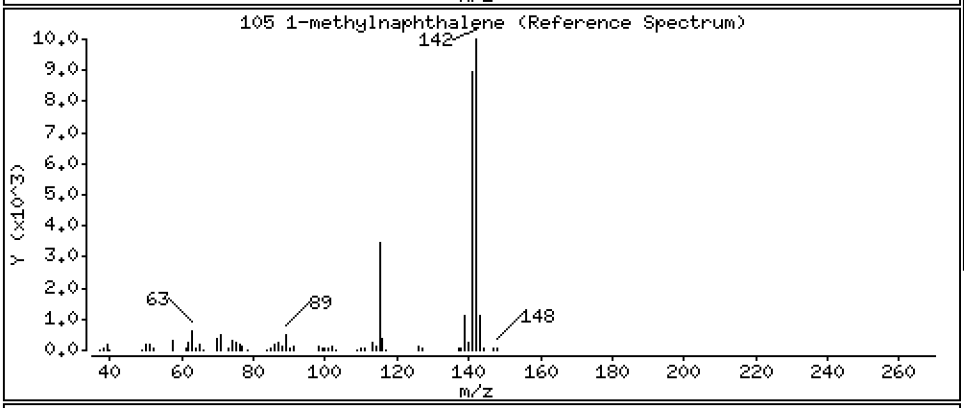
Column diameter: 0.25

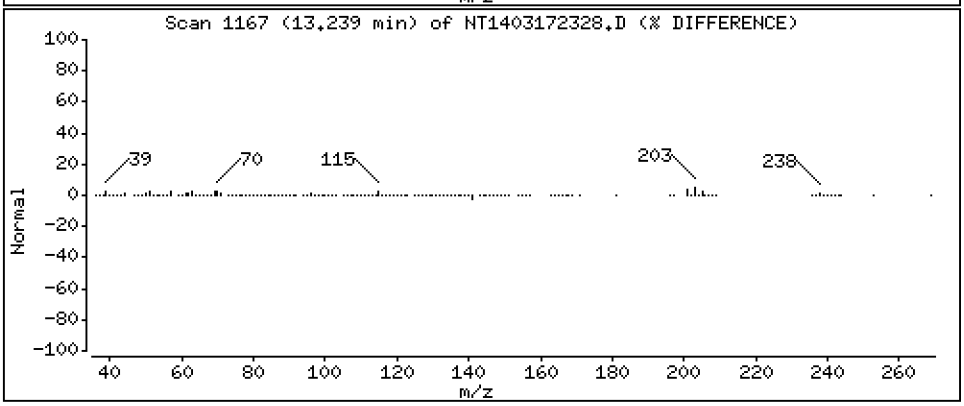
105 1-methylnaphthalene

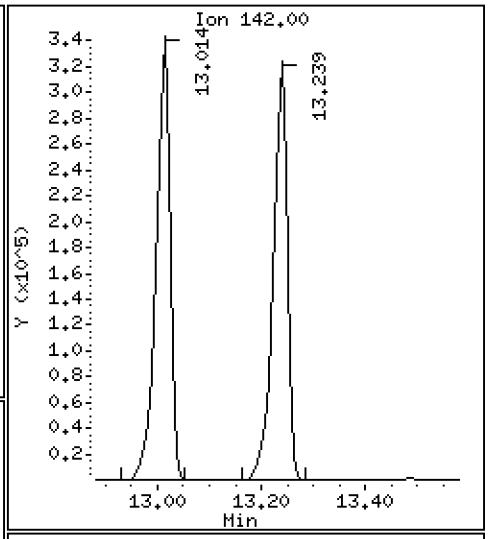
Concentration: 4.240 ug/mL

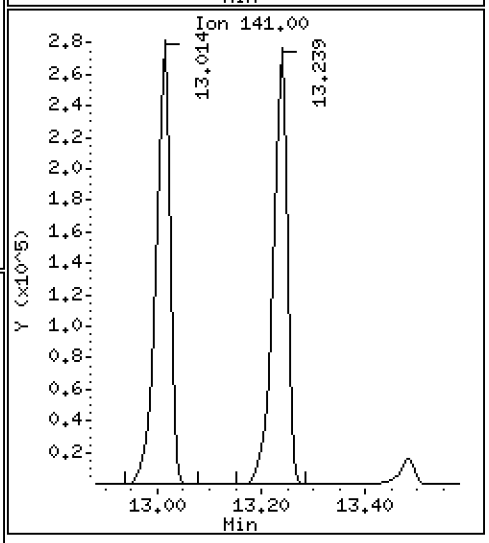












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS1

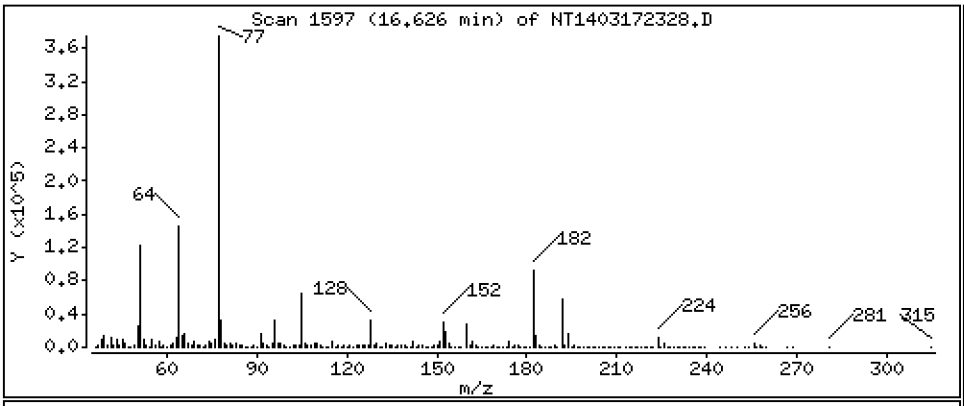
Operator: JGR

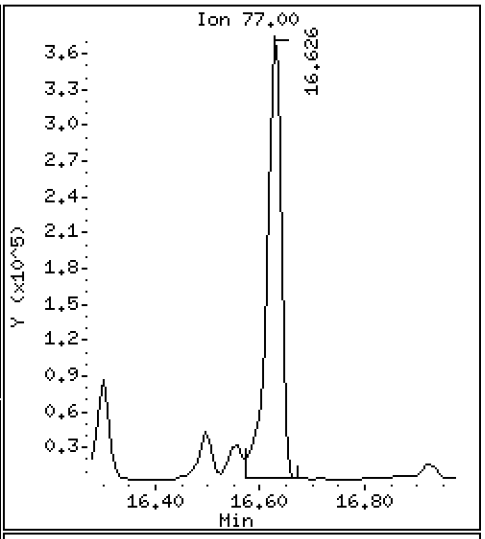
Column phase: ZB-5msi

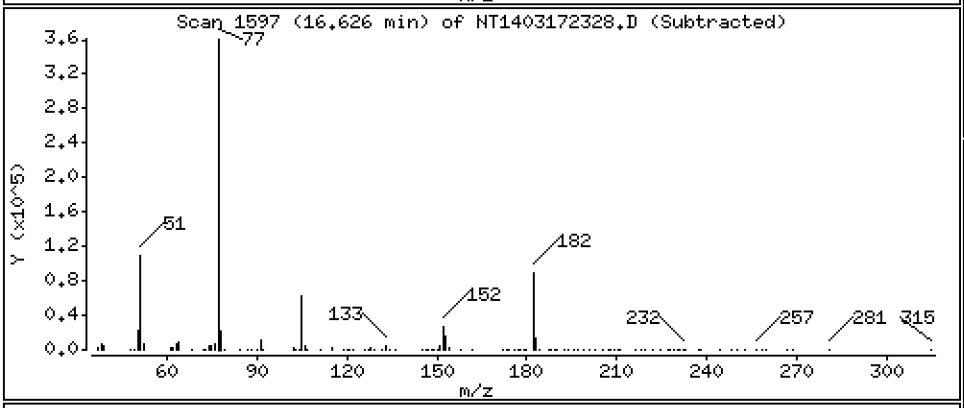
Column diameter: 0.25

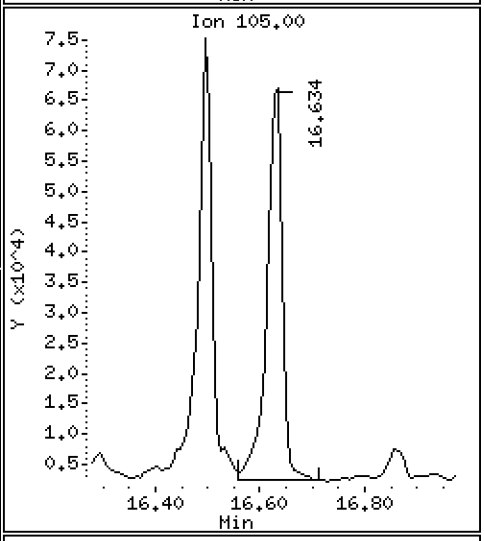
111 Azobenzene (1,2-DP-Hydrazine)

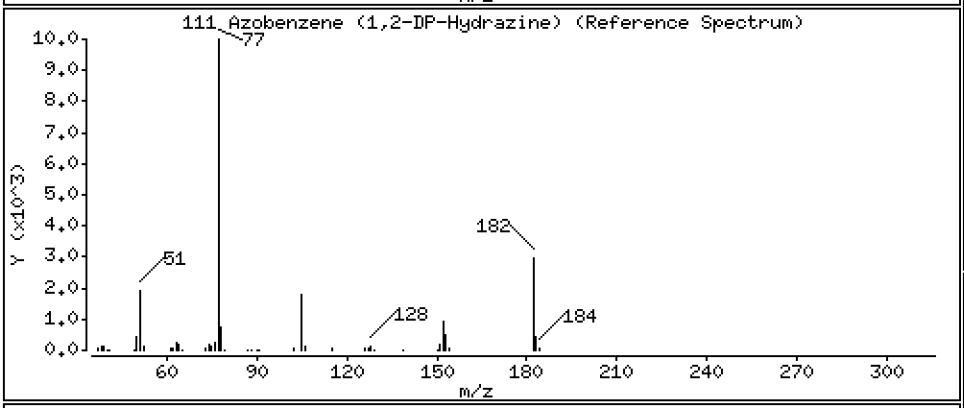
Concentration: 3.944 ug/mL

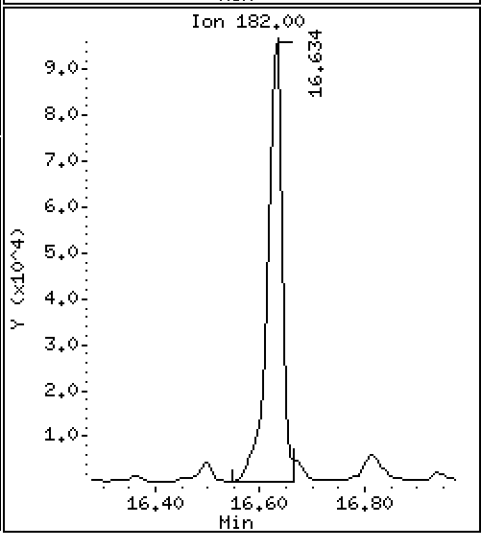


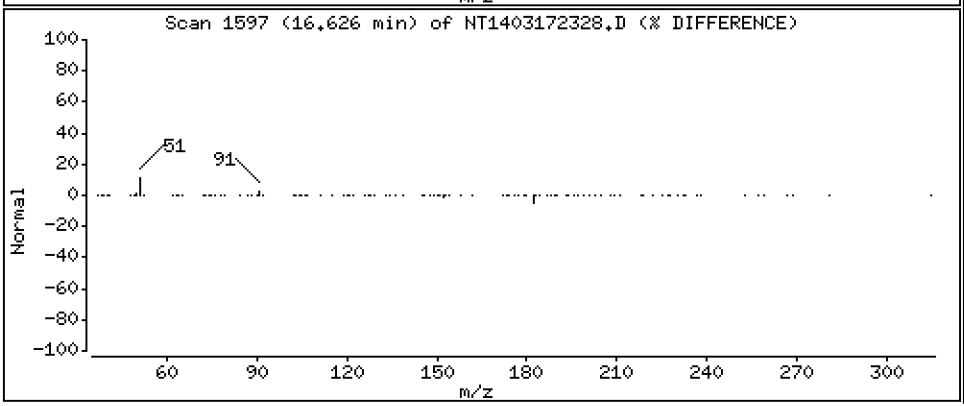












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS1

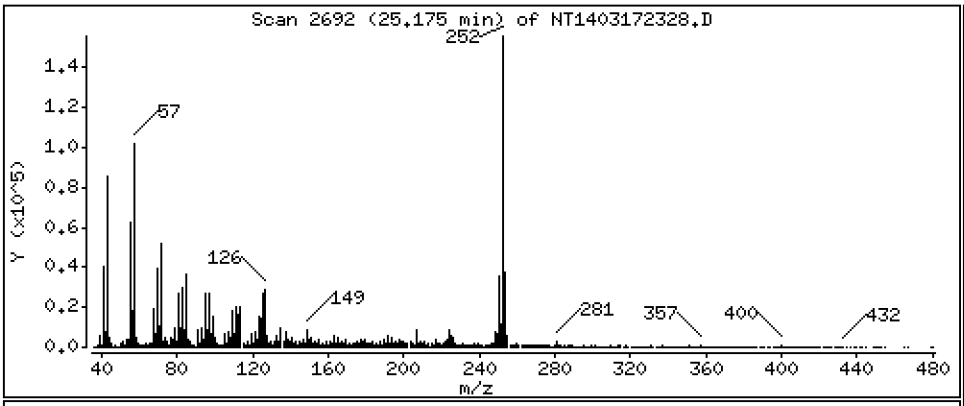
Operator: JGR

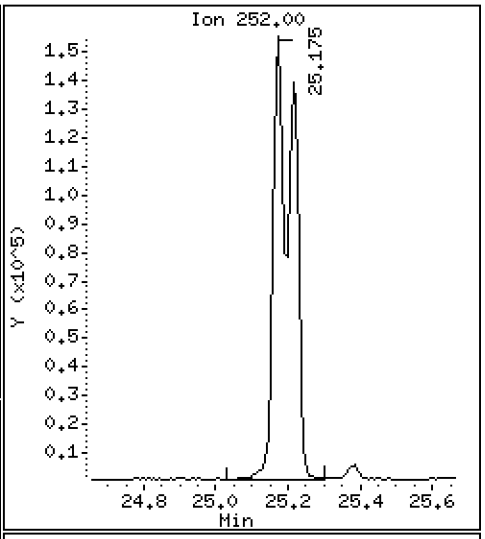
Column phase: ZB-5msi

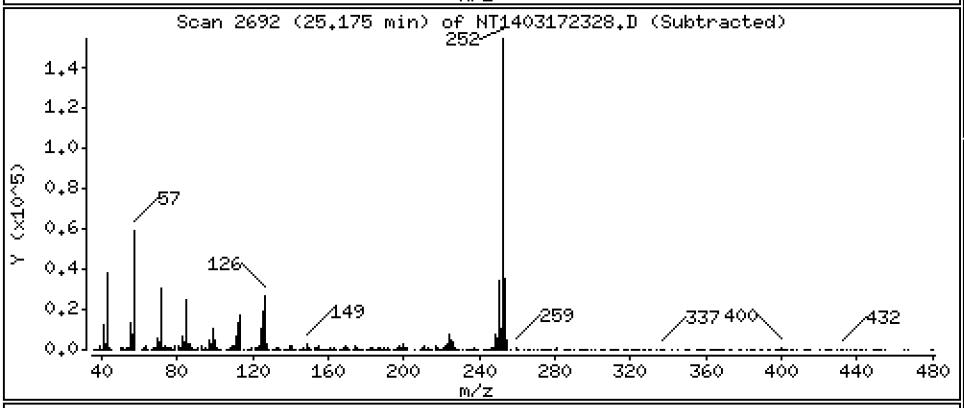
Column diameter: 0.25

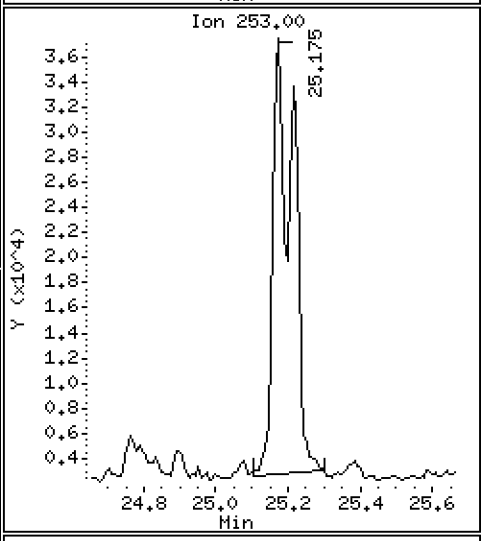
187 Total Benzofluoranthenes

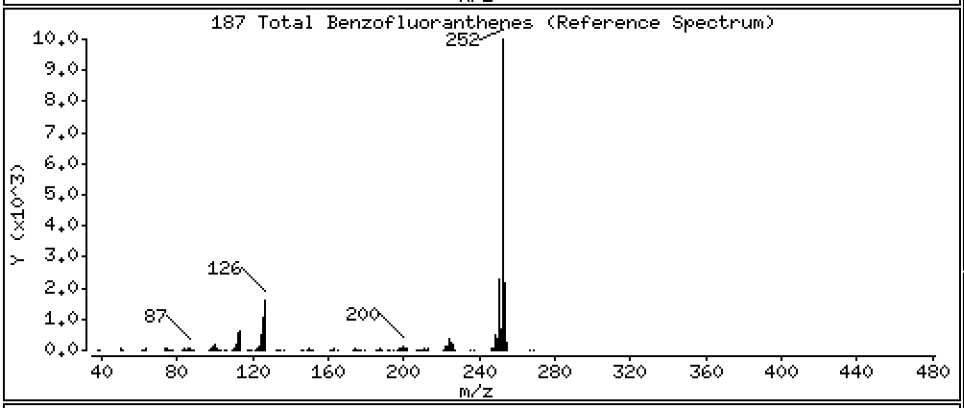
Concentration: 11.82 ug/mL

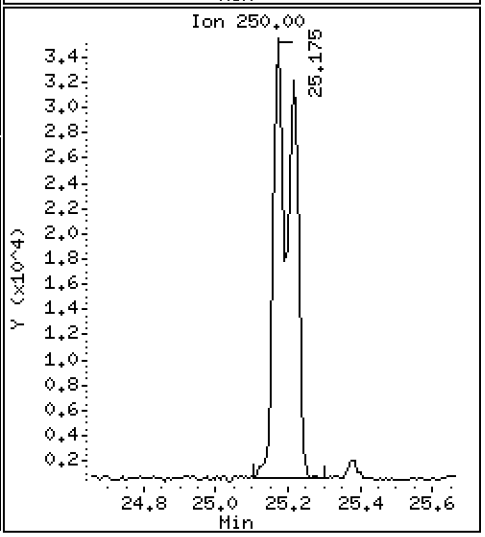


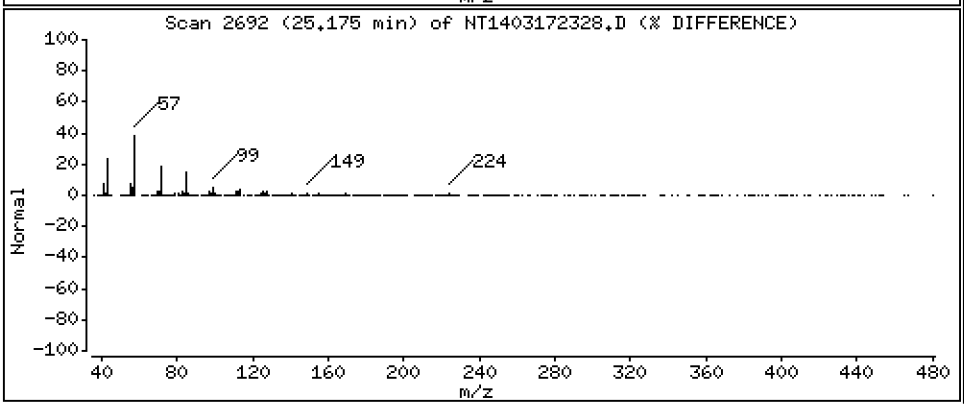












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS1

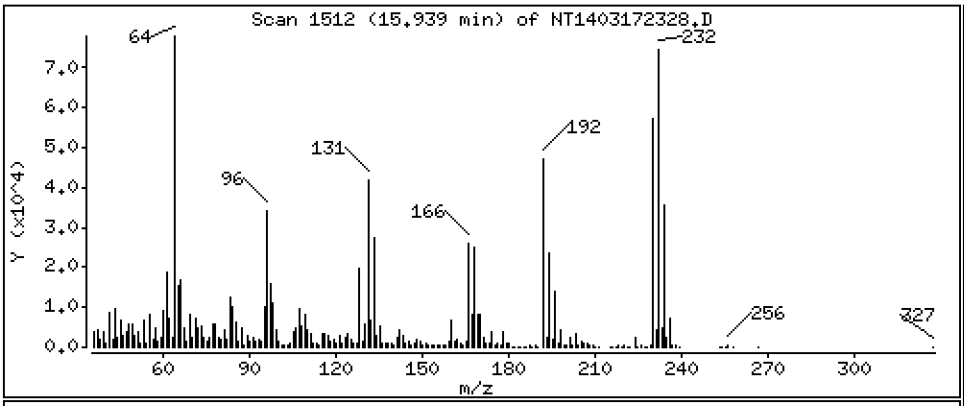
Operator: JGR

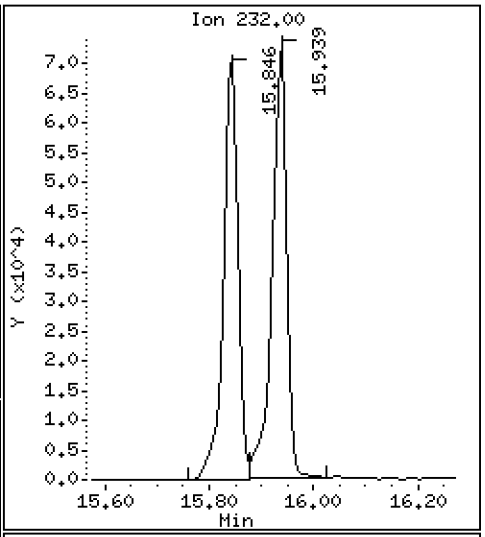
Column phase: ZB-5msi

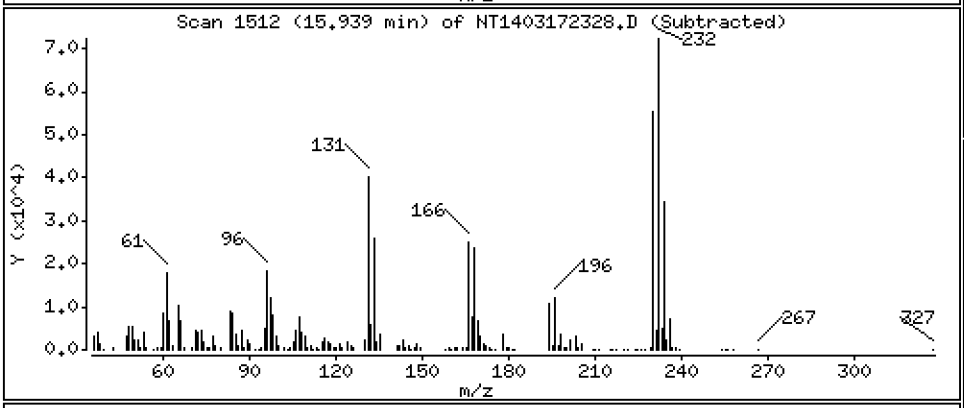
Column diameter: 0.25

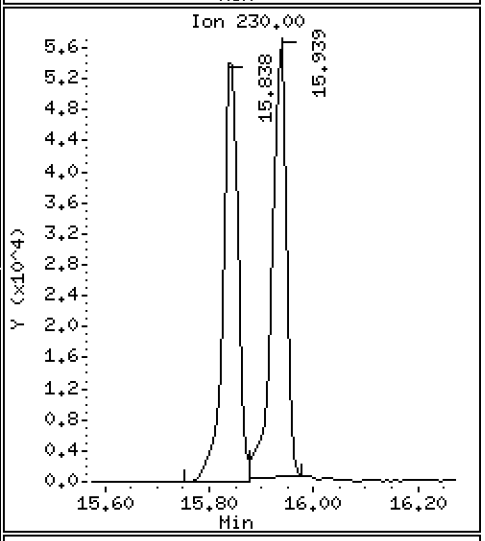
120 2,3,4,6-Tetrachlorophenol

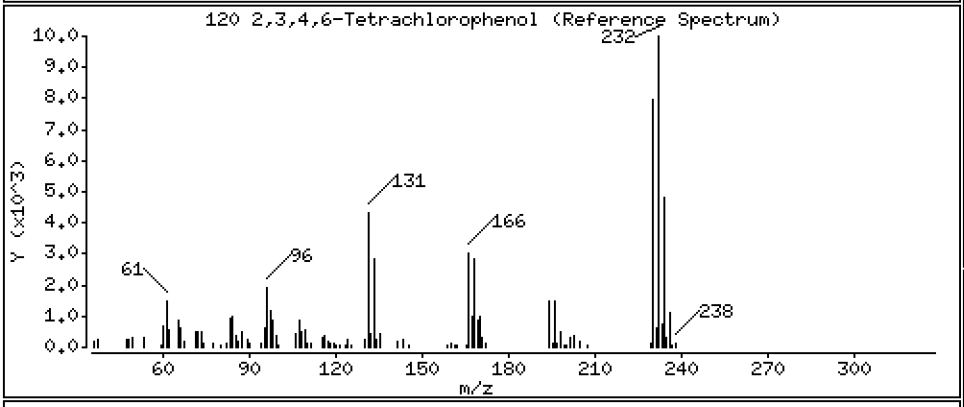
Concentration: 3.165 ug/mL

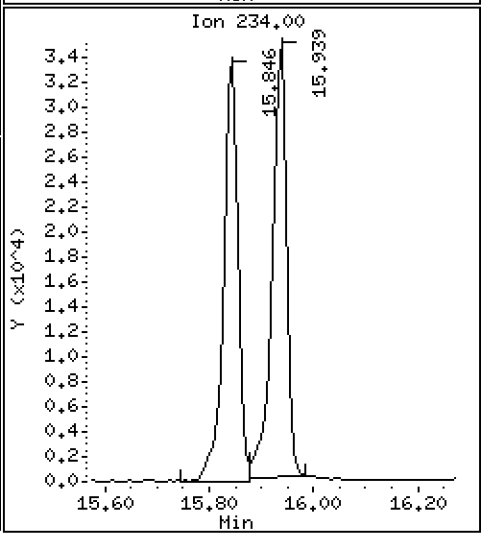


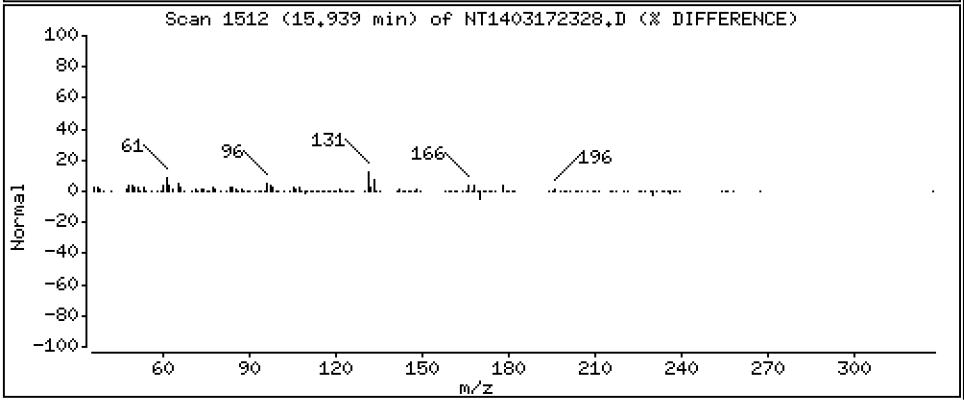












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230317.b\NT1403172328.D
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Inj Date : 18-MAR-2023 06:42 MS Autotune Date: 11-MAR-2023 16:01
Operator : JGR Inst ID: nt14.i
Smp Info : BLB0424-MS1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230317.b\ABN.m
Meth Date : 22-Mar-2023 08:57 van Quant Type: ISTD
Cal Date : 15-MAR-2023 15:50 Cal File: NT1403152308.D
Als bottle: 24
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

							CONCENTRATIONS		
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)	
$	1 2-Fluorophenol	112	6.837	6.821	(1.000)	390477	5.51159	5.512	
$	2 Phenol-d5	99	8.428	8.412	(1.000)	526057	5.63988	5.640	
	3 Phenol	94	8.443	8.436	(1.000)	346675	3.49723	3.497	
$	5 2-Chlorophenol-d4	132	8.706	8.698	(1.000)	444611	6.04622	6.046	
	4 Bis(2-Chloroethyl)ether	93	8.606	8.606	(1.000)	285402	3.99827	3.998	
	6 2-Chlorophenol	128	8.729	8.729	(1.000)	277229	3.55324	3.553	
	7 1,3-Dichlorobenzene	146	9.000	9.000	(1.000)	281008	3.55799	3.558	
*	8 1,4-Dichlorobenzene-d4	152	9.070	9.062	(1.000)	208566	4.00000	(M)	
	9 1,4-Dichlorobenzene	146	9.101	9.093	(1.000)	275968	3.62782	3.628	
$	10 1,2-Dichlorobenzene-d4	152	9.427	9.427	(1.000)	184780	3.76123	3.761	
	12 1,2-Dichlorobenzene	146	9.458	9.450	(1.000)	275783	3.66783	3.668	
	11 Benzyl alcohol	108	9.349	9.341	(1.000)	187514	4.06327	4.063	
	14 2,2'-oxybis(1-Chloropropane)	121	9.644	9.644	(1.000)	99236	4.37387	4.374	
	13 2-Methylphenol	108	9.567	9.559	(1.000)	243884	3.47986	3.480	
	17 Hexachloroethane	117	10.048	10.048	(1.000)	119279	3.66623	3.666	
	16 N-Nitroso-di-n-propylamine	70	9.900	9.900	(1.000)	223017	4.04171	4.042	
	15 4-Methylphenol	108	9.846	9.830	(1.000)	284264	3.42570	3.426	
$	18 Nitrobenzene-d5	82	10.164	10.164	(0.879)	348664	3.99852	3.999	
	19 Nitrobenzene	77	10.203	10.203	(0.882)	331912	3.91035	3.910	
	20 Isophorone	82	10.653	10.653	(0.921)	603336	5.20590	5.206	
	21 2-Nitrophenol	139	10.832	10.831	(0.936)	162260	3.34120	3.341	
	22 2,4-Dimethylphenol	107	10.894	10.886	(0.942)	798304	10.9961	11.00	
	23 Bis(2-Chloroethoxy)methane	93	11.087	11.087	(0.959)	352486	4.51767	4.518	
	24 Benzoic acid	105	11.095	11.103	(0.959)	771216	12.5188	12.52	
	25 2,4-Dichlorophenol	162	11.297	11.289	(0.977)	919909	15.9331	15.93	
	26 1,2,4-Trichlorobenzene	180	11.482	11.482	(0.993)	243151	3.42583	3.426	
*	27 Naphthalene-d8	136	11.567	11.567	(1.000)	823985	4.00000		
	28 Naphthalene	128	11.606	11.606	(1.003)	847104	3.84817	3.848	
	29 4-Chloroaniline	127	11.830	11.737	(1.023)	106162	1.15201	1.152	(M)
	30 Hexachlorobutadiene	225	11.977	11.969	(1.035)	130022	4.05741	4.057	
	31 4-Chloro-3-methylphenol	107	12.712	12.696	(1.099)	1037866	14.8760	14.88	
	32 2-Methylnaphthalene	142	13.014	13.006	(1.125)	613788	3.99812	3.998	
	33 Hexachlorocyclopentadiene	237	13.478	13.478	(0.886)	192977	5.53662	5.537	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
	34 2,4,6-Trichlorophenol	196	13.641	13.633	(0.897)	670618	15.7650	15.76
	35 2,4,5-Trichlorophenol	196	13.718	13.702	(0.902)	696853	15.7207	15.72
$	36 2-Fluorobiphenyl	172	13.803	13.795	(0.908)	649733	4.27854	4.279
	37 2-Chloronaphthalene	162	14.012	14.004	(0.922)	541213	4.15818	4.158
	38 2-Nitroaniline	65	14.275	14.267	(0.939)	757099	15.0642	15.06
	39 Dimethylphthalate	163	14.709	14.701	(0.967)	618541	4.42355	4.424
	40 Acenaphthylene	152	14.895	14.879	(0.980)	772185	3.53213	3.532
	41 2,6-Dinitrotoluene	165	14.848	14.840	(0.977)	501819	15.5354	15.54
*	42 Acenaphthene-d10	164	15.204	15.196	(1.000)	419326	4.00000	
	43 3-Nitroaniline	138	15.134	15.119	(0.995)	237536	5.33041	5.330
	44 Acenaphthene	153	15.274	15.266	(1.005)	525148	4.11430	4.114
	45 2,4-Dinitrophenol	184	15.335	15.335	(1.009)	8150	0.32578	0.3258
	46 Dibenzofuran	168	15.598	15.590	(1.026)	770638	4.22907	4.229
	47 4-Nitrophenol	109	15.459	15.436	(1.017)	302944	12.8433	12.84
	48 2,4-Dinitrotoluene	165	15.660	15.645	(1.030)	697080	15.2238	15.22
	50 Diethylphthalate	149	16.163	16.163	(1.063)	693141	4.79457	4.795
	49 Fluorene	166	16.317	16.309	(1.073)	711273	4.11778	4.118
	51 4-Chlorophenyl-phenylether	204	16.302	16.294	(1.072)	334832	4.51585	4.516
	52 4-Nitroaniline	138	16.402	16.394	(1.079)	209851	5.41428	5.414
	53 4,6-Dinitro-2-methylphenol	198	16.494	16.494	(0.904)	271953	11.1773	11.18
	54 N-Nitrosodiphenylamine	169	16.556	16.548	(0.907)	421465	4.47720	4.477
$	55 2,4,6-Tribromophenol	330	16.849	16.841	(1.108)	107503	6.75265	6.753
	56 4-Bromophenyl-phenylether	248	17.312	17.304	(0.948)	160938	5.07093	5.071
	57 Hexachlorobenzene	284	17.636	17.621	(0.966)	149414	4.46174	4.462
	58 Pentachlorophenol	266	17.992	17.977	(0.986)	323689	13.4966	13.50
*	59 Phenanthrene-d10	188	18.255	18.240	(1.000)	693082	4.00000	
	60 Phenanthrene	178	18.302	18.294	(1.003)	905697	4.57371	4.574
	61 Anthracene	178	18.395	18.387	(1.008)	702812	3.68386	3.684
	62 Carbazole	167	18.727	18.712	(1.026)	663382	3.90816	3.908
	63 Di-n-butylphthalate	149	19.524	19.509	(1.070)	1110956	5.16343	5.163
	64 Fluoranthene	202	20.731	20.677	(0.890)	825318	10.6107	10.61
	65 Pyrene	202	21.134	21.103	(0.907)	937552	11.7538	11.75
$	66 Terphenyl-d14	244	21.397	21.389	(0.918)	392060	7.26050	7.261
	67 Butylbenzylphthalate	149	22.318	22.310	(0.958)	267864	7.66498	7.665
	68 Benzo(a)anthracene	228	23.278	23.263	(0.999)	355814	5.04747	5.047
*	69 Chrysene-d12	240	23.301	23.294	(1.000)	191184	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.240	23.216	(0.997)	4083	0.20216	0.2022
	71 Chrysene	228	23.348	23.340	(1.002)	348581	5.46370	5.464
	72 bis(2-Ethylhexyl)phthalate	149	23.340	23.332	(0.960)	425621	7.77979	7.780
*	134 Di-n-octylphthalate-d4	153	24.323	24.316	(1.000)	415588	4.00000	
	73 Di-n-octylphthalate	149	24.339	24.331	(1.001)	480541	4.49800	4.498
	74 Benzo(b)fluoranthene	252	25.175	25.159	(0.970)	334377	6.50287	6.503
	75 Benzo(k)fluoranthene	252	25.214	25.198	(0.972)	269065	5.27864	5.279
	76 Benzo(a)pyrene	252	25.833	25.818	(0.996)	232118	5.27890	5.279
*	77 Perylene-d12	264	25.949	25.934	(1.000)	145513	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	28.634	28.610	(1.103)	204904	4.28150	4.281
	79 Dibenzo(a,h)anthracene	278	28.642	28.626	(1.104)	161046	3.99280	3.993
	80 Benzo(g,h,i)perylene	276	29.426	29.403	(1.134)	155147	3.93359	3.934
	90 N-Nitrosodimethylamine	74	4.712	4.697	(1.000)	399888	8.91204	8.912
	91 Aniline	93	Compound Not Detected.					
	93 Benzidine	184	Compound Not Detected.					
	103 Pyridine	79	Compound Not Detected.					
	105 1-methylnaphthalene	142	13.238	13.230	(1.144)	589666	4.23953	4.240
	111 Azobenzene (1,2-DP-Hydrazine)	77	16.625	16.625	(1.093)	680795	3.94357	3.944

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.175	25.159	(0.970)	577388	11.8233	11.82
120 2,3,4,6-Tetrachlorophenol	232	15.938	15.923	(1.048)	136914	3.16513	3.165

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1403172328.D
Lab Smp Id: BLB0424-MS1
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt14.i\20230317.b\ABN.m
Misc Info:

Calibration Date: 17-MAR-2023
Calibration Time: 23:31
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	231017	115509	462034	208566	-9.72
27 Naphthalene-d8	843789	421895	1687578	823985	-2.35
42 Acenaphthene-d10	432455	216228	864910	419326	-3.04
59 Phenanthrene-d10	793780	396890	1587560	693082	-12.69
69 Chrysene-d12	411057	205529	822114	191184	-53.49 <-
134 Di-n-octylphthala	799010	399505	1598020	415588	-47.99
77 Perylene-d12	254782	127391	509564	145513	-42.89

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.06	8.56	9.56	9.07	0.09
27 Naphthalene-d8	11.57	11.07	12.07	11.57	0.00
42 Acenaphthene-d10	15.20	14.70	15.70	15.20	0.05
59 Phenanthrene-d10	18.24	17.74	18.74	18.26	0.09
69 Chrysene-d12	23.29	22.79	23.79	23.30	0.03
134 Di-n-octylphthala	24.32	23.82	24.82	24.32	0.03
77 Perylene-d12	25.93	25.43	26.43	25.95	0.06

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

REVIEW SUMMARY FOR FILE - NT1403172328.D

Lab ID: BLB0424-MS1
nt14.i, ABN.m, 18-MAR-2023 06:42

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
1.023	1.015	0.0080	4-Chloroaniline

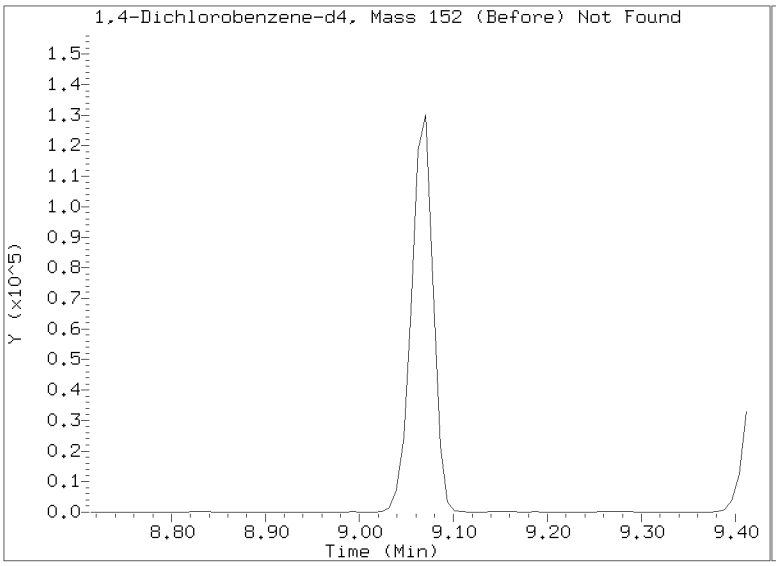
RRT check based on Ccal File: NT1403172316.D

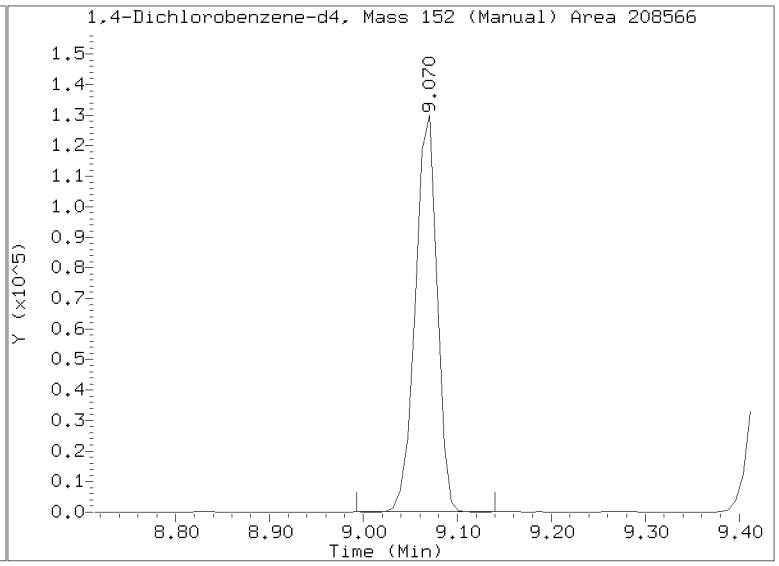
On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

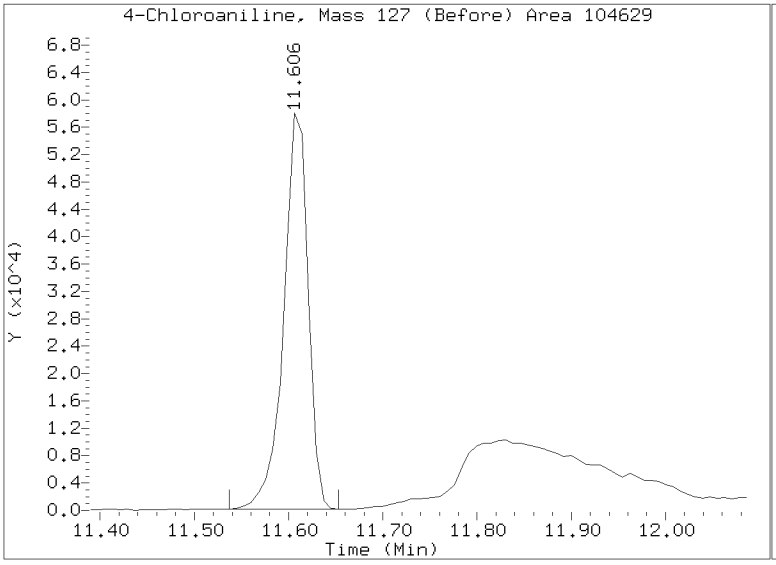
* Only compounds listed in the work order have been verified by the analyst *

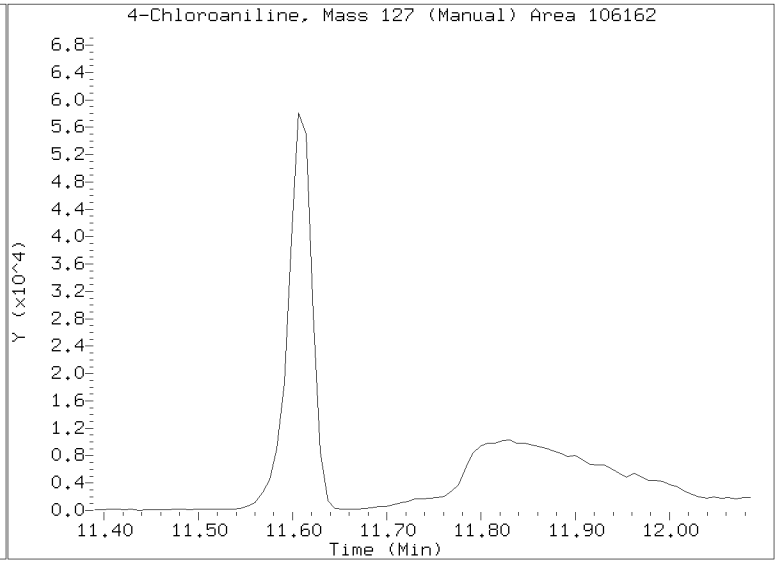
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230317.b/NT1403172328.D
Injection Date: 18-MAR-2023 06:42
Lab ID:BLB0424-MS1 Client ID:
Report Date: 03/22/2023 09:50









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Page 1

Date : 18-MAR-2023 07:18

Client ID:

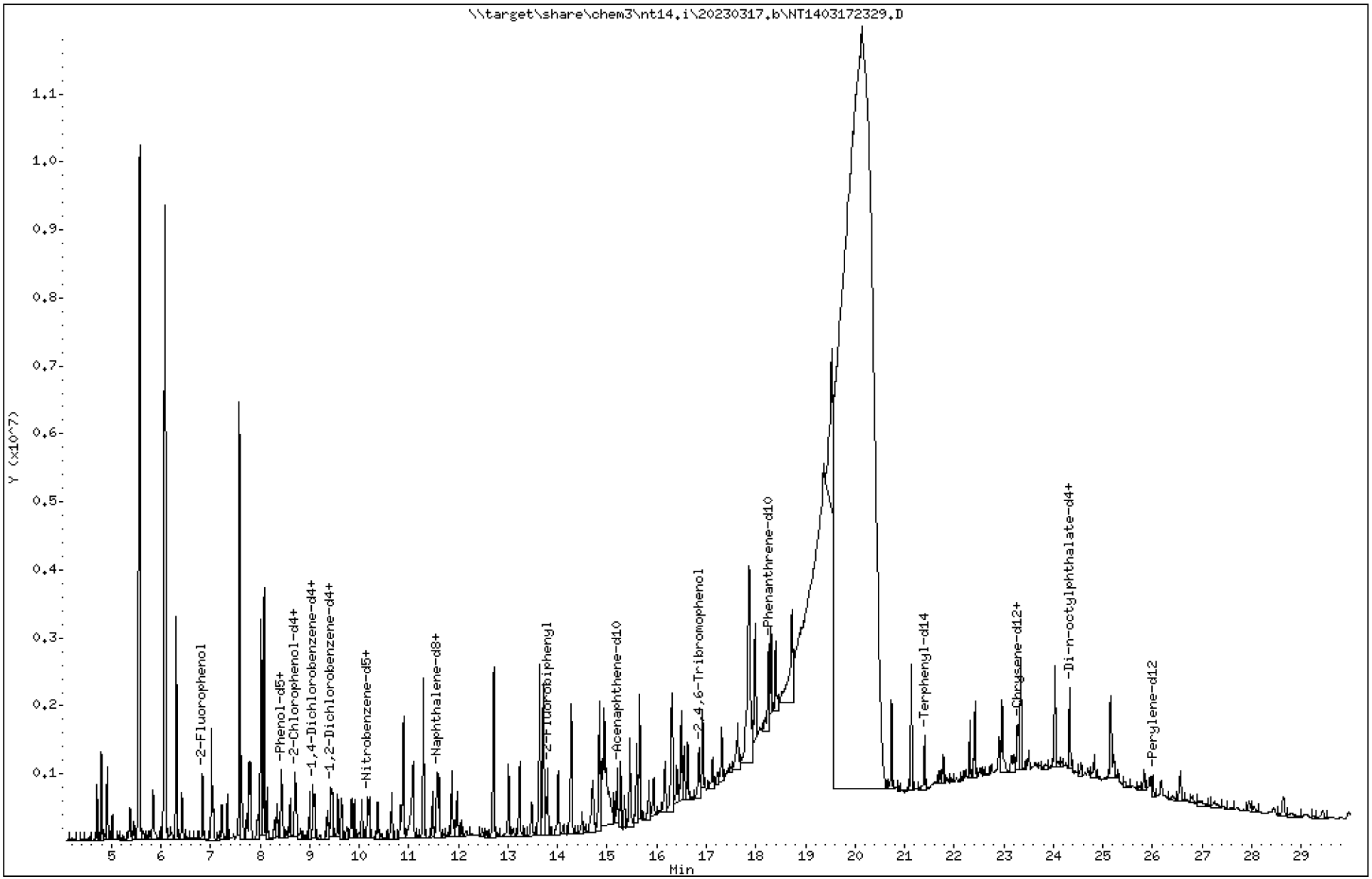
Instrument: nt14.i

Sample Info: BLB0424-MSD1

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



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Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

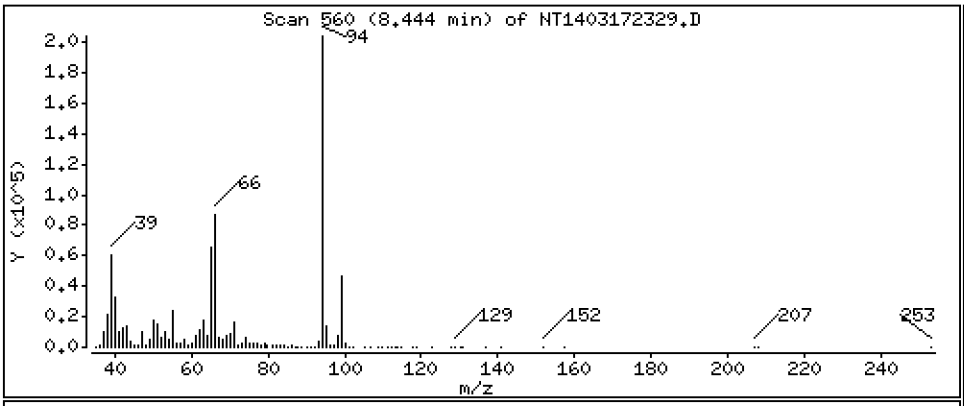
Operator: JGR

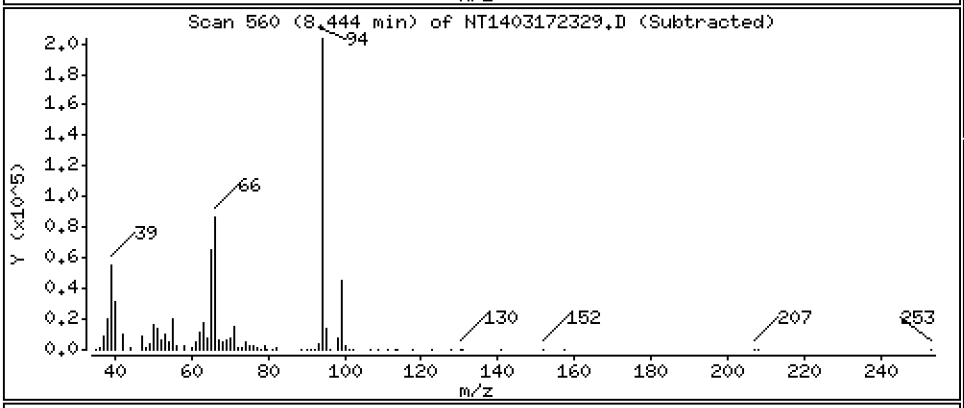
Column phase: ZB-5msi

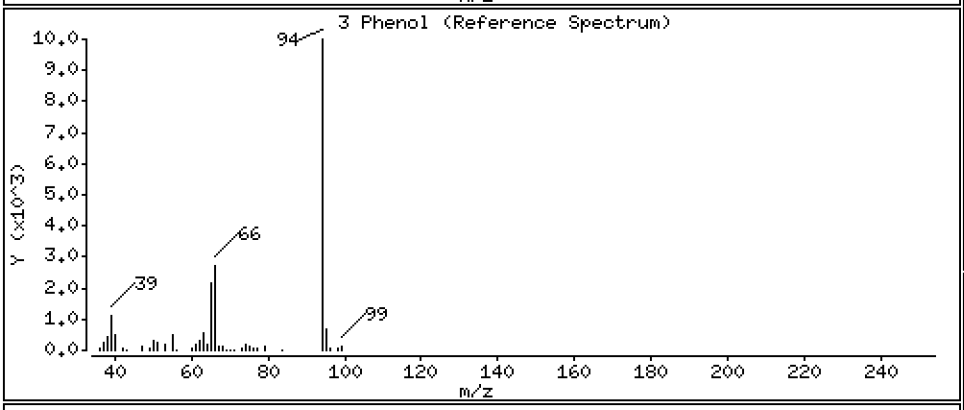
Column diameter: 0.25

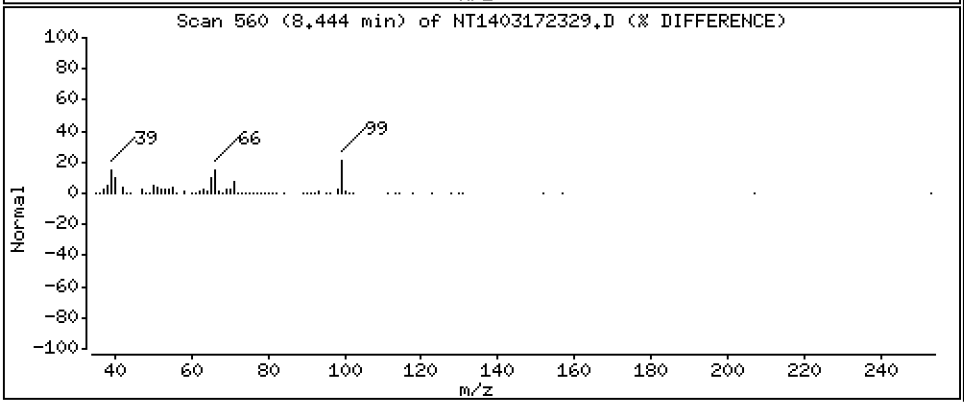
3 Phenol

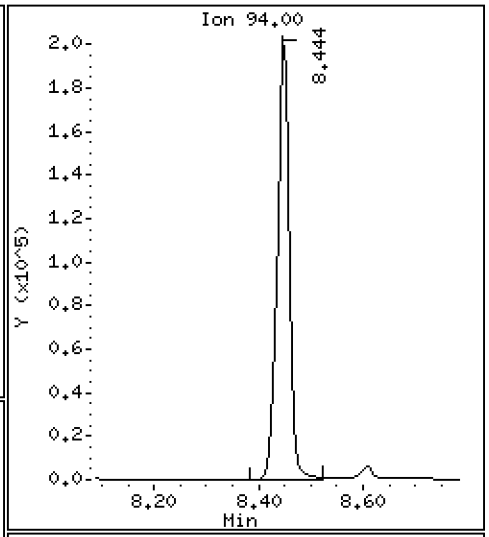
Concentration: 3.353 ug/mL

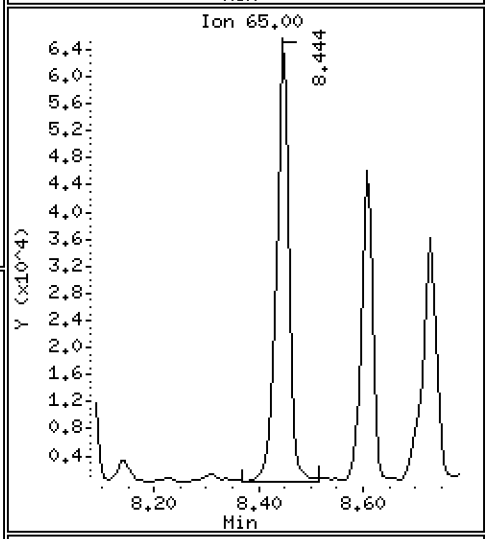


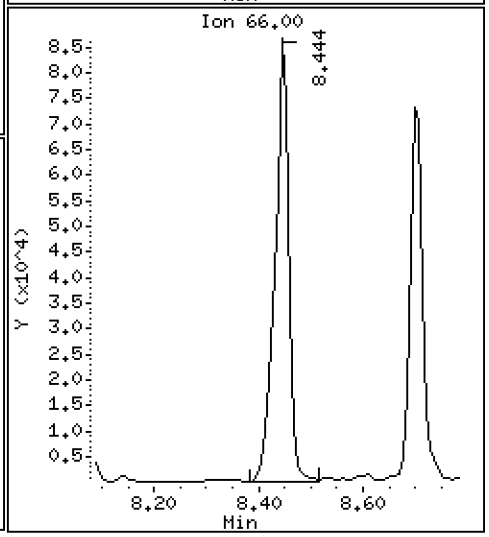












Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172329.D

Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

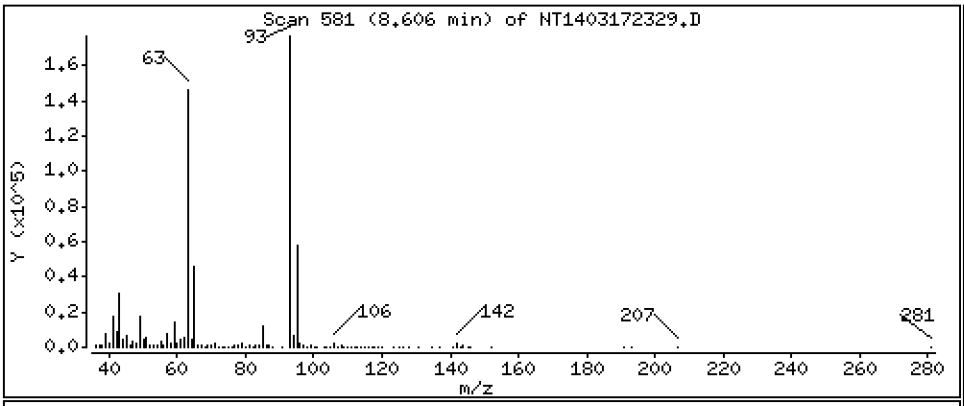
Operator: JGR

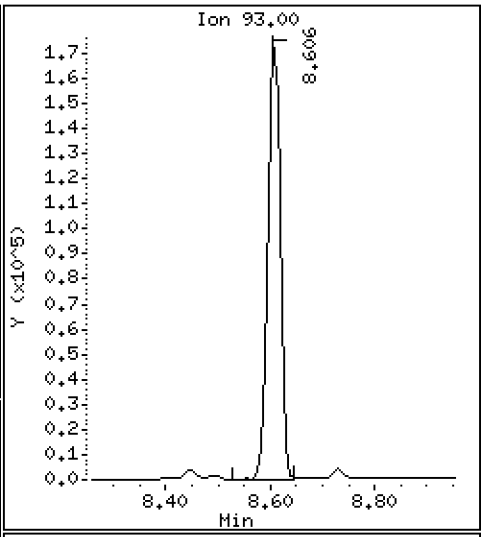
Column phase: ZB-5msi

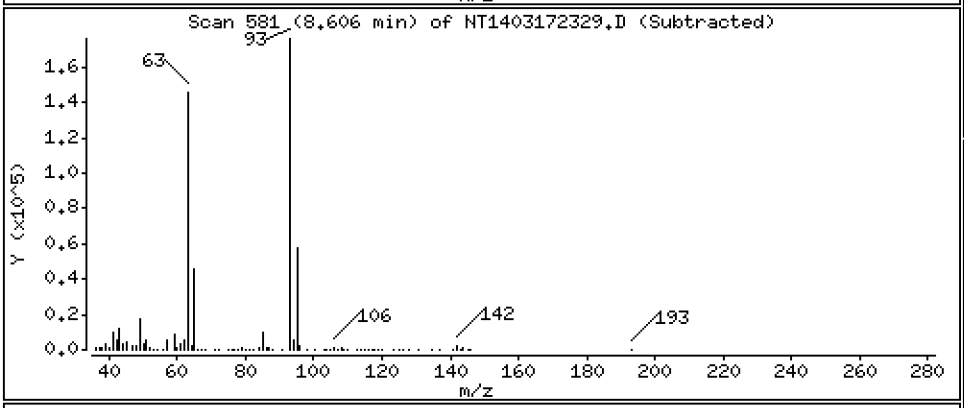
Column diameter: 0.25

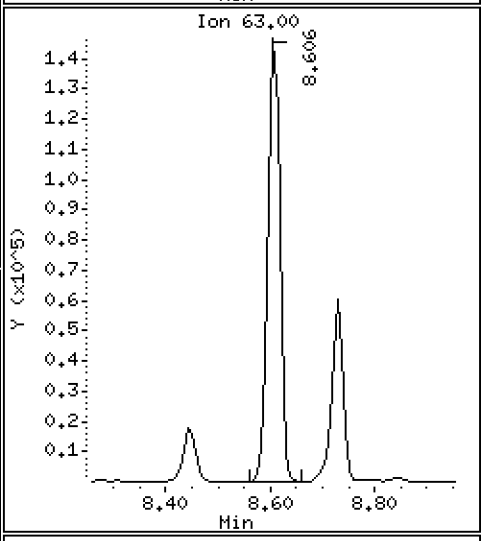
4 Bis(2-Chloroethyl)ether

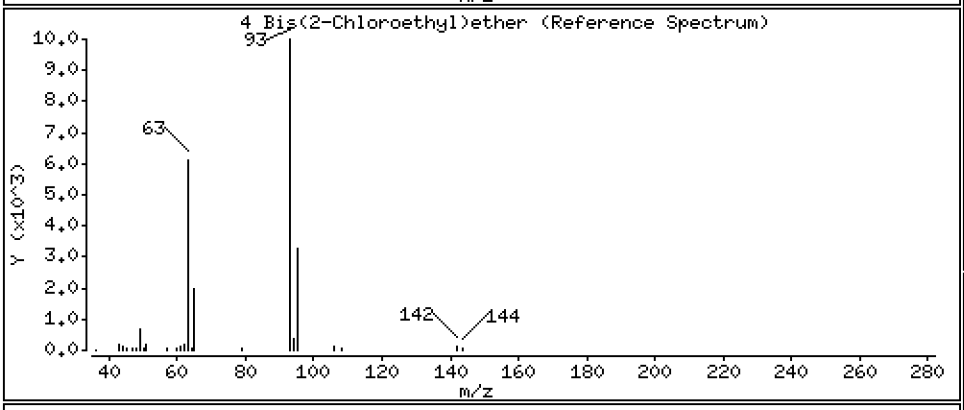
Concentration: 3.886 ug/mL

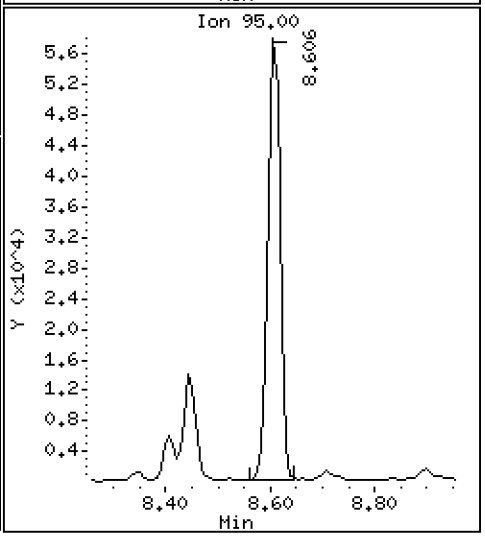


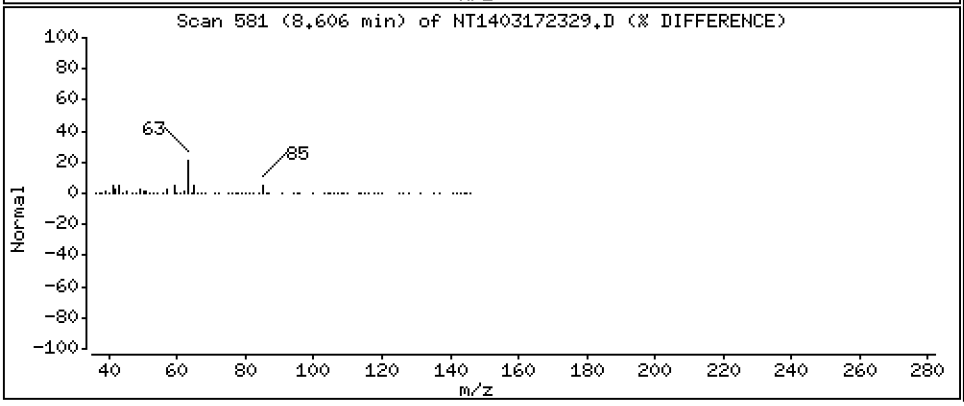












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Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

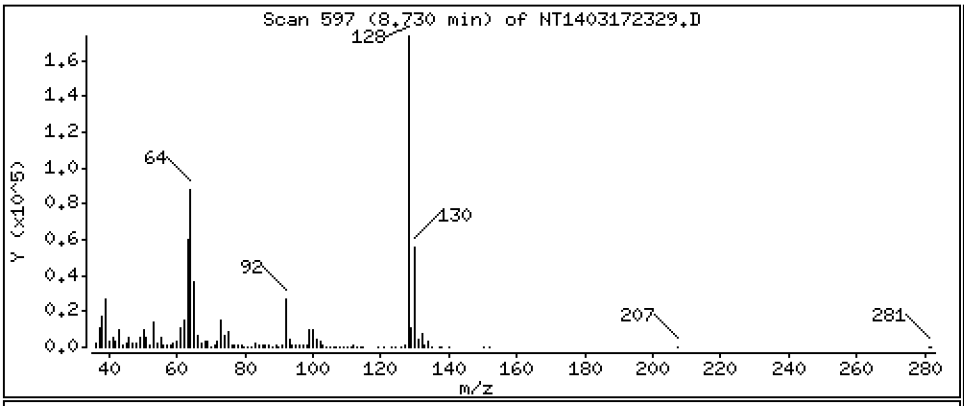
Operator: JGR

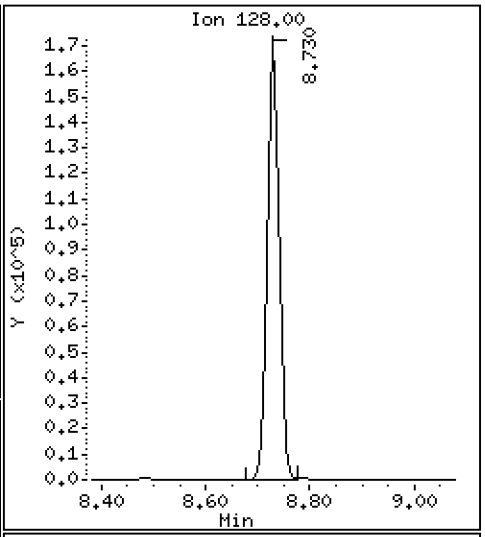
Column phase: ZB-5msi

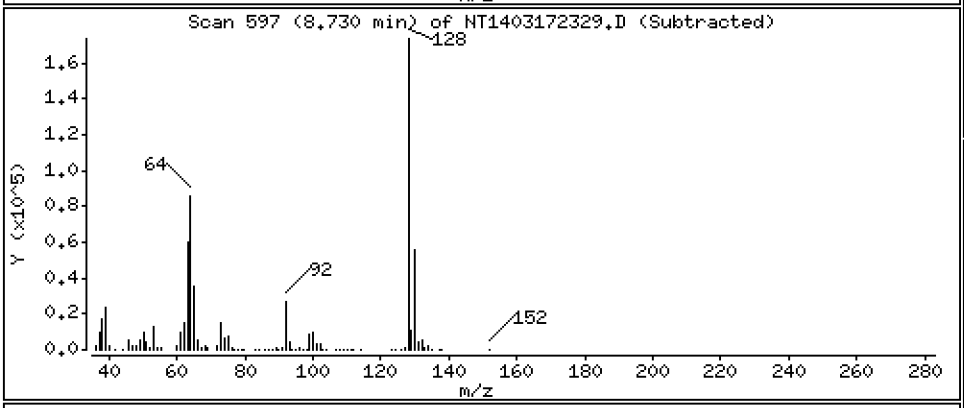
Column diameter: 0.25

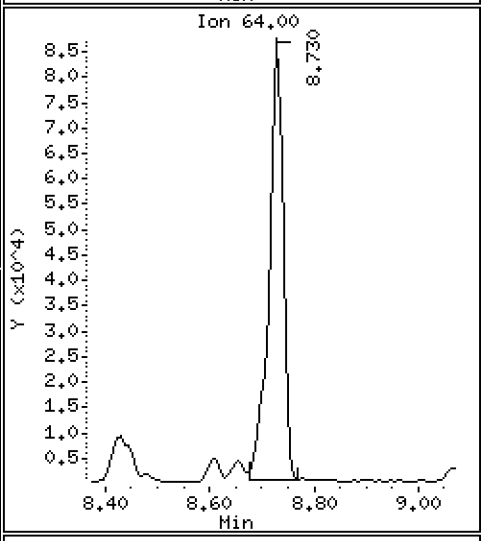
6 2-Chlorophenol

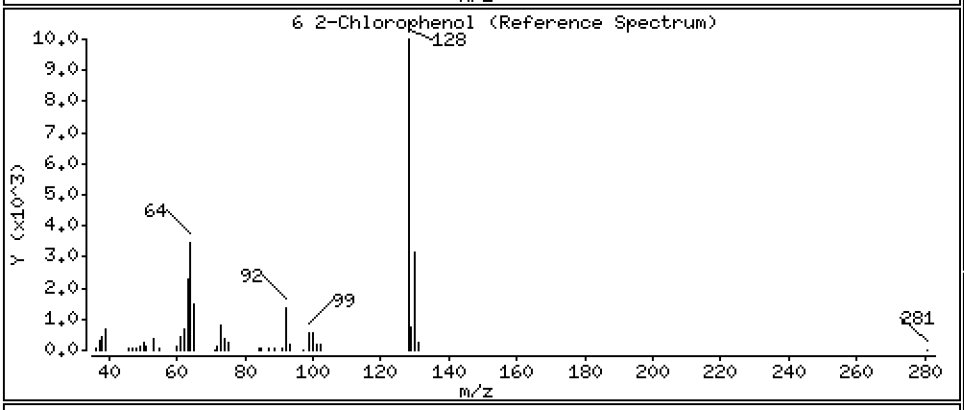
Concentration: 3.465 ug/mL

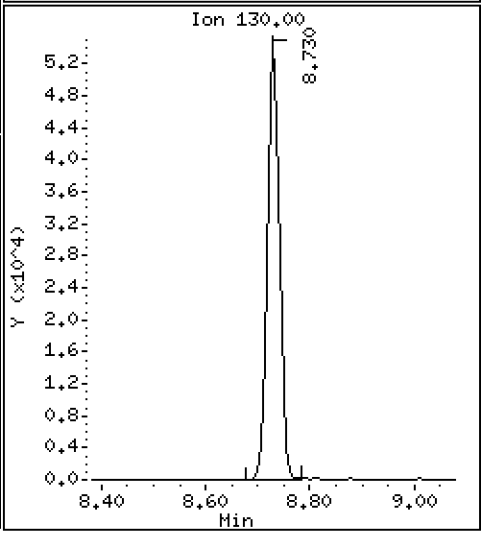


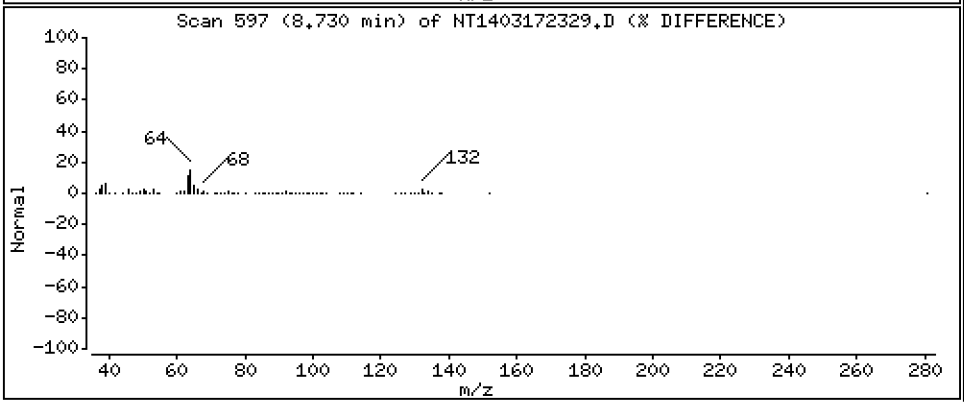












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Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

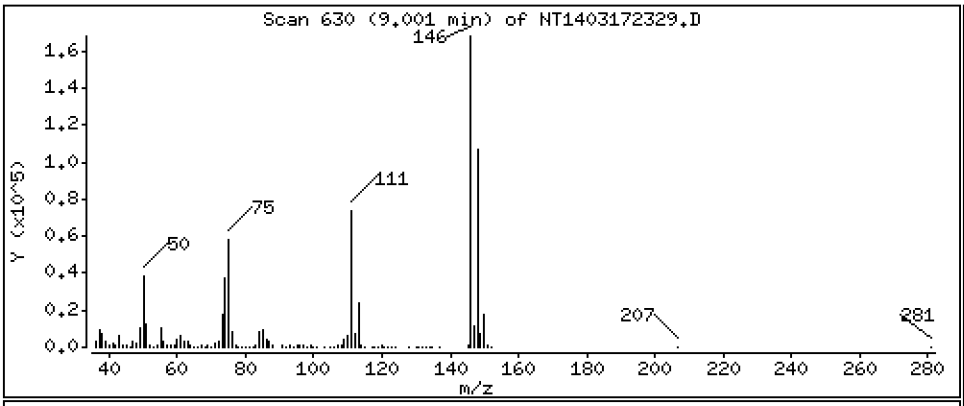
Operator: JGR

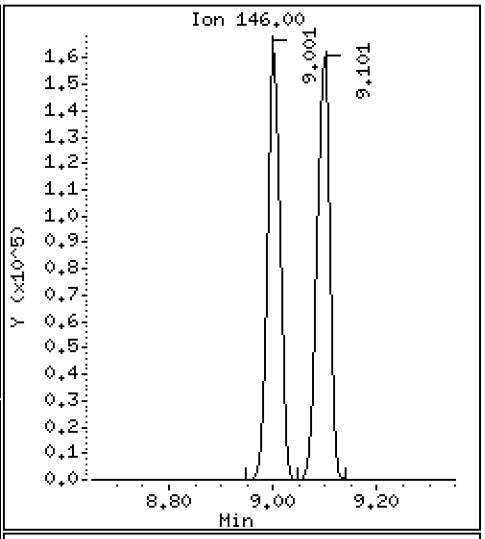
Column phase: ZB-5msi

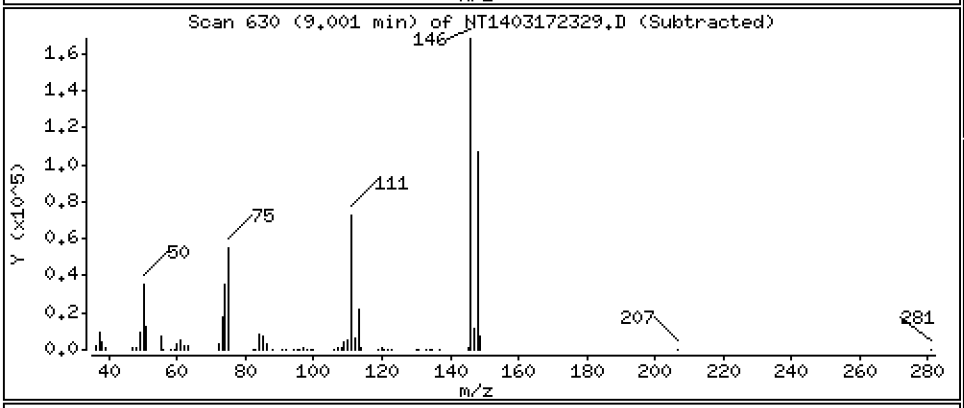
Column diameter: 0.25

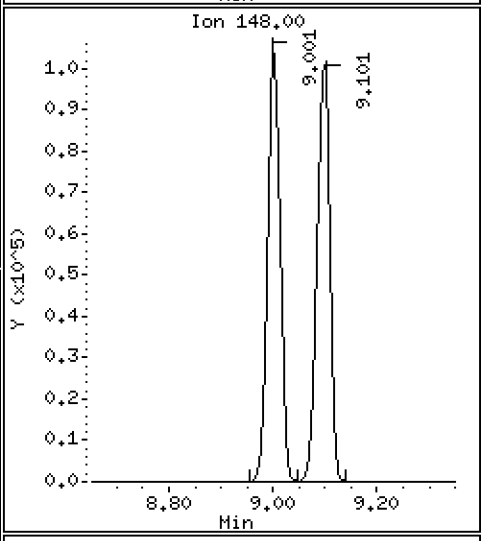
7 1,3-Dichlorobenzene

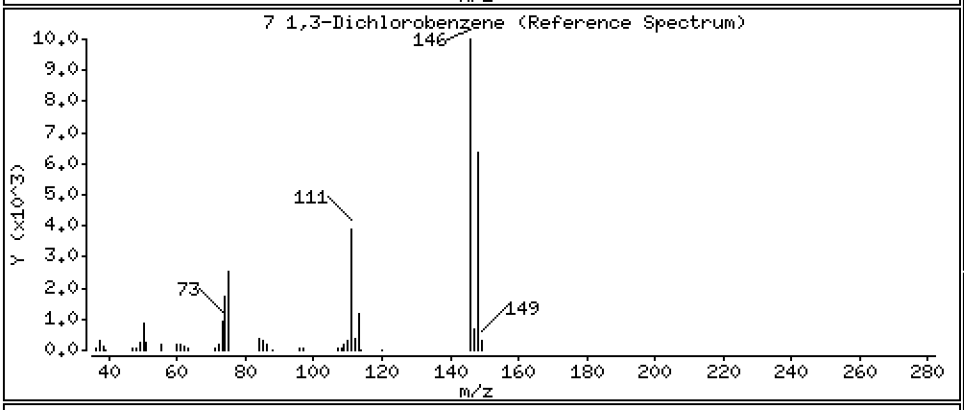
Concentration: 3.436 ug/mL

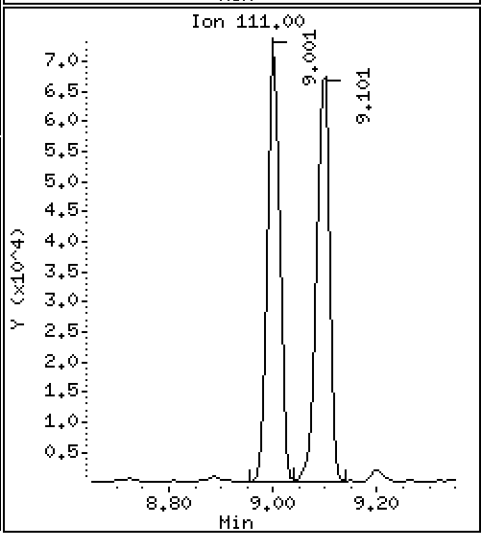


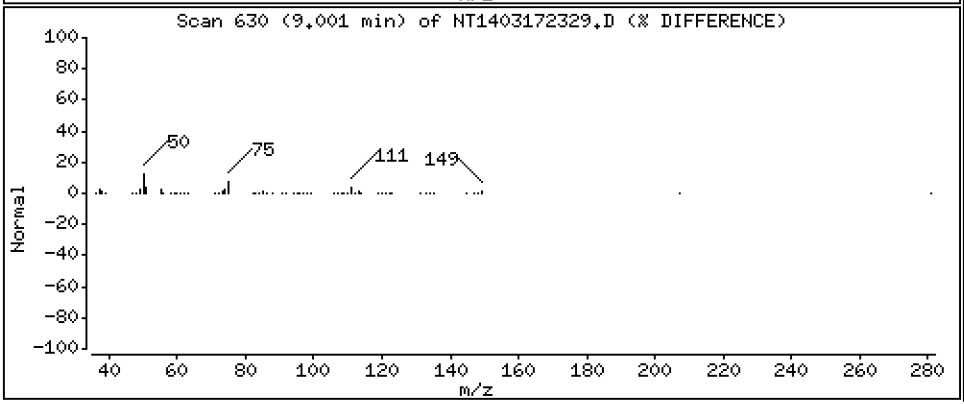












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Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

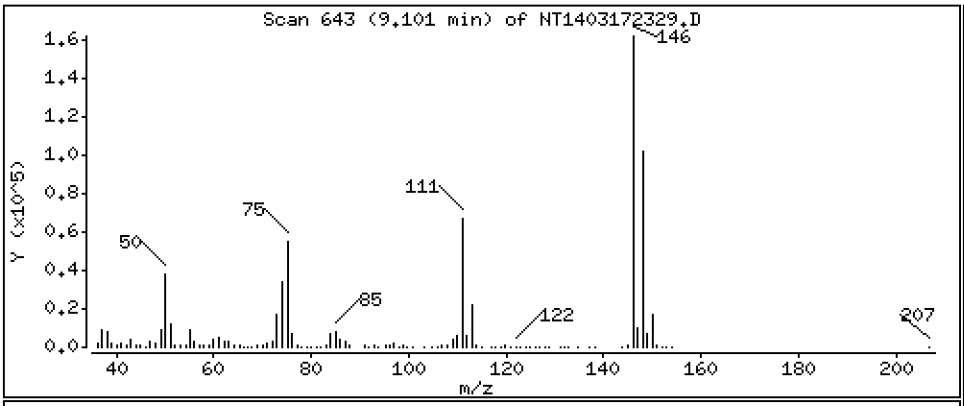
Operator: JGR

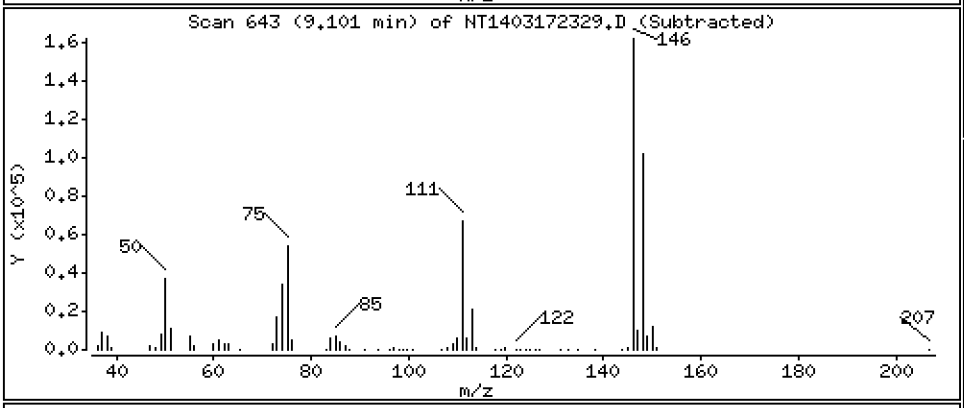
Column phase: ZB-5msi

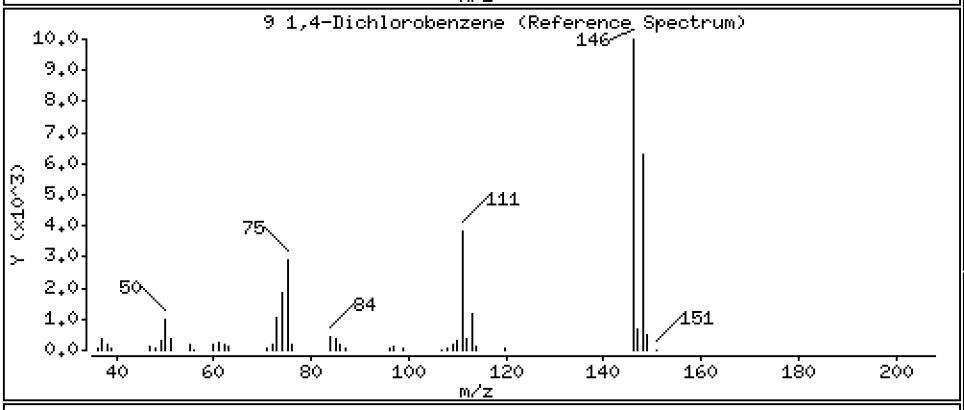
Column diameter: 0.25

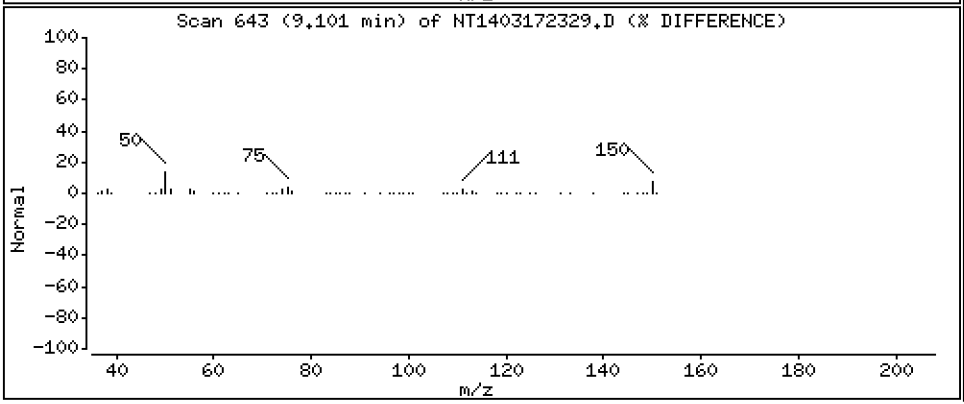
9 1,4-Dichlorobenzene

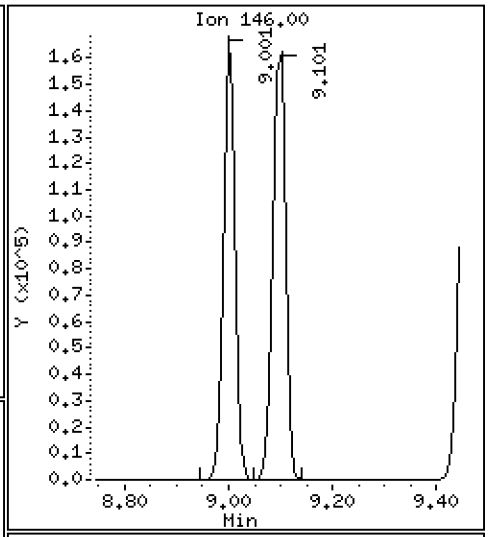
Concentration: 3.540 ug/mL

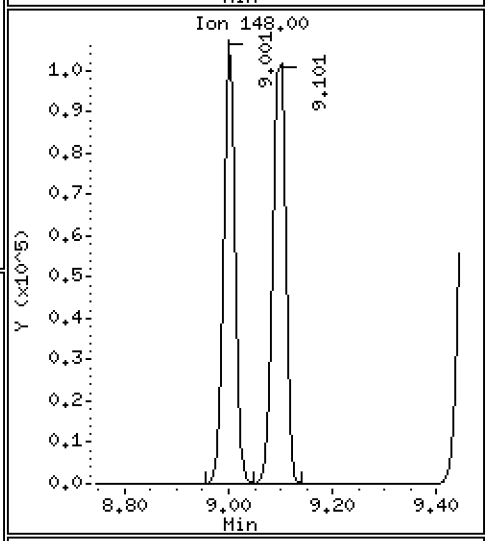


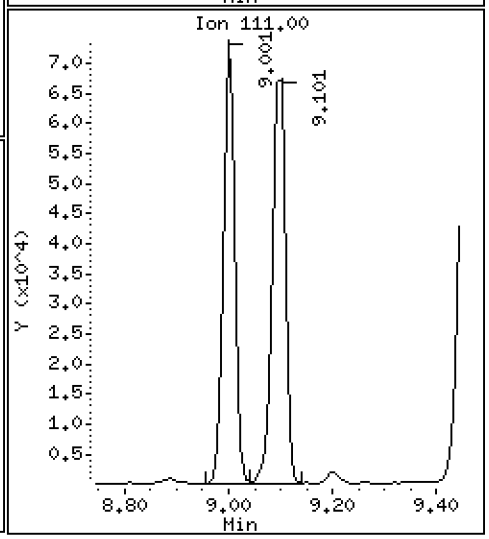












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Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

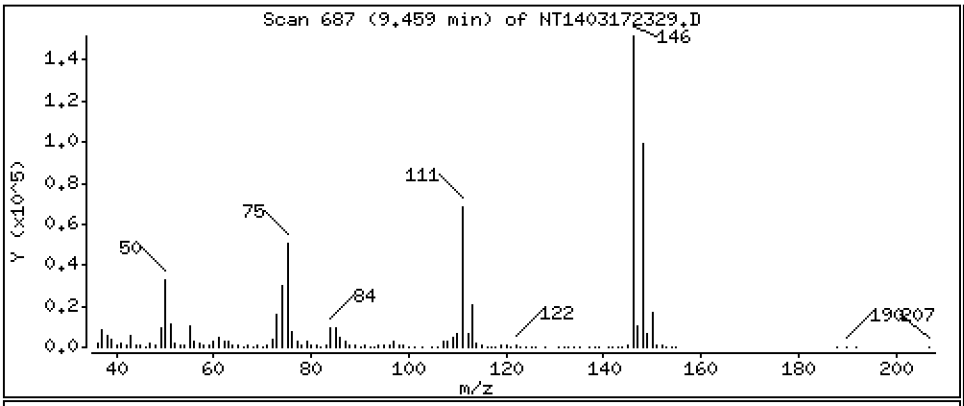
Operator: JGR

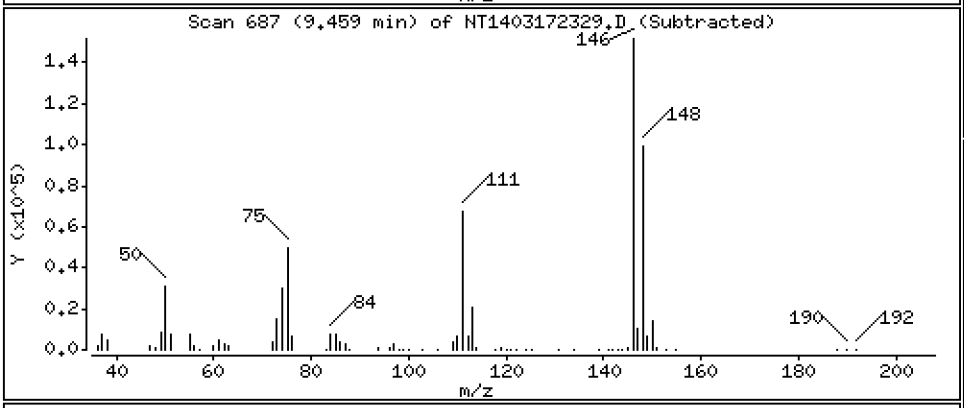
Column phase: ZB-5msi

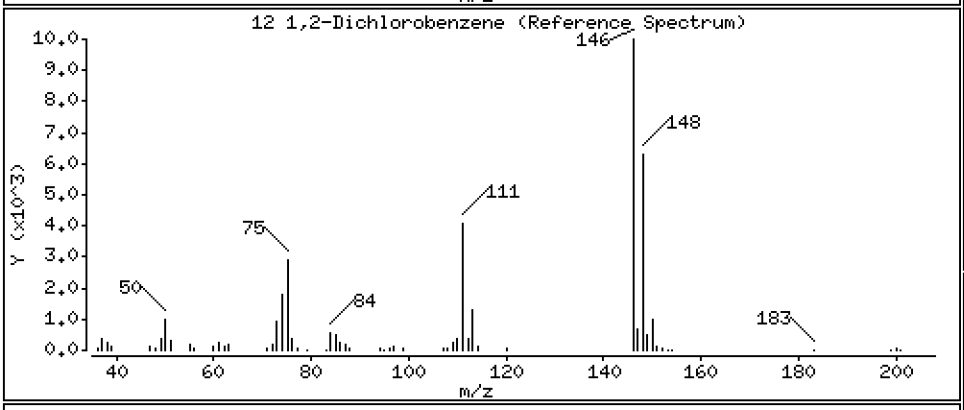
Column diameter: 0.25

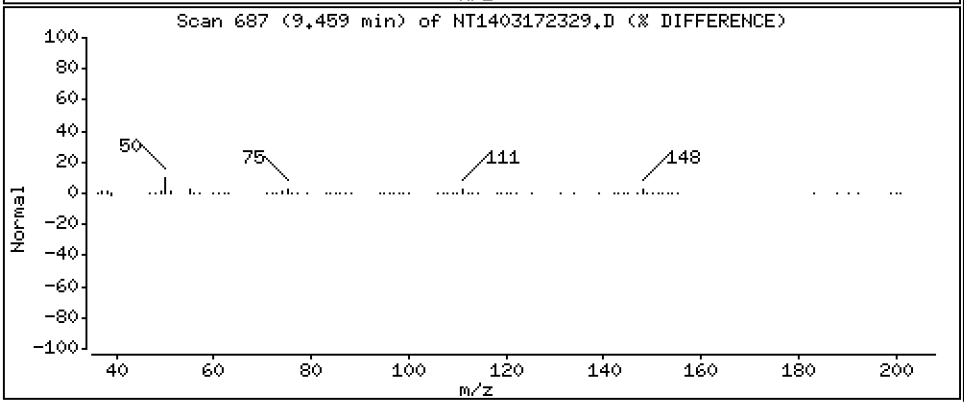
12 1,2-Dichlorobenzene

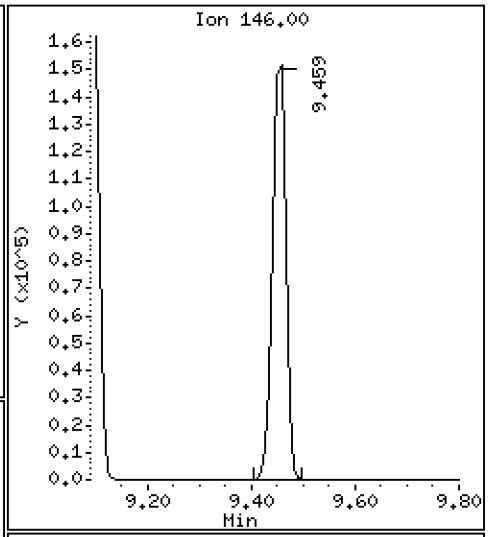
Concentration: 3.527 ug/mL

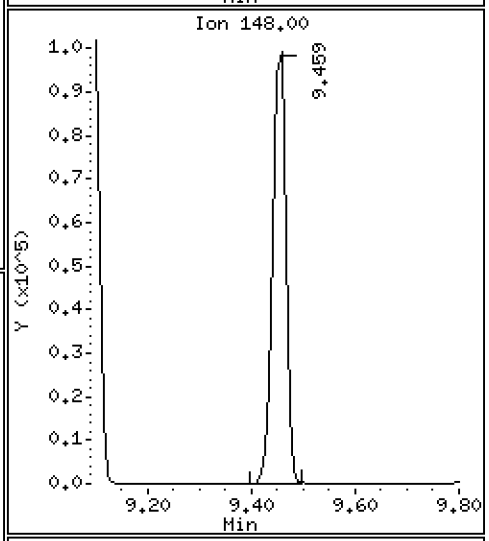


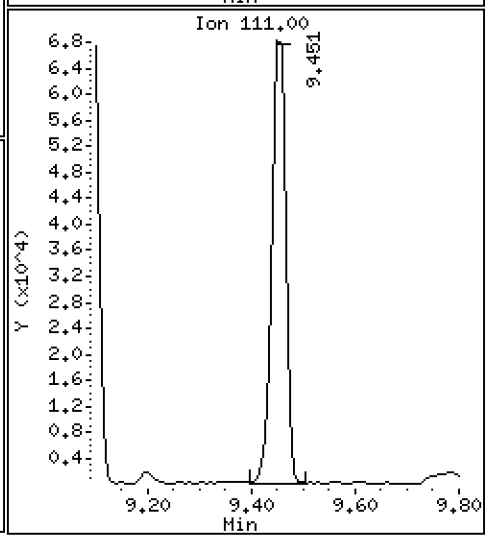












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Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

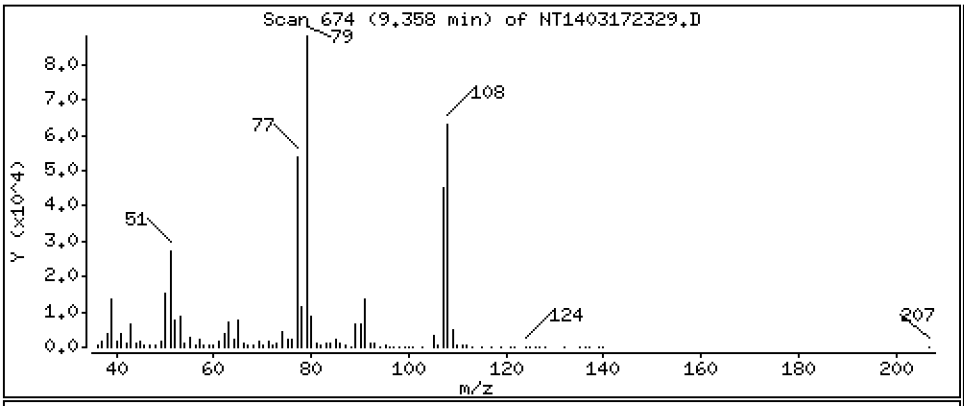
Operator: JGR

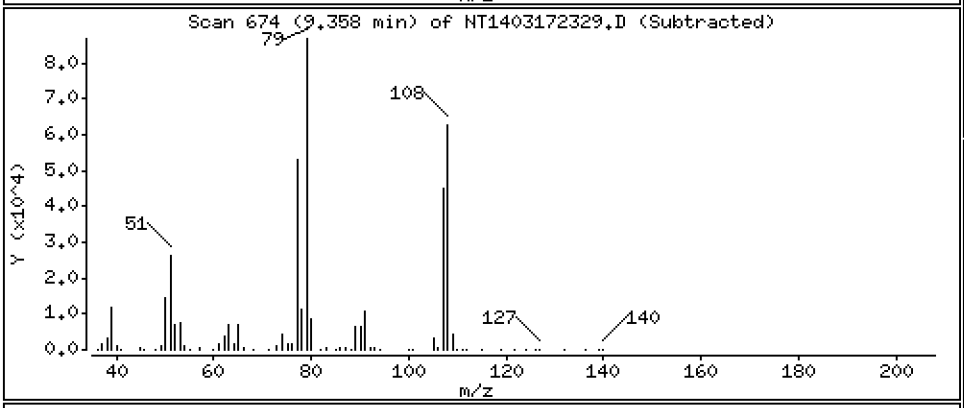
Column phase: ZB-5msi

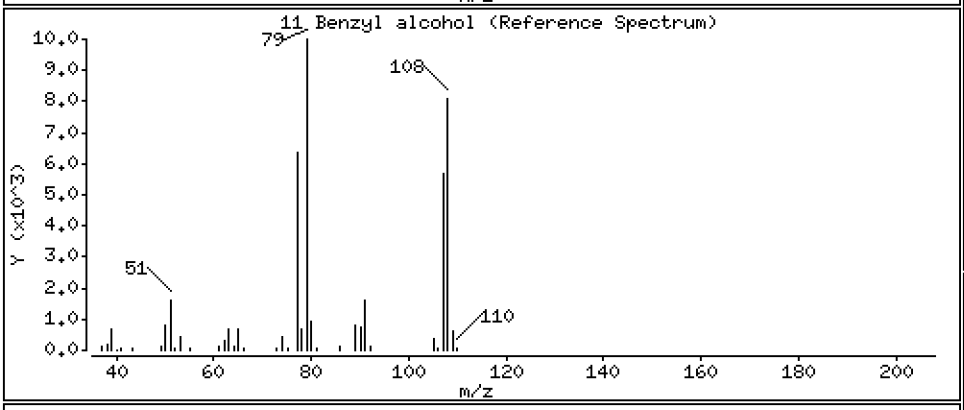
Column diameter: 0.25

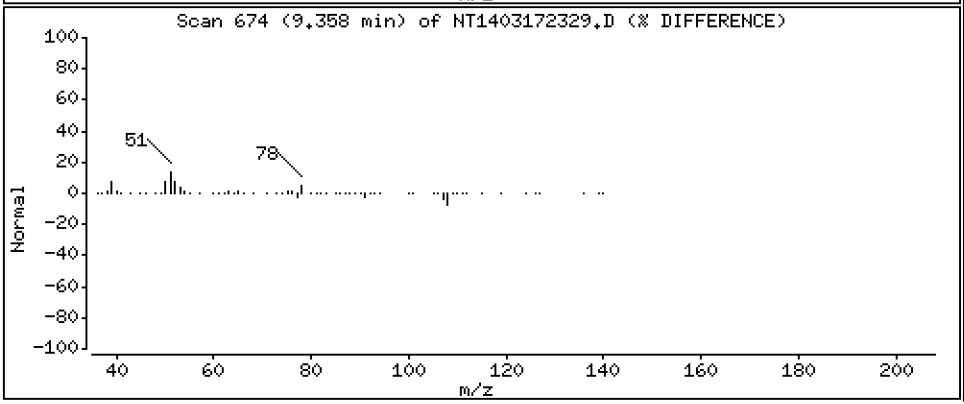
11 Benzyl alcohol

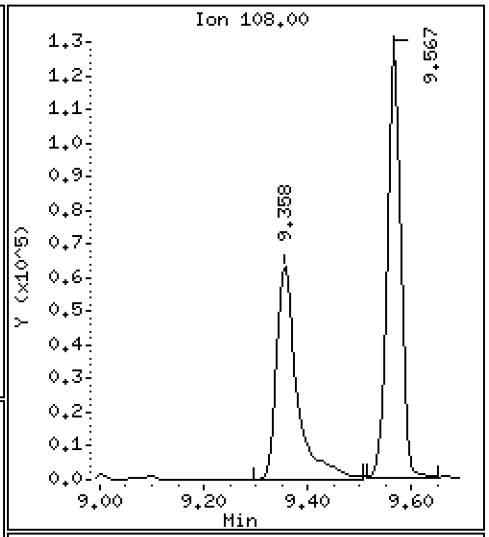
Concentration: 3.866 ug/mL

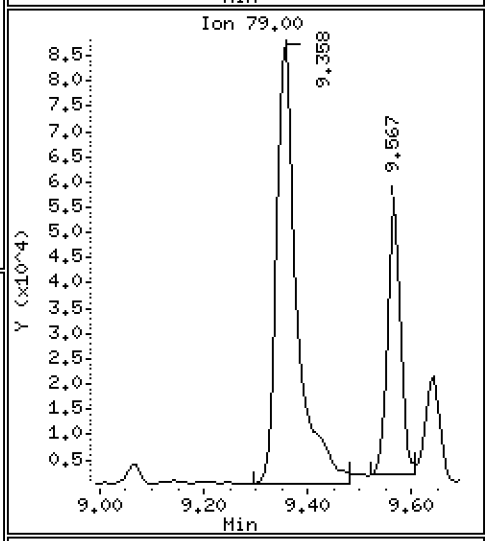


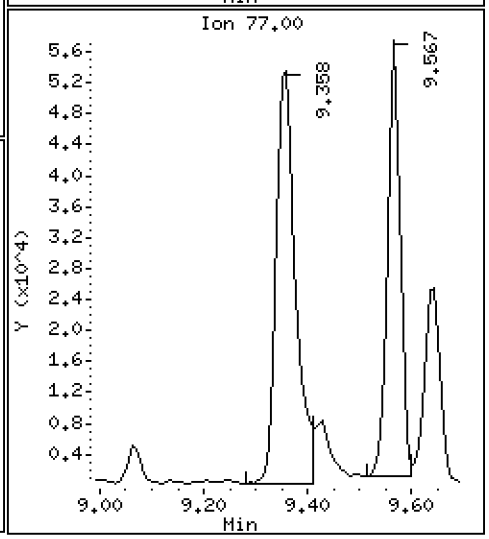












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Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

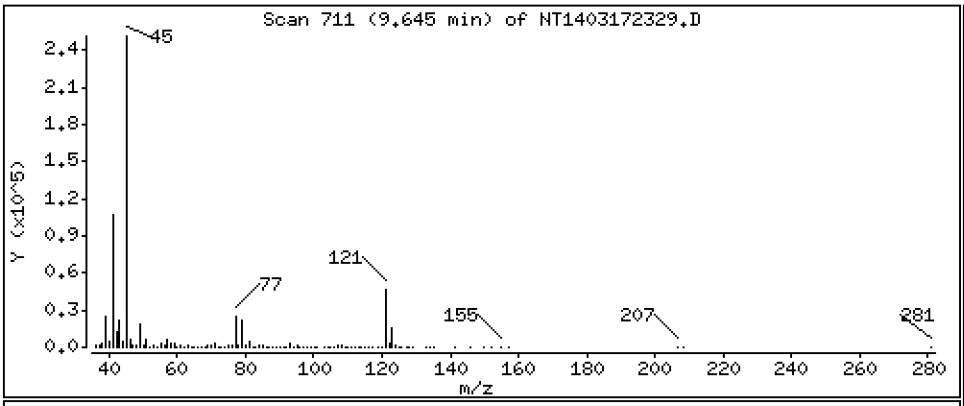
Operator: JGR

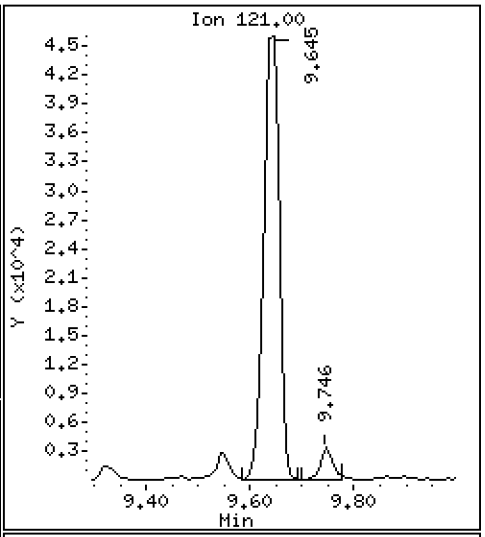
Column phase: ZB-5msi

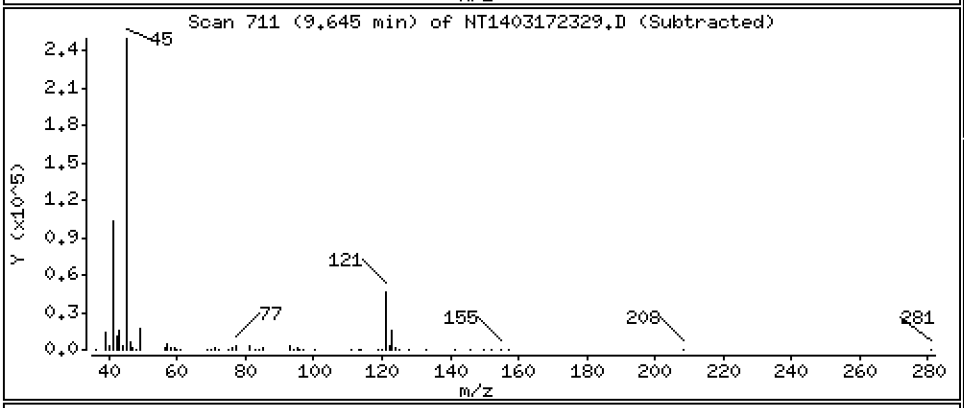
Column diameter: 0.25

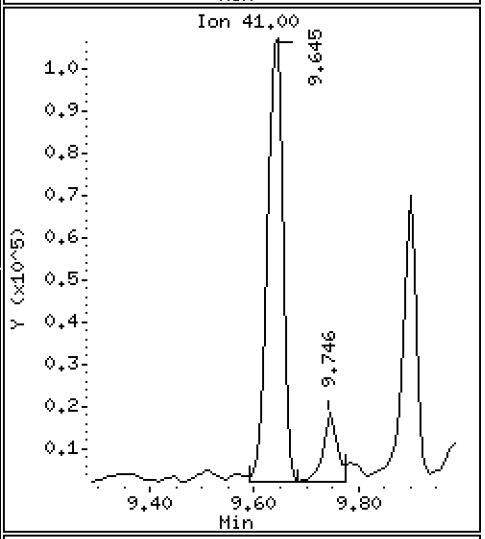
14 2,2'-oxybis(1-Chloropropane)

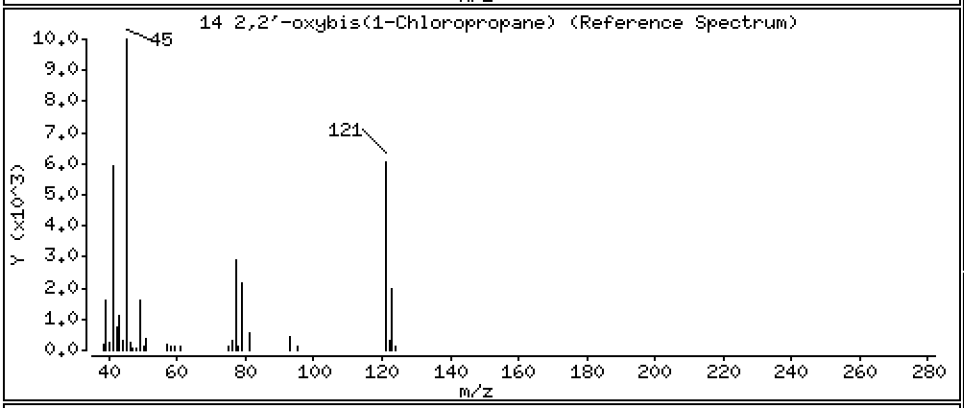
Concentration: 4.123 ug/mL

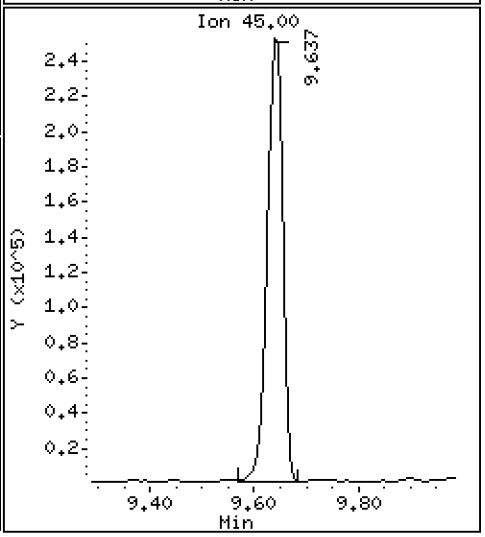


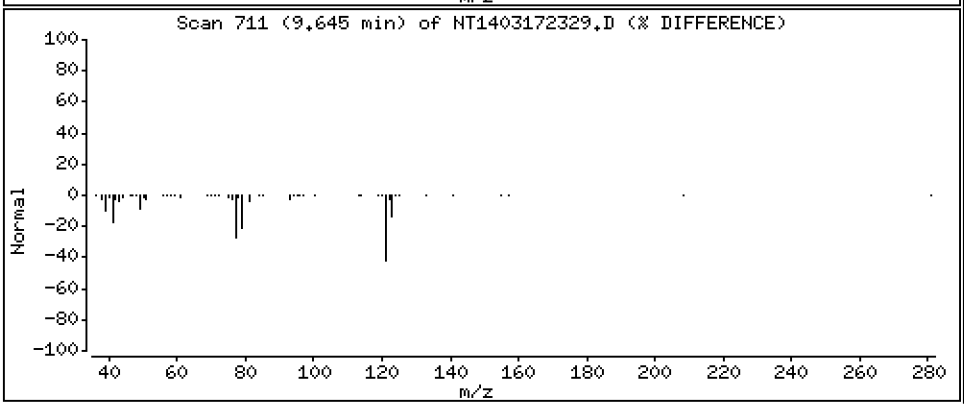












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Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

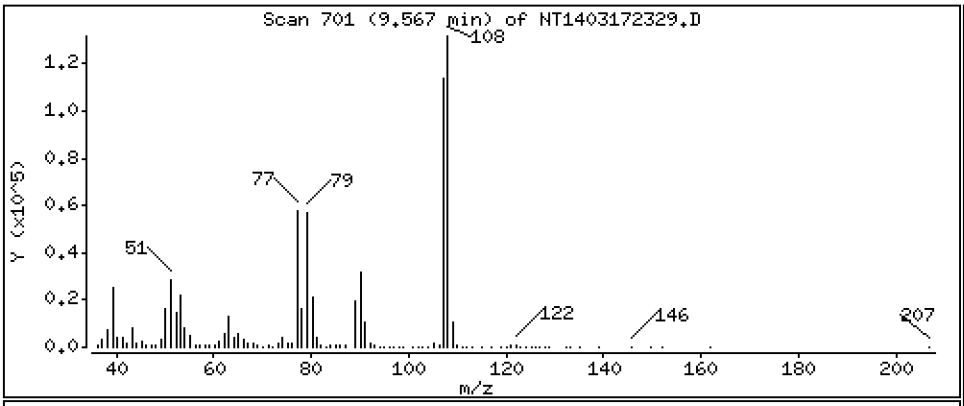
Operator: JGR

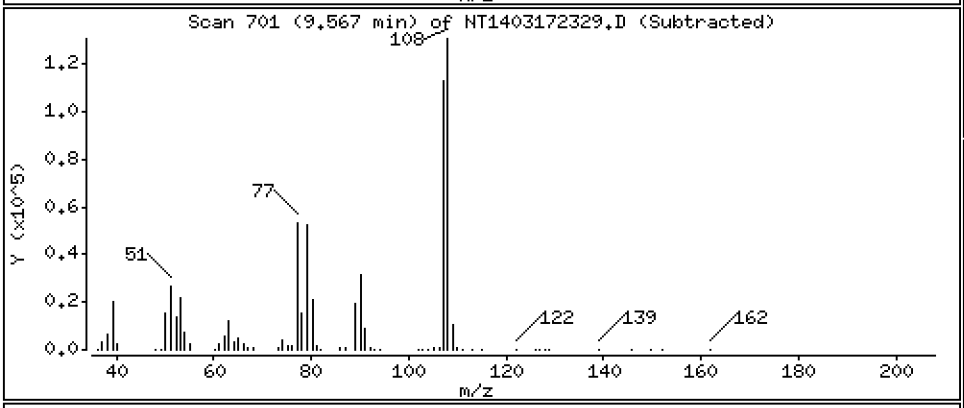
Column phase: ZB-5msi

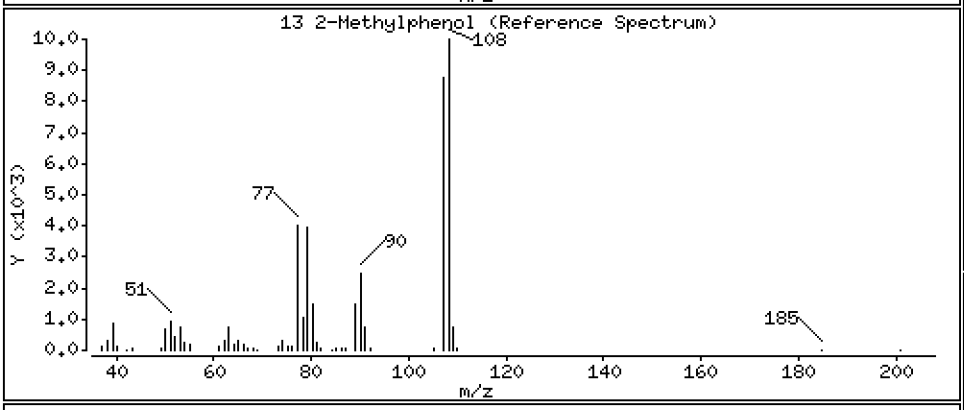
Column diameter: 0.25

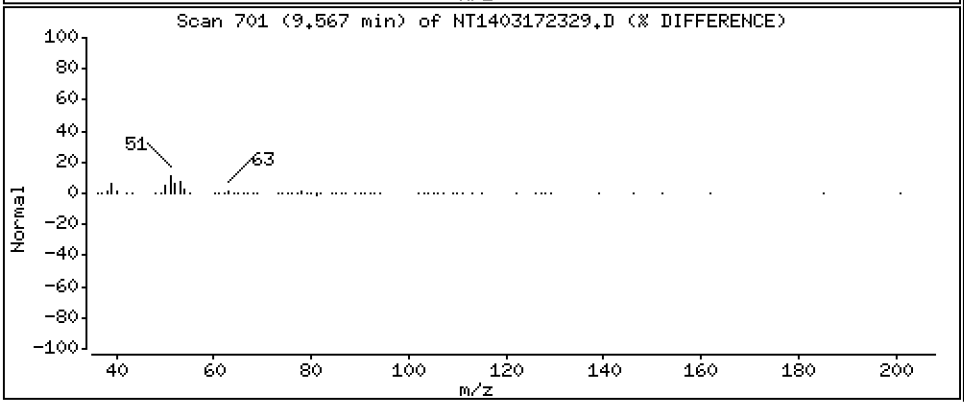
13 2-Methylphenol

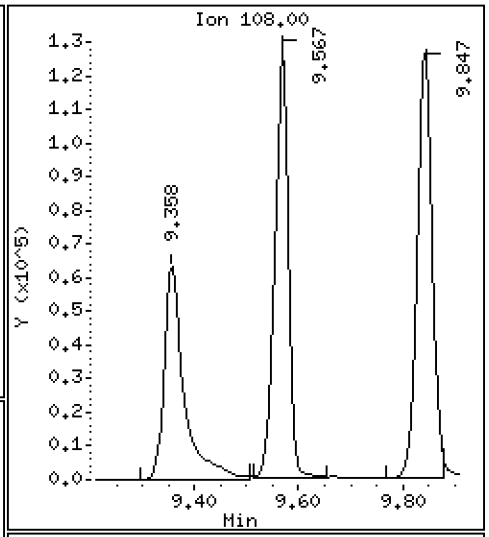
Concentration: 3.284 ug/mL

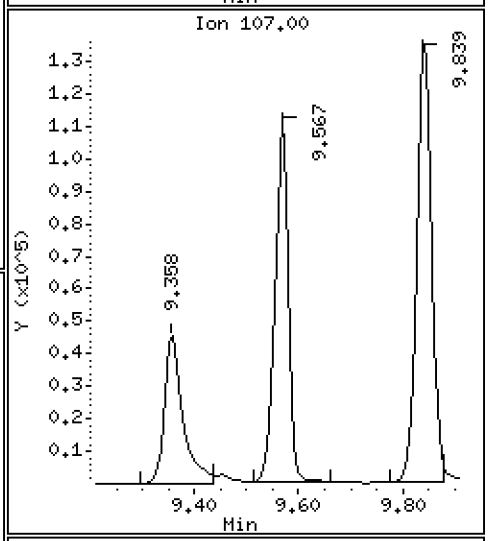


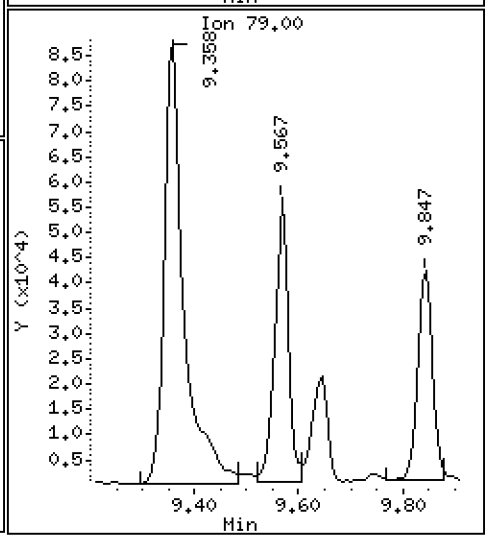












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Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

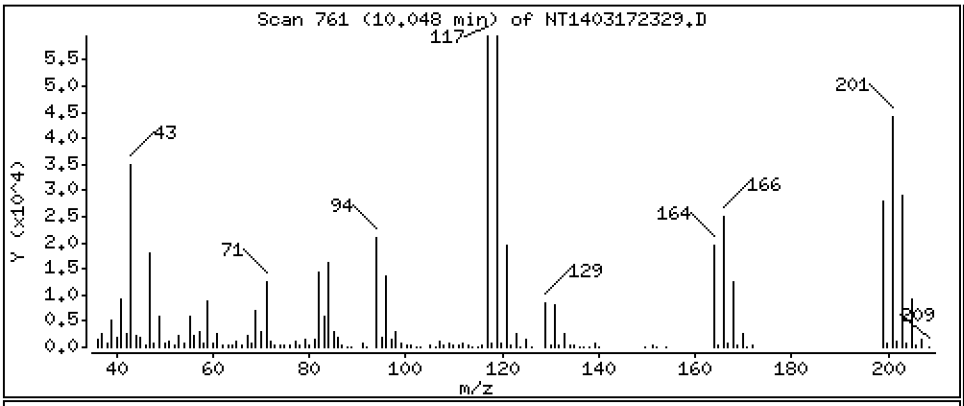
Operator: JGR

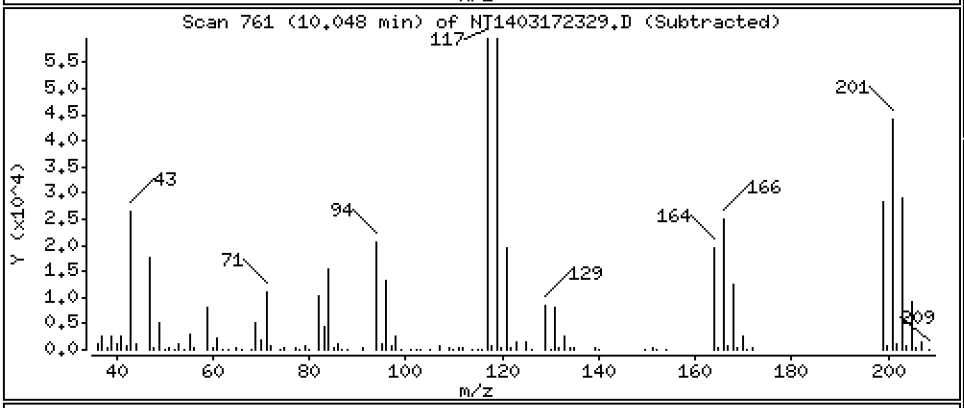
Column phase: ZB-5msi

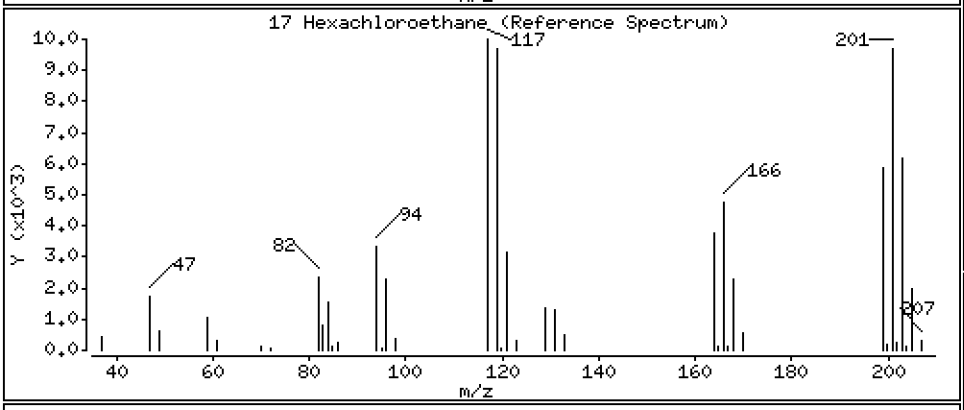
Column diameter: 0.25

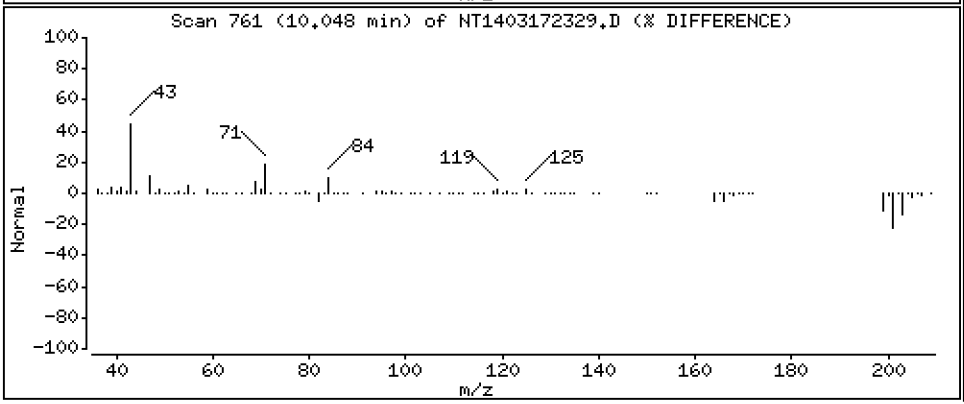
17 Hexachloroethane

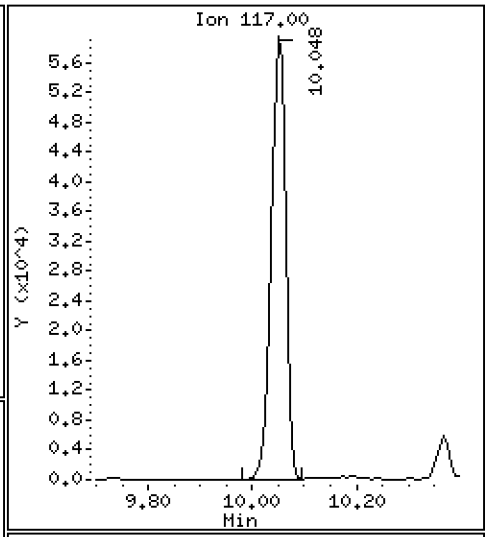
Concentration: 3.459 ug/mL

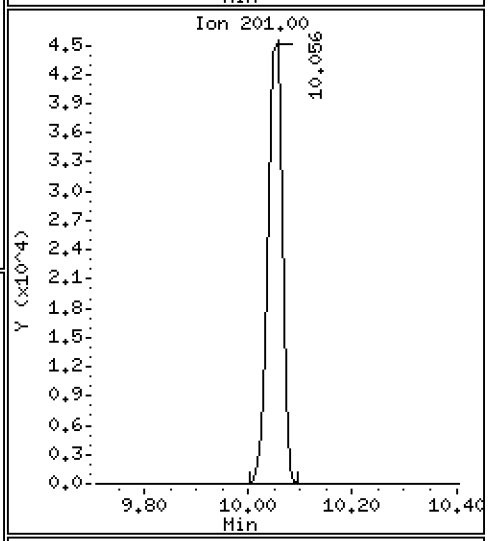


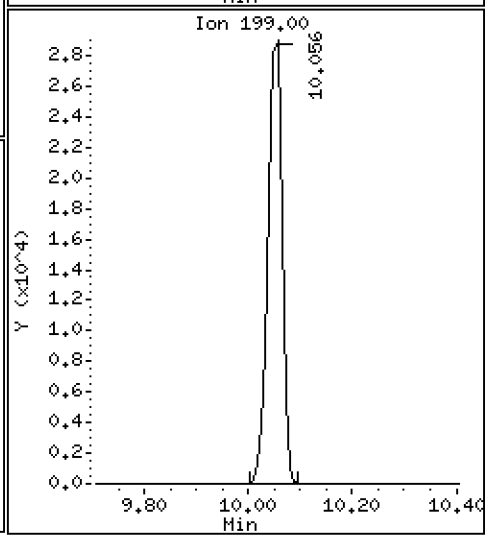












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Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

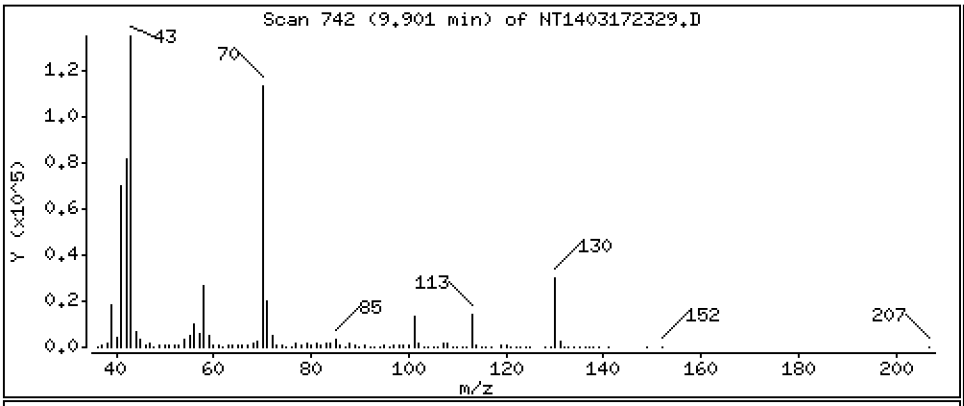
Operator: JGR

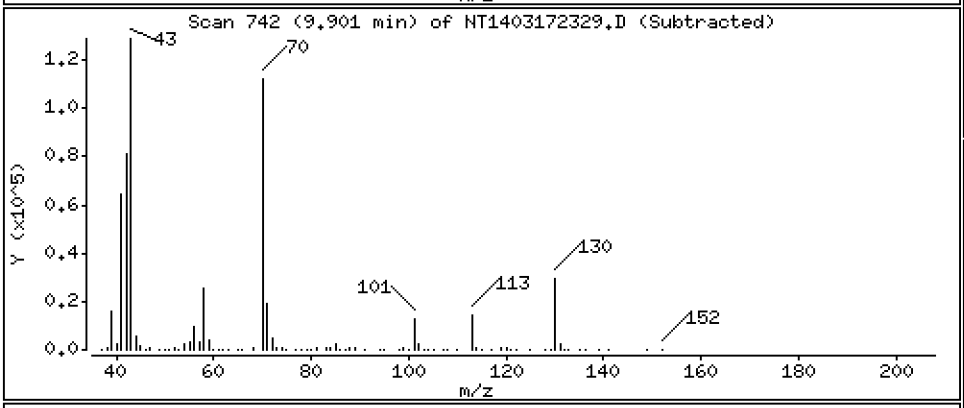
Column phase: ZB-5msi

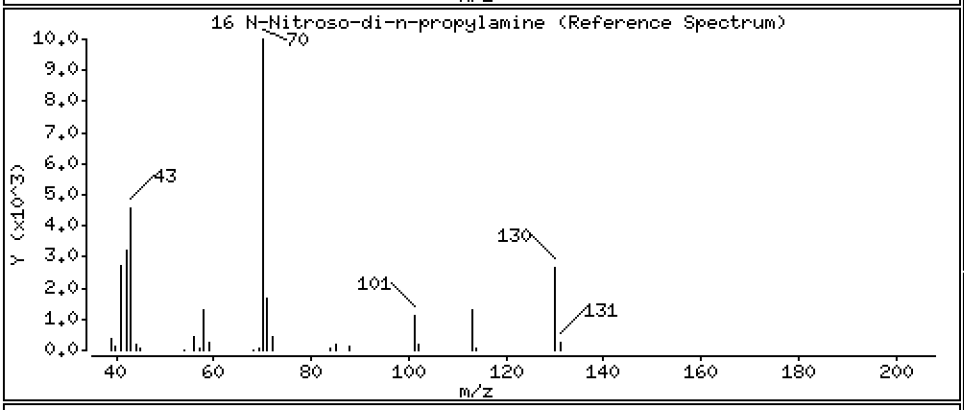
Column diameter: 0.25

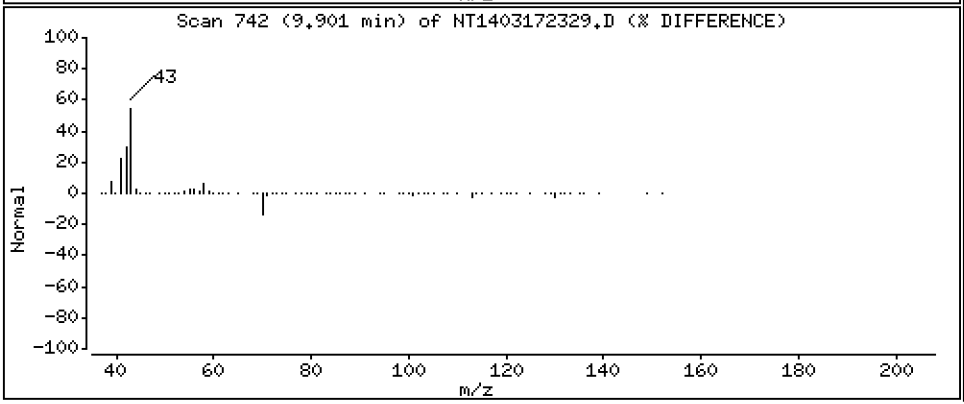
16 N-Nitroso-di-n-propylamine

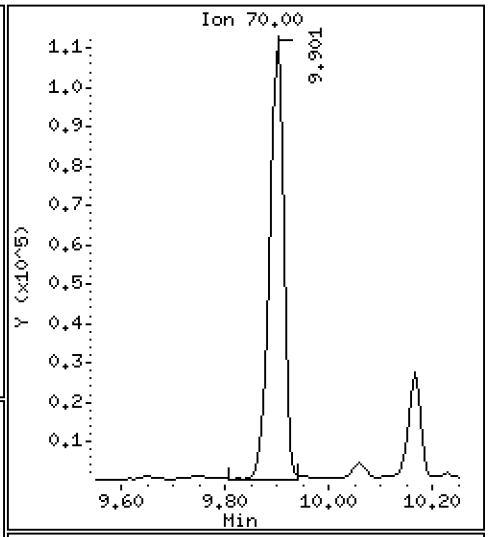
Concentration: 3.747 ug/mL

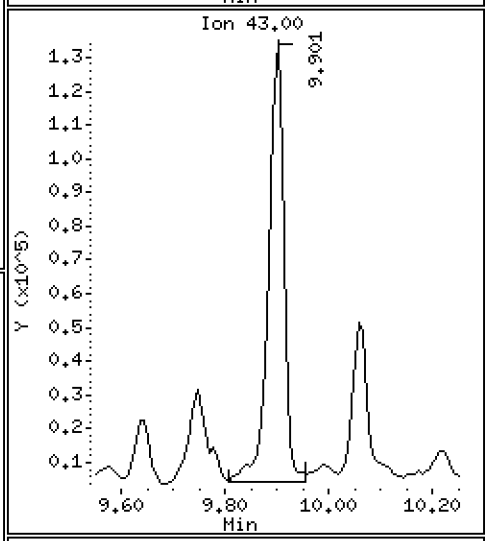


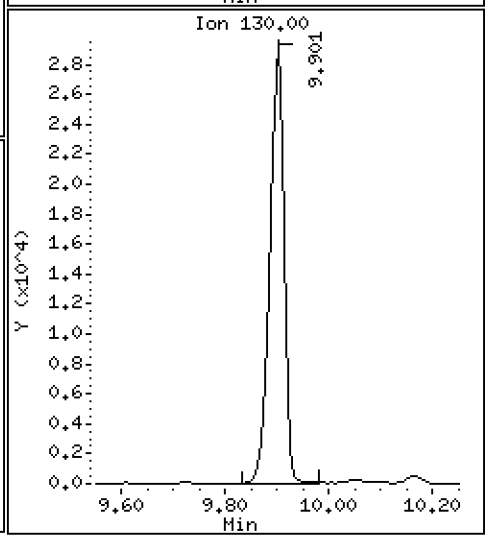












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Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

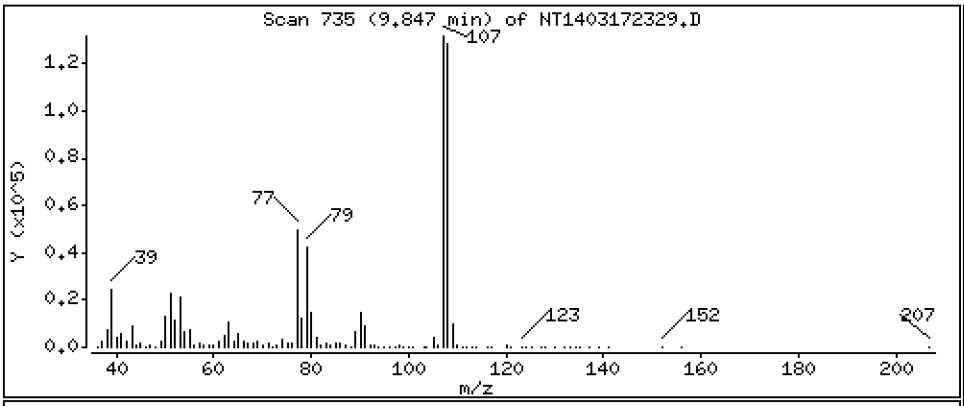
Operator: JGR

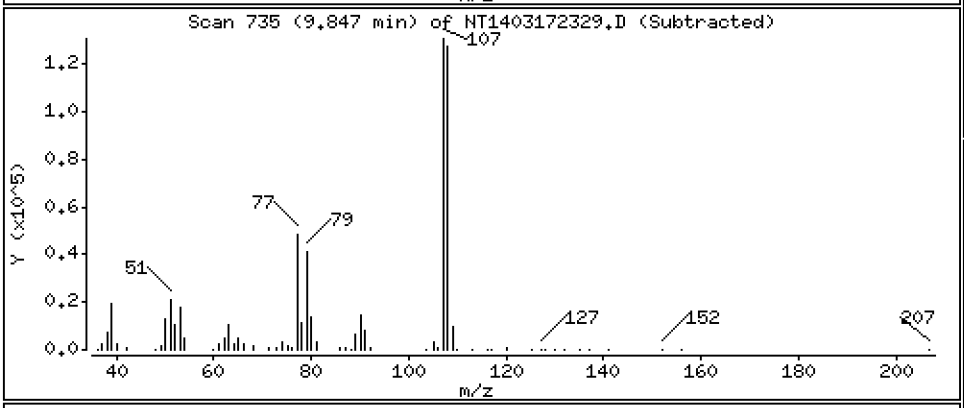
Column phase: ZB-5msi

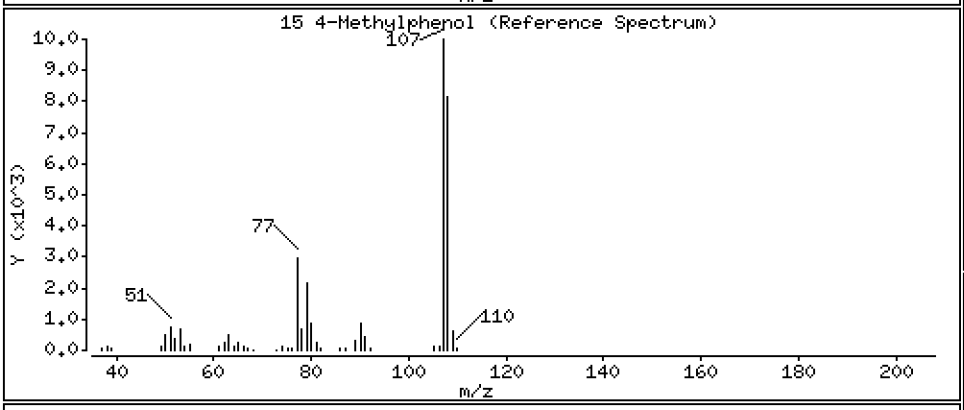
Column diameter: 0.25

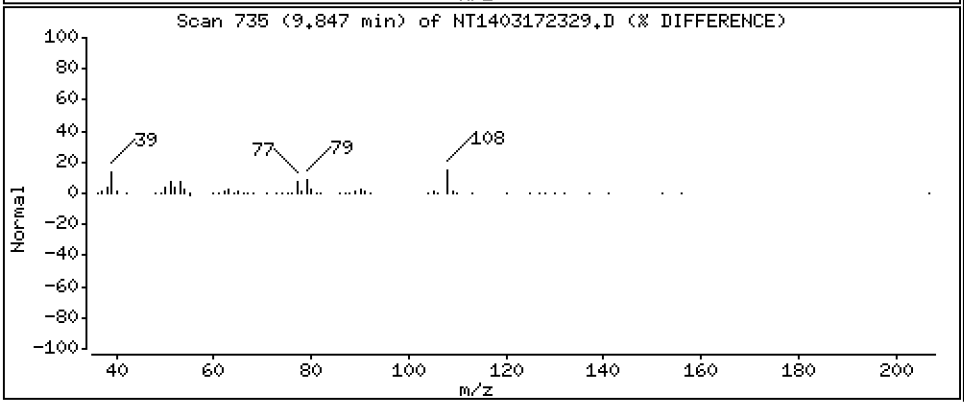
15 4-Methylphenol

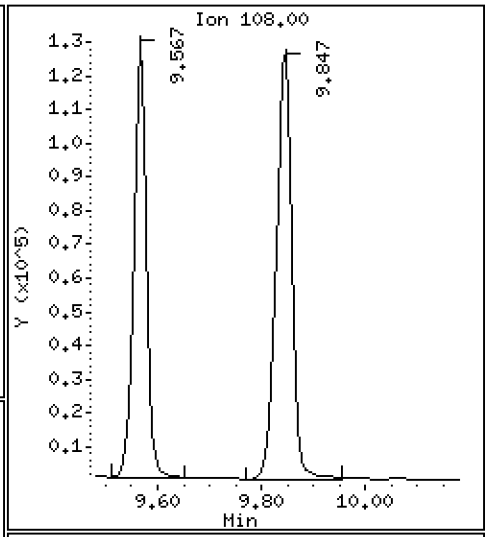
Concentration: 3.291 ug/mL

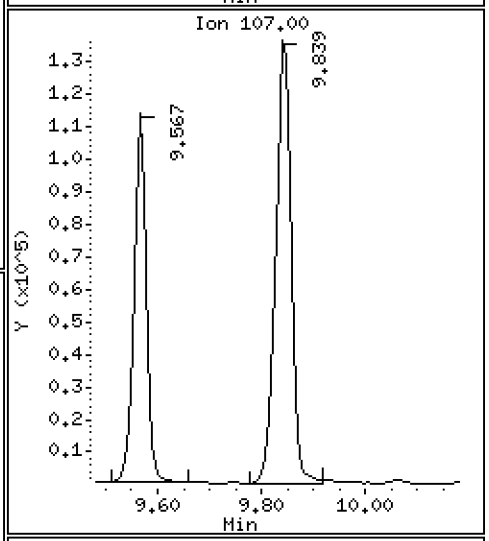


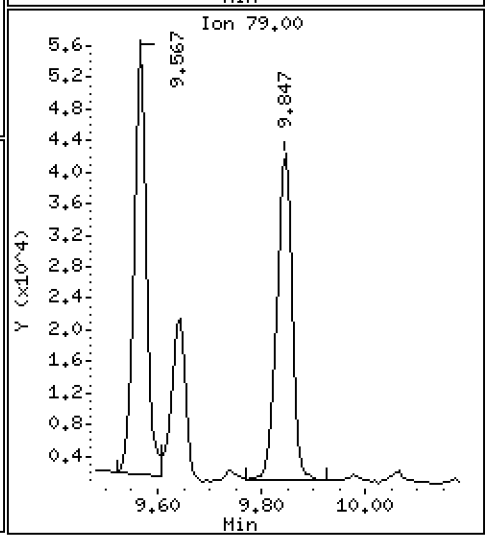












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Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

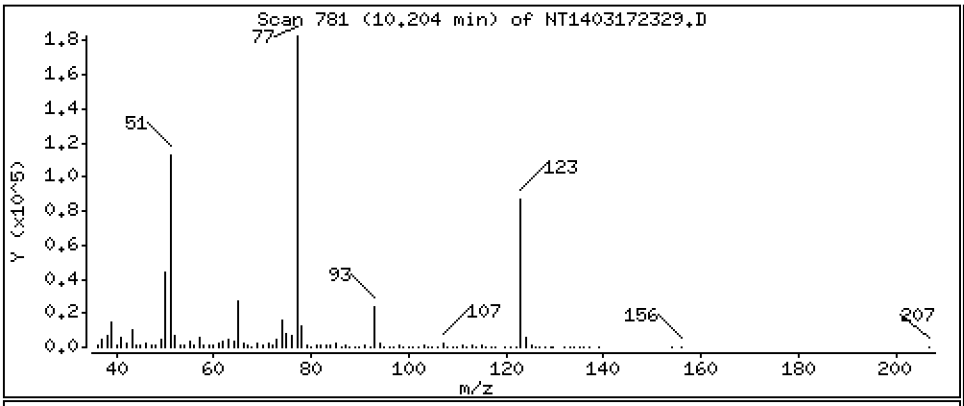
Operator: JGR

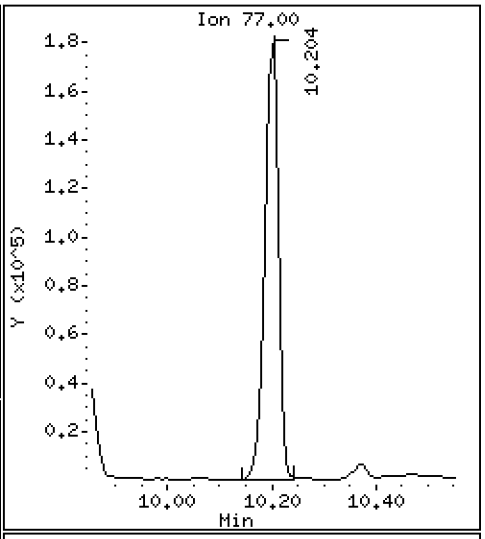
Column phase: ZB-5msi

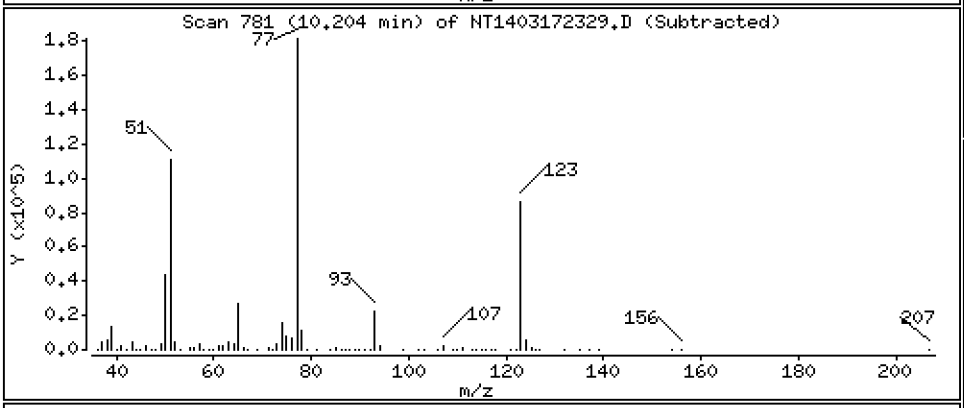
Column diameter: 0.25

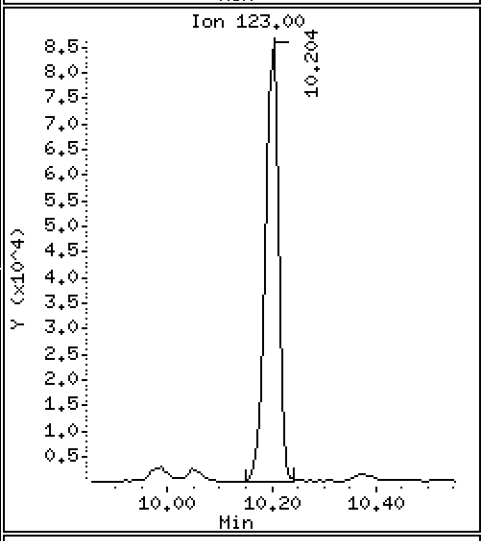
19 Nitrobenzene

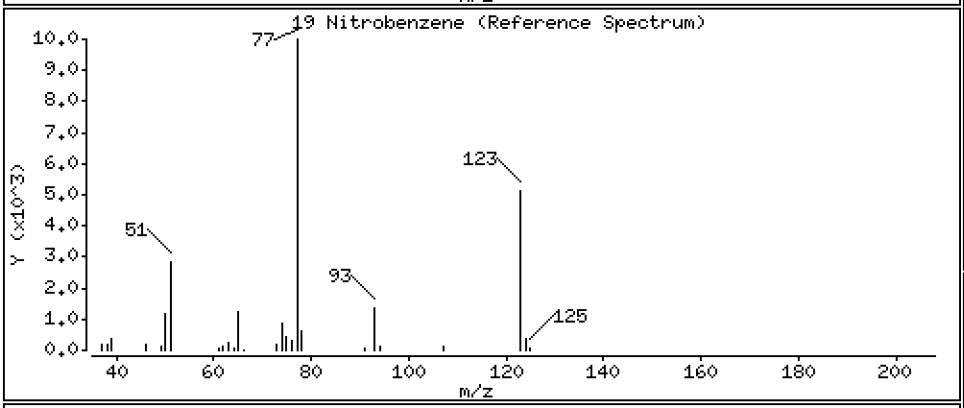
Concentration: 3.785 ug/mL

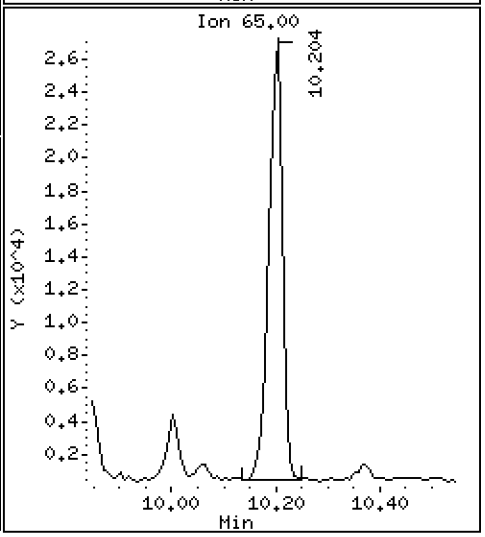


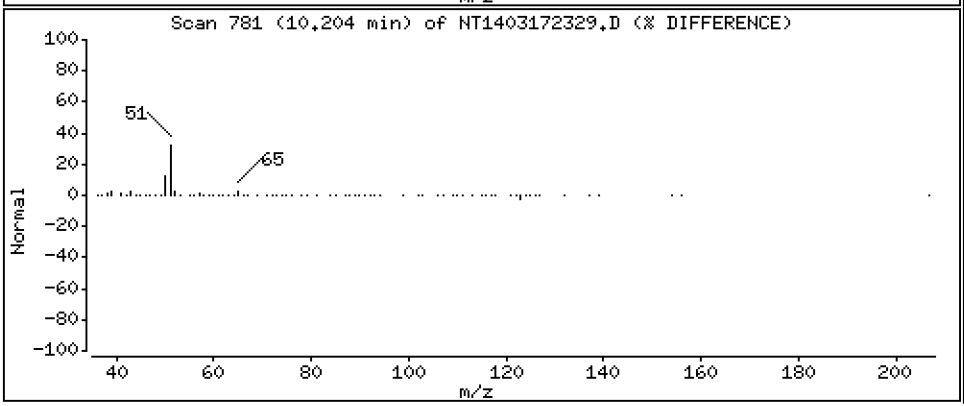












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Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

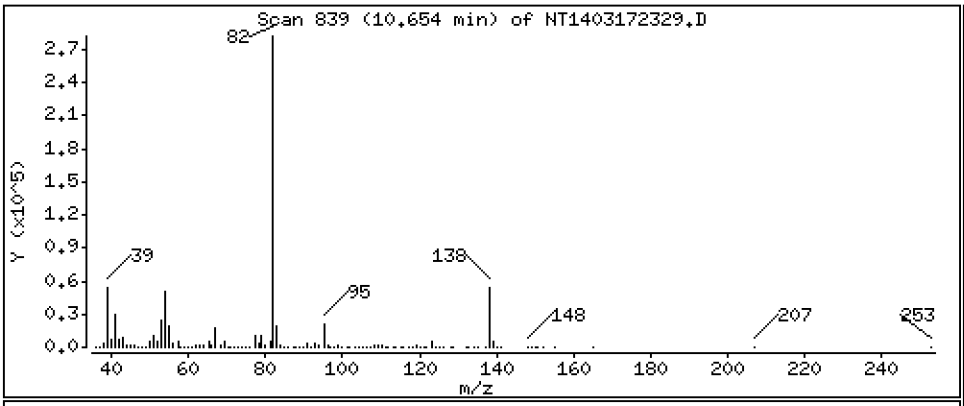
Operator: JGR

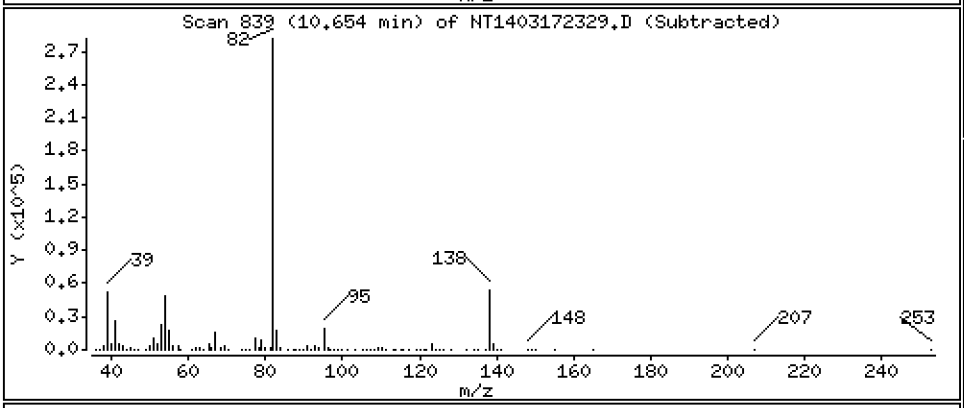
Column phase: ZB-5msi

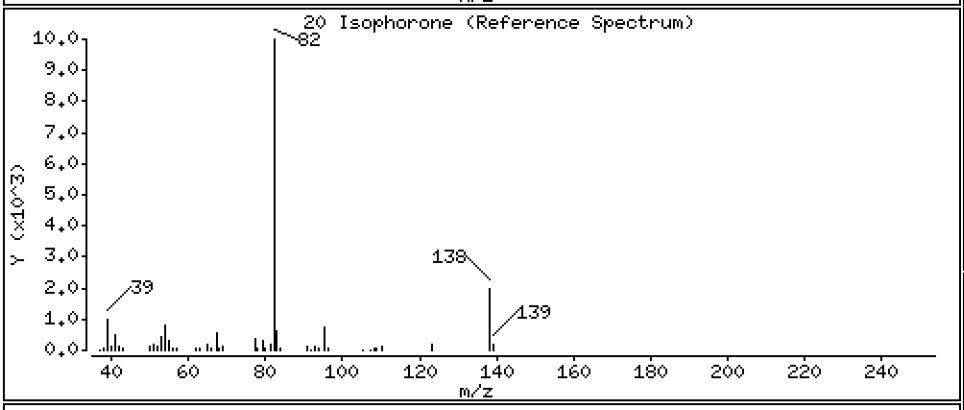
Column diameter: 0.25

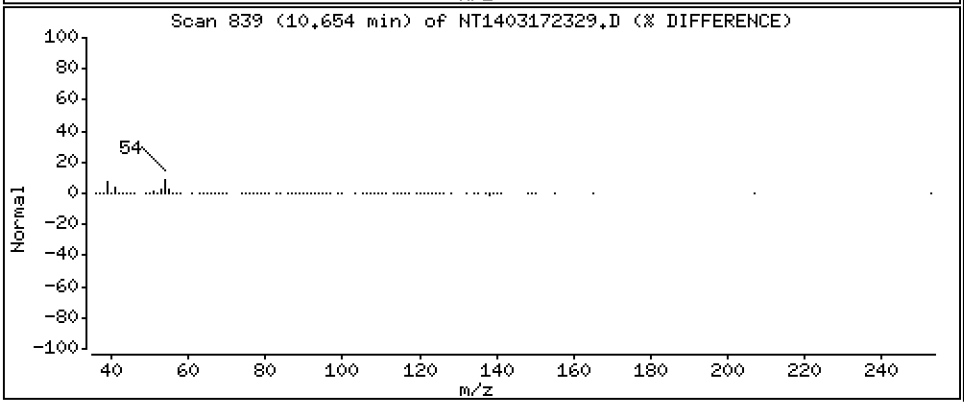
20 Isophorone

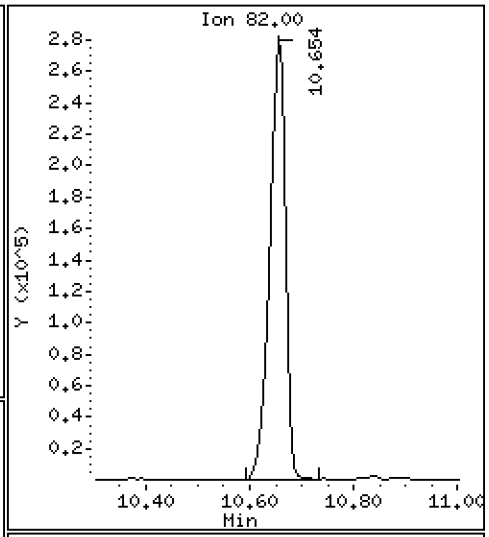
Concentration: 5.049 ug/mL

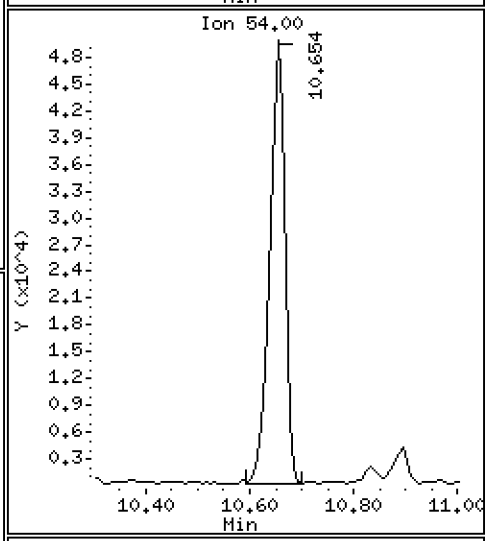


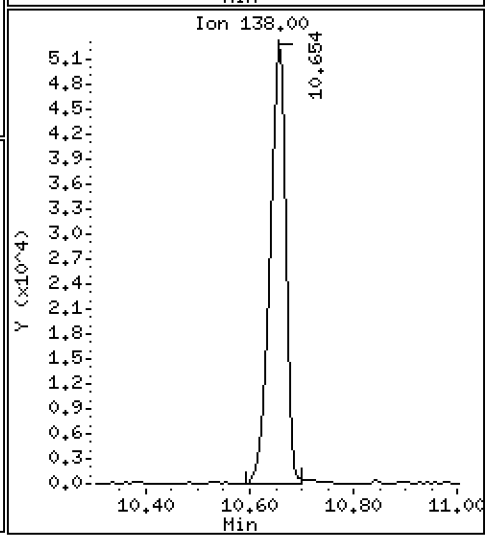












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Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

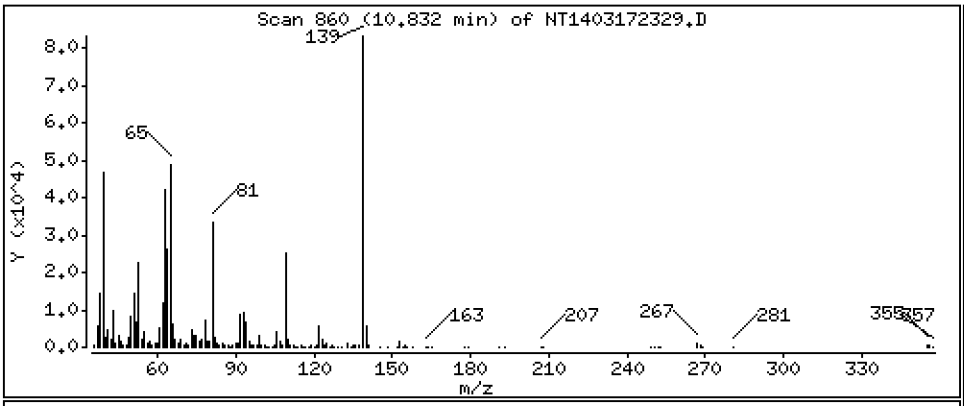
Operator: JGR

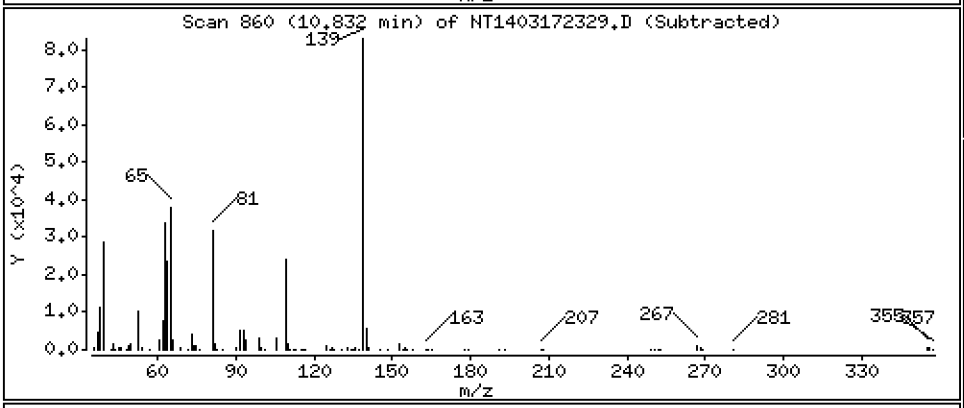
Column phase: ZB-5msi

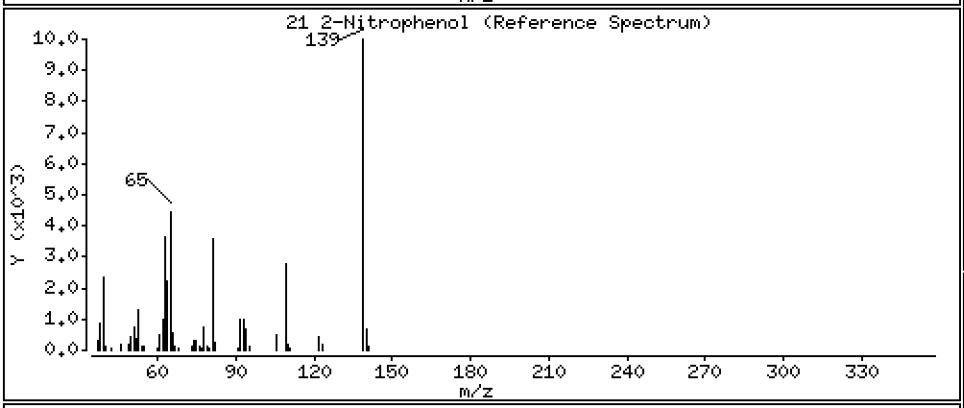
Column diameter: 0.25

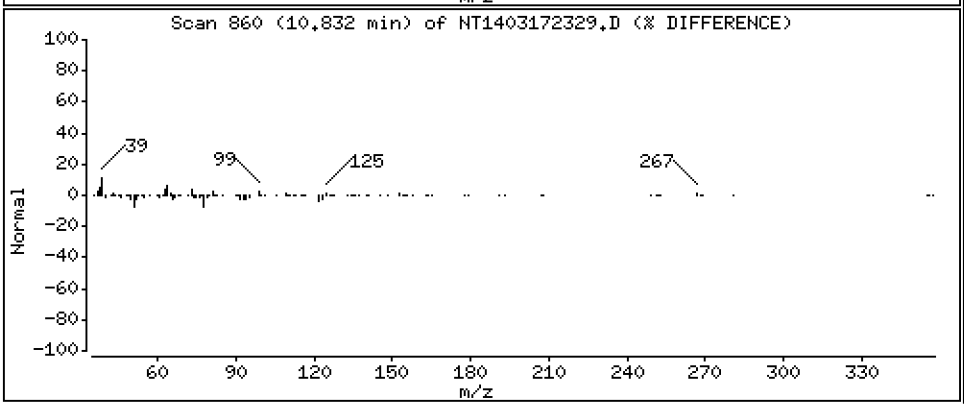
21 2-Nitrophenol

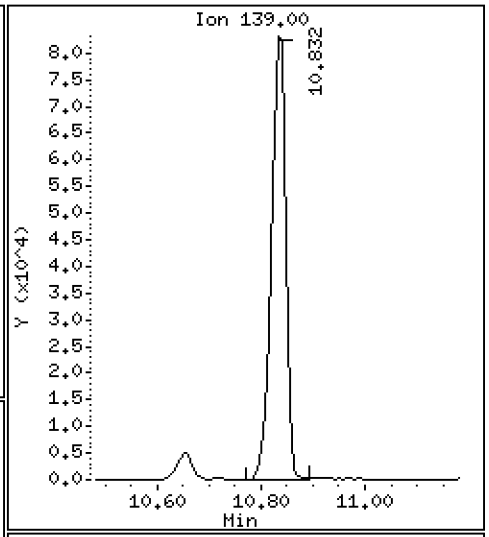
Concentration: 3.252 ug/mL

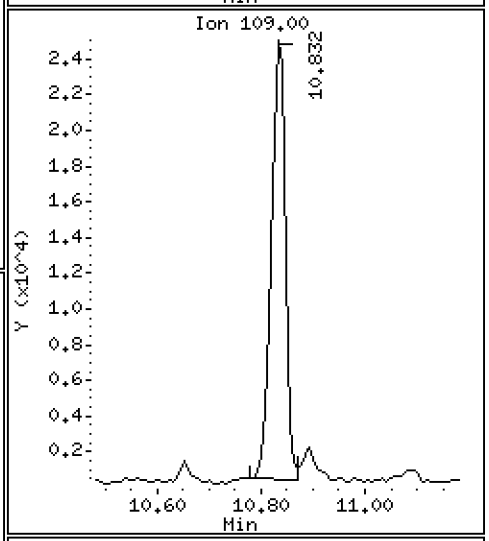


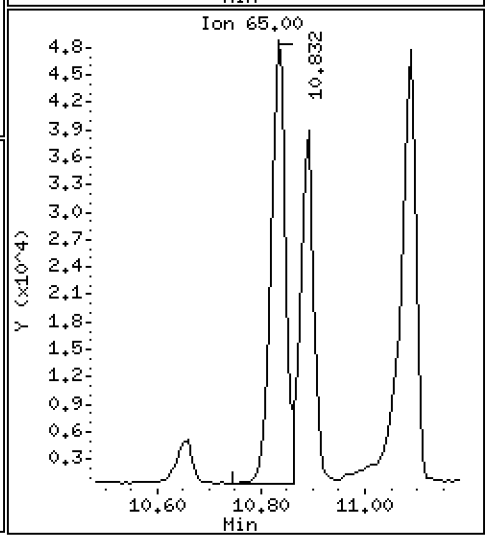












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Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

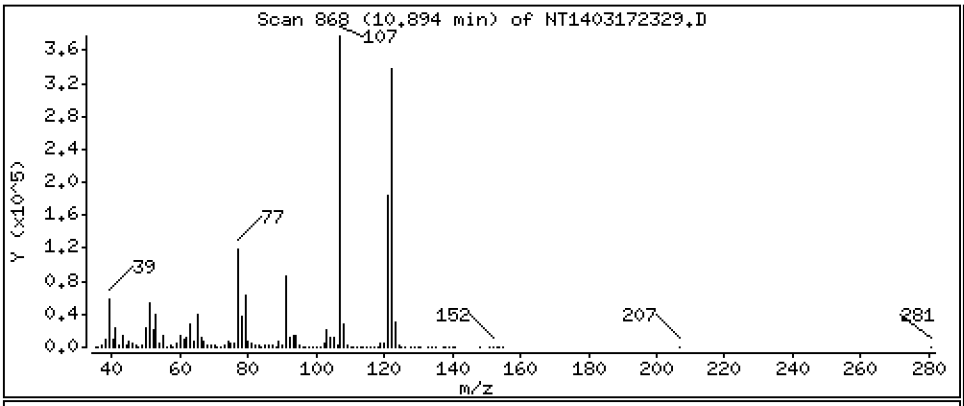
Operator: JGR

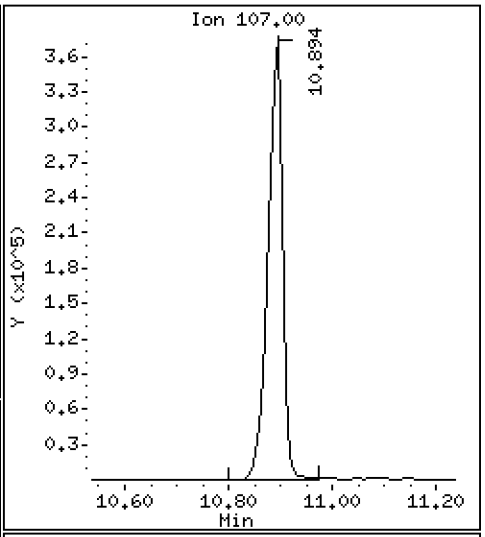
Column phase: ZB-5msi

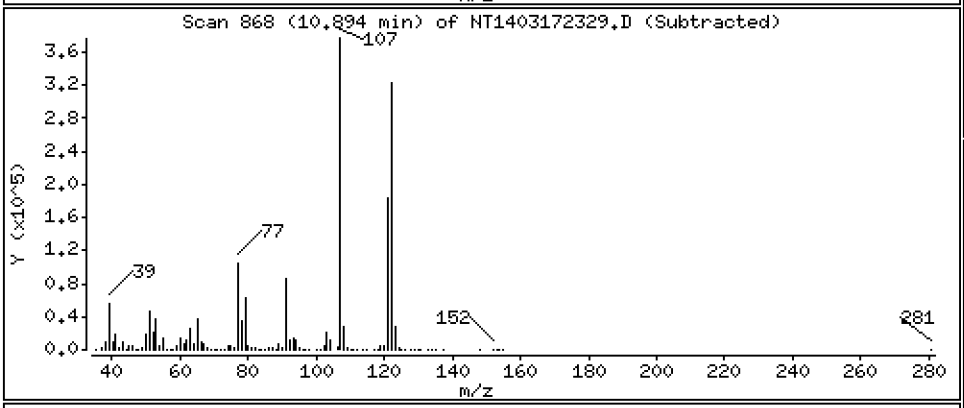
Column diameter: 0.25

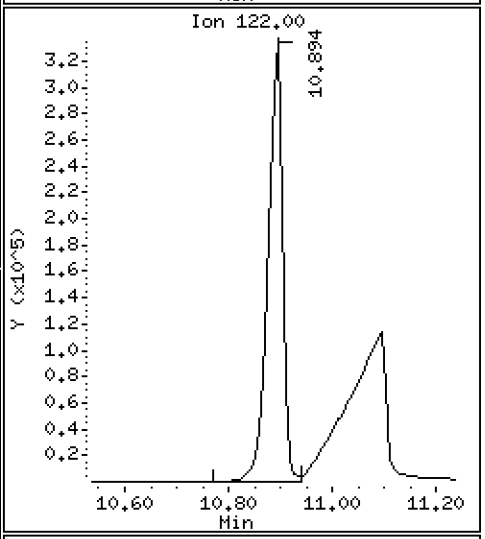
22 2,4-Dimethylphenol

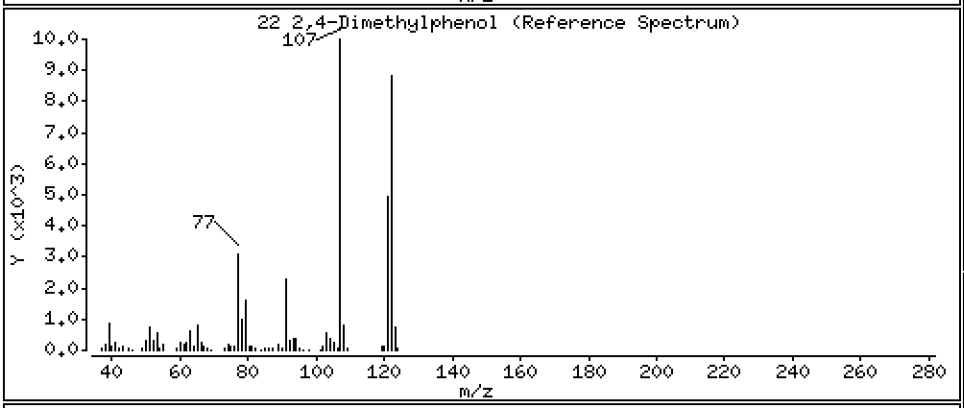
Concentration: 10.07 ug/mL

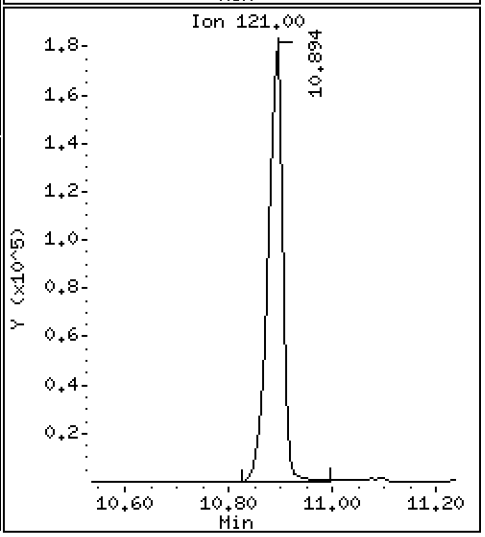


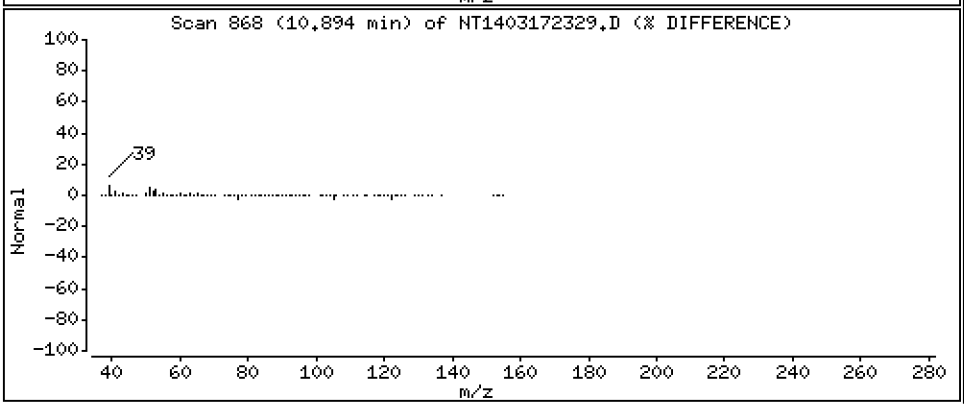












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Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

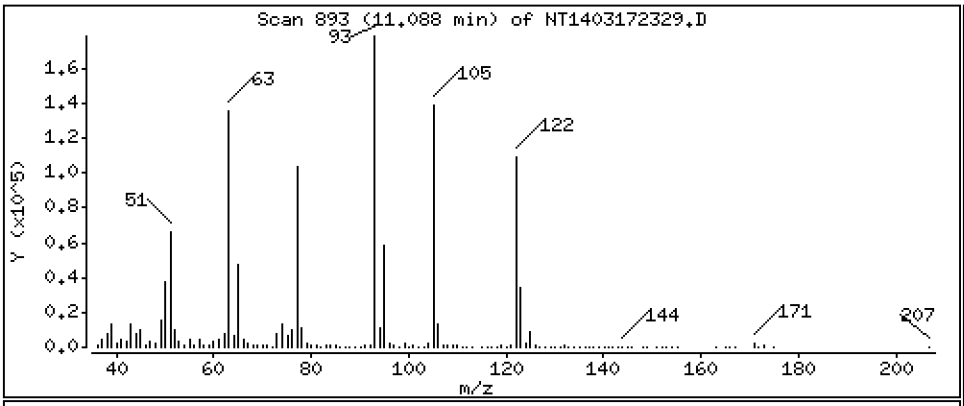
Operator: JGR

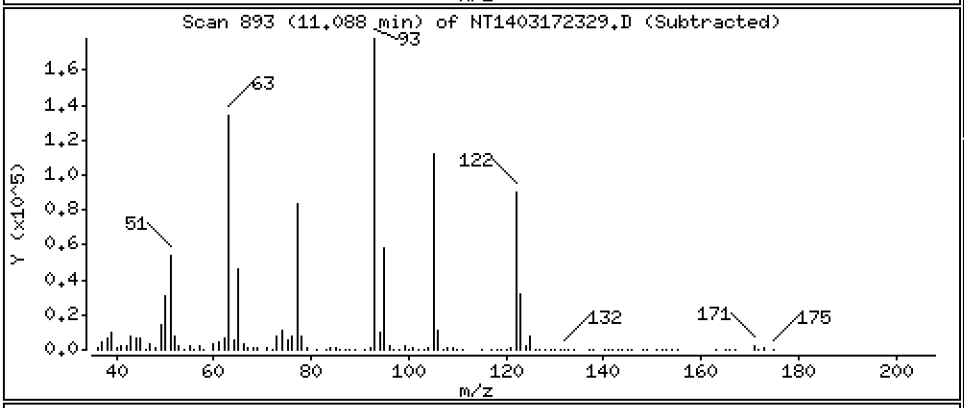
Column phase: ZB-5msi

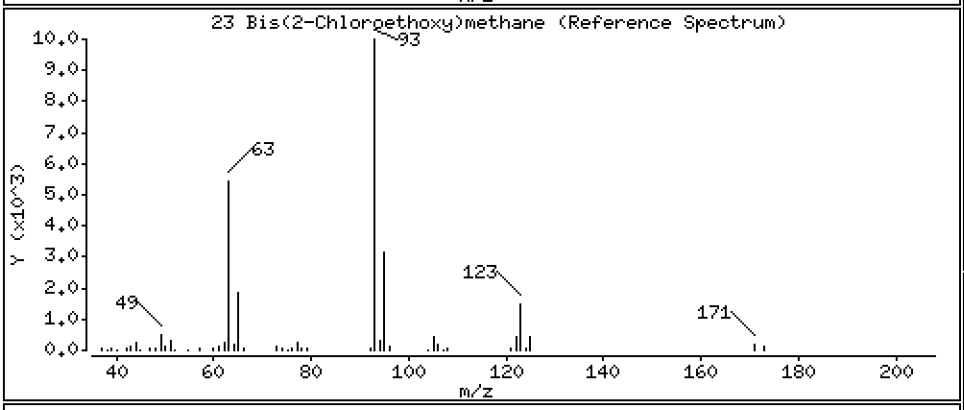
Column diameter: 0.25

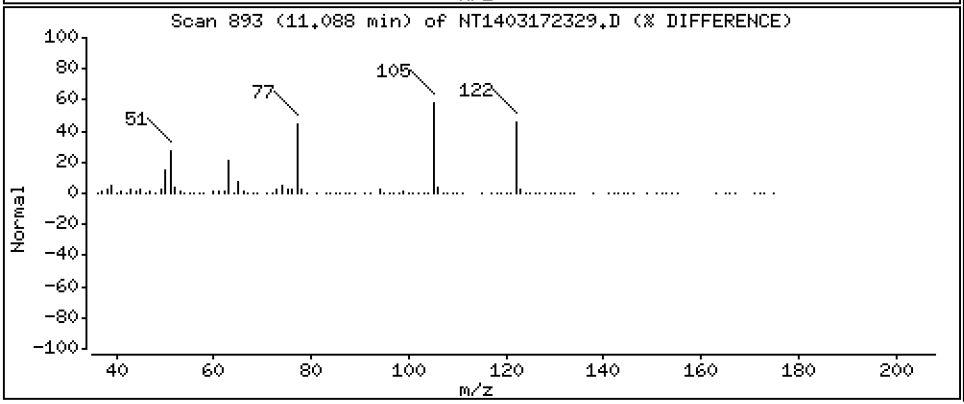
23 Bis(2-Chloroethoxy)methane

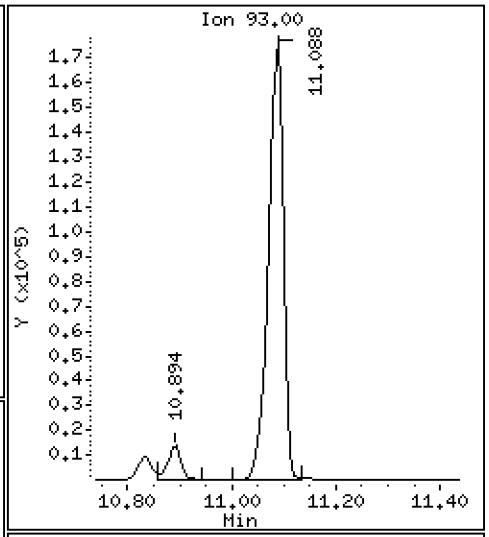
Concentration: 4.438 ug/mL

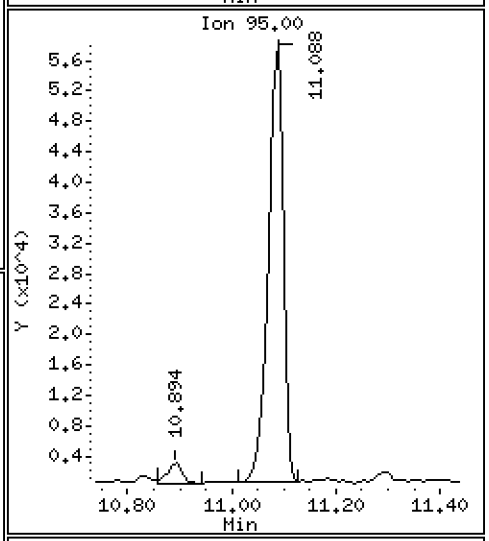


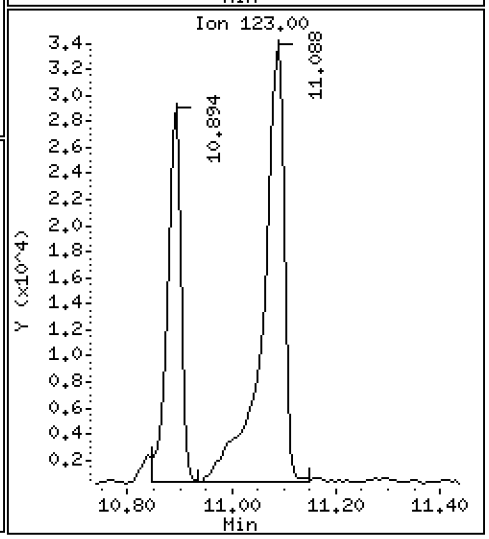












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Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

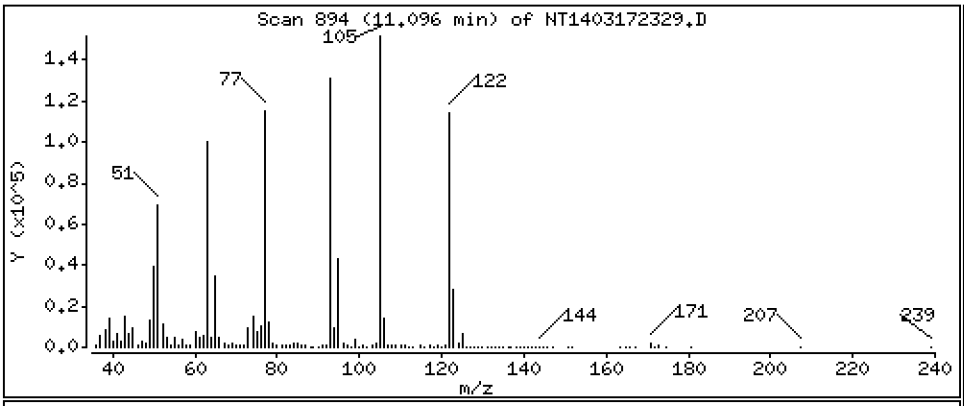
Operator: JGR

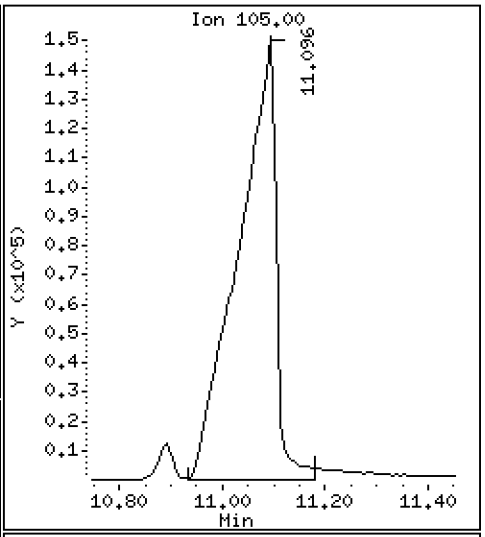
Column phase: ZB-5msi

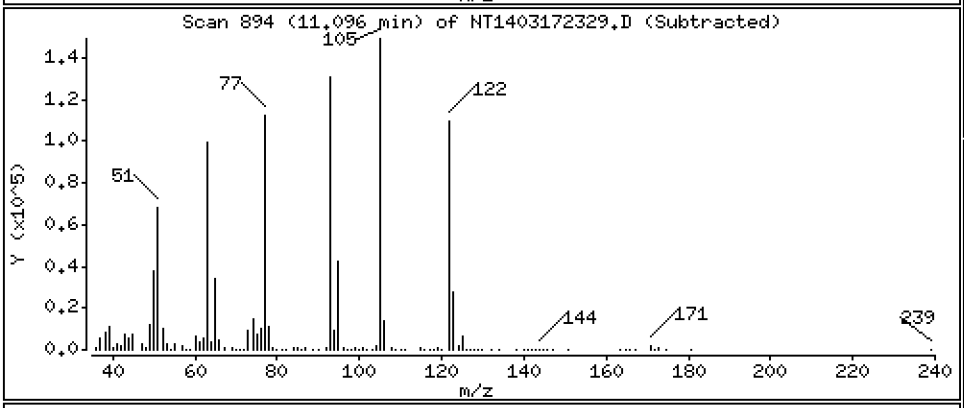
Column diameter: 0.25

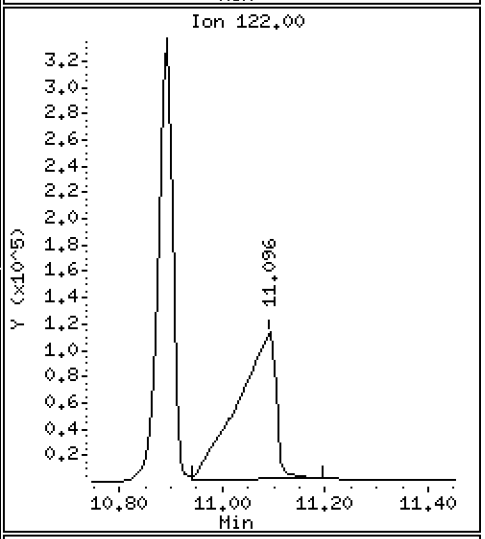
24 Benzoic acid

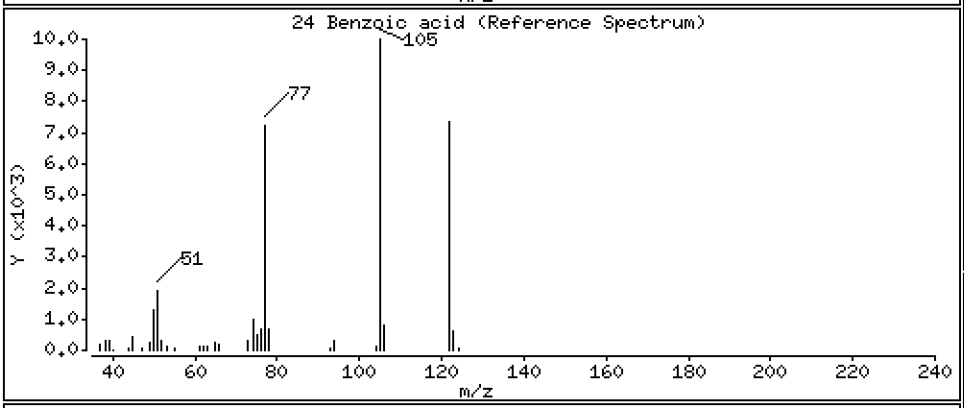
Concentration: 12.62 ug/mL

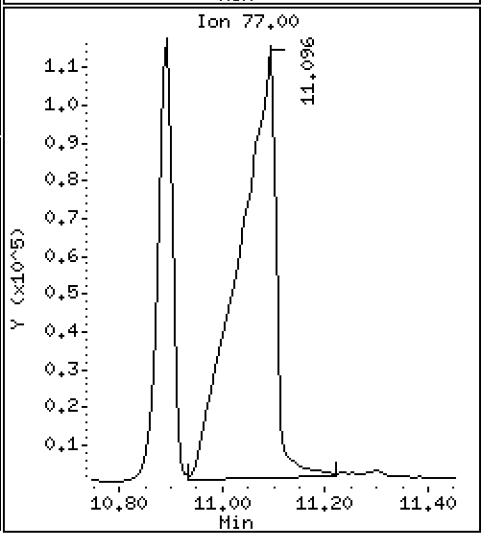


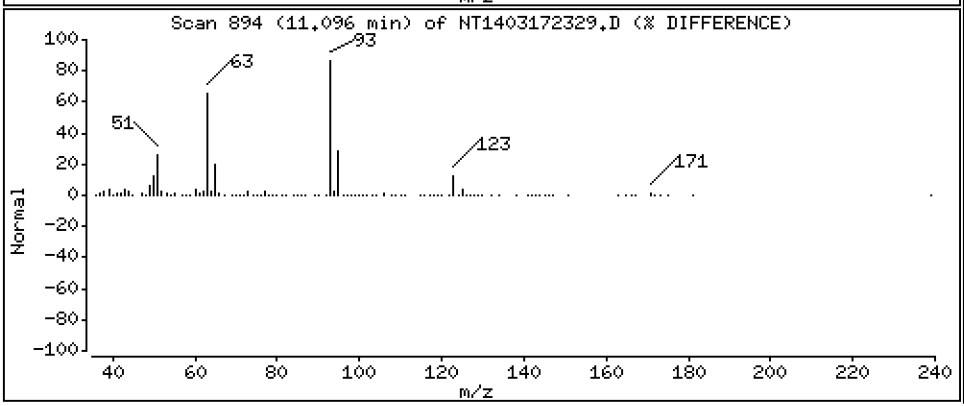












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Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

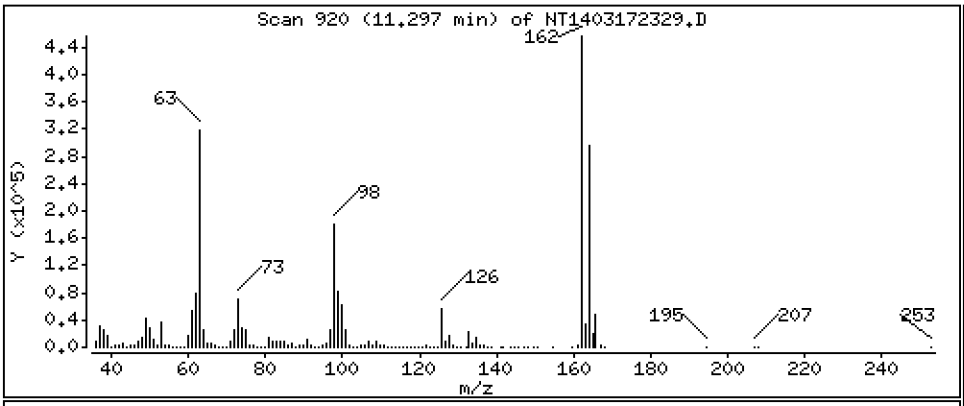
Operator: JGR

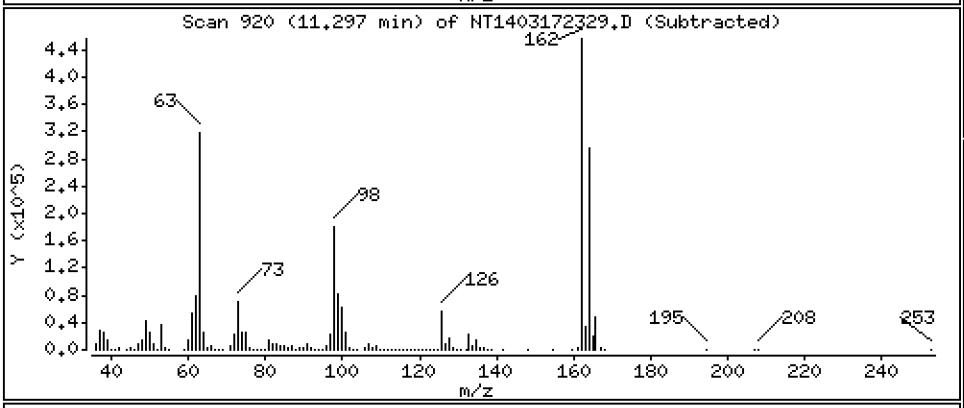
Column phase: ZB-5msi

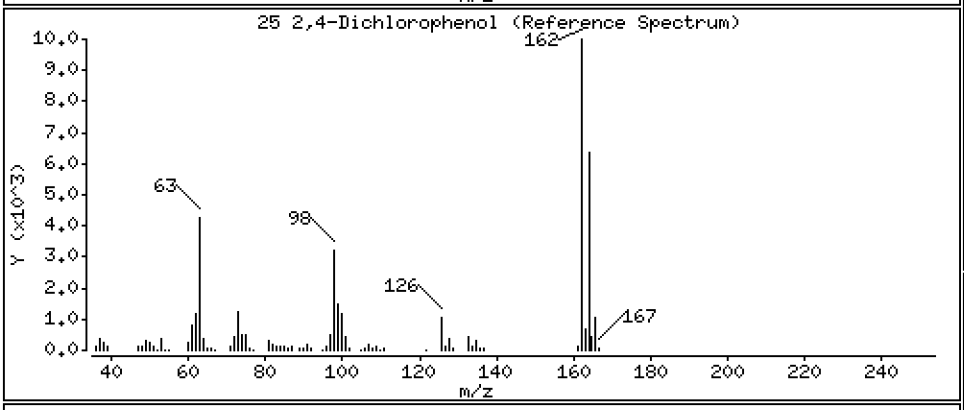
Column diameter: 0.25

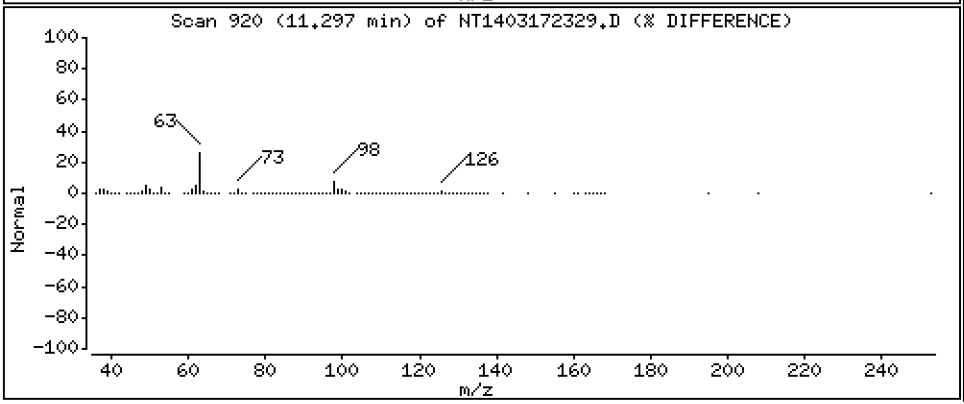
25 2,4-Dichlorophenol

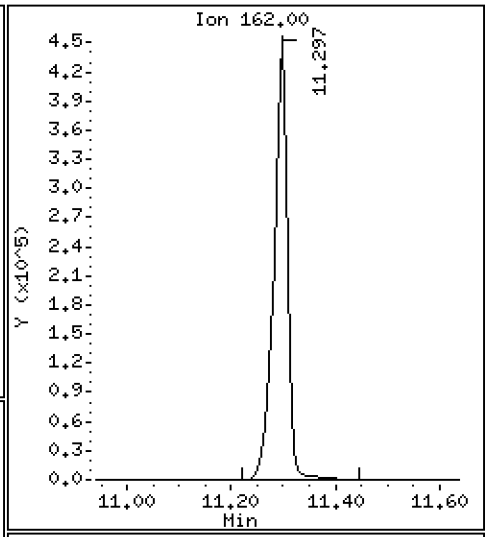
Concentration: 15.87 ug/mL

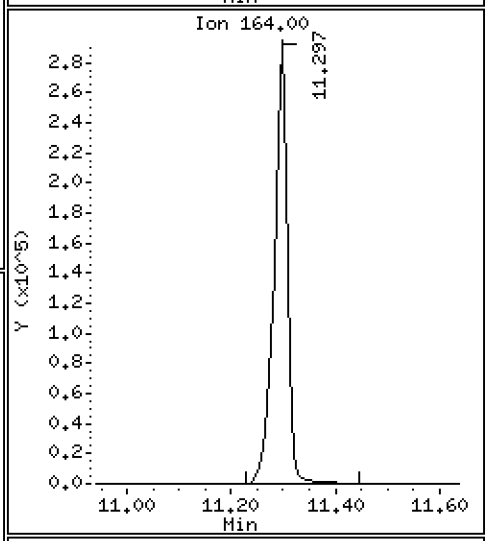


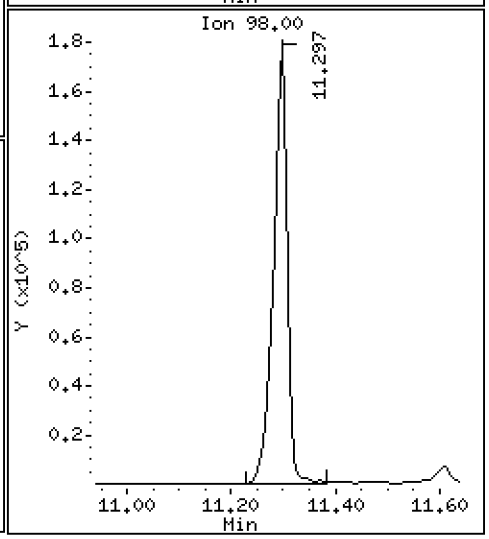












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Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

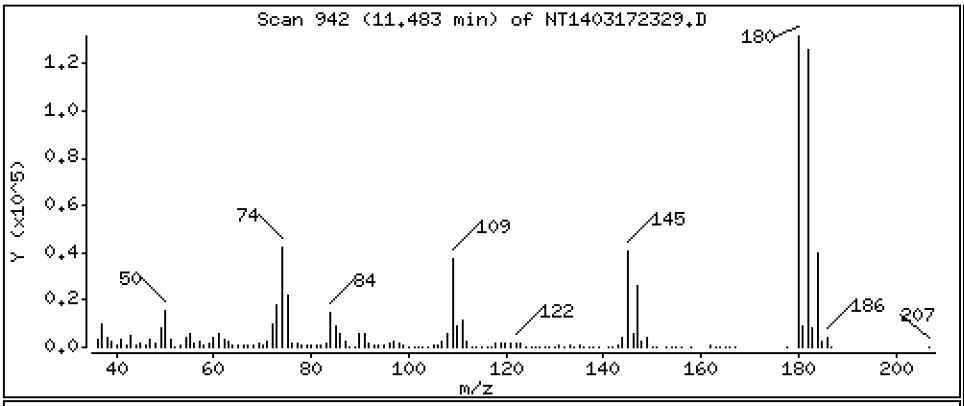
Operator: JGR

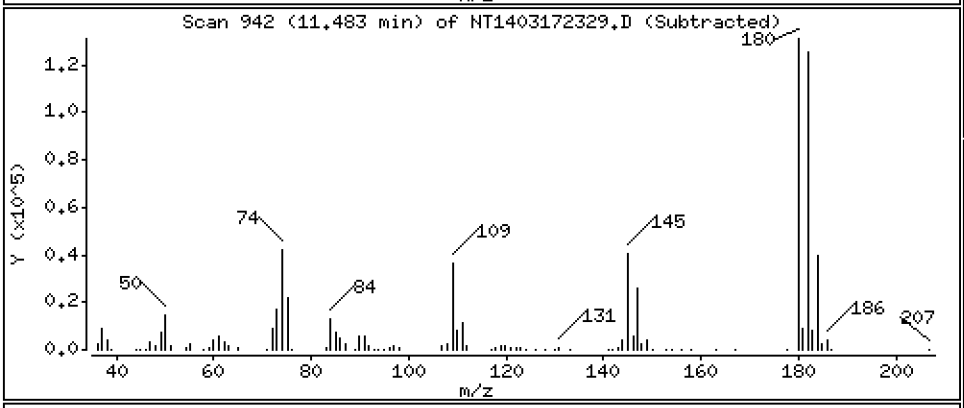
Column phase: ZB-5msi

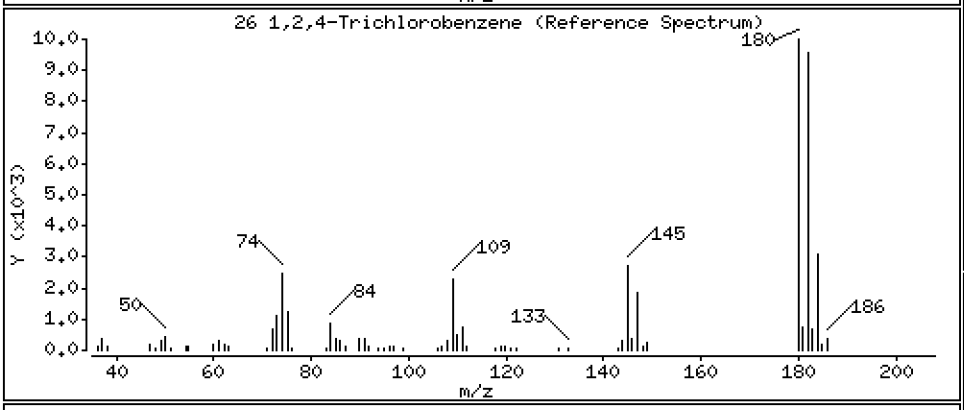
Column diameter: 0.25

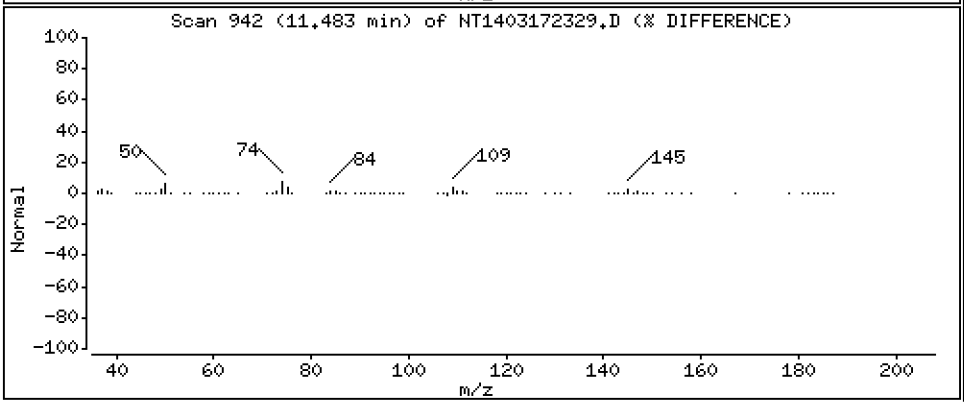
26 1,2,4-Trichlorobenzene

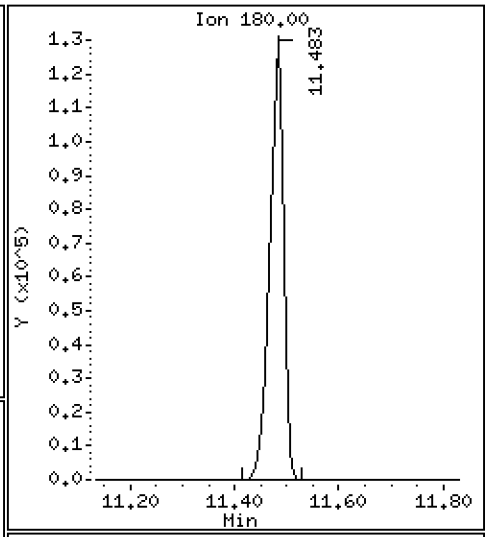
Concentration: 3.392 ug/mL

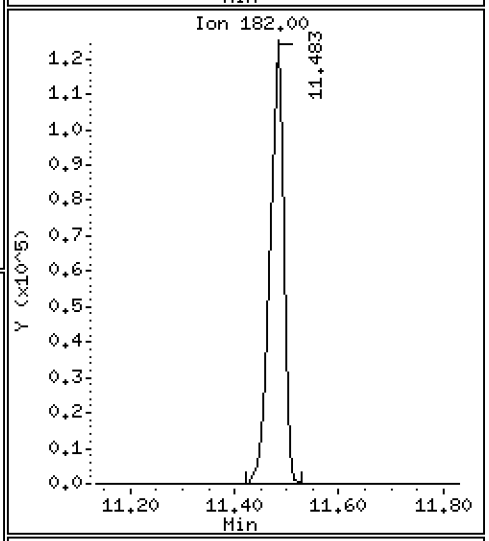


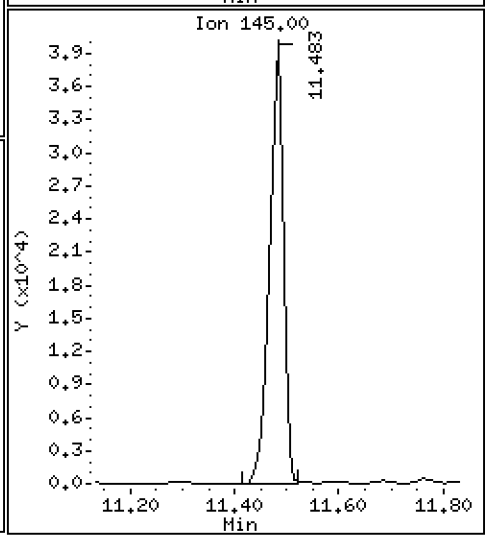












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Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

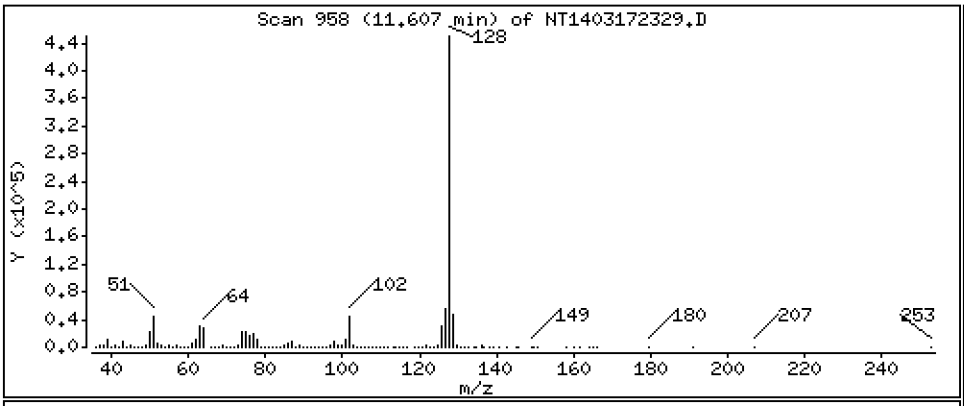
Operator: JGR

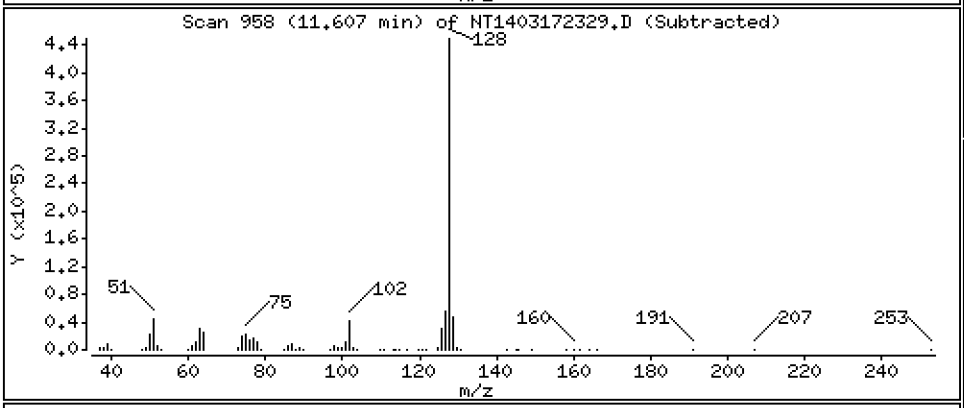
Column phase: ZB-5msi

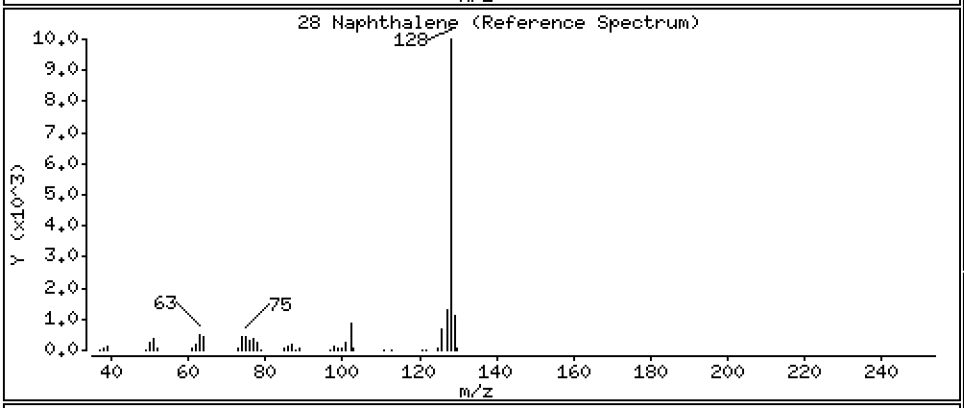
Column diameter: 0.25

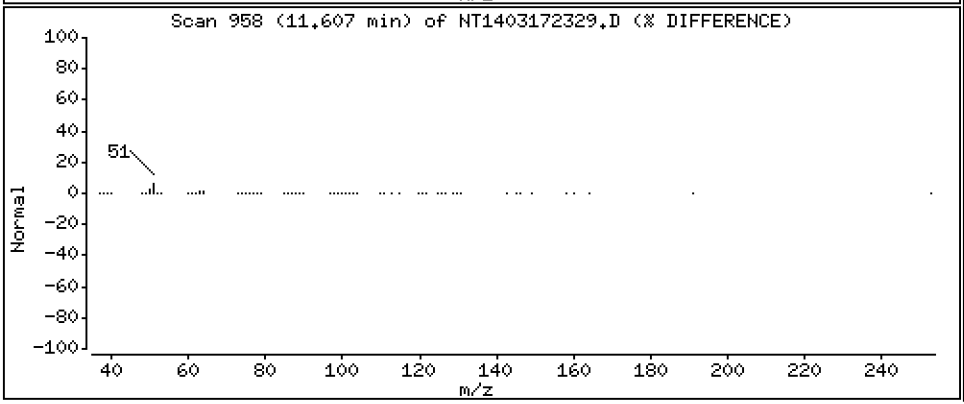
28 Naphthalene

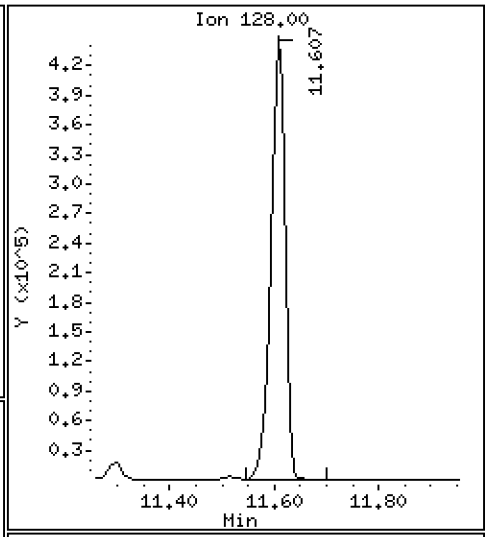
Concentration: 3.767 ug/mL

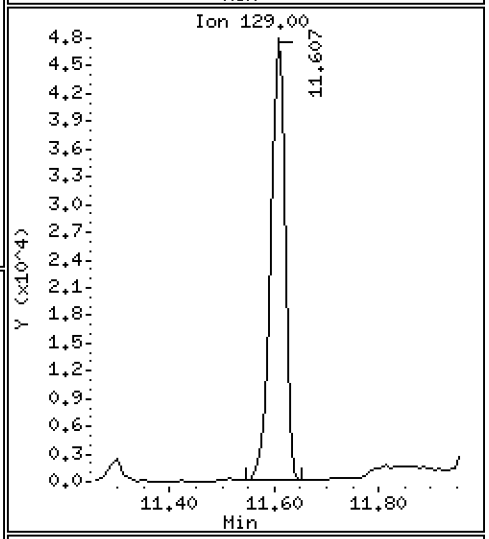


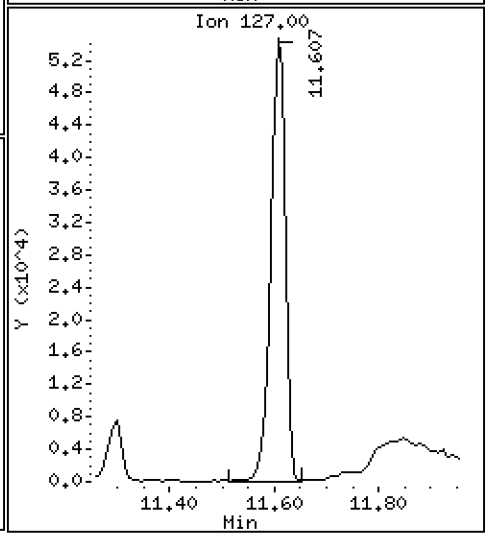












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Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

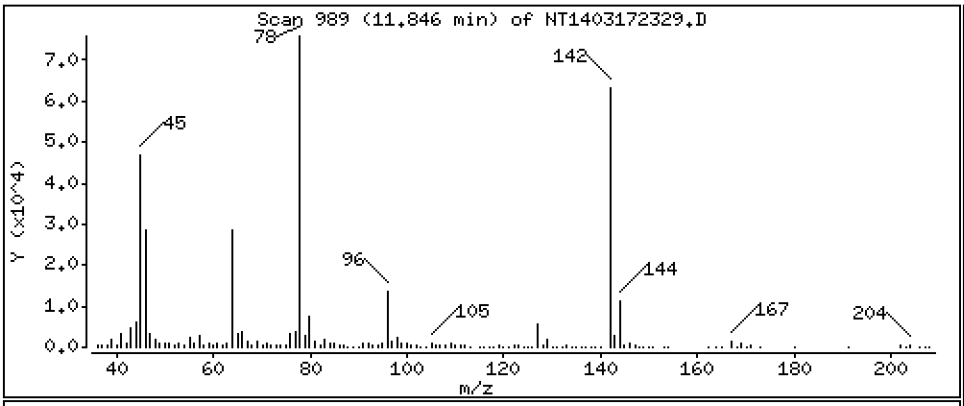
Operator: JGR

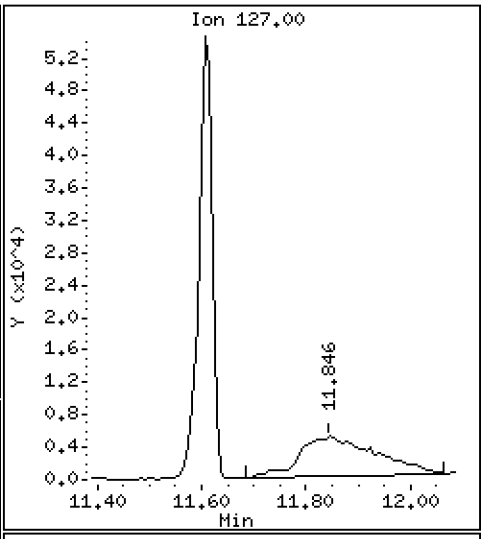
Column phase: ZB-5msi

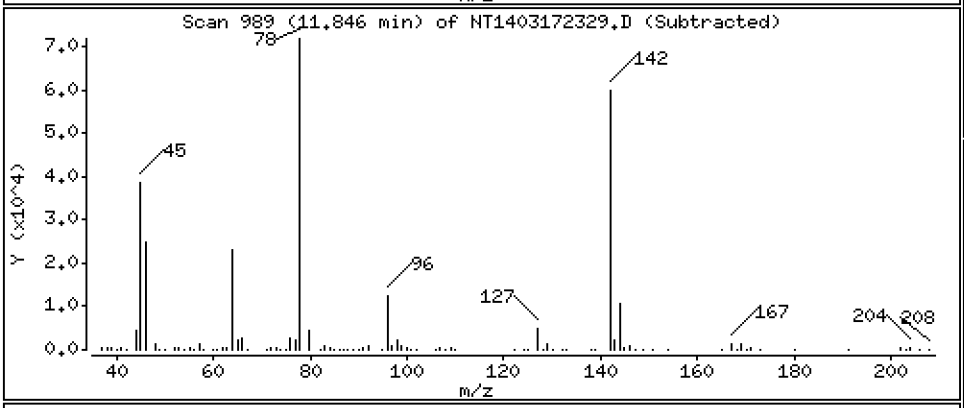
Column diameter: 0.25

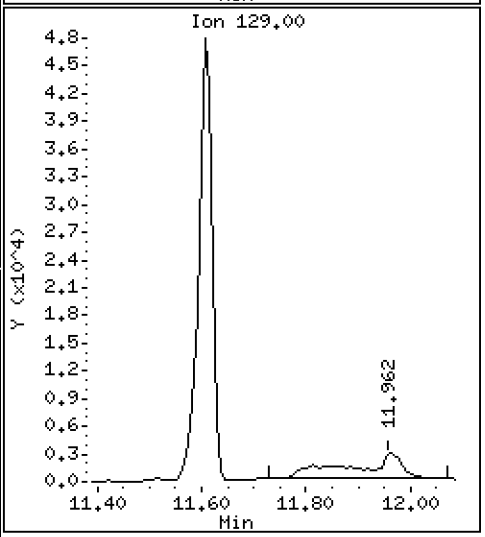
29 4-Chloroaniline

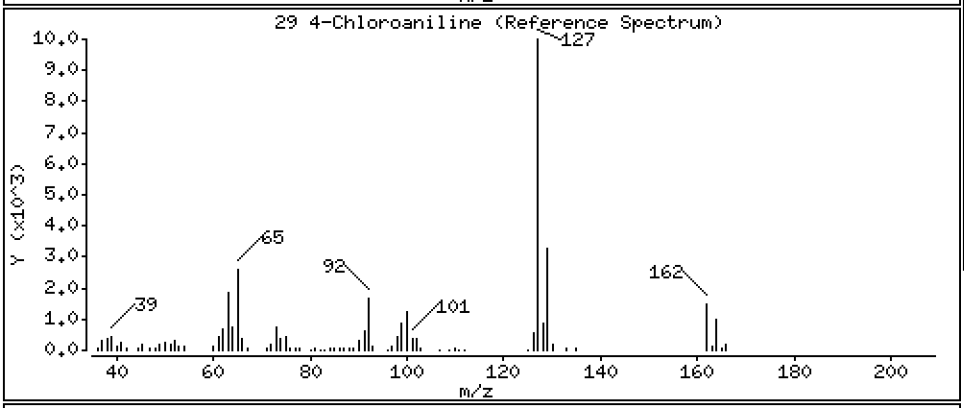
Concentration: 0.5241 ug/mL

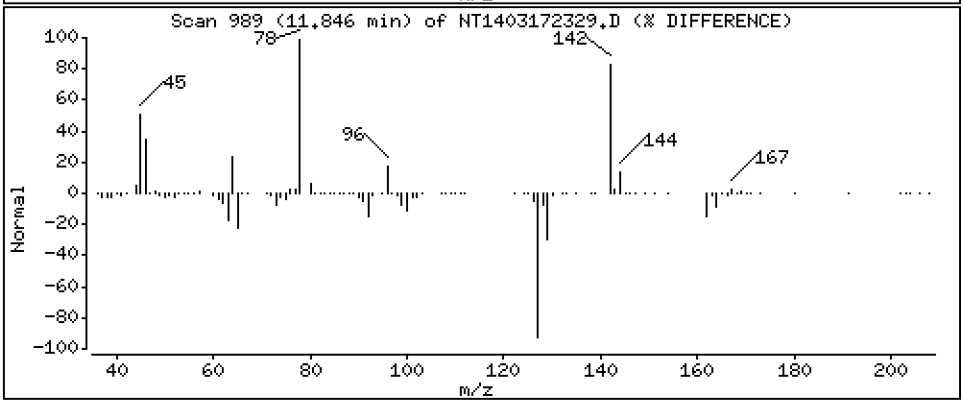












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Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

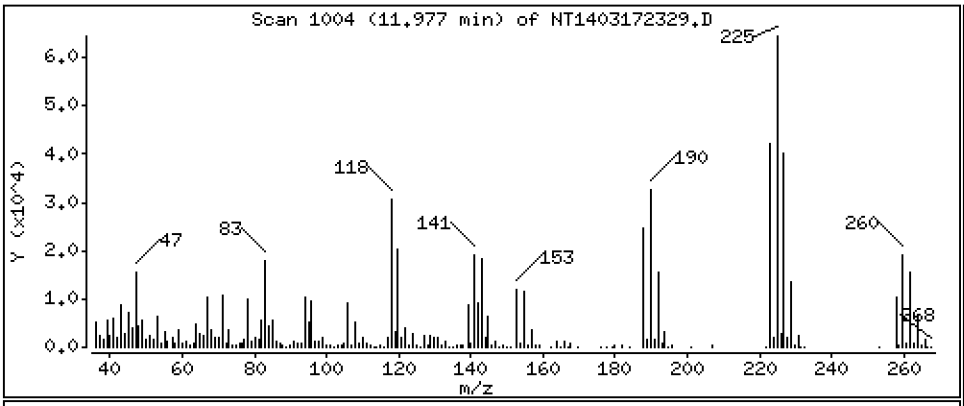
Operator: JGR

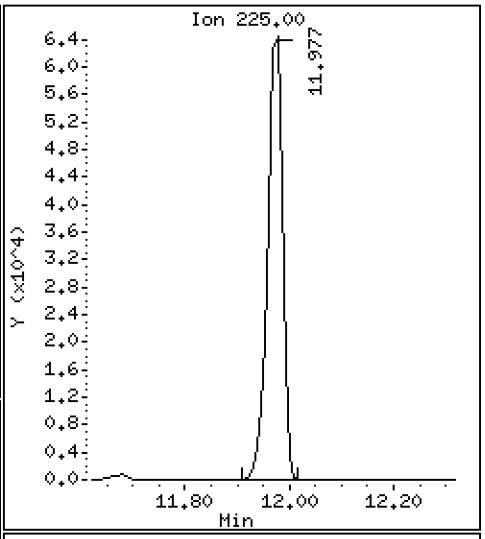
Column phase: ZB-5msi

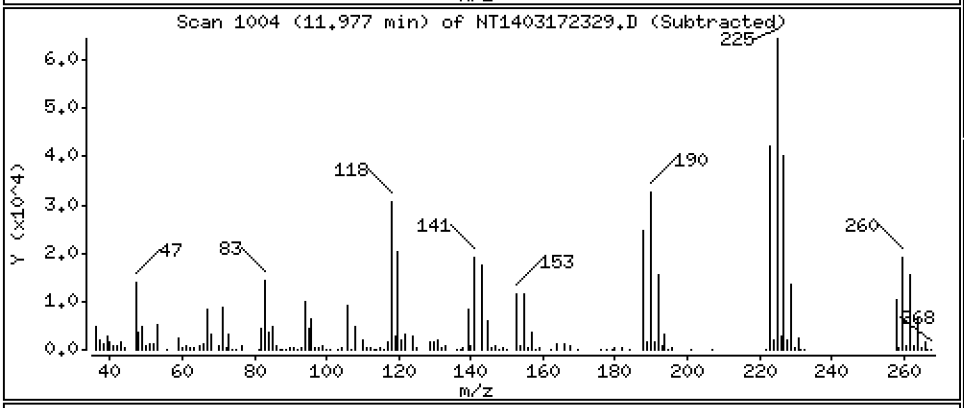
Column diameter: 0.25

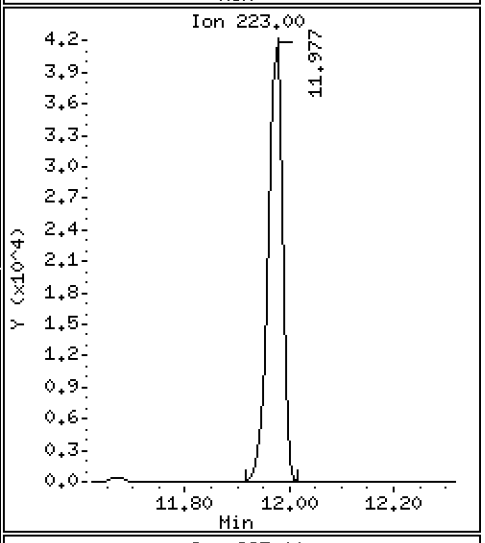
30 Hexachlorobutadiene

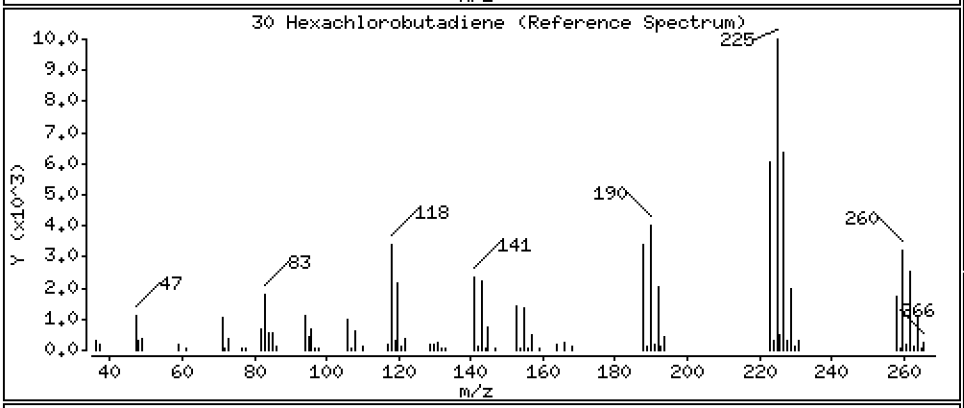
Concentration: 3.994 ug/mL

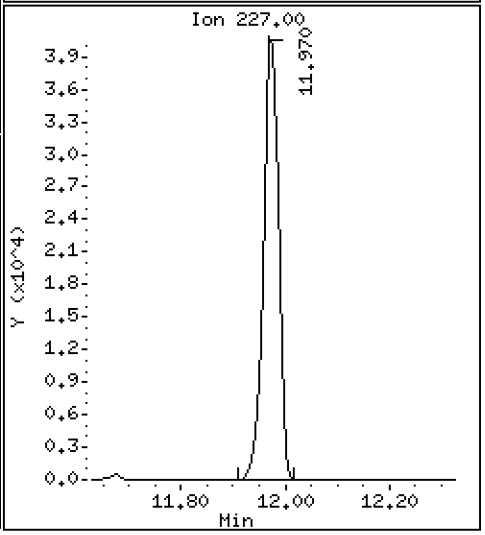


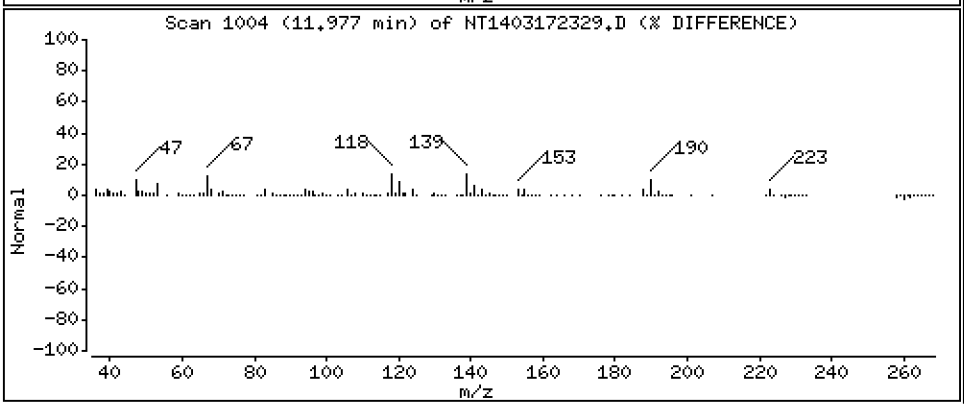












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Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

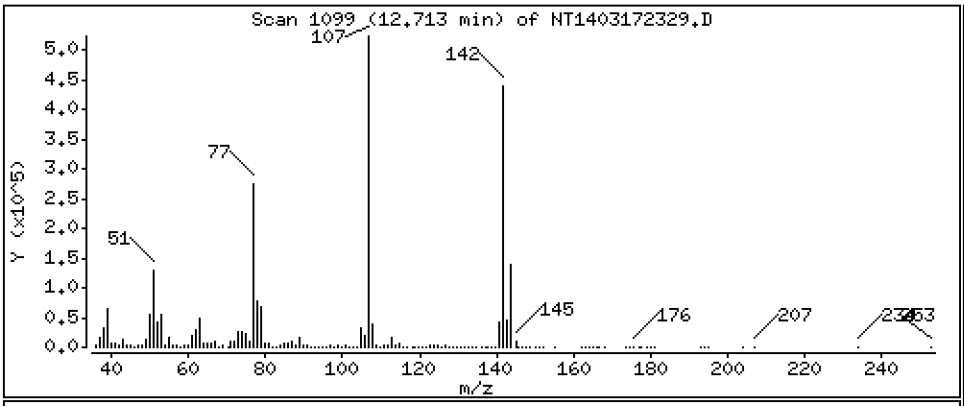
Operator: JGR

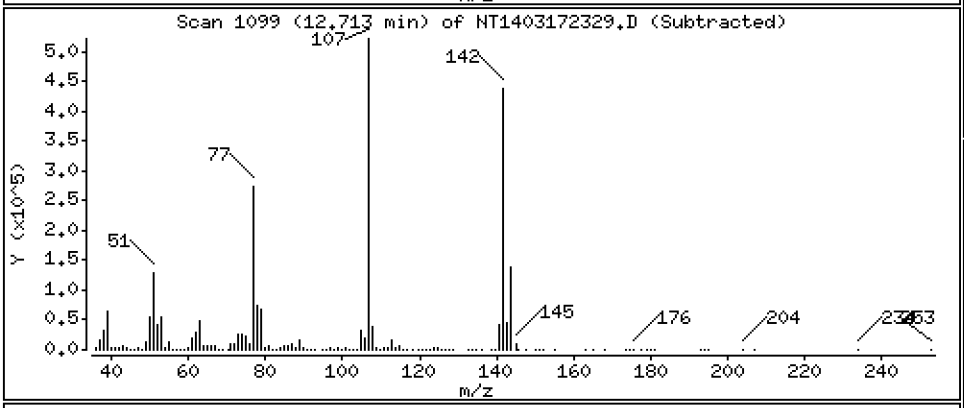
Column phase: ZB-5msi

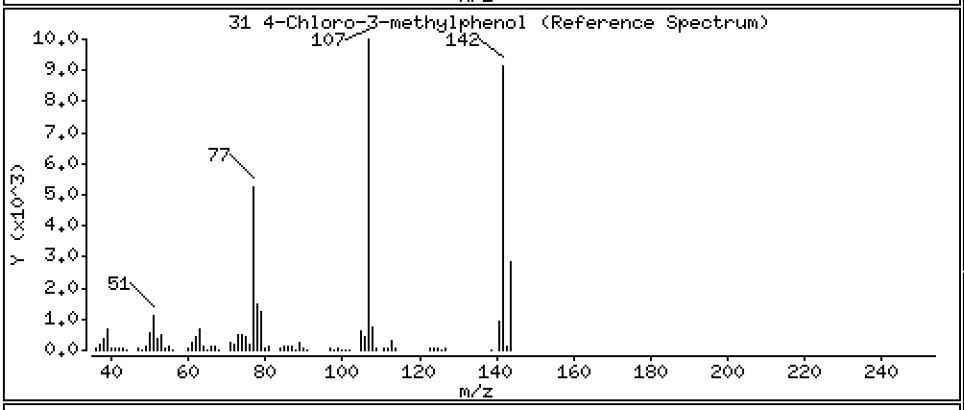
Column diameter: 0.25

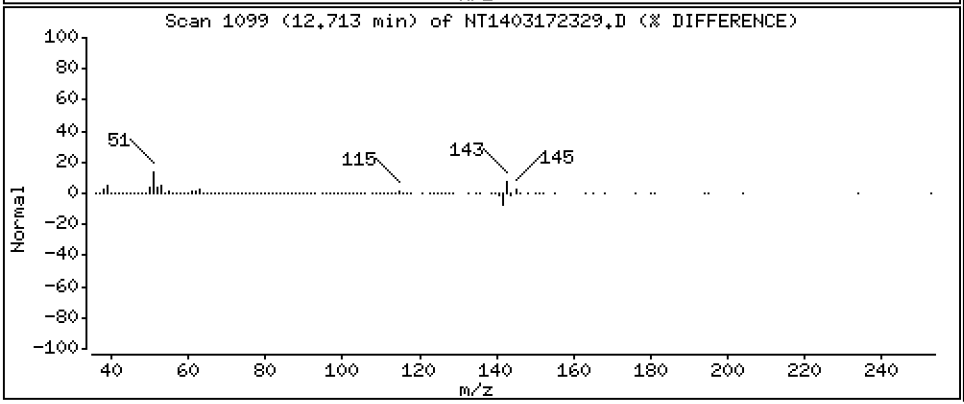
31 4-Chloro-3-methylphenol

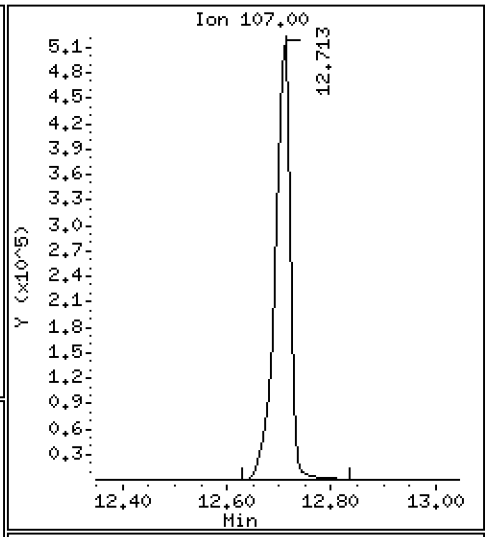
Concentration: 14.98 ug/mL

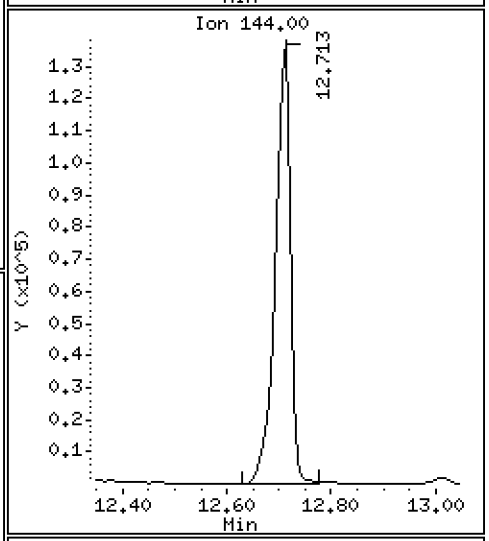


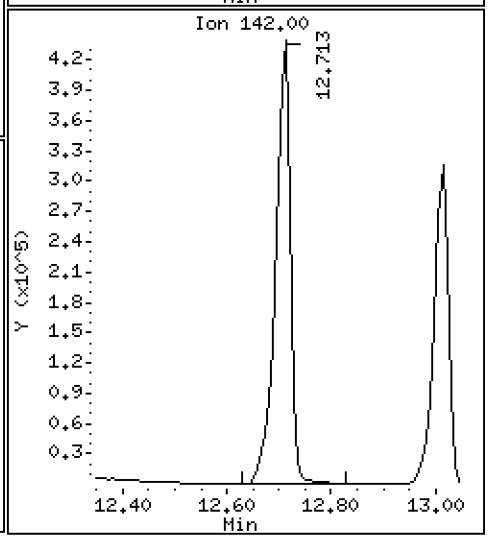












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Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

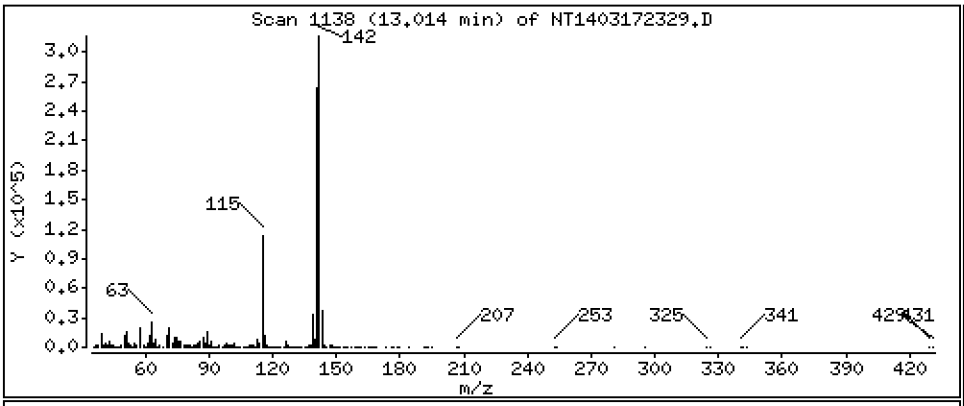
Operator: JGR

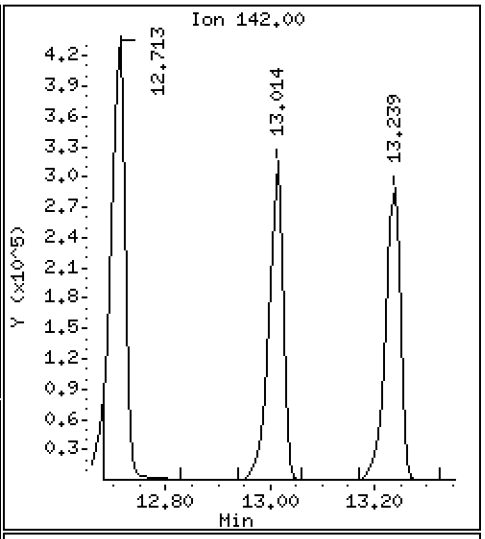
Column phase: ZB-5msi

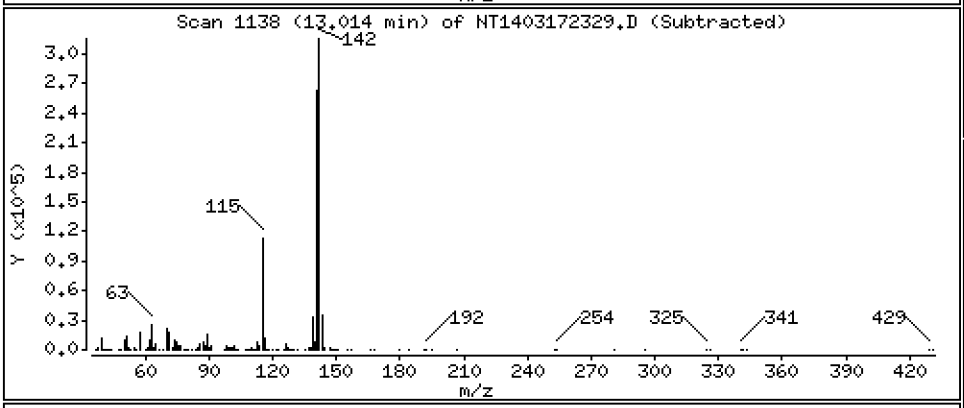
Column diameter: 0.25

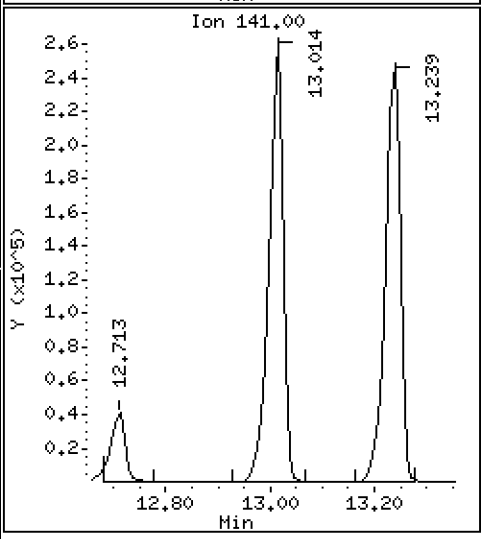
32 2-Methylnaphthalene

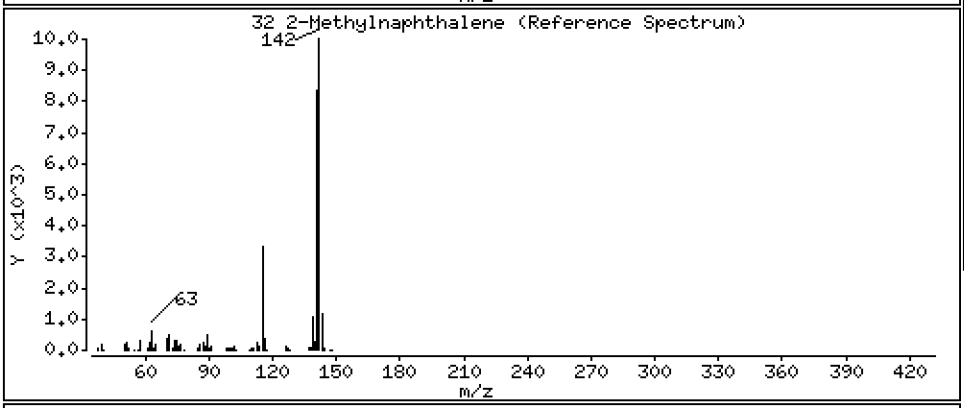
Concentration: 3.882 ug/mL

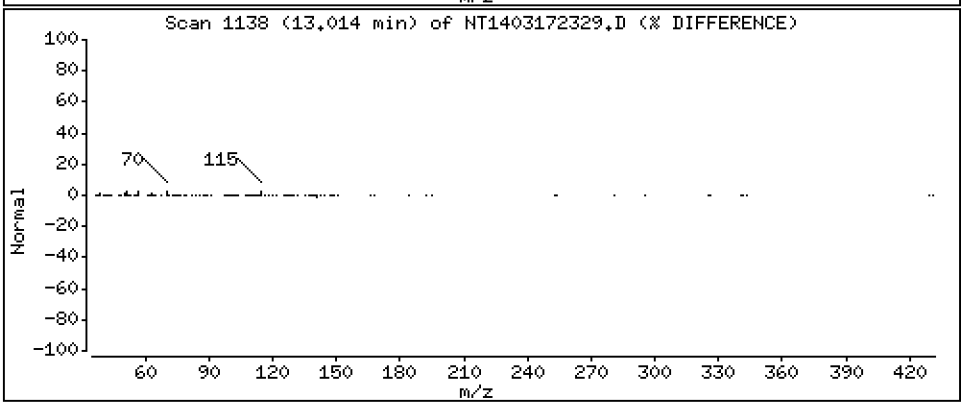












Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172329.D

Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

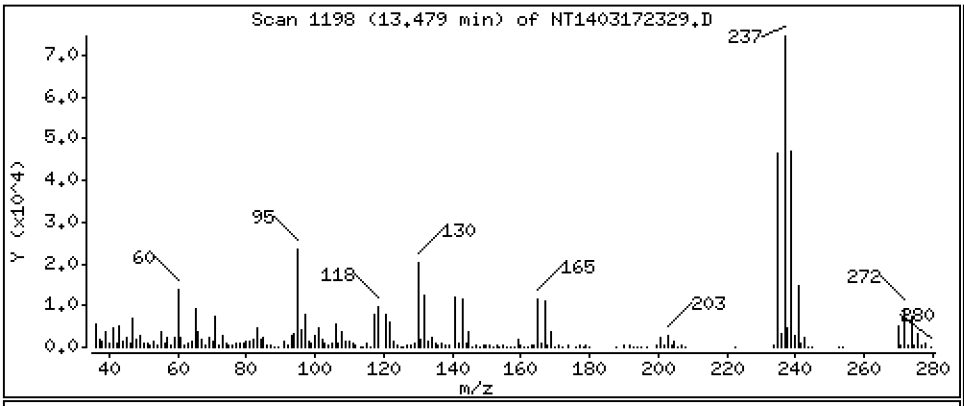
Operator: JGR

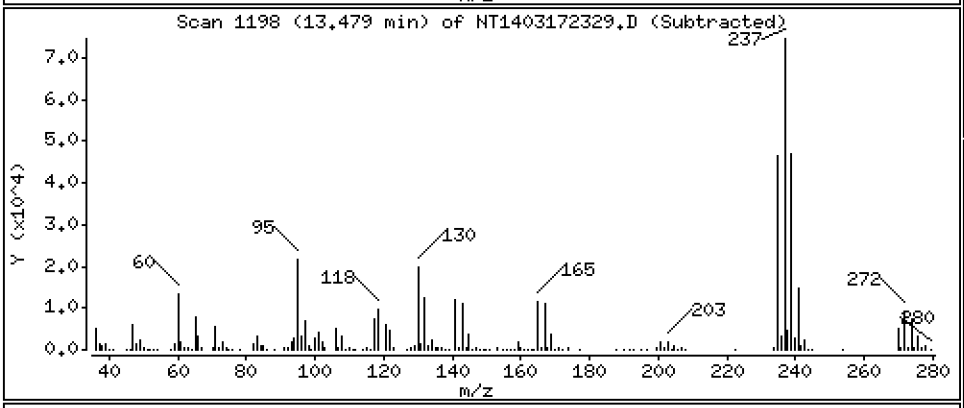
Column phase: ZB-5msi

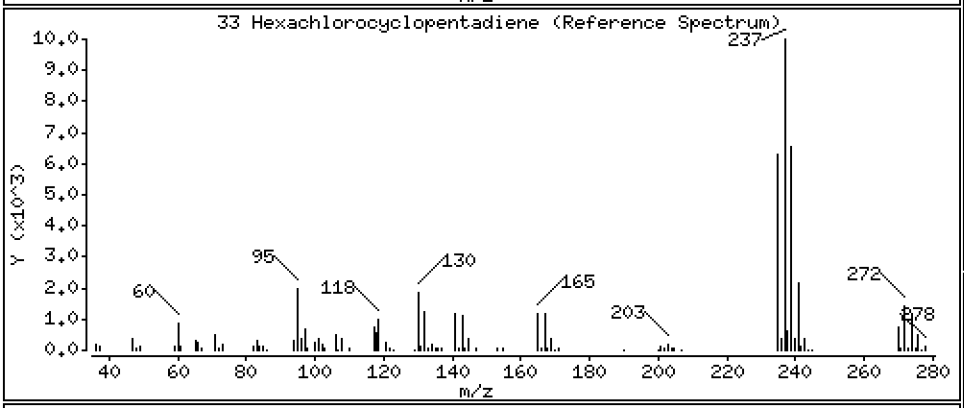
Column diameter: 0.25

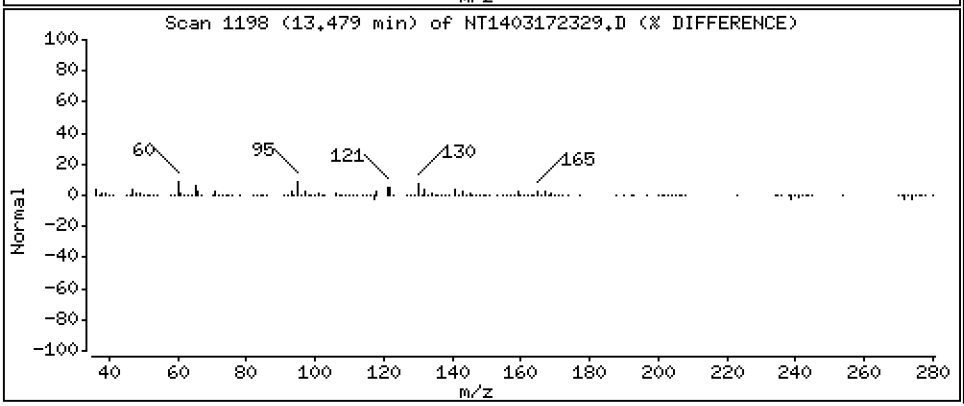
33 Hexachlorocyclopentadiene

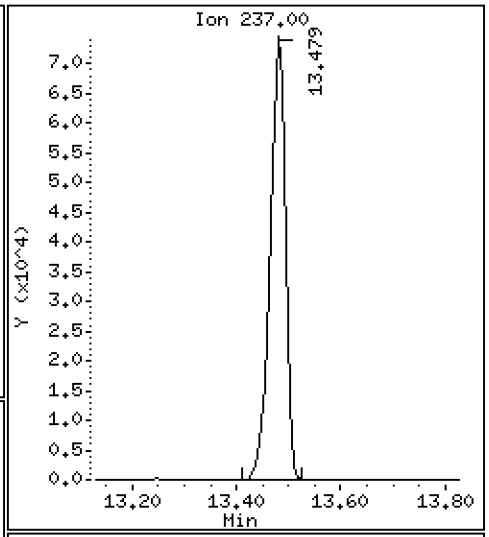
Concentration: 4.278 ug/mL

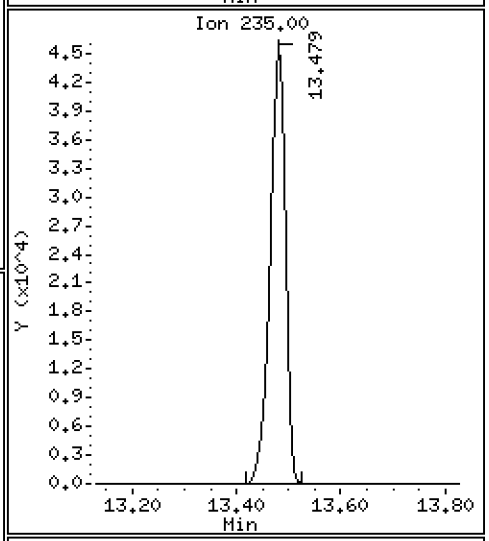


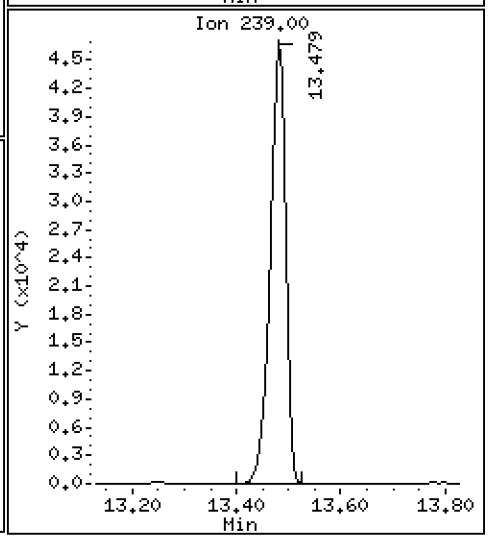












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Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

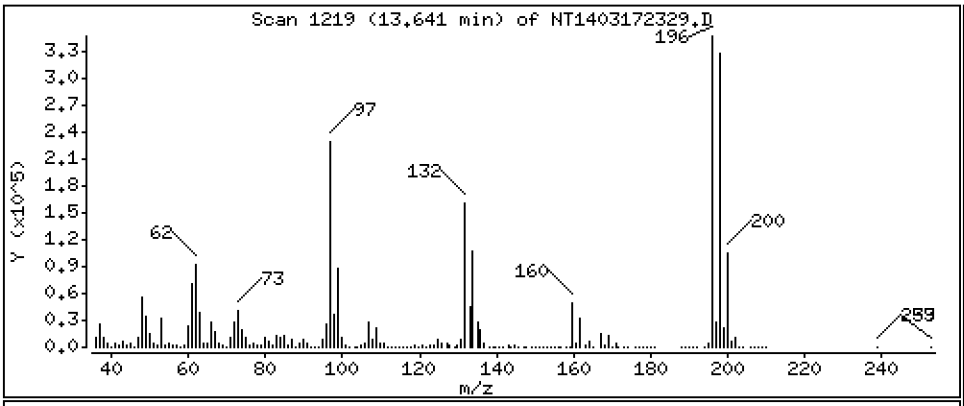
Operator: JGR

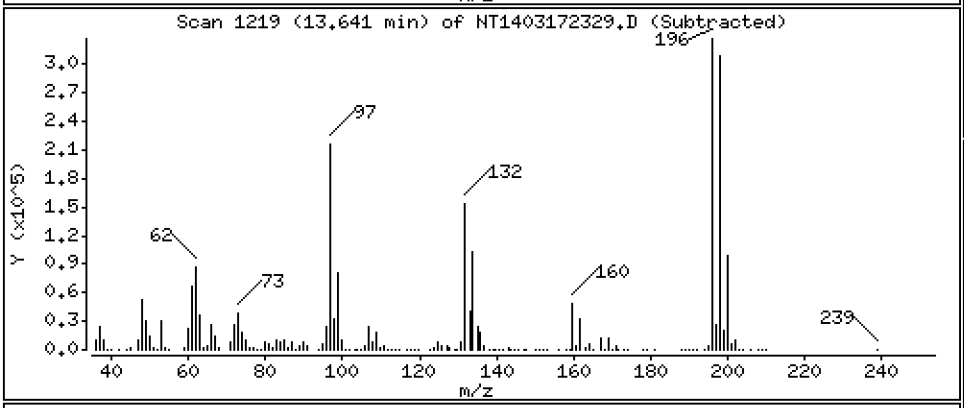
Column phase: ZB-5msi

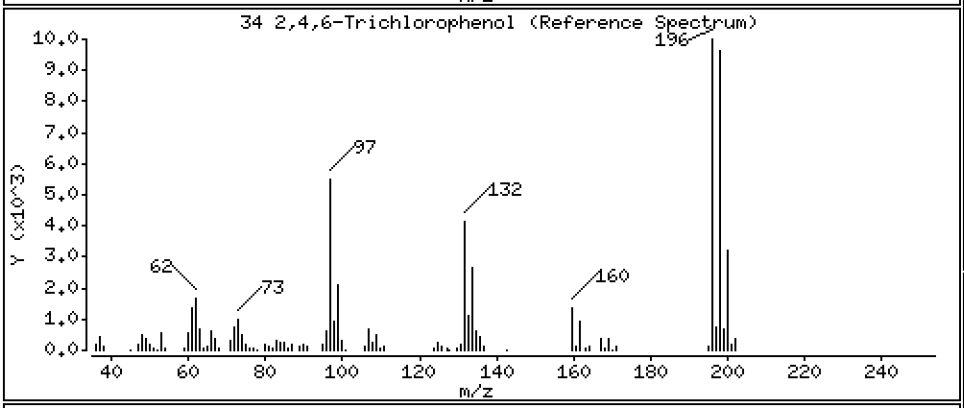
Column diameter: 0.25

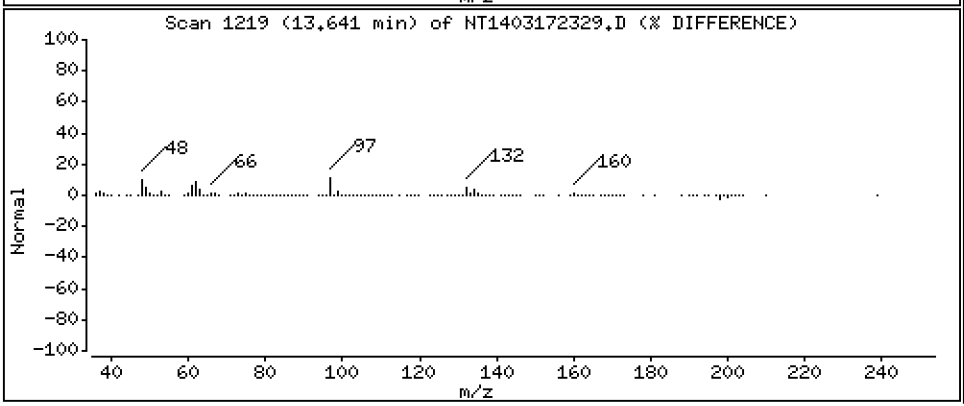
34 2,4,6-Trichlorophenol

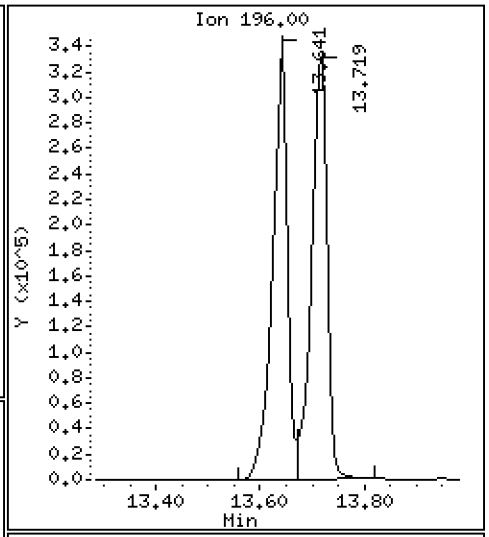
Concentration: 15.93 ug/mL

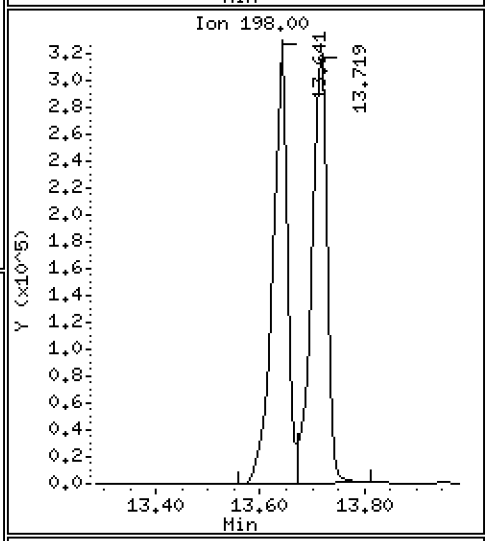


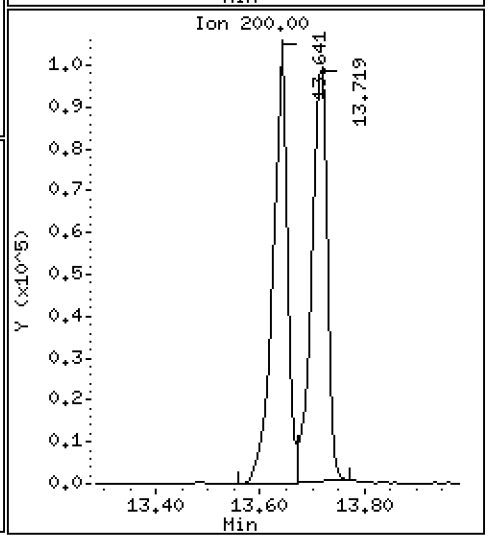












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Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

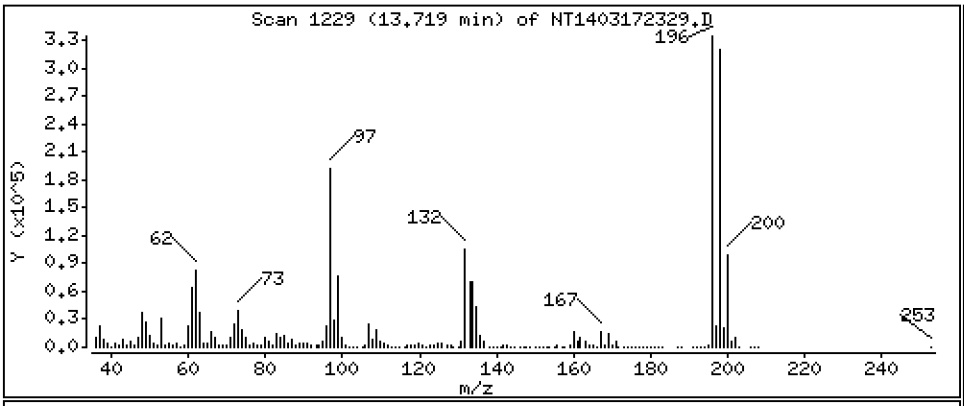
Operator: JGR

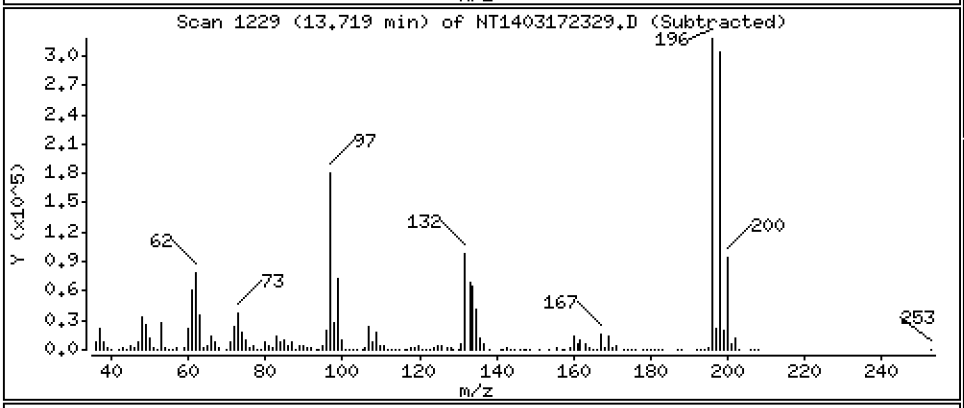
Column phase: ZB-5msi

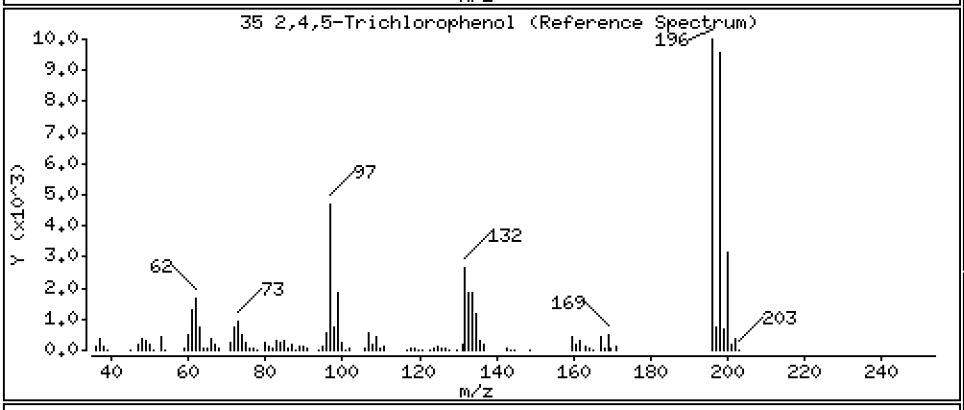
Column diameter: 0.25

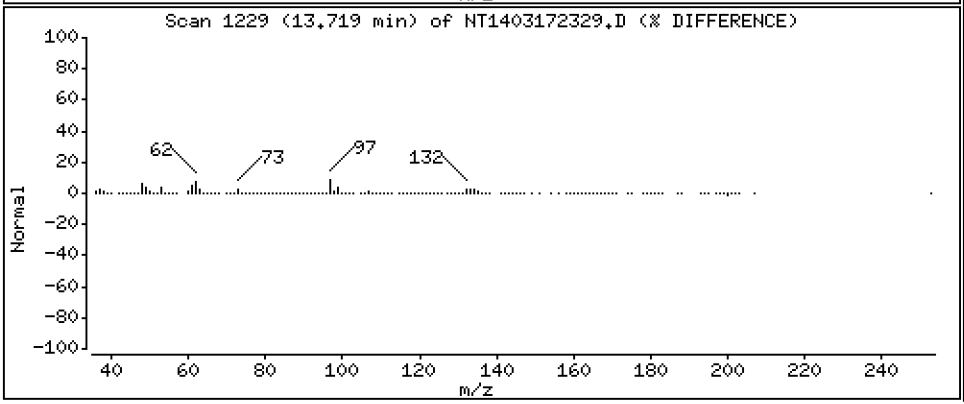
35 2,4,5-Trichlorophenol

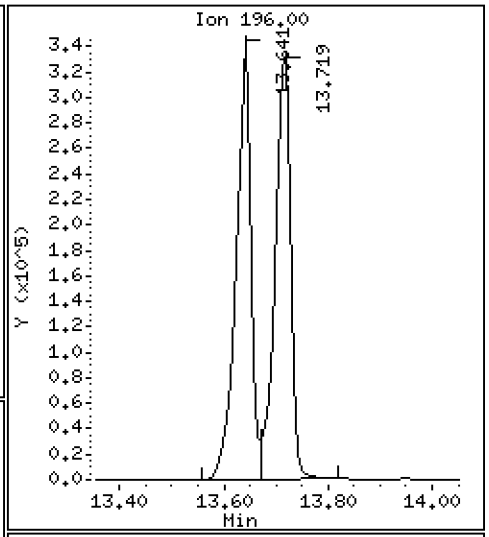
Concentration: 15.55 ug/mL

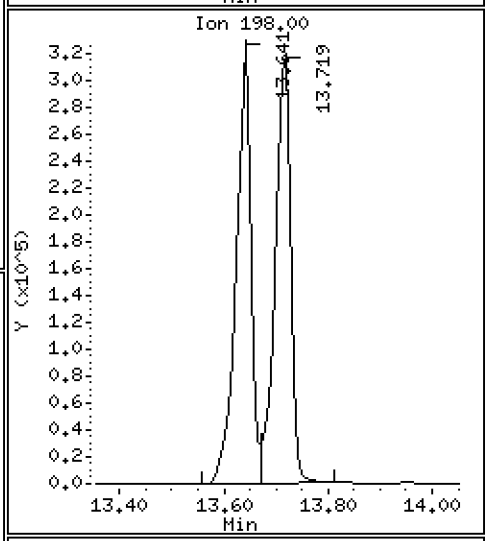


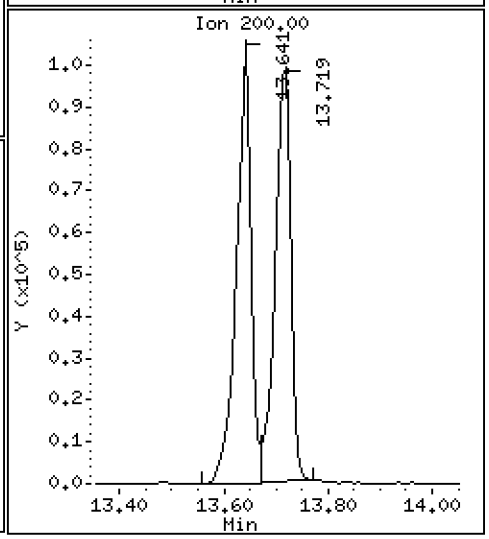












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Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

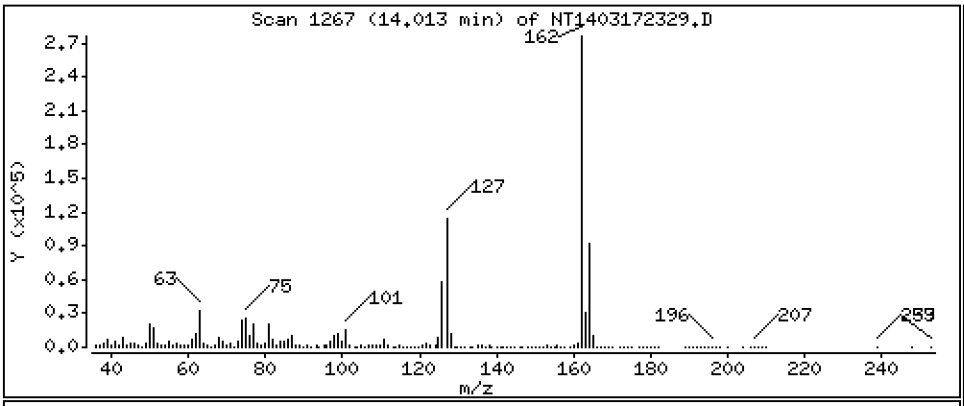
Operator: JGR

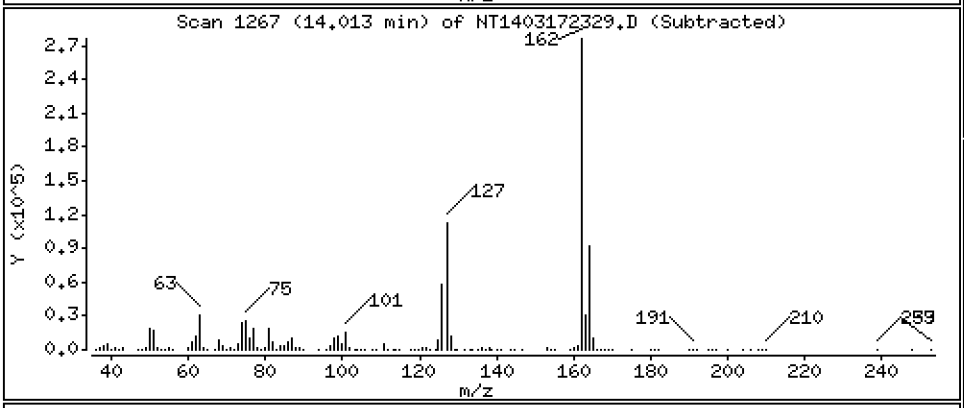
Column phase: ZB-5msi

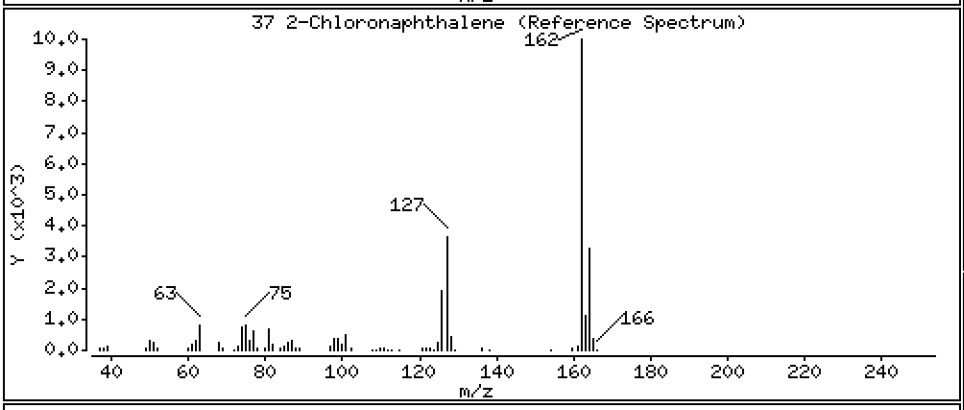
Column diameter: 0.25

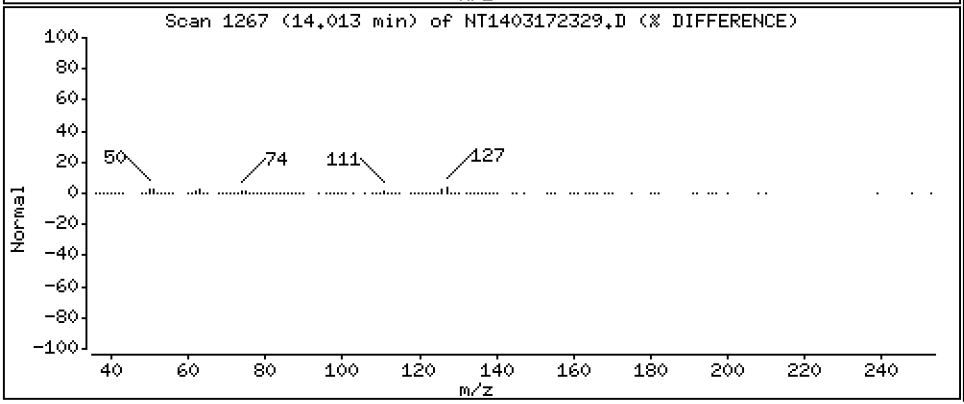
37 2-Chloronaphthalene

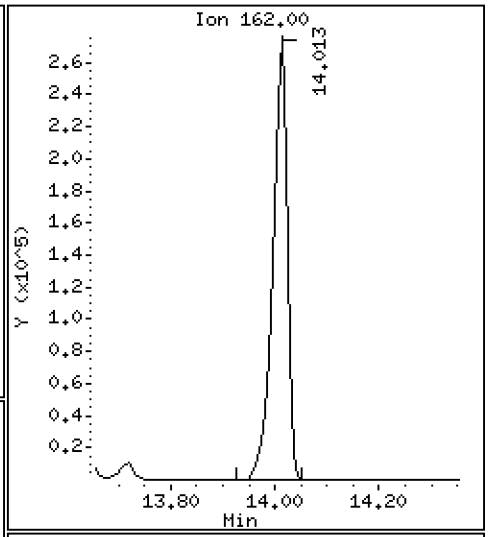
Concentration: 4.053 ug/mL

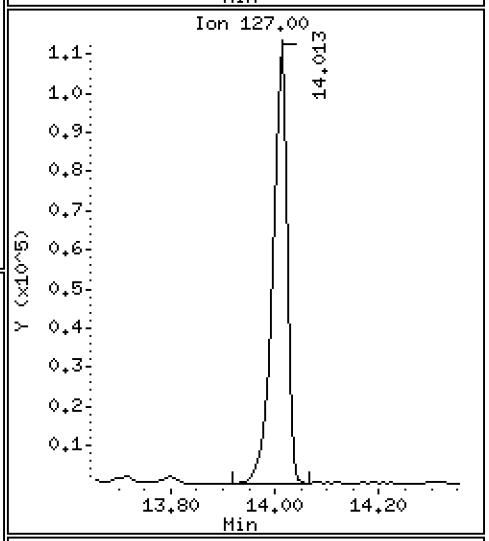


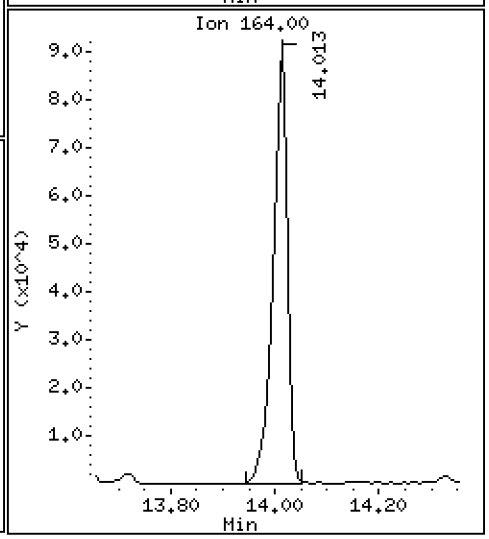












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Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

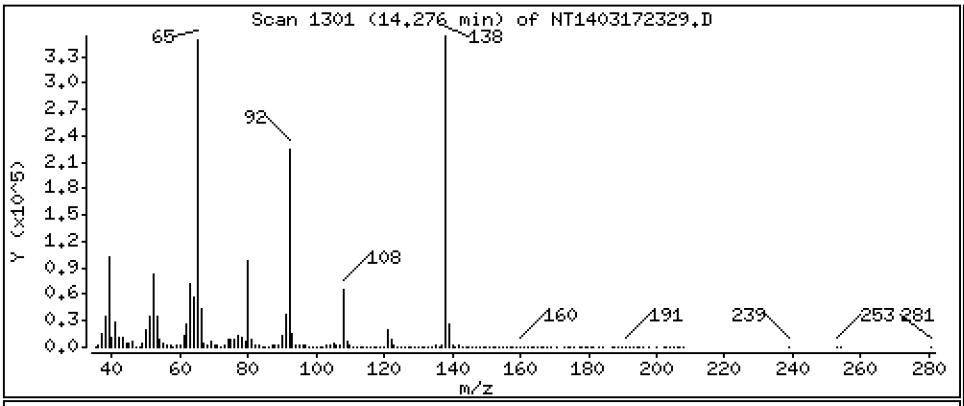
Operator: JGR

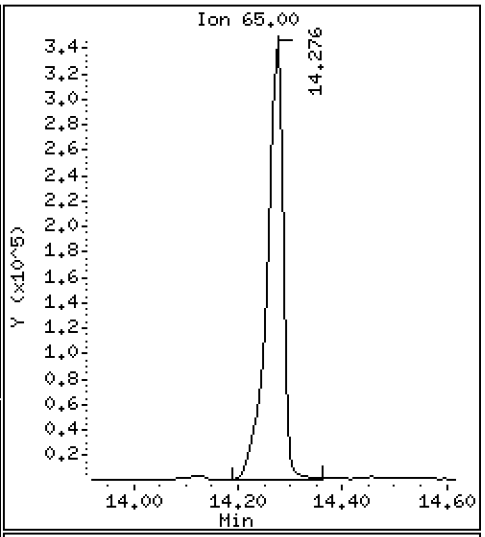
Column phase: ZB-5msi

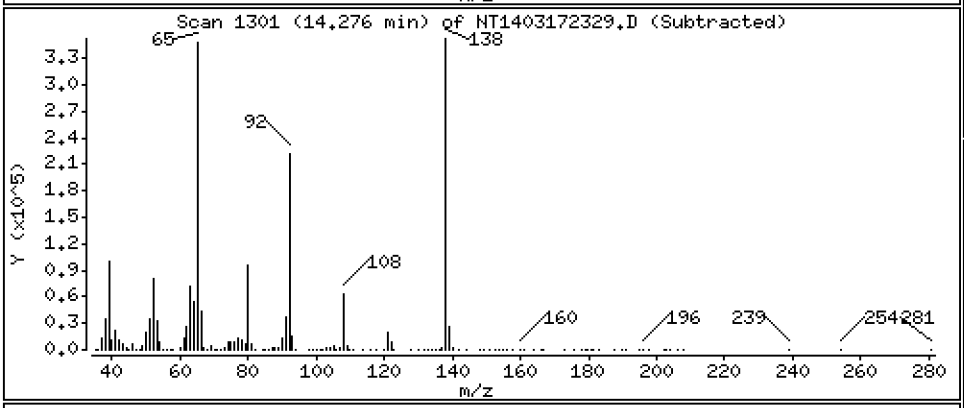
Column diameter: 0.25

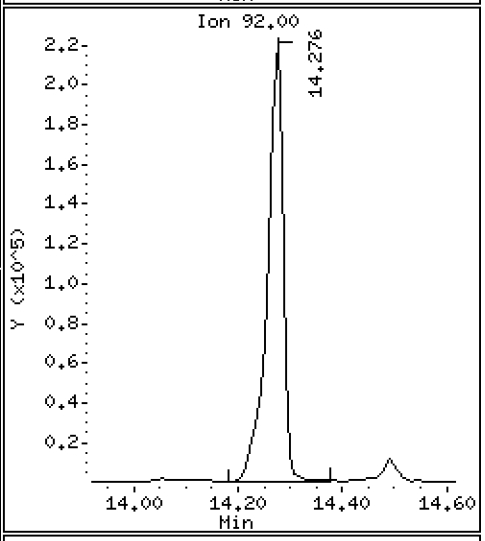
38 2-Nitroaniline

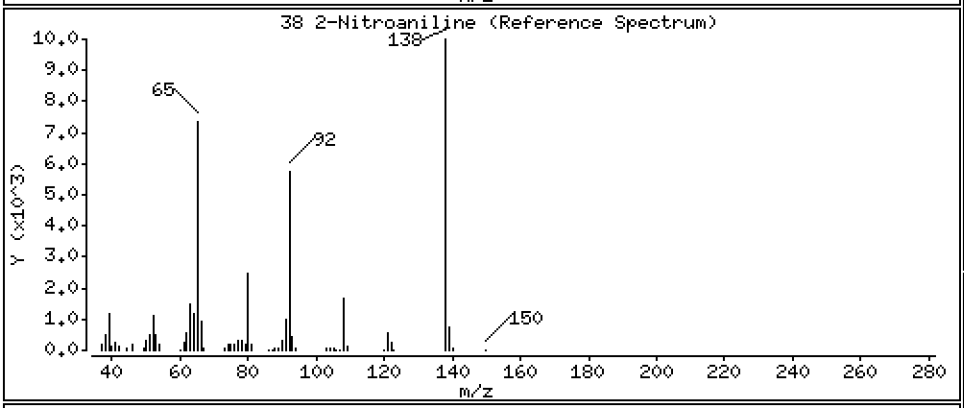
Concentration: 14.44 ug/mL

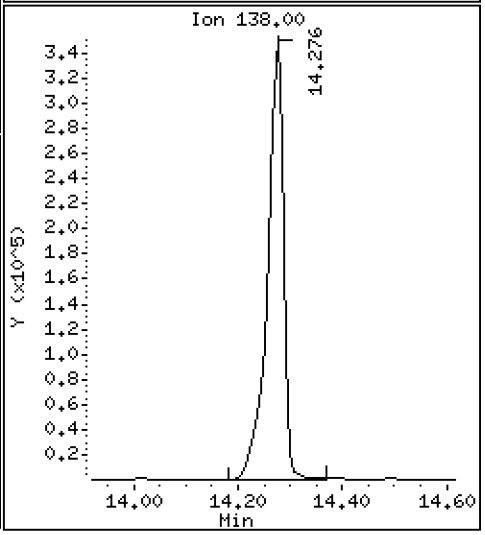


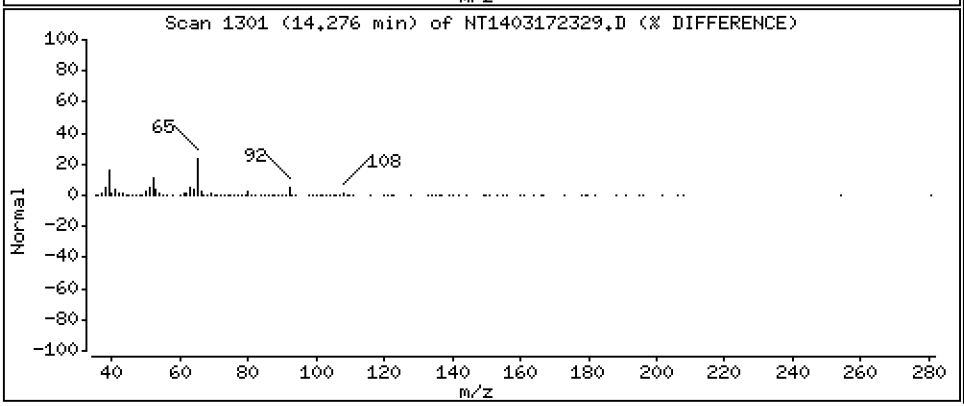












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Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

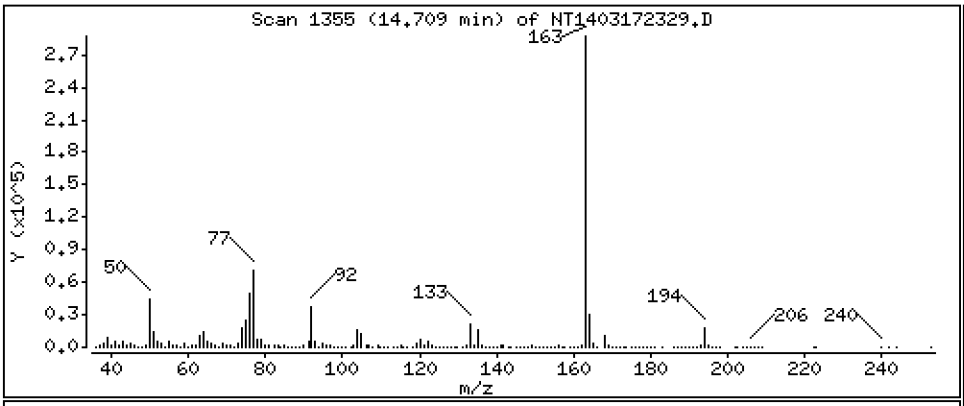
Operator: JGR

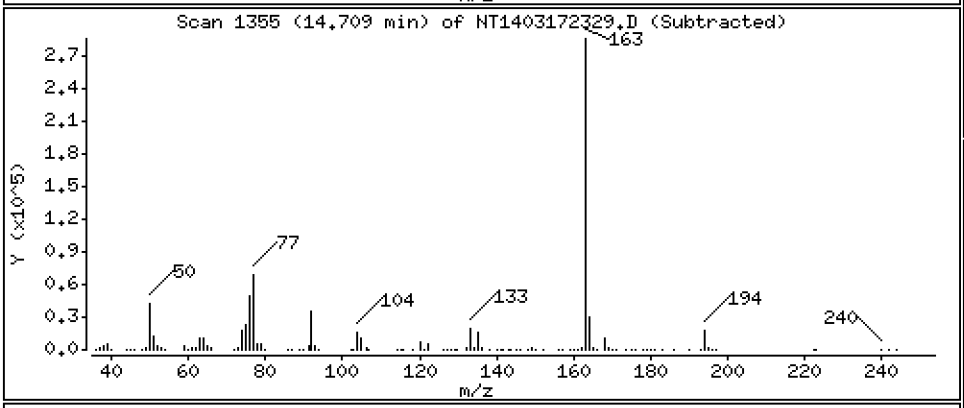
Column phase: ZB-5msi

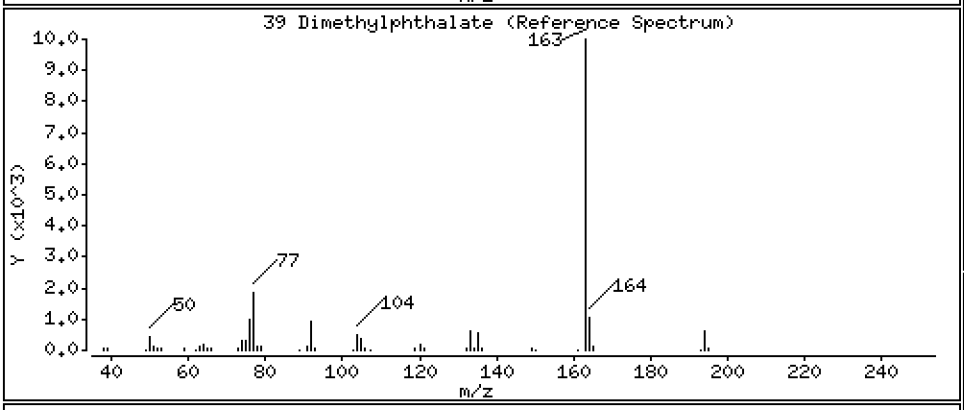
Column diameter: 0.25

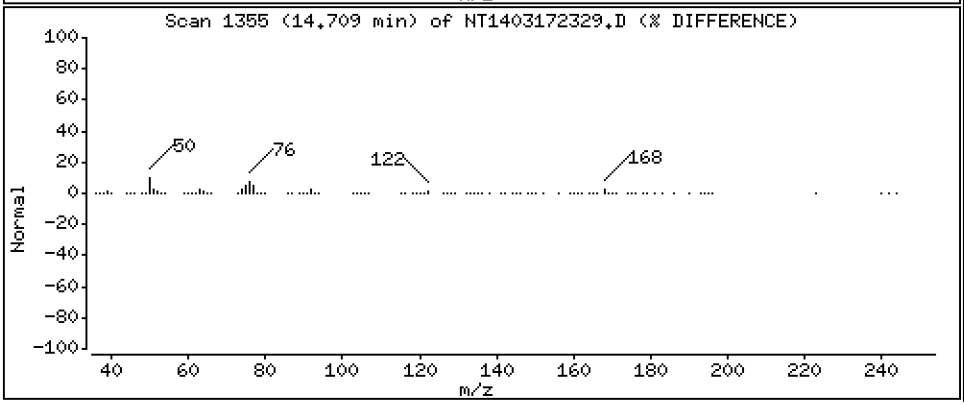
39 Dimethylphthalate

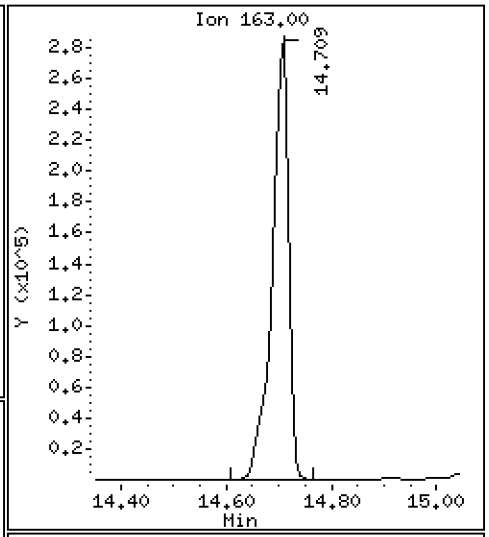
Concentration: 4.436 ug/mL

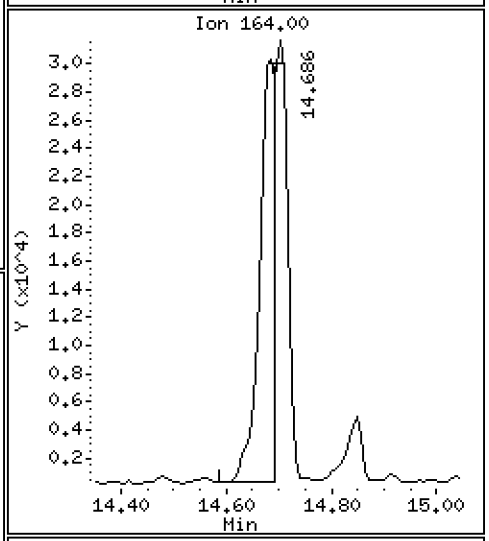


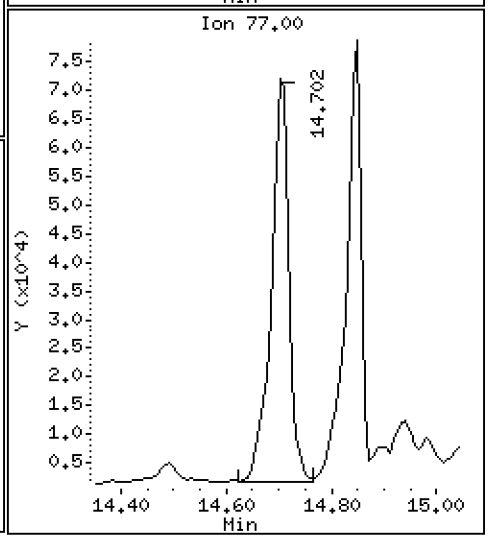












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Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

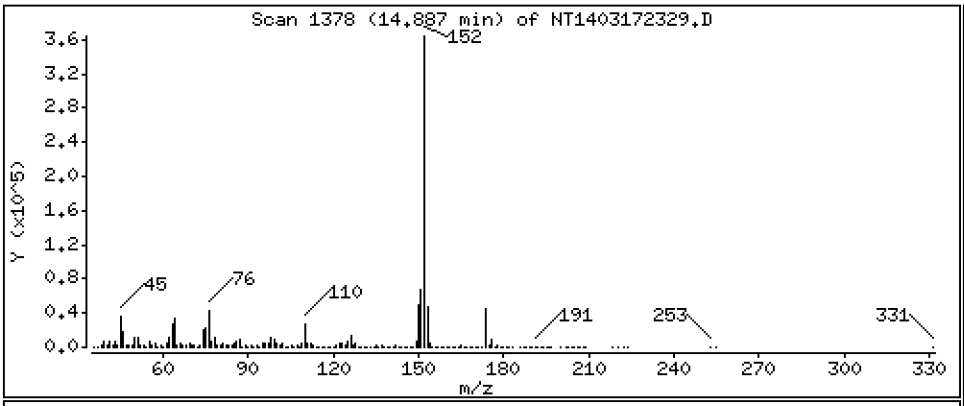
Operator: JGR

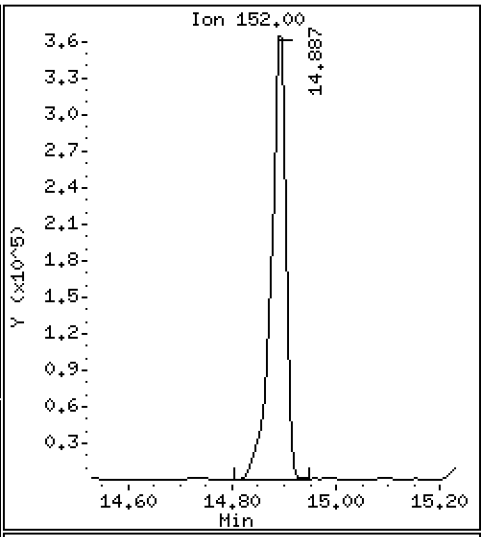
Column phase: ZB-5msi

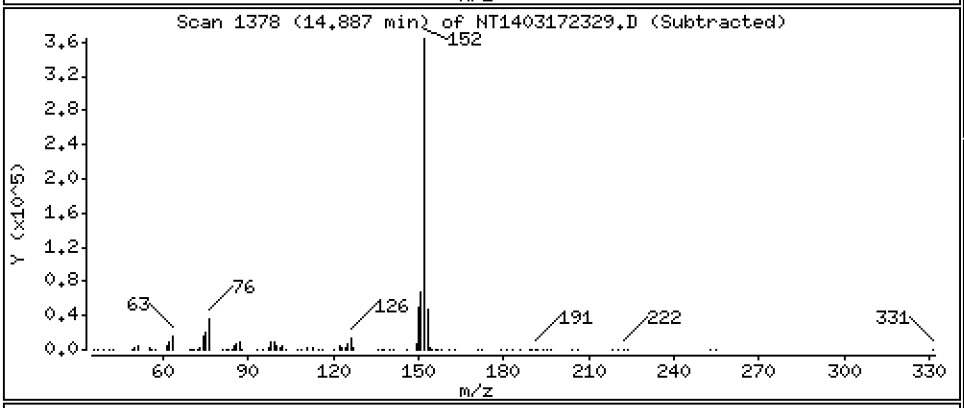
Column diameter: 0.25

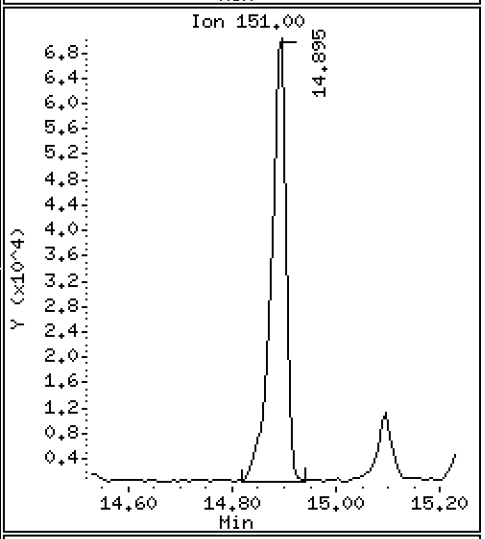
40 Acenaphthylene

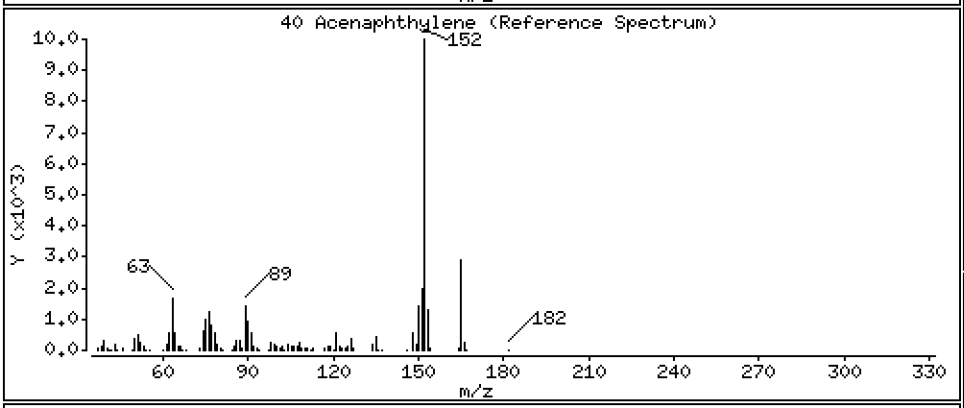
Concentration: 3.387 ug/mL

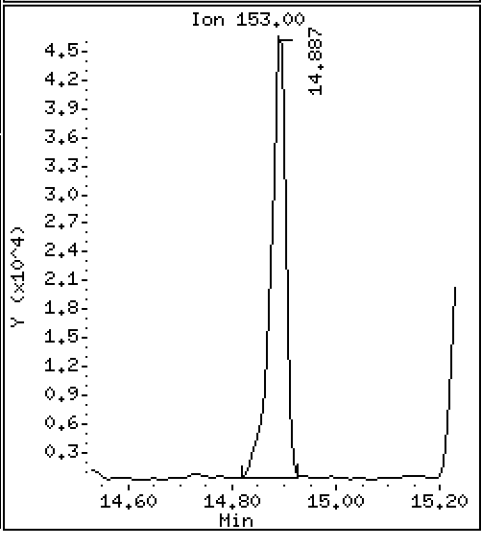


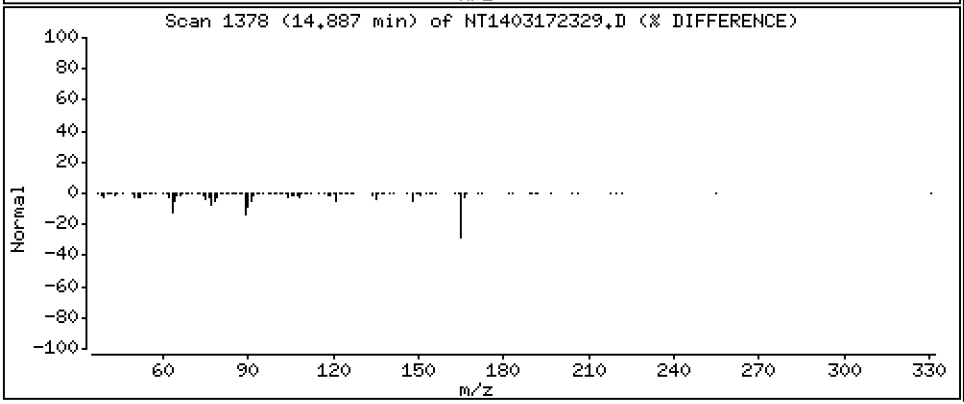












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Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

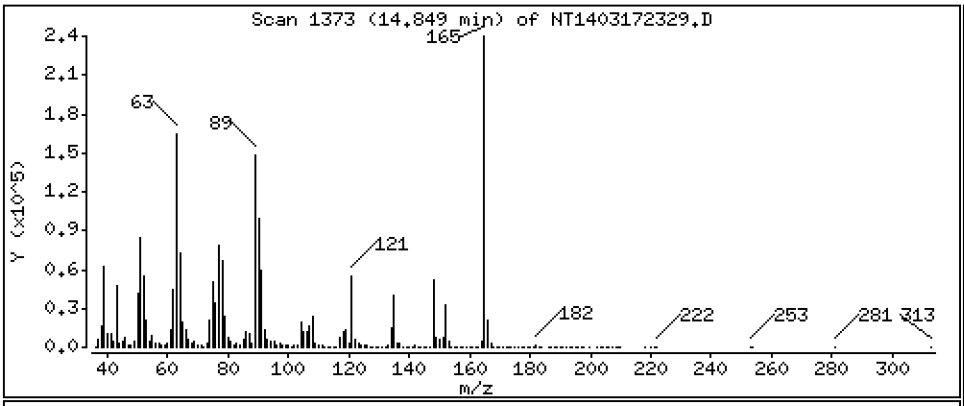
Operator: JGR

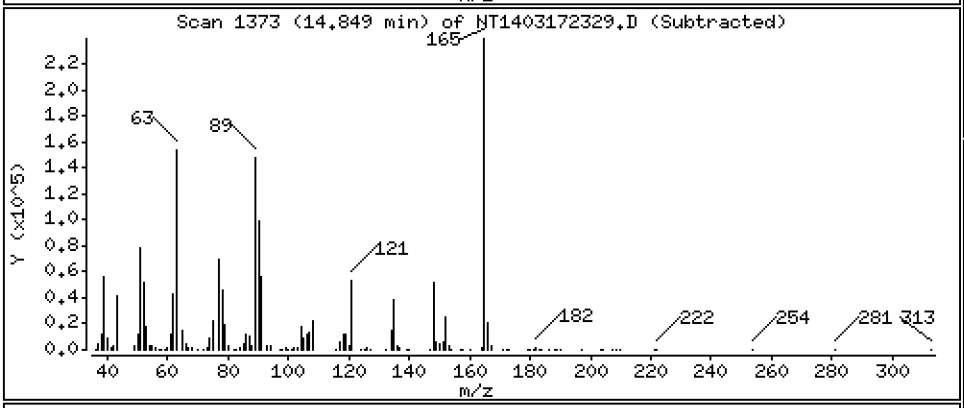
Column phase: ZB-5msi

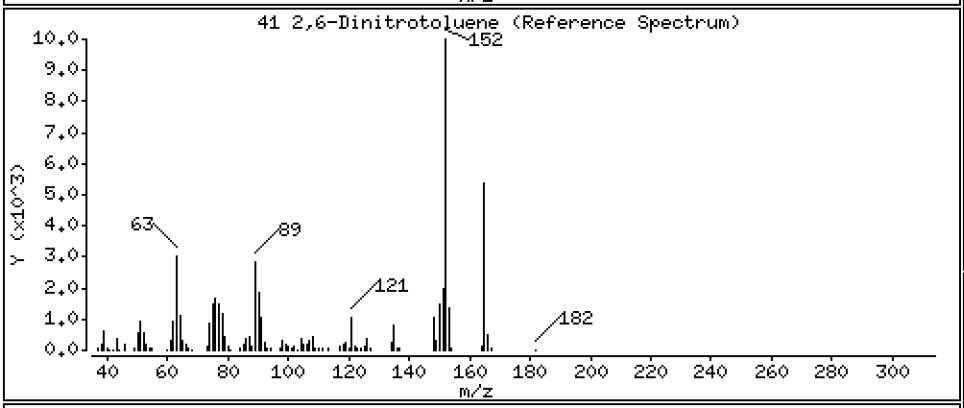
Column diameter: 0.25

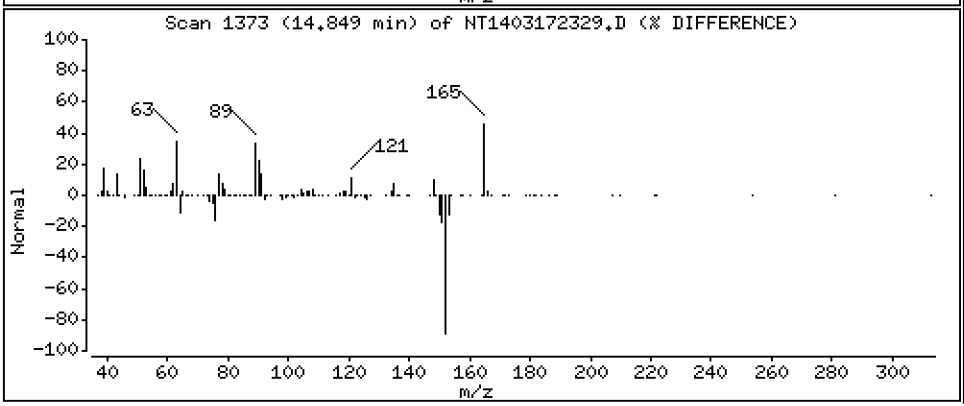
41 2,6-Dinitrotoluene

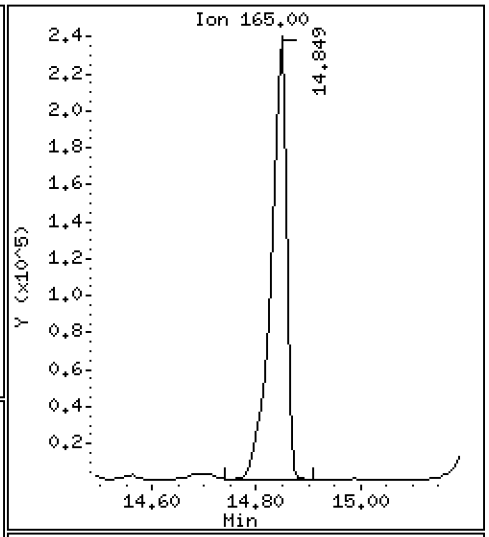
Concentration: 15.25 ug/mL

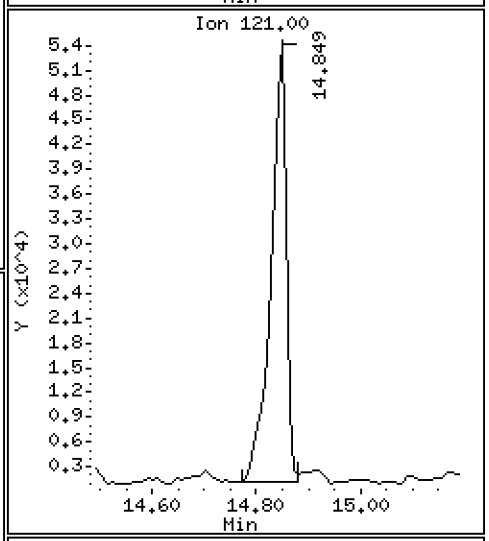


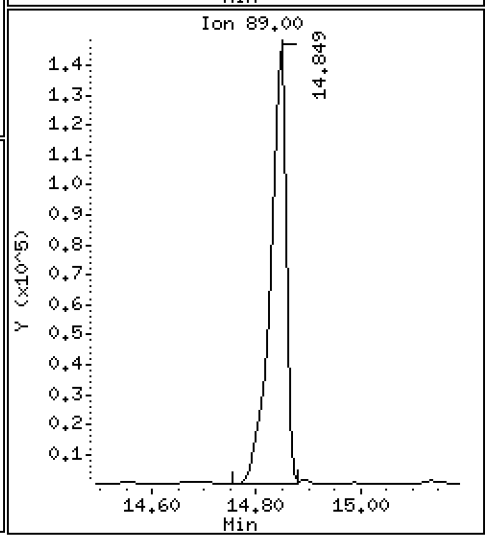












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Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

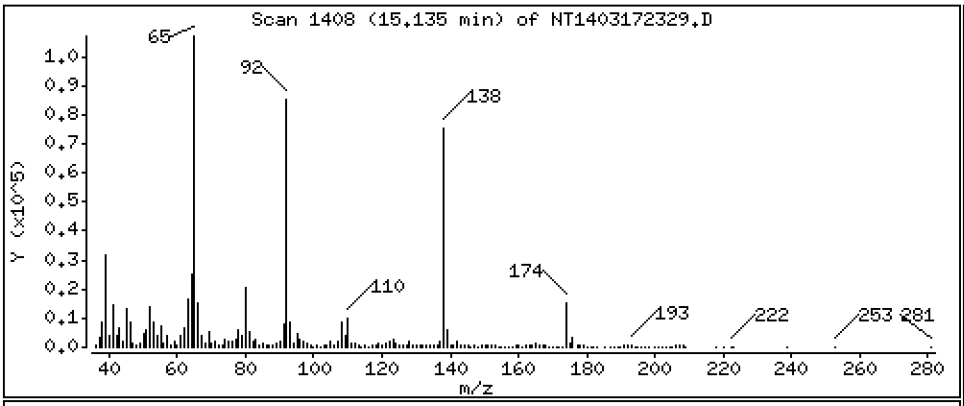
Operator: JGR

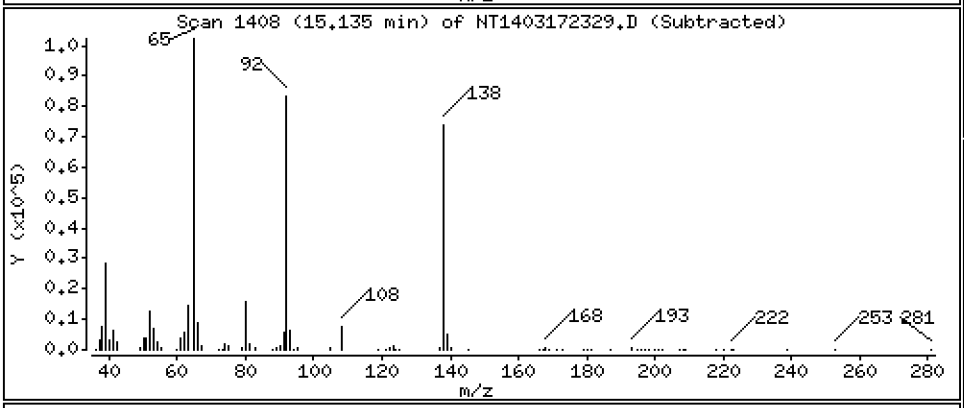
Column phase: ZB-5msi

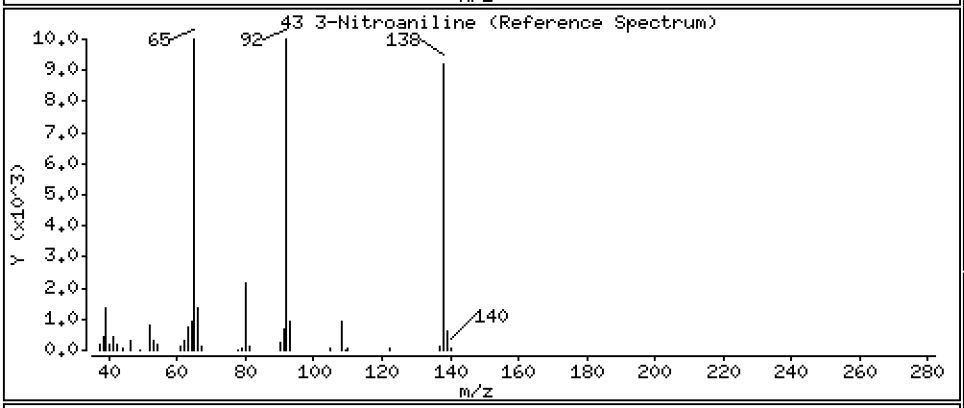
Column diameter: 0.25

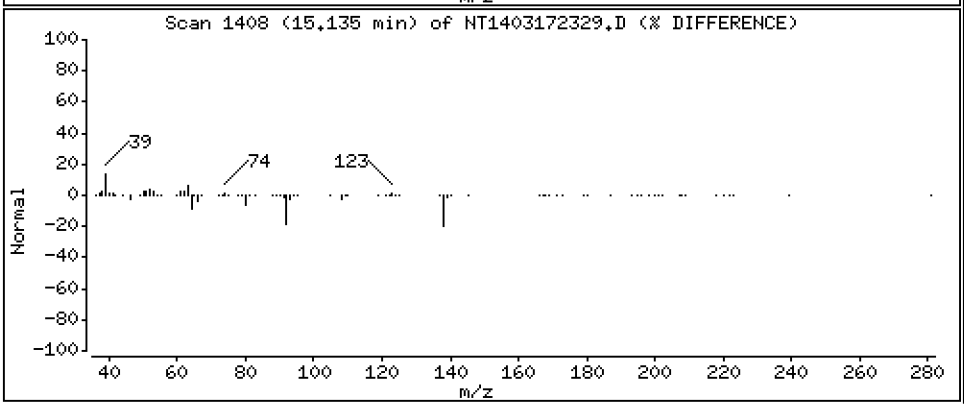
43 3-Nitroaniline

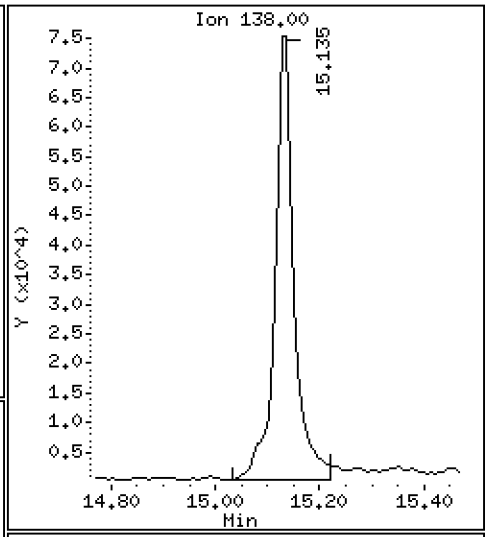
Concentration: 4.722 ug/mL

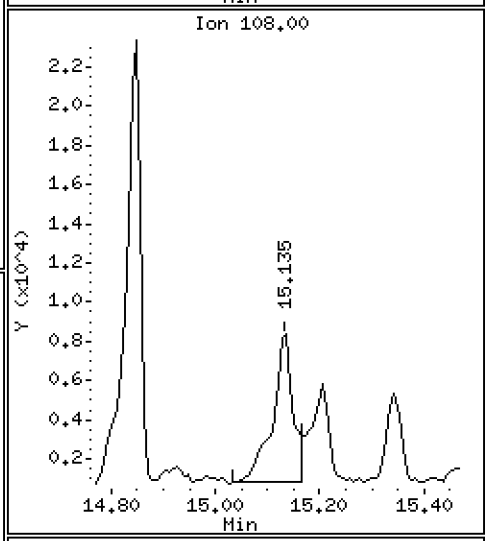


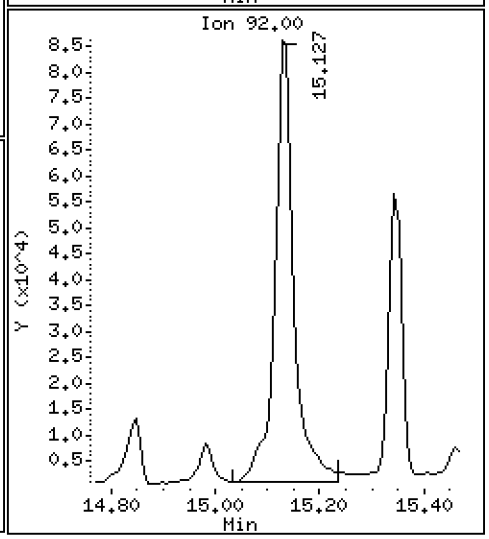












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Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

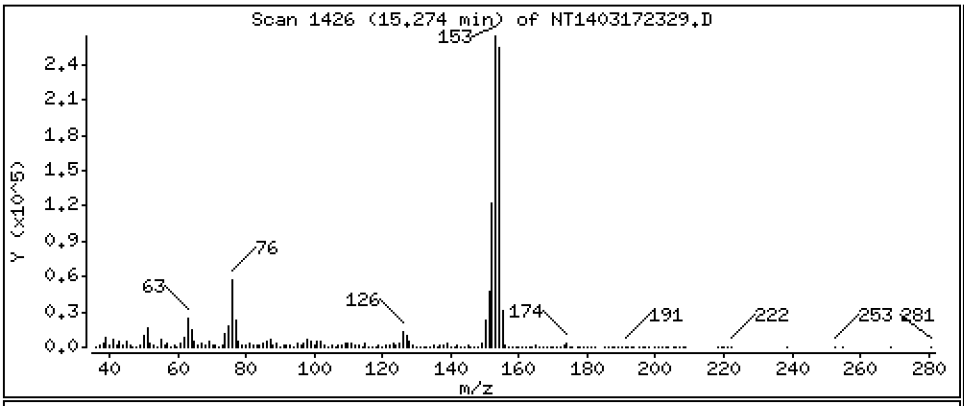
Operator: JGR

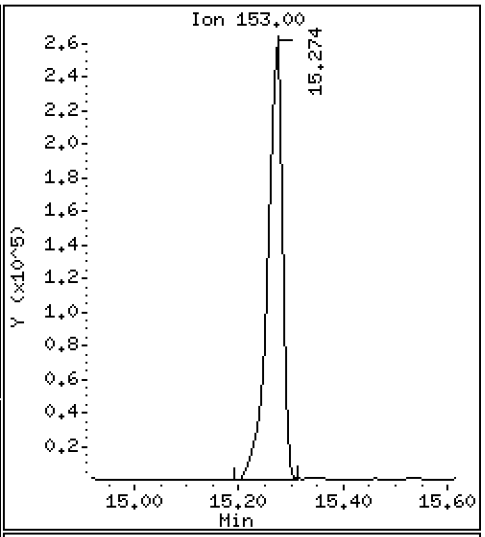
Column phase: ZB-5msi

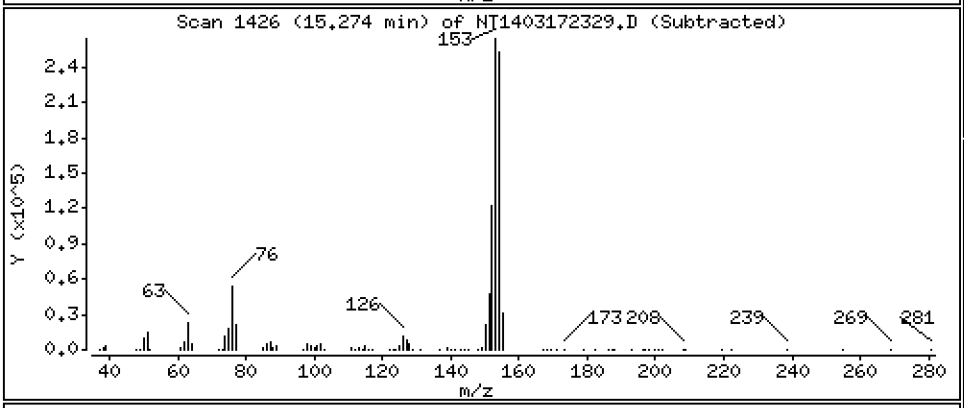
Column diameter: 0.25

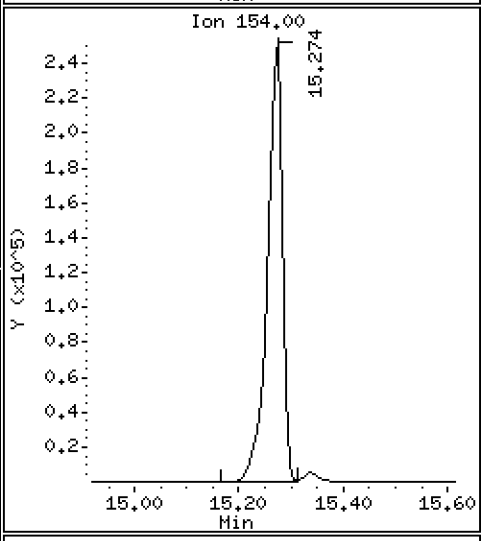
44 Acenaphthene

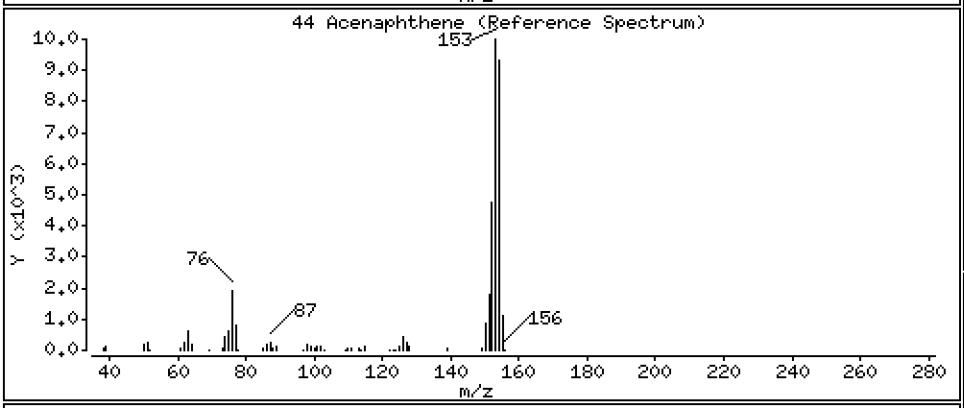
Concentration: 4.015 ug/mL

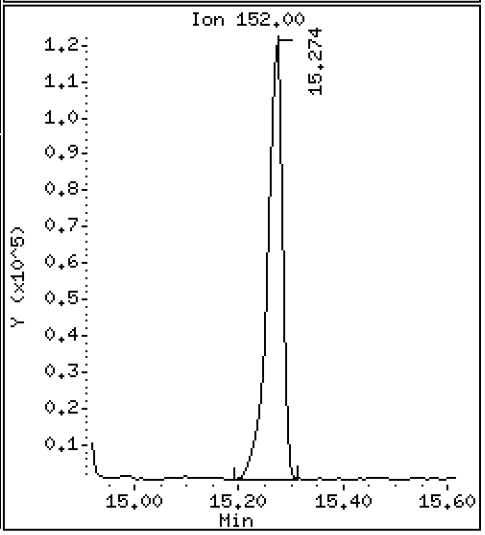


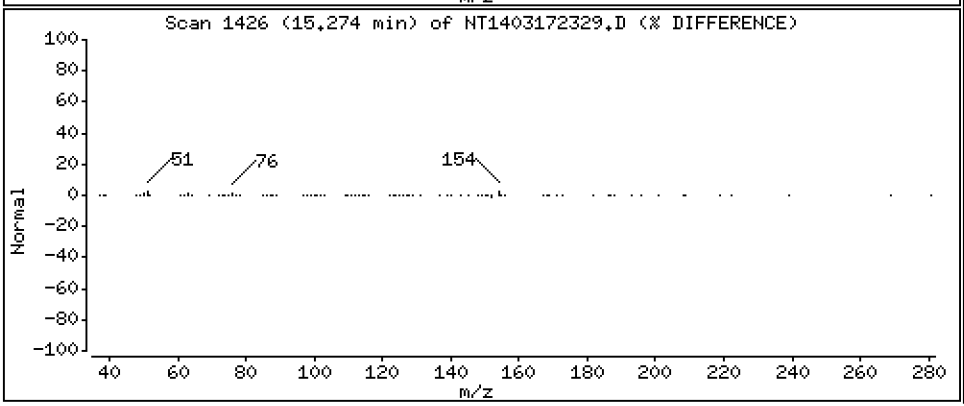












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Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

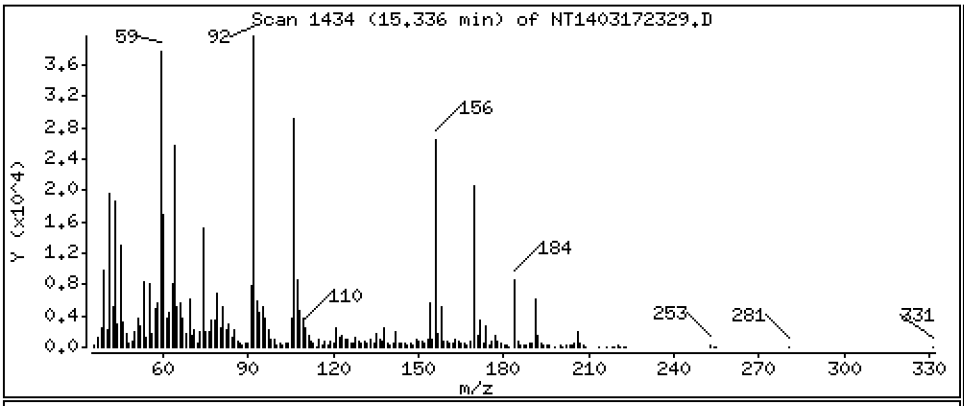
Operator: JGR

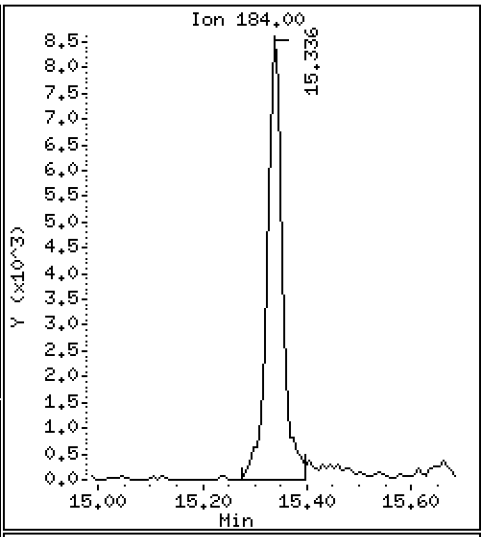
Column phase: ZB-5msi

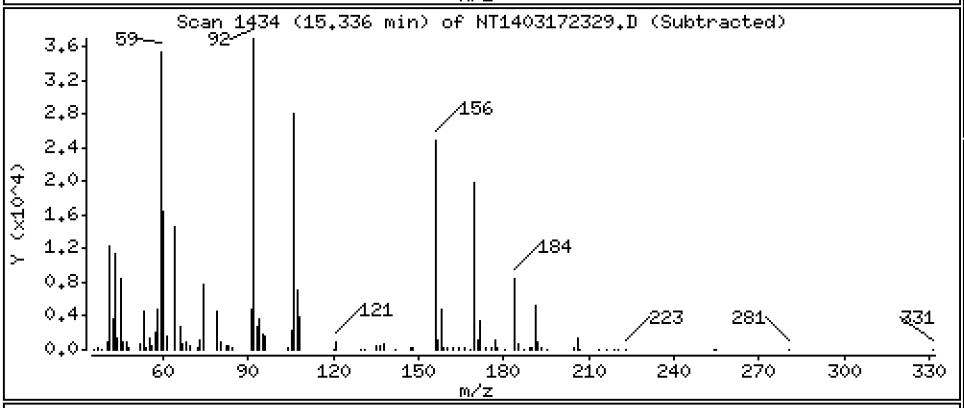
Column diameter: 0.25

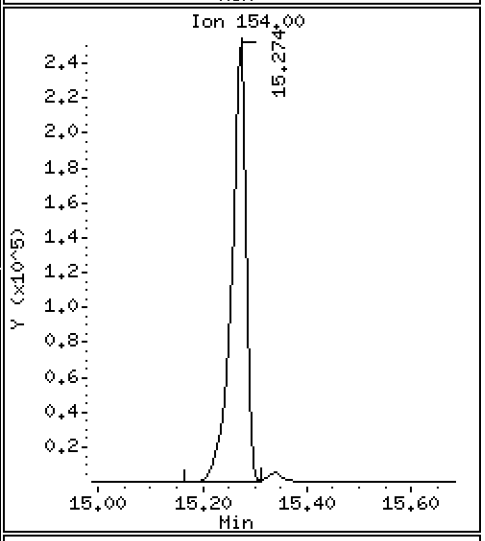
45 2,4-Dinitrophenol

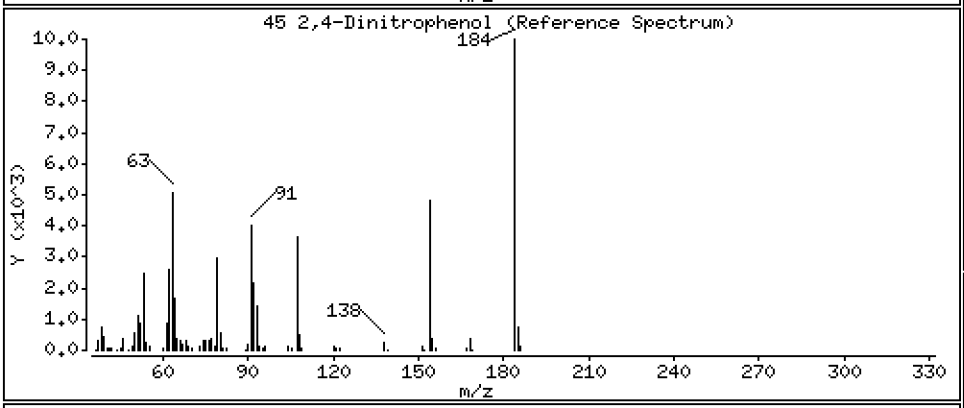
Concentration: 0.6929 ug/mL

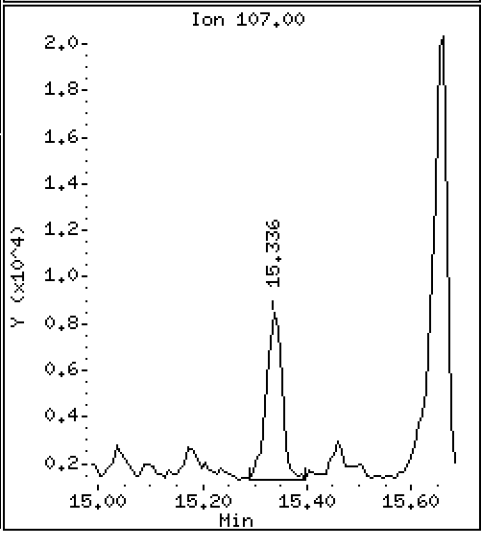


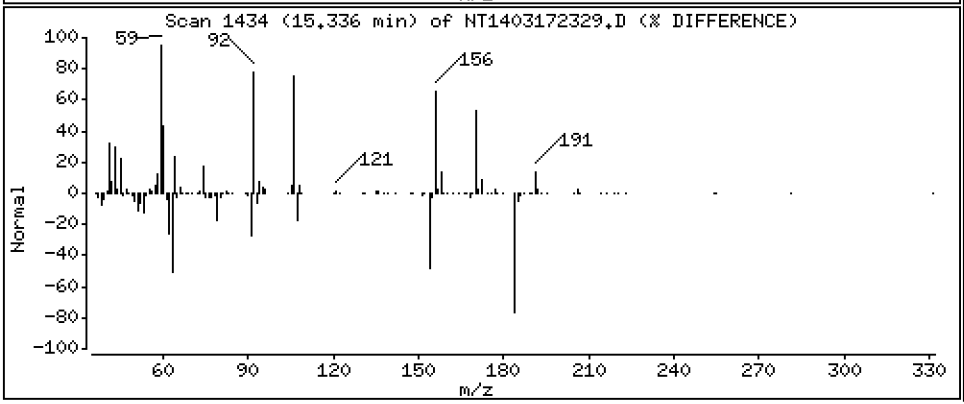












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Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

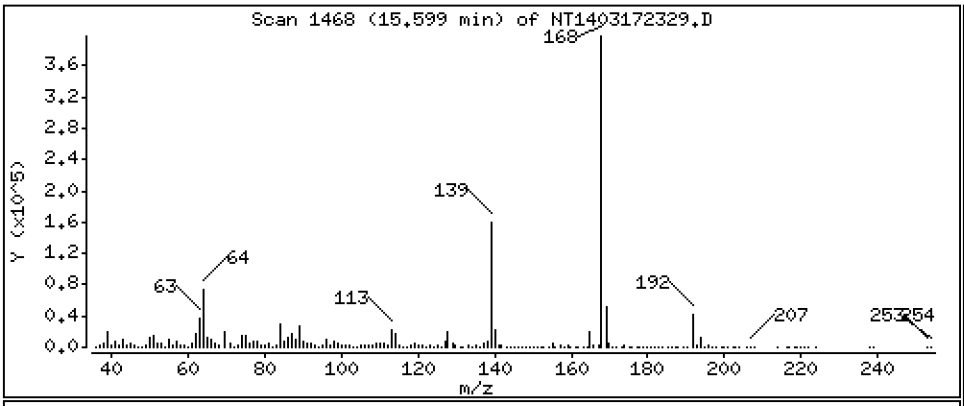
Operator: JGR

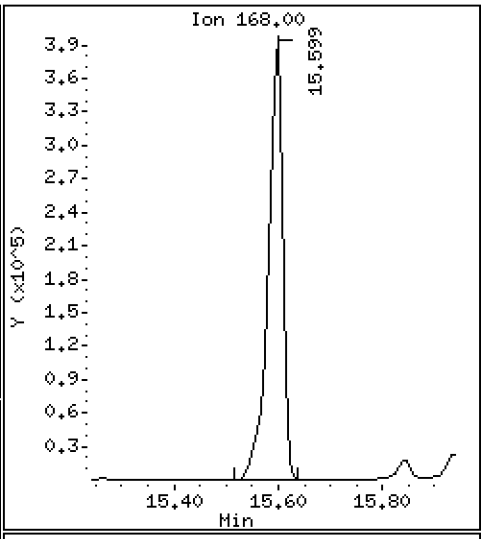
Column phase: ZB-5msi

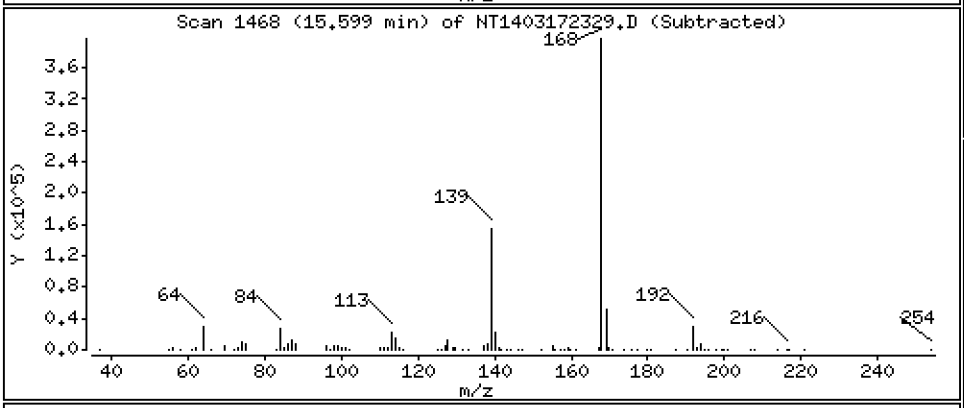
Column diameter: 0.25

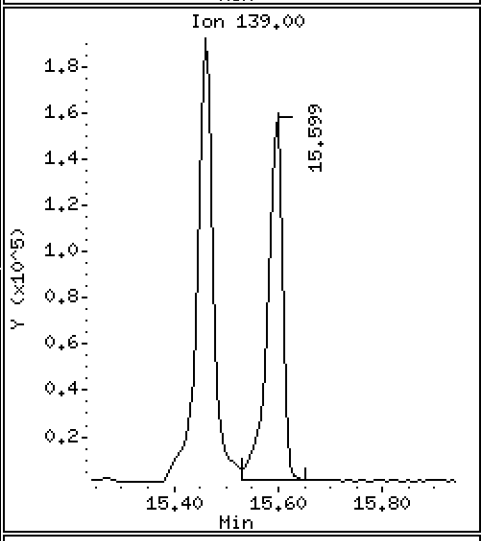
46 Dibenzofuran

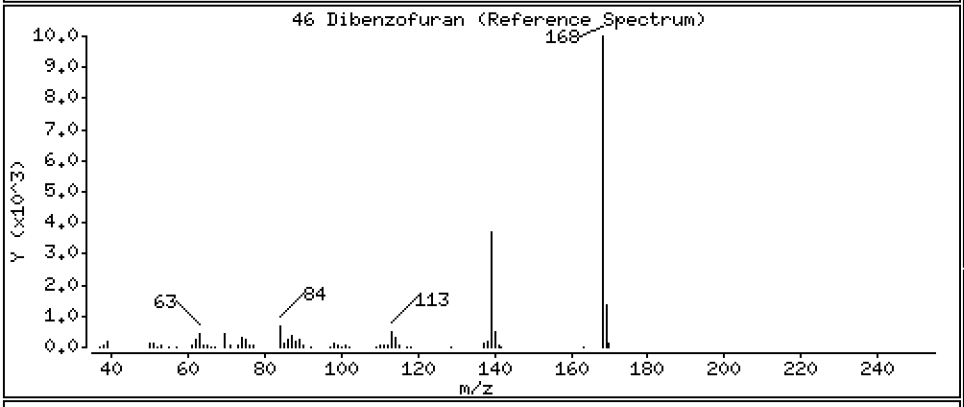
Concentration: 4.162 ug/mL

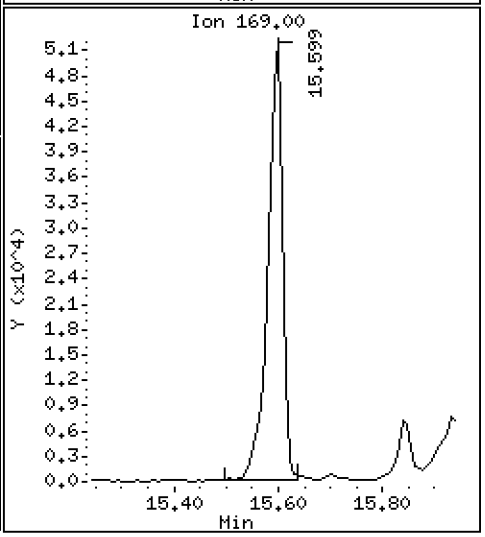


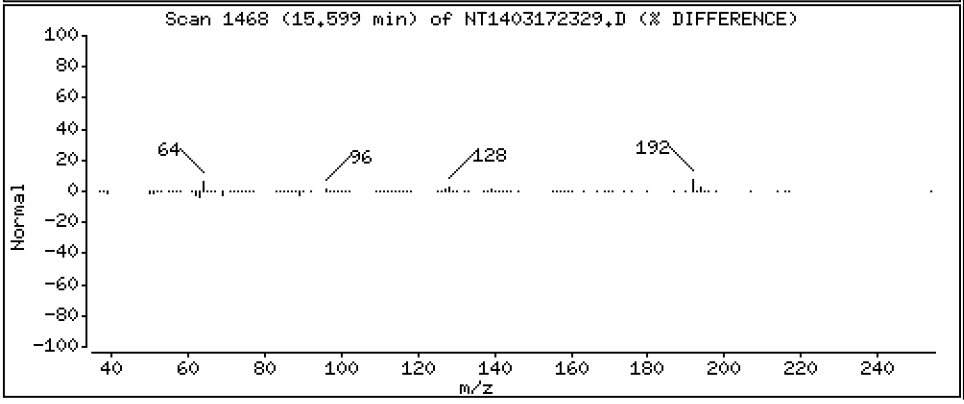












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Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

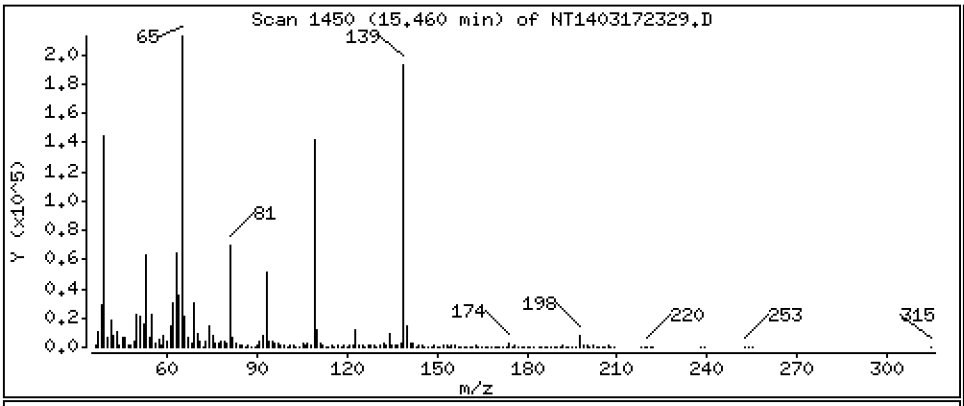
Operator: JGR

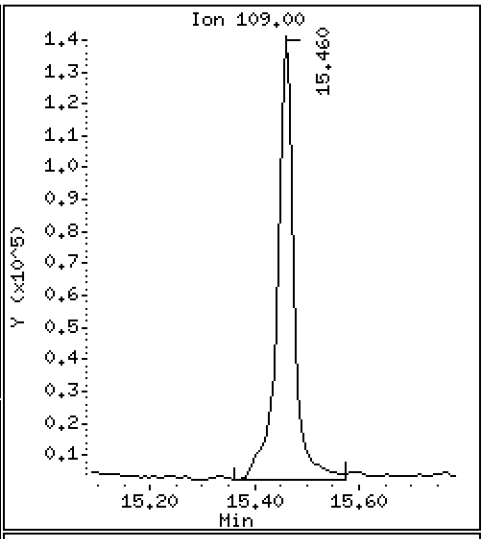
Column phase: ZB-5msi

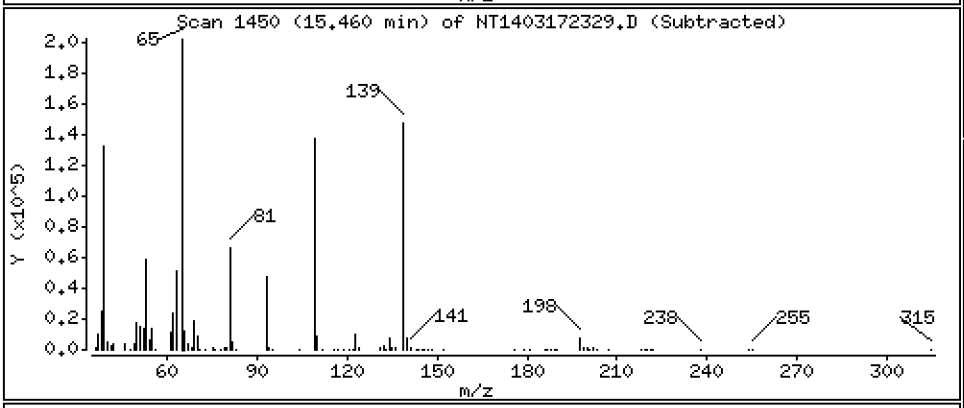
Column diameter: 0.25

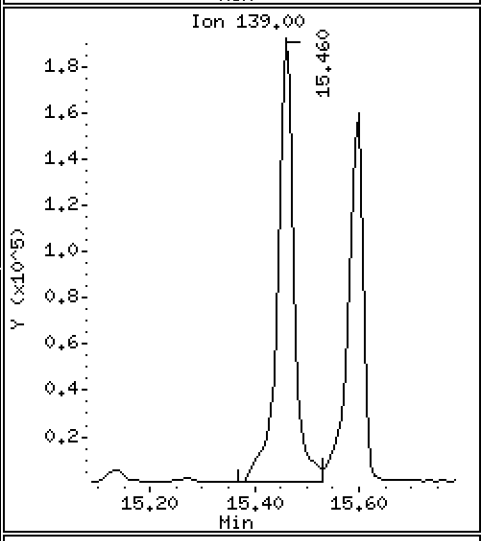
47 4-Nitrophenol

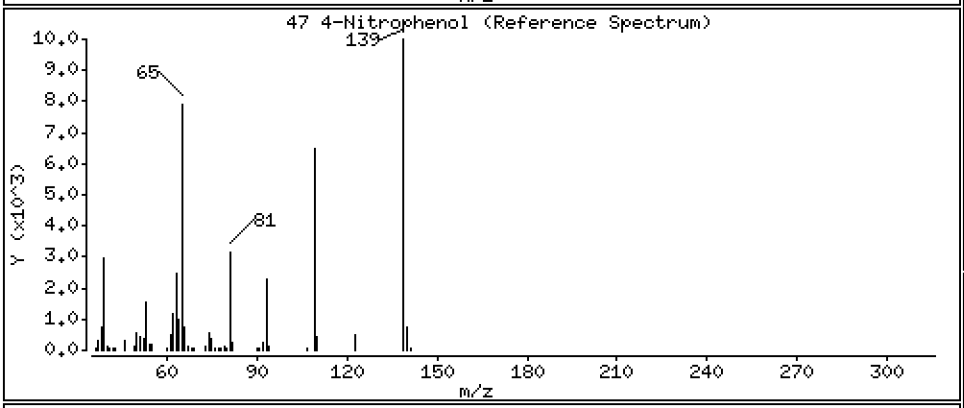
Concentration: 13.66 ug/mL

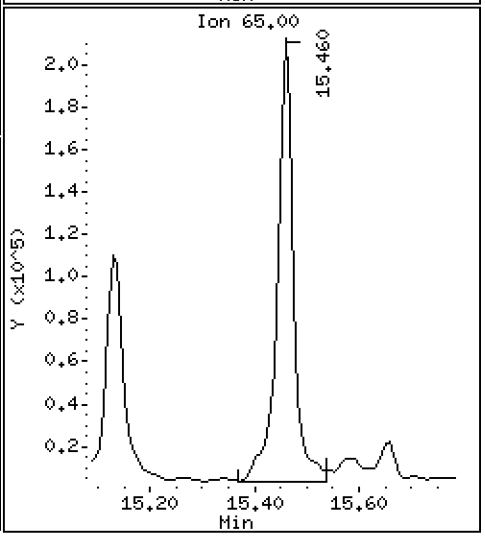


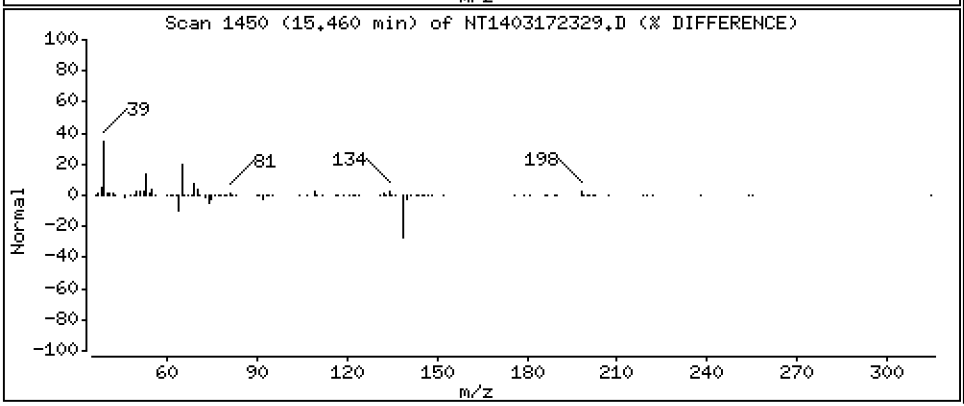












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Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

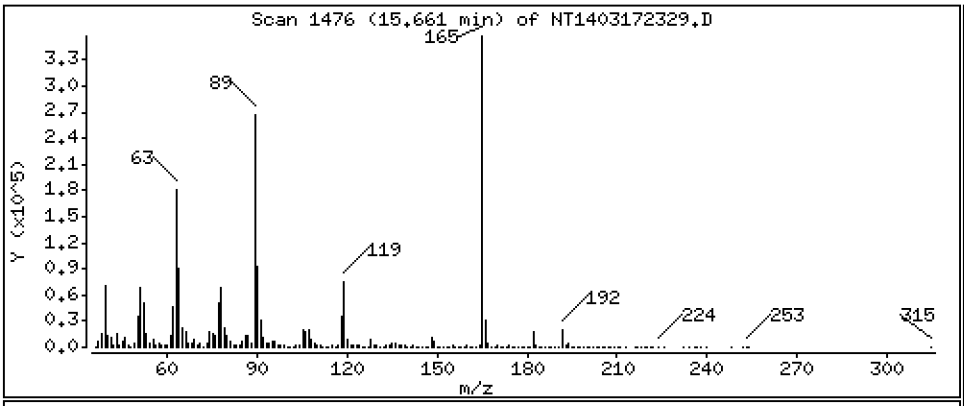
Operator: JGR

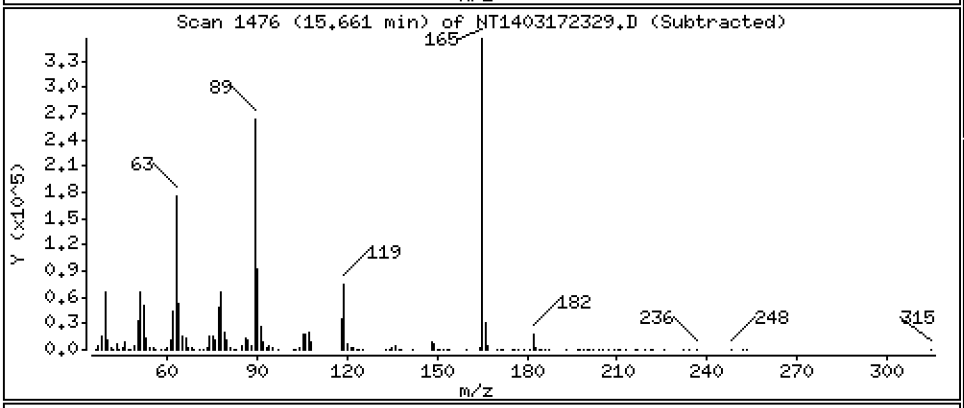
Column phase: ZB-5msi

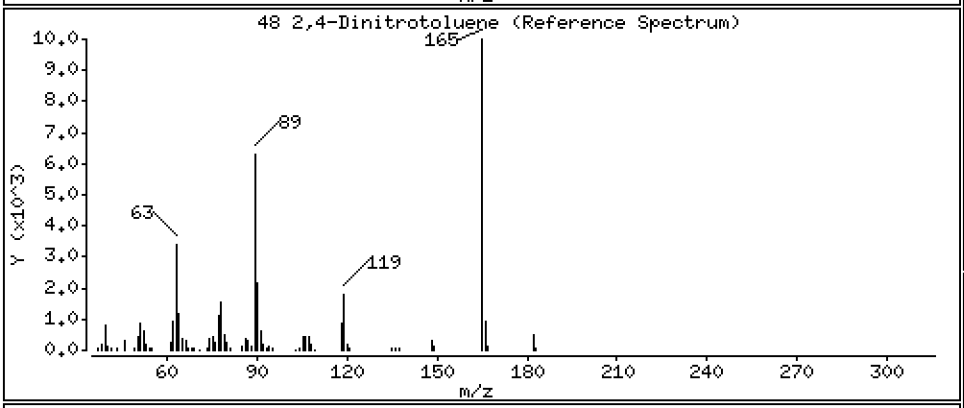
Column diameter: 0.25

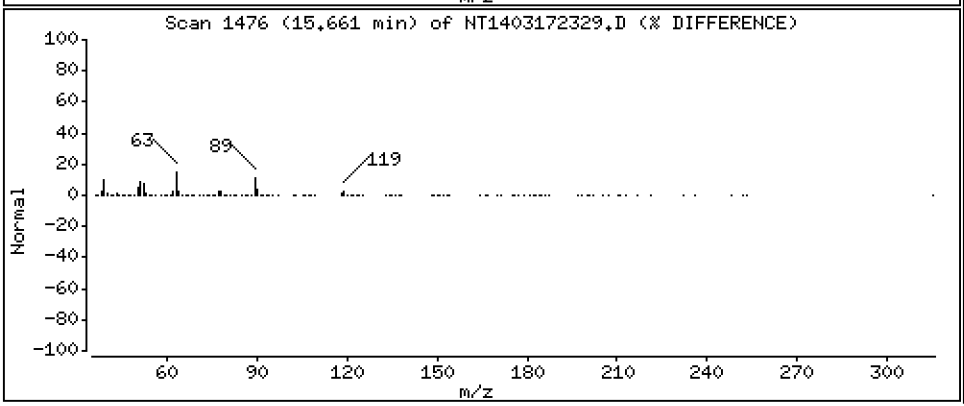
48 2,4-Dinitrotoluene

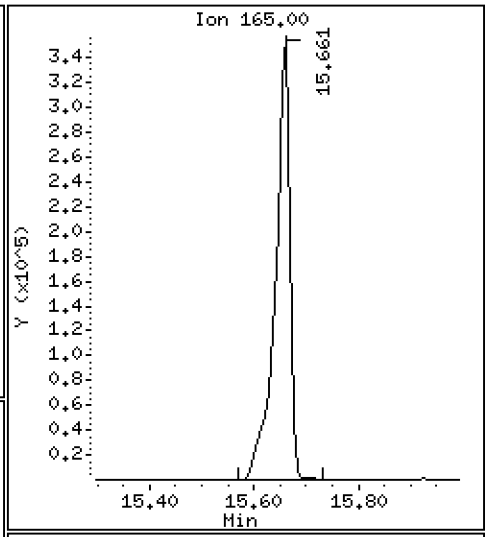
Concentration: 15.24 ug/mL

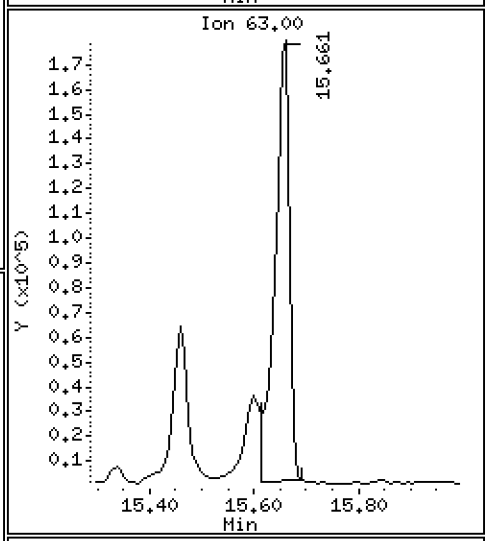


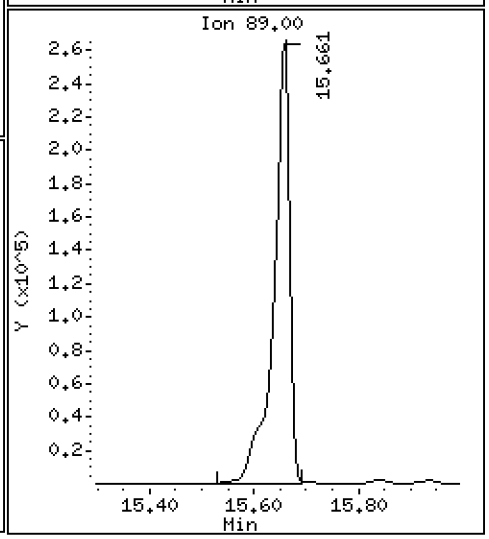












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Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

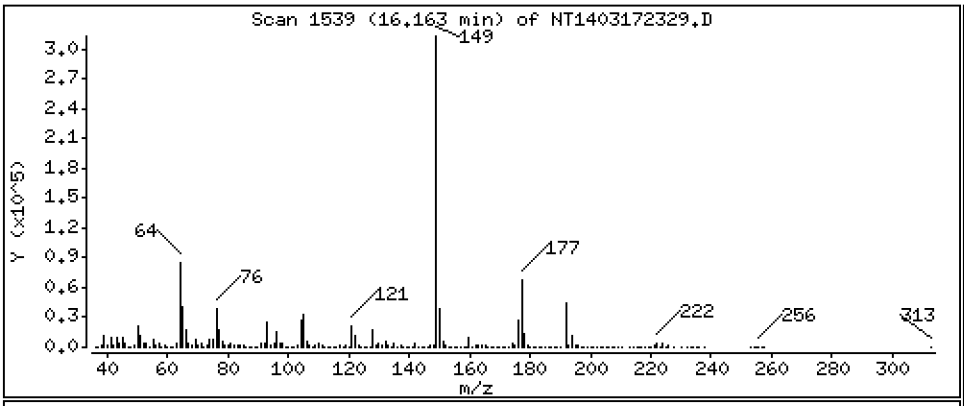
Operator: JGR

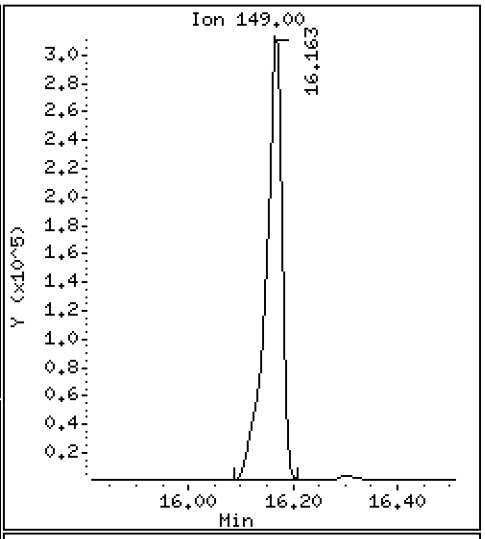
Column phase: ZB-5msi

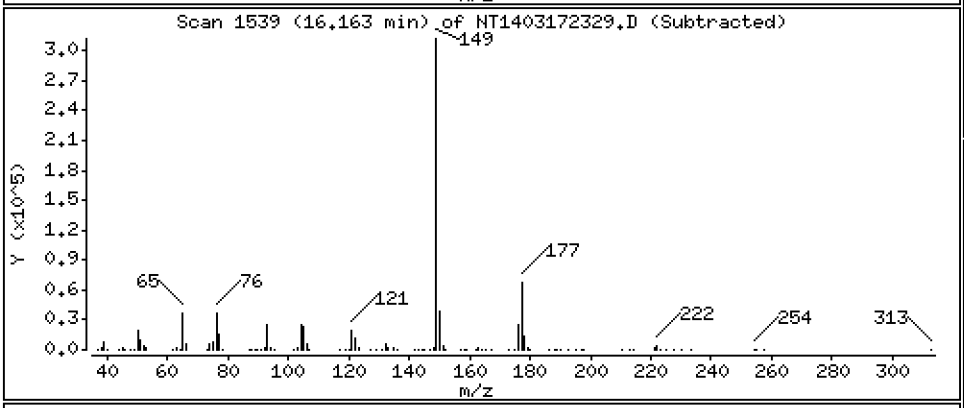
Column diameter: 0.25

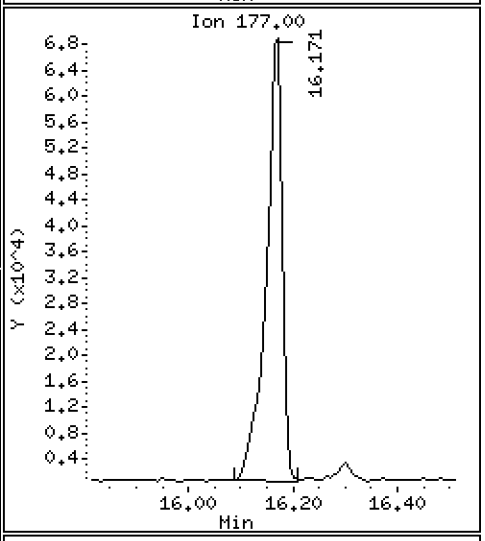
50 Diethylphthalate

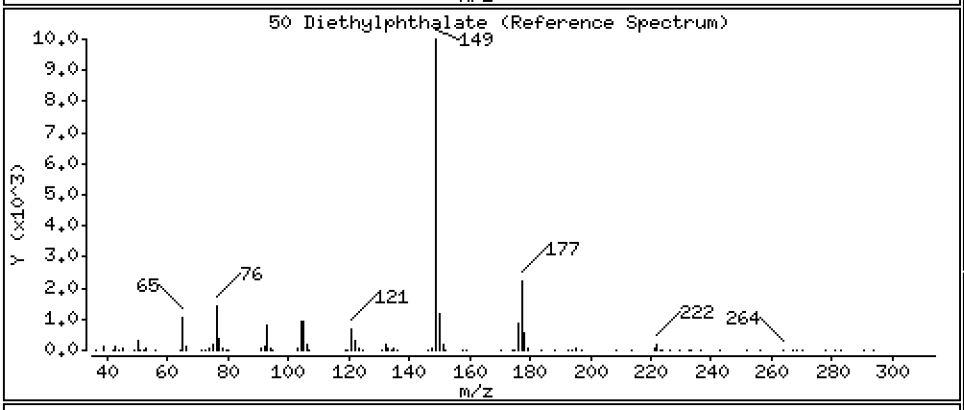
Concentration: 4.719 ug/mL

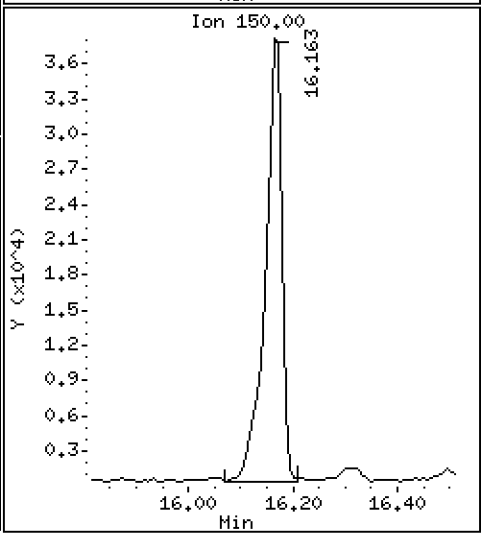


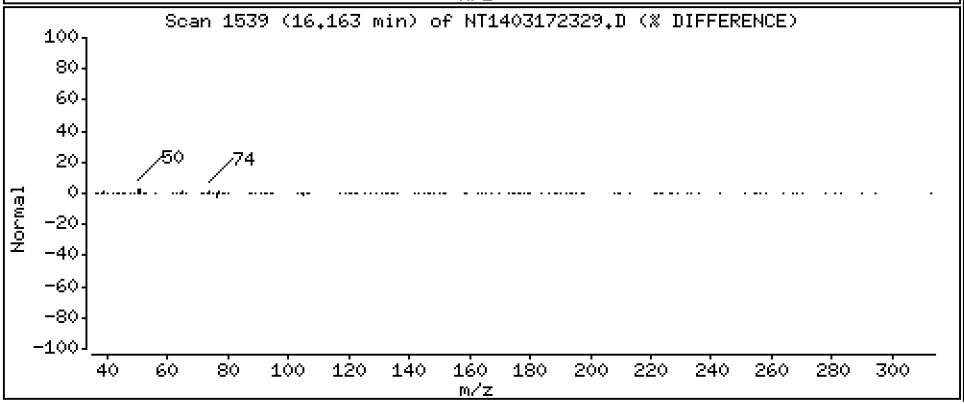












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Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

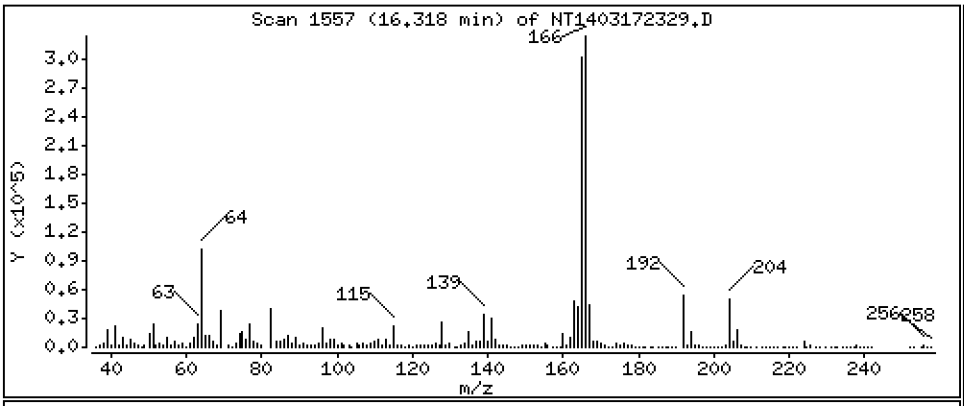
Operator: JGR

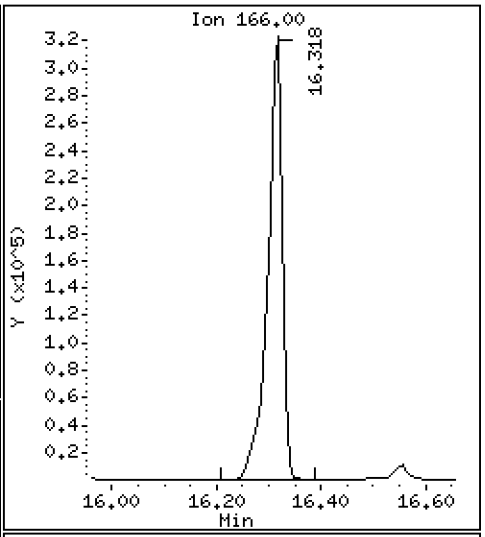
Column phase: ZB-5msi

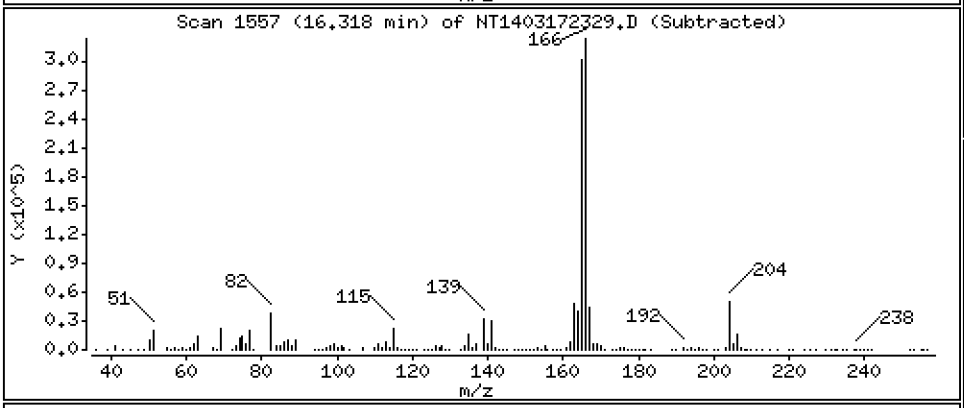
Column diameter: 0.25

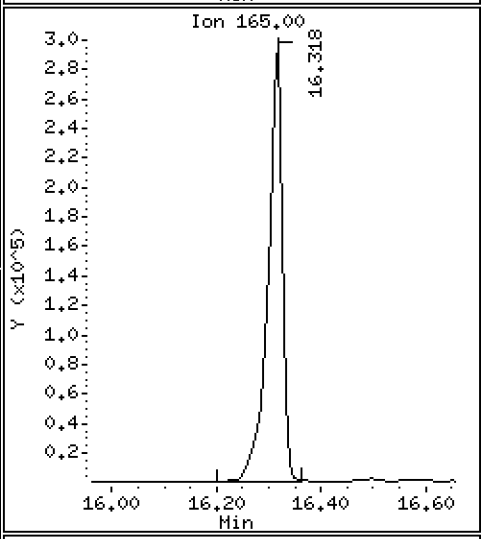
49 Fluorene

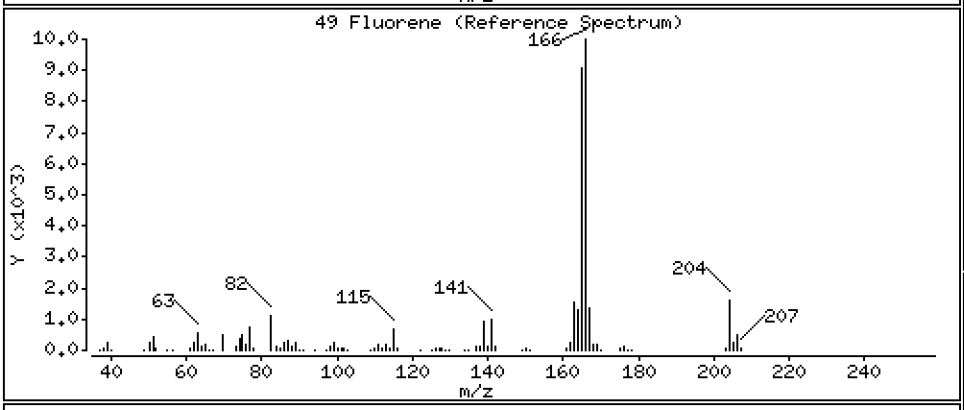
Concentration: 4.052 ug/mL

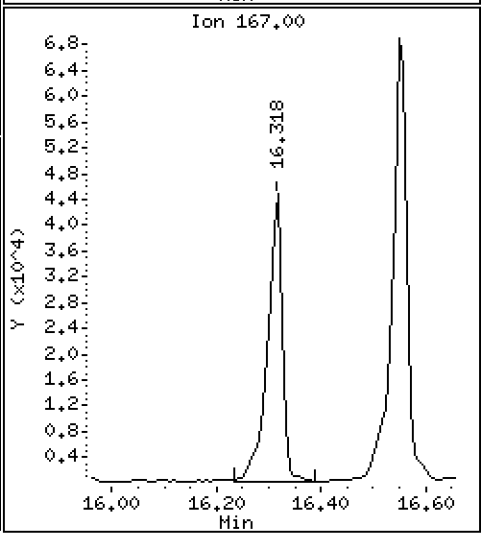


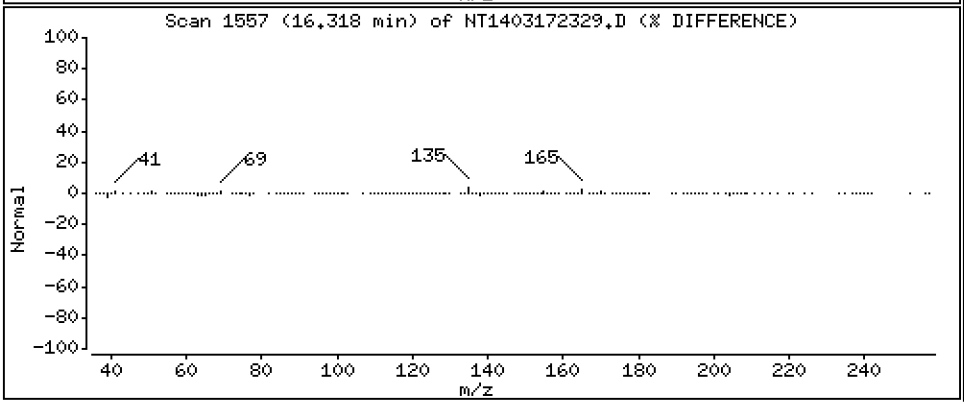












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Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

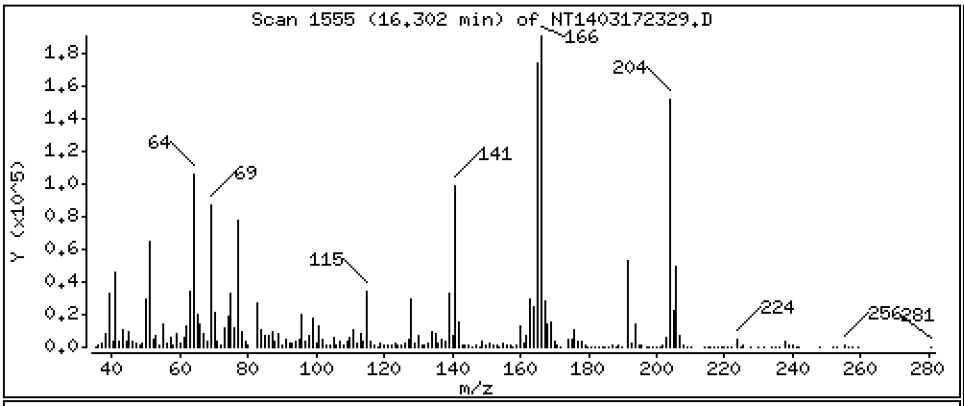
Operator: JGR

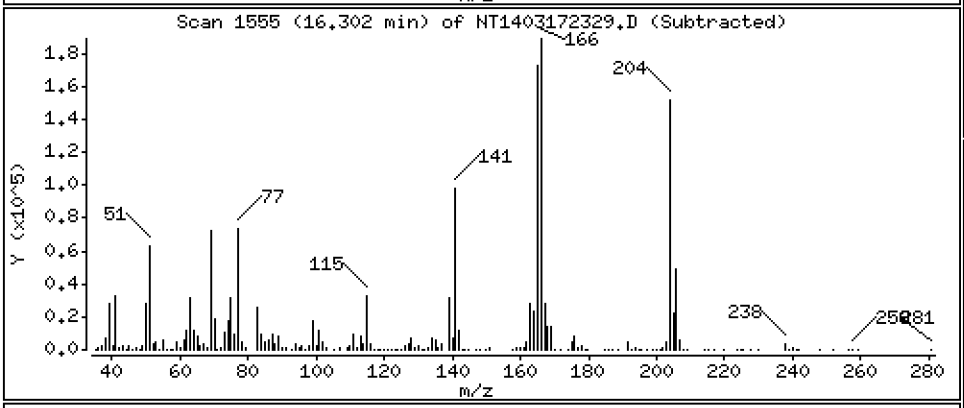
Column phase: ZB-5msi

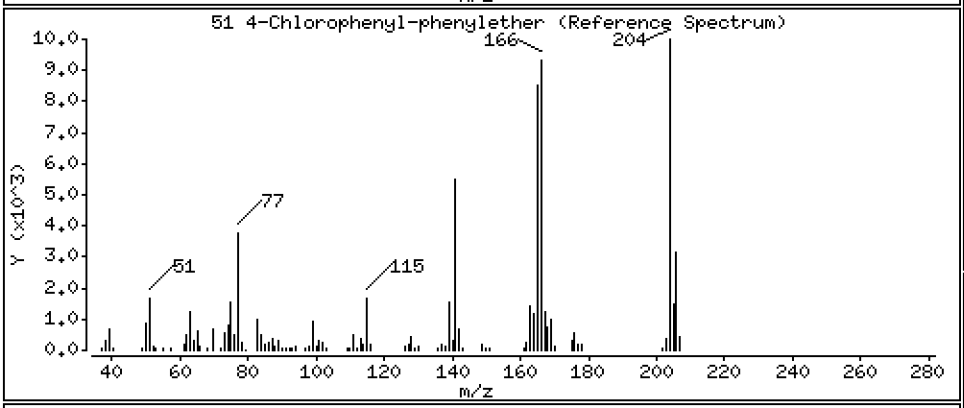
Column diameter: 0.25

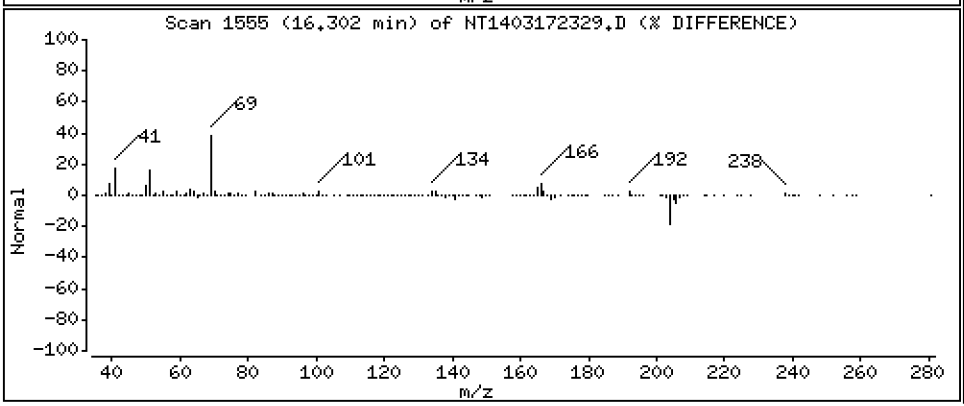
51 4-Chlorophenyl-phenylether

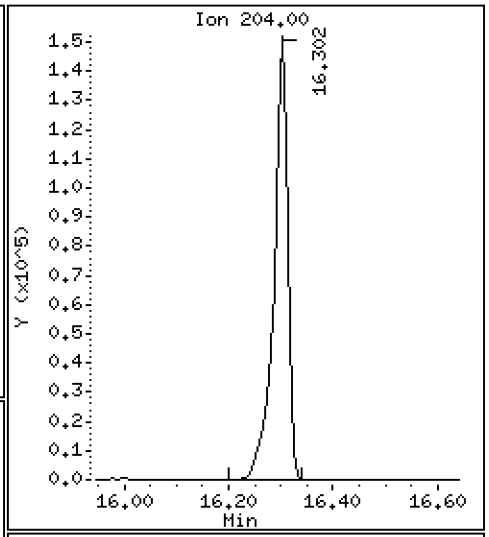
Concentration: 4.358 ug/mL

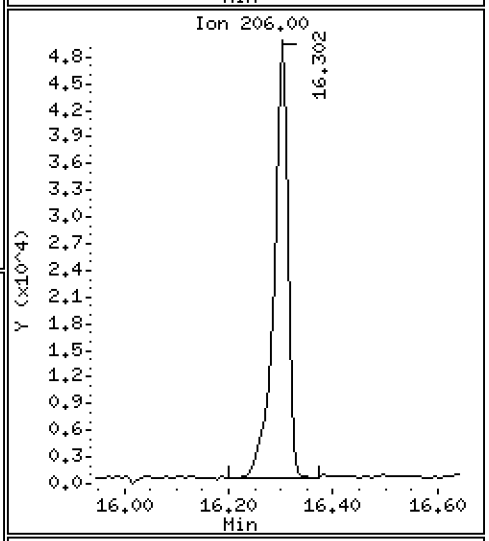


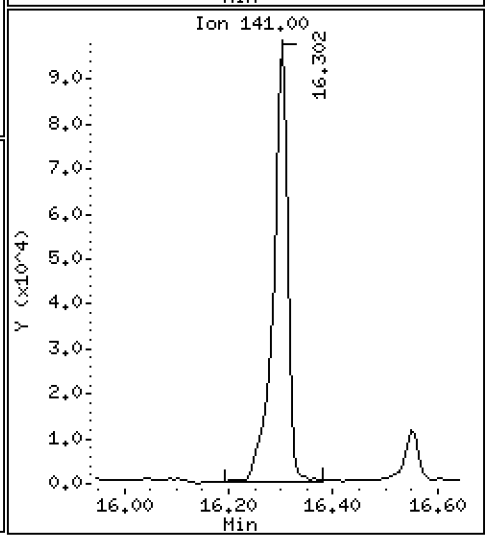












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Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

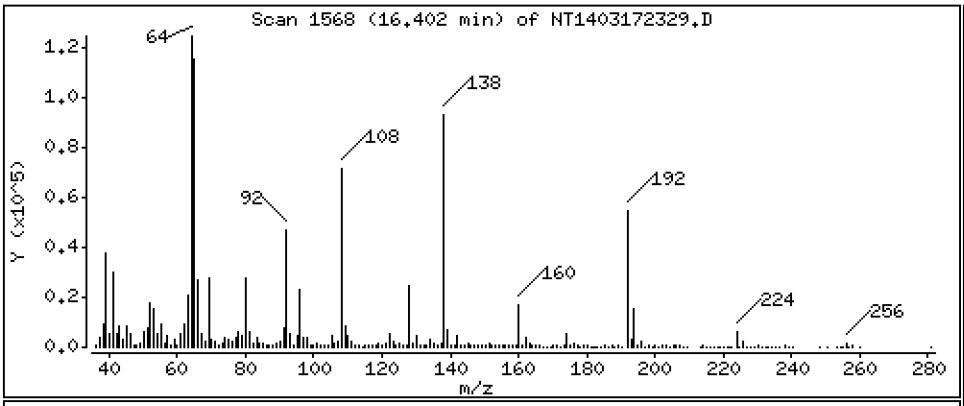
Operator: JGR

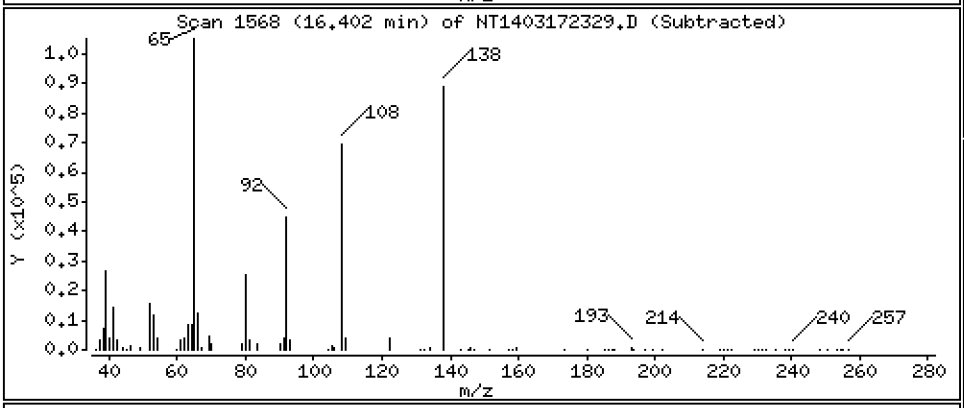
Column phase: ZB-5msi

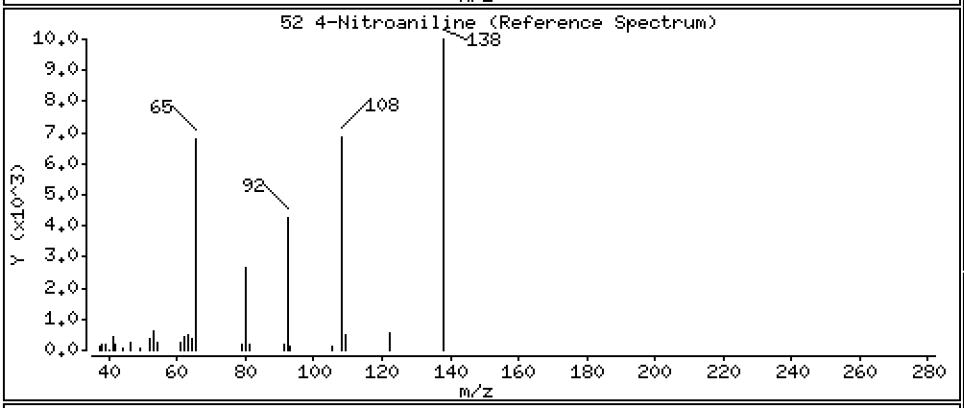
Column diameter: 0.25

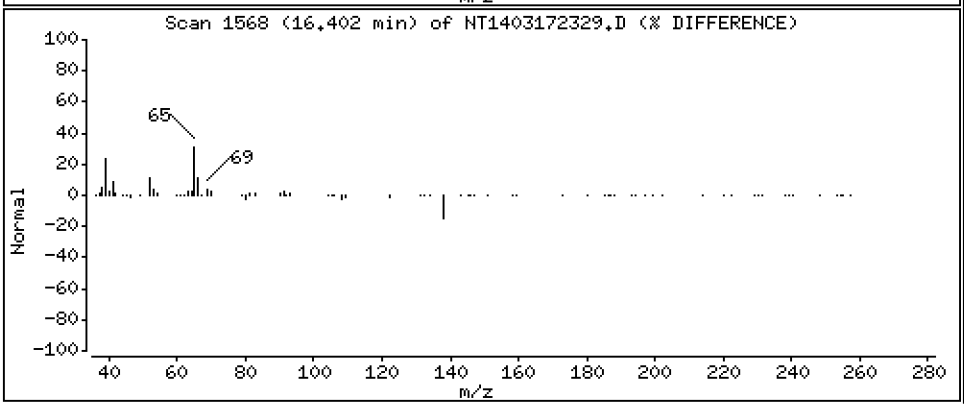
52 4-Nitroaniline

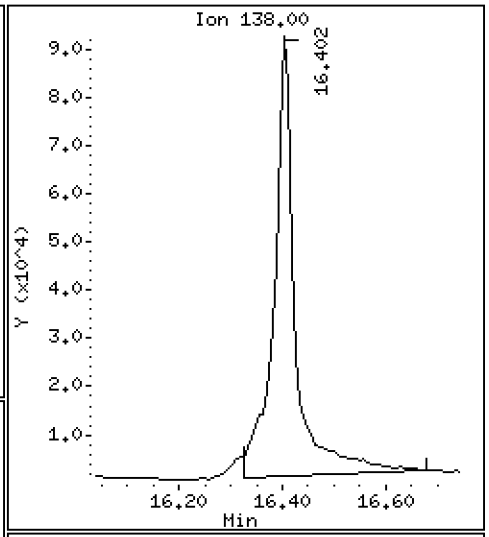
Concentration: 6.959 ug/mL

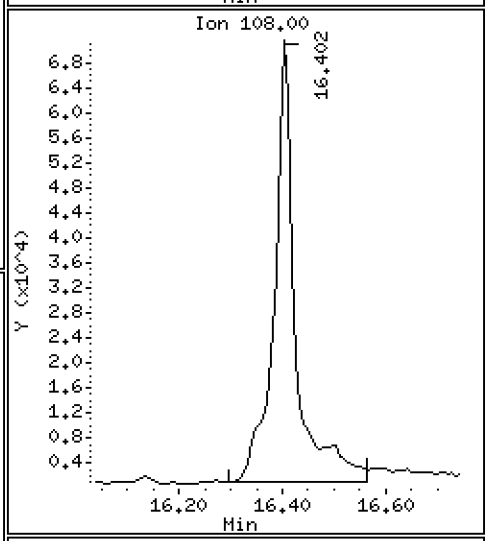


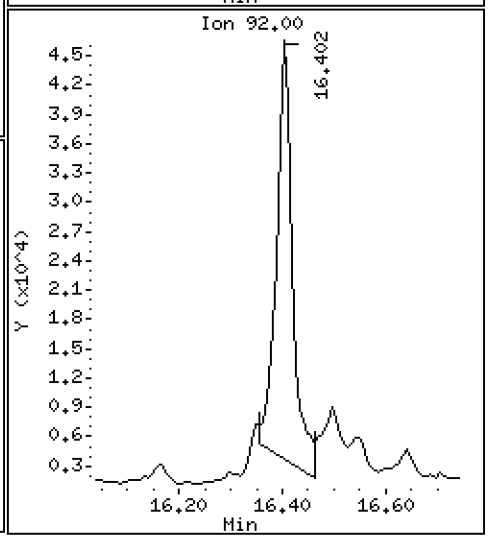












Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172329.D

Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

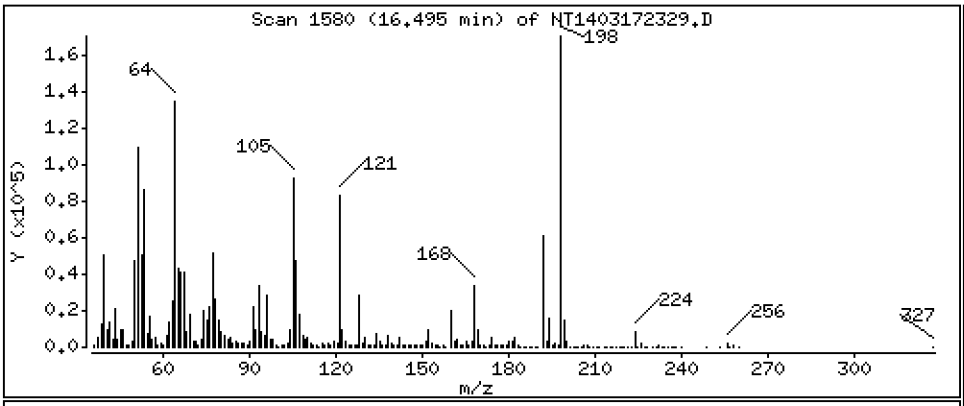
Operator: JGR

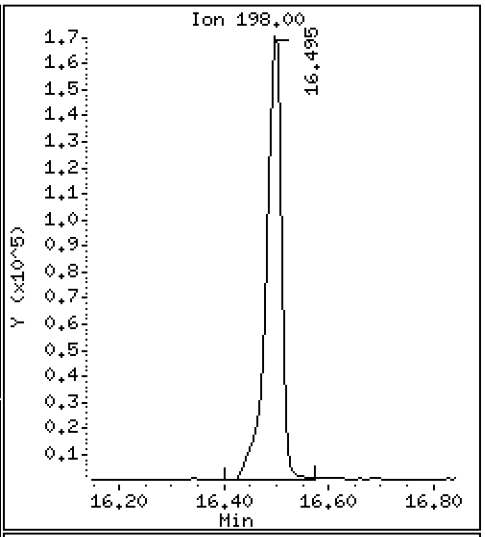
Column phase: ZB-5msi

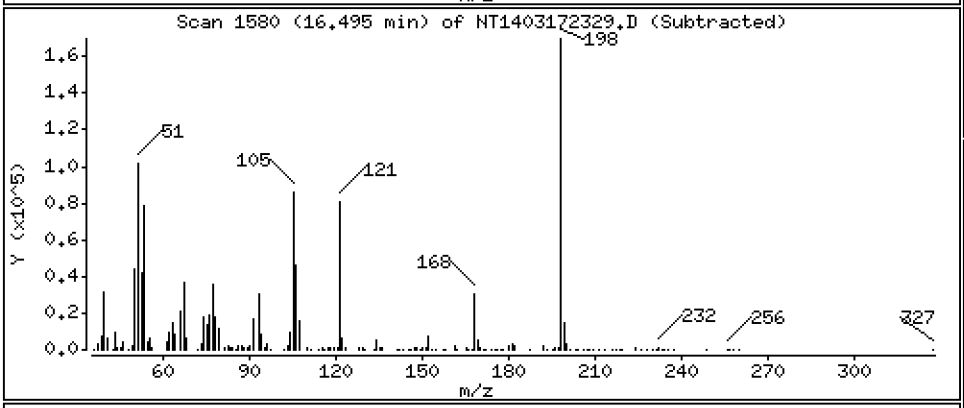
Column diameter: 0.25

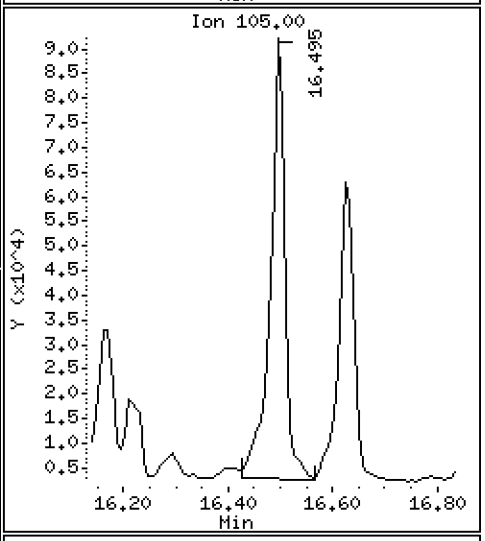
53 4,6-Dinitro-2-methylphenol

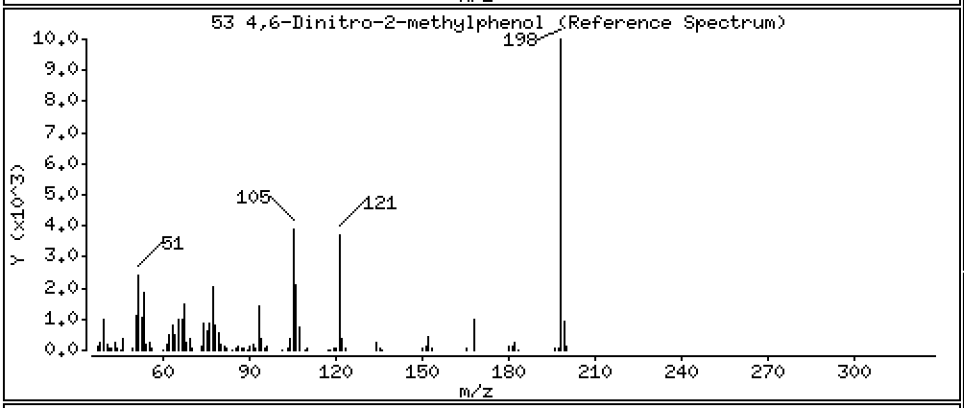
Concentration: 12.85 ug/mL

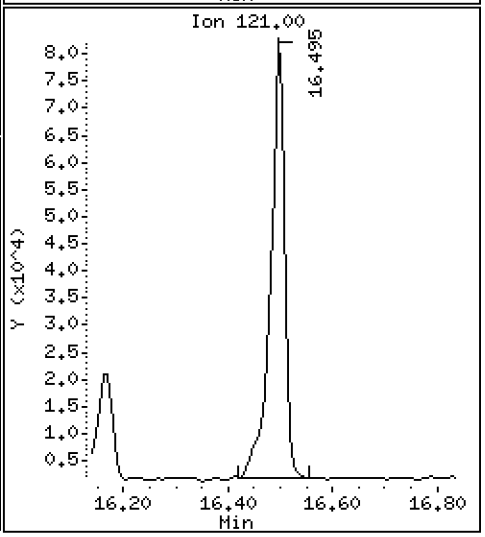


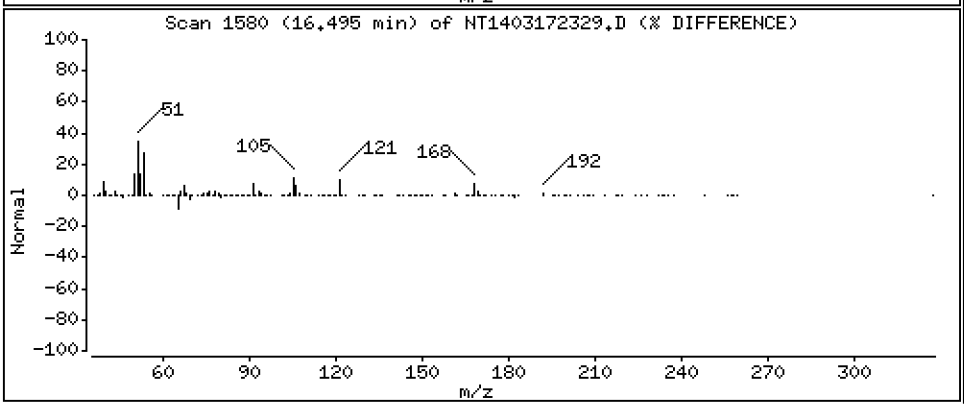












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Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

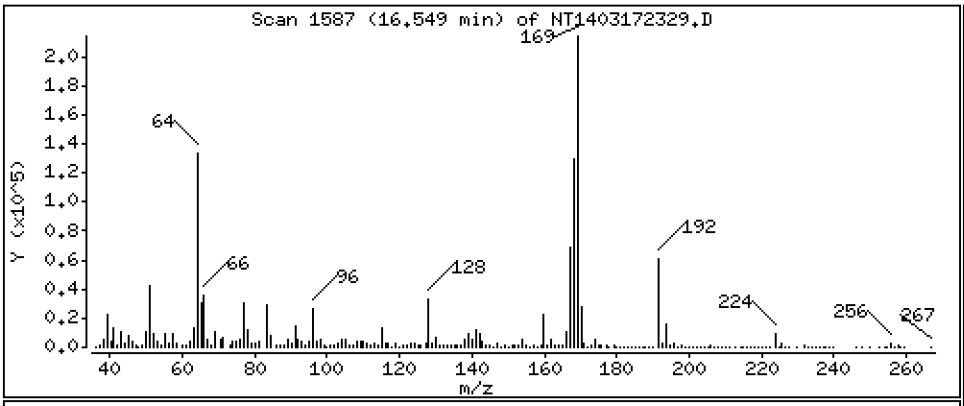
Operator: JGR

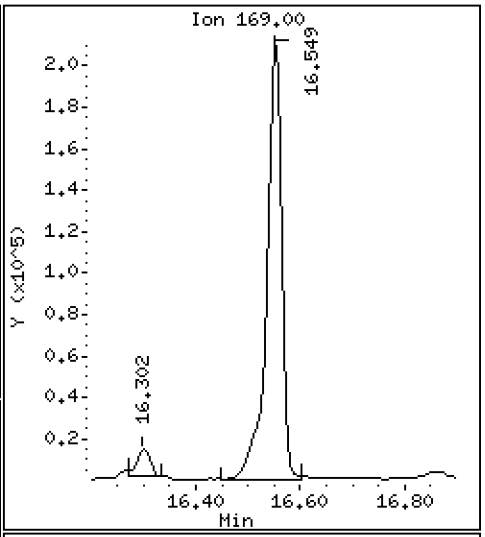
Column phase: ZB-5msi

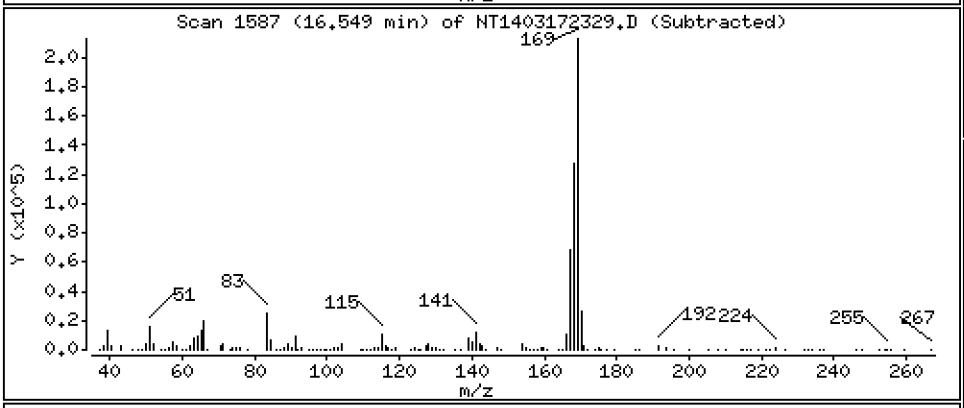
Column diameter: 0.25

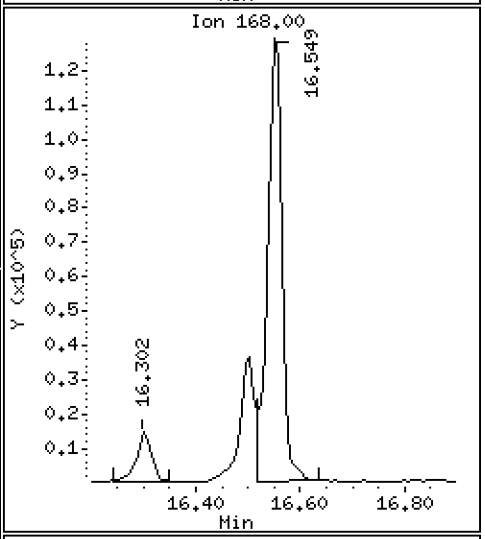
54 N-Nitrosodiphenylamine

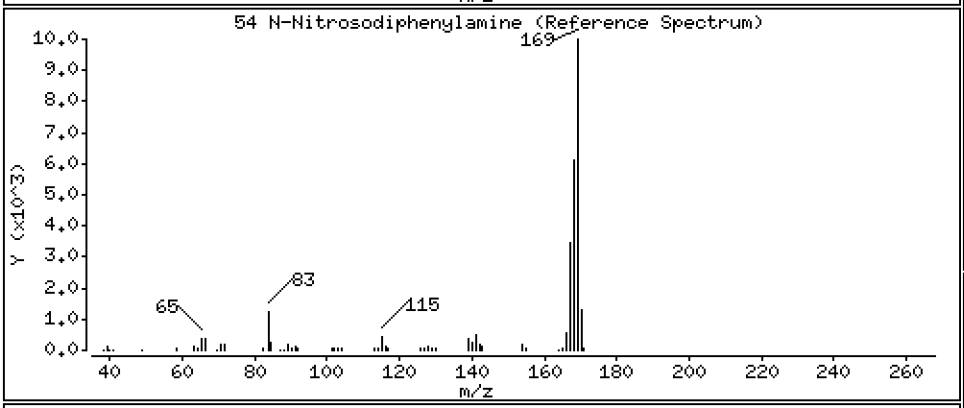
Concentration: 3.982 ug/mL

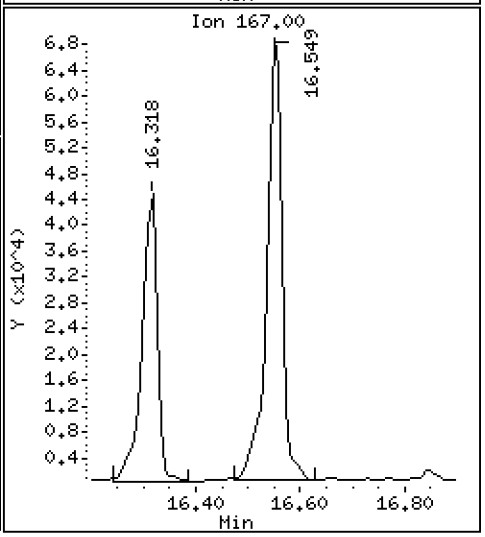


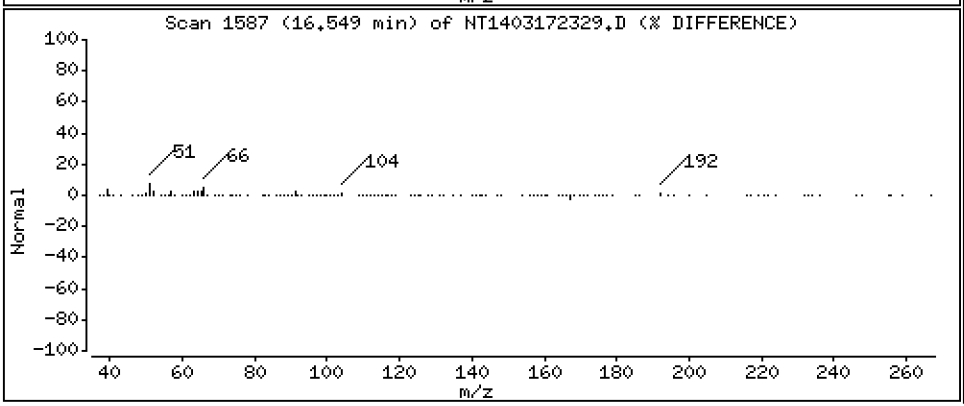












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Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

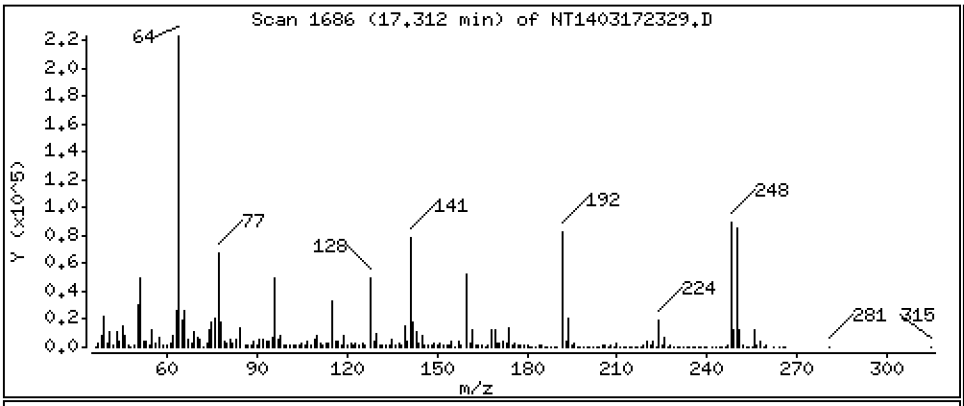
Operator: JGR

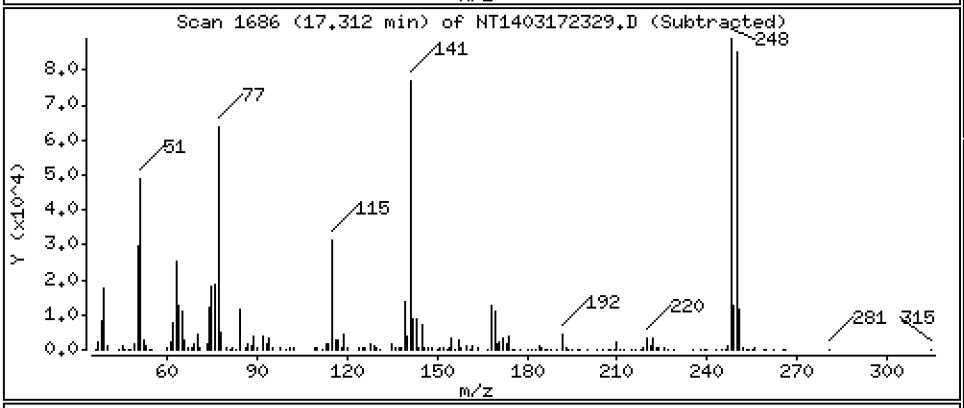
Column phase: ZB-5msi

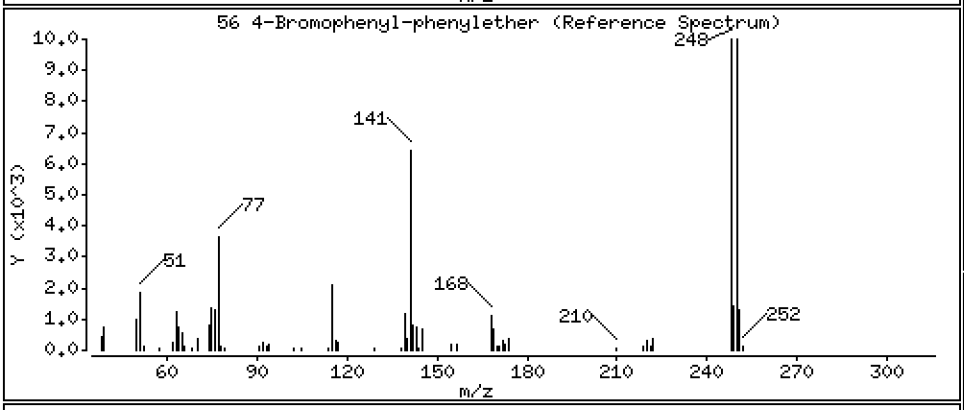
Column diameter: 0.25

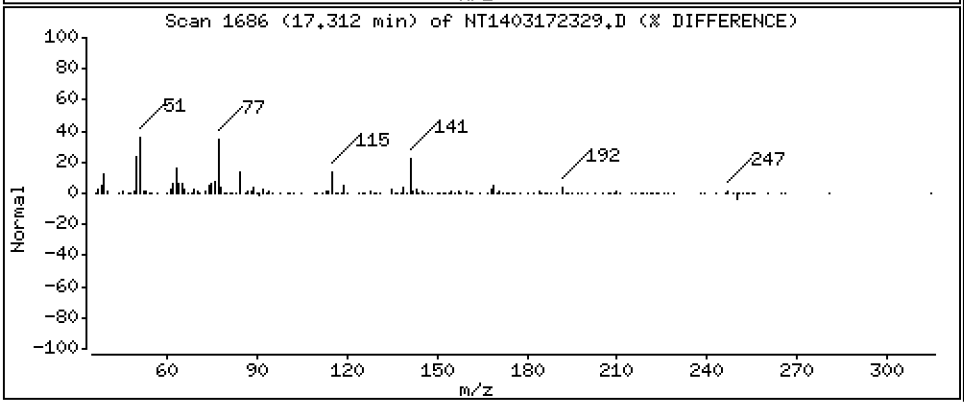
56 4-Bromophenyl-phenylether

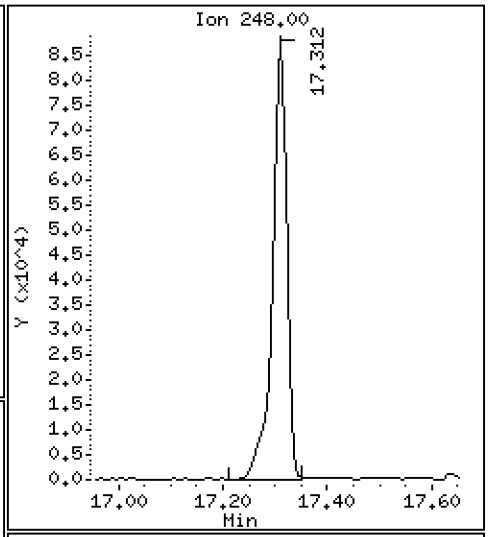
Concentration: 4.703 ug/mL

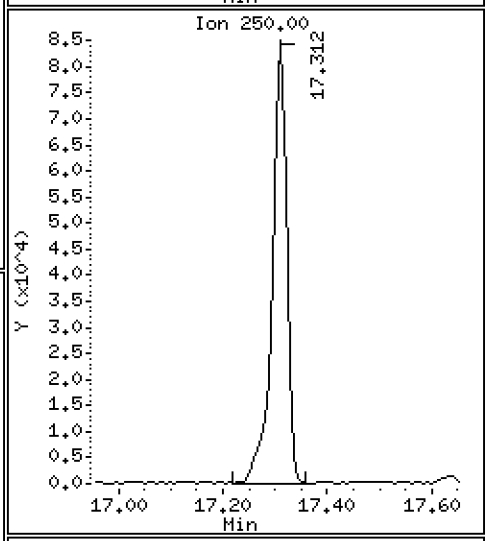


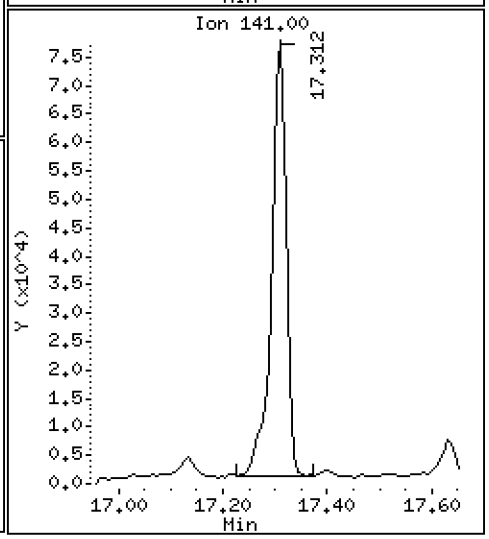












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Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

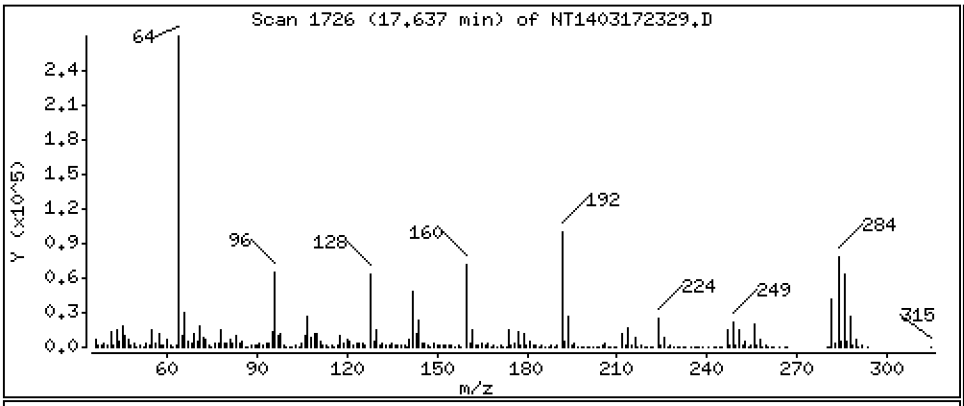
Operator: JGR

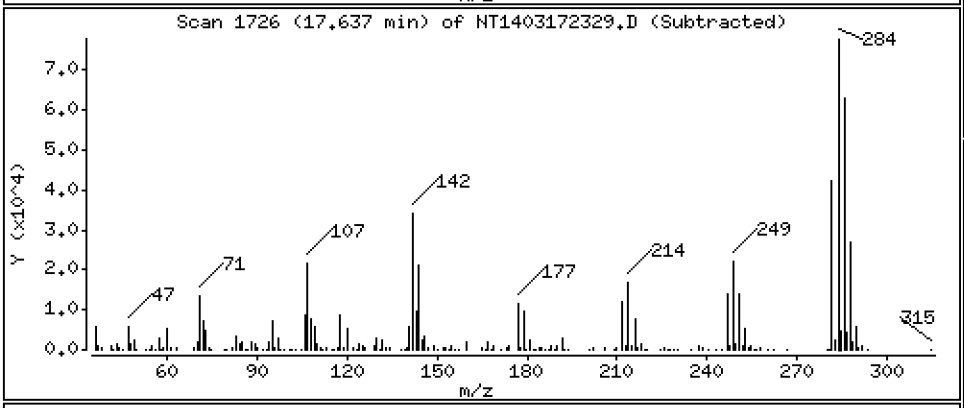
Column phase: ZB-5msi

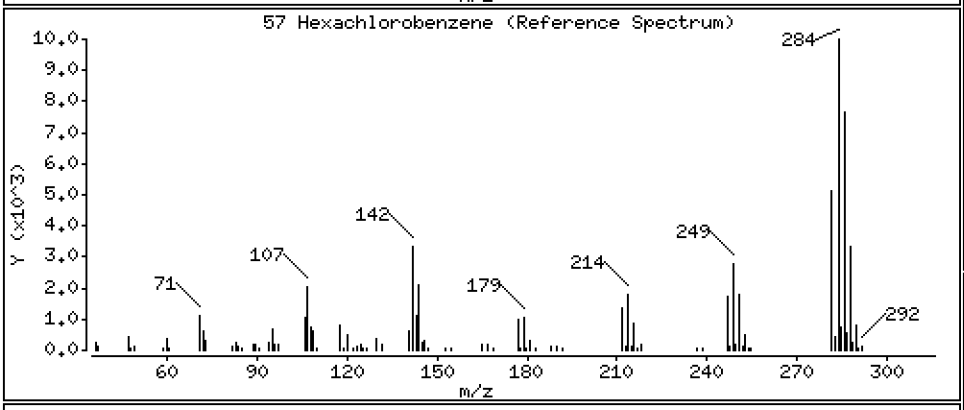
Column diameter: 0.25

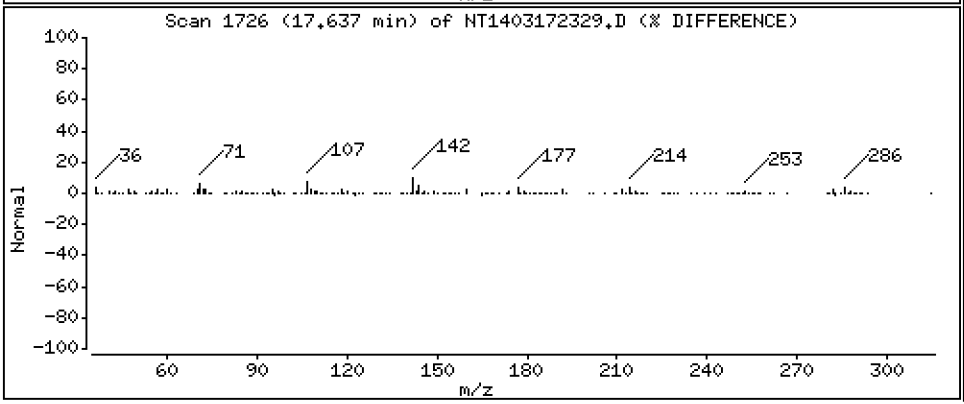
57 Hexachlorobenzene

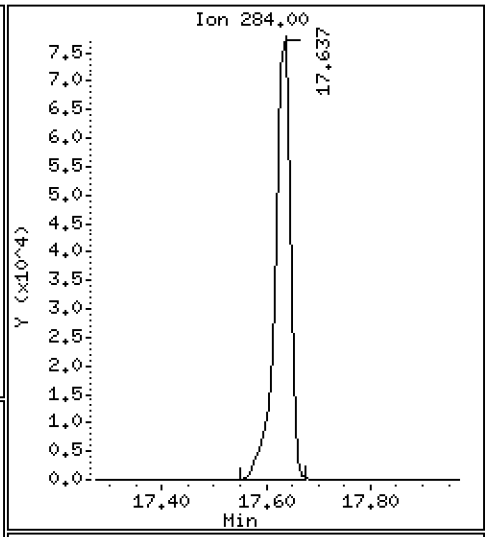
Concentration: 4.216 ug/mL

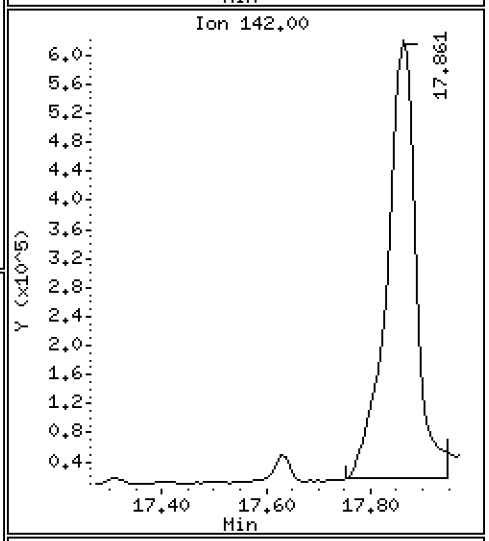


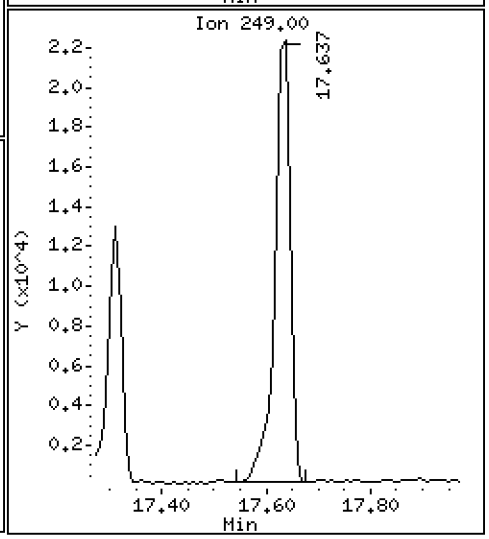












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Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

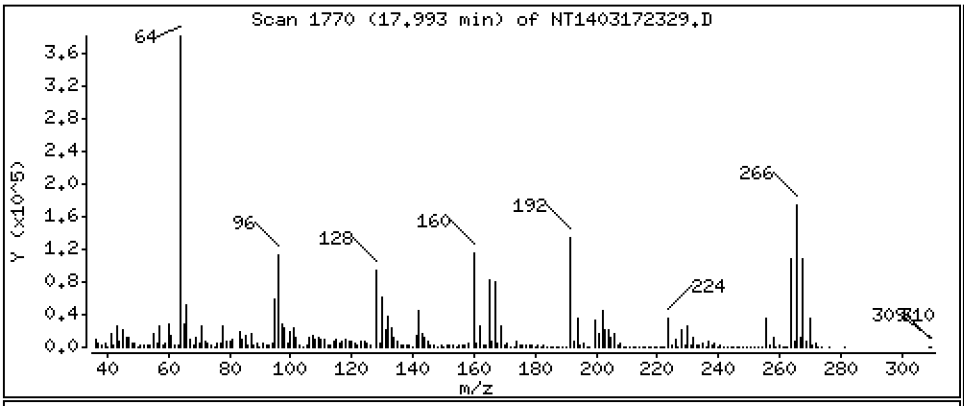
Operator: JGR

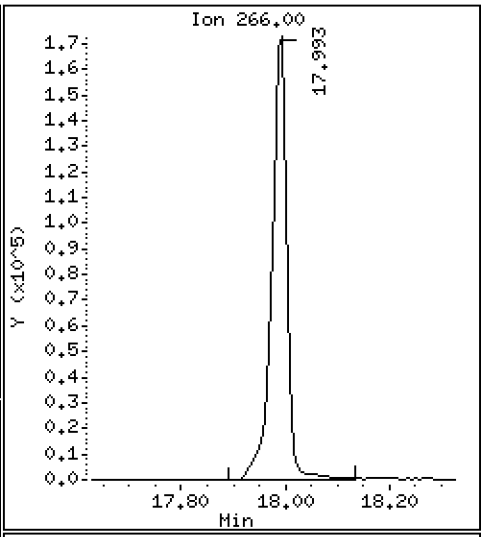
Column phase: ZB-5msi

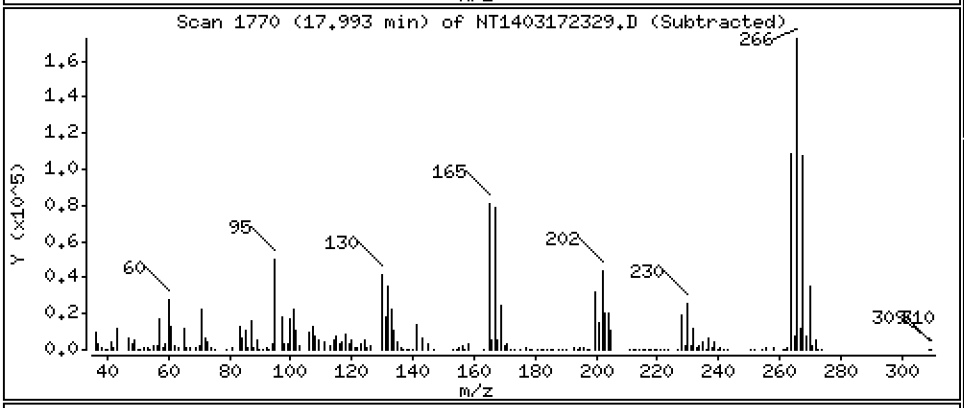
Column diameter: 0.25

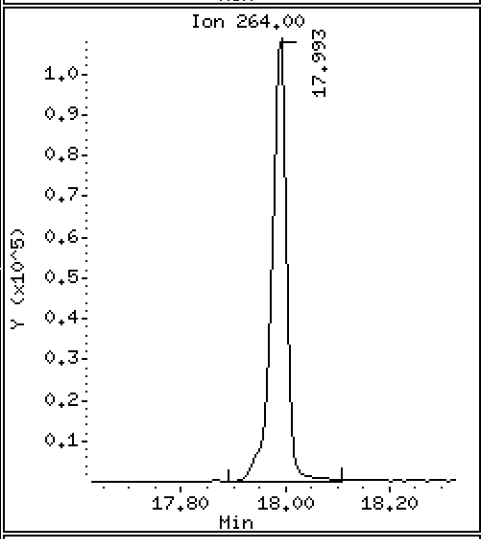
58 Pentachlorophenol

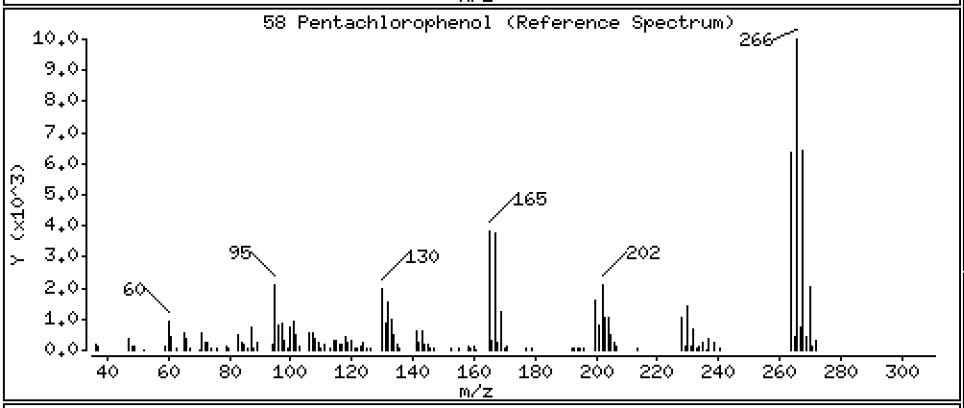
Concentration: 13.59 ug/mL

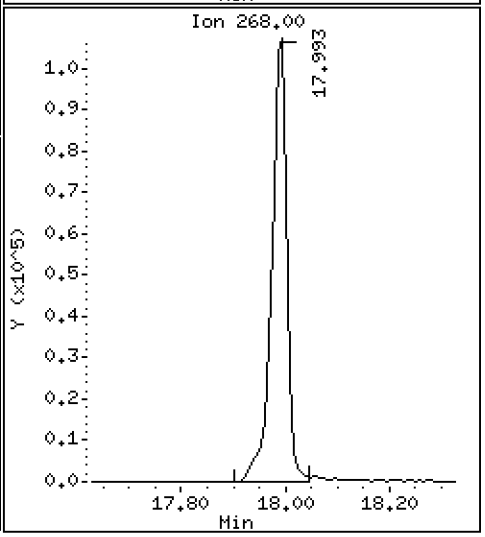


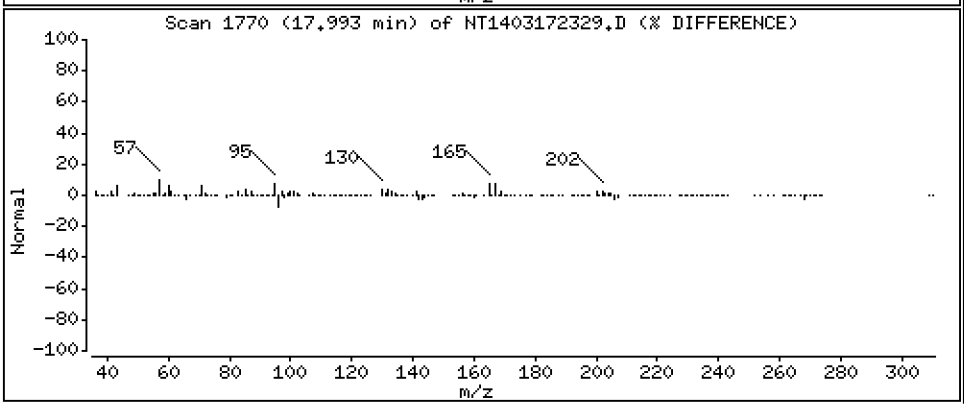












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Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

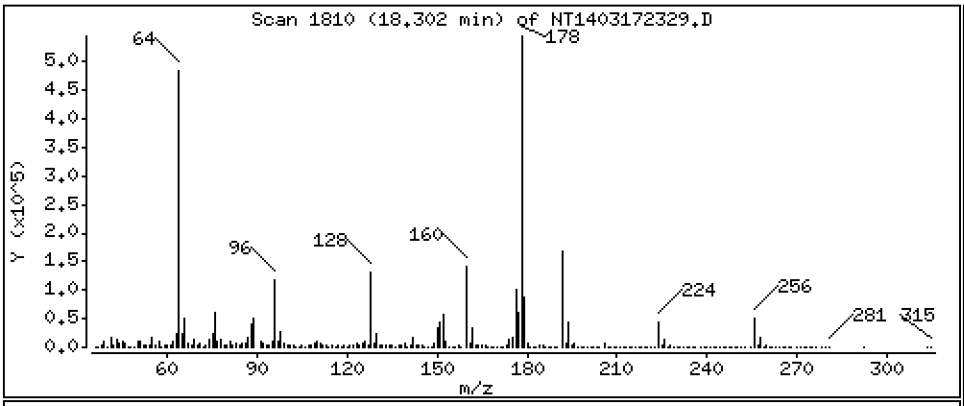
Operator: JGR

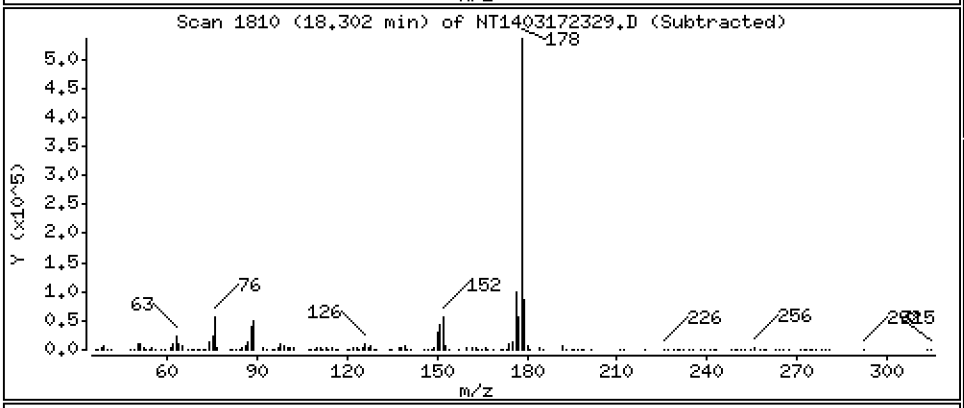
Column phase: ZB-5msi

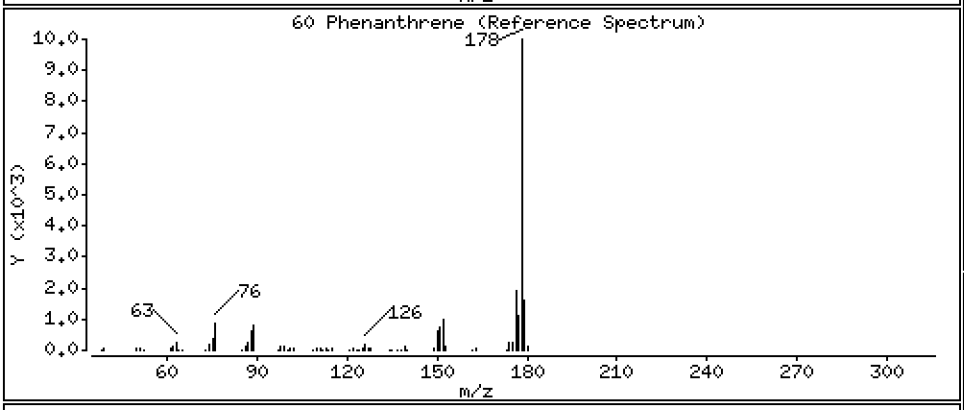
Column diameter: 0.25

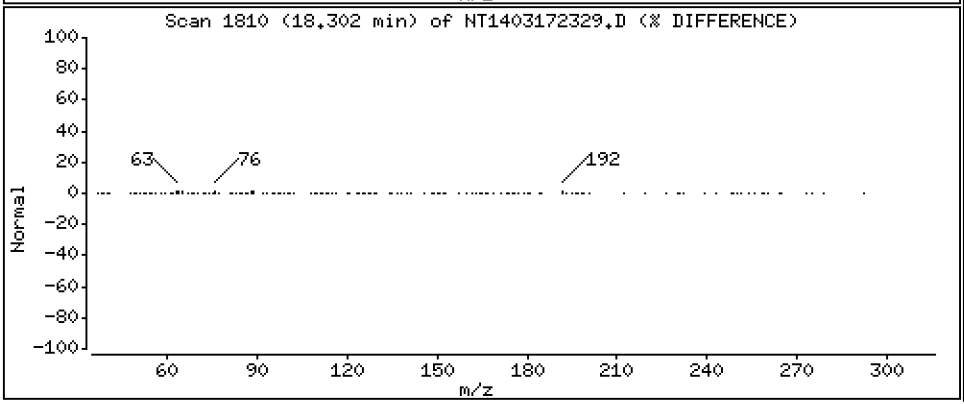
60 Phenanthrene

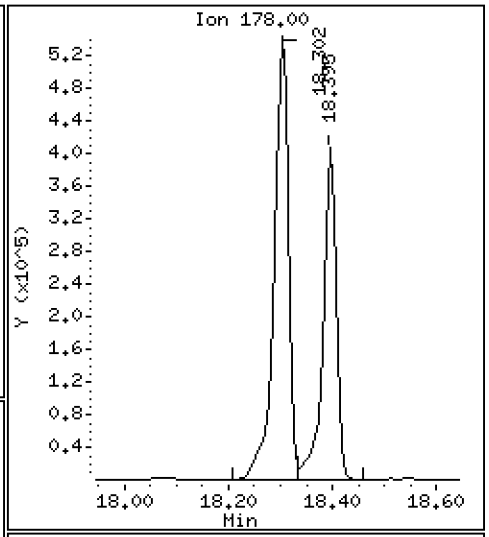
Concentration: 4.690 ug/mL

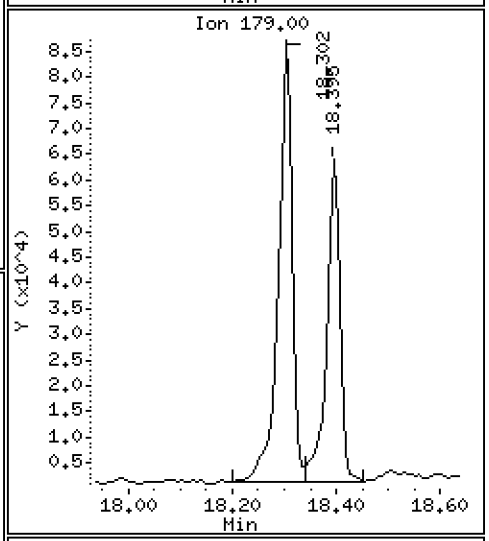


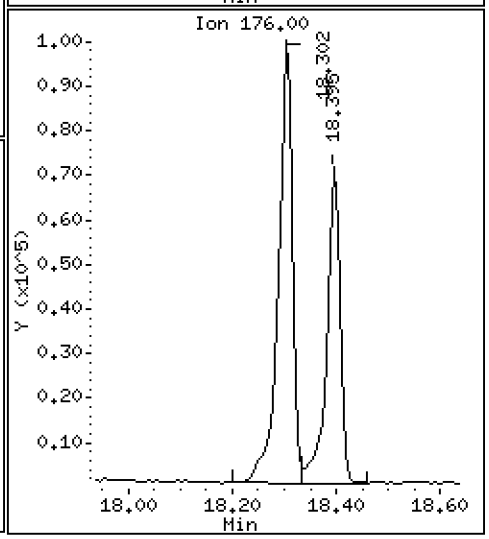












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Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

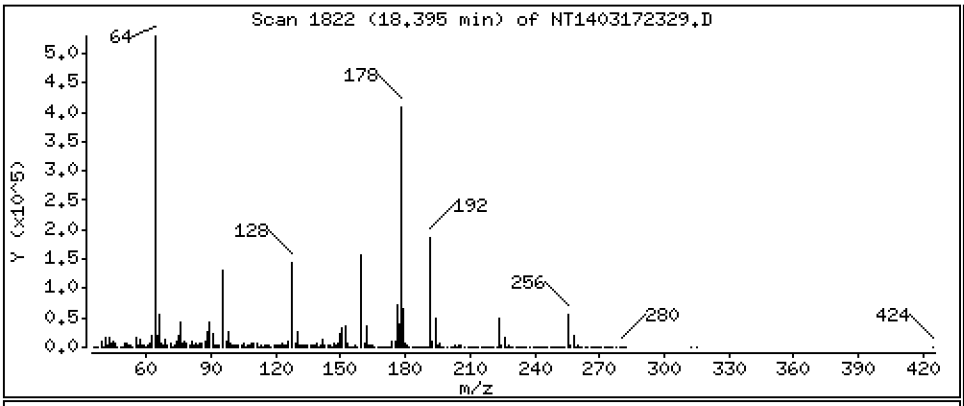
Operator: JGR

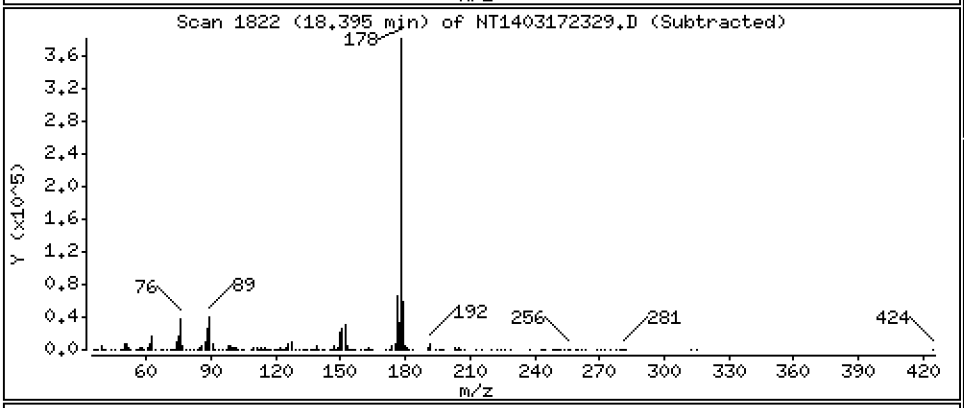
Column phase: ZB-5msi

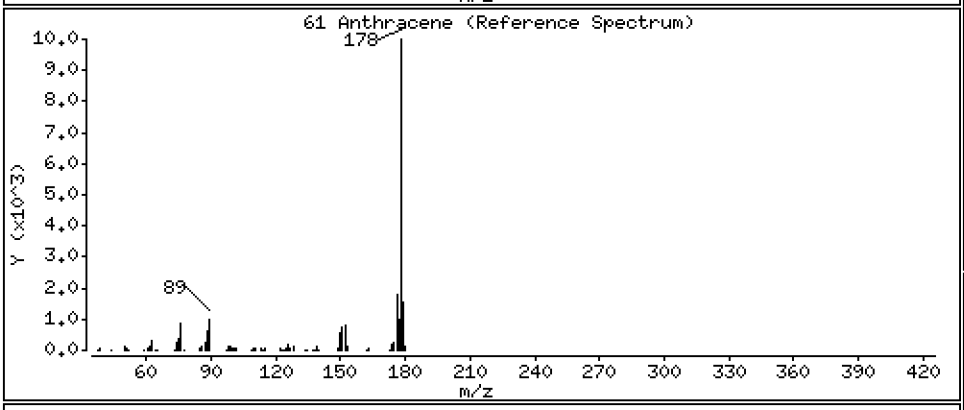
Column diameter: 0.25

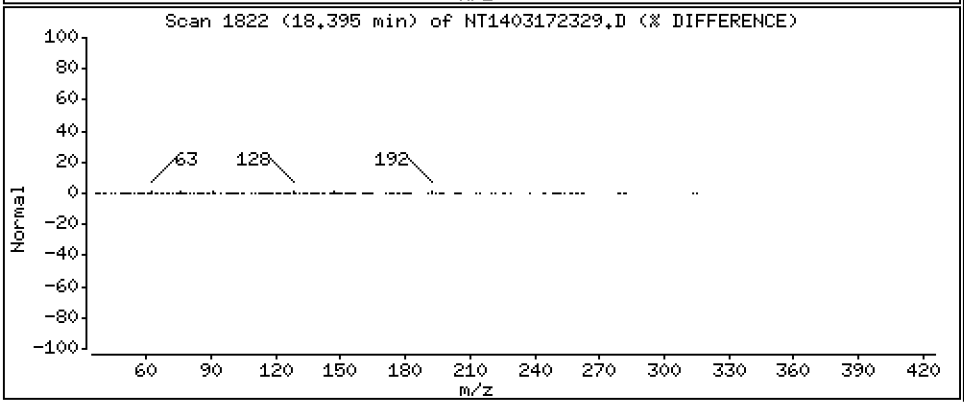
61 Anthracene

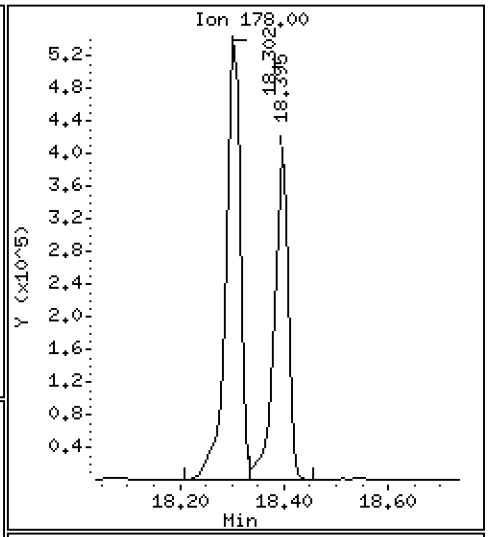
Concentration: 3.629 ug/mL

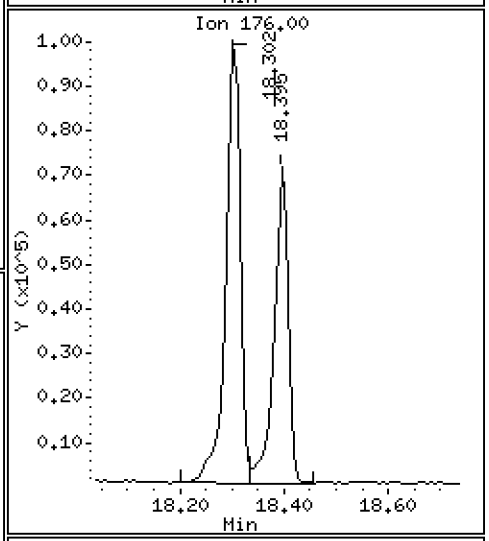


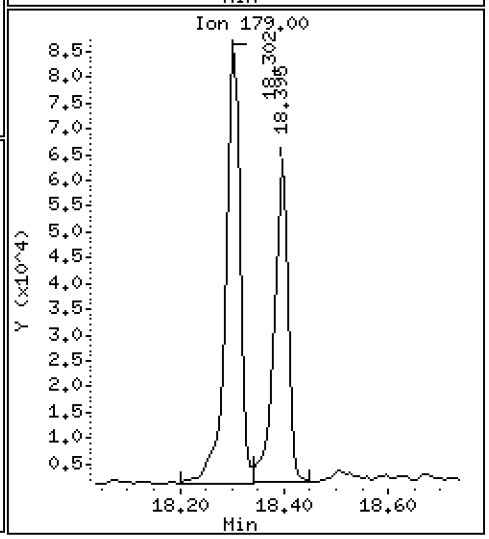












Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172329.D

Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

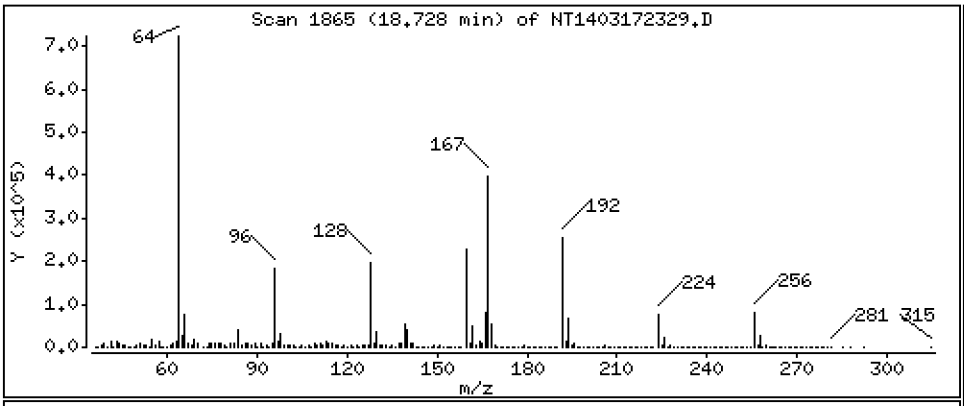
Operator: JGR

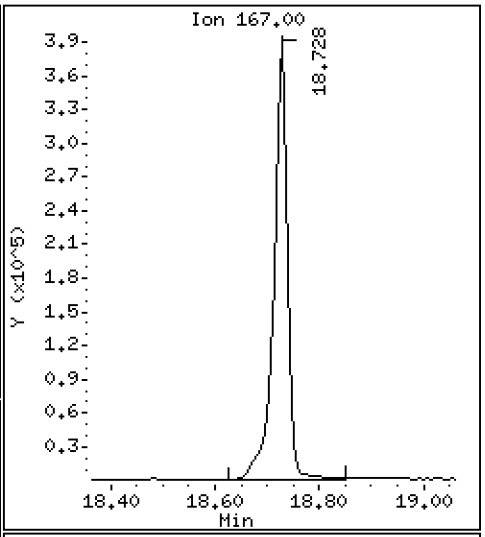
Column phase: ZB-5msi

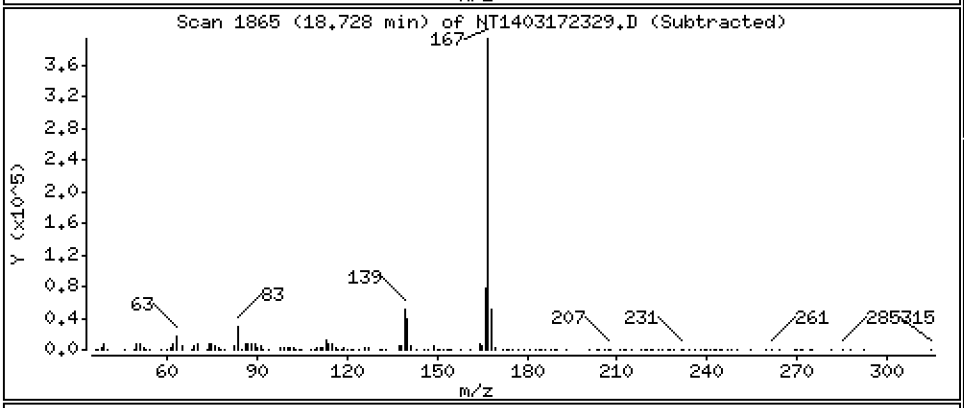
Column diameter: 0.25

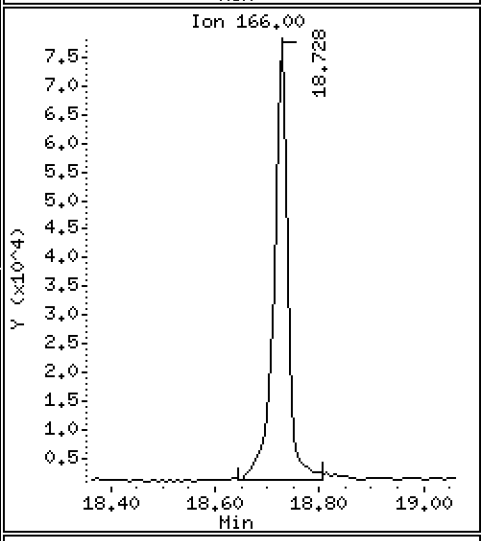
62 Carbazole

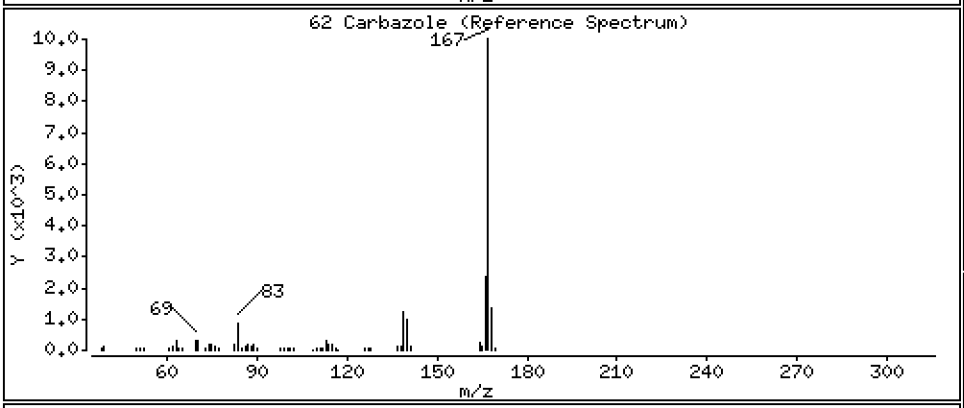
Concentration: 3.934 ug/mL

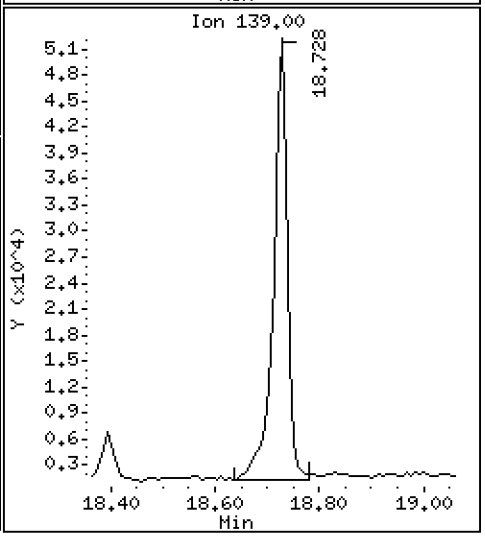


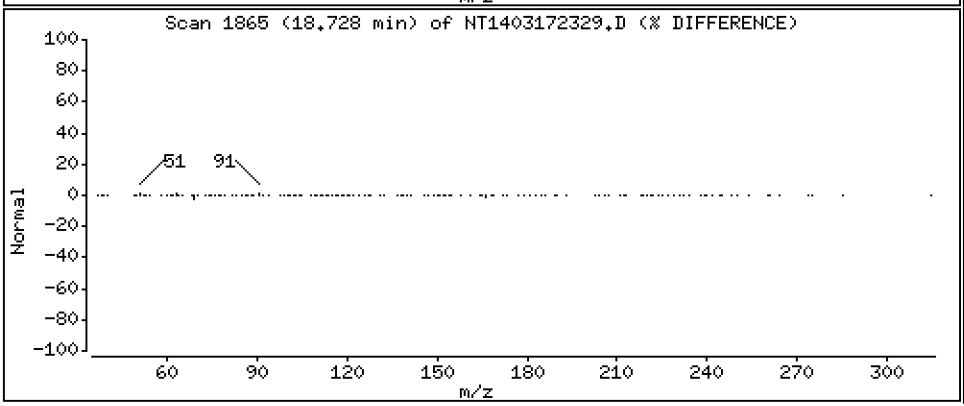












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Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

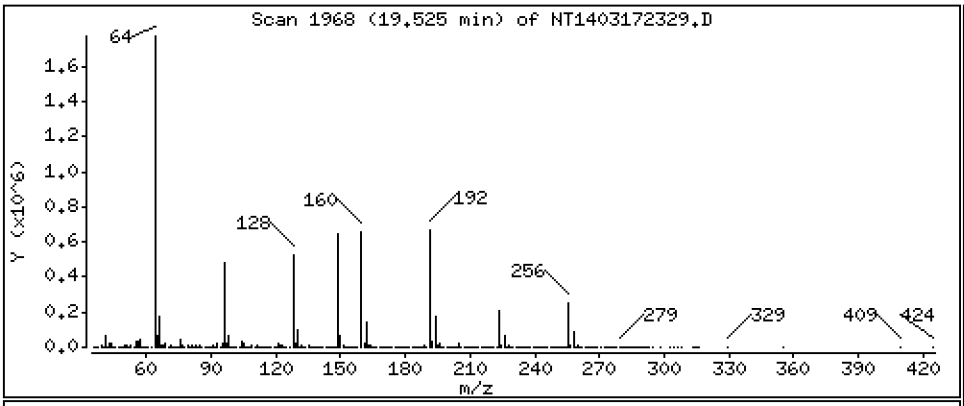
Operator: JGR

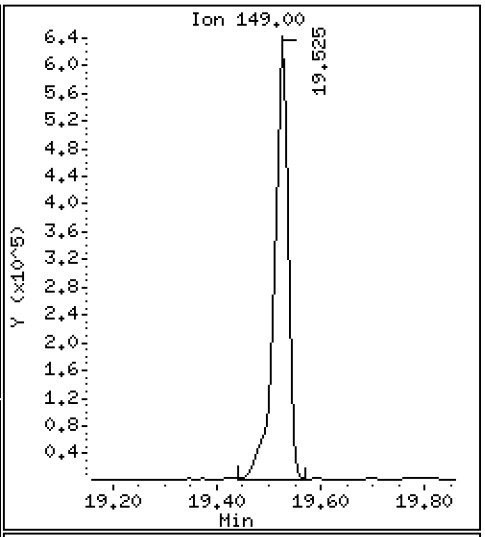
Column phase: ZB-5msi

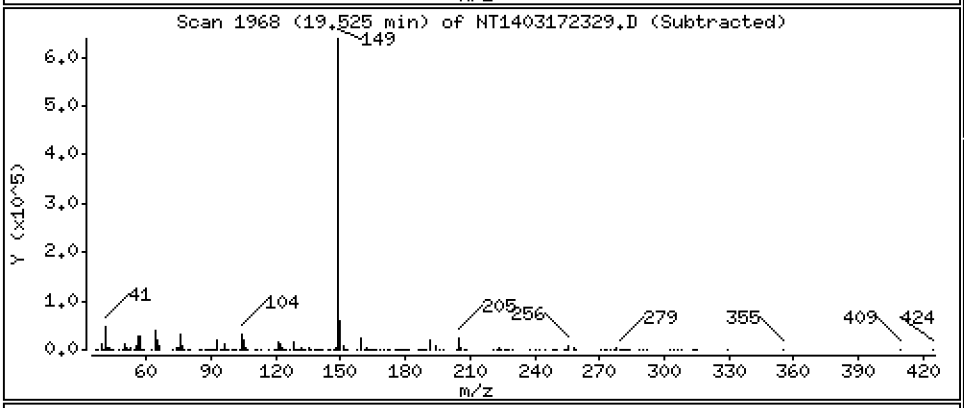
Column diameter: 0.25

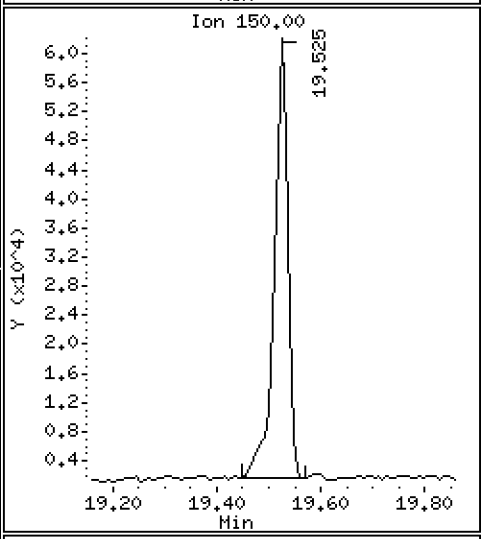
63 Di-n-butylphthalate

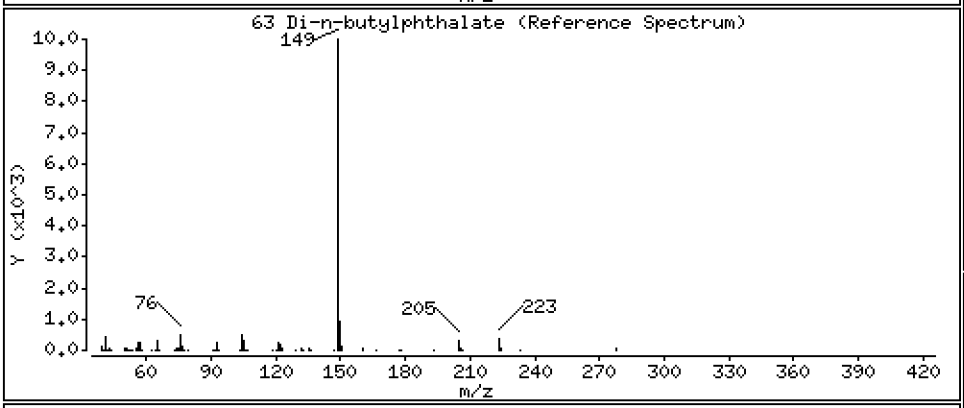
Concentration: 4.961 ug/mL

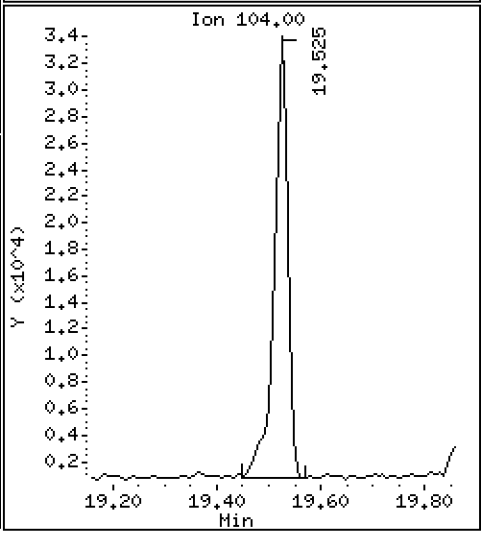


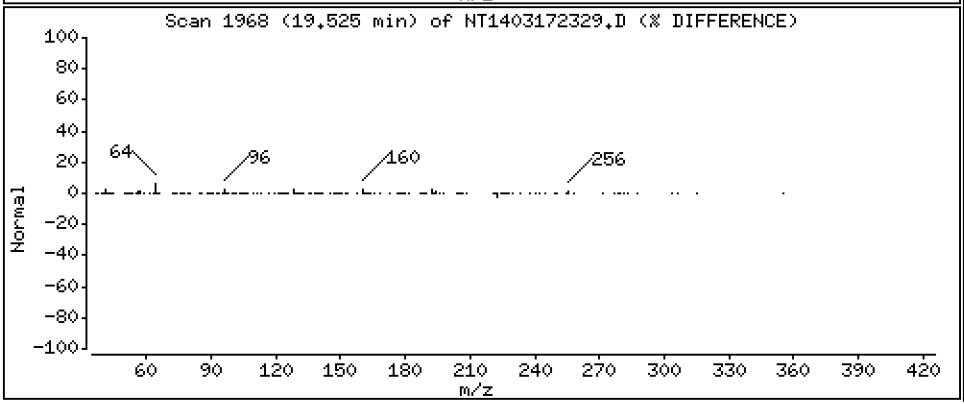












Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172329.D

Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

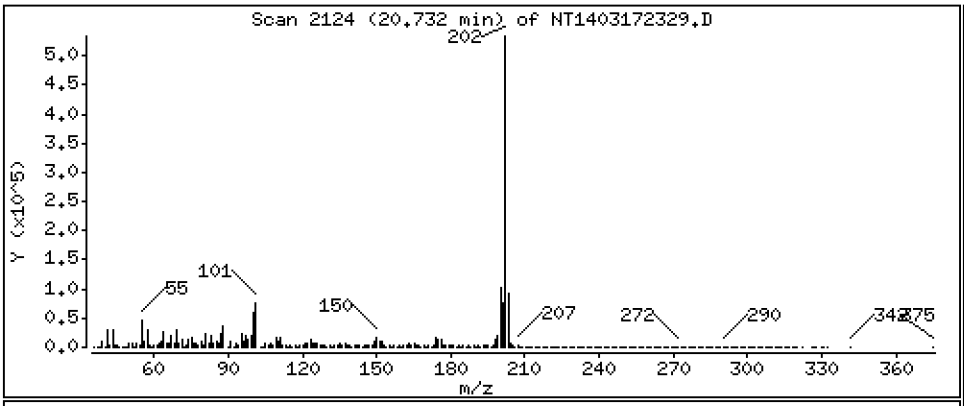
Operator: JGR

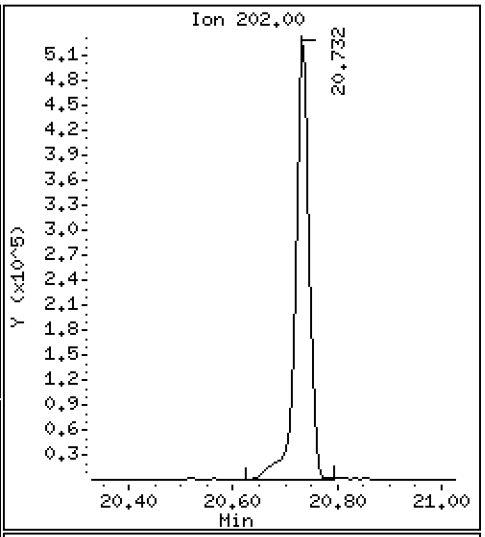
Column phase: ZB-5msi

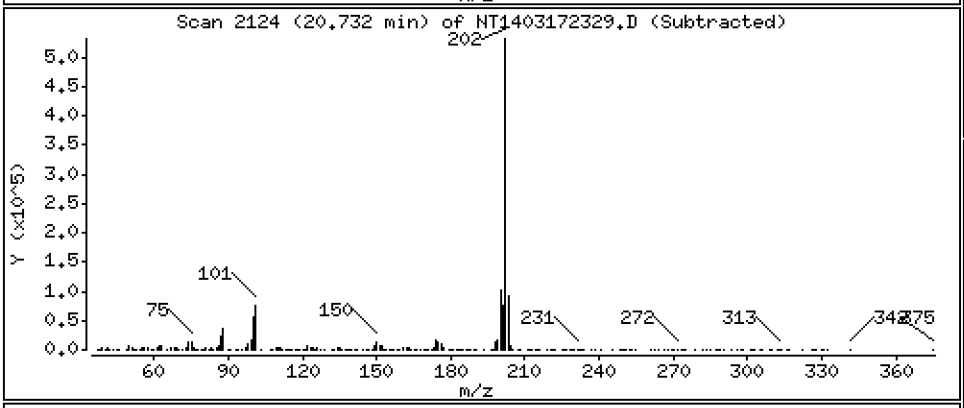
Column diameter: 0.25

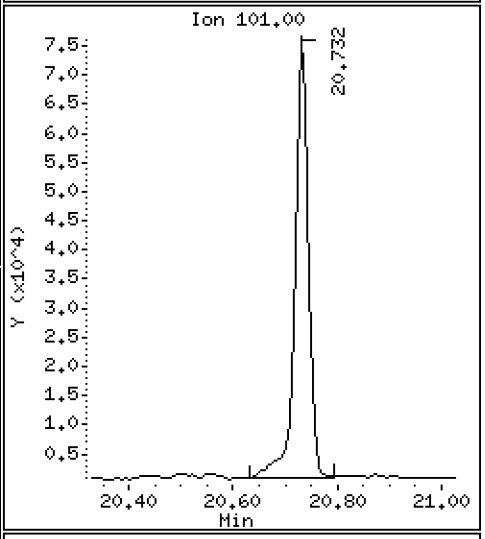
64 Fluoranthene

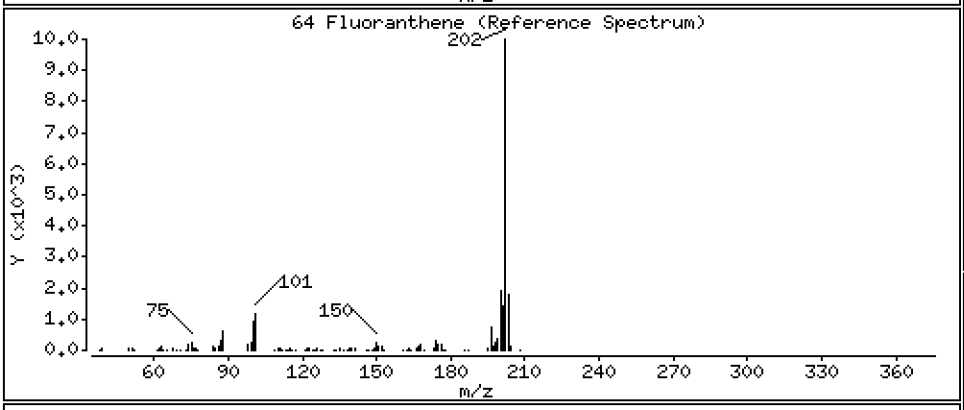
Concentration: 10.60 ug/mL

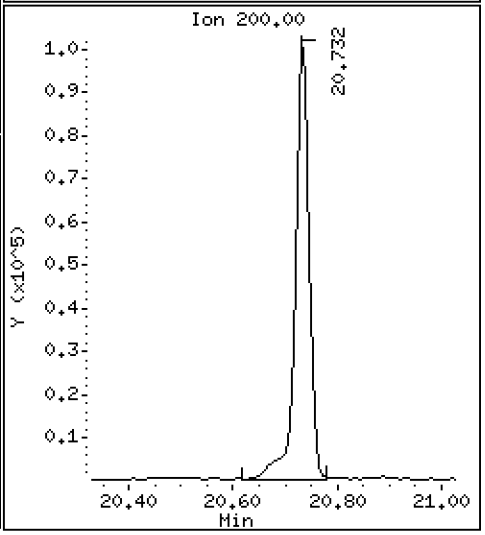


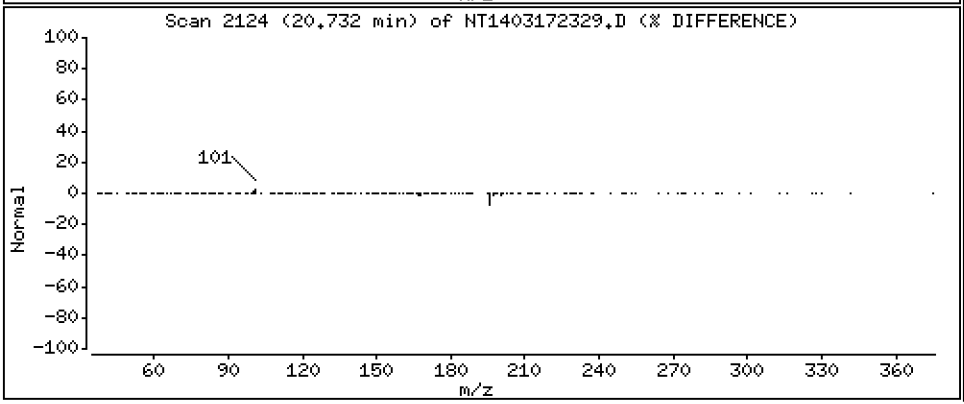












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Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

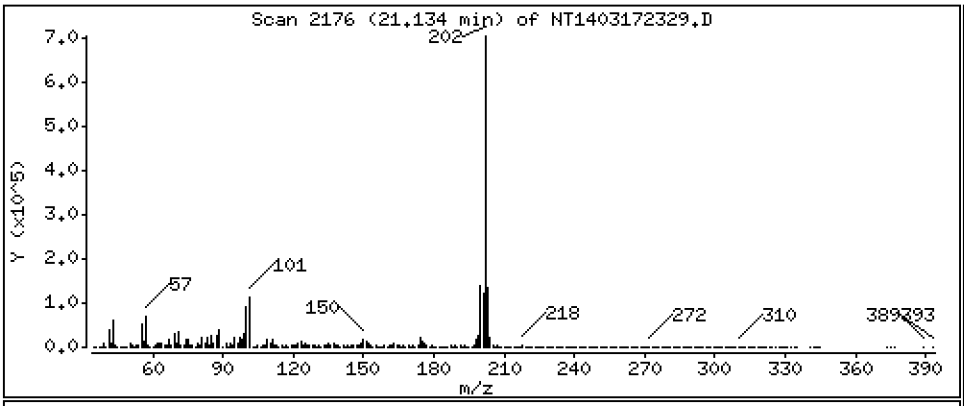
Operator: JGR

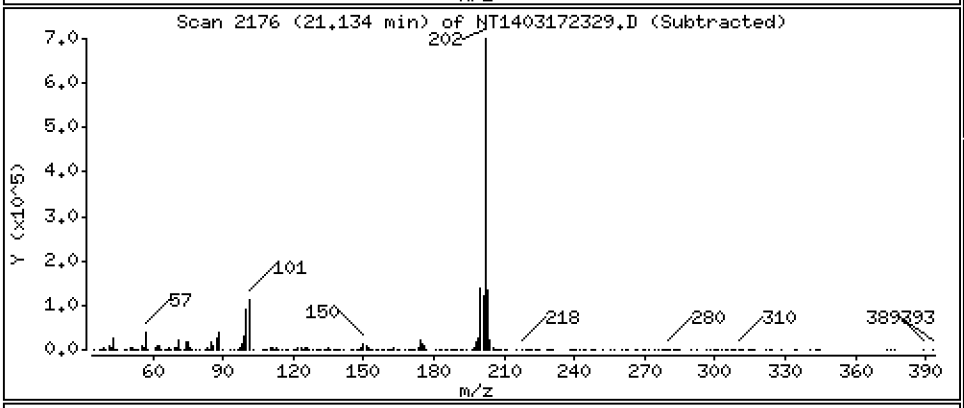
Column phase: ZB-5msi

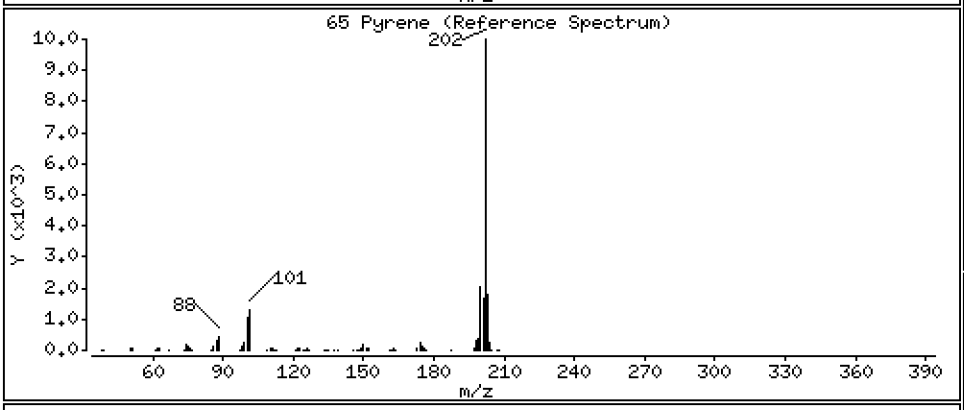
Column diameter: 0.25

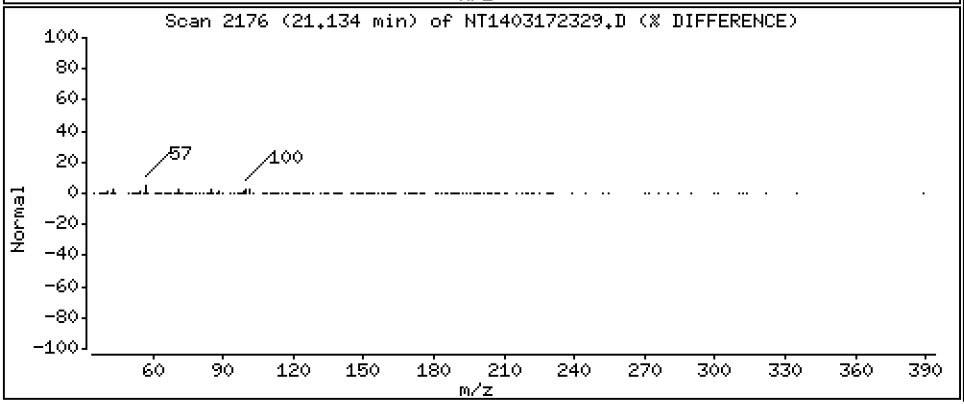
65 Pyrene

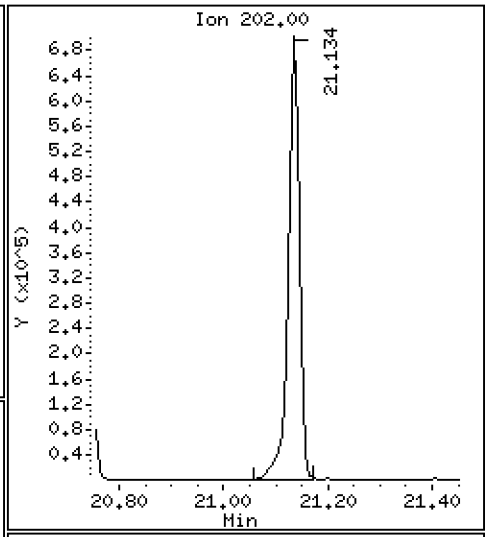
Concentration: 11.64 ug/mL

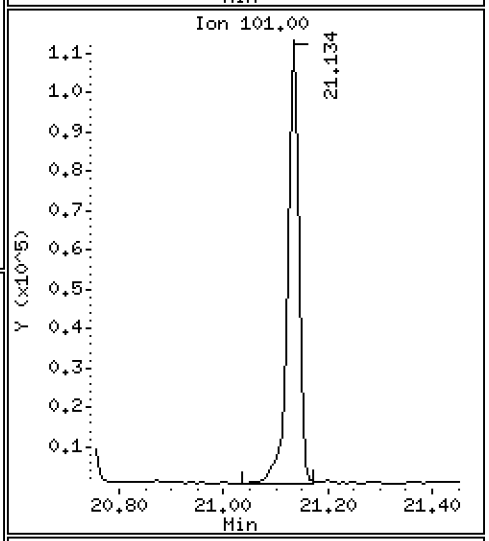


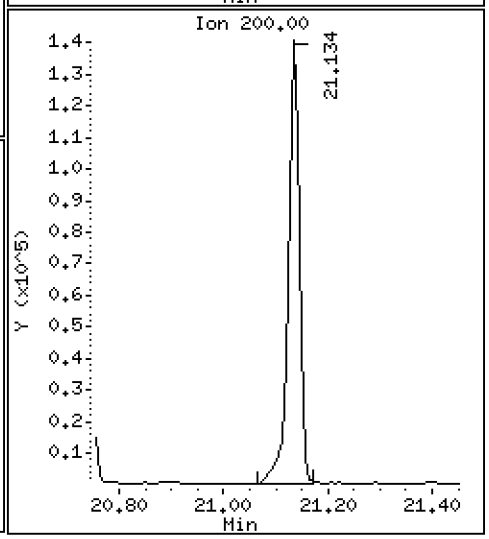












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Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

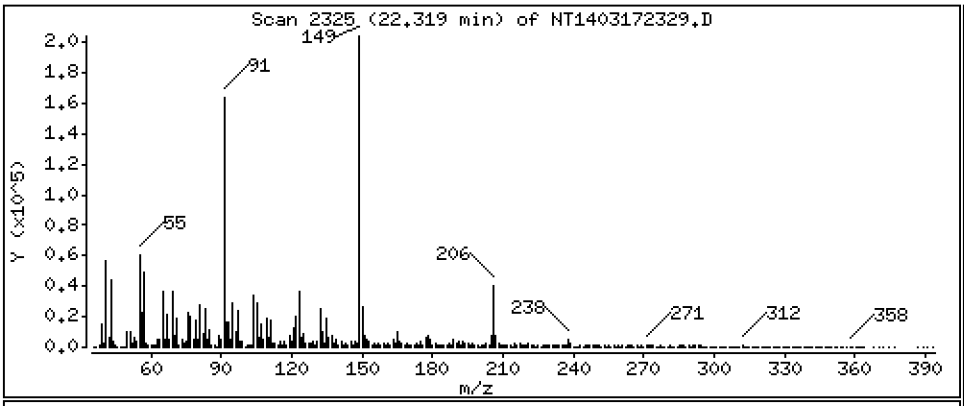
Operator: JGR

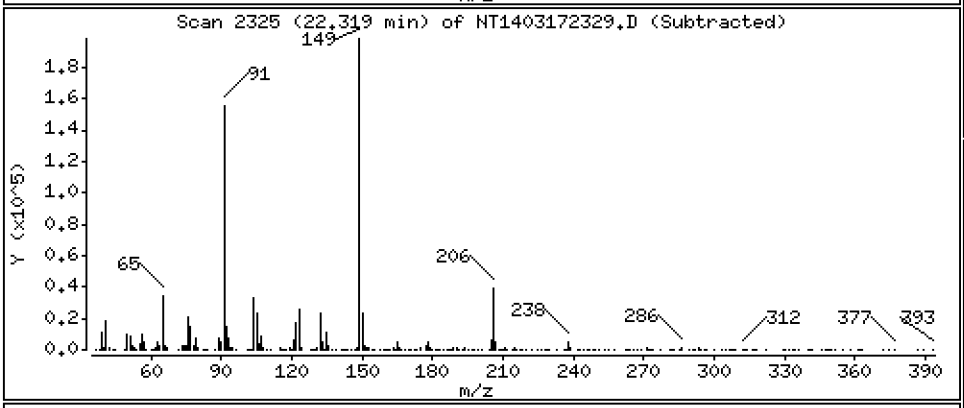
Column phase: ZB-5msi

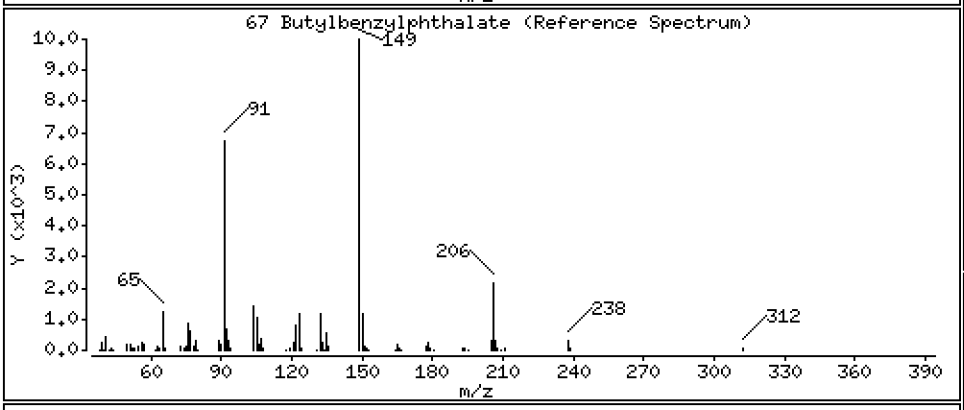
Column diameter: 0.25

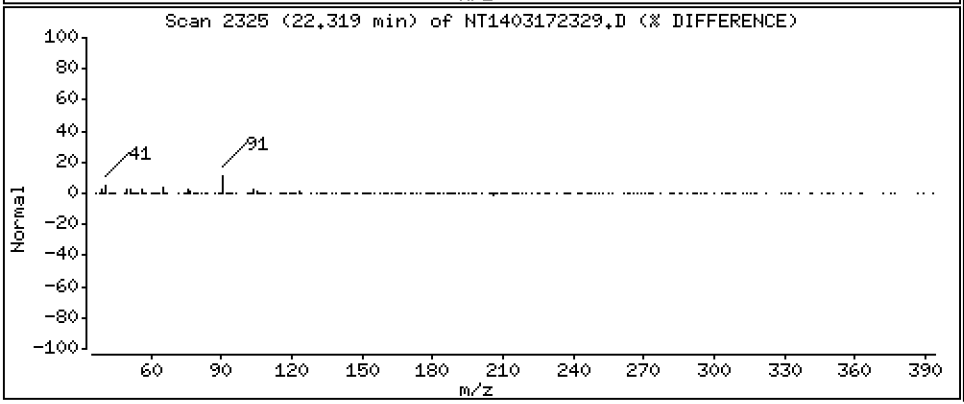
67 Butylbenzylphthalate

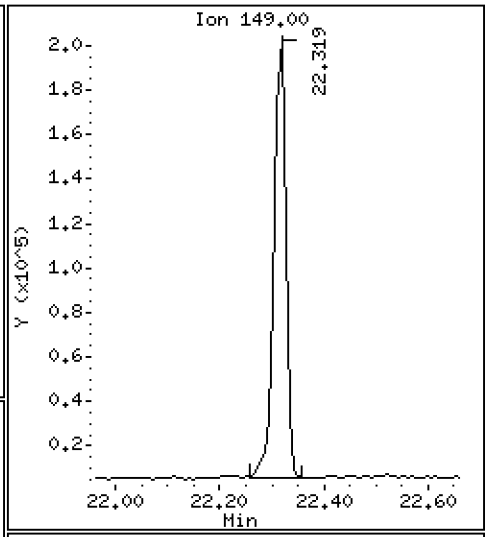
Concentration: 7.333 ug/mL

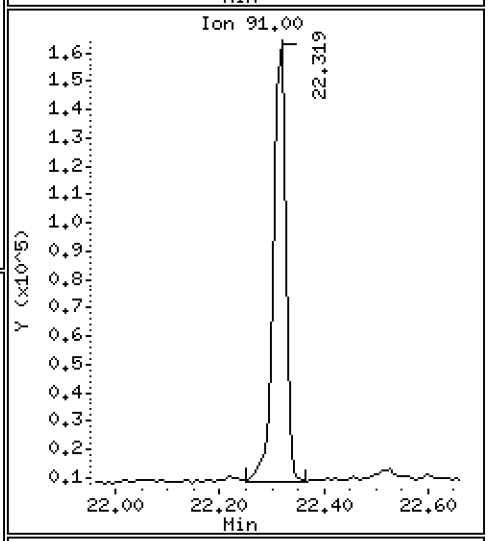


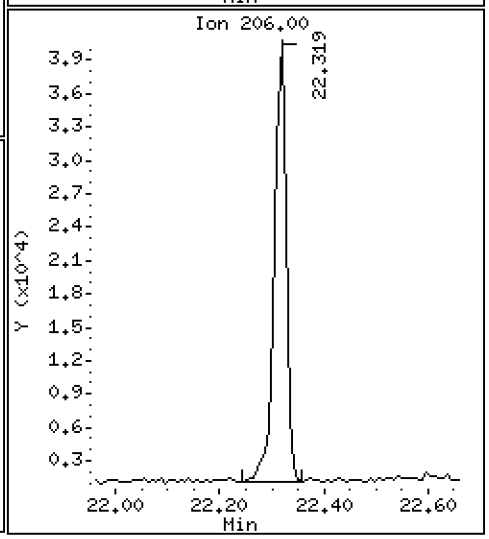












Date : 18-MAR-2023 07:18

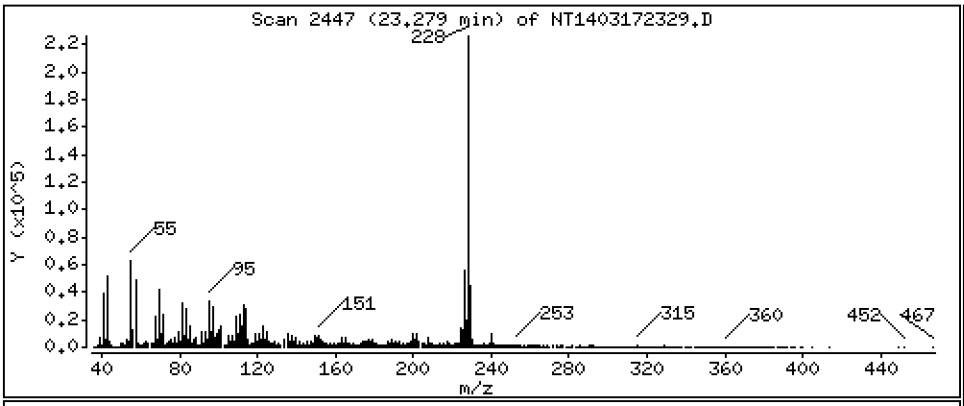
Client ID: Instrument: nt14.i

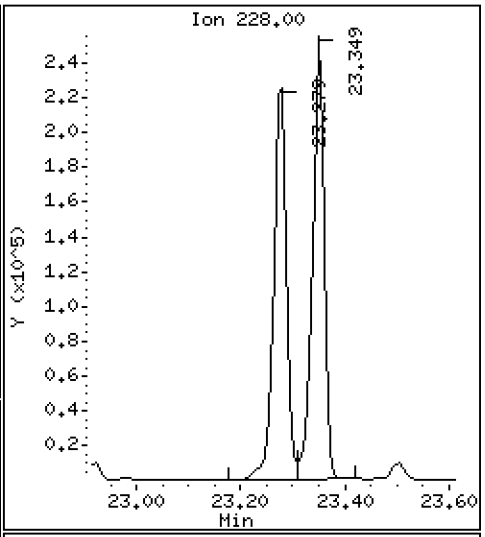
Sample Info: BLB0424-MSD1

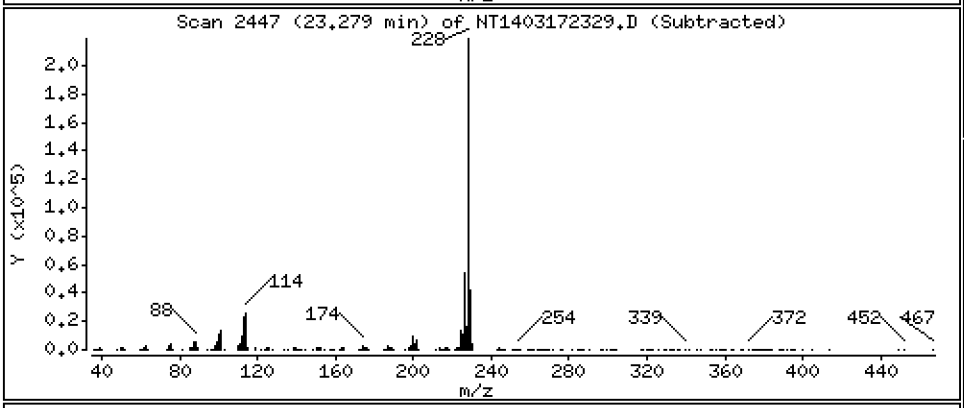
Operator: JGR

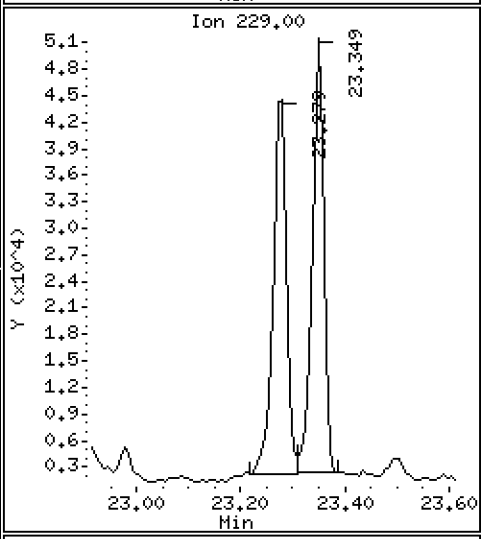
Column phase: ZB-5msi Column diameter: 0.25

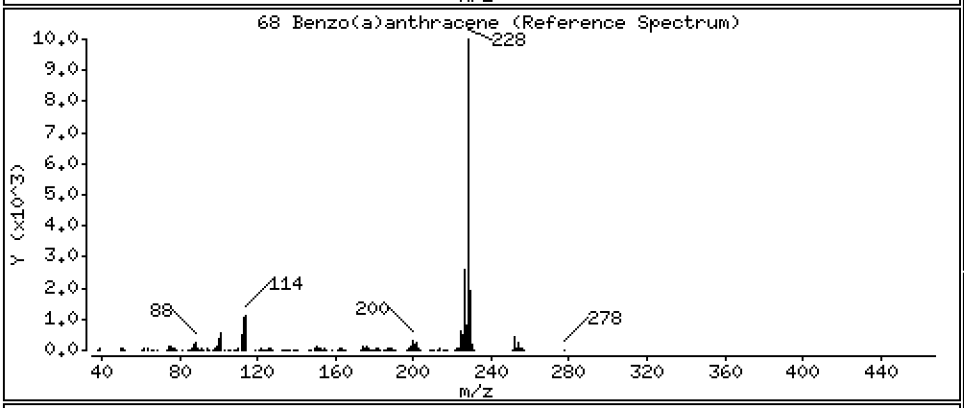
68 Benzo(a)anthracene Concentration: 4.764 ug/mL

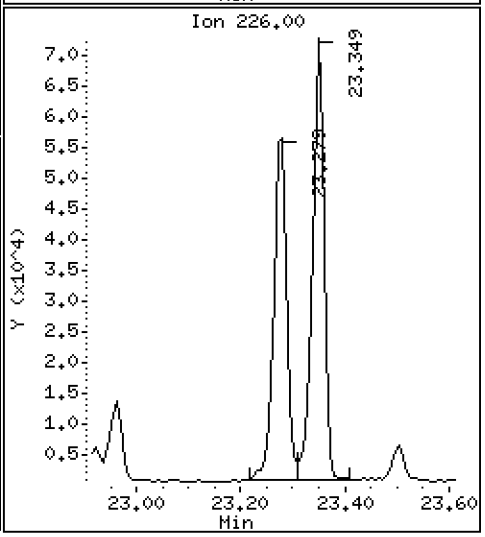


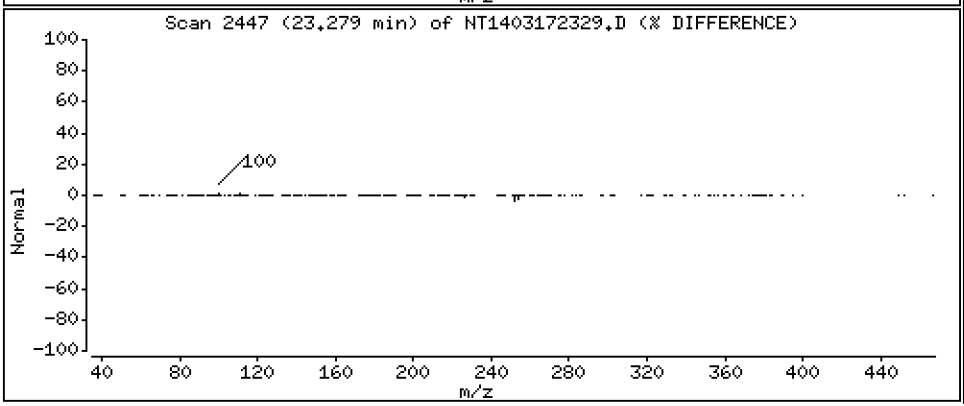












Date : 18-MAR-2023 07:18

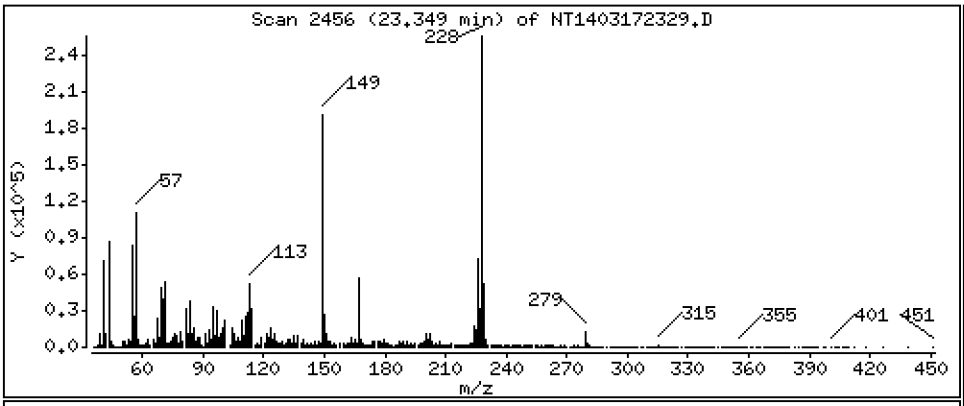
Client ID: Instrument: nt14.i

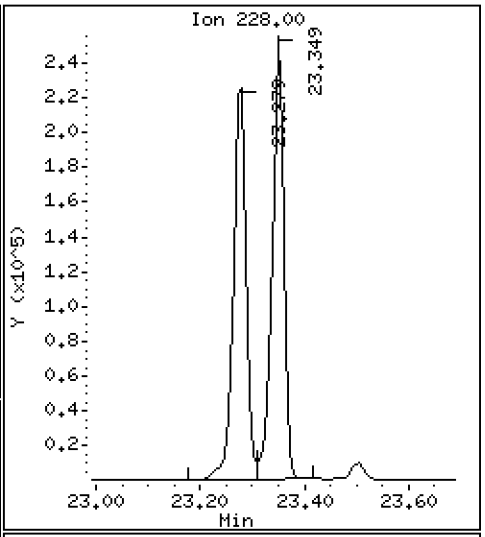
Sample Info: BLB0424-MSD1

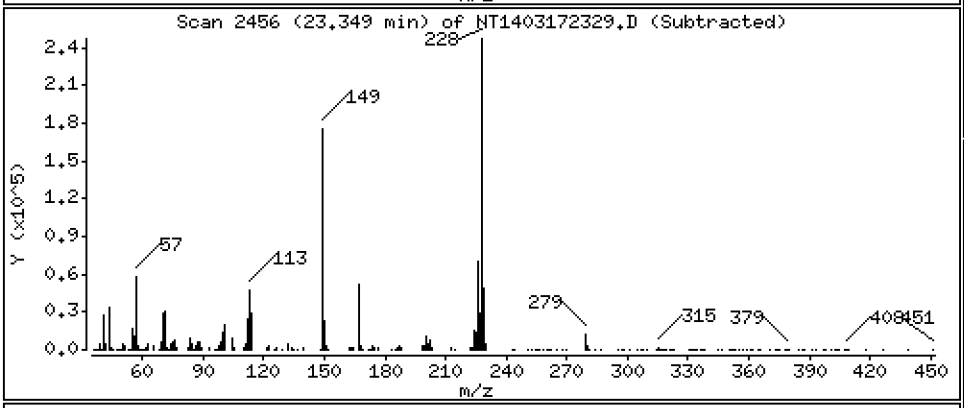
Operator: JGR

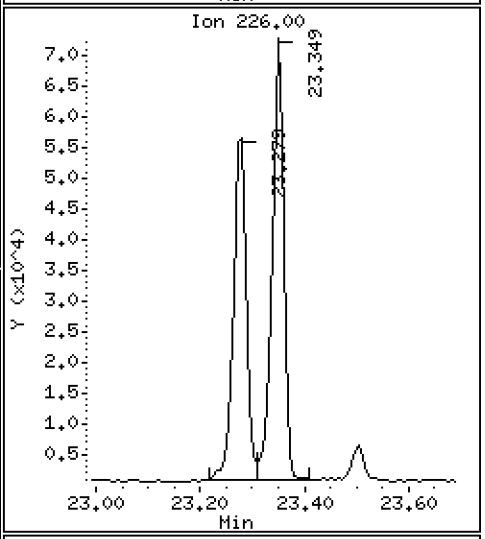
Column phase: ZB-5msi Column diameter: 0.25

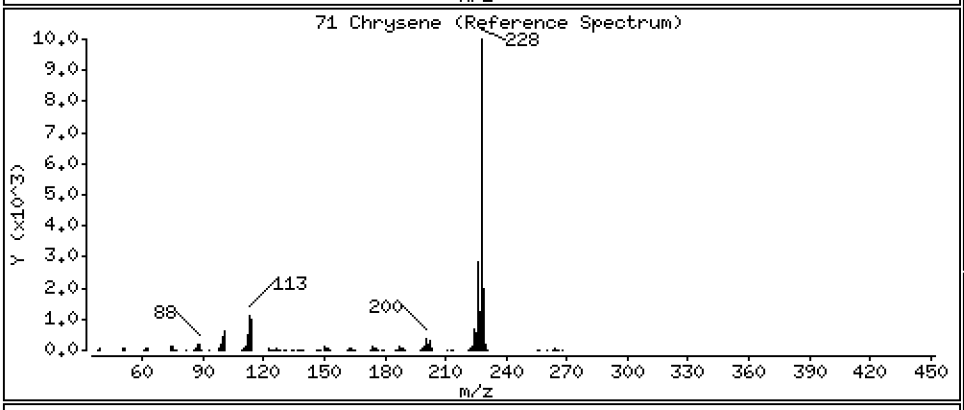
71 Chrysene Concentration: 5.200 ug/mL

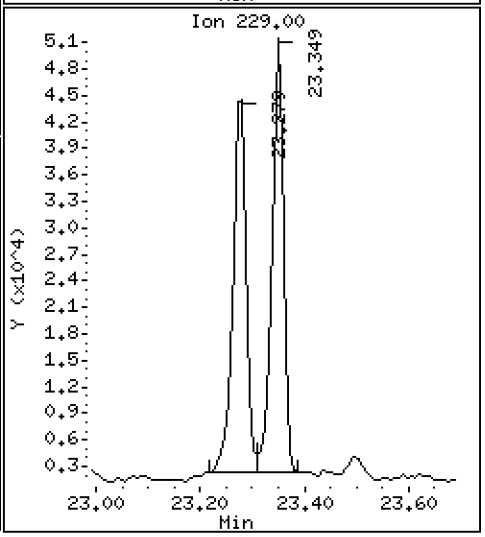


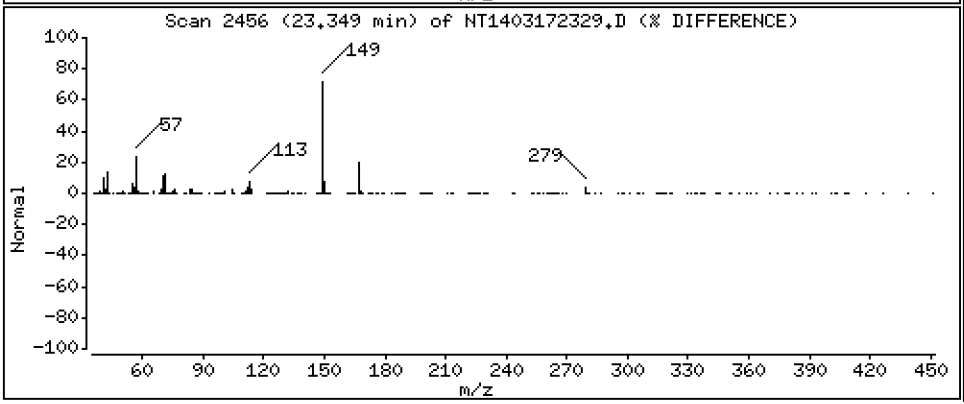












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Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

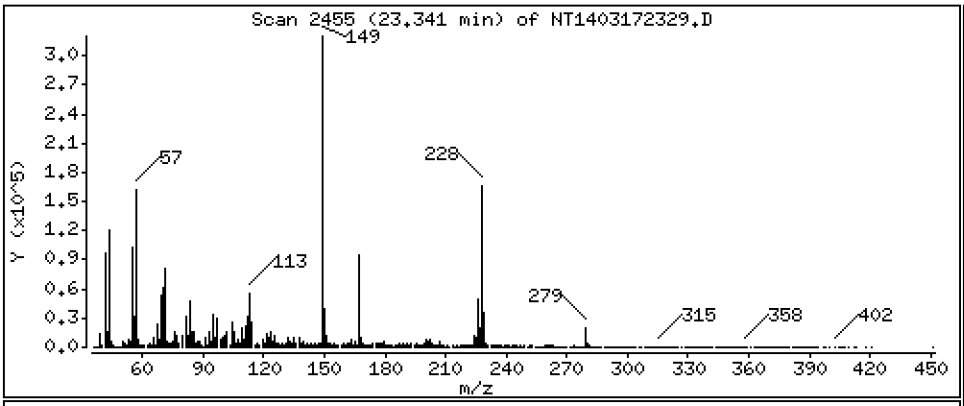
Operator: JGR

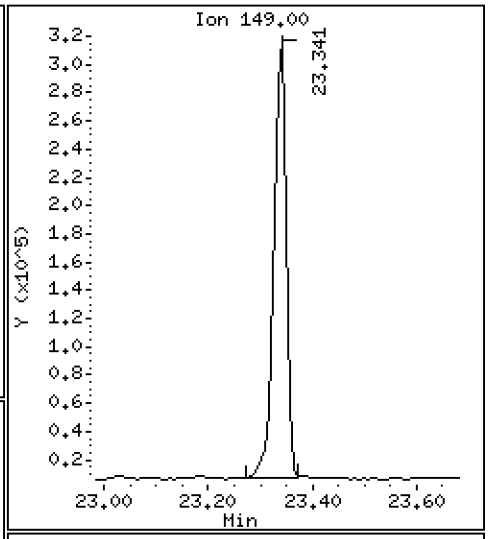
Column phase: ZB-5msi

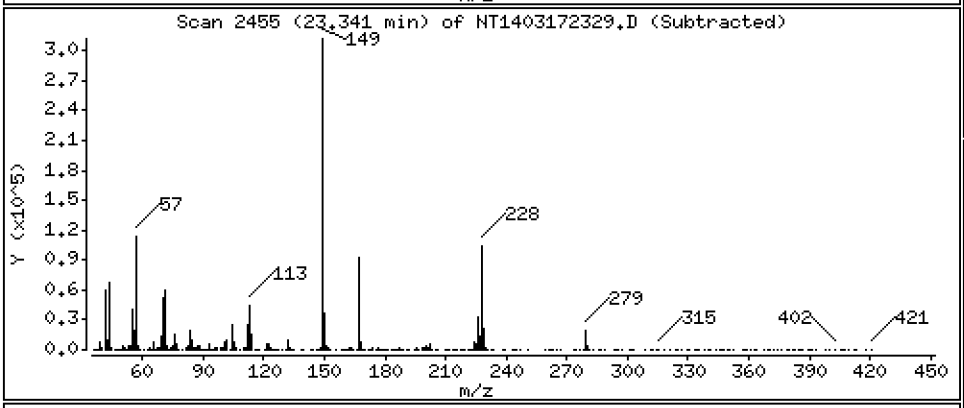
Column diameter: 0.25

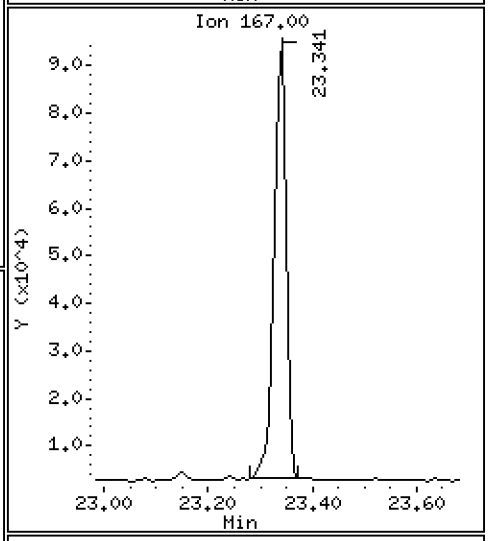
72 bis(2-Ethylhexyl)phthalate

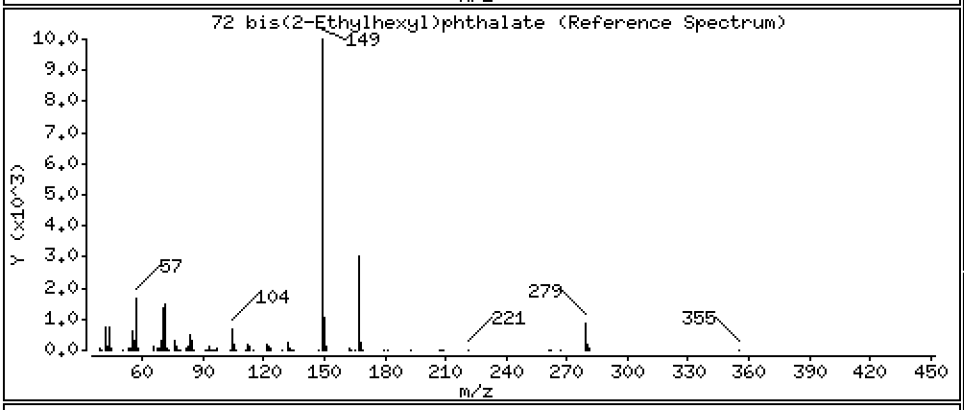
Concentration: 7.740 ug/mL

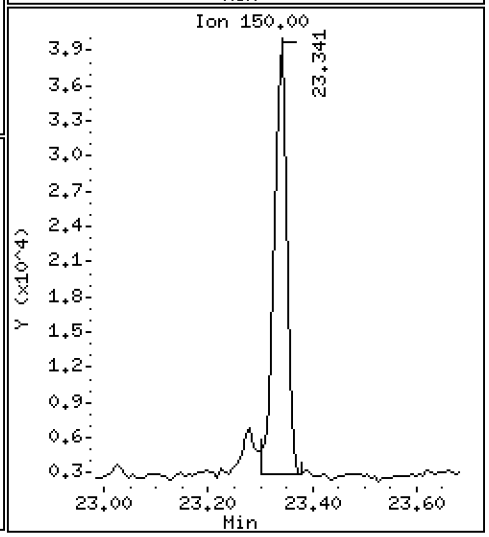


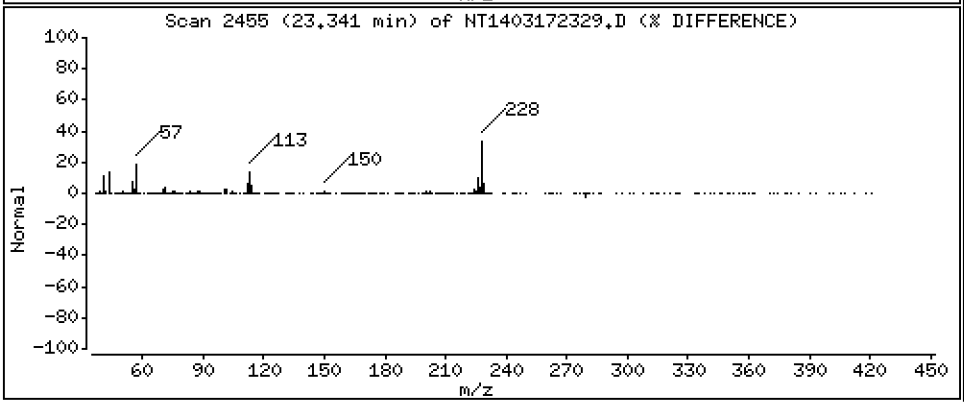












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Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

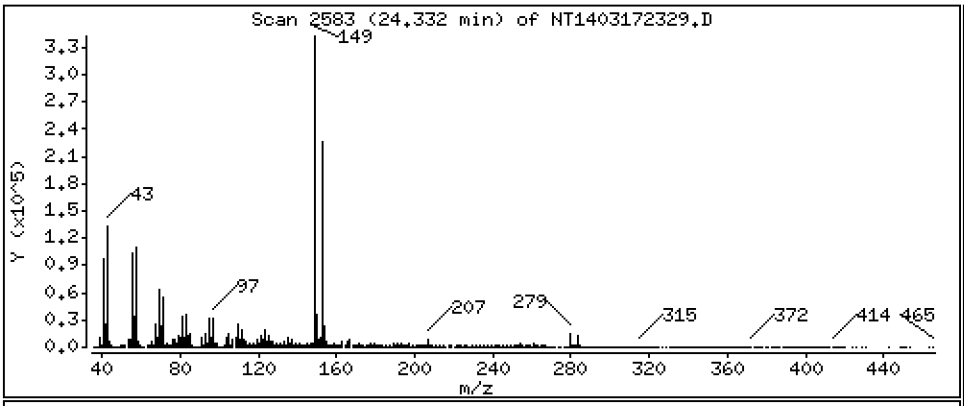
Operator: JGR

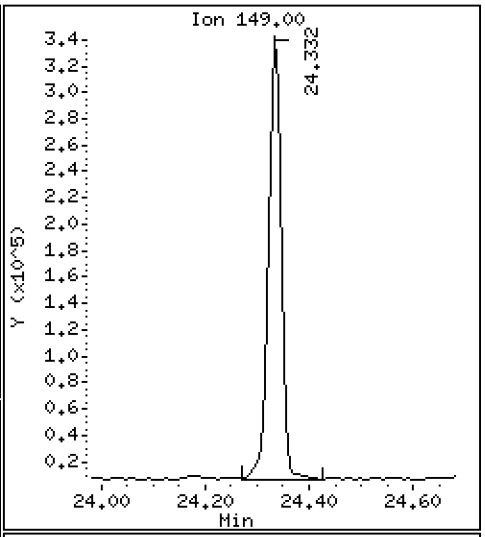
Column phase: ZB-5msi

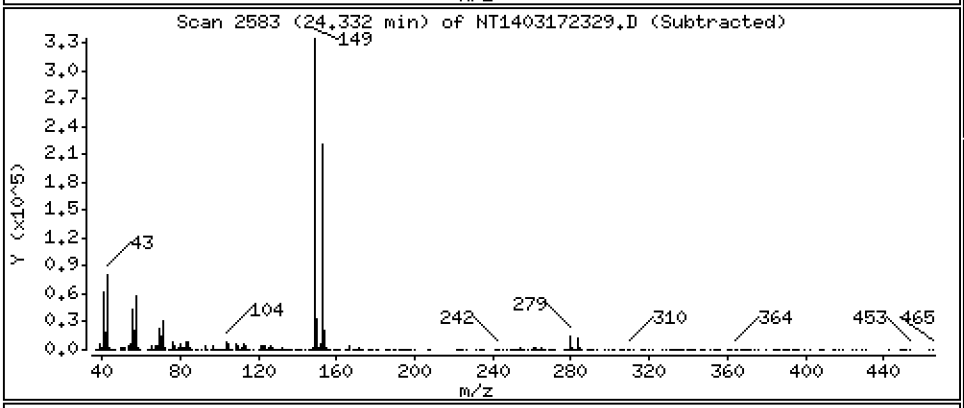
Column diameter: 0.25

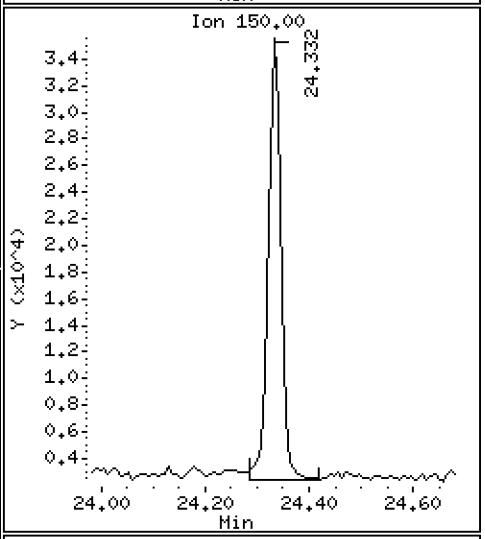
73 Di-n-octylphthalate

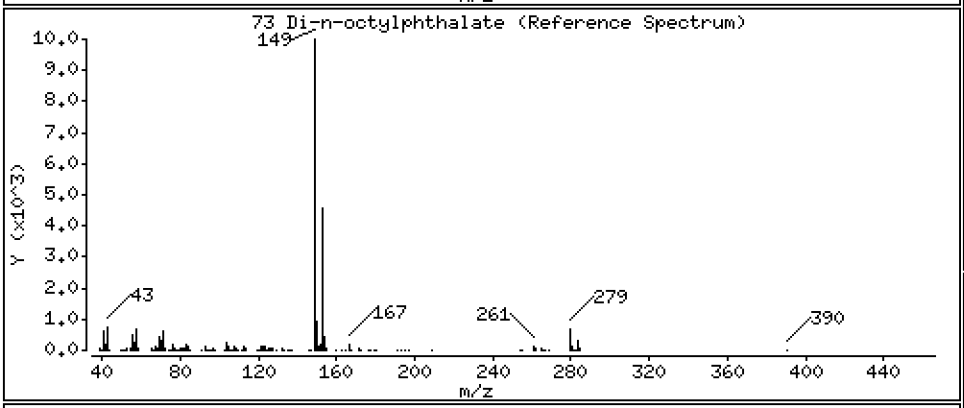
Concentration: 4.403 ug/mL

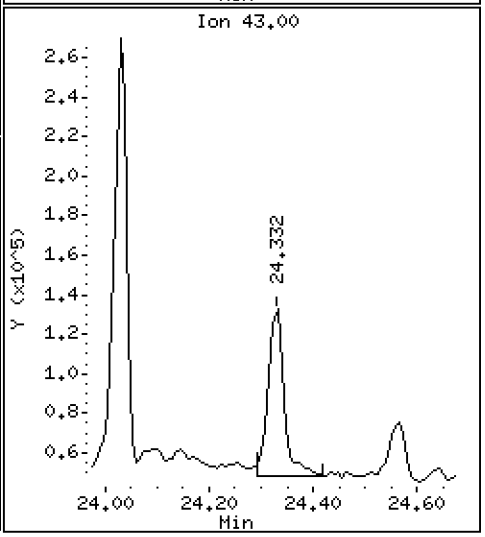


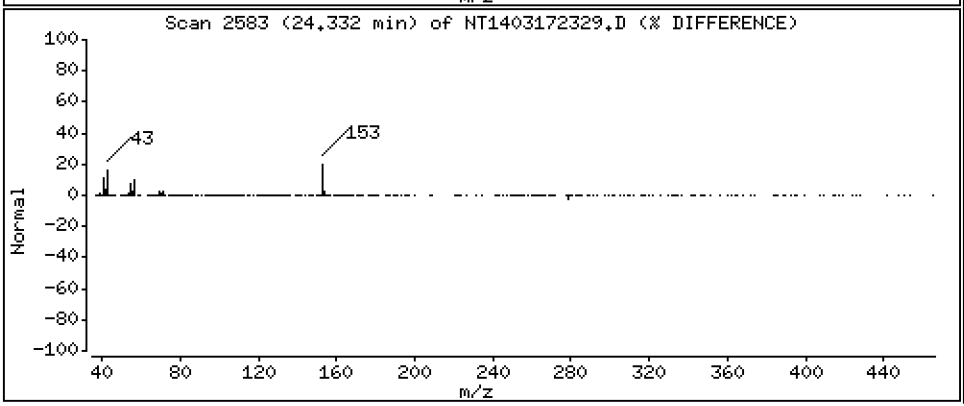












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Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

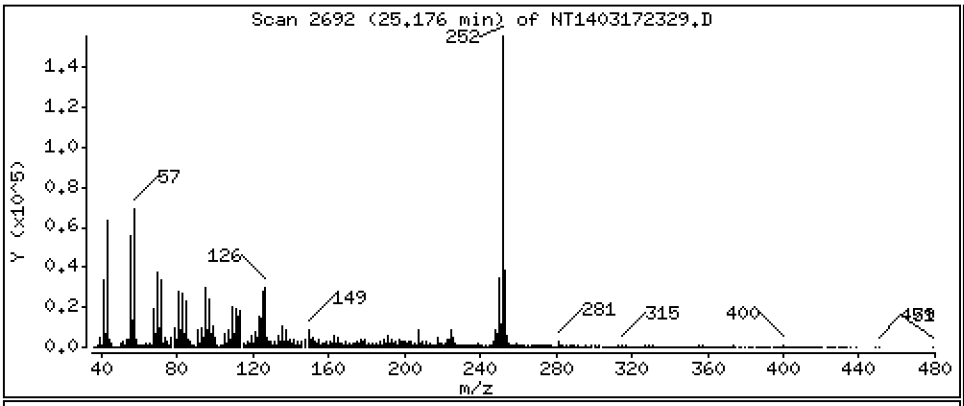
Operator: JGR

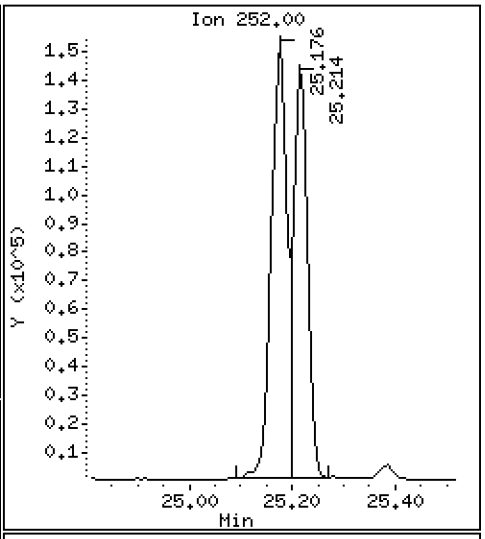
Column phase: ZB-5msi

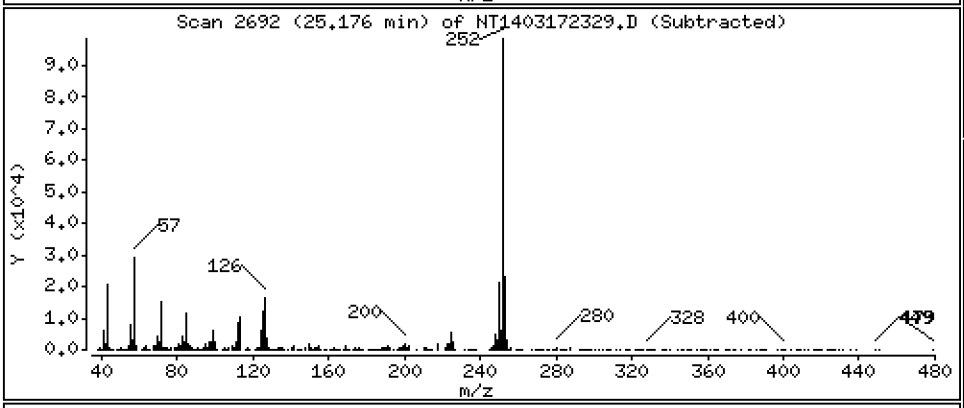
Column diameter: 0.25

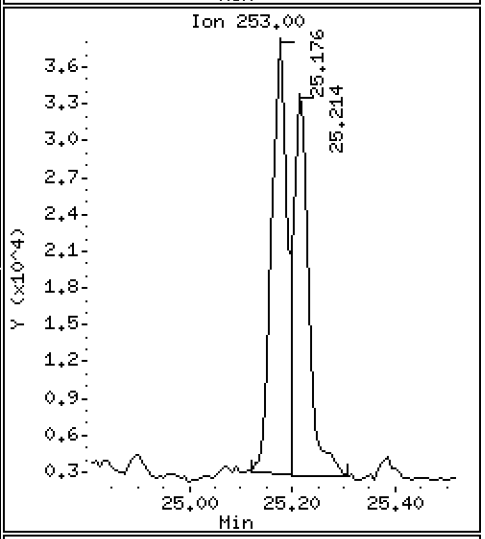
74 Benzo(b)fluoranthene

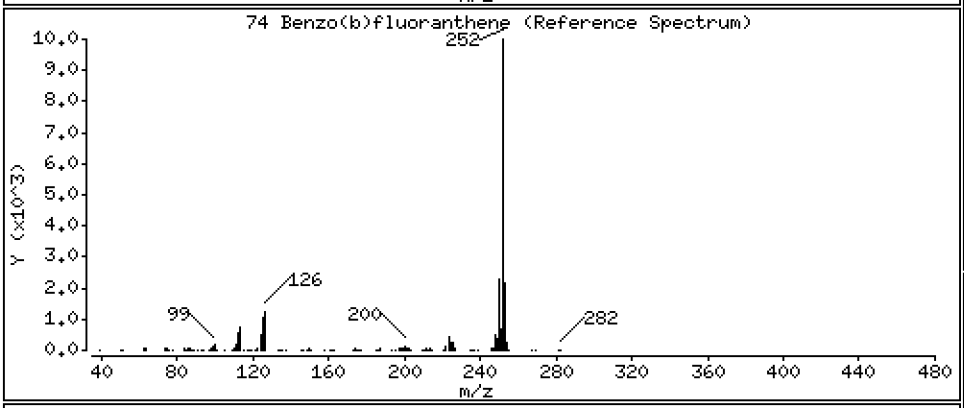
Concentration: 6.103 ug/mL

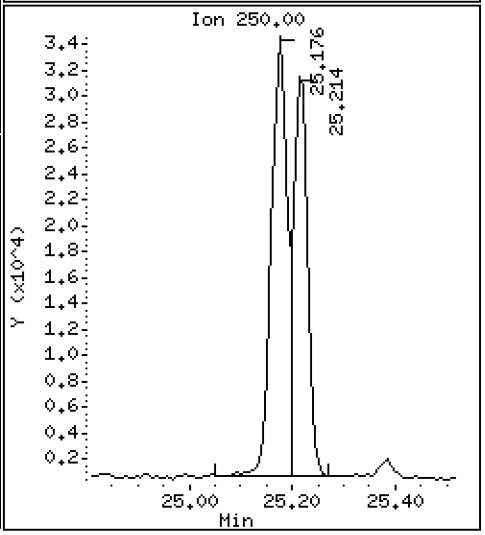


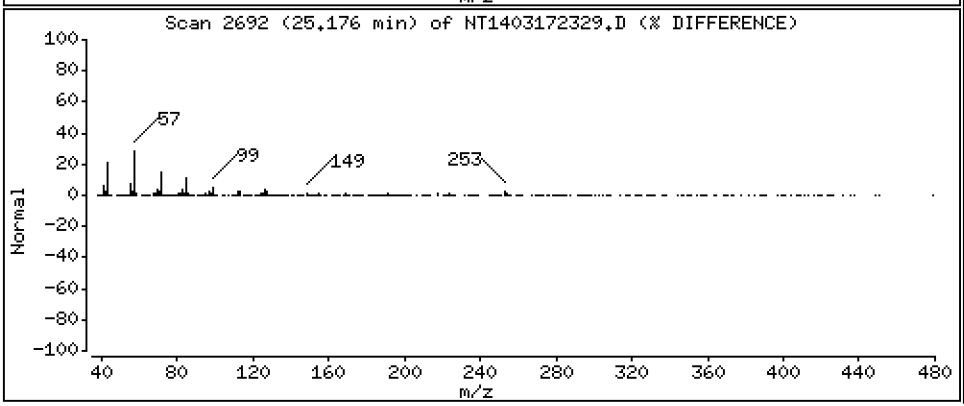












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Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

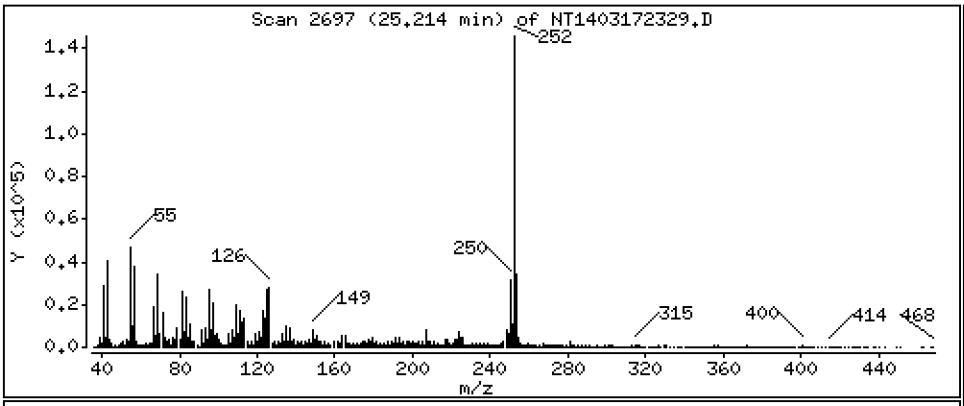
Operator: JGR

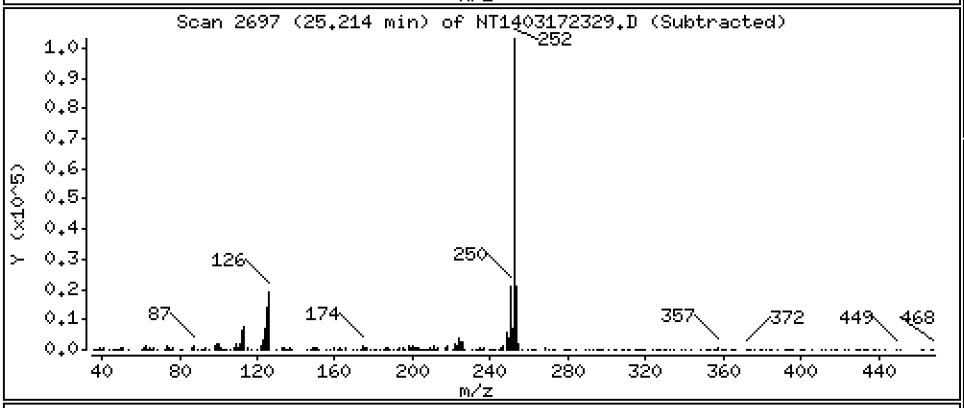
Column phase: ZB-5msi

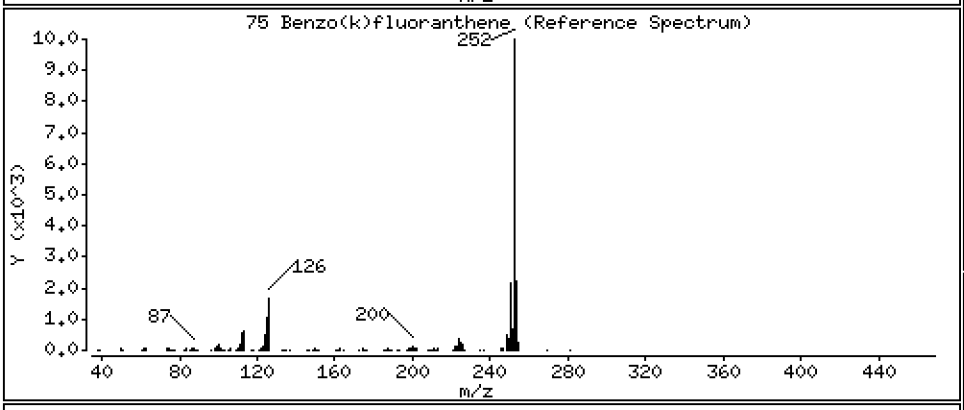
Column diameter: 0.25

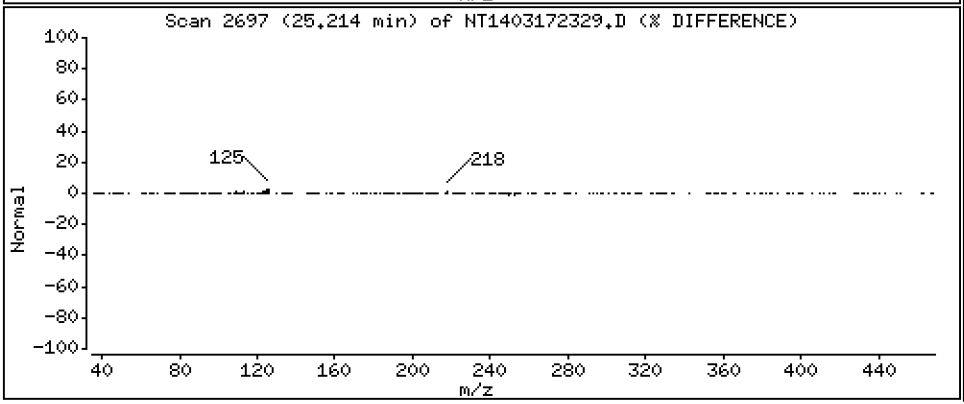
75 Benzo(k)fluoranthene

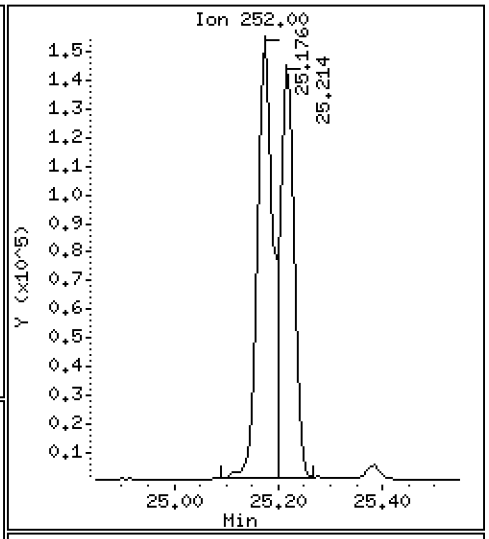
Concentration: 5.215 ug/mL

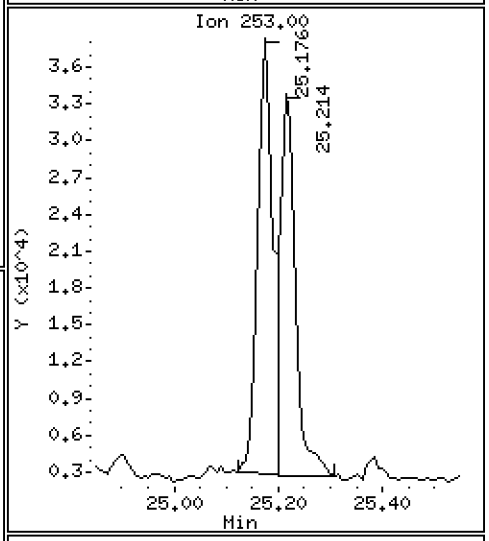


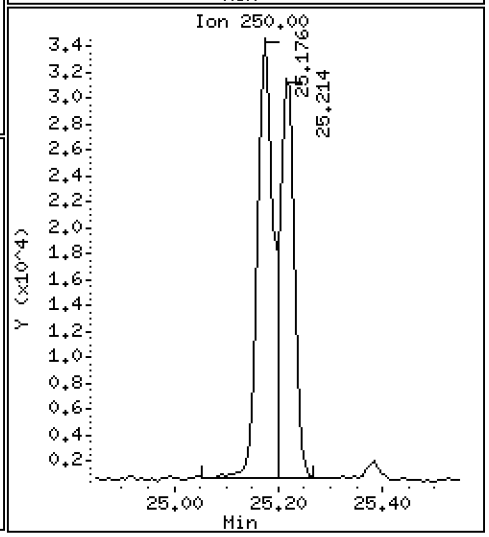












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Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

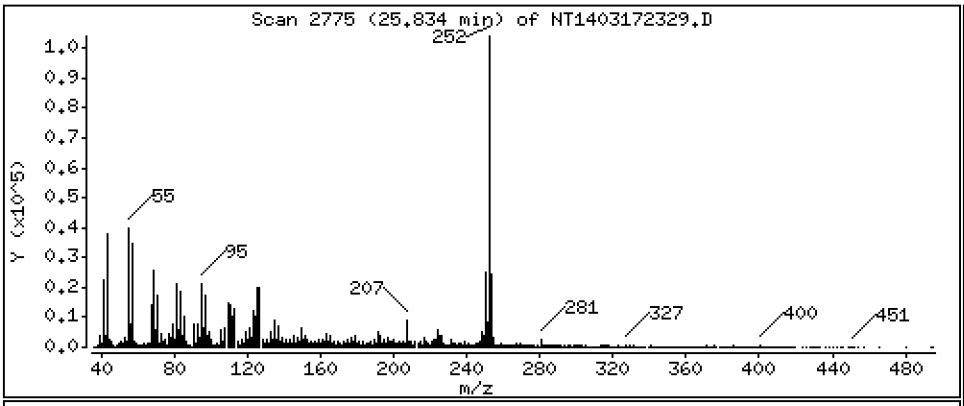
Operator: JGR

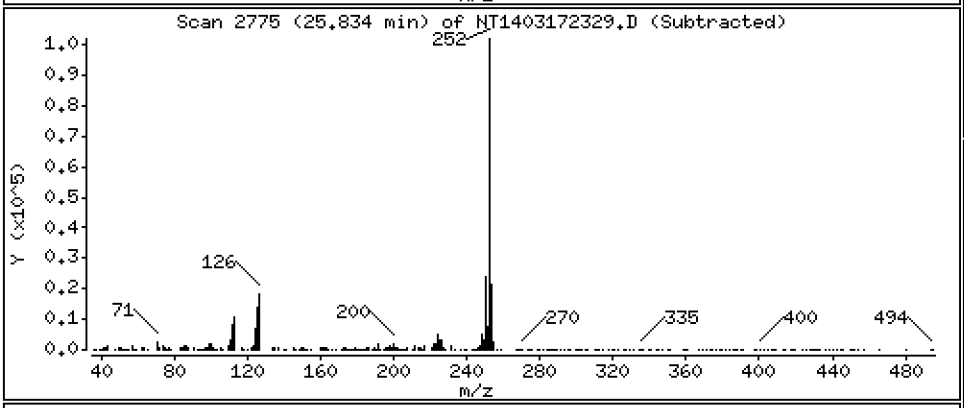
Column phase: ZB-5msi

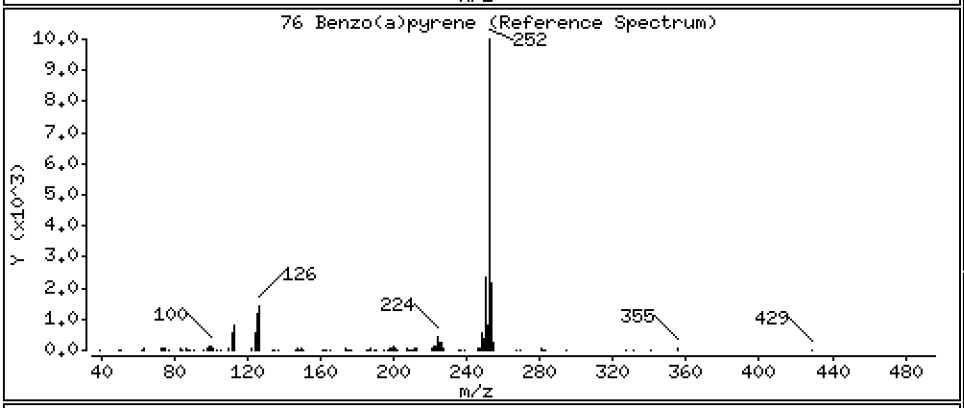
Column diameter: 0.25

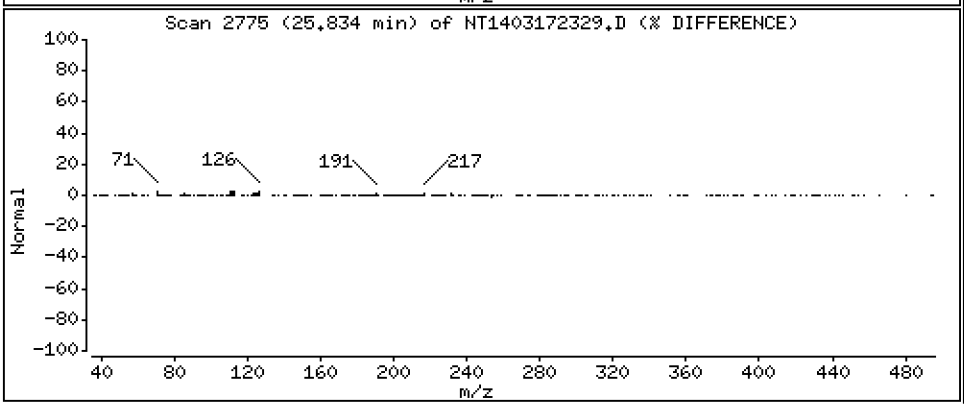
76 Benzo(a)pyrene

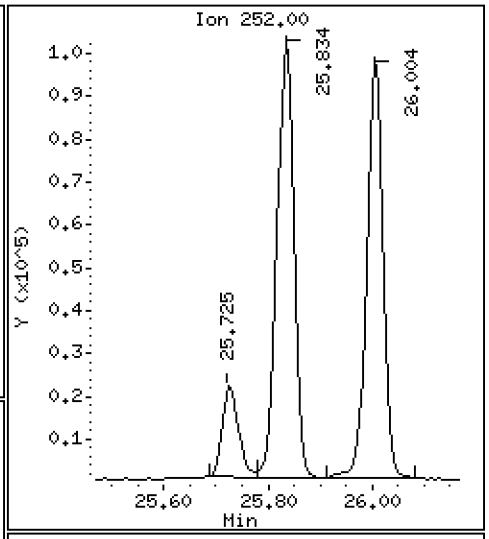
Concentration: 4.905 ug/mL

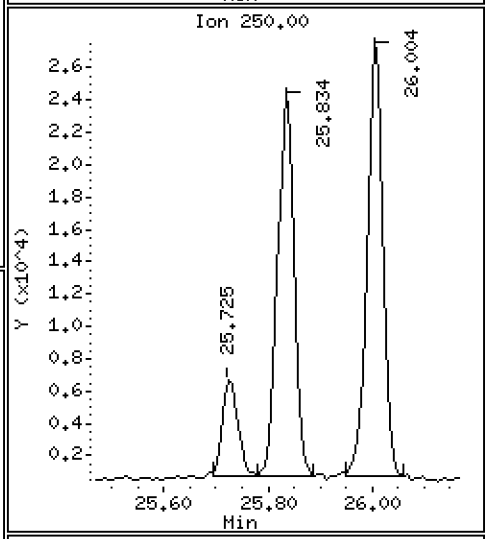


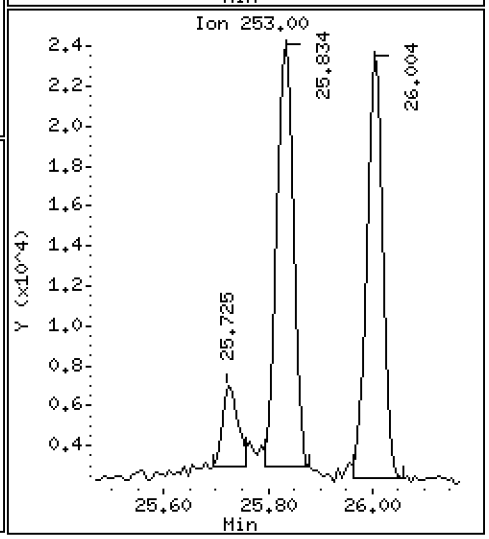












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Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

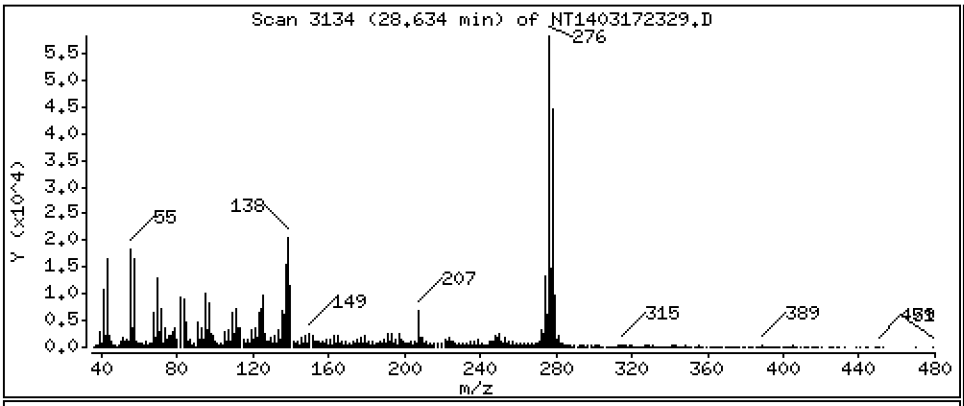
Operator: JGR

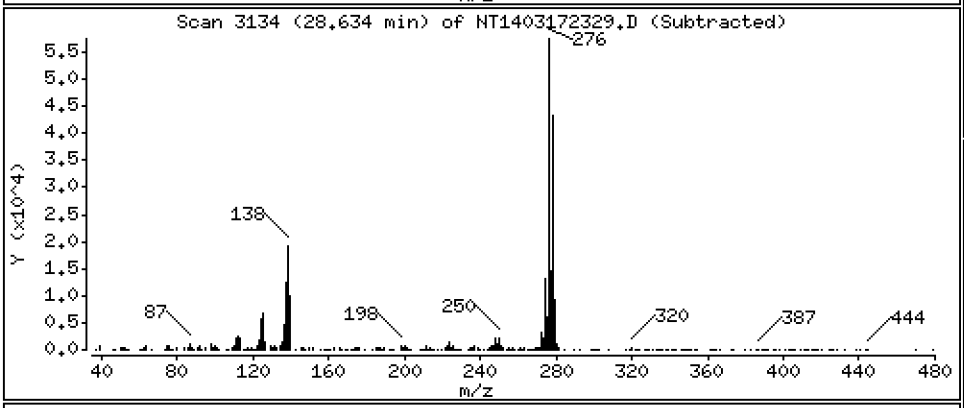
Column phase: ZB-5msi

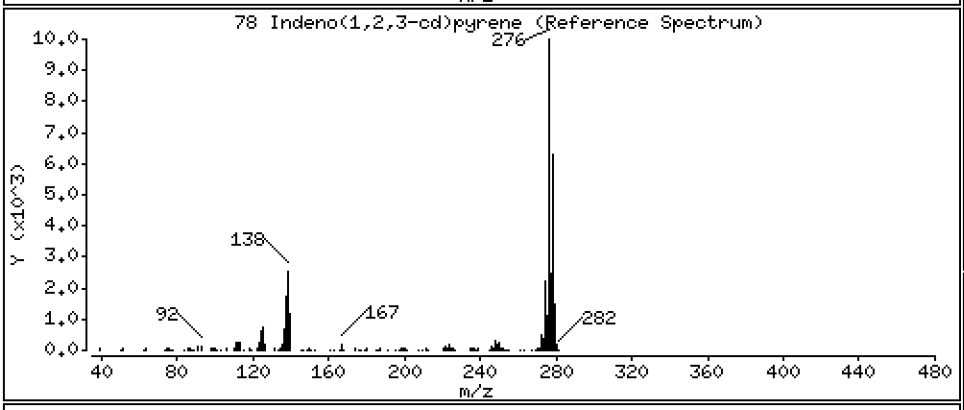
Column diameter: 0.25

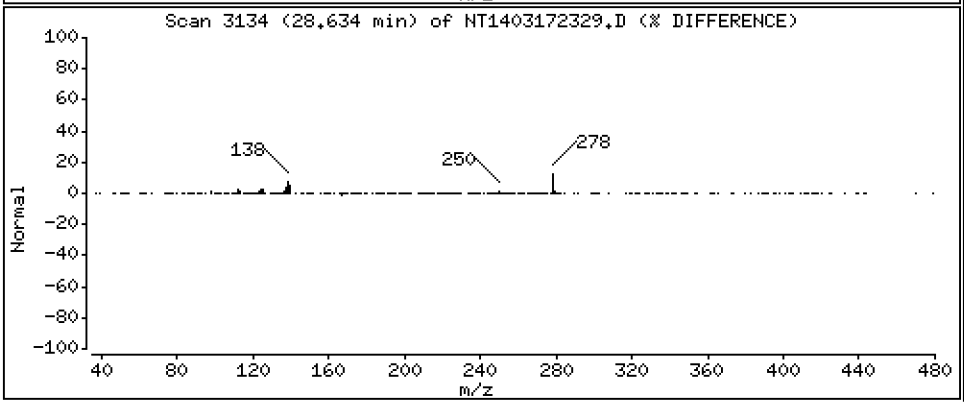
78 Indeno(1,2,3-cd)pyrene

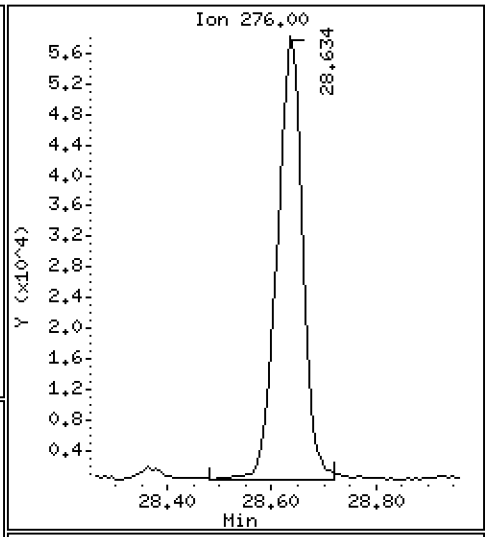
Concentration: 3.976 ug/mL

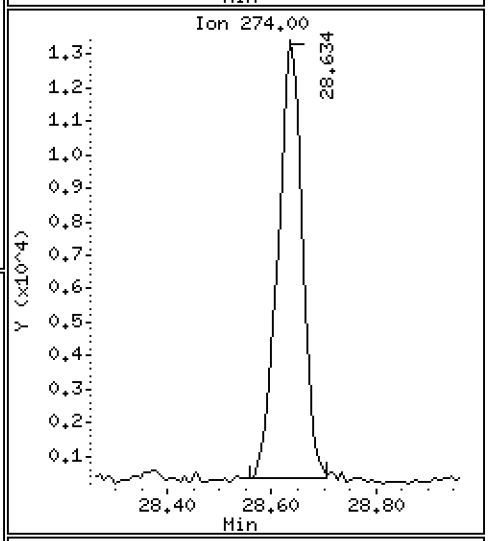


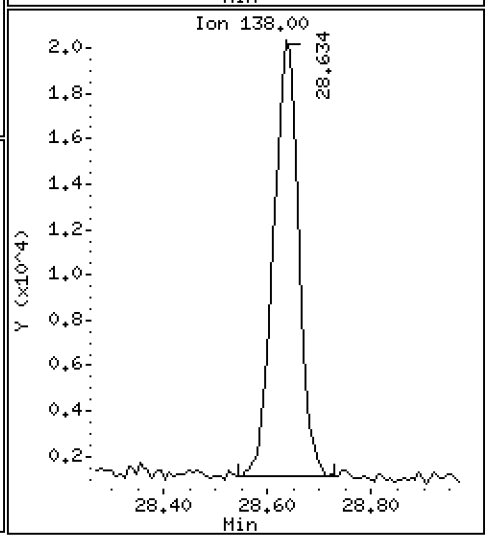












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Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

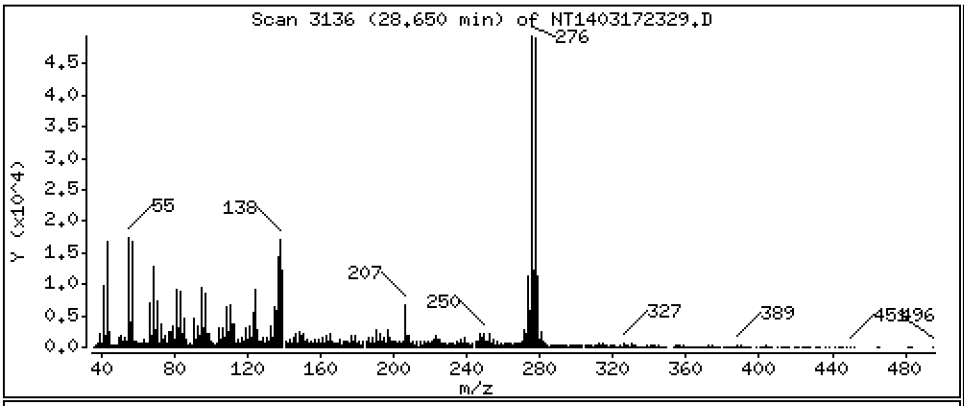
Operator: JGR

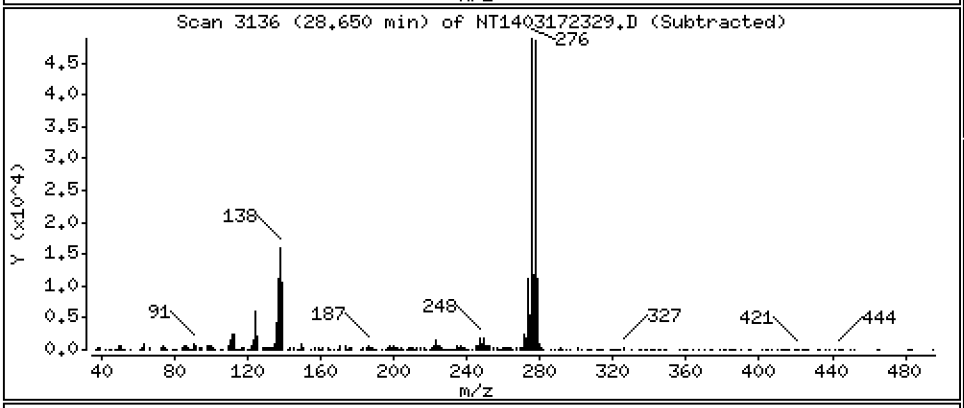
Column phase: ZB-5msi

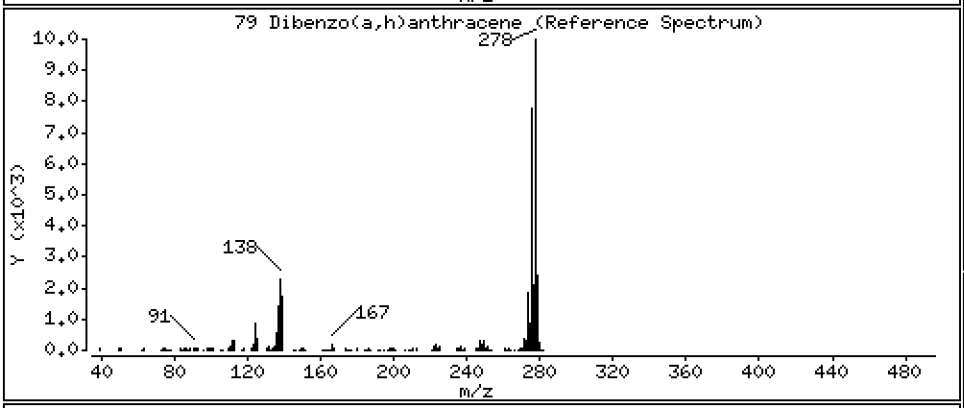
Column diameter: 0.25

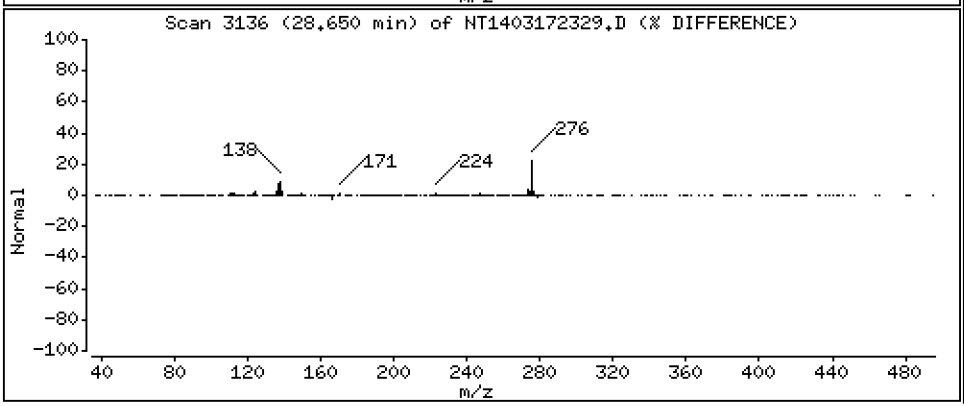
79 Dibenzo(a,h)anthracene

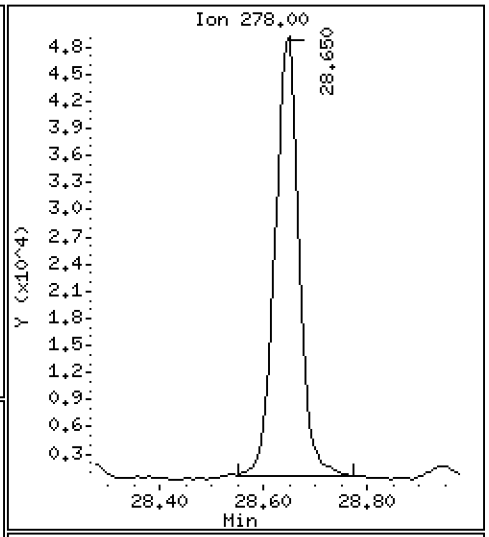
Concentration: 3.730 ug/mL

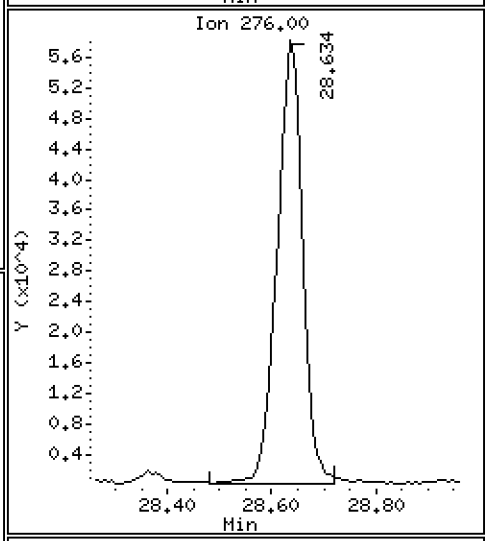


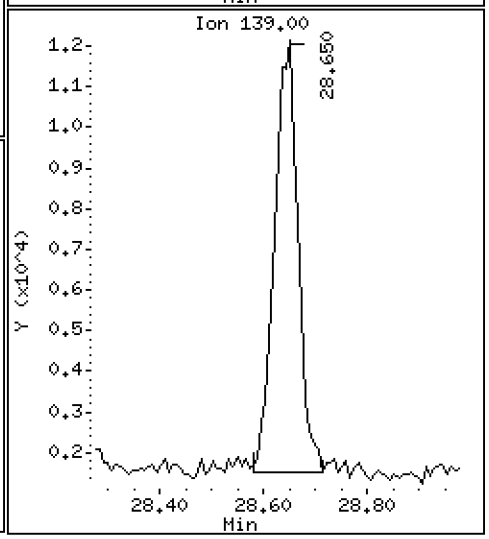












Date : 18-MAR-2023 07:18

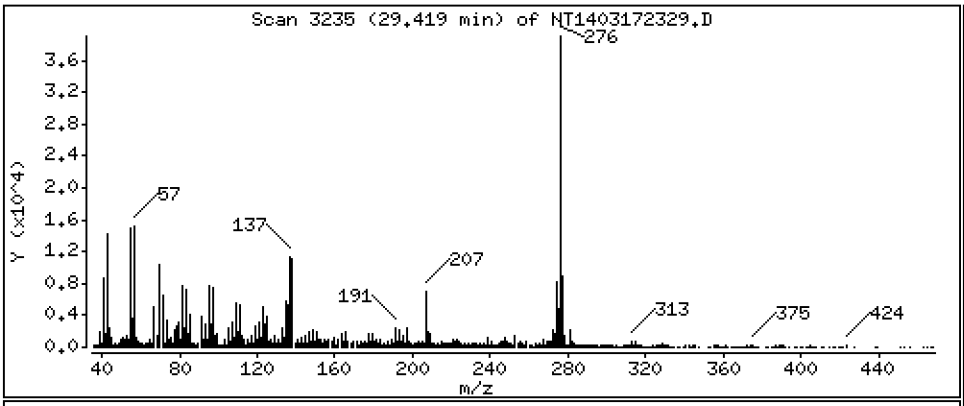
Client ID: Instrument: nt14.i

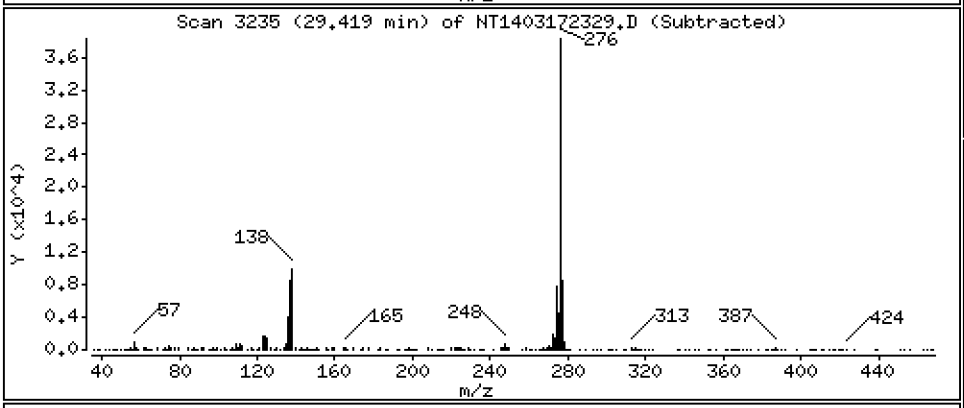
Sample Info: BLB0424-MSD1

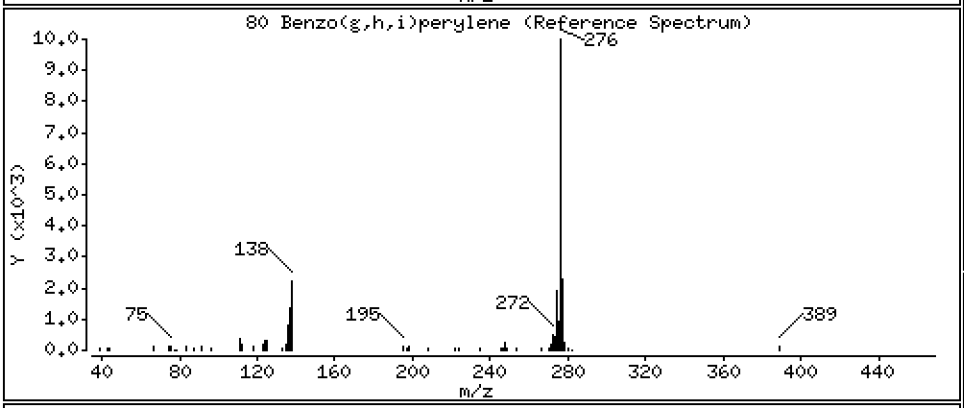
Operator: JGR

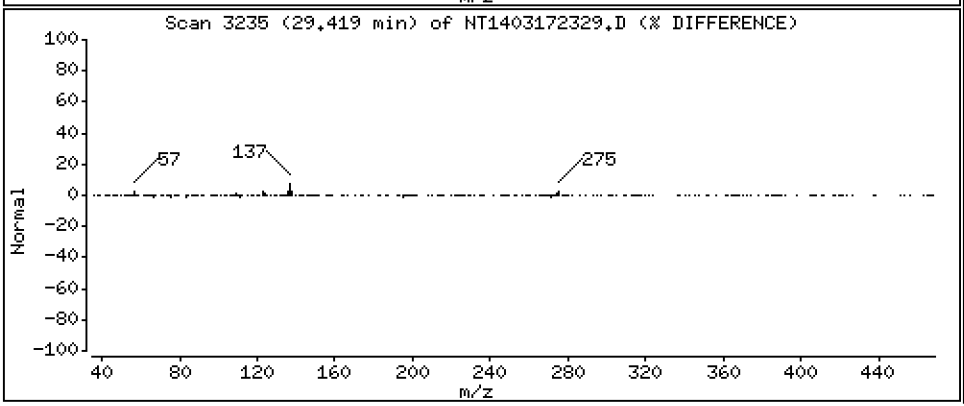
Column phase: ZB-5msi Column diameter: 0.25

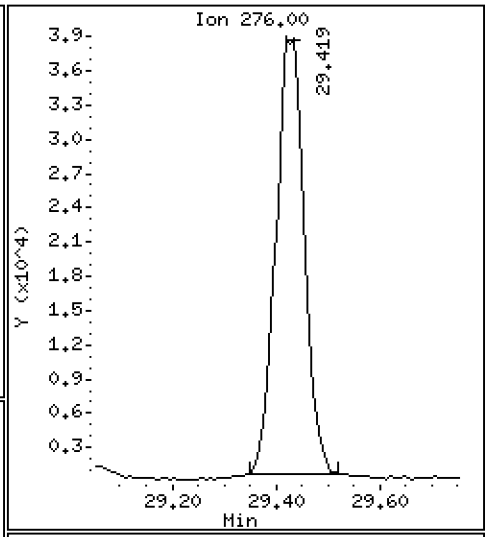
80 Benzo(g,h,i)perylene Concentration: 3.530 ug/mL

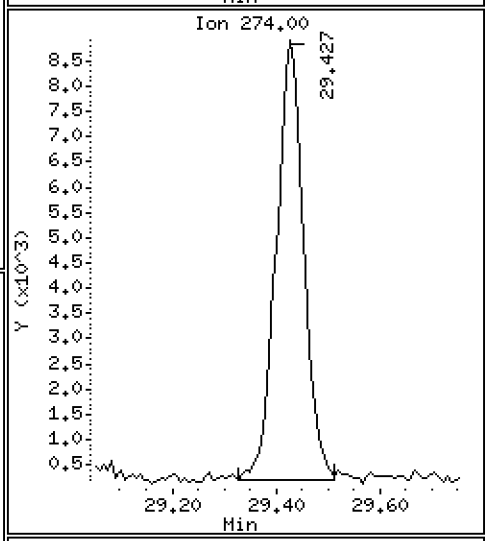


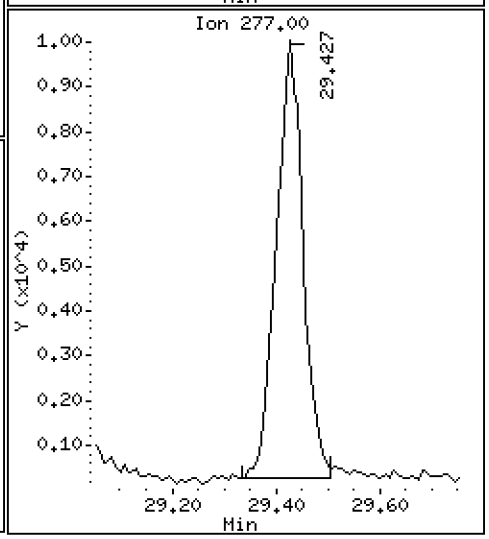












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Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

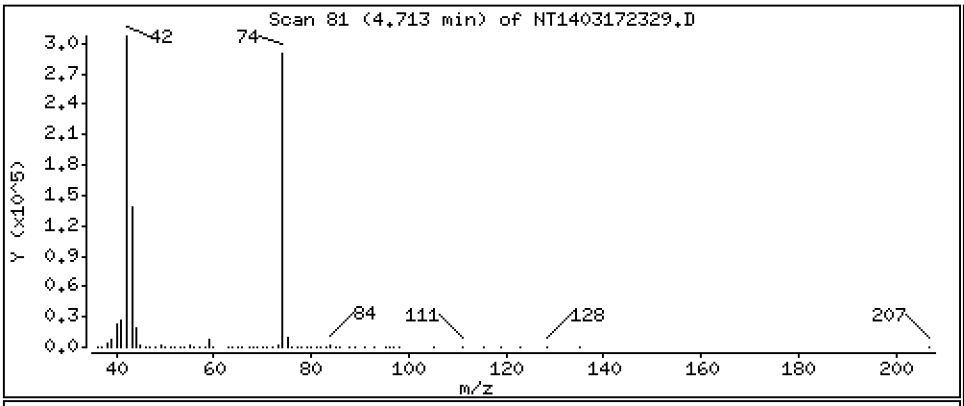
Operator: JGR

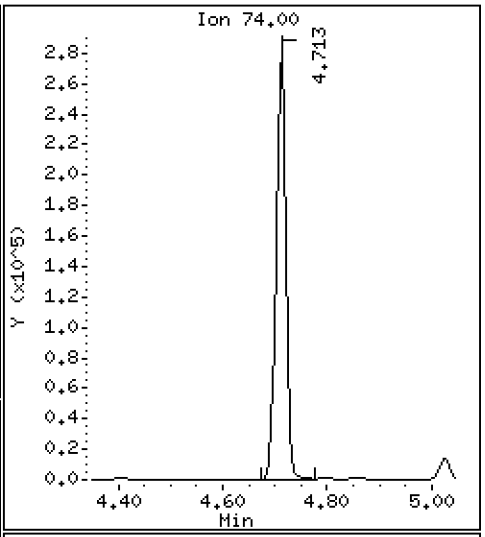
Column phase: ZB-5msi

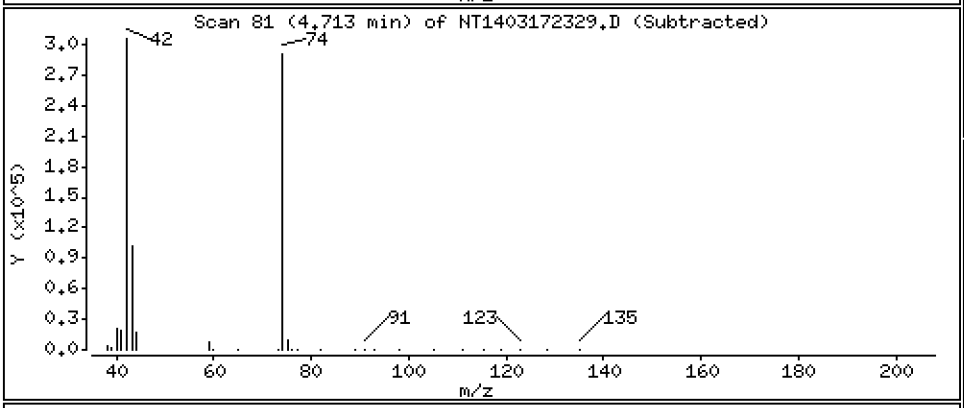
Column diameter: 0.25

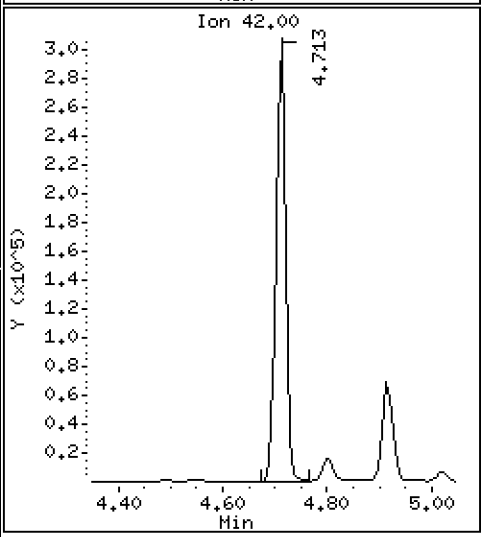
90 N-Nitrosodimethylamine

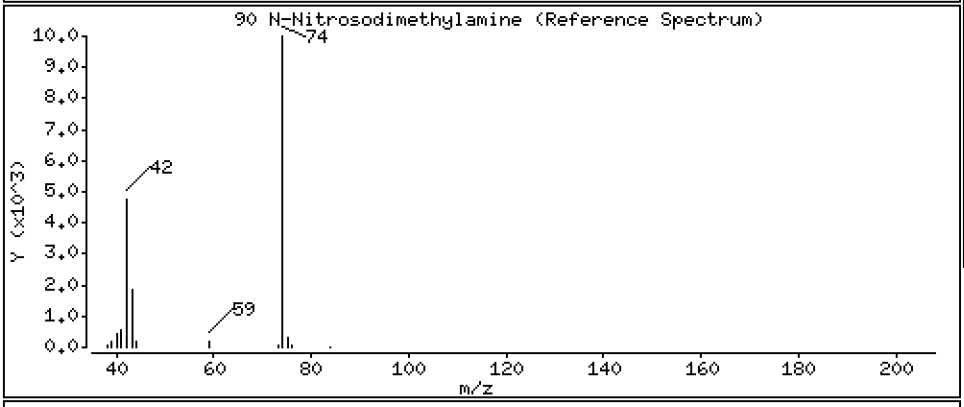
Concentration: 8.512 ug/mL

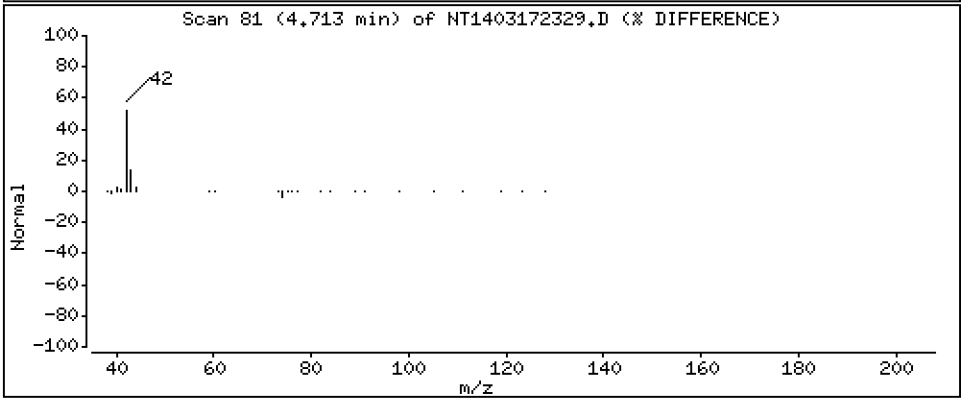












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Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

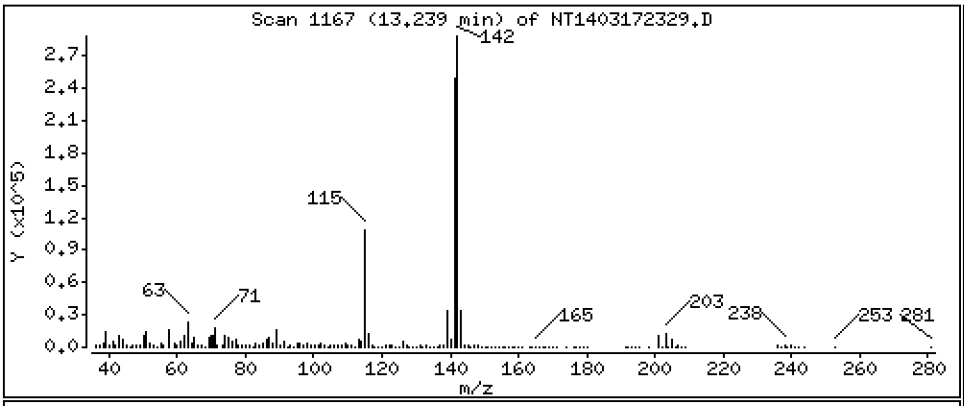
Operator: JGR

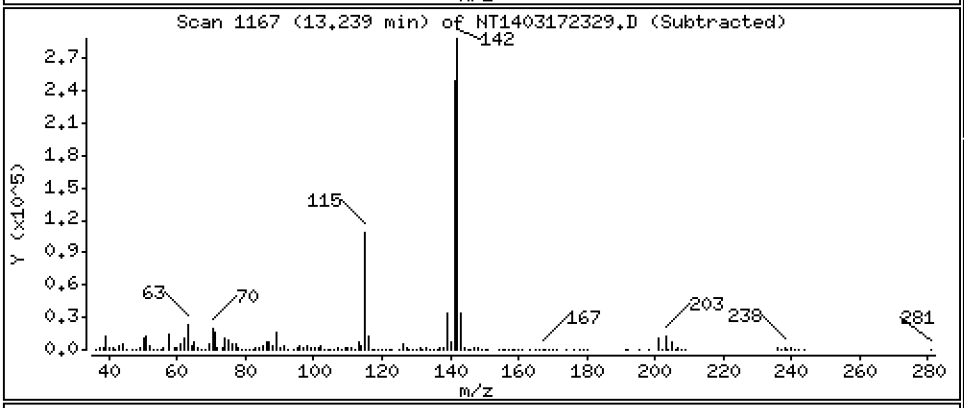
Column phase: ZB-5msi

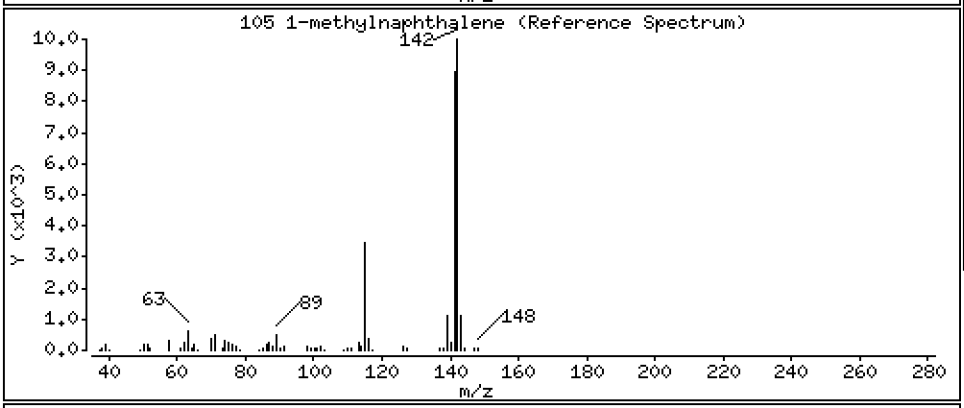
Column diameter: 0.25

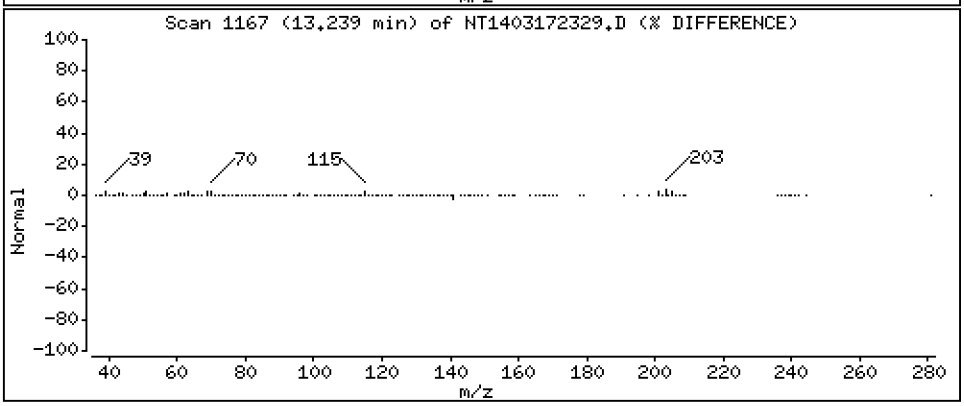
105 1-methylnaphthalene

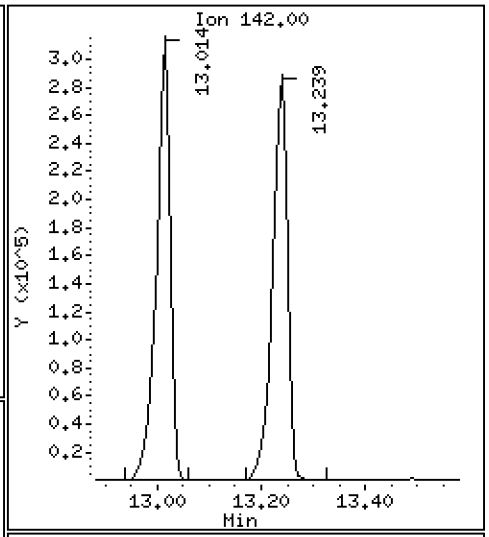
Concentration: 4.116 ug/mL

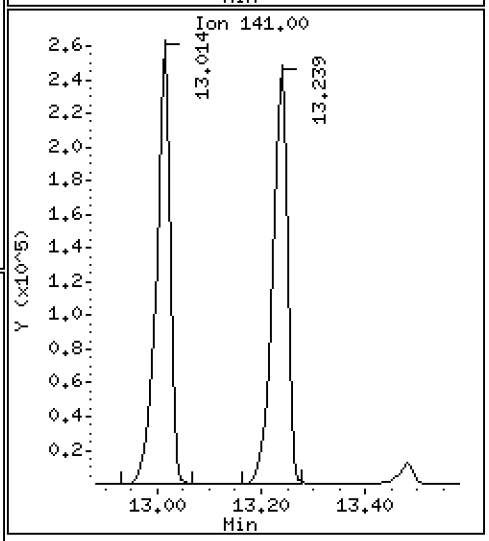












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Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

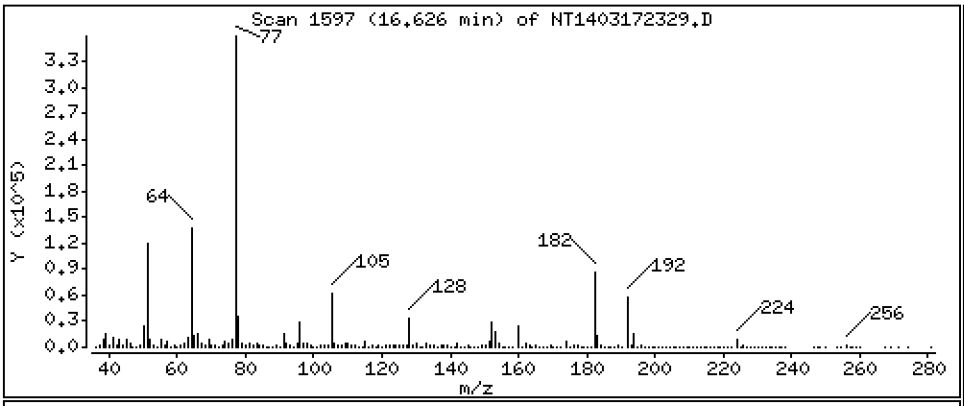
Operator: JGR

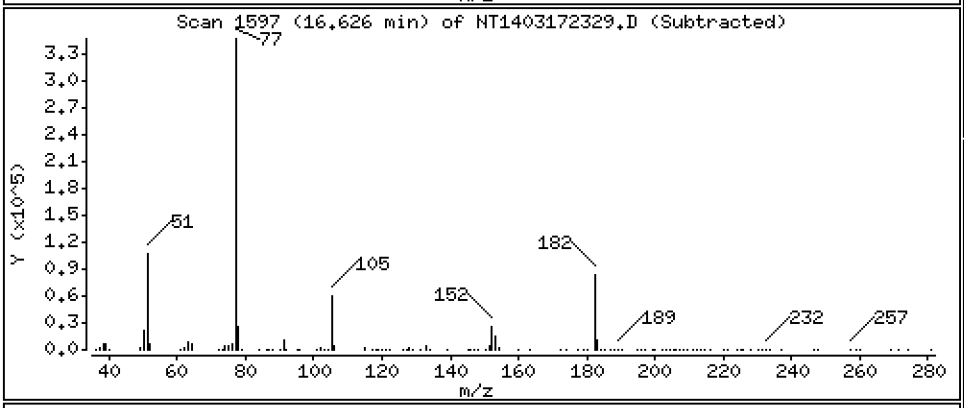
Column phase: ZB-5msi

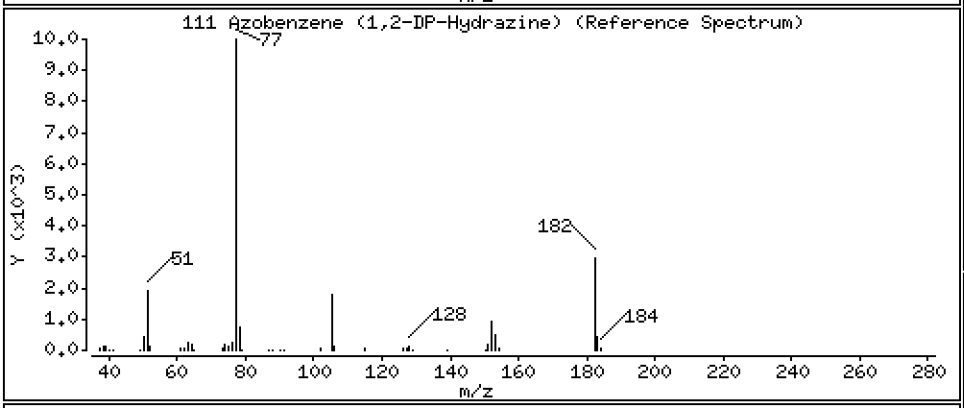
Column diameter: 0.25

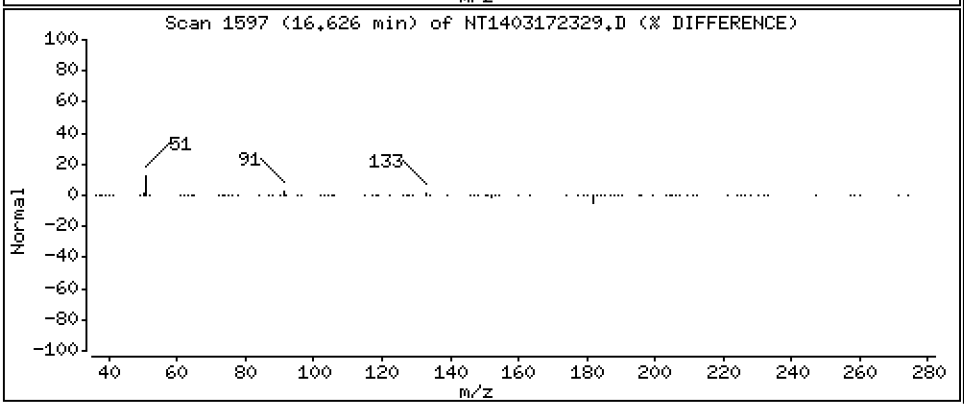
111 Azobenzene (1,2-DP-Hydrazine)

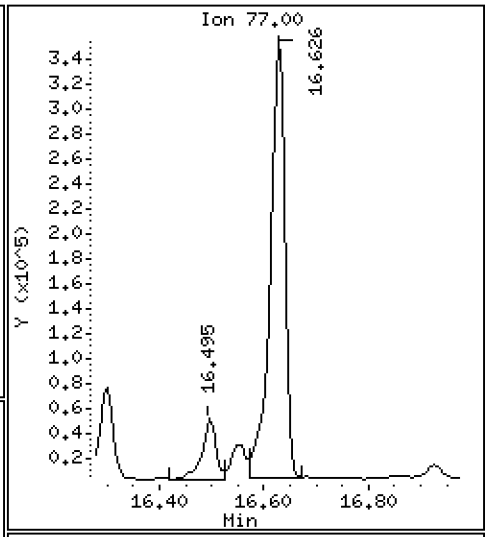
Concentration: 3.915 ug/mL

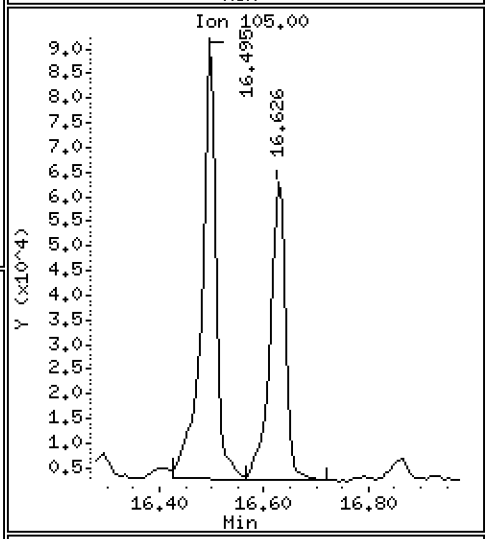


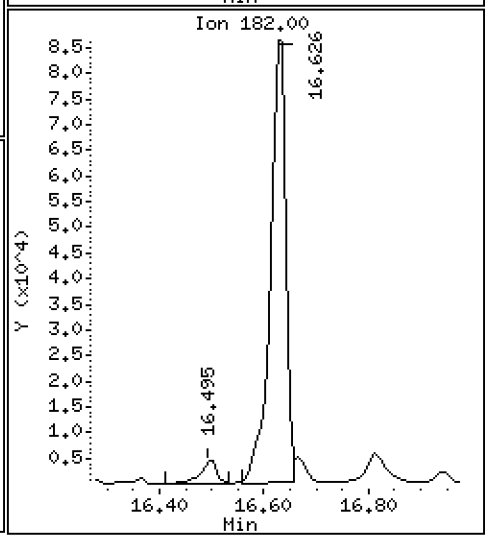












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Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

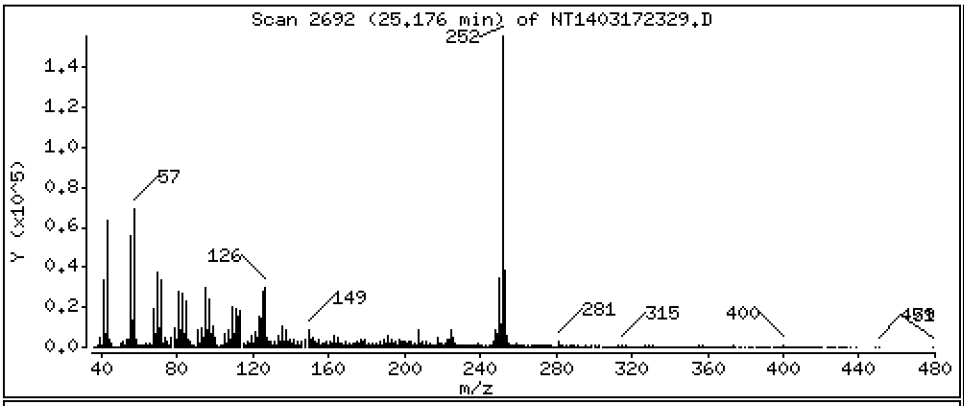
Operator: JGR

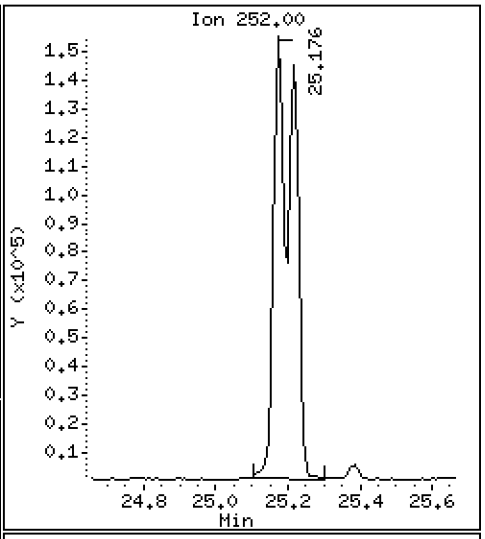
Column phase: ZB-5msi

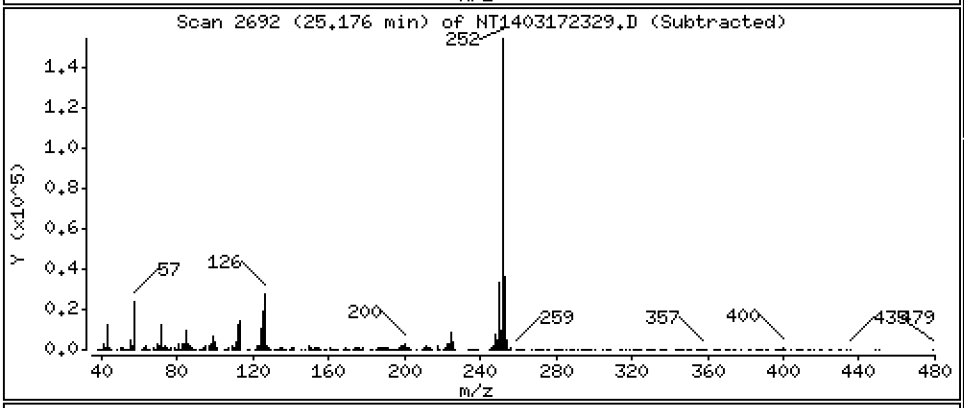
Column diameter: 0.25

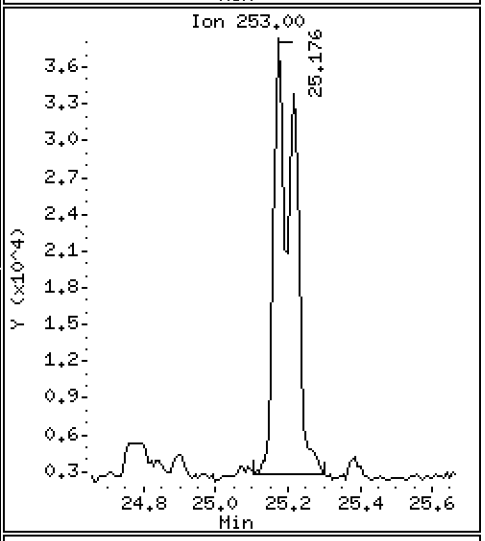
187 Total Benzofluoranthenes

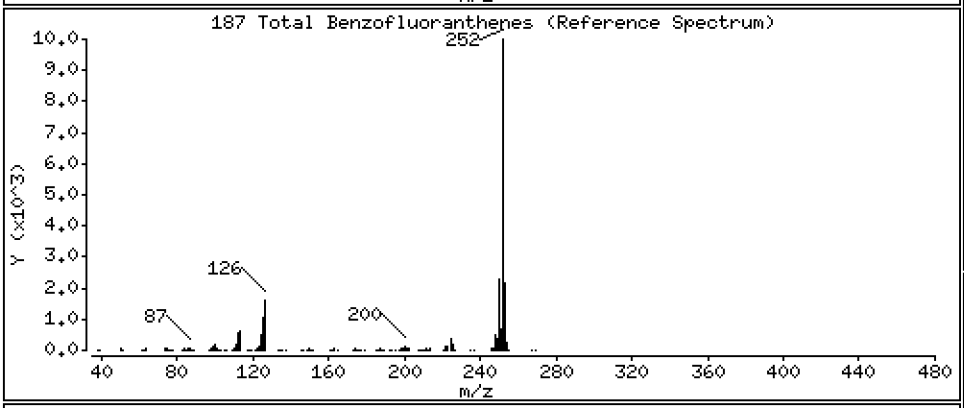
Concentration: 11.25 ug/mL

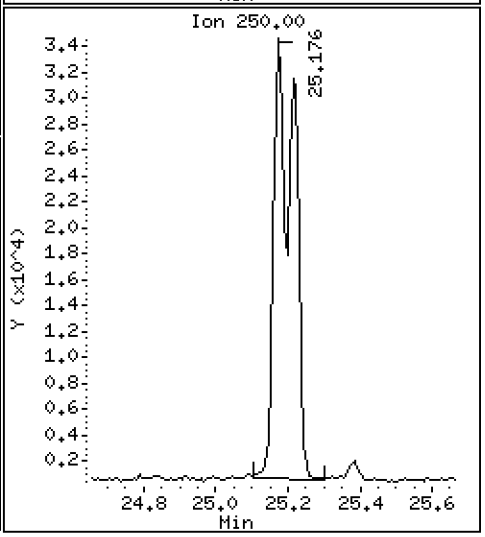


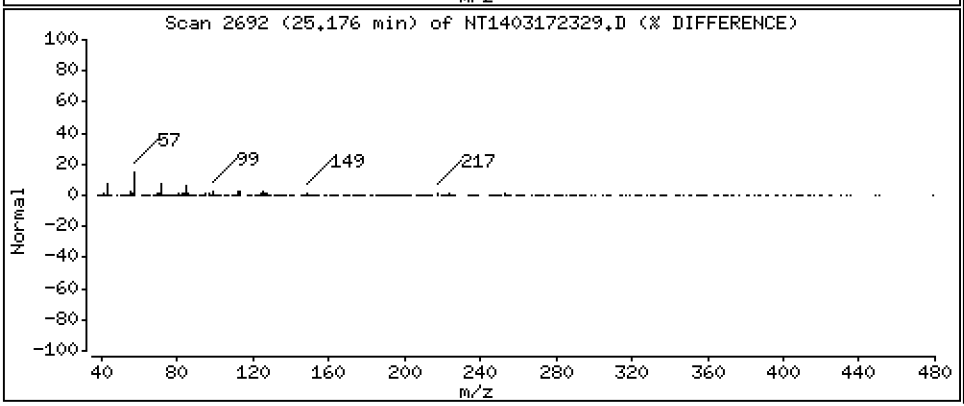












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Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD1

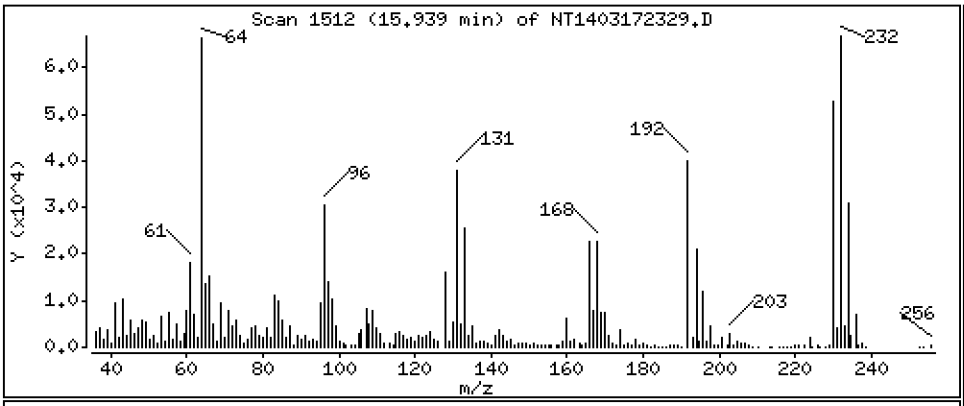
Operator: JGR

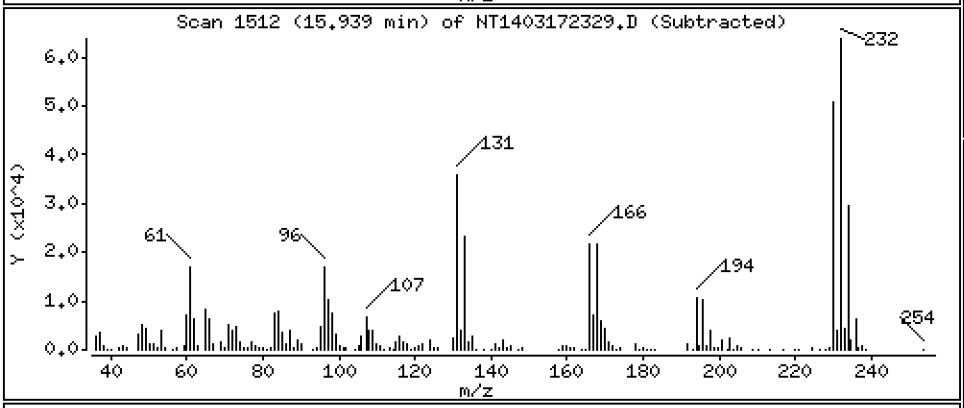
Column phase: ZB-5msi

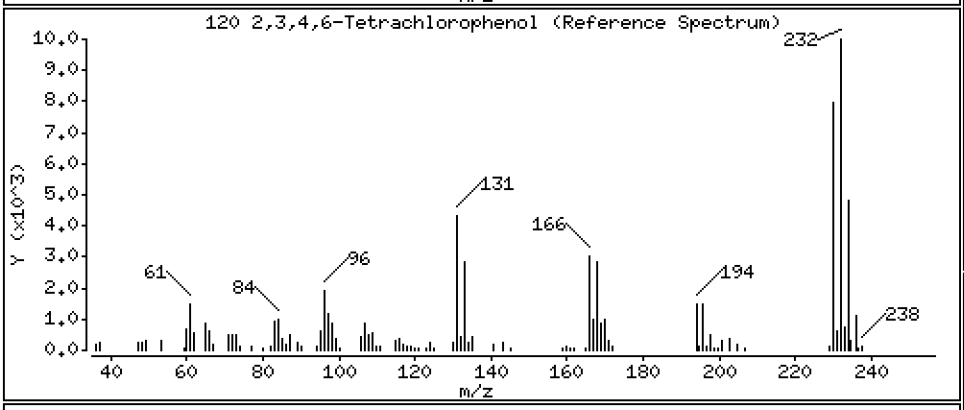
Column diameter: 0.25

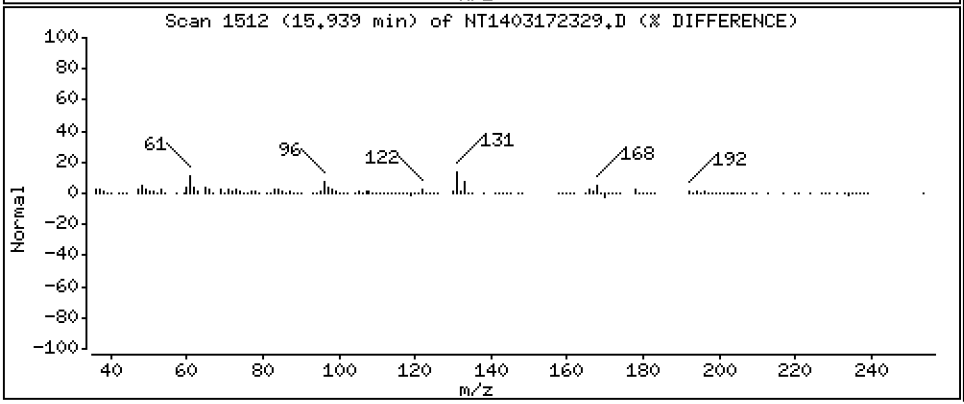
120 2,3,4,6-Tetrachlorophenol

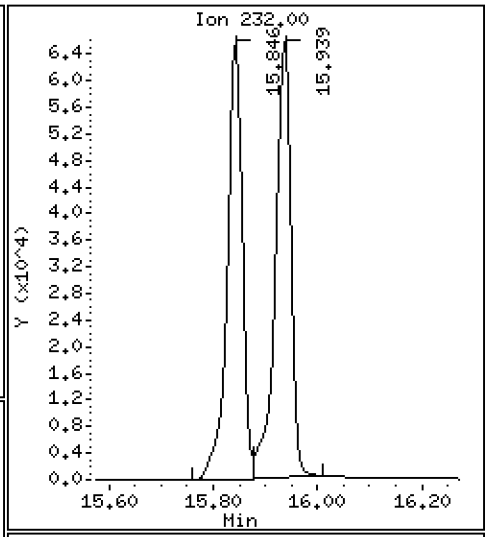
Concentration: 3.157 ug/mL

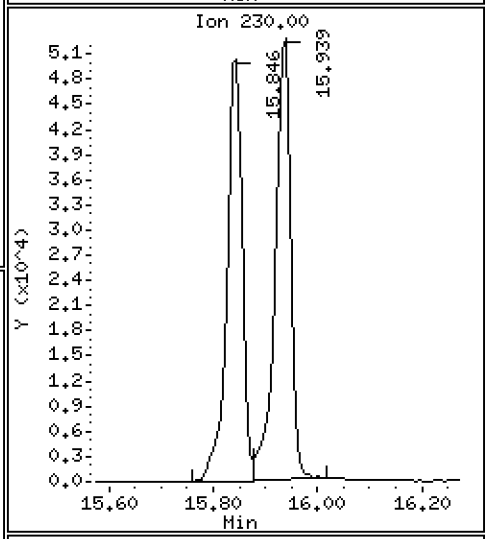


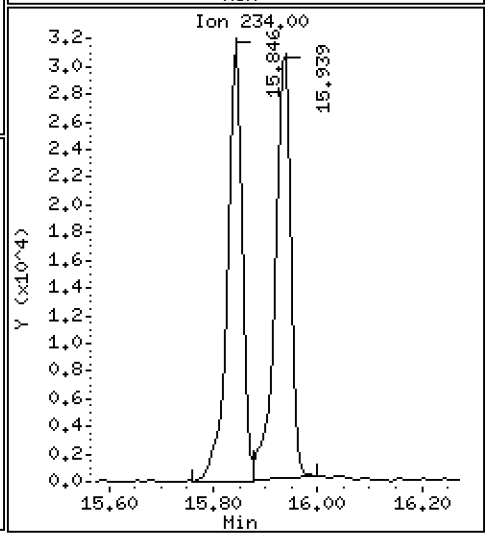












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230317.b\NT1403172329.D
Lab Smp Id: BLB0424-MSD1
Inj Date : 18-MAR-2023 07:18 MS Autotune Date: 11-MAR-2023 16:01
Operator : JGR Inst ID: nt14.i
Smp Info : BLB0424-MSD1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230317.b\ABN.m
Meth Date : 22-Mar-2023 08:57 van Quant Type: ISTD
Cal Date : 15-MAR-2023 15:50 Cal File: NT1403152308.D
Als bottle: 25
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

							CONCENTRATIONS	
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.837	6.821	(1.000)	368712	5.32656	5.327
$	2 Phenol-d5	99	8.428	8.412	(1.000)	491883	5.39730	5.397
	3 Phenol	94	8.444	8.436	(1.000)	324719	3.35264	3.353
$	5 2-Chlorophenol-d4	132	8.706	8.698	(1.000)	419477	5.83834	5.838
	4 Bis(2-Chloroethyl)ether	93	8.606	8.606	(1.000)	270991	3.88551	3.886
	6 2-Chlorophenol	128	8.729	8.729	(1.000)	264167	3.46531	3.465
	7 1,3-Dichlorobenzene	146	9.000	9.000	(1.000)	265160	3.43615	3.436
*	8 1,4-Dichlorobenzene-d4	152	9.070	9.062	(1.000)	203782	4.00000	(M)
	9 1,4-Dichlorobenzene	146	9.101	9.093	(1.000)	263088	3.53969	3.540
$	10 1,2-Dichlorobenzene-d4	152	9.427	9.427	(1.000)	176158	3.66991	3.670
	12 1,2-Dichlorobenzene	146	9.458	9.450	(1.000)	259146	3.52747	3.527
	11 Benzyl alcohol	108	9.357	9.341	(1.000)	174301	3.86562	3.866
	14 2,2'-oxybis(1-Chloropropane)	121	9.644	9.644	(1.000)	91405	4.12330	4.123
	13 2-Methylphenol	108	9.567	9.559	(1.000)	224861	3.28375	3.284
	17 Hexachloroethane	117	10.048	10.048	(1.000)	109950	3.45883	3.459
	16 N-Nitroso-di-n-propylamine	70	9.901	9.900	(1.000)	202020	3.74714	3.747
	15 4-Methylphenol	108	9.846	9.830	(1.000)	266801	3.29073	3.291
$	18 Nitrobenzene-d5	82	10.164	10.164	(0.879)	326605	3.87820	3.878
	19 Nitrobenzene	77	10.203	10.203	(0.882)	310274	3.78489	3.785
	20 Isophorone	82	10.653	10.653	(0.921)	565088	5.04857	5.049
	21 2-Nitrophenol	139	10.832	10.831	(0.936)	152460	3.25182	3.252
	22 2,4-Dimethylphenol	107	10.894	10.886	(0.942)	706265	10.0729	10.07
	23 Bis(2-Chloroethoxy)methane	93	11.088	11.087	(0.959)	334390	4.43754	4.438
	24 Benzoic acid	105	11.095	11.103	(0.959)	750773	12.6167	12.62
	25 2,4-Dichlorophenol	162	11.297	11.289	(0.977)	884773	15.8673	15.87
	26 1,2,4-Trichlorobenzene	180	11.483	11.482	(0.993)	232485	3.39157	3.392
*	27 Naphthalene-d8	136	11.567	11.567	(1.000)	795799	4.00000	
	28 Naphthalene	128	11.606	11.606	(1.003)	800911	3.76719	3.767
	29 4-Chloroaniline	127	11.845	11.737	(1.024)	46645	0.52409	0.5241(M)
	30 Hexachlorobutadiene	225	11.977	11.969	(1.035)	123601	3.99365	3.994
	31 4-Chloro-3-methylphenol	107	12.712	12.696	(1.099)	1009444	14.9811	14.98
	32 2-Methylnaphthalene	142	13.014	13.006	(1.125)	575621	3.88231	3.882
	33 Hexachlorocyclopentadiene	237	13.478	13.478	(0.886)	145458	4.27757	4.278

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
34	2,4,6-Trichlorophenol	196	13.641	13.633	(0.897)	661316	15.9348	15.93
35	2,4,5-Trichlorophenol	196	13.718	13.702	(0.902)	672449	15.5493	15.55
$ 36	2-Fluorobiphenyl	172	13.796	13.795	(0.907)	606707	4.09506	4.095
37	2-Chloronaphthalene	162	14.012	14.004	(0.922)	514690	4.05323	4.053
38	2-Nitroaniline	65	14.275	14.267	(0.939)	708152	14.4424	14.44
39	Dimethylphthalate	163	14.709	14.701	(0.967)	605157	4.43600	4.436
40	Acenaphthylene	152	14.887	14.879	(0.979)	722415	3.38706	3.387
41	2,6-Dinitrotoluene	165	14.848	14.840	(0.977)	480719	15.2541	15.25
* 42	Acenaphthene-d10	164	15.204	15.196	(1.000)	409102	4.00000	
43	3-Nitroaniline	138	15.135	15.119	(0.995)	205315	4.72250	4.722
44	Acenaphthene	153	15.274	15.266	(1.005)	499921	4.01454	4.015
45	2,4-Dinitrophenol	184	15.336	15.335	(1.009)	16922	0.69290	0.6929
46	Dibenzofuran	168	15.598	15.590	(1.026)	739923	4.16199	4.162
47	4-Nitrophenol	109	15.459	15.436	(1.017)	314272	13.6566	13.66
48	2,4-Dinitrotoluene	165	15.660	15.645	(1.030)	680846	15.2408	15.24
50	Diethylphthalate	149	16.163	16.163	(1.063)	665623	4.71928	4.719
49	Fluorene	166	16.317	16.309	(1.073)	682910	4.05238	4.052
51	4-Chlorophenyl-phenylether	204	16.302	16.294	(1.072)	315281	4.35844	4.358
52	4-Nitroaniline	138	16.402	16.394	(1.079)	263148	6.95905	6.959
53	4,6-Dinitro-2-methylphenol	198	16.495	16.494	(0.904)	334555	12.8547	12.85
54	N-Nitrosodiphenylamine	169	16.548	16.548	(0.906)	400021	3.98177	3.982
$ 55	2,4,6-Tribromophenol	330	16.849	16.841	(1.108)	107158	6.89920	6.899
56	4-Bromophenyl-phenylether	248	17.312	17.304	(0.948)	159299	4.70317	4.703
57	Hexachlorobenzene	284	17.636	17.621	(0.966)	150672	4.21594	4.216
58	Pentachlorophenol	266	17.992	17.977	(0.986)	347921	13.5895	13.59
* 59	Phenanthrene-d10	188	18.256	18.240	(1.000)	739666	4.00000	
60	Phenanthrene	178	18.302	18.294	(1.003)	991244	4.69046	4.690
61	Anthracene	178	18.395	18.387	(1.008)	738955	3.62937	3.629
62	Carbazole	167	18.727	18.712	(1.026)	712577	3.93359	3.934
63	Di-n-butylphthalate	149	19.524	19.509	(1.070)	1139088	4.96076	4.961
64	Fluoranthene	202	20.731	20.677	(0.890)	957771	10.6006	10.60
65	Pyrene	202	21.134	21.103	(0.907)	1078828	11.6434	11.64
$ 66	Terphenyl-d14	244	21.397	21.389	(0.918)	436151	6.95337	6.953
67	Butylbenzylphthalate	149	22.318	22.310	(0.958)	297681	7.33317	7.333
68	Benzo(a)anthracene	228	23.278	23.263	(0.999)	390074	4.76367	4.764
* 69	Chrysene-d12	240	23.302	23.294	(1.000)	222079	4.00000	
70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
71	Chrysene	228	23.348	23.340	(1.002)	385365	5.19995	5.200
72	bis(2-Ethylhexyl)phthalate	149	23.340	23.332	(0.960)	490749	7.73952	7.740
* 134	Di-n-octylphthalate-d4	153	24.323	24.316	(1.000)	481674	4.00000	
73	Di-n-octylphthalate	149	24.331	24.331	(1.000)	545179	4.40289	4.403
74	Benzo(b)fluoranthene	252	25.175	25.159	(0.970)	332045	6.10279	6.103
75	Benzo(k)fluoranthene	252	25.214	25.198	(0.972)	281267	5.21491	5.215
76	Benzo(a)pyrene	252	25.833	25.818	(0.996)	228214	4.90501	4.905
* 77	Perylene-d12	264	25.949	25.934	(1.000)	153971	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.634	28.610	(1.103)	201319	3.97551	3.976
79	Dibenzo(a,h)anthracene	278	28.649	28.626	(1.104)	159170	3.72951	3.730
80	Benzo(g,h,i)perylene	276	29.418	29.403	(1.134)	147318	3.52991	3.530
90	N-Nitrosodimethylamine	74	4.713	4.697	(1.000)	373160	8.51160	8.512
91	Aniline	93	Compound Not Detected.					
93	Benzidine	184	Compound Not Detected.					
103	Pyridine	79	Compound Not Detected.					
105	1-methylnaphthalene	142	13.238	13.230	(1.144)	552883	4.11587	4.116
111	Azobenzene (1,2-DP-Hydrazine)	77	16.626	16.625	(1.093)	659420	3.91522	3.915

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.175	25.159	(0.970)	581169	11.2470	11.25
120 2,3,4,6-Tetrachlorophenol	232	15.938	15.923	(1.048)	133217	3.15679	3.157

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1403172329.D
Lab Smp Id: BLB0424-MSD1
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt14.i\20230317.b\ABN.m
Misc Info:

Calibration Date: 17-MAR-2023
Calibration Time: 23:31
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	231017	115509	462034	203782	-11.79
27 Naphthalene-d8	843789	421895	1687578	795799	-5.69
42 Acenaphthene-d10	432455	216228	864910	409102	-5.40
59 Phenanthrene-d10	793780	396890	1587560	739666	-6.82
69 Chrysene-d12	411057	205529	822114	222079	-45.97
134 Di-n-octylphthala	799010	399505	1598020	481674	-39.72
77 Perylene-d12	254782	127391	509564	153971	-39.57

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.06	8.56	9.56	9.07	0.09
27 Naphthalene-d8	11.57	11.07	12.07	11.57	0.00
42 Acenaphthene-d10	15.20	14.70	15.70	15.20	0.05
59 Phenanthrene-d10	18.24	17.74	18.74	18.26	0.09
69 Chrysene-d12	23.29	22.79	23.79	23.30	0.03
134 Di-n-octylphthala	24.32	23.82	24.82	24.32	0.03
77 Perylene-d12	25.93	25.43	26.43	25.95	0.06

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

REVIEW SUMMARY FOR FILE - NT1403172329.D

Lab ID: BLB0424-MSD1
nt14.i, ABN.m, 18-MAR-2023 07:18

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
1.024	1.015	0.0093	4-Chloroaniline

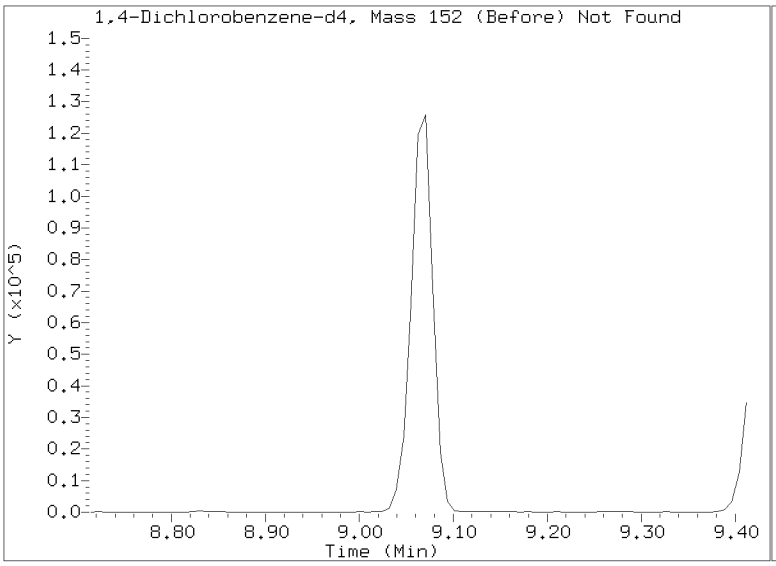
RRT check based on Ccal File: NT1403172316.D

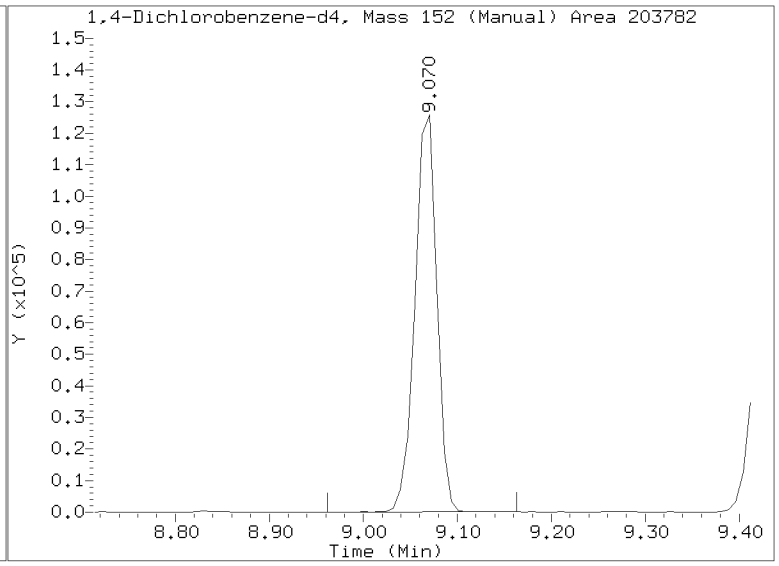
On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

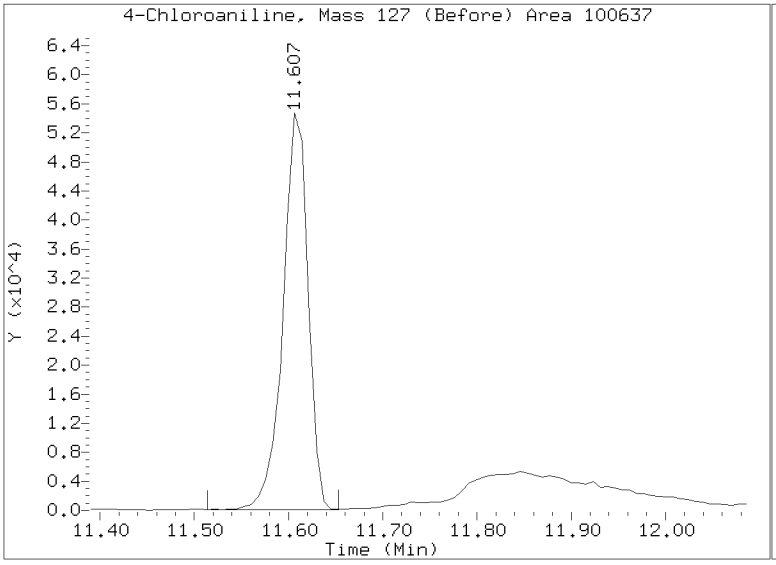
* Only compounds listed in the work order have been verified by the analyst *

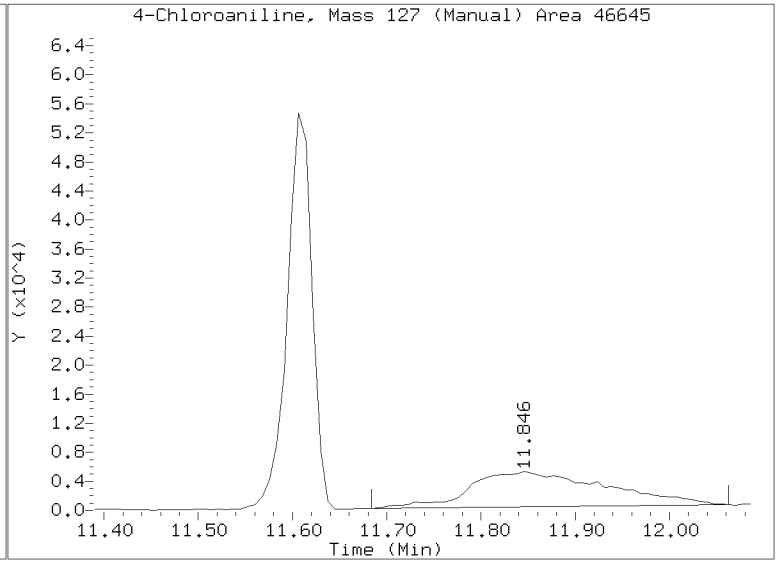
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230317.b/NT1403172329.D
Injection Date: 18-MAR-2023 07:18
Lab ID:BLB0424-MSD1 Client ID:
Report Date: 03/22/2023 09:51









STANDARD REFERENCE MATERIAL RECOVERY

EPA 8270E

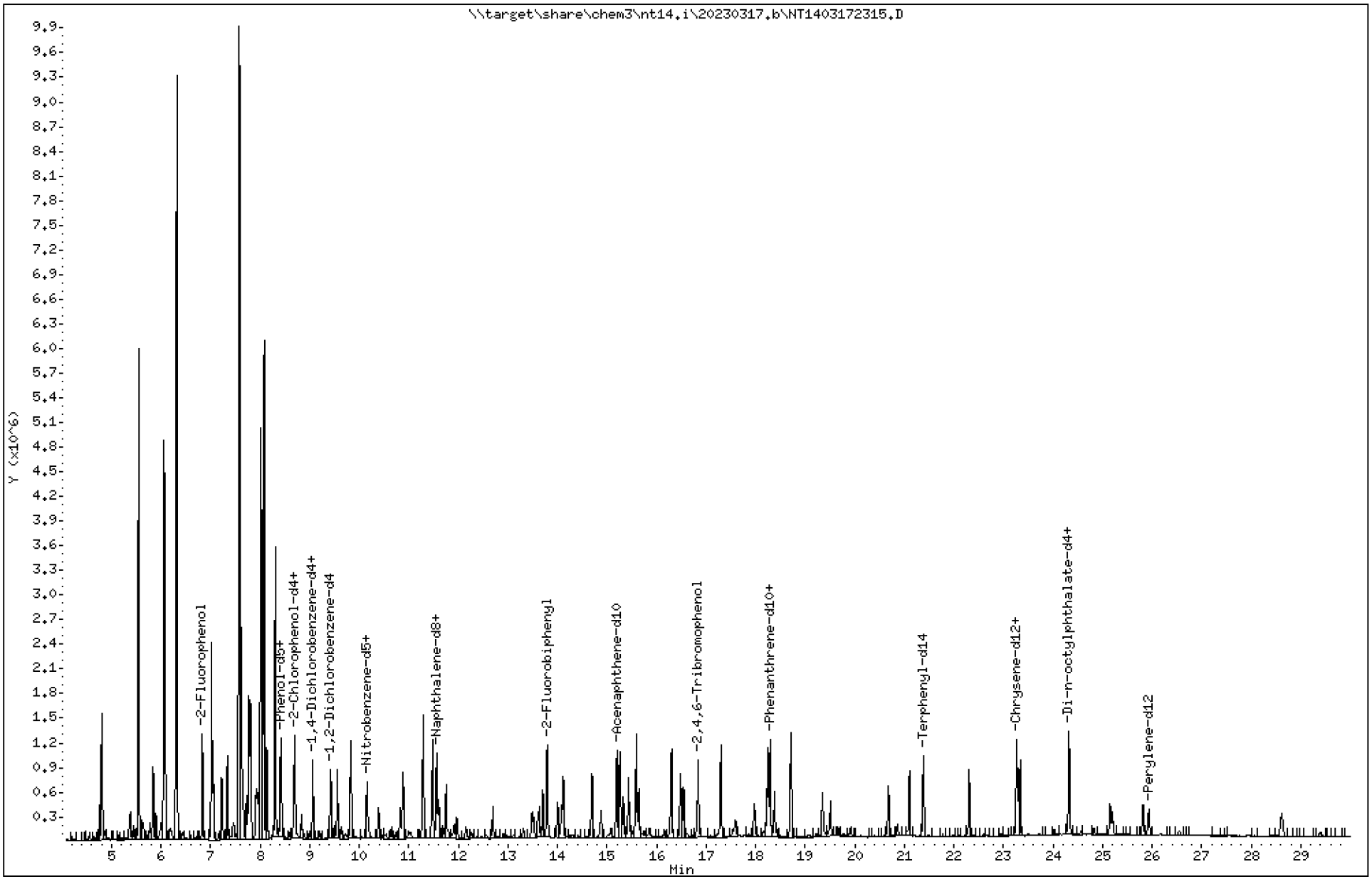
Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Laboratory ID: BLB0424-SRM1
Batch: BLB0424
Initial/Final: 1 g / 1 mL
Preparation: EPA 3546 (Microwave)
Analyzed: 03/17/2023 22:55
Standard ID: K003477
Expires: 01/31/2024
Standard Lot#: CRM 143 (LRAC8918)
Description: CRM 143 BNAs - Sandy Loam

ANALYTE	TRUE (ug/kg wet)	FOUND (ug/kg wet)	MDL	MRL	Q	SRM % REC.	QC LIMITS REC.
Phenol	2660.0	1720	43.9	200		64.8	26 - 174
4-Methylphenol	6617.0	4470	73.9	200		67.5	40 - 160
Naphthalene	4458.0	1630	42.4	200		36.6	25 - 175
Acenaphthylene	1948.0	1110	62.4	200		57.2	37 - 167
Dimethylphthalate	4537.0	4100	43.9	200		90.4	41 - 159
Acenaphthene	5489.0	3670	52.2	200		66.9	41 - 159
Dibenzofuran	6130.0	4620	141	200		75.4	45 - 155
Fluorene	3724.0	2780	146	200		74.7	44 - 156
Phenanthrene	5052.0	4260	87.2	200		84.4	46 - 154
Anthracene	2866.0	1960	71.9	200		68.3	42 - 158
Fluoranthene	2497.0	2920	60.9	200		117	39 - 161
Pyrene	2964.0	3510	56.8	200		118	38 - 162
Butylbenzylphthalate	3511.0	4380	94.1	200		125	36 - 164
Benzo(a)anthracene	5751.0	5070	59.6	200		88.2	49 - 151
Chrysene	1477.0	1250	60.6	200		84.5	45 - 155
bis(2-Ethylhexyl)phthalate	2905.0	2720	54.6	500		93.7	26 - 174
Benzofluoranthenes, Total	6534.0	5290	100	400		81.0	40 - 160
Benzo(a)pyrene	5902.0	4110	42.3	200		69.7	43 - 157
Indeno(1,2,3-cd)pyrene	3914.0	2830	147	200		72.4	22 - 178
Dibenzo(a,h)anthracene	3420.0	2560	172	200		74.7	37 - 163
Benzo(g,h,i)perylene	1380.0	975	136	200	Q	70.7	35 - 165

* Values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172315.D
Date : 17-MAR-2023 22:55
Client ID:
Sample Info: BLB0424-SRM1

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



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Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM1

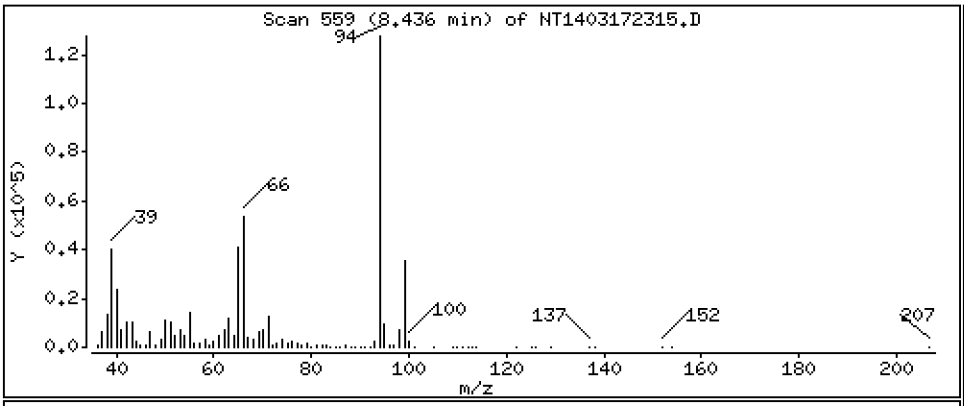
Operator: JGR

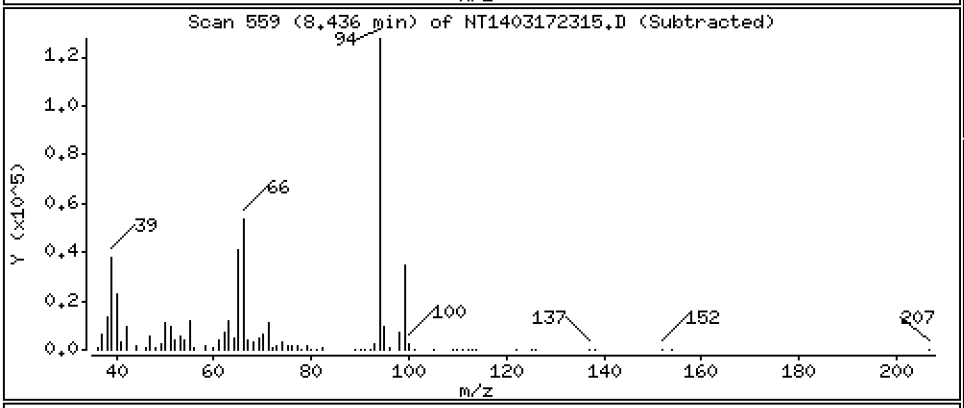
Column phase: ZB-5msi

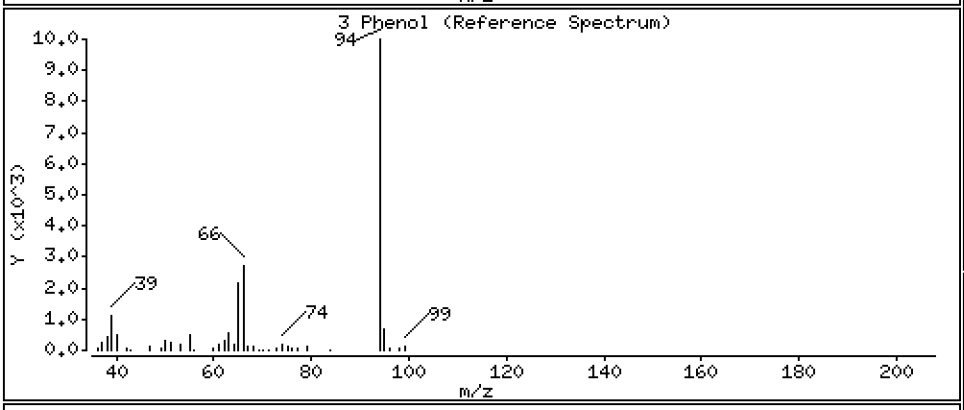
Column diameter: 0.25

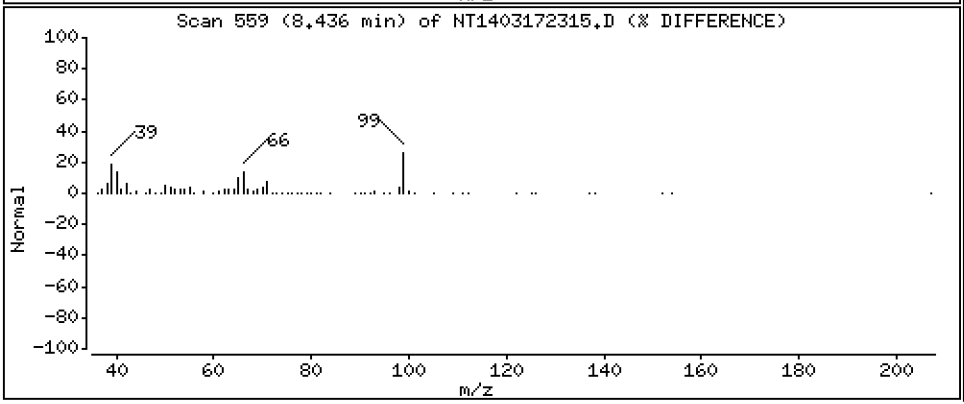
3 Phenol

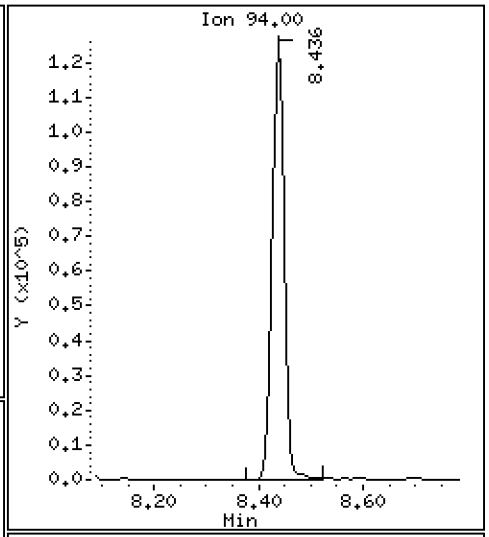
Concentration: 1.725 ug/mL

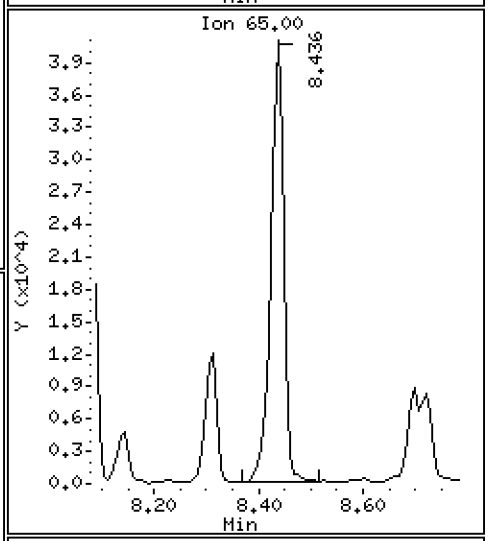


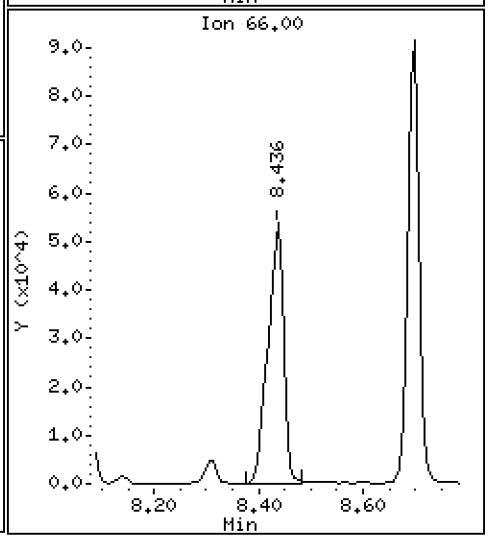












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Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM1

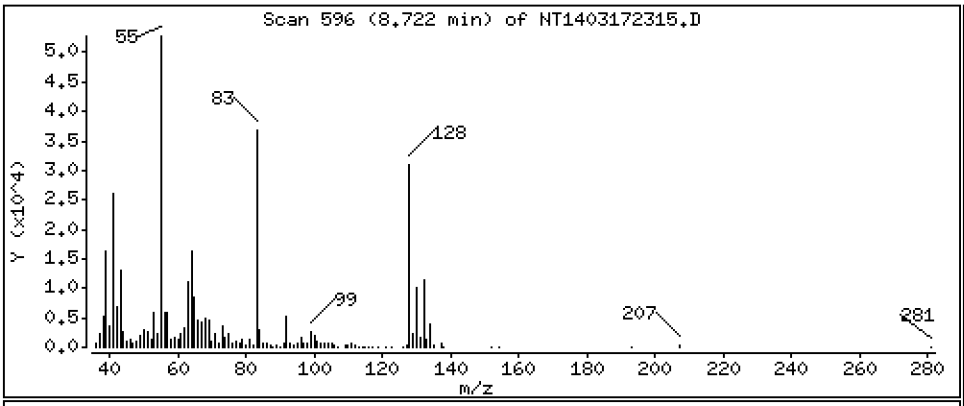
Operator: JGR

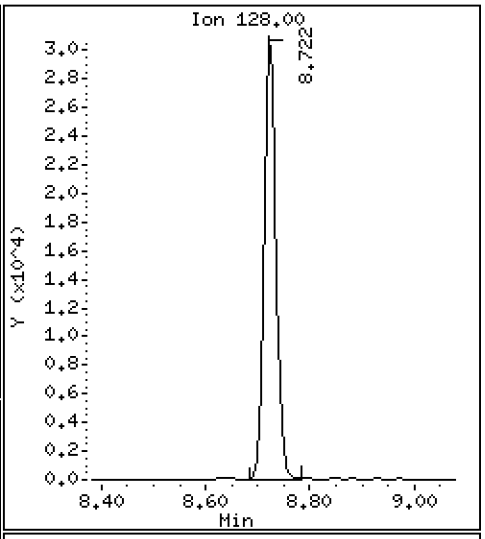
Column phase: ZB-5msi

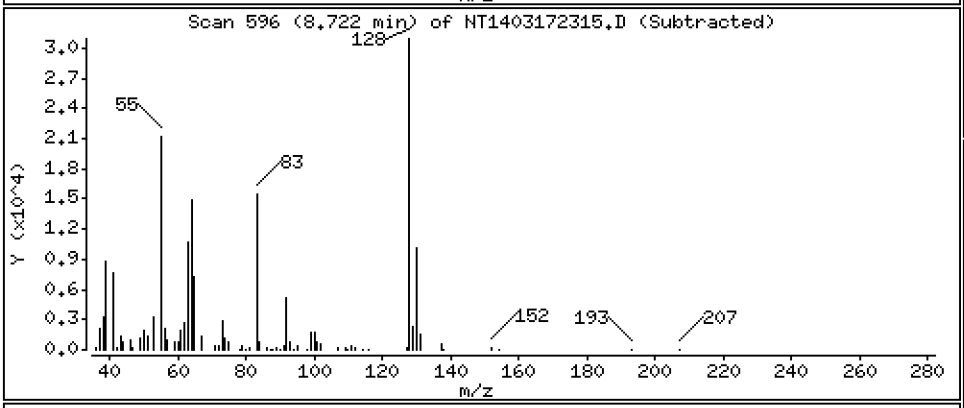
Column diameter: 0.25

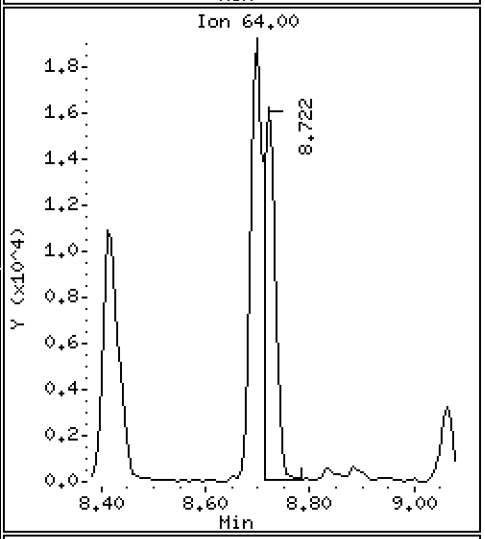
6 2-Chlorophenol

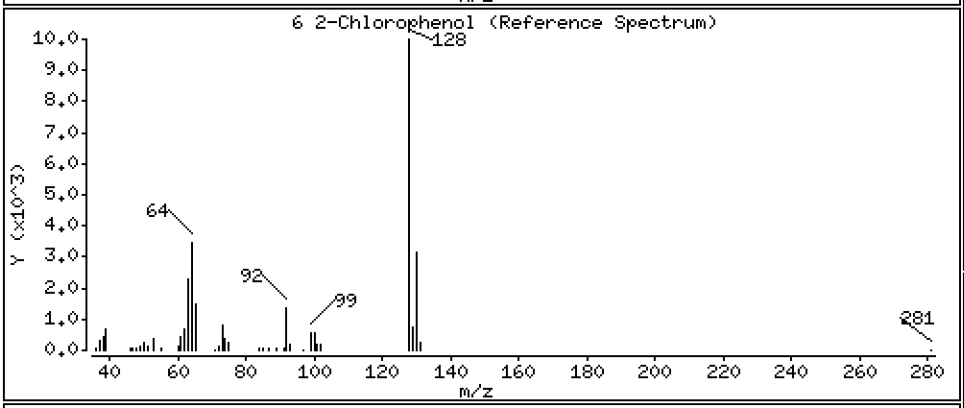
Concentration: 0.5623 ug/mL

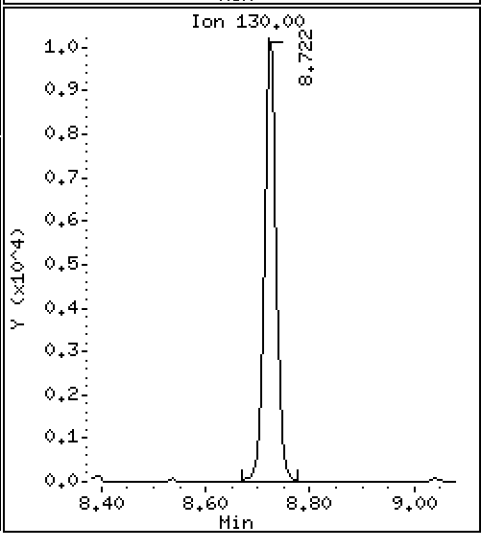


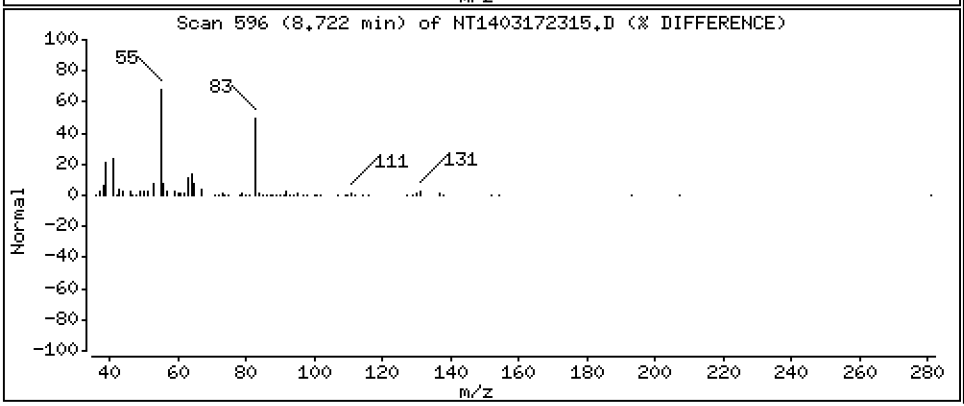












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Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM1

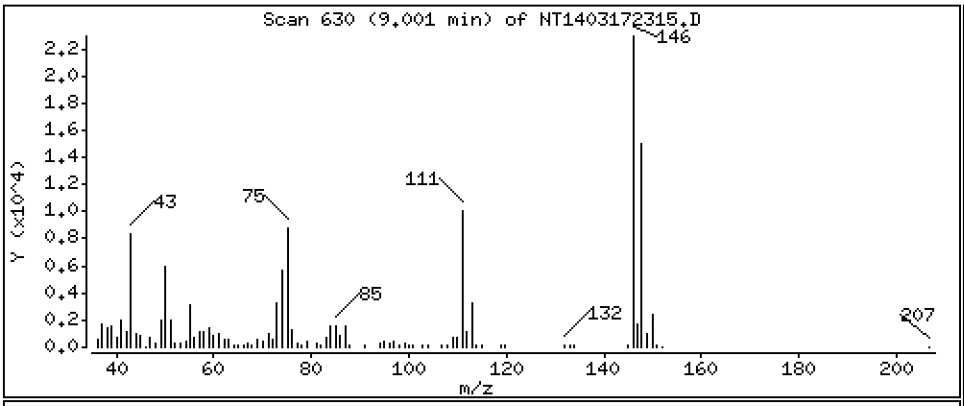
Operator: JGR

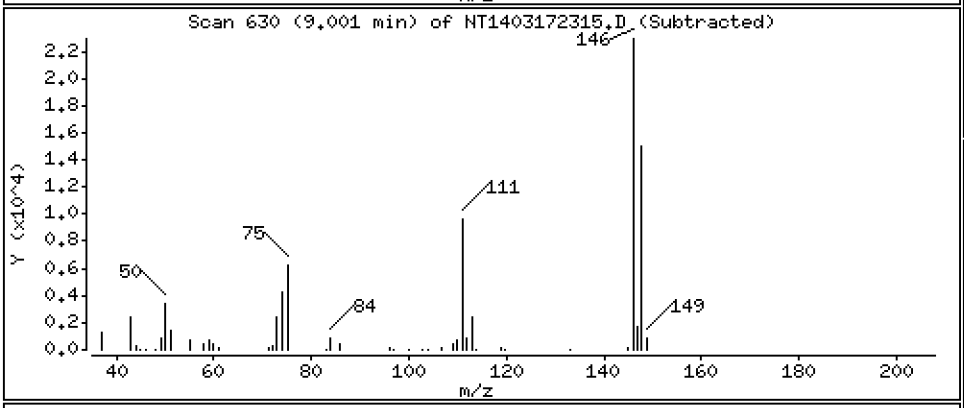
Column phase: ZB-5msi

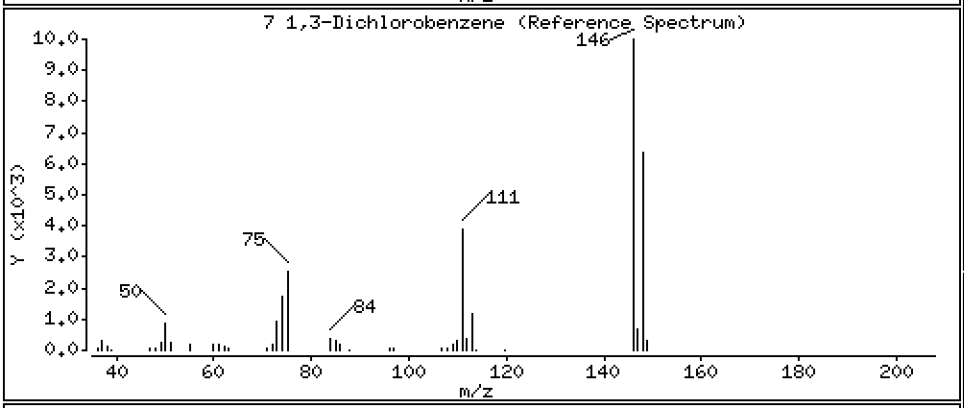
Column diameter: 0.25

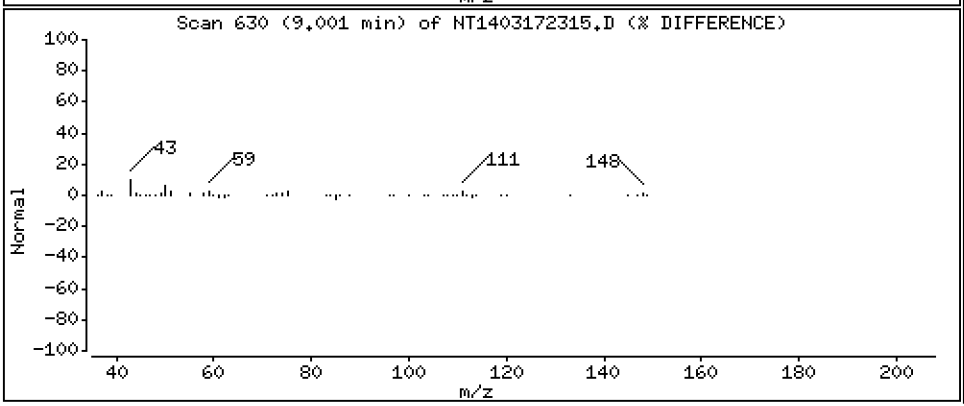
7 1,3-Dichlorobenzene

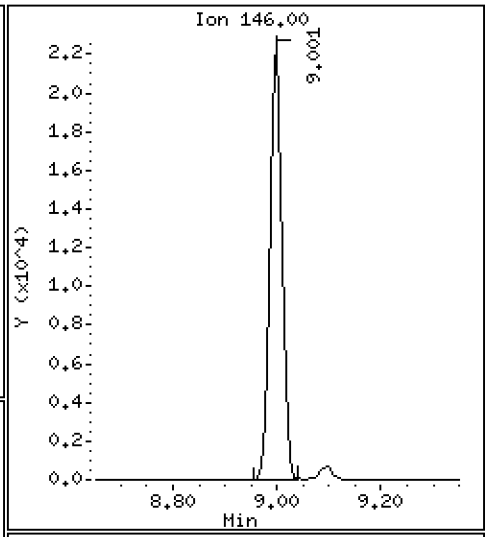
Concentration: 0.4048 ug/mL

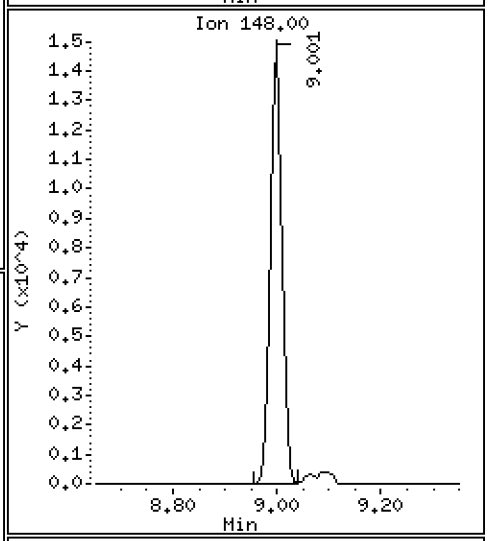


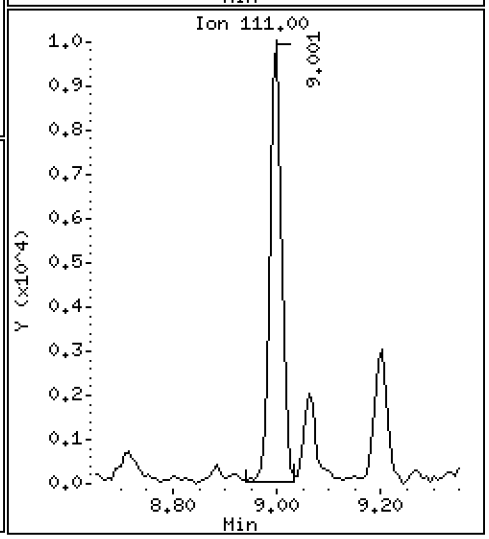












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Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM1

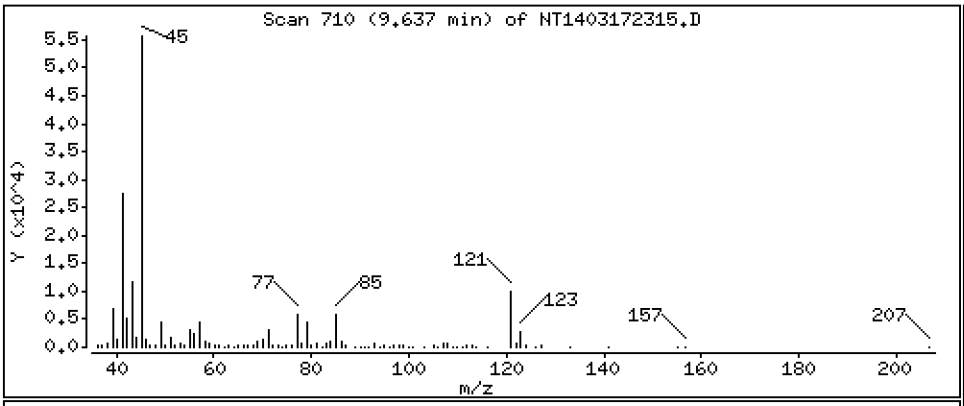
Operator: JGR

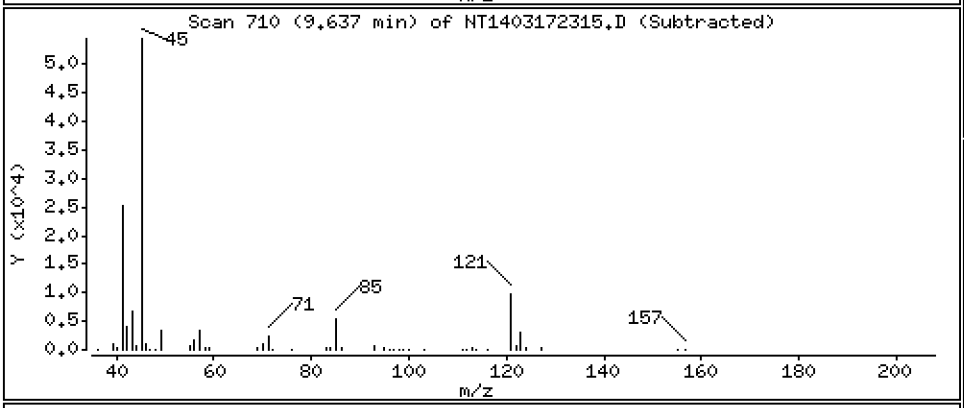
Column phase: ZB-5msi

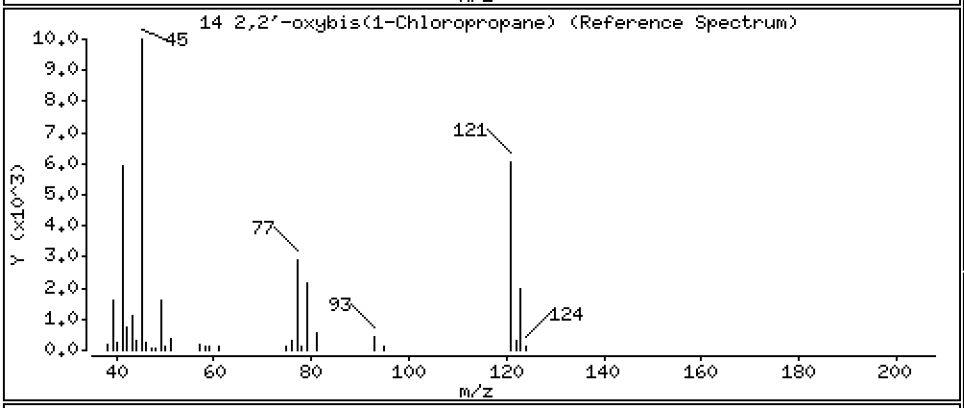
Column diameter: 0.25

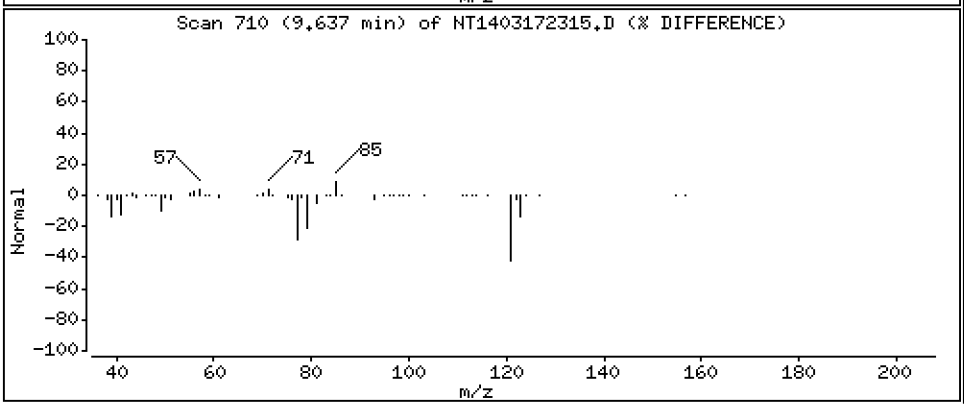
14 2,2'-oxybis(1-Chloropropane)

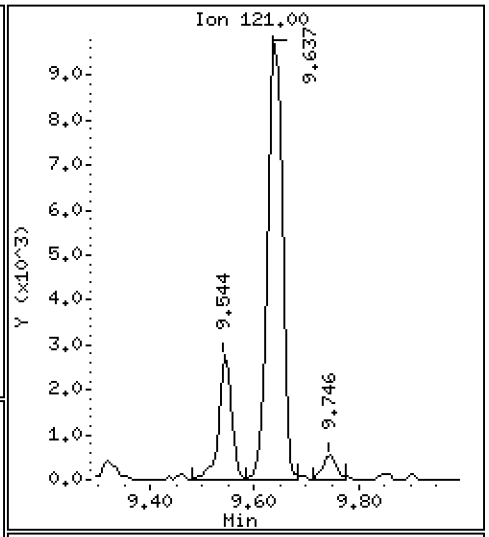
Concentration: 0.7326 ug/mL

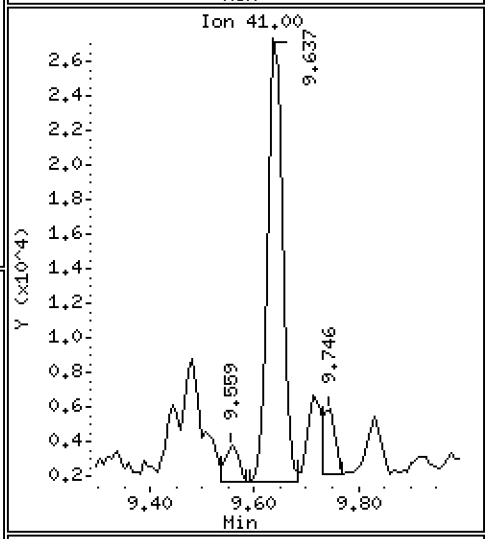


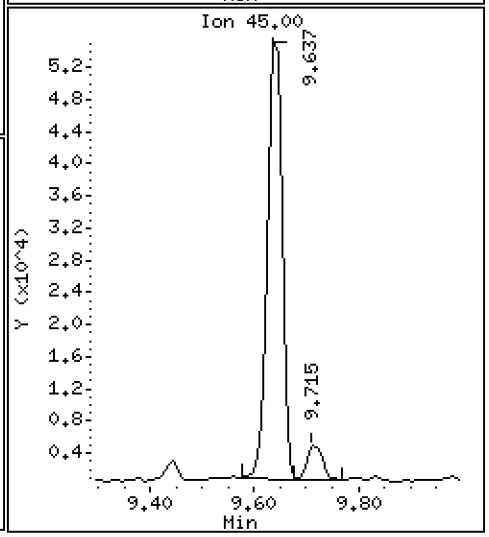












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Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM1

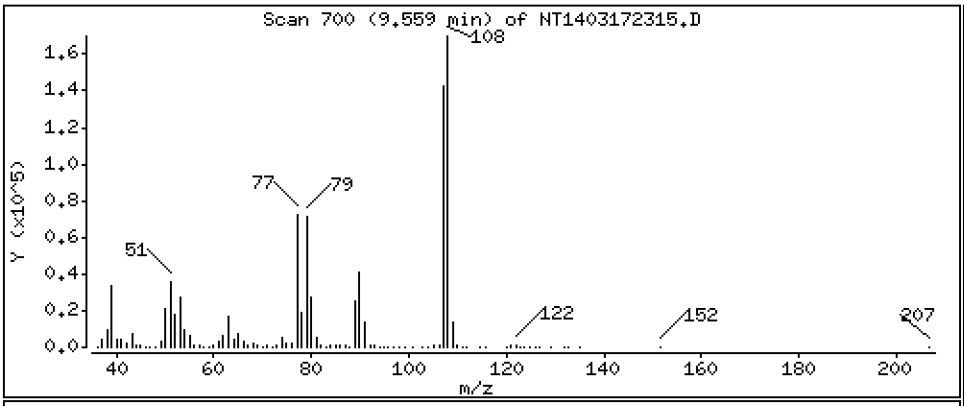
Operator: JGR

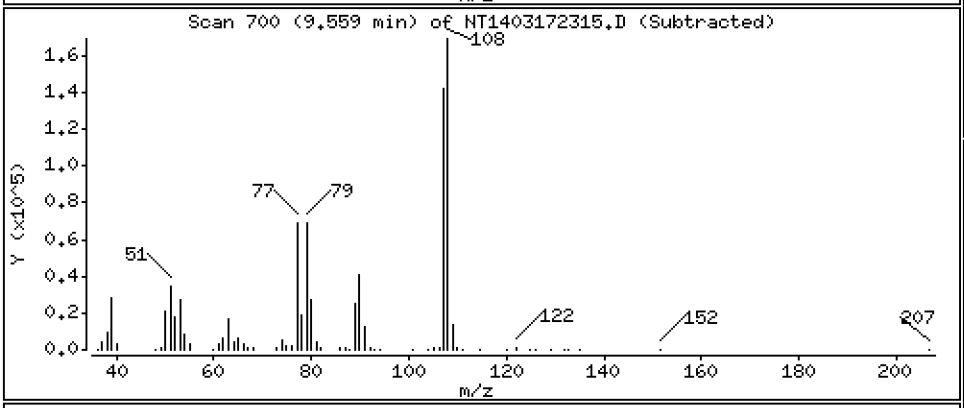
Column phase: ZB-5msi

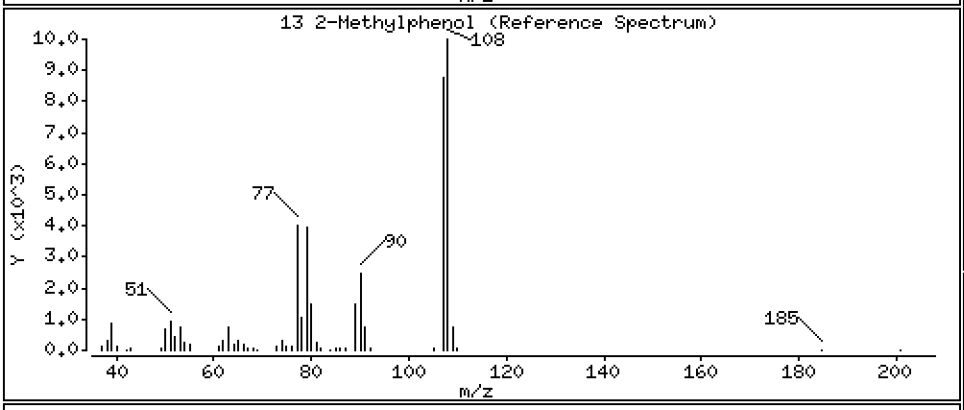
Column diameter: 0.25

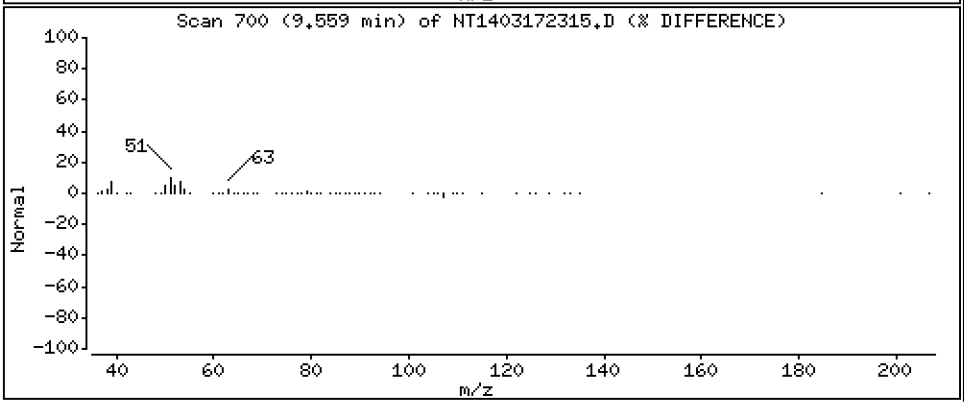
13 2-Methylphenol

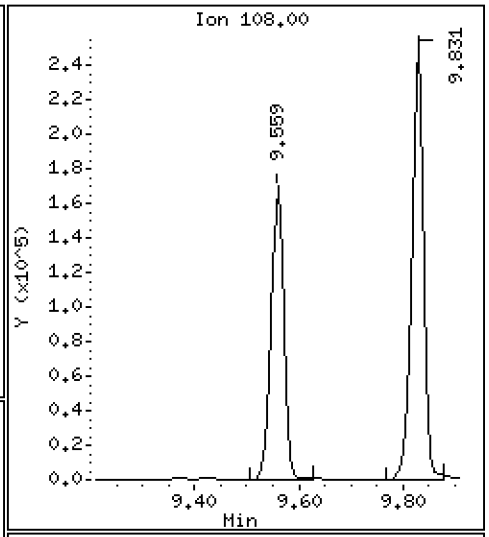
Concentration: 3.492 ug/mL

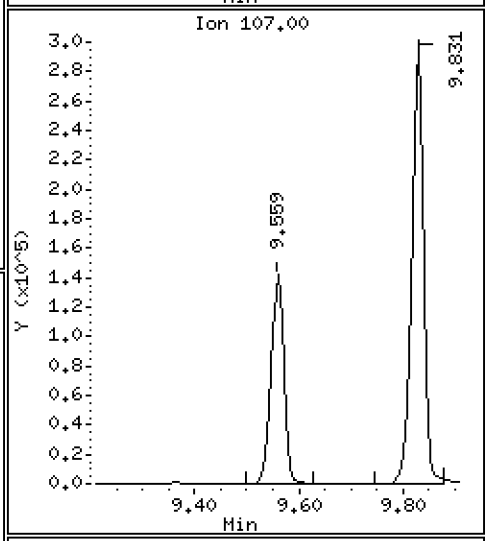


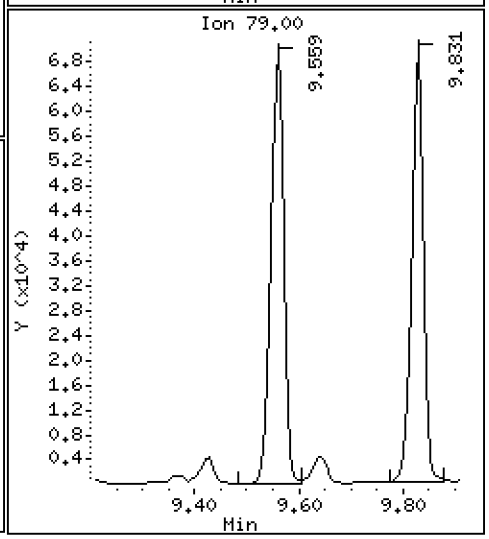












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Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM1

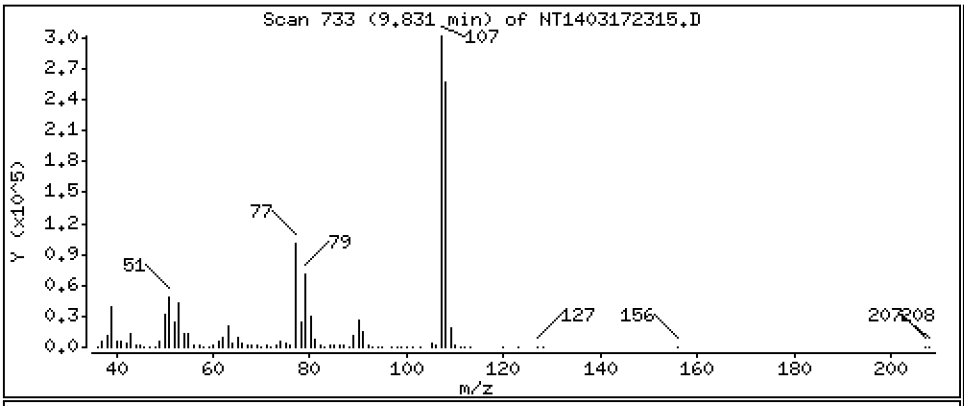
Operator: JGR

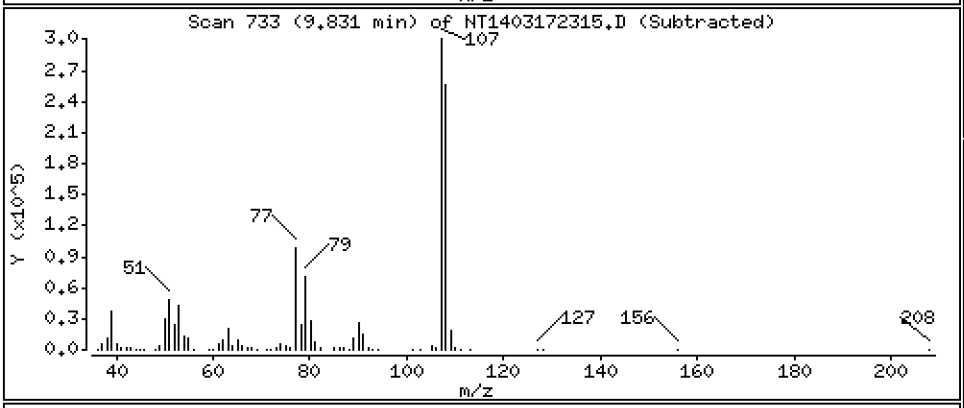
Column phase: ZB-5msi

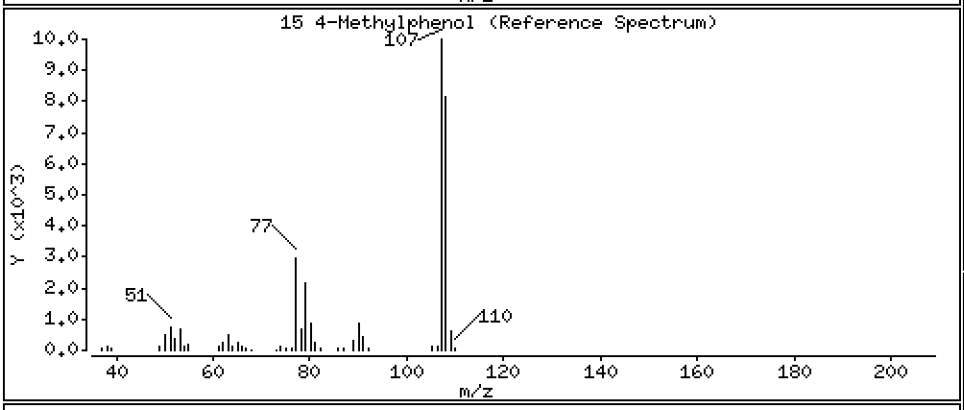
Column diameter: 0.25

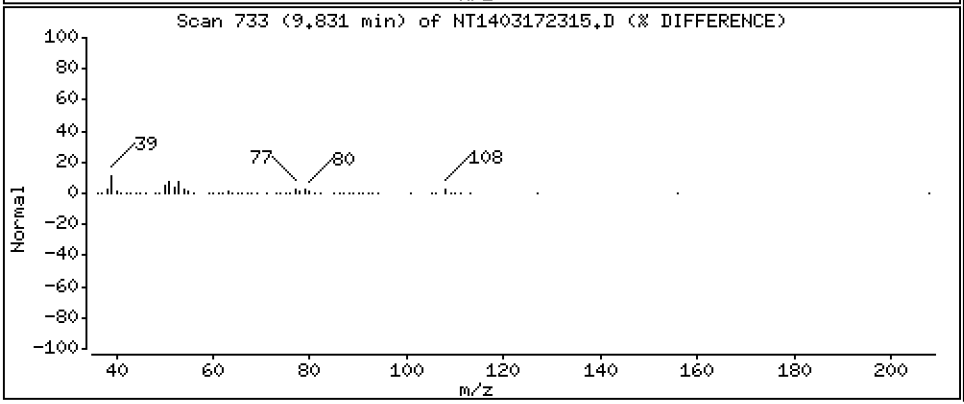
15 4-Methylphenol

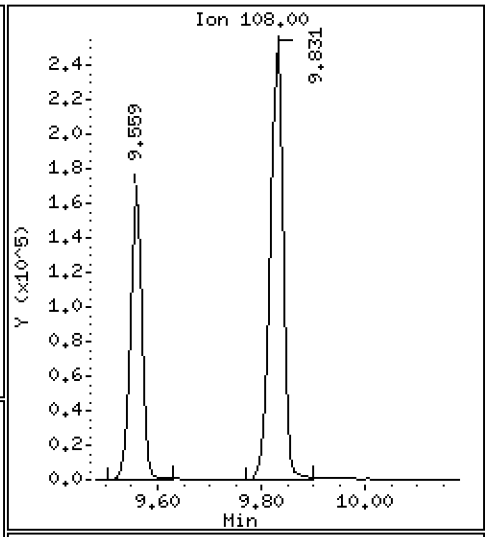
Concentration: 4.470 ug/mL

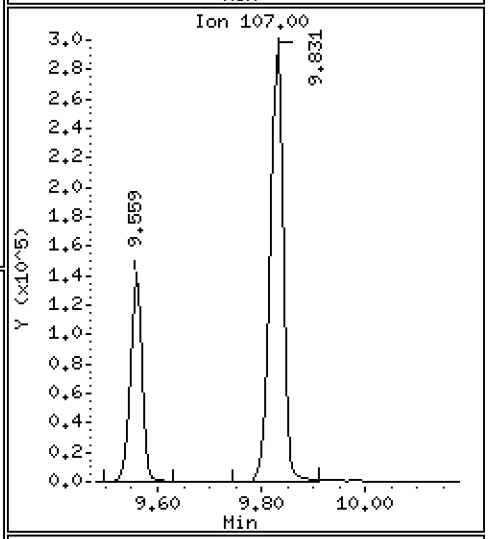


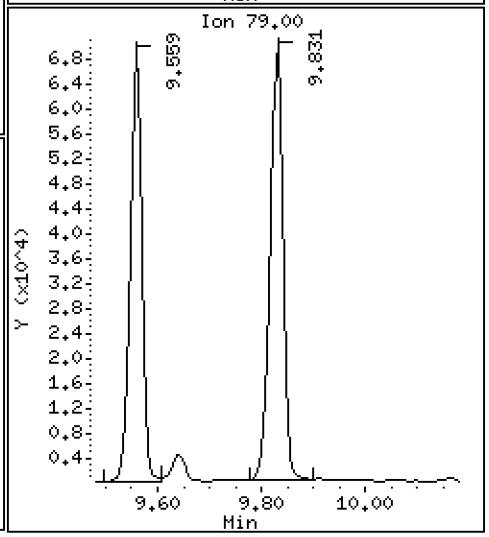












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Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM1

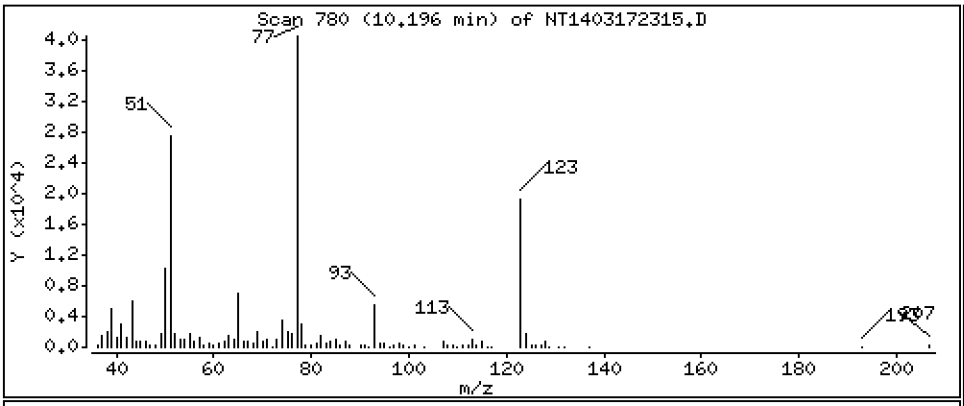
Operator: JGR

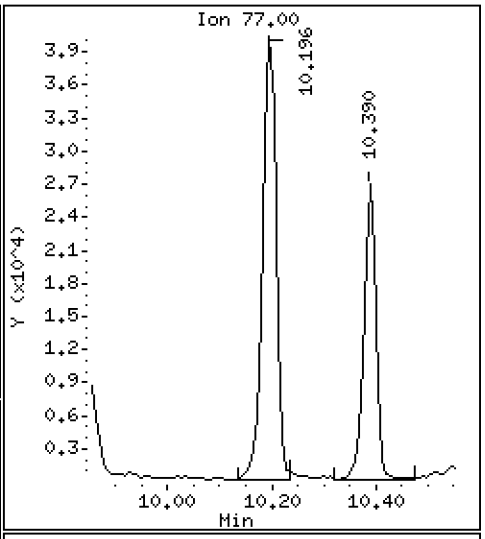
Column phase: ZB-5msi

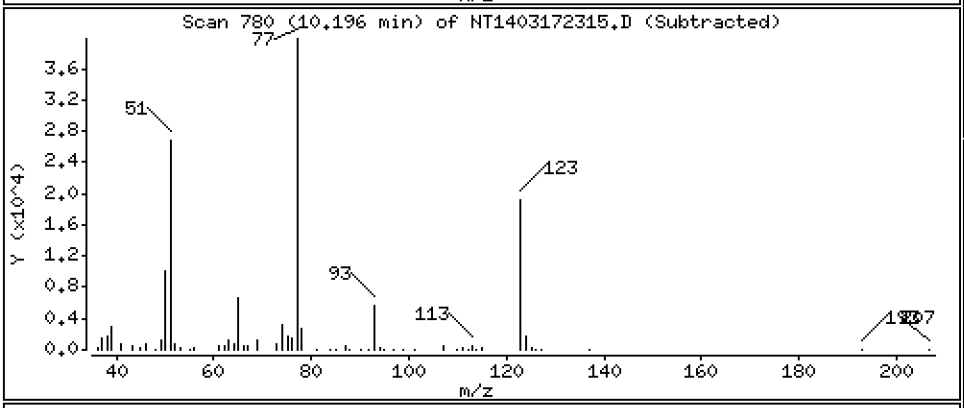
Column diameter: 0.25

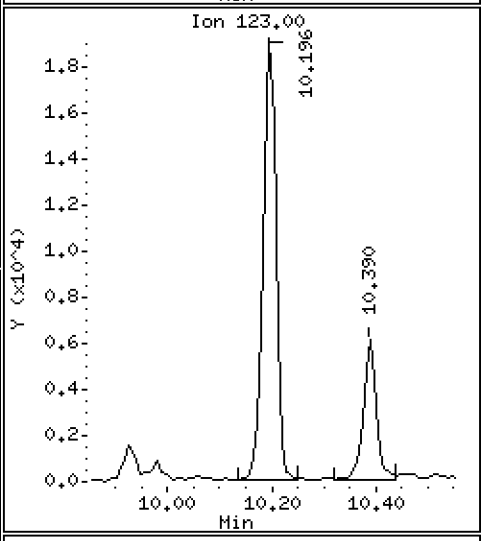
19 Nitrobenzene

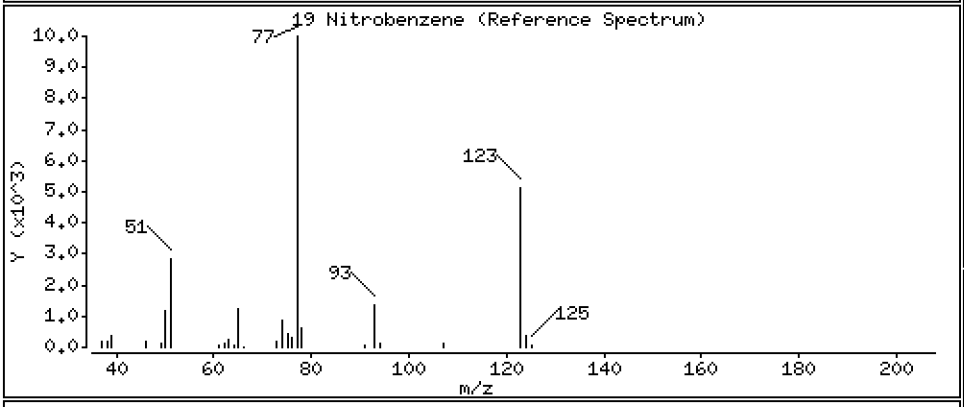
Concentration: 0.7528 ug/mL

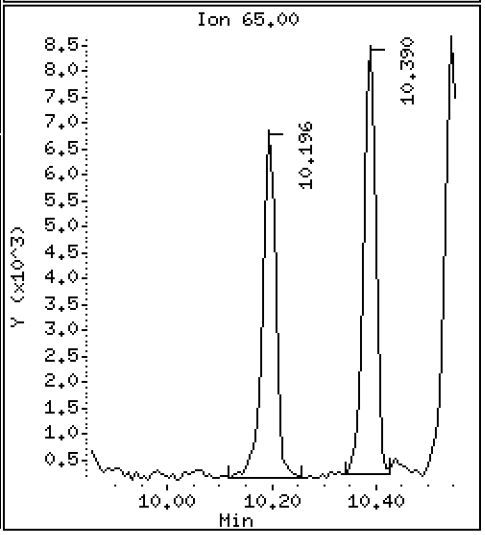


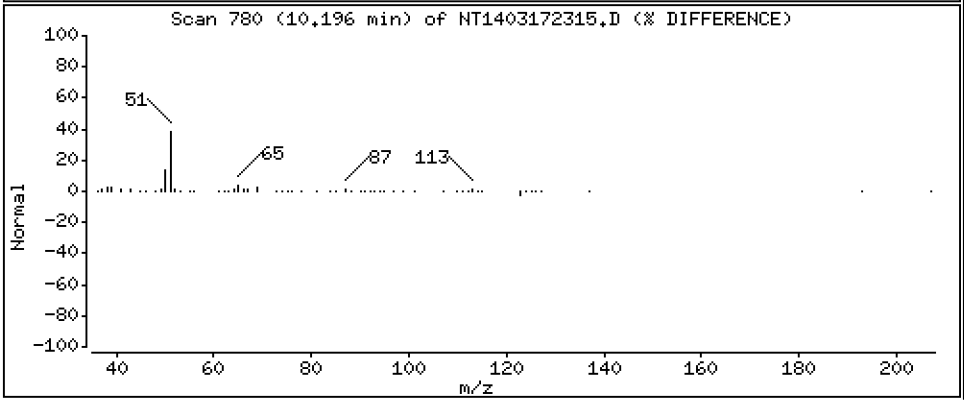












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Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM1

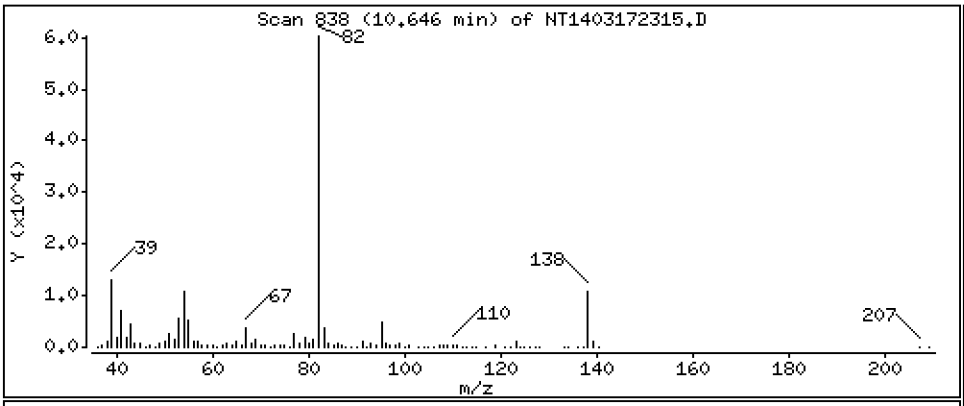
Operator: JGR

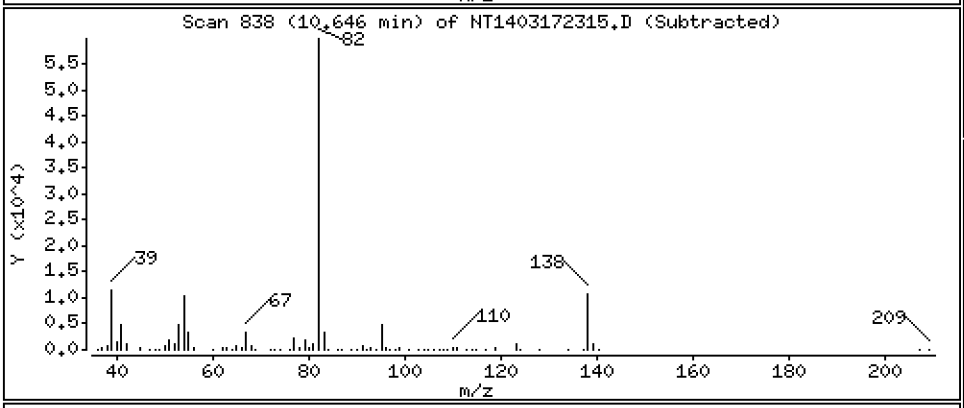
Column phase: ZB-5msi

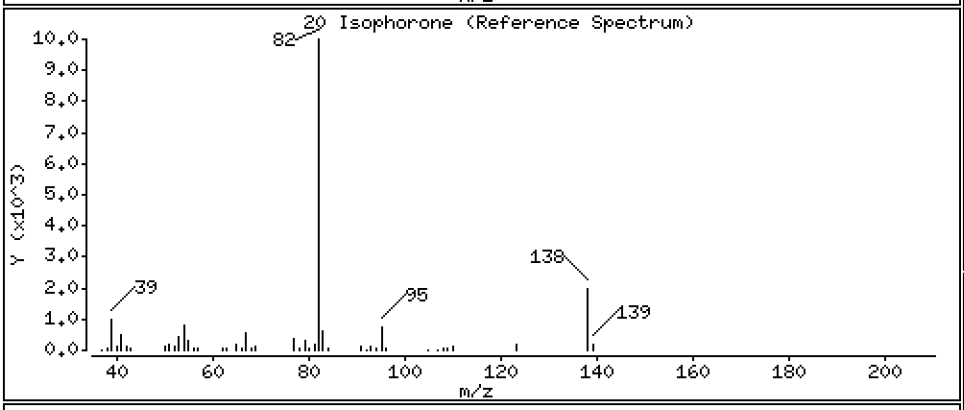
Column diameter: 0.25

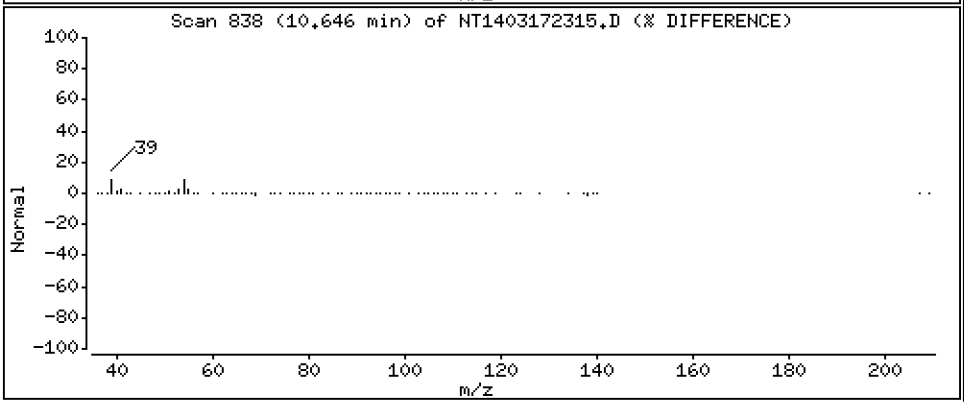
20 Isophorone

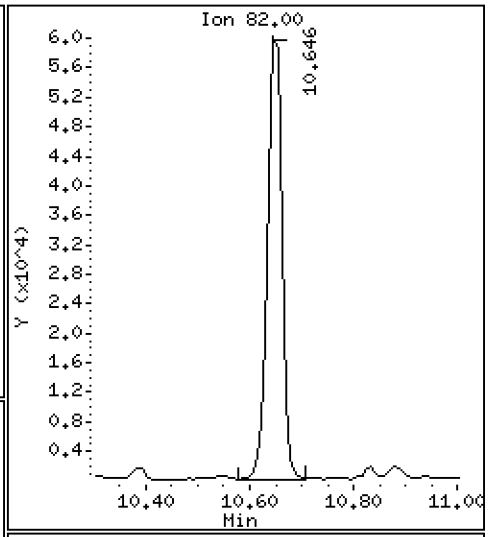
Concentration: 0.8871 ug/mL

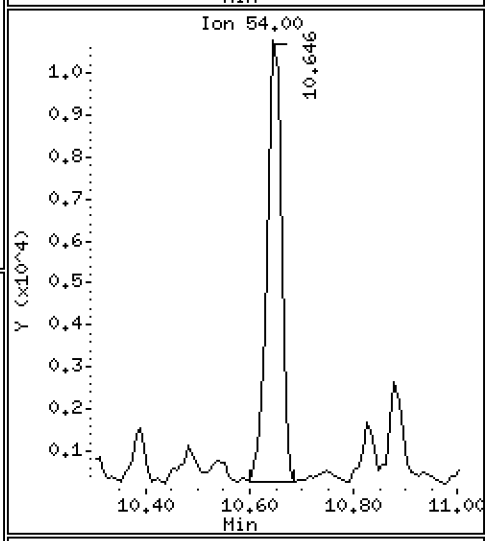


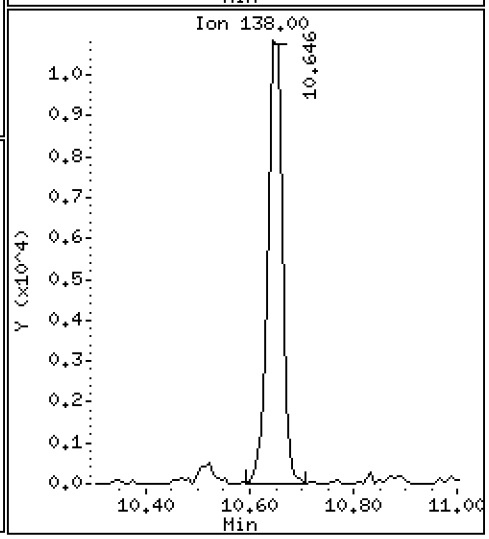












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Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM1

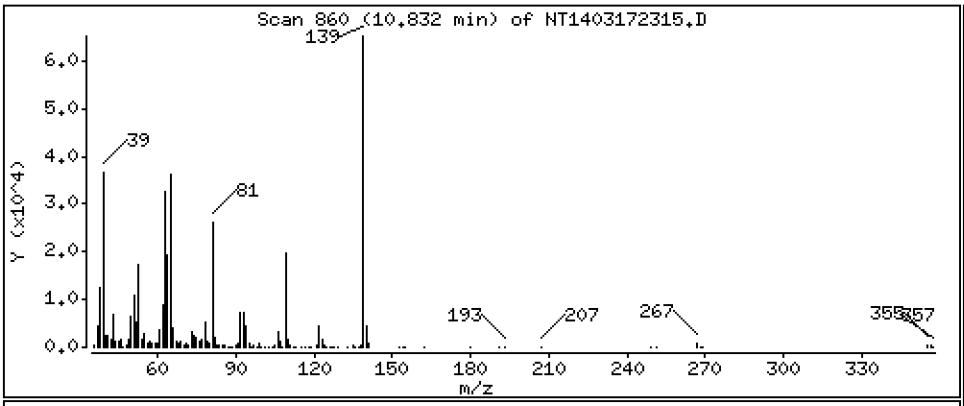
Operator: JGR

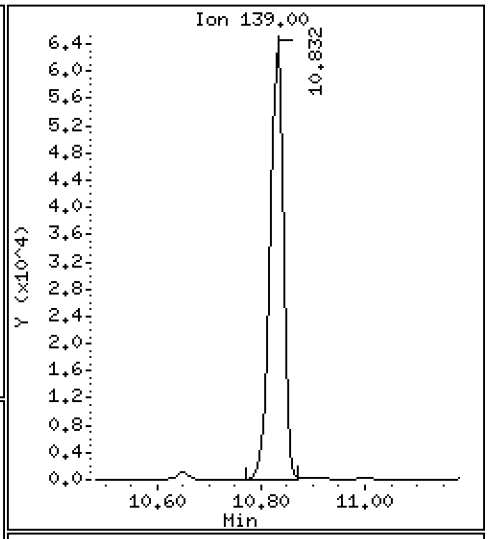
Column phase: ZB-5msi

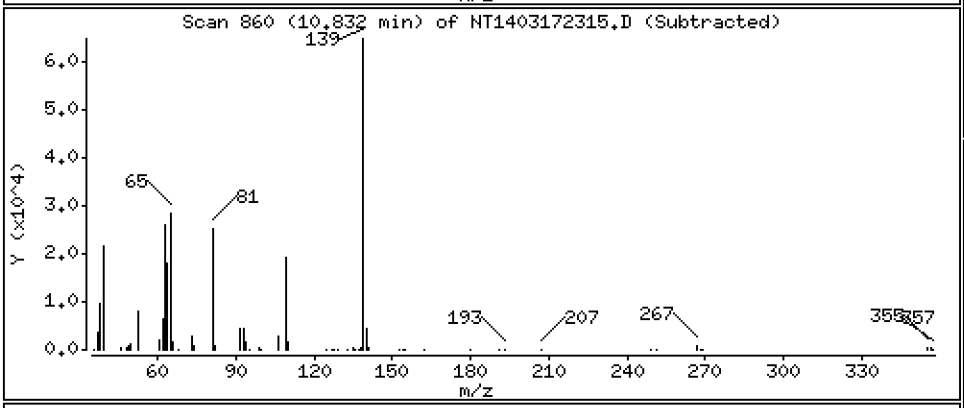
Column diameter: 0.25

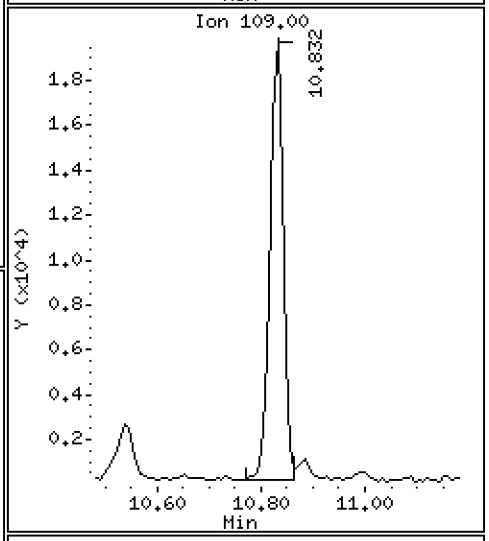
21 2-Nitrophenol

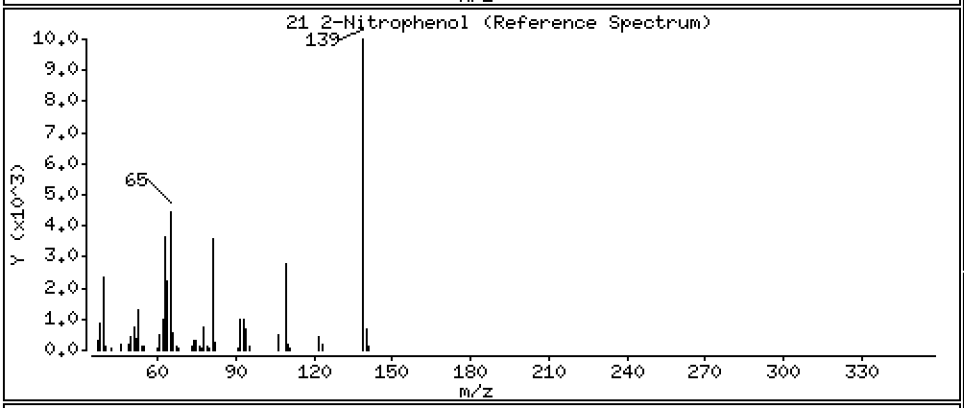
Concentration: 2.077 ug/mL

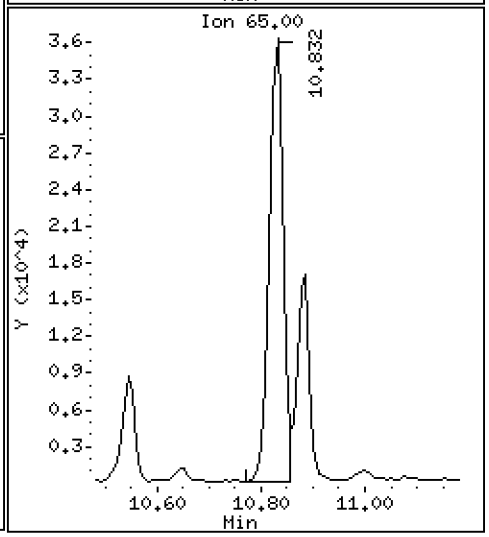


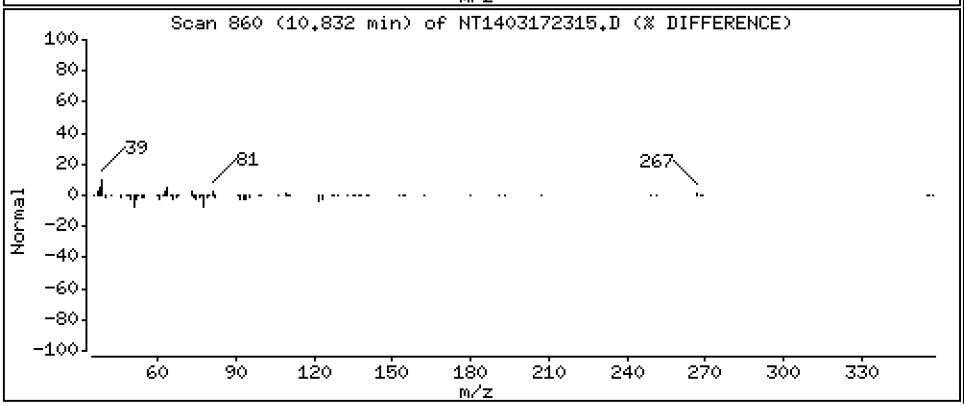












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Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM1

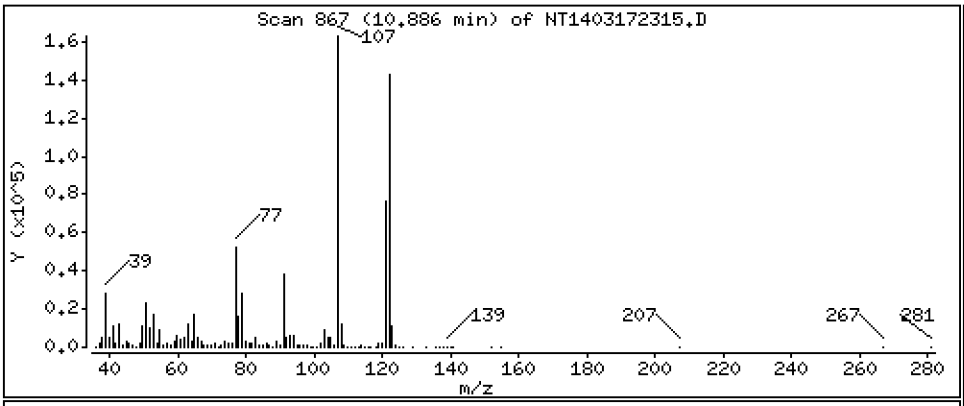
Operator: JGR

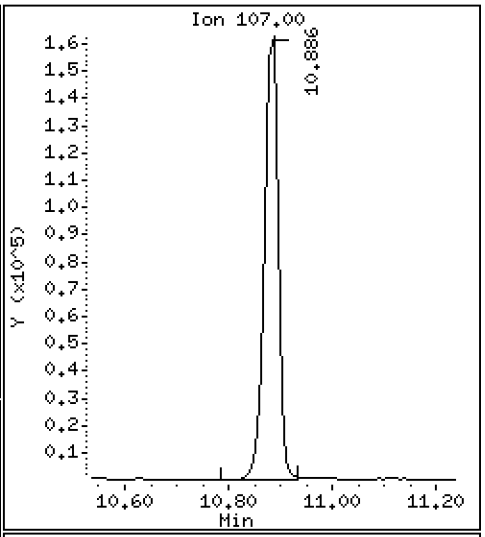
Column phase: ZB-5msi

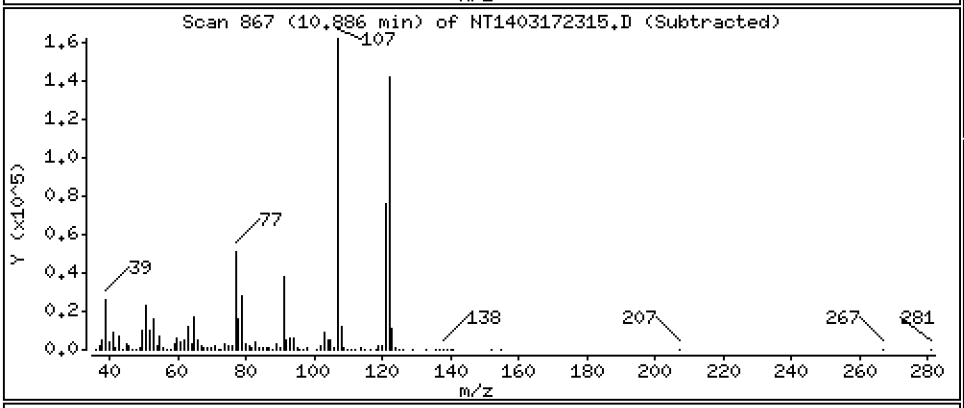
Column diameter: 0.25

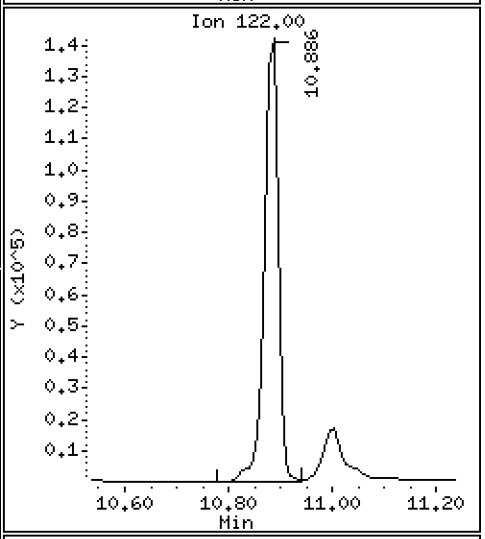
22 2,4-Dimethylphenol

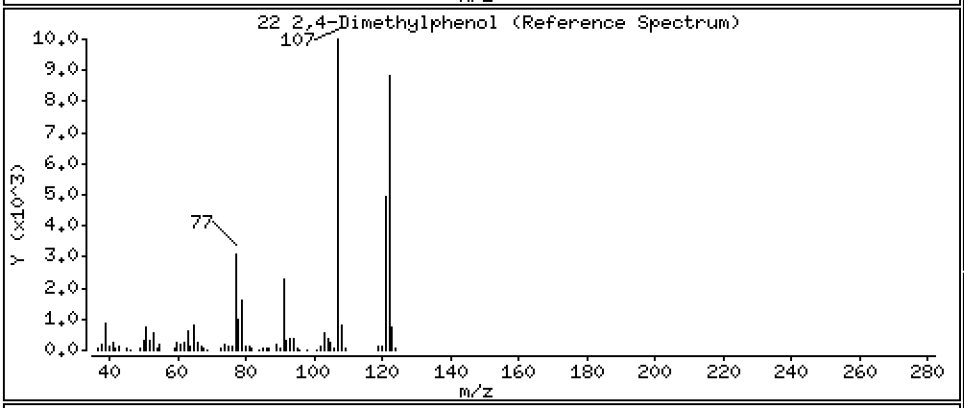
Concentration: 3.638 ug/mL

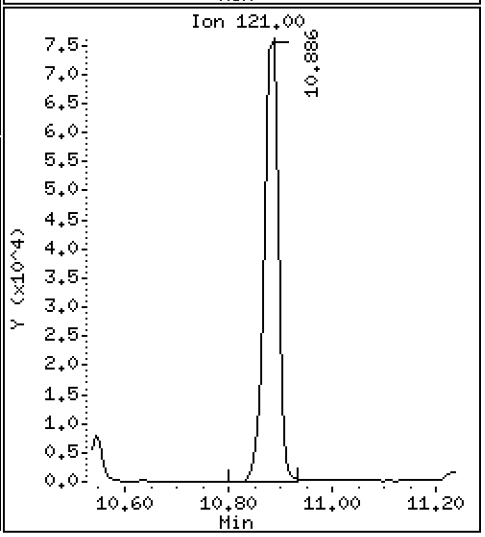


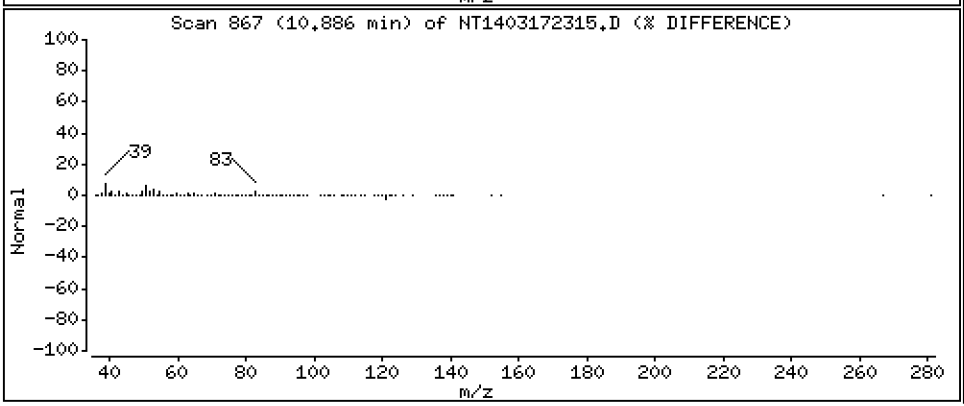












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Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM1

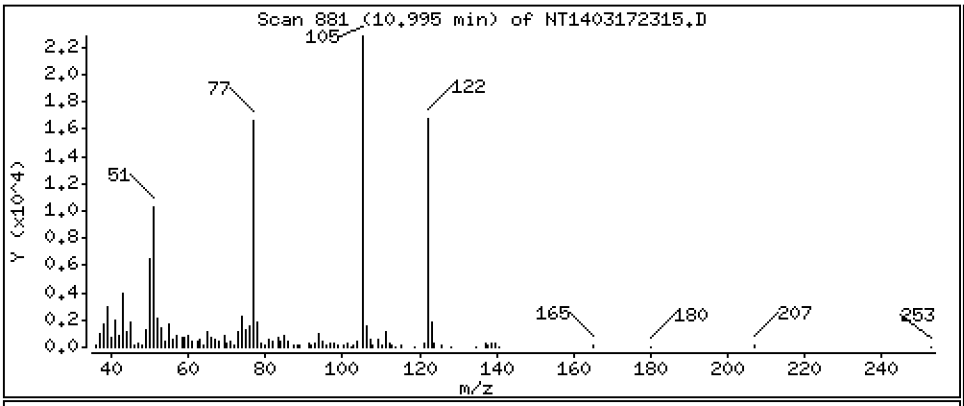
Operator: JGR

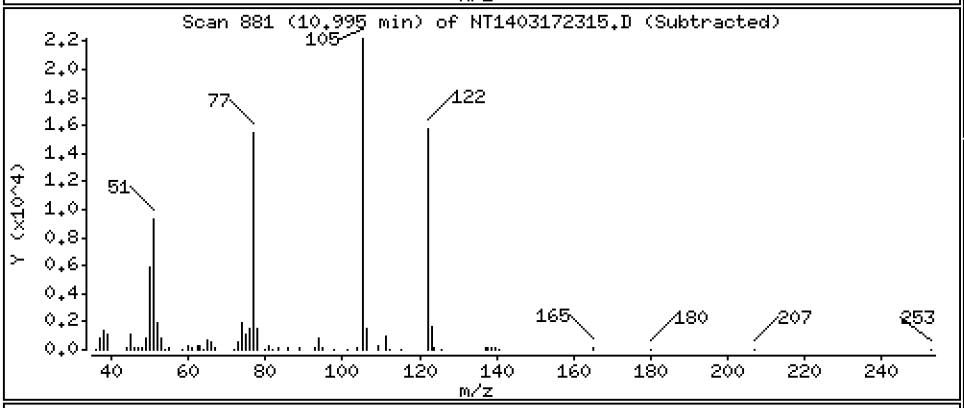
Column phase: ZB-5msi

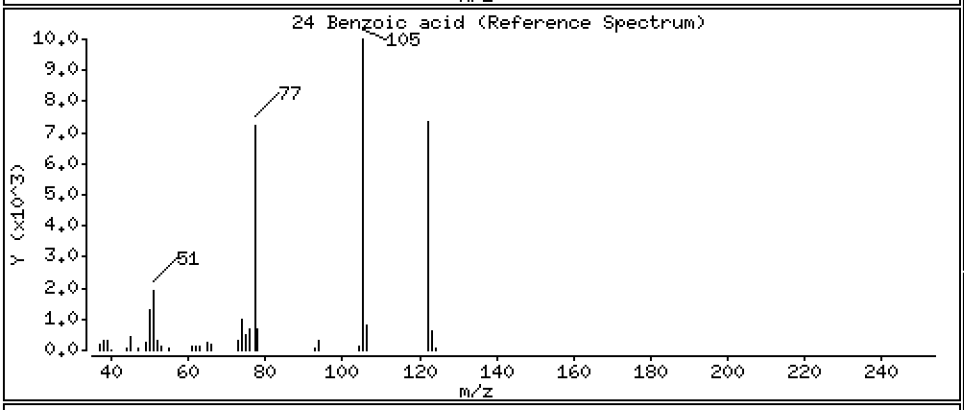
Column diameter: 0.25

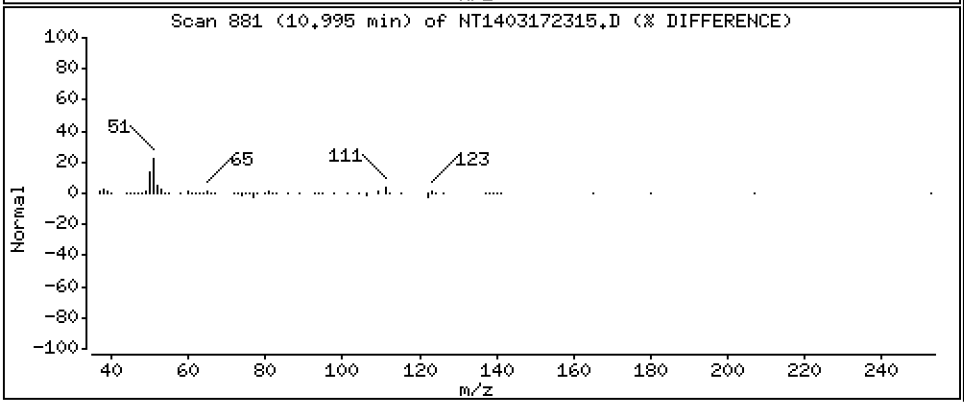
24 Benzoic acid

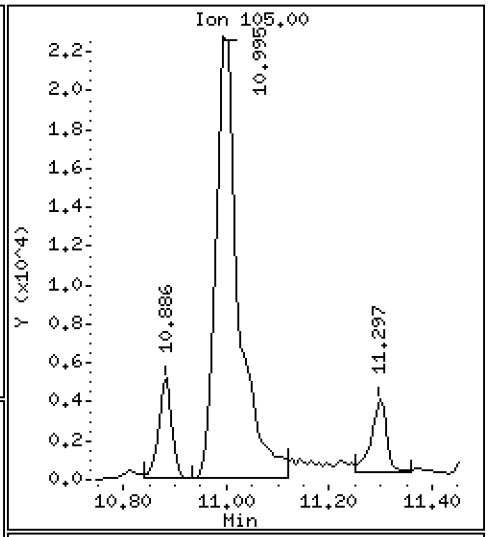
Concentration: 1.040 ug/mL

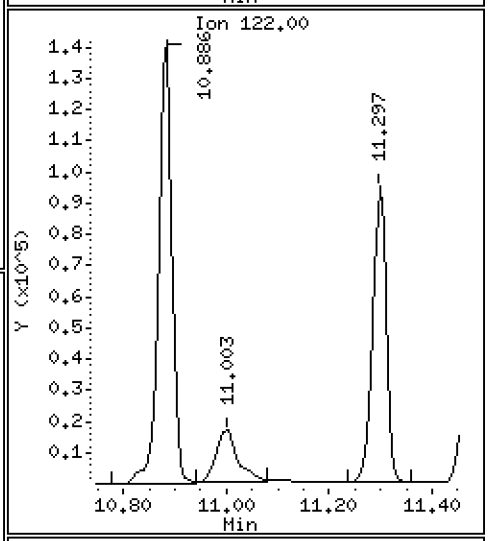


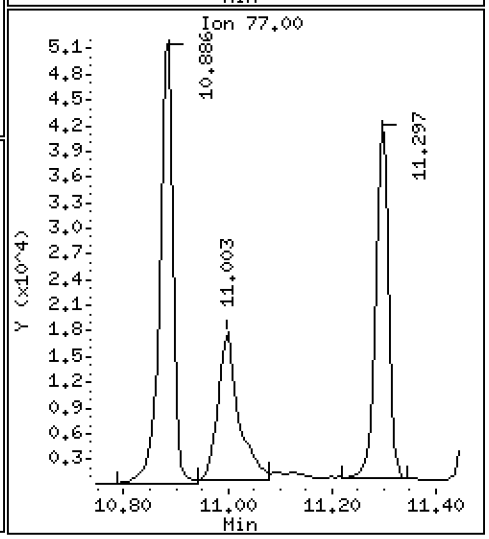












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Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM1

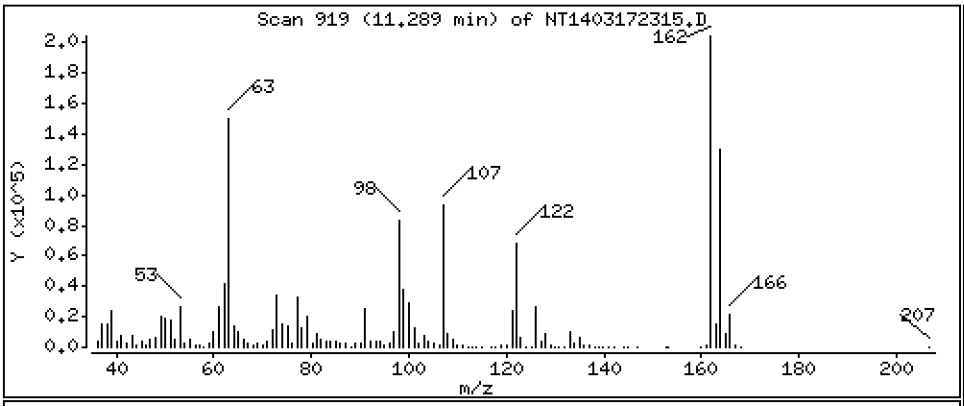
Operator: JGR

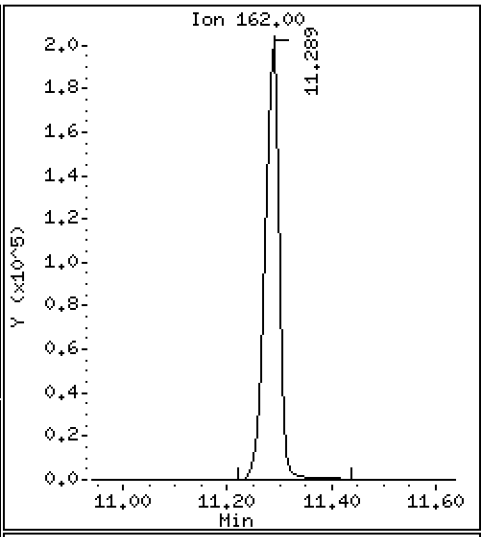
Column phase: ZB-5msi

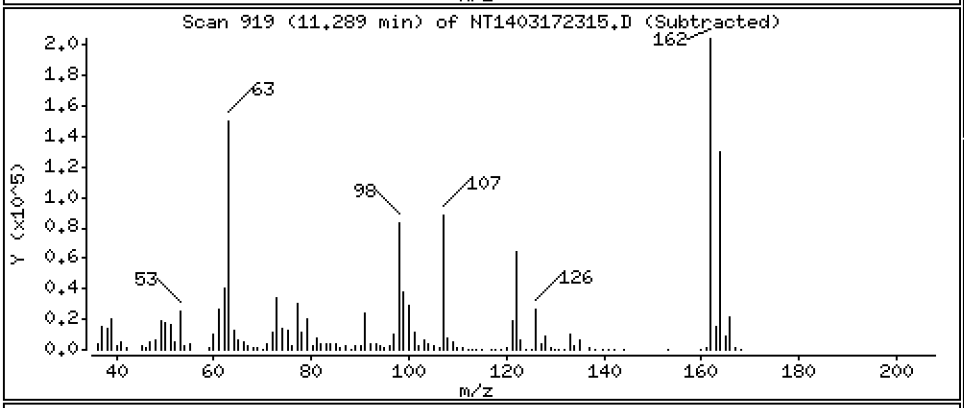
Column diameter: 0.25

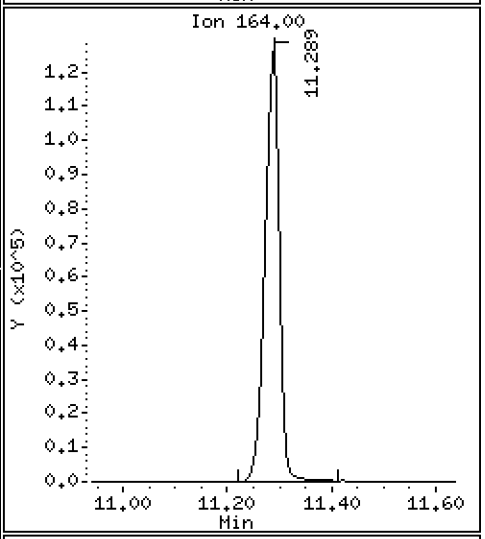
25 2,4-Dichlorophenol

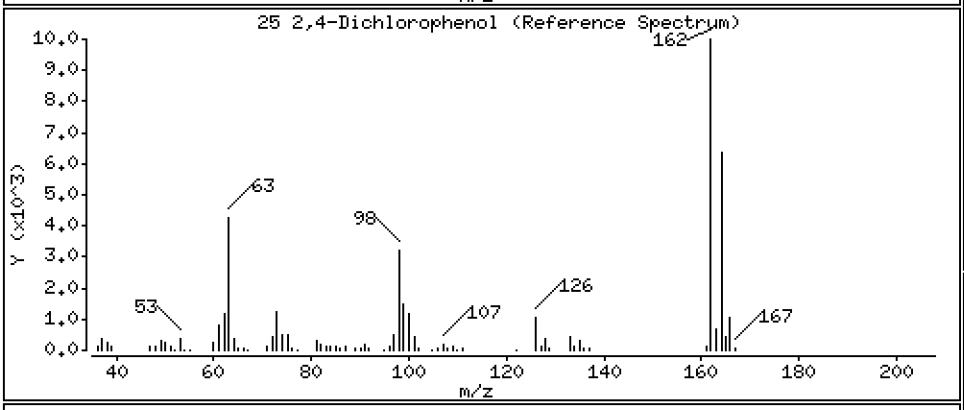
Concentration: 6.376 ug/mL

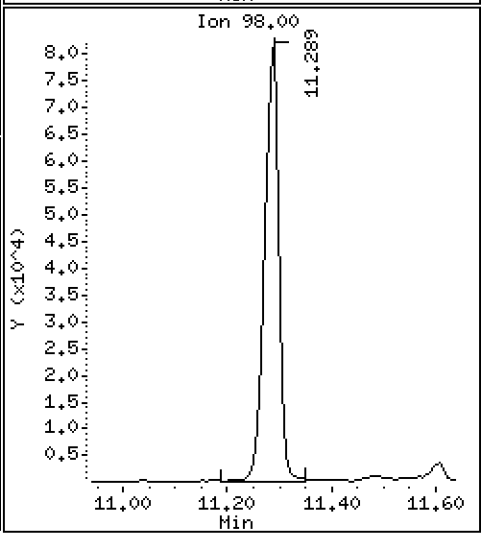


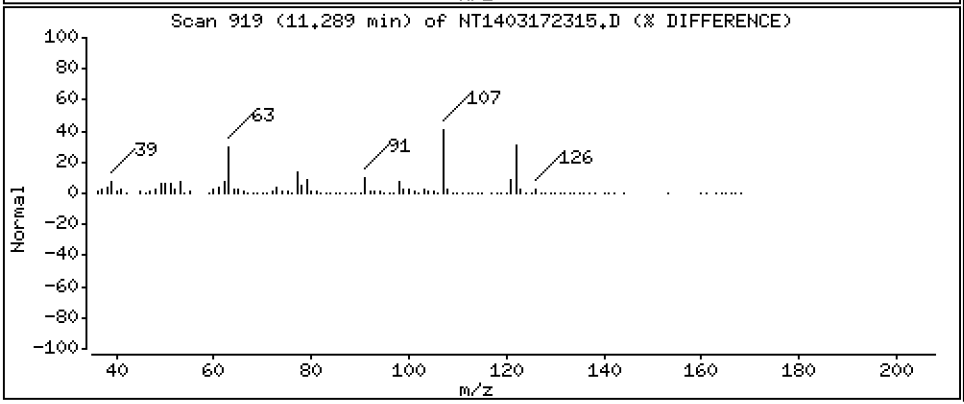












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Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM1

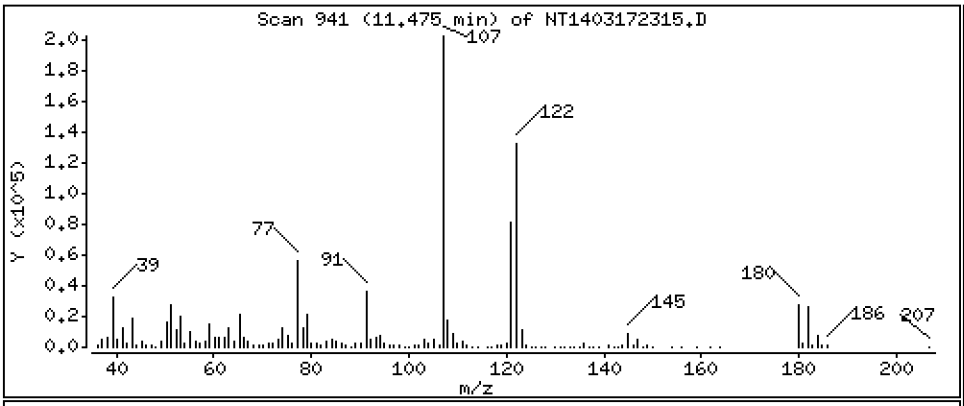
Operator: JGR

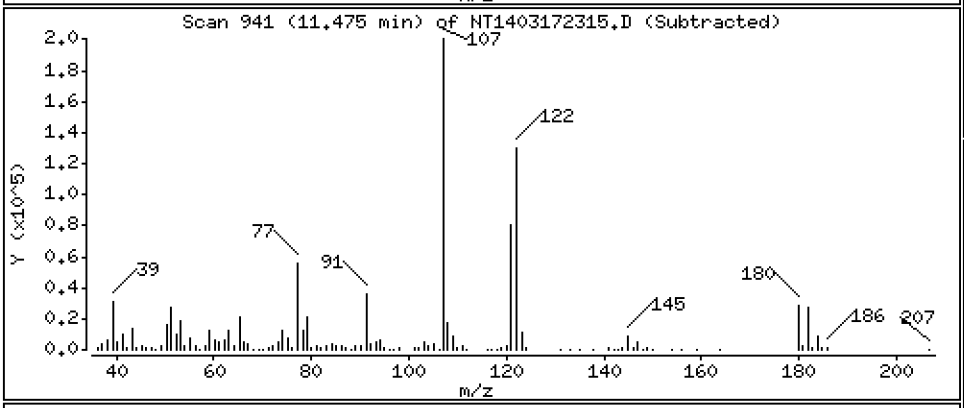
Column phase: ZB-5msi

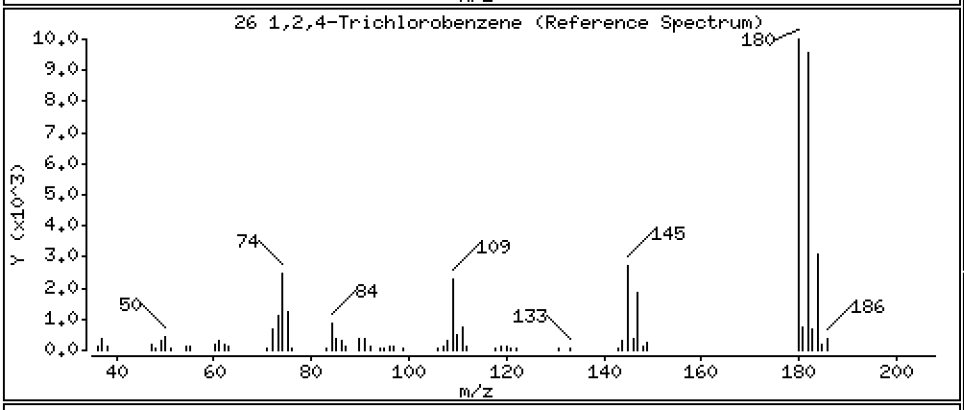
Column diameter: 0.25

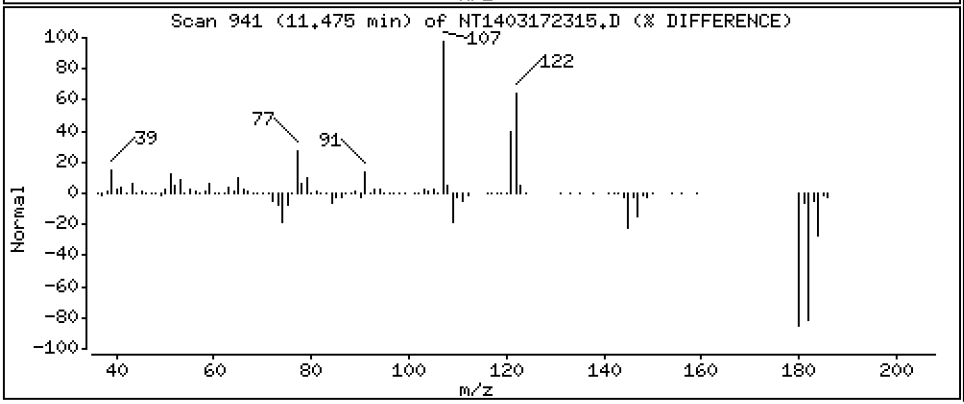
26 1,2,4-Trichlorobenzene

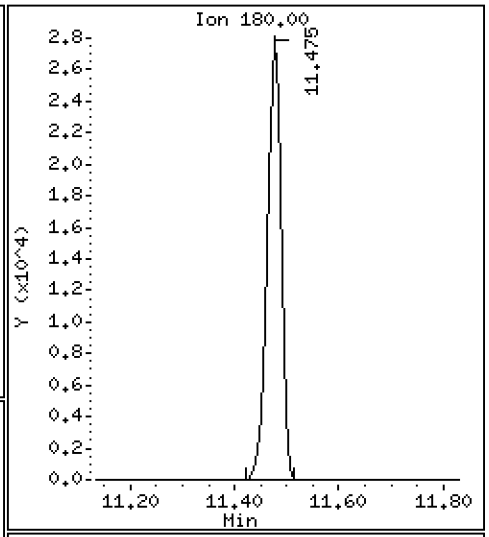
Concentration: 0.6398 ug/mL

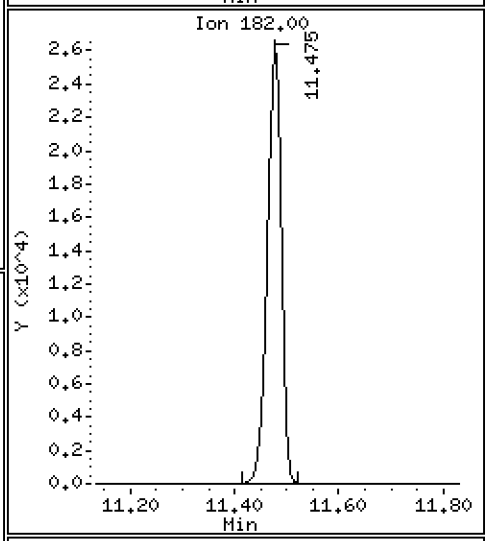


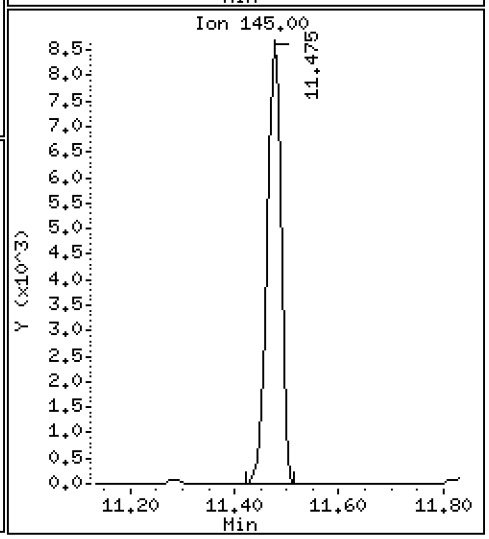












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Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM1

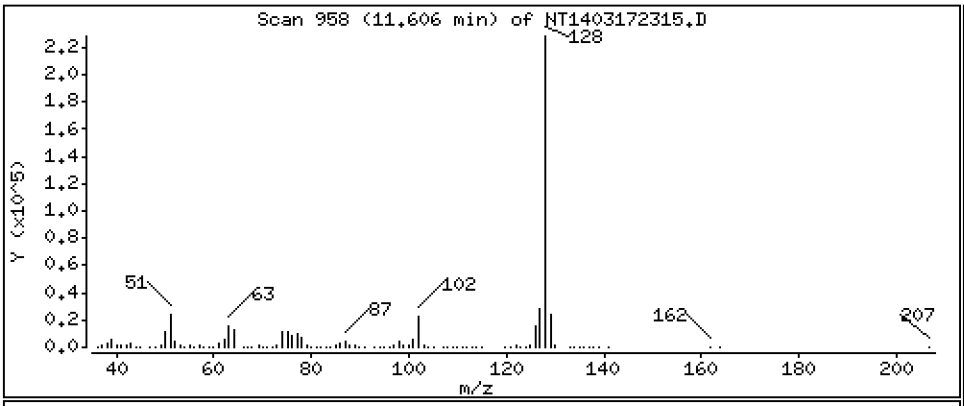
Operator: JGR

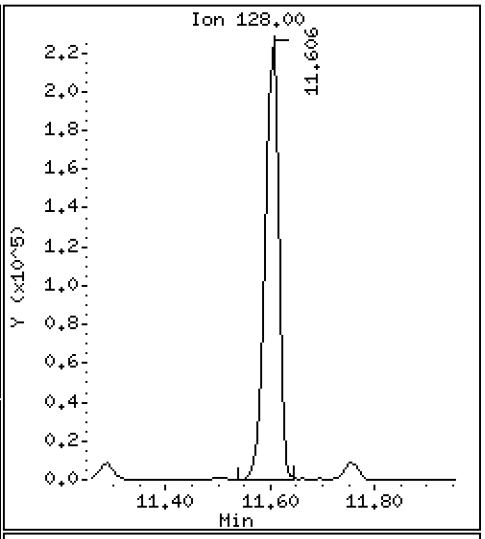
Column phase: ZB-5msi

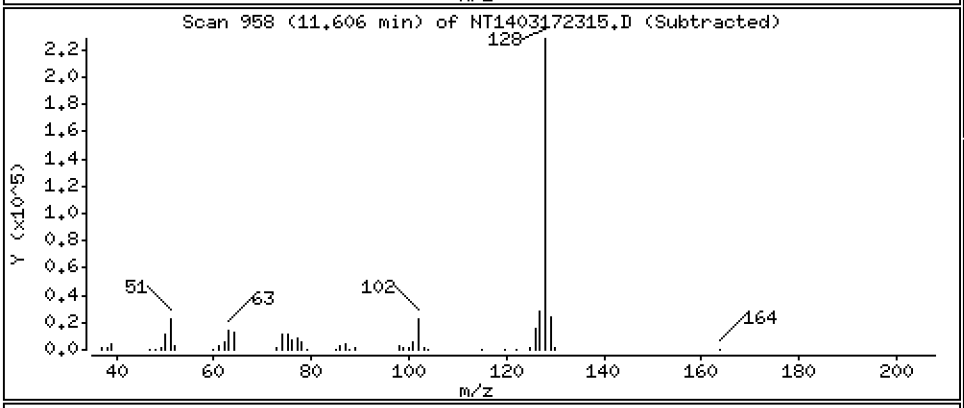
Column diameter: 0.25

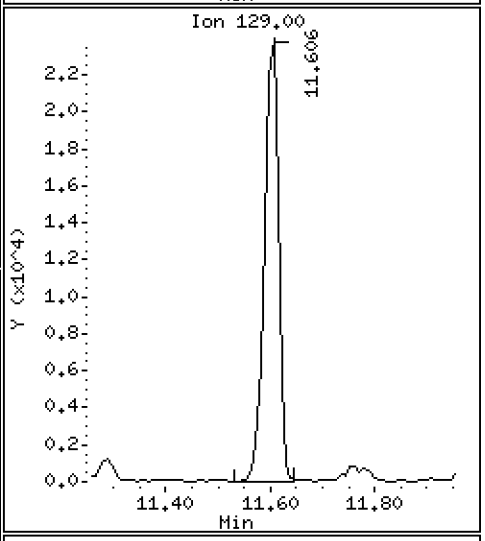
28 Naphthalene

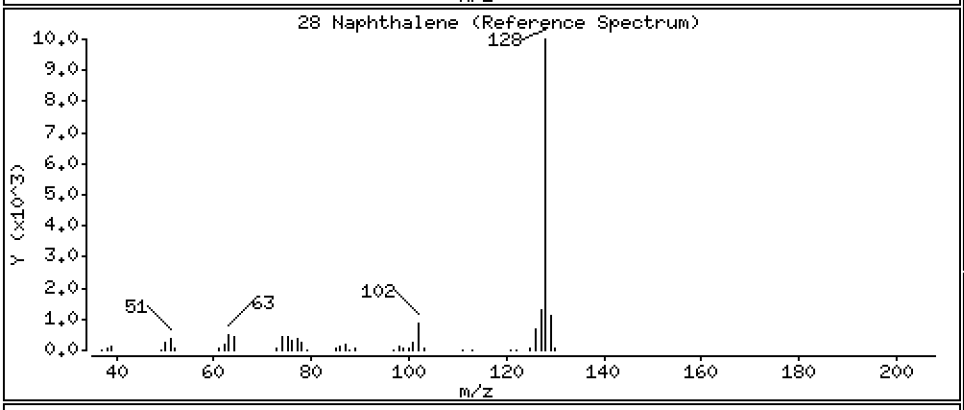
Concentration: 1.633 ug/mL

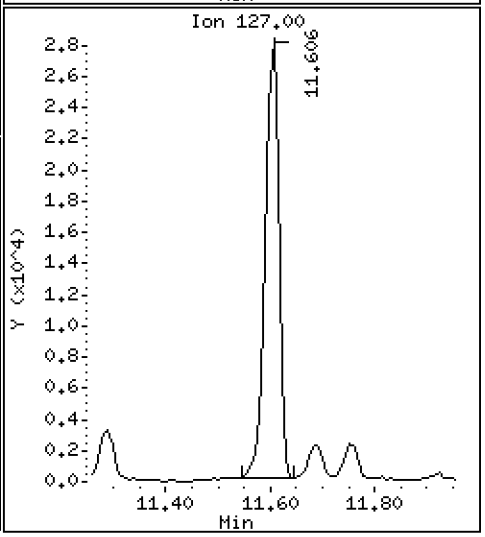


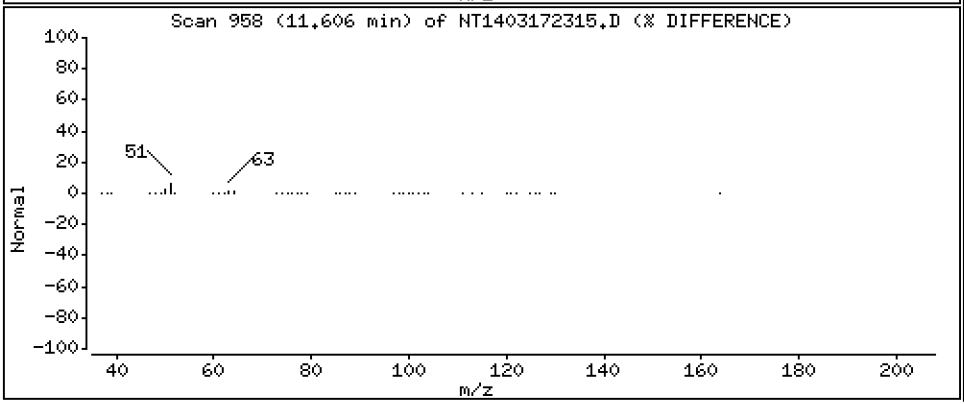












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Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM1

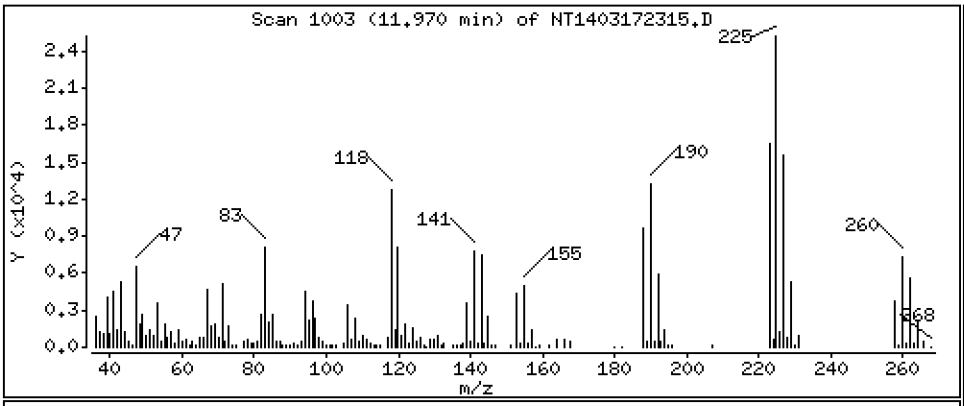
Operator: JGR

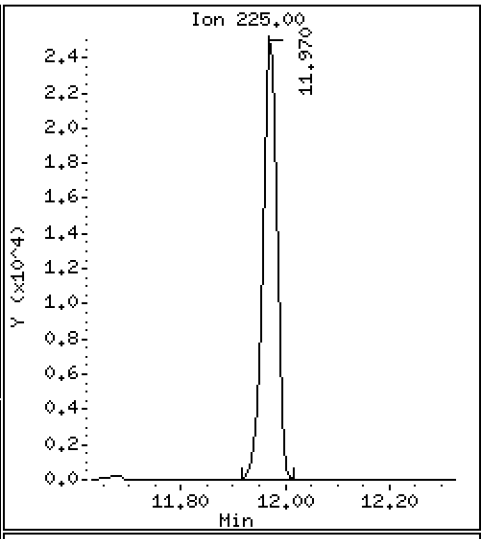
Column phase: ZB-5msi

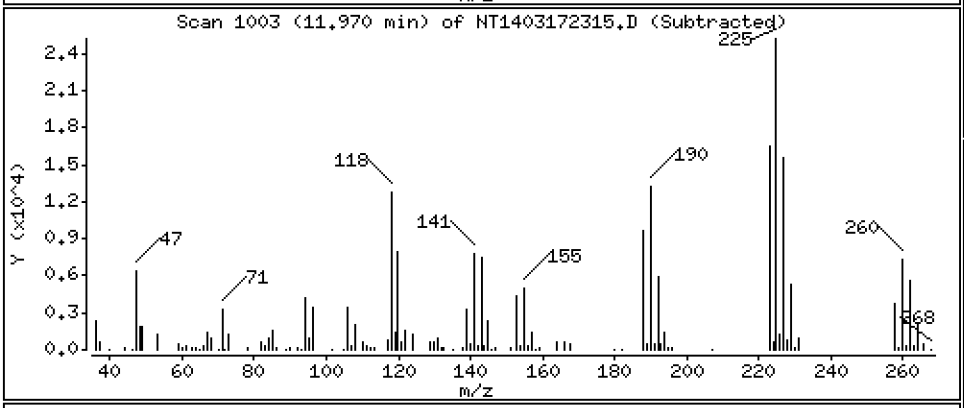
Column diameter: 0.25

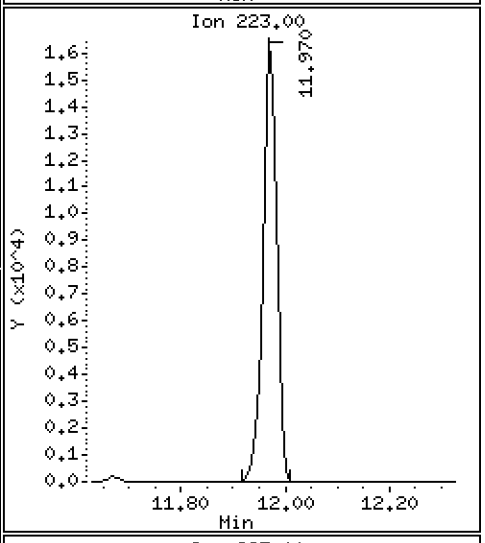
30 Hexachlorobutadiene

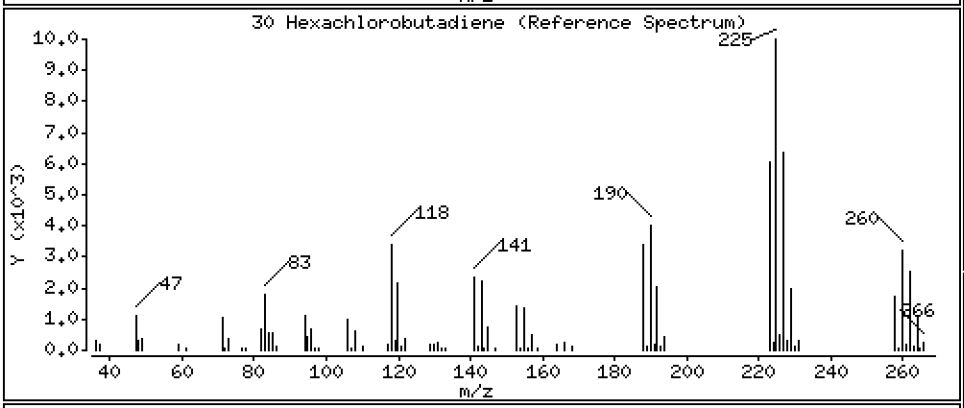
Concentration: 1.332 ug/mL

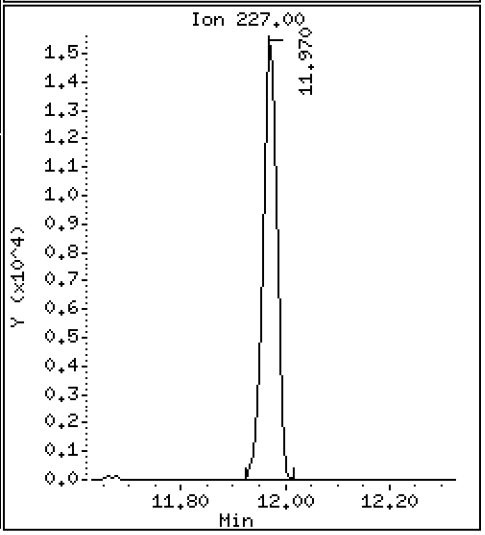


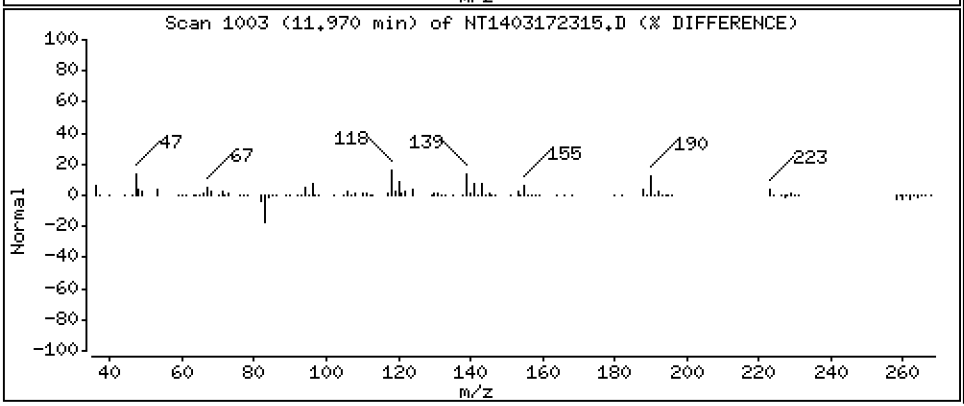












Date : 17-MAR-2023 22:55

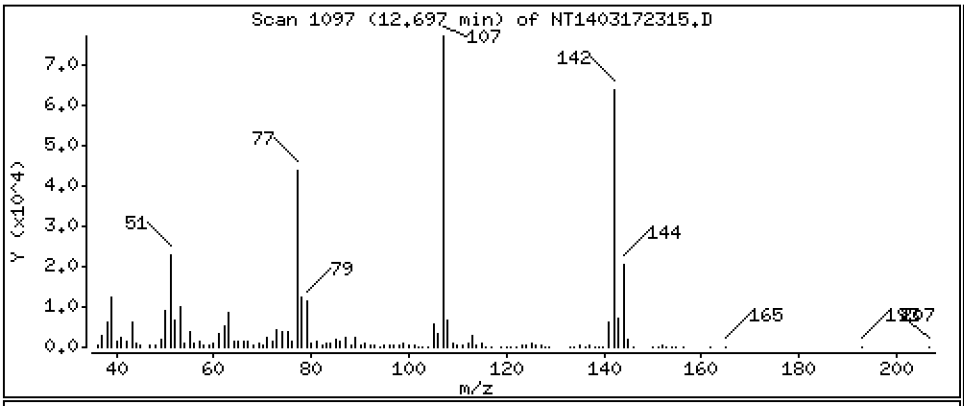
Client ID: Instrument: nt14.i

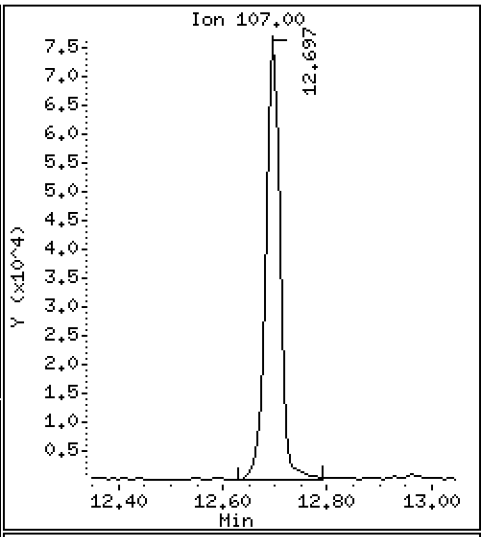
Sample Info: BLB0424-SRM1

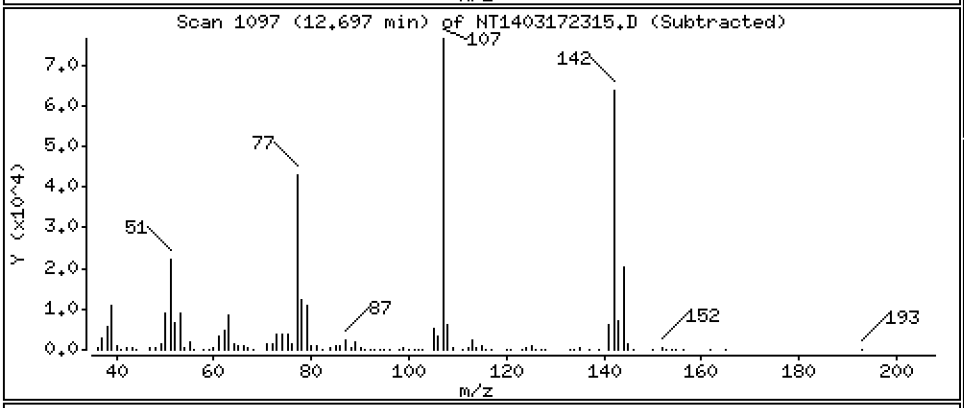
Operator: JGR

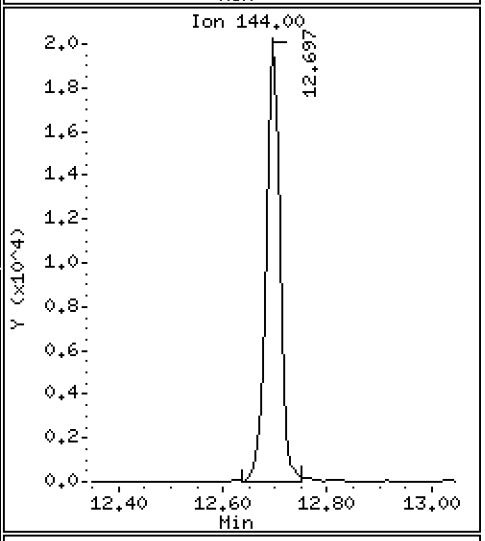
Column phase: ZB-5msi Column diameter: 0.25

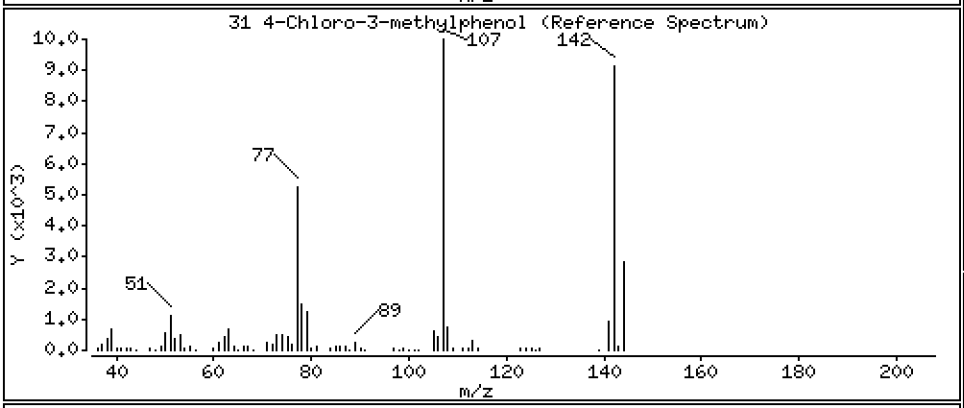
31 4-Chloro-3-methylphenol Concentration: 1.838 ug/mL

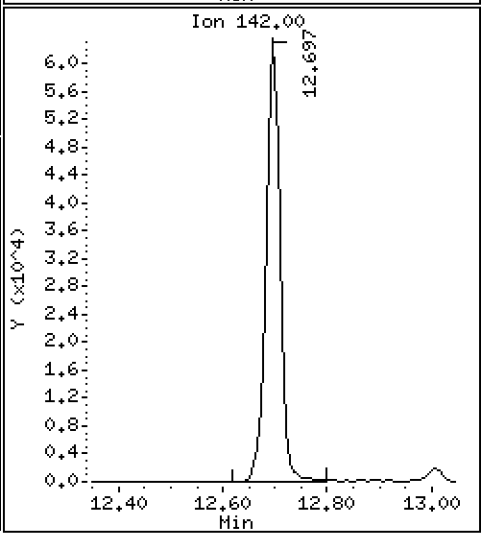


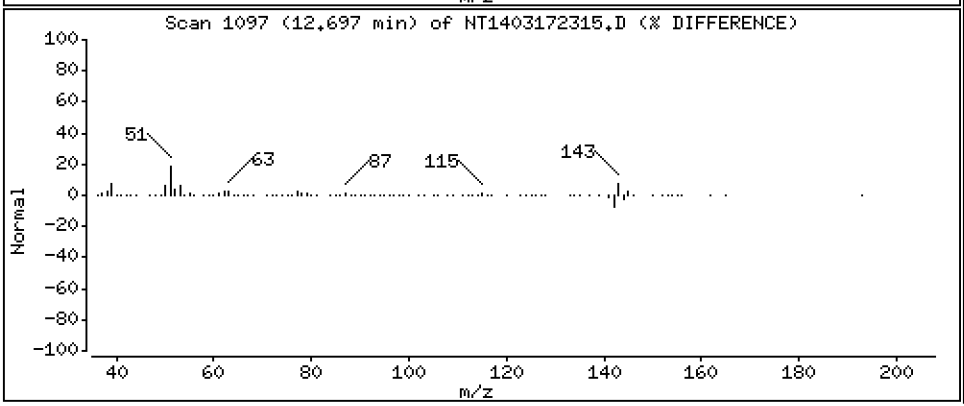












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Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM1

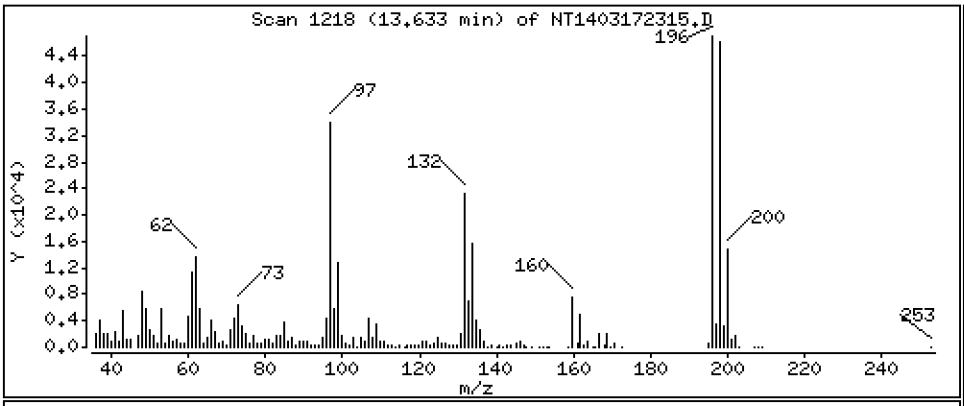
Operator: JGR

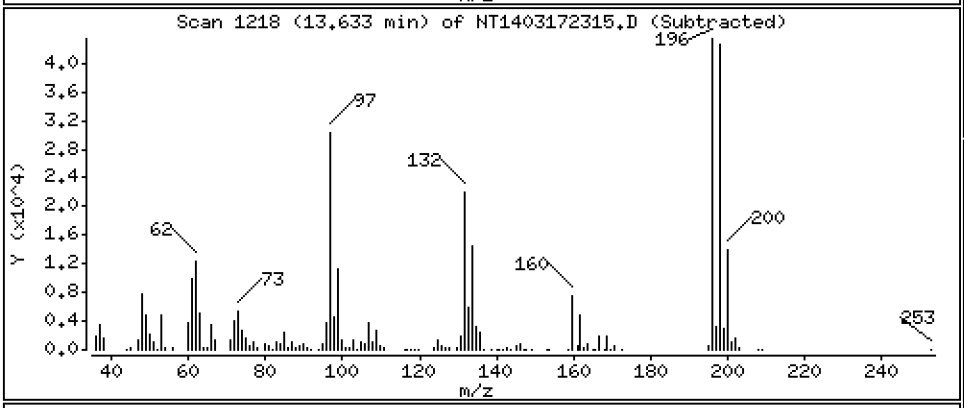
Column phase: ZB-5msi

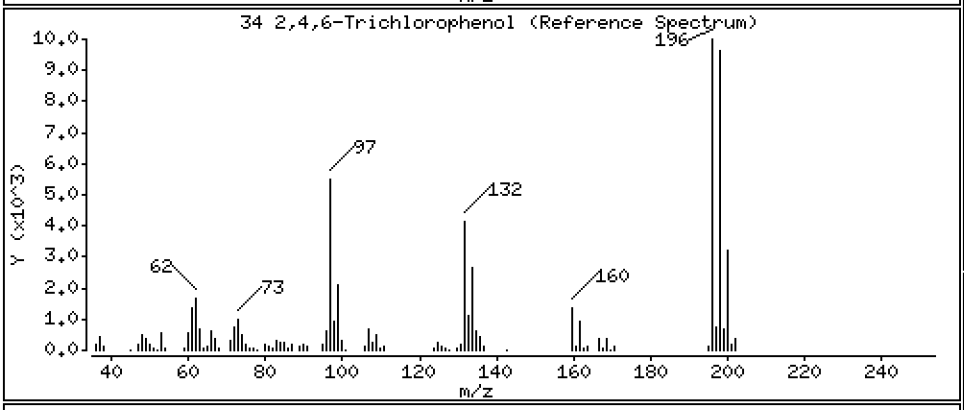
Column diameter: 0.25

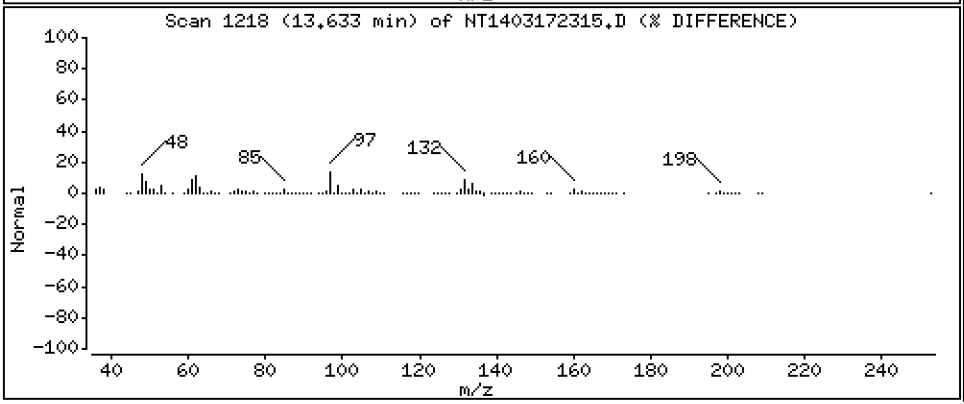
34 2,4,6-Trichlorophenol

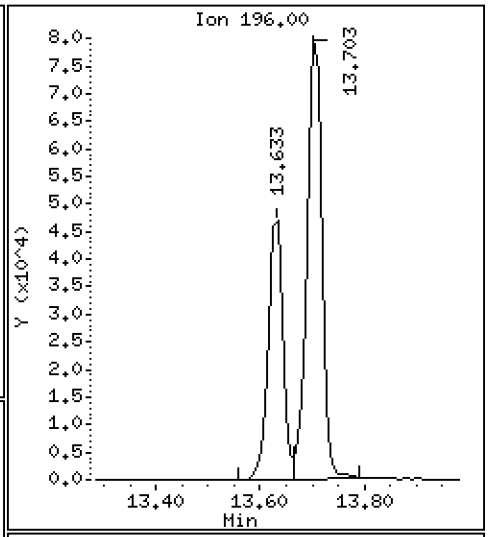
Concentration: 1.986 ug/mL

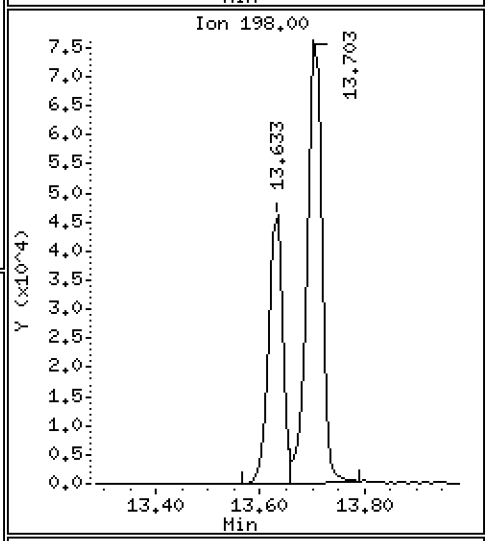


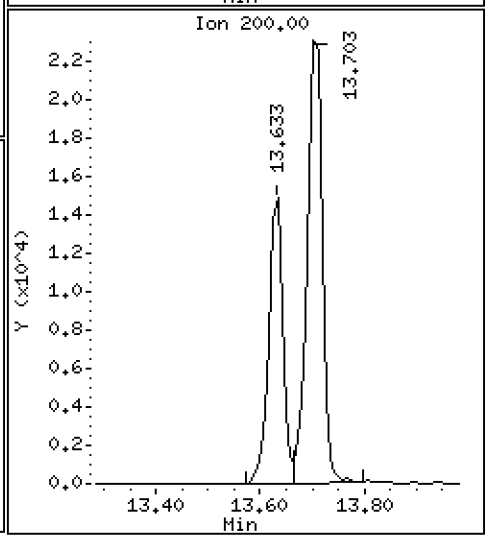












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Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM1

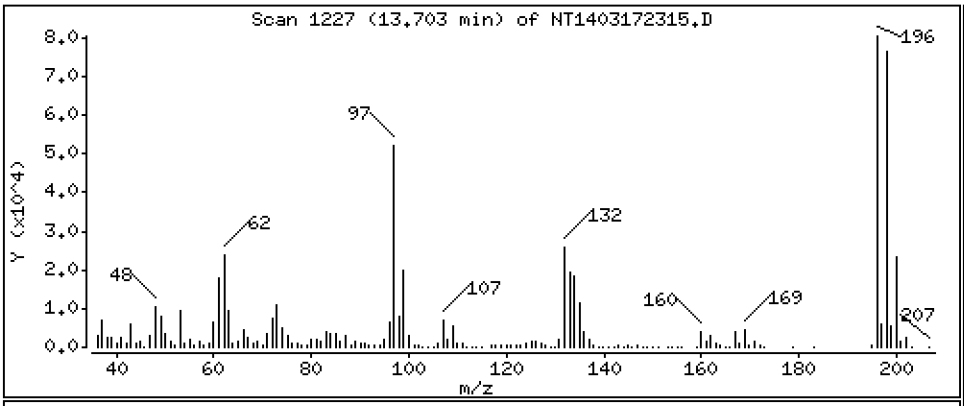
Operator: JGR

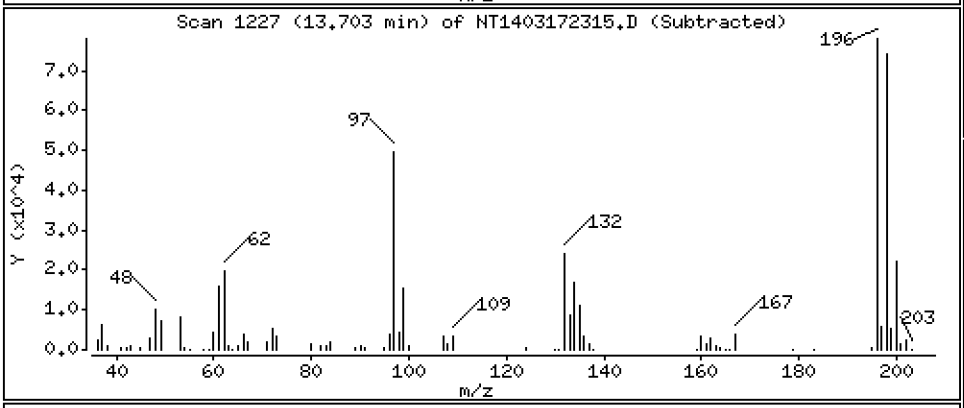
Column phase: ZB-5msi

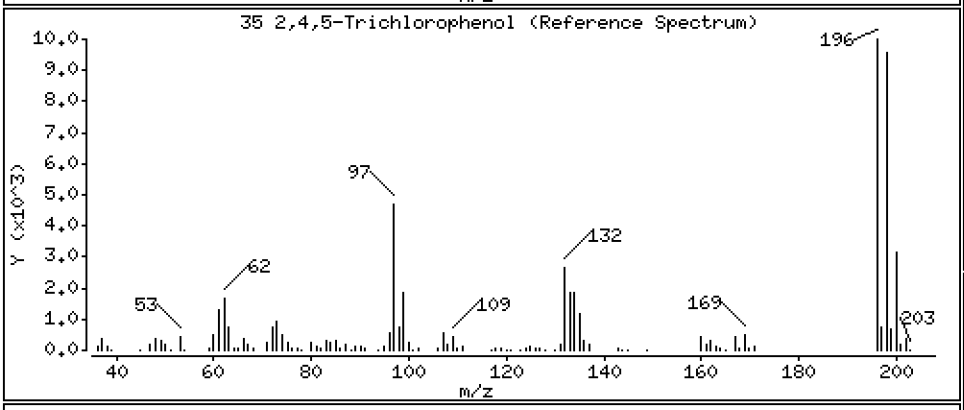
Column diameter: 0.25

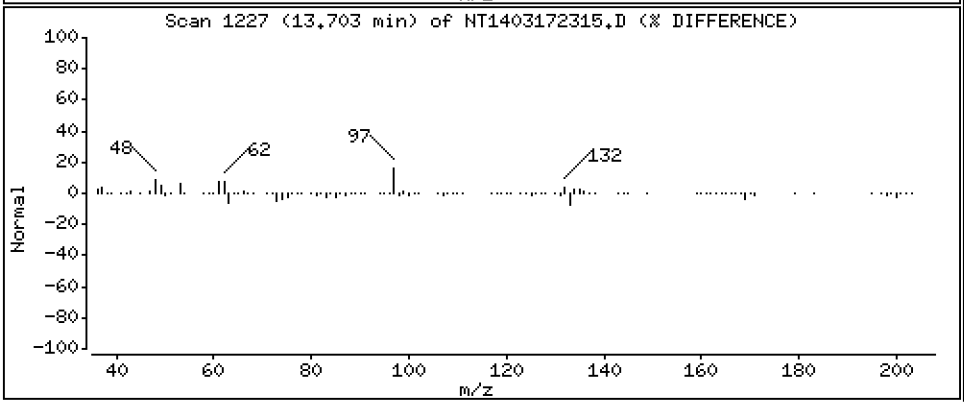
35 2,4,5-Trichlorophenol

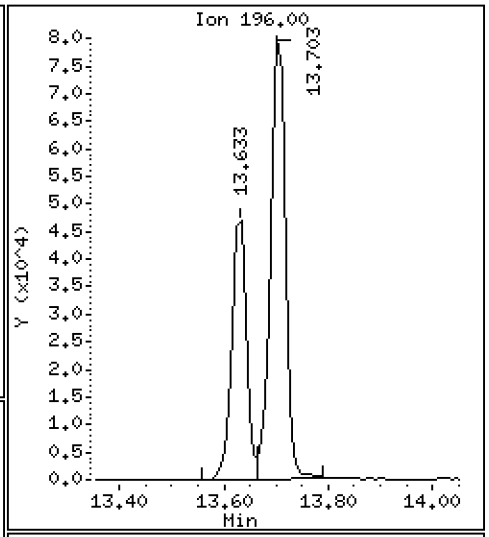
Concentration: 3.240 ug/mL

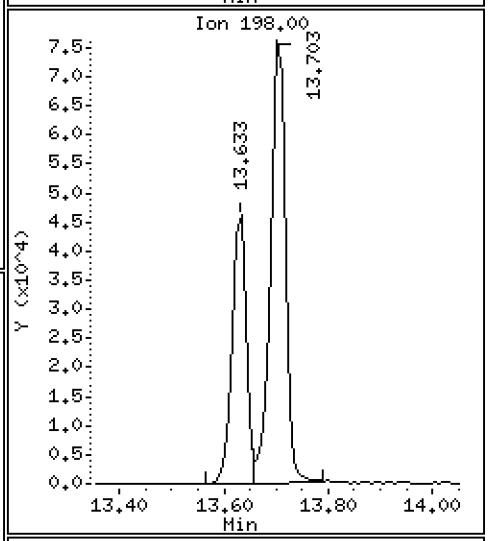


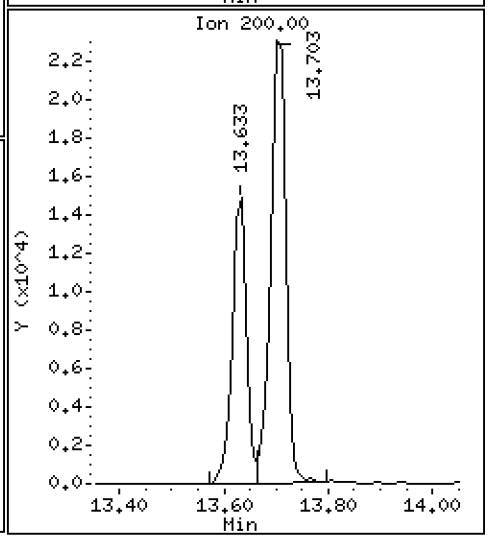












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Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM1

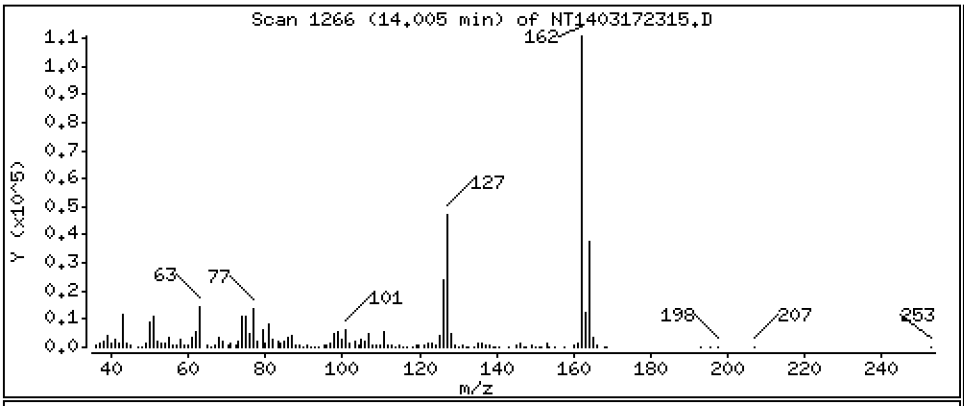
Operator: JGR

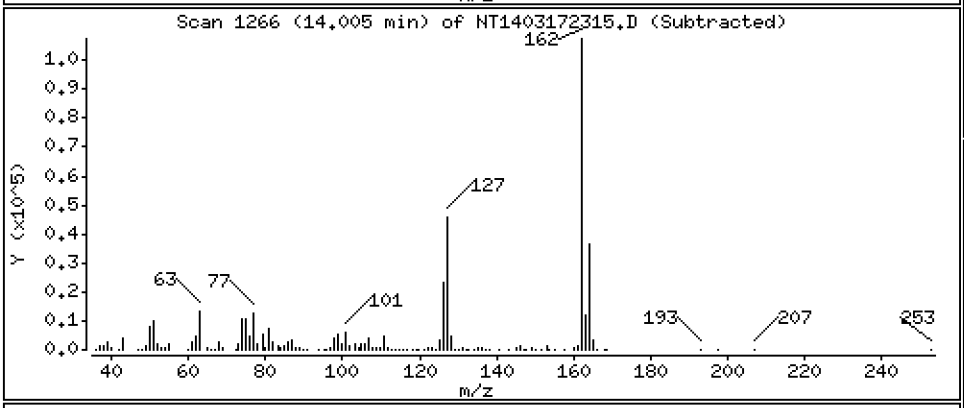
Column phase: ZB-5msi

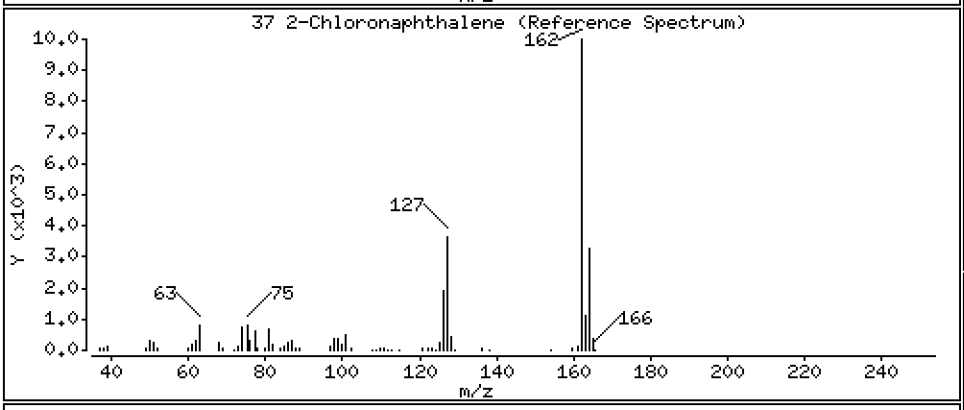
Column diameter: 0.25

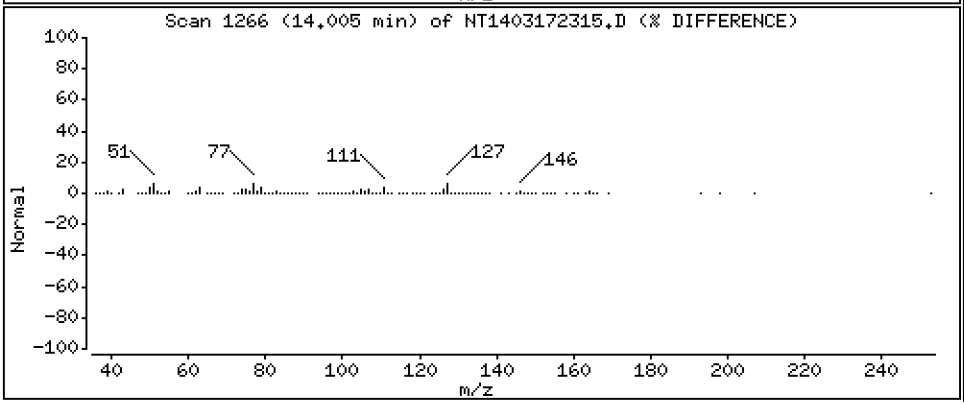
37 2-Chloronaphthalene

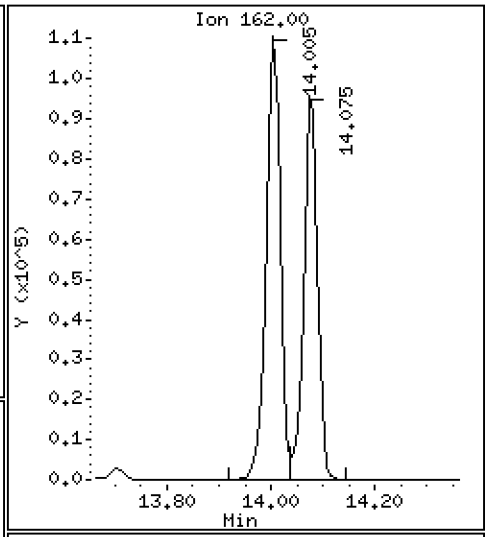
Concentration: 1.436 ug/mL

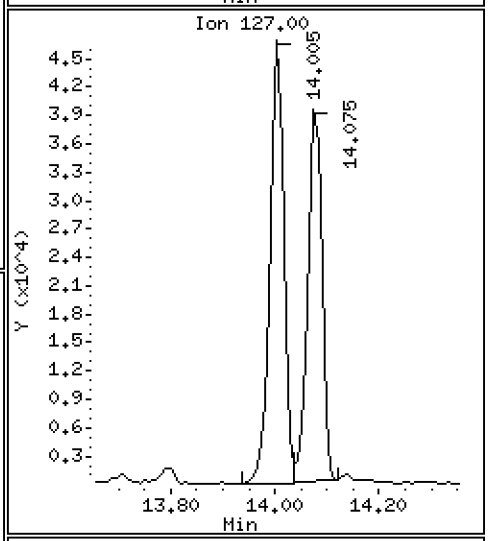


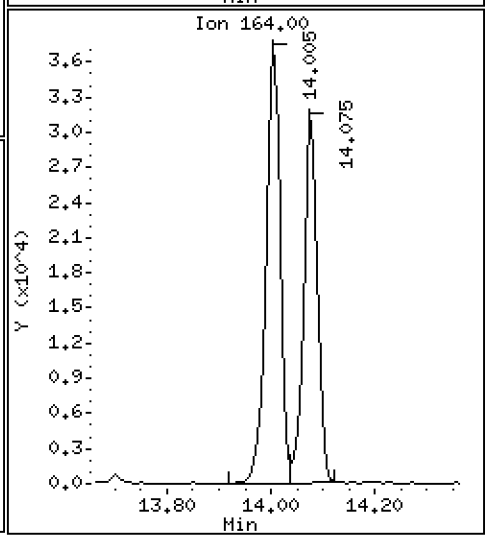












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Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM1

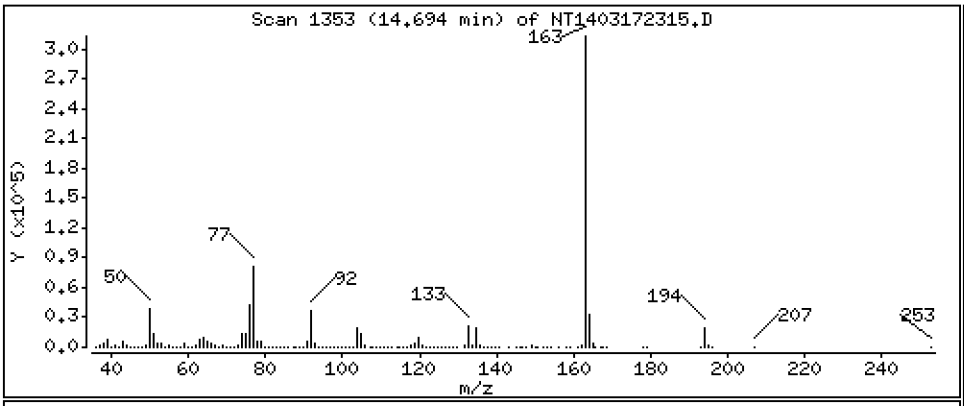
Operator: JGR

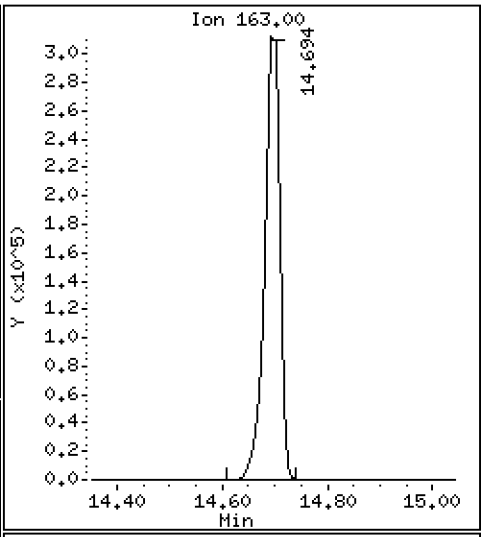
Column phase: ZB-5msi

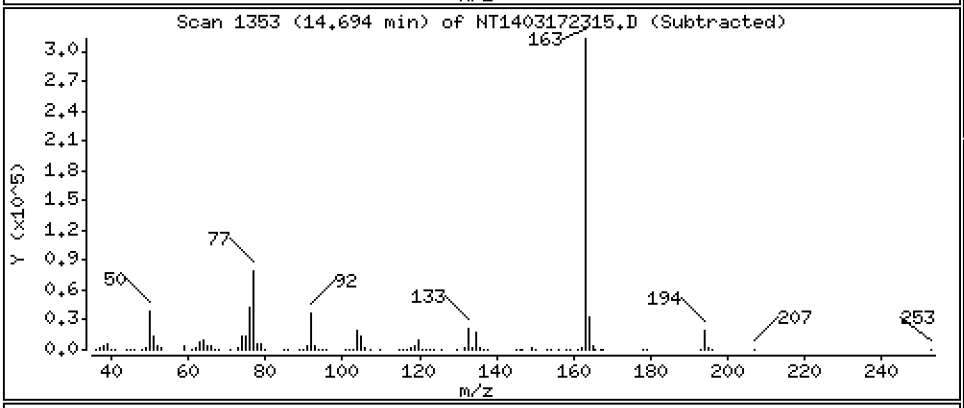
Column diameter: 0.25

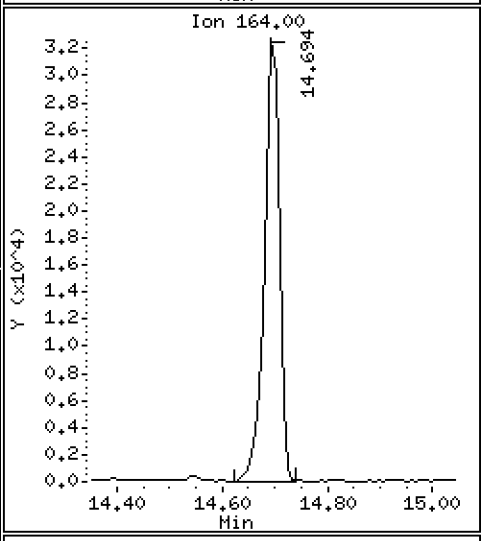
39 Dimethylphthalate

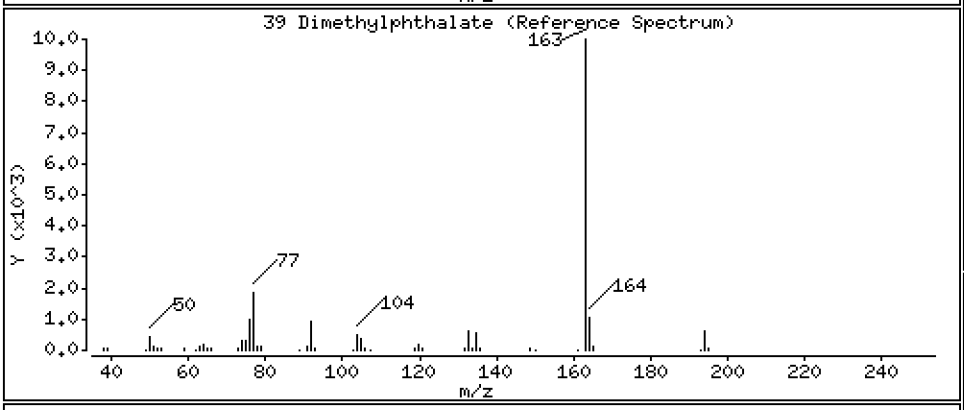
Concentration: 4.099 ug/mL

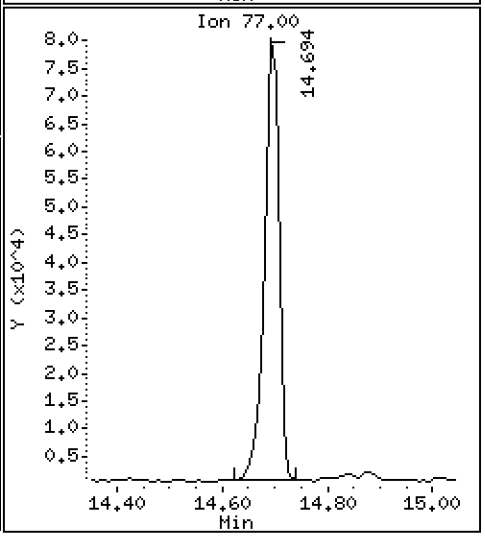


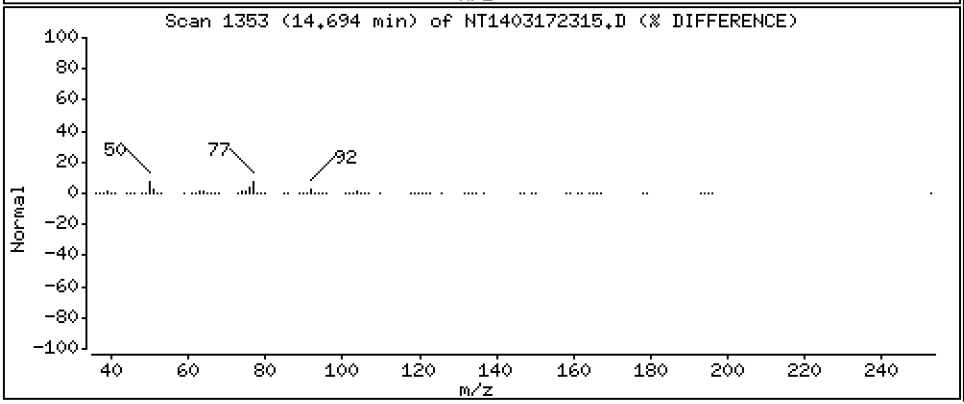












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Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM1

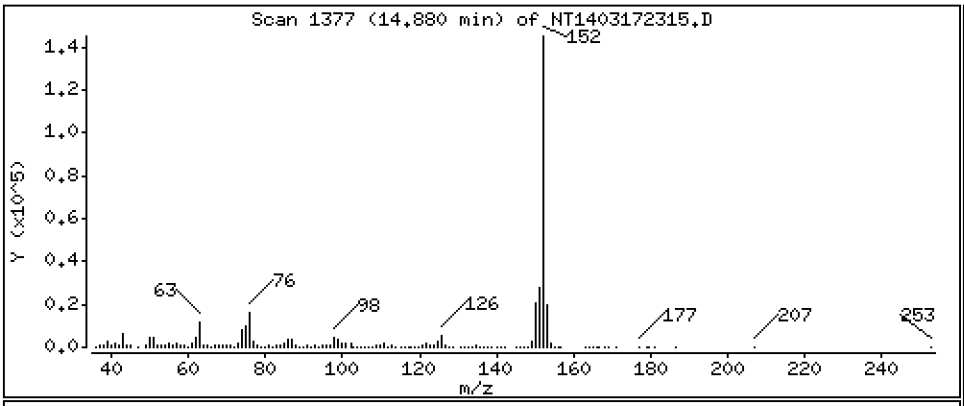
Operator: JGR

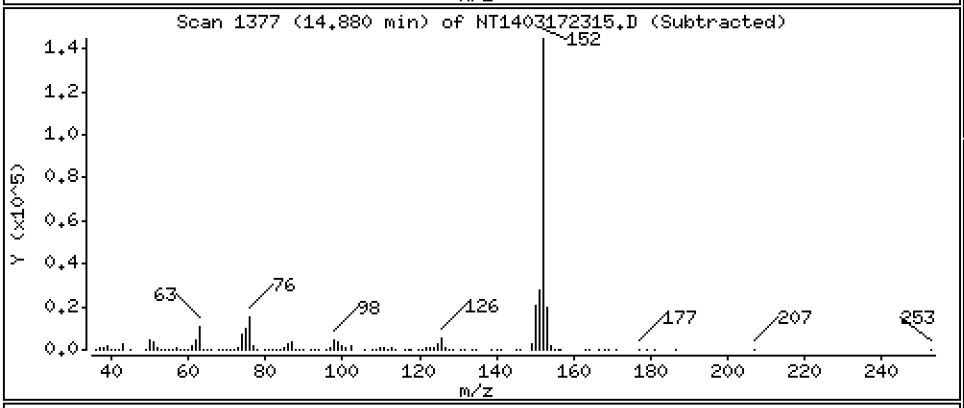
Column phase: ZB-5msi

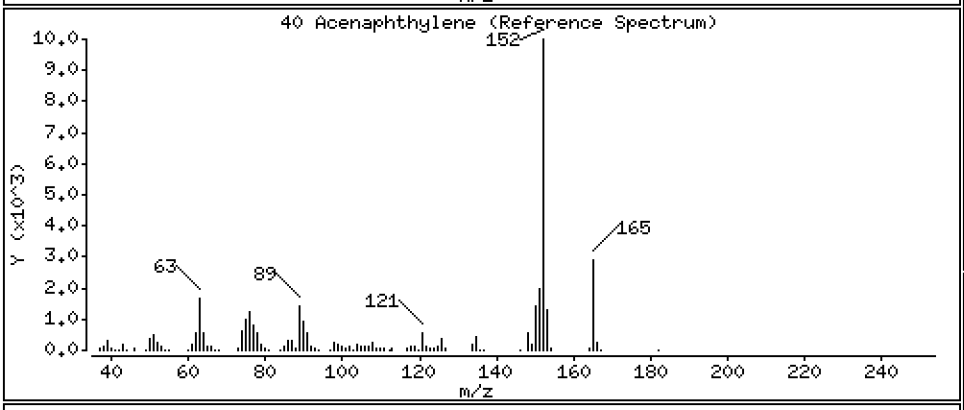
Column diameter: 0.25

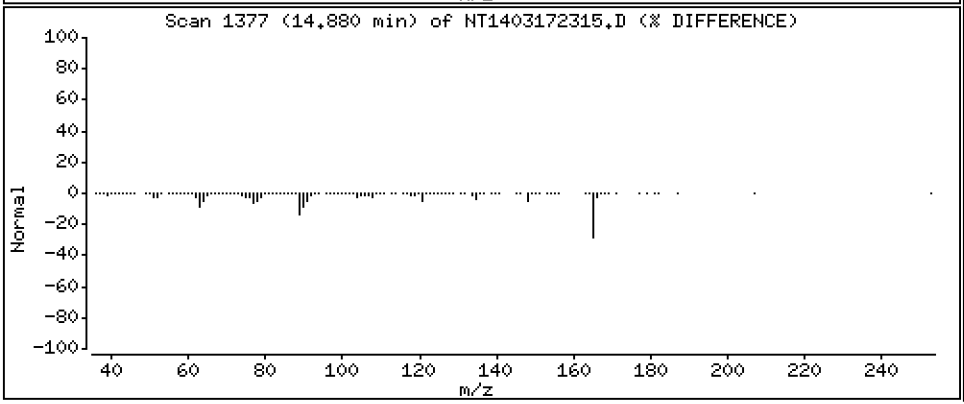
40 Acenaphthylene

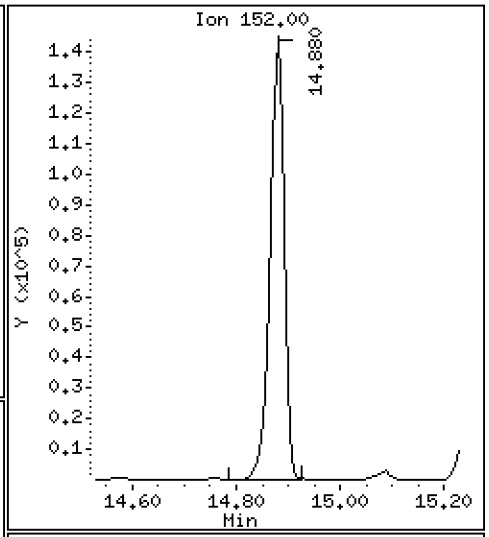
Concentration: 1.114 ug/mL

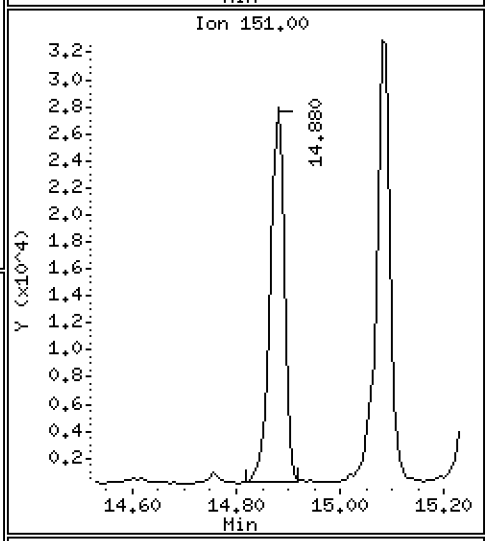


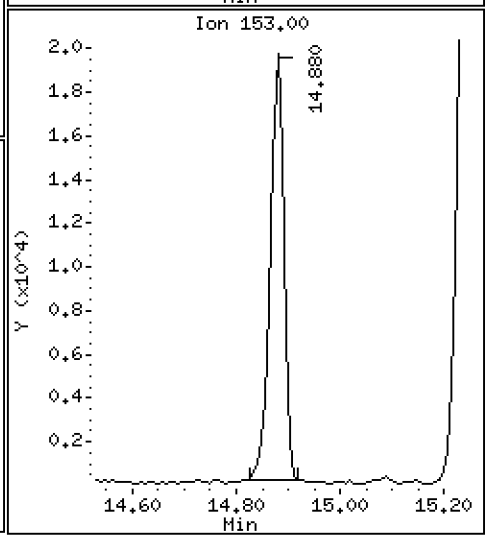












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Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM1

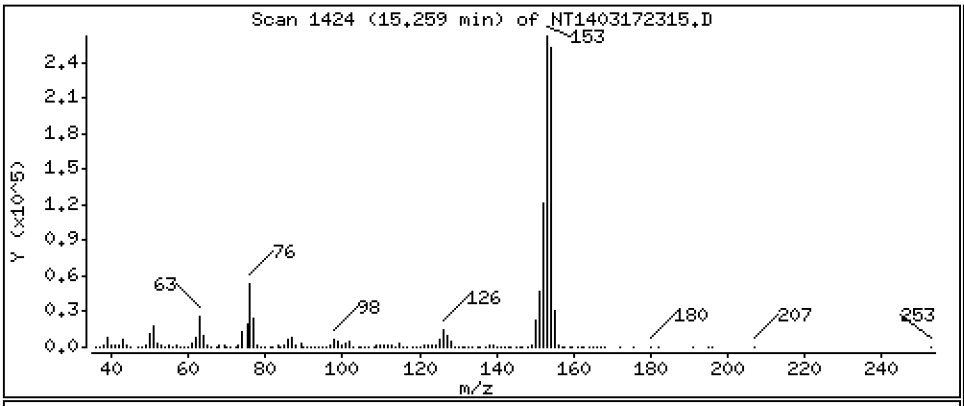
Operator: JGR

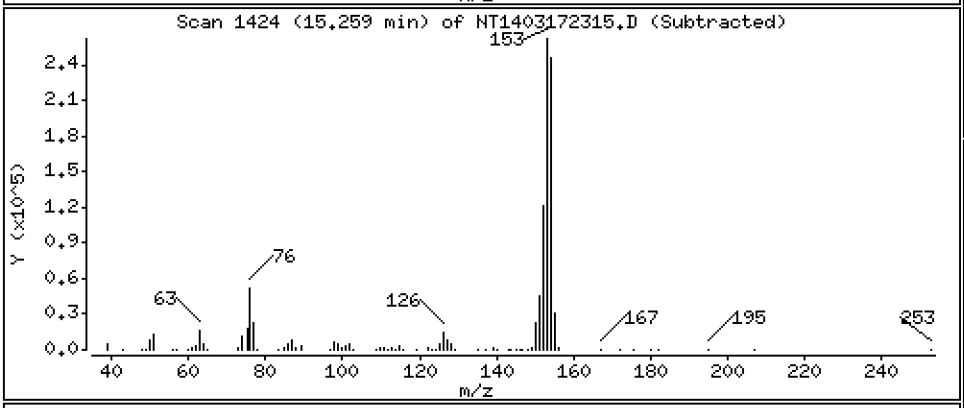
Column phase: ZB-5msi

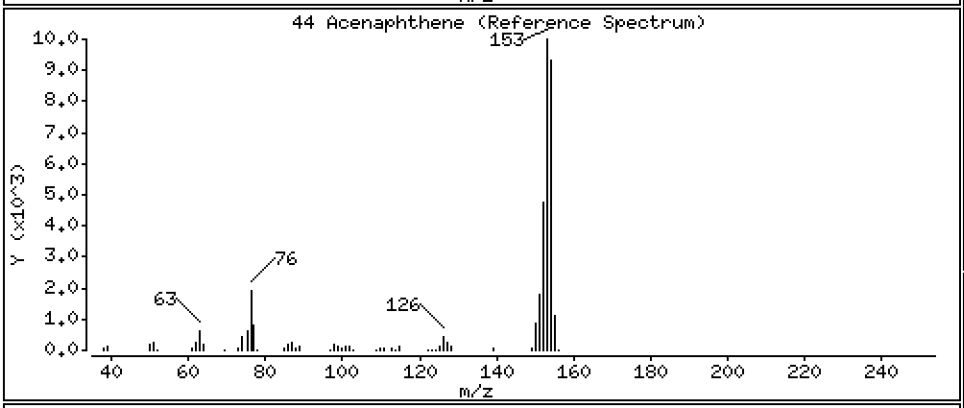
Column diameter: 0.25

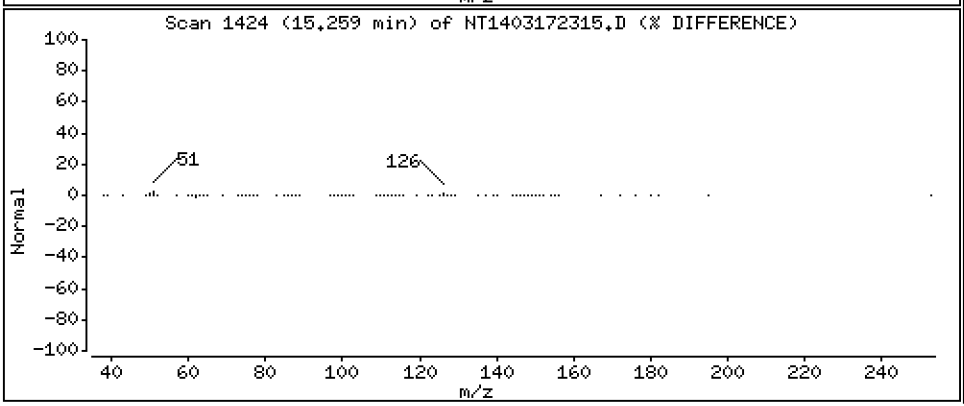
44 Acenaphthene

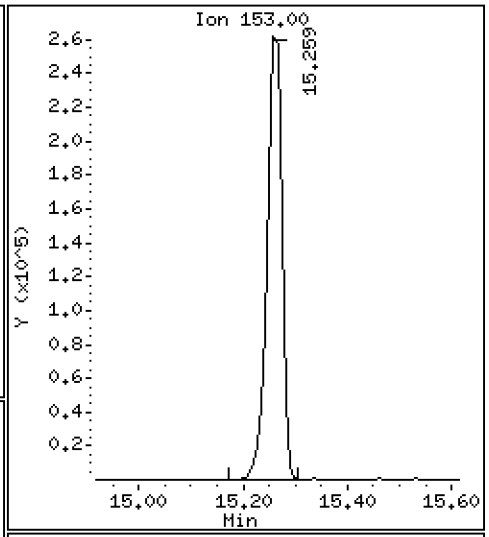
Concentration: 3.672 ug/mL

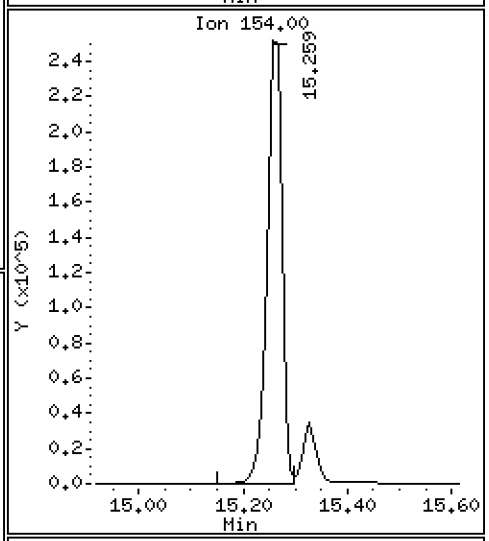


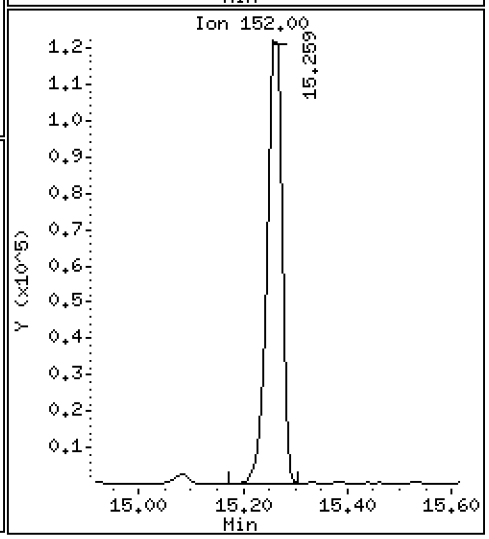












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Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM1

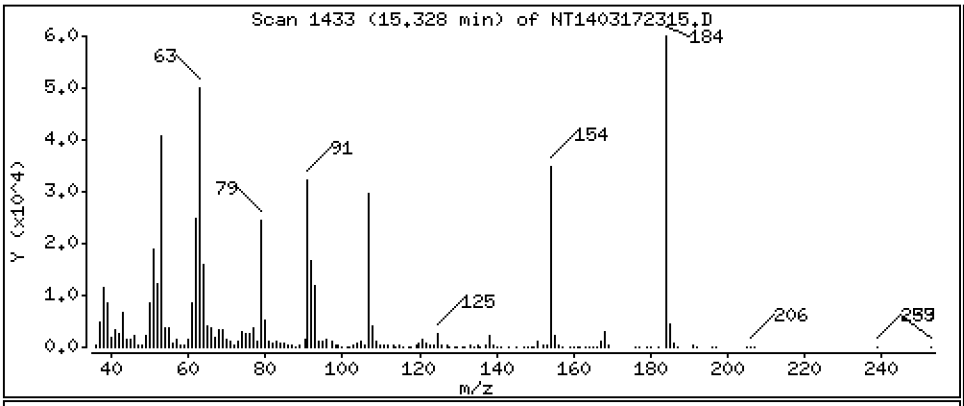
Operator: JGR

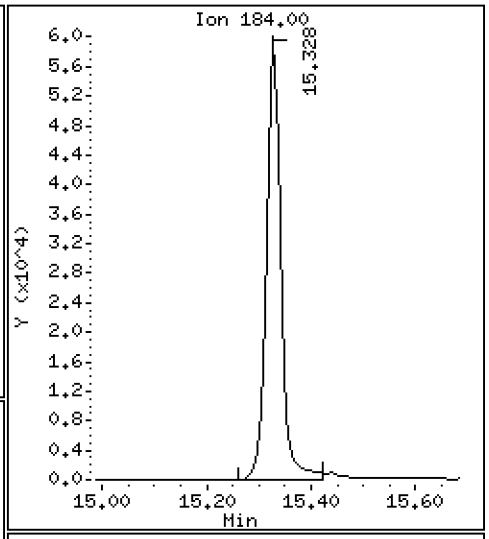
Column phase: ZB-5msi

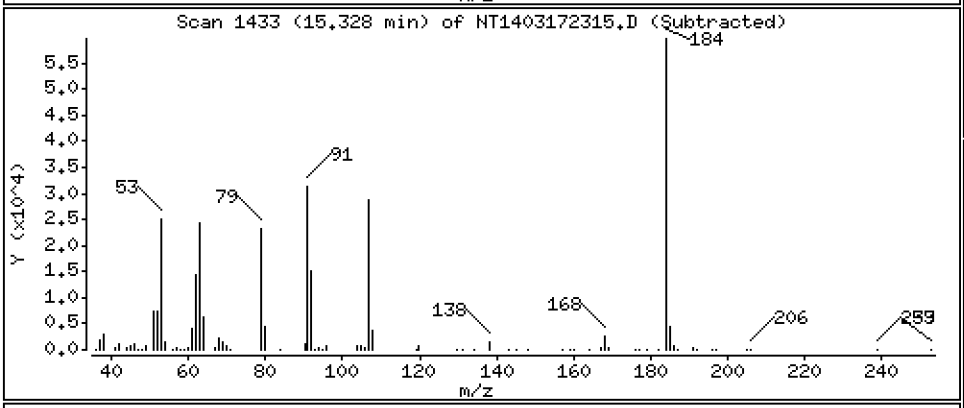
Column diameter: 0.25

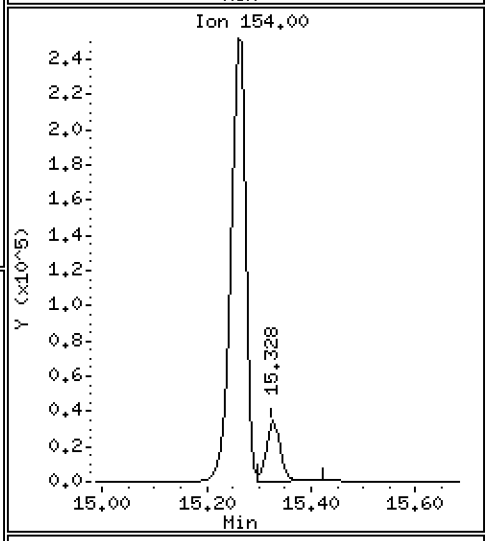
45 2,4-Dinitrophenol

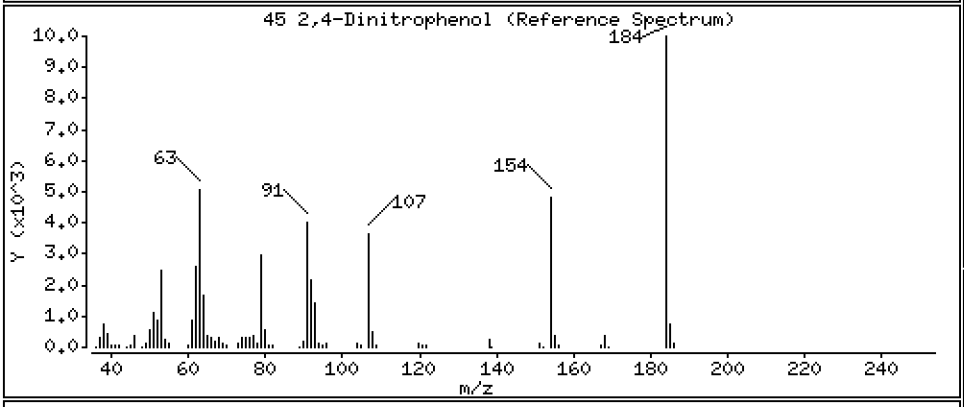
Concentration: 4.103 ug/mL

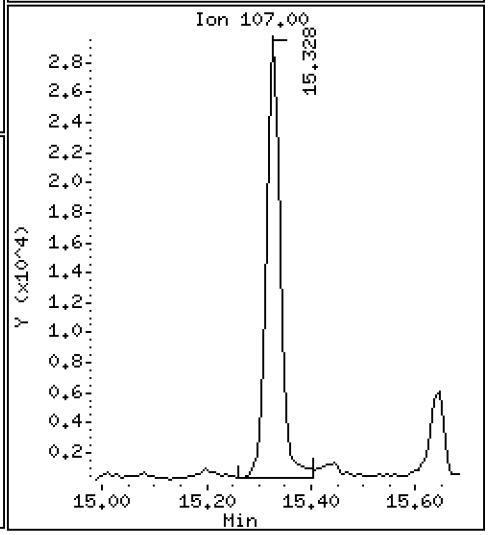


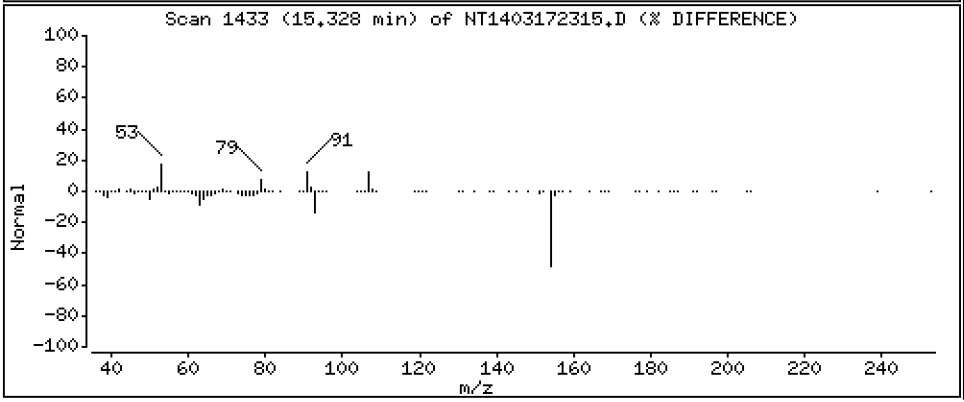












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Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM1

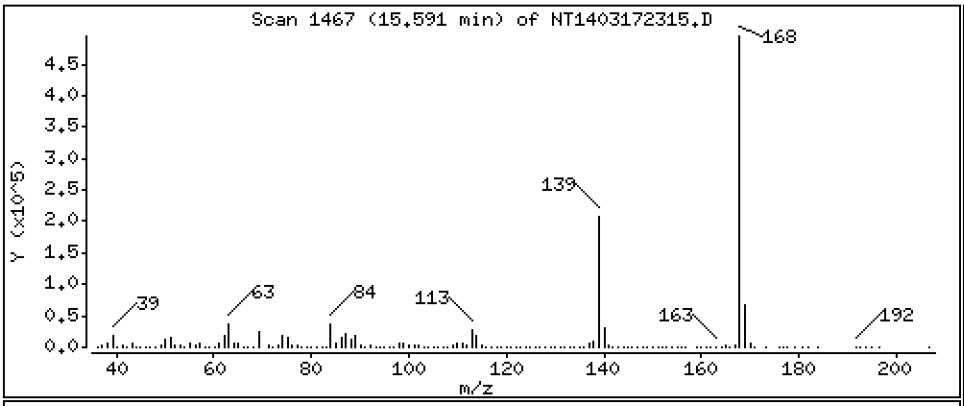
Operator: JGR

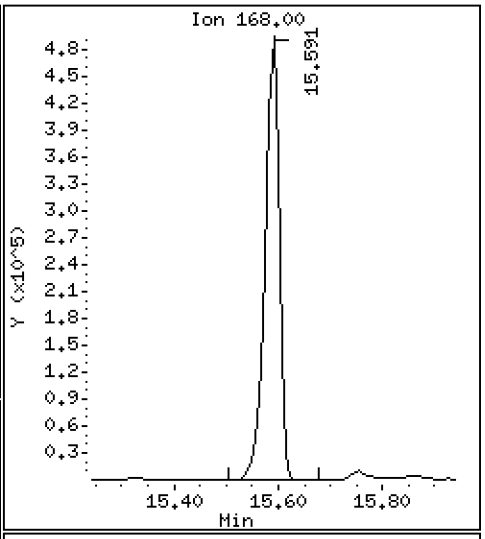
Column phase: ZB-5msi

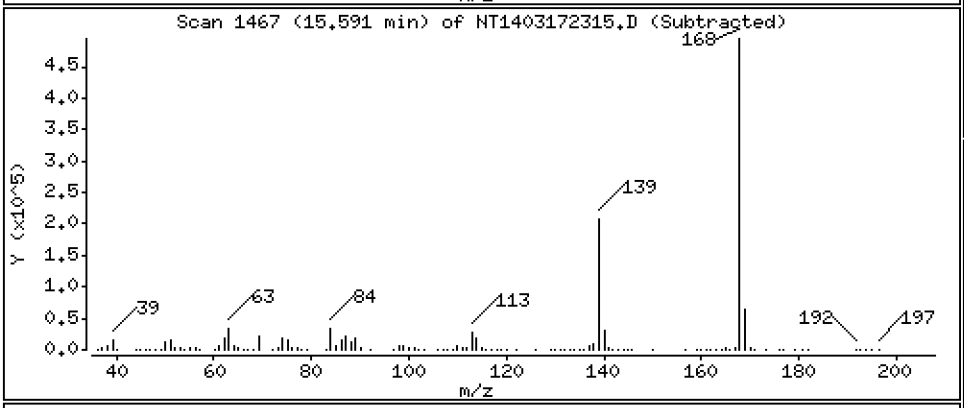
Column diameter: 0.25

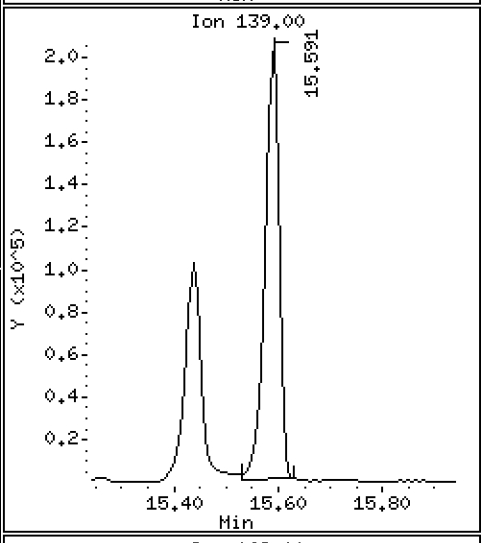
46 Dibenzofuran

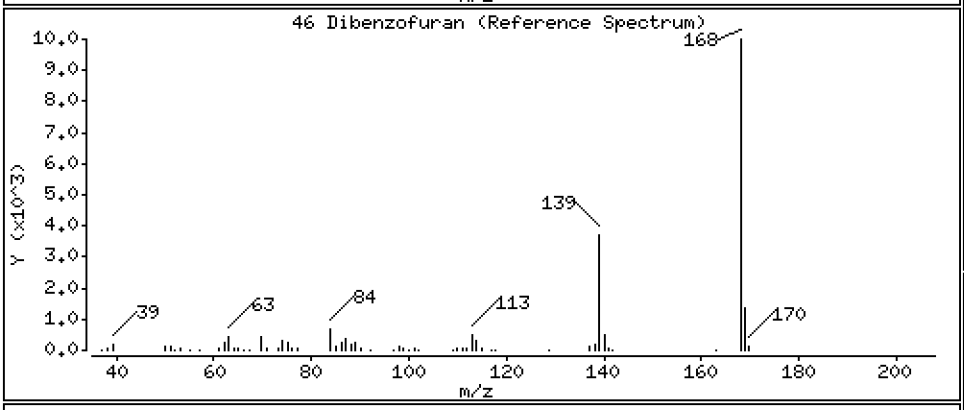
Concentration: 4.622 ug/mL

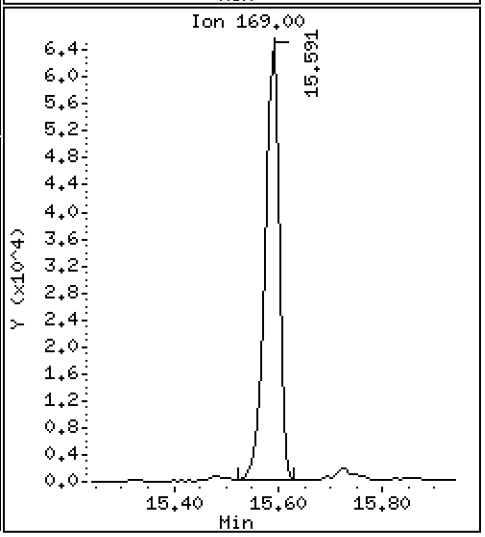


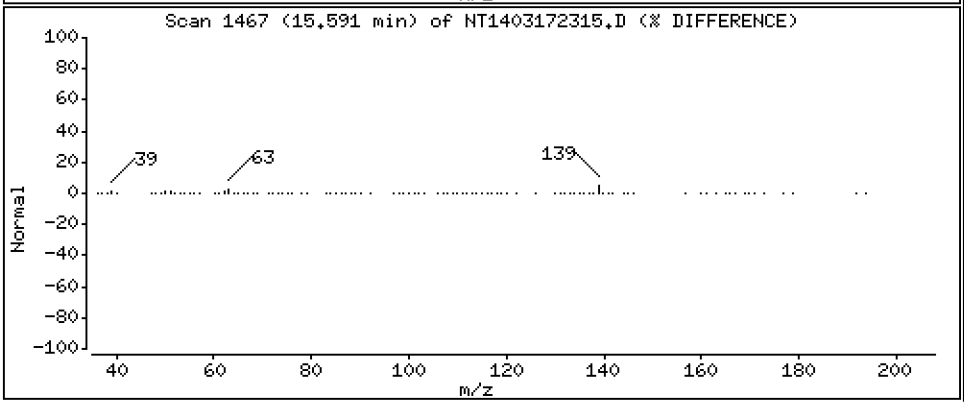












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Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM1

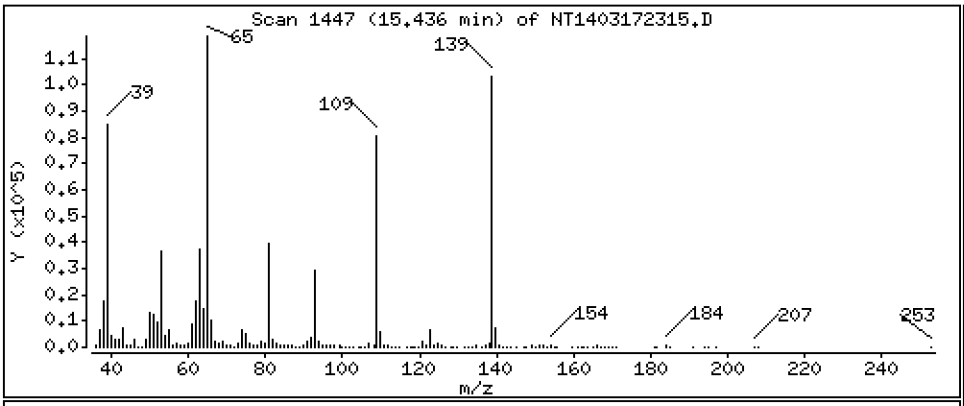
Operator: JGR

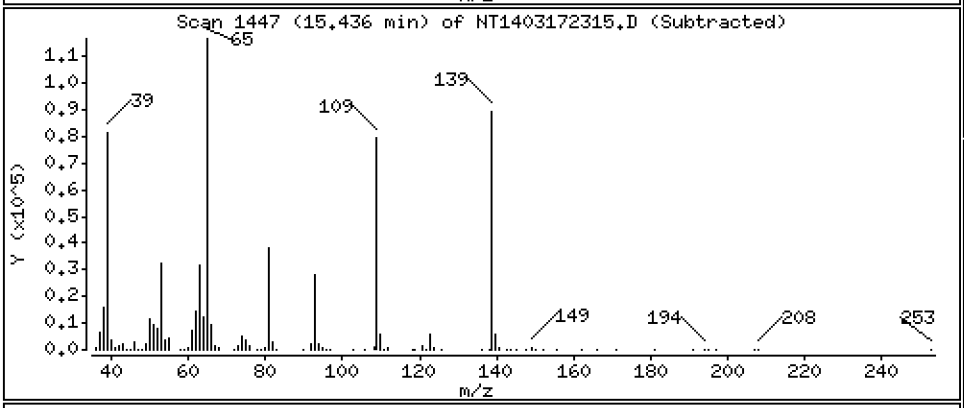
Column phase: ZB-5msi

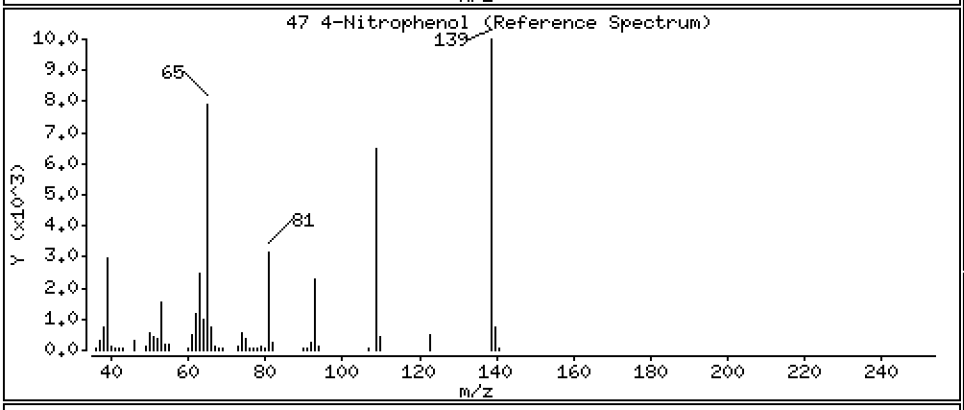
Column diameter: 0.25

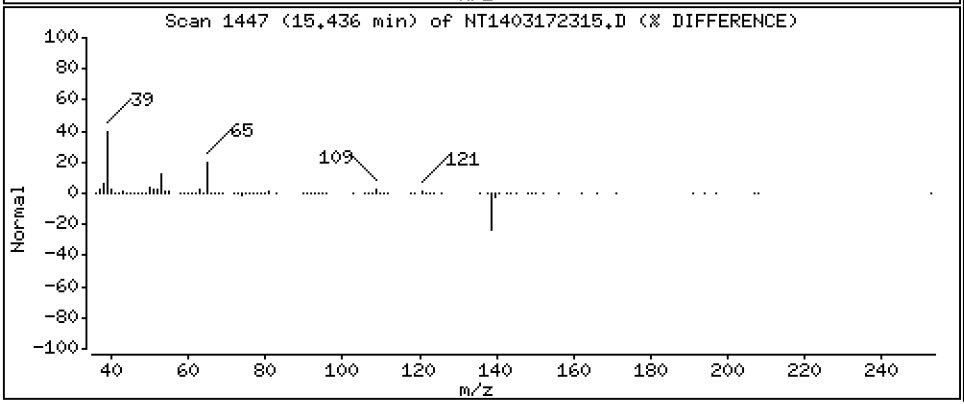
47 4-Nitrophenol

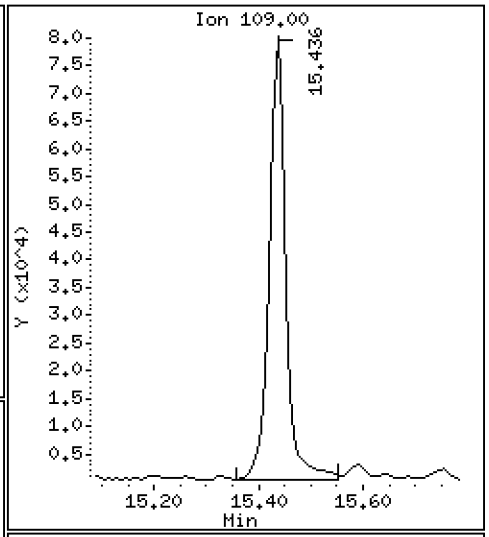
Concentration: 6.753 ug/mL

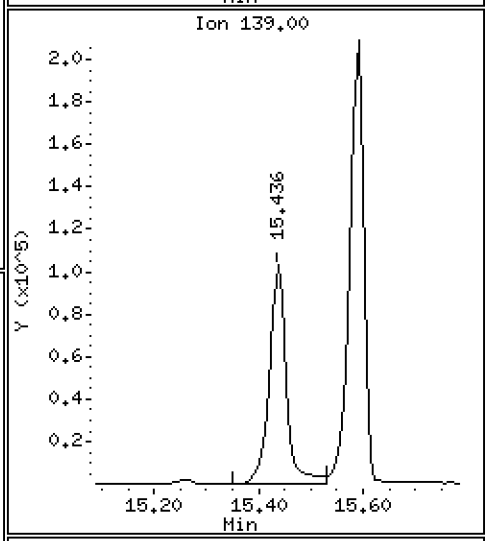


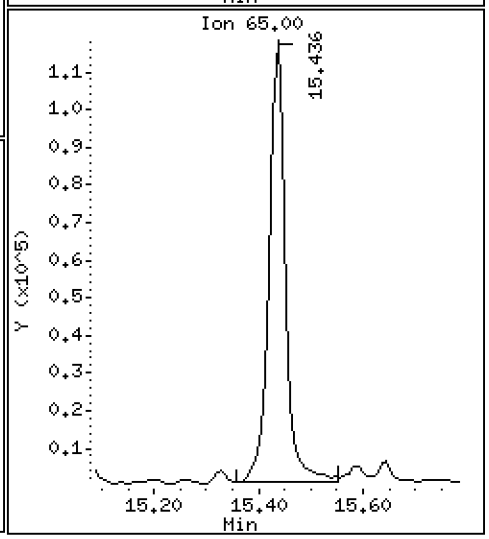












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Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM1

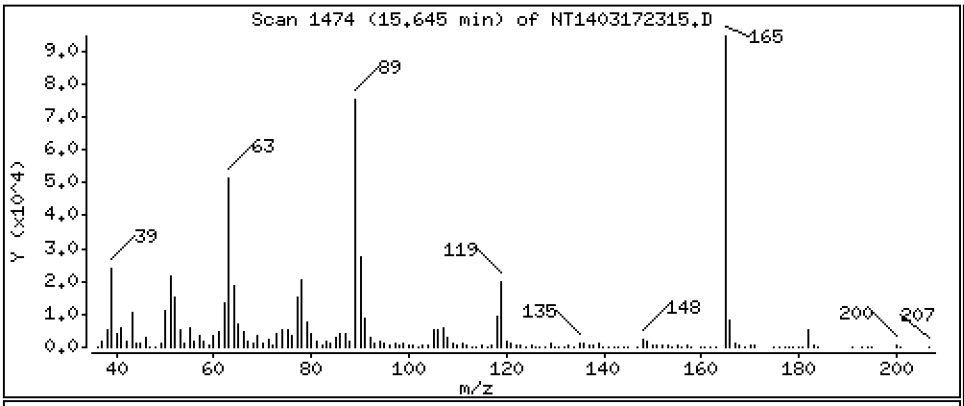
Operator: JGR

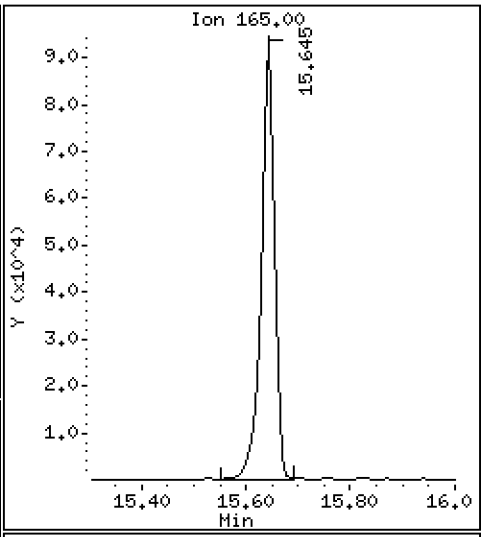
Column phase: ZB-5msi

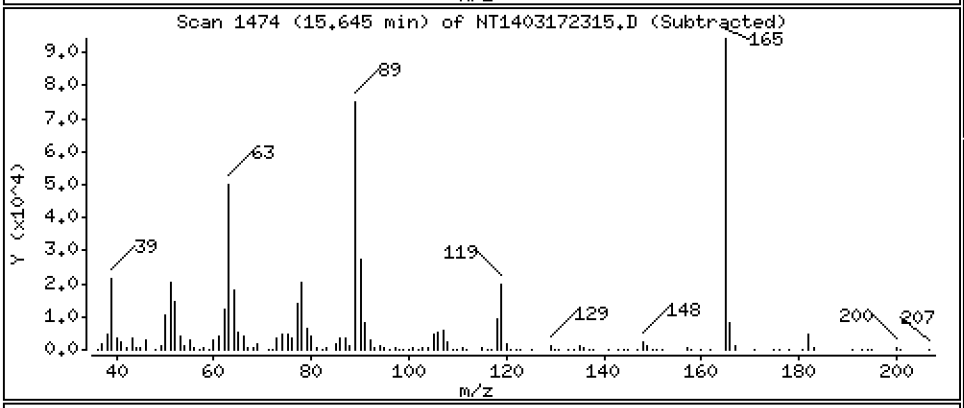
Column diameter: 0.25

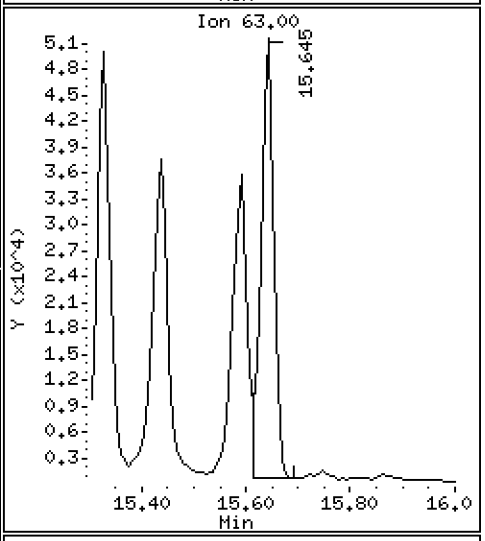
48 2,4-Dinitrotoluene

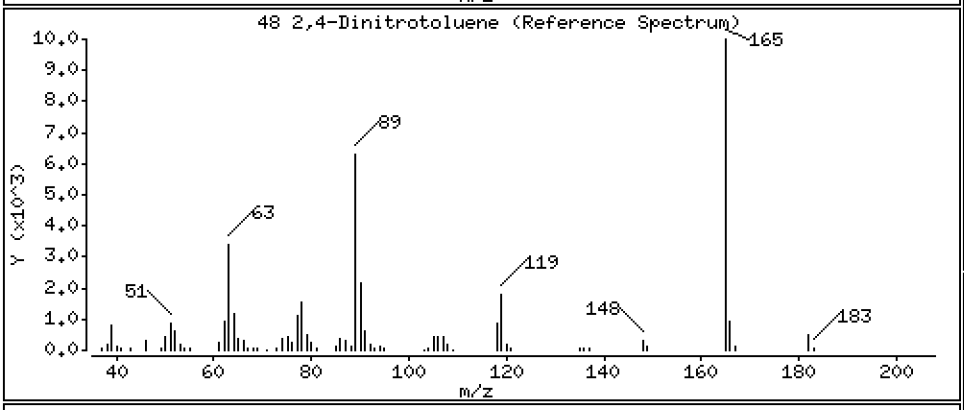
Concentration: 3.345 ug/mL

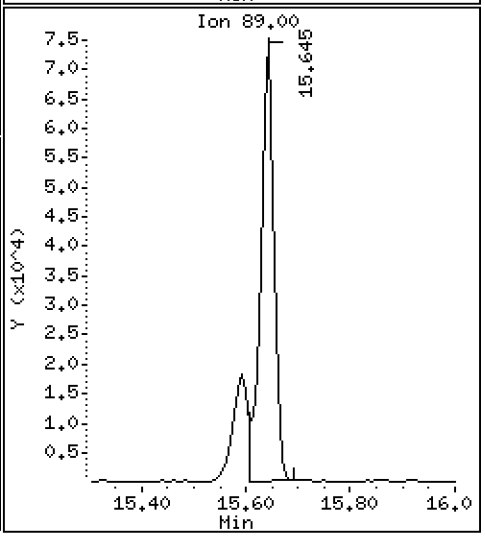


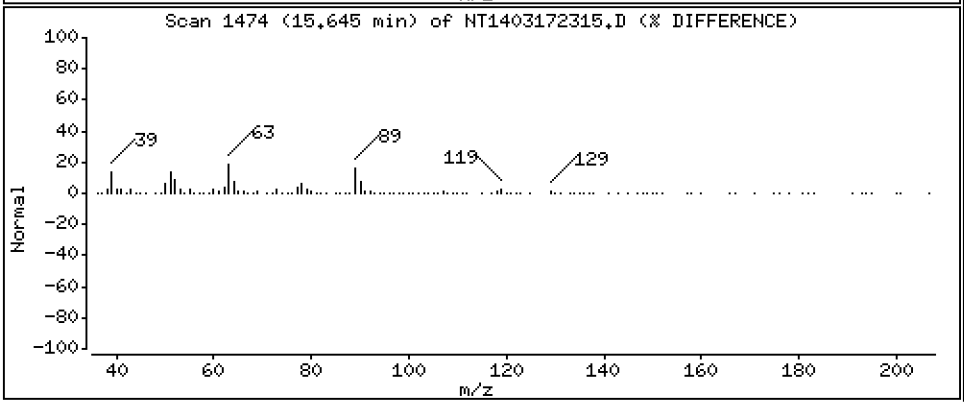












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Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM1

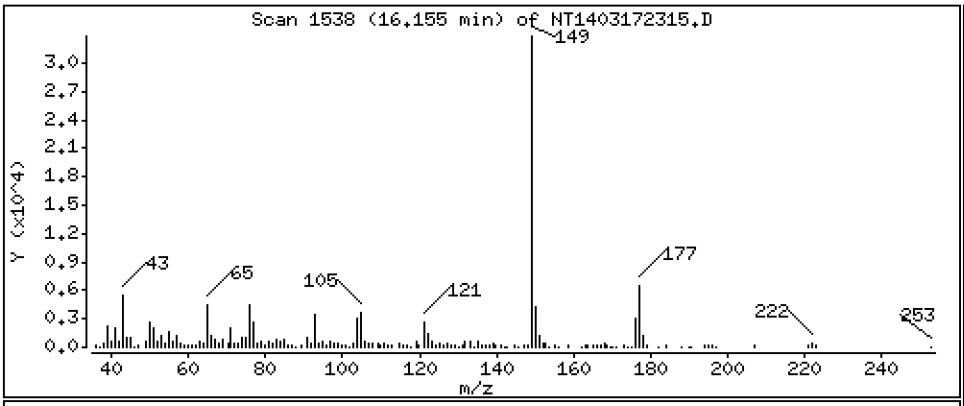
Operator: JGR

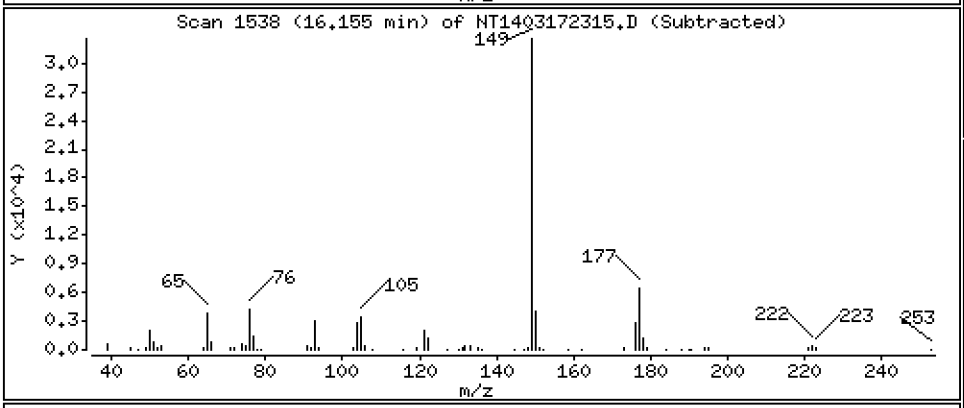
Column phase: ZB-5msi

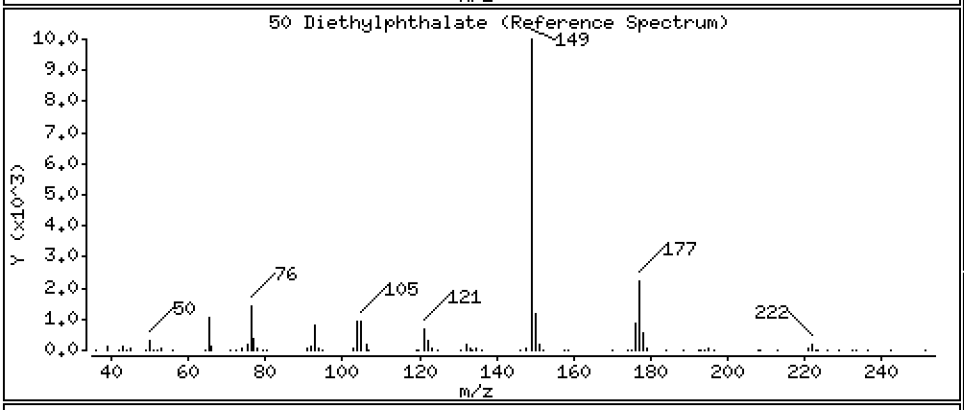
Column diameter: 0.25

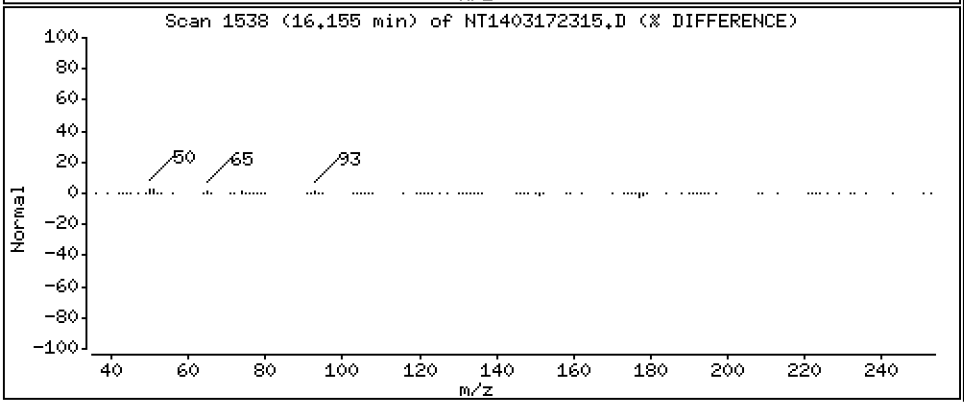
50 Diethylphthalate

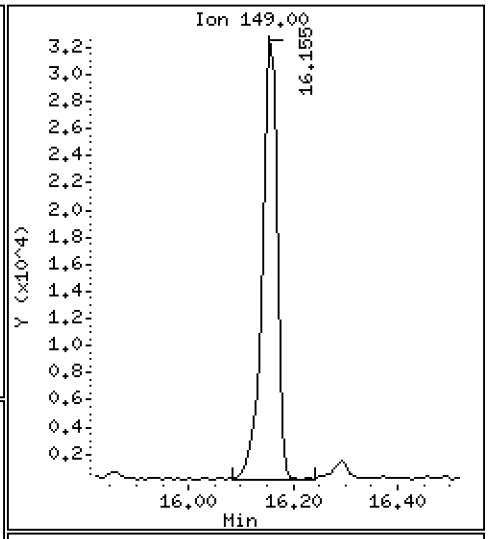
Concentration: 0.4485 ug/mL

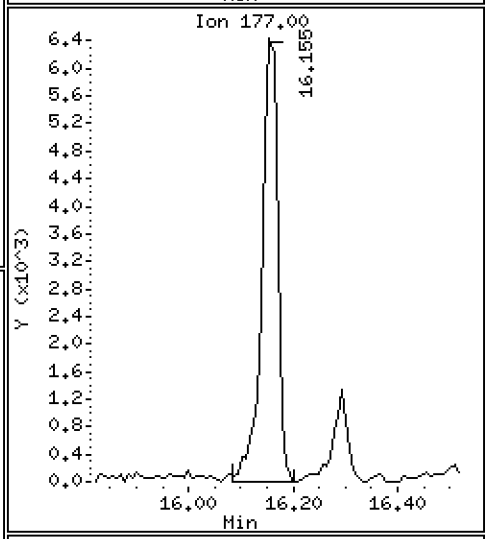


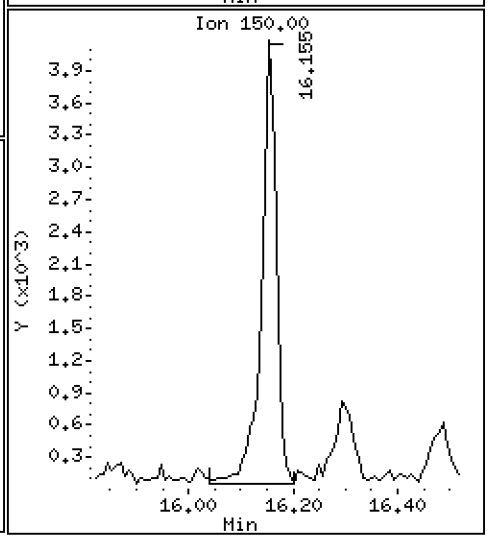












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Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM1

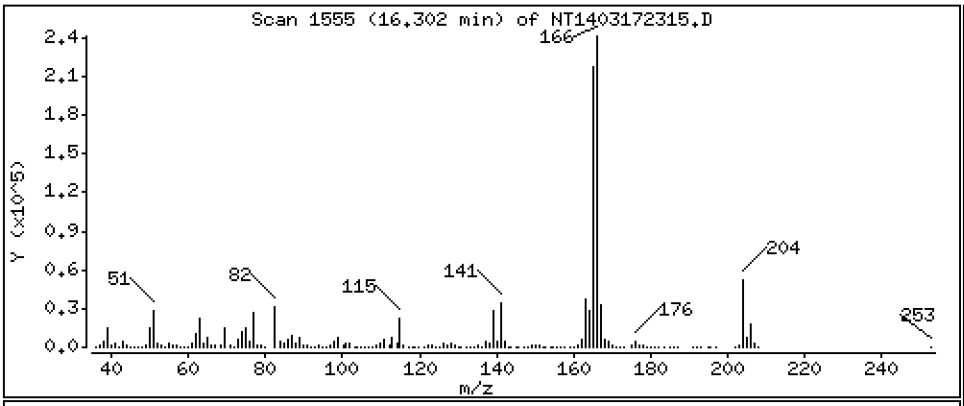
Operator: JGR

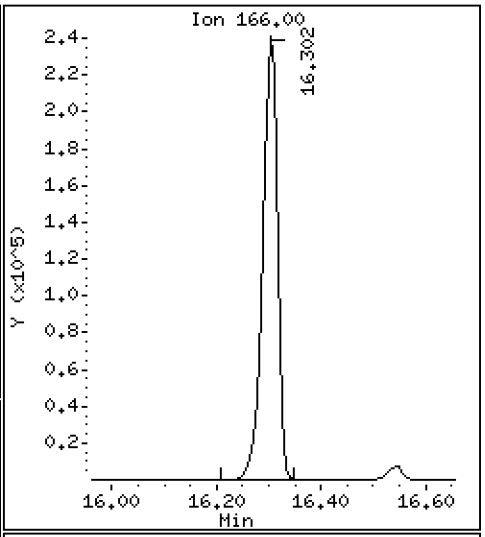
Column phase: ZB-5msi

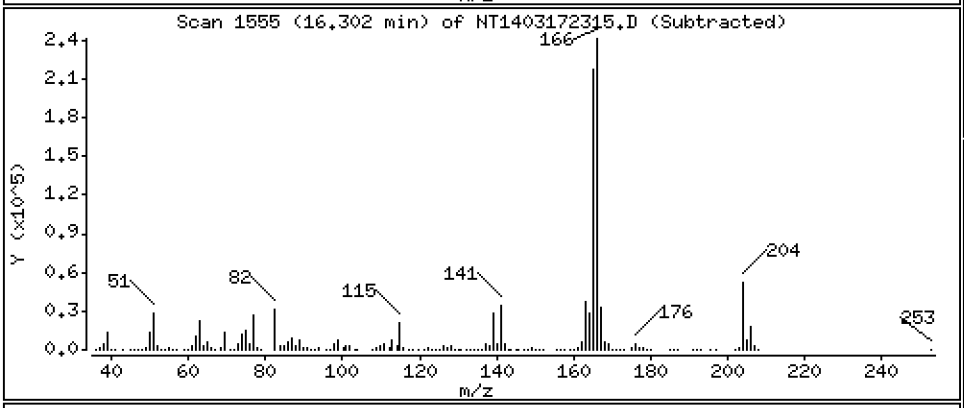
Column diameter: 0.25

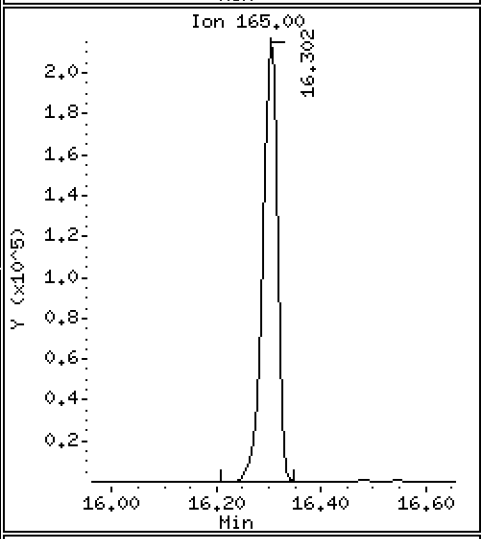
49 Fluorene

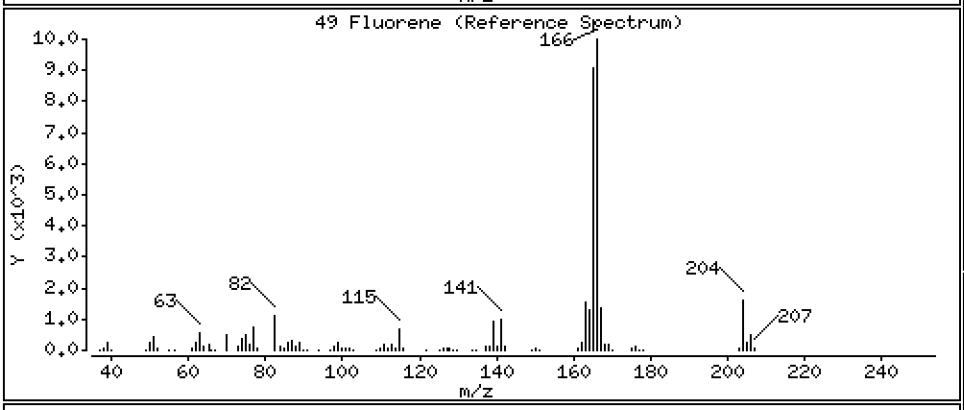
Concentration: 2.781 ug/mL

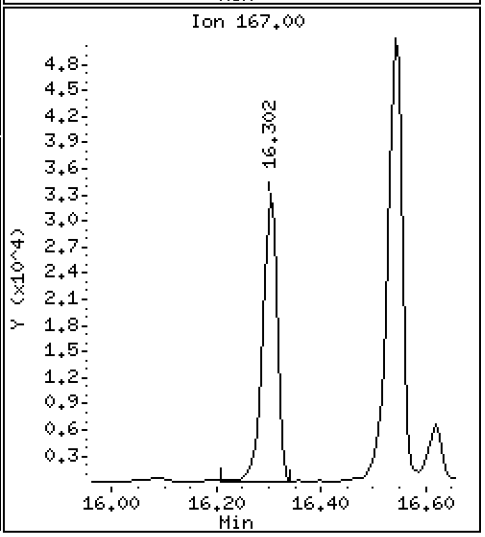


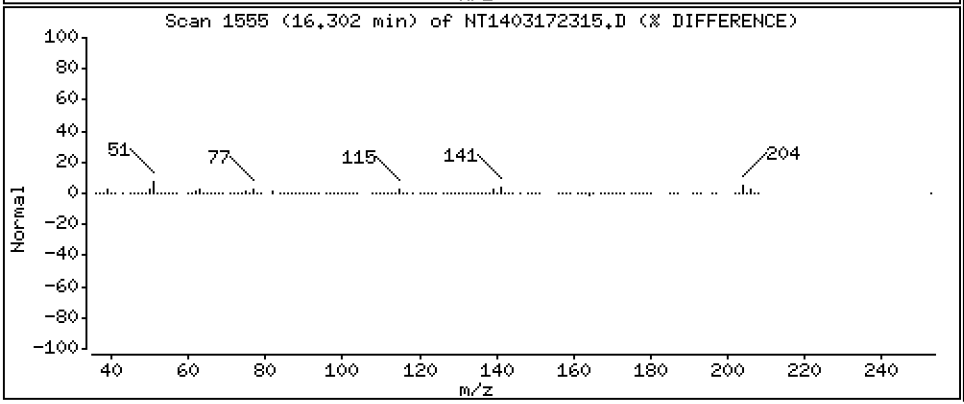












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Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM1

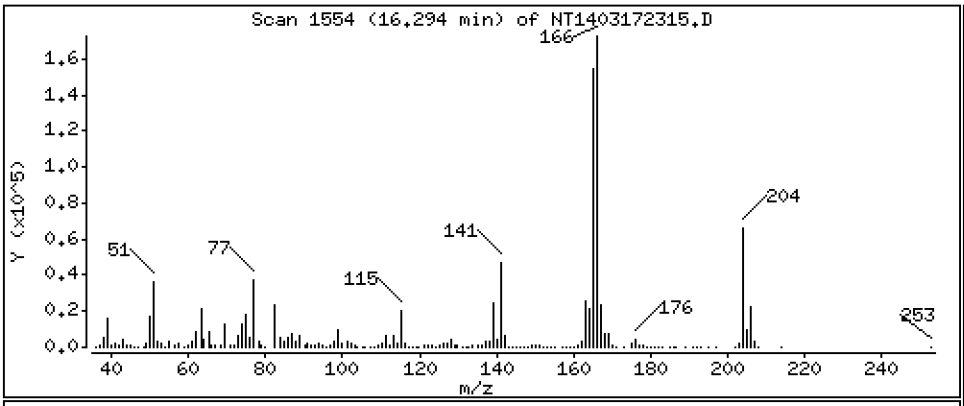
Operator: JGR

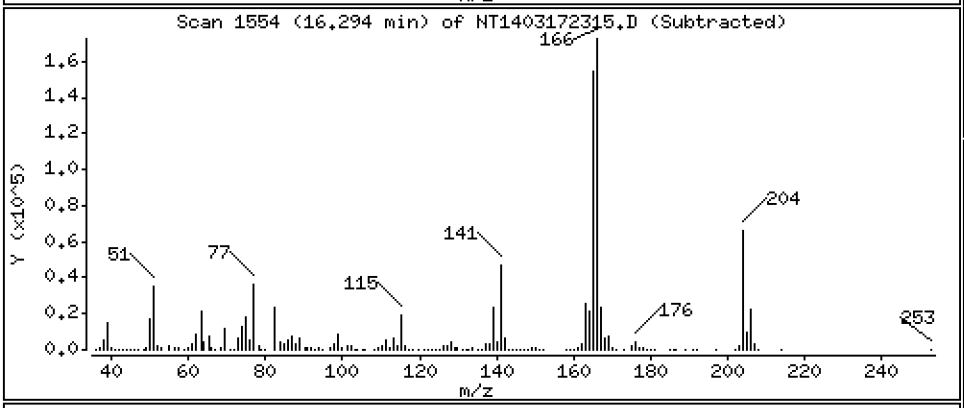
Column phase: ZB-5msi

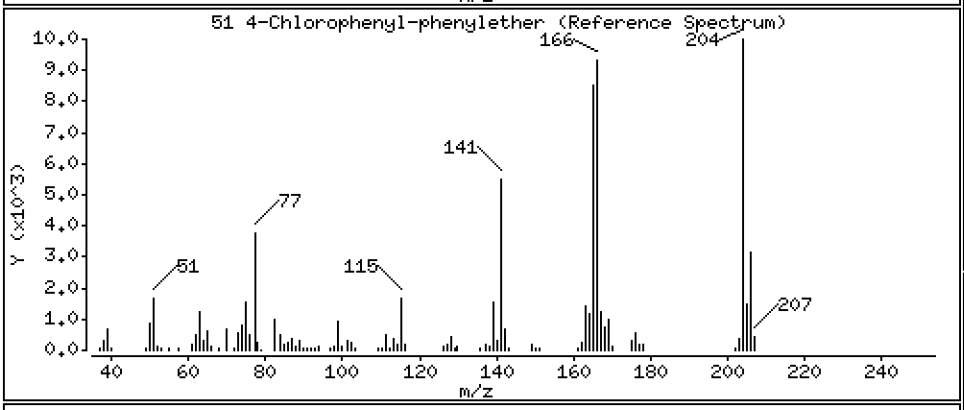
Column diameter: 0.25

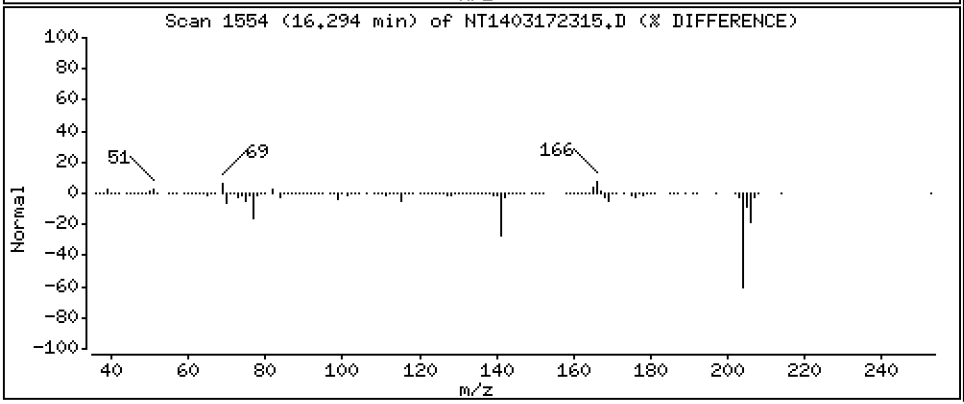
51 4-Chlorophenyl-phenylether

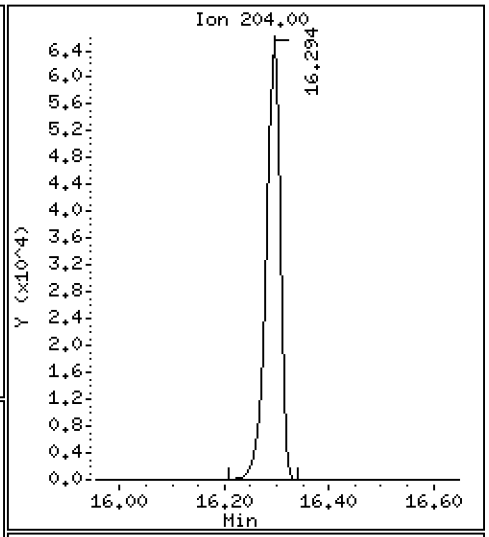
Concentration: 1.691 ug/mL

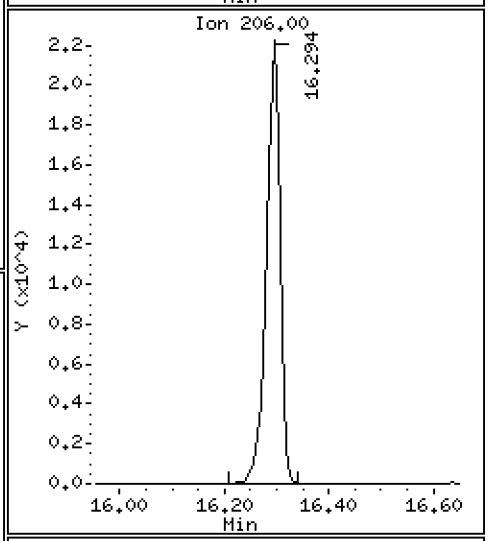


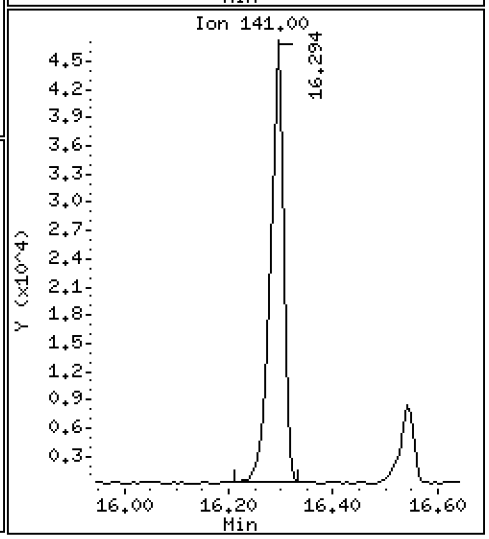












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Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM1

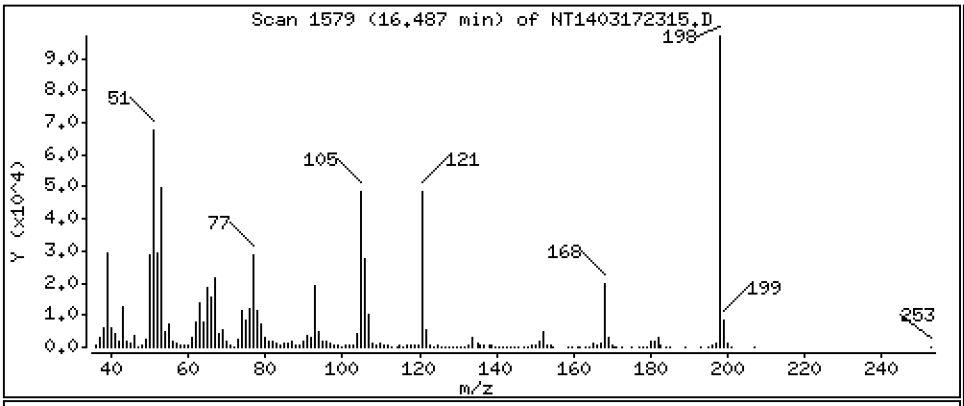
Operator: JGR

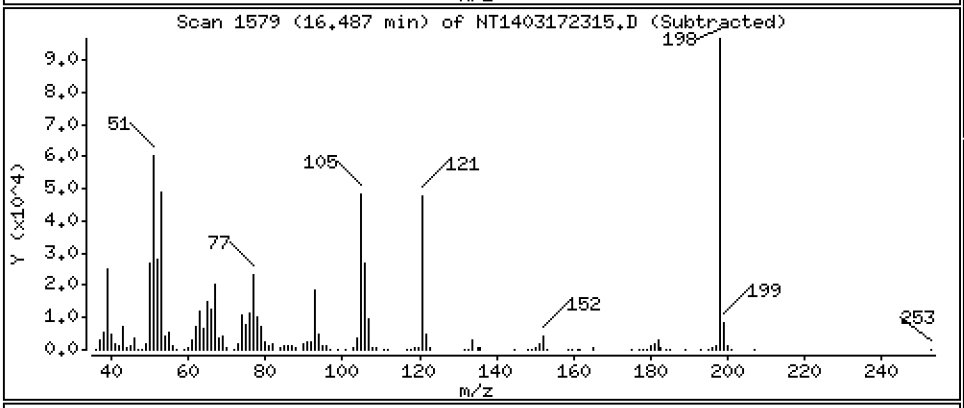
Column phase: ZB-5msi

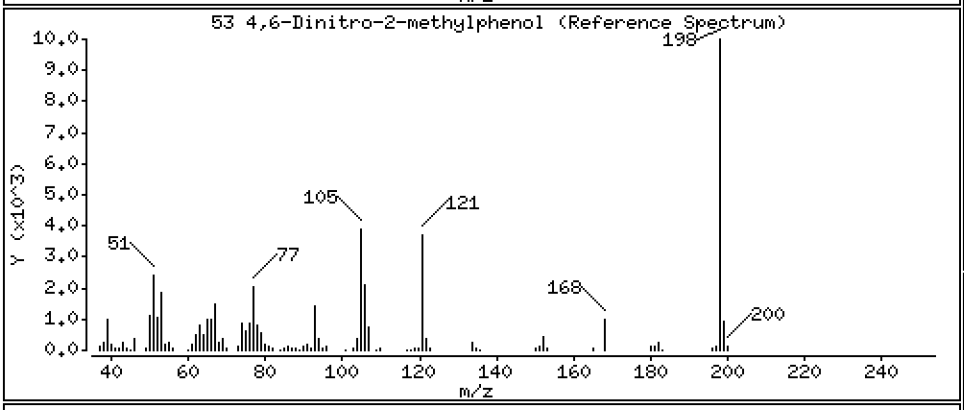
Column diameter: 0.25

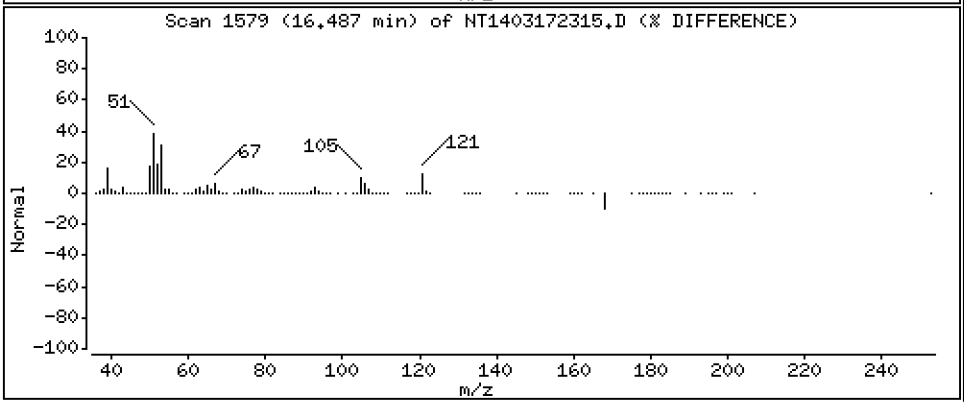
53 4,6-Dinitro-2-methylphenol

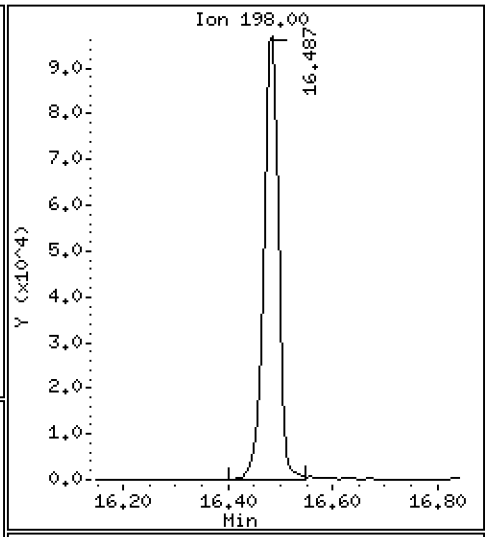
Concentration: 7.039 ug/mL

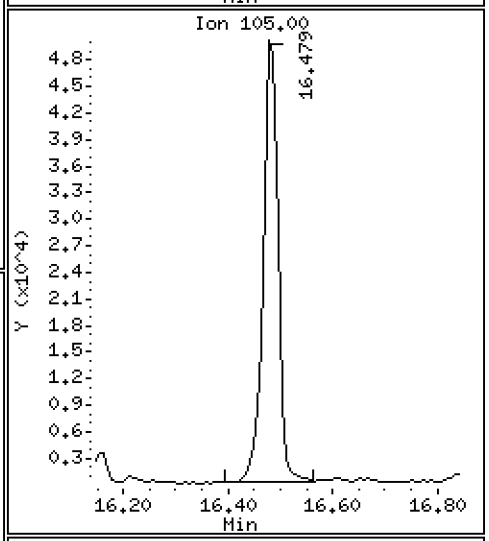


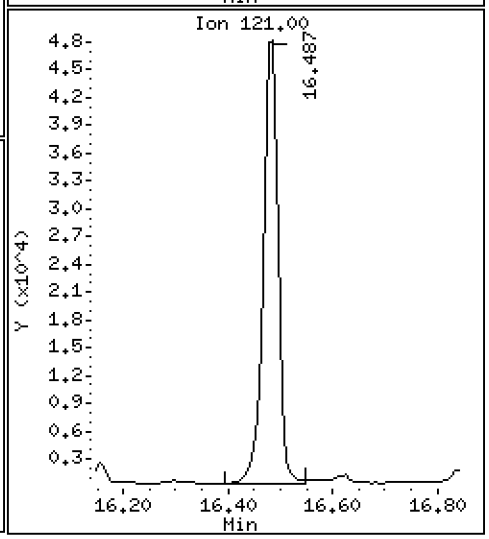












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Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM1

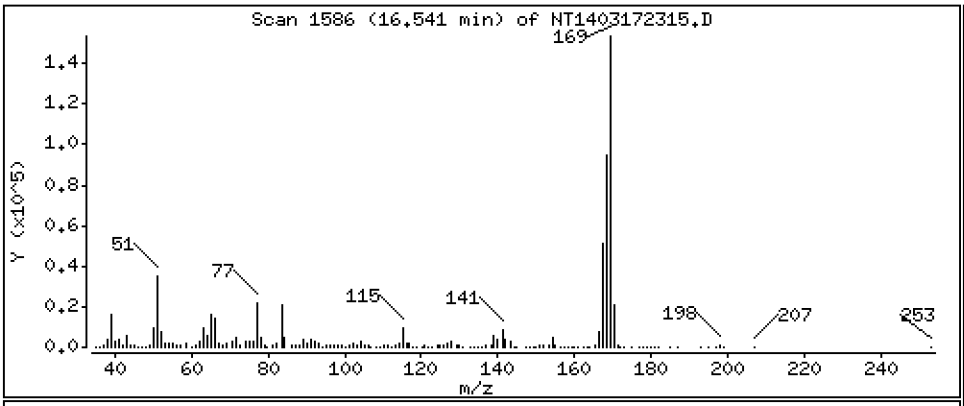
Operator: JGR

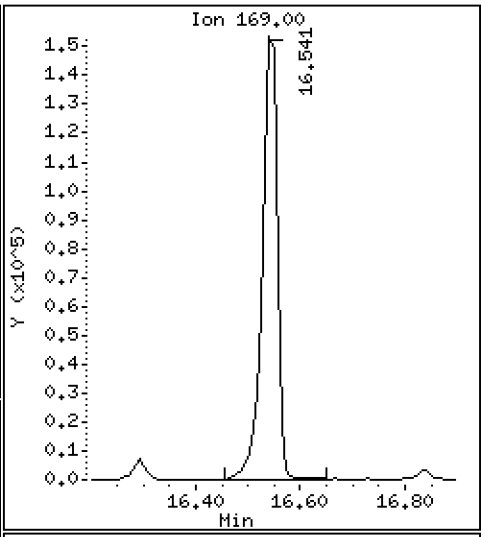
Column phase: ZB-5msi

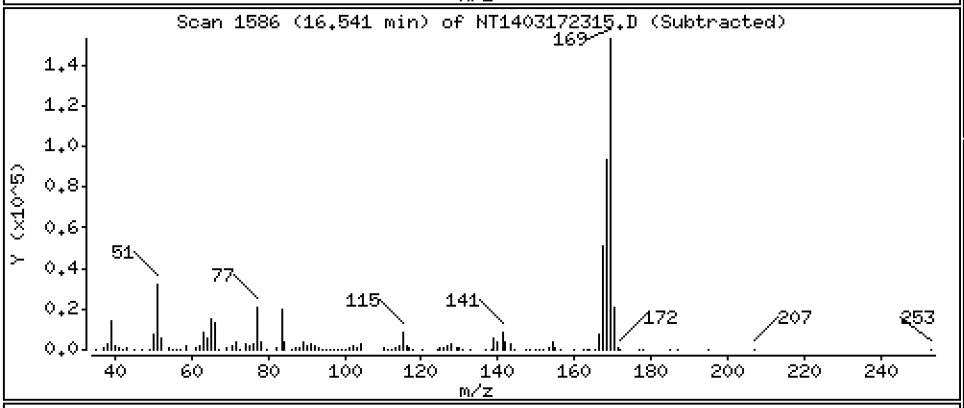
Column diameter: 0.25

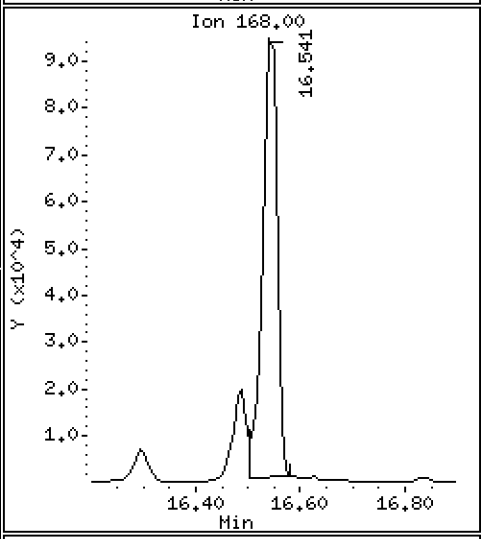
54 N-Nitrosodiphenylamine

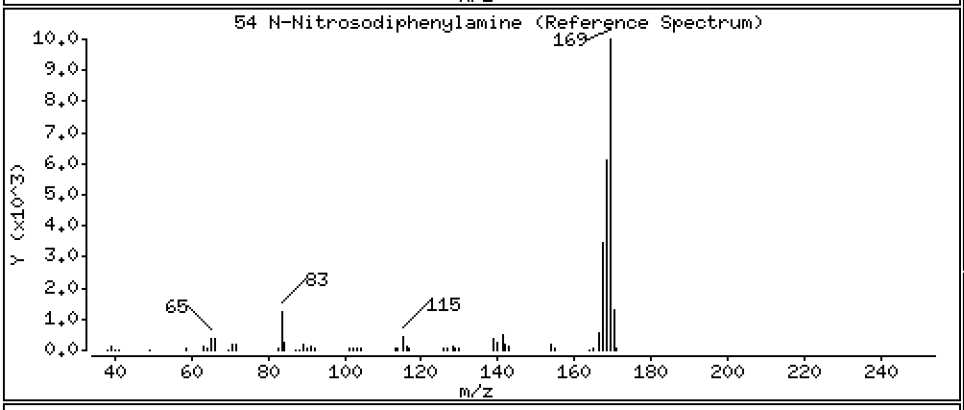
Concentration: 2.883 ug/mL

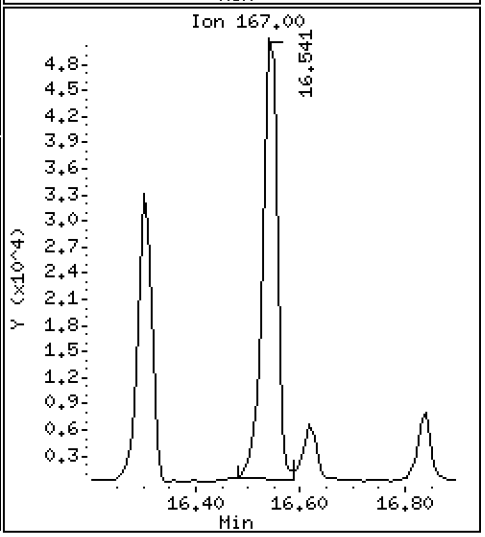


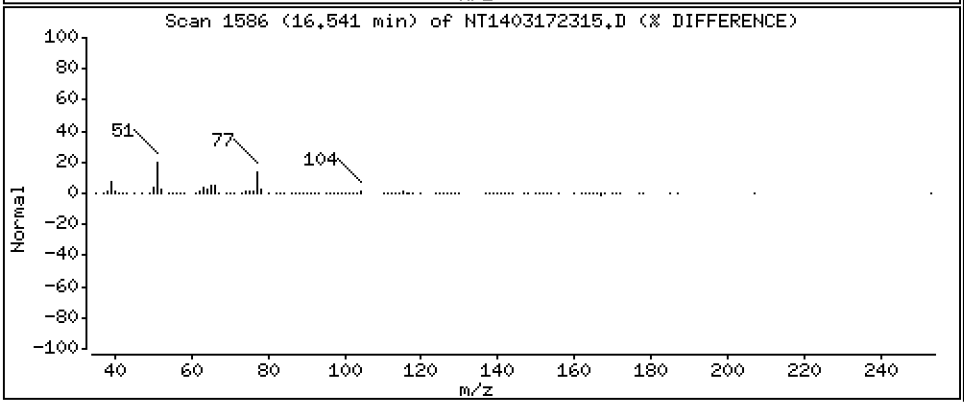












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Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM1

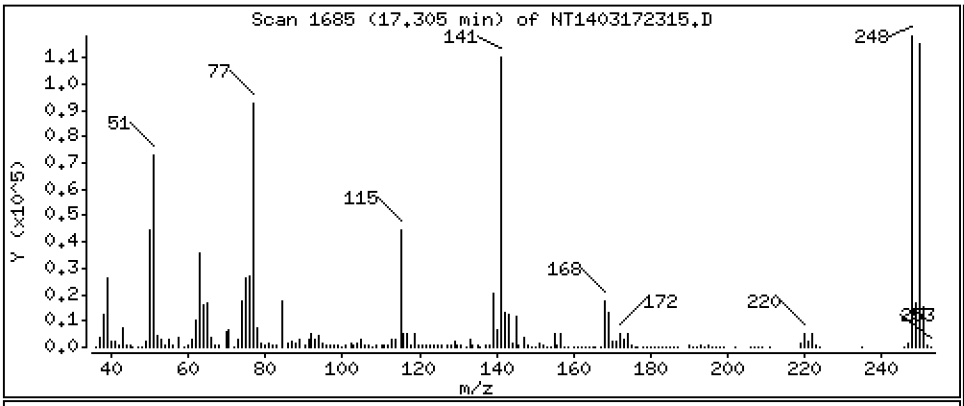
Operator: JGR

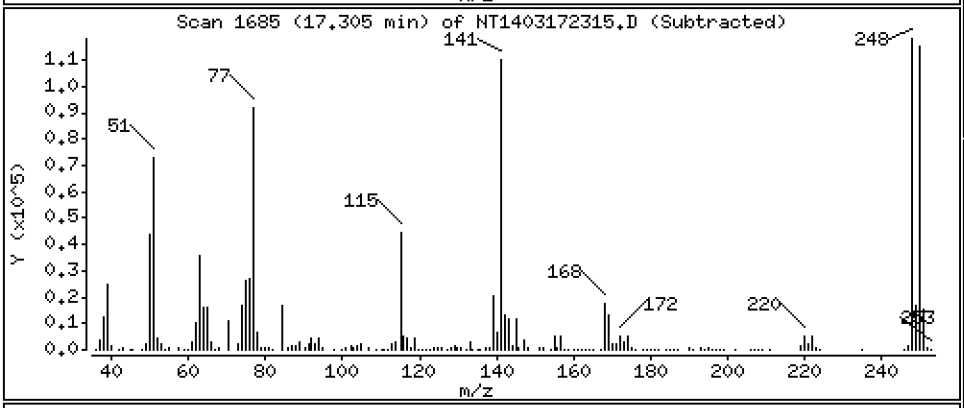
Column phase: ZB-5msi

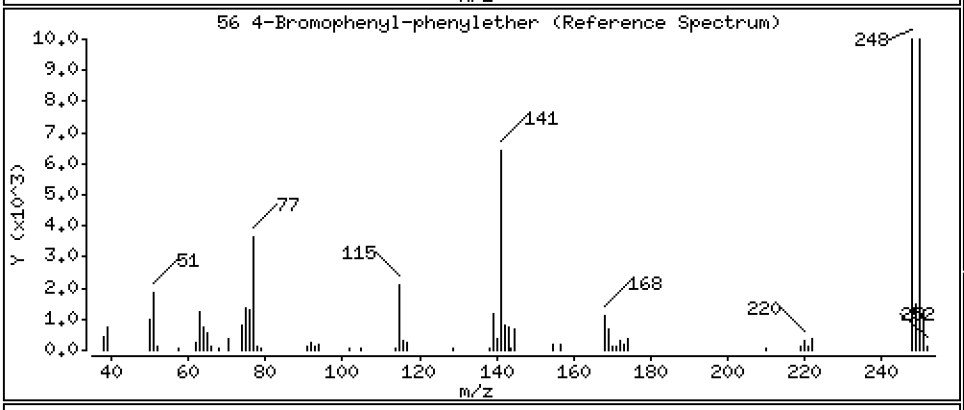
Column diameter: 0.25

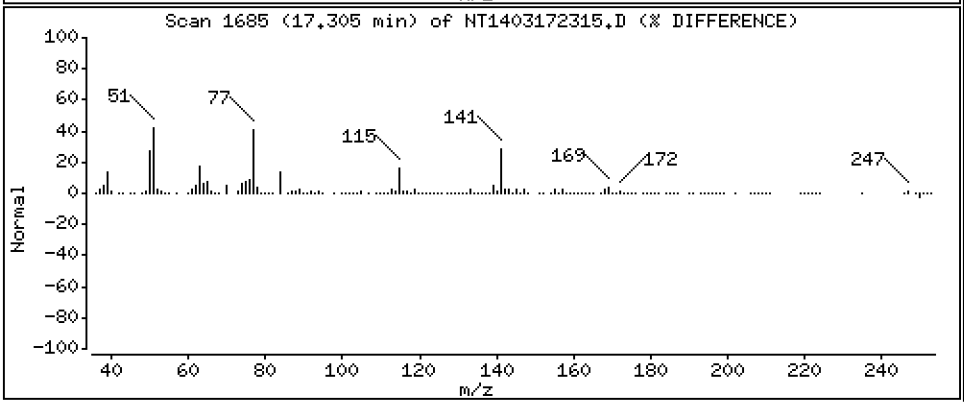
56 4-Bromophenyl-phenylether

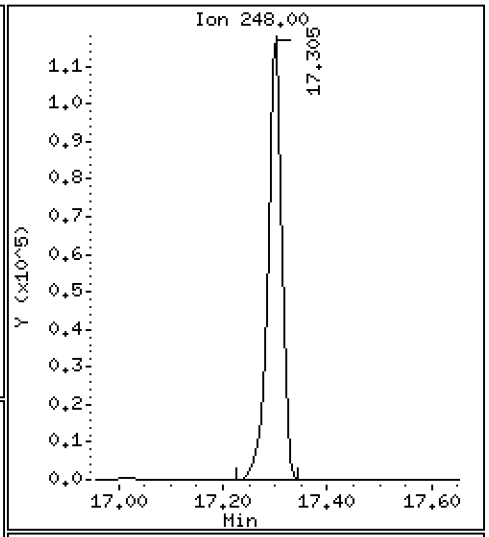
Concentration: 6.326 ug/mL

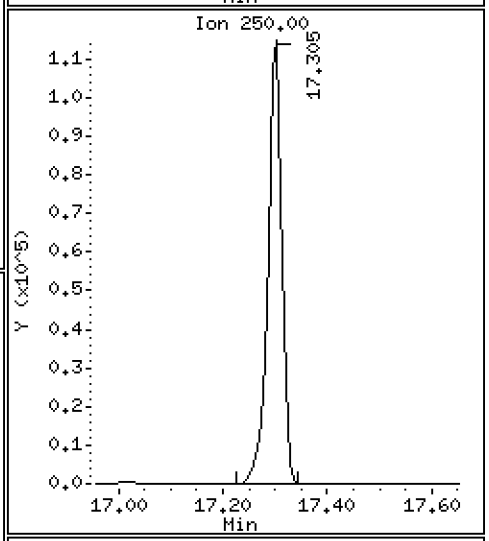


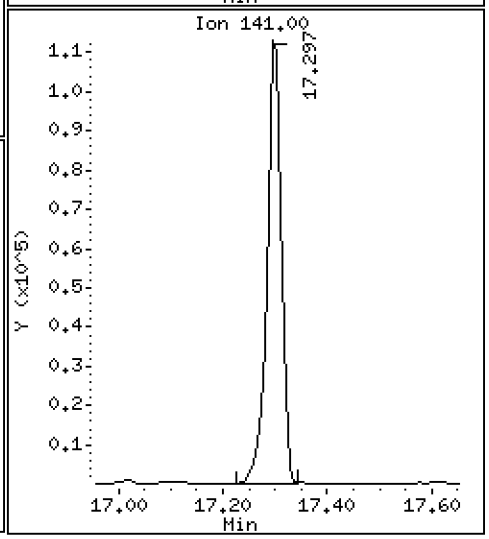












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Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM1

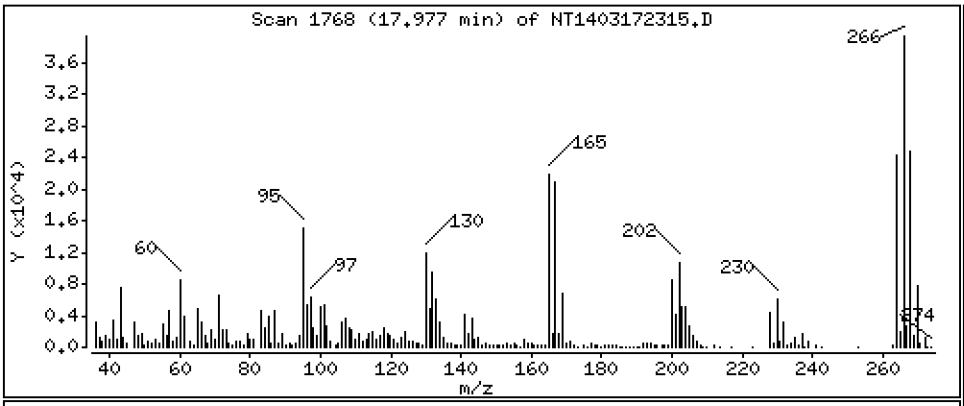
Operator: JGR

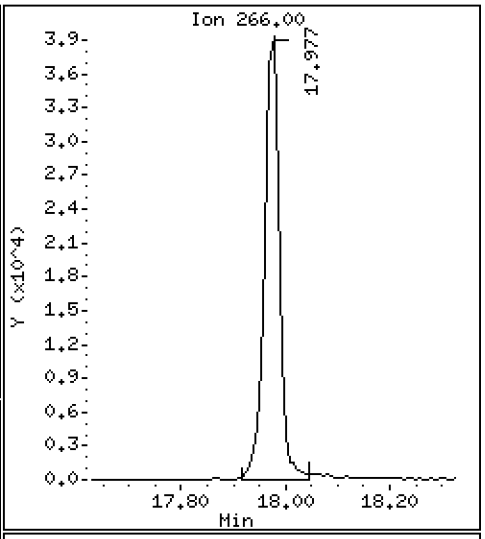
Column phase: ZB-5msi

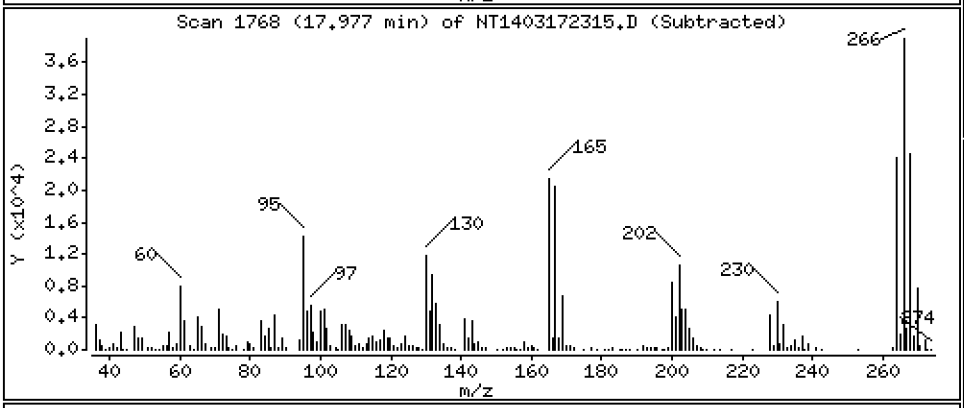
Column diameter: 0.25

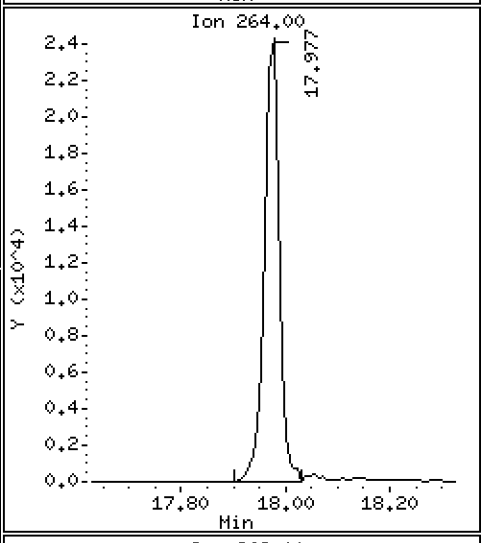
58 Pentachlorophenol

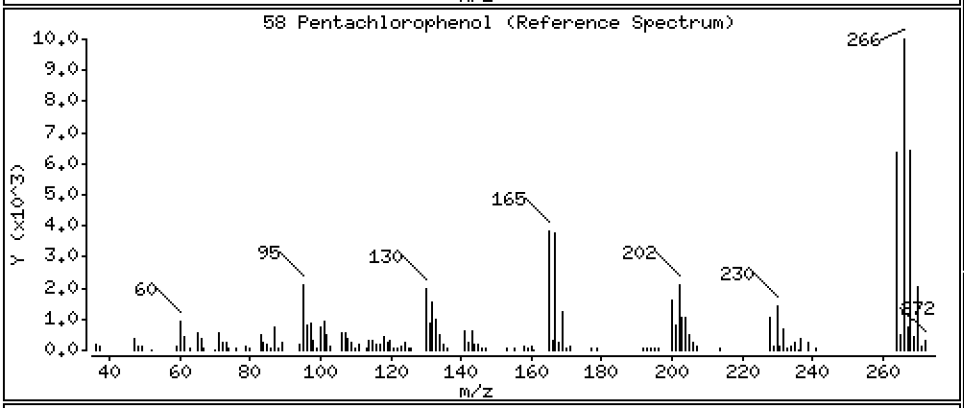
Concentration: 2.999 ug/mL

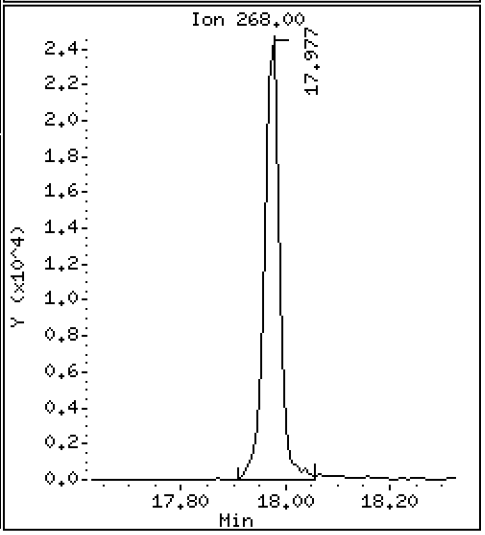


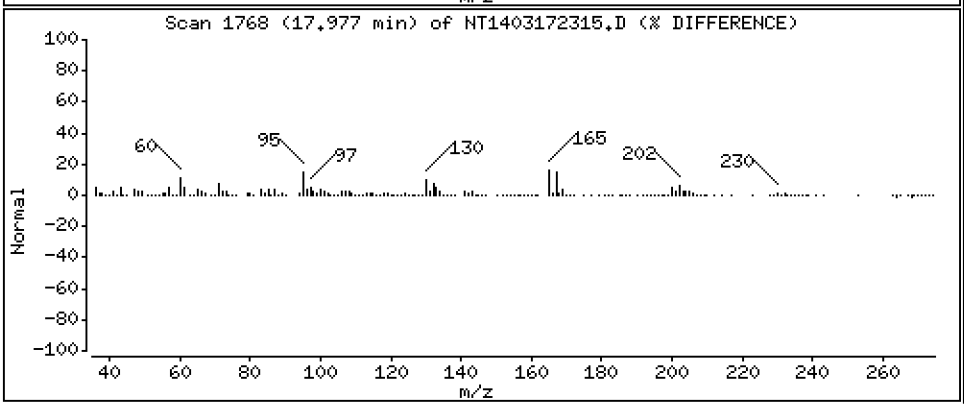












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Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM1

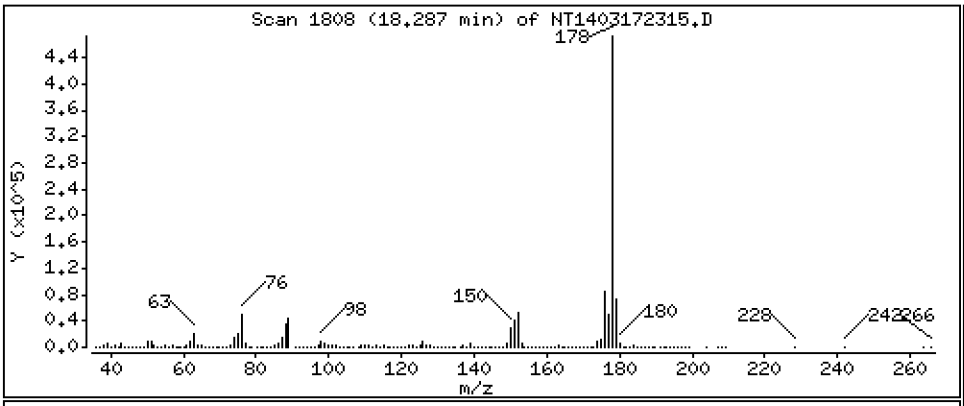
Operator: JGR

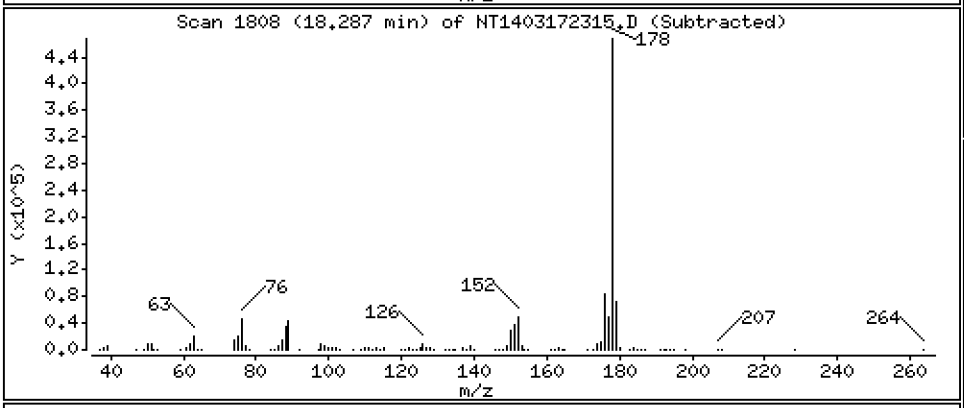
Column phase: ZB-5msi

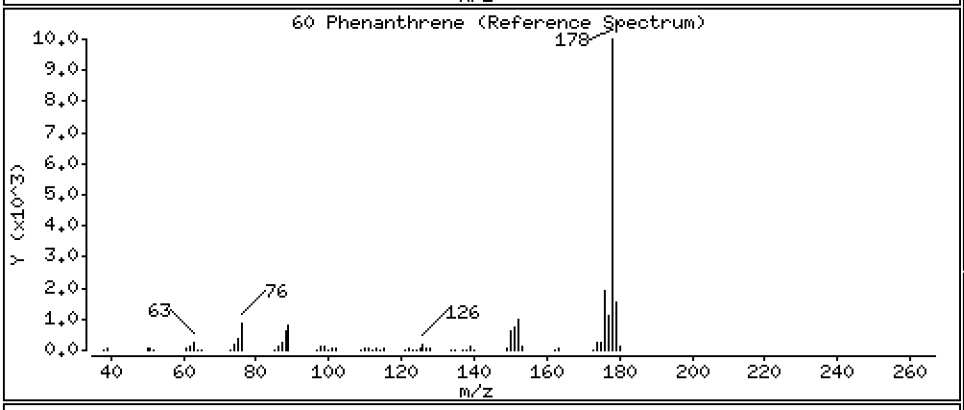
Column diameter: 0.25

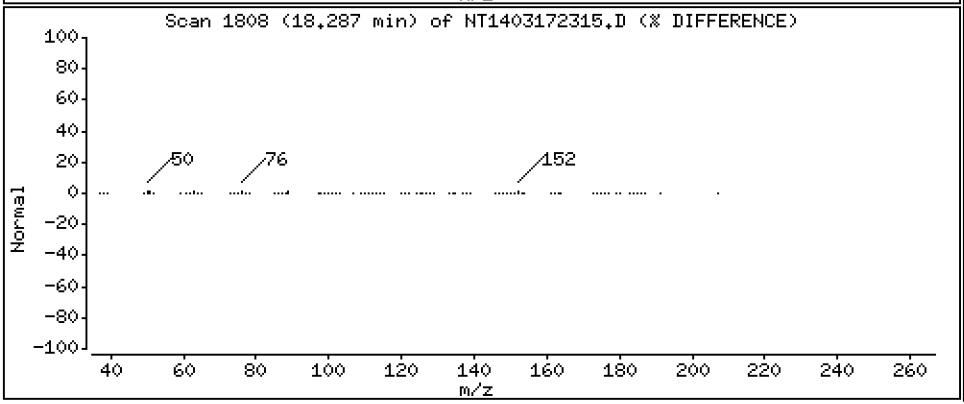
60 Phenanthrene

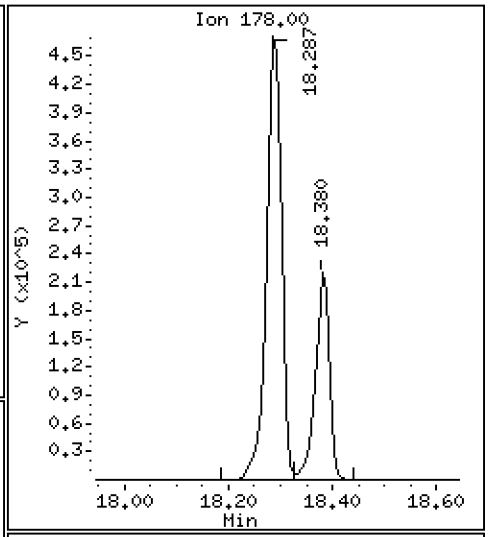
Concentration: 4.264 ug/mL

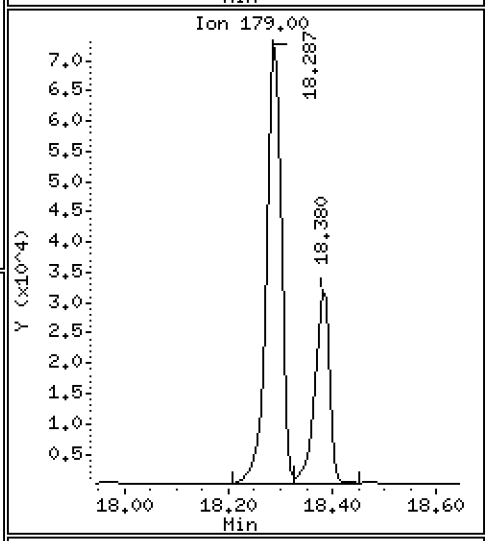


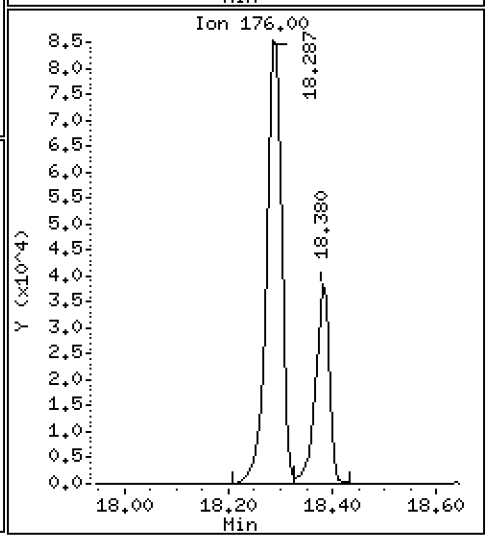












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Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM1

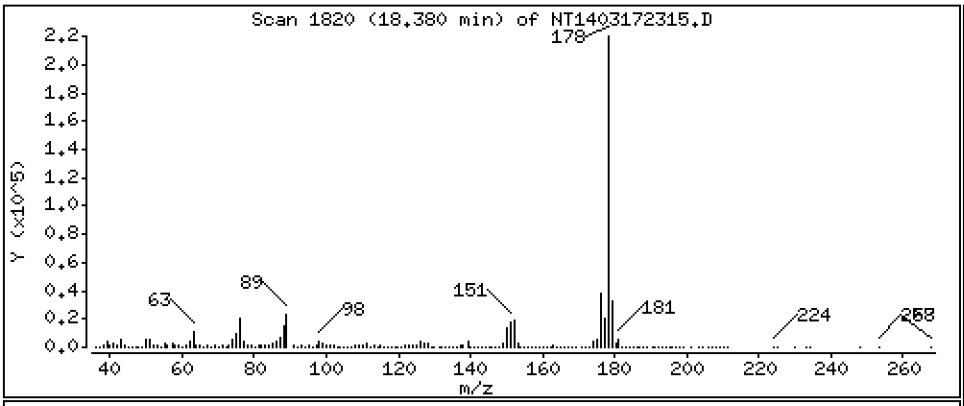
Operator: JGR

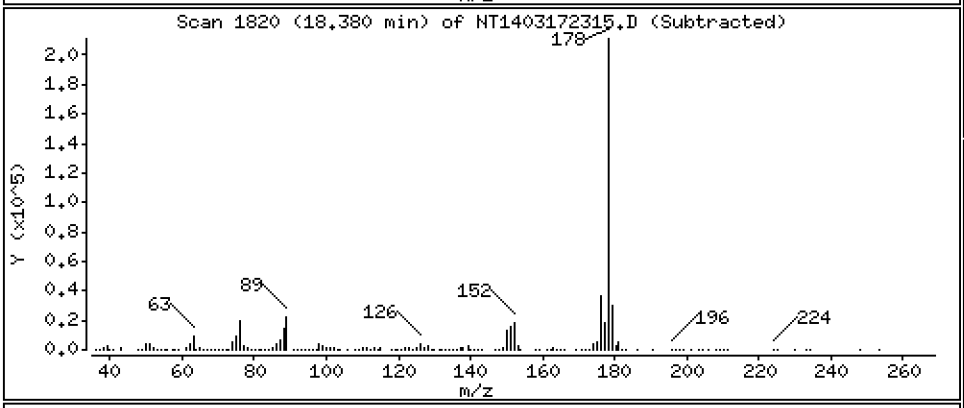
Column phase: ZB-5msi

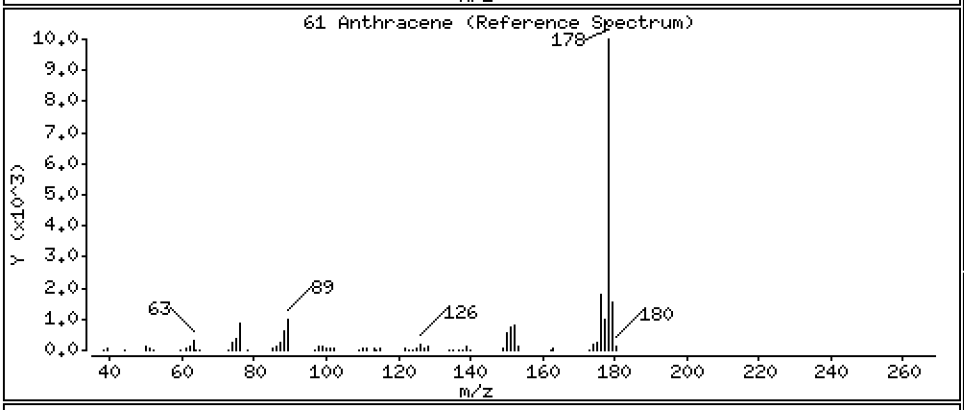
Column diameter: 0.25

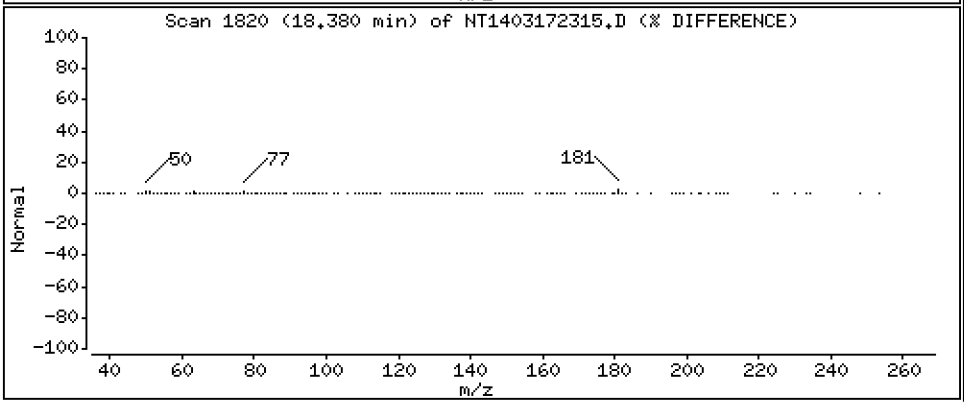
61 Anthracene

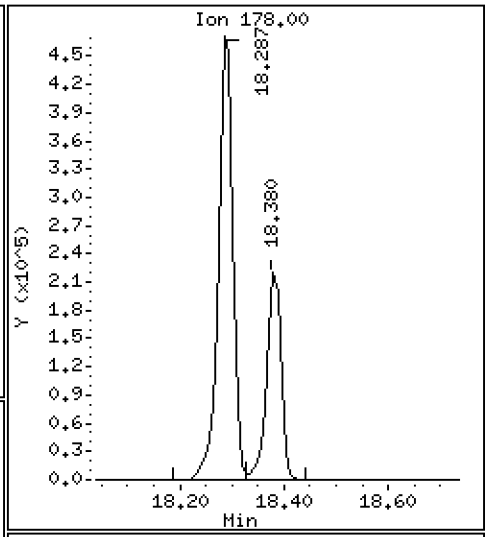
Concentration: 1.957 ug/mL

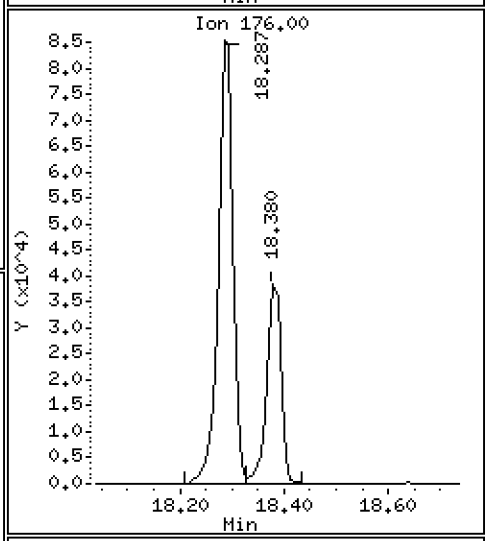


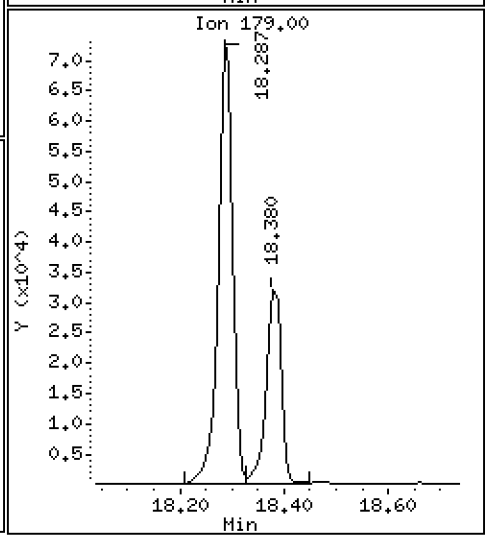












Date : 17-MAR-2023 22:55

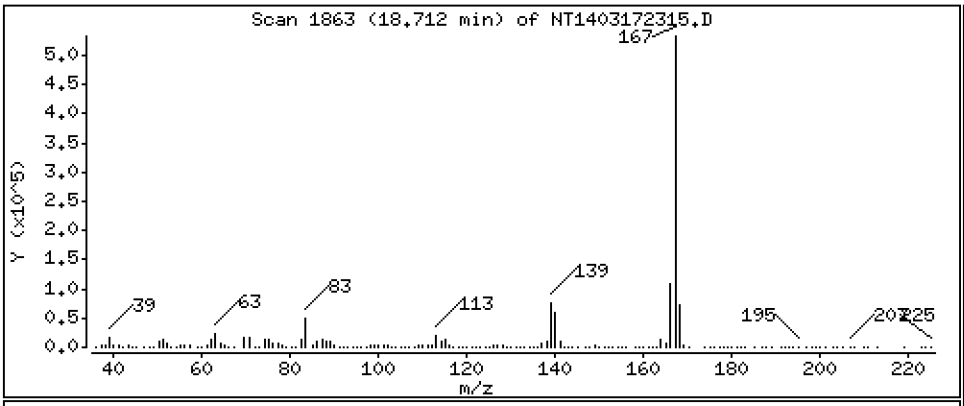
Client ID: Instrument: nt14.i

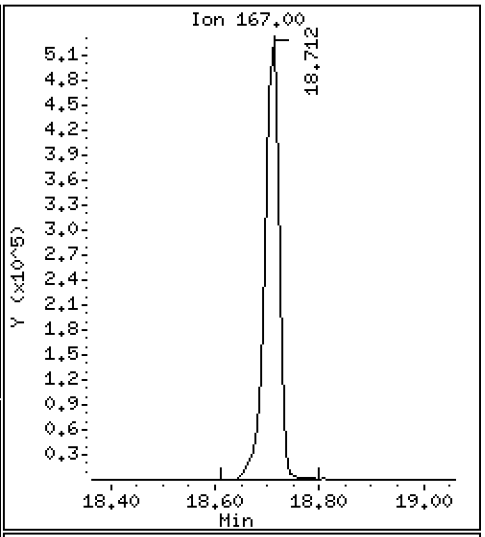
Sample Info: BLB0424-SRM1

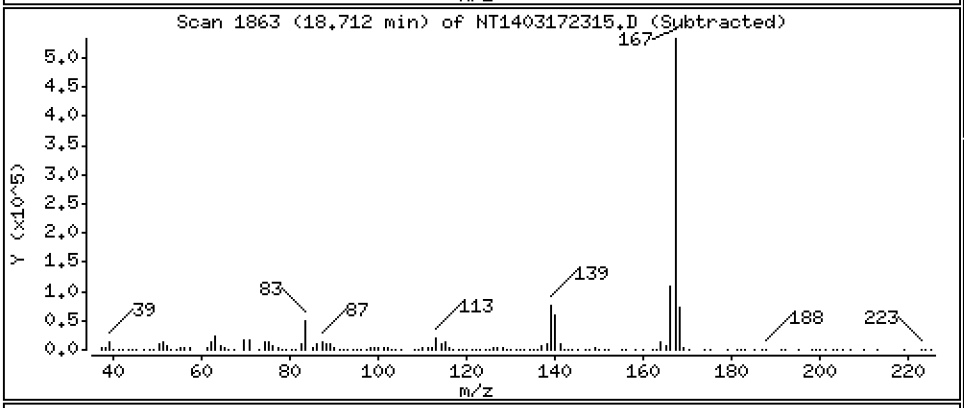
Operator: JGR

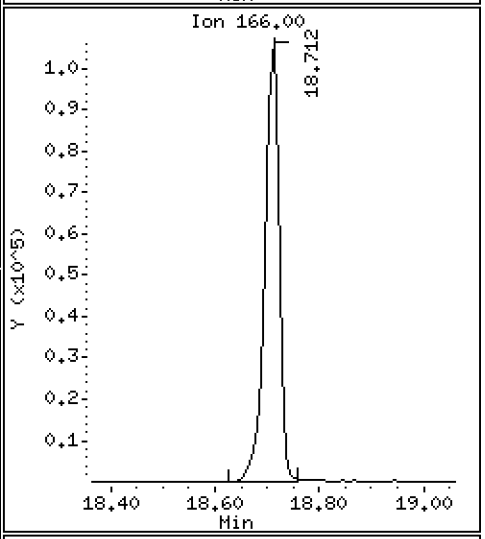
Column phase: ZB-5msi Column diameter: 0.25

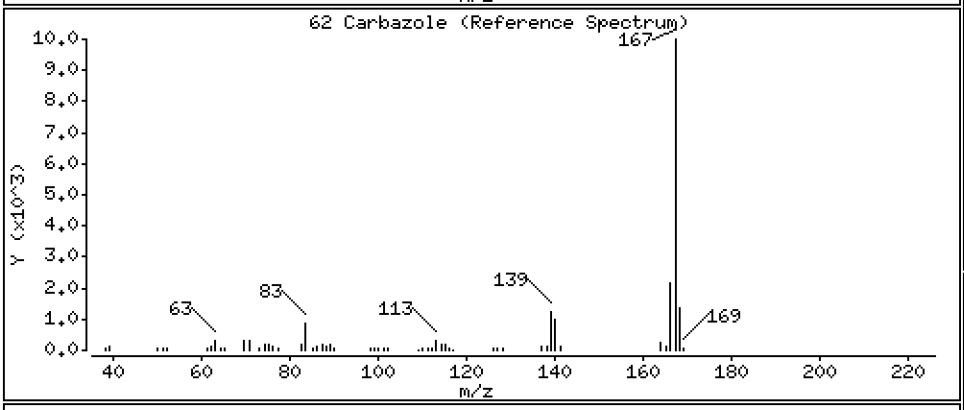
62 Carbazole Concentration: 5.302 ug/mL

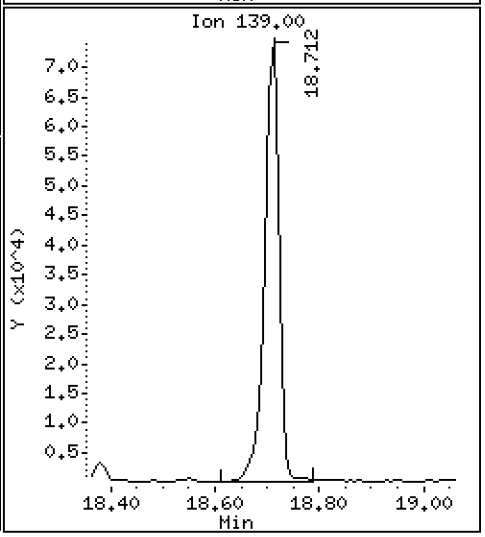


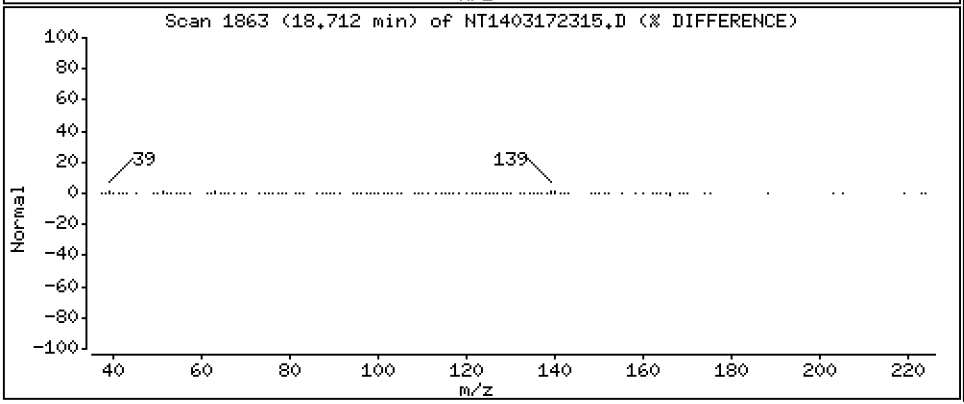












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Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM1

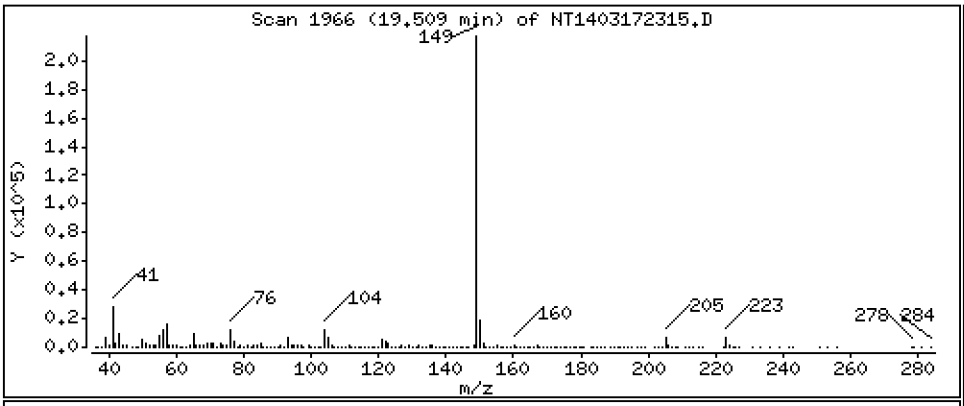
Operator: JGR

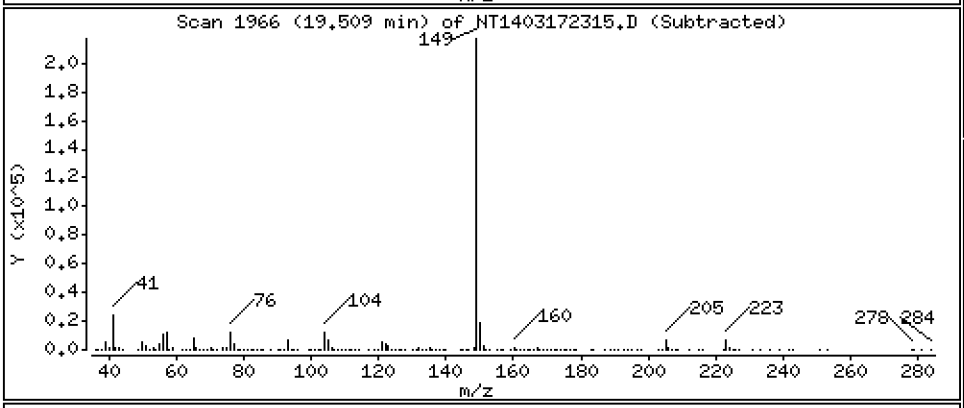
Column phase: ZB-5msi

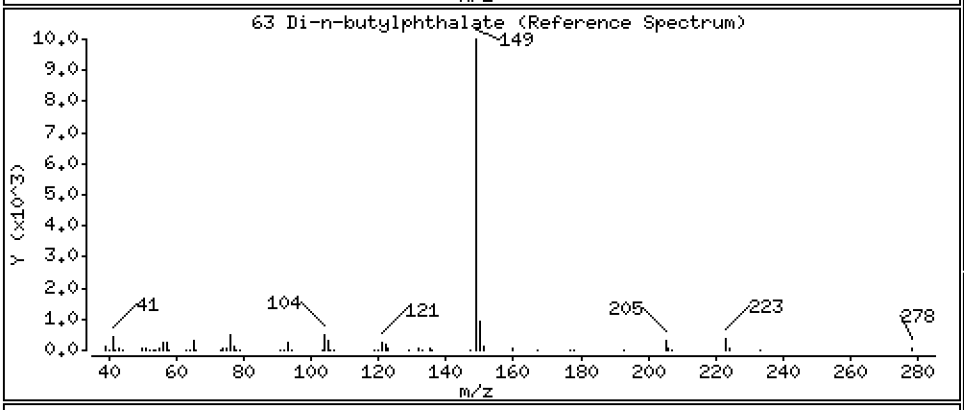
Column diameter: 0.25

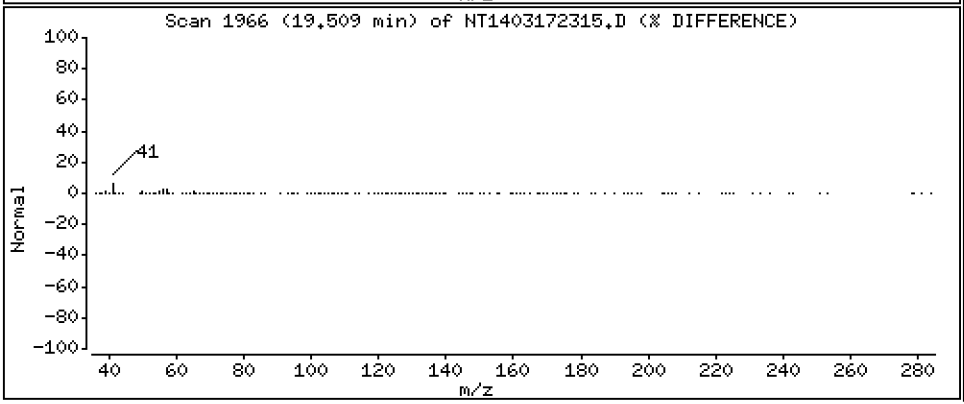
63 Di-n-butylphthalate

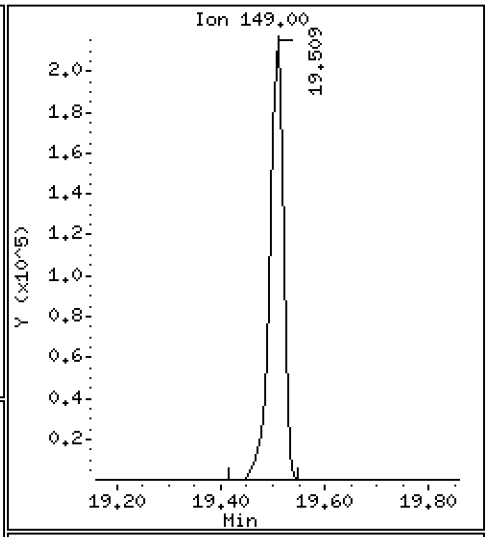
Concentration: 1.613 ug/mL

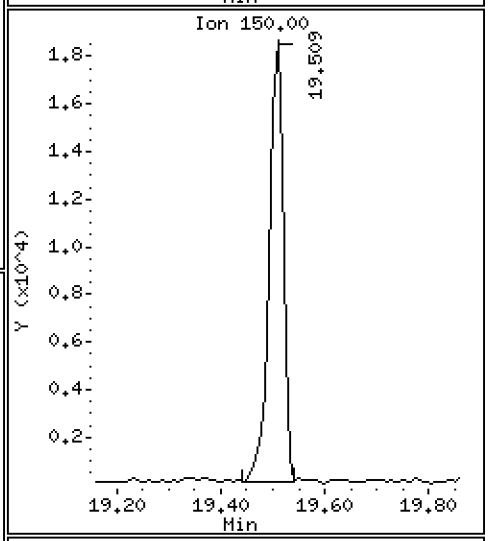


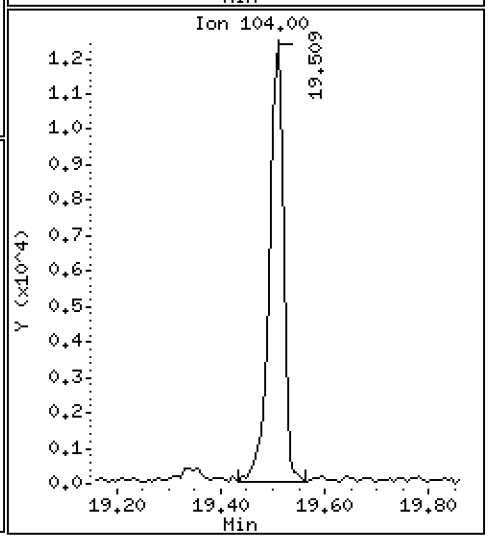












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Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM1

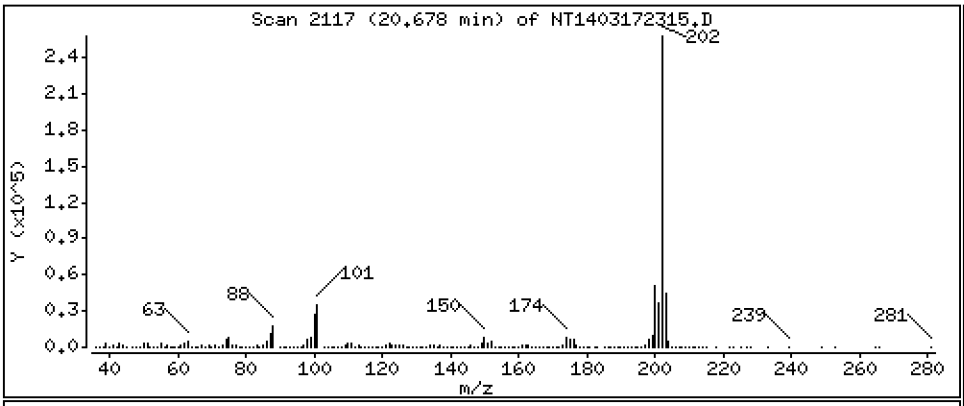
Operator: JGR

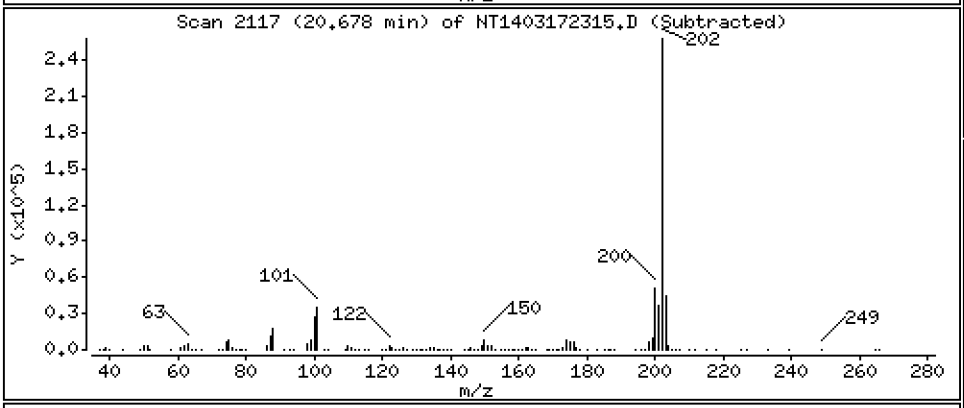
Column phase: ZB-5msi

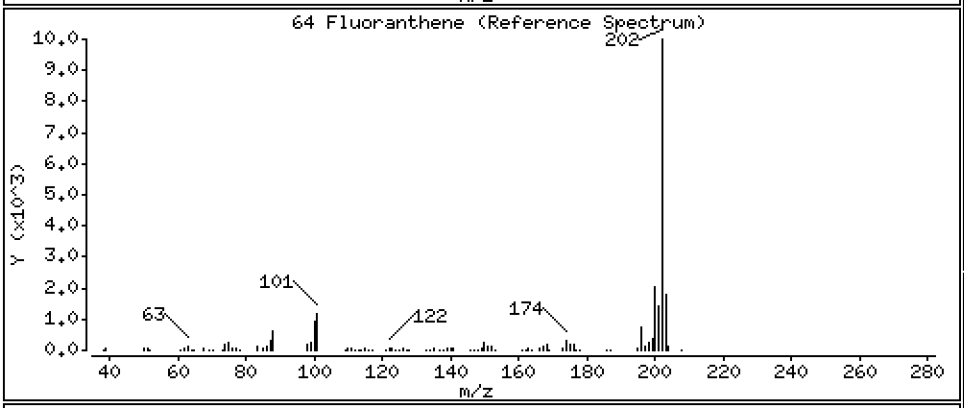
Column diameter: 0.25

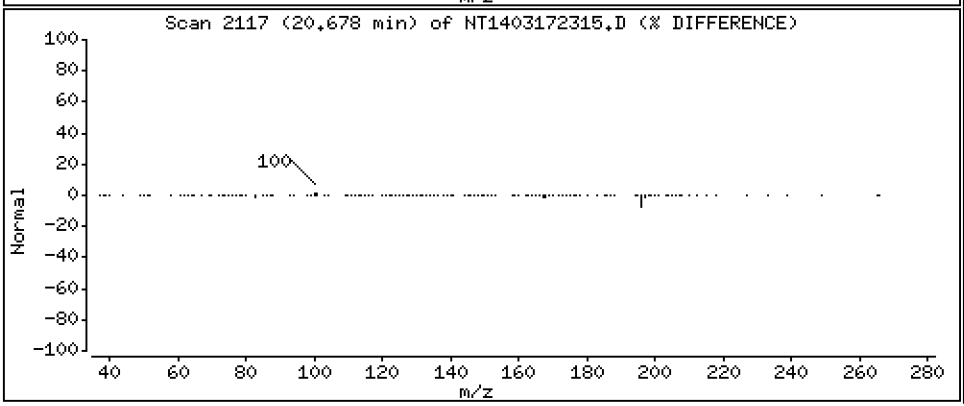
64 Fluoranthene

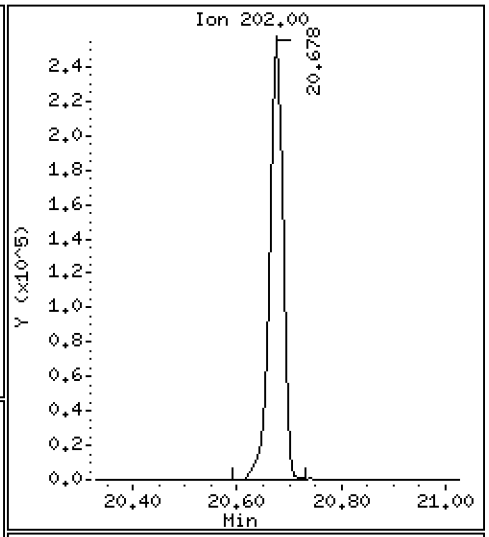
Concentration: 2.919 ug/mL

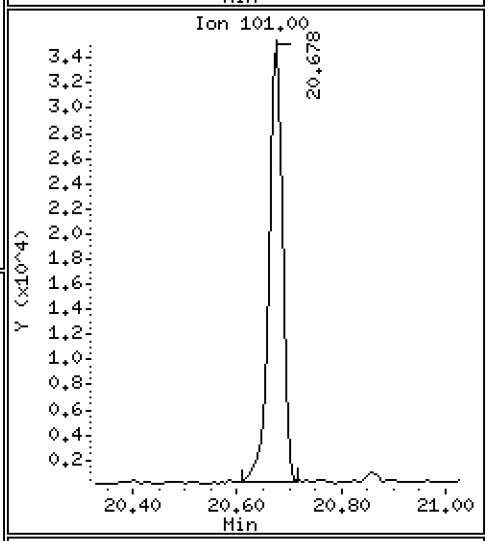


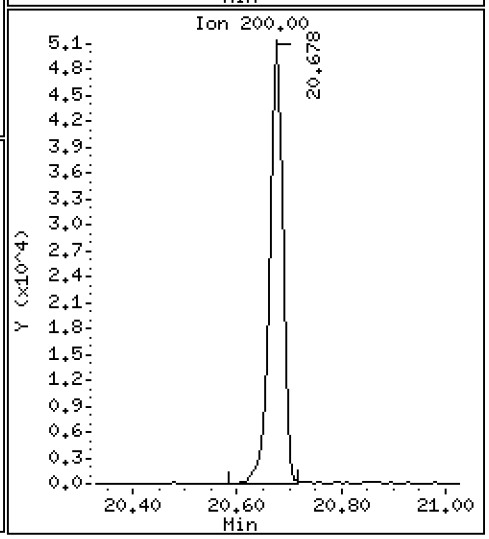












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Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM1

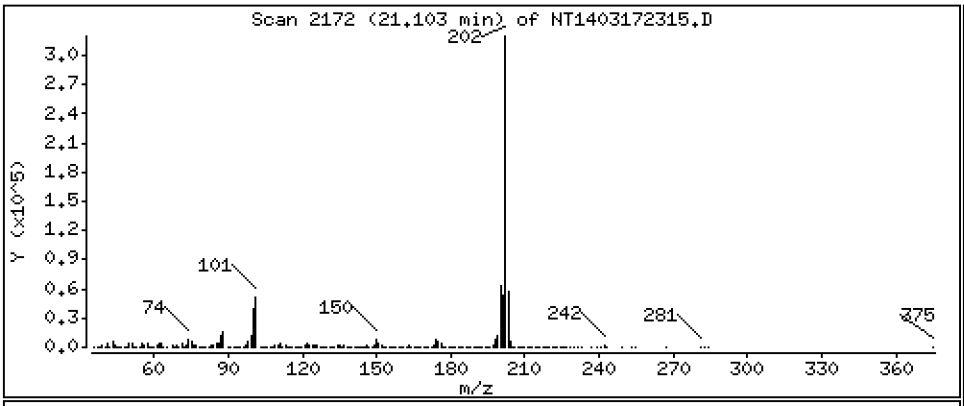
Operator: JGR

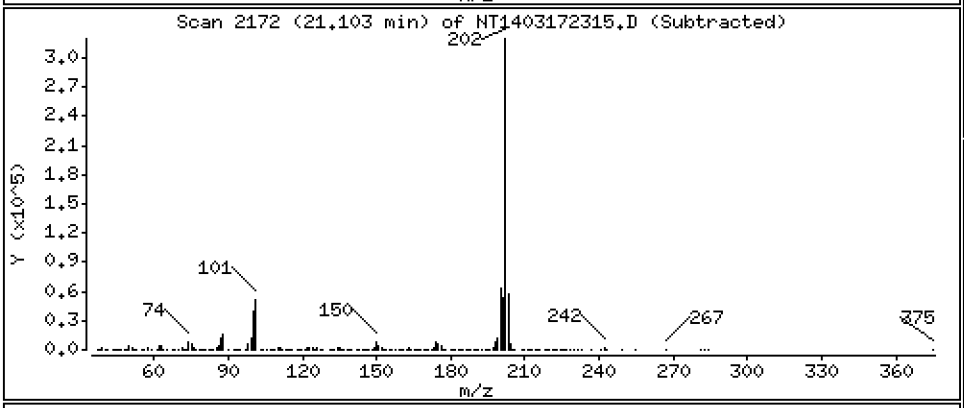
Column phase: ZB-5msi

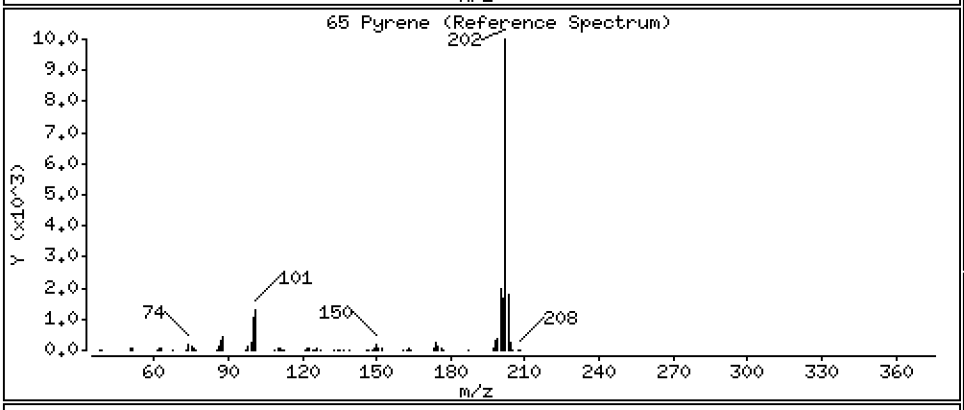
Column diameter: 0.25

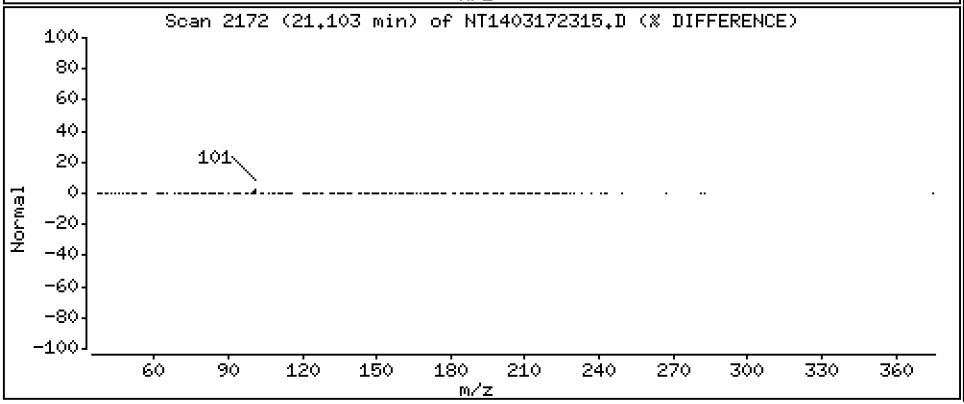
65 Pyrene

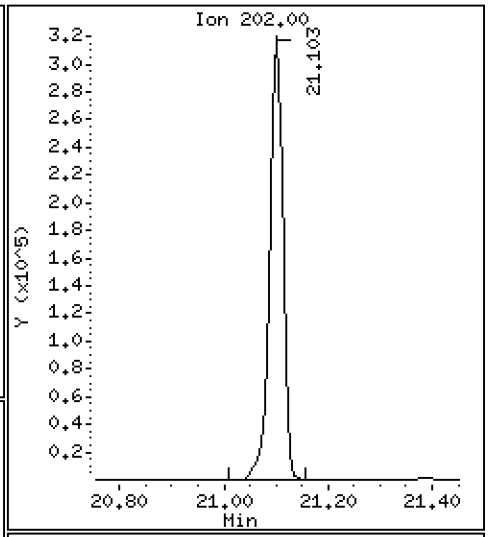
Concentration: 3.512 ug/mL

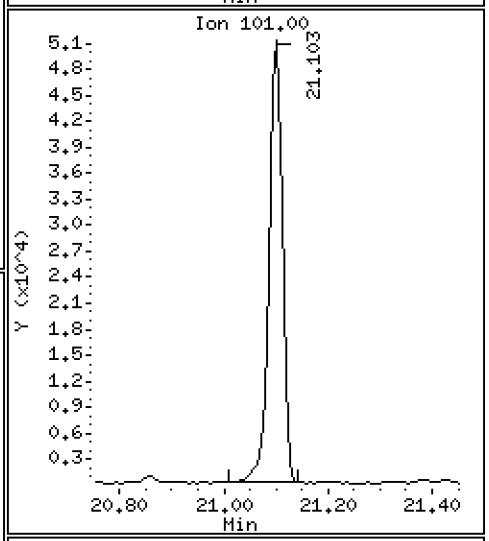


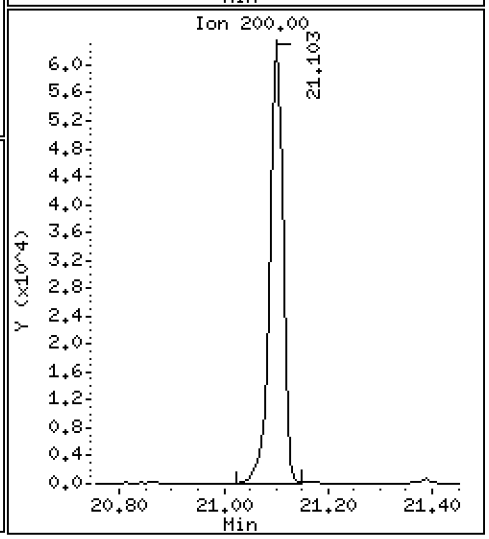












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Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM1

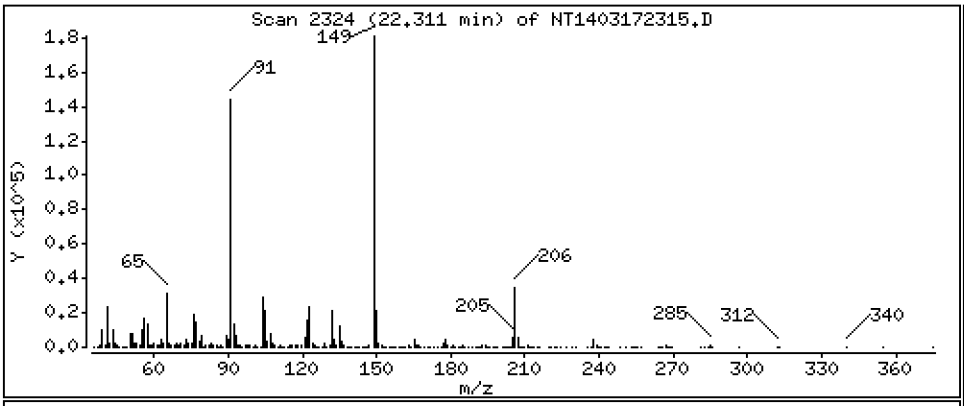
Operator: JGR

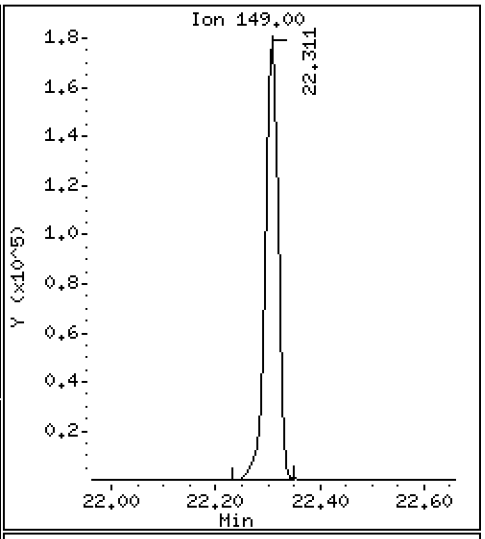
Column phase: ZB-5msi

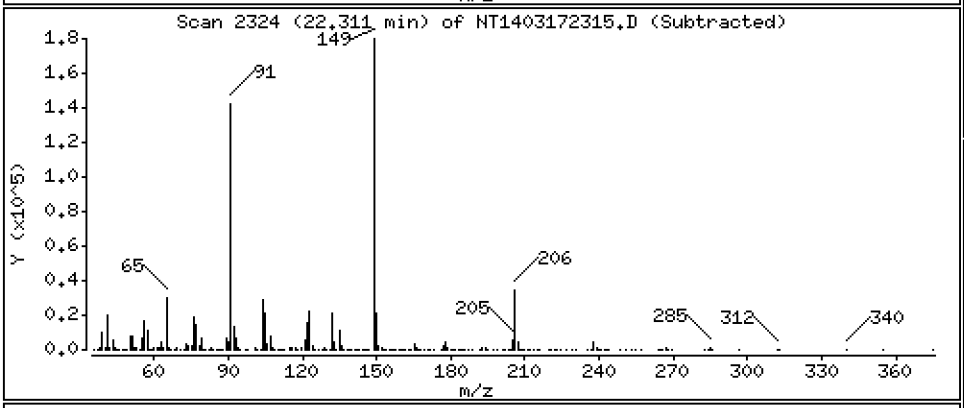
Column diameter: 0.25

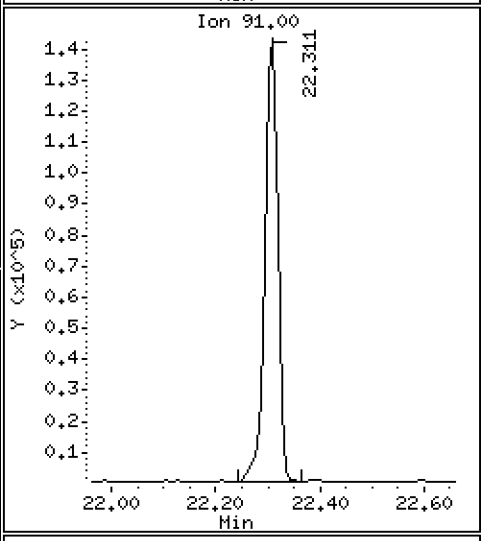
67 Butylbenzylphthalate

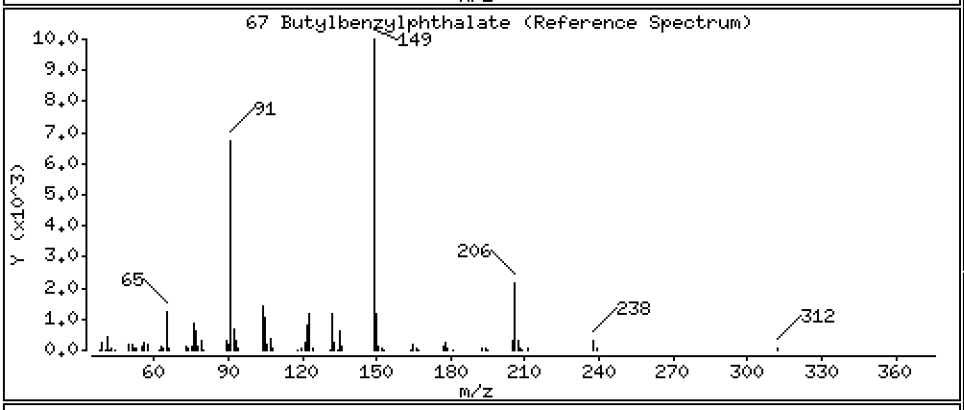
Concentration: 4.381 ug/mL

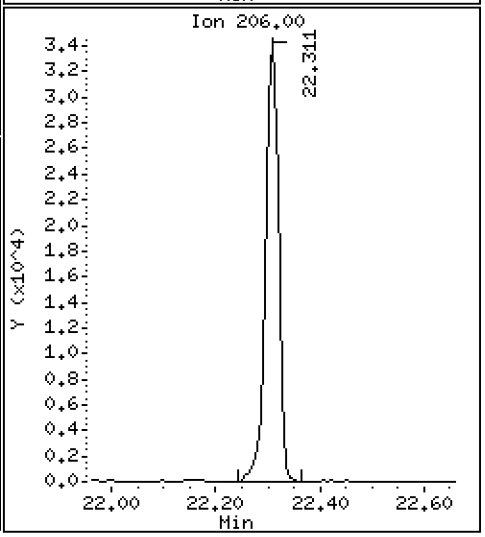


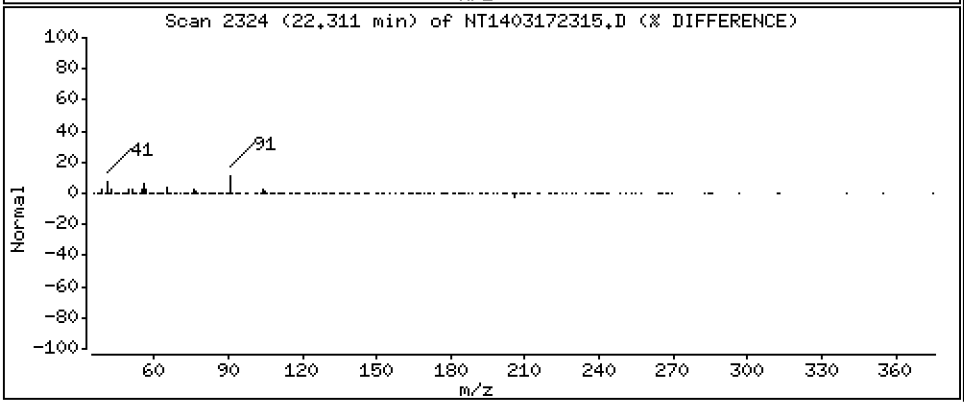












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Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM1

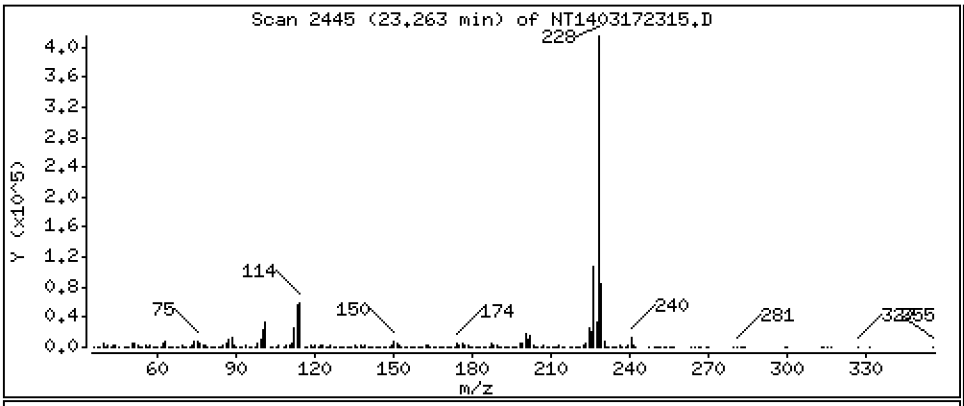
Operator: JGR

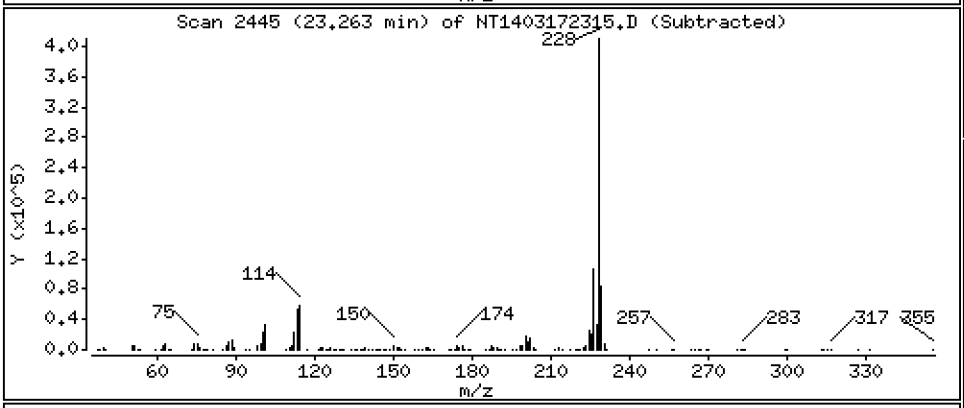
Column phase: ZB-5msi

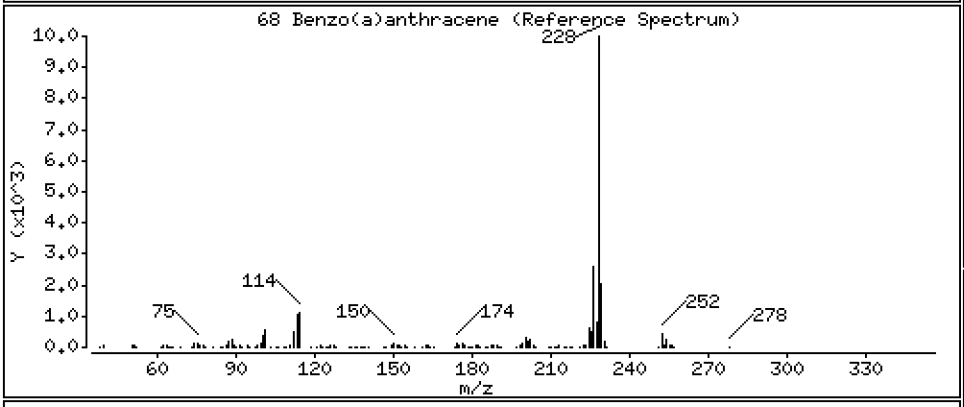
Column diameter: 0.25

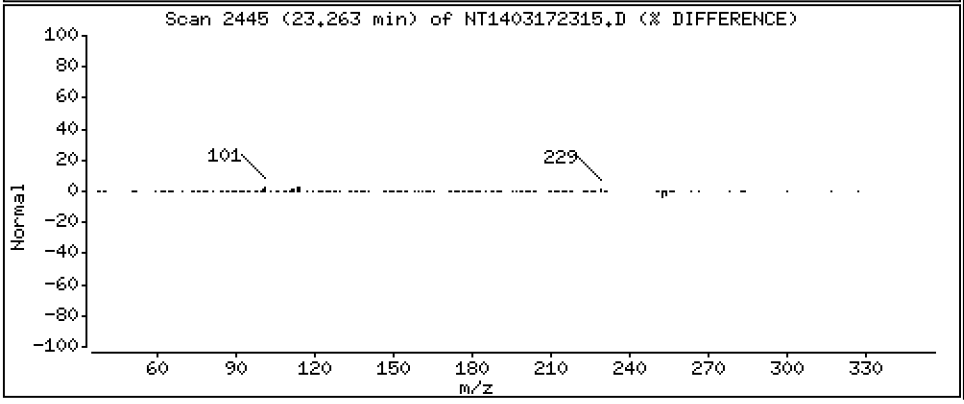
68 Benzo(a)anthracene

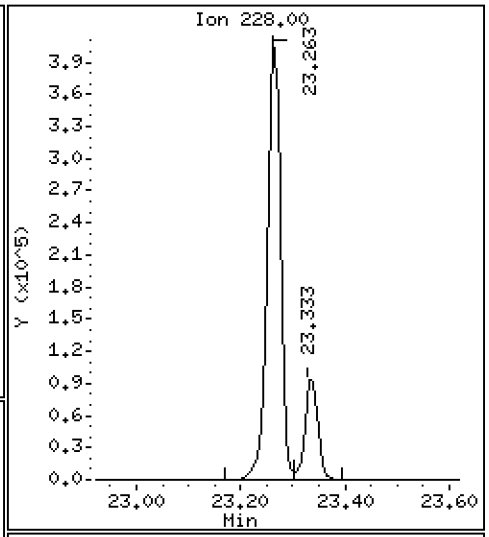
Concentration: 5.070 ug/mL

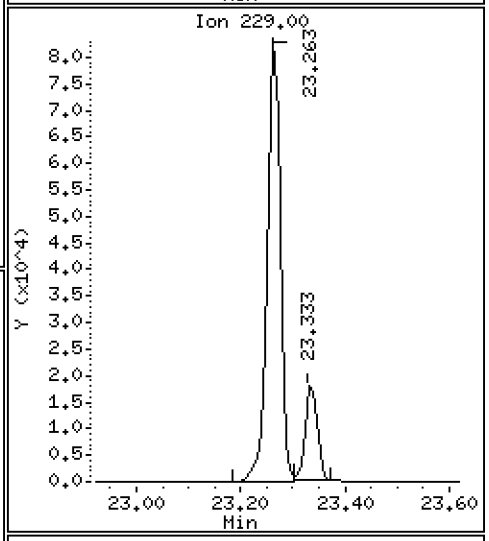


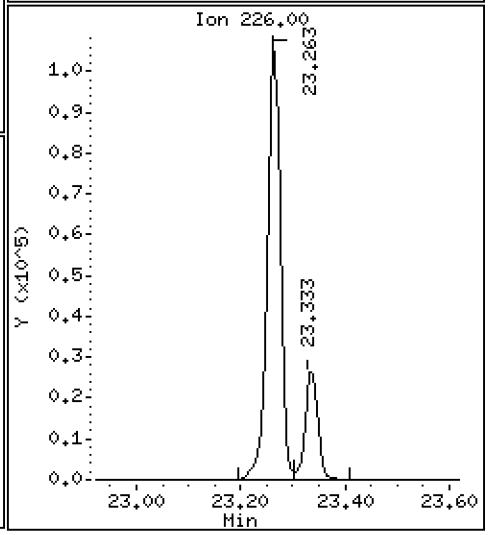












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Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM1

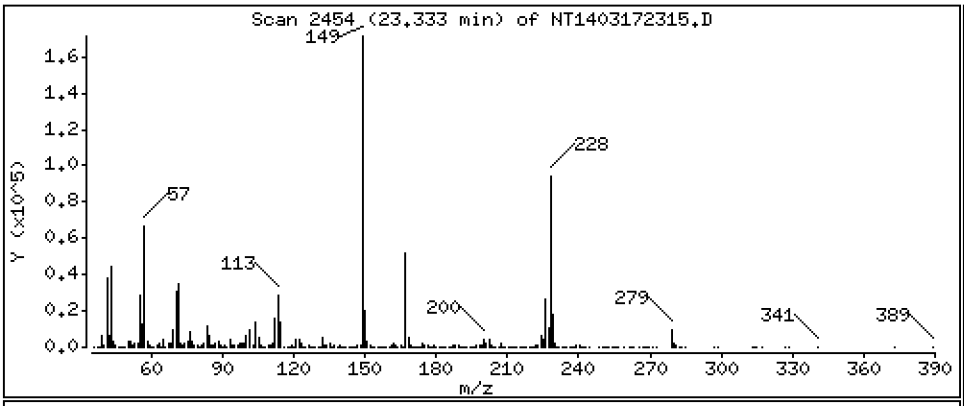
Operator: JGR

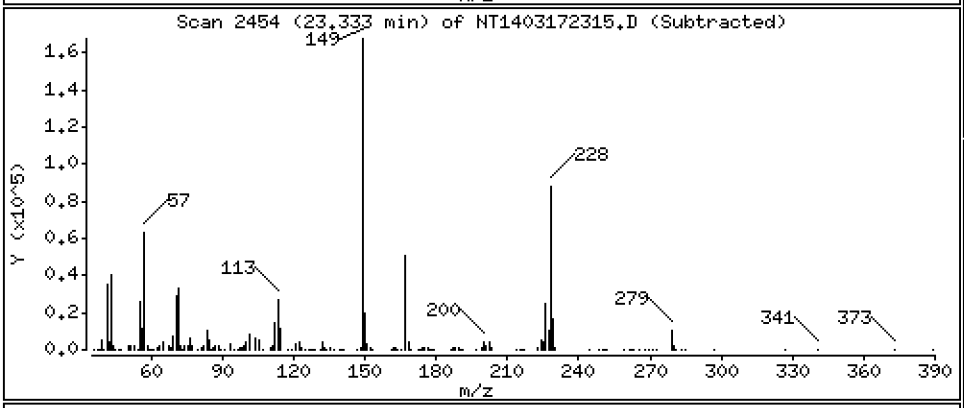
Column phase: ZB-5msi

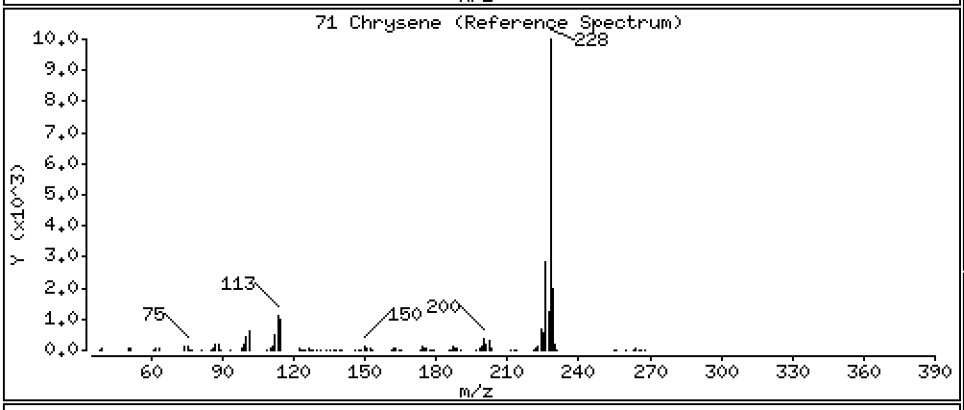
Column diameter: 0.25

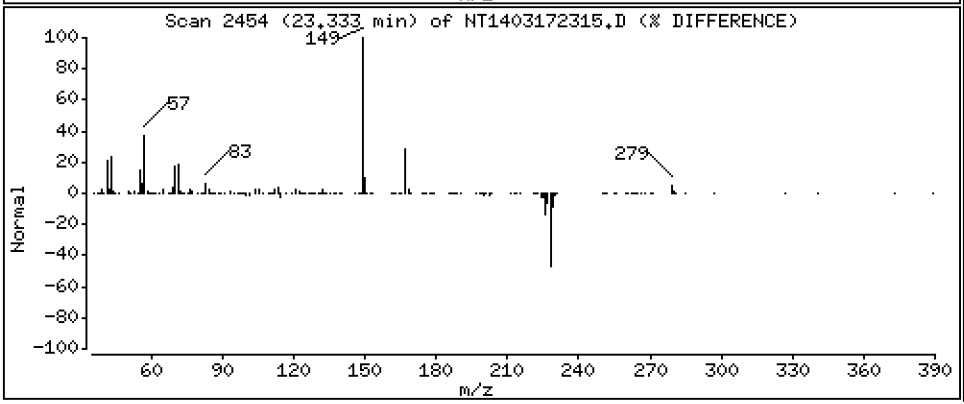
71 Chrysene

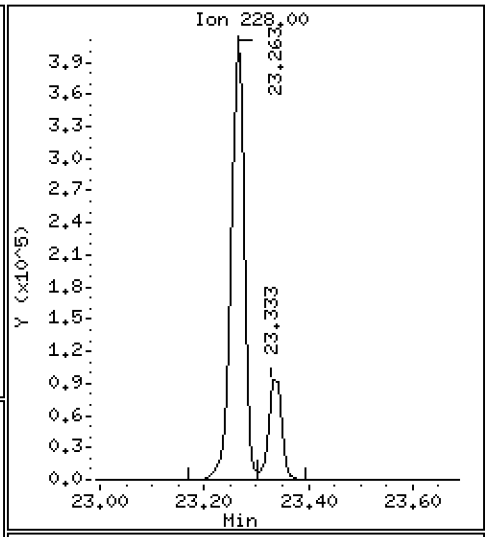
Concentration: 1.248 ug/mL

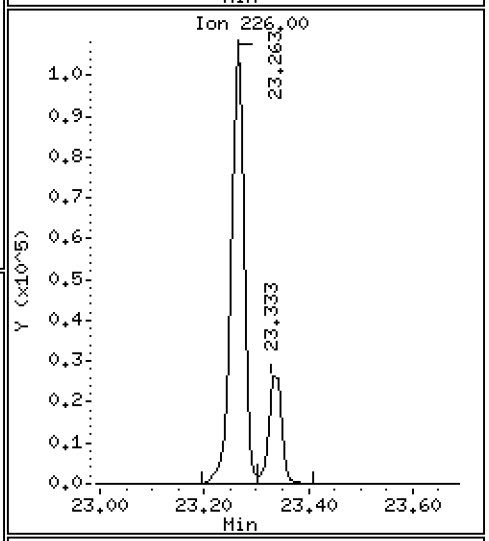


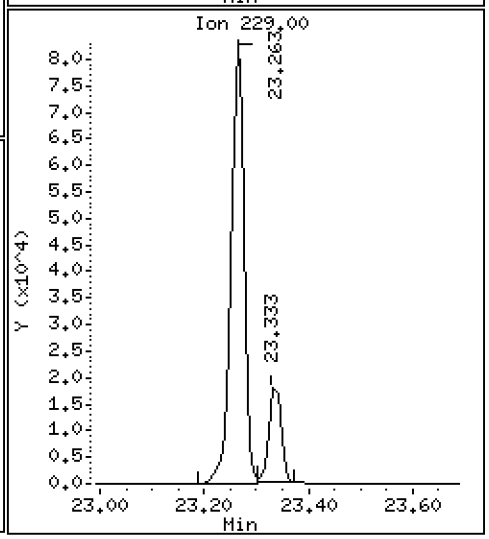












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Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM1

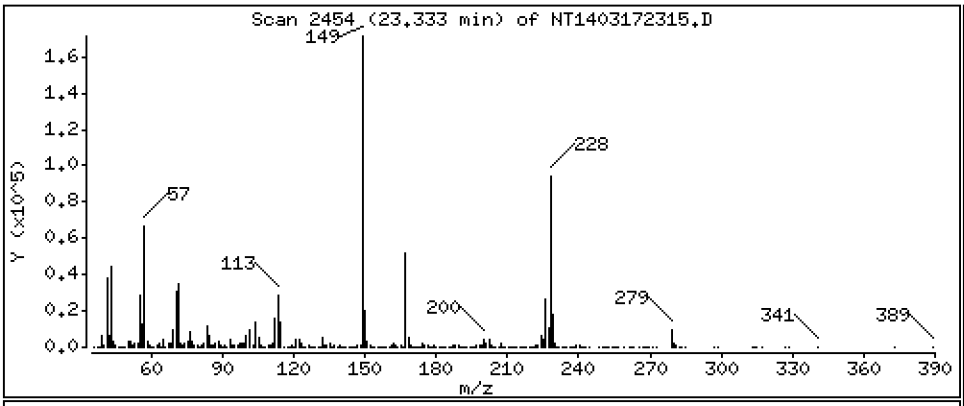
Operator: JGR

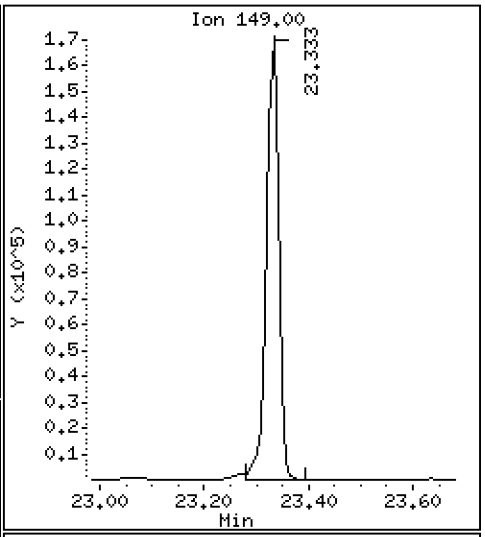
Column phase: ZB-5msi

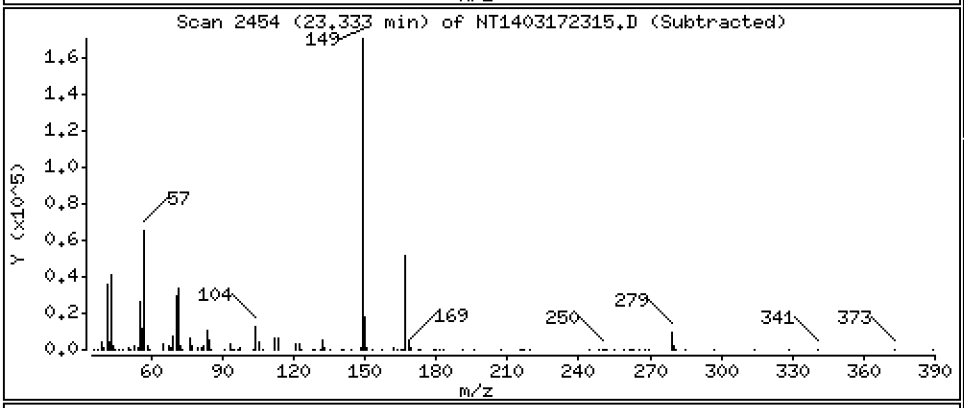
Column diameter: 0.25

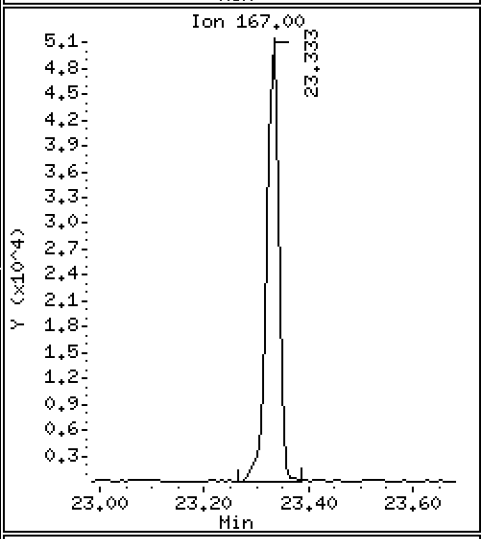
72 bis(2-Ethylhexyl)phthalate

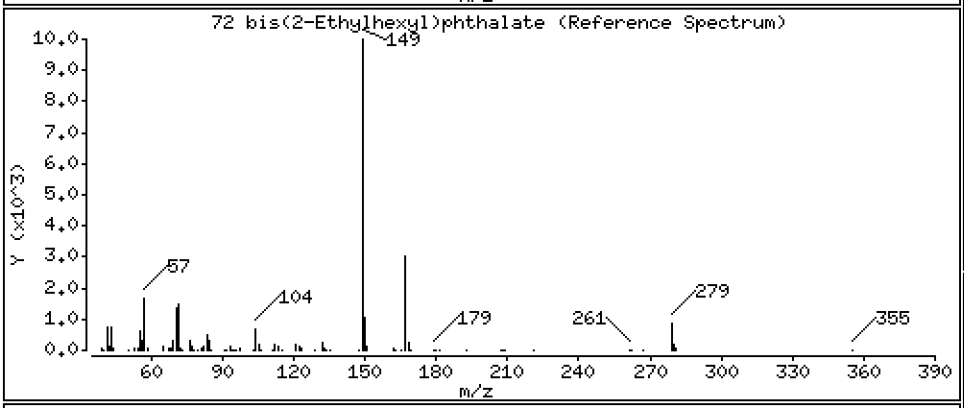
Concentration: 2.723 ug/mL

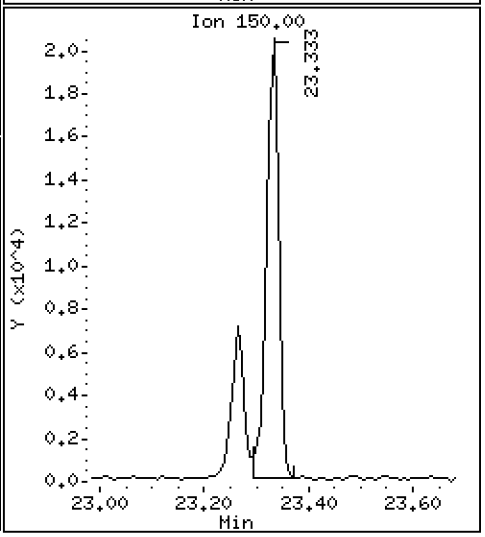


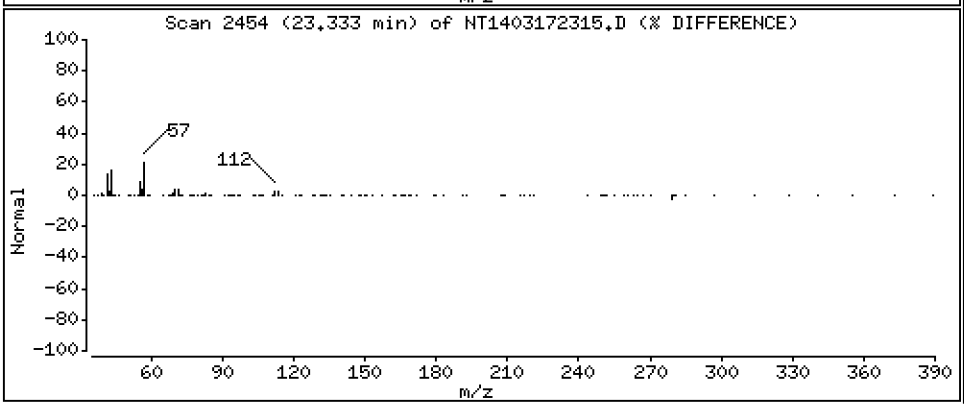












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Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM1

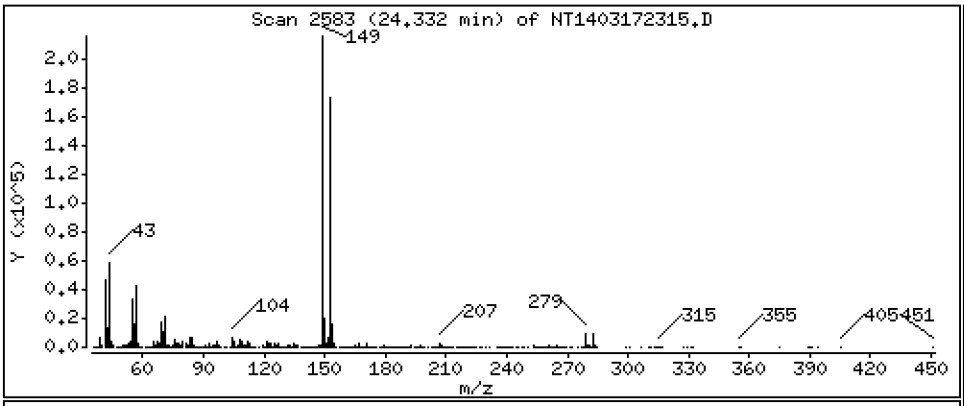
Operator: JGR

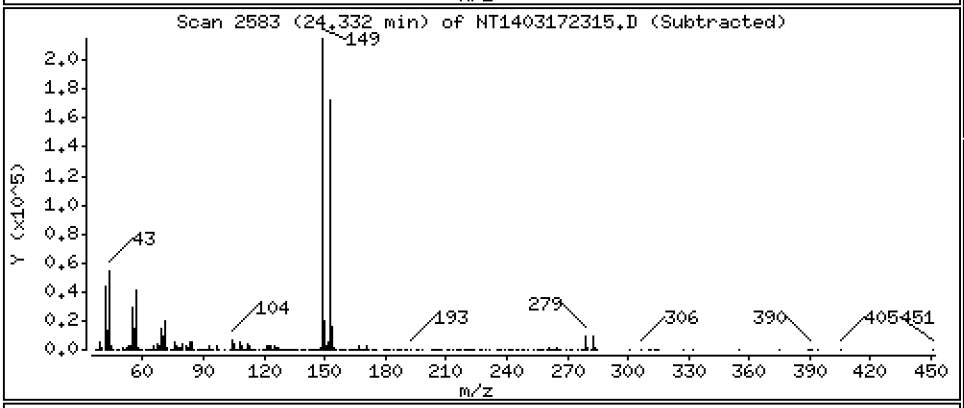
Column phase: ZB-5msi

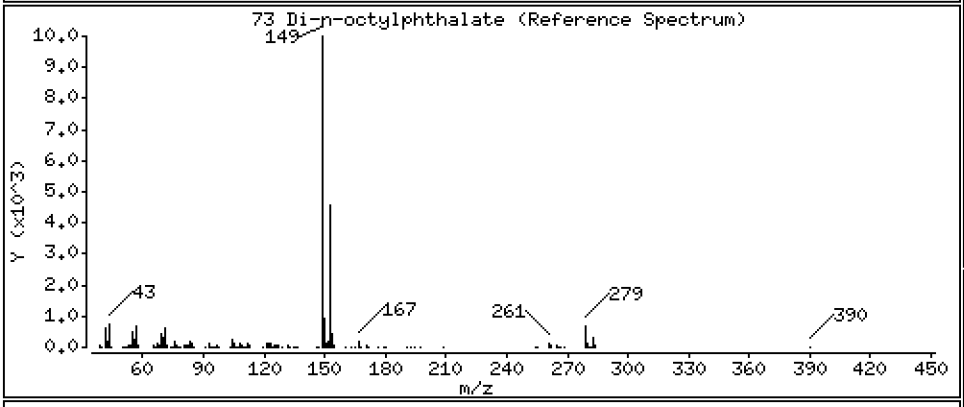
Column diameter: 0.25

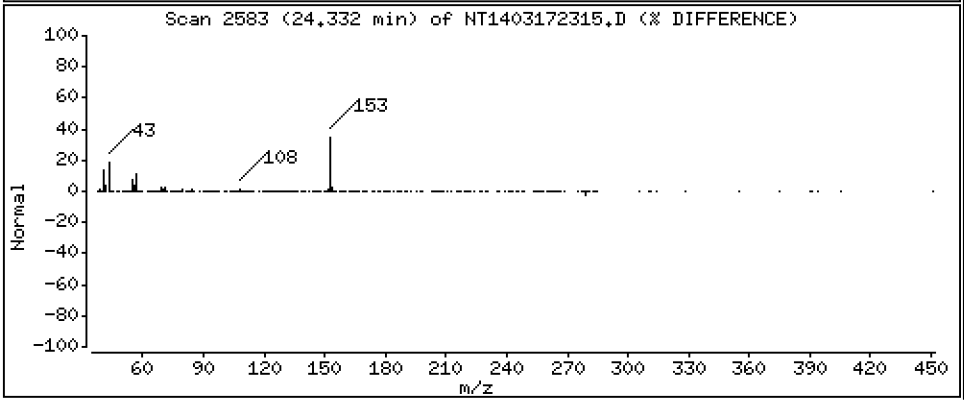
73 Di-n-octylphthalate

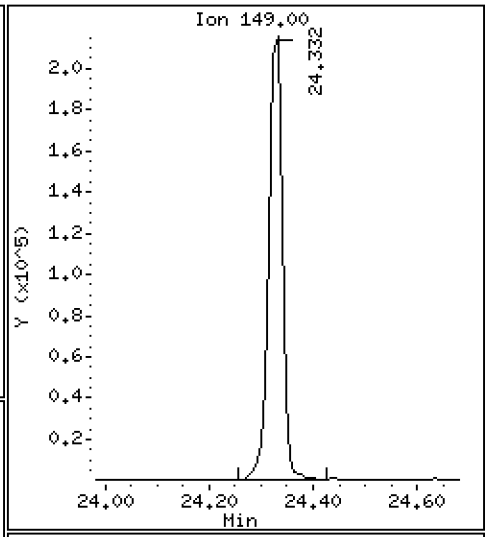
Concentration: 1.973 ug/mL

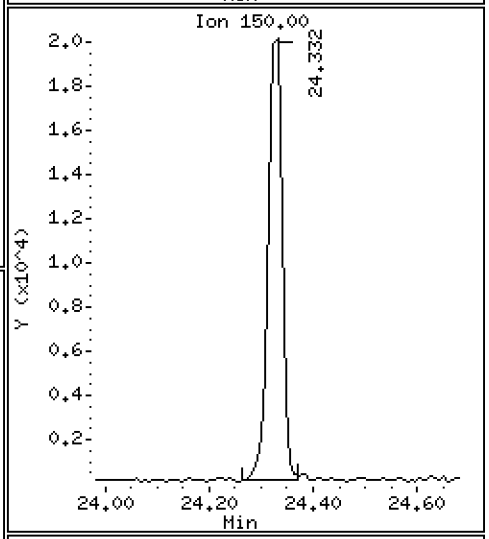


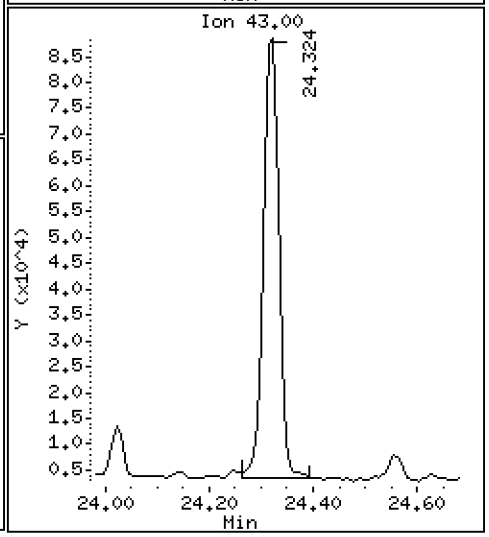












Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172315.D

Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM1

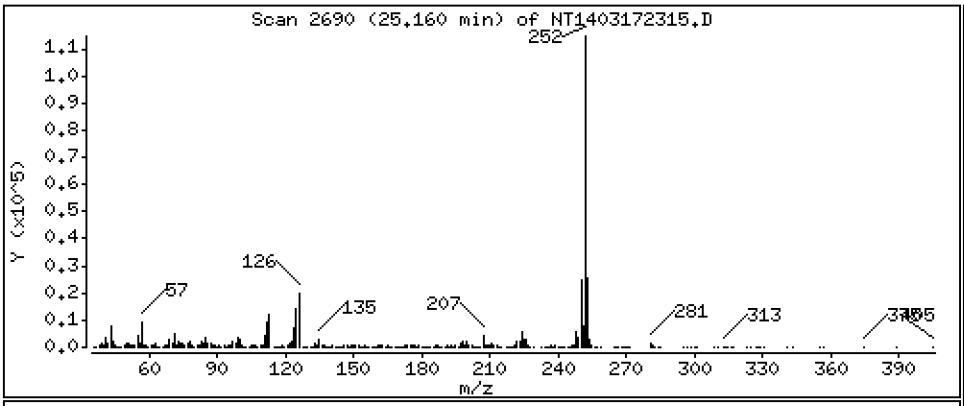
Operator: JGR

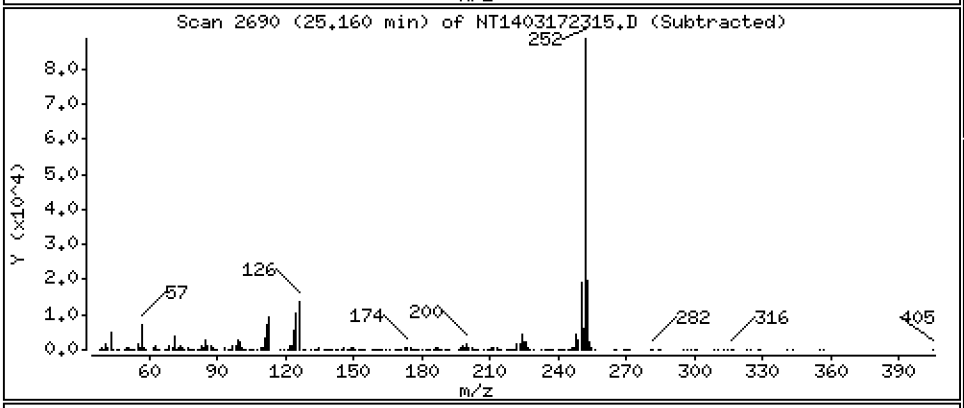
Column phase: ZB-5msi

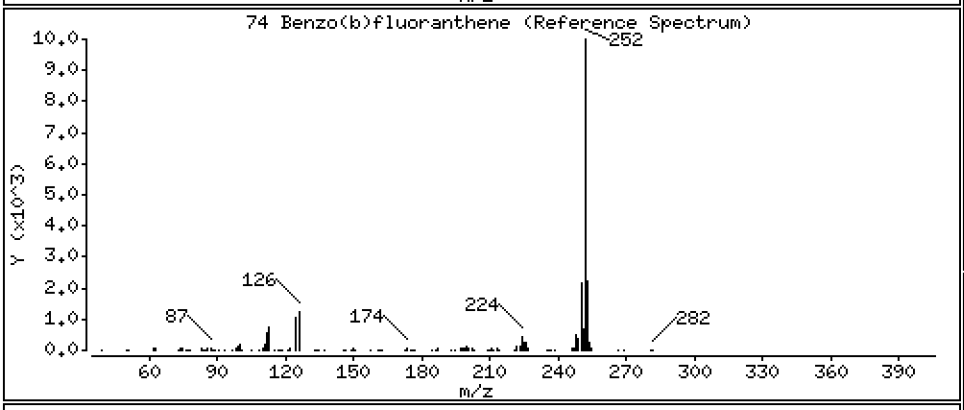
Column diameter: 0.25

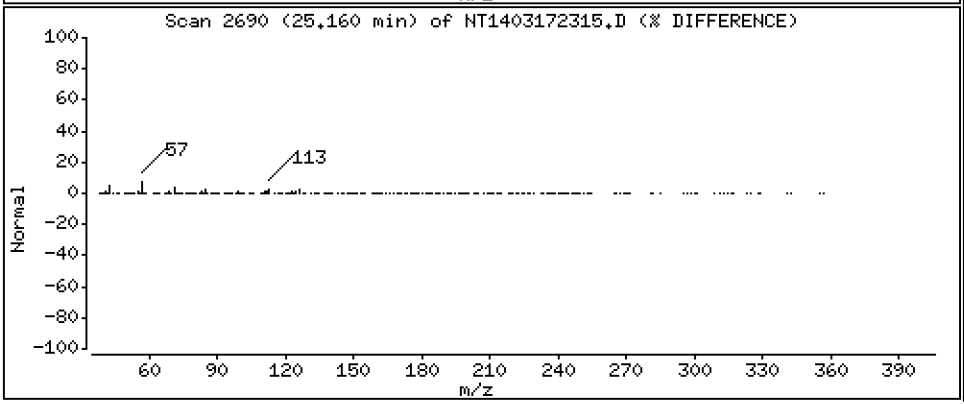
74 Benzo(b)fluoranthene

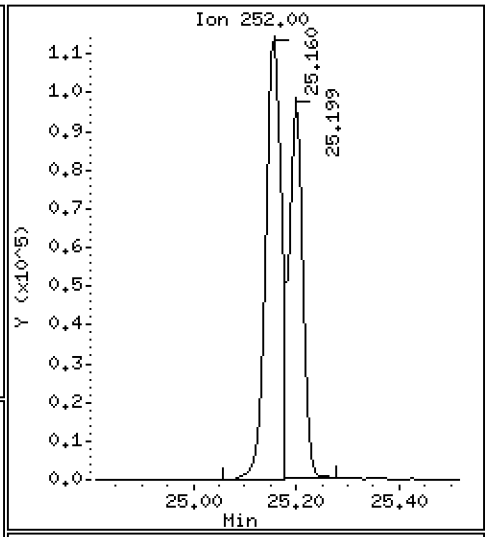
Concentration: 2.807 ug/mL

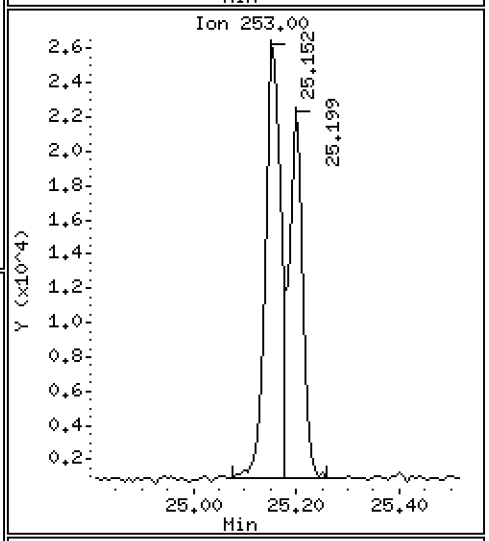


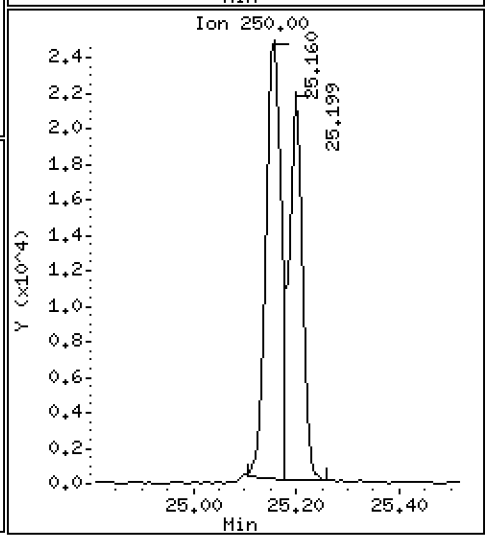












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Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM1

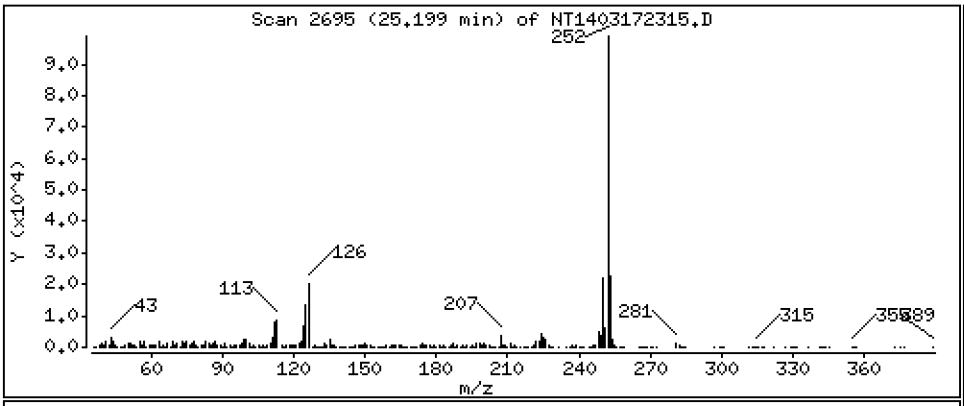
Operator: JGR

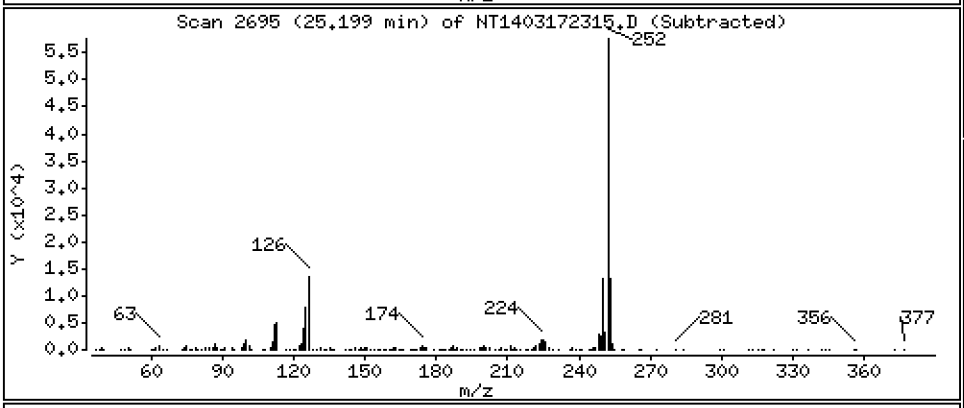
Column phase: ZB-5msi

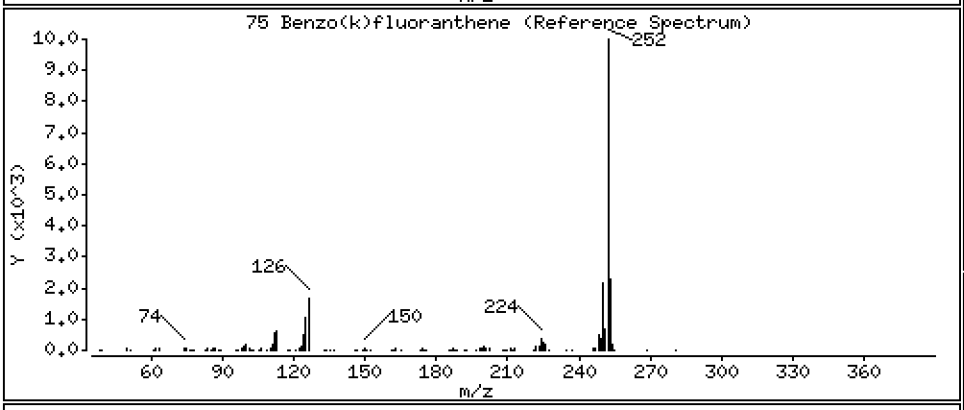
Column diameter: 0.25

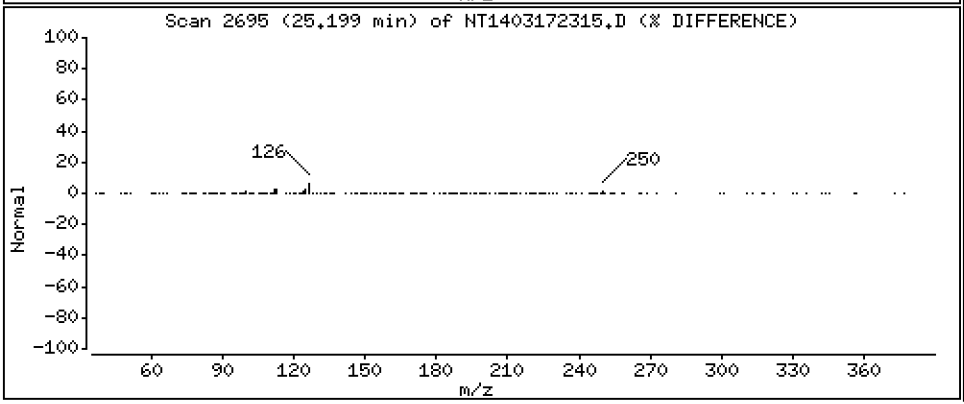
75 Benzo(k)fluoranthene

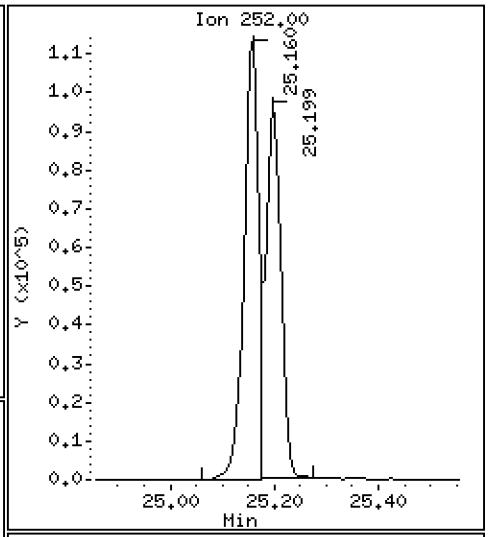
Concentration: 2.507 ug/mL

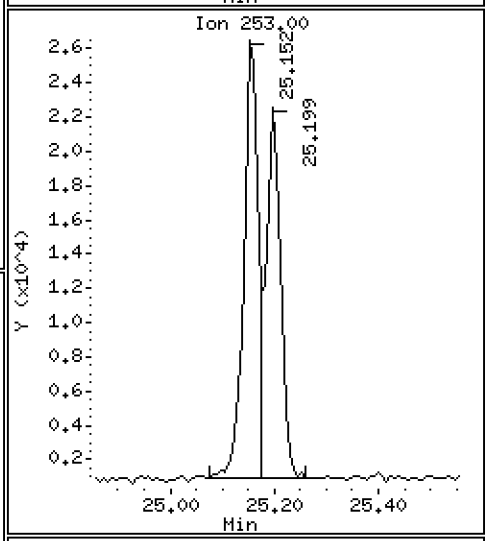


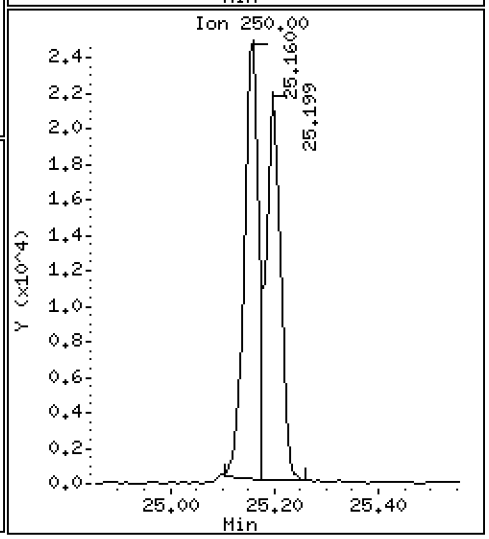












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Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM1

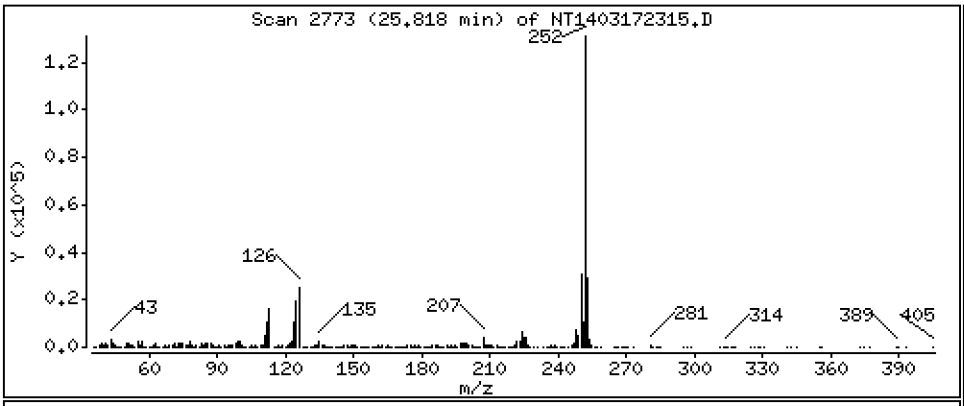
Operator: JGR

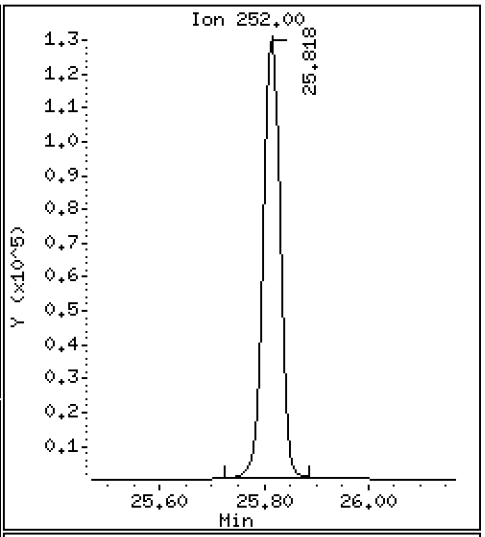
Column phase: ZB-5msi

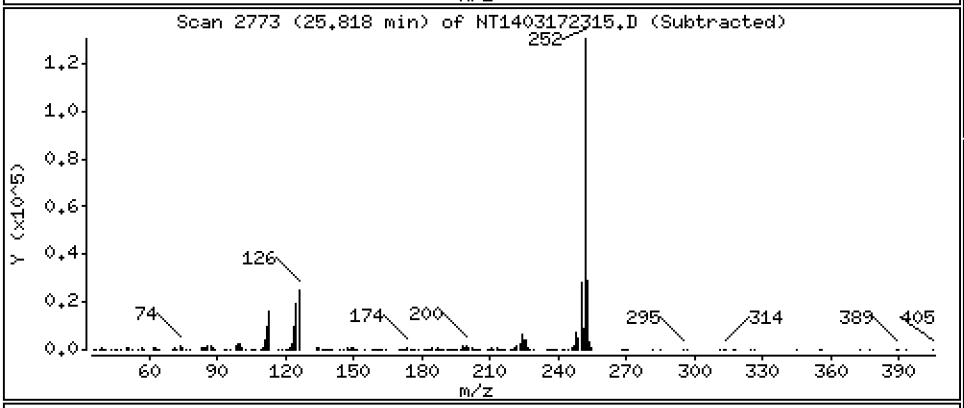
Column diameter: 0.25

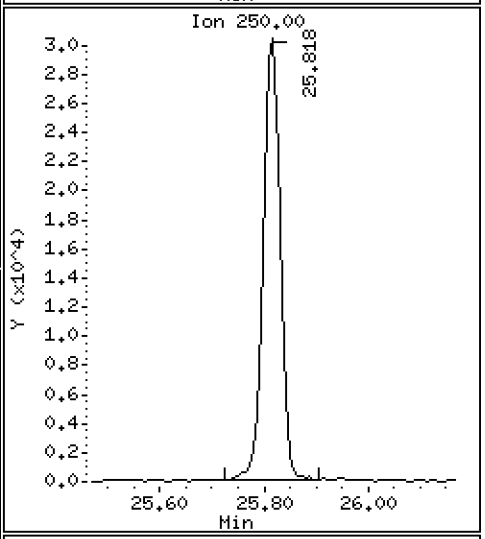
76 Benzo(a)pyrene

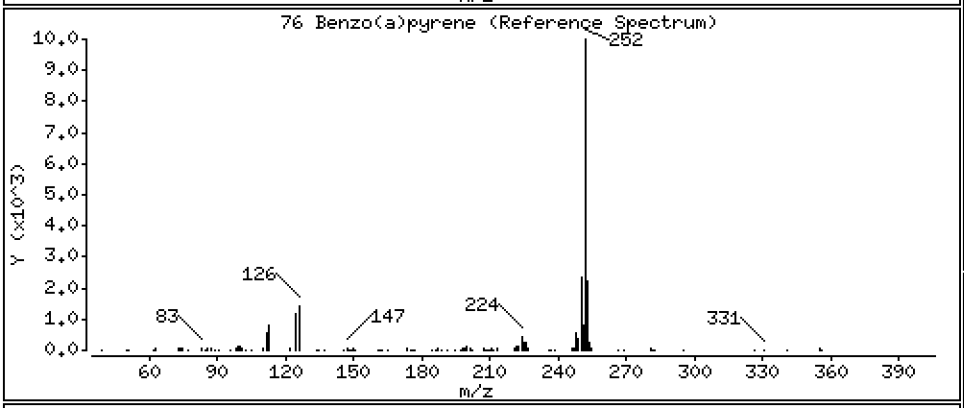
Concentration: 4.113 ug/mL

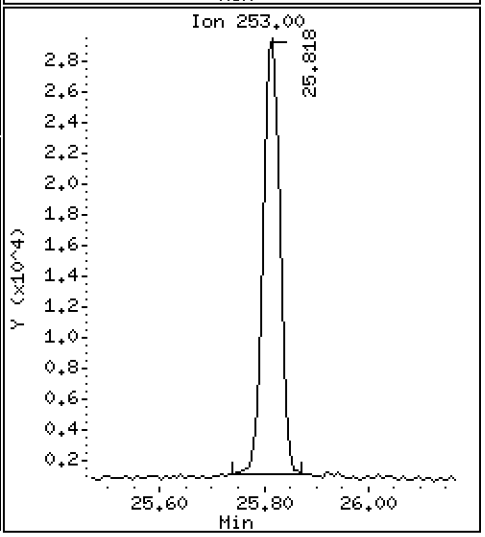


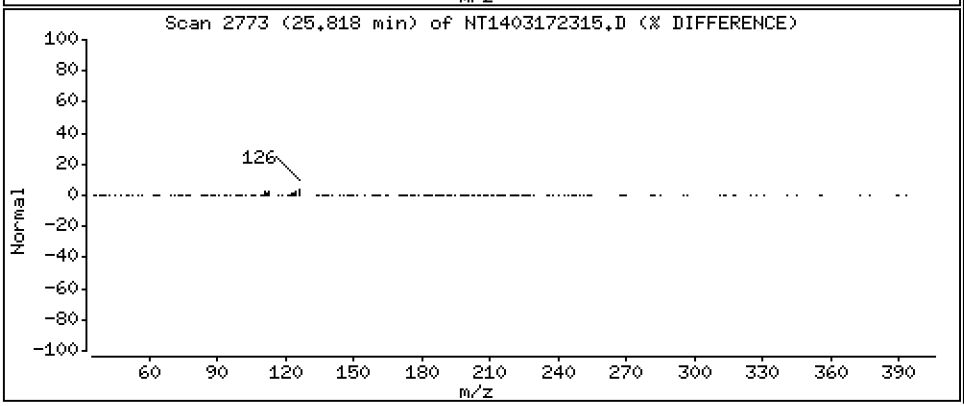












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Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM1

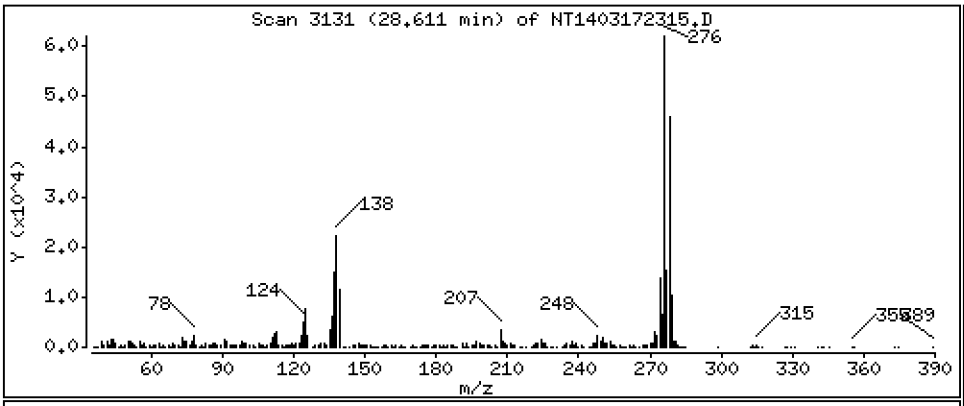
Operator: JGR

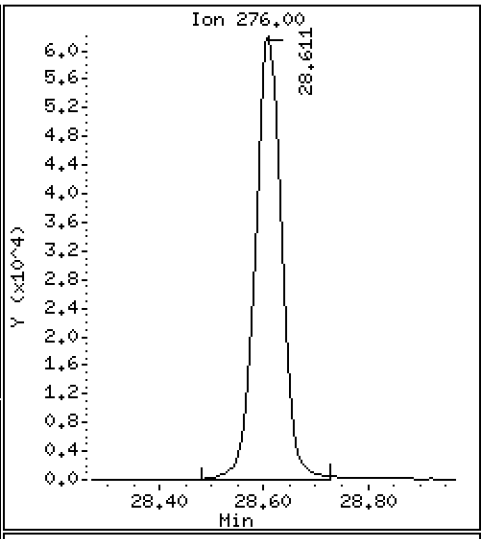
Column phase: ZB-5msi

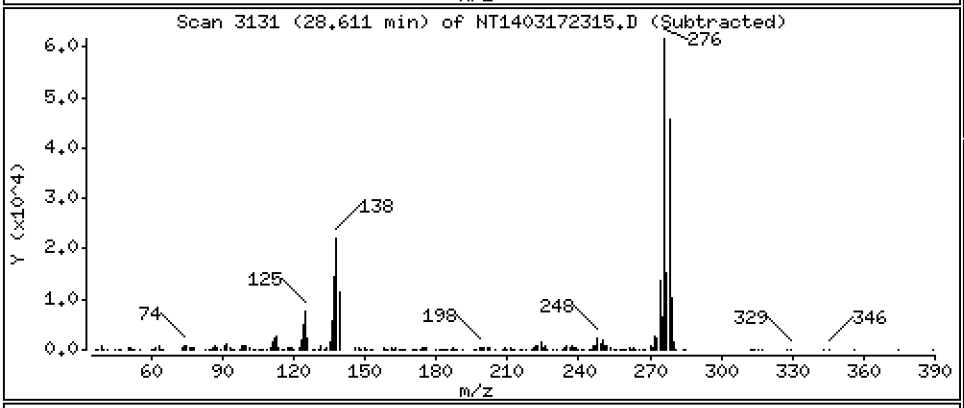
Column diameter: 0.25

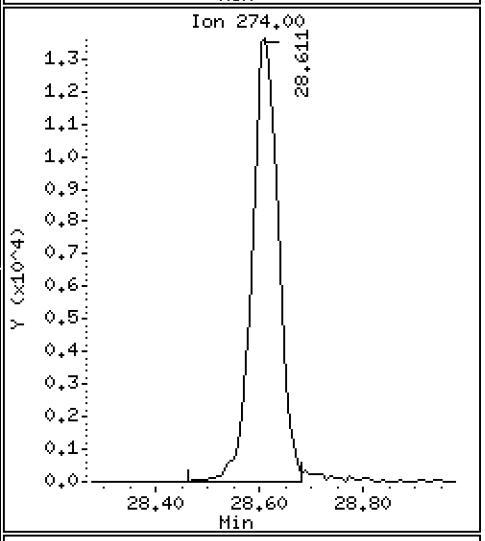
78 Indeno(1,2,3-cd)pyrene

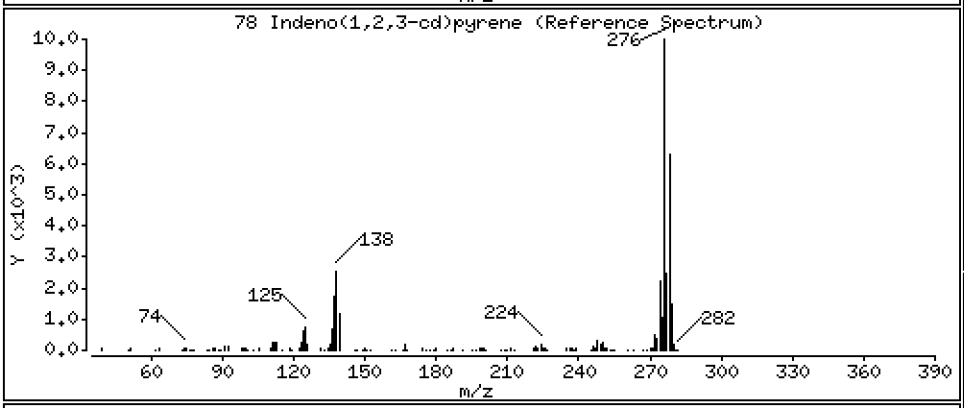
Concentration: 2.834 ug/mL

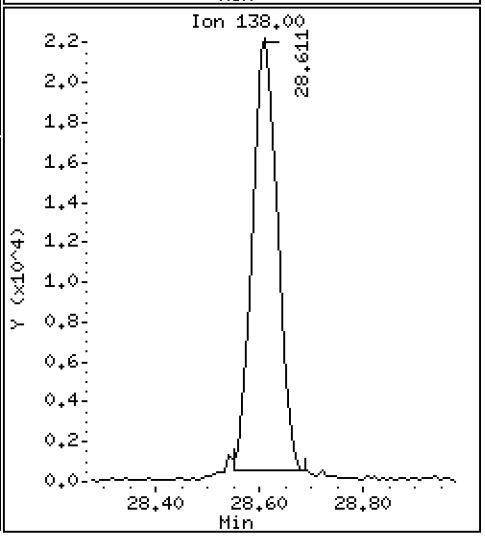


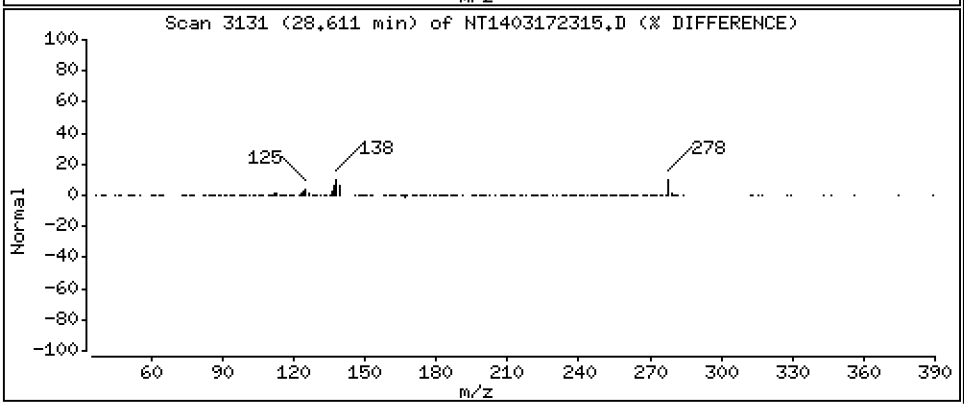












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Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM1

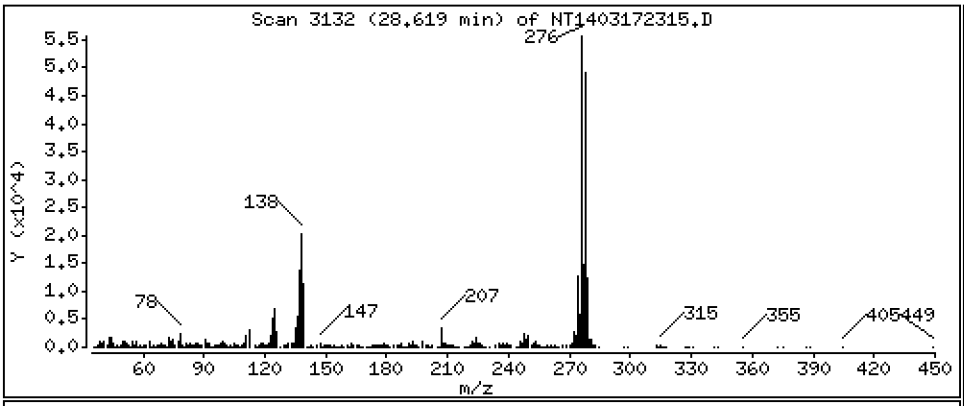
Operator: JGR

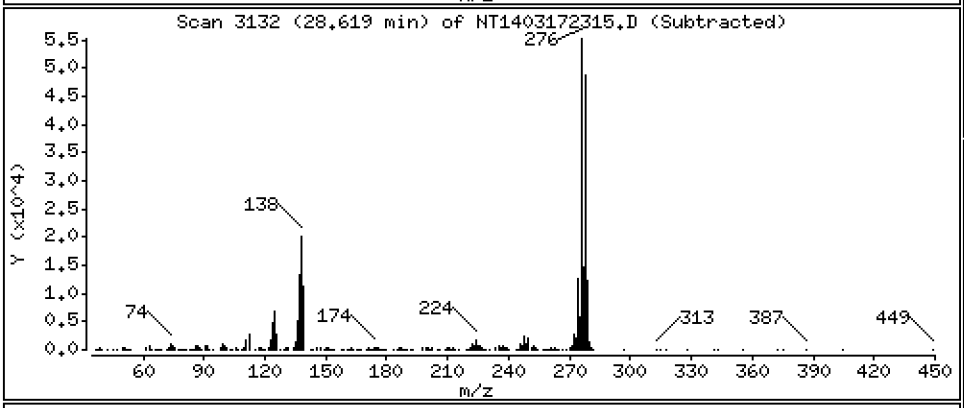
Column phase: ZB-5msi

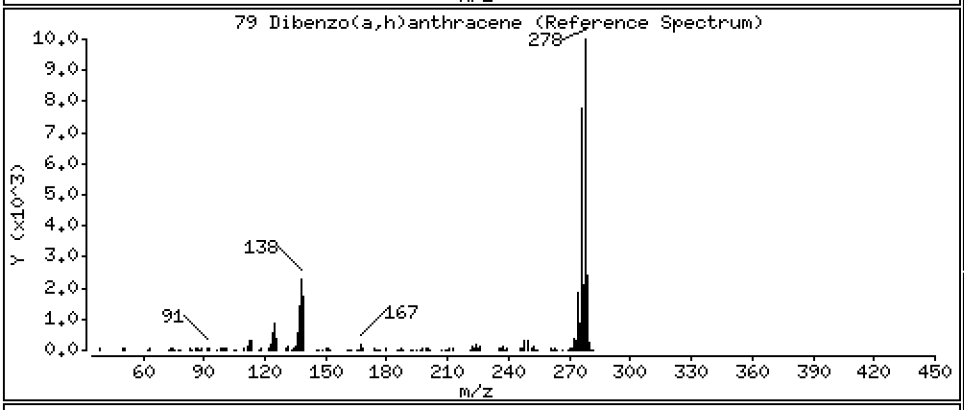
Column diameter: 0.25

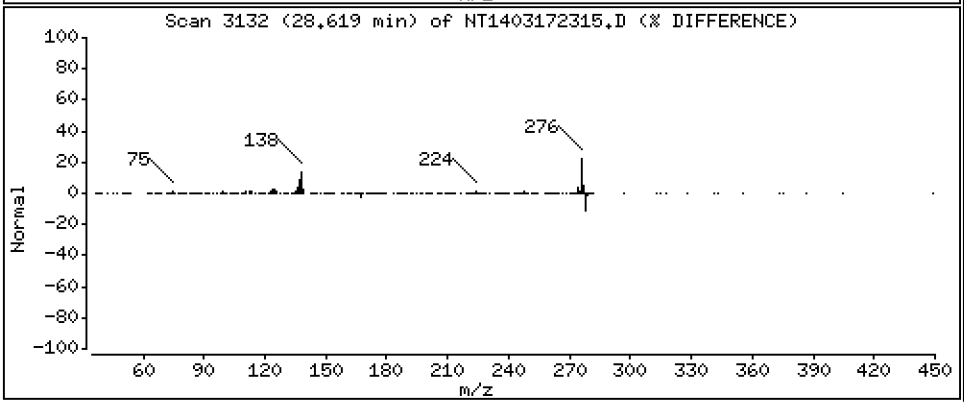
79 Dibenzo(a,h)anthracene

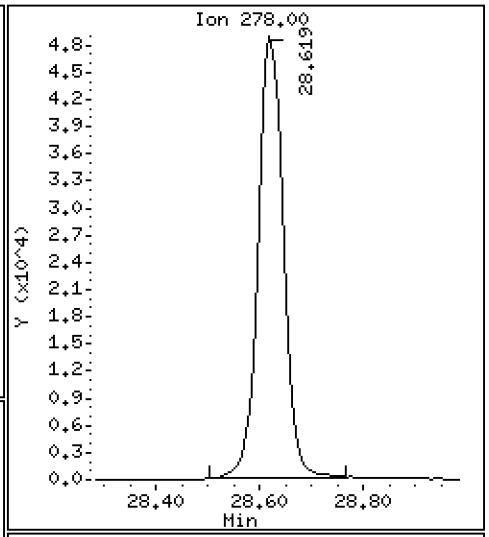
Concentration: 2.556 ug/mL

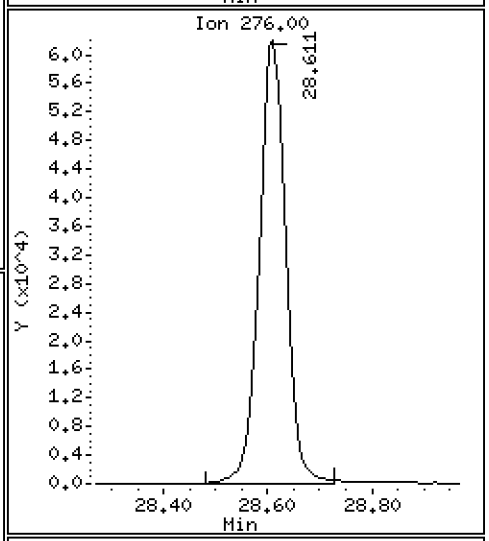


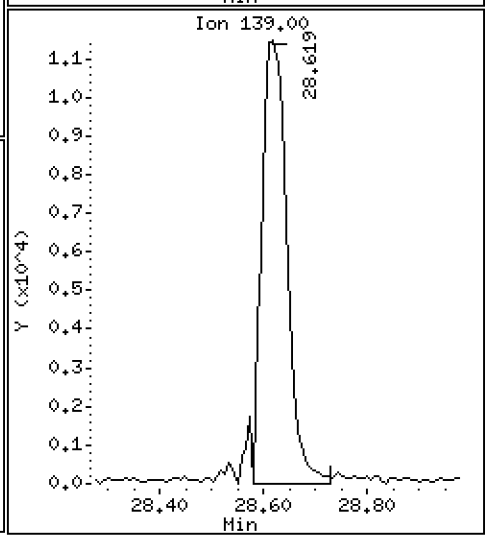












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Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM1

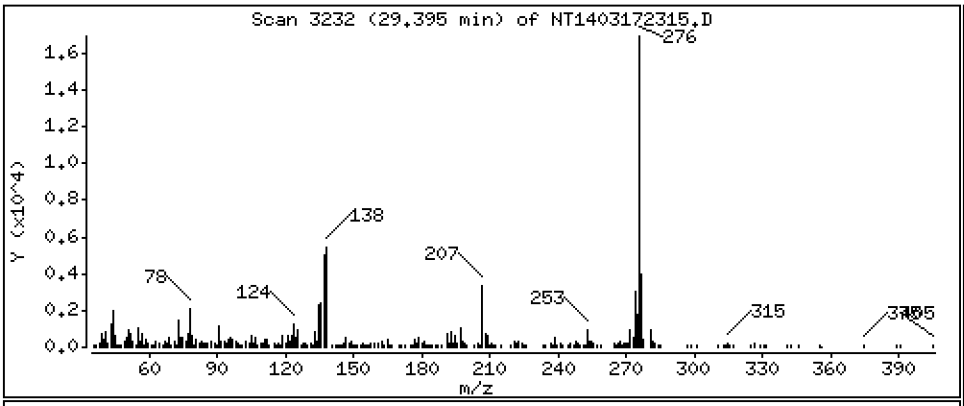
Operator: JGR

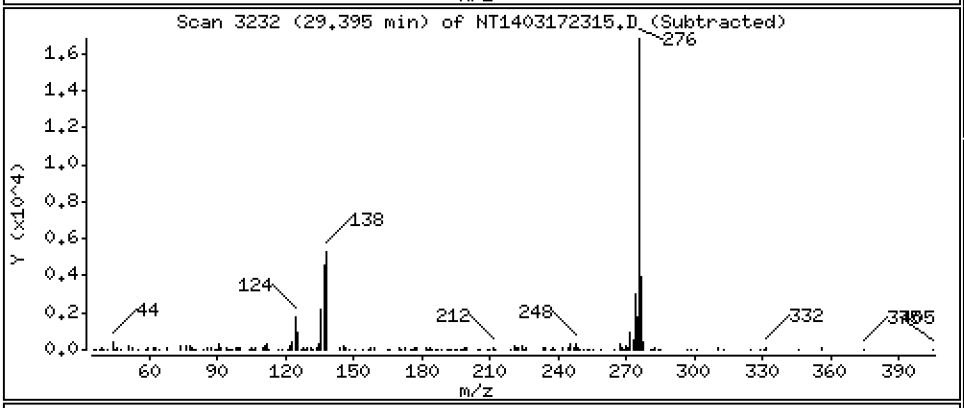
Column phase: ZB-5msi

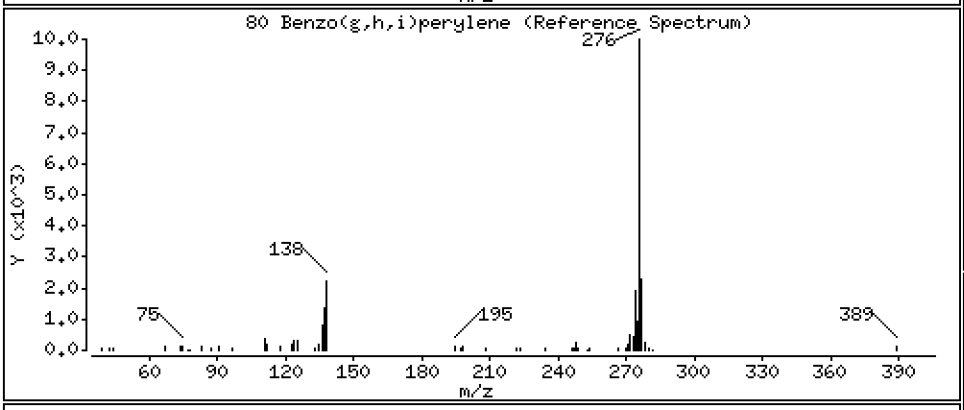
Column diameter: 0.25

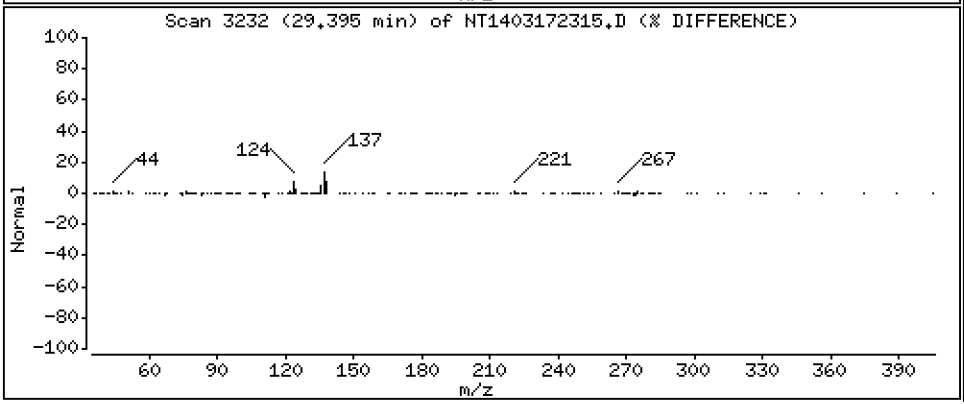
80 Benzo(g,h,i)perylene

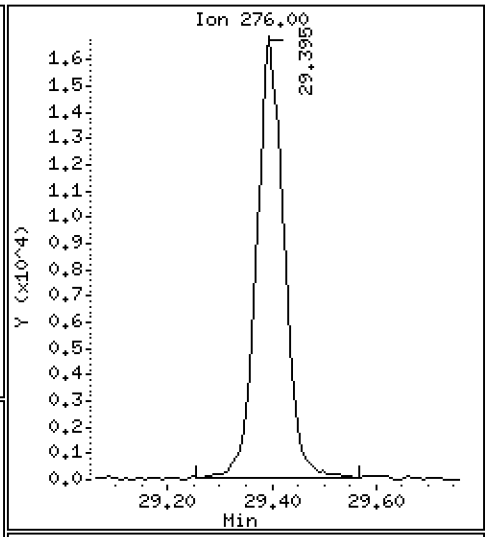
Concentration: 0.9751 ug/mL

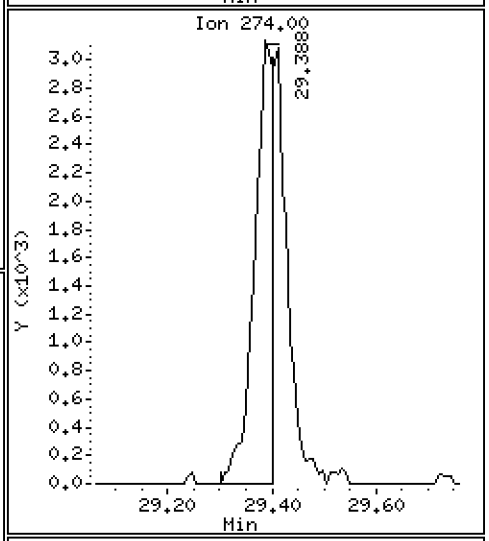


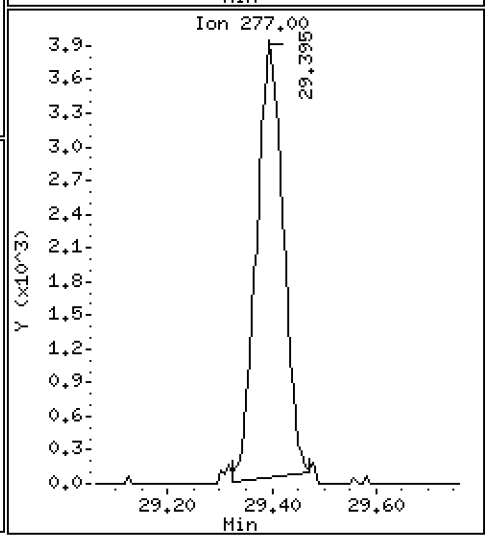












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Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM1

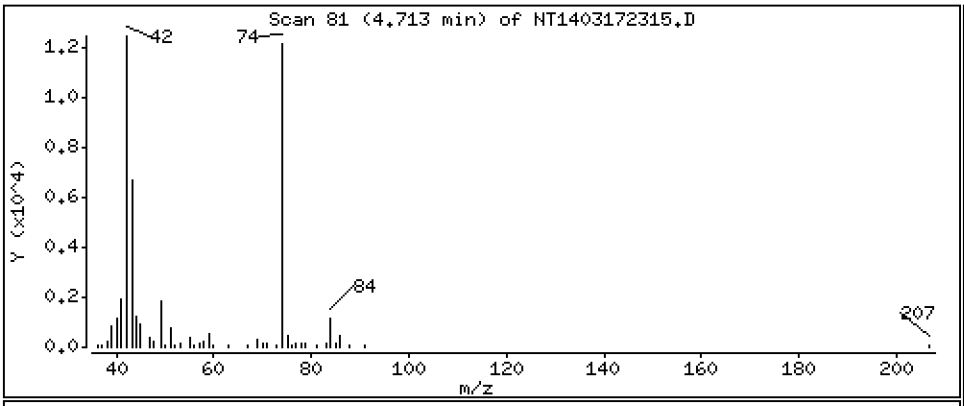
Operator: JGR

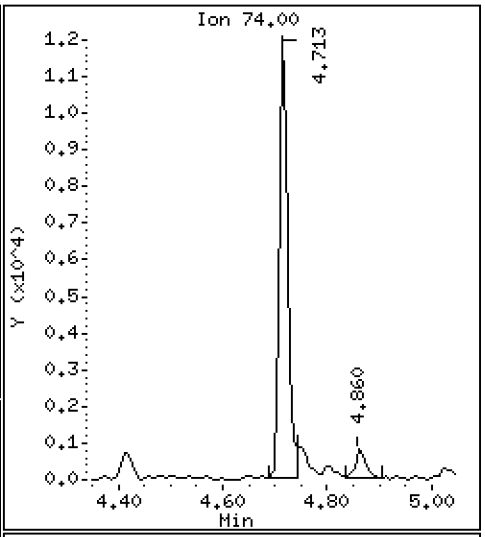
Column phase: ZB-5msi

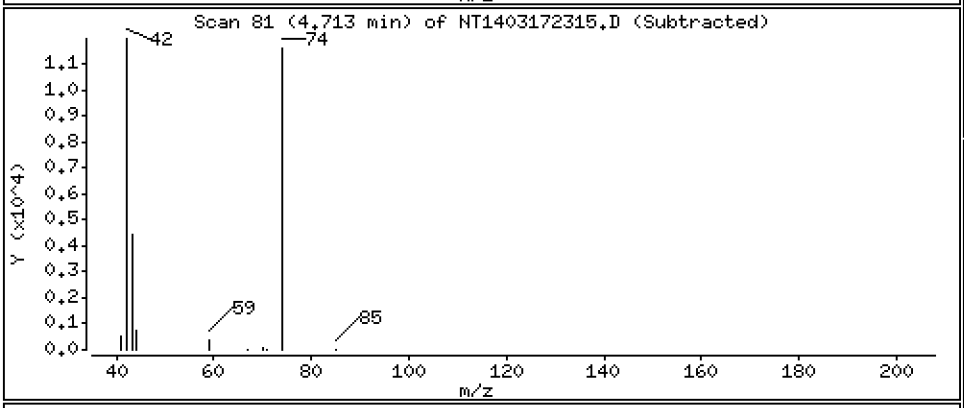
Column diameter: 0.25

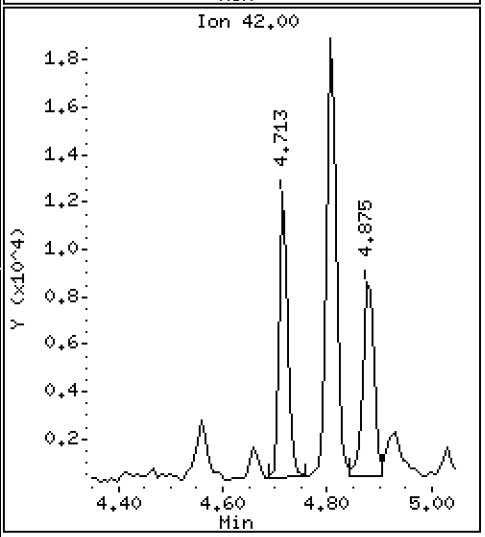
90 N-Nitrosodimethylamine

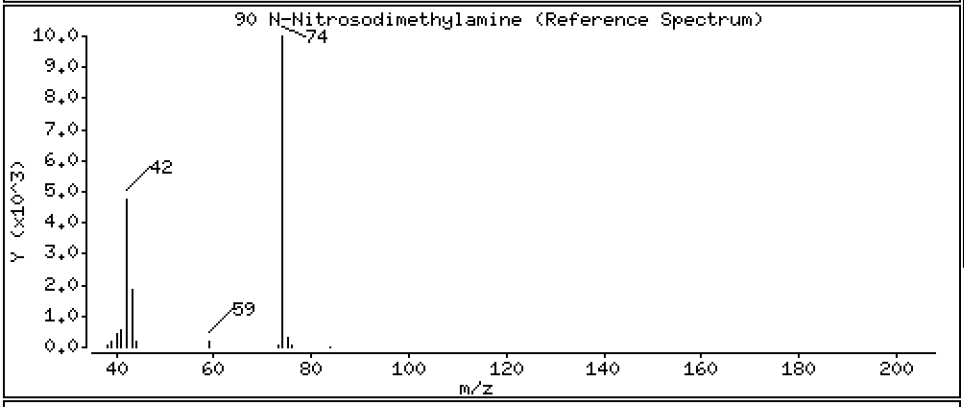
Concentration: 0.2841 ug/mL

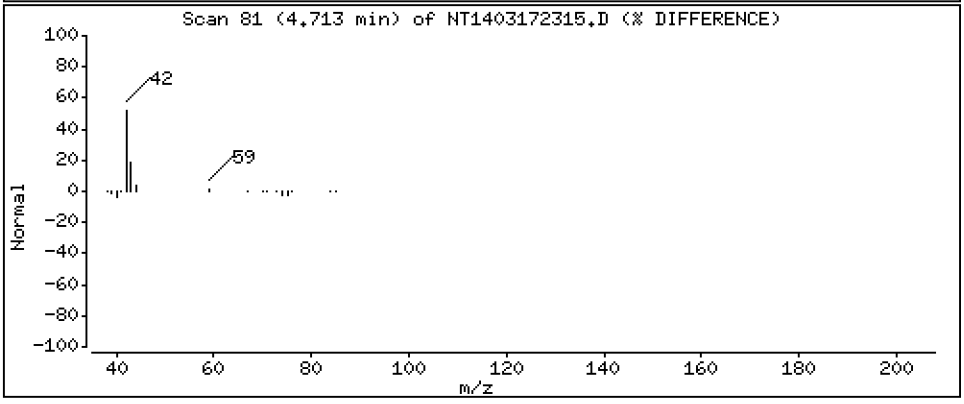












Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172315.D

Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM1

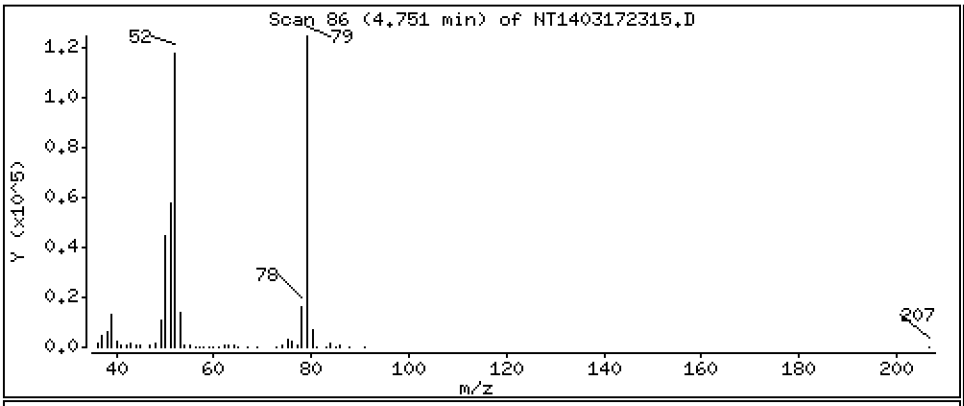
Operator: JGR

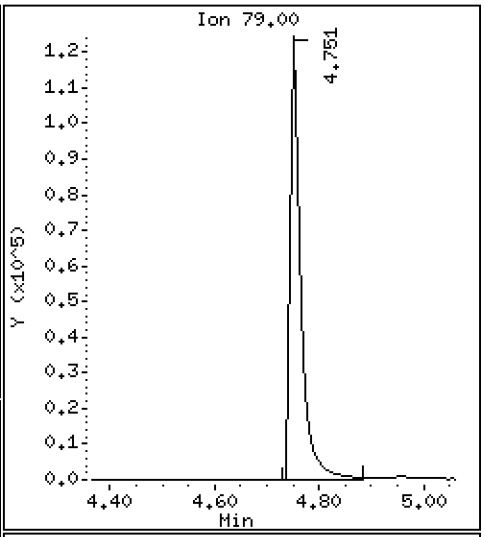
Column phase: ZB-5msi

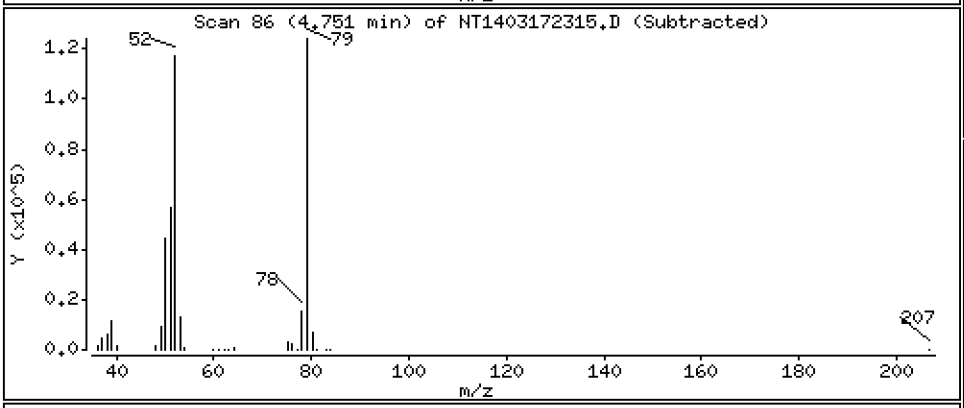
Column diameter: 0.25

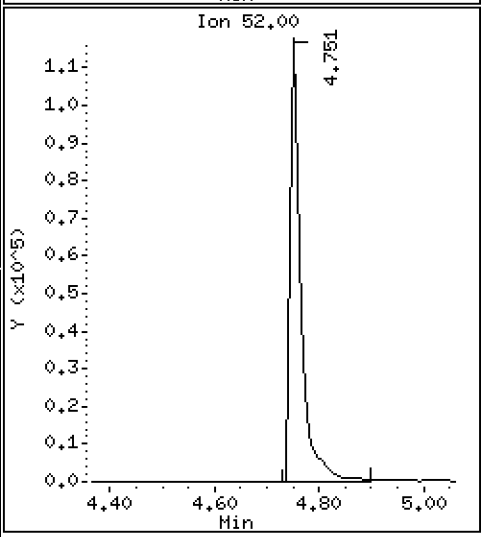
103 Pyridine

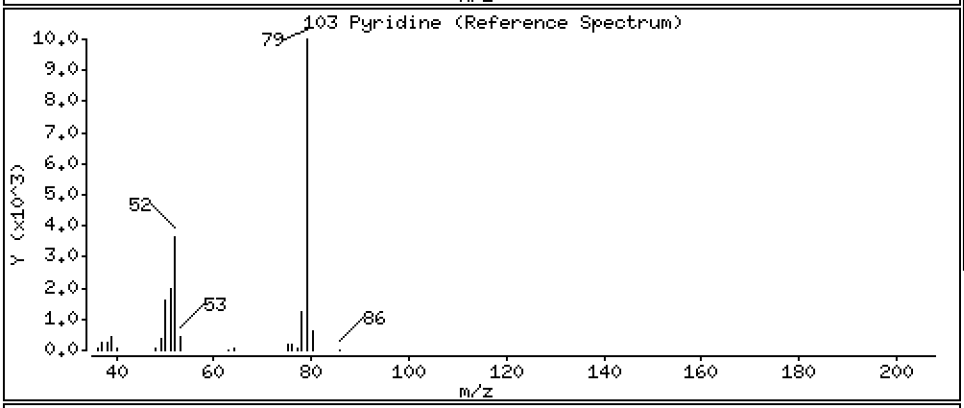
Concentration: 1.161 ug/mL

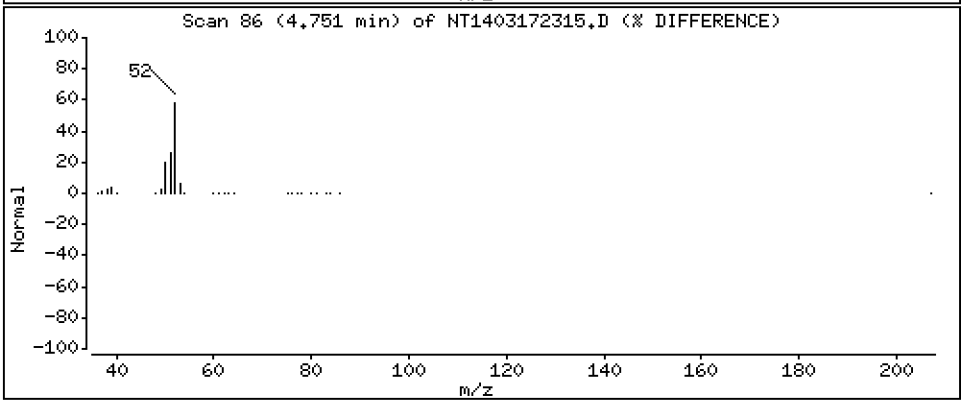












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Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM1

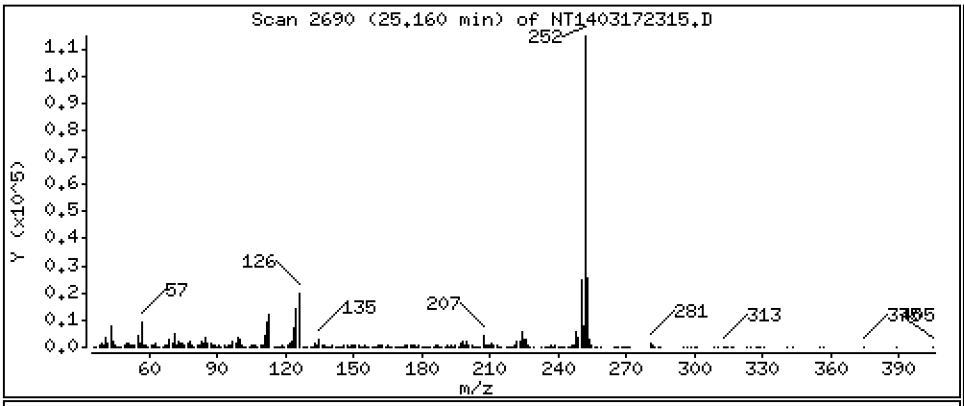
Operator: JGR

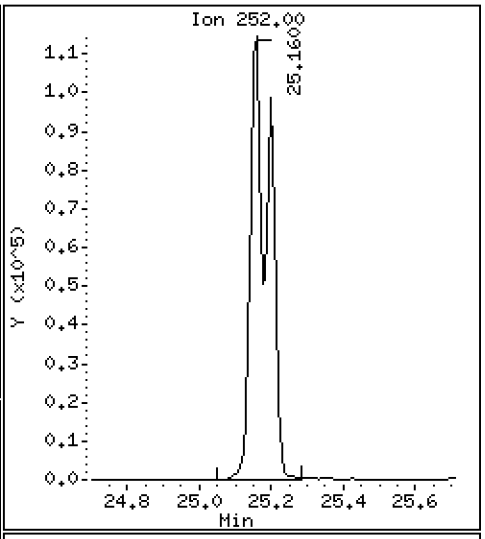
Column phase: ZB-5msi

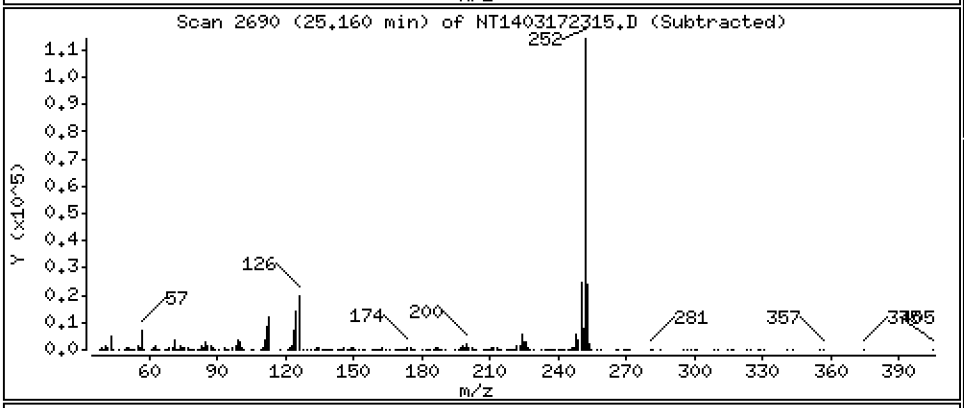
Column diameter: 0.25

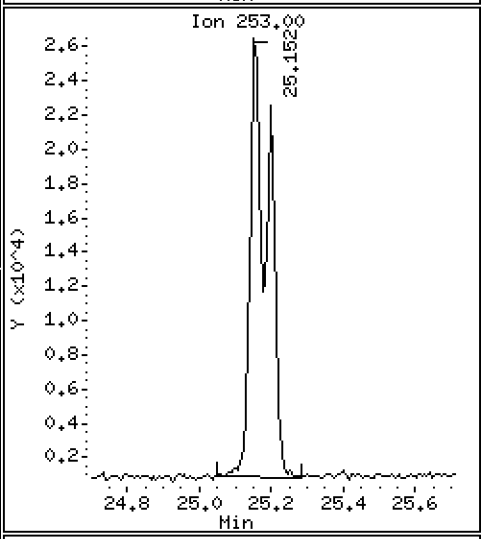
187 Total Benzofluoranthenes

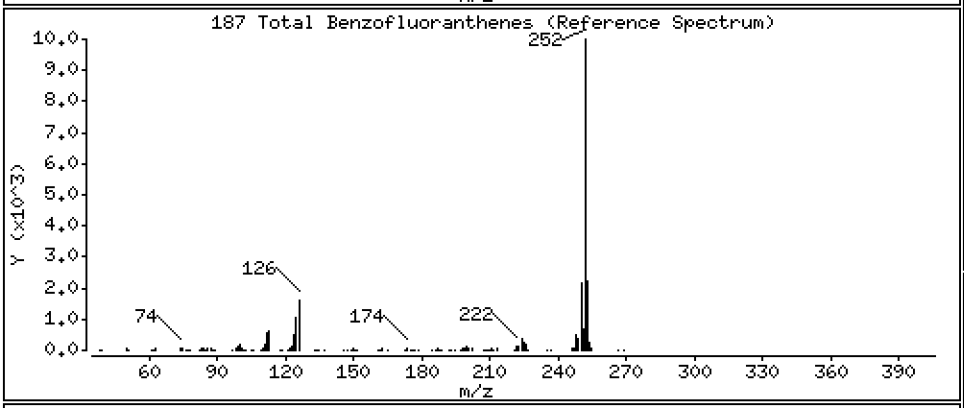
Concentration: 5.289 ug/mL

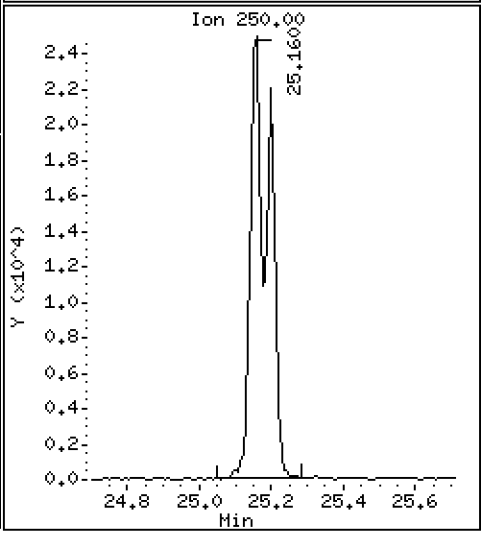


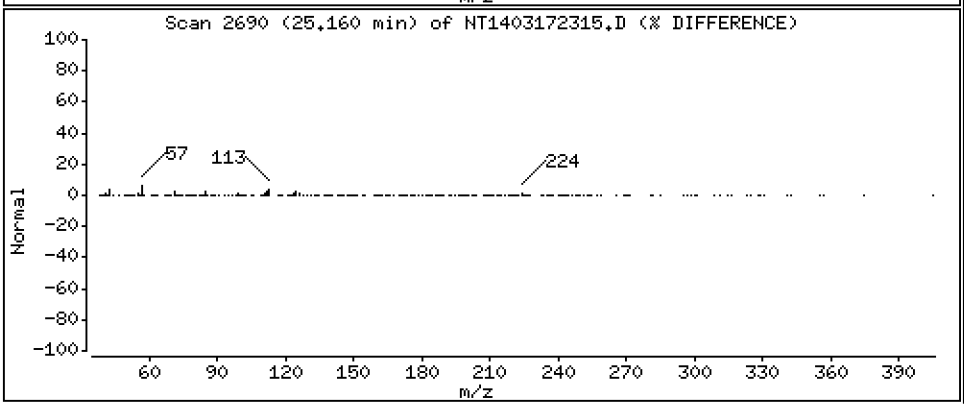












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Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM1

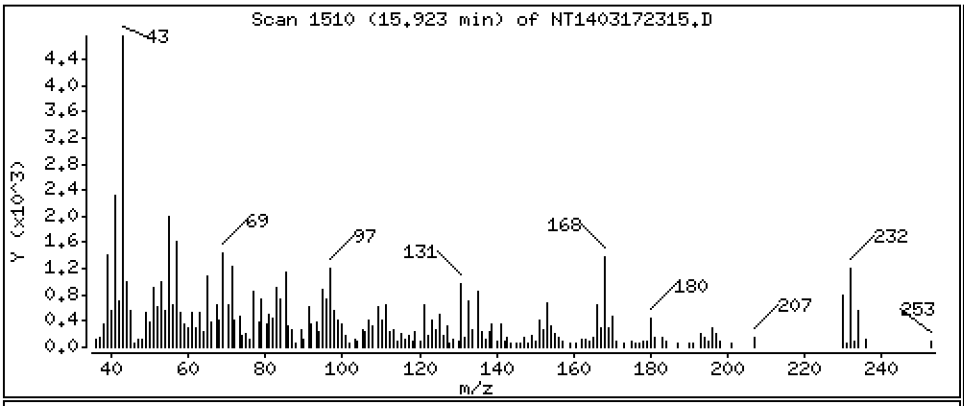
Operator: JGR

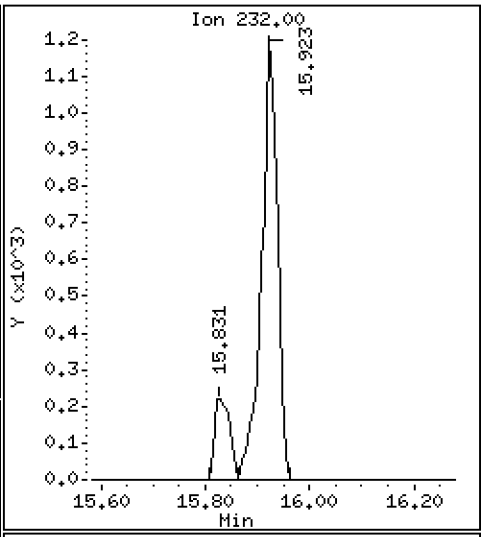
Column phase: ZB-5msi

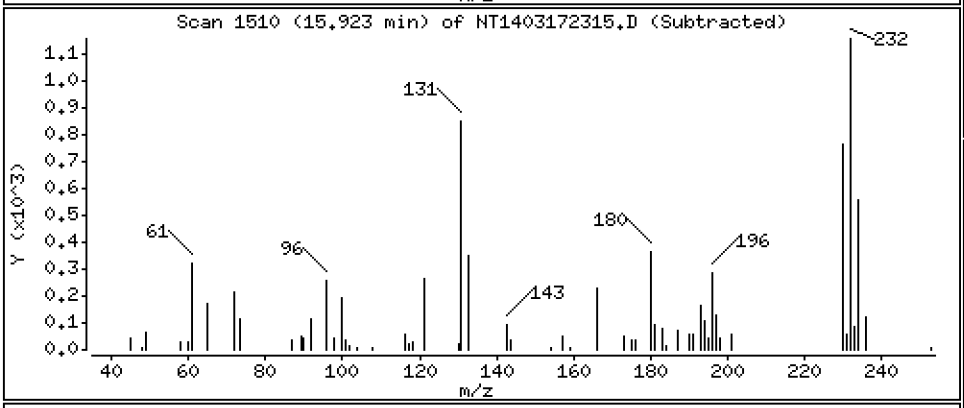
Column diameter: 0.25

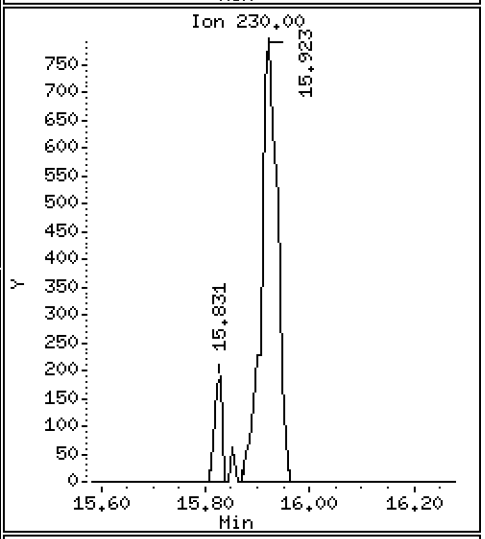
120 2,3,4,6-Tetrachlorophenol

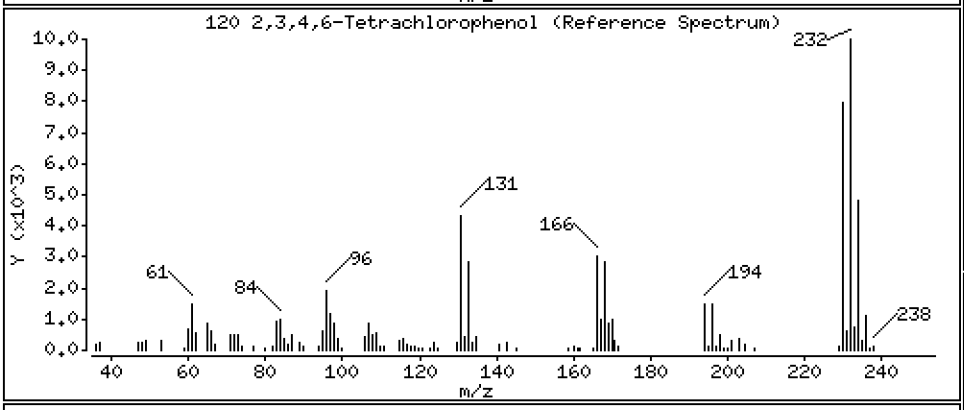
Concentration: 0.05498 ug/mL

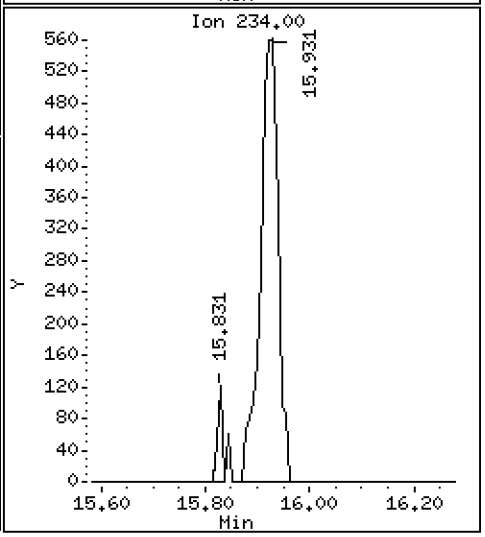


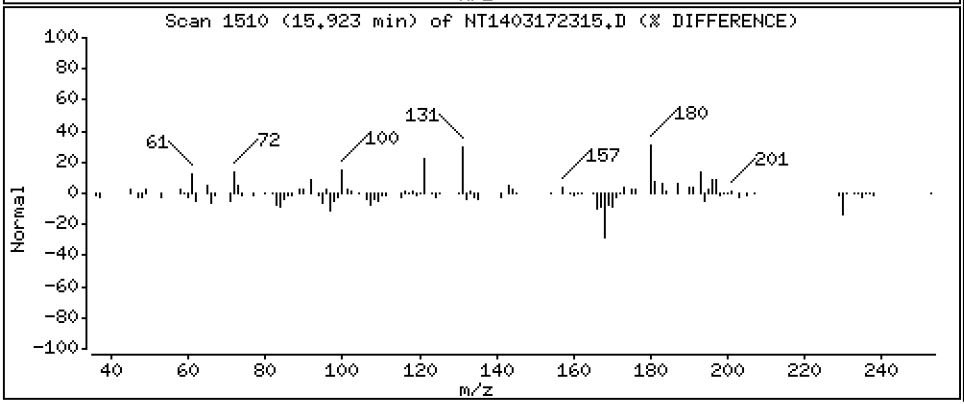












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230317.b\NT1403172315.D
Lab Smp Id: BLB0424-SRM1
Inj Date : 17-MAR-2023 22:55 MS Autotune Date: 11-MAR-2023 16:01
Operator : JGR Inst ID: nt14.i
Smp Info : BLB0424-SRM1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230317.b\ABN.m
Meth Date : 22-Mar-2023 08:03 van Quant Type: ISTD
Cal Date : 15-MAR-2023 15:50 Cal File: NT1403152308.D
Als bottle: 15
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)	
$	1 2-Fluorophenol	112	6.836	6.821	(1.000)	447818	5.66869	5.669	
$	2 Phenol-d5	99	8.413	8.412	(1.000)	576573	5.54359	5.544	
	3 Phenol	94	8.436	8.435	(1.000)	190626	1.72458	1.725	
$	5 2-Chlorophenol-d4	132	8.698	8.698	(1.000)	484443	5.90807	5.908	
	4 Bis(2-Chloroethyl)ether	93	Compound Not Detected.						
	6 2-Chlorophenol	128	8.721	8.729	(1.000)	48918	0.56228	0.5623	
	7 1,3-Dichlorobenzene	146	9.000	9.000	(1.000)	35650	0.40480	0.4048	
*	8 1,4-Dichlorobenzene-d4	152	9.062	9.062	(1.000)	232565	4.00000		(M)
	9 1,4-Dichlorobenzene	146	Compound Not Detected.						
$	10 1,2-Dichlorobenzene-d4	152	9.427	9.426	(1.000)	205991	3.76030	3.760	
	12 1,2-Dichlorobenzene	146	Compound Not Detected.						
	11 Benzyl alcohol	108	Compound Not Detected.						
	14 2,2'-oxybis(1-Chloropropane)	121	9.636	9.644	(1.000)	18533	0.73256	0.7326	
	13 2-Methylphenol	108	9.559	9.558	(1.000)	272898	3.49203	3.492	
	17 Hexachloroethane	117	Compound Not Detected.						
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.						
	15 4-Methylphenol	108	9.831	9.830	(1.000)	413564	4.46960	4.470	
$	18 Nitrobenzene-d5	82	10.164	10.164	(0.879)	380368	4.03953	4.040	
	19 Nitrobenzene	77	10.195	10.203	(0.882)	68997	0.75276	0.7528	
	20 Isophorone	82	10.645	10.653	(0.921)	111016	0.88707	0.8871	
	21 2-Nitrophenol	139	10.832	10.831	(0.937)	108340	2.07684	2.077	
	22 2,4-Dimethylphenol	107	10.886	10.885	(0.942)	285242	3.63848	3.638	
	23 Bis(2-Chloroethoxy)methane	93	Compound Not Detected.						
	24 Benzoic acid	105	10.994	11.103	(0.951)	67993	1.04000	1.040	
	25 2,4-Dichlorophenol	162	11.289	11.289	(0.977)	397527	6.37612	6.376	
	26 1,2,4-Trichlorobenzene	180	11.475	11.482	(0.993)	49035	0.63978	0.6398	
*	27 Naphthalene-d8	136	11.560	11.567	(1.000)	889784	4.00000		
	28 Naphthalene	128	11.606	11.606	(1.004)	388252	1.63330	1.633	
	29 4-Chloroaniline	127	Compound Not Detected.						
	30 Hexachlorobutadiene	225	11.969	11.976	(1.035)	46093	1.33199	1.332	
	31 4-Chloro-3-methylphenol	107	12.696	12.696	(1.098)	138449	1.83768	1.838	
	32 2-Methylnaphthalene	142	Compound Not Detected.						
	33 Hexachlorocyclopentadiene	237	Compound Not Detected.						

		QUANT SIG					CONCENTRATIONS ON-COLUMN	CONCENTRATIONS FINAL
Compounds		MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
34	2,4,6-Trichlorophenol	196	13.633	13.633	(0.897)	89192	1.98619	1.986
35	2,4,5-Trichlorophenol	196	13.703	13.702	(0.902)	151628	3.24033	3.240
$ 36	2-Fluorobiphenyl	172	13.795	13.795	(0.908)	667718	4.16516	4.165
37	2-Chloronaphthalene	162	14.004	14.012	(0.922)	197297	1.43593	1.436
38	2-Nitroaniline	65	Compound Not Detected.					
39	Dimethylphthalate	163	14.693	14.701	(0.967)	605099	4.09927	4.099
40	Acenaphthylene	152	14.879	14.879	(0.979)	257092	1.11399	1.114
41	2,6-Dinitrotoluene	165	Compound Not Detected.					
* 42	Acenaphthene-d10	164	15.196	15.196	(1.000)	442664	4.00000	
43	3-Nitroaniline	138	Compound Not Detected.					
44	Acenaphthene	153	15.258	15.265	(1.004)	494824	3.67234	3.672
45	2,4-Dinitrophenol	184	15.328	15.335	(1.009)	109035	4.10265	4.103
46	Dibenzofuran	168	15.590	15.590	(1.026)	889190	4.62239	4.622
47	4-Nitrophenol	109	15.436	15.435	(1.016)	168158	6.75322	6.753
48	2,4-Dinitrotoluene	165	15.645	15.652	(1.030)	161679	3.34481	3.345
50	Diethylphthalate	149	16.155	16.170	(1.063)	68451	0.44852	0.4485
49	Fluorene	166	16.302	16.309	(1.073)	507018	2.78053	2.781
51	4-Chlorophenyl-phenylether	204	16.294	16.301	(1.072)	132320	1.69050	1.691
52	4-Nitroaniline	138	Compound Not Detected.					
53	4,6-Dinitro-2-methylphenol	198	16.487	16.494	(0.904)	183713	7.03926	7.039
54	N-Nitrosodiphenylamine	169	16.541	16.548	(0.907)	292767	2.88323	2.883
$ 55	2,4,6-Tribromophenol	330	16.841	16.841	(1.108)	108515	6.45685	6.457
56	4-Bromophenyl-phenylether	248	17.304	17.304	(0.949)	216577	6.32636	6.326
57	Hexachlorobenzene	284	Compound Not Detected.					
58	Pentachlorophenol	266	17.977	17.976	(0.986)	75224	2.99887	2.999
* 59	Phenanthrene-d10	188	18.240	18.247	(1.000)	747605	4.00000	
60	Phenanthrene	178	18.286	18.294	(1.003)	910740	4.26376	4.264
61	Anthracene	178	18.379	18.387	(1.008)	402703	1.95687	1.957
62	Carbazole	167	18.712	18.711	(1.026)	970727	5.30174	5.302
63	Di-n-butylphthalate	149	19.509	19.508	(1.070)	374314	1.61284	1.613
64	Fluoranthene	202	20.677	20.677	(0.888)	434927	2.91857	2.919
65	Pyrene	202	21.103	21.102	(0.906)	536651	3.51160	3.512
$ 66	Terphenyl-d14	244	21.389	21.389	(0.918)	568431	5.49442	5.494
67	Butylbenzylphthalate	149	22.310	22.310	(0.958)	293351	4.38141	4.381
68	Benzo(a)anthracene	228	23.263	23.270	(0.999)	684787	5.07033	5.070
* 69	Chrysene-d12	240	23.294	23.293	(1.000)	366287	4.00000	
70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
71	Chrysene	228	23.332	23.340	(1.002)	152558	1.24810	1.248
72	bis(2-Ethylhexyl)phthalate	149	23.332	23.332	(0.960)	263965	2.72273	2.723
* 134	Di-n-octylphthalate-d4	153	24.316	24.323	(1.000)	736461	4.00000	
73	Di-n-octylphthalate	149	24.331	24.331	(1.001)	373463	1.97265	1.973
74	Benzo(b)fluoranthene	252	25.159	25.159	(0.970)	230663	2.80653	2.807
75	Benzo(k)fluoranthene	252	25.198	25.205	(0.972)	204254	2.50703	2.507
76	Benzo(a)pyrene	252	25.818	25.817	(0.996)	289070	4.11302	4.113
* 77	Perylene-d12	264	25.934	25.933	(1.000)	232583	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.610	28.618	(1.103)	216748	2.83351	2.834
79	Dibenzo(a,h)anthracene	278	28.618	28.633	(1.104)	164782	2.55600	2.556
80	Benzo(g,h,i)perylene	276	29.395	29.410	(1.133)	61474	0.97513	0.9751
90	N-Nitrosodimethylamine	74	4.712	4.697	(1.000)	14215	0.28411	0.2841
91	Aniline	93	Compound Not Detected.					
93	Benzidine	184	Compound Not Detected.					
103	Pyridine	79	4.751	4.712	(1.000)	179941	1.16133	1.161
105	1-methylnaphthalene	142	Compound Not Detected.					
111	Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.159	25.205	(0.970)	412860	5.28928	5.289
120 2,3,4,6-Tetrachlorophenol	232	15.923	15.930	(1.048)	2465	0.05498	0.05498

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1403172315.D
Lab Smp Id: BLB0424-SRM1
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt14.i\20230317.b\ABN.m
Misc Info:

Calibration Date: 17-MAR-2023
Calibration Time: 15:03
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	221219	110610	442438	232565	5.13
27 Naphthalene-d8	809500	404750	1619000	889784	9.92
42 Acenaphthene-d10	420689	210345	841378	442664	5.22
59 Phenanthrene-d10	757520	378760	1515040	747605	-1.31
69 Chrysene-d12	450500	225250	901000	366287	-18.69
134 Di-n-octylphthala	828388	414194	1656776	736461	-11.10
77 Perylene-d12	339914	169957	679828	232583	-31.58

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.06	8.56	9.56	9.06	0.00
27 Naphthalene-d8	11.57	11.07	12.07	11.56	-0.06
42 Acenaphthene-d10	15.20	14.70	15.70	15.20	0.00
59 Phenanthrene-d10	18.25	17.75	18.75	18.24	-0.04
69 Chrysene-d12	23.29	22.79	23.79	23.29	0.00
134 Di-n-octylphthala	24.32	23.82	24.82	24.32	-0.03
77 Perylene-d12	25.93	25.43	26.43	25.93	0.00

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

REVIEW SUMMARY FOR FILE - NT1403172315.D

Lab ID: BLB0424-SRM1
nt14.i, ABN.m, 17-MAR-2023 22:55

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.951	0.960	-0.0087	Benzoic acid

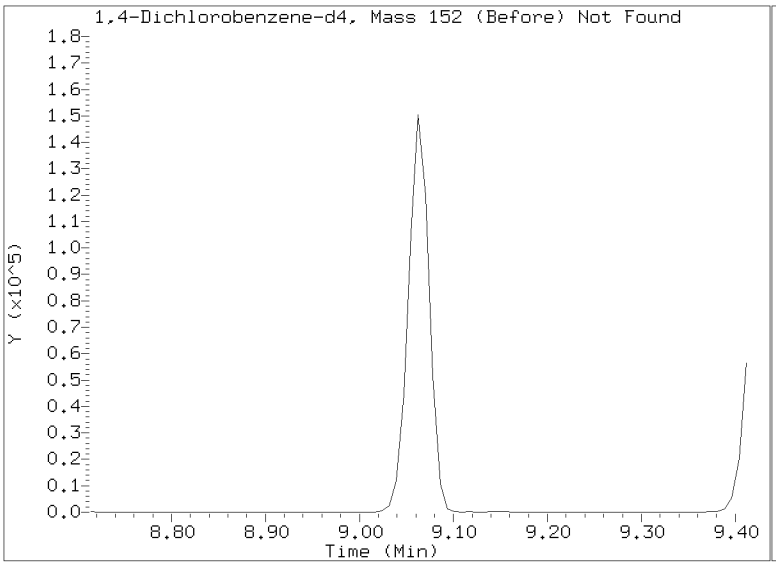
RRT check based on Ccal File: NT1403172302.D

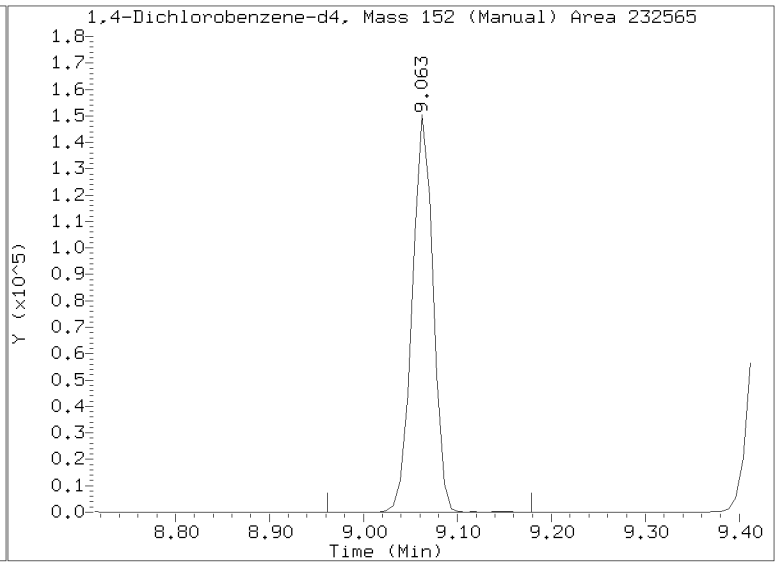
On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

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

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230317.b/NT1403172315.D
Injection Date: 17-MAR-2023 22:55
Lab ID:BLB0424-SRM1 Client ID:
Report Date: 03/22/2023 08:12





Analytical Resources, LLC
Analytical Chemists and Consultants

MASS SPECTROMETER
INSTRUMENT PERFORMANCE CHECK
EPA 8270E

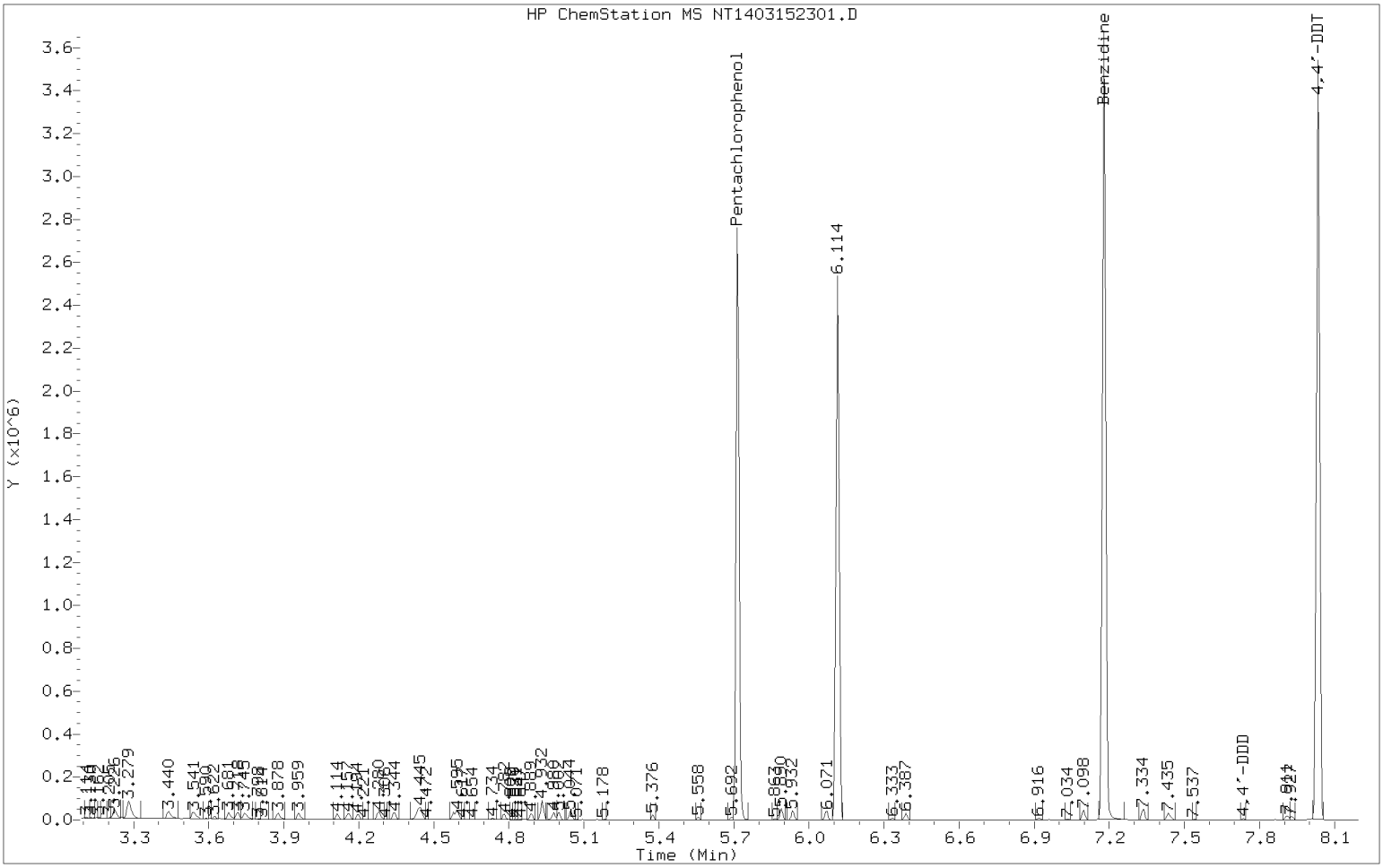
Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Lab File ID:	NT1403152301.D	Injection Date:	03/15/23
Instrument ID:	NT14	Injection Time:	12:00
Sequence:	SLC0160	Lab Sample ID:	SLC0160-TUN1

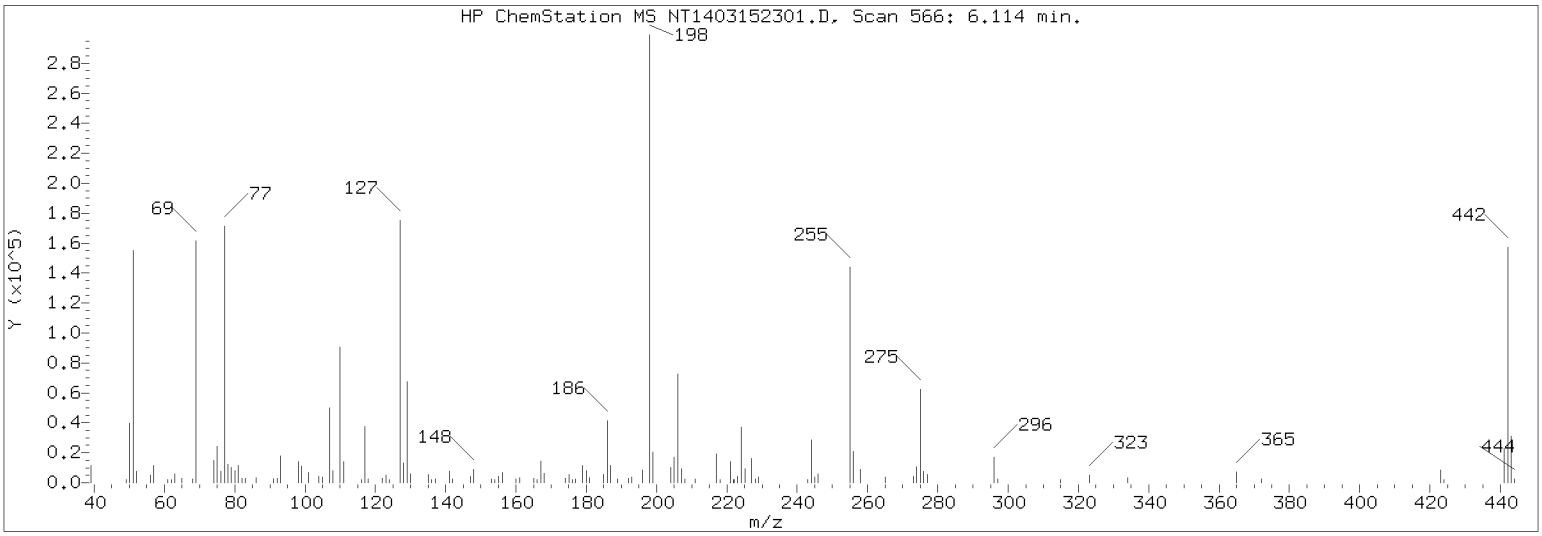
m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
68	Less than 2% of 69	0.674	PASS
69	Less than 100% of 198	53.4	PASS
70	Less than 2% of 69	0	PASS
197	Less than 2% of 198	0	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.72	PASS
365	1 - 100% of 198	2.71	PASS
441	Less than 150% of 443	72.2	PASS
442	1 - 200% of 198	58.3	PASS
443	15 - 24% of 442	19.2	PASS
4,4'-DDD	Less than 20% of 4,4'-DDT		
4,4'-DDE	Less than 20% of 4,4'-DDT		
4,4'-DDT	Base peak, 100% relative abundance		

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
MS Tune	SLC0160-TUN1	NT1403152301.D	03/15/2023	12:00
Cal Standard	SLC0160-CAL7	NT1403152302.D	03/15/2023	12:13
Cal Standard	SLC0160-CAL6	NT1403152303.D	03/15/2023	12:49
Cal Standard	SLC0160-CAL5	NT1403152304.D	03/15/2023	13:26
Cal Standard	SLC0160-CAL4	NT1403152305.D	03/15/2023	14:02
Cal Standard	SLC0160-CAL3	NT1403152306.D	03/15/2023	14:38
Cal Standard	SLC0160-CAL2	NT1403152307.D	03/15/2023	15:14
Cal Standard	SLC0160-CAL1	NT1403152308.D	03/15/2023	15:50
Secondary Cal Check	SLC0160-SCV1	NT1403152311.D	03/15/2023	17:39
Initial Cal Blank	SLC0160-ICB1	NT1403152312.D	03/15/2023	18:15

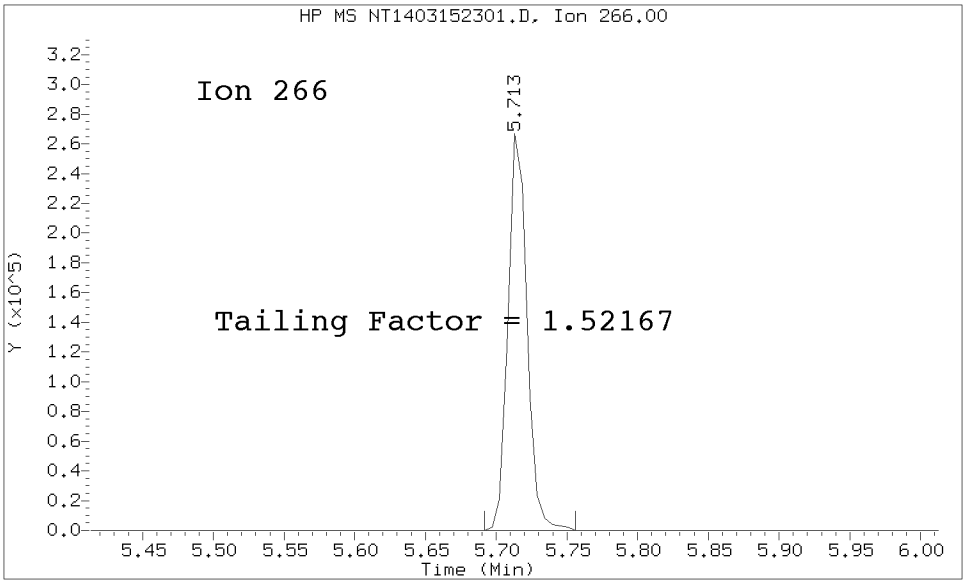
DFTPP TAILING FACTOR AND BREAKDOWN GRAPHIC REPORT

Datafile Analyzed: /20230315.b/NT1403152301.D/NT1403152301.D
Method Used: \20230315.b\DFTPP8270E.m Inst: nt14
Injection Date: 15-MAR-2023 12:00 Operator: JGR
Sample Info: SLC0160-TUN1 SLC0160-TUN1
Report Date: 03/21/2023 12:49



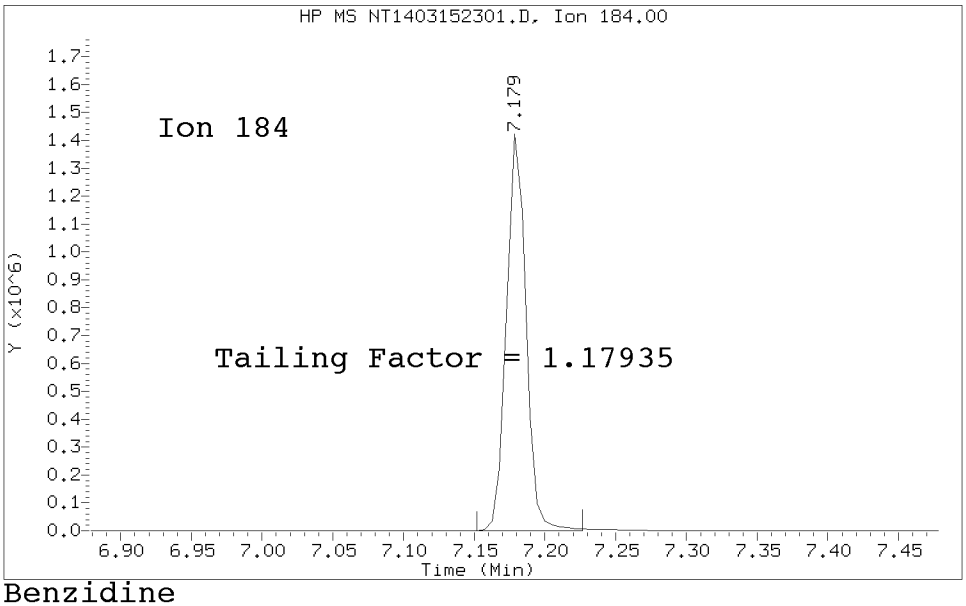


Datafile Analyzed: /20230315.b/NT1403152301.D/NT1403152301.D
Method Used: \20230315.b\DFTPP8270E.m\sw846ddt.m Inst: nt14
Injection Date: 15-MAR-2023 12:00 Operator: JGR
Sample Info: SLC0160-TUN1
Report Date: 03/21/2023 12:49



Pentachlorophenol
==========
 Exp. RT = 5.681
Found RT = 5.713

Tail Factor = 1.522 Maximum Allowed = 2.0



Benzidine
=========
 Exp. RT = 7.146
Found RT = 7.179

Tail Factor = 1.179 Maximum Allowed = 2.0

8270 TAILING FACTOR/BREAKDOWN SUMMARY RESULTS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test
Pentachlorophenol	1.5216693	2.000	PASS
Benzidine	1.1793548	2.000	PASS

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	570011			N/A
4,4-DDE	0	0.0	20.0	PASS
4,4-DDD	2915	0.5	20.0	PASS
4,4-DDD + DDE	2915	0.5	20.0	PASS

Tuning Sample, nt14.i/20230315.b/NT1403152301.D, *** PASSED ***

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
68	Less than 2.00% of mass 69	0.36 (0.67)
69	Mass 69 relative abundance	53.44
70	Less than 2.00% of mass 69	0.00 (0.00)
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.72
365	1.00 - 100.00% of mass 198	2.71
441	Less than 150.00% of mass 443	8.08 (72.22)
442	Less than 200.00% of mass 198	58.28
443	15.00 - 24.00% of mass 442	11.19 (19.20)

Data File: NT1403152301.D
Spectrum: Avg. Scans 565-567 (6.11), Background Scan 560
Location of Maximum: 198.00
Number of points: 121

m/z	Y	m/z	Y	m/z	Y	m/z	Y
39.00	9069	105.00	2863	168.00	5614	228.00	794
49.00	671	107.00	39032	174.00	2579	229.00	2862
50.00	30976	108.00	6346	175.00	4842	243.00	696
51.00	125768	110.00	71896	176.00	720	244.00	22688
52.00	6453	111.00	11106	177.00	2298	245.00	3011
56.00	4179	116.00	757	179.00	9119	246.00	4609
57.00	8934	117.00	29992	180.00	6294	255.00	114968
61.00	717	118.00	874	181.00	2818	256.00	16984
62.00	680	122.00	2529	185.00	4402	258.00	7242
63.00	4715	123.00	4032	186.00	32272	265.00	2218
65.00	1773	124.00	773	187.00	9241	273.00	3465
68.00	849	127.00	138368	189.00	1636	274.00	8836
69.00	126008	128.00	10413	192.00	2615	275.00	49816
74.00	11539	129.00	53960	193.00	3054	276.00	6361
75.00	19136	130.00	4541	196.00	6505	277.00	4187
76.00	6049	135.00	4342	198.00	235776	296.00	14150
77.00	134016	136.00	766	199.00	15852	297.00	810
78.00	9331	137.00	800	204.00	8038	315.00	707
79.00	8099	141.00	6361	205.00	13686	323.00	4245
80.00	6487	142.00	869	206.00	57704	334.00	2072
81.00	9538	147.00	3337	207.00	7569	365.00	6386
82.00	1806	148.00	7192	208.00	1530	372.00	1786
83.00	1759	153.00	830	211.00	1585	423.00	7390
86.00	2890	154.00	714	217.00	15135	424.00	1369
91.00	1612	155.00	3489	218.00	723	441.00	19048
92.00	1761	156.00	5350	221.00	10741	442.00	137408
93.00	14267	160.00	806	222.00	1546	443.00	26376
98.00	10738	161.00	2807	223.00	3284	444.00	1928
99.00	8546	165.00	1720	224.00	30088		
101.00	5073	166.00	753	225.00	7730		
104.00	3305	167.00	9750	227.00	12951		

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GC00048	Instrument:	NT14
Calibration Date:	03/15/2023	Column (1):	ZB-5MS

Calibration Comments: 625/8270E ICAL

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RRF	Conc	**RRF**	Conc	RRF	Conc	RRF	Conc	**RRF**	Conc	**RRF**
Phenol	0.2	1.88891	0.5	1.904159	1	1.926926	2.5	1.933496	5	1.828031	10	1.873074
bis(2-chloroethyl) ether	0.2	1.420175	0.5	1.410168	1	1.412981	2.5	1.347341	5	1.271815	10	1.328625
2-Chlorophenol	0.2	1.484706	0.5	1.456512	1	1.496775	2.5	1.491332	5	1.436785	10	1.502912
1,3-Dichlorobenzene	0.2	1.615539	0.5	1.537286	1	1.520278	2.5	1.500631	5	1.422329	10	1.465085
1,4-Dichlorobenzene	0.2	1.558385	0.5	1.480223	1	1.45647	2.5	1.438177	5	1.372437	10	1.408767
1,2-Dichlorobenzene	0.2	1.579535	0.5	1.431535	1	1.420979	2.5	1.421769	5	1.352894	10	1.403985
Benzyl Alcohol	0.2	0.7662078	0.5	0.8510741	1	0.8727812	2.5	0.8921109	5	0.8967278	10	0.9239865
2,2'-Oxybis(1-chloropropane)	0.2	0.4616527	0.5	0.4286266	1	0.4245899	2.5	0.4382393	5	0.4320322	10	0.4138697
2-Methylphenol	0.2	1.290424	0.5	1.322433	1	1.321582	2.5	1.355874	5	1.318967	10	1.355112
Hexachloroethane	0.2	0.6162911	0.5	0.6158599	1	0.6057372	2.5	0.6235277	5	0.6000586	10	0.6302724
N-Nitroso-di-n-Propylamine	0.2	1.029841	0.5	1.047539	1	1.054577	2.5	1.062109	5	1.034846	10	1.062117
4-Methylphenol	0.2	1.414469	0.5	1.568852	1	1.58332	2.5	1.588676	5	1.551601	10	1.673489
Nitrobenzene	0.2	0.405315	0.5	0.401859	1	0.421201	2.5	0.4089856	5	0.4085726	10	0.4160657
Isophorone	0.2	0.5023024	0.5	0.5003246	1	0.5438807	2.5	0.5758134	5	0.5891546	10	0.6065499
2-Nitrophenol	0.2	0.1647012	0.5	0.173489	1	0.216579	2.5	0.2180036	5	0.2374477	10	0.2450178
2,4-Dimethylphenol	0.4	0.3718613	1	0.3544129	2	0.3692202	5	0.3486056	10	0.346171	20	0.3379494
Bis(2-Chloroethoxy)methane	0.2	0.4021161	0.5	0.3780456	1	0.3859032	2.5	0.3630401	5	0.3689065	10	0.3727306
2,4-Dichlorophenol	0.4	0.2675487	1	0.2691378	2	0.2877477	5	0.2749146	10	0.2814592	20	0.29223
1,2,4-Trichlorobenzene	0.2	0.3341873	0.5	0.3188198	1	0.3679757	2.5	0.3495679	5	0.3453553	10	0.3463569
Naphthalene	0.2	1.114898	0.5	1.055618	1	1.073305	2.5	1.027183	5	1.039016	10	1.062216
Benzoic acid			2	0.1587533	4	0.2330815	10	0.2659892	20	0.2972718	40	0.3194996
4-Chloroaniline			1	0.4205172	2	0.4444515	5	0.4339387	10	0.4491171	20	0.4596089
Hexachlorobutadiene	0.2	0.168814	0.5	0.1496756	1	0.1588532	2.5	0.149704	5	0.1507756	10	0.153445
4-Chloro-3-Methylphenol			1	0.305307	2	0.335504	5	0.3276445	10	0.3440166	20	0.3532499
2-Methylnaphthalene	0.2	0.7568944	0.5	0.7130632	1	0.7478712	2.5	0.7288447	5	0.739959	10	0.7544455
Hexachlorocyclopentadiene			1	0.2871018	2	0.3163656	5	0.3220206	10	0.3411352	20	0.3579241
2,4,6-Trichlorophenol			1	0.3666097	2	0.401553	5	0.3943579	10	0.4062128	20	0.4208331

INITIAL CALIBRATION DATA

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GC00048	Instrument:	NT14
Calibration Date:	03/15/2023	Column (1):	ZB-5MS

Calibration Comments: 625/8270E ICAL

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RRF	Conc	**RRF**	Conc	RRF	Conc	RRF	Conc	**RRF**	Conc	**RRF**
2,4,5-Trichlorophenol			1	0.3733843	2	0.420793	5	0.4125364	10	0.4339809	20	0.4509169
2-Chloronaphthalene	0.2	1.269764	0.5	1.223721	1	1.268443	2.5	1.210869	5	1.227309	10	1.2467
2-Nitroaniline			1	0.4402413	2	0.4768788	5	0.4752773	10	0.4884379	20	0.4938617
Acenaphthylene	0.2	2.102916	0.5	2.08838	1	2.165107	2.5	2.029233	5	2.043888	10	2.071399
Dimethylphthalate	0.2	1.360394	0.5	1.35474	1	1.40153	2.5	1.322258	5	1.308476	10	1.305617
2,6-Dinitrotoluene			1	0.2807764	2	0.3081228	5	0.3045377	10	0.3144968	20	0.3195371
Acenaphthene	0.2	1.257126	0.5	1.182251	1	1.231391	2.5	1.166647	5	1.190384	10	1.235158
3-Nitroaniline			1	0.3893126	2	0.4201044	5	0.3960435	10	0.4372063	20	0.4521082
2,4-Dinitrophenol			2	0.1085172	4	0.1621474	10	0.2019587	20	0.2386125	40	0.2648974
Dibenzofuran	0.2	1.773784	0.5	1.670325	1	1.772918	2.5	1.674389	5	1.722577	10	1.762261
4-Nitrophenol			1	0.1801804	2	0.2190555	5	0.2220687	10	0.2331442	20	0.2348608
2,4-Dinitrotoluene			1	0.3840956	2	0.4308395	5	0.428943	10	0.4496562	20	0.4584472
Fluorene	0.2	1.665513	0.5	1.651043	1	1.664394	2.5	1.624256	5	1.611956	10	1.642119
4-Chlorophenylphenyl ether	0.2	0.7444699	0.5	0.7133258	1	0.7217984	2.5	0.6854279	5	0.6832293	10	0.6891443
Diethyl phthalate	0.2	1.290408	0.5	1.345949	1	1.397573	2.5	1.343735	5	1.361755	10	1.486754
4-Nitroaniline			1	0.3247011	2	0.3591725	5	0.3445415	10	0.3895564	20	0.3944903
4,6-Dinitro-2-methylphenol	0.8	5.995907E-02	2	9.744967E-02	4	0.1195481	10	0.1287218	20	0.14083	40	0.1485516
N-Nitrosodiphenylamine	0.2	0.5432218	0.5	0.5419329	1	0.5718471	2.5	0.5232106	5	0.528455	10	0.5411121
4-Bromophenyl phenyl ether	0.2	0.1700381	0.5	0.1730028	1	0.1820296	2.5	0.1795349	5	0.1831369	10	0.193707
Hexachlorobenzene	0.2	0.2059834	0.5	0.1906688	1	0.1948837	2.5	0.187072	5	0.1879561	10	0.1928714
Pentachlorophenol			1	9.496764E-02	2	0.1148183	5	0.1248261	10	0.135413	20	0.1433573
Phenanthrene	0.2	1.169084	0.5	1.116842	1	1.167904	2.5	1.08476	5	1.113007	10	1.151142
Anthracene	0.2	1.031694	0.5	1.053978	1	1.125382	2.5	1.084049	5	1.106397	10	1.143491
Carbazole	0.2	0.933117	0.5	0.9653382	1	1.009277	2.5	0.8846772	5	0.9609434	10	1.024633
Di-n-Butylphthalate	0.2	1.000393	0.5	1.123371	1	1.258362	2.5	1.247339	5	1.325849	10	1.353327
Fluoranthene	0.2	1.50931	0.5	1.555542	1	1.642103	2.5	1.615752	5	1.673979	10	1.694825
Pyrene	0.2	1.663543	0.5	1.628046	1	1.686025	2.5	1.629698	5	1.647459	10	1.706139

INITIAL CALIBRATION DATA

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GC00048	Instrument:	NT14
Calibration Date:	03/15/2023	Column (1):	ZB-5MS

Calibration Comments: 625/8270E ICAL

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RRF	Conc	**RRF**	Conc	RRF	Conc	RRF	Conc	**RRF**	Conc	**RRF**
Butylbenzylphthalate	0.2	0.6224576	0.5	0.6568884	1	0.7695318	2.5	0.7639089	5	0.7774503	10	0.7721294
Benzo(a)anthracene	0.2	1.459003	0.5	1.431621	1	1.503448	2.5	1.434898	5	1.454627	10	1.500468
3,3'-Dichlorobenzidine	0.6	0.3776726	1.5	0.4328206	3	0.4245709	7.5	0.3545697	15	0.3949075	30	0.4923399
Chrysene	0.2	1.397097	0.5	1.315783	1	1.335269	2.5	1.286594	5	1.297923	10	1.343426
bis(2-Ethylhexyl)phthalate	0.2	0.4461289	0.5	0.4746522	1	0.5432519	2.5	0.5424066	5	0.5512989	10	0.5576414
Di-n-Octylphthalate	0.2	1.0914	0.5	1.037782	1	1.06305	2.5	0.9984702	5	0.9878605	10	1.008003
Benzofluoranthenes, Total	0.4	1.239133	1	1.247445	2	1.331272	5	1.308718	10	1.361352	20	1.416985
Benzo(a)pyrene	0.2	1.07119	0.5	1.098779	1	1.191638	2.5	1.185766	5	1.253851	10	1.305348
Indeno(1,2,3-cd)pyrene	0.2	1.129915	0.5	1.199179	1	1.325357	2.5	1.296627	5	1.362077	10	1.413823
Dibenzo(a,h)anthracene	0.2	0.9897679	0.5	1.013326	1	1.10726	2.5	1.087329	5	1.126316	10	1.181156
Benzo(g,h,i)perylene	0.2	0.9704992	0.5	1.012465	1	1.060271	2.5	1.048066	5	1.096978	10	1.164595
1-Methylnaphthalene	0.2	0.6820033	0.5	0.6581919	1	0.6816753	2.5	0.6548594	5	0.6691345	10	0.6795508
2-Fluorophenol	0.3	1.320788	0.75	1.382127	1.5	1.38653	3.75	1.387086	7.5	1.310429	15	1.335588
Phenol-d5	0.3	1.705744	0.75	1.762202	1.5	1.7848	3.75	1.794143	7.5	1.750077	15	1.815971
2-Chlorophenol-d4	0.3	1.363612	0.75	1.417241	1.5	1.409941	3.75	1.40754	7.5	1.350918	15	1.413644
1,2-Dichlorobenzene-d4	0.2	0.9885251	0.5	0.9497904	1	0.953313	2.5	0.9174843	5	0.8883912	10	0.9284084
Nitrobenzene-d5	0.2	0.4078418	0.5	0.4058132	1	0.4303505	2.5	0.4177794	5	0.4226213	10	0.4342492
2-Fluorobiphenyl	0.2	1.510689	0.5	1.457228	1	1.47478	2.5	1.402562	5	1.40716	10	1.431574
2,4,6-Tribromophenol	0.3	0.1194354	0.75	0.128688	1.5	0.1498021	3.75	0.1492504	7.5	0.1613409	15	0.1711443
p-Terphenyl-d14	0.2	1.123825	0.5	1.123731	1	1.17288	2.5	1.131464	5	1.127331	10	1.125748

INITIAL CALIBRATION DATA

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GC00048	Instrument:	NT14
Calibration Date:	03/15/2023	Column (1):	ZB-5MS

Calibration Comments: 625/8270E ICAL

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
Phenol	20	1.953414										
bis(2-chloroethyl) ether	20	1.391852										
2-Chlorophenol	20	1.605362										
1,3-Dichlorobenzene	20	1.54185										
1,4-Dichlorobenzene	20	1.497932										
1,2-Dichlorobenzene	20	1.483536										
Benzyl Alcohol	20	0.9925627										
2,2'-Oxybis(1-chloropropane)	20	0.4469022										
2-Methylphenol	20	1.444457										
Hexachloroethane	20	0.6760137										
N-Nitroso-di-n-Propylamine	20	1.116733										
4-Methylphenol	20	1.759656										
Nitrobenzene	20	0.4223403										
Isophorone	20	0.620213										
2-Nitrophenol	20	0.2548255										
2,4-Dimethylphenol	40	0.3387654										
Bis(2-Chloroethoxy)methane	20	0.3805997										
2,4-Dichlorophenol	40	0.2888932										
1,2,4-Trichlorobenzene	20	0.3495813										
Naphthalene	20	1.108107										
Benzoic acid	80	0.3389192										
4-Chloroaniline	40	0.4765094										
Hexachlorobutadiene	20	0.1576788										
4-Chloro-3-Methylphenol	40	0.3663878										
2-Methylnaphthalene	20	0.7756887										
Hexachlorocyclopentadiene	40	0.3703477										
2,4,6-Trichlorophenol	40	0.4451125										

INITIAL CALIBRATION DATA

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GC00048	Instrument:	NT14
Calibration Date:	03/15/2023	Column (1):	ZB-5MS

Calibration Comments: 625/8270E ICAL

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
2,4,5-Trichlorophenol	40	0.4454304										
2-Chloronaphthalene	20	1.244228										
2-Nitroaniline	40	0.50182										
Acenaphthylene	20	2.096978										
Dimethylphthalate	20	1.283899										
2,6-Dinitrotoluene	40	0.3213046										
Acenaphthene	20	1.260025										
3-Nitroaniline	40	0.455743										
2,4-Dinitrophenol	80	0.2819113										
Dibenzofuran	20	1.79153										
4-Nitrophenol	40	0.2607218										
2,4-Dinitrotoluene	40	0.4687321										
Fluorene	20	1.674704										
4-Chlorophenylphenyl ether	20	0.7136102										
Diethyl phthalate	20	1.427189										
4-Nitroaniline	40	0.4058877										
4,6-Dinitro-2-methylphenol	80	0.1566934										
N-Nitrosodiphenylamine	20	0.5532399										
4-Bromophenyl phenyl ether	20	0.200717										
Hexachlorobenzene	20	0.1934474										
Pentachlorophenol	40	0.1518916										
Phenanthrene	20	1.197219										
Anthracene	20	1.162435										
Carbazole	20	1.079497										
Di-n-Butylphthalate	20	1.383599										
Fluoranthene	20	1.700054										
Pyrene	20	1.721257										

INITIAL CALIBRATION DATA

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GC00048	Instrument:	NT14
Calibration Date:	03/15/2023	Column (1):	ZB-5MS

Calibration Comments: 625/8270E ICAL

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
Butylbenzylphthalate	20	0.7557452										
Benzo(a)anthracene	20	1.540117										
3,3'-Dichlorobenzidine	60	0.5480792										
Chrysene	20	1.367712										
bis(2-Ethylhexyl)phthalate	20	0.5705747										
Di-n-Octylphthalate	20	1.01134										
Benzofluoranthenes, Total	40	1.492031										
Benzo(a)pyrene	20	1.354431										
Indeno(1,2,3-cd)pyrene	20	1.481985										
Dibenzo(a,h)anthracene	20	1.256041										
Benzo(g,h,i)perylene	20	1.236583										
1-Methylnaphthalene	20	0.7009437										
2-Fluorophenol	30	1.388599										
Phenol-d5	30	1.909165										
2-Chlorophenol-d4	30	1.509238										
1,2-Dichlorobenzene-d4	20	0.9694562										
Nitrobenzene-d5	20	0.4444494										
2-Fluorobiphenyl	20	1.456177										
2,4,6-Tribromophenol	30	0.1833862										
p-Terphenyl-d14	20	1.103488										

INITIAL CALIBRATION DATA

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GC00048	Instrument:	NT14
Calibration Date:	03/15/2023	Column (1):	ZB-5MS

Calibration Comments: 625/8270E ICAL

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Phenol	1.901144	2.2			RSD (15)	
bis(2-chloroethyl) ether	1.368994	4.0			RSD (15)	
2-Chlorophenol	1.496341	3.6			RSD (15)	
1,3-Dichlorobenzene	1.514714	4.1			RSD (15)	
1,4-Dichlorobenzene	1.458913	4.2			RSD (15)	
1,2-Dichlorobenzene	1.442033	5.0			RSD (15)	
Benzyl Alcohol	0.8850644	7.8			RSD (15)	
2,2'-Oxybis(1-chloropropane)	0.4351304	3.6			RSD (15)	
2-Methylphenol	1.344121	3.7			RSD (15)	
Hexachloroethane	0.6239658	4.0			RSD (15)	
N-Nitroso-di-n-Propylamine	1.058252	2.7			RSD (15)	
4-Methylphenol	1.591438	6.7			RSD (15)	
Nitrobenzene	0.4120485	1.9			RSD (15)	
Isophorone	0.5626055	8.6			RSD (15)	
2-Nitrophenol	0.2157234	16.1		0.9998	QCOD (0.99)	
2,4-Dimethylphenol	0.3524265	3.9			RSD (15)	
Bis(2-Chloroethoxy)methane	0.3787631	3.4			RSD (15)	
2,4-Dichlorophenol	0.2802759	3.5			RSD (15)	
1,2,4-Trichlorobenzene	0.3445492	4.4			RSD (15)	
Naphthalene	1.06862	3.1			RSD (15)	
Benzoic acid	0.2689191	24.5		0.9992	QCOD (0.99)	
4-Chloroaniline	0.4473571	4.4			RSD (15)	
Hexachlorobutadiene	0.1555637	4.4			RSD (15)	
4-Chloro-3-Methylphenol	0.338685	6.3			RSD (15)	
2-Methylnaphthalene	0.7452524	2.7			RSD (15)	
Hexachlorocyclopentadiene	0.3324825	9.1			RSD (15)	
2,4,6-Trichlorophenol	0.4057798	6.5			RSD (15)	
2,4,5-Trichlorophenol	0.4228403	6.7			RSD (15)	
2-Chloronaphthalene	1.241576	1.8			RSD (15)	
2-Nitroaniline	0.4794195	4.5			RSD (15)	

INITIAL CALIBRATION DATA

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GC00048	Instrument:	NT14
Calibration Date:	03/15/2023	Column (1):	ZB-5MS

Calibration Comments: 625/8270E ICAL

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Acenaphthylene	2.085414	2.1			RSD (15)	
Dimethylphthalate	1.333845	3.0			RSD (15)	
2,6-Dinitrotoluene	0.3081292	4.8			RSD (15)	
Acenaphthene	1.217569	3.1			RSD (15)	
3-Nitroaniline	0.4250863	6.6			RSD (15)	
2,4-Dinitrophenol	0.2096741	31.4		0.9983	QCOD (0.99)	
Dibenzofuran	1.738255	2.9			RSD (15)	
4-Nitrophenol	0.2250052	11.7			RSD (15)	
2,4-Dinitrotoluene	0.4367856	6.9			RSD (15)	
Fluorene	1.647712	1.4			RSD (15)	
4-Chlorophenylphenyl ether	0.7072865	3.2			RSD (15)	
Diethyl phthalate	1.379052	4.7			RSD (15)	
4-Nitroaniline	0.3697249	8.6			RSD (15)	
4,6-Dinitro-2-methylphenol	0.1216791	27.6		0.9996	QCOD (0.99)	
N-Nitrosodiphenylamine	0.5432885	3.0			RSD (15)	
4-Bromophenyl phenyl ether	0.1831666	5.9			RSD (15)	
Hexachlorobenzene	0.193269	3.3			RSD (15)	
Pentachlorophenol	0.1275457	16.2		0.9997	QCOD (0.99)	
Phenanthrene	1.142851	3.4			RSD (15)	
Anthracene	1.101061	4.3			RSD (15)	
Carbazole	0.9796404	6.5			RSD (15)	
Di-n-Butylphthalate	1.241749	11.0			RSD (15)	
Fluoranthene	1.627366	4.4			RSD (15)	
Pyrene	1.668881	2.2			RSD (15)	
Butylbenzylphthalate	0.7311588	8.7			RSD (15)	
Benzo(a)anthracene	1.474883	2.7			RSD (15)	
3,3'-Dichlorobenzidine	0.4321372	15.7		0.9979	QCOD (0.99)	
Chrysene	1.334829	2.9			RSD (15)	
bis(2-Ethylhexyl)phthalate	0.5265649	8.9			RSD (15)	
Di-n-Octylphthalate	1.028272	3.7			RSD (15)	

INITIAL CALIBRATION DATA

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GC00048	Instrument:	NT14
Calibration Date:	03/15/2023	Column (1):	ZB-5MS

Calibration Comments: 625/8270E ICAL

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Benzofluoranthenes, Total	1.342419	6.7			RSD (15)	
Benzo(a)pyrene	1.208715	8.6			RSD (15)	
Indeno(1,2,3-cd)pyrene	1.315566	9.2			RSD (15)	
Dibenzo(a,h)anthracene	1.108742	8.3			RSD (15)	
Benzo(g,h,i)perylene	1.084208	8.4			RSD (15)	
1-Methylnaphthalene	0.6751941	2.3			RSD (15)	
2-Fluorophenol	1.358735	2.6			RSD (15)	
Phenol-d5	1.788872	3.6			RSD (15)	
2-Chlorophenol-d4	1.410305	3.6			RSD (15)	
1,2-Dichlorobenzene-d4	0.9421955	3.6			RSD (15)	
Nitrobenzene-d5	0.4233007	3.3			RSD (15)	
2-Fluorobiphenyl	1.448596	2.6			RSD (15)	
2,4,6-Tribromophenol	0.1518639	14.9			RSD (15)	
p-Terphenyl-d14	1.129781	1.9			RSD (15)	

Printed: 3/21/2023 1:10:59PM

ANALYSIS SEQUENCE

SLC0160

Instrument ID: NT14
Calibration ID: GC00048
MS EM Level: 1847 EV

GCMS Description: Agilent 7890A/5975C XL
GCMS Column ID: L002738

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	File ID	Analyst	Comments
SLC0160-TUN1	MS Tune	QC		1	K004775		03/15/2023 12:00	NT1403152301.D	JGR	
SLC0160-CAL7	CAL 20	QC		2	K011111	K010831	03/15/2023 12:13	NT1403152302.D	JGR	
SLC0160-CAL6	CAL 10	QC		3	K011110	K010831	03/15/2023 12:49	NT1403152303.D	JGR	
SLC0160-CAL5	CAL 5	QC		4	K011109	K010831	03/15/2023 13:26	NT1403152304.D	JGR	
SLC0160-CAL4	CAL 2.5	QC		5	K011108	K010831	03/15/2023 14:02	NT1403152305.D	JGR	
SLC0160-CAL3	CAL 1.0	QC		6	K011107	K010831	03/15/2023 14:38	NT1403152306.D	JGR	
SLC0160-CAL2	CAL 0.5	QC		7	K011106	K010831	03/15/2023 15:14	NT1403152307.D	JGR	
SLC0160-CAL1	CAL 0.2	QC		8	K011105	K010831	03/15/2023 15:50	NT1403152308.D	JGR	
SLC0160-SCV1	SCV 5.0	QC		9	L002833	K010831	03/15/2023 17:39	NT1403152311.D	JGR	
SLC0160-ICB1	Initial Cal Blank	QC		10	K005156	K010831	03/15/2023 18:15	NT1403152312.D	JGR	

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230315.b

	Time	Filename	LabID	ClientId	DF														
1	1200	NT1403152301.D	SLC0160-TUN1		1	NO ISTDS FOUND													
2	1213	NT1403152302.D	SLC0160-CAL7		1	9.07	167425	11.58	667689	15.21	359561	18.26	655798	23.31	488521	25.95	451011	24.33	951548
3	1249	NT1403152303.D	SLC0160-CAL6		1	9.07	180739	11.57	689021	15.20	362269	18.25	660604	23.30	480922	25.94	459466	24.32	940570
4	1326	NT1403152304.D	SLC0160-CAL5		1	9.07	194517	11.57	721321	15.20	379602	18.25	703194	23.30	504769	25.94	484073	24.32	978492
5	1402	NT1403152305.D	SLC0160-CAL4		1	9.07	192012	11.57	744883	15.20	388723	18.25	720279	23.29	512149	25.94	495048	24.32	952832
6	1438	NT1403152306.D	SLC0160-CAL3		1	9.07	203547	11.57	753702	15.20	389189	18.24	718213	23.29	516735	25.94	493304	24.32	933762
7	1514	NT1403152307.D	SLC0160-CAL2		1	9.07	214919	11.57	819372	15.20	418625	18.24	774369	23.29	554225	25.93	529322	24.32	988092
8	1550	NT1403152308.D	SLC0160-CAL1		1	9.06	203313	11.57	744014	15.20	379787	18.24	697726	23.29	506894	25.93	478496	24.32	862800
9	1626	NT1403152309.D	SLC0160-SIM2		1	23.29	249												
10	1703	NT1403152310.D	SLC0160-SIM1		1	23.29	226												
11	1739	NT1403152311.D	SLC0160-SCV1		1	9.07	197462	11.57	726125	15.20	382881	18.24	706616	23.30	504808	25.94	496785	24.32	988248
12	1815	NT1403152312.D	SLC0160-ICB1		1	9.06	189234	11.56	727843	15.20	367416	18.24	678407	23.29	476533	25.93	452165	24.32	798655

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230315.b

Instrument: nt14.i Date: 15-MAR-2023

Time	Filename	LabID	DF	Manually Integrated Compounds
1200	NT1403152301.D	SLC0160-TUN1	1	NO MANUAL INTEGRATION
1213	NT1403152302.D	SLC0160-CAL7	1	1,4-Dichlorobenzene-d4, Benzoic acid, Total Benzofluoranthenes,
1249	NT1403152303.D	SLC0160-CAL6	1	1,4-Dichlorobenzene-d4, 2,2'-oxybis(1-Chloropropane), Benzoic acid, Total Benzofluoranthenes,
1326	NT1403152304.D	SLC0160-CAL5	1	1,4-Dichlorobenzene-d4, 2,2'-oxybis(1-Chloropropane), Total Benzofluoranthenes,
1402	NT1403152305.D	SLC0160-CAL4	1	1,4-Dichlorobenzene-d4, 2,2'-oxybis(1-Chloropropane), Total Benzofluoranthenes,
1438	NT1403152306.D	SLC0160-CAL3	1	1,4-Dichlorobenzene-d4, Total Benzofluoranthenes,
1514	NT1403152307.D	SLC0160-CAL2	1	1,4-Dichlorobenzene-d4, Benzoic acid, Total Benzofluoranthenes,
1550	NT1403152308.D	SLC0160-CAL1	1	1,4-Dichlorobenzene-d4, 2,2'-oxybis(1-Chloropropane), Benzoic acid, Total Benzofluoranthenes,
1626	NT1403152309.D	SLC0160-SIM2	1	NO MANUAL INTEGRATION
1703	NT1403152310.D	SLC0160-SIM1	1	NO MANUAL INTEGRATION
1739	NT1403152311.D	SLC0160-SCV1	1	1,4-Dichlorobenzene-d4,
1815	NT1403152312.D	SLC0160-ICB1	1	1,4-Dichlorobenzene-d4, Di-n-octylphthalate-d4,

Security Status Report

Date: 21-Mar-2023 13:13

NT1403152301.D	Data Locked	van, 21-Mar-2023 13:12
NT1403152302.D	Data Locked	van, 21-Mar-2023 13:12
NT1403152303.D	Data Locked	van, 21-Mar-2023 13:12
NT1403152304.D	Data Locked	van, 21-Mar-2023 13:12
NT1403152305.D	Data Locked	van, 21-Mar-2023 13:12
NT1403152306.D	Data Locked	van, 21-Mar-2023 13:12
NT1403152307.D	Data Locked	van, 21-Mar-2023 13:12
NT1403152308.D	Data Locked	van, 21-Mar-2023 13:12
NT1403152309.D	Data Locked	van, 21-Mar-2023 13:12
NT1403152310.D	Data Locked	van, 21-Mar-2023 13:12
NT1403152311.D	Data Locked	van, 21-Mar-2023 13:12
NT1403152312.D	Data Locked	van, 21-Mar-2023 13:12

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 15-MAR-2023 12:13
End Cal Date : 15-MAR-2023 15:50
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt14.i\20230315.b\ABN.m
Last Edit : 21-Mar-2023 11:52 van

Calibration File Names:
Level 1: \\target\share\chem3\nt14.i\20230315.b\NT1403152308.D
Level 2: \\target\share\chem3\nt14.i\20230315.b\NT1403152307.D
Level 3: \\target\share\chem3\nt14.i\20230315.b\NT1403152306.D
Level 4: \\target\share\chem3\nt14.i\20230315.b\NT1403152305.D
Level 5: \\target\share\chem3\nt14.i\20230315.b\NT1403152304.D
Level 6: \\target\share\chem3\nt14.i\20230315.b\NT1403152303.D
Level 7: \\target\share\chem3\nt14.i\20230315.b\NT1403152302.D

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

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Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt14.i\20230315.b\ABN.m
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Compound	0.2000000 Level 1 / 20.0000 Level 7	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
170 N,N-Dimethylaniline	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000
171 2,3-Dimethylaniline	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000
172 2,4-Dimethylaniline	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000
173 2,5-Dimethylaniline	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000
174 2,6-Dimethylaniline	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000
175 3,4-Dimethylaniline	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000
176 3,5-Dimethylaniline	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000

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

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

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

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

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Compound	0.2000000 Level 1 / 20.0000 Level 7	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
143 1,4-Dioxane	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
121 Quinoline	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	
120 2,3,4,6-Tetrachlorophenol	5019 / 836591	16437	35870	89351	186734	403311	QUAD	0.000e+000	2.46921	-0.14013	0.99940	
178 2-Benzyl-4-Chlorophenol	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
119 7,12-Dimethylbenz(a)anthracen	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	
118 Triphenyl Phosphate	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
117 Butyl Diphenyl Phosphate	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-

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Compound	0.2000000 Level 1 / 20.0000 Level 7	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
116 Dibutyl Phenyl Phosphate	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
115 Tributyl Phosphate	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
114 Beta-Pinene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	
113 Diphenyl Oxide	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
112 Biphenyl	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
111 Azobenzene (1,2-DP-Hydrazine)	1.65730 / 1.61936	1.64606	1.72160	1.63395	1.61767	1.63150	AVRG		1.64678		2.17629	
110 Tetrachloroguaiacol	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-

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

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Compound	0.2000000 Level 1 / 20.0000 Level 7	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
106 Guaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+000		0.000e+000	<-
105 1-methylnaphthalene	0.68200	0.65819	0.68168	0.65486	0.66913	0.67955						
	0.70094						AVRG		0.67519		2.34931	
151 1,2,4,5-Tetrachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+000		0.000e+000	<-
152 Benzo(e)pyrene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+000		0.000e+000	
153 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+000		0.000e+000	
154 Diazinon	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+000		0.000e+000	
155 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+000		0.000e+000	

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

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Compound	0.2000000 Level 1 / 20.0000 Level 7	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
163 1,2,3,5,8-Pentachloronaphthal	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000
164 1,2,3,4,6,7-Hexachloronaphtha	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000
165 1,2,3,4,5,6,7-Heptachloronaph	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000
166 Octachloronaphthalene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000
167 2,2',4,4',5-Pentabromobipheny	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000
3 Phenol	1.88891 / 1.95341	1.90416	1.92693	1.93350	1.82803	1.87307	AVRG		1.90114		2.22497
4 Bis(2-Chloroethyl)ether	1.42017 / 1.39185	1.41017	1.41298	1.34734	1.27181	1.32863	AVRG		1.36899		4.03571

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Compound	0.2000000 Level 1 / 20.0000 Level 7	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
6 2-Chlorophenol	1.48471	1.45651	1.49677	1.49133	1.43679	1.50291					
	1.60536						AVRG		1.49634		3.58051
7 1,3-Dichlorobenzene	1.61554	1.53729	1.52028	1.50063	1.42233	1.46509					
	1.54185						AVRG		1.51471		4.05527
9 1,4-Dichlorobenzene	1.55839	1.48022	1.45647	1.43818	1.37244	1.40877					
	1.49793						AVRG		1.45891		4.17875
11 Benzyl alcohol	0.76621	0.85107	0.87278	0.89211	0.89673	0.92399					
	0.99256						AVRG		0.88506		7.81289
12 1,2-Dichlorobenzene	1.57954	1.43153	1.42098	1.42177	1.35289	1.40398					
	1.48354						AVRG		1.44203		4.98354
13 2-Methylphenol	1.29042	1.32243	1.32158	1.35587	1.31897	1.35511					
	1.44446						AVRG		1.34412		3.69760
14 2,2'-oxybis(1-Chloropropane)	0.46165	0.42863	0.42459	0.43824	0.43203	0.41387					
	0.44690						AVRG		0.43513		3.59314

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Compound	0.2000000 Level 1 / 20.0000 Level 7	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
15 4-Methylphenol	1.41447	1.56885	1.58332	1.58868	1.55160	1.67349					
	1.75966						AVRG		1.59144		6.71488
16 N-Nitroso-di-n-propylamine	1.02984	1.04754	1.05458	1.06211	1.03485	1.06212					
	1.11673						AVRG		1.05825		2.70955
17 Hexachloroethane	0.61629	0.61586	0.60574	0.62353	0.60006	0.63027					
	0.67601						AVRG		0.62397		4.02124
19 Nitrobenzene	0.40531	0.40186	0.42120	0.40899	0.40857	0.41607					
	0.42234						AVRG		0.41205		1.92236
20 Isophorone	0.50230	0.50032	0.54388	0.57581	0.58915	0.60655					
	0.62021						AVRG		0.56261		8.58435
21 2-Nitrophenol	6127	17769	40809	101492	214095	422056					
	850721						QUAD	0.000e+000	4.30052	-0.29816	0.99989
22 2,4-Dimethylphenol	0.37186	0.35441	0.36922	0.34861	0.34617	0.33795					
	0.33877						AVRG		0.35243		3.86568

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Compound	0.2000000 Level 1 / 20.0000 Level 7	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
23 Bis(2-Chloroethoxy)methane	0.40212	0.37805	0.38590	0.36304	0.36891	0.37273					
	0.38060						AVRG		0.37876		3.37589
24 Benzoic acid	+++++	65039	175674	495327	1072142	2201419					
	4525852						QUAD	0.000e+000	3.40769	-0.06821	0.99969
25 2,4-Dichlorophenol	0.26755	0.26914	0.28775	0.27491	0.28146	0.29223					
	0.28889						AVRG		0.28028		3.53556
26 1,2,4-Trichlorobenzene	0.33419	0.31882	0.36798	0.34957	0.34536	0.34636					
	0.34958						AVRG		0.34455		4.38980
28 Naphthalene	1.11490	1.05562	1.07330	1.02718	1.03902	1.06222					
	1.10811						AVRG		1.06862		3.08628
29 4-Chloroaniline	+++++	0.42052	0.44445	0.43394	0.44912	0.45961					
	0.47651						AVRG		0.44736		4.37117
30 Hexachlorobutadiene	0.16881	0.14968	0.15885	0.14970	0.15078	0.15344					
	0.15768						AVRG		0.15556		4.44809

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 15-MAR-2023 12:13
End Cal Date : 15-MAR-2023 15:50
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt14.i\20230315.b\ABN.m
Last Edit : 21-Mar-2023 11:52 van

Compound	0.2000000 Level 1 / 20.0000 Level 7	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
31 4-Chloro-3-methylphenol	+++++	0.30531	0.33550	0.32764	0.34402	0.35325					
	0.36639						AVRG		0.33868		6.26912
32 2-Methylnaphthalene	0.75689	0.71306	0.74787	0.72884	0.73996	0.75445					
	0.77569						AVRG		0.74525		2.73167
33 Hexachlorocyclopentadiene	+++++	0.28710	0.31637	0.32202	0.34114	0.35792					
	0.37035						AVRG		0.33248		9.10739
34 2,4,6-Trichlorophenol	+++++	0.36661	0.40155	0.39436	0.40621	0.42083					
	0.44511						AVRG		0.40578		6.47949
35 2,4,5-Trichlorophenol	+++++	0.37338	0.42079	0.41254	0.43398	0.45092					
	0.44543						AVRG		0.42284		6.67151
37 2-Chloronaphthalene	1.26976	1.22372	1.26844	1.21087	1.22731	1.24670					
	1.24423						AVRG		1.24158		1.80548
38 2-Nitroaniline	+++++	0.44024	0.47688	0.47528	0.48844	0.49386					
	0.50182						AVRG		0.47942		4.52226

ARI Labs, Inc.

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Start Cal Date : 15-MAR-2023 12:13
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Quant Method : ISTD
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Integrator : HP RTE
Method file : \\target\share\chem3\nt14.i\20230315.b\ABN.m
Last Edit : 21-Mar-2023 11:52 van

Compound	0.2000000 Level 1 / 20.0000 Level 7	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
39 Dimethylphthalate	1.36039	1.35474	1.40153	1.32226	1.30848	1.30562					
	1.28390						AVRG		1.33384		3.02869
40 Acenaphthylene	2.10292	2.08838	2.16511	2.02923	2.04389	2.07140					
	2.09698						AVRG		2.08541		2.13346
41 2,6-Dinitrotoluene	+++++	0.28078	0.30812	0.30454	0.31450	0.31954					
	0.32130						AVRG		0.30813		4.82540
43 3-Nitroaniline	+++++	0.38931	0.42010	0.39604	0.43721	0.45211					
	0.45574						AVRG		0.42509		6.62458
44 Acenaphthene	1.25713	1.18225	1.23139	1.16665	1.19038	1.23516					
	1.26003						AVRG		1.21757		3.08168
45 2,4-Dinitrophenol	+++++	22714	63106	196265	452889	959641					
	2027286						QUAD	0.000e+000	4.19263	-0.11615	0.99929
46 Dibenzofuran	1.77378	1.67033	1.77292	1.67439	1.72258	1.76226					
	1.79153						AVRG		1.73825		2.85888

ARI Labs, Inc.

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Last Edit : 21-Mar-2023 11:52 van

Compound	0.2000000 Level 1 / 20.0000 Level 7	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
47 4-Nitrophenol	+++++	0.18018	0.21906	0.22207	0.23314	0.23486					
	0.26072						AVRG		0.22501		11.74575
48 2,4-Dinitrotoluene	+++++	0.38410	0.43084	0.42894	0.44966	0.45845					
	0.46873						AVRG		0.43679		6.89012
49 Fluorene	1.66551	1.65104	1.66439	1.62426	1.61196	1.64212					
	1.67470						AVRG		1.64771		1.40044
50 Diethylphthalate	1.29041	1.34595	1.39757	1.34374	1.36175	1.48675					
	1.42719						AVRG		1.37905		4.65821
51 4-Chlorophenyl-phenylether	0.74447	0.71333	0.72180	0.68543	0.68323	0.68914					
	0.71361						AVRG		0.70729		3.19051
52 4-Nitroaniline	+++++	0.32470	0.35917	0.34454	0.38956	0.39449					
	0.40589						AVRG		0.36972		8.62720
53 4,6-Dinitro-2-methylphenol	+++++	37731	85861	231789	495154	981338					
	2055185						QUAD	0.000e+000	7.22845	-0.27277	0.99983

ARI Labs, Inc.

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Method file : \\target\share\chem3\nt14.i\20230315.b\ABN.m
Last Edit : 21-Mar-2023 11:52 van

Compound	0.2000000 Level 1 / 20.0000 Level 7	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
54 N-Nitrosodiphenylamine	0.54322	0.54193	0.57185	0.52321	0.52846	0.54111					
	0.55324						AVRG		0.54329		2.95303
56 4-Bromophenyl-phenylether	0.17004	0.17300	0.18203	0.17953	0.18314	0.19371					
	0.20072						AVRG		0.18317		5.93582
57 Hexachlorobenzene	0.20598	0.19067	0.19488	0.18707	0.18796	0.19287					
	0.19345						AVRG		0.19327		3.25769
58 Pentachlorophenol	+++++	18385	41232	112387	238054	473512					
	996102						QUAD	0.000e+000	7.51309	-0.61742	0.99984
60 Phenanthrene	1.16908	1.11684	1.16790	1.08476	1.11301	1.15114					
	1.19722						AVRG		1.14285		3.44159
61 Anthracene	1.03169	1.05398	1.12538	1.08405	1.10640	1.14349					
	1.16244						AVRG		1.10106		4.30884
62 Carbazole	0.93312	0.96534	1.00928	0.88468	0.96094	1.02463					
	1.07950						AVRG		0.97964		6.53761

ARI Labs, Inc.

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Last Edit : 21-Mar-2023 11:52 van

Compound	0.2000000 Level 1 / 20.0000 Level 7	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
63 Di-n-butylphthalate	1.00039	1.12337	1.25836	1.24734	1.32585	1.35333					
	1.38360						AVRG		1.24175		11.01338
64 Fluoranthene	1.50931	1.55554	1.64210	1.61575	1.67398	1.69482					
	1.70005						AVRG		1.62737		4.44923
65 Pyrene	1.66354	1.62805	1.68602	1.62970	1.64746	1.70614					
	1.72126						AVRG		1.66888		2.20373
67 Butylbenzylphthalate	0.62246	0.65689	0.76953	0.76391	0.77745	0.77213					
	0.75575						AVRG		0.73116		8.70449
68 Benzo(a)anthracene	1.45900	1.43162	1.50345	1.43490	1.45463	1.50047					
	1.54012						AVRG		1.47488		2.74840
70 3,3'-Dichlorobenzidine	+++++	89955	164543	340486	747514	1775828					
	4016223						QUAD	0.000e+000	2.36788	-0.06686	0.99799
71 Chrysene	1.39710	1.31578	1.33527	1.28659	1.29792	1.34343					
	1.36771						AVRG		1.33483		2.91500

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Last Edit : 21-Mar-2023 11:52 van

Compound	0.2000000 Level 1 / 20.0000 Level 7	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
72 bis(2-Ethylhexyl)phthalate	0.44613	0.47465	0.54325	0.54241	0.55130	0.55764					
	0.57057						AVRG		0.52656		8.91050
73 Di-n-octylphthalate	1.09140	1.03778	1.06305	0.99847	0.98786	1.00800					
	1.01134						AVRG		1.02827		3.66121
74 Benzo(b)fluoranthene	1.19968	1.22415	1.43266	1.37341	1.52220	1.44295					
	1.69932						AVRG		1.41348		12.18296
75 Benzo(k)fluoranthene	1.37677	1.38136	1.36543	1.37280	1.34543	1.52694					
	1.43951						AVRG		1.40118		4.46324
187 Total Benzofluoranthenes	1.23913	1.24744	1.33127	1.30872	1.36135	1.41699					
	1.49203						AVRG		1.34242		6.74902
76 Benzo(a)pyrene	1.07119	1.09878	1.19164	1.18577	1.25385	1.30535					
	1.35443						AVRG		1.20871		8.57294
78 Indeno(1,2,3-cd)pyrene	1.12992	1.19918	1.32536	1.29663	1.36208	1.41382					
	1.48199						AVRG		1.31557		9.20455

ARI Labs, Inc.

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Integrator : HP RTE
Method file : \\target\share\chem3\nt14.i\20230315.b\ABN.m
Last Edit : 21-Mar-2023 11:52 van

Compound	0.2000000 Level 1 / 20.0000 Level 7	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
79 Dibenzo(a,h)anthracene	0.98977	1.01333	1.10726	1.08733	1.12632	1.18116					
	1.25604						AVRG		1.10874		8.31282
80 Benzo(g,h,i)perylene	0.97050	1.01247	1.06027	1.04807	1.09698	1.16459					
	1.23658						AVRG		1.08421		8.40278
90 N-Nitrosodimethylamine	0.88307	0.87125	0.89079	0.86831	0.82667	0.82615					
	0.85764						AVRG		0.86055		2.97641
91 Aniline	1.93382	1.93489	1.90525	1.91888	1.83702	1.89717					
	1.95800						AVRG		1.91215		2.03113
92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+000		0.000e+000
93 Benzidine	+++++	0.71177	0.67850	0.60435	0.68316	0.63682					
	0.61477						AVRG		0.65490		6.50792
96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+000		0.000e+000

ARI Labs, Inc.

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Compound	0.2000000 Level 1 / 20.0000 Level 7	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
97 Caffeine	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	
98 Retene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
99 Perylene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
100 3-beta-Coprostanol	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
101 Cholesterol	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
102 beta-Sitosterol	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	
103 Pyridine	2.69083 / 2.60049	2.80753	2.81818	2.72120	2.49907	2.51747	AVRG		2.66497		4.86998	

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Compound	0.2000000 Level 1	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20.0000 Level 7											
188 2,6-Dichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+000		0.000e+000	<-
189 N-Nitrosomethylethylamine	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+000		0.000e+000	<-
$ 1 2-Fluorophenol	1.32079	1.38213	1.38653	1.38709	1.31043	1.33559						
	1.38860						AVRG		1.35874		2.57146	
$ 137 d8-1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+000		0.000e+000	<-
$ 2 Phenol-d5	1.70574	1.76220	1.78480	1.79414	1.75008	1.81597						
	1.90916						AVRG		1.78887		3.56306	
$ 5 2-Chlorophenol-d4	1.36361	1.41724	1.40994	1.40754	1.35092	1.41364						
	1.50924						AVRG		1.41030		3.61111	
$ 10 1,2-Dichlorobenzene-d4	0.98853	0.94979	0.95331	0.91748	0.88839	0.92841						
	0.96946						AVRG		0.94220		3.56422	

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Compound	0.2000000 Level 1 / 20.0000 Level 7	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
$ 18 Nitrobenzene-d5	0.40784	0.40581	0.43035	0.41778	0.42262	0.43425					
	0.44445						AVRG		0.42330		3.33056
$ 36 2-Fluorobiphenyl	1.51069	1.45723	1.47478	1.40256	1.40716	1.43157					
	1.45618						AVRG		1.44860		2.64358
$ 55 2,4,6-Tribromophenol	+++++	0.12869	0.14980	0.14925	0.16134	0.17114					
	0.18339						AVRG		0.15727		12.15843
$ 66 Terphenyl-d14	1.12382	1.12373	1.17288	1.13146	1.12733	1.12575					
	1.10349						AVRG		1.12978		1.85877
$ 85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+000		0.000e+000
$ 86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+000		0.000e+000
$ 87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+000		0.000e+000

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

ARI Labs, Inc.

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

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt14.i\20230315.b\ABN.m
Batch File: \\target\share\chem3\nt14.i\20230315.b
Inst ID: nt14.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	NT1403152302	NT1403152303	NT1403152304	NT1403152305	NT1403152306	NT1403152307	NT1403152308
INJ.DATE:	15-MAR-2023	15-MAR-2023	15-MAR-2023	15-MAR-2023	15-MAR-2023	15-MAR-2023	15-MAR-2023
INJ.TIME:	12:13	12:49	13:26	14:02	14:38	15:14	15:50

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
$ 1 2-Fluorophenol	6.837	6.829	6.829	6.829	6.829	6.829	6.821	6.821	3.821-9.821	6.829	0.005
186 Carbaryl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.785	15.785-21.785	+++++	+++++
179 n-Decane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.645	5.645-11.645	+++++	+++++
180 n-Octadecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.455	14.455-20.455	+++++	+++++
169 4-tert-Butylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.696	17.696-23.696	+++++	+++++
170 N,N-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.219	16.219-22.219	+++++	+++++
171 2,3-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.559	16.559-22.559	+++++	+++++
172 2,4-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.559	16.559-22.559	+++++	+++++
173 2,5-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	22.949	19.949-25.949	+++++	+++++
174 2,6-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.196	16.196-22.196	+++++	+++++
175 3,4-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.559	16.559-22.559	+++++	+++++
176 3,5-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.503	17.503-23.503	+++++	+++++
177 p-Benzoquinone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.827	4.827-10.827	+++++	+++++
168 Pentachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.842	12.842-18.842	+++++	+++++
145 4,4'-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.212	44.212-50.212	+++++	+++++
146 4,4'-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.746	44.746-50.746	+++++	+++++
147 4,4'-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	48.216	45.216-51.216	+++++	+++++

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

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt14.i\20230315.b\ABN.m
Batch File: \\target\share\chem3\nt14.i\20230315.b
Inst ID: nt14.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
148 Dieldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.281	44.281-50.281	+++++	+++++
149 TCMX	+++++	+++++	+++++	+++++	+++++	+++++	+++++	43.387	40.387-46.387	+++++	+++++
150 DCBP	+++++	+++++	+++++	+++++	+++++	+++++	+++++	50.989	47.989-53.989	+++++	+++++
138 Chlorobenzilate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	67.733	64.733-70.733	+++++	+++++
139 Isodrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.067	62.067-68.067	+++++	+++++
140 Diallate A	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.487	62.487-68.487	+++++	+++++
141 Diallate B	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.487	62.487-68.487	+++++	+++++
142 1,2-Dibromo-3-Chloropr	+++++	+++++	+++++	+++++	+++++	+++++	+++++	49.917	46.917-52.917	+++++	+++++
135 2,3,5,6-Tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.383	13.383-19.383	+++++	+++++
136 2,3,4,5-tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	39.317	36.317-42.317	+++++	+++++
$ 137 d8-1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.445	0.000-5.445	+++++	+++++
* 134 Di-n-octylphthalate-d4	24.332	24.324	24.324	24.324	24.324	24.324	24.324	24.324	21.324-27.324	24.325	0.003
133 Butylatedhydroxytoluen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.571	12.571-18.571	+++++	+++++
132 3,6-Dimethylphenanthre	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.450	62.450-68.450	+++++	+++++
131 1-Methylphenanthrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	64.400	61.400-67.400	+++++	+++++
130 Dibenzothiophene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	62.100	59.100-65.100	+++++	+++++
129 1-Methylfluorene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	54.912	51.912-57.912	+++++	+++++
128 N-Hexadecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	54.212	51.212-57.212	+++++	+++++
127 2-Isopropylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	57.650	54.650-60.650	+++++	+++++
126 N-Tetradecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	56.750	53.750-59.750	+++++	+++++
144 alpha-Terpineol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.447	8.447-14.447	+++++	+++++
125 Safrole	+++++	+++++	+++++	+++++	+++++	+++++	+++++	52.166	49.166-55.166	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt14.i\20230315.b\ABN.m
Batch File: \\target\share\chem3\nt14.i\20230315.b
Inst ID: nt14.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
124 3,4-Dimethylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	50.617	47.617-53.617	+++++	+++++
123 Acetophenone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.252	7.252-13.252	+++++	+++++
122 Furfuraldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	43.467	40.467-46.467	+++++	+++++
143 1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.697	0.000-5.697	+++++	+++++
121 Quinoline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	54.500	51.500-57.500	+++++	+++++
120 2,3,4,6-Tetrachlorophe	15.939	15.931	15.923	15.923	15.923	15.923	15.923	15.923	12.923-18.923	15.927	0.006
178 2-Benzyl-4-Chloropheno	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.963	15.963-21.963	+++++	+++++
119 7,12-Dimethylbenz(a)an	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.069	44.069-50.069	+++++	+++++
118 Triphenyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.215	18.215-24.215	+++++	+++++
117 Butyl Diphenyl Phospha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.761	13.761-19.761	+++++	+++++
116 Dibutyl Phenyl Phospha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.747	15.747-21.747	+++++	+++++
115 Tributyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.923	13.923-19.923	+++++	+++++
114 Beta-Pinene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	48.950	45.950-51.950	+++++	+++++
113 Diphenyl Oxide	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.341	11.341-17.341	+++++	+++++
112 Biphenyl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.085	11.085-17.085	+++++	+++++
111 Azobenzene (1,2-DP-Hyd	16.641	16.634	16.626	16.618	16.618	16.618	16.618	16.618	13.618-19.618	16.625	0.009
110 Tetrachloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.140	14.140-20.140	+++++	+++++
109 3,4,5-Trichloroguaiaco	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.070	12.070-18.070	+++++	+++++
181 3,4,6-Trichloroguaiaco	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.232	12.232-18.232	+++++	+++++
108 4,5,6-Trichloroguaiaco	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.374	13.374-19.374	+++++	+++++
184 3,4-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.120	10.120-16.120	+++++	+++++
107 4,5-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.096	11.096-17.096	+++++	+++++
182 4,6-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.096	11.096-17.096	+++++	+++++
185 4-Chloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.735	8.735-14.735	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt14.i\20230315.b\ABN.m
Batch File: \\target\share\chem3\nt14.i\20230315.b
Inst ID: nt14.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
106 Guaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.243	6.243-12.243	+++++	+++++
105 1-methylnaphthalene	13.247	13.239	13.239	13.231	13.231	13.231	13.231	13.231	10.231-16.231	13.235	0.006
151 1,2,4,5-Tetrachloroben	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.499	8.499-14.499	+++++	+++++
152 Benzo(e)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	30.943	27.943-33.943	+++++	+++++
153 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	27.642	24.642-30.642	+++++	+++++
154 Diazinon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	25.953	22.953-28.953	+++++	+++++
155 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	27.750	24.750-30.750	+++++	+++++
156 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.464	23.464-29.464	+++++	+++++
157 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	27.099	24.099-30.099	+++++	+++++
158 Ethion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	24.513	21.513-27.513	+++++	+++++
159 4-Nonylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	25.132	22.132-28.132	+++++	+++++
160 Tetraethyl Tin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.528	16.528-22.528	+++++	+++++
161 1,2,3-Trichloronaphtha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	36.246	33.246-39.246	+++++	+++++
162 1,2,3,4-Tetrachloronap	+++++	+++++	+++++	+++++	+++++	+++++	+++++	37.506	34.506-40.506	+++++	+++++
163 1,2,3,5,8-Pentachloron	+++++	+++++	+++++	+++++	+++++	+++++	+++++	38.893	35.893-41.893	+++++	+++++
164 1,2,3,4,6,7-Hexachloro	+++++	+++++	+++++	+++++	+++++	+++++	+++++	39.681	36.681-42.681	+++++	+++++
165 1,2,3,4,5,6,7-Heptachl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	41.123	38.123-44.123	+++++	+++++
166 Octachloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	42.253	39.253-45.253	+++++	+++++
167 2,2',4,4',5-Pentabromo	+++++	+++++	+++++	+++++	+++++	+++++	+++++	42.033	39.033-45.033	+++++	+++++
$ 2 Phenol-d5	8.436	8.428	8.421	8.413	8.413	8.413	8.413	8.413	5.413-11.413	8.420	0.009
3 Phenol	8.459	8.444	8.436	8.436	8.436	8.436	8.428	8.428	5.428-11.428	8.439	0.010
4 Bis(2-Chloroethyl)ethe	8.629	8.622	8.614	8.614	8.606	8.606	8.606	8.606	5.606-11.606	8.614	0.009
$ 5 2-Chlorophenol-d4	8.714	8.706	8.699	8.699	8.698	8.699	8.699	8.699	5.699-11.699	8.702	0.006

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt14.i\20230315.b\ABN.m
Batch File: \\target\share\chem3\nt14.i\20230315.b
Inst ID: nt14.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	6 2-Chlorophenol	8.745	8.730	8.730	8.730	8.729	8.722	8.722	8.722	5.722-11.722	8.730	0.008
	7 1,3-Dichlorobenzene	9.008	9.008	9.008	9.001	9.000	9.001	9.000	9.000	6.000-12.000	9.004	0.004
*	8 1,4-Dichlorobenzene-d4	9.070	9.070	9.070	9.070	9.070	9.071	9.063	9.063	6.063-12.063	9.069	0.003
	9 1,4-Dichlorobenzene	9.109	9.101	9.102	9.101	9.101	9.102	9.094	9.094	6.094-12.094	9.101	0.005
$	10 1,2-Dichlorobenzene-d4	9.435	9.435	9.435	9.427	9.427	9.427	9.427	9.427	6.427-12.427	9.431	0.004
	11 Benzyl alcohol	9.358	9.342	9.334	9.334	9.334	9.334	9.334	9.334	6.334-12.334	9.339	0.009
	12 1,2-Dichlorobenzene	9.466	9.458	9.459	9.458	9.458	9.451	9.458	9.458	6.458-12.458	9.458	0.004
	13 2-Methylphenol	9.575	9.567	9.559	9.559	9.559	9.559	9.559	9.559	6.559-12.559	9.563	0.006
	14 2,2'-oxybis(1-Chloropr	9.653	9.645	9.645	9.645	9.644	9.645	9.645	9.645	6.645-12.645	9.646	0.003
	15 4-Methylphenol	9.854	9.839	9.831	9.831	9.823	9.823	9.823	9.823	6.823-12.823	9.832	0.011
	16 N-Nitroso-di-n-propyla	9.940	9.916	9.909	9.901	9.901	9.901	9.893	9.893	6.893-12.893	9.909	0.016
	17 Hexachloroethane	10.056	10.056	10.056	10.056	10.056	10.056	10.056	10.056	7.056-13.056	10.056	0.000
$	18 Nitrobenzene-d5	10.180	10.173	10.165	10.165	10.164	10.165	10.165	10.165	7.165-13.165	10.168	0.006
	19 Nitrobenzene	10.219	10.211	10.204	10.204	10.196	10.196	10.196	10.196	7.196-13.196	10.204	0.009
	20 Isophorone	10.693	10.669	10.654	10.654	10.653	10.646	10.646	10.646	7.646-13.646	10.659	0.017
	21 2-Nitrophenol	10.848	10.840	10.832	10.832	10.832	10.832	10.832	10.832	7.832-13.832	10.835	0.006
	22 2,4-Dimethylphenol	10.902	10.894	10.886	10.886	10.878	10.879	10.878	10.878	7.878-13.878	10.886	0.009
	23 Bis(2-Chloroethoxy)met	11.103	11.096	11.088	11.088	11.088	11.080	11.080	11.080	8.080-14.080	11.089	0.008
	24 Benzoic acid	11.297	11.196	11.119	11.065	11.018	10.987	10.964	10.964	7.964-13.964	11.092	0.121
	25 2,4-Dichlorophenol	11.305	11.297	11.290	11.289	11.289	11.282	11.282	11.282	8.282-14.282	11.291	0.008
	26 1,2,4-Trichlorobenzene	11.491	11.483	11.483	11.483	11.483	11.475	11.483	11.483	8.483-14.483	11.483	0.004
*	27 Naphthalene-d8	11.576	11.568	11.568	11.568	11.568	11.568	11.568	11.568	8.568-14.568	11.569	0.003
	28 Naphthalene	11.622	11.614	11.607	11.606	11.606	11.607	11.606	11.606	8.606-14.606	11.610	0.006
	29 4-Chloroaniline	11.753	11.745	11.738	11.738	11.730	11.730	11.730	11.730	8.730-14.730	11.738	0.009

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt14.i\20230315.b\ABN.m
Batch File: \\target\share\chem3\nt14.i\20230315.b
Inst ID: nt14.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	30 Hexachlorobutadiene	11.977	11.977	11.977	11.977	11.977	11.977	11.977	11.977	8.977-14.977	11.977	0.000
	31 4-Chloro-3-methylpheno	12.713	12.705	12.697	12.697	12.689	12.689	12.689	12.689	9.689-15.689	12.697	0.009
	32 2-Methylnaphthalene	13.022	13.014	13.014	13.007	13.006	13.007	13.006	13.006	10.006-16.006	13.011	0.006
	33 Hexachlorocyclopentadi	13.486	13.486	13.486	13.486	13.478	13.479	13.486	13.486	10.486-16.486	13.484	0.004
	34 2,4,6-Trichlorophenol	13.649	13.641	13.634	13.633	13.625	13.626	13.626	13.626	10.626-16.626	13.633	0.009
	35 2,4,5-Trichlorophenol	13.719	13.711	13.703	13.703	13.703	13.703	13.703	13.703	10.703-16.703	13.706	0.006
$	36 2-Fluorobiphenyl	13.811	13.804	13.796	13.796	13.796	13.796	13.796	13.796	10.796-16.796	13.799	0.006
	37 2-Chloronaphthalene	14.020	14.013	14.005	14.005	14.005	14.005	14.005	14.005	11.005-17.005	14.008	0.006
	38 2-Nitroaniline	14.291	14.276	14.268	14.260	14.260	14.260	14.260	14.260	11.260-17.260	14.268	0.012
	39 Dimethylphthalate	14.733	14.717	14.702	14.701	14.693	14.694	14.694	14.694	11.694-17.694	14.705	0.015
	40 Acenaphthylene	14.895	14.887	14.887	14.880	14.879	14.880	14.879	14.879	11.879-17.879	14.884	0.006
	41 2,6-Dinitrotoluene	14.864	14.849	14.841	14.841	14.833	14.833	14.833	14.833	11.833-17.833	14.842	0.011
*	42 Acenaphthene-d10	15.212	15.204	15.205	15.197	15.196	15.197	15.197	15.197	12.197-18.197	15.201	0.006
	43 3-Nitroaniline	15.158	15.135	15.127	15.119	15.111	15.112	15.112	15.112	12.112-18.112	15.125	0.017
	44 Acenaphthene	15.282	15.274	15.266	15.266	15.266	15.266	15.259	15.259	12.259-18.259	15.269	0.007
	45 2,4-Dinitrophenol	15.375	15.351	15.336	15.328	15.328	15.328	15.328	15.328	12.328-18.328	15.339	0.018
	46 Dibenzofuran	15.614	15.599	15.599	15.591	15.591	15.591	15.591	15.591	12.591-18.591	15.596	0.009
	47 4-Nitrophenol	15.467	15.444	15.429	15.429	15.421	15.421	15.421	15.421	12.421-18.421	15.433	0.017
	48 2,4-Dinitrotoluene	15.684	15.661	15.653	15.645	15.645	15.645	15.645	15.645	12.645-18.645	15.654	0.014
	49 Fluorene	16.325	16.318	16.310	16.310	16.302	16.302	16.302	16.302	13.302-19.302	16.310	0.009
	50 Diethylphthalate	16.194	16.179	16.171	16.163	16.155	16.156	16.155	16.155	13.155-19.155	16.168	0.015
	51 4-Chlorophenyl-phenyle	16.310	16.302	16.302	16.294	16.294	16.295	16.294	16.294	13.294-19.294	16.299	0.006
	52 4-Nitroaniline	16.449	16.418	16.395	16.387	16.379	16.379	16.379	16.379	13.379-19.379	16.398	0.026
	53 4,6-Dinitro-2-methylph	16.534	16.510	16.495	16.487	16.479	16.480	16.479	16.479	13.479-19.479	16.495	0.020

ARI Labs, Inc.
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Batch File: \\target\share\chem3\nt14.i\20230315.b
Inst ID: nt14.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	54 N-Nitrosodiphenylamine	16.572	16.557	16.549	16.549	16.541	16.541	16.541	16.541	13.541-19.541	16.550	0.011
$	55 2,4,6-Tribromophenol	16.857	16.850	16.842	16.842	16.842	16.834	16.842	16.842	13.842-19.842	16.844	0.007
	56 4-Bromophenyl-phenylet	17.312	17.305	17.305	17.304	17.304	17.305	17.304	17.304	14.304-20.304	17.306	0.003
	57 Hexachlorobenzene	17.637	17.629	17.621	17.621	17.621	17.621	17.621	17.621	14.621-20.621	17.625	0.006
	58 Pentachlorophenol	17.993	17.977	17.977	17.977	17.969	17.978	17.977	17.977	14.977-20.977	17.978	0.007
*	59 Phenanthrene-d10	18.256	18.248	18.248	18.248	18.240	18.241	18.240	18.240	15.240-21.240	18.246	0.006
	60 Phenanthrene	18.310	18.302	18.295	18.295	18.287	18.287	18.287	18.287	15.287-21.287	18.295	0.009
	61 Anthracene	18.403	18.387	18.388	18.387	18.379	18.380	18.380	18.380	15.380-21.380	18.386	0.008
	62 Carbazole	18.728	18.712	18.713	18.712	18.704	18.705	18.705	18.705	15.705-21.705	18.711	0.008
	63 Di-n-butylphthalate	19.525	19.517	19.517	19.509	19.509	19.509	19.509	19.509	16.509-22.509	19.514	0.006
	64 Fluoranthene	20.693	20.685	20.678	20.678	20.677	20.678	20.677	20.677	17.677-23.677	20.681	0.006
	65 Pyrene	21.119	21.111	21.103	21.103	21.103	21.103	21.103	21.103	18.103-24.103	21.106	0.006
$	66 Terphenyl-d14	21.397	21.389	21.390	21.389	21.389	21.390	21.389	21.389	18.389-24.389	21.391	0.003
	67 Butylbenzylphthalate	22.319	22.311	22.311	22.311	22.311	22.311	22.311	22.311	19.311-25.311	22.312	0.003
	68 Benzo(a)anthracene	23.287	23.279	23.271	23.271	23.263	23.263	23.263	23.263	20.263-26.263	23.271	0.009
*	69 Chrysene-d12	23.310	23.302	23.302	23.294	23.294	23.294	23.294	23.294	20.294-26.294	23.299	0.006
	70 3,3'-Dichlorobenzidine	23.248	23.232	23.225	23.217	23.217	23.217	23.217	23.217	20.217-26.217	23.225	0.012
	71 Chrysene	23.364	23.348	23.349	23.341	23.340	23.341	23.341	23.341	20.341-26.341	23.346	0.009
	72 bis(2-Ethylhexyl)phtha	23.341	23.341	23.333	23.341	23.333	23.333	23.333	23.333	20.333-26.333	23.336	0.004
	73 Di-n-octylphthalate	24.347	24.339	24.332	24.332	24.331	24.332	24.332	24.332	21.332-27.332	24.335	0.006
	74 Benzo(b)fluoranthene	25.191	25.175	25.168	25.160	25.160	25.160	25.152	25.152	22.152-28.152	25.167	0.013
	75 Benzo(k)fluoranthene	25.237	25.222	25.214	25.206	25.206	25.199	25.199	25.199	22.199-28.199	25.212	0.014
	187 Total Benzofluoranthen	25.237	25.222	25.214	25.206	25.160	25.199	25.199	25.199	22.199-28.199	25.205	0.024
	76 Benzo(a)pyrene	25.849	25.834	25.826	25.818	25.818	25.818	25.818	25.818	22.818-28.818	25.826	0.012

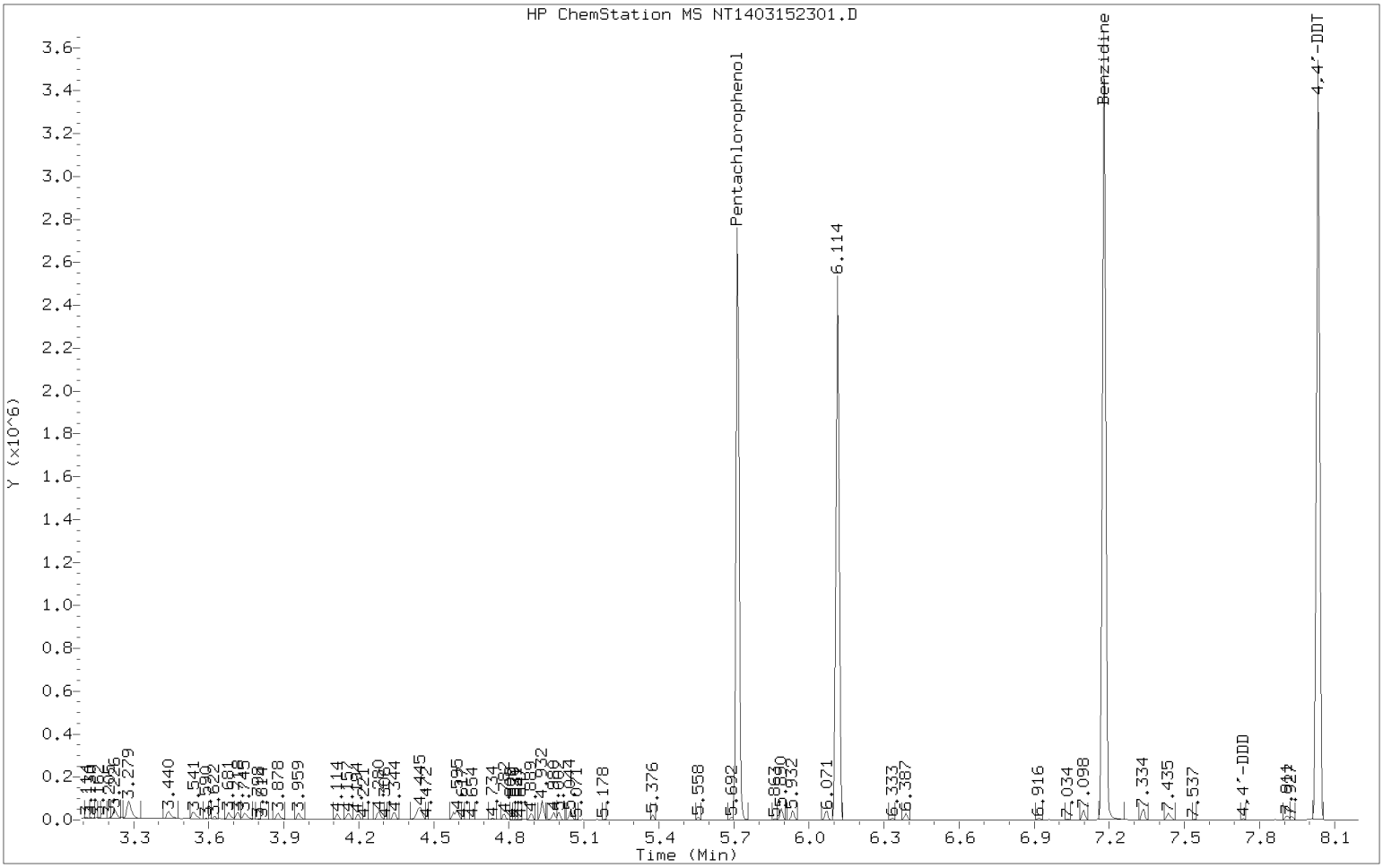
ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

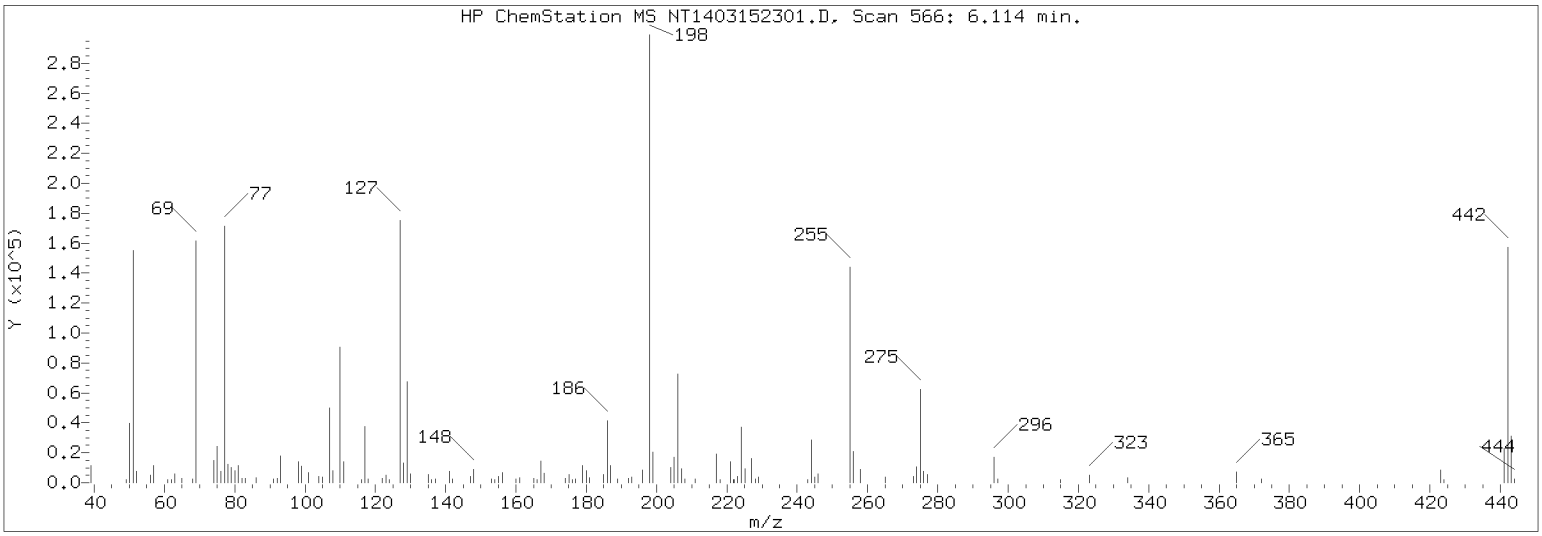
Method File: \\target\share\chem3\nt14.i\20230315.b\ABN.m
Batch File: \\target\share\chem3\nt14.i\20230315.b
Inst ID: nt14.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
*	77 Perylene-d12	25.950	25.942	25.942	25.942	25.942	25.934	25.934	25.934	22.934-28.934	25.941	0.005
	78 Indeno(1,2,3-cd)pyrene	28.681	28.650	28.627	28.619	28.611	28.611	28.611	28.611	25.611-31.611	28.630	0.027
	79 Dibenzo(a,h)anthracene	28.697	28.658	28.642	28.626	28.626	28.619	28.626	28.626	25.626-31.626	28.642	0.027
	80 Benzo(g,h,i)perylene	29.489	29.442	29.419	29.403	29.403	29.396	29.403	29.403	26.403-32.403	29.422	0.033
$	85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	51.633	48.633-54.633	+++++	+++++
$	86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	63.533	60.533-66.533	+++++	+++++
$	87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	60.273	57.273-63.273	+++++	+++++
$	88 Dibenz(a,h)anthracene-	+++++	+++++	+++++	+++++	+++++	+++++	+++++	78.600	75.600-81.600	+++++	+++++
$	89 Diphenyl-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	50.841	47.841-53.841	+++++	+++++
	90 N-Nitrosodimethylamine	4.752	4.736	4.721	4.721	4.713	4.713	4.721	4.721	1.721-7.721	4.725	0.014
	91 Aniline	8.544	8.529	8.521	8.521	8.513	8.514	8.513	8.513	5.513-11.513	8.522	0.011
	92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	56.160	53.160-59.160	+++++	+++++
	93 Benzidine	20.925	20.917	20.910	20.910	20.909	20.910	20.910	20.910	17.910-23.910	20.913	0.006
$	95 D10-1-methylnaphthalen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	52.075	49.075-55.075	+++++	+++++
	96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	49.250	46.250-52.250	+++++	+++++
	97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	61.202	58.202-64.202	+++++	+++++
	98 Retene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.787	15.787-21.787	+++++	+++++
	99 Perylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	24.361	21.361-27.361	+++++	+++++
	100 3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	25.411	22.411-28.411	+++++	+++++
	101 Cholesterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.023	23.023-29.023	+++++	+++++
	102 beta-Sitosterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	79.550	76.550-82.550	+++++	+++++
	103 Pyridine	4.744	4.744	4.744	4.744	4.751	4.752	4.767	4.767	1.767-7.767	4.749	0.009
	188 2,6-Dichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.874	8.874-14.874	+++++	+++++
	189 N-Nitrosomethylethylam	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.818	2.818-8.818	+++++	+++++

DFTPP TAILING FACTOR AND BREAKDOWN GRAPHIC REPORT

Datafile Analyzed: /20230315.b/NT1403152301.D/NT1403152301.D
Method Used: \20230315.b\DFTPP8270E.m Inst: nt14
Injection Date: 15-MAR-2023 12:00 Operator: JGR
Sample Info: SLC0160-TUN1 SLC0160-TUN1
Report Date: 03/21/2023 12:49





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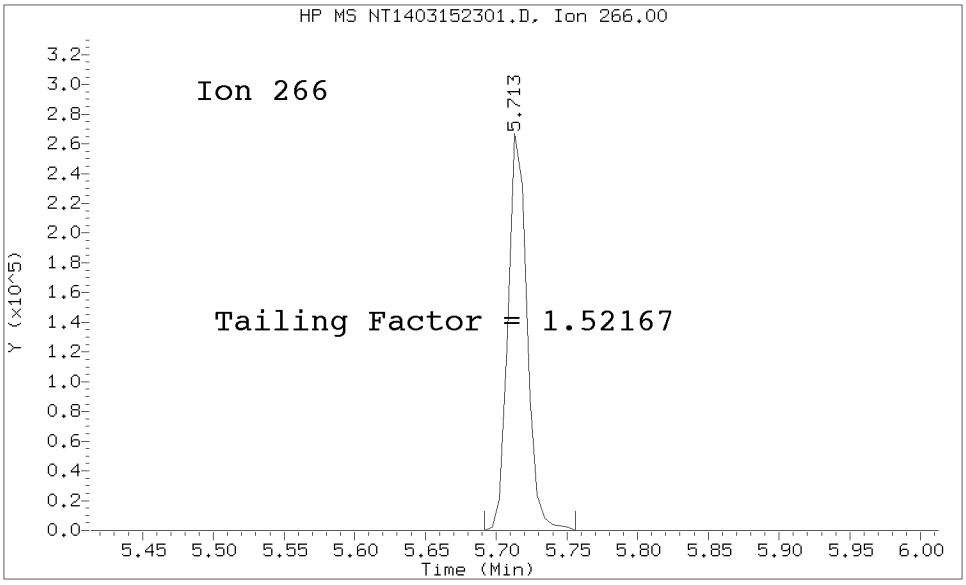
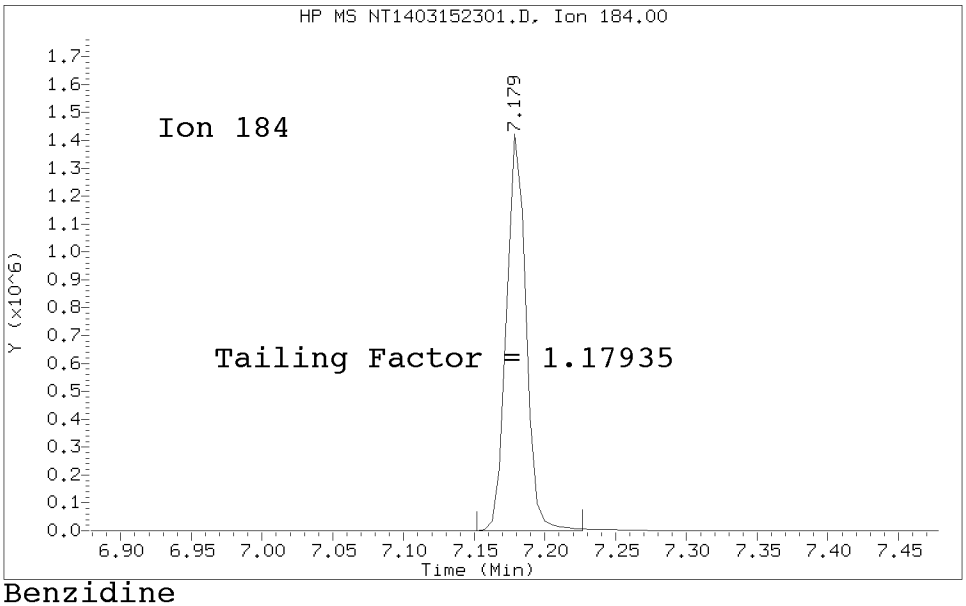
Method Used: \20230315.b\DFTPP8270E.m\sw846ddt.m Inst: nt14
Injection Date: 15-MAR-2023 12:00 Operator: JGR
Sample Info: SLC0160-TUN1
Report Date: 03/21/2023 12:49



Pentachlorophenol
==========
Exp. RT = 5.681
Found RT = 5.713

Tail Factor = 1.522 Maximum Allowed = 2.0



Benzidine
==========
Exp. RT = 7.146
Found RT = 7.179

Tail Factor = 1.179 Maximum Allowed = 2.0

8270 TAILING FACTOR/BREAKDOWN SUMMARY RESULTS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test
Pentachlorophenol	1.5216693	2.000	PASS
Benzidine	1.1793548	2.000	PASS

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	570011			N/A
4,4-DDE	0	0.0	20.0	PASS
4,4-DDD	2915	0.5	20.0	PASS
4,4-DDD + DDE	2915	0.5	20.0	PASS

Tuning Sample, nt14.i/20230315.b/NT1403152301.D, *** PASSED ***

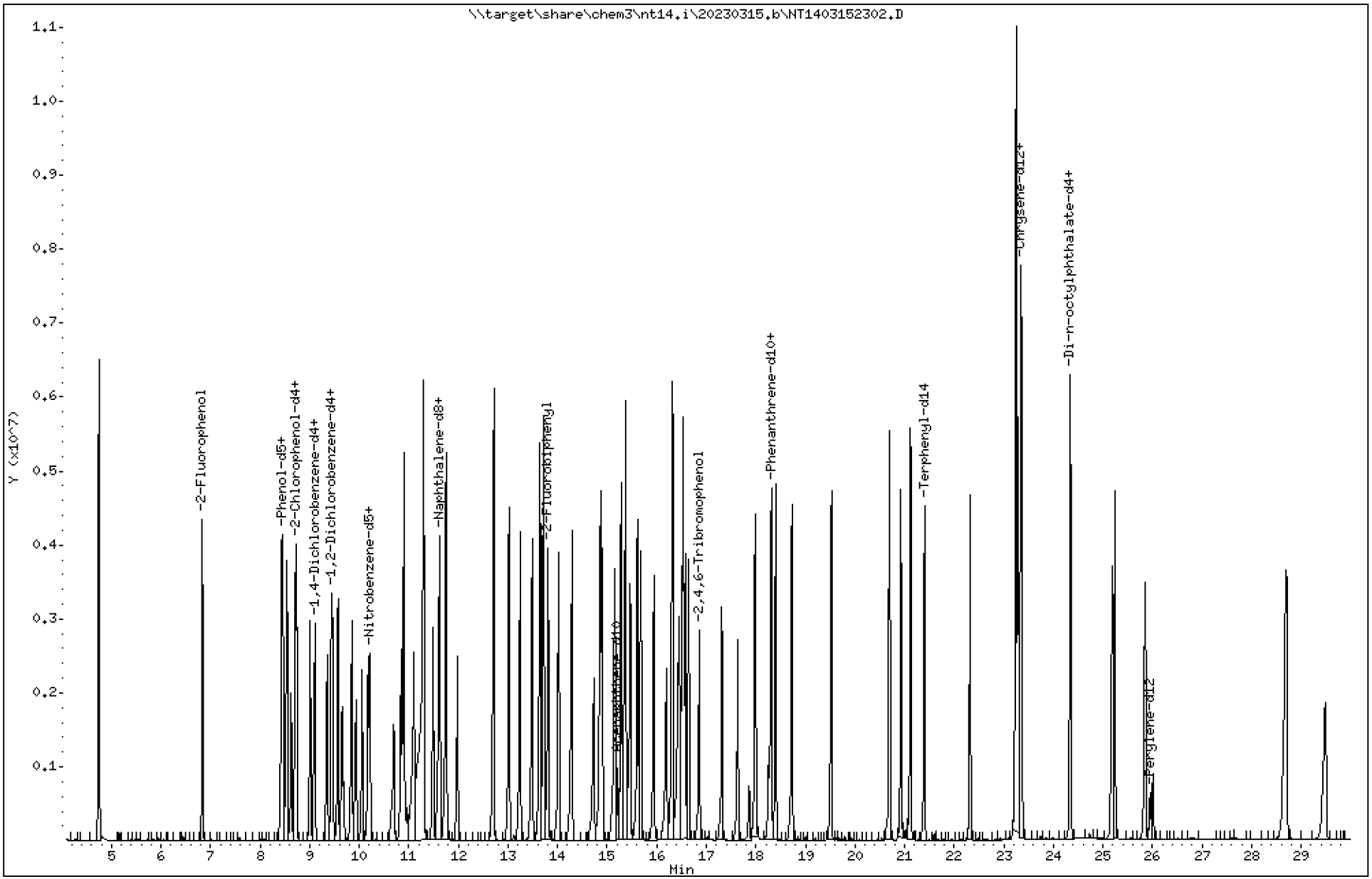
m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
68	Less than 2.00% of mass 69	0.36 (0.67)
69	Mass 69 relative abundance	53.44
70	Less than 2.00% of mass 69	0.00 (0.00)
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.72
365	1.00 - 100.00% of mass 198	2.71
441	Less than 150.00% of mass 443	8.08 (72.22)
442	Less than 200.00% of mass 198	58.28
443	15.00 - 24.00% of mass 442	11.19 (19.20)

Data File: NT1403152301.D
Spectrum: Avg. Scans 565-567 (6.11), Background Scan 560
Location of Maximum: 198.00
Number of points: 121

m/z	Y	m/z	Y	m/z	Y	m/z	Y
39.00	9069	105.00	2863	168.00	5614	228.00	794
49.00	671	107.00	39032	174.00	2579	229.00	2862
50.00	30976	108.00	6346	175.00	4842	243.00	696
51.00	125768	110.00	71896	176.00	720	244.00	22688
52.00	6453	111.00	11106	177.00	2298	245.00	3011
56.00	4179	116.00	757	179.00	9119	246.00	4609
57.00	8934	117.00	29992	180.00	6294	255.00	114968
61.00	717	118.00	874	181.00	2818	256.00	16984
62.00	680	122.00	2529	185.00	4402	258.00	7242
63.00	4715	123.00	4032	186.00	32272	265.00	2218
65.00	1773	124.00	773	187.00	9241	273.00	3465
68.00	849	127.00	138368	189.00	1636	274.00	8836
69.00	126008	128.00	10413	192.00	2615	275.00	49816
74.00	11539	129.00	53960	193.00	3054	276.00	6361
75.00	19136	130.00	4541	196.00	6505	277.00	4187
76.00	6049	135.00	4342	198.00	235776	296.00	14150
77.00	134016	136.00	766	199.00	15852	297.00	810
78.00	9331	137.00	800	204.00	8038	315.00	707
79.00	8099	141.00	6361	205.00	13686	323.00	4245
80.00	6487	142.00	869	206.00	57704	334.00	2072
81.00	9538	147.00	3337	207.00	7569	365.00	6386
82.00	1806	148.00	7192	208.00	1530	372.00	1786
83.00	1759	153.00	830	211.00	1585	423.00	7390
86.00	2890	154.00	714	217.00	15135	424.00	1369
91.00	1612	155.00	3489	218.00	723	441.00	19048
92.00	1761	156.00	5350	221.00	10741	442.00	137408
93.00	14267	160.00	806	222.00	1546	443.00	26376
98.00	10738	161.00	2807	223.00	3284	444.00	1928
99.00	8546	165.00	1720	224.00	30088		
101.00	5073	166.00	753	225.00	7730		
104.00	3305	167.00	9750	227.00	12951		

Data File: \\target\share\chem3\nt14.i\20230315.b\NT1403152302.D
Date : 15-MAR-2023 12:13
Client ID:
Sample Info: SLC0160-CAL7

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



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230315.b\NT1403152302.D
Lab Smp Id: SLC0160-CAL7
Inj Date : 15-MAR-2023 12:13 MS Autotune Date: 11-MAR-2023 16:01
Operator : JGR Inst ID: nt14.i
Smp Info : SLC0160-CAL7
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230315.b\ABN.m
Meth Date : 21-Mar-2023 12:29 van Quant Type: ISTD
Cal Date : 15-MAR-2023 15:50 Cal File: NT1403152308.D
Als bottle: 2 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

			QUANT SIG					AMOUNTS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1	2-Fluorophenol	112	6.837	6.821	(1.000)	1743646	30.0000	30.66
$	2	Phenol-d5	99	8.436	8.412	(1.000)	2397314	30.0000	32.02
	3	Phenol	94	8.459	8.428	(1.000)	1635252	20.0000	20.55
$	5	2-Chlorophenol-d4	132	8.714	8.698	(1.000)	1895131	30.0000	32.10
	4	Bis(2-Chloroethyl)ether	93	8.629	8.606	(1.000)	1165154	20.0000	20.33
	6	2-Chlorophenol	128	8.745	8.721	(1.000)	1343889	20.0000	21.46
	7	1,3-Dichlorobenzene	146	9.008	9.000	(1.000)	1290721	20.0000	20.36
*	8	1,4-Dichlorobenzene-d4	152	9.070	9.062	(1.000)	167425	4.00000	(M)
	9	1,4-Dichlorobenzene	146	9.109	9.093	(1.000)	1253956	20.0000	20.53
$	10	1,2-Dichlorobenzene-d4	152	9.435	9.427	(1.000)	811556	20.0000	20.58
	12	1,2-Dichlorobenzene	146	9.466	9.458	(1.000)	1241905	20.0000	20.58
	11	Benzyl alcohol	108	9.357	9.334	(1.000)	830899	20.0000	22.43
	14	2,2'-oxybis(1-Chloropropane)	121	9.652	9.644	(1.000)	374113	20.0000	20.54
	13	2-Methylphenol	108	9.574	9.559	(1.000)	1209191	20.0000	21.49
	17	Hexachloroethane	117	10.056	10.056	(1.000)	565908	20.0000	21.67
	16	N-Nitroso-di-n-propylamine	70	9.939	9.893	(1.000)	934845	20.0000	21.11
	15	4-Methylphenol	108	9.854	9.823	(1.000)	1473052	20.0000	22.11
$	18	Nitrobenzene-d5	82	10.180	10.164	(0.879)	1483770	20.0000	21.00
	19	Nitrobenzene	77	10.219	10.195	(0.883)	1409960	20.0000	20.50
	20	Isophorone	82	10.692	10.645	(0.924)	2070547	20.0000	22.05
	21	2-Nitrophenol	139	10.847	10.831	(0.937)	850721	20.0000	19.98
	22	2,4-Dimethylphenol	107	10.901	10.878	(0.942)	2261899	40.0000	38.45
	23	Bis(2-Chloroethoxy)methane	93	11.103	11.080	(0.959)	1270611	20.0000	20.10
	24	Benzoic acid	105	11.297	10.963	(0.976)	4525852	80.0000	79.86(M)
	25	2,4-Dichlorophenol	162	11.305	11.281	(0.977)	1928908	40.0000	41.23
	26	1,2,4-Trichlorobenzene	180	11.490	11.482	(0.993)	1167058	20.0000	20.29
*	27	Naphthalene-d8	136	11.575	11.567	(1.000)	667689	4.00000	
	28	Naphthalene	128	11.621	11.606	(1.004)	3699353	20.0000	20.74
	29	4-Chloroaniline	127	11.753	11.729	(1.015)	3181601	40.0000	42.61
	30	Hexachlorobutadiene	225	11.977	11.977	(1.035)	526402	20.0000	20.27
	31	4-Chloro-3-methylphenol	107	12.712	12.689	(1.098)	2446331	40.0000	43.27
	32	2-Methylnaphthalene	142	13.022	13.006	(1.125)	2589594	20.0000	20.82
	33	Hexachlorocyclopentadiene	237	13.486	13.486	(0.887)	1331626	40.0000	44.56

			QUANT SIG					AMOUNTS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
	34	2,4,6-Trichlorophenol	196	13.648	13.625	(0.897)	1600451	40.0000	43.88
	35	2,4,5-Trichlorophenol	196	13.718	13.702	(0.902)	1601594	40.0000	42.14
$	36	2-Fluorobiphenyl	172	13.811	13.795	(0.908)	2617922	20.0000	20.10
	37	2-Chloronaphthalene	162	14.020	14.004	(0.922)	2236879	20.0000	20.04
	38	2-Nitroaniline	65	14.291	14.260	(0.939)	1804349	40.0000	41.87
	39	Dimethylphthalate	163	14.732	14.693	(0.968)	2308200	20.0000	19.25
	40	Acenaphthylene	152	14.895	14.879	(0.979)	3769958	20.0000	20.11
	41	2,6-Dinitrotoluene	165	14.864	14.833	(0.977)	1155286	40.0000	41.71
*	42	Acenaphthene-d10	164	15.212	15.196	(1.000)	359561	4.00000	
	43	3-Nitroaniline	138	15.158	15.111	(0.996)	1638674	40.0000	42.88
	44	Acenaphthene	153	15.281	15.258	(1.005)	2265280	20.0000	20.70
	45	2,4-Dinitrophenol	184	15.374	15.328	(1.011)	2027286	80.0000	79.79
	46	Dibenzofuran	168	15.614	15.590	(1.026)	3220821	20.0000	20.61
	47	4-Nitrophenol	109	15.467	15.420	(1.017)	937454	40.0000	46.35
	48	2,4-Dinitrotoluene	165	15.683	15.645	(1.031)	1685378	40.0000	42.93
	50	Diethylphthalate	149	16.194	16.155	(1.065)	2565807	20.0000	20.70
	49	Fluorene	166	16.325	16.302	(1.073)	3010791	20.0000	20.33
	51	4-Chlorophenyl-phenylether	204	16.309	16.294	(1.072)	1282932	20.0000	20.18
	52	4-Nitroaniline	138	16.448	16.379	(1.081)	1459414	40.0000	43.91
	53	4,6-Dinitro-2-methylphenol	198	16.533	16.479	(0.906)	2055185	80.0000	79.90
	54	N-Nitrosodiphenylamine	169	16.572	16.541	(0.908)	1814068	20.0000	20.37
$	55	2,4,6-Tribromophenol	330	16.857	16.841	(1.108)	494539	30.0000	36.23
	56	4-Bromophenyl-phenylether	248	17.312	17.304	(0.948)	658149	20.0000	21.92
	57	Hexachlorobenzene	284	17.636	17.621	(0.966)	634312	20.0000	20.02
	58	Pentachlorophenol	266	17.992	17.977	(0.986)	996102	40.0000	39.95
*	59	Phenanthrene-d10	188	18.255	18.240	(1.000)	655798	4.00000	
	60	Phenanthrene	178	18.310	18.286	(1.003)	3925669	20.0000	20.95
	61	Anthracene	178	18.402	18.379	(1.008)	3811614	20.0000	21.11
	62	Carbazole	167	18.727	18.704	(1.026)	3539660	20.0000	22.04
	63	Di-n-butylphthalate	149	19.524	19.509	(1.070)	4536808	20.0000	22.28
	64	Fluoranthene	202	20.693	20.677	(0.888)	4152561	20.0000	20.89
	65	Pyrene	202	21.118	21.103	(0.906)	4204352	20.0000	20.63
$	66	Terphenyl-d14	244	21.397	21.389	(0.918)	2695385	20.0000	19.53
	67	Butylbenzylphthalate	149	22.318	22.310	(0.957)	1845987	20.0000	20.67
	68	Benzo(a)anthracene	228	23.286	23.263	(0.999)	3761897	20.0000	20.88
*	69	Chrysene-d12	240	23.309	23.294	(1.000)	488521	4.00000	
	70	3,3'-Dichlorobenzidine	252	23.247	23.216	(0.997)	4016223	60.0000	59.79
	71	Chrysene	228	23.363	23.340	(1.002)	3340780	20.0000	20.49
	72	bis(2-Ethylhexyl)phthalate	149	23.340	23.332	(0.959)	2714646	20.0000	21.67
*	134	Di-n-octylphthalate-d4	153	24.331	24.323	(1.000)	951548	4.00000	
	73	Di-n-octylphthalate	149	24.347	24.331	(1.001)	4811694	20.0000	19.67
	74	Benzo(b)fluoranthene	252	25.190	25.152	(0.971)	3832060	20.0000	24.04
	75	Benzo(k)fluoranthene	252	25.237	25.198	(0.973)	3246184	20.0000	20.55
	76	Benzo(a)pyrene	252	25.849	25.818	(0.996)	3054317	20.0000	22.41
*	77	Perylene-d12	264	25.949	25.934	(1.000)	451011	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	28.680	28.610	(1.105)	3341958	20.0000	22.53
	79	Dibenzo(a,h)anthracene	278	28.696	28.626	(1.106)	2832442	20.0000	22.66
	80	Benzo(g,h,i)perylene	276	29.488	29.403	(1.136)	2788563	20.0000	22.81
	90	N-Nitrosodimethylamine	74	4.751	4.720	(1.000)	1435899	40.0000	39.86
	91	Aniline	93	8.544	8.513	(1.000)	3278182	40.0000	40.96
	93	Benzidine	184	20.925	20.909	(0.898)	3003267	40.0000	37.55
	103	Pyridine	79	4.743	4.766	(1.000)	2176938	20.0000	19.52
	105	1-methylnaphthalene	142	13.246	13.230	(1.144)	2340062	20.0000	20.76
	111	Azobenzene (1,2-DP-Hydrazine)	77	16.641	16.618	(1.094)	2911296	20.0000	19.67

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
187 Total Benzofluoranthenes	252	25.237	25.199	(0.973)	6729222	40.0000	44.46(M)
120 2,3,4,6-Tetrachlorophenol	232	15.938	15.923	(1.048)	836591	20.0000	19.95

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1403152302.D
Lab Smp Id: SLC0160-CAL7
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt14.i\20230315.b\ABN.m
Misc Info:

Calibration Date: 15-MAR-2023
Calibration Time: 13:26
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	194517	97259	389034	167425	-13.93
27 Naphthalene-d8	721321	360661	1442642	667689	-7.44
42 Acenaphthene-d10	379602	189801	759204	359561	-5.28
59 Phenanthrene-d10	703194	351597	1406388	655798	-6.74
69 Chrysene-d12	504769	252385	1009538	488521	-3.22
134 Di-n-octylphthala	978492	489246	1956984	951548	-2.75
77 Perylene-d12	484073	242037	968146	451011	-6.83

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.07	8.57	9.57	9.07	-0.00
27 Naphthalene-d8	11.57	11.07	12.07	11.58	0.07
42 Acenaphthene-d10	15.20	14.70	15.70	15.21	0.05
59 Phenanthrene-d10	18.25	17.75	18.75	18.26	0.04
69 Chrysene-d12	23.30	22.80	23.80	23.31	0.03
134 Di-n-octylphthala	24.32	23.82	24.82	24.33	0.03
77 Perylene-d12	25.94	25.44	26.44	25.95	0.03

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

REVIEW SUMMARY FOR FILE - NT1403152302.D

Lab ID: SLC0160-CAL7
nt14.i, ABN.m, 15-MAR-2023 12:13

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
1.000	1.064	-0.0642	2,2'-oxybis(1-Chloropropane)
0.976	0.948	0.0282	Benzoic acid

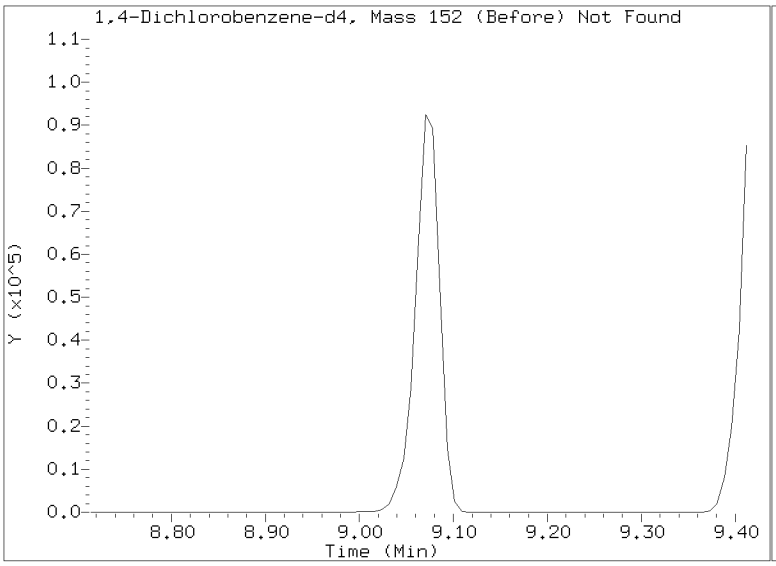
RRT check based on Ccal File: NT1403152308.D

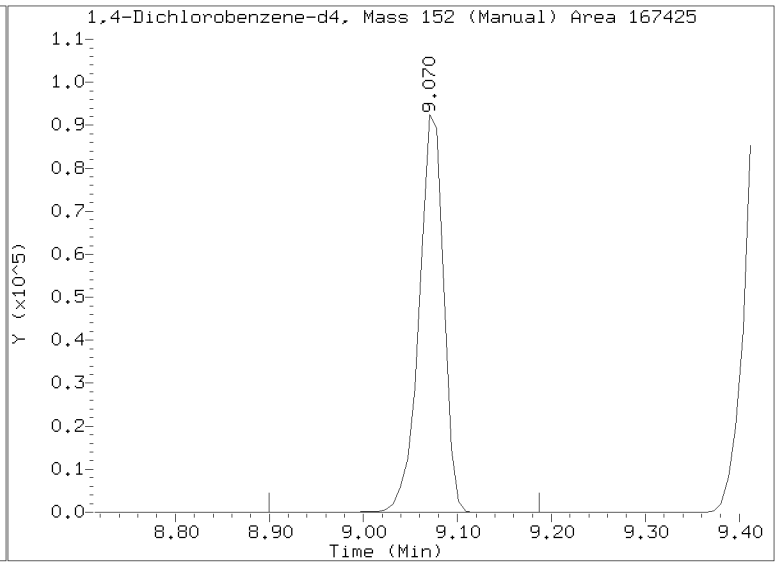
On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

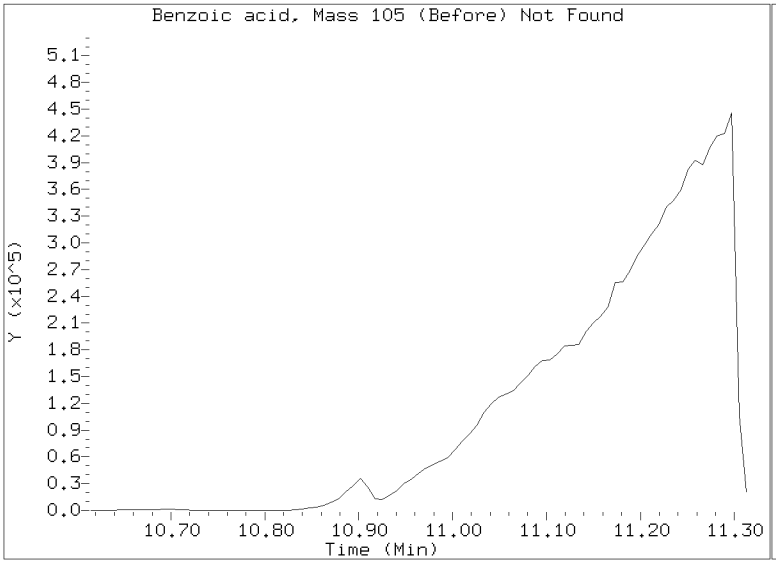
* Only compounds listed in the work order have been verified by the analyst *

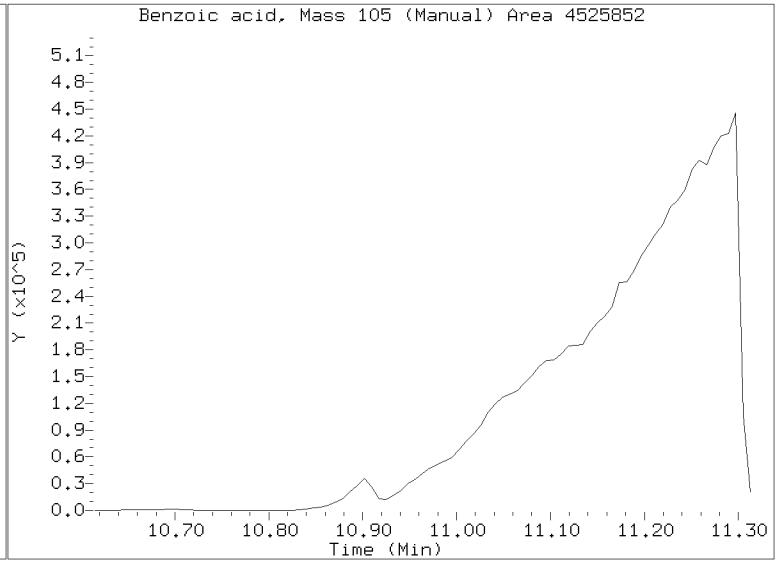
Quant Ion Manual Peak Adjustment Report

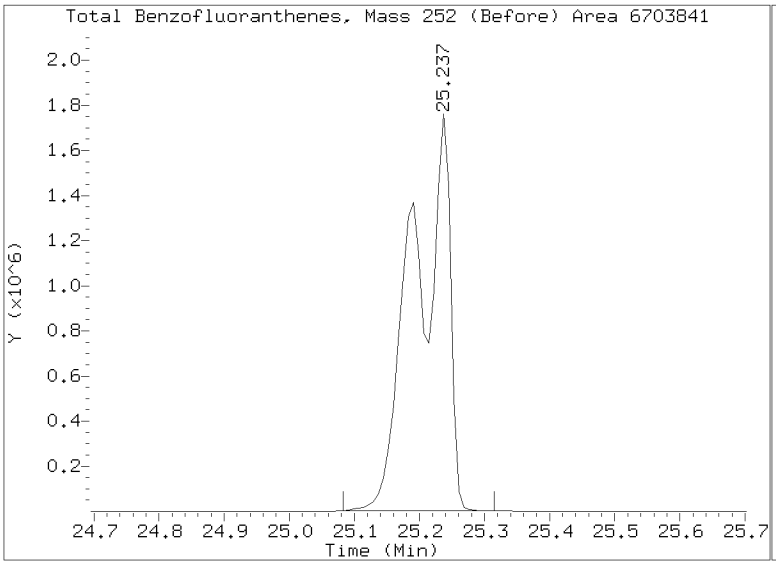
Datafile: //target/share/chem3/nt14.i/20230315.b/NT1403152302.D
Injection Date: 15-MAR-2023 12:13
Lab ID:SLC0160-CAL7 Client ID:
Report Date: 03/21/2023 12:48

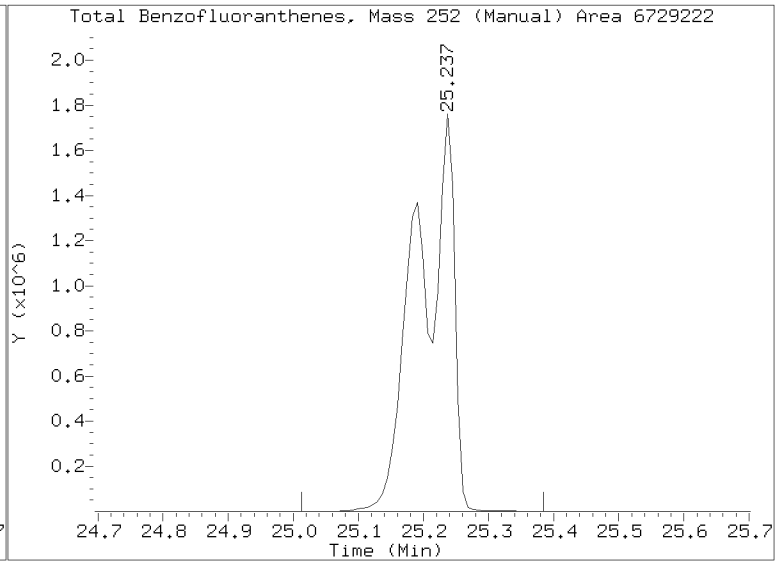












Data File: \\target\share\chem3\nt14.i\20230315.b\NT1403152303.D

Page 1

Date : 15-MAR-2023 12:49

Client ID:

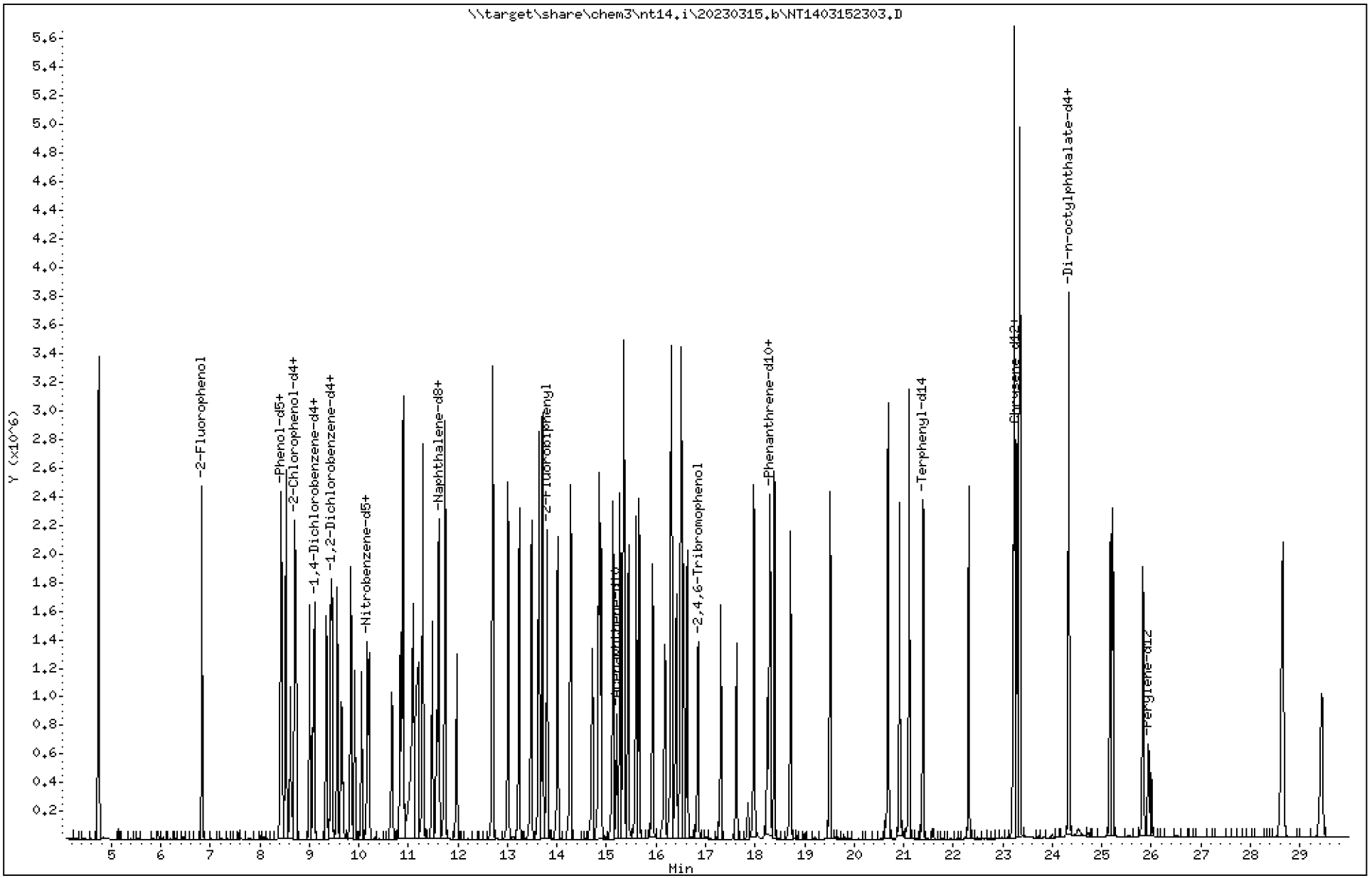
Instrument: nt14.i

Sample Info: SLC0160-CAL6

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230315.b\NT1403152303.D
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Inj Date : 15-MAR-2023 12:49 MS Autotune Date: 11-MAR-2023 16:01
Operator : JGR Inst ID: nt14.i
Smp Info : SLC0160-CAL6
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230315.b\ABN.m
Meth Date : 21-Mar-2023 12:29 van Quant Type: ISTD
Cal Date : 15-MAR-2023 15:50 Cal File: NT1403152308.D
Als bottle: 3 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

							AMOUNTS	
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.829	6.821	(1.000)	905223	15.0000	14.74
$	2 Phenol-d5	99	8.428	8.412	(1.000)	1230813	15.0000	15.23
	3 Phenol	94	8.443	8.428	(1.000)	846344	10.0000	9.852
$	5 2-Chlorophenol-d4	132	8.706	8.698	(1.000)	958127	15.0000	15.04
	4 Bis(2-Chloroethyl)ether	93	8.621	8.606	(1.000)	600336	10.0000	9.705
	6 2-Chlorophenol	128	8.729	8.721	(1.000)	679087	10.0000	10.04
	7 1,3-Dichlorobenzene	146	9.008	9.000	(1.000)	661995	10.0000	9.672
*	8 1,4-Dichlorobenzene-d4	152	9.070	9.062	(1.000)	180739	4.00000	(M)
	9 1,4-Dichlorobenzene	146	9.101	9.093	(1.000)	636548	10.0000	9.656
$	10 1,2-Dichlorobenzene-d4	152	9.435	9.427	(1.000)	419499	10.0000	9.854
	12 1,2-Dichlorobenzene	146	9.458	9.458	(1.000)	634387	10.0000	9.736
	11 Benzyl alcohol	108	9.341	9.334	(1.000)	417501	10.0000	10.44
	14 2,2'-oxybis(1-Chloropropane)	121	9.644	9.644	(1.063)	187006	10.0000	9.511(M)
	13 2-Methylphenol	108	9.567	9.559	(1.000)	612304	10.0000	10.08
	17 Hexachloroethane	117	10.056	10.056	(1.000)	284787	10.0000	10.10
	16 N-Nitroso-di-n-propylamine	70	9.916	9.893	(1.000)	479915	10.0000	10.04
	15 4-Methylphenol	108	9.838	9.823	(1.000)	756162	10.0000	10.52
$	18 Nitrobenzene-d5	82	10.172	10.164	(0.879)	748017	10.0000	10.26
	19 Nitrobenzene	77	10.211	10.195	(0.883)	716695	10.0000	10.10
	20 Isophorone	82	10.669	10.645	(0.922)	1044814	10.0000	10.78
	21 2-Nitrophenol	139	10.839	10.831	(0.937)	422056	10.0000	10.09
	22 2,4-Dimethylphenol	107	10.894	10.878	(0.942)	1164271	20.0000	19.18
	23 Bis(2-Chloroethoxy)methane	93	11.095	11.080	(0.959)	642048	10.0000	9.841
	24 Benzoic acid	105	11.196	10.963	(0.968)	2201419	40.0000	40.76(M)
	25 2,4-Dichlorophenol	162	11.297	11.281	(0.977)	1006763	20.0000	20.85
	26 1,2,4-Trichlorobenzene	180	11.482	11.482	(0.993)	596618	10.0000	10.05
*	27 Naphthalene-d8	136	11.567	11.567	(1.000)	689021	4.00000	
	28 Naphthalene	128	11.614	11.606	(1.004)	1829723	10.0000	9.940
	29 4-Chloroaniline	127	11.745	11.729	(1.015)	1583401	20.0000	20.55
	30 Hexachlorobutadiene	225	11.977	11.977	(1.035)	264317	10.0000	9.864
	31 4-Chloro-3-methylphenol	107	12.704	12.689	(1.098)	1216983	20.0000	20.86
	32 2-Methylnaphthalene	142	13.014	13.006	(1.125)	1299572	10.0000	10.12
	33 Hexachlorocyclopentadiene	237	13.486	13.486	(0.887)	648324	20.0000	21.53

		QUANT SIG					AMOUNTS	
	Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
	34 2,4,6-Trichlorophenol	196	13.641	13.625	(0.897)	762274	20.0000	20.74
	35 2,4,5-Trichlorophenol	196	13.710	13.702	(0.902)	816766	20.0000	21.33
$	36 2-Fluorobiphenyl	172	13.803	13.795	(0.908)	1296537	10.0000	9.882
	37 2-Chloronaphthalene	162	14.012	14.004	(0.922)	1129102	10.0000	10.04
	38 2-Nitroaniline	65	14.275	14.260	(0.939)	894554	20.0000	20.60
	39 Dimethylphthalate	163	14.716	14.693	(0.968)	1182461	10.0000	9.788
	40 Acenaphthylene	152	14.887	14.879	(0.979)	1876009	10.0000	9.933
	41 2,6-Dinitrotoluene	165	14.848	14.833	(0.977)	578792	20.0000	20.74
*	42 Acenaphthene-d10	164	15.204	15.196	(1.000)	362269	4.00000	
	43 3-Nitroaniline	138	15.134	15.111	(0.995)	818924	20.0000	21.27
	44 Acenaphthene	153	15.274	15.258	(1.005)	1118649	10.0000	10.14
	45 2,4-Dinitrophenol	184	15.351	15.328	(1.010)	959641	40.0000	41.16
	46 Dibenzofuran	168	15.598	15.590	(1.026)	1596031	10.0000	10.14
	47 4-Nitrophenol	109	15.444	15.420	(1.016)	425414	20.0000	20.88
	48 2,4-Dinitrotoluene	165	15.660	15.645	(1.030)	830406	20.0000	20.99
	50 Diethylphthalate	149	16.178	16.155	(1.064)	1346512	10.0000	10.78
	49 Fluorene	166	16.317	16.302	(1.073)	1487222	10.0000	9.966
	51 4-Chlorophenyl-phenylether	204	16.302	16.294	(1.072)	624139	10.0000	9.743
	52 4-Nitroaniline	138	16.417	16.379	(1.080)	714558	20.0000	21.34
	53 4,6-Dinitro-2-methylphenol	198	16.510	16.479	(0.905)	981338	40.0000	40.54
	54 N-Nitrosodiphenylamine	169	16.556	16.541	(0.907)	893652	10.0000	9.960
$	55 2,4,6-Tribromophenol	330	16.849	16.841	(1.108)	232501	15.0000	16.90
	56 4-Bromophenyl-phenylether	248	17.304	17.304	(0.948)	319909	10.0000	10.58
	57 Hexachlorobenzene	284	17.628	17.621	(0.966)	318529	10.0000	9.979
	58 Pentachlorophenol	266	17.977	17.977	(0.985)	473512	20.0000	20.27
*	59 Phenanthrene-d10	188	18.248	18.240	(1.000)	660604	4.00000	
	60 Phenanthrene	178	18.302	18.286	(1.003)	1901122	10.0000	10.07
	61 Anthracene	178	18.387	18.379	(1.008)	1888486	10.0000	10.39
	62 Carbazole	167	18.712	18.704	(1.025)	1692192	10.0000	10.46
	63 Di-n-butylphthalate	149	19.517	19.509	(1.070)	2235033	10.0000	10.90
	64 Fluoranthene	202	20.685	20.677	(0.888)	2037696	10.0000	10.41
	65 Pyrene	202	21.110	21.103	(0.906)	2051300	10.0000	10.22
$	66 Terphenyl-d14	244	21.389	21.389	(0.918)	1353492	10.0000	9.964
	67 Butylbenzylphthalate	149	22.310	22.310	(0.957)	928335	10.0000	10.56
	68 Benzo(a)anthracene	228	23.278	23.263	(0.999)	1804020	10.0000	10.17
*	69 Chrysene-d12	240	23.301	23.294	(1.000)	480922	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.232	23.216	(0.997)	1775828	30.0000	31.33
	71 Chrysene	228	23.348	23.340	(1.002)	1615208	10.0000	10.06
	72 bis(2-Ethylhexyl)phthalate	149	23.340	23.332	(0.960)	1311252	10.0000	10.59
*	134 Di-n-octylphthalate-d4	153	24.323	24.323	(1.000)	940570	4.00000	
	73 Di-n-octylphthalate	149	24.339	24.331	(1.001)	2370243	10.0000	9.803
	74 Benzo(b)fluoranthene	252	25.175	25.152	(0.970)	1657464	10.0000	10.21
	75 Benzo(k)fluoranthene	252	25.221	25.198	(0.972)	1753944	10.0000	10.90
	76 Benzo(a)pyrene	252	25.833	25.818	(0.996)	1499407	10.0000	10.80
*	77 Perylene-d12	264	25.942	25.934	(1.000)	459466	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	28.649	28.610	(1.104)	1624009	10.0000	10.75
	79 Dibenzo(a,h)anthracene	278	28.657	28.626	(1.105)	1356753	10.0000	10.65
	80 Benzo(g,h,i)perylene	276	29.442	29.403	(1.135)	1337729	10.0000	10.74
	90 N-Nitrosodimethylamine	74	4.736	4.720	(1.000)	746586	20.0000	19.20
	91 Aniline	93	8.528	8.513	(1.000)	1714467	20.0000	19.84
	93 Benzidine	184	20.917	20.909	(0.898)	1531307	20.0000	19.45
	103 Pyridine	79	4.743	4.766	(1.000)	1137513	10.0000	9.447
	105 1-methylnaphthalene	142	13.238	13.230	(1.144)	1170562	10.0000	10.06
	111 Azobenzene (1,2-DP-Hydrazine)	77	16.633	16.618	(1.094)	1477609	10.0000	9.907

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
187 Total Benzofluoranthenes	252	25.221	25.199	(0.972)	3255283	20.0000	21.11(M)
120 2,3,4,6-Tetrachlorophenol	232	15.931	15.923	(1.048)	403311	10.0000	10.30

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1403152303.D
Lab Smp Id: SLC0160-CAL6
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt14.i\20230315.b\ABN.m
Misc Info:

Calibration Date: 15-MAR-2023
Calibration Time: 13:26
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	194517	97259	389034	180739	-7.08
27 Naphthalene-d8	721321	360661	1442642	689021	-4.48
42 Acenaphthene-d10	379602	189801	759204	362269	-4.57
59 Phenanthrene-d10	703194	351597	1406388	660604	-6.06
69 Chrysene-d12	504769	252385	1009538	480922	-4.72
134 Di-n-octylphthala	978492	489246	1956984	940570	-3.88
77 Perylene-d12	484073	242037	968146	459466	-5.08

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.07	8.57	9.57	9.07	-0.00
27 Naphthalene-d8	11.57	11.07	12.07	11.57	-0.00
42 Acenaphthene-d10	15.20	14.70	15.70	15.20	-0.00
59 Phenanthrene-d10	18.25	17.75	18.75	18.25	-0.00
69 Chrysene-d12	23.30	22.80	23.80	23.30	-0.00
134 Di-n-octylphthala	24.32	23.82	24.82	24.32	-0.00
77 Perylene-d12	25.94	25.44	26.44	25.94	-0.00

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

REVIEW SUMMARY FOR FILE - NT1403152303.D

Lab ID: SLC0160-CAL6
nt14.i, ABN.m, 15-MAR-2023 12:49

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.968	0.948	0.0201	Benzoic acid

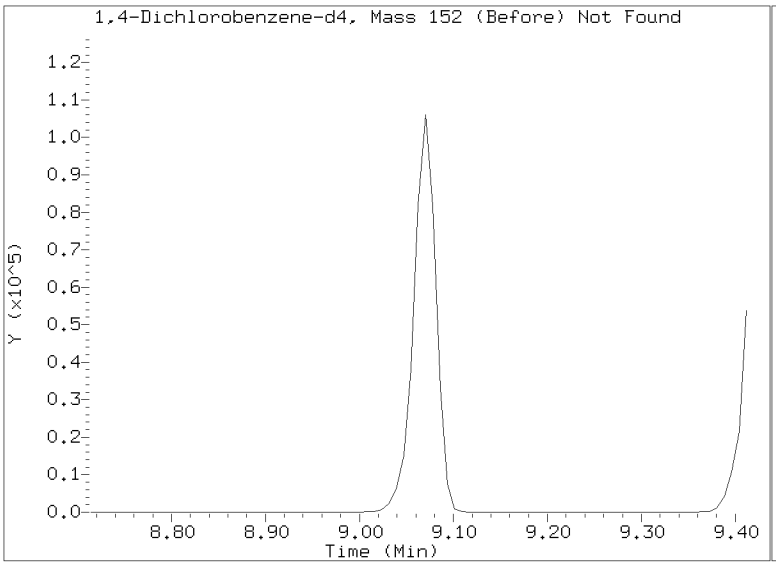
RRT check based on Ccal File: NT1403152308.D

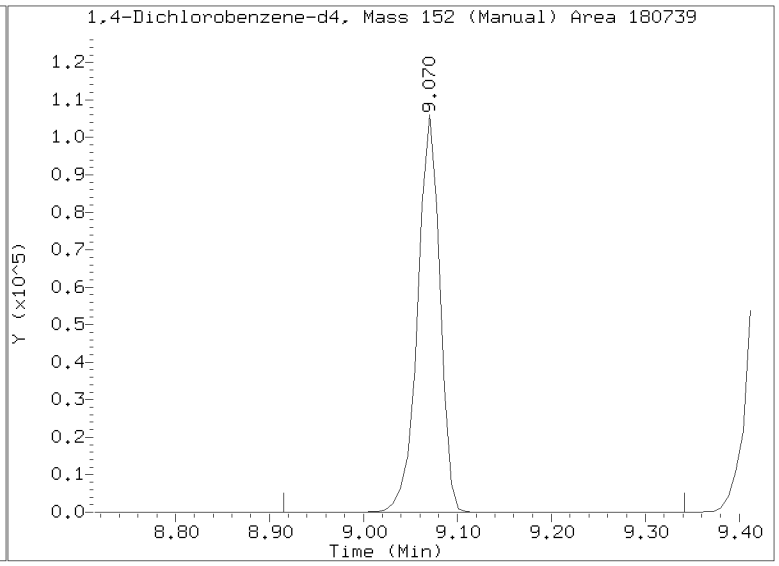
On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

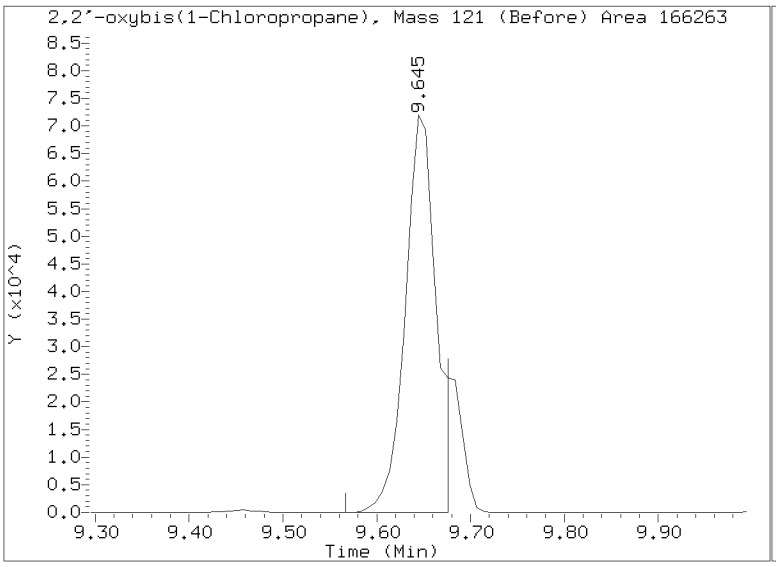
* Only compounds listed in the work order have been verified by the analyst *

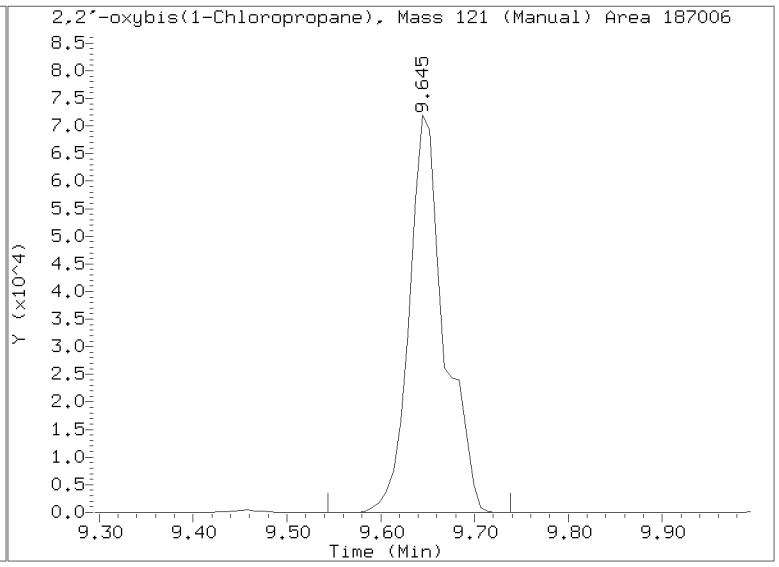
Quant Ion Manual Peak Adjustment Report

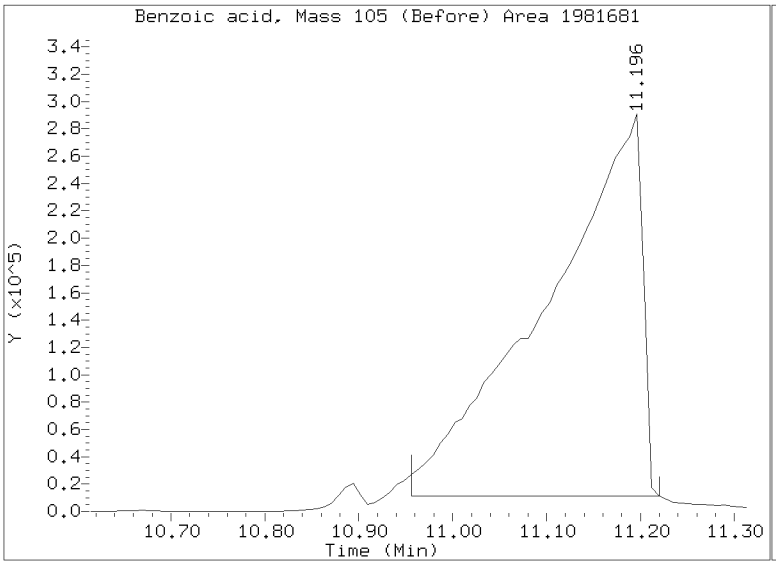
Datafile: //target/share/chem3/nt14.i/20230315.b/NT1403152303.D
Injection Date: 15-MAR-2023 12:49
Lab ID:SLC0160-CAL6 Client ID:
Report Date: 03/21/2023 12:48

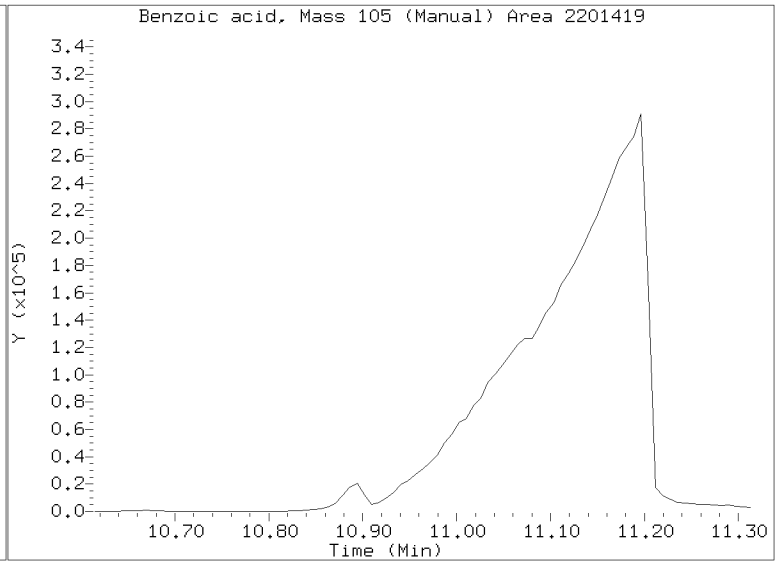












Quant Ion Manual Peak Adjustment Report

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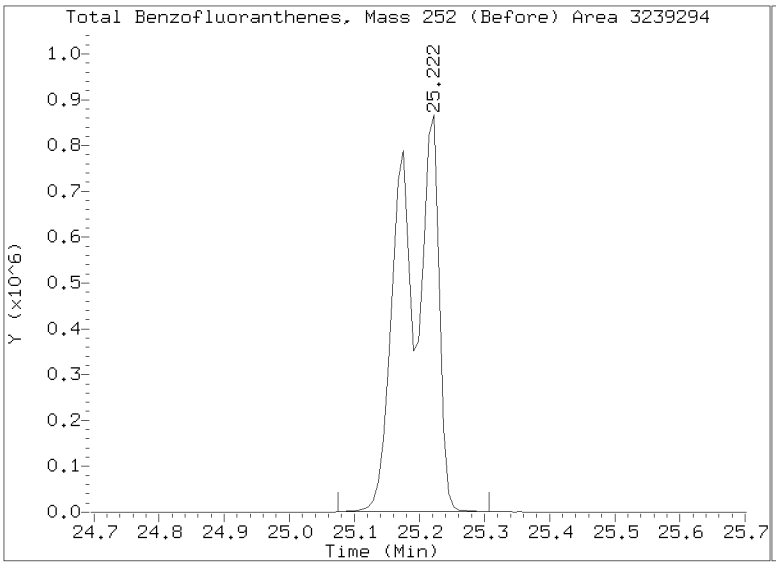
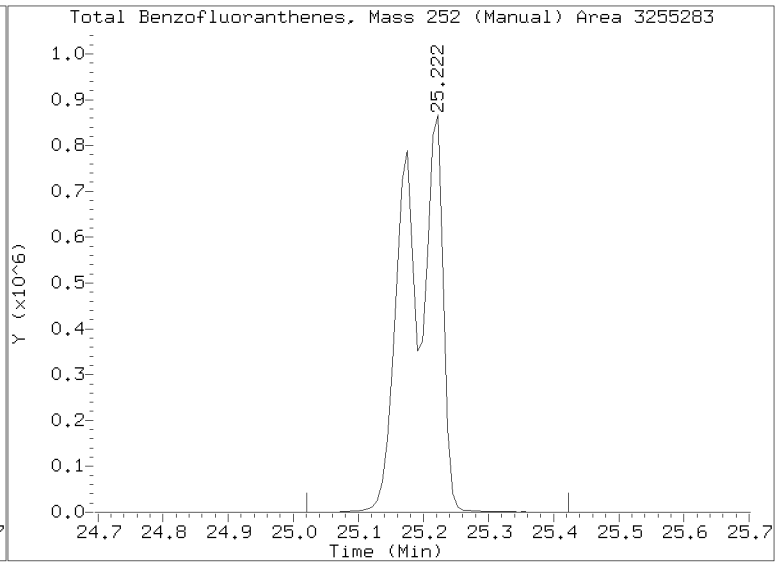
Injection Date: 15-MAR-2023 12:49
Lab ID:SLC0160-CAL6 Client ID:
Report Date: 03/21/2023 12:48





Data File: \\target\share\chem3\nt14.i\20230315.b\NT1403152304.D

Date : 15-MAR-2023 13:26

Client ID:

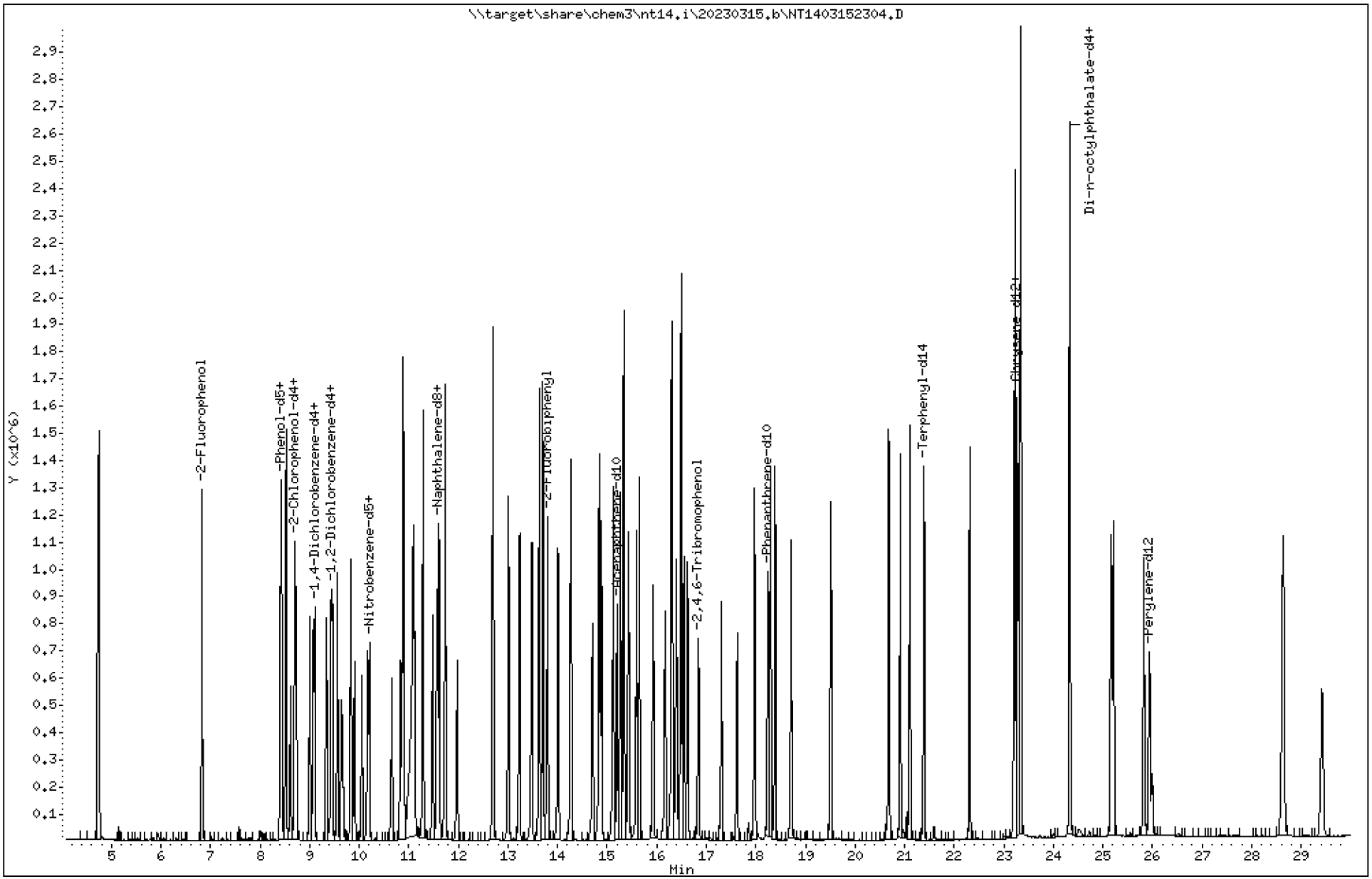
Sample Info: SLC0160-CAL5

Column phase: ZB-5msi

Instrument: nt14.i

Operator: JGR

Column diameter: 0.25



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230315.b\NT1403152304.D
Lab Smp Id: SLC0160-CAL5
Inj Date : 15-MAR-2023 13:26 MS Autotune Date: 11-MAR-2023 16:01
Operator : JGR Inst ID: nt14.i
Smp Info : SLC0160-CAL5
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230315.b\ABN.m
Meth Date : 21-Mar-2023 12:29 van Quant Type: ISTD
Cal Date : 15-MAR-2023 15:50 Cal File: NT1403152308.D
Als bottle: 4 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)	
$	1 2-Fluorophenol	112	6.829	6.821	(1.000)	477939	7.50000	7.233	
$	2 Phenol-d5	99	8.420	8.412	(1.000)	638287	7.50000	7.337	
	3 Phenol	94	8.436	8.428	(1.000)	444479	5.00000	4.808	
$	5 2-Chlorophenol-d4	132	8.698	8.698	(1.000)	492706	7.50000	7.184	
	4 Bis(2-Chloroethyl)ether	93	8.613	8.606	(1.000)	309237	5.00000	4.645	
	6 2-Chlorophenol	128	8.729	8.721	(1.000)	349349	5.00000	4.801	
	7 1,3-Dichlorobenzene	146	9.008	9.000	(1.000)	345834	5.00000	4.695	
*	8 1,4-Dichlorobenzene-d4	152	9.070	9.062	(1.000)	194517	4.00000		(M)
	9 1,4-Dichlorobenzene	146	9.101	9.093	(1.000)	333703	5.00000	4.704	
$	10 1,2-Dichlorobenzene-d4	152	9.435	9.427	(1.000)	216009	5.00000	4.714	
	12 1,2-Dichlorobenzene	146	9.458	9.458	(1.000)	328951	5.00000	4.691	
	11 Benzyl alcohol	108	9.334	9.334	(1.000)	218036	5.00000	5.066	
	14 2,2'-oxybis(1-Chloropropane)	121	9.644	9.644	(1.063)	105047	5.00000	4.964	(M)
	13 2-Methylphenol	108	9.559	9.559	(1.000)	320702	5.00000	4.906	
	17 Hexachloroethane	117	10.056	10.056	(1.000)	145902	5.00000	4.808	
	16 N-Nitroso-di-n-propylamine	70	9.908	9.893	(1.000)	251619	5.00000	4.889	
	15 4-Methylphenol	108	9.831	9.823	(1.000)	377266	5.00000	4.875	
$	18 Nitrobenzene-d5	82	10.164	10.164	(0.879)	381057	5.00000	4.992	
	19 Nitrobenzene	77	10.203	10.195	(0.882)	368390	5.00000	4.958	
	20 Isophorone	82	10.653	10.645	(0.921)	531212	5.00000	5.236	
	21 2-Nitrophenol	139	10.832	10.831	(0.936)	214095	5.00000	5.001	
	22 2,4-Dimethylphenol	107	10.886	10.878	(0.941)	624251	10.0000	9.823	
	23 Bis(2-Chloroethoxy)methane	93	11.088	11.080	(0.959)	332625	5.00000	4.870	
	24 Benzoic acid	105	11.119	10.963	(0.961)	1072142	20.0000	19.66	
	25 2,4-Dichlorophenol	162	11.289	11.281	(0.976)	507556	10.0000	10.04	
	26 1,2,4-Trichlorobenzene	180	11.483	11.482	(0.993)	311390	5.00000	5.012	
*	27 Naphthalene-d8	136	11.567	11.567	(1.000)	721321	4.00000		
	28 Naphthalene	128	11.606	11.606	(1.003)	936830	5.00000	4.861	
	29 4-Chloroaniline	127	11.737	11.729	(1.015)	809894	10.0000	10.04	
	30 Hexachlorobutadiene	225	11.977	11.977	(1.035)	135947	5.00000	4.846	
	31 4-Chloro-3-methylphenol	107	12.697	12.689	(1.098)	620366	10.0000	10.16	
	32 2-Methylnaphthalene	142	13.014	13.006	(1.125)	667185	5.00000	4.964	
	33 Hexachlorocyclopentadiene	237	13.486	13.486	(0.887)	323739	10.0000	10.26	

		QUANT SIG					AMOUNTS	
	Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
	34 2,4,6-Trichlorophenol	196	13.633	13.625	(0.897)	385498	10.0000	10.01
	35 2,4,5-Trichlorophenol	196	13.703	13.702	(0.901)	411850	10.0000	10.26
$	36 2-Fluorobiphenyl	172	13.796	13.795	(0.907)	667701	5.00000	4.857
	37 2-Chloronaphthalene	162	14.005	14.004	(0.921)	582361	5.00000	4.943
	38 2-Nitroaniline	65	14.268	14.260	(0.938)	463530	10.0000	10.19
	39 Dimethylphthalate	163	14.701	14.693	(0.967)	620875	5.00000	4.905
	40 Acenaphthylene	152	14.887	14.879	(0.979)	969830	5.00000	4.900
	41 2,6-Dinitrotoluene	165	14.840	14.833	(0.976)	298459	10.0000	10.21
*	42 Acenaphthene-d10	164	15.204	15.196	(1.000)	379602	4.00000	
	43 3-Nitroaniline	138	15.127	15.111	(0.995)	414911	10.0000	10.29
	44 Acenaphthene	153	15.266	15.258	(1.004)	564840	5.00000	4.888
	45 2,4-Dinitrophenol	184	15.336	15.328	(1.009)	452889	20.0000	19.35
	46 Dibenzofuran	168	15.598	15.590	(1.026)	817367	5.00000	4.955
	47 4-Nitrophenol	109	15.428	15.420	(1.015)	221255	10.0000	10.36
	48 2,4-Dinitrotoluene	165	15.652	15.645	(1.029)	426726	10.0000	10.29
	50 Diethylphthalate	149	16.170	16.155	(1.064)	646156	5.00000	4.937
	49 Fluorene	166	16.309	16.302	(1.073)	764877	5.00000	4.891
	51 4-Chlorophenyl-phenylether	204	16.302	16.294	(1.072)	324194	5.00000	4.830
	52 4-Nitroaniline	138	16.394	16.379	(1.078)	369691	10.0000	10.54
	53 4,6-Dinitro-2-methylphenol	198	16.495	16.479	(0.904)	495154	20.0000	19.82
	54 N-Nitrosodiphenylamine	169	16.548	16.541	(0.907)	464508	5.00000	4.863
$	55 2,4,6-Tribromophenol	330	16.841	16.841	(1.108)	114835	7.50000	7.968
	56 4-Bromophenyl-phenylether	248	17.304	17.304	(0.948)	160976	5.00000	4.999
	57 Hexachlorobenzene	284	17.621	17.621	(0.966)	165212	5.00000	4.863
	58 Pentachlorophenol	266	17.977	17.977	(0.985)	238054	10.0000	9.891
*	59 Phenanthrene-d10	188	18.248	18.240	(1.000)	703194	4.00000	
	60 Phenanthrene	178	18.294	18.286	(1.003)	978325	5.00000	4.869
	61 Anthracene	178	18.387	18.379	(1.008)	972515	5.00000	5.024
	62 Carbazole	167	18.712	18.704	(1.025)	844662	5.00000	4.905
	63 Di-n-butylphthalate	149	19.517	19.509	(1.070)	1165411	5.00000	5.339
	64 Fluoranthene	202	20.677	20.677	(0.887)	1056216	5.00000	5.143
	65 Pyrene	202	21.103	21.103	(0.906)	1039483	5.00000	4.936
$	66 Terphenyl-d14	244	21.389	21.389	(0.918)	711302	5.00000	4.989
	67 Butylbenzylphthalate	149	22.310	22.310	(0.957)	490541	5.00000	5.317
	68 Benzo(a)anthracene	228	23.271	23.263	(0.999)	917813	5.00000	4.931
*	69 Chrysene-d12	240	23.302	23.294	(1.000)	504769	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.224	23.216	(0.997)	747514	15.0000	13.44
	71 Chrysene	228	23.348	23.340	(1.002)	818939	5.00000	4.862
	72 bis(2-Ethylhexyl)phthalate	149	23.333	23.332	(0.959)	674302	5.00000	5.235
*	134 Di-n-octylphthalate-d4	153	24.323	24.323	(1.000)	978492	4.00000	
	73 Di-n-octylphthalate	149	24.331	24.331	(1.000)	1208267	5.00000	4.803
	74 Benzo(b)fluoranthene	252	25.167	25.152	(0.970)	921068	5.00000	5.385
	75 Benzo(k)fluoranthene	252	25.214	25.198	(0.972)	814106	5.00000	4.801
	76 Benzo(a)pyrene	252	25.826	25.818	(0.996)	758694	5.00000	5.187
*	77 Perylene-d12	264	25.942	25.934	(1.000)	484073	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	28.626	28.610	(1.103)	824181	5.00000	5.177
	79 Dibenzo(a,h)anthracene	278	28.642	28.626	(1.104)	681524	5.00000	5.079
	80 Benzo(g,h,i)perylene	276	29.418	29.403	(1.134)	663772	5.00000	5.059
	90 N-Nitrosodimethylamine	74	4.720	4.720	(1.000)	402003	10.0000	9.606
	91 Aniline	93	8.521	8.513	(1.000)	893329	10.0000	9.607
	93 Benzidine	184	20.909	20.909	(0.897)	862096	10.0000	10.43
	103 Pyridine	79	4.743	4.766	(1.000)	607640	5.00000	4.689
	105 1-methylnaphthalene	142	13.238	13.230	(1.144)	603326	5.00000	4.955
	111 Azobenzene (1,2-DP-Hydrazine)	77	16.626	16.618	(1.093)	767588	5.00000	4.912

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
187 Total Benzofluoranthenes	252	25.214	25.199	(0.972)	1647484	10.0000	10.14(M)
120 2,3,4,6-Tetrachlorophenol	232	15.923	15.923	(1.047)	186734	5.00000	4.723

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1403152304.D
Lab Smp Id: SLC0160-CAL5
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt14.i\20230315.b\ABN.m
Misc Info:

Calibration Date: 15-MAR-2023
Calibration Time: 13:26
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	194517	97259	389034	194517	0.00
27 Naphthalene-d8	721321	360661	1442642	721321	0.00
42 Acenaphthene-d10	379602	189801	759204	379602	0.00
59 Phenanthrene-d10	703194	351597	1406388	703194	0.00
69 Chrysene-d12	504769	252385	1009538	504769	0.00
134 Di-n-octylphthala	978492	489246	1956984	978492	0.00
77 Perylene-d12	484073	242037	968146	484073	0.00

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.07	8.57	9.57	9.07	0.00
27 Naphthalene-d8	11.57	11.07	12.07	11.57	0.00
42 Acenaphthene-d10	15.20	14.70	15.70	15.20	0.00
59 Phenanthrene-d10	18.25	17.75	18.75	18.25	0.00
69 Chrysene-d12	23.30	22.80	23.80	23.30	0.00
134 Di-n-octylphthala	24.32	23.82	24.82	24.32	0.00
77 Perylene-d12	25.94	25.44	26.44	25.94	0.00

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

REVIEW SUMMARY FOR FILE - NT1403152304.D

Lab ID: SLC0160-CAL5
nt14.i, ABN.m, 15-MAR-2023 13:26

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.961	0.948	0.0134	Benzoic acid

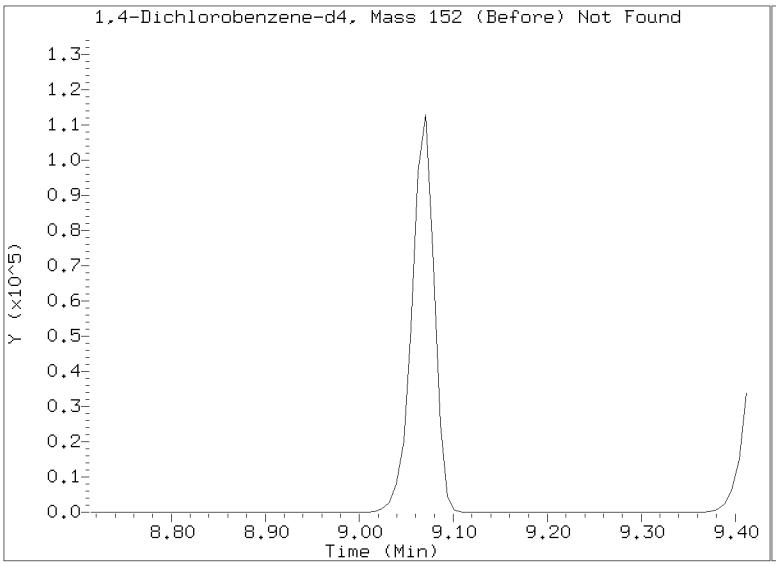
RRT check based on Ccal File: NT1403152308.D

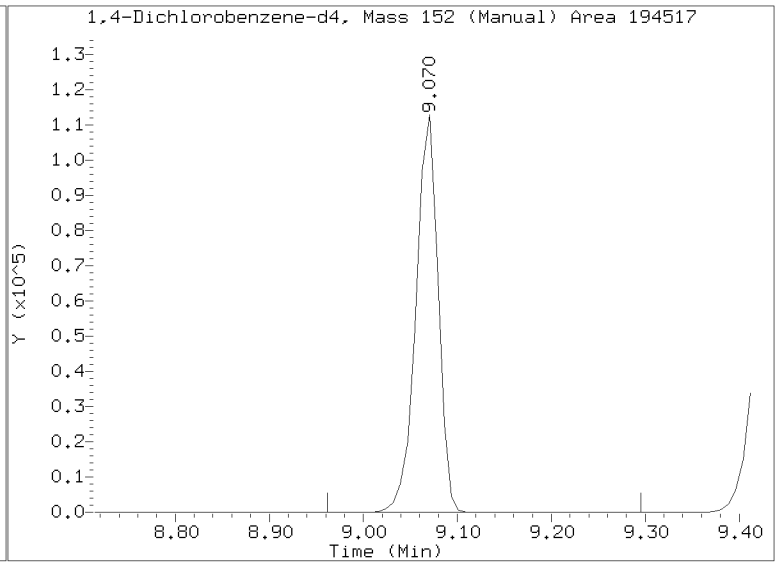
On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

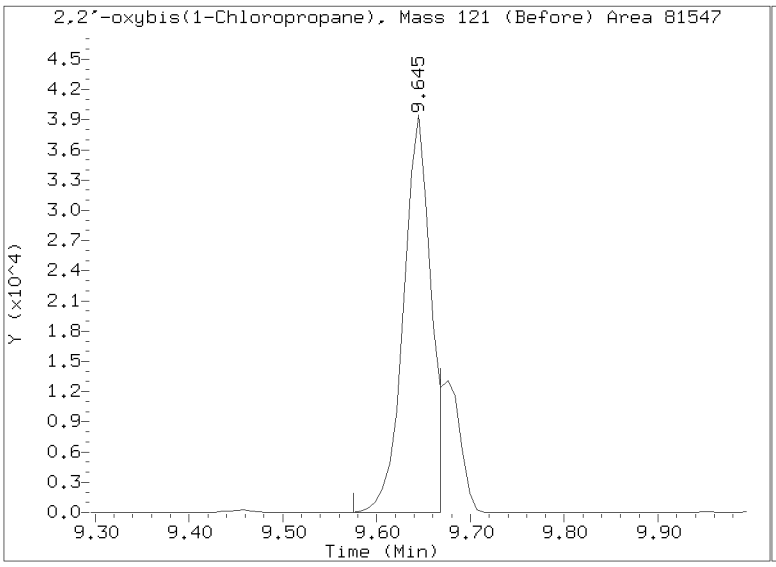
* Only compounds listed in the work order have been verified by the analyst *

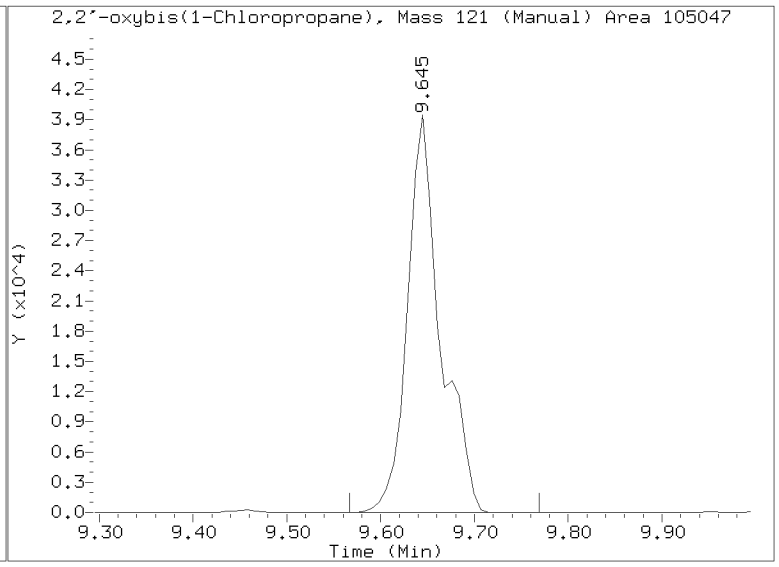
Quant Ion Manual Peak Adjustment Report

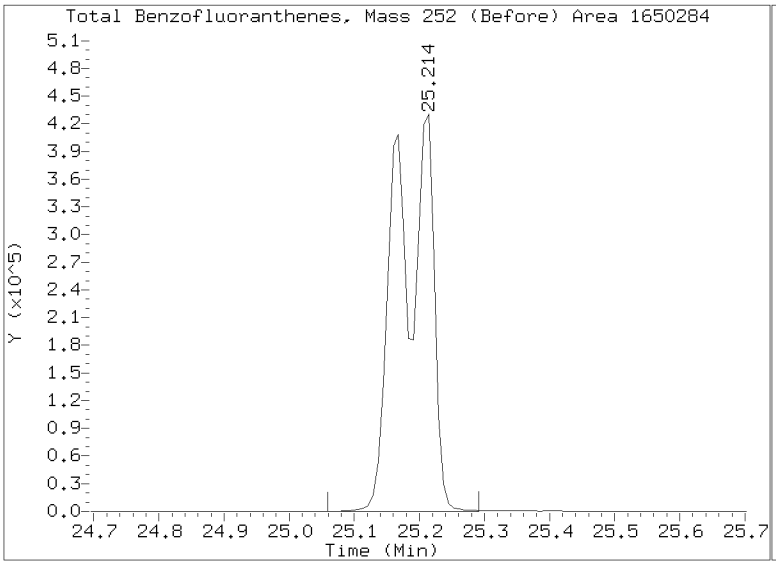
Datafile: //target/share/chem3/nt14.i/20230315.b/NT1403152304.D
Injection Date: 15-MAR-2023 13:26
Lab ID:SLC0160-CAL5 Client ID:
Report Date: 03/21/2023 12:48

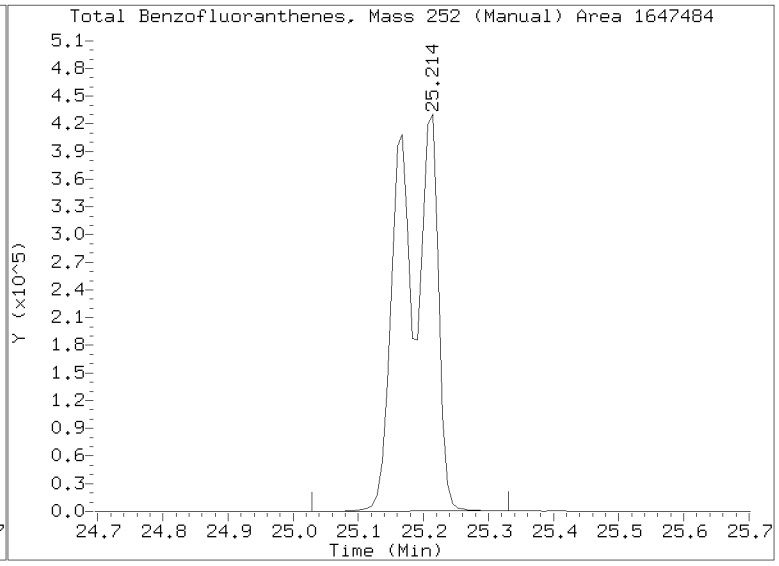








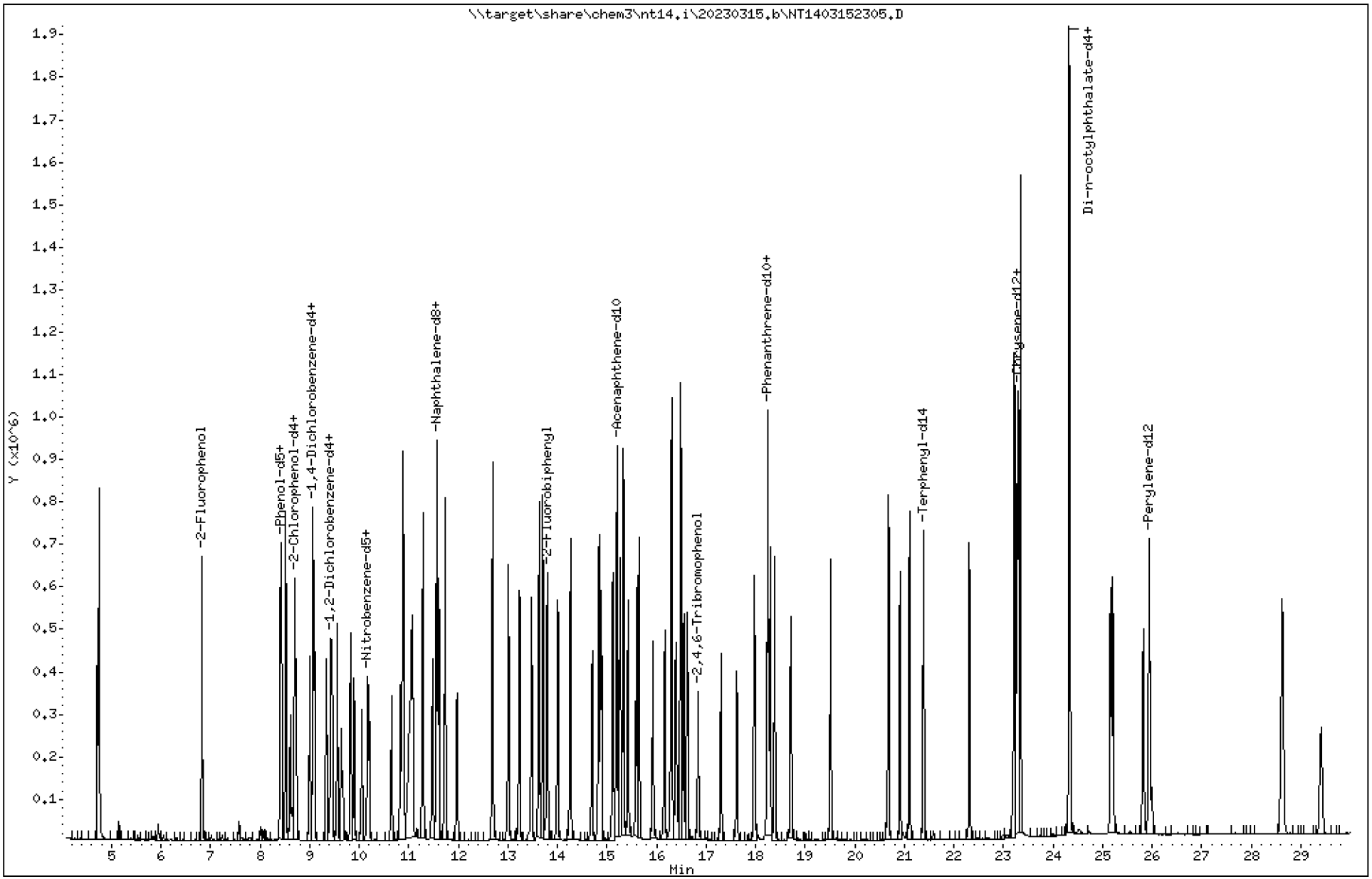




Data File: \\target\share\chem3\nt14.i\20230315.b\NT1403152305.D
Date : 15-MAR-2023 14:02
Client ID:
Sample Info: SLC0160-CAL4

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

Column phase: ZB-5msi



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230315.b\NT1403152305.D
Lab Smp Id: SLC0160-CAL4
Inj Date : 15-MAR-2023 14:02 MS Autotune Date: 11-MAR-2023 16:01
Operator : JGR Inst ID: nt14.i
Smp Info : SLC0160-CAL4
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230315.b\ABN.m
Meth Date : 21-Mar-2023 12:29 van Quant Type: ISTD
Cal Date : 15-MAR-2023 15:50 Cal File: NT1403152308.D
Als bottle: 5 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

							AMOUNTS		
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)	
$	1 2-Fluorophenol	112	6.829	6.821	(1.000)	249691	3.75000	3.828	
$	2 Phenol-d5	99	8.412	8.412	(1.000)	322966	3.75000	3.761	
	3 Phenol	94	8.436	8.428	(1.000)	232034	2.50000	2.543	
$	5 2-Chlorophenol-d4	132	8.698	8.698	(1.000)	253373	3.75000	3.743	
	4 Bis(2-Chloroethyl)ether	93	8.613	8.606	(1.000)	161691	2.50000	2.460	
	6 2-Chlorophenol	128	8.729	8.721	(1.000)	178971	2.50000	2.492	
	7 1,3-Dichlorobenzene	146	9.000	9.000	(1.000)	180087	2.50000	2.477	
*	8 1,4-Dichlorobenzene-d4	152	9.070	9.062	(1.000)	192012	4.00000	(M)	
	9 1,4-Dichlorobenzene	146	9.101	9.093	(1.000)	172592	2.50000	2.464	
$	10 1,2-Dichlorobenzene-d4	152	9.427	9.427	(1.000)	110105	2.50000	2.434	
	12 1,2-Dichlorobenzene	146	9.458	9.458	(1.000)	170623	2.50000	2.465	
	11 Benzyl alcohol	108	9.334	9.334	(1.000)	107060	2.50000	2.520	
	14 2,2'-oxybis(1-Chloropropane)	121	9.644	9.644	(1.063)	52592	2.50000	2.518	(M)
	13 2-Methylphenol	108	9.559	9.559	(1.000)	162715	2.50000	2.522	
	17 Hexachloroethane	117	10.056	10.056	(1.000)	74828	2.50000	2.498	
	16 N-Nitroso-di-n-propylamine	70	9.900	9.893	(1.000)	127461	2.50000	2.509	
	15 4-Methylphenol	108	9.831	9.823	(1.000)	190653	2.50000	2.496	
$	18 Nitrobenzene-d5	82	10.164	10.164	(0.879)	194498	2.50000	2.467	
	19 Nitrobenzene	77	10.203	10.195	(0.882)	190404	2.50000	2.481	
	20 Isophorone	82	10.653	10.645	(0.921)	268071	2.50000	2.559	
	21 2-Nitrophenol	139	10.832	10.831	(0.936)	101492	2.50000	2.322	
	22 2,4-Dimethylphenol	107	10.886	10.878	(0.941)	324588	5.00000	4.946	
	23 Bis(2-Chloroethoxy)methane	93	11.087	11.080	(0.959)	169014	2.50000	2.396	
	24 Benzoic acid	105	11.064	10.963	(0.956)	495327	10.0000	8.943	
	25 2,4-Dichlorophenol	162	11.289	11.281	(0.976)	255974	5.00000	4.904	
	26 1,2,4-Trichlorobenzene	180	11.482	11.482	(0.993)	162742	2.50000	2.536	
*	27 Naphthalene-d8	136	11.567	11.567	(1.000)	744883	4.00000		
	28 Naphthalene	128	11.606	11.606	(1.003)	478207	2.50000	2.403	
	29 4-Chloroaniline	127	11.737	11.729	(1.015)	404042	5.00000	4.850	
	30 Hexachlorobutadiene	225	11.977	11.977	(1.035)	69695	2.50000	2.406	
	31 4-Chloro-3-methylphenol	107	12.696	12.689	(1.098)	305071	5.00000	4.837	
	32 2-Methylnaphthalene	142	13.006	13.006	(1.124)	339315	2.50000	2.445	
	33 Hexachlorocyclopentadiene	237	13.486	13.486	(0.887)	156471	5.00000	4.843	

			QUANT SIG					AMOUNTS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
	34	2,4,6-Trichlorophenol	196	13.633	13.625	(0.897)	191620	5.00000	4.859
	35	2,4,5-Trichlorophenol	196	13.703	13.702	(0.902)	200453	5.00000	4.878
$	36	2-Fluorobiphenyl	172	13.795	13.795	(0.908)	340755	2.50000	2.421
	37	2-Chloronaphthalene	162	14.004	14.004	(0.922)	294183	2.50000	2.438
	38	2-Nitroaniline	65	14.260	14.260	(0.938)	230939	5.00000	4.957
	39	Dimethylphthalate	163	14.701	14.693	(0.967)	321245	2.50000	2.478
	40	Acenaphthylene	152	14.879	14.879	(0.979)	493006	2.50000	2.433
	41	2,6-Dinitrotoluene	165	14.840	14.833	(0.977)	147976	5.00000	4.942
*	42	Acenaphthene-d10	164	15.196	15.196	(1.000)	388723	4.00000	
	43	3-Nitroaniline	138	15.119	15.111	(0.995)	192439	5.00000	4.658
	44	Acenaphthene	153	15.266	15.258	(1.005)	283439	2.50000	2.395
	45	2,4-Dinitrophenol	184	15.328	15.328	(1.009)	196265	10.0000	8.349
	46	Dibenzofuran	168	15.590	15.590	(1.026)	406796	2.50000	2.408
	47	4-Nitrophenol	109	15.428	15.420	(1.015)	107904	5.00000	4.935
	48	2,4-Dinitrotoluene	165	15.645	15.645	(1.030)	208425	5.00000	4.910
	50	Diethylphthalate	149	16.163	16.155	(1.064)	326463	2.50000	2.436
	49	Fluorene	166	16.309	16.302	(1.073)	394616	2.50000	2.464
	51	4-Chlorophenyl-phenylether	204	16.294	16.294	(1.072)	166526	2.50000	2.423
	52	4-Nitroaniline	138	16.386	16.379	(1.078)	167414	5.00000	4.659
	53	4,6-Dinitro-2-methylphenol	198	16.487	16.479	(0.903)	231789	10.0000	9.192
	54	N-Nitrosodiphenylamine	169	16.548	16.541	(0.907)	235536	2.50000	2.408
$	55	2,4,6-Tribromophenol	330	16.841	16.841	(1.108)	54391	3.75000	3.685
	56	4-Bromophenyl-phenylether	248	17.304	17.304	(0.948)	80822	2.50000	2.450
	57	Hexachlorobenzene	284	17.621	17.621	(0.966)	84215	2.50000	2.420
	58	Pentachlorophenol	266	17.977	17.977	(0.985)	112387	5.00000	4.629
*	59	Phenanthrene-d10	188	18.248	18.240	(1.000)	720279	4.00000	
	60	Phenanthrene	178	18.294	18.286	(1.003)	488331	2.50000	2.373
	61	Anthracene	178	18.387	18.379	(1.008)	488011	2.50000	2.461
	62	Carbazole	167	18.712	18.704	(1.025)	398259	2.50000	2.258
	63	Di-n-butylphthalate	149	19.509	19.509	(1.069)	561520	2.50000	2.511
	64	Fluoranthene	202	20.677	20.677	(0.888)	517191	2.50000	2.482
	65	Pyrene	202	21.103	21.103	(0.906)	521655	2.50000	2.441
$	66	Terphenyl-d14	244	21.389	21.389	(0.918)	362174	2.50000	2.504
	67	Butylbenzylphthalate	149	22.310	22.310	(0.958)	244522	2.50000	2.612
	68	Benzo(a)anthracene	228	23.270	23.263	(0.999)	459301	2.50000	2.432
*	69	Chrysene-d12	240	23.294	23.294	(1.000)	512149	4.00000	
	70	3,3'-Dichlorobenzidine	252	23.216	23.216	(0.997)	340486	7.50000	6.179
	71	Chrysene	228	23.340	23.340	(1.002)	411830	2.50000	2.410
	72	bis(2-Ethylhexyl)phthalate	149	23.340	23.332	(0.960)	323014	2.50000	2.575
*	134	Di-n-octylphthalate-d4	153	24.323	24.323	(1.000)	952832	4.00000	
	73	Di-n-octylphthalate	149	24.331	24.331	(1.000)	594609	2.50000	2.428
	74	Benzo(b)fluoranthene	252	25.159	25.152	(0.970)	424941	2.50000	2.429
	75	Benzo(k)fluoranthene	252	25.206	25.198	(0.972)	424751	2.50000	2.449
	76	Benzo(a)pyrene	252	25.818	25.818	(0.995)	366882	2.50000	2.453
*	77	Perylene-d12	264	25.942	25.934	(1.000)	495048	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	28.618	28.610	(1.103)	401183	2.50000	2.464
	79	Dibenzo(a,h)anthracene	278	28.626	28.626	(1.103)	336425	2.50000	2.452
	80	Benzo(g,h,i)perylene	276	29.403	29.403	(1.133)	324277	2.50000	2.417
	90	N-Nitrosodimethylamine	74	4.720	4.720	(1.000)	208407	5.00000	5.045
	91	Aniline	93	8.521	8.513	(1.000)	460561	5.00000	5.018
	93	Benzidine	184	20.909	20.909	(0.898)	386898	5.00000	4.614
	103	Pyridine	79	4.743	4.766	(1.000)	326564	2.50000	2.553
	105	1-methylnaphthalene	142	13.230	13.230	(1.144)	304871	2.50000	2.425
	111	Azobenzene (1,2-DP-Hydrazine)	77	16.618	16.618	(1.094)	396971	2.50000	2.481

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
187 Total Benzofluoranthenes	252	25.206	25.199	(0.972)	809848	5.00000	4.874(M)
120 2,3,4,6-Tetrachlorophenol	232	15.923	15.923	(1.048)	89351	2.50000	2.241

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1403152305.D
Lab Smp Id: SLC0160-CAL4
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt14.i\20230315.b\ABN.m
Misc Info:

Calibration Date: 15-MAR-2023
Calibration Time: 13:26
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	194517	97259	389034	192012	-1.29
27 Naphthalene-d8	721321	360661	1442642	744883	3.27
42 Acenaphthene-d10	379602	189801	759204	388723	2.40
59 Phenanthrene-d10	703194	351597	1406388	720279	2.43
69 Chrysene-d12	504769	252385	1009538	512149	1.46
134 Di-n-octylphthala	978492	489246	1956984	952832	-2.62
77 Perylene-d12	484073	242037	968146	495048	2.27

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.07	8.57	9.57	9.07	-0.00
27 Naphthalene-d8	11.57	11.07	12.07	11.57	-0.00
42 Acenaphthene-d10	15.20	14.70	15.70	15.20	-0.05
59 Phenanthrene-d10	18.25	17.75	18.75	18.25	-0.00
69 Chrysene-d12	23.30	22.80	23.80	23.29	-0.03
134 Di-n-octylphthala	24.32	23.82	24.82	24.32	-0.00
77 Perylene-d12	25.94	25.44	26.44	25.94	-0.00

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

REVIEW SUMMARY FOR FILE - NT1403152305.D

Lab ID: SLC0160-CAL4
nt14.i, ABN.m, 15-MAR-2023 14:02

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.956	0.948	0.0087	Benzoic acid

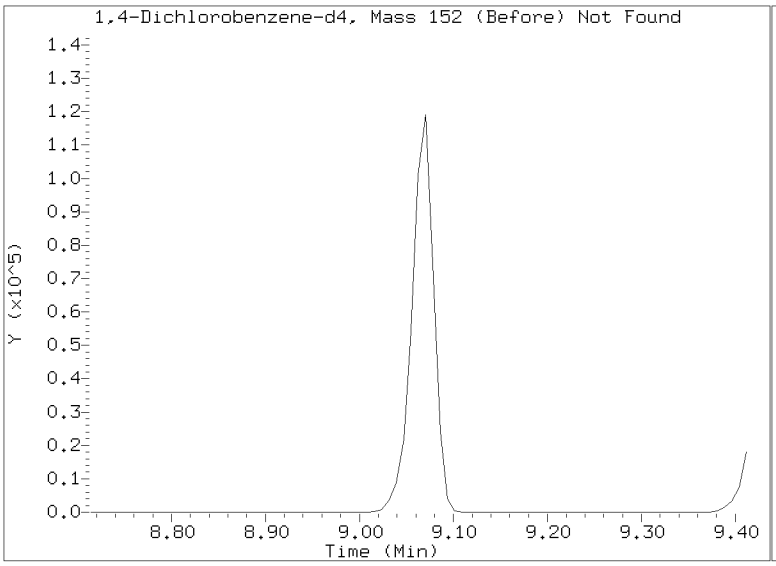
RRT check based on Ccal File: NT1403152308.D

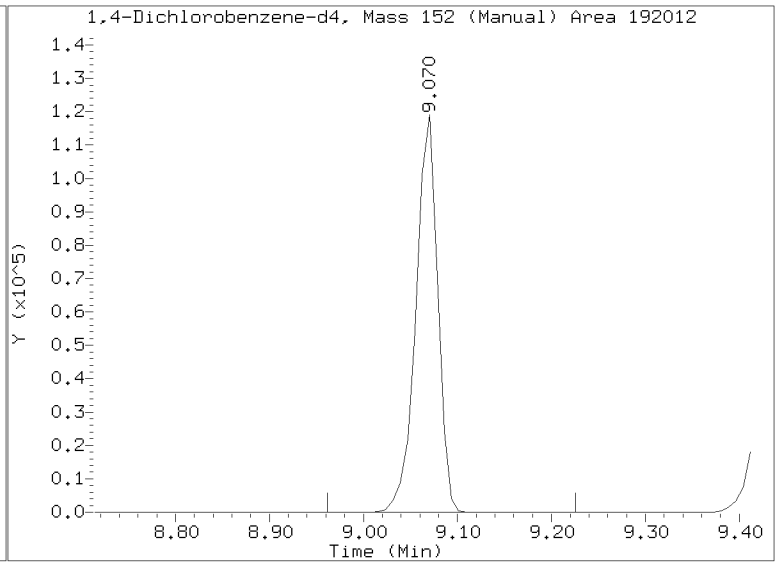
On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

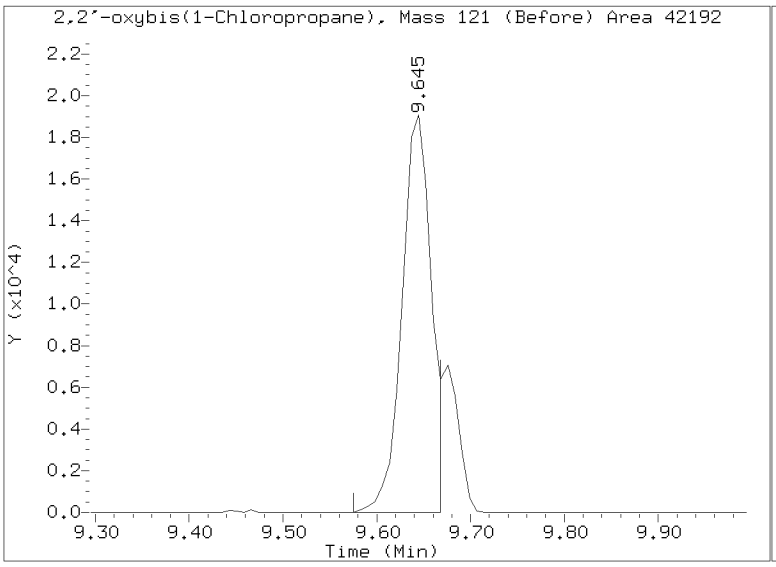
* Only compounds listed in the work order have been verified by the analyst *

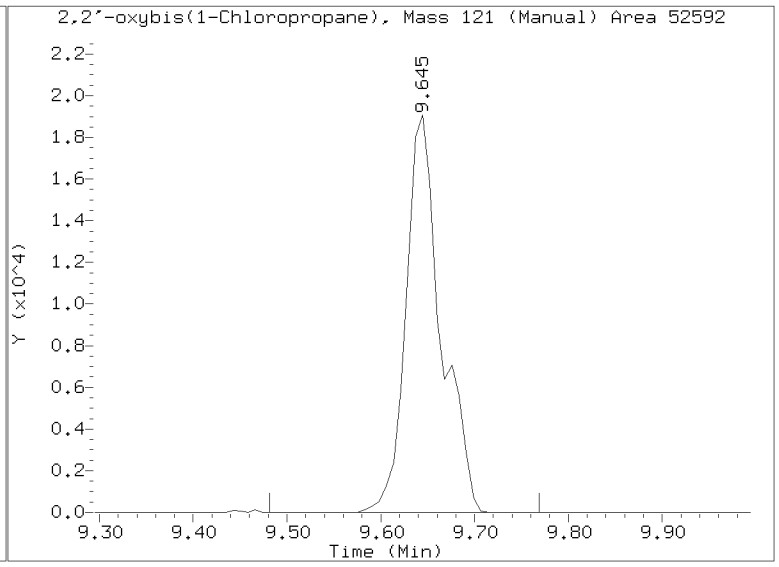
Quant Ion Manual Peak Adjustment Report

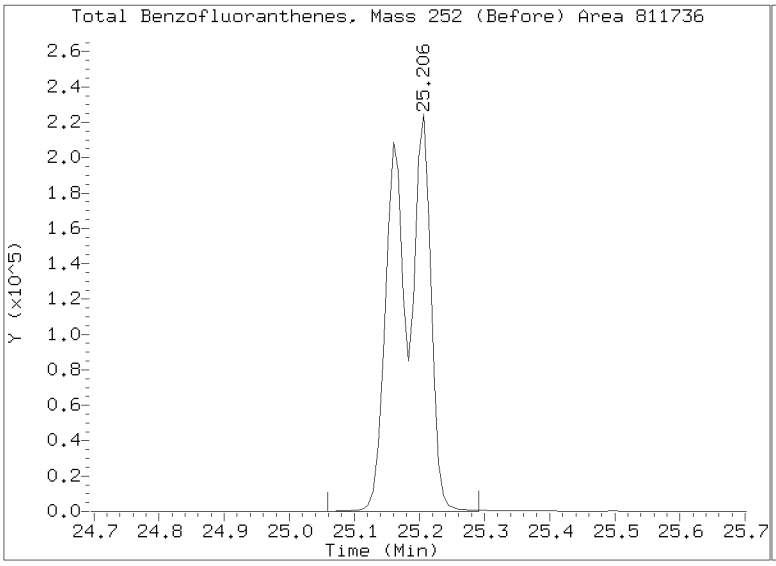
Datafile: //target/share/chem3/nt14.i/20230315.b/NT1403152305.D
Injection Date: 15-MAR-2023 14:02
Lab ID:SLC0160-CAL4 Client ID:
Report Date: 03/21/2023 12:48

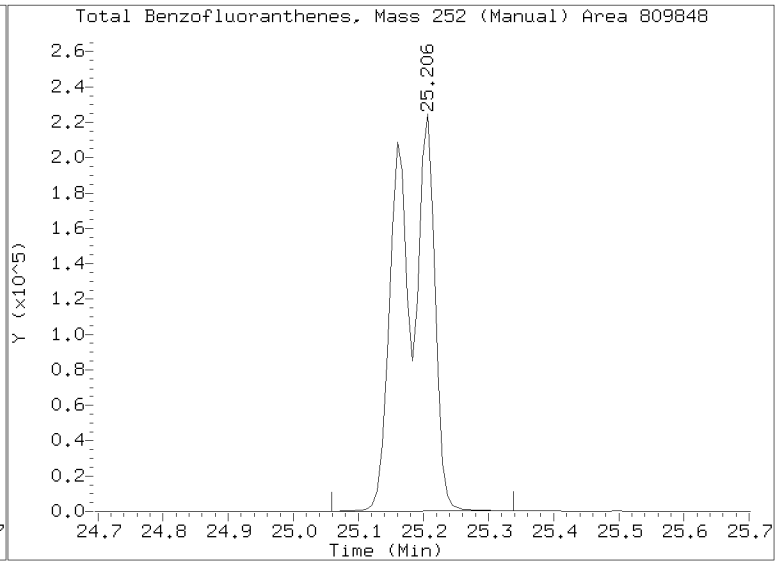






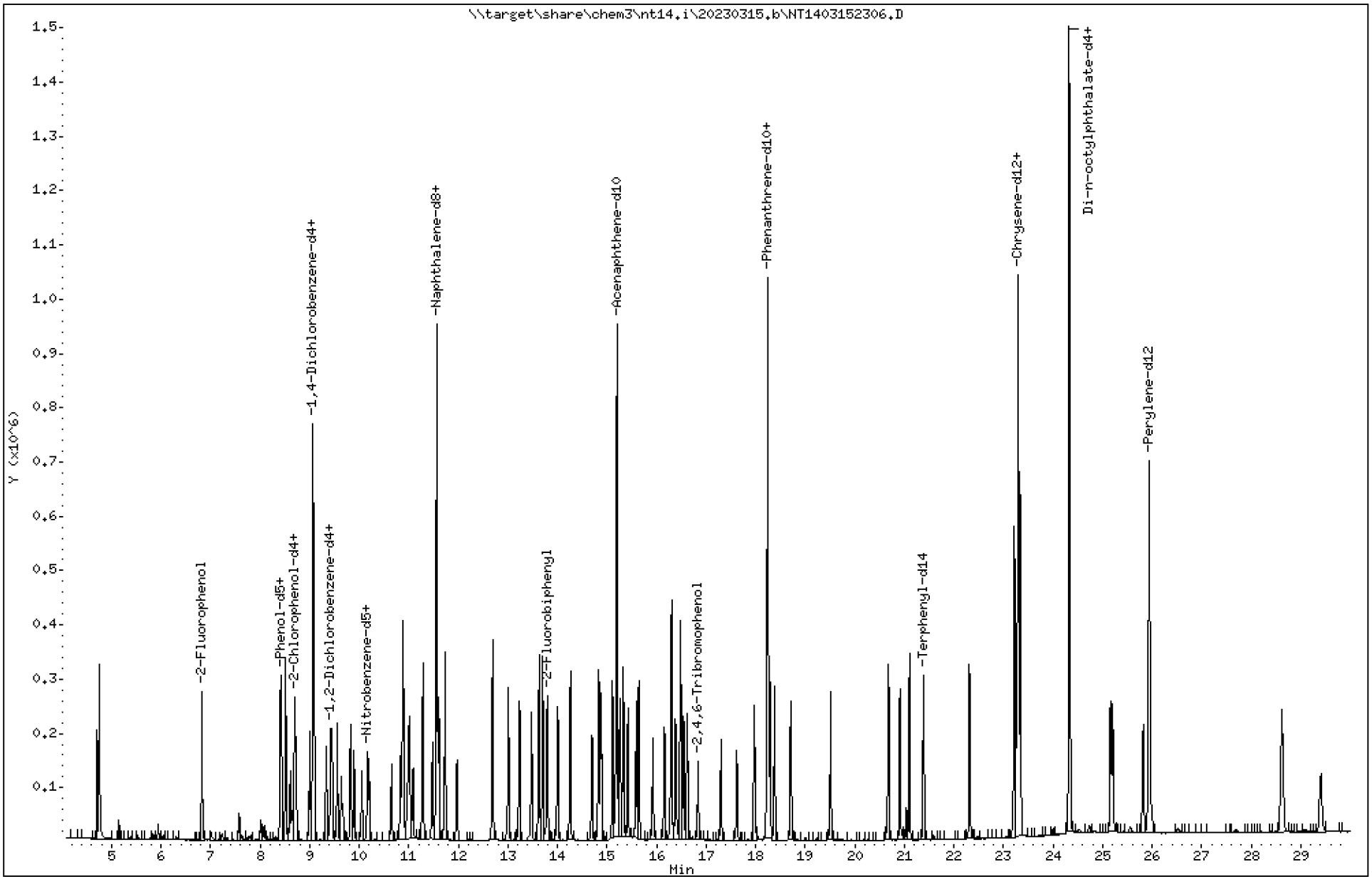






Data File: \\target\share\chem3\nt14.i\20230315.b\NT1403152306.D
Date : 15-MAR-2023 14:38
Client ID:
Sample Info: SLC0160-CAL3

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



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230315.b\NT1403152306.D
Lab Smp Id: SLC0160-CAL3
Inj Date : 15-MAR-2023 14:38 MS Autotune Date: 11-MAR-2023 16:01
Operator : JGR Inst ID: nt14.i
Smp Info : SLC0160-CAL3
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230315.b\ABN.m
Meth Date : 21-Mar-2023 12:29 van Quant Type: ISTD
Cal Date : 15-MAR-2023 15:50 Cal File: NT1403152308.D
Als bottle: 6 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)	
$	1 2-Fluorophenol	112	6.828	6.821	(1.000)	105834	1.50000	1.531	
$	2 Phenol-d5	99	8.412	8.412	(1.000)	136234	1.50000	1.497	
	3 Phenol	94	8.435	8.428	(1.000)	98055	1.00000	1.014	
$	5 2-Chlorophenol-d4	132	8.698	8.698	(1.000)	107621	1.50000	1.500	
	4 Bis(2-Chloroethyl)ether	93	8.605	8.606	(1.000)	71902	1.00000	1.032	
	6 2-Chlorophenol	128	8.729	8.721	(1.000)	76166	1.00000	1.000	
	7 1,3-Dichlorobenzene	146	9.000	9.000	(1.000)	77362	1.00000	1.004	
*	8 1,4-Dichlorobenzene-d4	152	9.070	9.062	(1.000)	203547	4.00000	(M)	
	9 1,4-Dichlorobenzene	146	9.101	9.093	(1.000)	74115	1.00000	0.9983	
$	10 1,2-Dichlorobenzene-d4	152	9.427	9.427	(1.000)	48511	1.00000	1.012	
	12 1,2-Dichlorobenzene	146	9.458	9.458	(1.000)	72309	1.00000	0.9854	
	11 Benzyl alcohol	108	9.333	9.334	(1.000)	44413	1.00000	0.9861	
	14 2,2'-oxybis(1-Chloropropane)	121	9.644	9.644	(1.000)	21606	1.00000	0.9758	
	13 2-Methylphenol	108	9.559	9.559	(1.000)	67251	1.00000	0.9832	
	17 Hexachloroethane	117	10.055	10.056	(1.000)	30824	1.00000	0.9708	
	16 N-Nitroso-di-n-propylamine	70	9.900	9.893	(1.000)	53664	1.00000	0.9965	
	15 4-Methylphenol	108	9.823	9.823	(1.000)	80570	1.00000	0.9949	
$	18 Nitrobenzene-d5	82	10.164	10.164	(0.879)	81089	1.00000	1.017	
	19 Nitrobenzene	77	10.195	10.195	(0.881)	79365	1.00000	1.022	
	20 Isophorone	82	10.653	10.645	(0.921)	102481	1.00000	0.9667	
	21 2-Nitrophenol	139	10.831	10.831	(0.936)	40809	1.00000	0.9279	
	22 2,4-Dimethylphenol	107	10.878	10.878	(0.940)	139141	2.00000	2.095	
	23 Bis(2-Chloroethoxy)methane	93	11.087	11.080	(0.959)	72714	1.00000	1.019	
	24 Benzoic acid	105	11.017	10.963	(0.952)	175674	4.00000	3.162	
	25 2,4-Dichlorophenol	162	11.289	11.281	(0.976)	108438	2.00000	2.053	
	26 1,2,4-Trichlorobenzene	180	11.482	11.482	(0.993)	69336	1.00000	1.068	
*	27 Naphthalene-d8	136	11.567	11.567	(1.000)	753702	4.00000		
	28 Naphthalene	128	11.606	11.606	(1.003)	202238	1.00000	1.004	
	29 4-Chloroaniline	127	11.729	11.729	(1.014)	167492	2.00000	1.987	
	30 Hexachlorobutadiene	225	11.976	11.977	(1.035)	29932	1.00000	1.021	
	31 4-Chloro-3-methylphenol	107	12.688	12.689	(1.097)	126435	2.00000	1.981	
	32 2-Methylnaphthalene	142	13.006	13.006	(1.124)	140918	1.00000	1.004	
	33 Hexachlorocyclopentadiene	237	13.478	13.486	(0.887)	61563	2.00000	1.903	

		QUANT SIG					AMOUNTS	
	Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
	34 2,4,6-Trichlorophenol	196	13.625	13.625	(0.897)	78140	2.00000	1.979
	35 2,4,5-Trichlorophenol	196	13.702	13.702	(0.902)	81884	2.00000	1.990
$	36 2-Fluorobiphenyl	172	13.795	13.795	(0.908)	143492	1.00000	1.018
	37 2-Chloronaphthalene	162	14.004	14.004	(0.922)	123416	1.00000	1.022
	38 2-Nitroaniline	65	14.259	14.260	(0.938)	92798	2.00000	1.989
	39 Dimethylphthalate	163	14.693	14.693	(0.967)	136365	1.00000	1.051
	40 Acenaphthylene	152	14.879	14.879	(0.979)	210659	1.00000	1.038
	41 2,6-Dinitrotoluene	165	14.832	14.833	(0.976)	59959	2.00000	2.000
*	42 Acenaphthene-d10	164	15.196	15.196	(1.000)	389189	4.00000	
	43 3-Nitroaniline	138	15.111	15.111	(0.994)	81750	2.00000	1.977
	44 Acenaphthene	153	15.266	15.258	(1.005)	119811	1.00000	1.011
	45 2,4-Dinitrophenol	184	15.327	15.328	(1.009)	63106	4.00000	2.707
	46 Dibenzofuran	168	15.590	15.590	(1.026)	172500	1.00000	1.020
	47 4-Nitrophenol	109	15.420	15.420	(1.015)	42627	2.00000	1.947
	48 2,4-Dinitrotoluene	165	15.644	15.645	(1.030)	83839	2.00000	1.973
	50 Diethylphthalate	149	16.155	16.155	(1.063)	135980	1.00000	1.013
	49 Fluorene	166	16.301	16.302	(1.073)	161941	1.00000	1.010
	51 4-Chlorophenyl-phenylether	204	16.294	16.294	(1.072)	70229	1.00000	1.021
	52 4-Nitroaniline	138	16.378	16.379	(1.078)	69893	2.00000	1.943
	53 4,6-Dinitro-2-methylphenol	198	16.479	16.479	(0.903)	85861	4.00000	3.441
	54 N-Nitrosodiphenylamine	169	16.540	16.541	(0.907)	102677	1.00000	1.053
$	55 2,4,6-Tribromophenol	330	16.841	16.841	(1.108)	21863	1.50000	1.480
	56 4-Bromophenyl-phenylether	248	17.304	17.304	(0.949)	32684	1.00000	0.9938
	57 Hexachlorobenzene	284	17.620	17.621	(0.966)	34992	1.00000	1.008
	58 Pentachlorophenol	266	17.969	17.977	(0.985)	41232	2.00000	1.717
*	59 Phenanthrene-d10	188	18.240	18.240	(1.000)	718213	4.00000	
	60 Phenanthrene	178	18.286	18.286	(1.003)	209701	1.00000	1.022
	61 Anthracene	178	18.379	18.379	(1.008)	202066	1.00000	1.022
	62 Carbazole	167	18.704	18.704	(1.025)	181219	1.00000	1.030
	63 Di-n-butylphthalate	149	19.509	19.509	(1.070)	225943	1.00000	1.013
	64 Fluoranthene	202	20.677	20.677	(0.888)	212133	1.00000	1.009
	65 Pyrene	202	21.102	21.103	(0.906)	217807	1.00000	1.010
$	66 Terphenyl-d14	244	21.389	21.389	(0.918)	151517	1.00000	1.038
	67 Butylbenzylphthalate	149	22.310	22.310	(0.958)	99411	1.00000	1.052
	68 Benzo(a)anthracene	228	23.262	23.263	(0.999)	194221	1.00000	1.019
*	69 Chrysene-d12	240	23.293	23.294	(1.000)	516735	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.216	23.216	(0.997)	164543	3.00000	2.989
	71 Chrysene	228	23.340	23.340	(1.002)	172495	1.00000	1.000
	72 bis(2-Ethylhexyl)phthalate	149	23.332	23.332	(0.959)	126817	1.00000	1.032
*	134 Di-n-octylphthalate-d4	153	24.323	24.323	(1.000)	933762	4.00000	
	73 Di-n-octylphthalate	149	24.331	24.331	(1.000)	248159	1.00000	1.034
	74 Benzo(b)fluoranthene	252	25.159	25.152	(0.970)	176684	1.00000	1.014
	75 Benzo(k)fluoranthene	252	25.206	25.198	(0.972)	168393	1.00000	0.9745
	76 Benzo(a)pyrene	252	25.817	25.818	(0.995)	146960	1.00000	0.9859
*	77 Perylene-d12	264	25.941	25.934	(1.000)	493304	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	28.610	28.610	(1.103)	163451	1.00000	1.007
	79 Dibenzo(a,h)anthracene	278	28.626	28.626	(1.103)	136554	1.00000	0.9987
	80 Benzo(g,h,i)perylene	276	29.402	29.403	(1.133)	130759	1.00000	0.9779
	90 N-Nitrosodimethylamine	74	4.712	4.720	(1.000)	90659	2.00000	2.070
	91 Aniline	93	8.513	8.513	(1.000)	193904	2.00000	1.993
	93 Benzidine	184	20.909	20.909	(0.898)	175303	2.00000	2.072
	103 Pyridine	79	4.751	4.766	(1.000)	143408	1.00000	1.057
	105 1-methylnaphthalene	142	13.230	13.230	(1.144)	128445	1.00000	1.010
	111 Azobenzene (1,2-DP-Hydrazine)	77	16.617	16.618	(1.094)	167507	1.00000	1.045

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
187 Total Benzofluoranthenes	252	25.159	25.199	(0.970)	328361	2.00000	1.983(M)
120 2,3,4,6-Tetrachlorophenol	232	15.923	15.923	(1.048)	35870	1.00000	0.9055

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1403152306.D
Lab Smp Id: SLC0160-CAL3
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt14.i\20230315.b\ABN.m
Misc Info:

Calibration Date: 15-MAR-2023
Calibration Time: 13:26
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	194517	97259	389034	203547	4.64
27 Naphthalene-d8	721321	360661	1442642	753702	4.49
42 Acenaphthene-d10	379602	189801	759204	389189	2.53
59 Phenanthrene-d10	703194	351597	1406388	718213	2.14
69 Chrysene-d12	504769	252385	1009538	516735	2.37
134 Di-n-octylphthala	978492	489246	1956984	933762	-4.57
77 Perylene-d12	484073	242037	968146	493304	1.91

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.07	8.57	9.57	9.07	-0.00
27 Naphthalene-d8	11.57	11.07	12.07	11.57	-0.00
42 Acenaphthene-d10	15.20	14.70	15.70	15.20	-0.05
59 Phenanthrene-d10	18.25	17.75	18.75	18.24	-0.04
69 Chrysene-d12	23.30	22.80	23.80	23.29	-0.03
134 Di-n-octylphthala	24.32	23.82	24.82	24.32	-0.00
77 Perylene-d12	25.94	25.44	26.44	25.94	-0.00

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

REVIEW SUMMARY FOR FILE - NT1403152306.D

Lab ID: SLC0160-CAL3
nt14.i, ABN.m, 15-MAR-2023 14:38

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
1.000	1.064	-0.0642	2,2'-oxybis(1-Chloropropane)

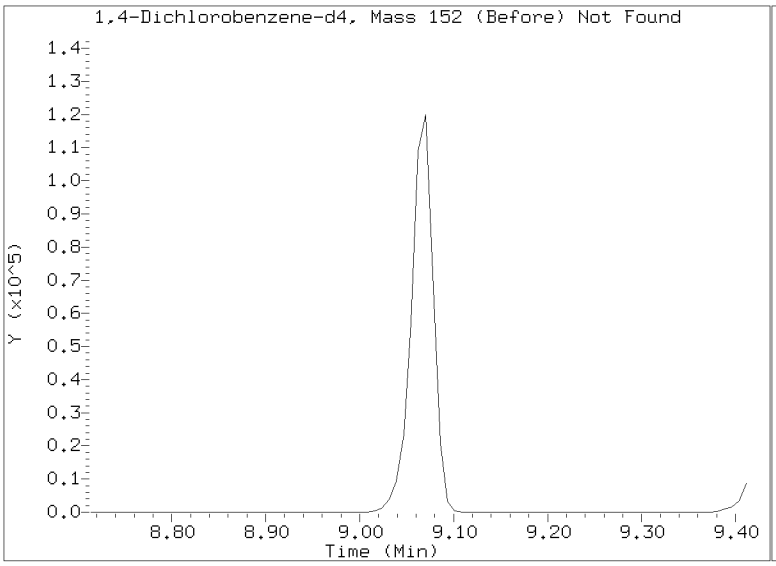
RRT check based on Ccal File: NT1403152308.D

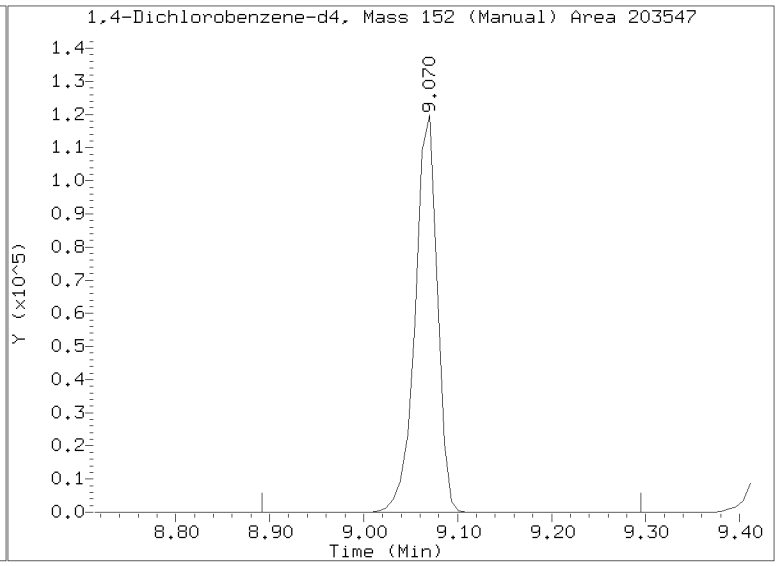
On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

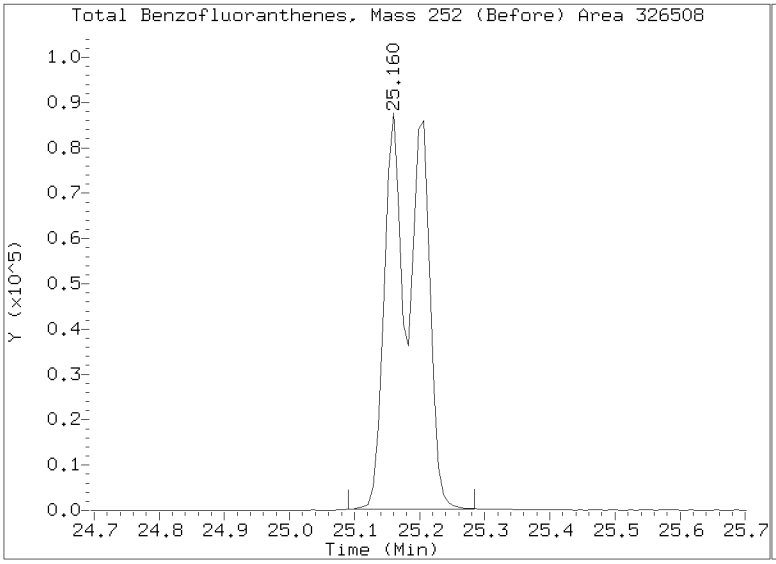
* Only compounds listed in the work order have been verified by the analyst *

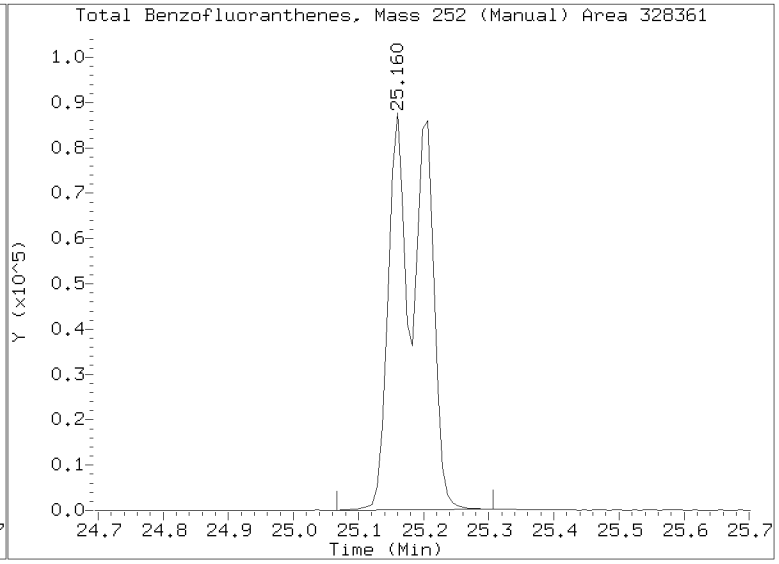
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230315.b/NT1403152306.D
Injection Date: 15-MAR-2023 14:38
Lab ID:SLC0160-CAL3 Client ID:
Report Date: 03/21/2023 12:48



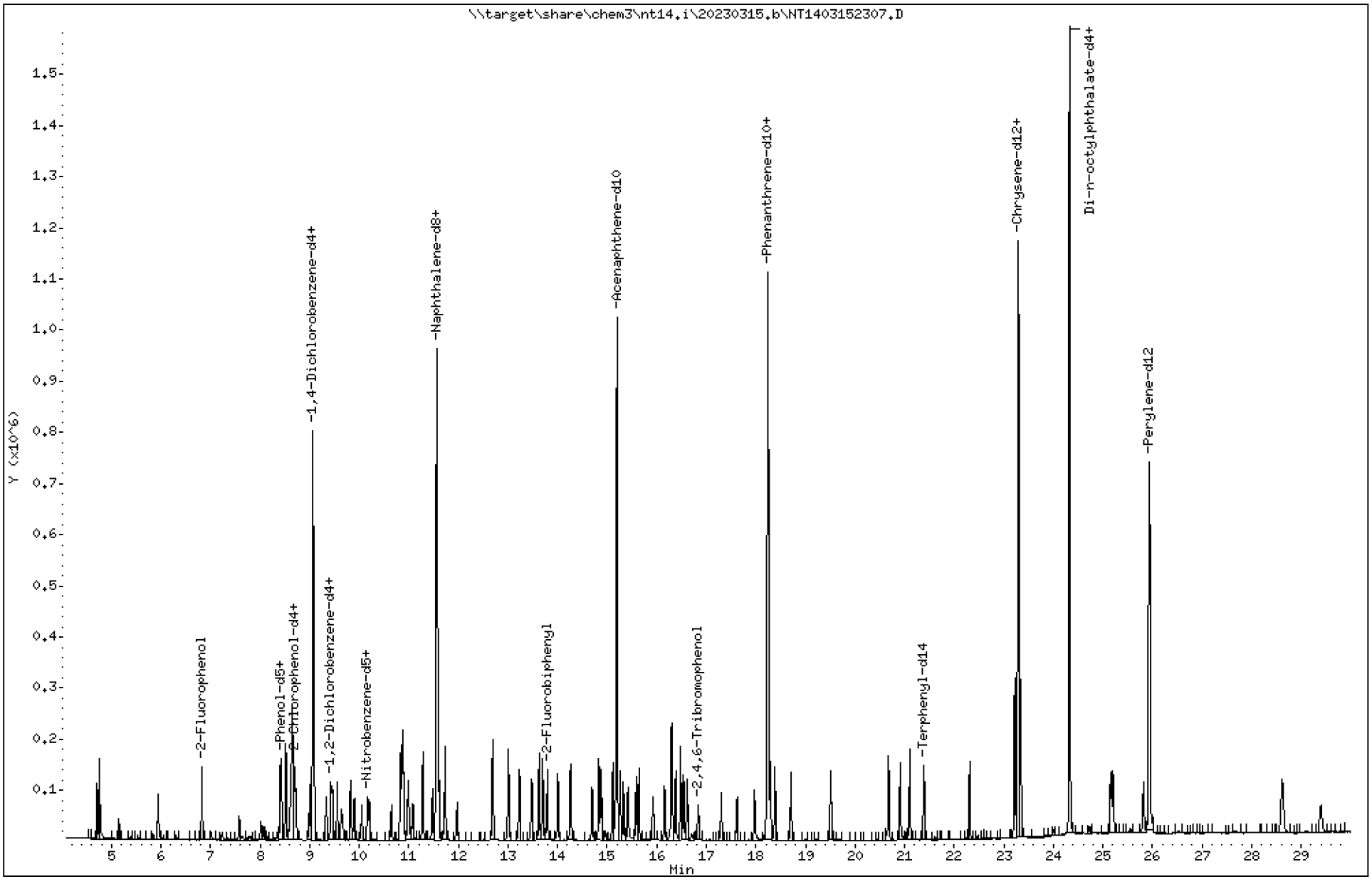






Data File: \\target\share\chem3\nt14.i\20230315.b\NT1403152307.D
Date : 15-MAR-2023 15:14
Client ID:
Sample Info: SLC0160-CAL2

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



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230315.b\NT1403152307.D
Lab Smp Id: SLC0160-CAL2
Inj Date : 15-MAR-2023 15:14 MS Autotune Date: 11-MAR-2023 16:01
Operator : JGR Inst ID: nt14.i
Smp Info : SLC0160-CAL2
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230315.b\ABN.m
Meth Date : 21-Mar-2023 12:29 van Quant Type: ISTD
Cal Date : 15-MAR-2023 15:50 Cal File: NT1403152308.D
Als bottle: 7 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.829	6.821	(1.000)	55696	0.75000	0.7629
$	2 Phenol-d5	99	8.413	8.412	(1.000)	71012	0.75000	0.7388
	3 Phenol	94	8.436	8.428	(1.000)	51155	0.50000	0.5008
$	5 2-Chlorophenol-d4	132	8.698	8.698	(1.000)	57111	0.75000	0.7537
	4 Bis(2-Chloroethyl)ether	93	8.606	8.606	(1.000)	37884	0.50000	0.5150
	6 2-Chlorophenol	128	8.722	8.721	(1.000)	39129	0.50000	0.4867
	7 1,3-Dichlorobenzene	146	9.000	9.000	(1.000)	41299	0.50000	0.5075
*	8 1,4-Dichlorobenzene-d4	152	9.070	9.062	(1.000)	214919	4.00000	(M)
	9 1,4-Dichlorobenzene	146	9.101	9.093	(1.000)	39766	0.50000	0.5073
$	10 1,2-Dichlorobenzene-d4	152	9.427	9.427	(1.000)	25516	0.50000	0.5040
	12 1,2-Dichlorobenzene	146	9.450	9.458	(1.000)	38458	0.50000	0.4964
	11 Benzyl alcohol	108	9.334	9.334	(1.000)	22864	0.50000	0.4808
	14 2,2'-oxybis(1-Chloropropane)	121	9.644	9.644	(1.000)	11515	0.50000	0.4925
	13 2-Methylphenol	108	9.559	9.559	(1.000)	35527	0.50000	0.4919
	17 Hexachloroethane	117	10.056	10.056	(1.000)	16545	0.50000	0.4935
	16 N-Nitroso-di-n-propylamine	70	9.901	9.893	(1.000)	28142	0.50000	0.4949
	15 4-Methylphenol	108	9.823	9.823	(1.000)	42147	0.50000	0.4929
$	18 Nitrobenzene-d5	82	10.164	10.164	(0.879)	41564	0.50000	0.4793
	19 Nitrobenzene	77	10.195	10.195	(0.881)	41159	0.50000	0.4876
	20 Isophorone	82	10.646	10.645	(0.920)	51244	0.50000	0.4446
	21 2-Nitrophenol	139	10.832	10.831	(0.936)	17769	0.50000	0.3725
	22 2,4-Dimethylphenol	107	10.878	10.878	(0.940)	72599	1.00000	1.006
	23 Bis(2-Chloroethoxy)methane	93	11.080	11.080	(0.958)	38720	0.50000	0.4991
	24 Benzoic acid	105	10.987	10.963	(0.950)	65039	2.00000	1.080(M)
	25 2,4-Dichlorophenol	162	11.281	11.281	(0.975)	55131	1.00000	0.9603
	26 1,2,4-Trichlorobenzene	180	11.475	11.482	(0.992)	32654	0.50000	0.4627
*	27 Naphthalene-d8	136	11.567	11.567	(1.000)	819372	4.00000	
	28 Naphthalene	128	11.606	11.606	(1.003)	108118	0.50000	0.4939
	29 4-Chloroaniline	127	11.730	11.729	(1.014)	86140	1.00000	0.9400
	30 Hexachlorobutadiene	225	11.977	11.977	(1.035)	15330	0.50000	0.4811
	31 4-Chloro-3-methylphenol	107	12.689	12.689	(1.097)	62540	1.00000	0.9014
	32 2-Methylnaphthalene	142	13.006	13.006	(1.124)	73033	0.50000	0.4784
	33 Hexachlorocyclopentadiene	237	13.478	13.486	(0.887)	30047	1.00000	0.8635

			QUANT SIG					AMOUNTS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
	34	2,4,6-Trichlorophenol	196	13.625	13.625	(0.897)	38368	1.00000	0.9035
	35	2,4,5-Trichlorophenol	196	13.703	13.702	(0.902)	39077	1.00000	0.8830
$	36	2-Fluorobiphenyl	172	13.796	13.795	(0.908)	76254	0.50000	0.5030
	37	2-Chloronaphthalene	162	14.005	14.004	(0.922)	64035	0.50000	0.4928
	38	2-Nitroaniline	65	14.260	14.260	(0.938)	46074	1.00000	0.9183
	39	Dimethylphthalate	163	14.693	14.693	(0.967)	70891	0.50000	0.5078
	40	Acenaphthylene	152	14.879	14.879	(0.979)	109281	0.50000	0.5007
	41	2,6-Dinitrotoluene	165	14.833	14.833	(0.976)	29385	1.00000	0.9112
*	42	Acenaphthene-d10	164	15.196	15.196	(1.000)	418625	4.00000	
	43	3-Nitroaniline	138	15.111	15.111	(0.994)	40744	1.00000	0.9158
	44	Acenaphthene	153	15.266	15.258	(1.005)	61865	0.50000	0.4855
	45	2,4-Dinitrophenol	184	15.328	15.328	(1.009)	22714	2.00000	0.9086
	46	Dibenzofuran	168	15.591	15.590	(1.026)	87405	0.50000	0.4805
	47	4-Nitrophenol	109	15.421	15.420	(1.015)	18857	1.00000	0.8008
	48	2,4-Dinitrotoluene	165	15.645	15.645	(1.030)	40198	1.00000	0.8794
	50	Diethylphthalate	149	16.155	16.155	(1.063)	70431	0.50000	0.4880
	49	Fluorene	166	16.302	16.302	(1.073)	86396	0.50000	0.5010
	51	4-Chlorophenyl-phenylether	204	16.294	16.294	(1.072)	37327	0.50000	0.5043
	52	4-Nitroaniline	138	16.379	16.379	(1.078)	33982	1.00000	0.8782
	53	4,6-Dinitro-2-methylphenol	198	16.479	16.479	(0.903)	37731	2.00000	1.406
	54	N-Nitrosodiphenylamine	169	16.541	16.541	(0.907)	52457	0.50000	0.4988
$	55	2,4,6-Tribromophenol	330	16.834	16.841	(1.108)	10101	0.75000	0.6355
	56	4-Bromophenyl-phenylether	248	17.304	17.304	(0.949)	16746	0.50000	0.4723
	57	Hexachlorobenzene	284	17.621	17.621	(0.966)	18456	0.50000	0.4933
	58	Pentachlorophenol	266	17.977	17.977	(0.986)	18385	1.00000	0.7121
*	59	Phenanthrene-d10	188	18.240	18.240	(1.000)	774369	4.00000	
	60	Phenanthrene	178	18.286	18.286	(1.003)	108106	0.50000	0.4886
	61	Anthracene	178	18.379	18.379	(1.008)	102021	0.50000	0.4786
	62	Carbazole	167	18.704	18.704	(1.025)	93441	0.50000	0.4927
	63	Di-n-butylphthalate	149	19.509	19.509	(1.070)	108738	0.50000	0.4523
	64	Fluoranthene	202	20.677	20.677	(0.888)	107765	0.50000	0.4779
	65	Pyrene	202	21.103	21.103	(0.906)	112788	0.50000	0.4878
$	66	Terphenyl-d14	244	21.389	21.389	(0.918)	77850	0.50000	0.4973
	67	Butylbenzylphthalate	149	22.310	22.310	(0.958)	45508	0.50000	0.4492
	68	Benzo(a)anthracene	228	23.263	23.263	(0.999)	99180	0.50000	0.4853
*	69	Chrysene-d12	240	23.294	23.294	(1.000)	554225	4.00000	
	70	3,3'-Dichlorobenzidine	252	23.216	23.216	(0.997)	89955	1.50000	1.530
	71	Chrysene	228	23.340	23.340	(1.002)	91155	0.50000	0.4929
	72	bis(2-Ethylhexyl)phthalate	149	23.333	23.332	(0.959)	58625	0.50000	0.4507
*	134	Di-n-octylphthalate-d4	153	24.324	24.323	(1.000)	988092	4.00000	
	73	Di-n-octylphthalate	149	24.331	24.331	(1.000)	128178	0.50000	0.5046
	74	Benzo(b)fluoranthene	252	25.160	25.152	(0.970)	80996	0.50000	0.4330
	75	Benzo(k)fluoranthene	252	25.198	25.198	(0.972)	91398	0.50000	0.4929
	76	Benzo(a)pyrene	252	25.818	25.818	(0.996)	72701	0.50000	0.4545
*	77	Perylene-d12	264	25.934	25.934	(1.000)	529322	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	28.611	28.610	(1.103)	79344	0.50000	0.4558
	79	Dibenzo(a,h)anthracene	278	28.618	28.626	(1.104)	67047	0.50000	0.4570
	80	Benzo(g,h,i)perylene	276	29.395	29.403	(1.133)	66990	0.50000	0.4669
	90	N-Nitrosodimethylamine	74	4.713	4.720	(1.000)	46812	1.00000	1.012
	91	Aniline	93	8.513	8.513	(1.000)	103961	1.00000	1.012
	93	Benzidine	184	20.909	20.909	(0.898)	98620	1.00000	1.087
	103	Pyridine	79	4.751	4.766	(1.000)	75424	0.50000	0.5267
	105	1-methylnaphthalene	142	13.231	13.230	(1.144)	67413	0.50000	0.4874
	111	Azobenzene (1,2-DP-Hydrazine)	77	16.618	16.618	(1.094)	86135	0.50000	0.4998

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
187 Total Benzofluoranthenes	252	25.198	25.199	(0.972)	165075	1.00000	0.9293(M)
120 2,3,4,6-Tetrachlorophenol	232	15.923	15.923	(1.048)	16437	0.50000	0.3869

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1403152307.D
Lab Smp Id: SLC0160-CAL2
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt14.i\20230315.b\ABN.m
Misc Info:

Calibration Date: 15-MAR-2023
Calibration Time: 13:26
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	194517	97259	389034	214919	10.49
27 Naphthalene-d8	721321	360661	1442642	819372	13.59
42 Acenaphthene-d10	379602	189801	759204	418625	10.28
59 Phenanthrene-d10	703194	351597	1406388	774369	10.12
69 Chrysene-d12	504769	252385	1009538	554225	9.80
134 Di-n-octylphthala	978492	489246	1956984	988092	0.98
77 Perylene-d12	484073	242037	968146	529322	9.35

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.07	8.57	9.57	9.07	0.00
27 Naphthalene-d8	11.57	11.07	12.07	11.57	0.00
42 Acenaphthene-d10	15.20	14.70	15.70	15.20	-0.05
59 Phenanthrene-d10	18.25	17.75	18.75	18.24	-0.04
69 Chrysene-d12	23.30	22.80	23.80	23.29	-0.03
134 Di-n-octylphthala	24.32	23.82	24.82	24.32	0.00
77 Perylene-d12	25.94	25.44	26.44	25.93	-0.03

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

REVIEW SUMMARY FOR FILE - NT1403152307.D

Lab ID: SLC0160-CAL2
nt14.i, ABN.m, 15-MAR-2023 15:14

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
1.000	1.064	-0.0642	2,2'-oxybis(1-Chloropropane)

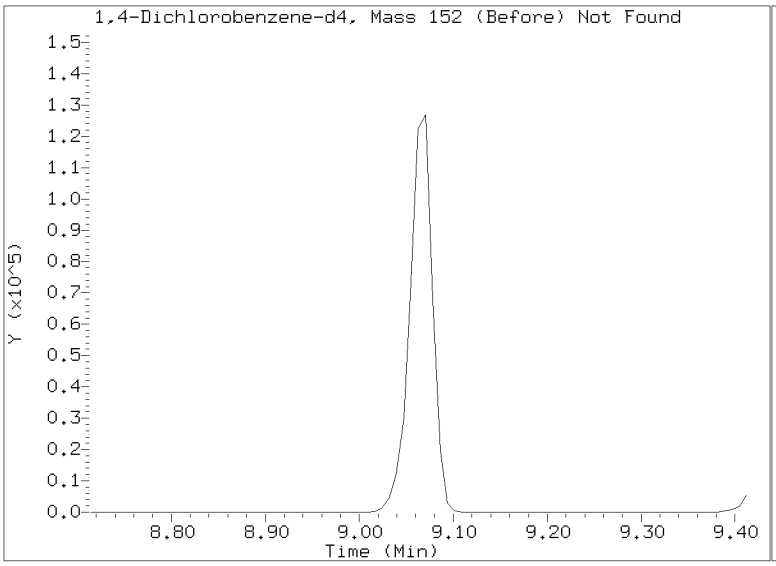
RRT check based on Ccal File: NT1403152308.D

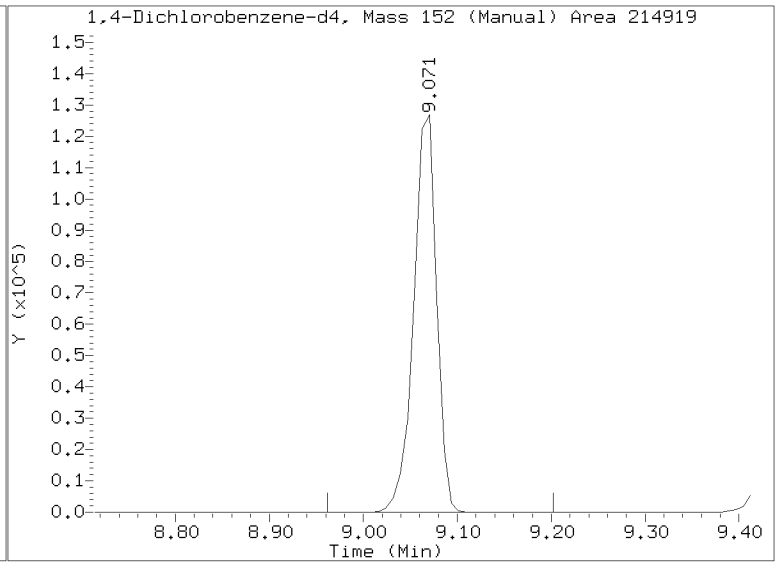
On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

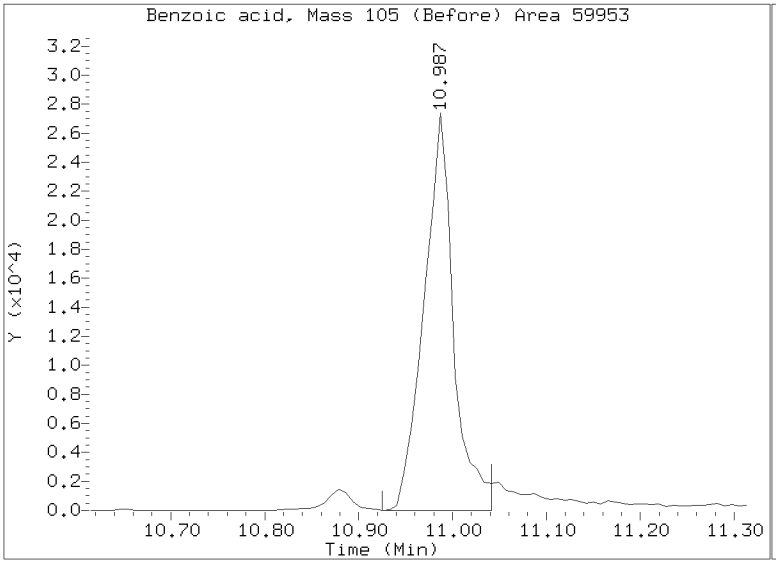
* Only compounds listed in the work order have been verified by the analyst *

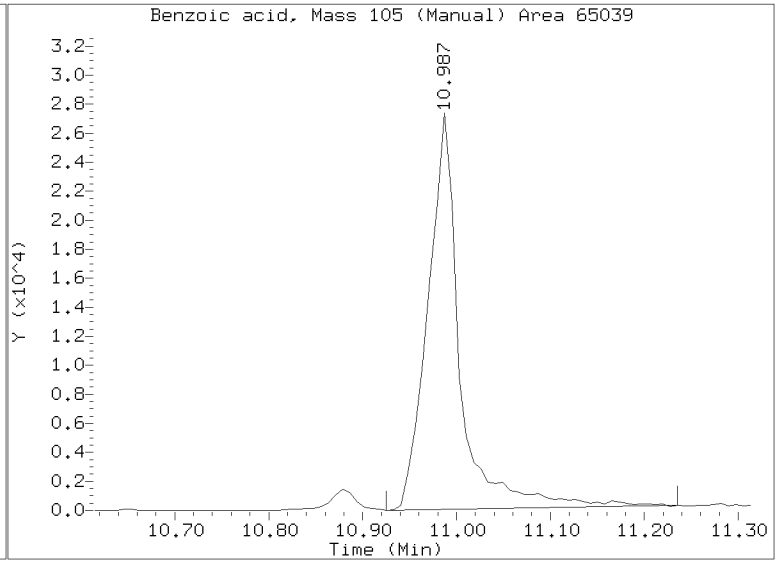
Quant Ion Manual Peak Adjustment Report

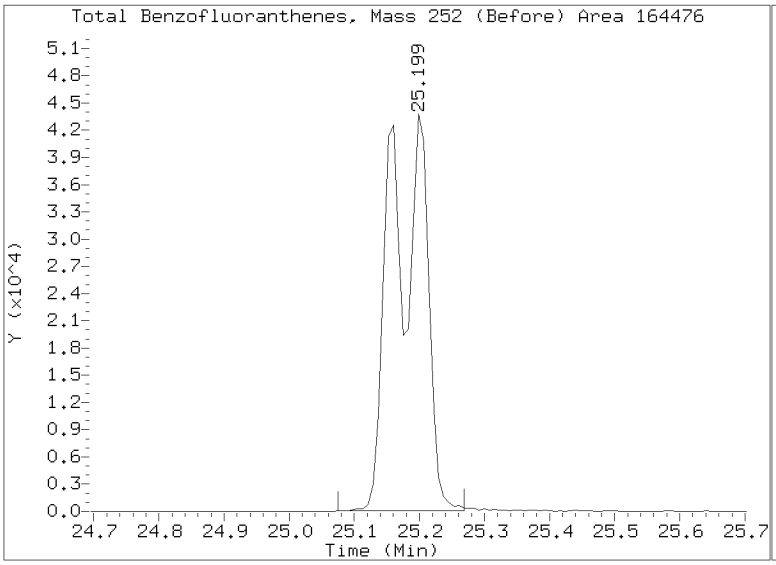
Datafile: //target/share/chem3/nt14.i/20230315.b/NT1403152307.D
Injection Date: 15-MAR-2023 15:14
Lab ID:SLC0160-CAL2 Client ID:
Report Date: 03/21/2023 12:48

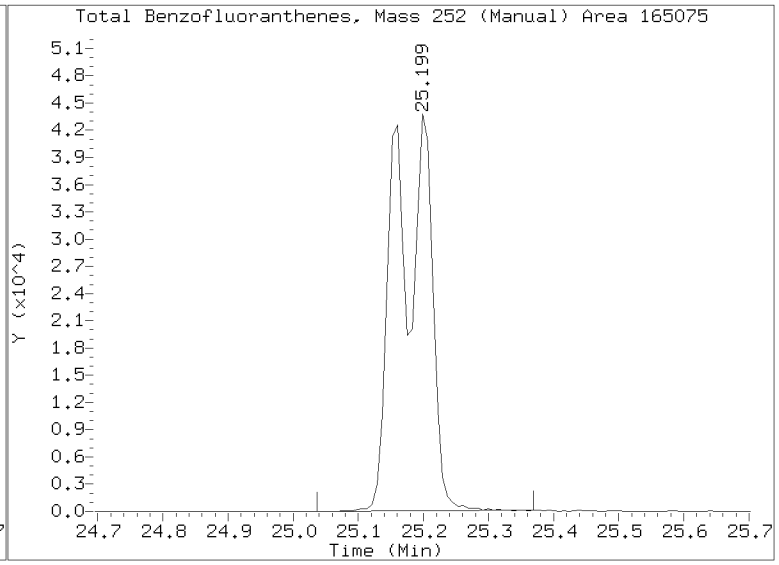












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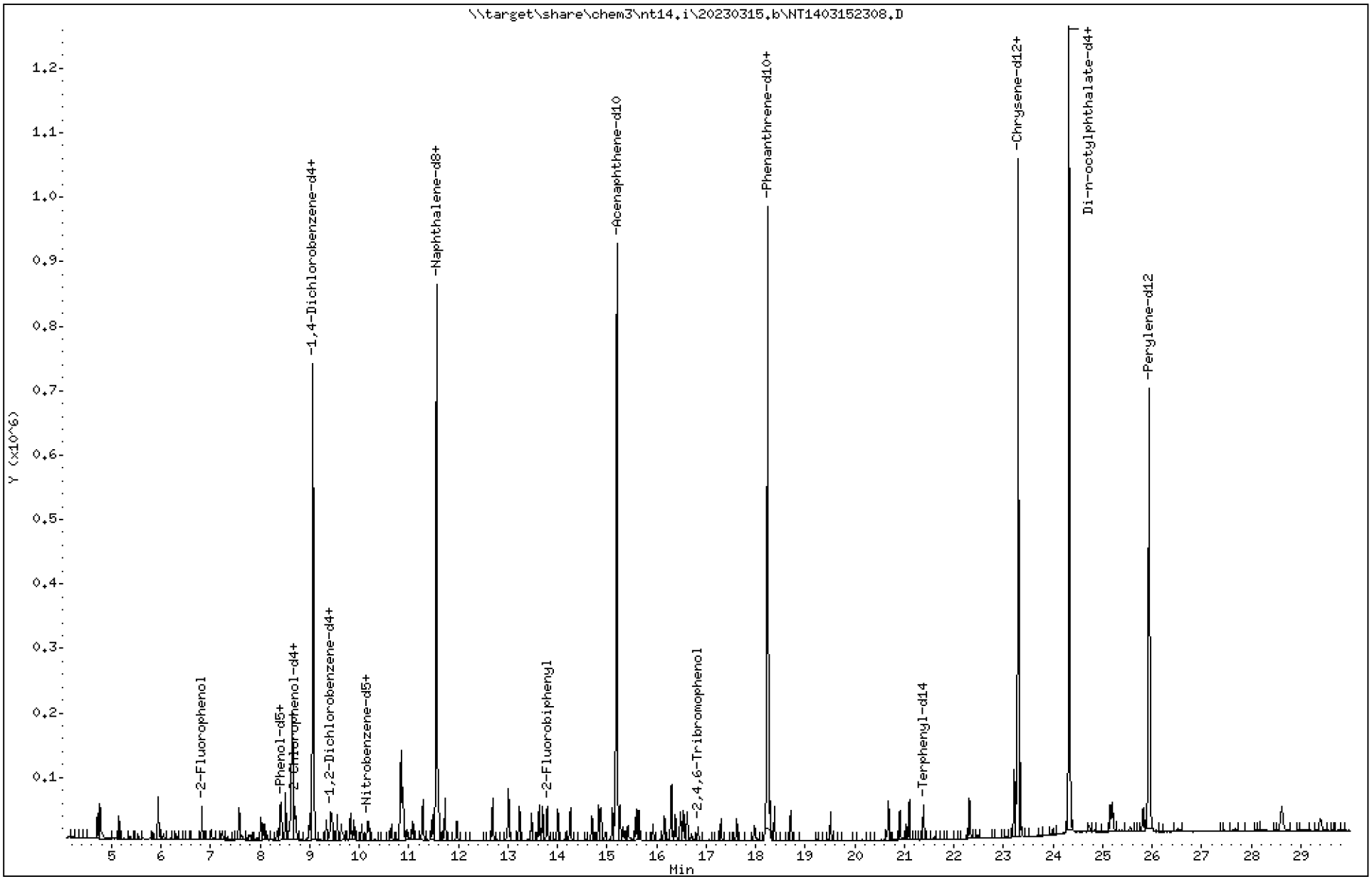
Date : 15-MAR-2023 15:50
Client ID:
Sample Info: SLC0160-CAL1

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



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230315.b\NT1403152308.D
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Inj Date : 15-MAR-2023 15:50 MS Autotune Date: 11-MAR-2023 16:01
Operator : JGR Inst ID: nt14.i
Smp Info : SLC0160-CAL1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230315.b\ABN.m
Meth Date : 21-Mar-2023 12:29 van Quant Type: ISTD
Cal Date : 15-MAR-2023 15:50 Cal File: NT1403152308.D
Als bottle: 8 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)	
$	1 2-Fluorophenol	112	6.821	6.821	(1.000)	20140	0.30000	0.2916	
$	2 Phenol-d5	99	8.412	8.412	(1.000)	26010	0.30000	0.2861	
	3 Phenol	94	8.428	8.428	(1.000)	19202	0.20000	0.1987	
$	5 2-Chlorophenol-d4	132	8.698	8.698	(1.000)	20793	0.30000	0.2901	
	4 Bis(2-Chloroethyl)ether	93	8.606	8.606	(1.000)	14437	0.20000	0.2075	
	6 2-Chlorophenol	128	8.721	8.721	(1.000)	15093	0.20000	0.1984	
	7 1,3-Dichlorobenzene	146	9.000	9.000	(1.000)	16423	0.20000	0.2133	
*	8 1,4-Dichlorobenzene-d4	152	9.062	9.062	(1.000)	203313	4.00000		(M)
	9 1,4-Dichlorobenzene	146	9.093	9.093	(1.000)	15842	0.20000	0.2136	
$	10 1,2-Dichlorobenzene-d4	152	9.427	9.427	(1.000)	10049	0.20000	0.2098	
	12 1,2-Dichlorobenzene	146	9.458	9.458	(1.000)	16057	0.20000	0.2191	
	11 Benzyl alcohol	108	9.334	9.334	(1.000)	7789	0.20000	0.1731	
	14 2,2'-oxybis(1-Chloropropane)	121	9.644	9.644	(1.064)	4693	0.20000	0.2122	(M)
	13 2-Methylphenol	108	9.559	9.559	(1.000)	13118	0.20000	0.1920	
	17 Hexachloroethane	117	10.056	10.056	(1.000)	6265	0.20000	0.1975	
	16 N-Nitroso-di-n-propylamine	70	9.893	9.893	(1.000)	10469	0.20000	0.1946	
	15 4-Methylphenol	108	9.823	9.823	(1.000)	14379	0.20000	0.1778	
$	18 Nitrobenzene-d5	82	10.164	10.164	(0.879)	15172	0.20000	0.1927	
	19 Nitrobenzene	77	10.195	10.195	(0.881)	15078	0.20000	0.1967	
	20 Isophorone	82	10.645	10.645	(0.920)	18686	0.20000	0.1786	
	21 2-Nitrophenol	139	10.831	10.831	(0.936)	6127	0.20000	0.1416	
	22 2,4-Dimethylphenol	107	10.878	10.878	(0.940)	27667	0.40000	0.4221	
	23 Bis(2-Chloroethoxy)methane	93	11.080	11.080	(0.958)	14959	0.20000	0.2123	
	24 Benzoic acid	105	10.963	10.963	(0.948)	12742	0.80000	0.2334	(M)
	25 2,4-Dichlorophenol	162	11.281	11.281	(0.975)	19906	0.40000	0.3818	
	26 1,2,4-Trichlorobenzene	180	11.482	11.482	(0.993)	12432	0.20000	0.1940	
*	27 Naphthalene-d8	136	11.567	11.567	(1.000)	744014	4.00000		
	28 Naphthalene	128	11.606	11.606	(1.003)	41475	0.20000	0.2087	
	29 4-Chloroaniline	127	11.729	11.729	(1.014)	31645	0.40000	0.3803	
	30 Hexachlorobutadiene	225	11.977	11.977	(1.035)	6280	0.20000	0.2170	
	31 4-Chloro-3-methylphenol	107	12.689	12.689	(1.097)	21661	0.40000	0.3438	
	32 2-Methylnaphthalene	142	13.006	13.006	(1.124)	28157	0.20000	0.2031	
	33 Hexachlorocyclopentadiene	237	13.486	13.486	(0.887)	10435	0.40000	0.3306	

		QUANT SIG					AMOUNTS	
	Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
	34 2,4,6-Trichlorophenol	196	13.625	13.625	(0.897)	12312	0.40000	0.3196
	35 2,4,5-Trichlorophenol	196	13.702	13.702	(0.902)	14119	0.40000	0.3517
$	36 2-Fluorobiphenyl	172	13.795	13.795	(0.908)	28687	0.20000	0.2086
	37 2-Chloronaphthalene	162	14.004	14.004	(0.922)	24112	0.20000	0.2045
	38 2-Nitroaniline	65	14.260	14.260	(0.938)	14085	0.40000	0.3094
	39 Dimethylphthalate	163	14.693	14.693	(0.967)	25833	0.20000	0.2040
	40 Acenaphthylene	152	14.879	14.879	(0.979)	39933	0.20000	0.2017
	41 2,6-Dinitrotoluene	165	14.833	14.833	(0.976)	9438	0.40000	0.3226
*	42 Acenaphthene-d10	164	15.196	15.196	(1.000)	379787	4.00000	
	43 3-Nitroaniline	138	15.111	15.111	(0.994)	13233	0.40000	0.3279
	44 Acenaphthene	153	15.258	15.258	(1.004)	23872	0.20000	0.2065
	45 2,4-Dinitrophenol	184	15.328	15.328	(1.009)	3869	0.80000	0.1708
	46 Dibenzofuran	168	15.590	15.590	(1.026)	33683	0.20000	0.2041
	47 4-Nitrophenol	109	15.420	15.420	(1.015)	4406	0.40000	0.2062
	48 2,4-Dinitrotoluene	165	15.645	15.645	(1.030)	12886	0.40000	0.3107
	50 Diethylphthalate	149	16.155	16.155	(1.063)	24504	0.20000	0.1871
	49 Fluorene	166	16.302	16.302	(1.073)	31627	0.20000	0.2022
	51 4-Chlorophenyl-phenylether	204	16.294	16.294	(1.072)	14137	0.20000	0.2105
	52 4-Nitroaniline	138	16.379	16.379	(1.078)	11563	0.40000	0.3294
	53 4,6-Dinitro-2-methylphenol	198	16.479	16.479	(0.903)	8367	0.80000	0.3466
	54 N-Nitrosodiphenylamine	169	16.541	16.541	(0.907)	18951	0.20000	0.2000
$	55 2,4,6-Tribromophenol	330	16.841	16.841	(1.108)	3402	0.30000	0.2359
	56 4-Bromophenyl-phenylether	248	17.304	17.304	(0.949)	5932	0.20000	0.1857
	57 Hexachlorobenzene	284	17.621	17.621	(0.966)	7186	0.20000	0.2132
	58 Pentachlorophenol	266	17.977	17.977	(0.986)	4555	0.40000	0.1961
*	59 Phenanthrene-d10	188	18.240	18.240	(1.000)	697726	4.00000	
	60 Phenanthrene	178	18.286	18.286	(1.003)	40785	0.20000	0.2046
	61 Anthracene	178	18.379	18.379	(1.008)	35992	0.20000	0.1874
	62 Carbazole	167	18.704	18.704	(1.025)	32553	0.20000	0.1905
	63 Di-n-butylphthalate	149	19.509	19.509	(1.070)	34900	0.20000	0.1611
	64 Fluoranthene	202	20.677	20.677	(0.888)	38253	0.20000	0.1855
	65 Pyrene	202	21.103	21.103	(0.906)	42162	0.20000	0.1994
$	66 Terphenyl-d14	244	21.389	21.389	(0.918)	28483	0.20000	0.1989
	67 Butylbenzylphthalate	149	22.310	22.310	(0.958)	15776	0.20000	0.1703
	68 Benzo(a)anthracene	228	23.263	23.263	(0.999)	36978	0.20000	0.1978
*	69 Chrysene-d12	240	23.294	23.294	(1.000)	506894	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.216	23.216	(0.997)	28716	0.60000	0.5357
	71 Chrysene	228	23.340	23.340	(1.002)	35409	0.20000	0.2093
	72 bis(2-Ethylhexyl)phthalate	149	23.332	23.332	(0.959)	19246	0.20000	0.1694
*	134 Di-n-octylphthalate-d4	153	24.323	24.323	(1.000)	862800	4.00000	
	73 Di-n-octylphthalate	149	24.331	24.331	(1.000)	47083	0.20000	0.2123
	74 Benzo(b)fluoranthene	252	25.152	25.152	(0.970)	28702	0.20000	0.1697
	75 Benzo(k)fluoranthene	252	25.198	25.198	(0.972)	32939	0.20000	0.1965
	76 Benzo(a)pyrene	252	25.818	25.818	(0.996)	25628	0.20000	0.1772
*	77 Perylene-d12	264	25.934	25.934	(1.000)	478496	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	28.610	28.610	(1.103)	27033	0.20000	0.1718
	79 Dibenzo(a,h)anthracene	278	28.626	28.626	(1.104)	23680	0.20000	0.1785
	80 Benzo(g,h,i)perylene	276	29.403	29.403	(1.134)	23219	0.20000	0.1790
	90 N-Nitrosodimethylamine	74	4.720	4.720	(1.000)	17954	0.40000	0.4105
	91 Aniline	93	8.513	8.513	(1.000)	39317	0.40000	0.4045
	93 Benzidine	184	20.909	20.909	(0.898)	31808	0.40000	0.3833
	103 Pyridine	79	4.766	4.766	(1.000)	27354	0.20000	0.2019
	105 1-methylnaphthalene	142	13.230	13.230	(1.144)	25371	0.20000	0.2020
	111 Azobenzene (1,2-DP-Hydrazine)	77	16.618	16.618	(1.094)	31471	0.20000	0.2013

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
187 Total Benzofluoranthenes	252	25.198	25.199	(0.972)	59292	0.40000	0.3692(M)
120 2,3,4,6-Tetrachlorophenol	232	15.923	15.923	(1.048)	5019	0.20000	0.1304

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1403152308.D
Lab Smp Id: SLC0160-CAL1
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt14.i\20230315.b\ABN.m
Misc Info:

Calibration Date: 15-MAR-2023
Calibration Time: 13:26
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	194517	97259	389034	203313	4.52
27 Naphthalene-d8	721321	360661	1442642	744014	3.15
42 Acenaphthene-d10	379602	189801	759204	379787	0.05
59 Phenanthrene-d10	703194	351597	1406388	697726	-0.78
69 Chrysene-d12	504769	252385	1009538	506894	0.42
134 Di-n-octylphthala	978492	489246	1956984	862800	-11.82
77 Perylene-d12	484073	242037	968146	478496	-1.15

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.07	8.57	9.57	9.06	-0.09
27 Naphthalene-d8	11.57	11.07	12.07	11.57	-0.00
42 Acenaphthene-d10	15.20	14.70	15.70	15.20	-0.05
59 Phenanthrene-d10	18.25	17.75	18.75	18.24	-0.04
69 Chrysene-d12	23.30	22.80	23.80	23.29	-0.03
134 Di-n-octylphthala	24.32	23.82	24.82	24.32	-0.00
77 Perylene-d12	25.94	25.44	26.44	25.93	-0.03

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

REVIEW SUMMARY FOR FILE - NT1403152308.D

Lab ID: SLC0160-CAL1
nt14.i, ABN.m, 15-MAR-2023 15:50

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

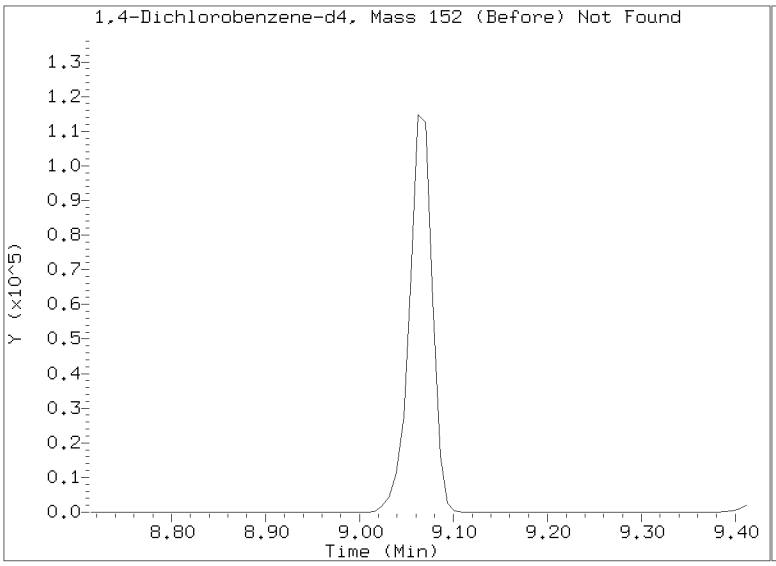
RRT check based on Ccal File: NT1403152308.D

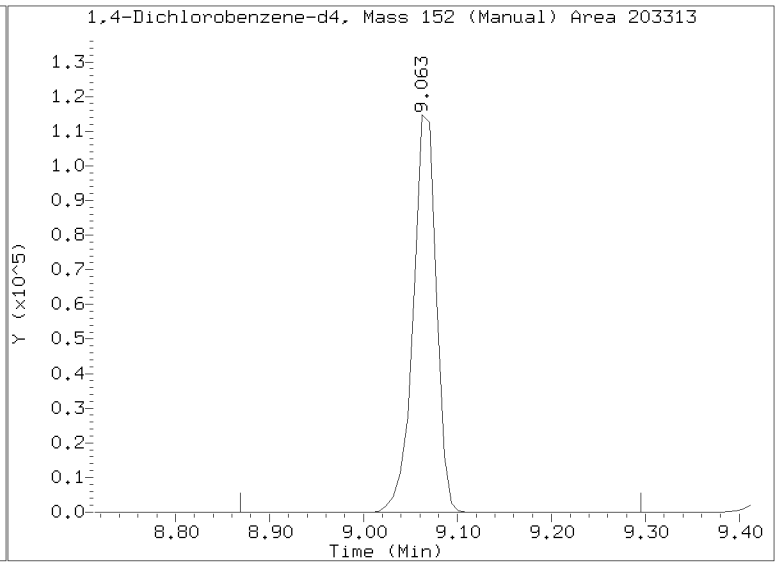
On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

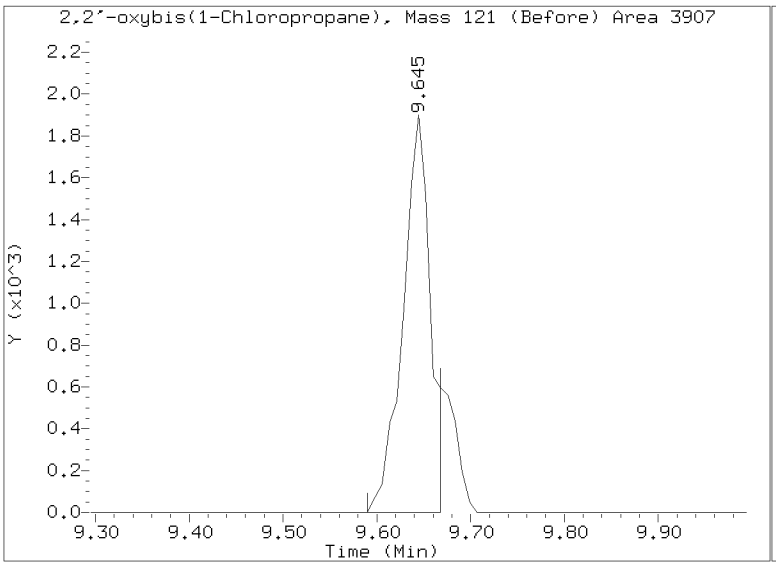
* Only compounds listed in the work order have been verified by the analyst *

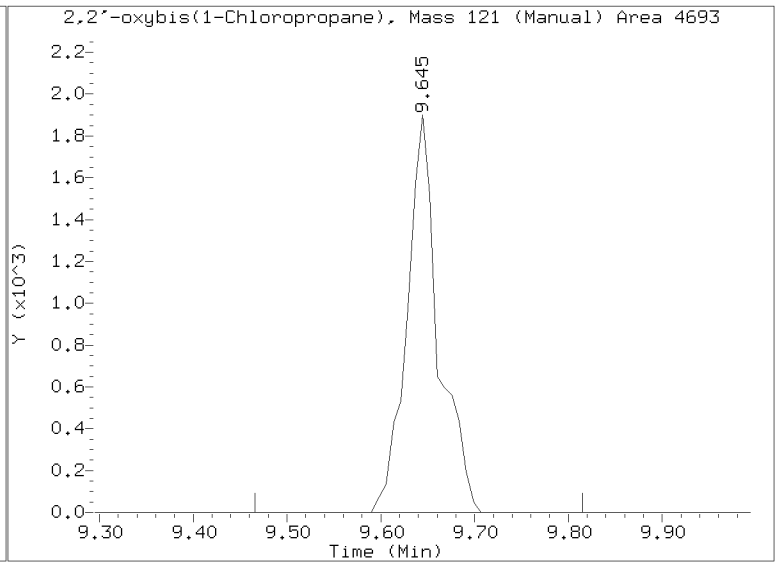
Quant Ion Manual Peak Adjustment Report

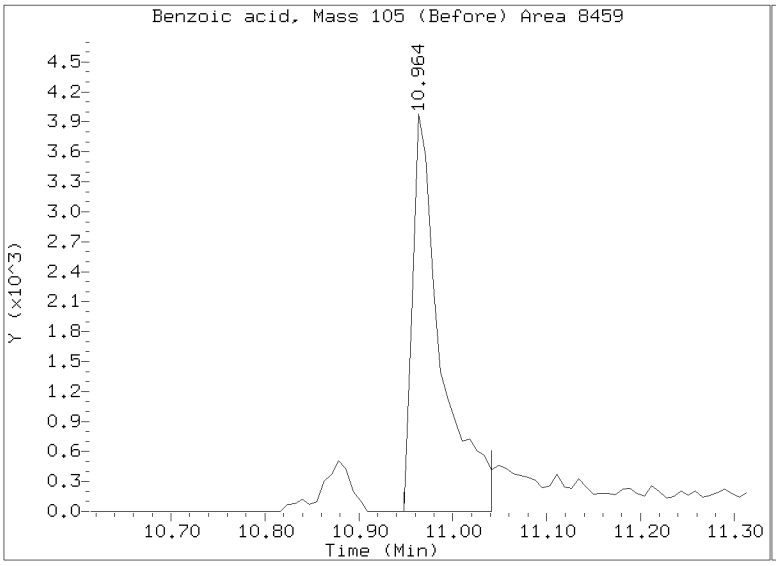
Datafile: //target/share/chem3/nt14.i/20230315.b/NT1403152308.D
Injection Date: 15-MAR-2023 15:50
Lab ID:SLC0160-CAL1 Client ID:
Report Date: 03/21/2023 12:48

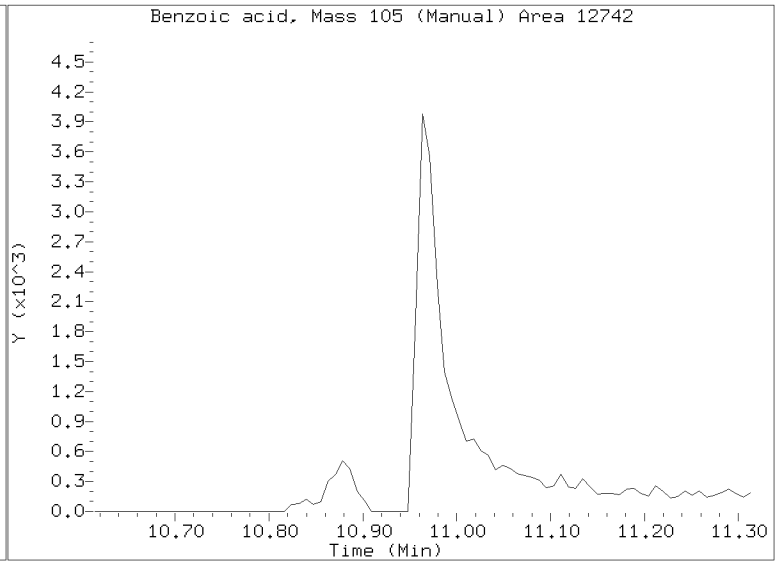












Quant Ion Manual Peak Adjustment Report

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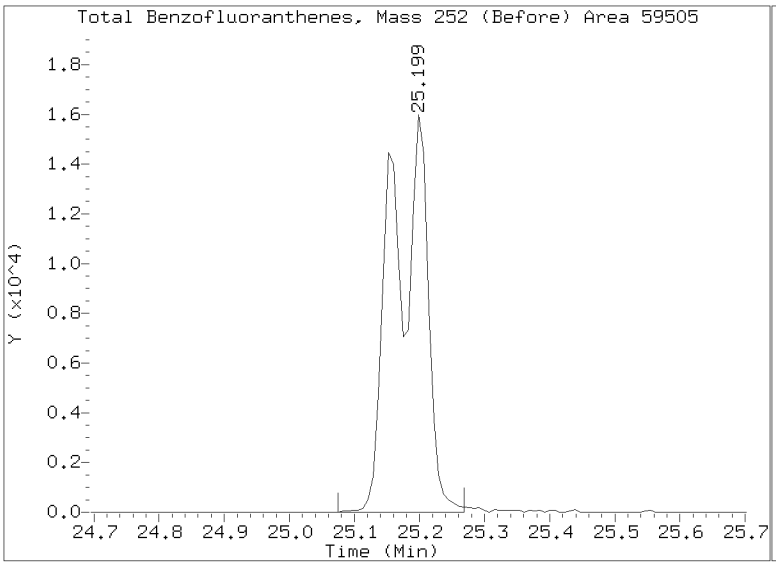
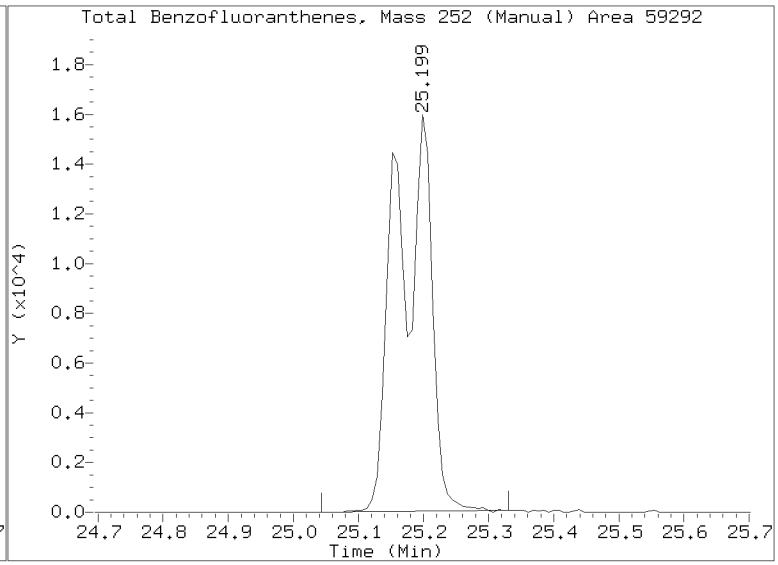
Injection Date: 15-MAR-2023 15:50
Lab ID:SLC0160-CAL1 Client ID:
Report Date: 03/21/2023 12:48





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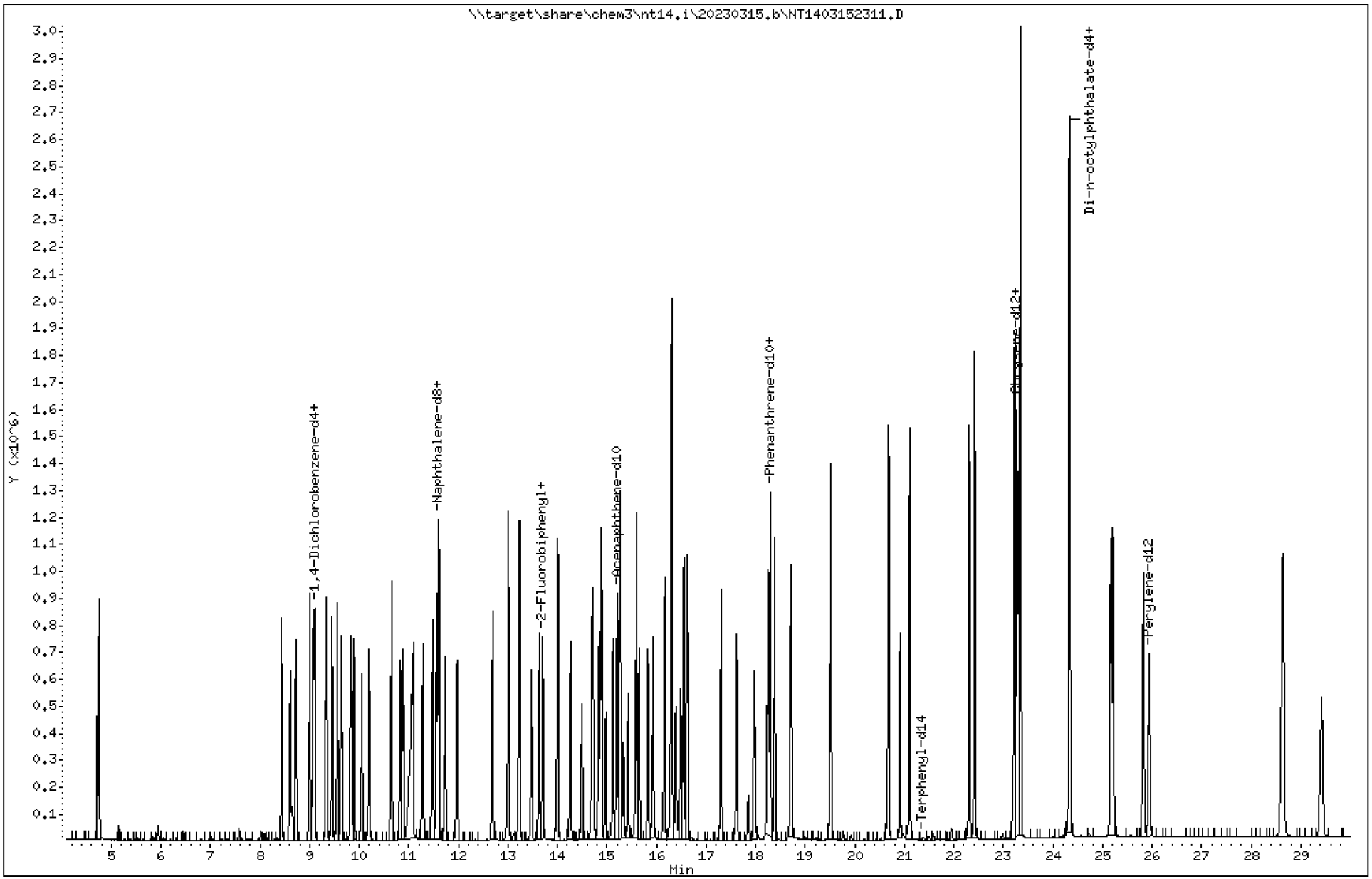
Date : 15-MAR-2023 17:39
Client ID:
Sample Info: SLC0160-SCV1

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

Column phase: ZB-5msi



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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

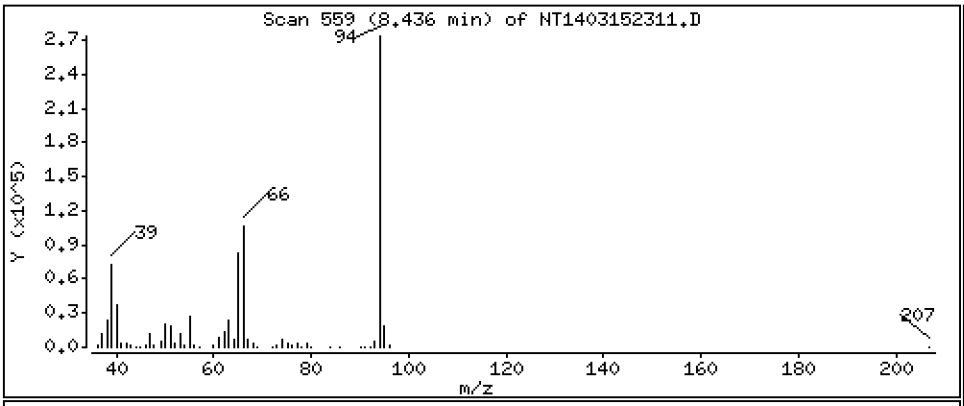
Operator: JGR

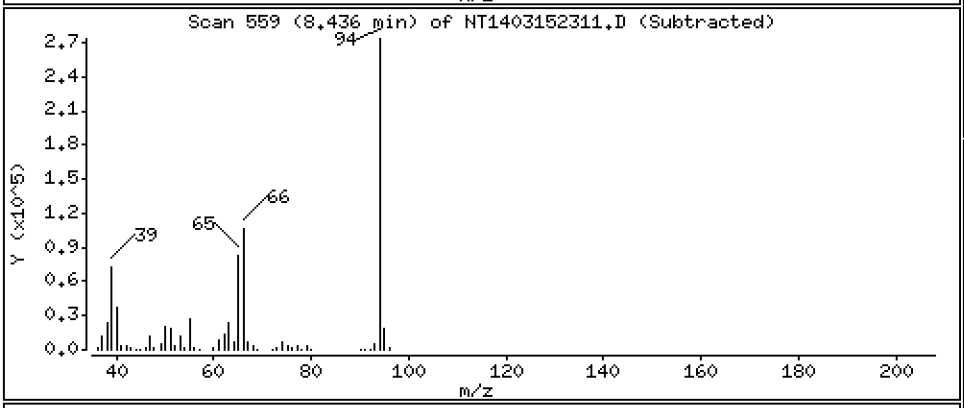
Column phase: ZB-5msi

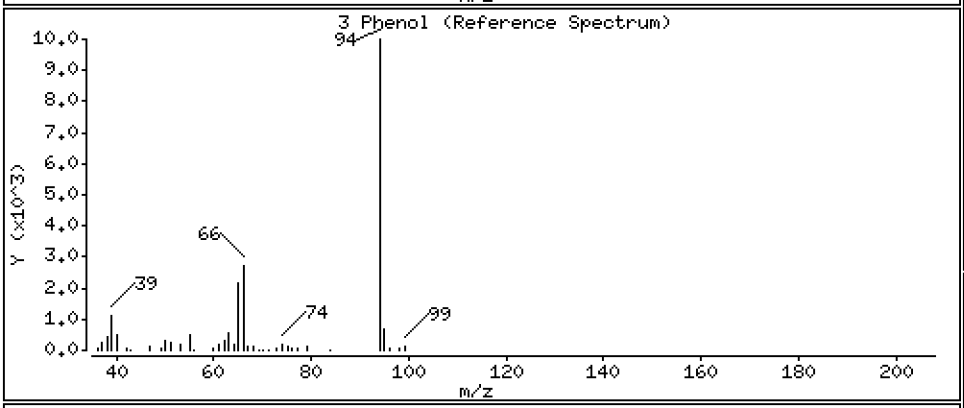
Column diameter: 0.25

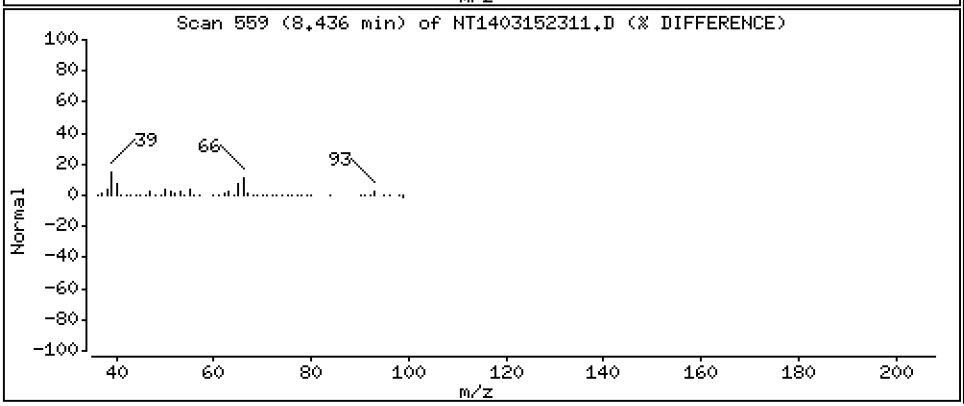
3 Phenol

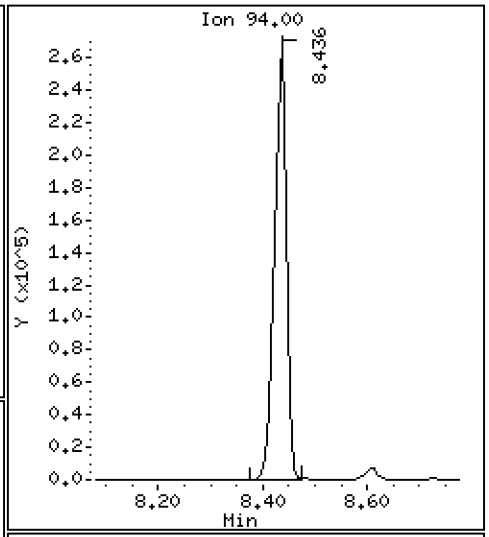
Concentration: 4.368 ug/mL

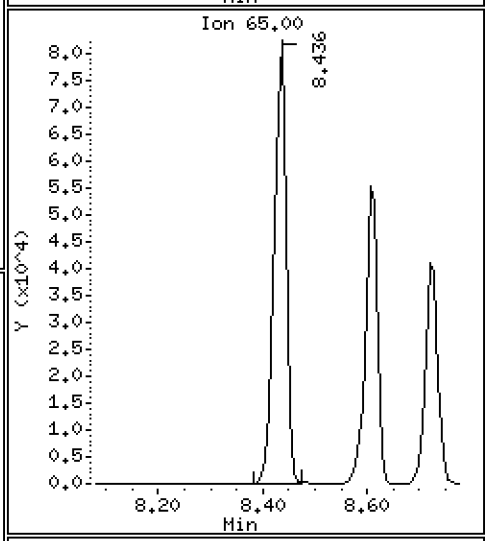


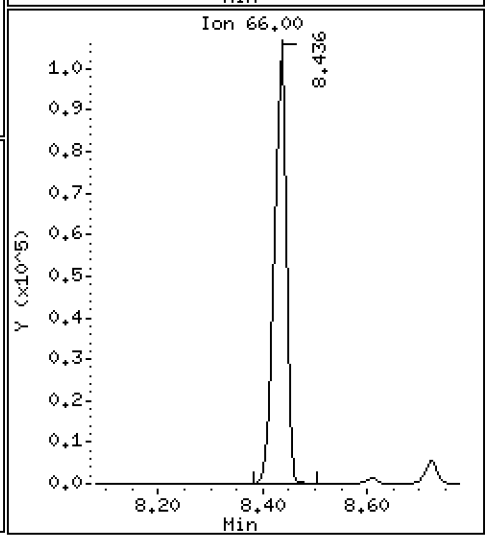












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

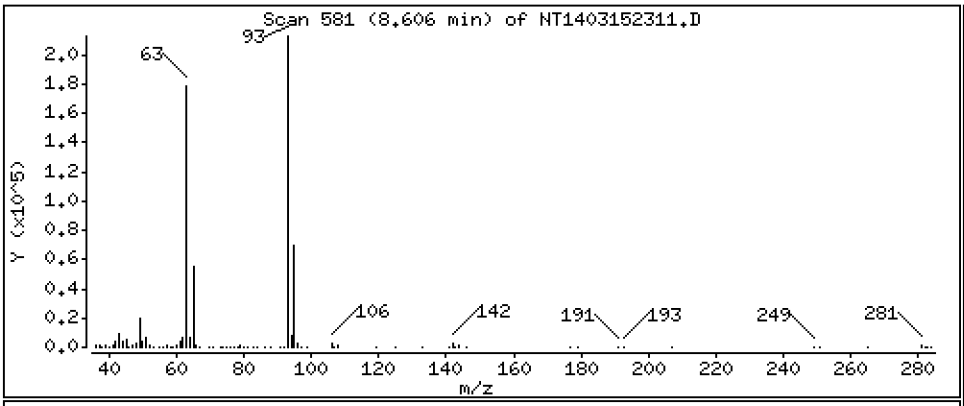
Operator: JGR

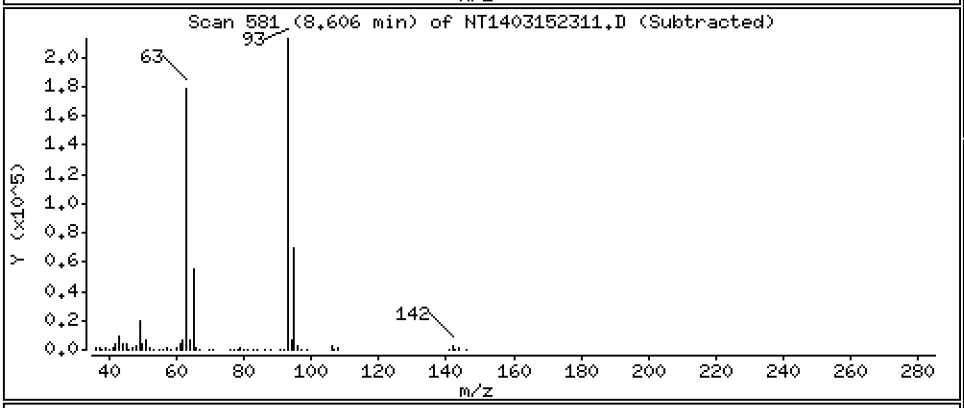
Column phase: ZB-5msi

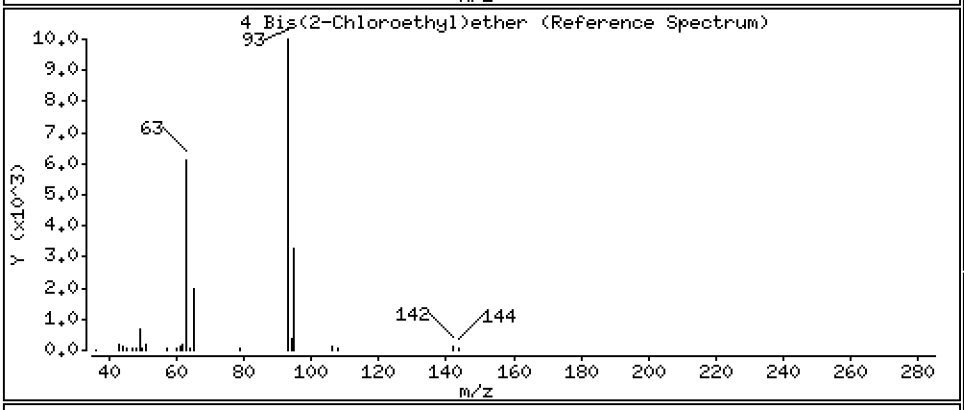
Column diameter: 0.25

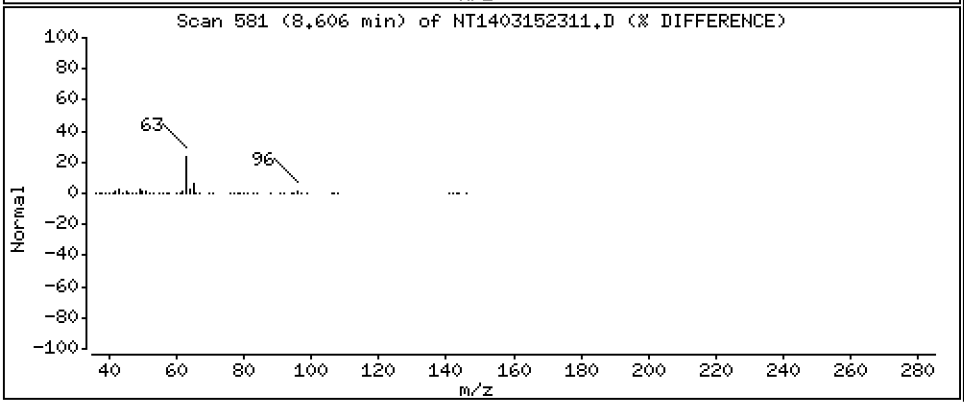
4 Bis(2-Chloroethyl)ether

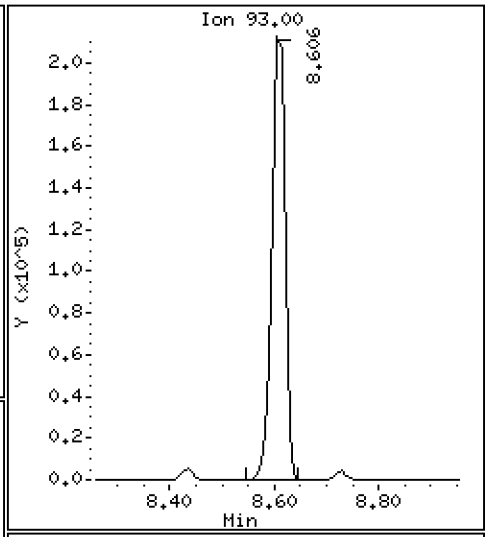
Concentration: 5.258 ug/mL

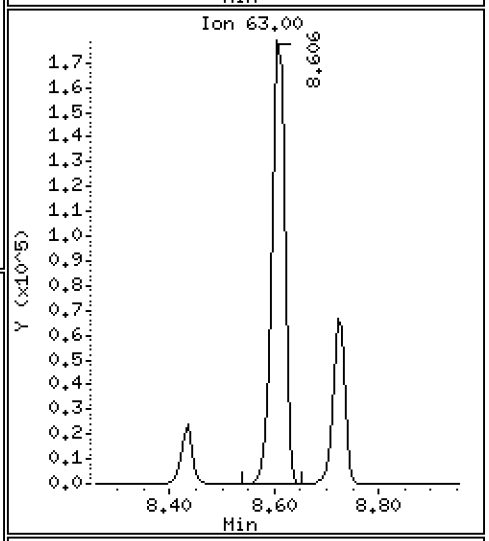


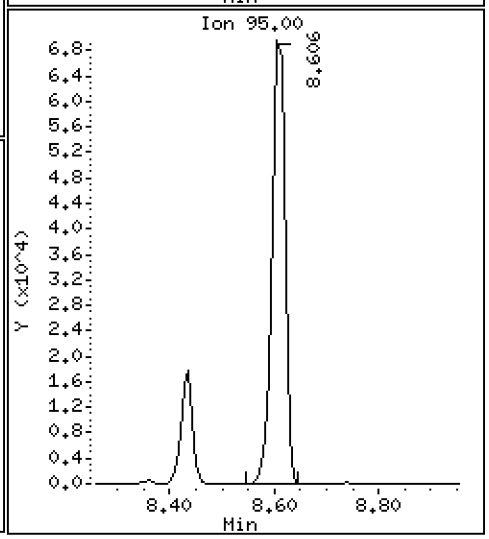












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

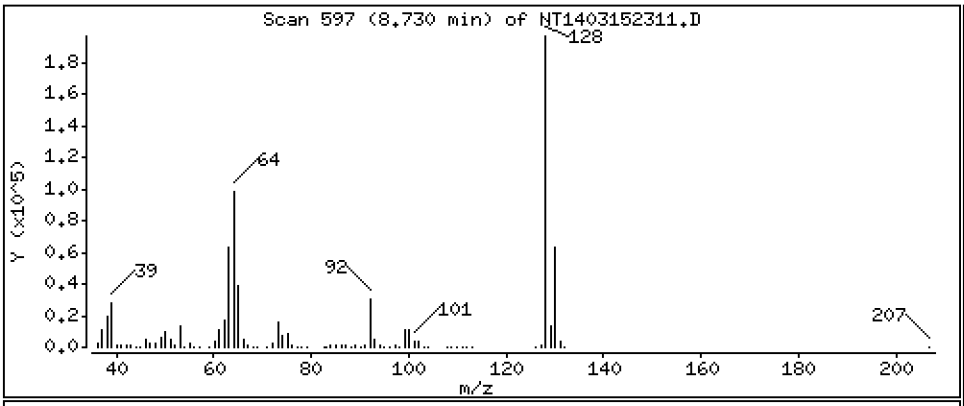
Operator: JGR

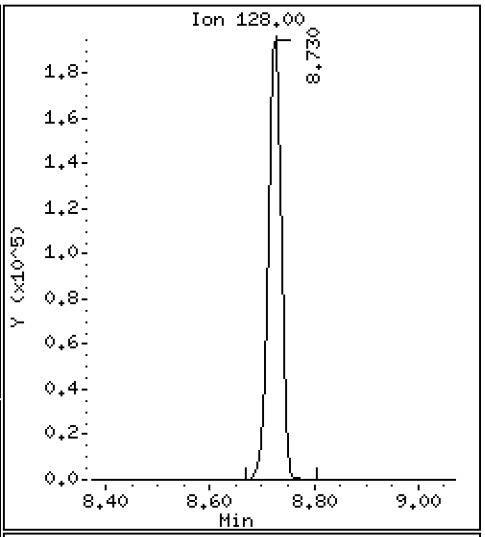
Column phase: ZB-5msi

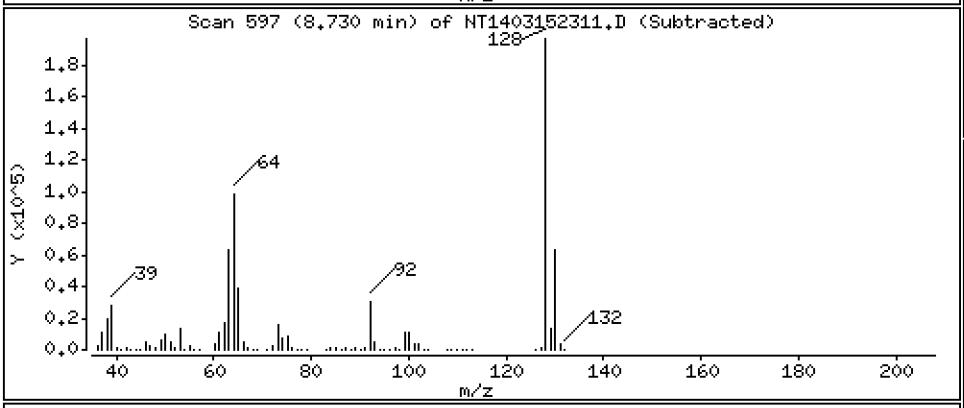
Column diameter: 0.25

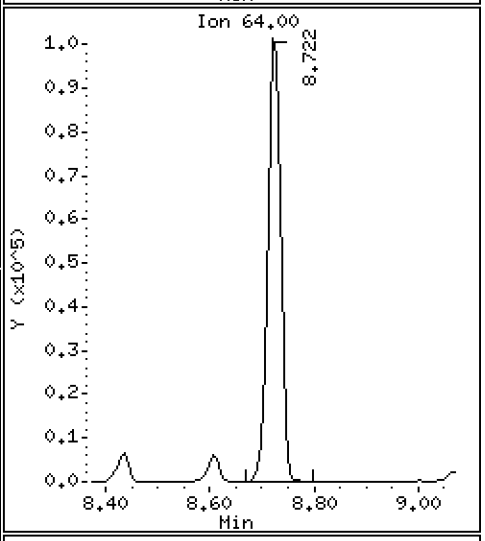
6 2-Chlorophenol

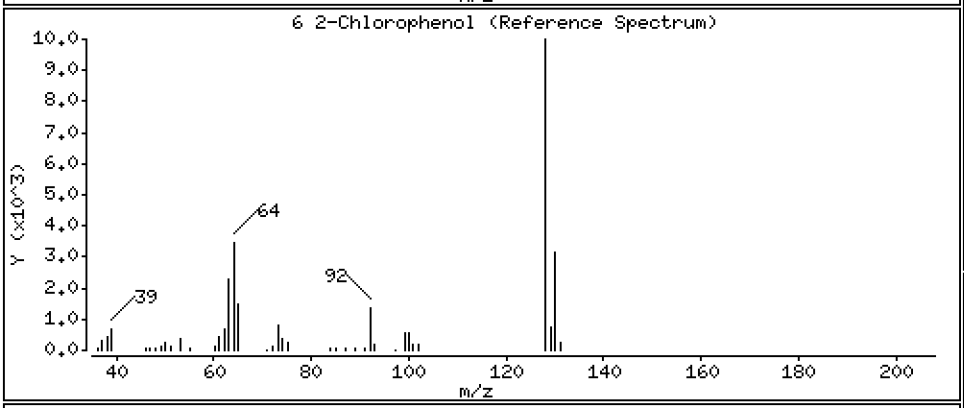
Concentration: 4.379 ug/mL

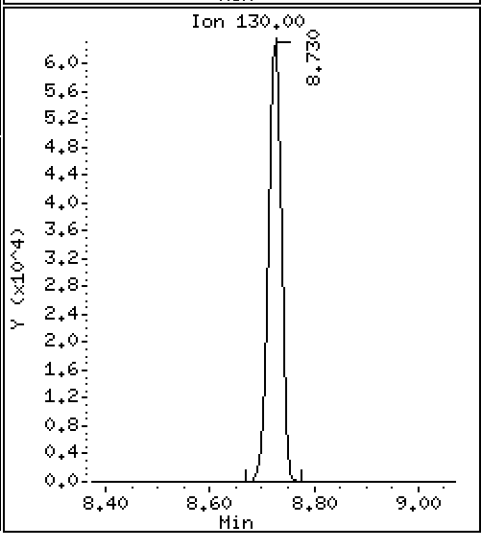


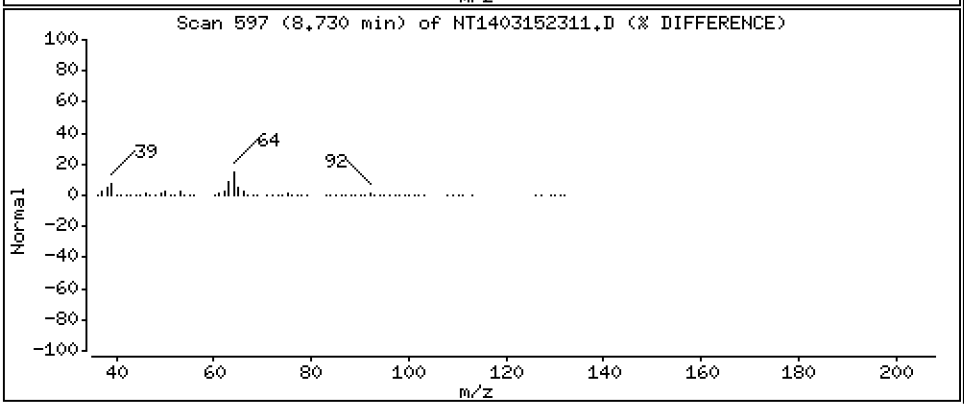












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

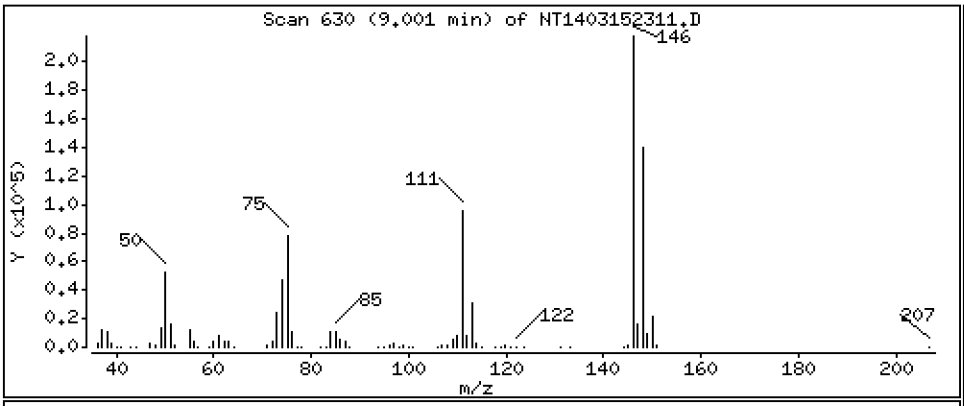
Operator: JGR

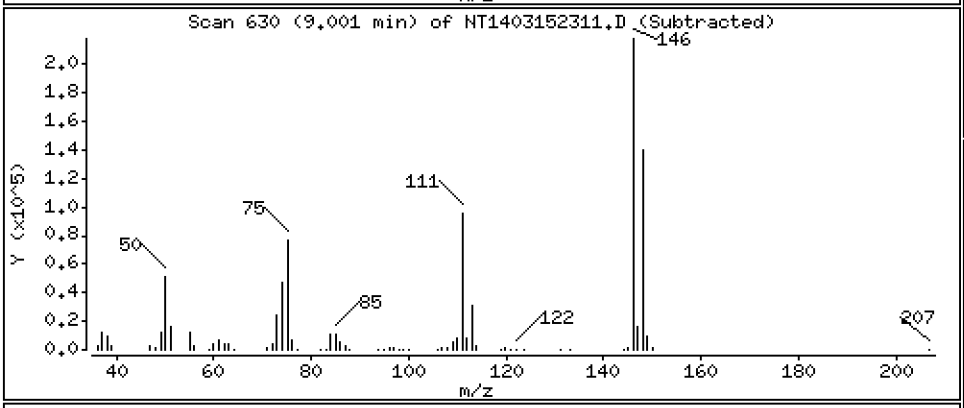
Column phase: ZB-5msi

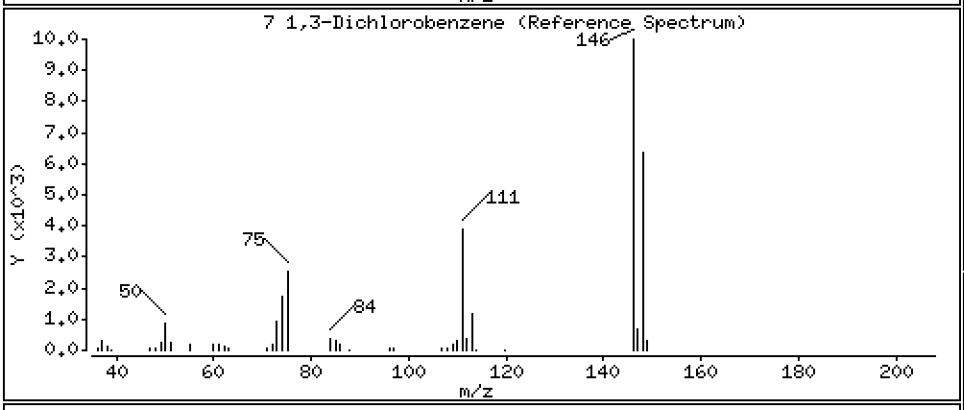
Column diameter: 0.25

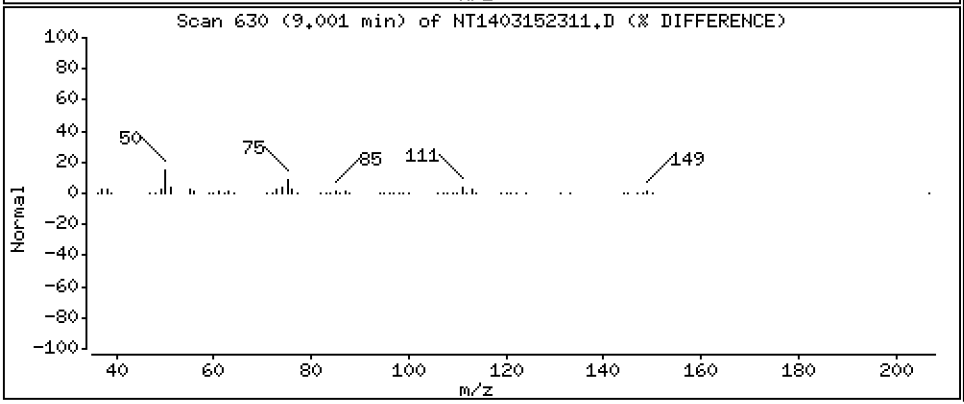
7 1,3-Dichlorobenzene

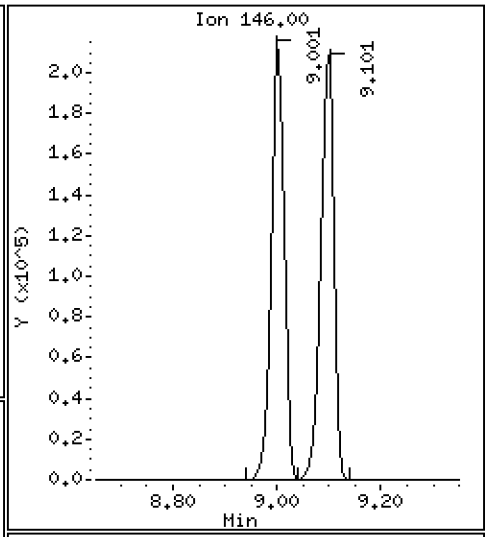
Concentration: 4.793 ug/mL

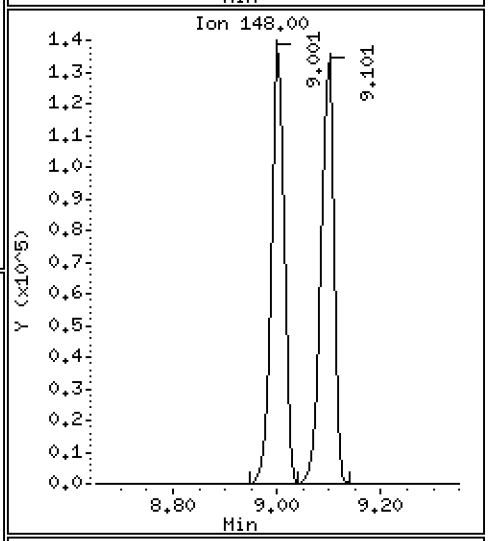


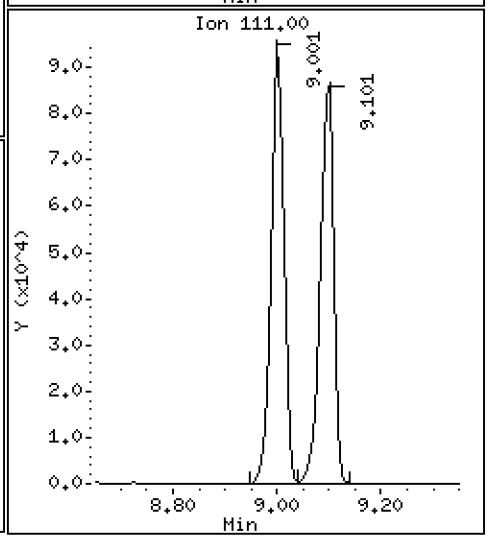












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

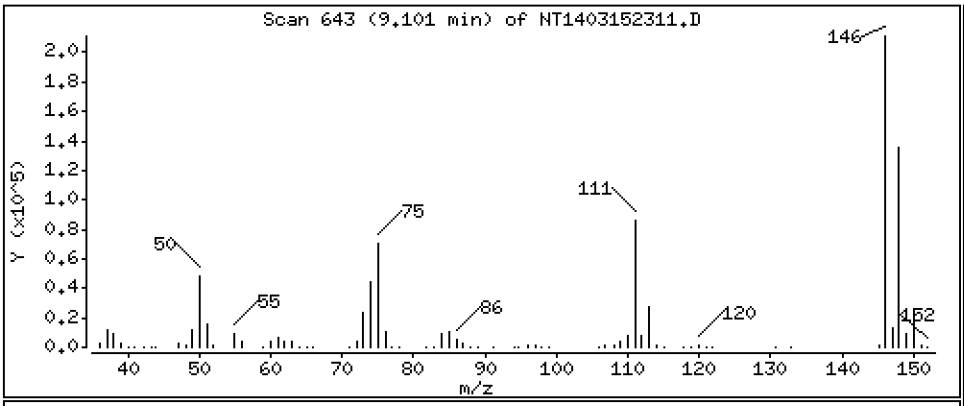
Operator: JGR

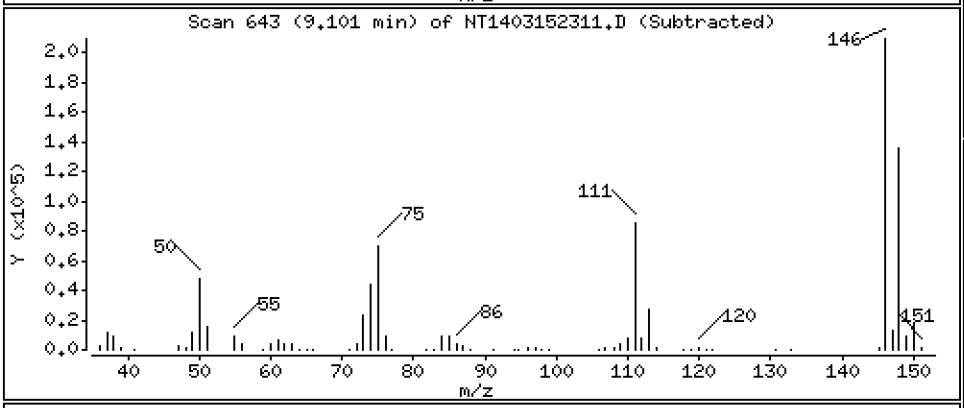
Column phase: ZB-5msi

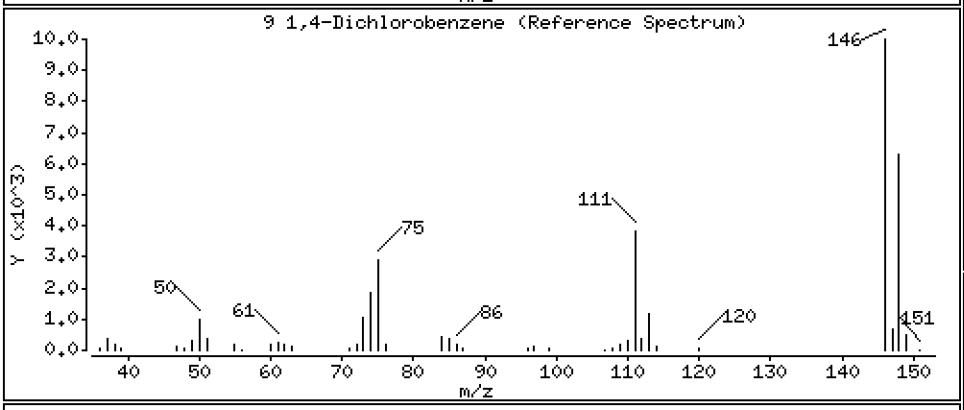
Column diameter: 0.25

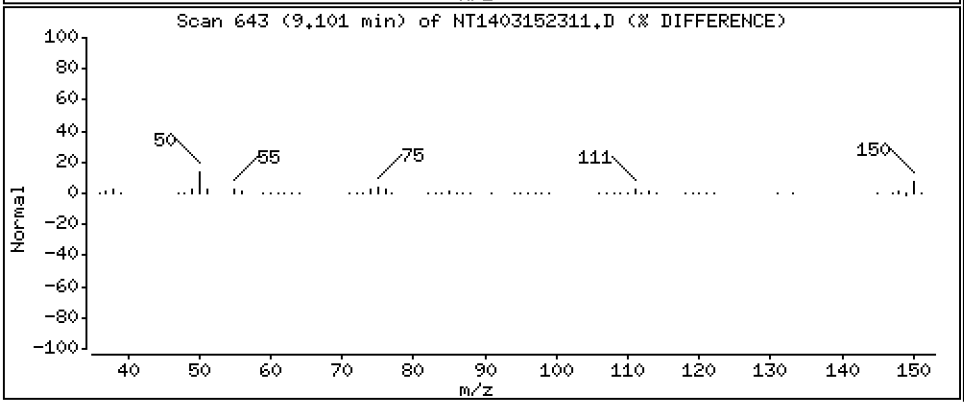
9 1,4-Dichlorobenzene

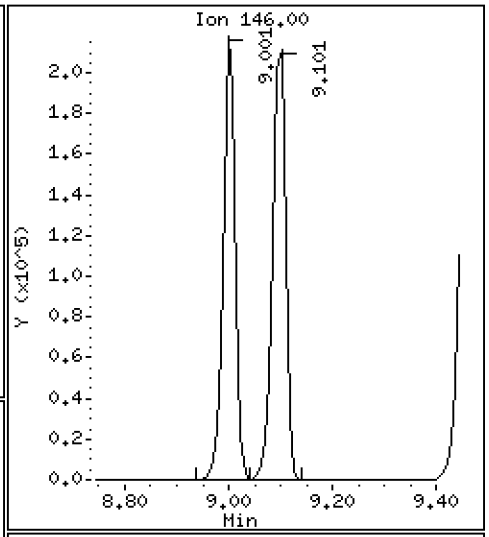
Concentration: 4.889 ug/mL

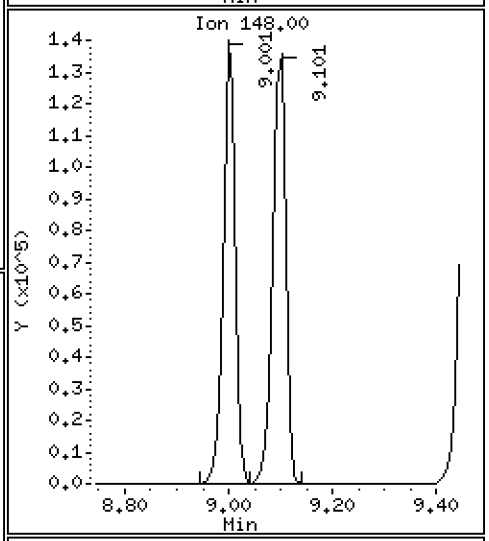


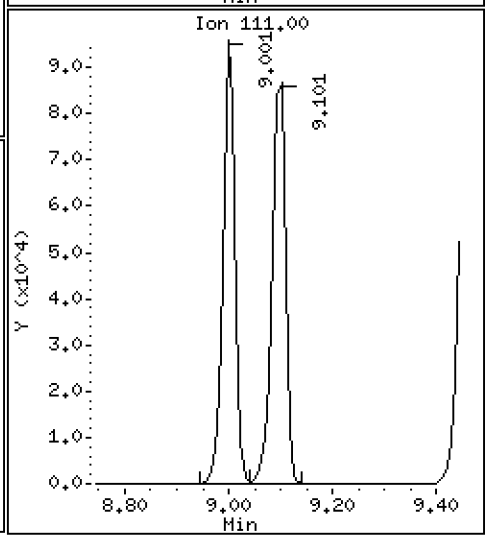












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

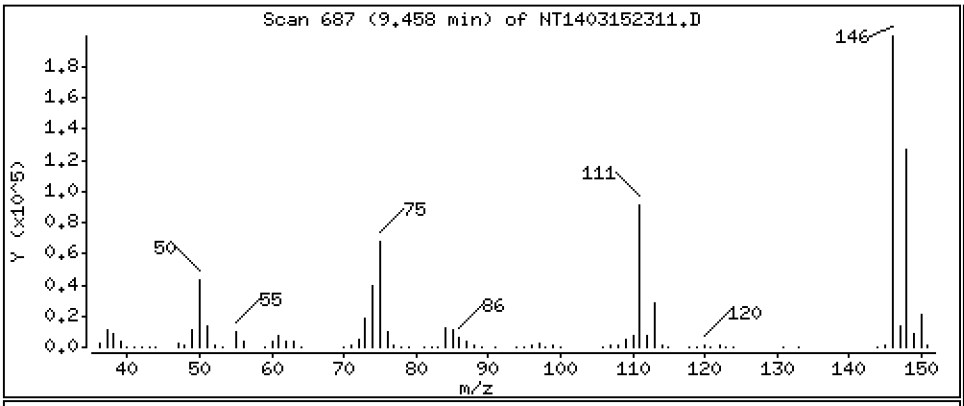
Operator: JGR

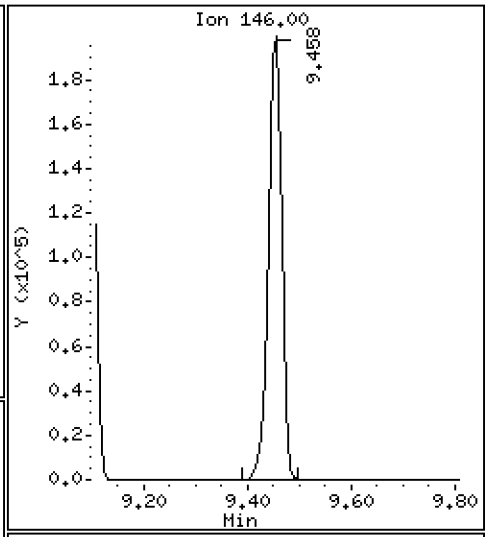
Column phase: ZB-5msi

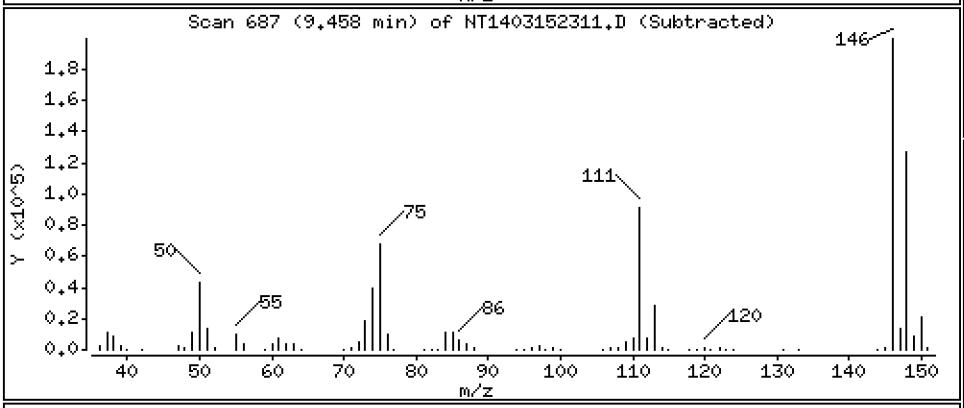
Column diameter: 0.25

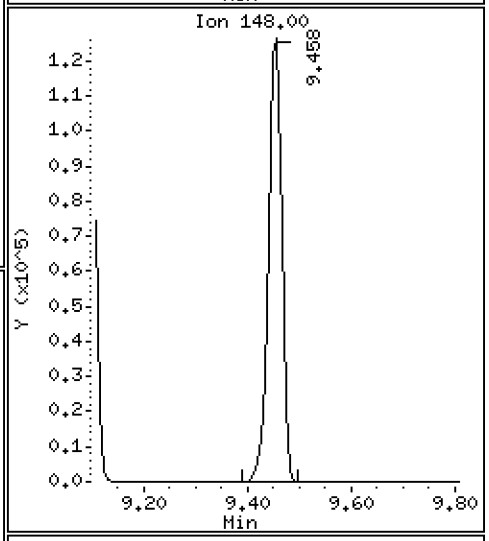
12 1,2-Dichlorobenzene

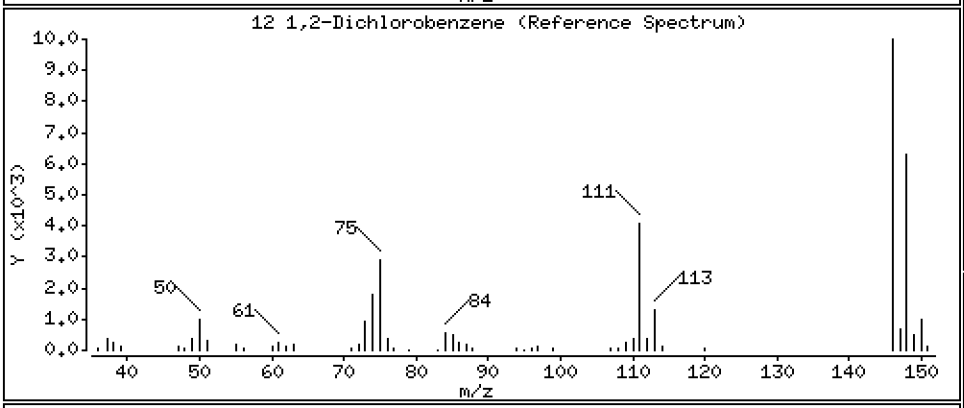
Concentration: 4.786 ug/mL

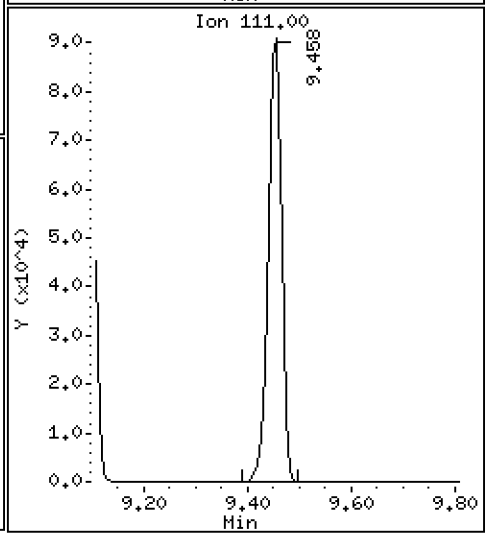


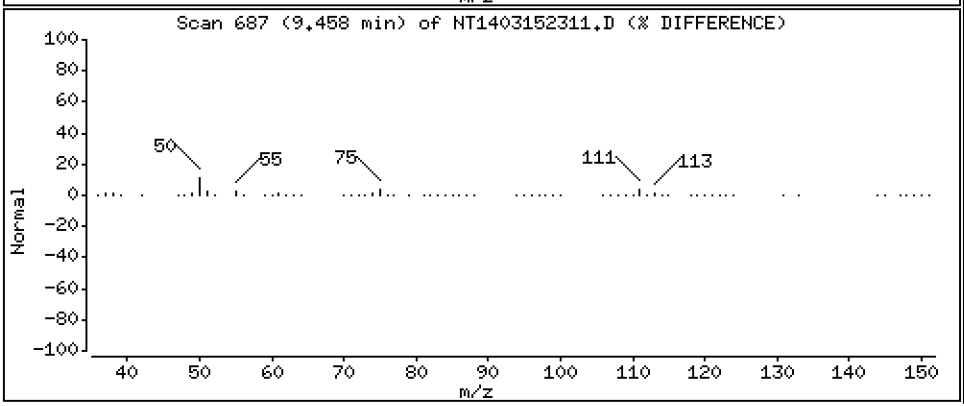












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

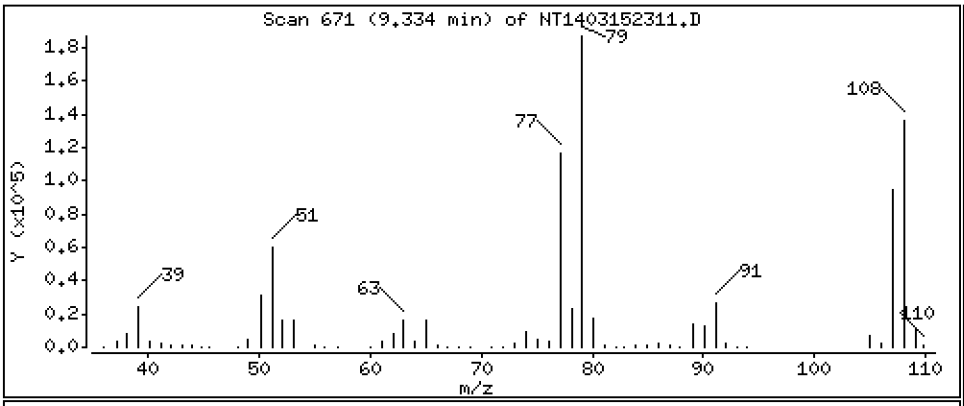
Operator: JGR

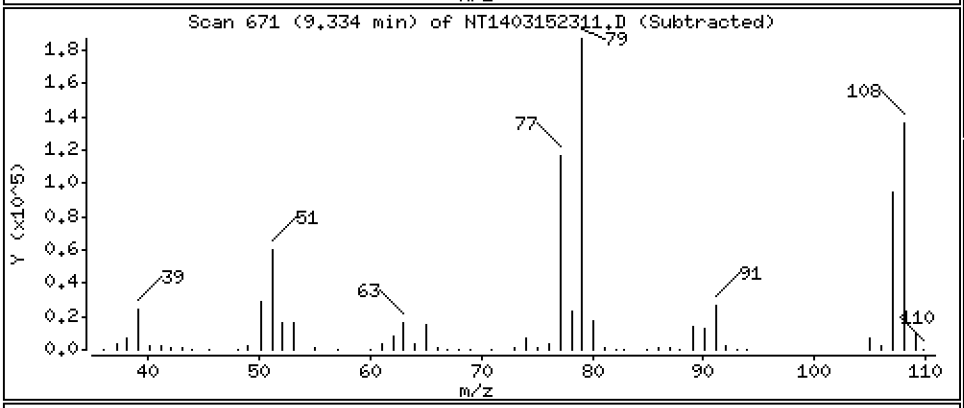
Column phase: ZB-5msi

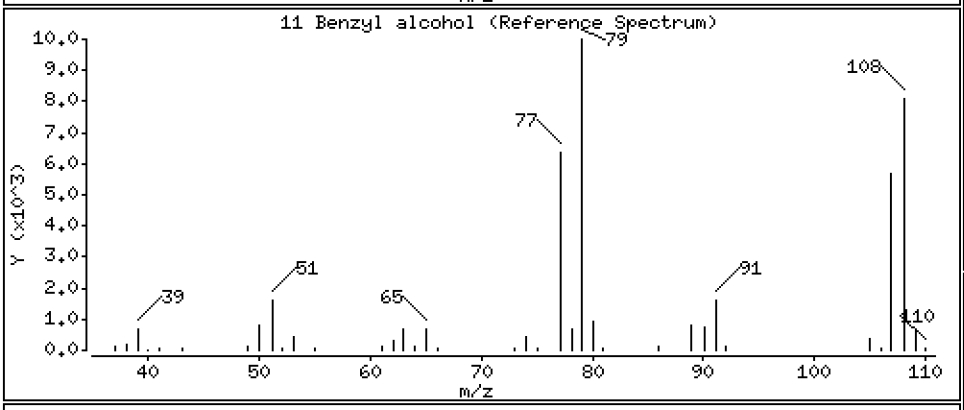
Column diameter: 0.25

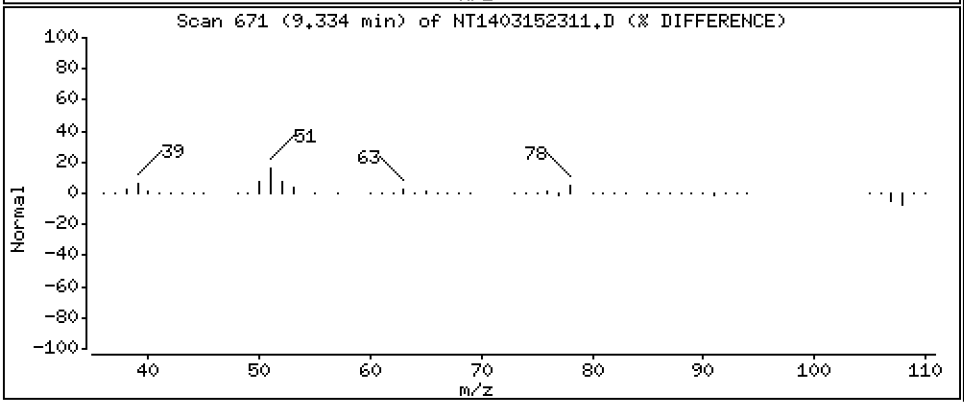
11 Benzyl alcohol

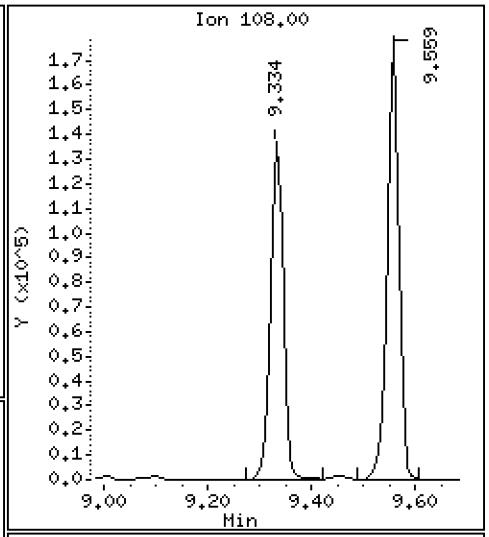
Concentration: 5.051 ug/mL

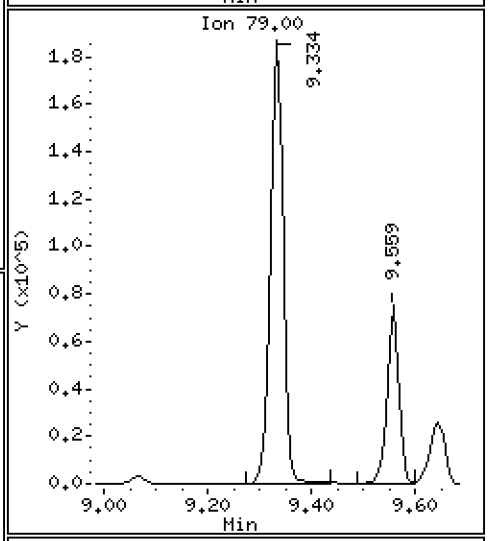


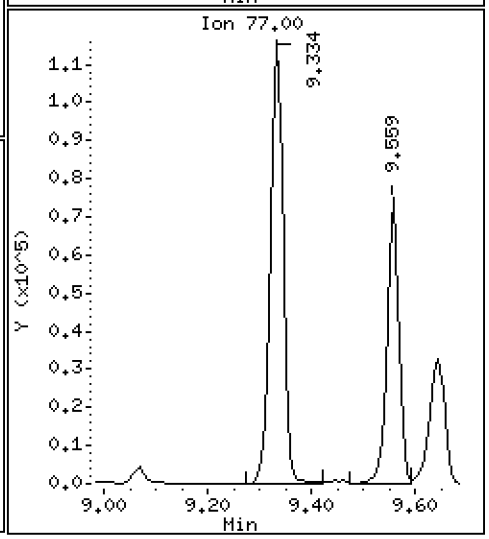












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

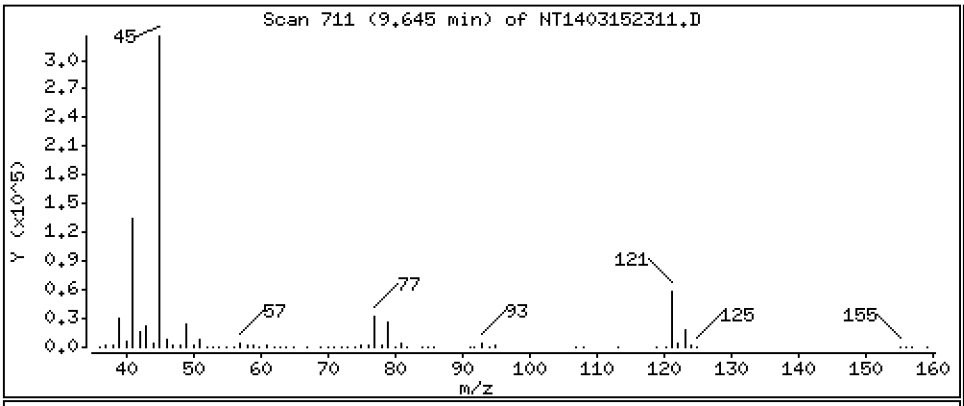
Operator: JGR

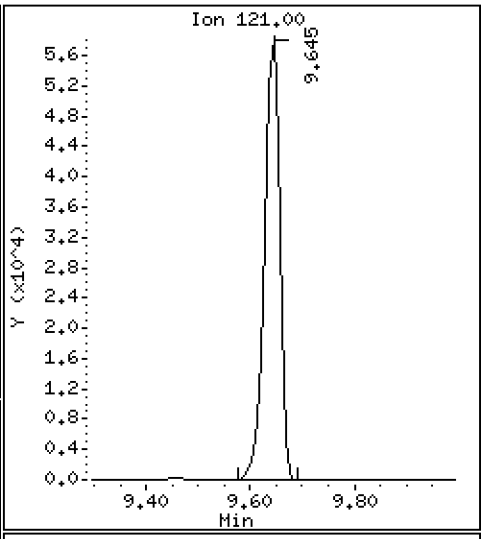
Column phase: ZB-5msi

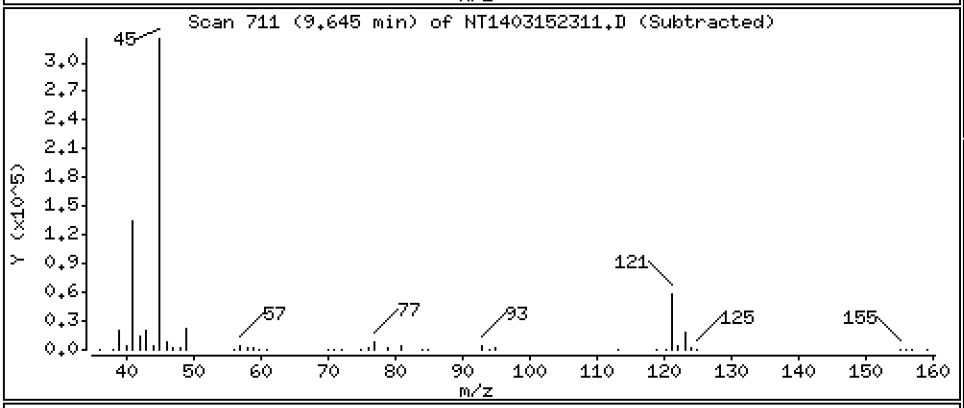
Column diameter: 0.25

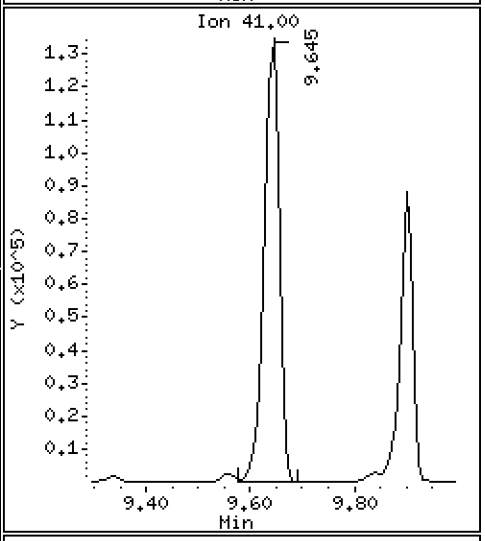
14 2,2'-oxybis(1-Chloropropane)

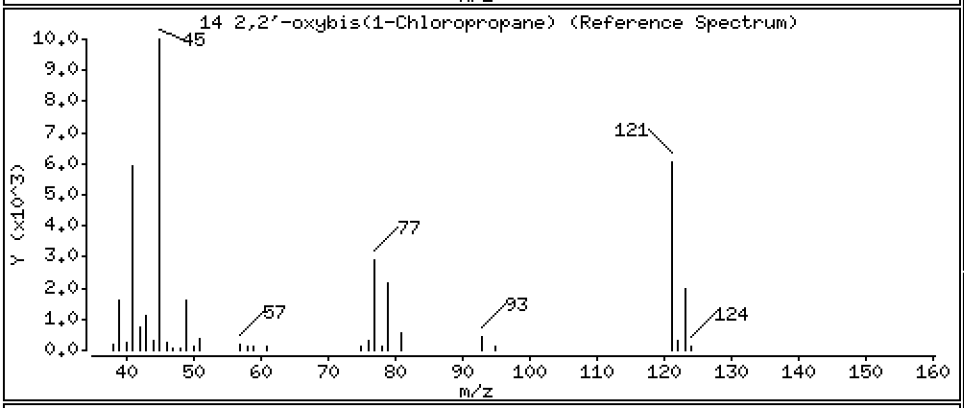
Concentration: 5.319 ug/mL

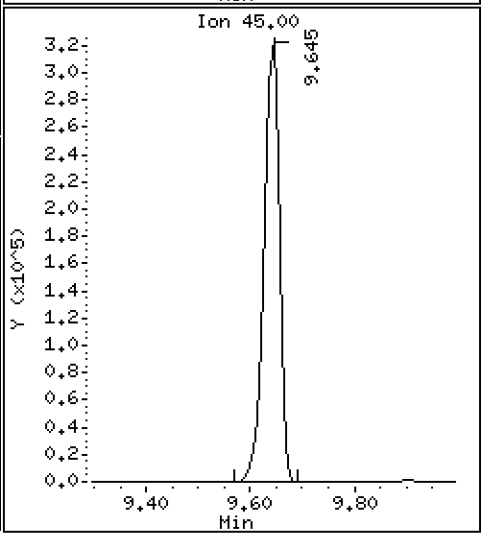


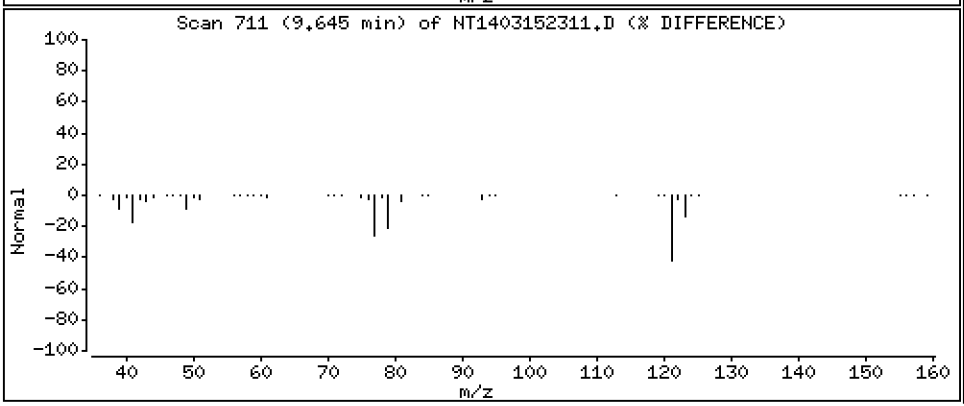












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

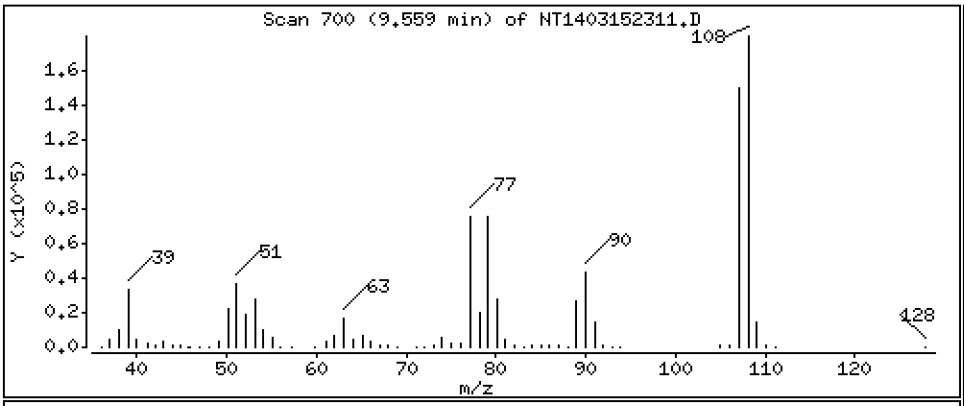
Operator: JGR

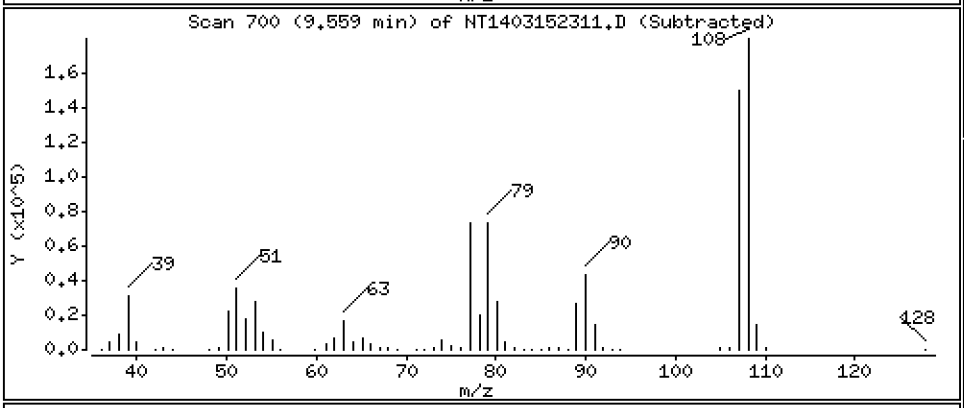
Column phase: ZB-5msi

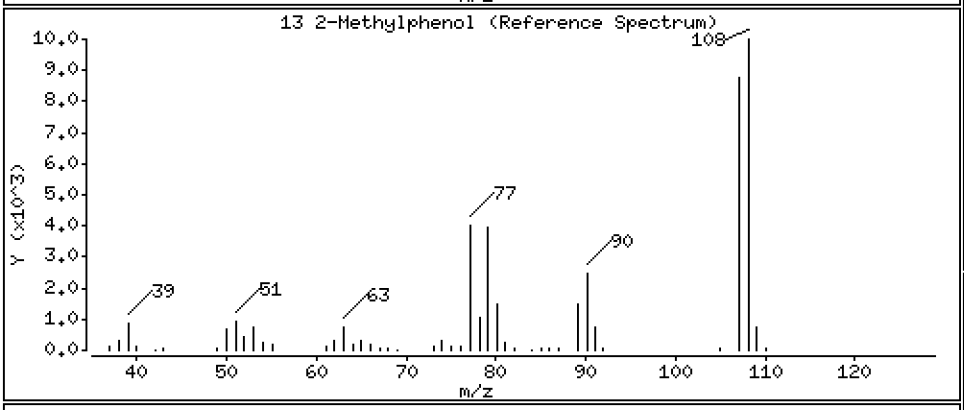
Column diameter: 0.25

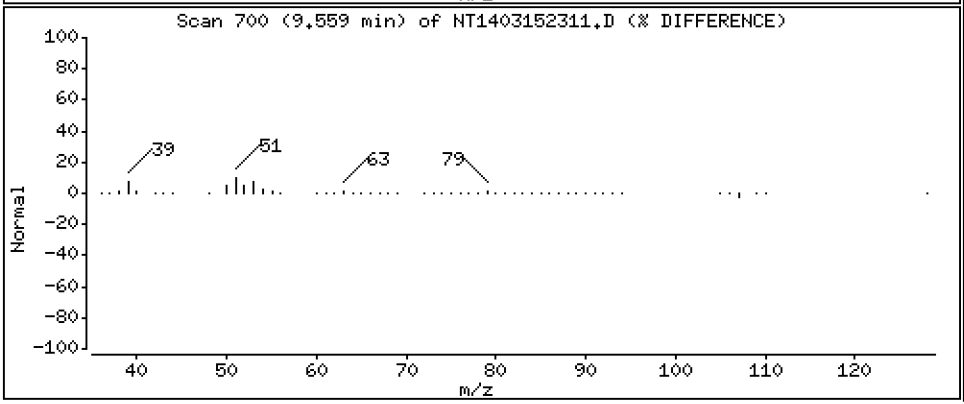
13 2-Methylphenol

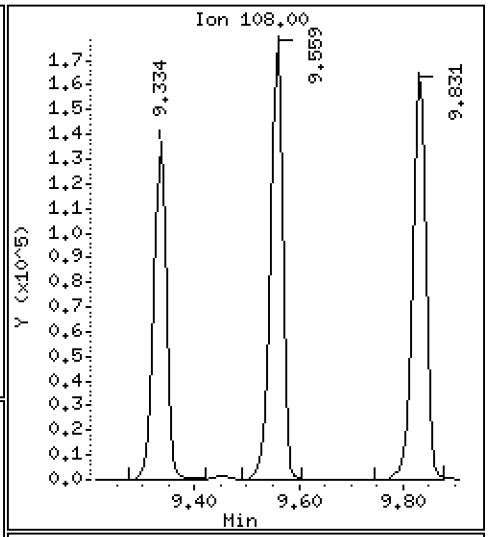
Concentration: 4.117 ug/mL

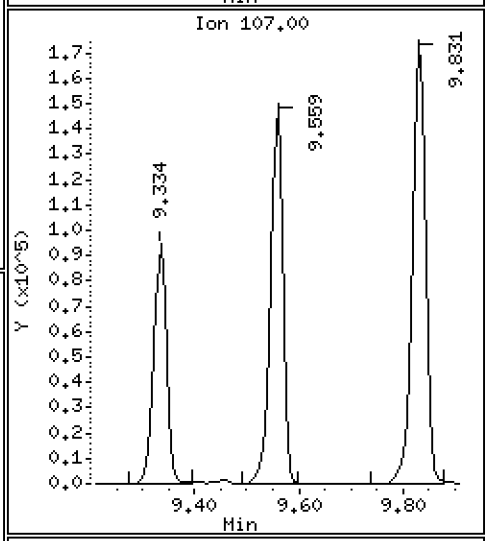


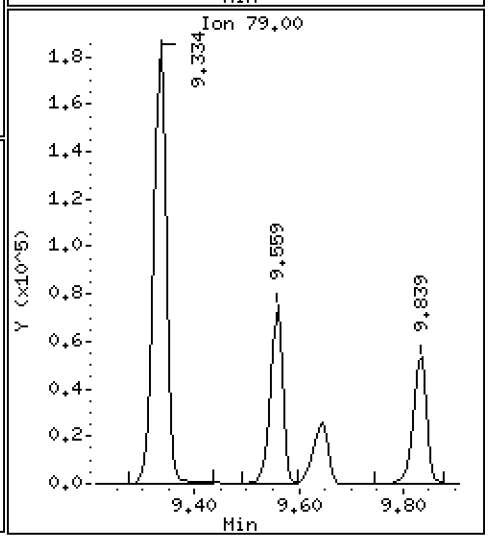












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

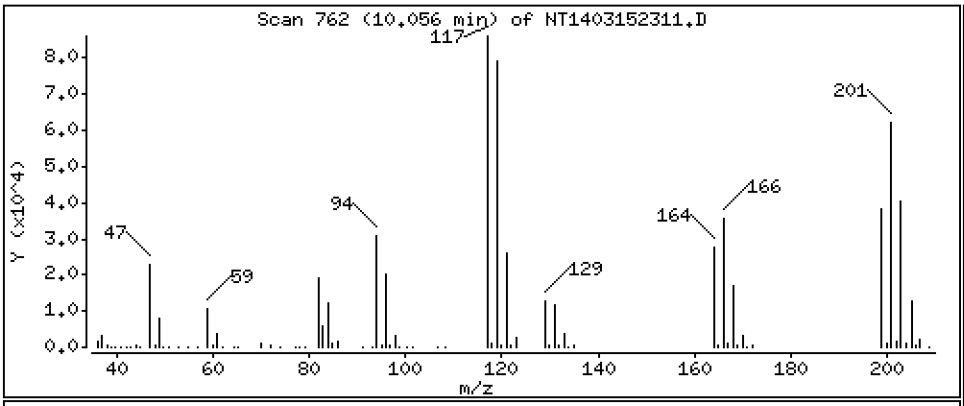
Operator: JGR

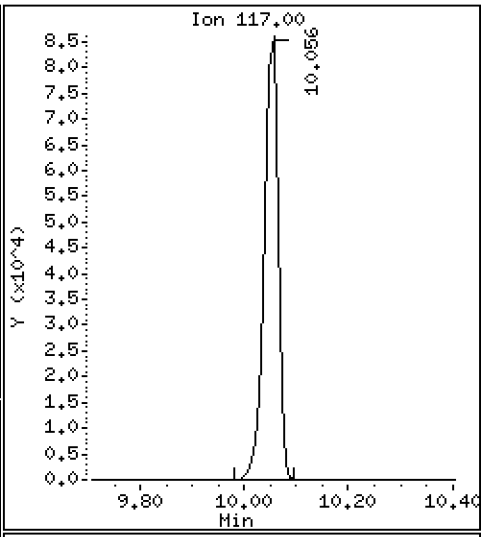
Column phase: ZB-5msi

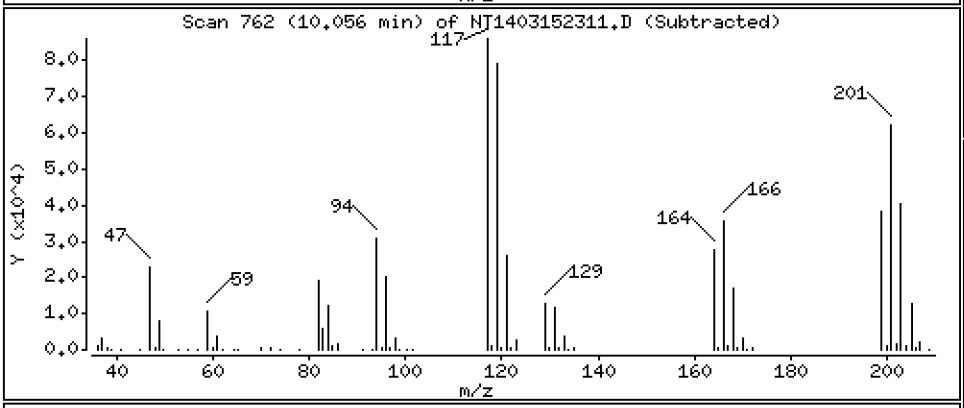
Column diameter: 0.25

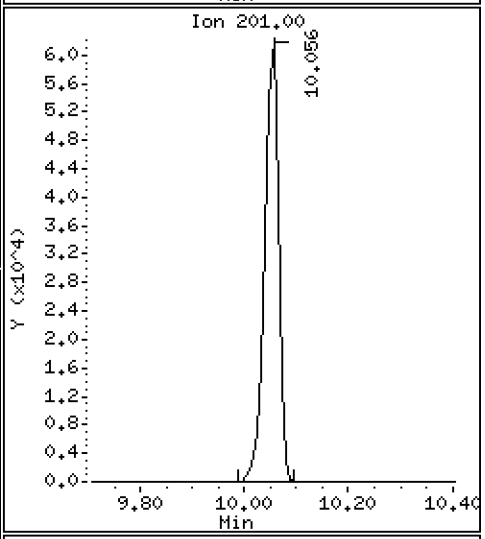
17 Hexachloroethane

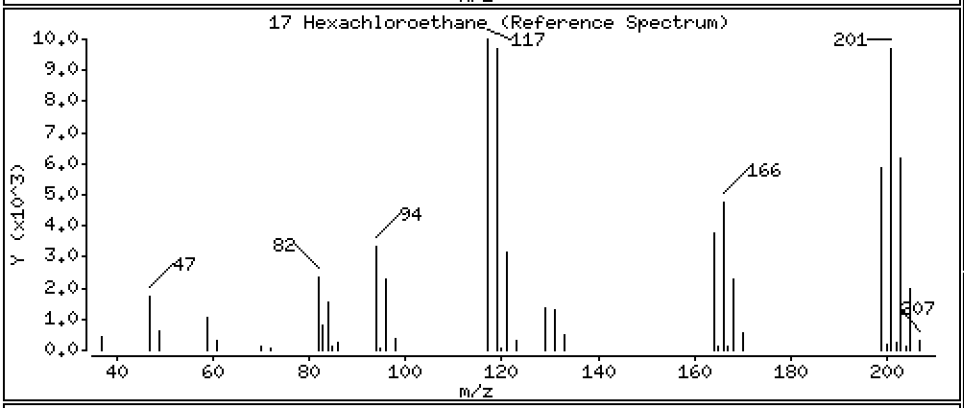
Concentration: 4.955 ug/mL

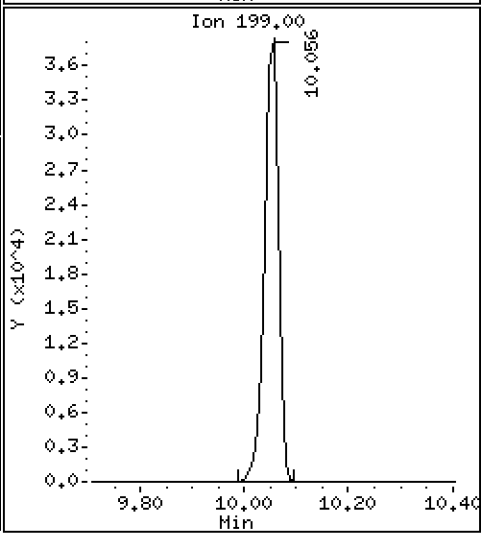


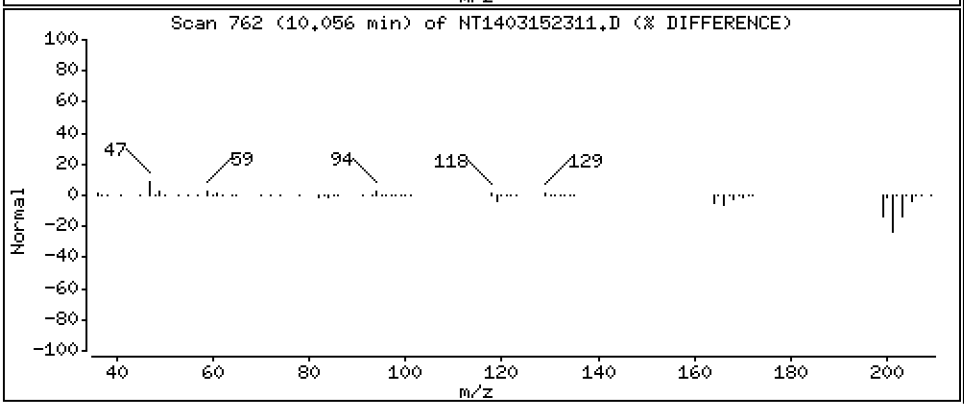












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

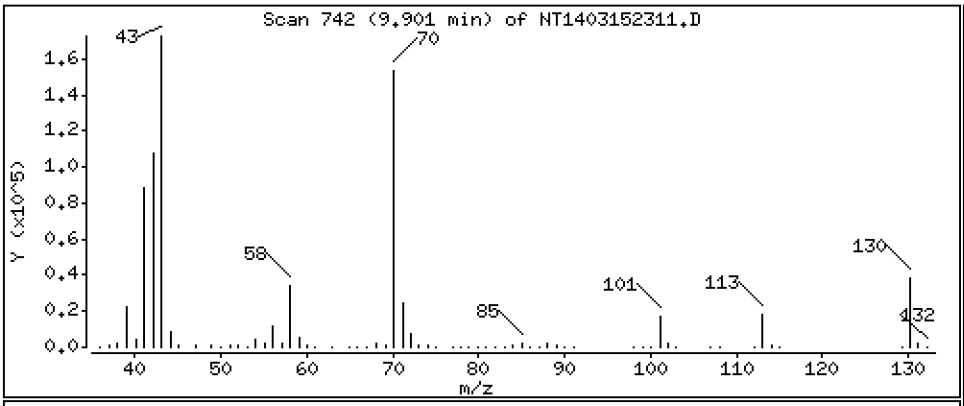
Operator: JGR

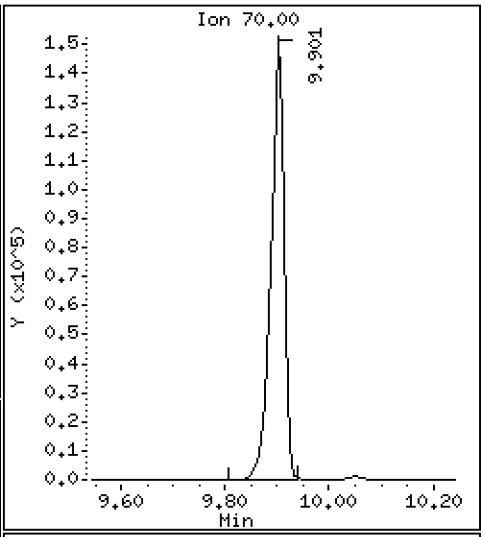
Column phase: ZB-5msi

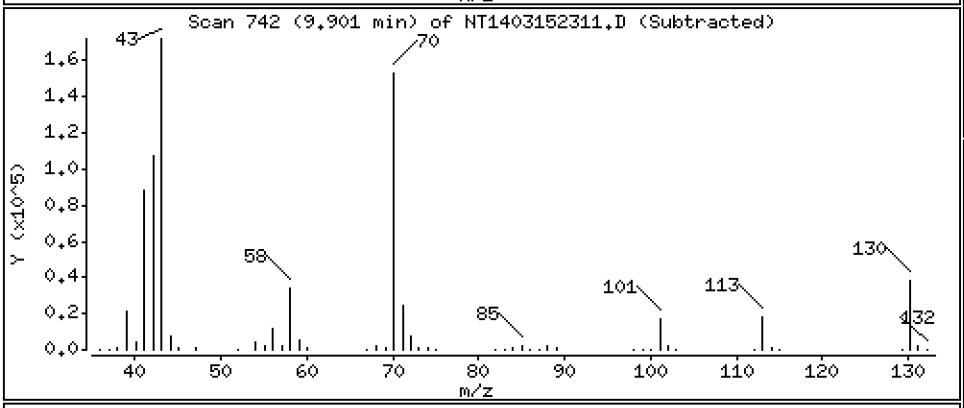
Column diameter: 0.25

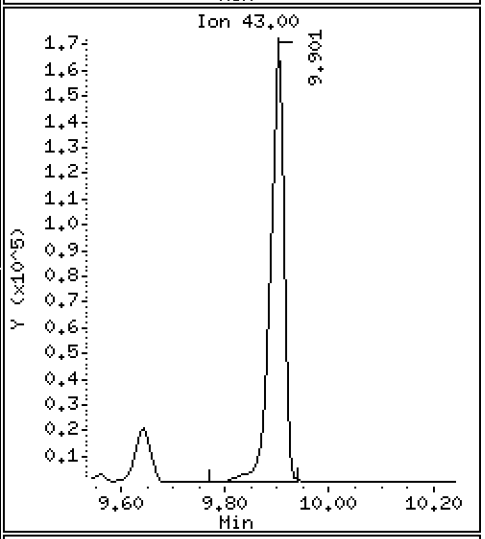
16 N-Nitroso-di-n-propylamine

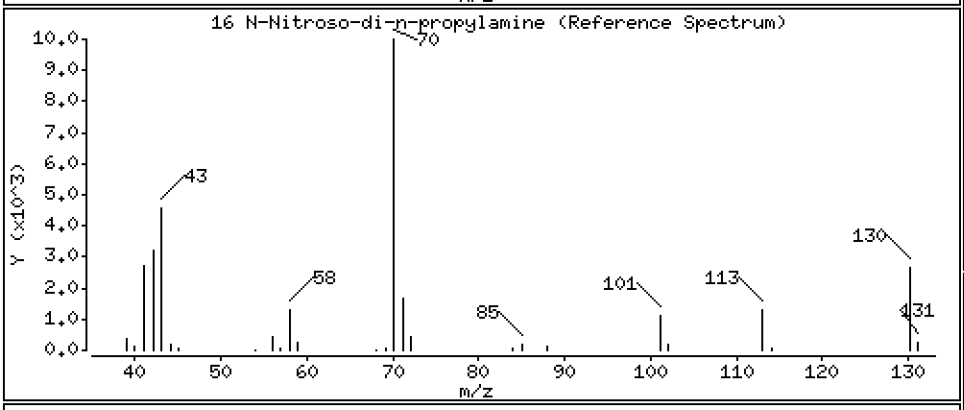
Concentration: 4.983 ug/mL

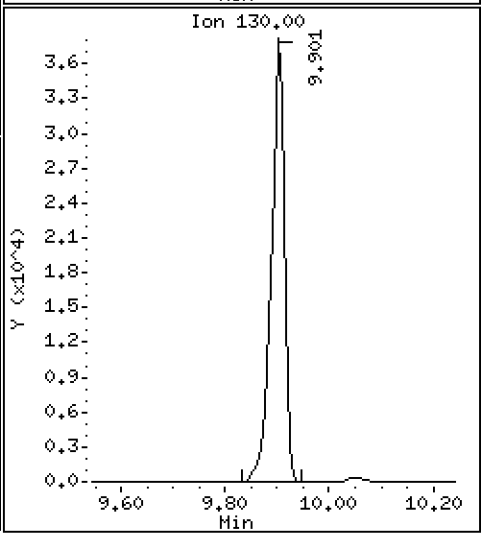


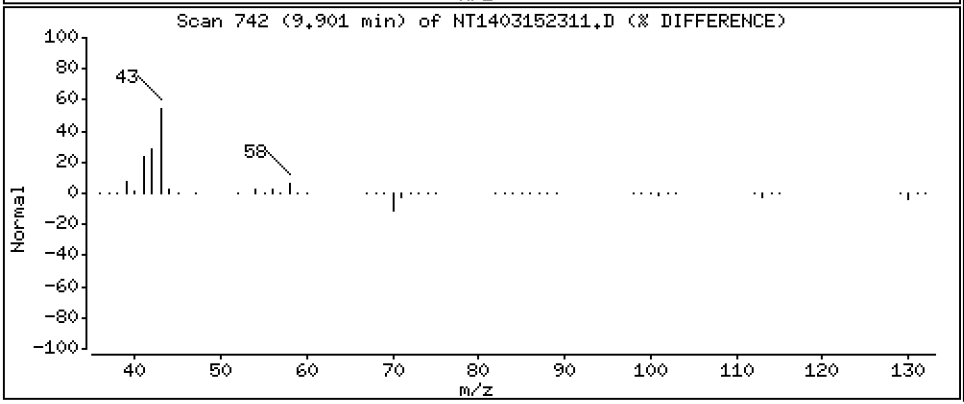












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

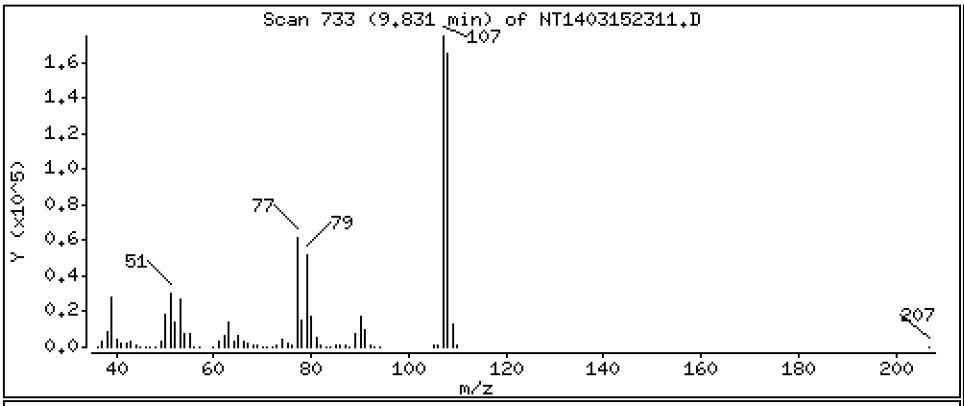
Operator: JGR

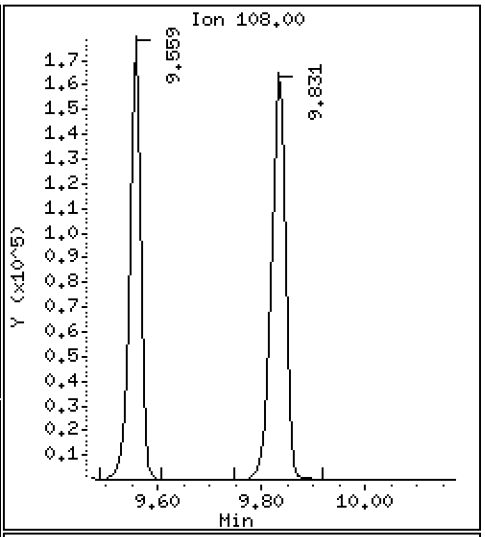
Column phase: ZB-5msi

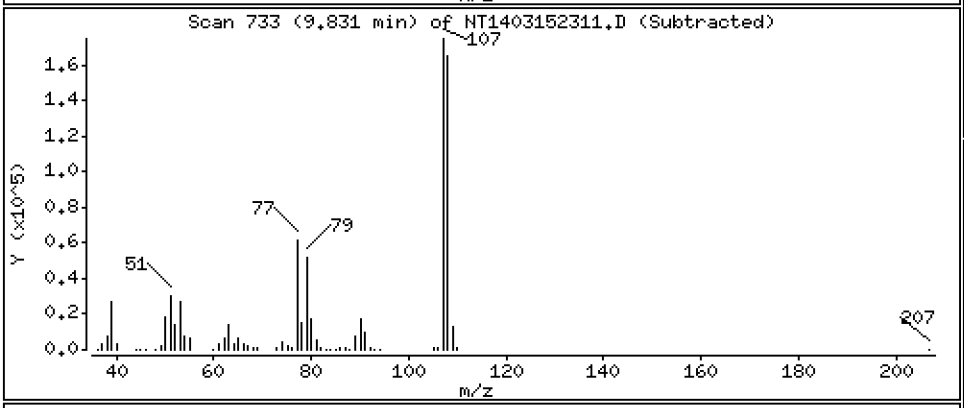
Column diameter: 0.25

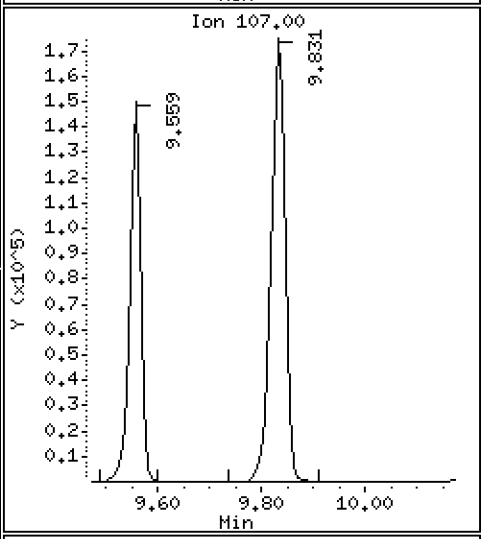
15 4-Methylphenol

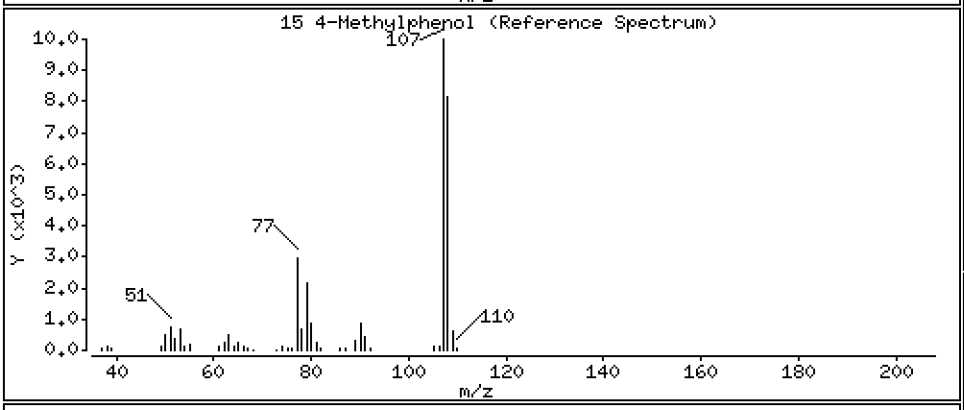
Concentration: 4.302 ug/mL

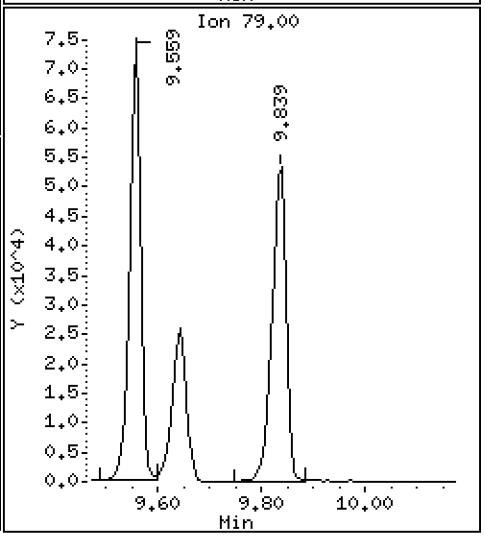


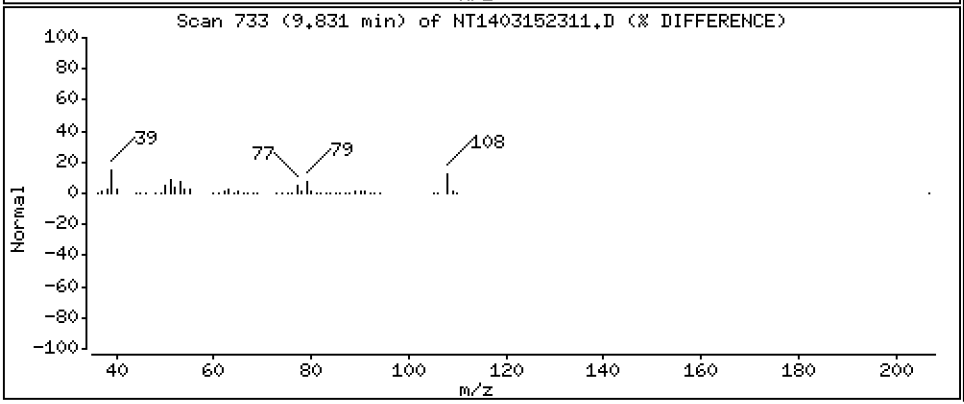












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

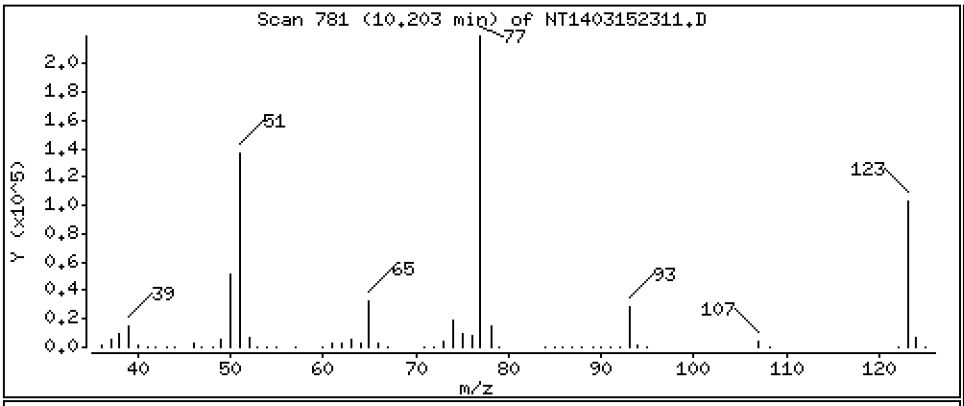
Operator: JGR

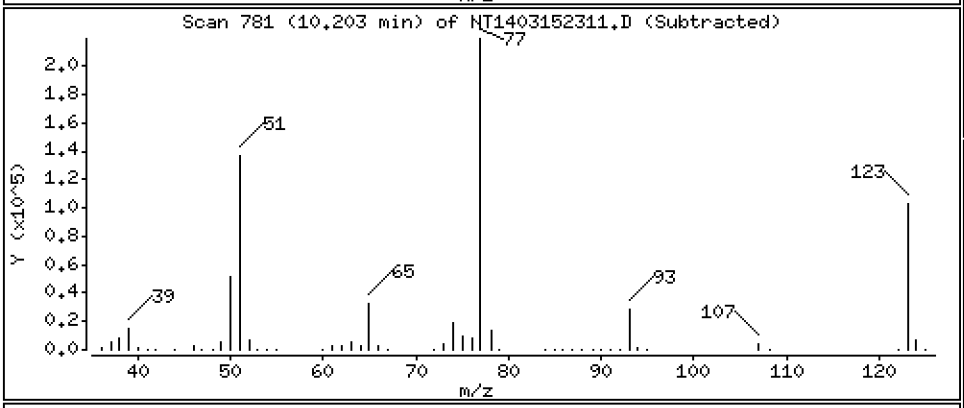
Column phase: ZB-5msi

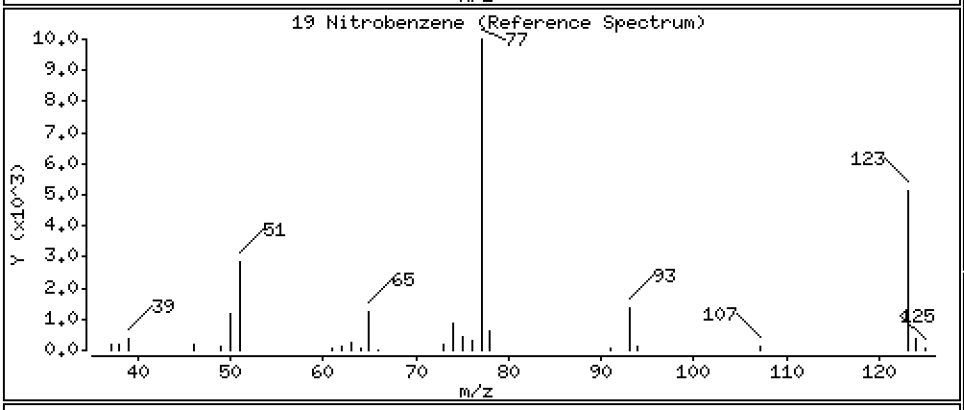
Column diameter: 0.25

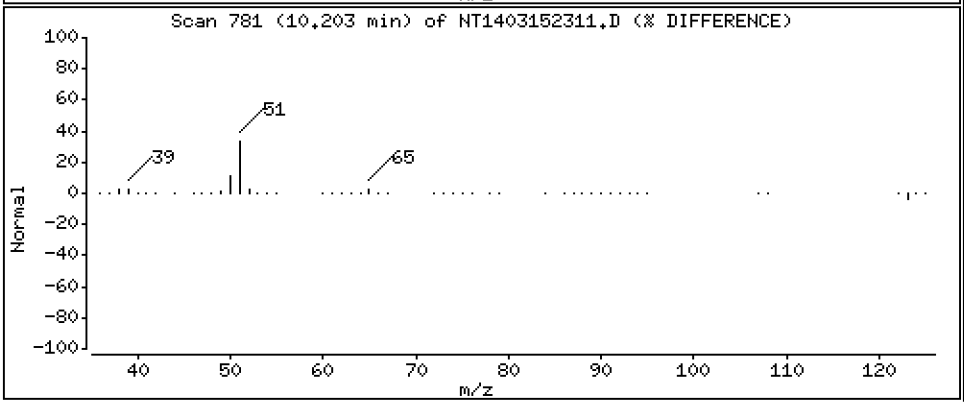
19 Nitrobenzene

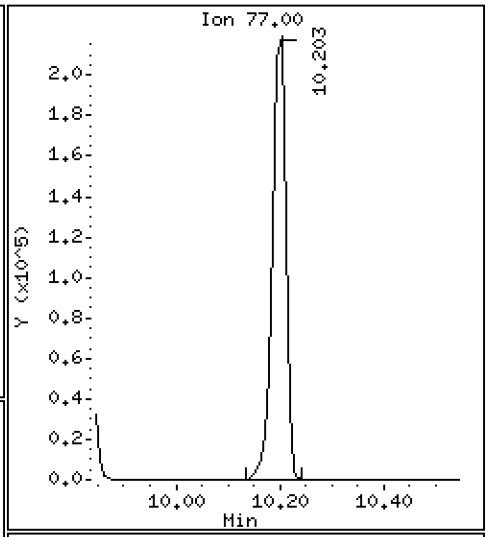
Concentration: 5.023 ug/mL

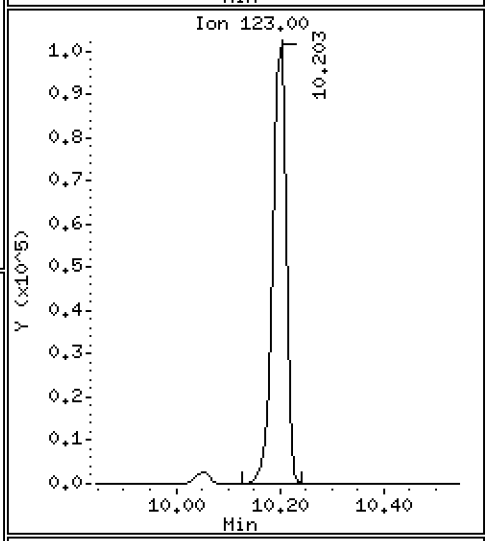


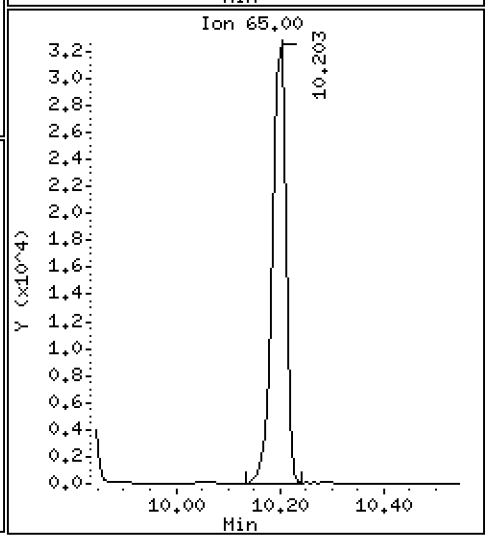












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

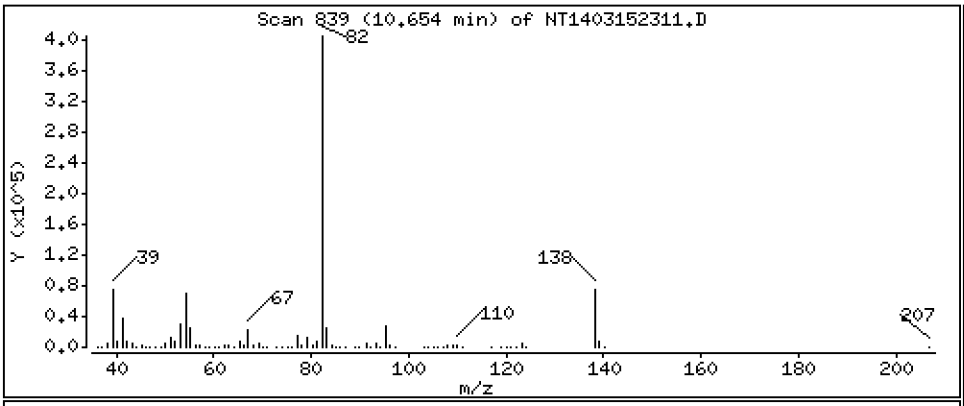
Operator: JGR

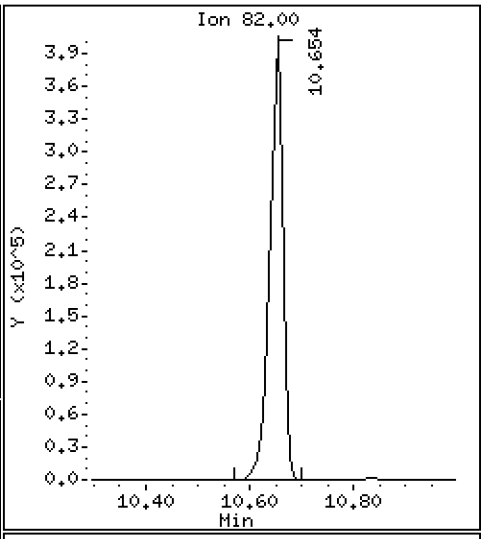
Column phase: ZB-5msi

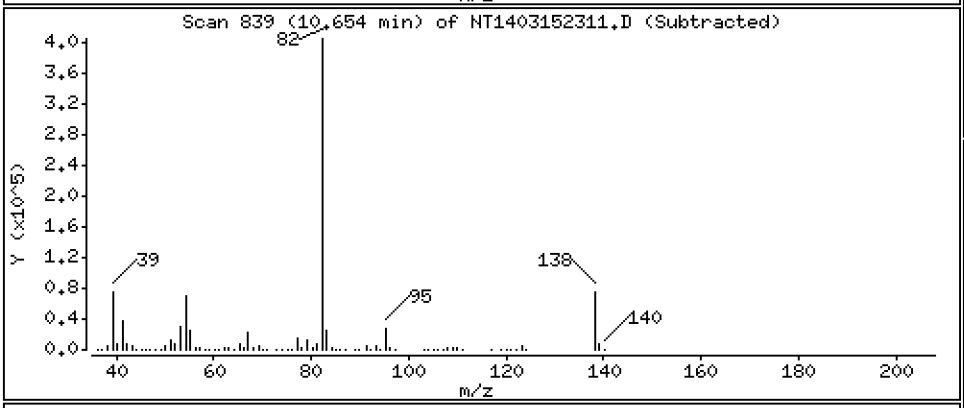
Column diameter: 0.25

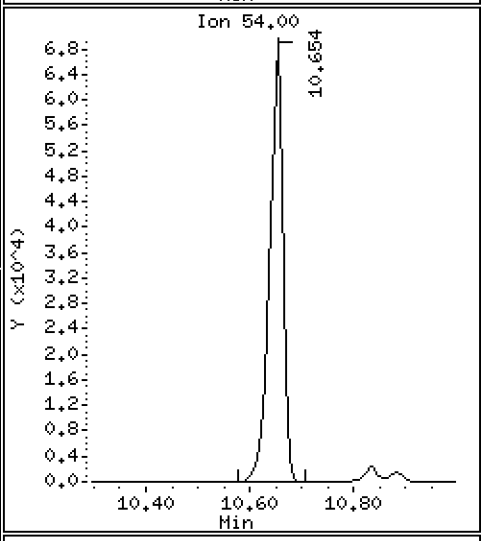
20 Isophorone

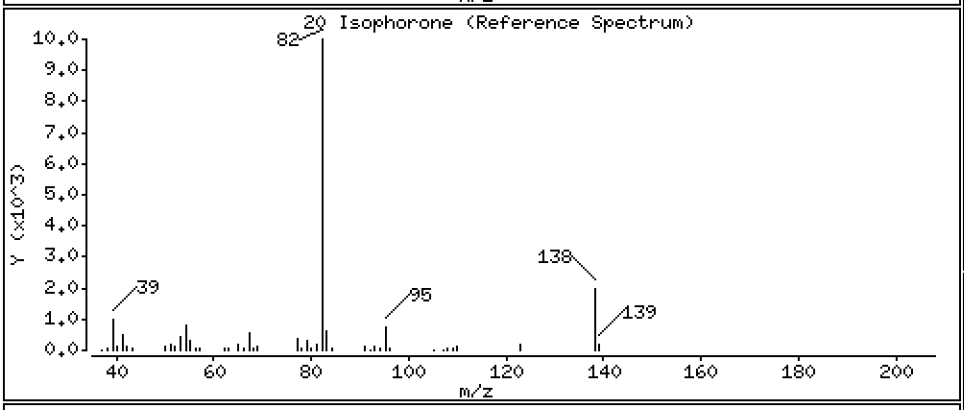
Concentration: 6.771 ug/mL

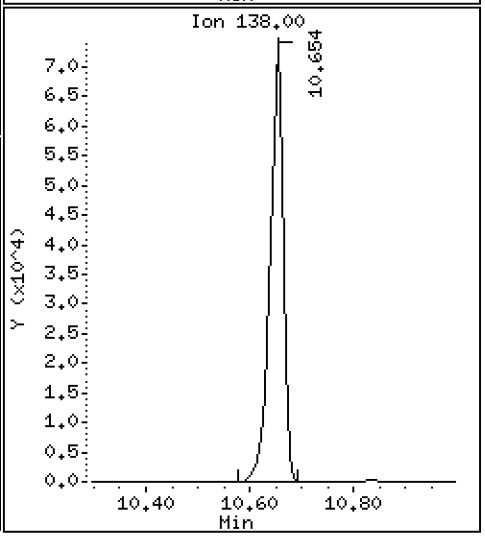


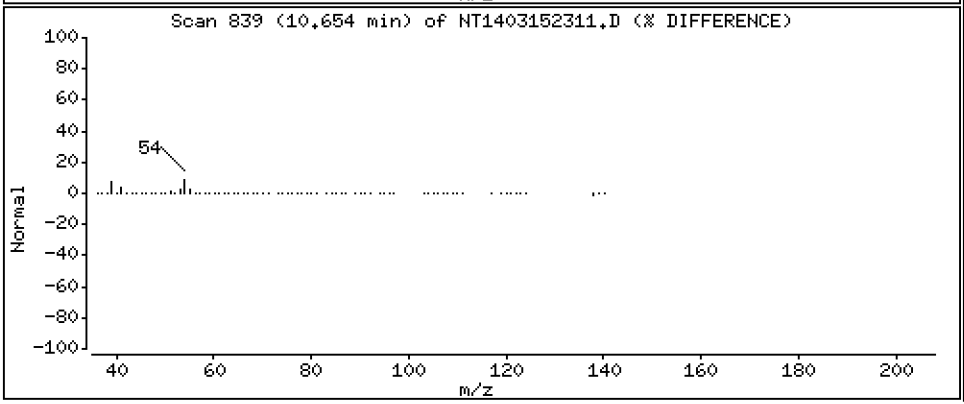












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

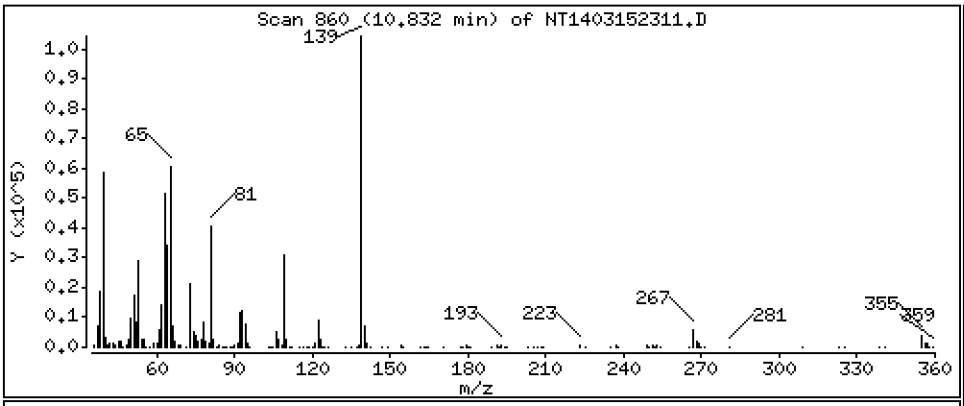
Operator: JGR

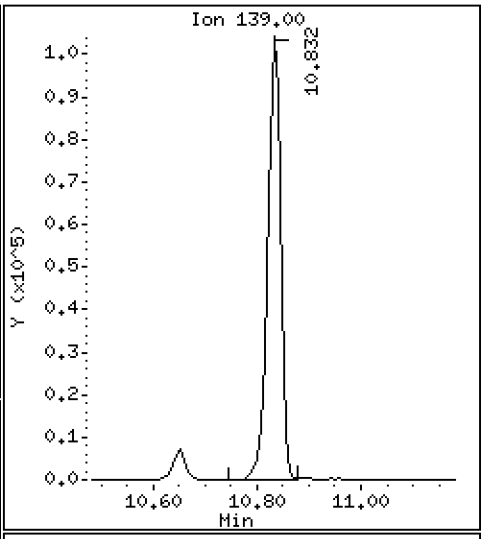
Column phase: ZB-5msi

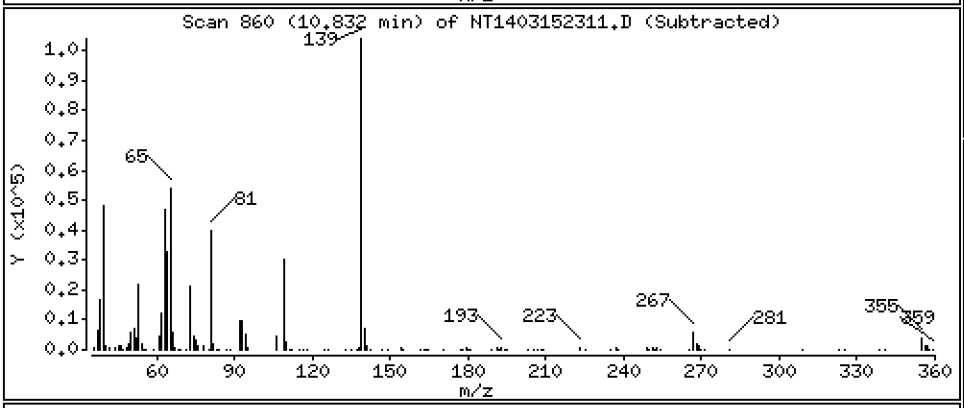
Column diameter: 0.25

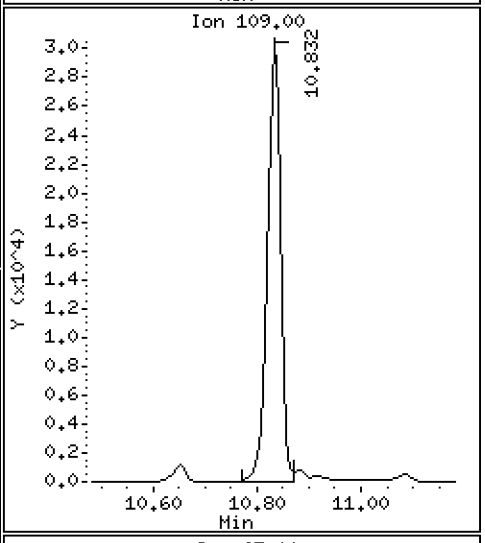
21 2-Nitrophenol

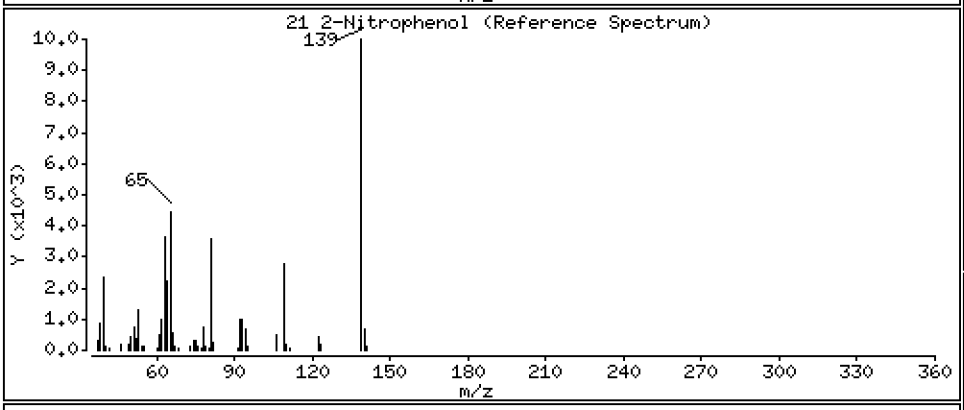
Concentration: 4.530 ug/mL

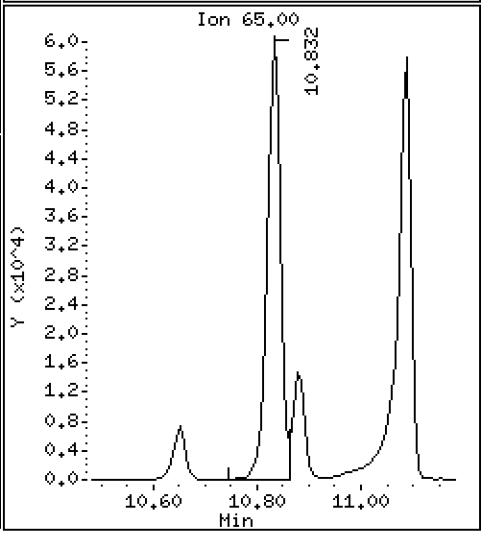


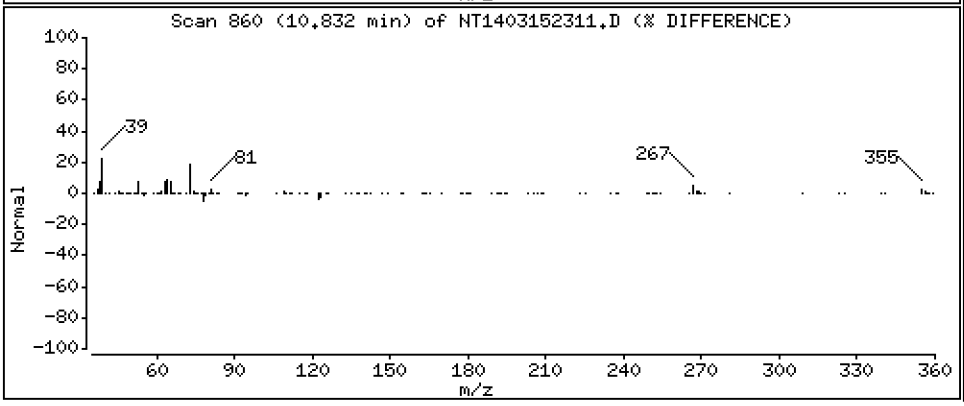












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

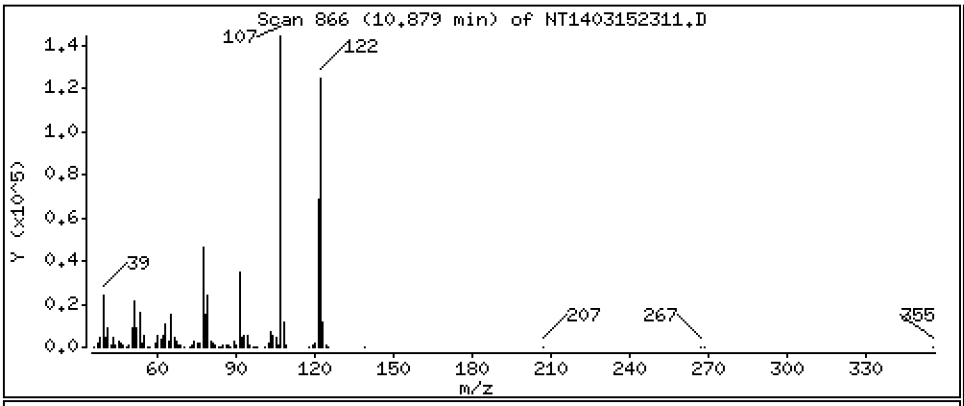
Operator: JGR

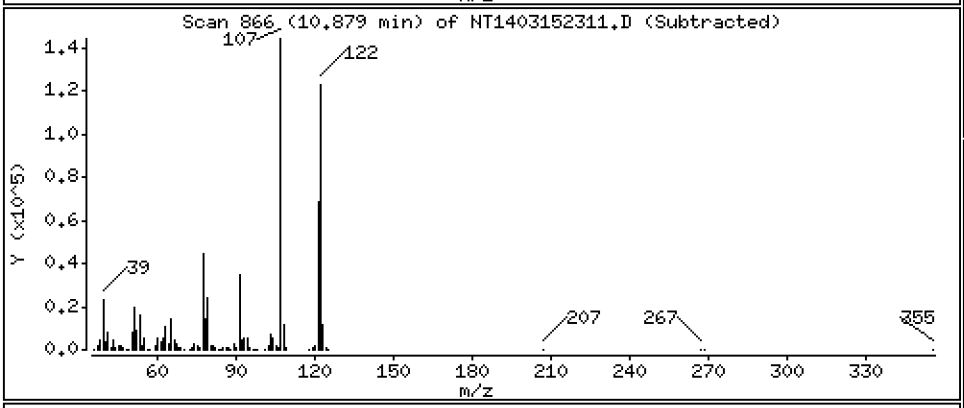
Column phase: ZB-5msi

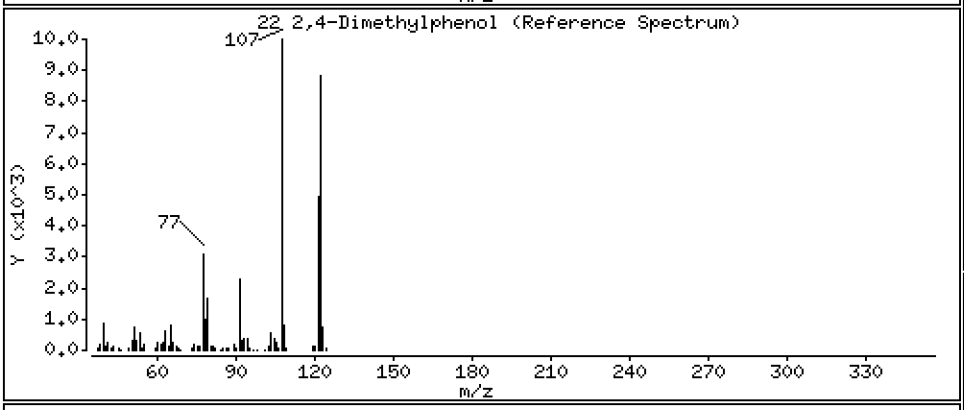
Column diameter: 0.25

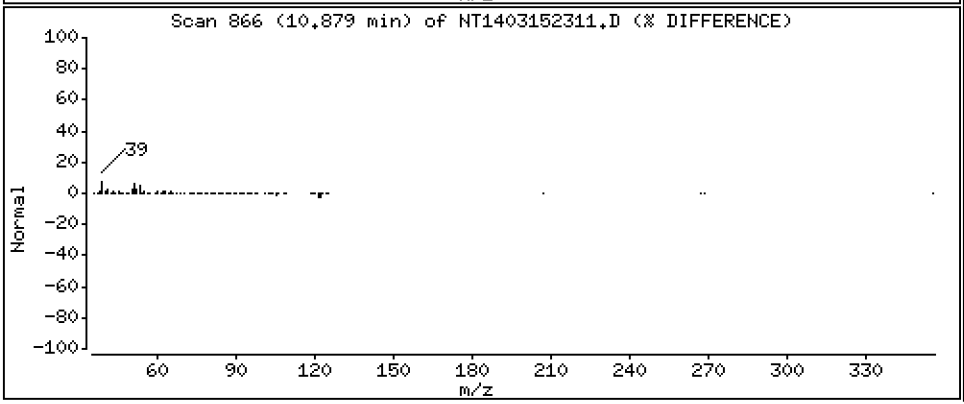
22 2,4-Dimethylphenol

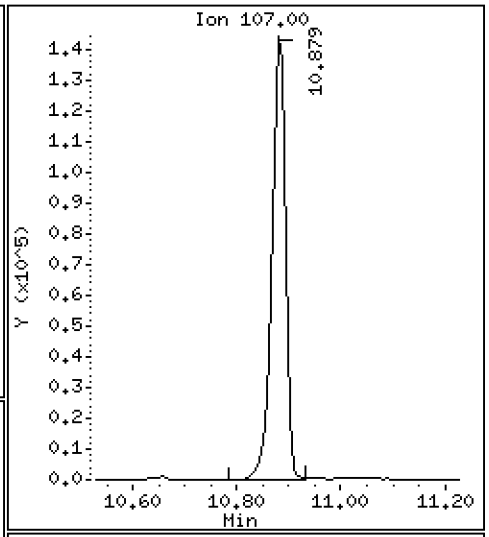
Concentration: 3.915 ug/mL

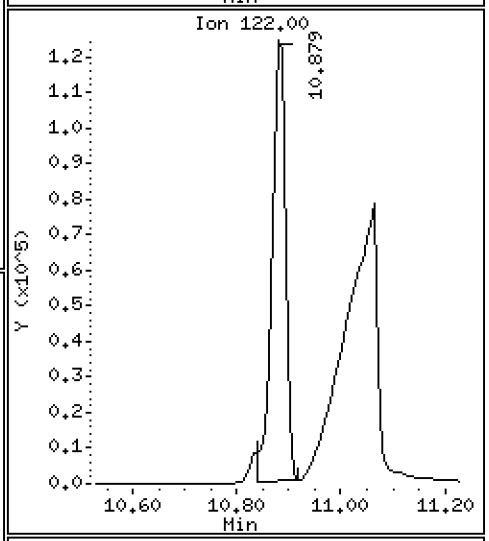


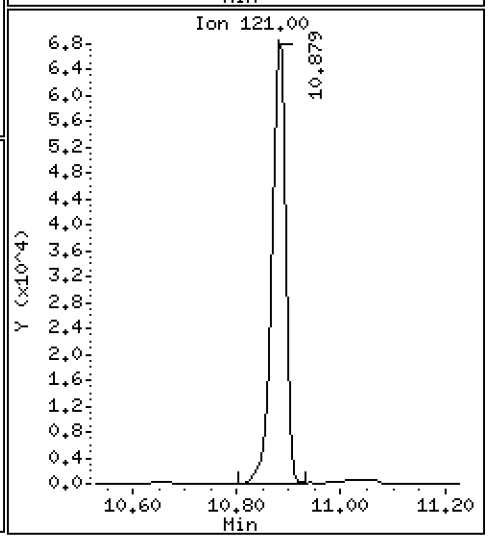












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

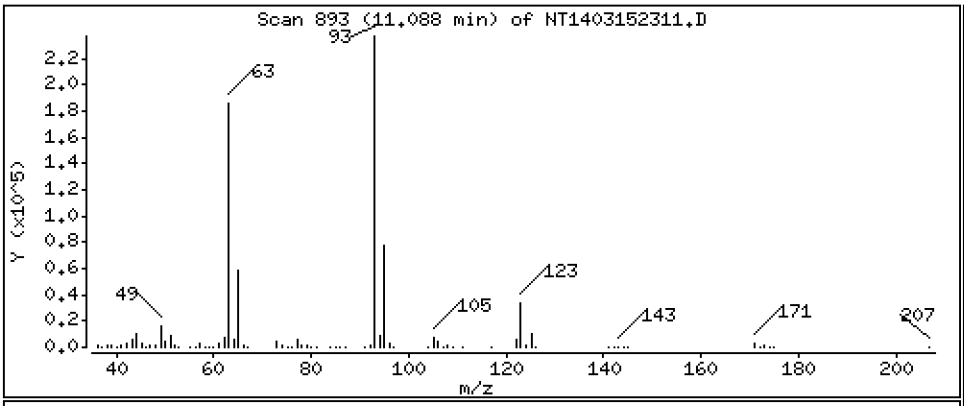
Operator: JGR

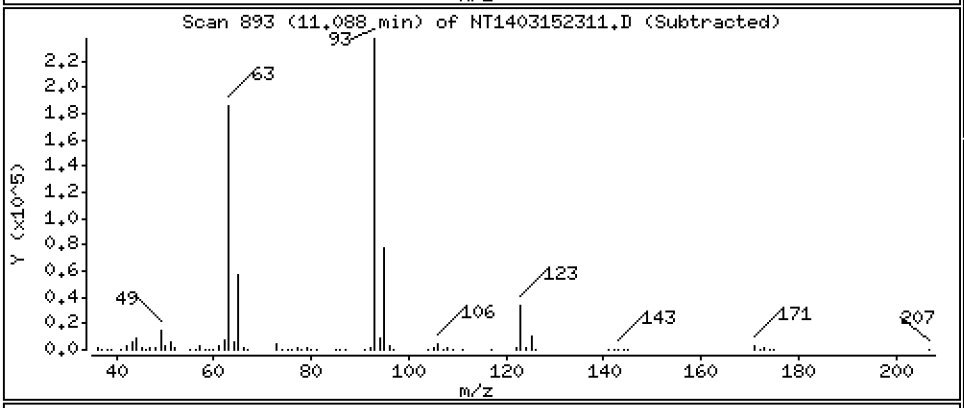
Column phase: ZB-5msi

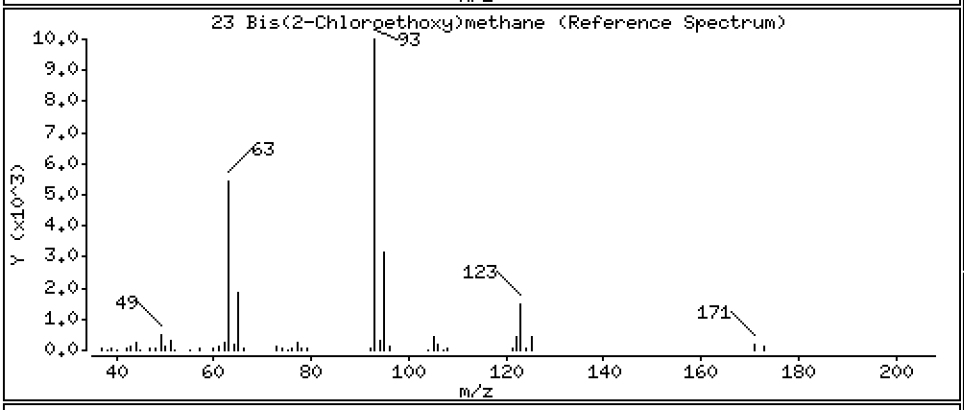
Column diameter: 0.25

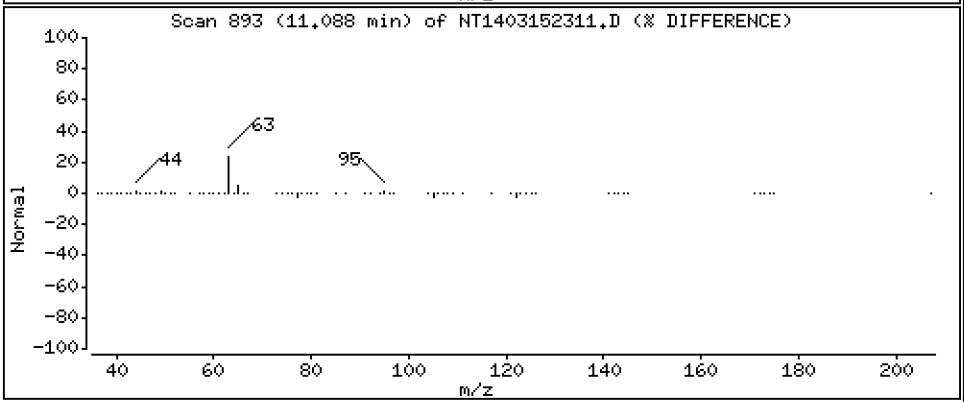
23 Bis(2-Chloroethoxy)methane

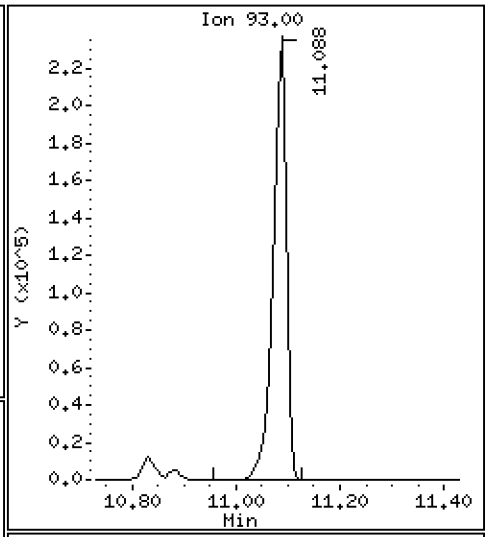
Concentration: 5.859 ug/mL

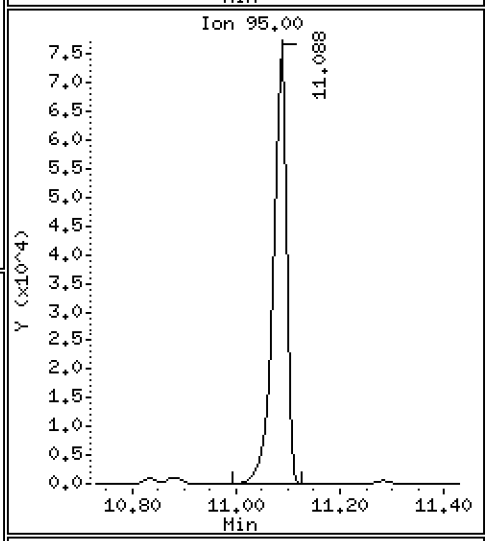


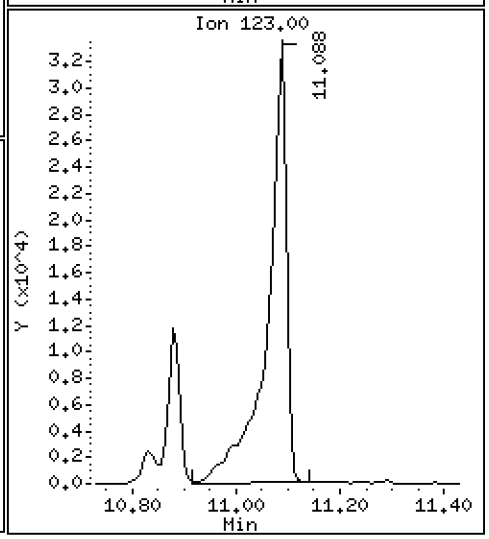












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

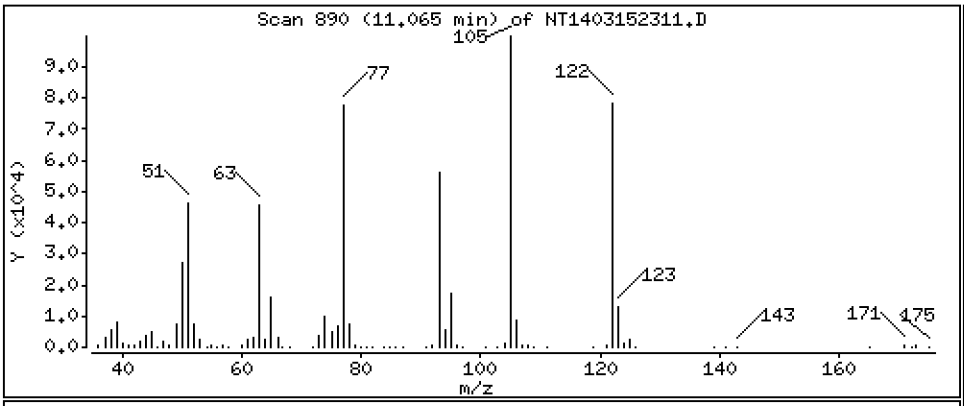
Operator: JGR

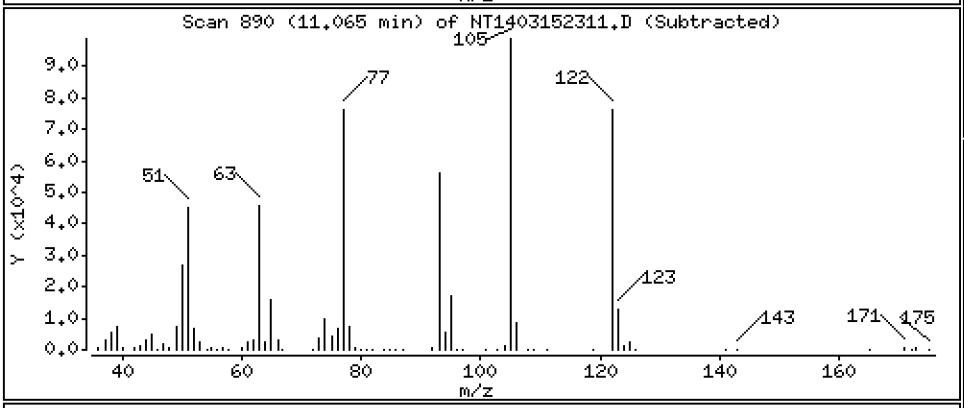
Column phase: ZB-5msi

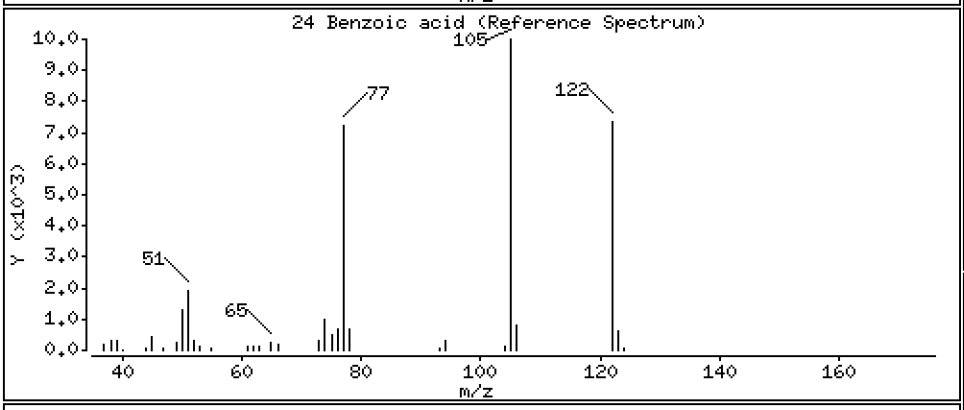
Column diameter: 0.25

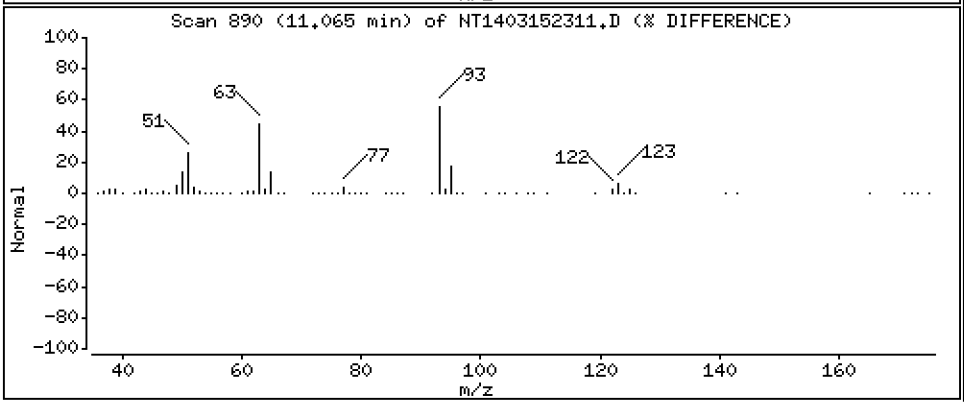
24 Benzoic acid

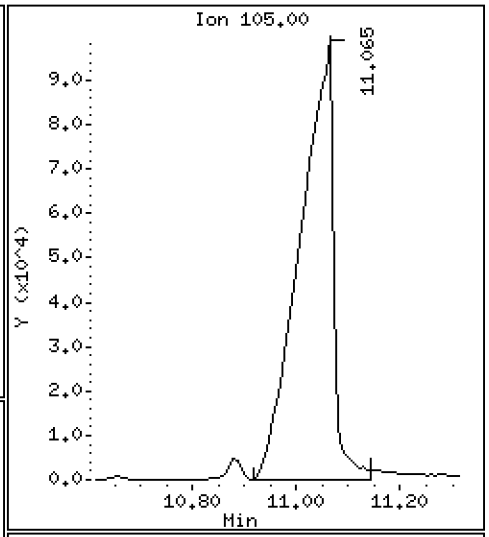
Concentration: 8.248 ug/mL

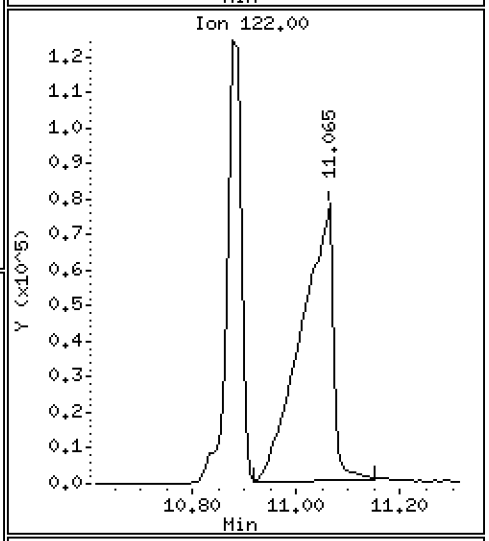


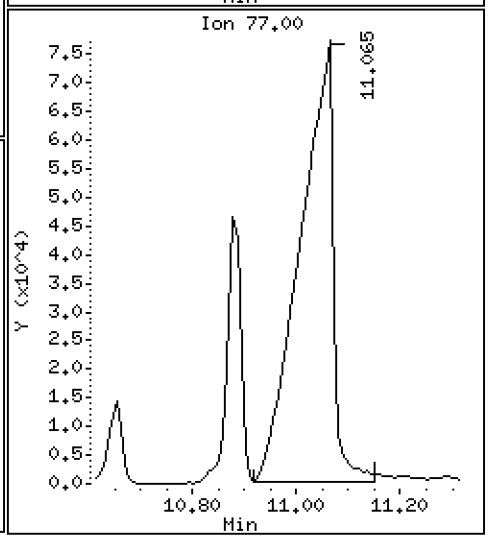












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

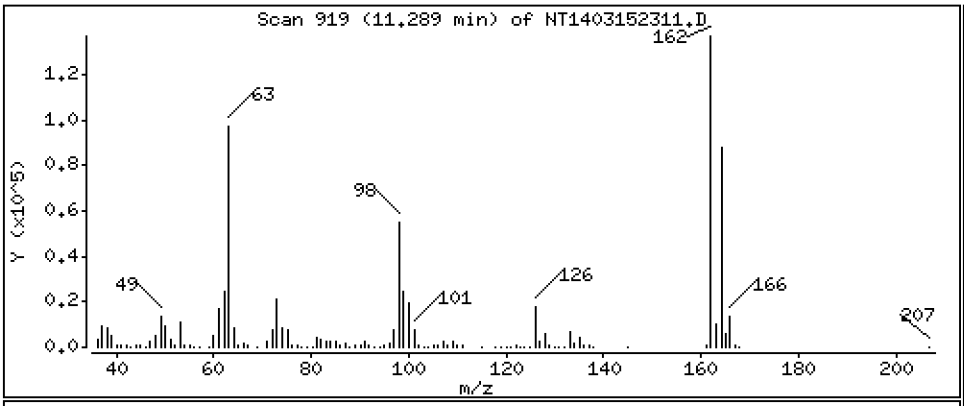
Operator: JGR

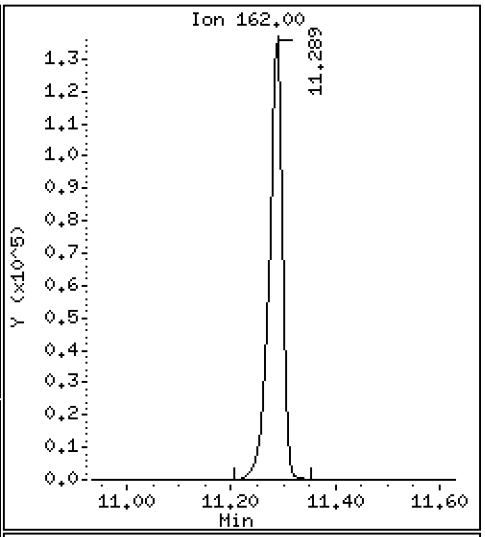
Column phase: ZB-5msi

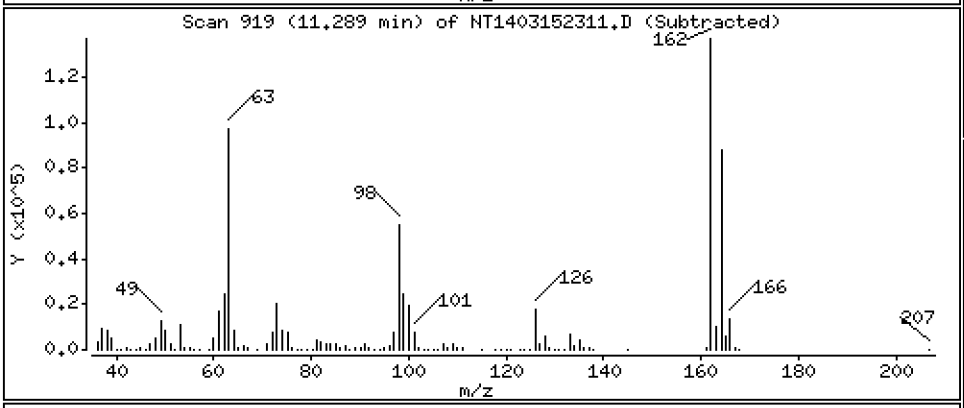
Column diameter: 0.25

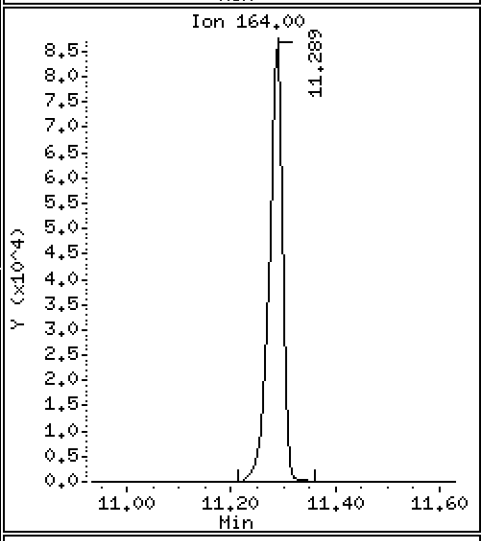
25 2,4-Dichlorophenol

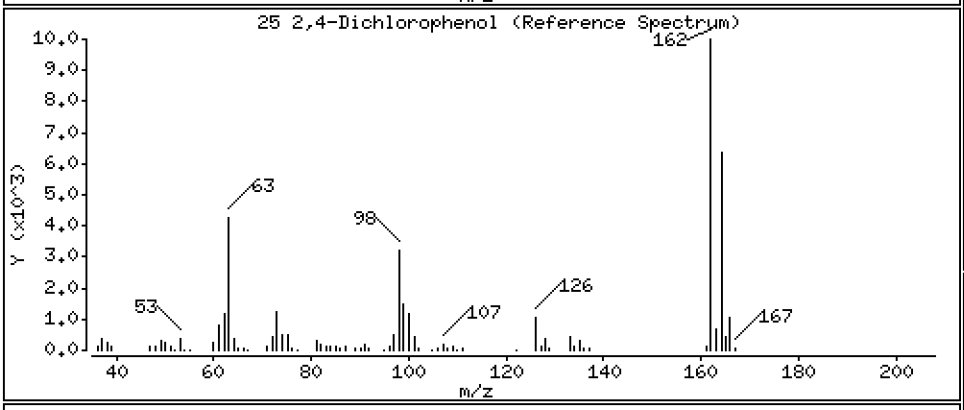
Concentration: 4.779 ug/mL

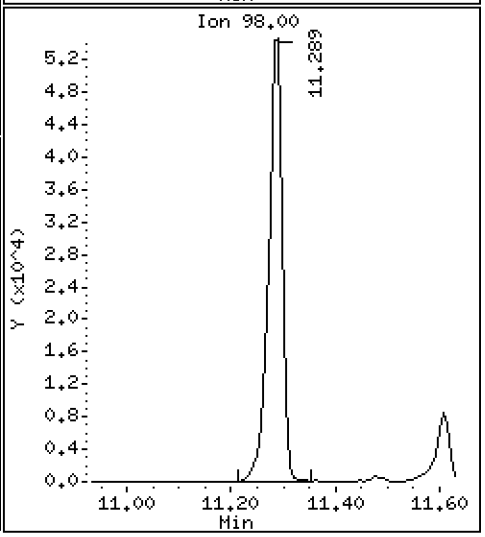


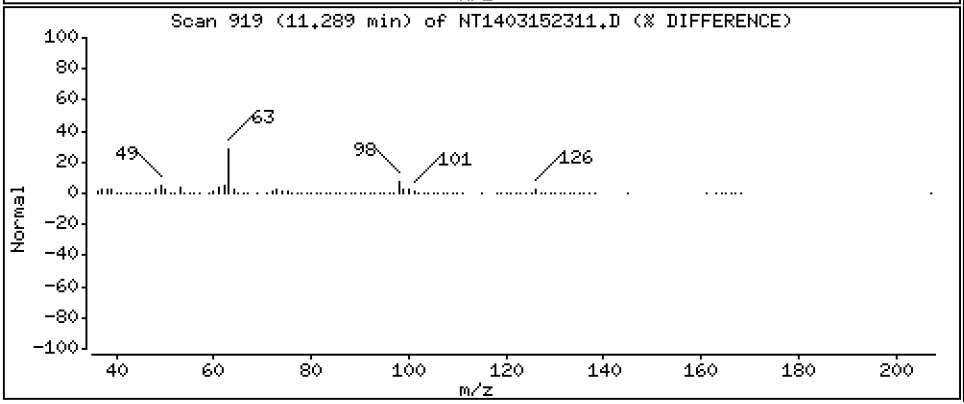












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

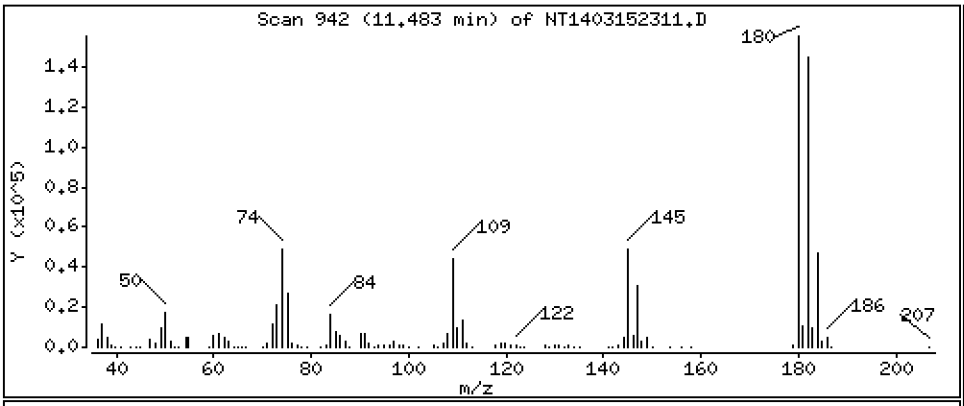
Operator: JGR

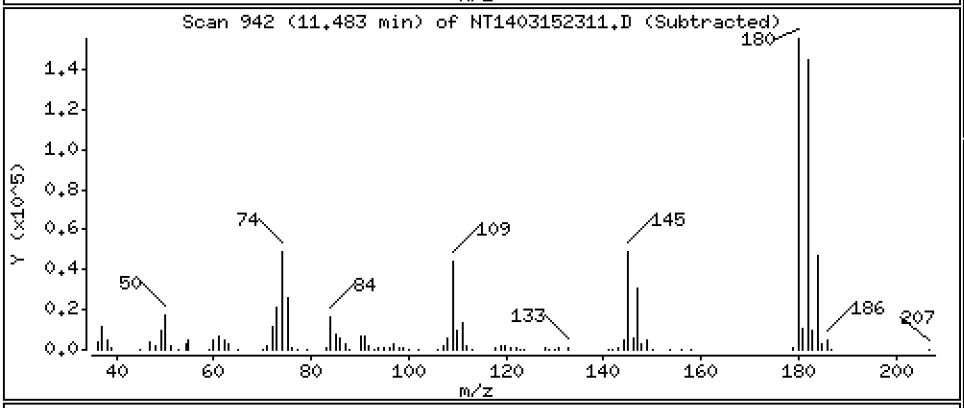
Column phase: ZB-5msi

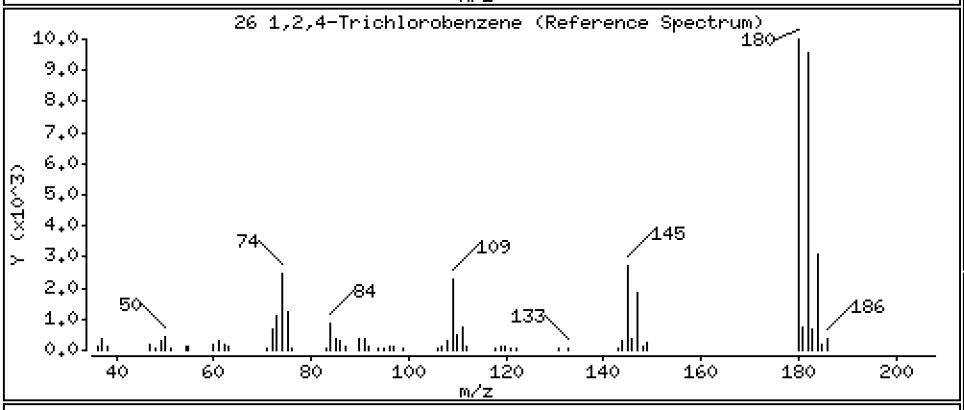
Column diameter: 0.25

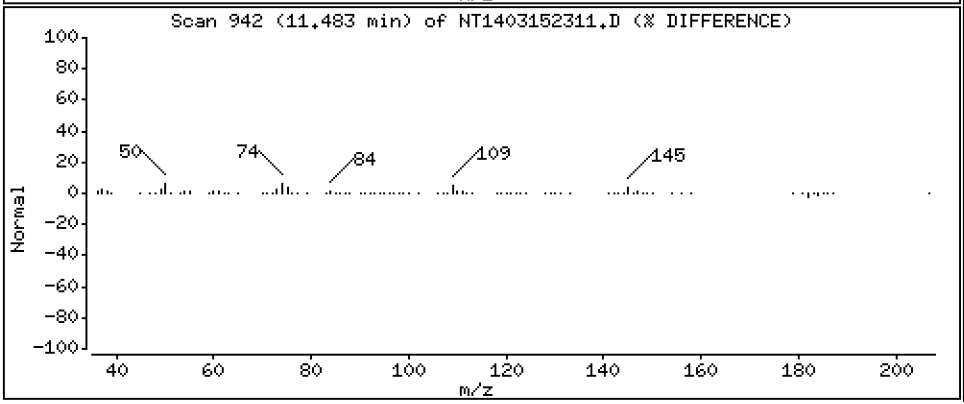
26 1,2,4-Trichlorobenzene

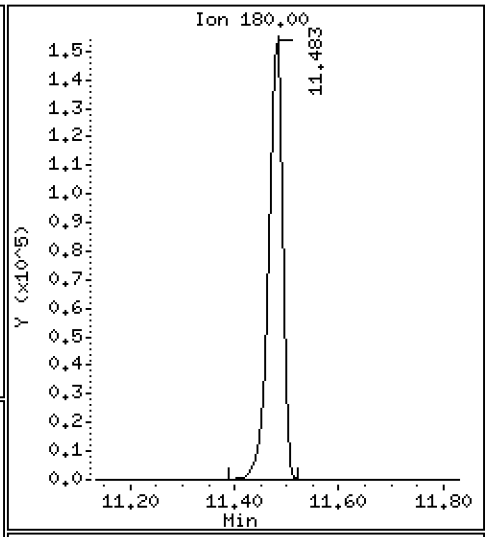
Concentration: 5.052 ug/mL

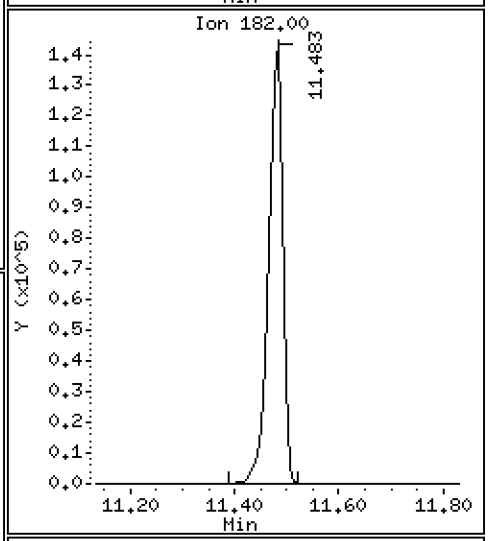


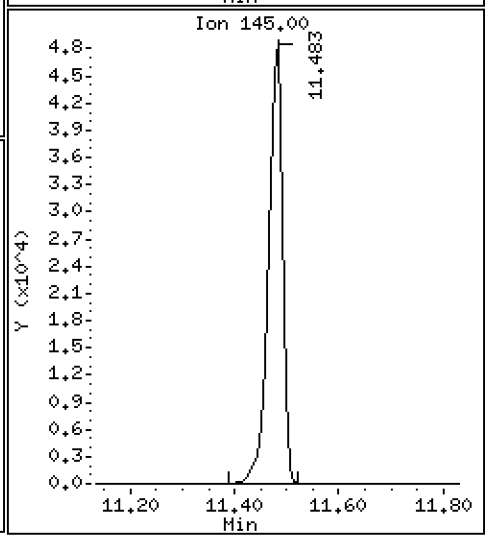












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

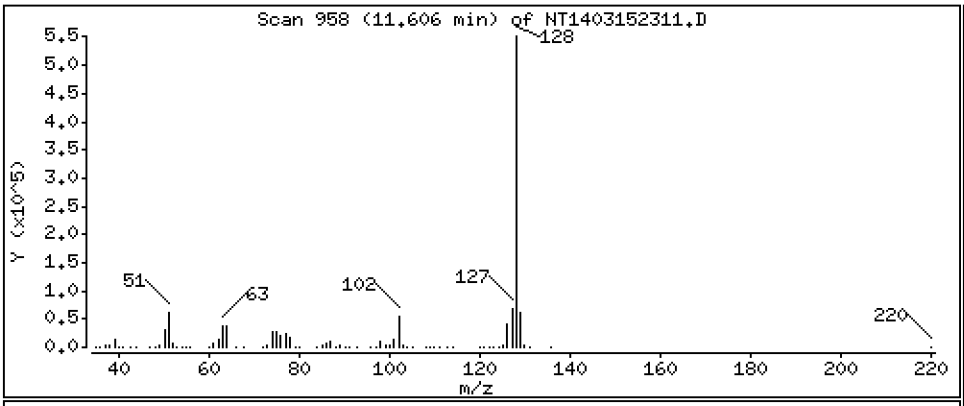
Operator: JGR

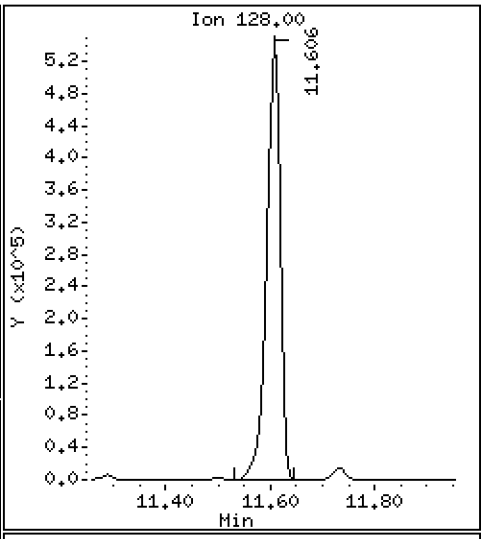
Column phase: ZB-5msi

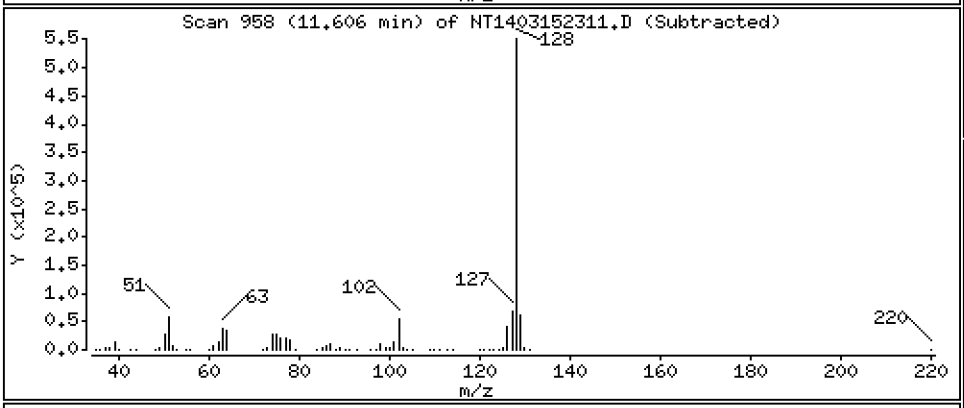
Column diameter: 0.25

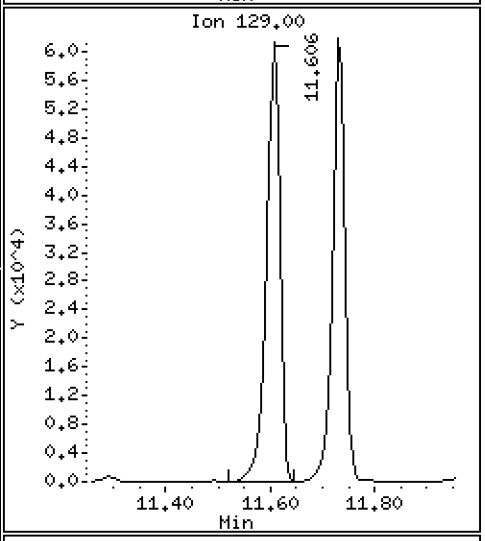
28 Naphthalene

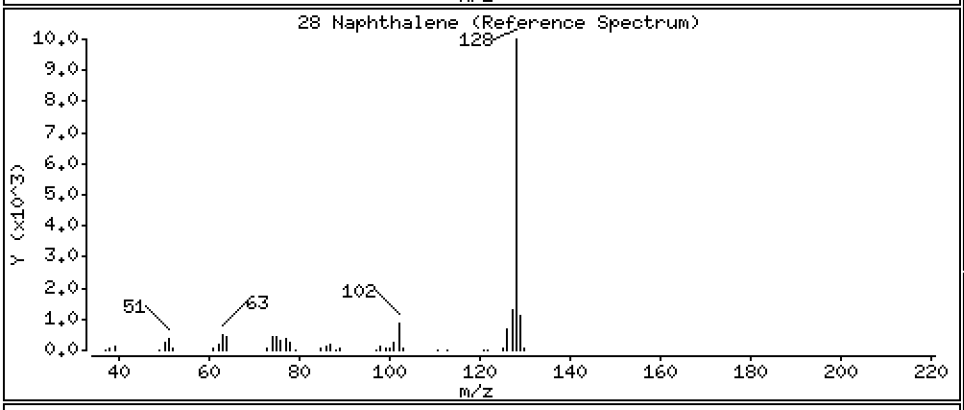
Concentration: 4.829 ug/mL

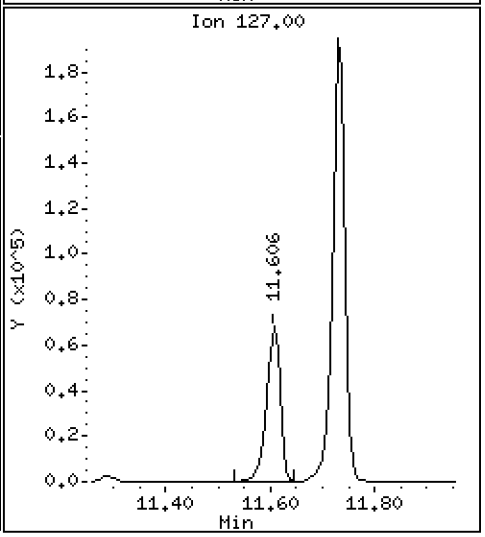


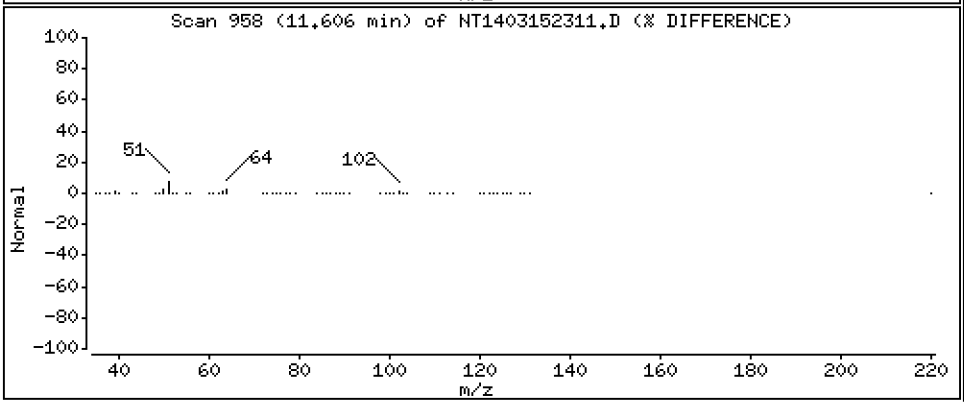












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

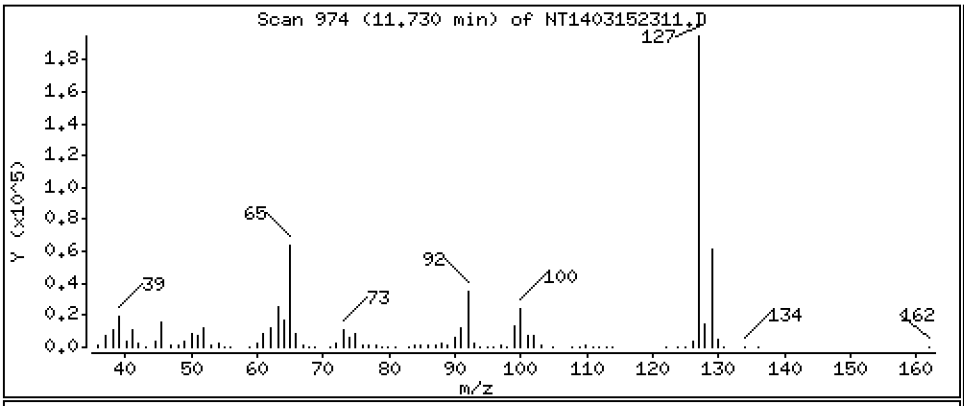
Operator: JGR

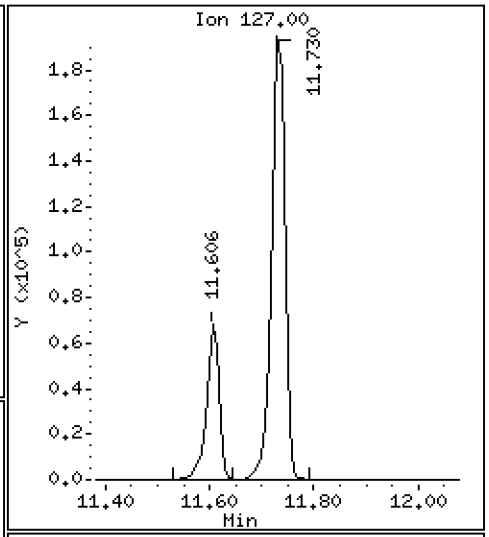
Column phase: ZB-5msi

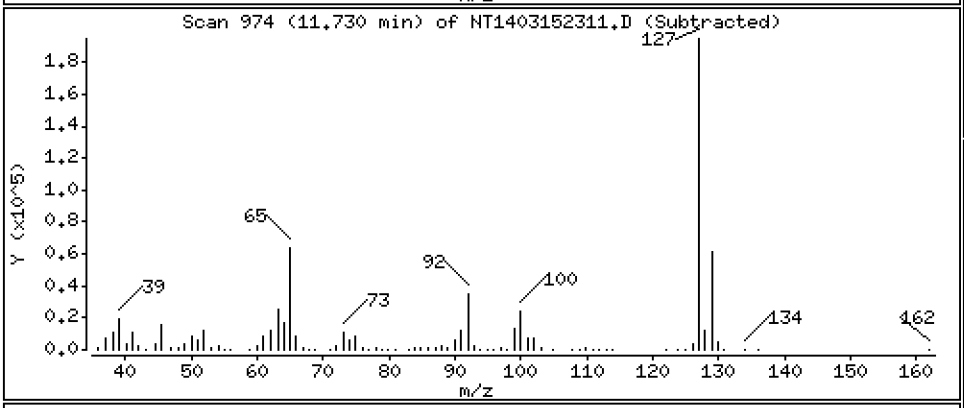
Column diameter: 0.25

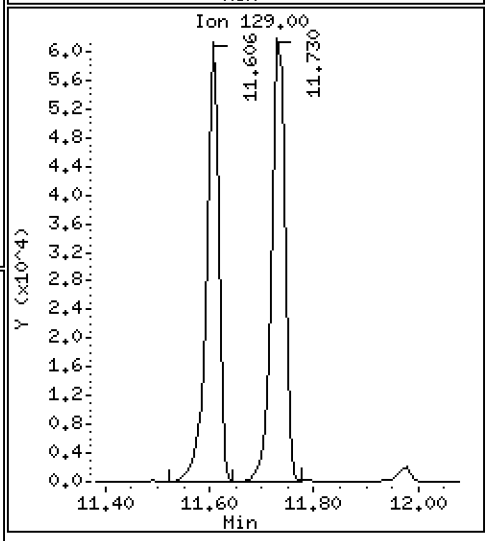
29 4-Chloroaniline

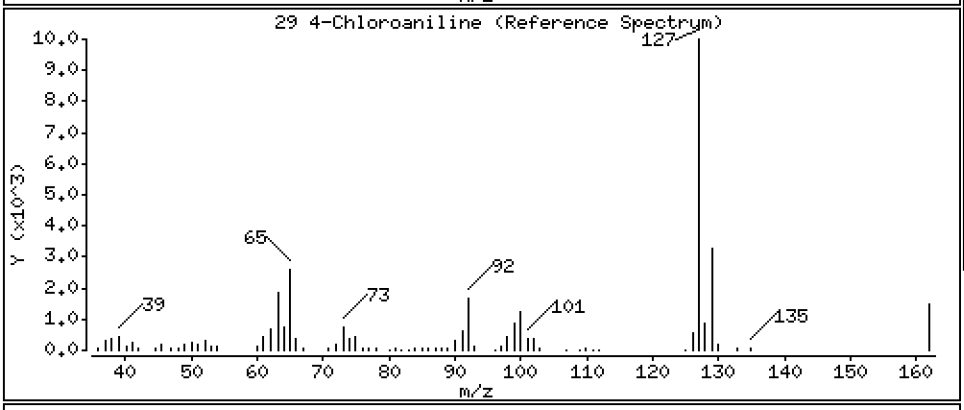
Concentration: 4.033 ug/mL

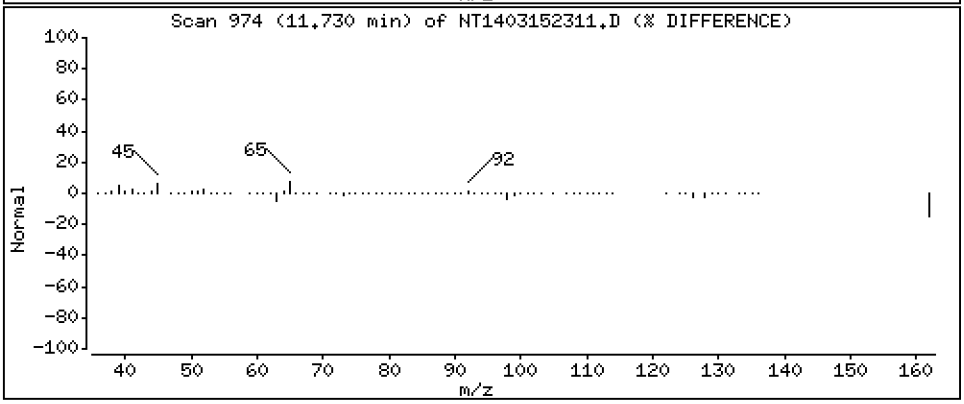












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

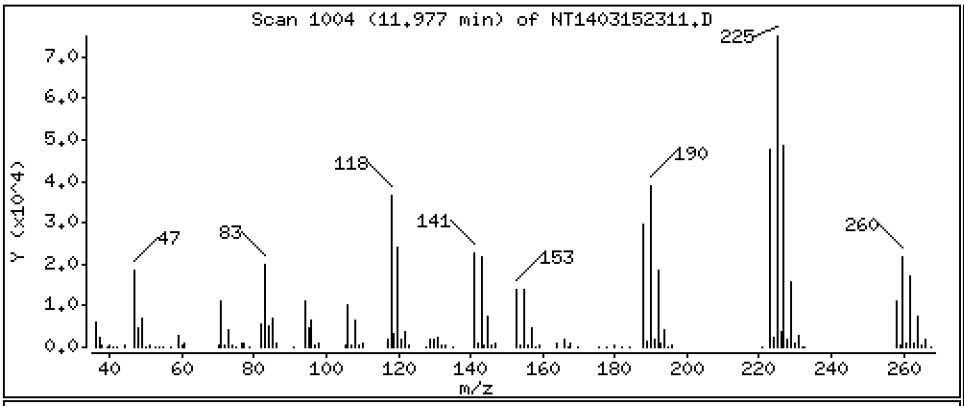
Operator: JGR

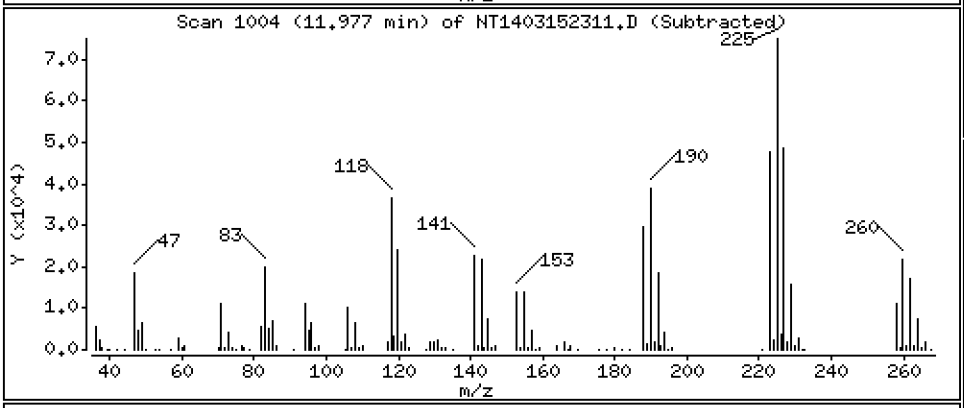
Column phase: ZB-5msi

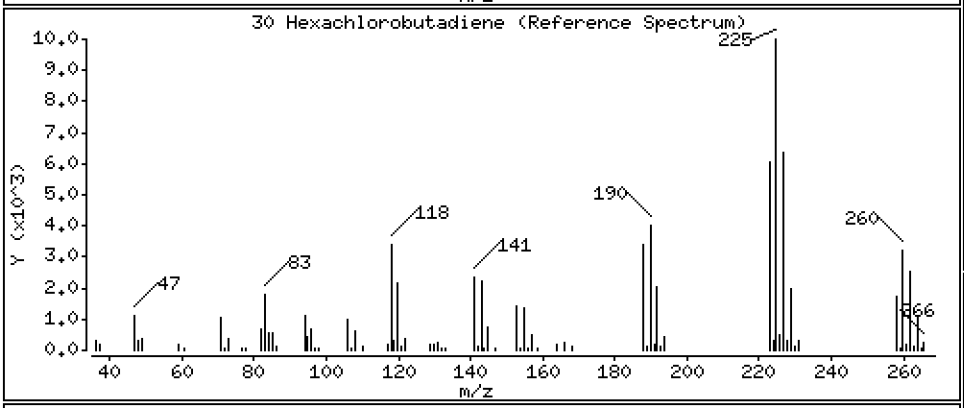
Column diameter: 0.25

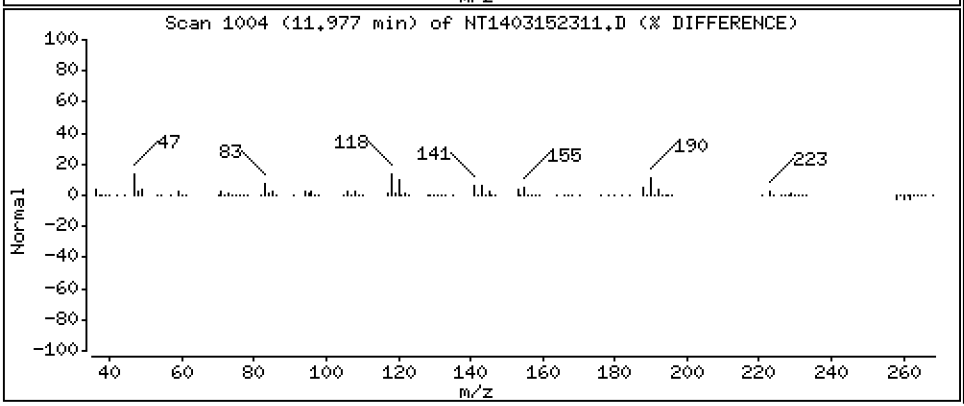
30 Hexachlorobutadiene

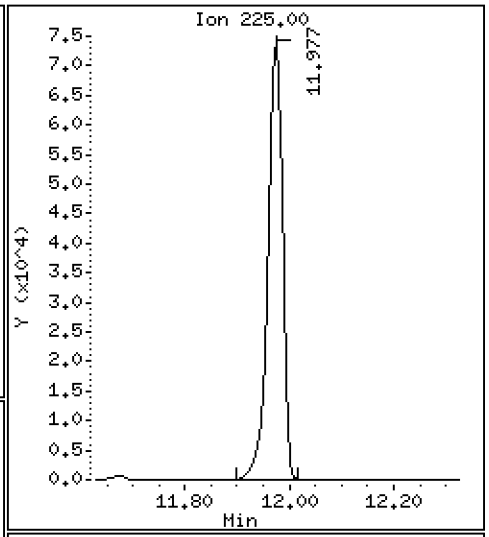
Concentration: 4.908 ug/mL

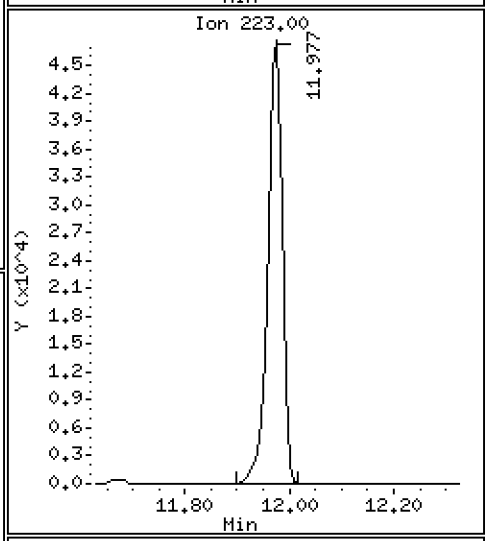


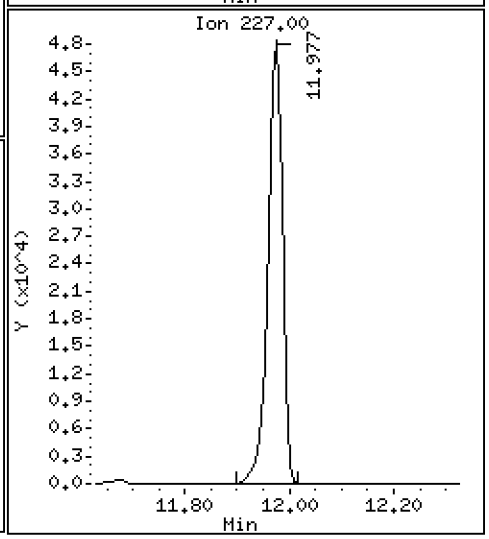












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

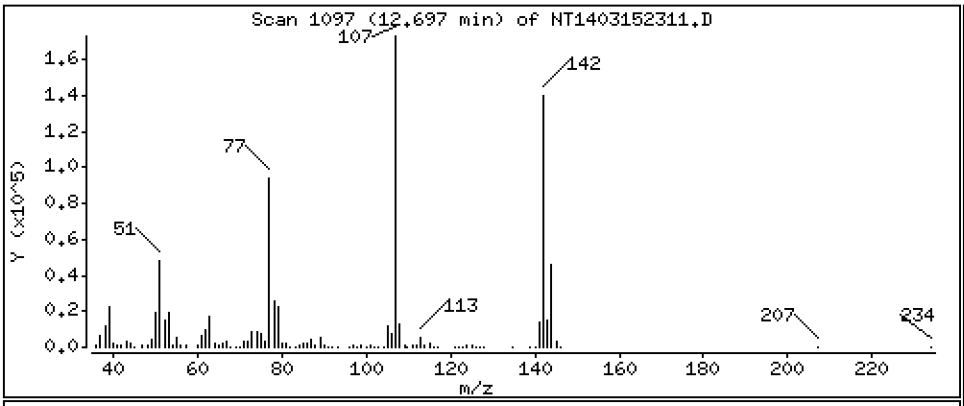
Operator: JGR

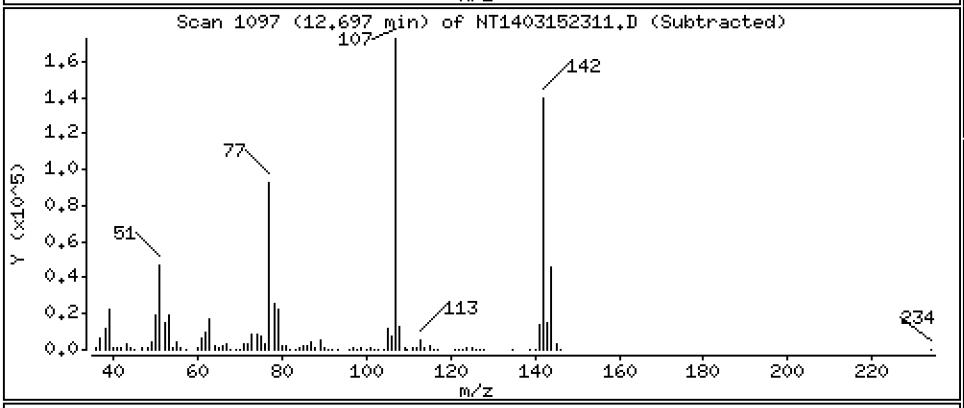
Column phase: ZB-5msi

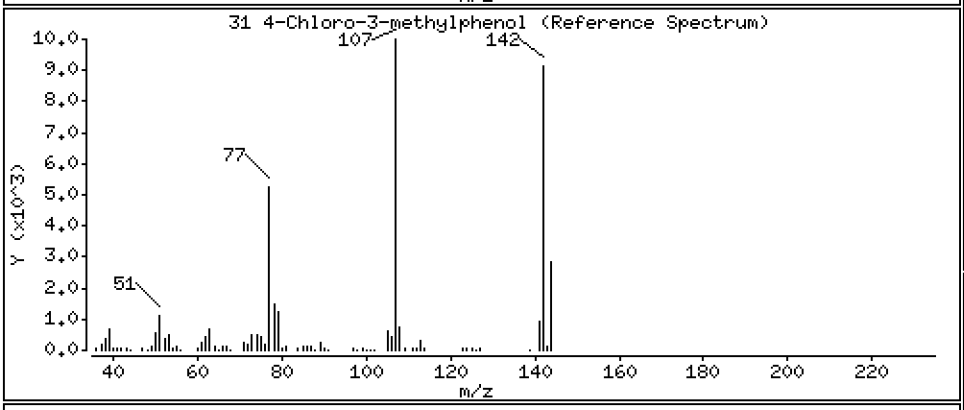
Column diameter: 0.25

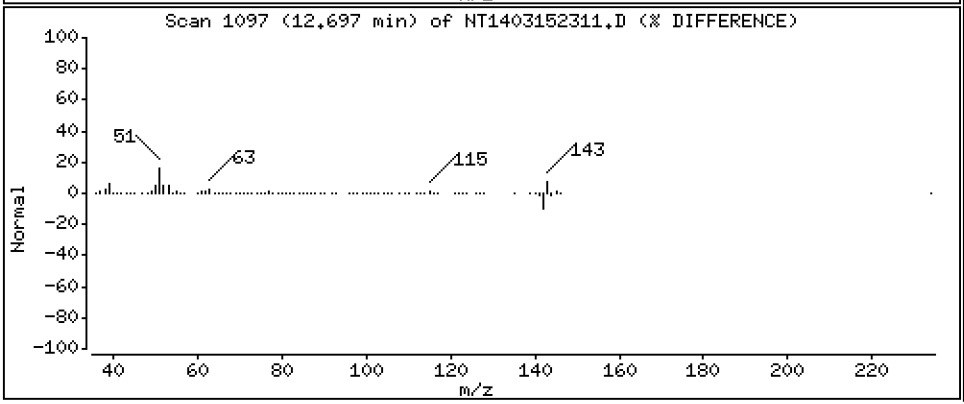
31 4-Chloro-3-methylphenol

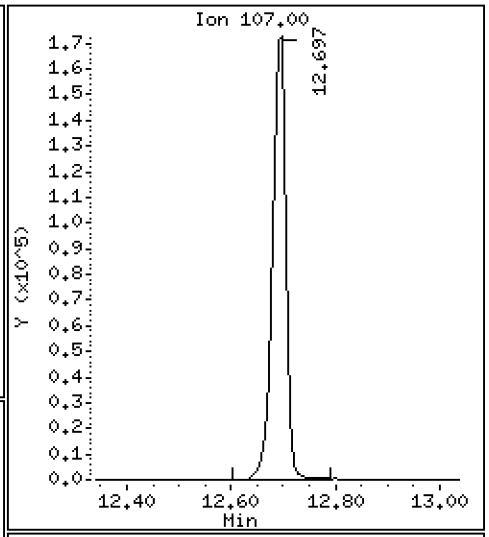
Concentration: 4.852 ug/mL

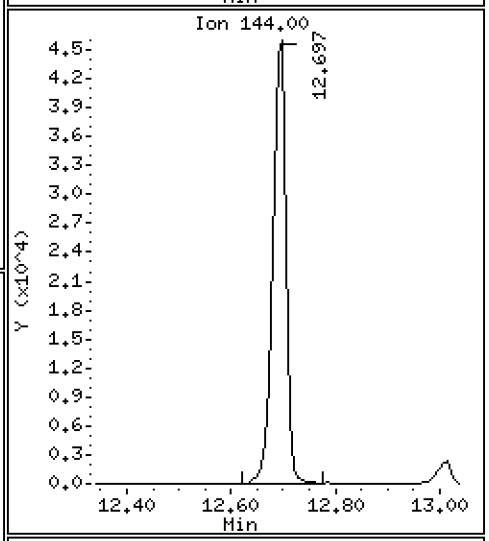


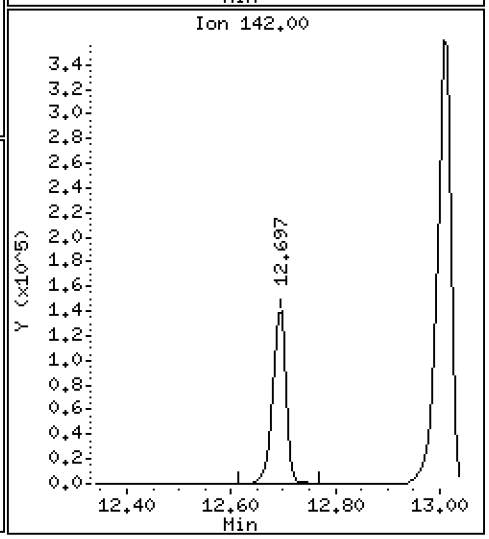












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

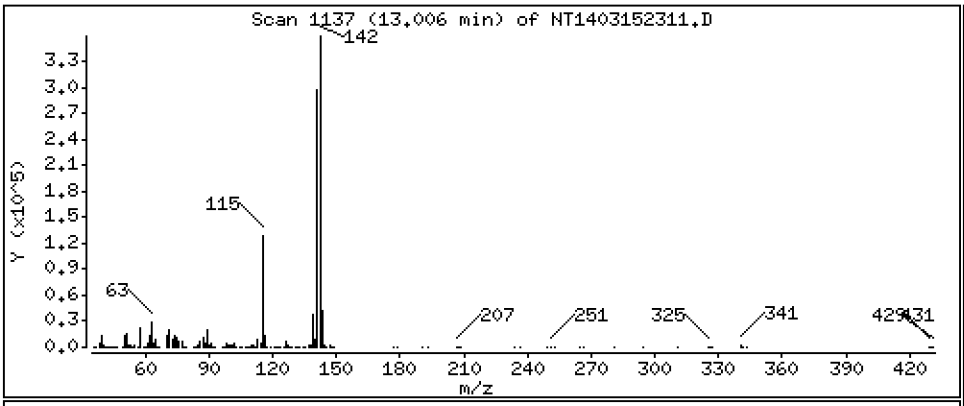
Operator: JGR

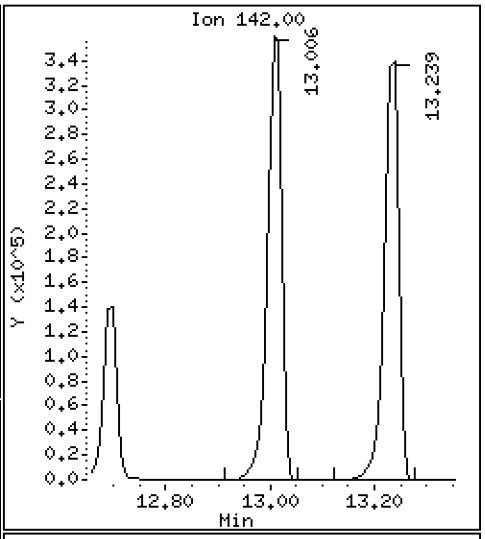
Column phase: ZB-5msi

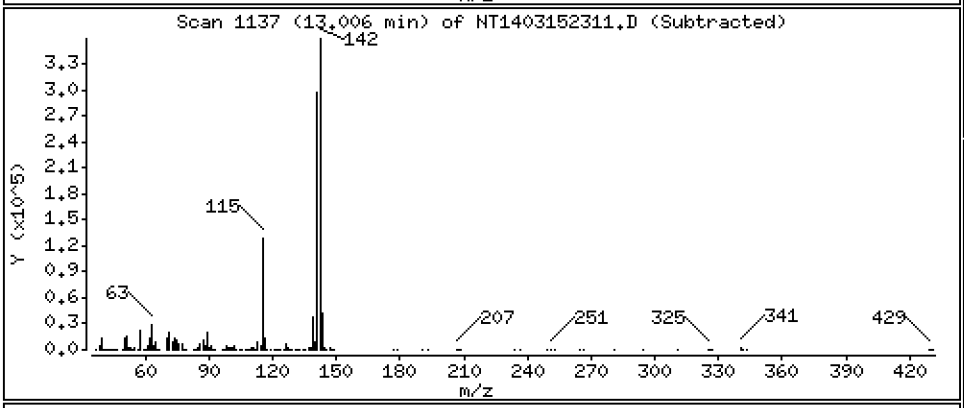
Column diameter: 0.25

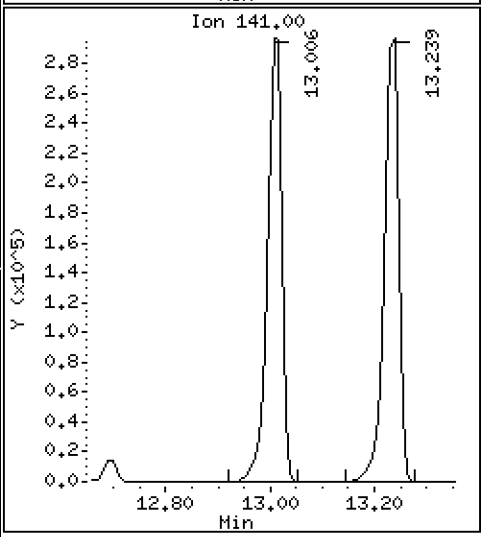
32 2-Methylnaphthalene

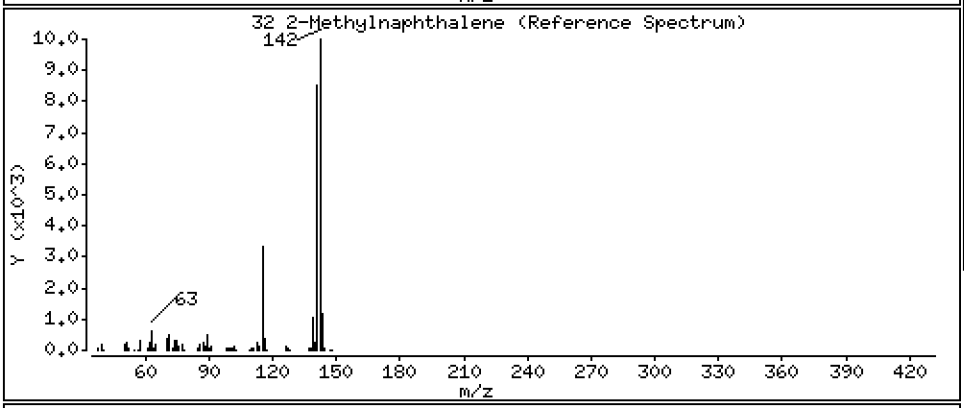
Concentration: 4.854 ug/mL

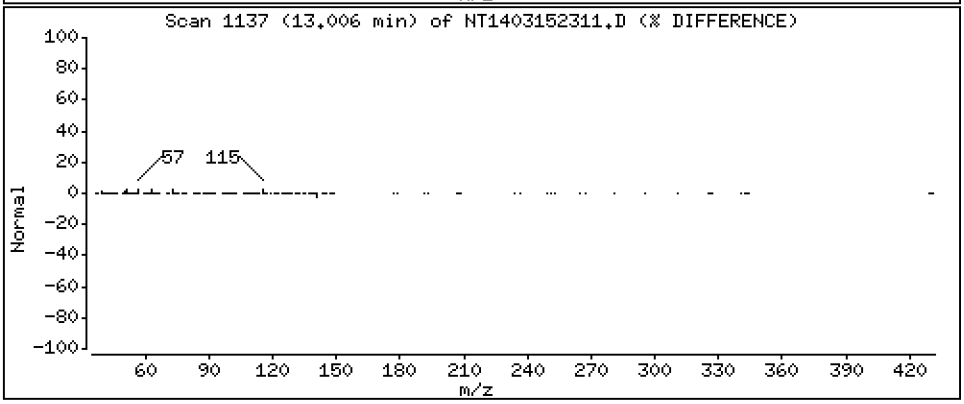












Data File: \\target\share\chem3\nt14.i\20230315.b\NT1403152311.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

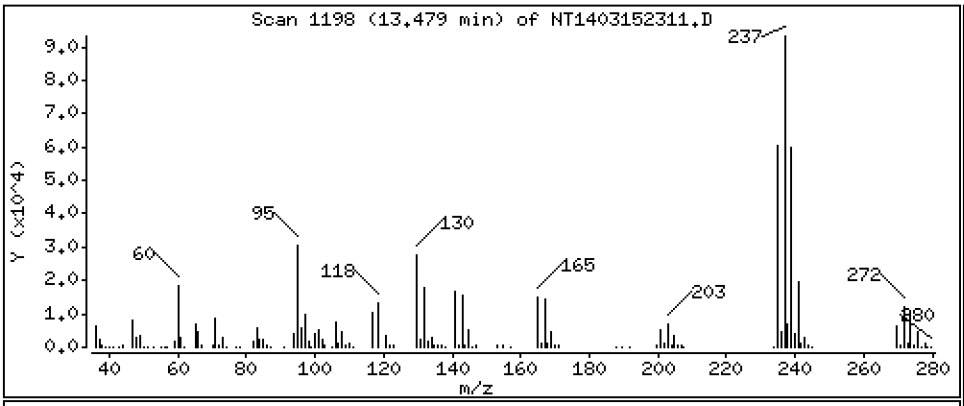
Operator: JGR

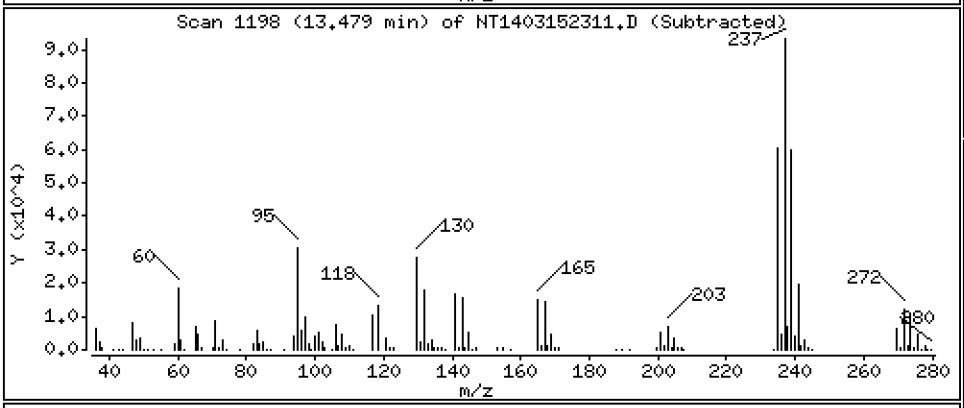
Column phase: ZB-5msi

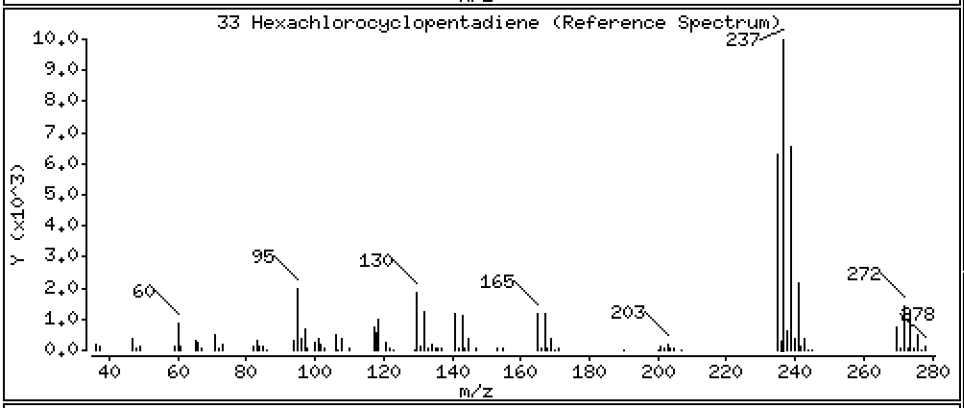
Column diameter: 0.25

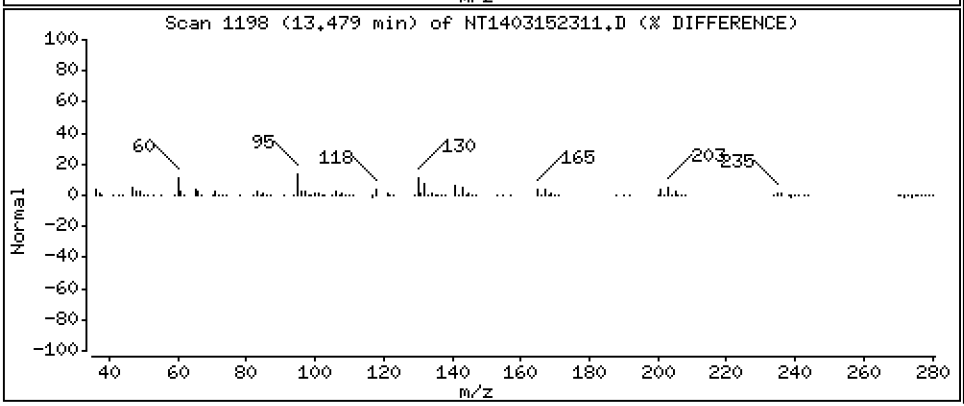
33 Hexachlorocyclopentadiene

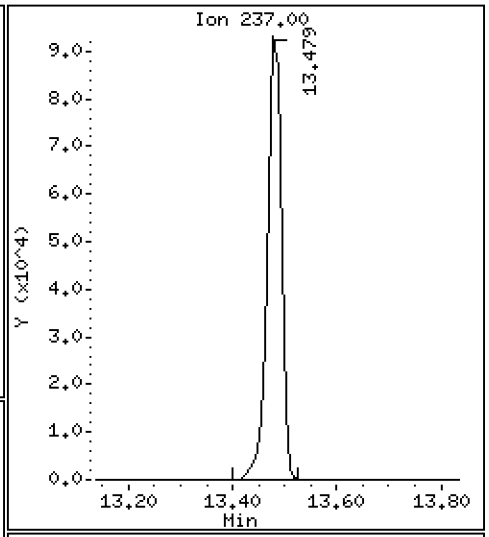
Concentration: 5.230 ug/mL

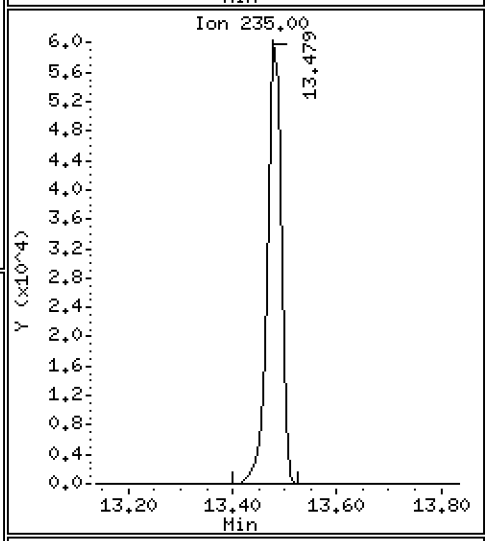


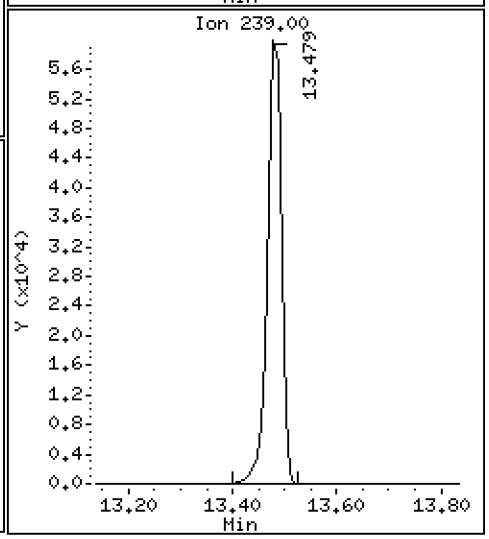












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

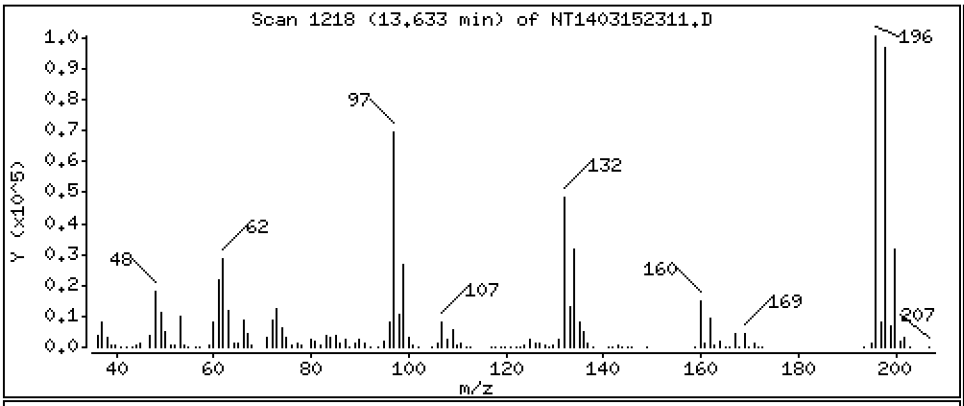
Operator: JGR

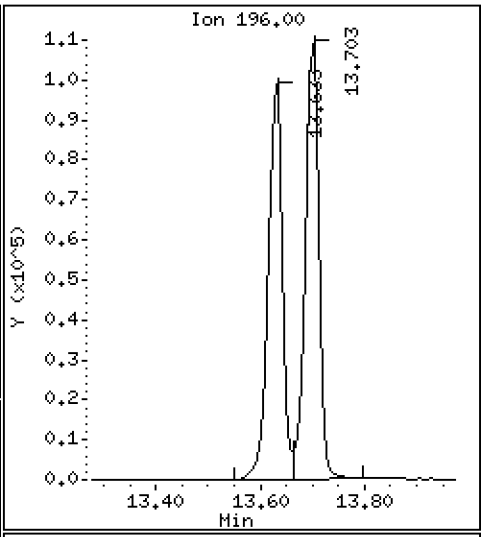
Column phase: ZB-5msi

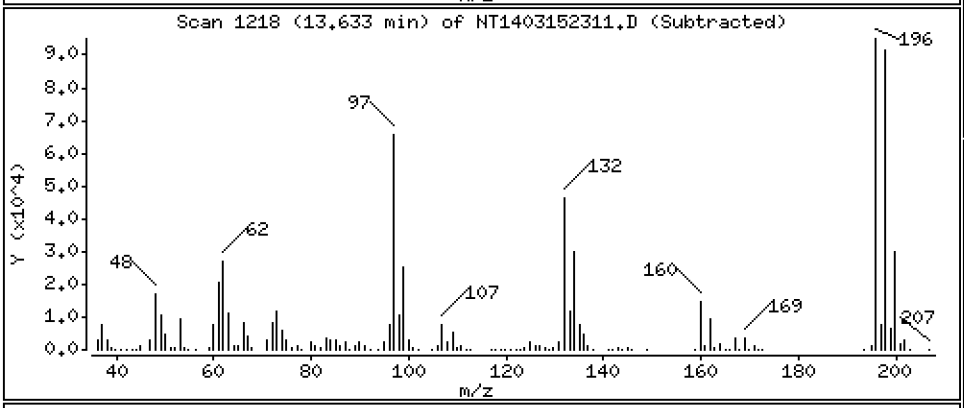
Column diameter: 0.25

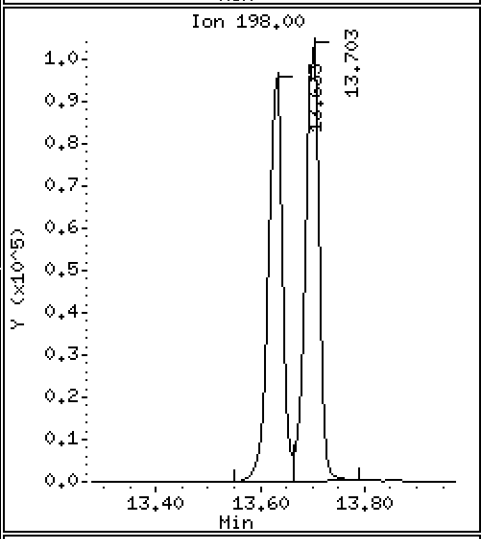
34 2,4,6-Trichlorophenol

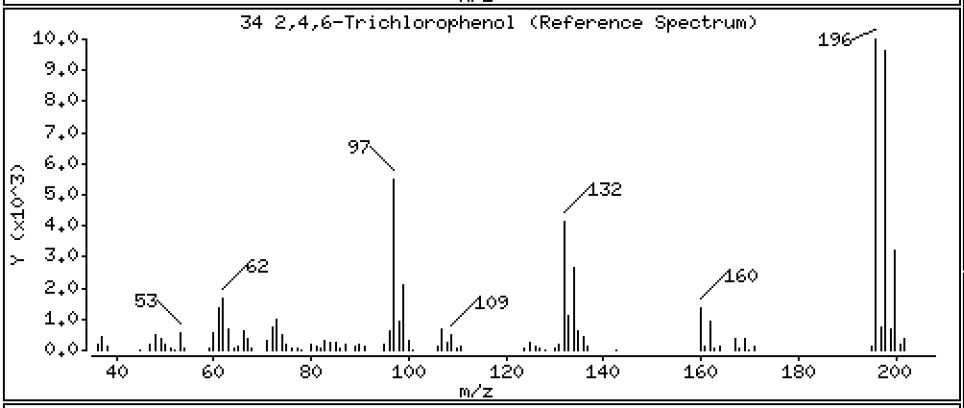
Concentration: 4.718 ug/mL

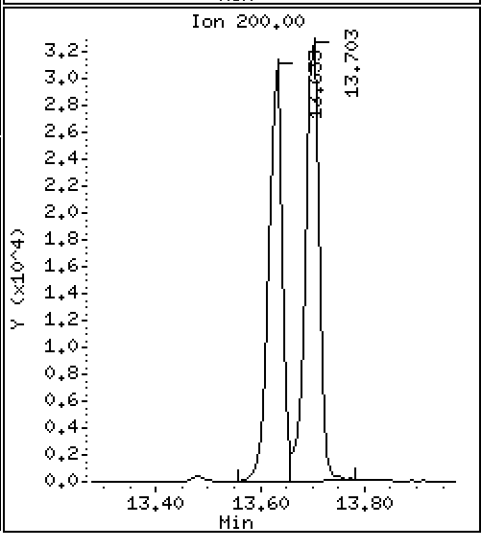


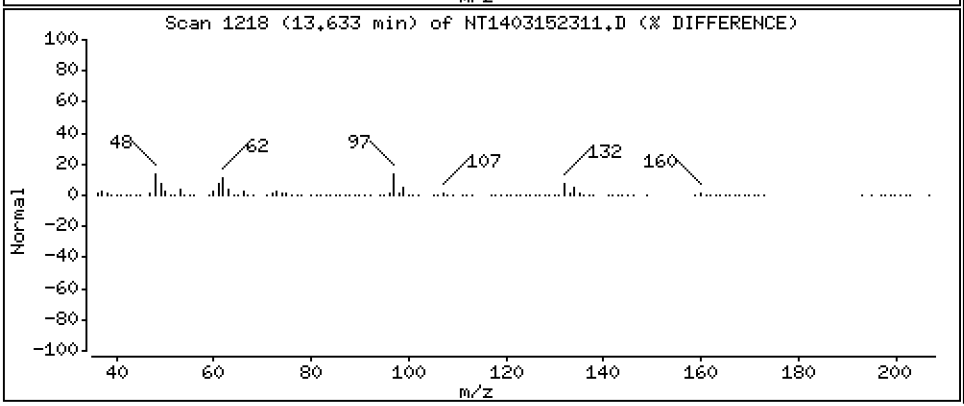












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

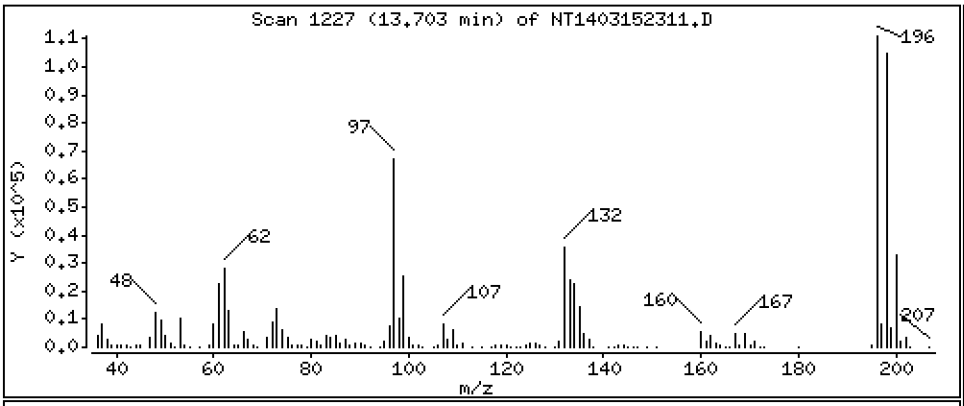
Operator: JGR

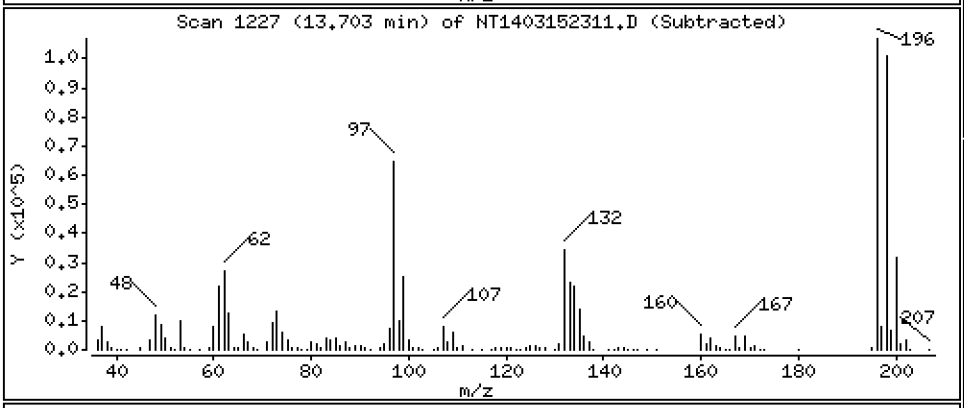
Column phase: ZB-5msi

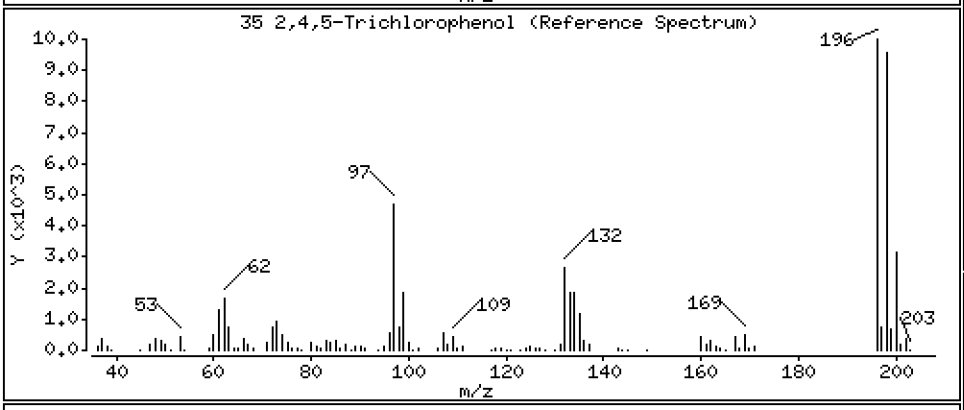
Column diameter: 0.25

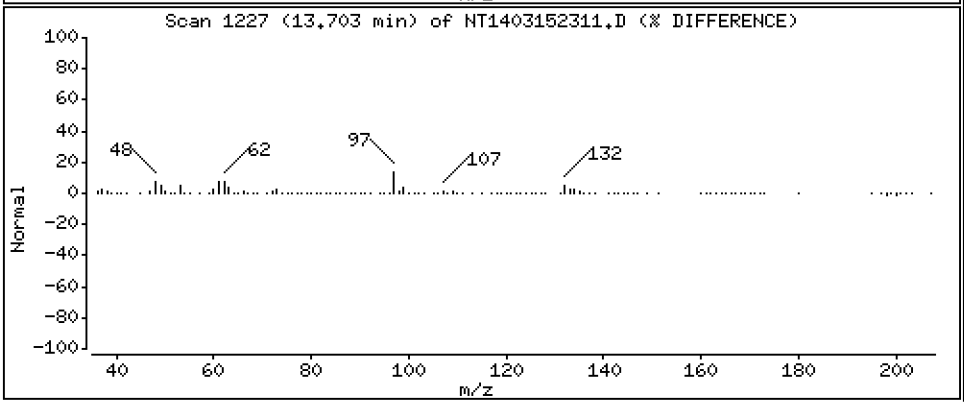
35 2,4,5-Trichlorophenol

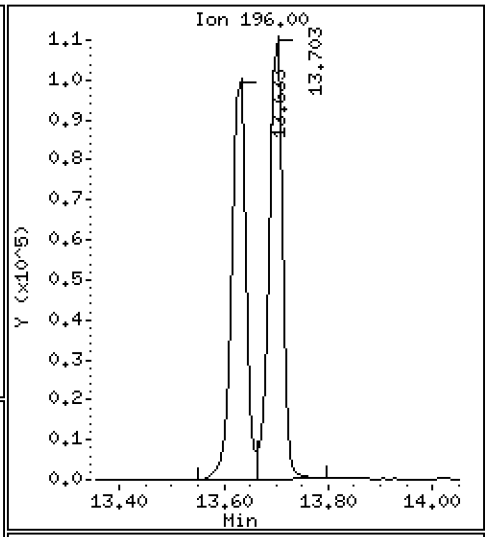
Concentration: 4.661 ug/mL

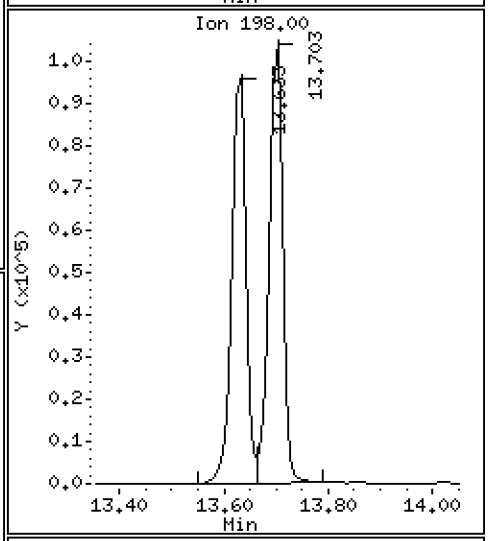


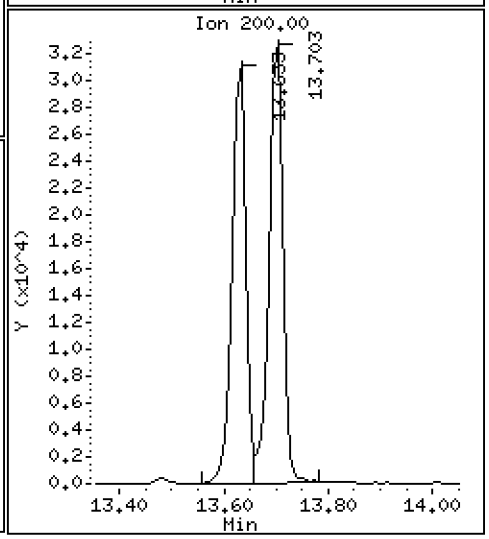












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

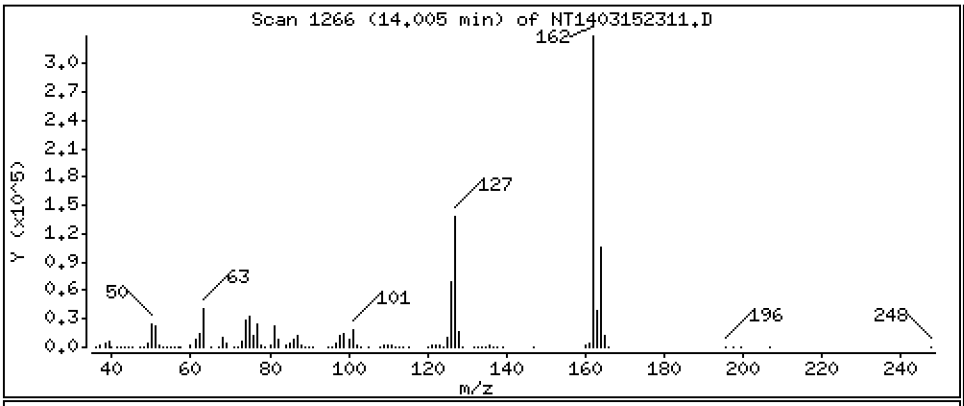
Operator: JGR

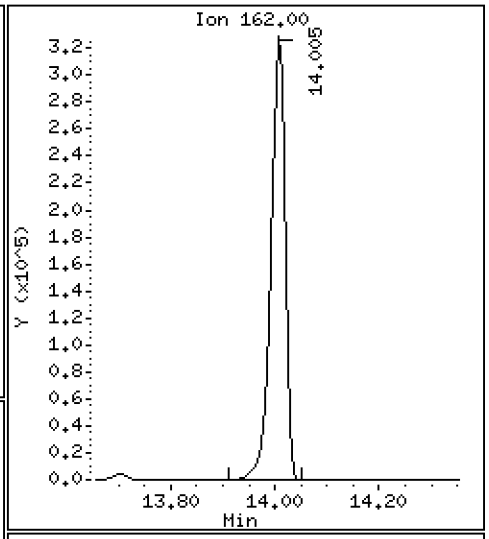
Column phase: ZB-5msi

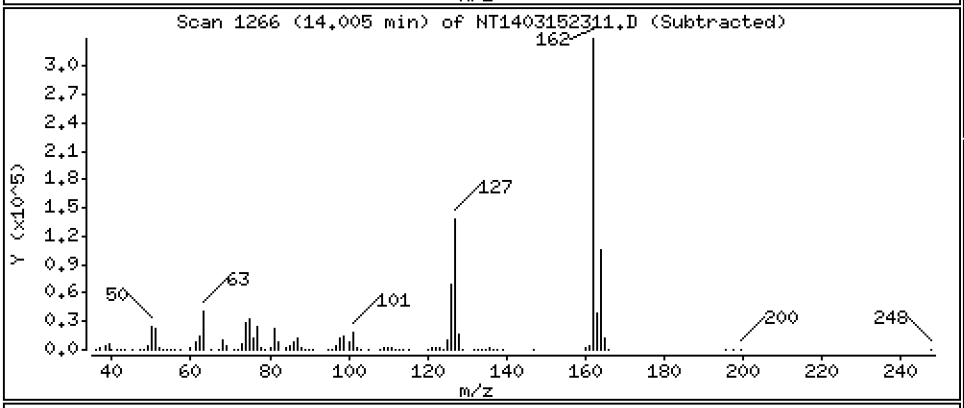
Column diameter: 0.25

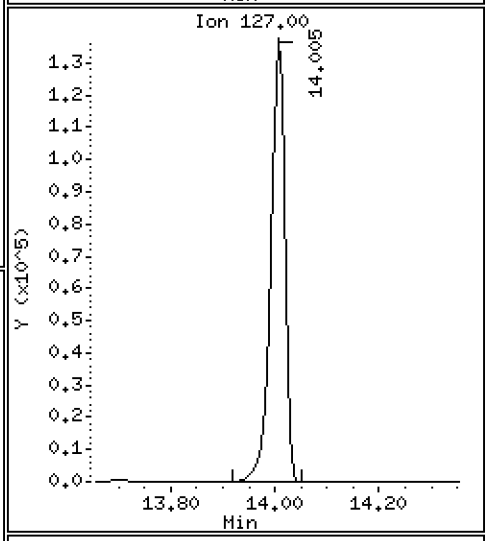
37 2-Chloronaphthalene

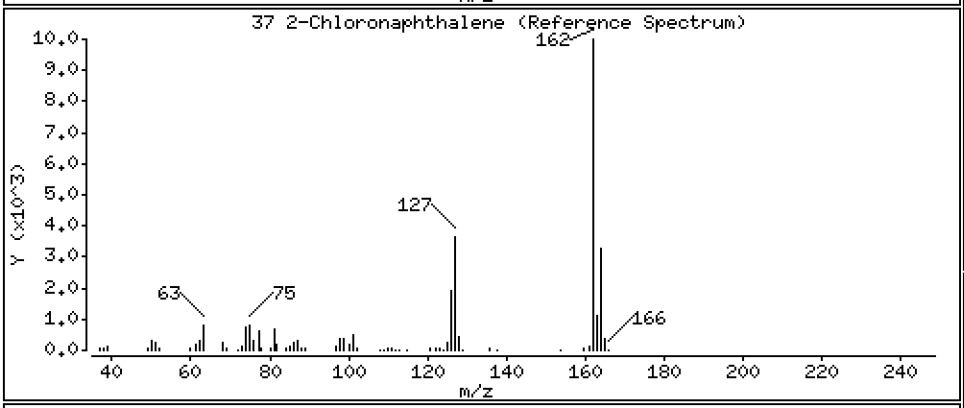
Concentration: 4.977 ug/mL

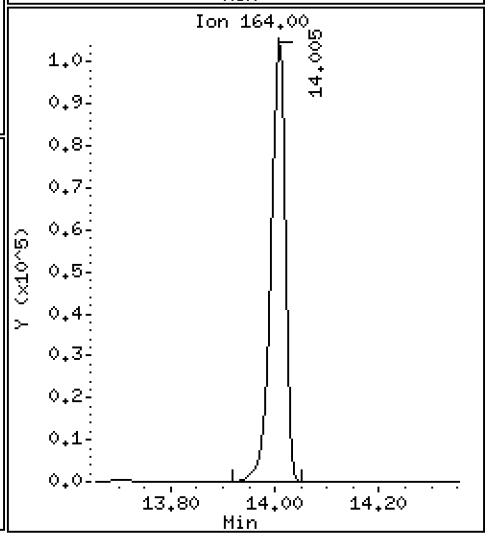


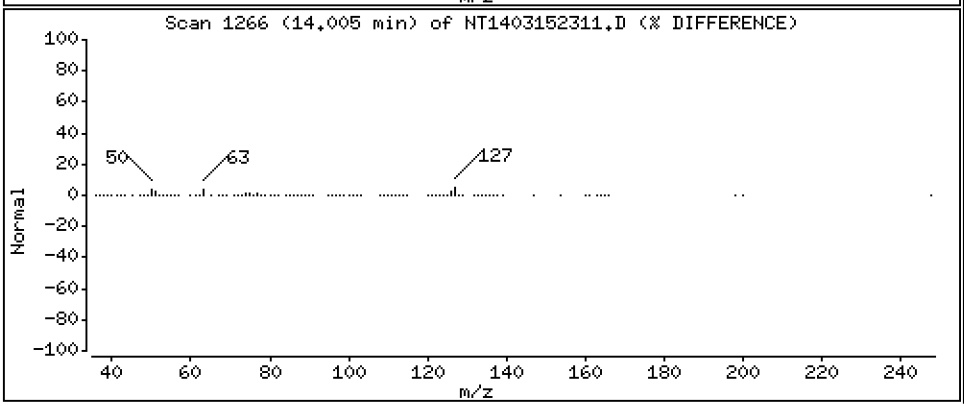












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

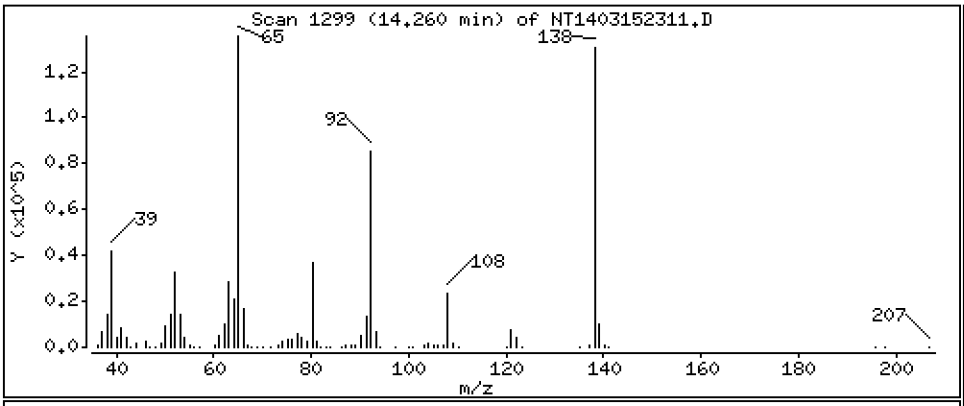
Operator: JGR

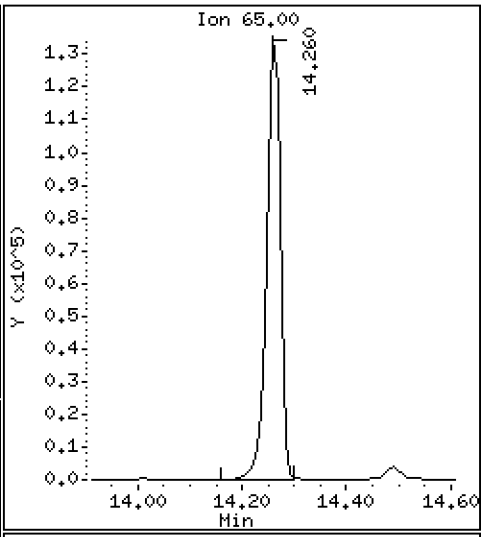
Column phase: ZB-5msi

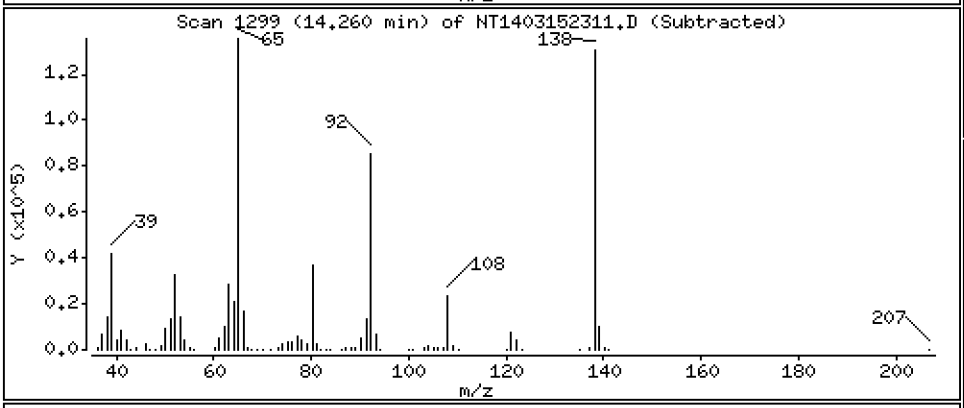
Column diameter: 0.25

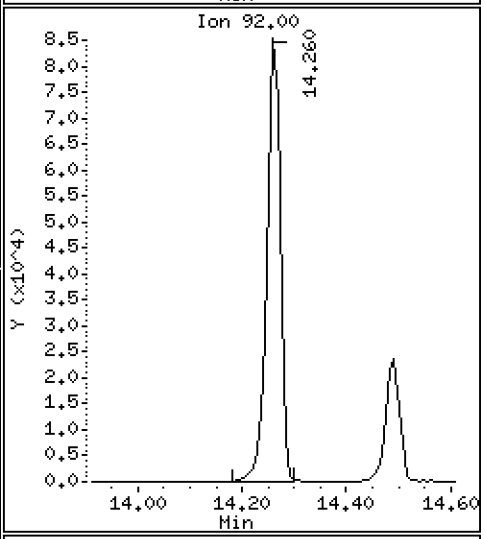
38 2-Nitroaniline

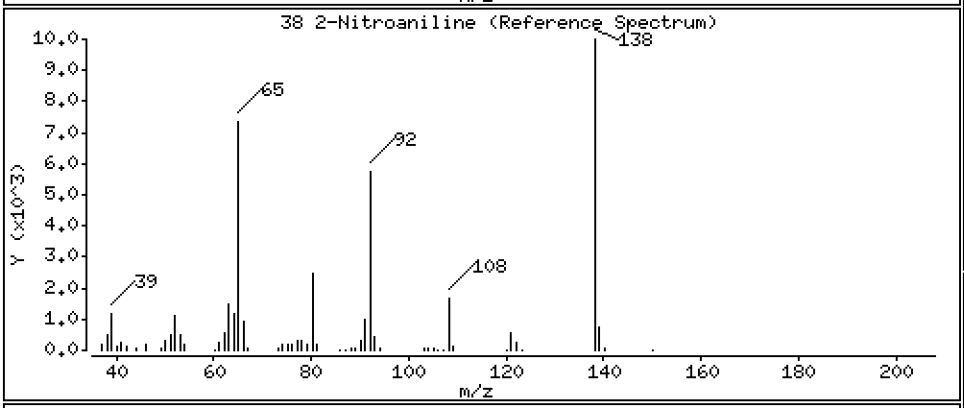
Concentration: 5.100 ug/mL

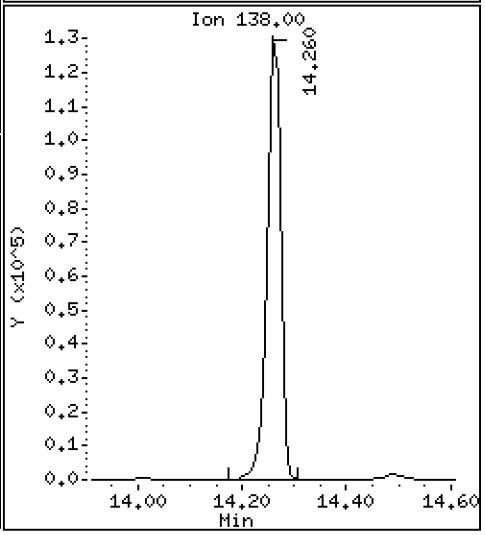


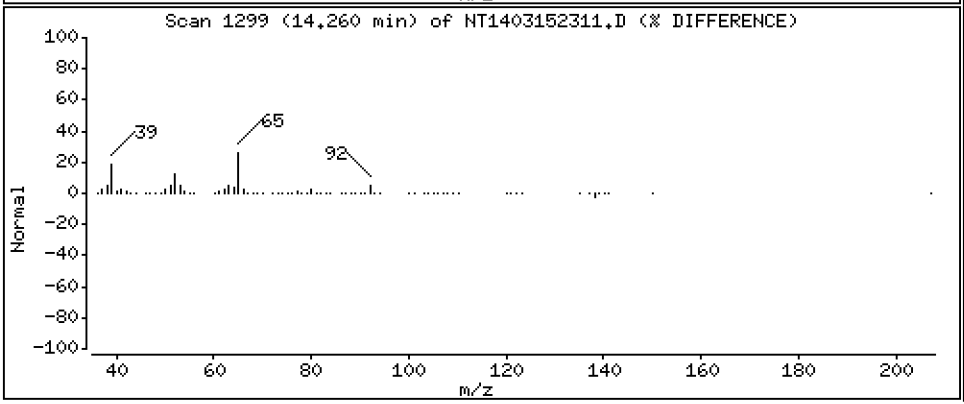












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

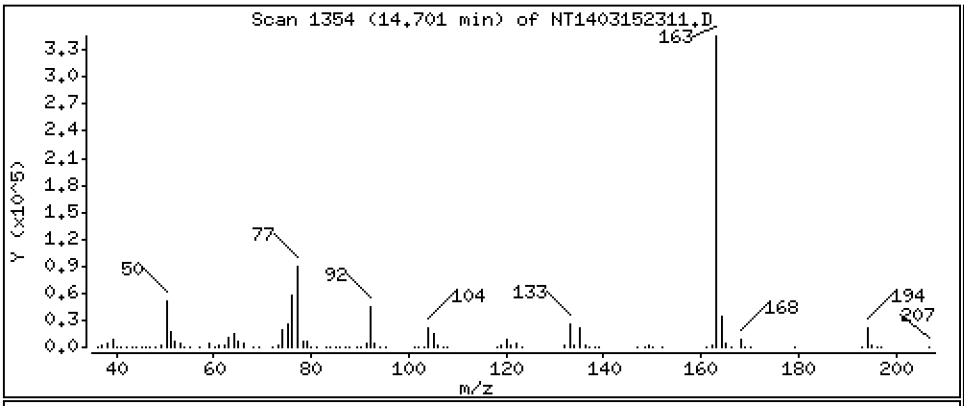
Operator: JGR

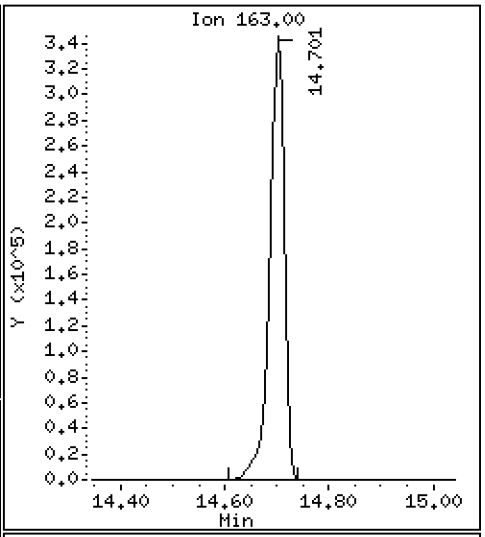
Column phase: ZB-5msi

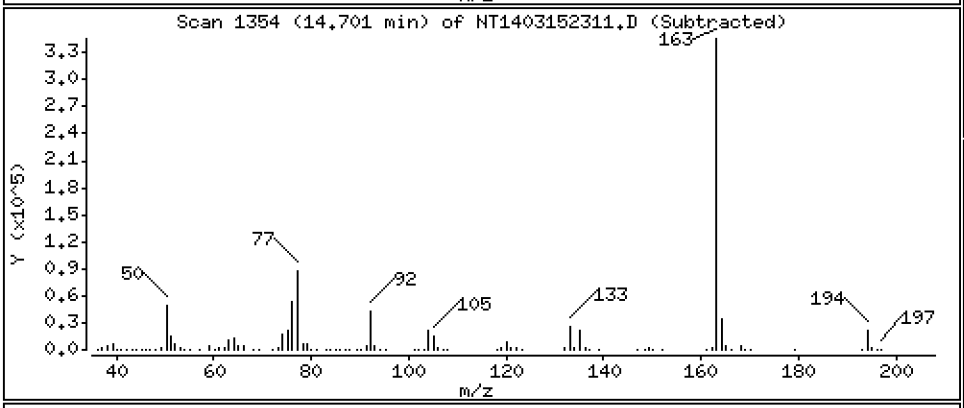
Column diameter: 0.25

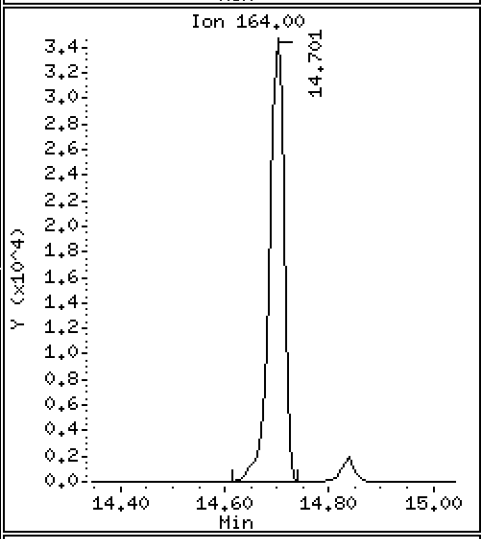
39 Dimethylphthalate

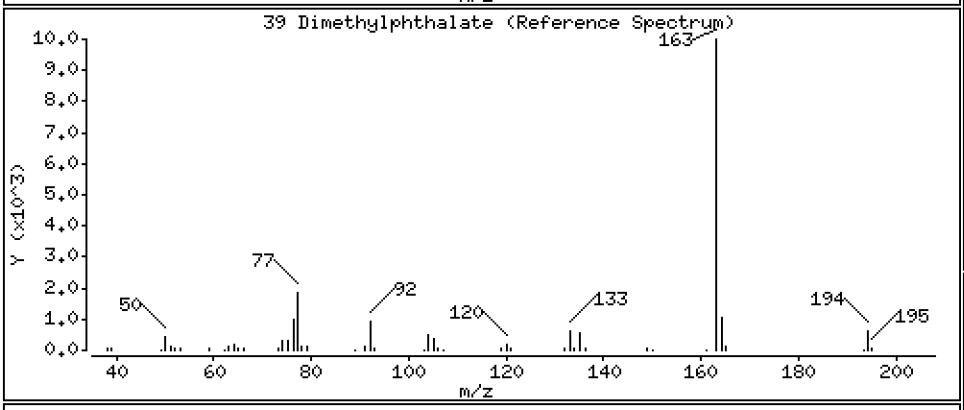
Concentration: 5.031 ug/mL

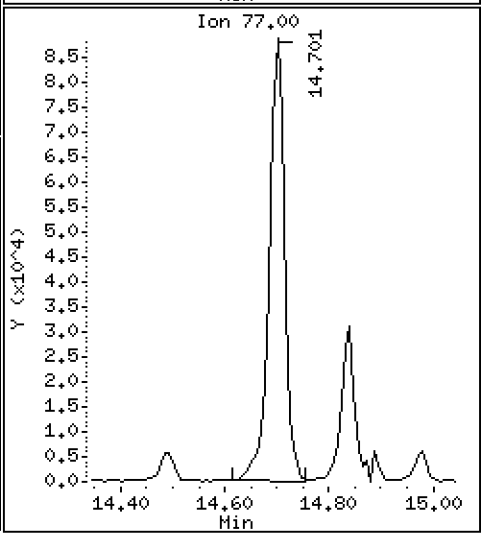


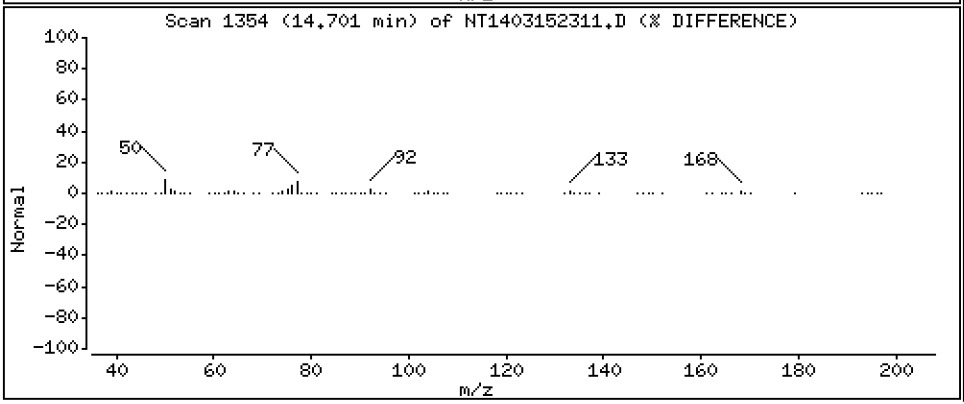












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

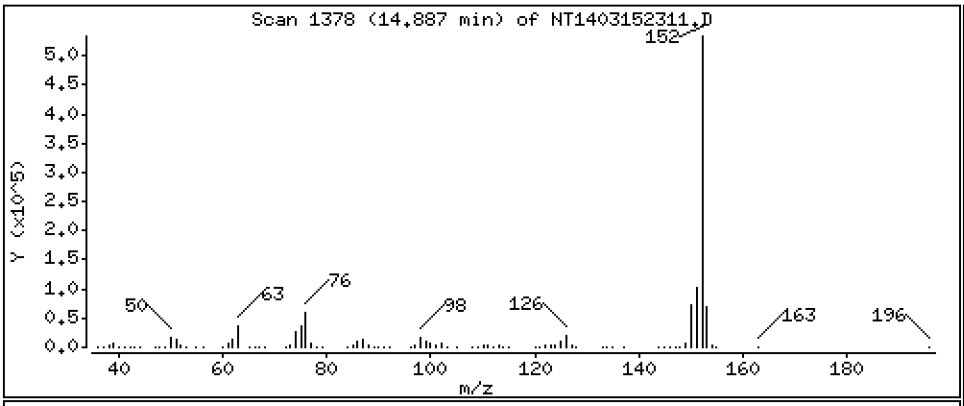
Operator: JGR

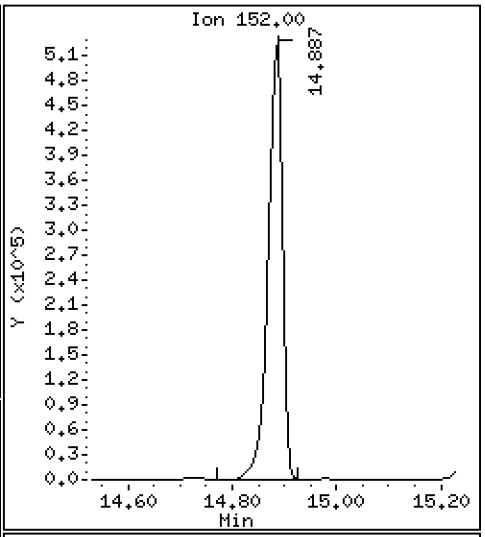
Column phase: ZB-5msi

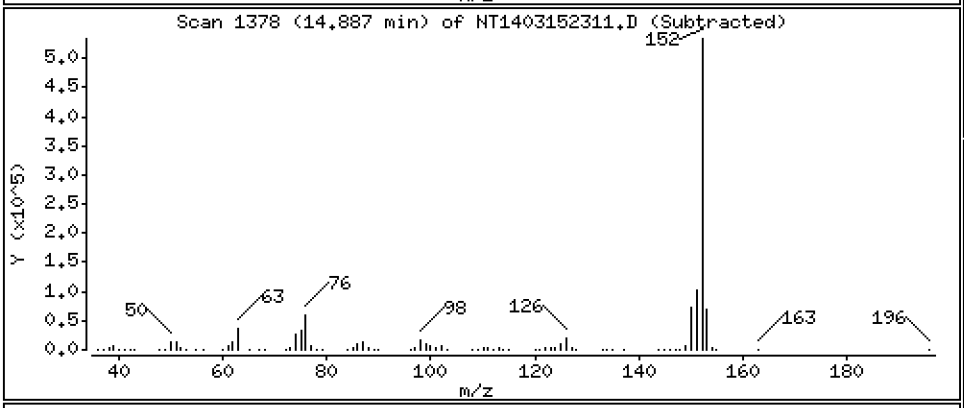
Column diameter: 0.25

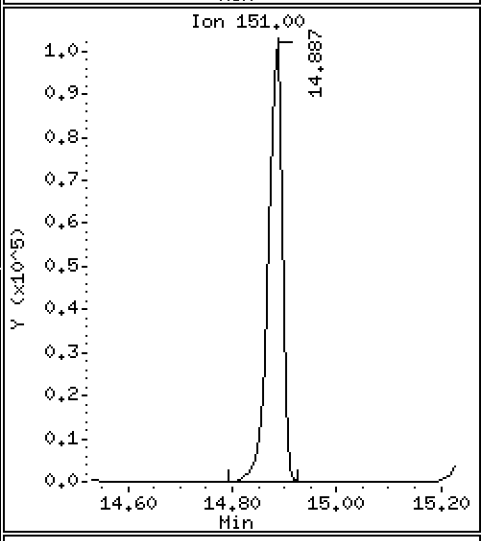
40 Acenaphthylene

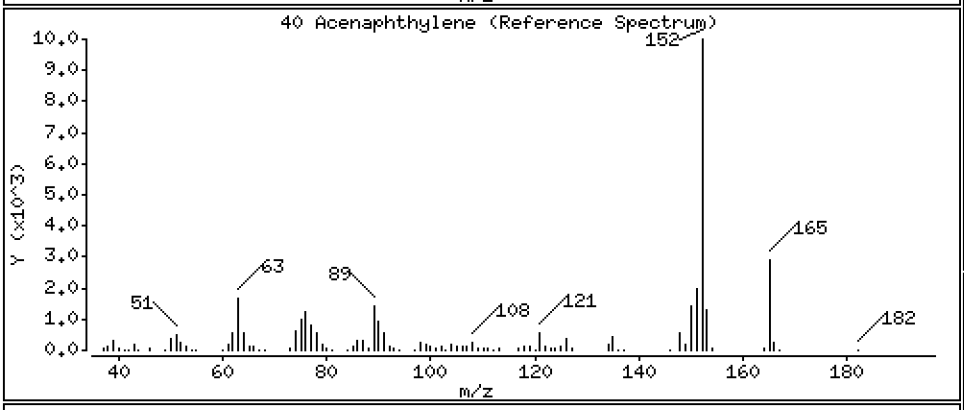
Concentration: 4.879 ug/mL

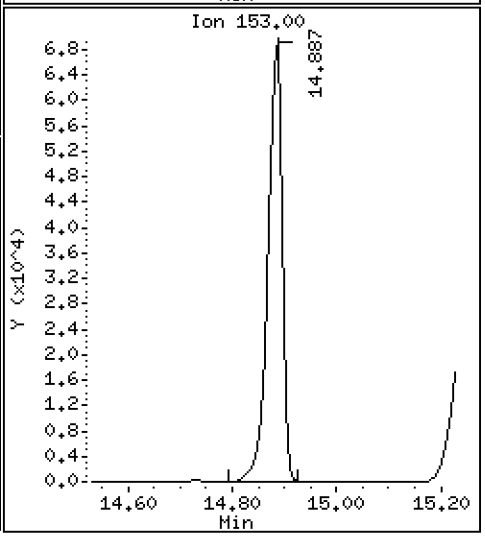


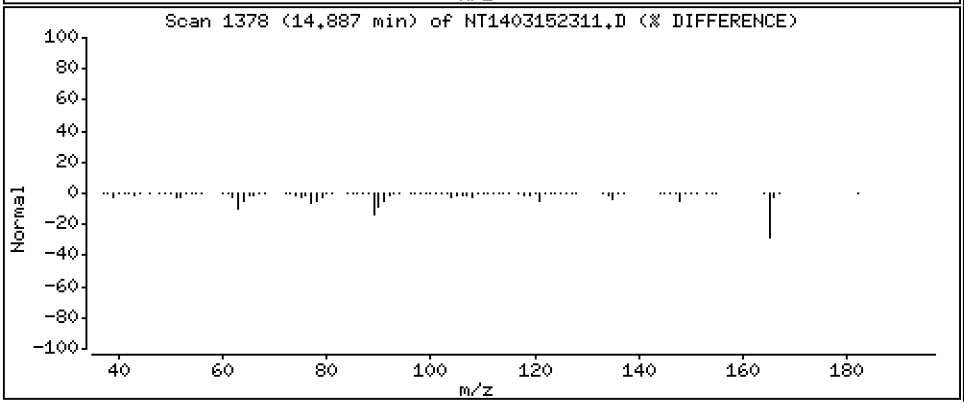












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

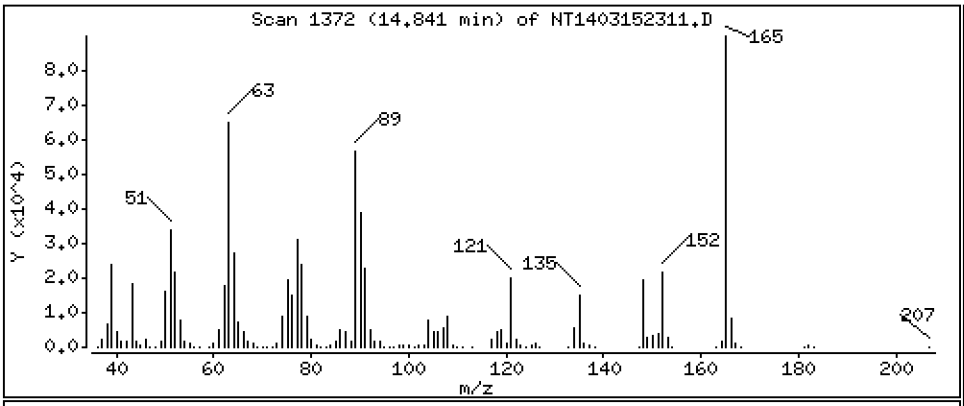
Operator: JGR

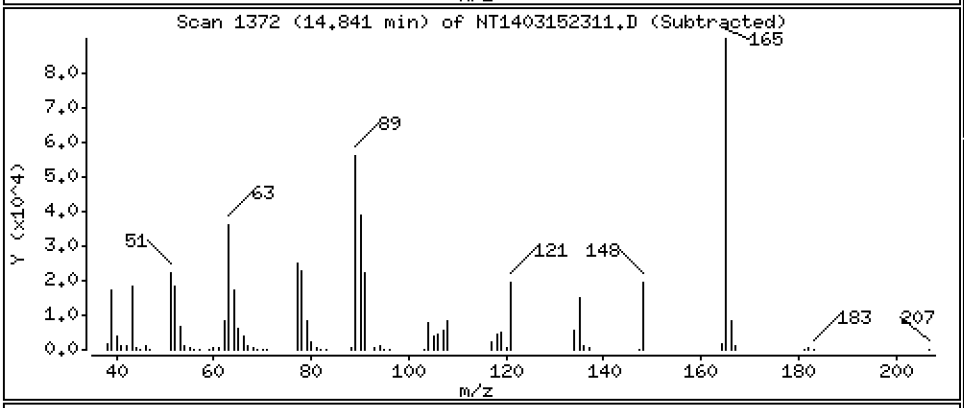
Column phase: ZB-5msi

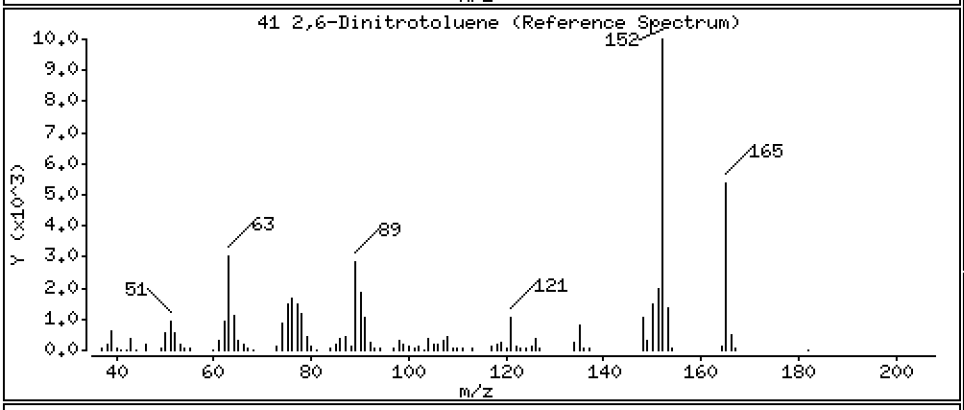
Column diameter: 0.25

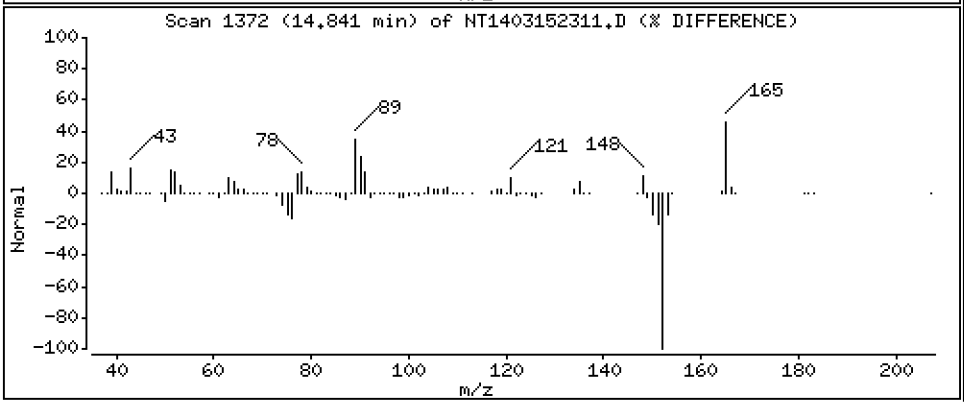
41 2,6-Dinitrotoluene

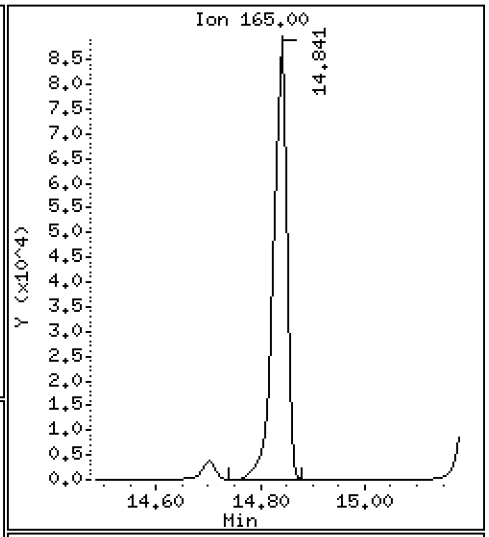
Concentration: 5.219 ug/mL

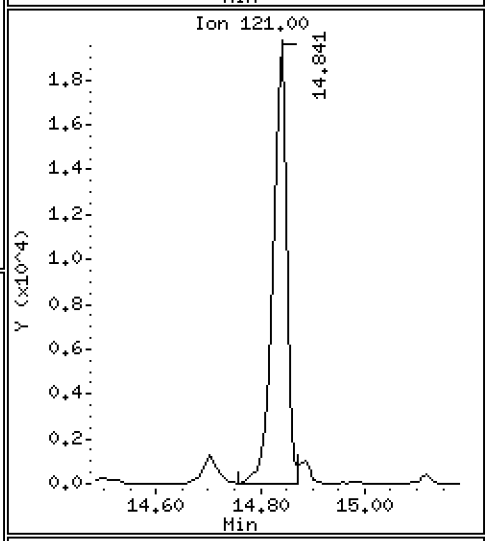


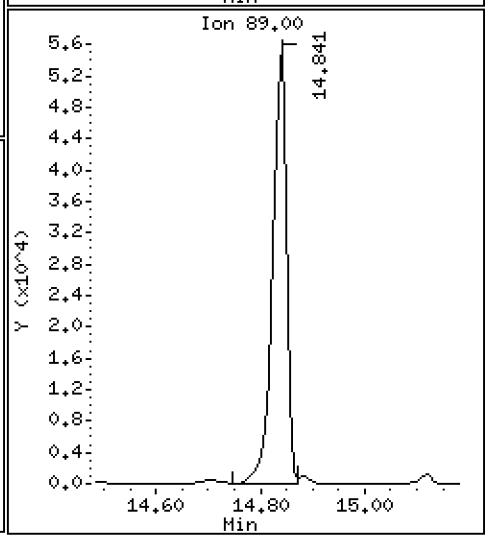












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

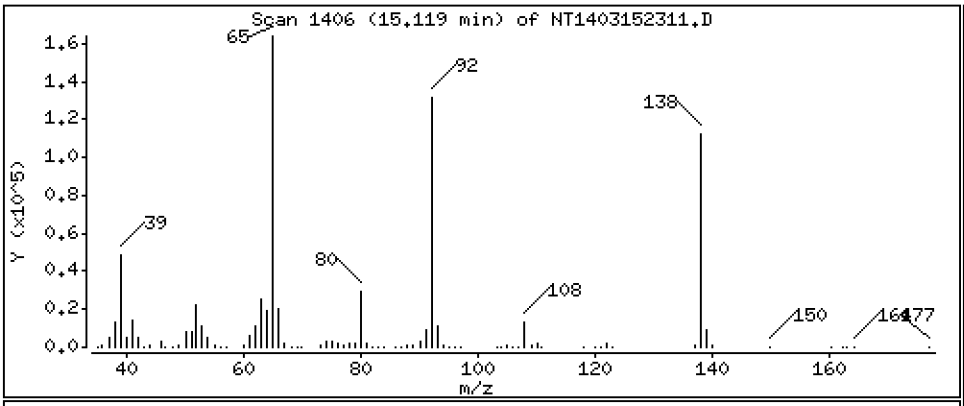
Operator: JGR

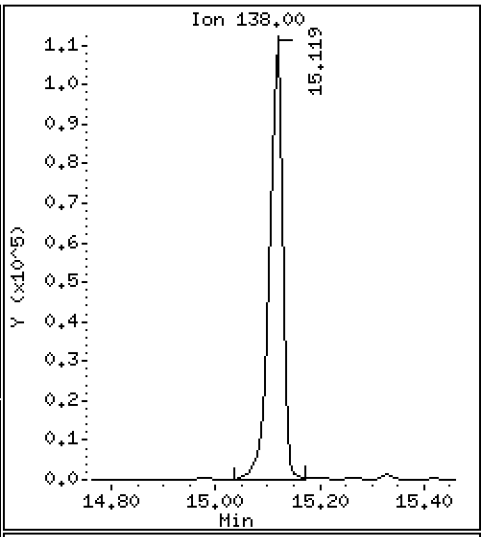
Column phase: ZB-5msi

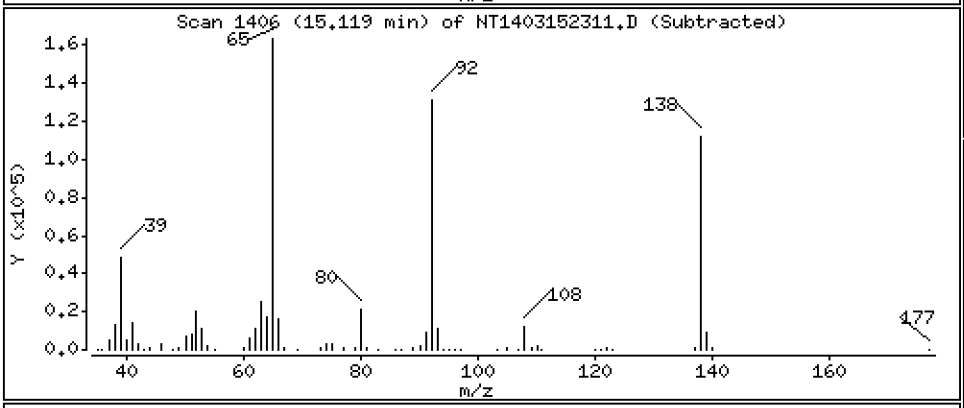
Column diameter: 0.25

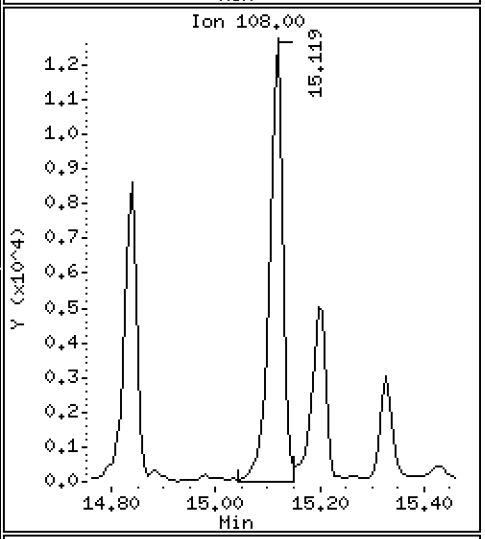
43 3-Nitroaniline

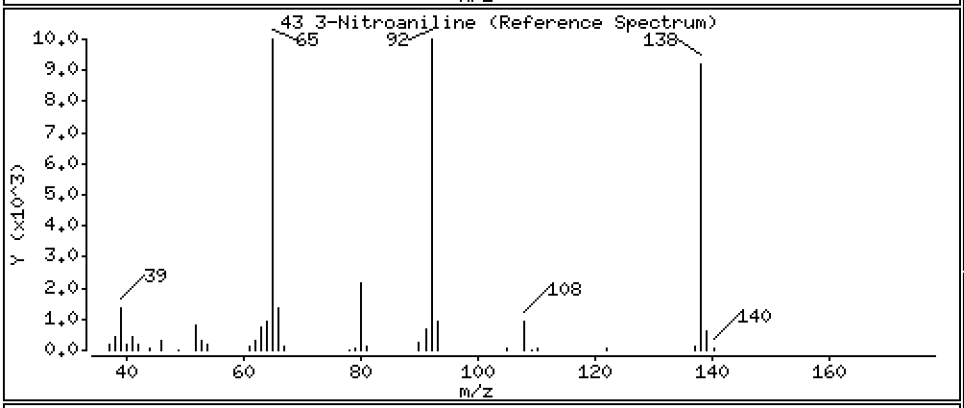
Concentration: 5.210 ug/mL

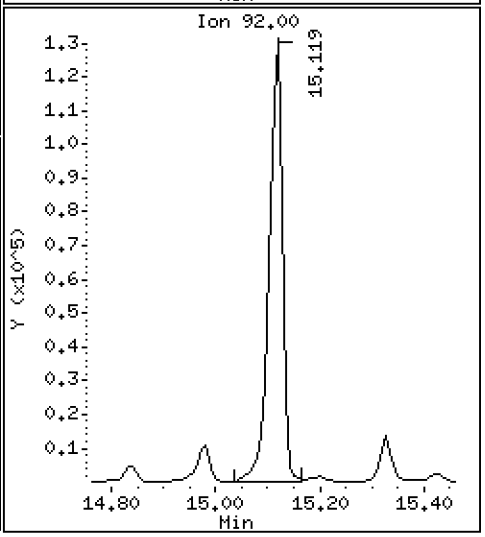


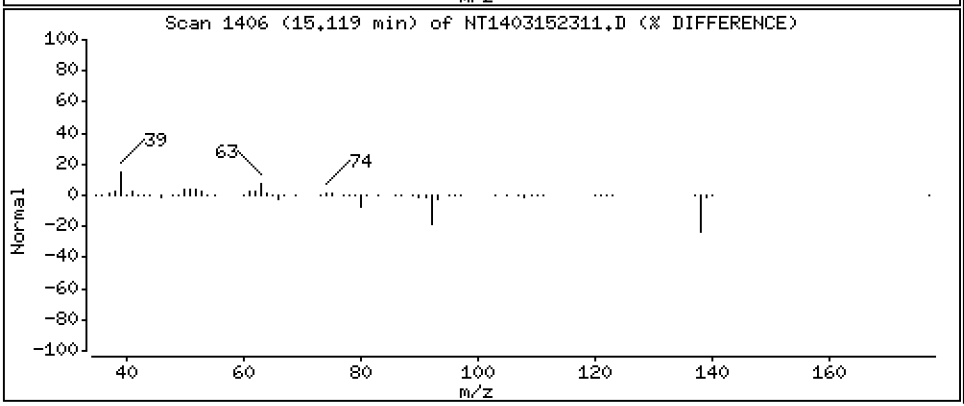












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

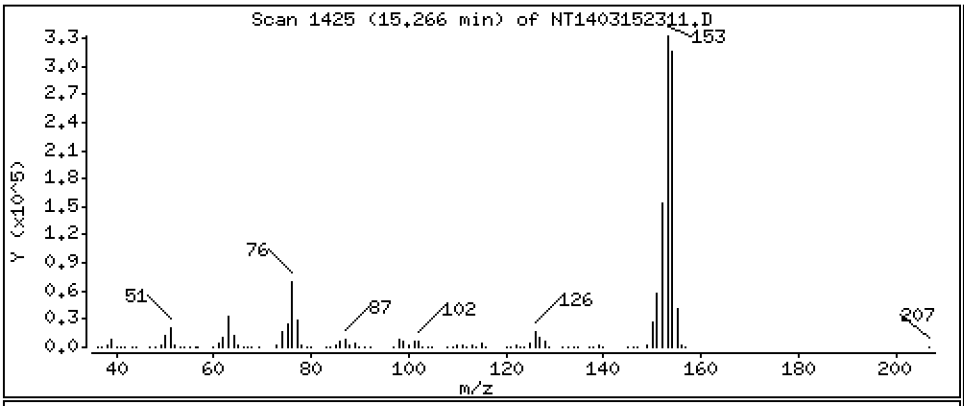
Operator: JGR

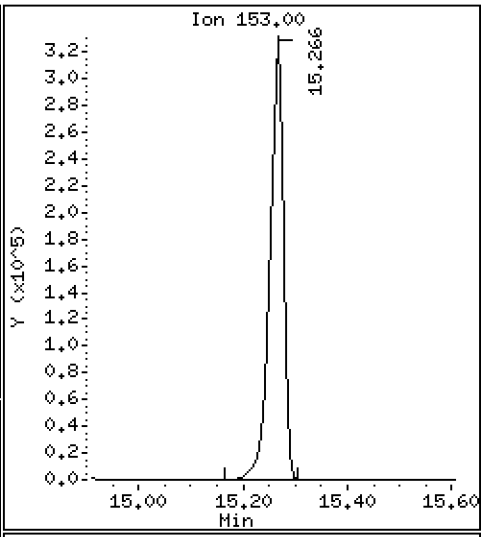
Column phase: ZB-5msi

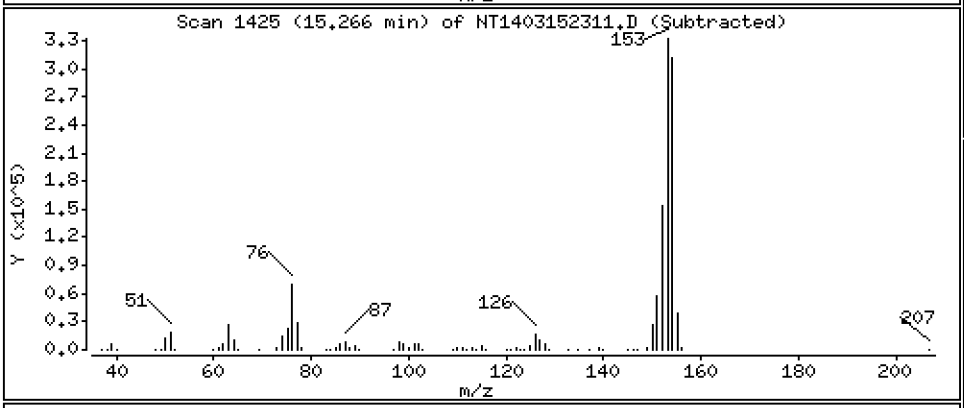
Column diameter: 0.25

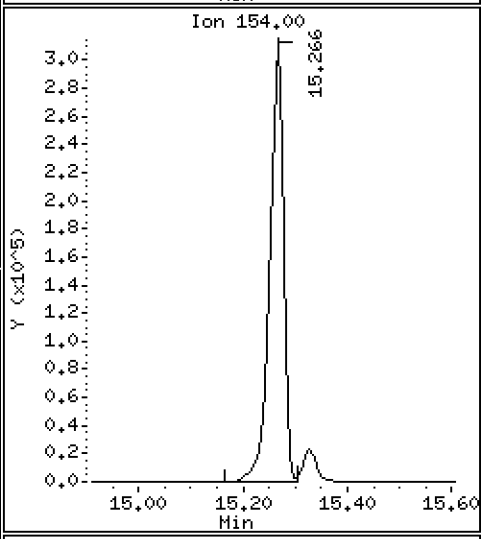
44 Acenaphthene

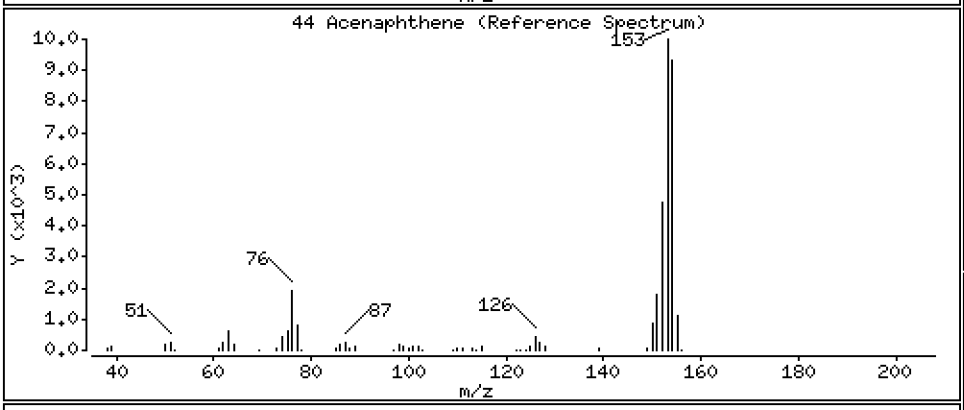
Concentration: 4.965 ug/mL

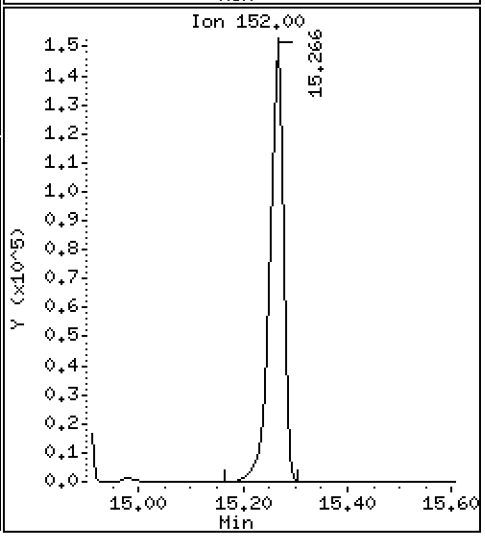


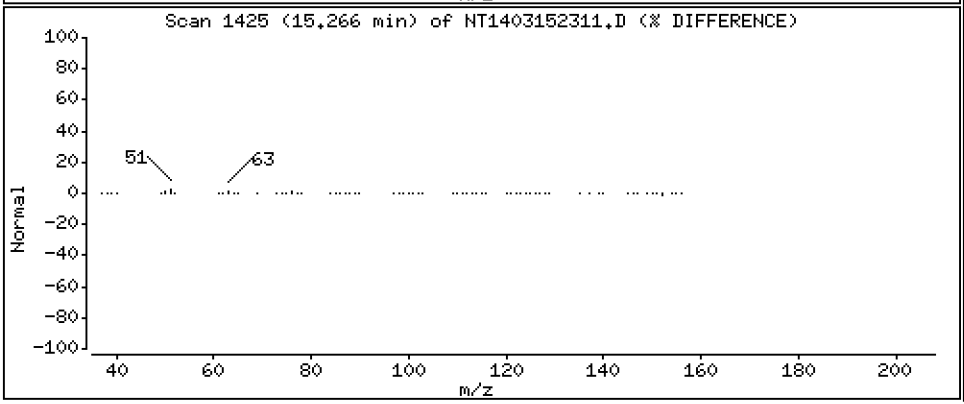












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

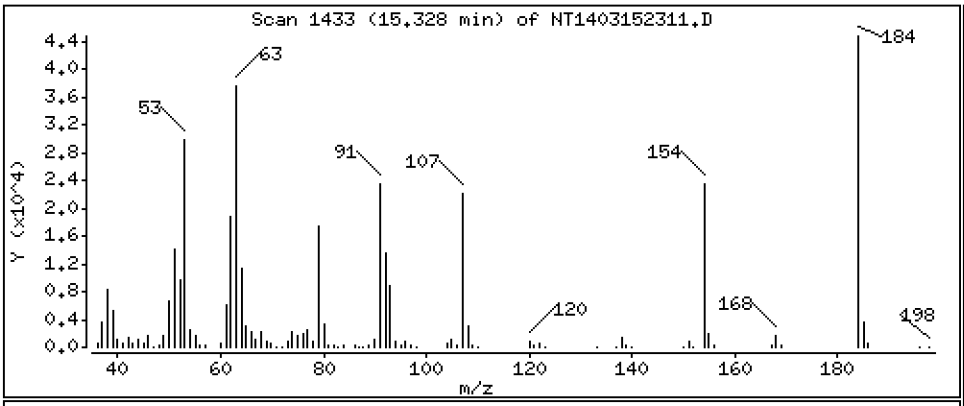
Operator: JGR

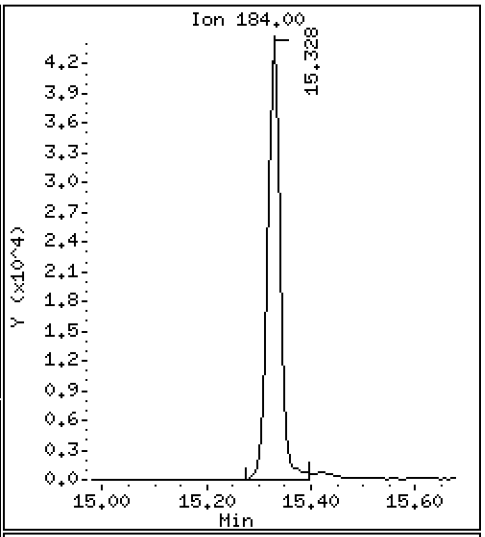
Column phase: ZB-5msi

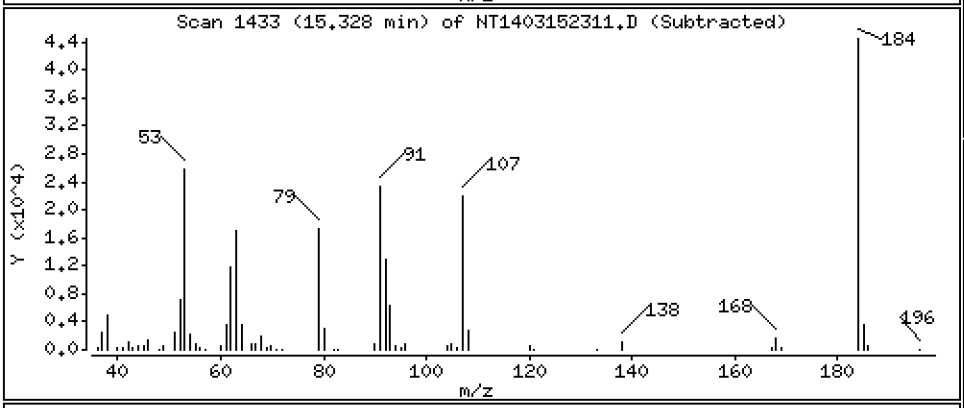
Column diameter: 0.25

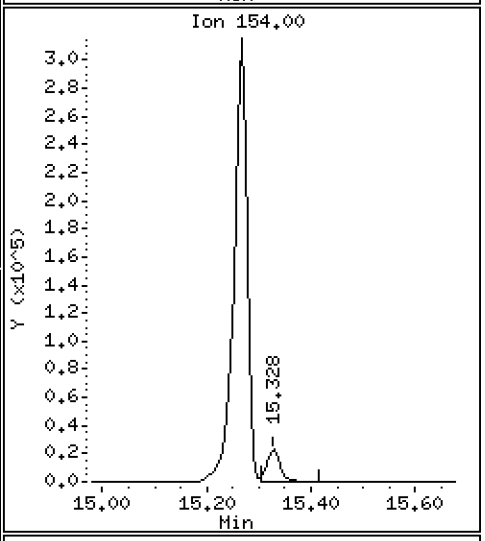
45 2,4-Dinitrophenol

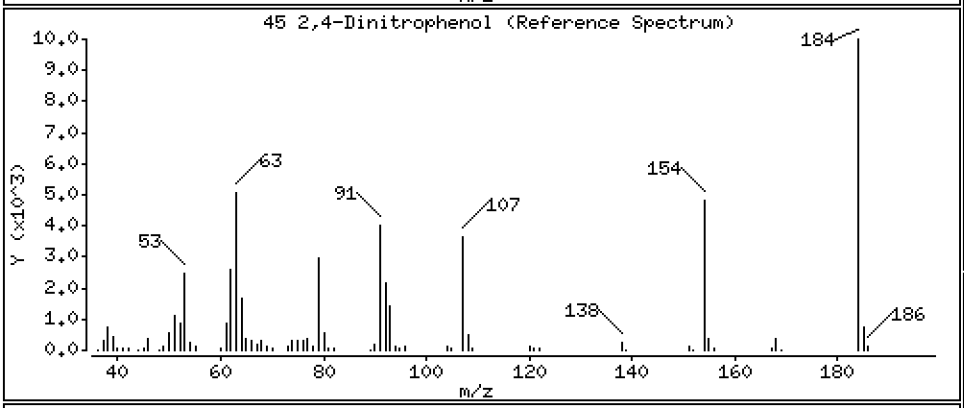
Concentration: 3.077 ug/mL

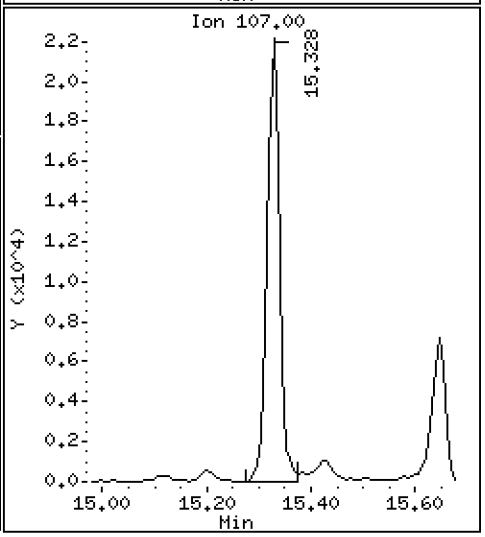


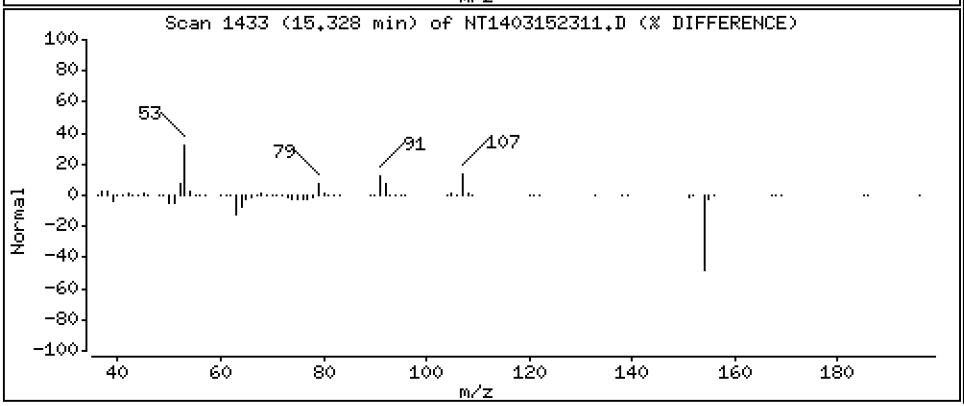












Data File: \\target\share\chem3\nt14.i\20230315.b\NT1403152311.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

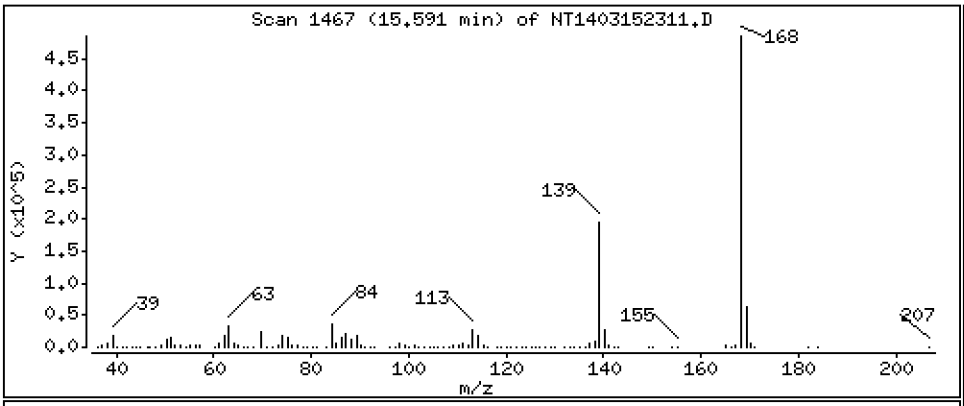
Operator: JGR

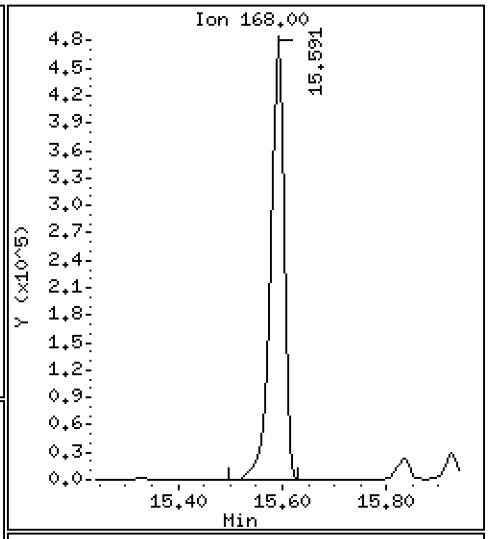
Column phase: ZB-5msi

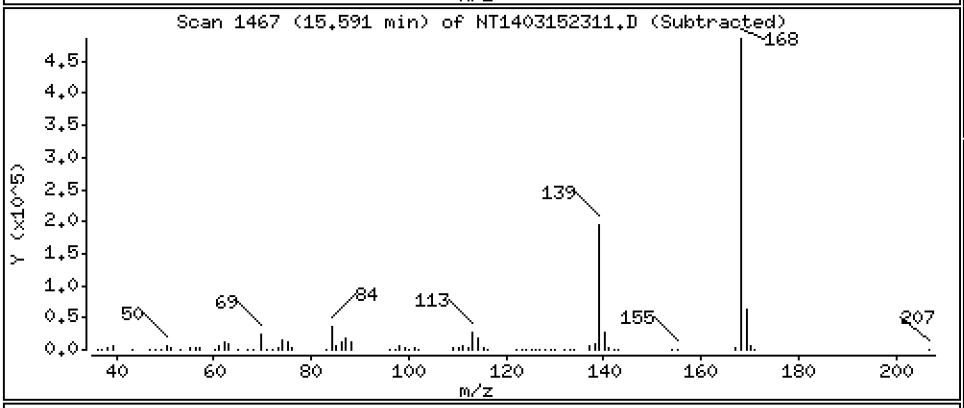
Column diameter: 0.25

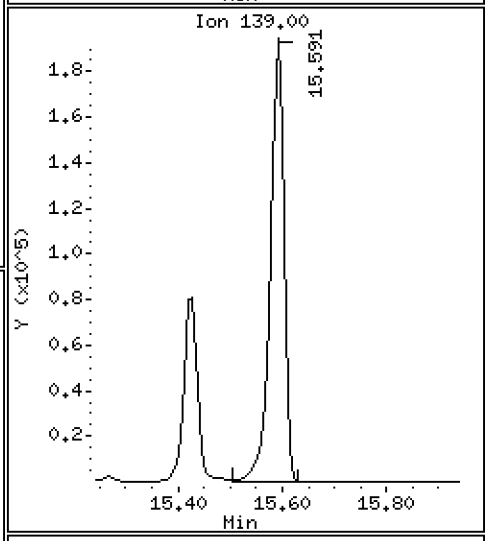
46 Dibenzofuran

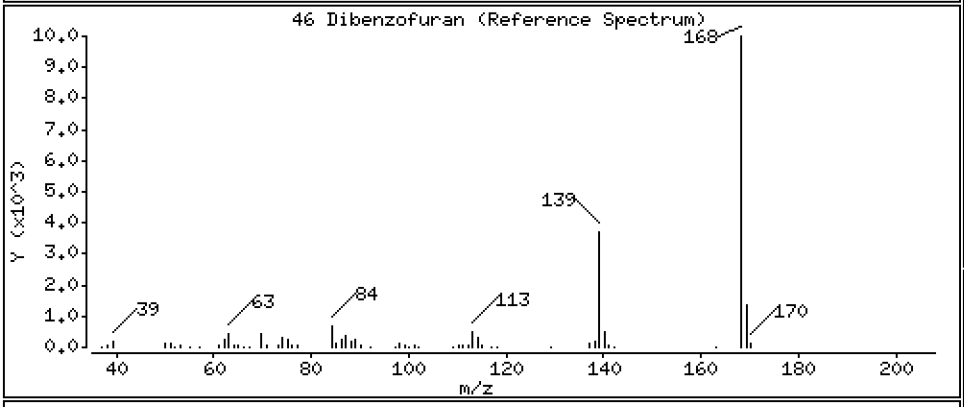
Concentration: 4.956 ug/mL

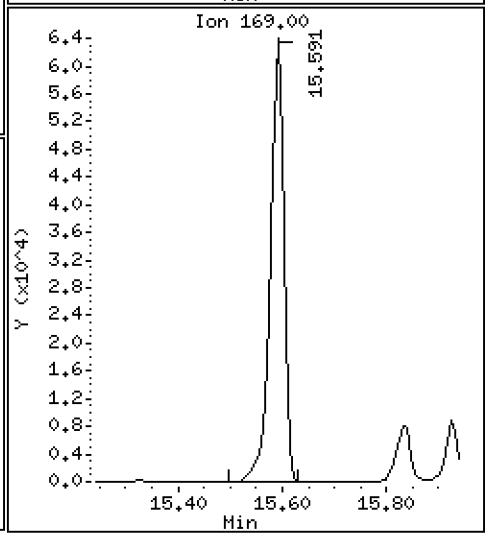


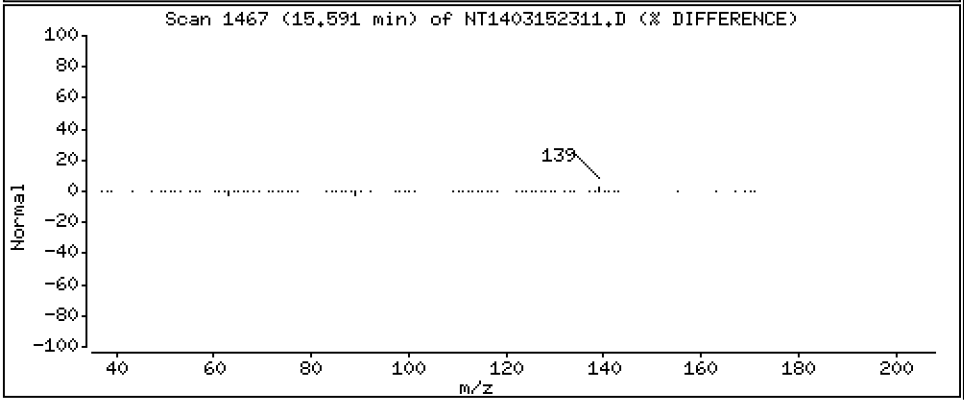












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

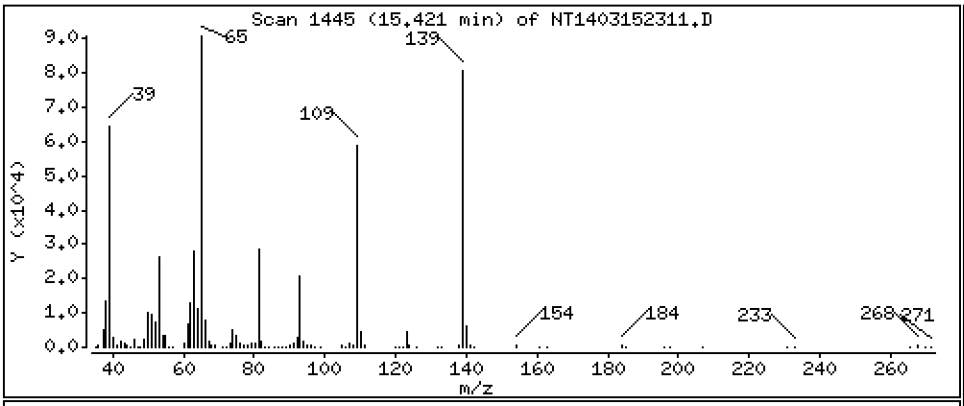
Operator: JGR

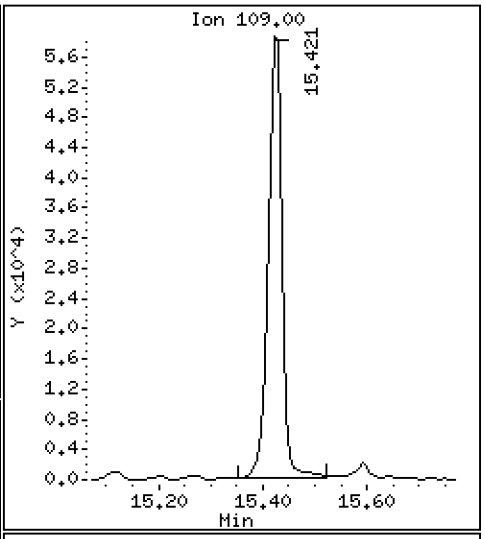
Column phase: ZB-5msi

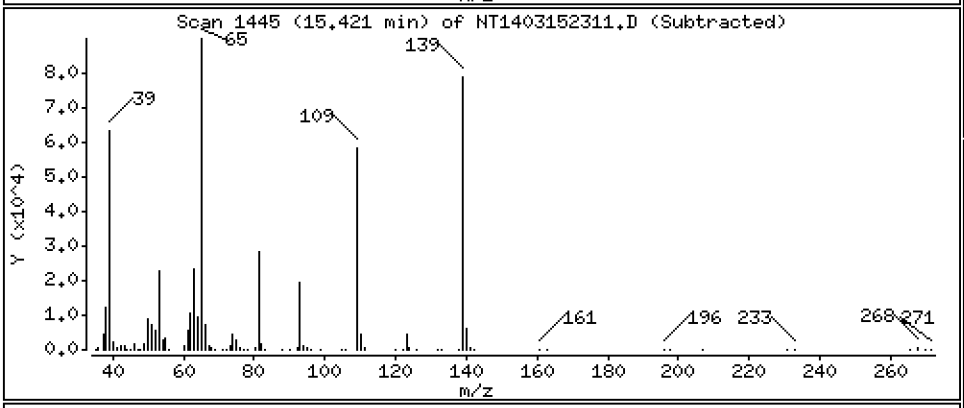
Column diameter: 0.25

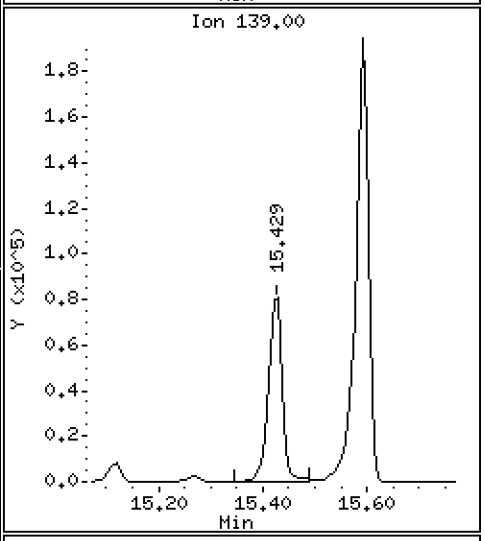
47 4-Nitrophenol

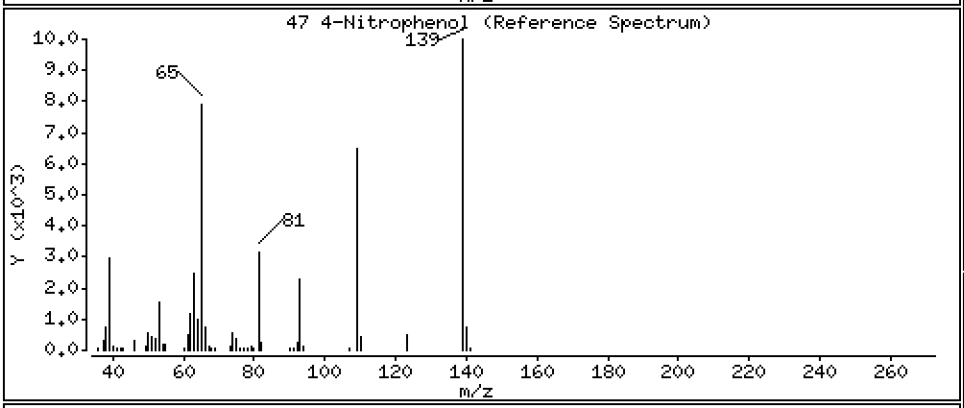
Concentration: 4.828 ug/mL

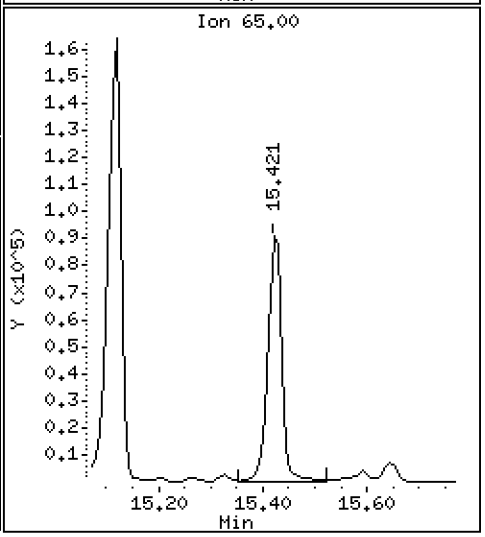


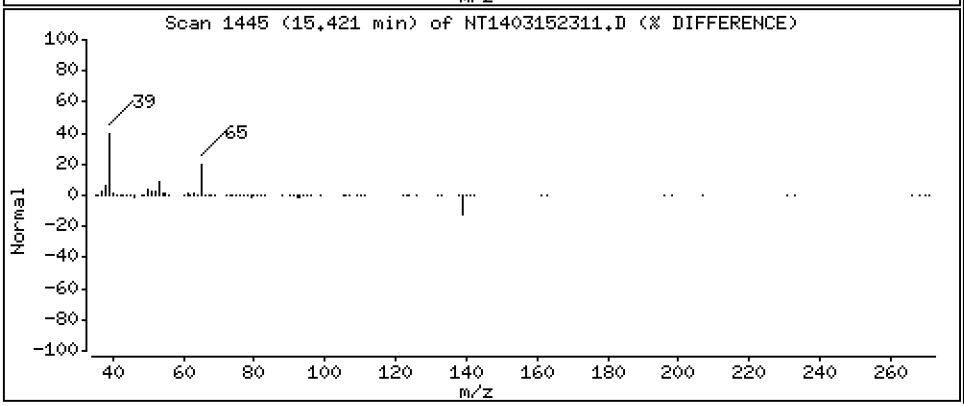












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

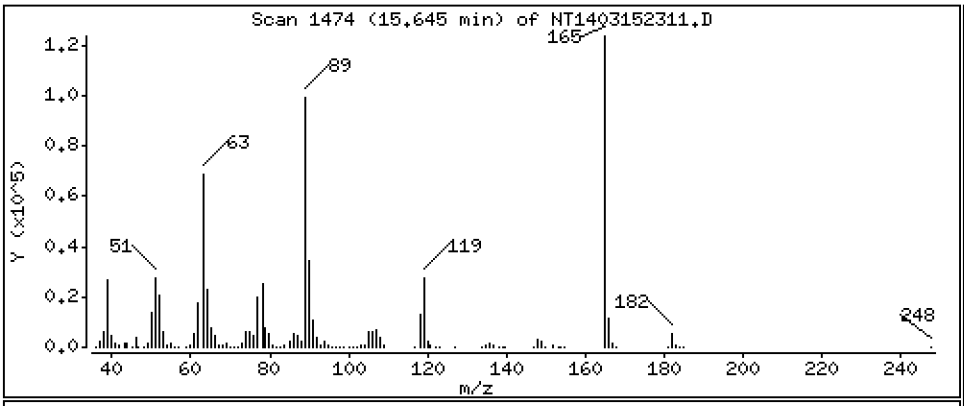
Operator: JGR

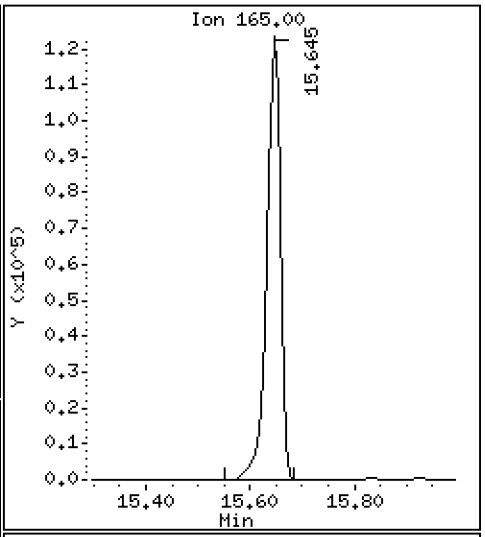
Column phase: ZB-5msi

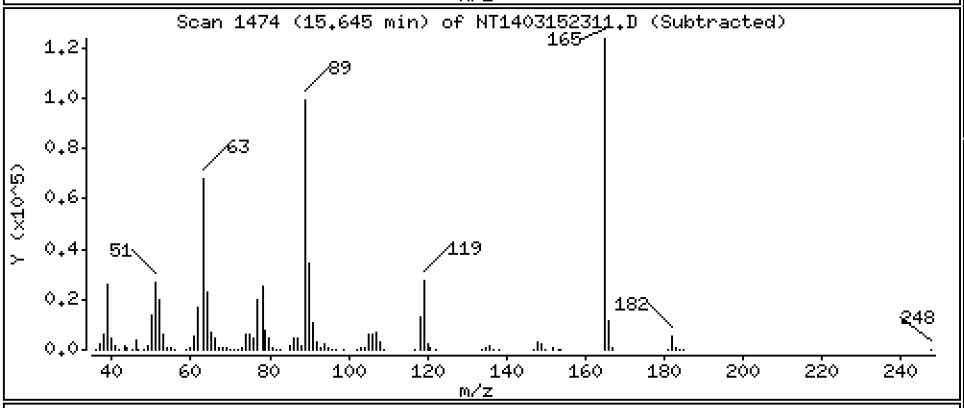
Column diameter: 0.25

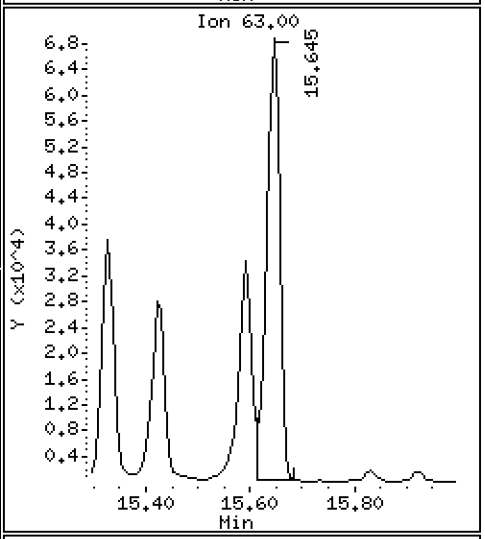
48 2,4-Dinitrotoluene

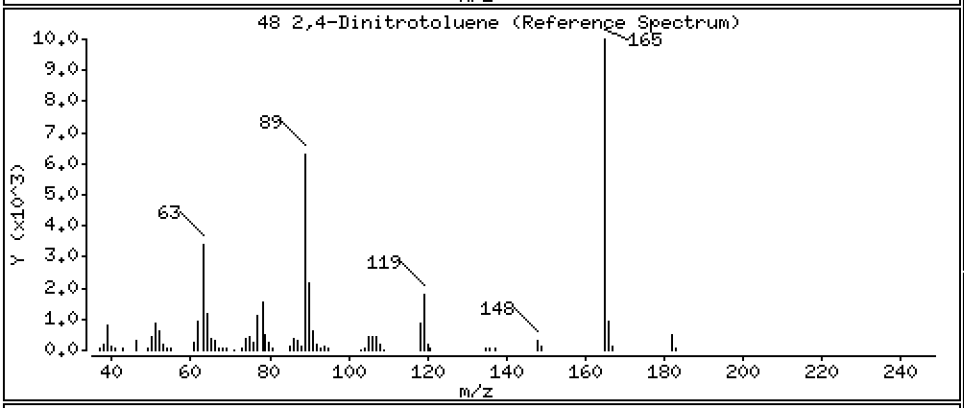
Concentration: 5.119 ug/mL

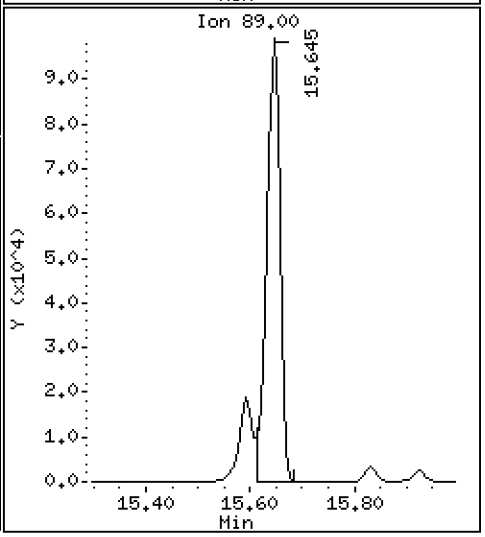


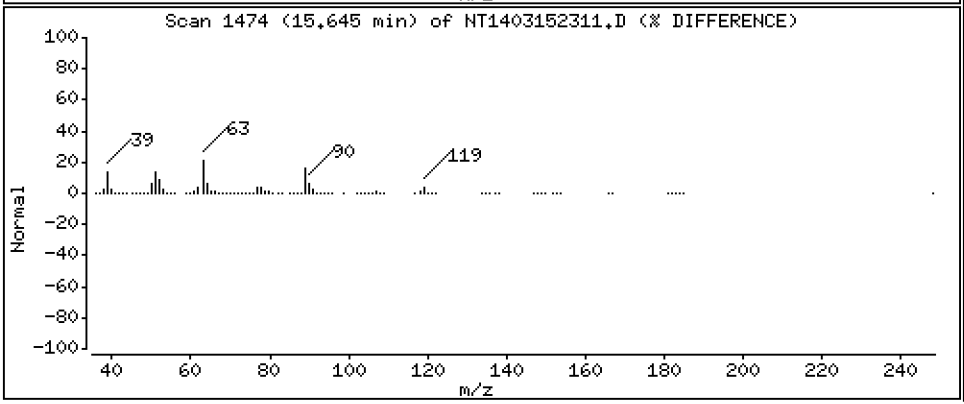












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

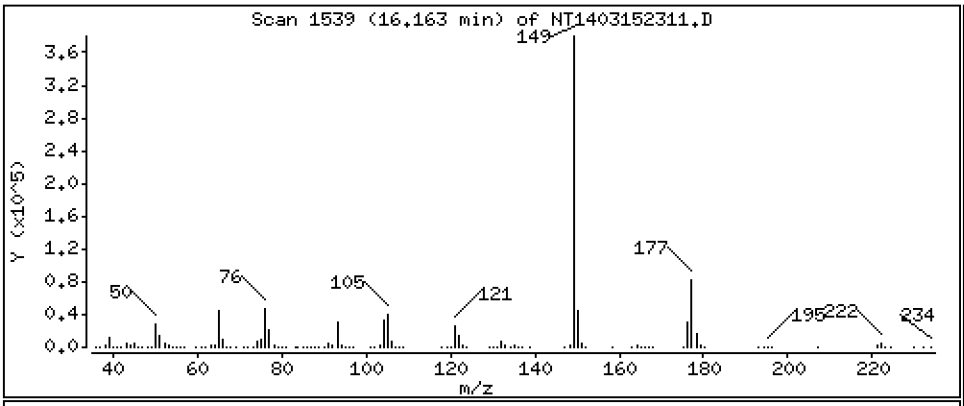
Operator: JGR

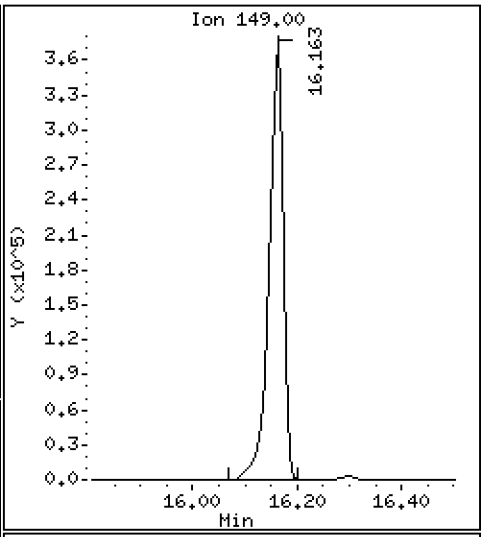
Column phase: ZB-5msi

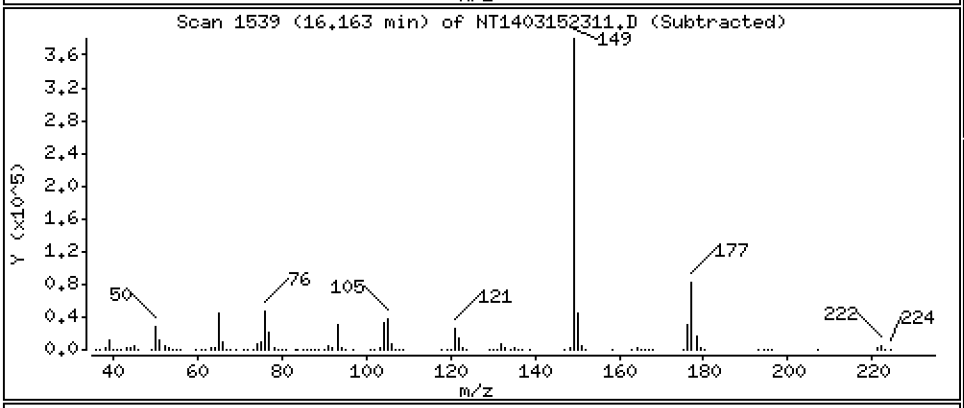
Column diameter: 0.25

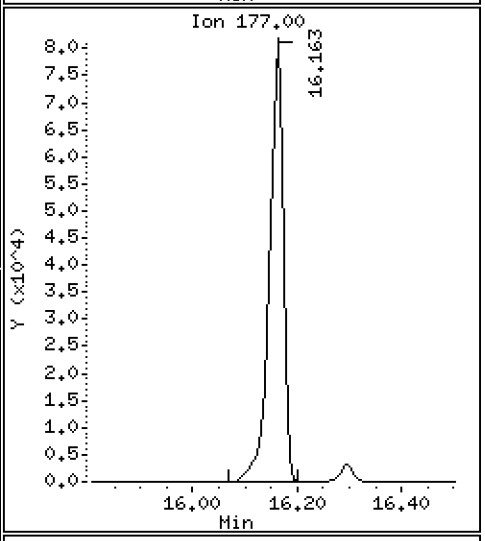
50 Diethylphthalate

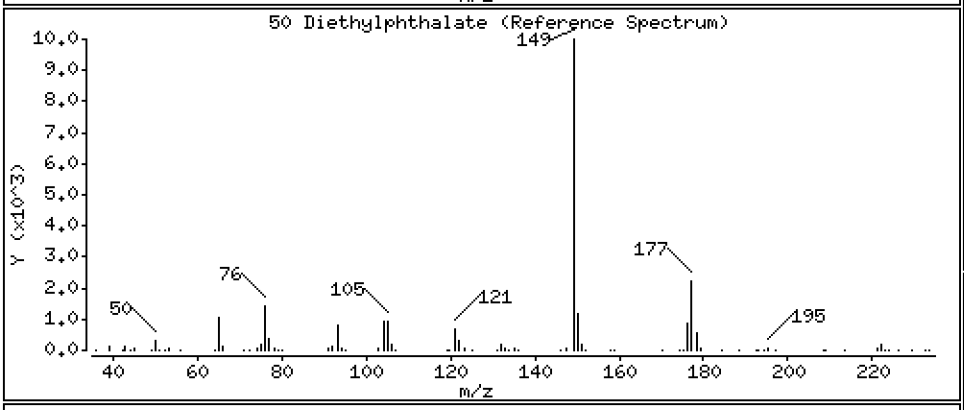
Concentration: 5.203 ug/mL

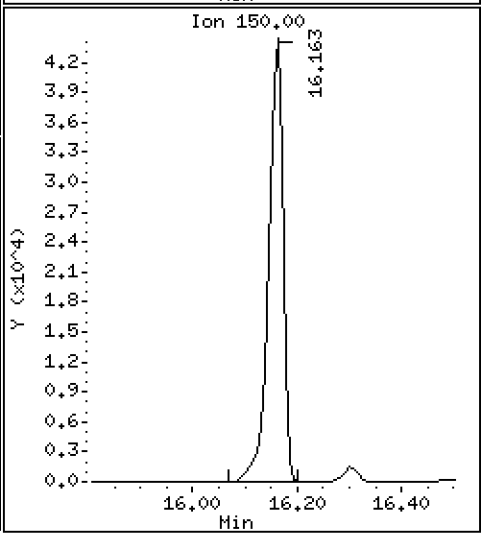


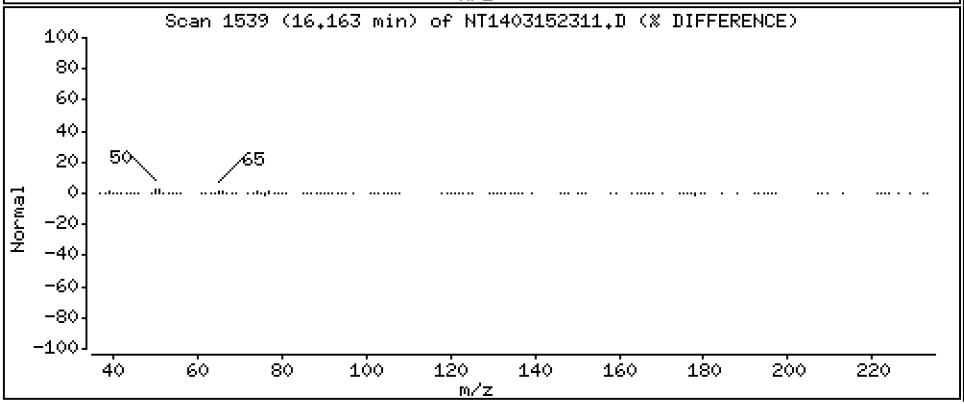












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

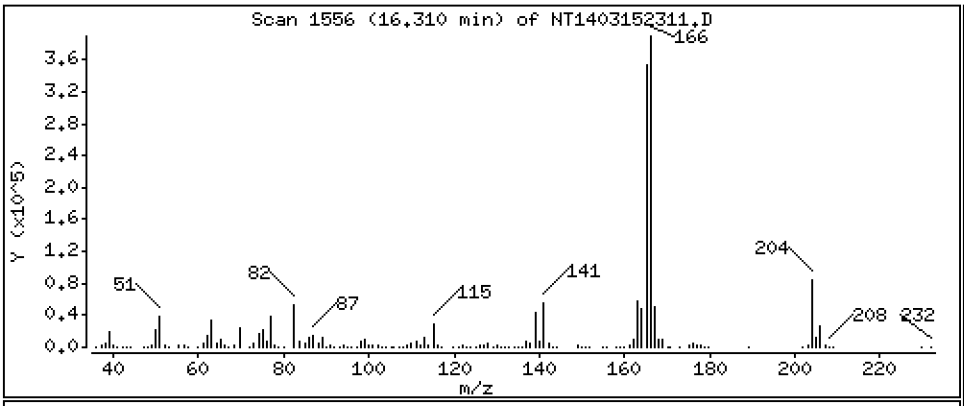
Operator: JGR

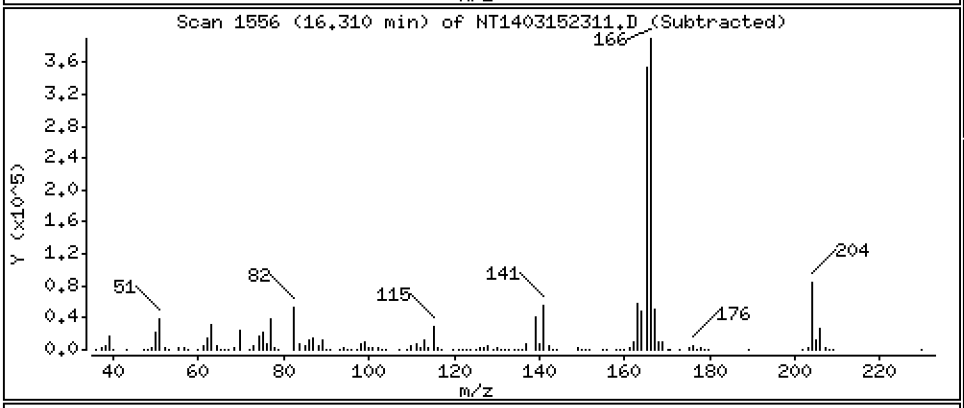
Column phase: ZB-5msi

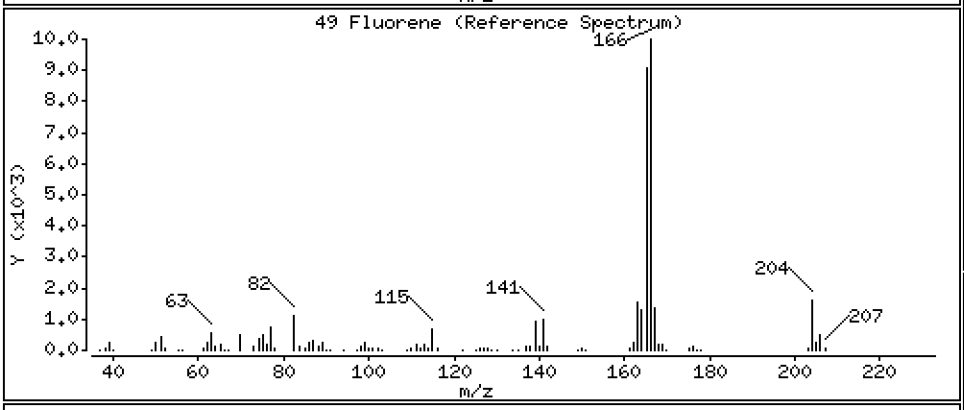
Column diameter: 0.25

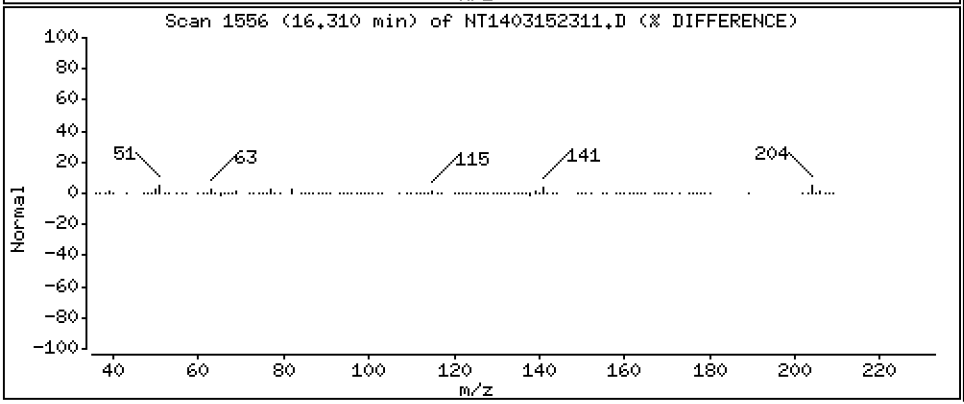
49 Fluorene

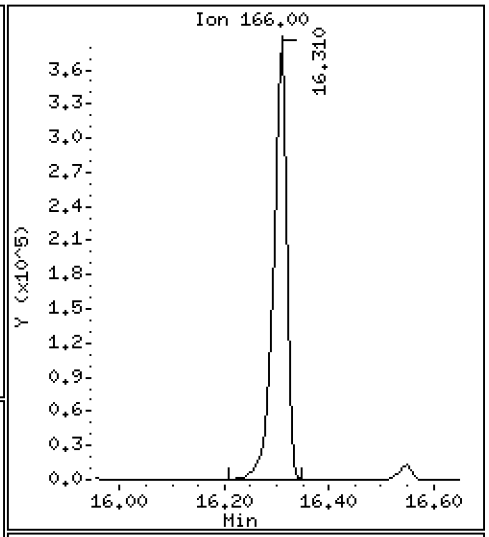
Concentration: 4.844 ug/mL

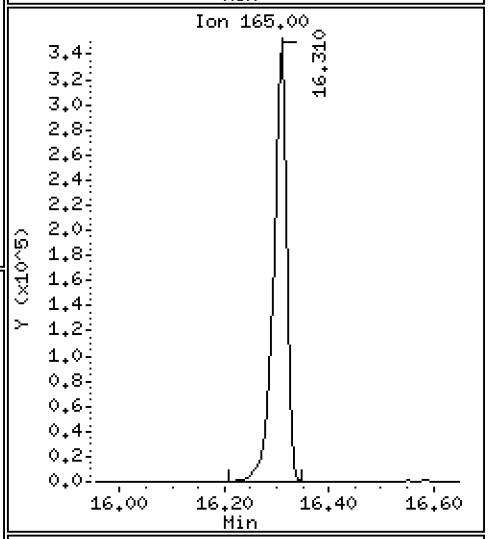


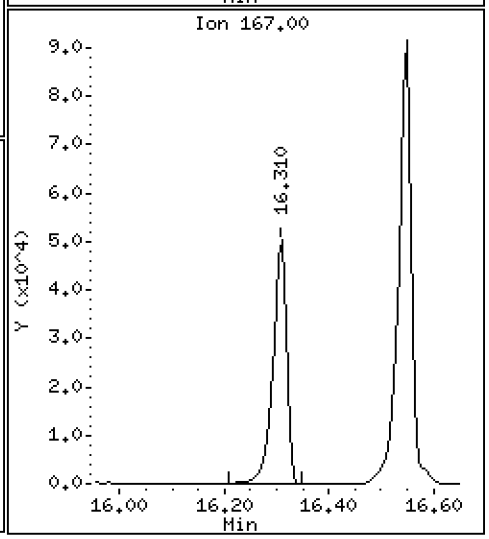












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

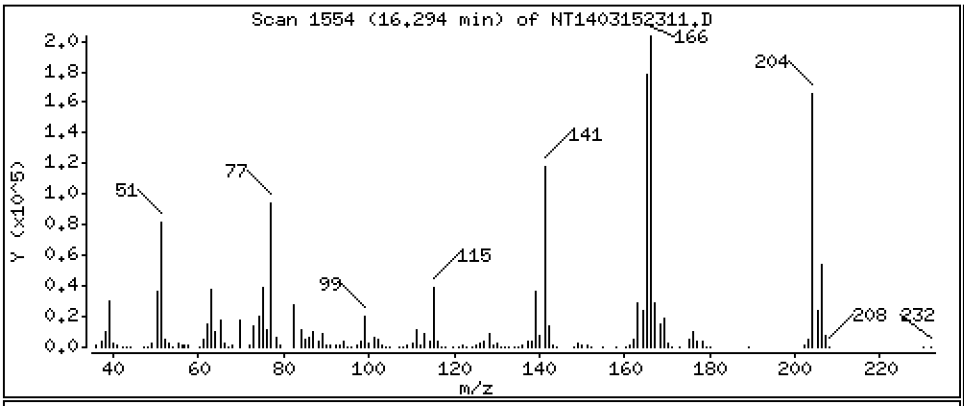
Operator: JGR

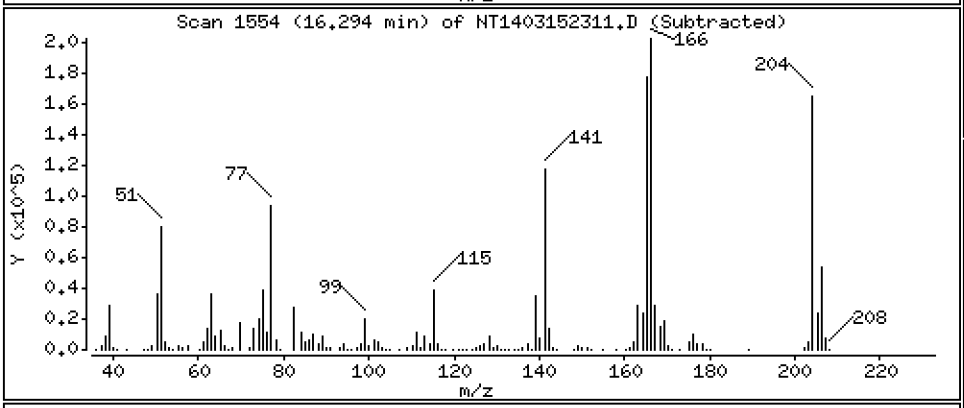
Column phase: ZB-5msi

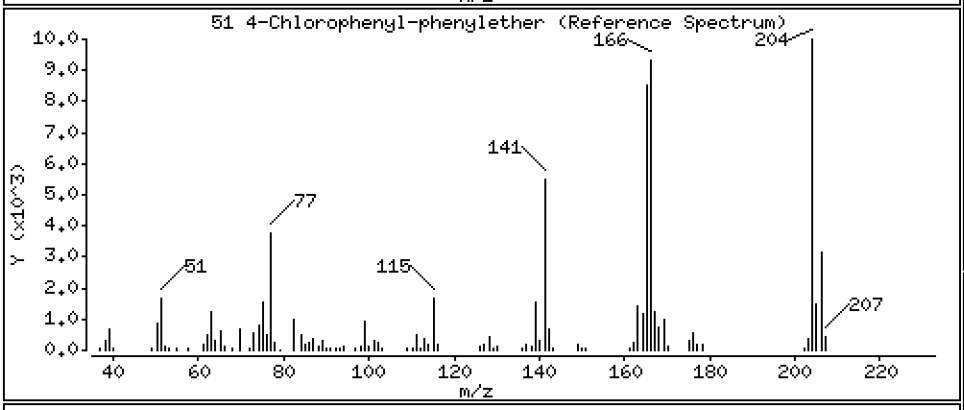
Column diameter: 0.25

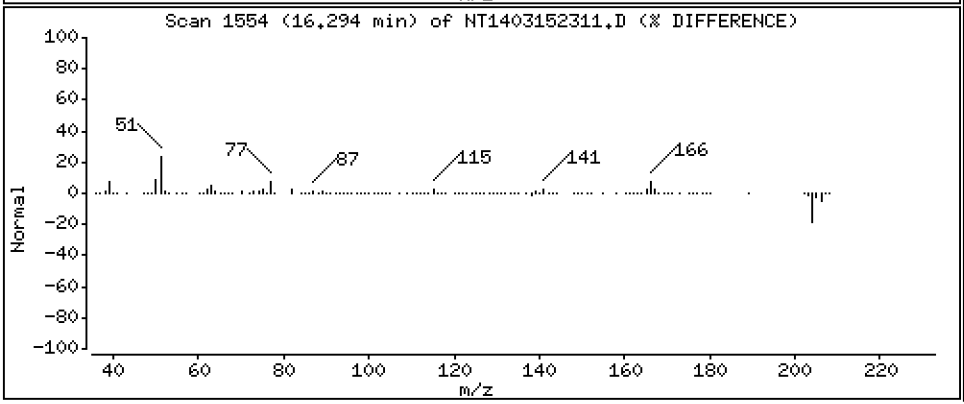
51 4-Chlorophenyl-phenylether

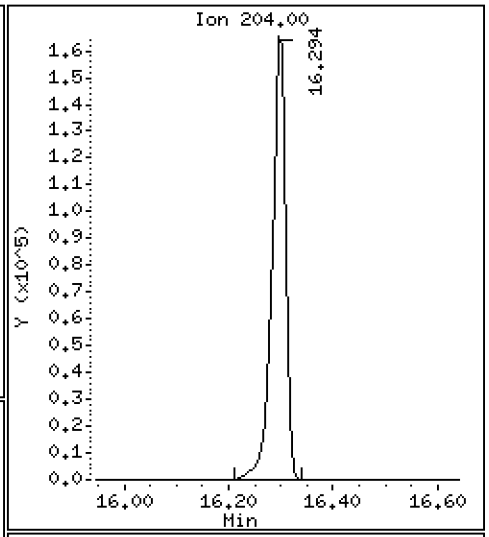
Concentration: 4.985 ug/mL

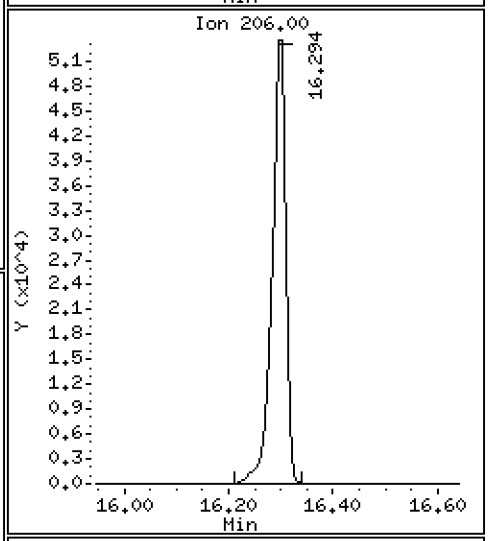


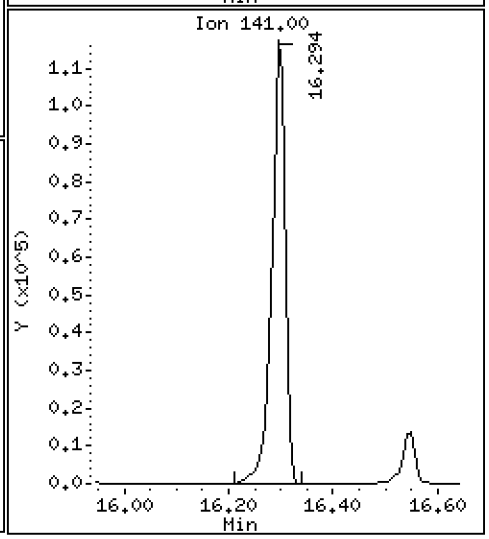












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

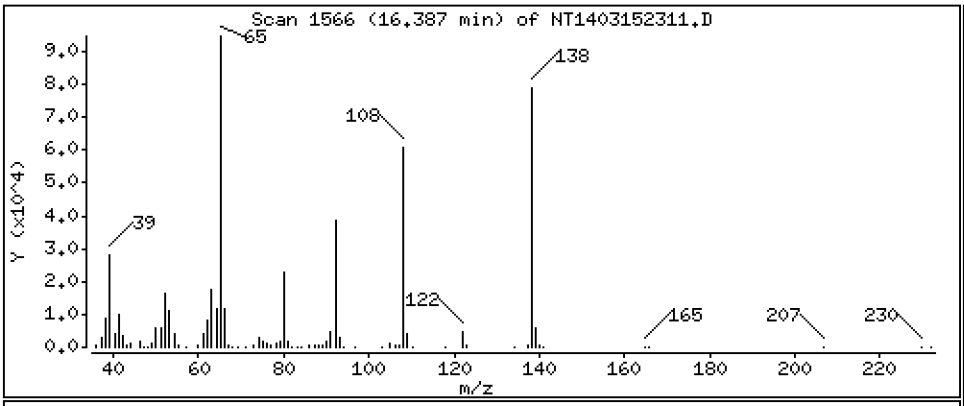
Operator: JGR

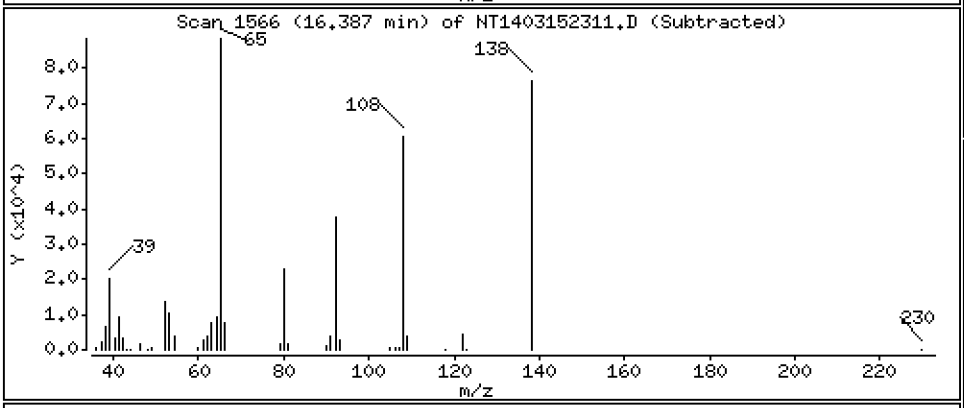
Column phase: ZB-5msi

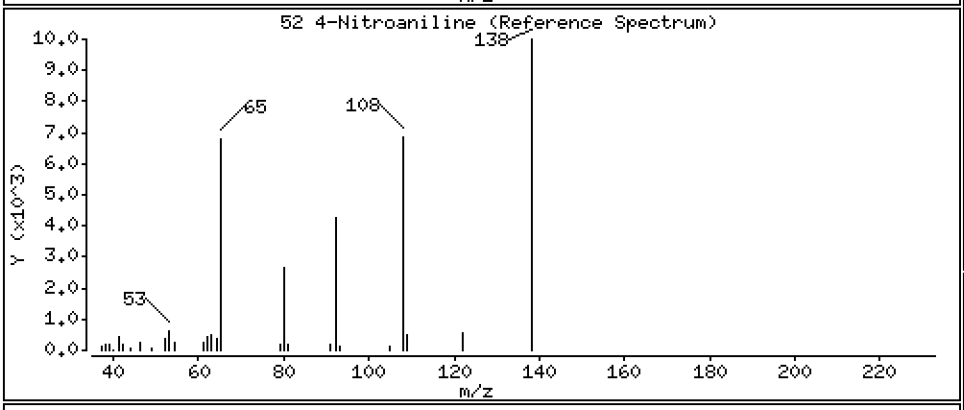
Column diameter: 0.25

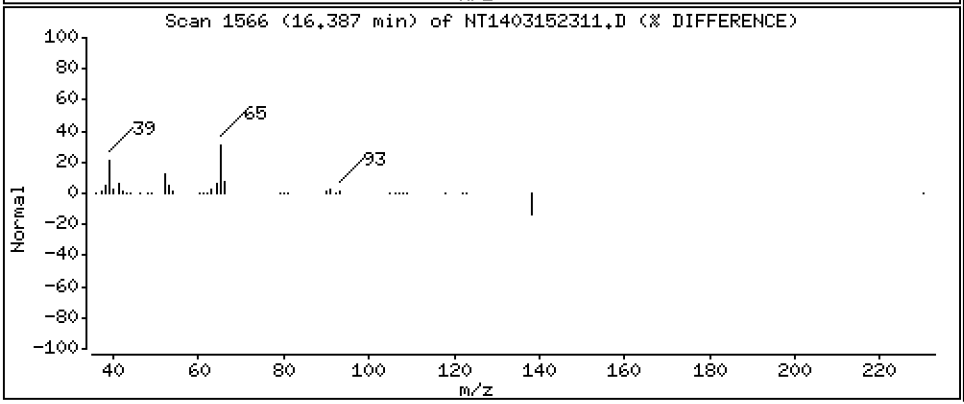
52 4-Nitroaniline

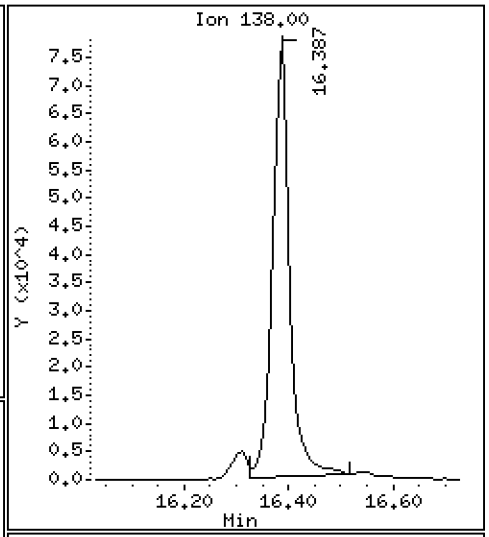
Concentration: 4.817 ug/mL

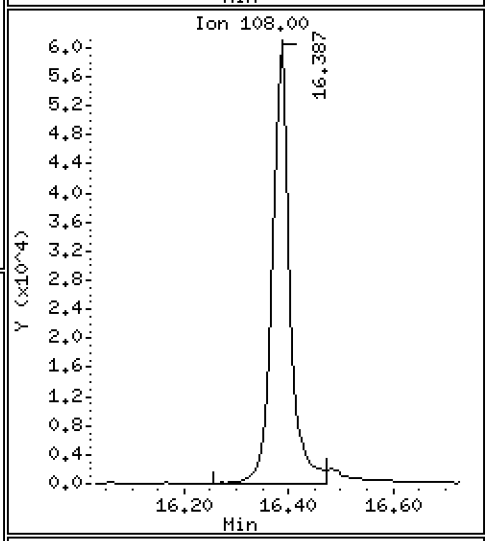


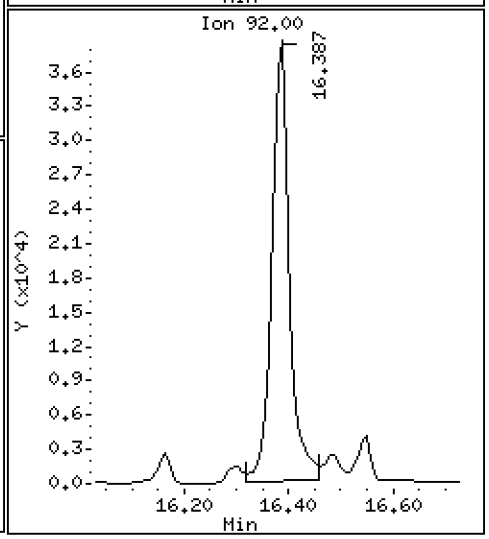












Data File: \\target\share\chem3\nt14.i\20230315.b\NT1403152311.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

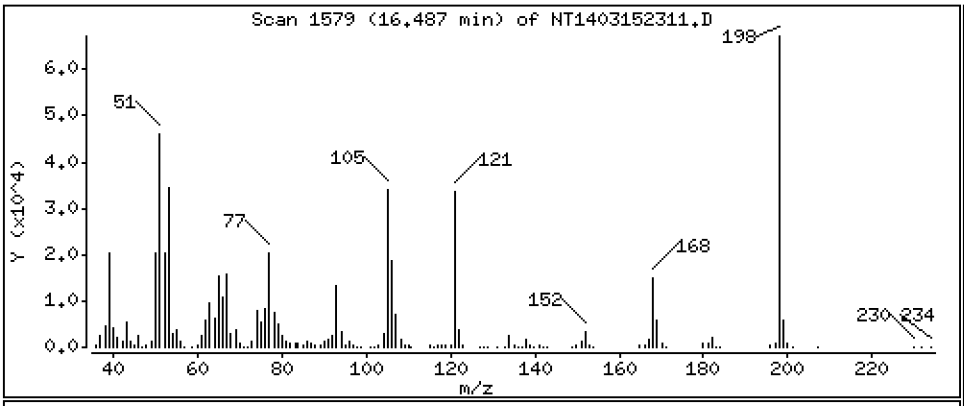
Operator: JGR

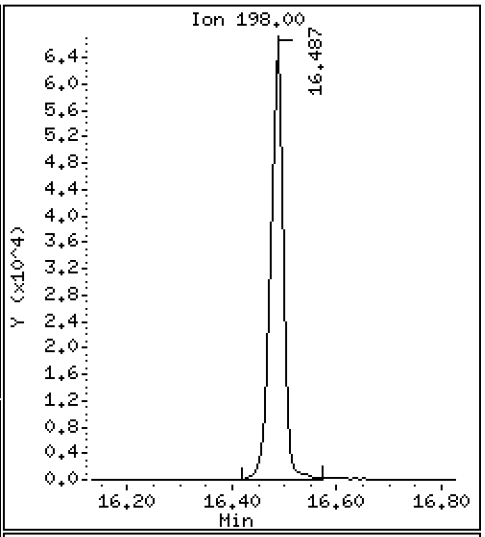
Column phase: ZB-5msi

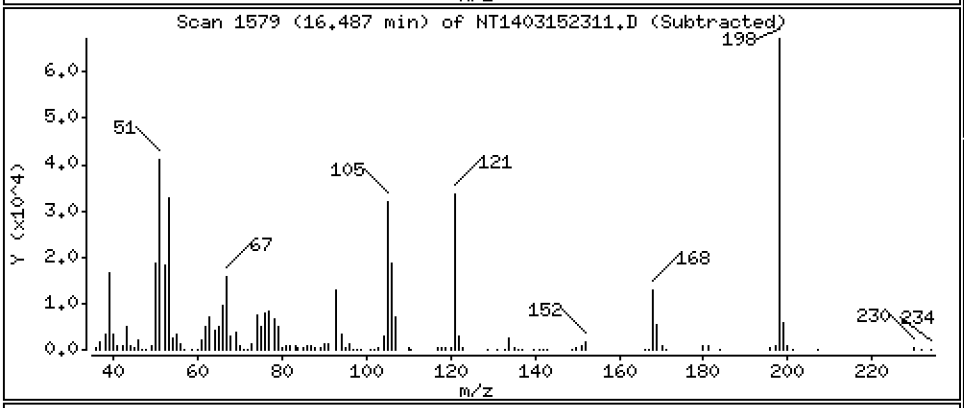
Column diameter: 0.25

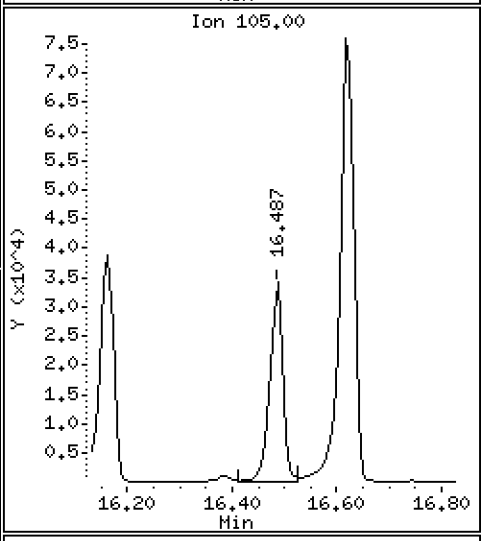
53 4,6-Dinitro-2-methylphenol

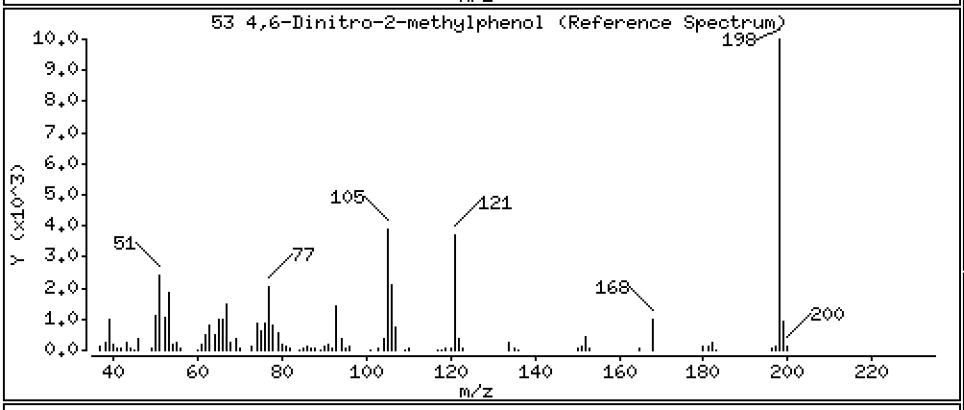
Concentration: 4.439 ug/mL

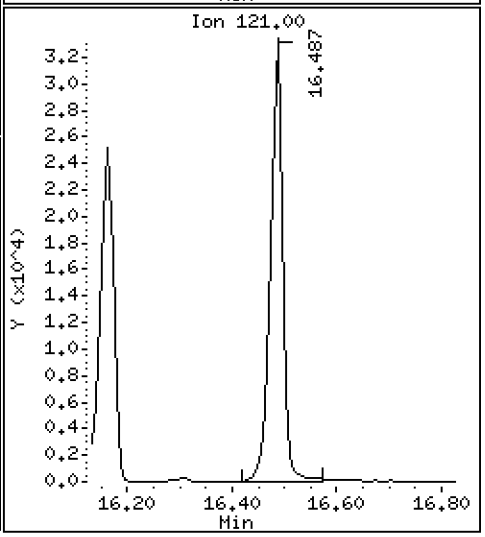


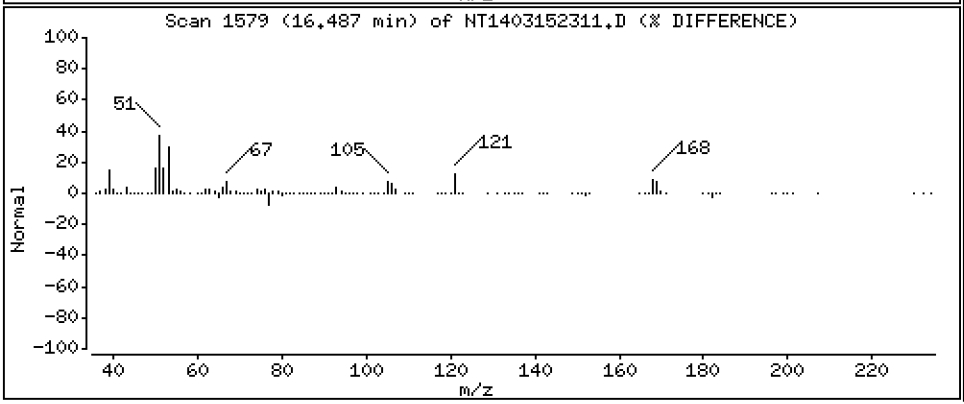












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

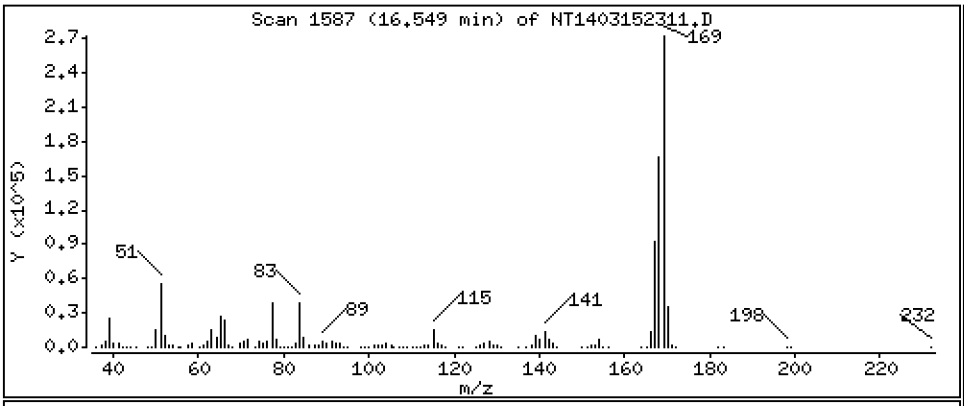
Operator: JGR

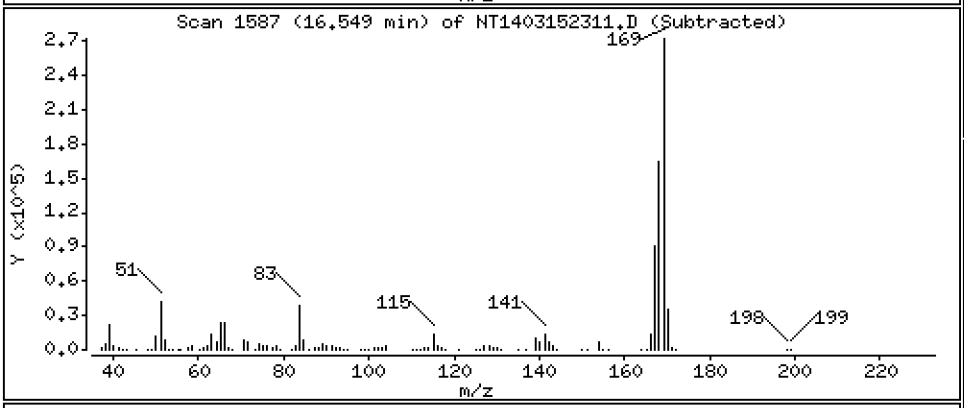
Column phase: ZB-5msi

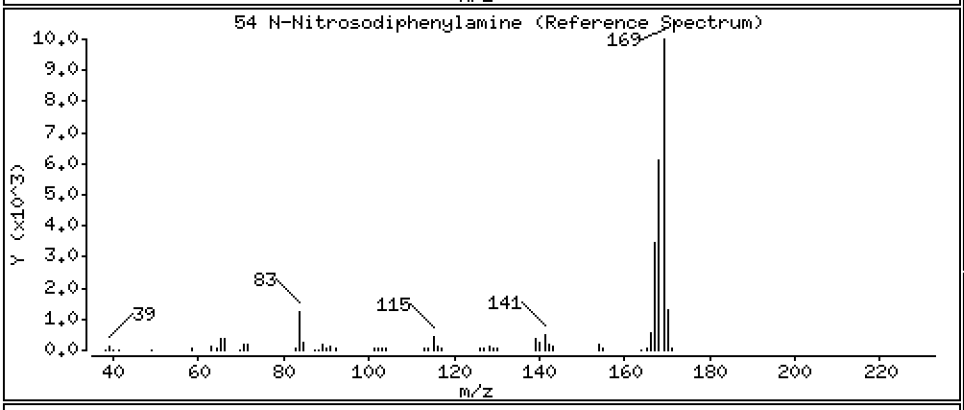
Column diameter: 0.25

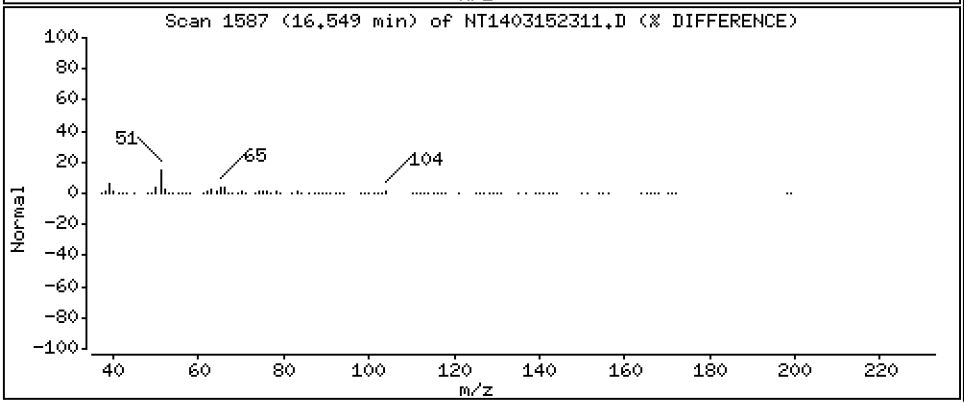
54 N-Nitrosodiphenylamine

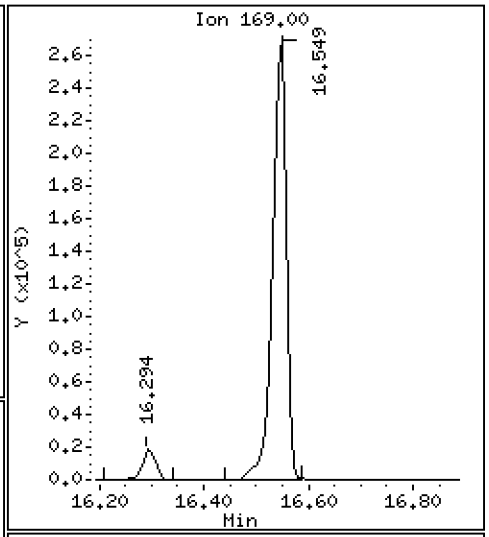
Concentration: 4.954 ug/mL

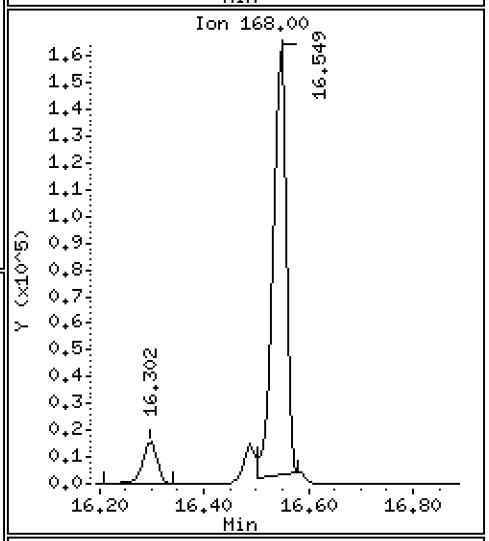


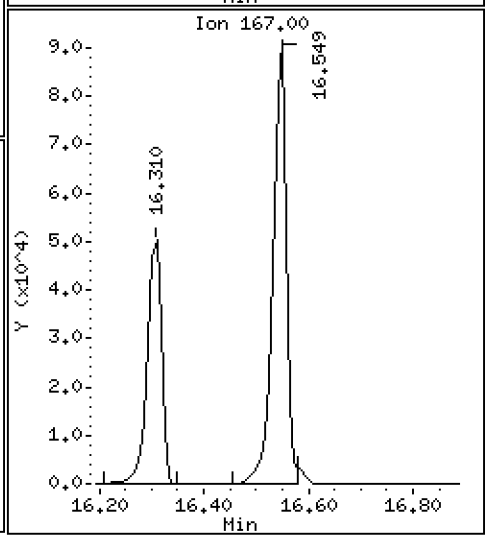












Data File: \\target\share\chem3\nt14.i\20230315.b\NT1403152311.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

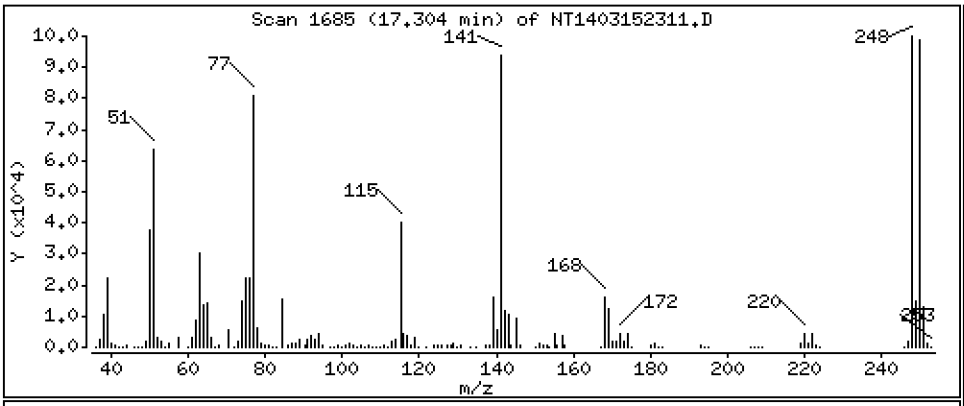
Operator: JGR

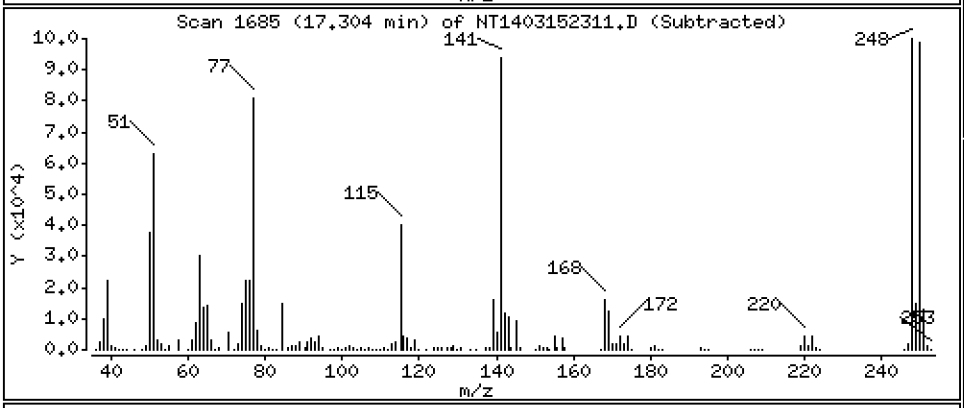
Column phase: ZB-5msi

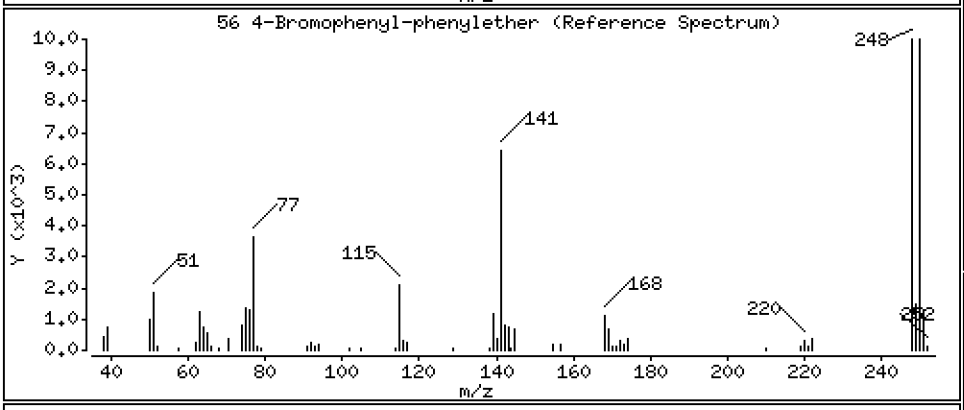
Column diameter: 0.25

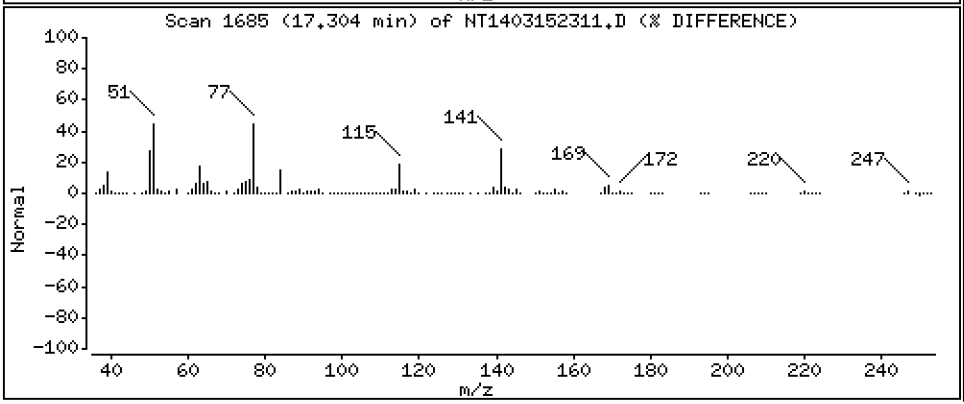
56 4-Bromophenyl-phenylether

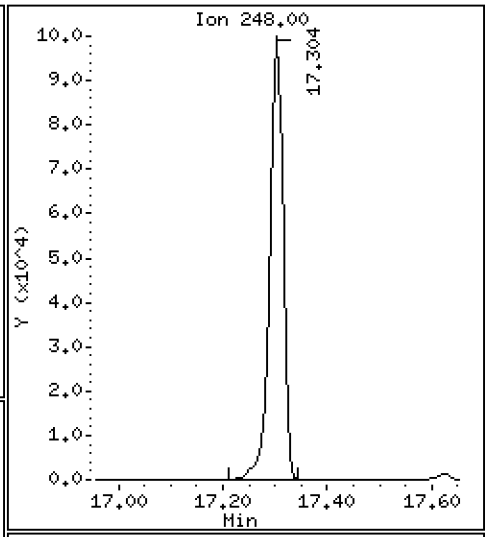
Concentration: 5.226 ug/mL

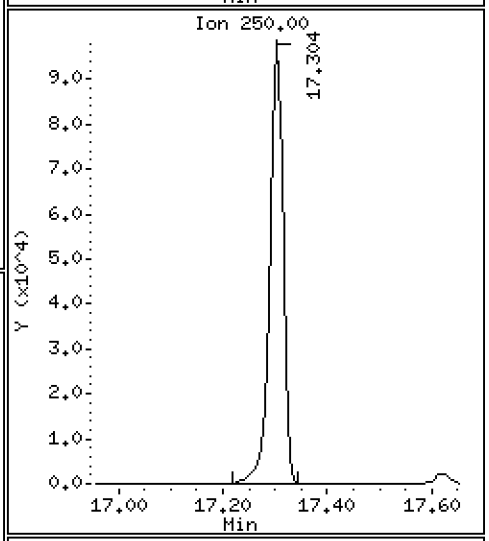


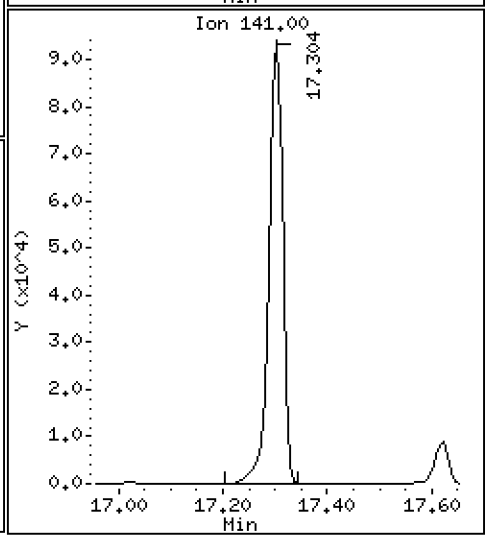












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

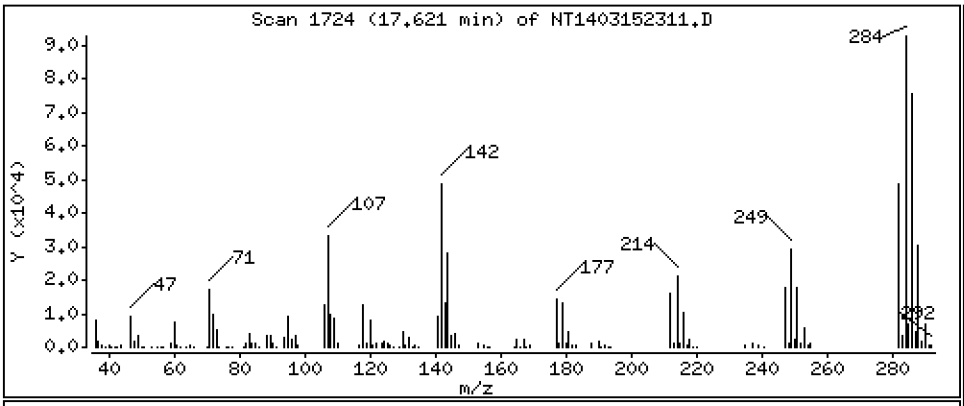
Operator: JGR

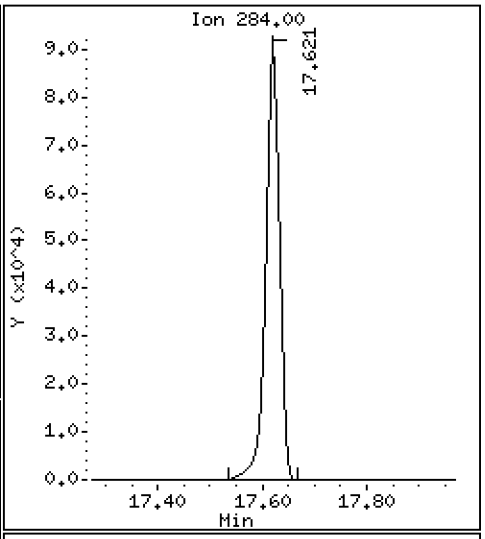
Column phase: ZB-5msi

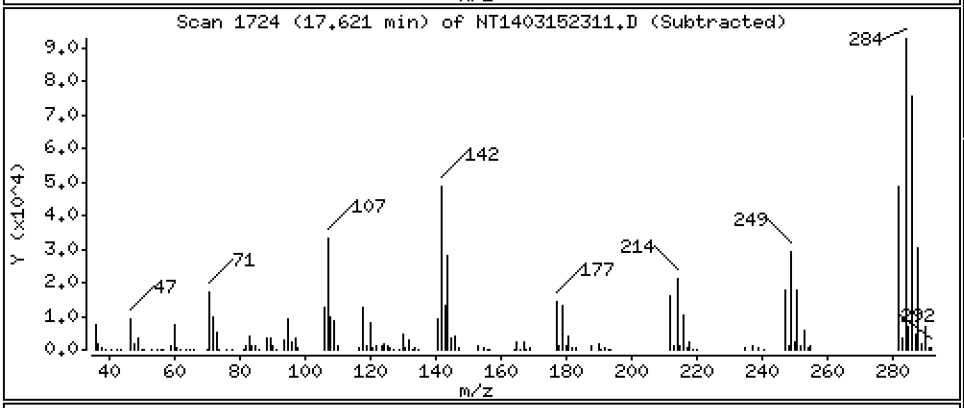
Column diameter: 0.25

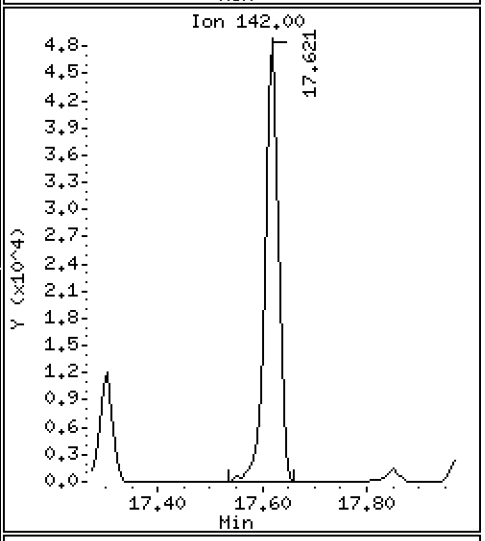
57 Hexachlorobenzene

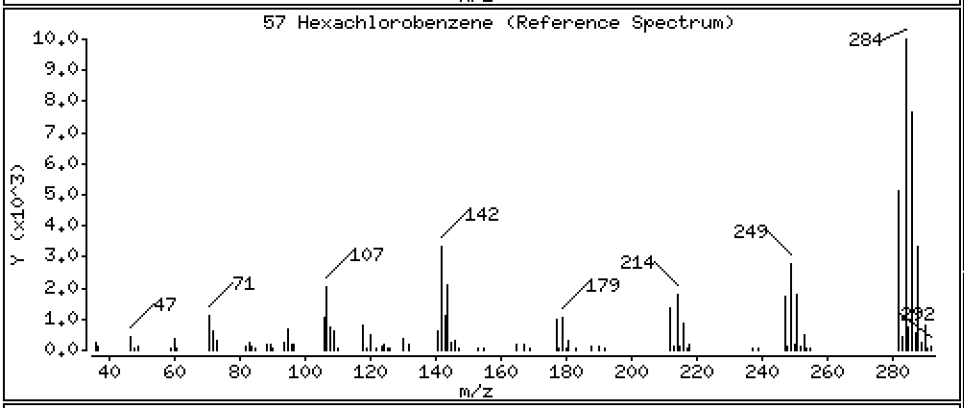
Concentration: 4.780 ug/mL

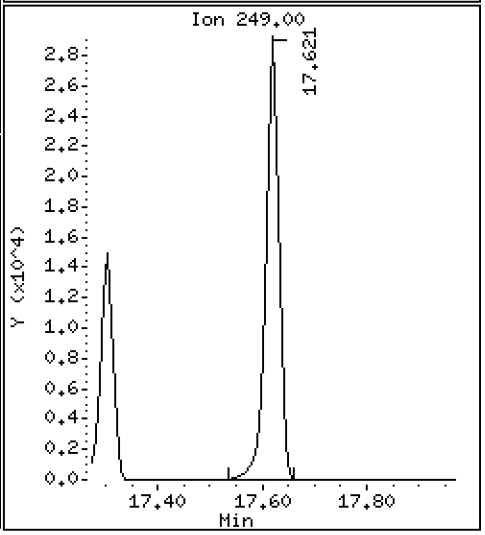


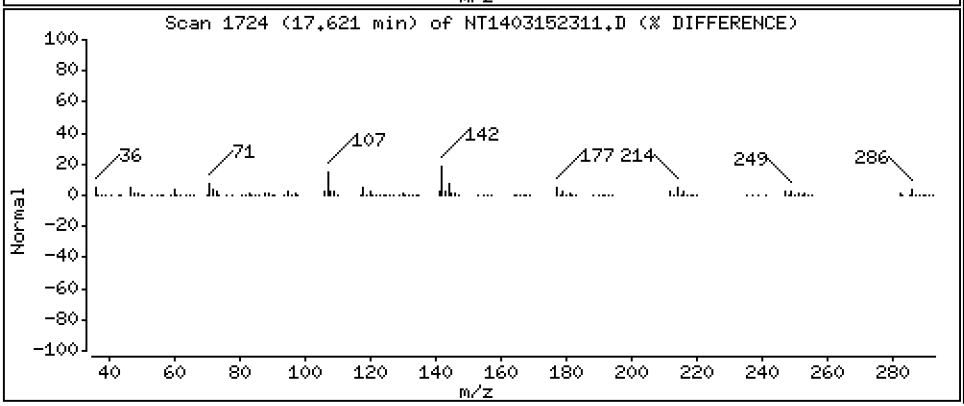












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

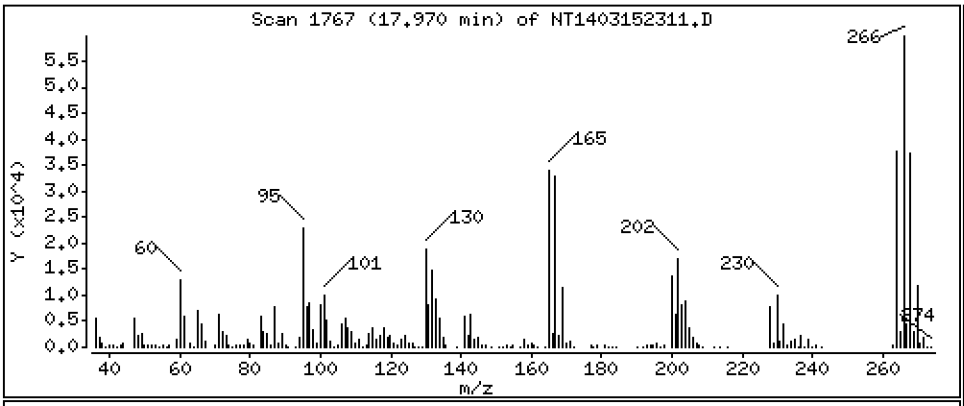
Operator: JGR

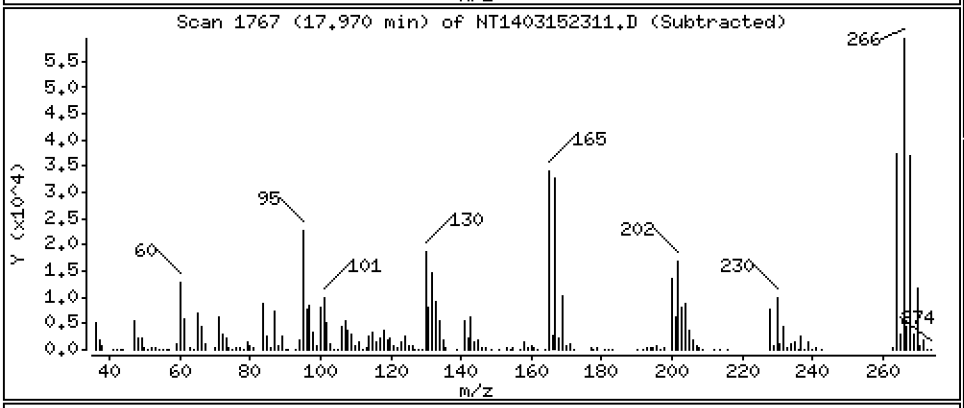
Column phase: ZB-5msi

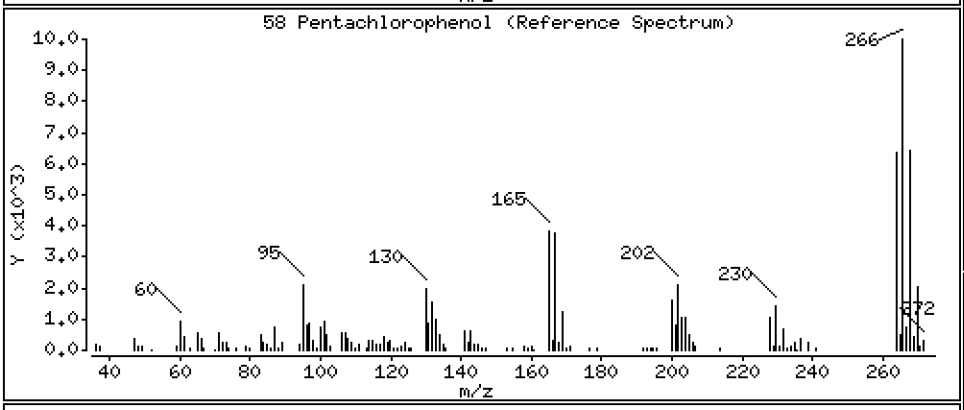
Column diameter: 0.25

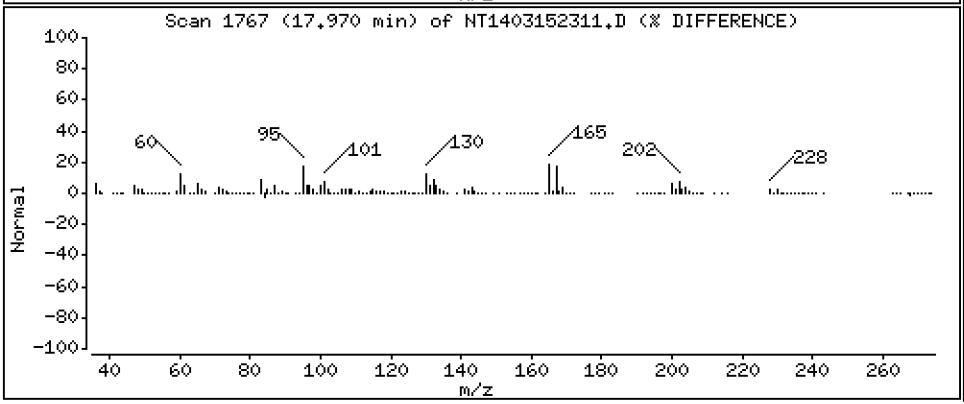
58 Pentachlorophenol

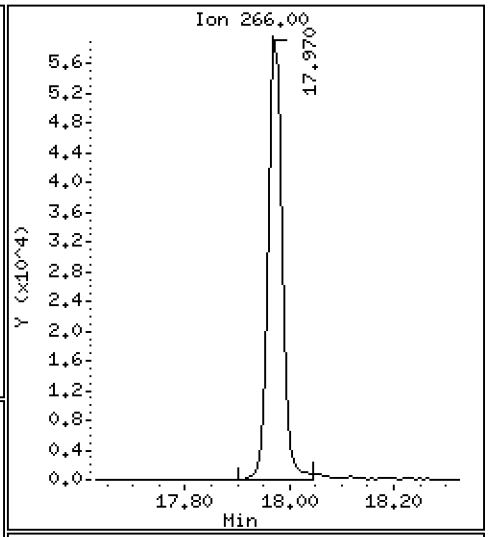
Concentration: 4.477 ug/mL

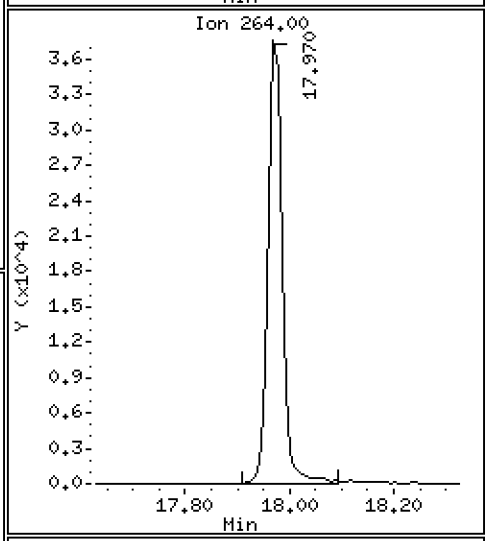


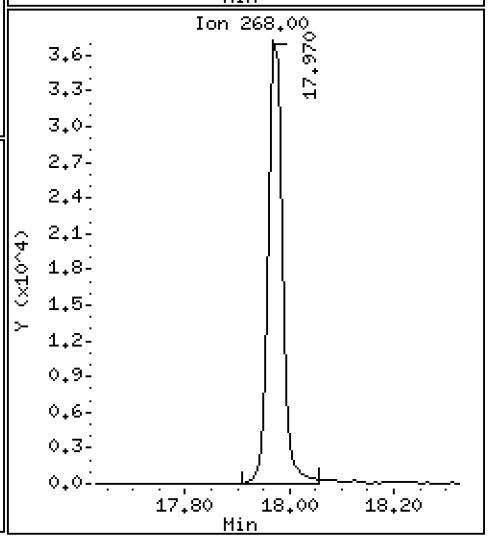












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

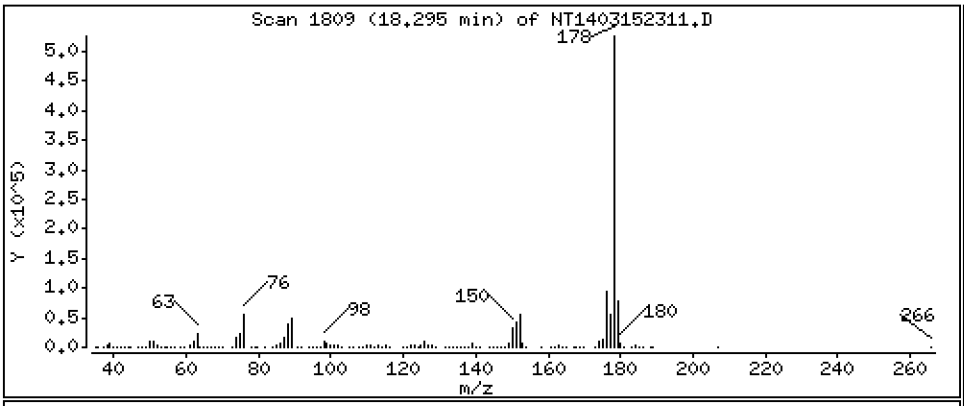
Operator: JGR

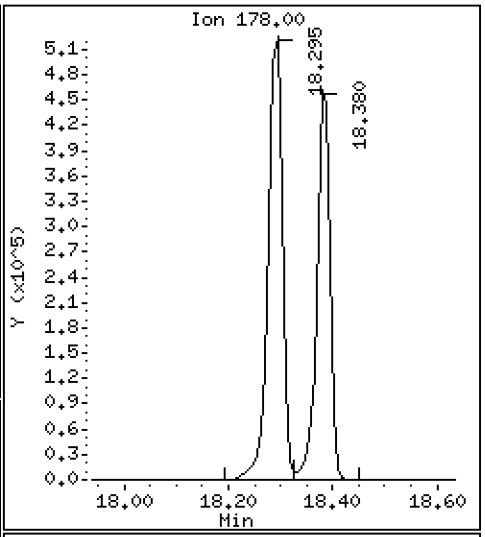
Column phase: ZB-5msi

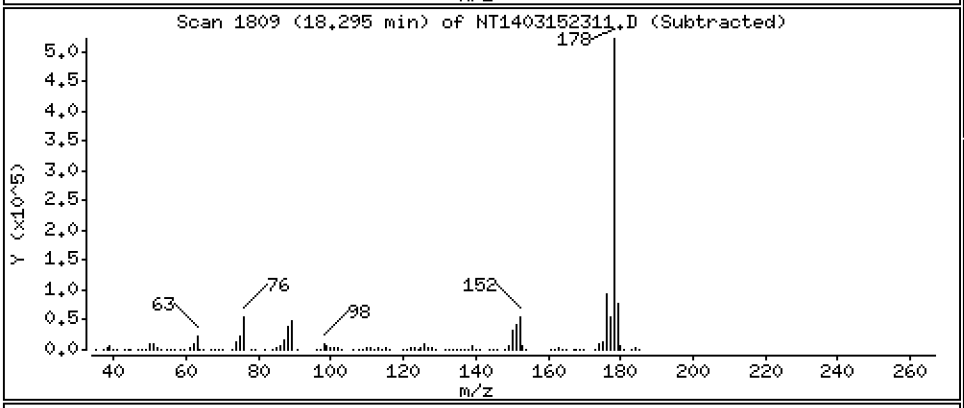
Column diameter: 0.25

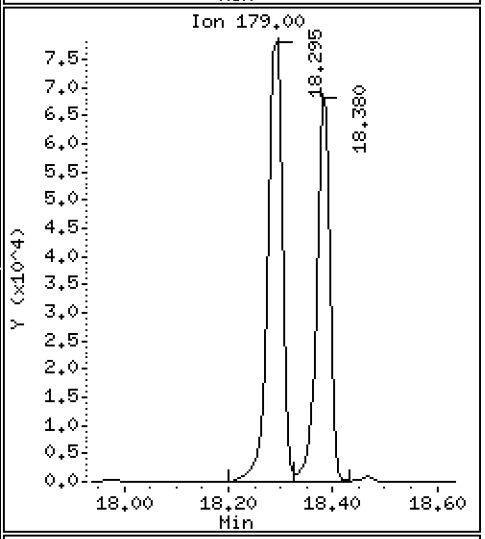
60 Phenanthrene

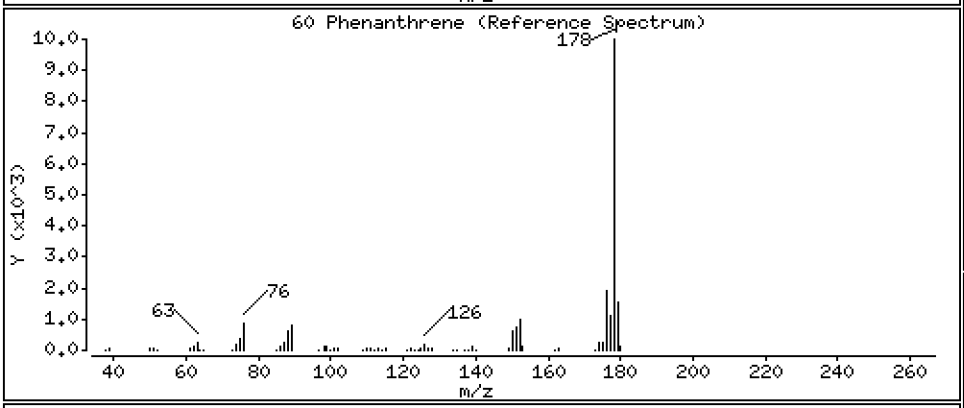
Concentration: 4.734 ug/mL

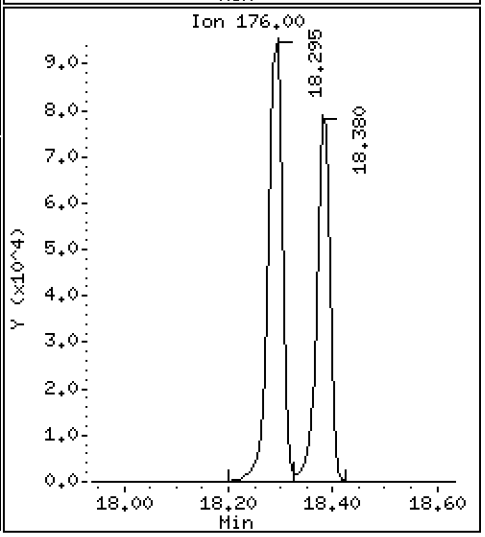


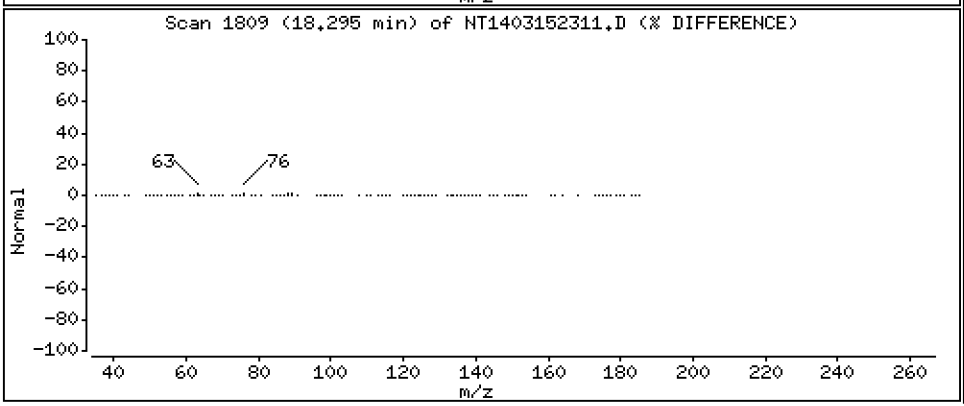












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

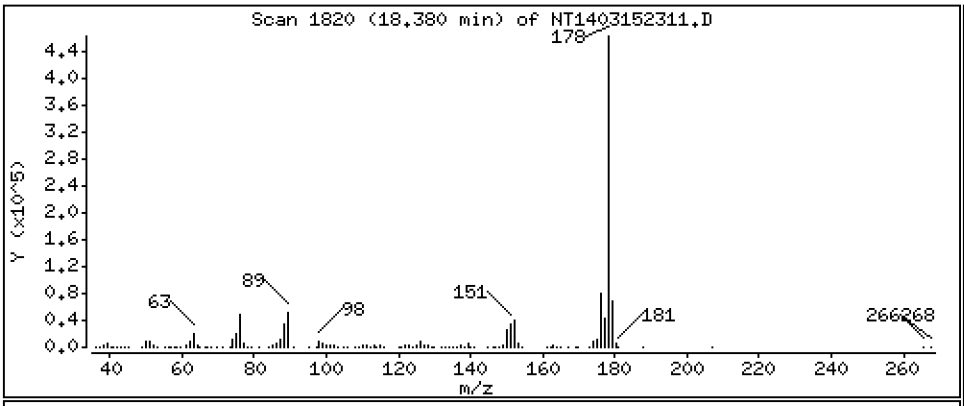
Operator: JGR

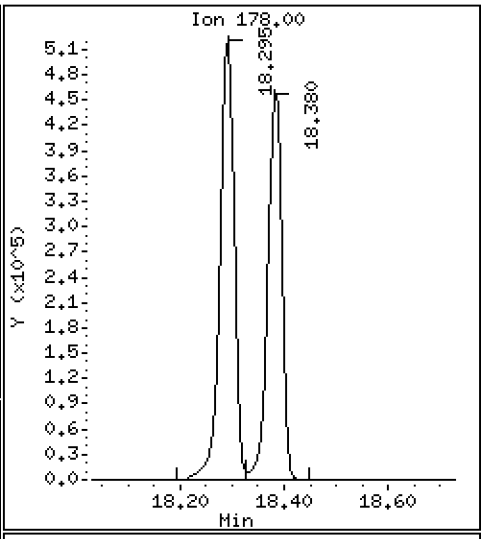
Column phase: ZB-5msi

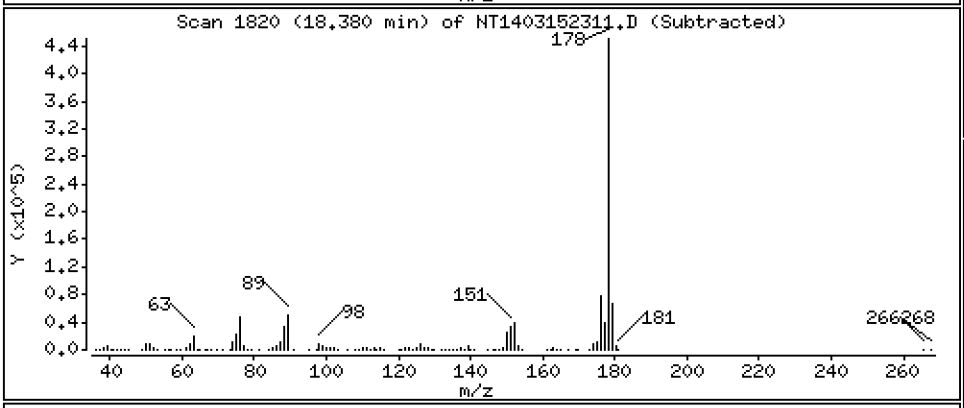
Column diameter: 0.25

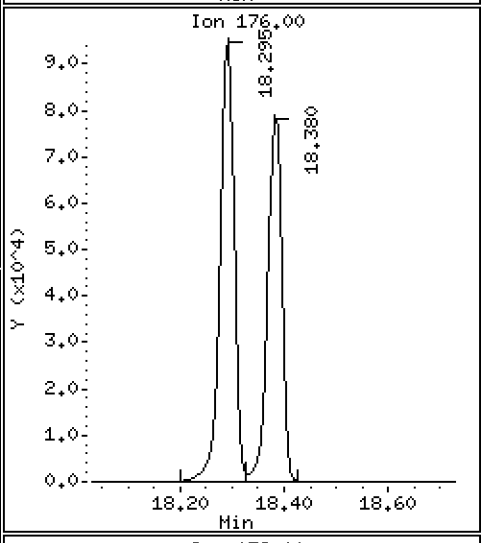
61 Anthracene

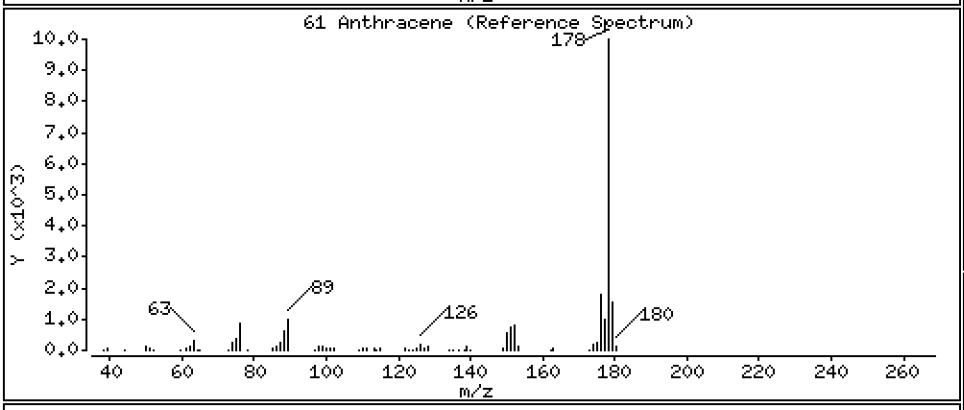
Concentration: 4.281 ug/mL

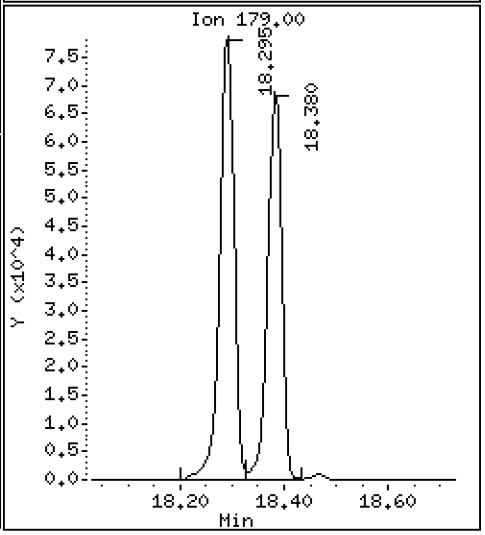


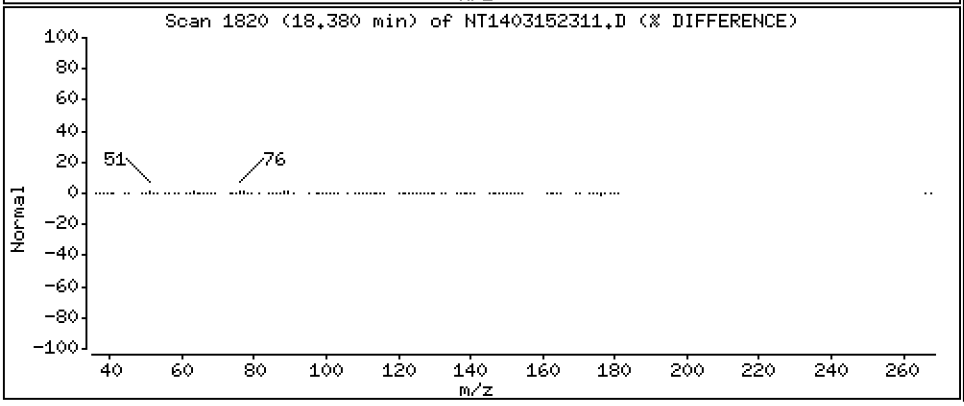












Data File: \\target\share\chem3\nt14.i\20230315.b\NT1403152311.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

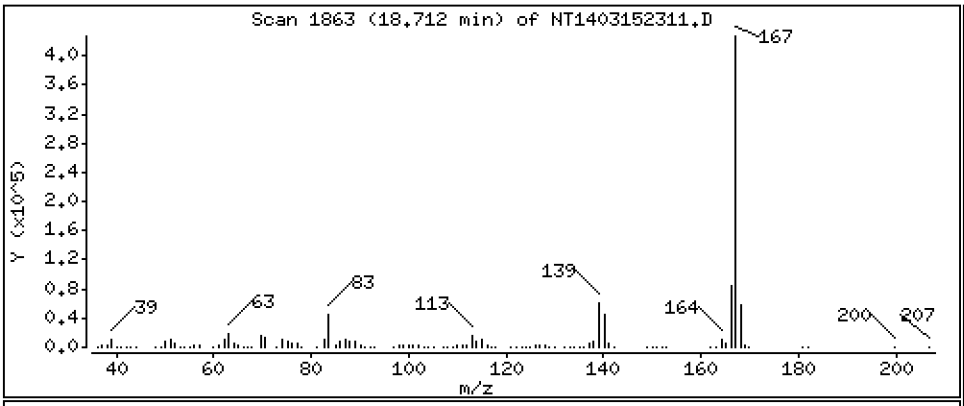
Operator: JGR

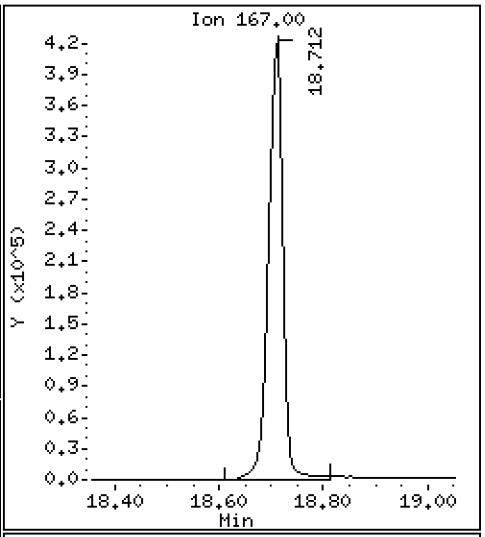
Column phase: ZB-5msi

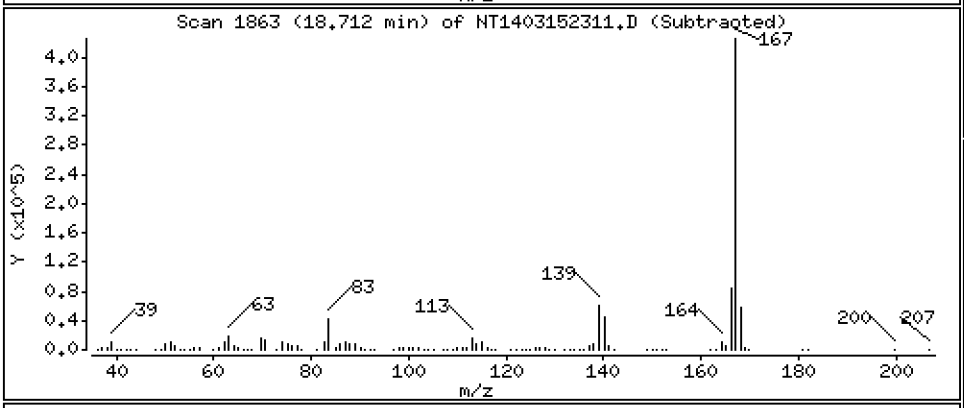
Column diameter: 0.25

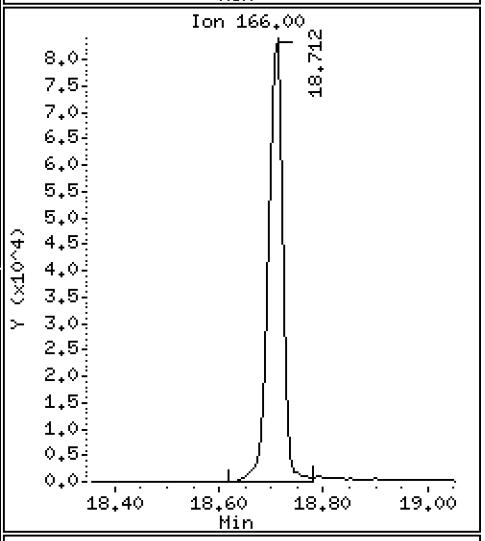
62 Carbazole

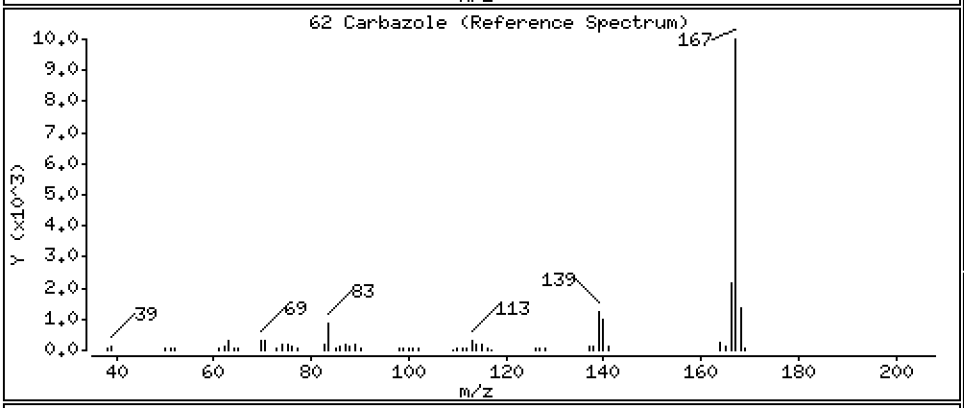
Concentration: 4.587 ug/mL

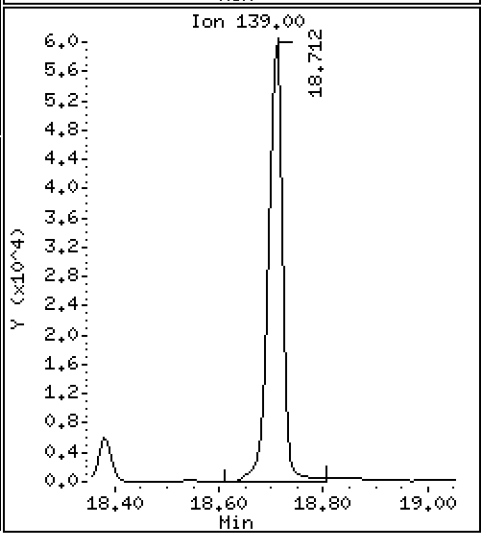


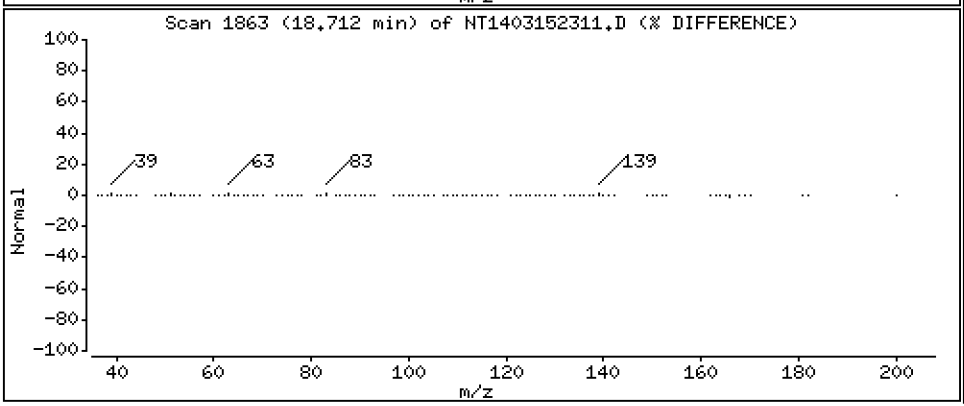












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

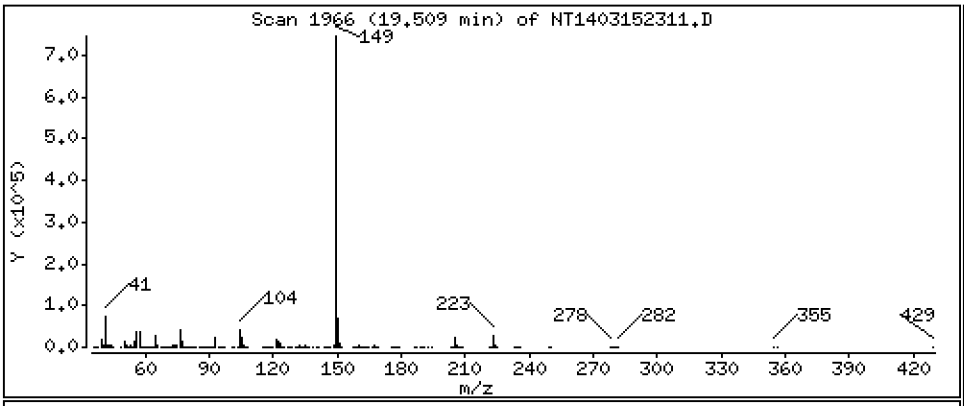
Operator: JGR

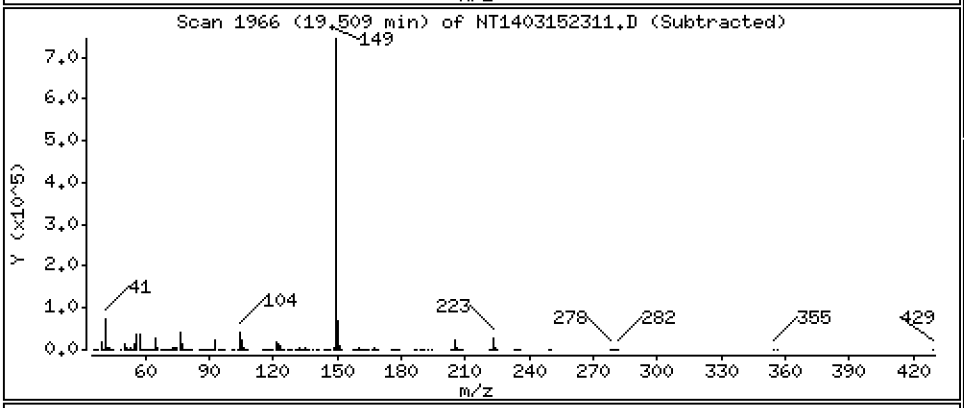
Column phase: ZB-5msi

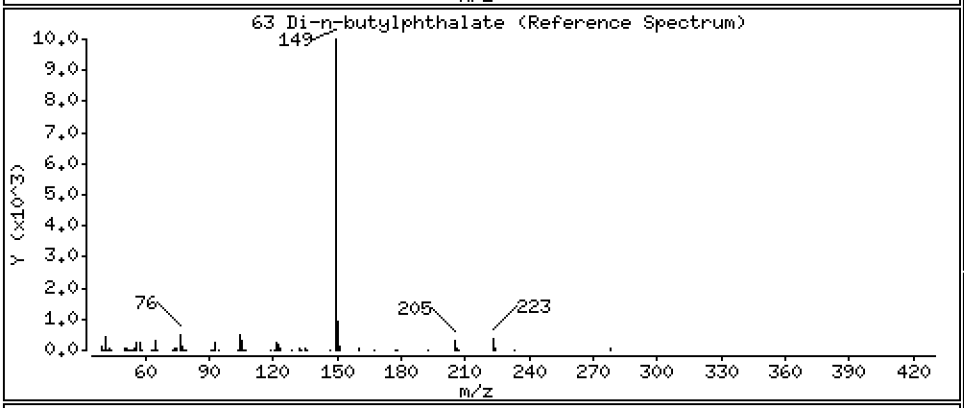
Column diameter: 0.25

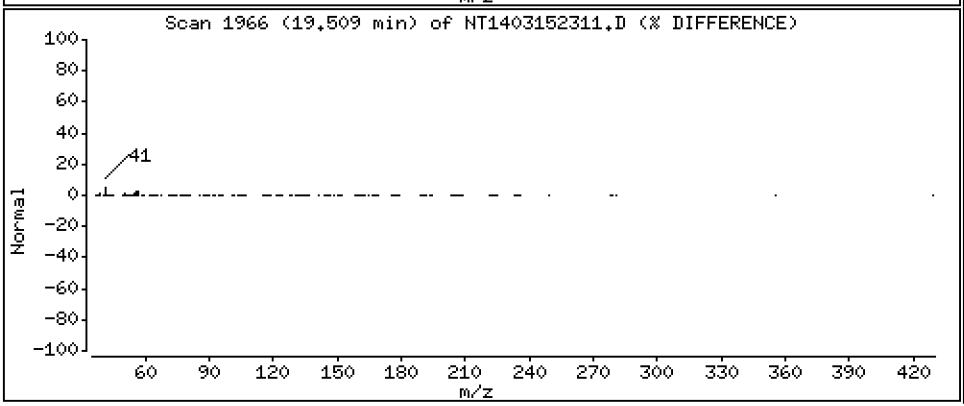
63 Di-n-butylphthalate

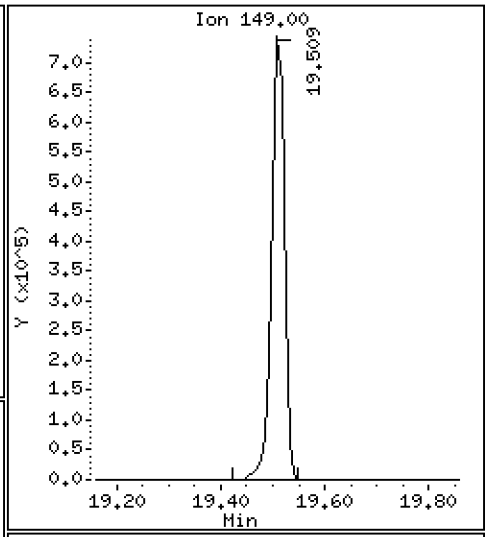
Concentration: 5.507 ug/mL

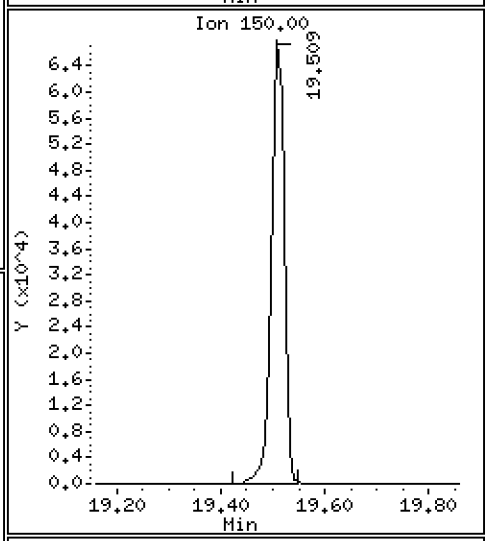


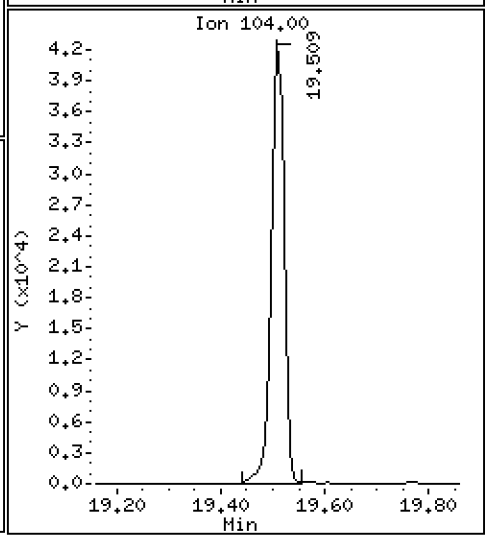












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

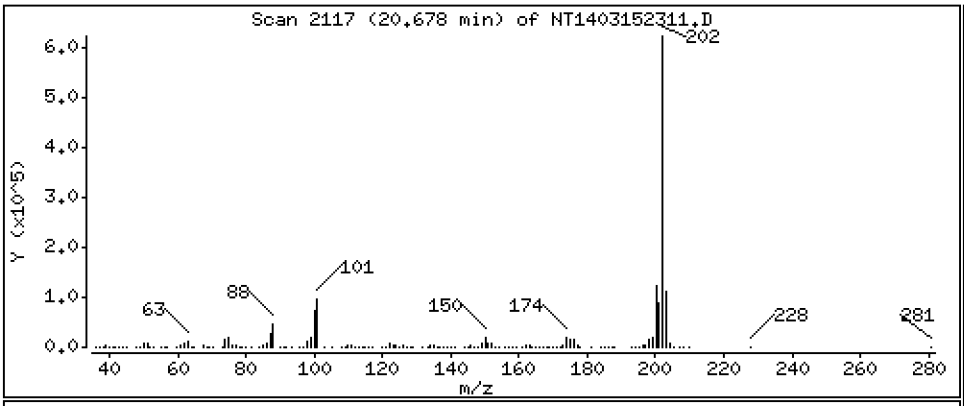
Operator: JGR

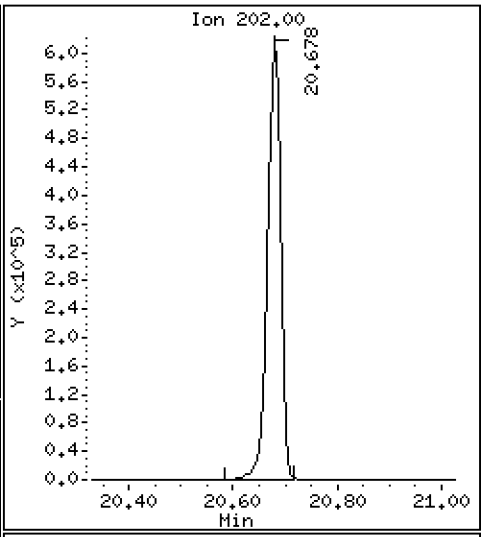
Column phase: ZB-5msi

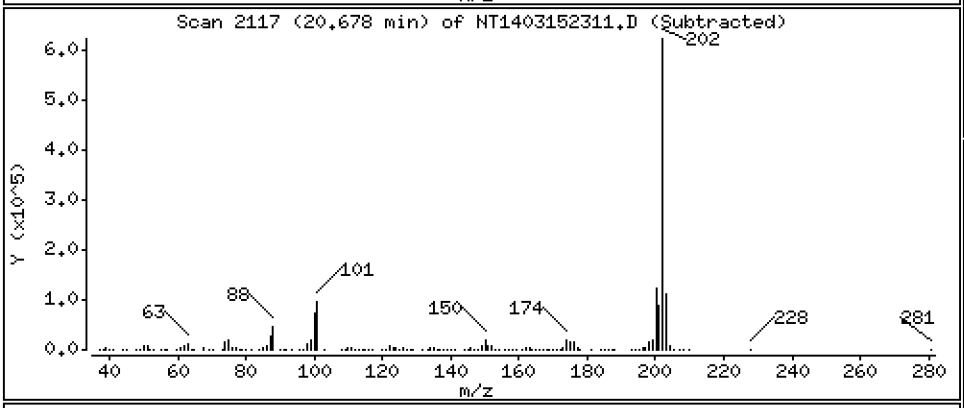
Column diameter: 0.25

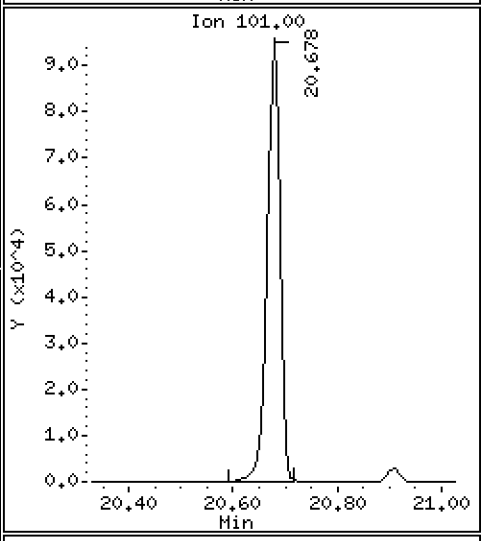
64 Fluoranthene

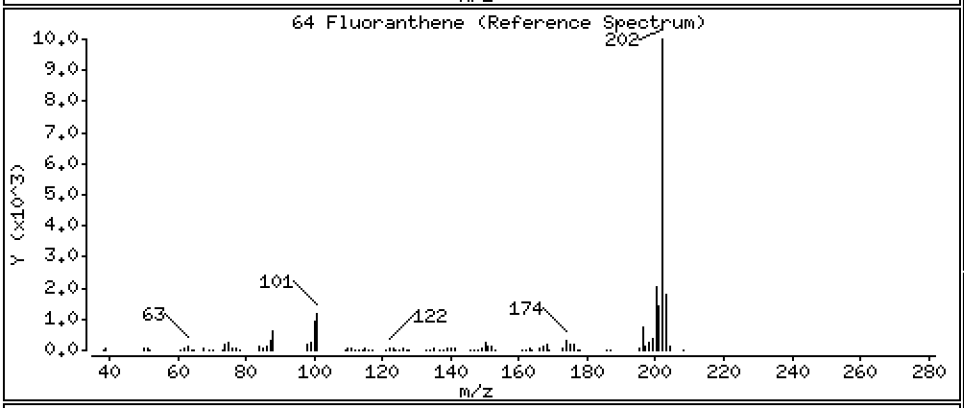
Concentration: 5.024 ug/mL

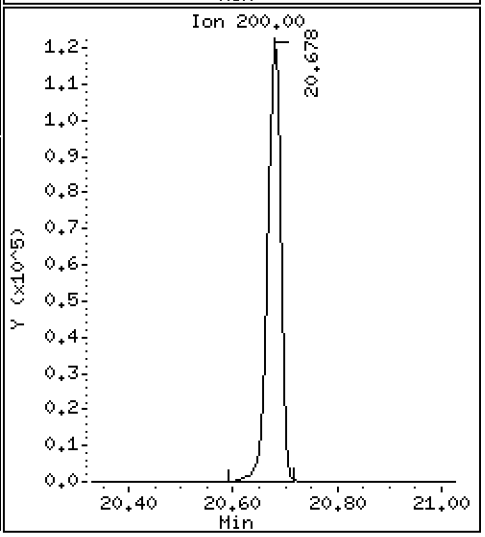


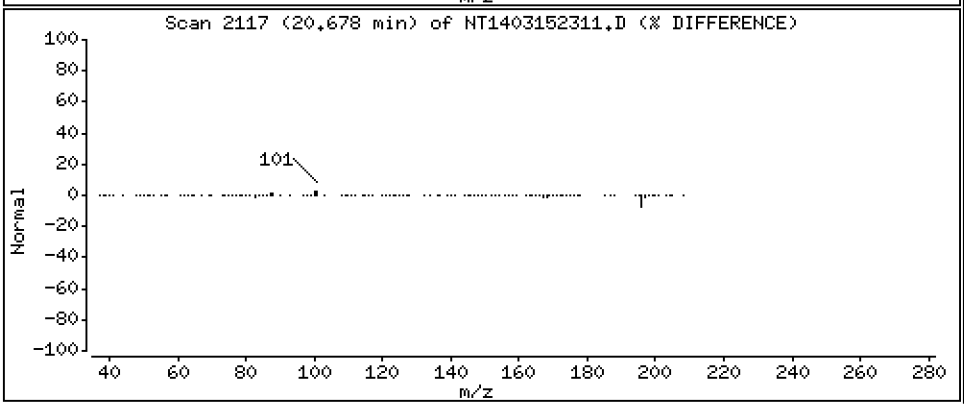












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

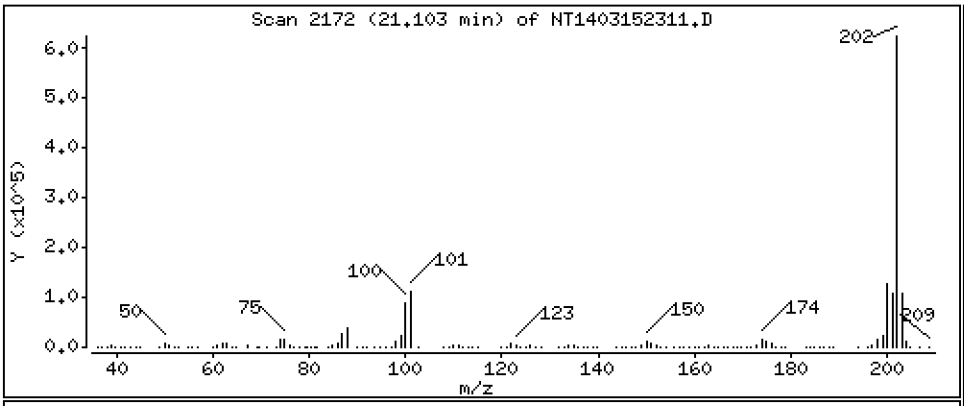
Operator: JGR

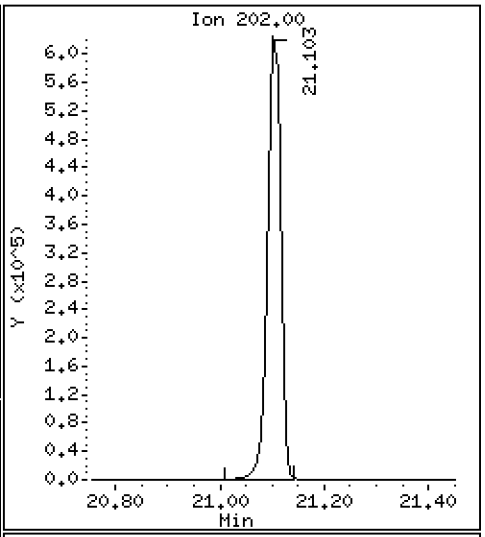
Column phase: ZB-5msi

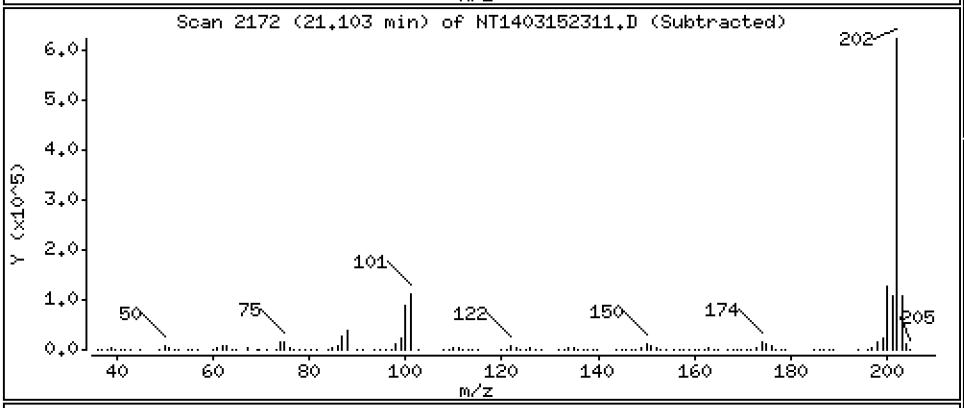
Column diameter: 0.25

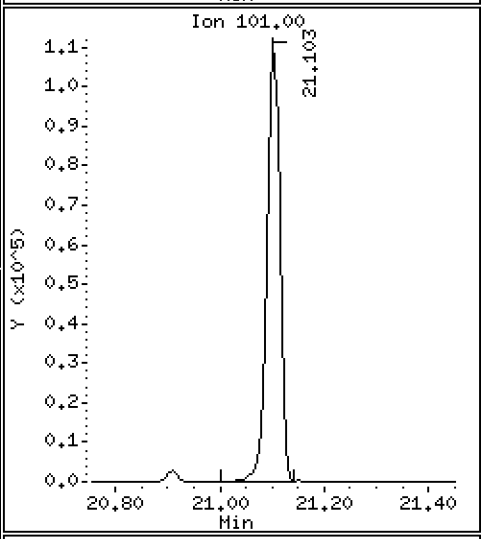
65 Pyrene

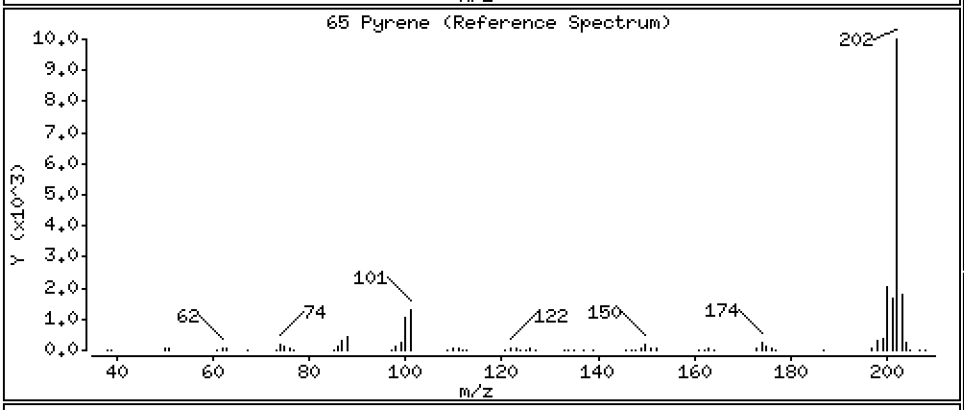
Concentration: 4.958 ug/mL

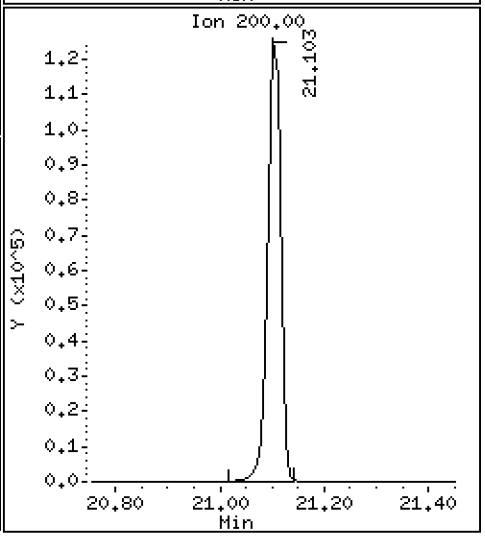


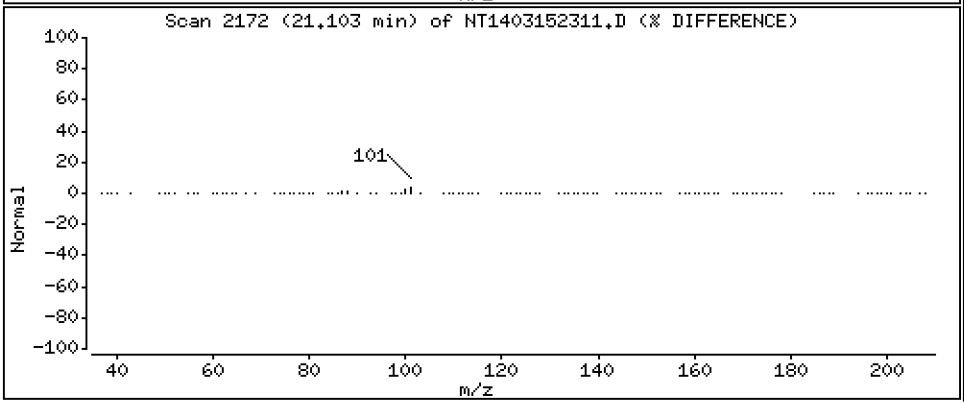












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

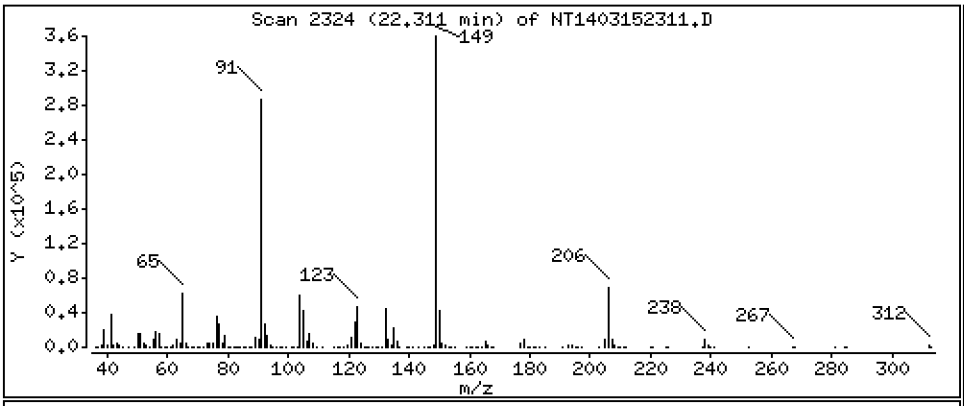
Operator: JGR

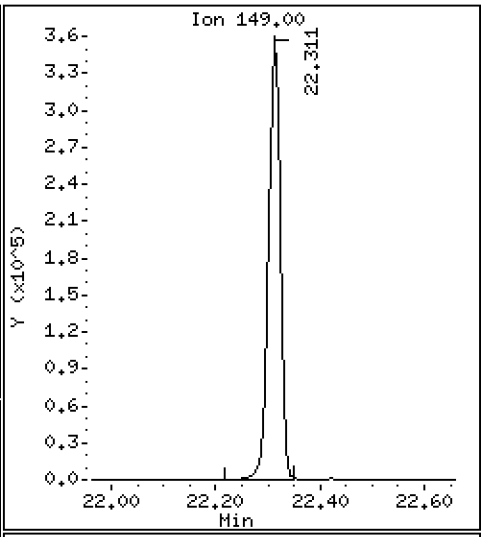
Column phase: ZB-5msi

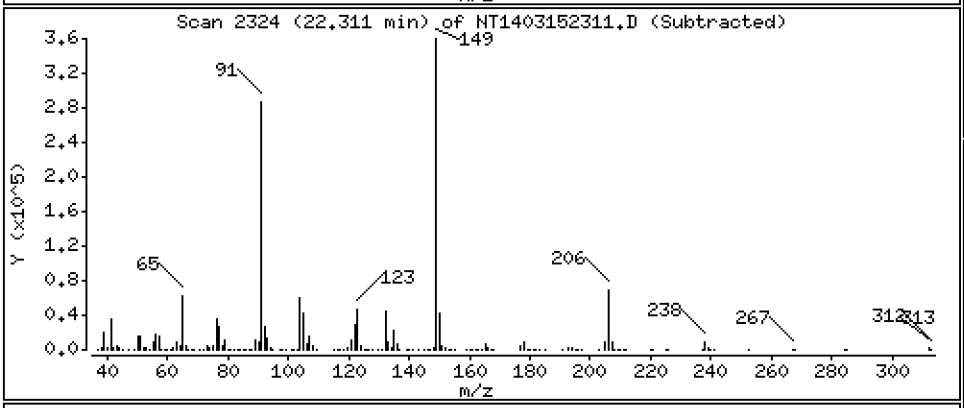
Column diameter: 0.25

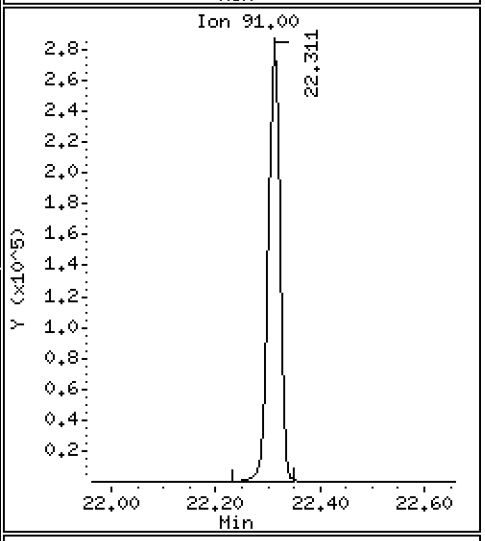
67 Butylbenzylphthalate

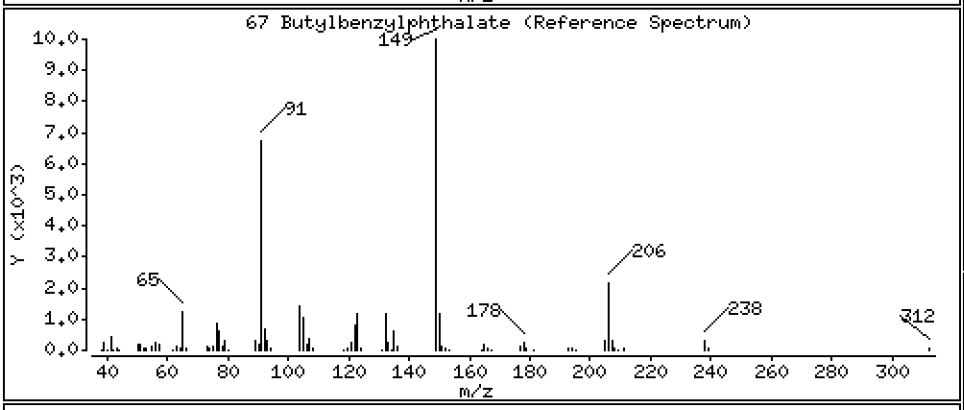
Concentration: 5.737 ug/mL

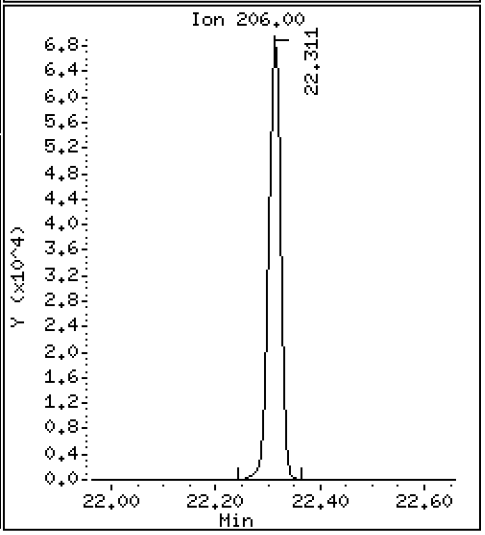


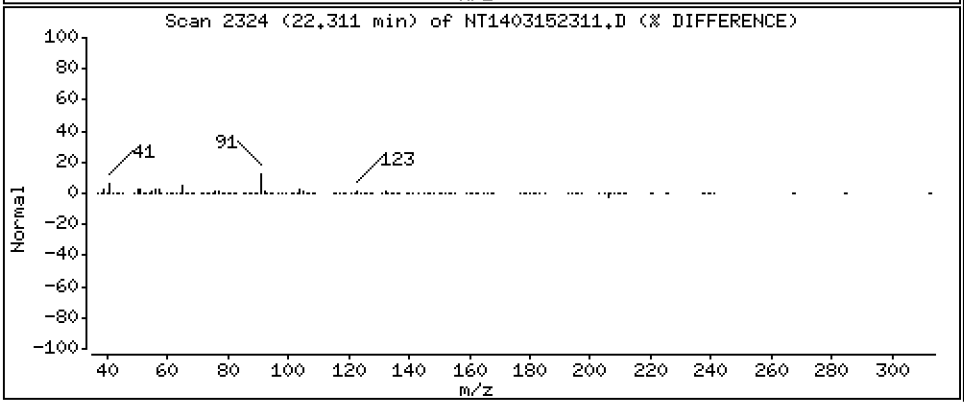












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

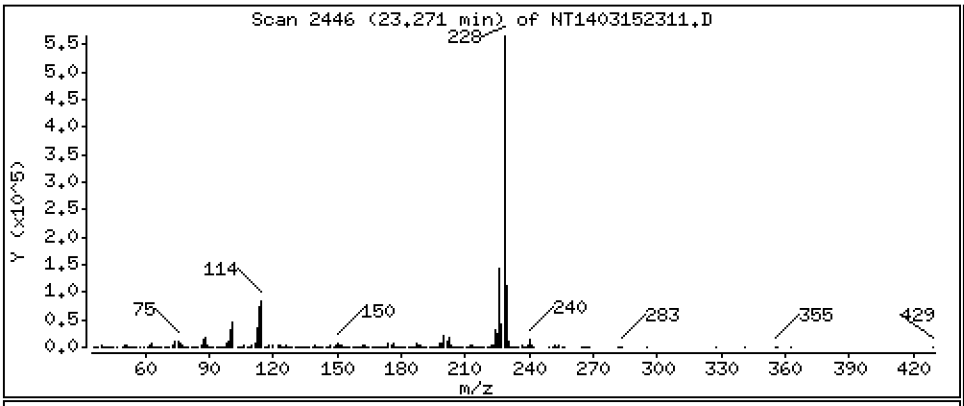
Operator: JGR

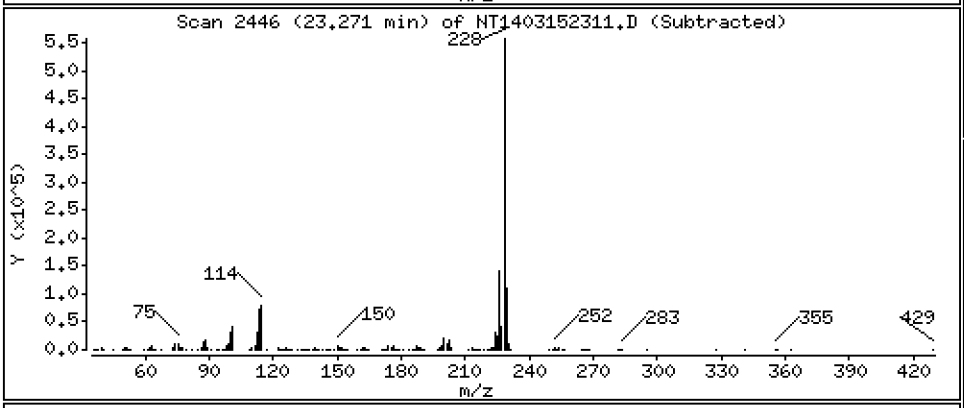
Column phase: ZB-5msi

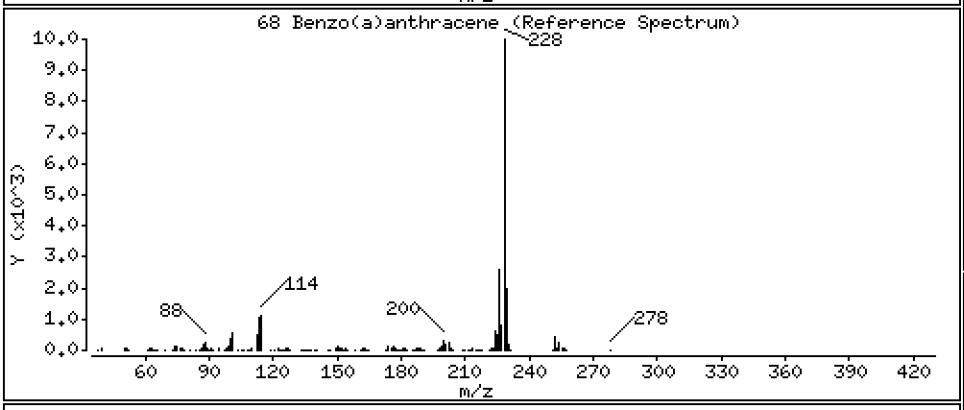
Column diameter: 0.25

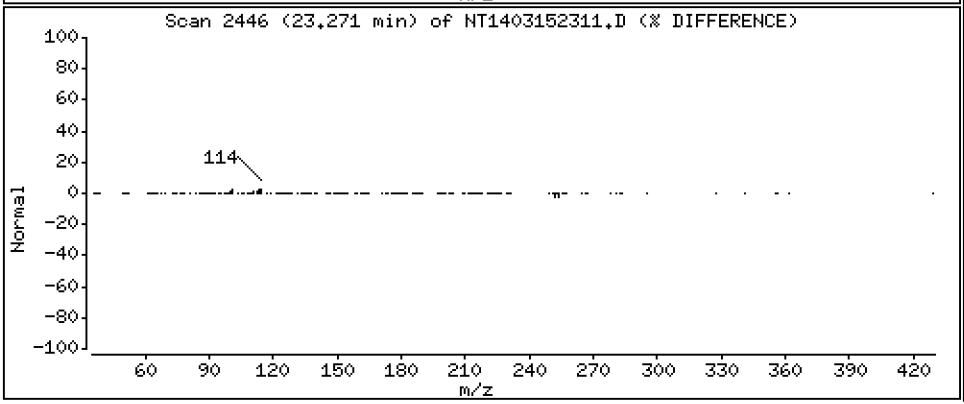
68 Benzo(a)anthracene

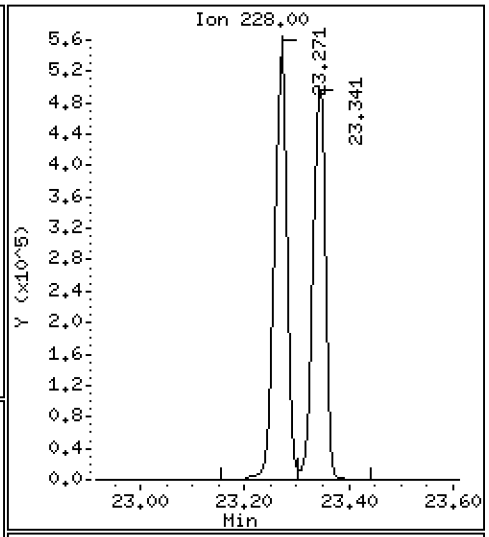
Concentration: 4.827 ug/mL

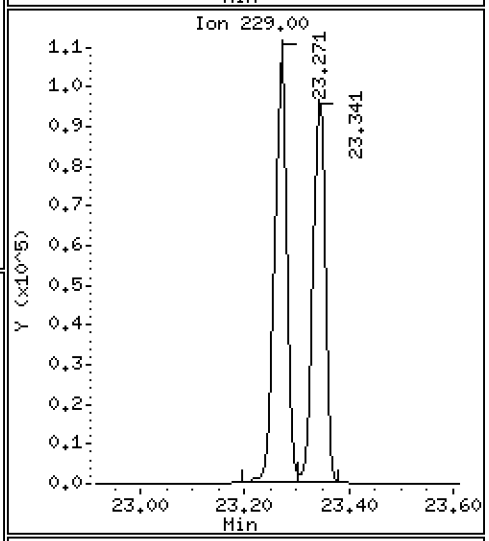


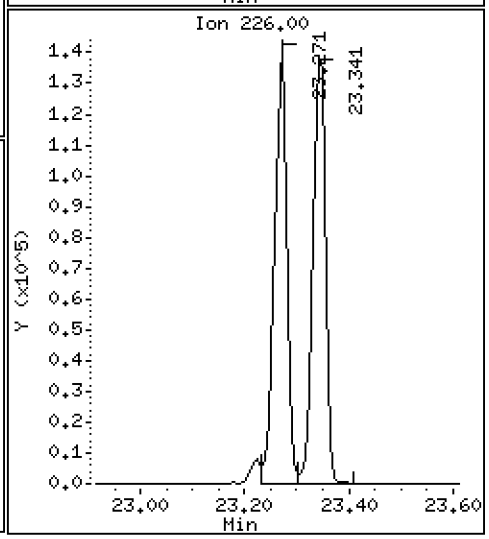












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

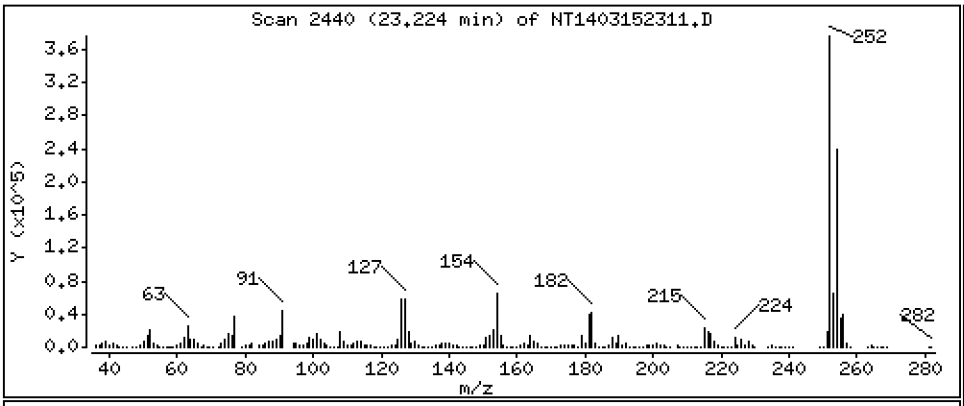
Operator: JGR

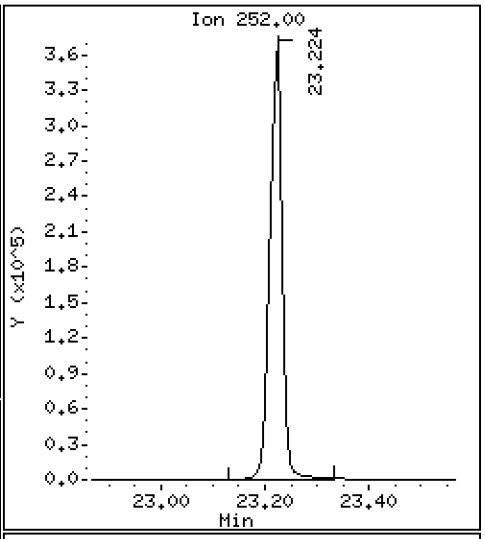
Column phase: ZB-5msi

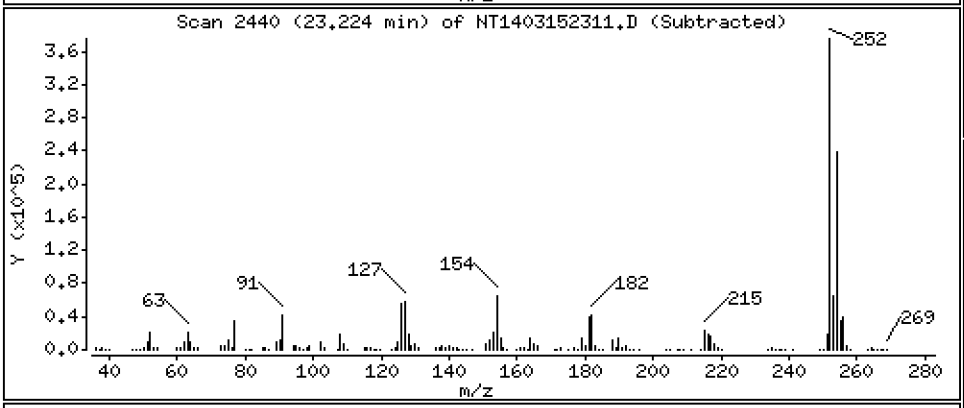
Column diameter: 0.25

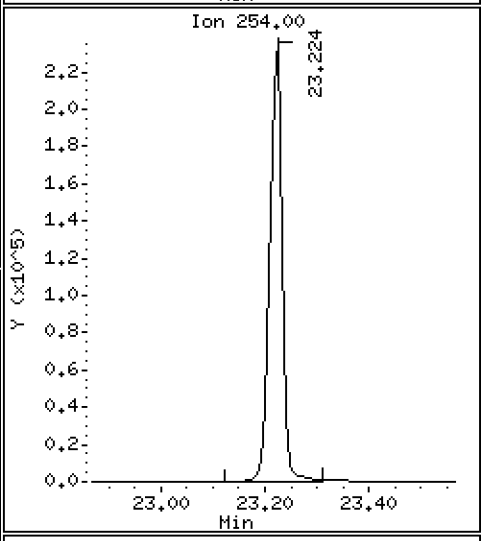
70 3,3'-Dichlorobenzidine

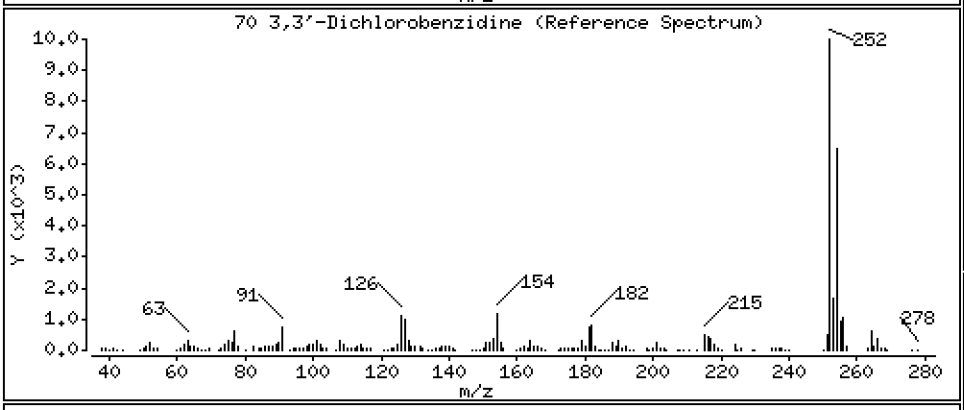
Concentration: 10.65 ug/mL

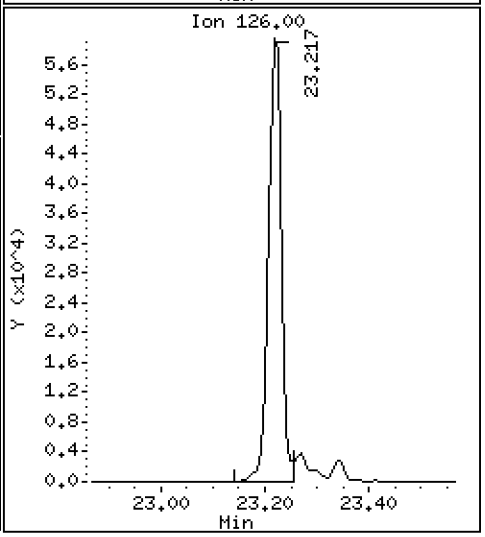


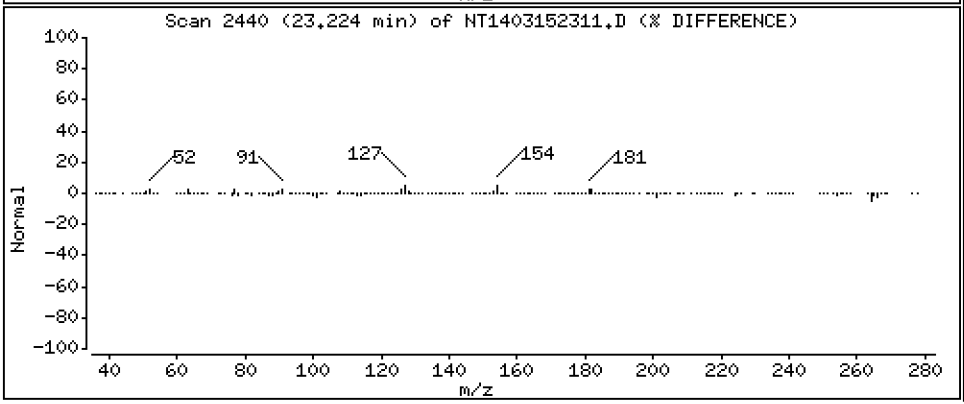












Data File: \\target\share\chem3\nt14.i\20230315.b\NT1403152311.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

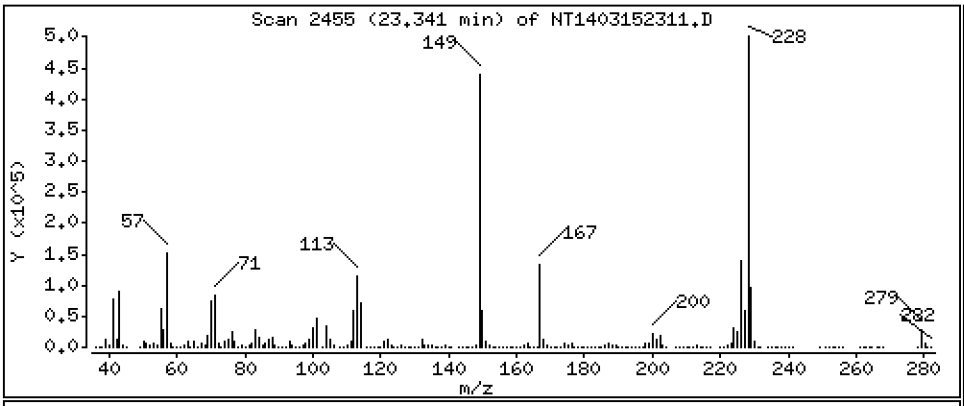
Operator: JGR

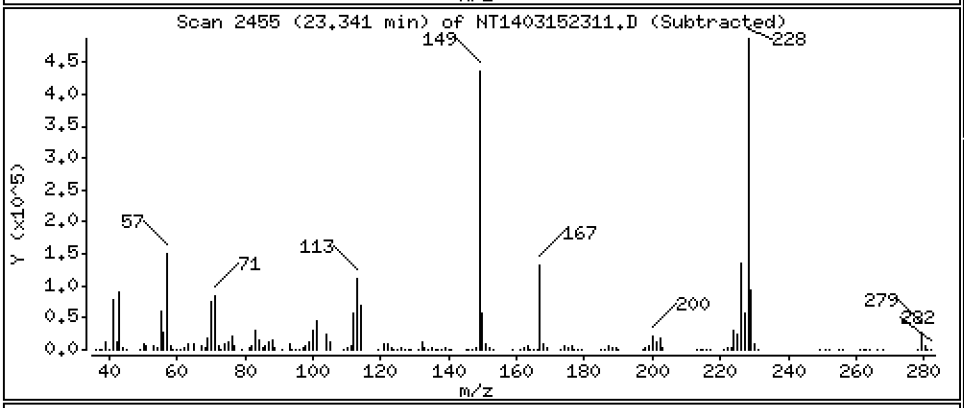
Column phase: ZB-5msi

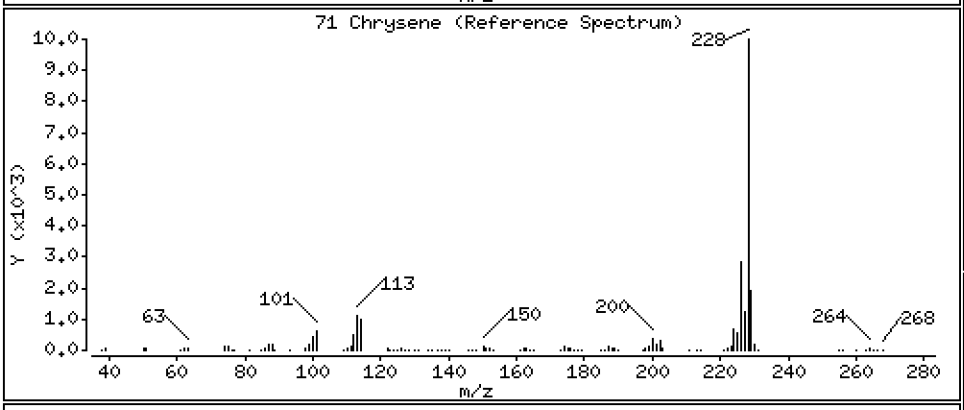
Column diameter: 0.25

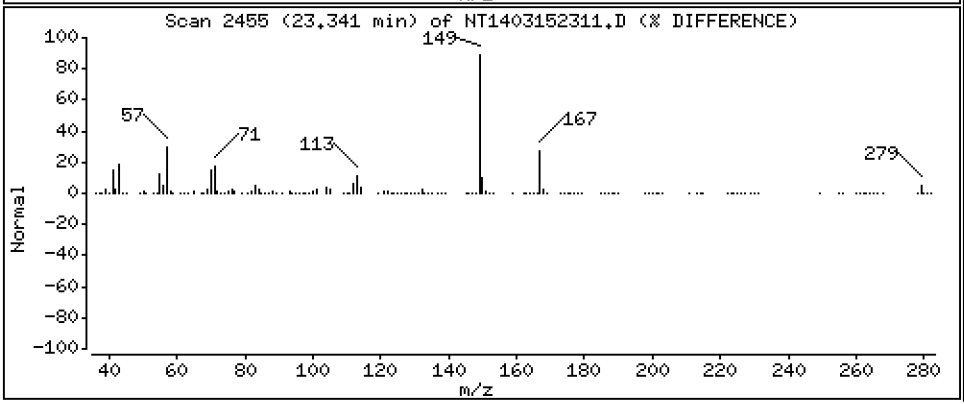
71 Chrysene

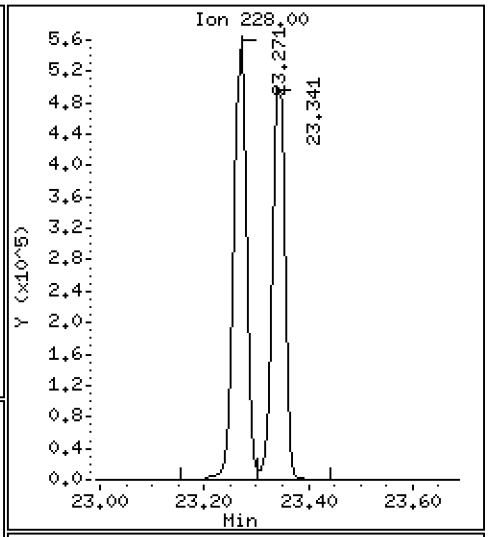
Concentration: 4.723 ug/mL

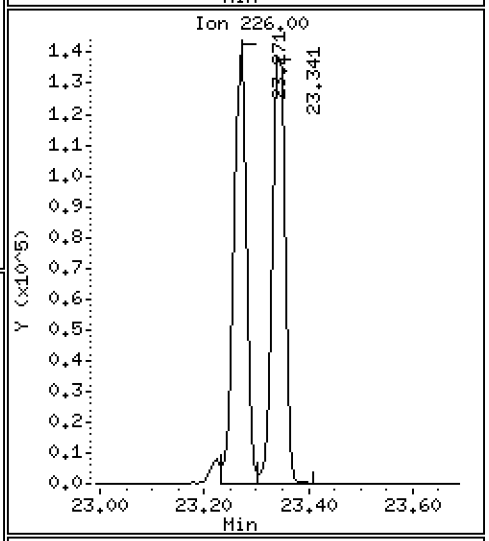


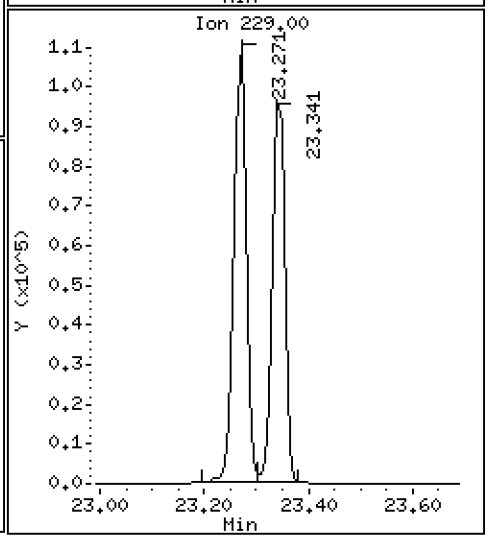












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

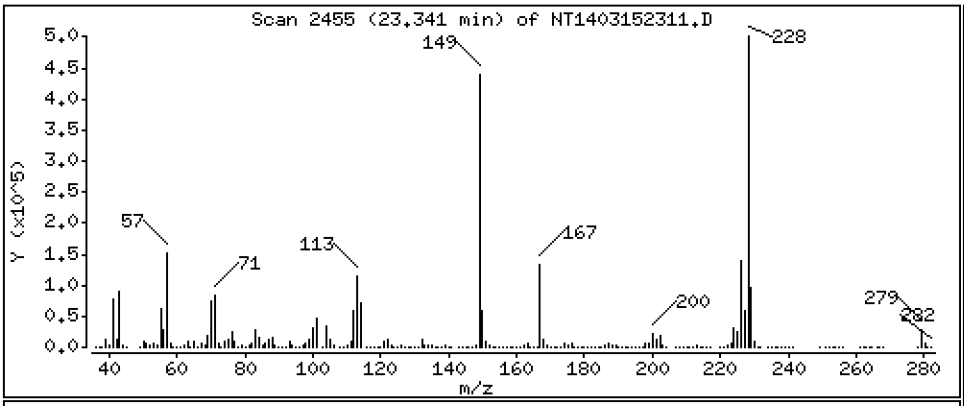
Operator: JGR

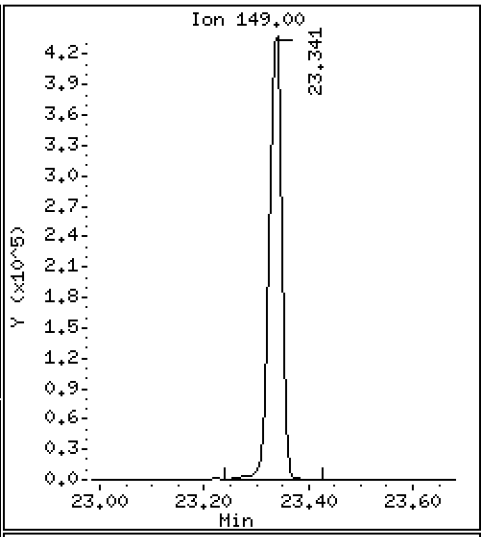
Column phase: ZB-5msi

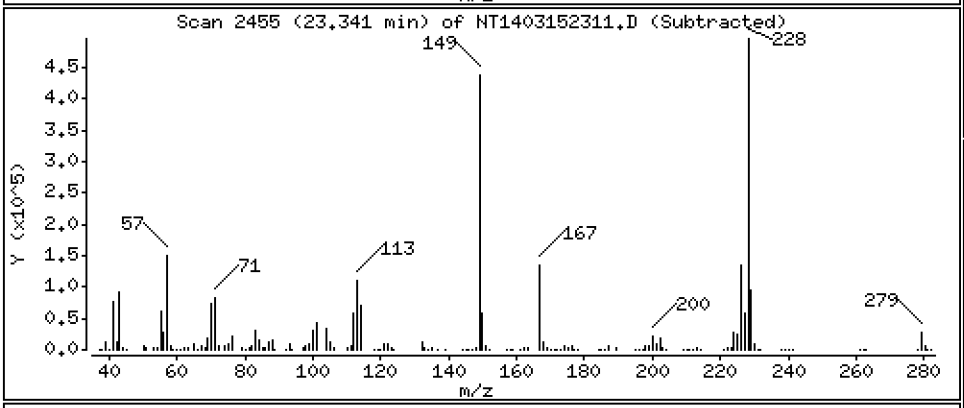
Column diameter: 0.25

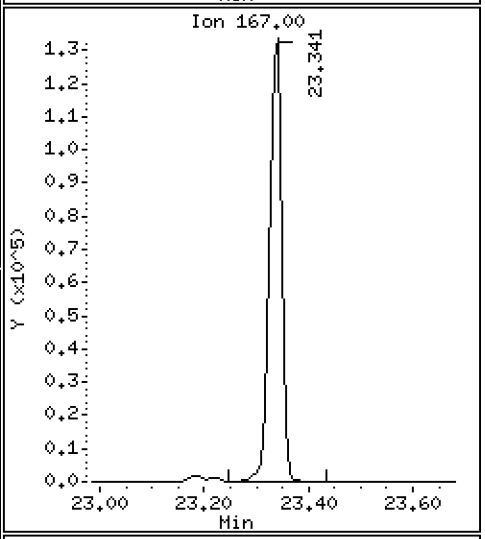
72 bis(2-Ethylhexyl)phthalate

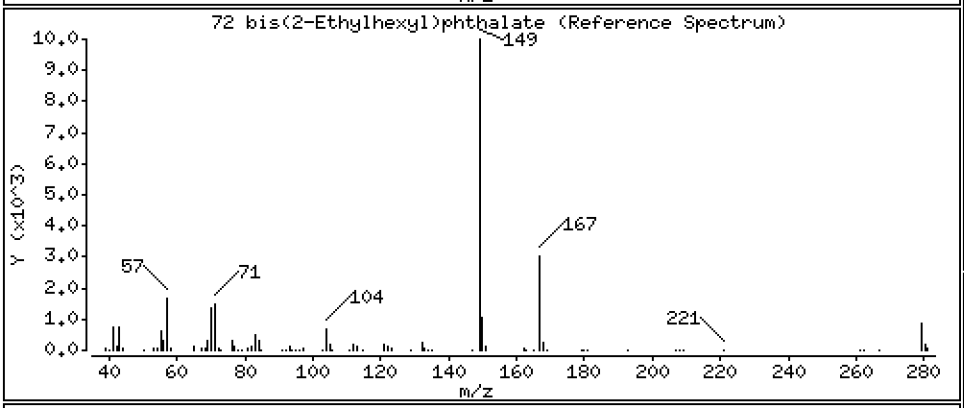
Concentration: 5.428 ug/mL

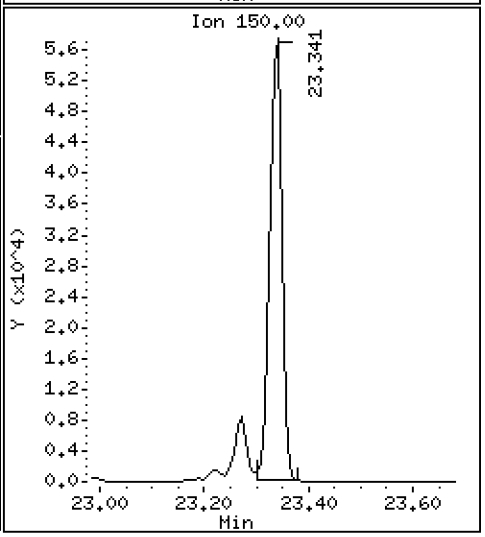


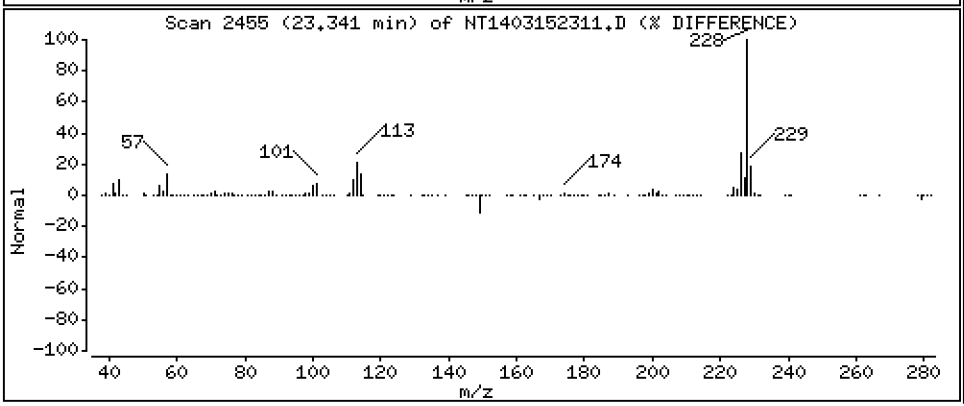












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

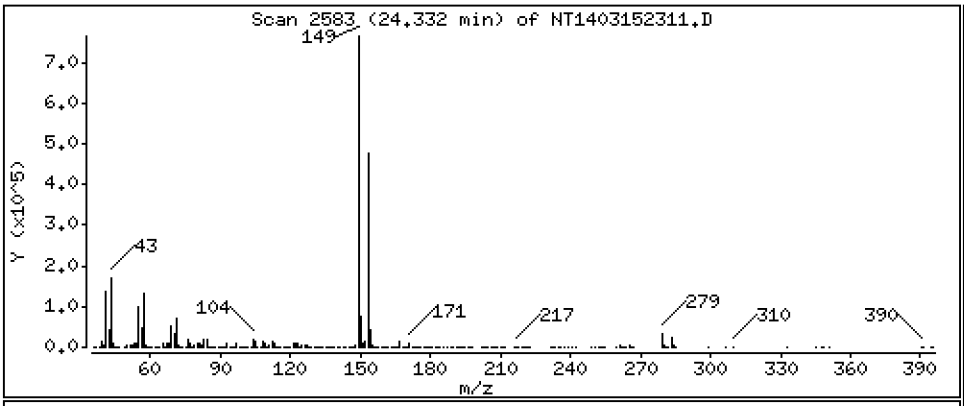
Operator: JGR

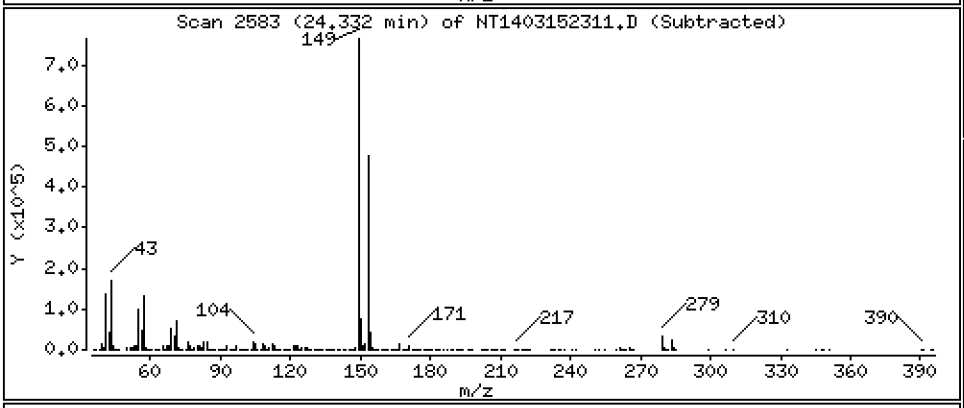
Column phase: ZB-5msi

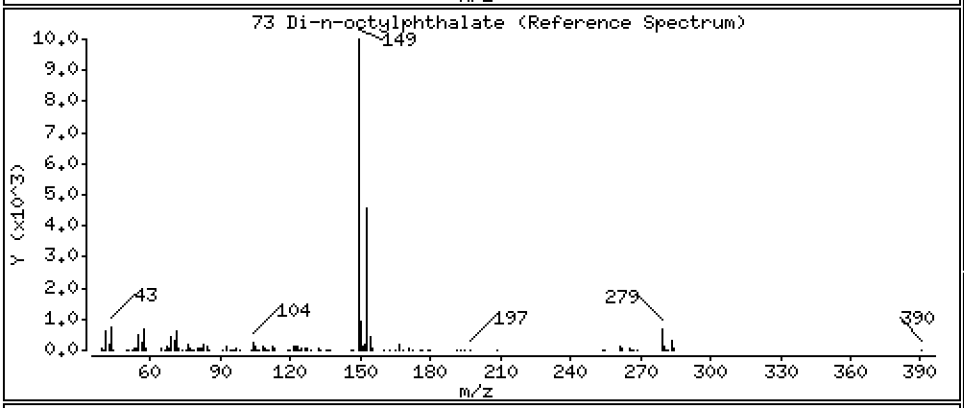
Column diameter: 0.25

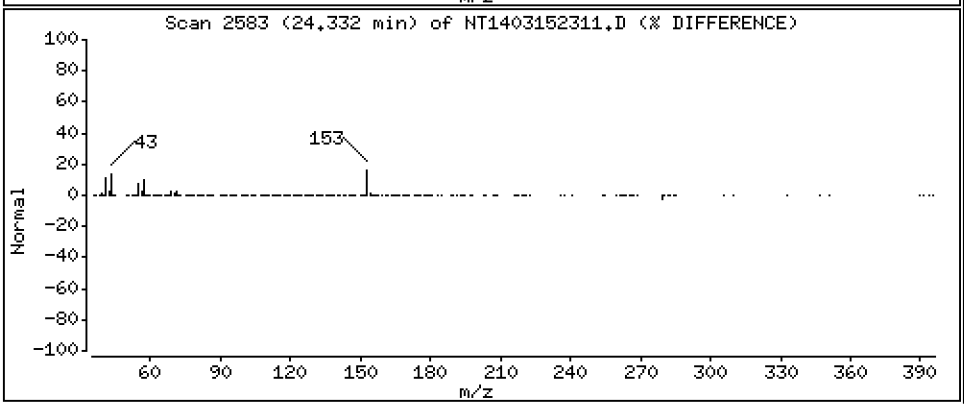
73 Di-n-octylphthalate

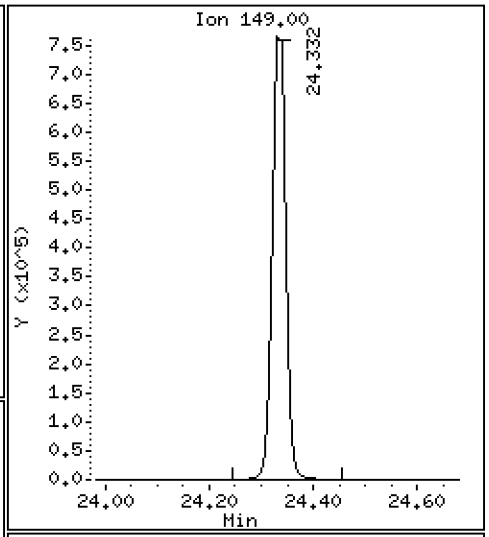
Concentration: 5.135 ug/mL

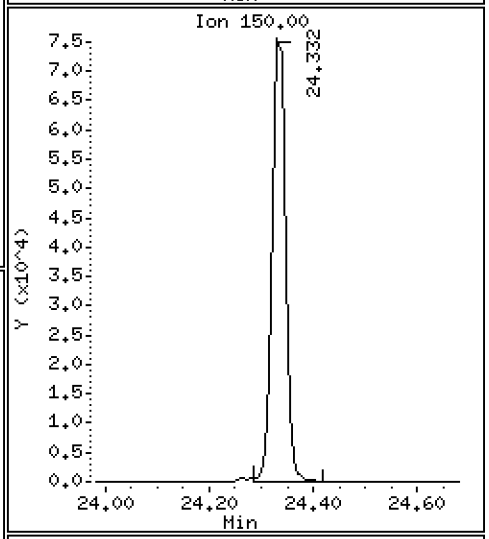


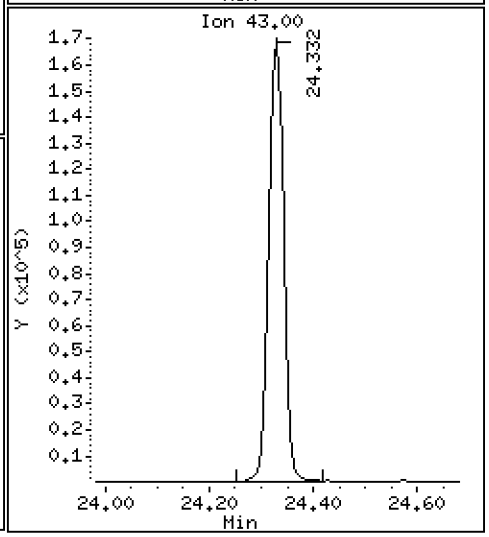












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

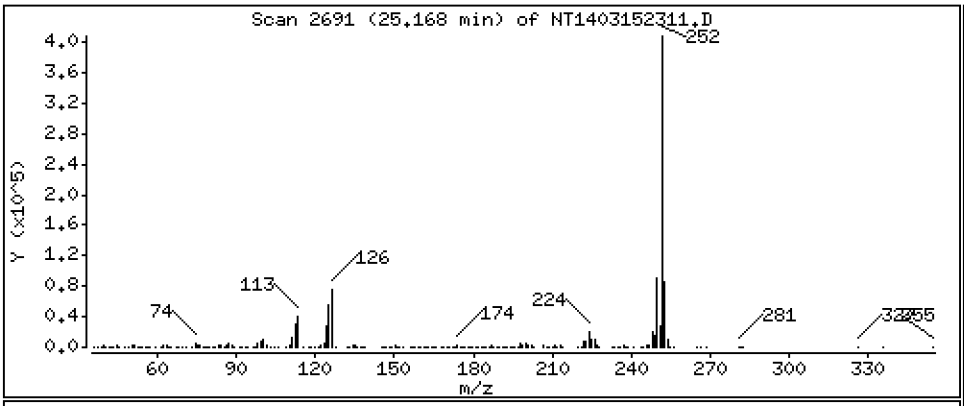
Operator: JGR

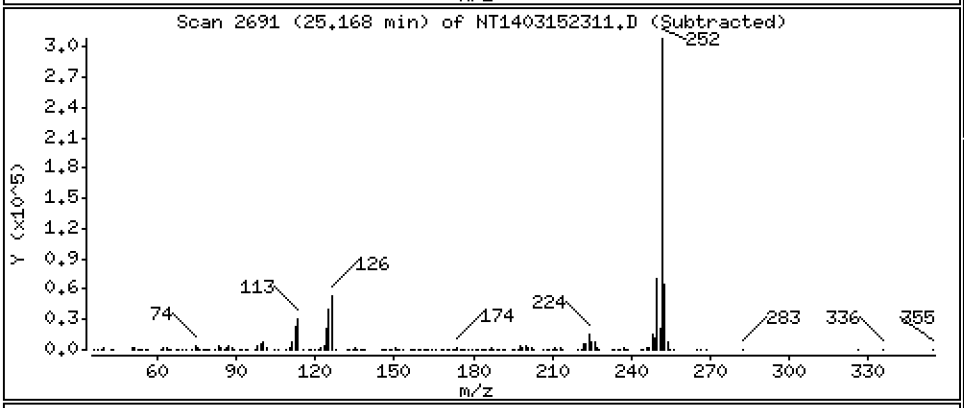
Column phase: ZB-5msi

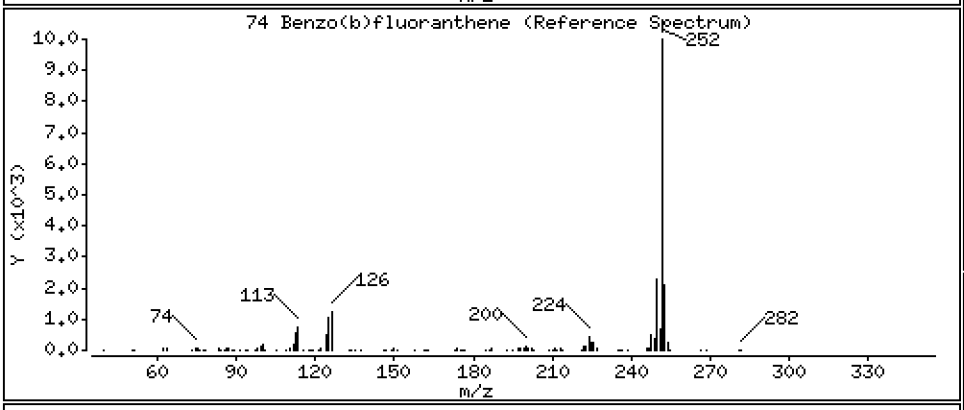
Column diameter: 0.25

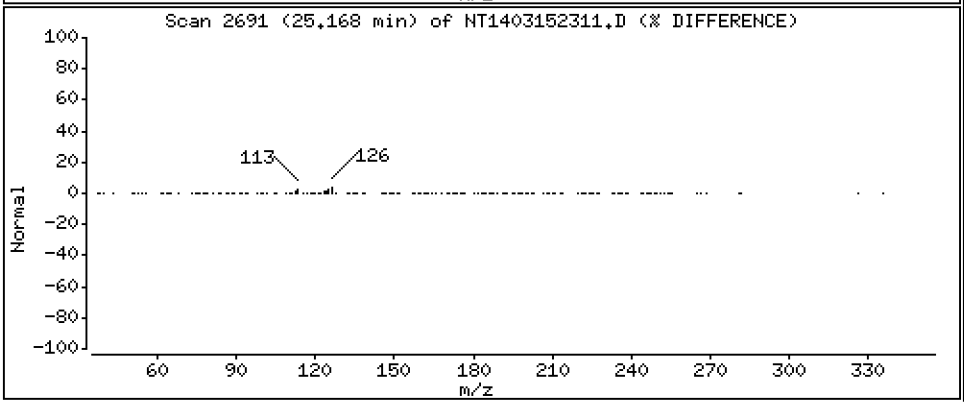
74 Benzo(b)fluoranthene

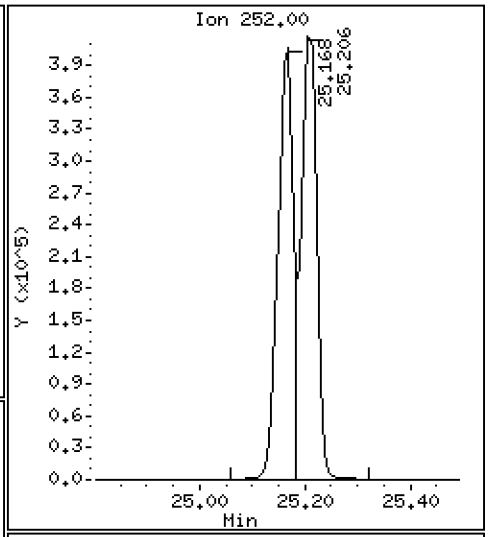
Concentration: 4.774 ug/mL

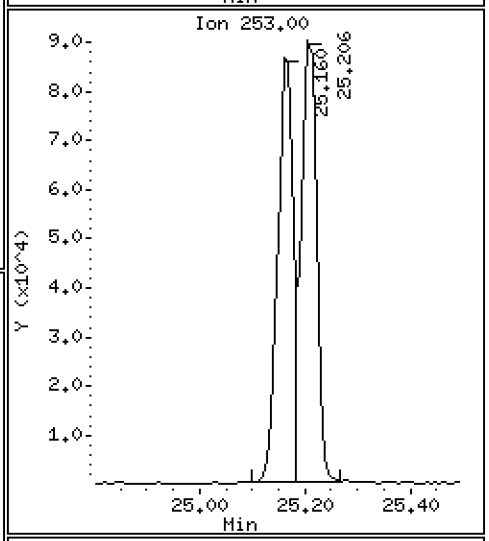


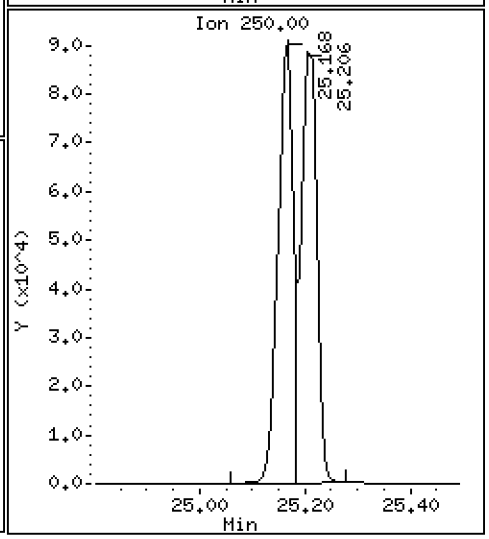












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

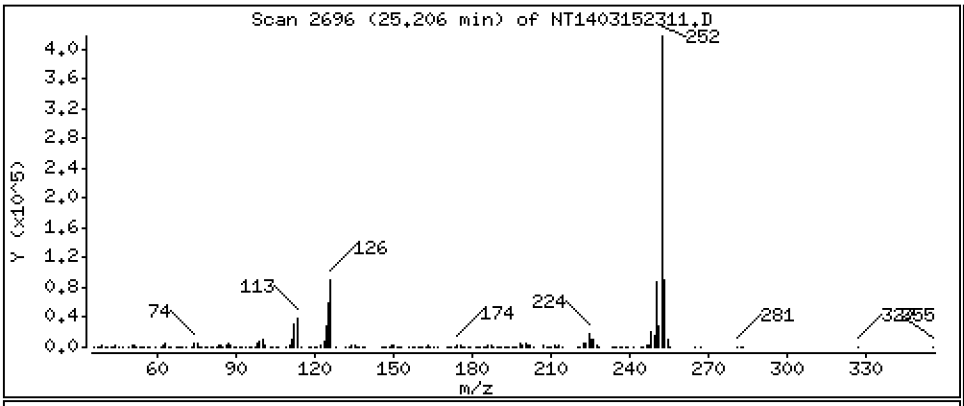
Operator: JGR

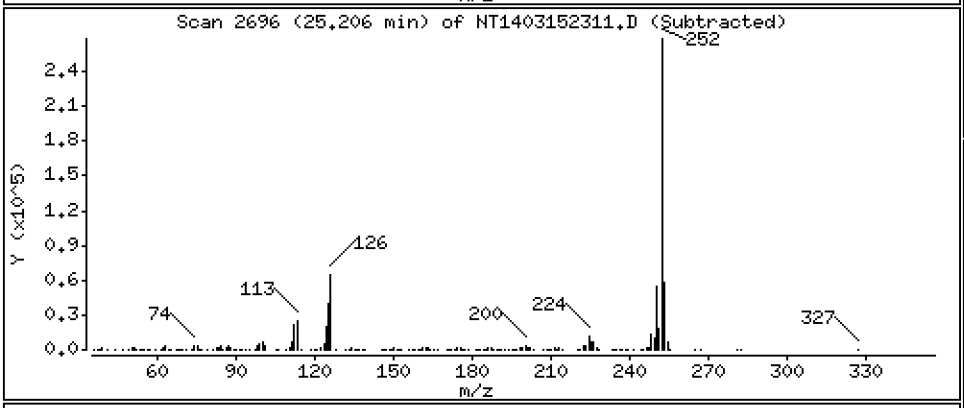
Column phase: ZB-5msi

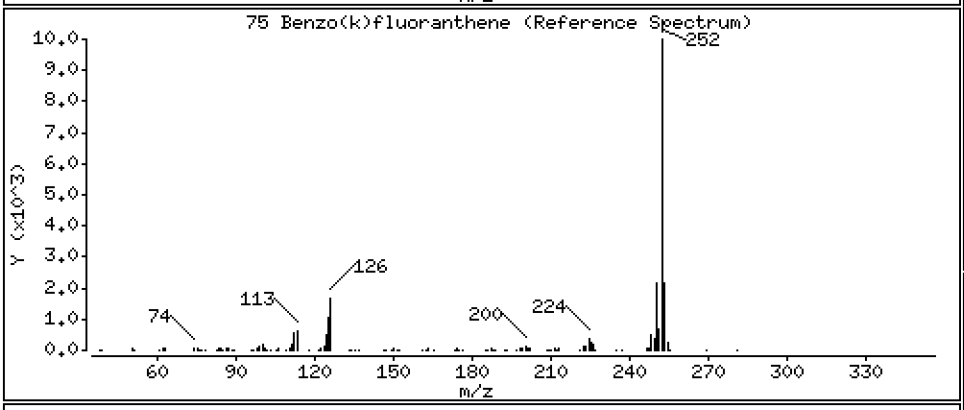
Column diameter: 0.25

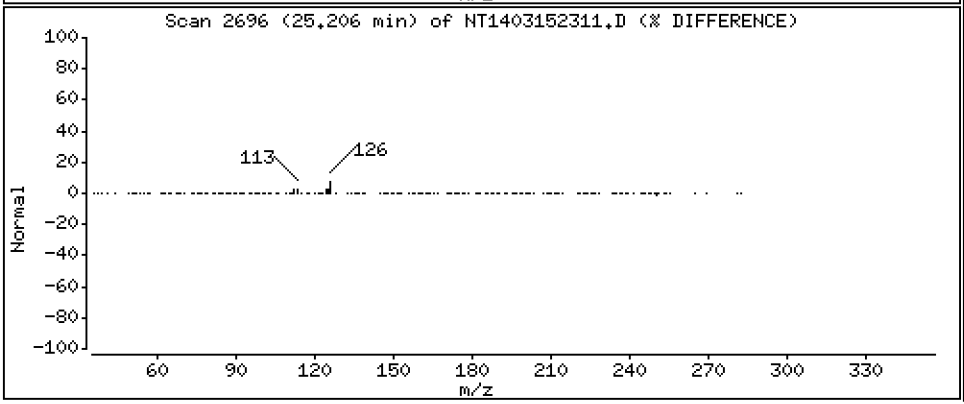
75 Benzo(k)fluoranthene

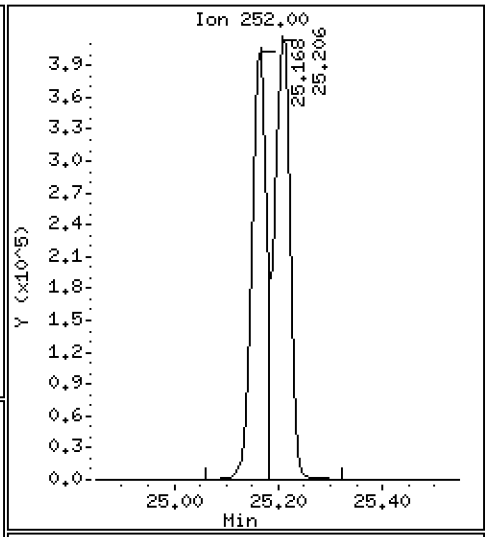
Concentration: 5.100 ug/mL

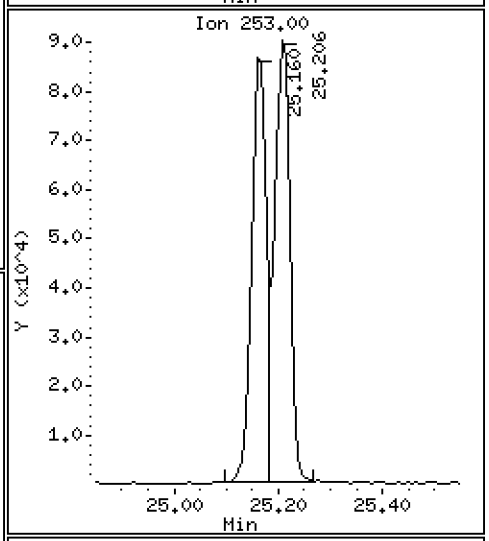


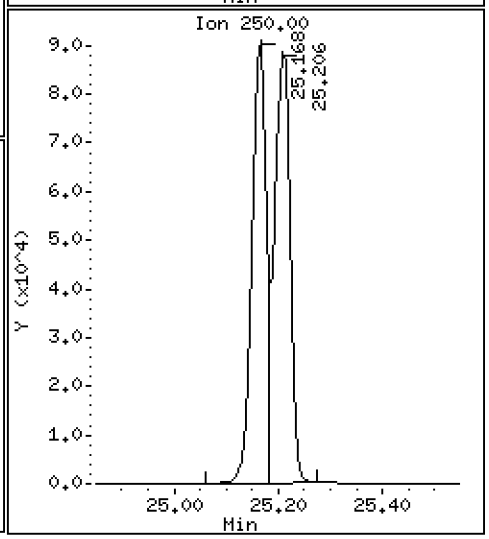












Date : 15-MAR-2023 17:39

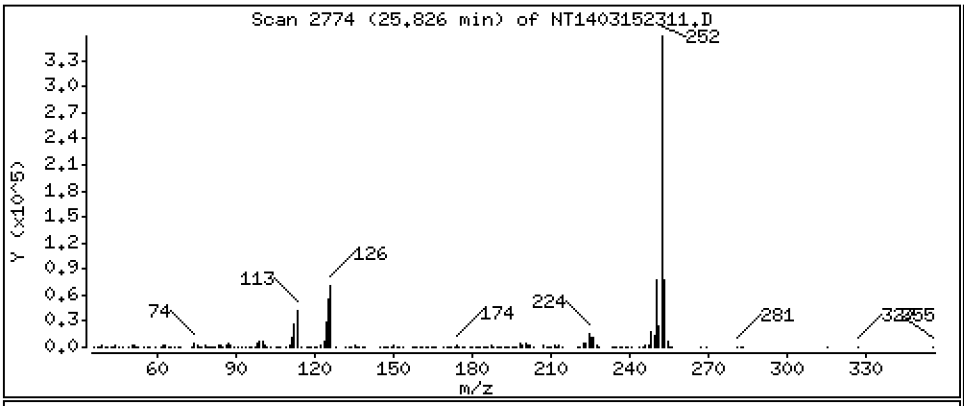
Client ID: Instrument: nt14.i

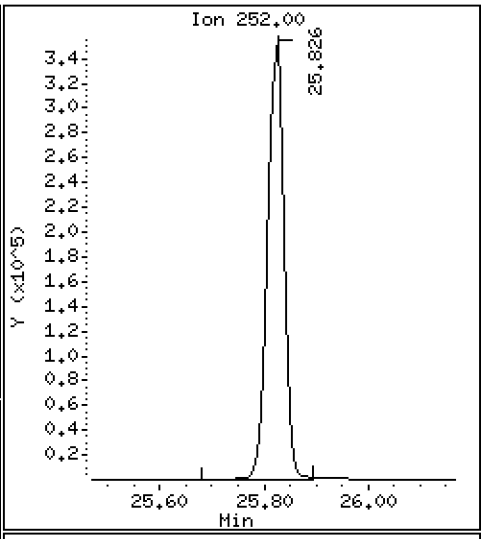
Sample Info: SLC0160-SCV1

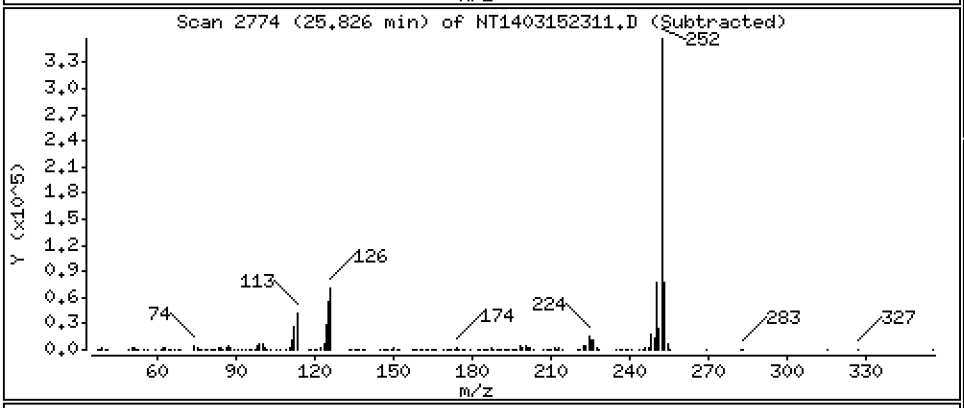
Operator: JGR

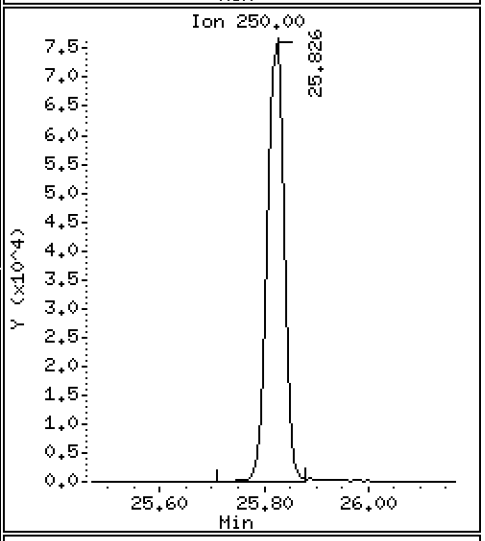
Column phase: ZB-5msi Column diameter: 0.25

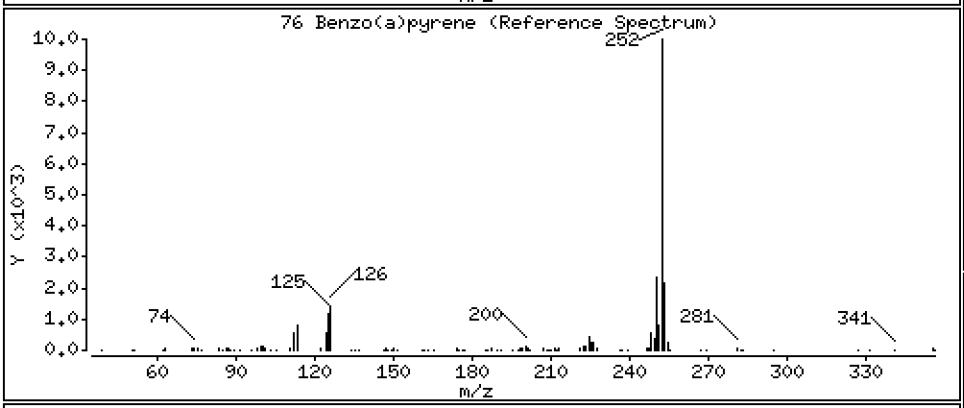
76 Benzo(a)pyrene Concentration: 4.978 ug/mL

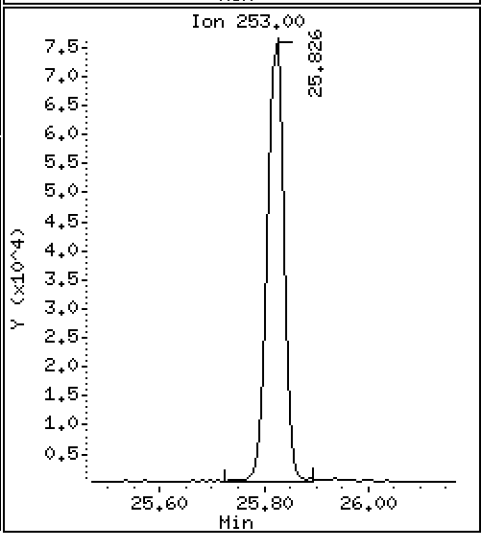


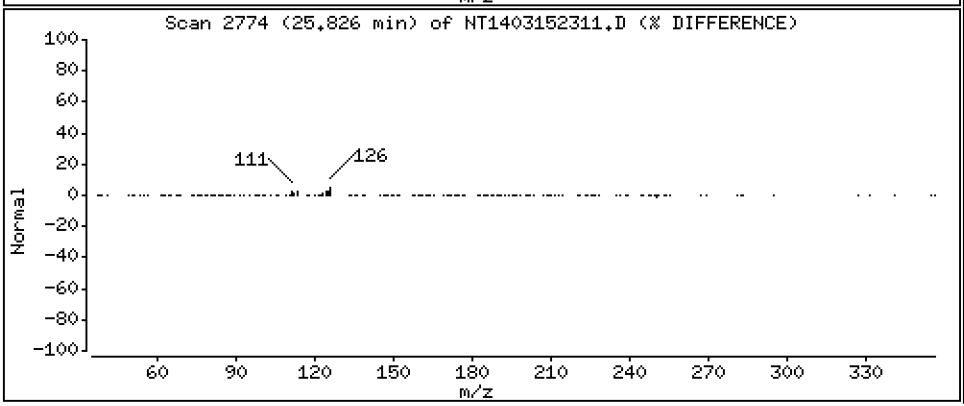












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

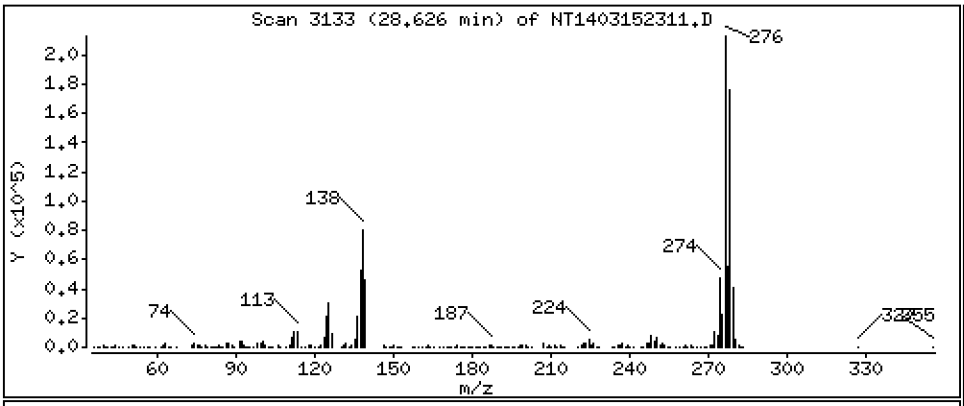
Operator: JGR

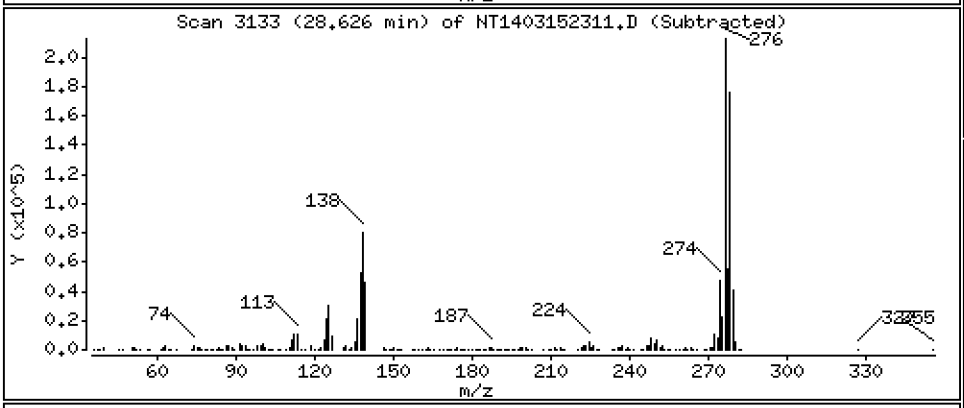
Column phase: ZB-5msi

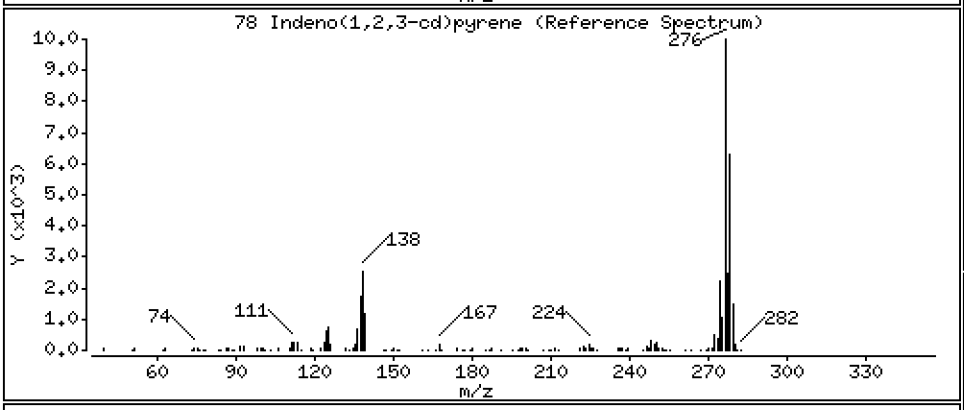
Column diameter: 0.25

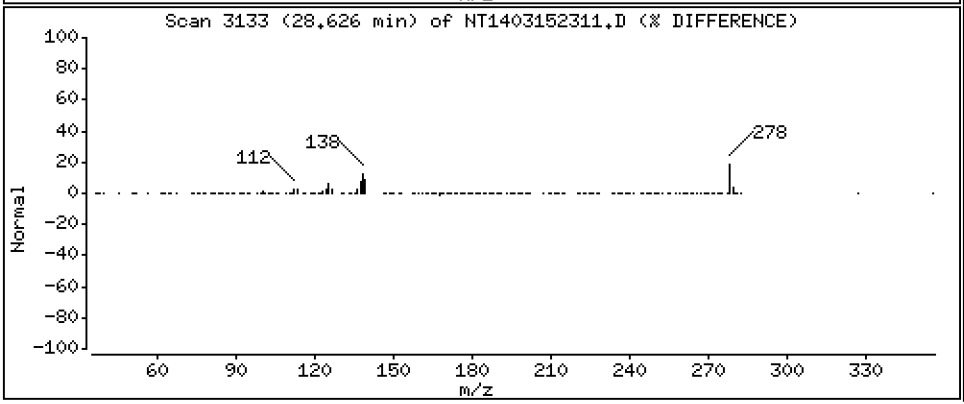
78 Indeno(1,2,3-cd)pyrene

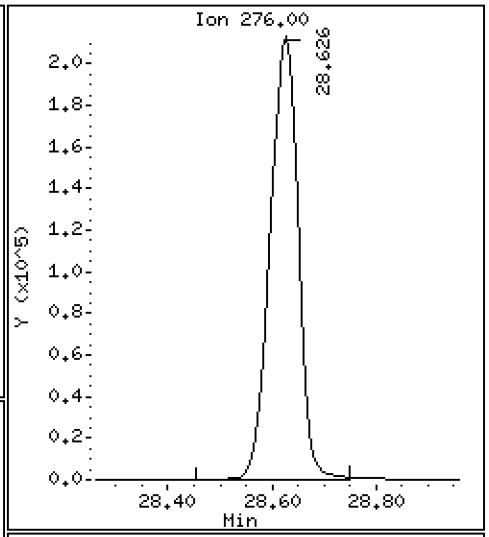
Concentration: 4.943 ug/mL

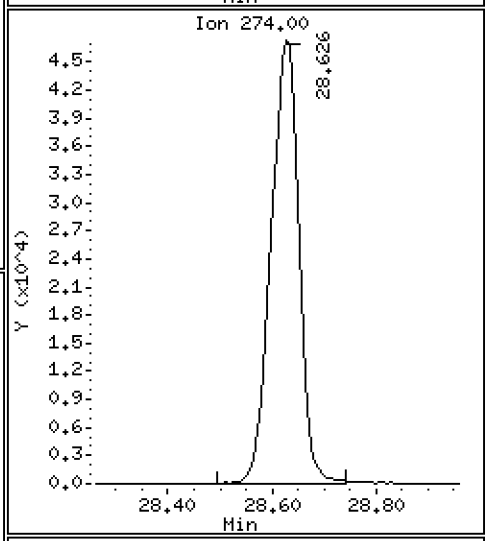


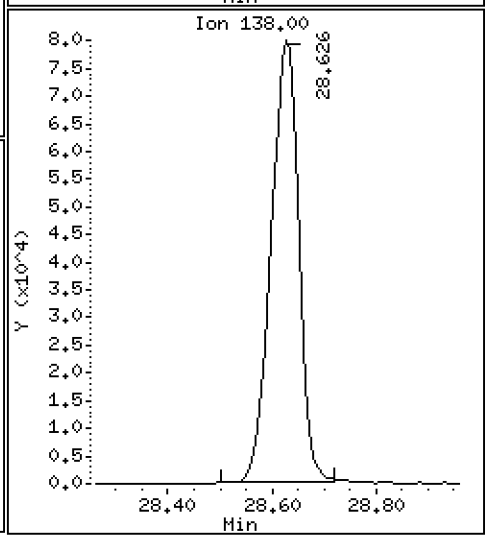












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

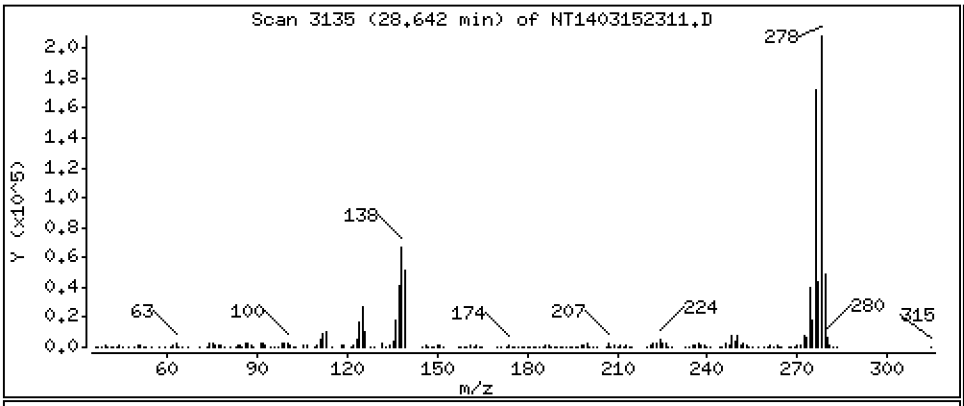
Operator: JGR

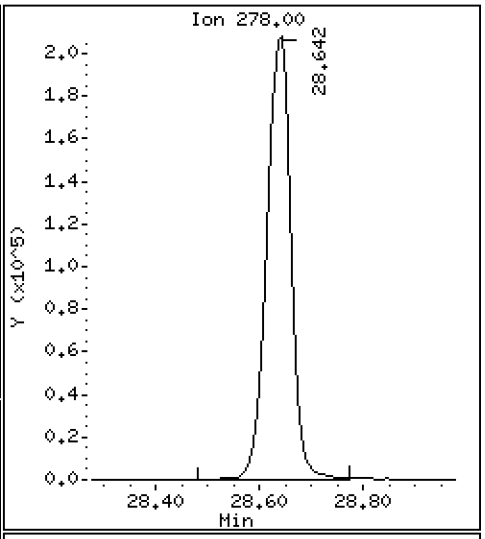
Column phase: ZB-5msi

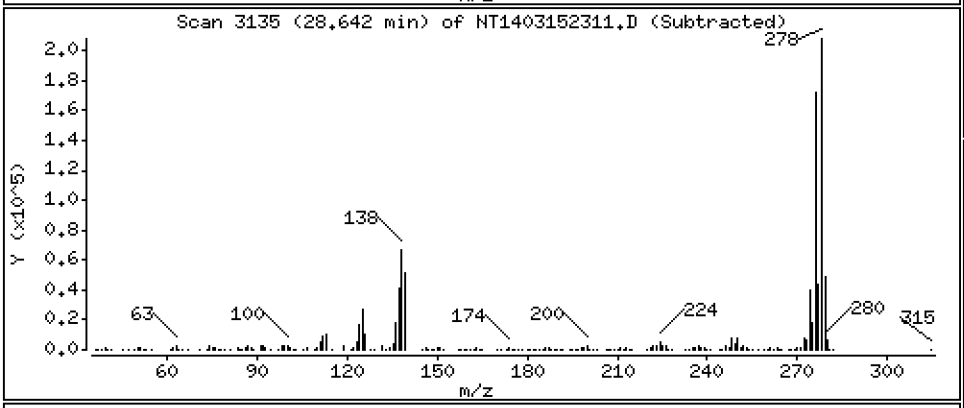
Column diameter: 0.25

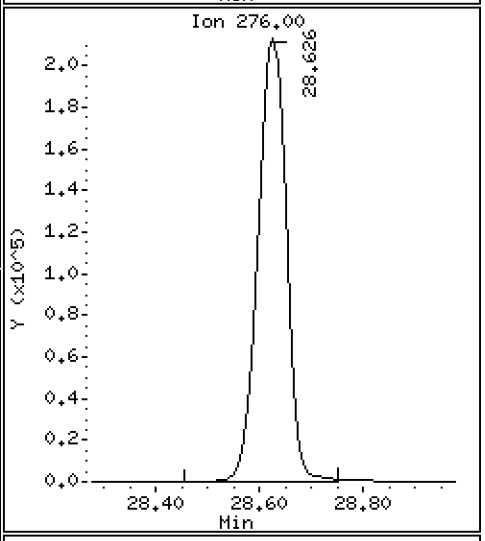
79 Dibenzo(a,h)anthracene

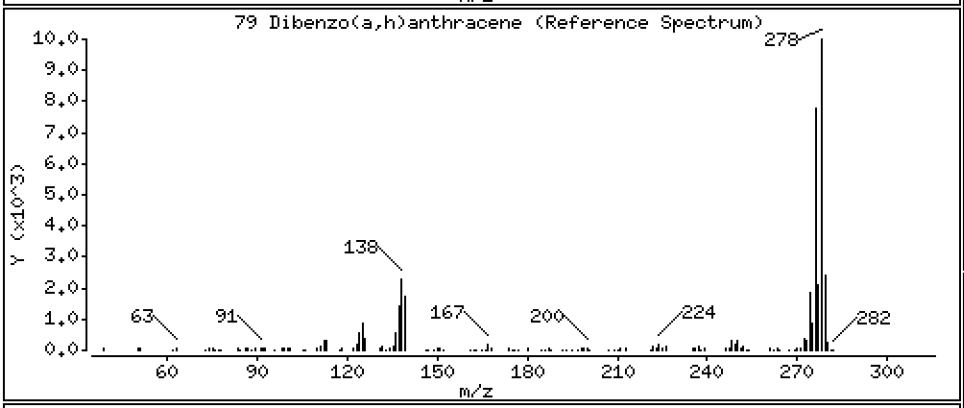
Concentration: 4.865 ug/mL

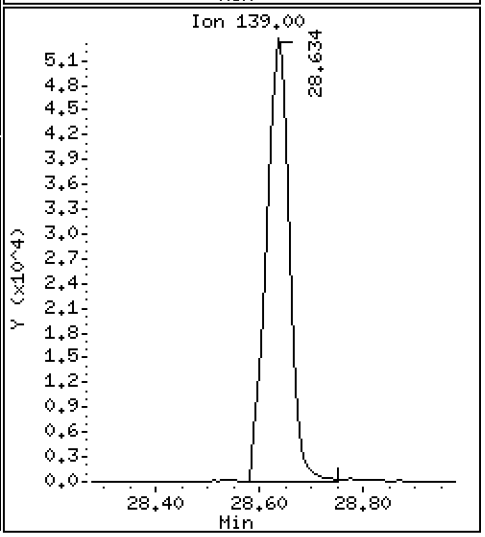


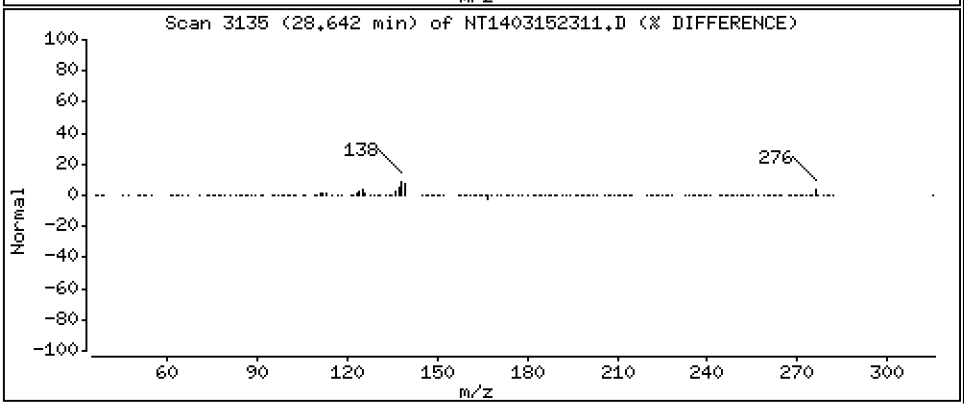












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

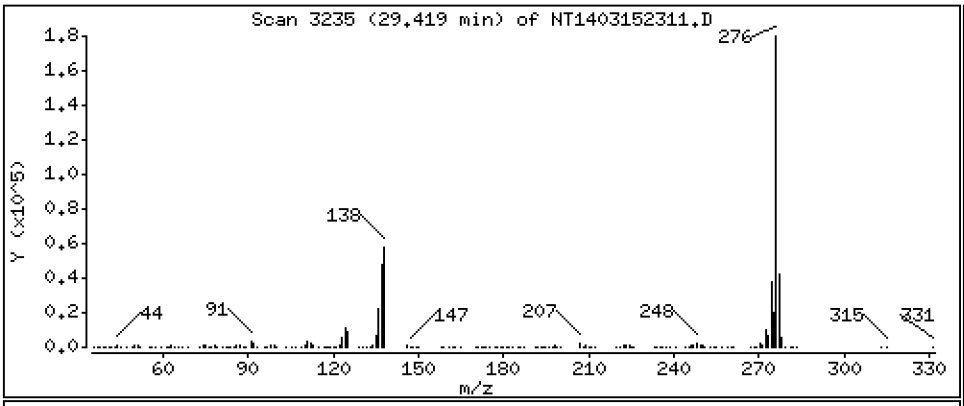
Operator: JGR

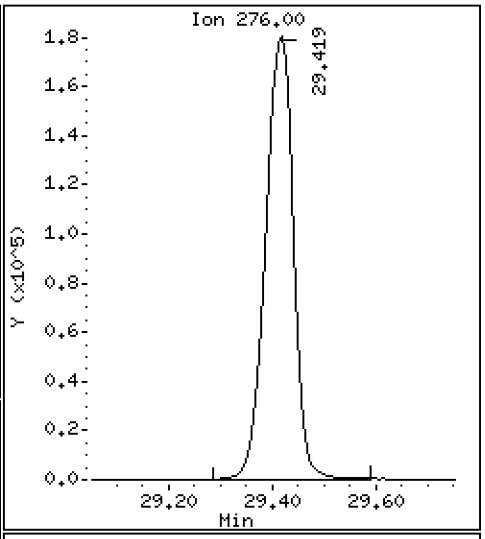
Column phase: ZB-5msi

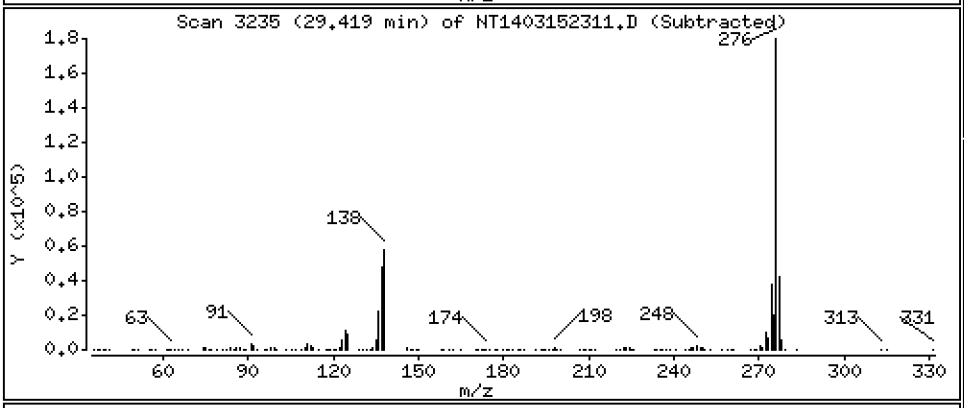
Column diameter: 0.25

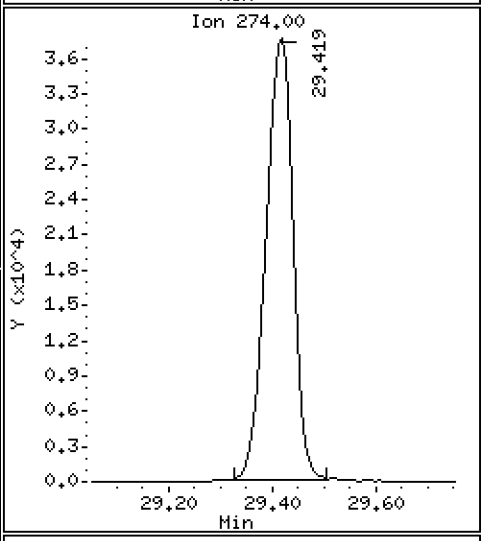
80 Benzo(g,h,i)perylene

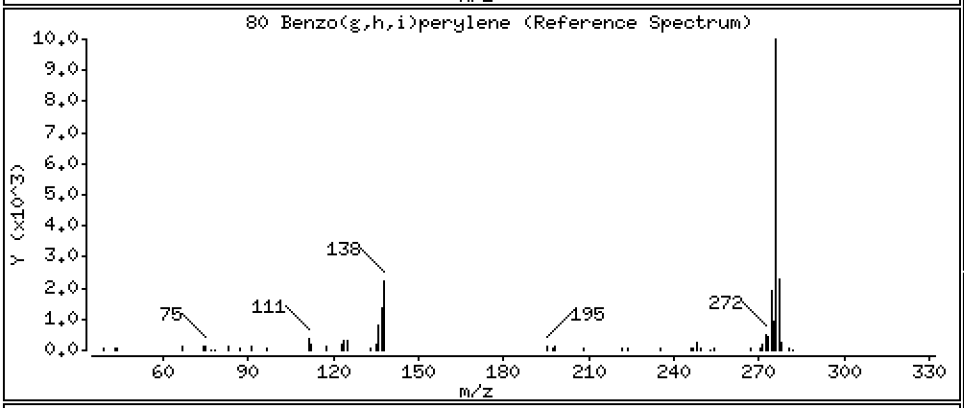
Concentration: 4.939 ug/mL

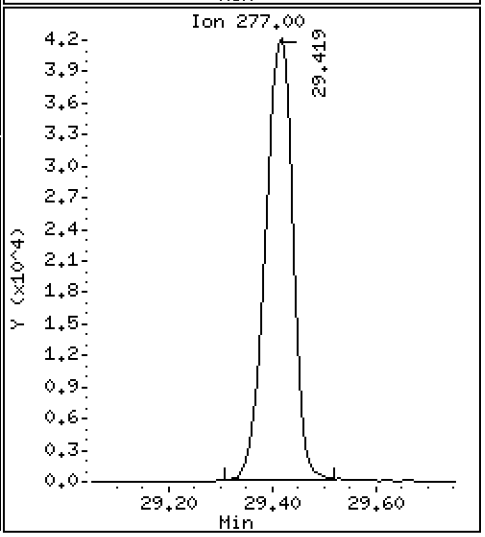


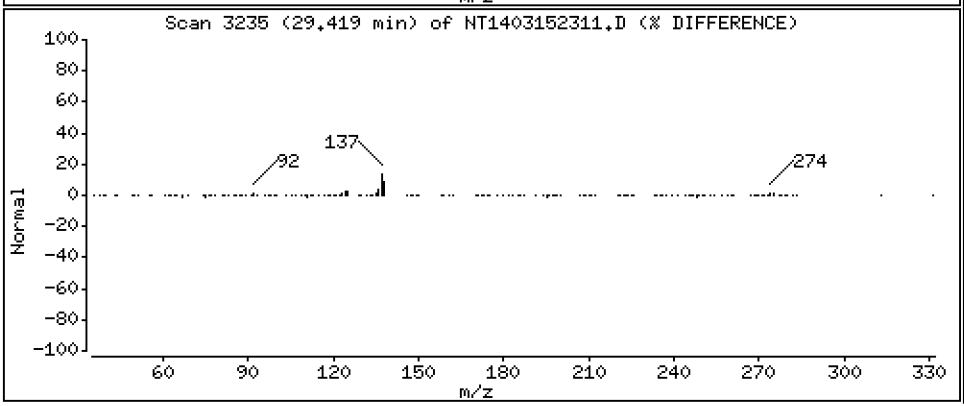












Data File: \\target\share\chem3\nt14.i\20230315.b\NT1403152311.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

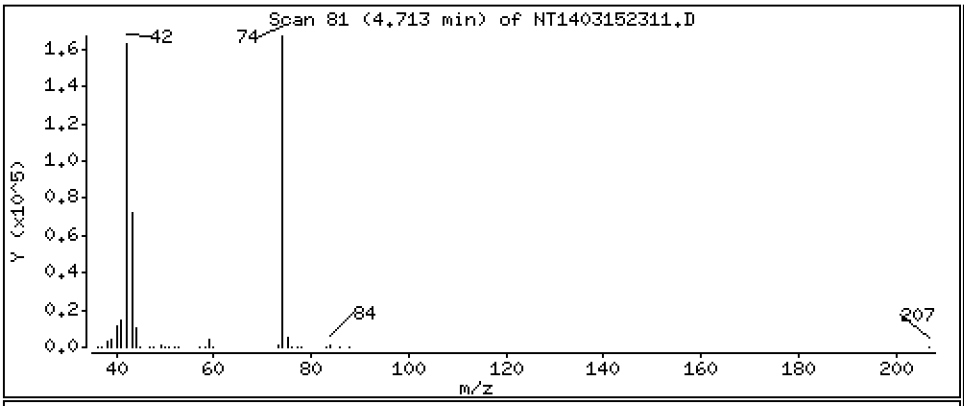
Operator: JGR

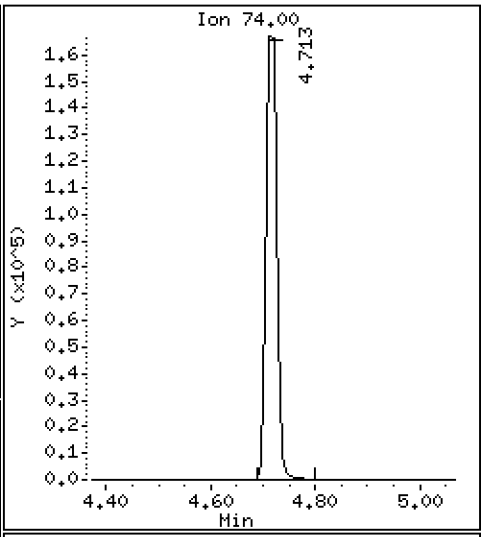
Column phase: ZB-5msi

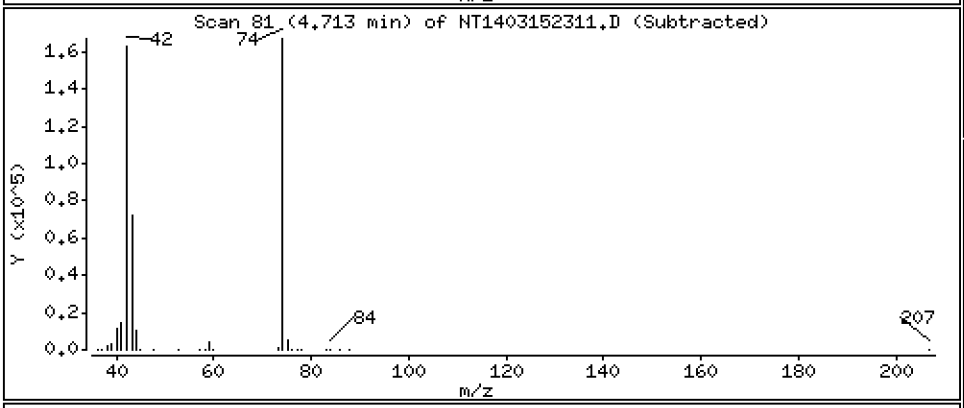
Column diameter: 0.25

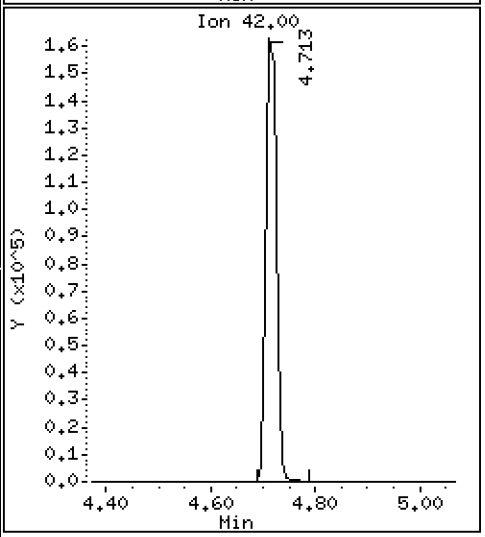
90 N-Nitrosodimethylamine

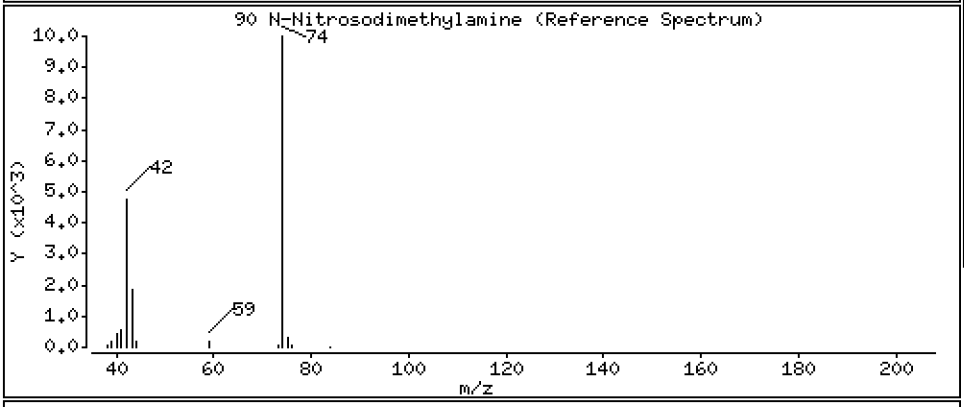
Concentration: 5.200 ug/mL

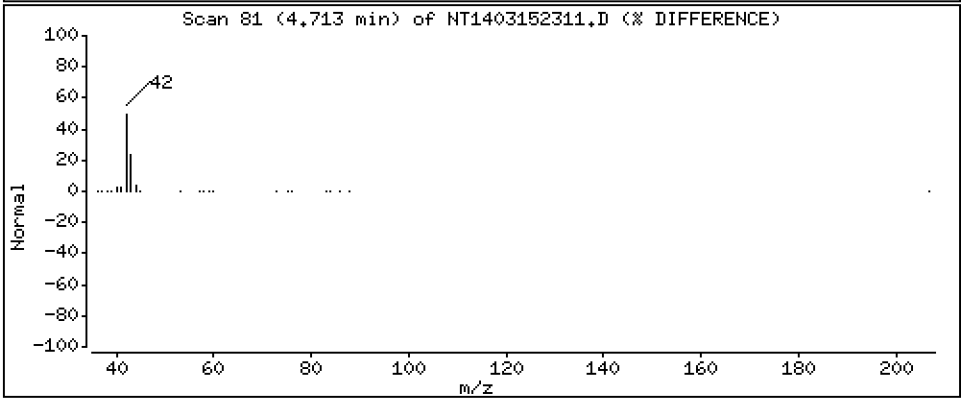












Data File: \\target\share\chem3\nt14.i\20230315.b\NT1403152311.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

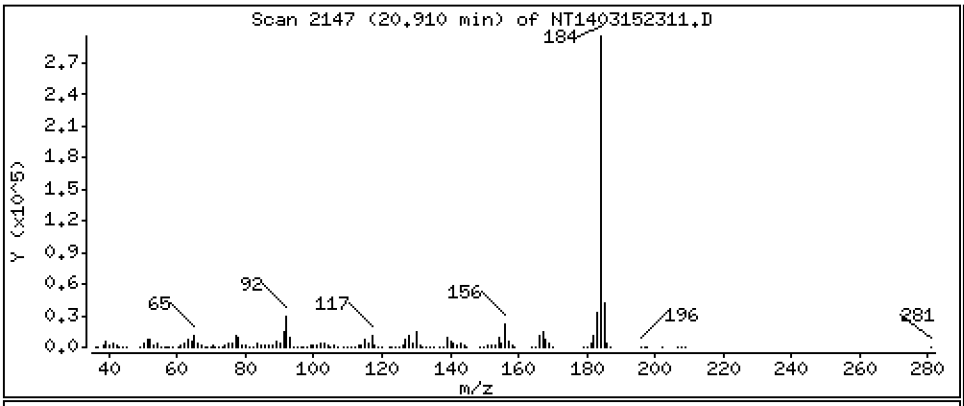
Operator: JGR

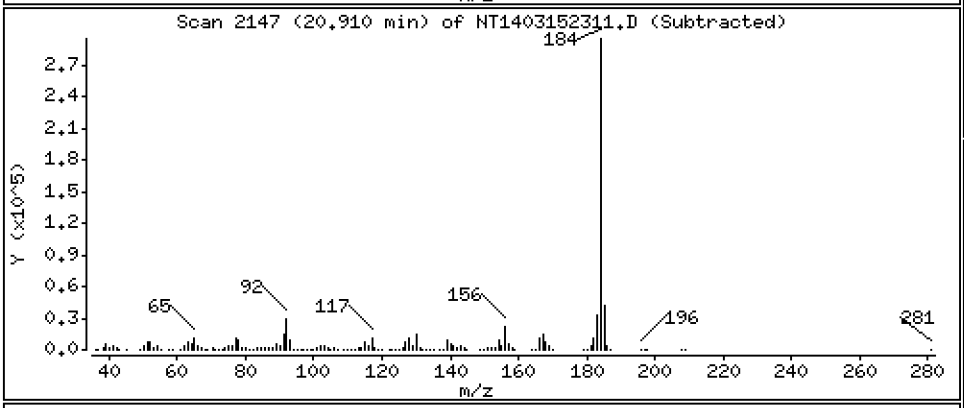
Column phase: ZB-5msi

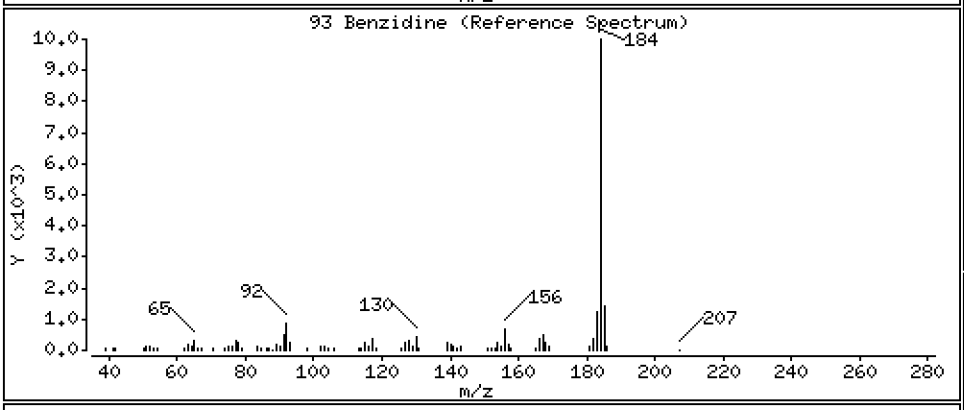
Column diameter: 0.25

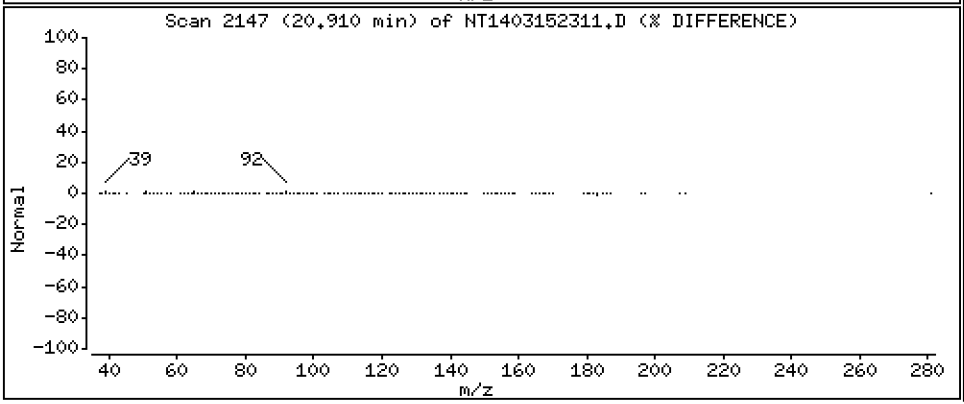
93 Benzidine

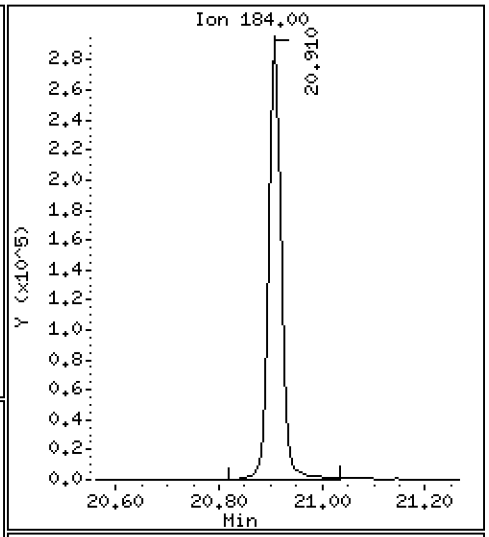
Concentration: 5.646 ug/mL

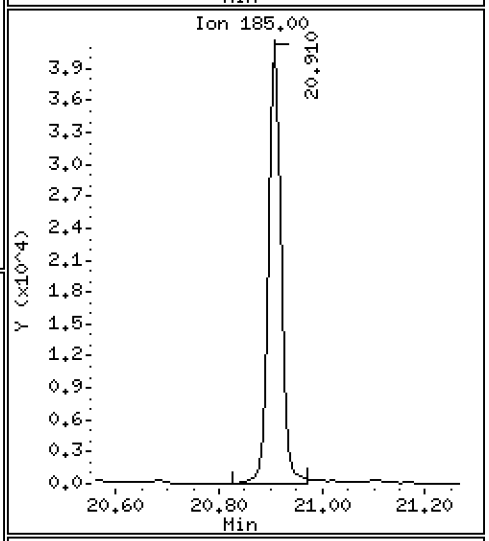


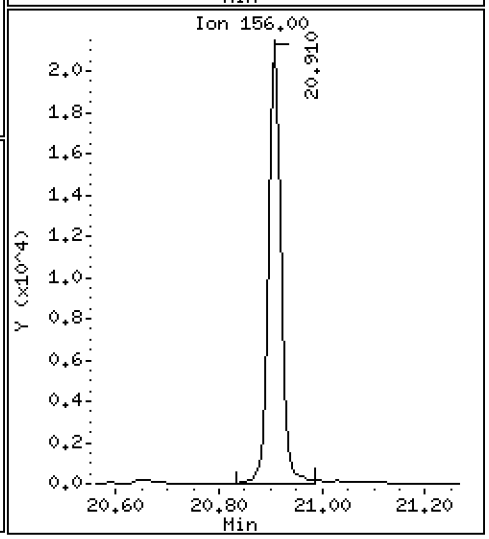












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

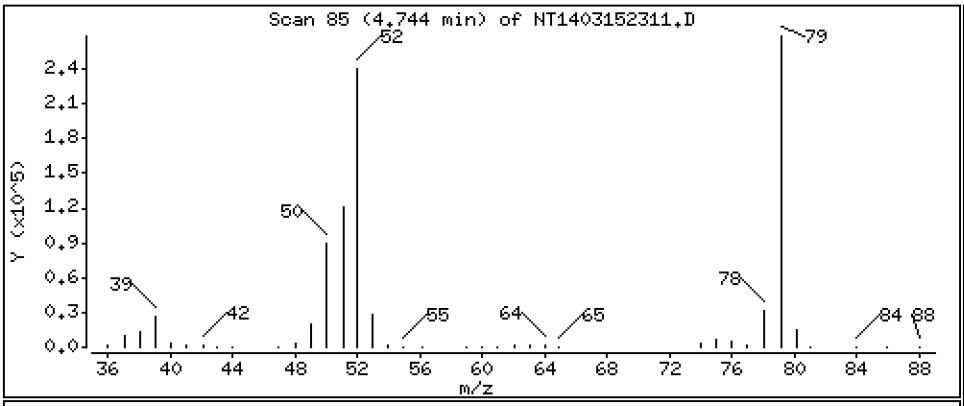
Operator: JGR

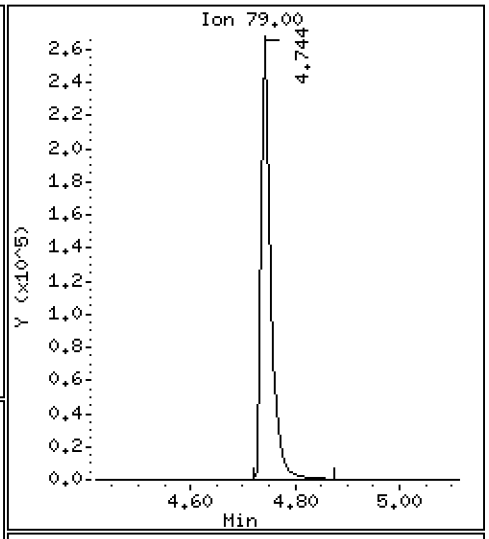
Column phase: ZB-5msi

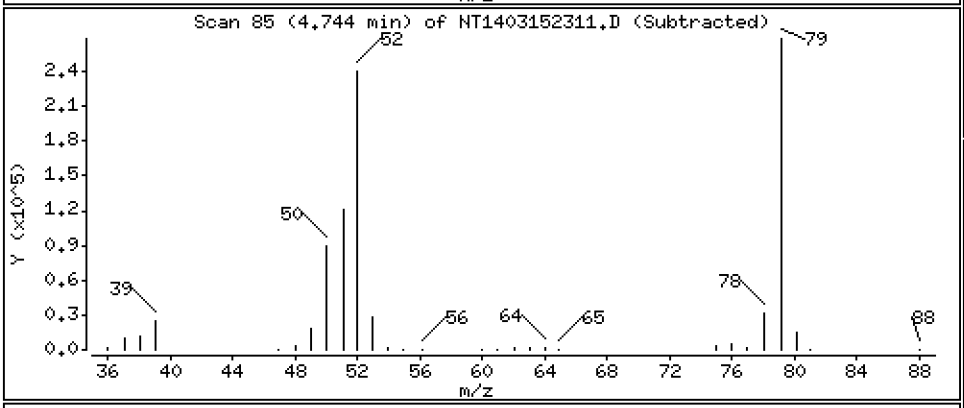
Column diameter: 0.25

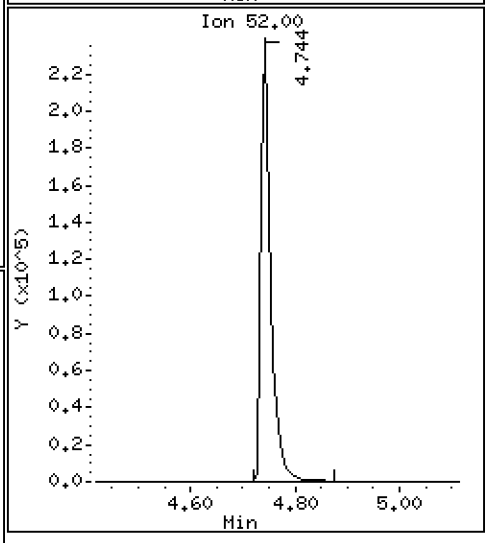
103 Pyridine

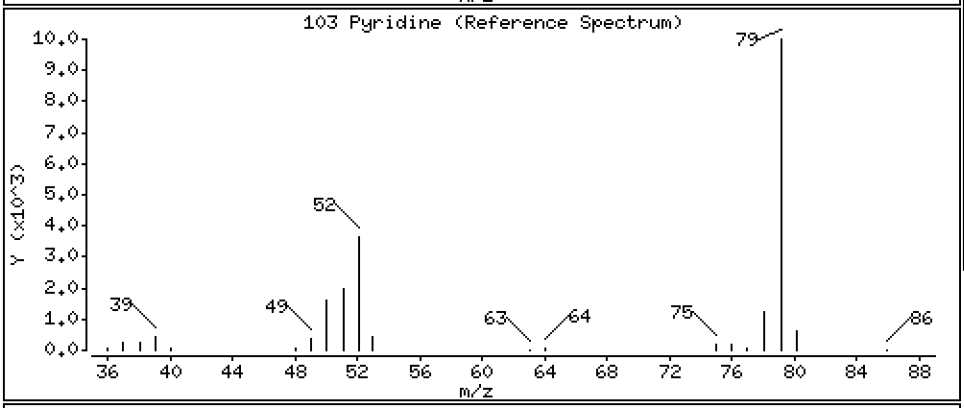
Concentration: 2.648 ug/mL

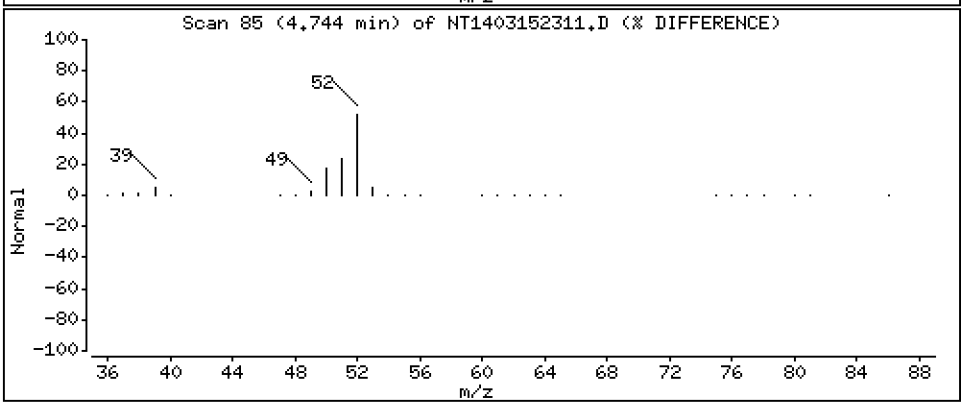












Data File: \\target\share\chem3\nt14.i\20230315.b\NT1403152311.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

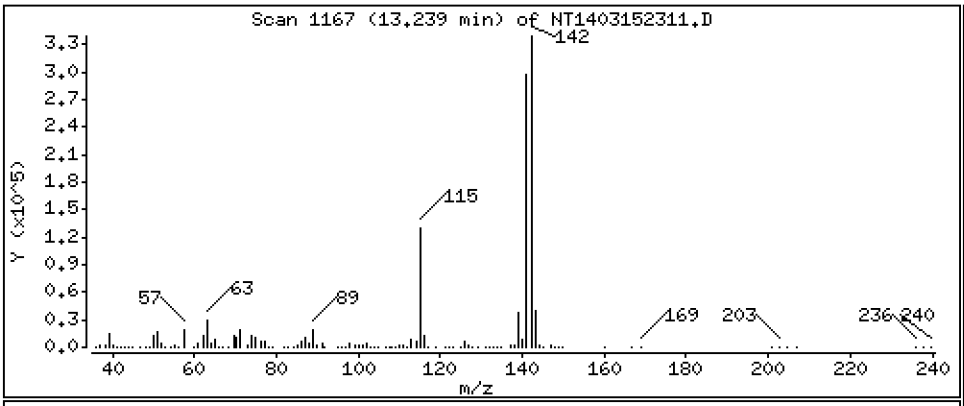
Operator: JGR

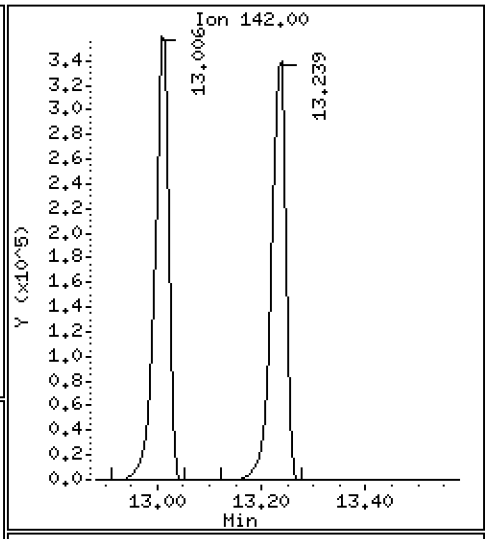
Column phase: ZB-5msi

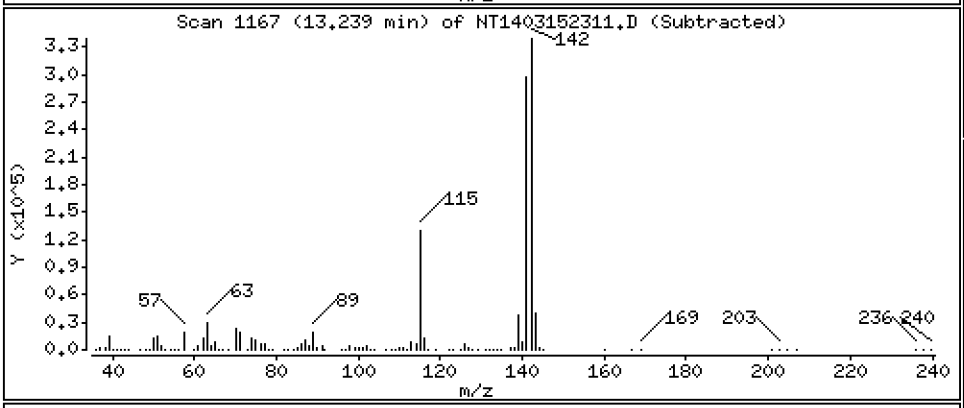
Column diameter: 0.25

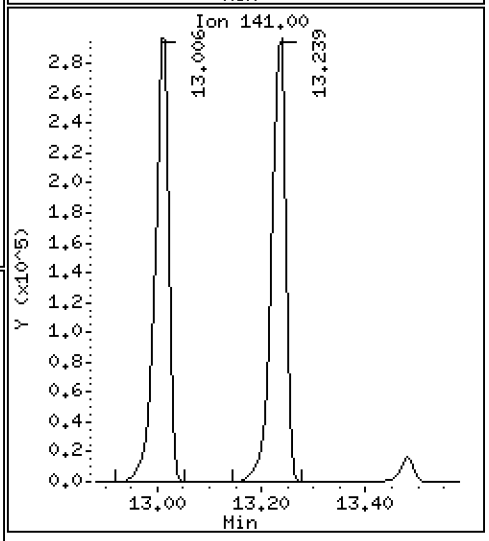
105 1-methylnaphthalene

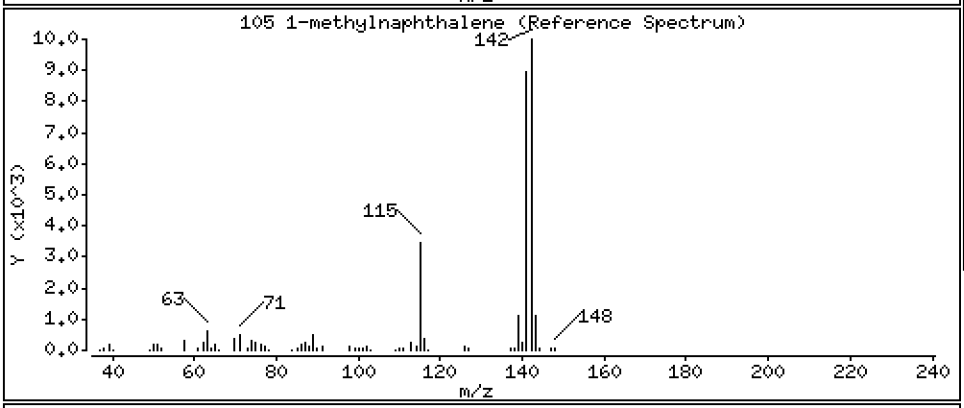
Concentration: 5.103 ug/mL

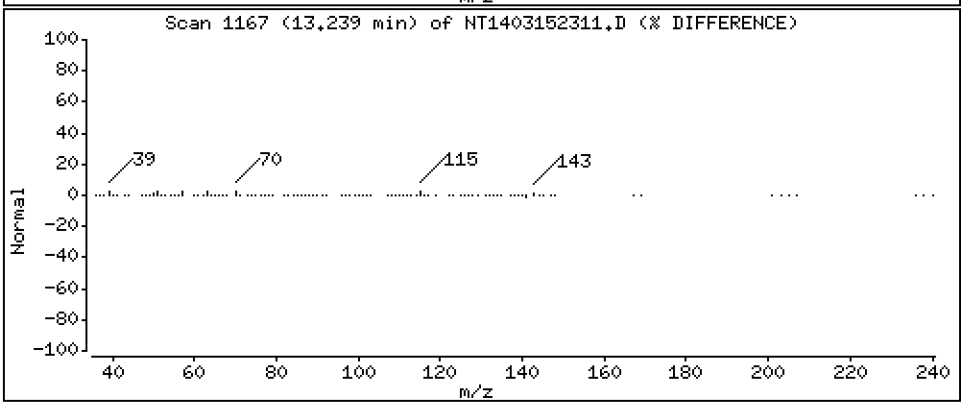












Data File: \\target\share\chem3\nt14.i\20230315.b\NT1403152311.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

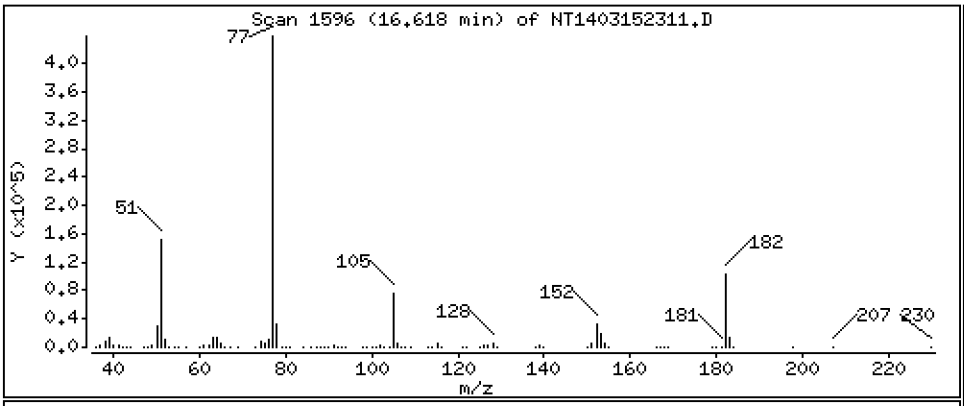
Operator: JGR

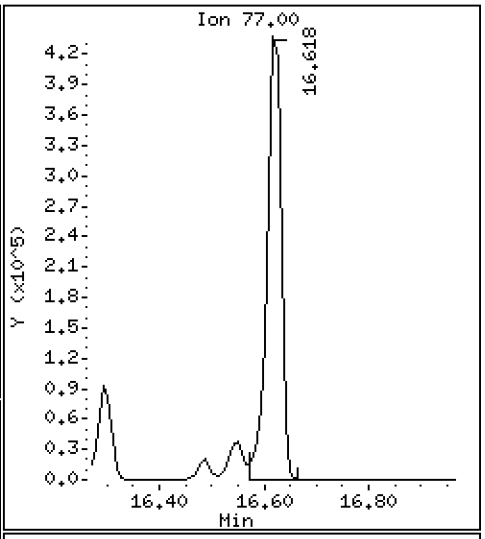
Column phase: ZB-5msi

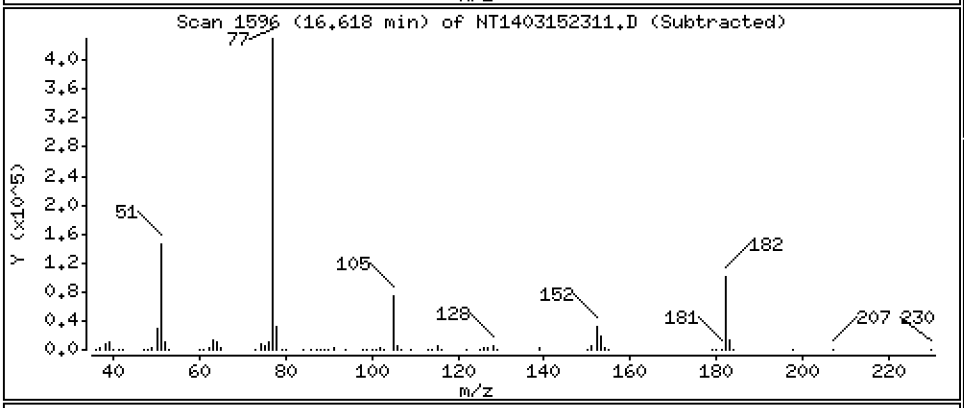
Column diameter: 0.25

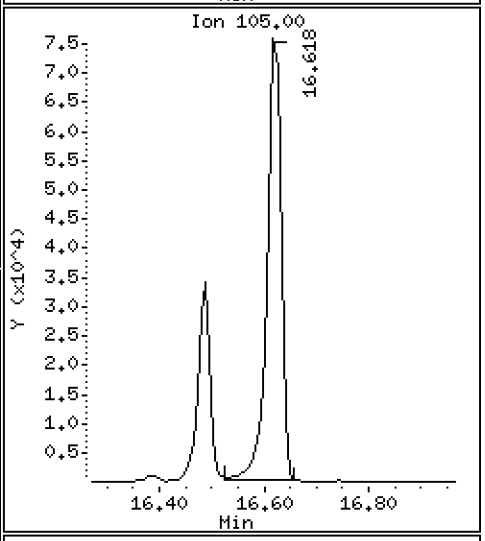
111 Azobenzene (1,2-DP-Hydrazine)

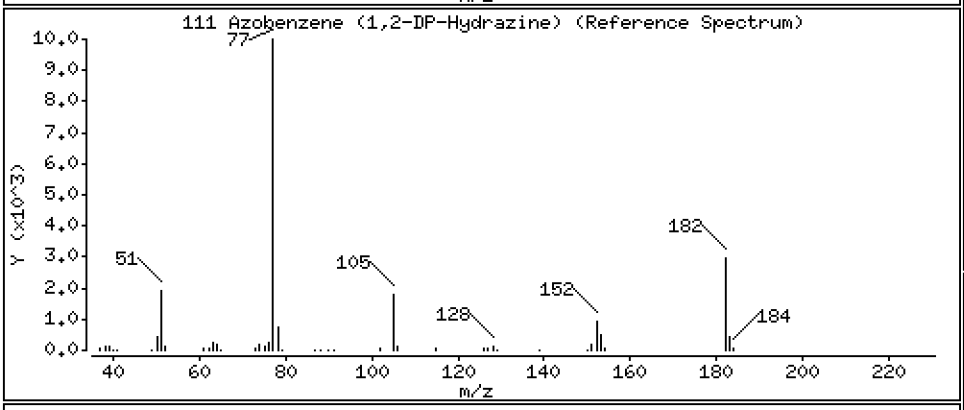
Concentration: 5.002 ug/mL

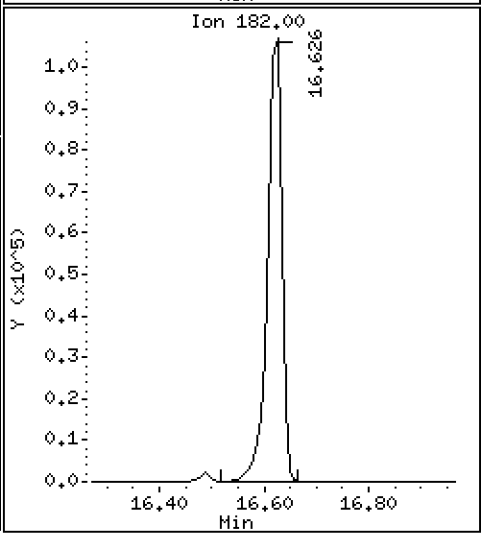


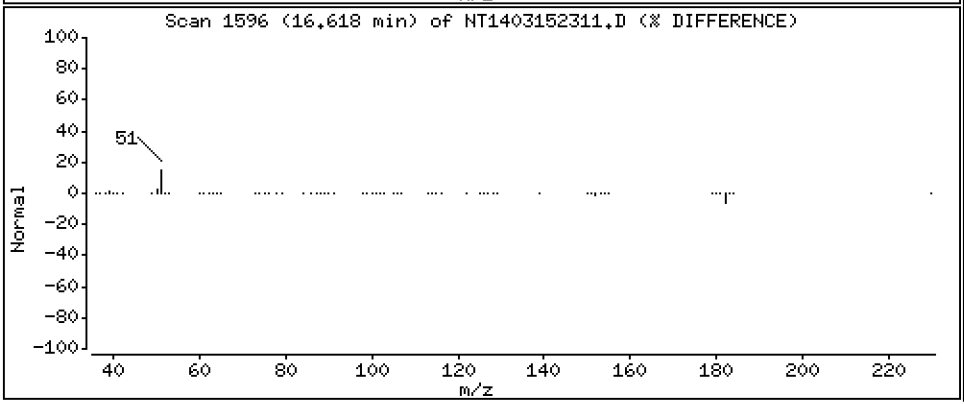












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

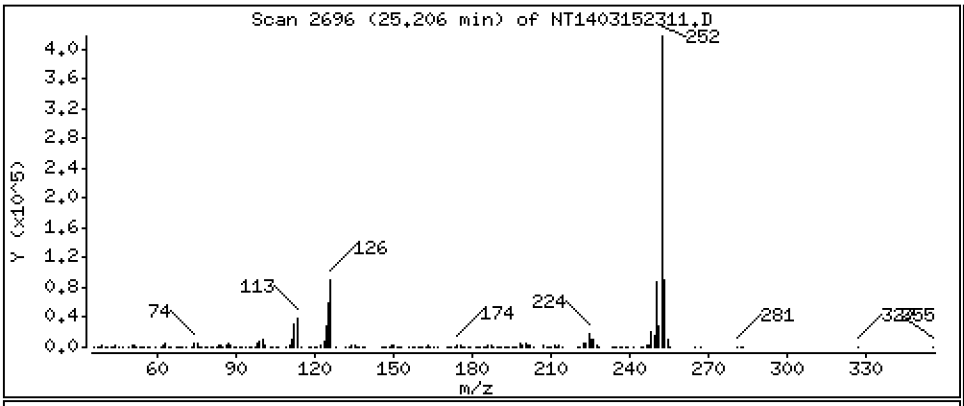
Operator: JGR

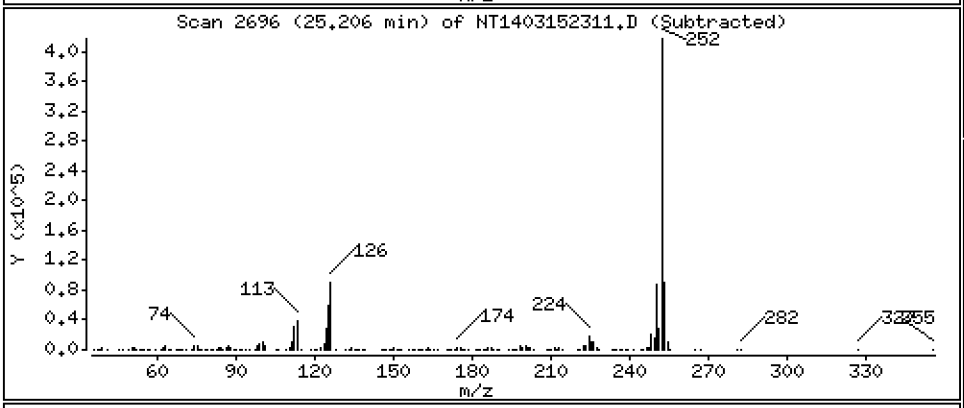
Column phase: ZB-5msi

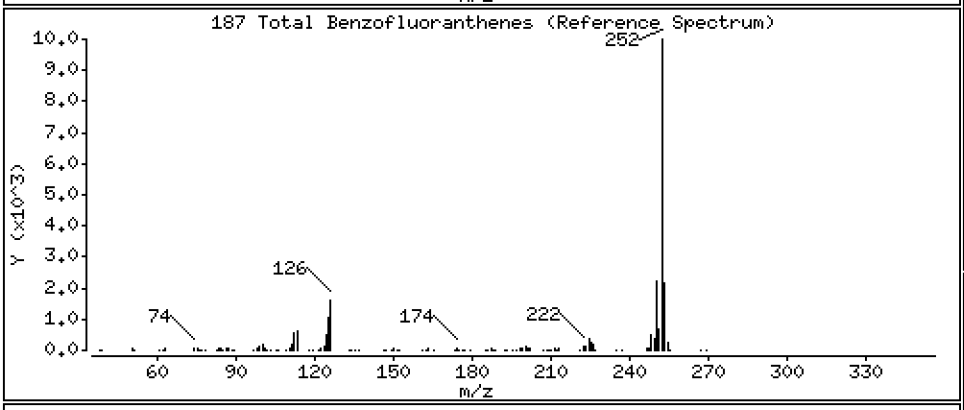
Column diameter: 0.25

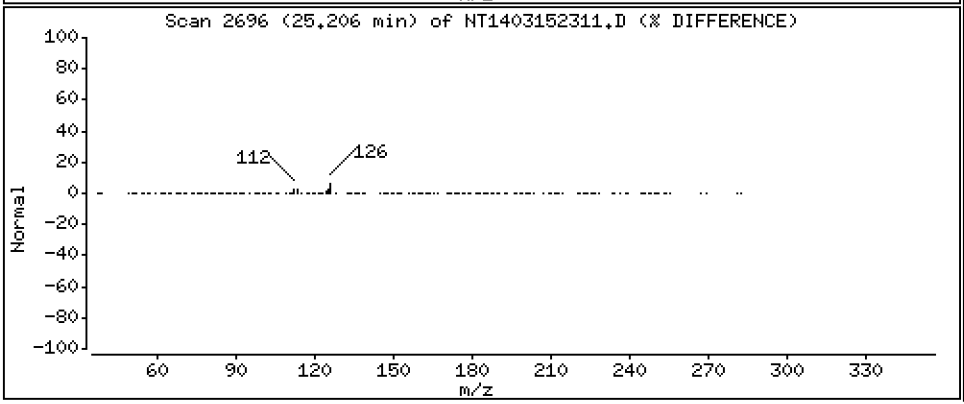
187 Total Benzofluoranthenes

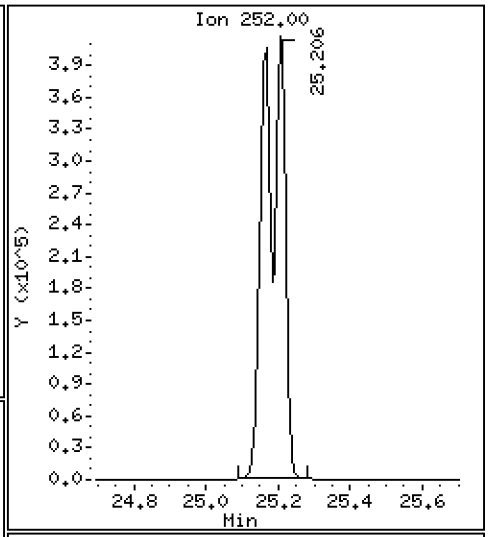
Concentration: 9.756 ug/mL

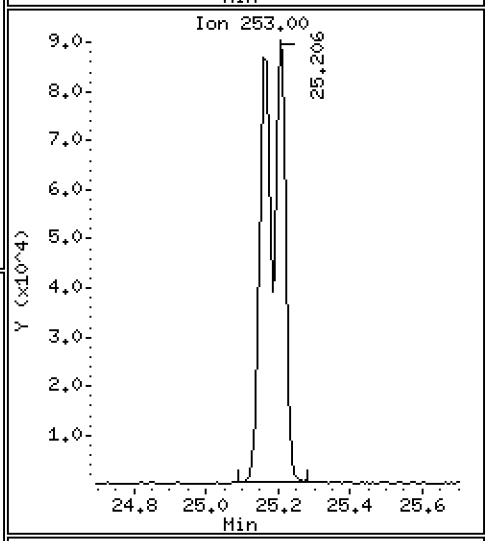


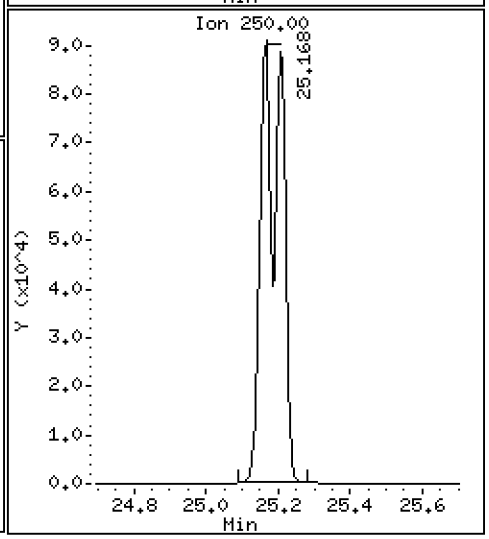












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

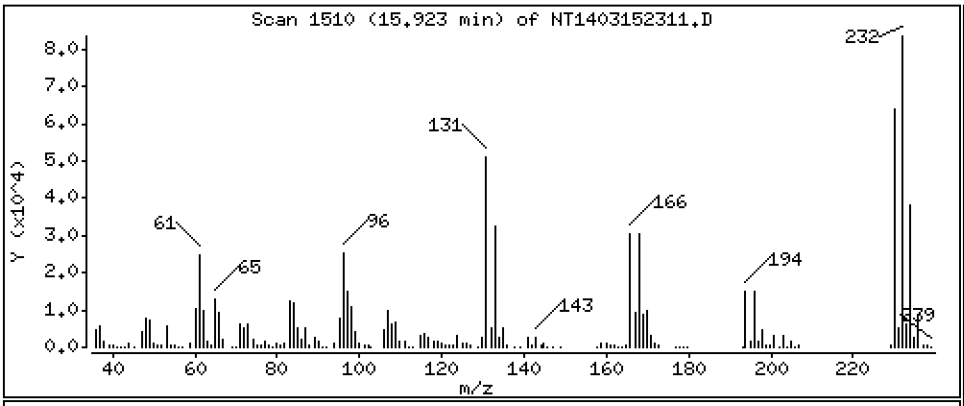
Operator: JGR

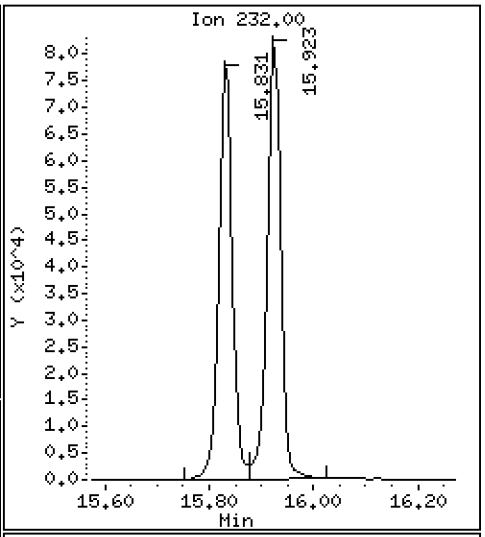
Column phase: ZB-5msi

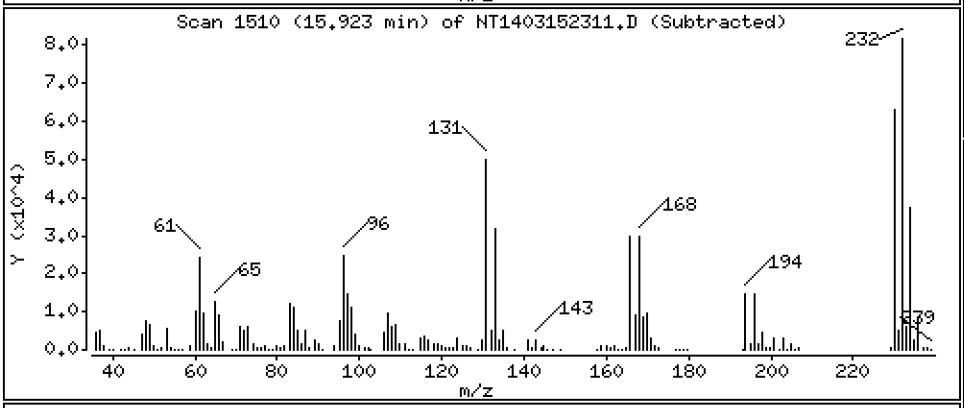
Column diameter: 0.25

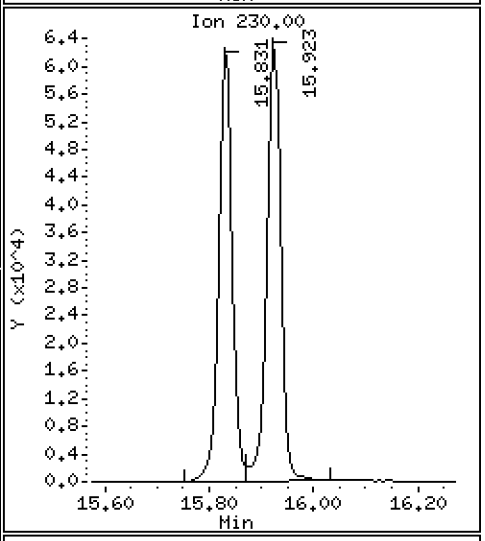
120 2,3,4,6-Tetrachlorophenol

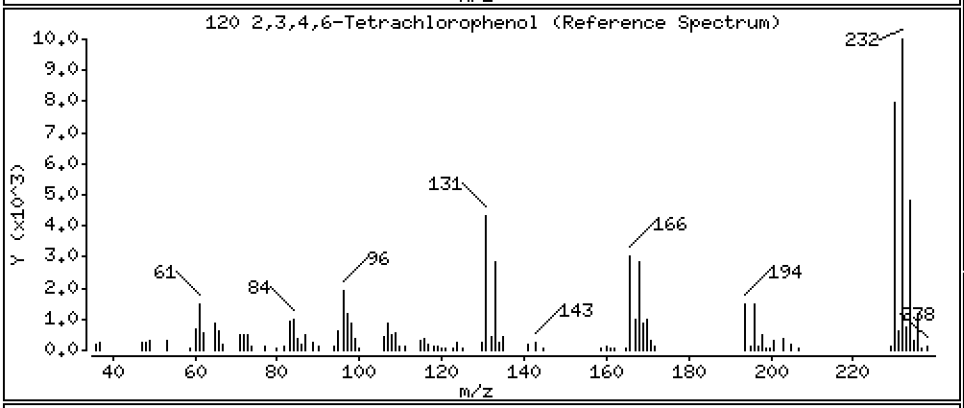
Concentration: 3.569 ug/mL

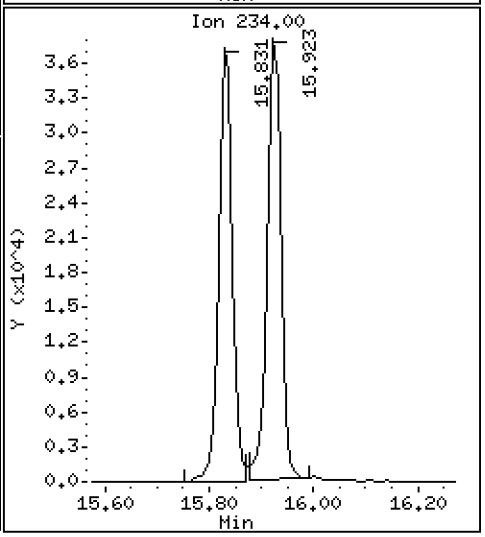


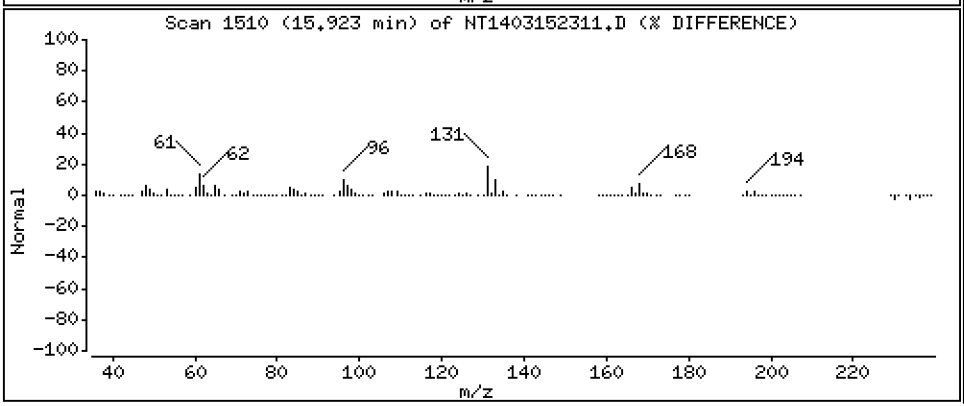












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

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Lab Smp Id: SLC0160-SCV1
Inj Date : 15-MAR-2023 17:39 MS Autotune Date: 11-MAR-2023 16:01
Operator : JGR Inst ID: nt14.i
Smp Info : SLC0160-SCV1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230315.b\ABN.m
Meth Date : 21-Mar-2023 12:29 van Quant Type: ISTD
Cal Date : 15-MAR-2023 15:50 Cal File: NT1403152308.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)	
$	1 2-Fluorophenol	112	Compound Not Detected.						
$	2 Phenol-d5	99	Compound Not Detected.						
	3 Phenol	94	8.436	8.428	(1.000)	409924	4.36782	4.368	
$	5 2-Chlorophenol-d4	132	Compound Not Detected.						
	4 Bis(2-Chloroethyl)ether	93	8.606	8.606	(1.000)	355357	5.25823	5.258	
	6 2-Chlorophenol	128	8.729	8.721	(1.000)	323438	4.37862	4.379	
	7 1,3-Dichlorobenzene	146	9.000	9.000	(1.000)	358409	4.79319	4.793	
*	8 1,4-Dichlorobenzene-d4	152	9.070	9.062	(1.000)	197462	4.00000	(M)	
	9 1,4-Dichlorobenzene	146	9.101	9.093	(1.000)	352132	4.88937	4.889	
$	10 1,2-Dichlorobenzene-d4	152	Compound Not Detected.						
	12 1,2-Dichlorobenzene	146	9.458	9.458	(1.000)	340729	4.78641	4.786	
	11 Benzyl alcohol	108	9.334	9.334	(1.000)	220673	5.05069	5.051	
	14 2,2'-oxybis(1-Chloropropane)	121	9.644	9.644	(1.000)	114247	5.31866	5.319	
	13 2-Methylphenol	108	9.559	9.559	(1.000)	273187	4.11716	4.117	
	17 Hexachloroethane	117	10.056	10.056	(1.000)	152626	4.95501	4.955	
	16 N-Nitroso-di-n-propylamine	70	9.900	9.893	(1.000)	260326	4.98316	4.983	
	15 4-Methylphenol	108	9.830	9.823	(1.000)	337960	4.30182	4.302	
$	18 Nitrobenzene-d5	82	Compound Not Detected.						
	19 Nitrobenzene	77	10.203	10.195	(0.882)	375695	5.02268	5.023	
	20 Isophorone	82	10.653	10.645	(0.921)	691478	6.77053	6.771	
	21 2-Nitrophenol	139	10.831	10.831	(0.936)	194856	4.53030	4.530	
	22 2,4-Dimethylphenol	107	10.878	10.878	(0.940)	250436	3.91450	3.915	
	23 Bis(2-Chloroethoxy)methane	93	11.087	11.080	(0.959)	402865	5.85923	5.859	
	24 Benzoic acid	105	11.064	10.963	(0.956)	444832	8.24795	8.248	
	25 2,4-Dichlorophenol	162	11.289	11.281	(0.976)	243165	4.77930	4.779	
	26 1,2,4-Trichlorobenzene	180	11.482	11.482	(0.993)	315977	5.05188	5.052	
*	27 Naphthalene-d8	136	11.567	11.567	(1.000)	726125	4.00000		
	28 Naphthalene	128	11.606	11.606	(1.003)	936737	4.82884	4.829	
	29 4-Chloroaniline	127	11.729	11.729	(1.014)	327500	4.03279	4.033	
	30 Hexachlorobutadiene	225	11.977	11.977	(1.035)	138599	4.90795	4.908	
	31 4-Chloro-3-methylphenol	107	12.696	12.689	(1.098)	298325	4.85224	4.852	
	32 2-Methylnaphthalene	142	13.006	13.006	(1.124)	656729	4.85435	4.854	
	33 Hexachlorocyclopentadiene	237	13.478	13.486	(0.887)	166439	5.22977	5.230	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
34	2,4,6-Trichlorophenol	196	13.633	13.625	(0.897)	183263	4.71824	4.718
35	2,4,5-Trichlorophenol	196	13.703	13.702	(0.902)	188647	4.66090	4.661
$ 36	2-Fluorobiphenyl	172	13.695	13.795	(0.901)	426	0.00307	0.003072
37	2-Chloronaphthalene	162	14.004	14.004	(0.922)	591509	4.97719	4.977
38	2-Nitroaniline	65	14.260	14.260	(0.938)	234033	5.09985	5.100
39	Dimethylphthalate	163	14.701	14.693	(0.967)	642281	5.03056	5.031
40	Acenaphthylene	152	14.887	14.879	(0.980)	974004	4.87938	4.879
41	2,6-Dinitrotoluene	165	14.840	14.833	(0.977)	153944	5.21947	5.219
* 42	Acenaphthene-d10	164	15.196	15.196	(1.000)	382881	4.00000	
43	3-Nitroaniline	138	15.119	15.111	(0.995)	211974	5.20957	5.210
44	Acenaphthene	153	15.266	15.258	(1.005)	578656	4.96504	4.965
45	2,4-Dinitrophenol	184	15.328	15.328	(1.009)	70613	3.07711	3.077
46	Dibenzofuran	168	15.590	15.590	(1.026)	824547	4.95562	4.956
47	4-Nitrophenol	109	15.420	15.420	(1.015)	103988	4.82822	4.828
48	2,4-Dinitrotoluene	165	15.645	15.645	(1.030)	214010	5.11873	5.119
50	Diethylphthalate	149	16.163	16.155	(1.064)	686853	5.20331	5.203
49	Fluorene	166	16.309	16.302	(1.073)	763926	4.84358	4.844
51	4-Chlorophenyl-phenylether	204	16.294	16.294	(1.072)	337497	4.98506	4.985
52	4-Nitroaniline	138	16.386	16.379	(1.078)	170484	4.81727	4.817
53	4,6-Dinitro-2-methylphenol	198	16.487	16.479	(0.904)	109125	4.43923	4.439
54	N-Nitrosodiphenylamine	169	16.548	16.541	(0.907)	475466	4.95411	4.954
$ 55	2,4,6-Tribromophenol	330	Compound Not Detected.					
56	4-Bromophenyl-phenylether	248	17.304	17.304	(0.949)	169085	5.22559	5.226
57	Hexachlorobenzene	284	17.621	17.621	(0.966)	163199	4.78004	4.780
58	Pentachlorophenol	266	17.969	17.977	(0.985)	106585	4.47687	4.477
* 59	Phenanthrene-d10	188	18.240	18.240	(1.000)	706616	4.00000	
60	Phenanthrene	178	18.294	18.286	(1.003)	955749	4.73403	4.734
61	Anthracene	178	18.379	18.379	(1.008)	832701	4.28109	4.281
62	Carbazole	167	18.712	18.704	(1.026)	793728	4.58650	4.587
63	Di-n-butylphthalate	149	19.509	19.509	(1.070)	1207956	5.50673	5.507
64	Fluoranthene	202	20.677	20.677	(0.887)	1031812	5.02399	5.024
65	Pyrene	202	21.103	21.103	(0.906)	1044240	4.95802	4.958
$ 66	Terphenyl-d14	244	21.381	21.389	(0.918)	662	0.00464	0.004643
67	Butylbenzylphthalate	149	22.310	22.310	(0.957)	529418	5.73747	5.737
68	Benzo(a)anthracene	228	23.270	23.263	(0.999)	898379	4.82654	4.827
* 69	Chrysene-d12	240	23.301	23.294	(1.000)	504808	4.00000	
70	3,3'-Dichlorobenzidine	252	23.224	23.216	(0.997)	586696	10.6467	10.65
71	Chrysene	228	23.340	23.340	(1.002)	795614	4.72292	4.723
72	bis(2-Ethylhexyl)phthalate	149	23.340	23.332	(0.960)	706123	5.42778	5.428
* 134	Di-n-octylphthalate-d4	153	24.323	24.323	(1.000)	988248	4.00000	
73	Di-n-octylphthalate	149	24.331	24.331	(1.000)	1304643	5.13544	5.135
74	Benzo(b)fluoranthene	252	25.167	25.152	(0.970)	838016	4.77369	4.774
75	Benzo(k)fluoranthene	252	25.206	25.198	(0.972)	887530	5.10013	5.100
76	Benzo(a)pyrene	252	25.825	25.818	(0.996)	747283	4.97798	4.978
* 77	Perylene-d12	264	25.941	25.934	(1.000)	496785	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.626	28.610	(1.103)	807644	4.94309	4.943
79	Dibenzo(a,h)anthracene	278	28.641	28.626	(1.104)	669918	4.86500	4.865
80	Benzo(g,h,i)perylene	276	29.418	29.403	(1.134)	665079	4.93915	4.939
90	N-Nitrosodimethylamine	74	4.712	4.720	(1.000)	220898	5.19984	5.200
91	Aniline	93	Compound Not Detected.					
93	Benzidine	184	20.909	20.909	(0.897)	466644	5.64609	5.646
103	Pyridine	79	4.743	4.766	(1.000)	348414	2.64838	2.648
105	1-methylnaphthalene	142	13.238	13.230	(1.144)	625458	5.10291	5.103
111	Azobenzene (1,2-DP-Hydrazine)	77	16.618	16.618	(1.094)	788522	5.00236	5.002

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.206	25.199	(0.972)	1626530	9.75586	9.756
120 2,3,4,6-Tetrachlorophenol	232	15.923	15.923	(1.048)	141312	3.56895	3.569

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1403152311.D
Lab Smp Id: SLC0160-SCV1
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt14.i\20230315.b\ABN.m
Misc Info:

Calibration Date: 15-MAR-2023
Calibration Time: 13:26
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	194517	97259	389034	197462	1.51
27 Naphthalene-d8	721321	360661	1442642	726125	0.67
42 Acenaphthene-d10	379602	189801	759204	382881	0.86
59 Phenanthrene-d10	703194	351597	1406388	706616	0.49
69 Chrysene-d12	504769	252385	1009538	504808	0.01
134 Di-n-octylphthala	978492	489246	1956984	988248	1.00
77 Perylene-d12	484073	242037	968146	496785	2.63

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.07	8.57	9.57	9.07	-0.00
27 Naphthalene-d8	11.57	11.07	12.07	11.57	-0.00
42 Acenaphthene-d10	15.20	14.70	15.70	15.20	-0.05
59 Phenanthrene-d10	18.25	17.75	18.75	18.24	-0.04
69 Chrysene-d12	23.30	22.80	23.80	23.30	-0.00
134 Di-n-octylphthala	24.32	23.82	24.82	24.32	-0.00
77 Perylene-d12	25.94	25.44	26.44	25.94	-0.00

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

REVIEW SUMMARY FOR FILE - NT1403152311.D

Lab ID: SLC0160-SCV1
nt14.i, ABN.m, 15-MAR-2023 17:39

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

** FIRST SURROGATE NOT FOUND. ICAL Check not performed **

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
1.000	1.064	-0.0642	2,2'-oxybis(1-Chloropropane)
0.956	0.948	0.0087	Benzoic acid
0.901	0.908	-0.0066	2-Fluorobiphenyl

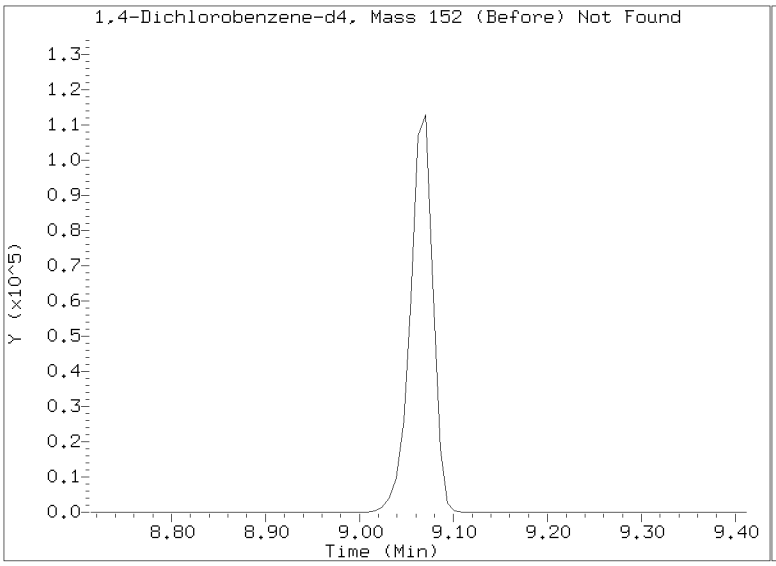
RRT check based on Ccal File: NT1403152308.D

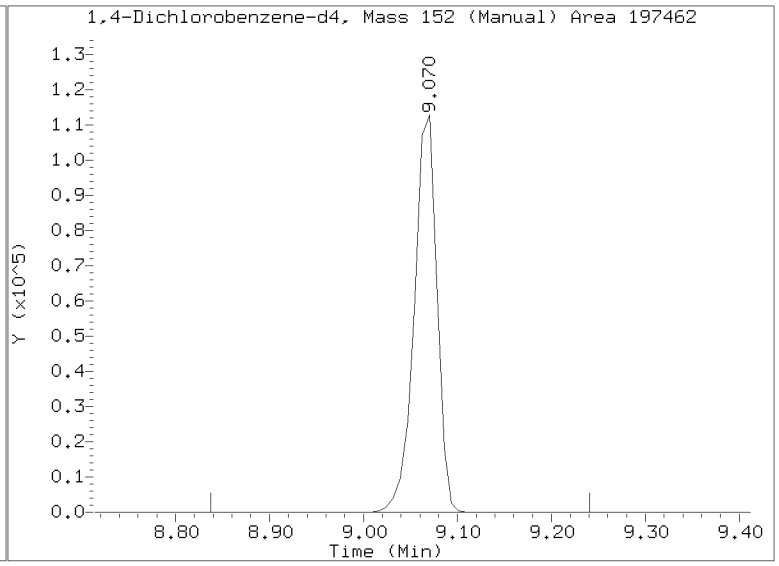
On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

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

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230315.b/NT1403152311.D
Injection Date: 15-MAR-2023 17:39
Lab ID:SLC0160-SCV1 Client ID:
Report Date: 03/21/2023 12:48

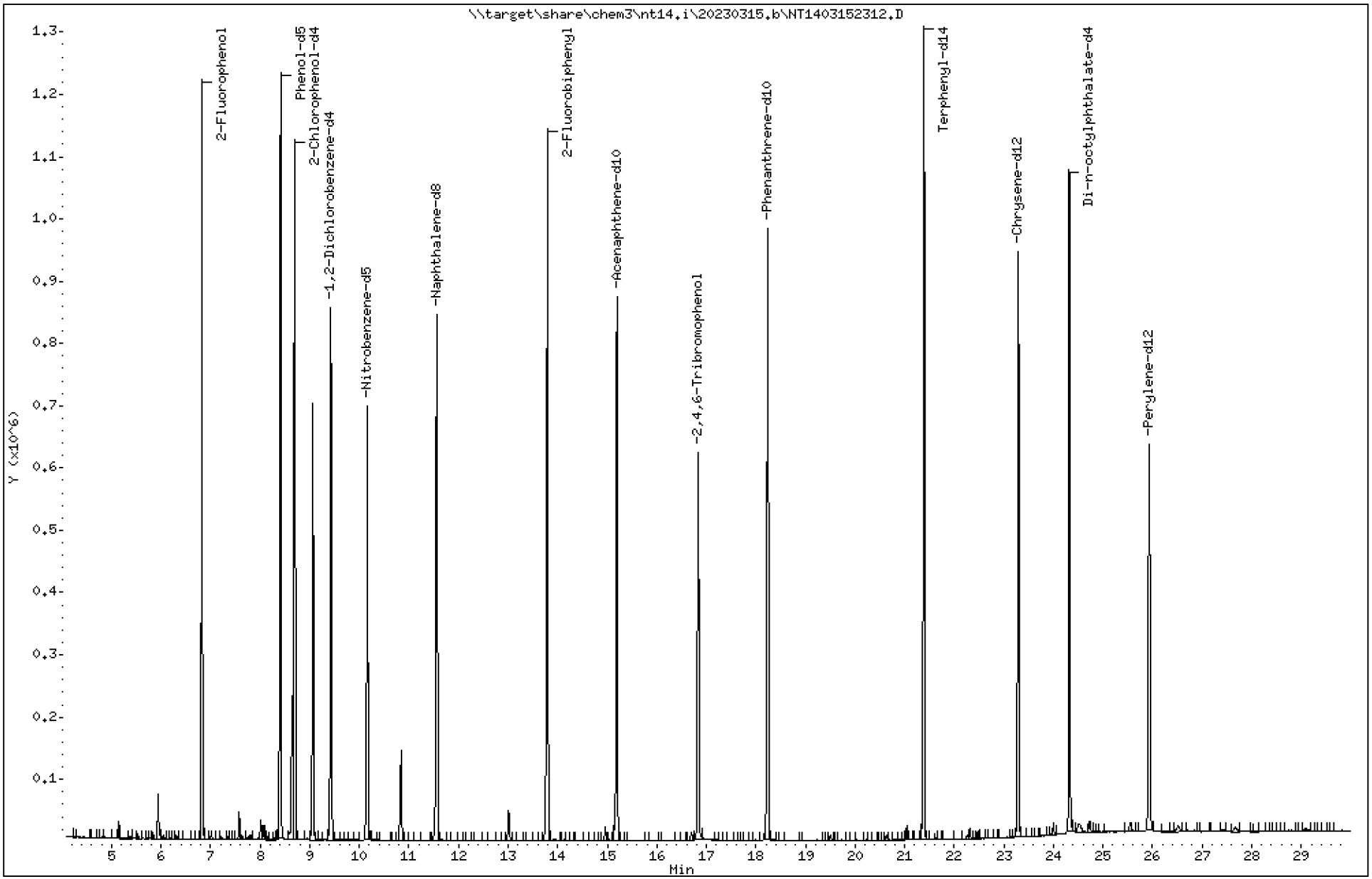




Data File: \\target\share\chem3\nt14.i\20230315.b\NT1403152312.D
Date : 15-MAR-2023 18:15
Client ID:
Sample Info: SLC0160-ICB1

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

Column phase: ZB-5msi



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230315.b\NT1403152312.D
Lab Smp Id: SLC0160-ICB1
Inj Date : 15-MAR-2023 18:15 MS Autotune Date: 11-MAR-2023 16:01
Operator : JGR Inst ID: nt14.i
Smp Info : SLC0160-ICB1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230315.b\ABN.m
Meth Date : 21-Mar-2023 12:29 van Quant Type: ISTD
Cal Date : 15-MAR-2023 15:50 Cal File: NT1403152308.D
Als bottle: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)	
$	1 2-Fluorophenol	112	6.829	6.821	(1.000)	475023	7.38994	7.390	
$	2 Phenol-d5	99	8.412	8.412	(1.000)	625743	7.39397	7.394	
	3 Phenol	94	Compound Not Detected.						
$	5 2-Chlorophenol-d4	132	8.698	8.698	(1.000)	504209	7.55716	7.557	
	4 Bis(2-Chloroethyl)ether	93	Compound Not Detected.						
	6 2-Chlorophenol	128	Compound Not Detected.						
	7 1,3-Dichlorobenzene	146	Compound Not Detected.						
*	8 1,4-Dichlorobenzene-d4	152	9.062	9.062	(1.000)	189234	4.00000		(M)
	9 1,4-Dichlorobenzene	146	Compound Not Detected.						
$	10 1,2-Dichlorobenzene-d4	152	9.427	9.427	(1.000)	222627	4.99456	4.995	
	12 1,2-Dichlorobenzene	146	Compound Not Detected.						
	11 Benzyl alcohol	108	Compound Not Detected.						
	14 2,2'-oxybis(1-Chloropropane)	121	Compound Not Detected.						
	13 2-Methylphenol	108	Compound Not Detected.						
	17 Hexachloroethane	117	Compound Not Detected.						
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.						
	15 4-Methylphenol	108	Compound Not Detected.						
$	18 Nitrobenzene-d5	82	10.164	10.164	(0.879)	384703	4.99458	4.995	
	19 Nitrobenzene	77	Compound Not Detected.						
	20 Isophorone	82	Compound Not Detected.						
	21 2-Nitrophenol	139	Compound Not Detected.						
	22 2,4-Dimethylphenol	107	Compound Not Detected.						
	23 Bis(2-Chloroethoxy)methane	93	Compound Not Detected.						
	24 Benzoic acid	105	Compound Not Detected.						
	25 2,4-Dichlorophenol	162	Compound Not Detected.						
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.						
*	27 Naphthalene-d8	136	11.559	11.567	(1.000)	727843	4.00000		
	28 Naphthalene	128	Compound Not Detected.						
	29 4-Chloroaniline	127	Compound Not Detected.						
	30 Hexachlorobutadiene	225	Compound Not Detected.						
	31 4-Chloro-3-methylphenol	107	Compound Not Detected.						
	32 2-Methylnaphthalene	142	Compound Not Detected.						
	33 Hexachlorocyclopentadiene	237	Compound Not Detected.						

			QUANT SIG					CONCENTRATIONS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
	34	2,4,6-Trichlorophenol	196	Compound Not Detected.					
	35	2,4,5-Trichlorophenol	196	Compound Not Detected.					
$	36	2-Fluorobiphenyl	172	13.795	13.795	(0.908)	662673	4.98028	4.980
	37	2-Chloronaphthalene	162	Compound Not Detected.					
	38	2-Nitroaniline	65	Compound Not Detected.					
	39	Dimethylphthalate	163	Compound Not Detected.					
	40	Acenaphthylene	152	Compound Not Detected.					
	41	2,6-Dinitrotoluene	165	Compound Not Detected.					
*	42	Acenaphthene-d10	164	15.196	15.196	(1.000)	367416	4.00000	
	43	3-Nitroaniline	138	Compound Not Detected.					
	44	Acenaphthene	153	Compound Not Detected.					
	45	2,4-Dinitrophenol	184	Compound Not Detected.					
	46	Dibenzofuran	168	Compound Not Detected.					
	47	4-Nitrophenol	109	Compound Not Detected.					
	48	2,4-Dinitrotoluene	165	Compound Not Detected.					
	50	Diethylphthalate	149	Compound Not Detected.					
	49	Fluorene	166	Compound Not Detected.					
	51	4-Chlorophenyl-phenylether	204	Compound Not Detected.					
	52	4-Nitroaniline	138	Compound Not Detected.					
	53	4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54	N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55	2,4,6-Tribromophenol	330	16.833	16.841	(1.108)	96459	6.91497	6.915
	56	4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57	Hexachlorobenzene	284	Compound Not Detected.					
	58	Pentachlorophenol	266	Compound Not Detected.					
*	59	Phenanthrene-d10	188	18.240	18.240	(1.000)	678407	4.00000	
	60	Phenanthrene	178	Compound Not Detected.					
	61	Anthracene	178	Compound Not Detected.					
	62	Carbazole	167	Compound Not Detected.					
	63	Di-n-butylphthalate	149	Compound Not Detected.					
	64	Fluoranthene	202	Compound Not Detected.					
	65	Pyrene	202	Compound Not Detected.					
$	66	Terphenyl-d14	244	21.389	21.389	(0.918)	690717	5.13184	5.132
	67	Butylbenzylphthalate	149	Compound Not Detected.					
	68	Benzo(a)anthracene	228	Compound Not Detected.					
*	69	Chrysene-d12	240	23.293	23.294	(1.000)	476533	4.00000	
	70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
	71	Chrysene	228	Compound Not Detected.					
	72	bis(2-Ethylhexyl)phthalate	149	Compound Not Detected.					
*	134	Di-n-octylphthalate-d4	153	24.323	24.323	(1.000)	798655	4.00000	(M)
	73	Di-n-octylphthalate	149	Compound Not Detected.					
	74	Benzo(b)fluoranthene	252	Compound Not Detected.					
	75	Benzo(k)fluoranthene	252	Compound Not Detected.					
	76	Benzo(a)pyrene	252	Compound Not Detected.					
*	77	Perylene-d12	264	25.934	25.934	(1.000)	452165	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
	79	Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	80	Benzo(g,h,i)perylene	276	Compound Not Detected.					
	90	N-Nitrosodimethylamine	74	Compound Not Detected.					
	91	Aniline	93	Compound Not Detected.					
	93	Benzidine	184	Compound Not Detected.					
	103	Pyridine	79	Compound Not Detected.					
	105	1-methylnaphthalene	142	Compound Not Detected.					
	111	Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					

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

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1403152312.D
Lab Smp Id: SLC0160-ICB1
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt14.i\20230315.b\ABN.m
Misc Info:

Calibration Date: 15-MAR-2023
Calibration Time: 13:26
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	194517	97259	389034	189234	-2.72
27 Naphthalene-d8	721321	360661	1442642	727843	0.90
42 Acenaphthene-d10	379602	189801	759204	367416	-3.21
59 Phenanthrene-d10	703194	351597	1406388	678407	-3.52
69 Chrysene-d12	504769	252385	1009538	476533	-5.59
134 Di-n-octylphthala	978492	489246	1956984	798655	-18.38
77 Perylene-d12	484073	242037	968146	452165	-6.59

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.07	8.57	9.57	9.06	-0.09
27 Naphthalene-d8	11.57	11.07	12.07	11.56	-0.07
42 Acenaphthene-d10	15.20	14.70	15.70	15.20	-0.05
59 Phenanthrene-d10	18.25	17.75	18.75	18.24	-0.04
69 Chrysene-d12	23.30	22.80	23.80	23.29	-0.03
134 Di-n-octylphthala	24.32	23.82	24.82	24.32	-0.00
77 Perylene-d12	25.94	25.44	26.44	25.93	-0.03

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

REVIEW SUMMARY FOR FILE - NT1403152312.D

Lab ID: SLC0160-ICB1
nt14.i, ABN.m, 15-MAR-2023 18:15

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

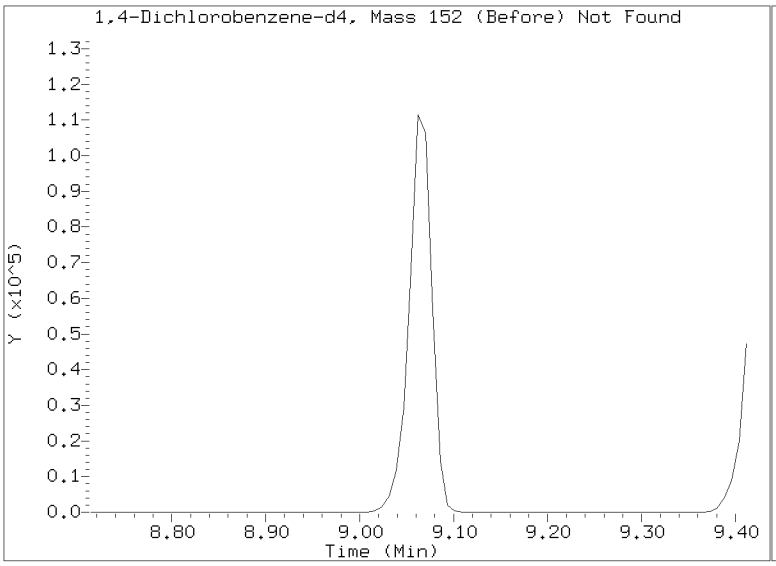
RRT check based on Ccal File: NT1403152308.D

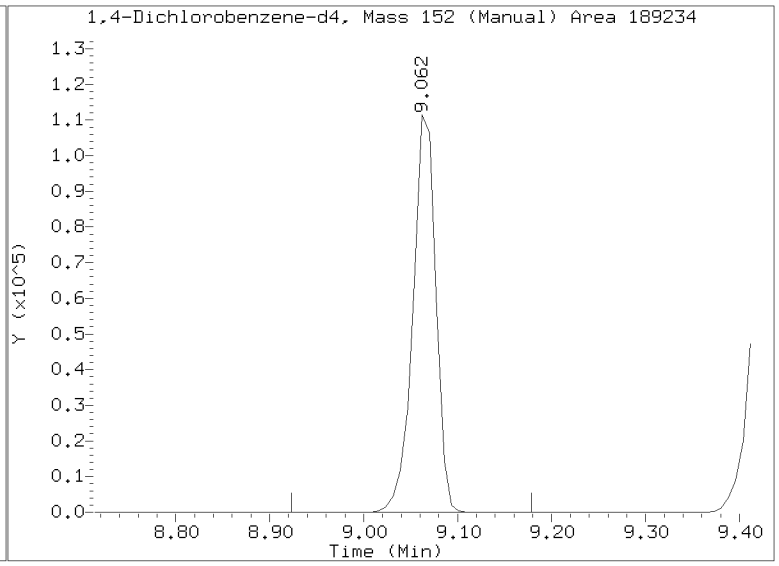
On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

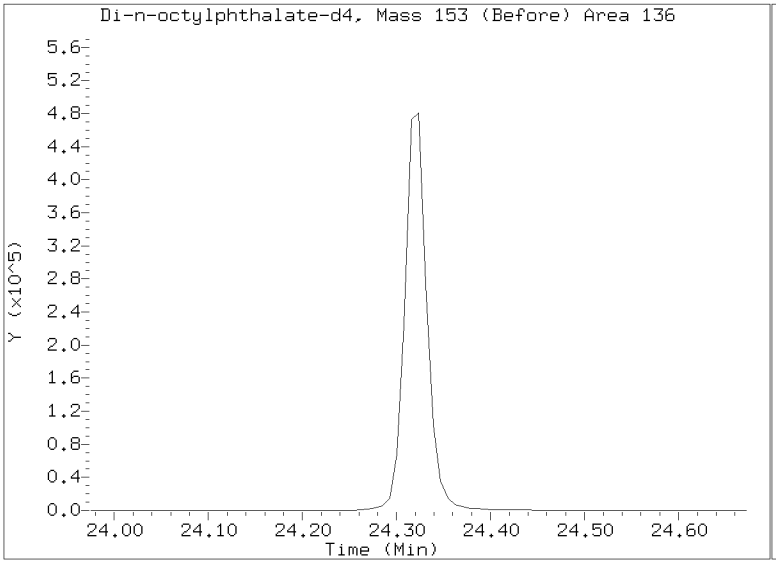
* Only compounds listed in the work order have been verified by the analyst *

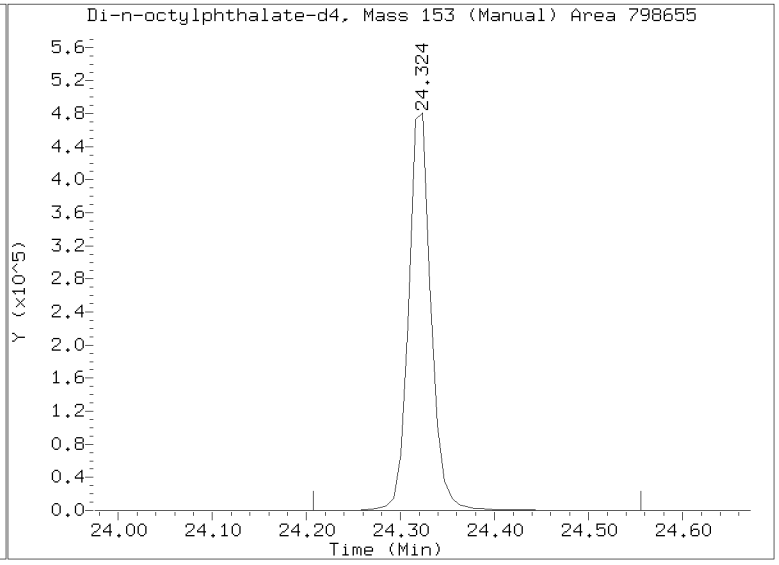
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230315.b/NT1403152312.D
Injection Date: 15-MAR-2023 18:15
Lab ID:SLC0160-ICB1 Client ID:
Report Date: 03/21/2023 12:48









Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8270E

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GC00048
Laboratory ID: SLC0160-SCV1
Sequence: SLC0160
Sequence Name: SCV 5.0
Standard ID: L002833

ANALYTE	EXPECTED (ug/mL)	FOUND (ug/mL)	% DRIFT	QC LIMIT
Phenol	5.0000	4.4	-12.6	20.00
bis(2-chloroethyl) ether	5.0000	5.3	5.2	20.00
2-Chlorophenol	5.0000	4.4	-12.4	20.00
1,3-Dichlorobenzene	5.0000	4.8	-4.1	20.00
1,4-Dichlorobenzene	5.0000	4.9	-2.2	20.00
1,2-Dichlorobenzene	5.0000	4.8	-4.3	20.00
Benzyl Alcohol	5.0000	5.1	1.0	20.00
2,2'-Oxybis(1-chloropropane)	5.0000	5.3	6.4	20.00
2-Methylphenol	5.0000	4.1	-17.7	20.00
Hexachloroethane	5.0000	5.0	-0.9	20.00
N-Nitroso-di-n-Propylamine	5.0000	5.0	-0.3	20.00
4-Methylphenol	5.0000	4.3	-14.0	20.00
Nitrobenzene	5.0000	5.0	0.5	20.00
Isophorone	5.0000	6.8	35.4 *	20.00
2-Nitrophenol	5.0000	4.5	-9.4	20.00
2,4-Dimethylphenol	5.0000	3.9	-21.7 *	20.00
Bis(2-Chloroethoxy)methane	5.0000	5.9	17.2	20.00
2,4-Dichlorophenol	5.0000	4.8	-4.4	20.00
1,2,4-Trichlorobenzene	5.0000	5.1	1.0	20.00
Naphthalene	5.0000	4.8	-3.4	20.00
Benzoic acid	10.000	8.2	-17.5	20.00
4-Chloroaniline	5.0000	4.0	-19.3	20.00
Hexachlorobutadiene	5.0000	4.9	-1.8	20.00
4-Chloro-3-Methylphenol	5.0000	4.9	-3.0	20.00
2-Methylnaphthalene	5.0000	4.9	-2.9	20.00
Hexachlorocyclopentadiene	5.0000	5.2	4.6	20.00
2,4,6-Trichlorophenol	5.0000	4.7	-5.6	20.00
2,4,5-Trichlorophenol	5.0000	4.7	-6.8	20.00
2-Chloronaphthalene	5.0000	5.0	-0.5	20.00
2-Nitroaniline	5.0000	5.1	2.0	20.00
Acenaphthylene	5.0000	4.9	-2.4	20.00
Dimethylphthalate	5.0000	5.0	0.6	20.00
2,6-Dinitrotoluene	5.0000	5.2	4.4	20.00
Acenaphthene	5.0000	5.0	-0.7	20.00

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8270E

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GC00048
Laboratory ID: SLC0160-SCV1
Sequence: SLC0160
Sequence Name: SCV 5.0
Standard ID: L002833

3-Nitroaniline	5.0000	5.2	4.2	20.00
2,4-Dinitrophenol	5.0000	3.1	-38.5 *	20.00
Dibenzofuran	5.0000	5.0	-0.9	20.00
4-Nitrophenol	5.0000	4.8	-3.4	20.00
2,4-Dinitrotoluene	5.0000	5.1	2.4	20.00
Fluorene	5.0000	4.8	-3.1	20.00
4-Chlorophenylphenyl ether	5.0000	5.0	-0.3	20.00
Diethyl phthalate	5.0000	5.2	4.1	20.00
4-Nitroaniline	5.0000	4.8	-3.7	20.00
4,6-Dinitro-2-methylphenol	5.0000	4.4	-11.2	20.00
N-Nitrosodiphenylamine	5.0000	5.0	-0.9	20.00
4-Bromophenyl phenyl ether	5.0000	5.2	4.5	20.00
Hexachlorobenzene	5.0000	4.8	-4.4	20.00
Pentachlorophenol	5.0000	4.5	-10.5	20.00
Phenanthrene	5.0000	4.7	-5.3	20.00
Anthracene	5.0000	4.3	-14.4	20.00
Carbazole	5.0000	4.6	-8.3	20.00
Di-n-Butylphthalate	5.0000	5.5	10.1	20.00
Fluoranthene	5.0000	5.0	0.5	20.00
Pyrene	5.0000	5.0	-0.8	20.00
Butylbenzylphthalate	5.0000	5.7	14.7	20.00
Benzo(a)anthracene	5.0000	4.8	-3.5	20.00
3,3'-Dichlorobenzidine	10.000	10.6	6.5	20.00
Chrysene	5.0000	4.7	-5.5	20.00
bis(2-Ethylhexyl)phthalate	5.0000	5.4	8.6	20.00
Di-n-Octylphthalate	5.0000	5.1	2.7	20.00
Benzofluoranthenes, Total	10.000	9.8	-2.4	20.00
Benzo(a)pyrene	5.0000	5.0	-0.4	20.00
Indeno(1,2,3-cd)pyrene	5.0000	4.9	-1.1	20.00
Dibenzo(a,h)anthracene	5.0000	4.9	-2.7	20.00
Benzo(g,h,i)perylene	5.0000	4.9	-1.2	20.00
1-Methylnaphthalene	5.0000	5.1	2.1	20.00

* Indicates values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20230315.b\NT1403152311.D

Date : 15-MAR-2023 17:39

Client ID:

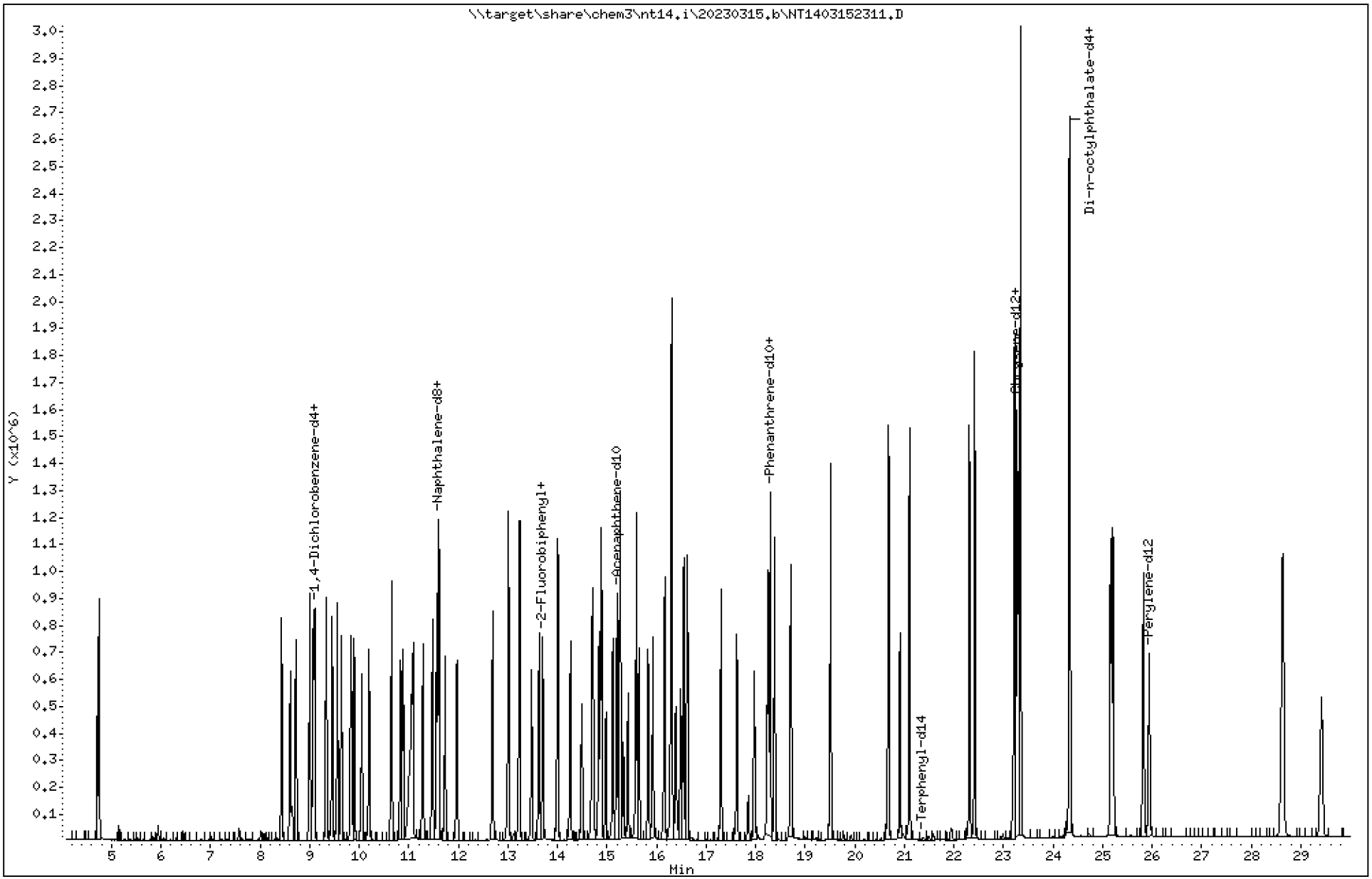
Instrument: nt14.i

Sample Info: SLC0160-SCV1

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

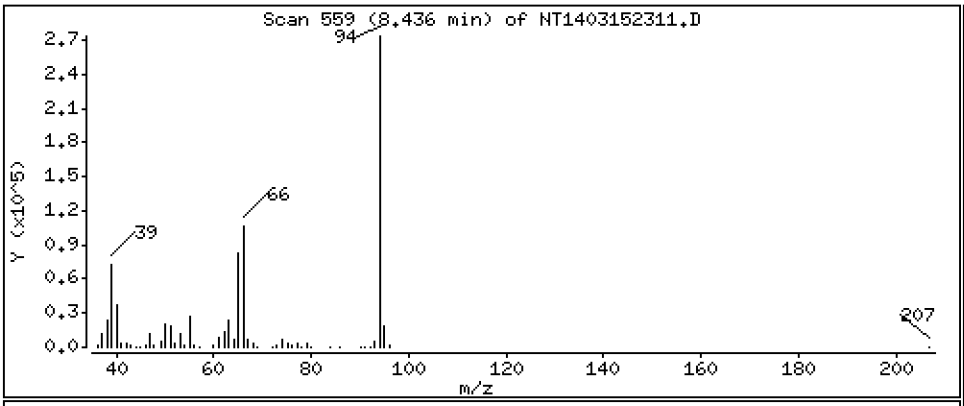
Operator: JGR

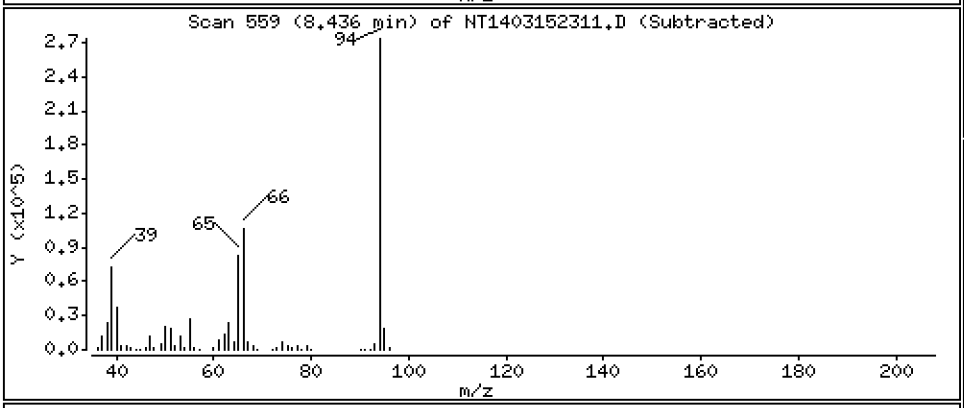
Column phase: ZB-5msi

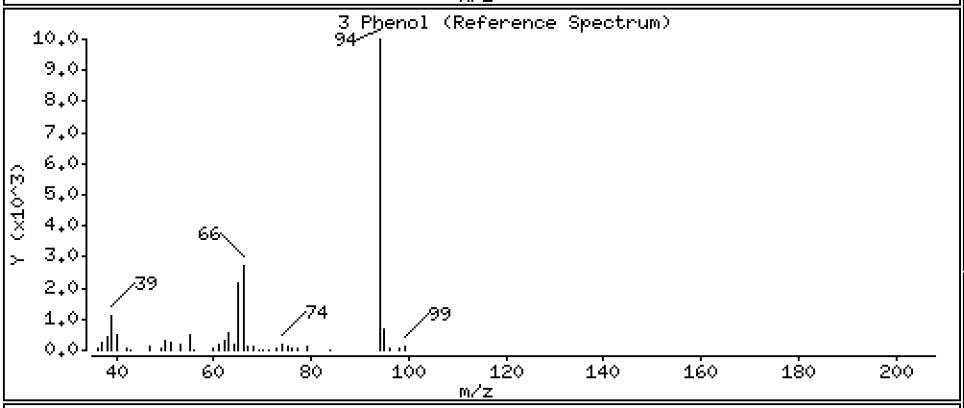
Column diameter: 0.25

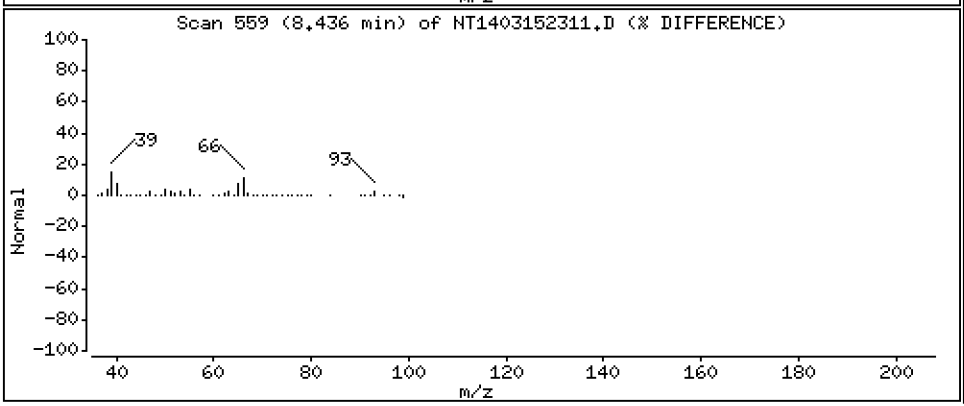
3 Phenol

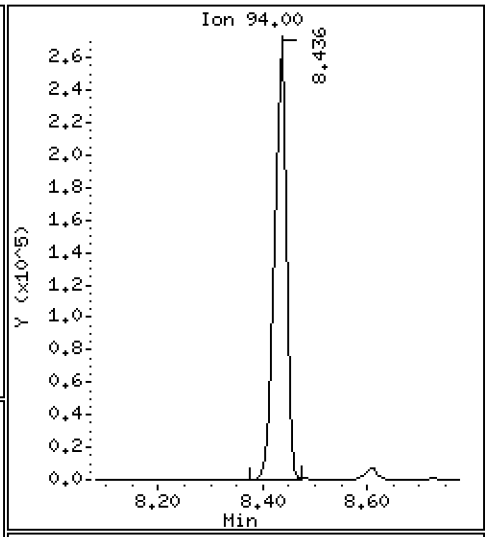
Concentration: 4.368 ug/mL

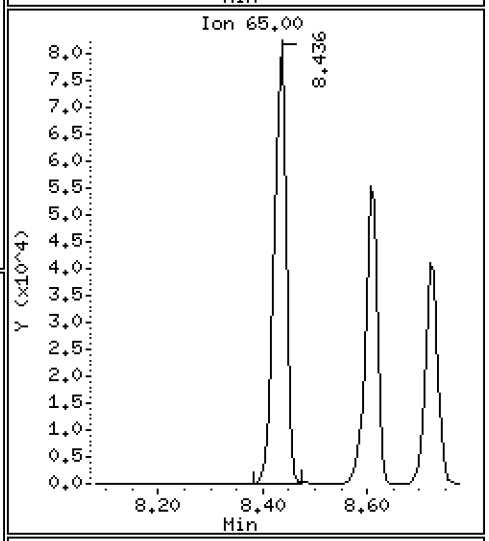


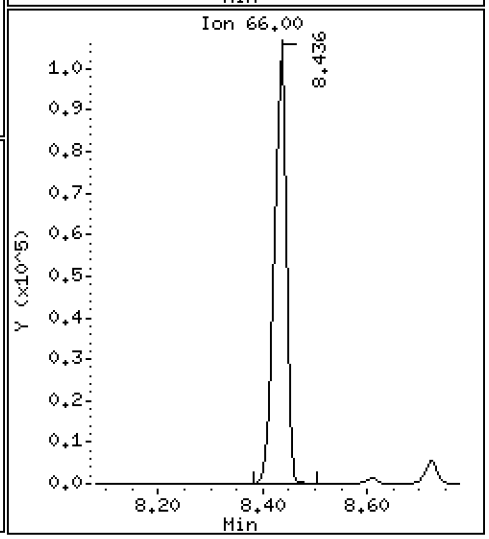












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

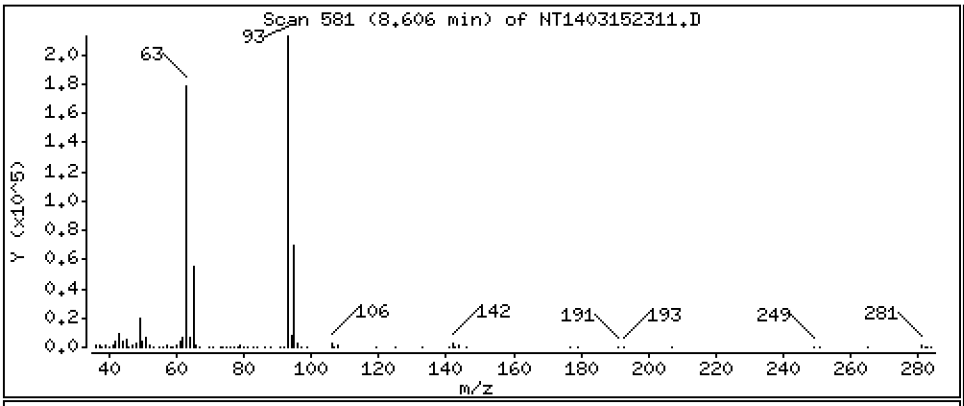
Operator: JGR

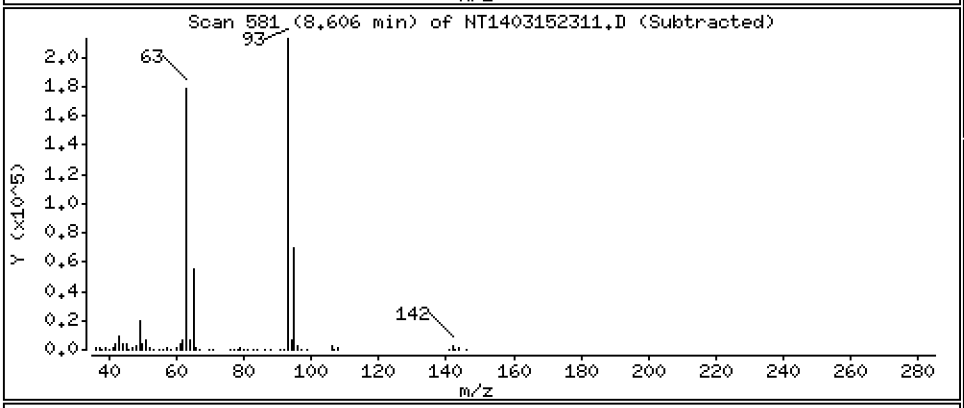
Column phase: ZB-5msi

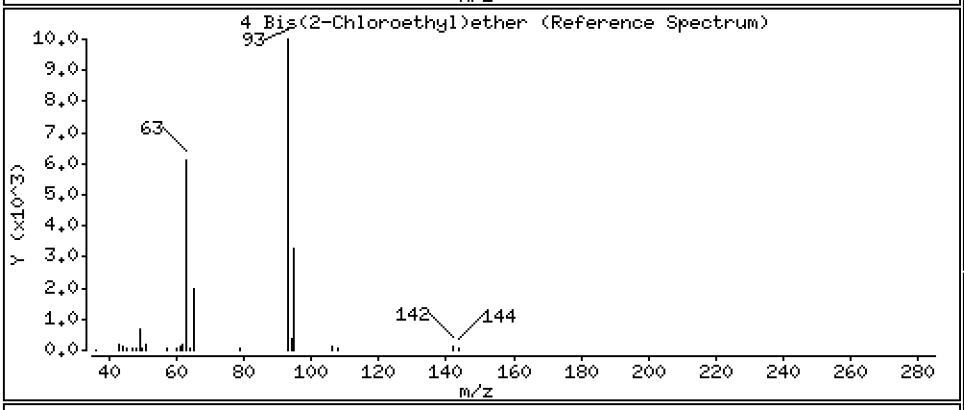
Column diameter: 0.25

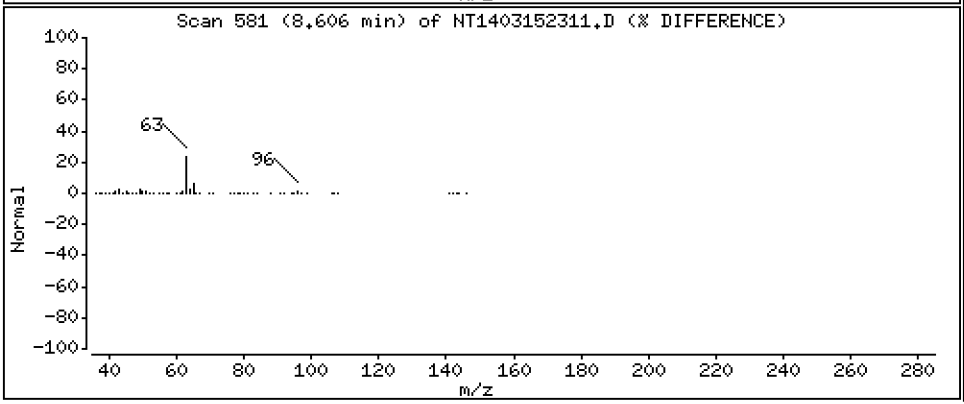
4 Bis(2-Chloroethyl)ether

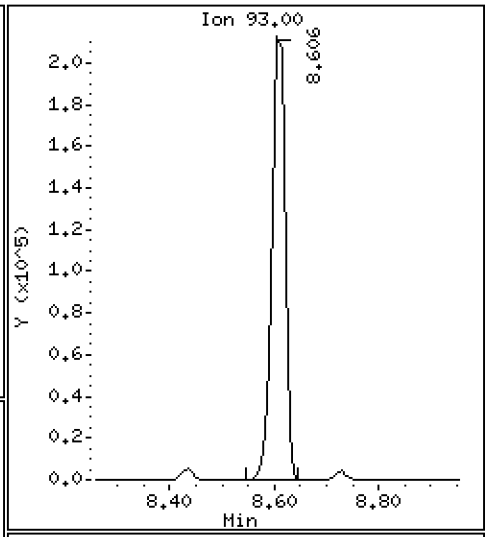
Concentration: 5.258 ug/mL

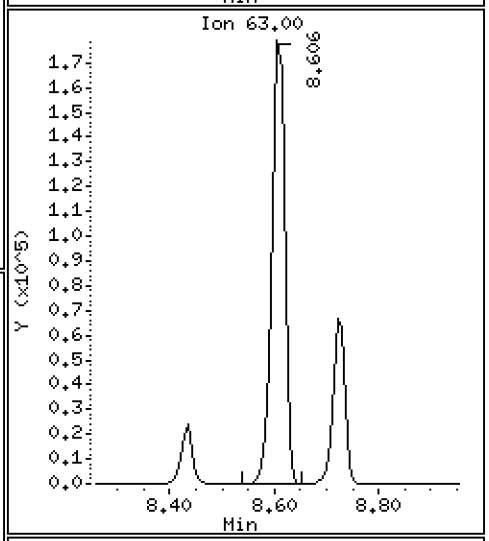


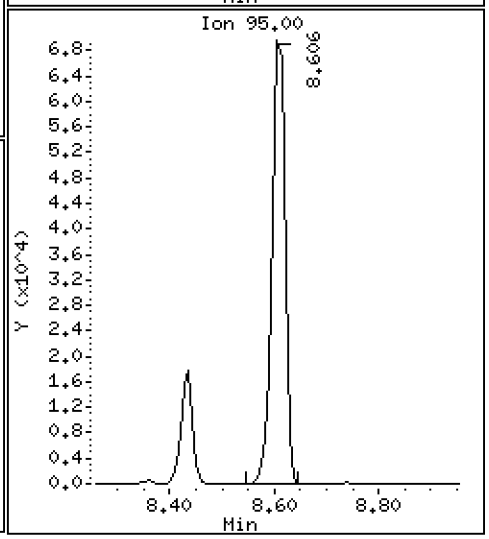












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

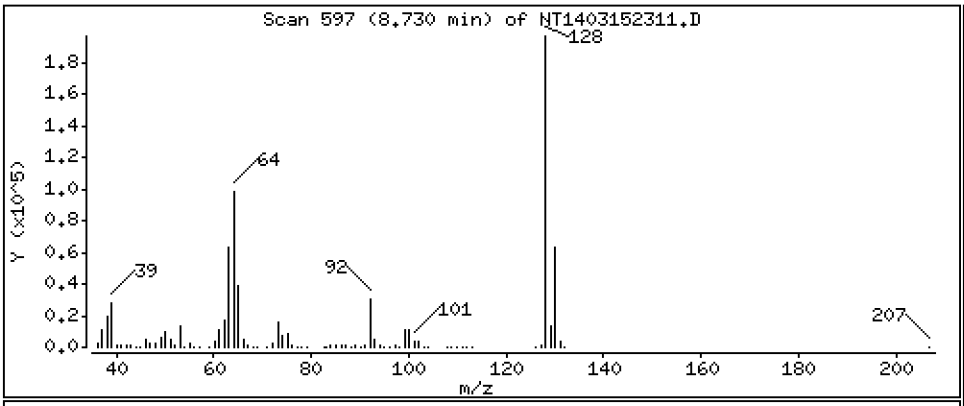
Operator: JGR

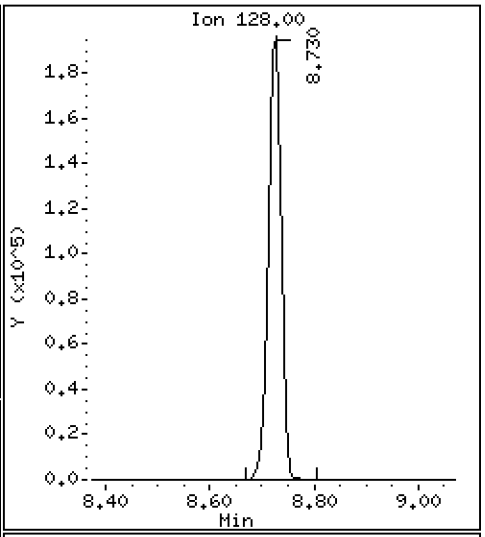
Column phase: ZB-5msi

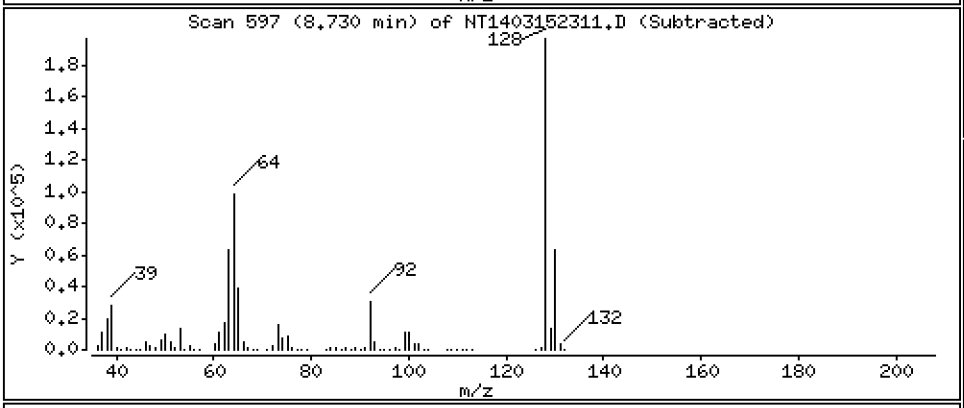
Column diameter: 0.25

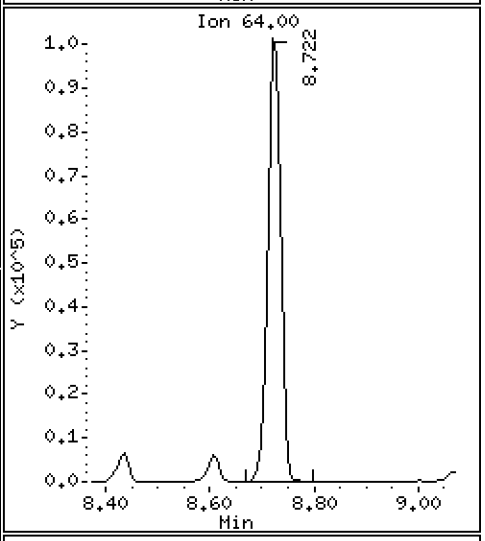
6 2-Chlorophenol

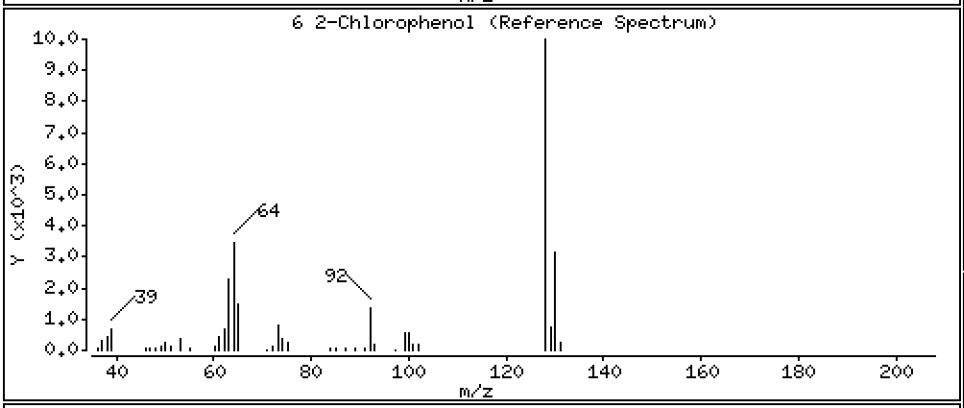
Concentration: 4.379 ug/mL

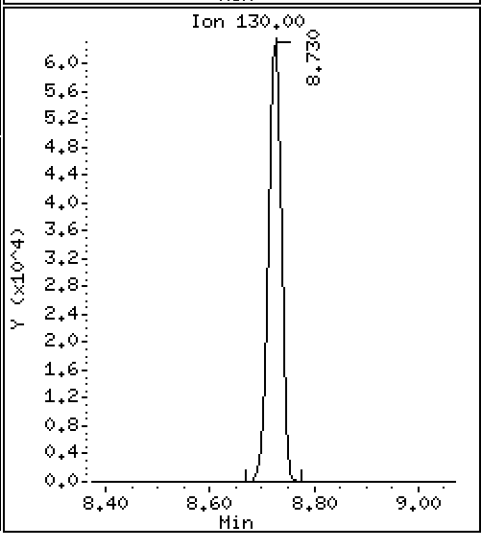


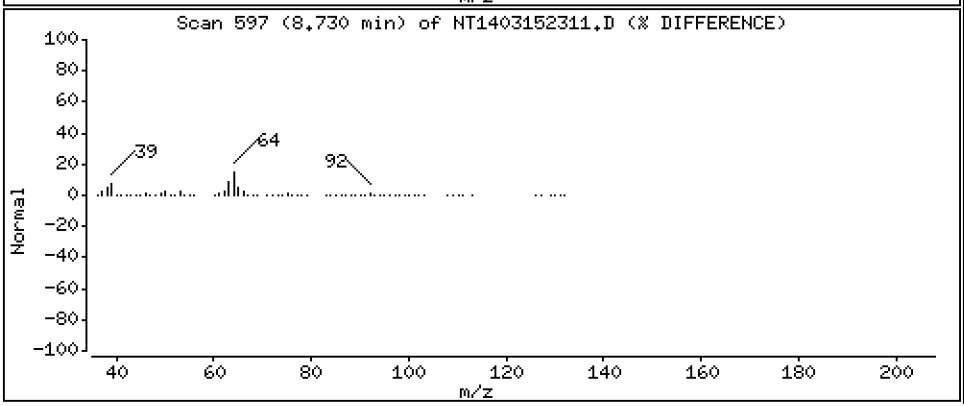












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

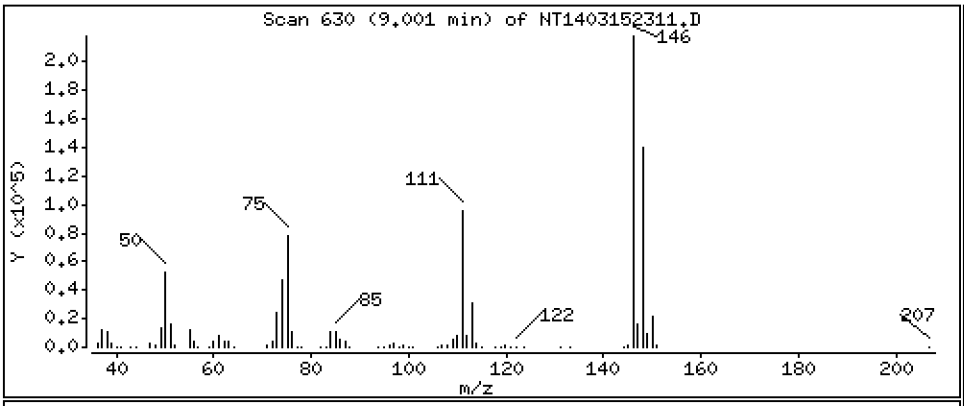
Operator: JGR

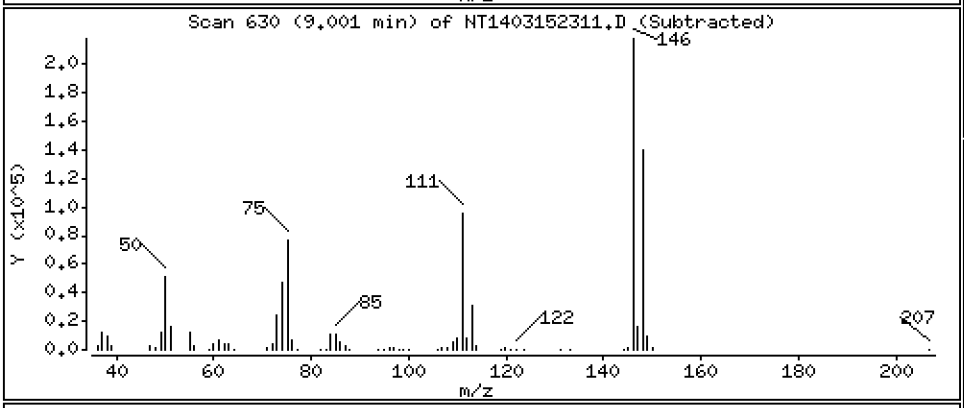
Column phase: ZB-5msi

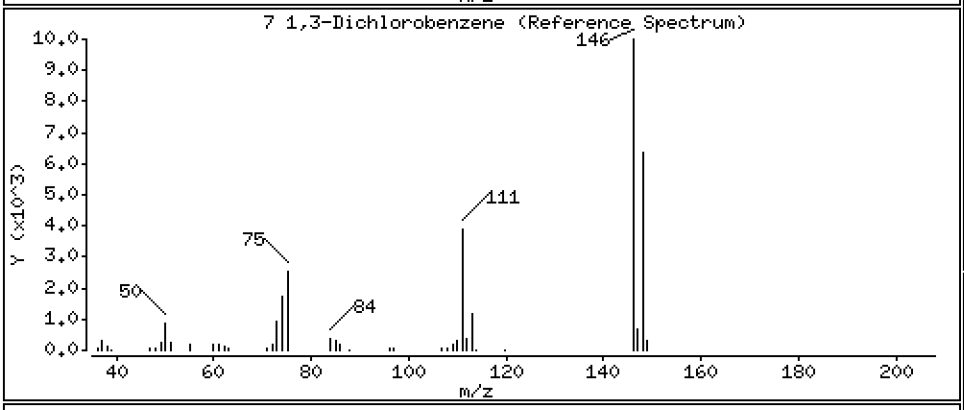
Column diameter: 0.25

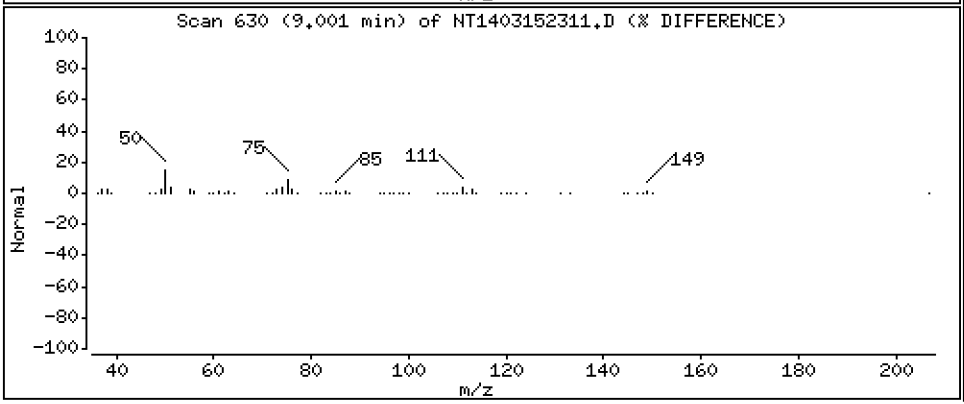
7 1,3-Dichlorobenzene

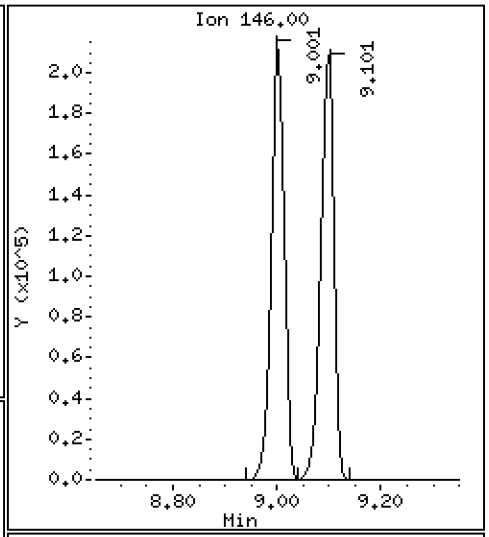
Concentration: 4.793 ug/mL

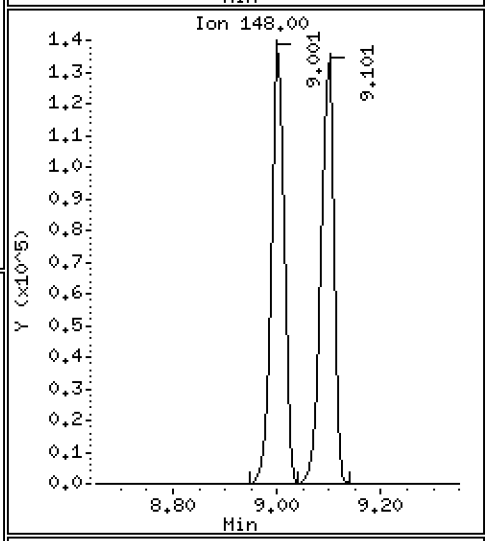


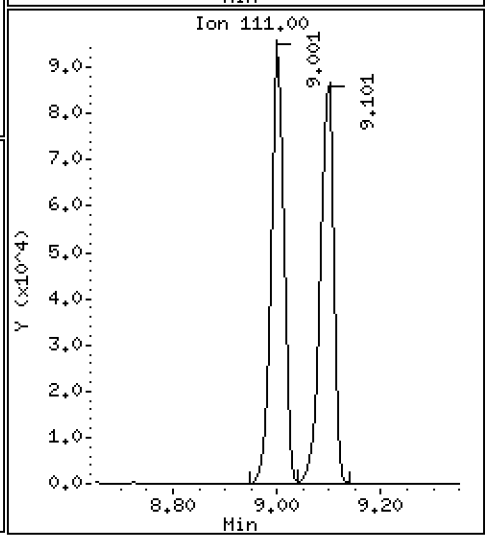












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

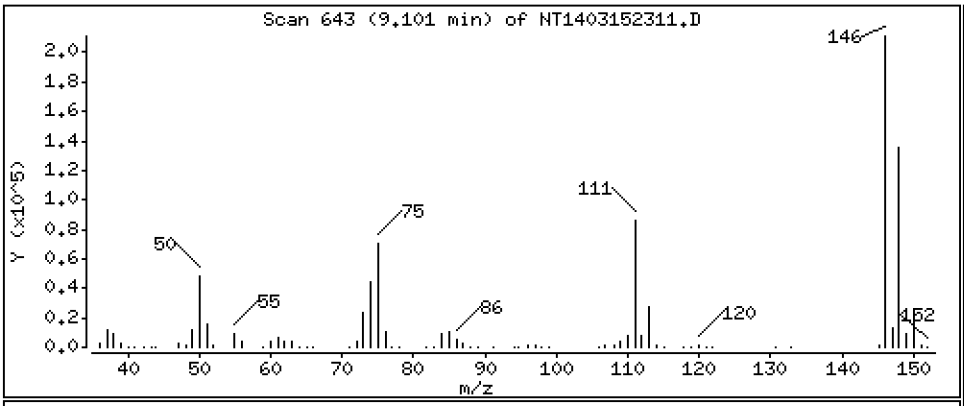
Operator: JGR

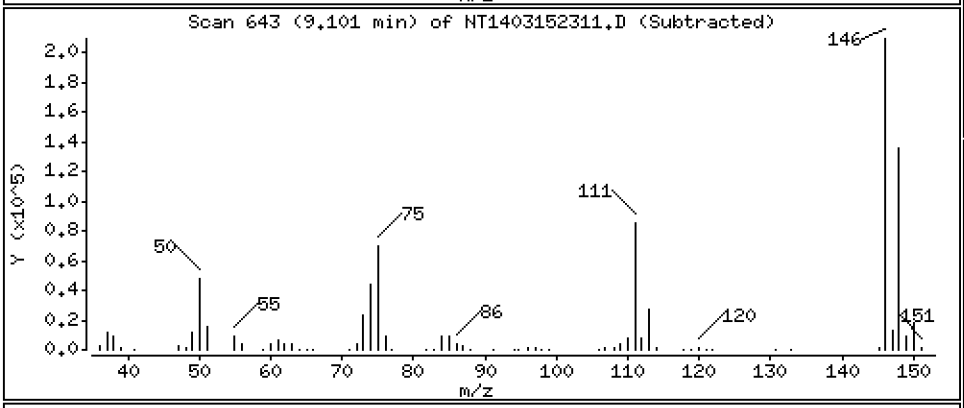
Column phase: ZB-5msi

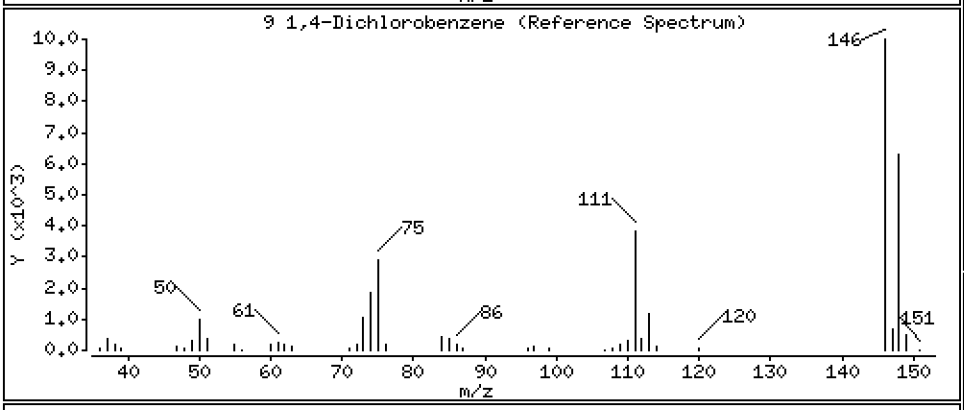
Column diameter: 0.25

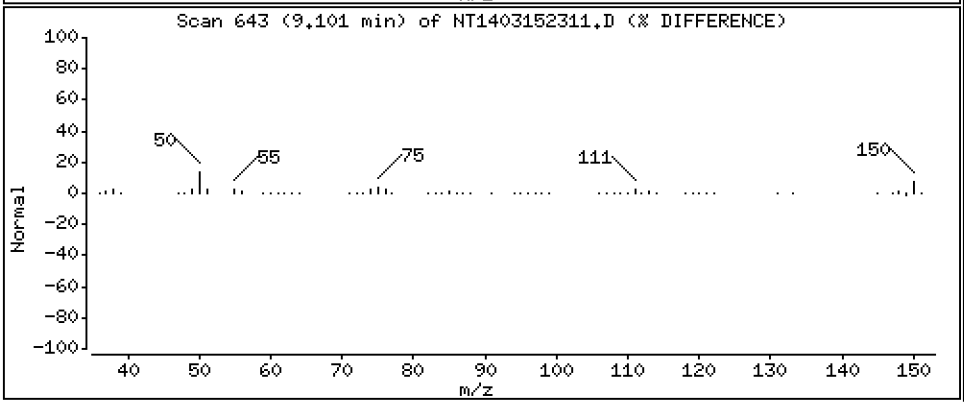
9 1,4-Dichlorobenzene

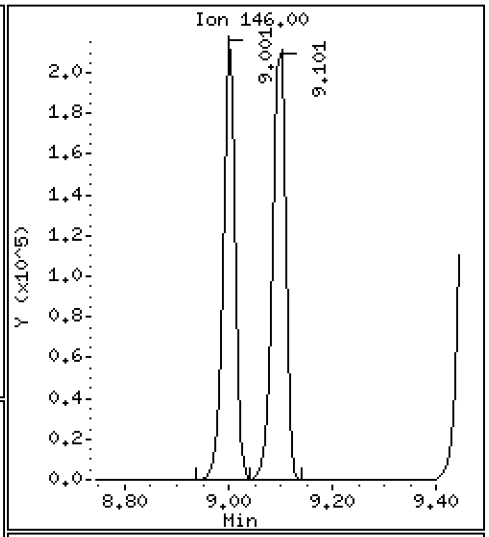
Concentration: 4.889 ug/mL

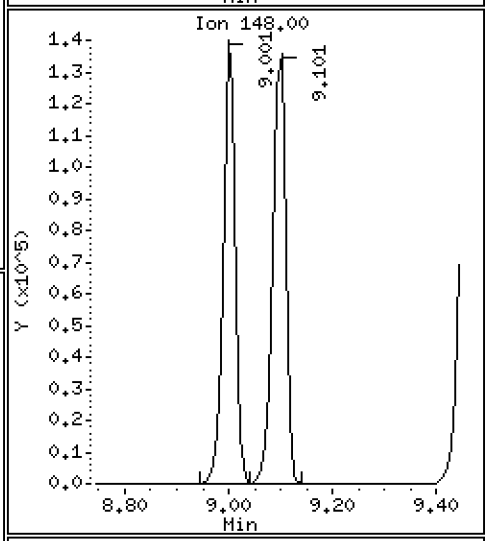


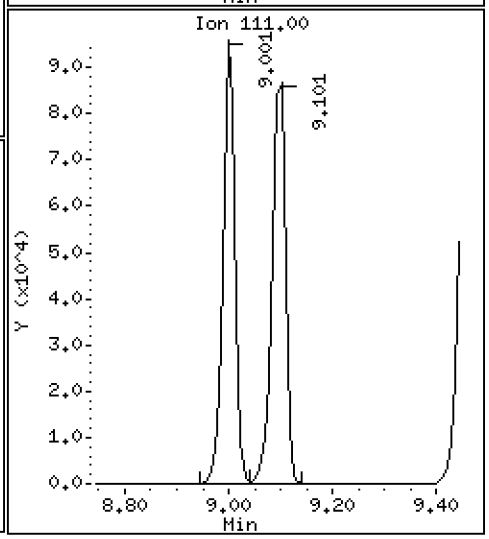












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

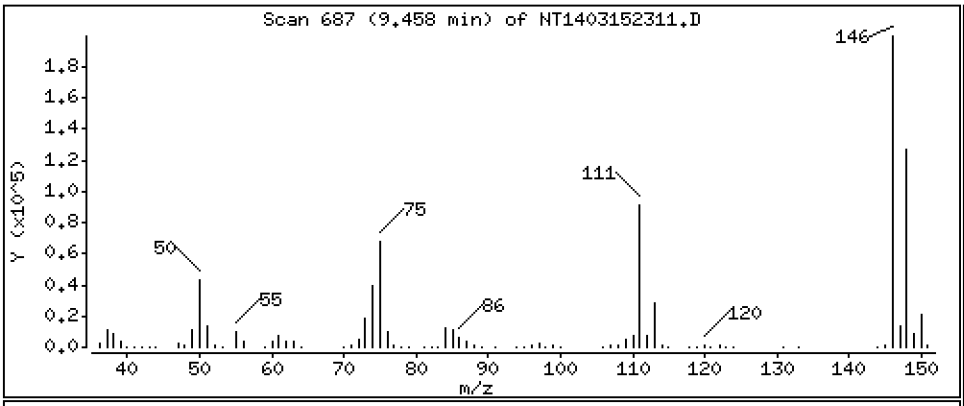
Operator: JGR

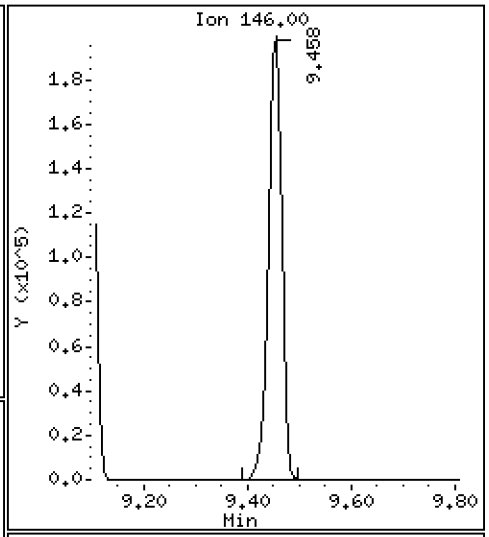
Column phase: ZB-5msi

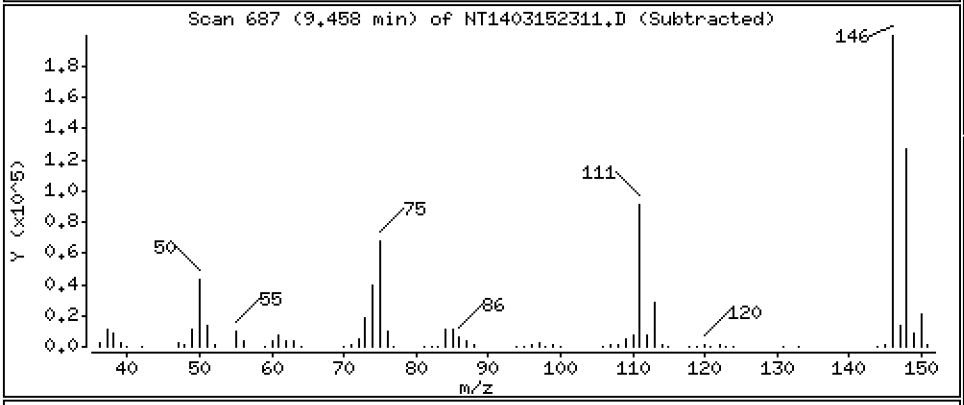
Column diameter: 0.25

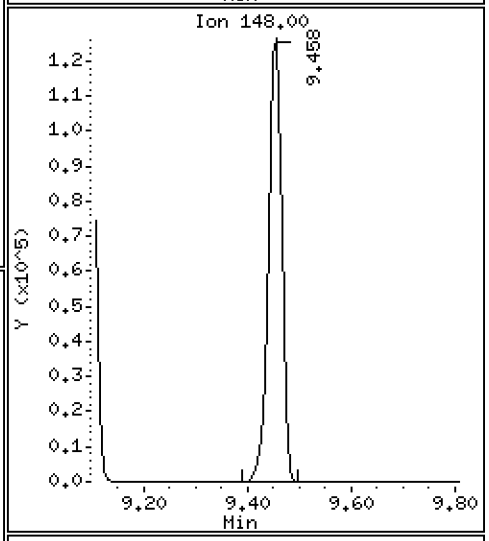
12 1,2-Dichlorobenzene

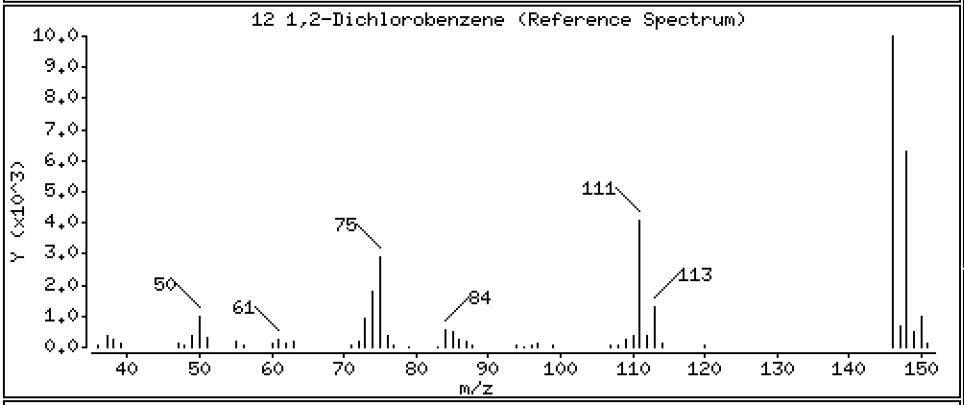
Concentration: 4.786 ug/mL

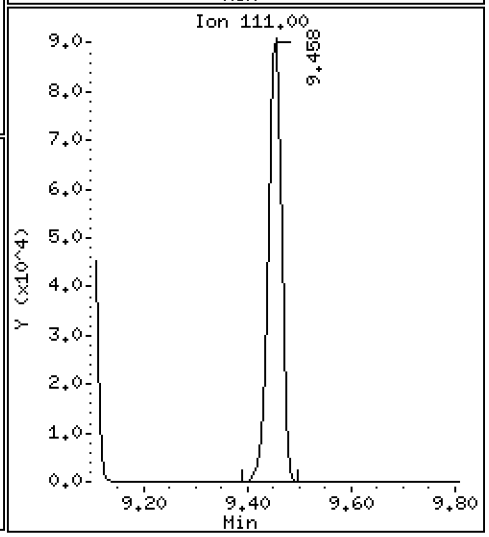


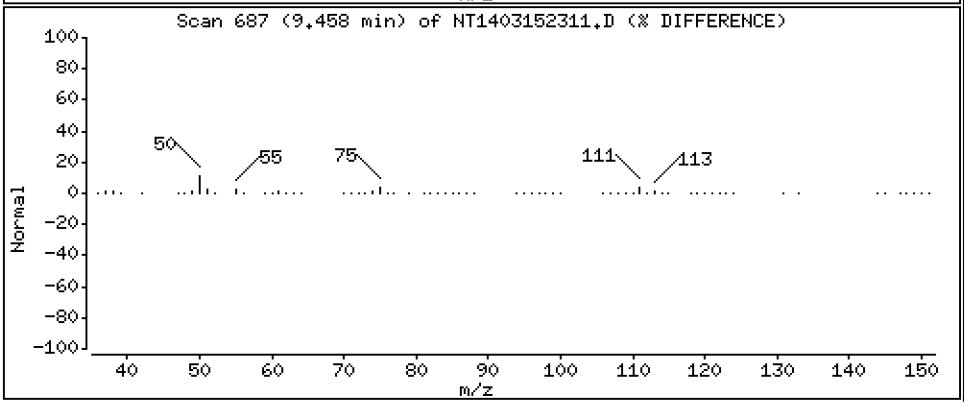












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

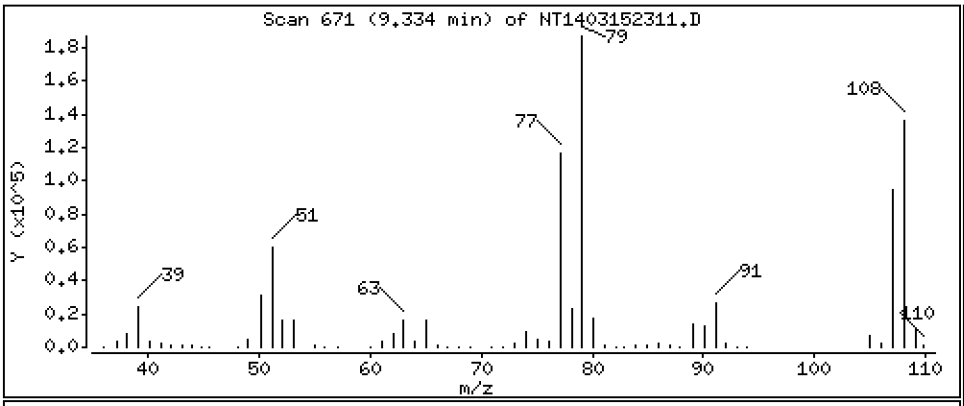
Operator: JGR

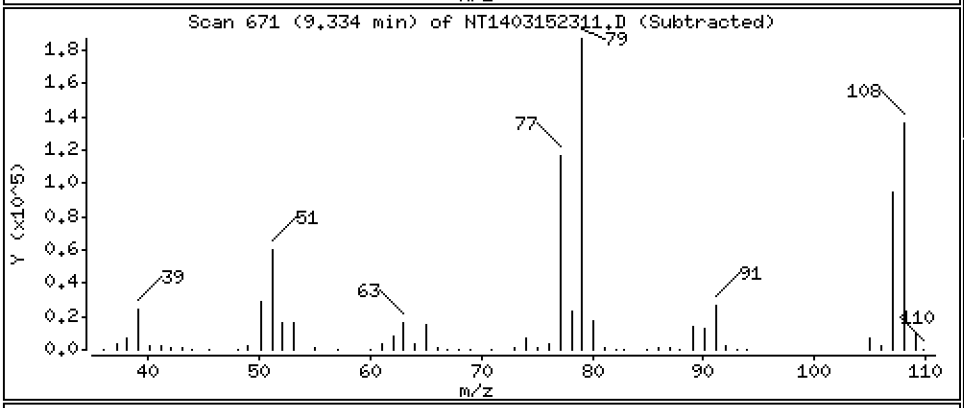
Column phase: ZB-5msi

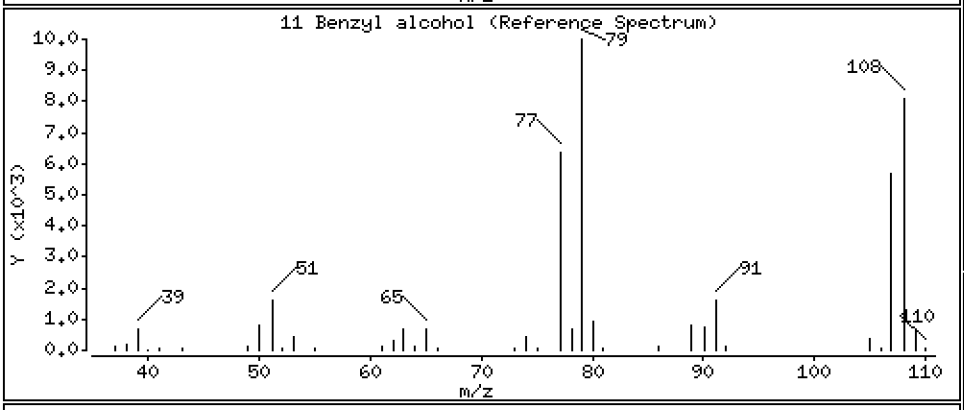
Column diameter: 0.25

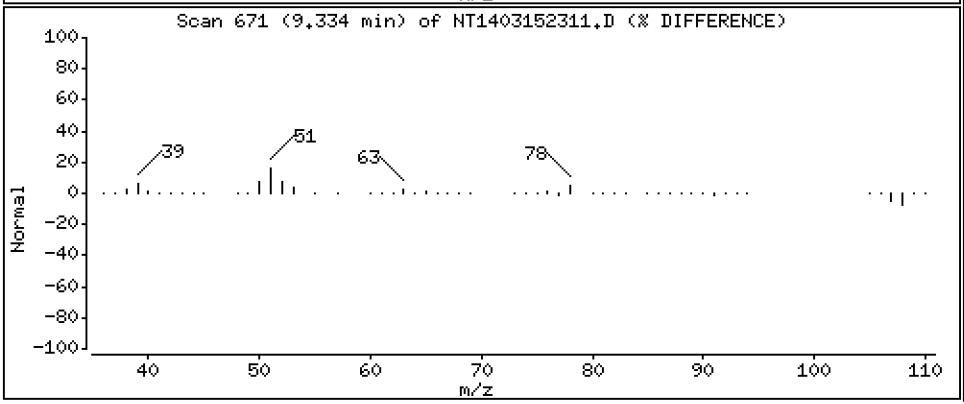
11 Benzyl alcohol

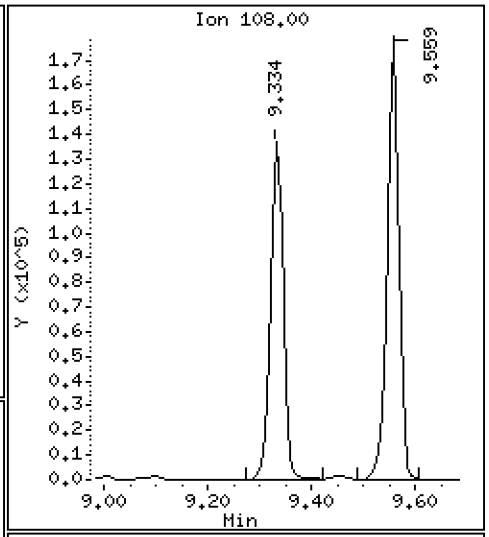
Concentration: 5.051 ug/mL

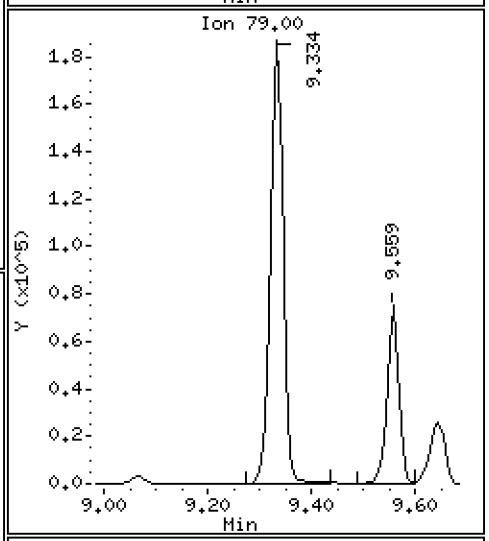


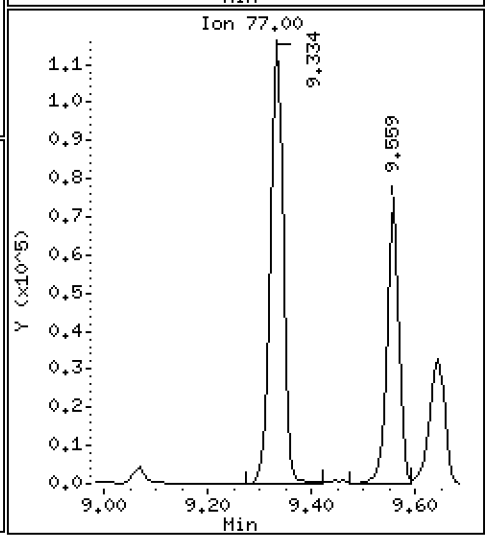












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

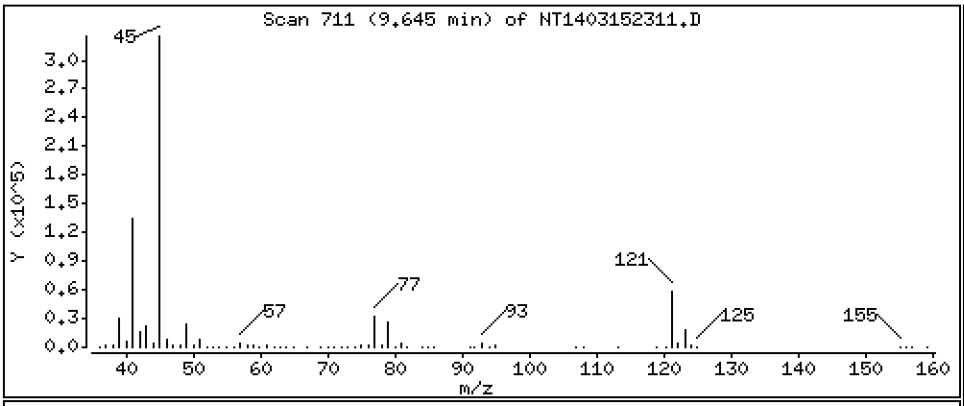
Operator: JGR

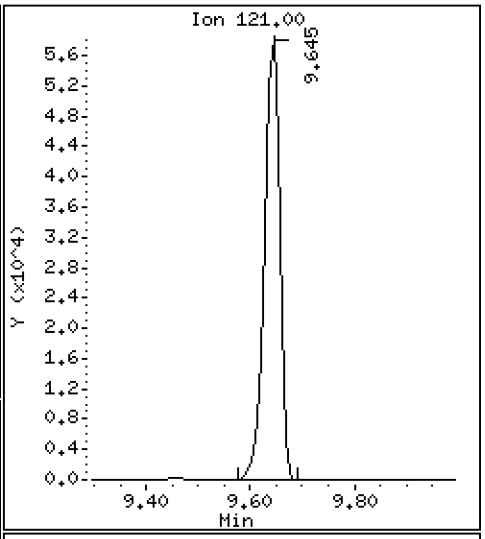
Column phase: ZB-5msi

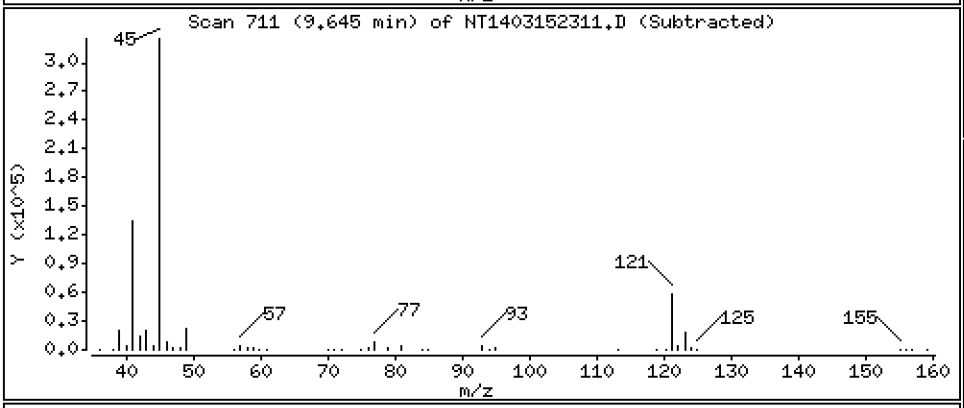
Column diameter: 0.25

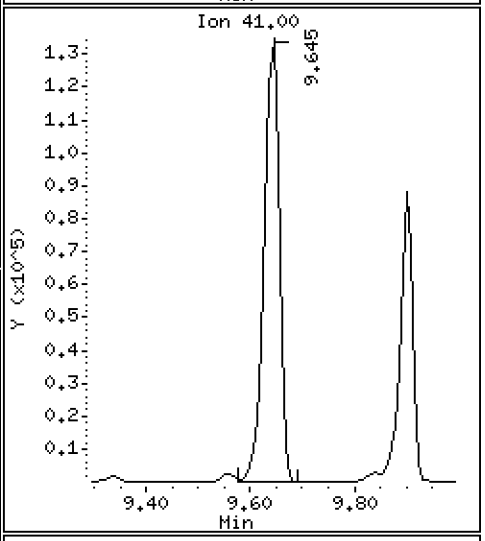
14 2,2'-oxybis(1-Chloropropane)

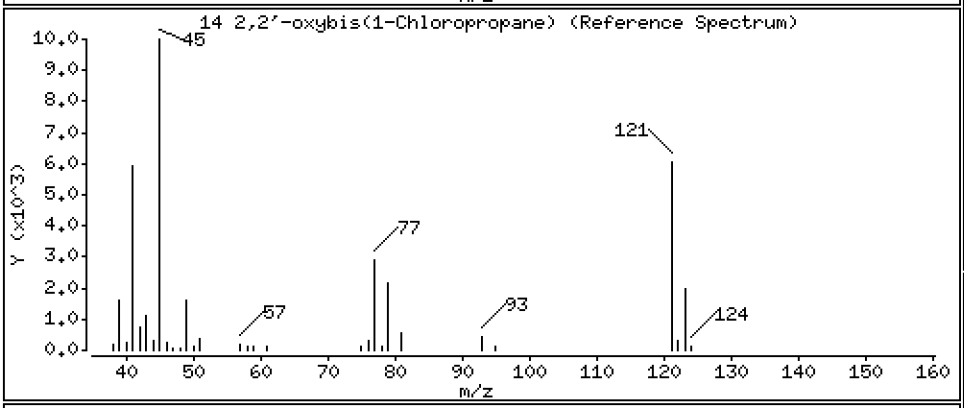
Concentration: 5.319 ug/mL

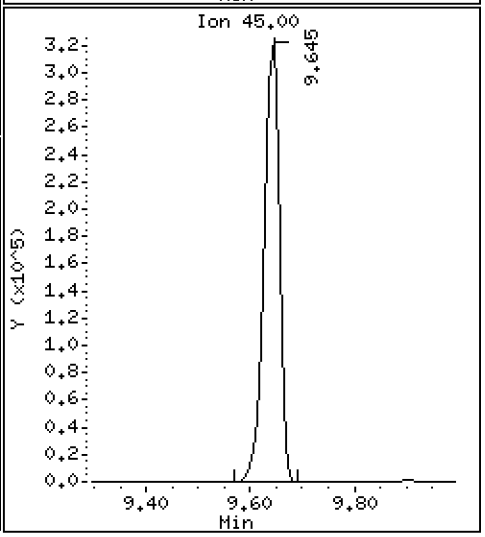


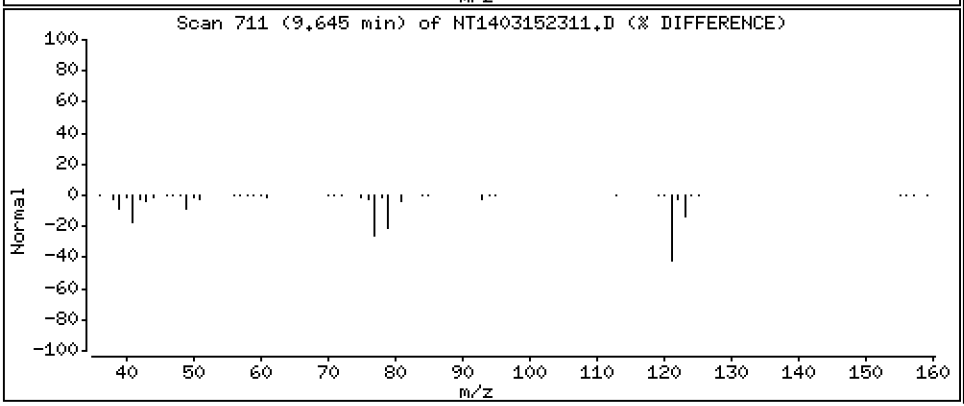












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

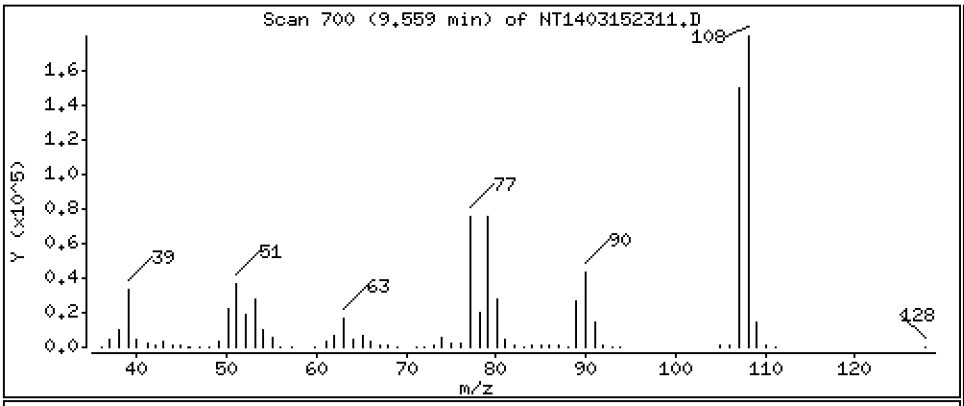
Operator: JGR

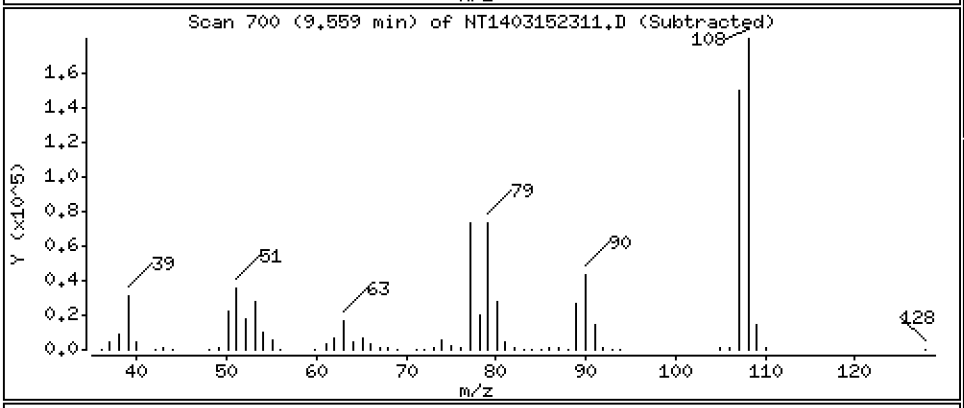
Column phase: ZB-5msi

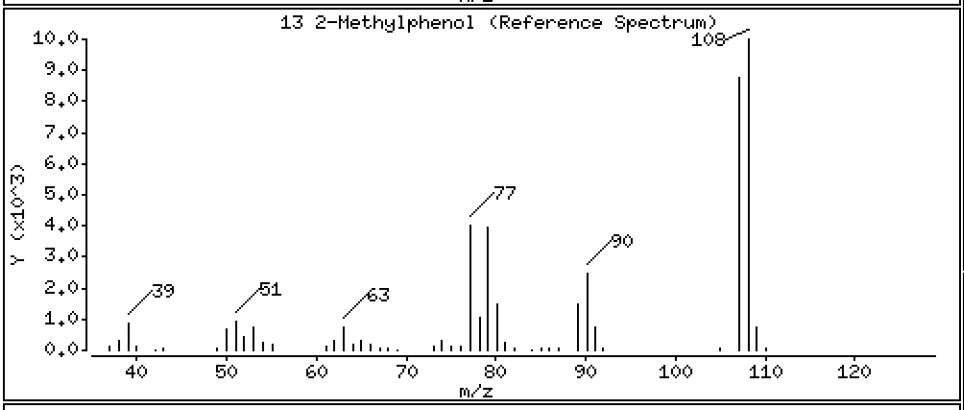
Column diameter: 0.25

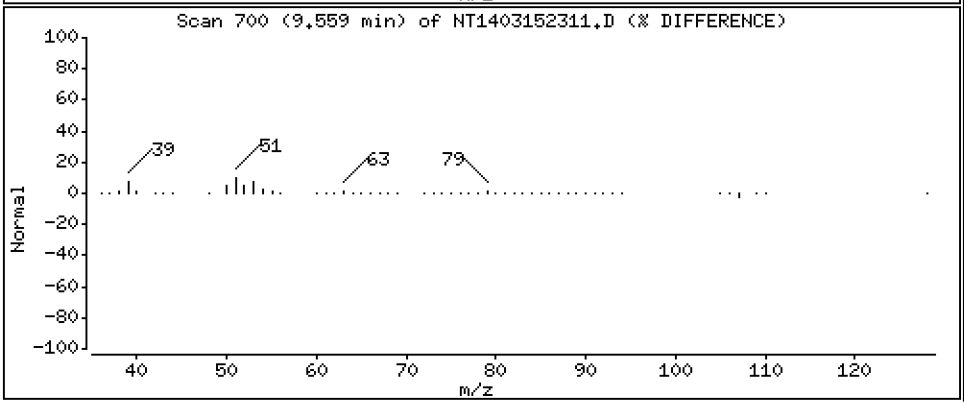
13 2-Methylphenol

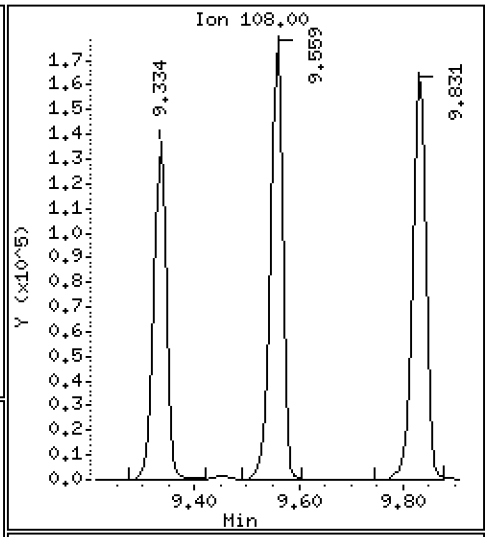
Concentration: 4.117 ug/mL

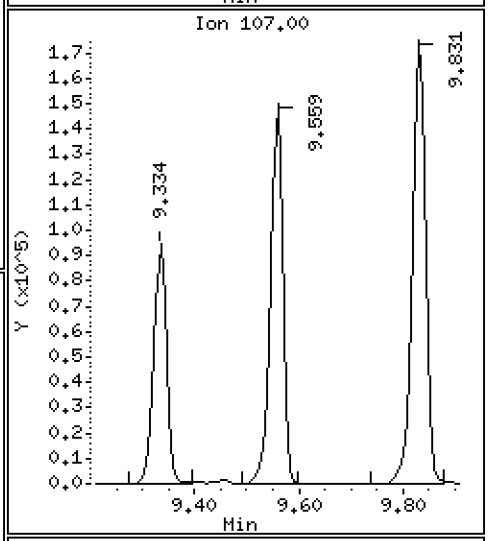


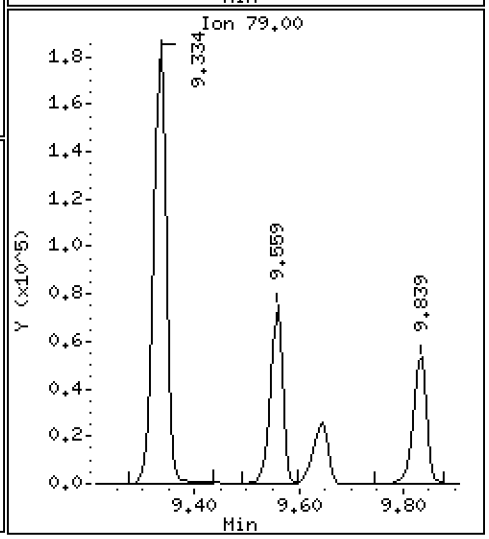












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

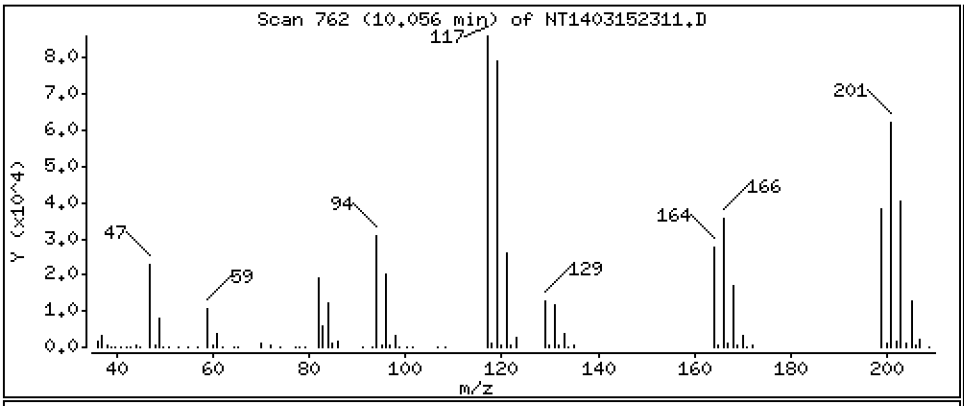
Operator: JGR

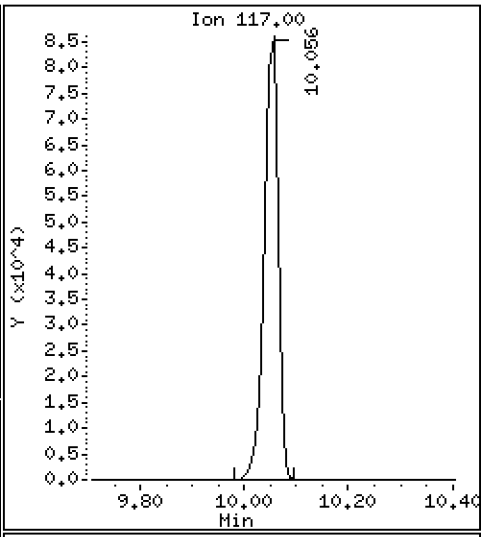
Column phase: ZB-5msi

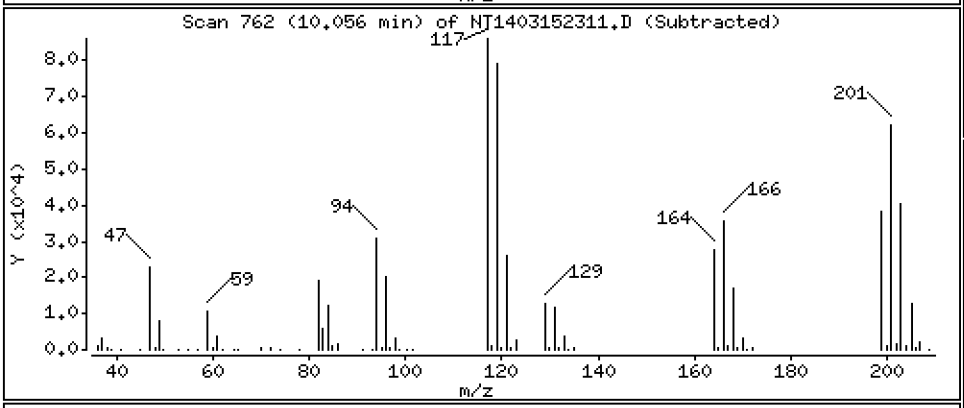
Column diameter: 0.25

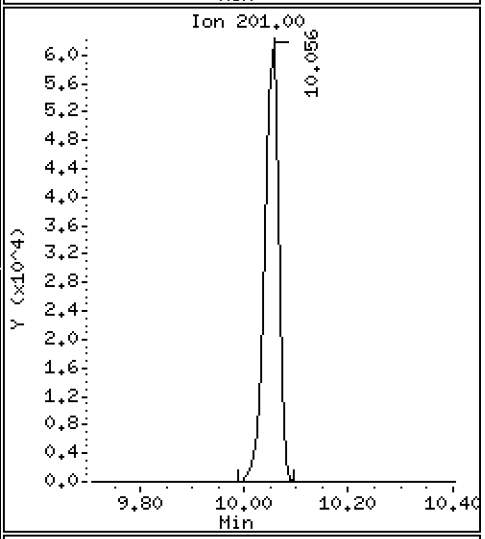
17 Hexachloroethane

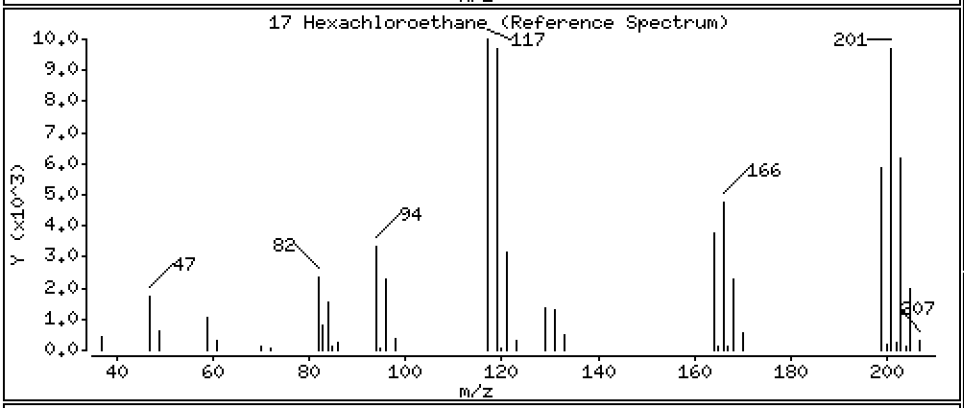
Concentration: 4.955 ug/mL

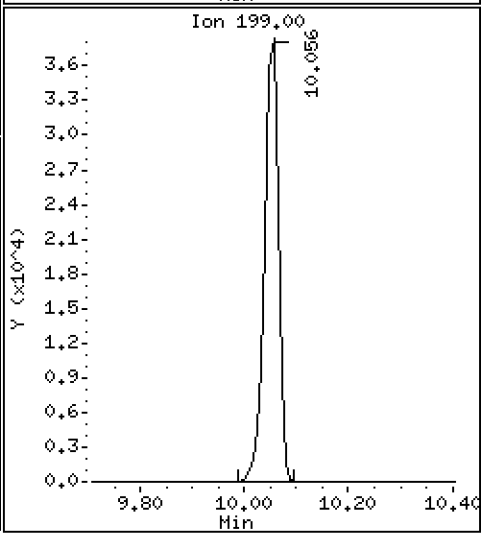


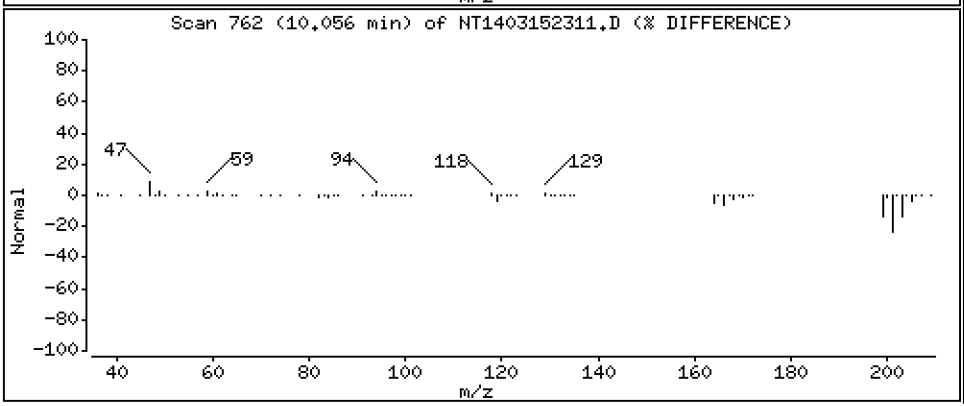












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

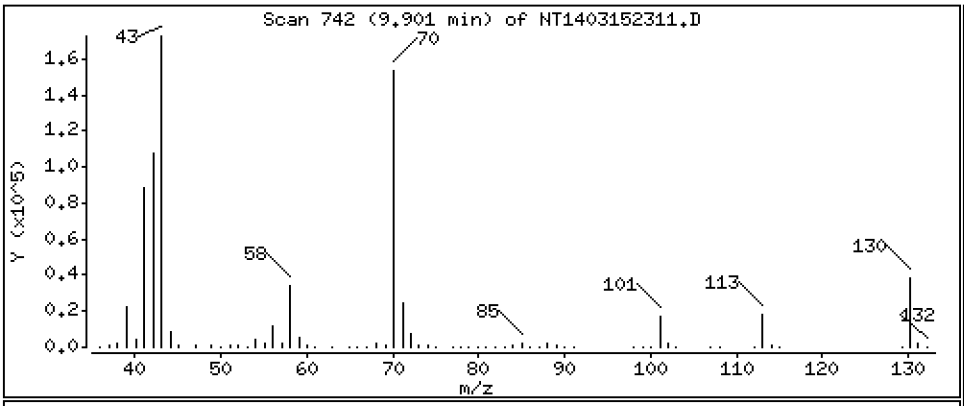
Operator: JGR

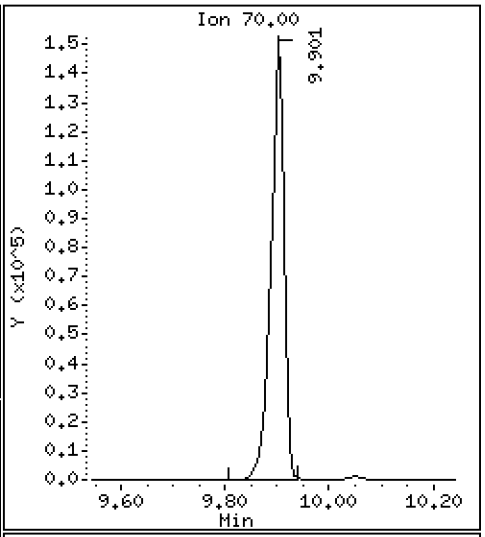
Column phase: ZB-5msi

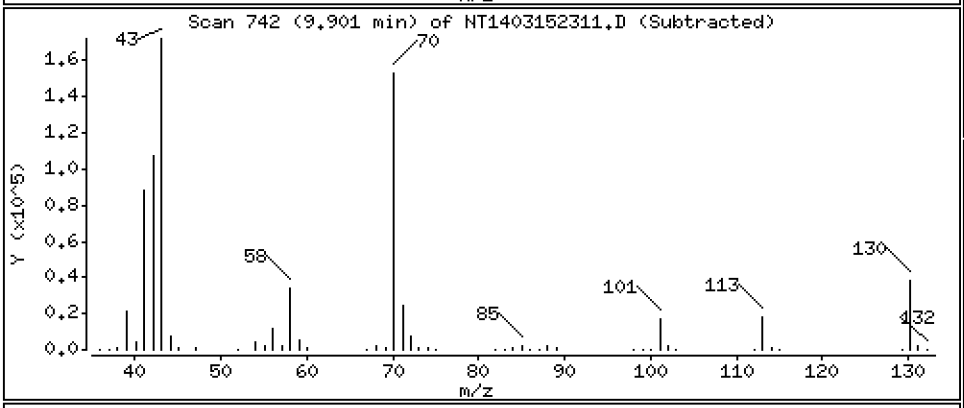
Column diameter: 0.25

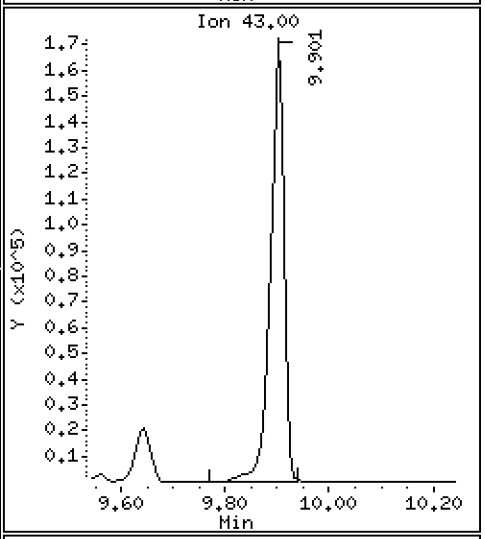
16 N-Nitroso-di-n-propylamine

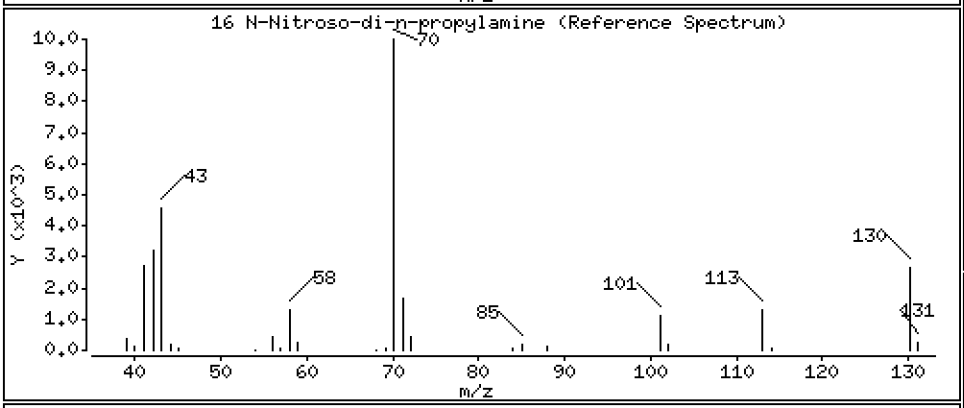
Concentration: 4.983 ug/mL

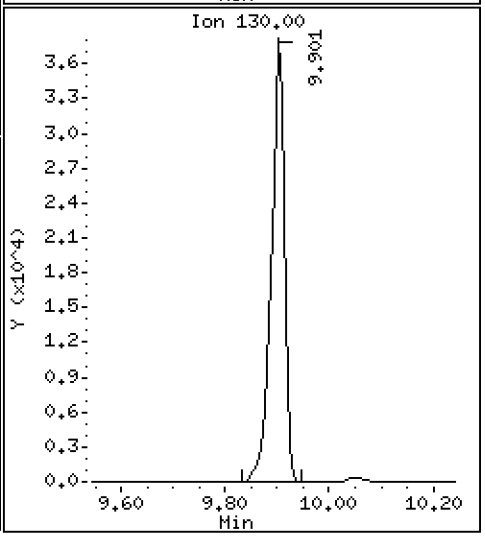


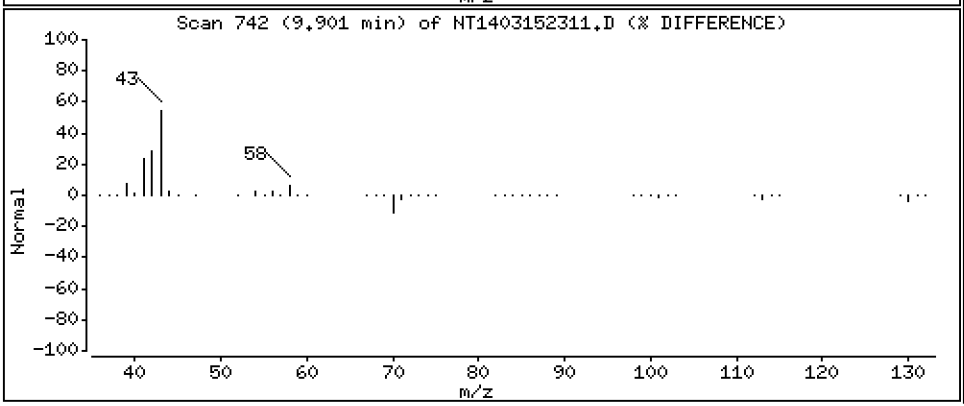












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

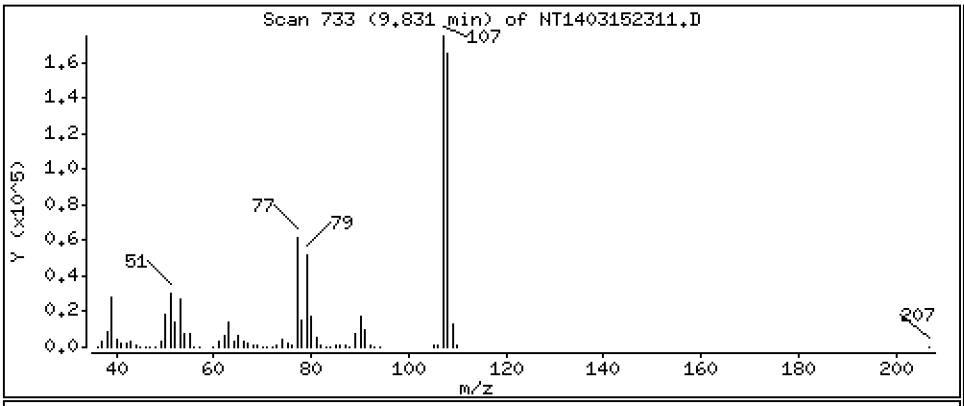
Operator: JGR

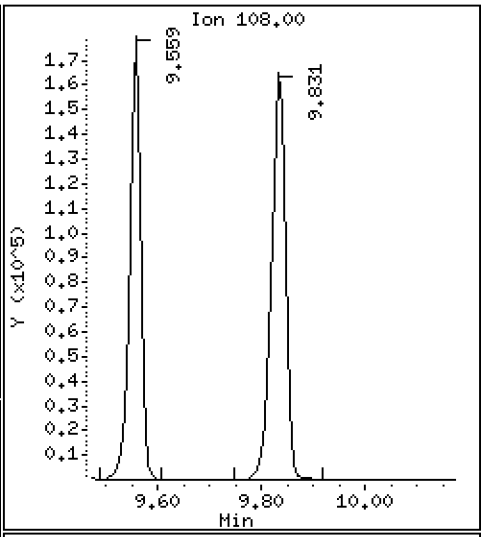
Column phase: ZB-5msi

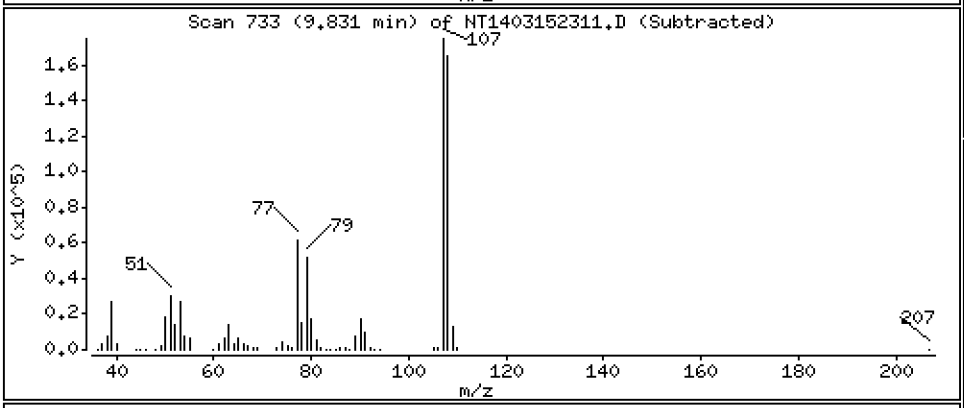
Column diameter: 0.25

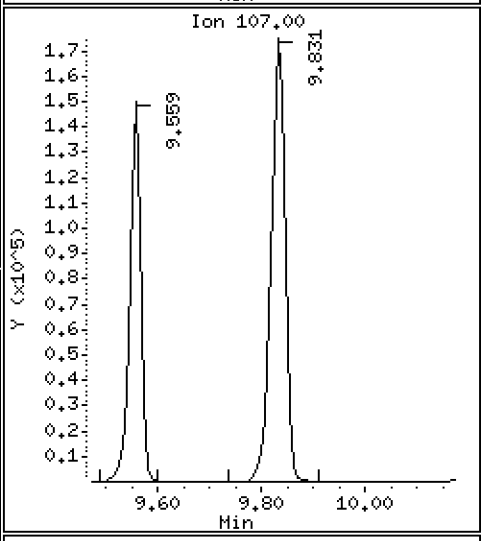
15 4-Methylphenol

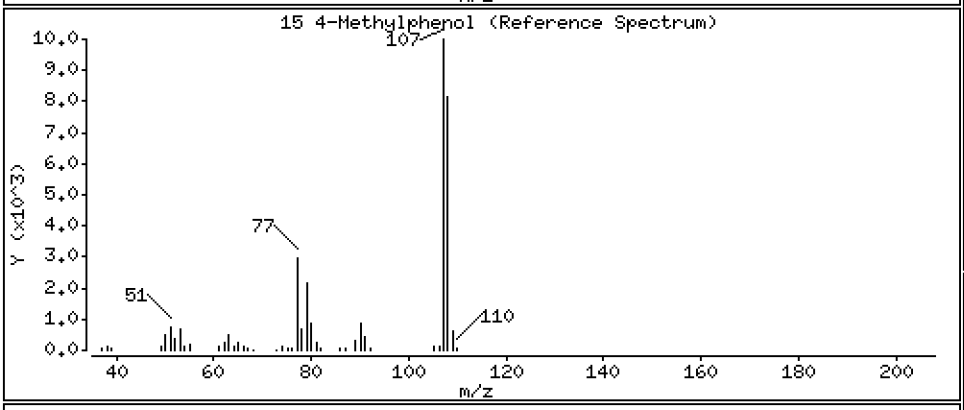
Concentration: 4.302 ug/mL

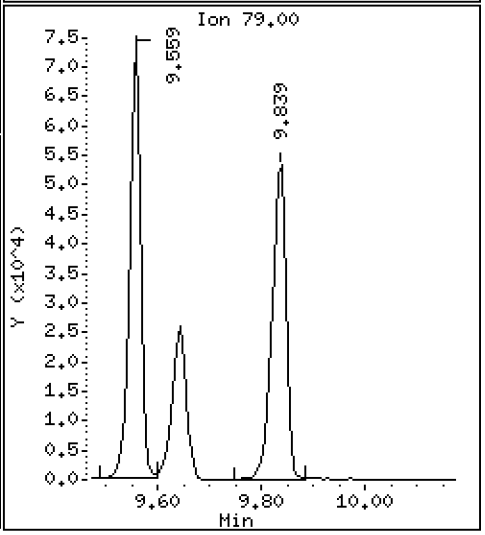


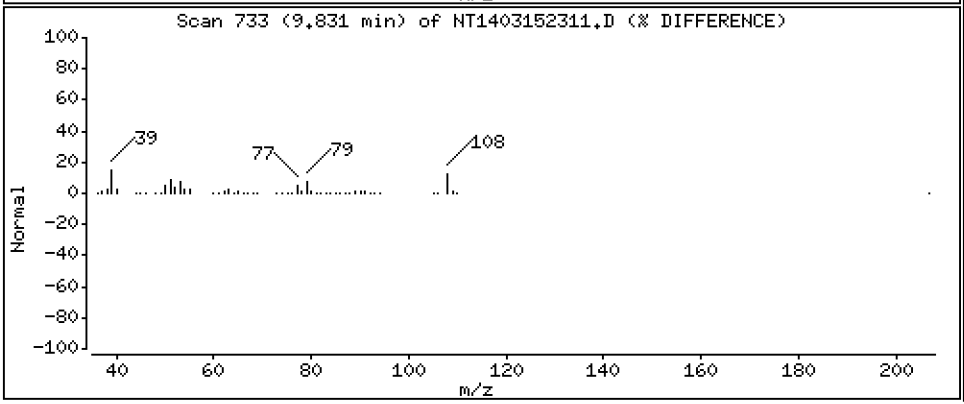












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

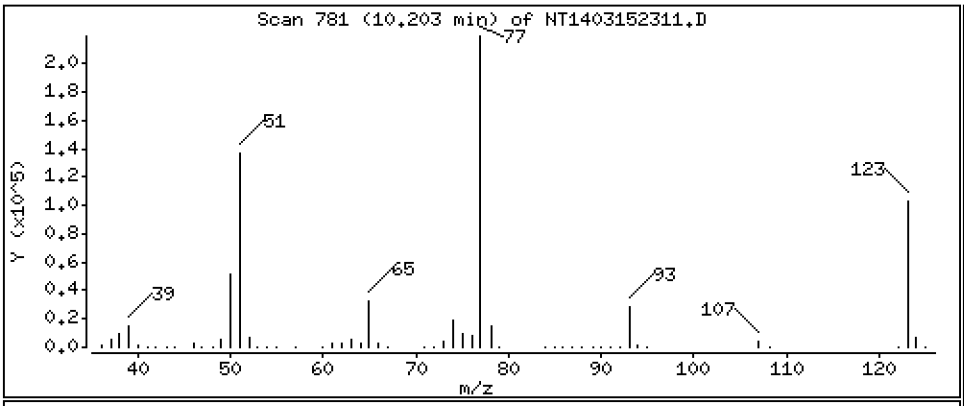
Operator: JGR

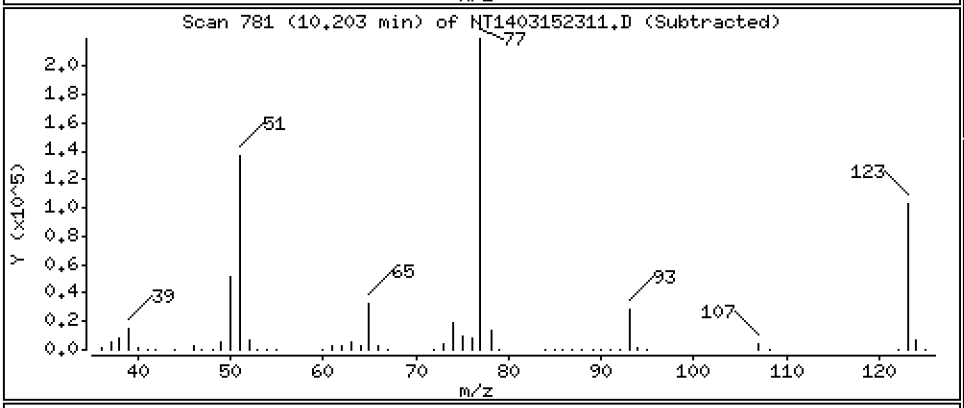
Column phase: ZB-5msi

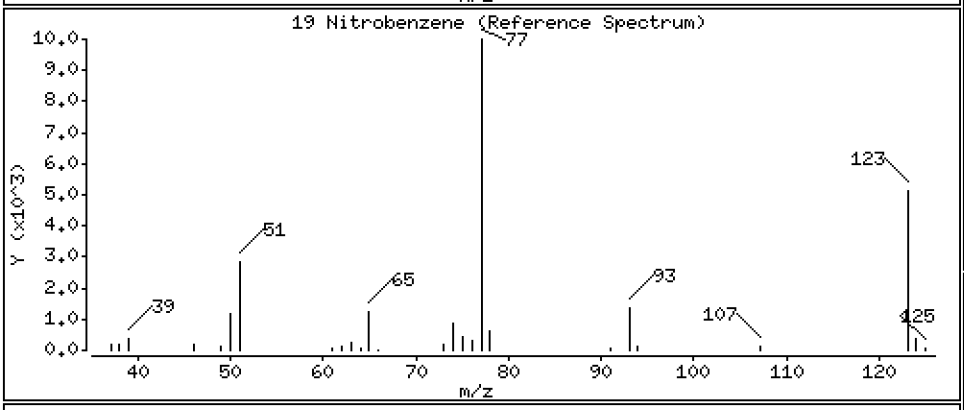
Column diameter: 0.25

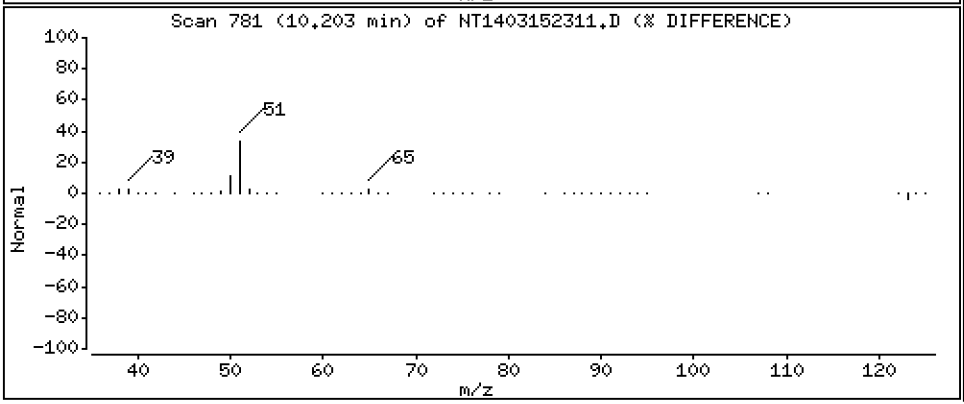
19 Nitrobenzene

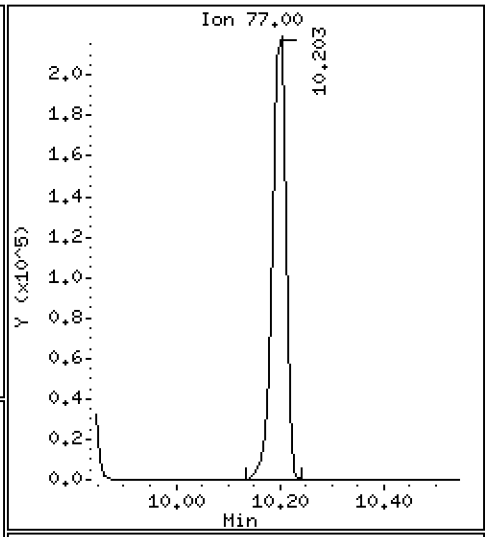
Concentration: 5.023 ug/mL

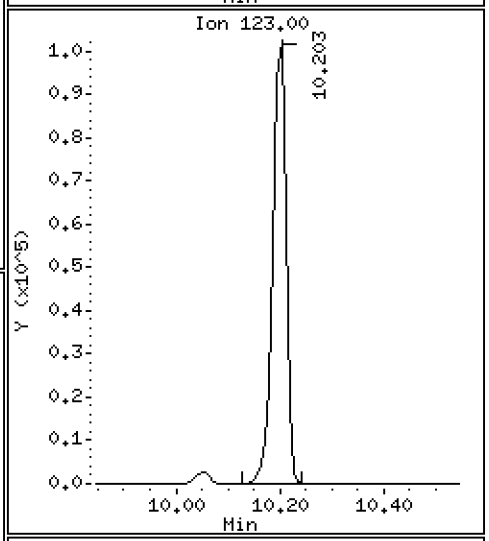


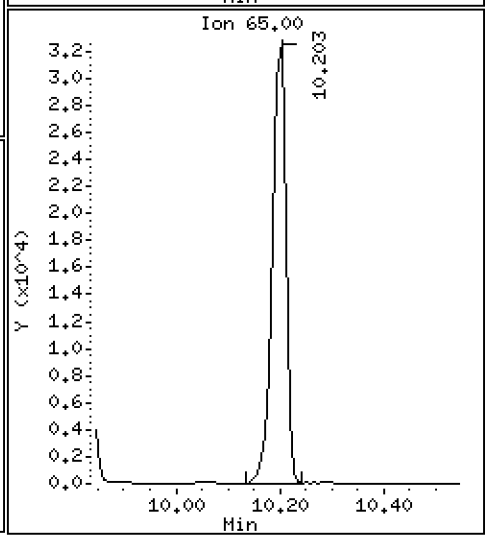












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

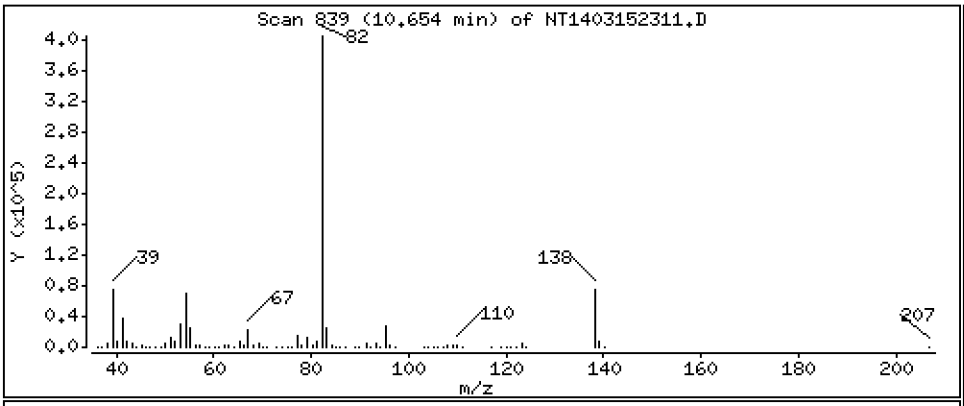
Operator: JGR

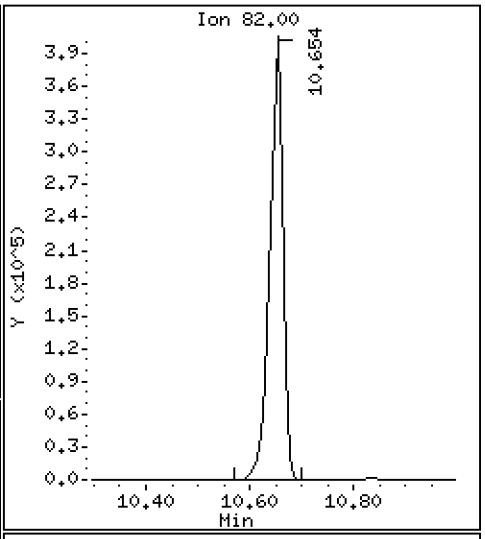
Column phase: ZB-5msi

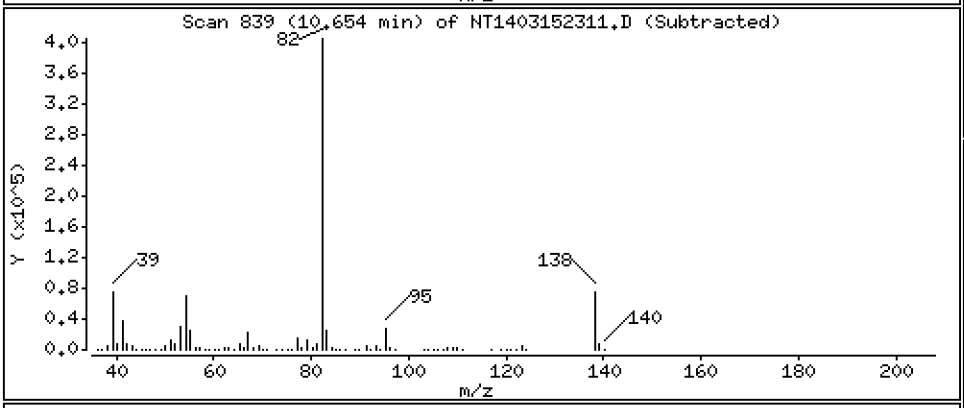
Column diameter: 0.25

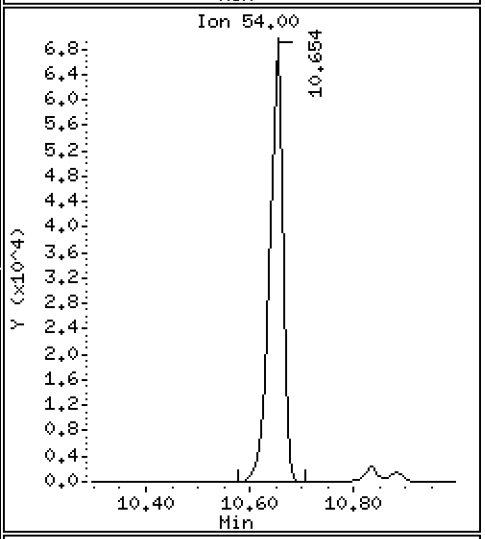
20 Isophorone

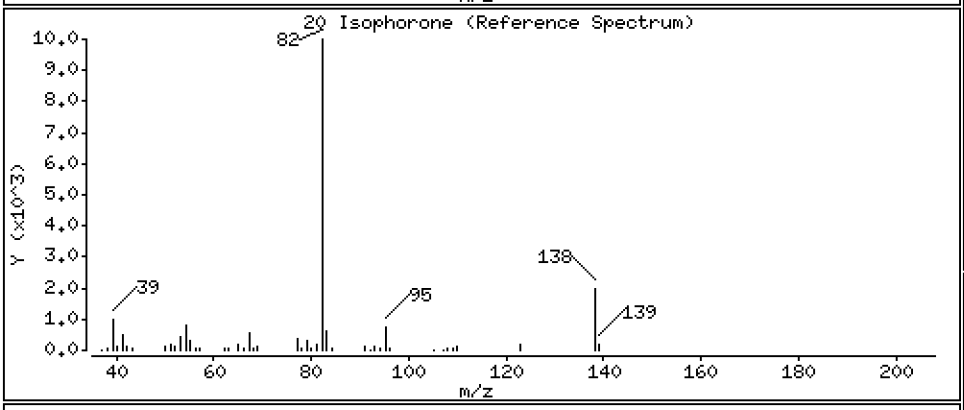
Concentration: 6.771 ug/mL

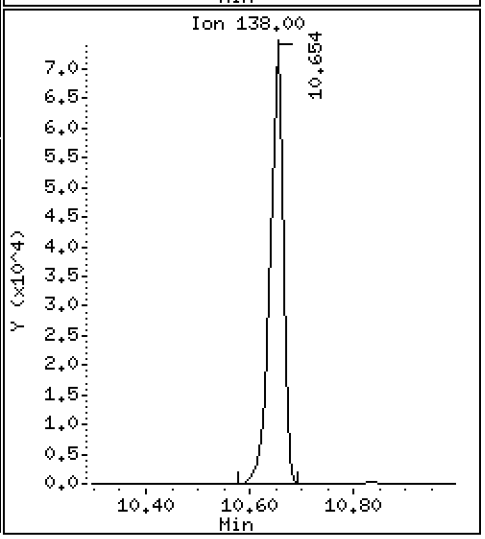


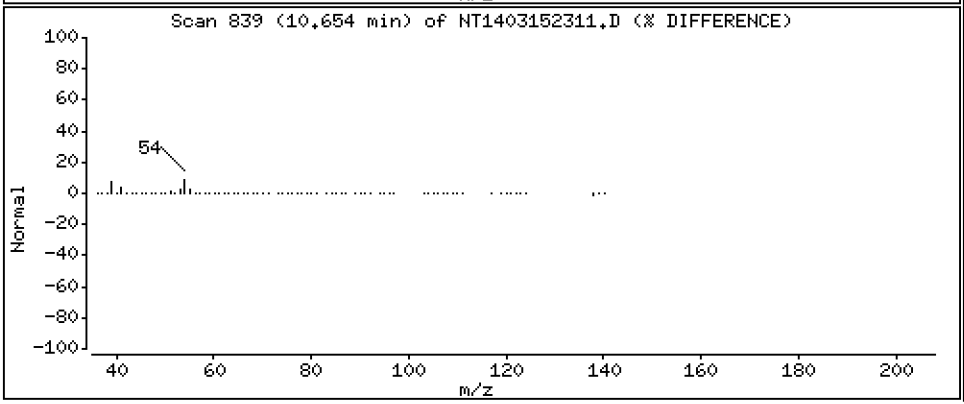












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

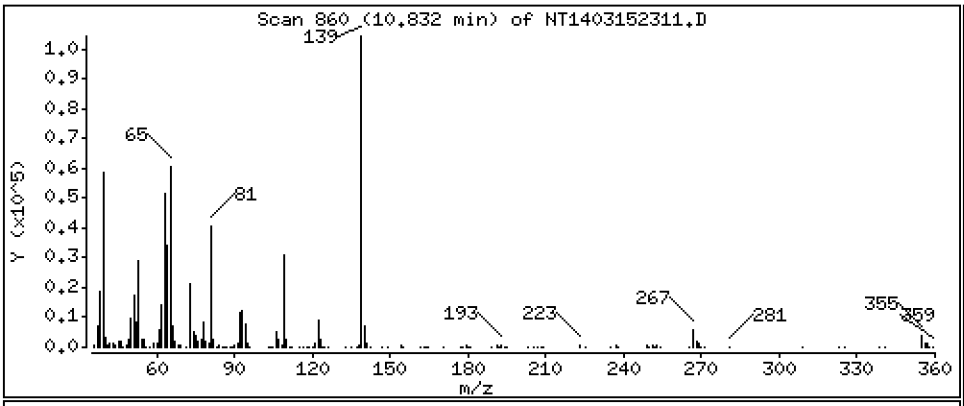
Operator: JGR

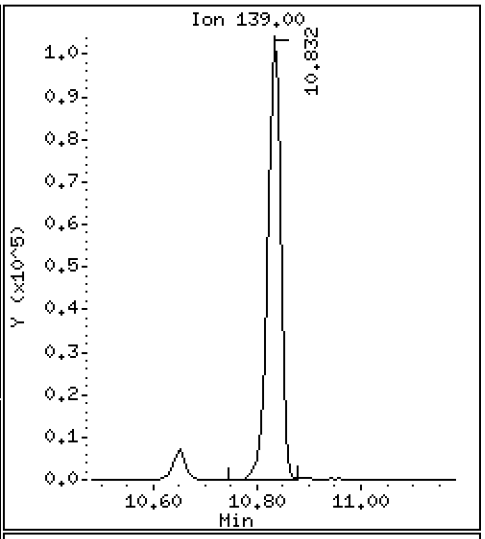
Column phase: ZB-5msi

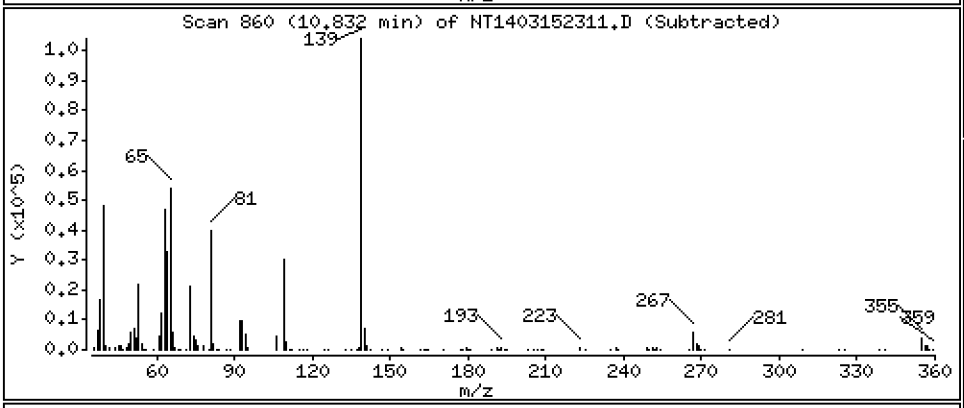
Column diameter: 0.25

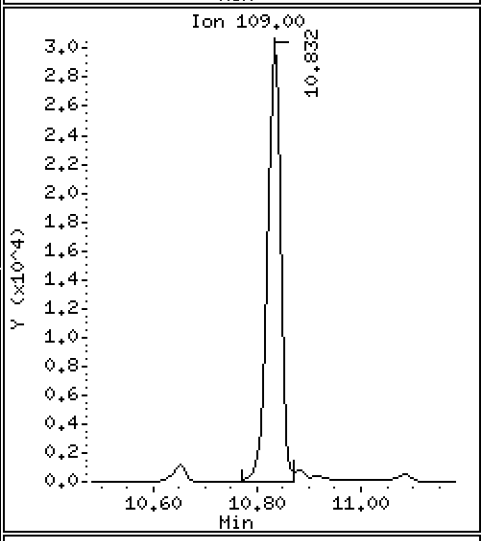
21 2-Nitrophenol

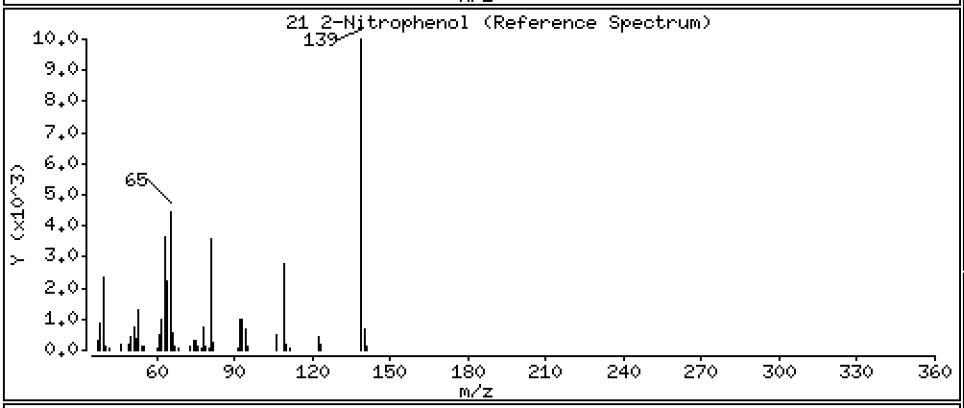
Concentration: 4.530 ug/mL

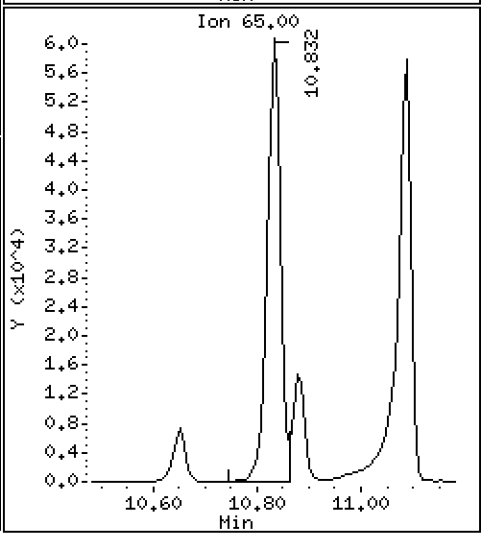


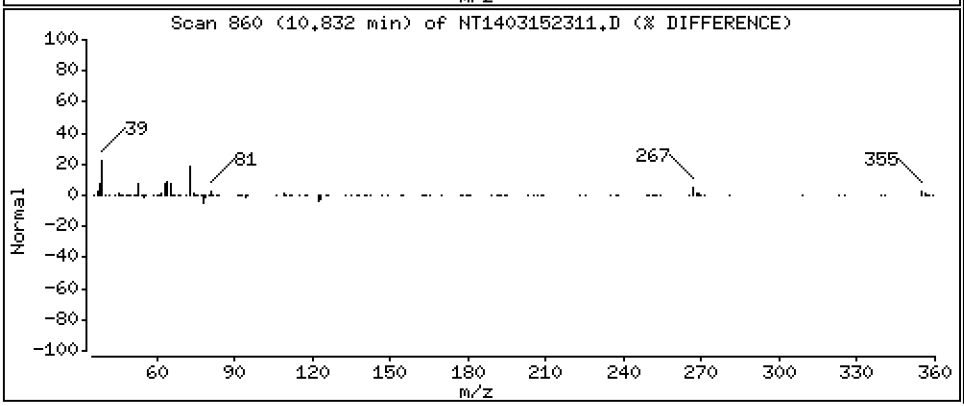












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

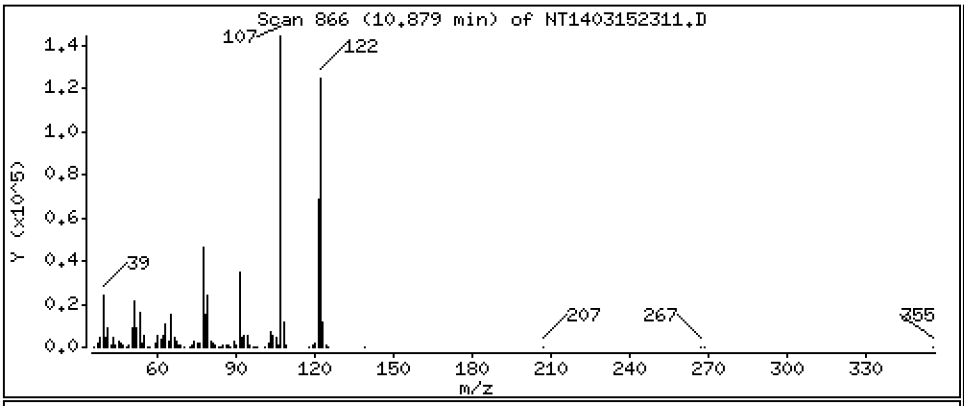
Operator: JGR

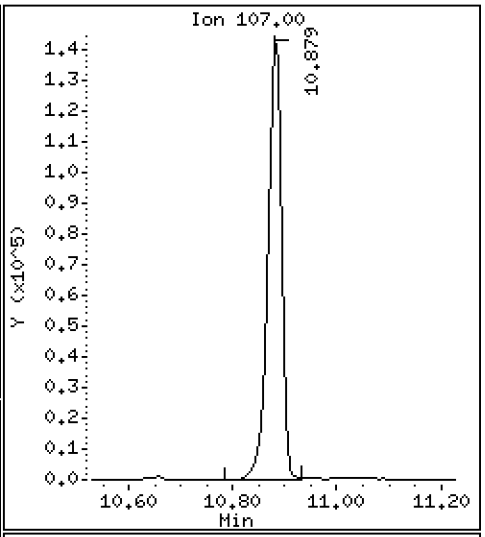
Column phase: ZB-5msi

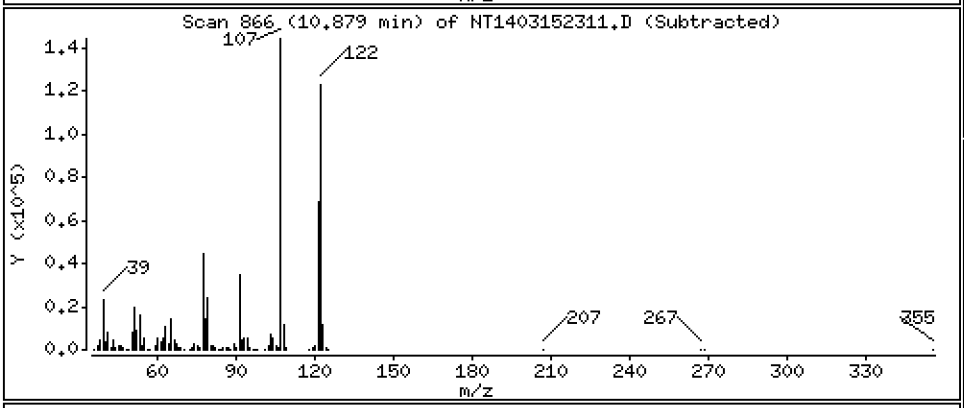
Column diameter: 0.25

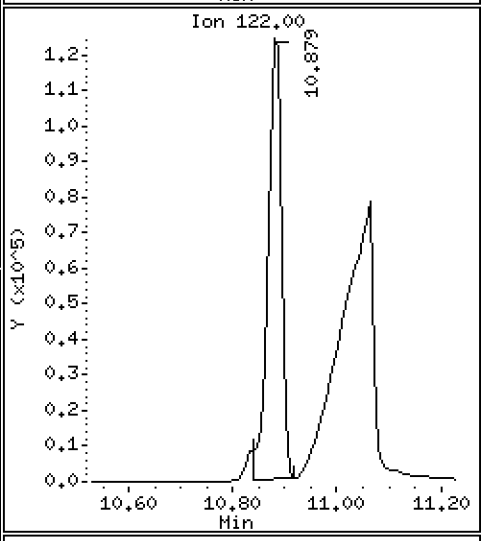
22 2,4-Dimethylphenol

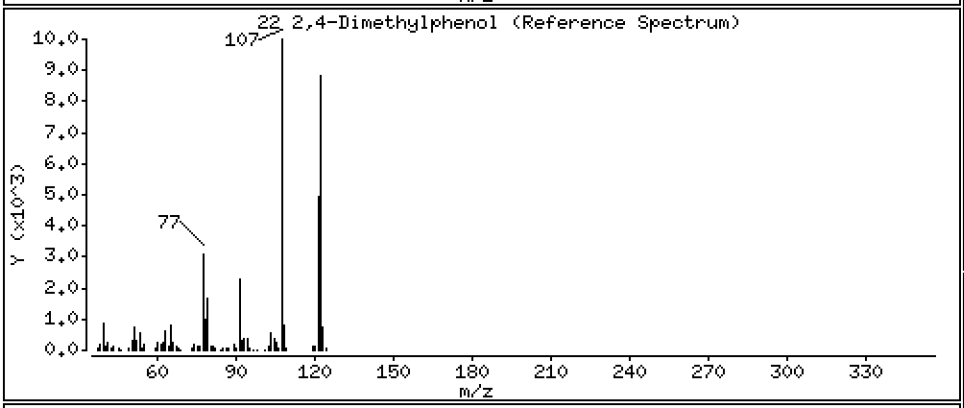
Concentration: 3.915 ug/mL

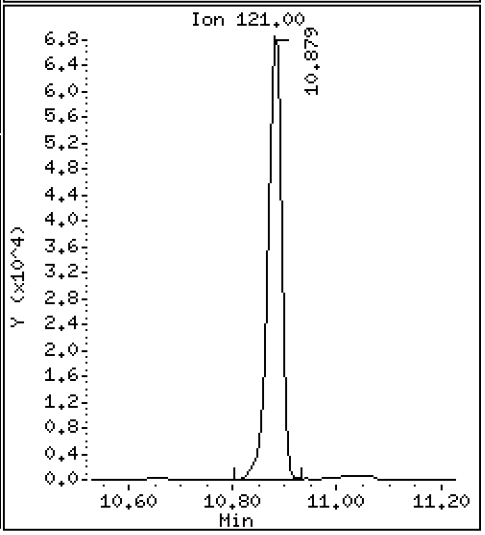


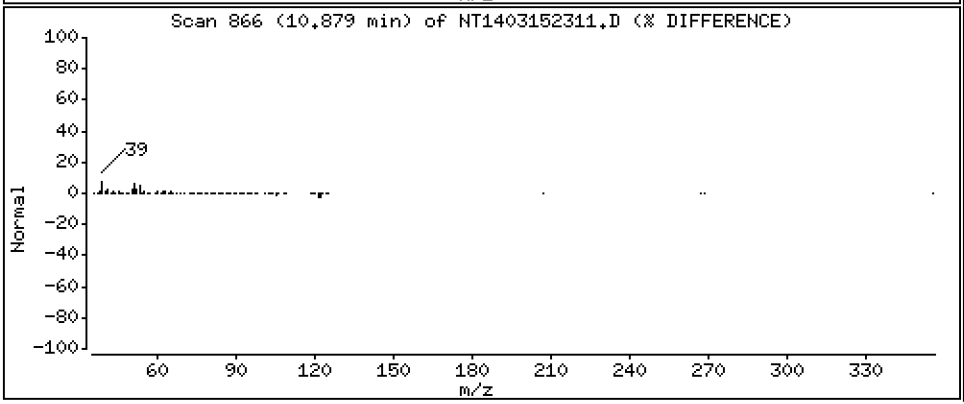












Data File: \\target\share\chem3\nt14.i\20230315.b\NT1403152311.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

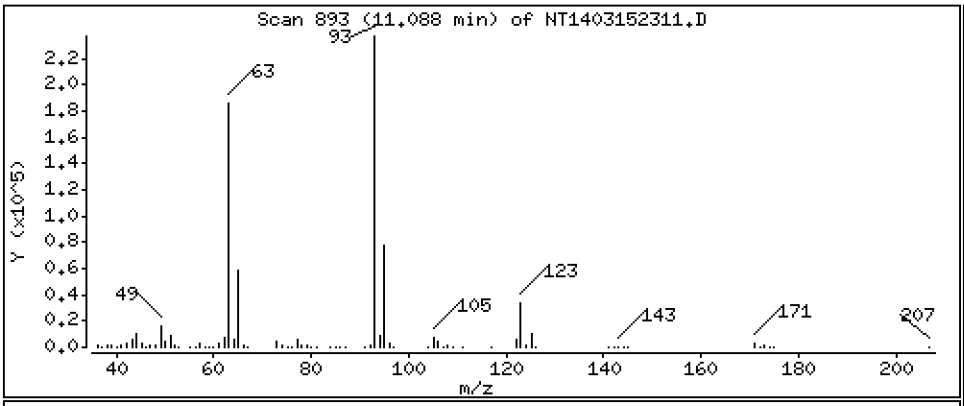
Operator: JGR

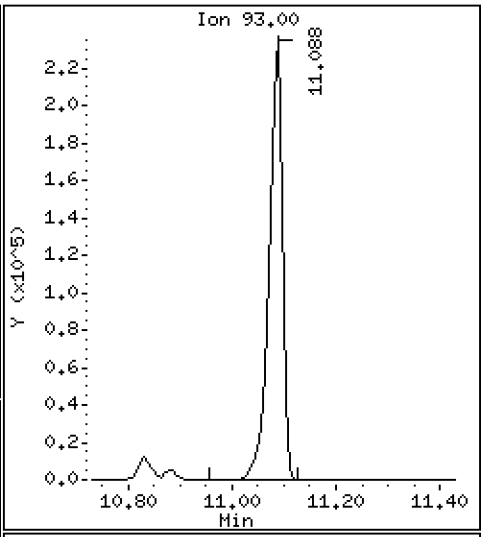
Column phase: ZB-5msi

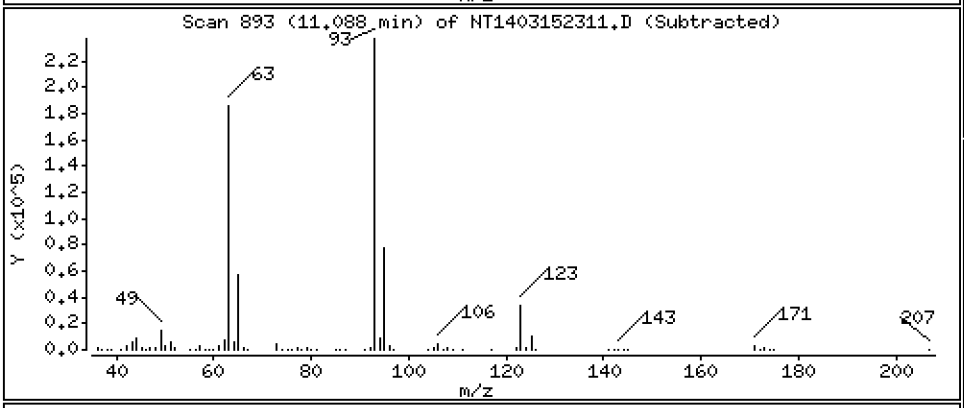
Column diameter: 0.25

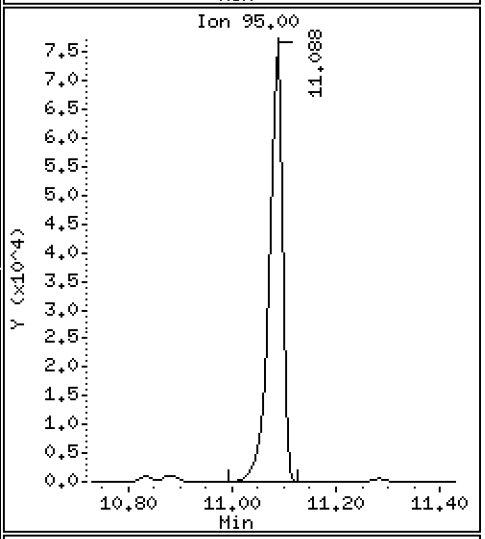
23 Bis(2-Chloroethoxy)methane

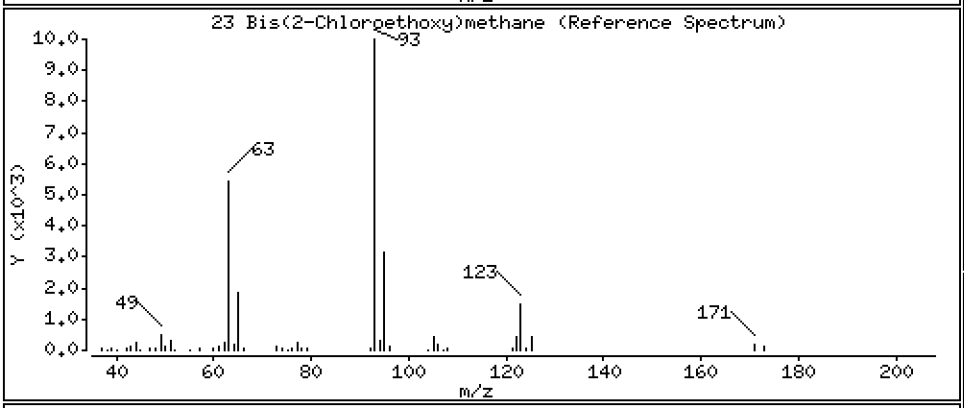
Concentration: 5.859 ug/mL

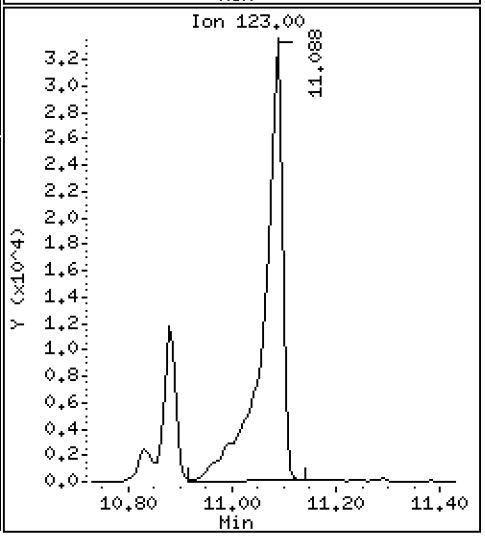


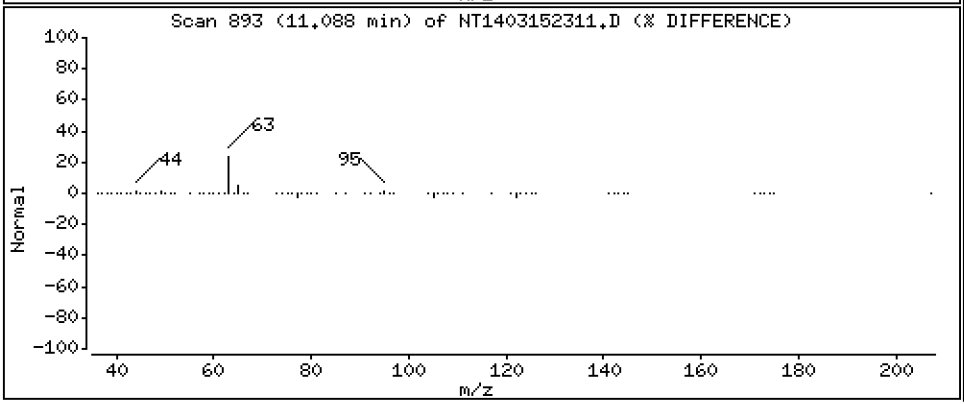












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

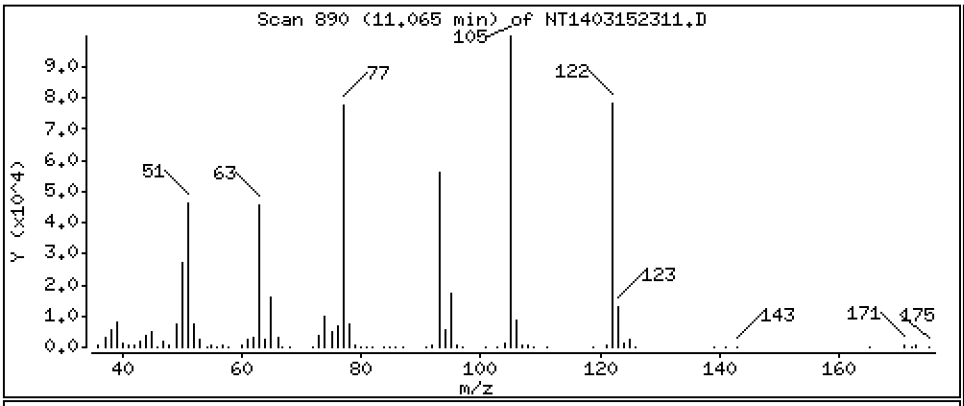
Operator: JGR

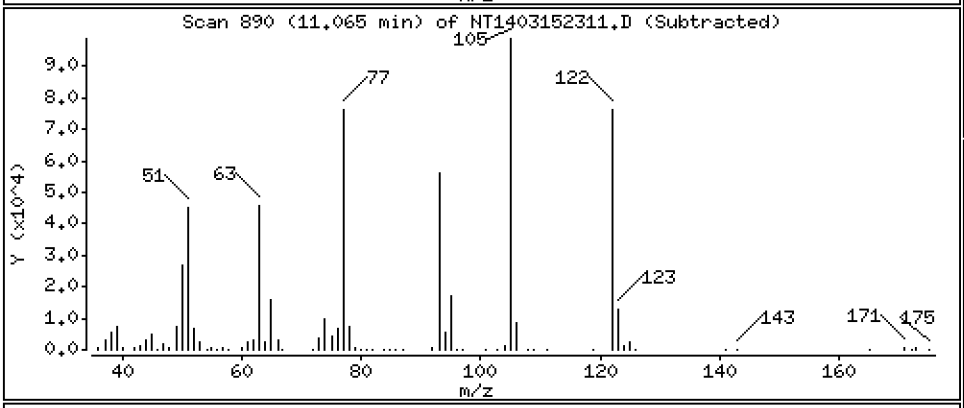
Column phase: ZB-5msi

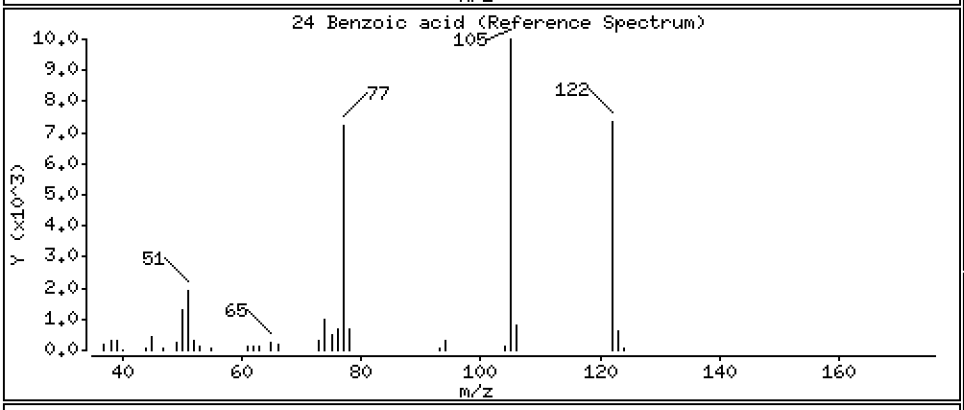
Column diameter: 0.25

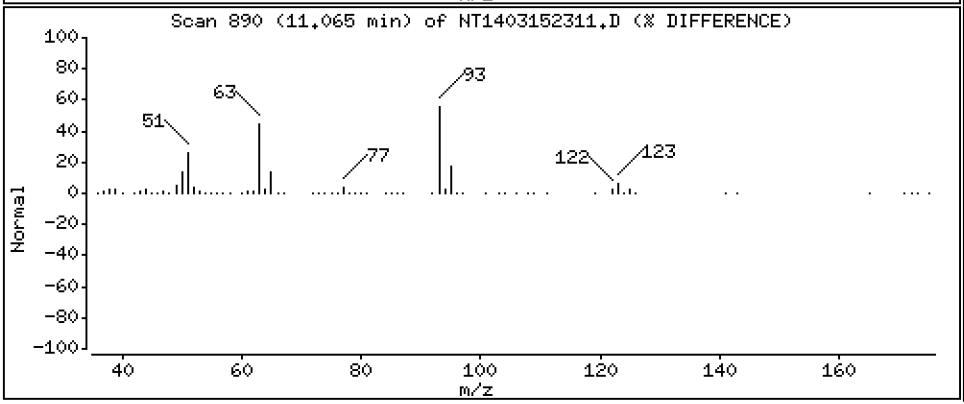
24 Benzoic acid

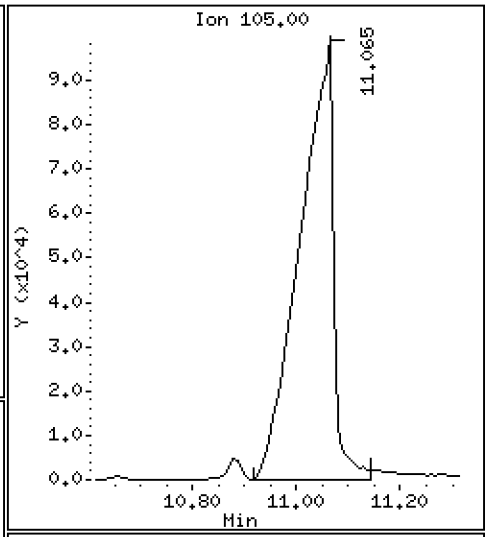
Concentration: 8.248 ug/mL

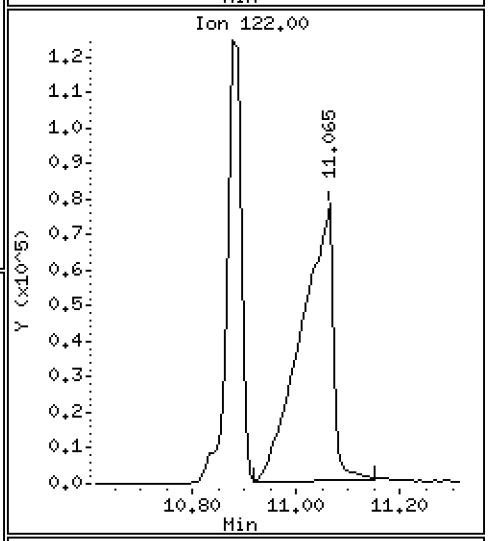


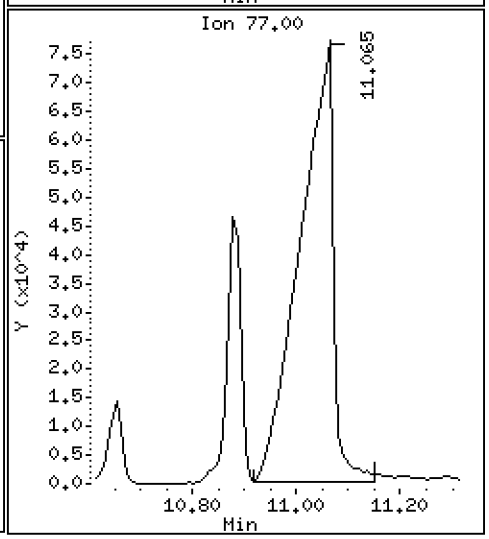












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

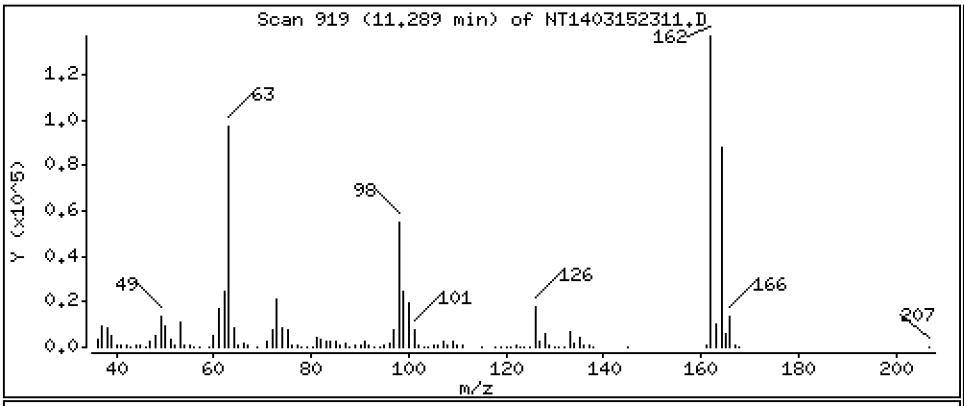
Operator: JGR

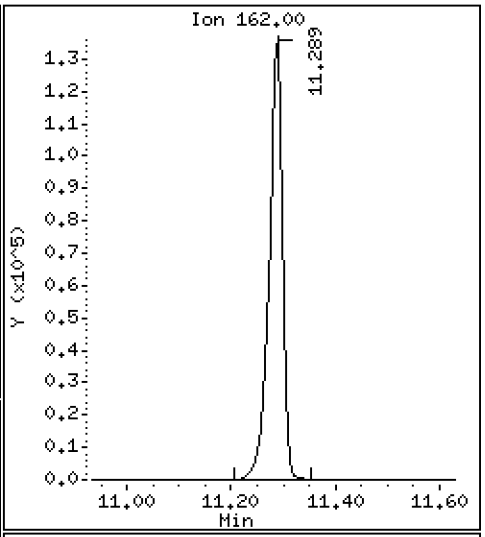
Column phase: ZB-5msi

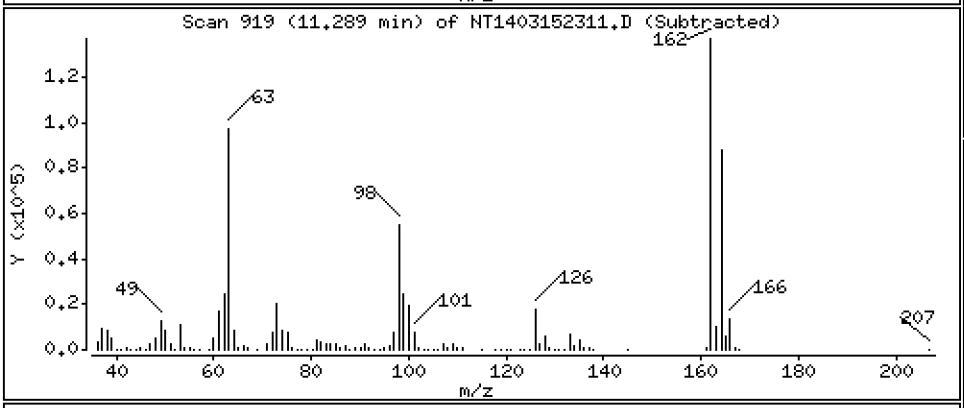
Column diameter: 0.25

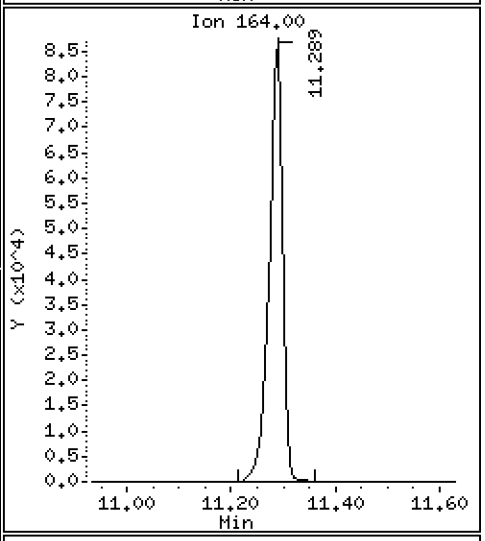
25 2,4-Dichlorophenol

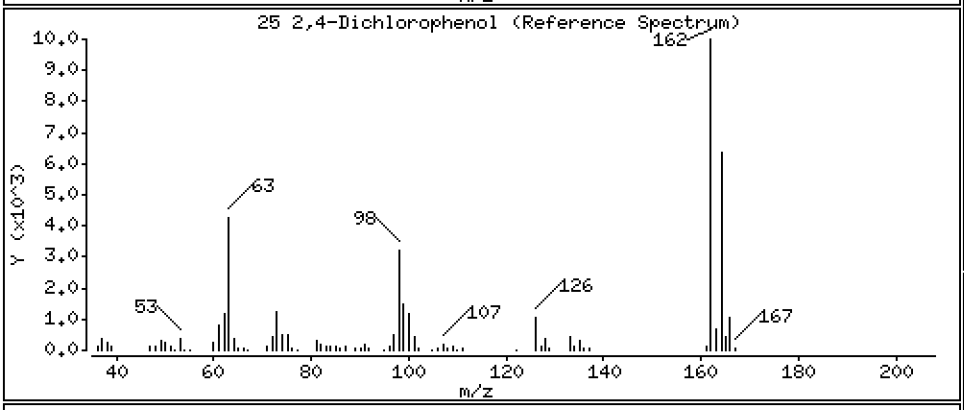
Concentration: 4.779 ug/mL

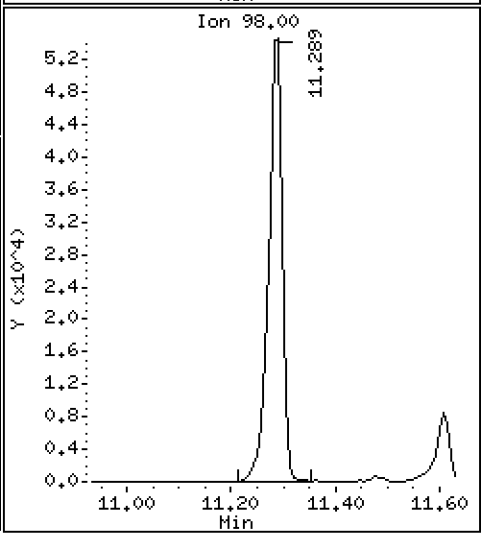


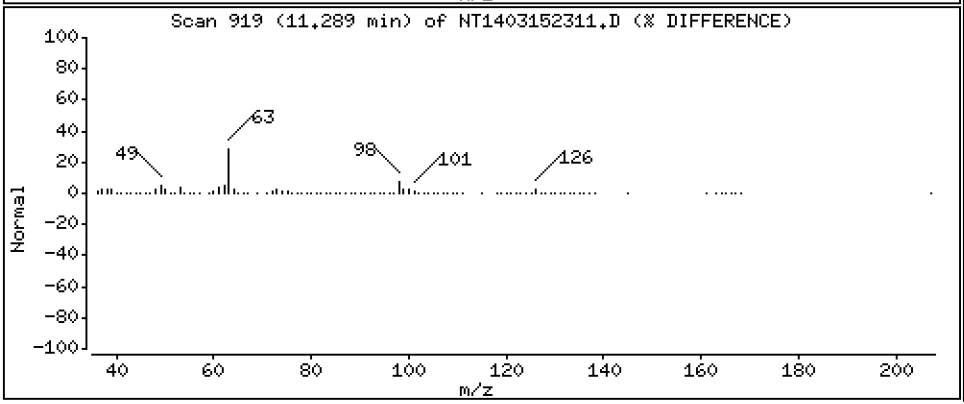












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

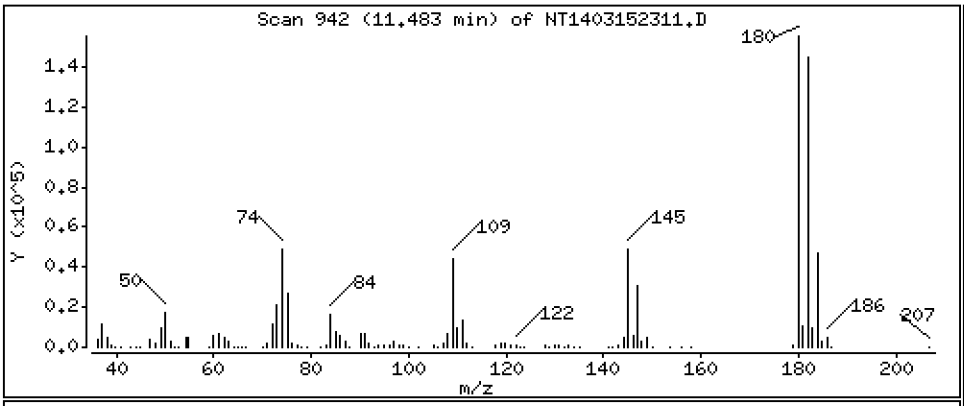
Operator: JGR

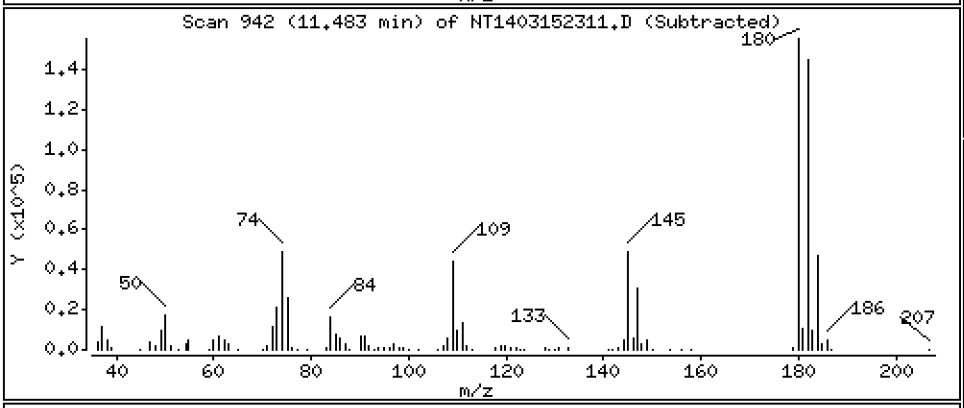
Column phase: ZB-5msi

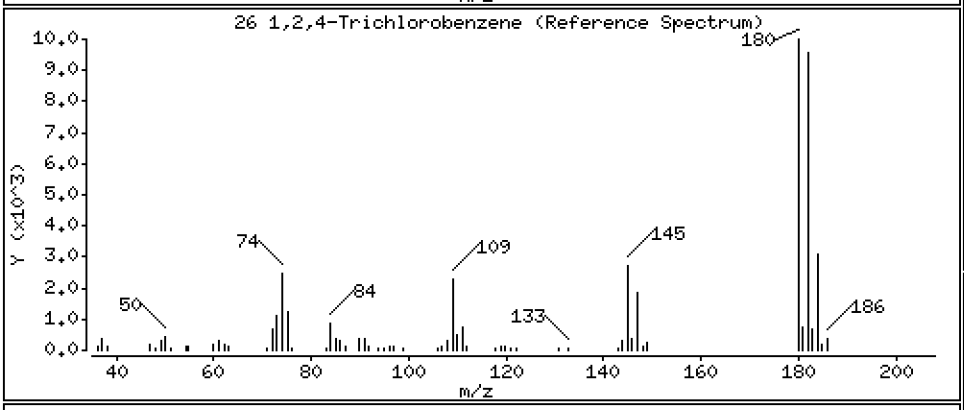
Column diameter: 0.25

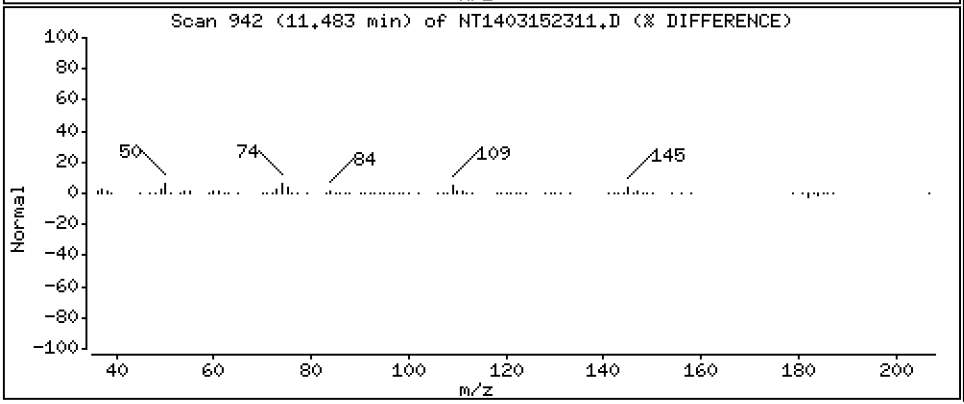
26 1,2,4-Trichlorobenzene

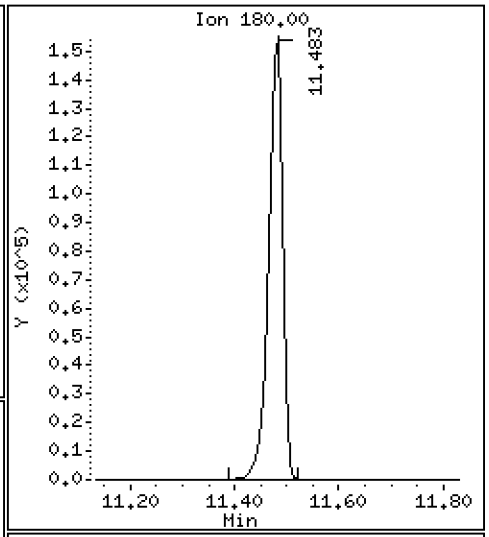
Concentration: 5.052 ug/mL

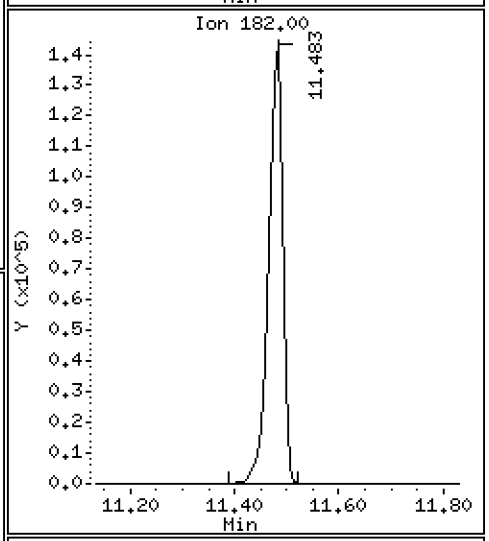


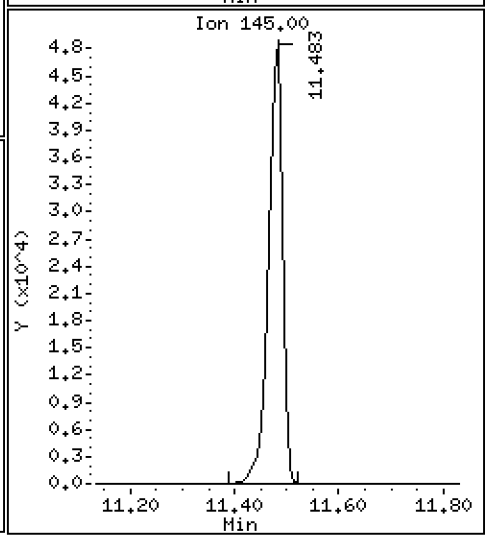












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

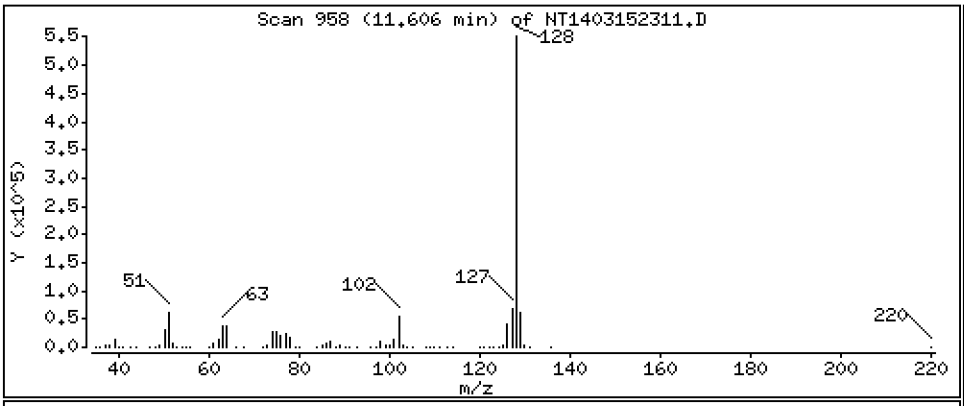
Operator: JGR

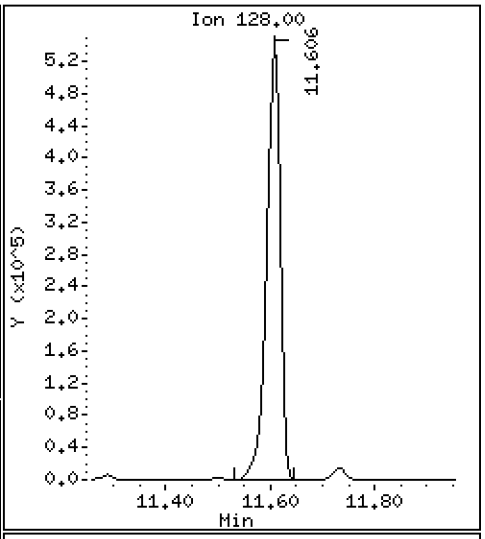
Column phase: ZB-5msi

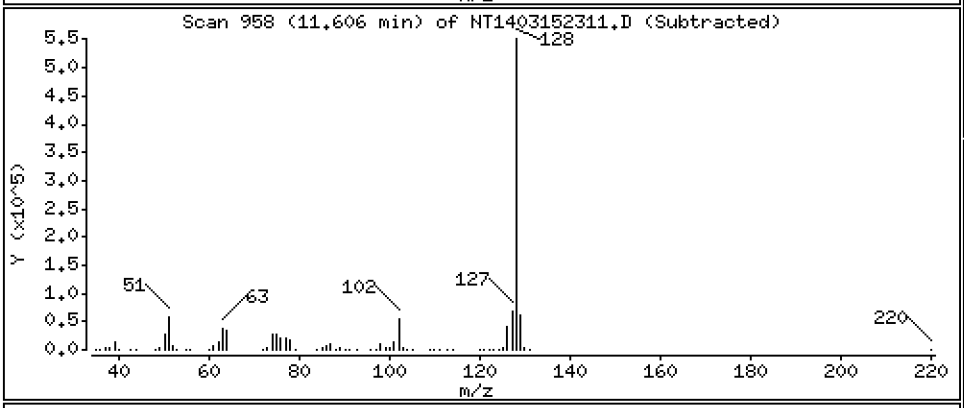
Column diameter: 0.25

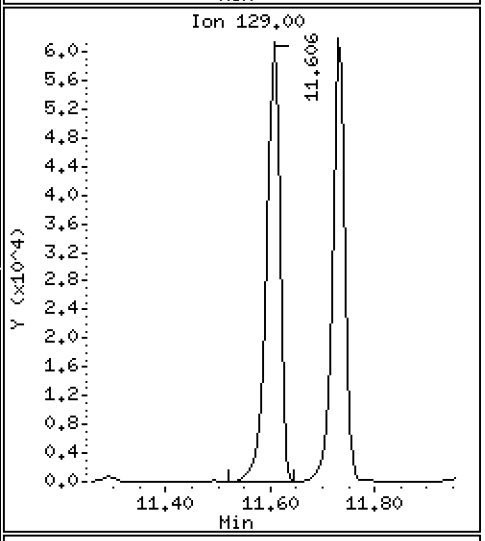
28 Naphthalene

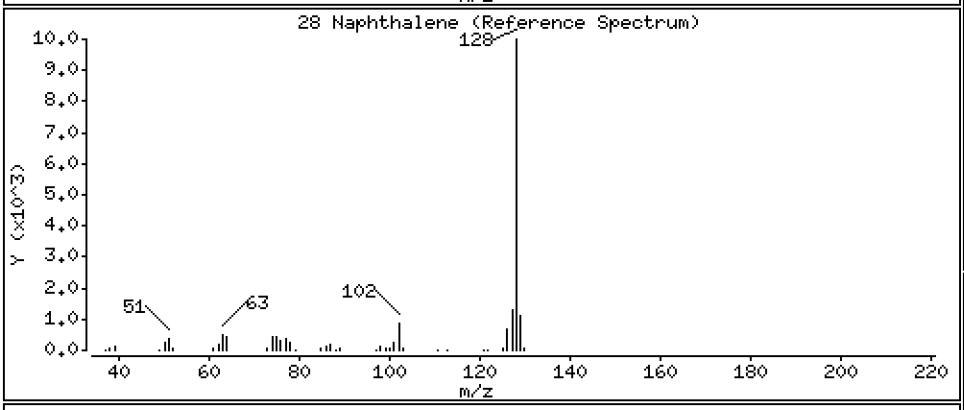
Concentration: 4.829 ug/mL

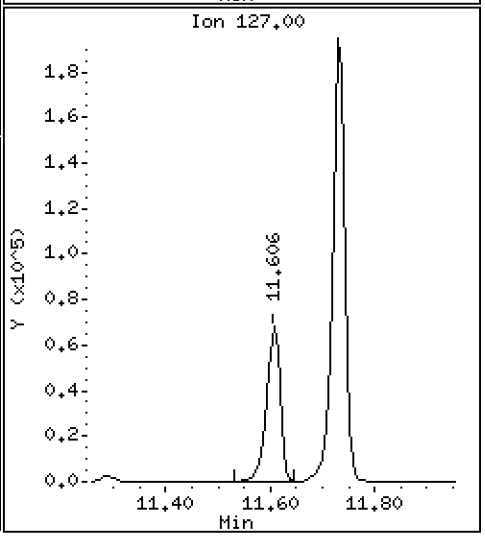


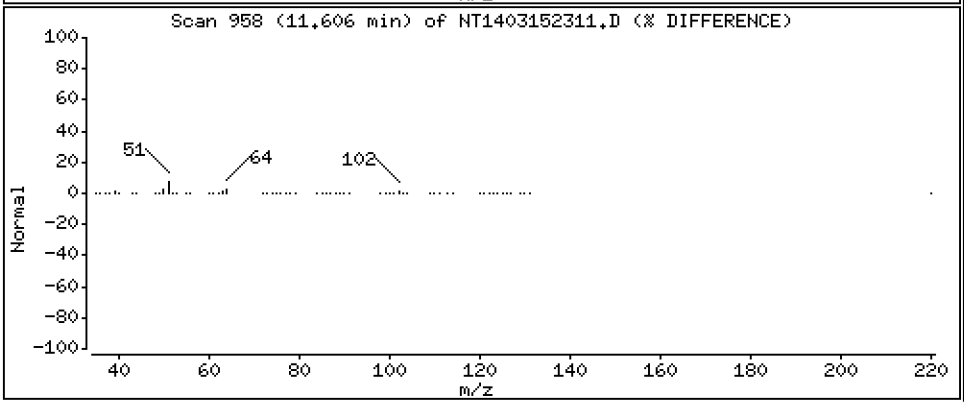












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

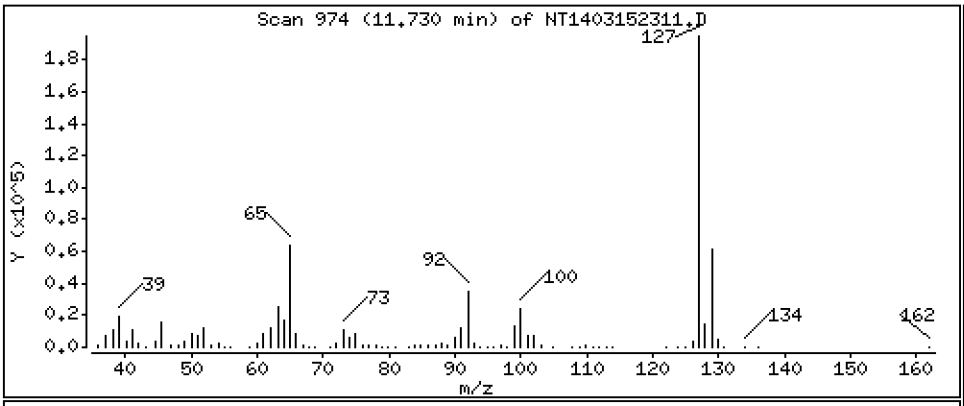
Operator: JGR

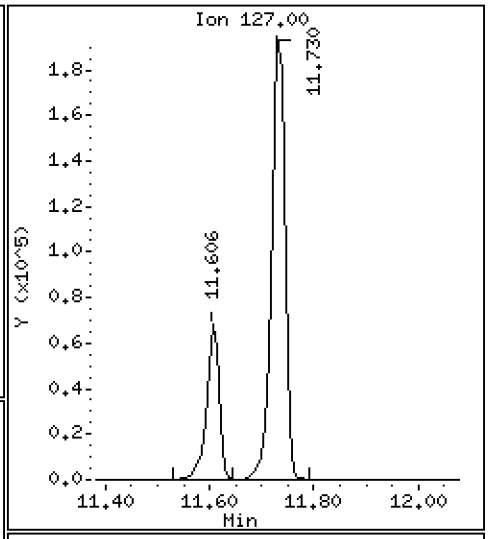
Column phase: ZB-5msi

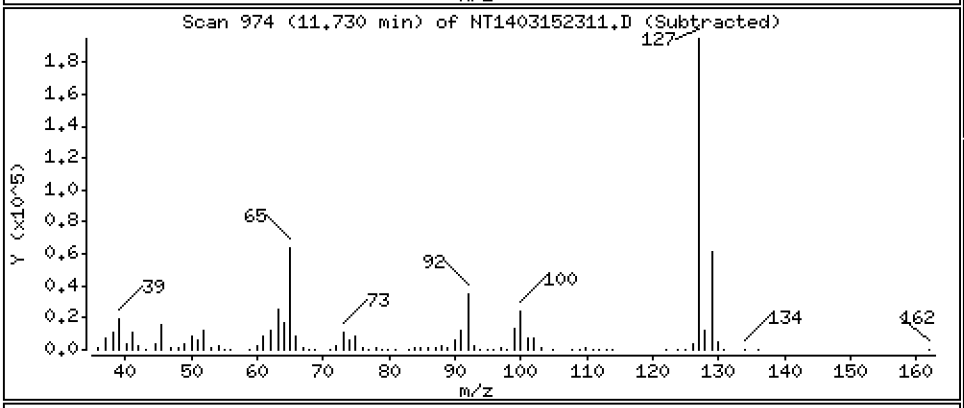
Column diameter: 0.25

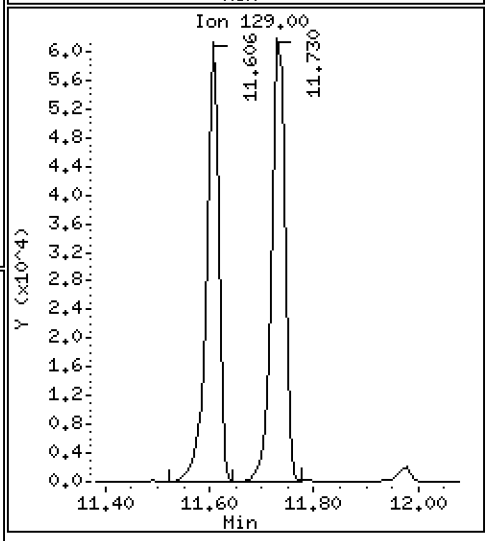
29 4-Chloroaniline

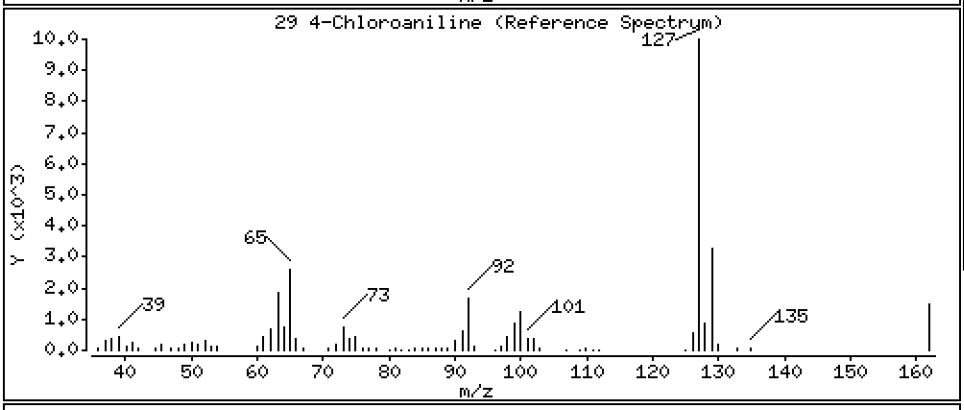
Concentration: 4.033 ug/mL

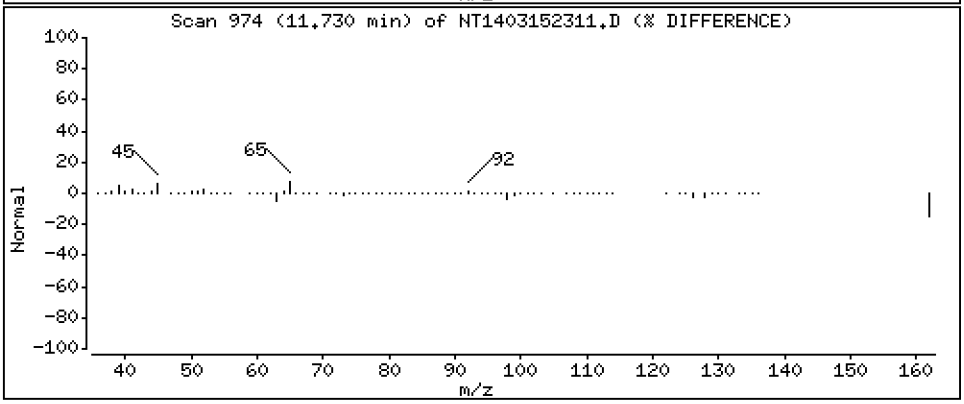












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

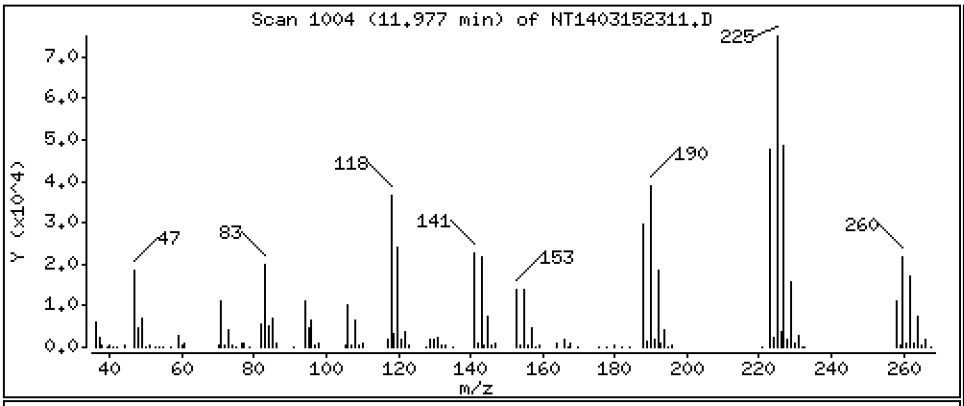
Operator: JGR

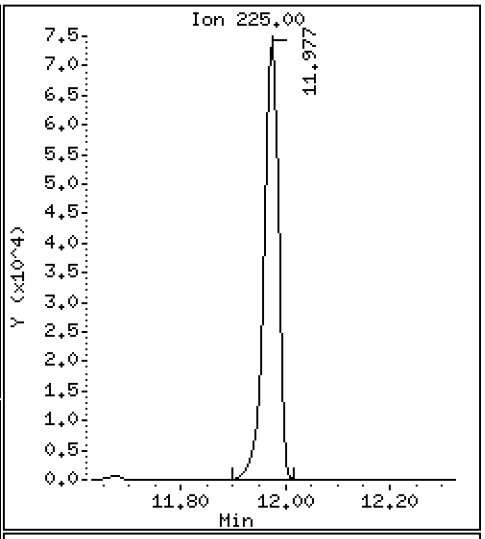
Column phase: ZB-5msi

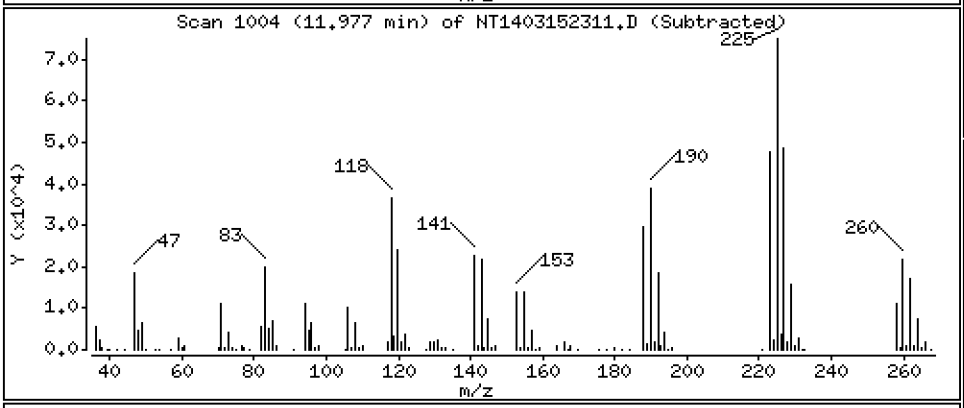
Column diameter: 0.25

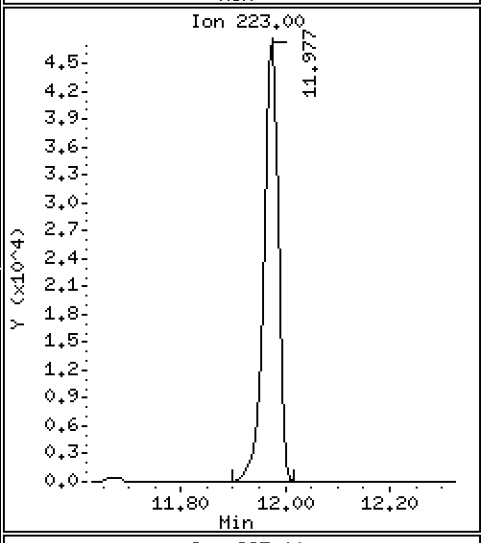
30 Hexachlorobutadiene

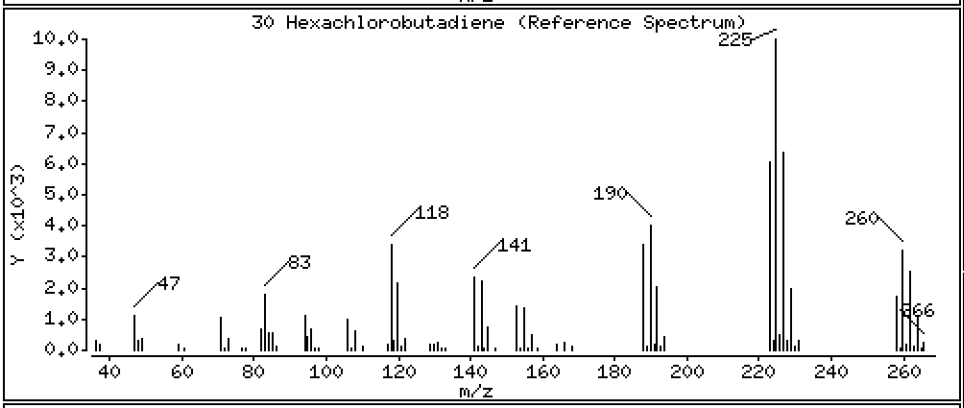
Concentration: 4.908 ug/mL

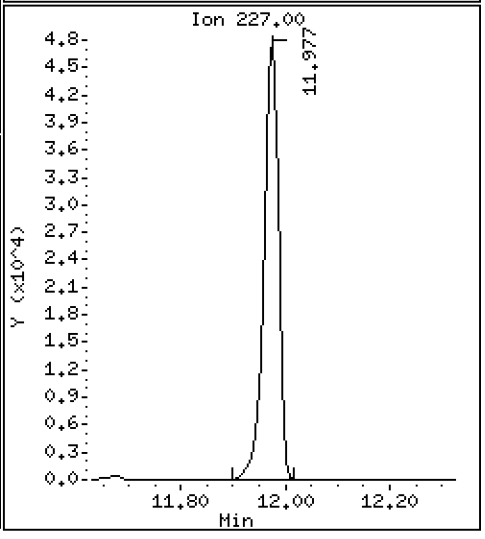


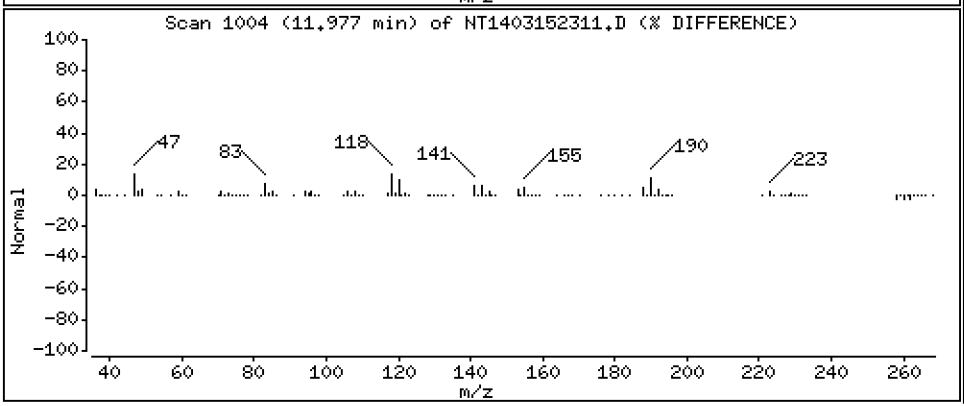












Data File: \\target\share\chem3\nt14.i\20230315.b\NT1403152311.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

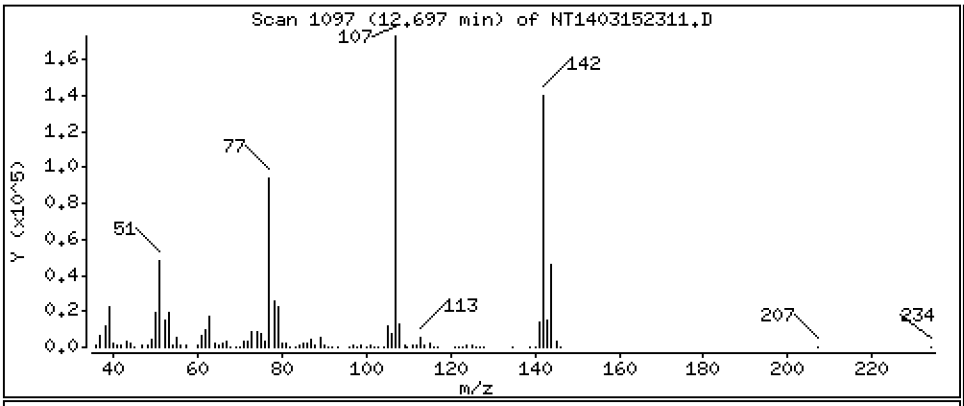
Operator: JGR

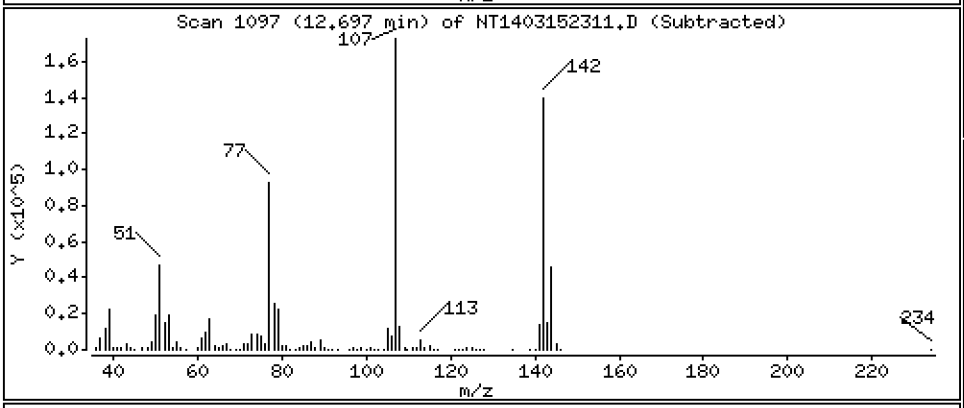
Column phase: ZB-5msi

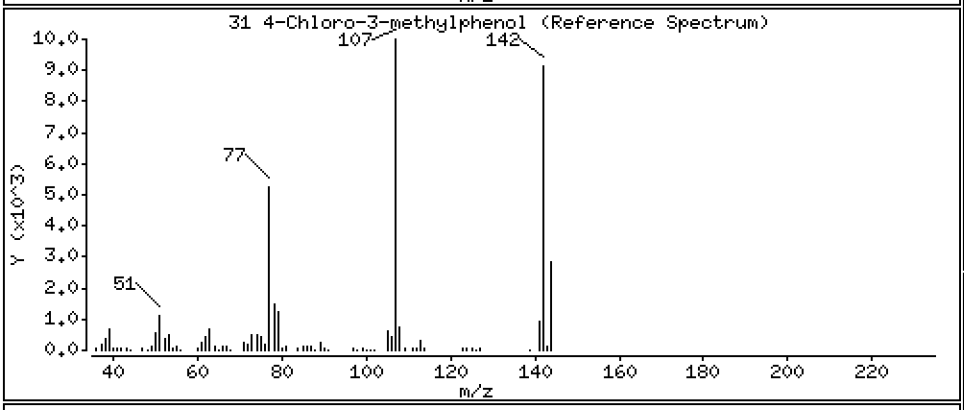
Column diameter: 0.25

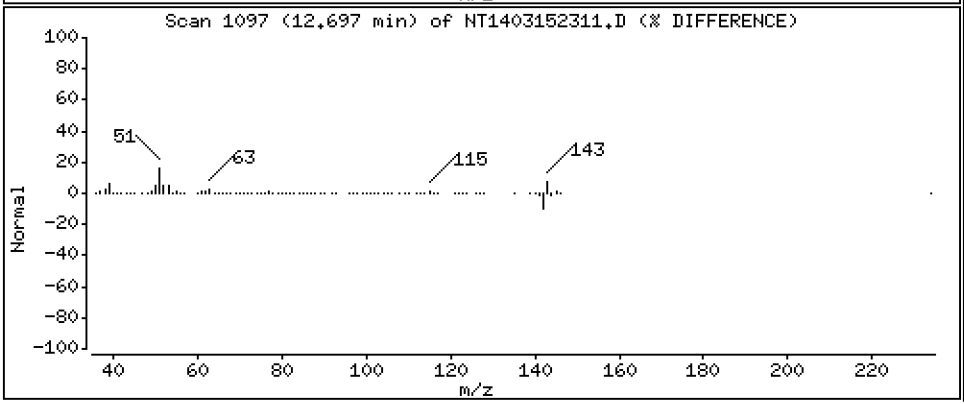
31 4-Chloro-3-methylphenol

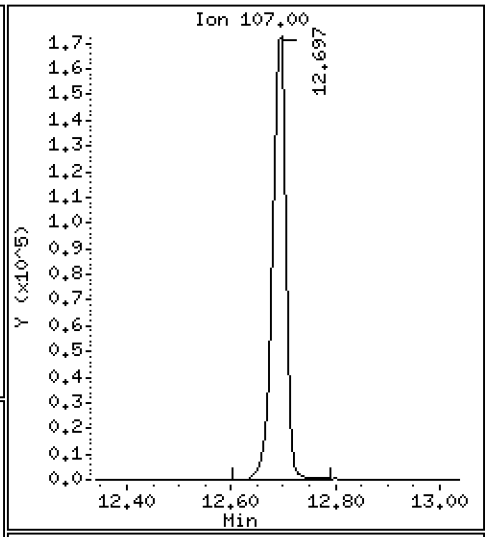
Concentration: 4.852 ug/mL

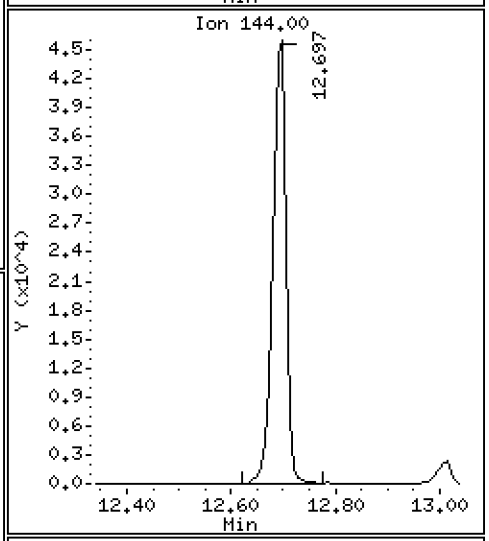


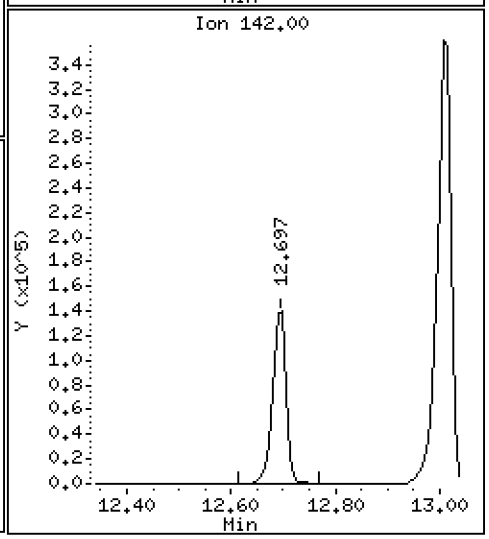












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

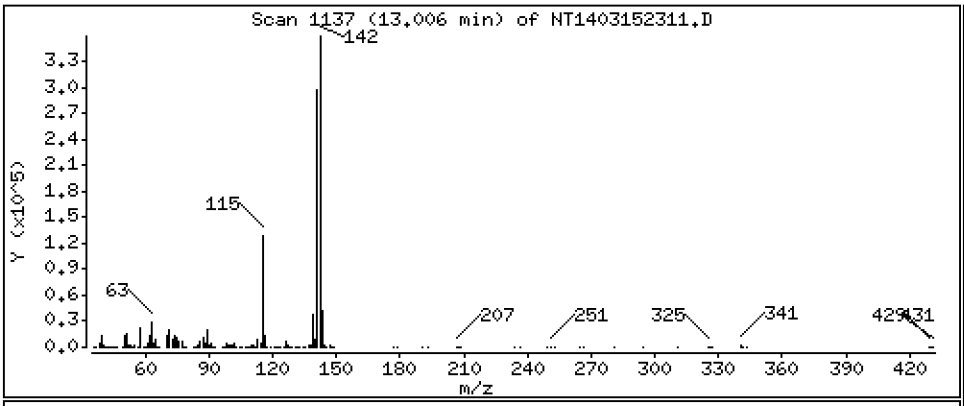
Operator: JGR

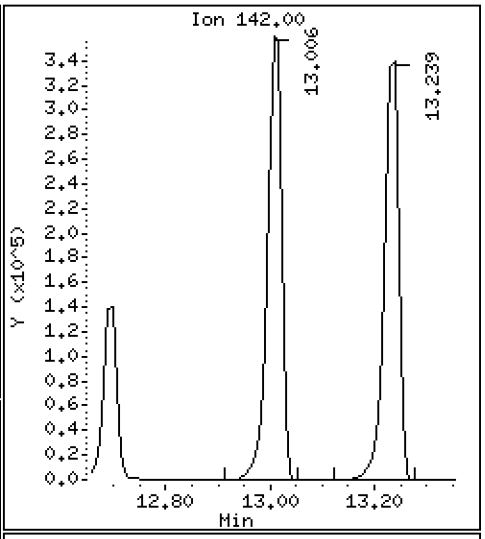
Column phase: ZB-5msi

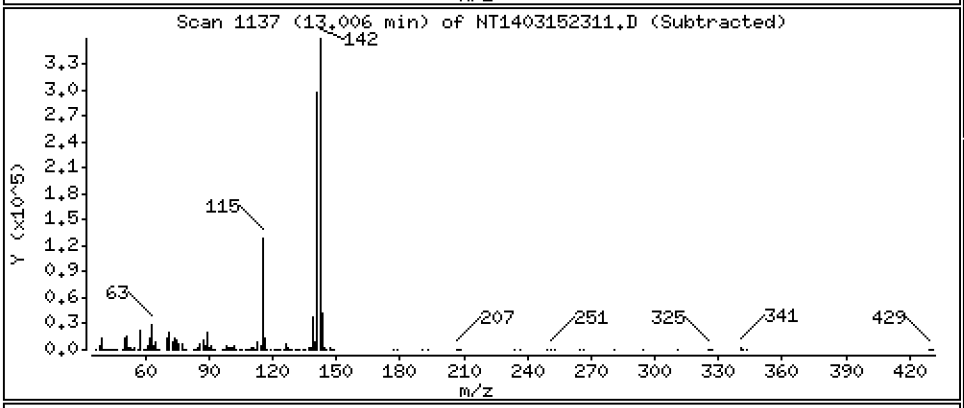
Column diameter: 0.25

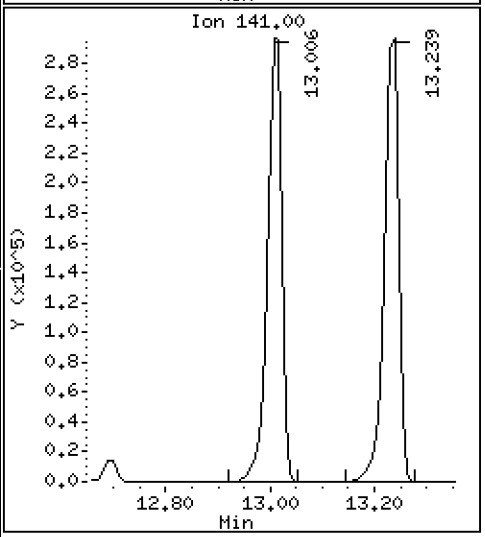
32 2-Methylnaphthalene

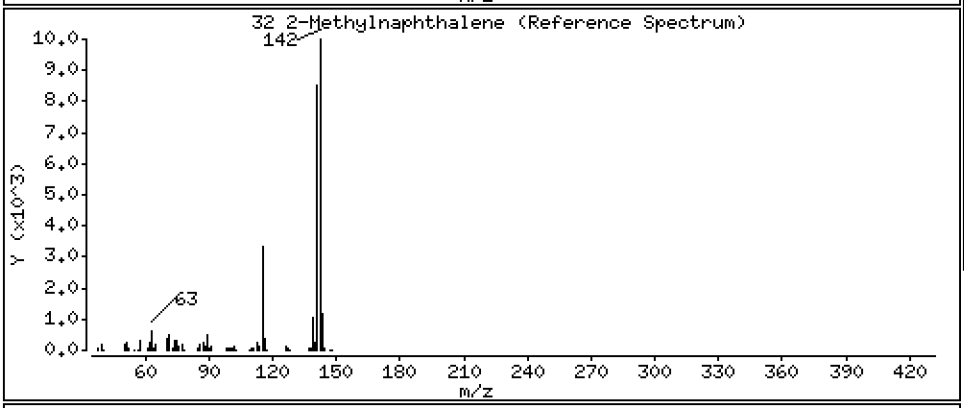
Concentration: 4.854 ug/mL

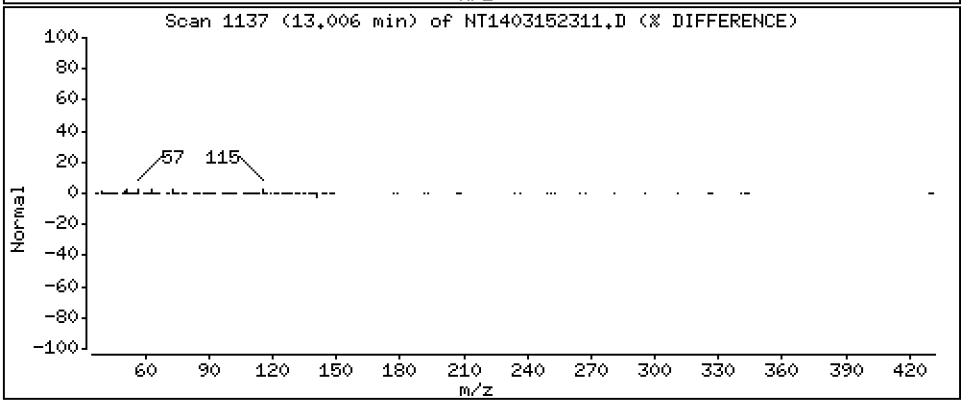












Data File: \\target\share\chem3\nt14.i\20230315.b\NT1403152311.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

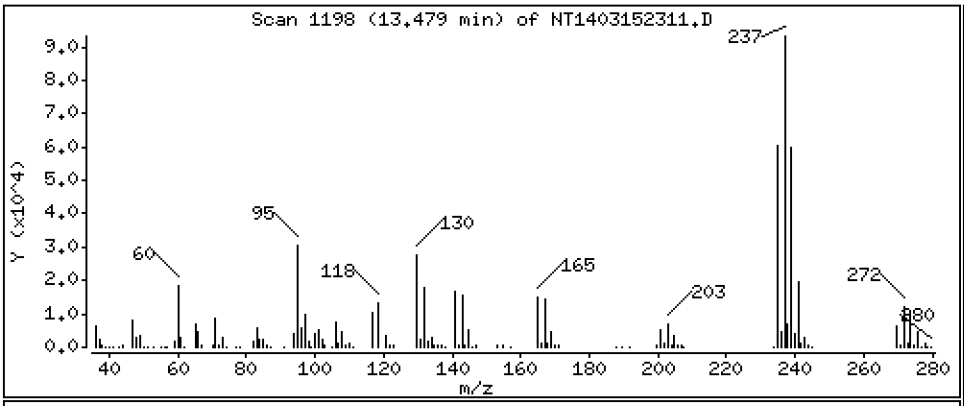
Operator: JGR

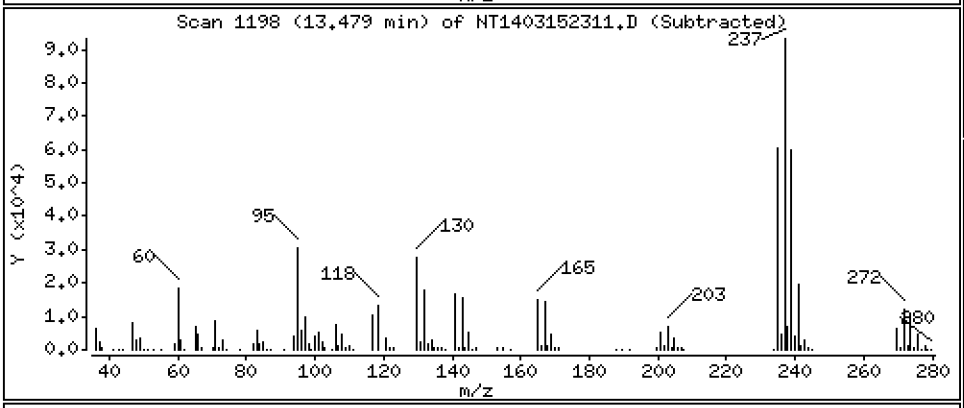
Column phase: ZB-5msi

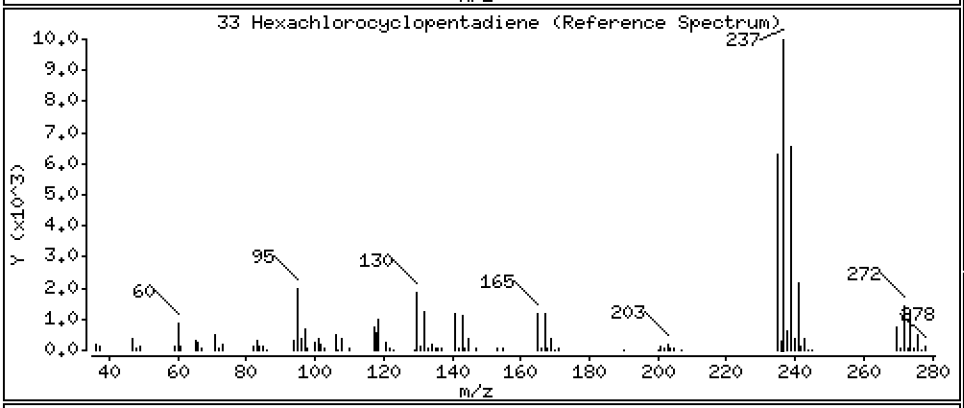
Column diameter: 0.25

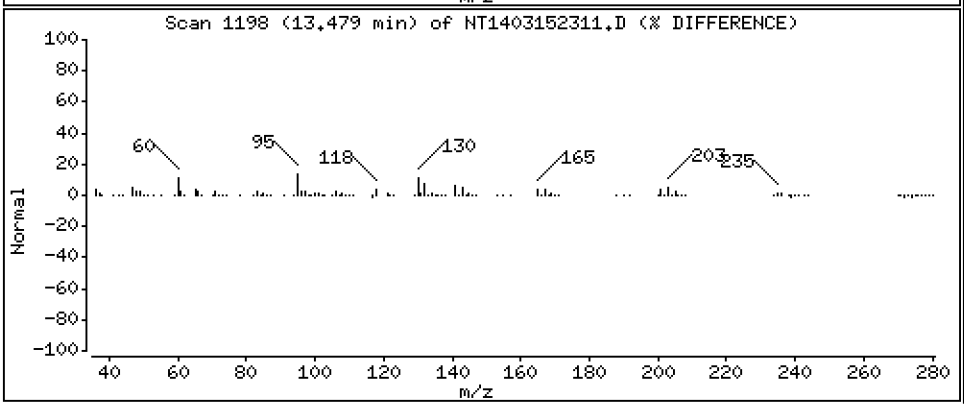
33 Hexachlorocyclopentadiene

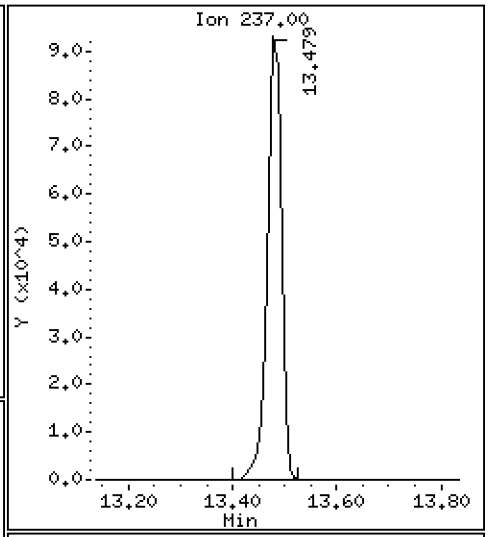
Concentration: 5.230 ug/mL

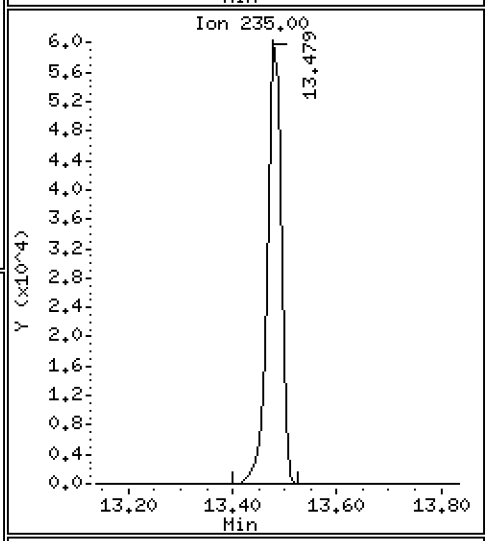


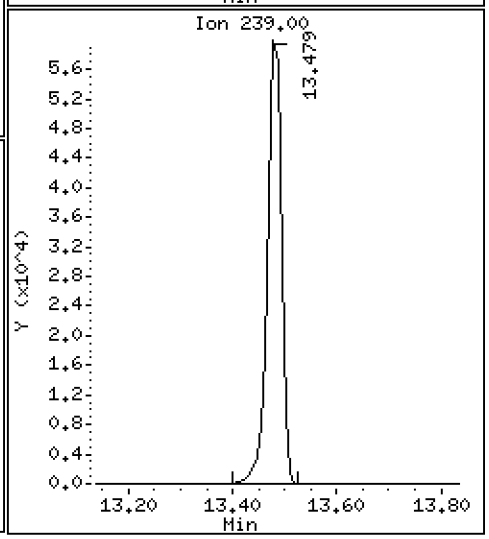












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

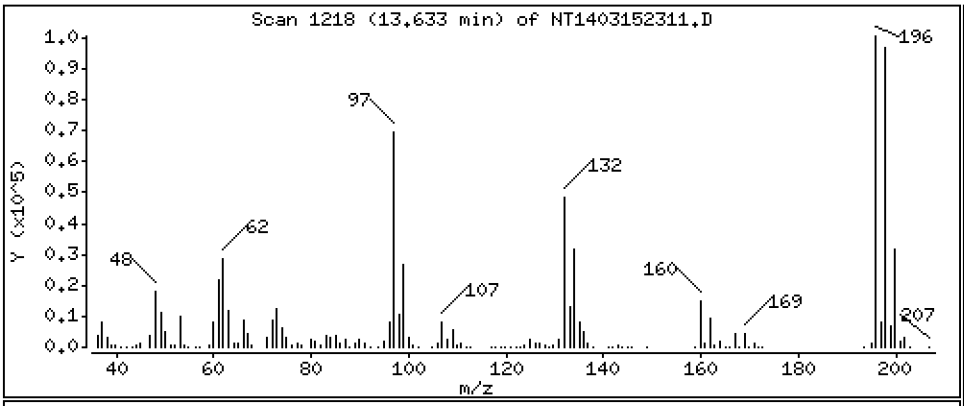
Operator: JGR

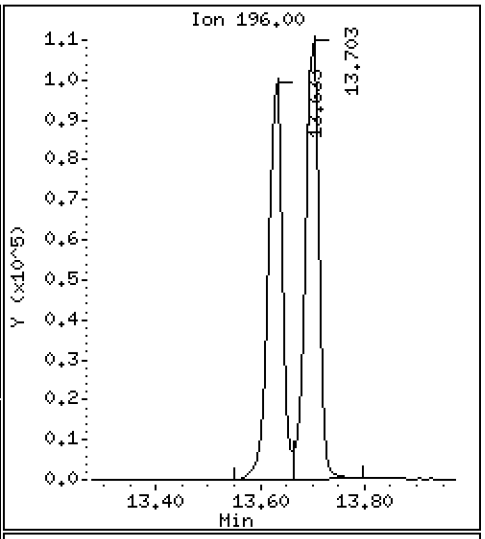
Column phase: ZB-5msi

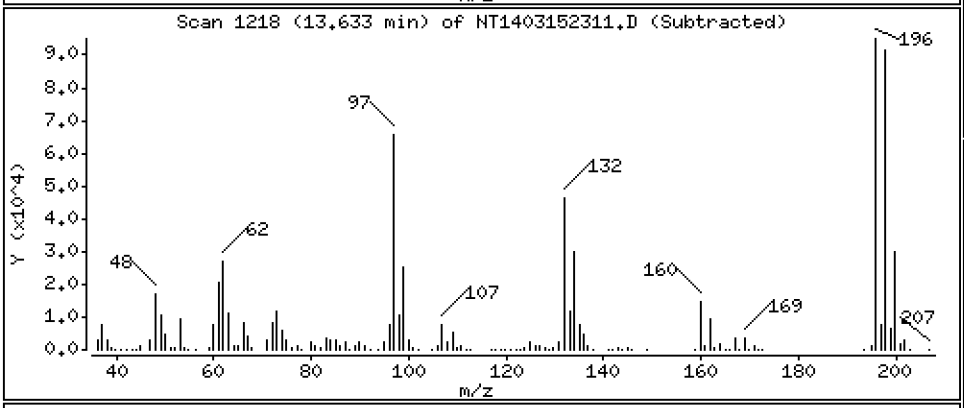
Column diameter: 0.25

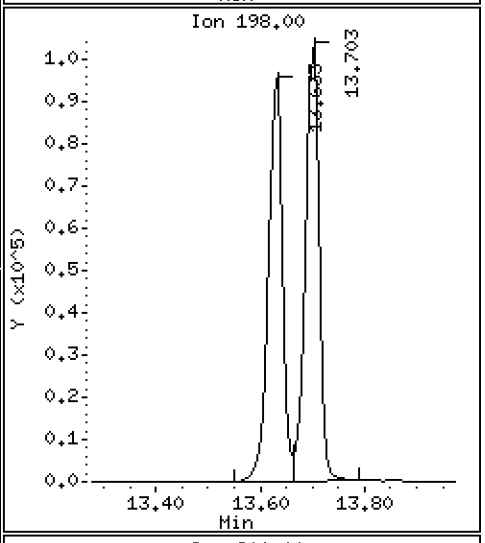
34 2,4,6-Trichlorophenol

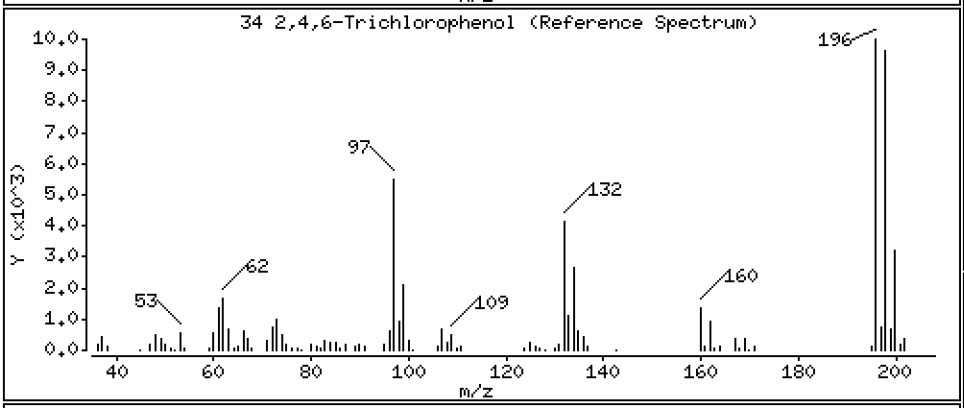
Concentration: 4.718 ug/mL

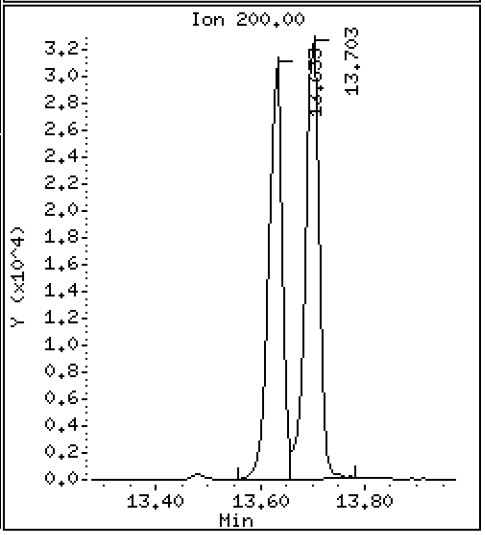


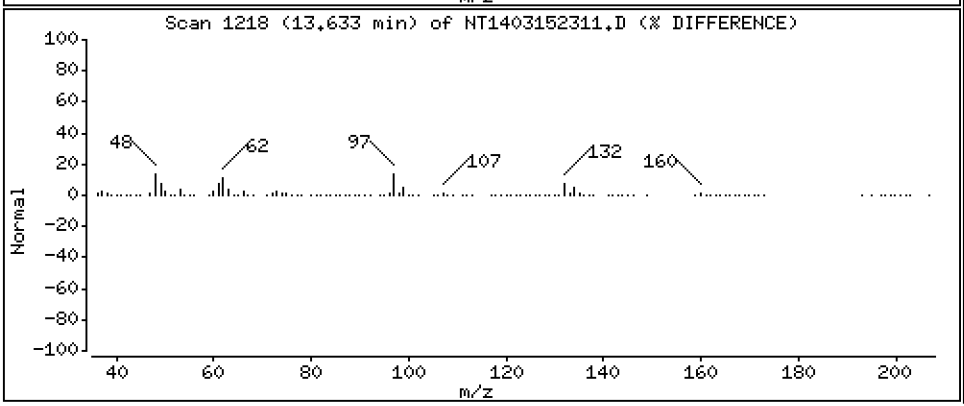












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

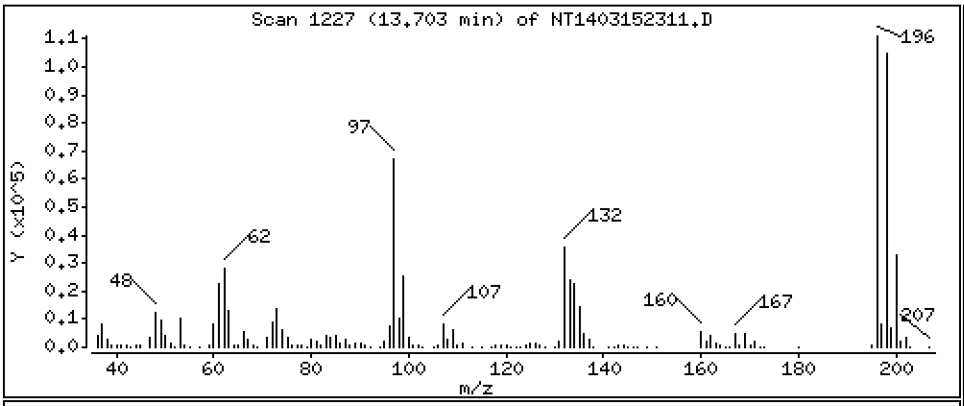
Operator: JGR

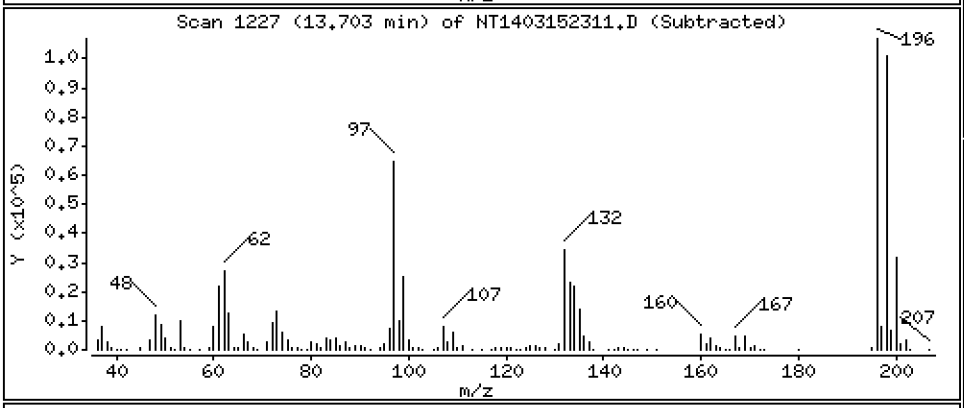
Column phase: ZB-5msi

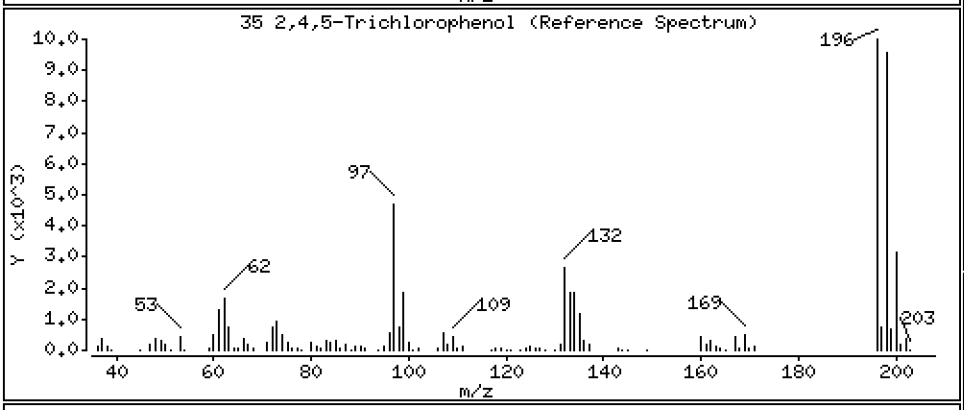
Column diameter: 0.25

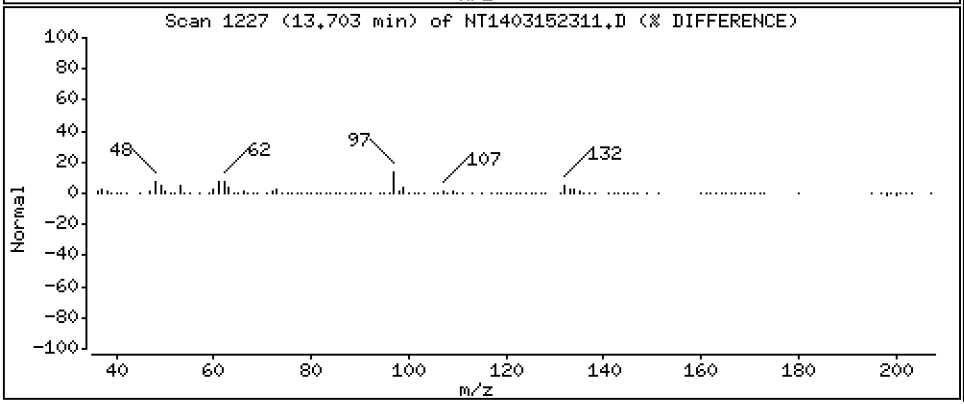
35 2,4,5-Trichlorophenol

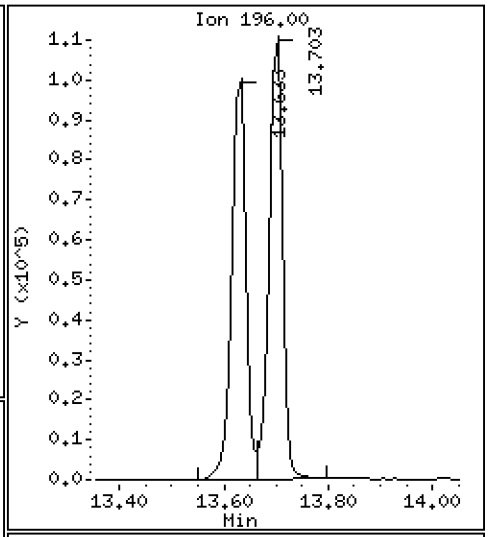
Concentration: 4.661 ug/mL

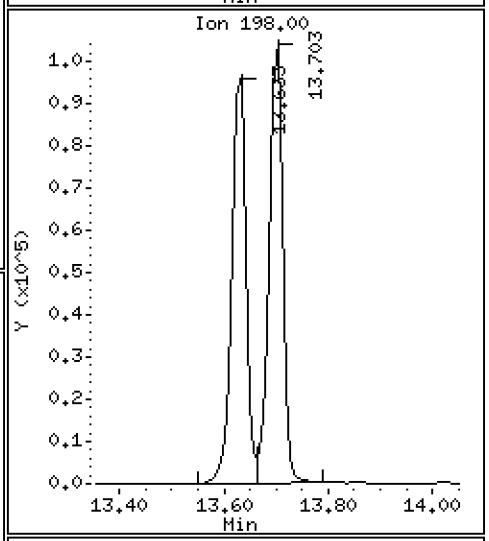


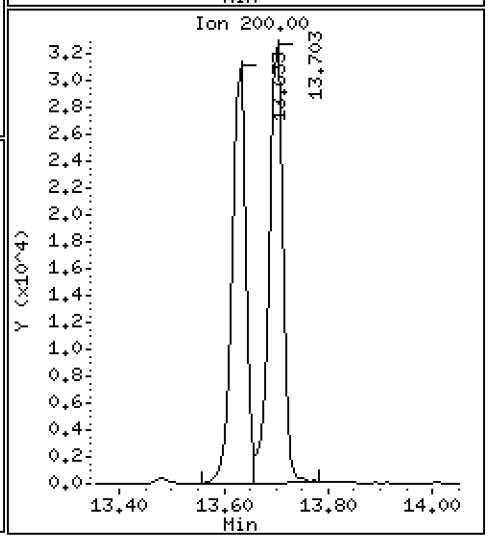












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

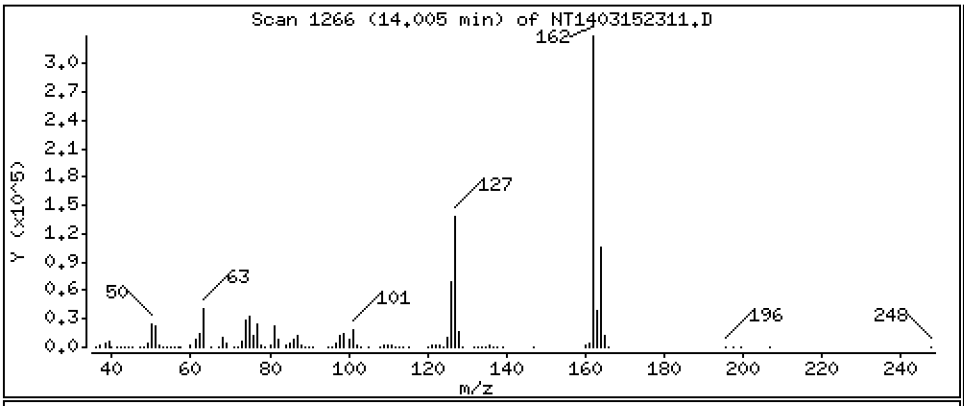
Operator: JGR

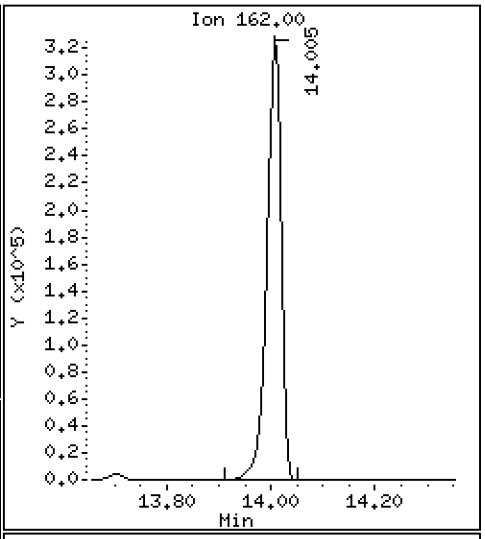
Column phase: ZB-5msi

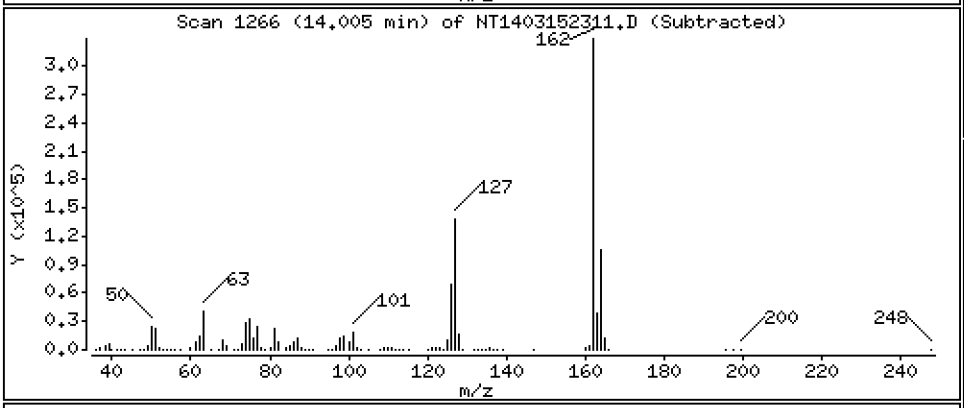
Column diameter: 0.25

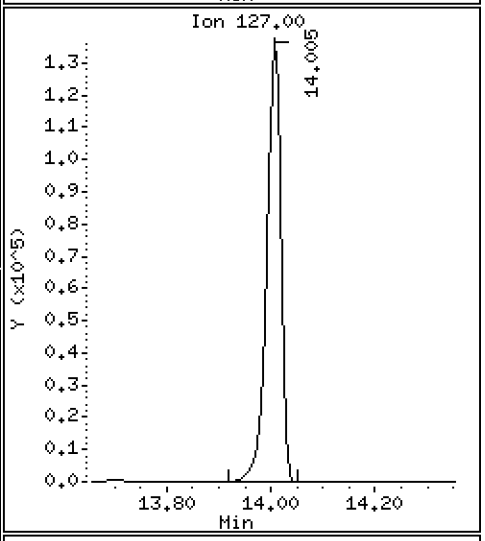
37 2-Chloronaphthalene

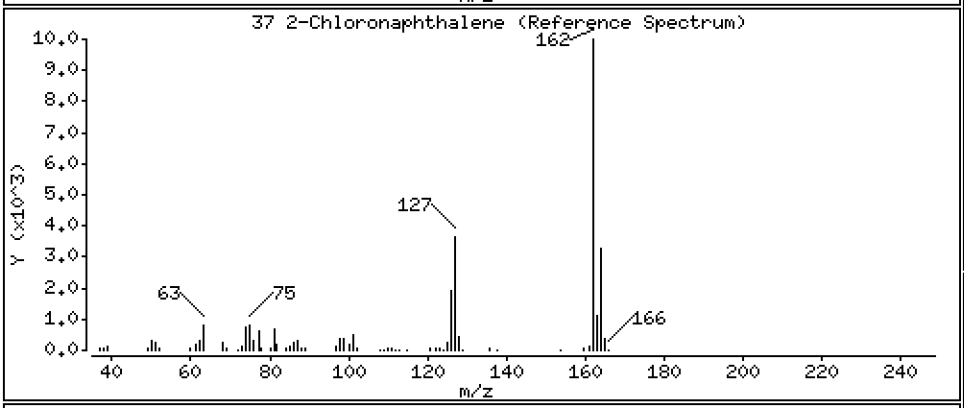
Concentration: 4.977 ug/mL

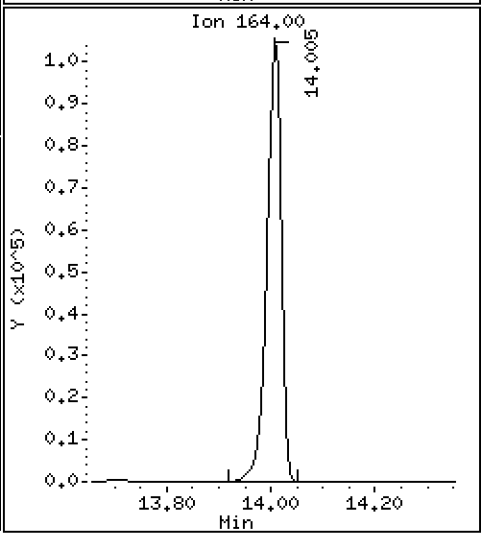


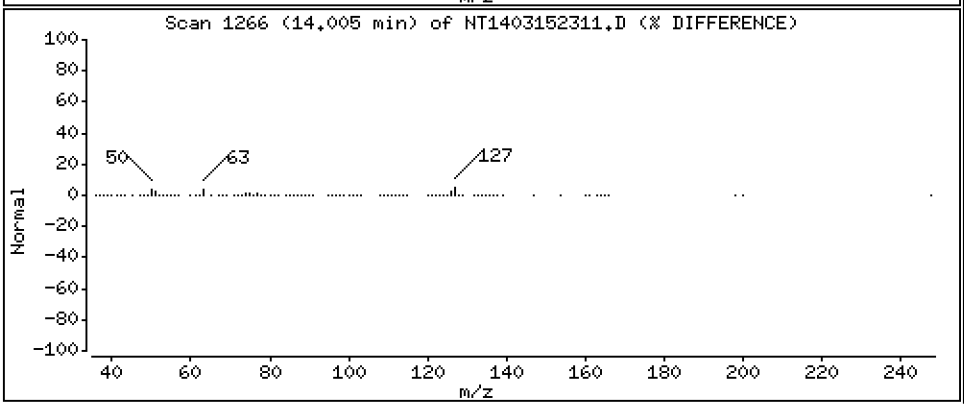












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

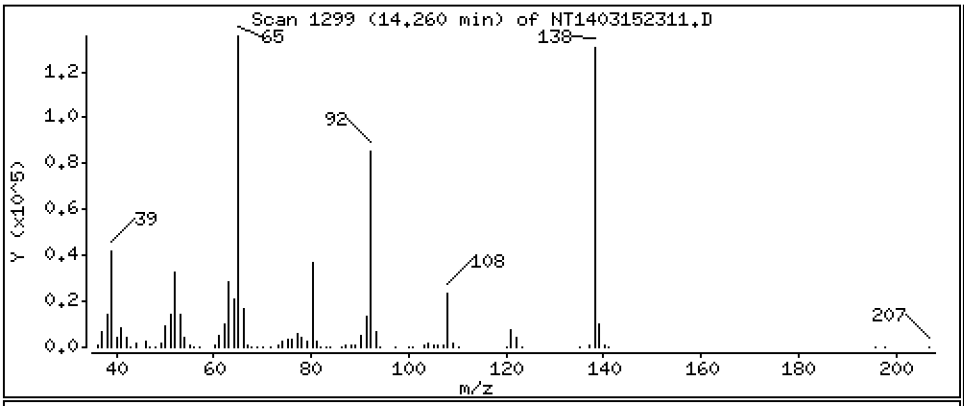
Operator: JGR

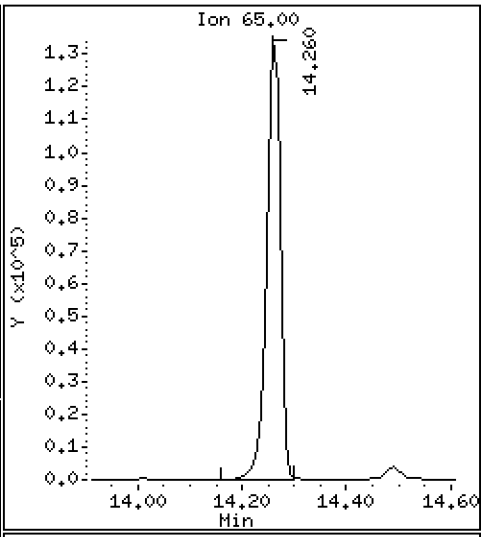
Column phase: ZB-5msi

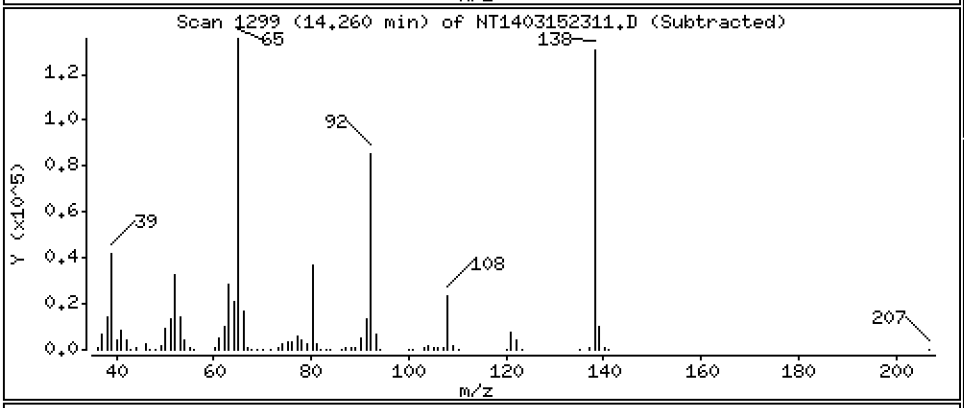
Column diameter: 0.25

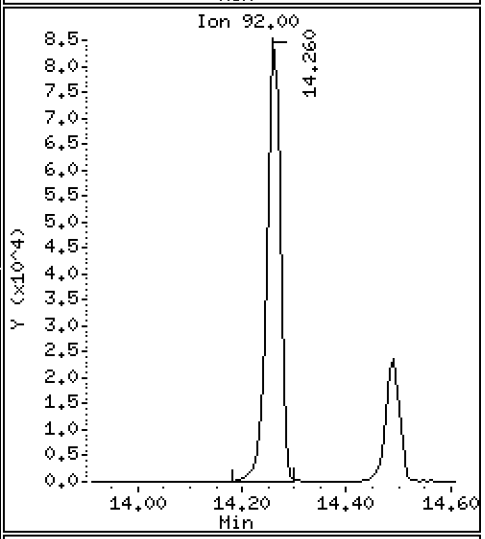
38 2-Nitroaniline

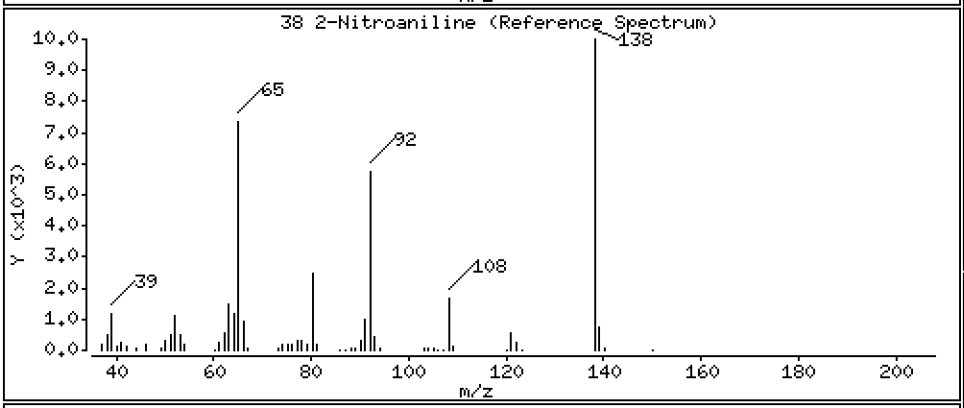
Concentration: 5.100 ug/mL

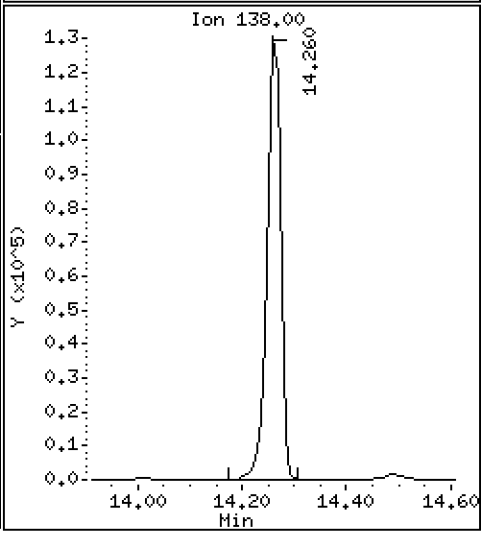


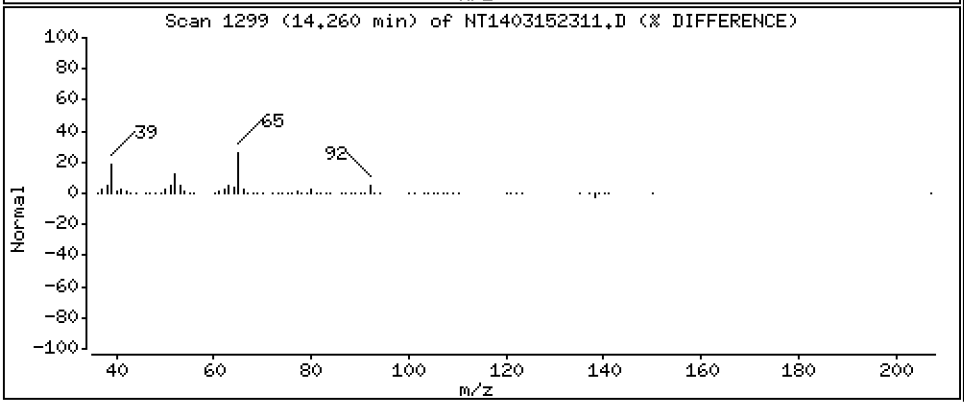












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

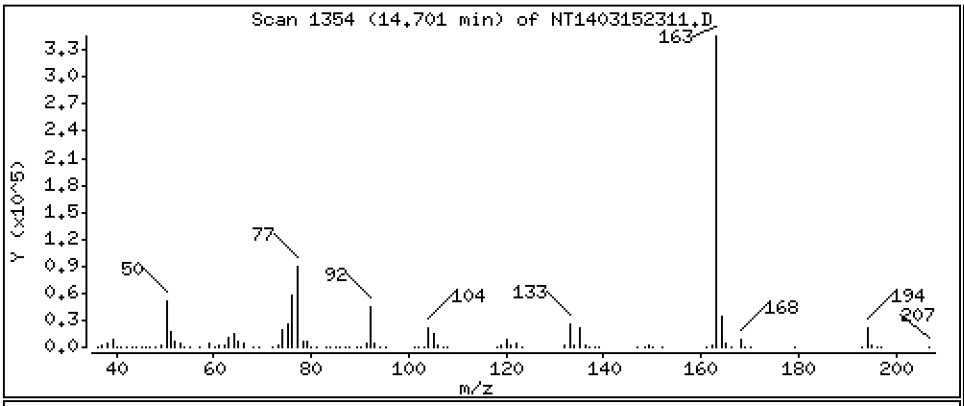
Operator: JGR

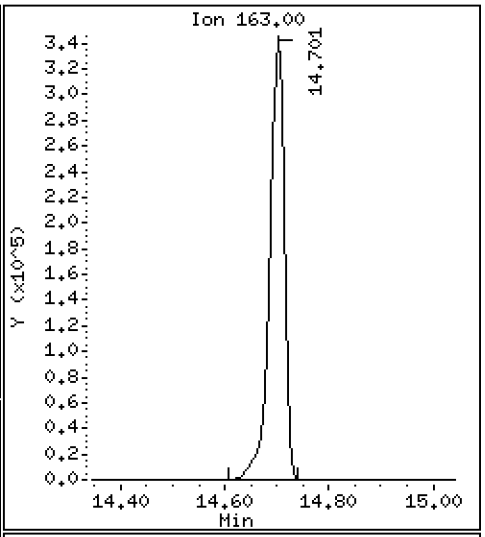
Column phase: ZB-5msi

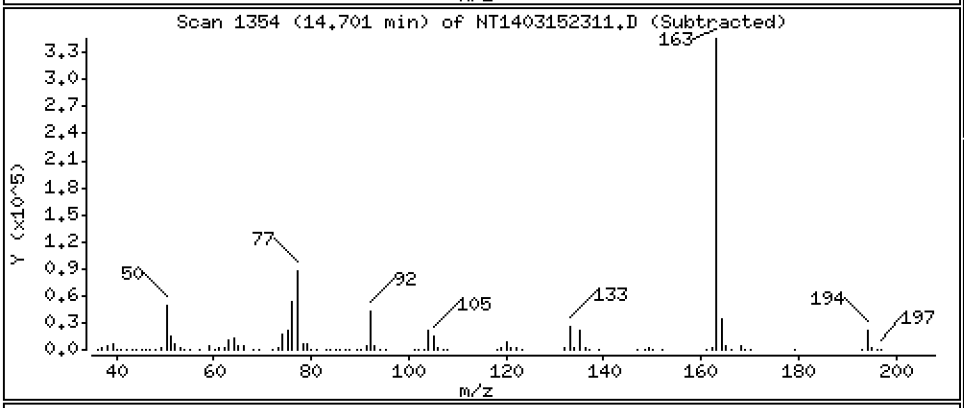
Column diameter: 0.25

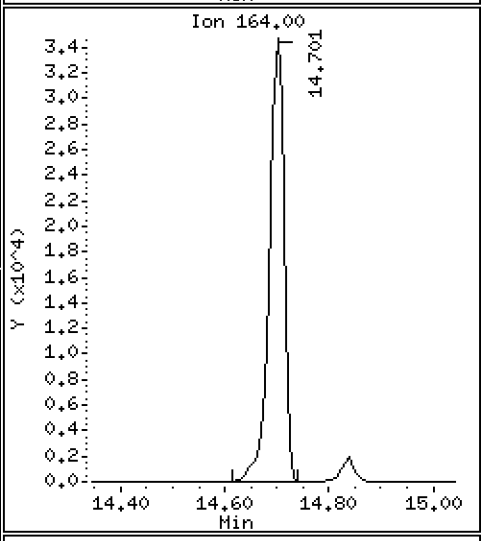
39 Dimethylphthalate

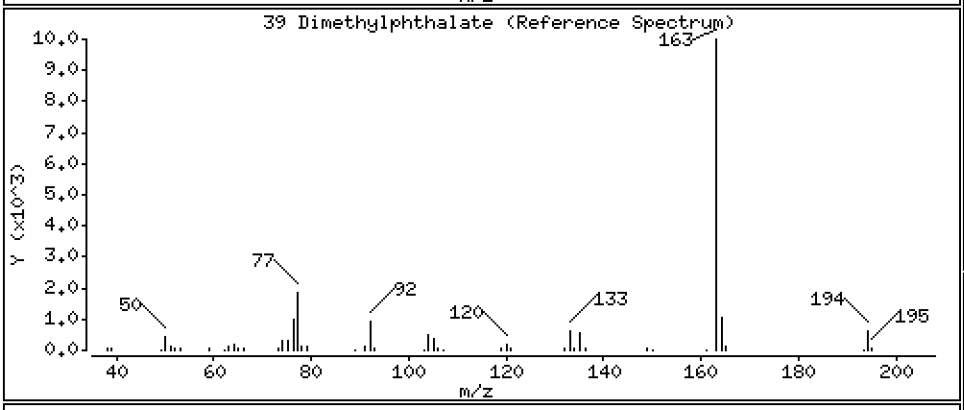
Concentration: 5.031 ug/mL

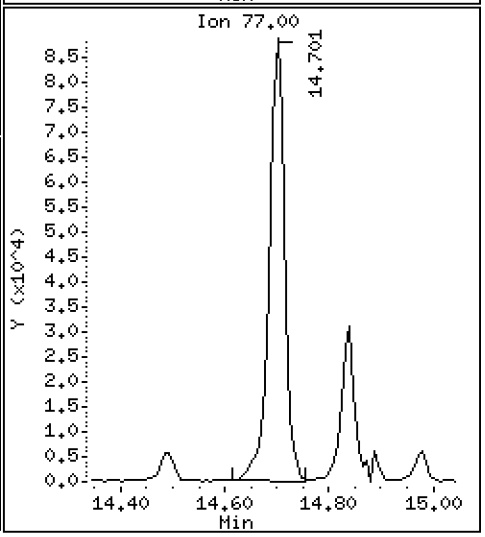


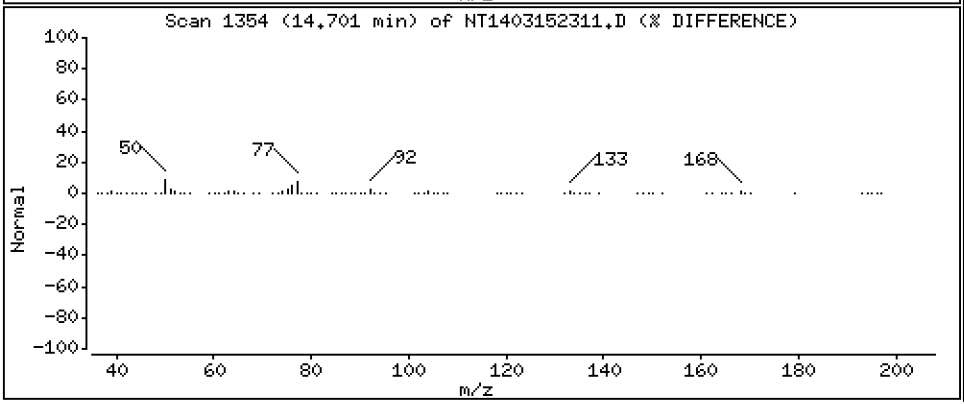












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

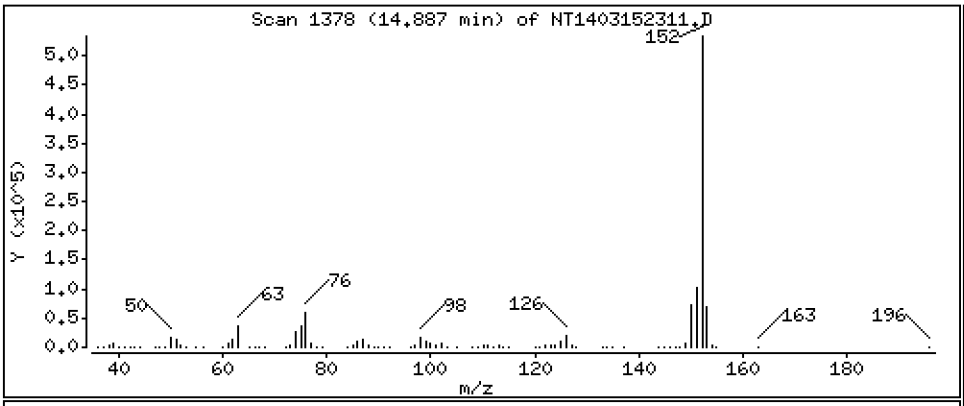
Operator: JGR

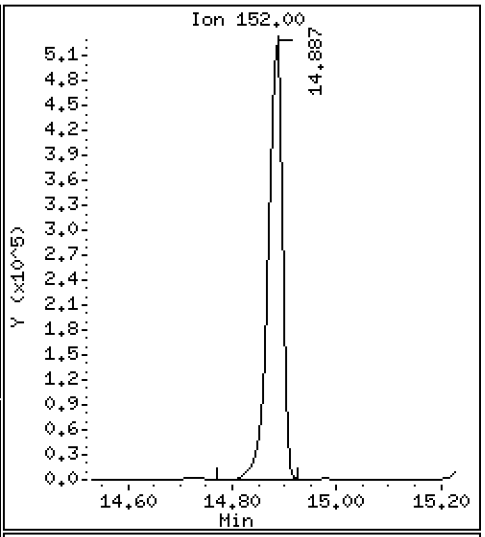
Column phase: ZB-5msi

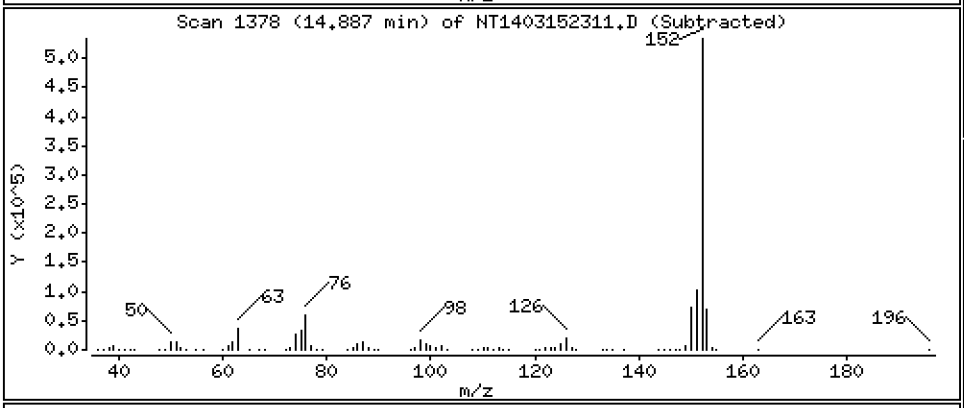
Column diameter: 0.25

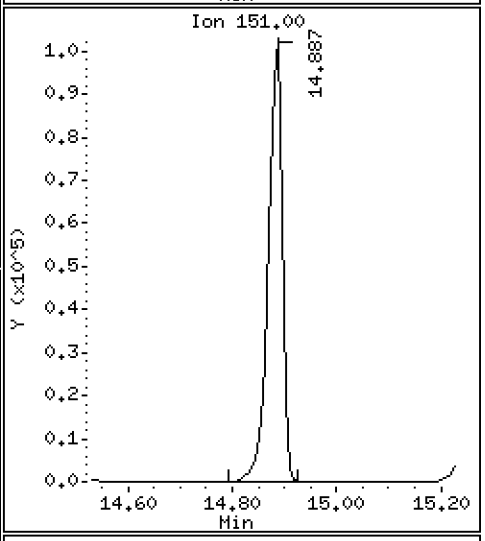
40 Acenaphthylene

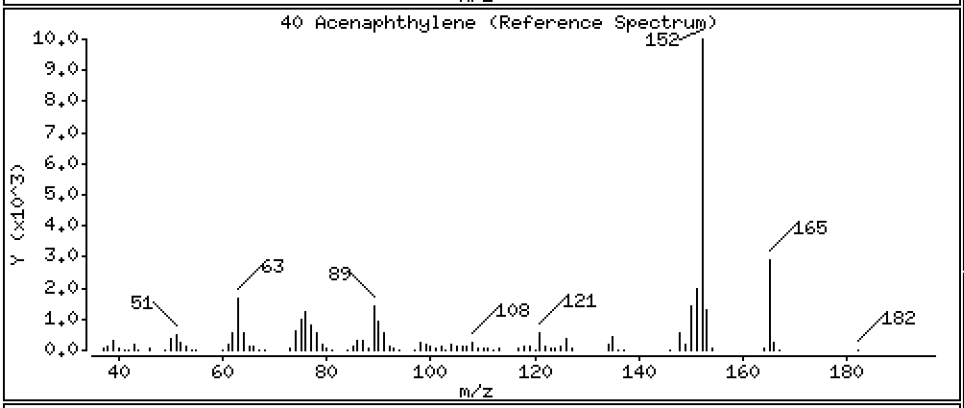
Concentration: 4.879 ug/mL

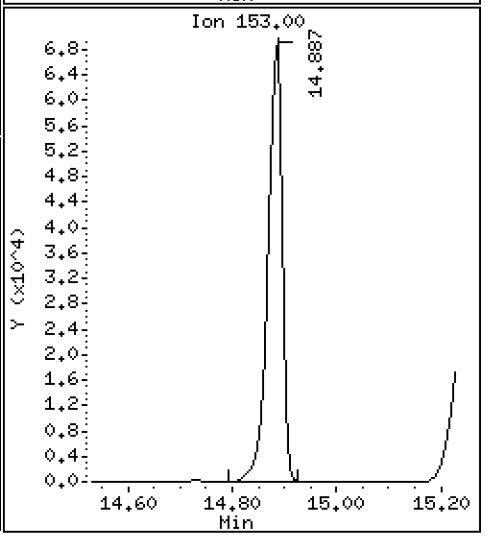


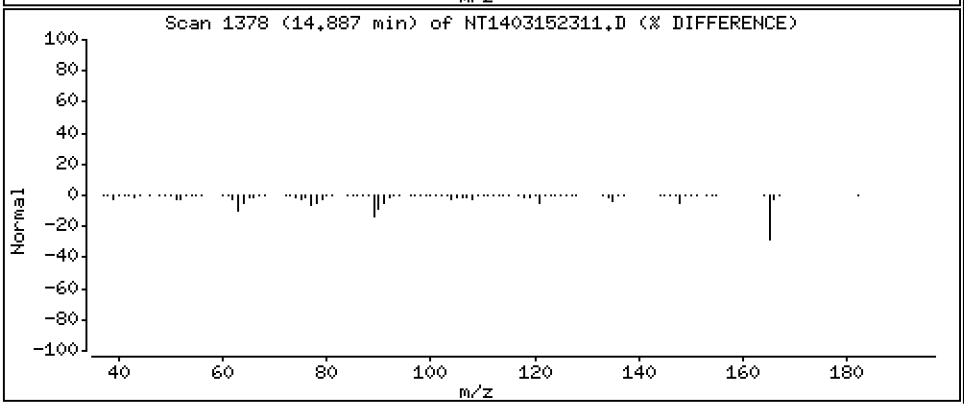












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

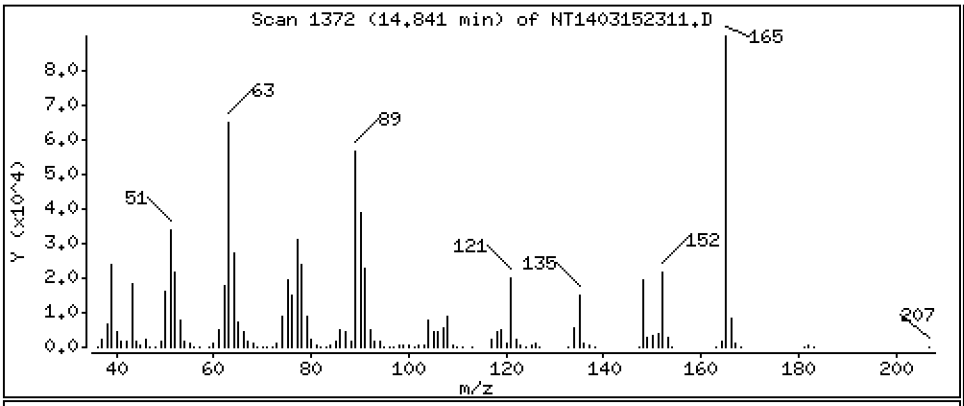
Operator: JGR

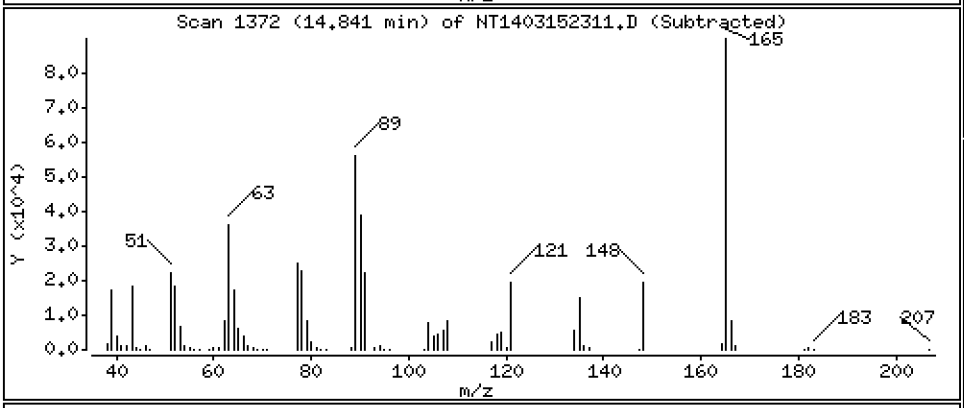
Column phase: ZB-5msi

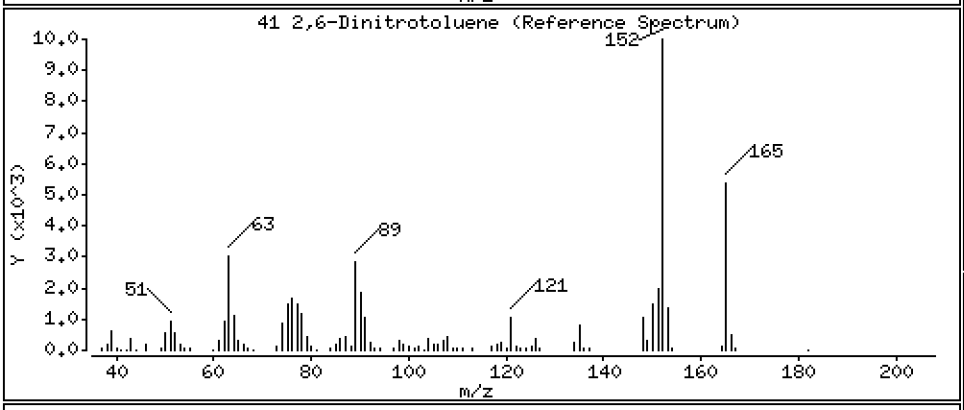
Column diameter: 0.25

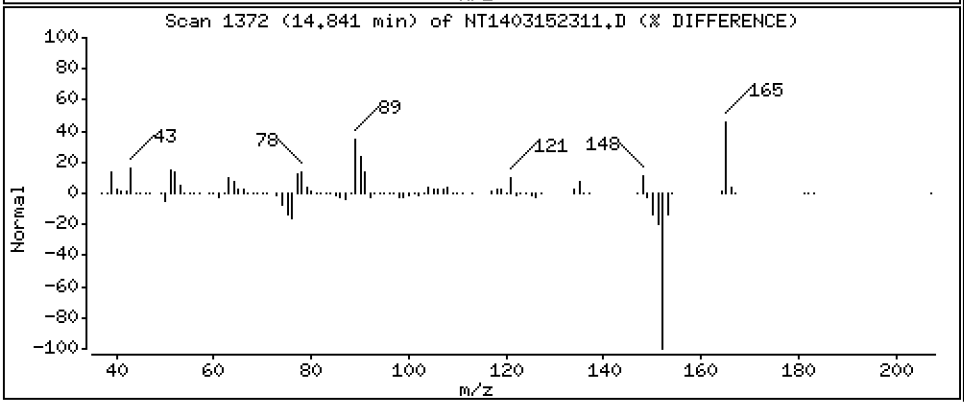
41 2,6-Dinitrotoluene

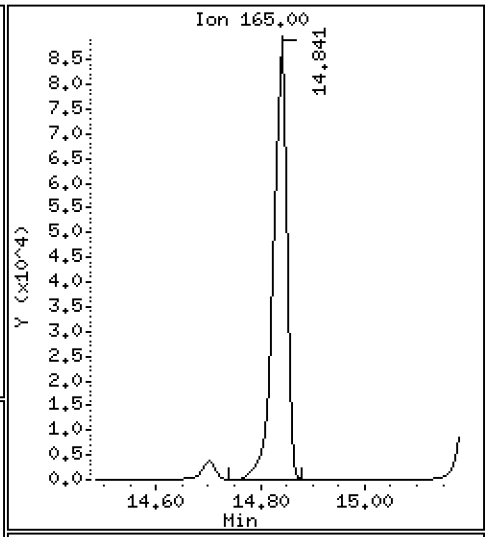
Concentration: 5.219 ug/mL

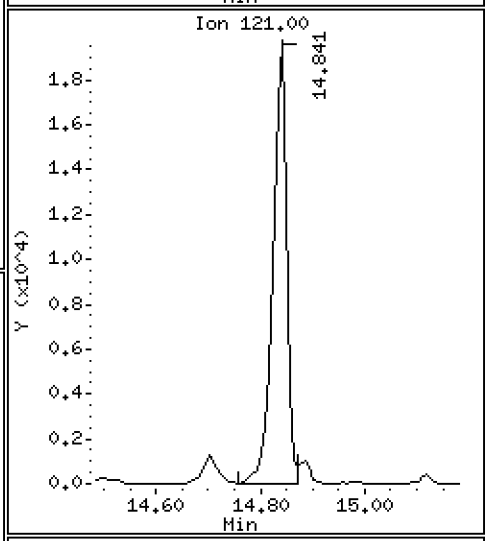


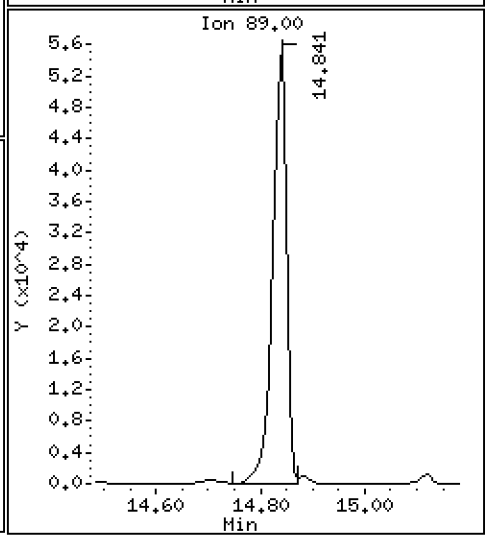












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

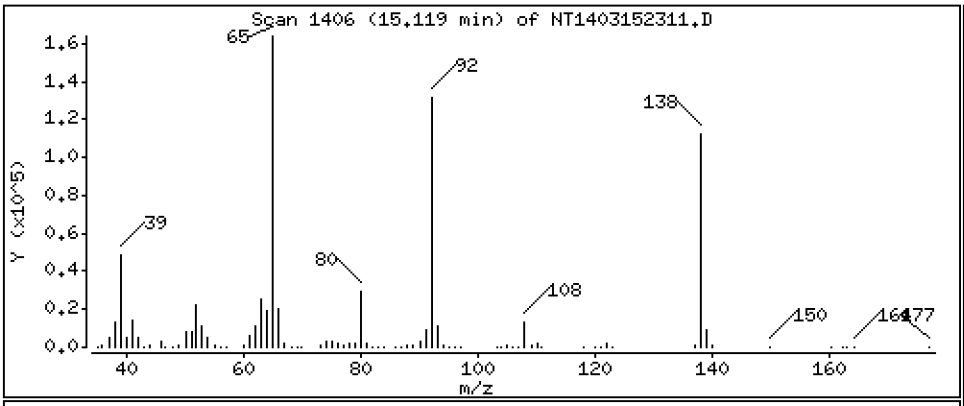
Operator: JGR

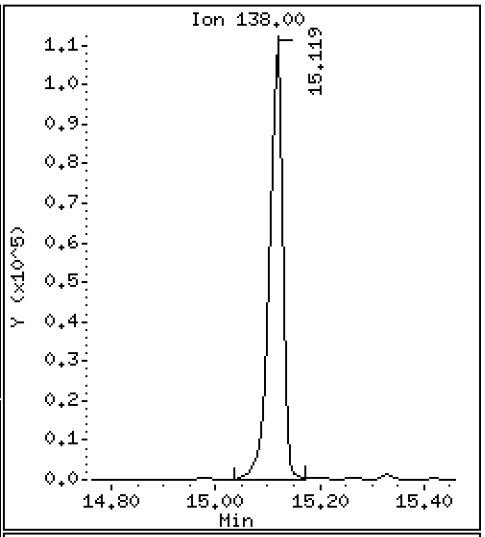
Column phase: ZB-5msi

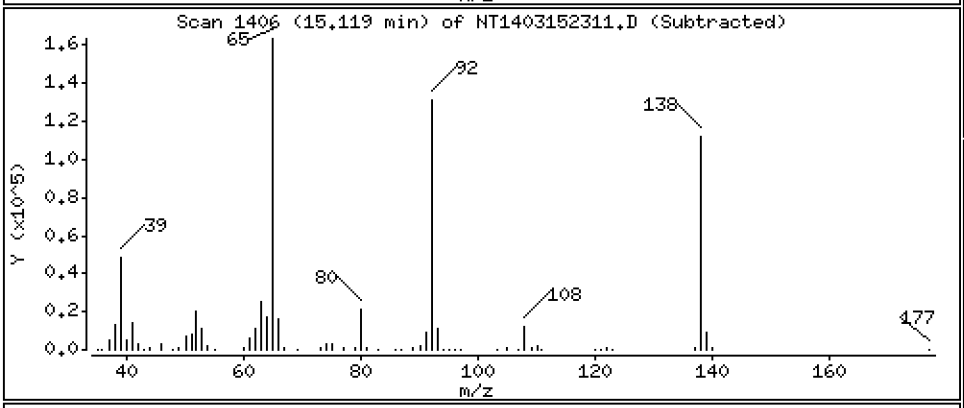
Column diameter: 0.25

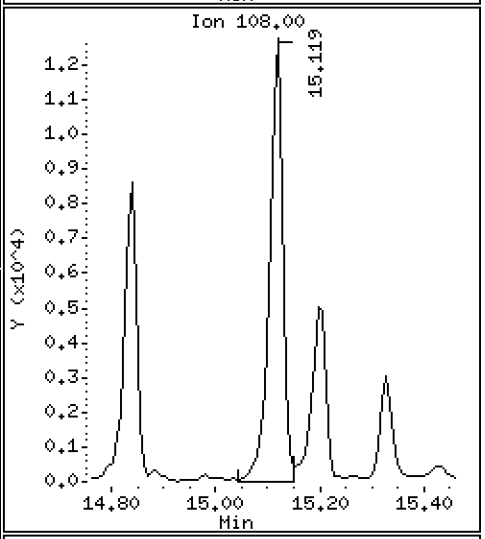
43 3-Nitroaniline

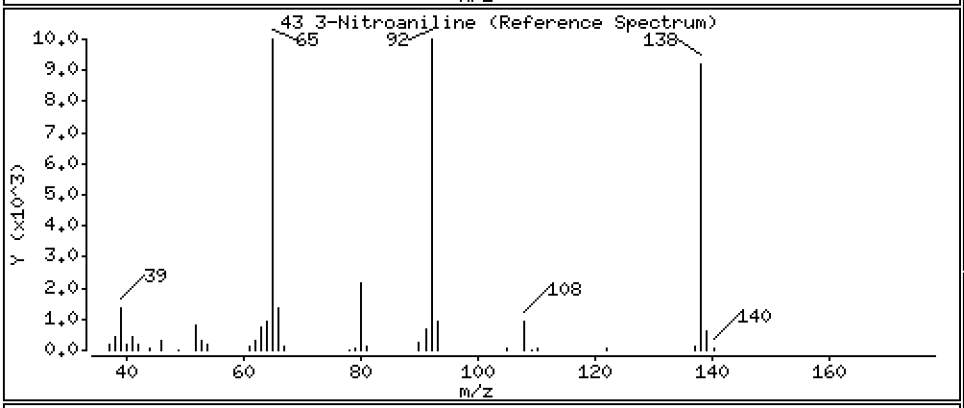
Concentration: 5.210 ug/mL

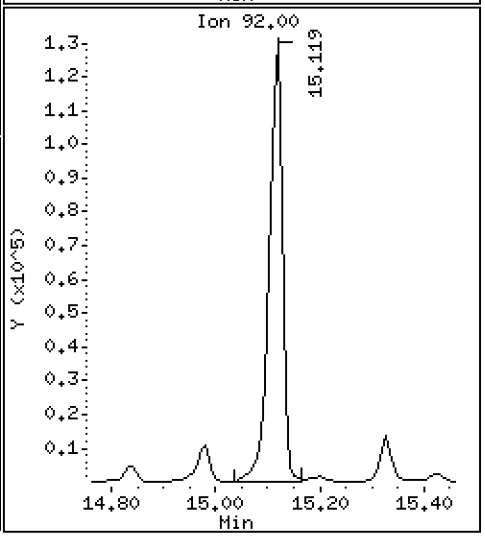


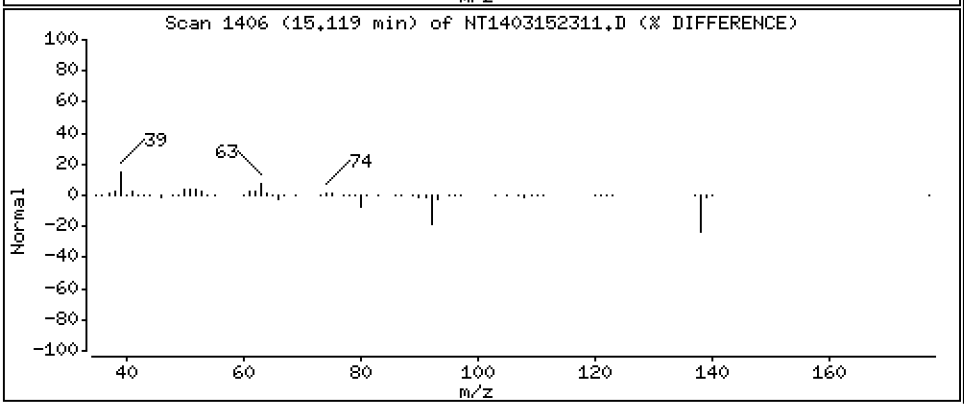












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

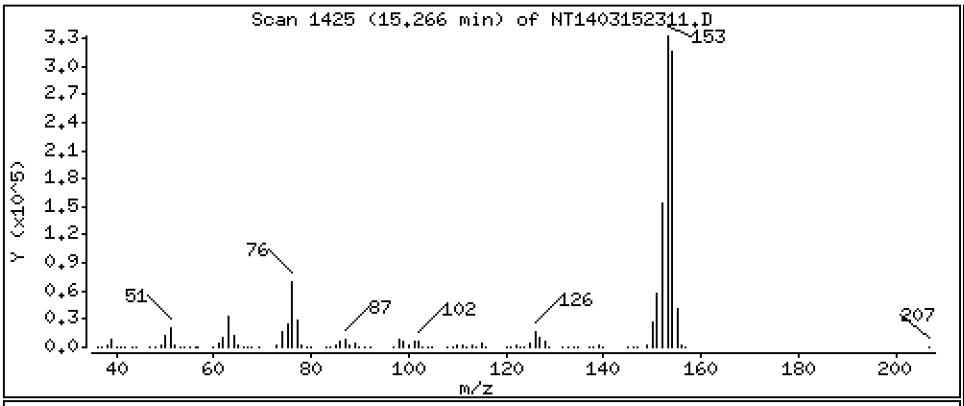
Operator: JGR

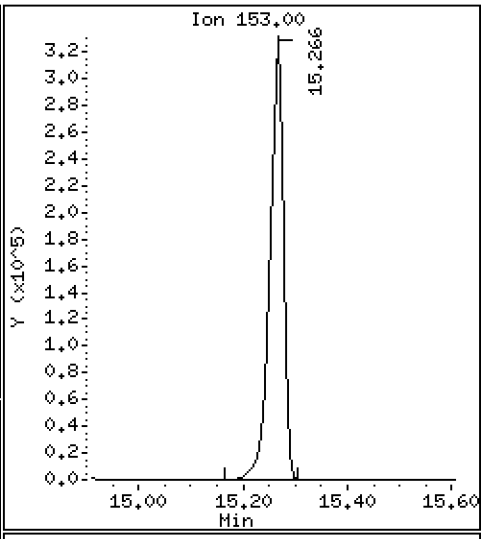
Column phase: ZB-5msi

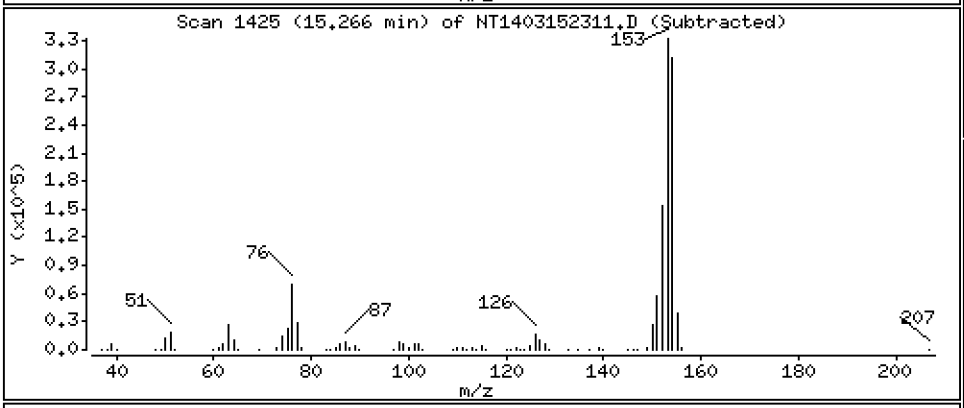
Column diameter: 0.25

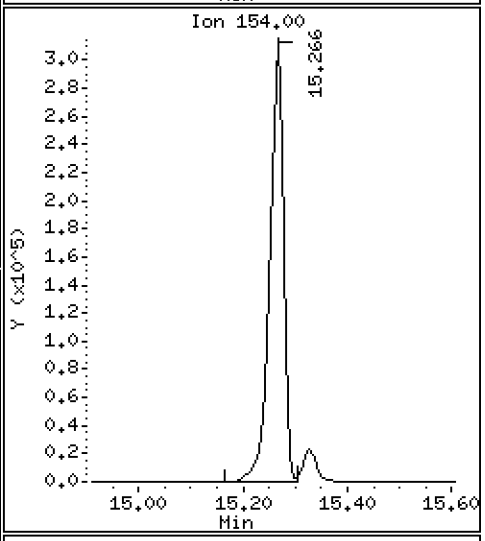
44 Acenaphthene

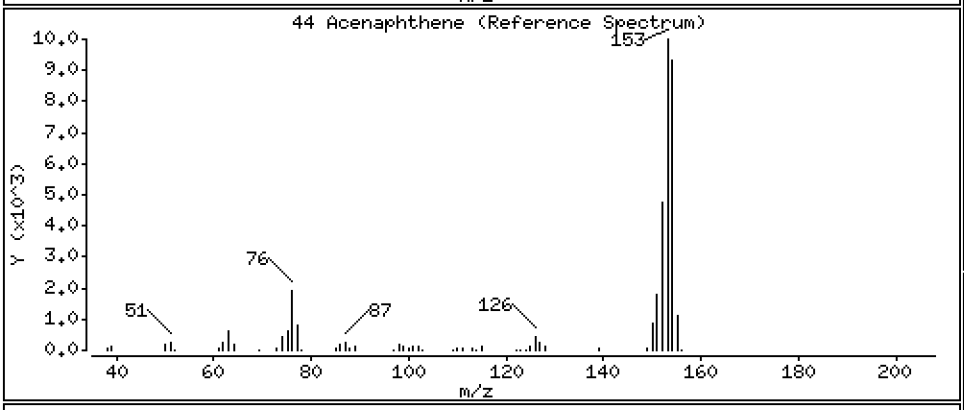
Concentration: 4.965 ug/mL

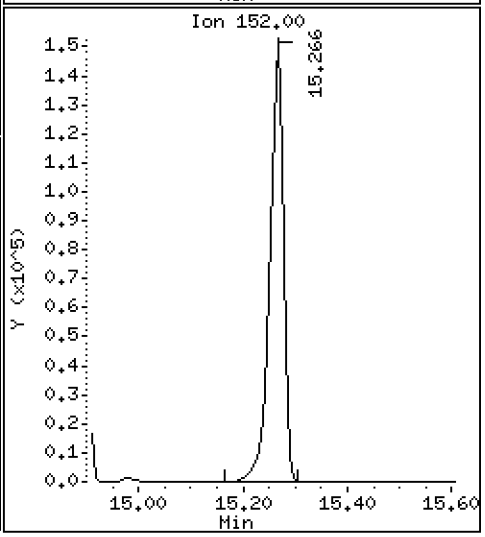


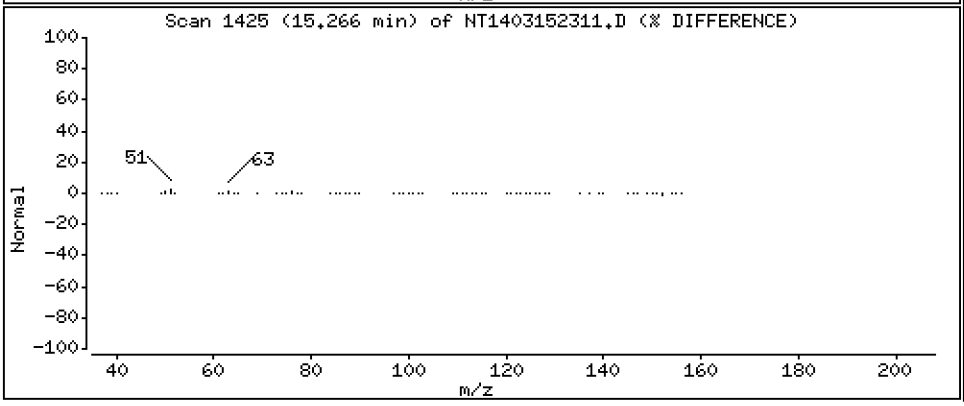












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

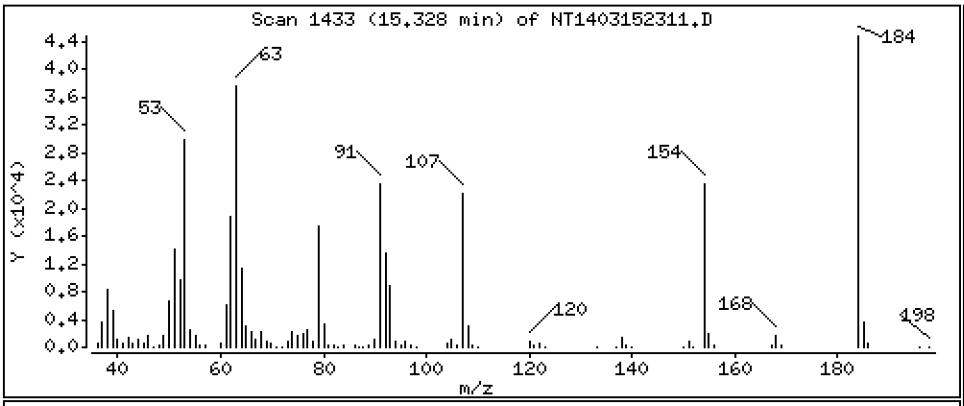
Operator: JGR

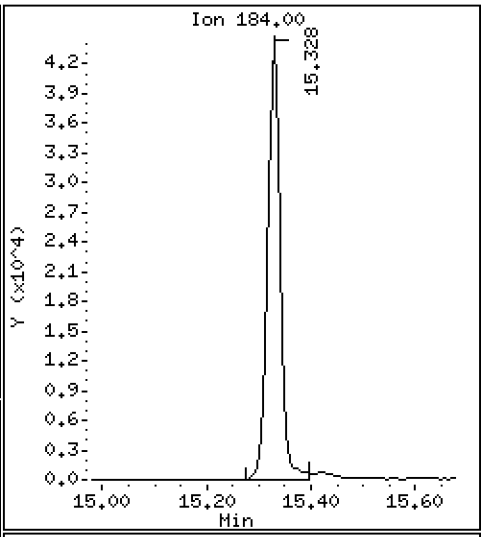
Column phase: ZB-5msi

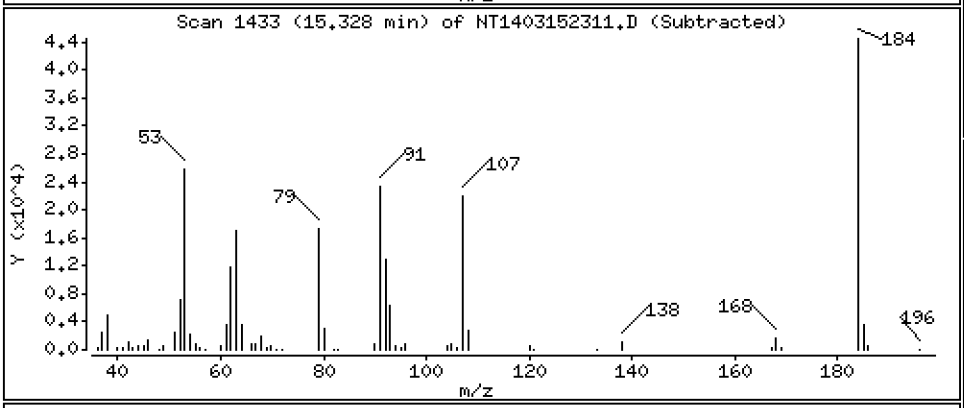
Column diameter: 0.25

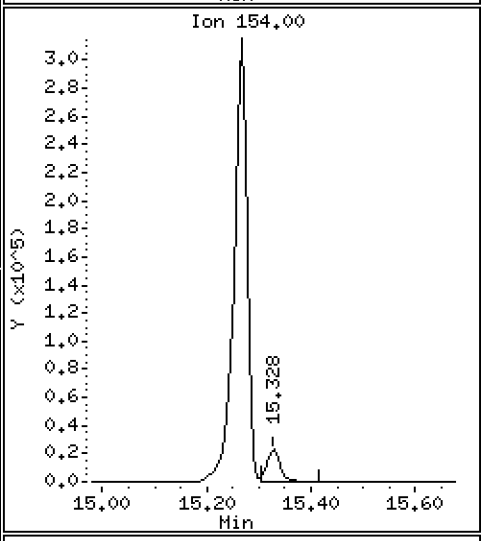
45 2,4-Dinitrophenol

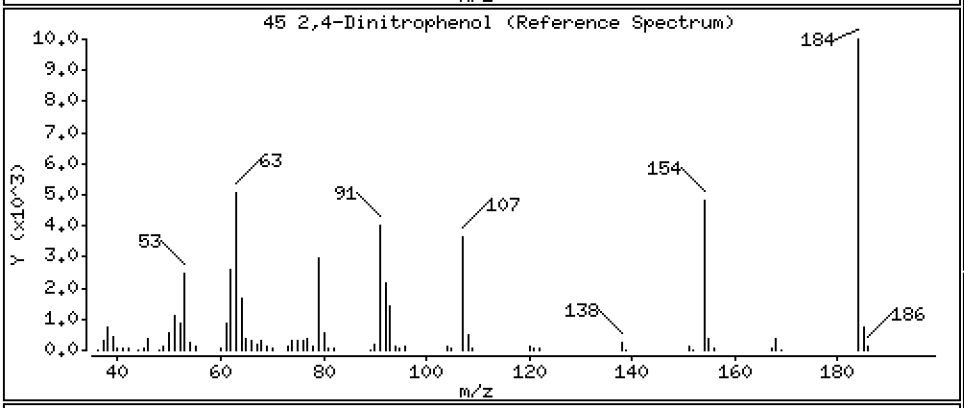
Concentration: 3.077 ug/mL

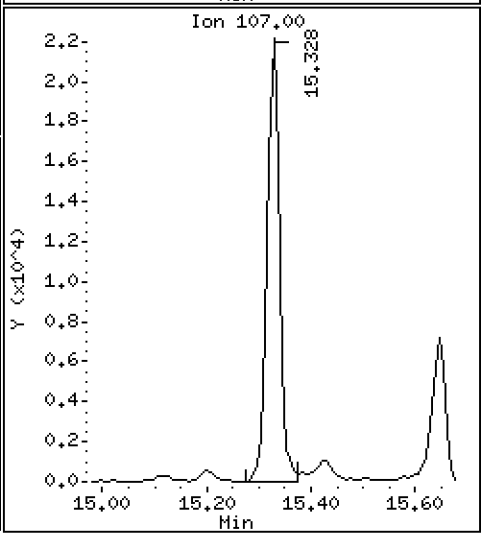


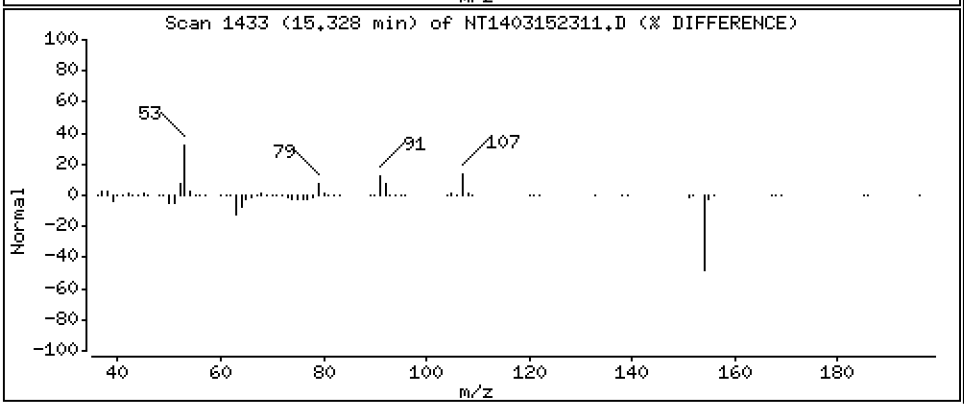












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

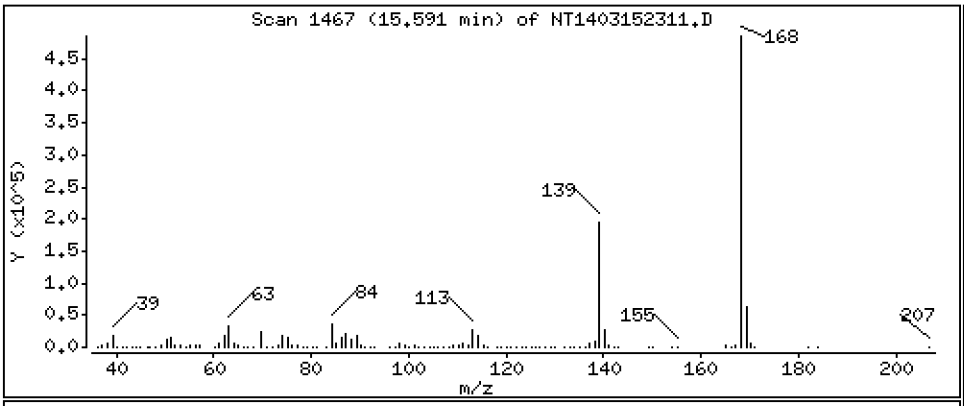
Operator: JGR

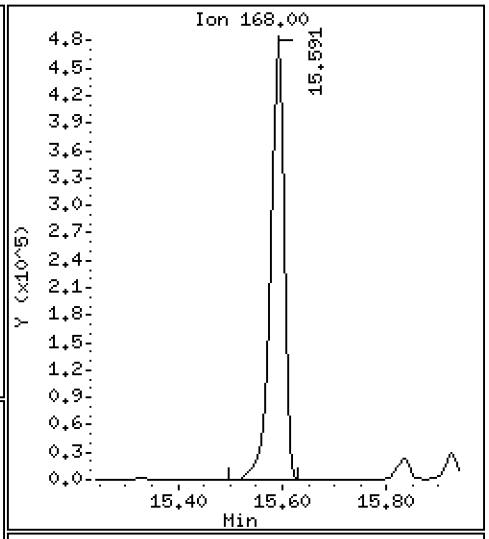
Column phase: ZB-5msi

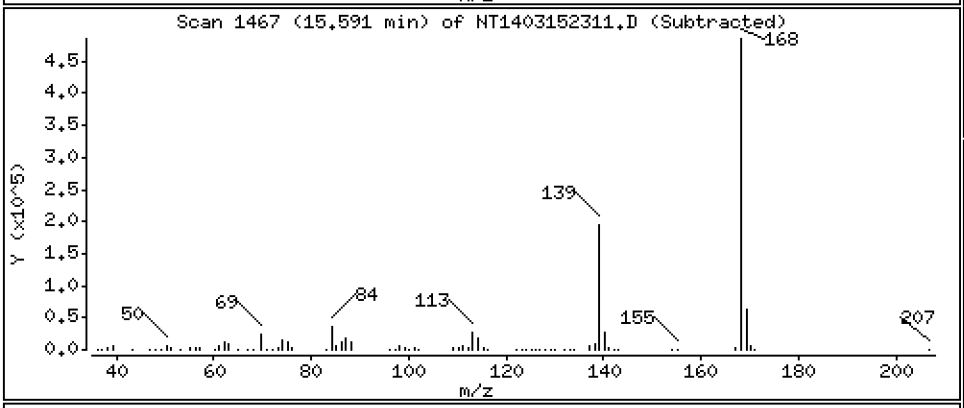
Column diameter: 0.25

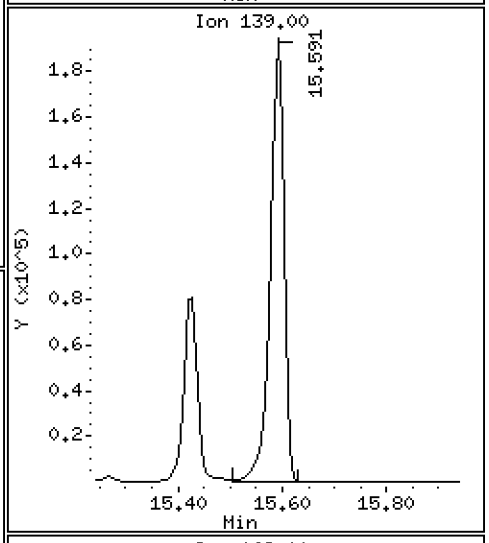
46 Dibenzofuran

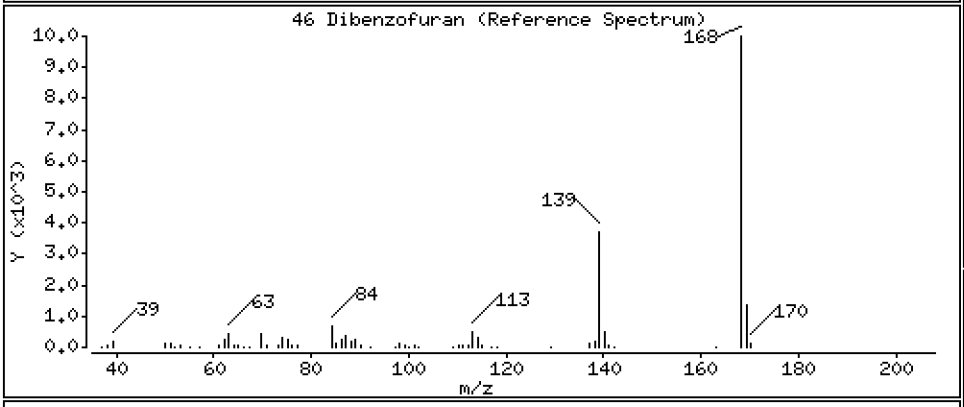
Concentration: 4.956 ug/mL

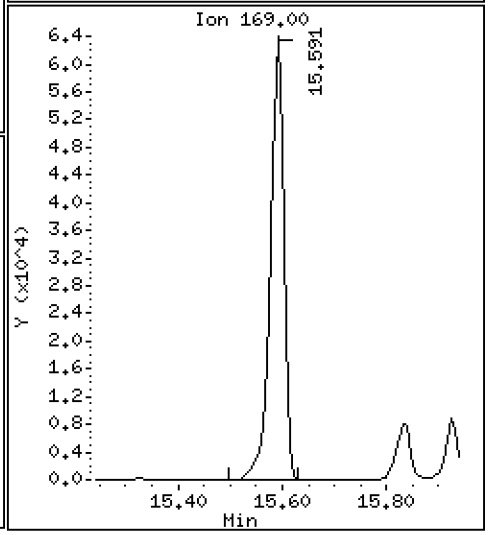


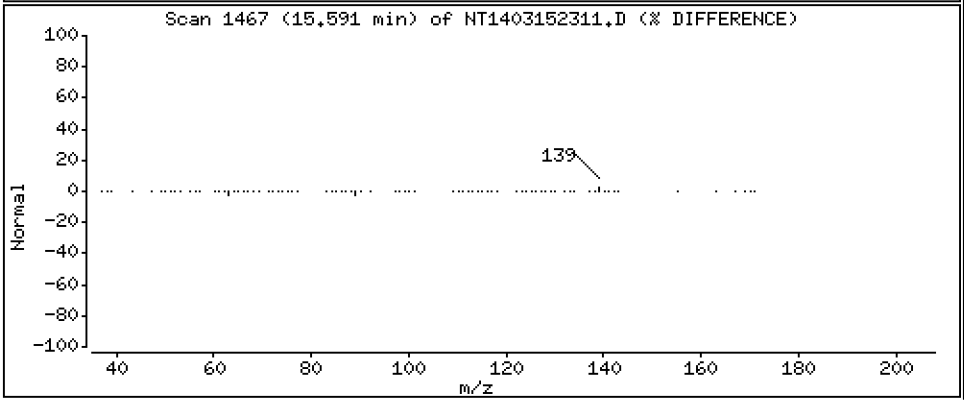












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

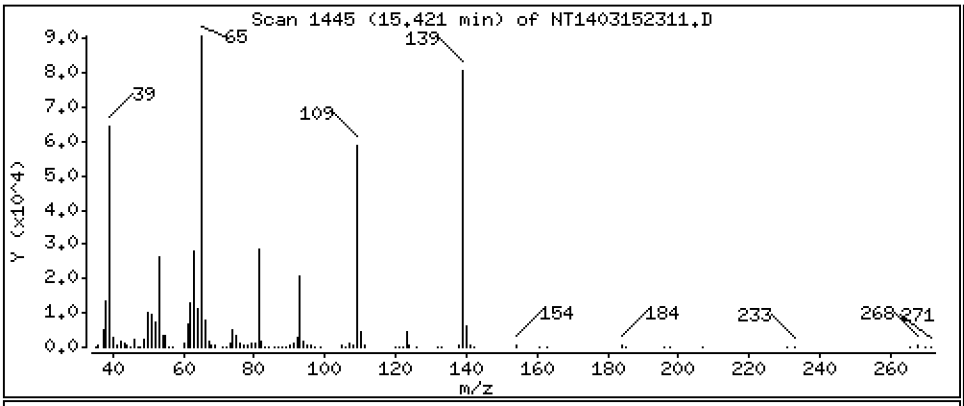
Operator: JGR

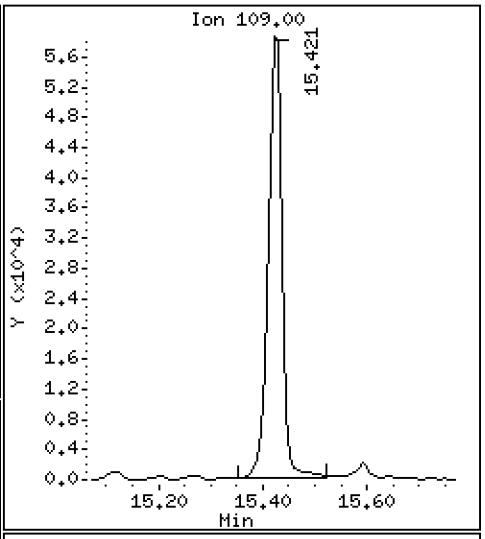
Column phase: ZB-5msi

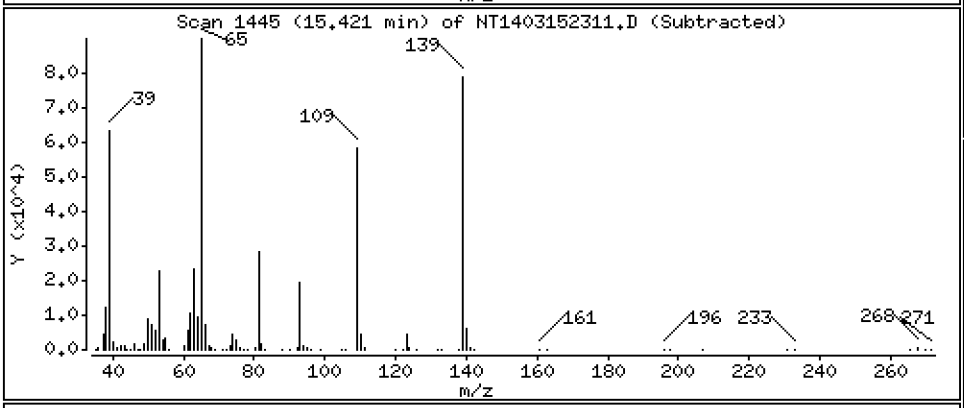
Column diameter: 0.25

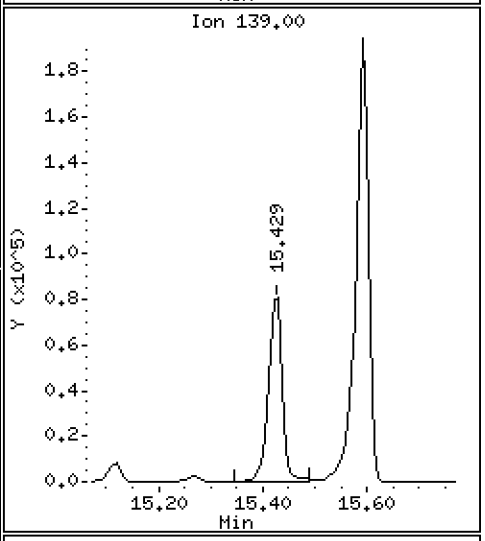
47 4-Nitrophenol

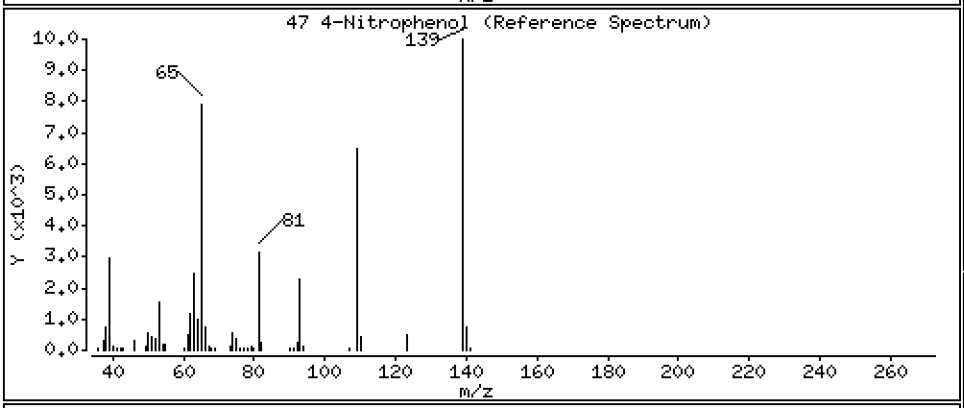
Concentration: 4.828 ug/mL

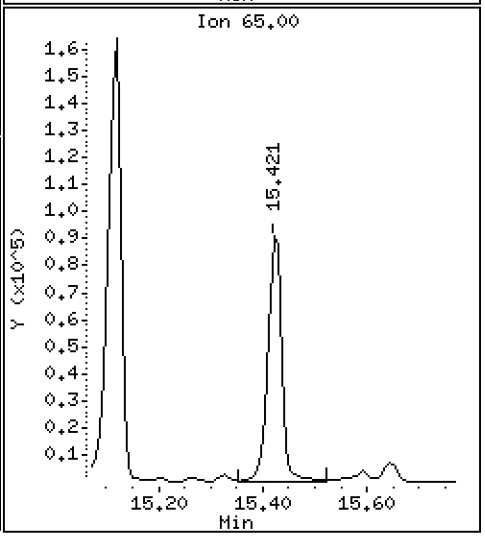


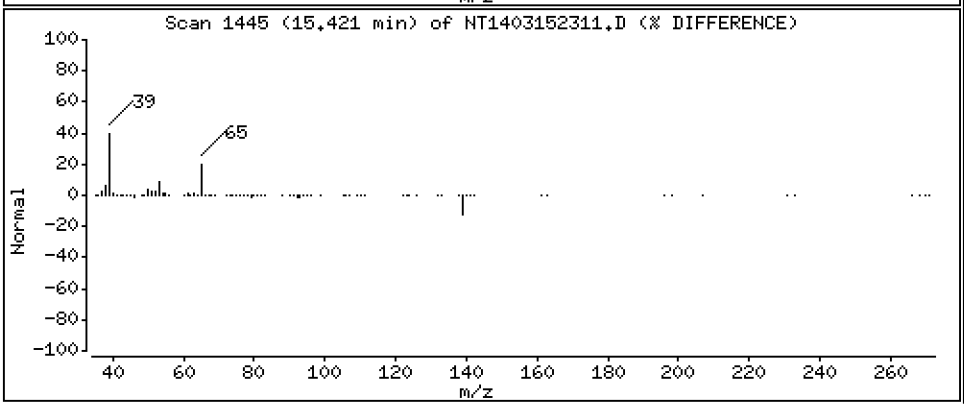












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

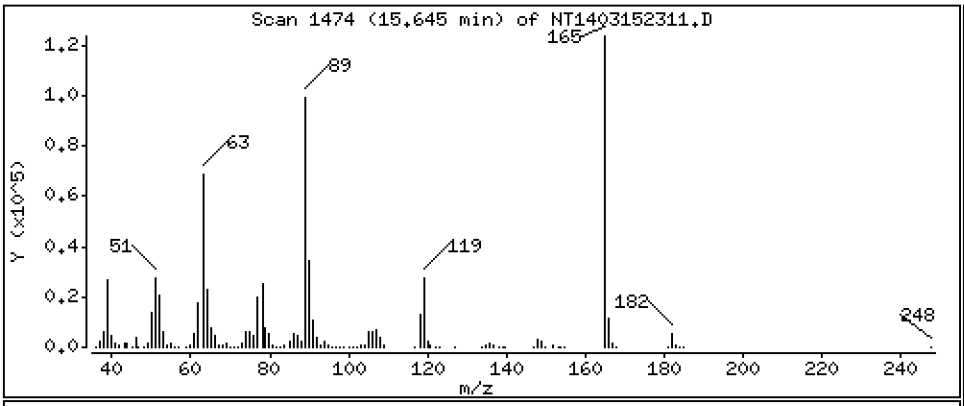
Operator: JGR

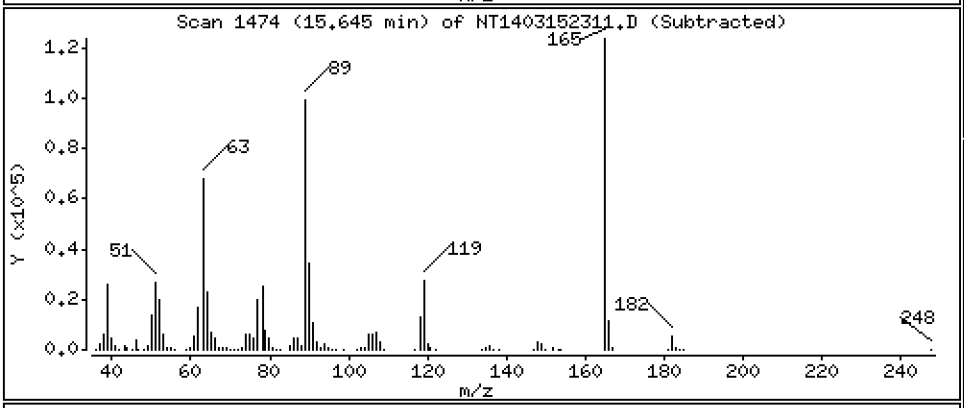
Column phase: ZB-5msi

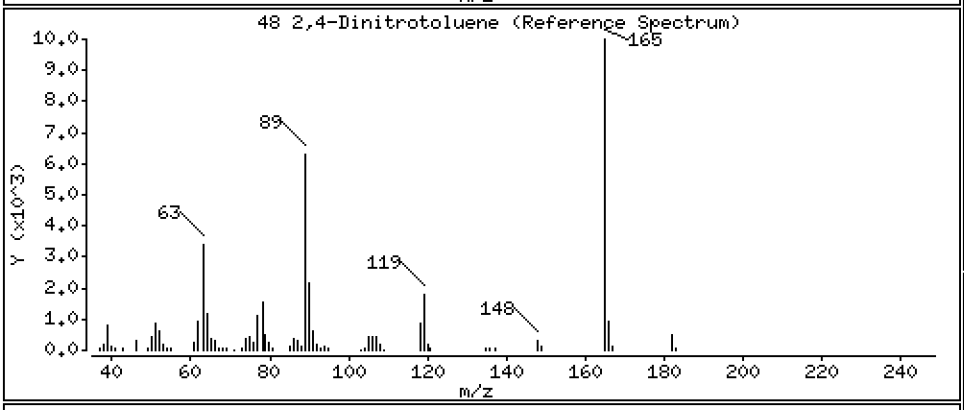
Column diameter: 0.25

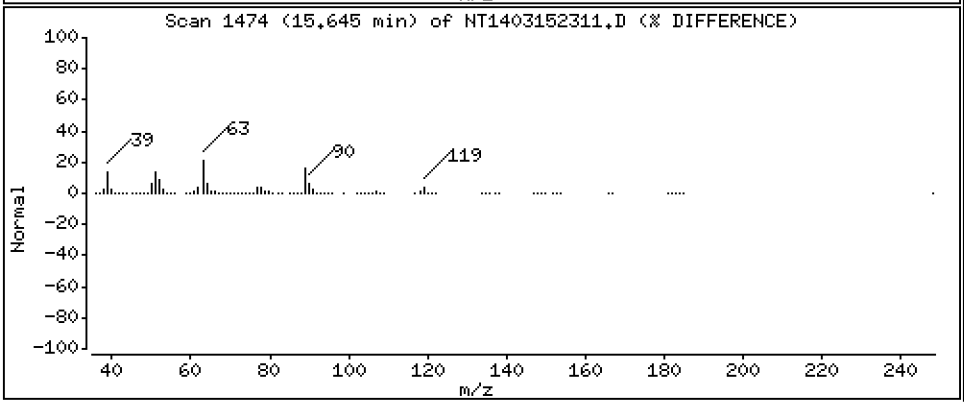
48 2,4-Dinitrotoluene

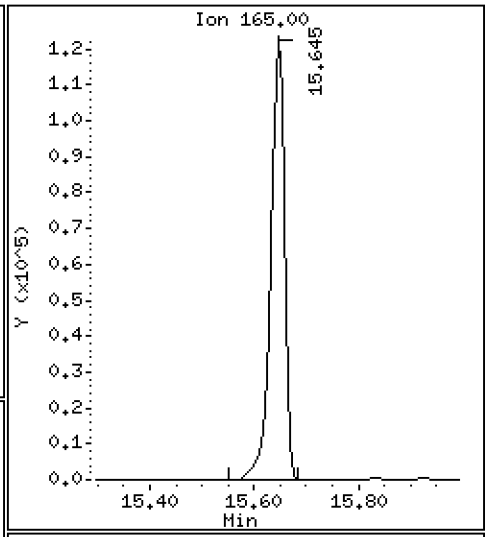
Concentration: 5.119 ug/mL

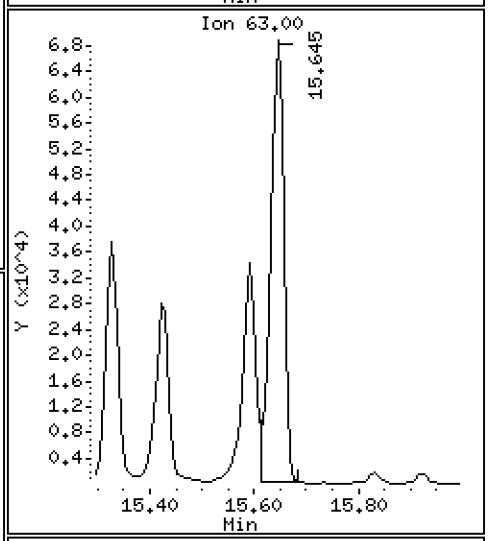


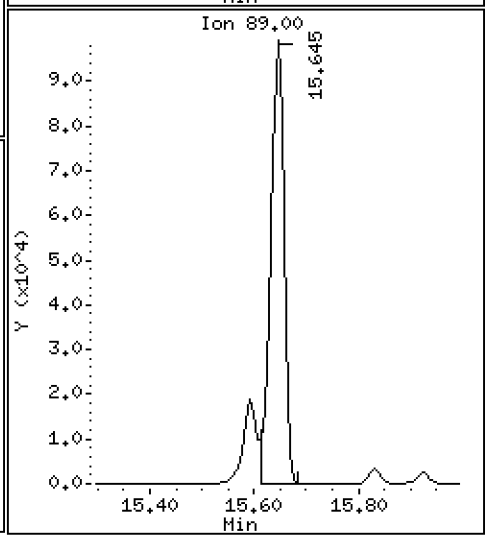












Date : 15-MAR-2023 17:39

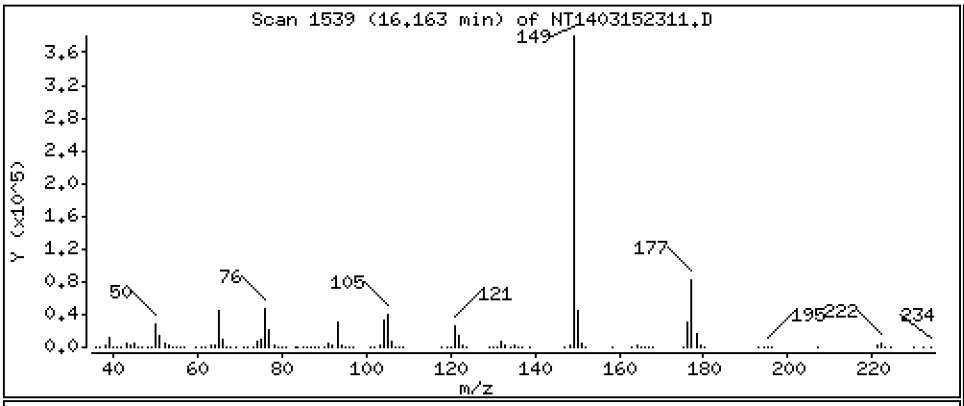
Client ID: Instrument: nt14.i

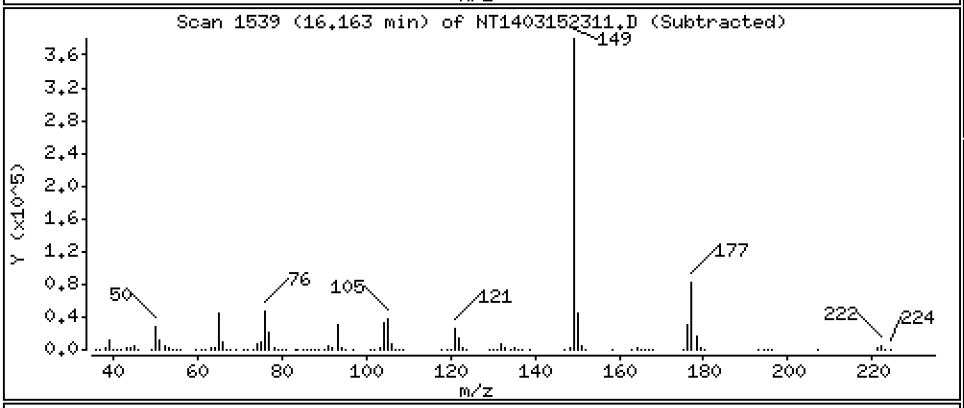
Sample Info: SLC0160-SCV1

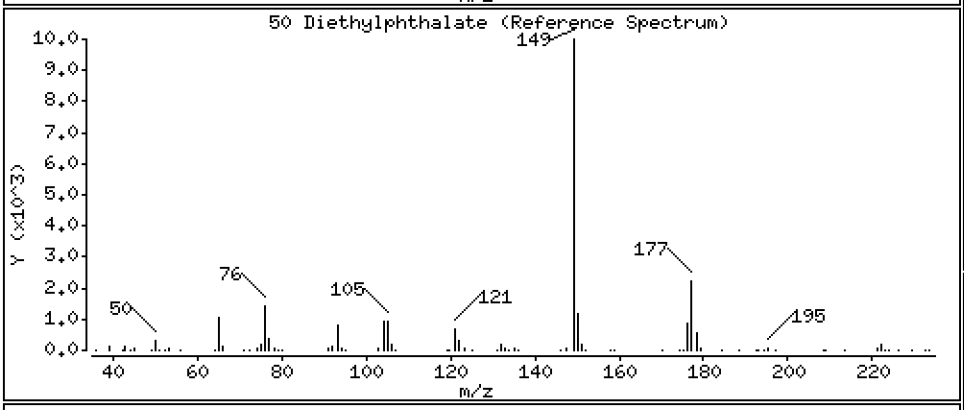
Operator: JGR

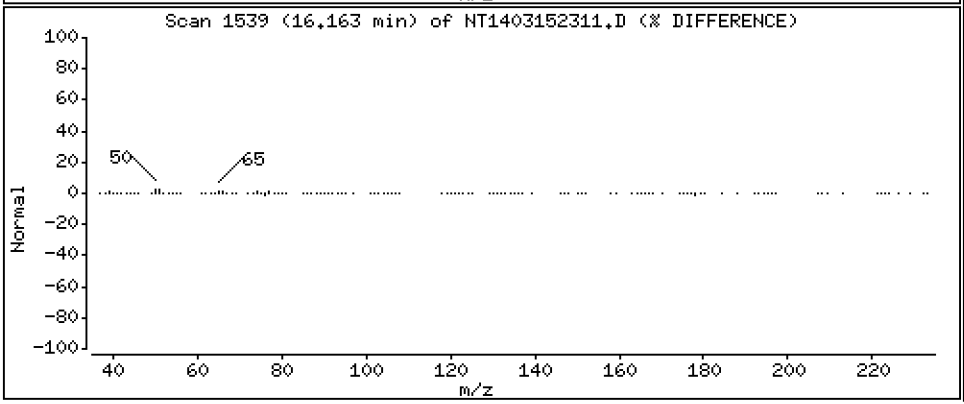
Column phase: ZB-5msi Column diameter: 0.25

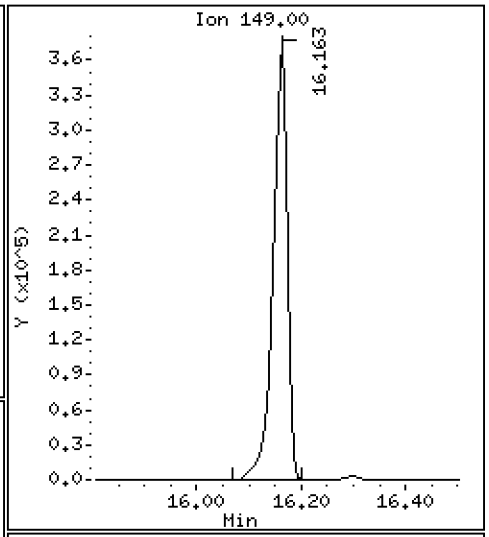
50 Diethylphthalate Concentration: 5.203 ug/mL

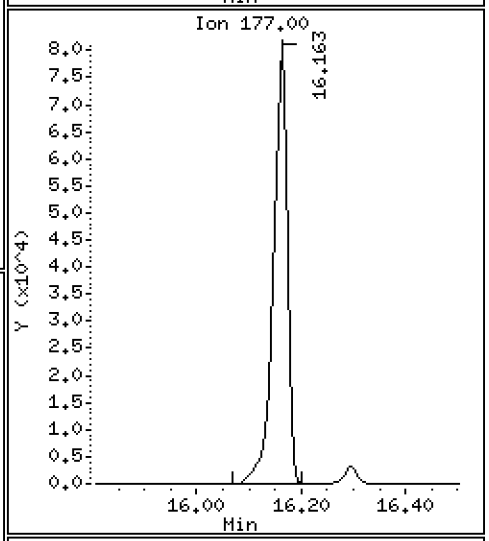


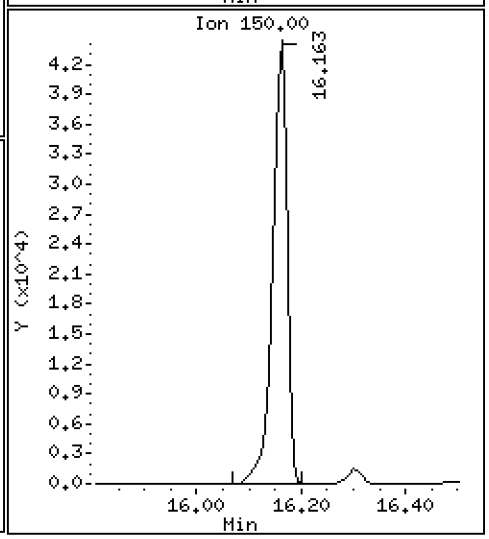












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

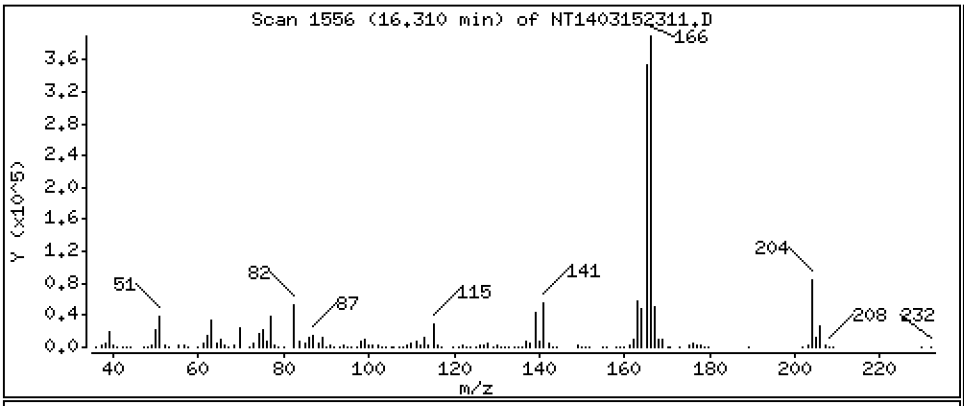
Operator: JGR

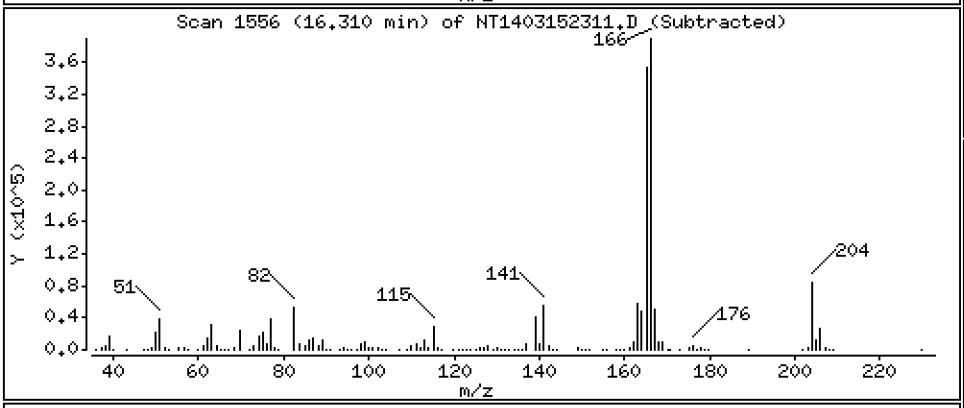
Column phase: ZB-5msi

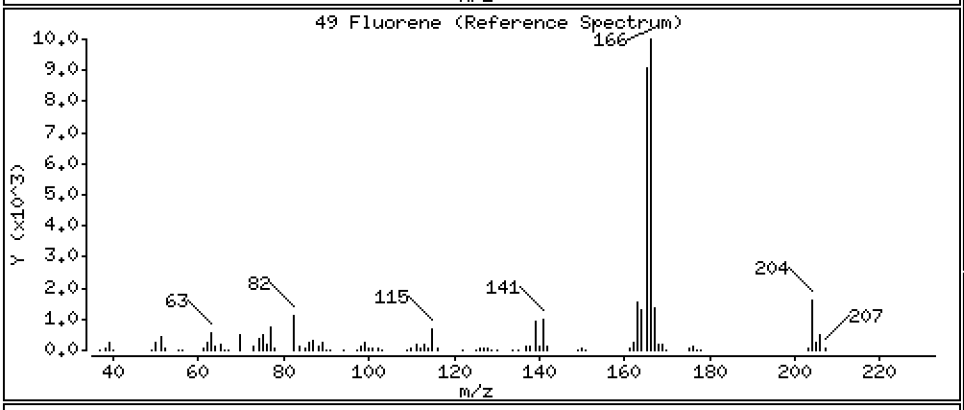
Column diameter: 0.25

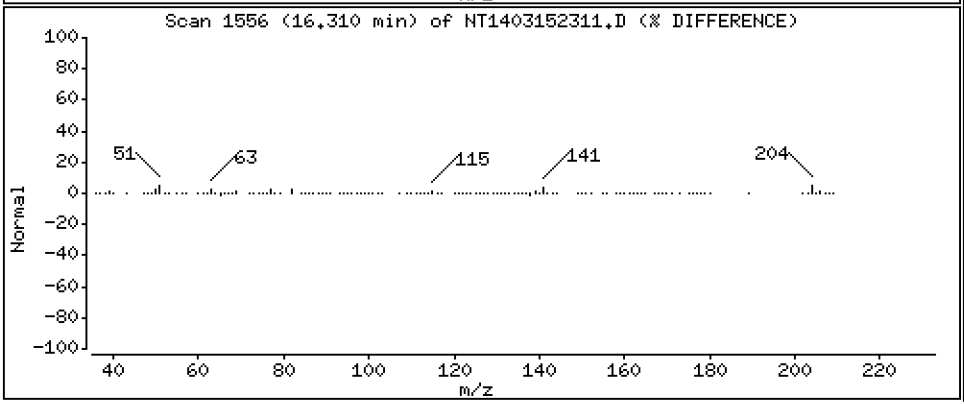
49 Fluorene

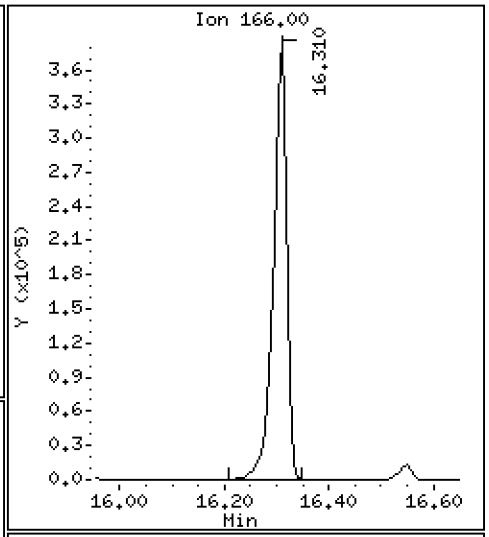
Concentration: 4.844 ug/mL

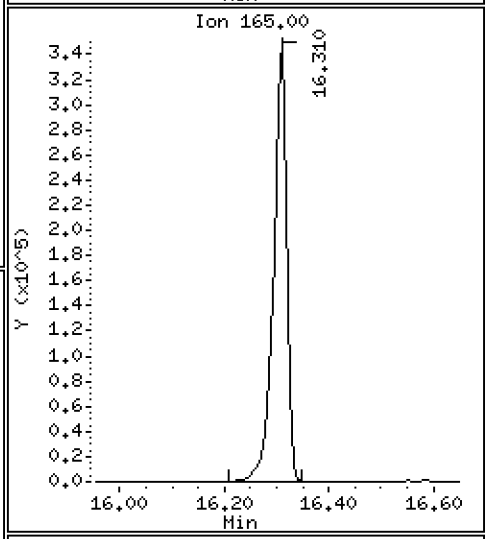


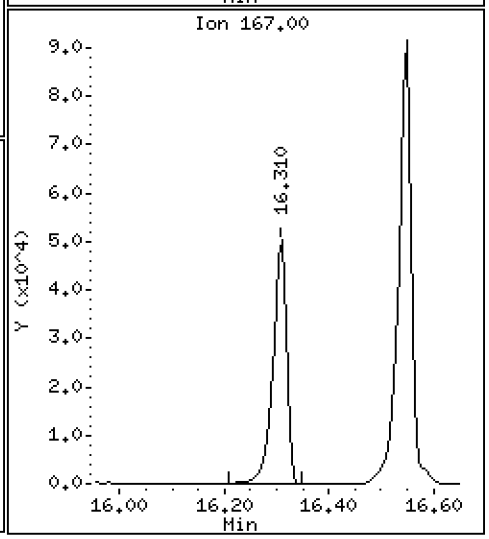












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

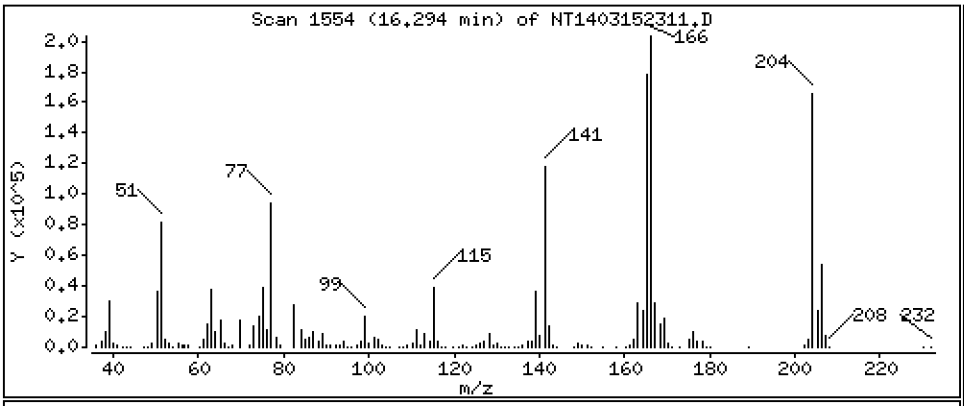
Operator: JGR

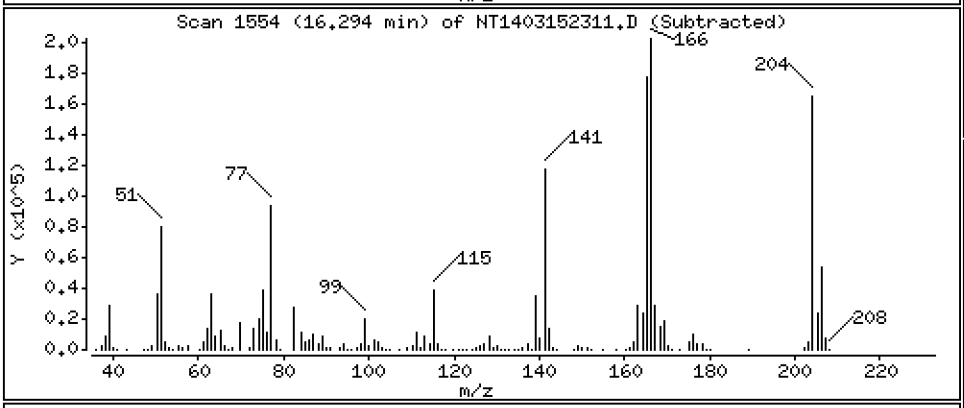
Column phase: ZB-5msi

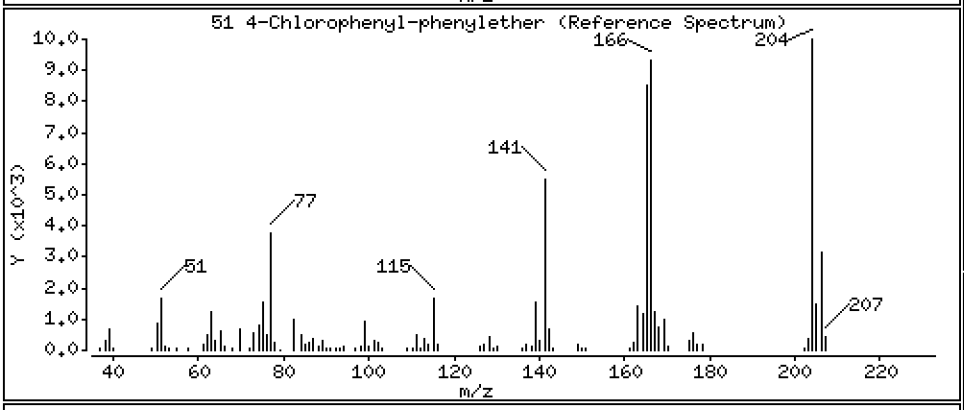
Column diameter: 0.25

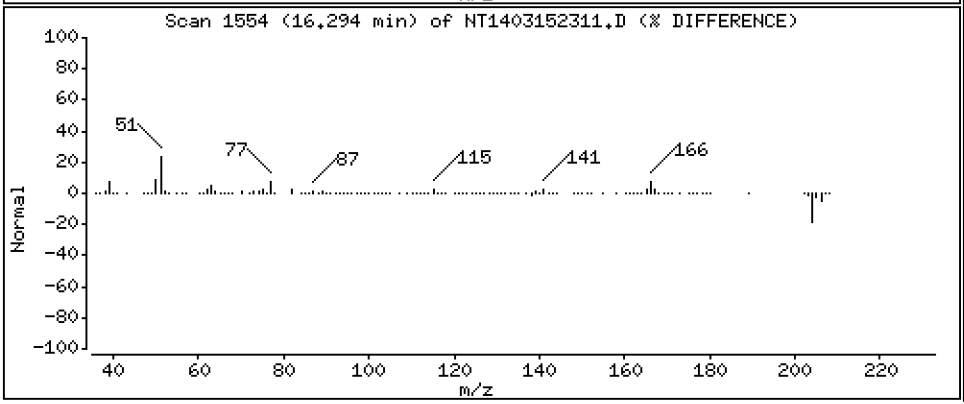
51 4-Chlorophenyl-phenylether

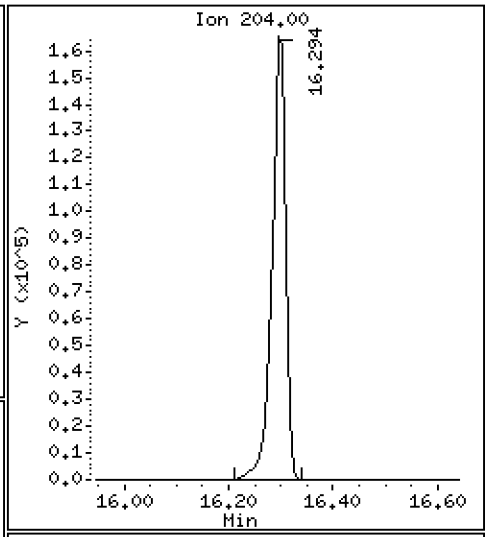
Concentration: 4.985 ug/mL

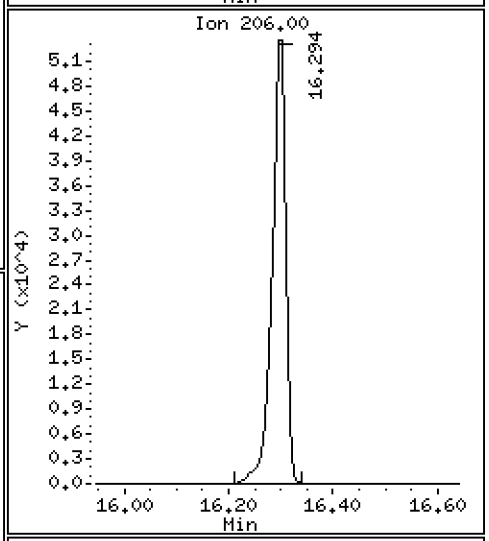


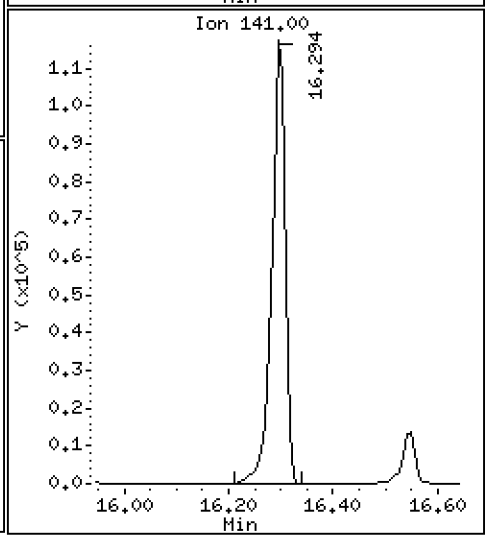












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

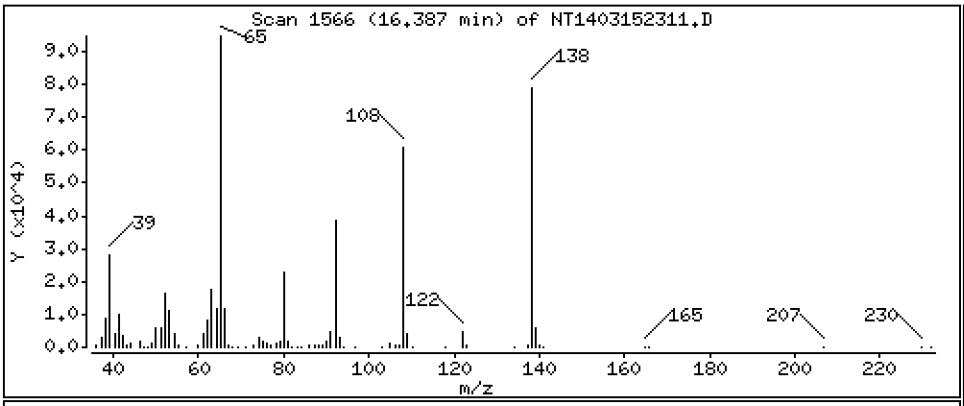
Operator: JGR

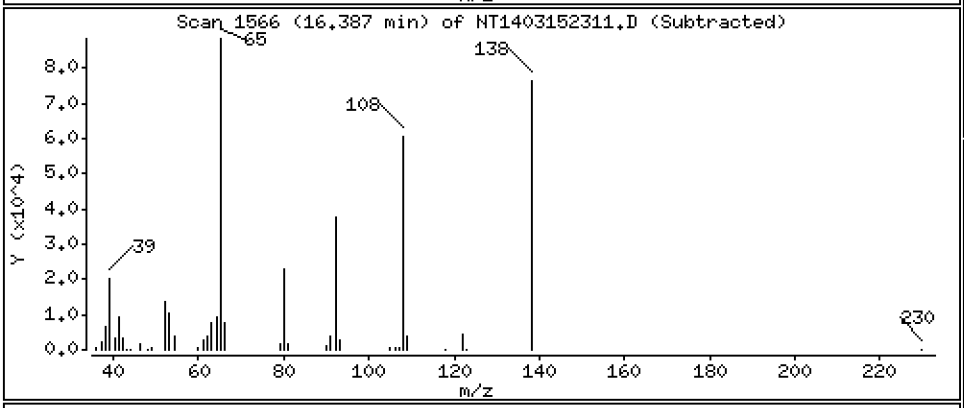
Column phase: ZB-5msi

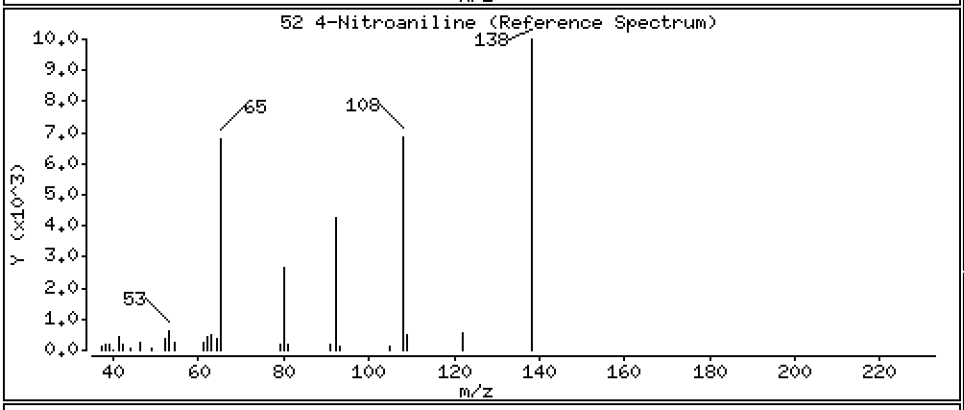
Column diameter: 0.25

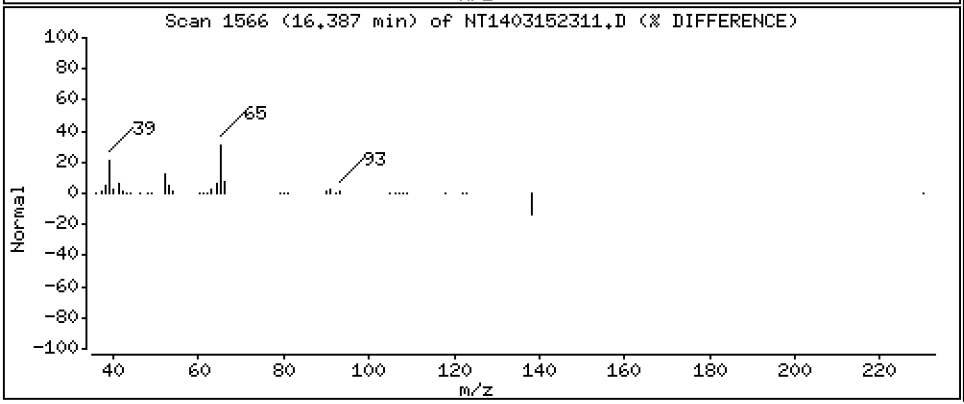
52 4-Nitroaniline

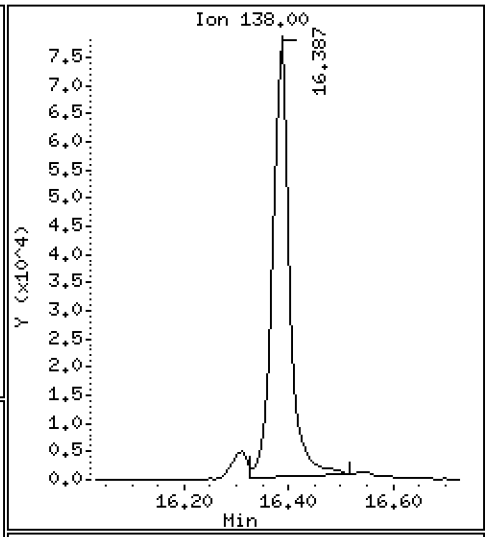
Concentration: 4.817 ug/mL

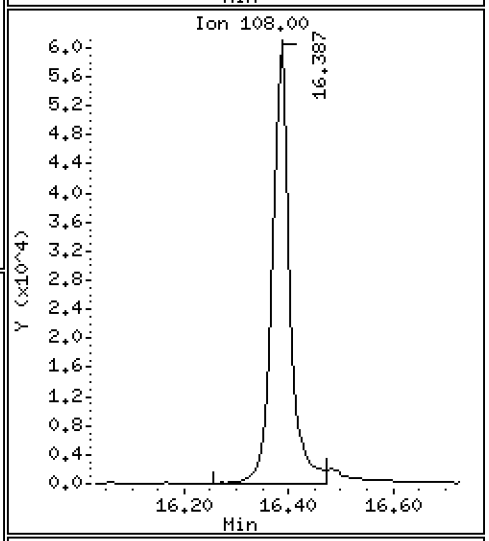


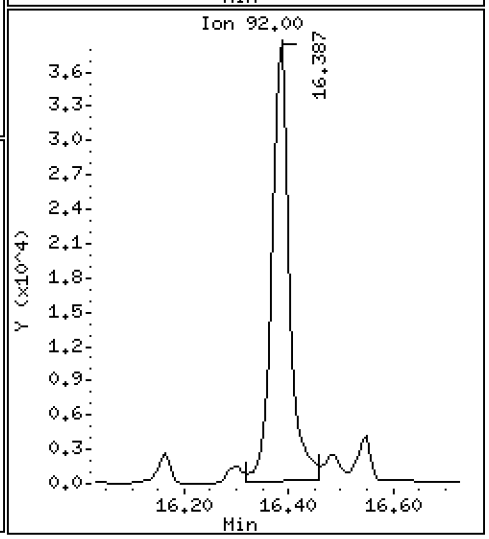












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

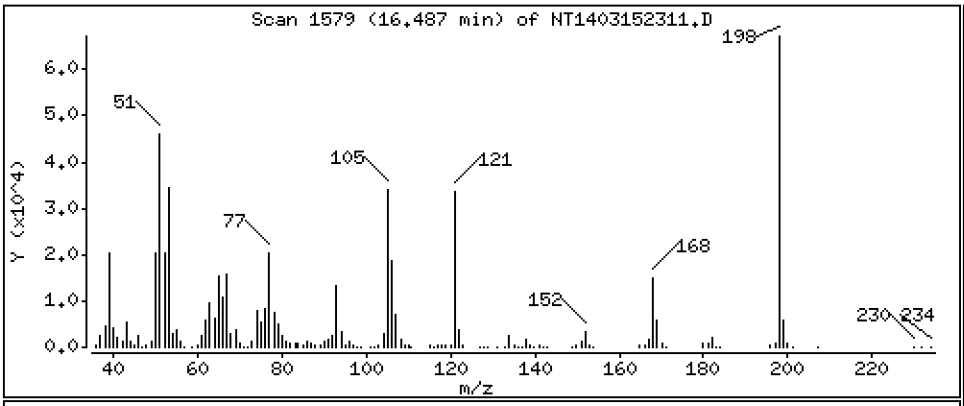
Operator: JGR

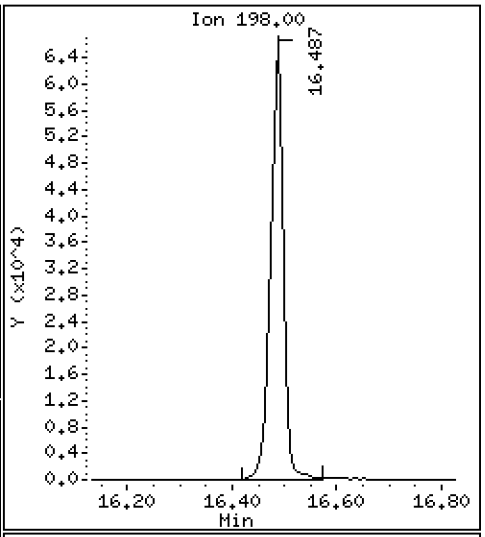
Column phase: ZB-5msi

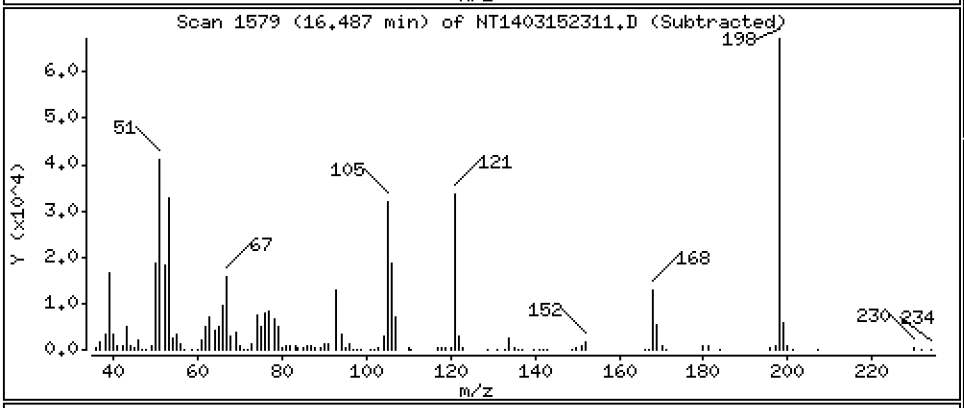
Column diameter: 0.25

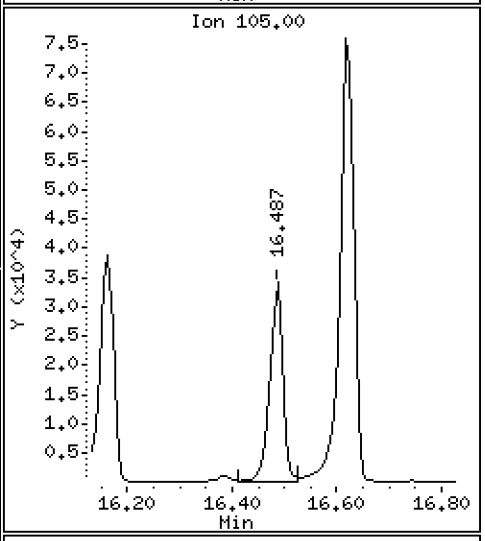
53 4,6-Dinitro-2-methylphenol

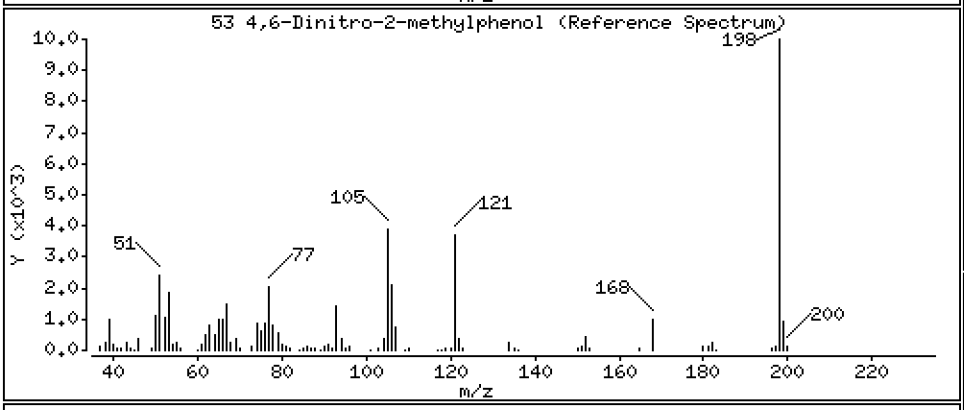
Concentration: 4.439 ug/mL

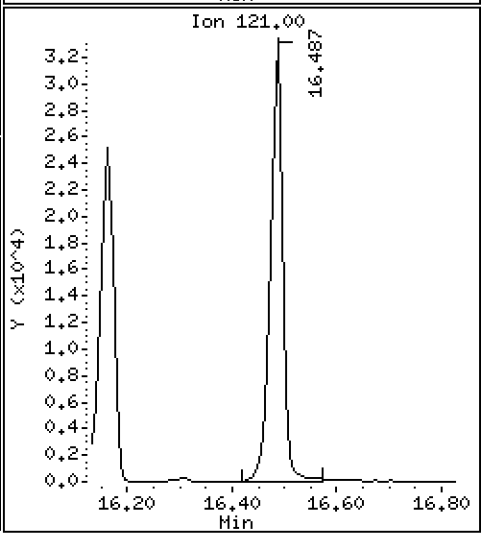


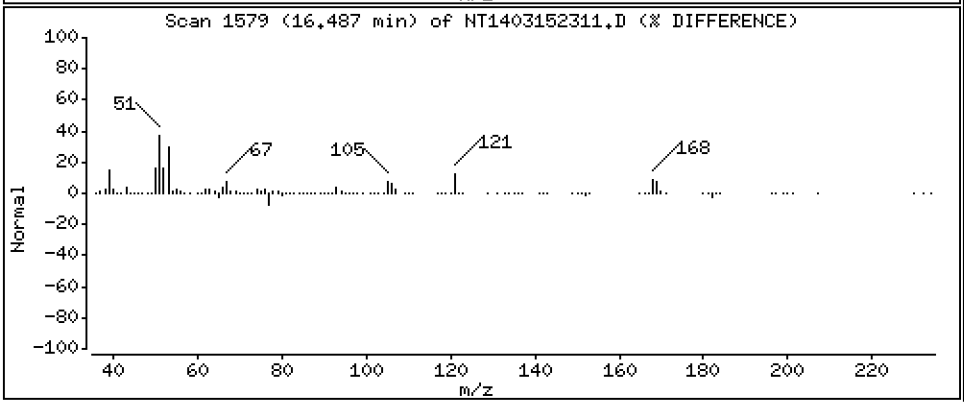












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

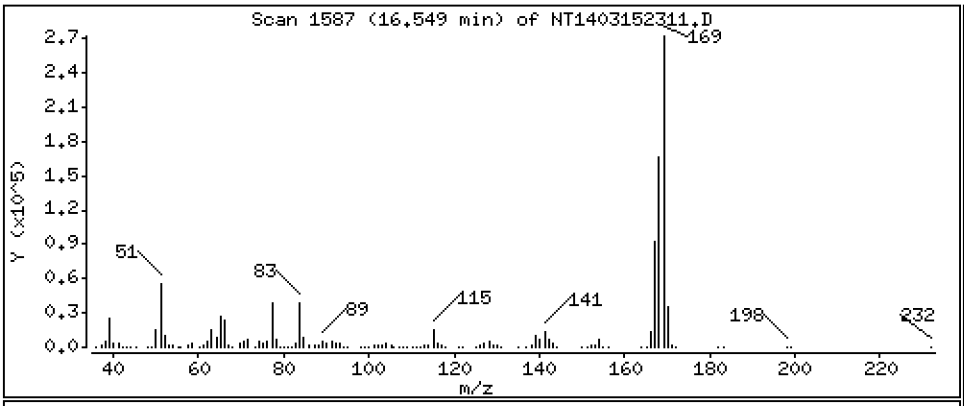
Operator: JGR

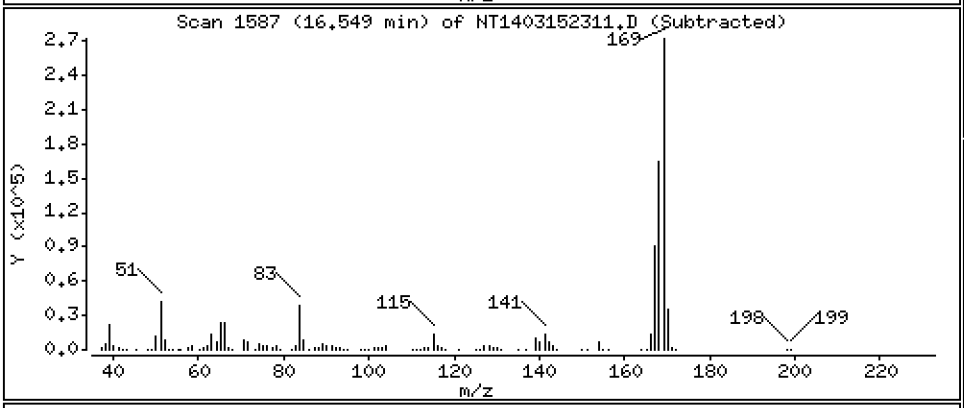
Column phase: ZB-5msi

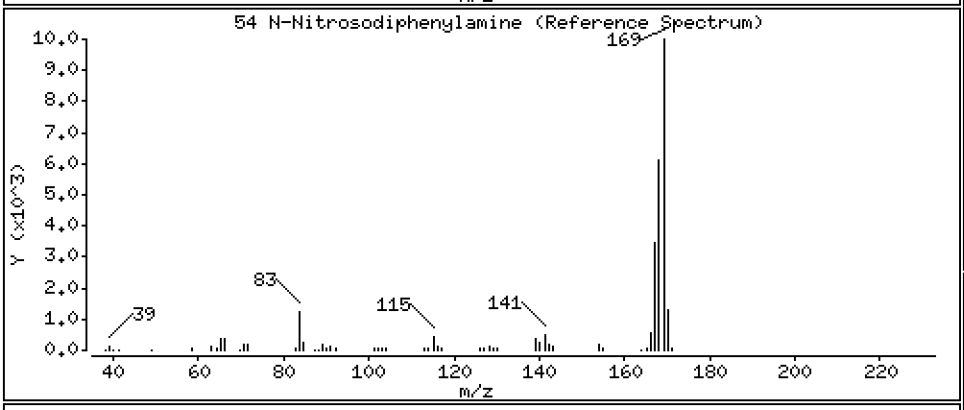
Column diameter: 0.25

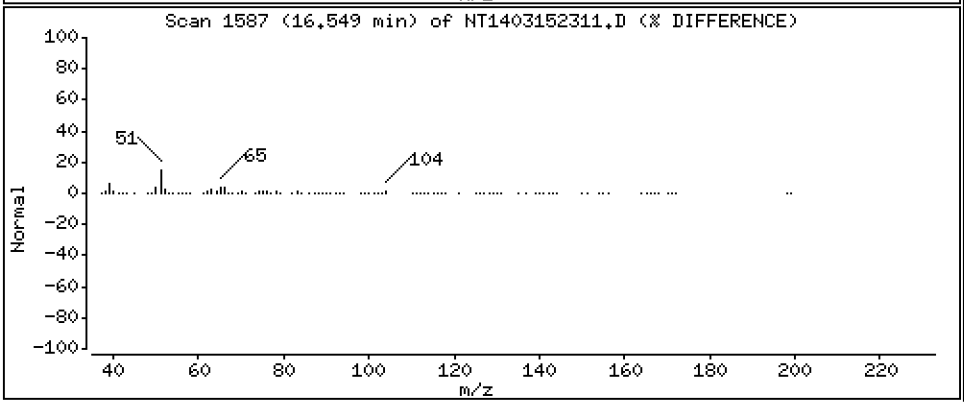
54 N-Nitrosodiphenylamine

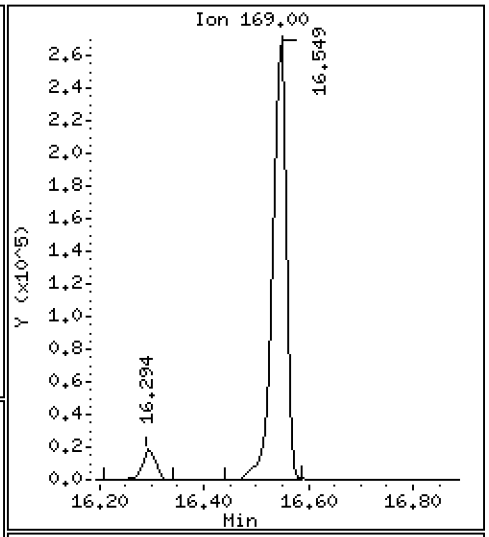
Concentration: 4.954 ug/mL

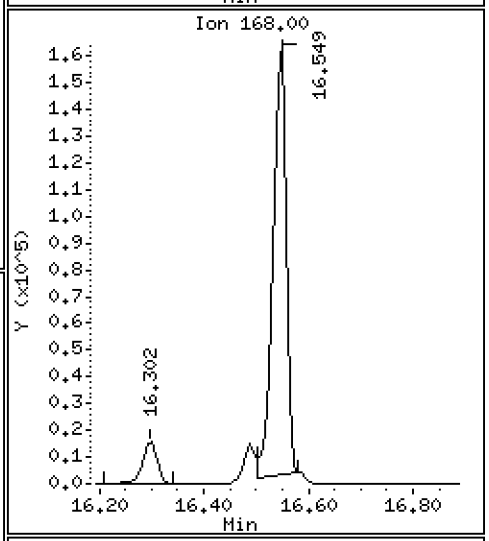


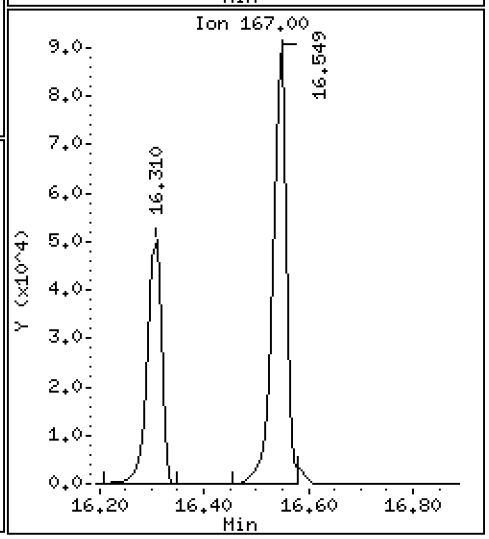












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

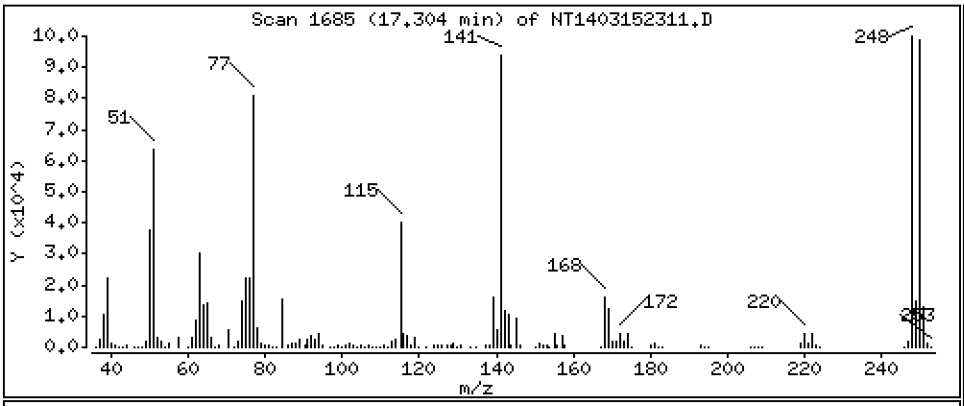
Operator: JGR

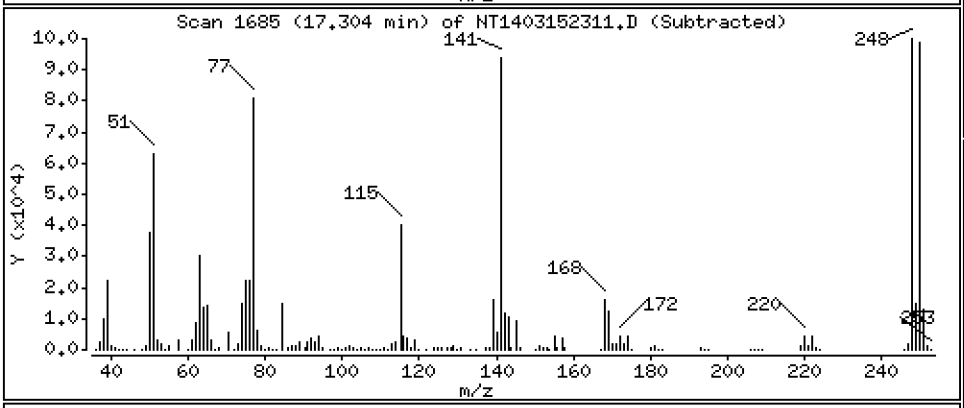
Column phase: ZB-5msi

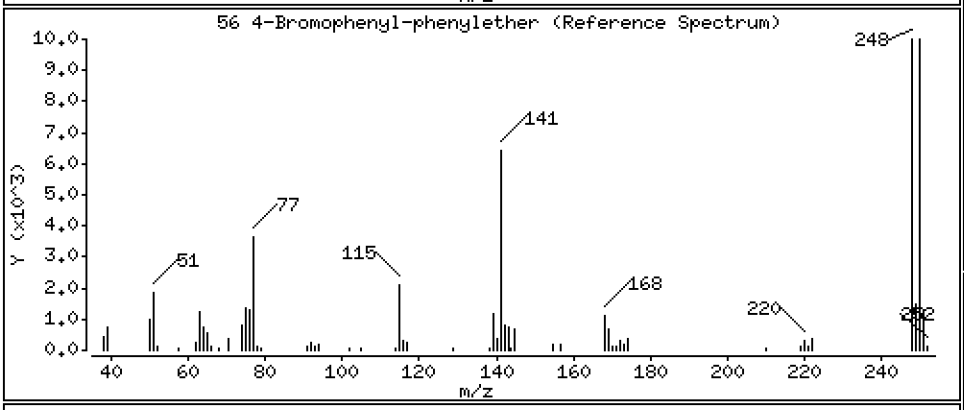
Column diameter: 0.25

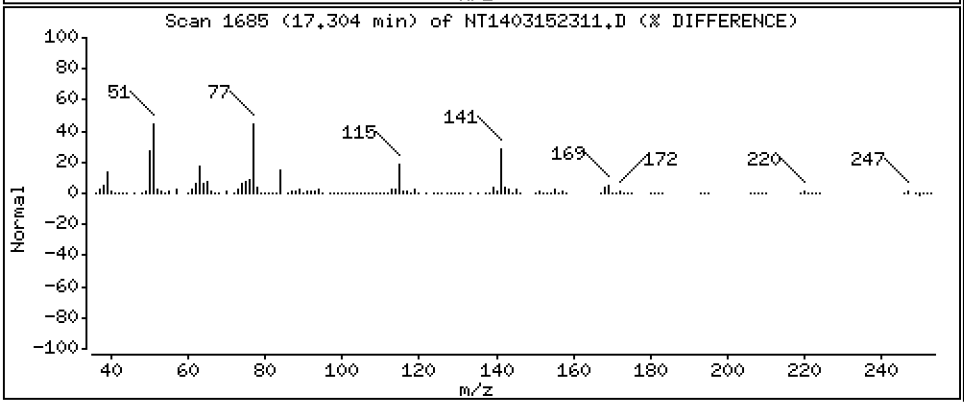
56 4-Bromophenyl-phenylether

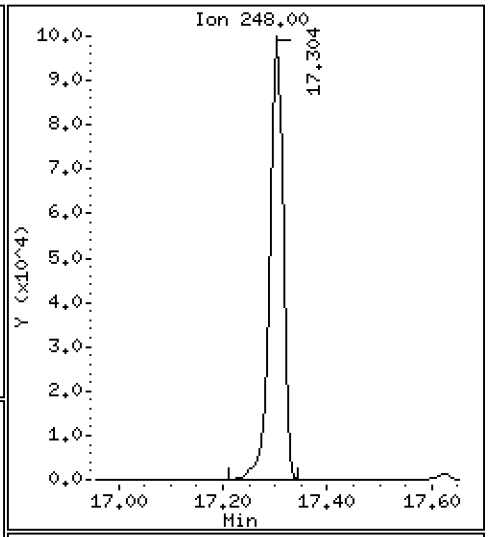
Concentration: 5.226 ug/mL

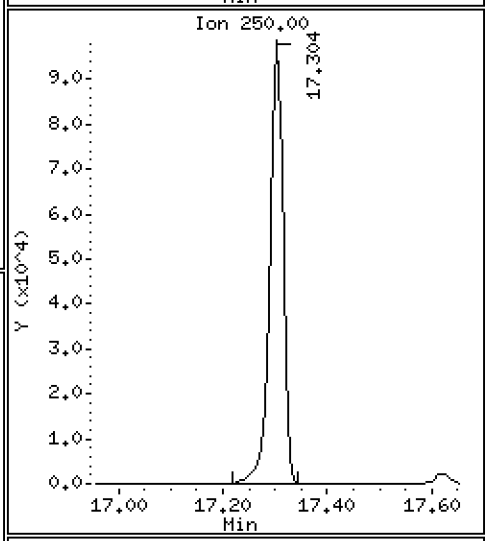


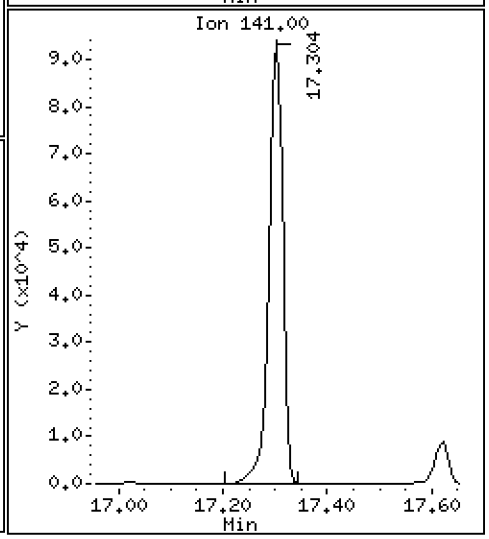












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

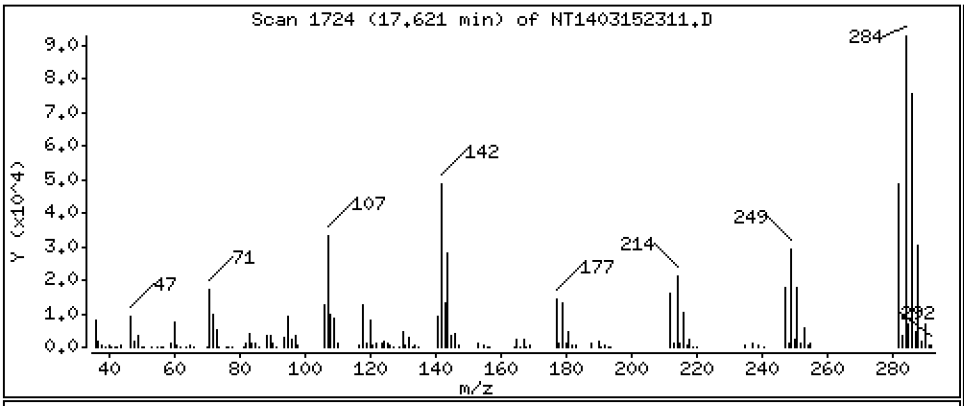
Operator: JGR

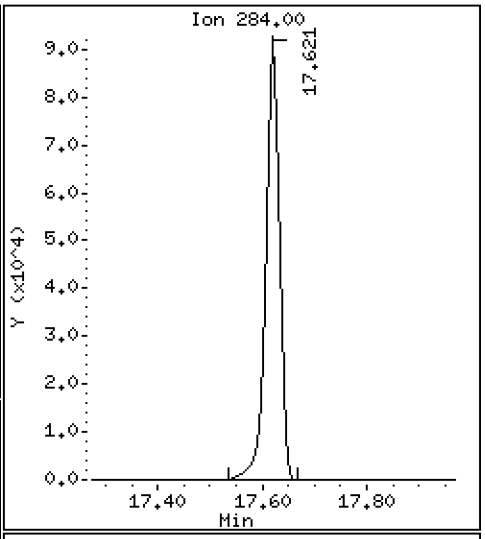
Column phase: ZB-5msi

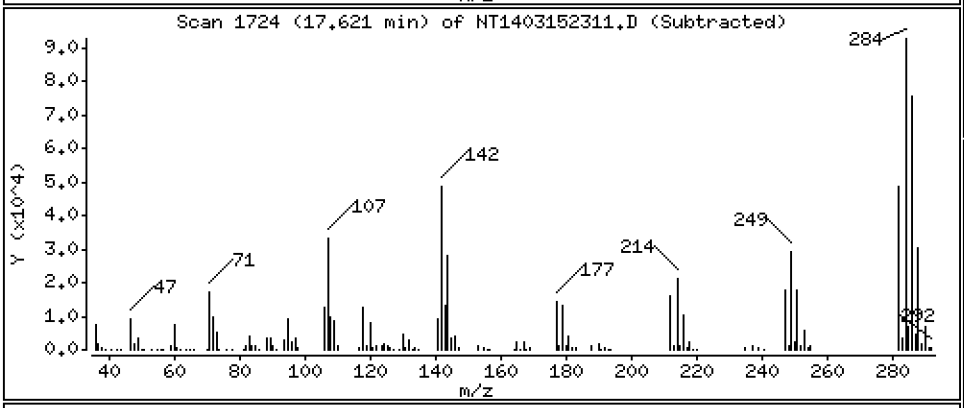
Column diameter: 0.25

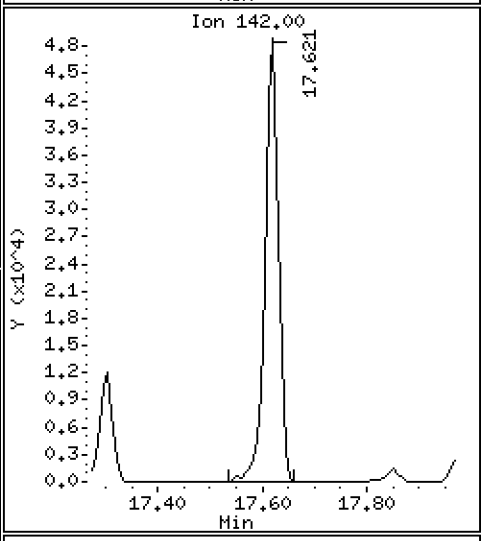
57 Hexachlorobenzene

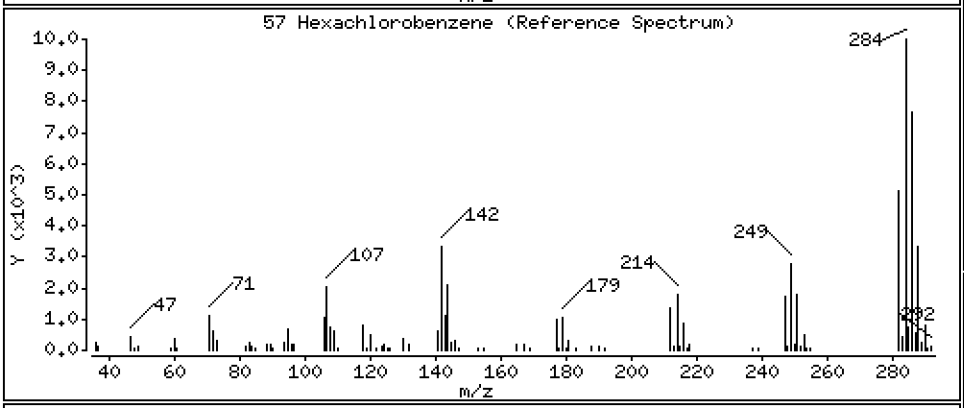
Concentration: 4.780 ug/mL

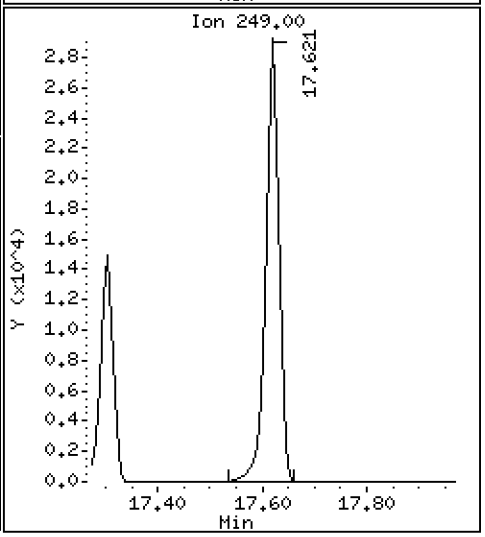


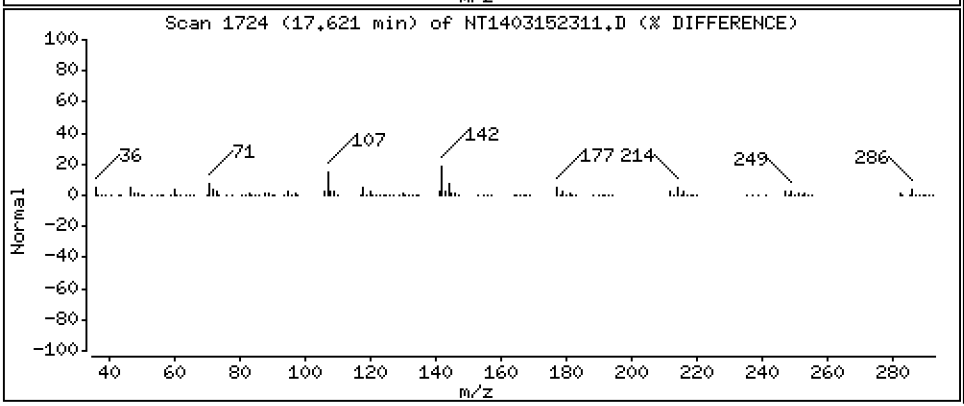












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

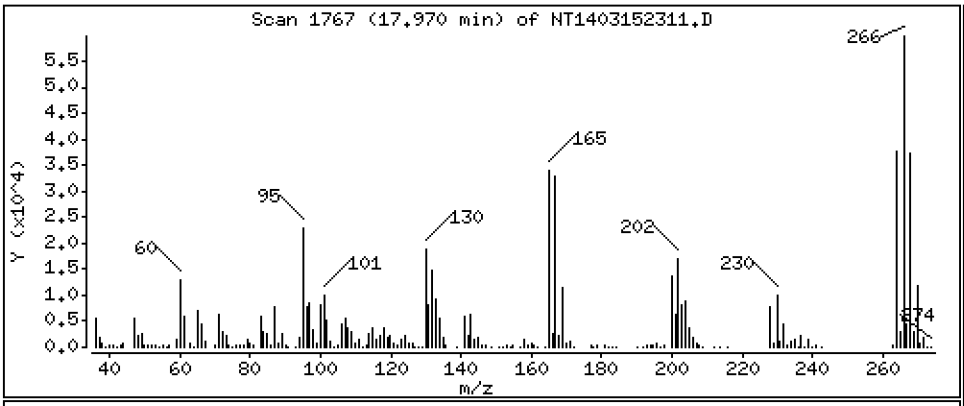
Operator: JGR

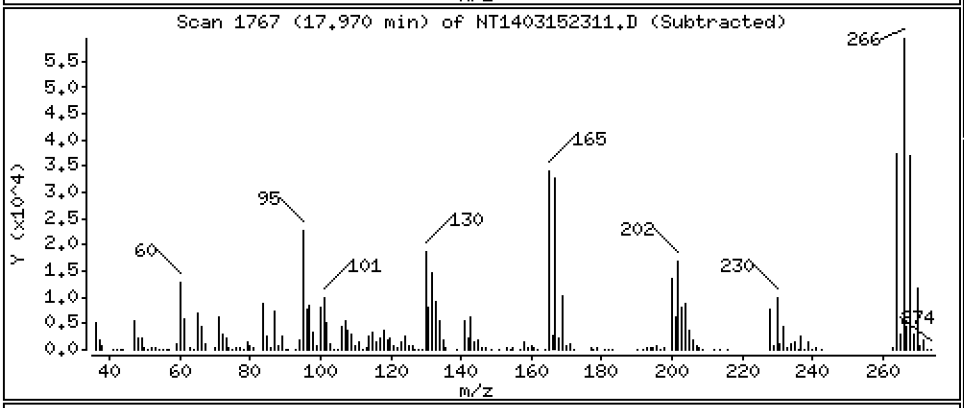
Column phase: ZB-5msi

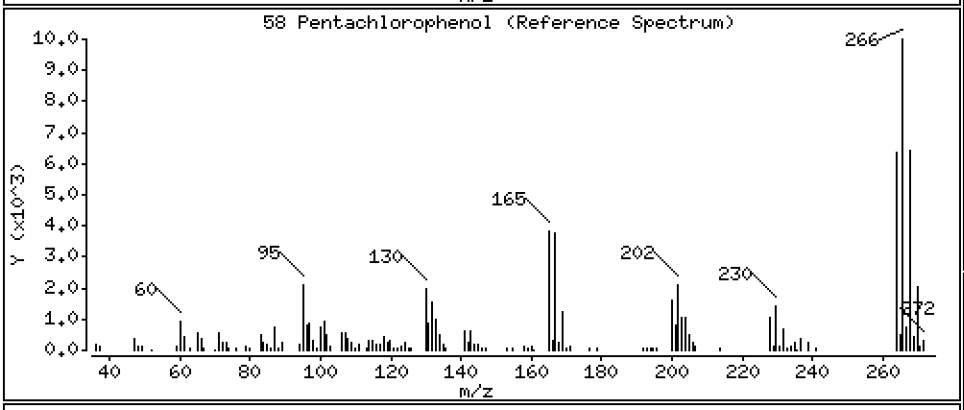
Column diameter: 0.25

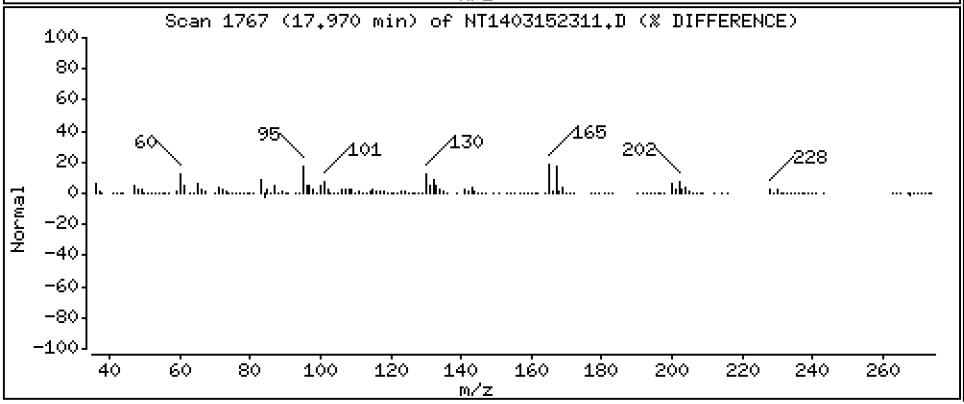
58 Pentachlorophenol

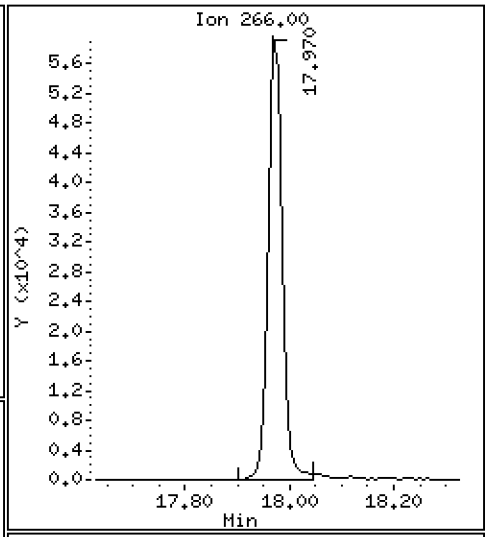
Concentration: 4.477 ug/mL

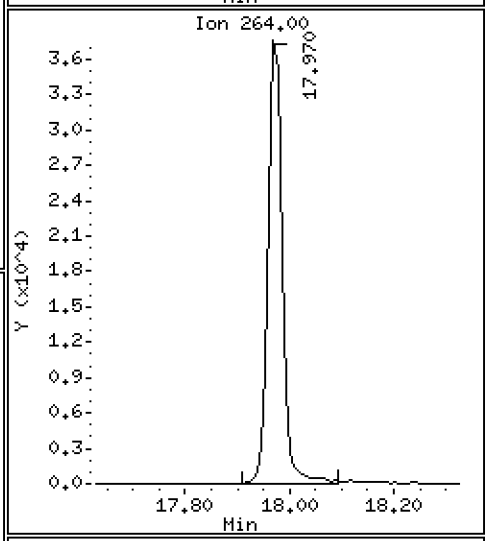


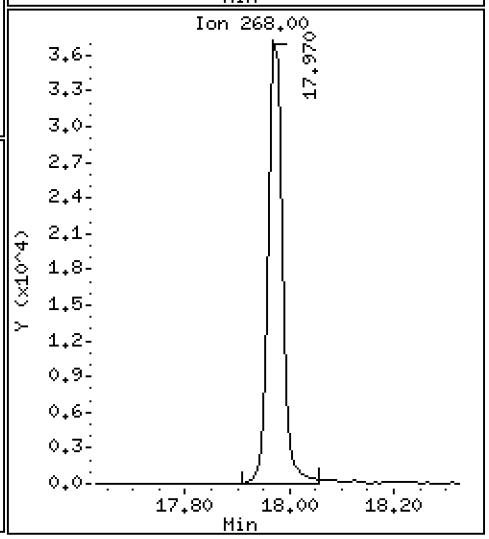












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

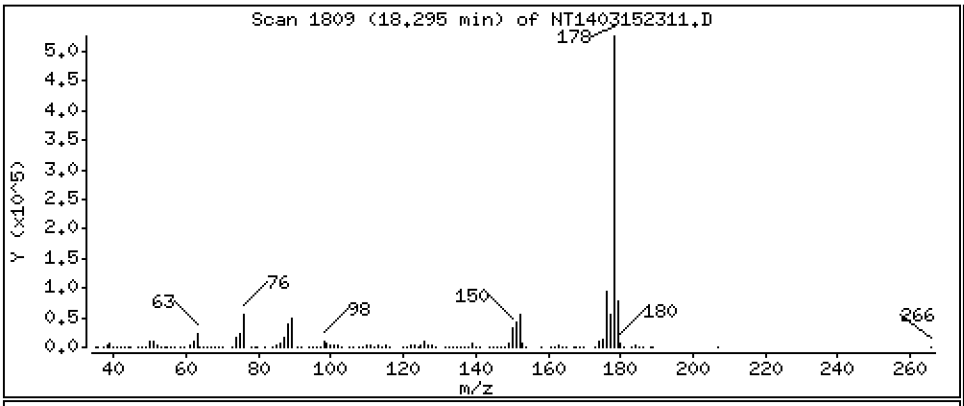
Operator: JGR

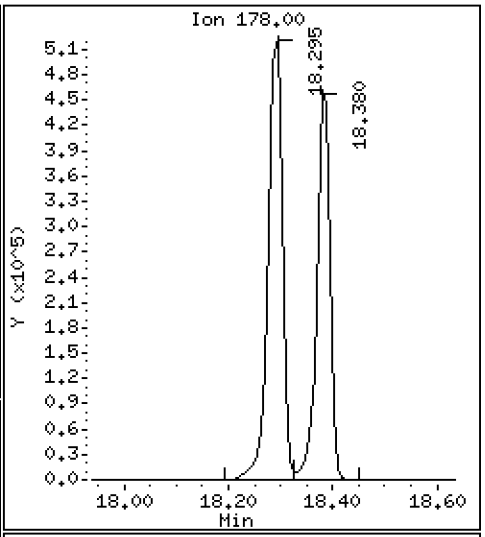
Column phase: ZB-5msi

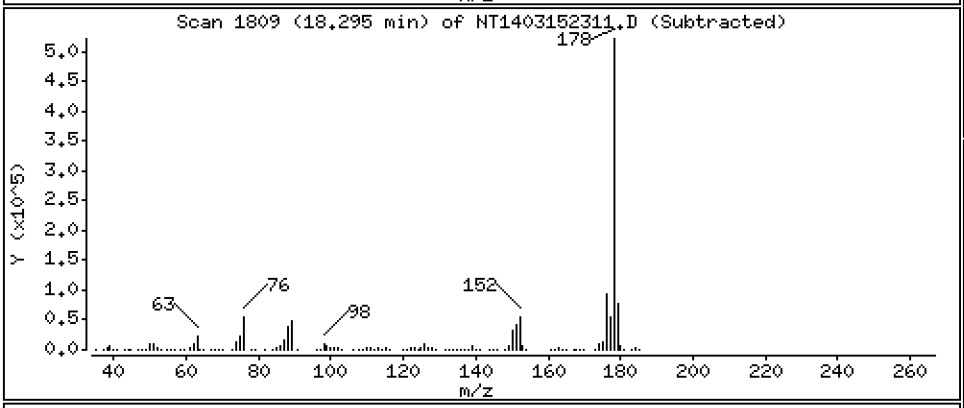
Column diameter: 0.25

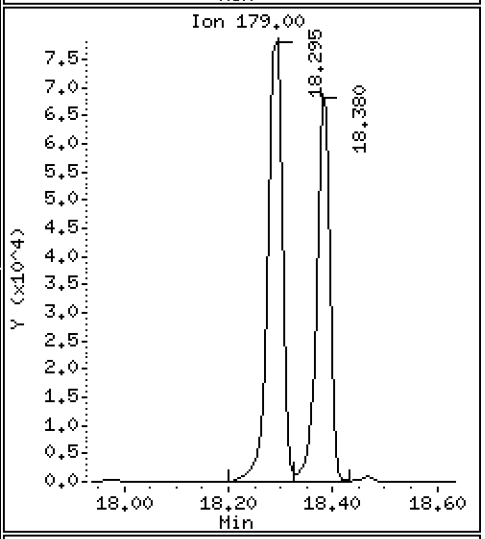
60 Phenanthrene

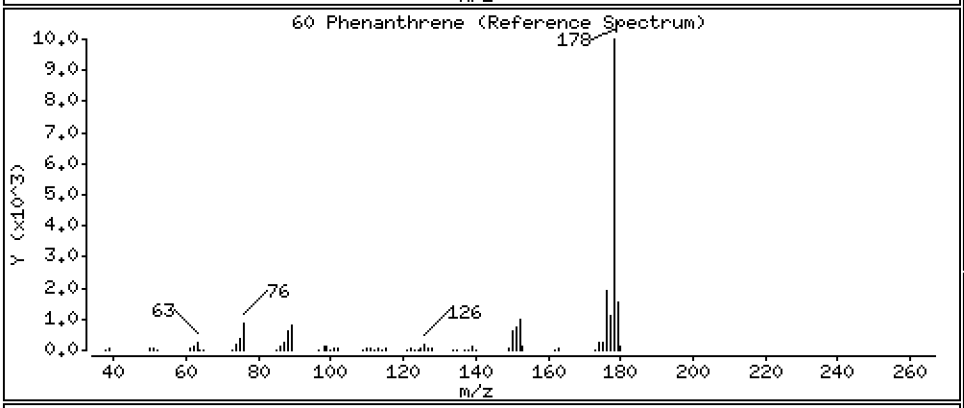
Concentration: 4.734 ug/mL

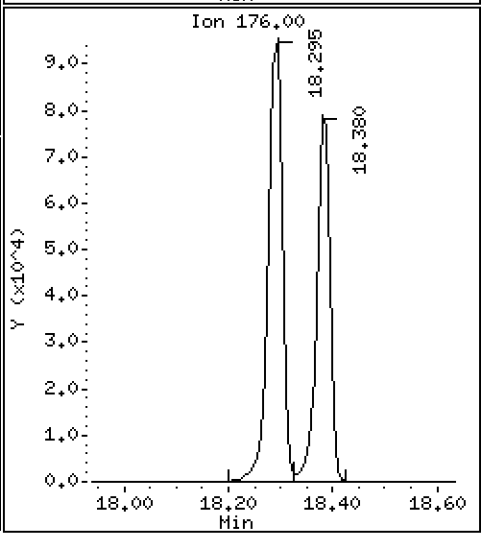


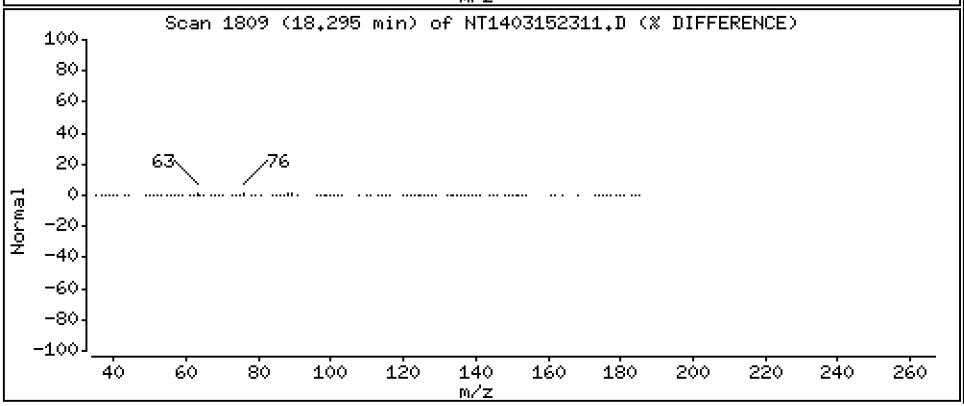












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

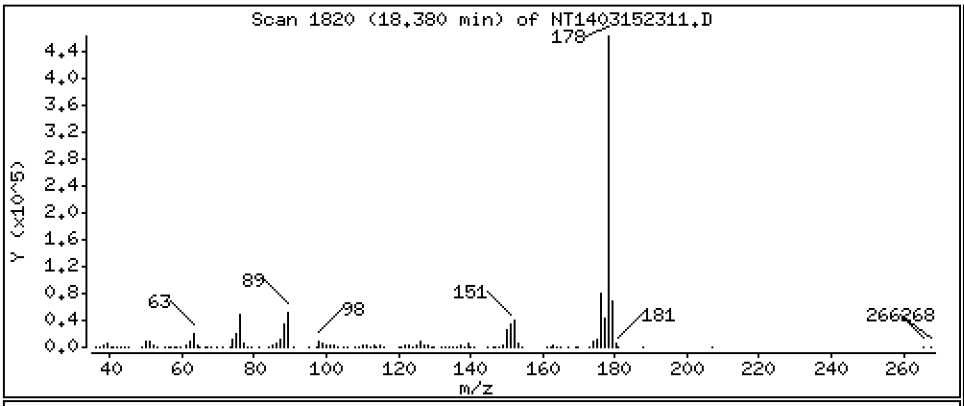
Operator: JGR

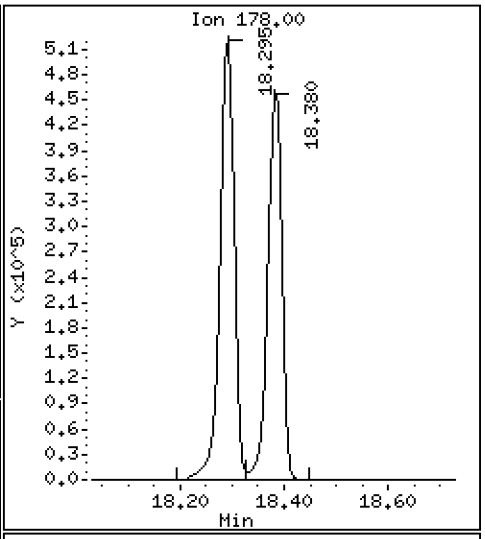
Column phase: ZB-5msi

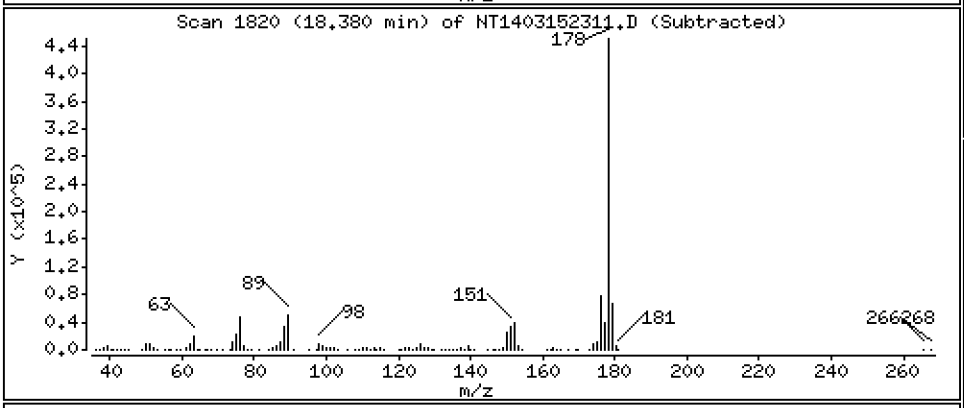
Column diameter: 0.25

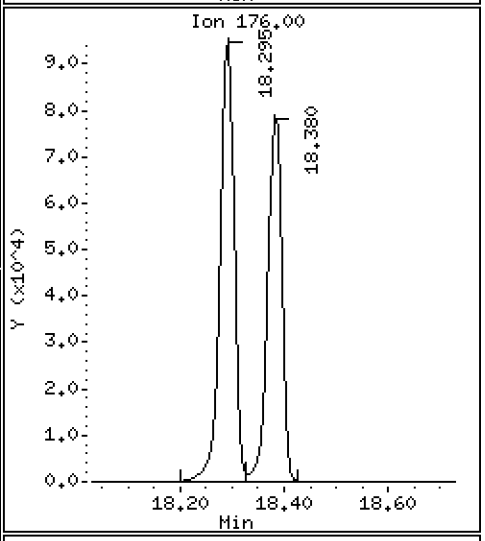
61 Anthracene

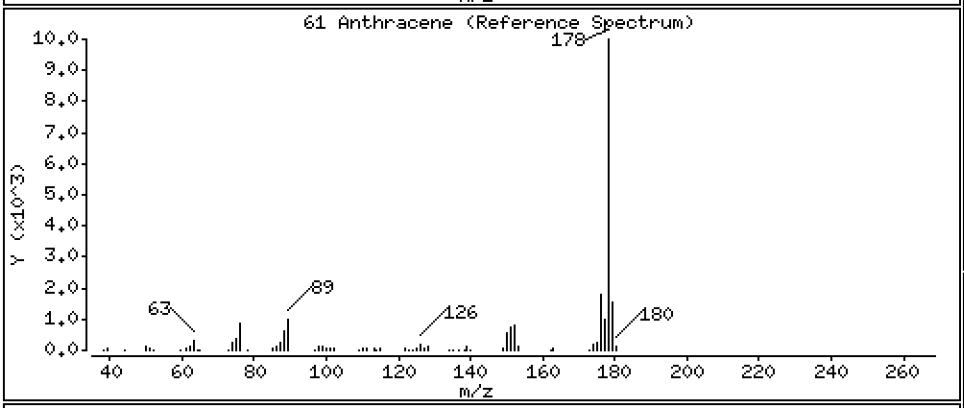
Concentration: 4.281 ug/mL

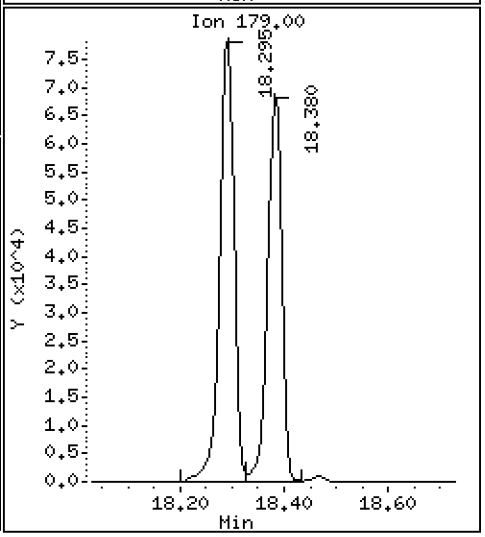


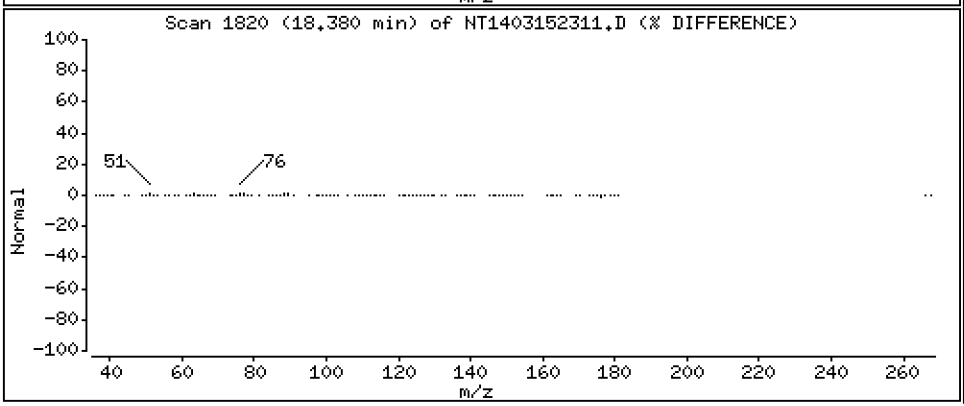












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

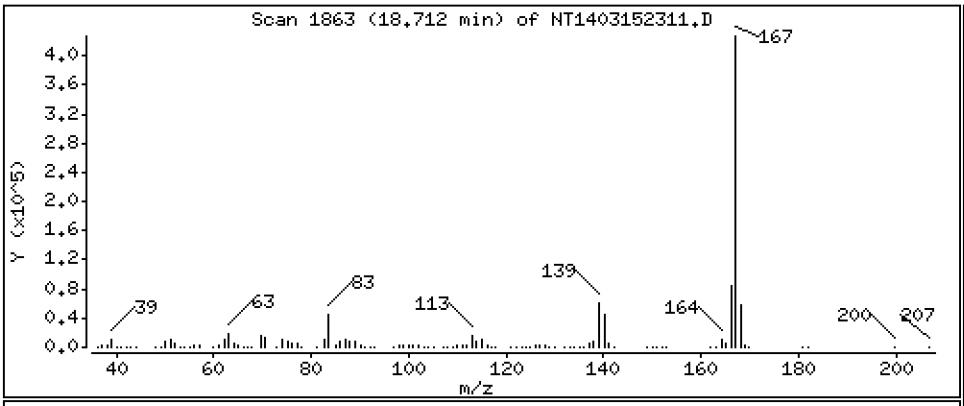
Operator: JGR

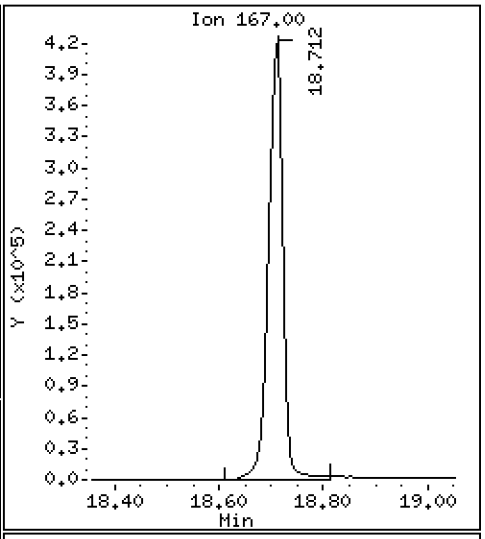
Column phase: ZB-5msi

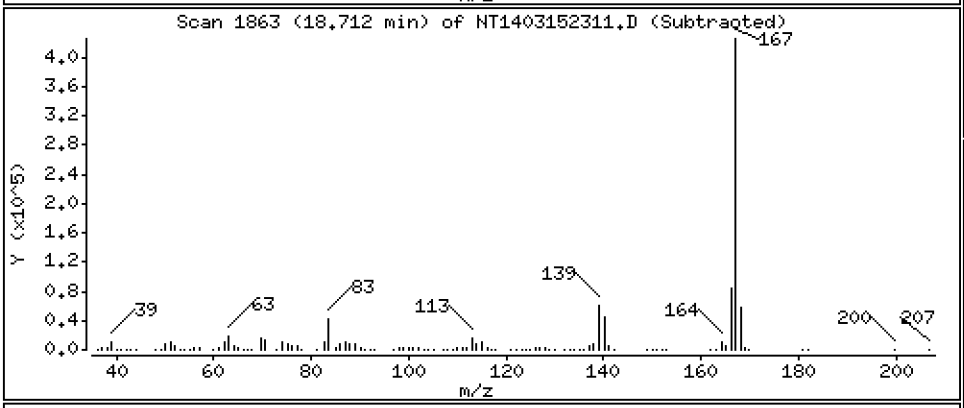
Column diameter: 0.25

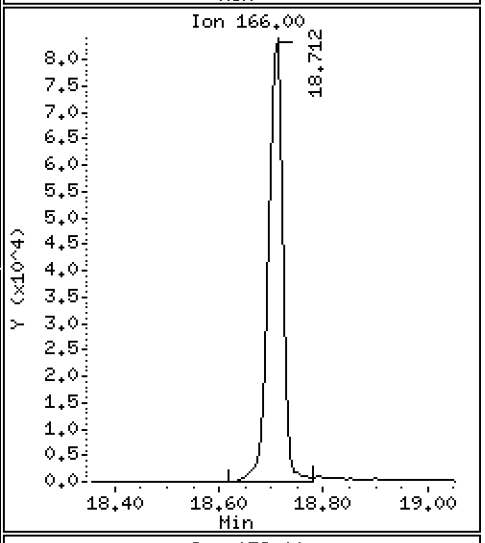
62 Carbazole

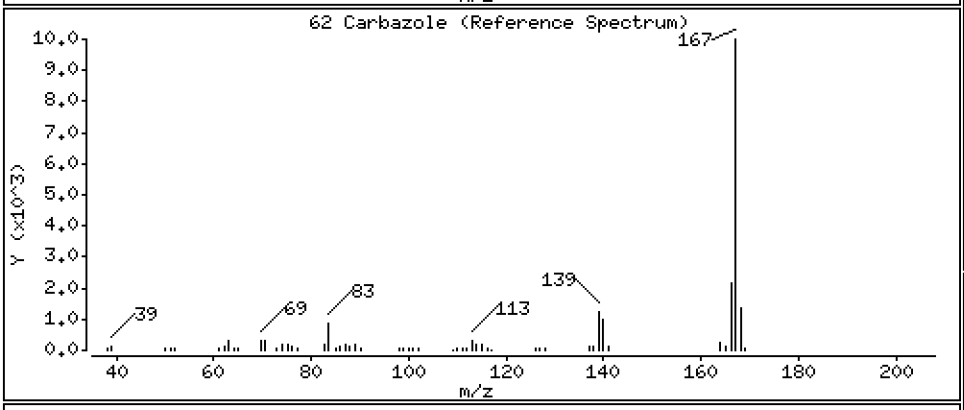
Concentration: 4.587 ug/mL

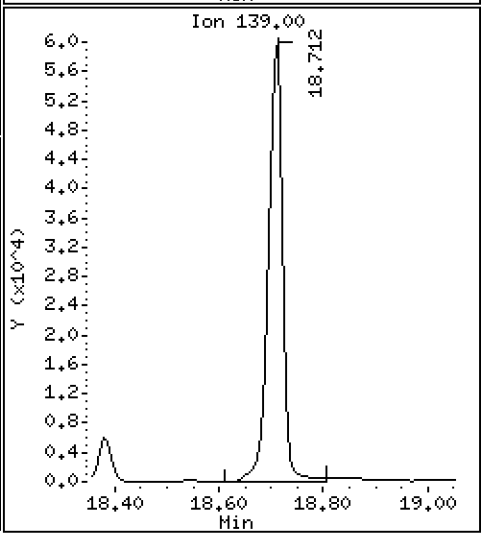


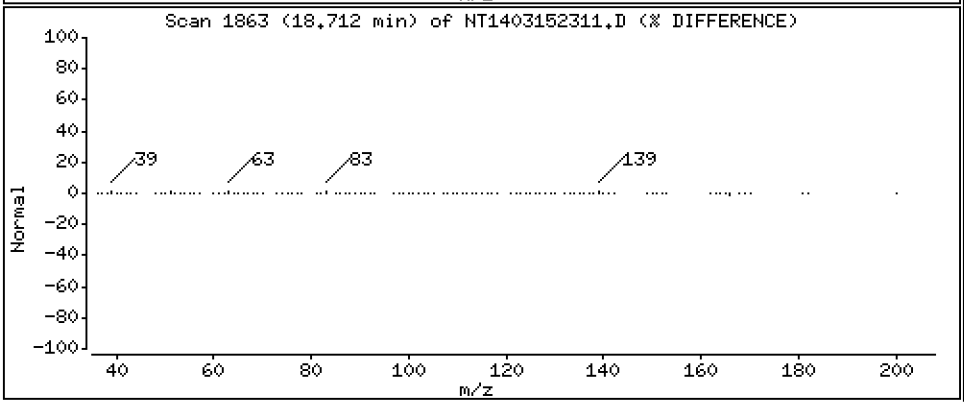












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

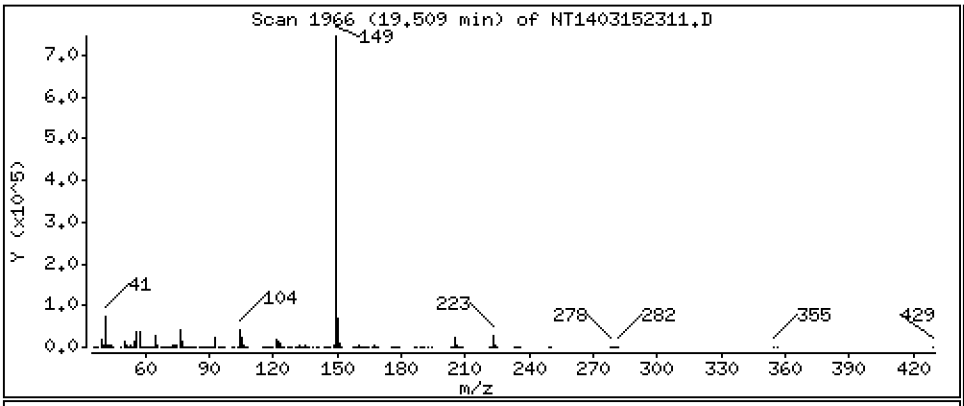
Operator: JGR

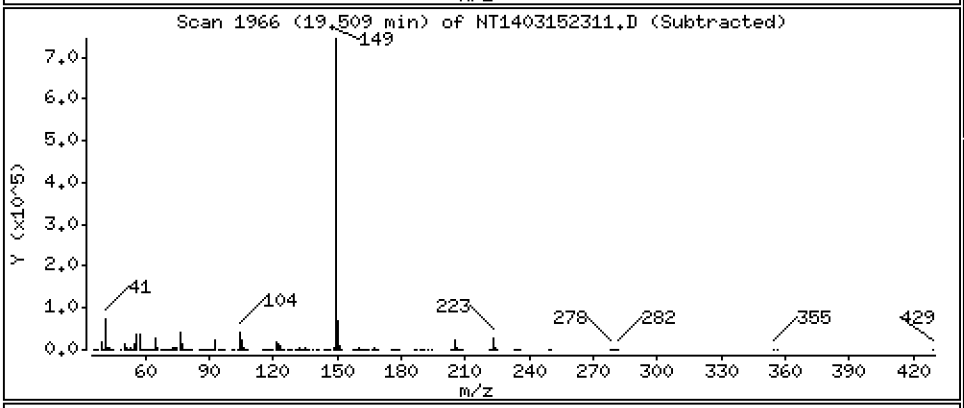
Column phase: ZB-5msi

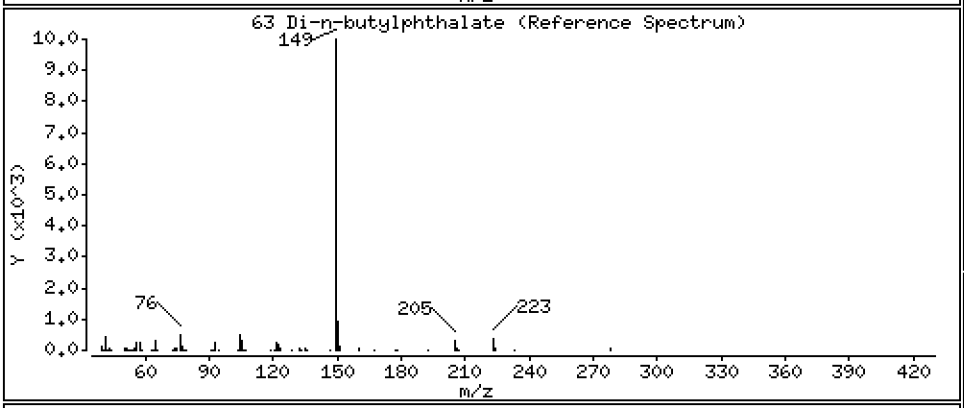
Column diameter: 0.25

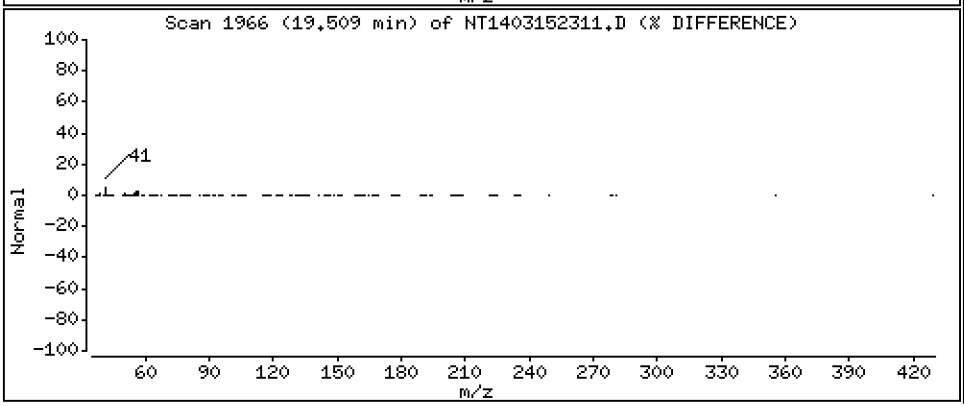
63 Di-n-butylphthalate

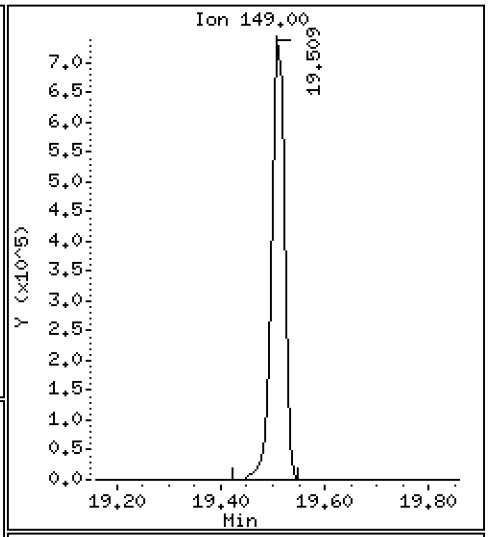
Concentration: 5.507 ug/mL

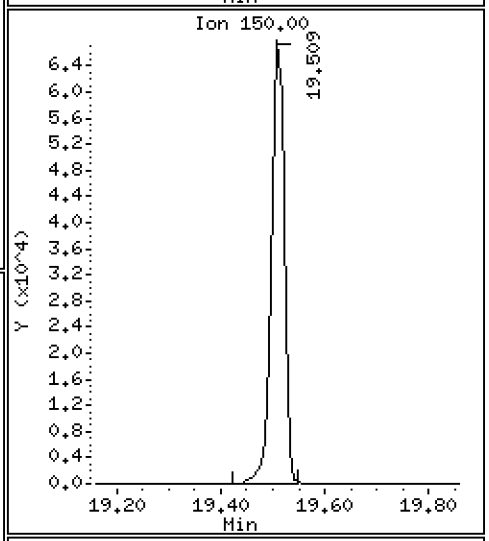


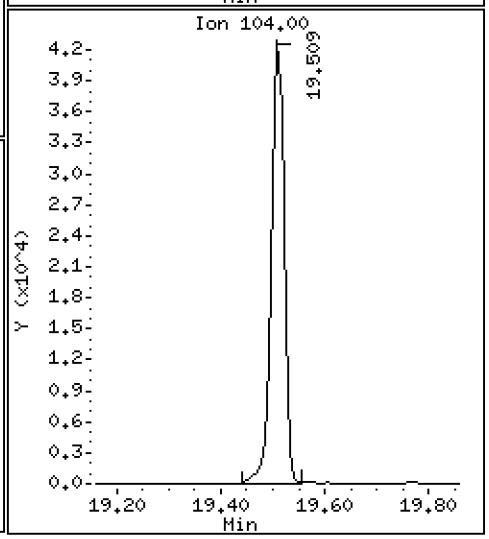












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

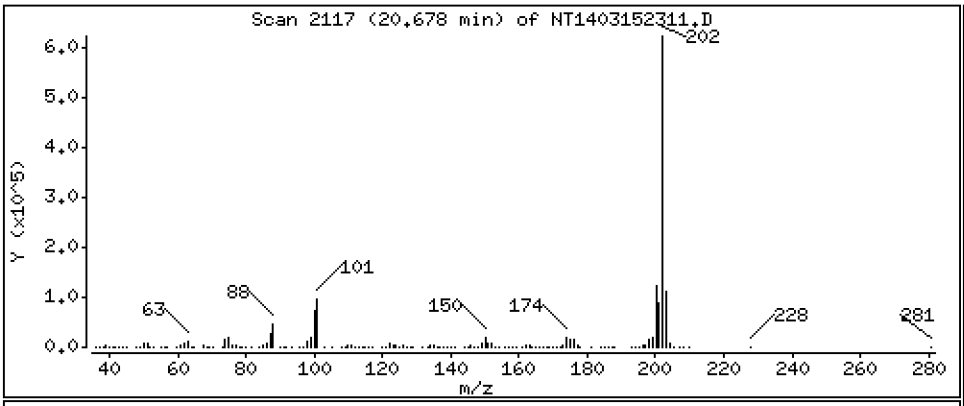
Operator: JGR

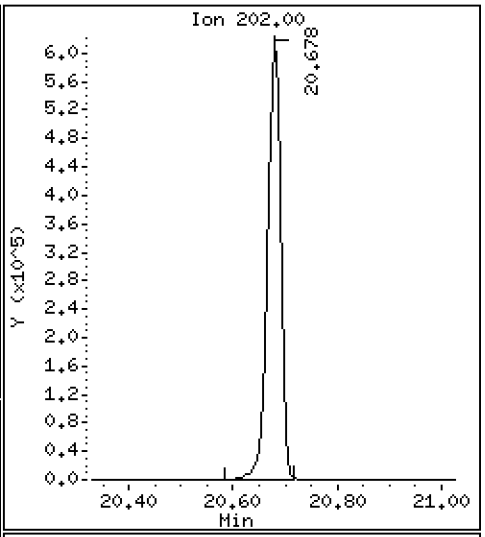
Column phase: ZB-5msi

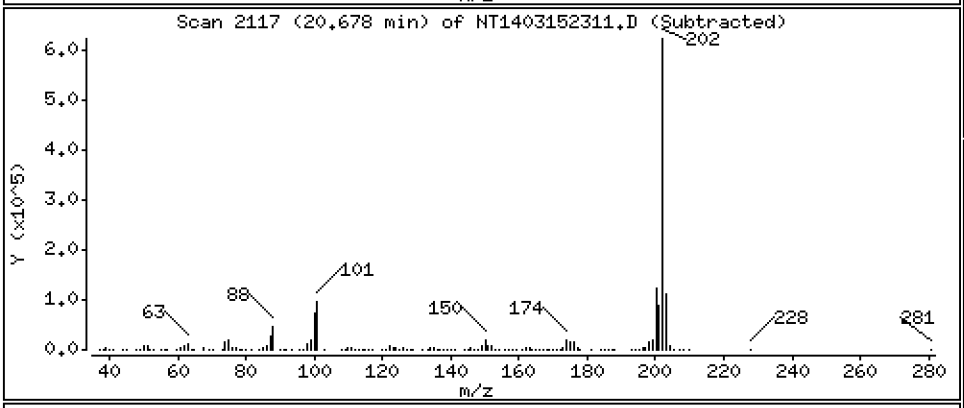
Column diameter: 0.25

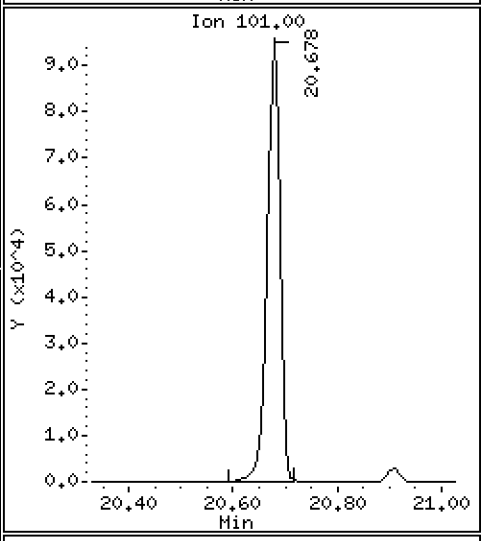
64 Fluoranthene

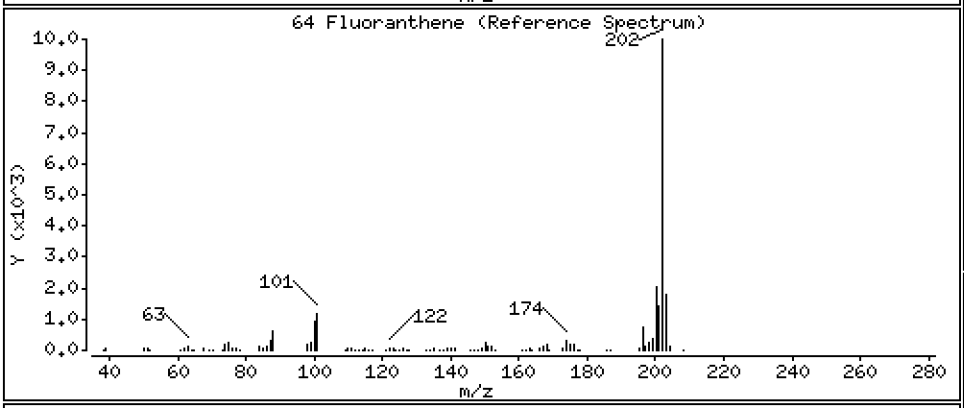
Concentration: 5.024 ug/mL

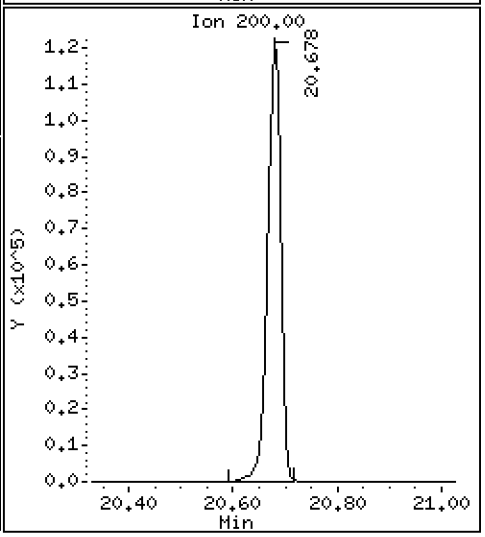


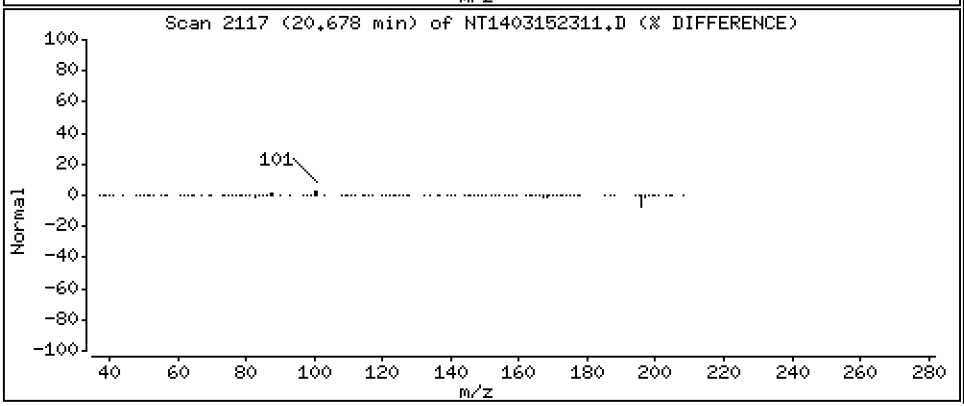












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

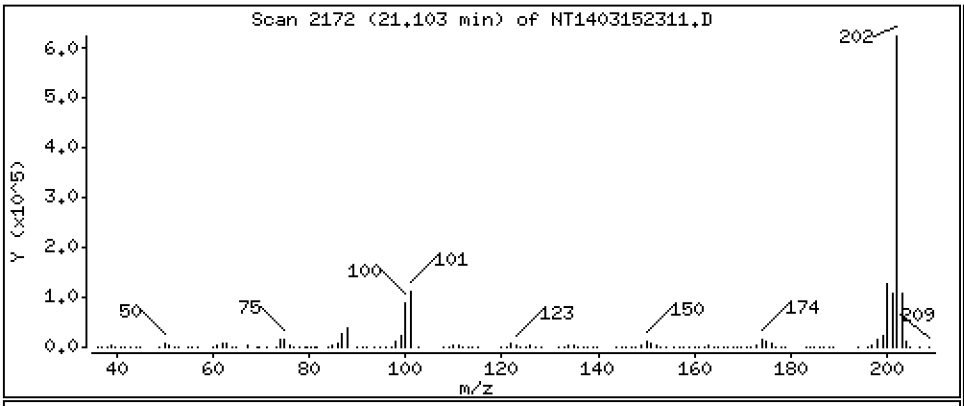
Operator: JGR

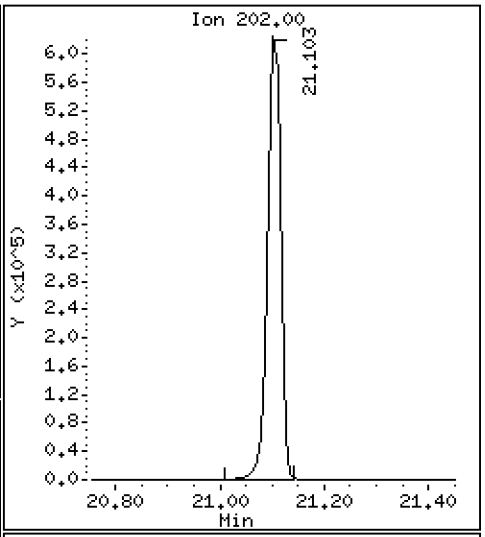
Column phase: ZB-5msi

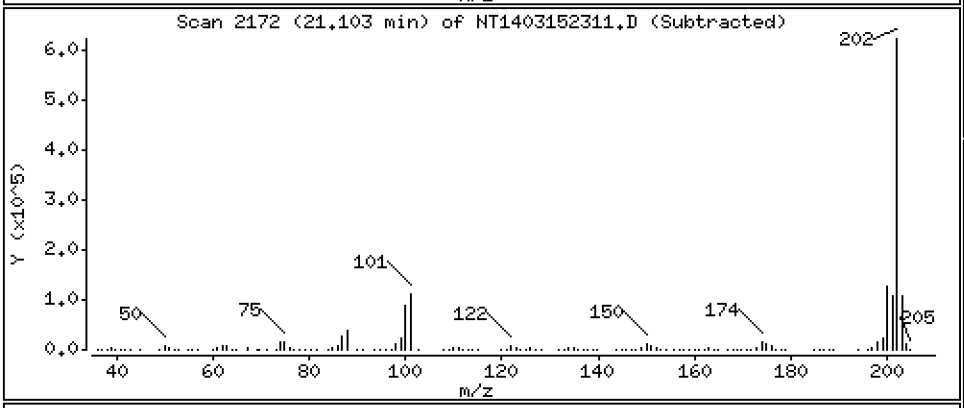
Column diameter: 0.25

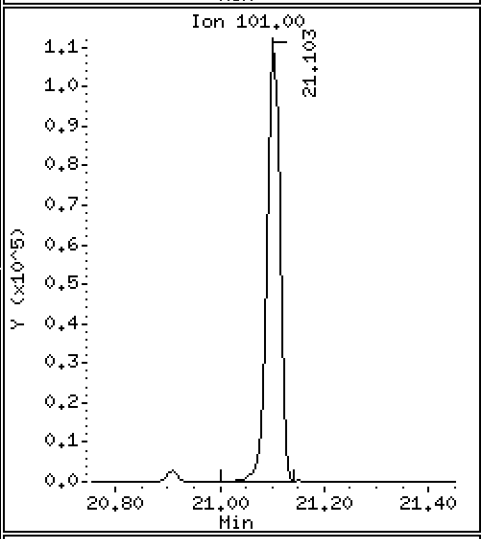
65 Pyrene

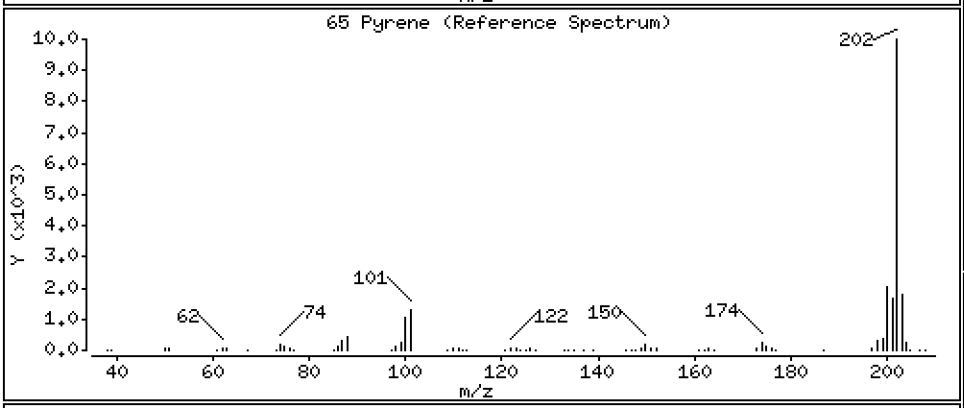
Concentration: 4.958 ug/mL

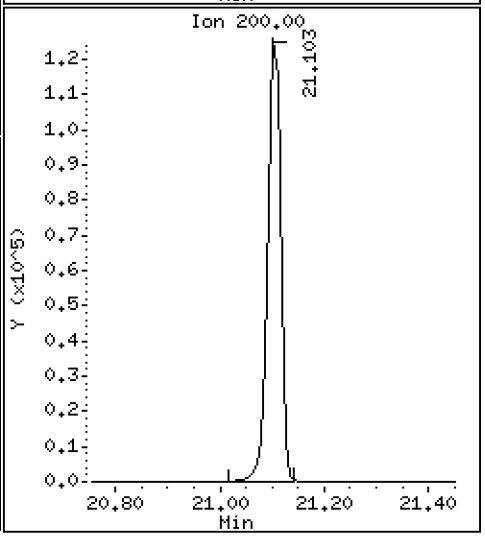


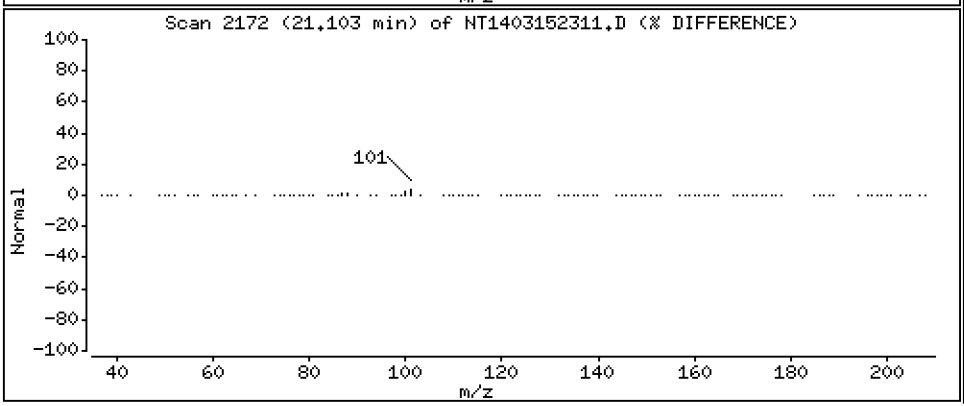












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

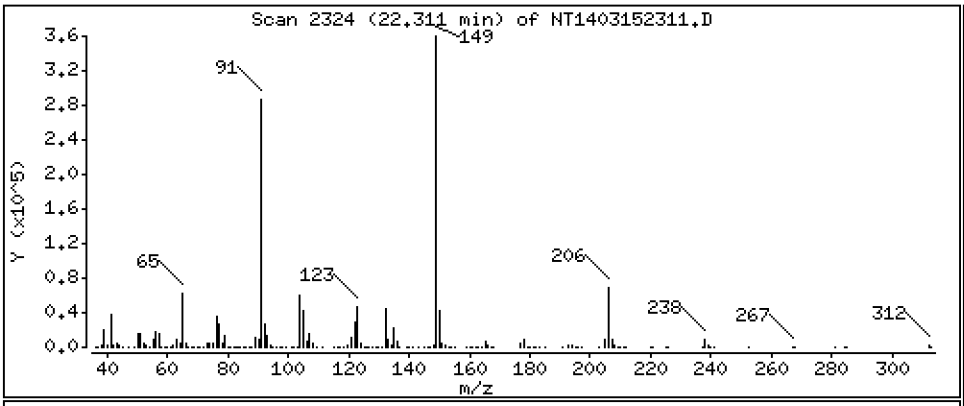
Operator: JGR

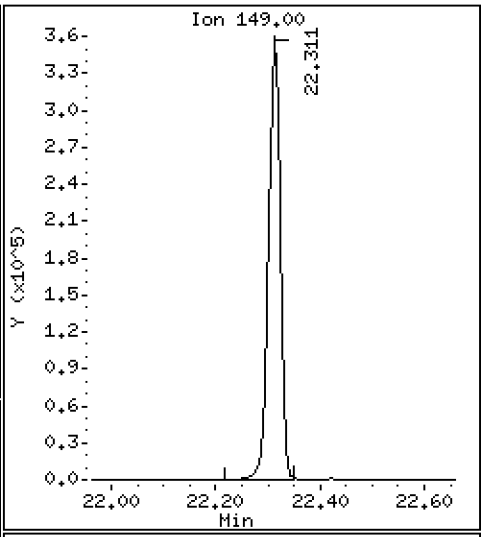
Column phase: ZB-5msi

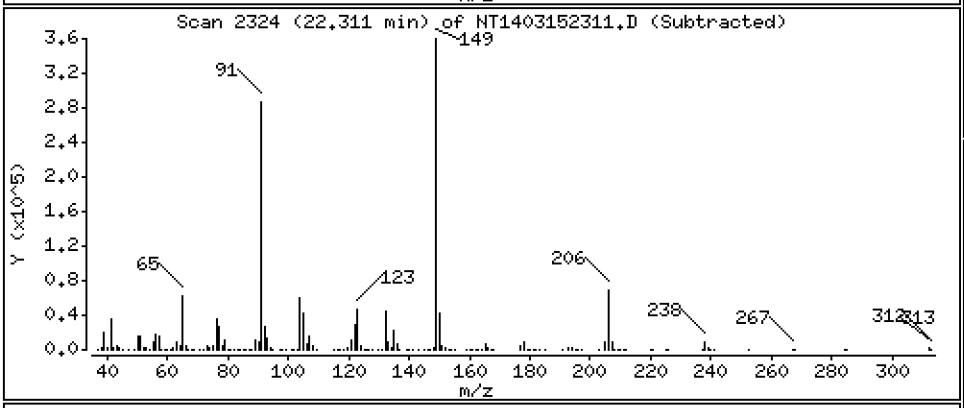
Column diameter: 0.25

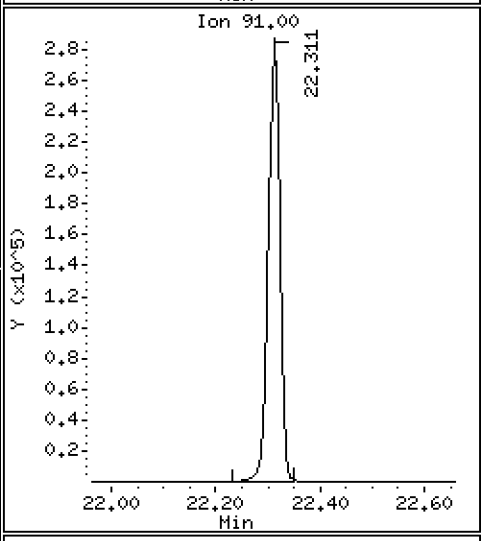
67 Butylbenzylphthalate

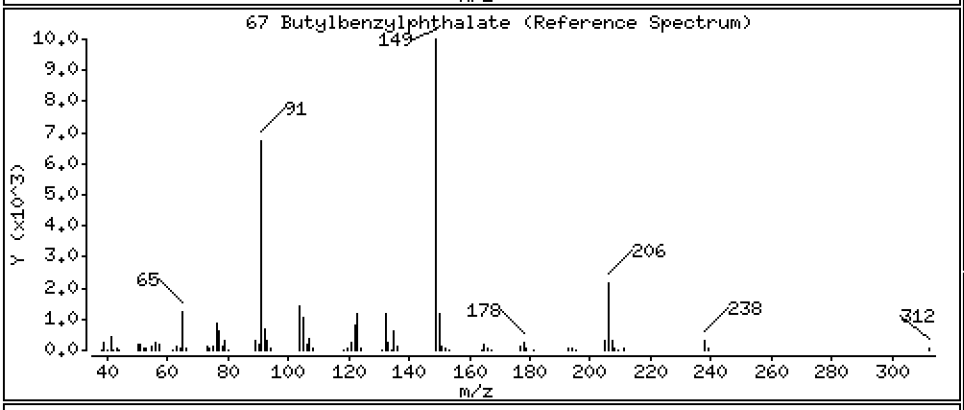
Concentration: 5.737 ug/mL

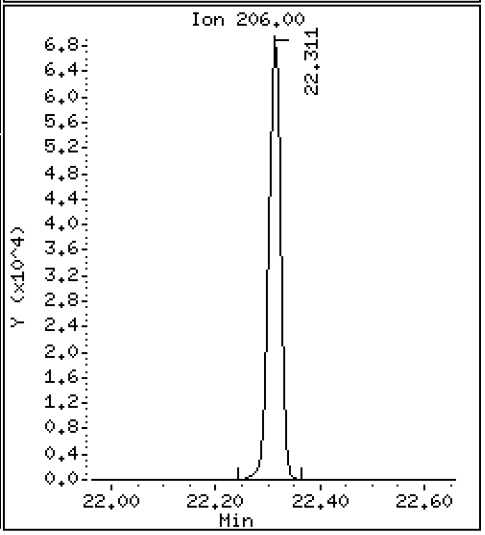


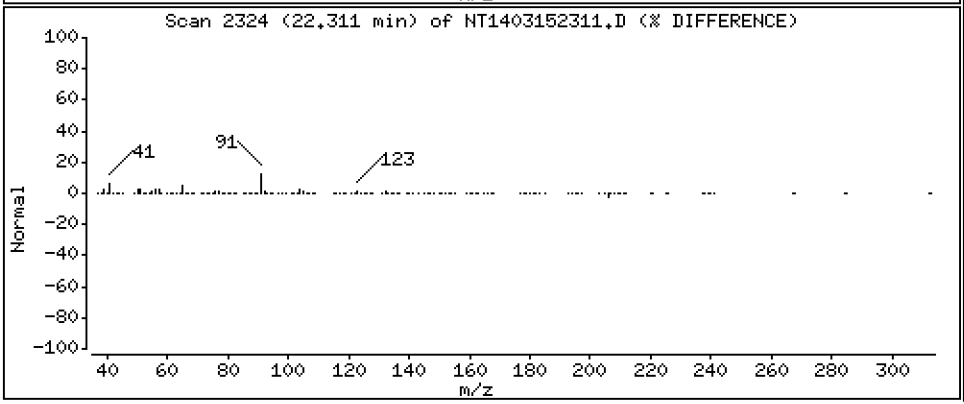












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

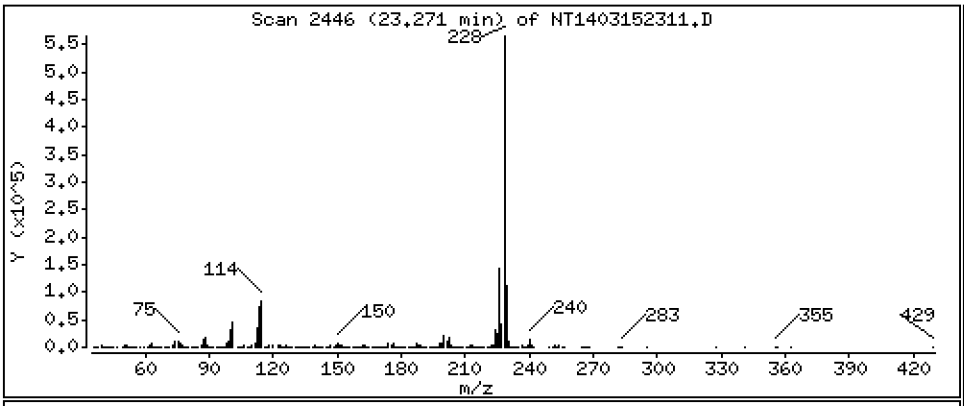
Operator: JGR

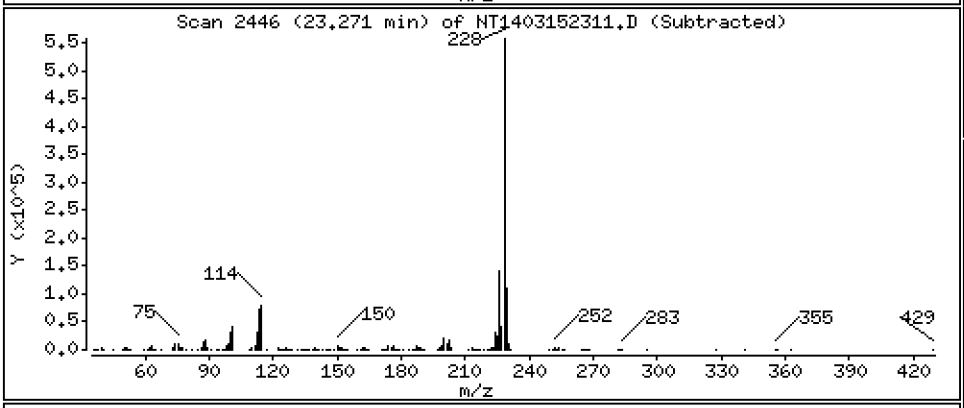
Column phase: ZB-5msi

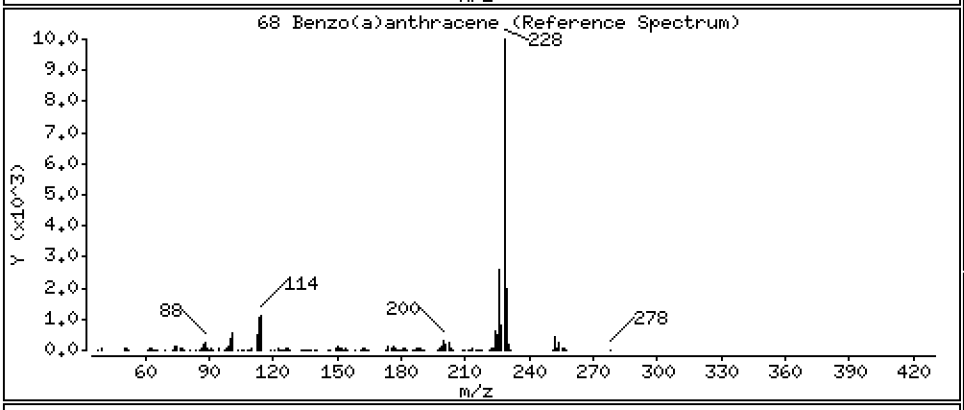
Column diameter: 0.25

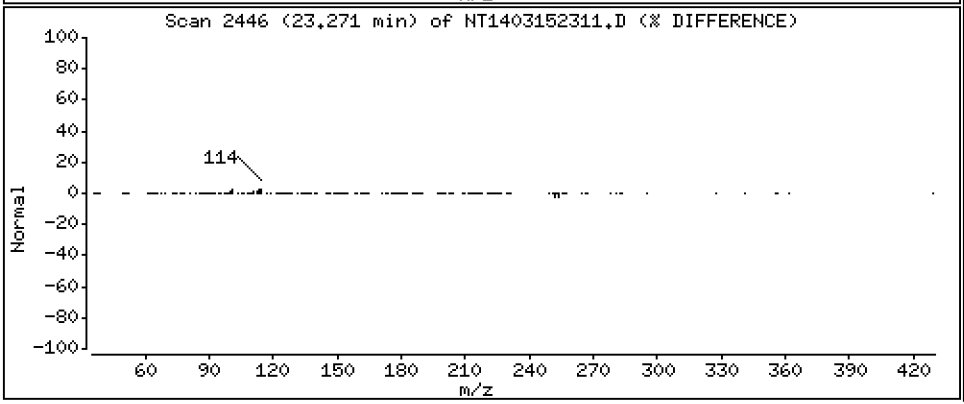
68 Benzo(a)anthracene

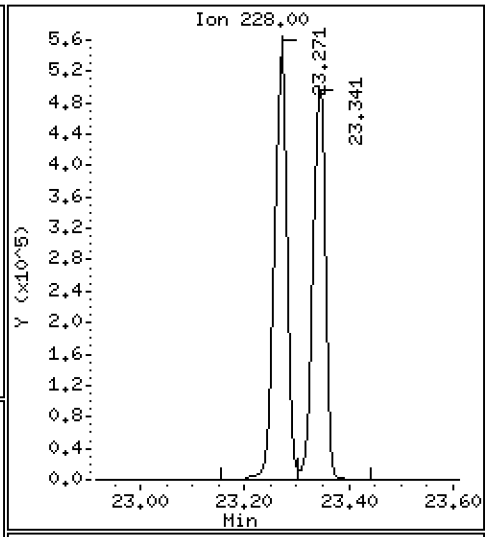
Concentration: 4.827 ug/mL

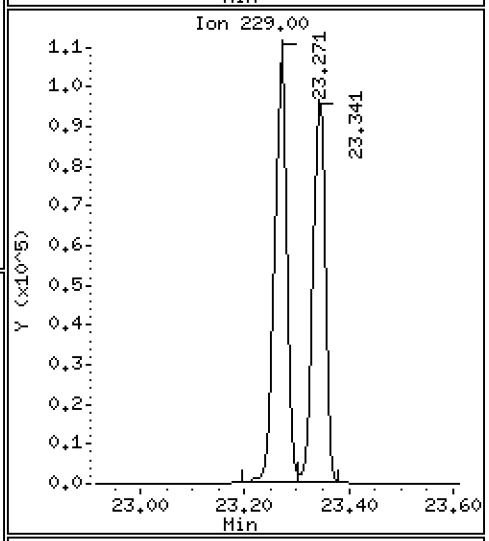


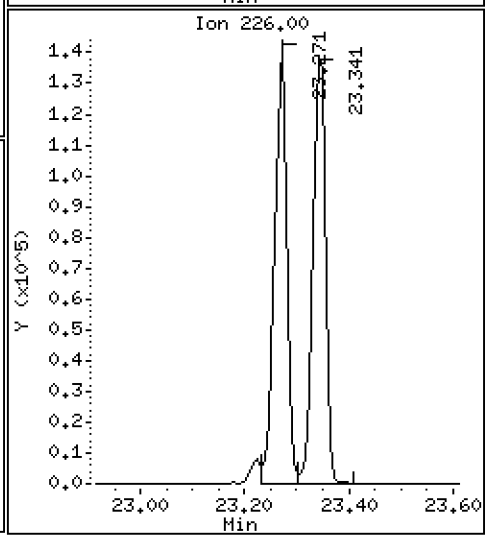












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

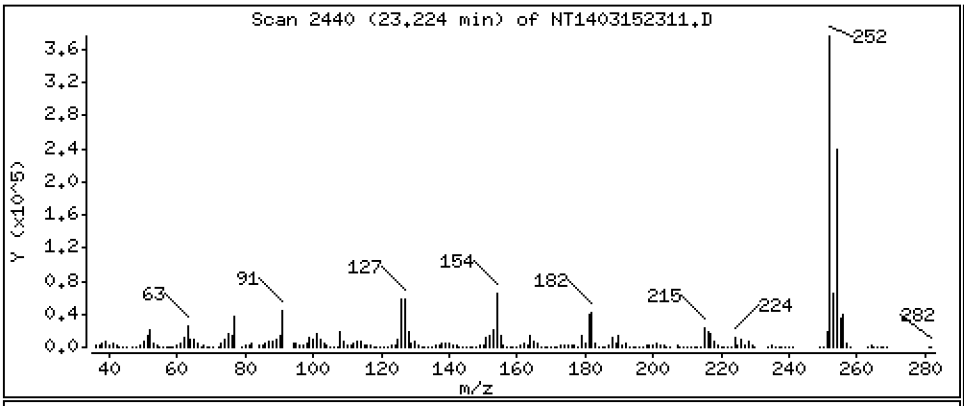
Operator: JGR

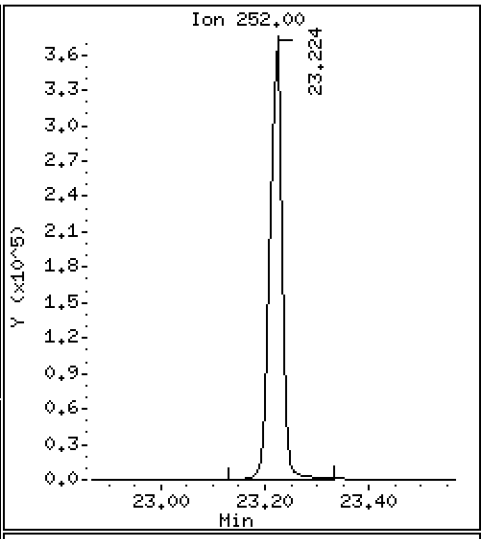
Column phase: ZB-5msi

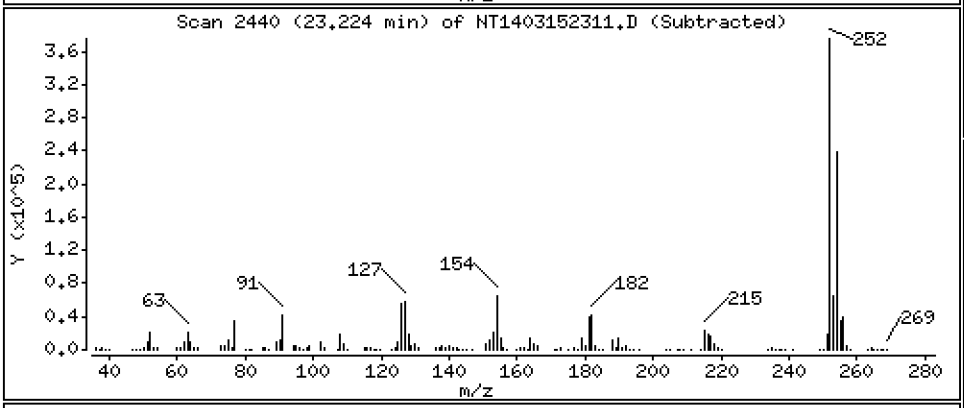
Column diameter: 0.25

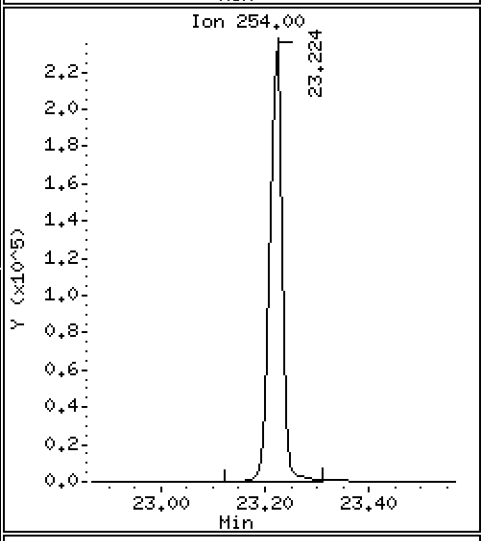
70 3,3'-Dichlorobenzidine

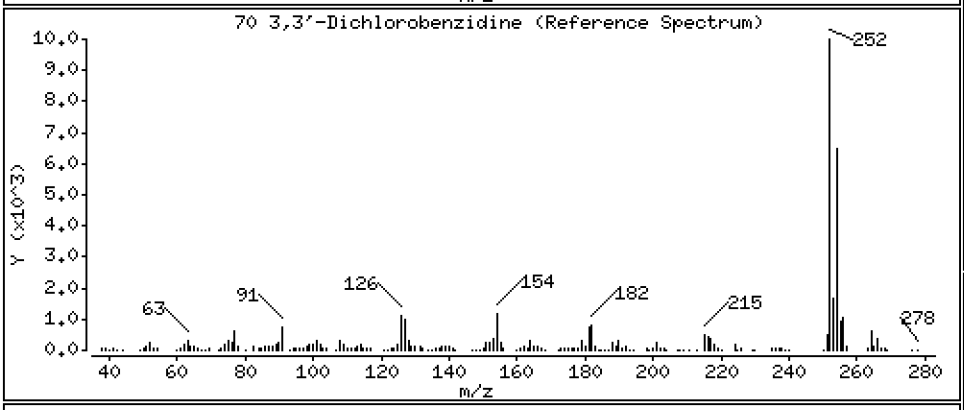
Concentration: 10.65 ug/mL

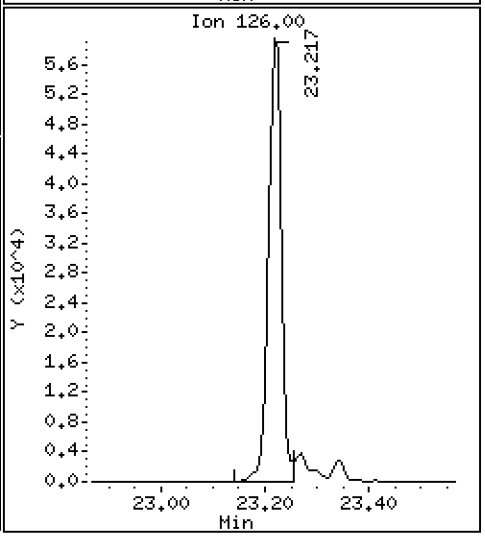


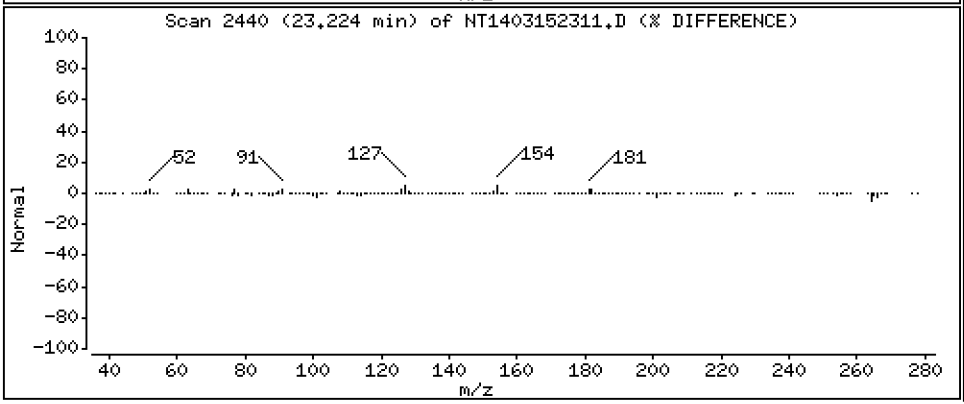












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

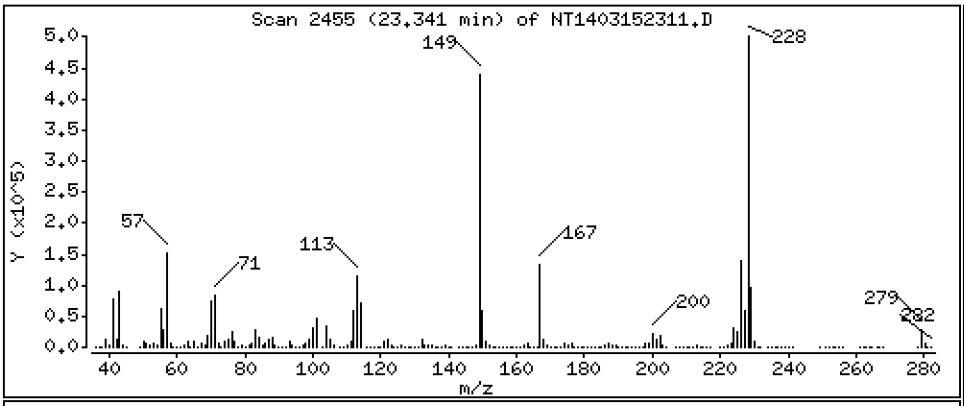
Operator: JGR

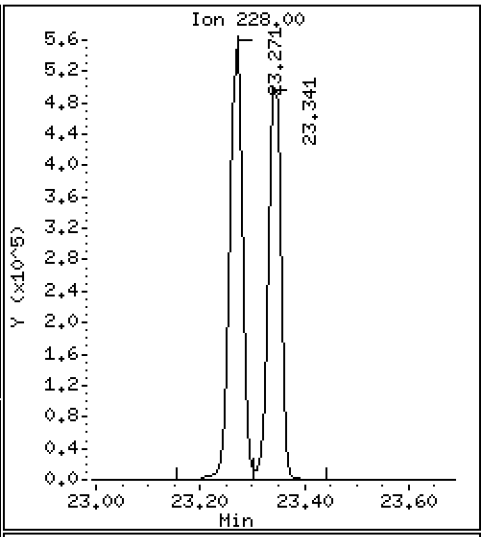
Column phase: ZB-5msi

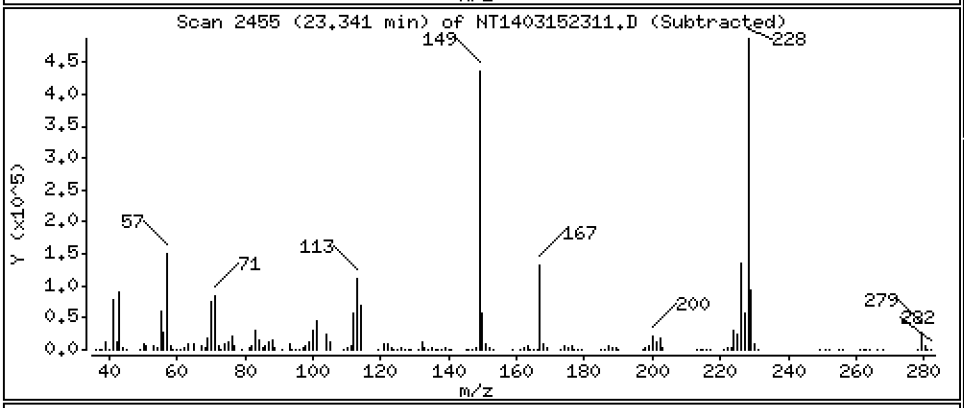
Column diameter: 0.25

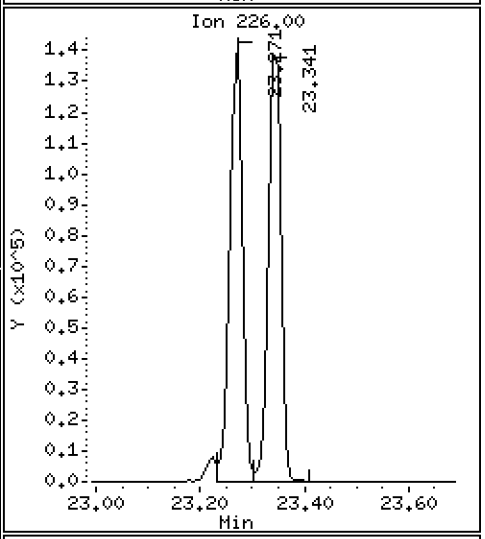
71 Chrysene

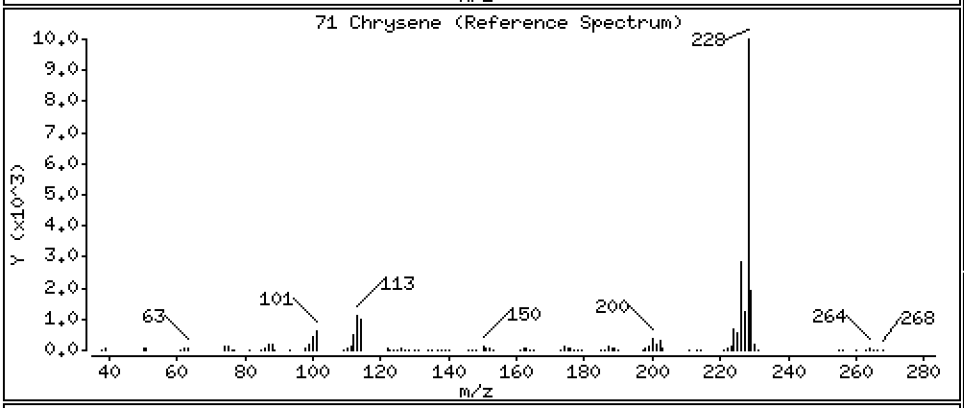
Concentration: 4.723 ug/mL

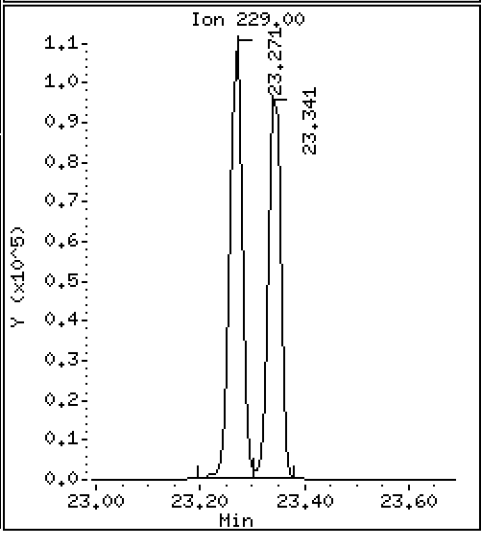


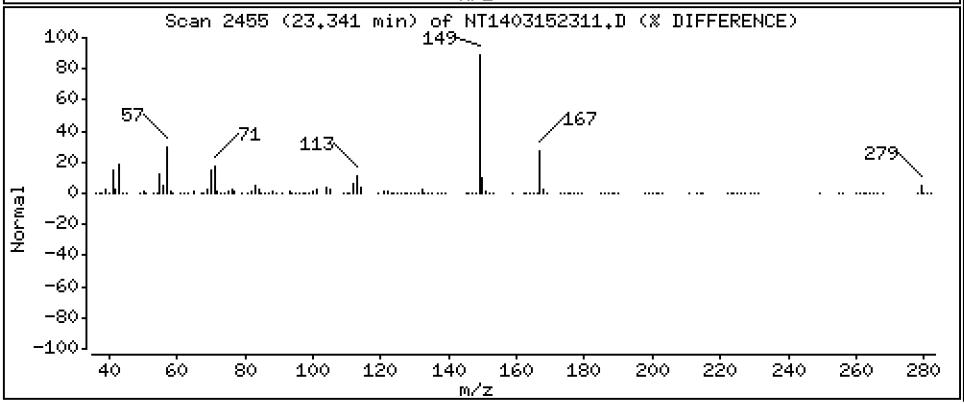












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

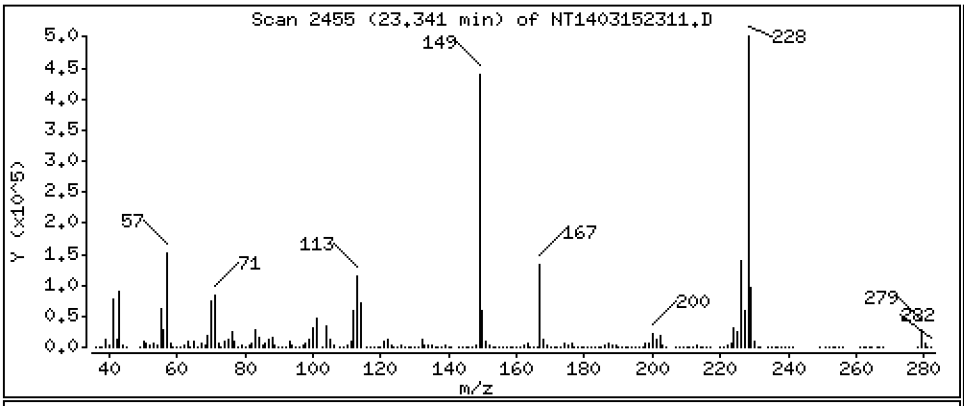
Operator: JGR

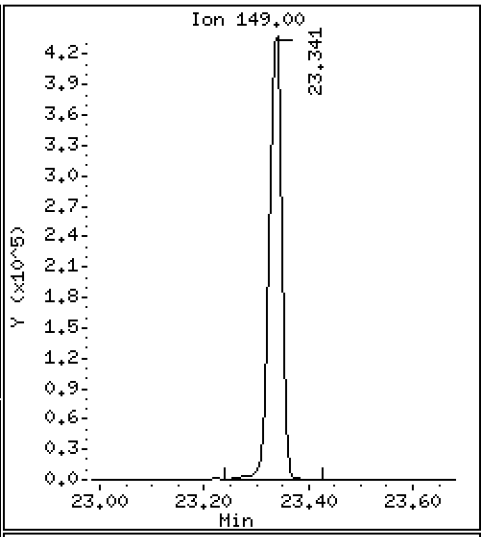
Column phase: ZB-5msi

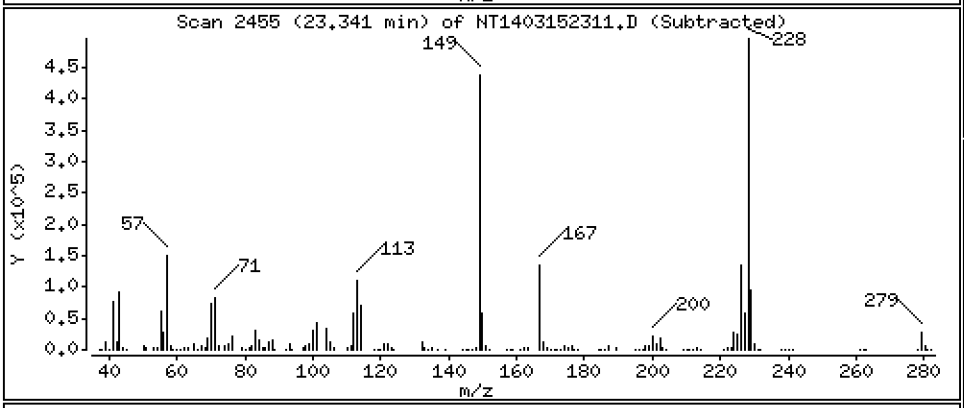
Column diameter: 0.25

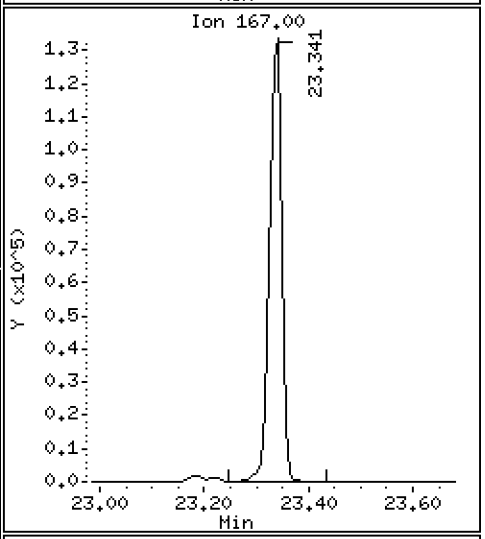
72 bis(2-Ethylhexyl)phthalate

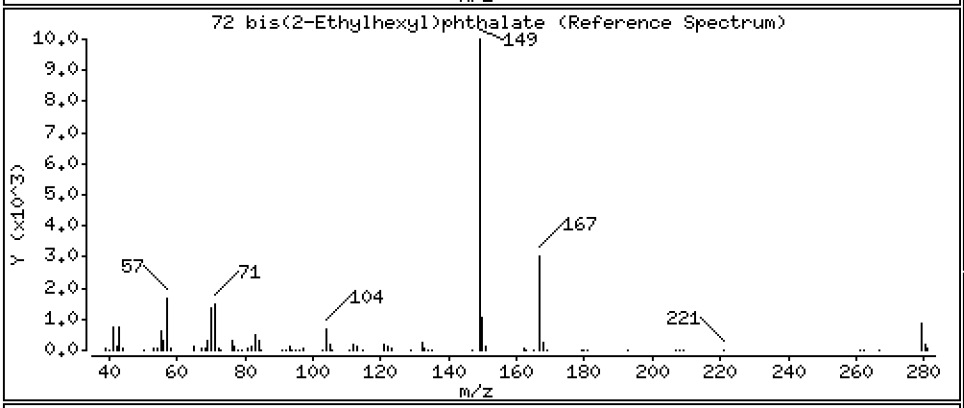
Concentration: 5.428 ug/mL

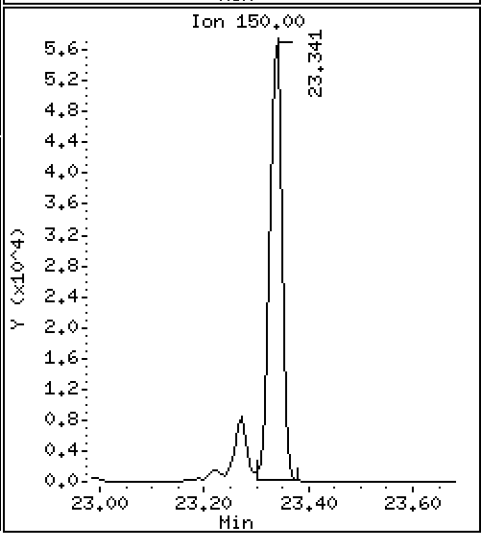


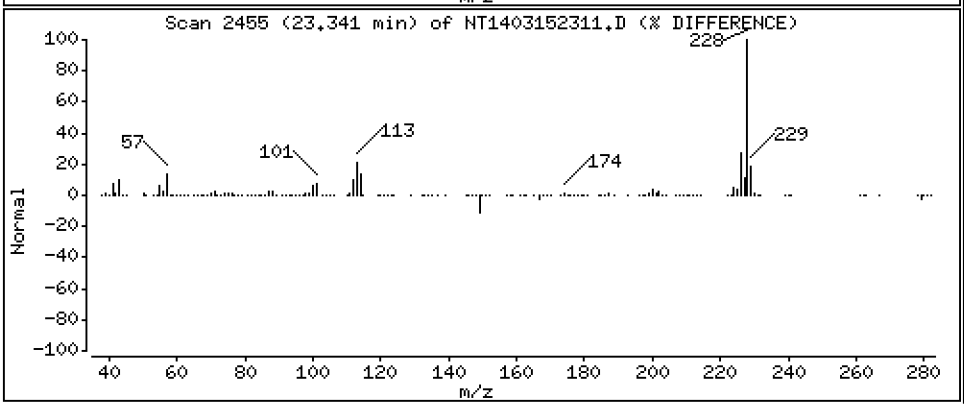












Date : 15-MAR-2023 17:39

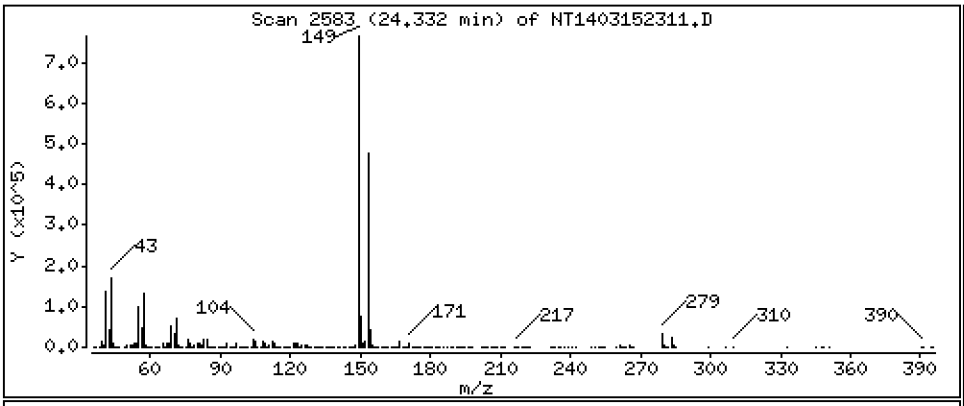
Client ID: Instrument: nt14.i

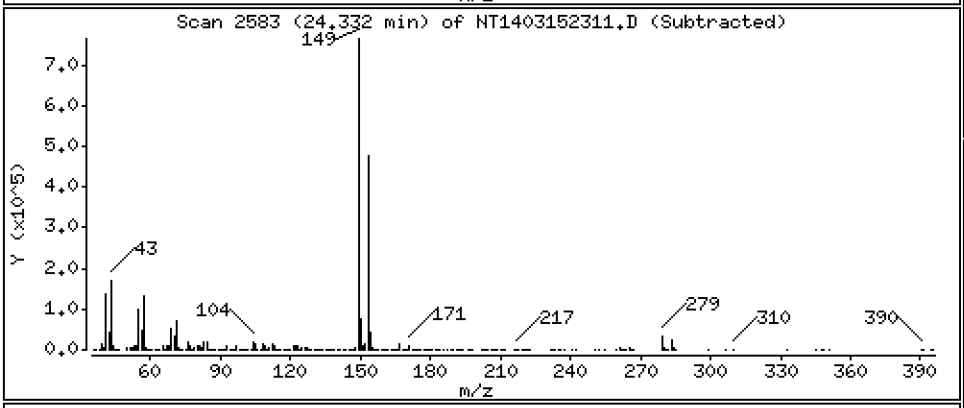
Sample Info: SLC0160-SCV1

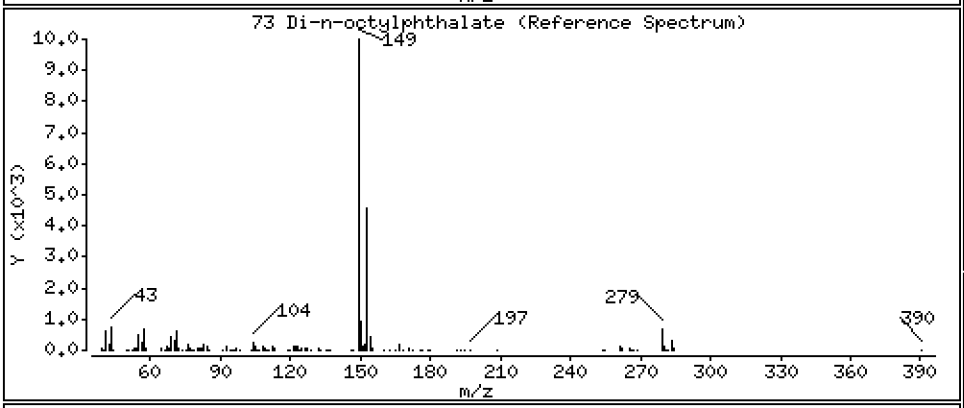
Operator: JGR

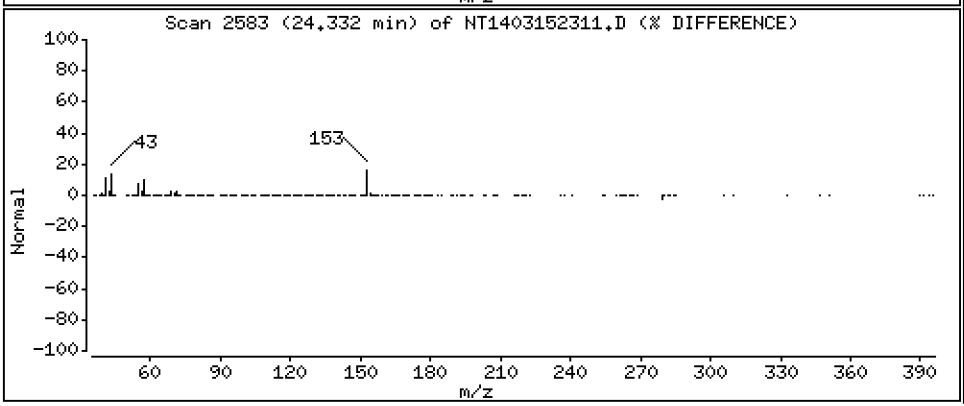
Column phase: ZB-5msi Column diameter: 0.25

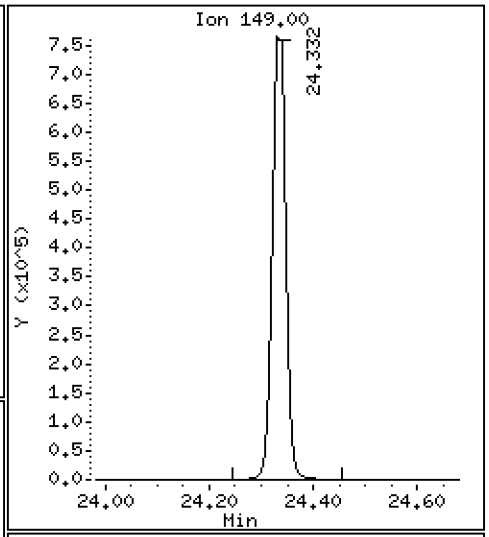
73 Di-n-octylphthalate Concentration: 5.135 ug/mL

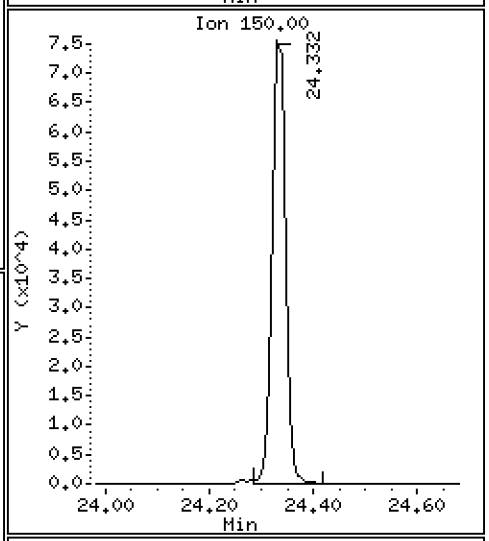


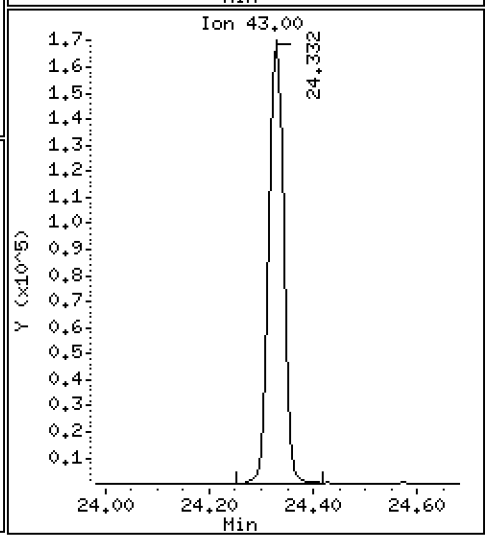












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

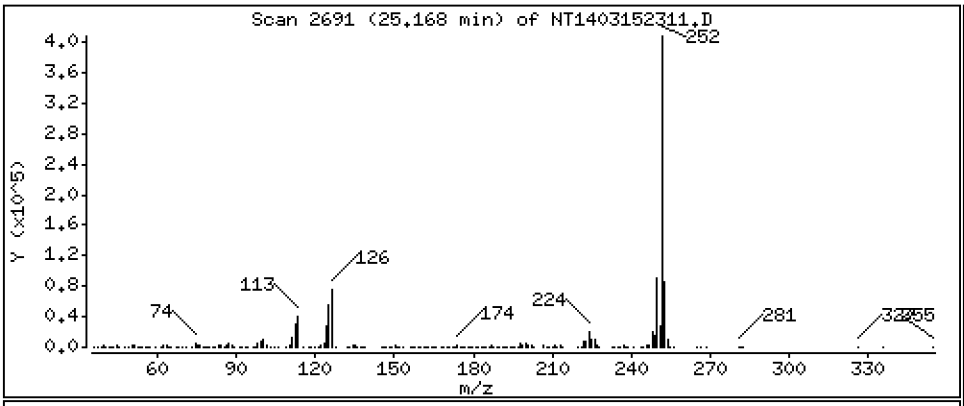
Operator: JGR

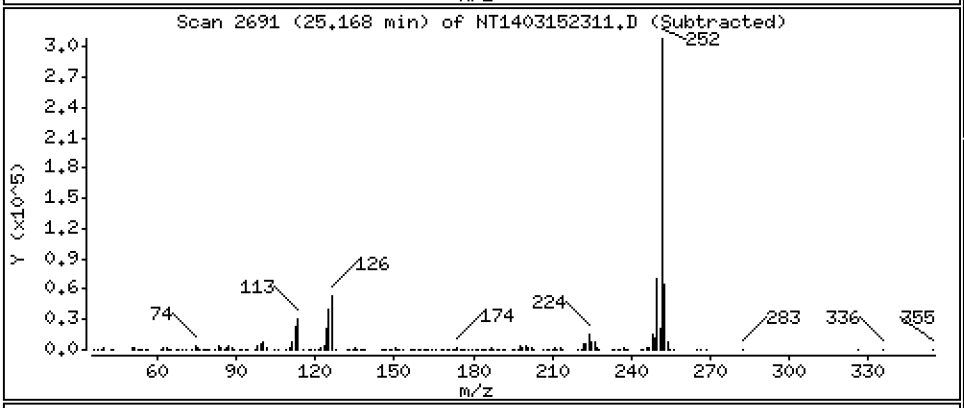
Column phase: ZB-5msi

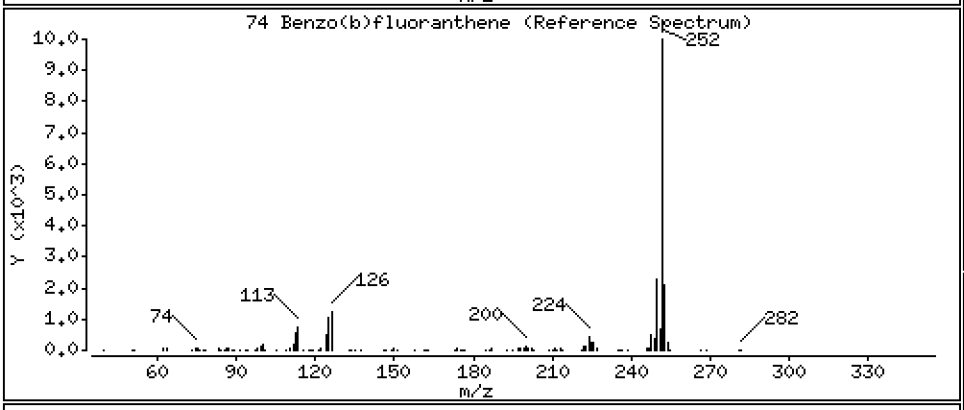
Column diameter: 0.25

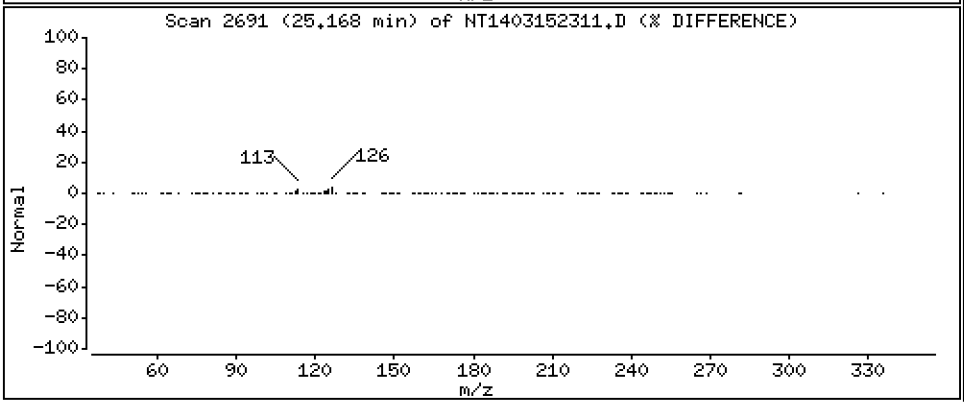
74 Benzo(b)fluoranthene

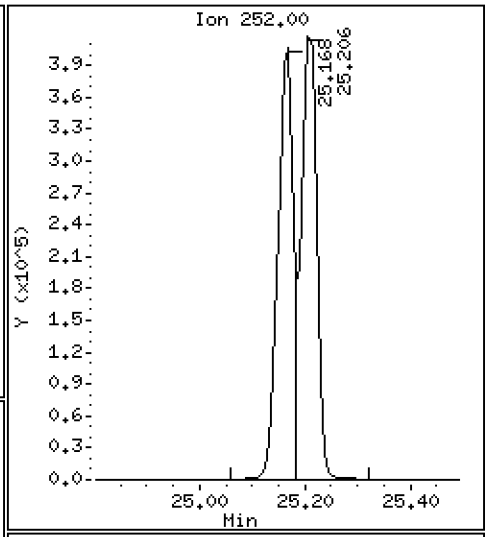
Concentration: 4.774 ug/mL

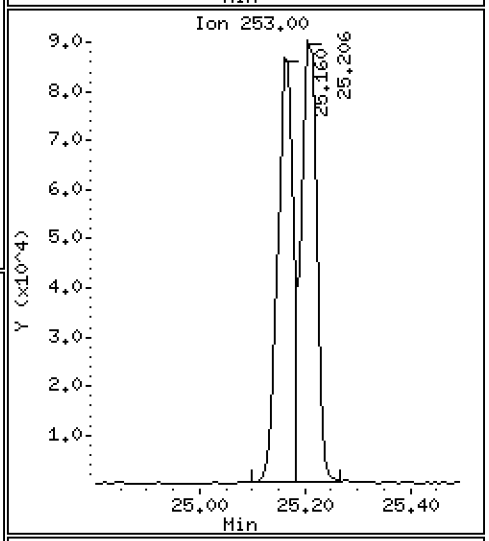


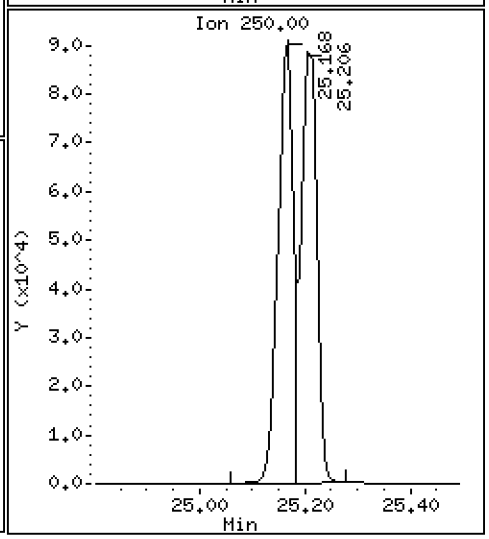












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

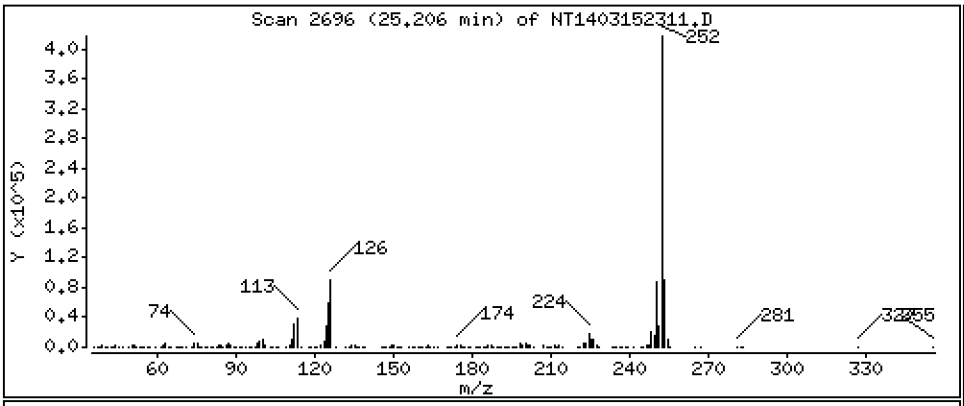
Operator: JGR

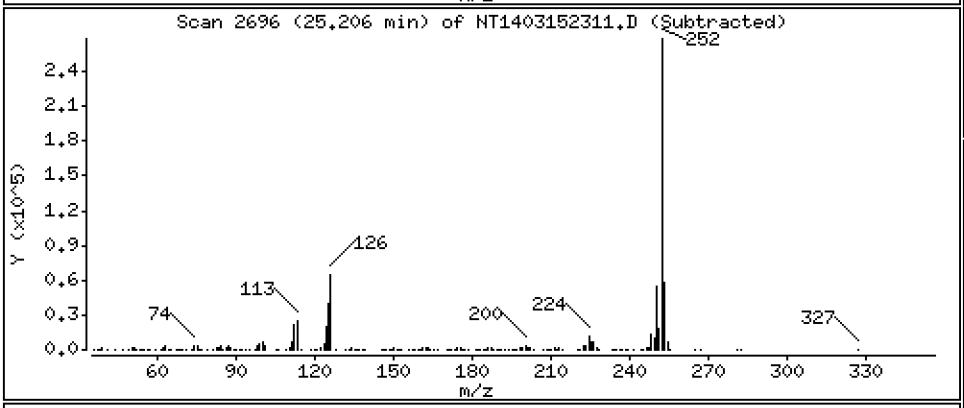
Column phase: ZB-5msi

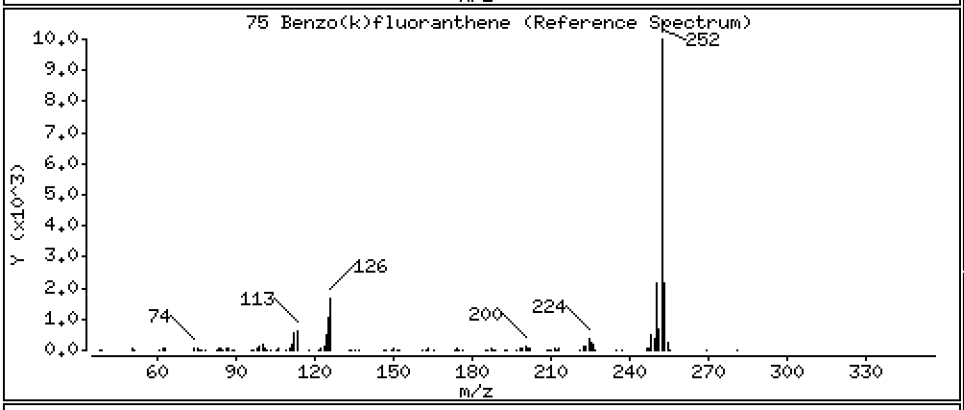
Column diameter: 0.25

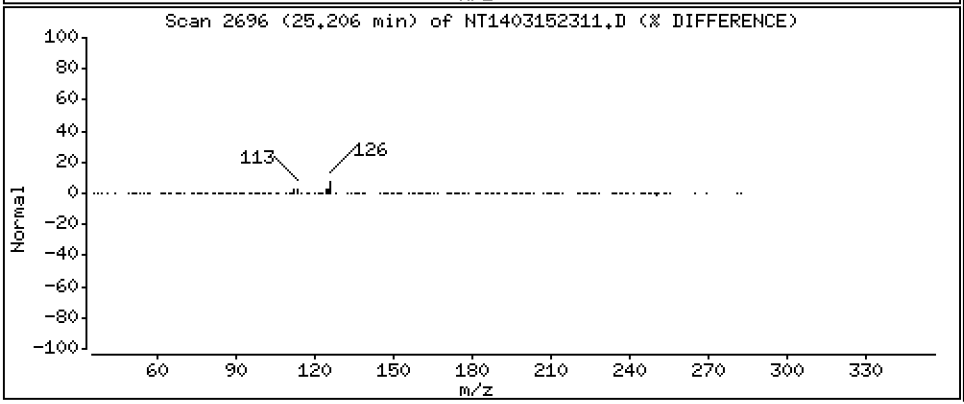
75 Benzo(k)fluoranthene

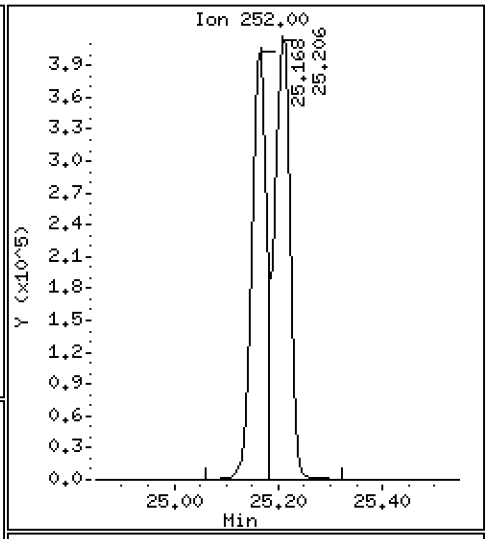
Concentration: 5.100 ug/mL

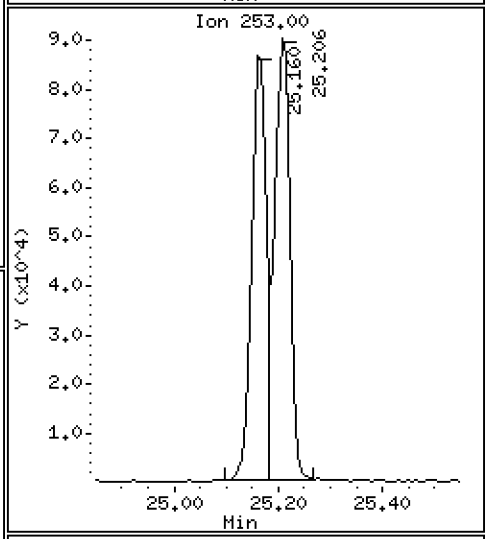


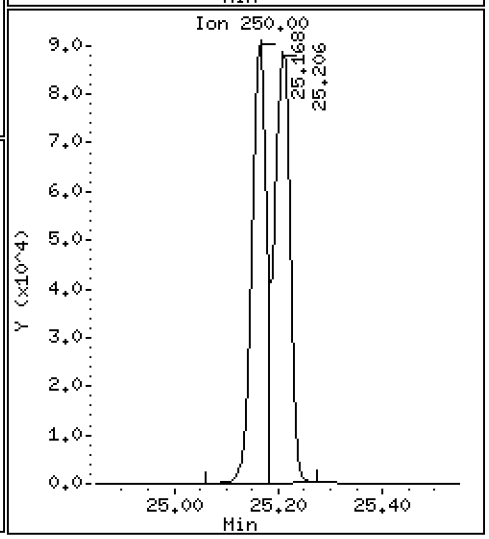












Date : 15-MAR-2023 17:39

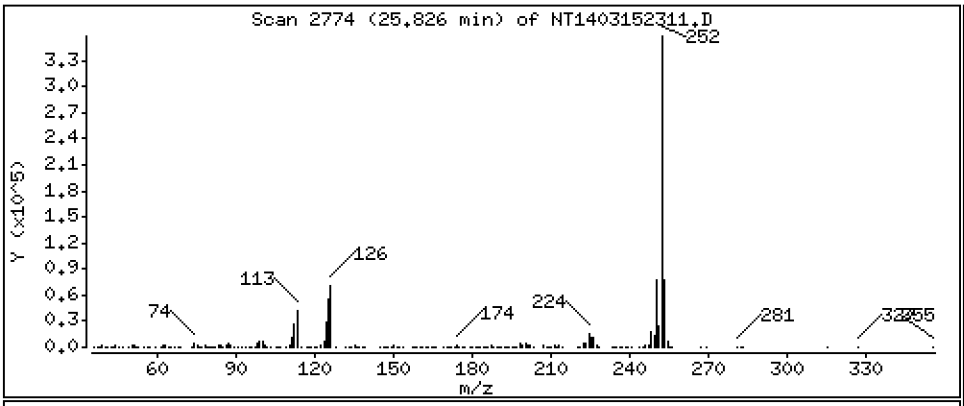
Client ID: Instrument: nt14.i

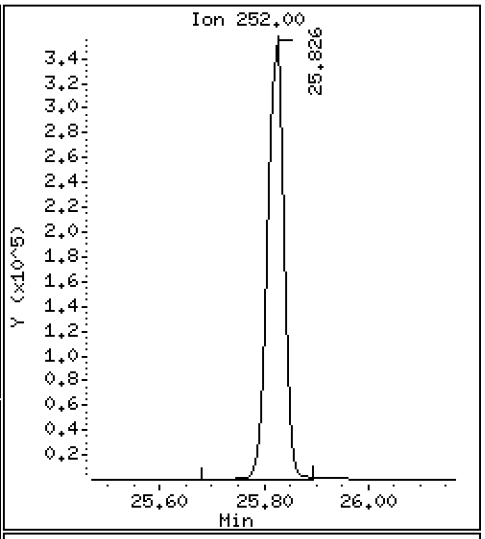
Sample Info: SLC0160-SCV1

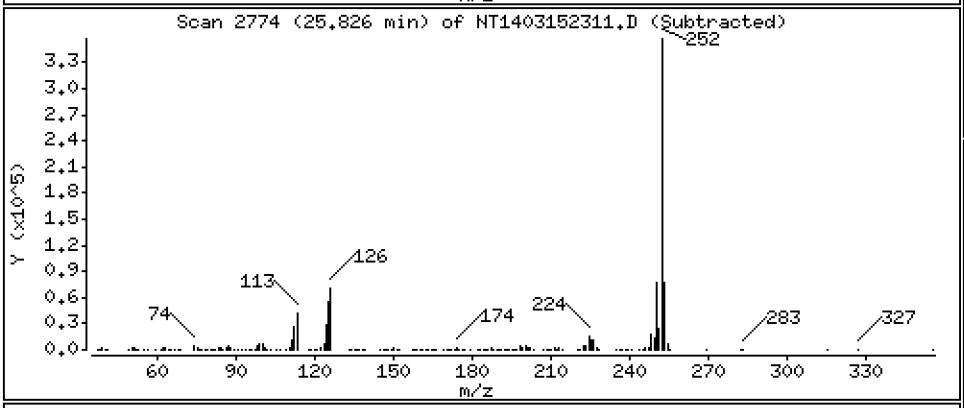
Operator: JGR

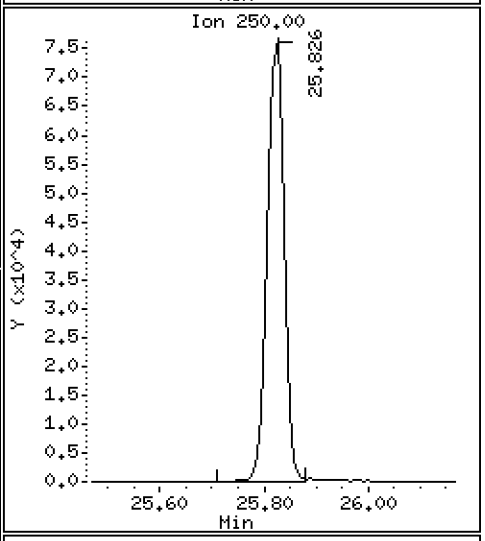
Column phase: ZB-5msi Column diameter: 0.25

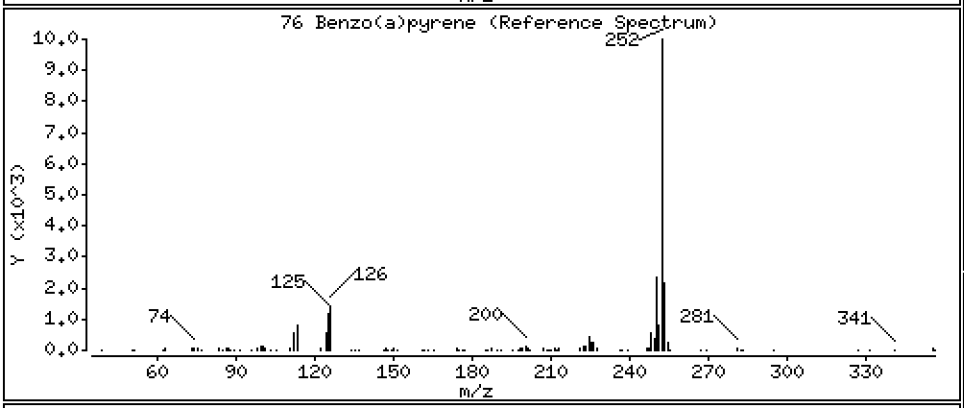
76 Benzo(a)pyrene Concentration: 4.978 ug/mL

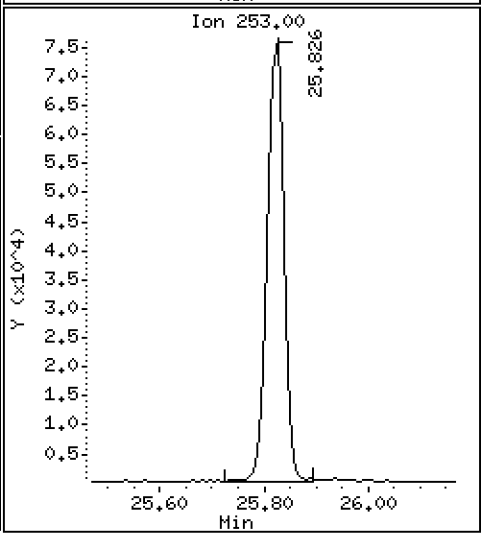


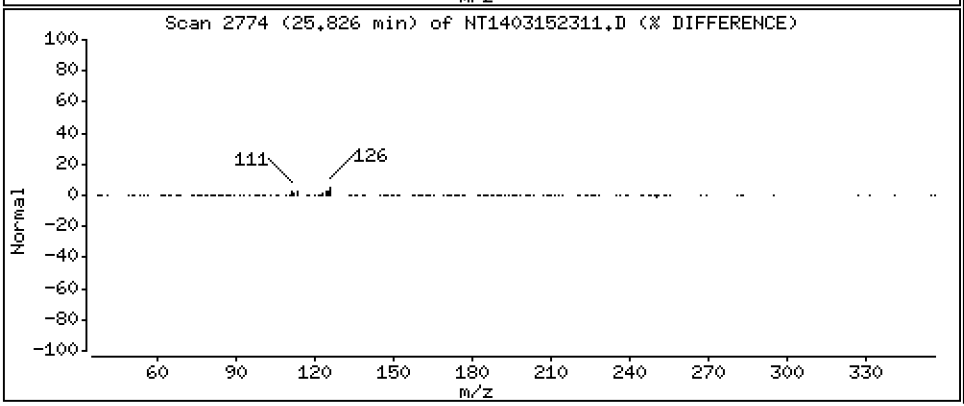












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

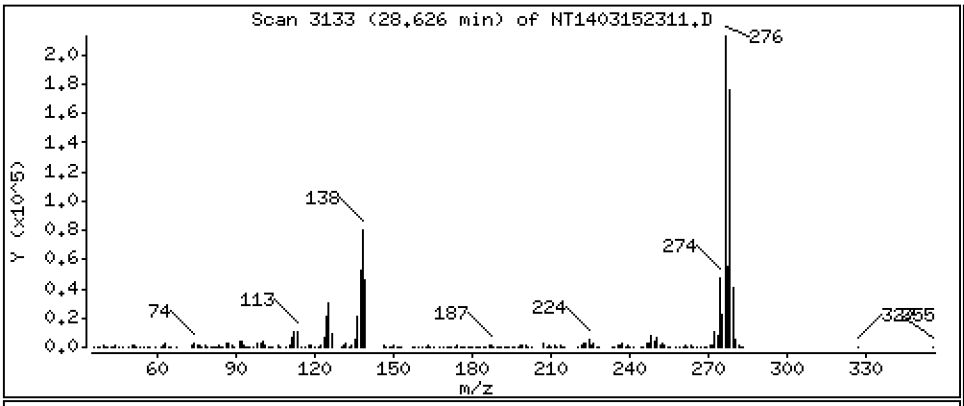
Operator: JGR

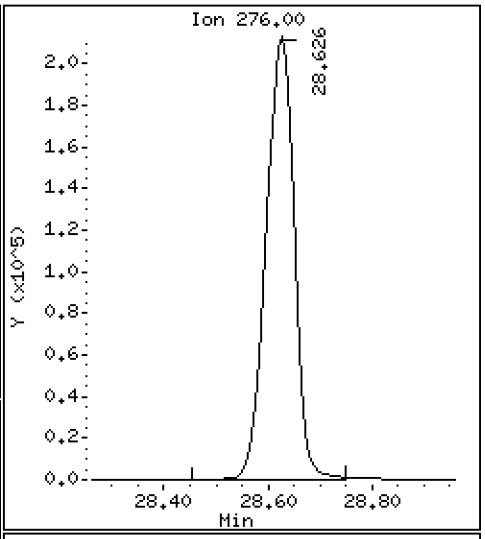
Column phase: ZB-5msi

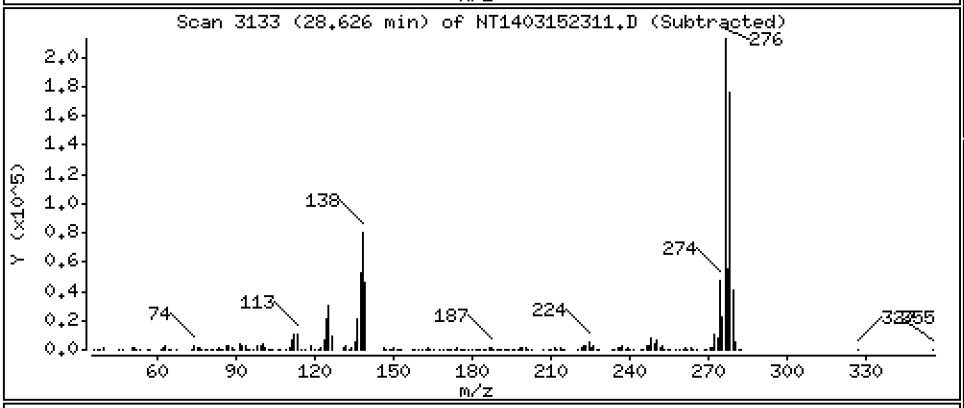
Column diameter: 0.25

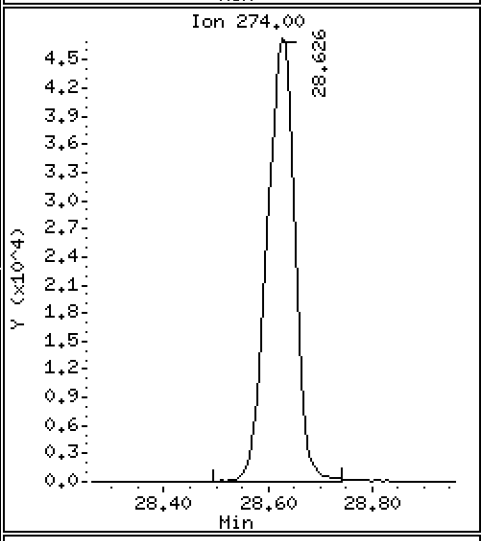
78 Indeno(1,2,3-cd)pyrene

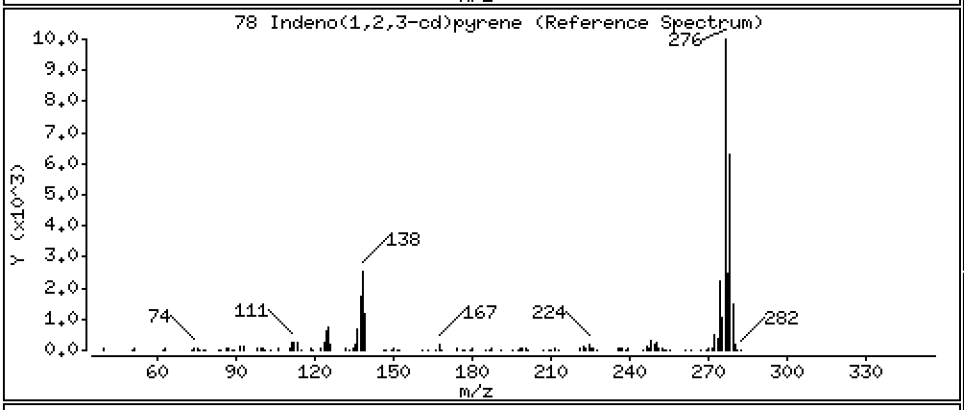
Concentration: 4.943 ug/mL

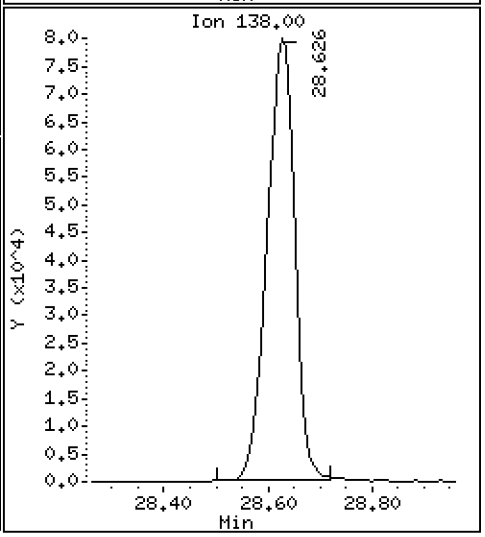


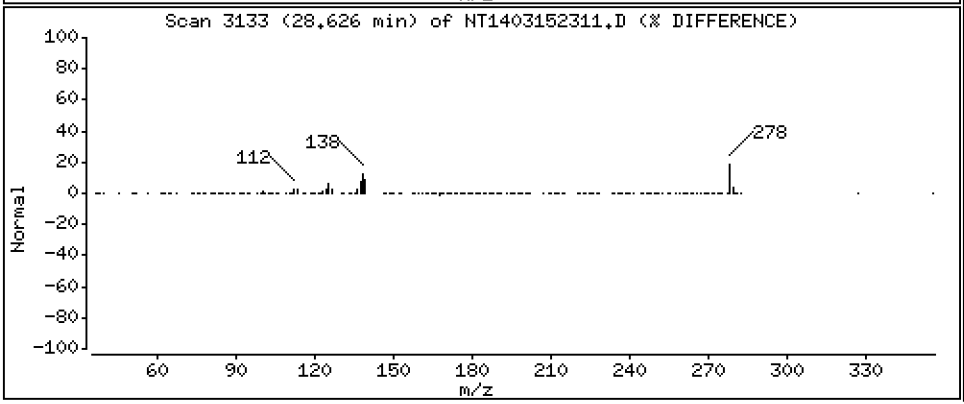












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

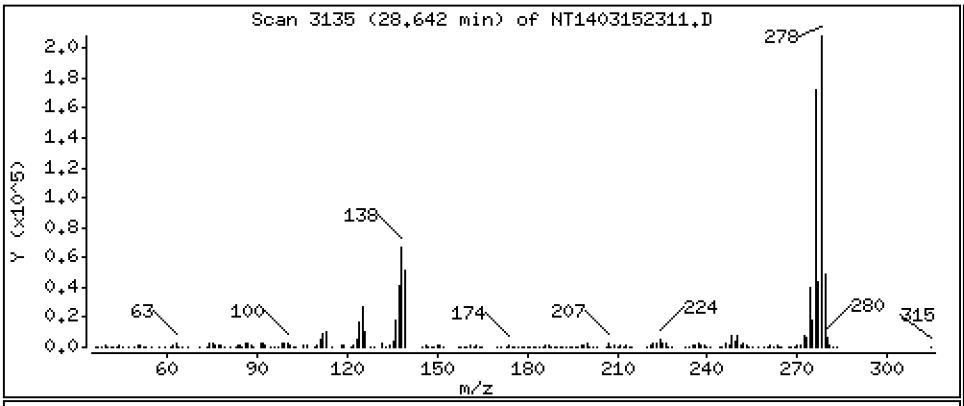
Operator: JGR

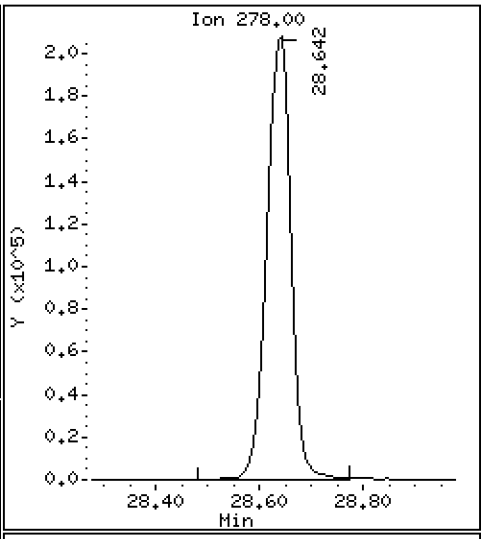
Column phase: ZB-5msi

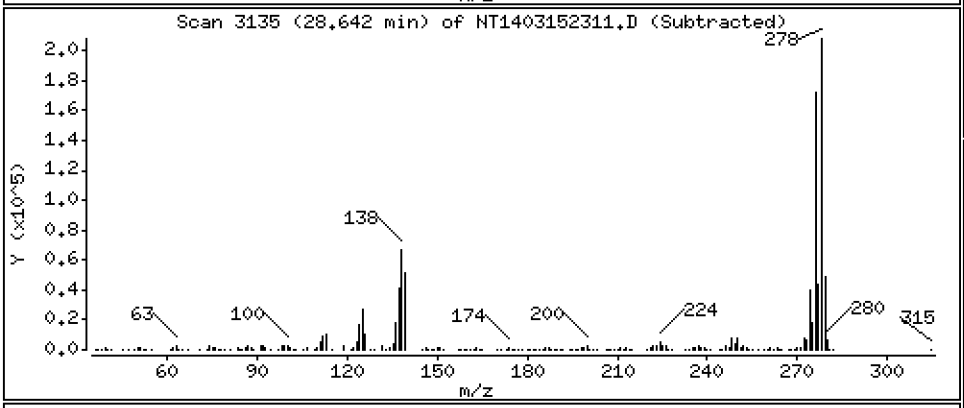
Column diameter: 0.25

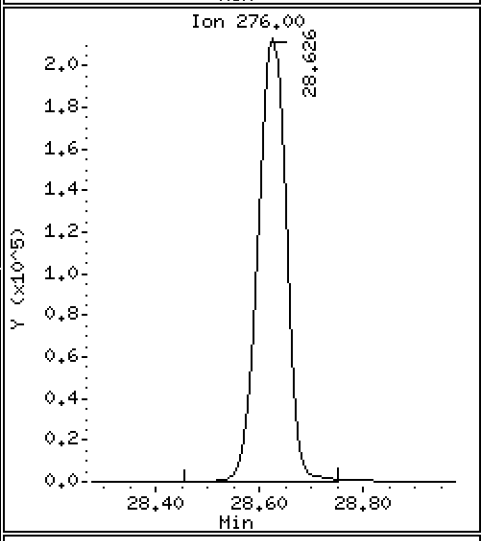
79 Dibenzo(a,h)anthracene

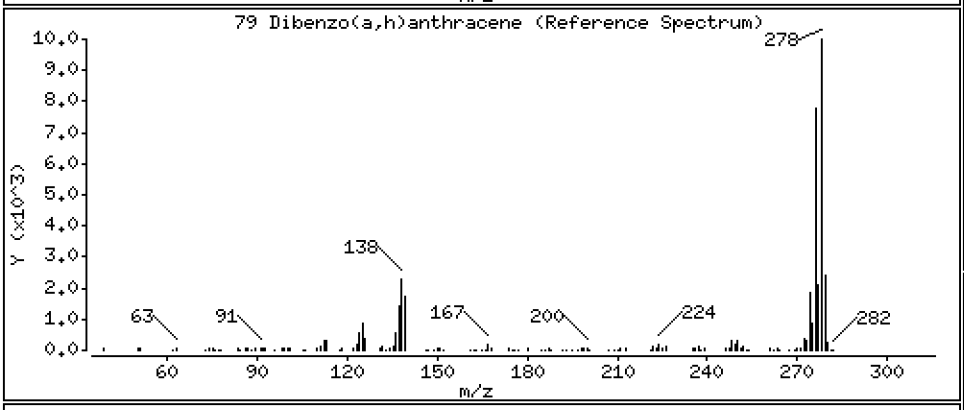
Concentration: 4.865 ug/mL

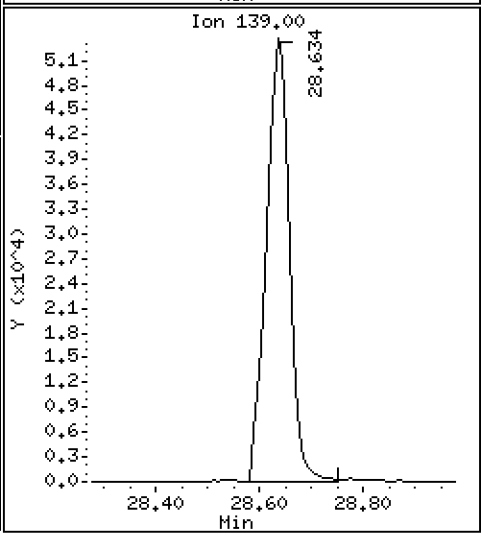


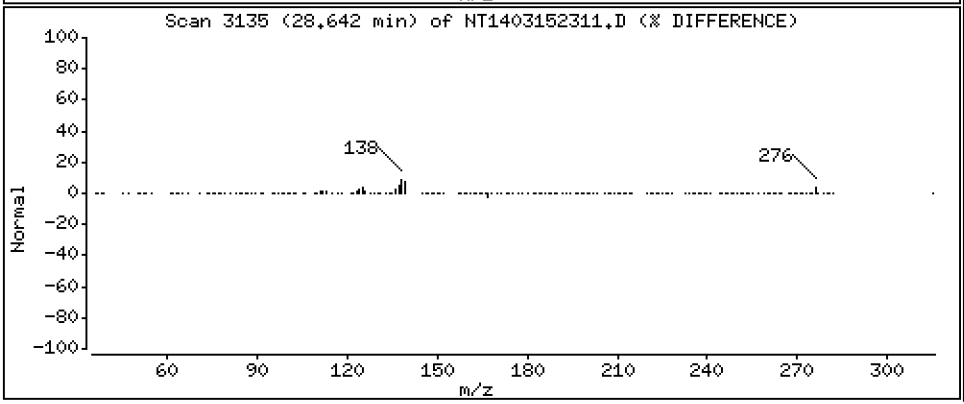












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

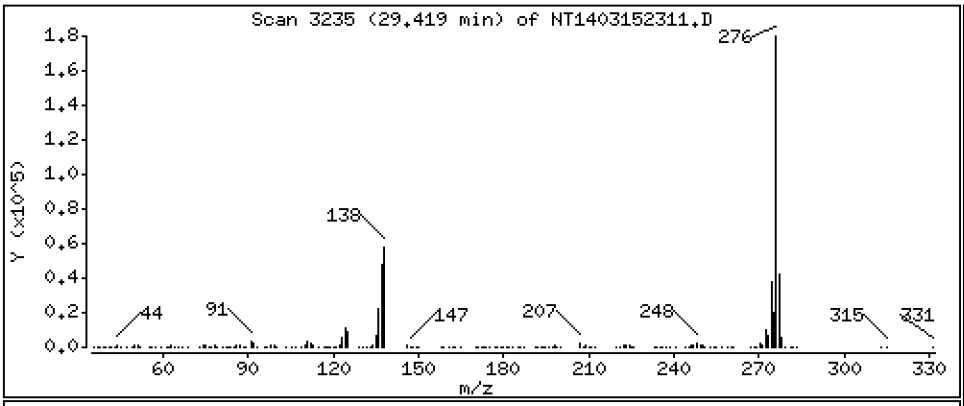
Operator: JGR

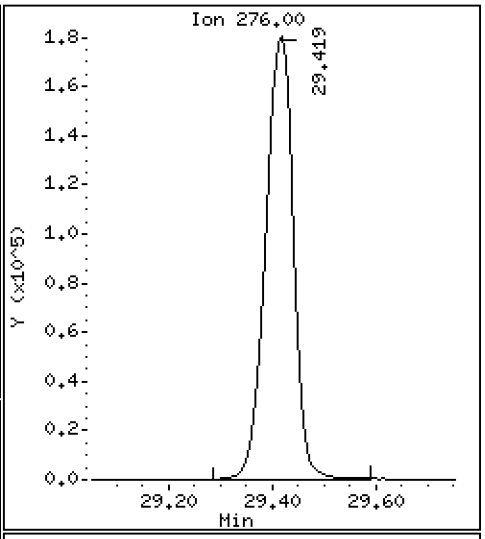
Column phase: ZB-5msi

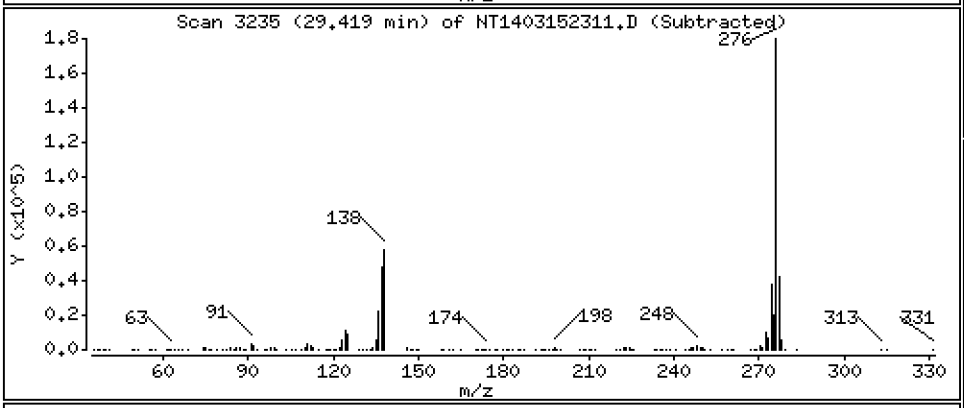
Column diameter: 0.25

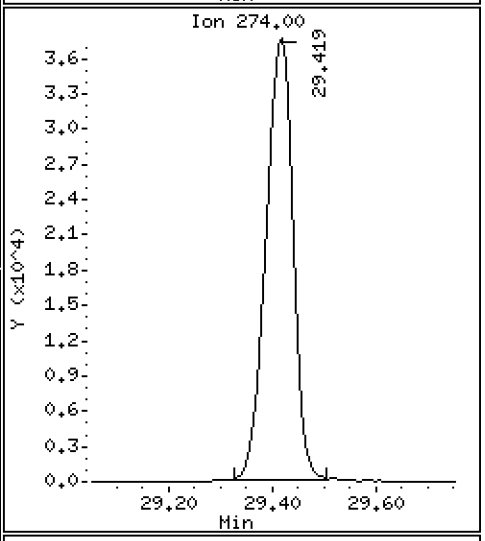
80 Benzo(g,h,i)perylene

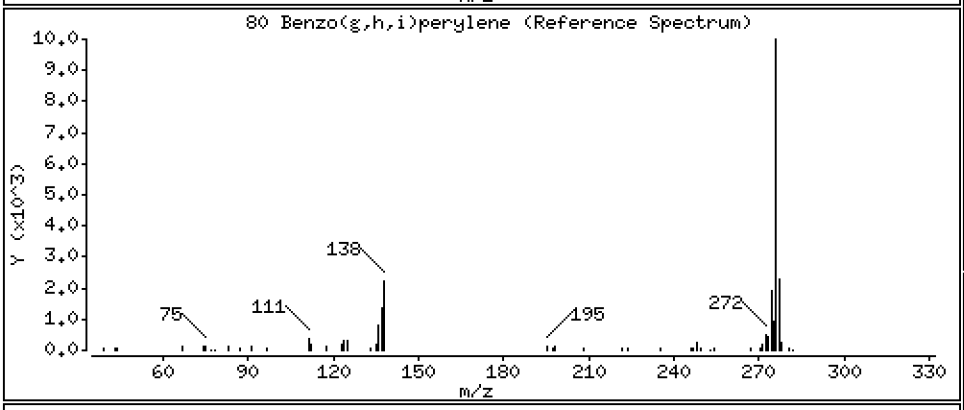
Concentration: 4.939 ug/mL

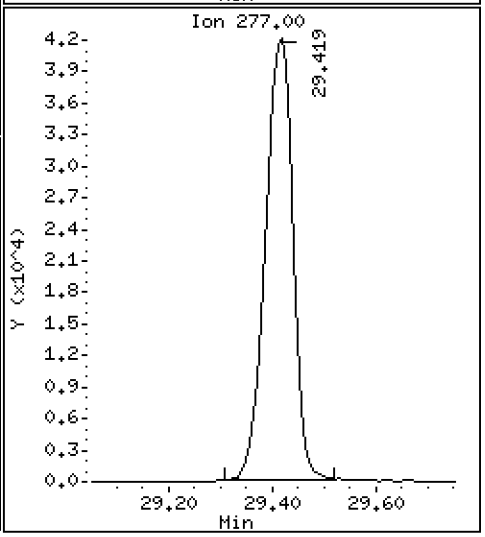


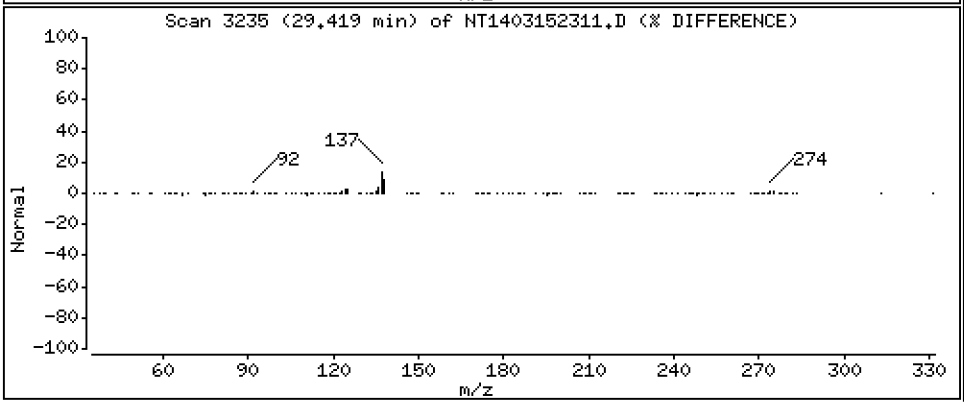












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

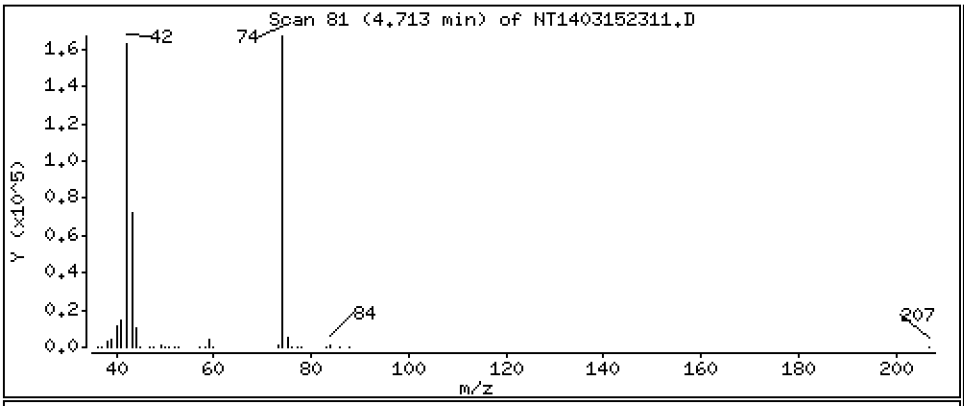
Operator: JGR

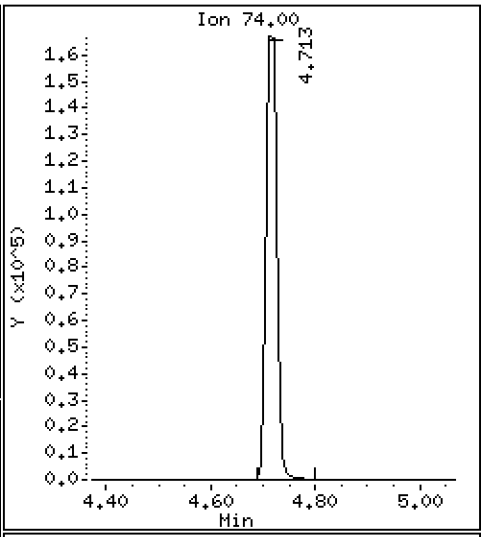
Column phase: ZB-5msi

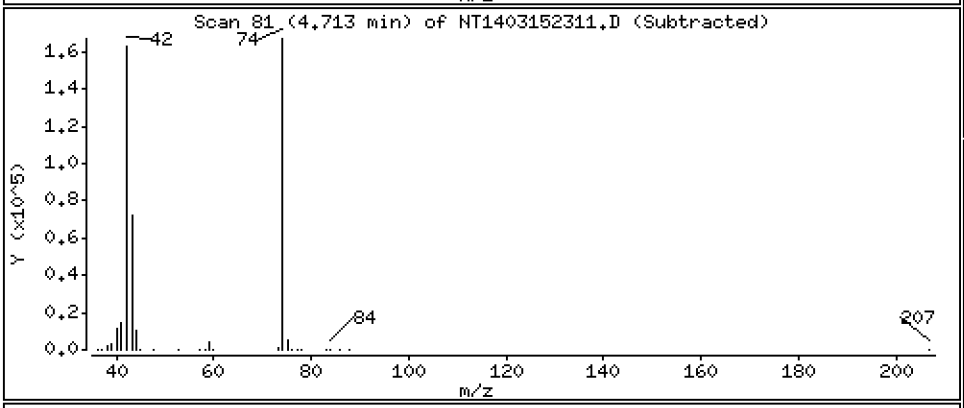
Column diameter: 0.25

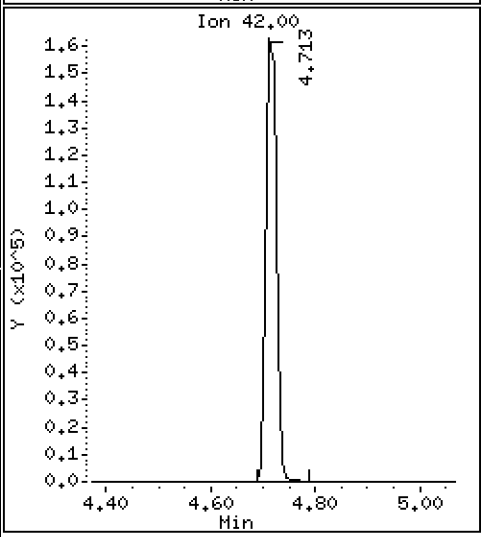
90 N-Nitrosodimethylamine

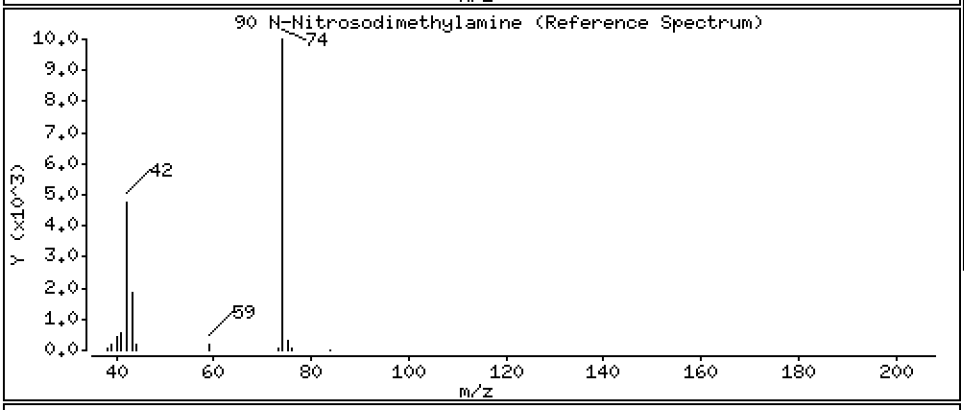
Concentration: 5.200 ug/mL

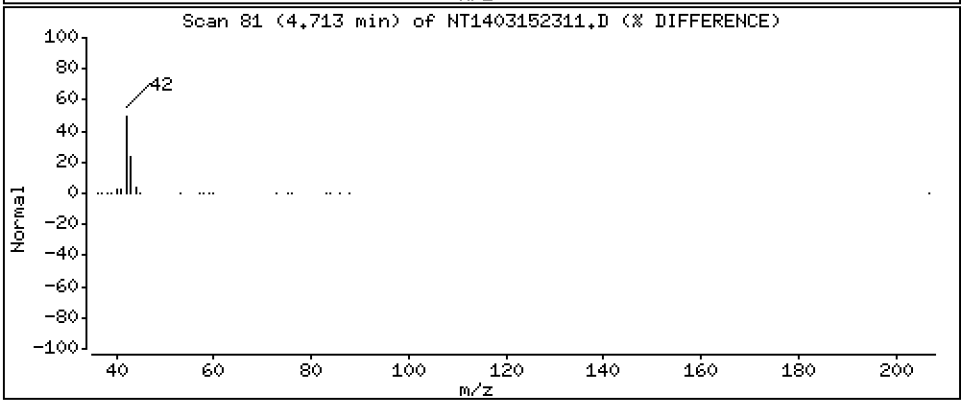












Data File: \\target\share\chem3\nt14.i\20230315.b\NT1403152311.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

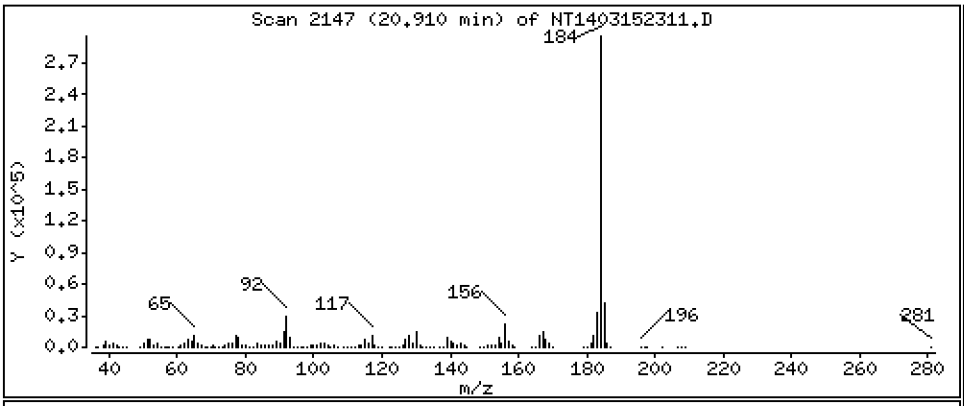
Operator: JGR

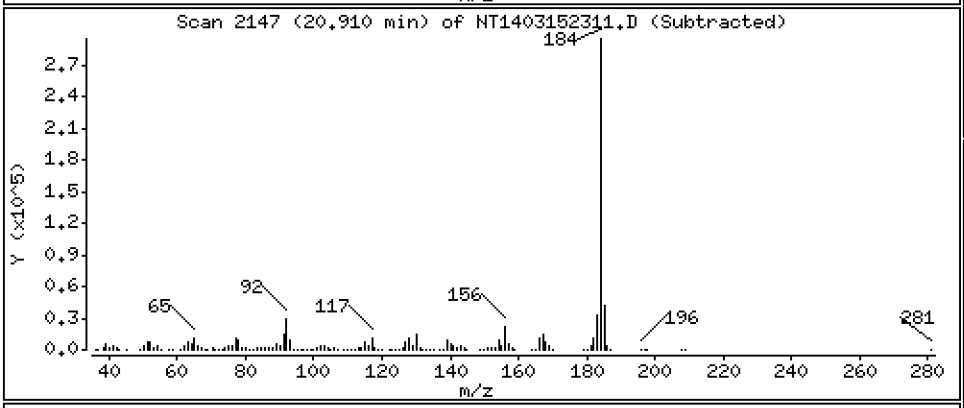
Column phase: ZB-5msi

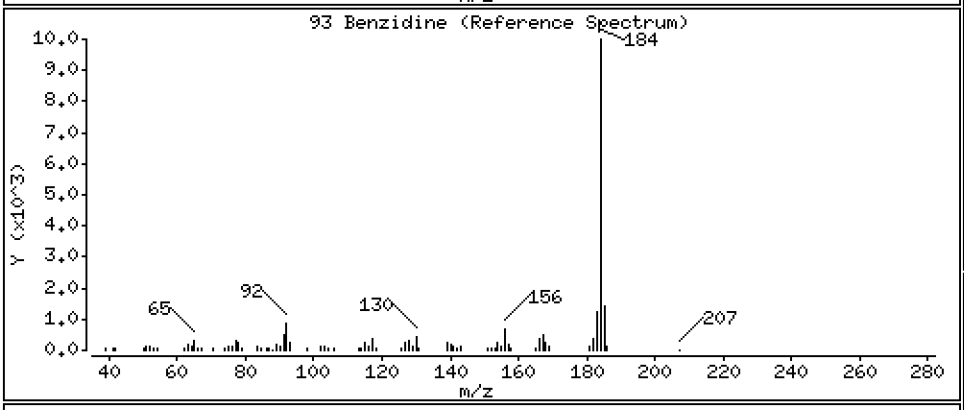
Column diameter: 0.25

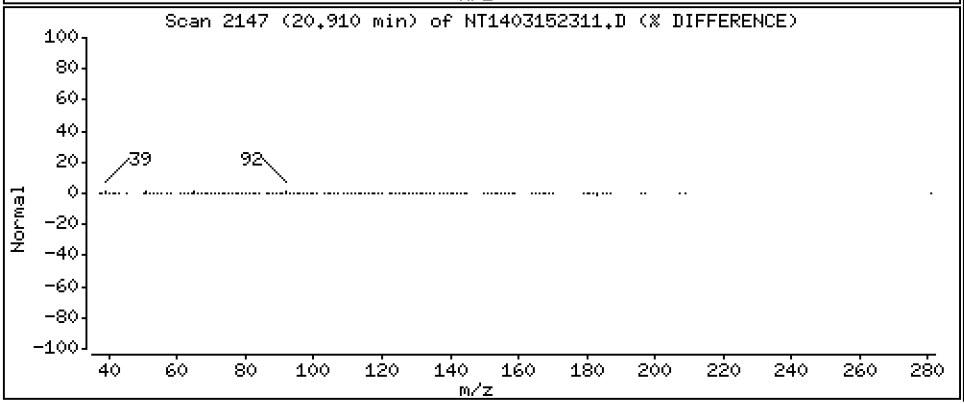
93 Benzidine

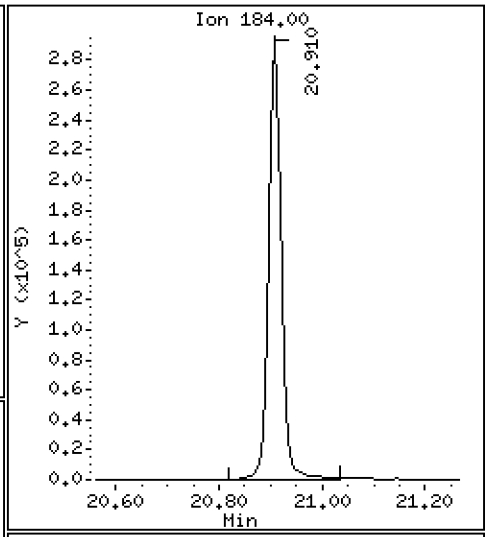
Concentration: 5.646 ug/mL

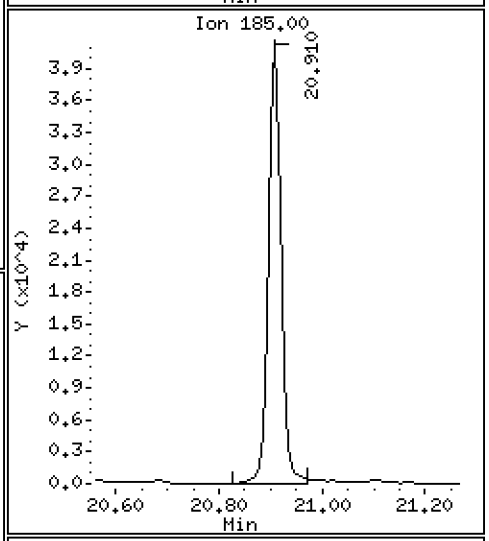


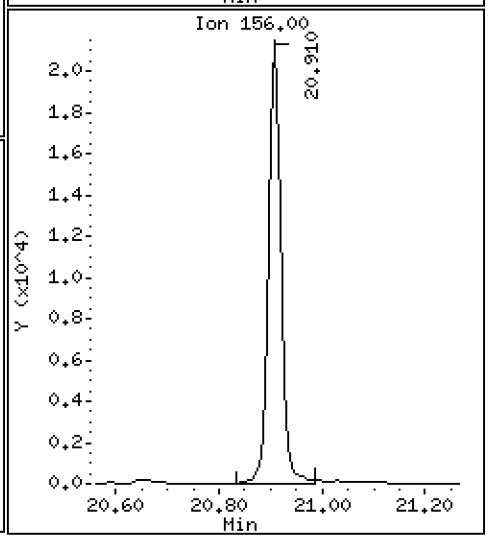












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

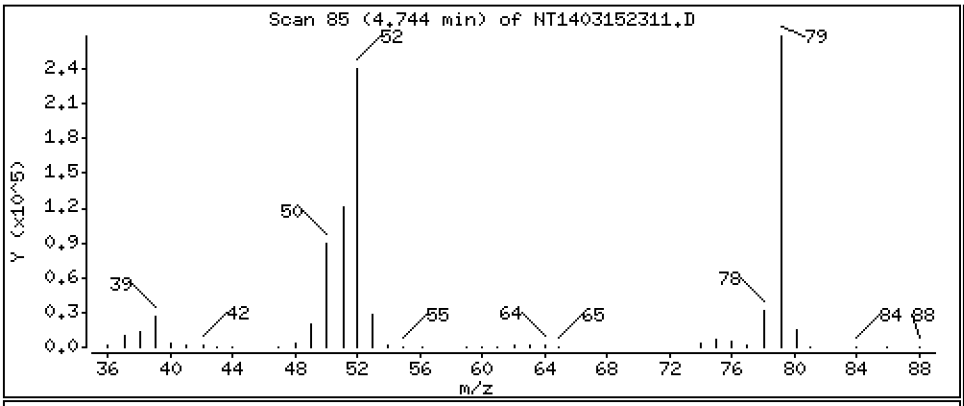
Operator: JGR

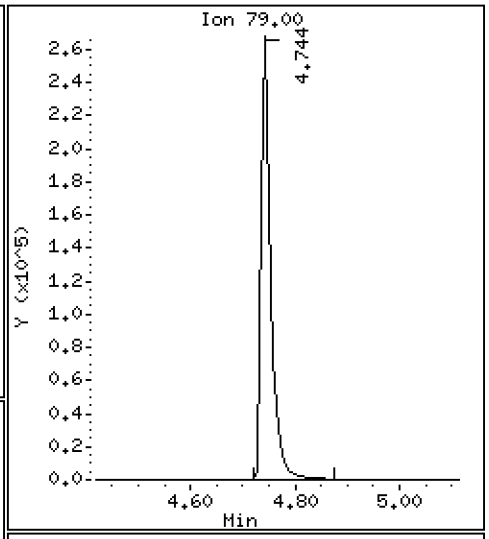
Column phase: ZB-5msi

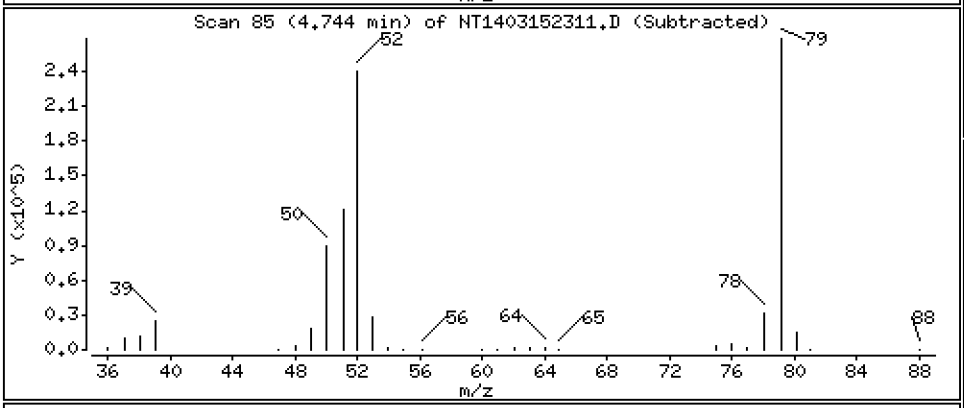
Column diameter: 0.25

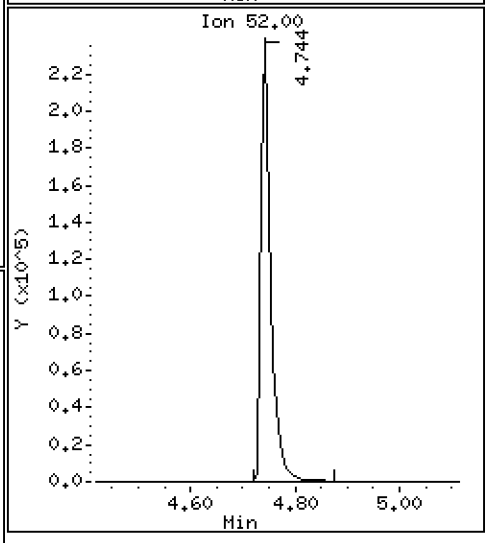
103 Pyridine

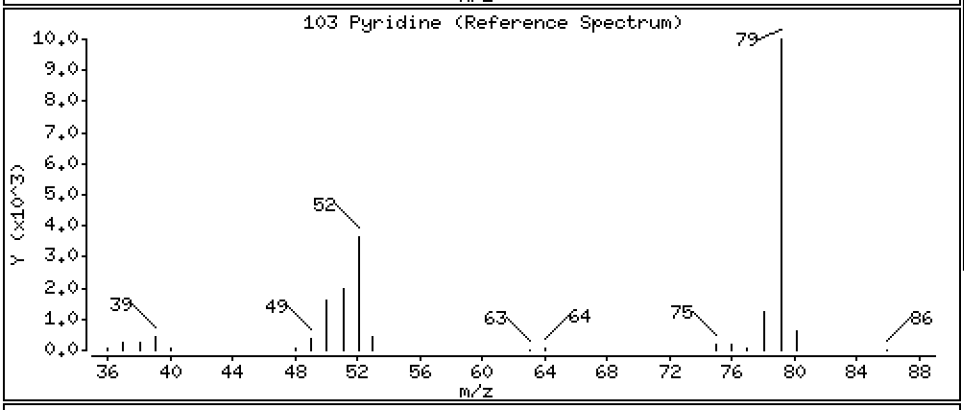
Concentration: 2.648 ug/mL

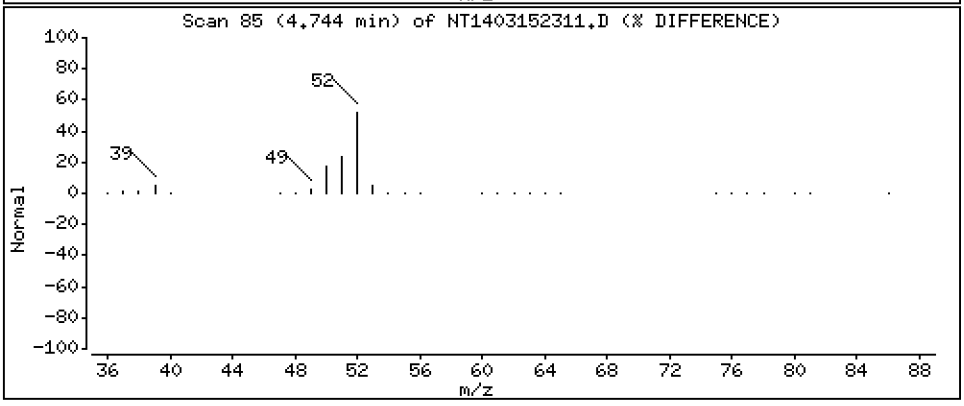












Data File: \\target\share\chem3\nt14.i\20230315.b\NT1403152311.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

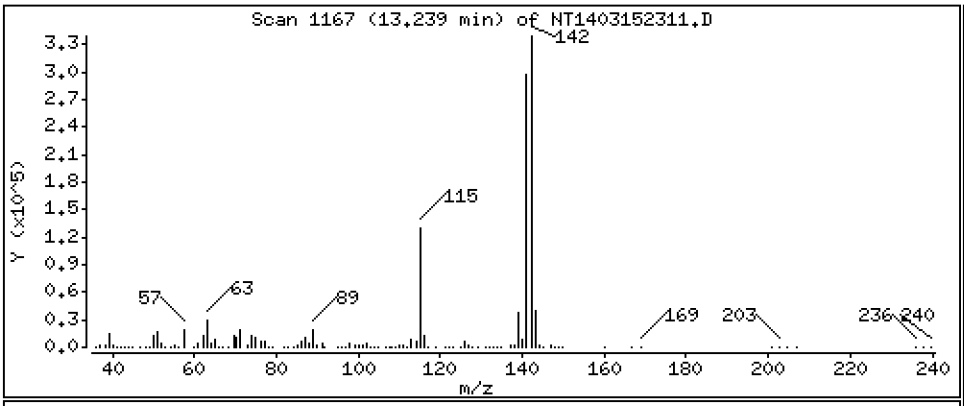
Operator: JGR

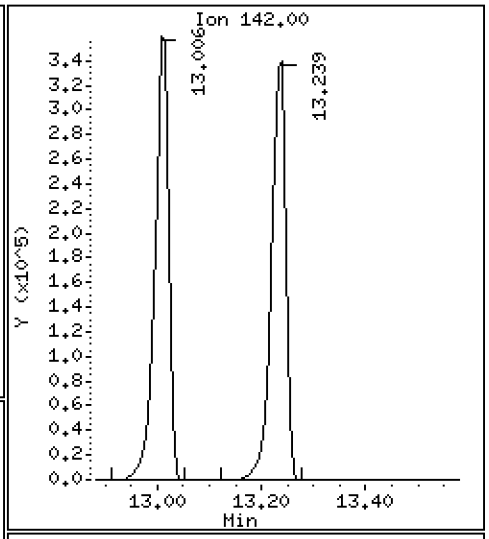
Column phase: ZB-5msi

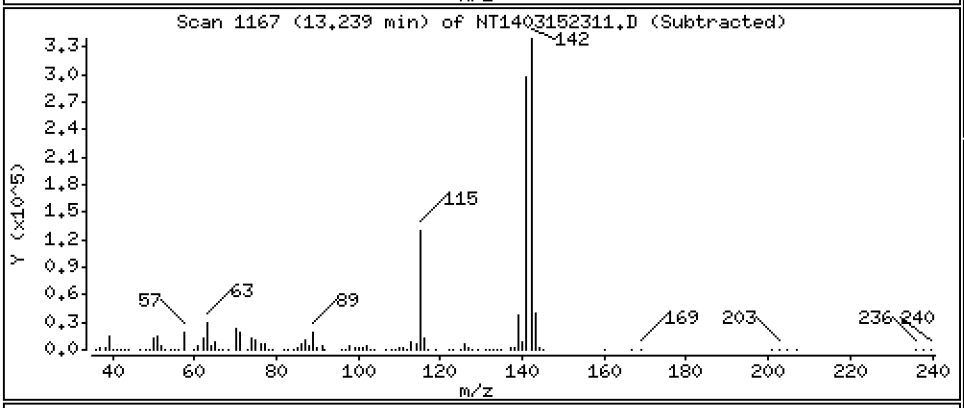
Column diameter: 0.25

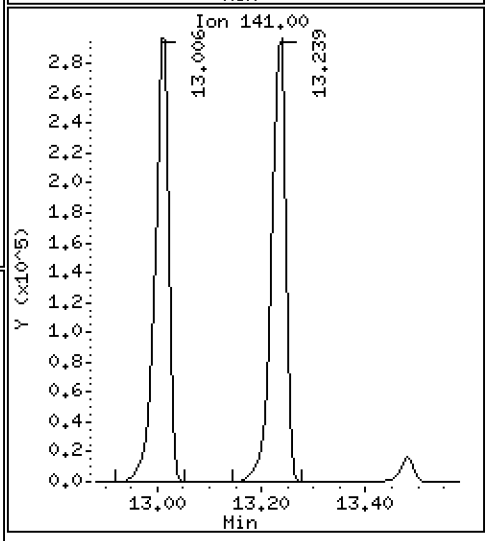
105 1-methylnaphthalene

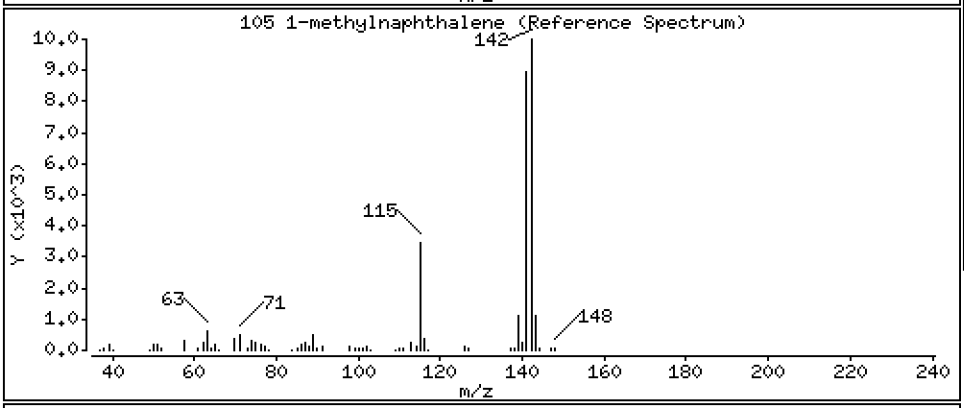
Concentration: 5.103 ug/mL

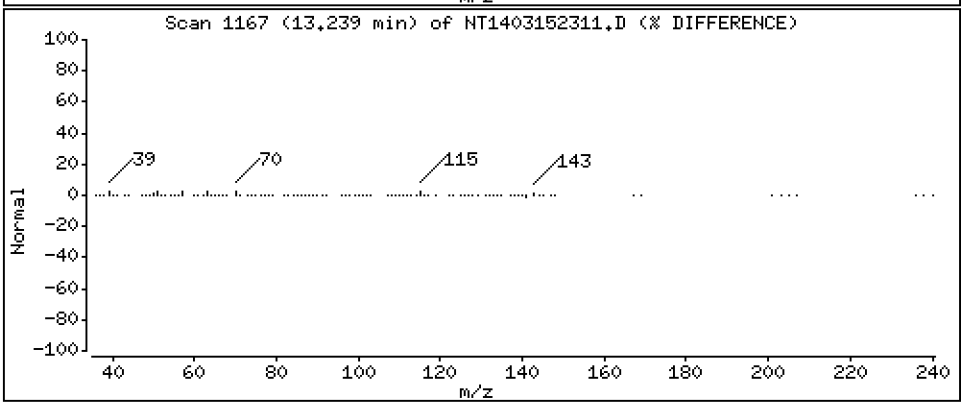












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

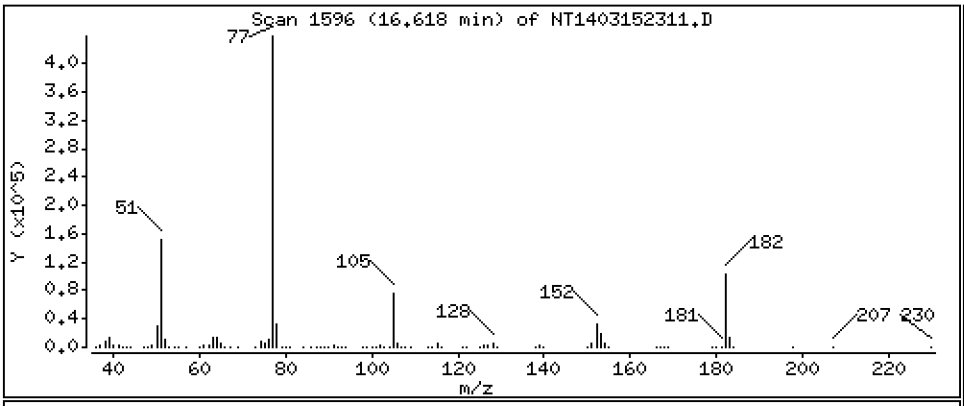
Operator: JGR

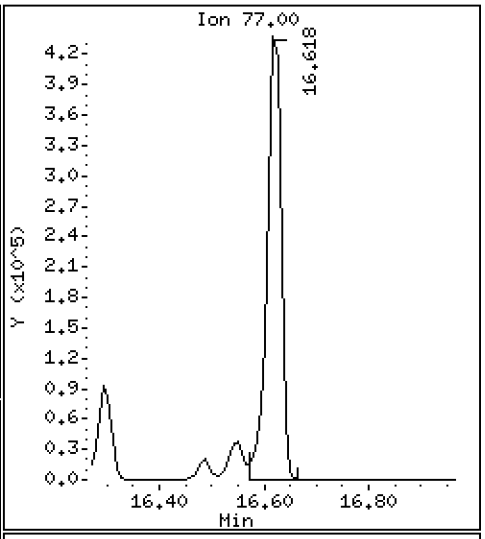
Column phase: ZB-5msi

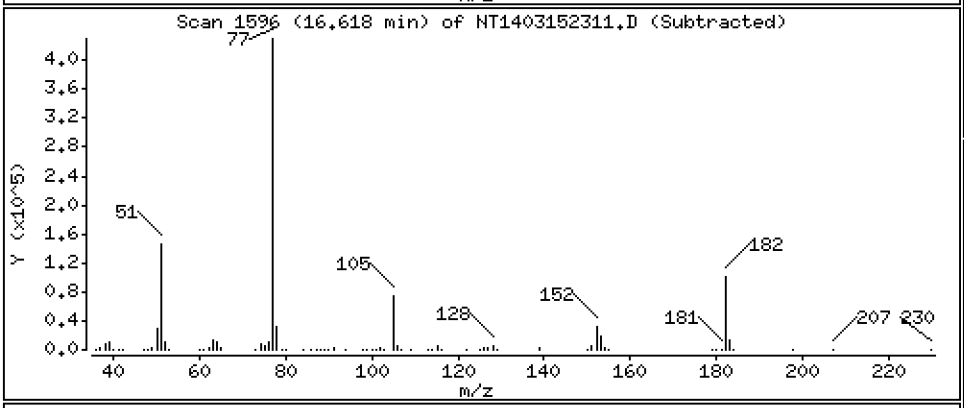
Column diameter: 0.25

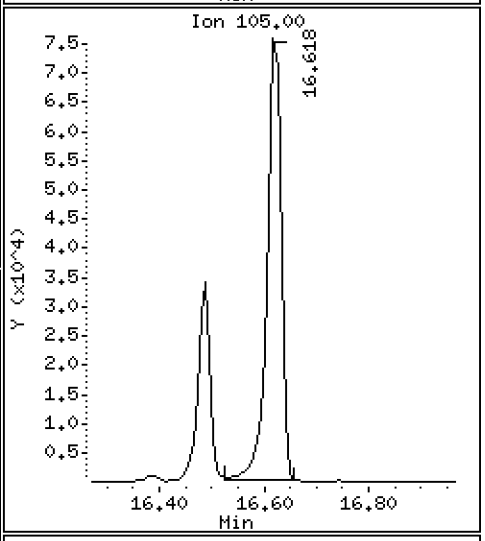
111 Azobenzene (1,2-DP-Hydrazine)

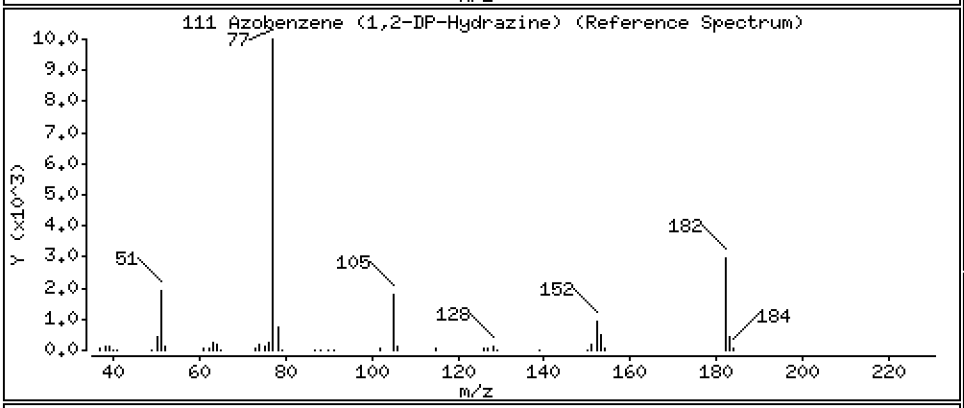
Concentration: 5.002 ug/mL

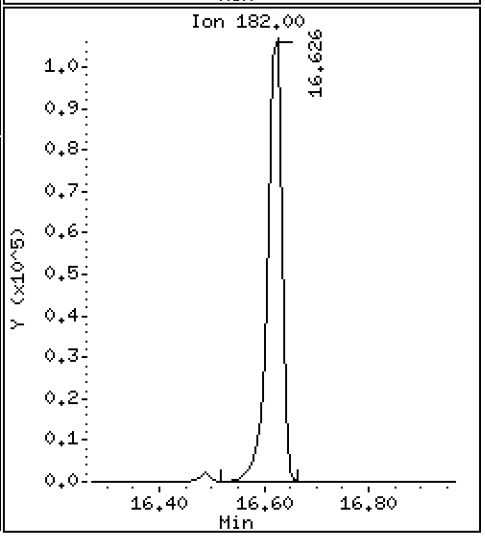


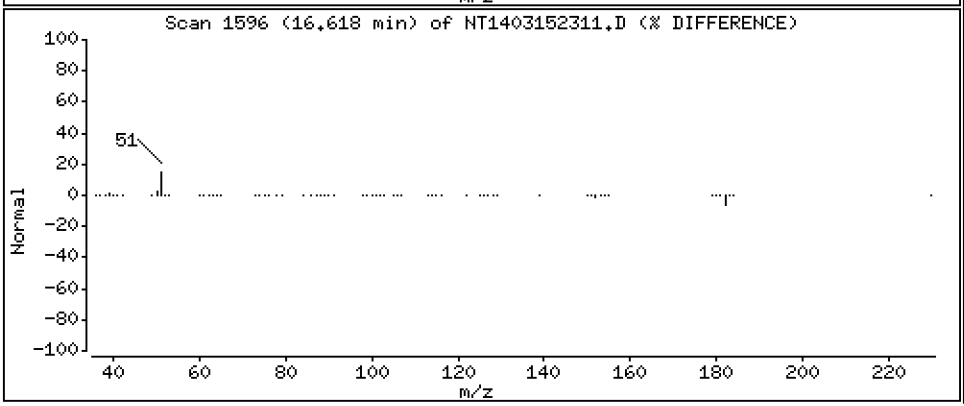












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

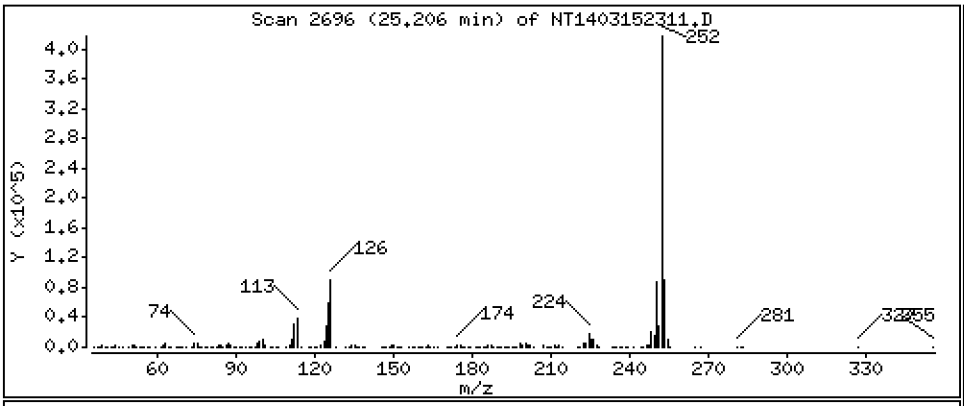
Operator: JGR

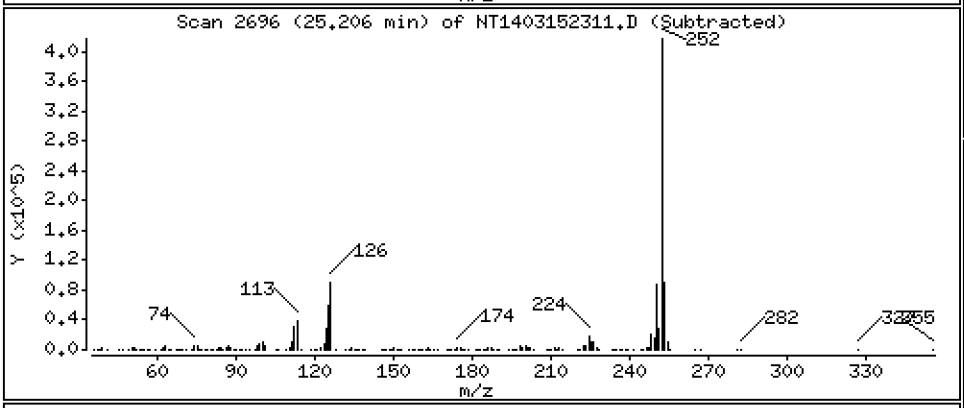
Column phase: ZB-5msi

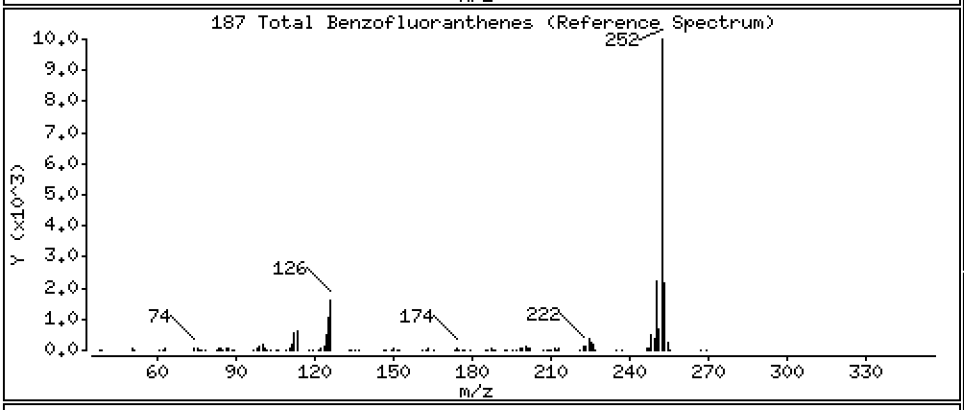
Column diameter: 0.25

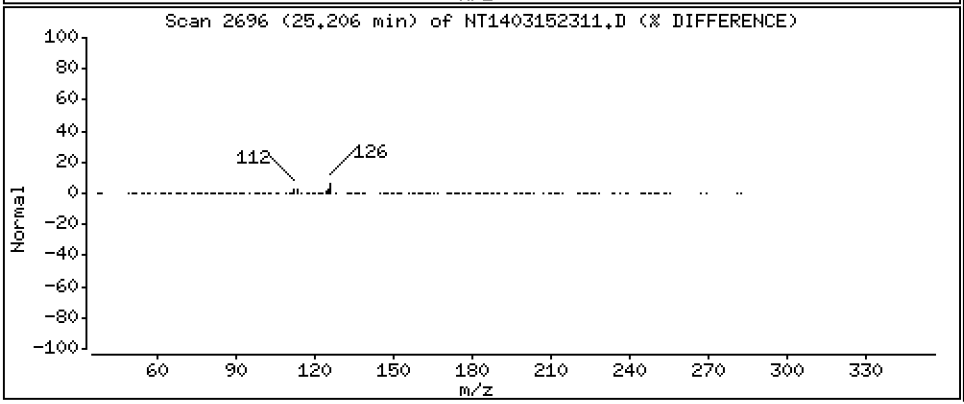
187 Total Benzofluoranthenes

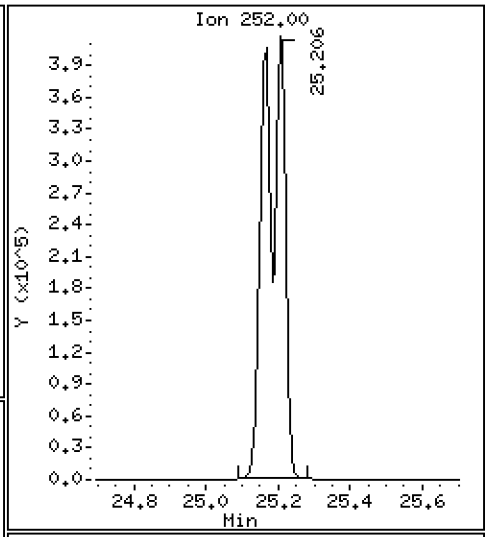
Concentration: 9.756 ug/mL

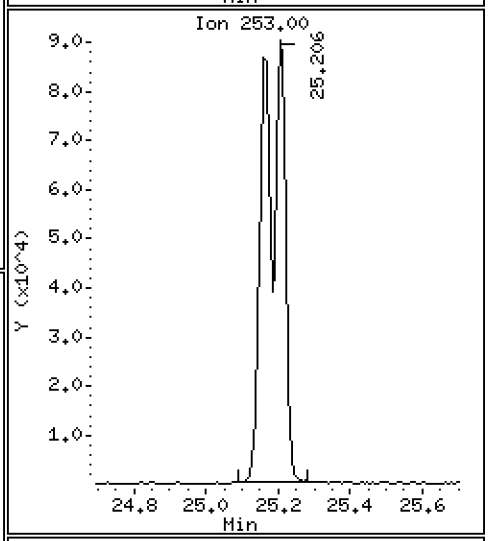


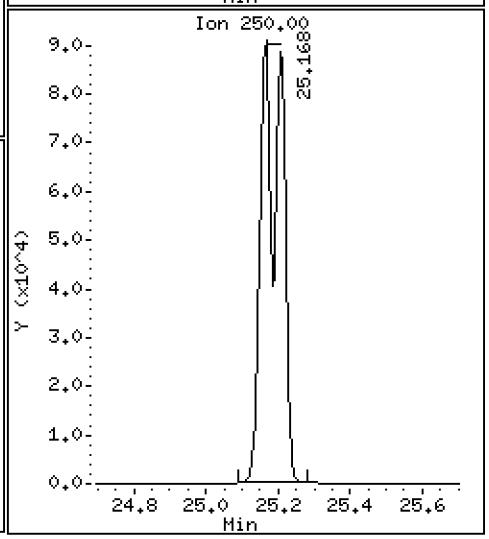












Data File: \\target\share\chem3\nt14.i\20230315.b\NT1403152311.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

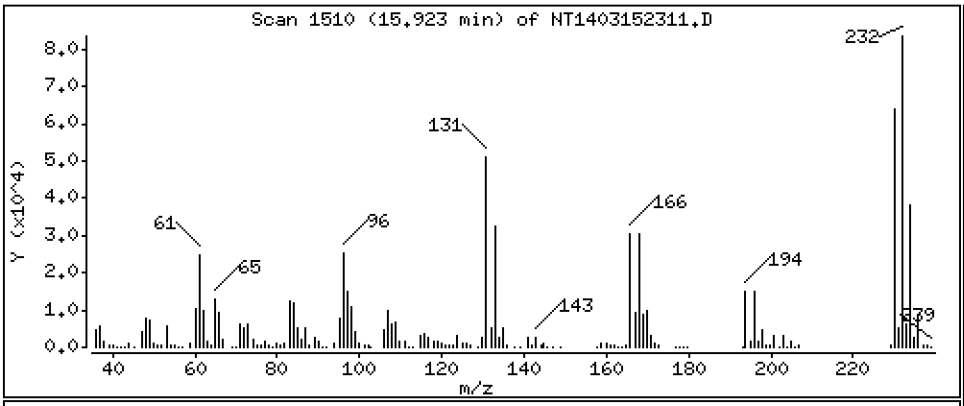
Operator: JGR

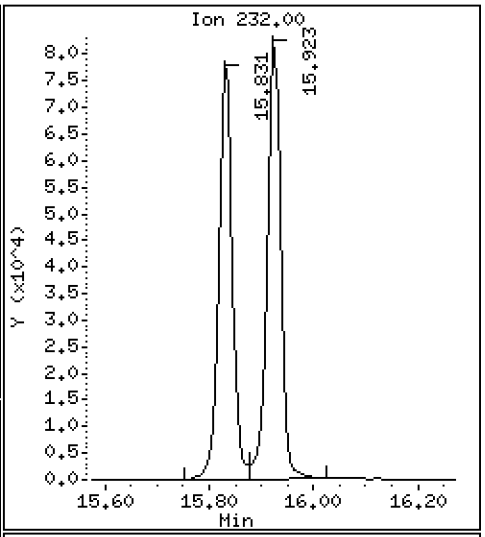
Column phase: ZB-5msi

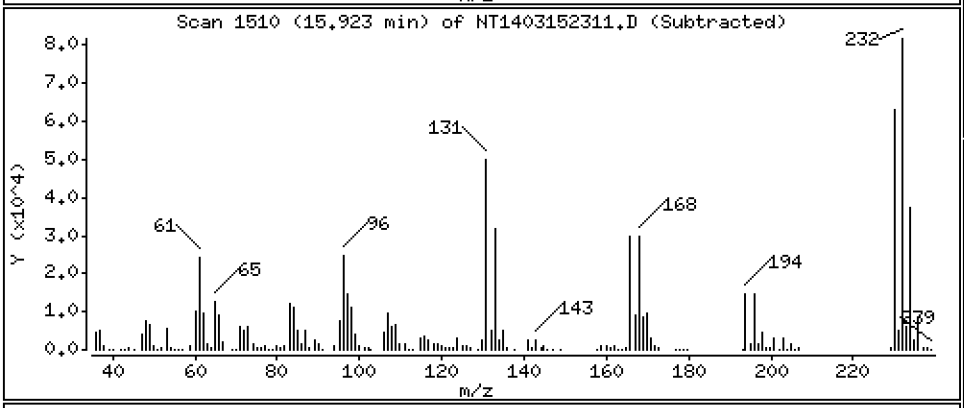
Column diameter: 0.25

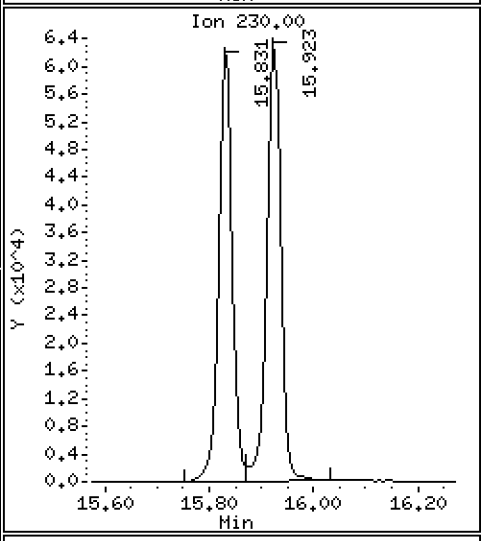
120 2,3,4,6-Tetrachlorophenol

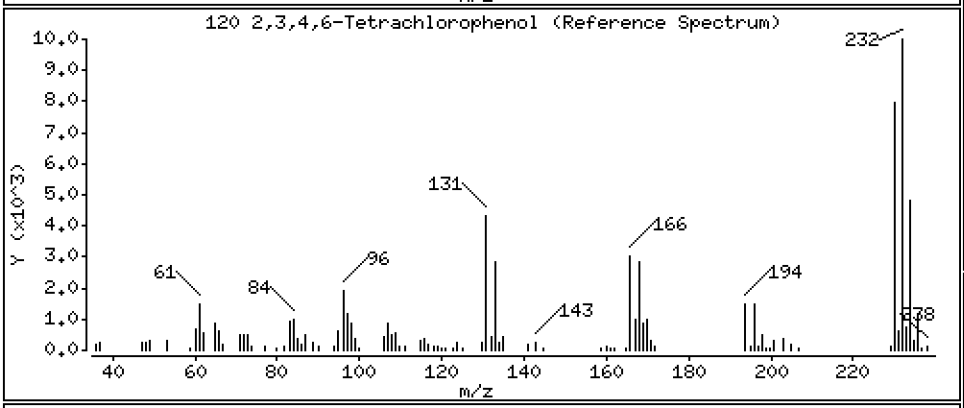
Concentration: 3.569 ug/mL

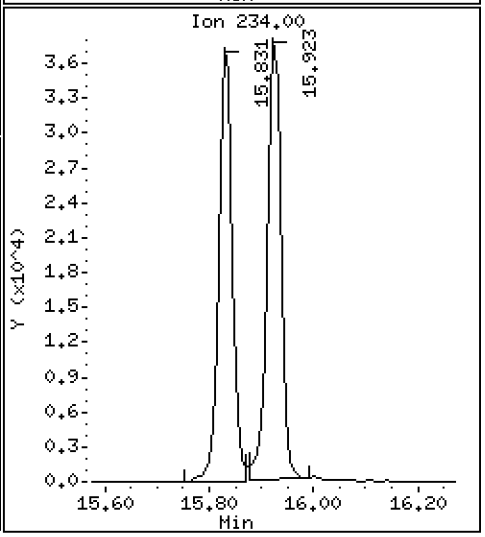


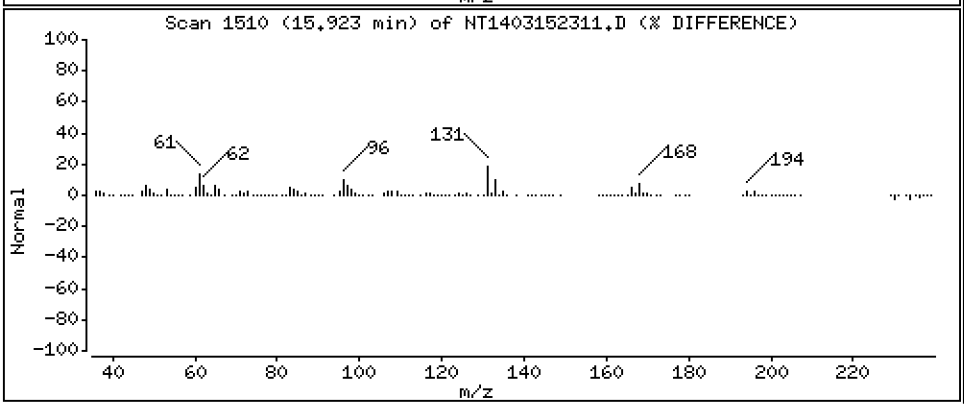












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230315.b\NT1403152311.D
Lab Smp Id: SLC0160-SCV1
Inj Date : 15-MAR-2023 17:39 MS Autotune Date: 11-MAR-2023 16:01
Operator : JGR Inst ID: nt14.i
Smp Info : SLC0160-SCV1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230315.b\ABN.m
Meth Date : 21-Mar-2023 12:29 van Quant Type: ISTD
Cal Date : 15-MAR-2023 15:50 Cal File: NT1403152308.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)	
$	1 2-Fluorophenol	112	Compound Not Detected.						
$	2 Phenol-d5	99	Compound Not Detected.						
	3 Phenol	94	8.436	8.428	(1.000)	409924	4.36782	4.368	
$	5 2-Chlorophenol-d4	132	Compound Not Detected.						
	4 Bis(2-Chloroethyl)ether	93	8.606	8.606	(1.000)	355357	5.25823	5.258	
	6 2-Chlorophenol	128	8.729	8.721	(1.000)	323438	4.37862	4.379	
	7 1,3-Dichlorobenzene	146	9.000	9.000	(1.000)	358409	4.79319	4.793	
*	8 1,4-Dichlorobenzene-d4	152	9.070	9.062	(1.000)	197462	4.00000	(M)	
	9 1,4-Dichlorobenzene	146	9.101	9.093	(1.000)	352132	4.88937	4.889	
$	10 1,2-Dichlorobenzene-d4	152	Compound Not Detected.						
	12 1,2-Dichlorobenzene	146	9.458	9.458	(1.000)	340729	4.78641	4.786	
	11 Benzyl alcohol	108	9.334	9.334	(1.000)	220673	5.05069	5.051	
	14 2,2'-oxybis(1-Chloropropane)	121	9.644	9.644	(1.000)	114247	5.31866	5.319	
	13 2-Methylphenol	108	9.559	9.559	(1.000)	273187	4.11716	4.117	
	17 Hexachloroethane	117	10.056	10.056	(1.000)	152626	4.95501	4.955	
	16 N-Nitroso-di-n-propylamine	70	9.900	9.893	(1.000)	260326	4.98316	4.983	
	15 4-Methylphenol	108	9.830	9.823	(1.000)	337960	4.30182	4.302	
$	18 Nitrobenzene-d5	82	Compound Not Detected.						
	19 Nitrobenzene	77	10.203	10.195	(0.882)	375695	5.02268	5.023	
	20 Isophorone	82	10.653	10.645	(0.921)	691478	6.77053	6.771	
	21 2-Nitrophenol	139	10.831	10.831	(0.936)	194856	4.53030	4.530	
	22 2,4-Dimethylphenol	107	10.878	10.878	(0.940)	250436	3.91450	3.915	
	23 Bis(2-Chloroethoxy)methane	93	11.087	11.080	(0.959)	402865	5.85923	5.859	
	24 Benzoic acid	105	11.064	10.963	(0.956)	444832	8.24795	8.248	
	25 2,4-Dichlorophenol	162	11.289	11.281	(0.976)	243165	4.77930	4.779	
	26 1,2,4-Trichlorobenzene	180	11.482	11.482	(0.993)	315977	5.05188	5.052	
*	27 Naphthalene-d8	136	11.567	11.567	(1.000)	726125	4.00000		
	28 Naphthalene	128	11.606	11.606	(1.003)	936737	4.82884	4.829	
	29 4-Chloroaniline	127	11.729	11.729	(1.014)	327500	4.03279	4.033	
	30 Hexachlorobutadiene	225	11.977	11.977	(1.035)	138599	4.90795	4.908	
	31 4-Chloro-3-methylphenol	107	12.696	12.689	(1.098)	298325	4.85224	4.852	
	32 2-Methylnaphthalene	142	13.006	13.006	(1.124)	656729	4.85435	4.854	
	33 Hexachlorocyclopentadiene	237	13.478	13.486	(0.887)	166439	5.22977	5.230	

		QUANT SIG					CONCENTRATIONS	
	Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
	34 2,4,6-Trichlorophenol	196	13.633	13.625	(0.897)	183263	4.71824	4.718
	35 2,4,5-Trichlorophenol	196	13.703	13.702	(0.902)	188647	4.66090	4.661
$	36 2-Fluorobiphenyl	172	13.695	13.795	(0.901)	426	0.00307	0.003072
	37 2-Chloronaphthalene	162	14.004	14.004	(0.922)	591509	4.97719	4.977
	38 2-Nitroaniline	65	14.260	14.260	(0.938)	234033	5.09985	5.100
	39 Dimethylphthalate	163	14.701	14.693	(0.967)	642281	5.03056	5.031
	40 Acenaphthylene	152	14.887	14.879	(0.980)	974004	4.87938	4.879
	41 2,6-Dinitrotoluene	165	14.840	14.833	(0.977)	153944	5.21947	5.219
*	42 Acenaphthene-d10	164	15.196	15.196	(1.000)	382881	4.00000	
	43 3-Nitroaniline	138	15.119	15.111	(0.995)	211974	5.20957	5.210
	44 Acenaphthene	153	15.266	15.258	(1.005)	578656	4.96504	4.965
	45 2,4-Dinitrophenol	184	15.328	15.328	(1.009)	70613	3.07711	3.077
	46 Dibenzofuran	168	15.590	15.590	(1.026)	824547	4.95562	4.956
	47 4-Nitrophenol	109	15.420	15.420	(1.015)	103988	4.82822	4.828
	48 2,4-Dinitrotoluene	165	15.645	15.645	(1.030)	214010	5.11873	5.119
	50 Diethylphthalate	149	16.163	16.155	(1.064)	686853	5.20331	5.203
	49 Fluorene	166	16.309	16.302	(1.073)	763926	4.84358	4.844
	51 4-Chlorophenyl-phenylether	204	16.294	16.294	(1.072)	337497	4.98506	4.985
	52 4-Nitroaniline	138	16.386	16.379	(1.078)	170484	4.81727	4.817
	53 4,6-Dinitro-2-methylphenol	198	16.487	16.479	(0.904)	109125	4.43923	4.439
	54 N-Nitrosodiphenylamine	169	16.548	16.541	(0.907)	475466	4.95411	4.954
$	55 2,4,6-Tribromophenol	330	Compound Not Detected.					
	56 4-Bromophenyl-phenylether	248	17.304	17.304	(0.949)	169085	5.22559	5.226
	57 Hexachlorobenzene	284	17.621	17.621	(0.966)	163199	4.78004	4.780
	58 Pentachlorophenol	266	17.969	17.977	(0.985)	106585	4.47687	4.477
*	59 Phenanthrene-d10	188	18.240	18.240	(1.000)	706616	4.00000	
	60 Phenanthrene	178	18.294	18.286	(1.003)	955749	4.73403	4.734
	61 Anthracene	178	18.379	18.379	(1.008)	832701	4.28109	4.281
	62 Carbazole	167	18.712	18.704	(1.026)	793728	4.58650	4.587
	63 Di-n-butylphthalate	149	19.509	19.509	(1.070)	1207956	5.50673	5.507
	64 Fluoranthene	202	20.677	20.677	(0.887)	1031812	5.02399	5.024
	65 Pyrene	202	21.103	21.103	(0.906)	1044240	4.95802	4.958
$	66 Terphenyl-d14	244	21.381	21.389	(0.918)	662	0.00464	0.004643
	67 Butylbenzylphthalate	149	22.310	22.310	(0.957)	529418	5.73747	5.737
	68 Benzo(a)anthracene	228	23.270	23.263	(0.999)	898379	4.82654	4.827
*	69 Chrysene-d12	240	23.301	23.294	(1.000)	504808	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.224	23.216	(0.997)	586696	10.6467	10.65
	71 Chrysene	228	23.340	23.340	(1.002)	795614	4.72292	4.723
	72 bis(2-Ethylhexyl)phthalate	149	23.340	23.332	(0.960)	706123	5.42778	5.428
*	134 Di-n-octylphthalate-d4	153	24.323	24.323	(1.000)	988248	4.00000	
	73 Di-n-octylphthalate	149	24.331	24.331	(1.000)	1304643	5.13544	5.135
	74 Benzo(b)fluoranthene	252	25.167	25.152	(0.970)	838016	4.77369	4.774
	75 Benzo(k)fluoranthene	252	25.206	25.198	(0.972)	887530	5.10013	5.100
	76 Benzo(a)pyrene	252	25.825	25.818	(0.996)	747283	4.97798	4.978
*	77 Perylene-d12	264	25.941	25.934	(1.000)	496785	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	28.626	28.610	(1.103)	807644	4.94309	4.943
	79 Dibenzo(a,h)anthracene	278	28.641	28.626	(1.104)	669918	4.86500	4.865
	80 Benzo(g,h,i)perylene	276	29.418	29.403	(1.134)	665079	4.93915	4.939
	90 N-Nitrosodimethylamine	74	4.712	4.720	(1.000)	220898	5.19984	5.200
	91 Aniline	93	Compound Not Detected.					
	93 Benzidine	184	20.909	20.909	(0.897)	466644	5.64609	5.646
	103 Pyridine	79	4.743	4.766	(1.000)	348414	2.64838	2.648
	105 1-methylnaphthalene	142	13.238	13.230	(1.144)	625458	5.10291	5.103
	111 Azobenzene (1,2-DP-Hydrazine)	77	16.618	16.618	(1.094)	788522	5.00236	5.002

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.206	25.199	(0.972)	1626530	9.75586	9.756
120 2,3,4,6-Tetrachlorophenol	232	15.923	15.923	(1.048)	141312	3.56895	3.569

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1403152311.D
Lab Smp Id: SLC0160-SCV1
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt14.i\20230315.b\ABN.m
Misc Info:

Calibration Date: 15-MAR-2023
Calibration Time: 13:26
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	194517	97259	389034	197462	1.51
27 Naphthalene-d8	721321	360661	1442642	726125	0.67
42 Acenaphthene-d10	379602	189801	759204	382881	0.86
59 Phenanthrene-d10	703194	351597	1406388	706616	0.49
69 Chrysene-d12	504769	252385	1009538	504808	0.01
134 Di-n-octylphthala	978492	489246	1956984	988248	1.00
77 Perylene-d12	484073	242037	968146	496785	2.63

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.07	8.57	9.57	9.07	-0.00
27 Naphthalene-d8	11.57	11.07	12.07	11.57	-0.00
42 Acenaphthene-d10	15.20	14.70	15.70	15.20	-0.05
59 Phenanthrene-d10	18.25	17.75	18.75	18.24	-0.04
69 Chrysene-d12	23.30	22.80	23.80	23.30	-0.00
134 Di-n-octylphthala	24.32	23.82	24.82	24.32	-0.00
77 Perylene-d12	25.94	25.44	26.44	25.94	-0.00

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

REVIEW SUMMARY FOR FILE - NT1403152311.D

Lab ID: SLC0160-SCV1
nt14.i, ABN.m, 15-MAR-2023 17:39

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

** FIRST SURROGATE NOT FOUND. ICAL Check not performed **

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
1.000	1.064	-0.0642	2,2'-oxybis(1-Chloropropane)
0.956	0.948	0.0087	Benzoic acid
0.901	0.908	-0.0066	2-Fluorobiphenyl

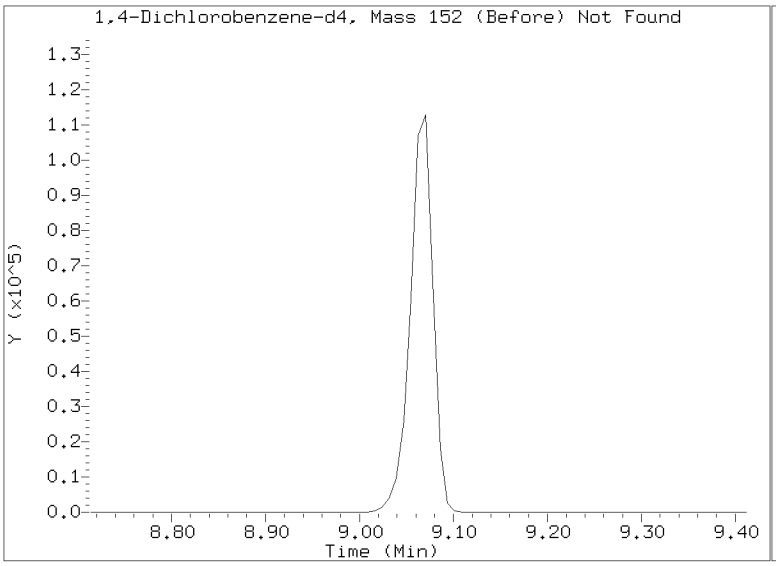
RRT check based on Ccal File: NT1403152308.D

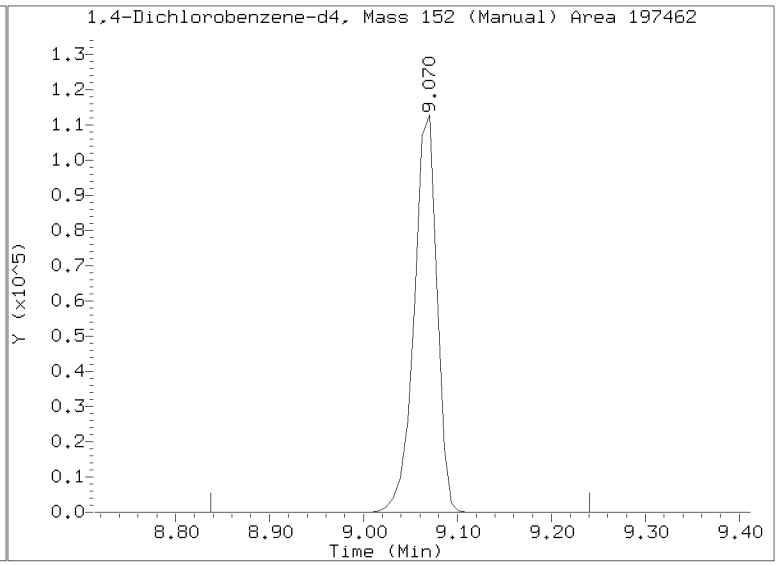
On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

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

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230315.b/NT1403152311.D
Injection Date: 15-MAR-2023 17:39
Lab ID:SLC0160-SCV1 Client ID:
Report Date: 03/21/2023 12:48





SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8270E

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GC00048
Laboratory ID: SLC0160-SCV1
Sequence: SLC0160
Standard ID: L002833

ANALYTE	EXPECTED (ug/mL)	FOUND (ug/mL)	% DRIFT	QC LIMIT
Phenol	5.0000	4.4	-12.6	20.00
bis(2-chloroethyl) ether	5.0000	5.3	5.2	20.00
2-Chlorophenol	5.0000	4.4	-12.4	20.00
1,3-Dichlorobenzene	5.0000	4.8	-4.1	20.00
1,4-Dichlorobenzene	5.0000	4.9	-2.2	20.00
1,2-Dichlorobenzene	5.0000	4.8	-4.3	20.00
Benzyl Alcohol	5.0000	5.1	1.0	20.00
2,2'-Oxybis(1-chloropropane)	5.0000	5.3	6.4	20.00
2-Methylphenol	5.0000	4.1	-17.7	20.00
Hexachloroethane	5.0000	5.0	-0.9	20.00
N-Nitroso-di-n-Propylamine	5.0000	5.0	-0.3	20.00
4-Methylphenol	5.0000	4.3	-14.0	20.00
Nitrobenzene	5.0000	5.0	0.5	20.00
Isophorone	5.0000	6.8	35.4 *	20.00
2-Nitrophenol	5.0000	4.5	-9.4	20.00
2,4-Dimethylphenol	5.0000	3.9	-21.7 *	20.00
Bis(2-Chloroethoxy)methane	5.0000	5.9	17.2	20.00
2,4-Dichlorophenol	5.0000	4.8	-4.4	20.00
1,2,4-Trichlorobenzene	5.0000	5.1	1.0	20.00
Naphthalene	5.0000	4.8	-3.4	20.00
Benzoic acid	10.000	8.2	-17.5	20.00
4-Chloroaniline	5.0000	4.0	-19.3	20.00
Hexachlorobutadiene	5.0000	4.9	-1.8	20.00
4-Chloro-3-Methylphenol	5.0000	4.9	-3.0	20.00
2-Methylnaphthalene	5.0000	4.9	-2.9	20.00
Hexachlorocyclopentadiene	5.0000	5.2	4.6	20.00
2,4,6-Trichlorophenol	5.0000	4.7	-5.6	20.00
2,4,5-Trichlorophenol	5.0000	4.7	-6.8	20.00
2-Chloronaphthalene	5.0000	5.0	-0.5	20.00
2-Nitroaniline	5.0000	5.1	2.0	20.00
Acenaphthylene	5.0000	4.9	-2.4	20.00
Dimethylphthalate	5.0000	5.0	0.6	20.00

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8270E

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GC00048
Laboratory ID: SLC0160-SCV1
Sequence: SLC0160
Standard ID: L002833

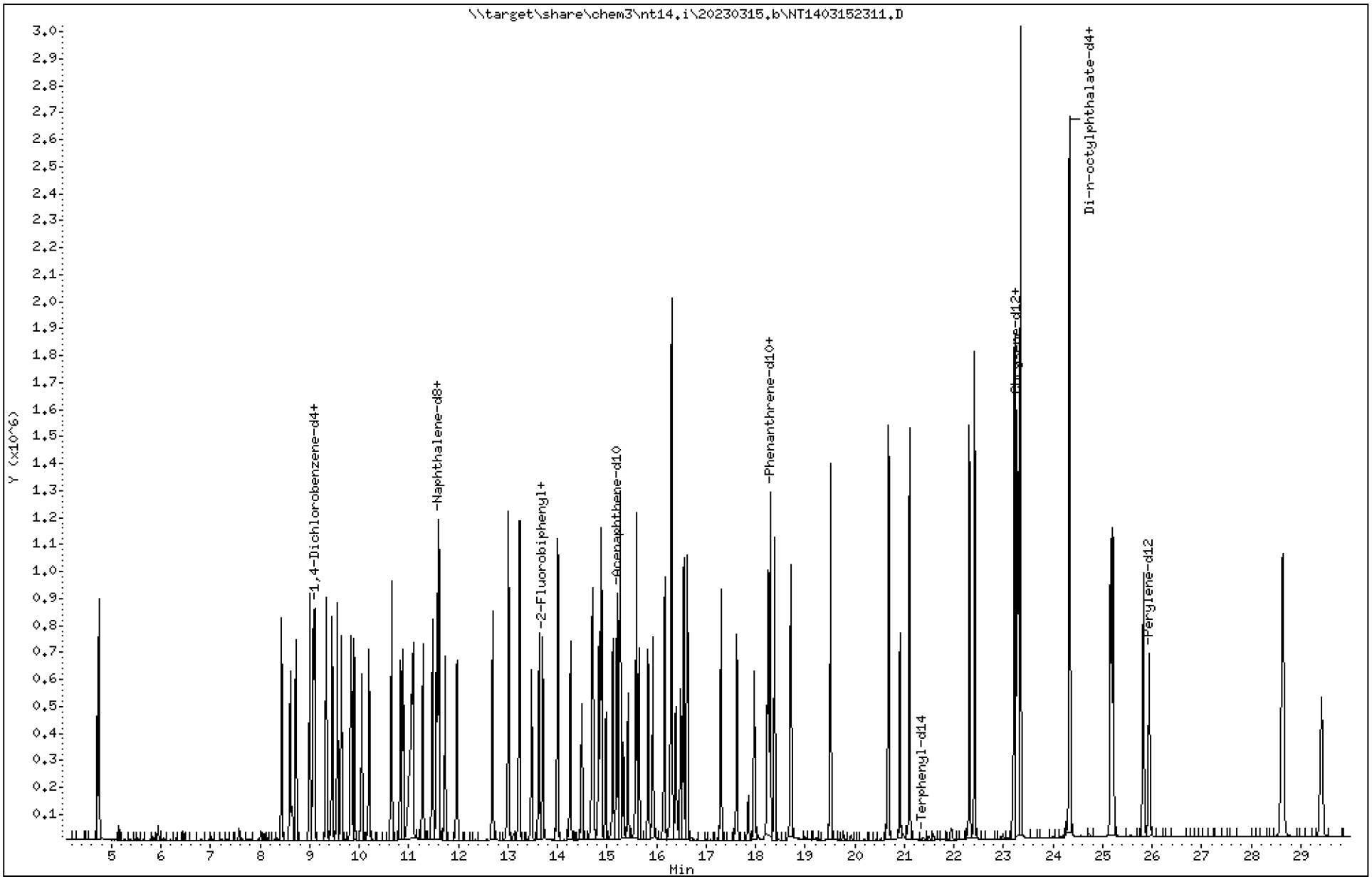
2,6-Dinitrotoluene	5.0000	5.2	4.4	20.00
Acenaphthene	5.0000	5.0	-0.7	20.00
3-Nitroaniline	5.0000	5.2	4.2	20.00
2,4-Dinitrophenol	5.0000	3.1	-38.5 *	20.00
Dibenzofuran	5.0000	5.0	-0.9	20.00
4-Nitrophenol	5.0000	4.8	-3.4	20.00
2,4-Dinitrotoluene	5.0000	5.1	2.4	20.00
Fluorene	5.0000	4.8	-3.1	20.00
4-Chlorophenylphenyl ether	5.0000	5.0	-0.3	20.00
Diethyl phthalate	5.0000	5.2	4.1	20.00
4-Nitroaniline	5.0000	4.8	-3.7	20.00
4,6-Dinitro-2-methylphenol	5.0000	4.4	-11.2	20.00
N-Nitrosodiphenylamine	5.0000	5.0	-0.9	20.00
4-Bromophenyl phenyl ether	5.0000	5.2	4.5	20.00
Hexachlorobenzene	5.0000	4.8	-4.4	20.00
Pentachlorophenol	5.0000	4.5	-10.5	20.00
Phenanthrene	5.0000	4.7	-5.3	20.00
Anthracene	5.0000	4.3	-14.4	20.00
Carbazole	5.0000	4.6	-8.3	20.00
Di-n-Butylphthalate	5.0000	5.5	10.1	20.00
Fluoranthene	5.0000	5.0	0.5	20.00
Pyrene	5.0000	5.0	-0.8	20.00
Butylbenzylphthalate	5.0000	5.7	14.7	20.00
Benzo(a)anthracene	5.0000	4.8	-3.5	20.00
3,3'-Dichlorobenzidine	10.000	10.6	6.5	20.00
Chrysene	5.0000	4.7	-5.5	20.00
bis(2-Ethylhexyl)phthalate	5.0000	5.4	8.6	20.00
Di-n-Octylphthalate	5.0000	5.1	2.7	20.00
Benzofluoranthenes, Total	10.000	9.8	-2.4	20.00
Benzo(a)pyrene	5.0000	5.0	-0.4	20.00
Indeno(1,2,3-cd)pyrene	5.0000	4.9	-1.1	20.00
Dibenzo(a,h)anthracene	5.0000	4.9	-2.7	20.00
Benzo(g,h,i)perylene	5.0000	4.9	-1.2	20.00
1-Methylnaphthalene	5.0000	5.1	2.1	20.00

* Values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20230315.b\NT1403152311.D
Date : 15-MAR-2023 17:39
Client ID:
Sample Info: SLC0160-SCV1

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

Column phase: ZB-5msi



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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

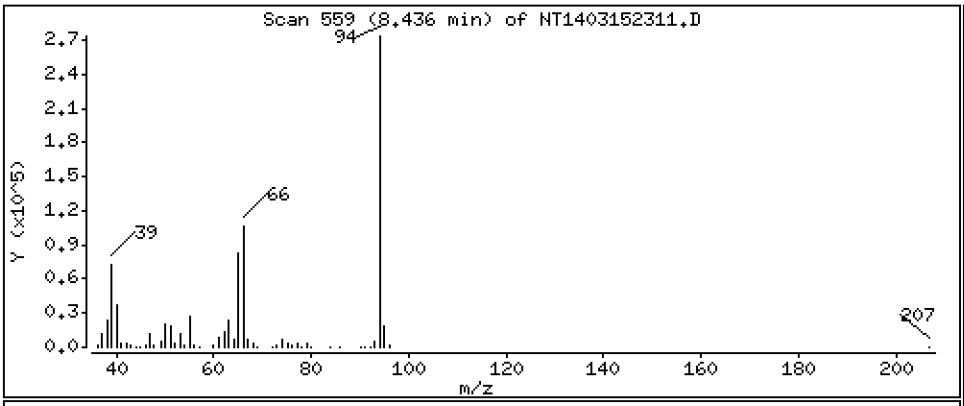
Operator: JGR

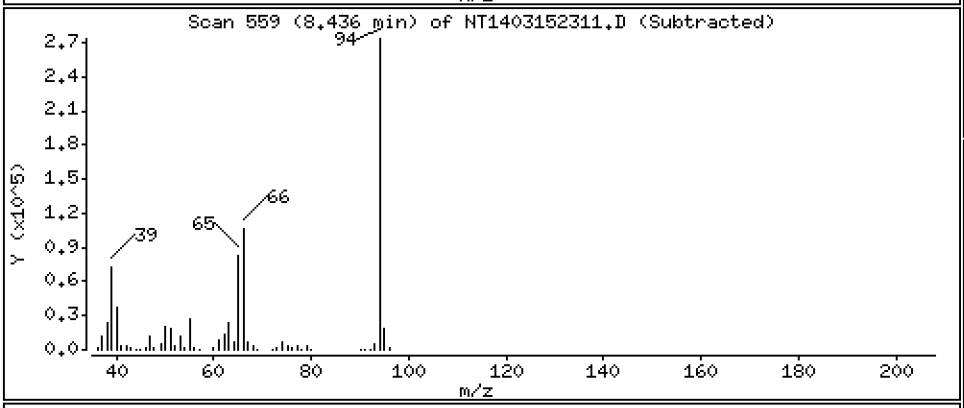
Column phase: ZB-5msi

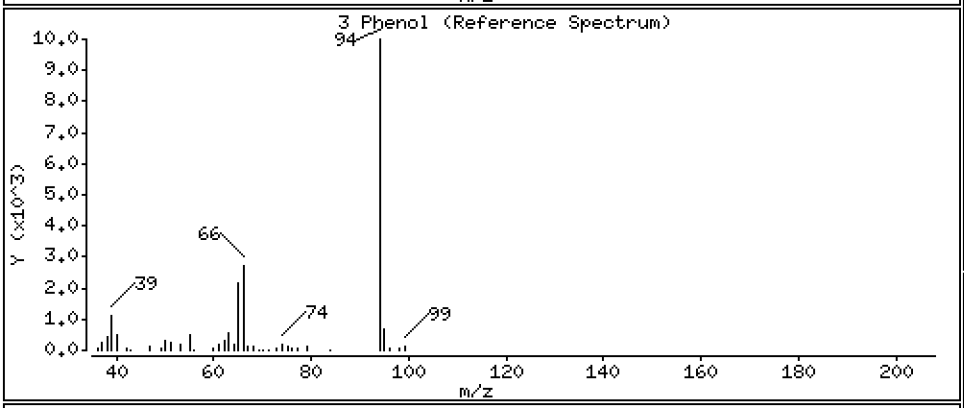
Column diameter: 0.25

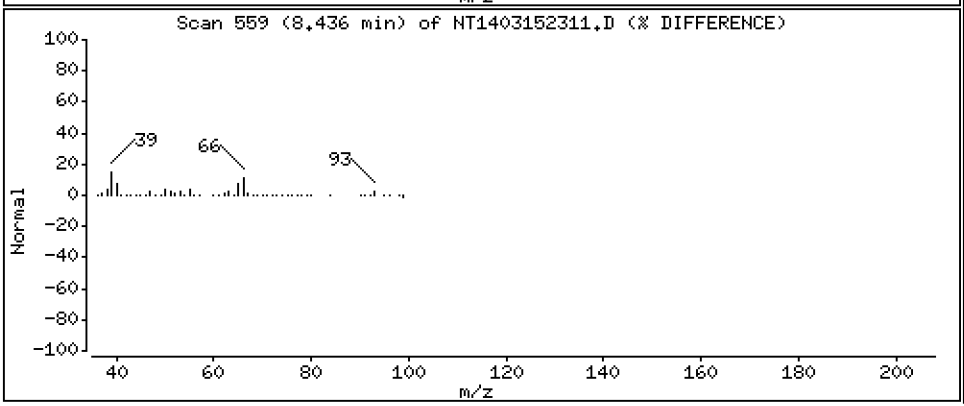
3 Phenol

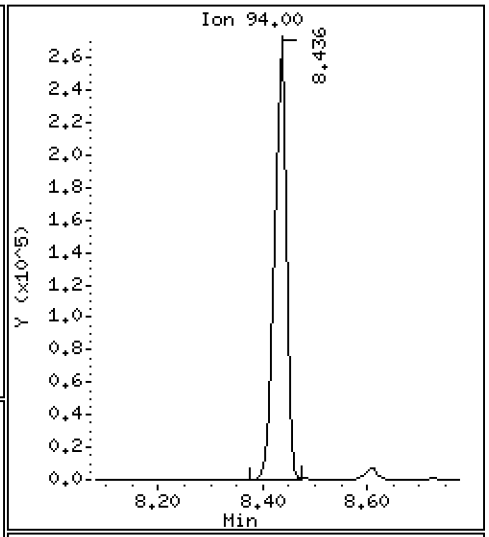
Concentration: 4.368 ug/mL

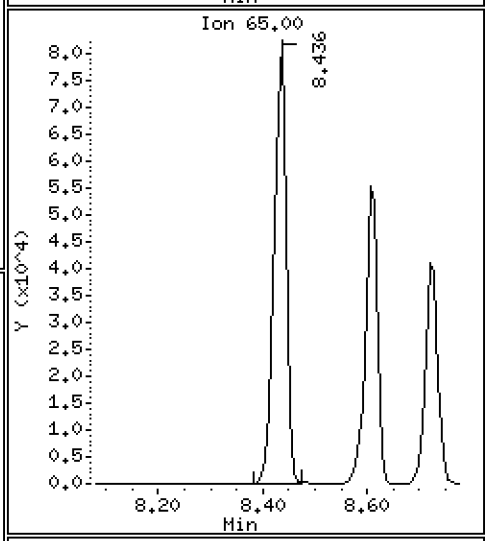


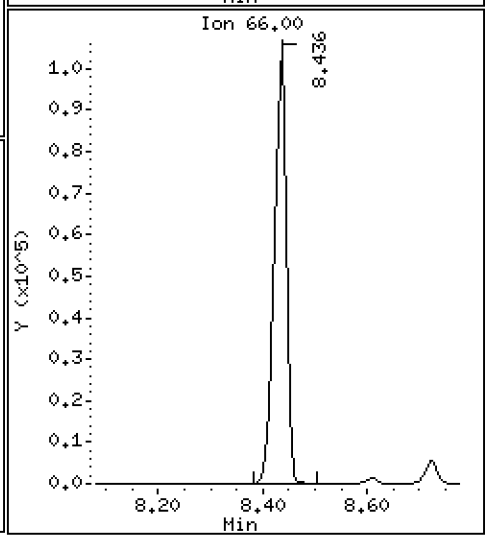












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

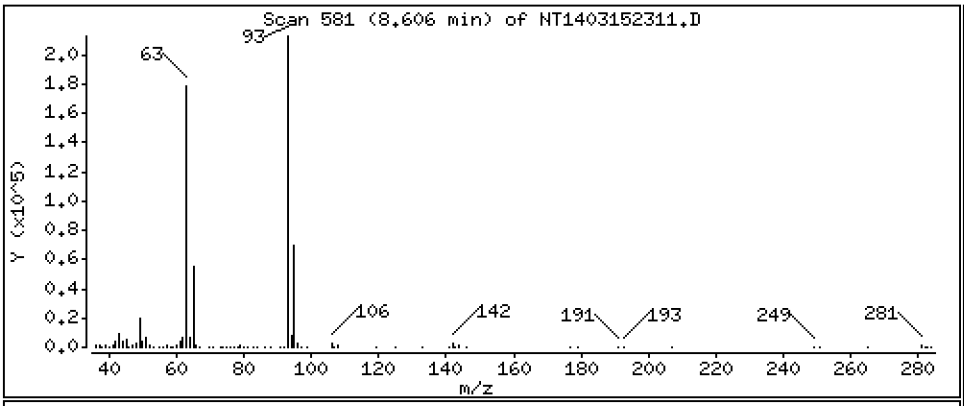
Operator: JGR

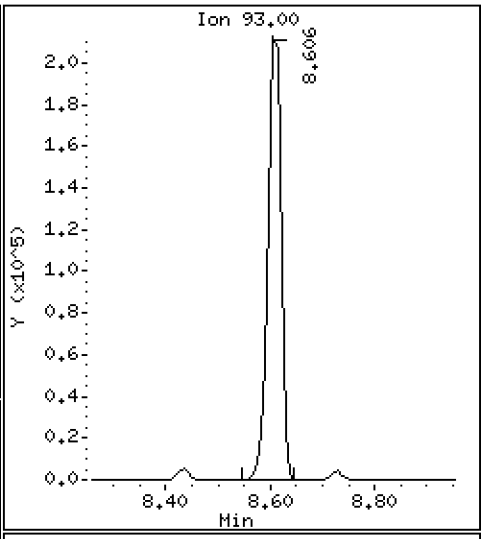
Column phase: ZB-5msi

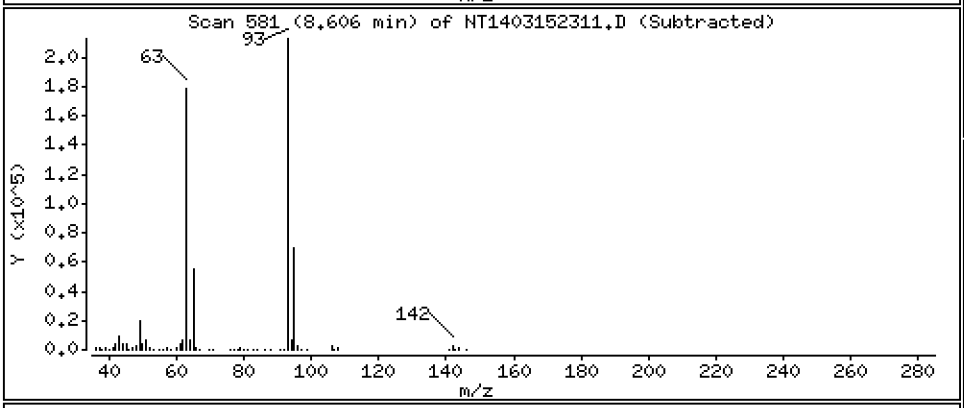
Column diameter: 0.25

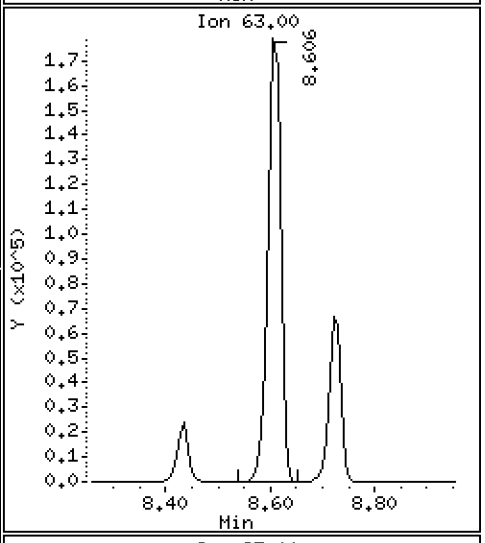
4 Bis(2-Chloroethyl)ether

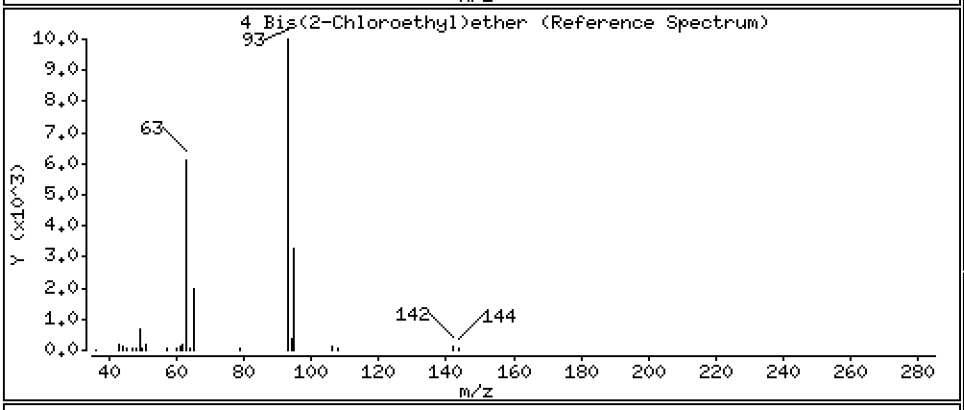
Concentration: 5.258 ug/mL

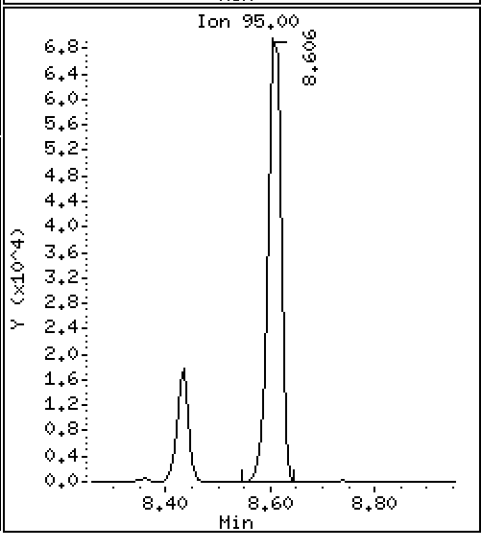


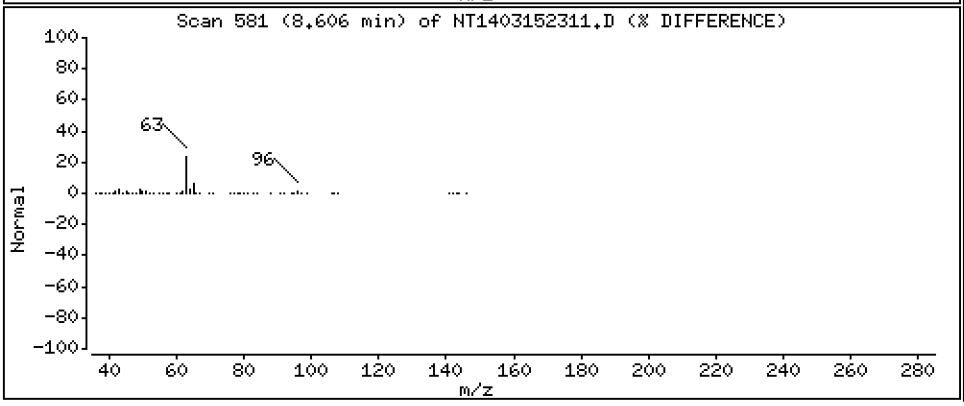












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

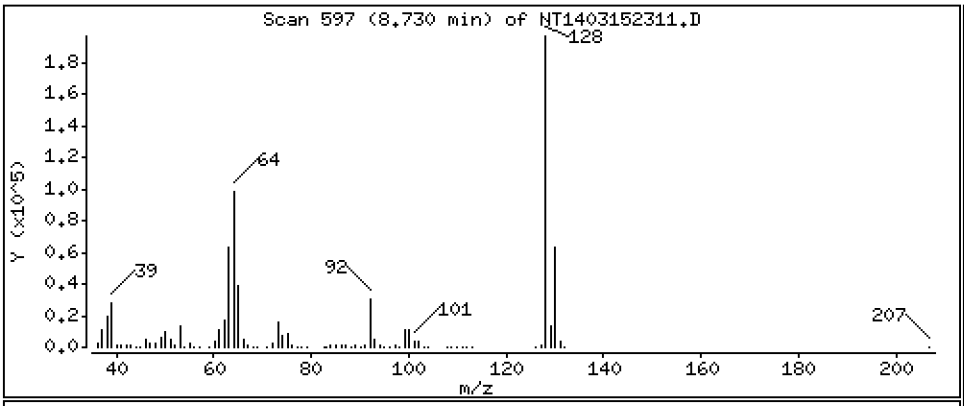
Operator: JGR

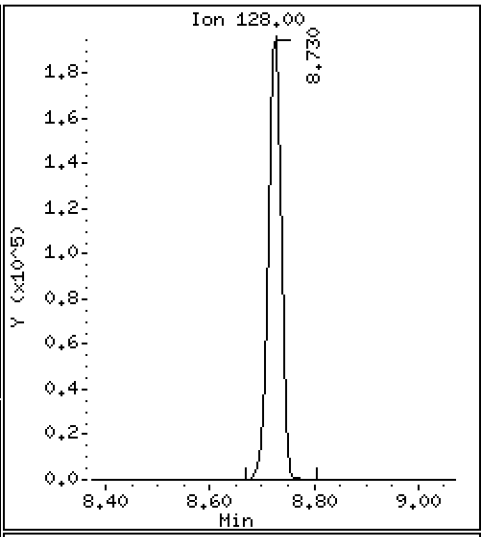
Column phase: ZB-5msi

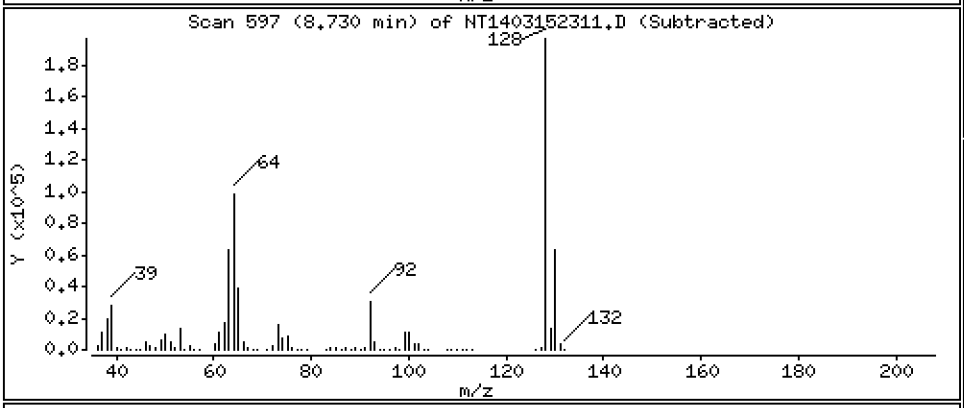
Column diameter: 0.25

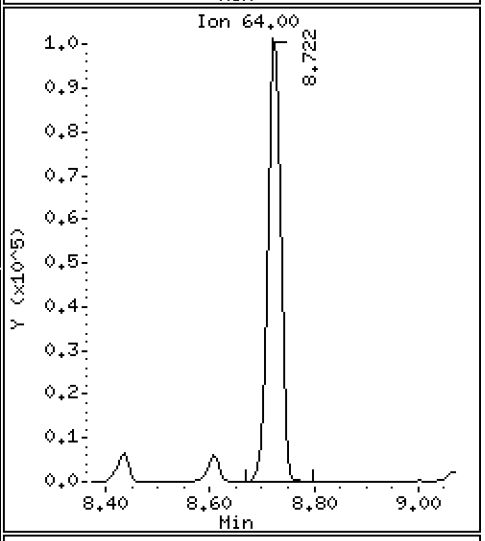
6 2-Chlorophenol

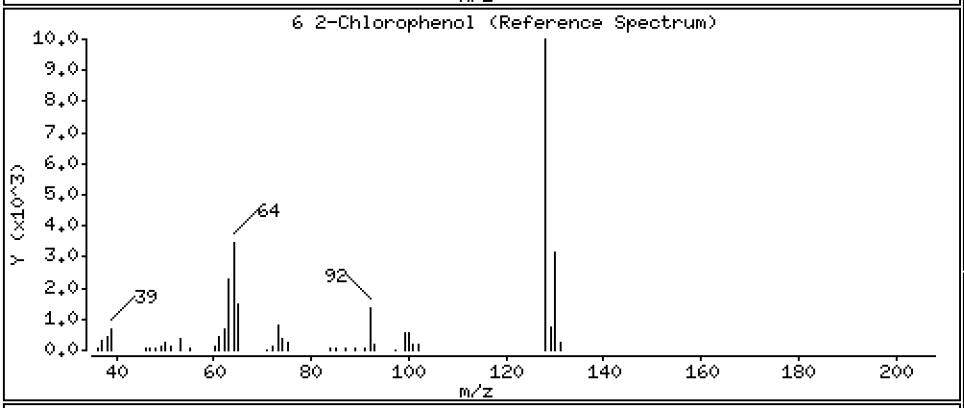
Concentration: 4.379 ug/mL

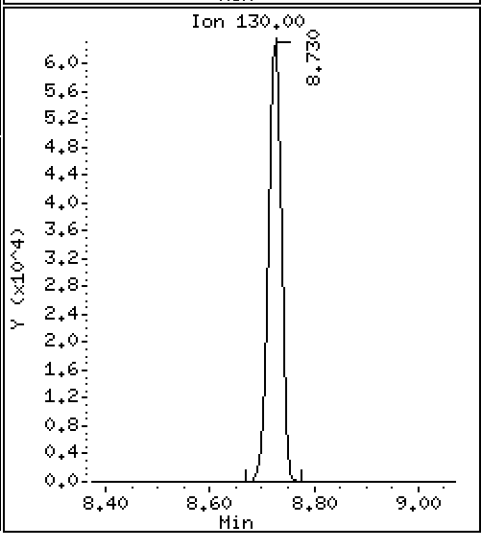


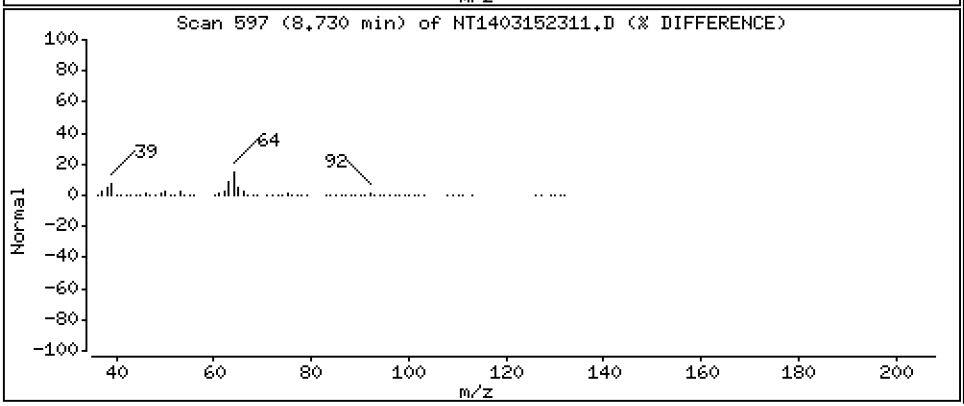












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

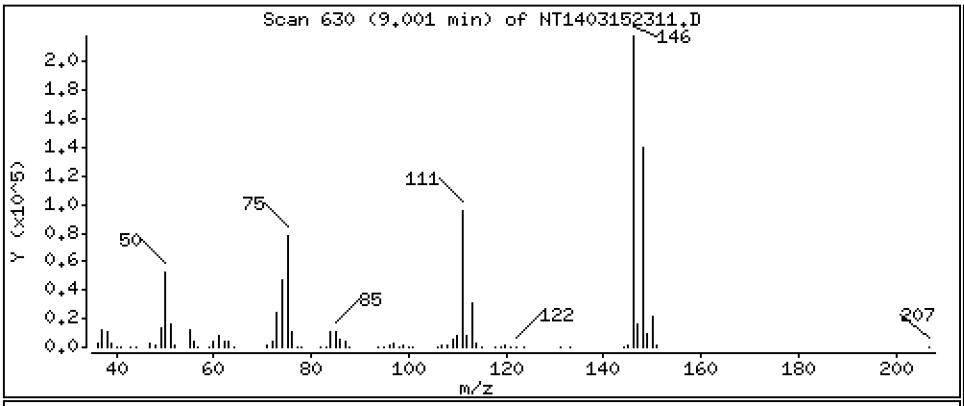
Operator: JGR

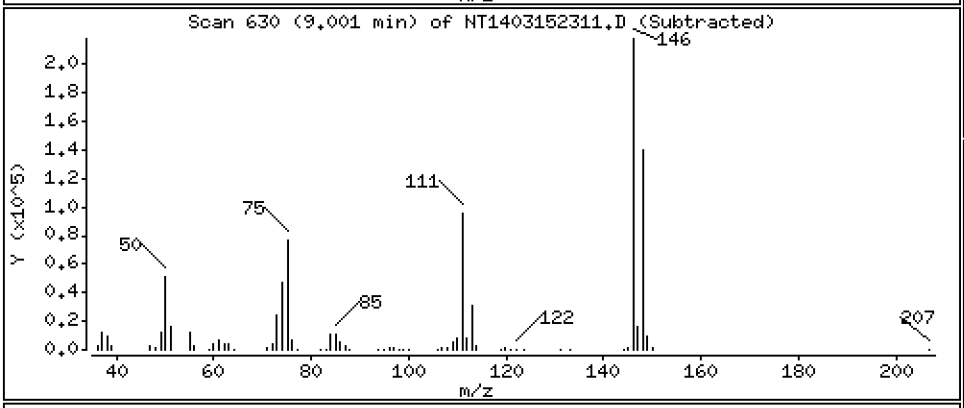
Column phase: ZB-5msi

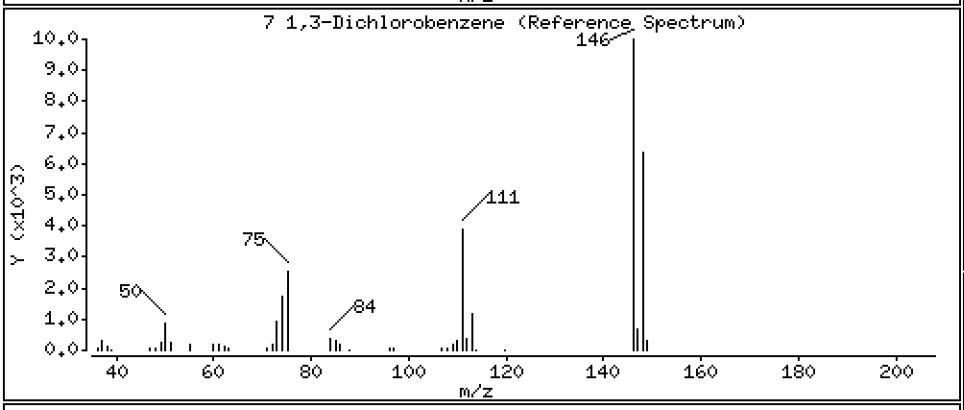
Column diameter: 0.25

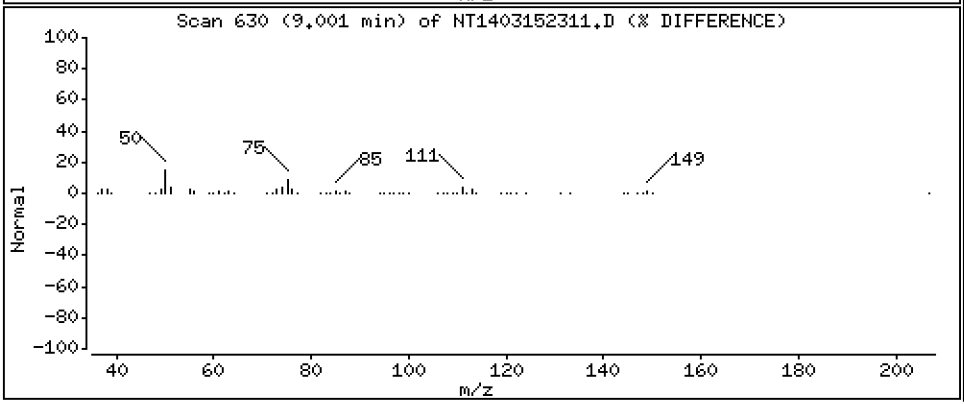
7 1,3-Dichlorobenzene

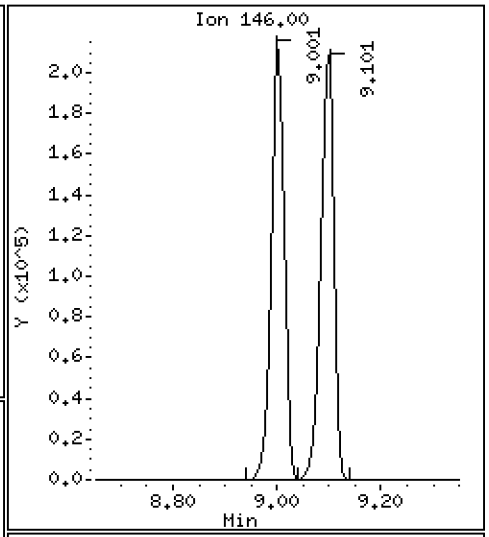
Concentration: 4.793 ug/mL

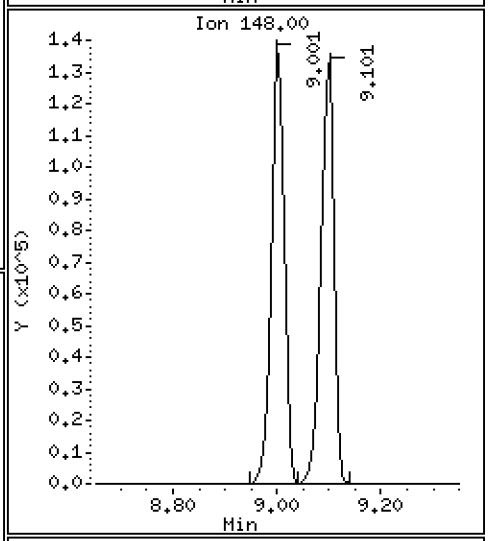


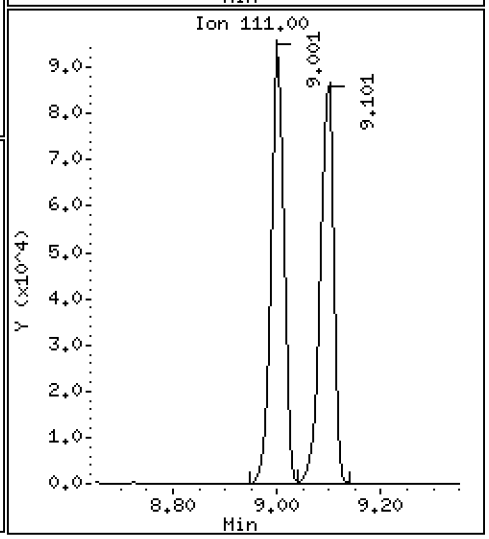












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

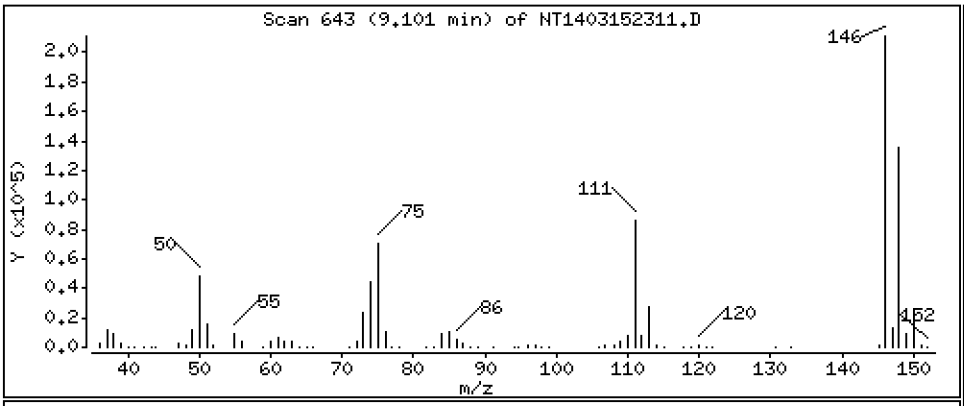
Operator: JGR

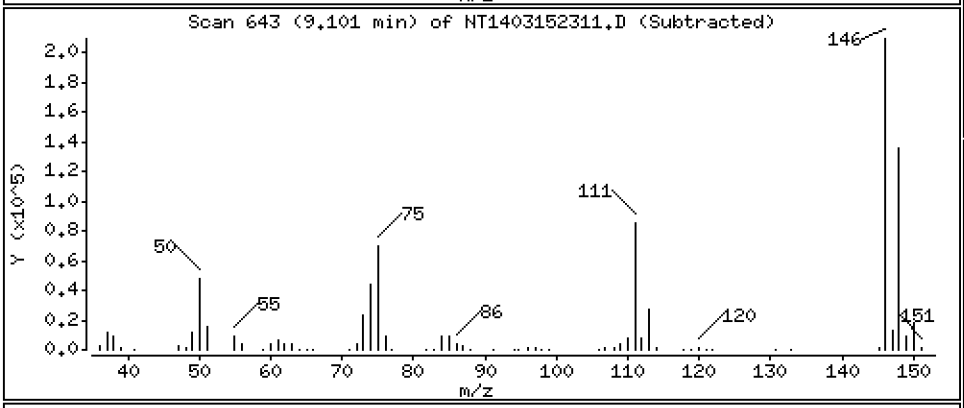
Column phase: ZB-5msi

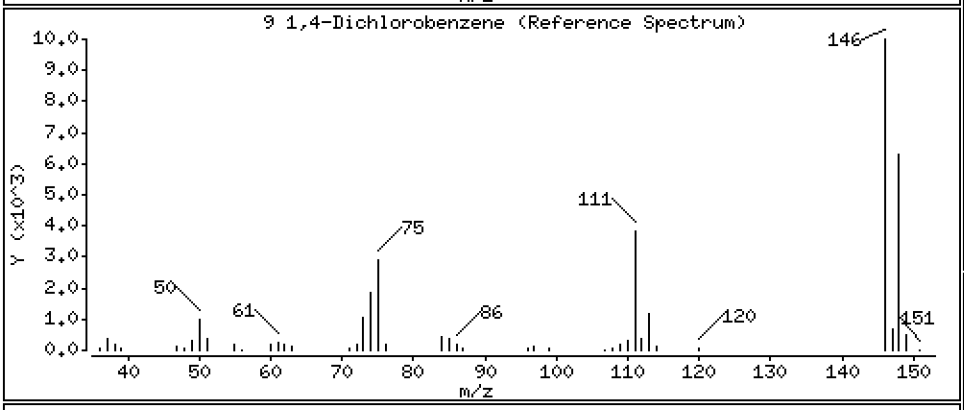
Column diameter: 0.25

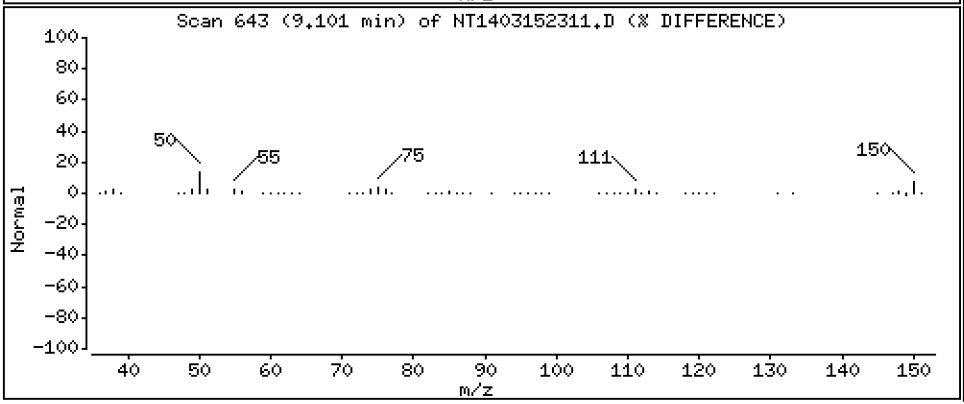
9 1,4-Dichlorobenzene

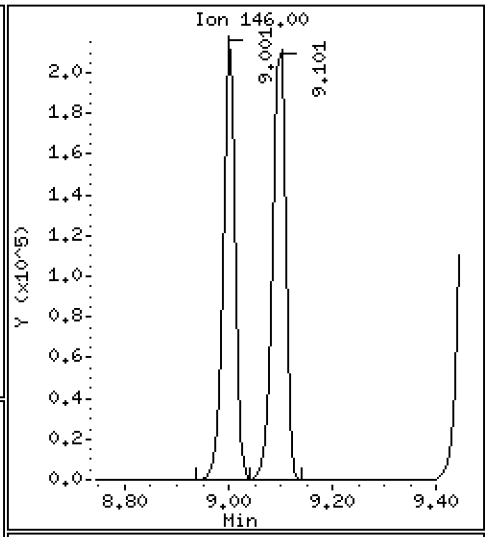
Concentration: 4.889 ug/mL

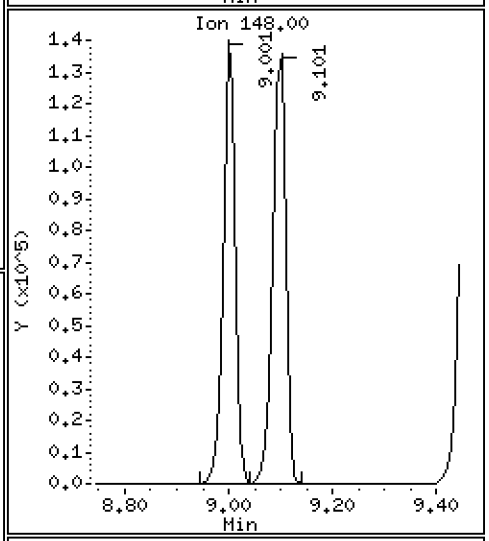


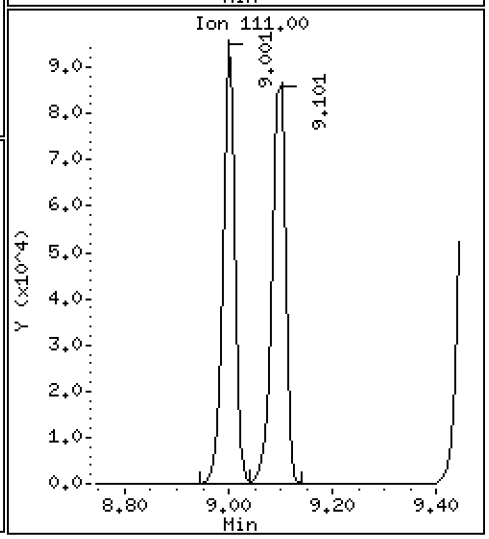












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

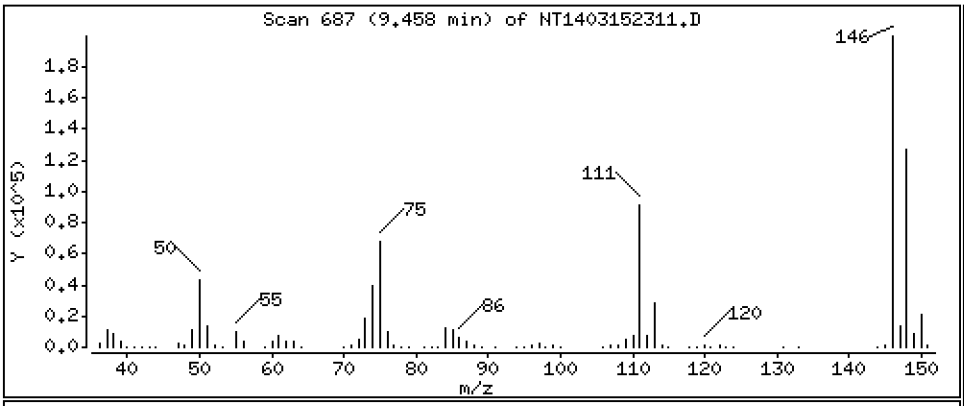
Operator: JGR

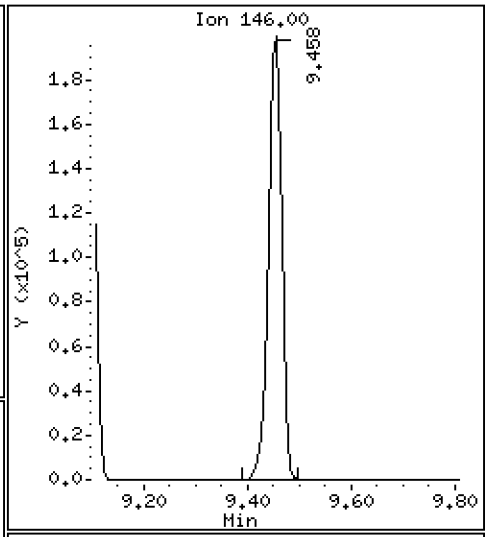
Column phase: ZB-5msi

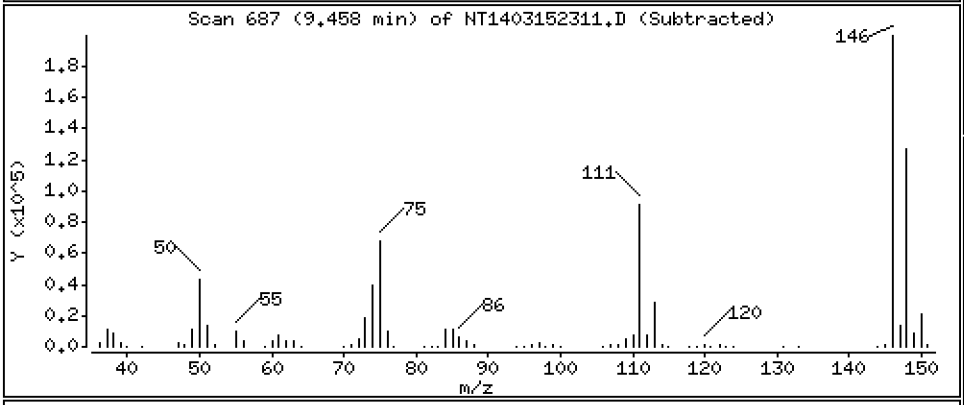
Column diameter: 0.25

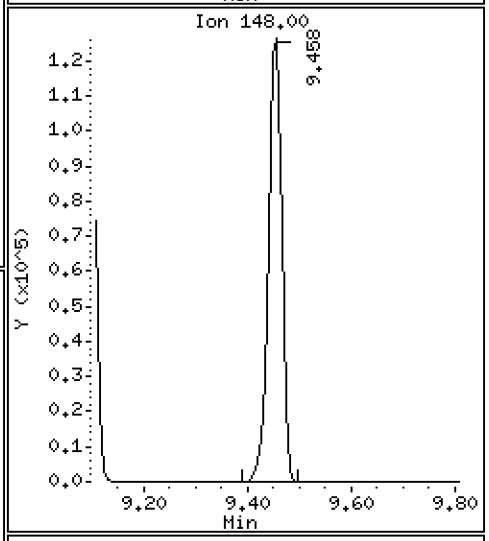
12 1,2-Dichlorobenzene

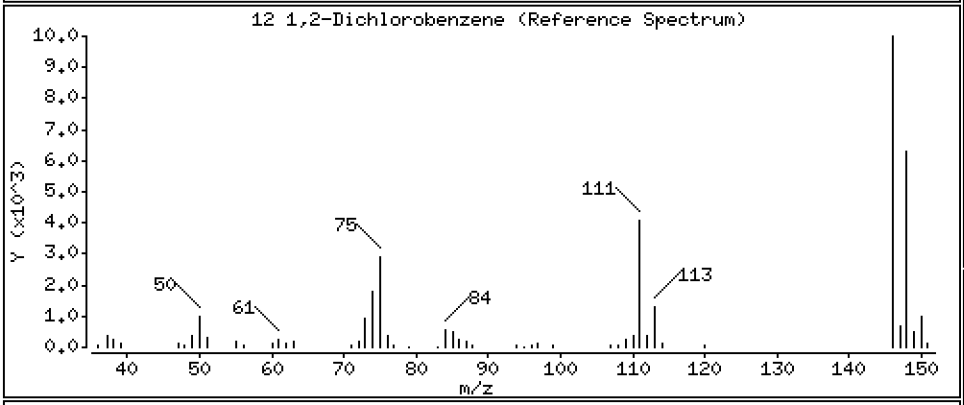
Concentration: 4.786 ug/mL

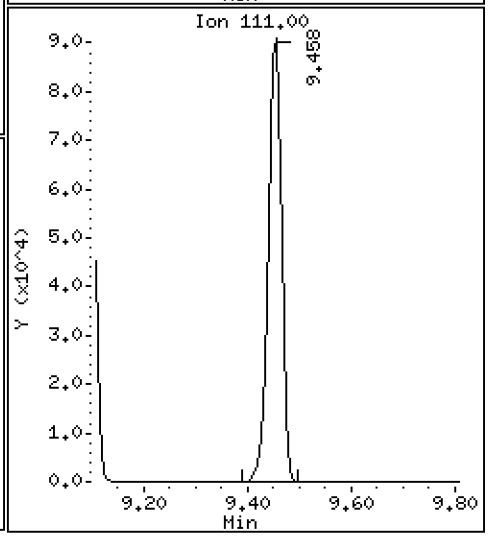


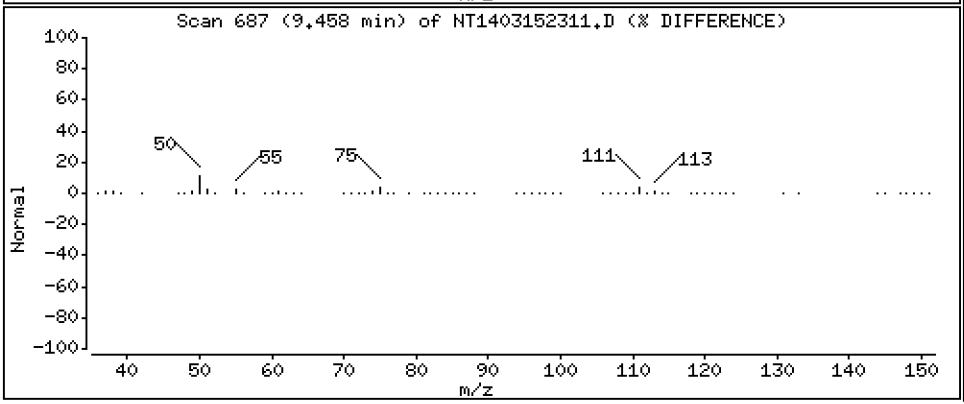












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

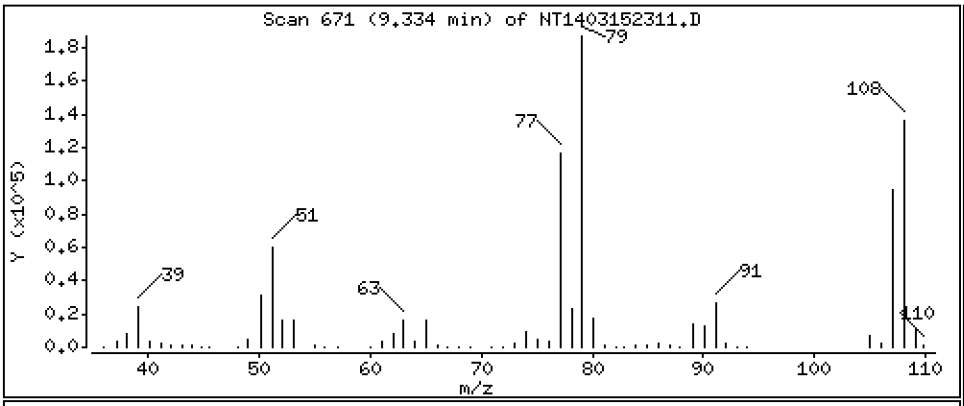
Operator: JGR

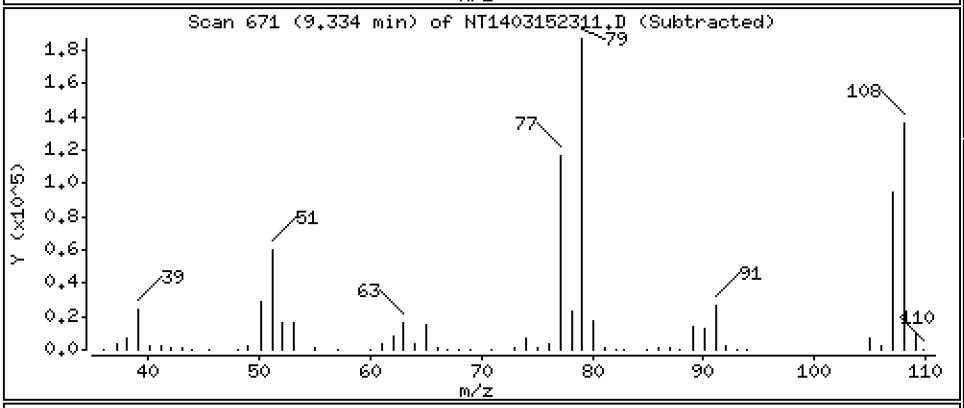
Column phase: ZB-5msi

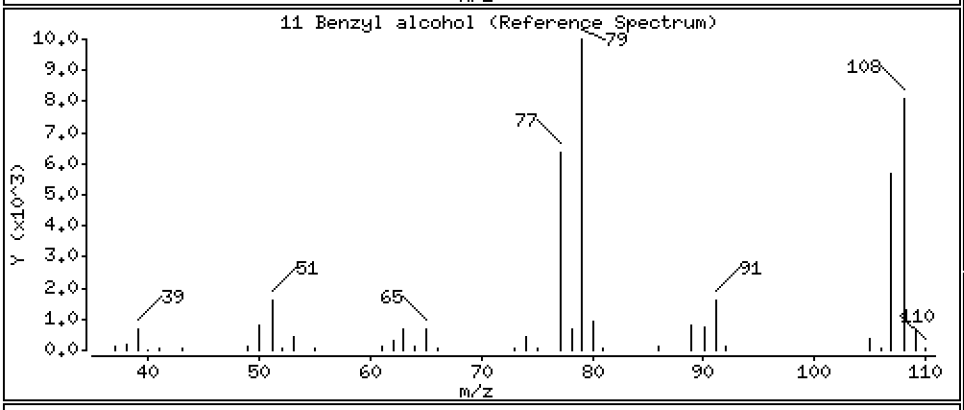
Column diameter: 0.25

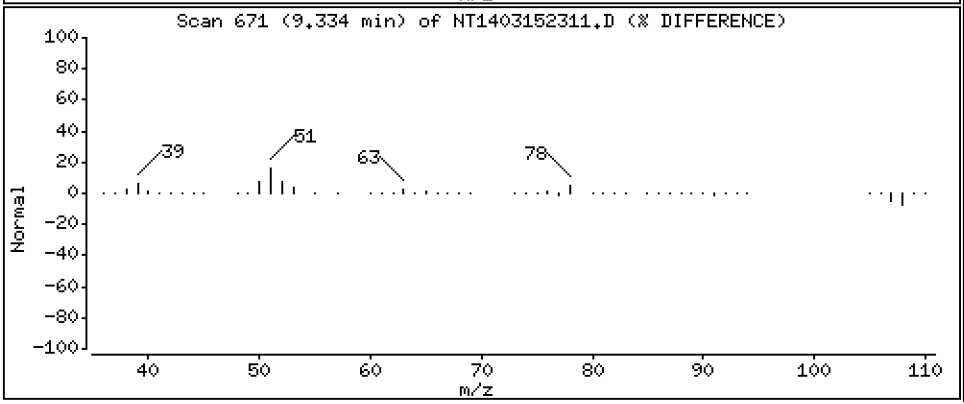
11 Benzyl alcohol

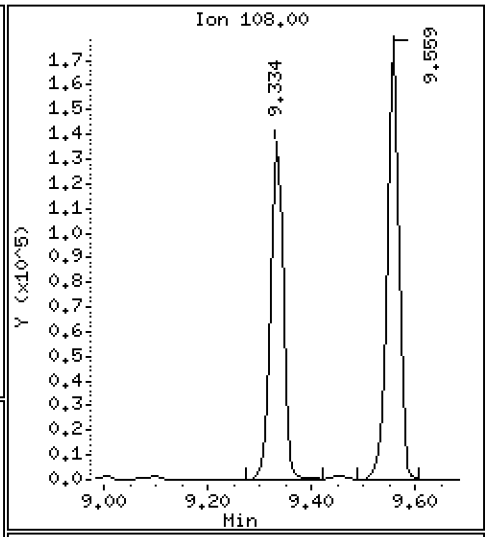
Concentration: 5.051 ug/mL

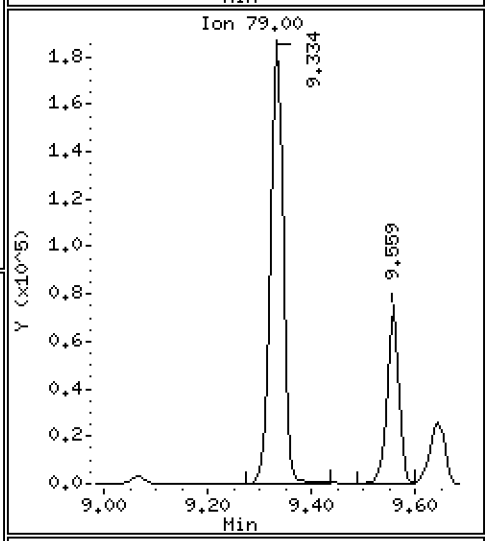


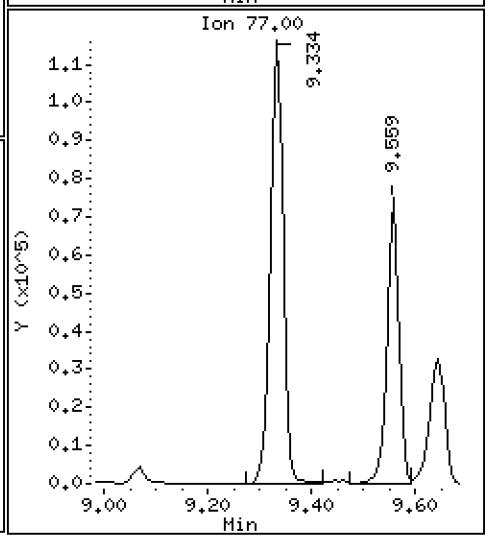












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

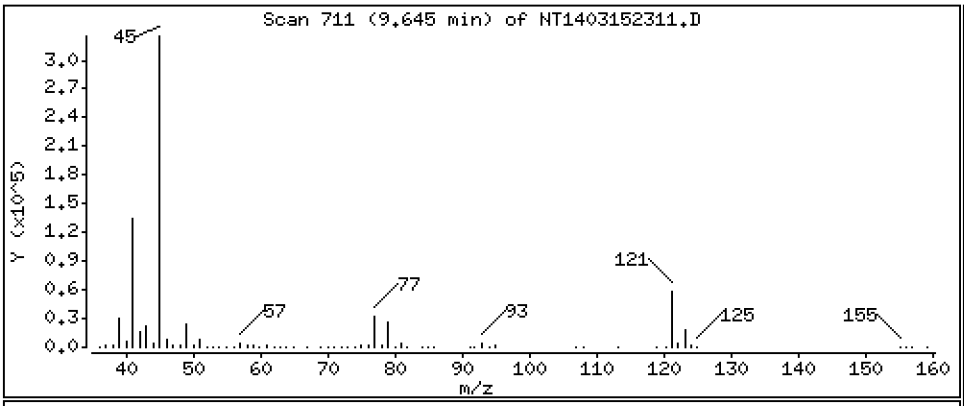
Operator: JGR

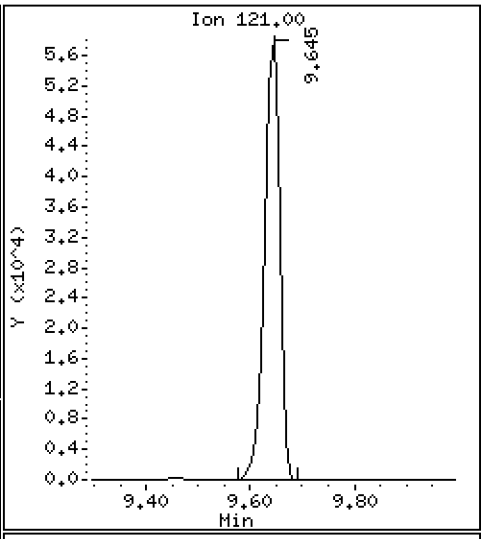
Column phase: ZB-5msi

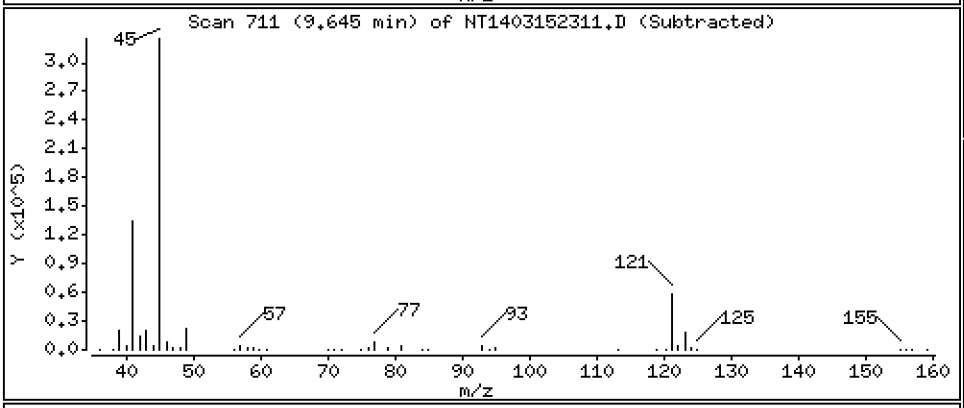
Column diameter: 0.25

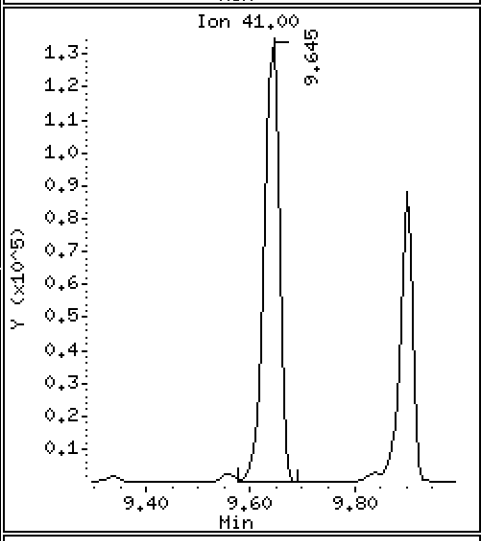
14 2,2'-oxybis(1-Chloropropane)

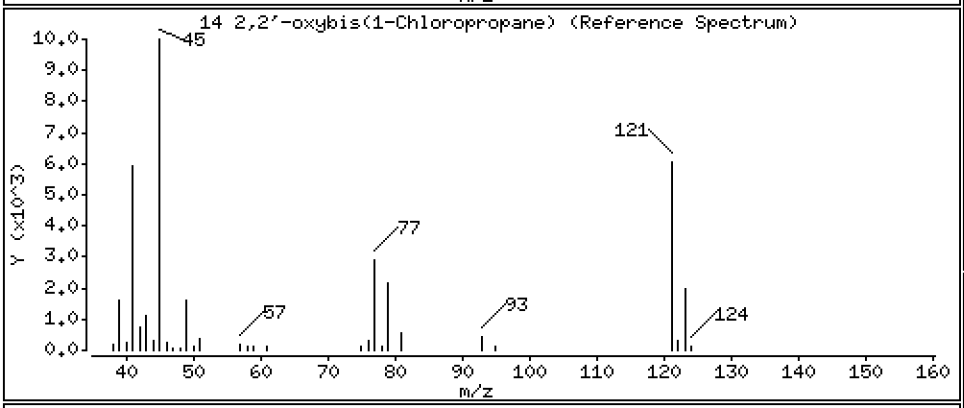
Concentration: 5.319 ug/mL

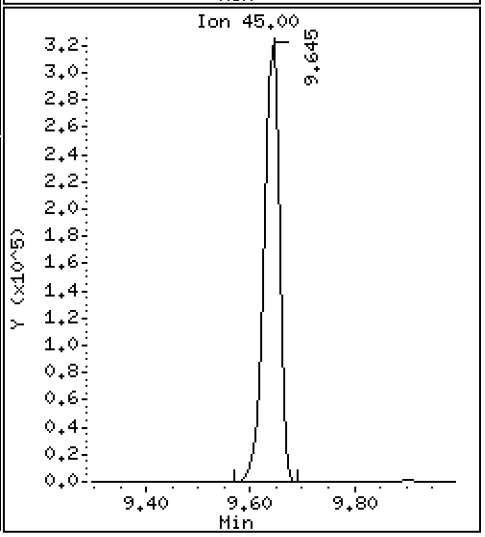


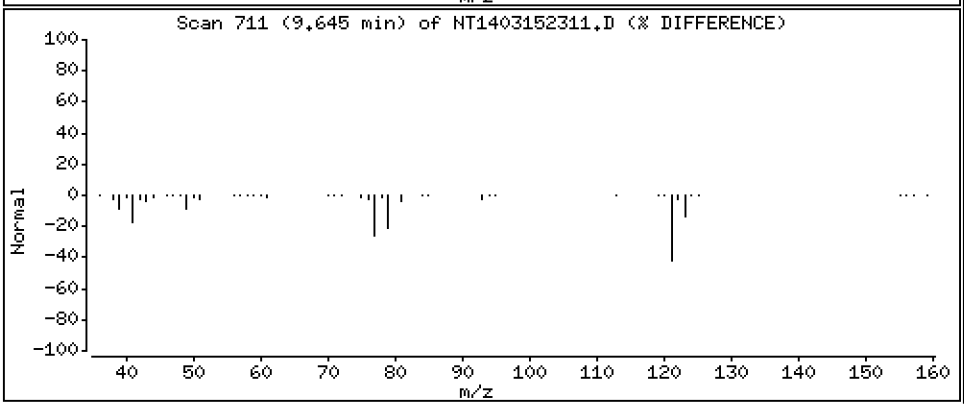












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

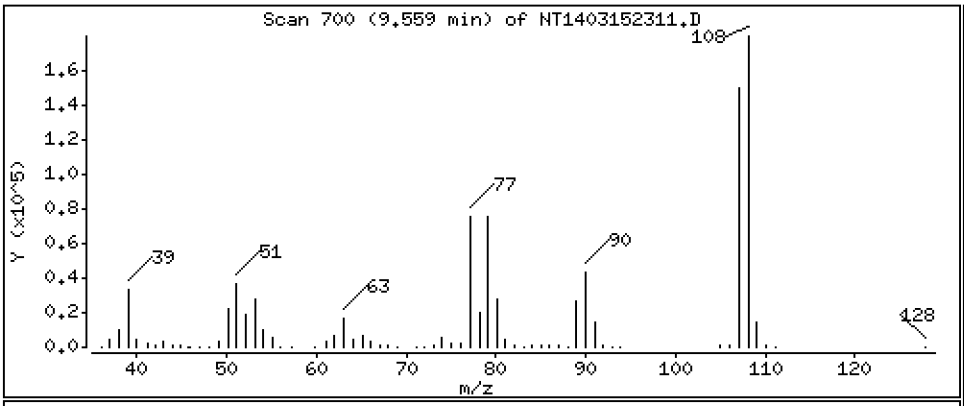
Operator: JGR

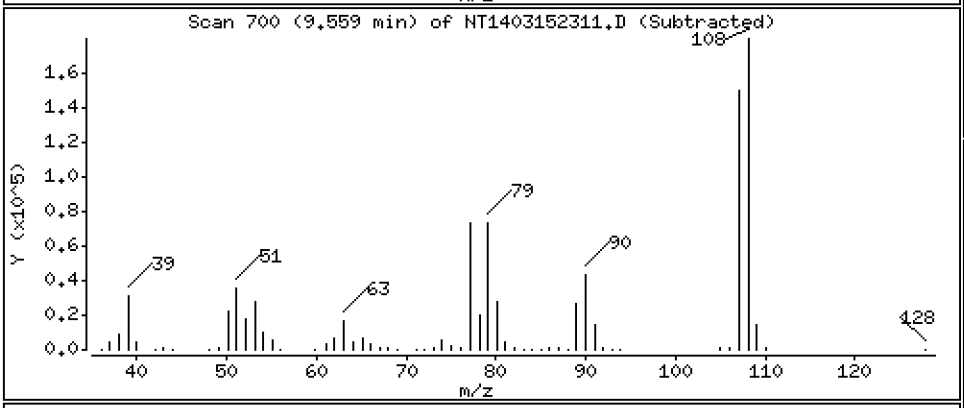
Column phase: ZB-5msi

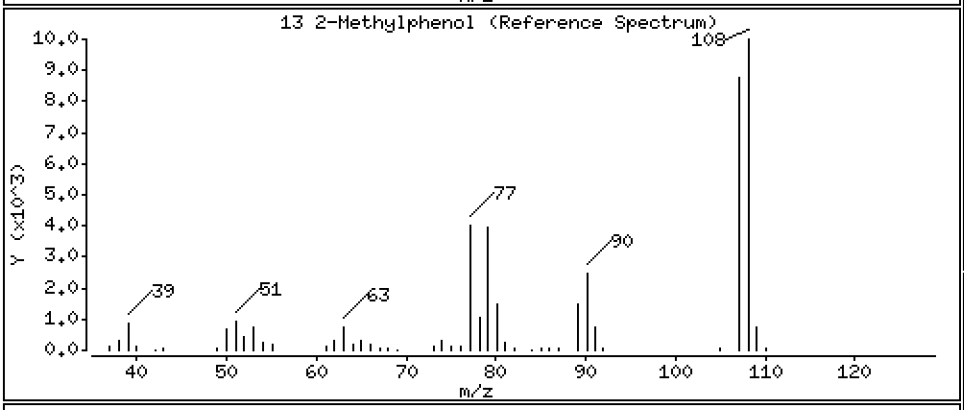
Column diameter: 0.25

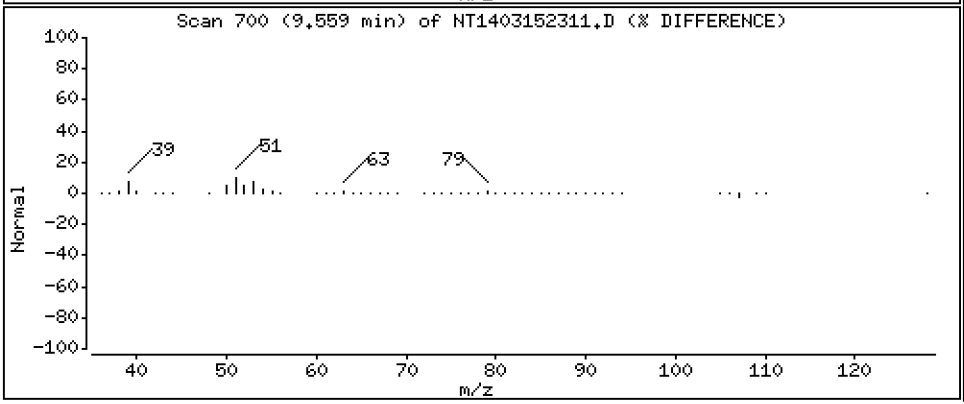
13 2-Methylphenol

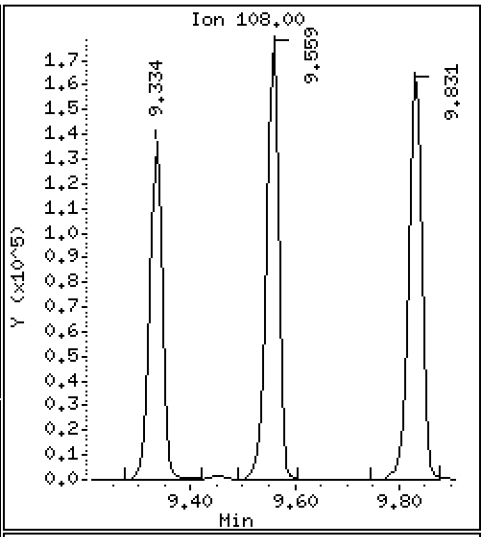
Concentration: 4.117 ug/mL

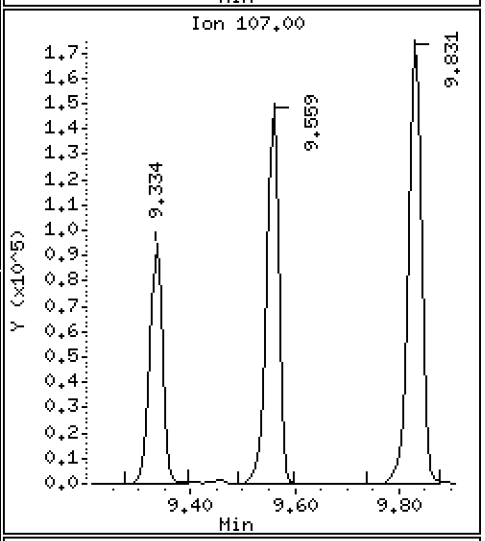


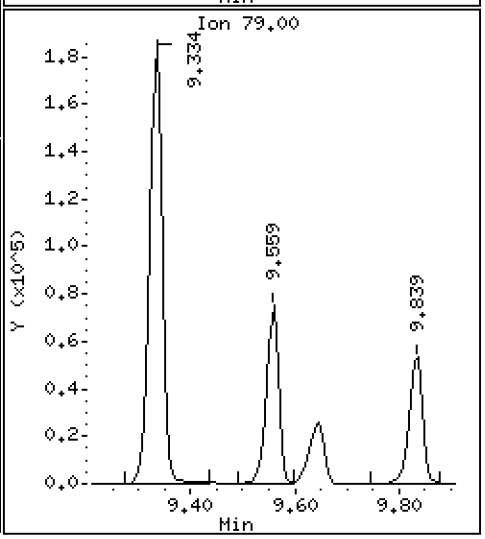












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

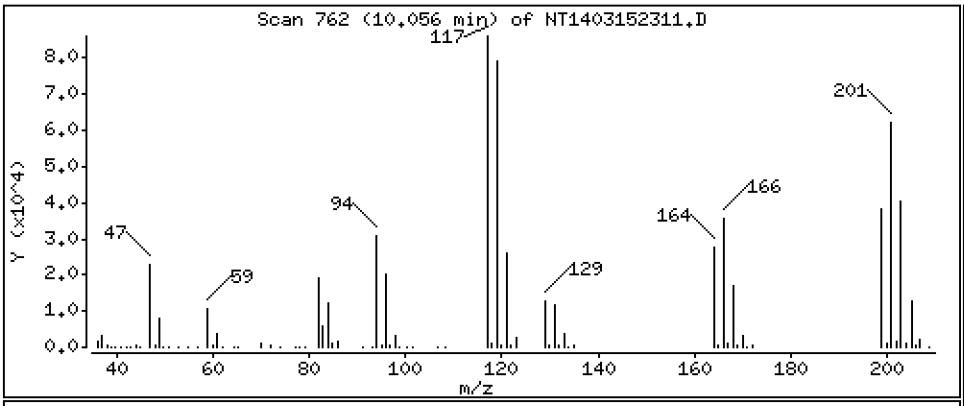
Operator: JGR

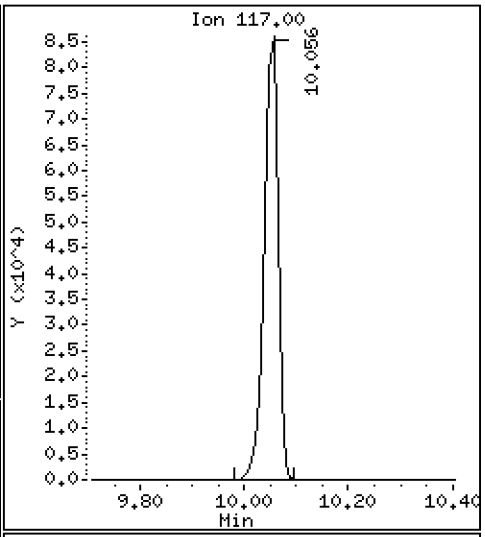
Column phase: ZB-5msi

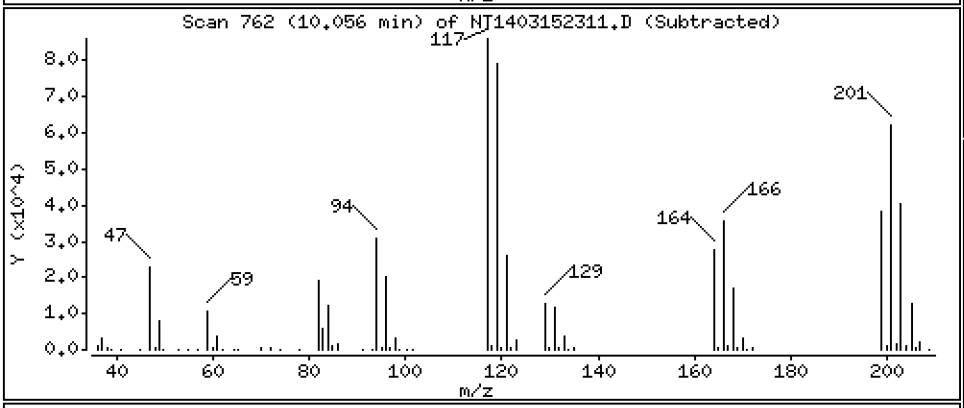
Column diameter: 0.25

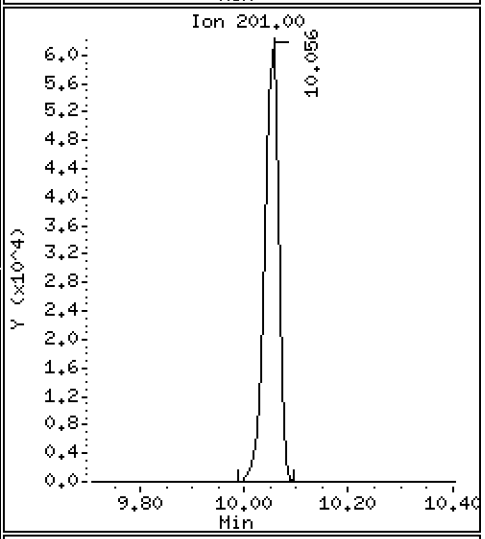
17 Hexachloroethane

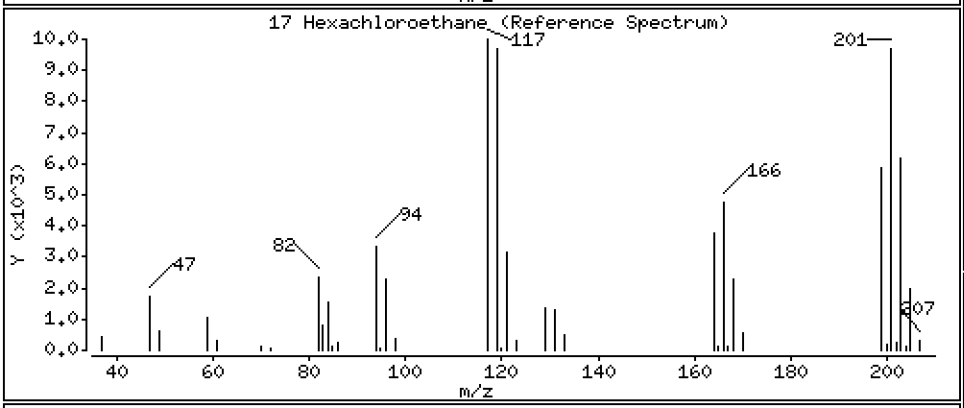
Concentration: 4.955 ug/mL

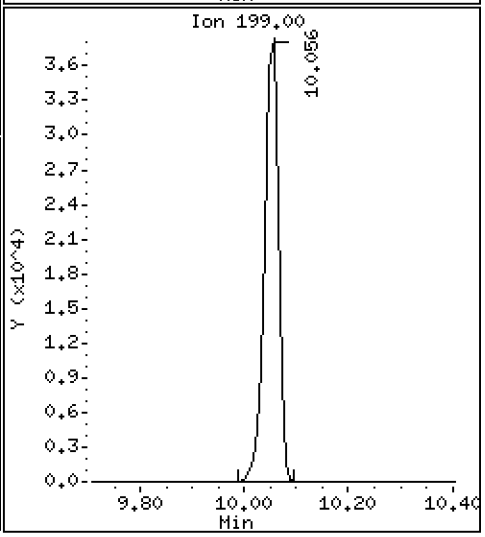


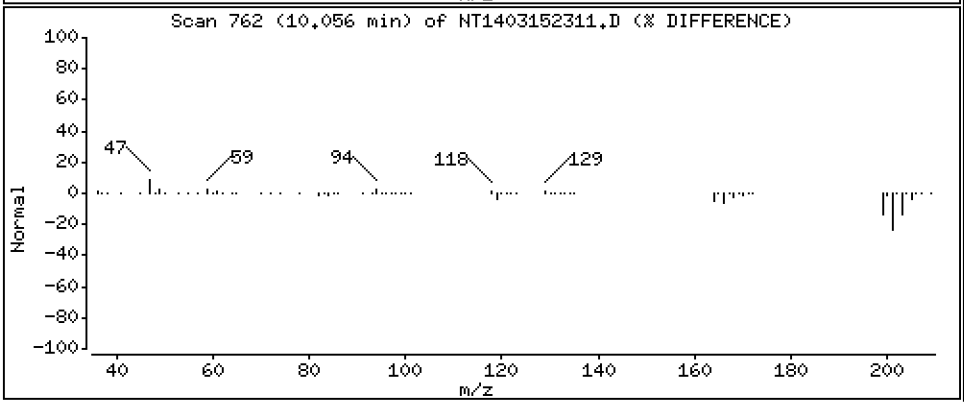












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

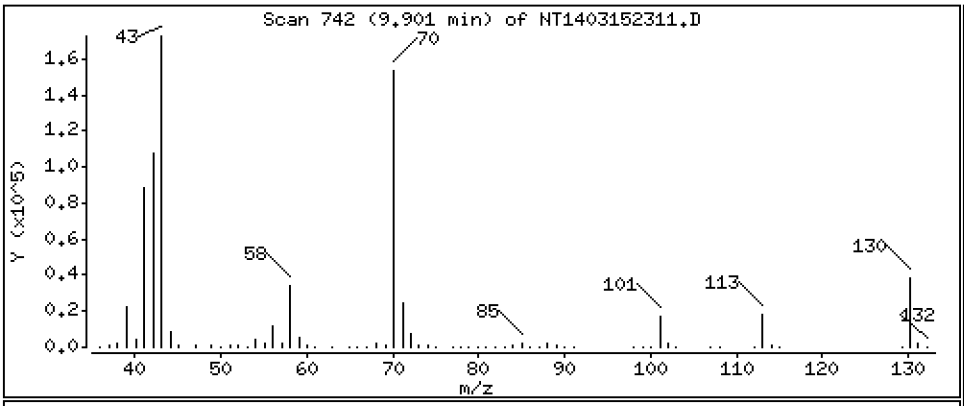
Operator: JGR

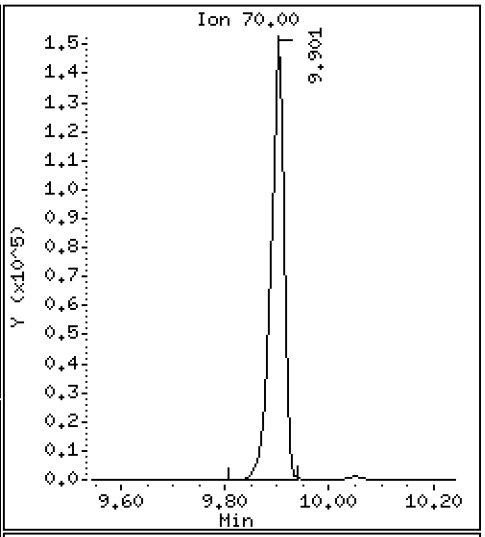
Column phase: ZB-5msi

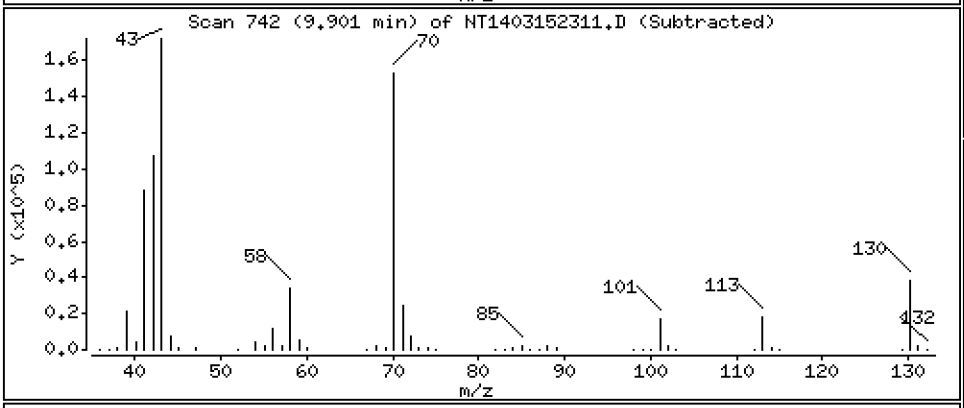
Column diameter: 0.25

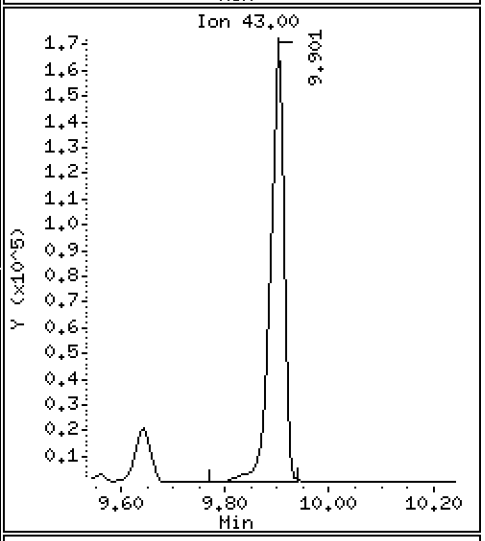
16 N-Nitroso-di-n-propylamine

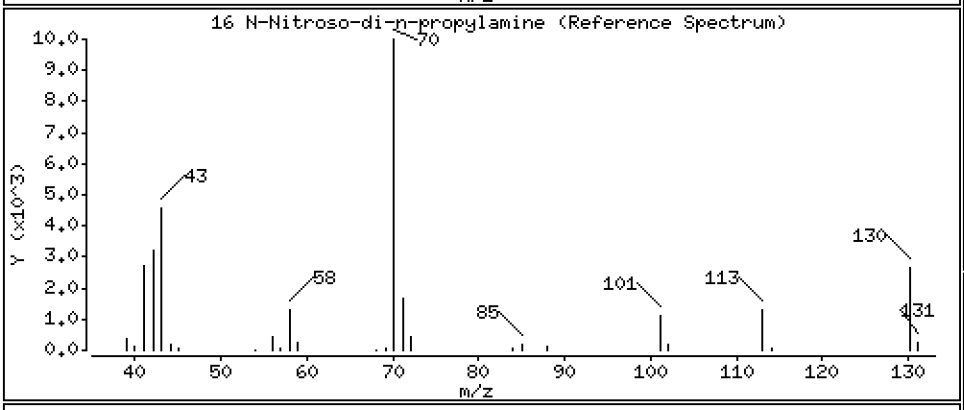
Concentration: 4.983 ug/mL

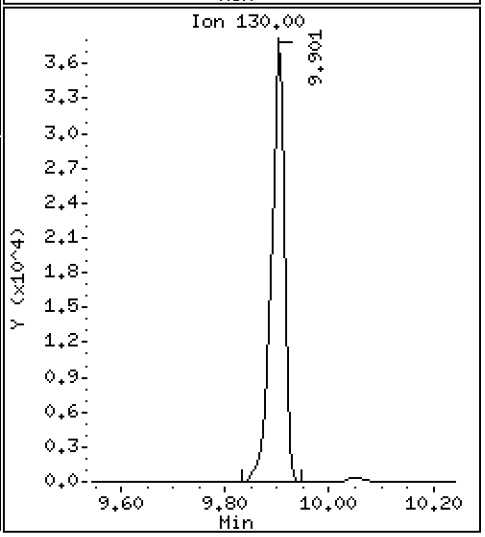


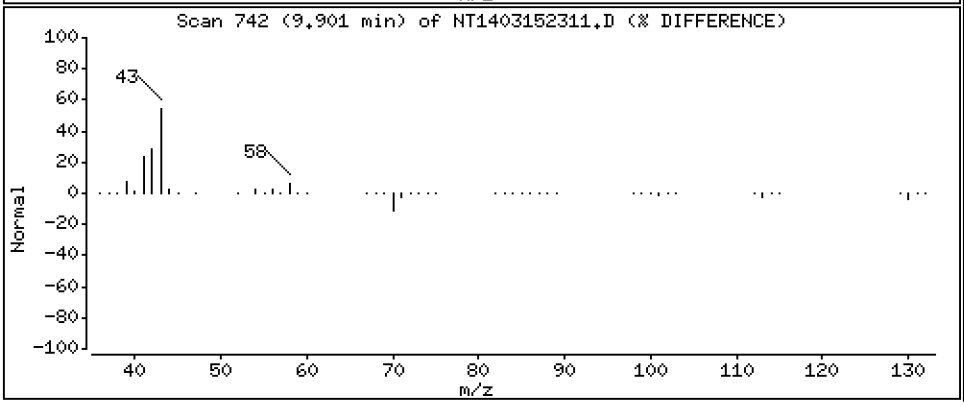












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

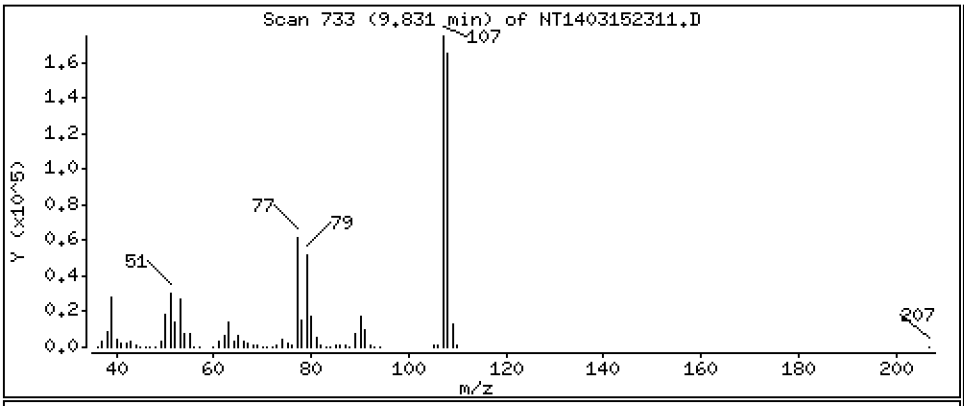
Operator: JGR

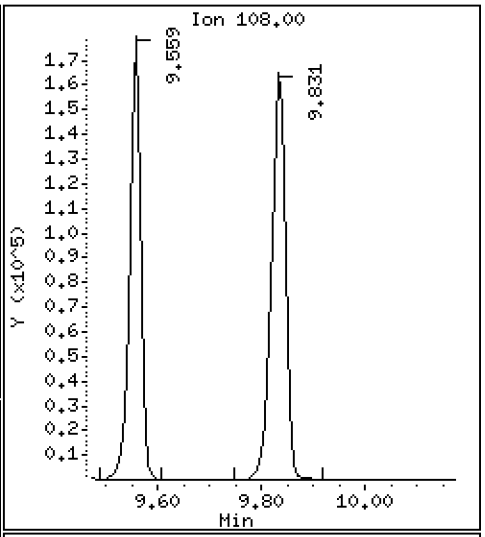
Column phase: ZB-5msi

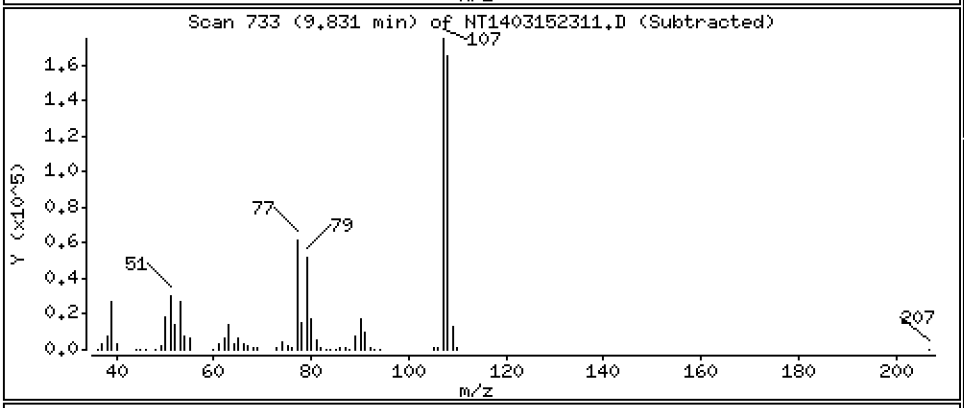
Column diameter: 0.25

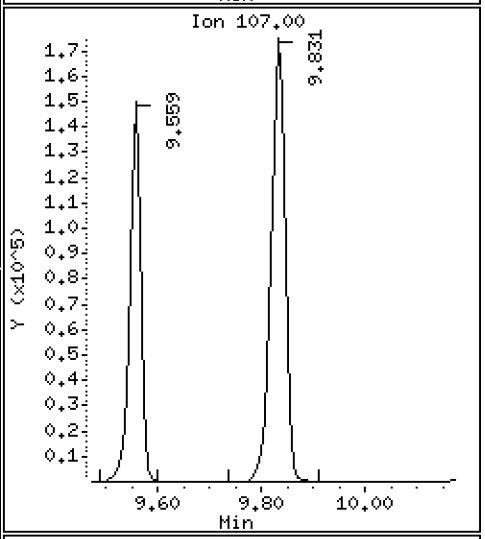
15 4-Methylphenol

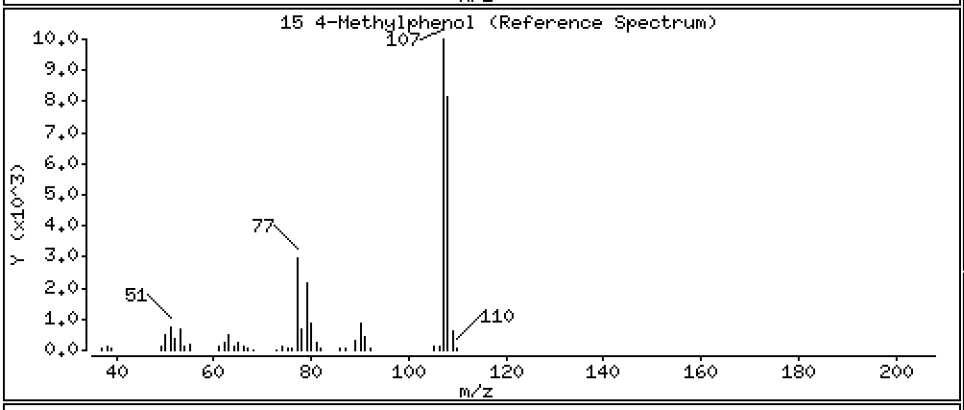
Concentration: 4.302 ug/mL

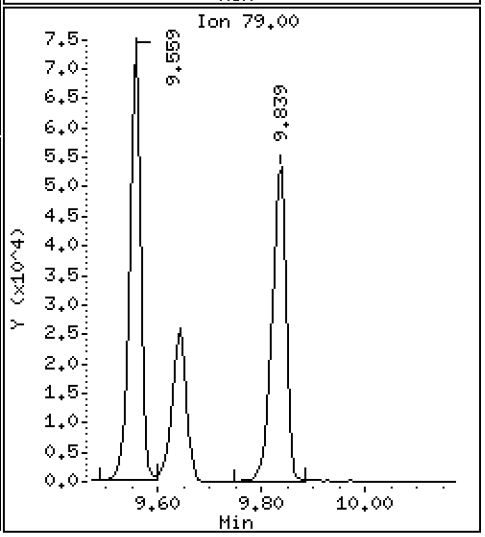


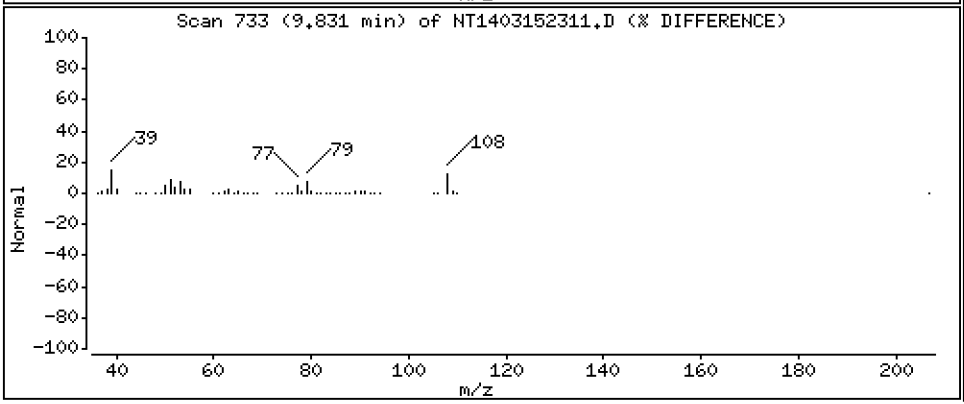












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

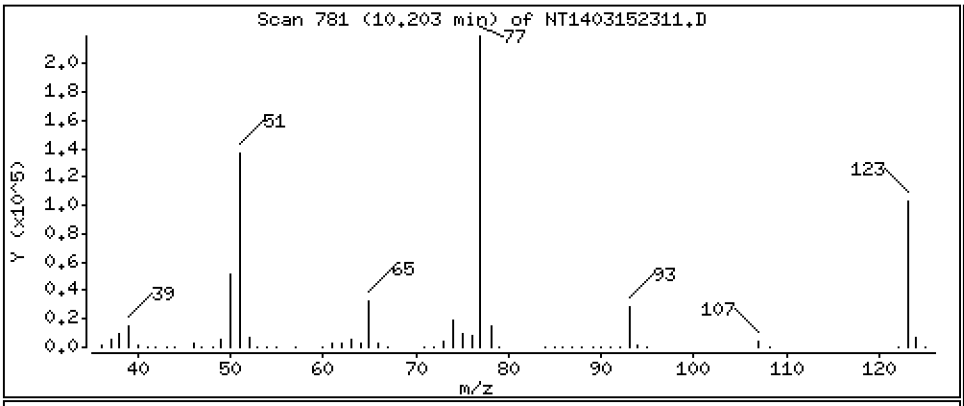
Operator: JGR

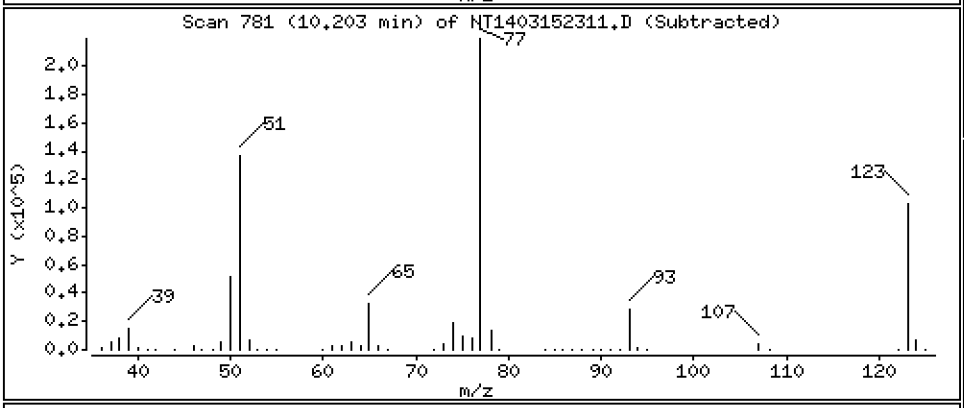
Column phase: ZB-5msi

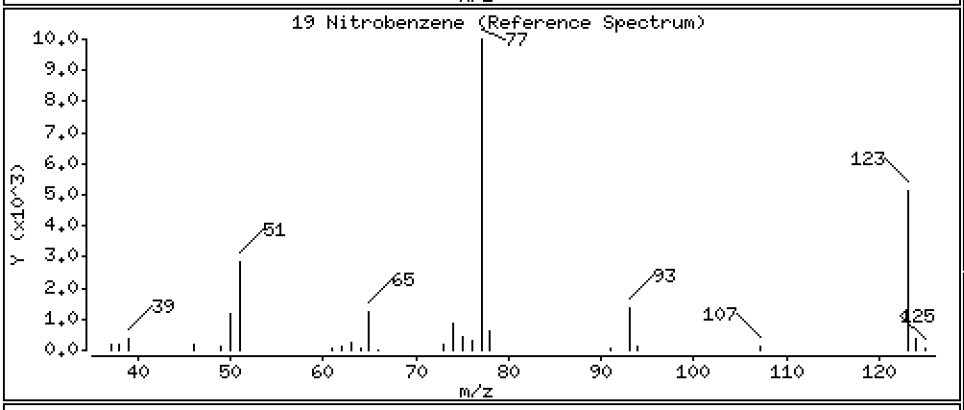
Column diameter: 0.25

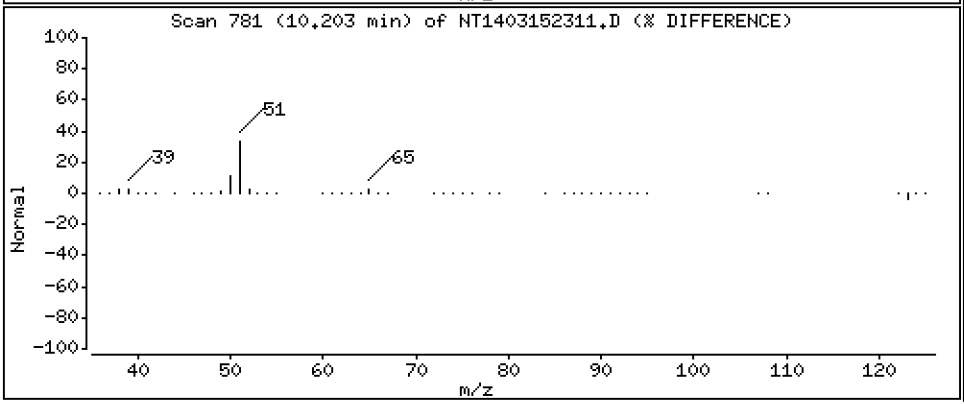
19 Nitrobenzene

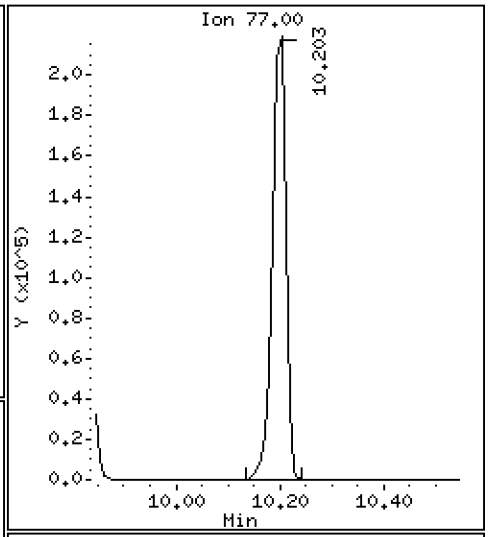
Concentration: 5.023 ug/mL

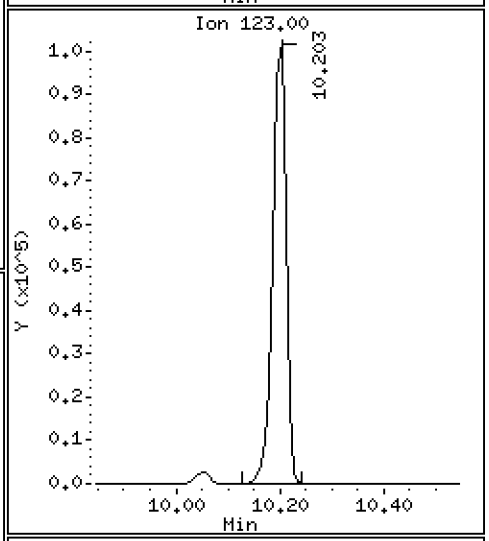


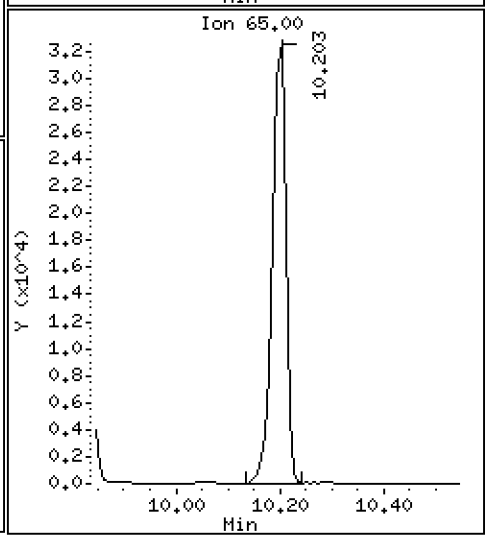












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

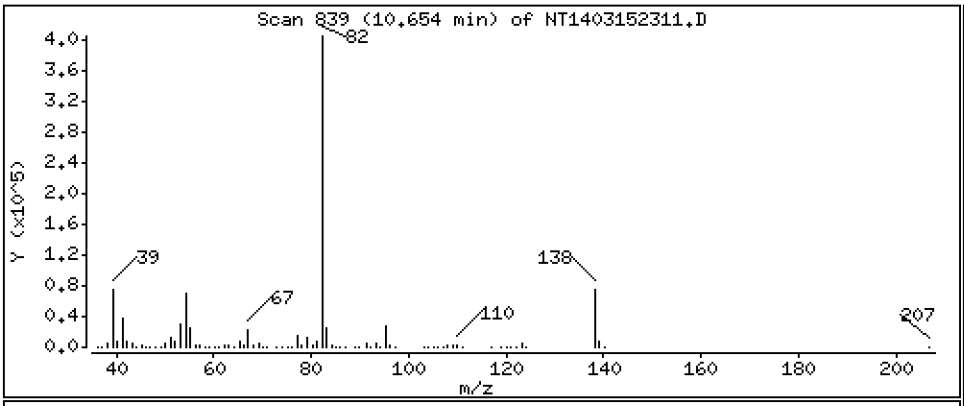
Operator: JGR

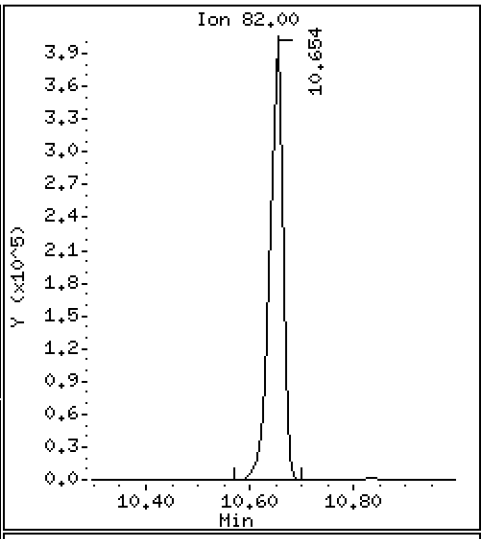
Column phase: ZB-5msi

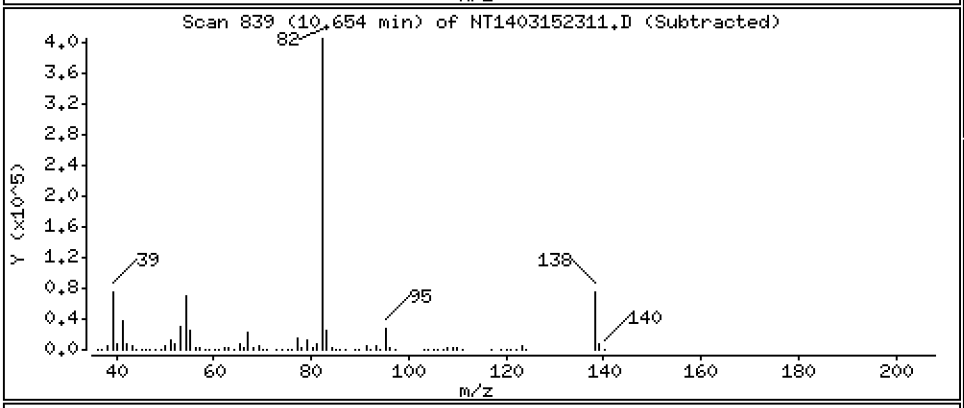
Column diameter: 0.25

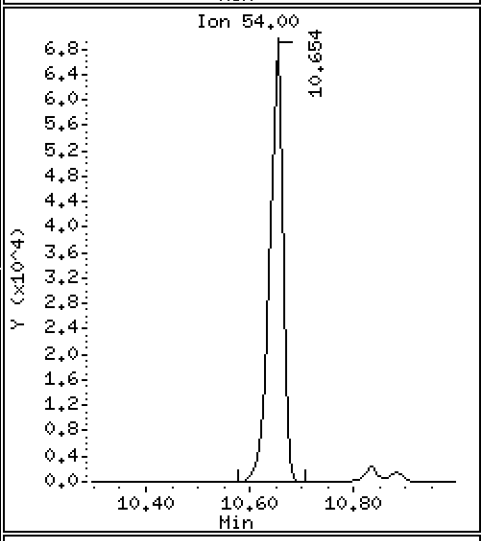
20 Isophorone

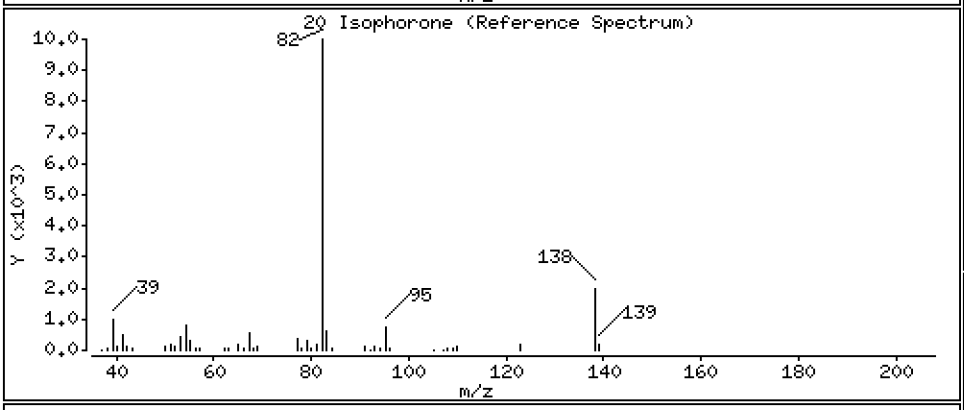
Concentration: 6.771 ug/mL

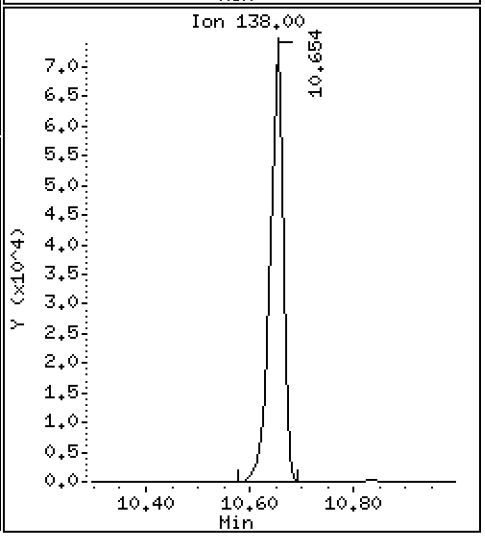


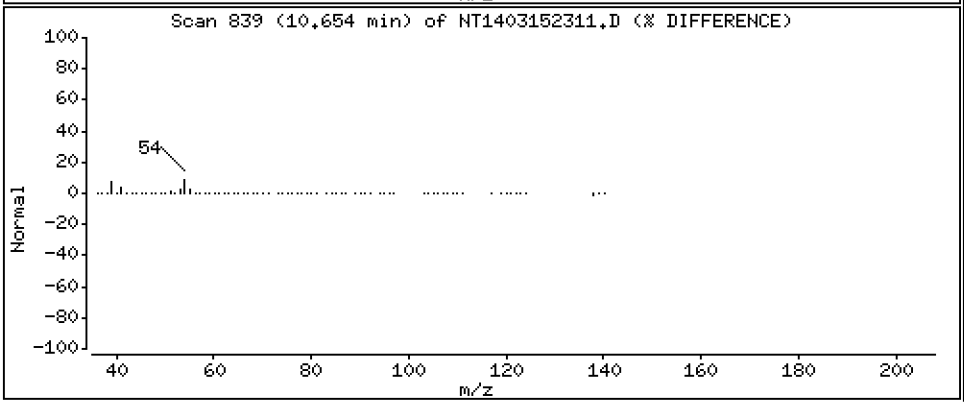












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

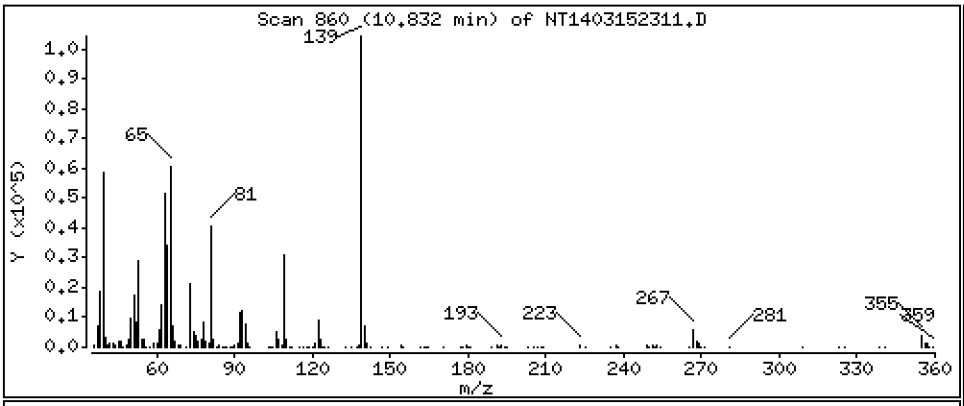
Operator: JGR

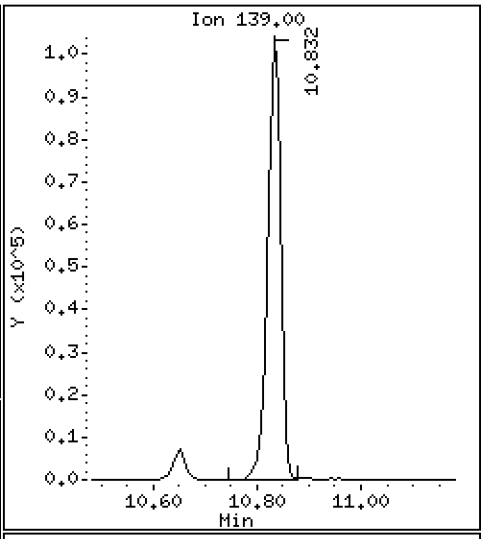
Column phase: ZB-5msi

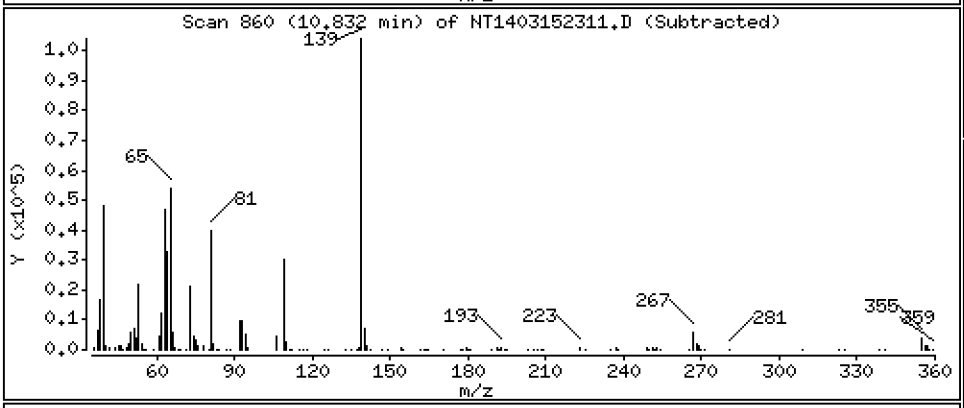
Column diameter: 0.25

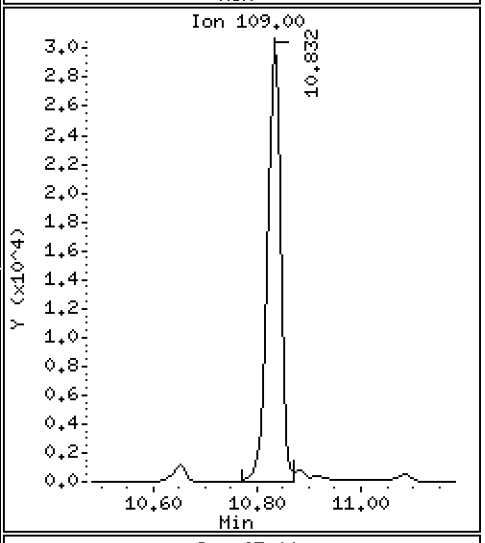
21 2-Nitrophenol

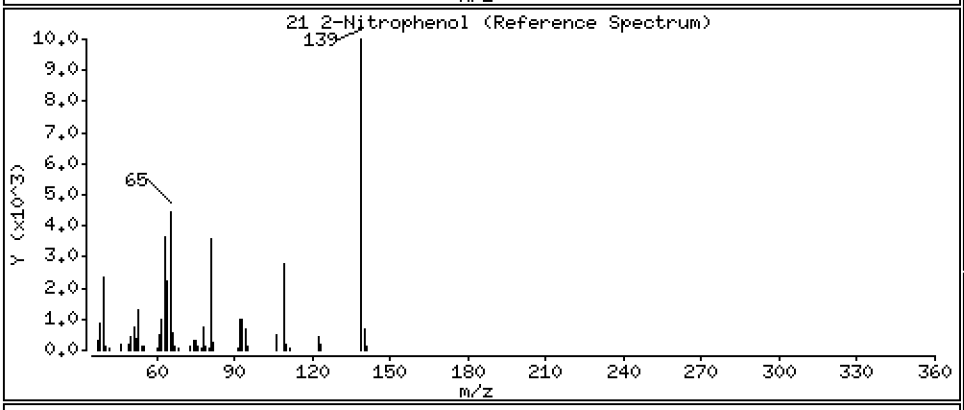
Concentration: 4.530 ug/mL

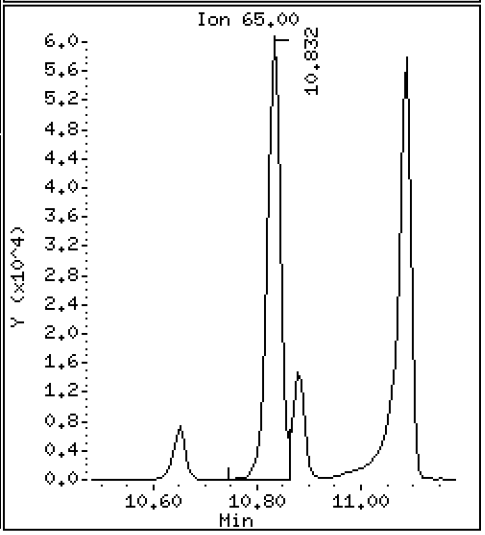


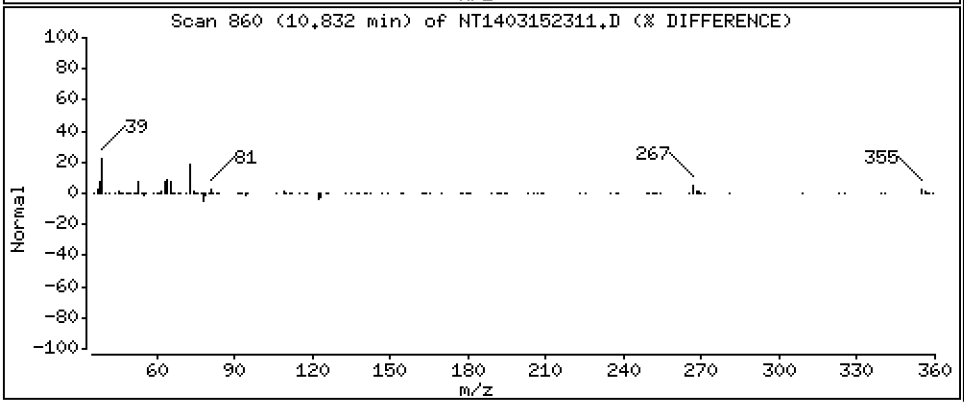












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

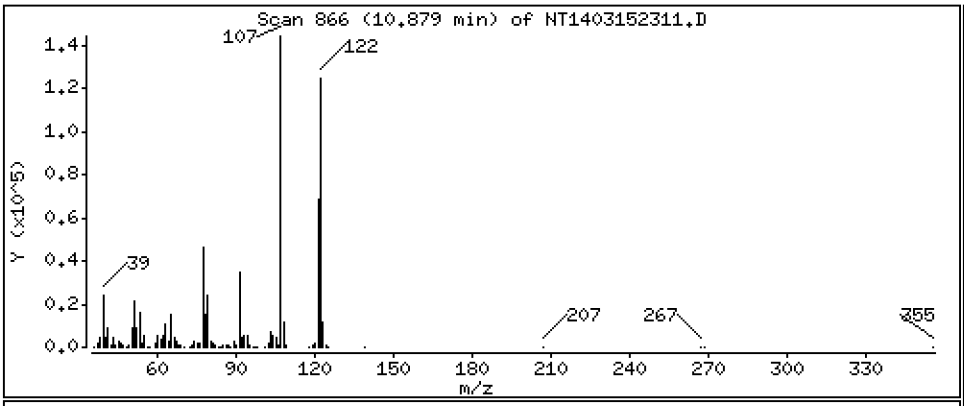
Operator: JGR

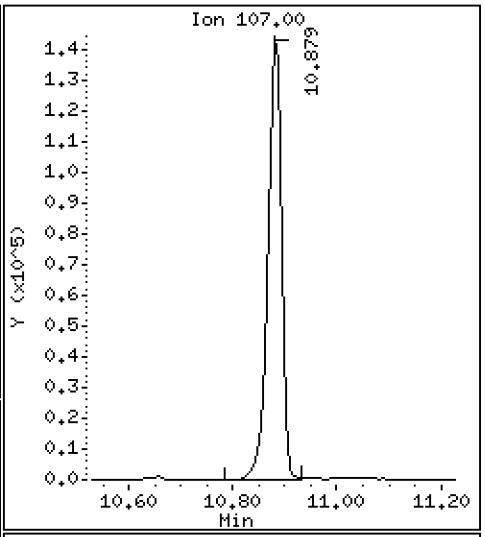
Column phase: ZB-5msi

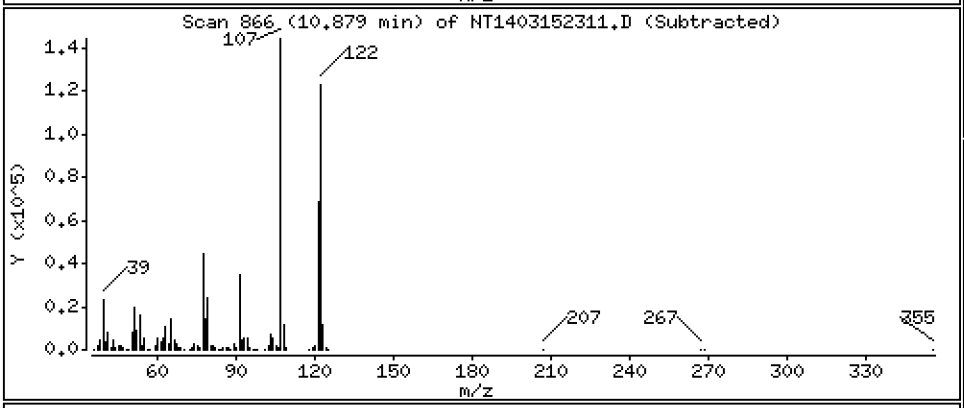
Column diameter: 0.25

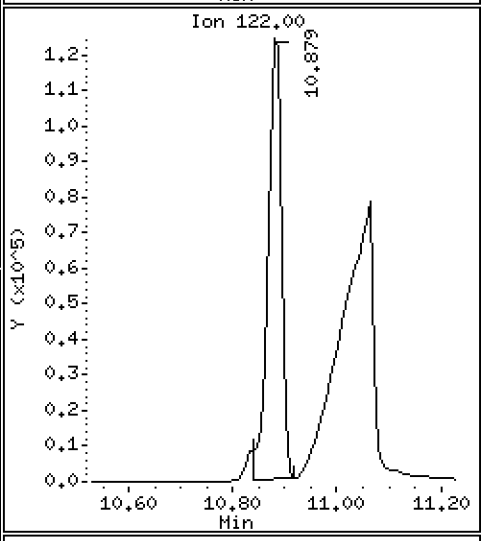
22 2,4-Dimethylphenol

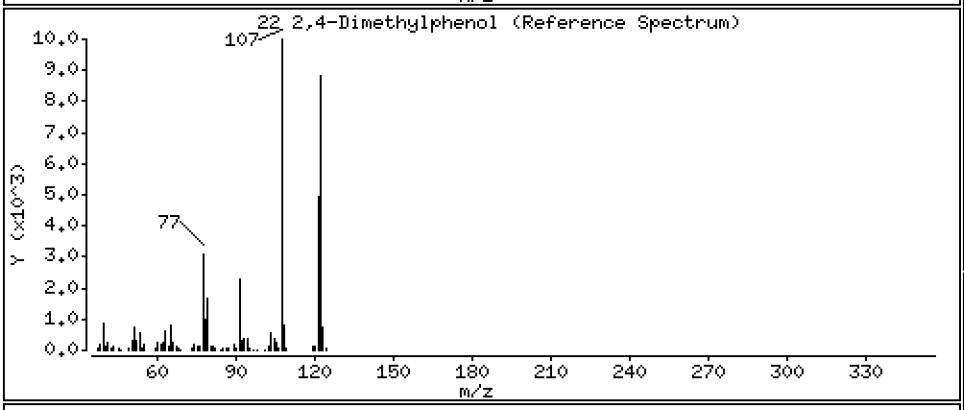
Concentration: 3.915 ug/mL

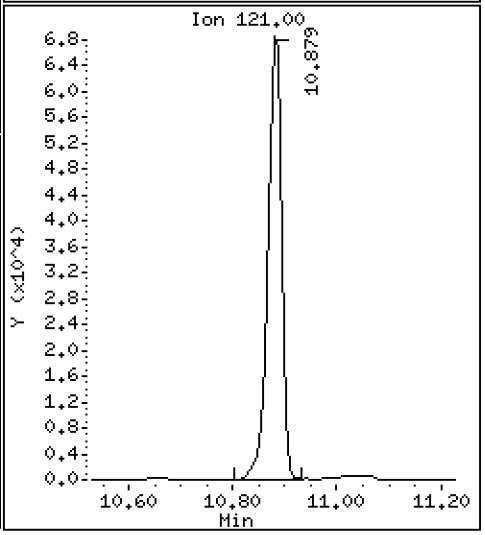


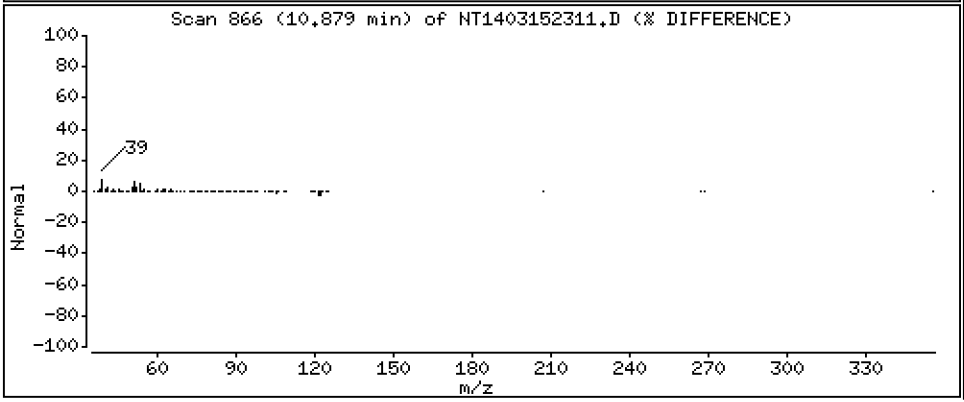












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

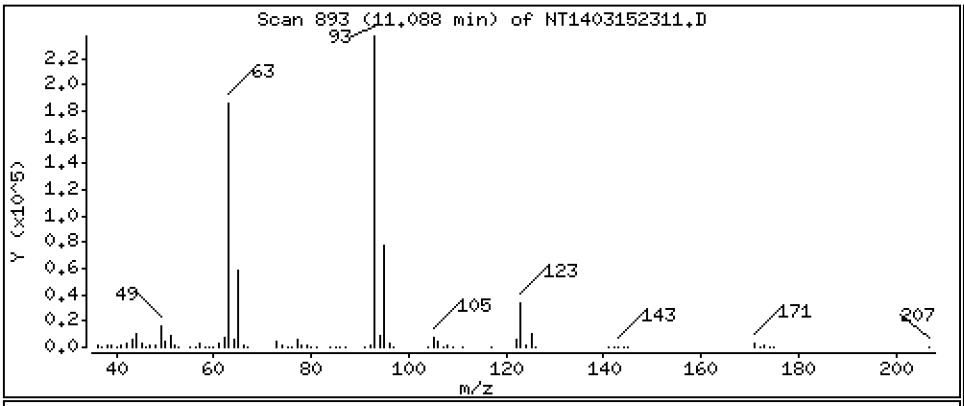
Operator: JGR

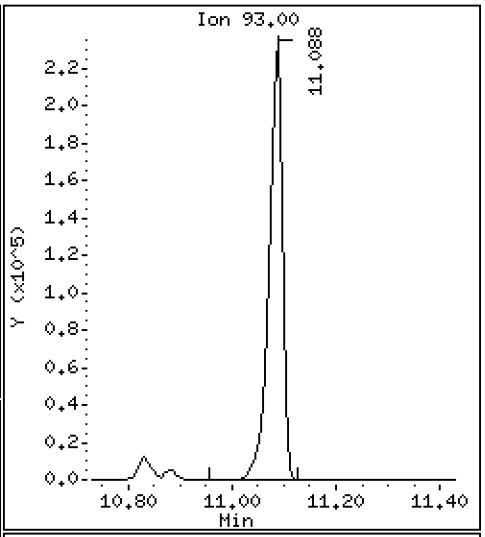
Column phase: ZB-5msi

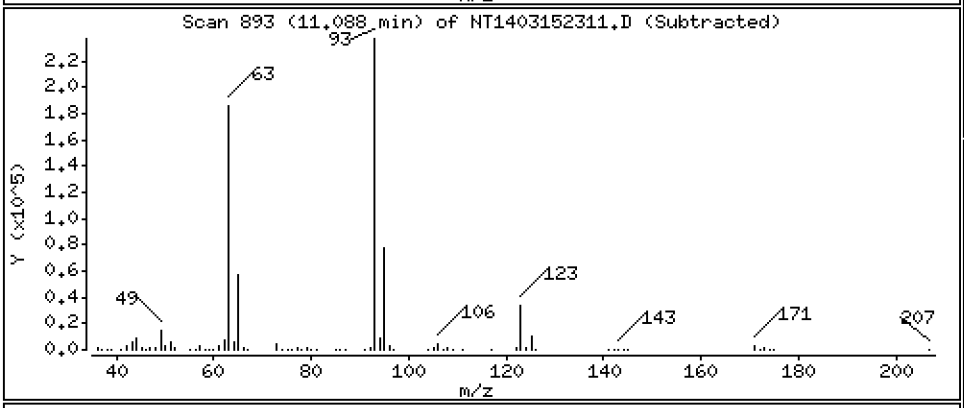
Column diameter: 0.25

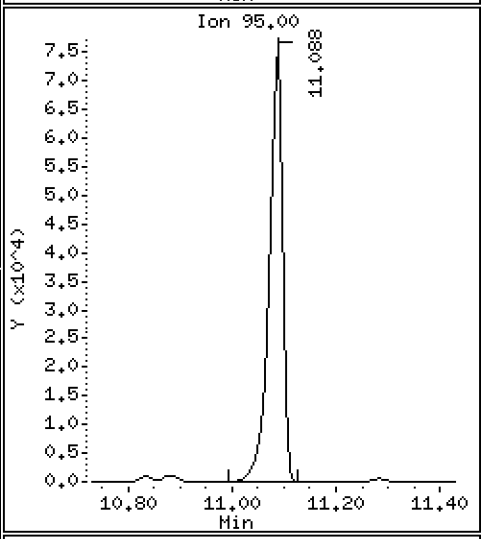
23 Bis(2-Chloroethoxy)methane

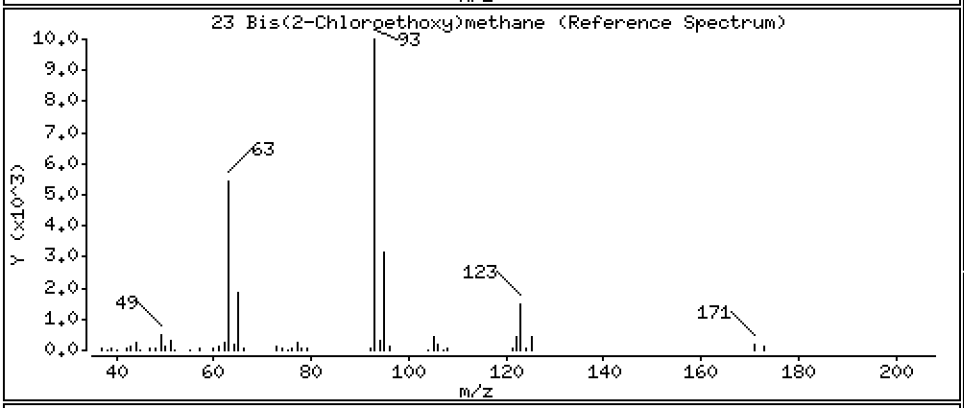
Concentration: 5.859 ug/mL

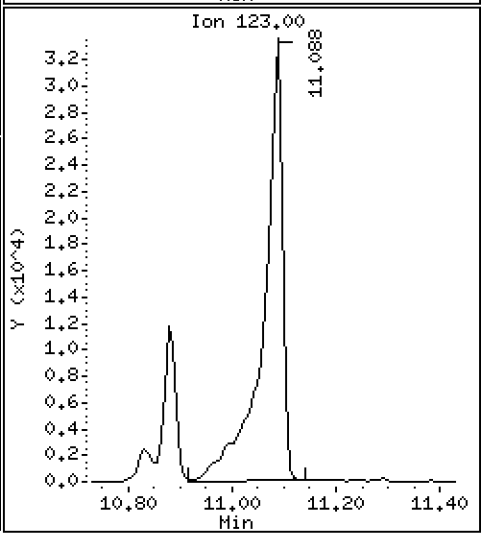


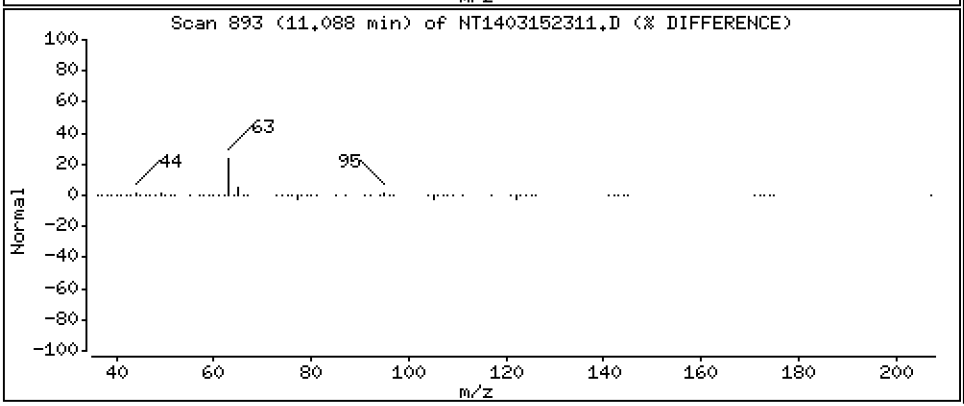












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

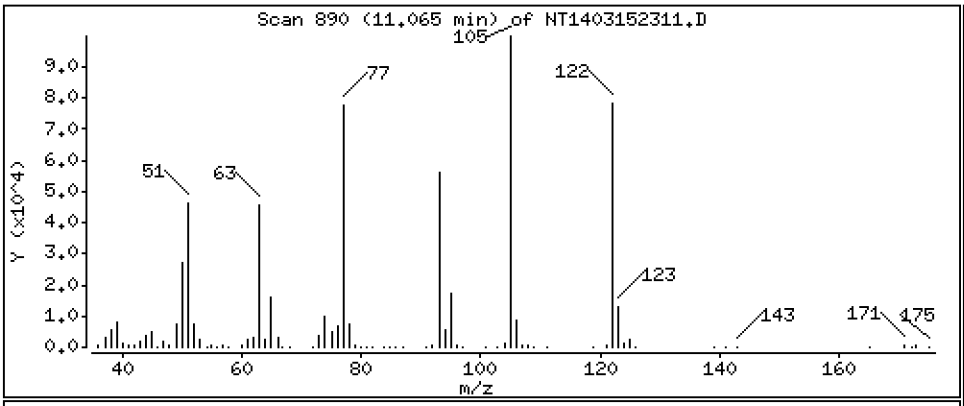
Operator: JGR

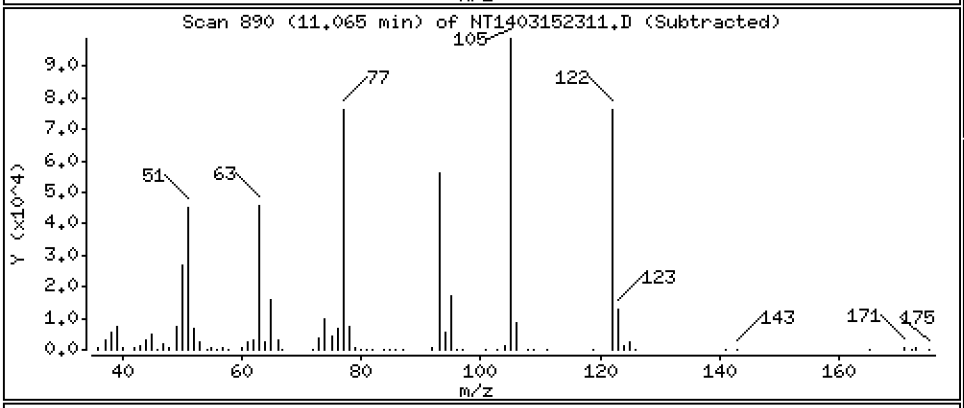
Column phase: ZB-5msi

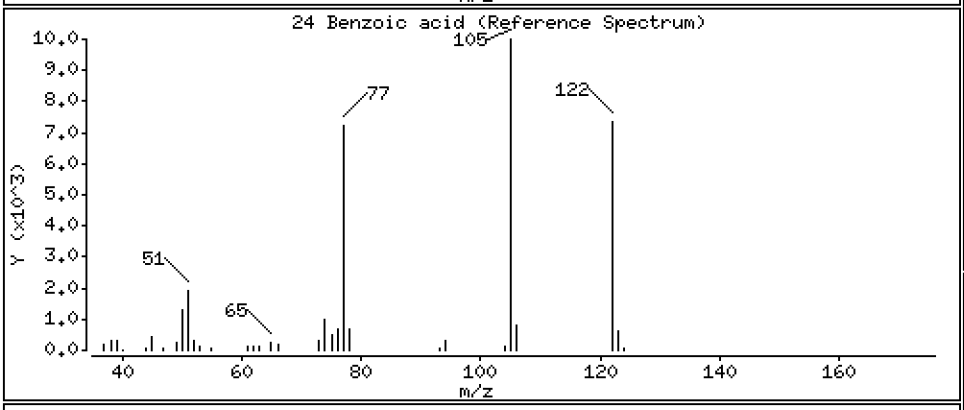
Column diameter: 0.25

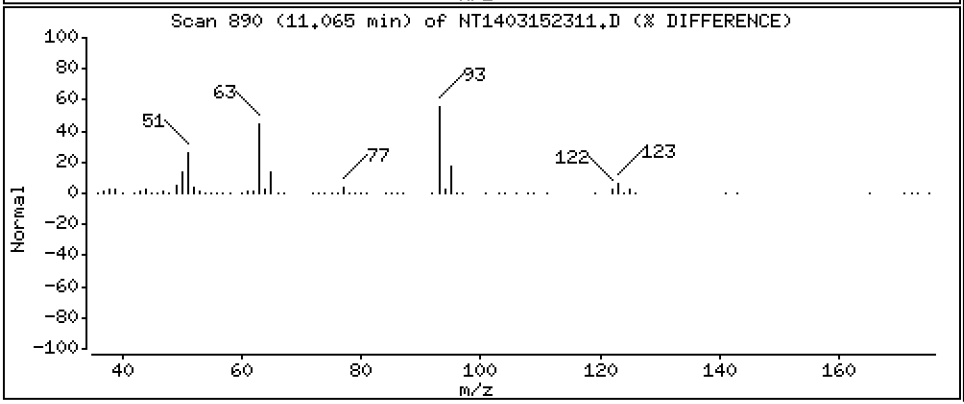
24 Benzoic acid

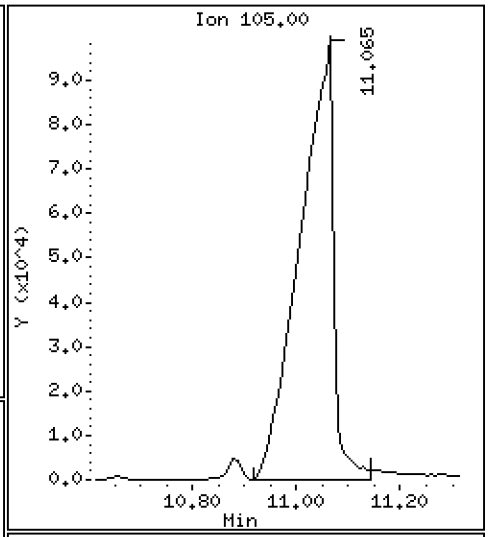
Concentration: 8.248 ug/mL

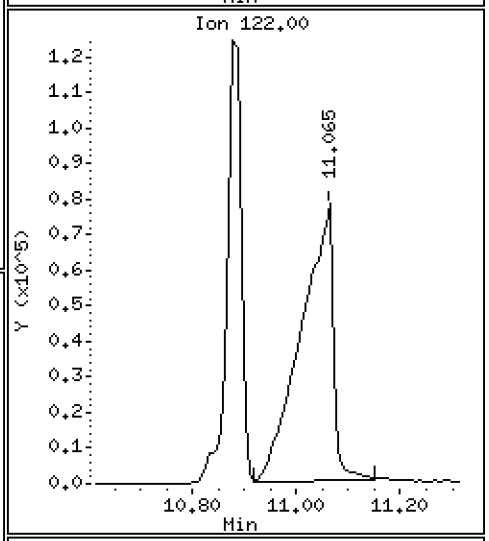


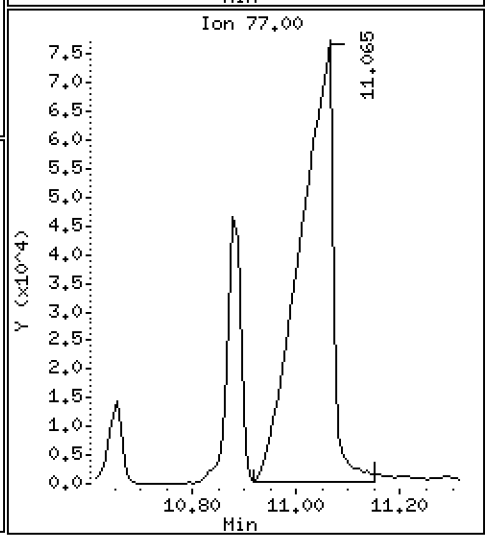












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

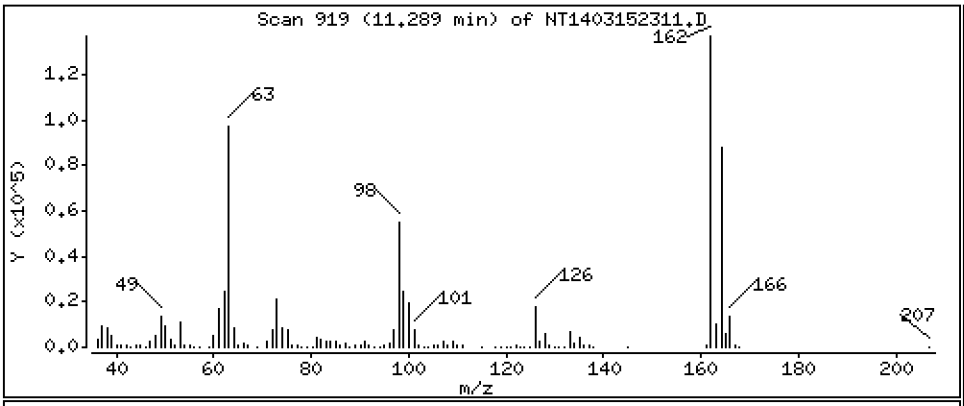
Operator: JGR

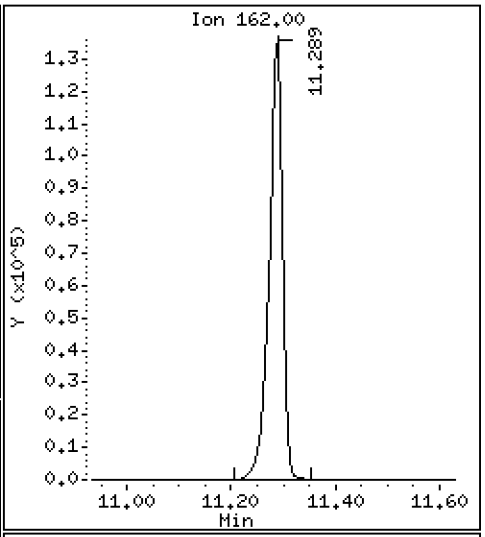
Column phase: ZB-5msi

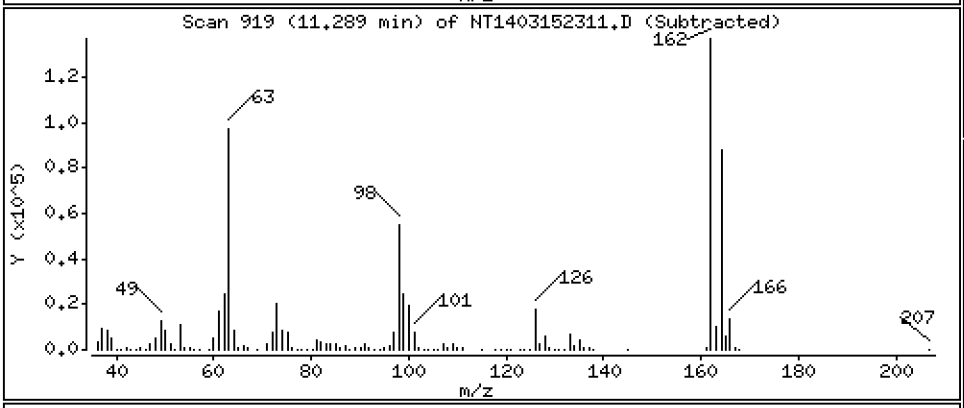
Column diameter: 0.25

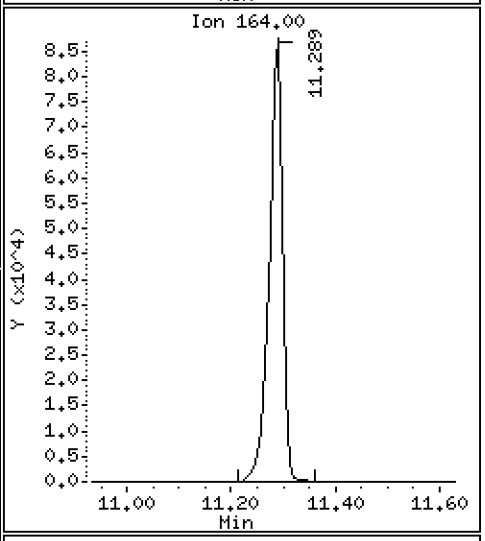
25 2,4-Dichlorophenol

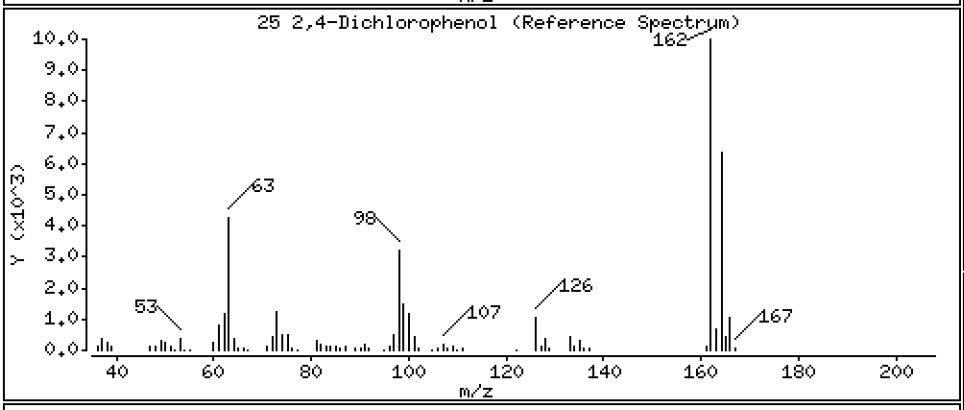
Concentration: 4.779 ug/mL

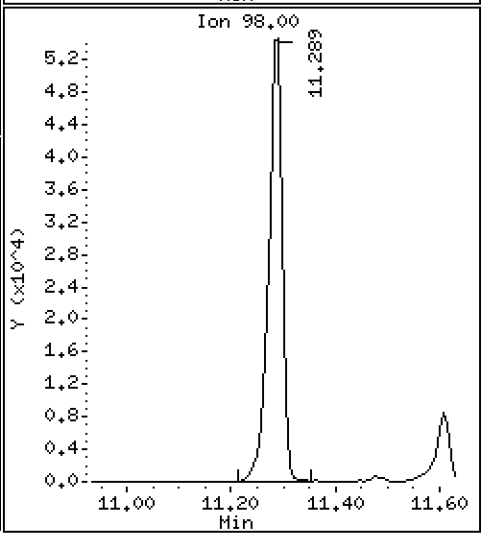


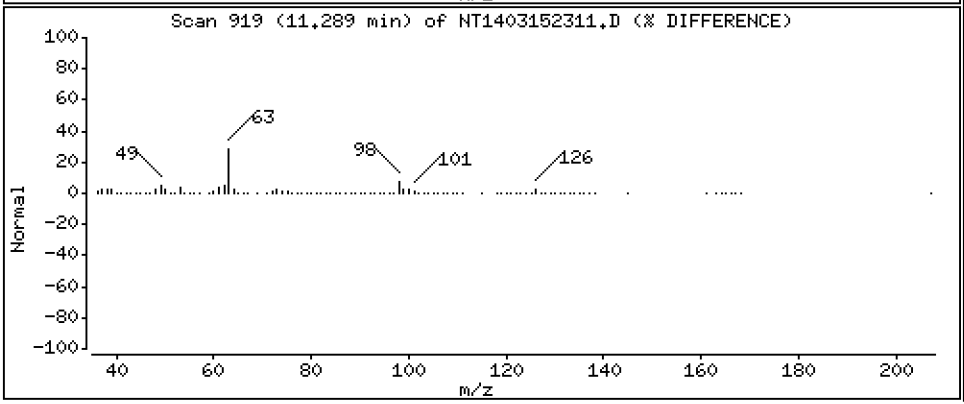












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

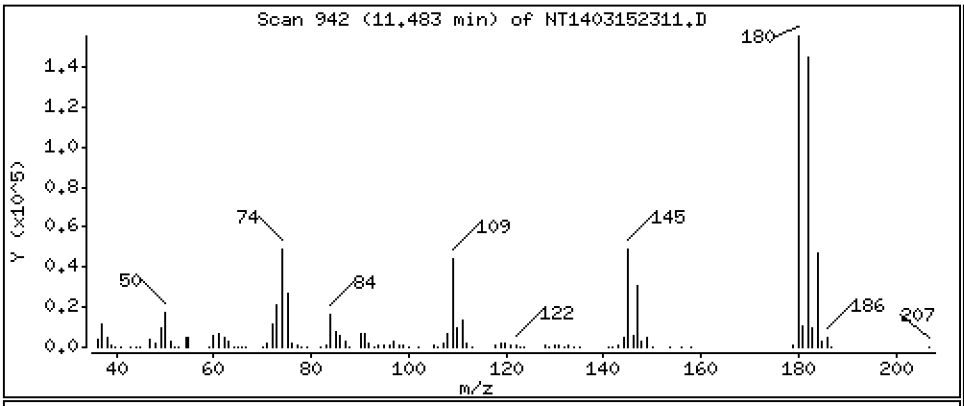
Operator: JGR

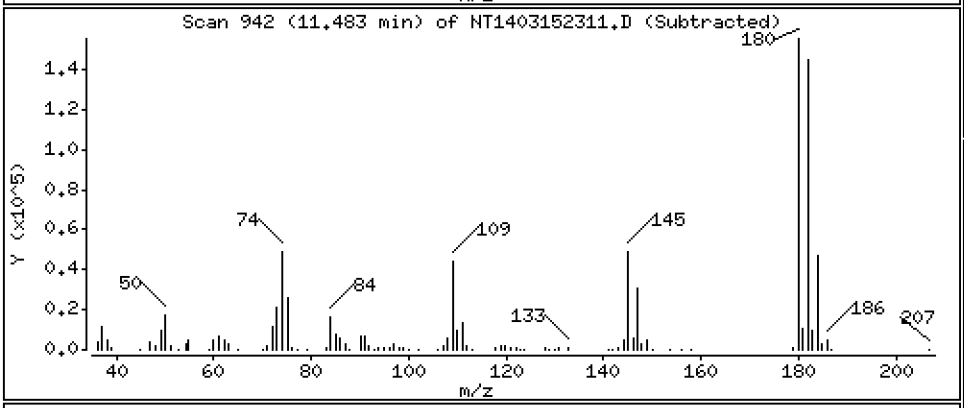
Column phase: ZB-5msi

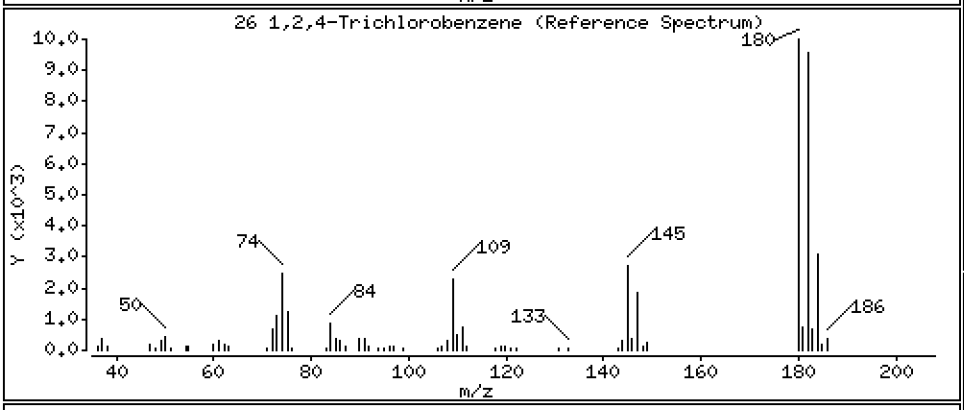
Column diameter: 0.25

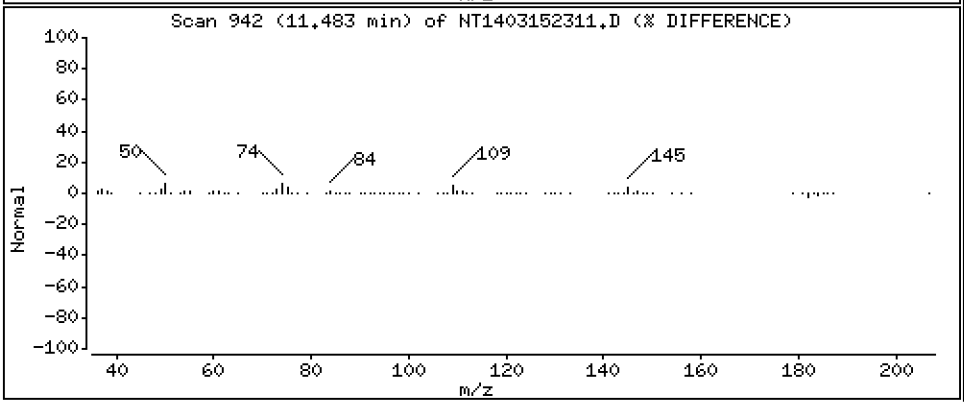
26 1,2,4-Trichlorobenzene

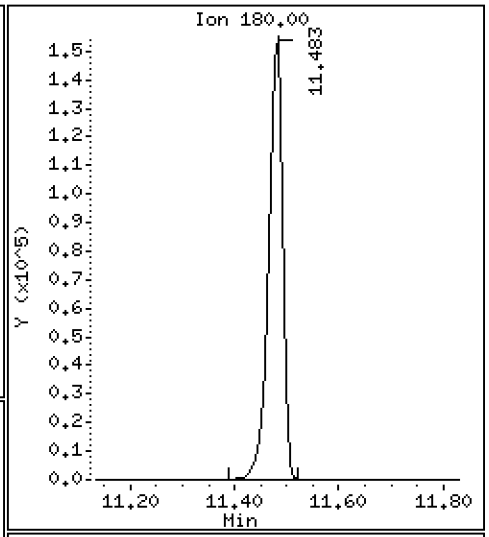
Concentration: 5.052 ug/mL

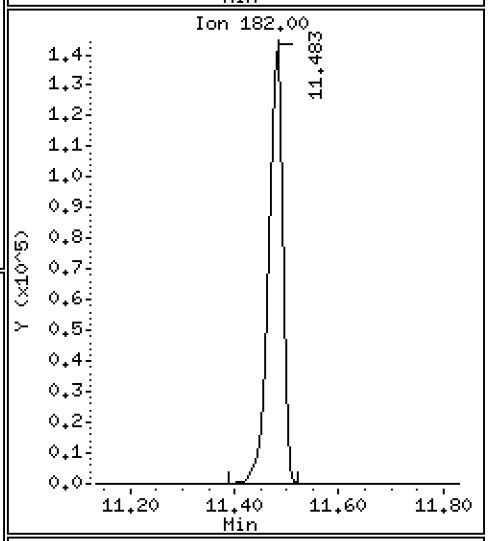


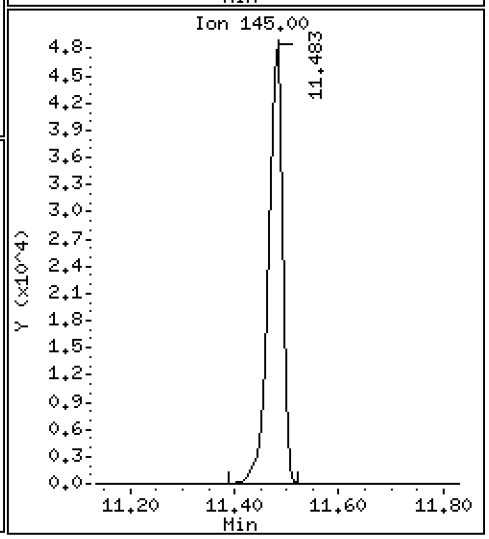












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

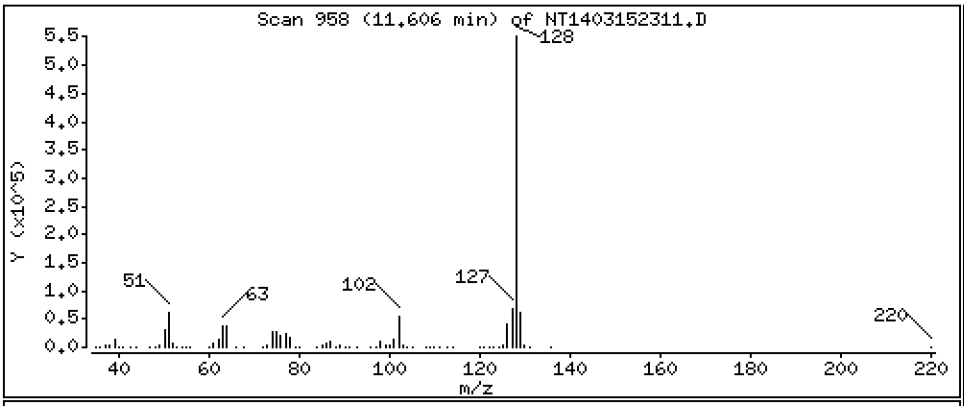
Operator: JGR

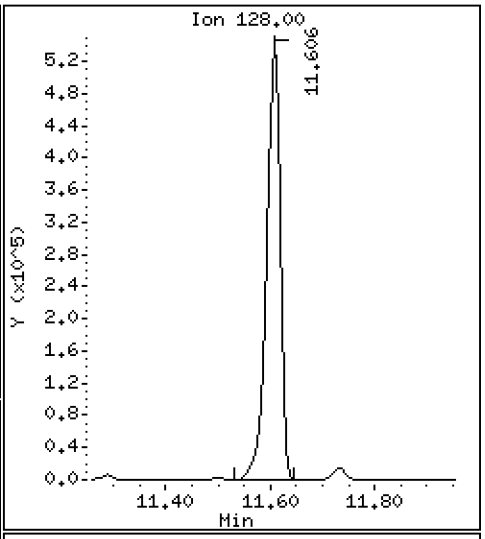
Column phase: ZB-5msi

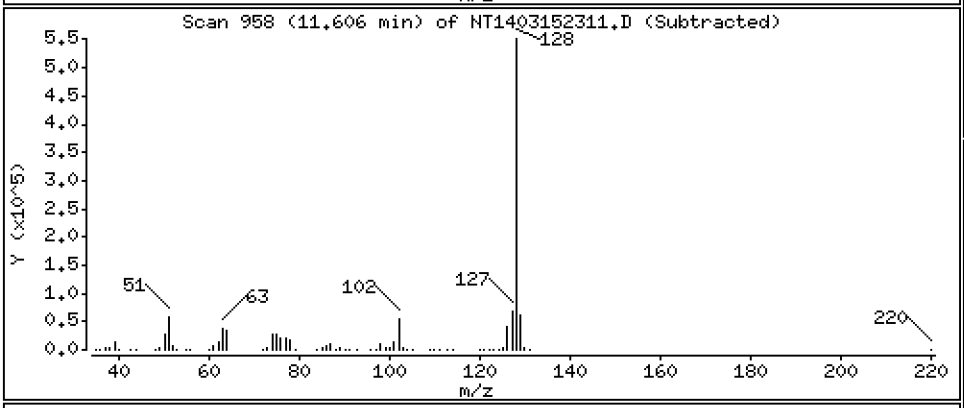
Column diameter: 0.25

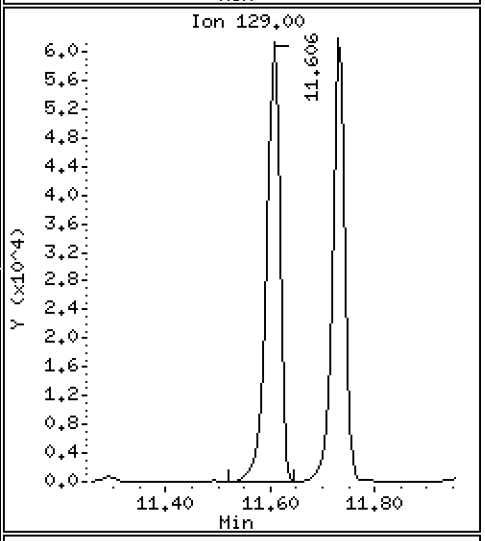
28 Naphthalene

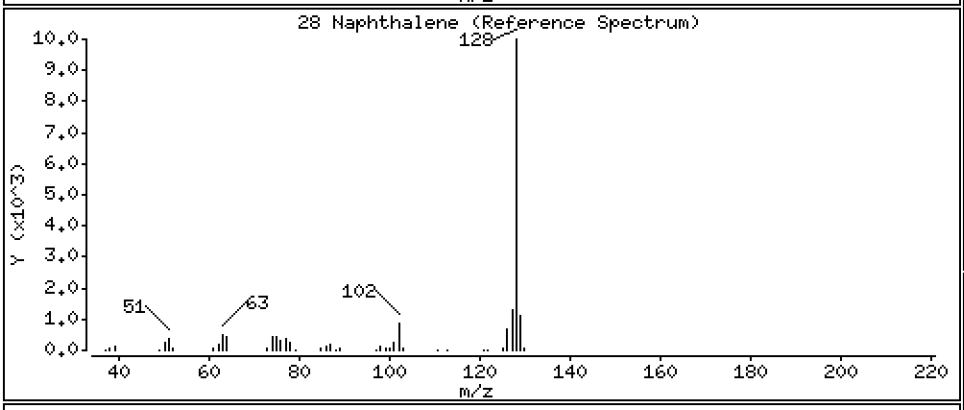
Concentration: 4.829 ug/mL

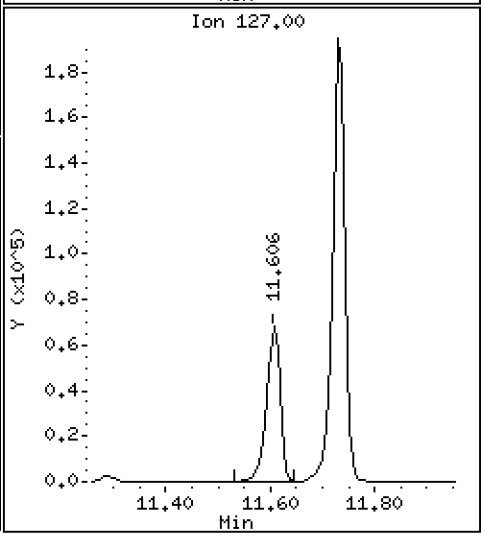


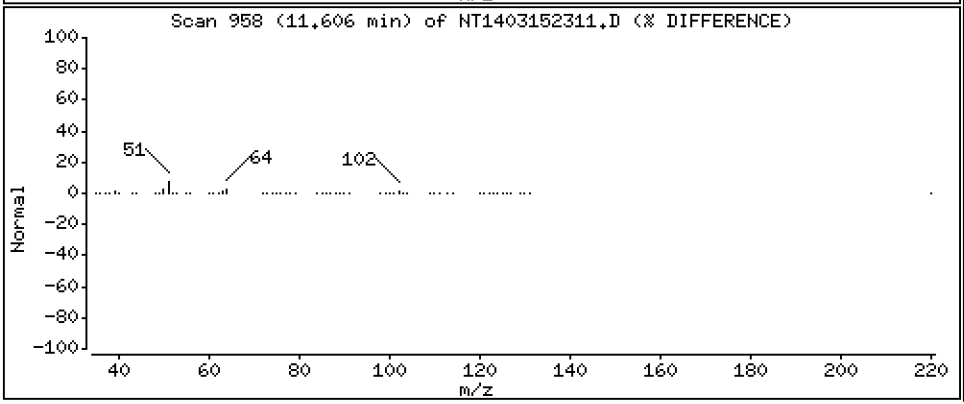












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

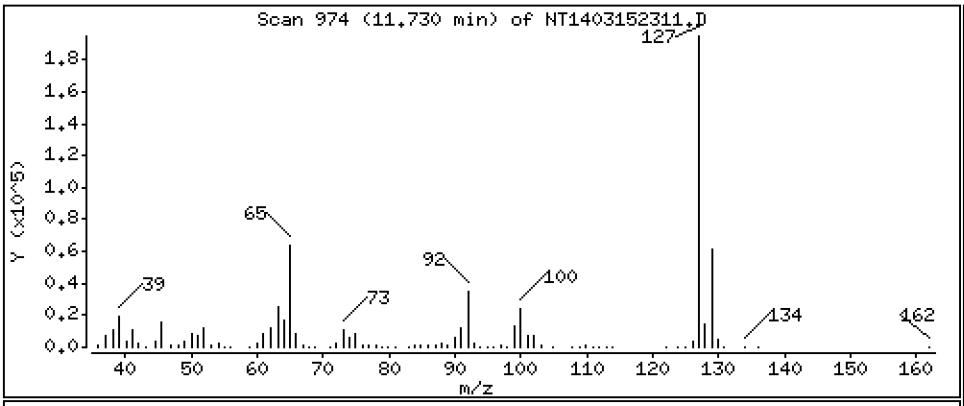
Operator: JGR

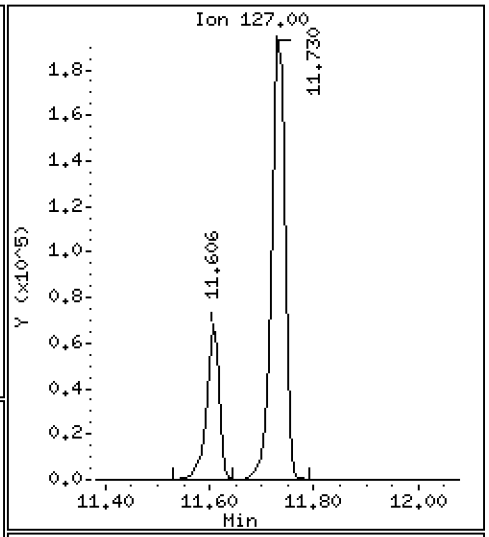
Column phase: ZB-5msi

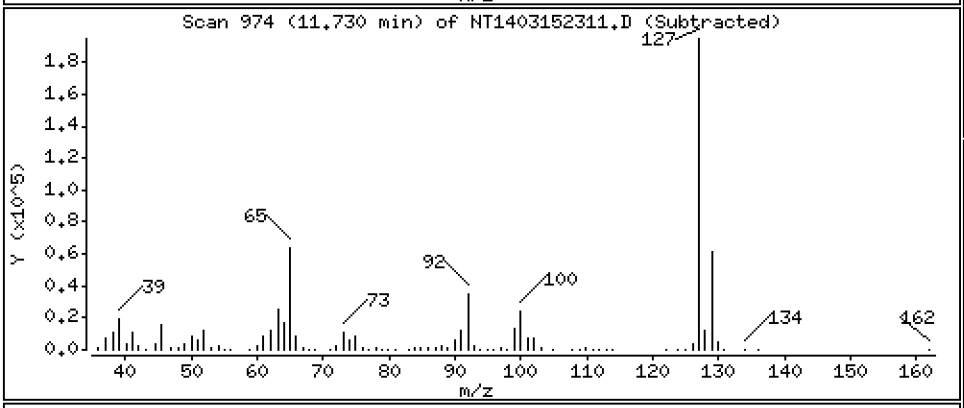
Column diameter: 0.25

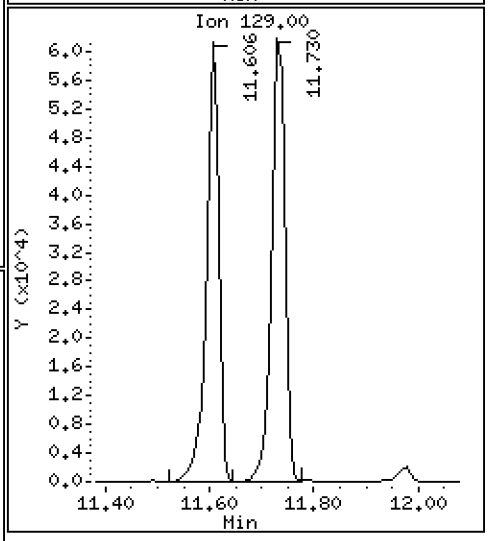
29 4-Chloroaniline

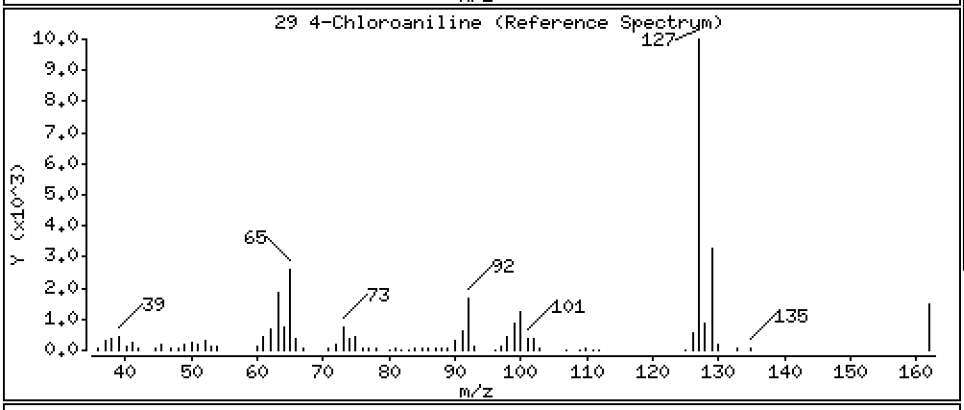
Concentration: 4.033 ug/mL

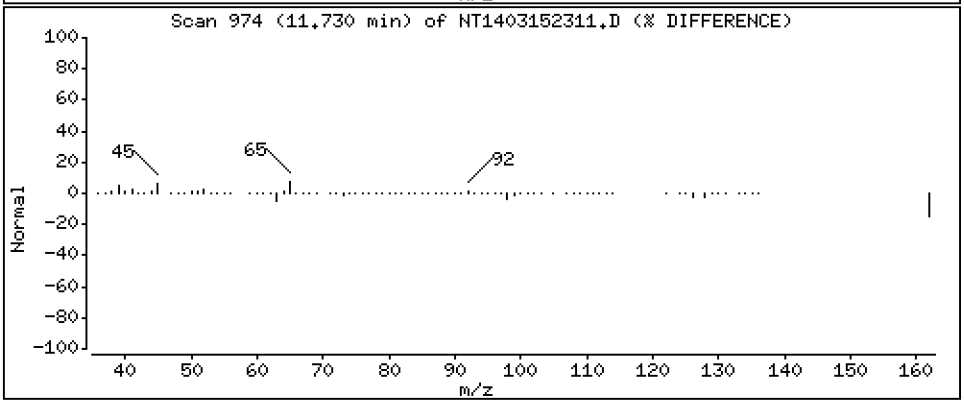












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

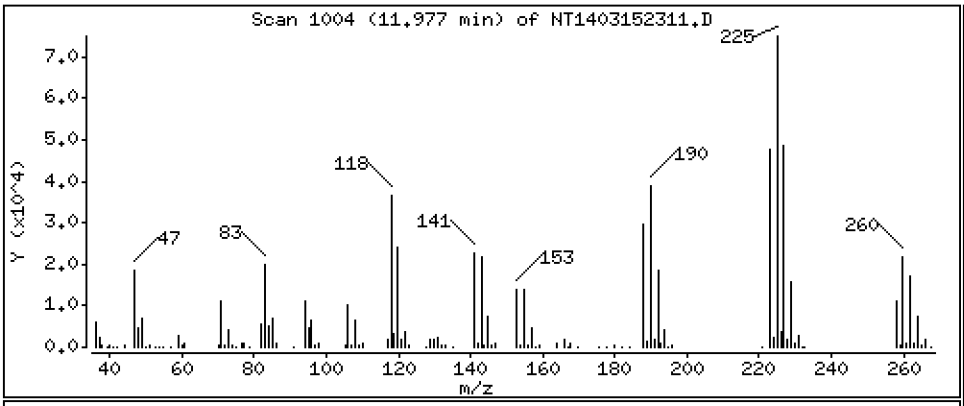
Operator: JGR

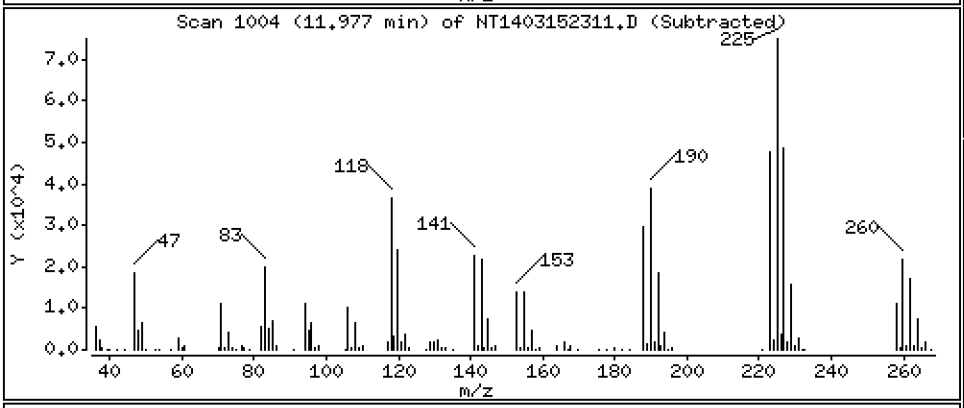
Column phase: ZB-5msi

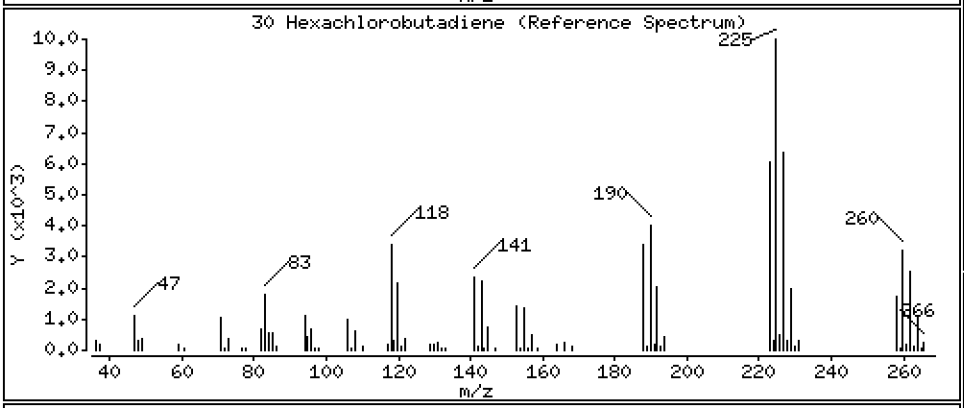
Column diameter: 0.25

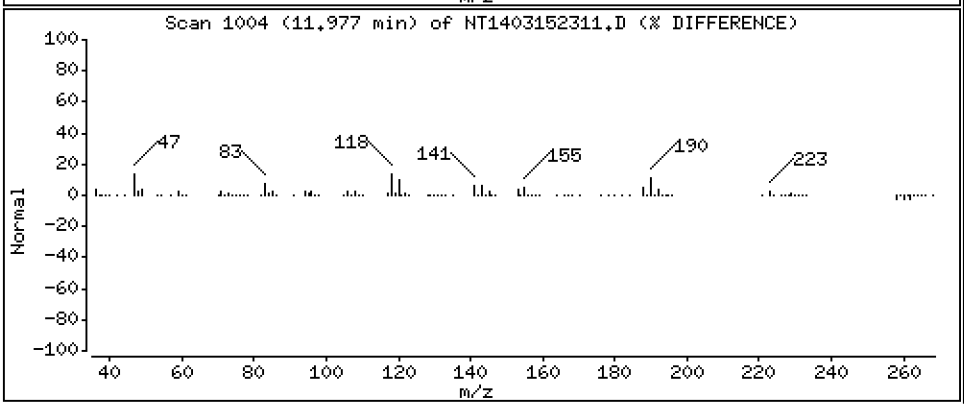
30 Hexachlorobutadiene

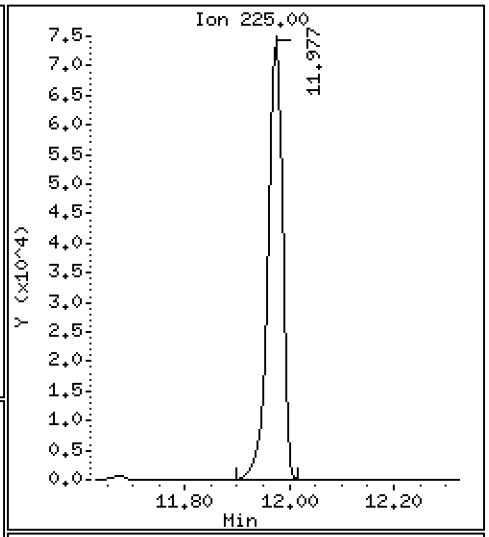
Concentration: 4.908 ug/mL

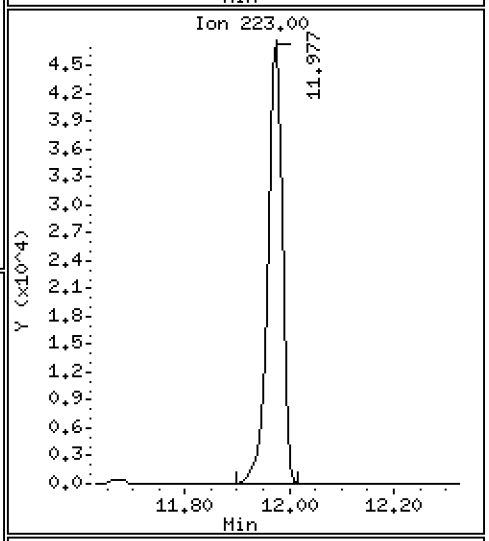


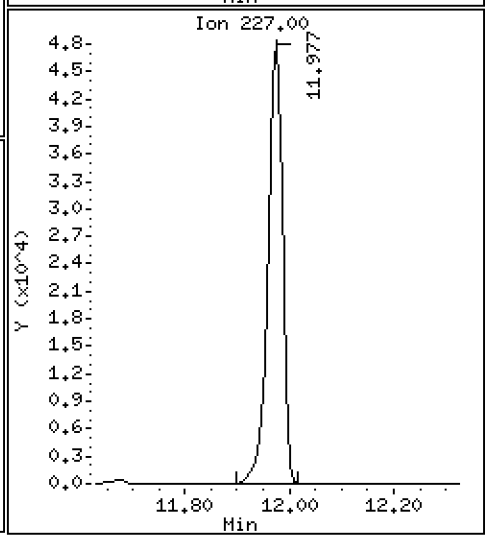












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

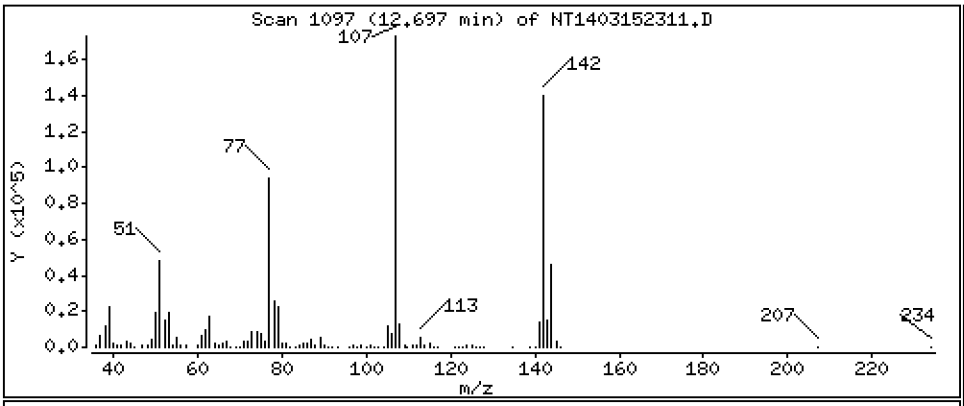
Operator: JGR

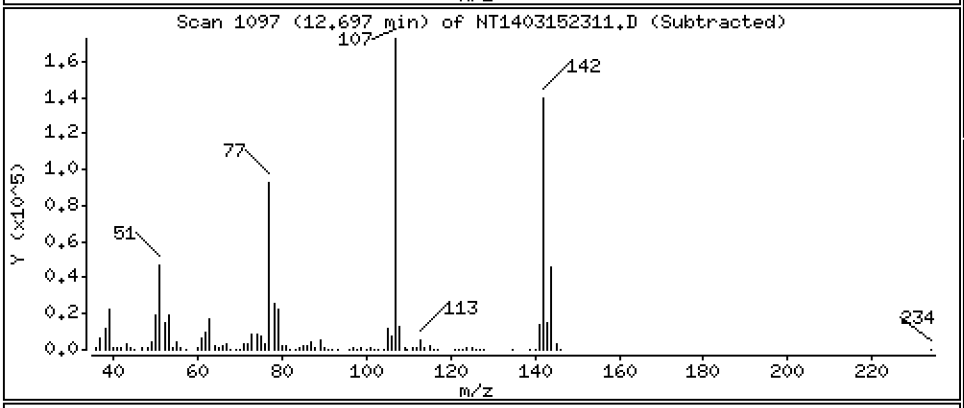
Column phase: ZB-5msi

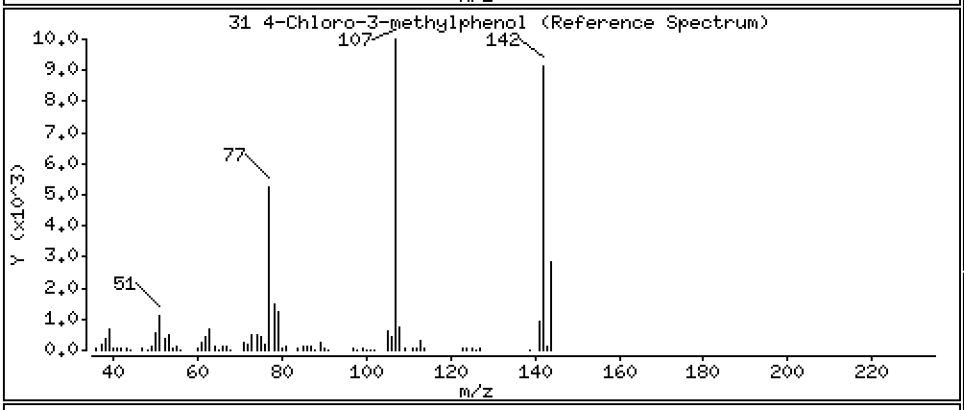
Column diameter: 0.25

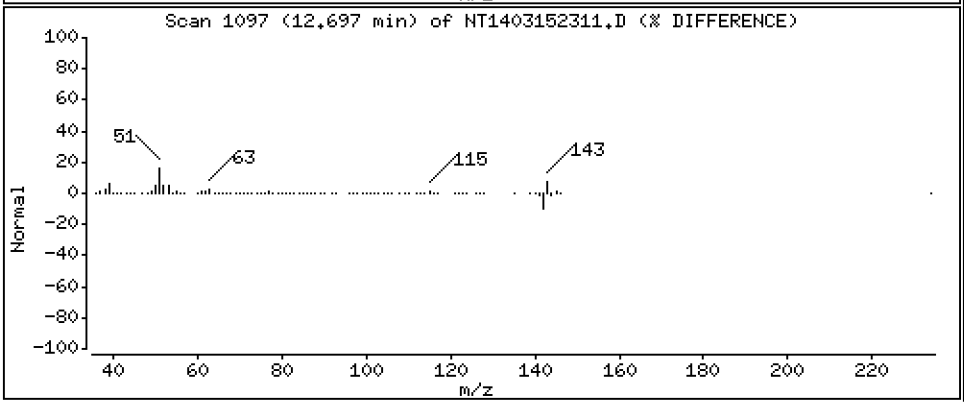
31 4-Chloro-3-methylphenol

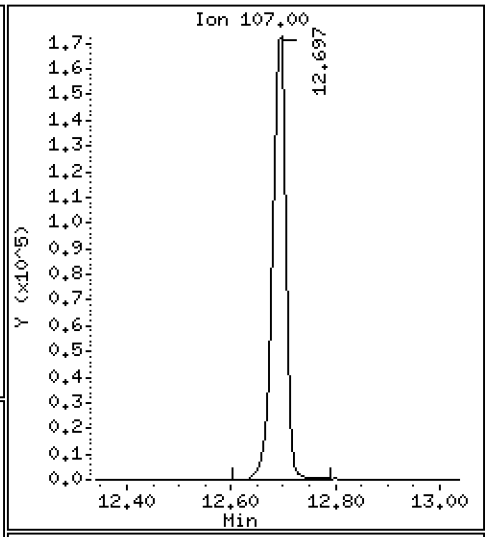
Concentration: 4.852 ug/mL

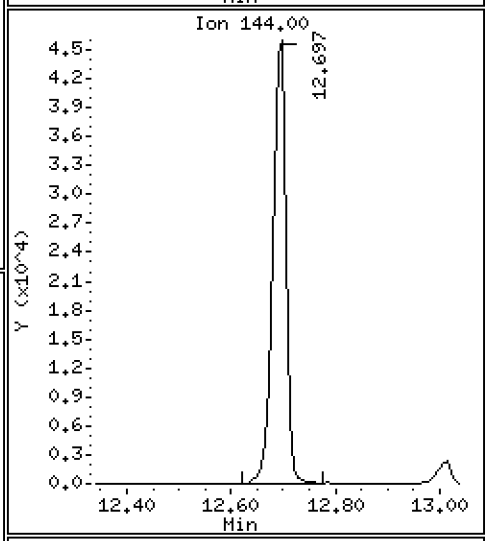


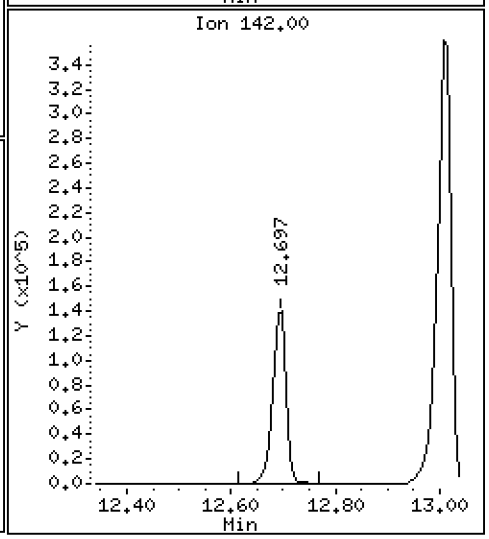












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

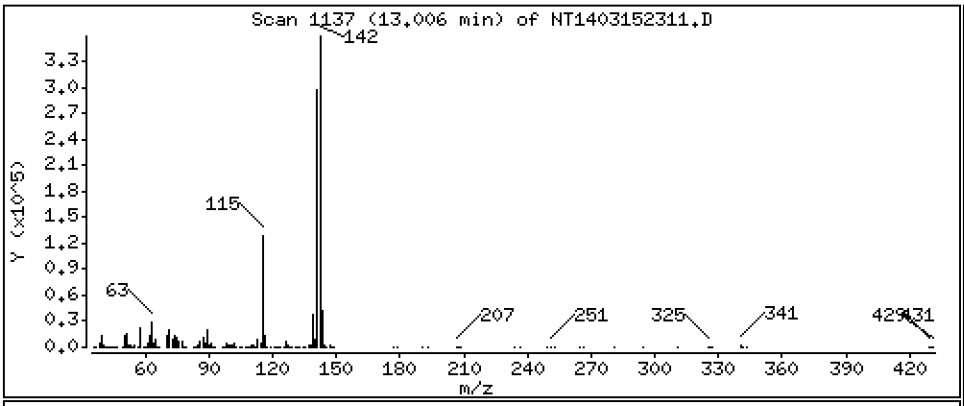
Operator: JGR

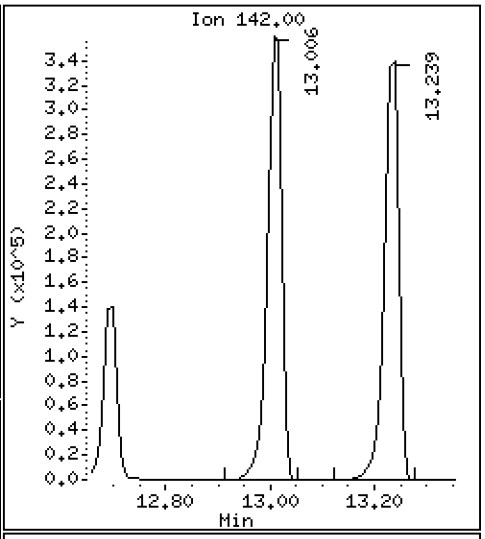
Column phase: ZB-5msi

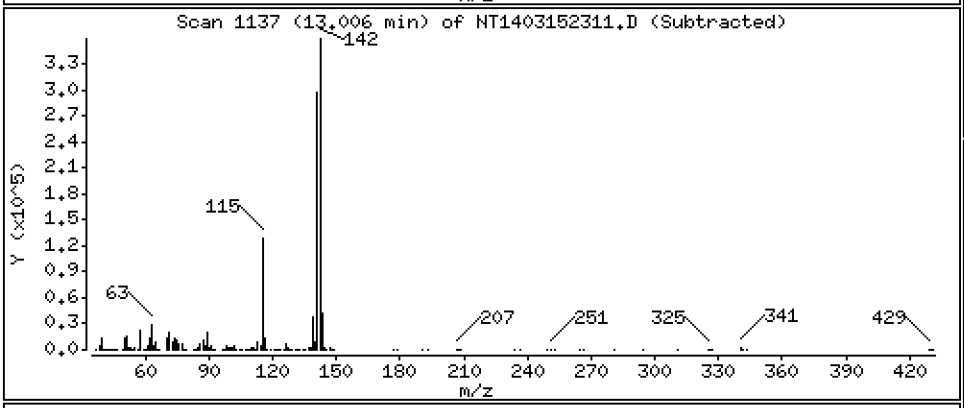
Column diameter: 0.25

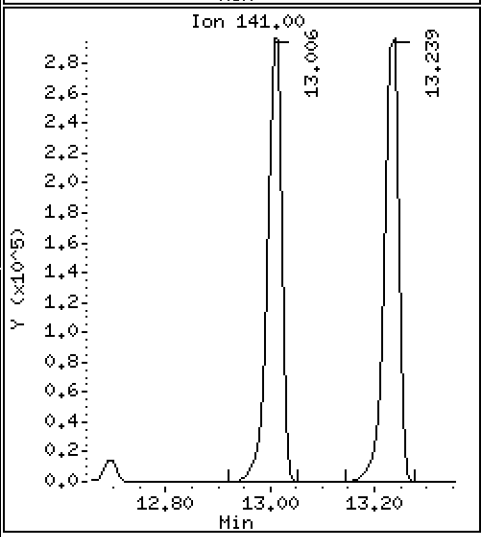
32 2-Methylnaphthalene

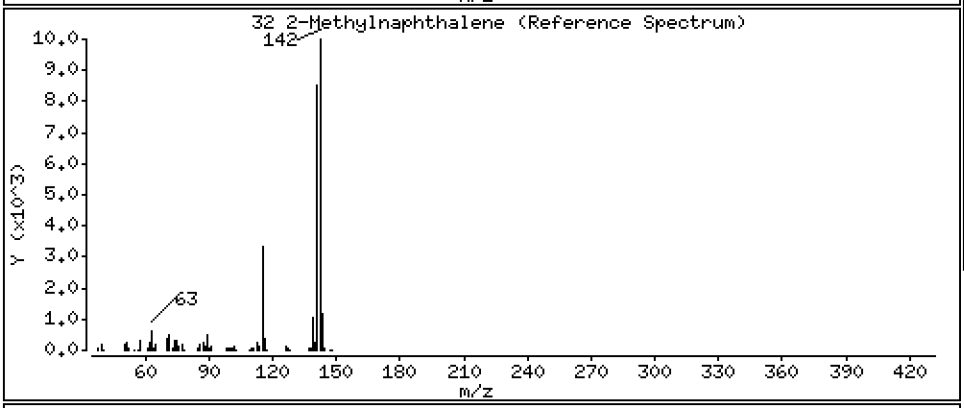
Concentration: 4.854 ug/mL

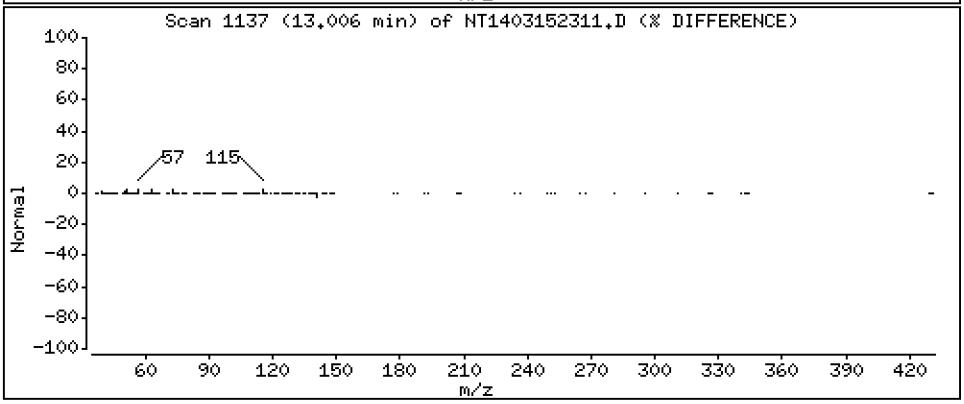












Data File: \\target\share\chem3\nt14.i\20230315.b\NT1403152311.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

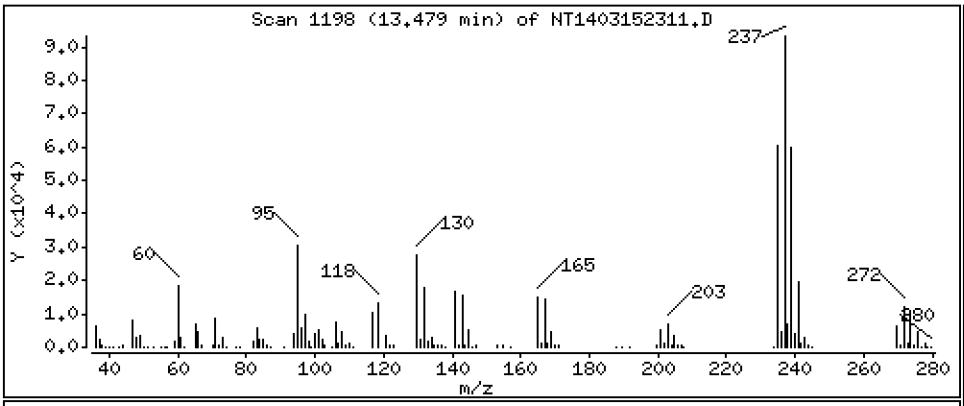
Operator: JGR

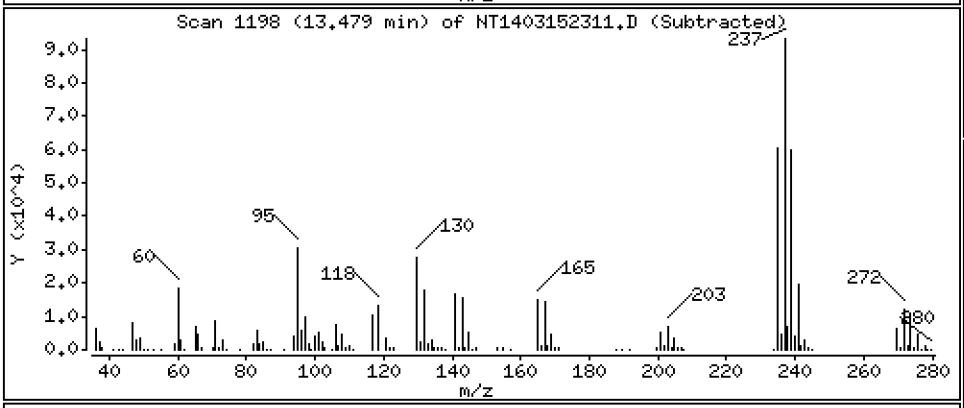
Column phase: ZB-5msi

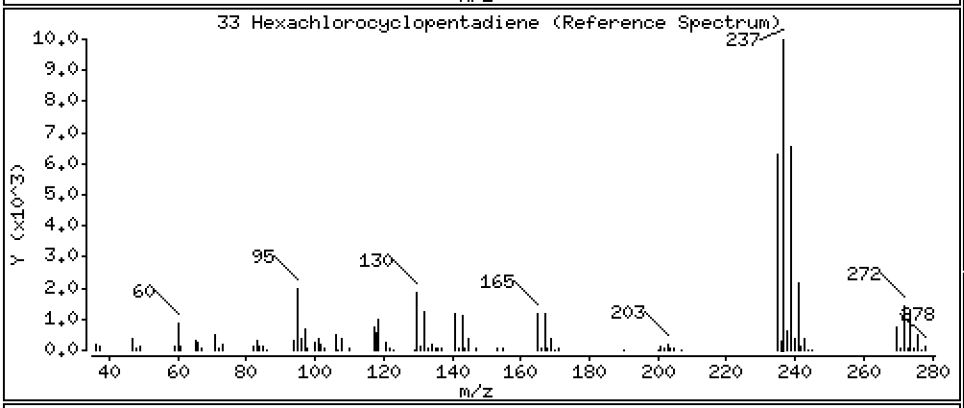
Column diameter: 0.25

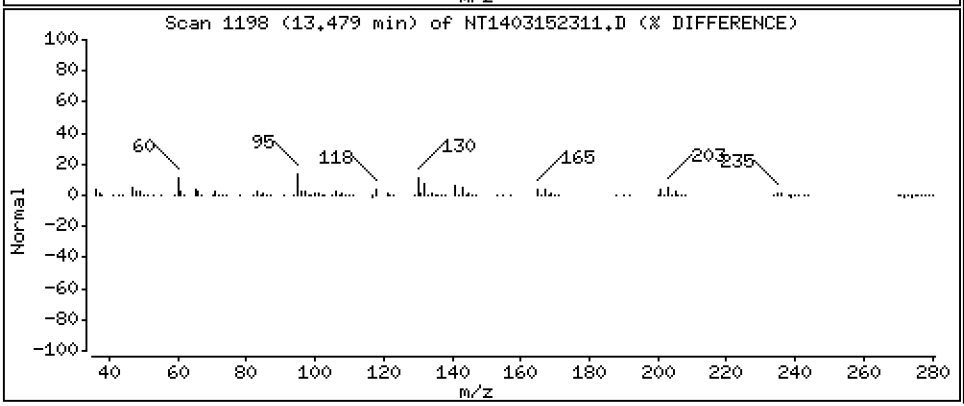
33 Hexachlorocyclopentadiene

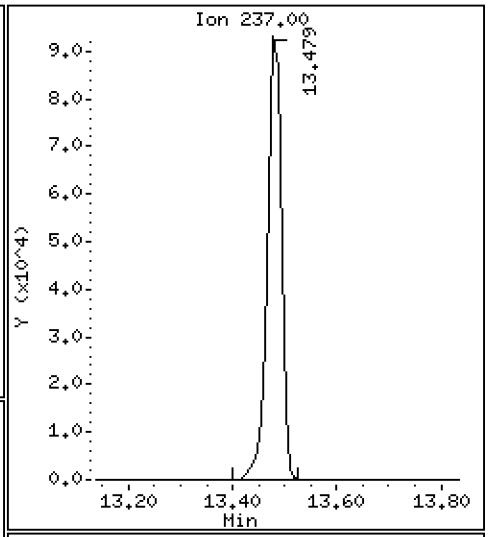
Concentration: 5.230 ug/mL

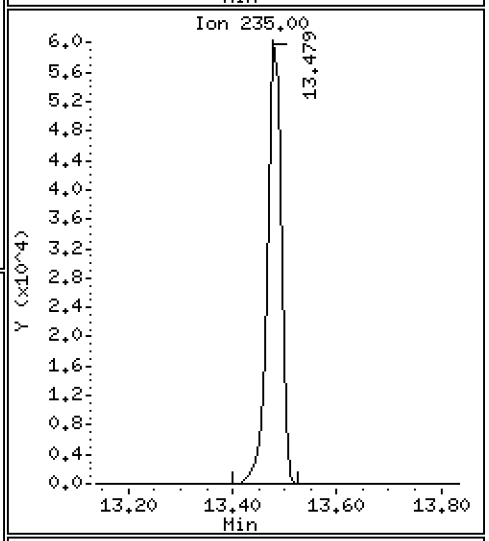


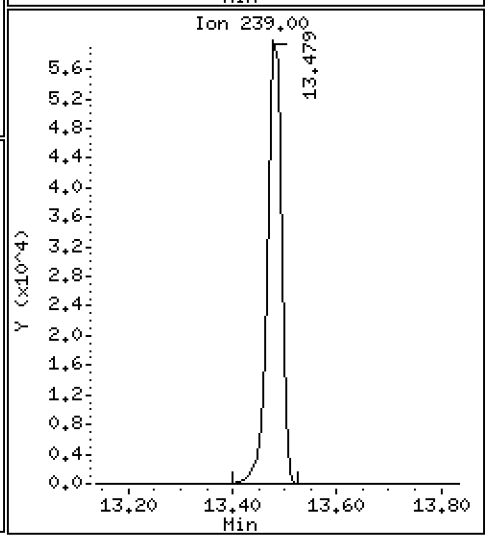












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

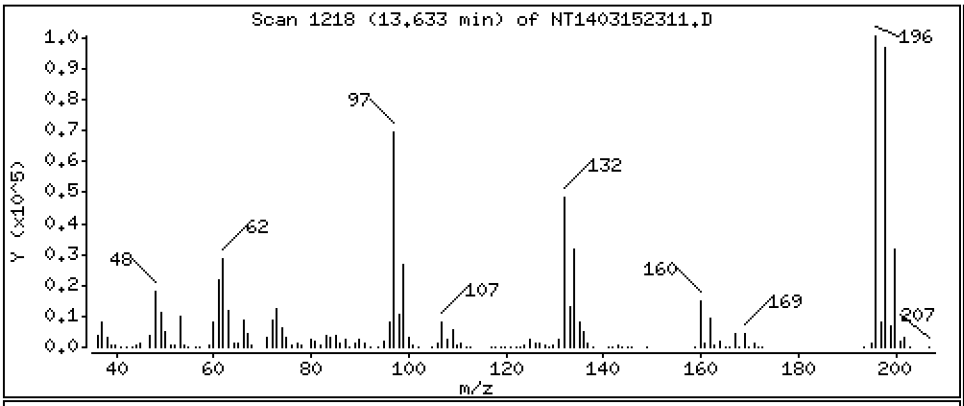
Operator: JGR

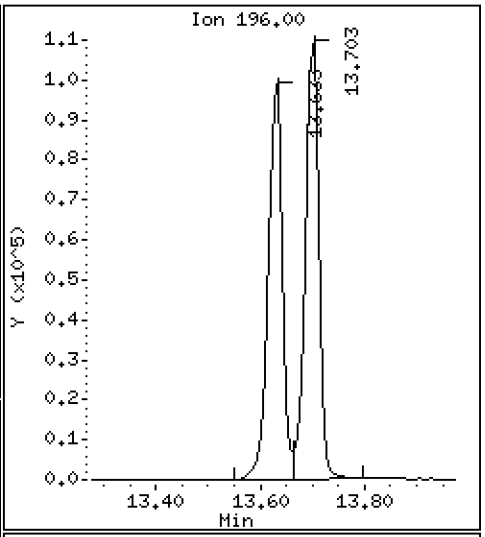
Column phase: ZB-5msi

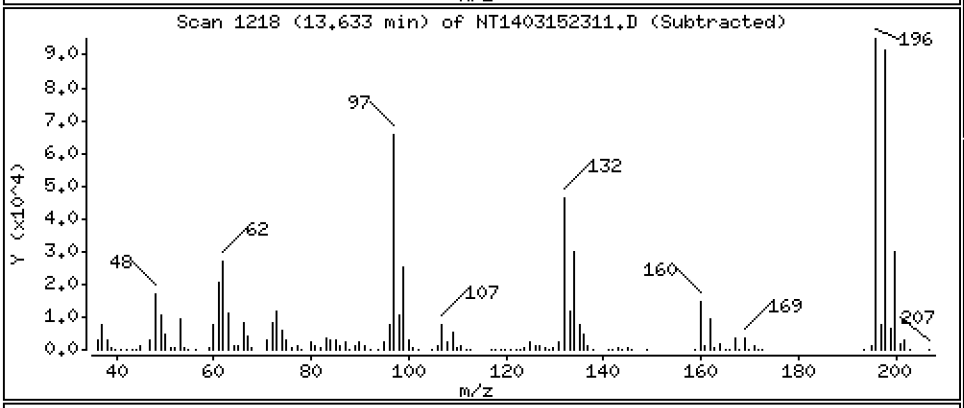
Column diameter: 0.25

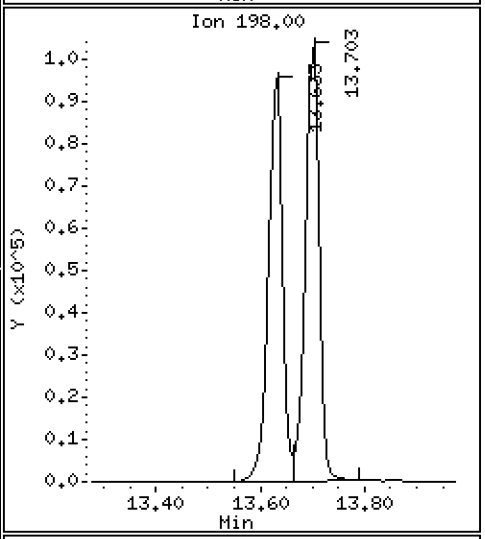
34 2,4,6-Trichlorophenol

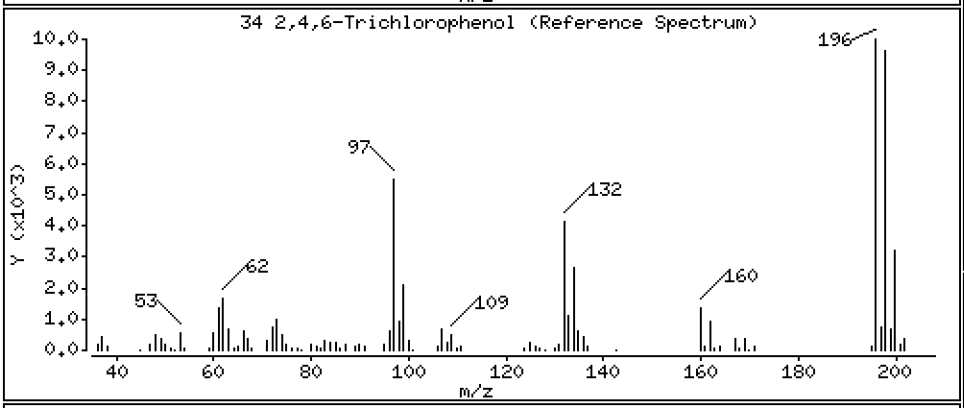
Concentration: 4.718 ug/mL

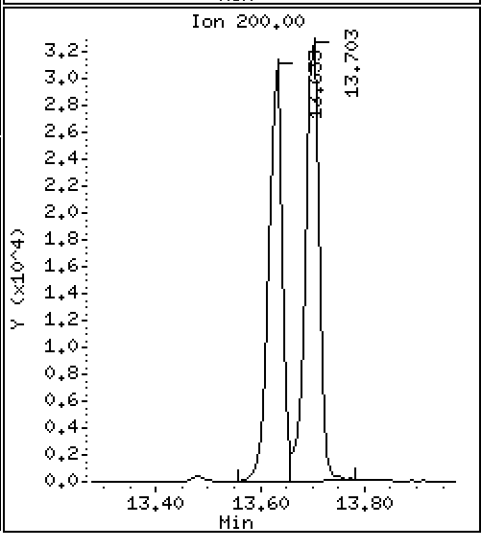


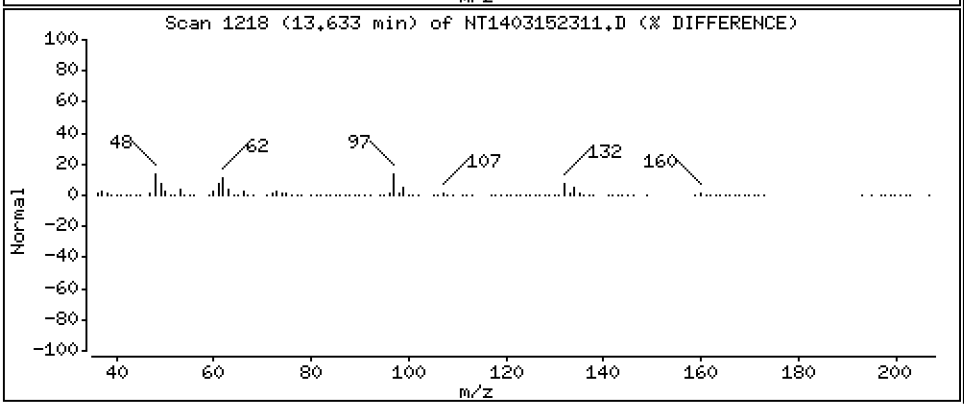












Data File: \\target\share\chem3\nt14.i\20230315.b\NT1403152311.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

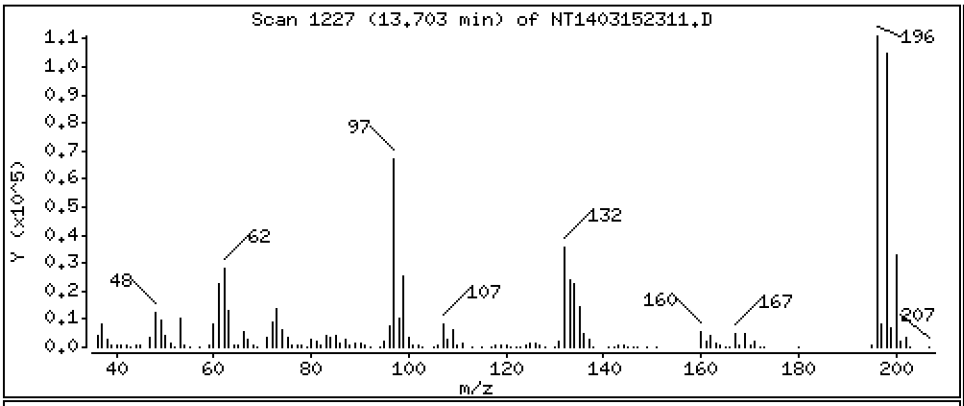
Operator: JGR

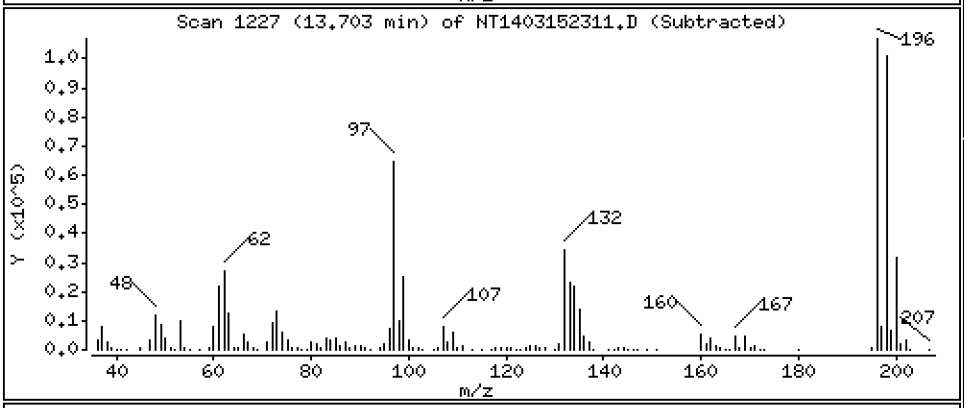
Column phase: ZB-5msi

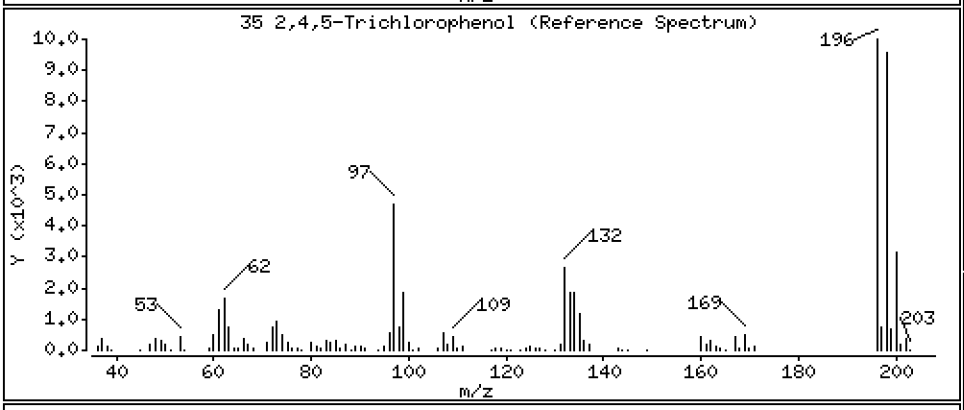
Column diameter: 0.25

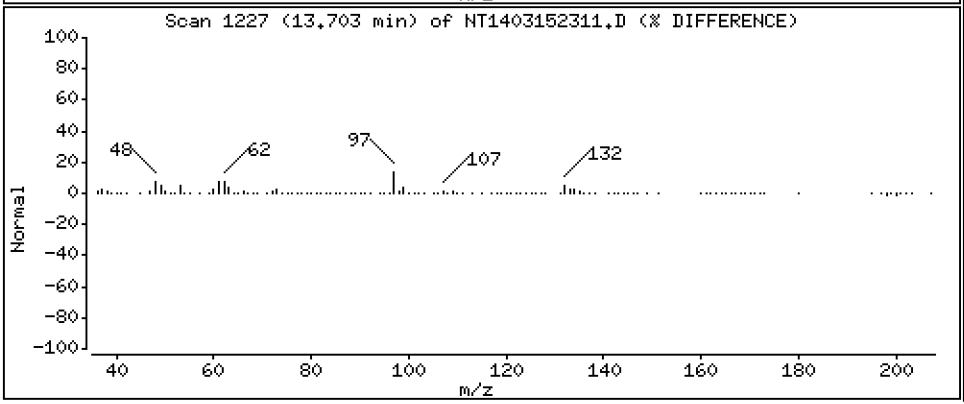
35 2,4,5-Trichlorophenol

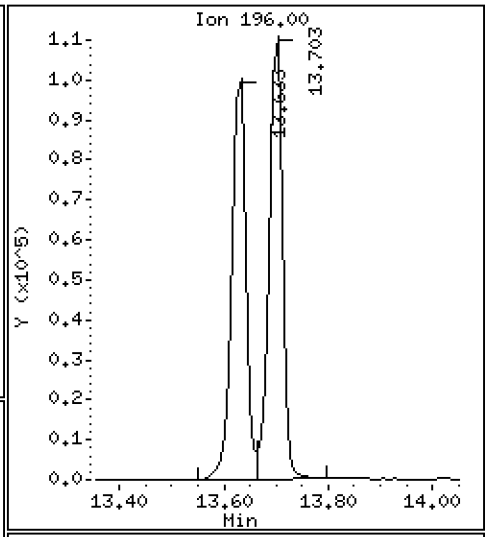
Concentration: 4.661 ug/mL

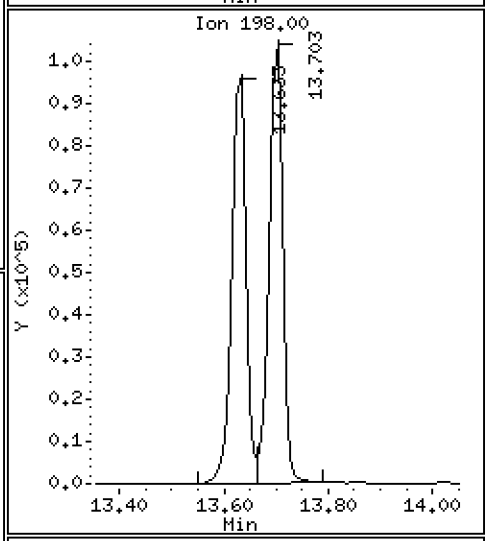


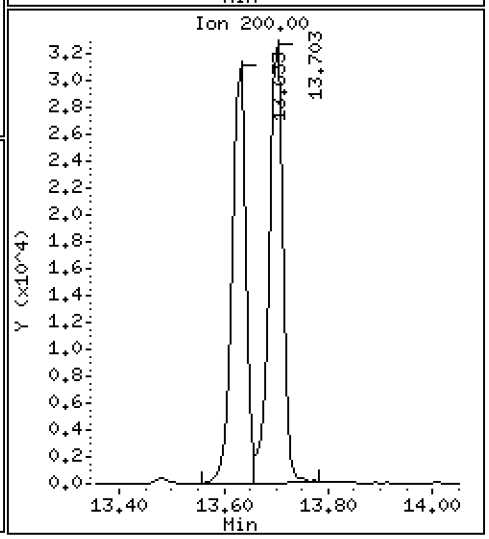












Data File: \\target\share\chem3\nt14.i\20230315.b\NT1403152311.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

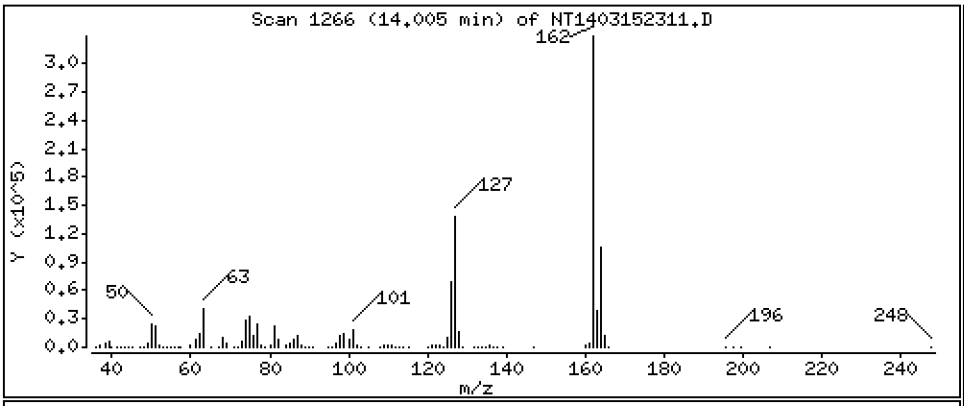
Operator: JGR

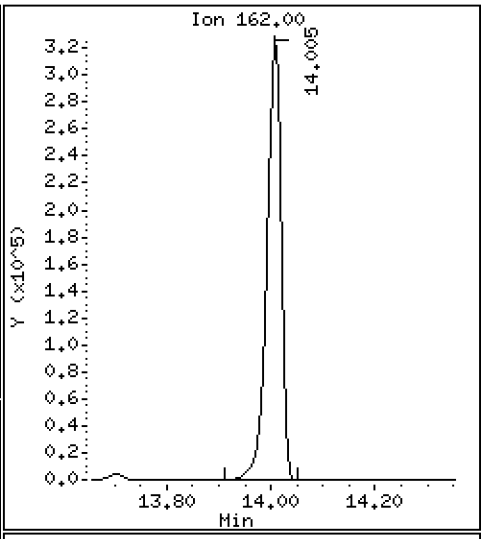
Column phase: ZB-5msi

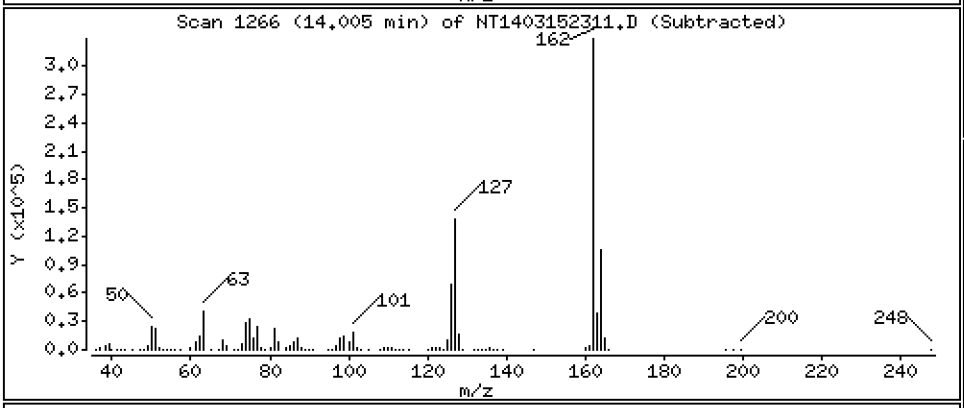
Column diameter: 0.25

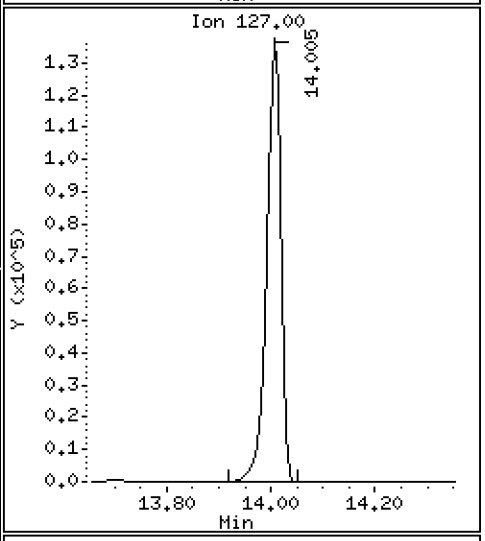
37 2-Chloronaphthalene

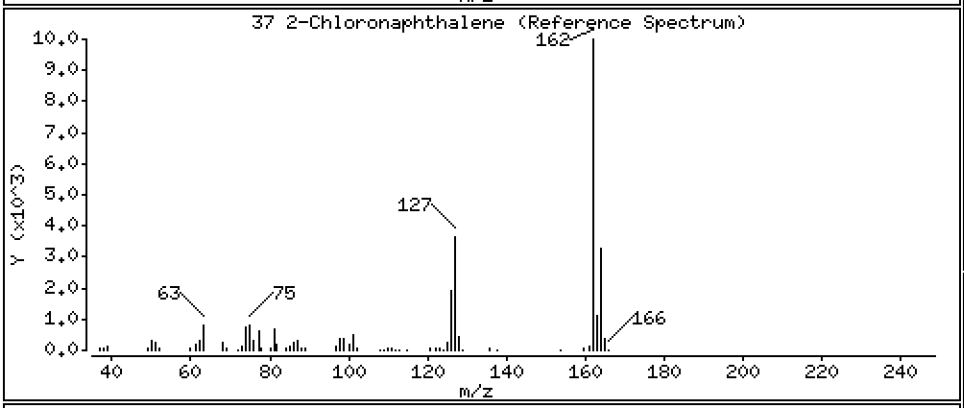
Concentration: 4.977 ug/mL

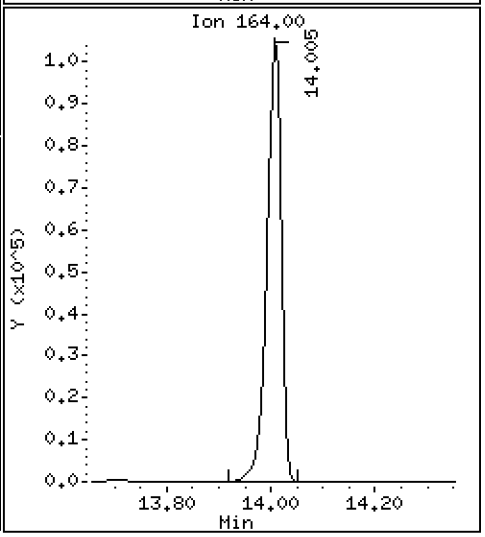


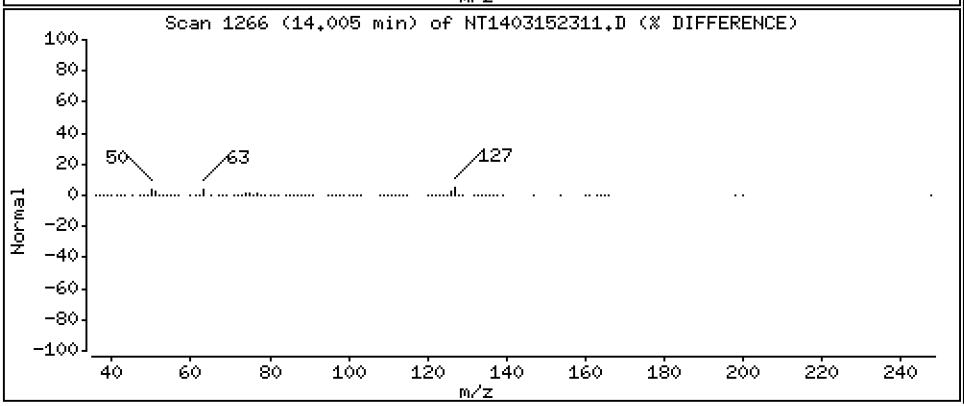












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

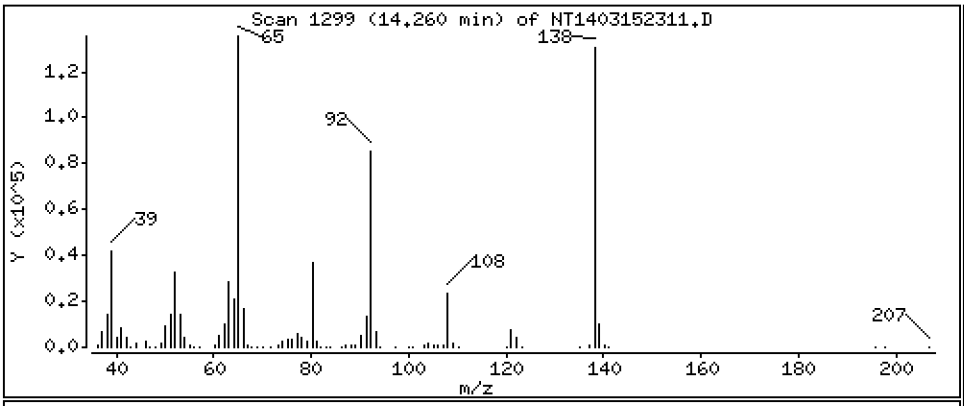
Operator: JGR

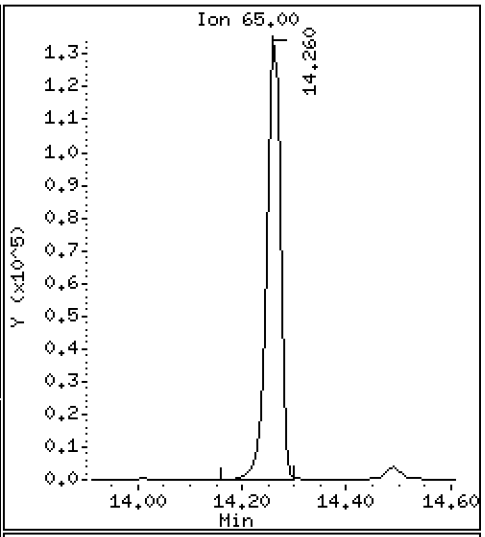
Column phase: ZB-5msi

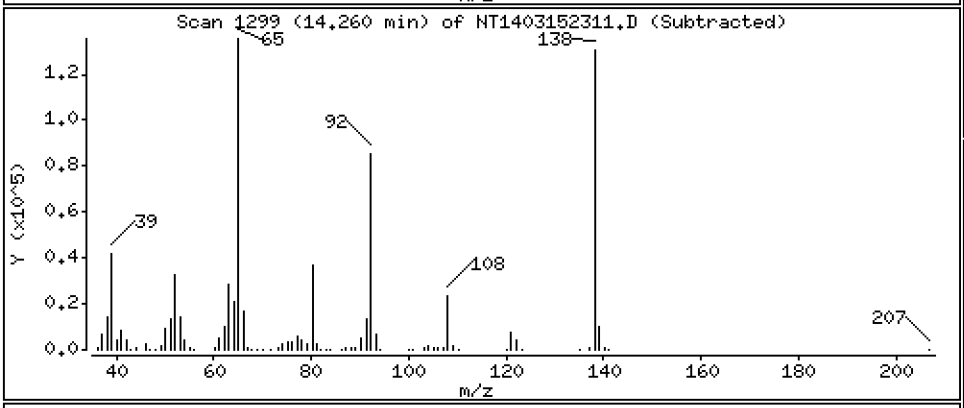
Column diameter: 0.25

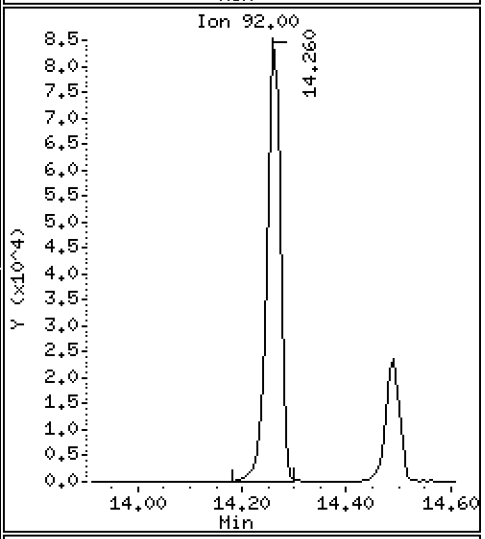
38 2-Nitroaniline

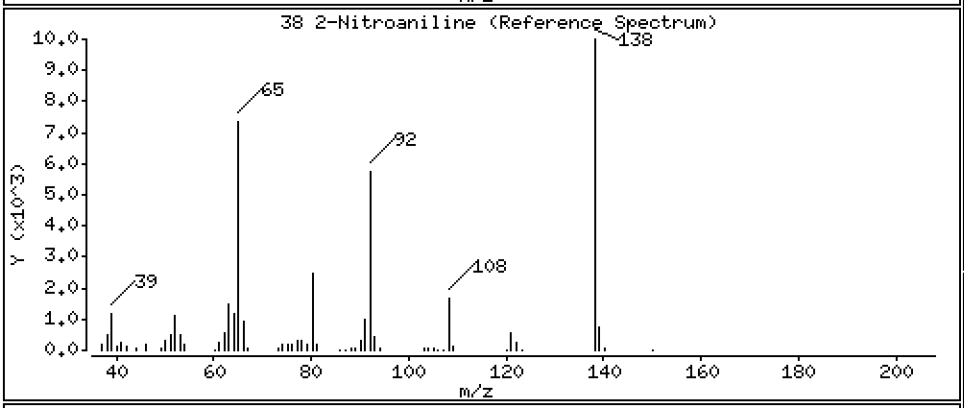
Concentration: 5.100 ug/mL

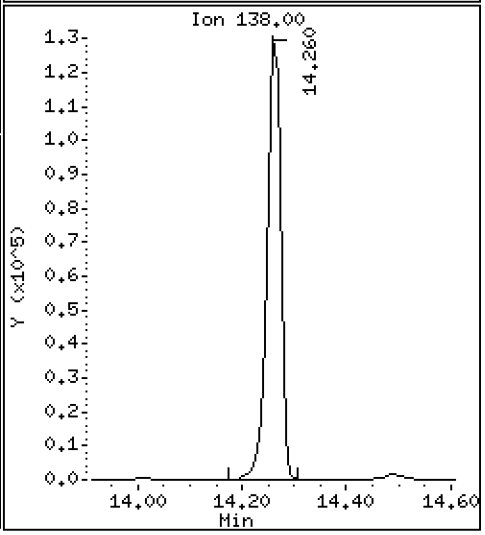


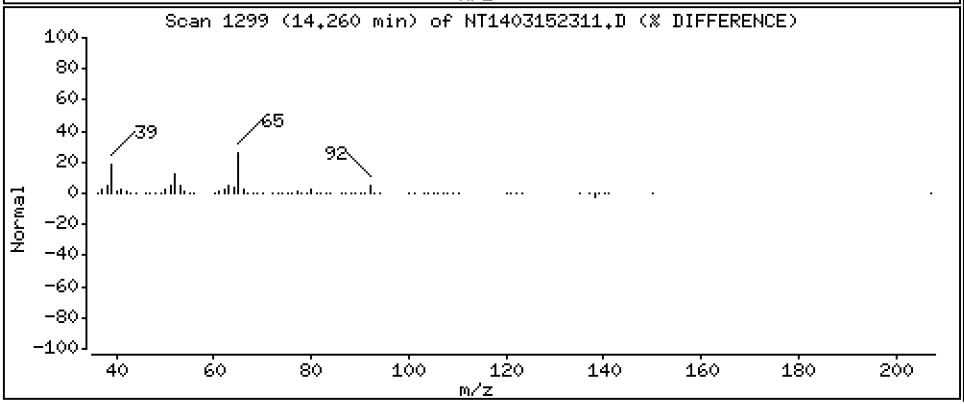












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

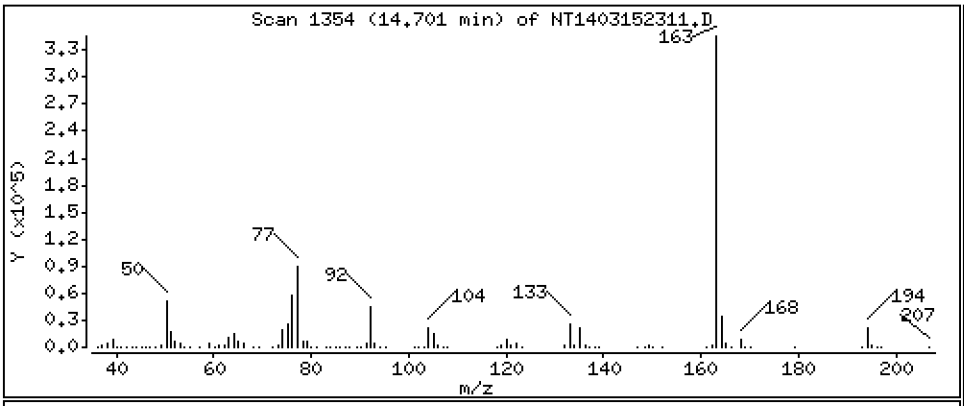
Operator: JGR

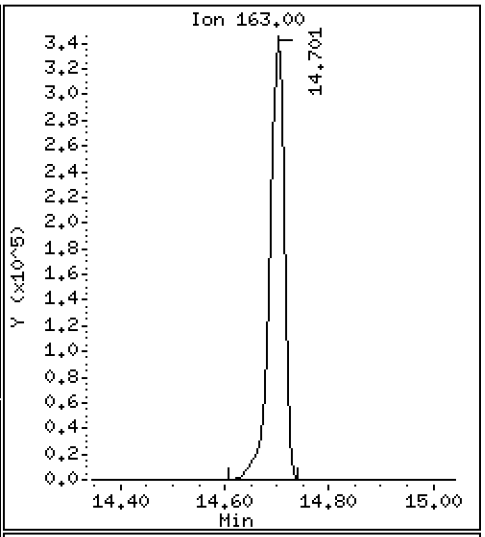
Column phase: ZB-5msi

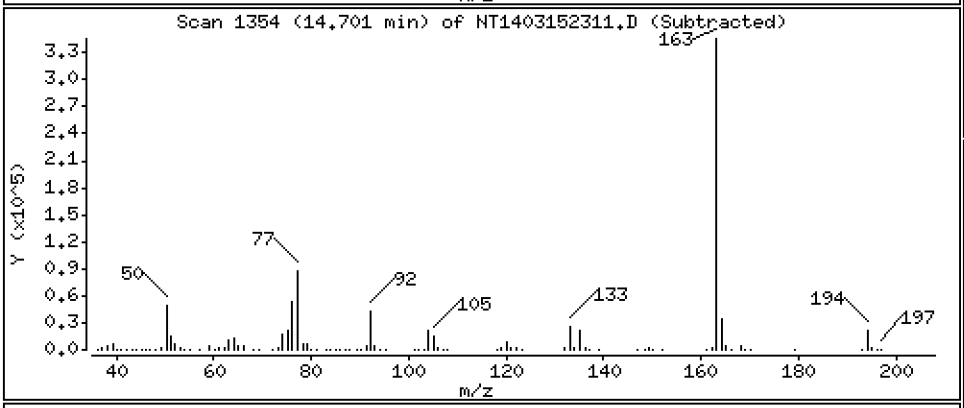
Column diameter: 0.25

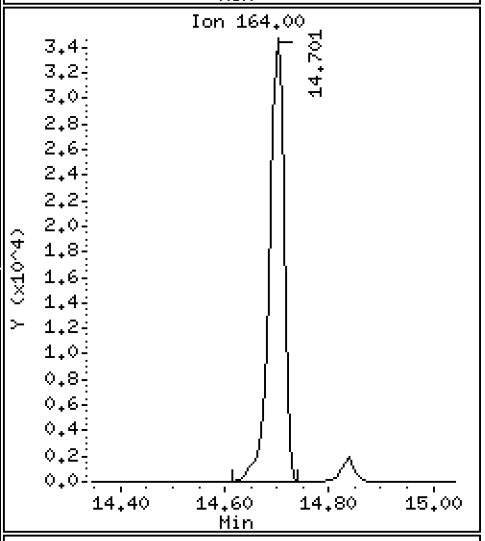
39 Dimethylphthalate

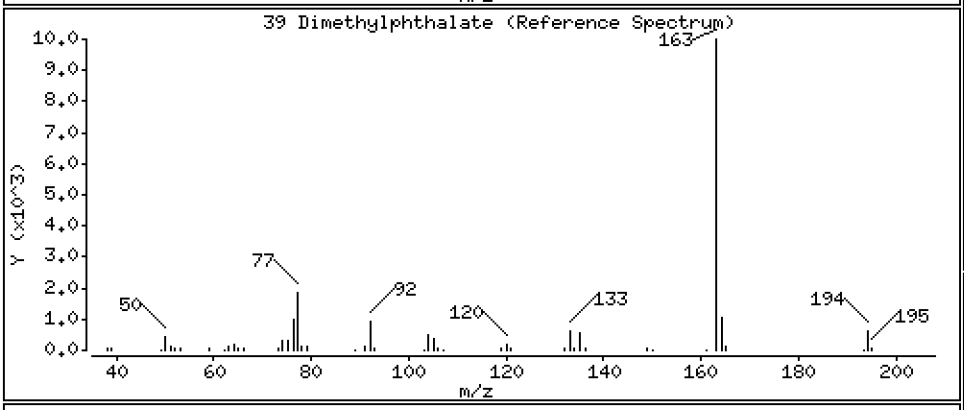
Concentration: 5.031 ug/mL

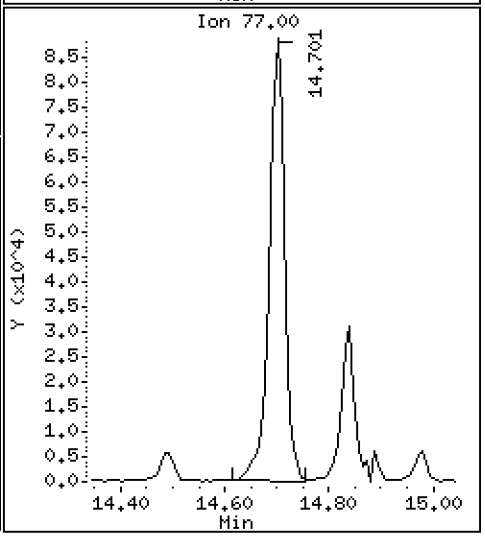


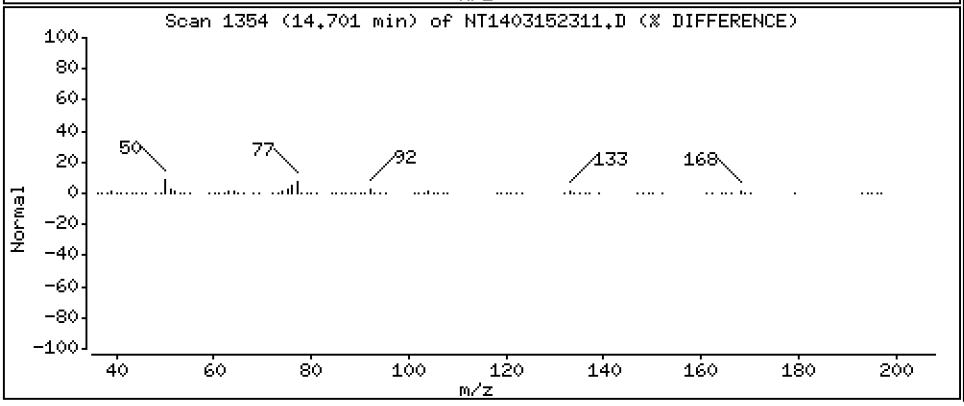












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

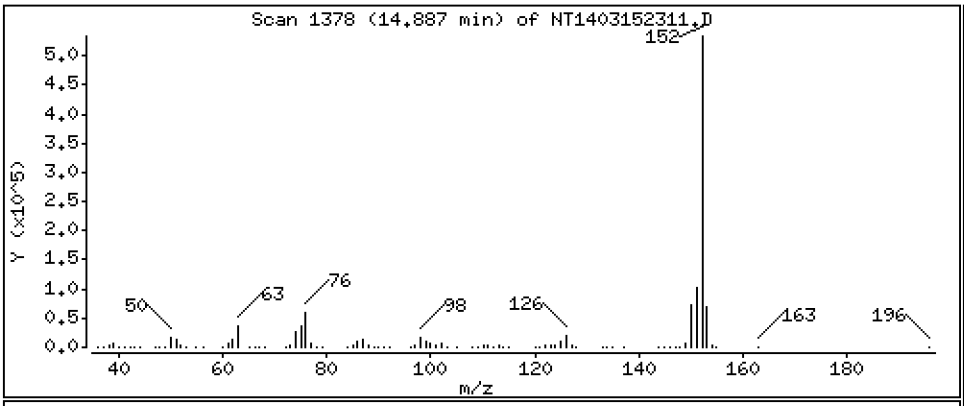
Operator: JGR

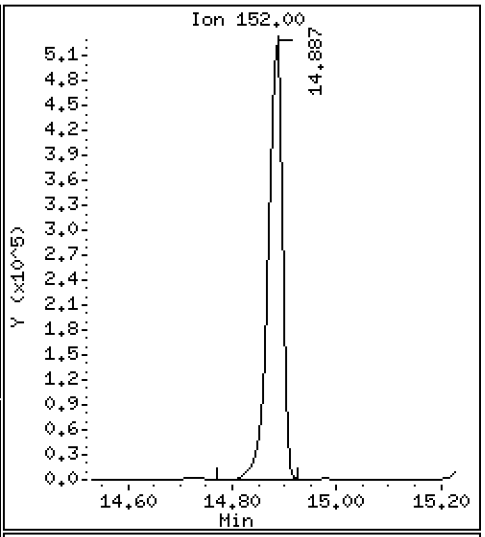
Column phase: ZB-5msi

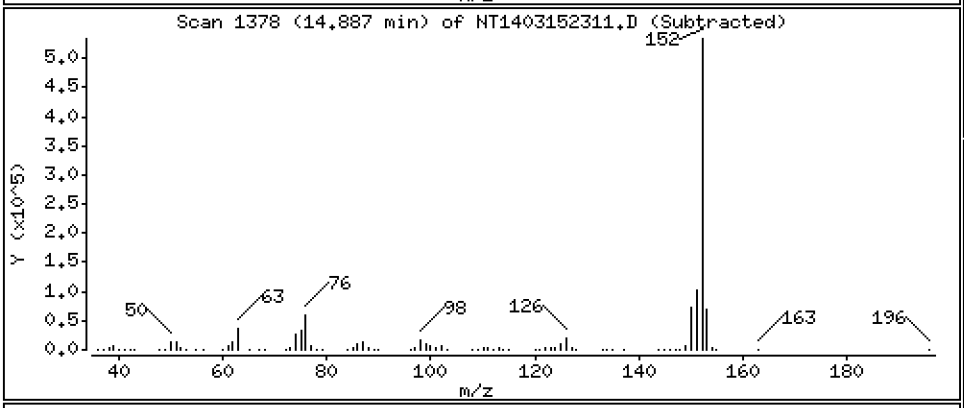
Column diameter: 0.25

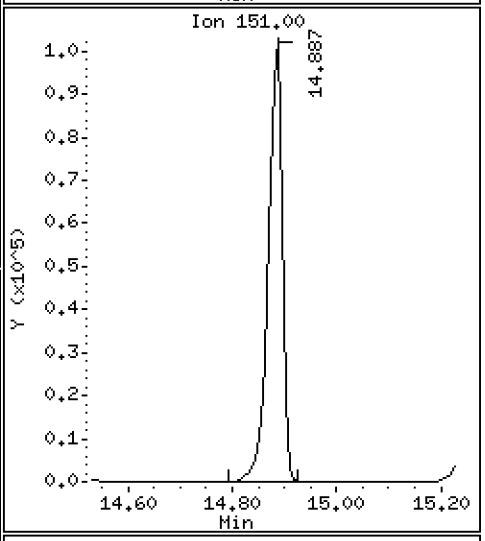
40 Acenaphthylene

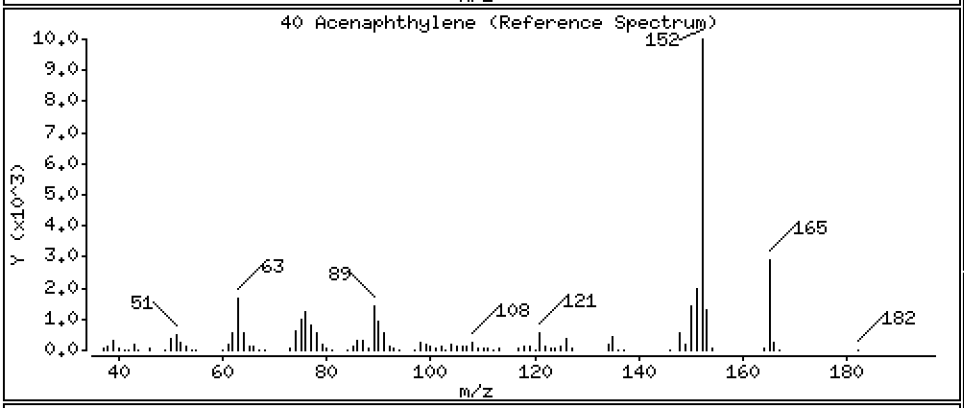
Concentration: 4.879 ug/mL

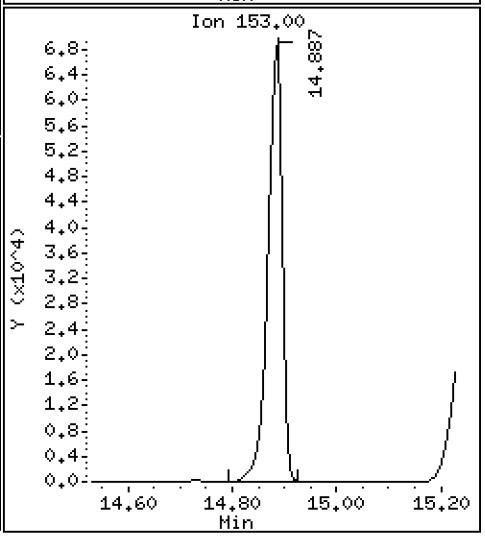


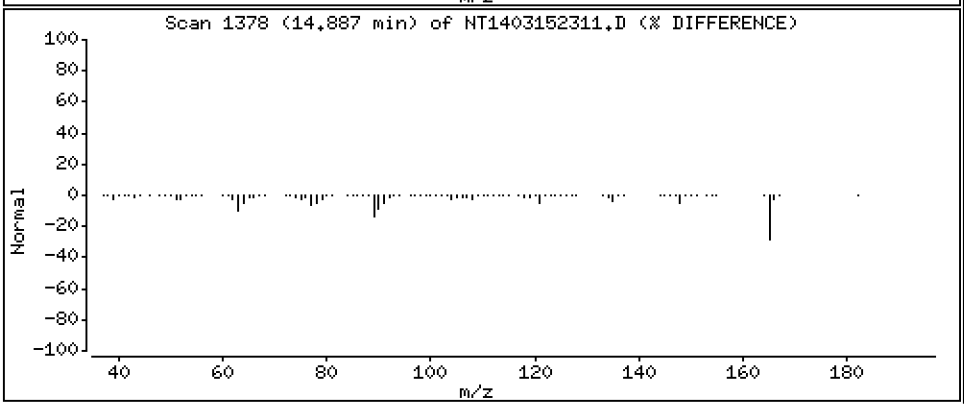












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

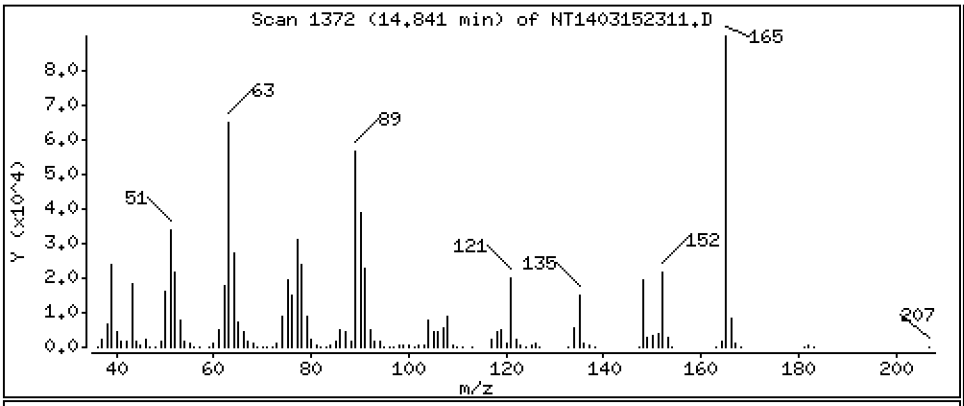
Operator: JGR

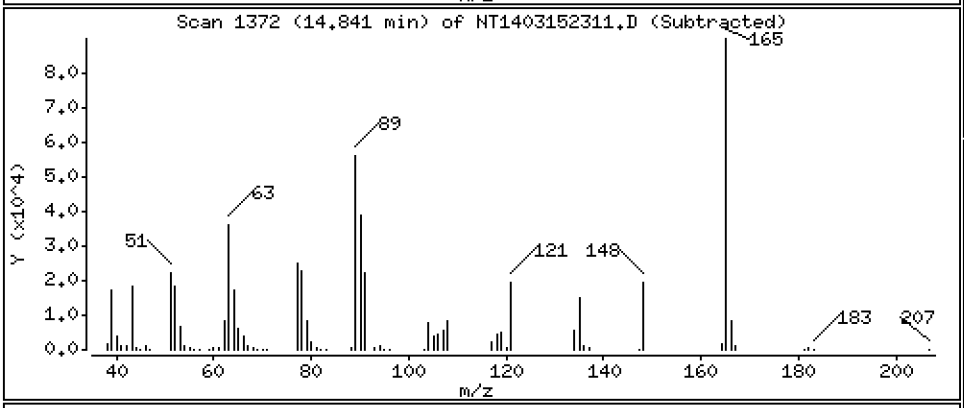
Column phase: ZB-5msi

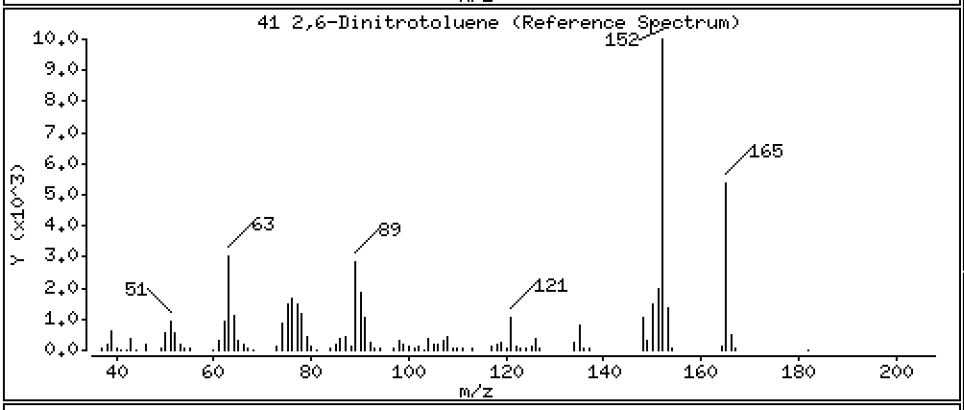
Column diameter: 0.25

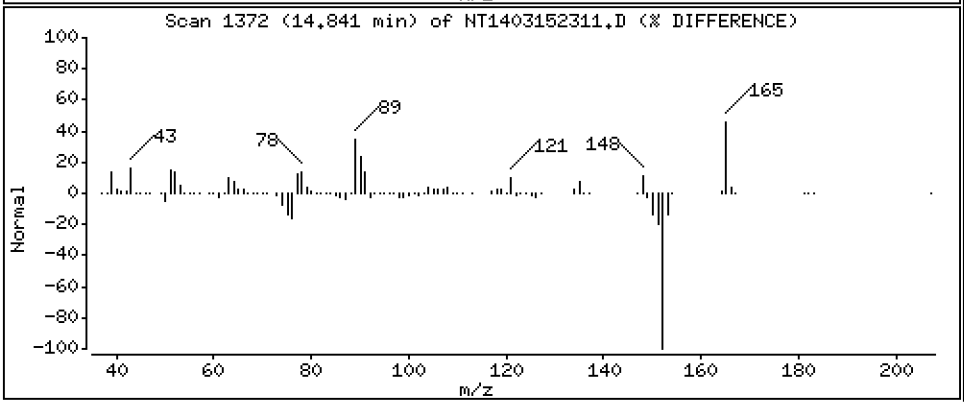
41 2,6-Dinitrotoluene

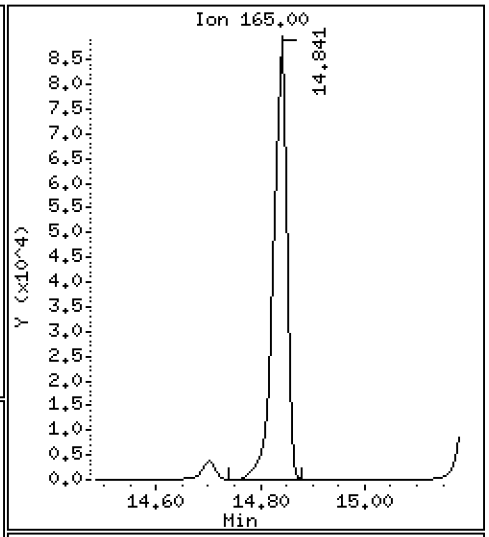
Concentration: 5.219 ug/mL

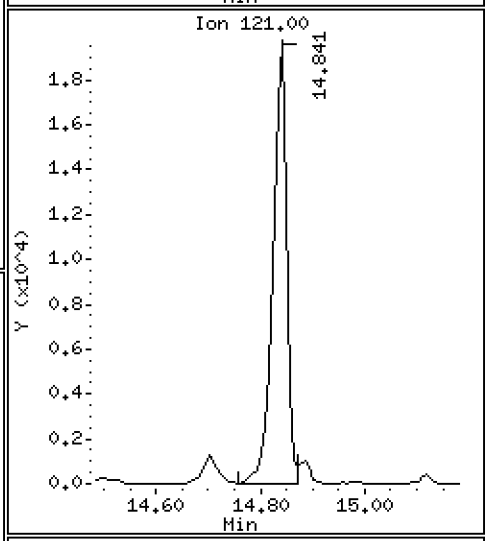


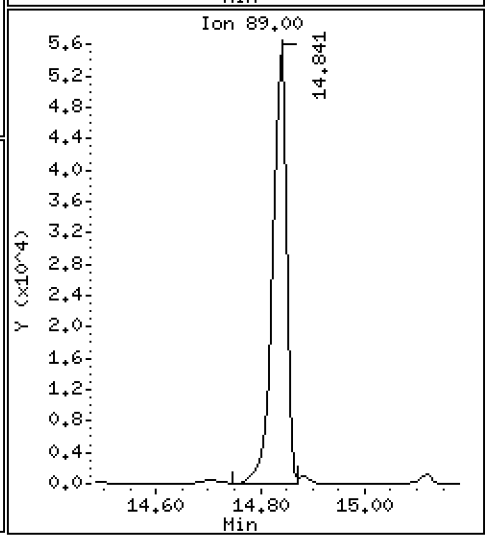












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

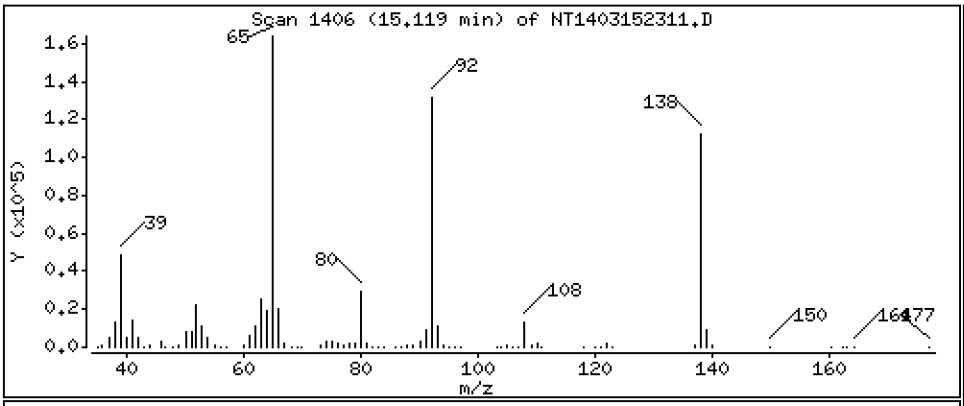
Operator: JGR

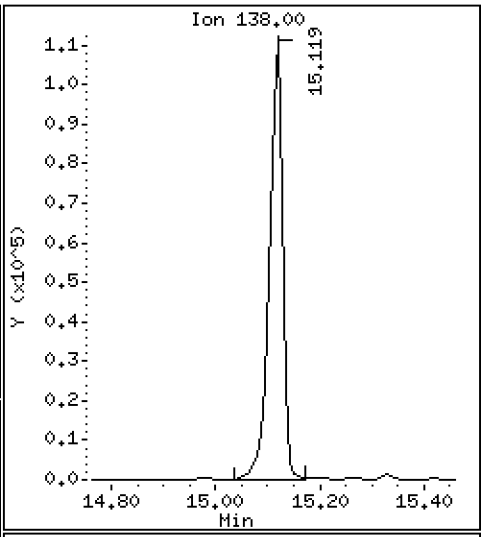
Column phase: ZB-5msi

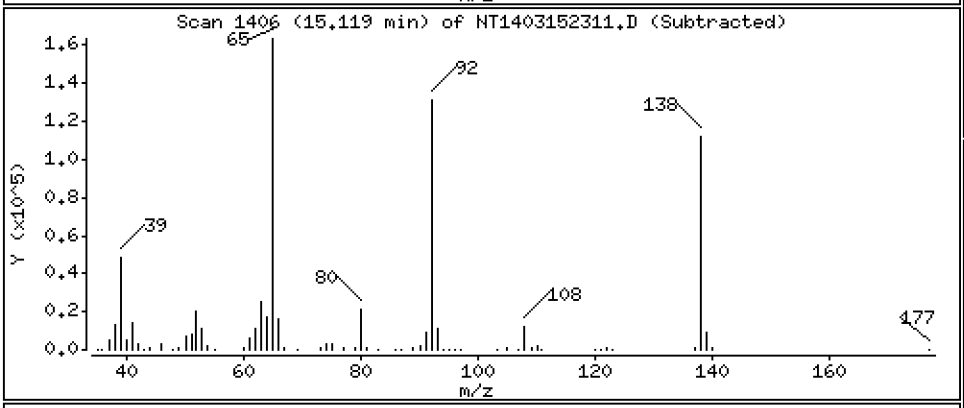
Column diameter: 0.25

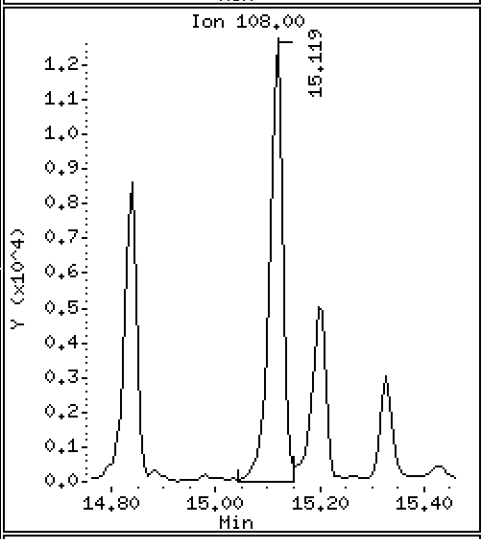
43 3-Nitroaniline

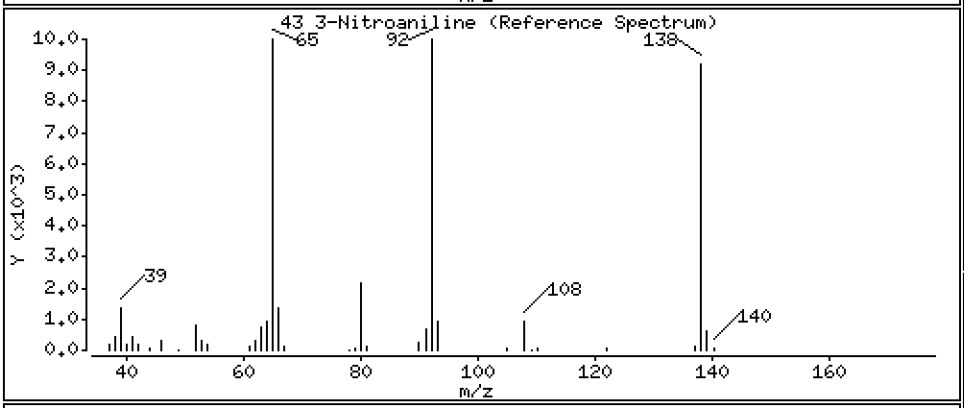
Concentration: 5.210 ug/mL

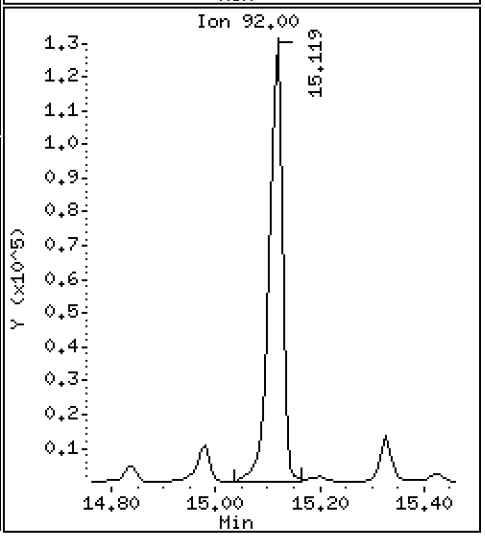


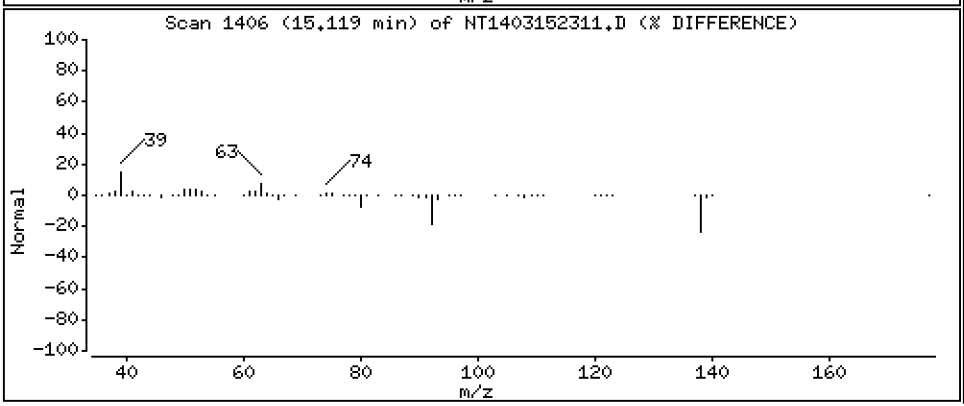












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

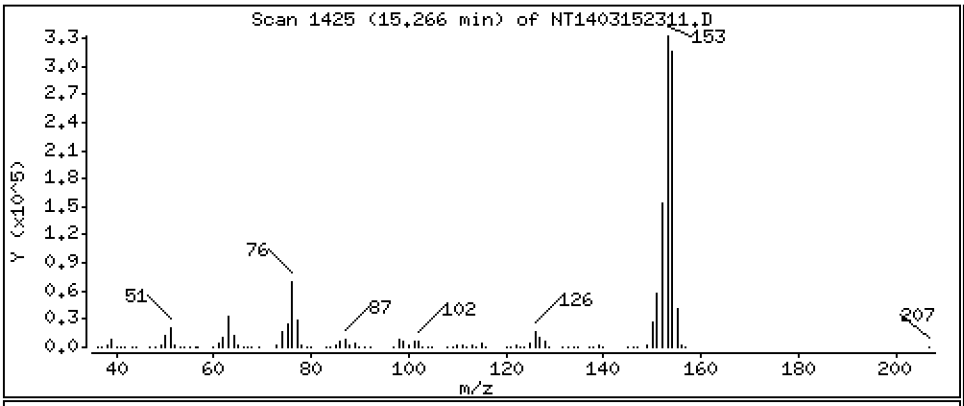
Operator: JGR

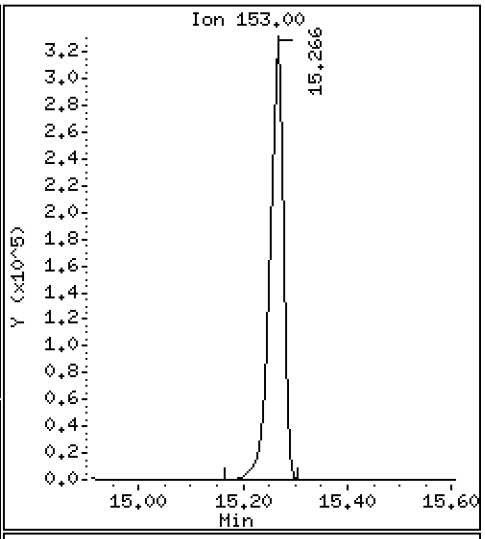
Column phase: ZB-5msi

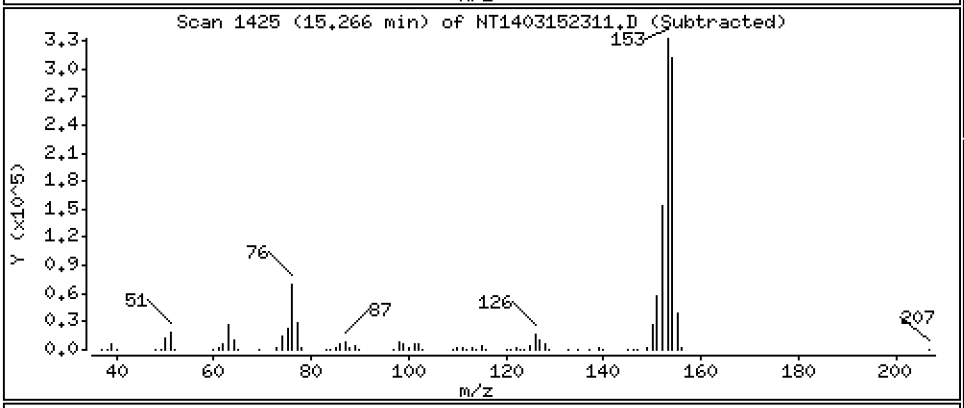
Column diameter: 0.25

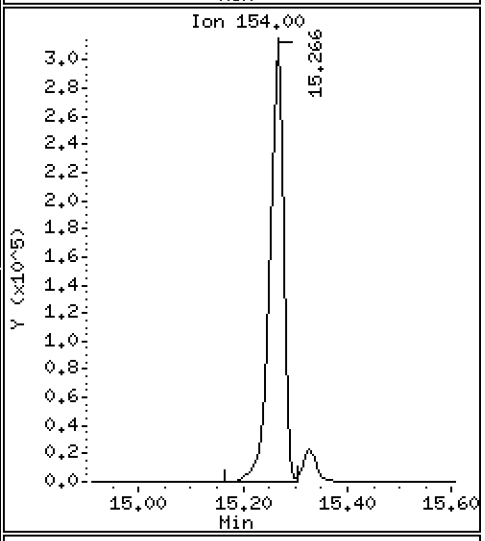
44 Acenaphthene

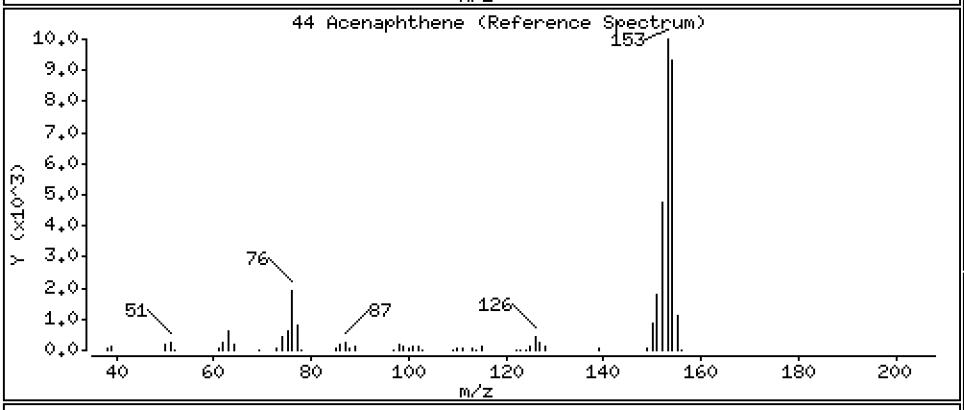
Concentration: 4.965 ug/mL

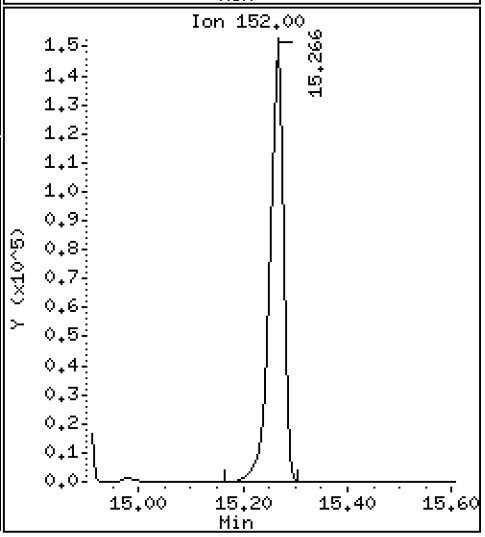


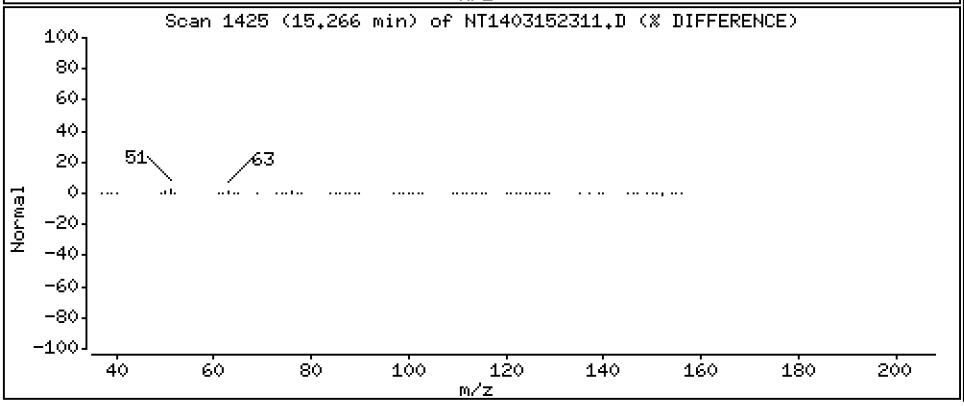












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

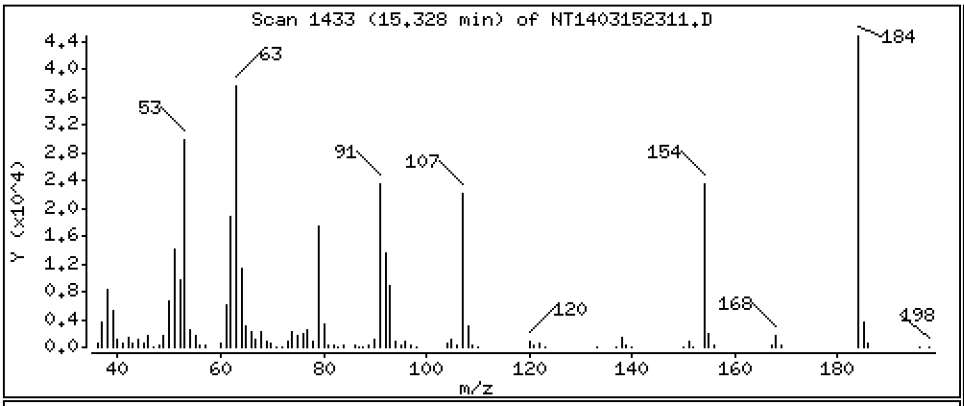
Operator: JGR

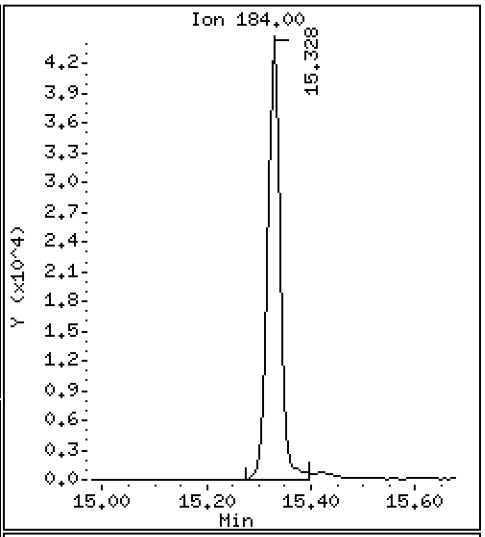
Column phase: ZB-5msi

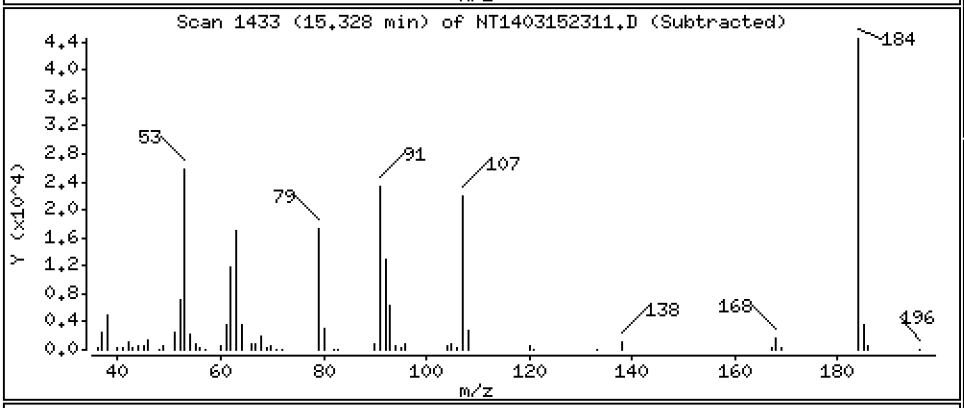
Column diameter: 0.25

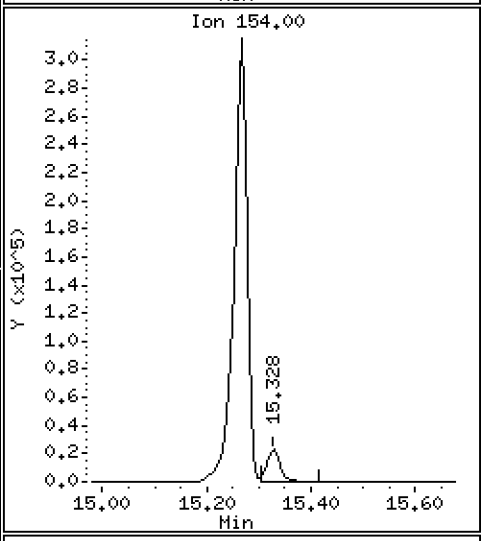
45 2,4-Dinitrophenol

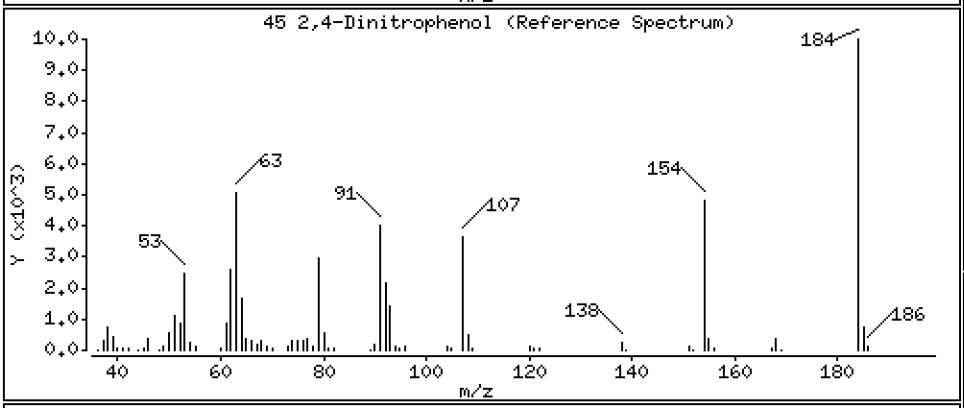
Concentration: 3.077 ug/mL

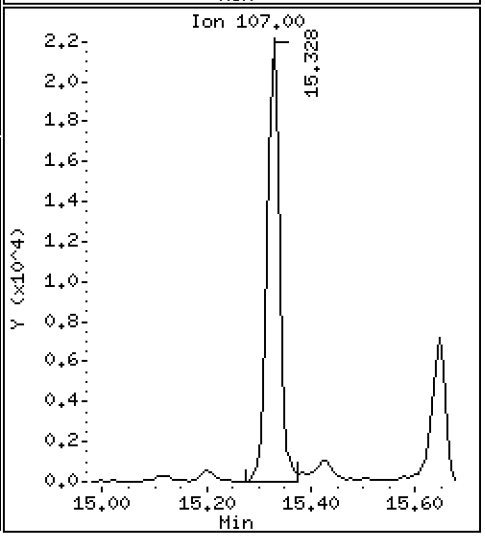


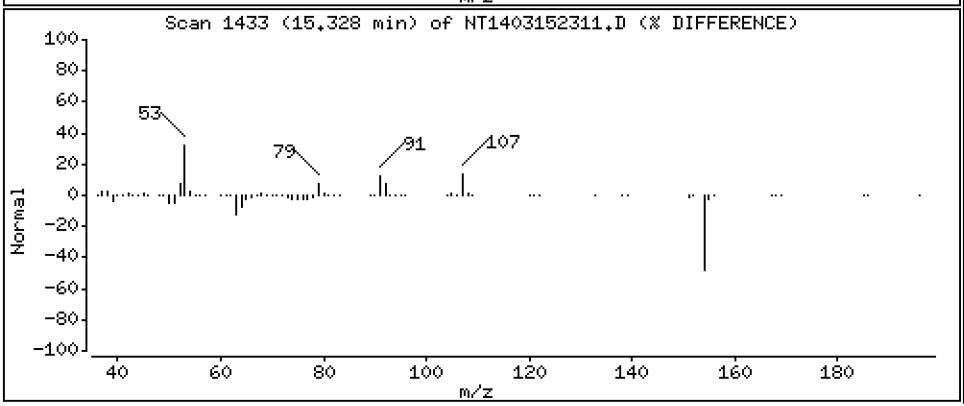












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

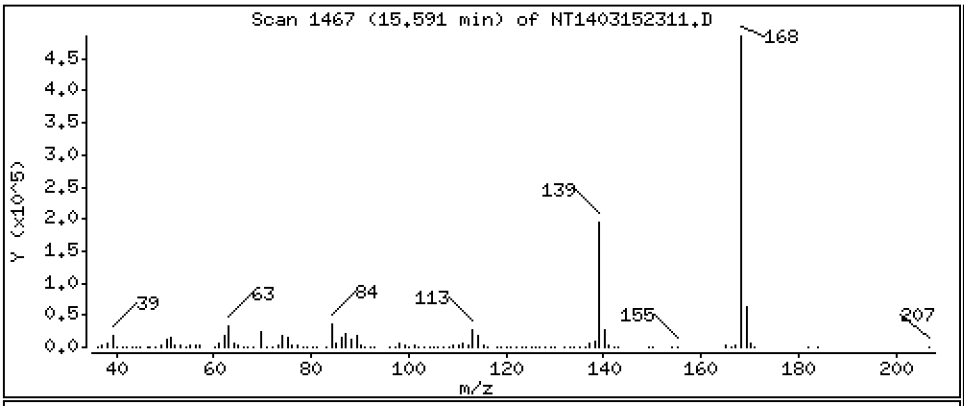
Operator: JGR

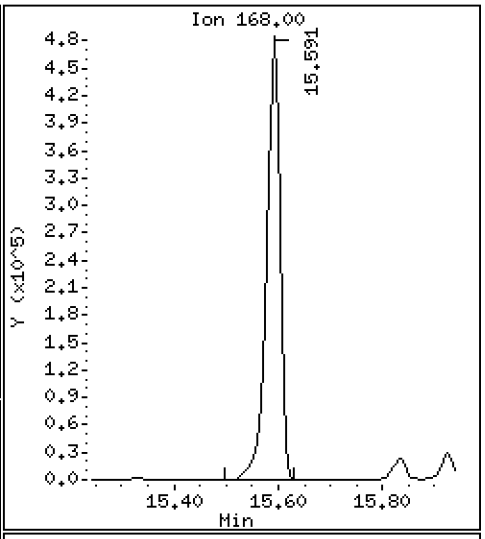
Column phase: ZB-5msi

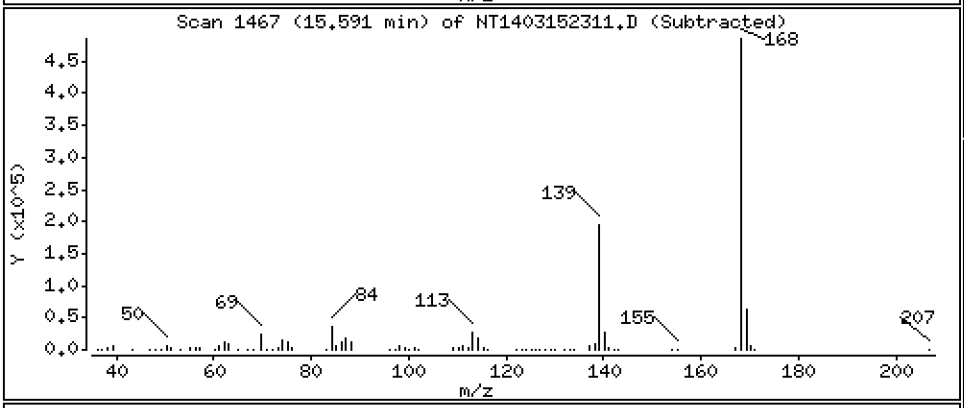
Column diameter: 0.25

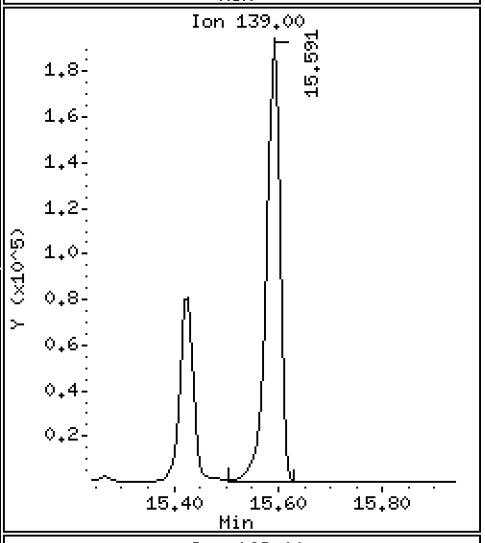
46 Dibenzofuran

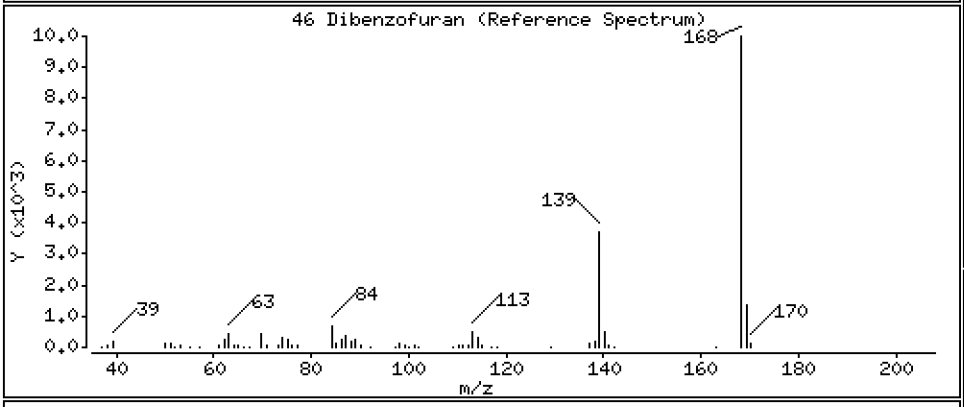
Concentration: 4.956 ug/mL

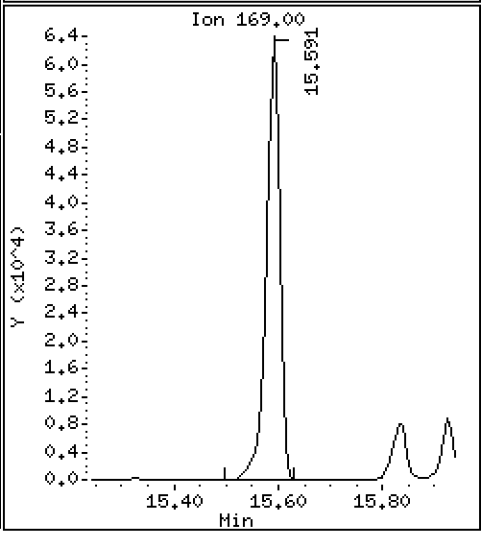


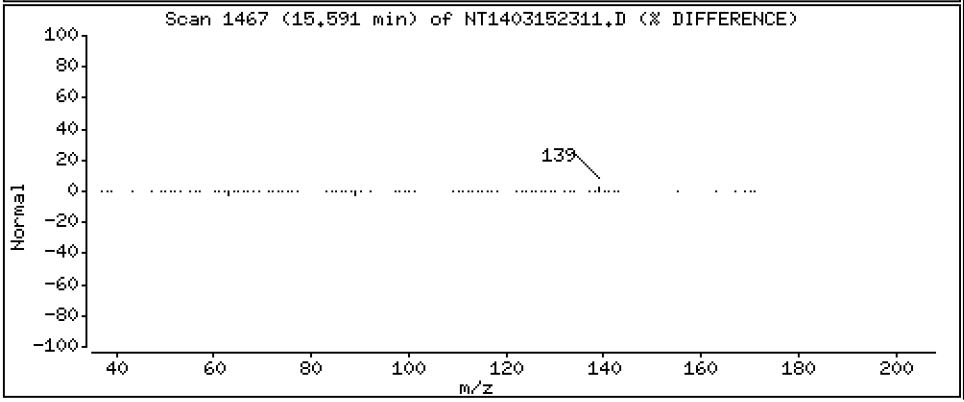












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

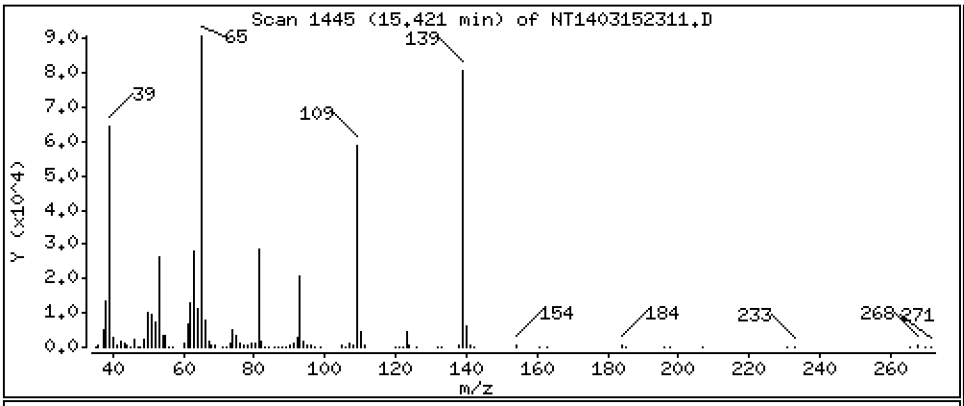
Operator: JGR

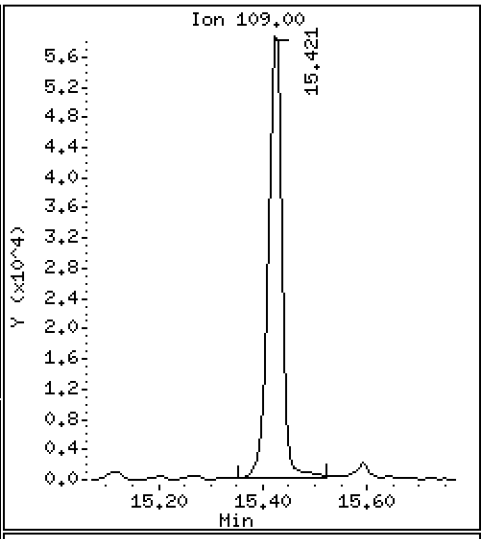
Column phase: ZB-5msi

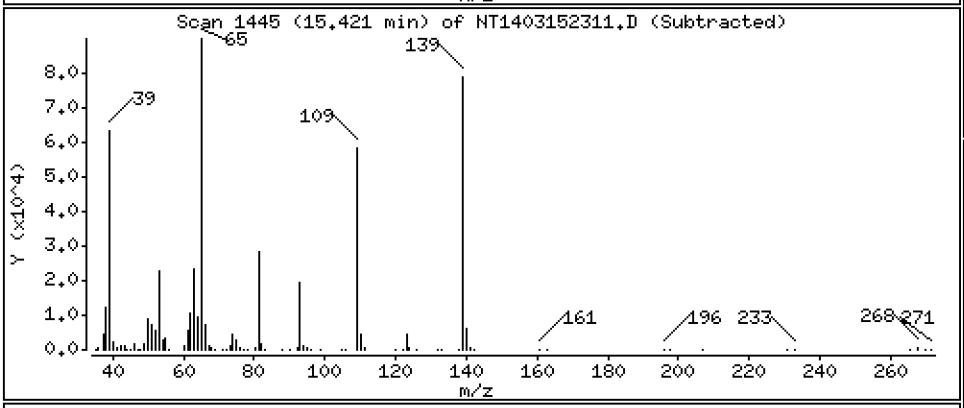
Column diameter: 0.25

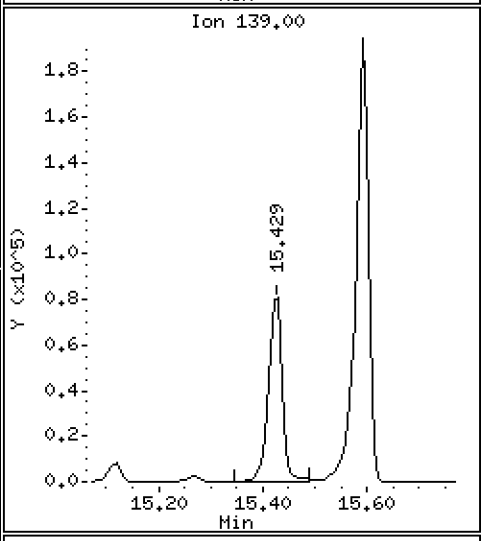
47 4-Nitrophenol

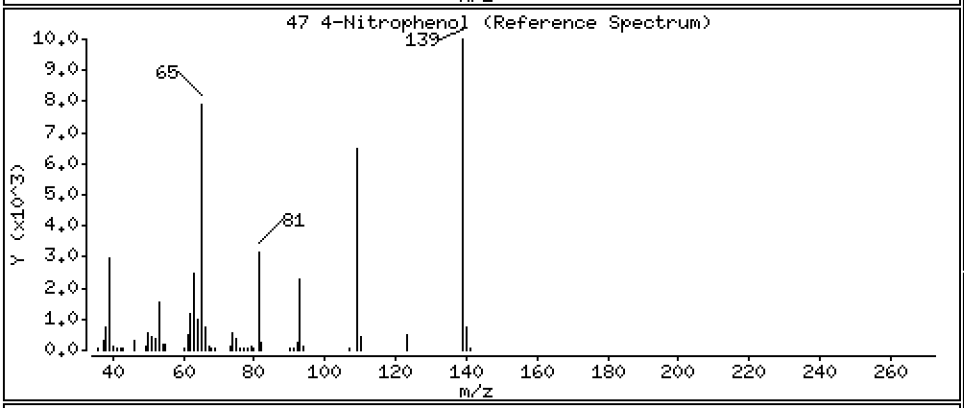
Concentration: 4.828 ug/mL

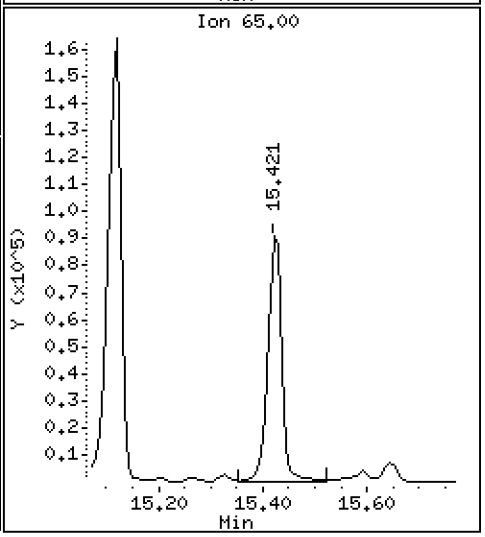


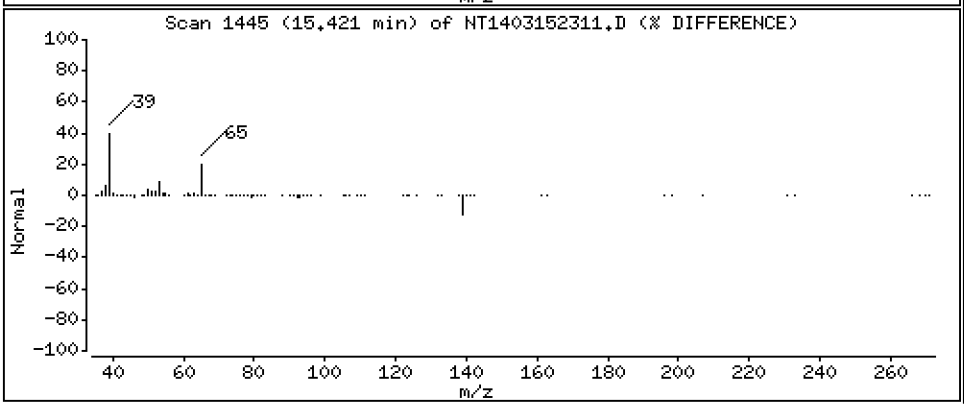












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

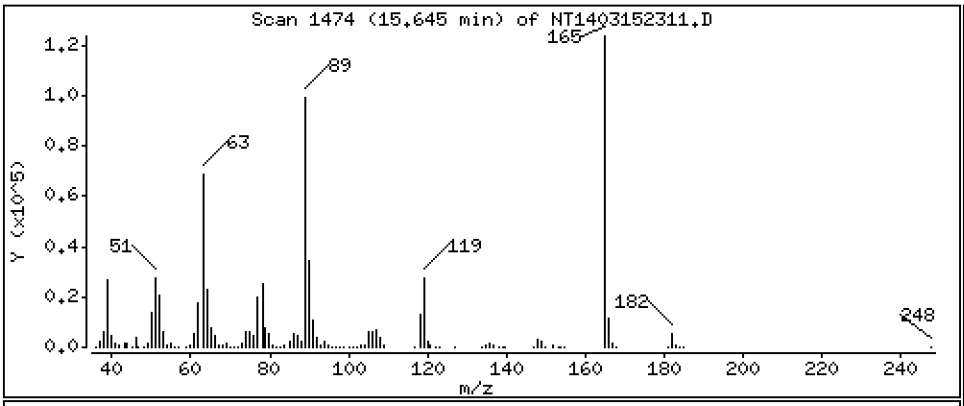
Operator: JGR

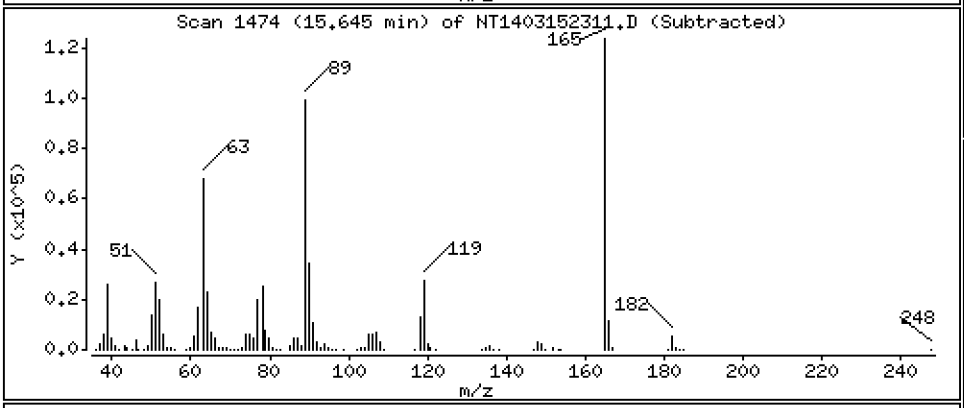
Column phase: ZB-5msi

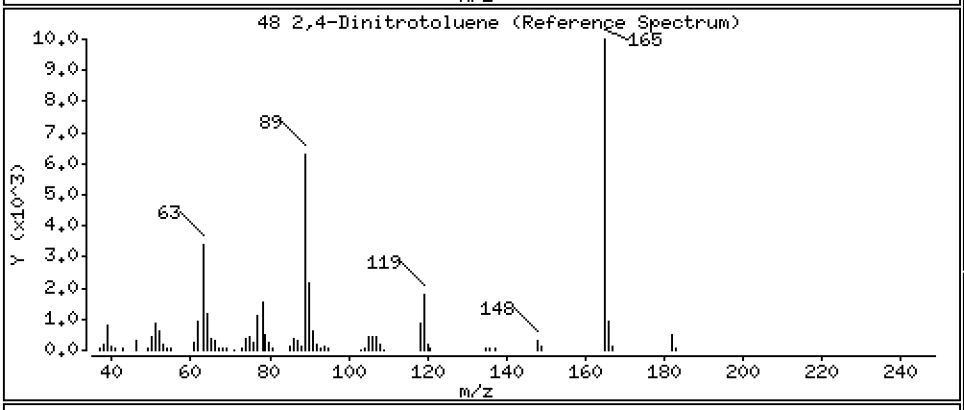
Column diameter: 0.25

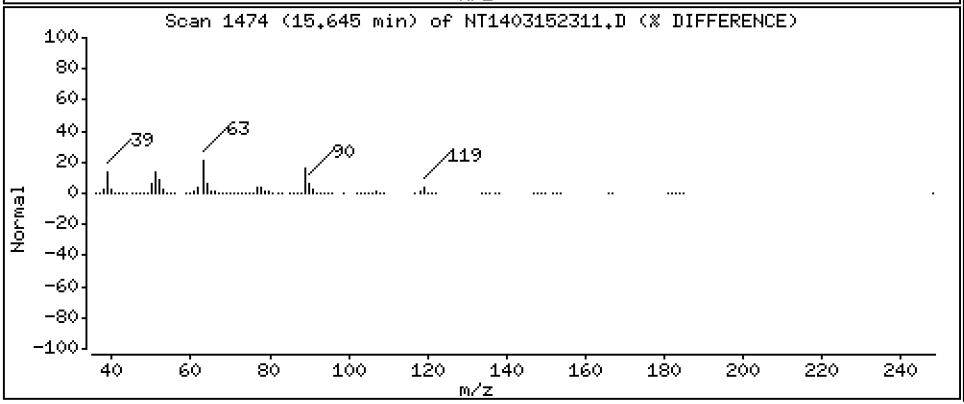
48 2,4-Dinitrotoluene

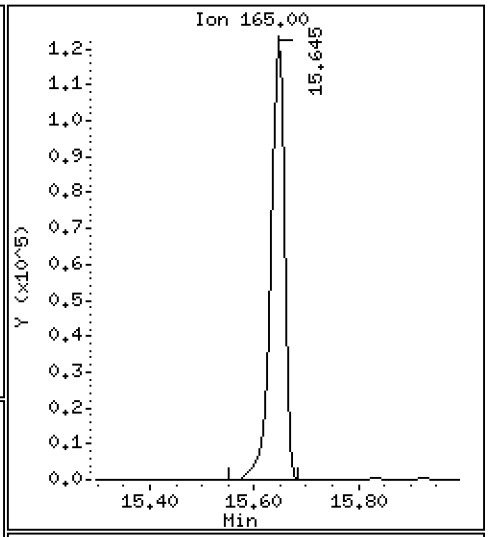
Concentration: 5.119 ug/mL

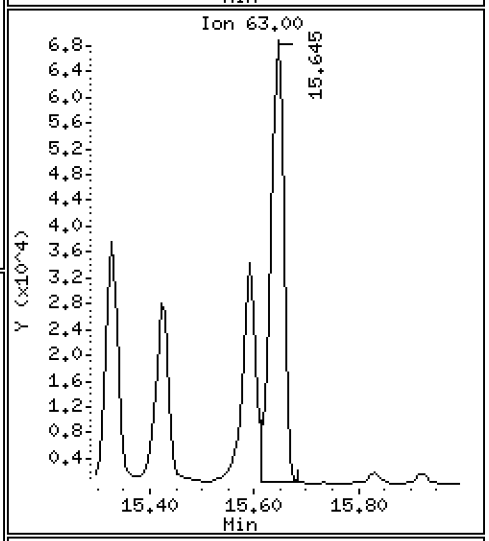


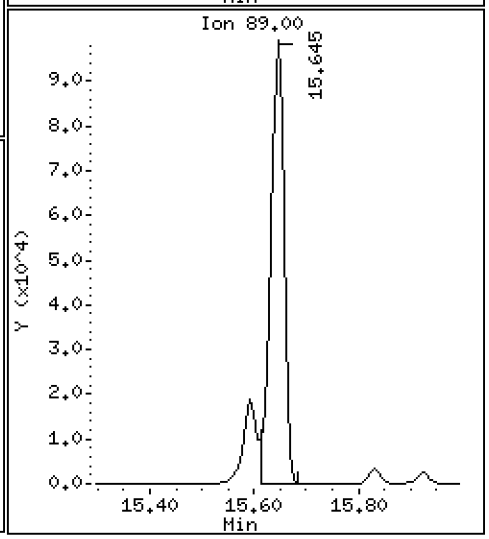












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

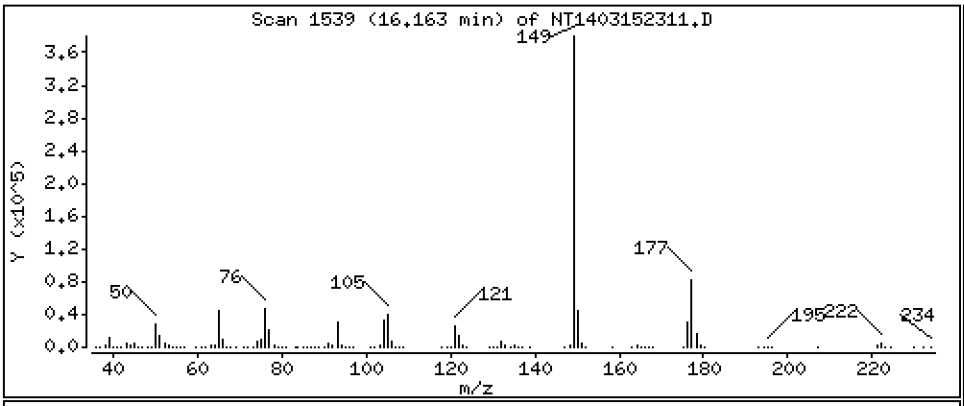
Operator: JGR

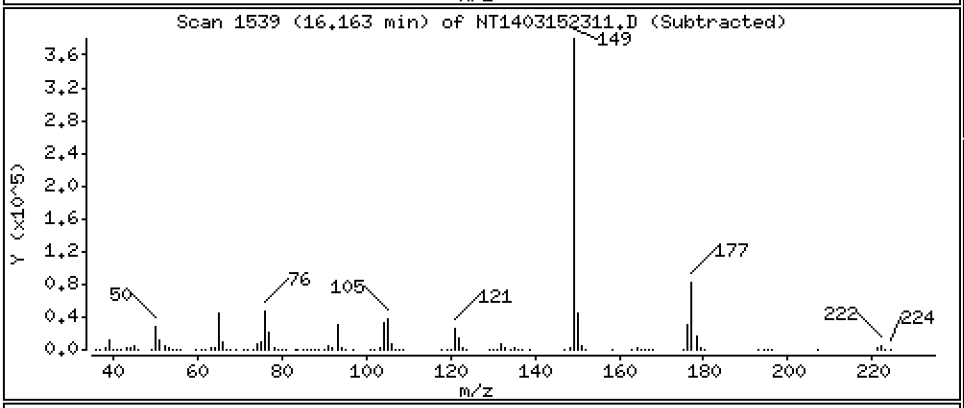
Column phase: ZB-5msi

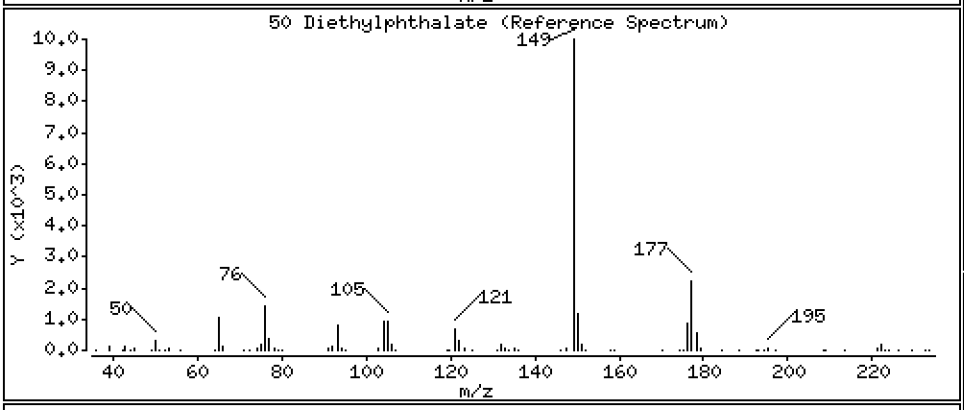
Column diameter: 0.25

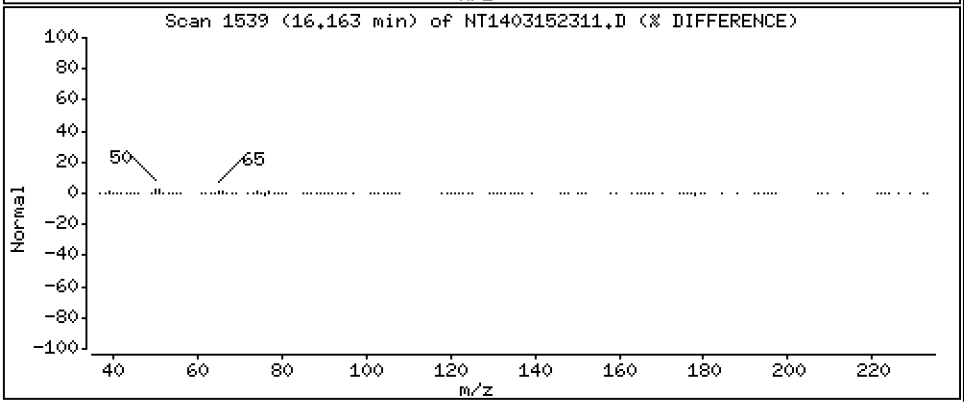
50 Diethylphthalate

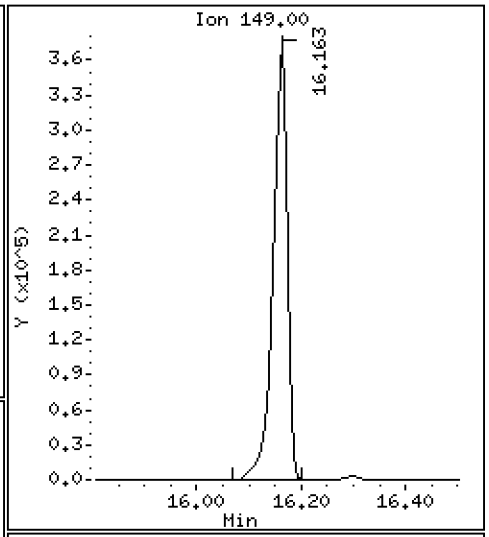
Concentration: 5.203 ug/mL

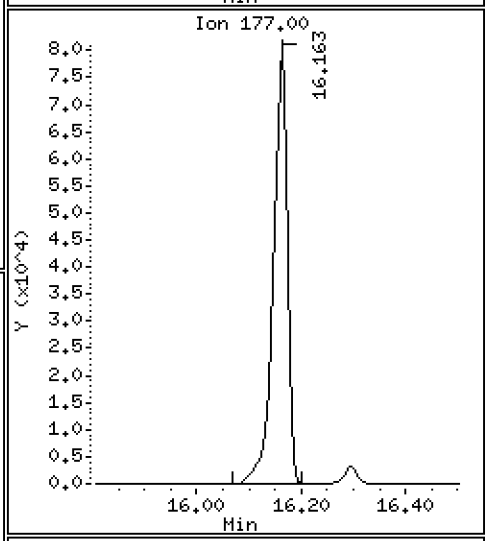


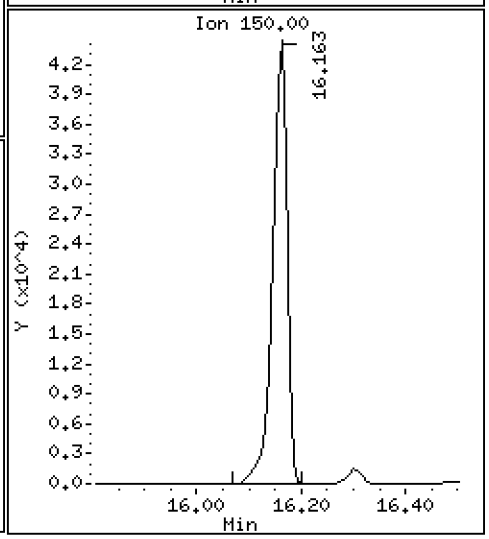












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

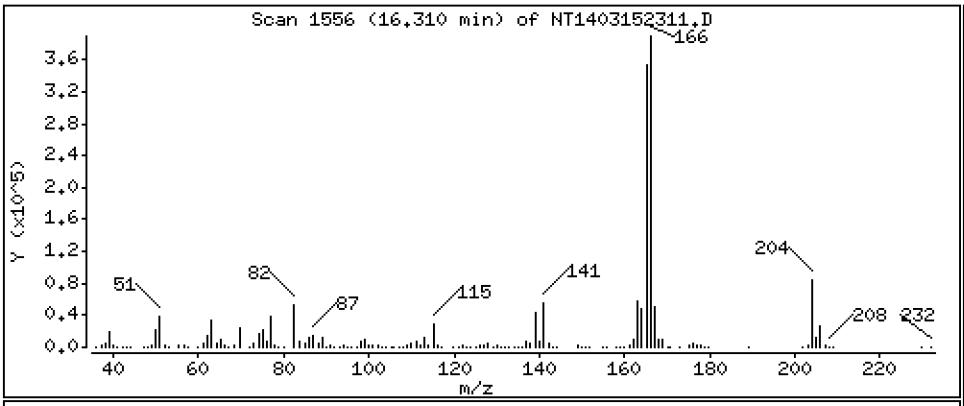
Operator: JGR

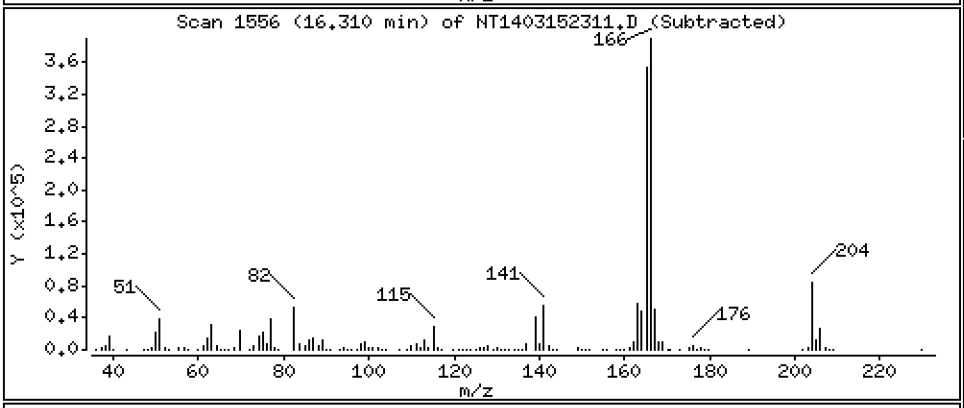
Column phase: ZB-5msi

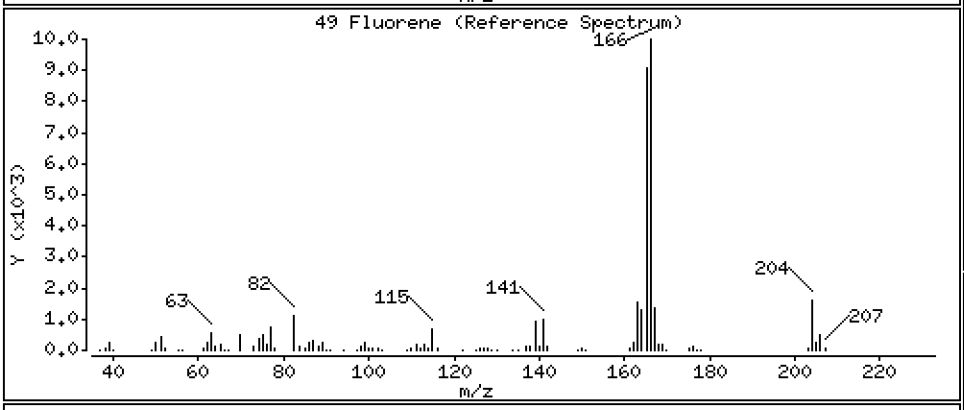
Column diameter: 0.25

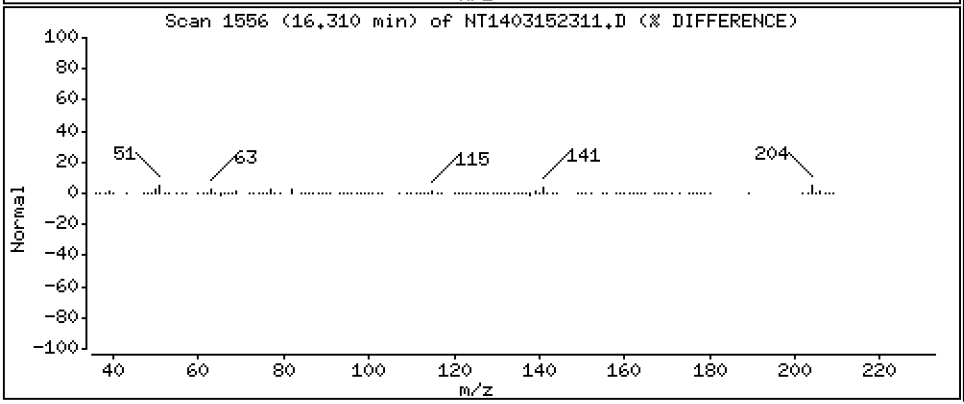
49 Fluorene

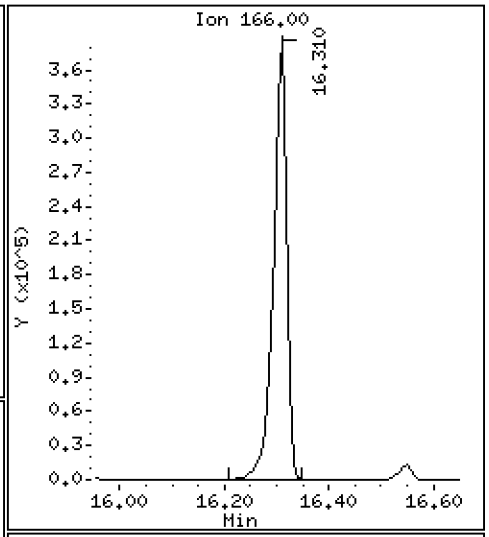
Concentration: 4.844 ug/mL

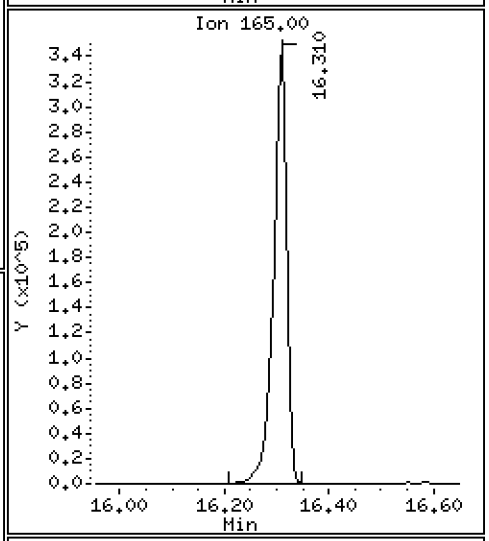


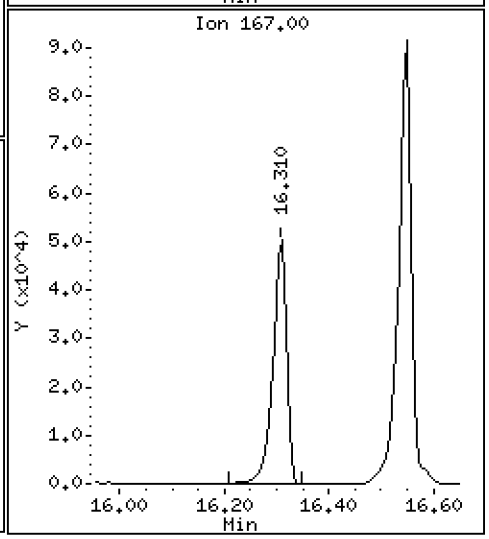












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

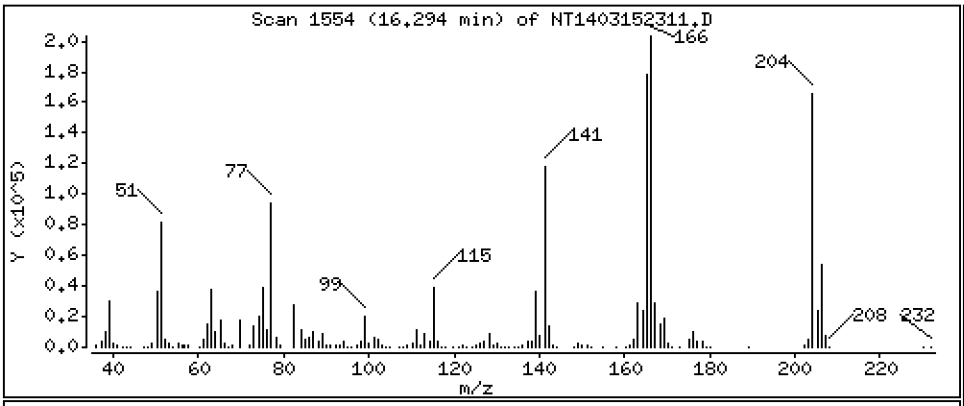
Operator: JGR

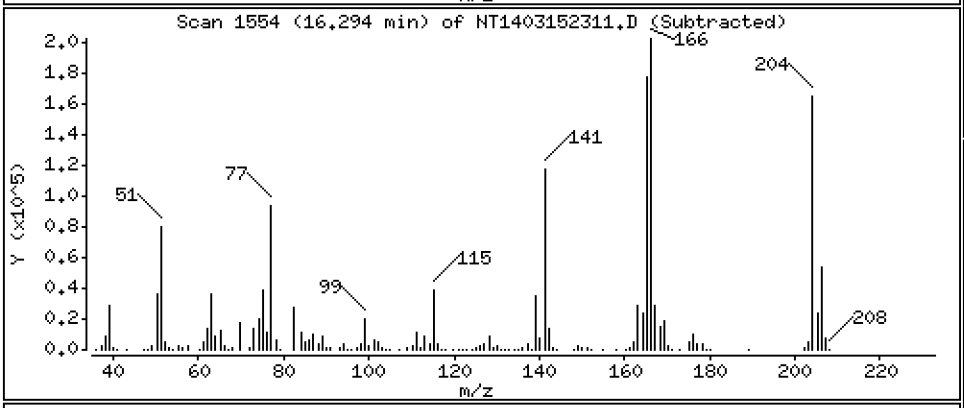
Column phase: ZB-5msi

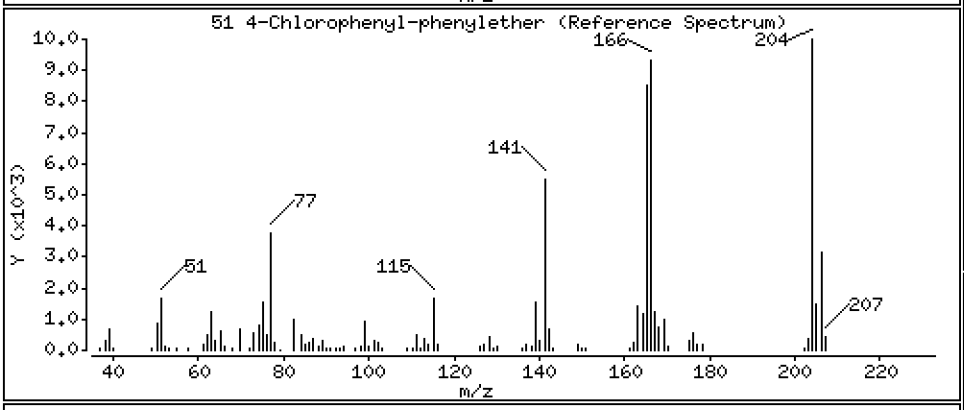
Column diameter: 0.25

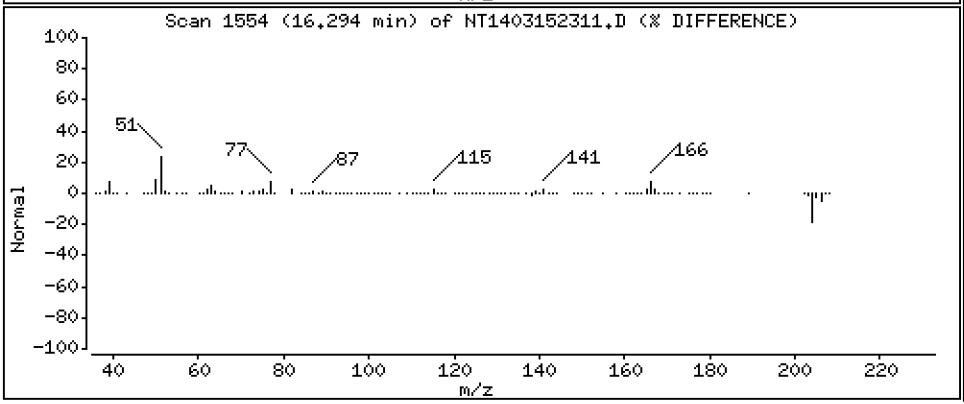
51 4-Chlorophenyl-phenylether

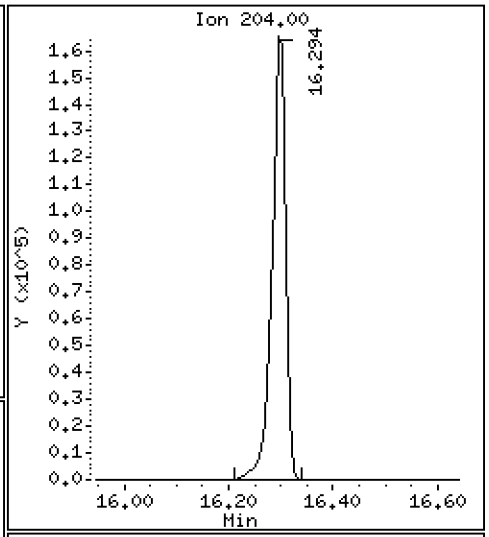
Concentration: 4.985 ug/mL

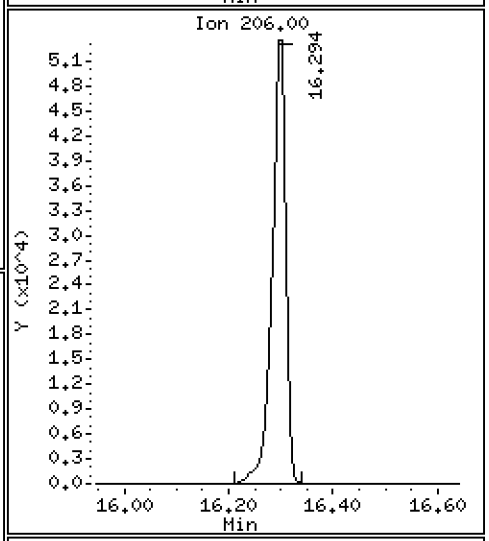


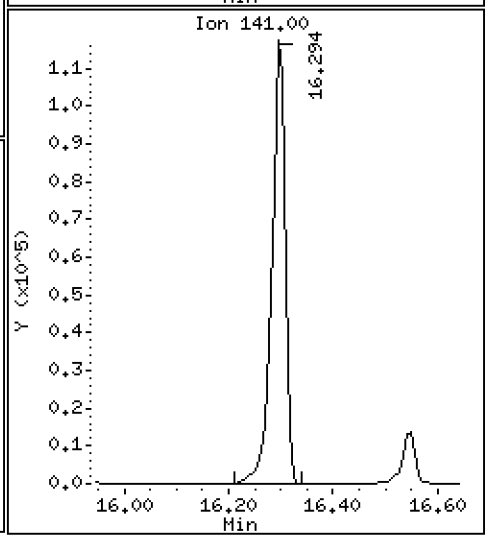












Data File: \\target\share\chem3\nt14.i\20230315.b\NT1403152311.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

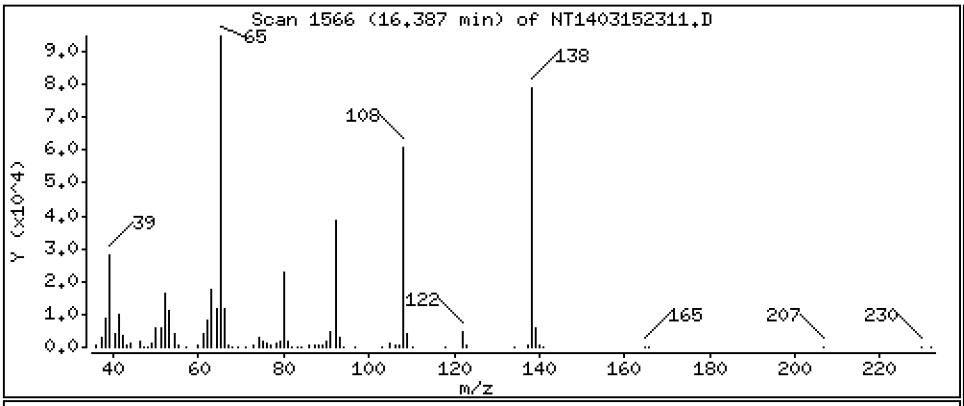
Operator: JGR

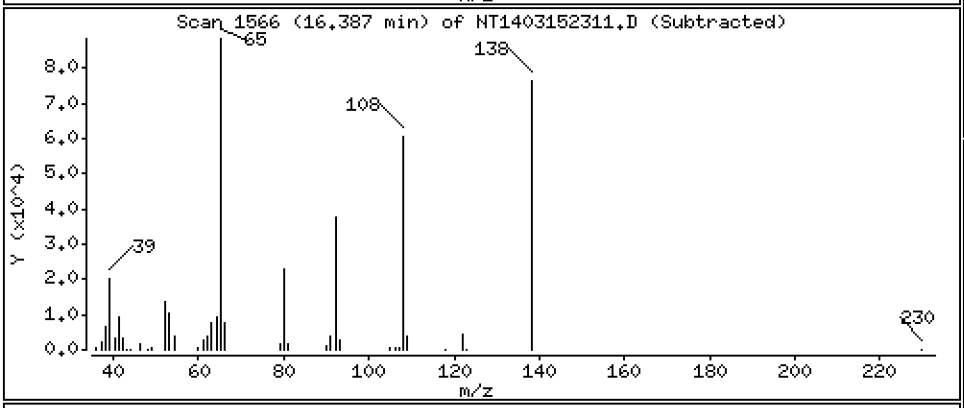
Column phase: ZB-5msi

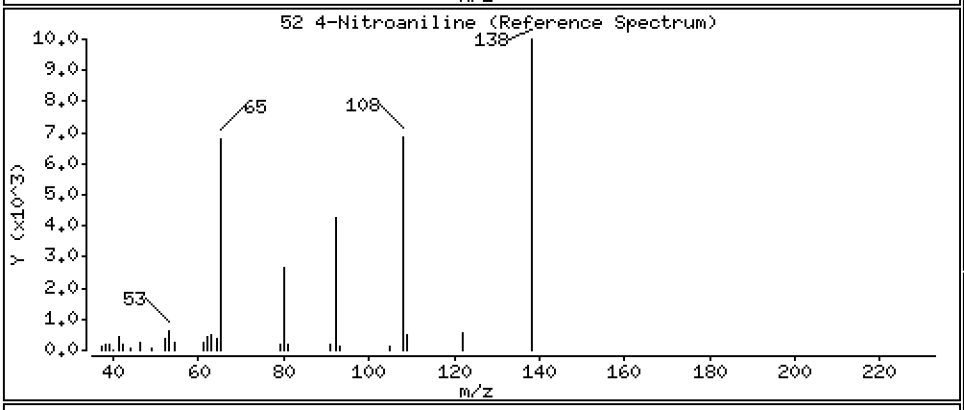
Column diameter: 0.25

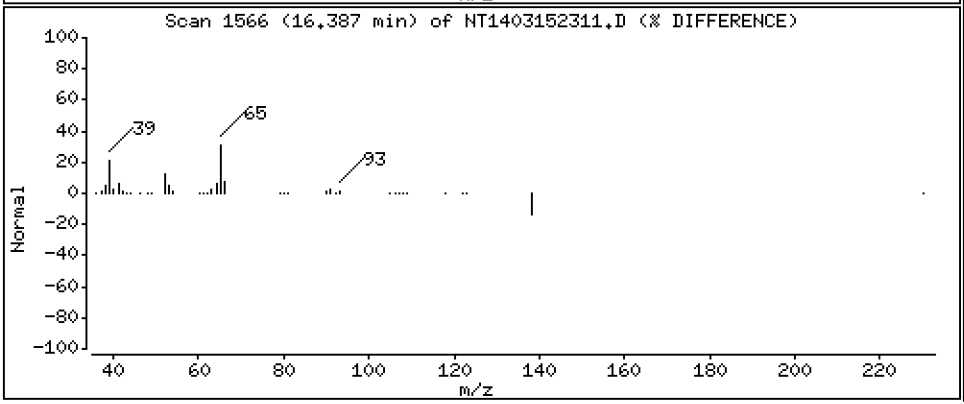
52 4-Nitroaniline

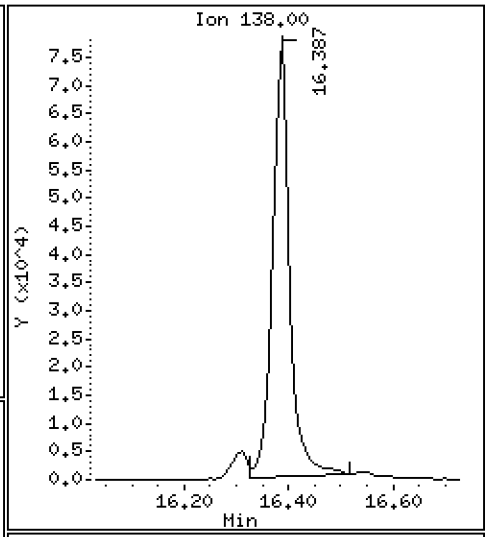
Concentration: 4.817 ug/mL

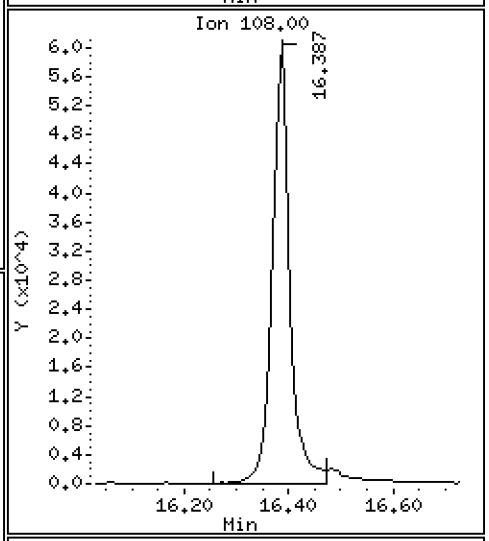


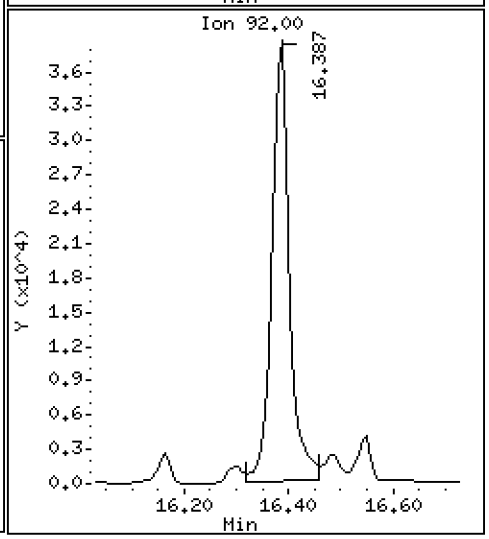












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

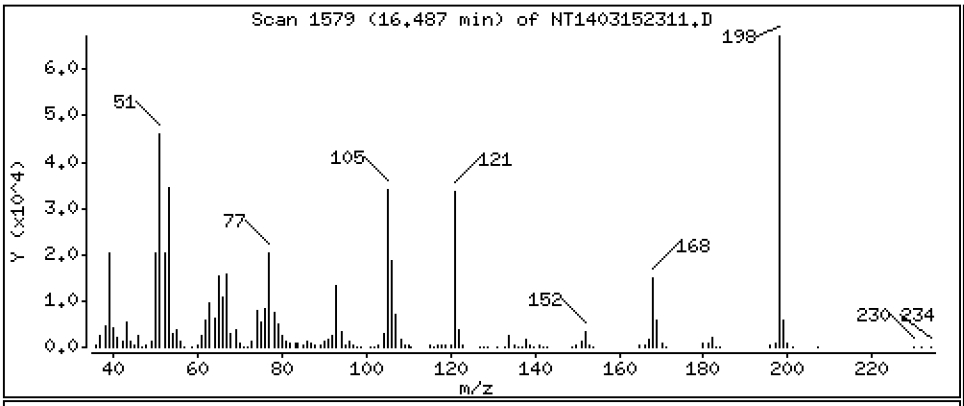
Operator: JGR

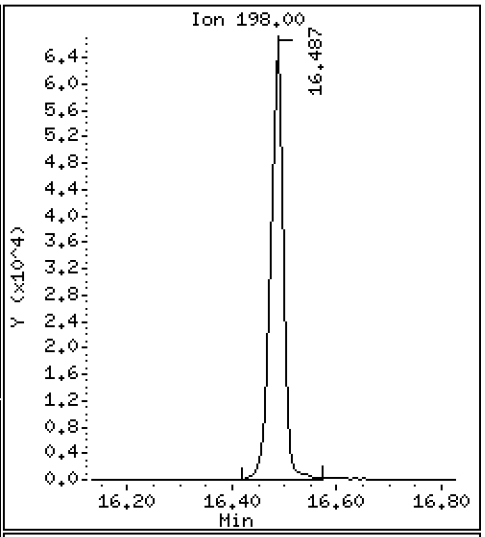
Column phase: ZB-5msi

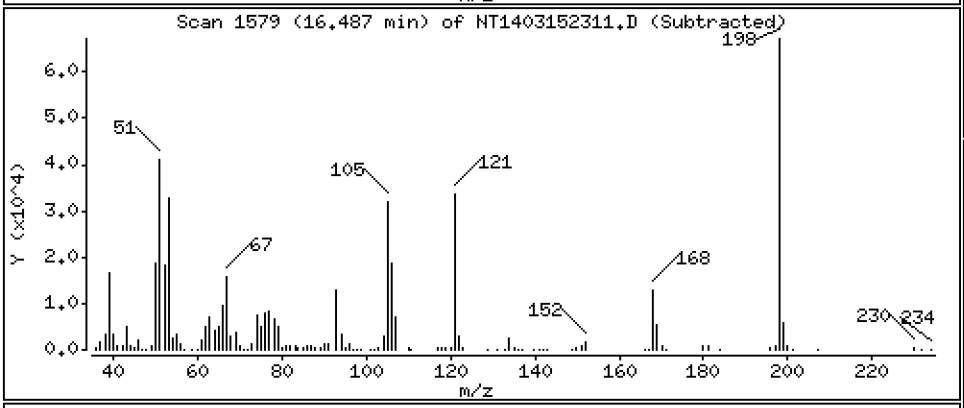
Column diameter: 0.25

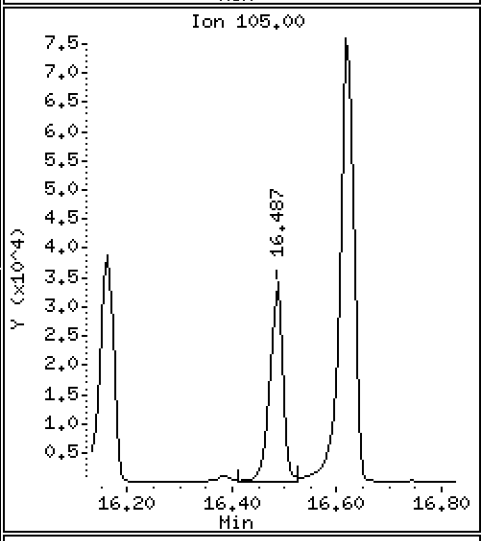
53 4,6-Dinitro-2-methylphenol

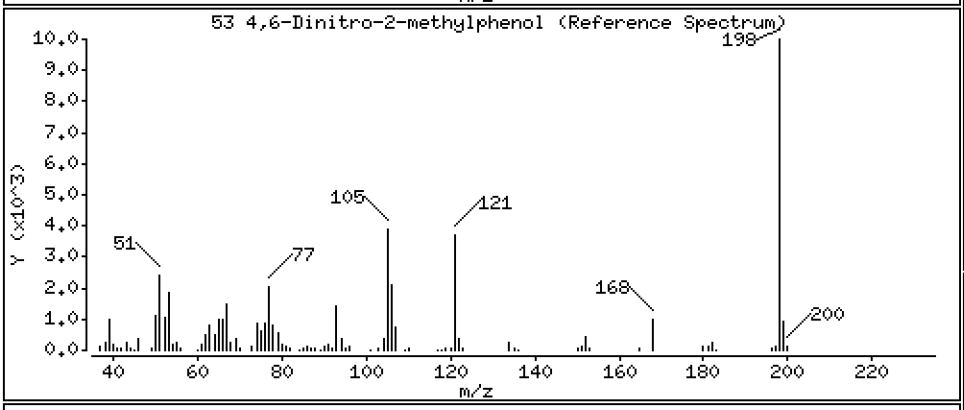
Concentration: 4.439 ug/mL

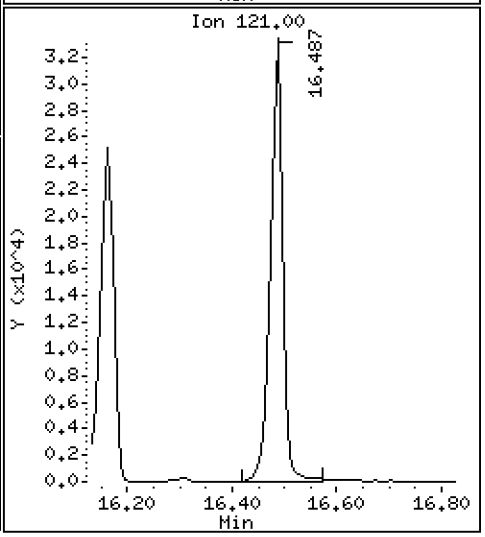


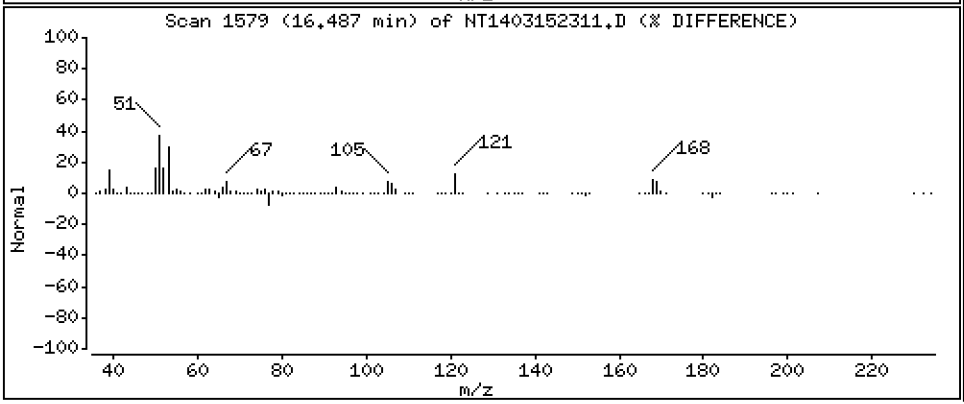












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

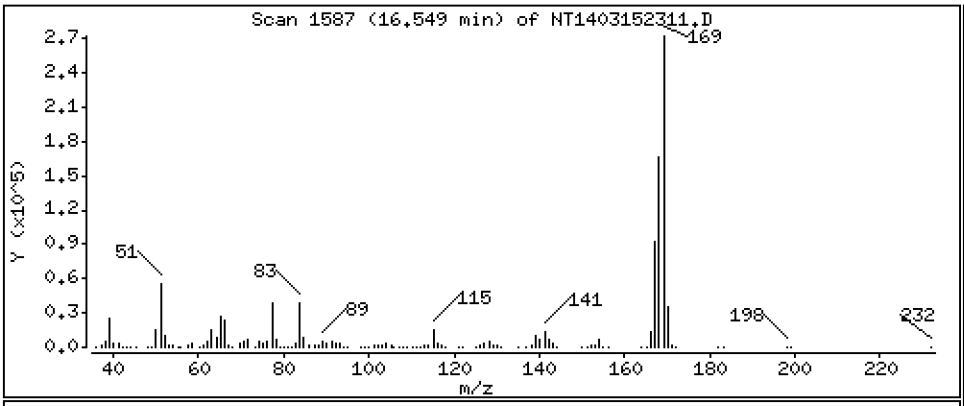
Operator: JGR

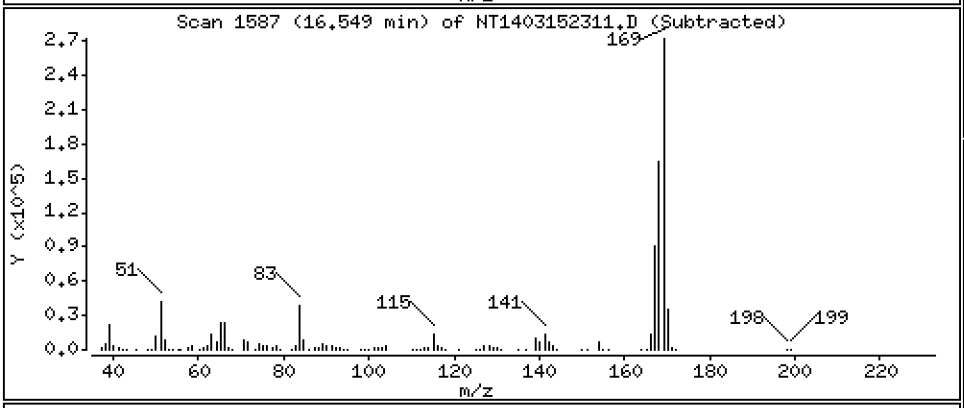
Column phase: ZB-5msi

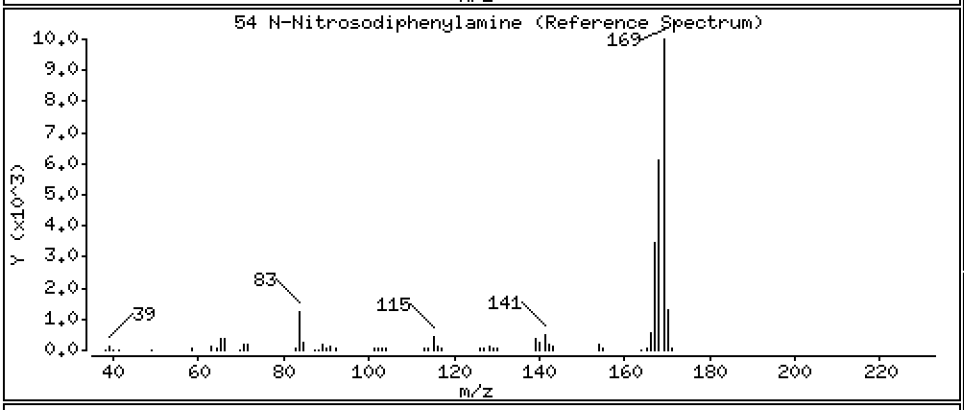
Column diameter: 0.25

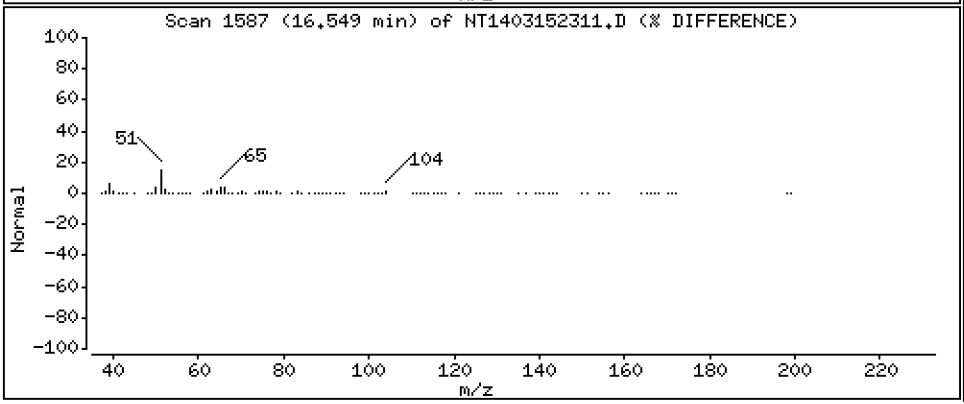
54 N-Nitrosodiphenylamine

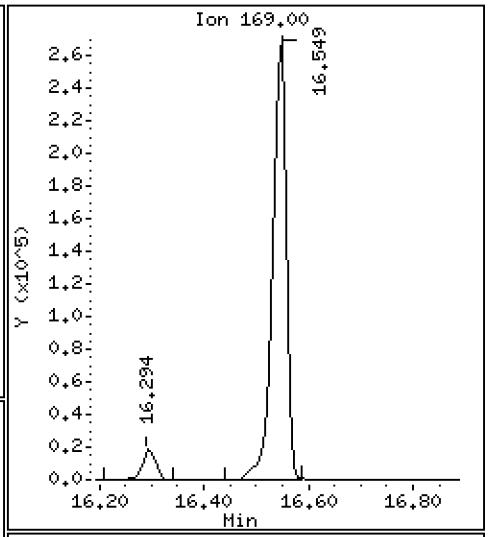
Concentration: 4.954 ug/mL

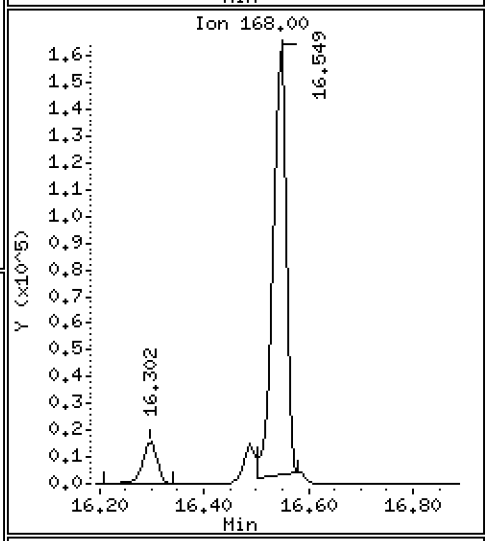


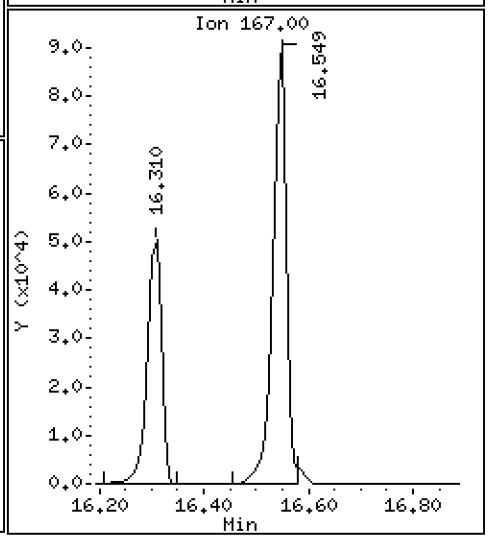












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

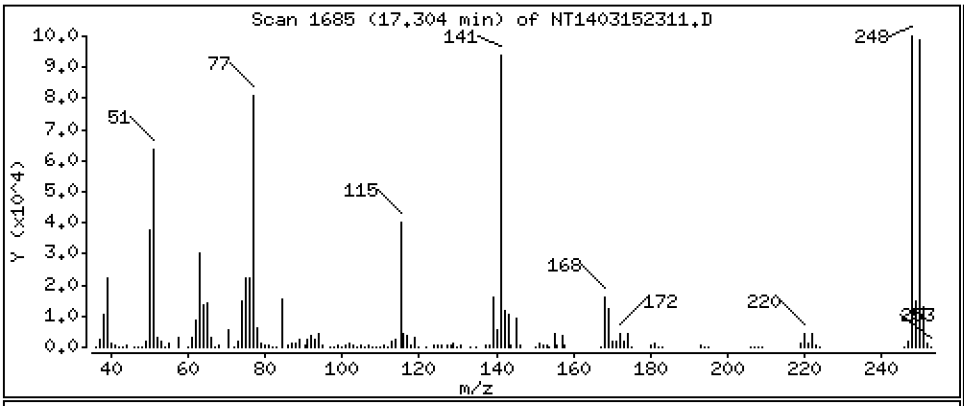
Operator: JGR

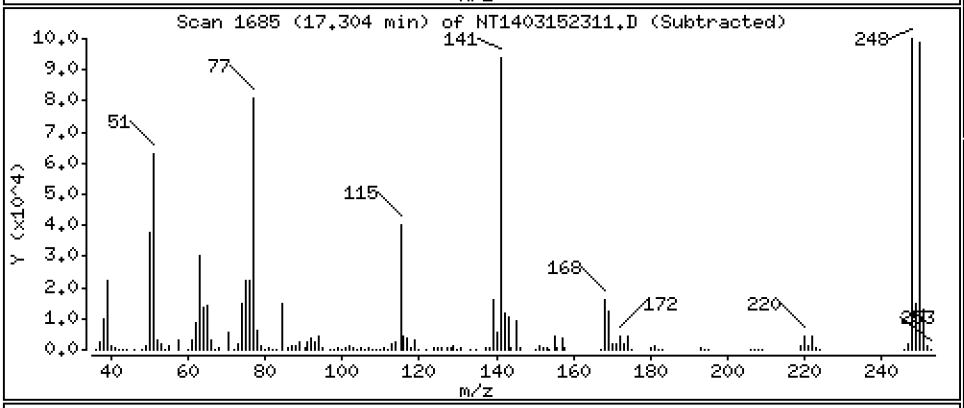
Column phase: ZB-5msi

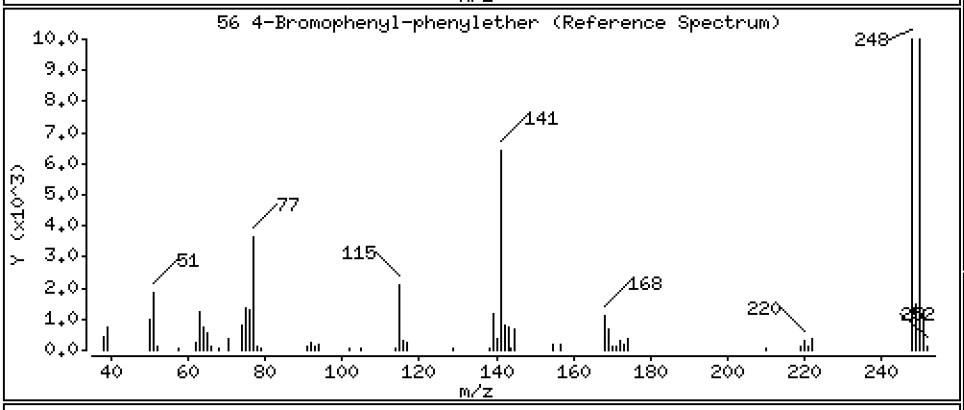
Column diameter: 0.25

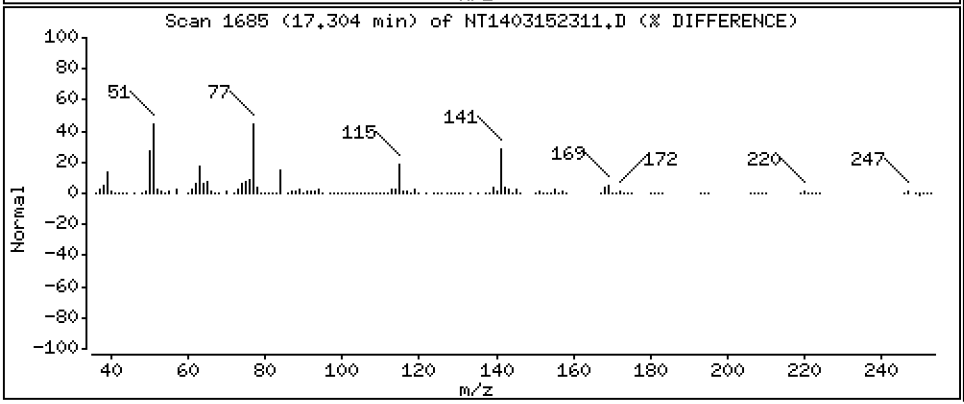
56 4-Bromophenyl-phenylether

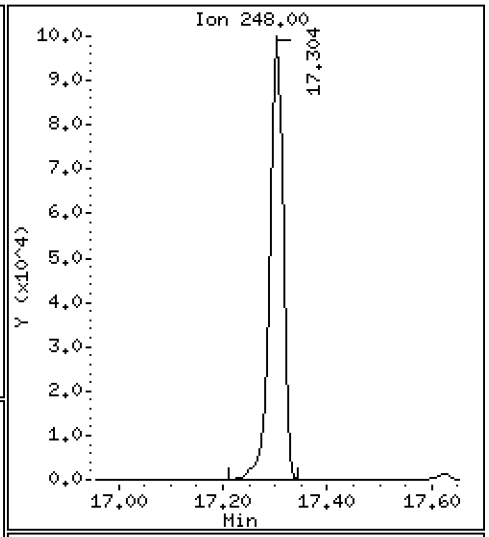
Concentration: 5.226 ug/mL

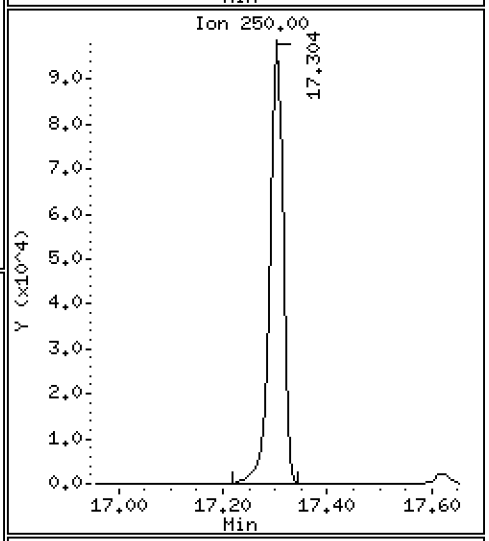


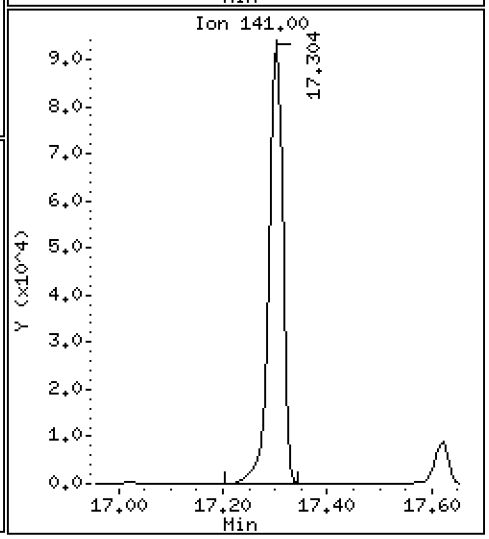












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

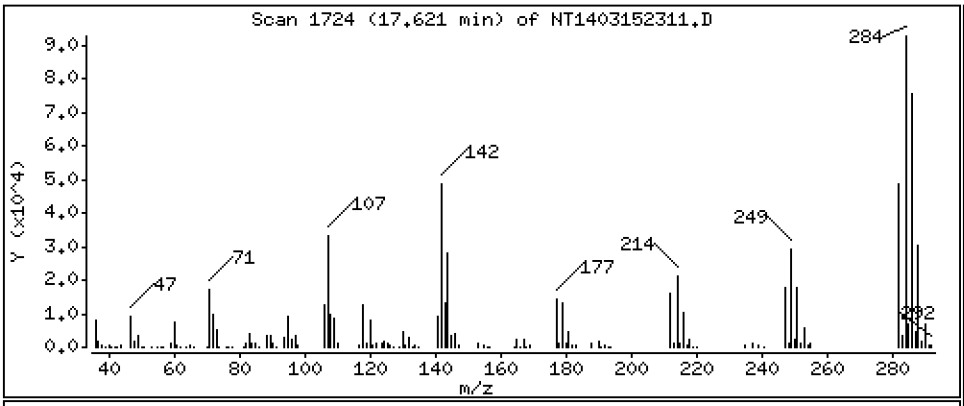
Operator: JGR

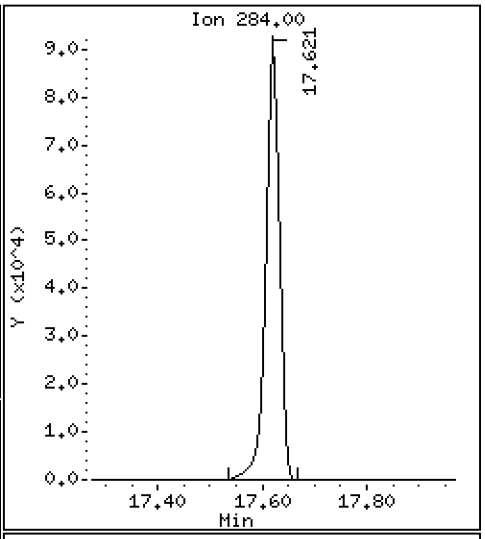
Column phase: ZB-5msi

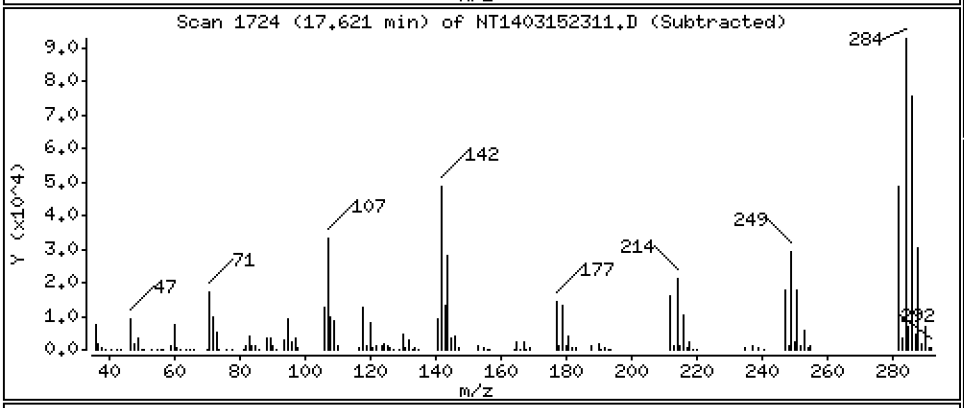
Column diameter: 0.25

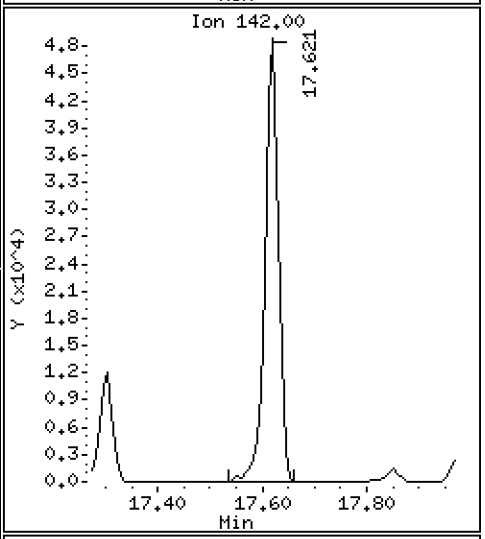
57 Hexachlorobenzene

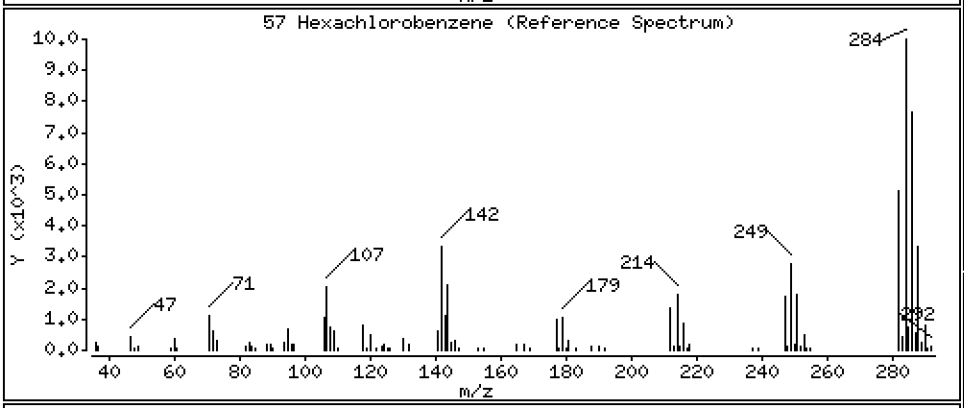
Concentration: 4.780 ug/mL

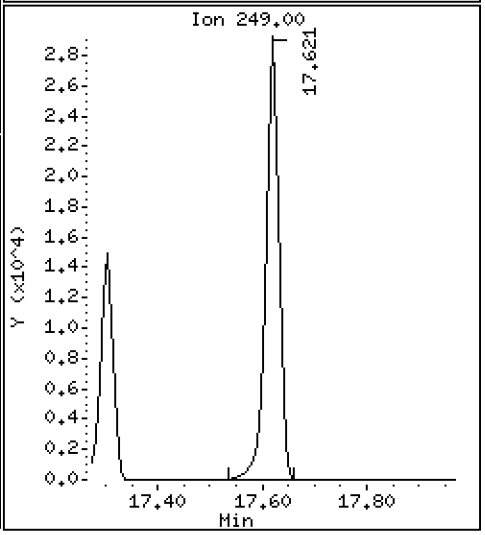


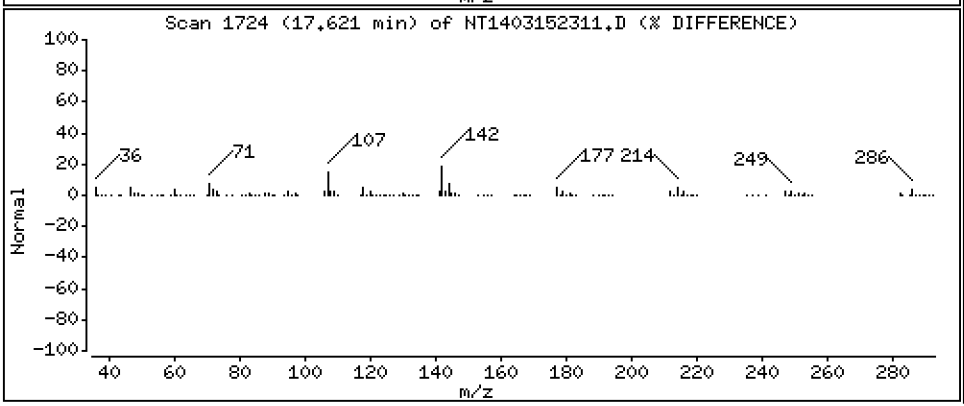












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

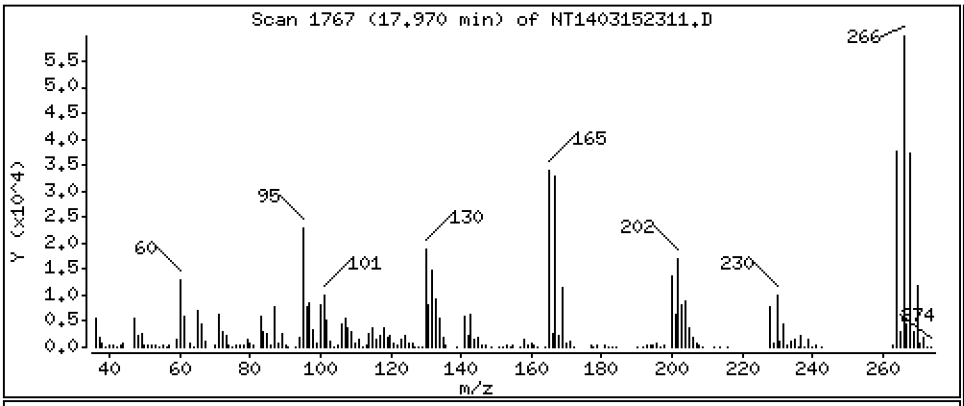
Operator: JGR

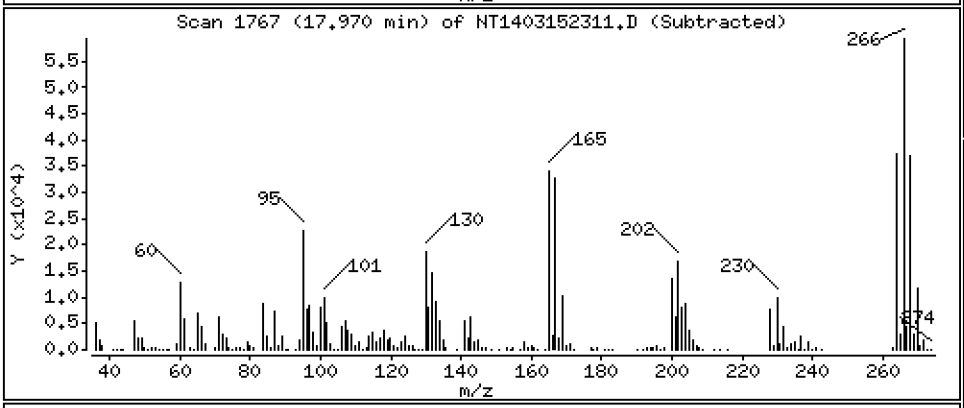
Column phase: ZB-5msi

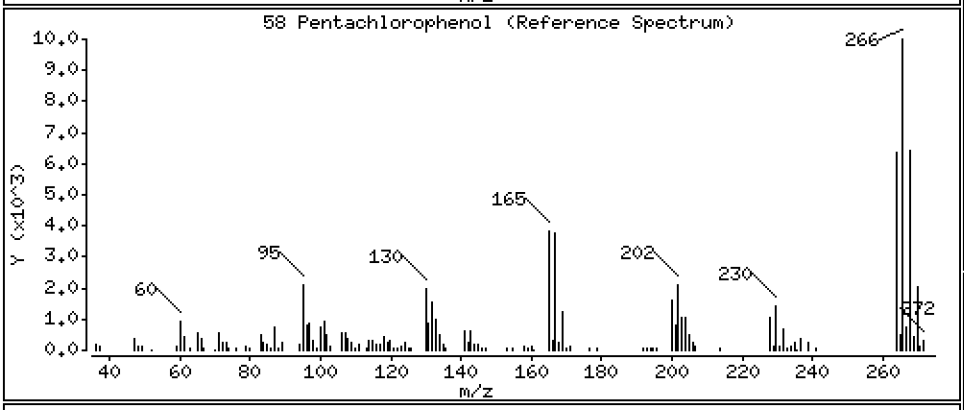
Column diameter: 0.25

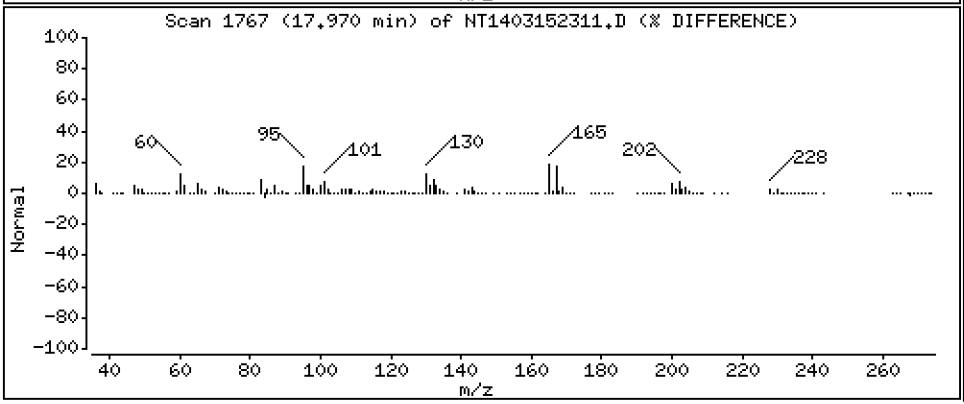
58 Pentachlorophenol

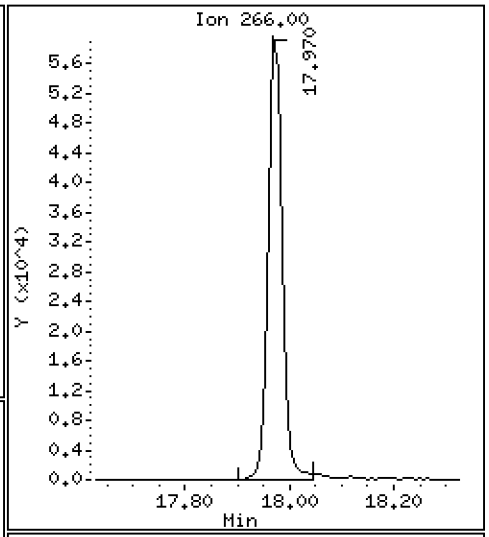
Concentration: 4.477 ug/mL

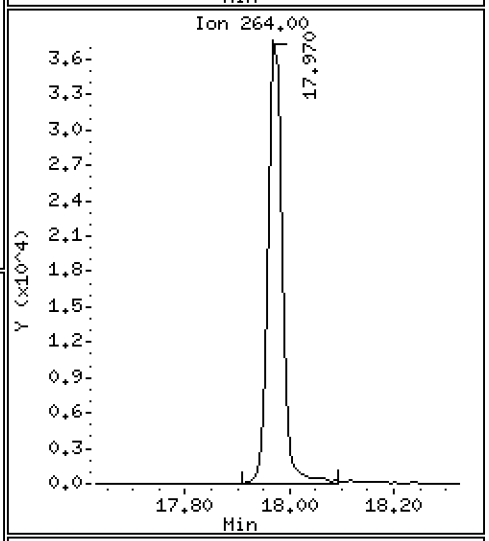


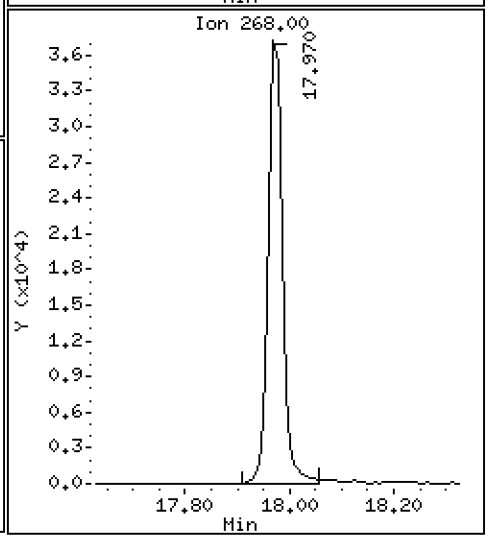












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

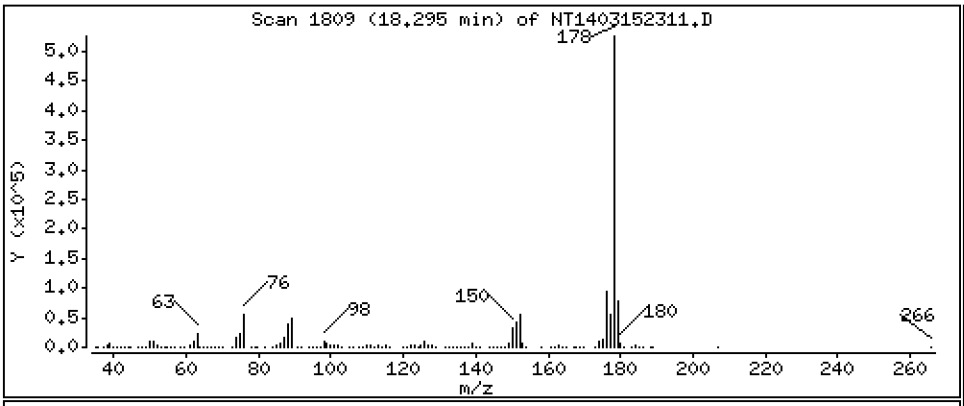
Operator: JGR

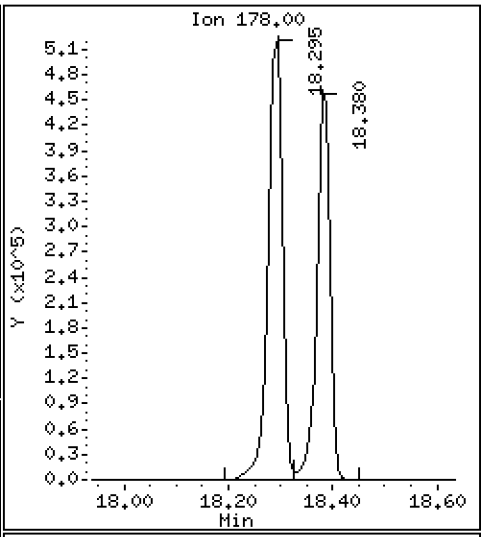
Column phase: ZB-5msi

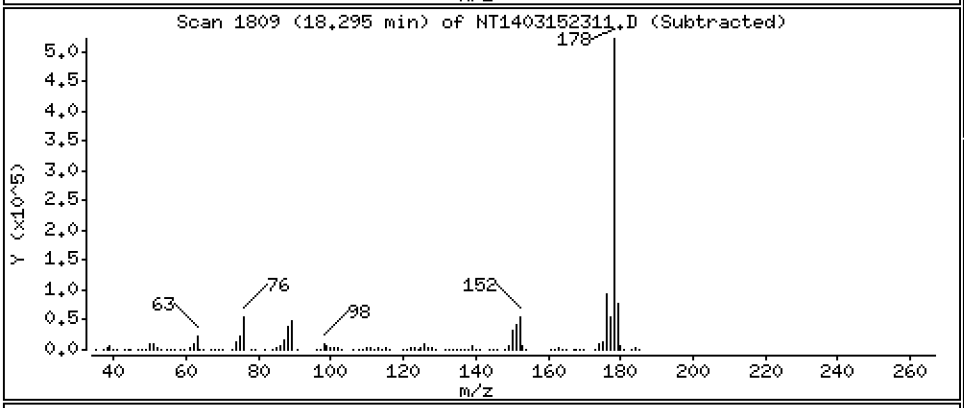
Column diameter: 0.25

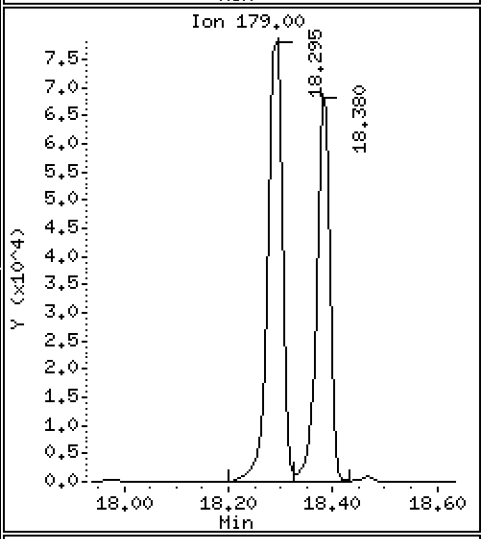
60 Phenanthrene

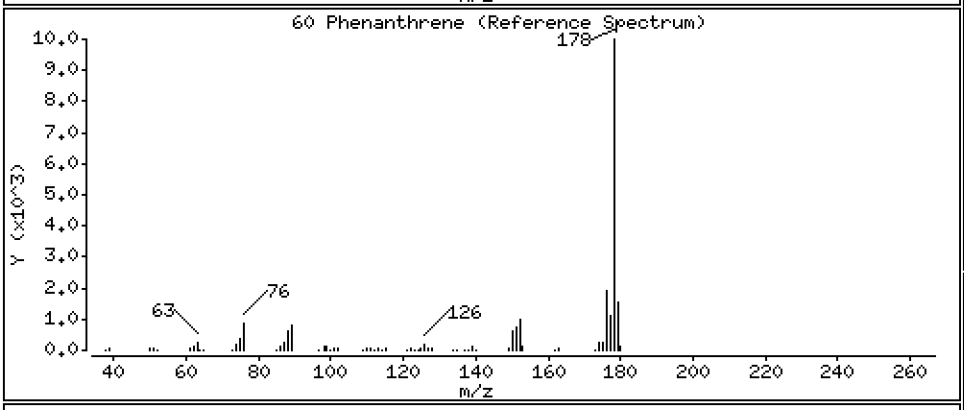
Concentration: 4.734 ug/mL

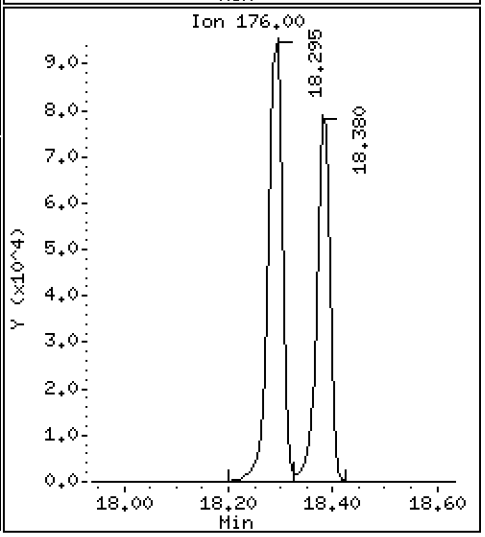


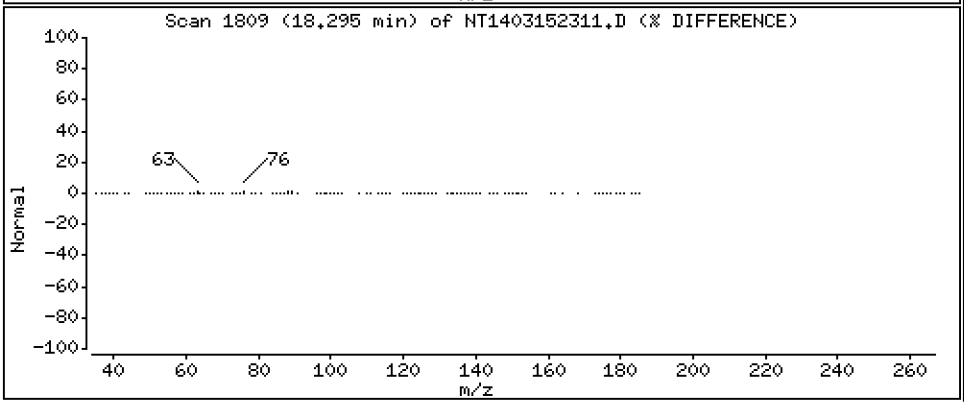












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

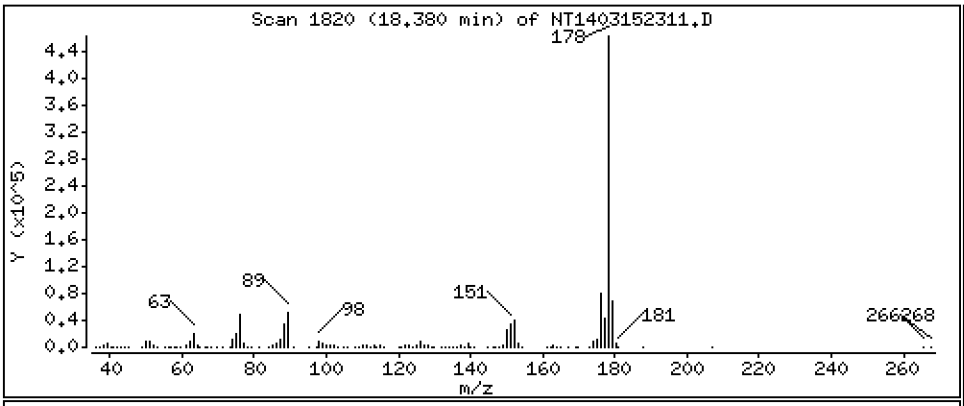
Operator: JGR

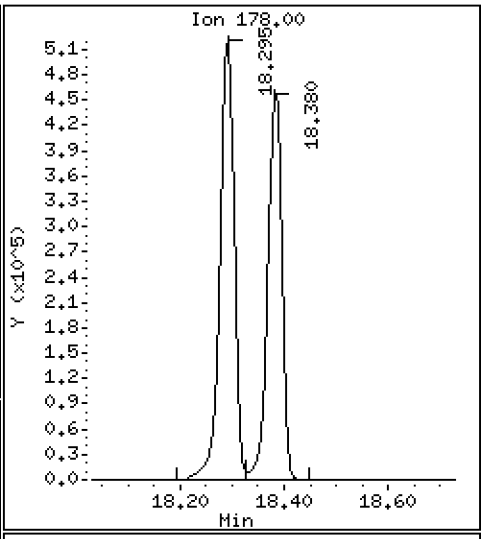
Column phase: ZB-5msi

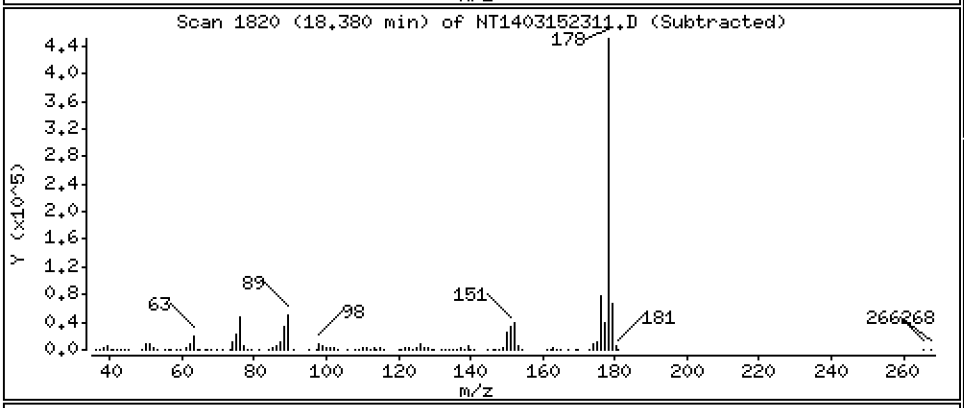
Column diameter: 0.25

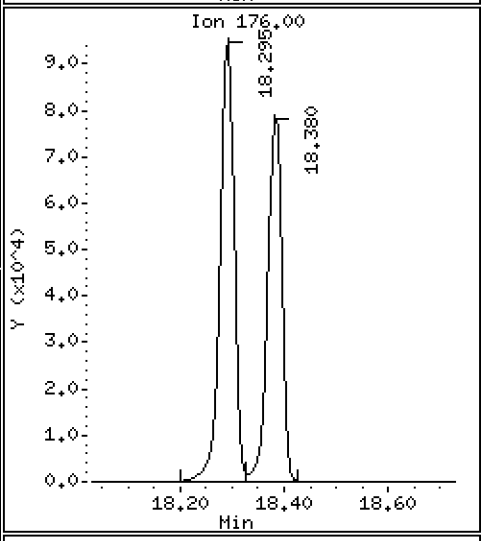
61 Anthracene

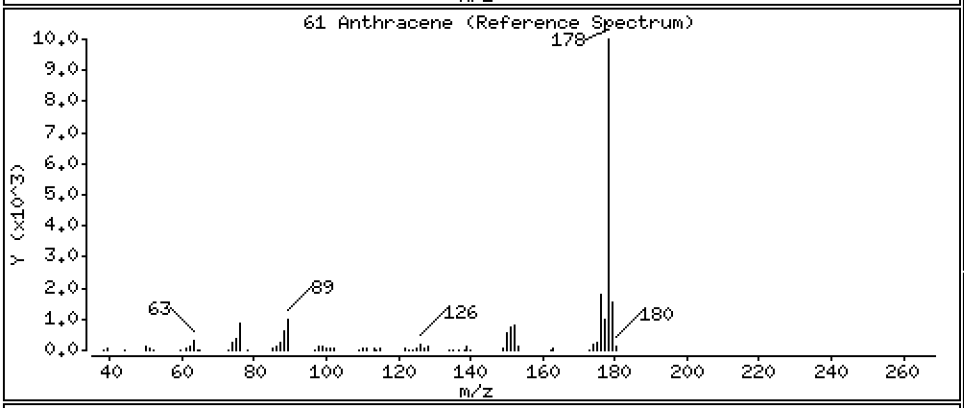
Concentration: 4.281 ug/mL

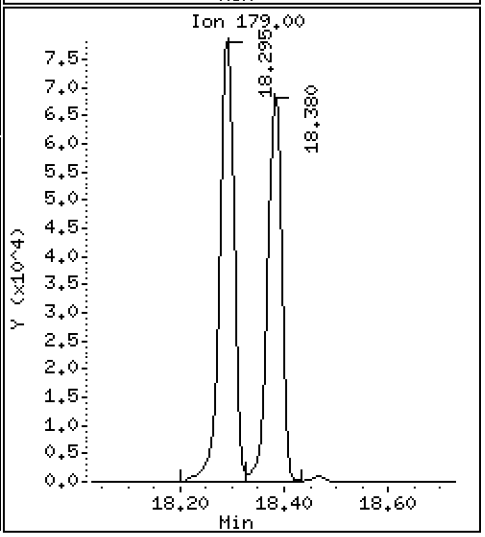


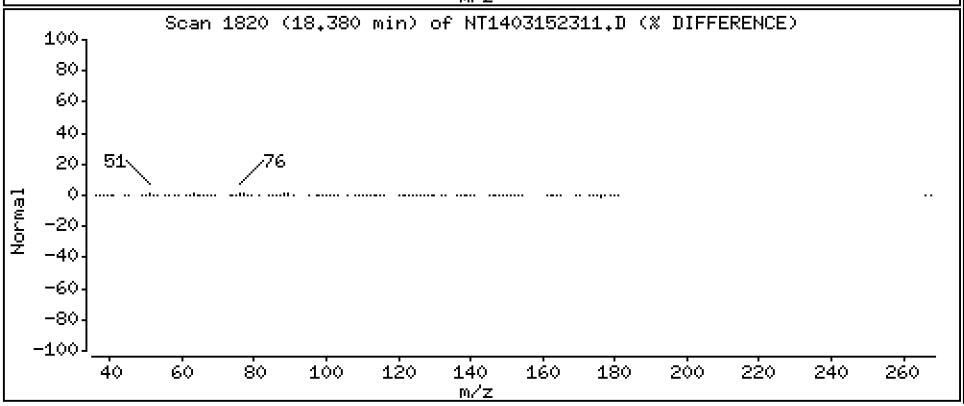












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

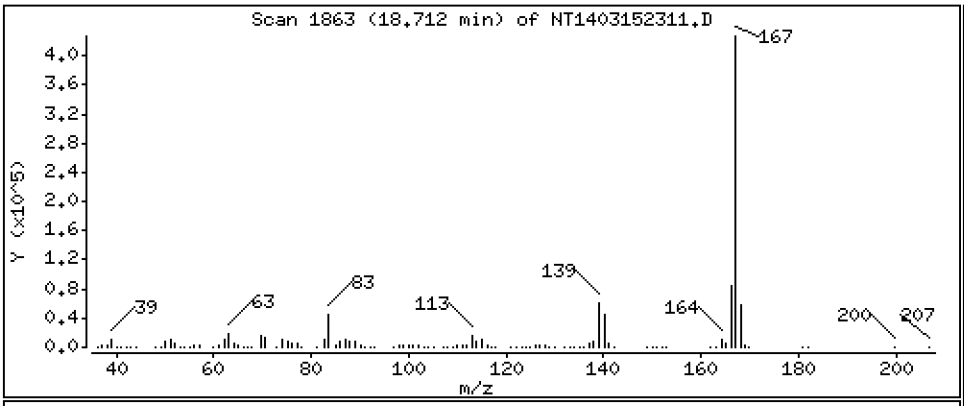
Operator: JGR

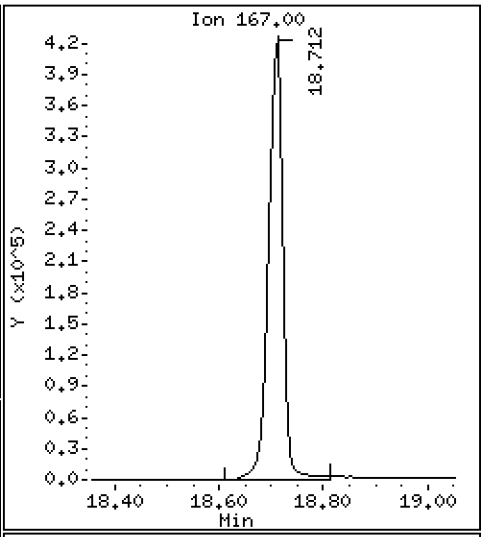
Column phase: ZB-5msi

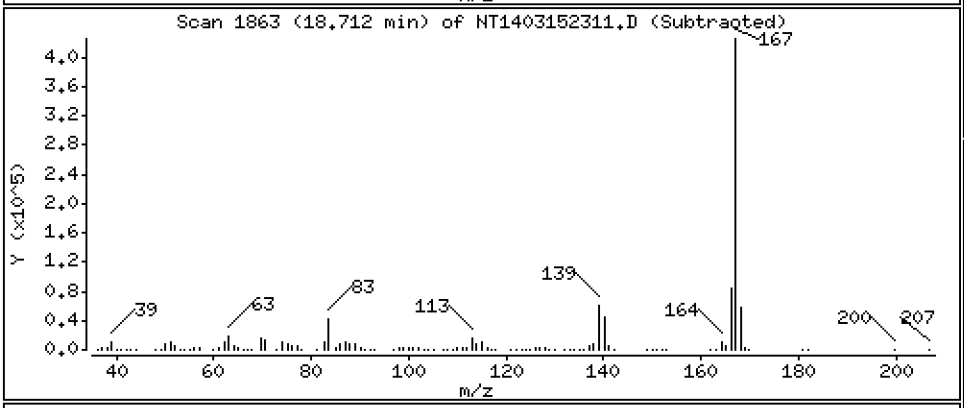
Column diameter: 0.25

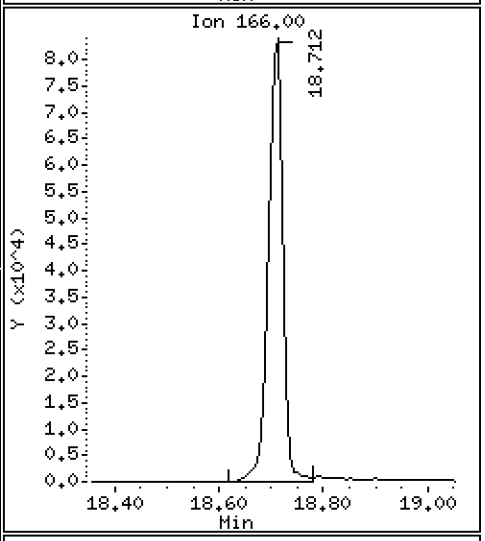
62 Carbazole

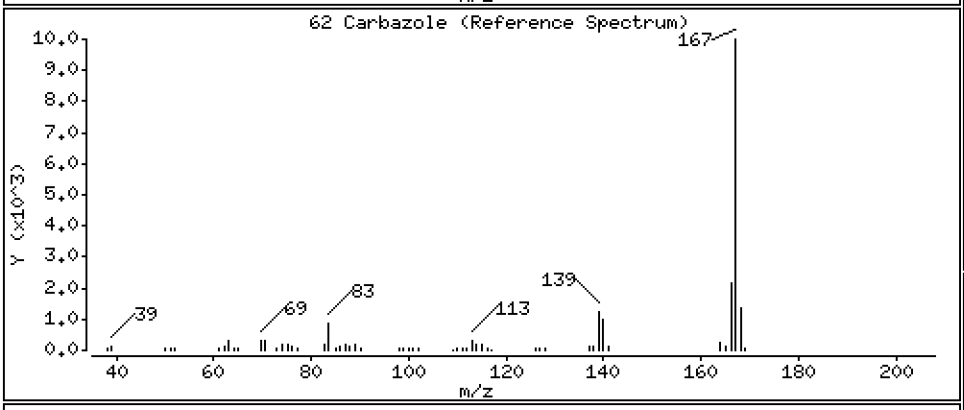
Concentration: 4.587 ug/mL

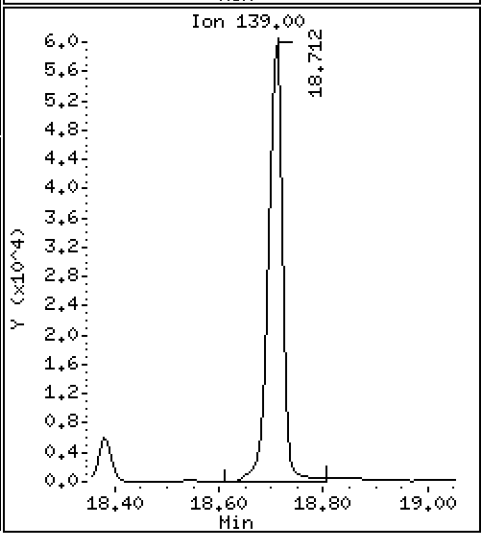


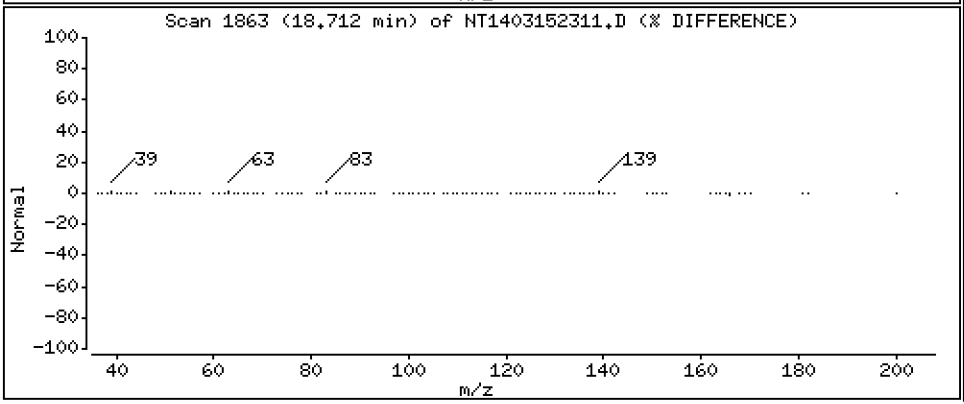












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

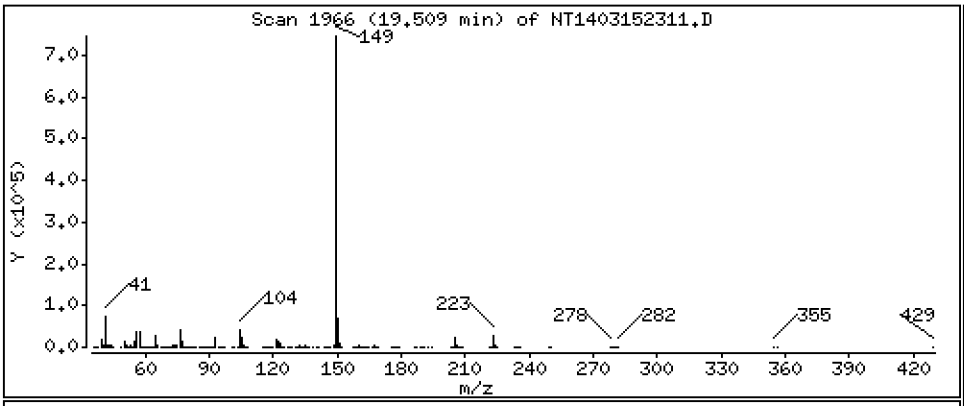
Operator: JGR

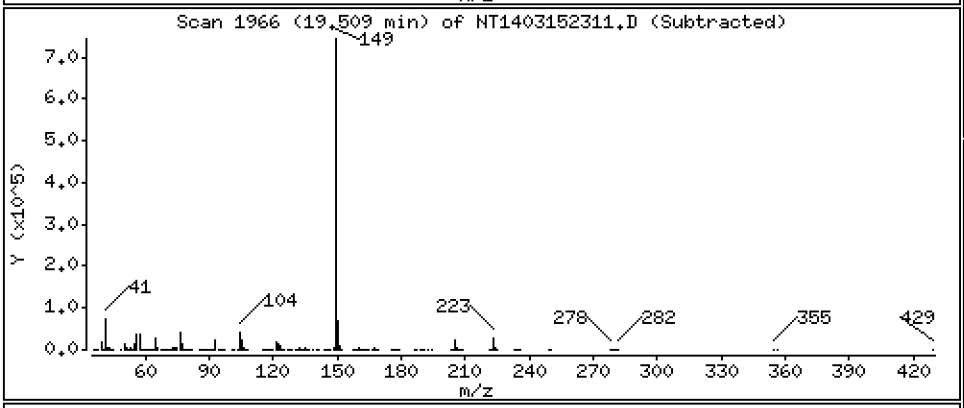
Column phase: ZB-5msi

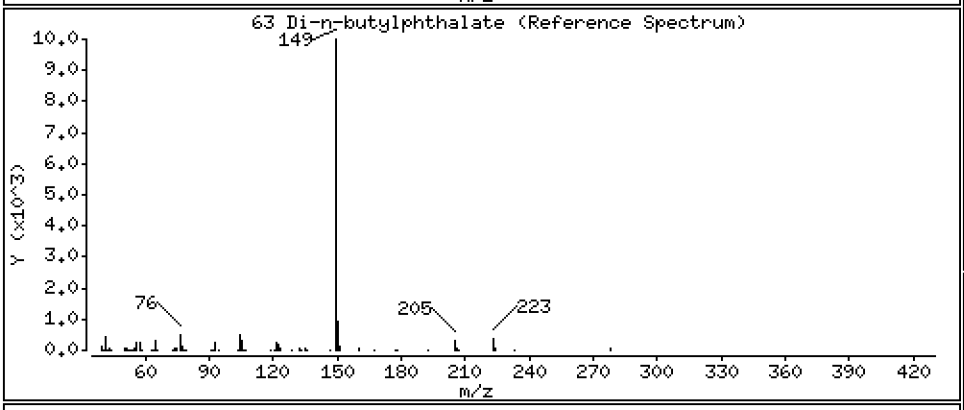
Column diameter: 0.25

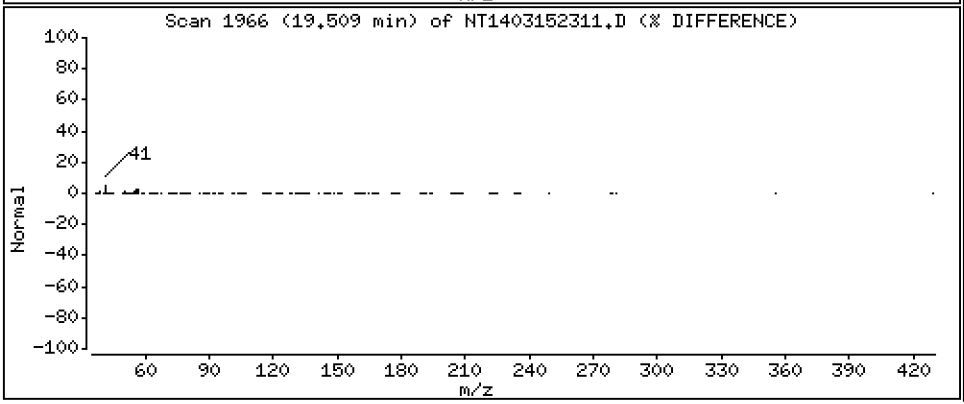
63 Di-n-butylphthalate

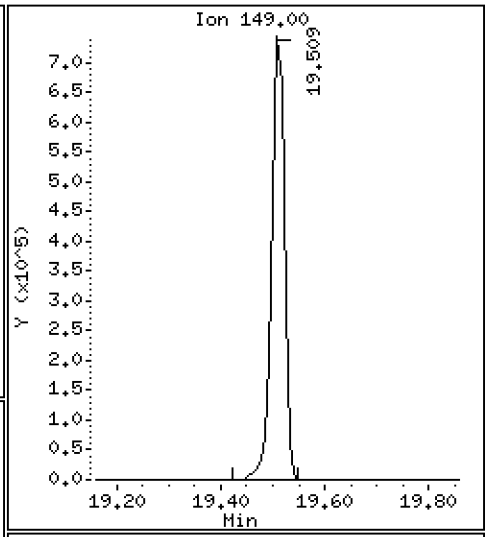
Concentration: 5.507 ug/mL

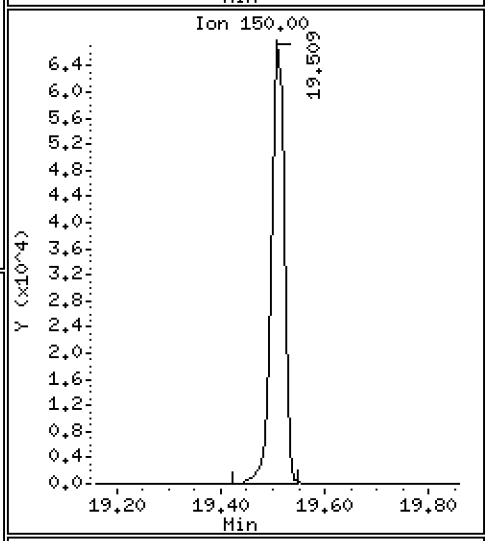


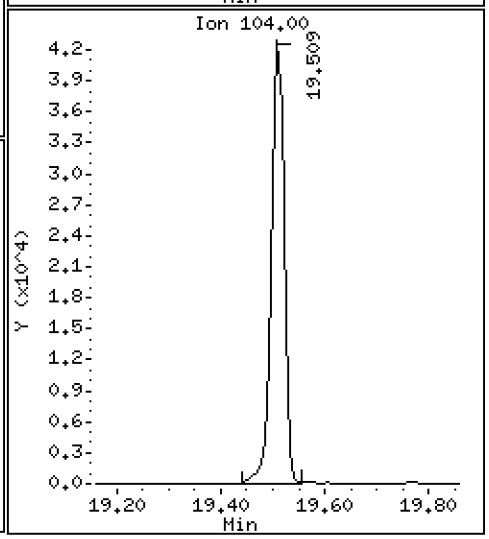












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

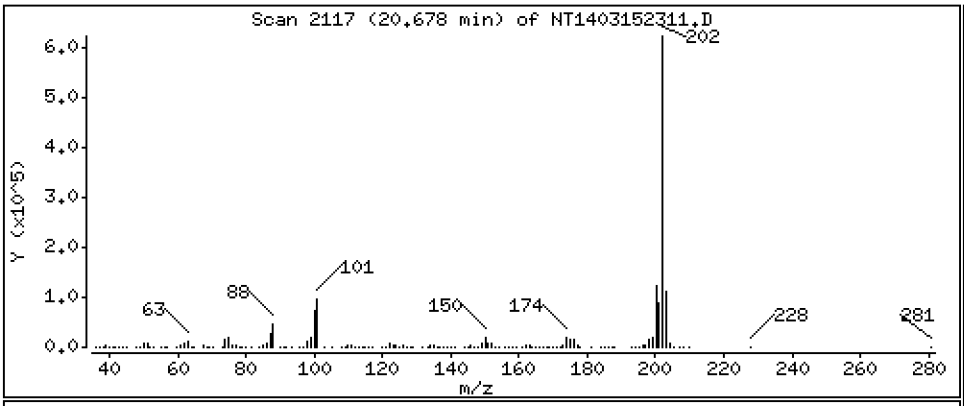
Operator: JGR

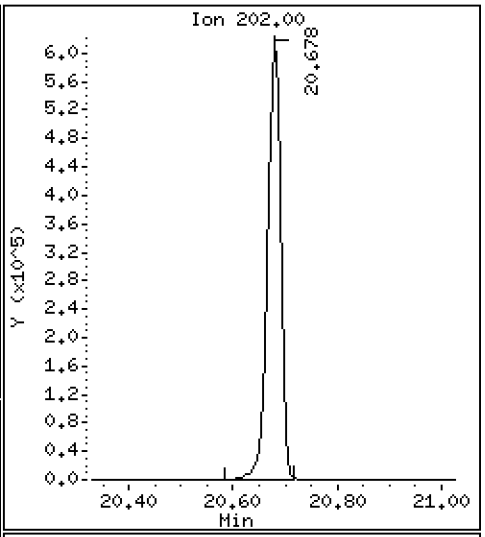
Column phase: ZB-5msi

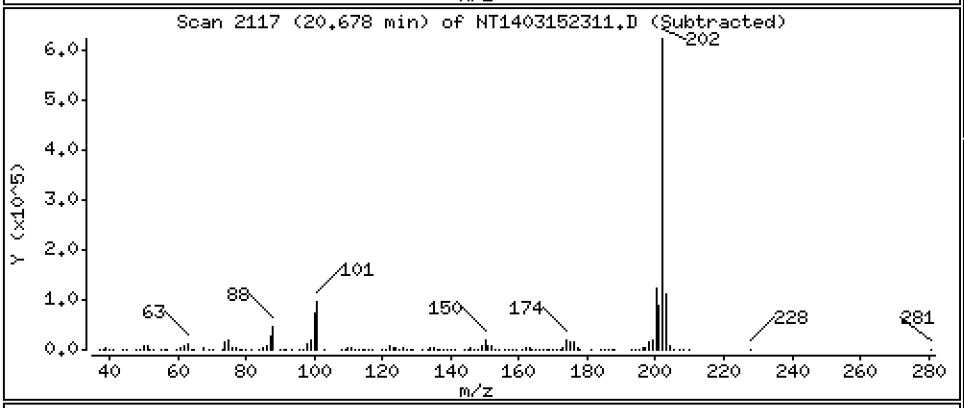
Column diameter: 0.25

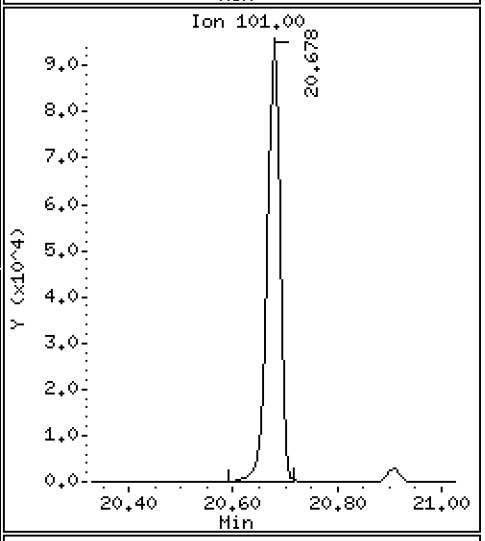
64 Fluoranthene

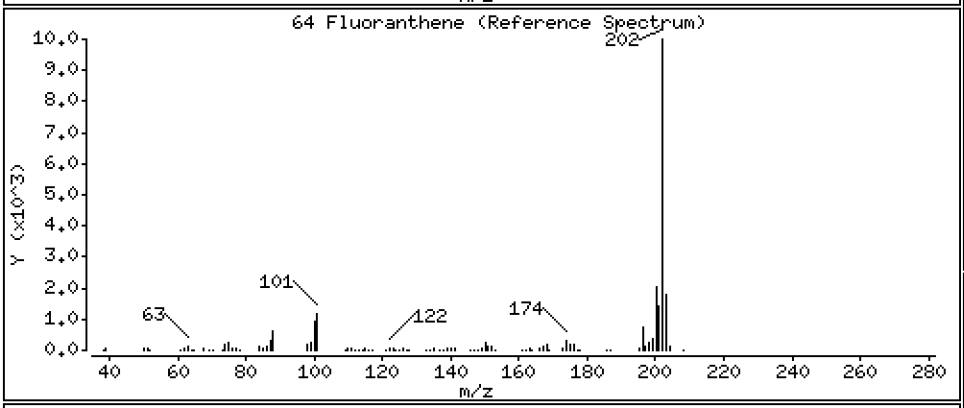
Concentration: 5.024 ug/mL

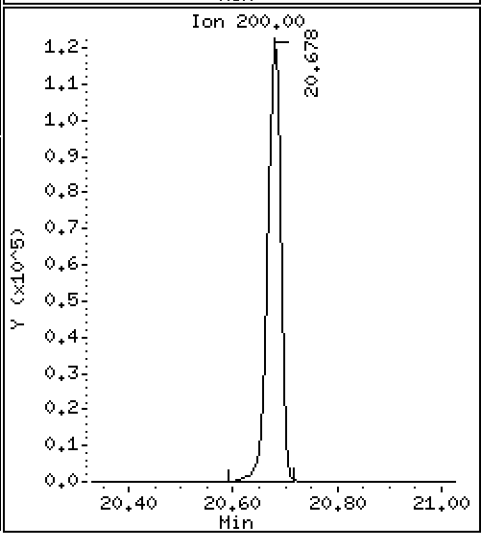


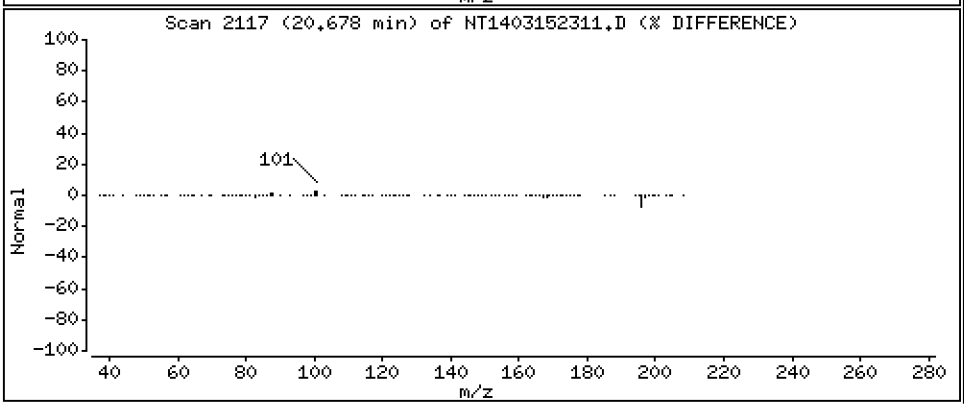












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

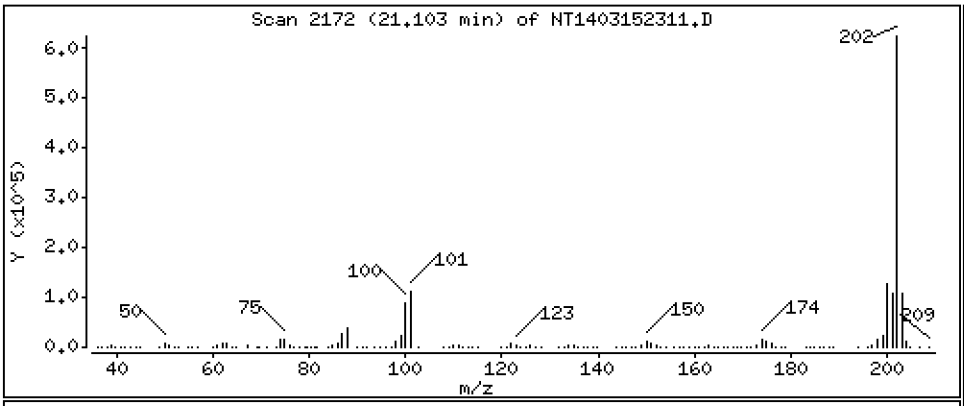
Operator: JGR

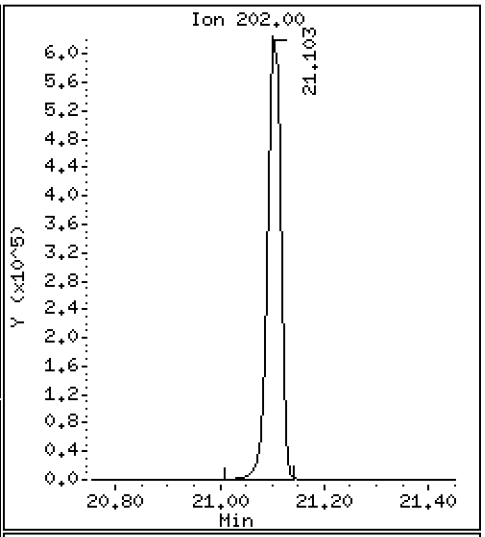
Column phase: ZB-5msi

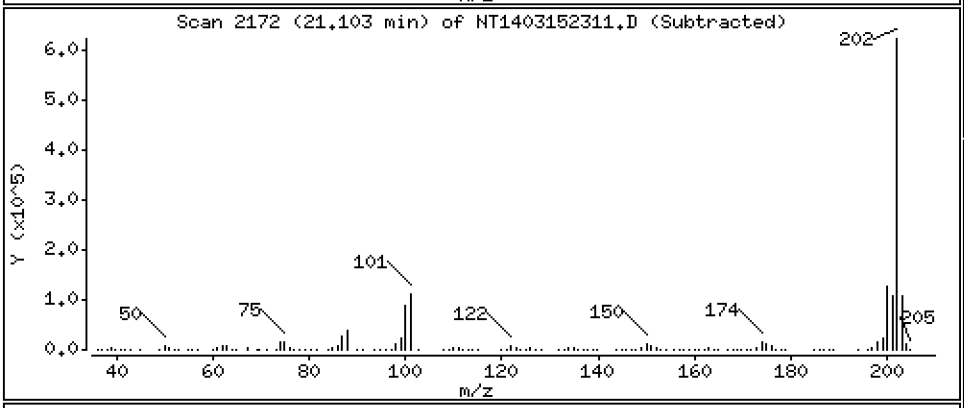
Column diameter: 0.25

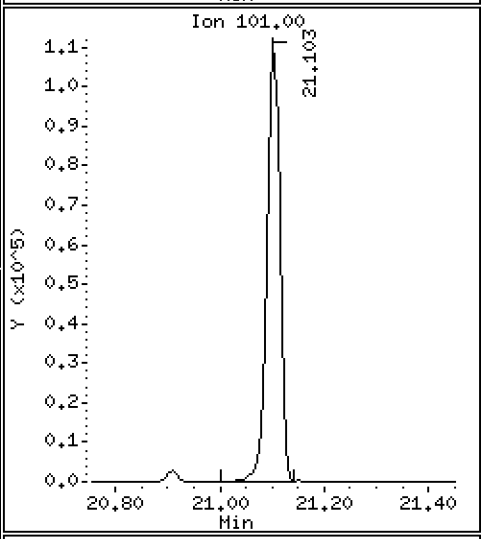
65 Pyrene

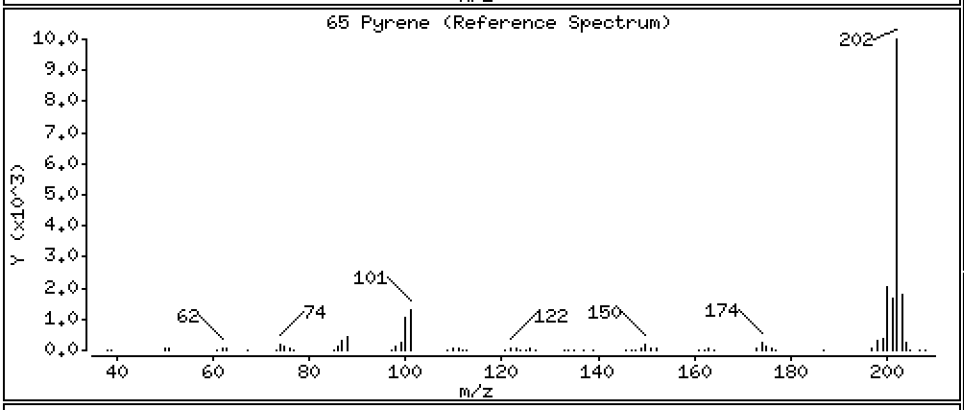
Concentration: 4.958 ug/mL

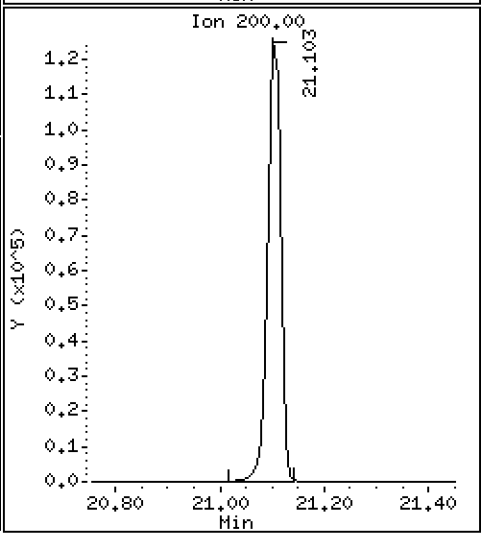


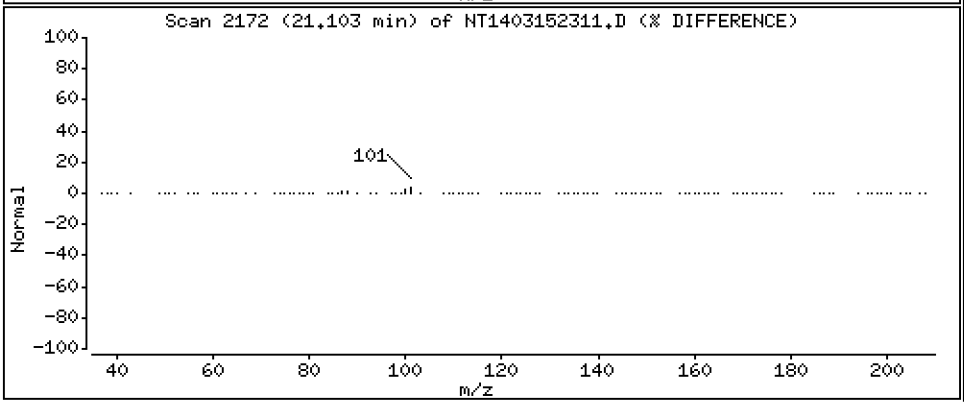












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

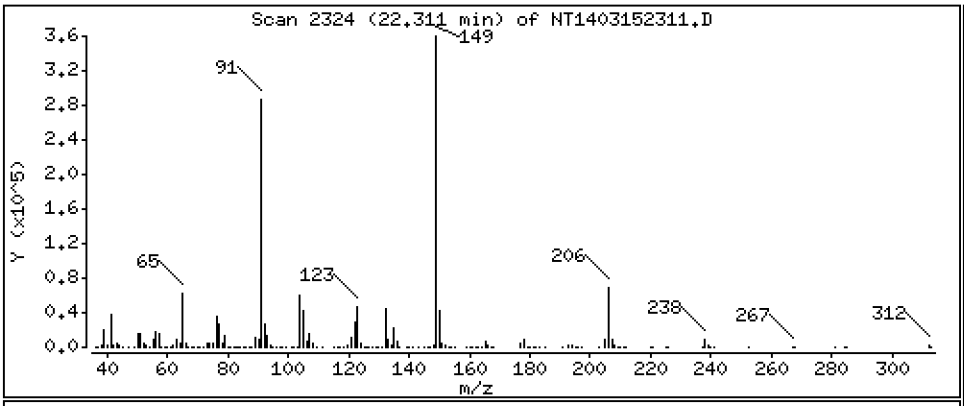
Operator: JGR

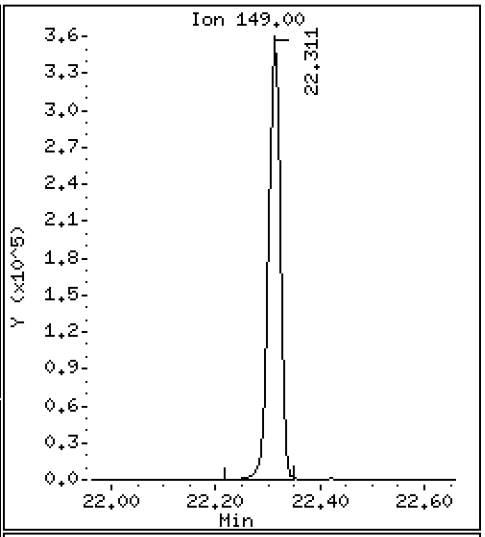
Column phase: ZB-5msi

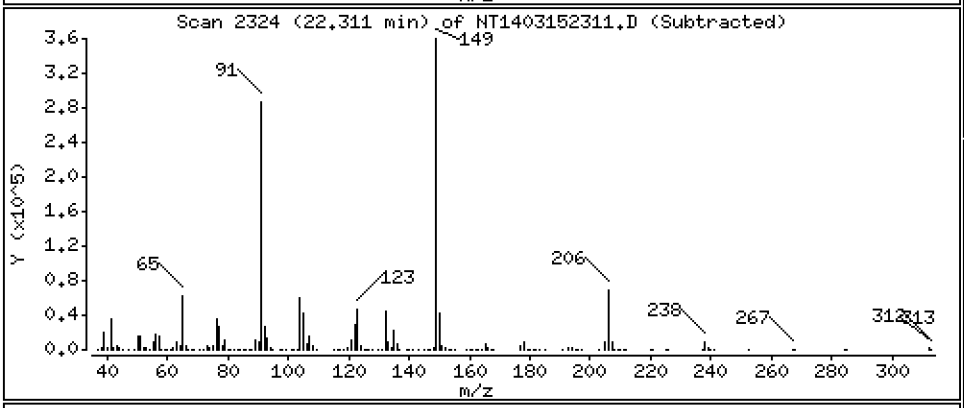
Column diameter: 0.25

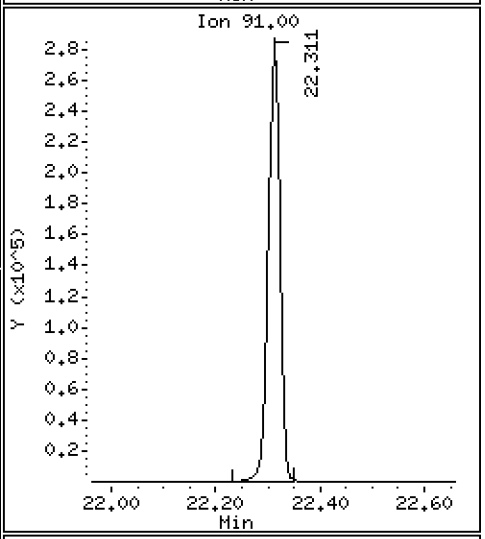
67 Butylbenzylphthalate

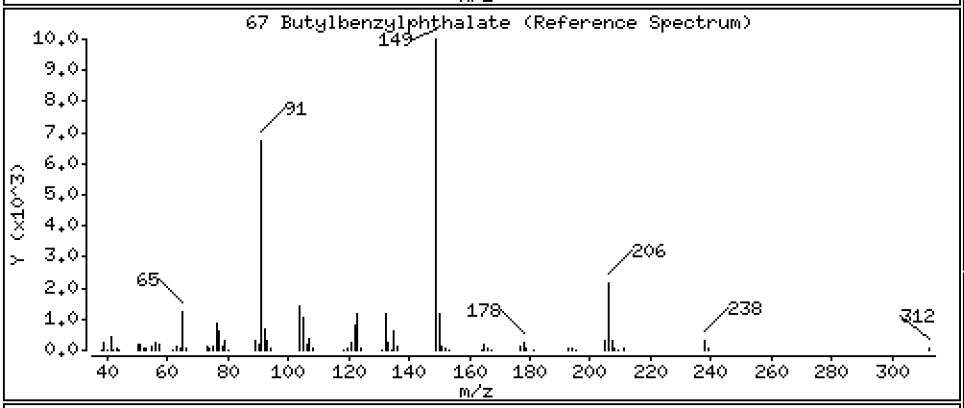
Concentration: 5.737 ug/mL

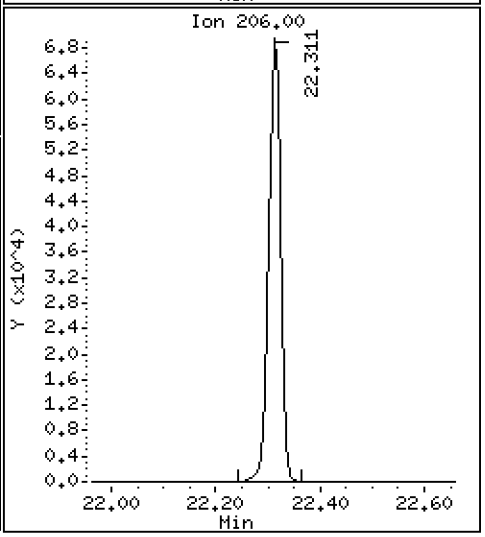


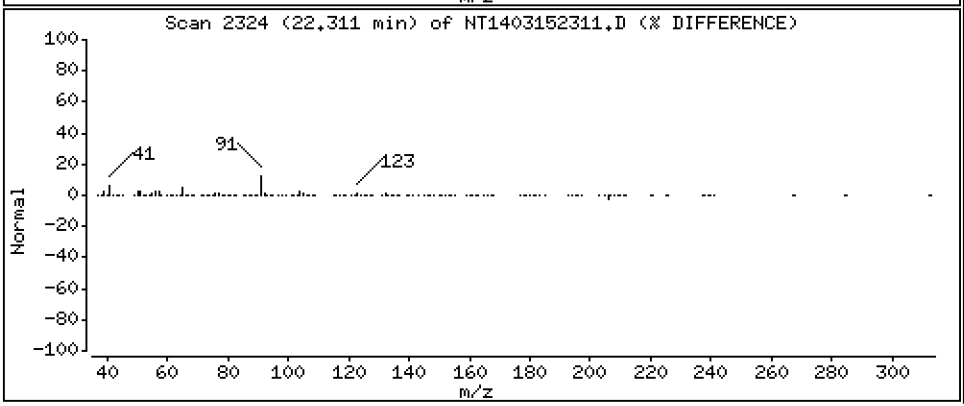












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

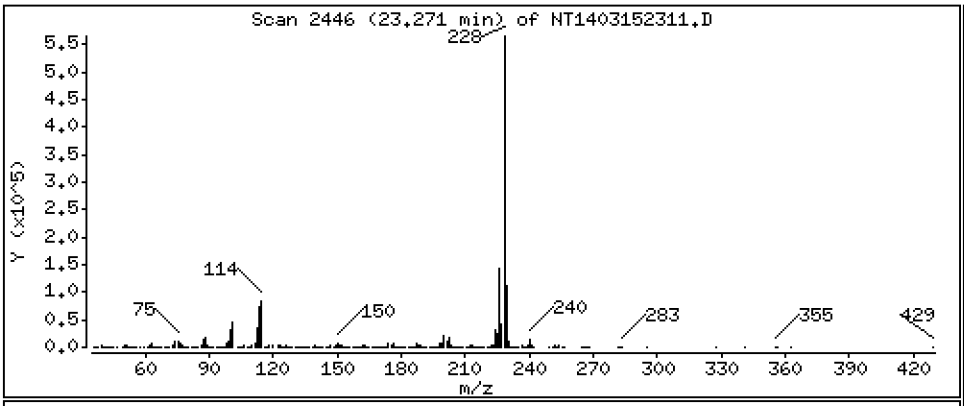
Operator: JGR

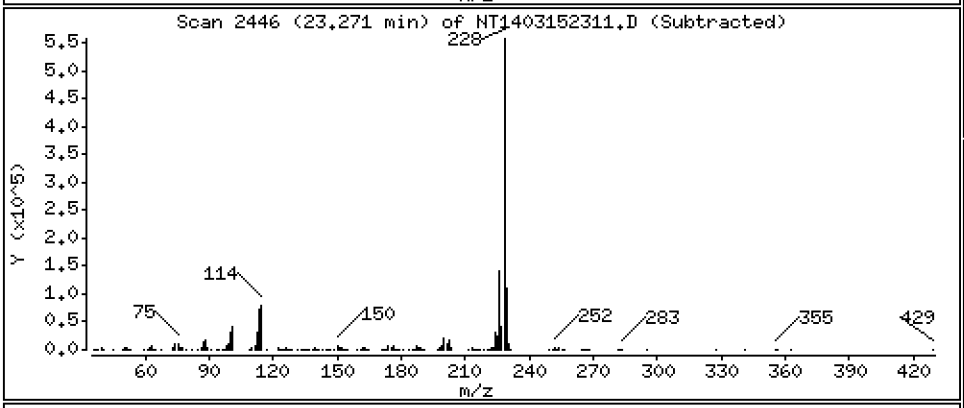
Column phase: ZB-5msi

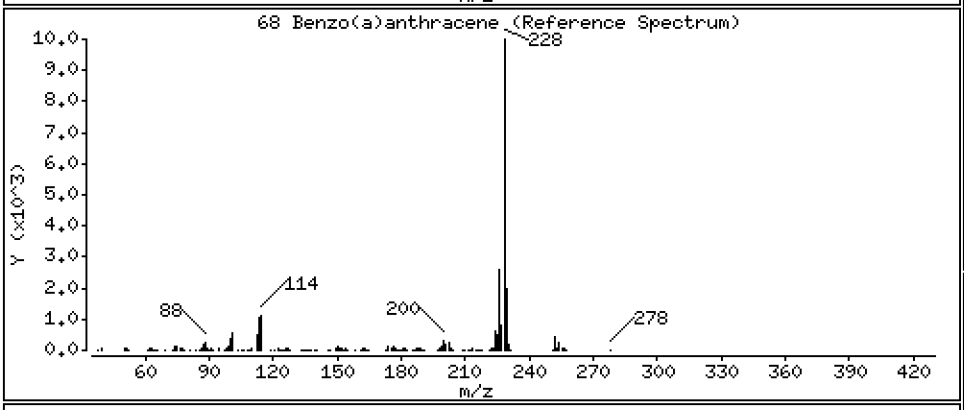
Column diameter: 0.25

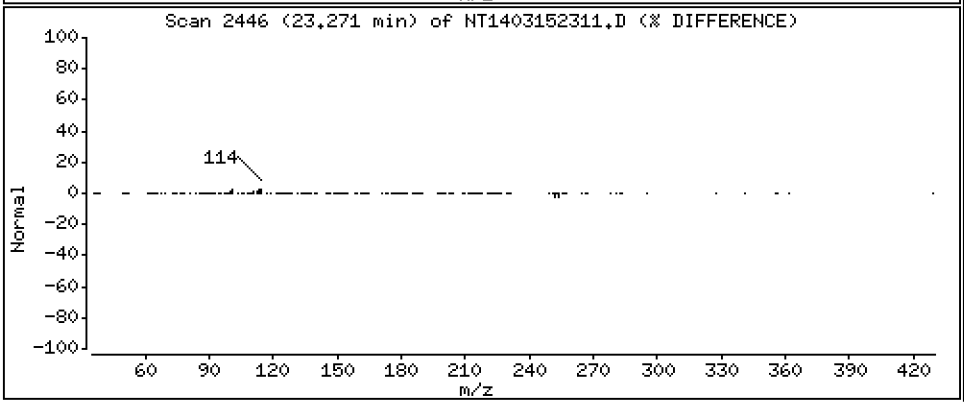
68 Benzo(a)anthracene

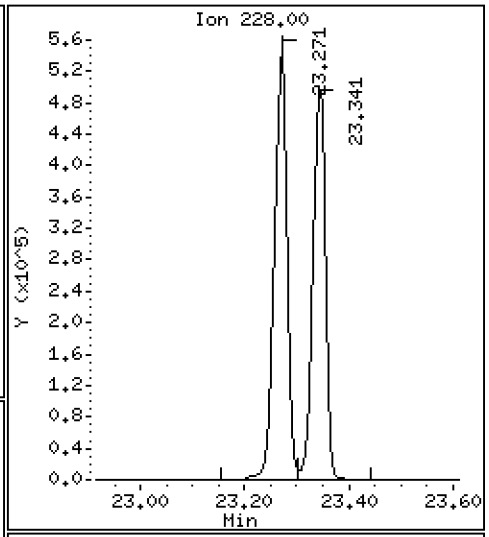
Concentration: 4.827 ug/mL

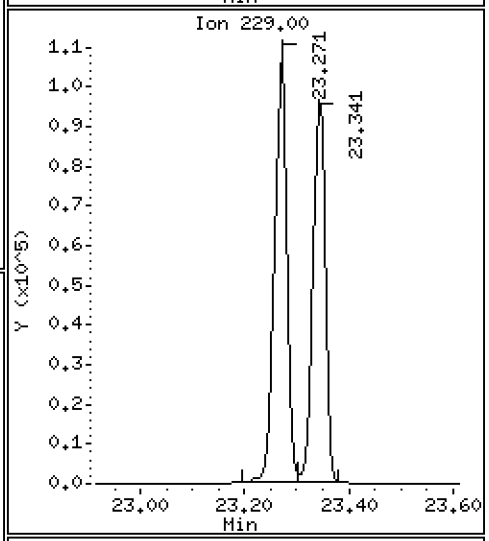


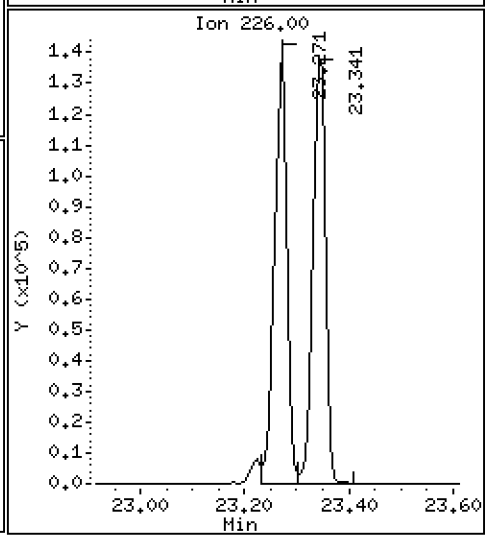












Data File: \\target\share\chem3\nt14.i\20230315.b\NT1403152311.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

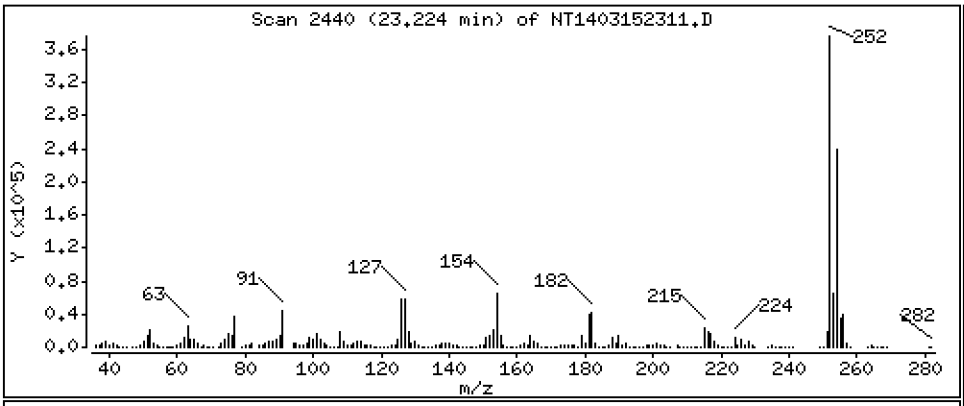
Operator: JGR

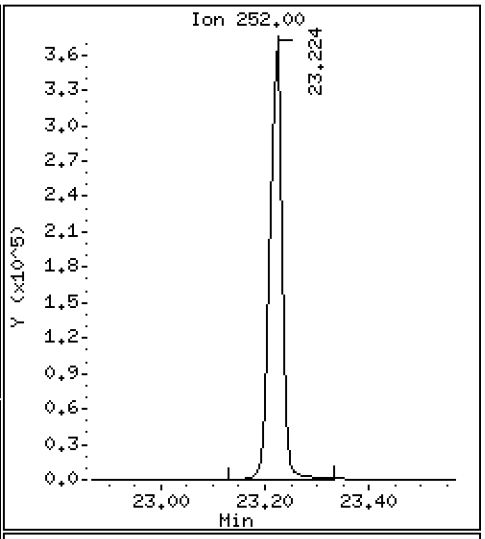
Column phase: ZB-5msi

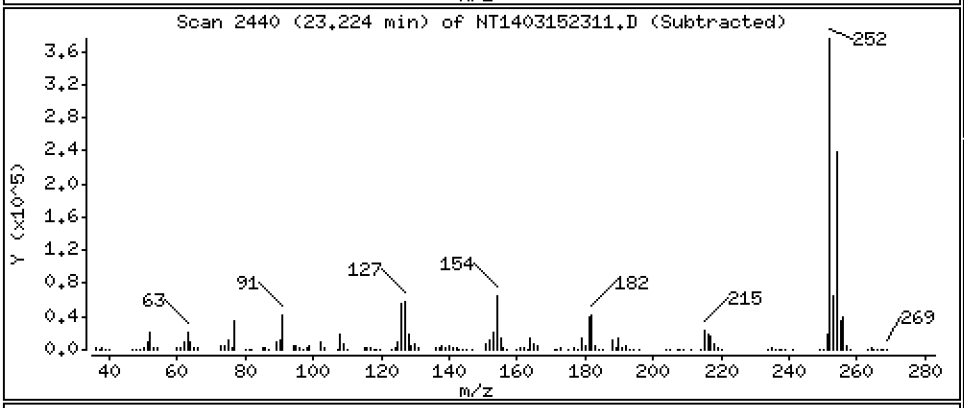
Column diameter: 0.25

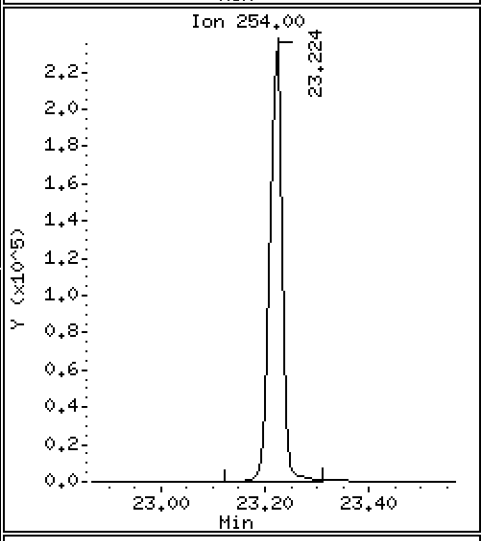
70 3,3'-Dichlorobenzidine

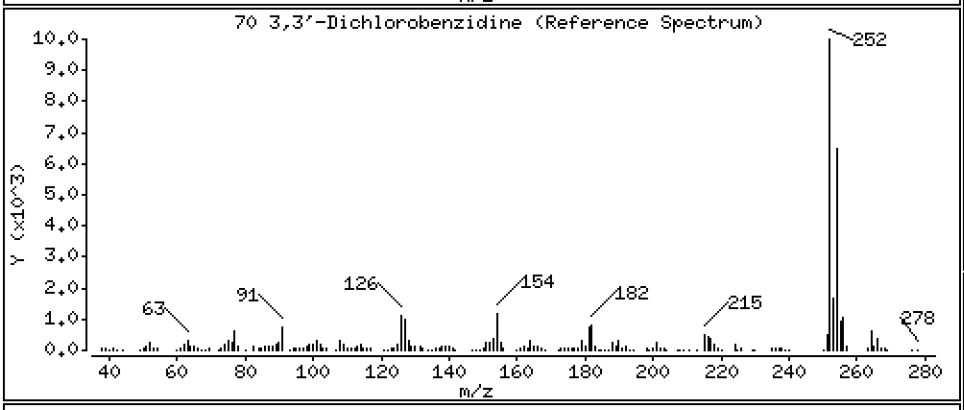
Concentration: 10.65 ug/mL

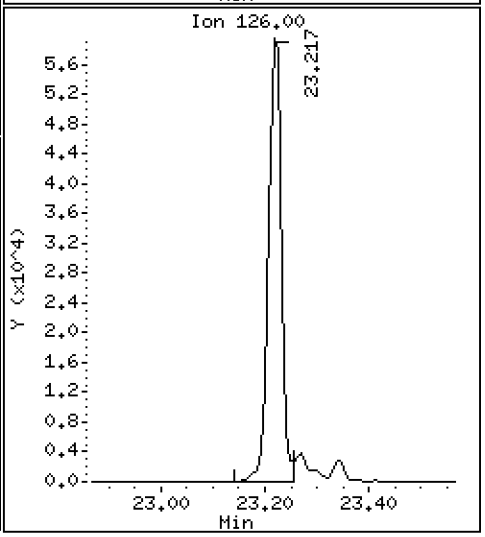


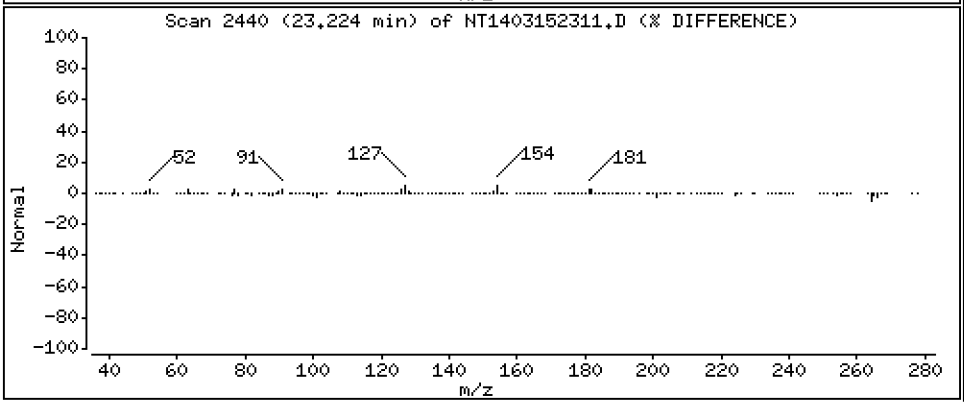












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

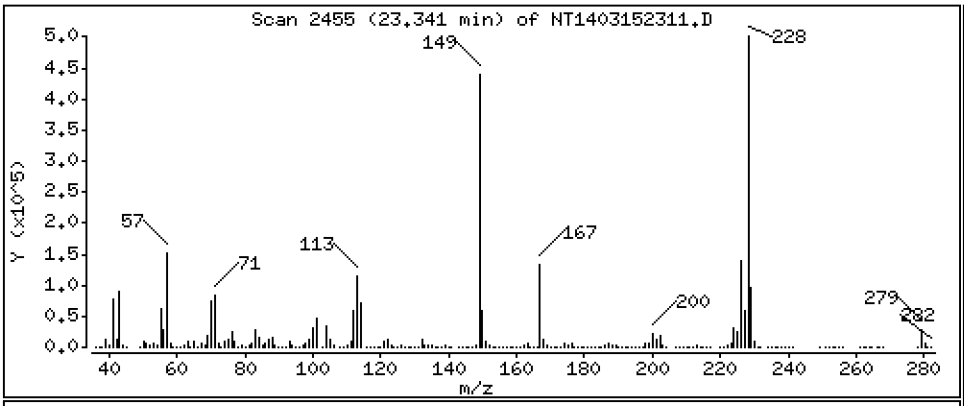
Operator: JGR

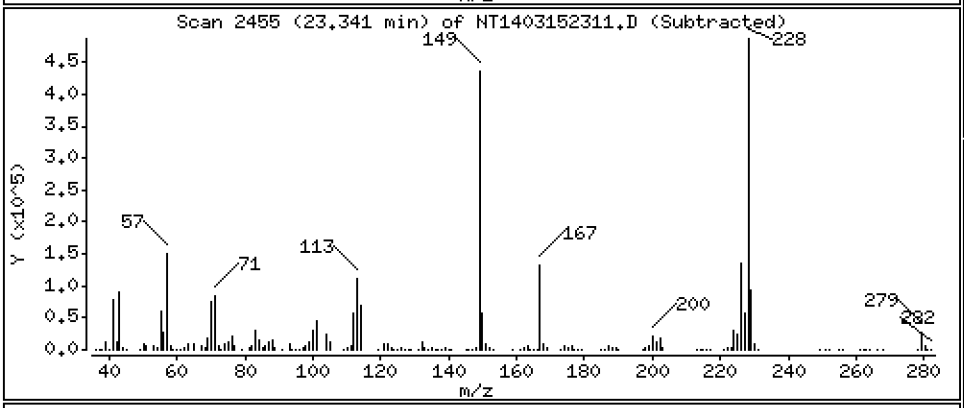
Column phase: ZB-5msi

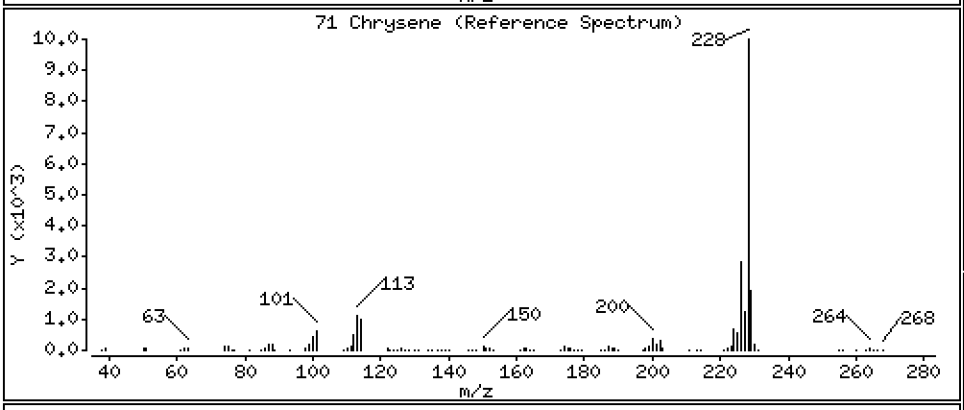
Column diameter: 0.25

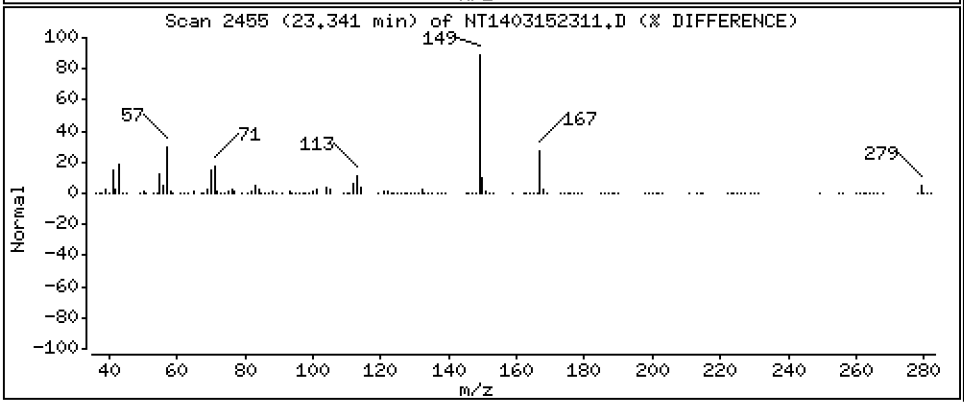
71 Chrysene

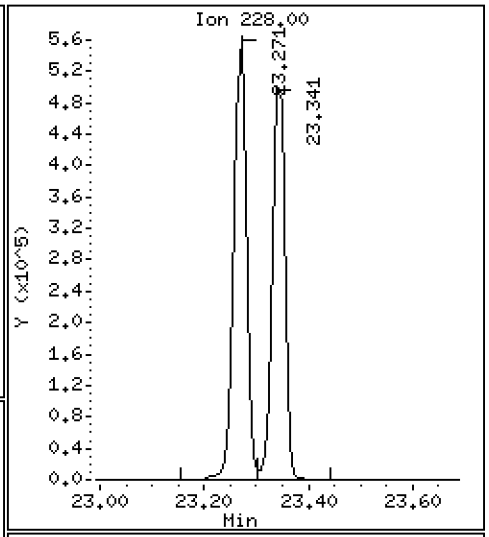
Concentration: 4.723 ug/mL

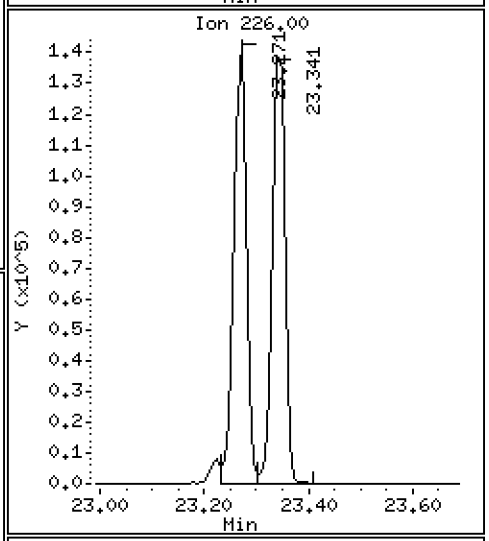


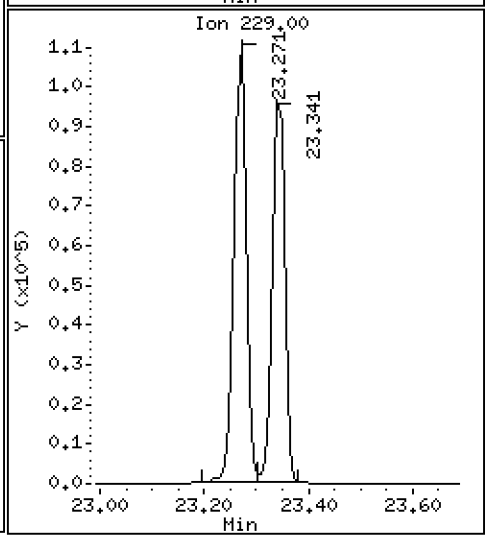












Data File: \\target\share\chem3\nt14.i\20230315.b\NT1403152311.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

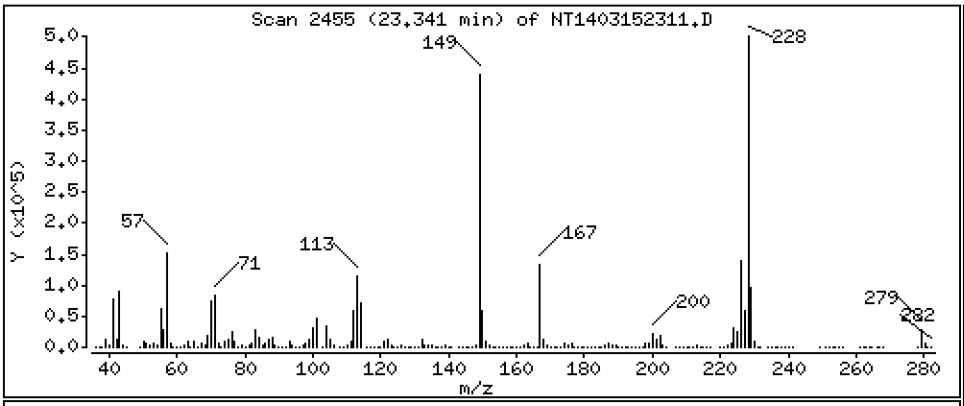
Operator: JGR

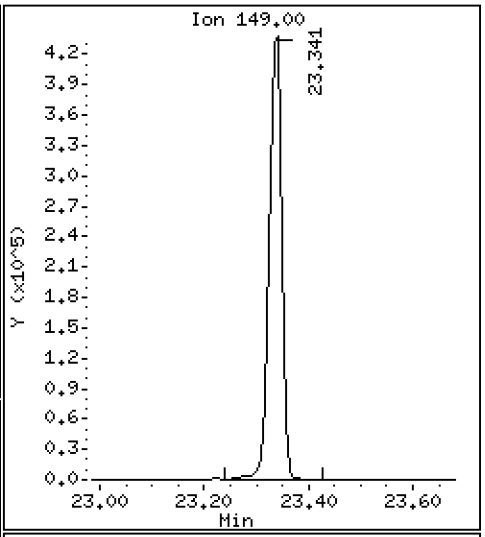
Column phase: ZB-5msi

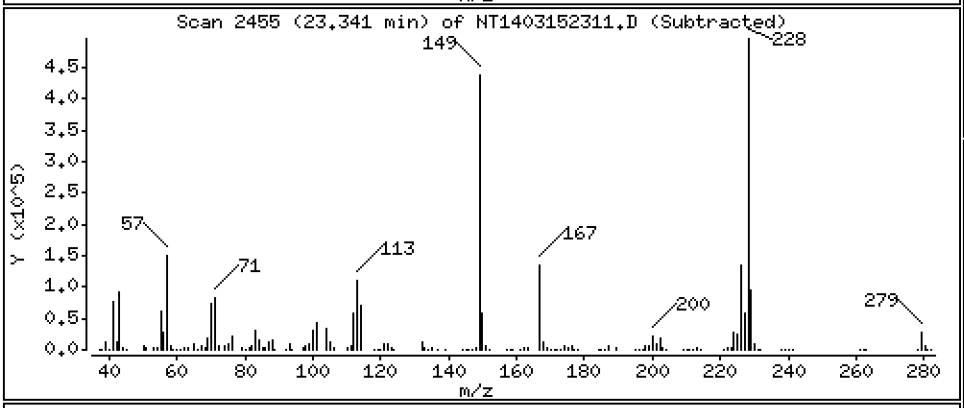
Column diameter: 0.25

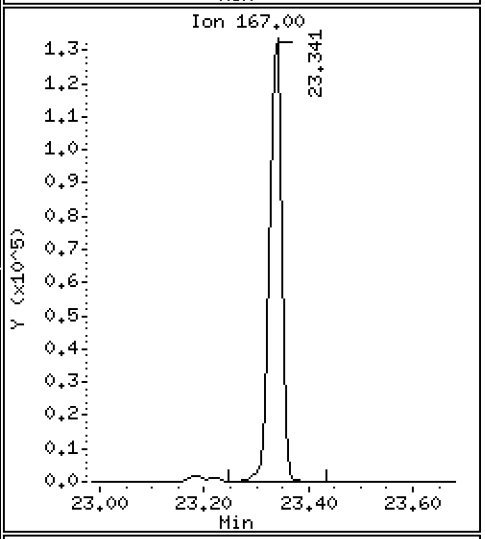
72 bis(2-Ethylhexyl)phthalate

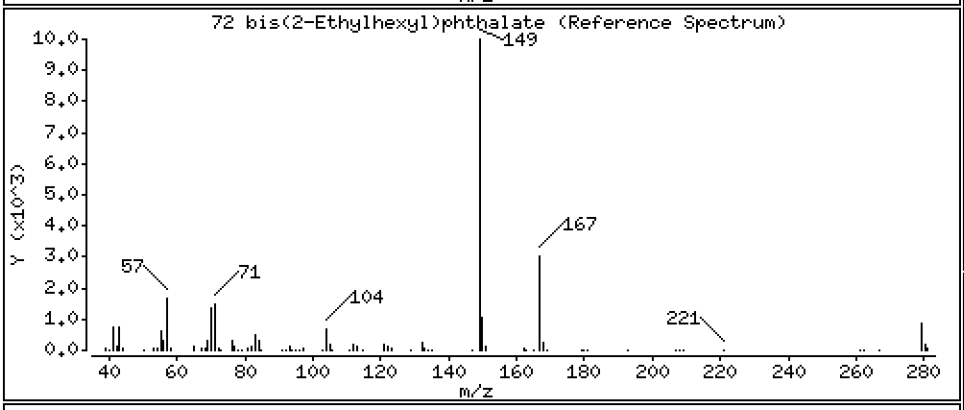
Concentration: 5.428 ug/mL

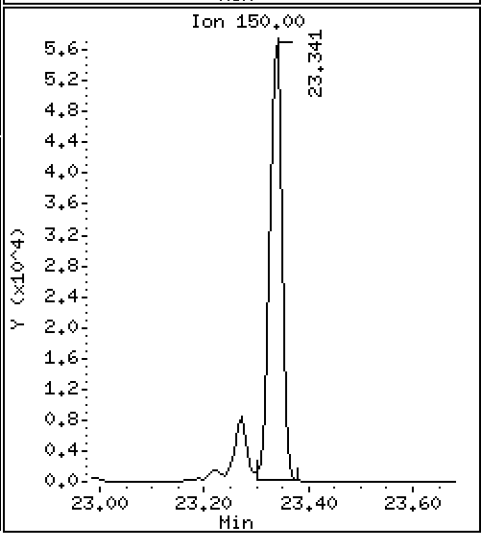


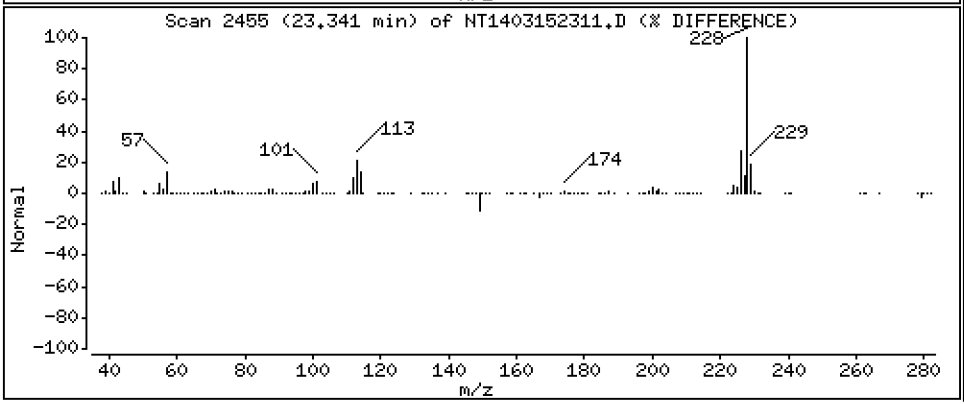












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

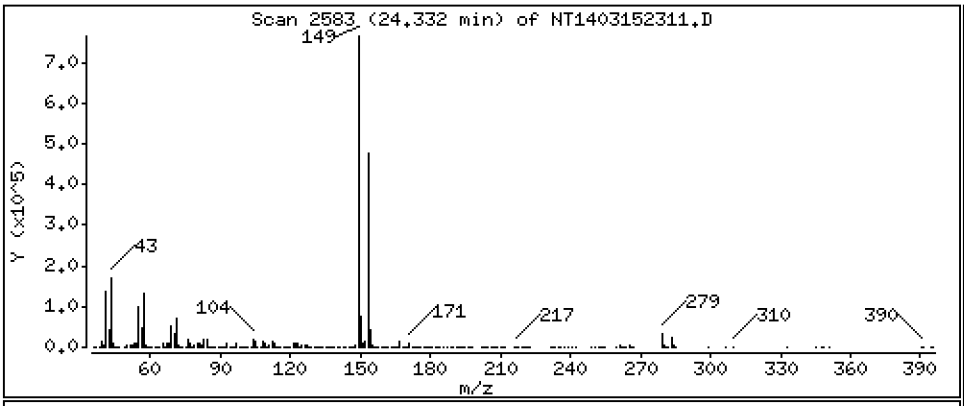
Operator: JGR

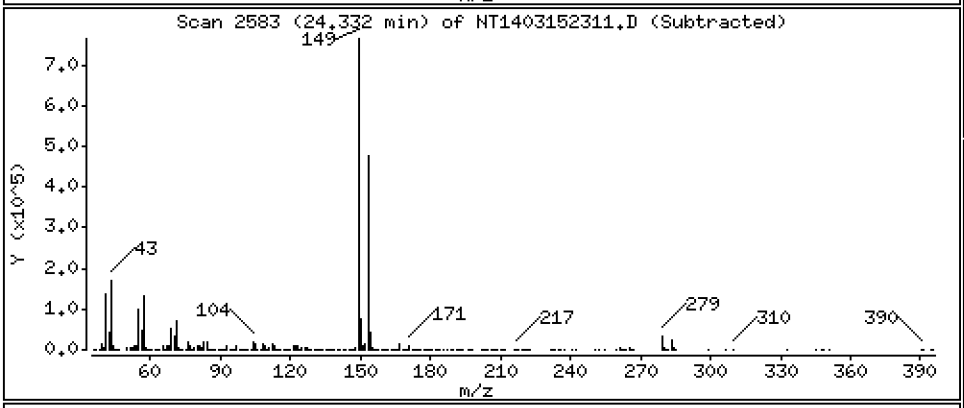
Column phase: ZB-5msi

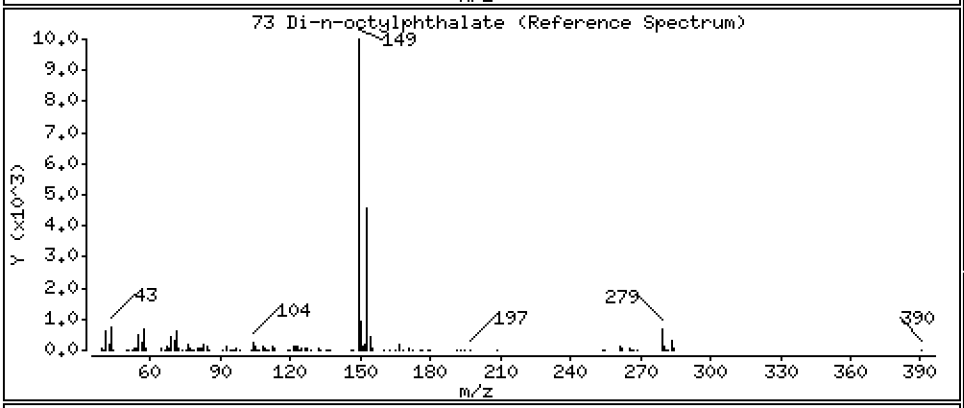
Column diameter: 0.25

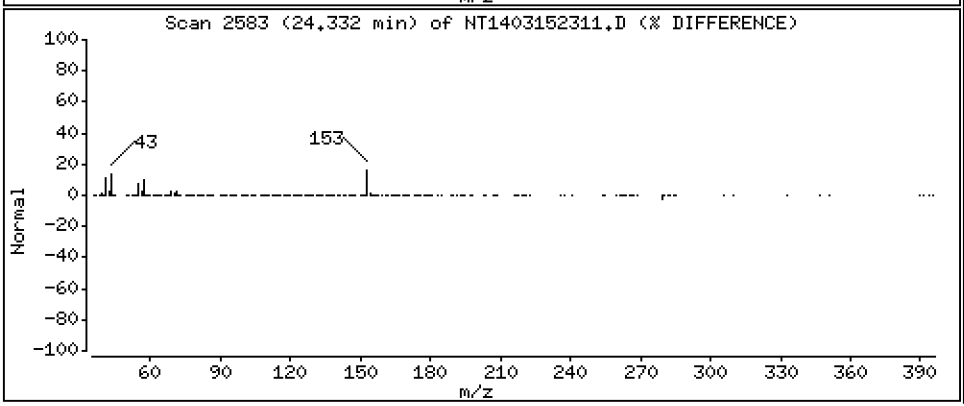
73 Di-n-octylphthalate

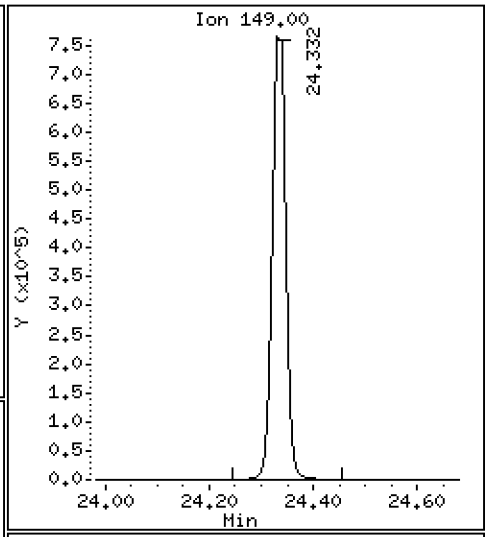
Concentration: 5.135 ug/mL

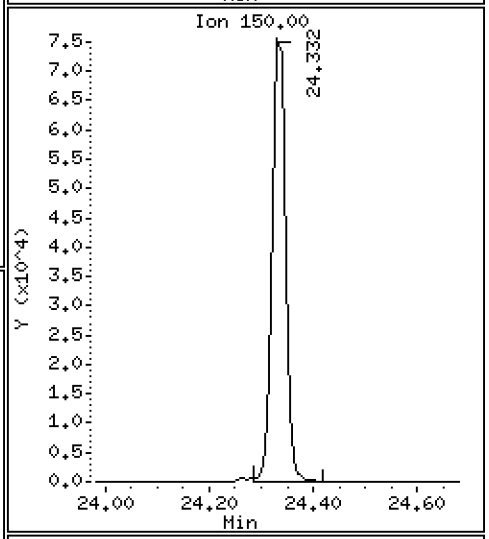


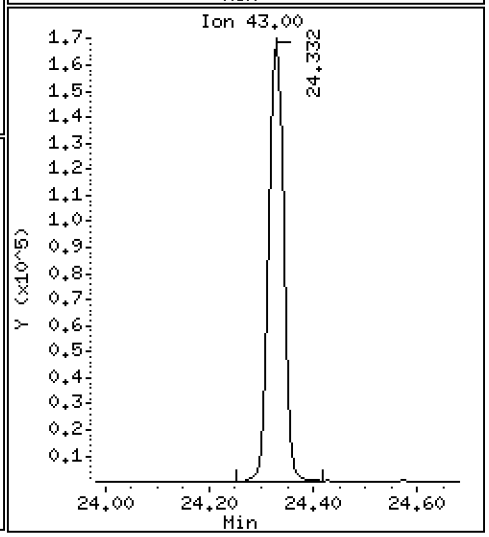












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

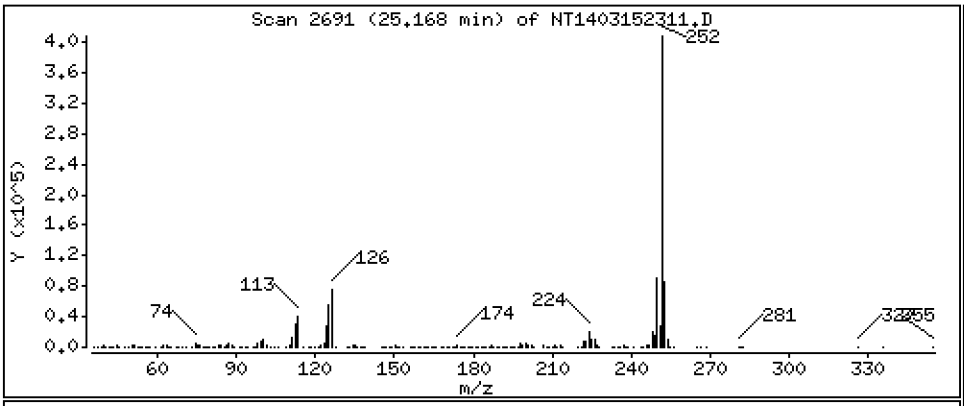
Operator: JGR

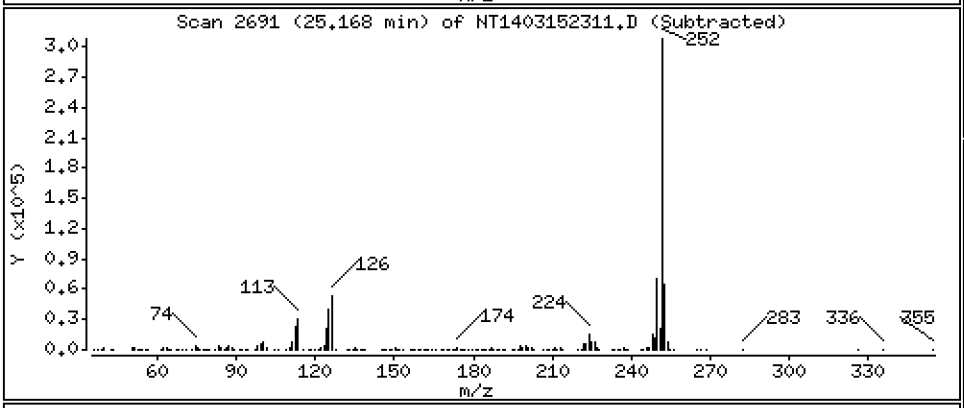
Column phase: ZB-5msi

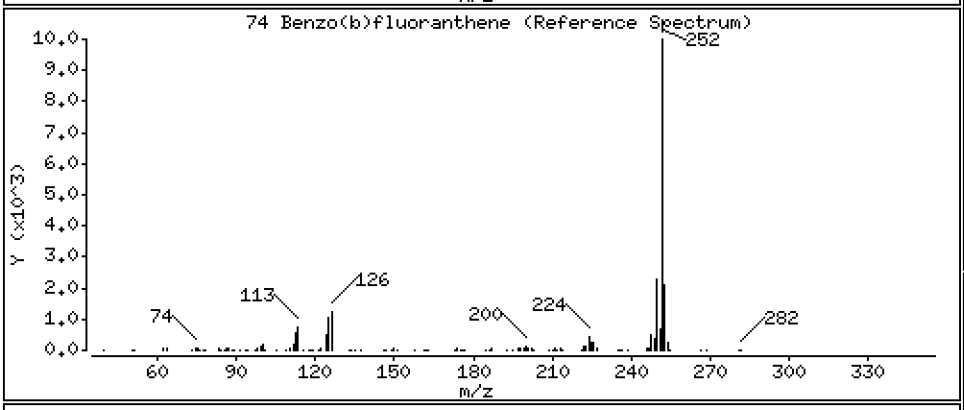
Column diameter: 0.25

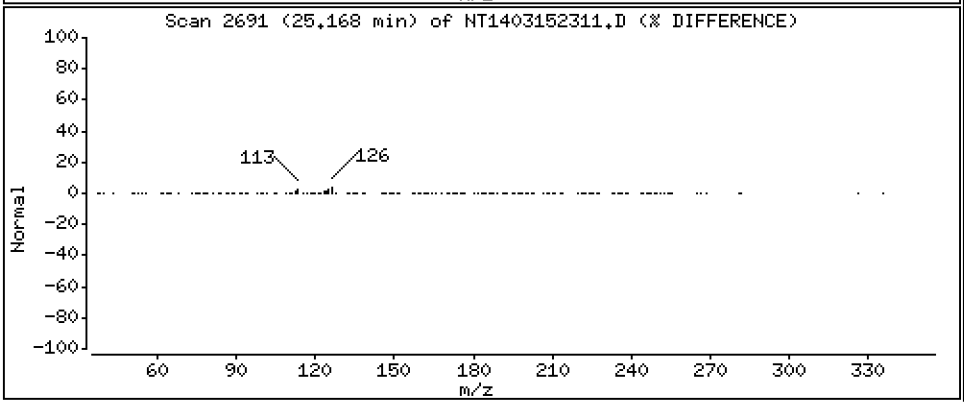
74 Benzo(b)fluoranthene

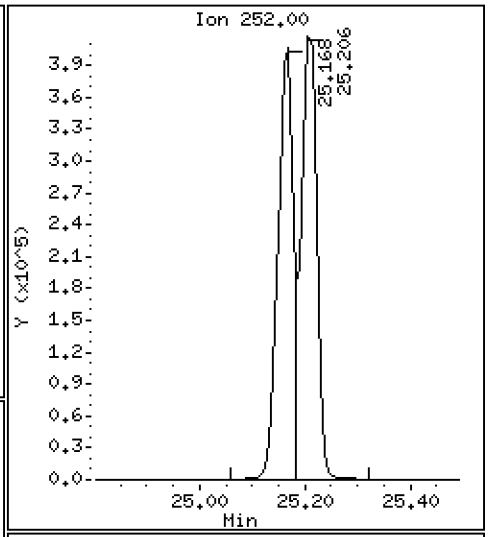
Concentration: 4.774 ug/mL

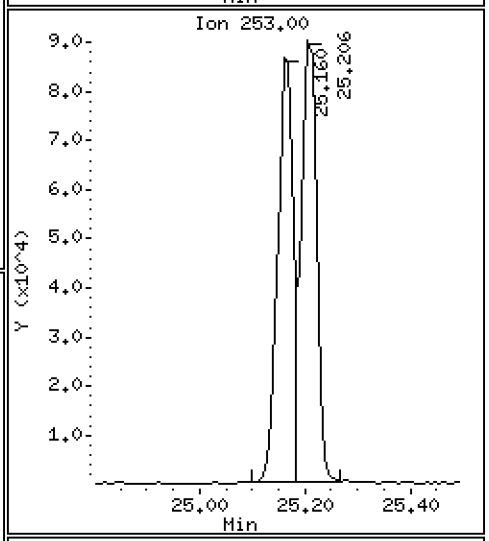


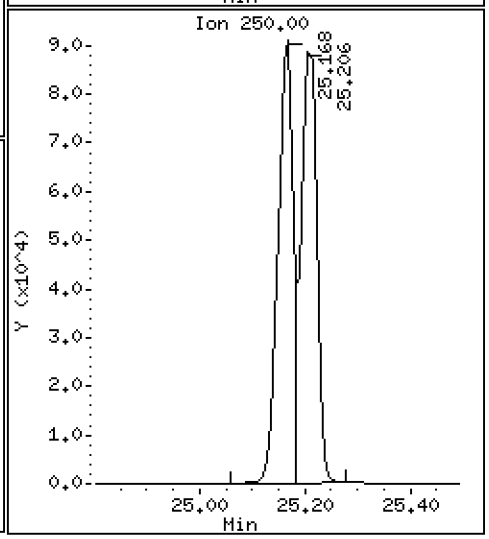












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

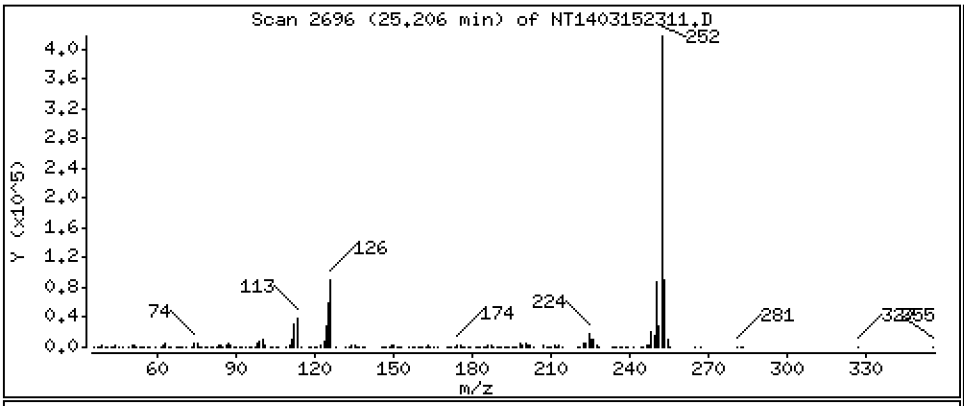
Operator: JGR

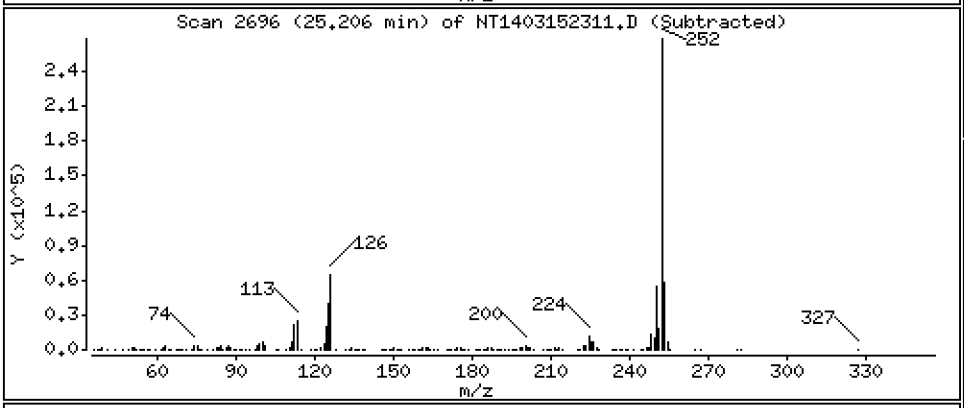
Column phase: ZB-5msi

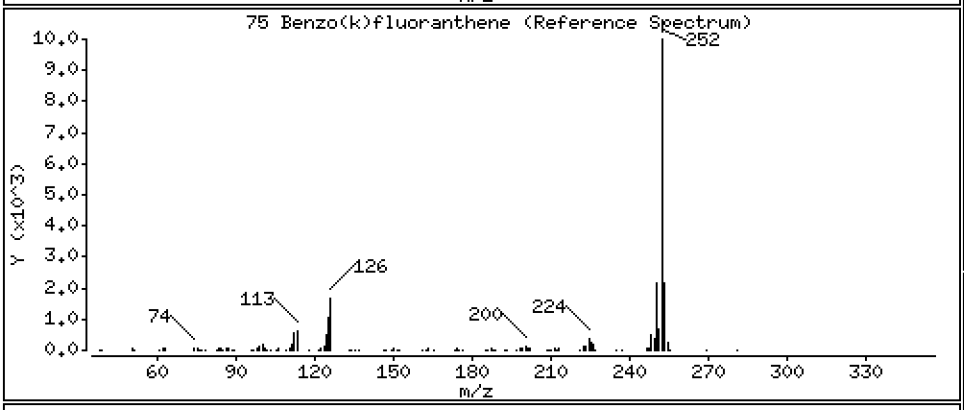
Column diameter: 0.25

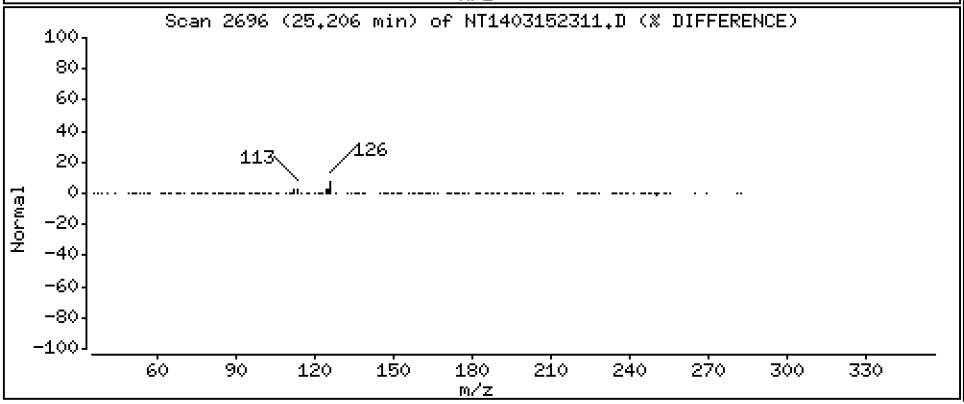
75 Benzo(k)fluoranthene

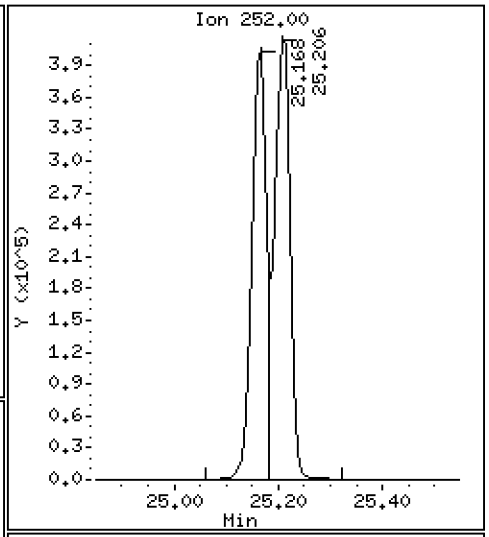
Concentration: 5.100 ug/mL

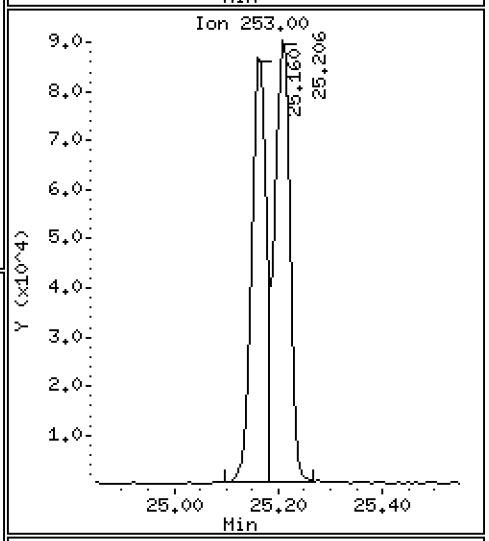


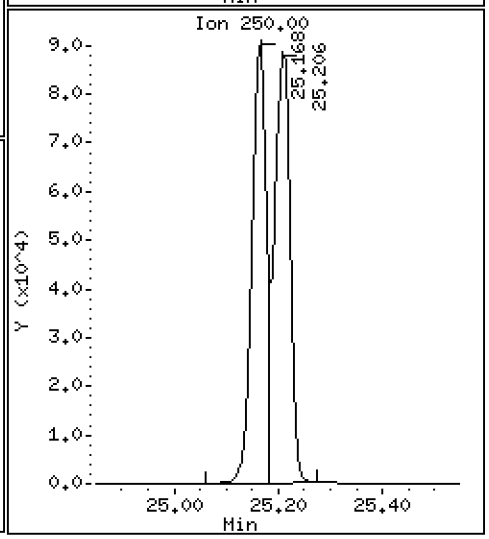












Date : 15-MAR-2023 17:39

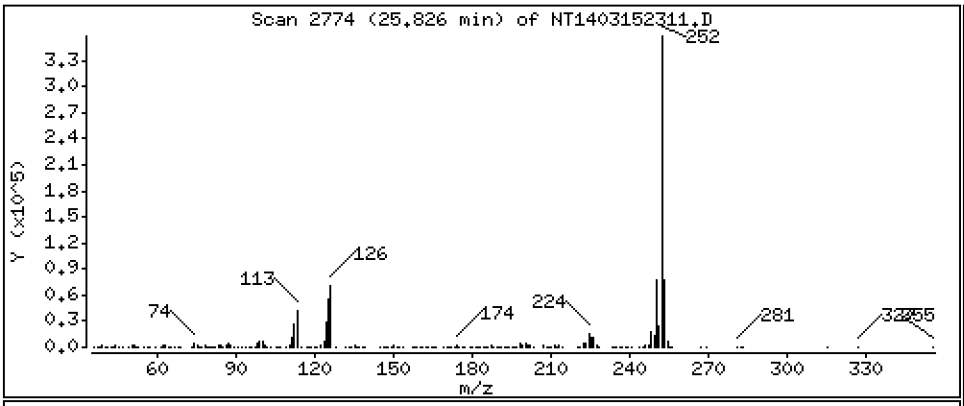
Client ID: Instrument: nt14.i

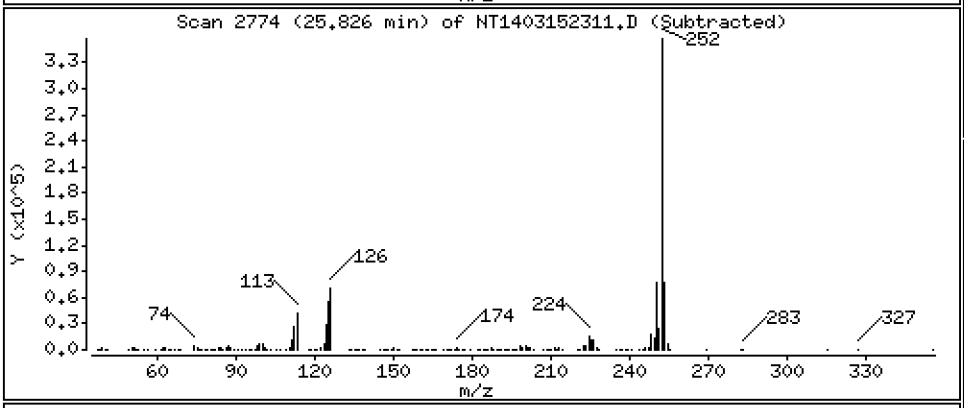
Sample Info: SLC0160-SCV1

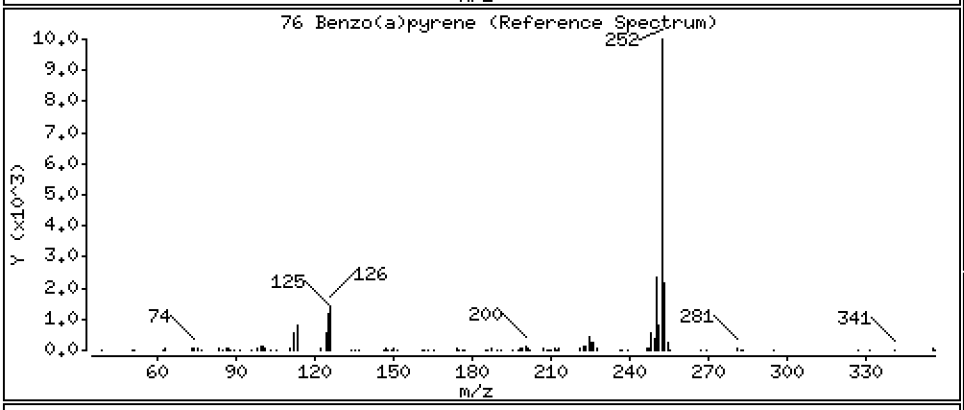
Operator: JGR

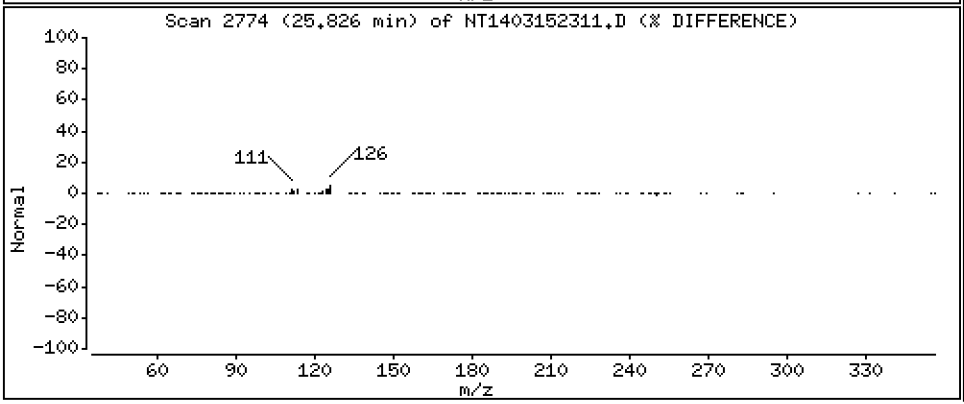
Column phase: ZB-5msi Column diameter: 0.25

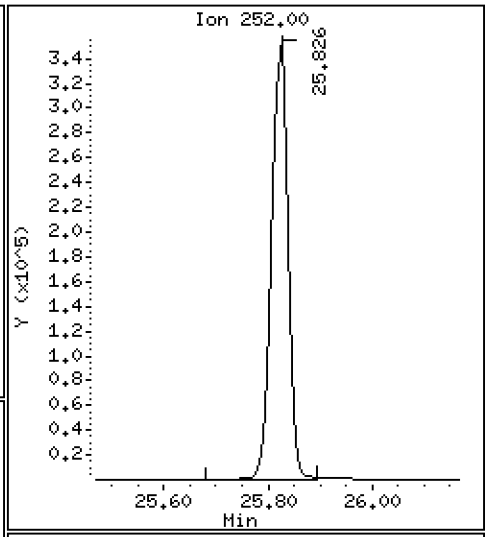
76 Benzo(a)pyrene Concentration: 4.978 ug/mL

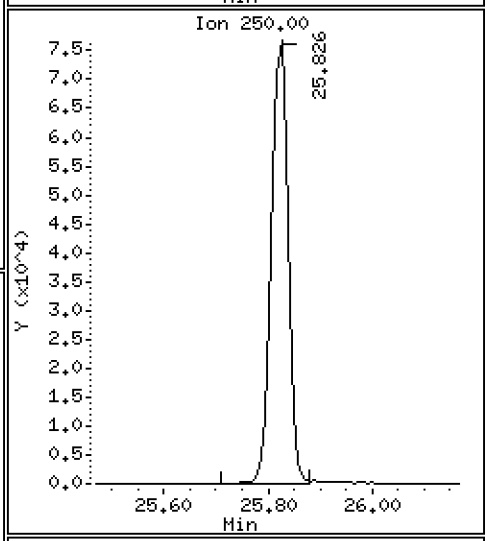


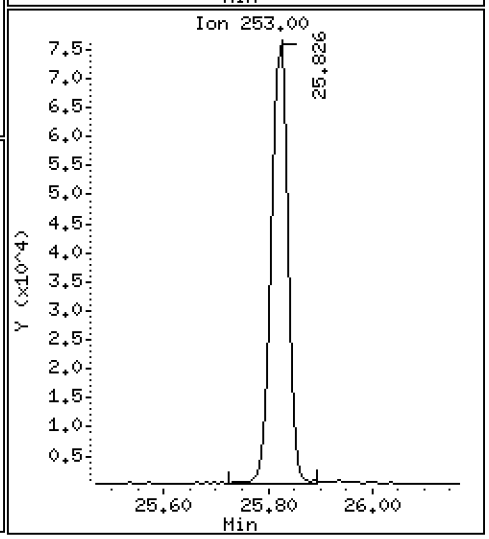












Data File: \\target\share\chem3\nt14.i\20230315.b\NT1403152311.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

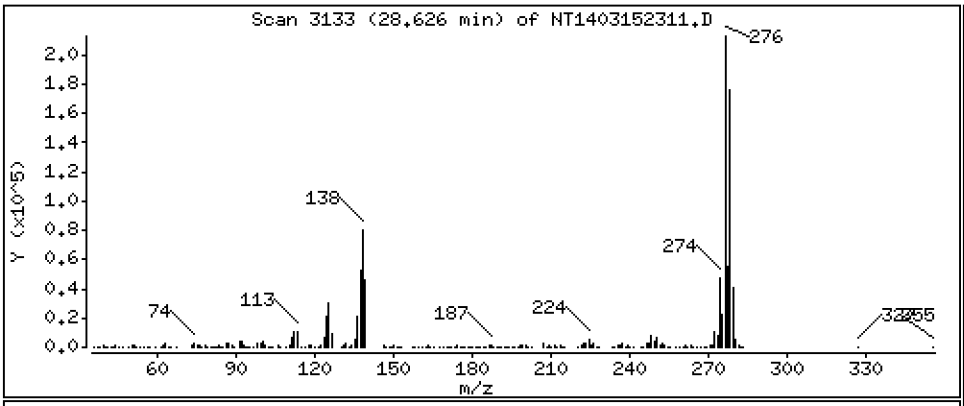
Operator: JGR

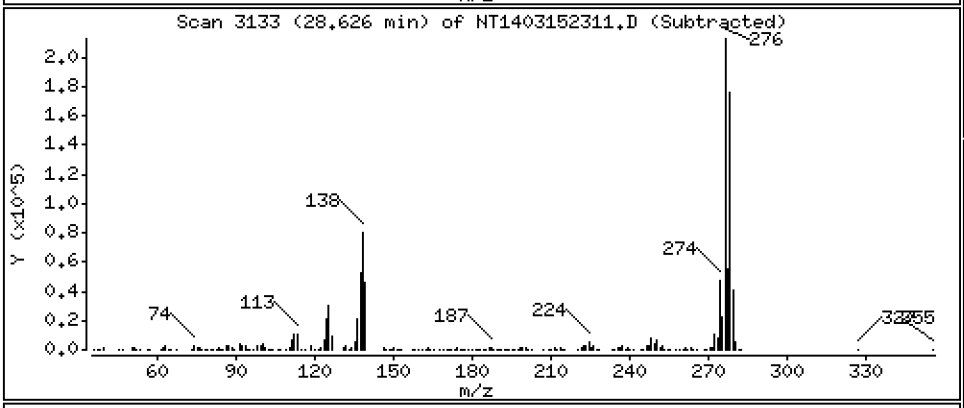
Column phase: ZB-5msi

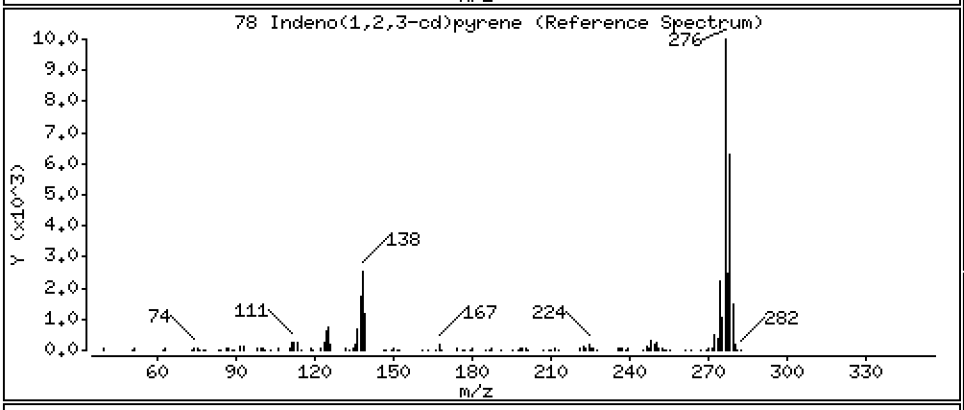
Column diameter: 0.25

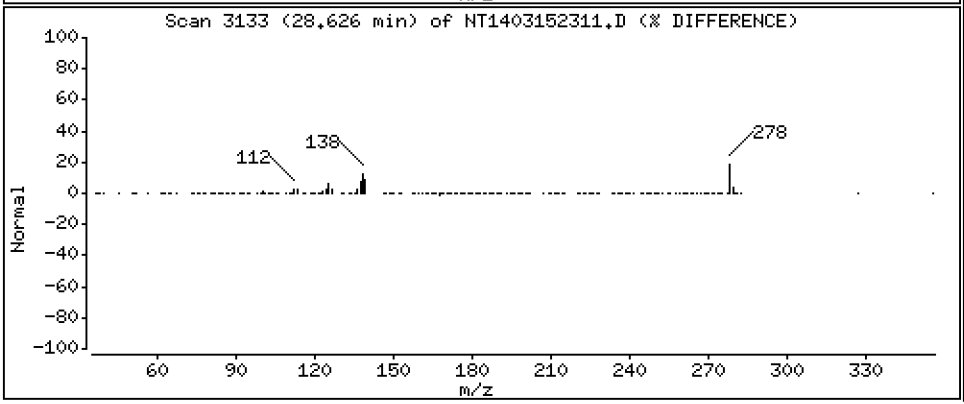
78 Indeno(1,2,3-cd)pyrene

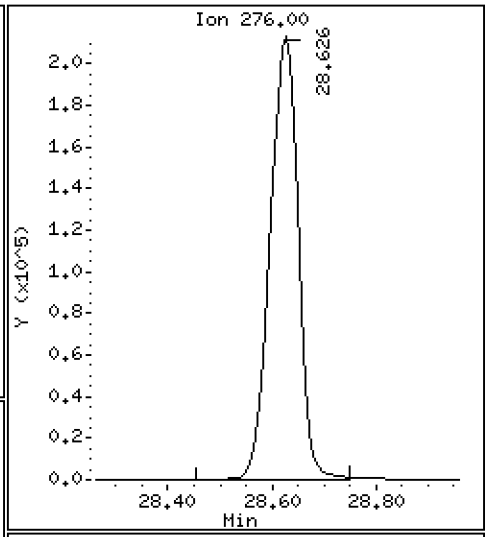
Concentration: 4.943 ug/mL

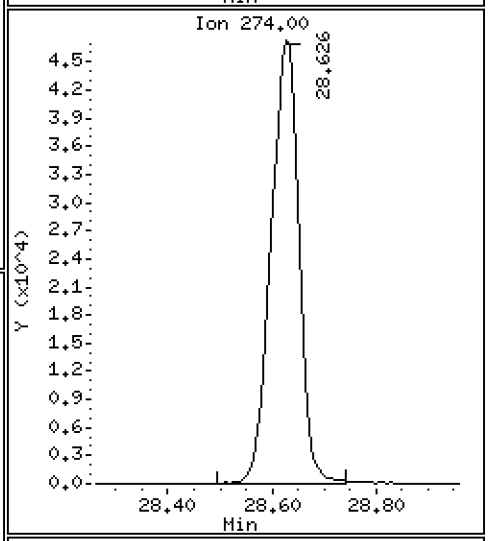


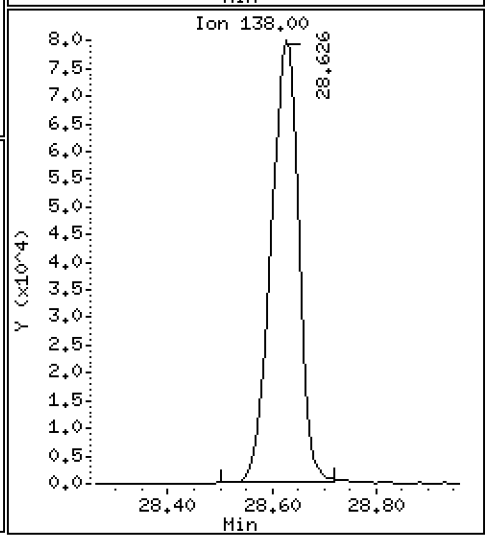












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

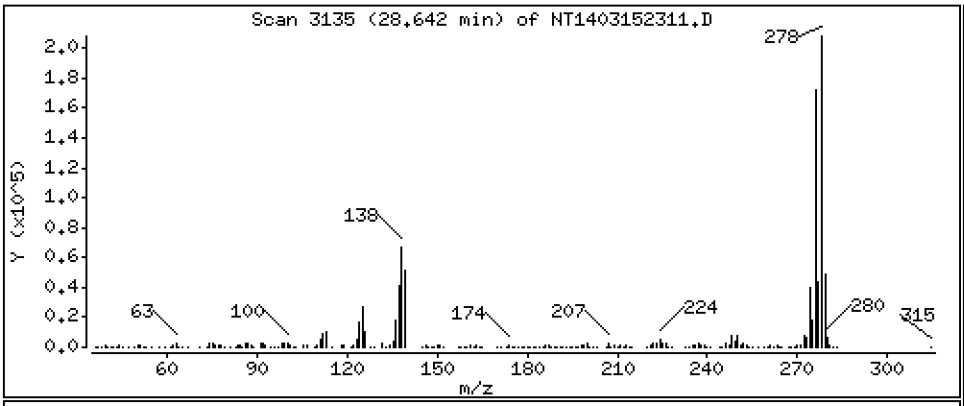
Operator: JGR

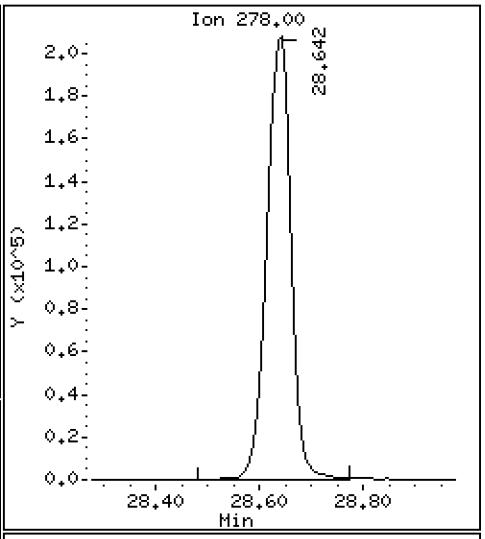
Column phase: ZB-5msi

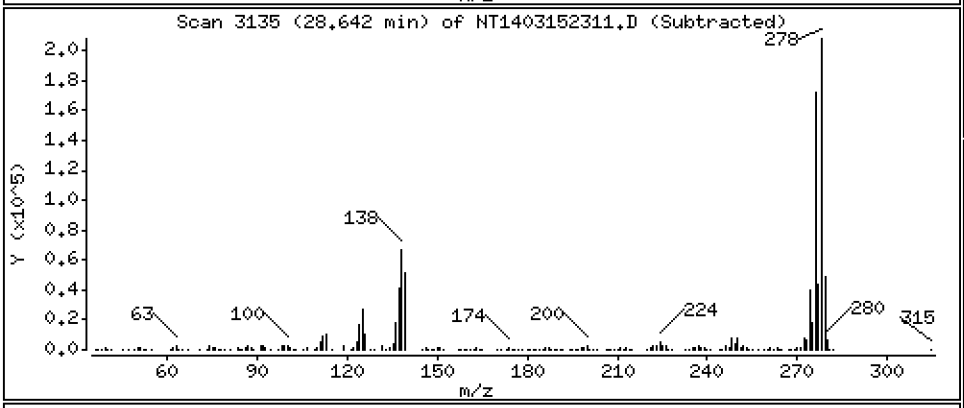
Column diameter: 0.25

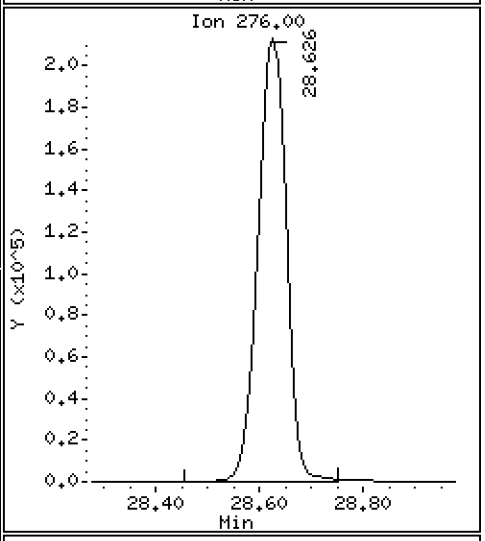
79 Dibenzo(a,h)anthracene

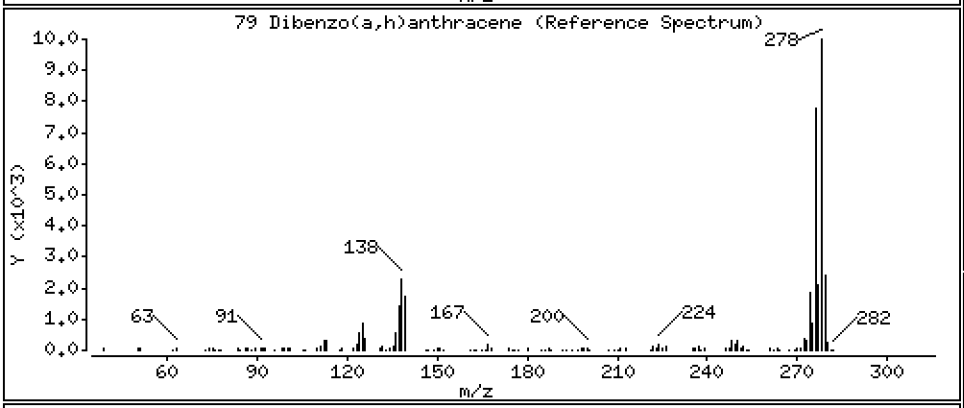
Concentration: 4.865 ug/mL

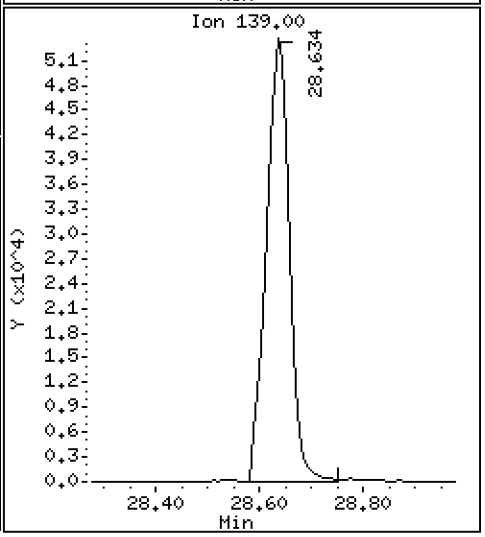


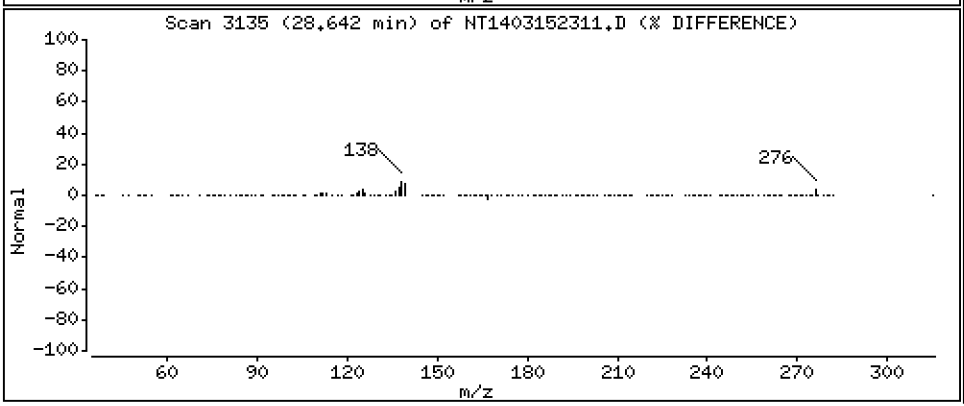












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

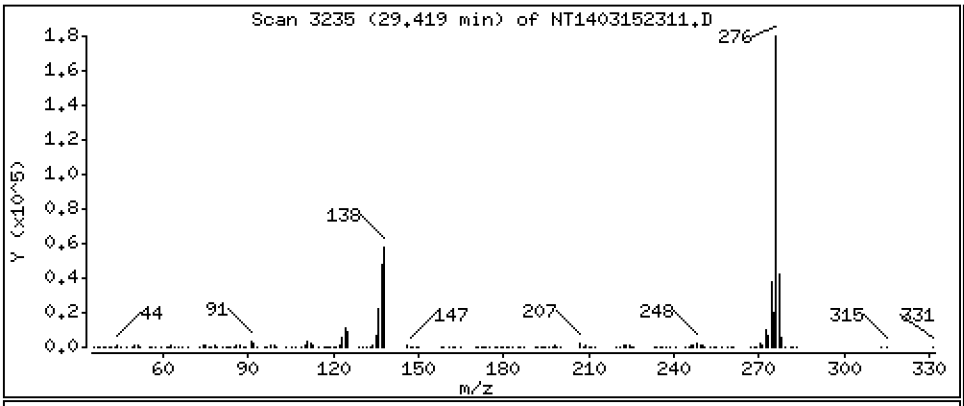
Operator: JGR

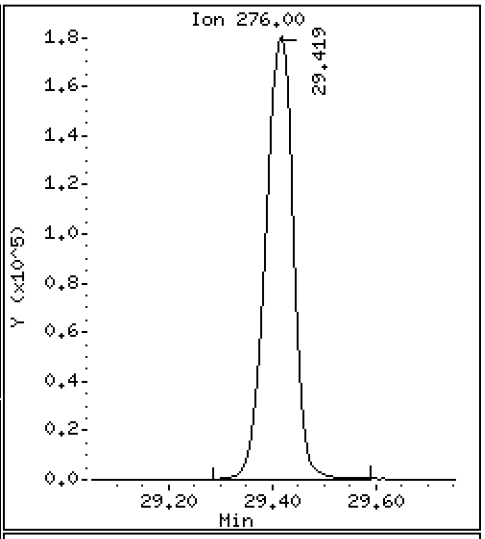
Column phase: ZB-5msi

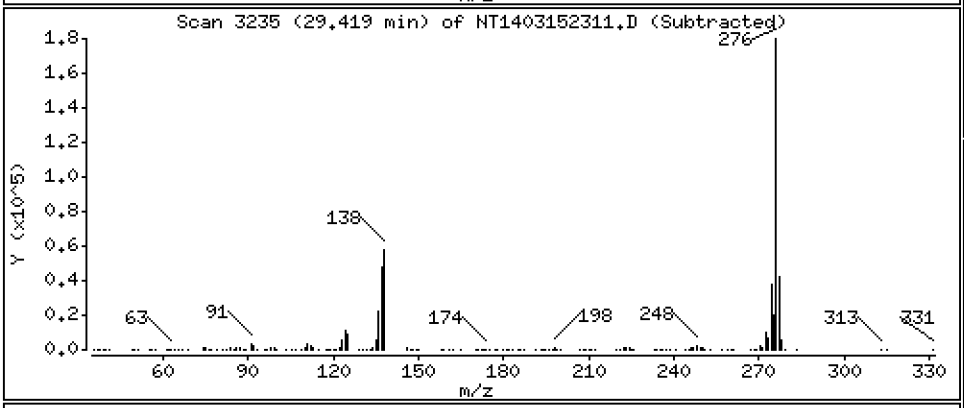
Column diameter: 0.25

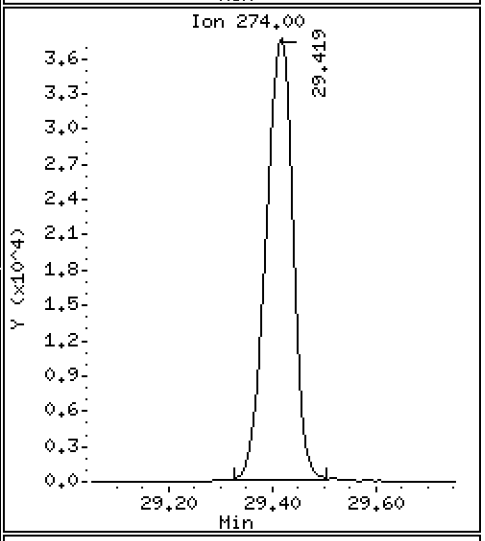
80 Benzo(g,h,i)perylene

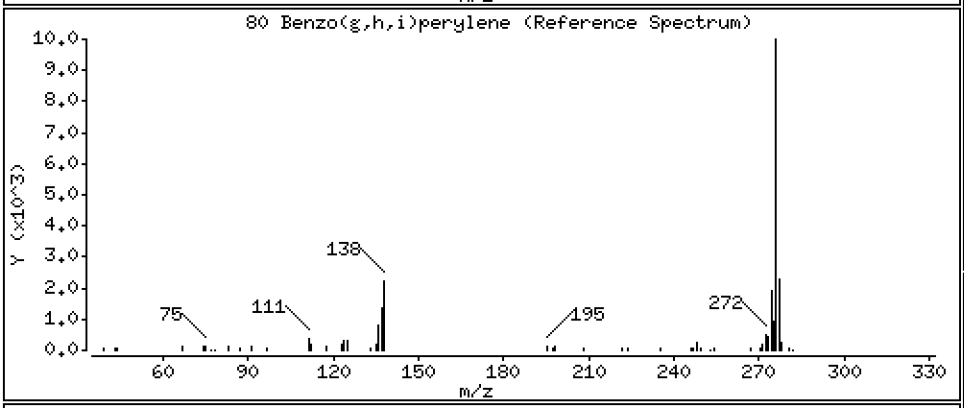
Concentration: 4.939 ug/mL

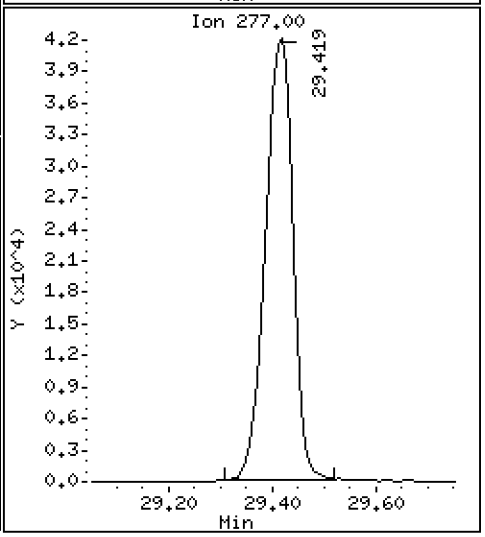


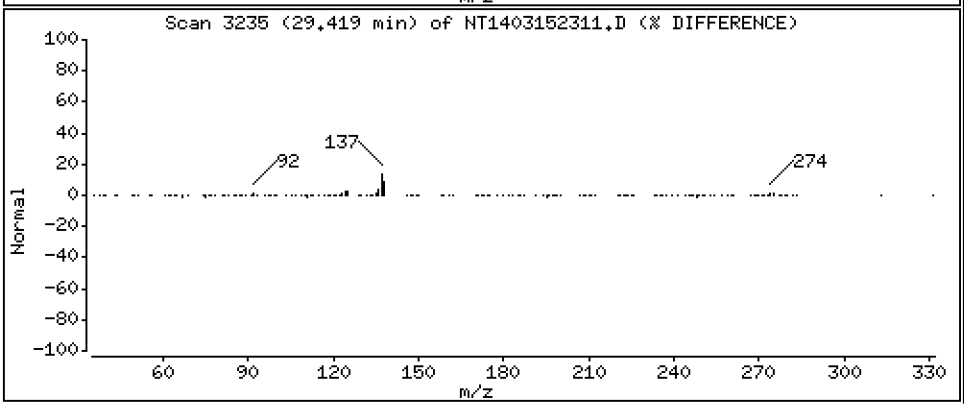












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

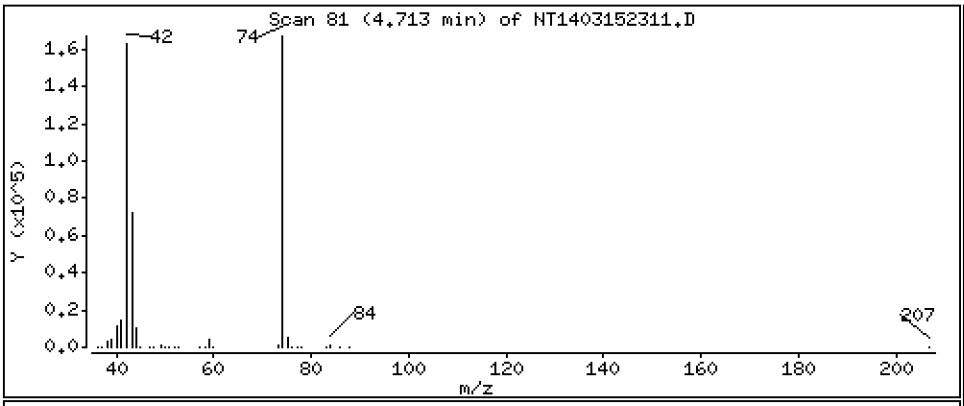
Operator: JGR

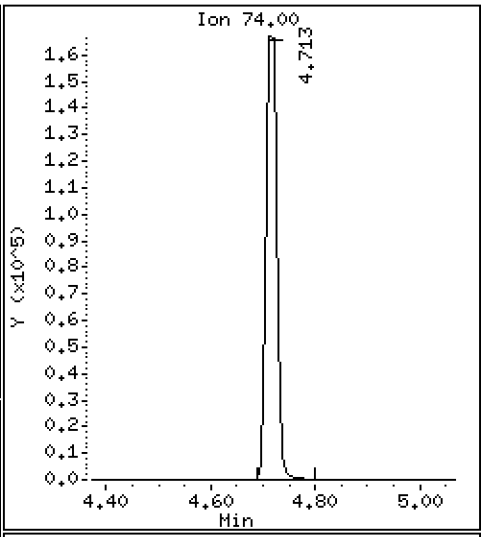
Column phase: ZB-5msi

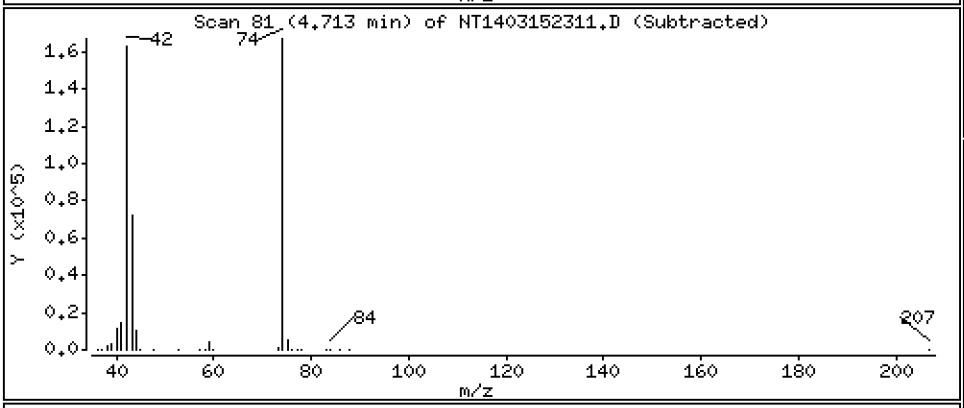
Column diameter: 0.25

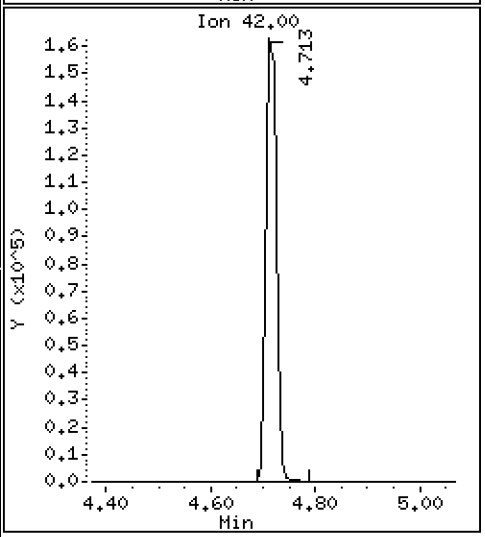
90 N-Nitrosodimethylamine

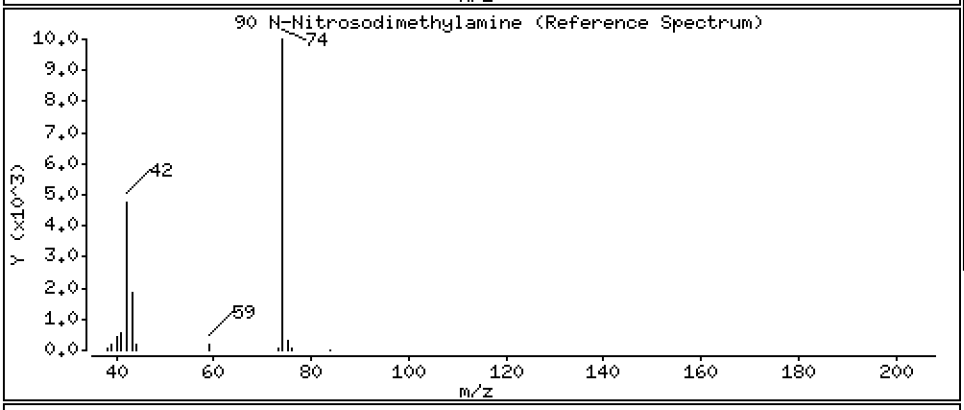
Concentration: 5.200 ug/mL

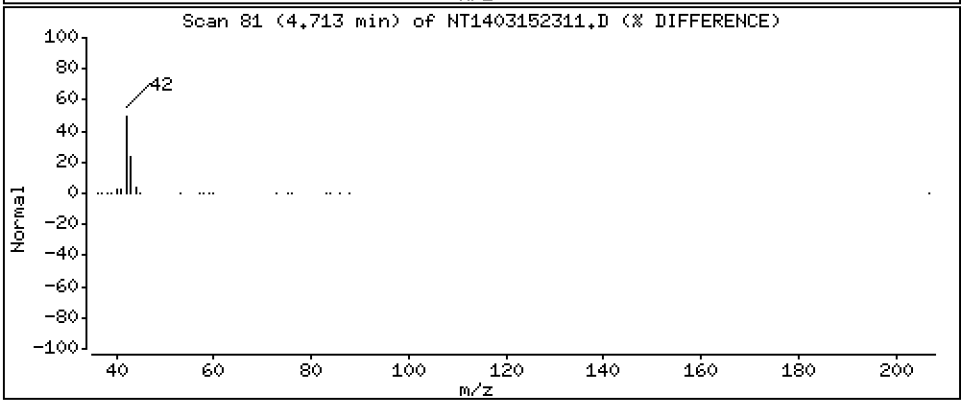












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

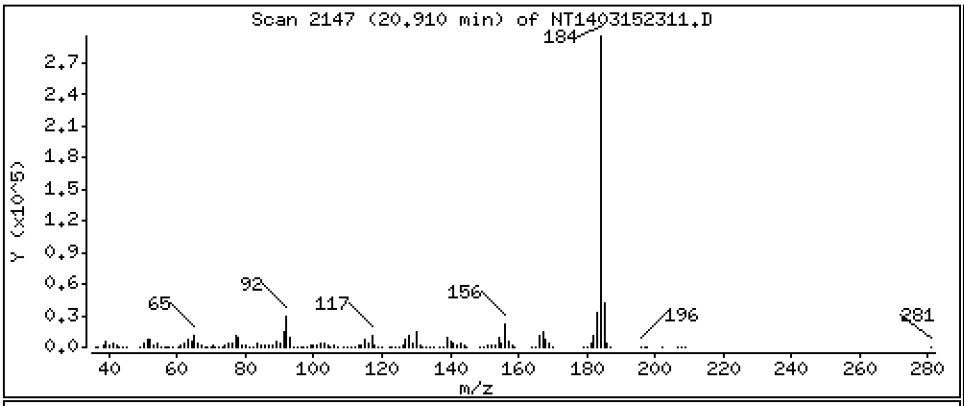
Operator: JGR

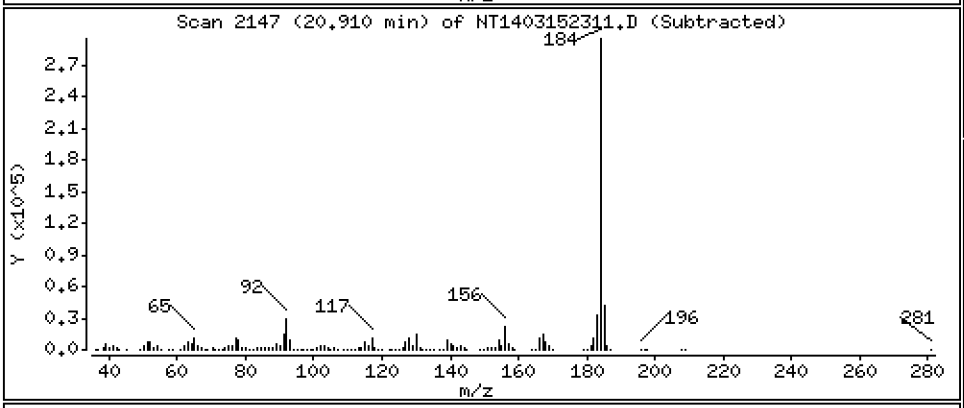
Column phase: ZB-5msi

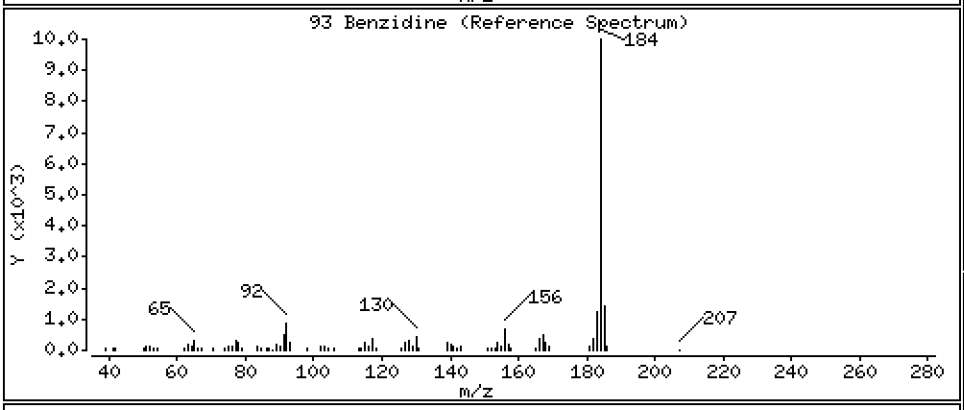
Column diameter: 0.25

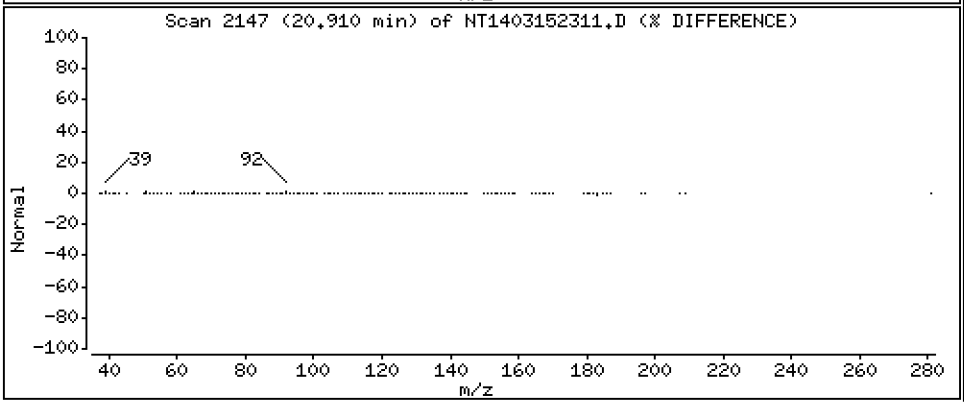
93 Benzidine

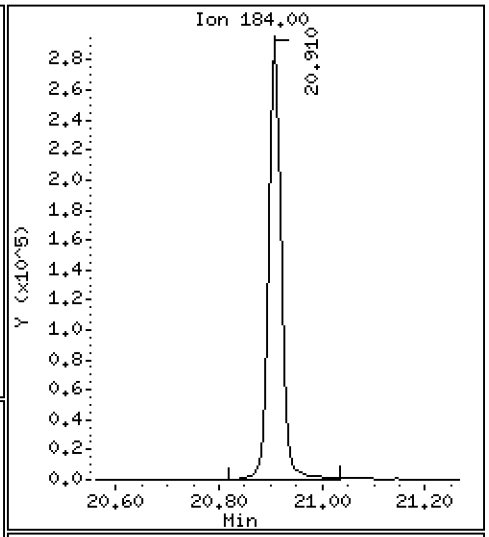
Concentration: 5.646 ug/mL

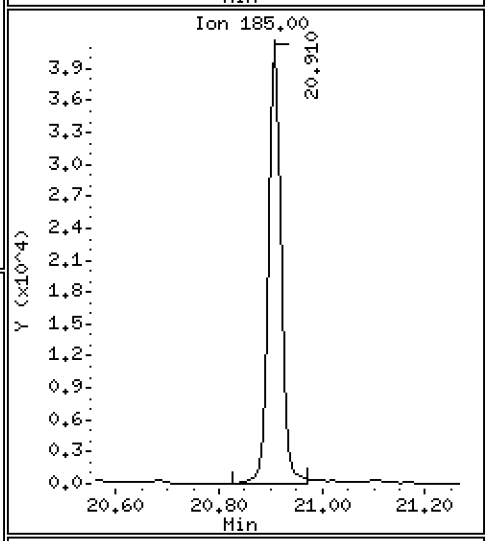


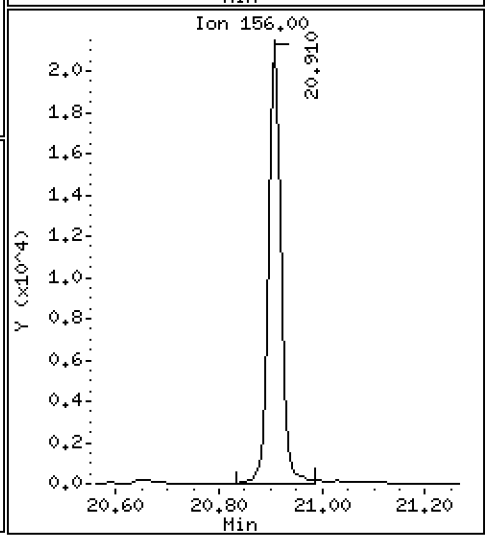












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

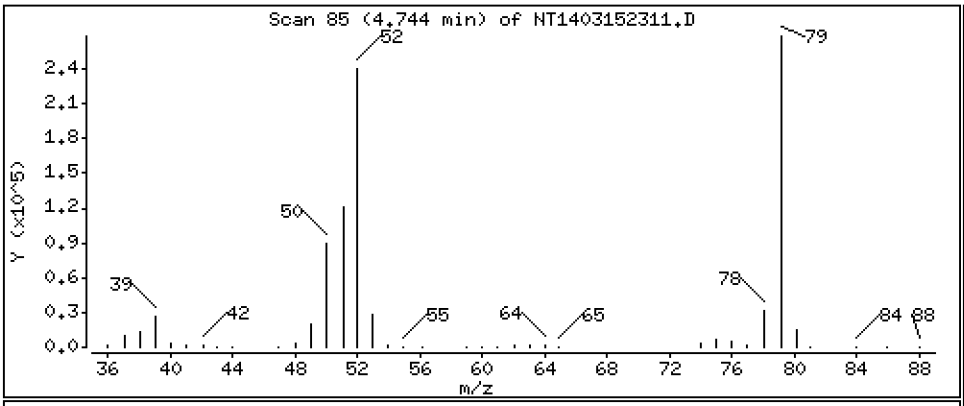
Operator: JGR

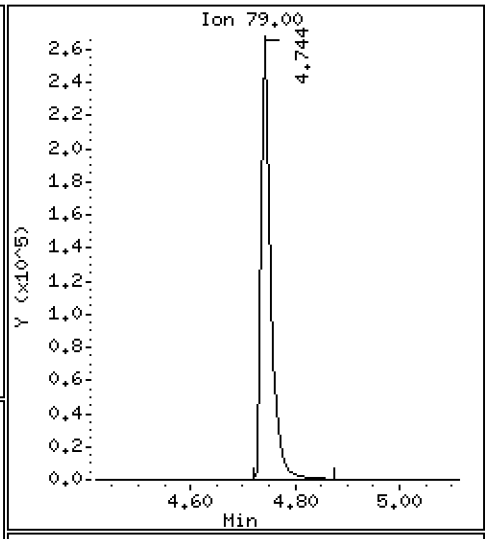
Column phase: ZB-5msi

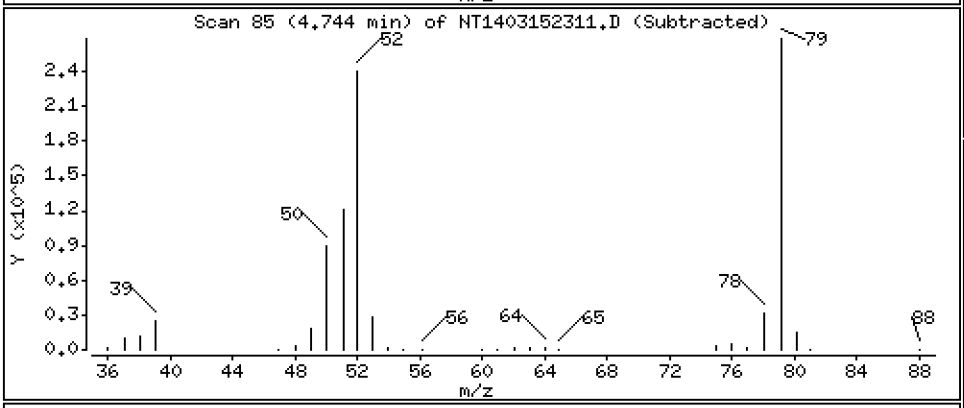
Column diameter: 0.25

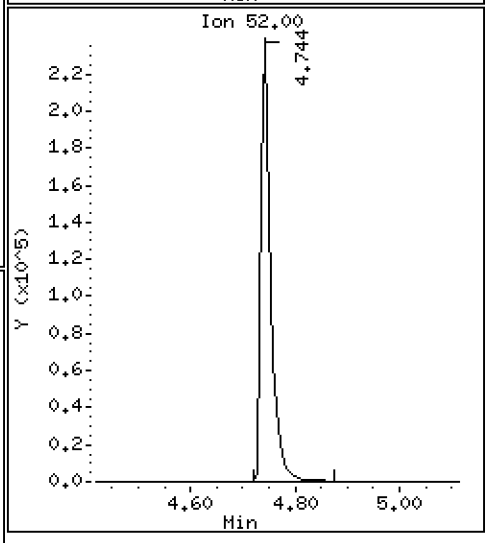
103 Pyridine

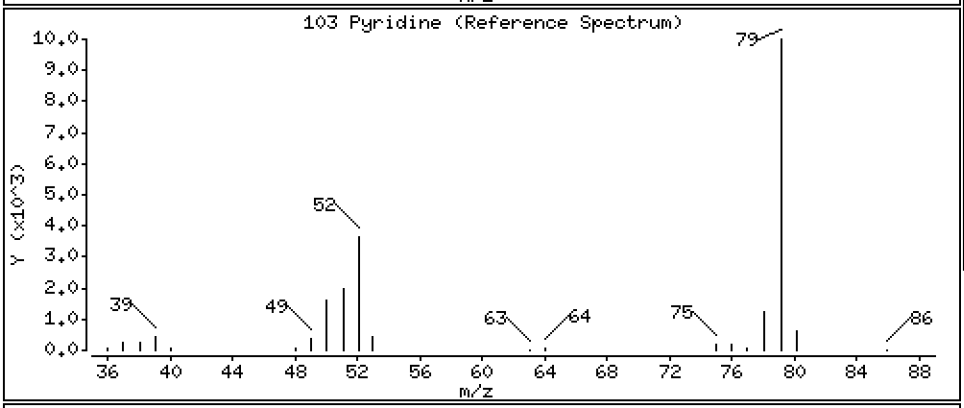
Concentration: 2.648 ug/mL

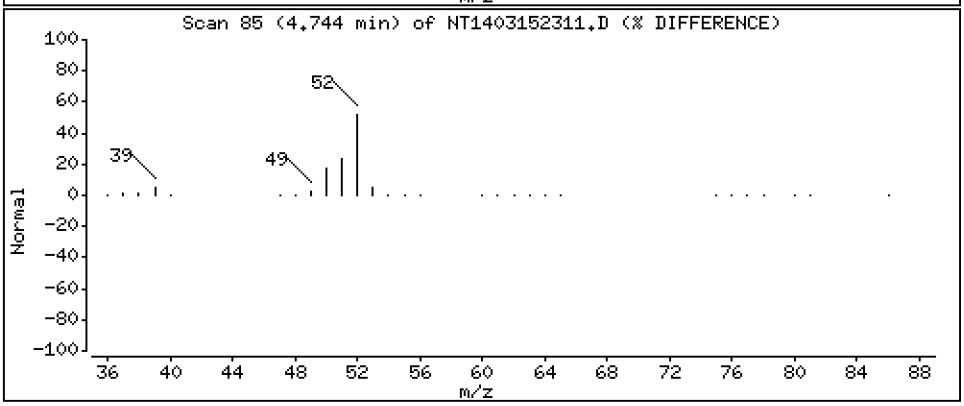












Data File: \\target\share\chem3\nt14.i\20230315.b\NT1403152311.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

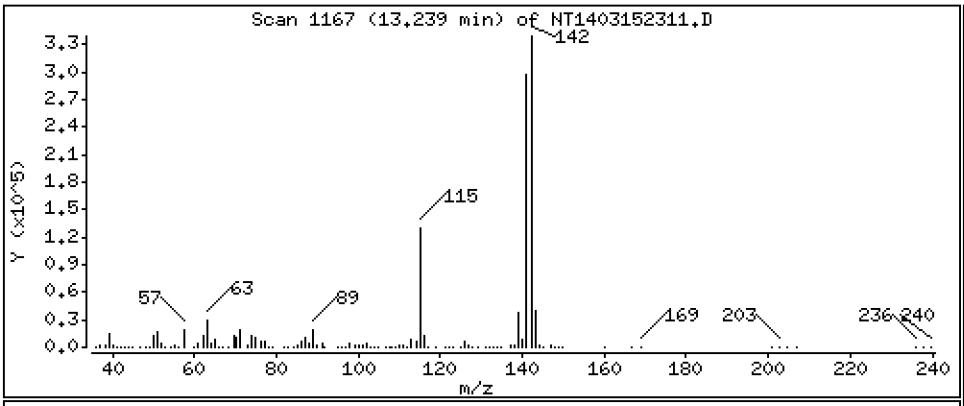
Operator: JGR

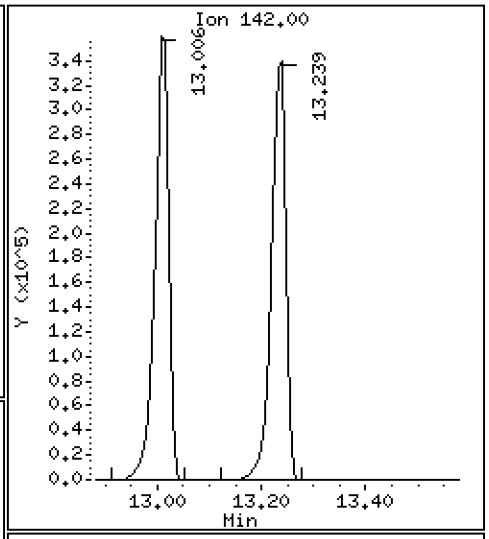
Column phase: ZB-5msi

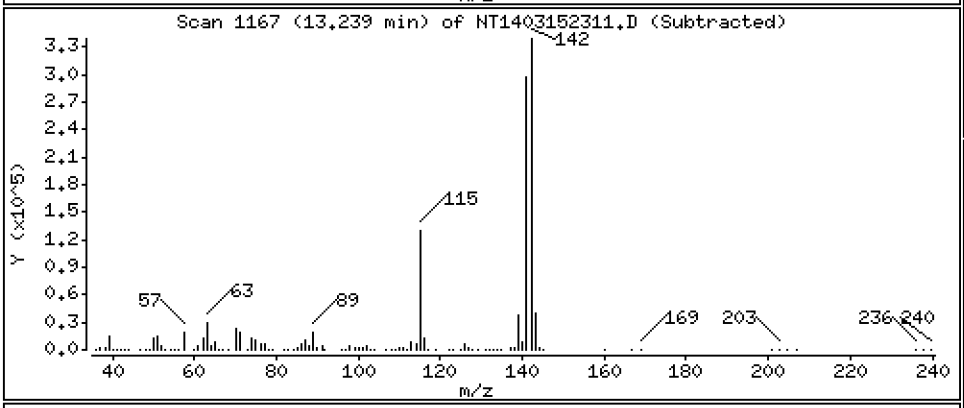
Column diameter: 0.25

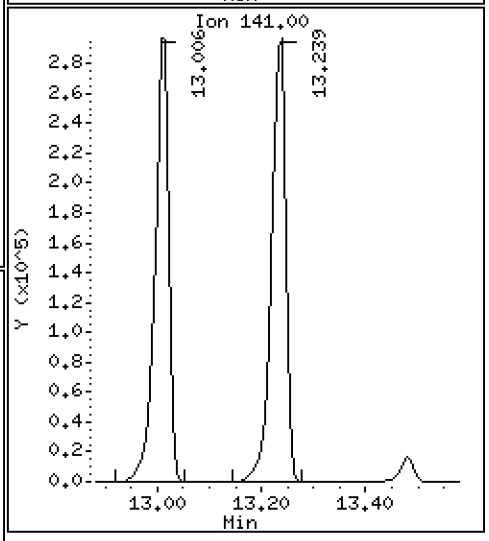
105 1-methylnaphthalene

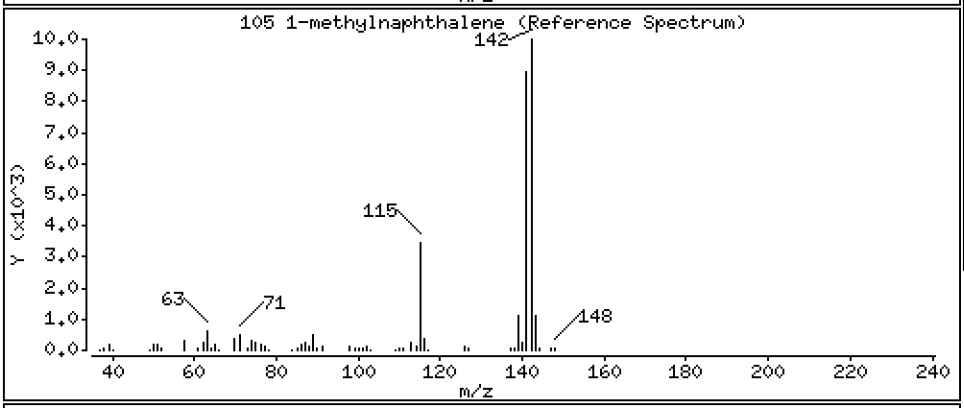
Concentration: 5.103 ug/mL

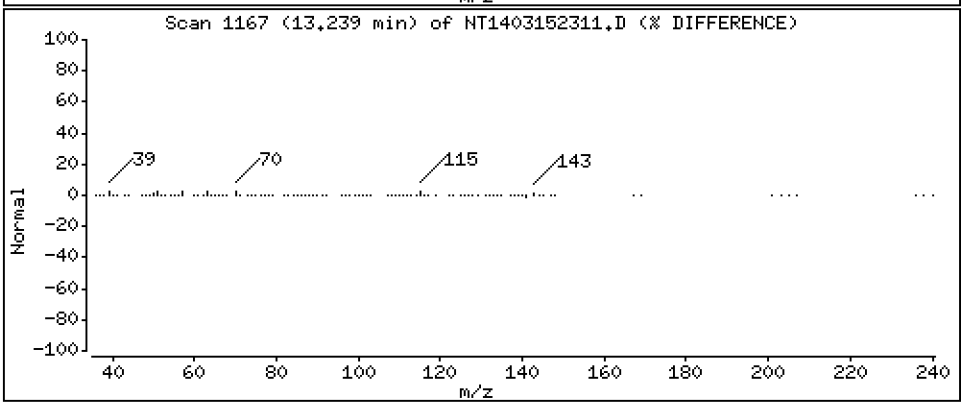












Data File: \\target\share\chem3\nt14.i\20230315.b\NT1403152311.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

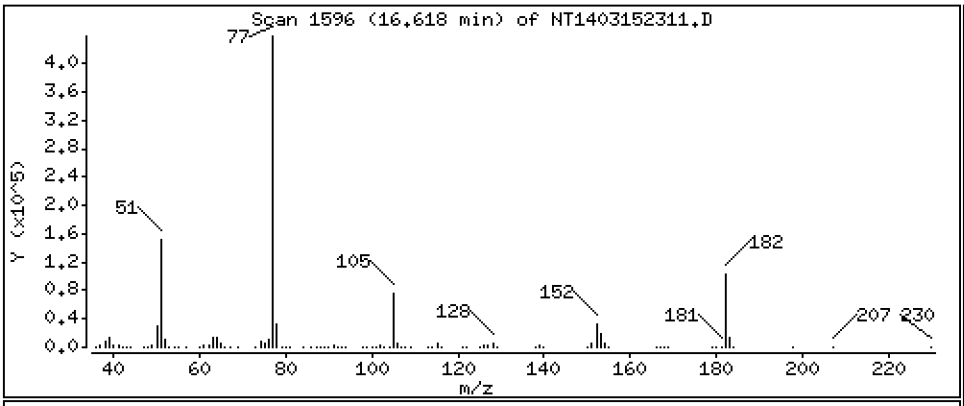
Operator: JGR

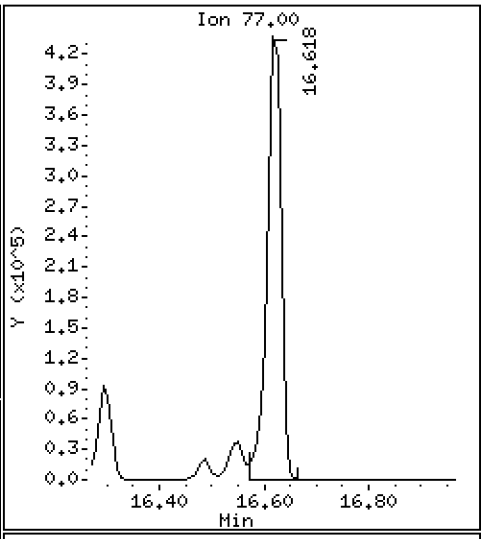
Column phase: ZB-5msi

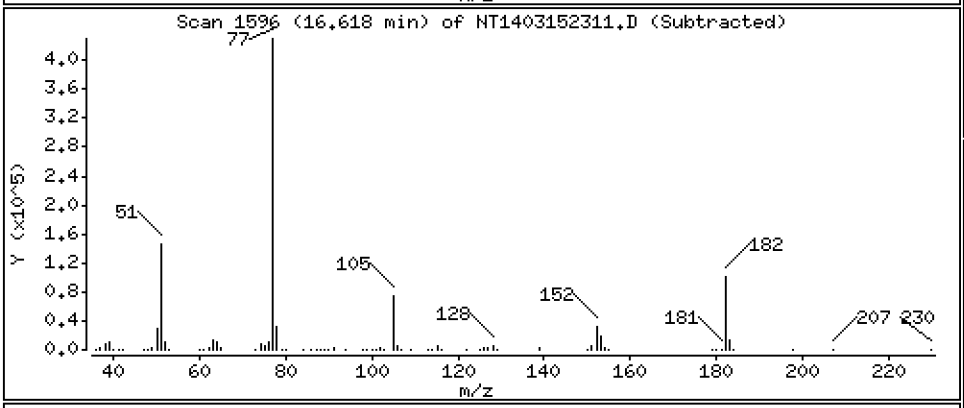
Column diameter: 0.25

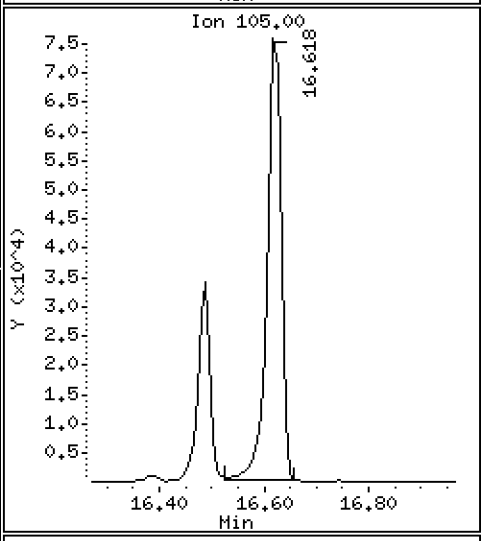
111 Azobenzene (1,2-DP-Hydrazine)

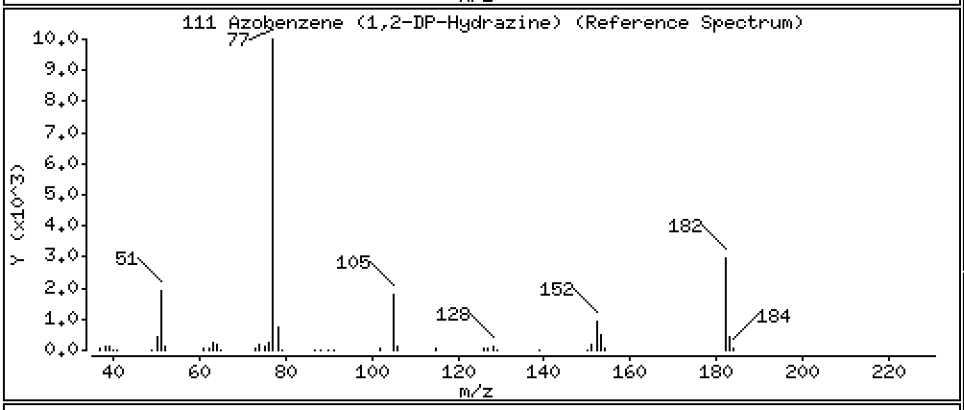
Concentration: 5.002 ug/mL

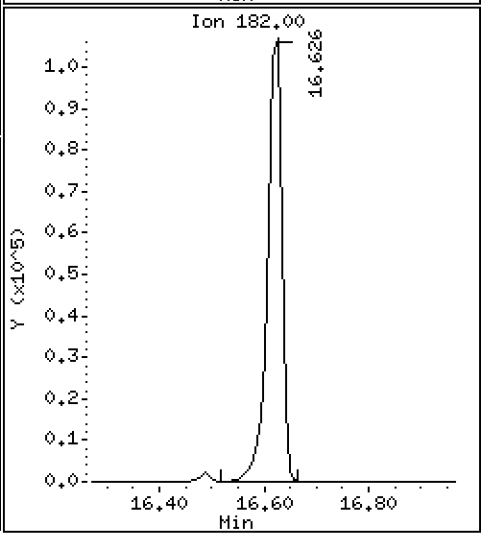


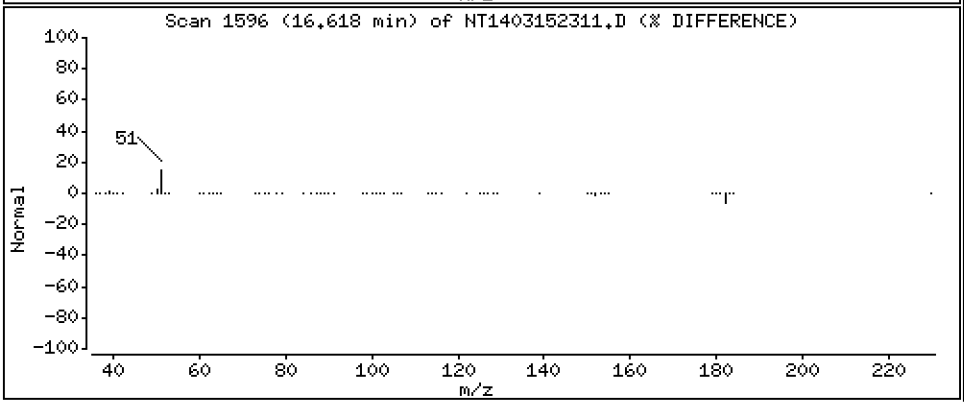












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

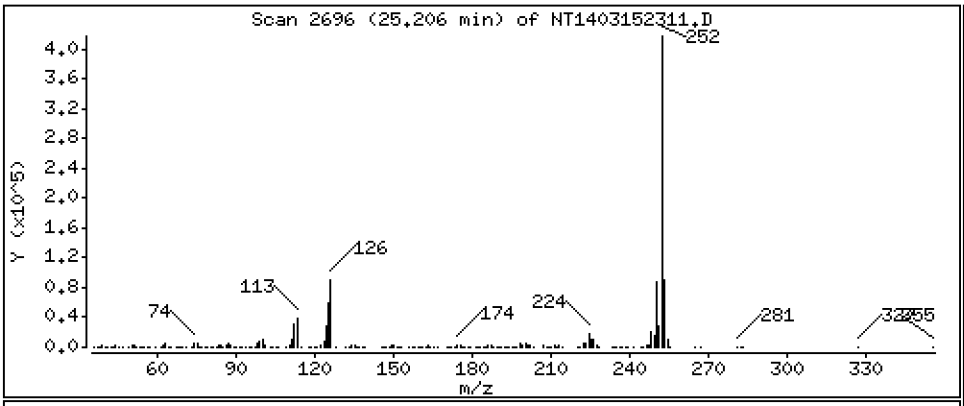
Operator: JGR

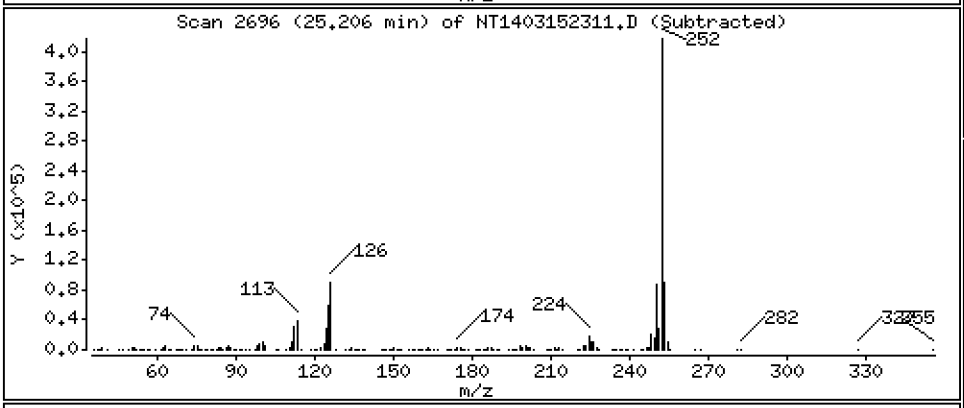
Column phase: ZB-5msi

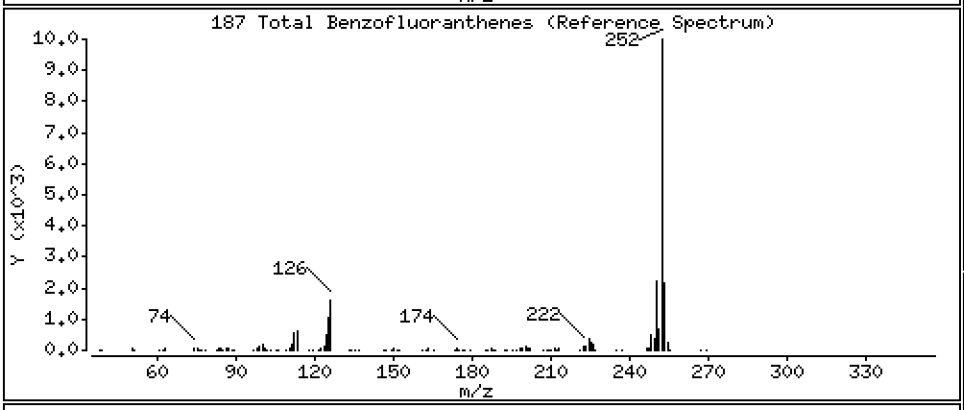
Column diameter: 0.25

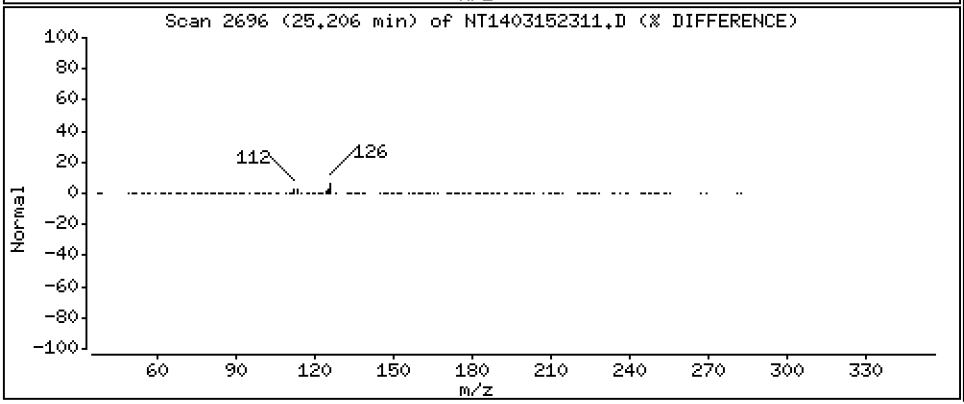
187 Total Benzofluoranthenes

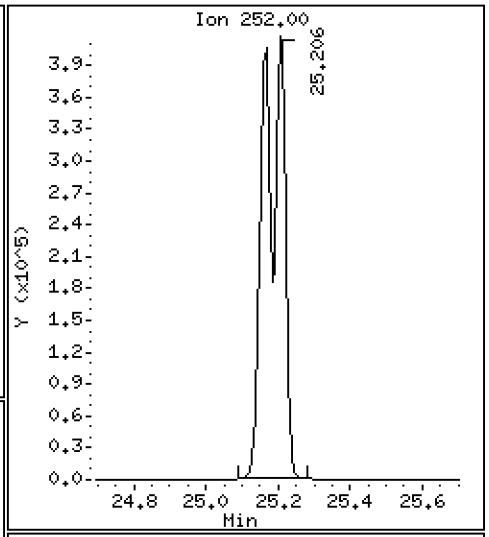
Concentration: 9.756 ug/mL

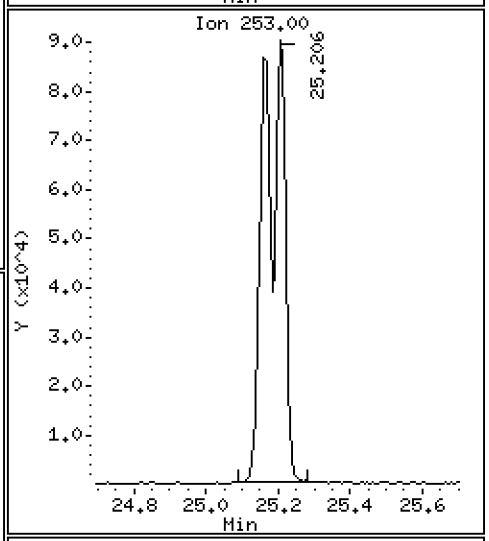


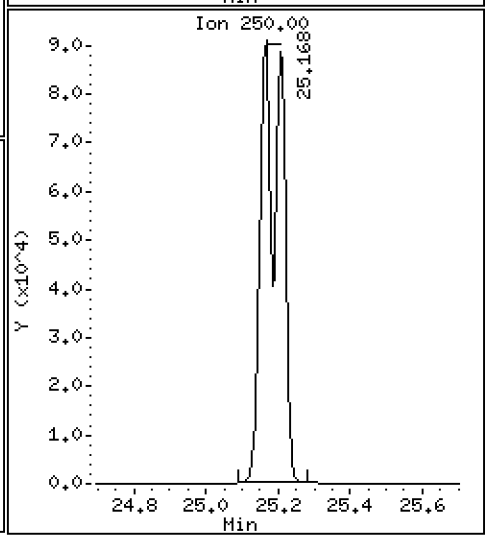












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

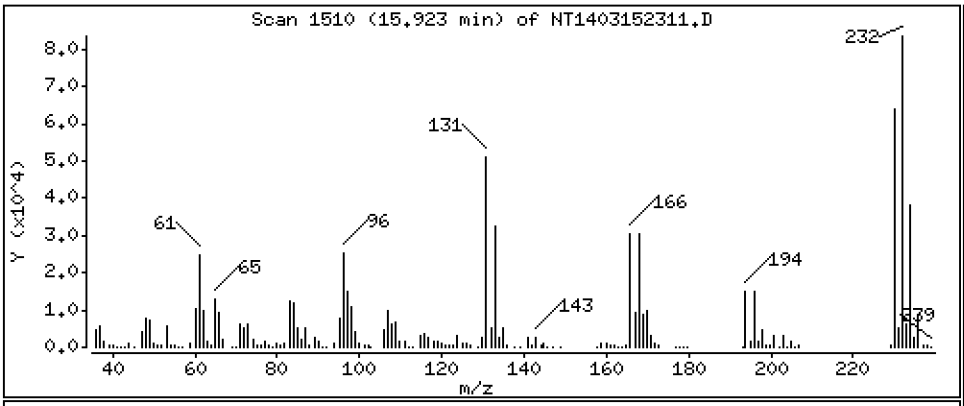
Operator: JGR

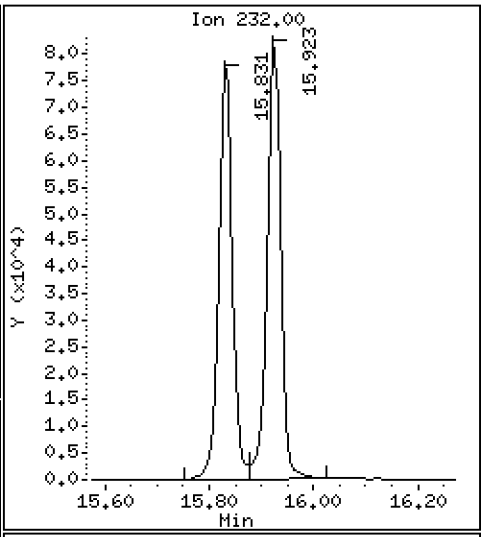
Column phase: ZB-5msi

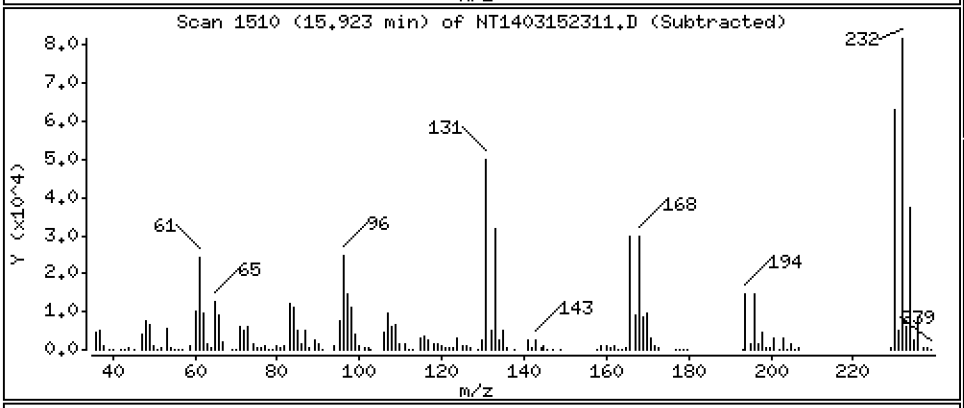
Column diameter: 0.25

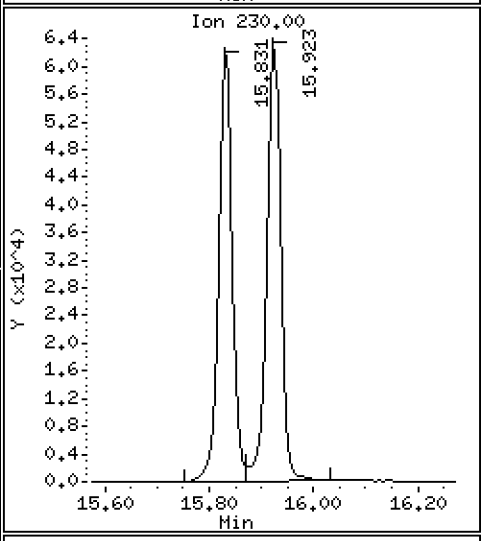
120 2,3,4,6-Tetrachlorophenol

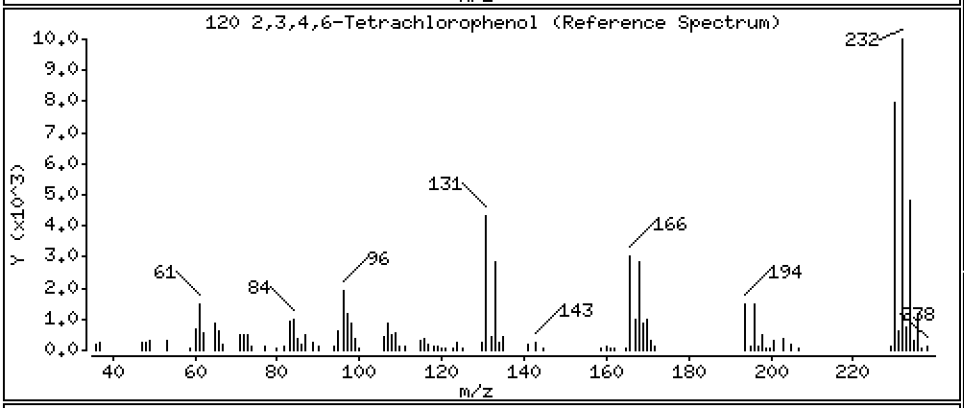
Concentration: 3.569 ug/mL

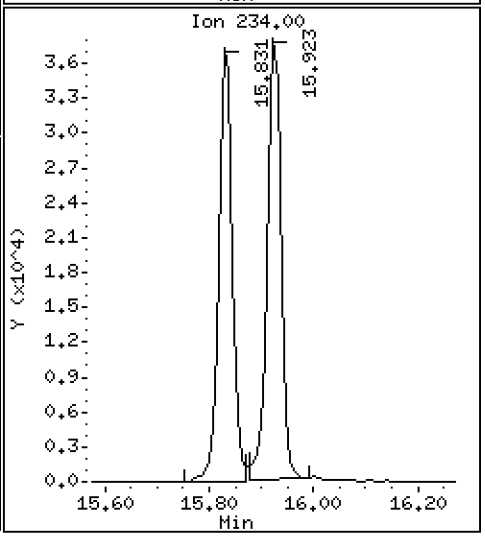


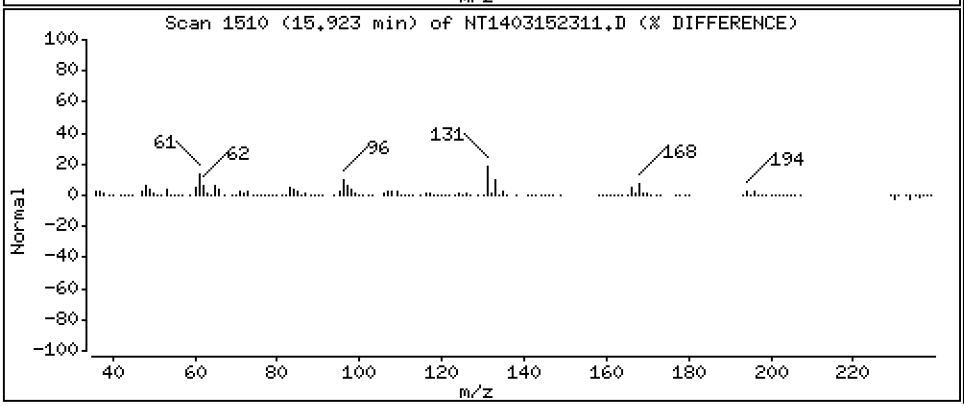












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230315.b\NT1403152311.D
Lab Smp Id: SLC0160-SCV1
Inj Date : 15-MAR-2023 17:39 MS Autotune Date: 11-MAR-2023 16:01
Operator : JGR Inst ID: nt14.i
Smp Info : SLC0160-SCV1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230315.b\ABN.m
Meth Date : 21-Mar-2023 12:29 van Quant Type: ISTD
Cal Date : 15-MAR-2023 15:50 Cal File: NT1403152308.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)	
$	1 2-Fluorophenol	112	Compound Not Detected.						
$	2 Phenol-d5	99	Compound Not Detected.						
	3 Phenol	94	8.436	8.428	(1.000)	409924	4.36782	4.368	
$	5 2-Chlorophenol-d4	132	Compound Not Detected.						
	4 Bis(2-Chloroethyl)ether	93	8.606	8.606	(1.000)	355357	5.25823	5.258	
	6 2-Chlorophenol	128	8.729	8.721	(1.000)	323438	4.37862	4.379	
	7 1,3-Dichlorobenzene	146	9.000	9.000	(1.000)	358409	4.79319	4.793	
*	8 1,4-Dichlorobenzene-d4	152	9.070	9.062	(1.000)	197462	4.00000	(M)	
	9 1,4-Dichlorobenzene	146	9.101	9.093	(1.000)	352132	4.88937	4.889	
$	10 1,2-Dichlorobenzene-d4	152	Compound Not Detected.						
	12 1,2-Dichlorobenzene	146	9.458	9.458	(1.000)	340729	4.78641	4.786	
	11 Benzyl alcohol	108	9.334	9.334	(1.000)	220673	5.05069	5.051	
	14 2,2'-oxybis(1-Chloropropane)	121	9.644	9.644	(1.000)	114247	5.31866	5.319	
	13 2-Methylphenol	108	9.559	9.559	(1.000)	273187	4.11716	4.117	
	17 Hexachloroethane	117	10.056	10.056	(1.000)	152626	4.95501	4.955	
	16 N-Nitroso-di-n-propylamine	70	9.900	9.893	(1.000)	260326	4.98316	4.983	
	15 4-Methylphenol	108	9.830	9.823	(1.000)	337960	4.30182	4.302	
$	18 Nitrobenzene-d5	82	Compound Not Detected.						
	19 Nitrobenzene	77	10.203	10.195	(0.882)	375695	5.02268	5.023	
	20 Isophorone	82	10.653	10.645	(0.921)	691478	6.77053	6.771	
	21 2-Nitrophenol	139	10.831	10.831	(0.936)	194856	4.53030	4.530	
	22 2,4-Dimethylphenol	107	10.878	10.878	(0.940)	250436	3.91450	3.915	
	23 Bis(2-Chloroethoxy)methane	93	11.087	11.080	(0.959)	402865	5.85923	5.859	
	24 Benzoic acid	105	11.064	10.963	(0.956)	444832	8.24795	8.248	
	25 2,4-Dichlorophenol	162	11.289	11.281	(0.976)	243165	4.77930	4.779	
	26 1,2,4-Trichlorobenzene	180	11.482	11.482	(0.993)	315977	5.05188	5.052	
*	27 Naphthalene-d8	136	11.567	11.567	(1.000)	726125	4.00000		
	28 Naphthalene	128	11.606	11.606	(1.003)	936737	4.82884	4.829	
	29 4-Chloroaniline	127	11.729	11.729	(1.014)	327500	4.03279	4.033	
	30 Hexachlorobutadiene	225	11.977	11.977	(1.035)	138599	4.90795	4.908	
	31 4-Chloro-3-methylphenol	107	12.696	12.689	(1.098)	298325	4.85224	4.852	
	32 2-Methylnaphthalene	142	13.006	13.006	(1.124)	656729	4.85435	4.854	
	33 Hexachlorocyclopentadiene	237	13.478	13.486	(0.887)	166439	5.22977	5.230	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
	34 2,4,6-Trichlorophenol	196	13.633	13.625	(0.897)	183263	4.71824	4.718
	35 2,4,5-Trichlorophenol	196	13.703	13.702	(0.902)	188647	4.66090	4.661
$	36 2-Fluorobiphenyl	172	13.695	13.795	(0.901)	426	0.00307	0.003072
	37 2-Chloronaphthalene	162	14.004	14.004	(0.922)	591509	4.97719	4.977
	38 2-Nitroaniline	65	14.260	14.260	(0.938)	234033	5.09985	5.100
	39 Dimethylphthalate	163	14.701	14.693	(0.967)	642281	5.03056	5.031
	40 Acenaphthylene	152	14.887	14.879	(0.980)	974004	4.87938	4.879
	41 2,6-Dinitrotoluene	165	14.840	14.833	(0.977)	153944	5.21947	5.219
*	42 Acenaphthene-d10	164	15.196	15.196	(1.000)	382881	4.00000	
	43 3-Nitroaniline	138	15.119	15.111	(0.995)	211974	5.20957	5.210
	44 Acenaphthene	153	15.266	15.258	(1.005)	578656	4.96504	4.965
	45 2,4-Dinitrophenol	184	15.328	15.328	(1.009)	70613	3.07711	3.077
	46 Dibenzofuran	168	15.590	15.590	(1.026)	824547	4.95562	4.956
	47 4-Nitrophenol	109	15.420	15.420	(1.015)	103988	4.82822	4.828
	48 2,4-Dinitrotoluene	165	15.645	15.645	(1.030)	214010	5.11873	5.119
	50 Diethylphthalate	149	16.163	16.155	(1.064)	686853	5.20331	5.203
	49 Fluorene	166	16.309	16.302	(1.073)	763926	4.84358	4.844
	51 4-Chlorophenyl-phenylether	204	16.294	16.294	(1.072)	337497	4.98506	4.985
	52 4-Nitroaniline	138	16.386	16.379	(1.078)	170484	4.81727	4.817
	53 4,6-Dinitro-2-methylphenol	198	16.487	16.479	(0.904)	109125	4.43923	4.439
	54 N-Nitrosodiphenylamine	169	16.548	16.541	(0.907)	475466	4.95411	4.954
$	55 2,4,6-Tribromophenol	330	Compound Not Detected.					
	56 4-Bromophenyl-phenylether	248	17.304	17.304	(0.949)	169085	5.22559	5.226
	57 Hexachlorobenzene	284	17.621	17.621	(0.966)	163199	4.78004	4.780
	58 Pentachlorophenol	266	17.969	17.977	(0.985)	106585	4.47687	4.477
*	59 Phenanthrene-d10	188	18.240	18.240	(1.000)	706616	4.00000	
	60 Phenanthrene	178	18.294	18.286	(1.003)	955749	4.73403	4.734
	61 Anthracene	178	18.379	18.379	(1.008)	832701	4.28109	4.281
	62 Carbazole	167	18.712	18.704	(1.026)	793728	4.58650	4.587
	63 Di-n-butylphthalate	149	19.509	19.509	(1.070)	1207956	5.50673	5.507
	64 Fluoranthene	202	20.677	20.677	(0.887)	1031812	5.02399	5.024
	65 Pyrene	202	21.103	21.103	(0.906)	1044240	4.95802	4.958
$	66 Terphenyl-d14	244	21.381	21.389	(0.918)	662	0.00464	0.004643
	67 Butylbenzylphthalate	149	22.310	22.310	(0.957)	529418	5.73747	5.737
	68 Benzo(a)anthracene	228	23.270	23.263	(0.999)	898379	4.82654	4.827
*	69 Chrysene-d12	240	23.301	23.294	(1.000)	504808	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.224	23.216	(0.997)	586696	10.6467	10.65
	71 Chrysene	228	23.340	23.340	(1.002)	795614	4.72292	4.723
	72 bis(2-Ethylhexyl)phthalate	149	23.340	23.332	(0.960)	706123	5.42778	5.428
*	134 Di-n-octylphthalate-d4	153	24.323	24.323	(1.000)	988248	4.00000	
	73 Di-n-octylphthalate	149	24.331	24.331	(1.000)	1304643	5.13544	5.135
	74 Benzo(b)fluoranthene	252	25.167	25.152	(0.970)	838016	4.77369	4.774
	75 Benzo(k)fluoranthene	252	25.206	25.198	(0.972)	887530	5.10013	5.100
	76 Benzo(a)pyrene	252	25.825	25.818	(0.996)	747283	4.97798	4.978
*	77 Perylene-d12	264	25.941	25.934	(1.000)	496785	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	28.626	28.610	(1.103)	807644	4.94309	4.943
	79 Dibenzo(a,h)anthracene	278	28.641	28.626	(1.104)	669918	4.86500	4.865
	80 Benzo(g,h,i)perylene	276	29.418	29.403	(1.134)	665079	4.93915	4.939
	90 N-Nitrosodimethylamine	74	4.712	4.720	(1.000)	220898	5.19984	5.200
	91 Aniline	93	Compound Not Detected.					
	93 Benzidine	184	20.909	20.909	(0.897)	466644	5.64609	5.646
	103 Pyridine	79	4.743	4.766	(1.000)	348414	2.64838	2.648
	105 1-methylnaphthalene	142	13.238	13.230	(1.144)	625458	5.10291	5.103
	111 Azobenzene (1,2-DP-Hydrazine)	77	16.618	16.618	(1.094)	788522	5.00236	5.002

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.206	25.199	(0.972)	1626530	9.75586	9.756
120 2,3,4,6-Tetrachlorophenol	232	15.923	15.923	(1.048)	141312	3.56895	3.569

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1403152311.D
Lab Smp Id: SLC0160-SCV1
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt14.i\20230315.b\ABN.m
Misc Info:

Calibration Date: 15-MAR-2023
Calibration Time: 13:26
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	194517	97259	389034	197462	1.51
27 Naphthalene-d8	721321	360661	1442642	726125	0.67
42 Acenaphthene-d10	379602	189801	759204	382881	0.86
59 Phenanthrene-d10	703194	351597	1406388	706616	0.49
69 Chrysene-d12	504769	252385	1009538	504808	0.01
134 Di-n-octylphthala	978492	489246	1956984	988248	1.00
77 Perylene-d12	484073	242037	968146	496785	2.63

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.07	8.57	9.57	9.07	-0.00
27 Naphthalene-d8	11.57	11.07	12.07	11.57	-0.00
42 Acenaphthene-d10	15.20	14.70	15.70	15.20	-0.05
59 Phenanthrene-d10	18.25	17.75	18.75	18.24	-0.04
69 Chrysene-d12	23.30	22.80	23.80	23.30	-0.00
134 Di-n-octylphthala	24.32	23.82	24.82	24.32	-0.00
77 Perylene-d12	25.94	25.44	26.44	25.94	-0.00

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

REVIEW SUMMARY FOR FILE - NT1403152311.D

Lab ID: SLC0160-SCV1
nt14.i, ABN.m, 15-MAR-2023 17:39

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

** FIRST SURROGATE NOT FOUND. ICAL Check not performed **

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
1.000	1.064	-0.0642	2,2'-oxybis(1-Chloropropane)
0.956	0.948	0.0087	Benzoic acid
0.901	0.908	-0.0066	2-Fluorobiphenyl

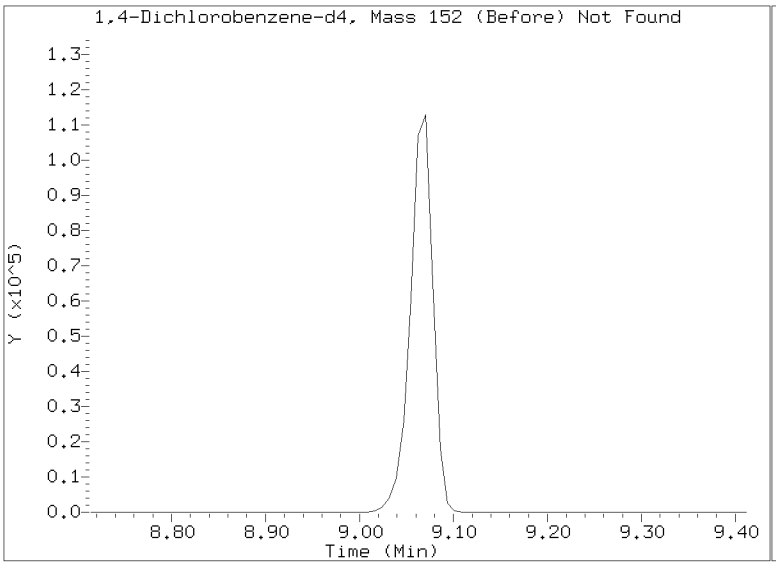
RRT check based on Ccal File: NT1403152308.D

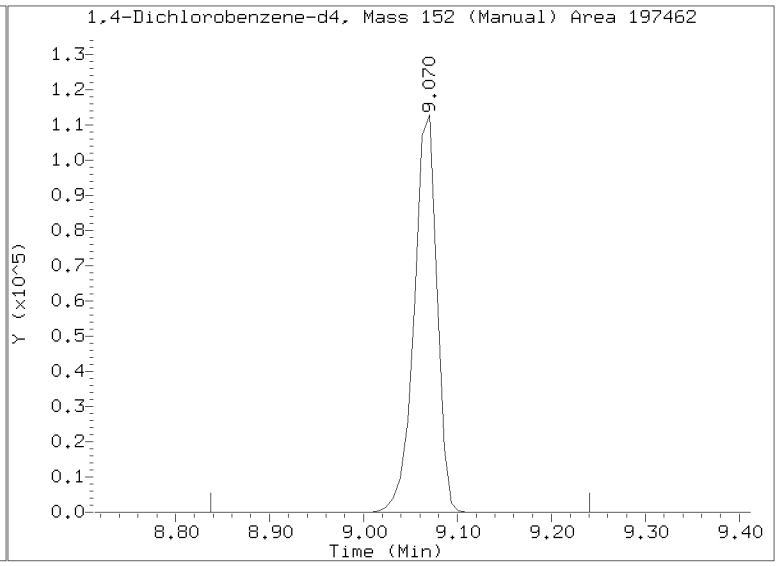
On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

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

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230315.b/NT1403152311.D
Injection Date: 15-MAR-2023 17:39
Lab ID:SLC0160-SCV1 Client ID:
Report Date: 03/21/2023 12:48





LOW-CONCENTRATION CALIBRATION VERIFICATION

EPA 8270E

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GC00048
Laboratory ID: SLC0335-LCV1
Sequence: SLC0335
Standard ID: K011105

ANALYTE	EXPECTED (ug/mL)	FOUND (ug/mL)	% DRIFT	QC LIMIT
Phenol	0.20000	0.2	-19.9	50.00
4-Methylphenol	0.20000	0.2	-20.8	50.00
Naphthalene	0.20000	0.2	4.2	50.00
2-Methylnaphthalene	0.20000	0.2	-0.7	50.00
Acenaphthylene	0.20000	0.2	-3.1	50.00
Dimethylphthalate	0.20000	0.2	-2.2	50.00
Acenaphthene	0.20000	0.2	1.2	50.00
Dibenzofuran	0.20000	0.2	2.1	50.00
Fluorene	0.20000	0.2	-14.5	50.00
Phenanthrene	0.20000	0.2	-0.3	50.00
Anthracene	0.20000	0.2	-11.4	50.00
Fluoranthene	0.20000	0.2	4.6	50.00
Pyrene	0.20000	0.2	6.6	50.00
Butylbenzylphthalate	0.20000	0.2	-8.2	50.00
Benzo(a)anthracene	0.20000	0.2	4.1	50.00
Chrysene	0.20000	0.2	0.6	50.00
bis(2-Ethylhexyl)phthalate	0.20000	0.2	-2.1	50.00
Benzofluoranthenes, Total	0.40000	0.4	-1.3	50.00
Benzo(a)pyrene	0.20000	0.2	-9.9	50.00
Indeno(1,2,3-cd)pyrene	0.20000	0.1	-31.7	50.00
Dibenzo(a,h)anthracene	0.20000	0.1	-29.7	50.00
Benzo(g,h,i)perylene	0.20000	0.1	-28.1	50.00
2-Fluorophenol	0.30000	0.252	-16.0	50.00
Phenol-d5	0.30000	0.253	-15.7	50.00
2-Chlorophenol-d4	0.30000	0.290	-3.5	50.00
1,2-Dichlorobenzene-d4	0.20000	0.217	8.5	50.00
Nitrobenzene-d5	0.20000	0.182	-9.1	50.00
2-Fluorobiphenyl	0.20000	0.206	3.0	50.00
2,4,6-Tribromophenol	0.30000	0.233	-22.5	50.00

LOW-CONCENTRATION CALIBRATION VERIFICATION
EPA 8270E

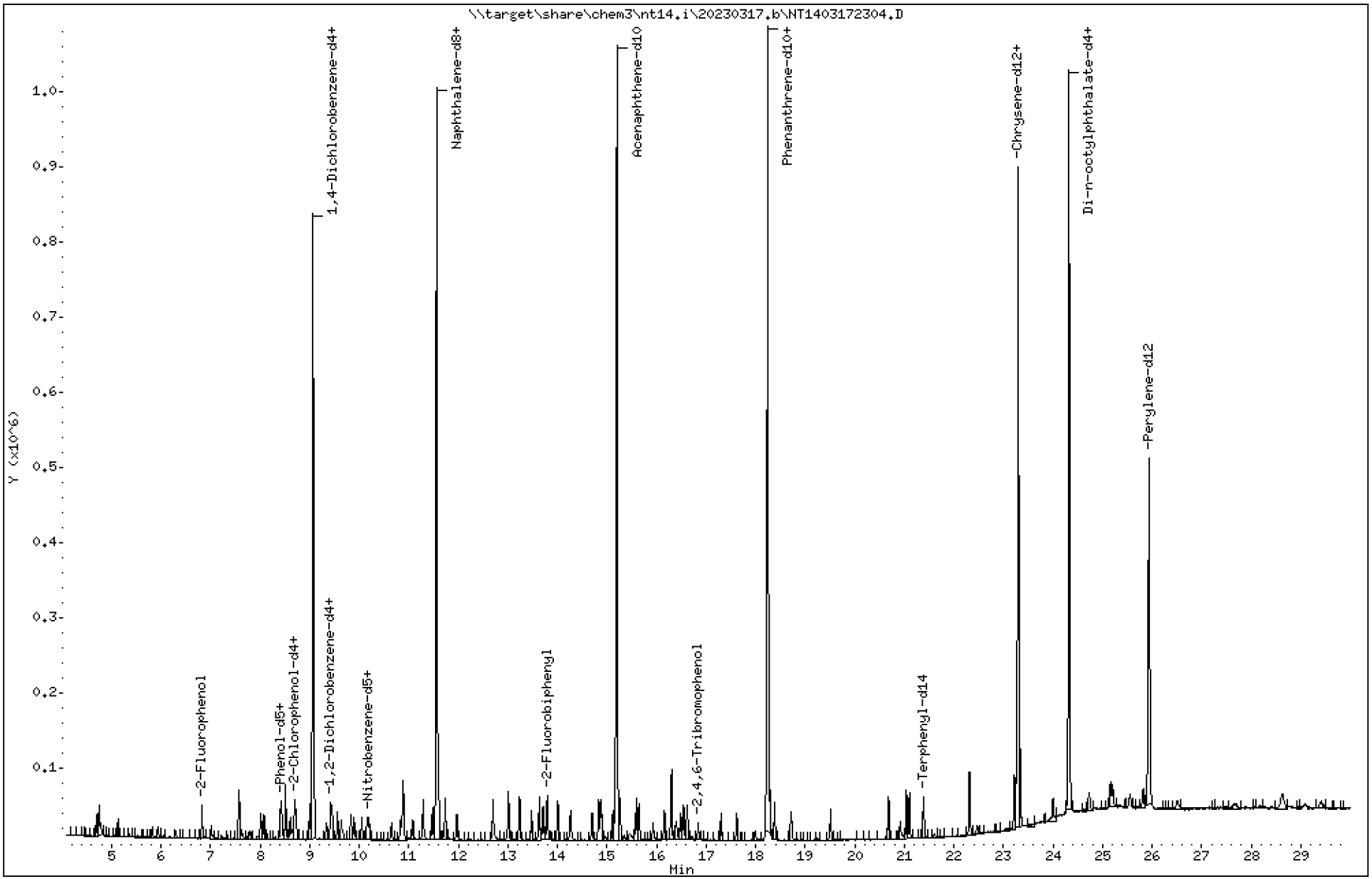
Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GC00048
Laboratory ID: SLC0335-LCV1
Sequence: SLC0335
Standard ID: K011105

p-Terphenyl-d14	0.20000	0.227	13.3	50.00

* Values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172304.D
Date : 17-MAR-2023 16:16
Client ID:
Sample Info: SLC0335-LCV1

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



Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172304.D

Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

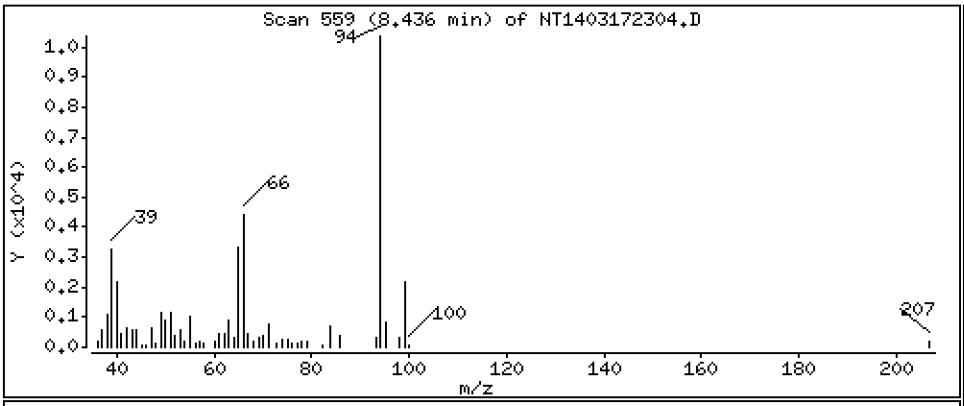
Operator: JGR

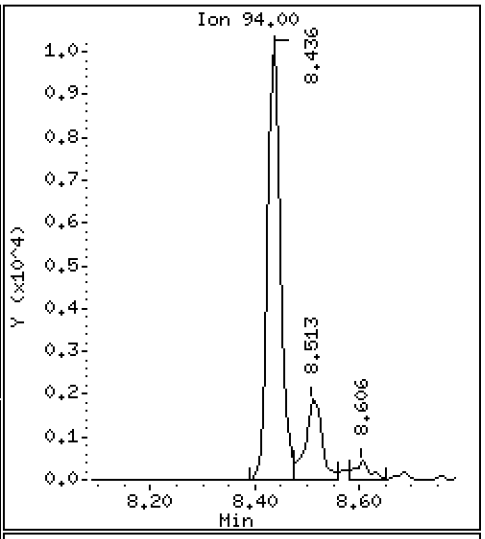
Column phase: ZB-5msi

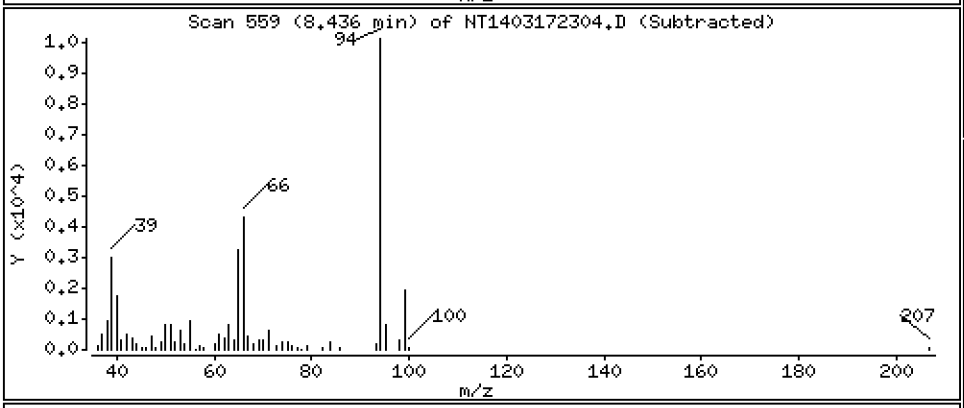
Column diameter: 0.25

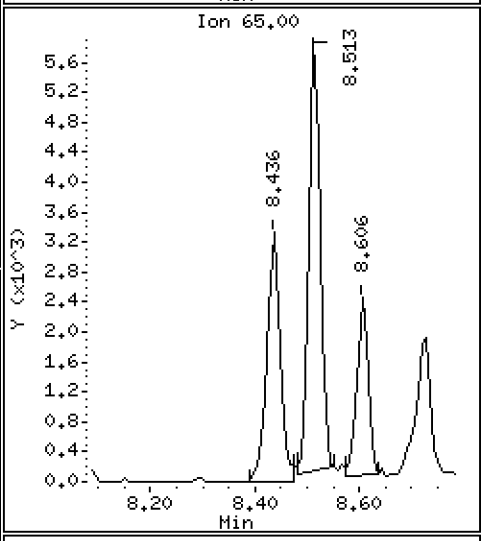
3 Phenol

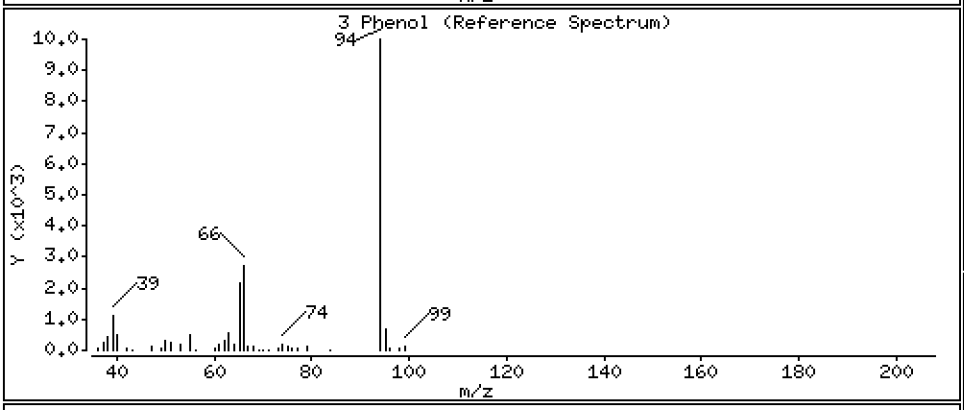
Concentration: 0.1603 ug/mL

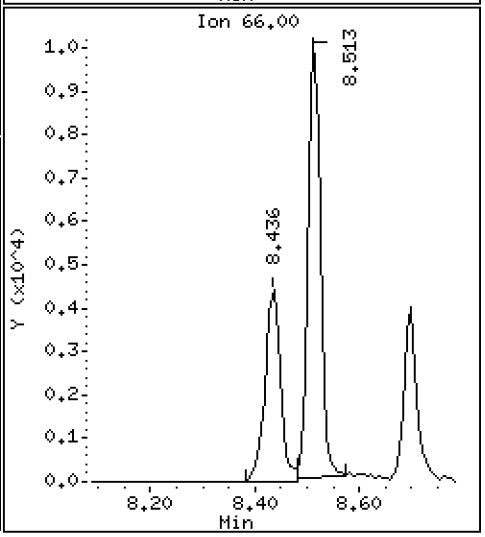


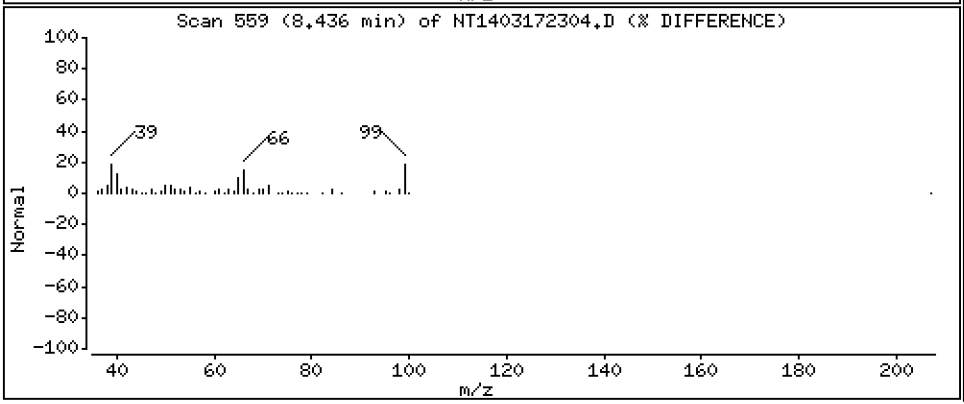












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

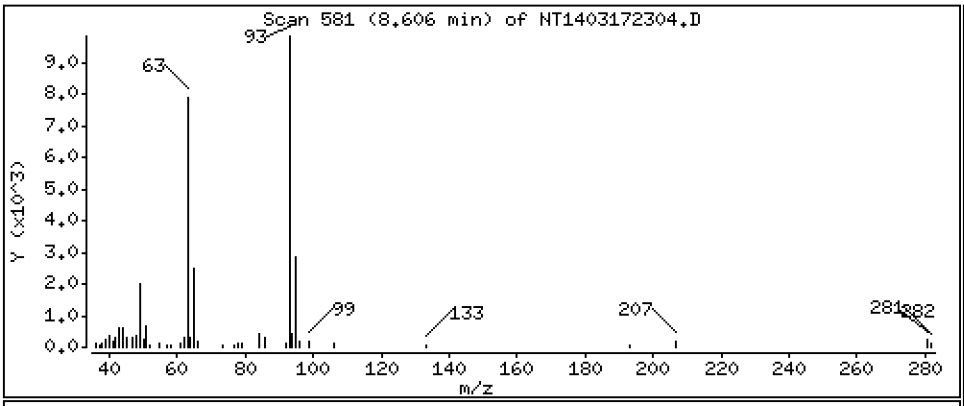
Operator: JGR

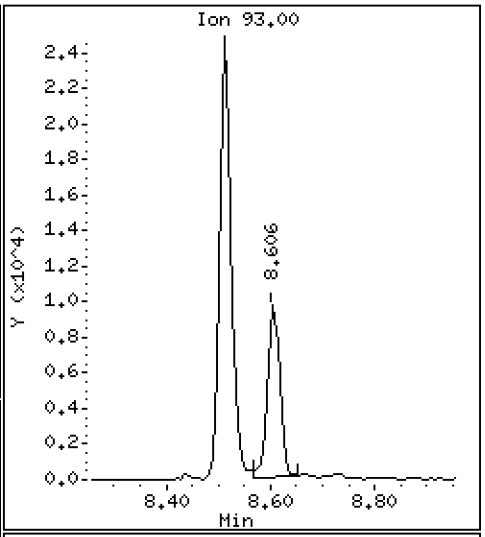
Column phase: ZB-5msi

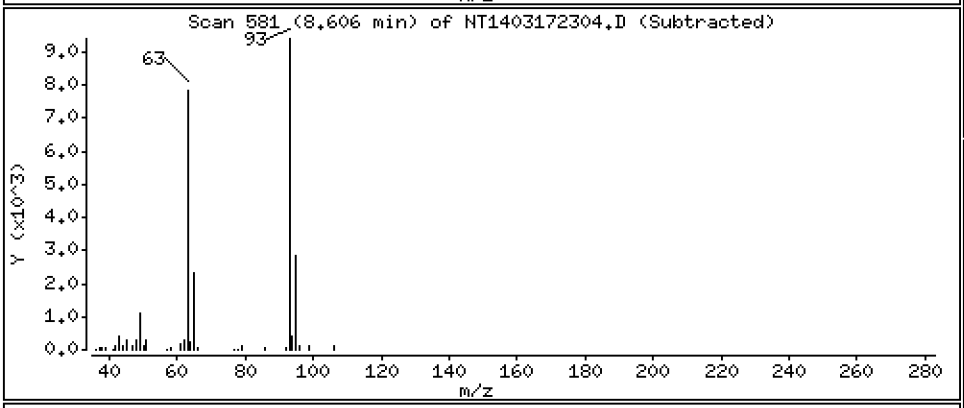
Column diameter: 0.25

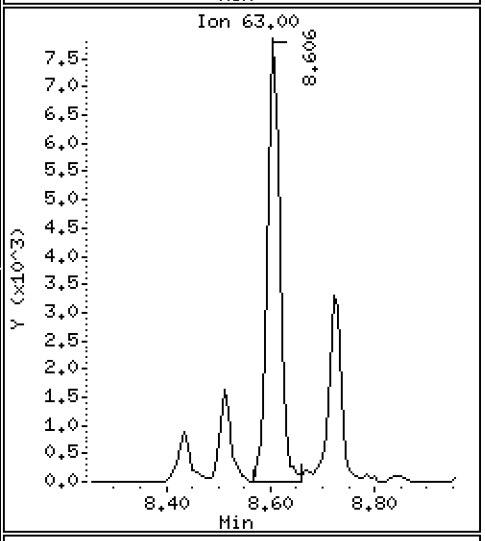
4 Bis(2-Chloroethyl)ether

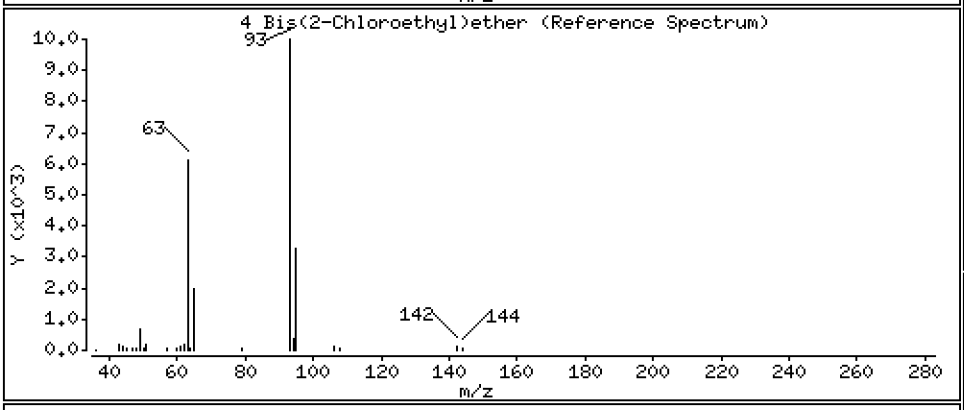
Concentration: 0.2004 ug/mL

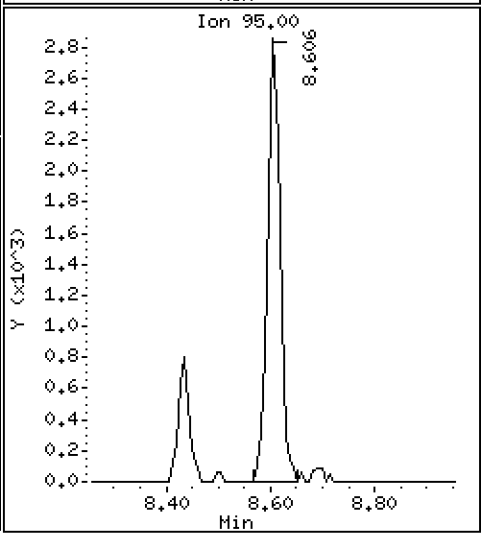


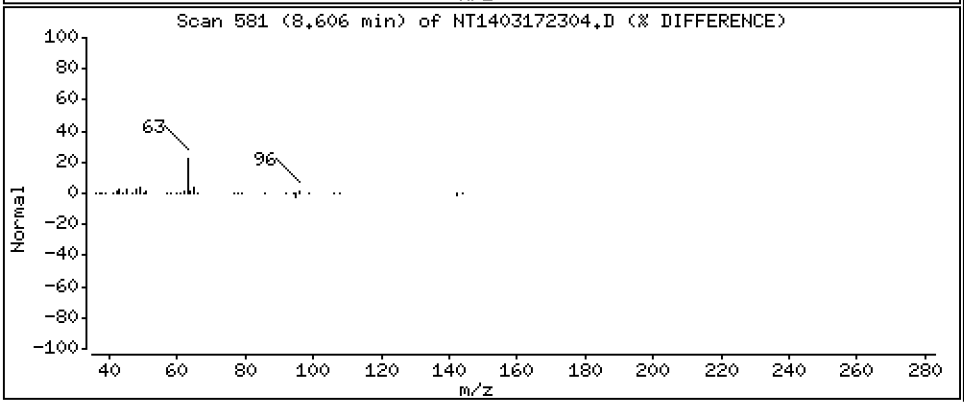












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

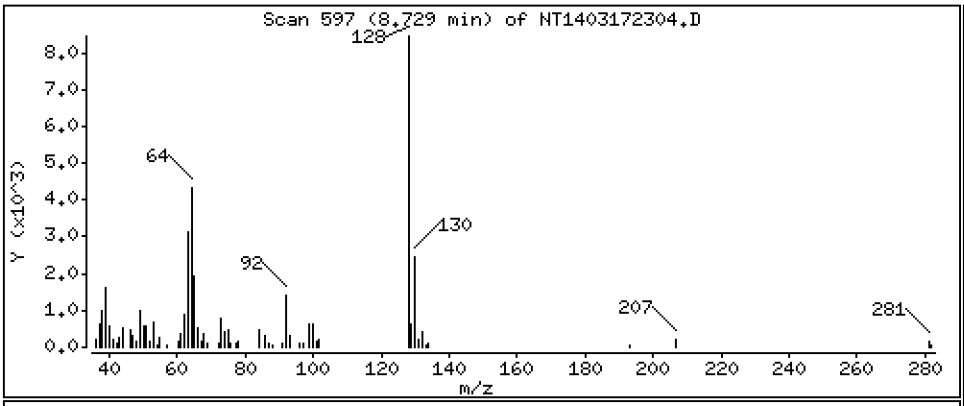
Operator: JGR

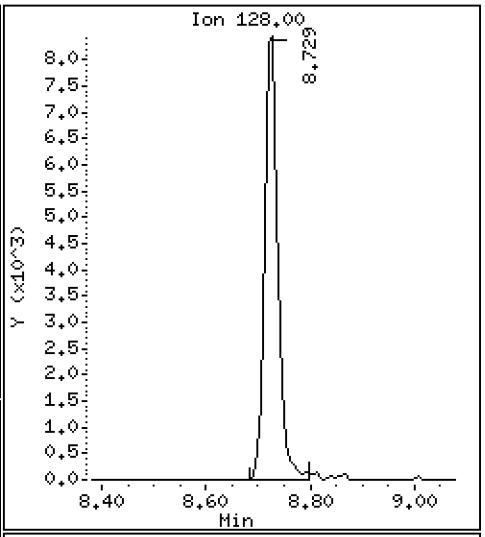
Column phase: ZB-5msi

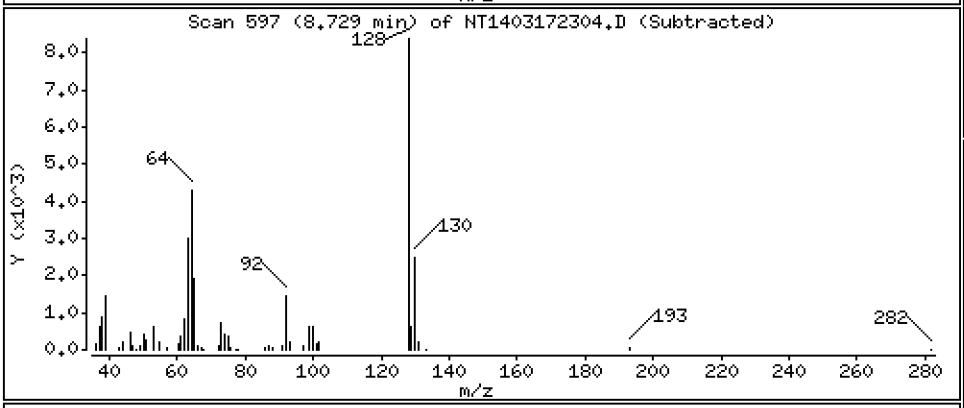
Column diameter: 0.25

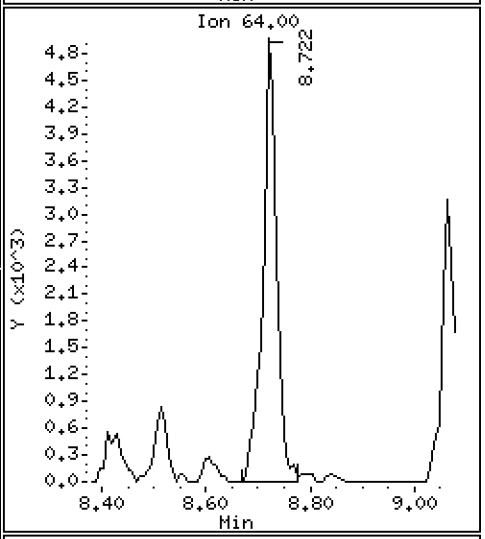
6 2-Chlorophenol

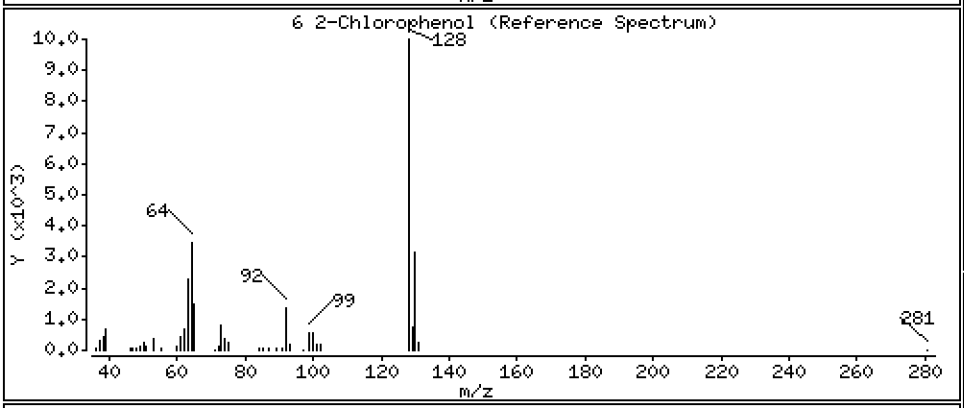
Concentration: 0.1847 ug/mL

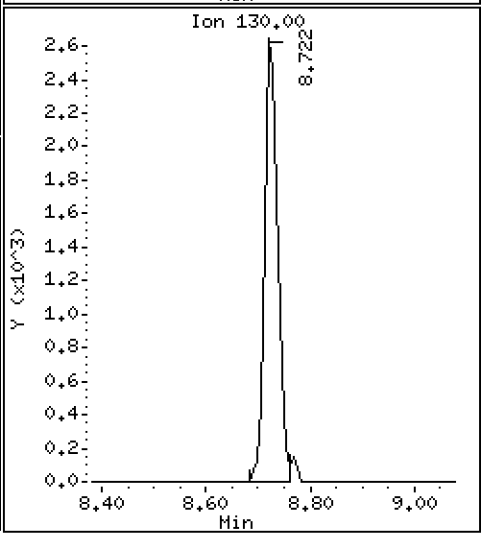


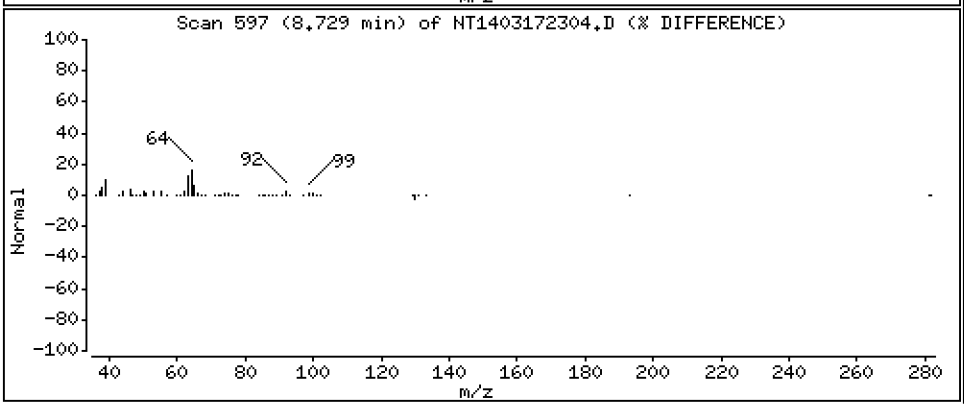












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

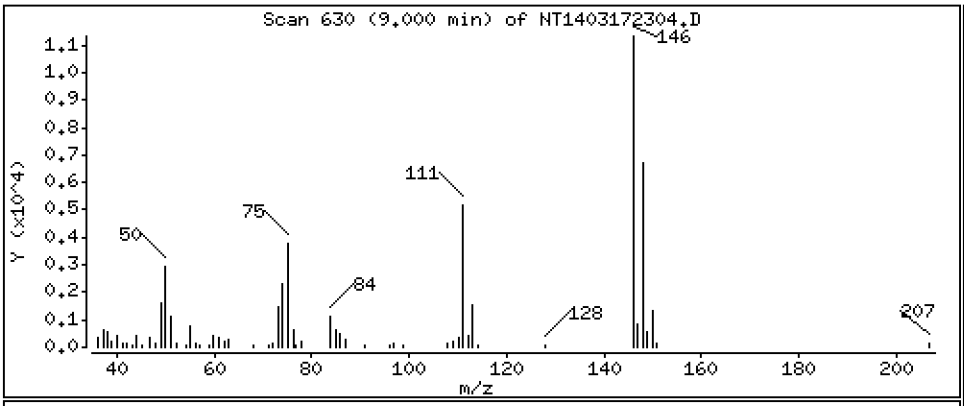
Operator: JGR

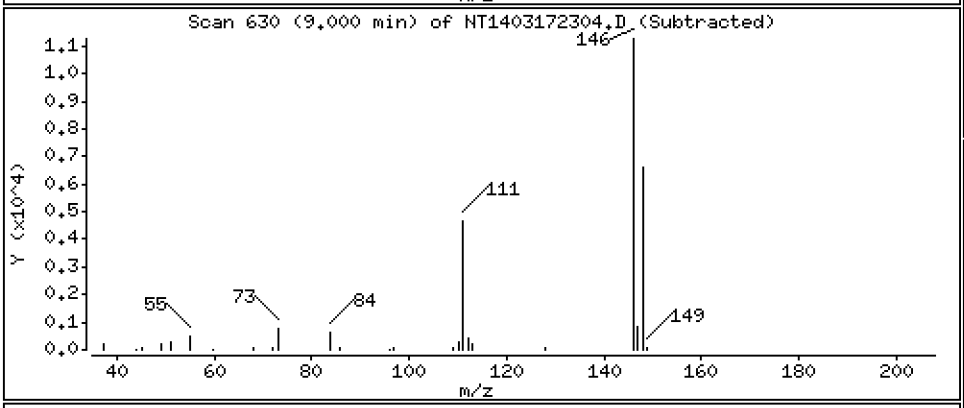
Column phase: ZB-5msi

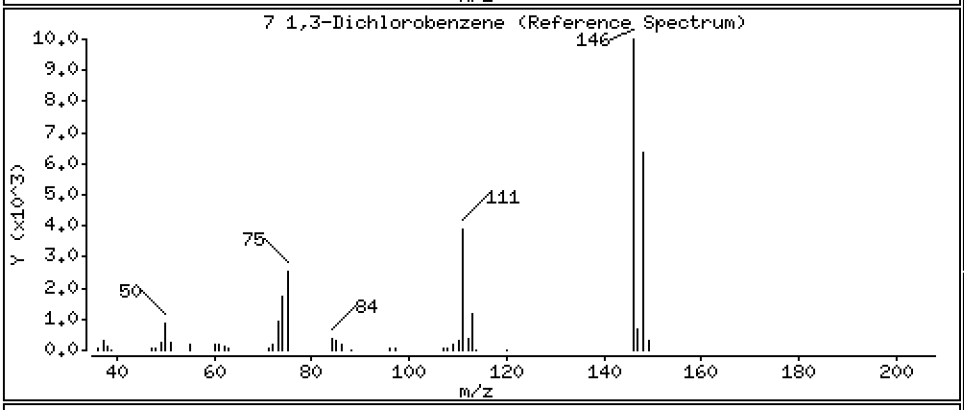
Column diameter: 0.25

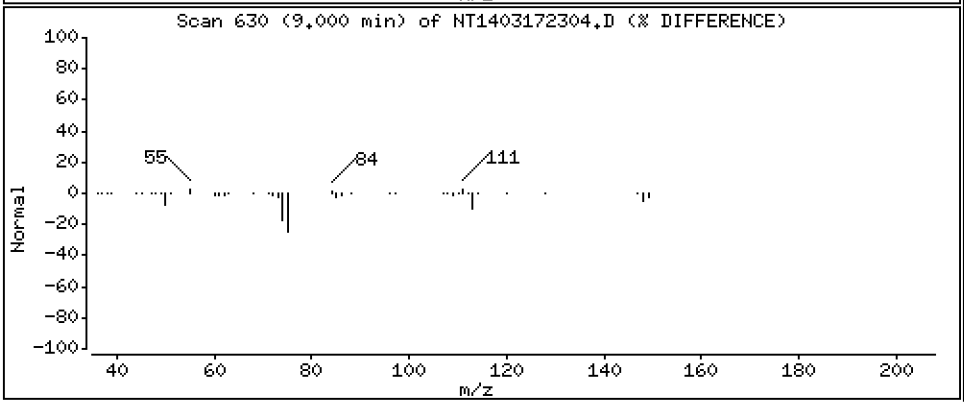
7 1,3-Dichlorobenzene

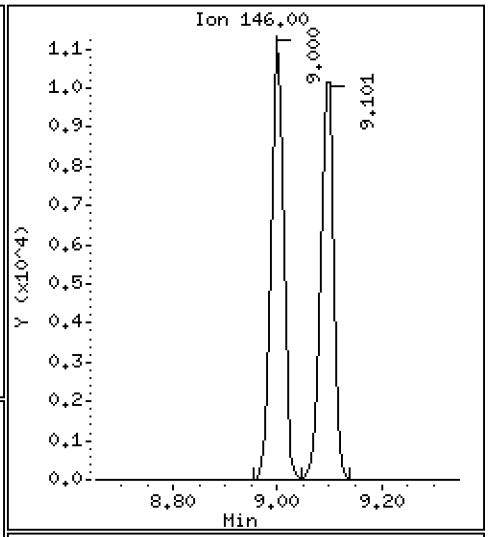
Concentration: 0.2224 ug/mL

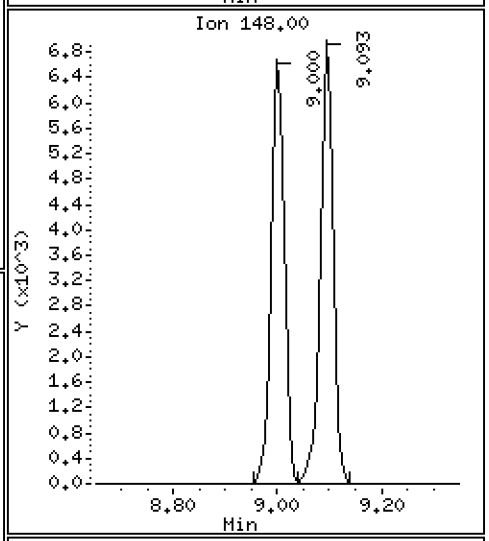


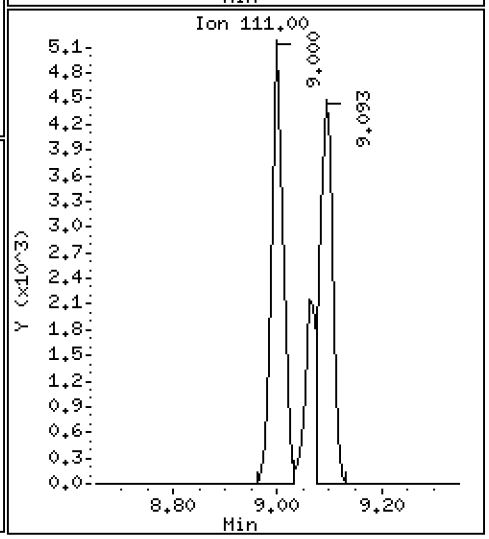












Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172304.D

Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

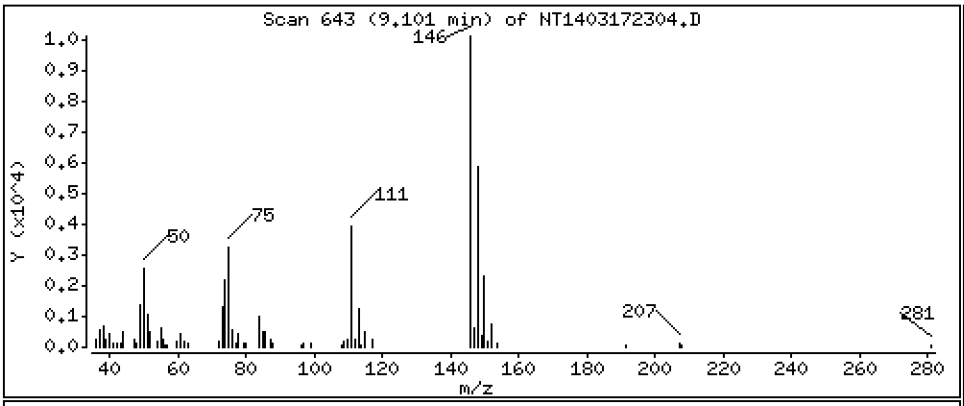
Operator: JGR

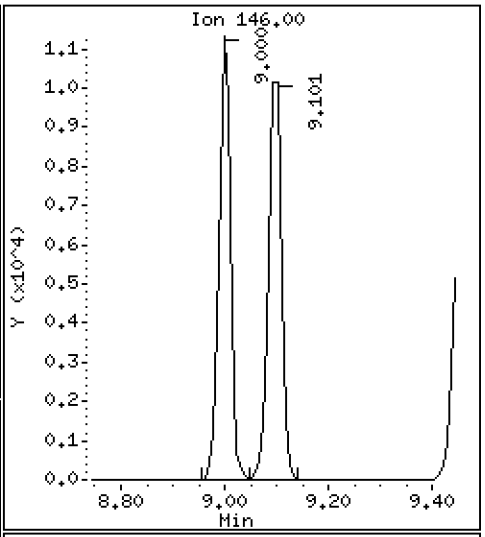
Column phase: ZB-5msi

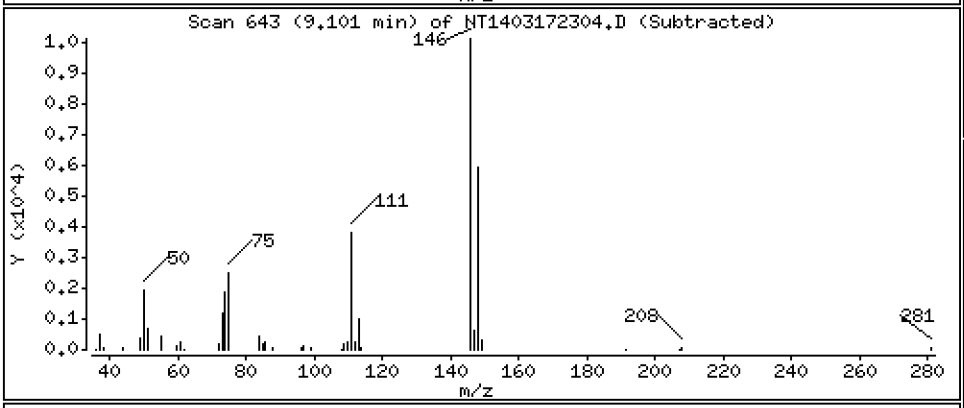
Column diameter: 0.25

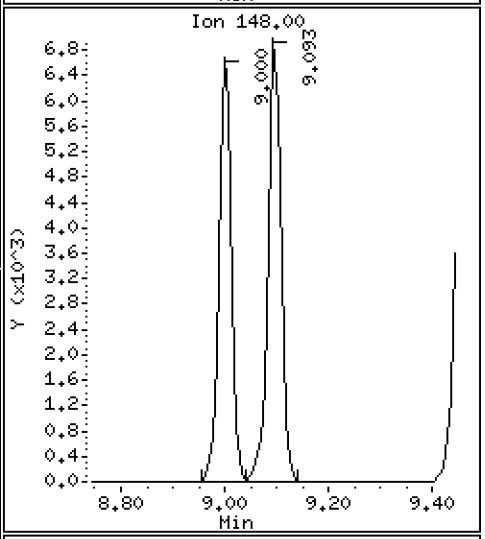
9 1,4-Dichlorobenzene

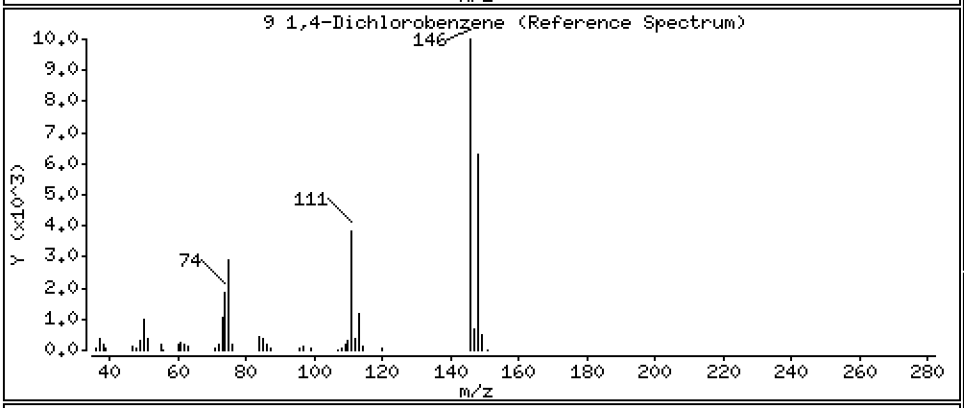
Concentration: 0.2135 ug/mL

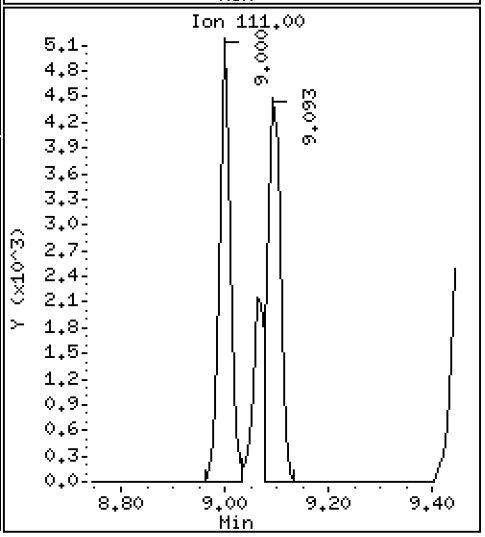


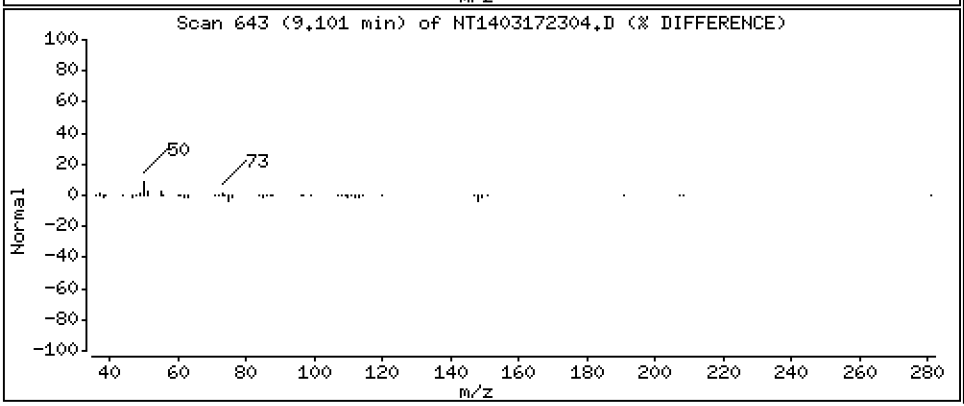












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

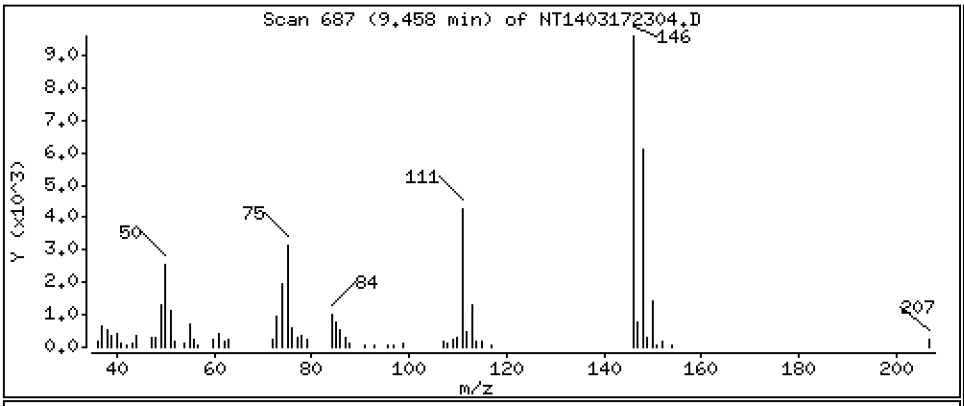
Operator: JGR

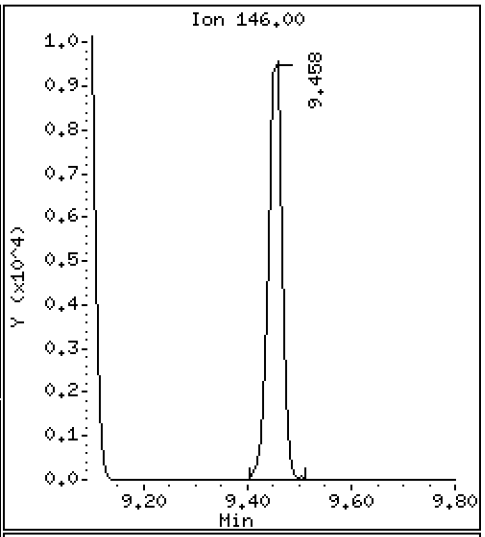
Column phase: ZB-5msi

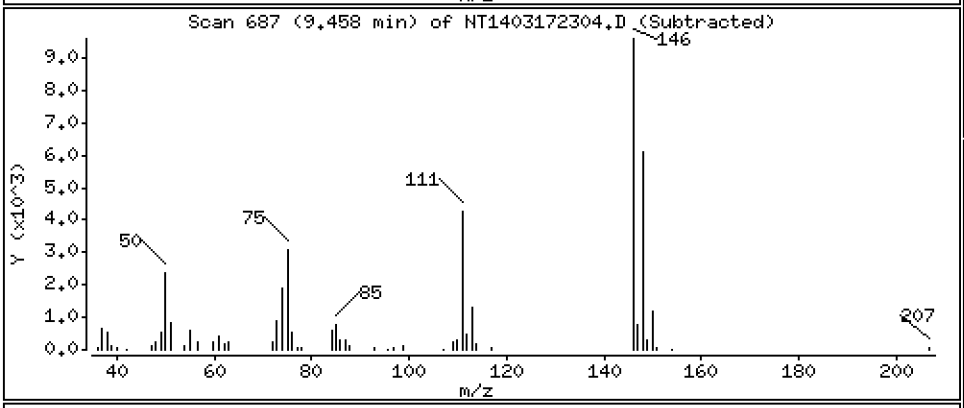
Column diameter: 0.25

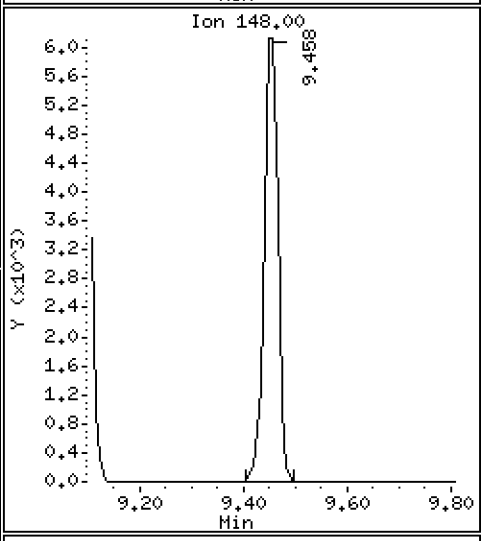
12 1,2-Dichlorobenzene

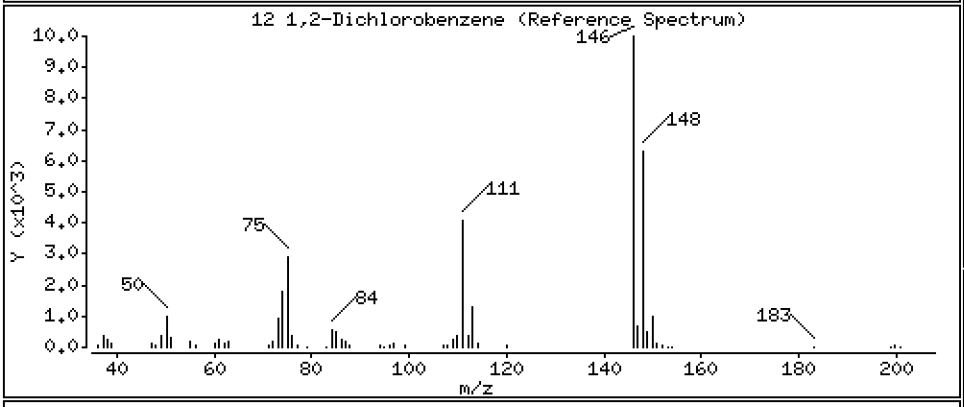
Concentration: 0.2153 ug/mL

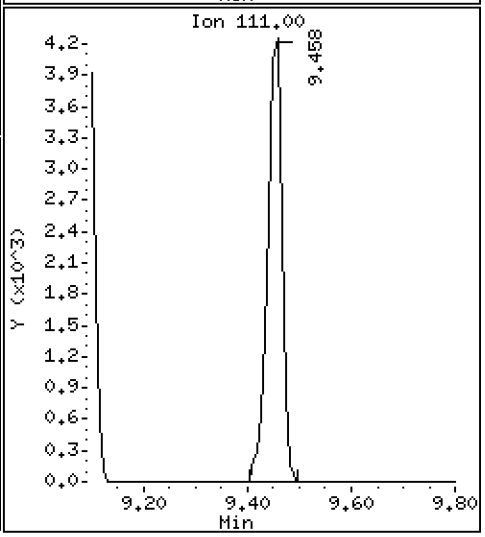


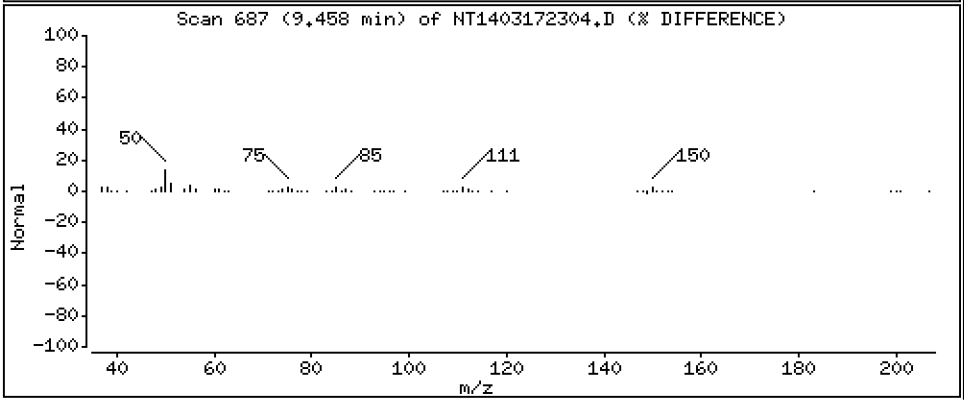












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

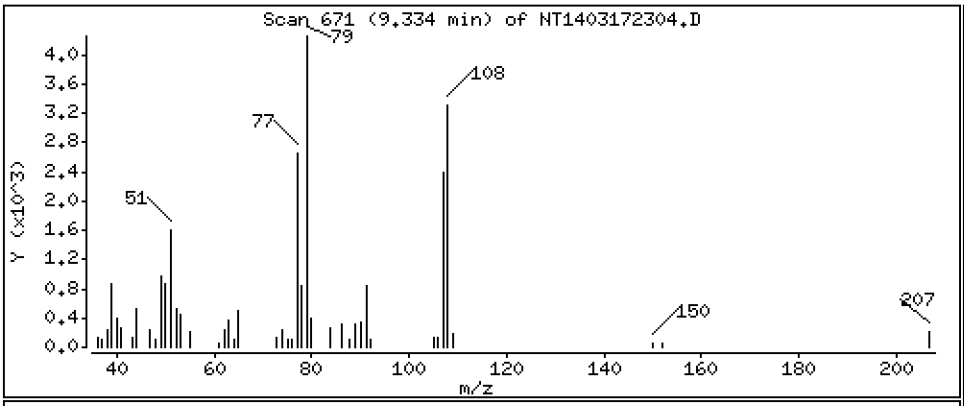
Operator: JGR

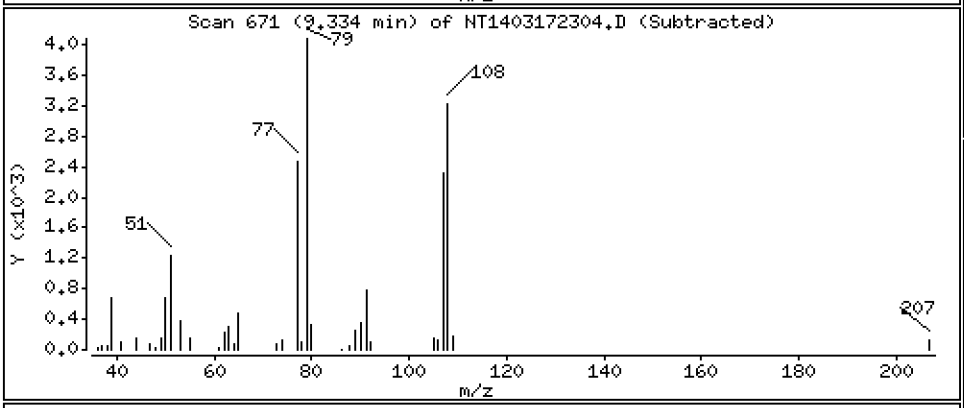
Column phase: ZB-5msi

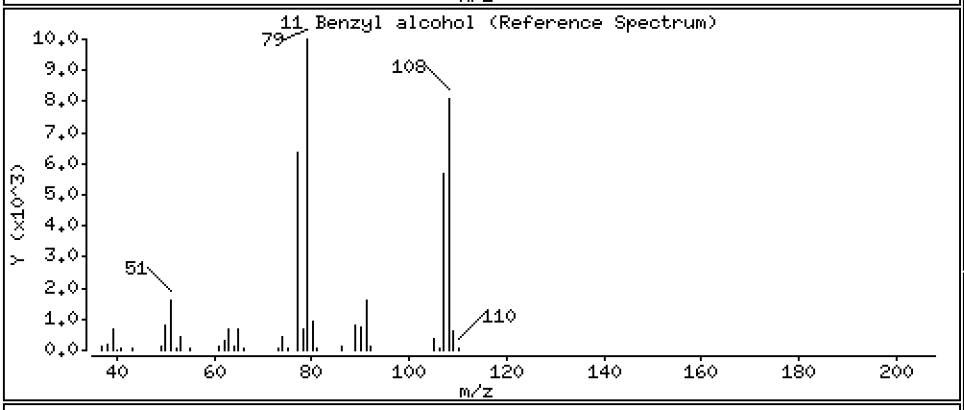
Column diameter: 0.25

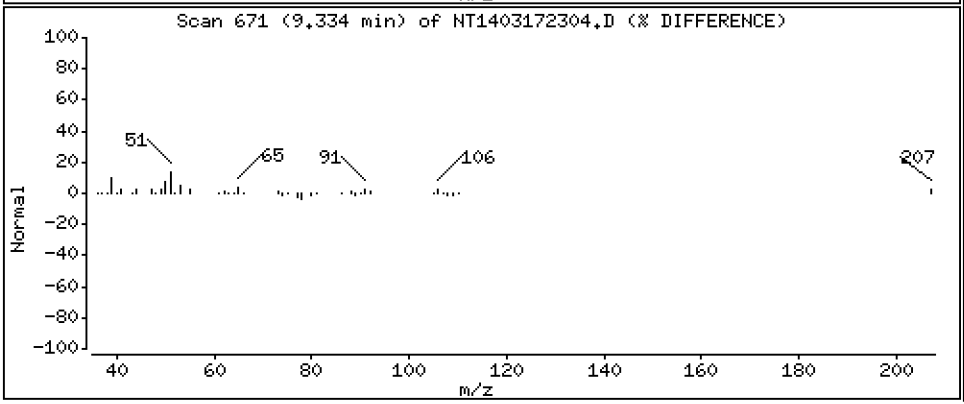
11 Benzyl alcohol

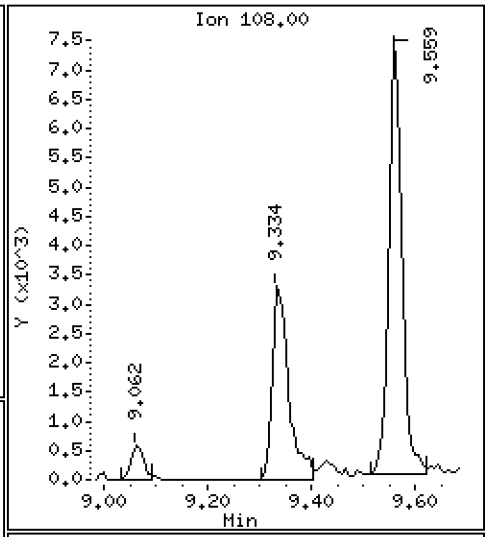
Concentration: 0.1442 ug/mL

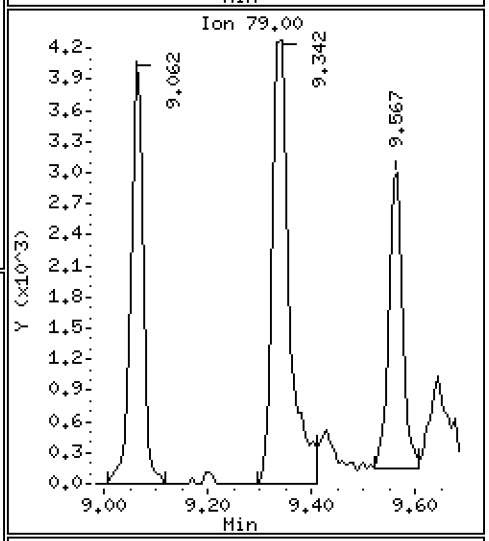


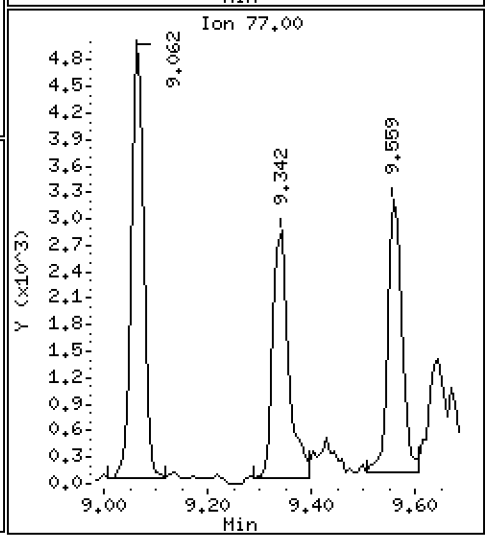












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

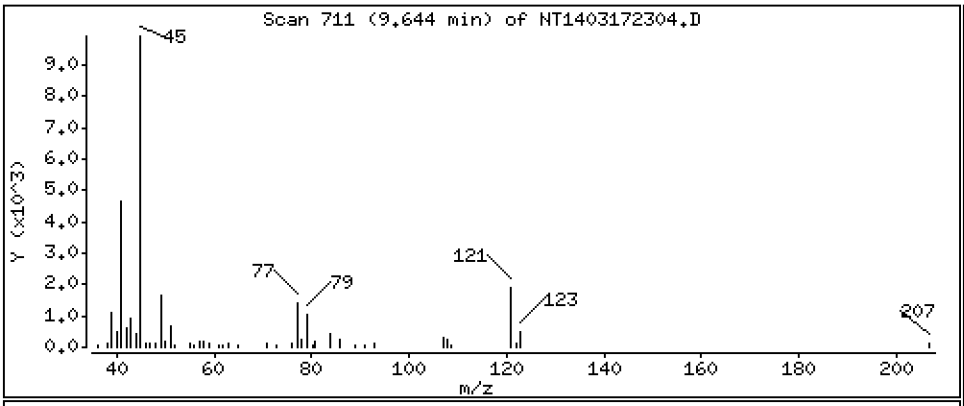
Operator: JGR

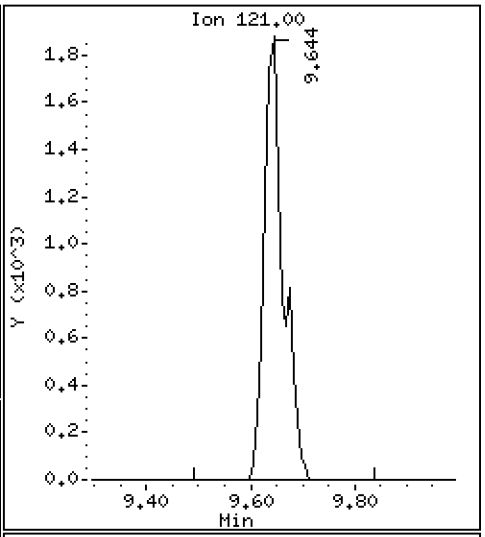
Column phase: ZB-5msi

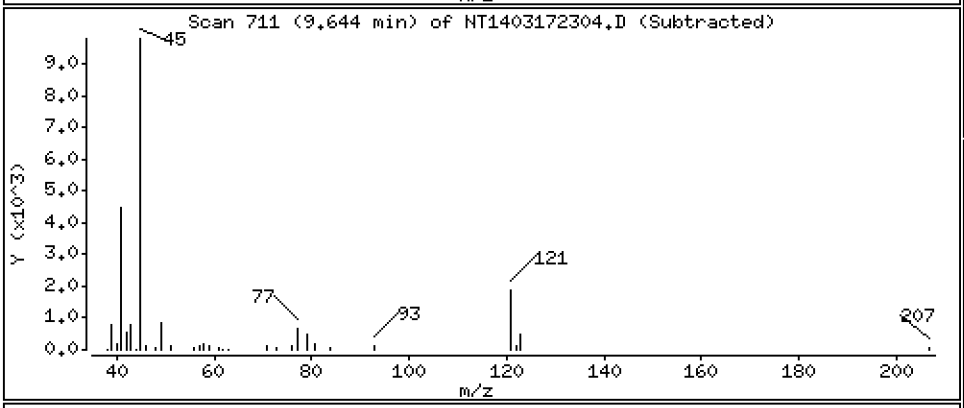
Column diameter: 0.25

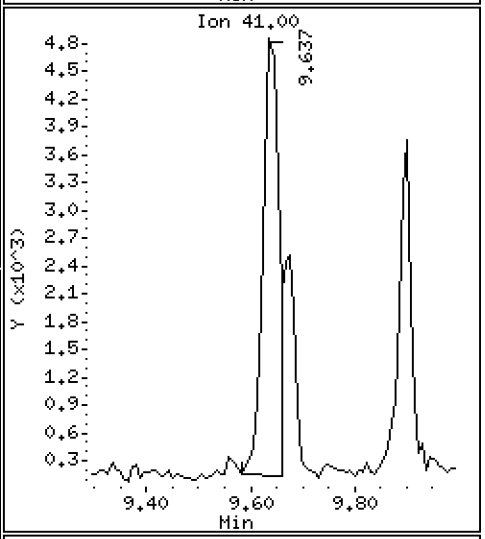
14 2,2'-oxybis(1-Chloropropane)

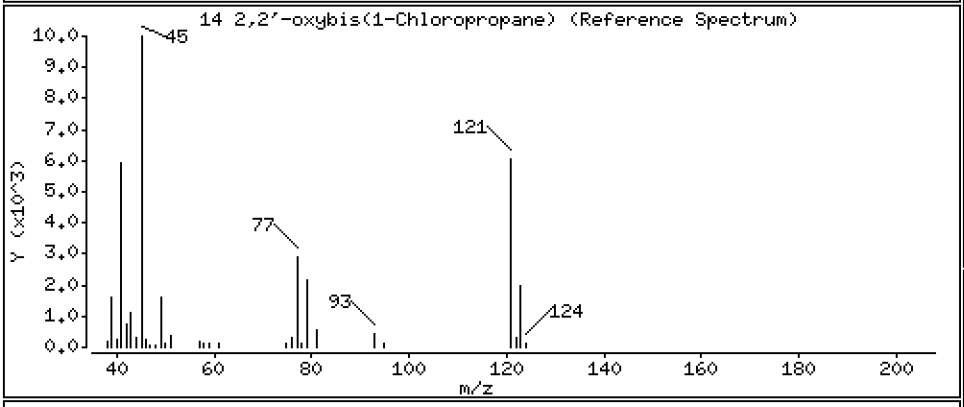
Concentration: 0.2077 ug/mL

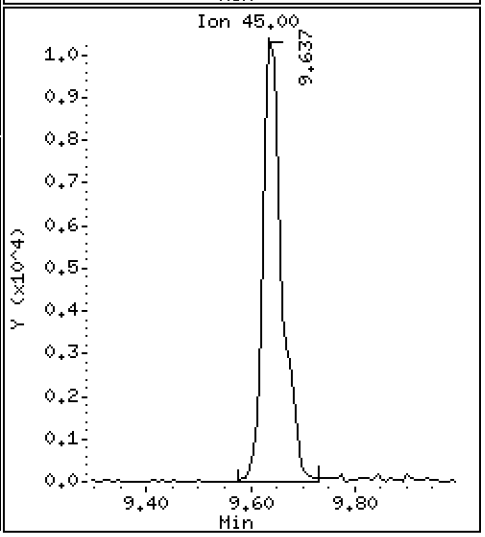


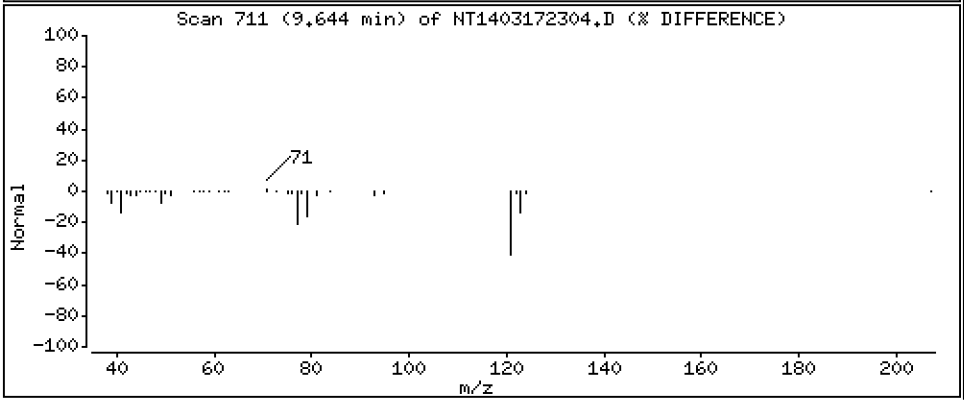












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

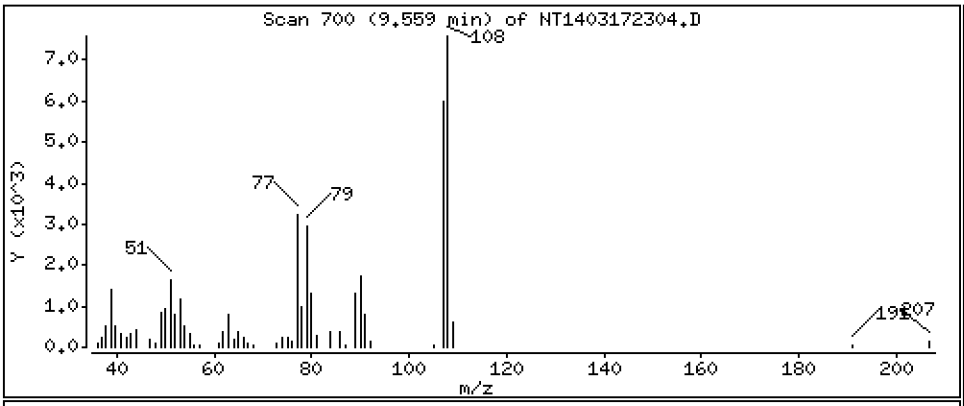
Operator: JGR

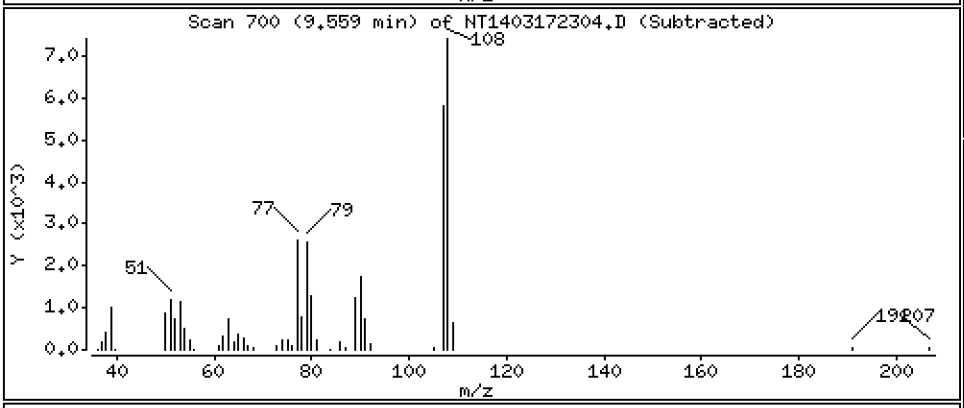
Column phase: ZB-5msi

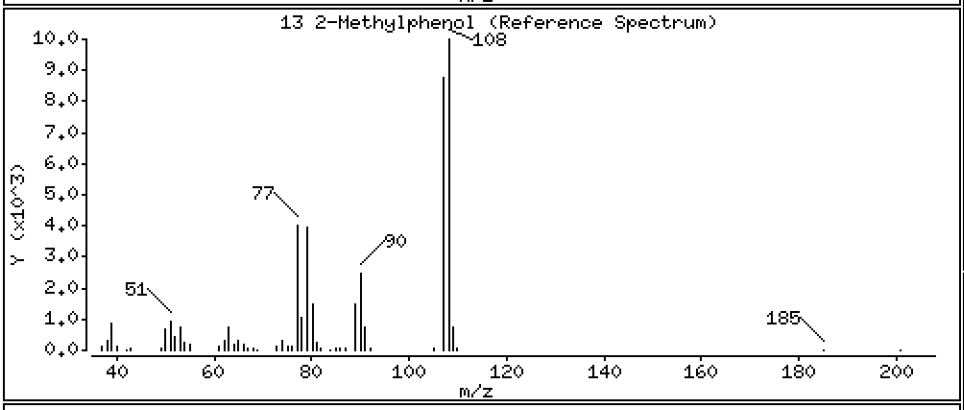
Column diameter: 0.25

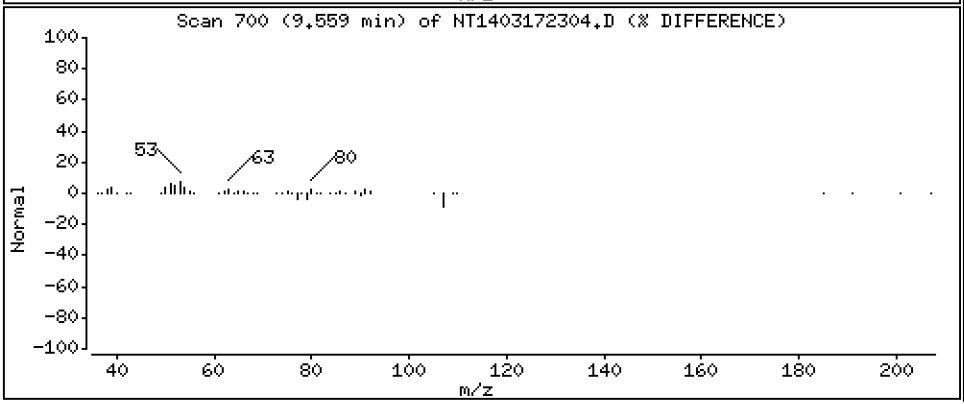
13 2-Methylphenol

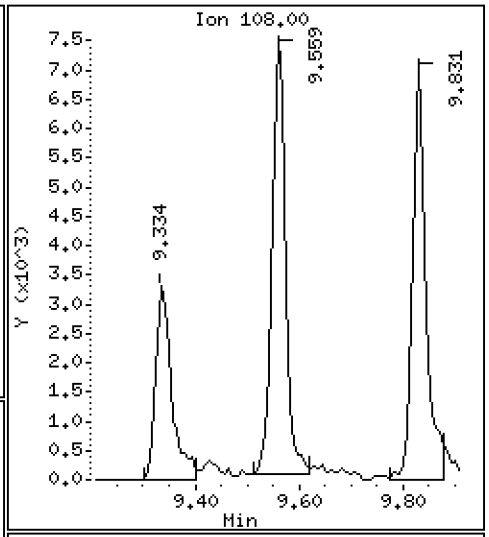
Concentration: 0.1739 ug/mL

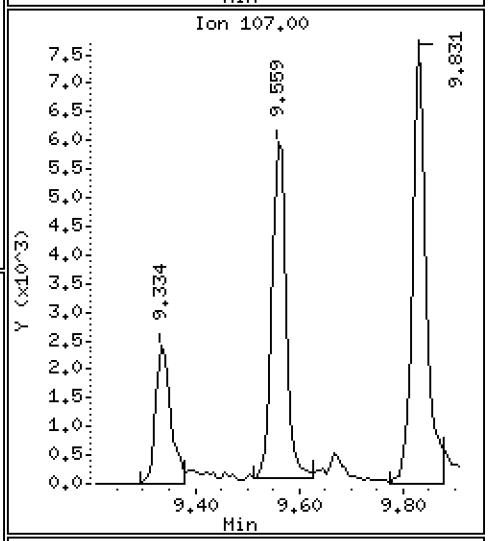


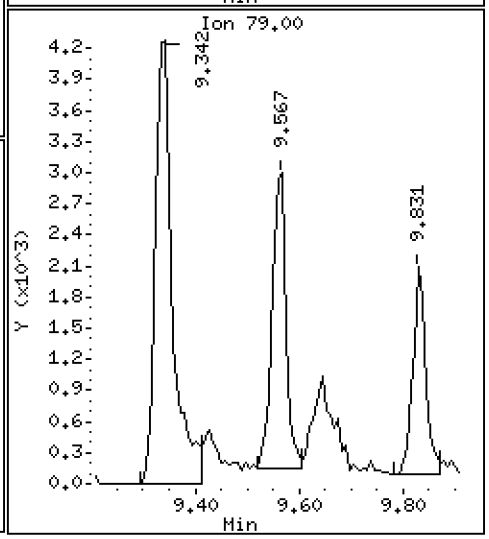












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

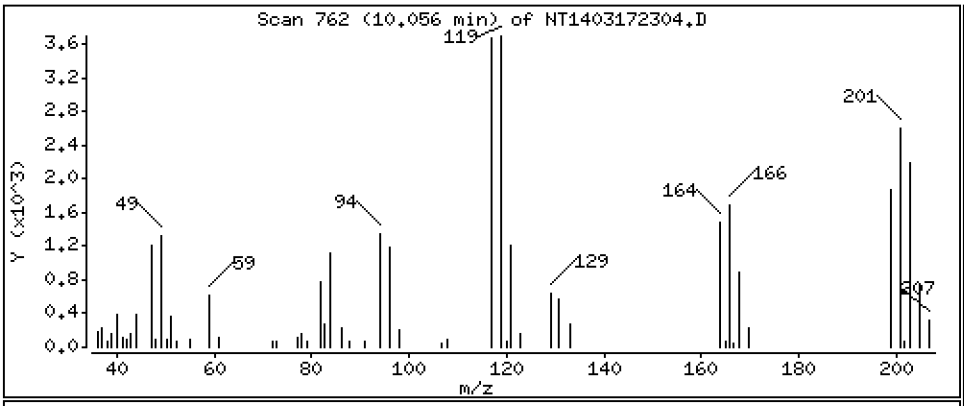
Operator: JGR

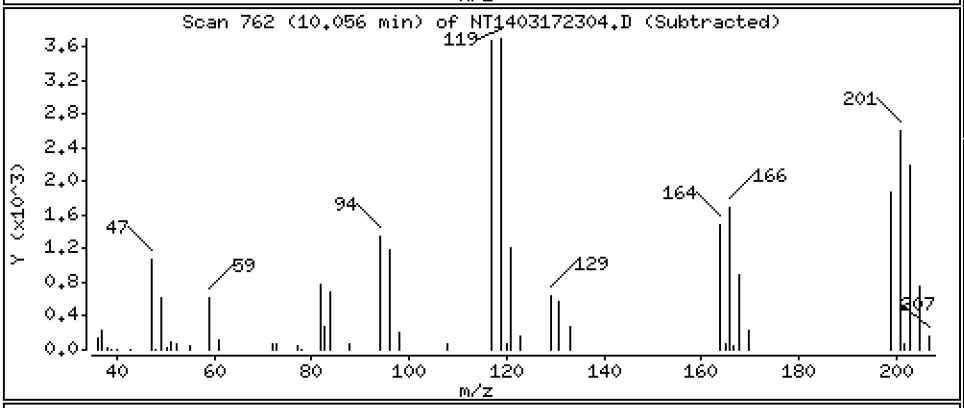
Column phase: ZB-5msi

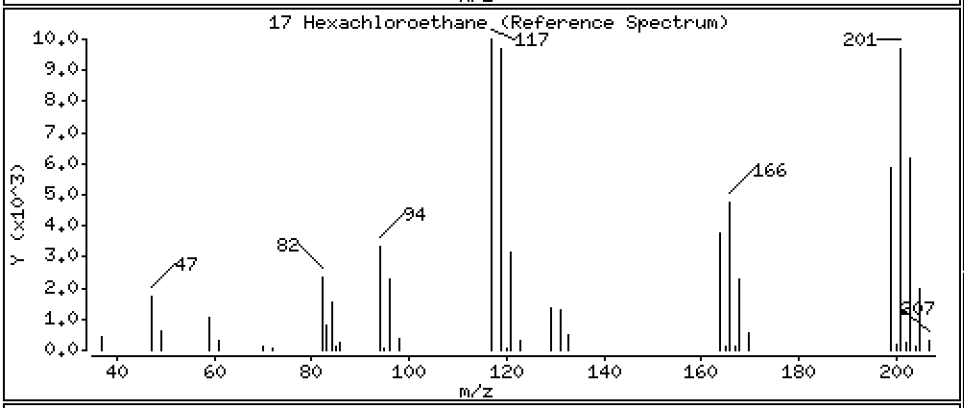
Column diameter: 0.25

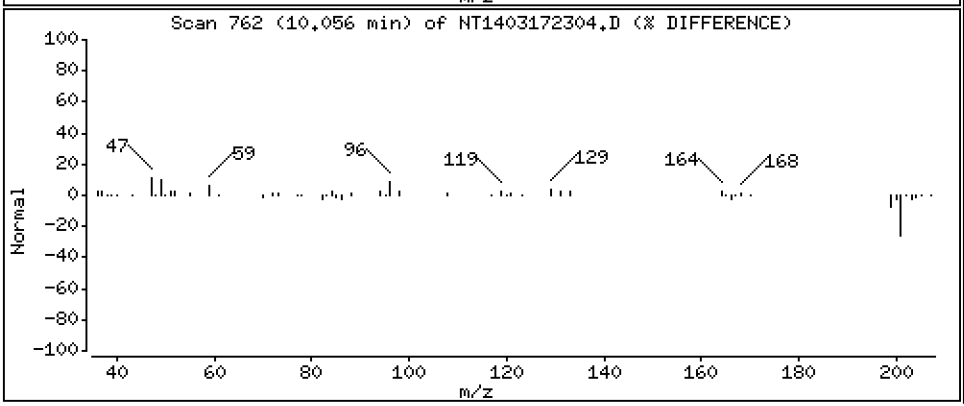
17 Hexachloroethane

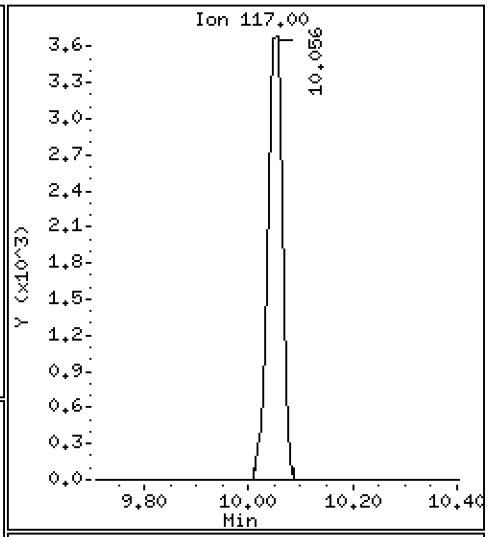
Concentration: 0.2033 ug/mL

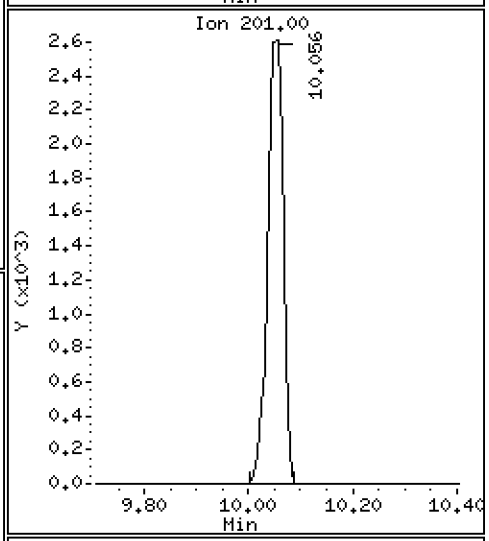


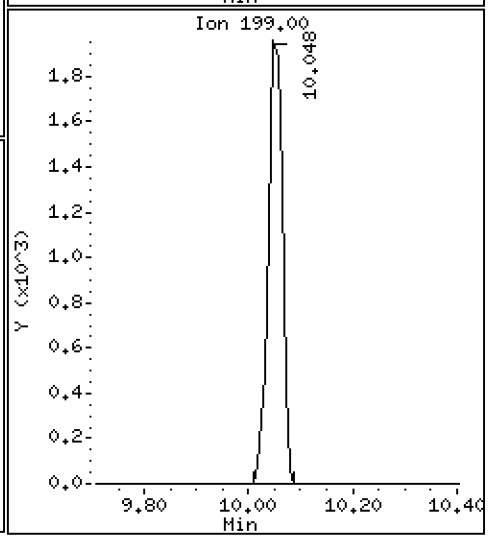












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

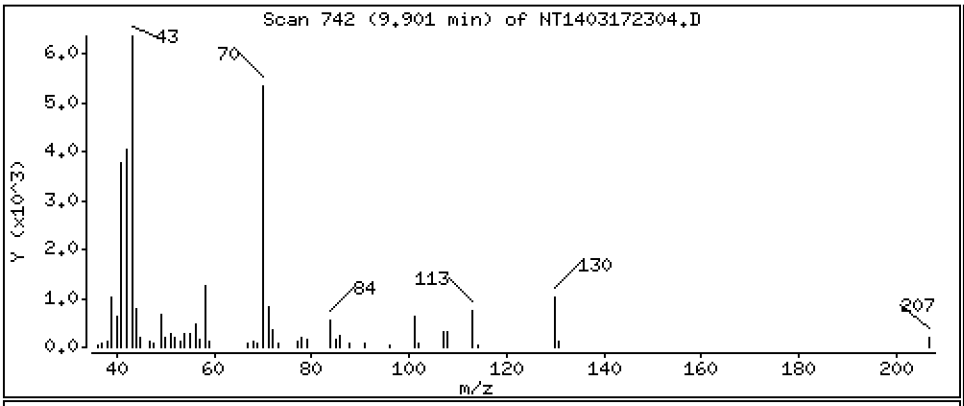
Operator: JGR

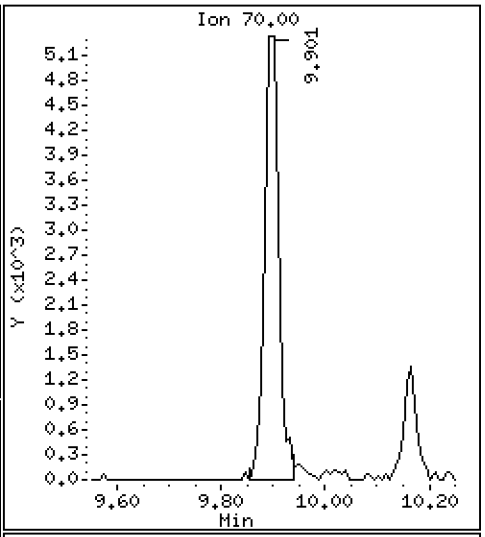
Column phase: ZB-5msi

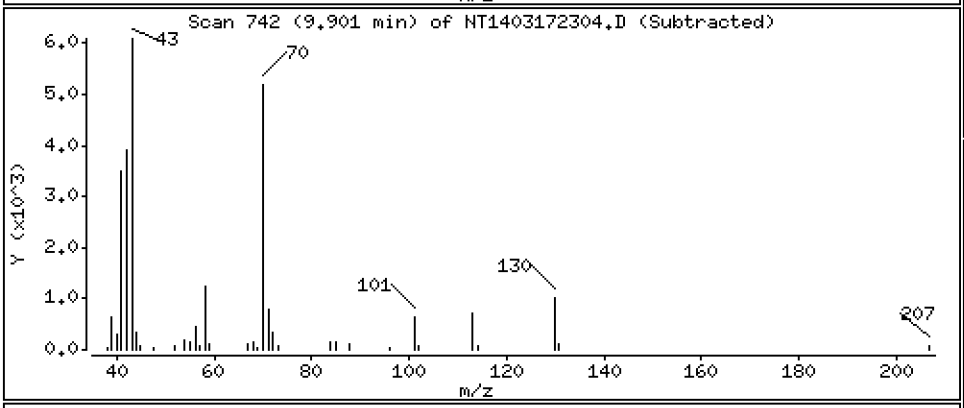
Column diameter: 0.25

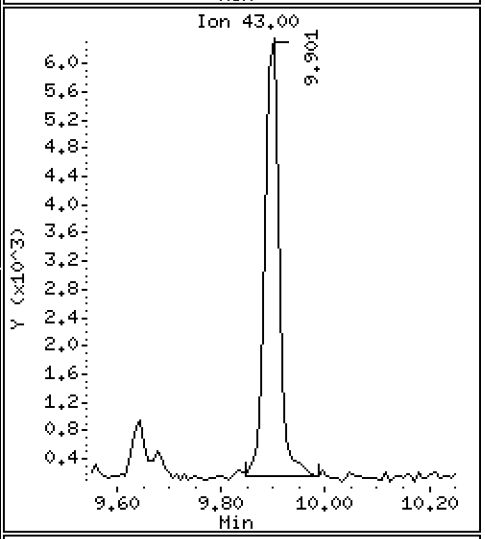
16 N-Nitroso-di-n-propylamine

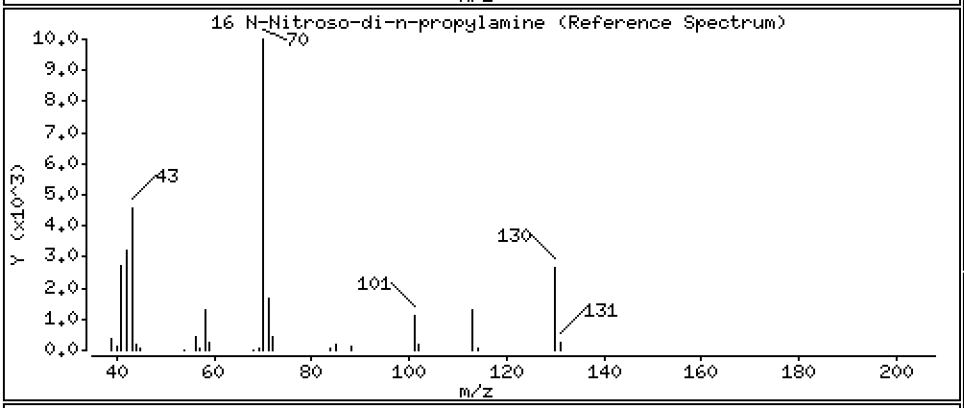
Concentration: 0.1688 ug/mL

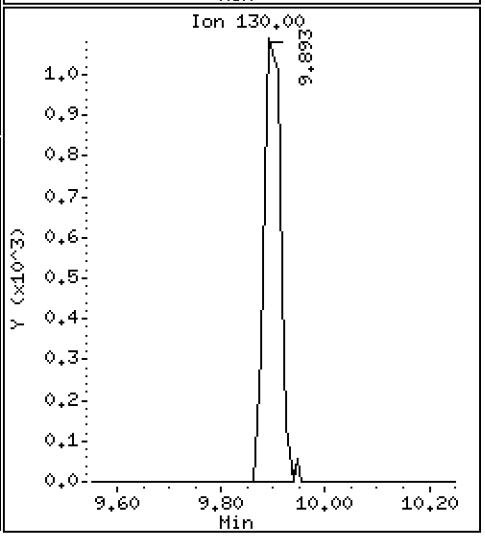


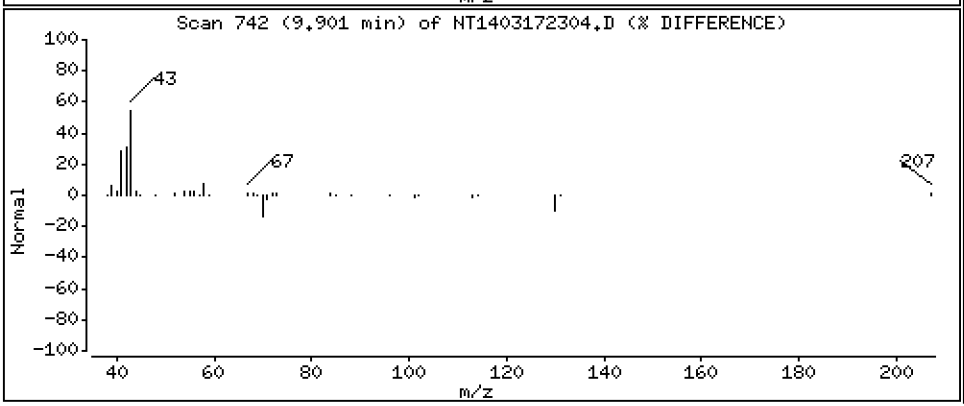












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

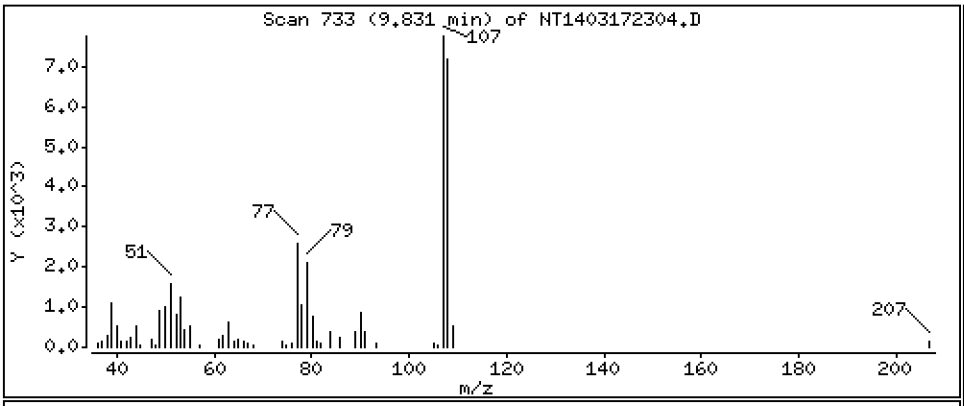
Operator: JGR

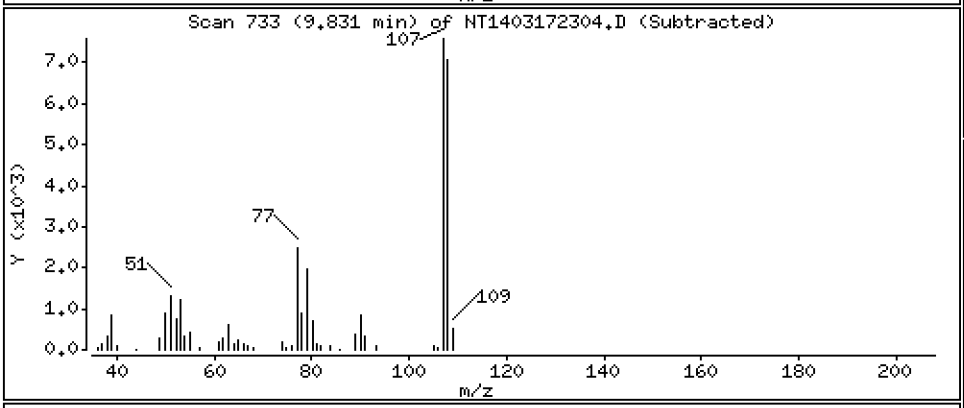
Column phase: ZB-5msi

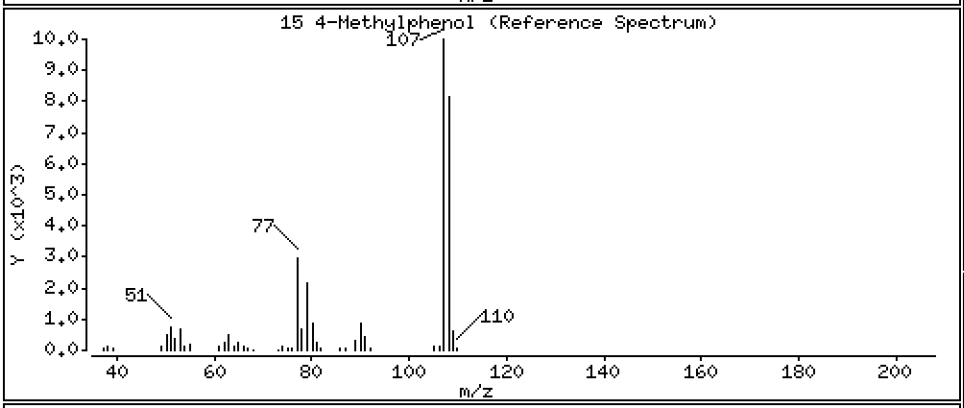
Column diameter: 0.25

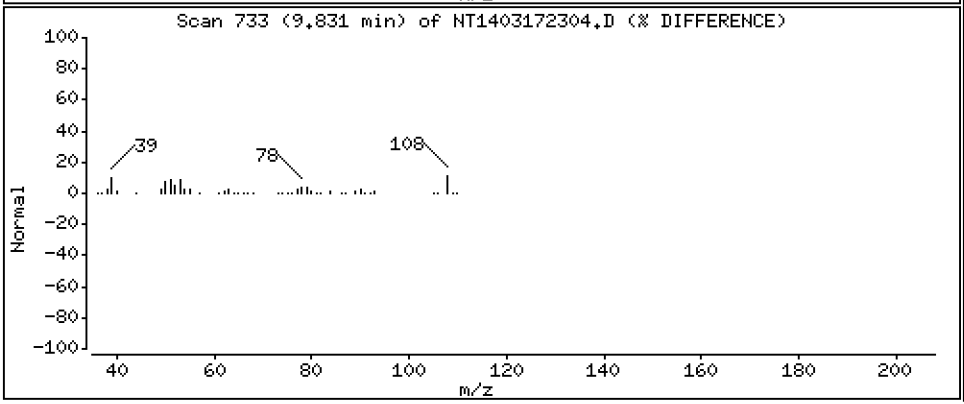
15 4-Methylphenol

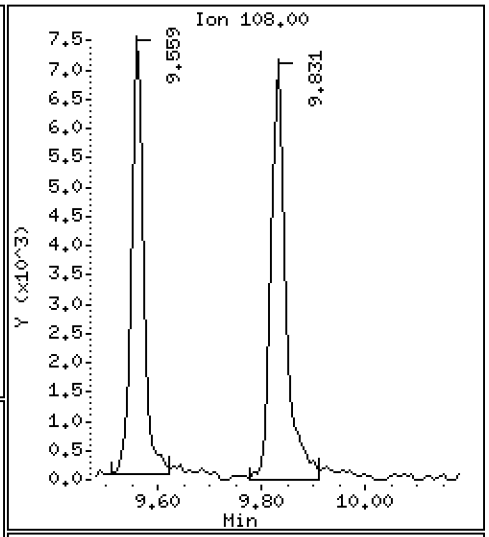
Concentration: 0.1583 ug/mL

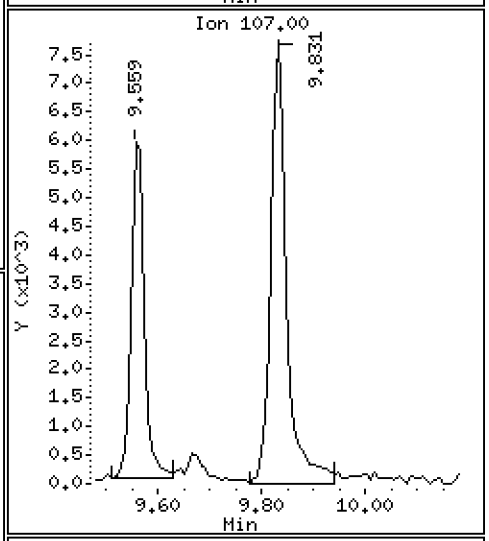


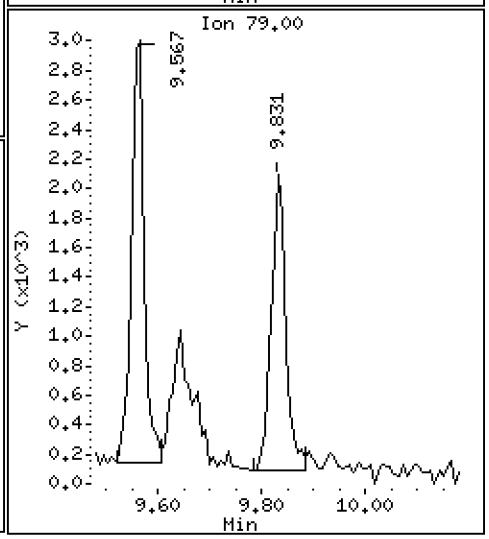












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

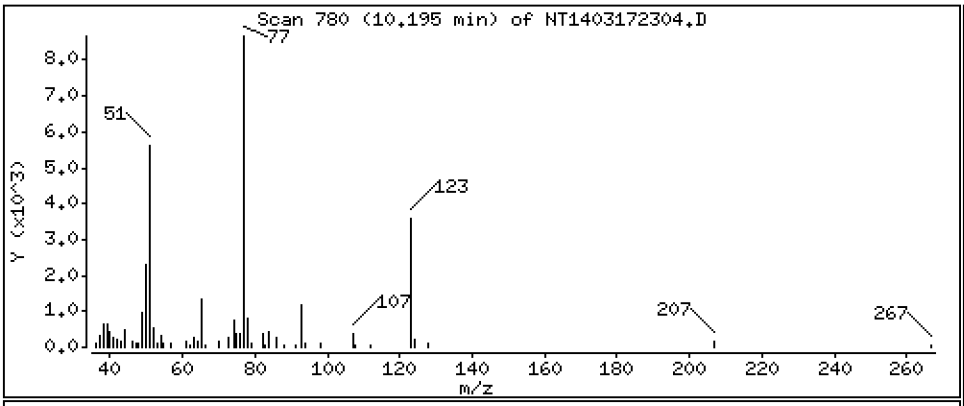
Operator: JGR

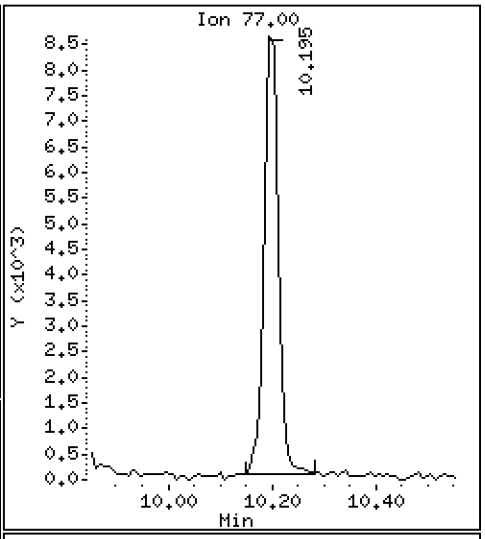
Column phase: ZB-5msi

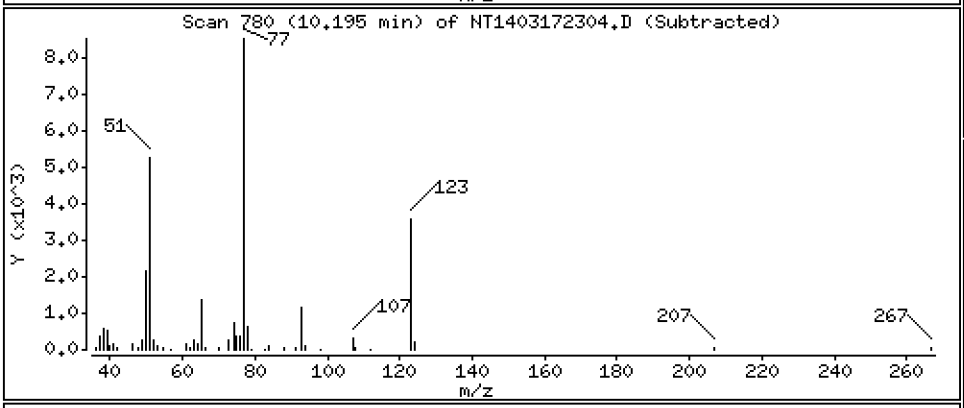
Column diameter: 0.25

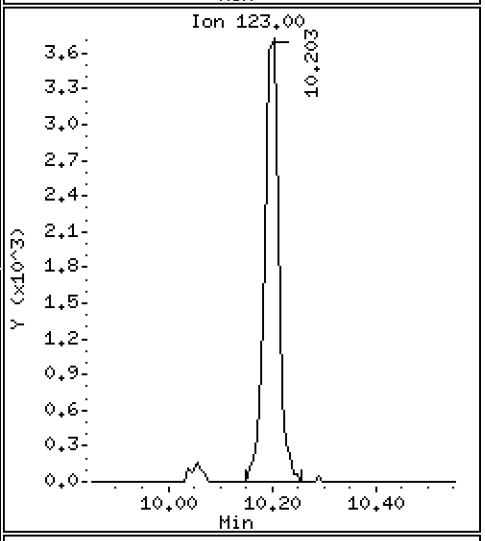
19 Nitrobenzene

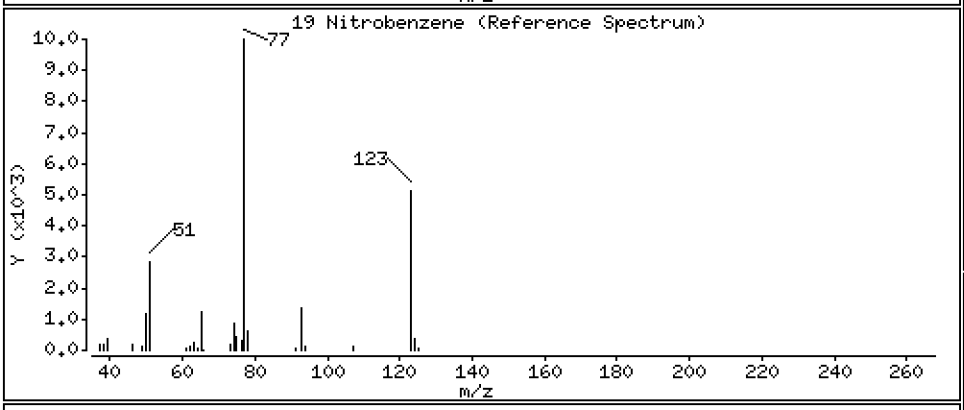
Concentration: 0.1840 ug/mL

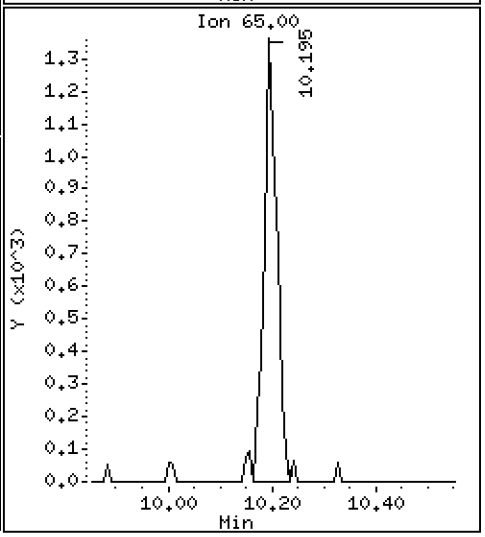


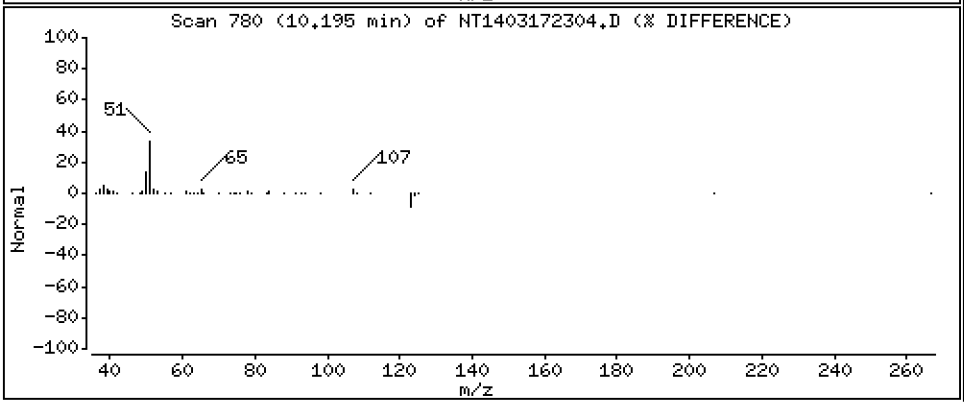












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

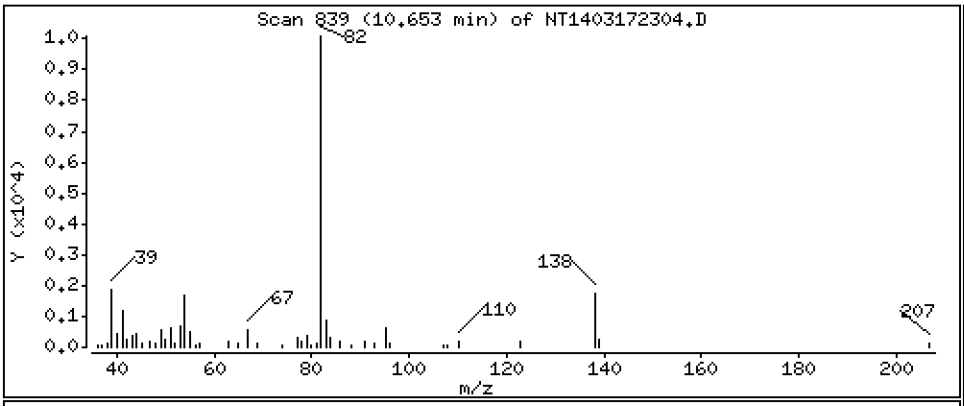
Operator: JGR

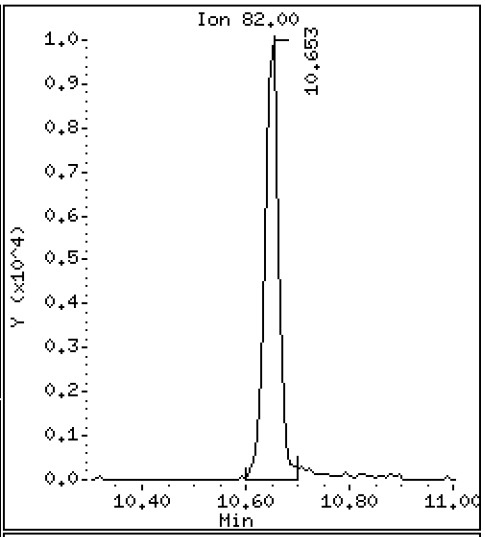
Column phase: ZB-5msi

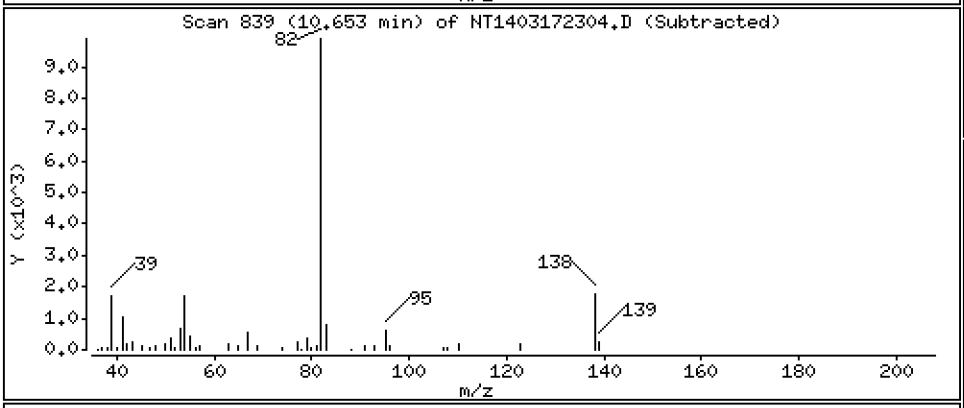
Column diameter: 0.25

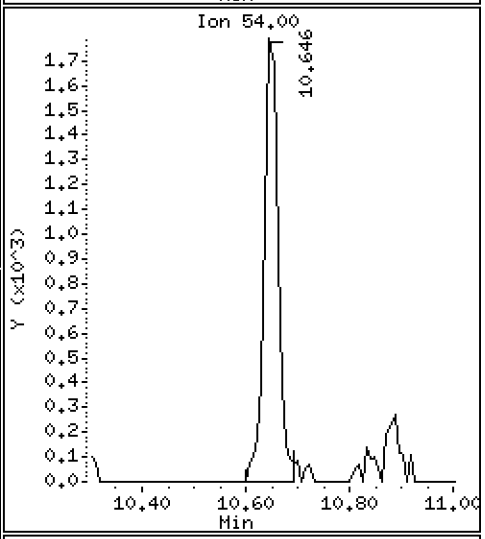
20 Isophorone

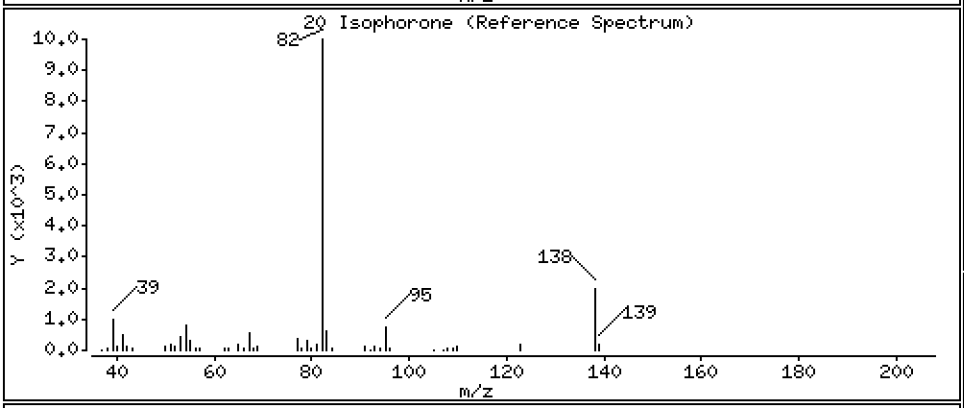
Concentration: 0.1523 ug/mL

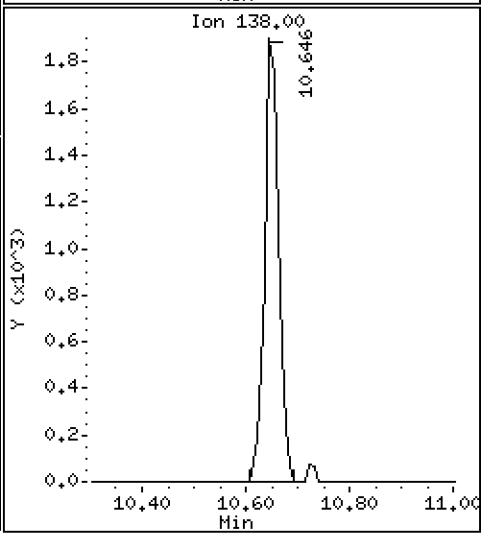


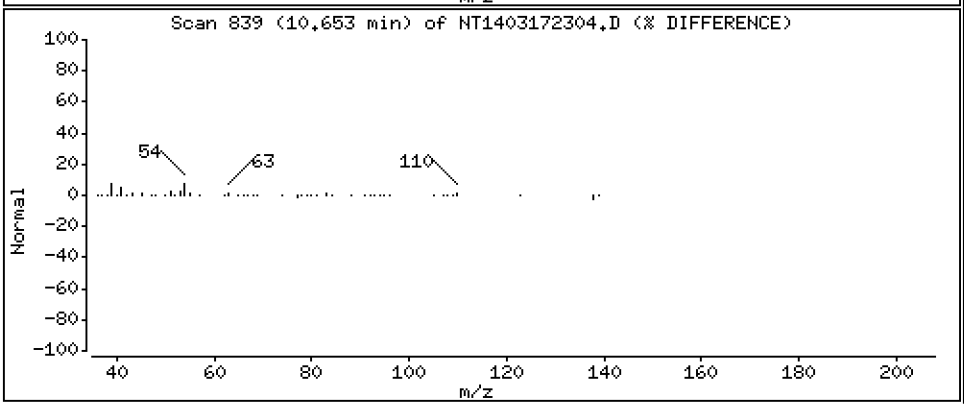












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

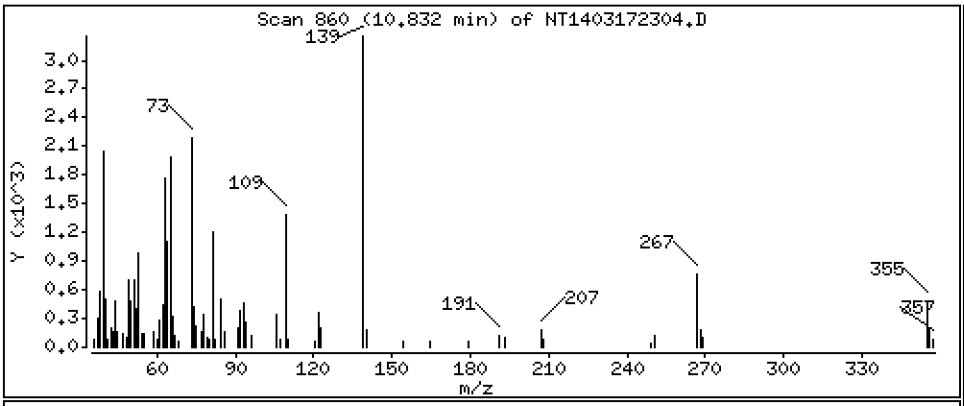
Operator: JGR

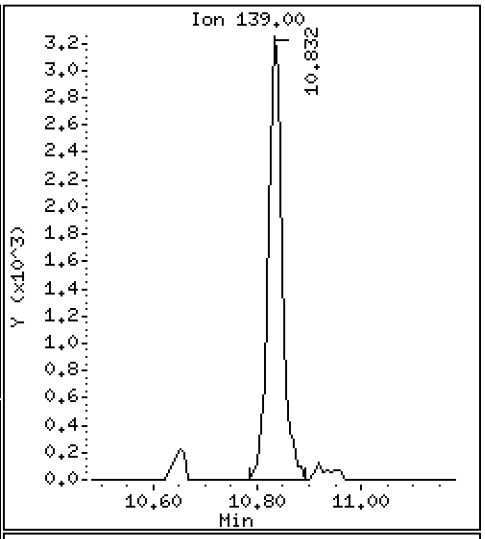
Column phase: ZB-5msi

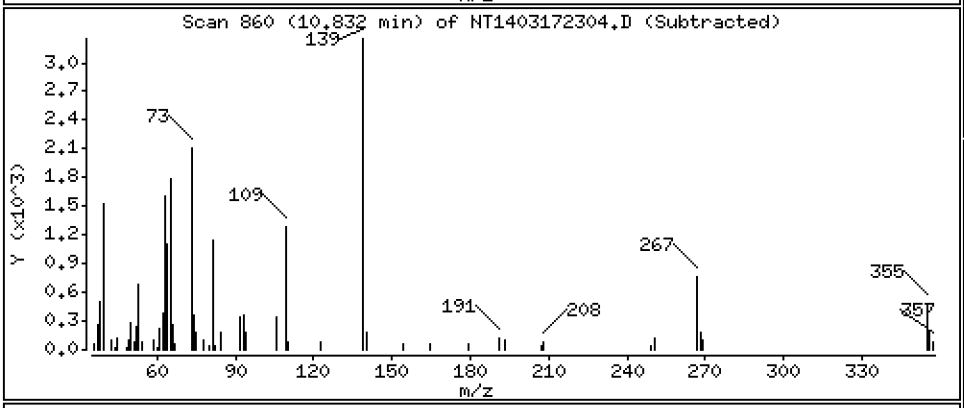
Column diameter: 0.25

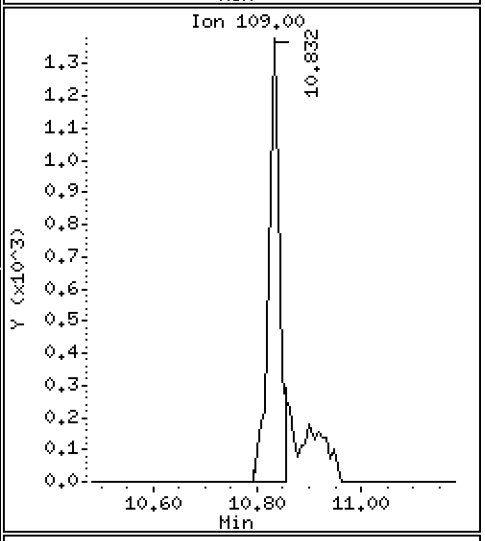
21 2-Nitrophenol

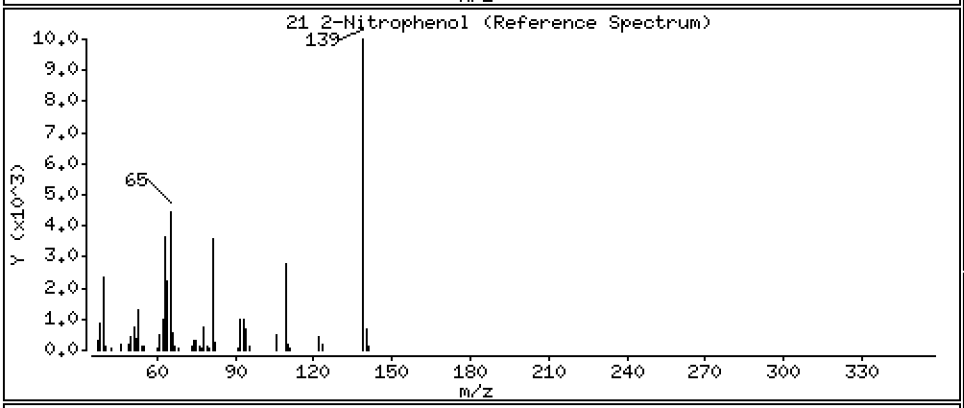
Concentration: 0.1214 ug/mL

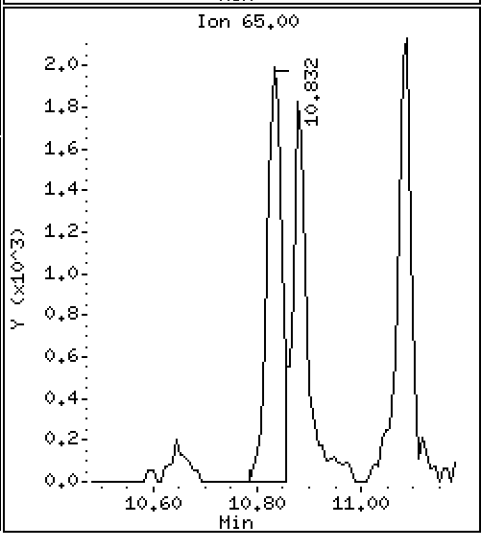


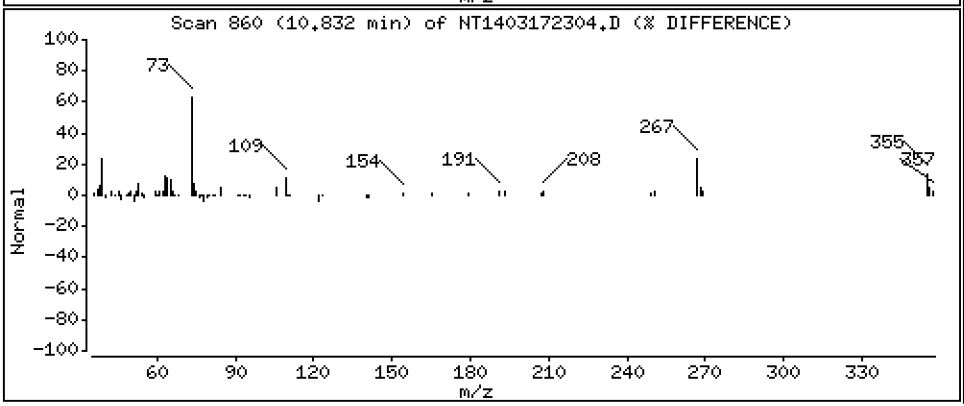












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

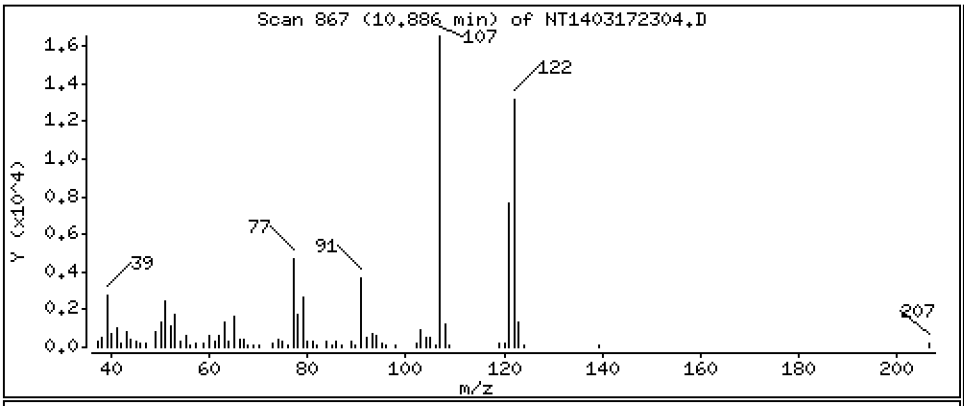
Operator: JGR

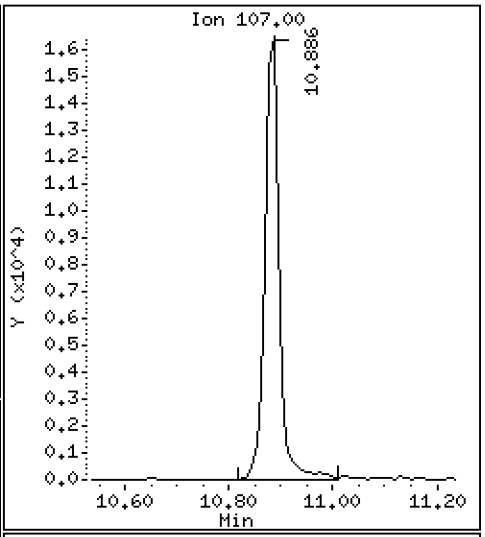
Column phase: ZB-5msi

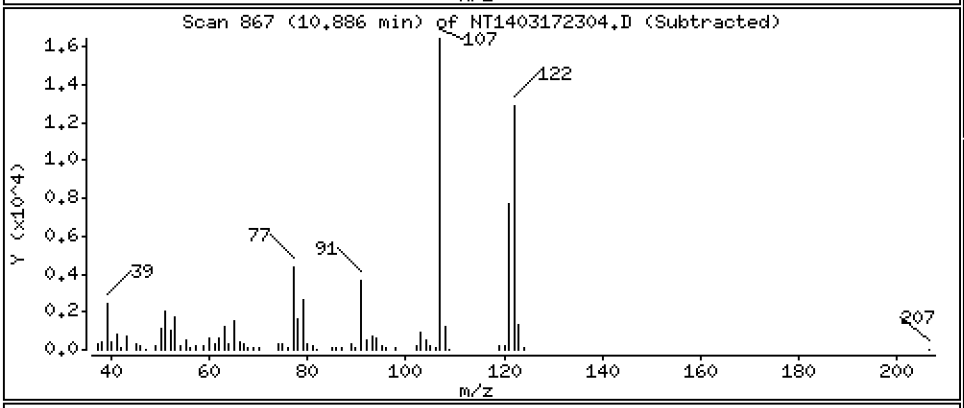
Column diameter: 0.25

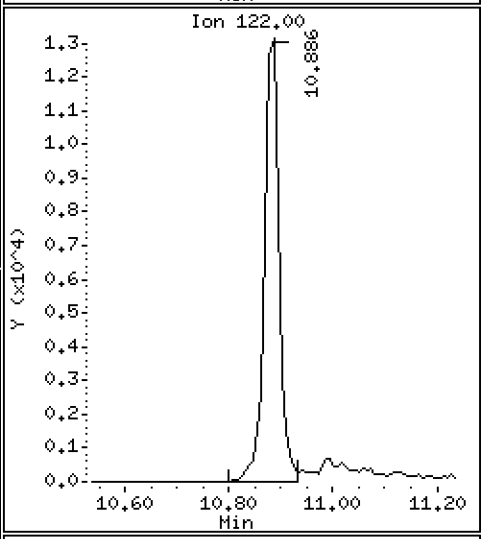
22 2,4-Dimethylphenol

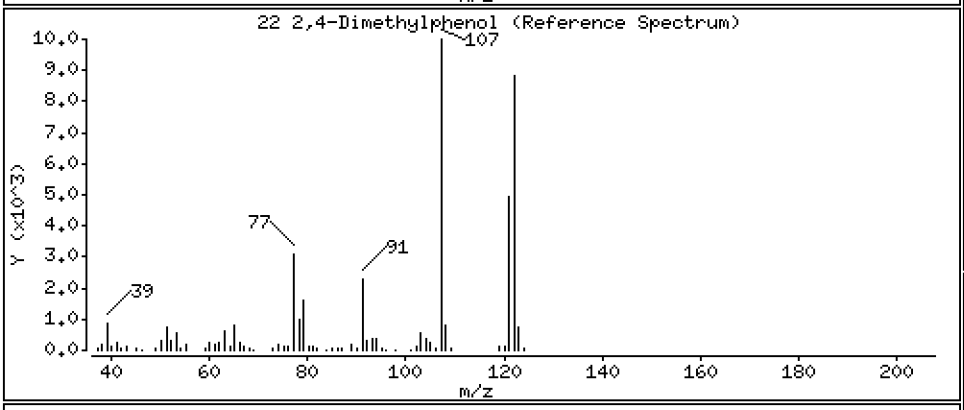
Concentration: 0.4112 ug/mL

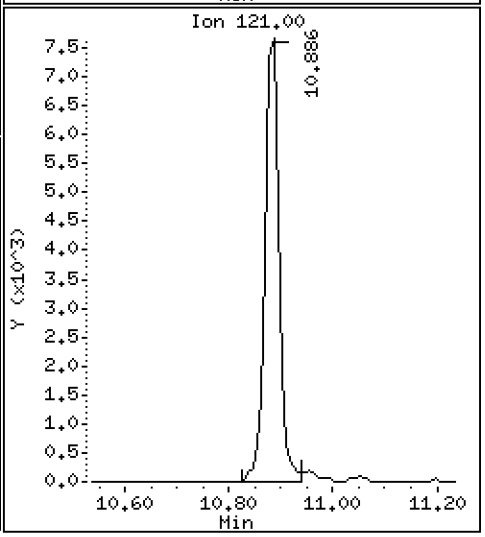


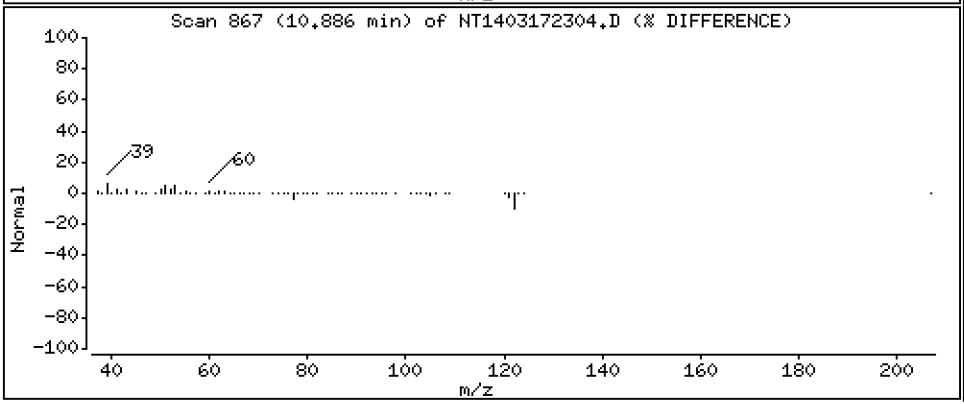












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

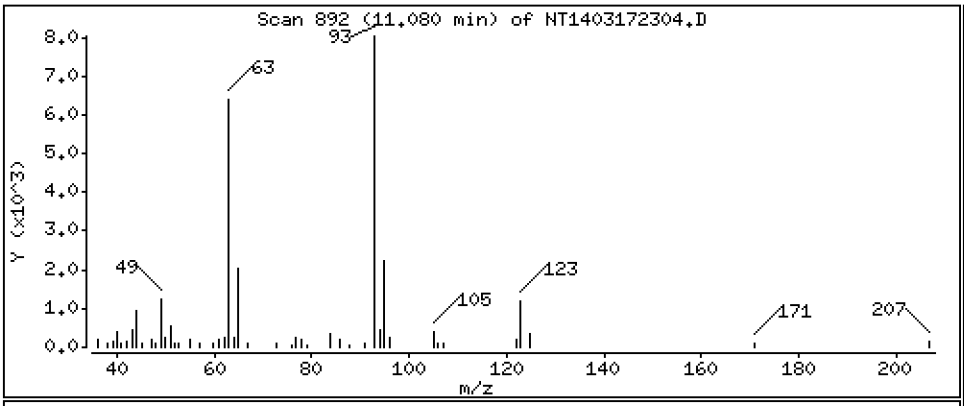
Operator: JGR

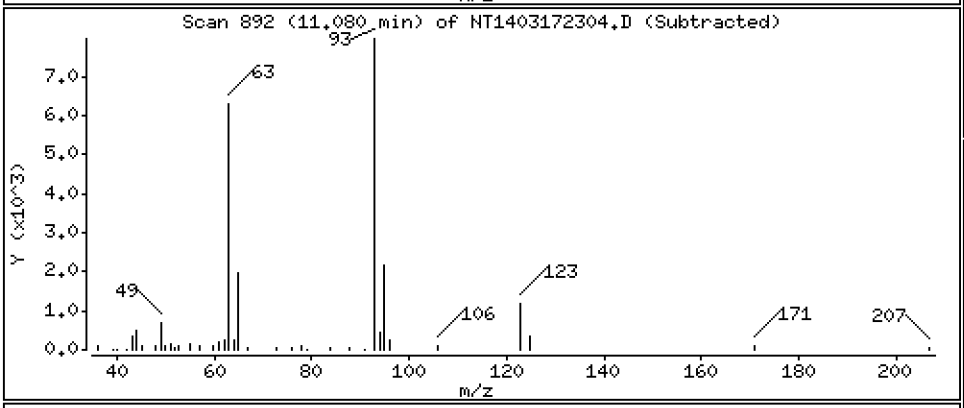
Column phase: ZB-5msi

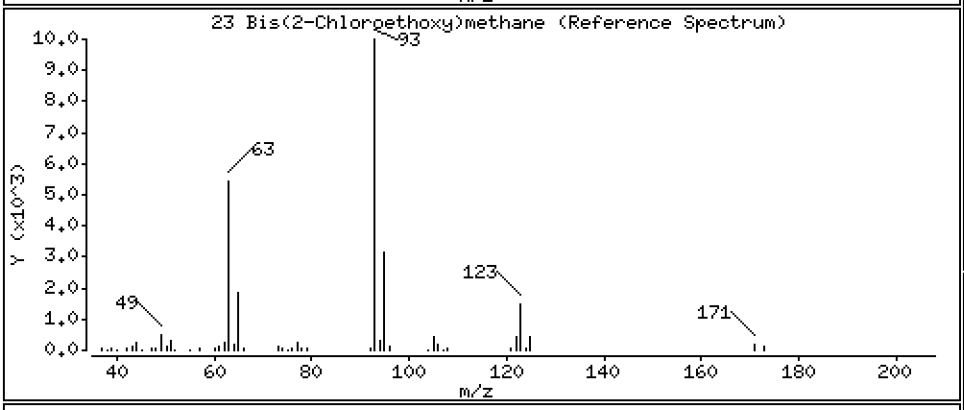
Column diameter: 0.25

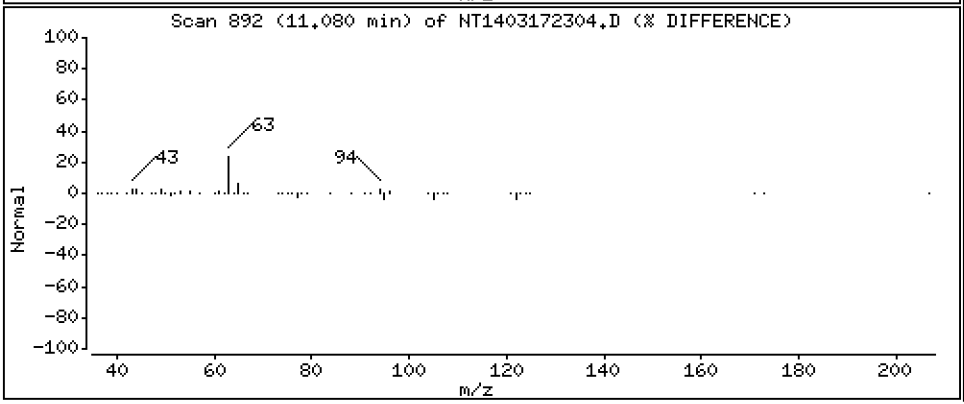
23 Bis(2-Chloroethoxy)methane

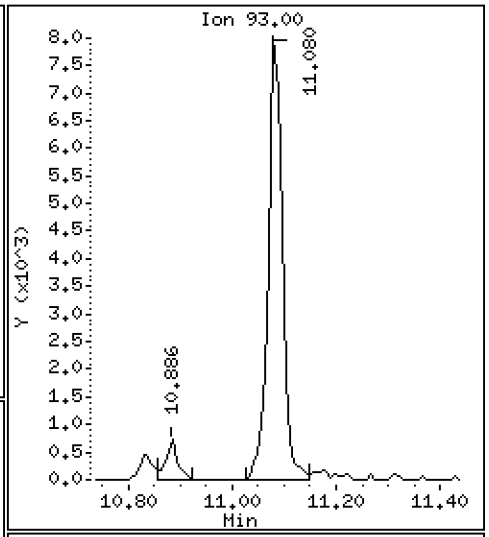
Concentration: 0.1847 ug/mL

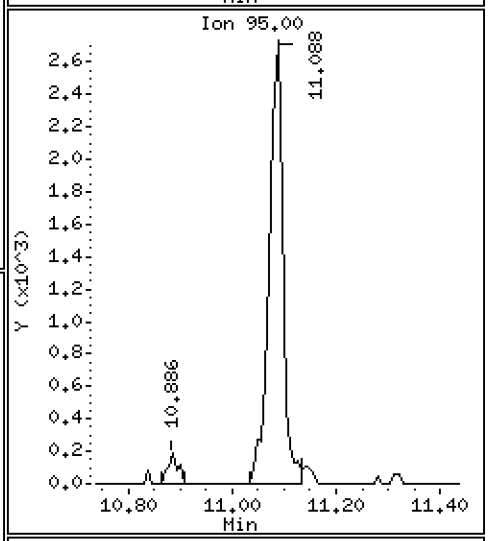


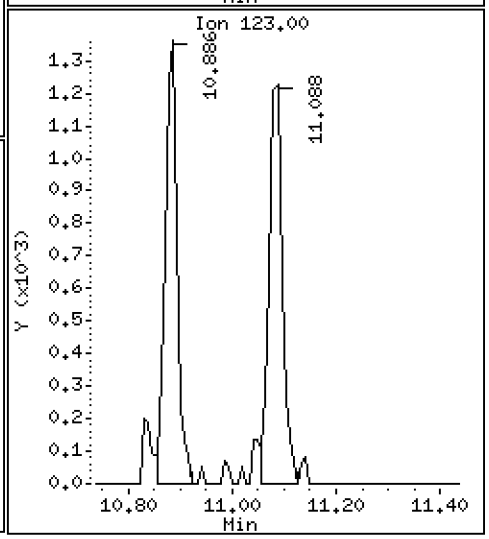












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

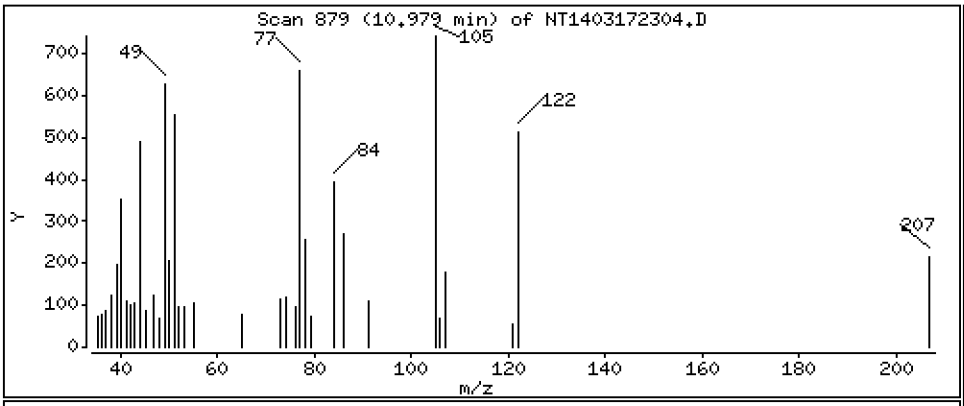
Operator: JGR

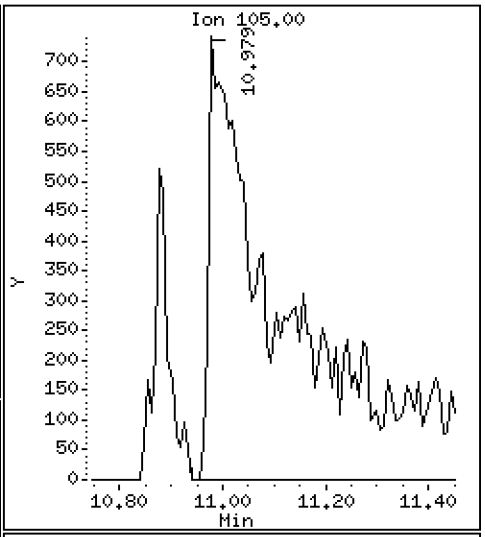
Column phase: ZB-5msi

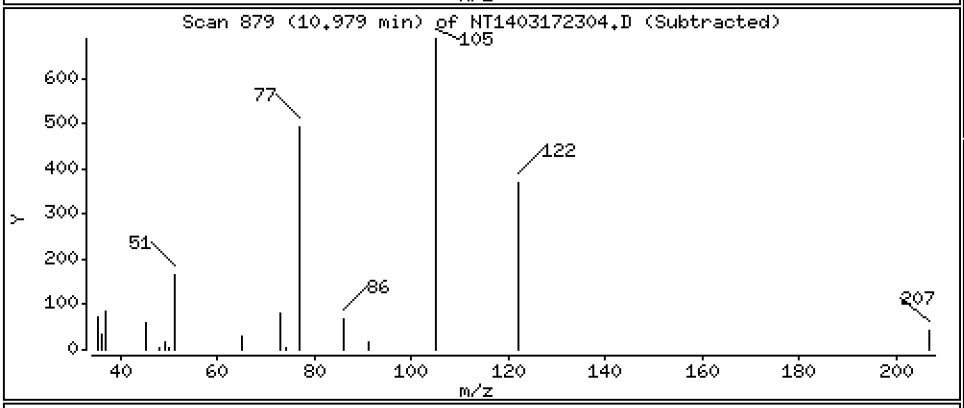
Column diameter: 0.25

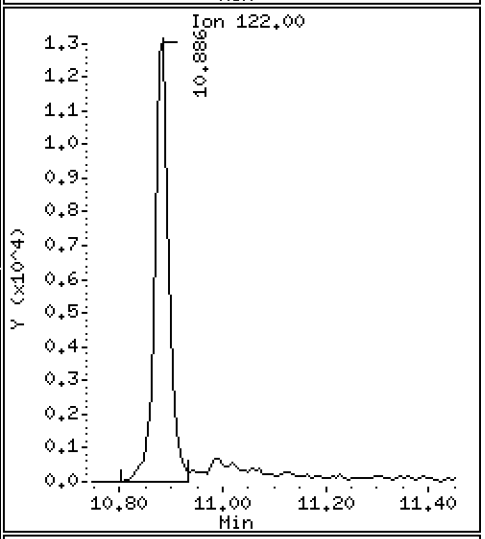
24 Benzoic acid

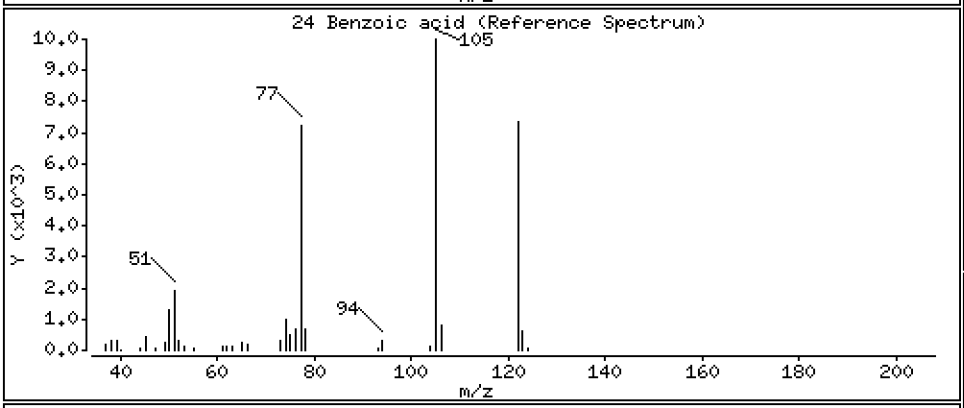
Concentration: 0.1295 ug/mL

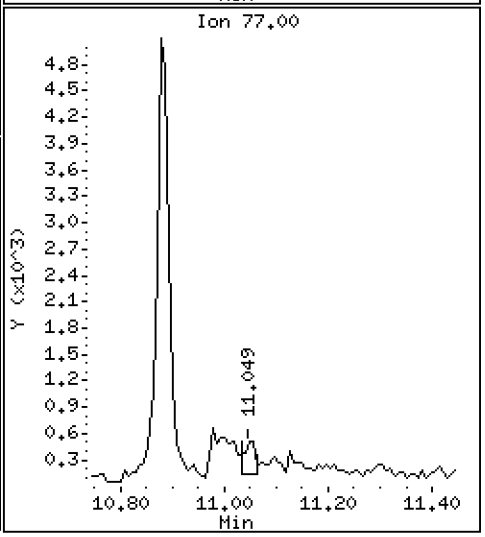


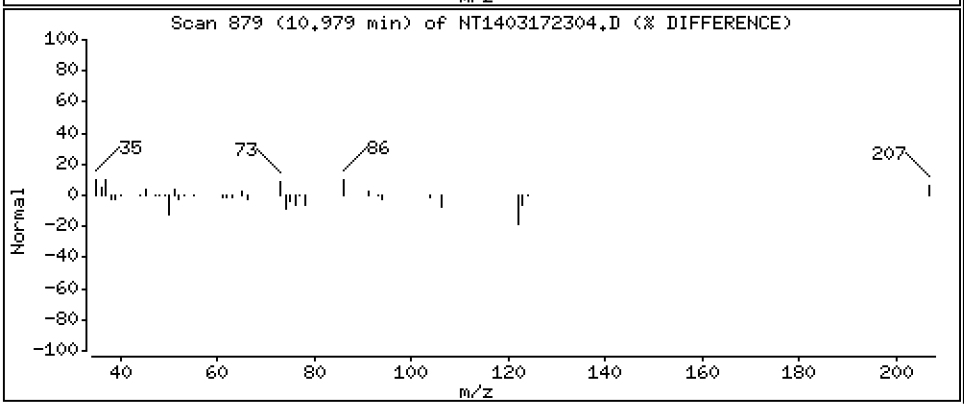












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

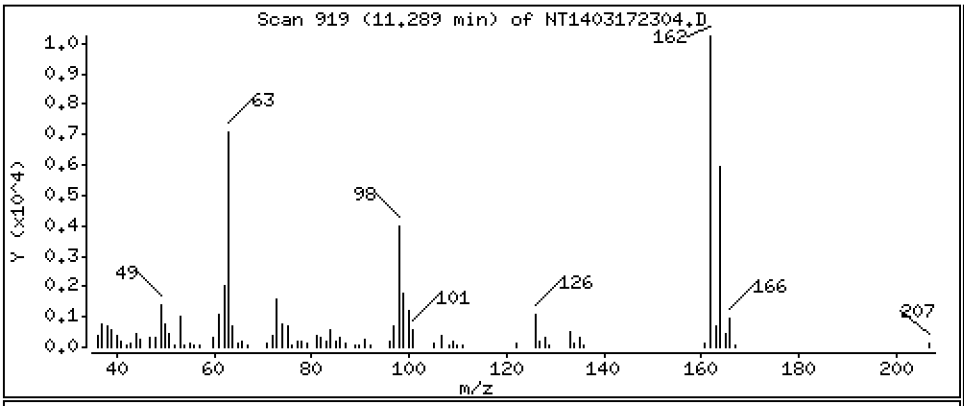
Operator: JGR

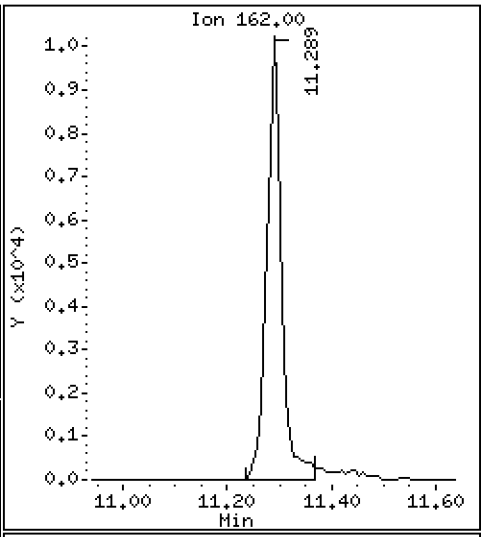
Column phase: ZB-5msi

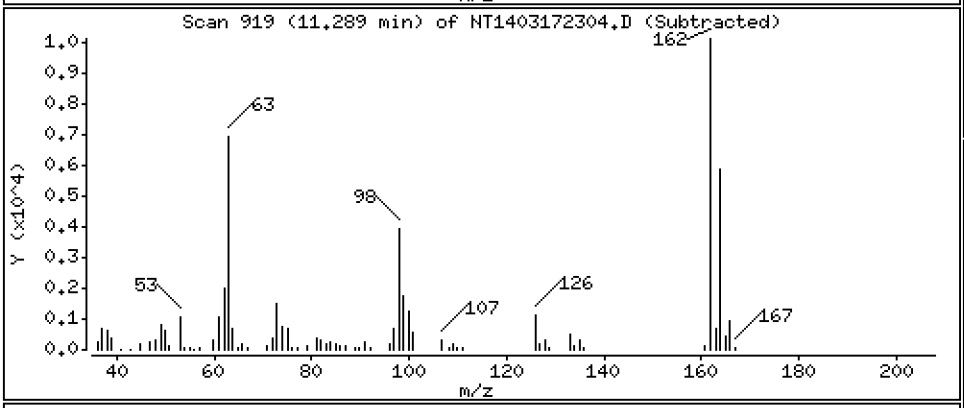
Column diameter: 0.25

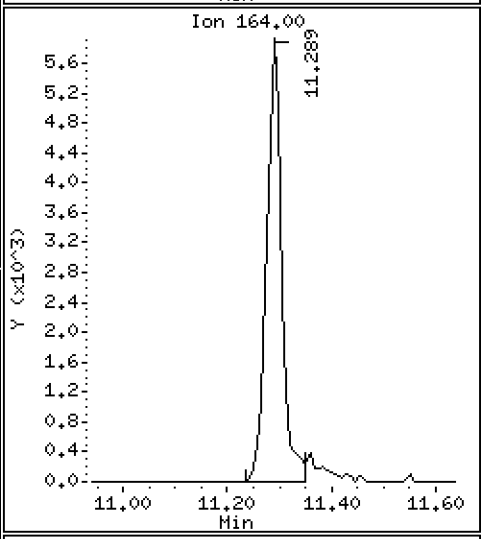
25 2,4-Dichlorophenol

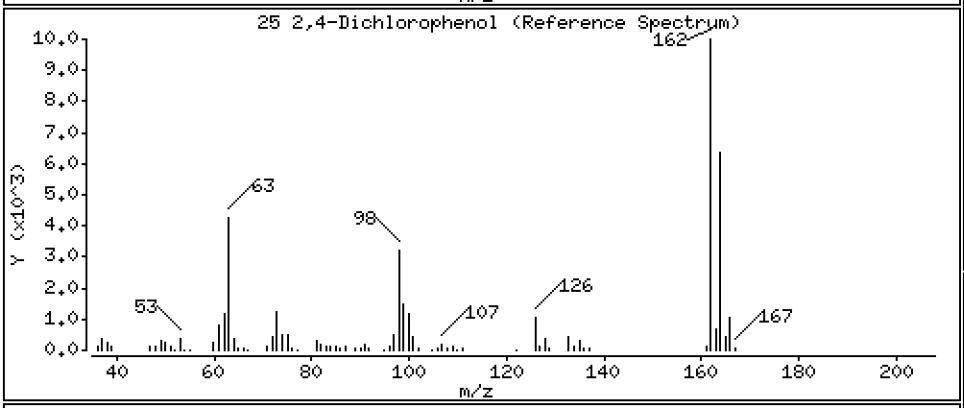
Concentration: 0.3425 ug/mL

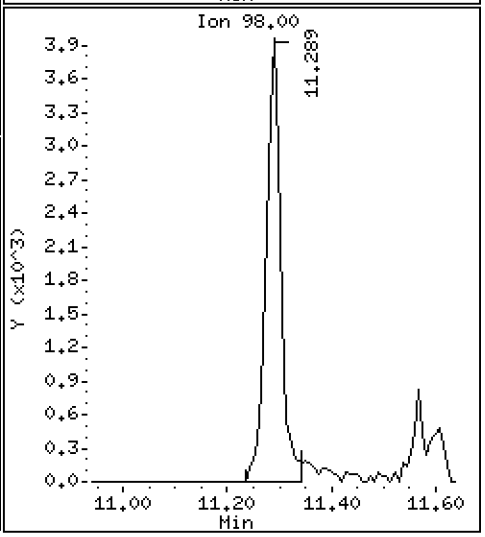


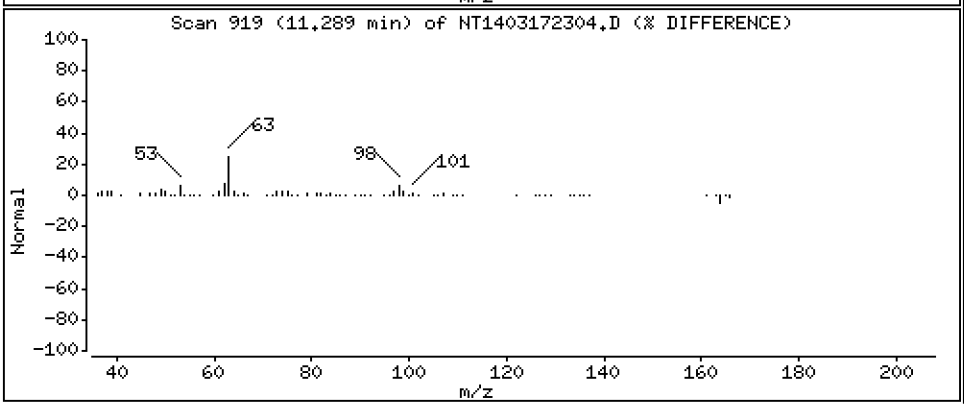












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

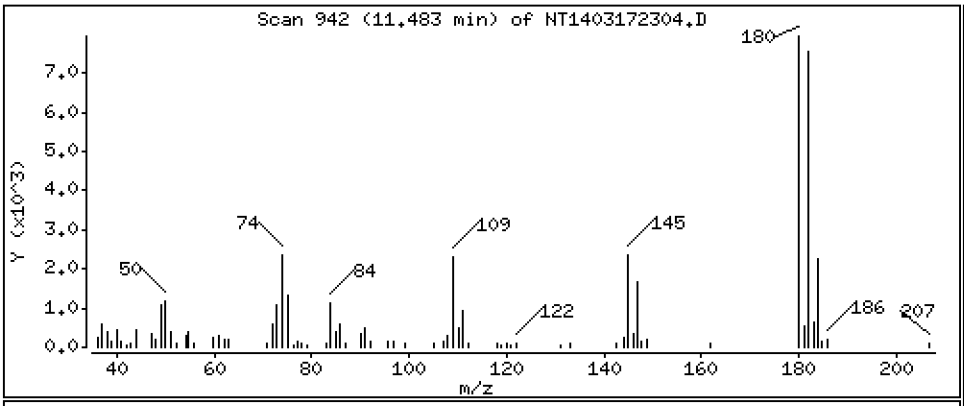
Operator: JGR

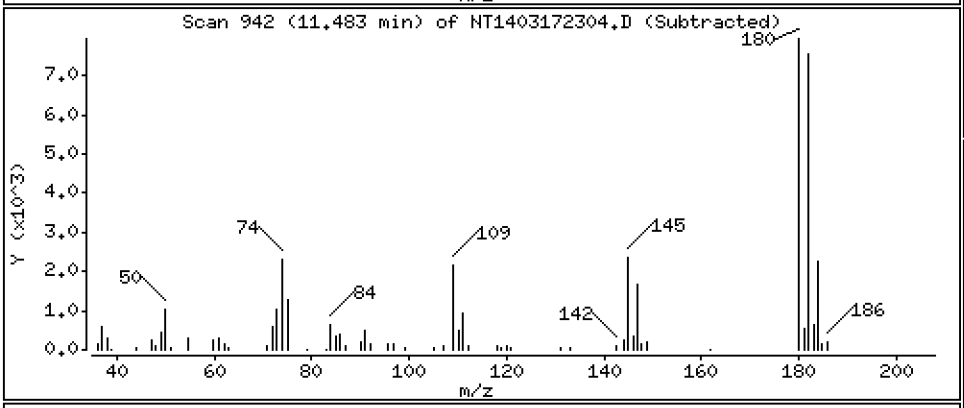
Column phase: ZB-5msi

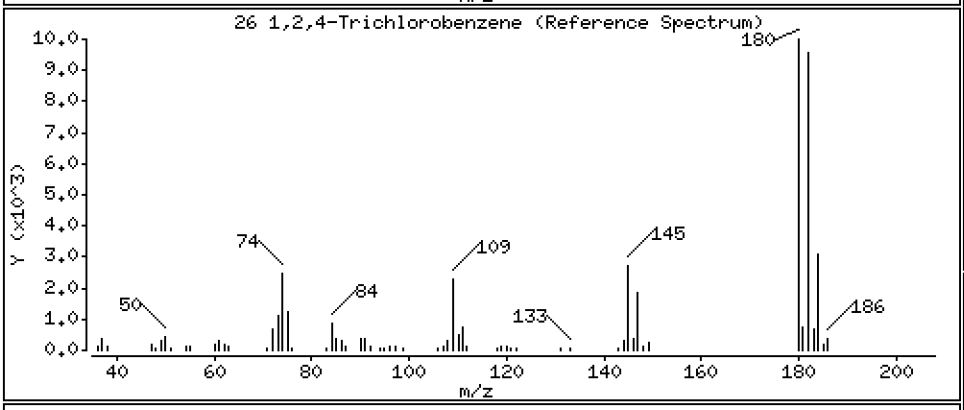
Column diameter: 0.25

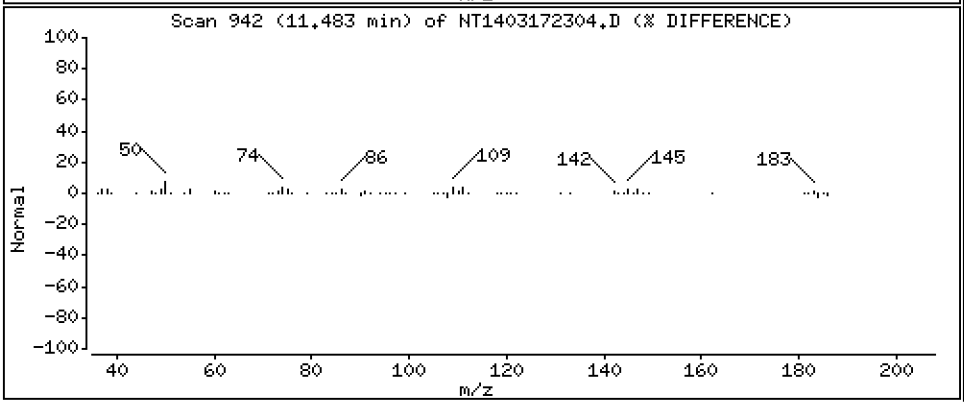
26 1,2,4-Trichlorobenzene

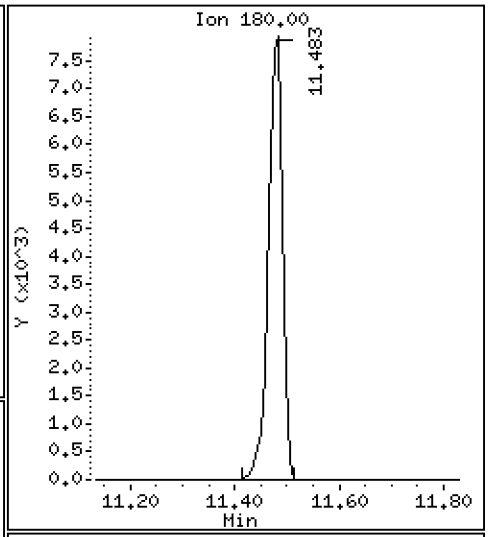
Concentration: 0.2035 ug/mL

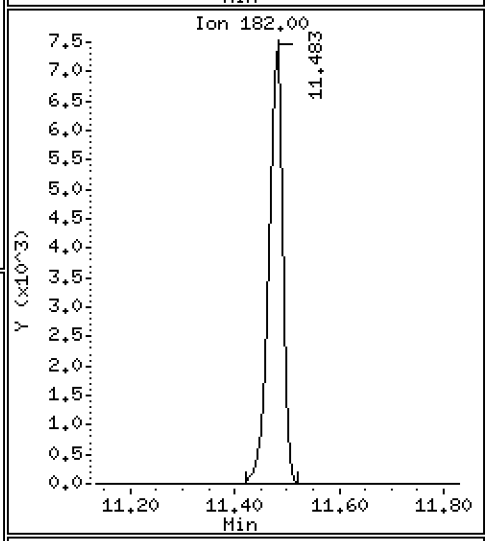


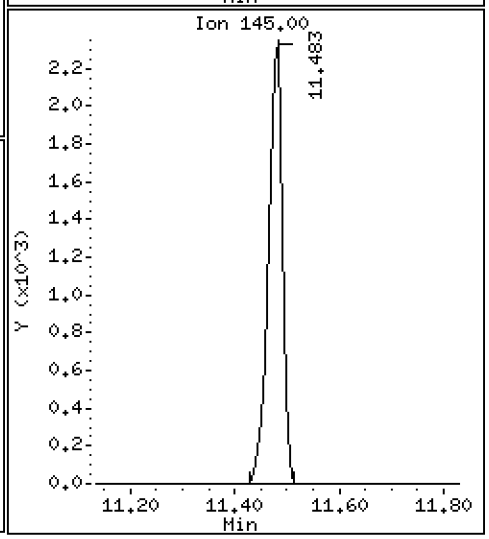












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

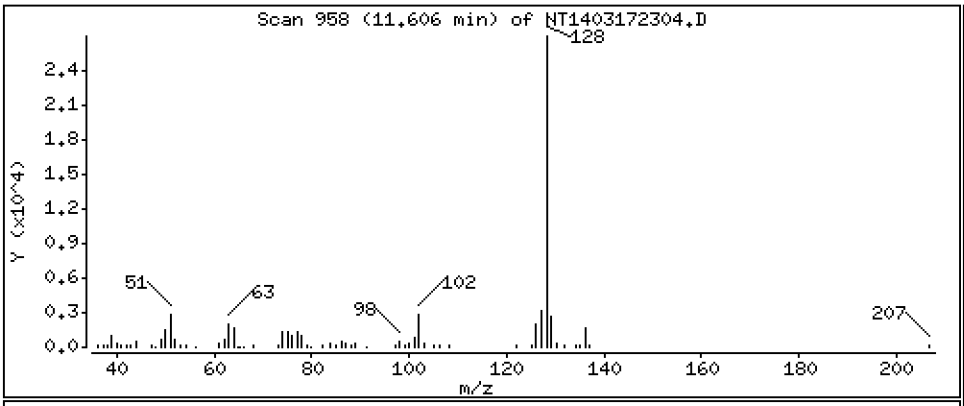
Operator: JGR

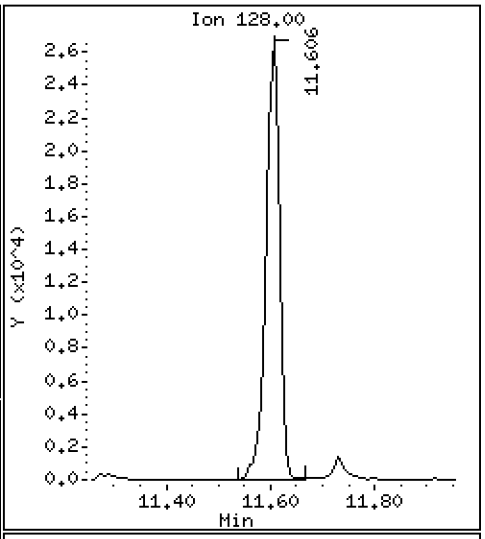
Column phase: ZB-5msi

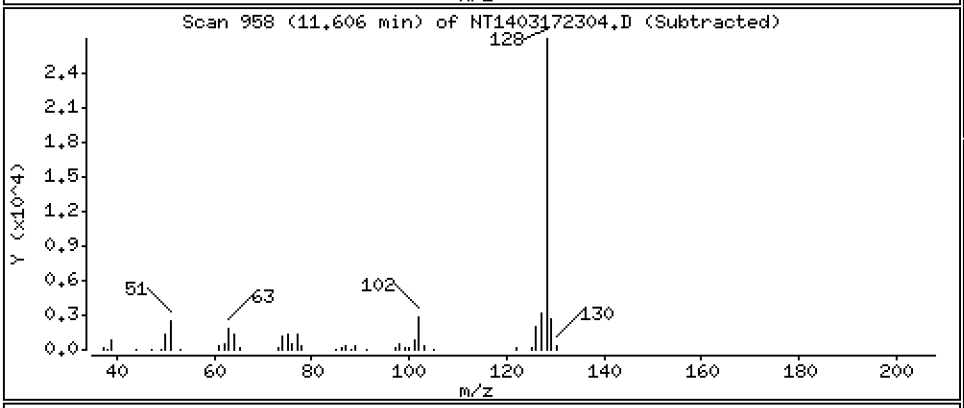
Column diameter: 0.25

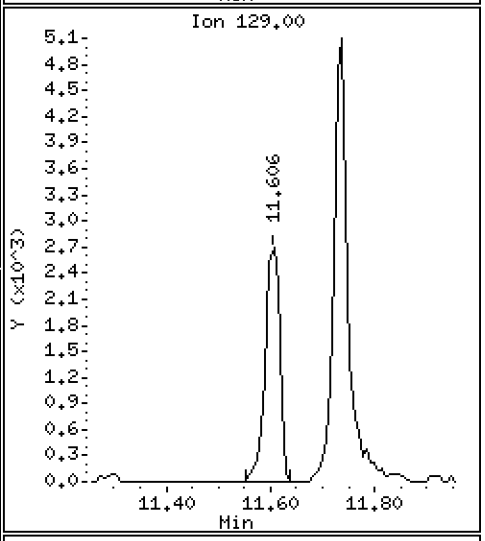
28 Naphthalene

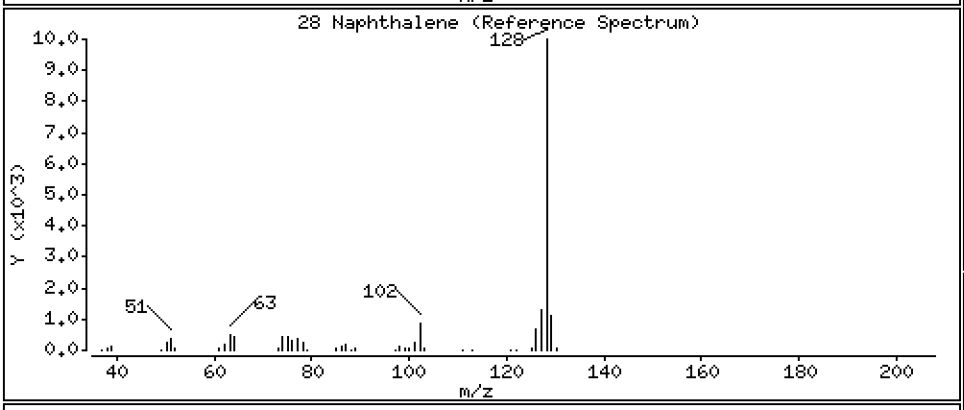
Concentration: 0.2085 ug/mL

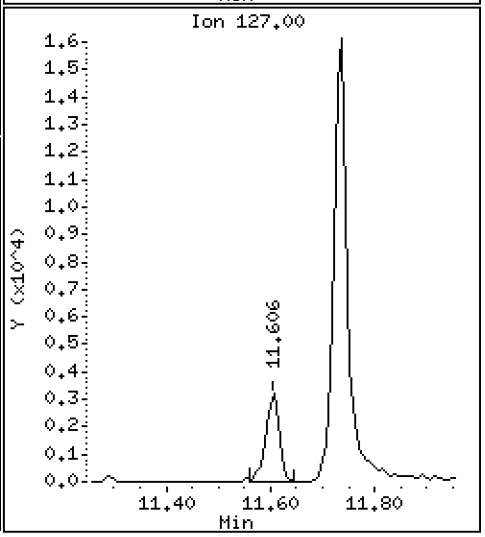


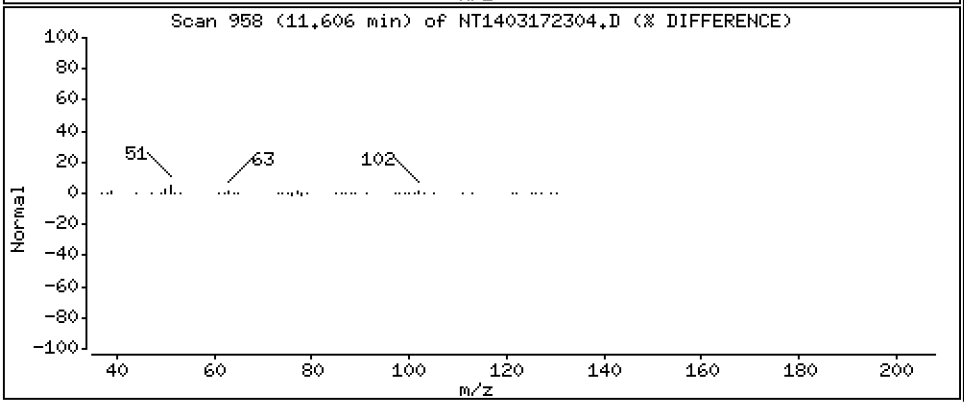












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

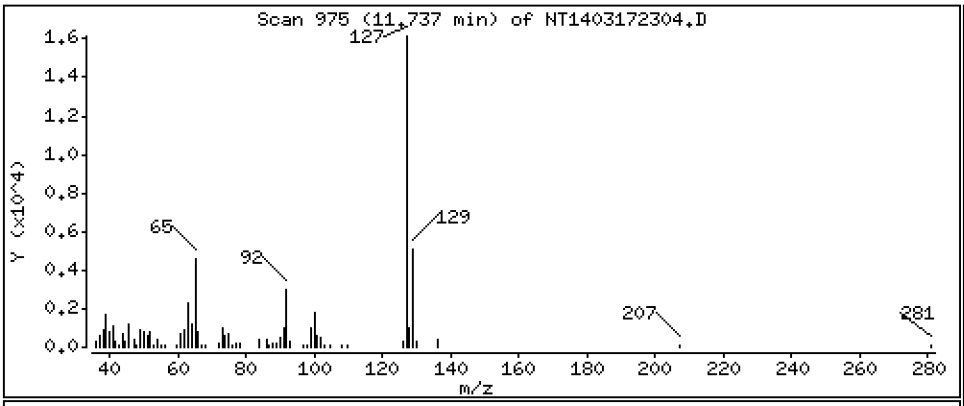
Operator: JGR

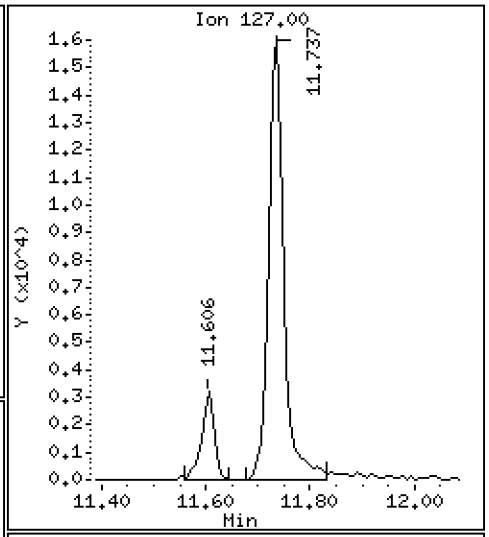
Column phase: ZB-5msi

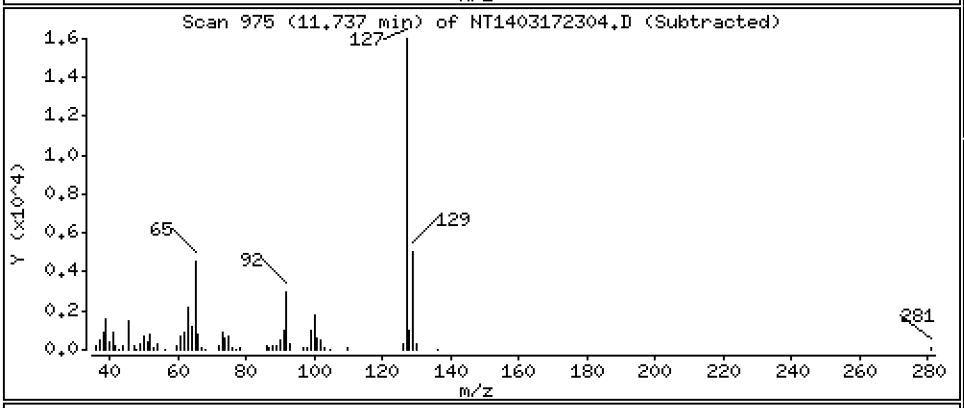
Column diameter: 0.25

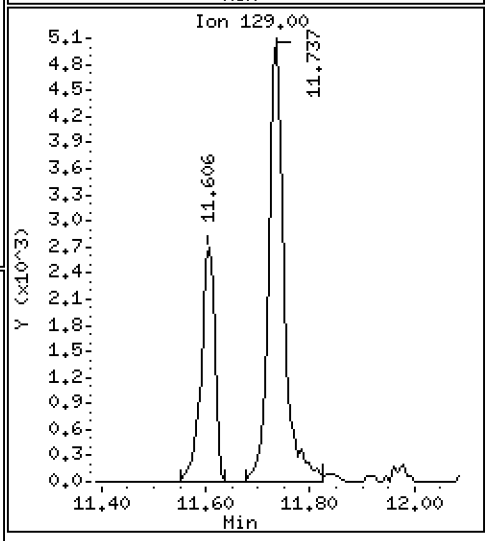
29 4-Chloroaniline

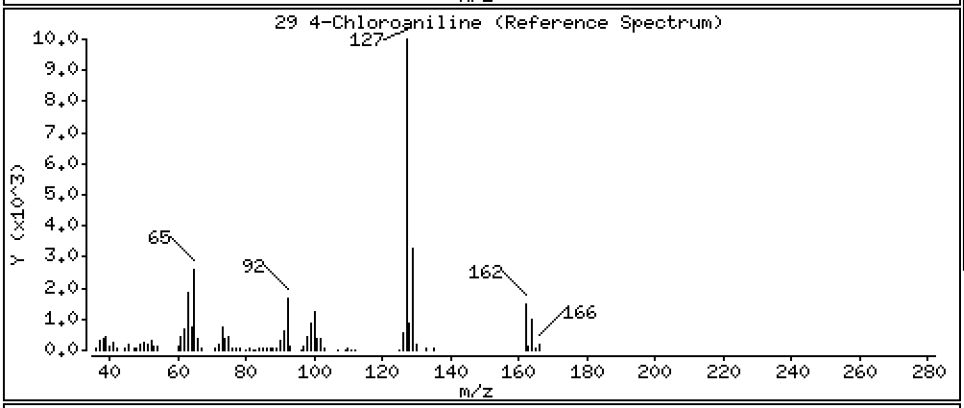
Concentration: 0.3382 ug/mL

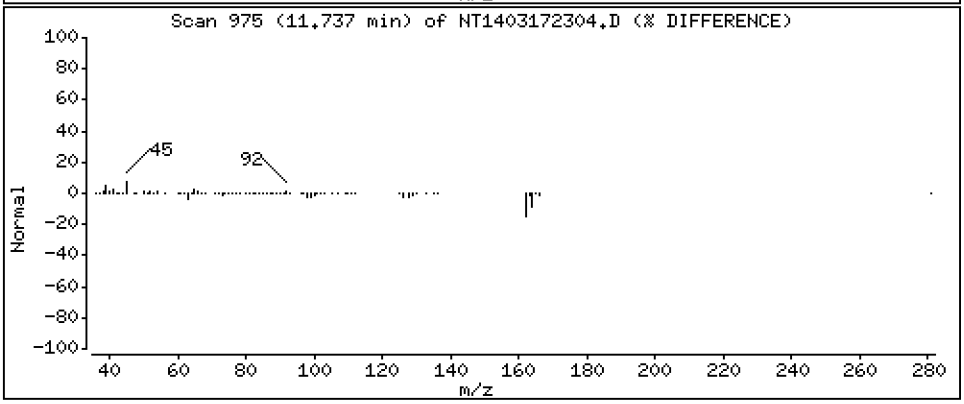












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

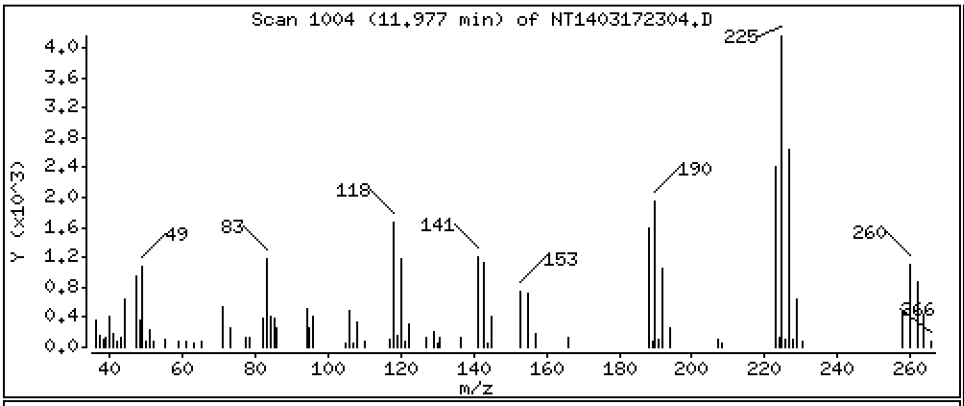
Operator: JGR

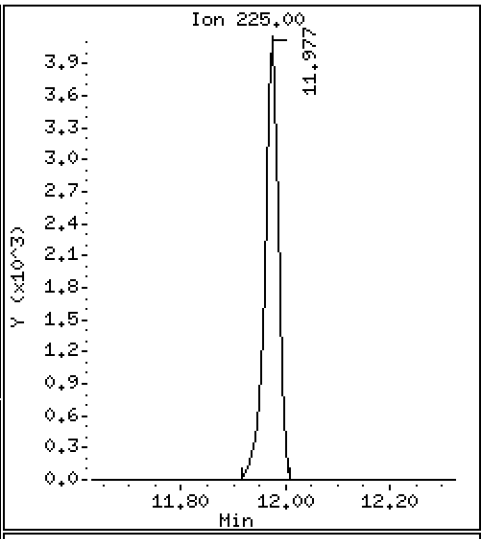
Column phase: ZB-5msi

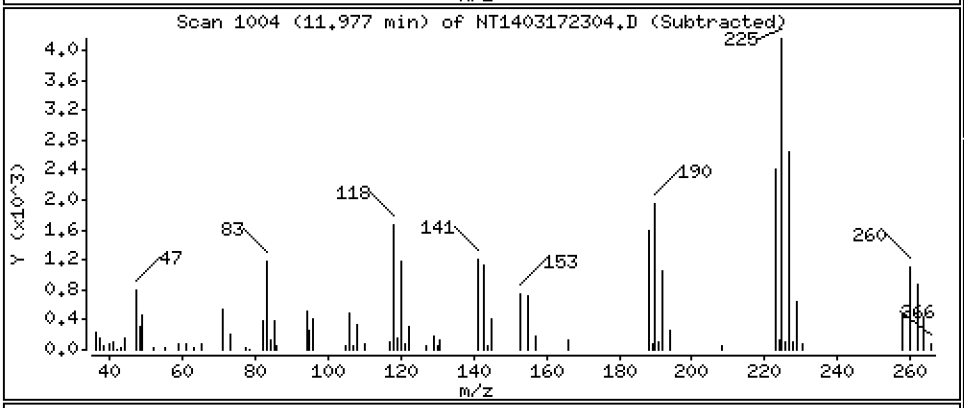
Column diameter: 0.25

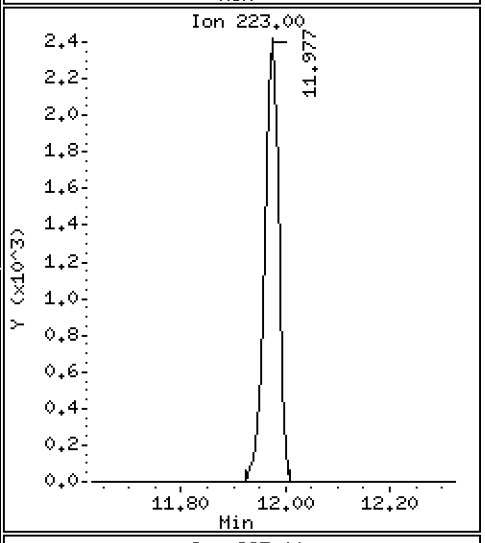
30 Hexachlorobutadiene

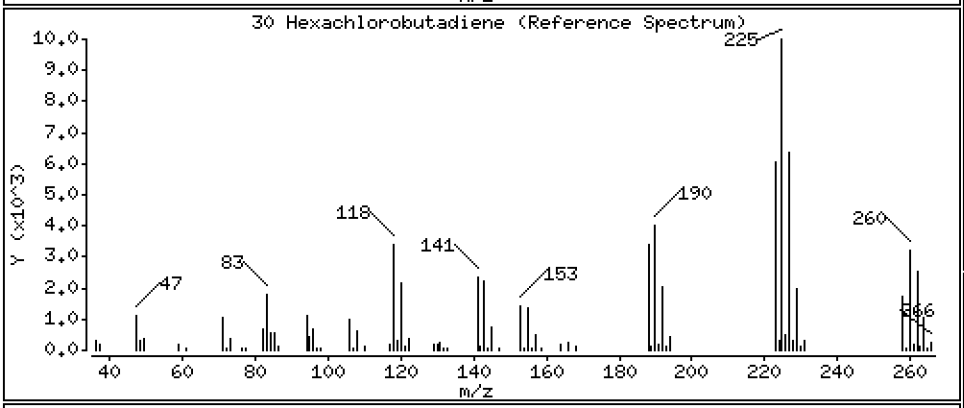
Concentration: 0.2222 ug/mL

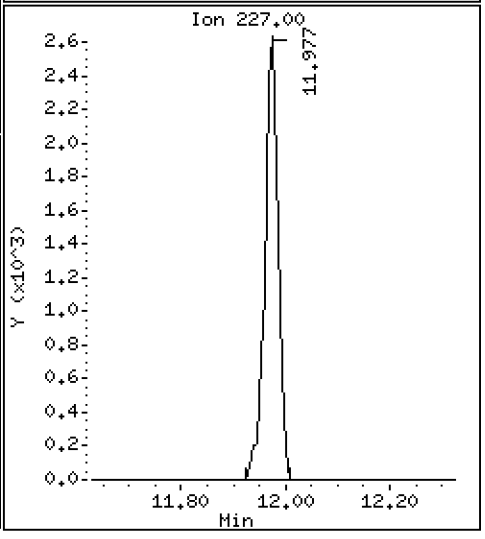


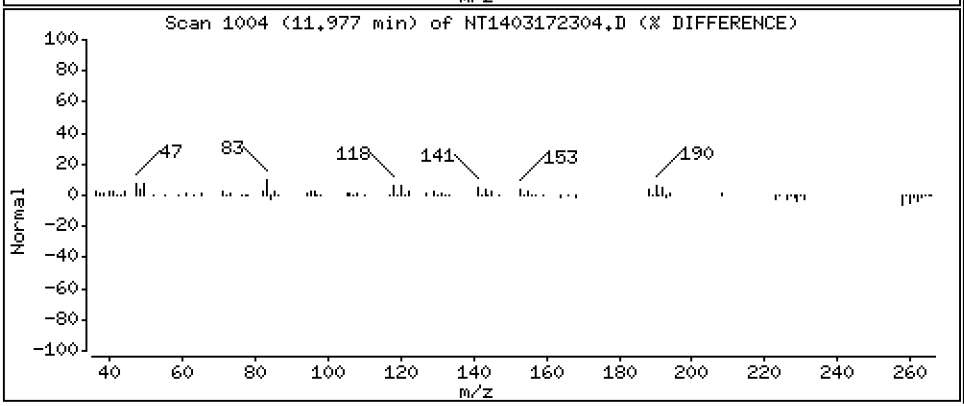












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

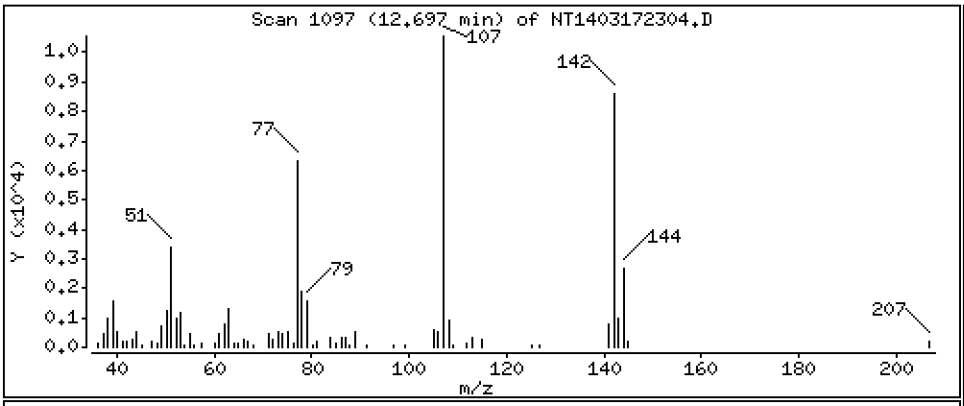
Operator: JGR

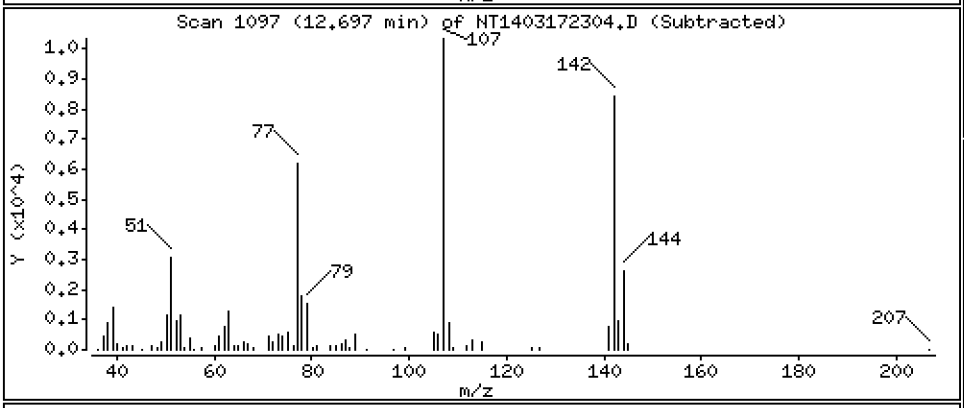
Column phase: ZB-5msi

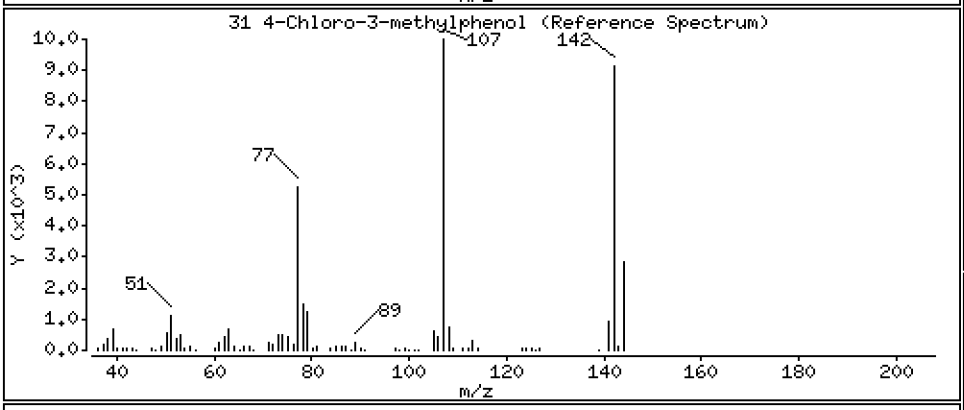
Column diameter: 0.25

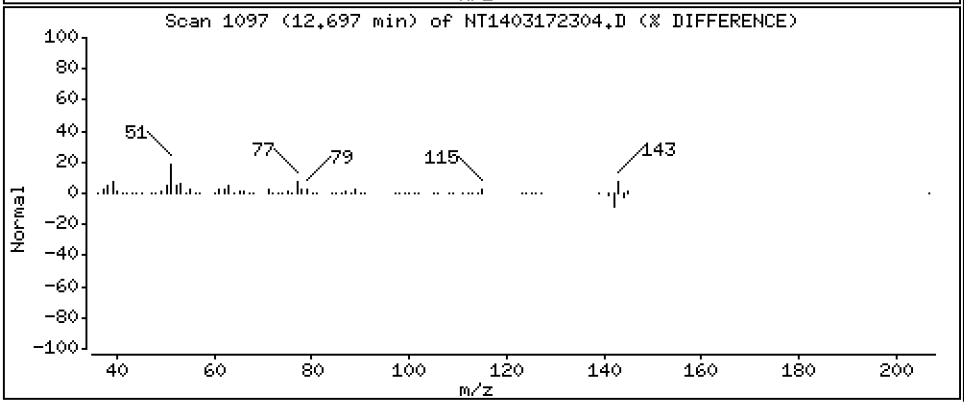
31 4-Chloro-3-methylphenol

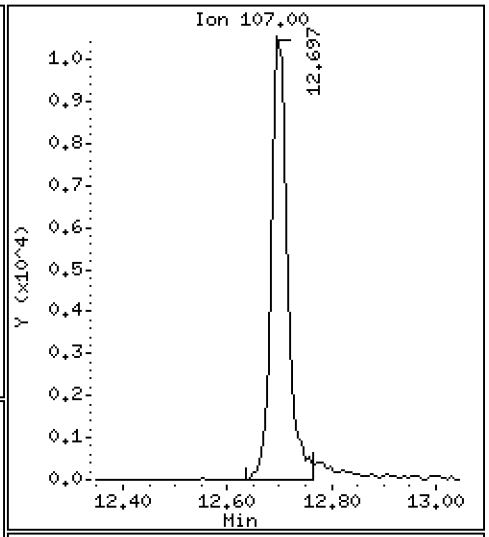
Concentration: 0.3158 ug/mL

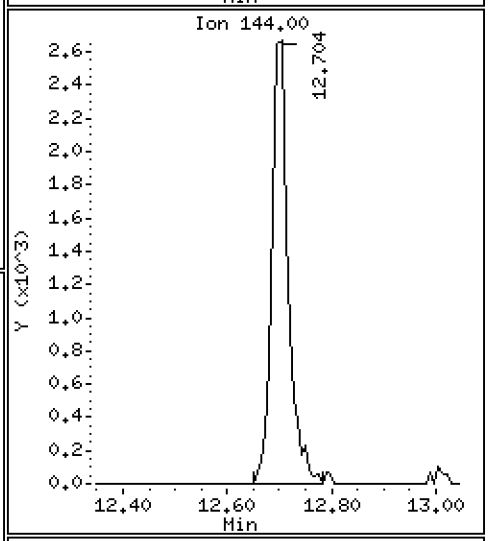


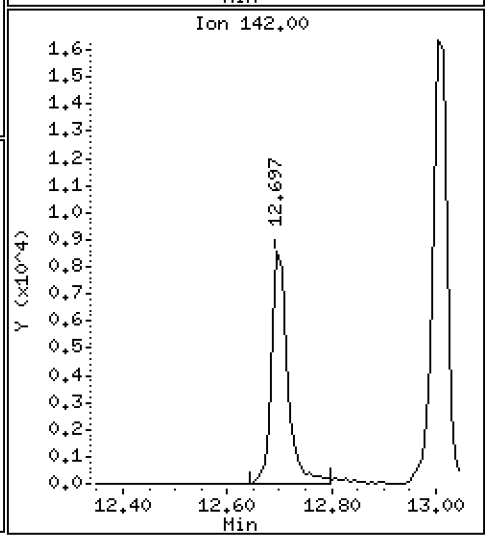












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

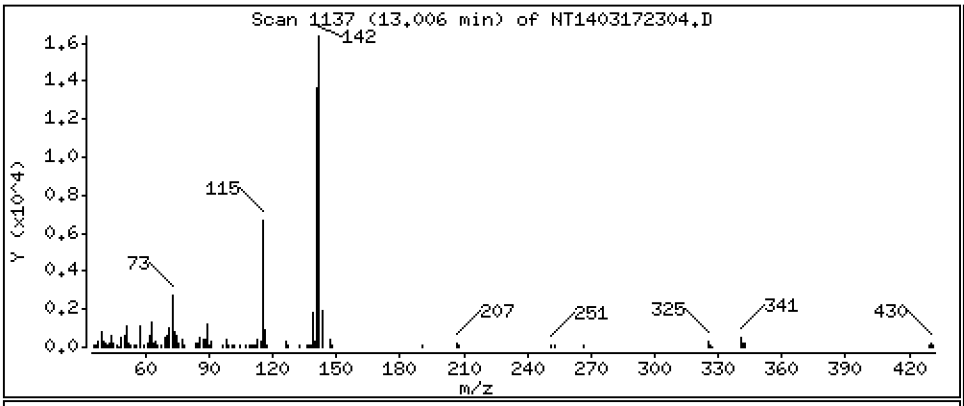
Operator: JGR

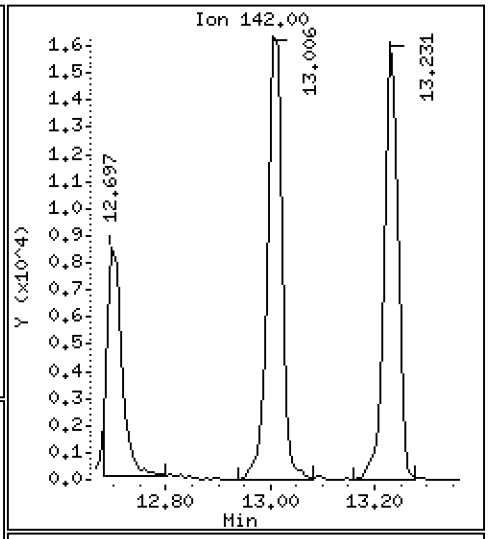
Column phase: ZB-5msi

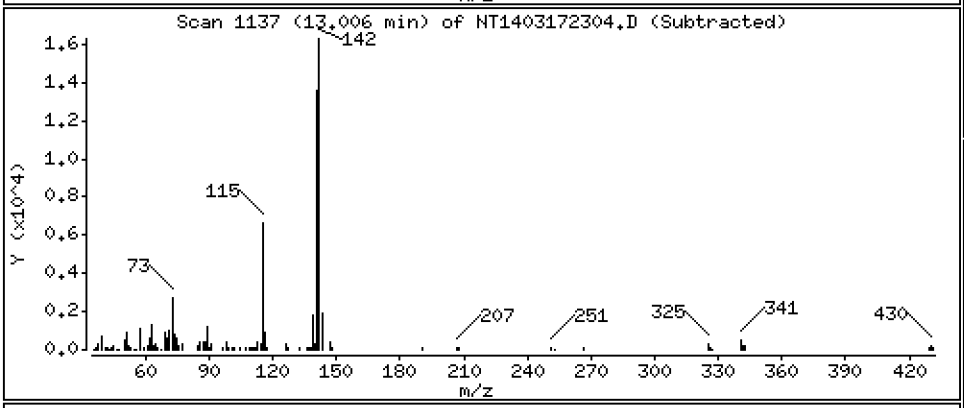
Column diameter: 0.25

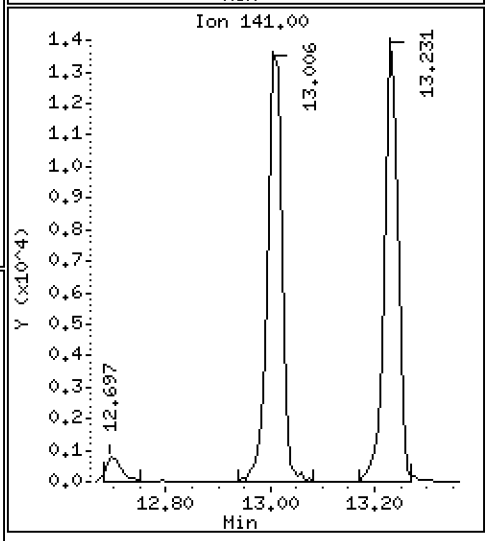
32 2-Methylnaphthalene

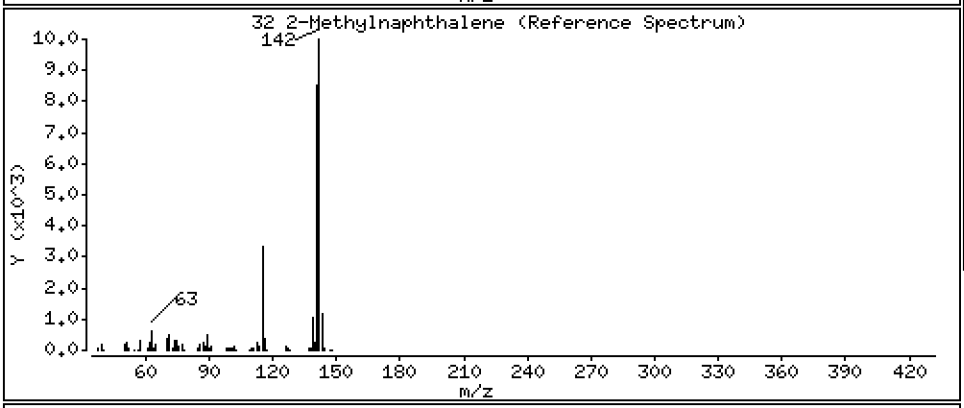
Concentration: 0.1987 ug/mL

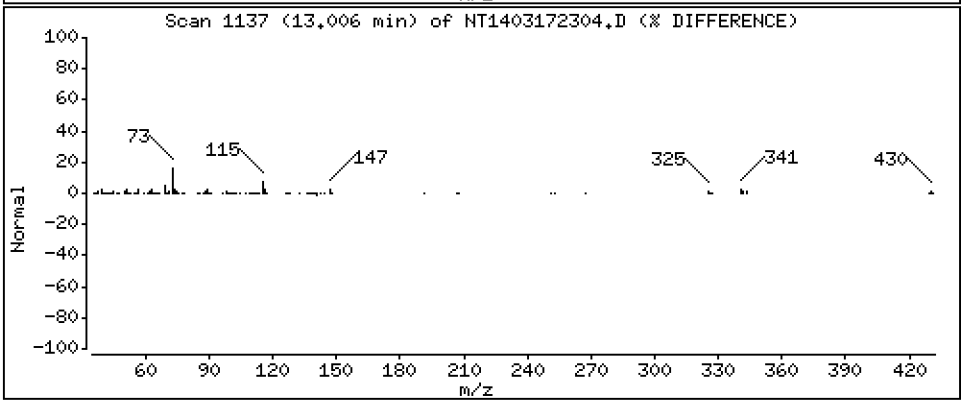












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

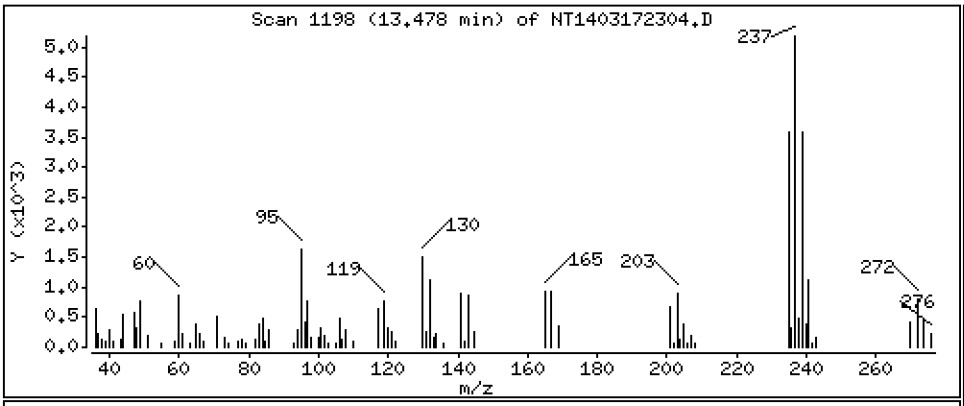
Operator: JGR

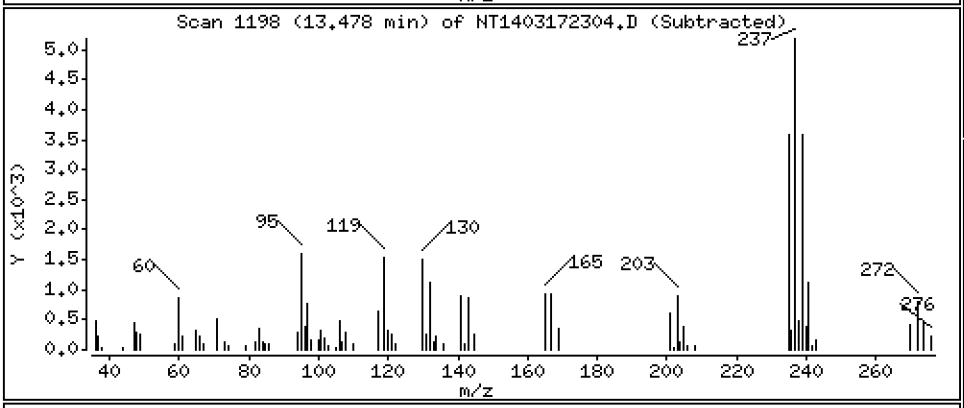
Column phase: ZB-5msi

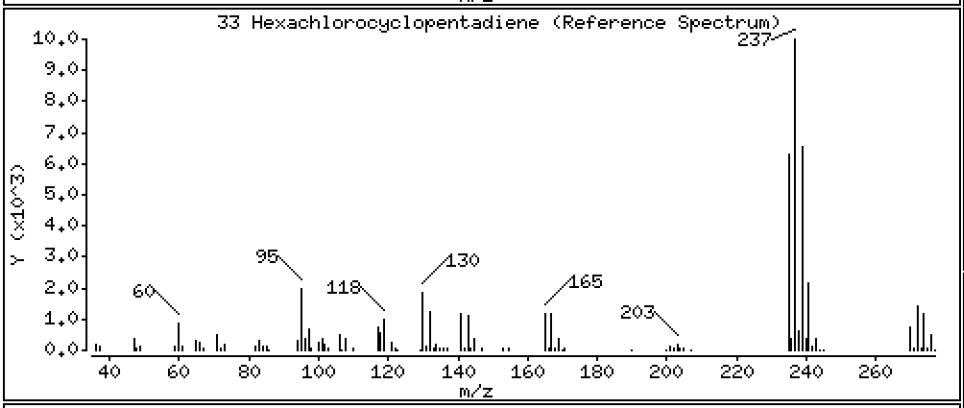
Column diameter: 0.25

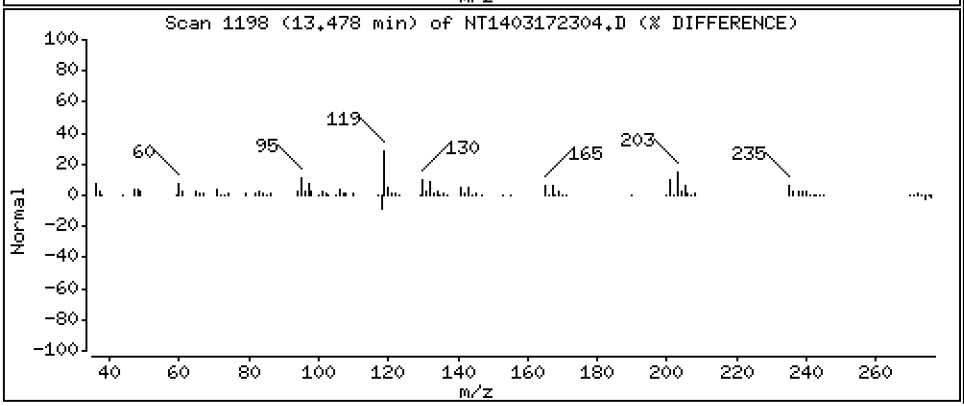
33 Hexachlorocyclopentadiene

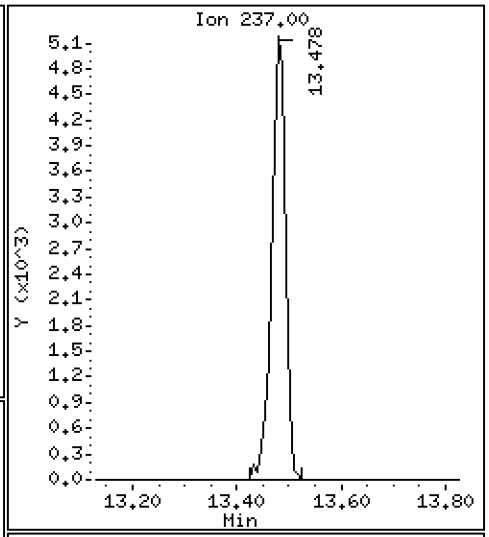
Concentration: 0.2606 ug/mL

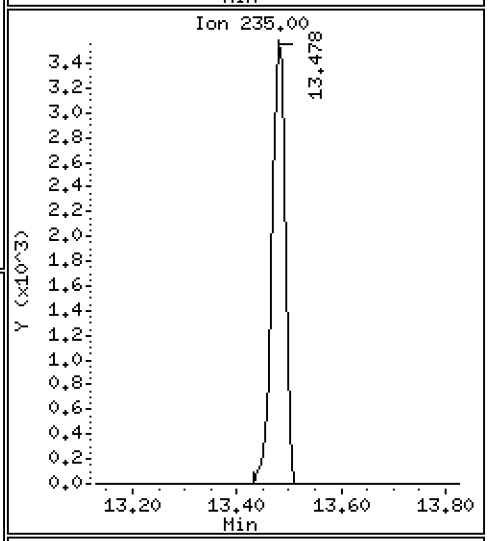


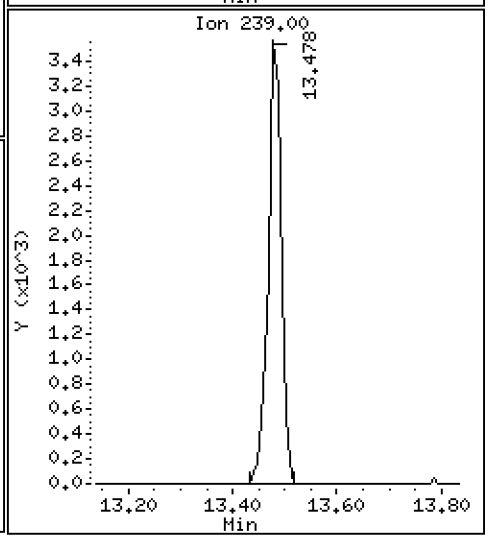












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

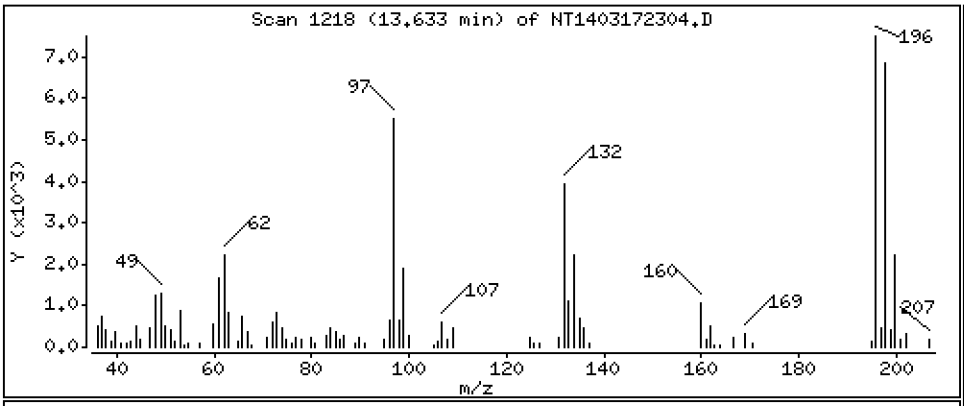
Operator: JGR

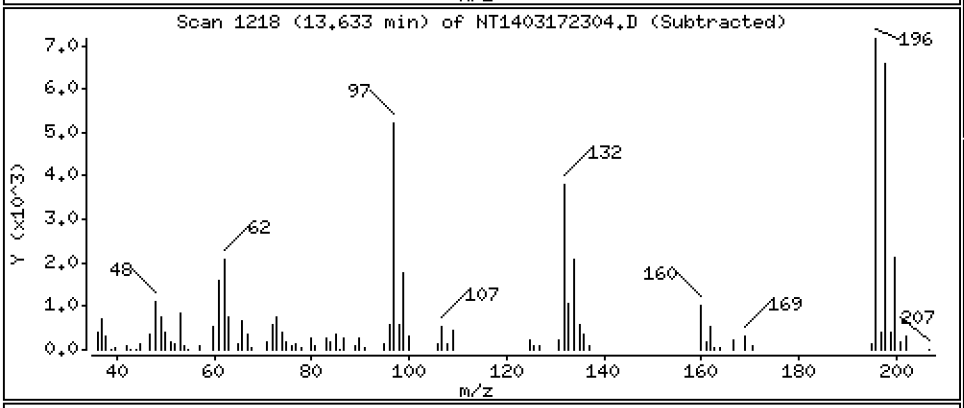
Column phase: ZB-5msi

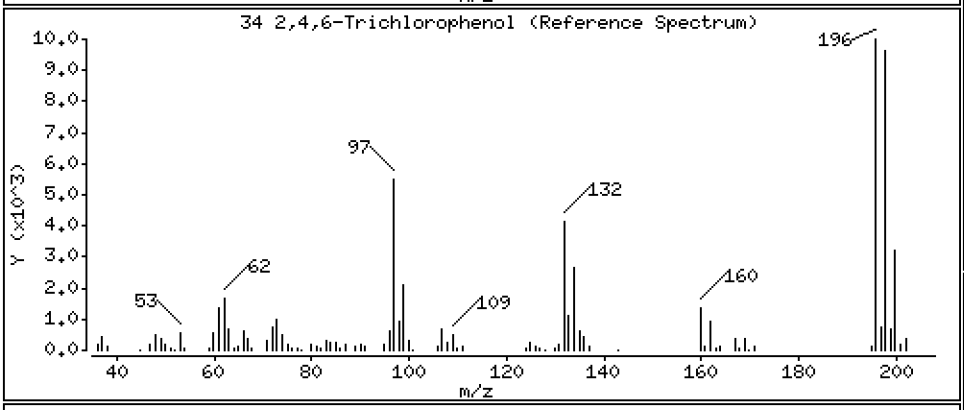
Column diameter: 0.25

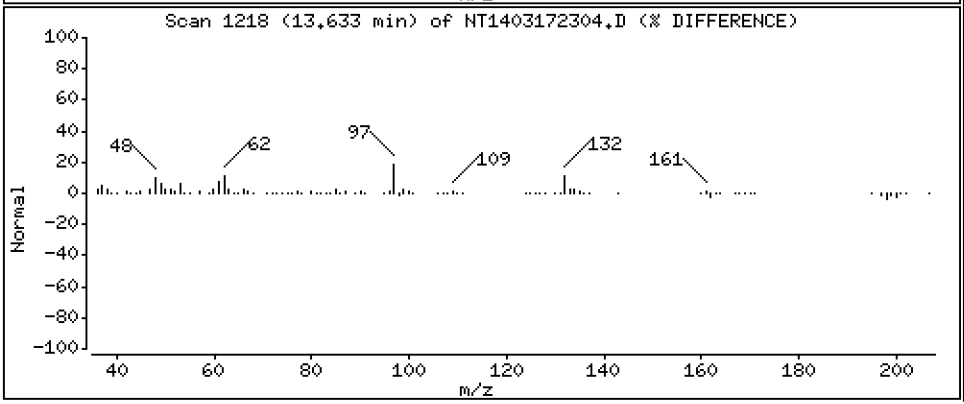
34 2,4,6-Trichlorophenol

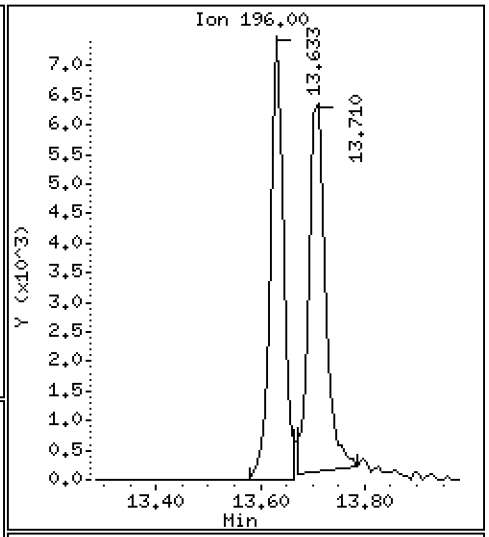
Concentration: 0.2944 ug/mL

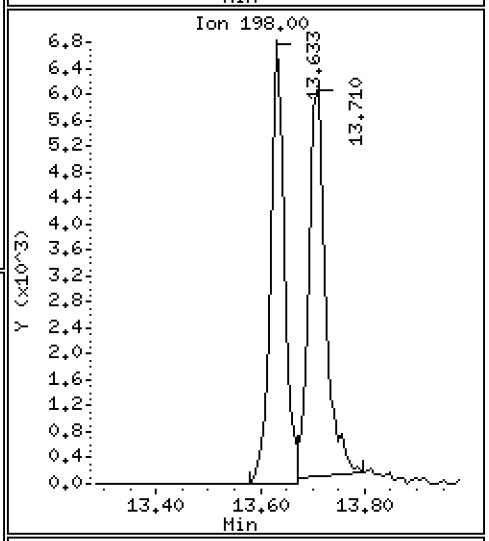


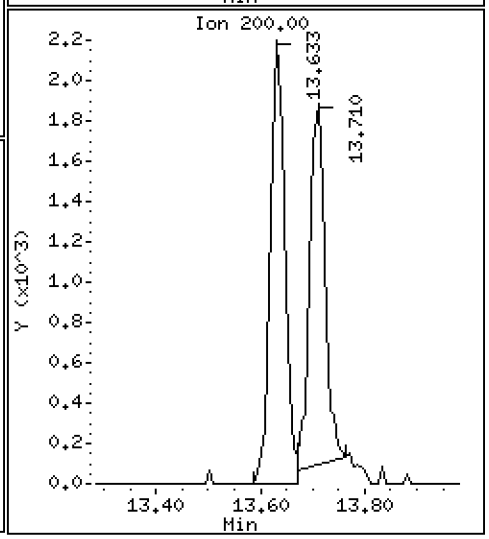












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

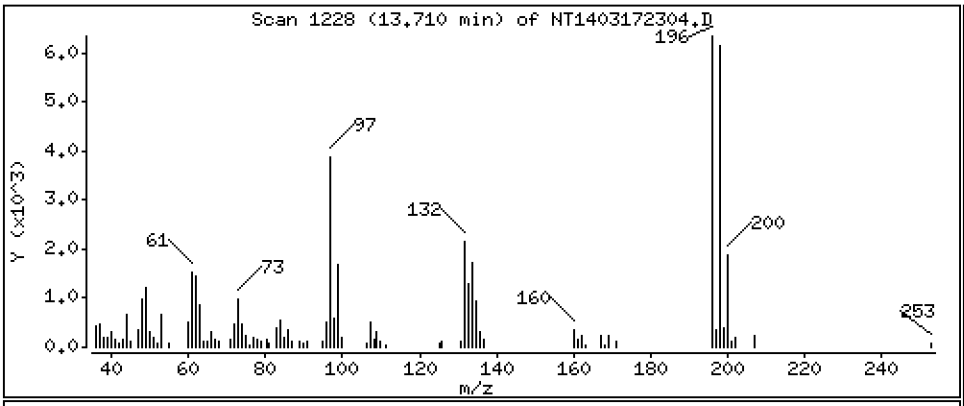
Operator: JGR

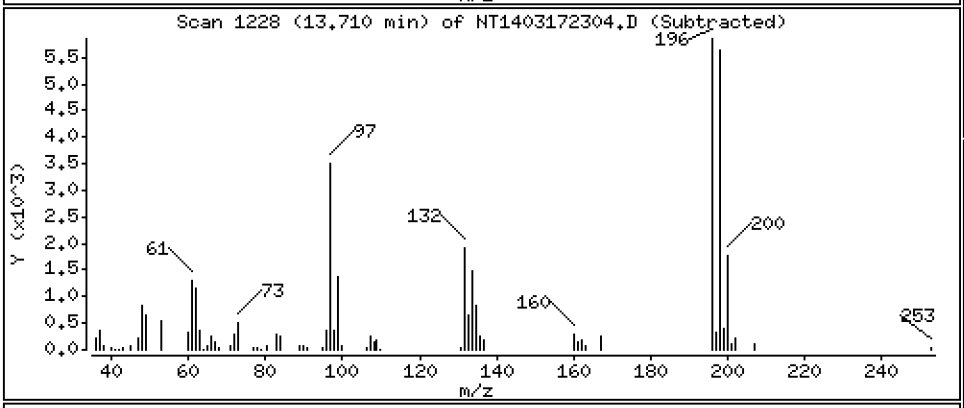
Column phase: ZB-5msi

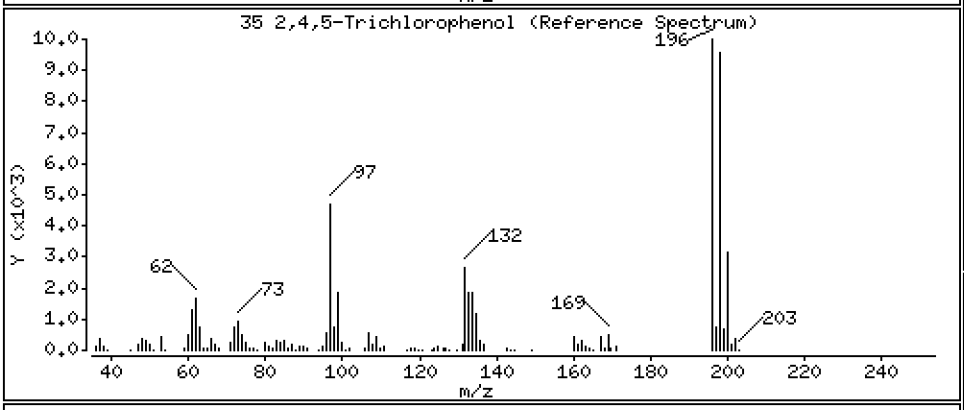
Column diameter: 0.25

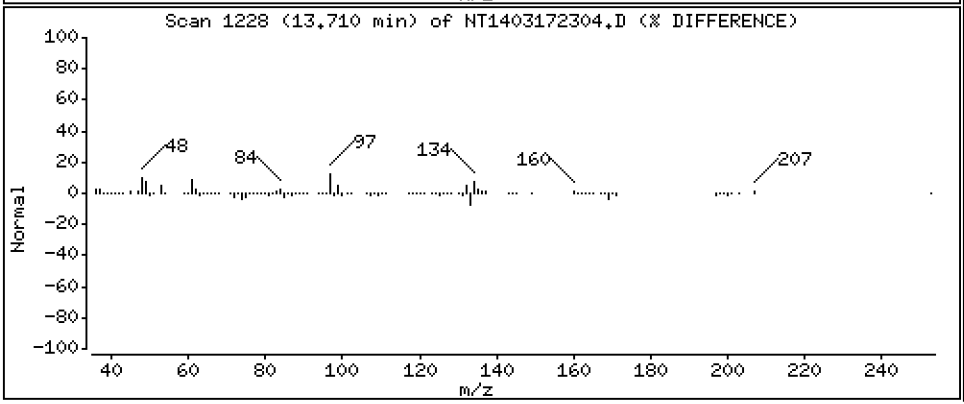
35 2,4,5-Trichlorophenol

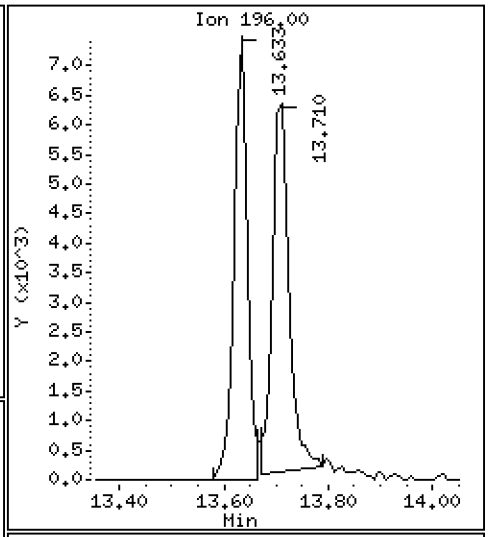
Concentration: 0.2996 ug/mL

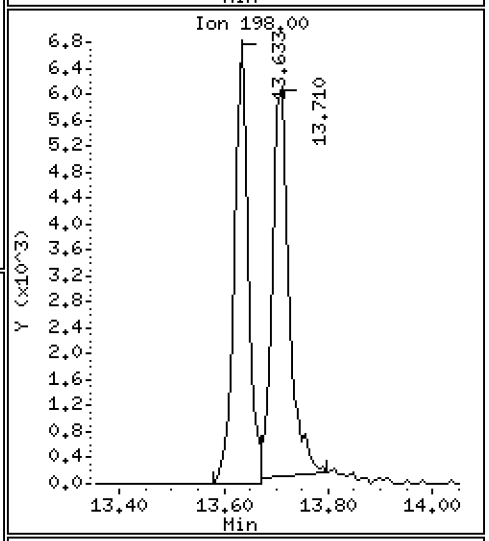


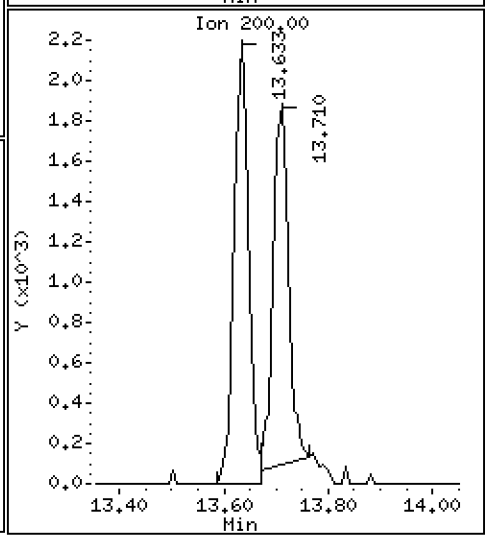












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

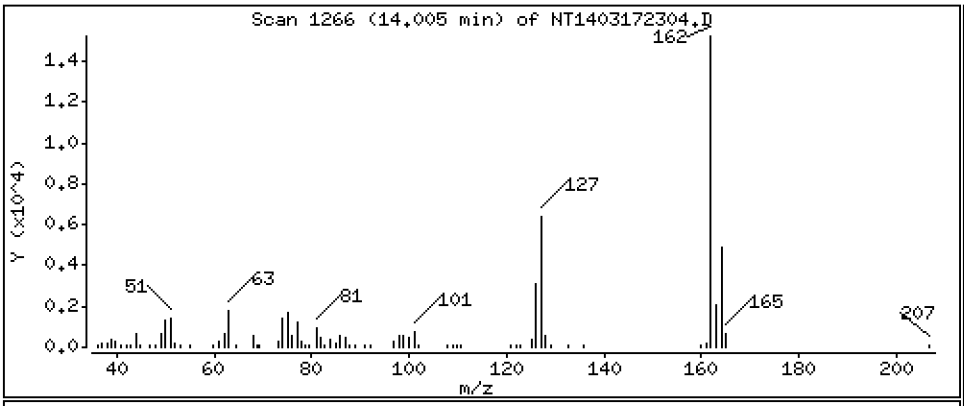
Operator: JGR

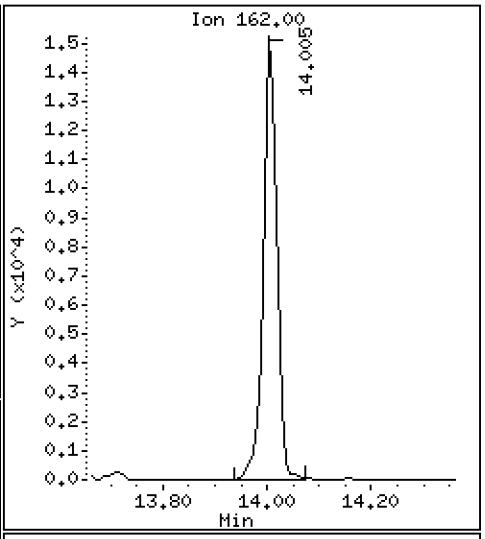
Column phase: ZB-5msi

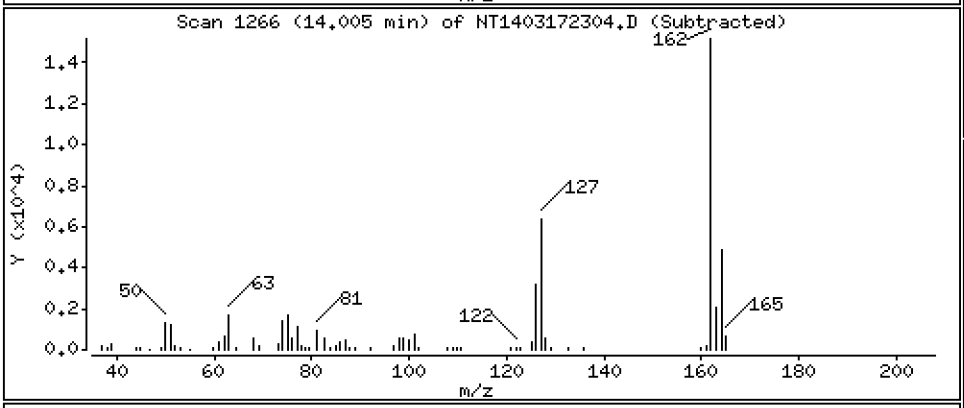
Column diameter: 0.25

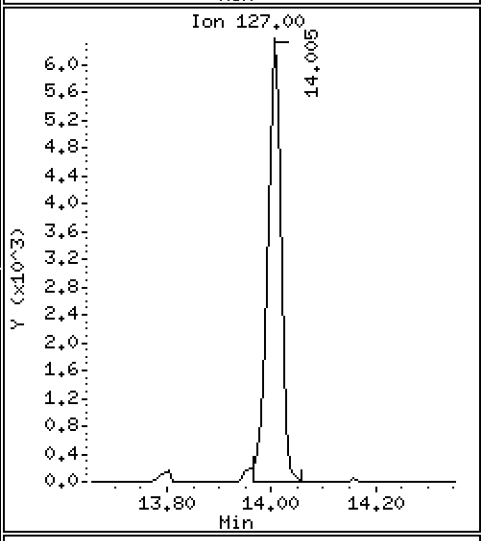
37 2-Chloronaphthalene

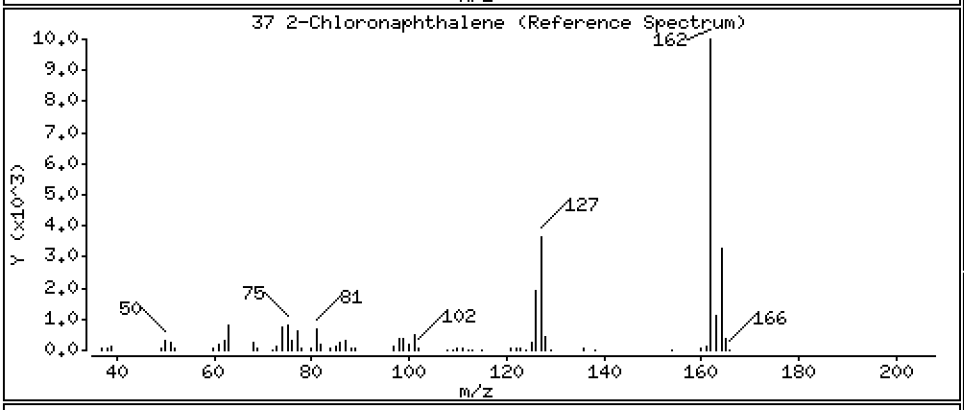
Concentration: 0.2031 ug/mL

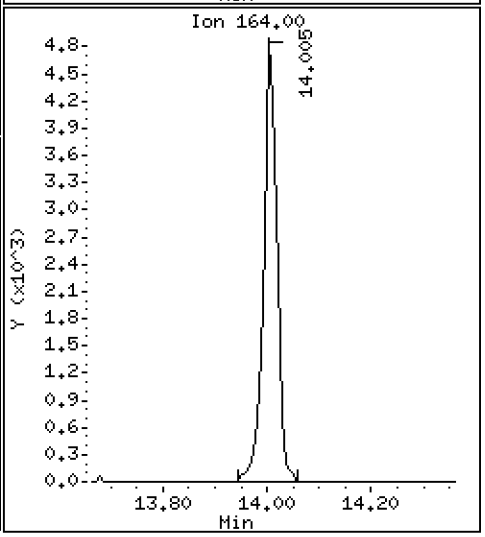


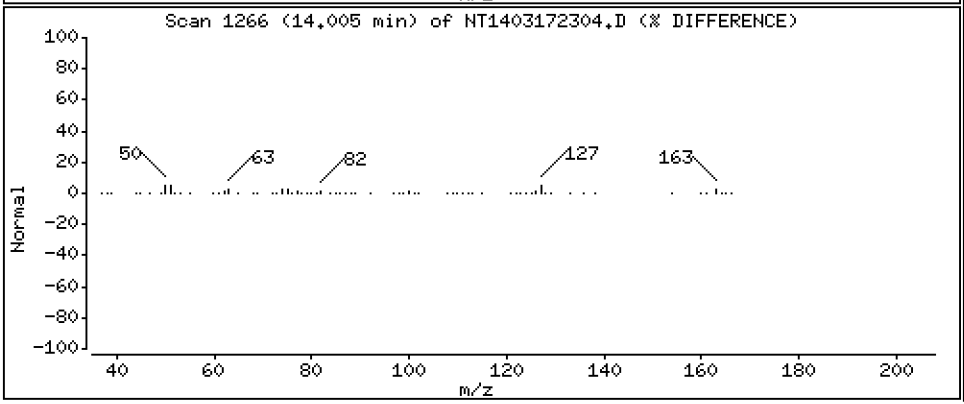












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

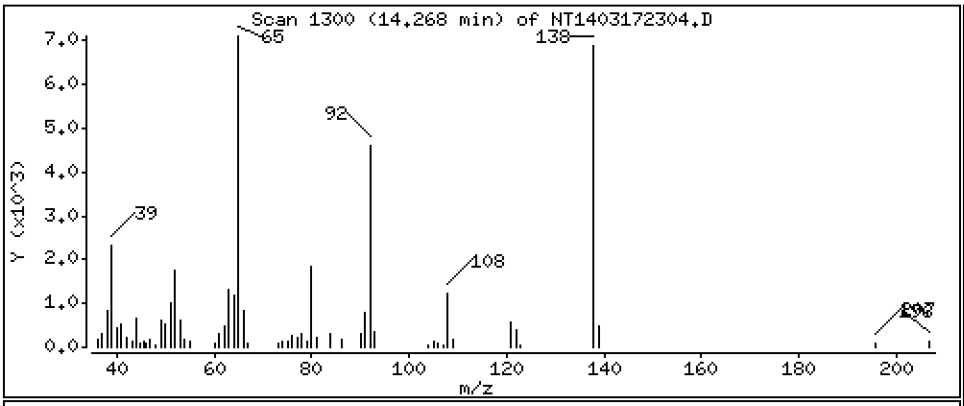
Operator: JGR

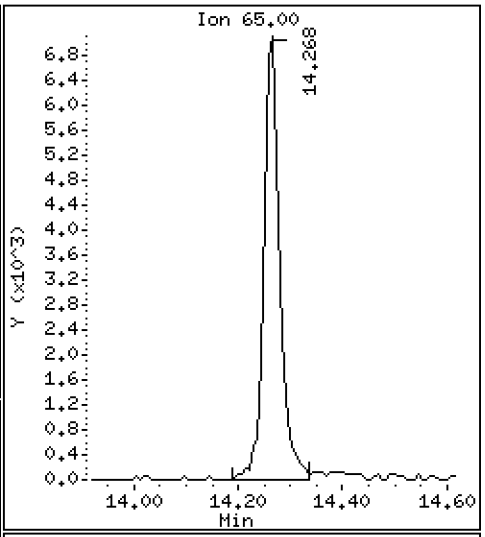
Column phase: ZB-5msi

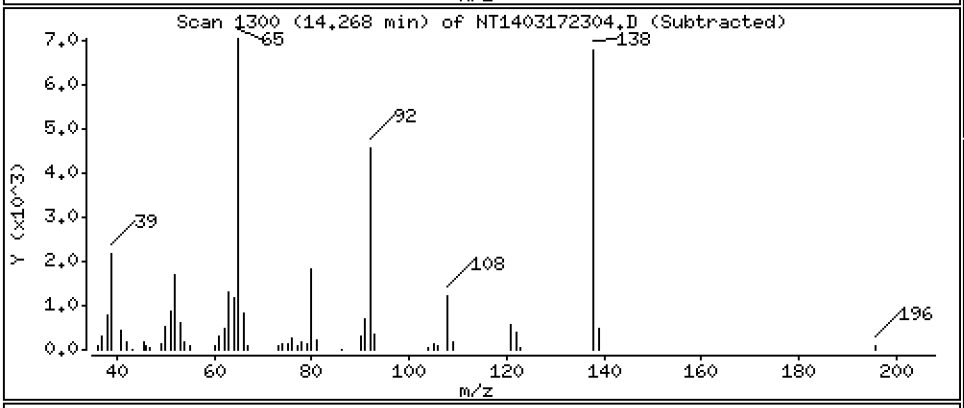
Column diameter: 0.25

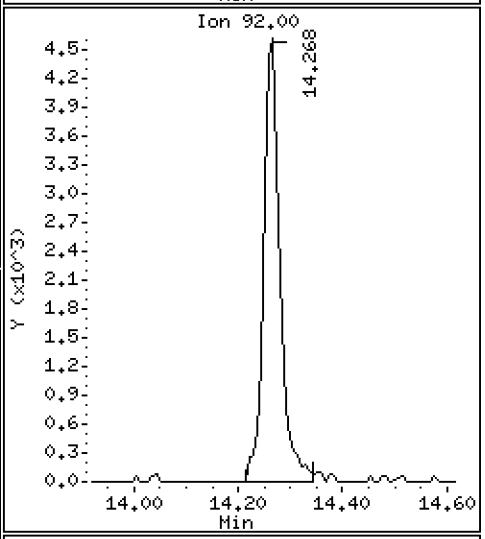
38 2-Nitroaniline

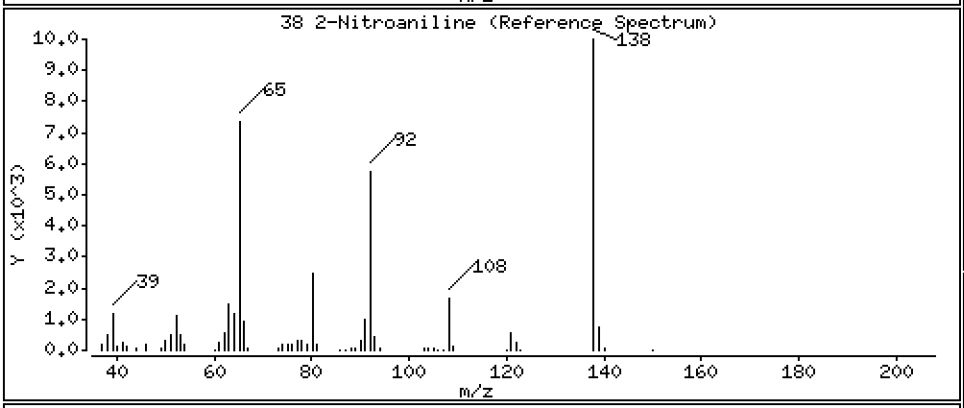
Concentration: 0.2915 ug/mL

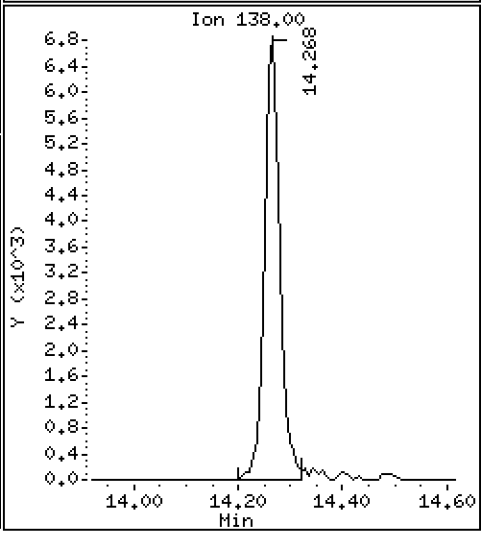


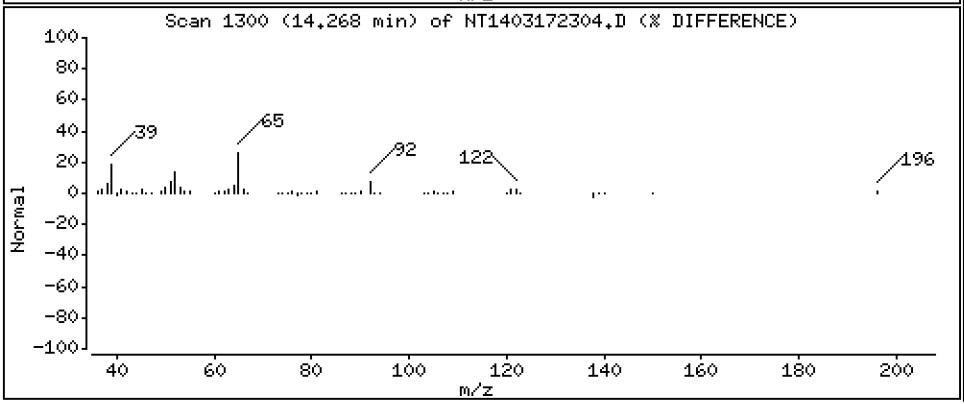












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

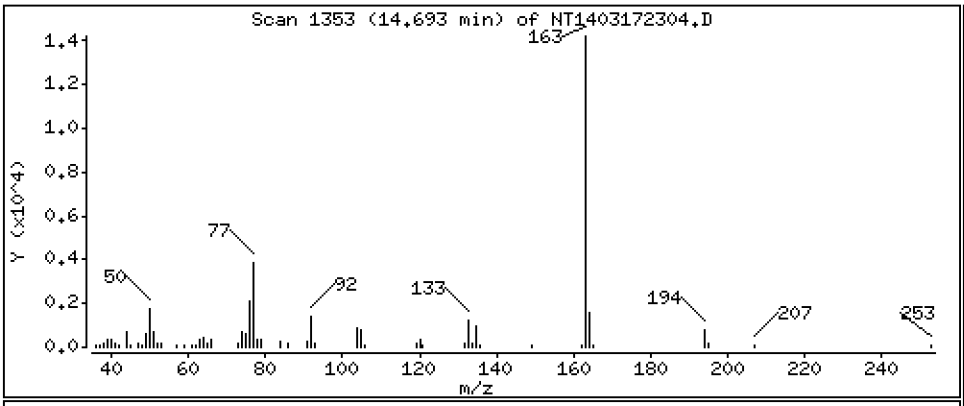
Operator: JGR

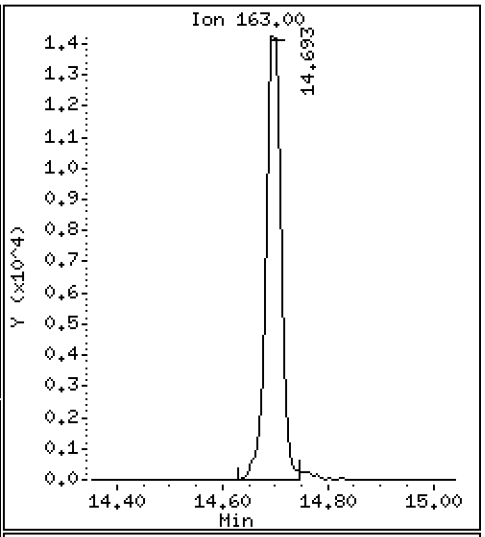
Column phase: ZB-5msi

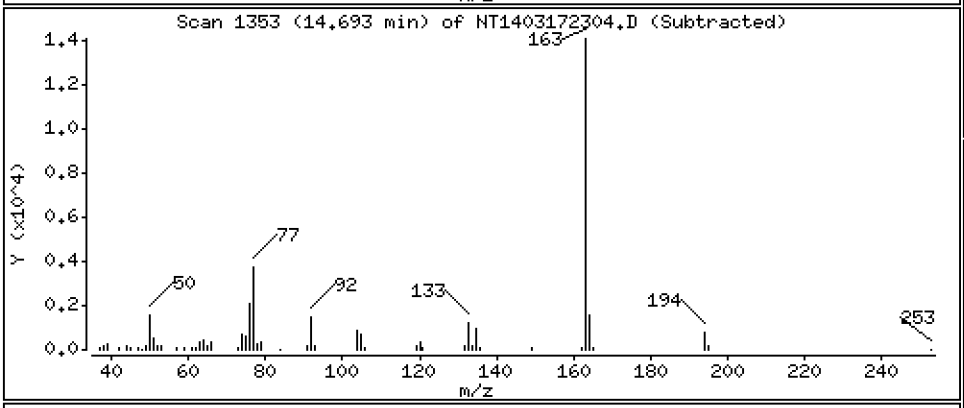
Column diameter: 0.25

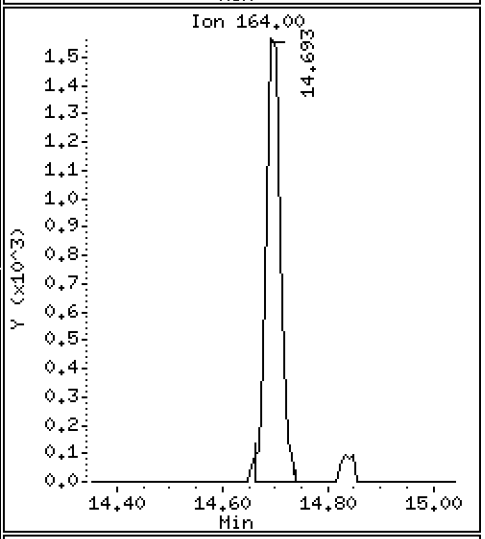
39 Dimethylphthalate

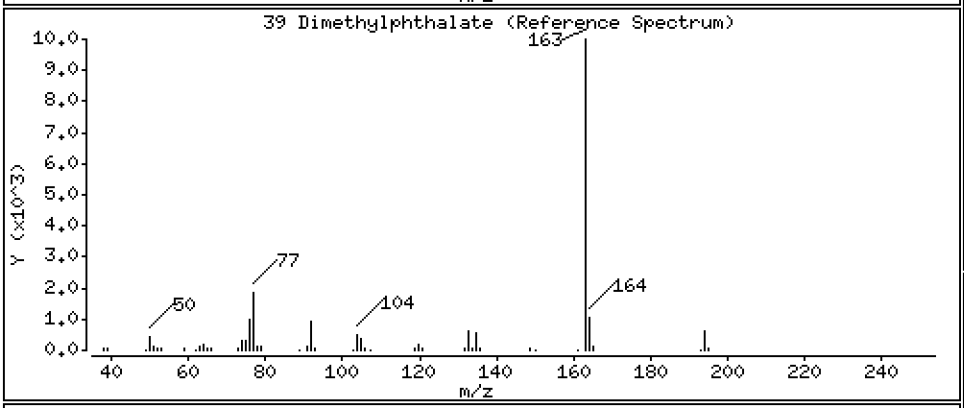
Concentration: 0.1957 ug/mL

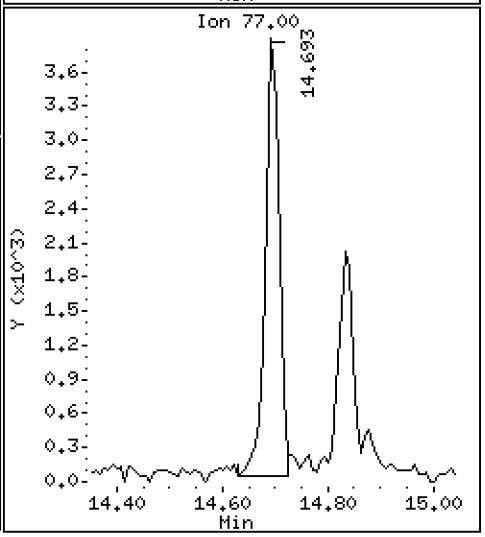


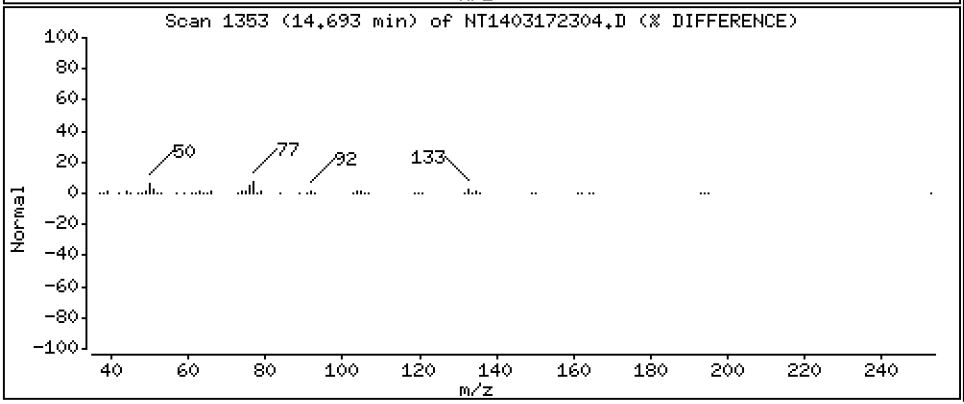












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

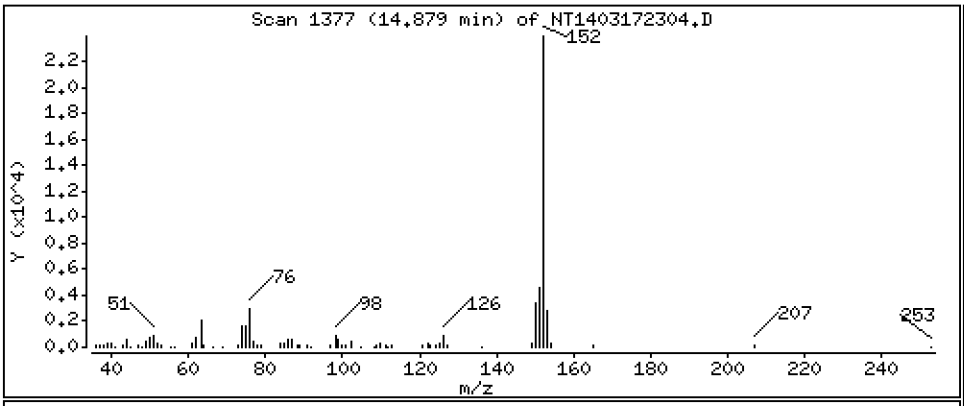
Operator: JGR

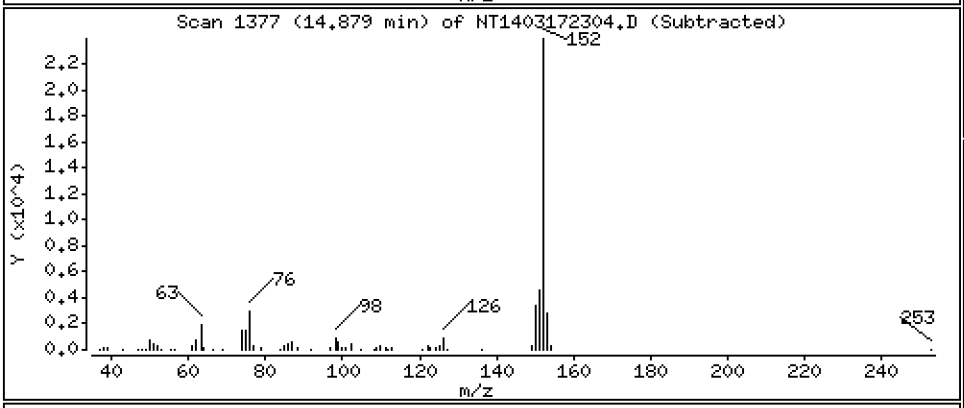
Column phase: ZB-5msi

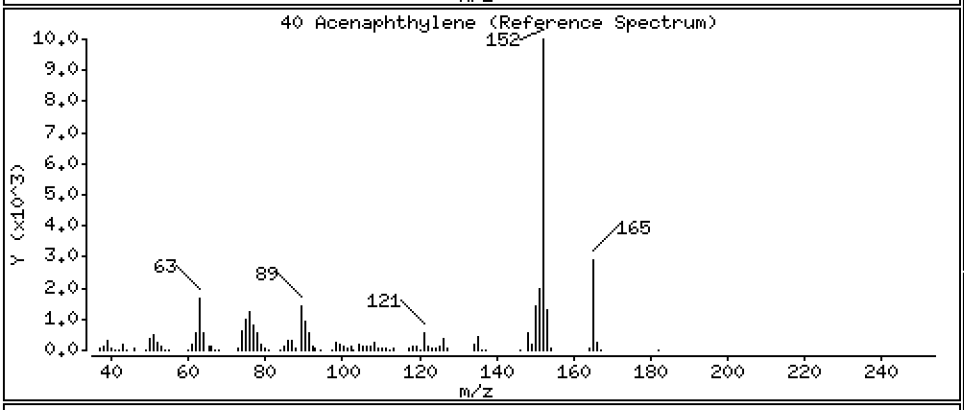
Column diameter: 0.25

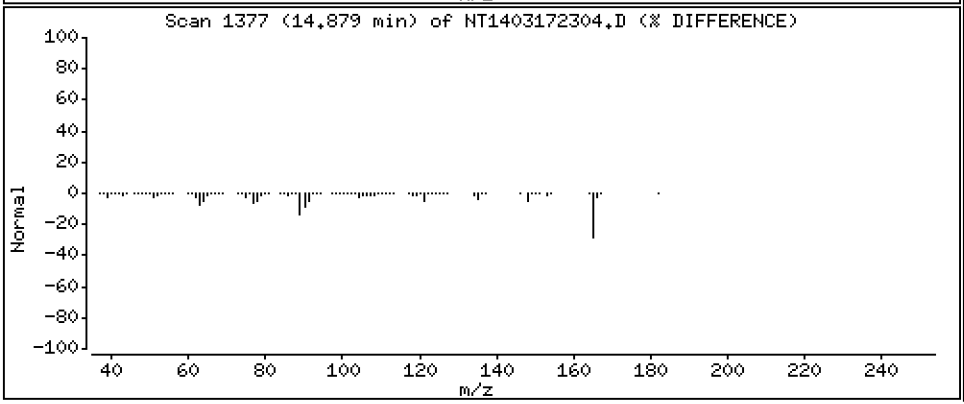
40 Acenaphthylene

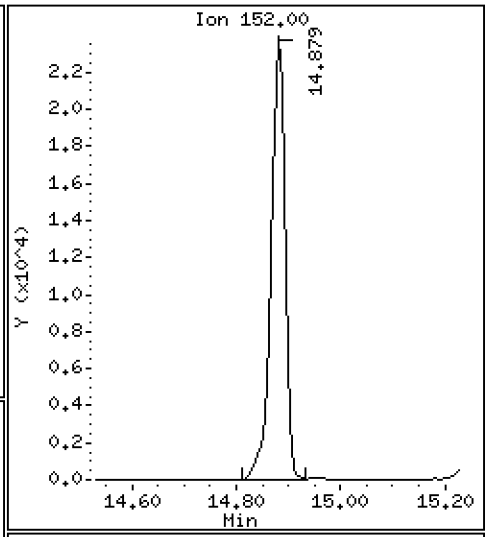
Concentration: 0.1937 ug/mL

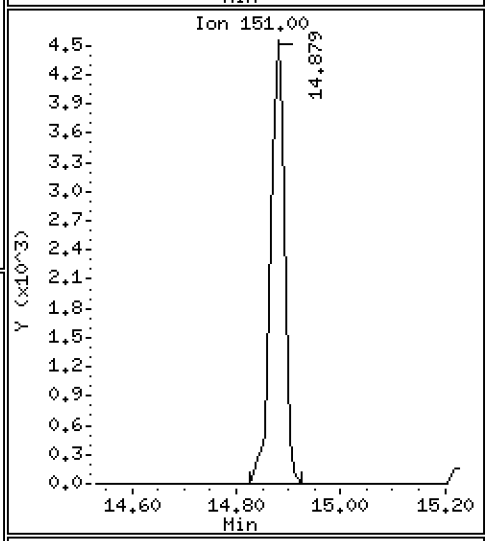


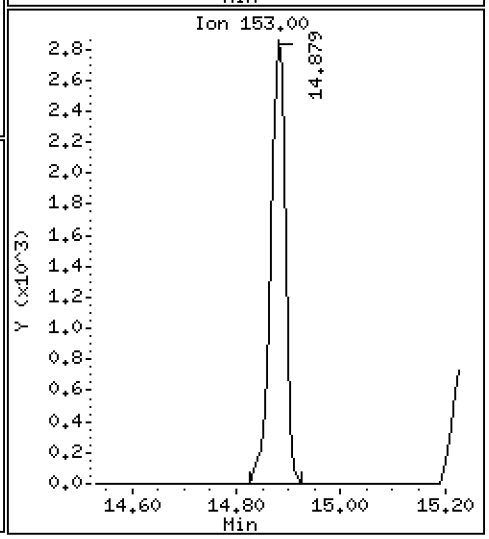












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

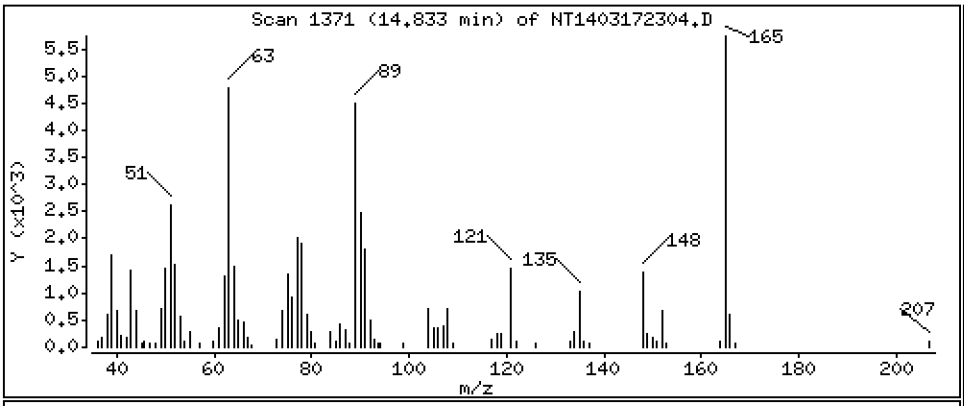
Operator: JGR

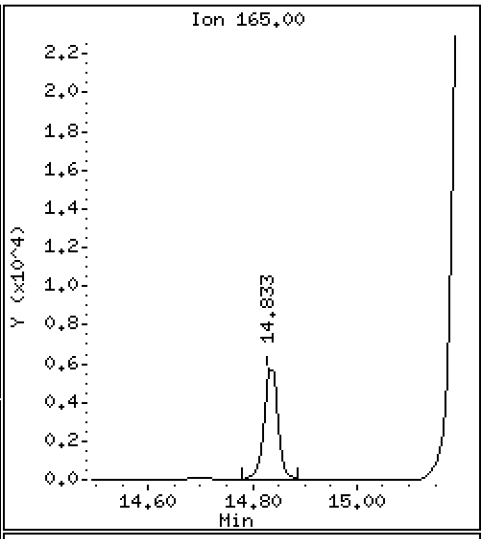
Column phase: ZB-5msi

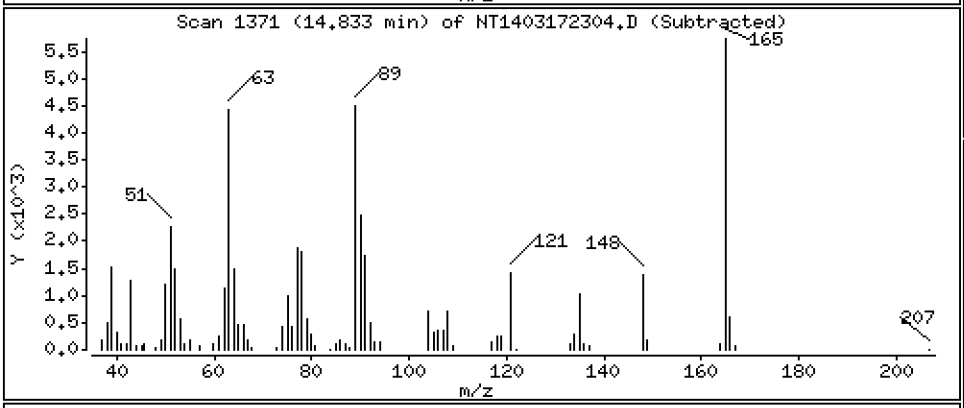
Column diameter: 0.25

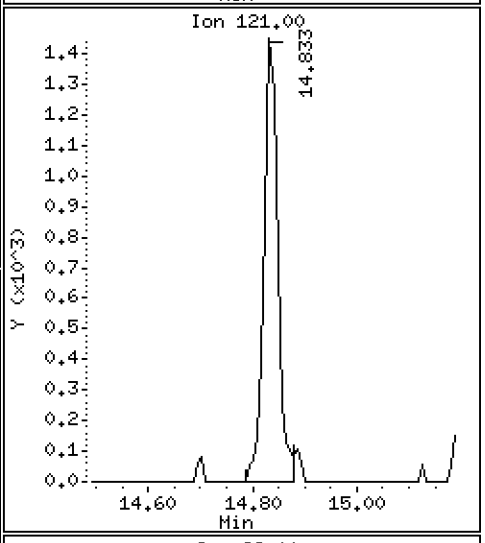
41 2,6-Dinitrotoluene

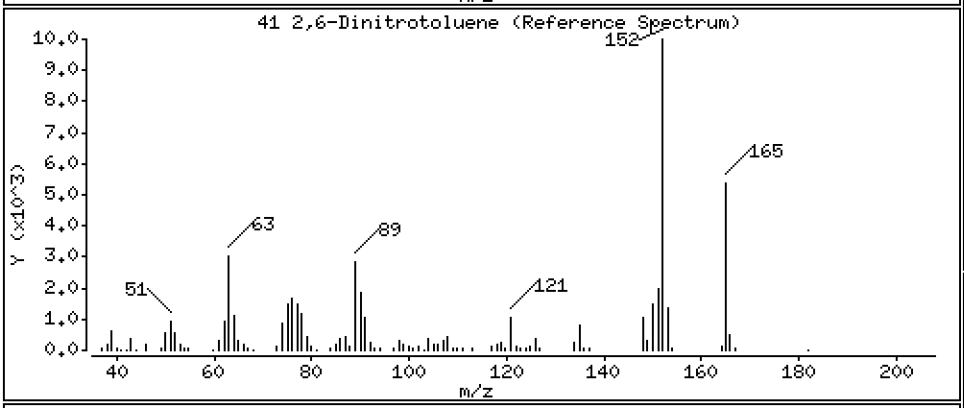
Concentration: 0.3165 ug/mL

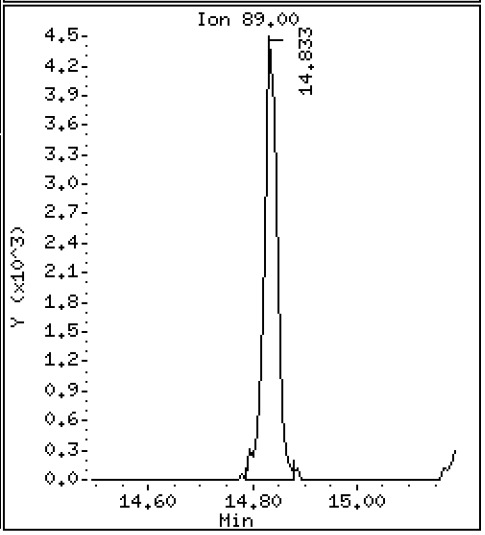


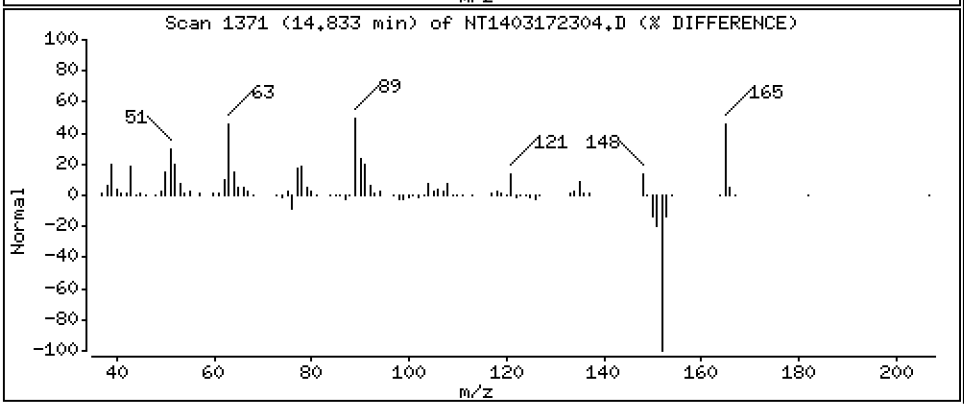












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

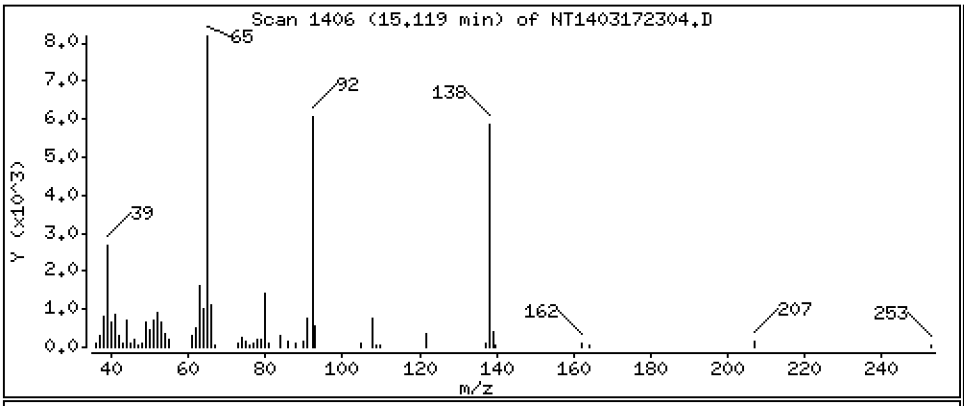
Operator: JGR

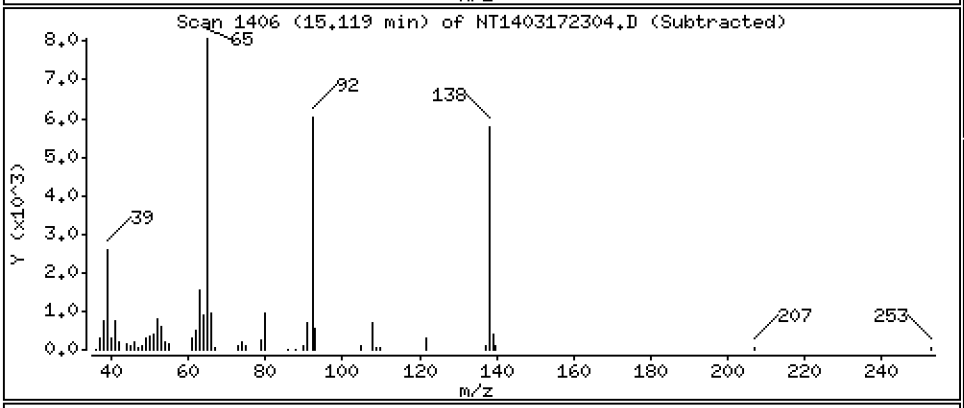
Column phase: ZB-5msi

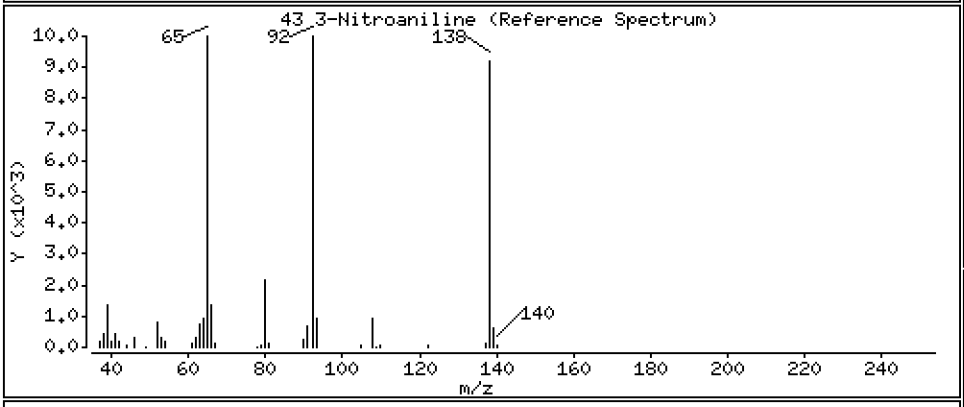
Column diameter: 0.25

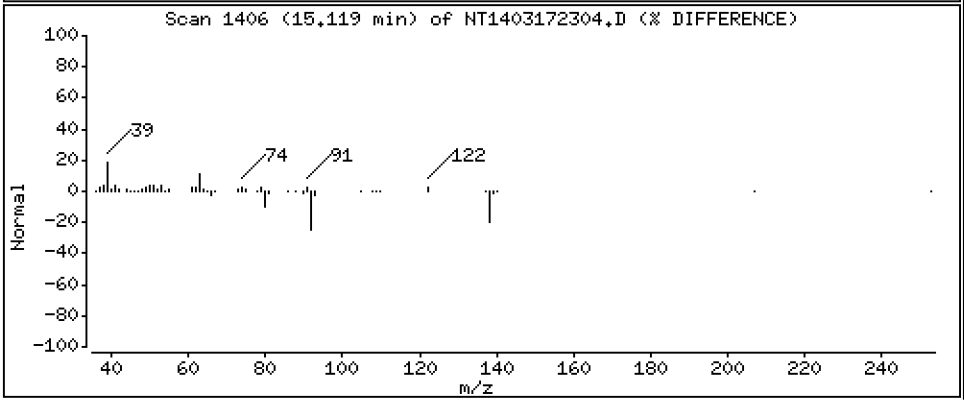
43 3-Nitroaniline

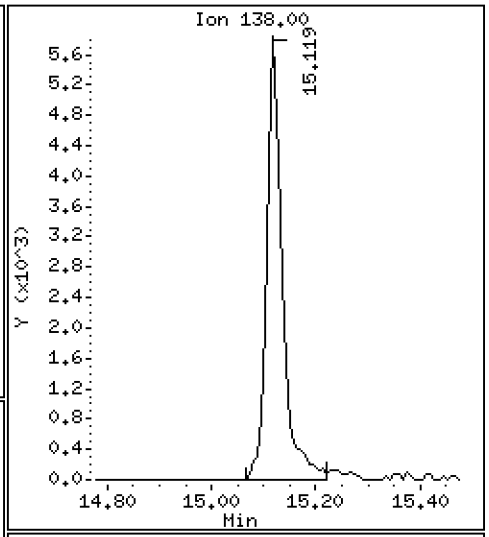
Concentration: 0.2595 ug/mL

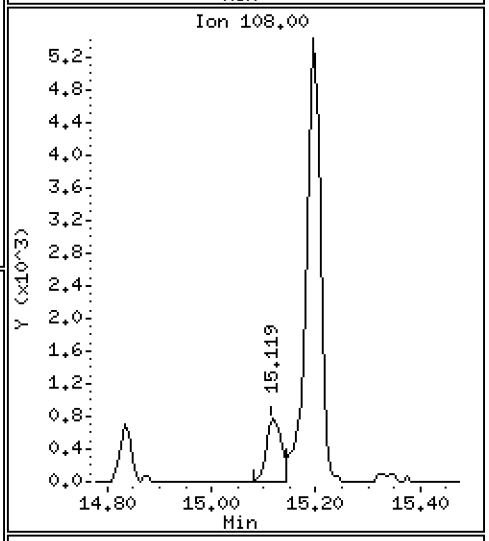


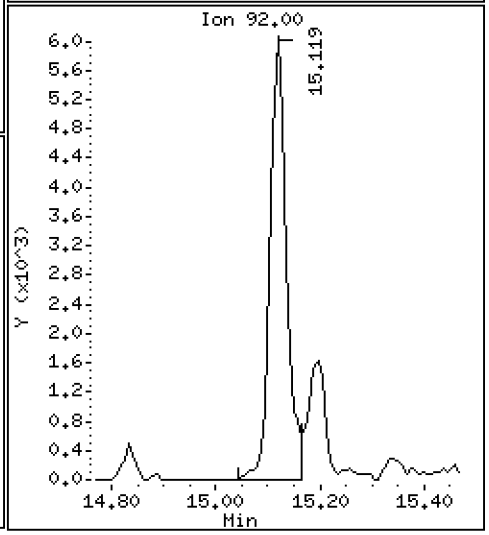












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

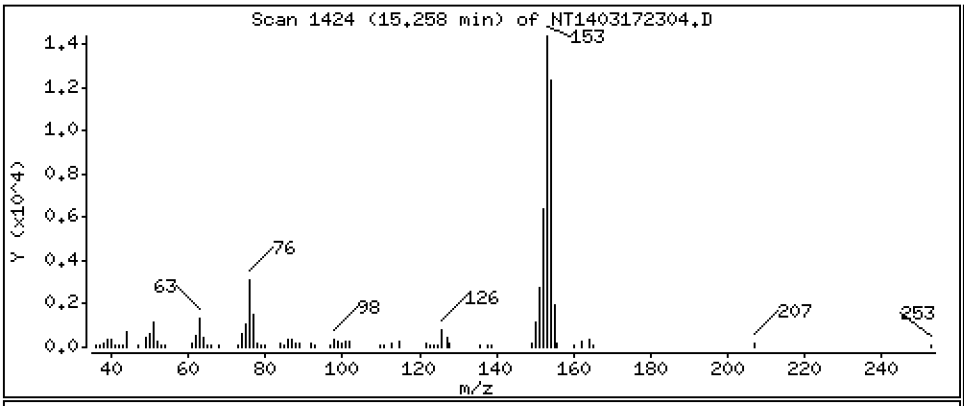
Operator: JGR

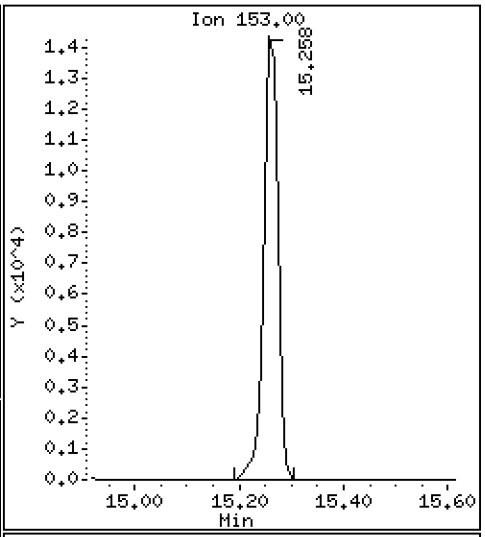
Column phase: ZB-5msi

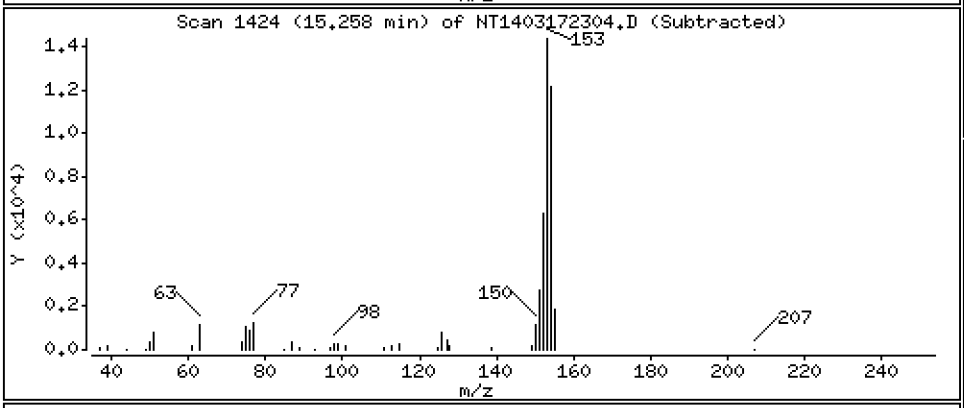
Column diameter: 0.25

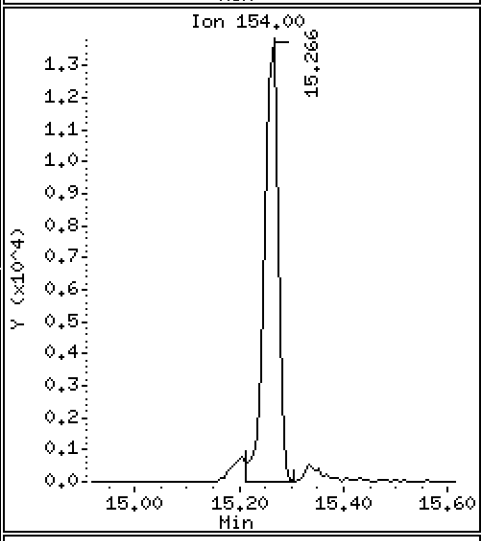
44 Acenaphthene

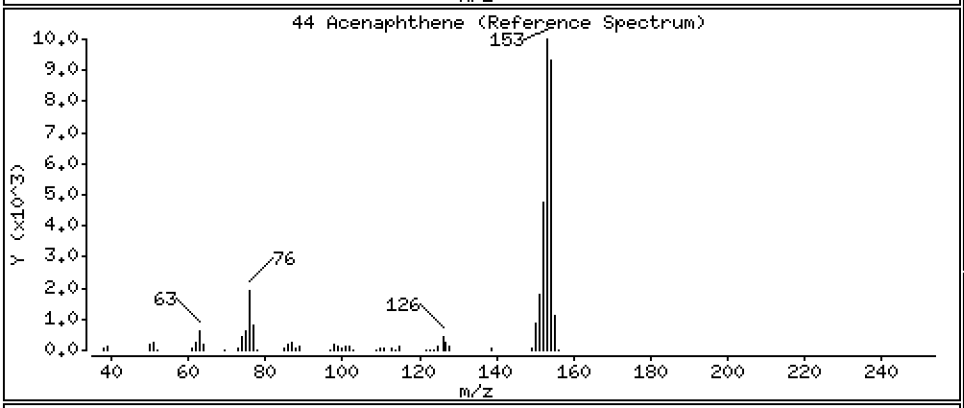
Concentration: 0.2025 ug/mL

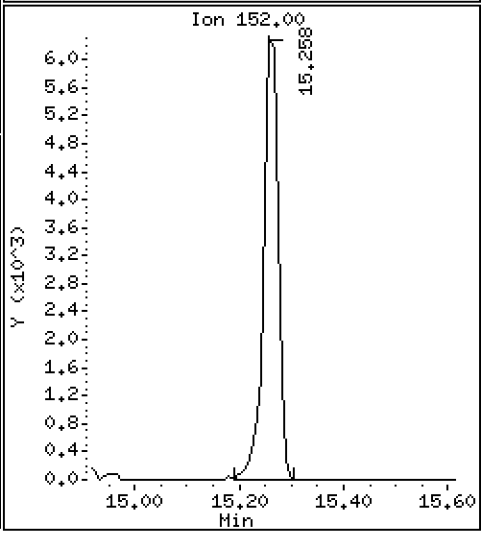


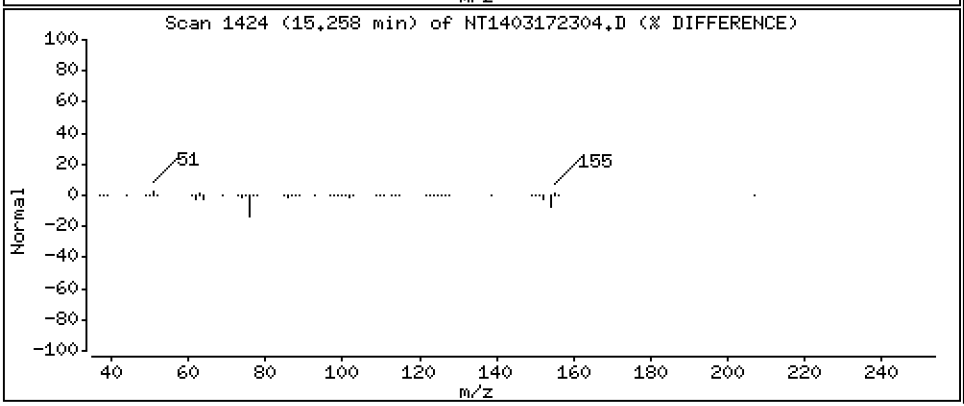












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

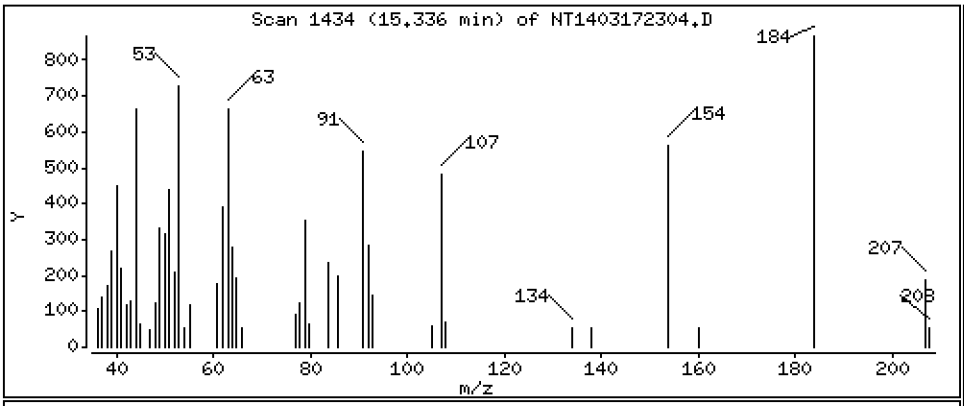
Operator: JGR

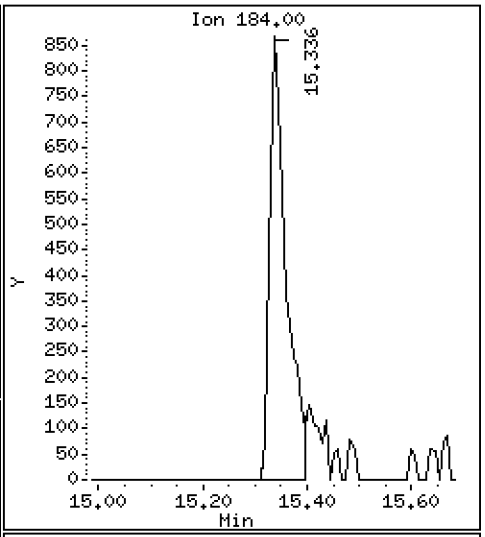
Column phase: ZB-5msi

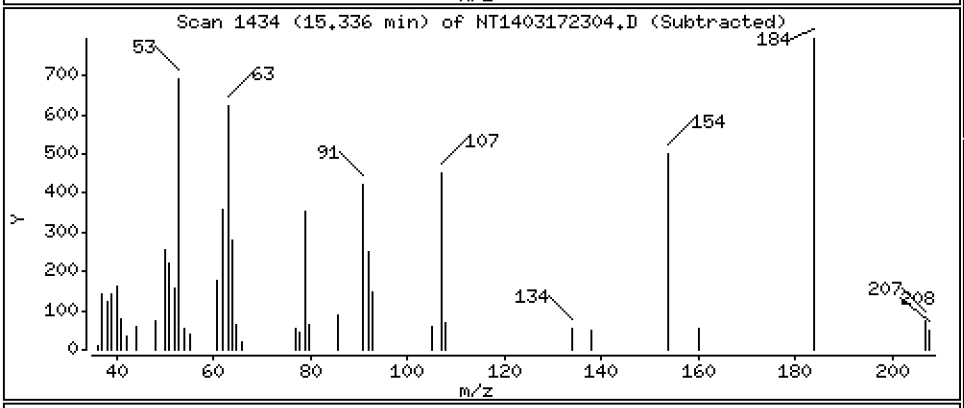
Column diameter: 0.25

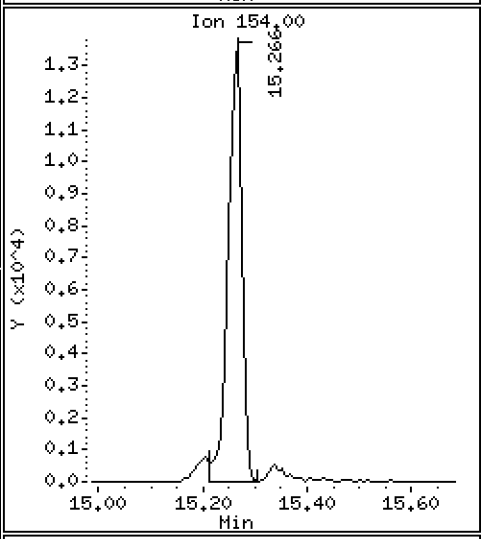
45 2,4-Dinitrophenol

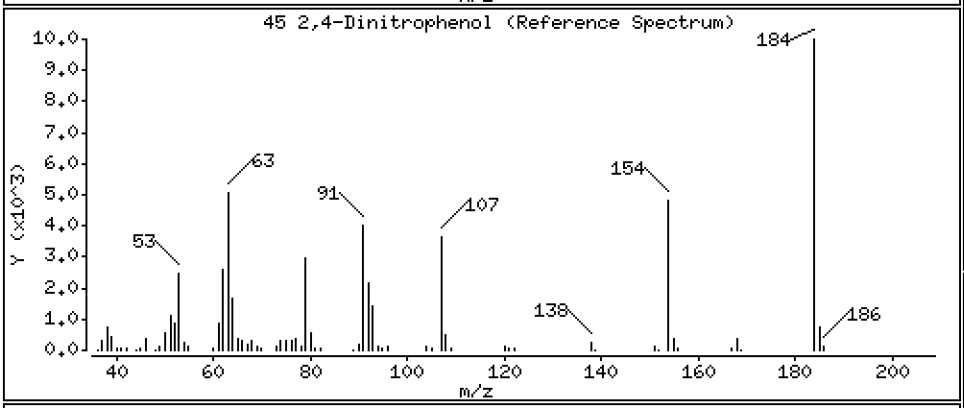
Concentration: 0.07503 ug/mL

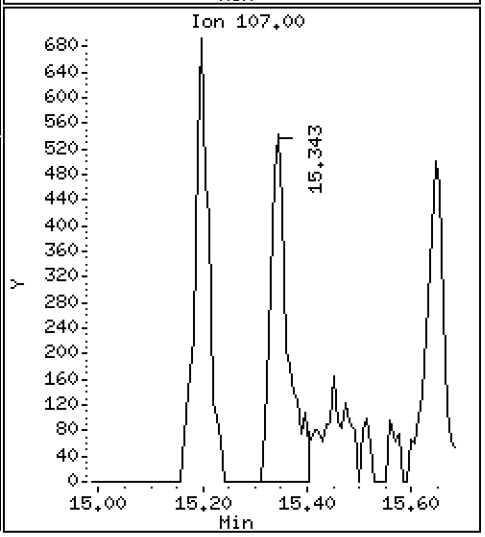


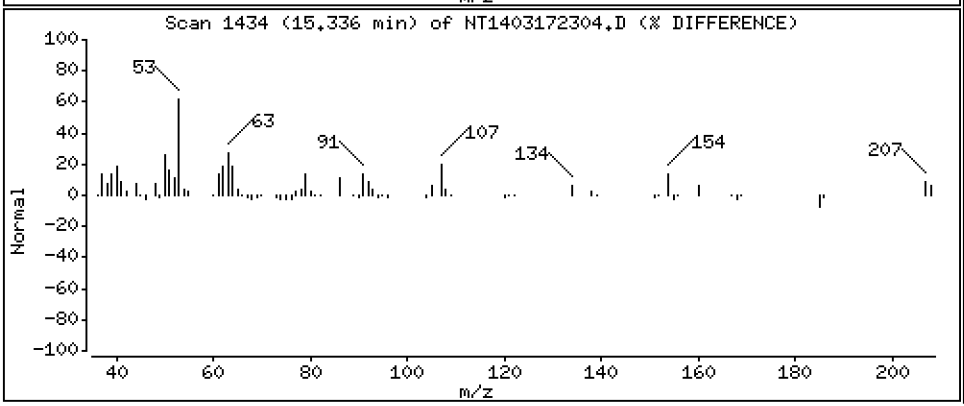












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

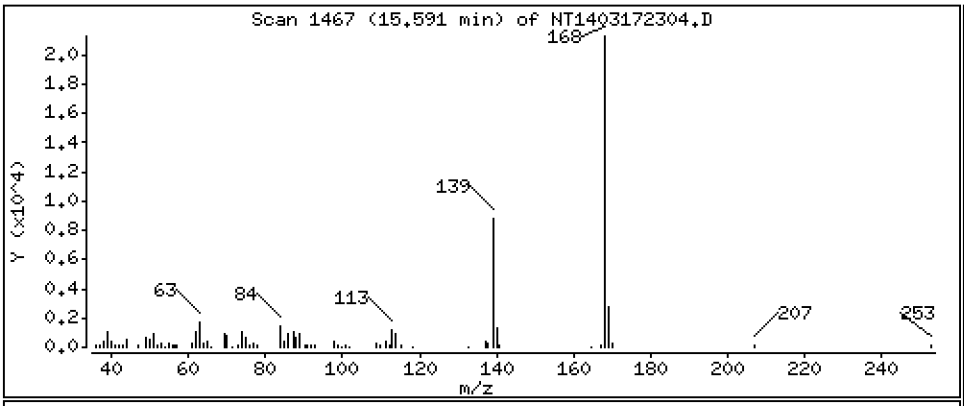
Operator: JGR

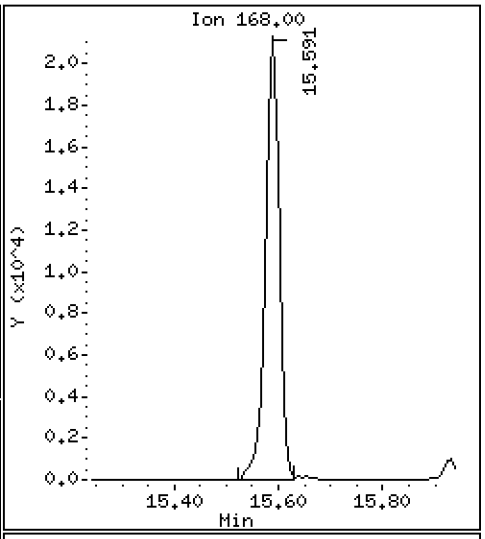
Column phase: ZB-5msi

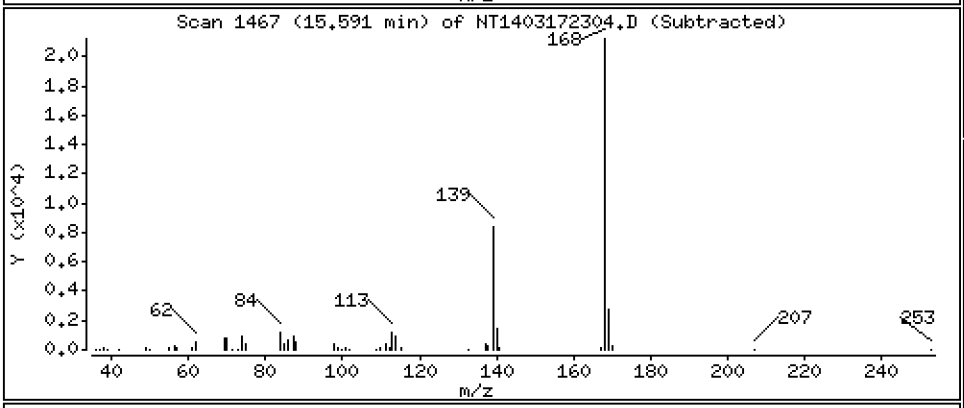
Column diameter: 0.25

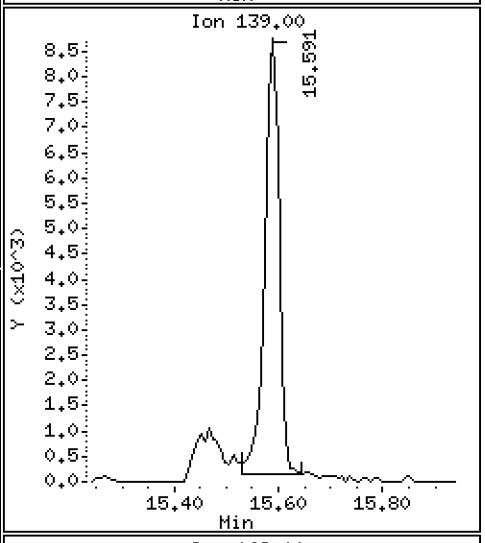
46 Dibenzofuran

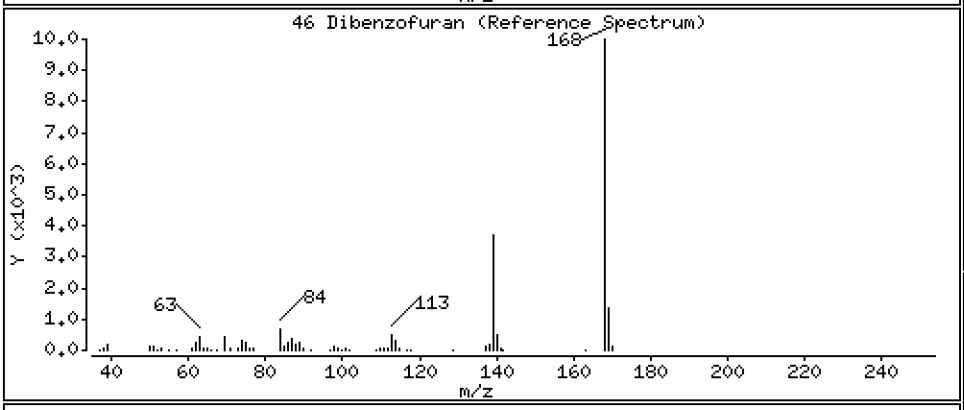
Concentration: 0.2043 ug/mL

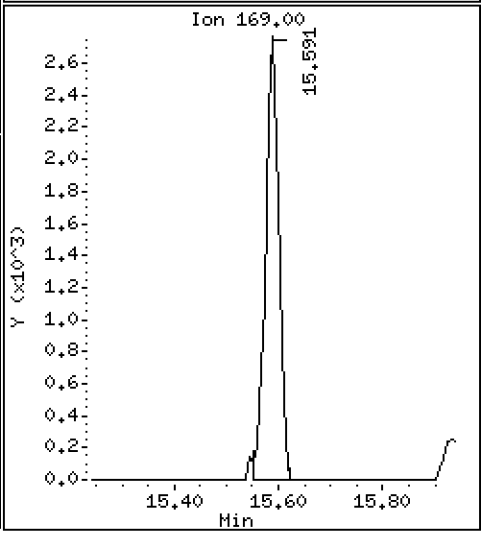


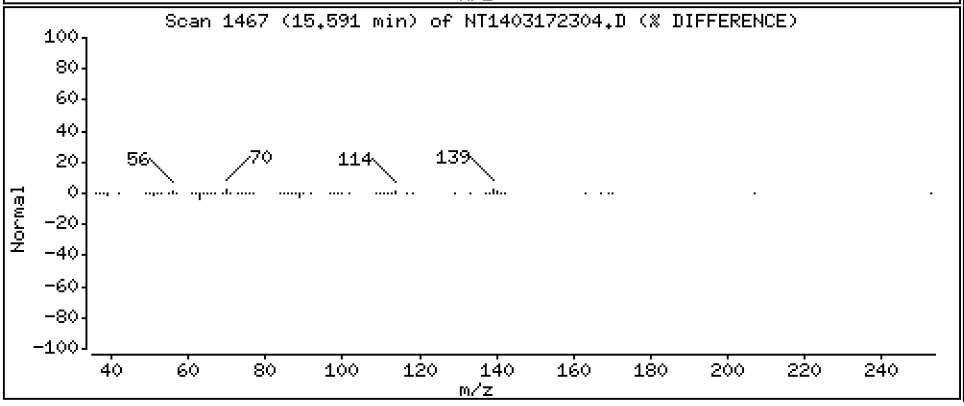












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

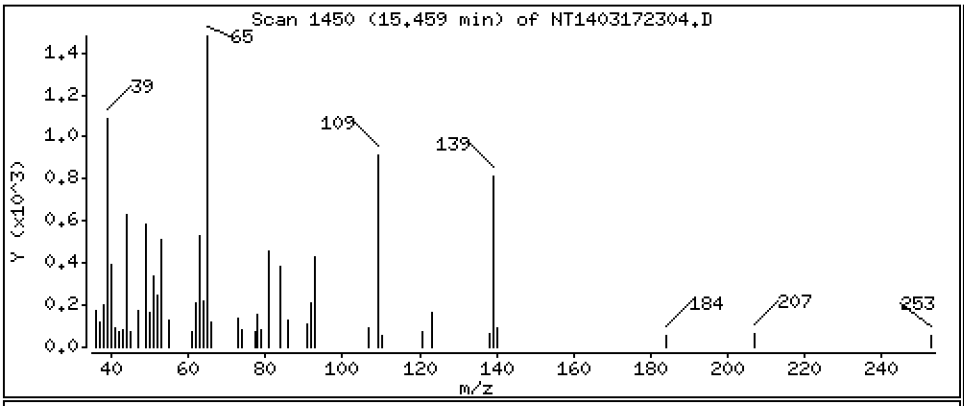
Operator: JGR

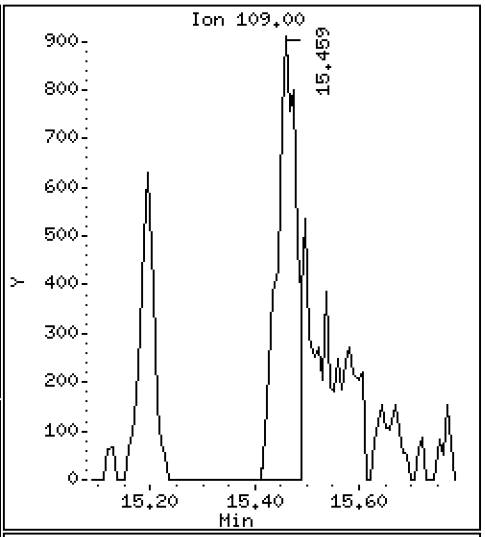
Column phase: ZB-5msi

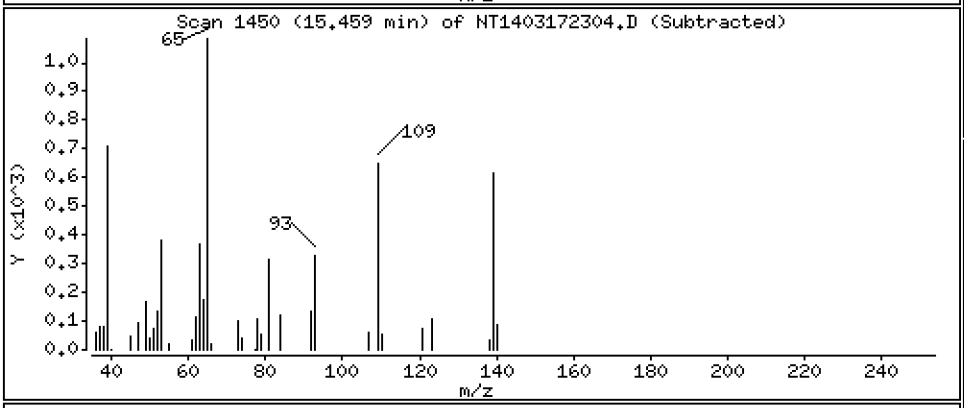
Column diameter: 0.25

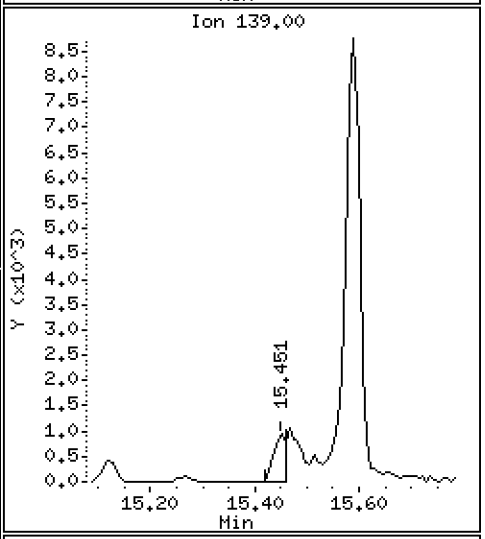
47 4-Nitrophenol

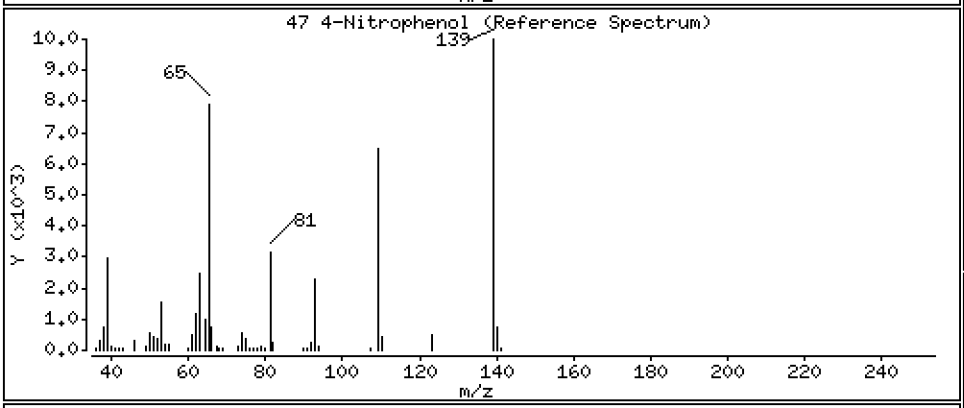
Concentration: 0.1020 ug/mL

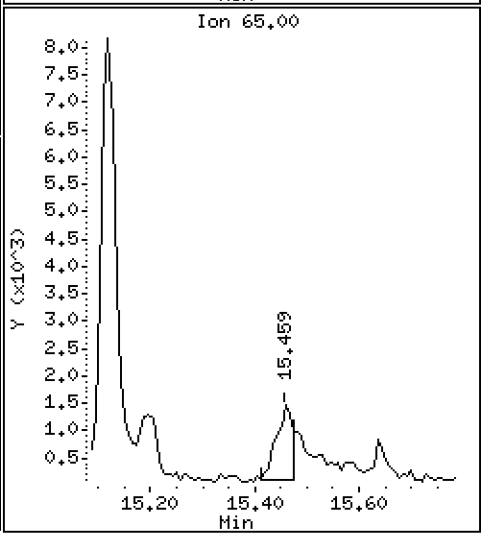


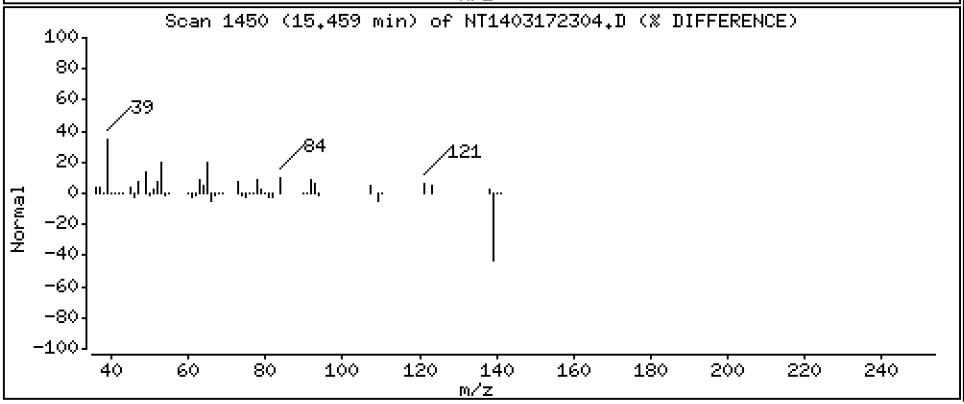












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

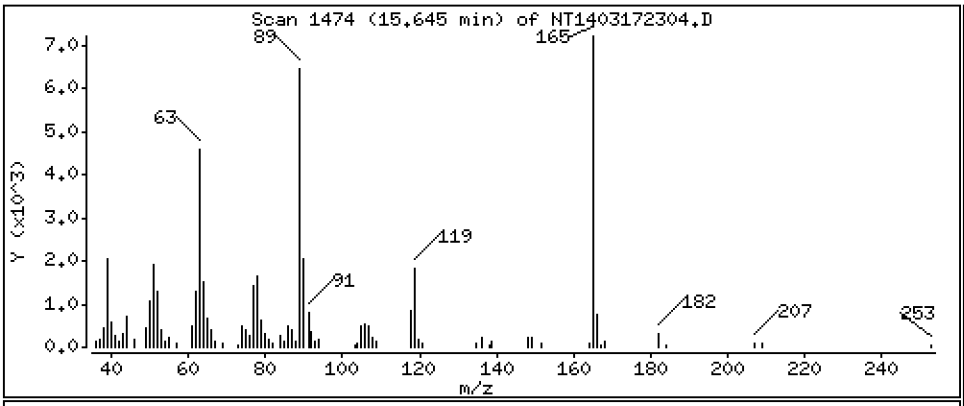
Operator: JGR

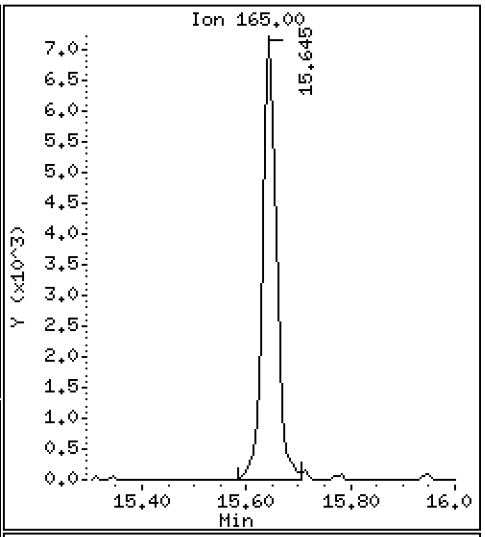
Column phase: ZB-5msi

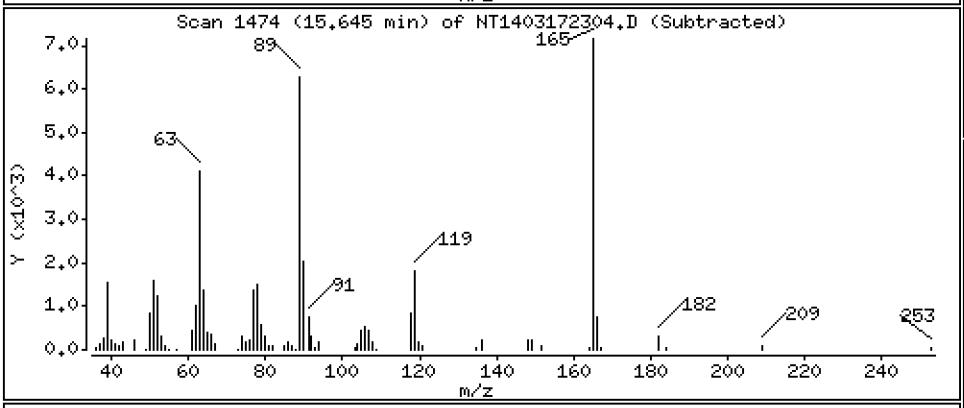
Column diameter: 0.25

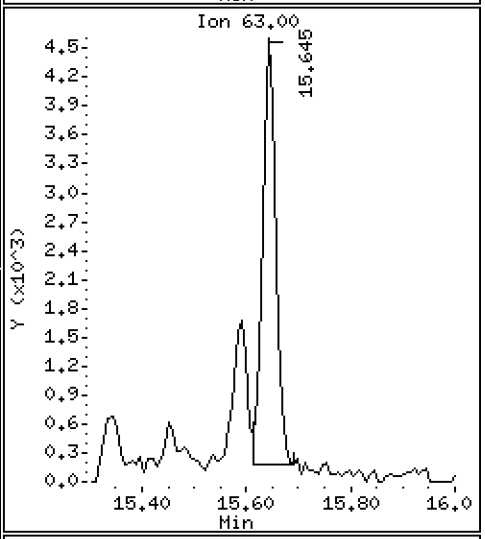
48 2,4-Dinitrotoluene

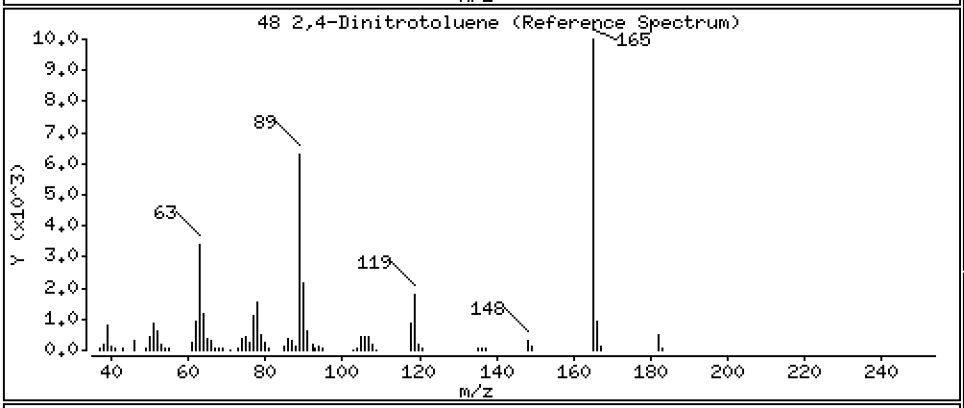
Concentration: 0.2865 ug/mL

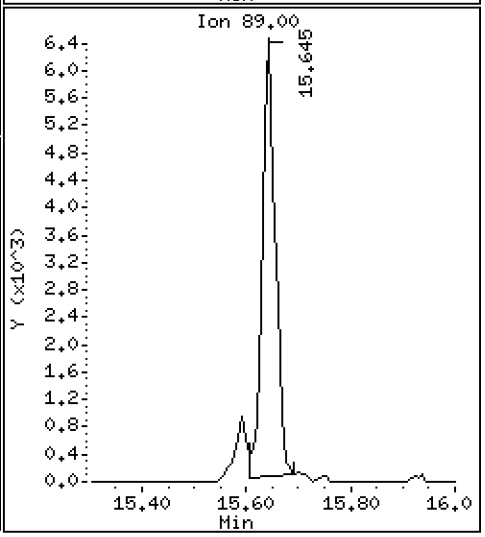


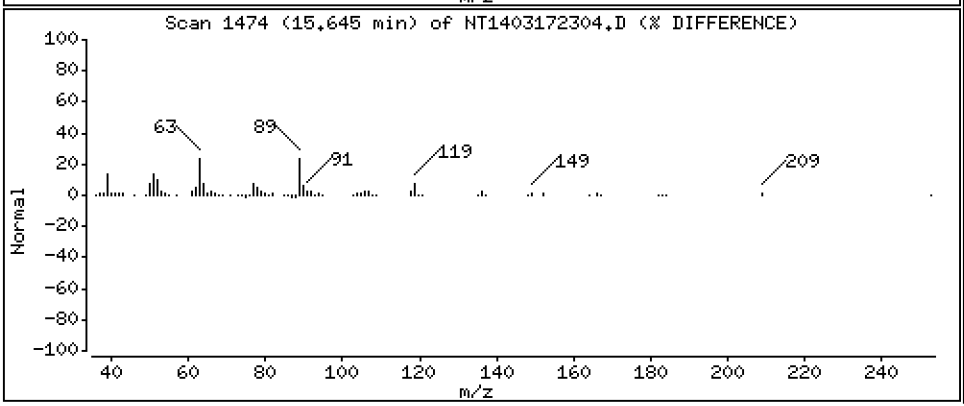












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

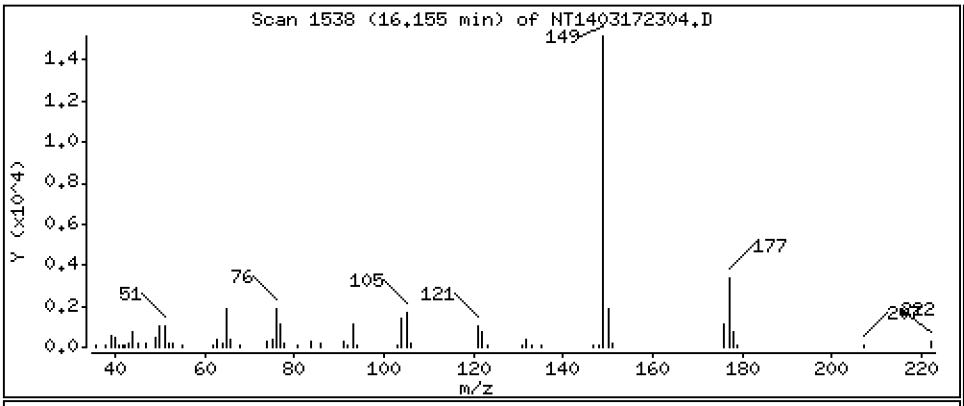
Operator: JGR

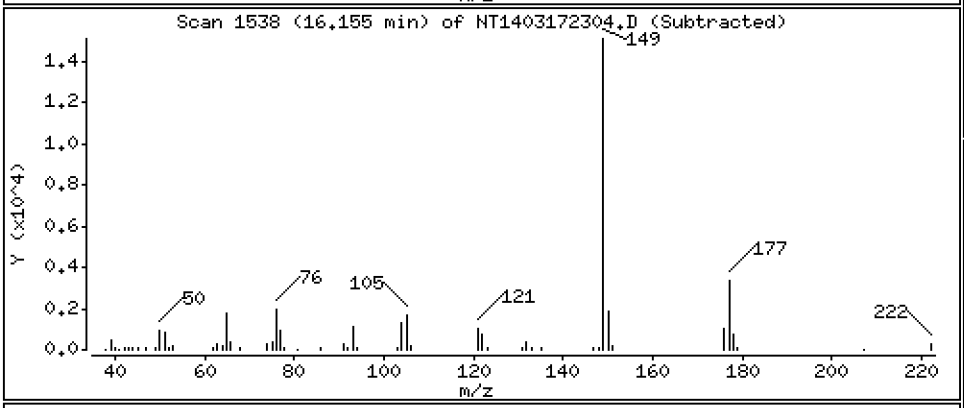
Column phase: ZB-5msi

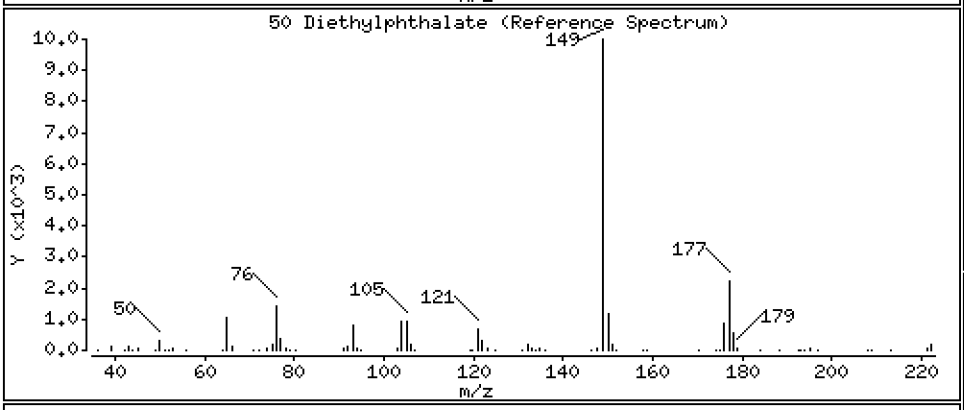
Column diameter: 0.25

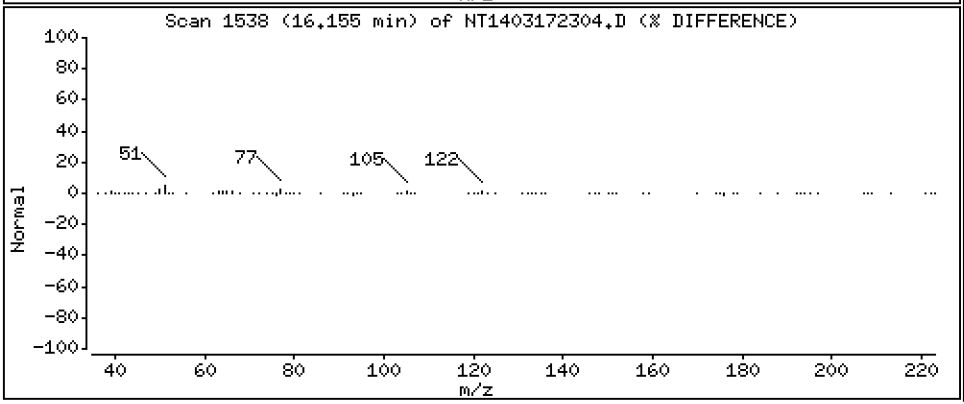
50 Diethylphthalate

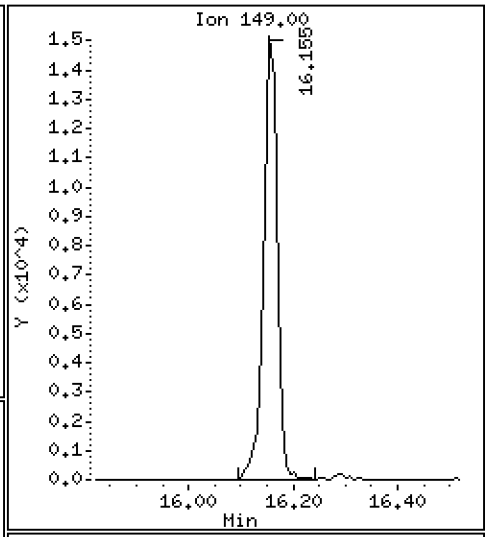
Concentration: 0.2007 ug/mL

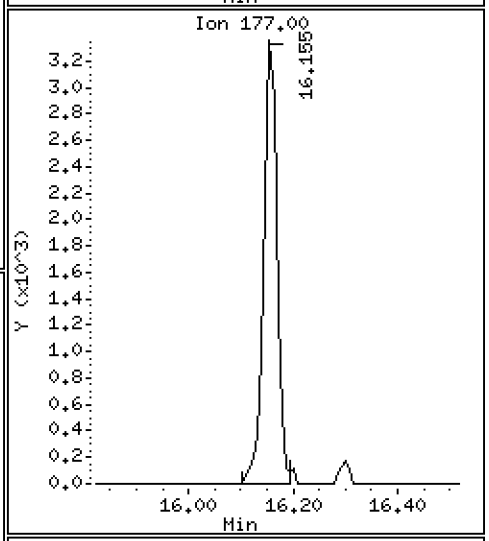


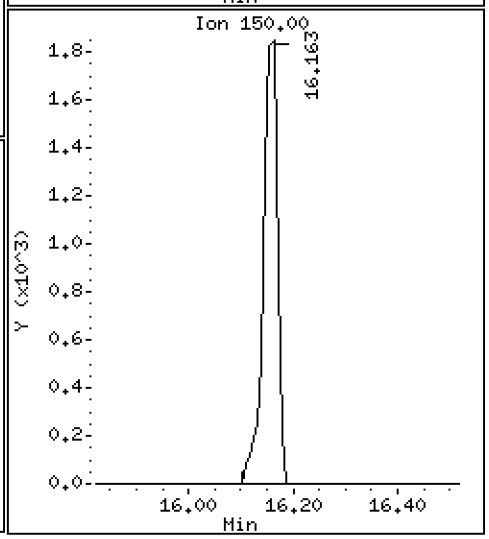












Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172304.D

Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

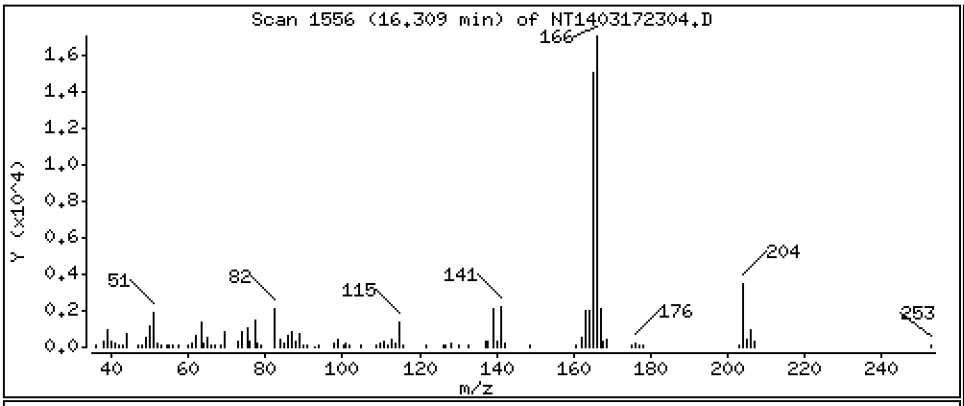
Operator: JGR

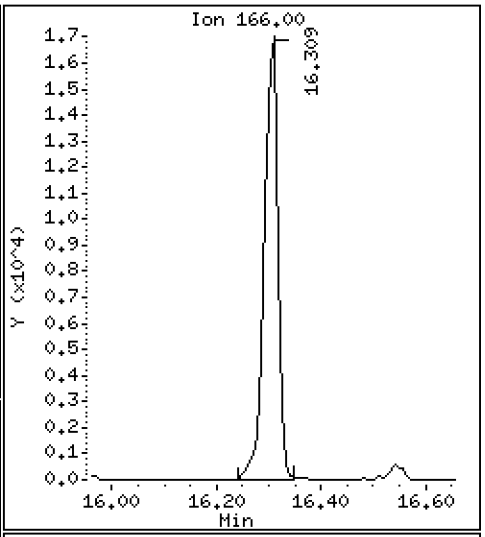
Column phase: ZB-5msi

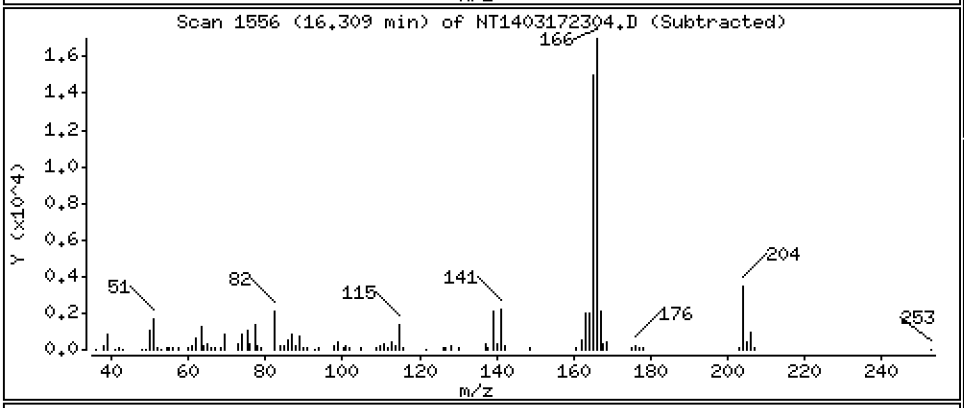
Column diameter: 0.25

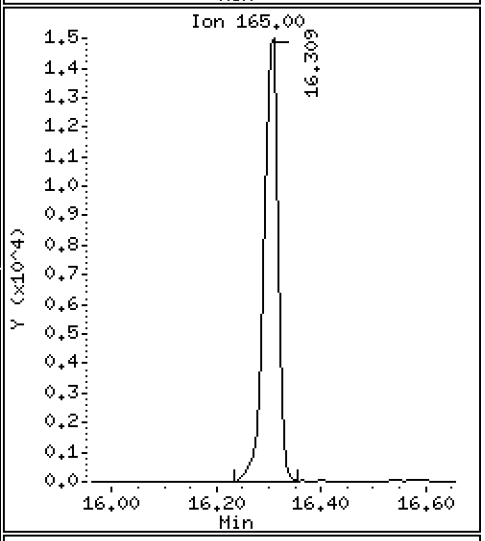
49 Fluorene

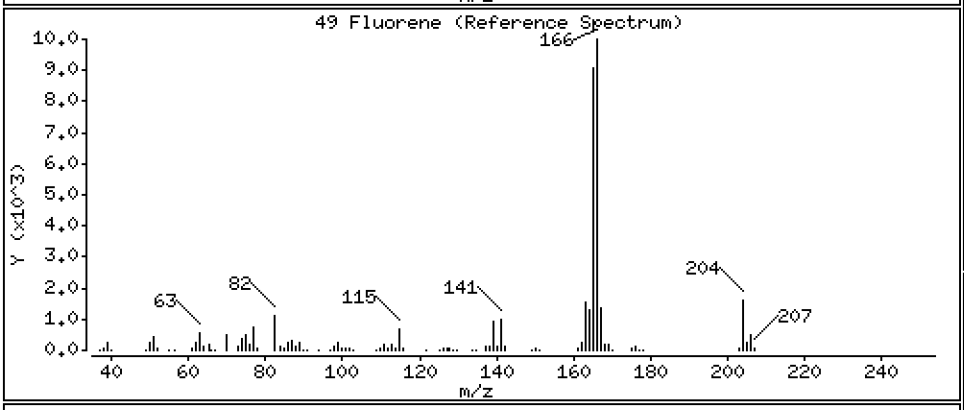
Concentration: 0.1710 ug/mL

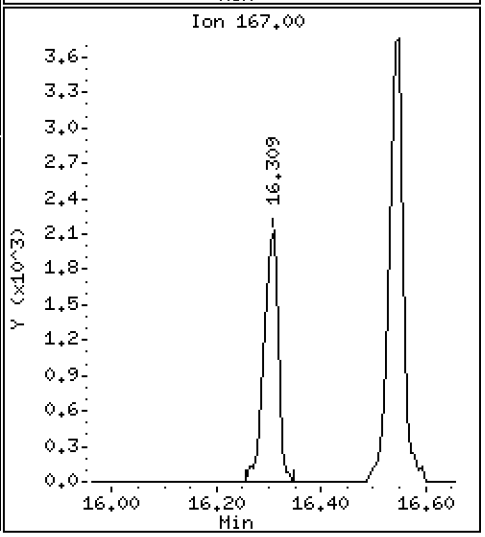


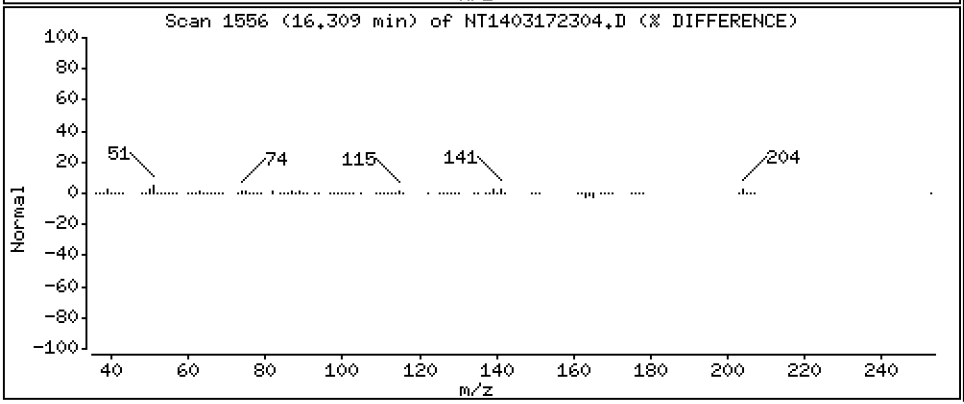












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

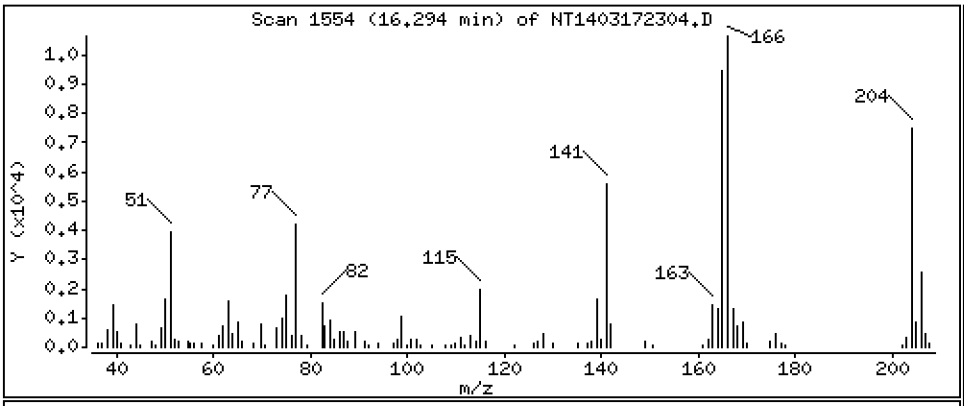
Operator: JGR

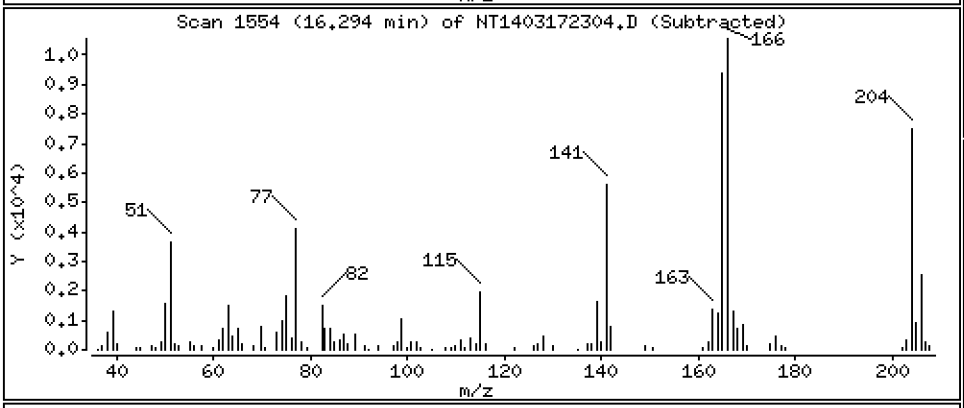
Column phase: ZB-5msi

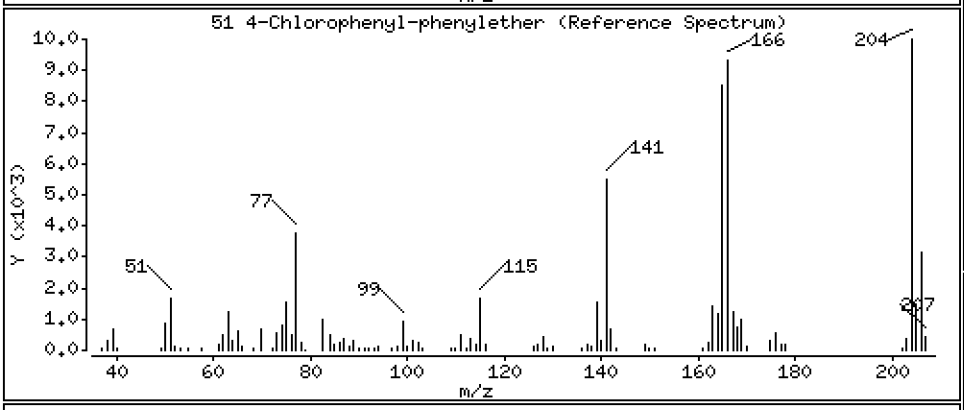
Column diameter: 0.25

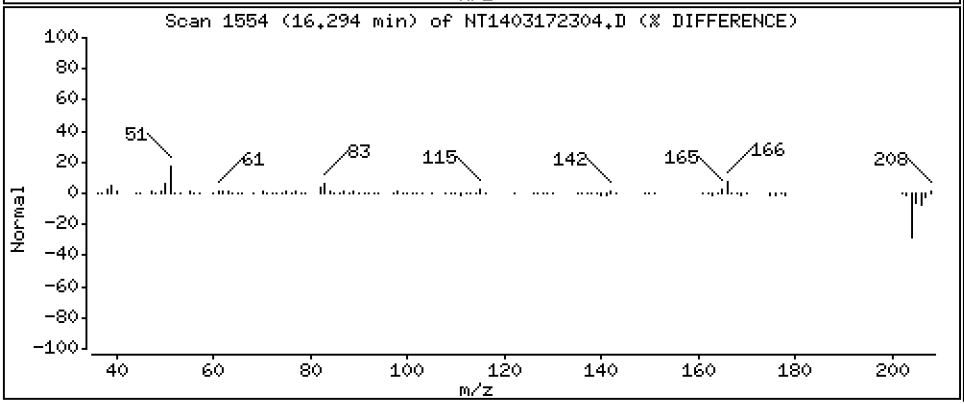
51 4-Chlorophenyl-phenylether

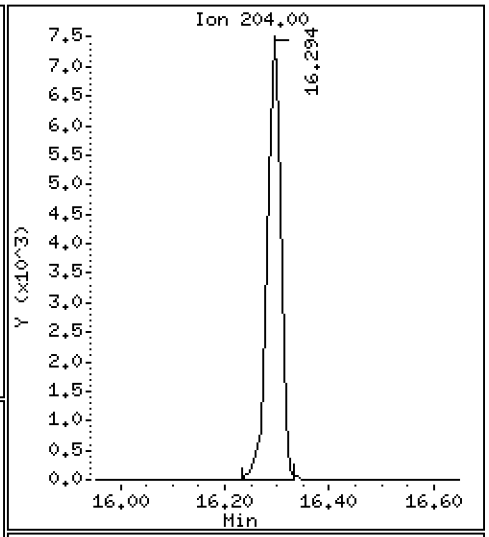
Concentration: 0.1743 ug/mL

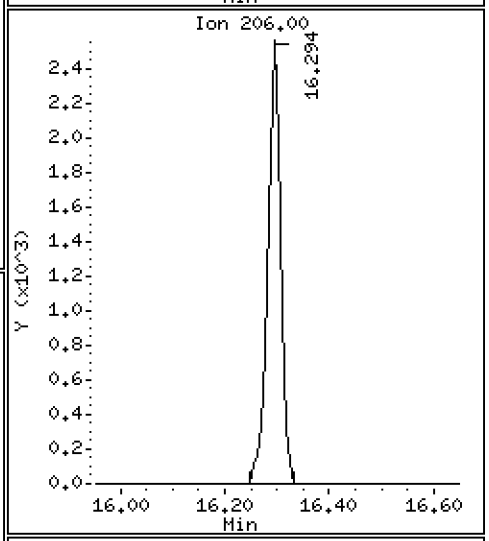


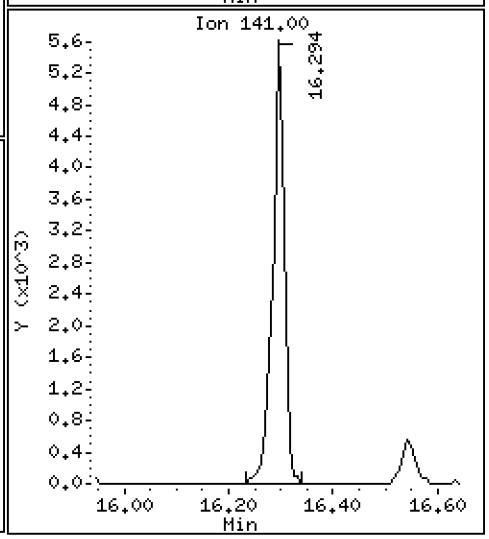












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

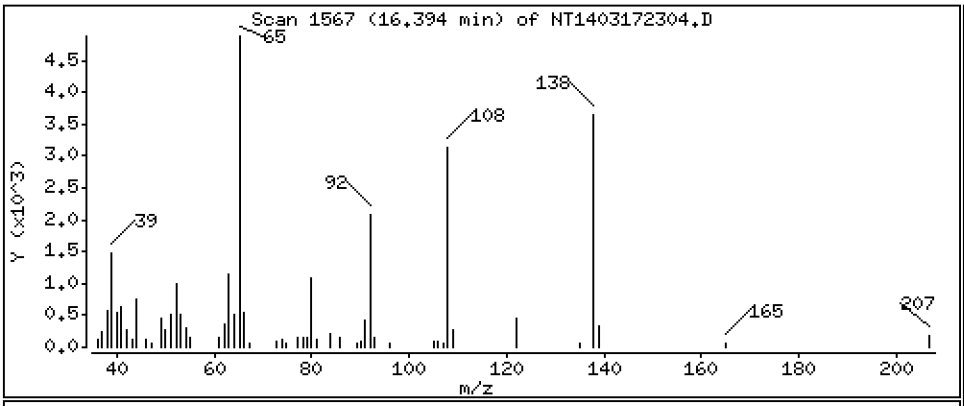
Operator: JGR

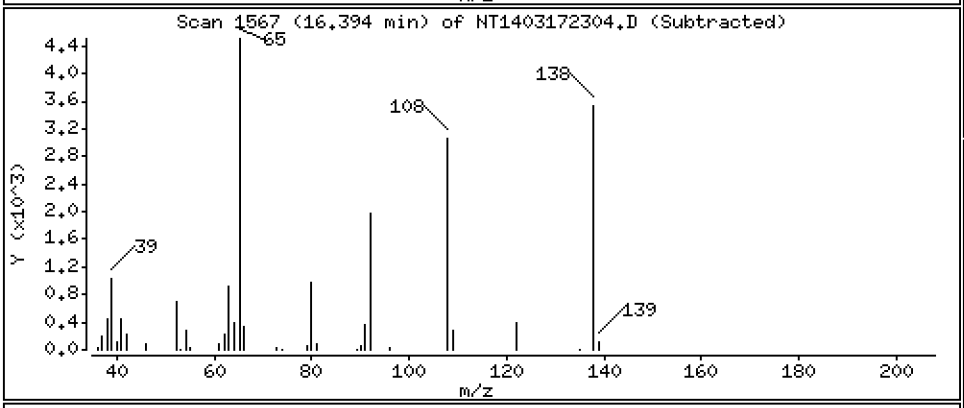
Column phase: ZB-5msi

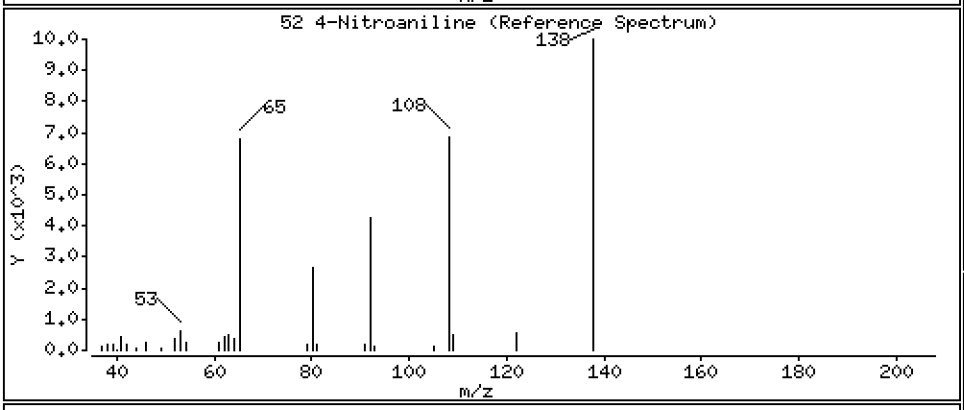
Column diameter: 0.25

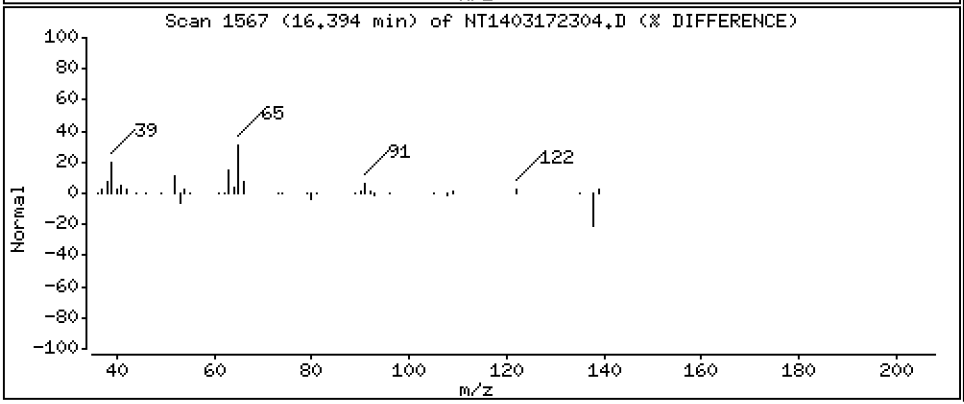
52 4-Nitroaniline

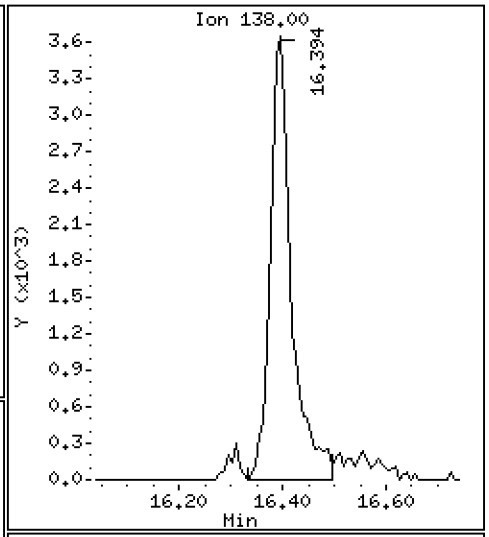
Concentration: 0.2615 ug/mL

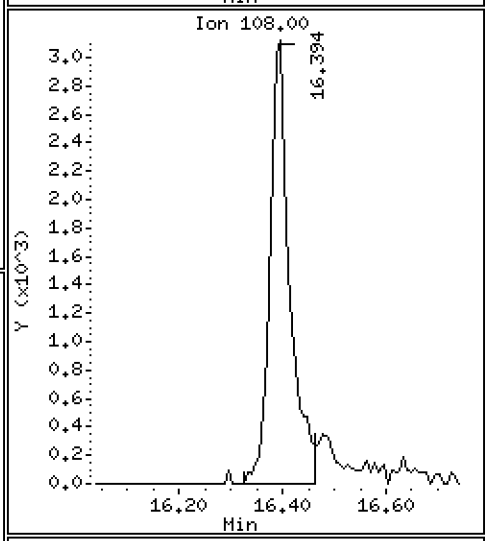


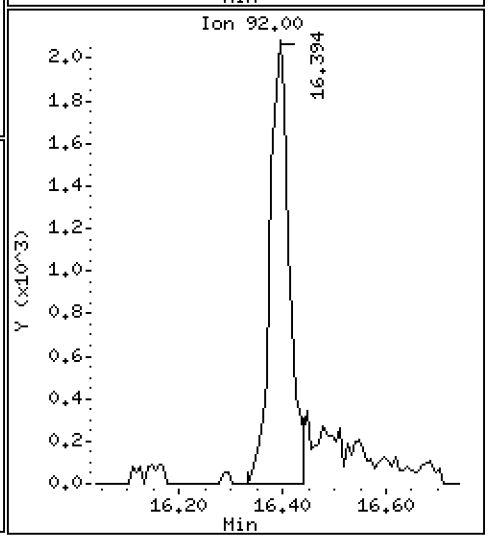












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

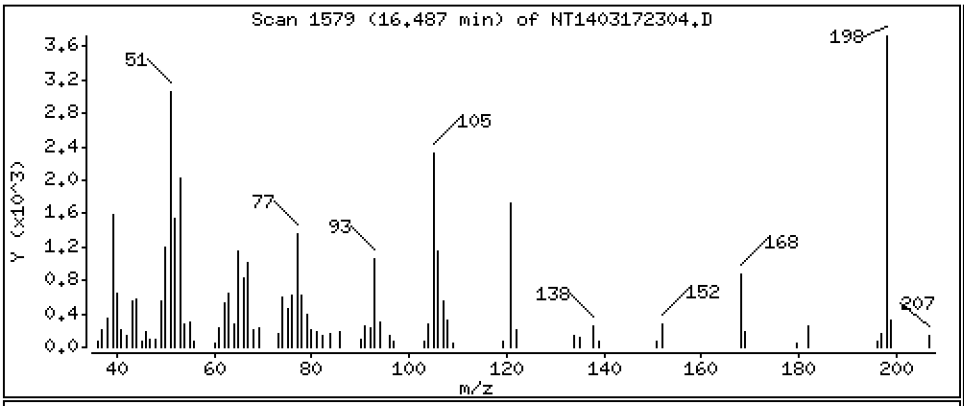
Operator: JGR

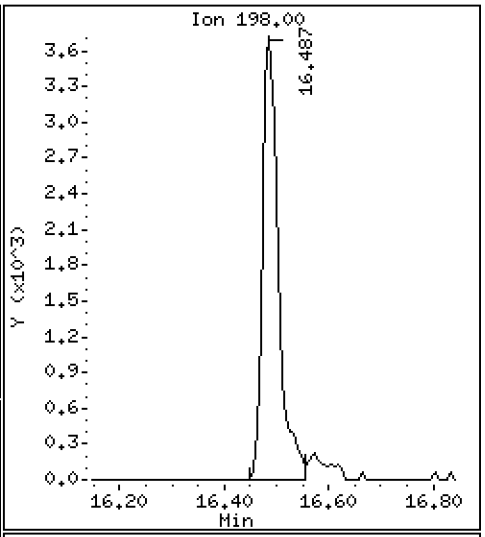
Column phase: ZB-5msi

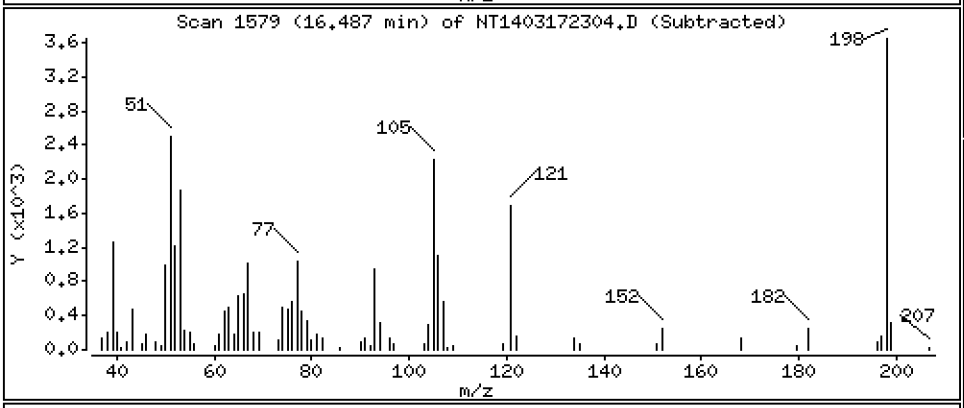
Column diameter: 0.25

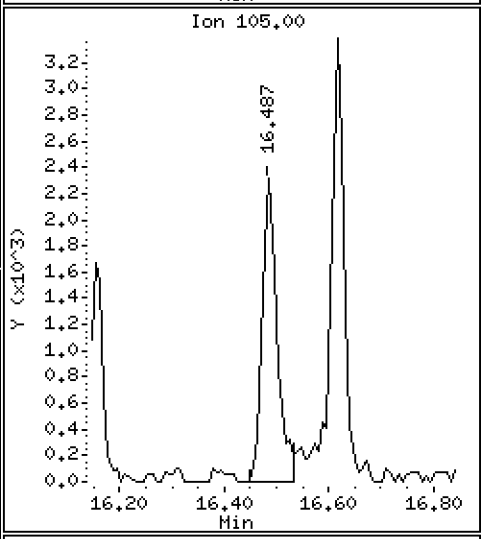
53 4,6-Dinitro-2-methylphenol

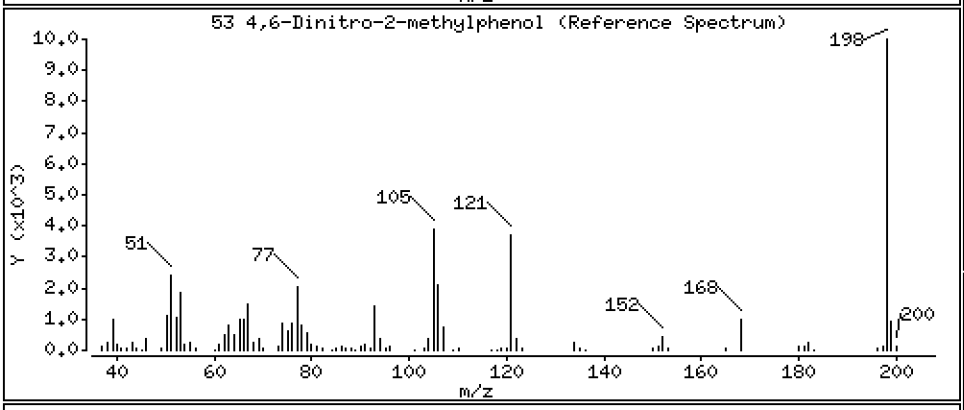
Concentration: 0.2891 ug/mL

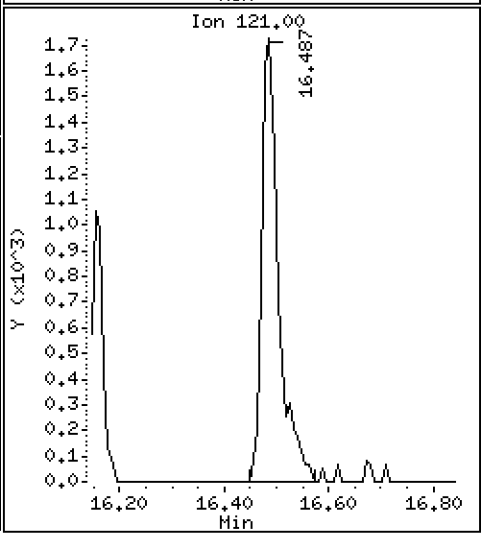


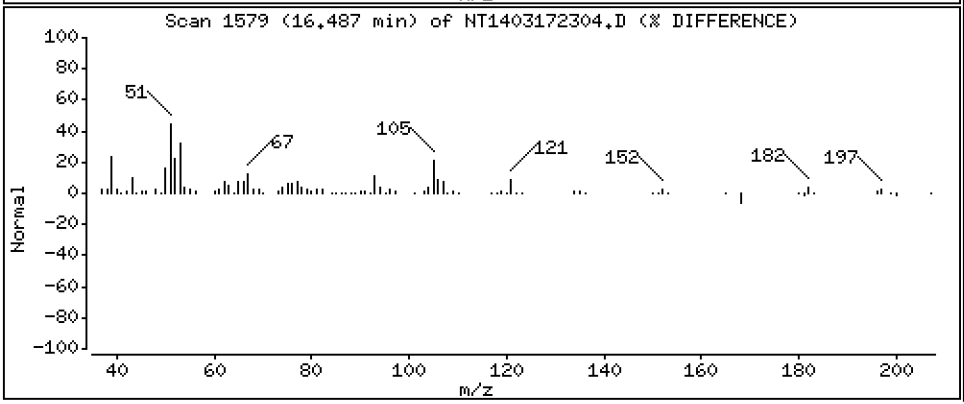












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

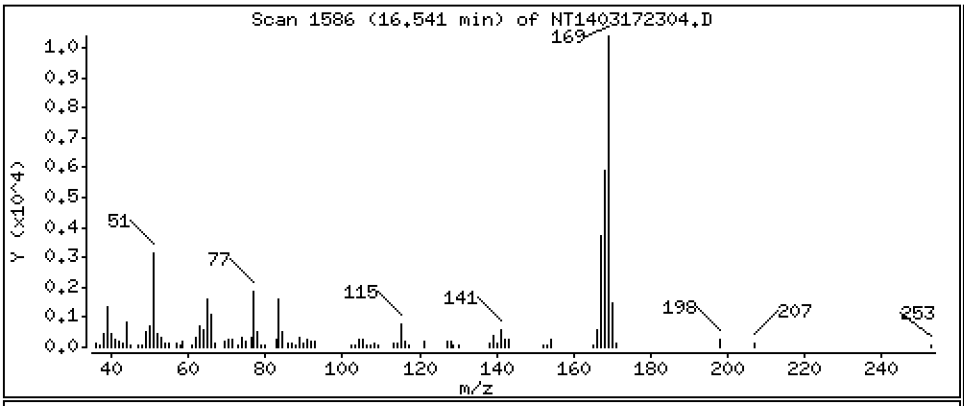
Operator: JGR

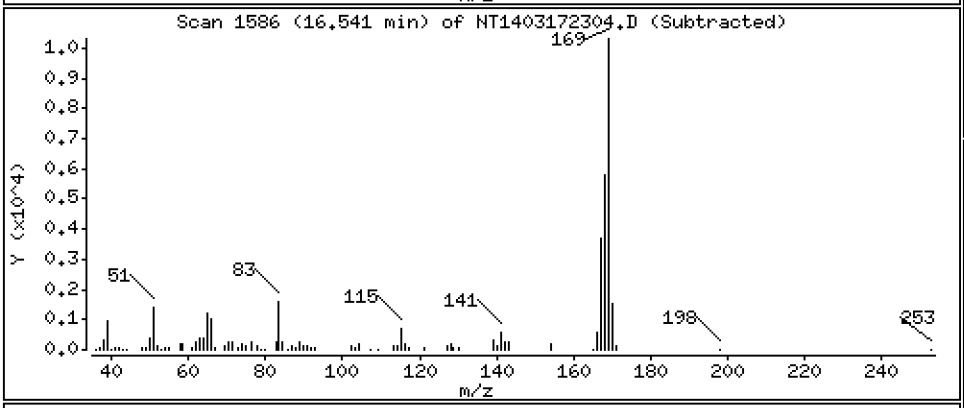
Column phase: ZB-5msi

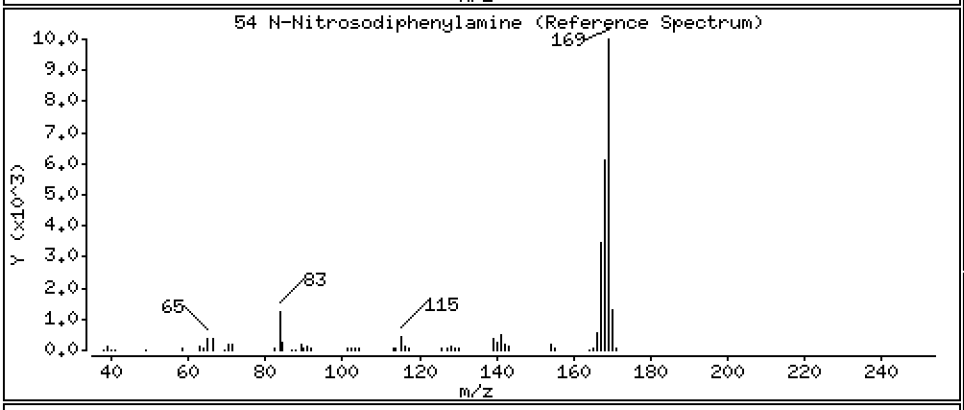
Column diameter: 0.25

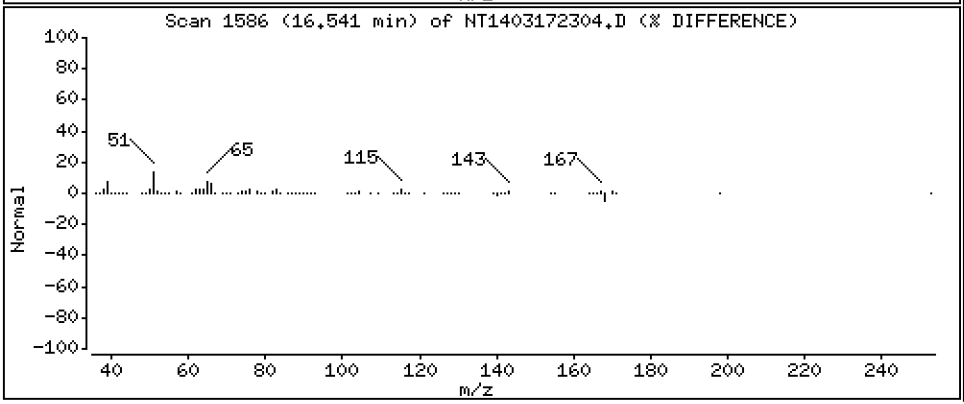
54 N-Nitrosodiphenylamine

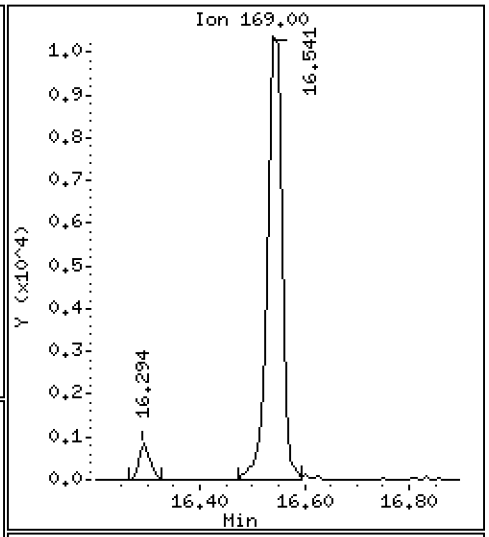
Concentration: 0.1883 ug/mL

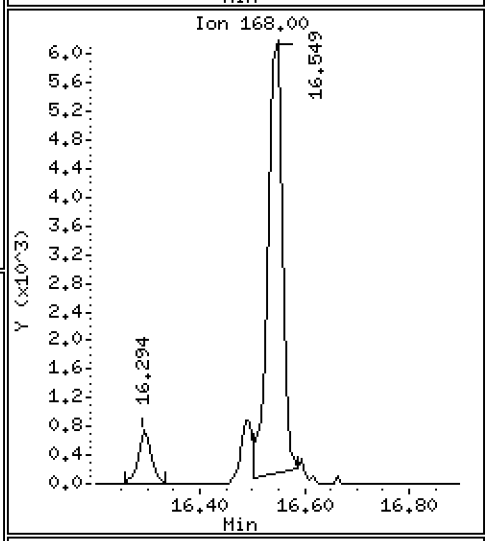


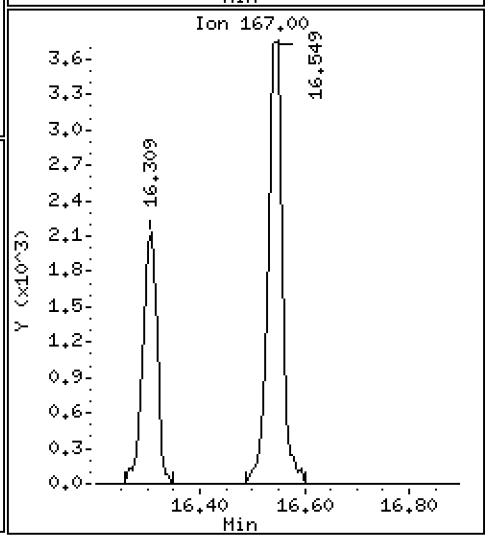












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

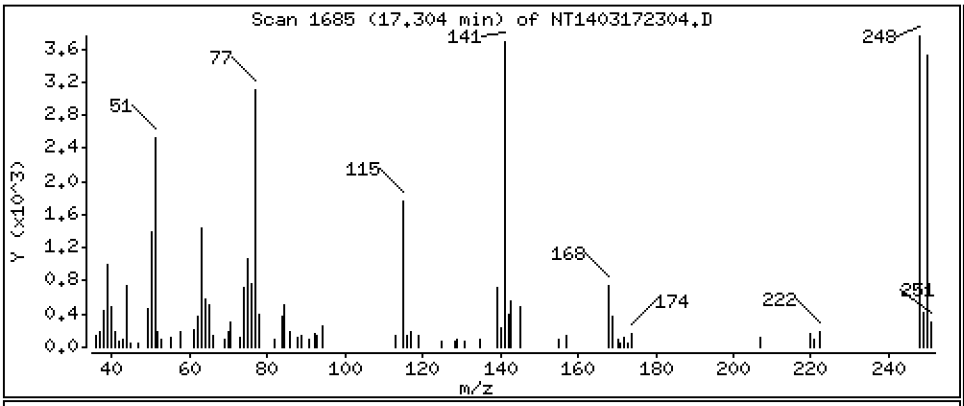
Operator: JGR

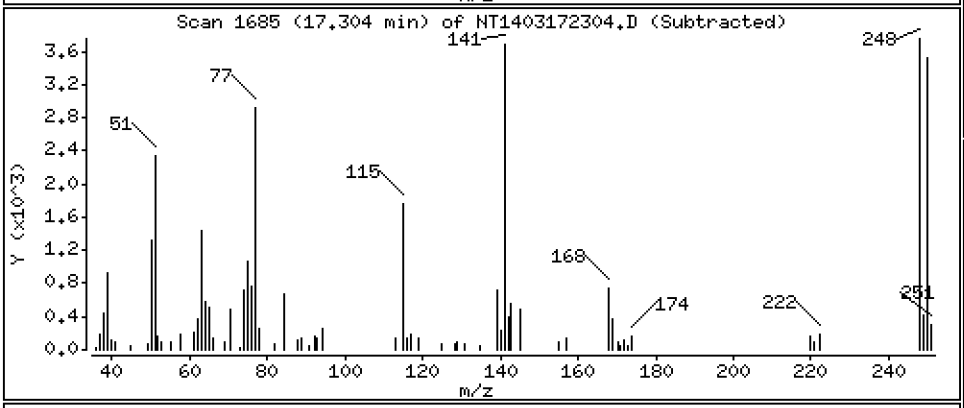
Column phase: ZB-5msi

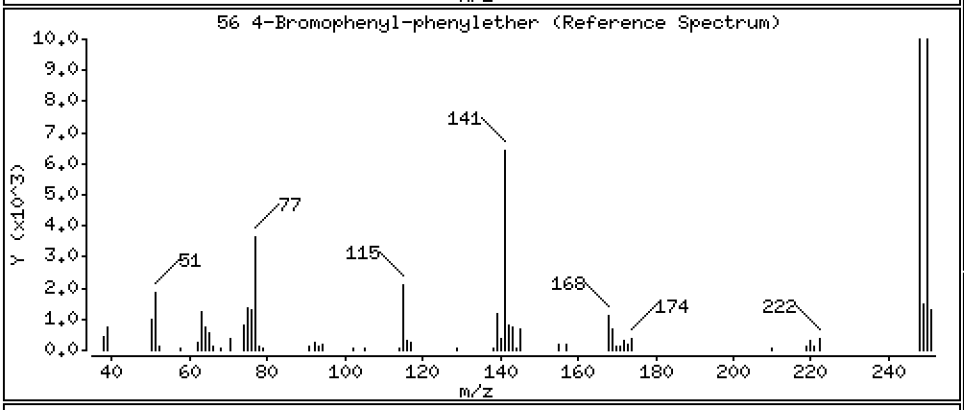
Column diameter: 0.25

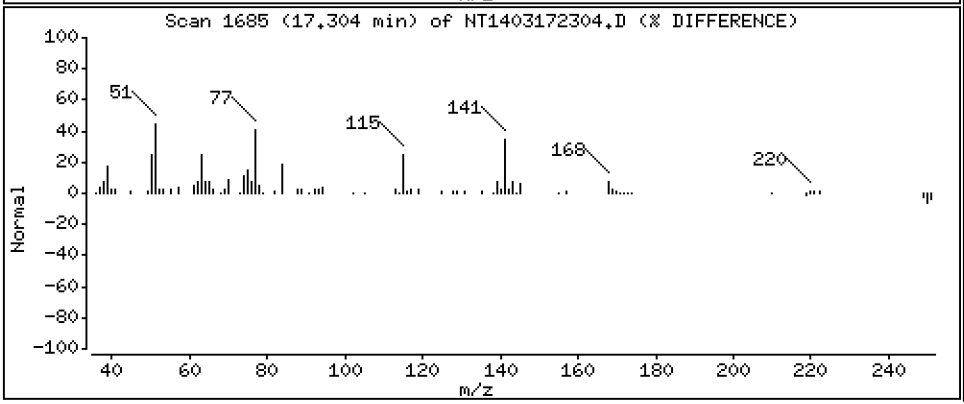
56 4-Bromophenyl-phenylether

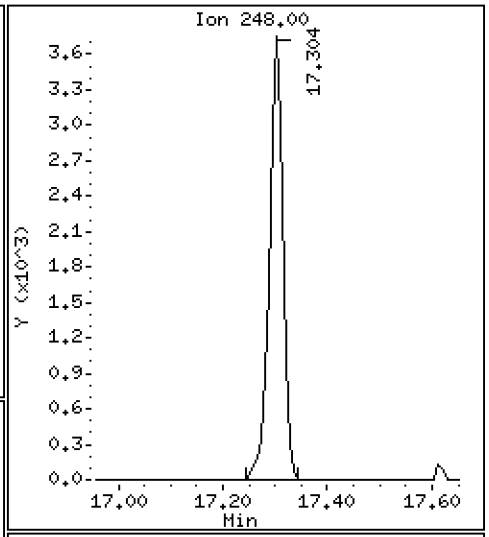
Concentration: 0.1918 ug/mL

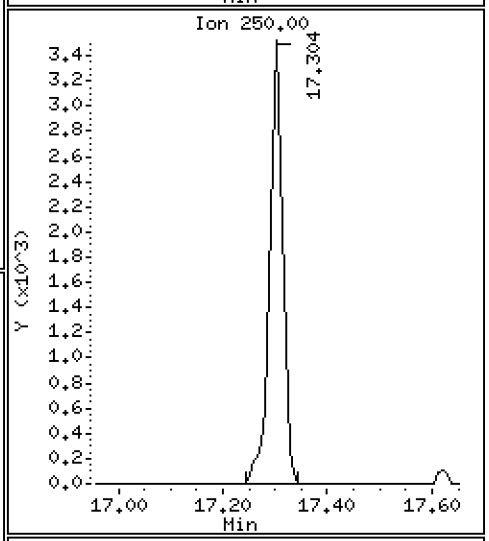


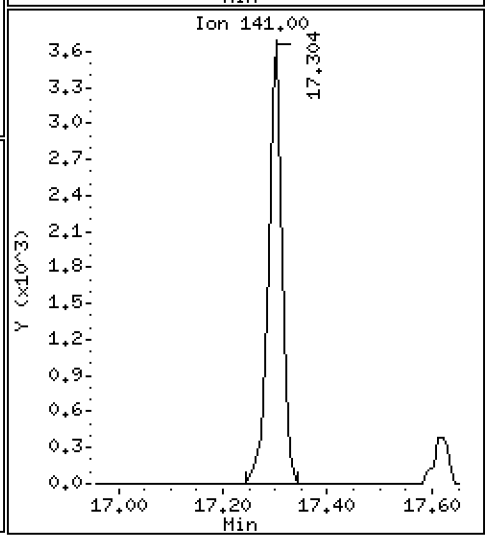












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

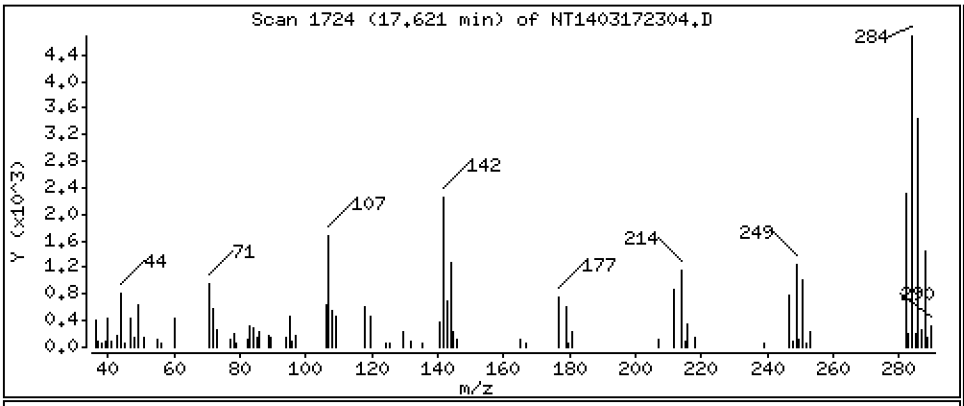
Operator: JGR

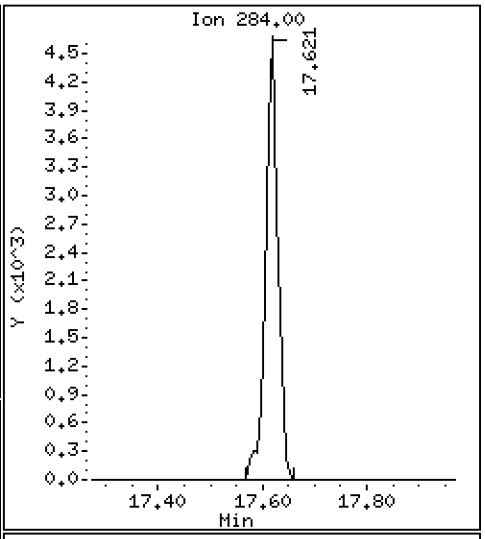
Column phase: ZB-5msi

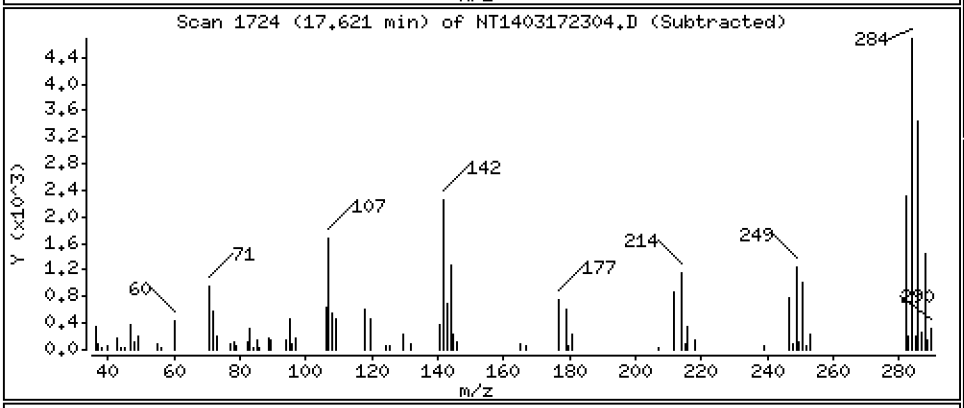
Column diameter: 0.25

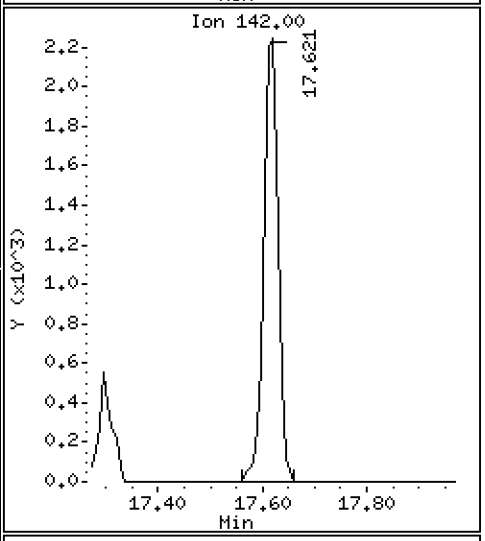
57 Hexachlorobenzene

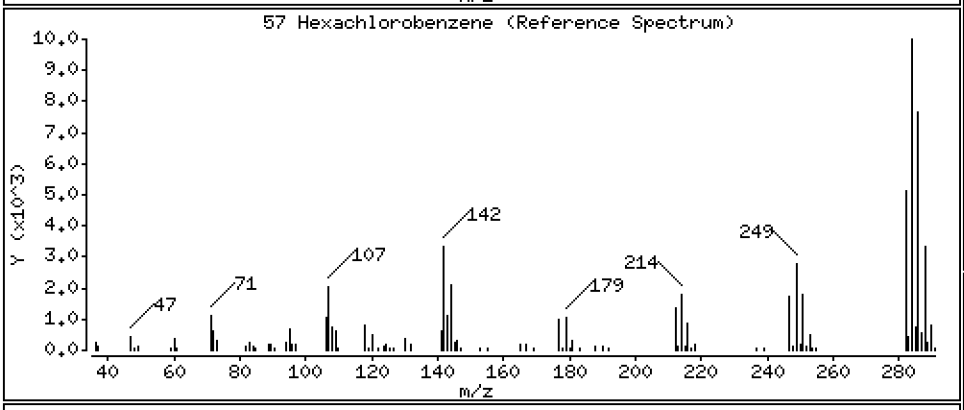
Concentration: 0.2077 ug/mL

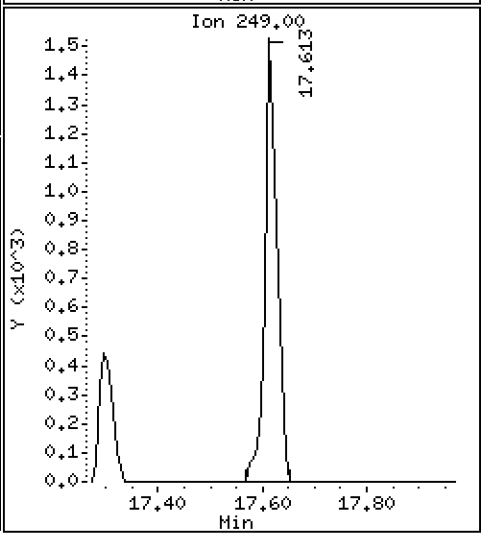


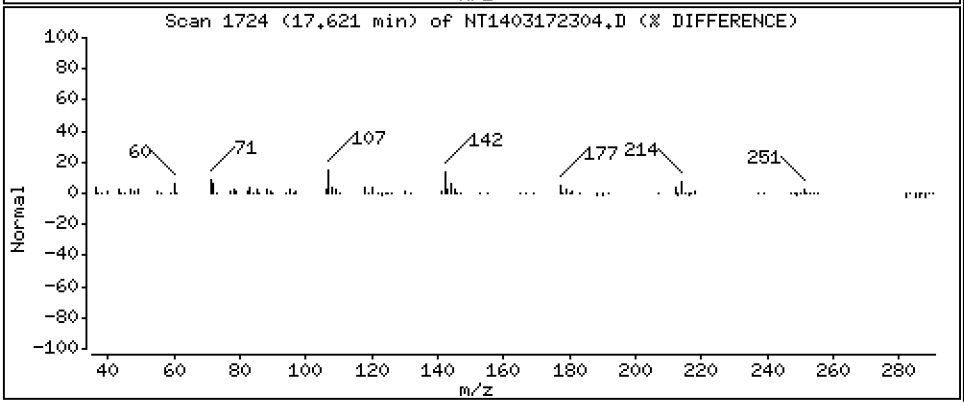












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

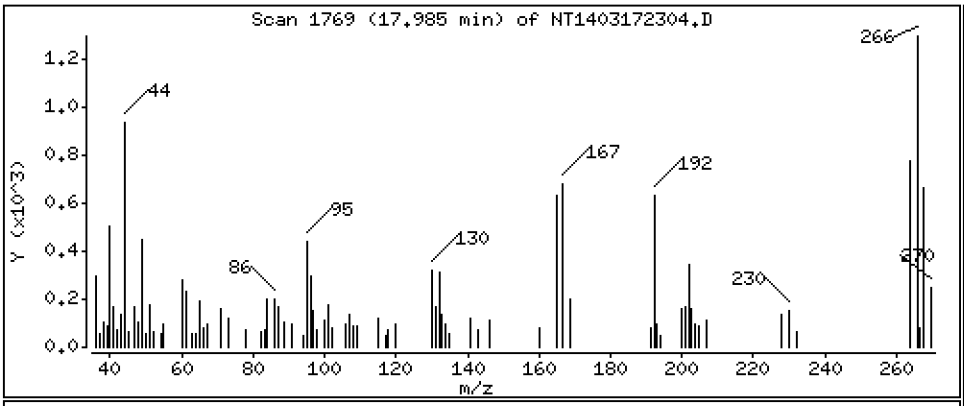
Operator: JGR

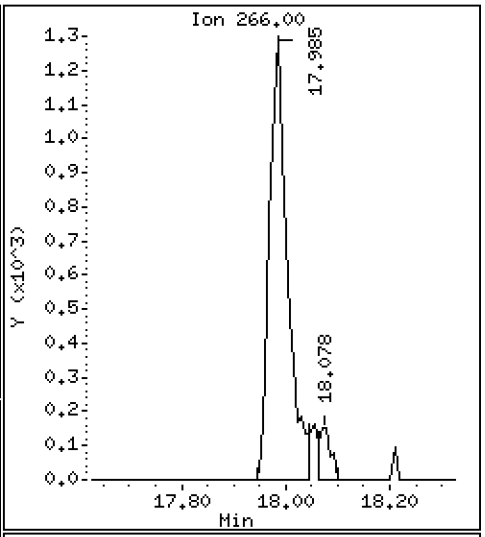
Column phase: ZB-5msi

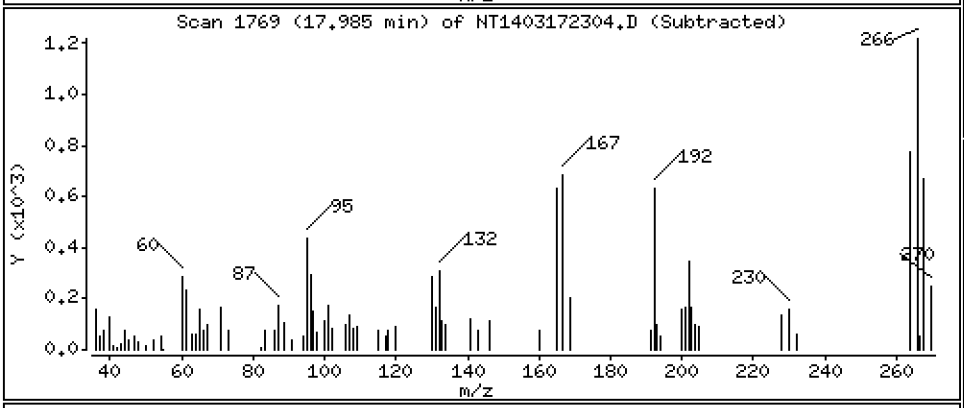
Column diameter: 0.25

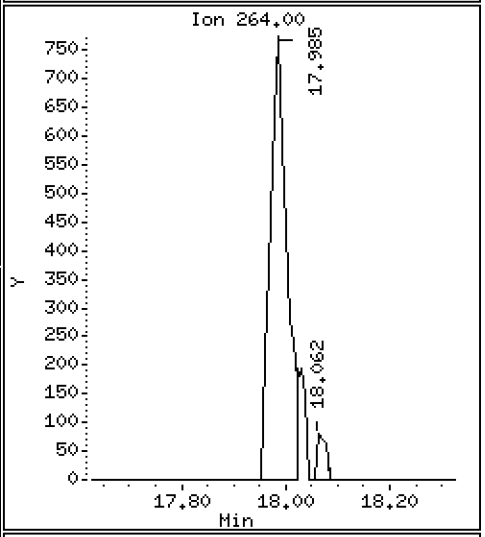
58 Pentachlorophenol

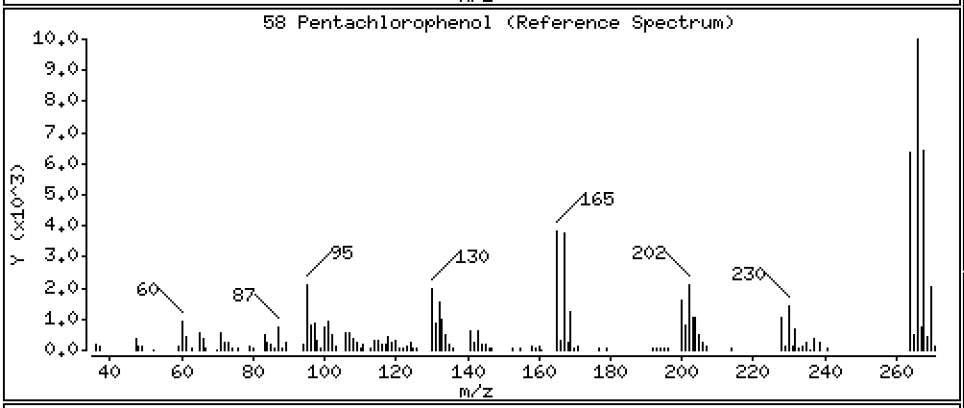
Concentration: 0.1220 ug/mL

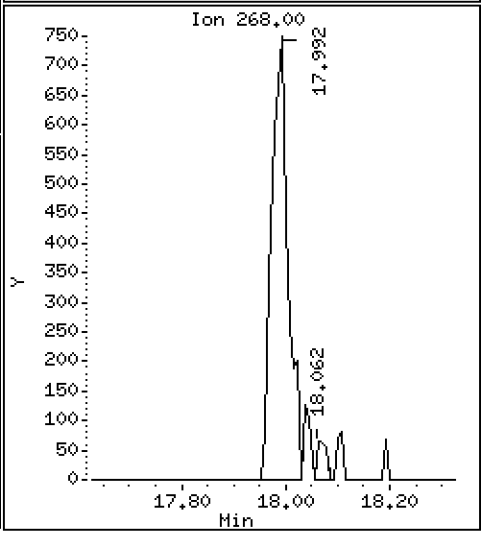


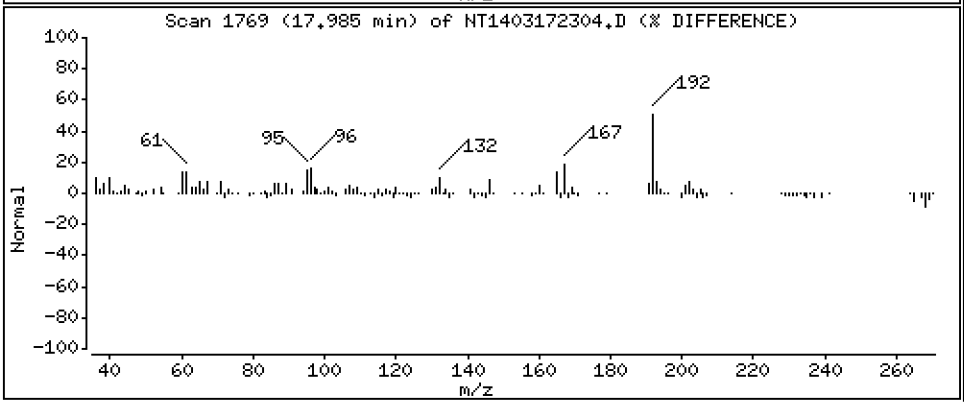












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

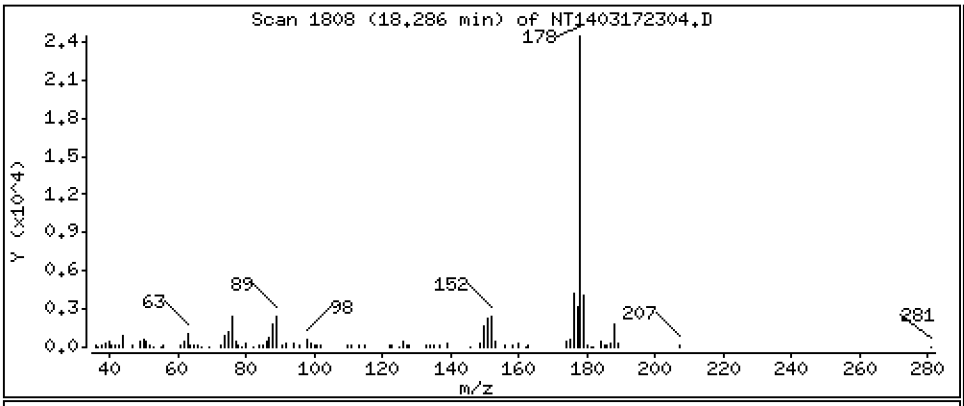
Operator: JGR

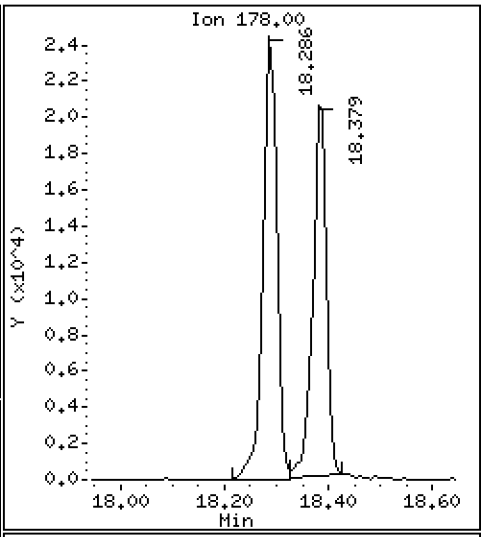
Column phase: ZB-5msi

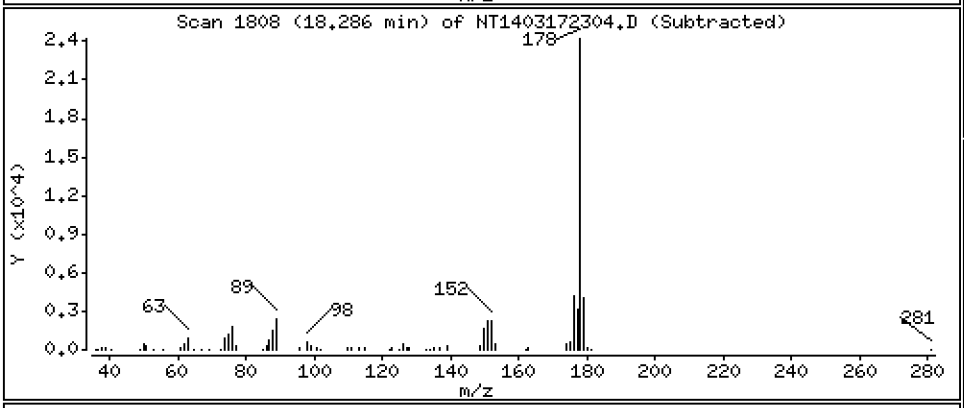
Column diameter: 0.25

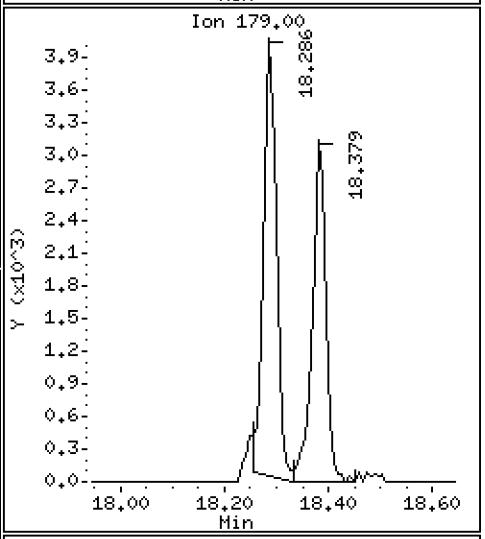
60 Phenanthrene

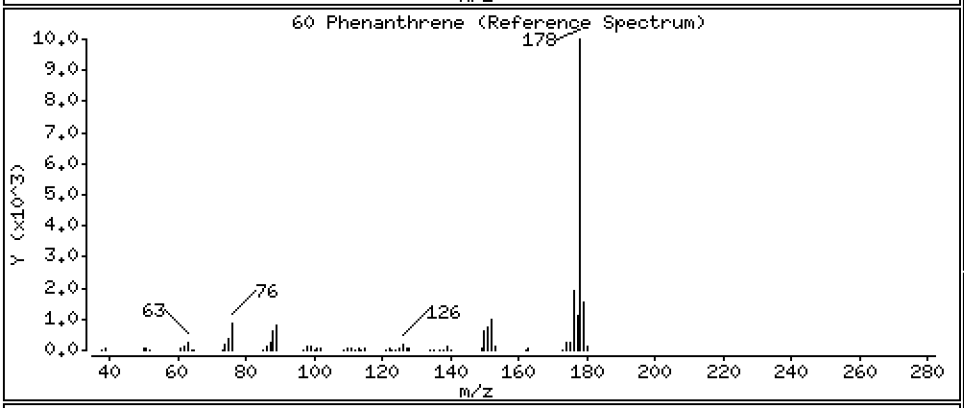
Concentration: 0.1994 ug/mL

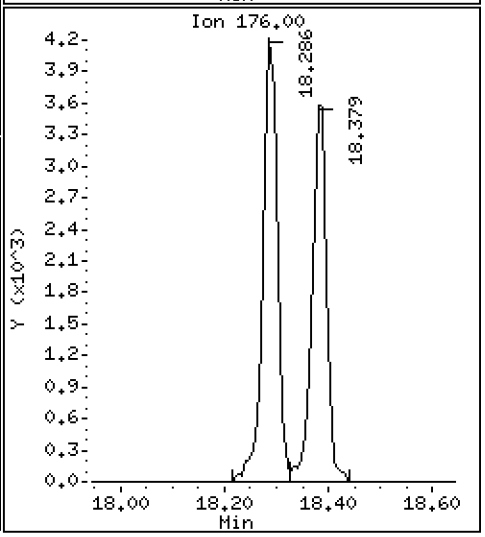


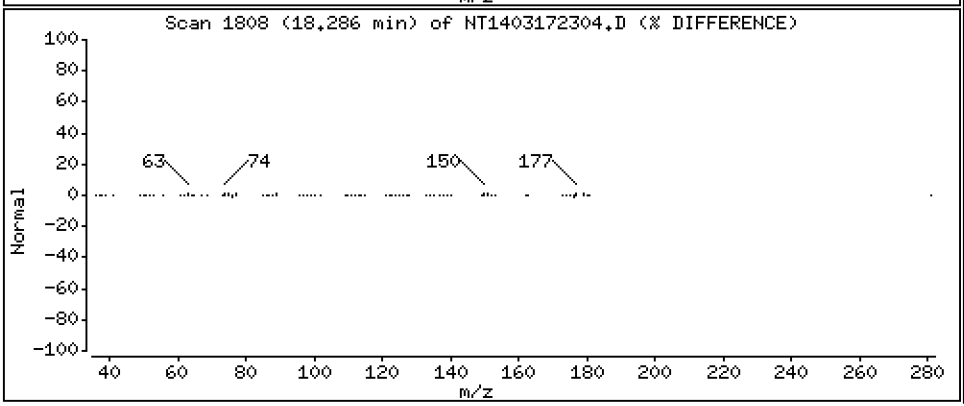












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

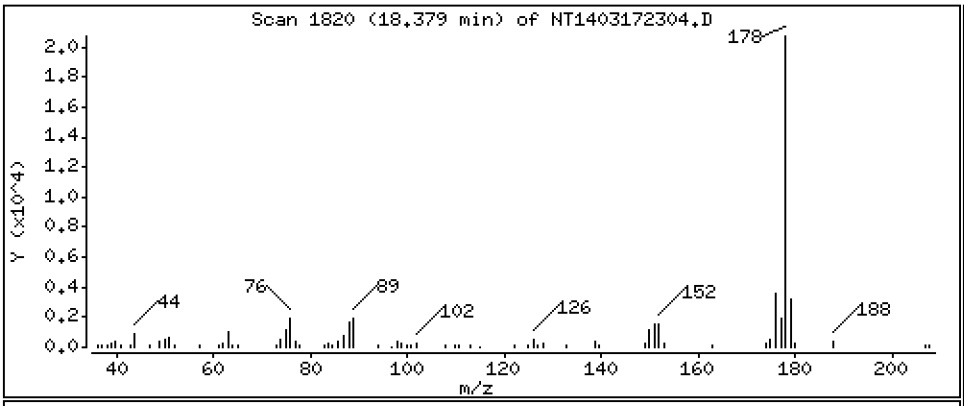
Operator: JGR

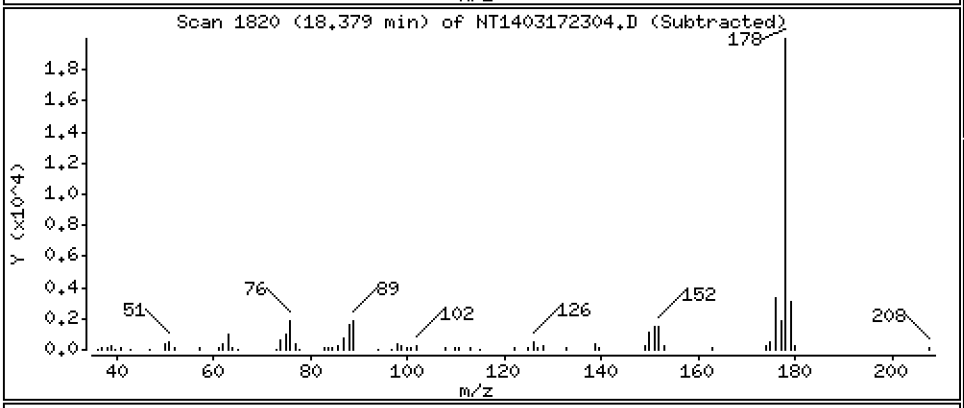
Column phase: ZB-5msi

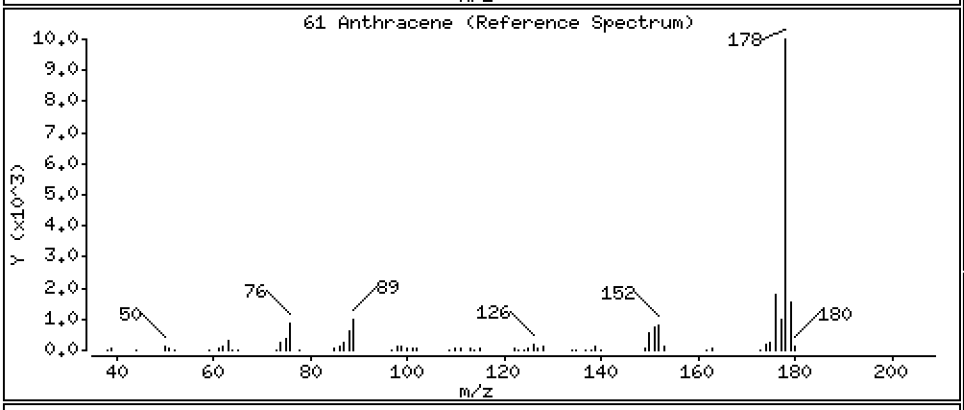
Column diameter: 0.25

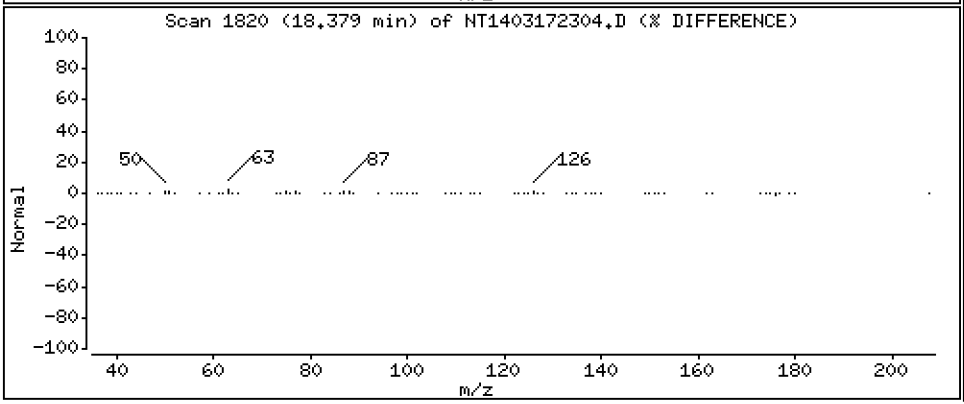
61 Anthracene

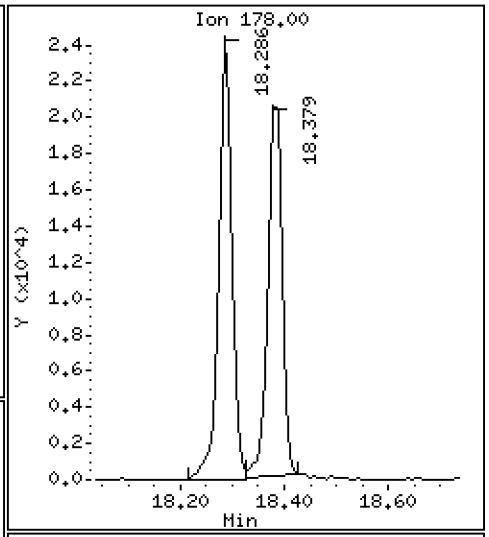
Concentration: 0.1773 ug/mL

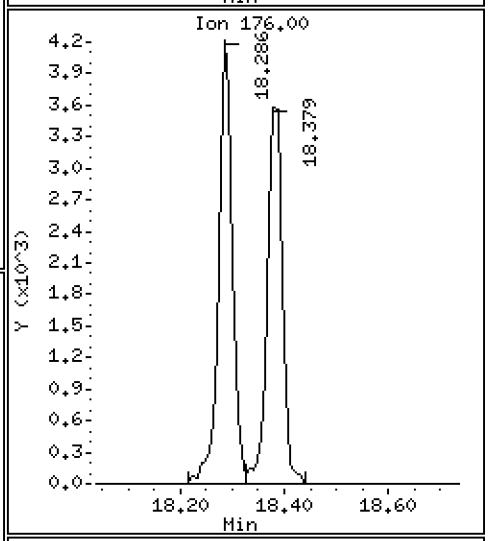


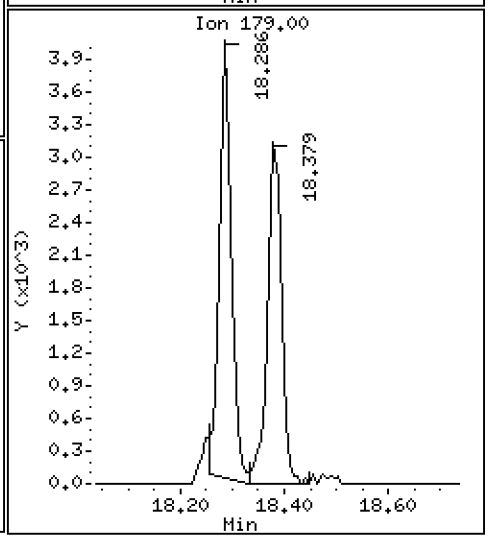












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

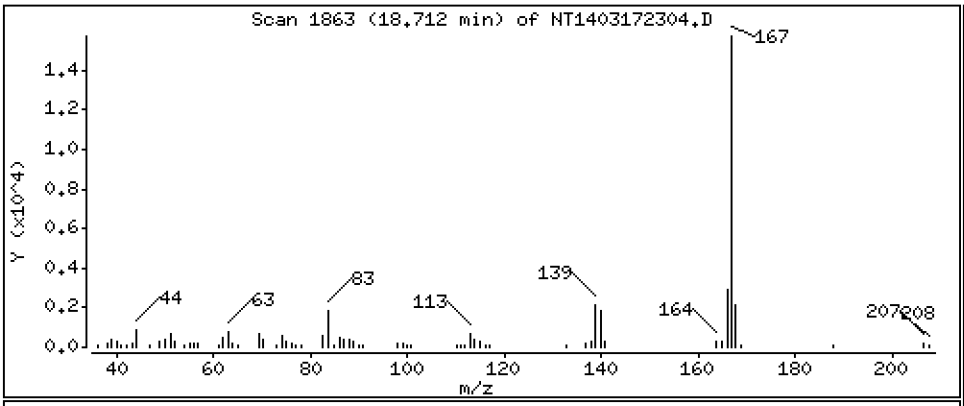
Operator: JGR

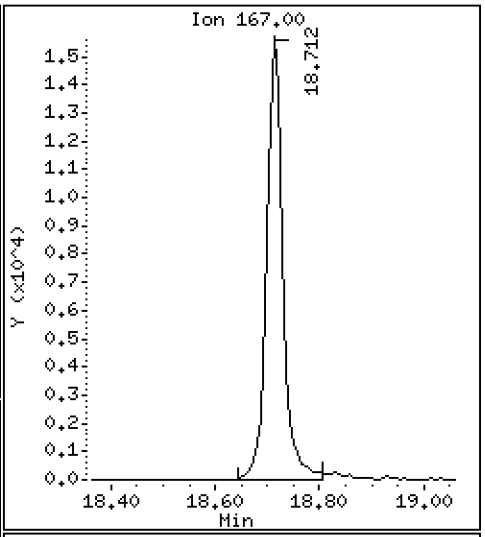
Column phase: ZB-5msi

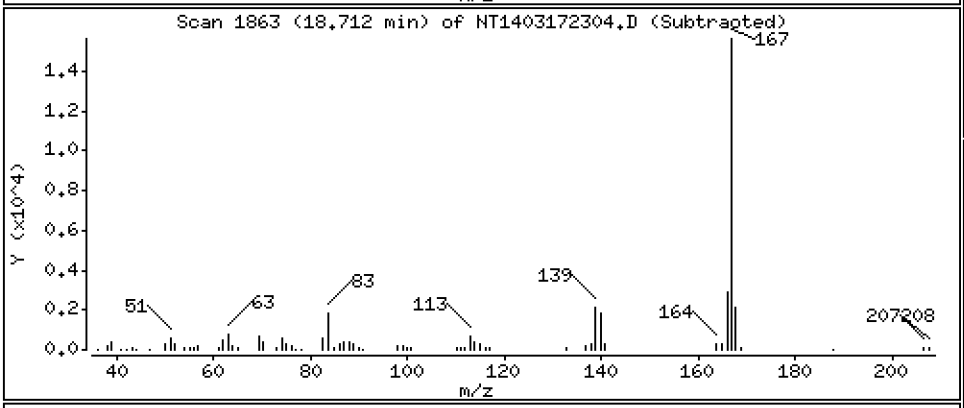
Column diameter: 0.25

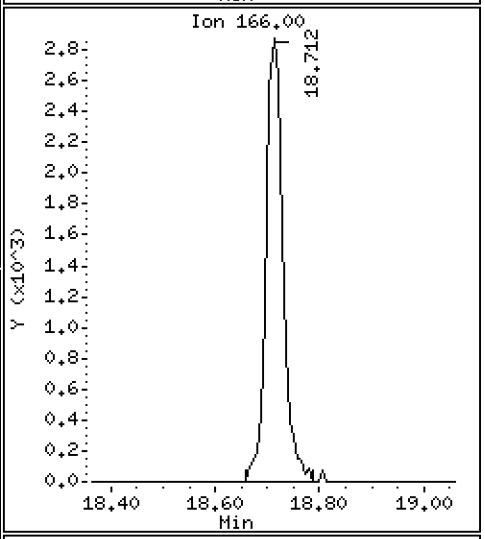
62 Carbazole

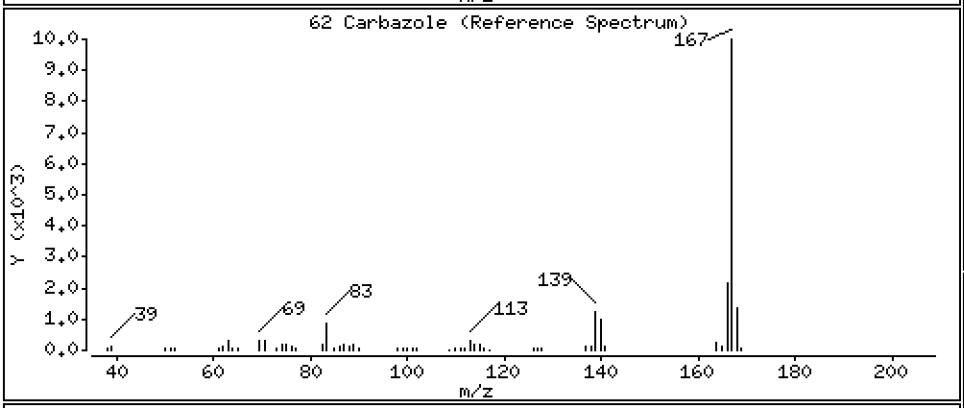
Concentration: 0.1750 ug/mL

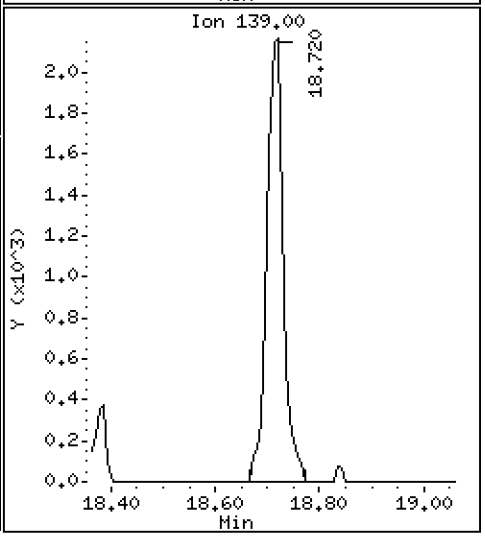


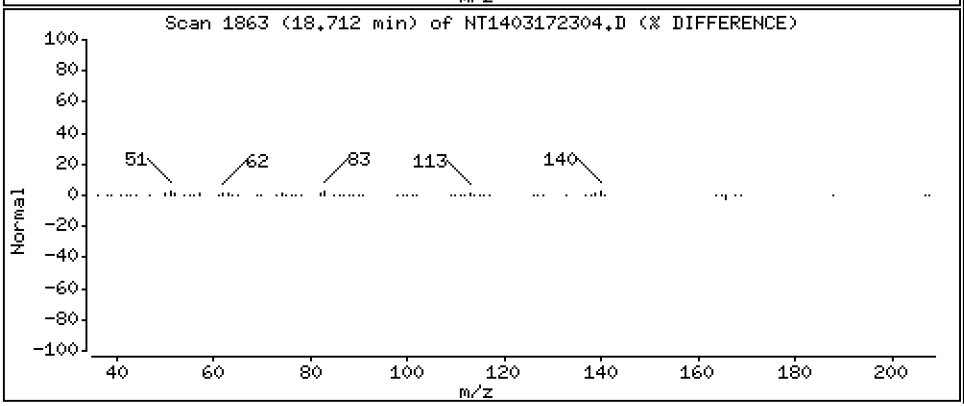












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

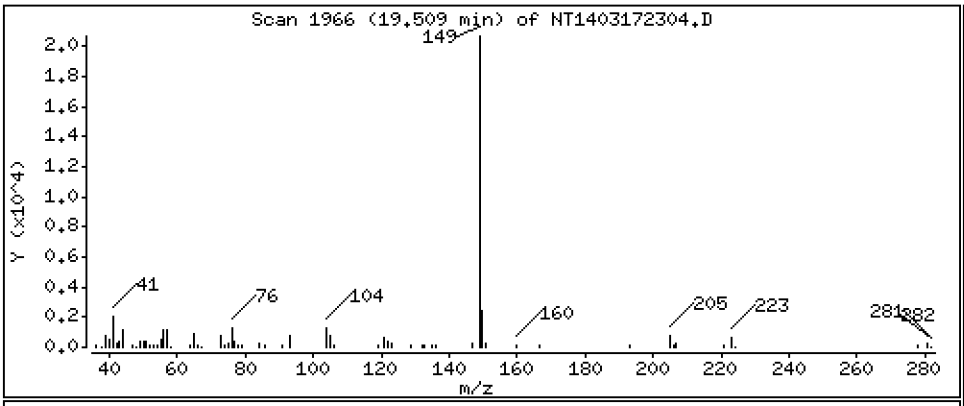
Operator: JGR

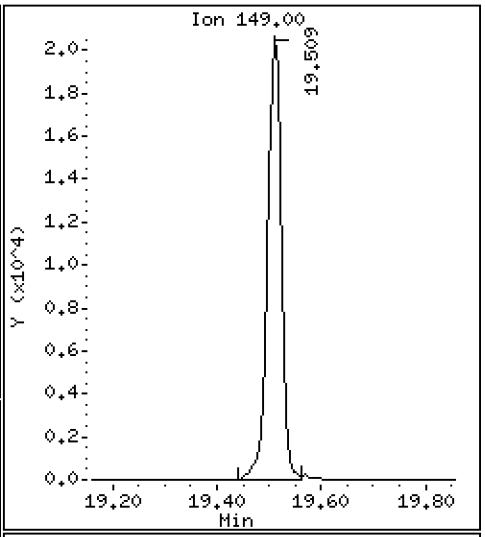
Column phase: ZB-5msi

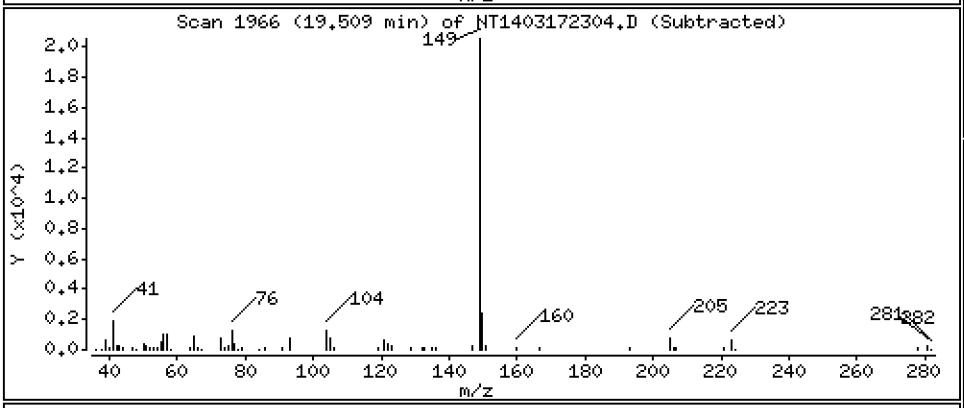
Column diameter: 0.25

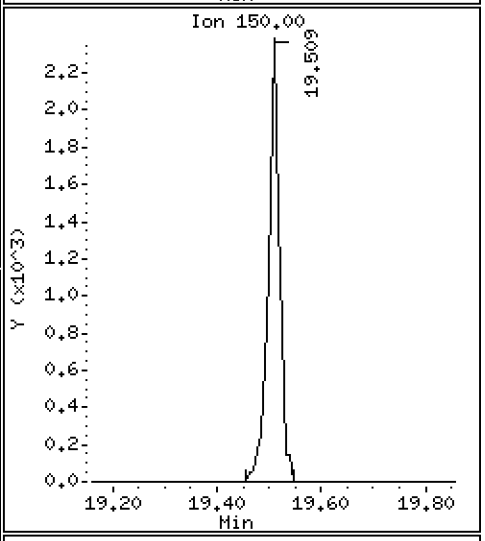
63 Di-n-butylphthalate

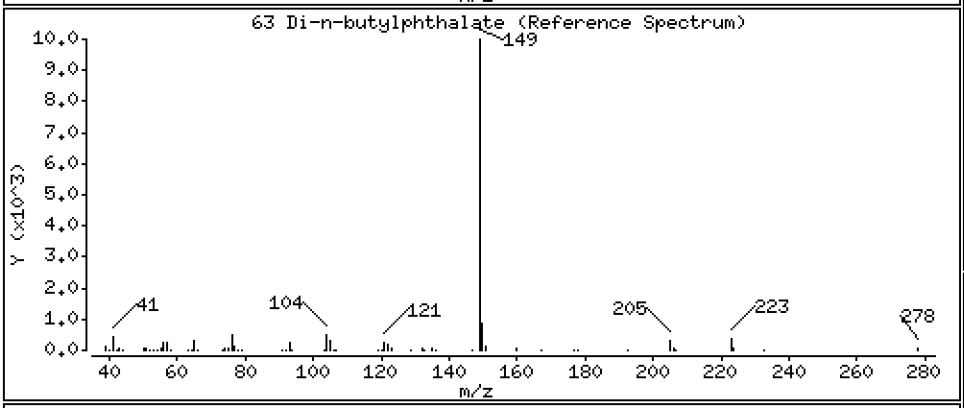
Concentration: 0.1543 ug/mL

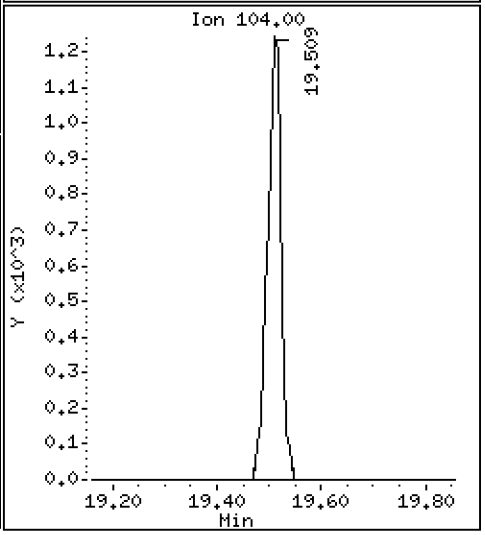


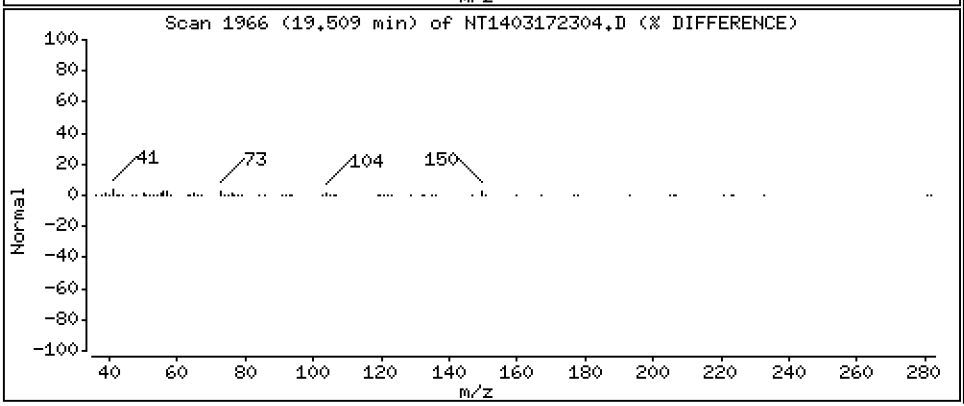












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

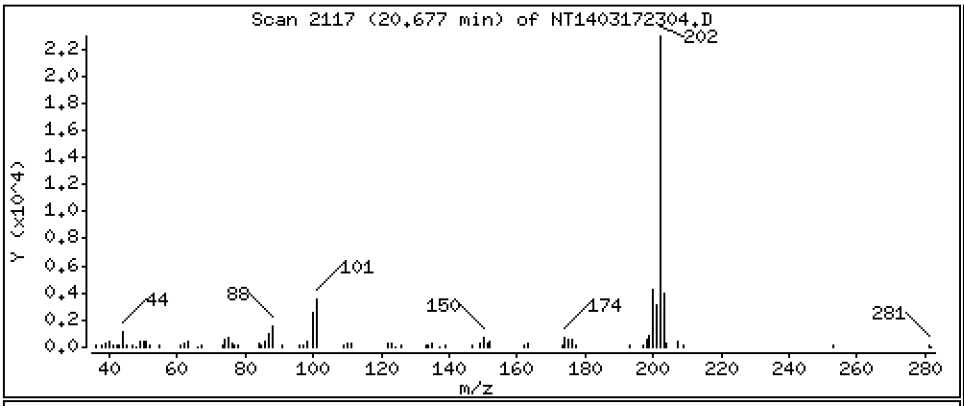
Operator: JGR

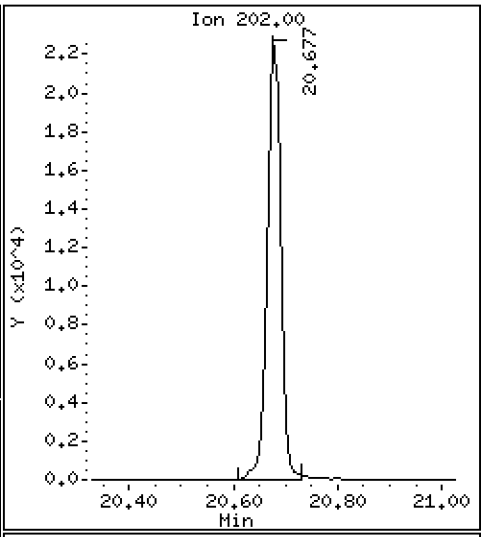
Column phase: ZB-5msi

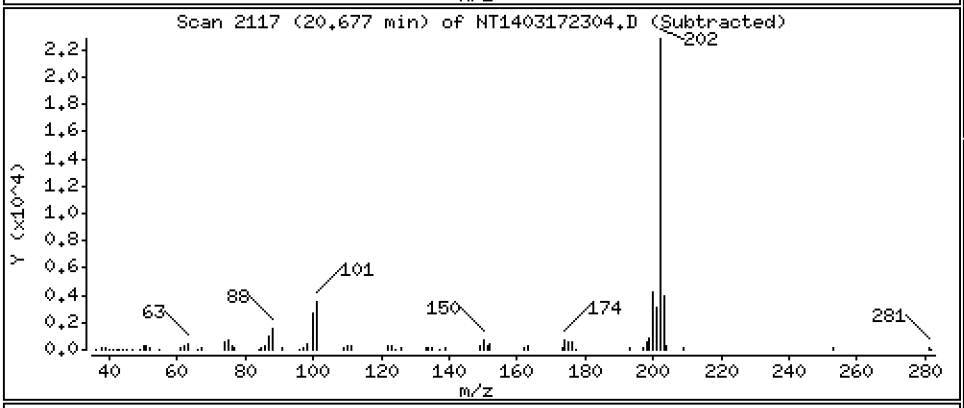
Column diameter: 0.25

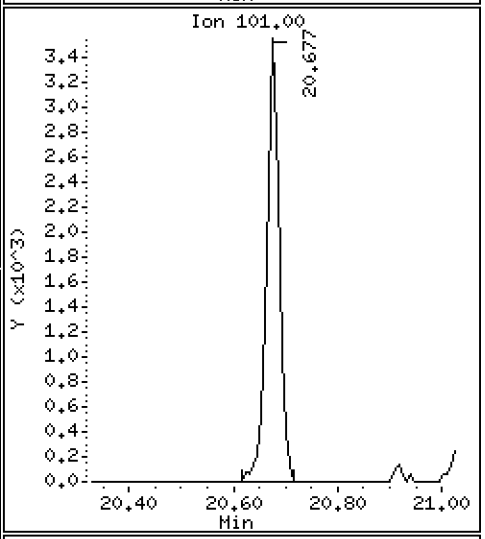
64 Fluoranthene

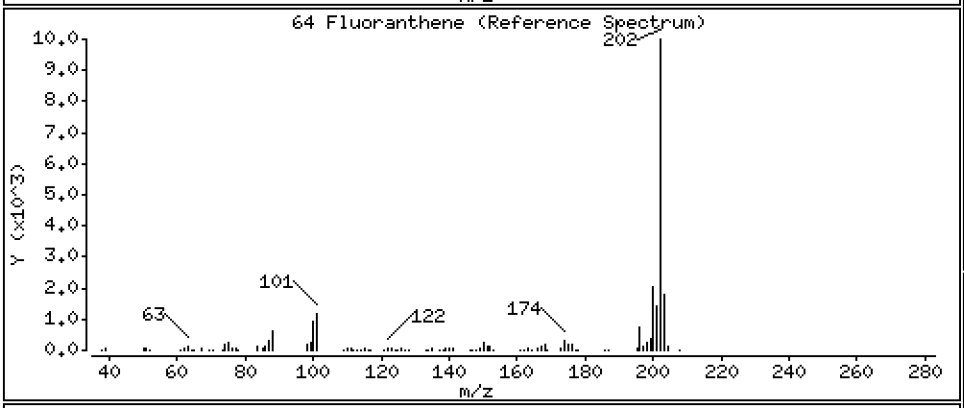
Concentration: 0.2091 ug/mL

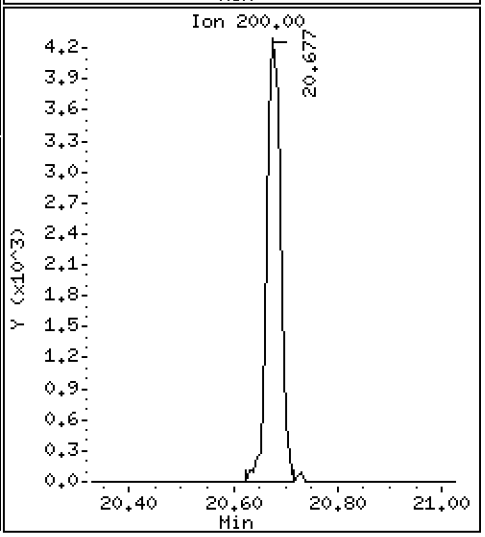


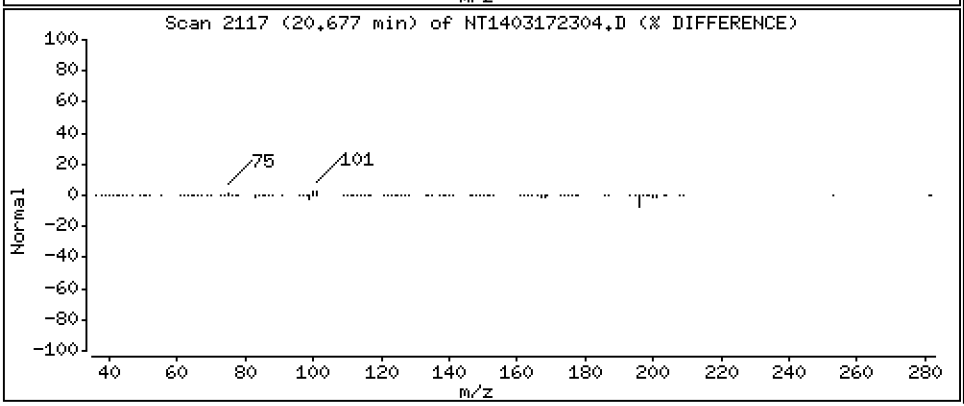












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

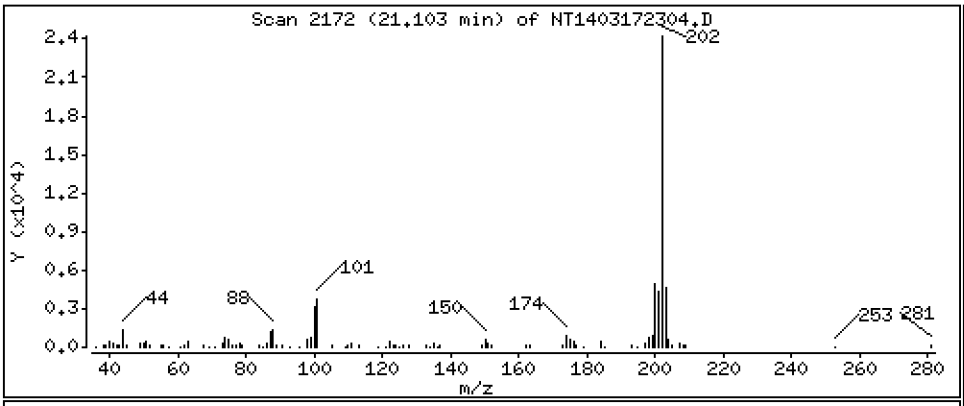
Operator: JGR

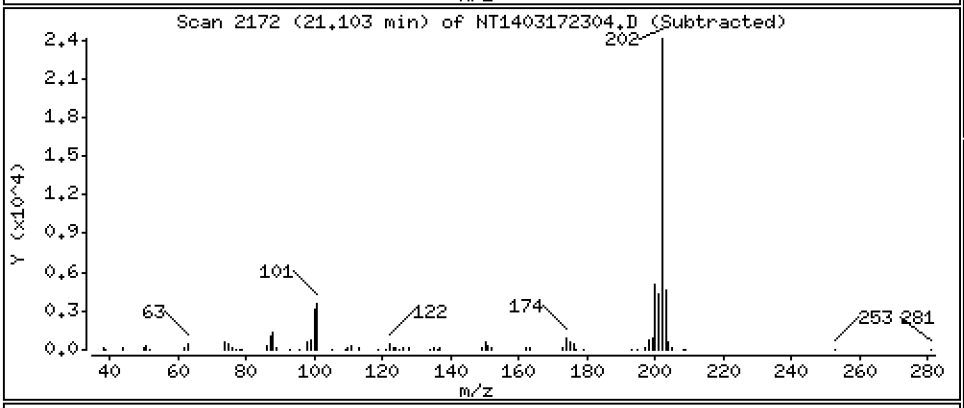
Column phase: ZB-5msi

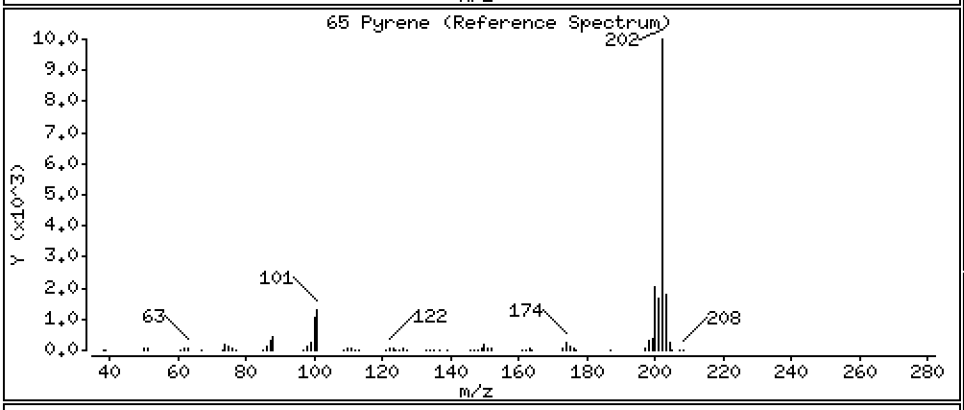
Column diameter: 0.25

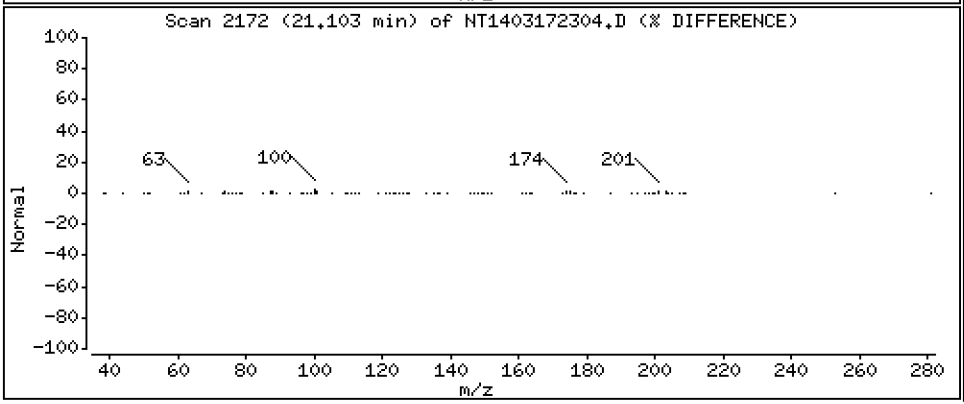
65 Pyrene

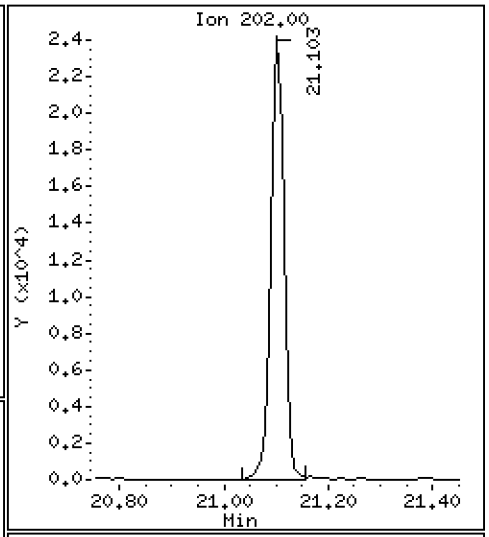
Concentration: 0.2132 ug/mL

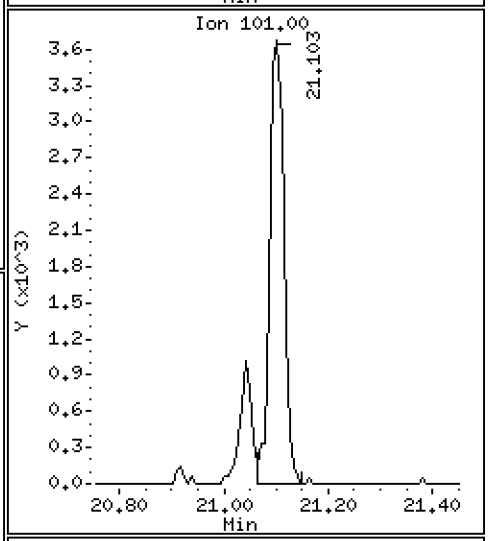


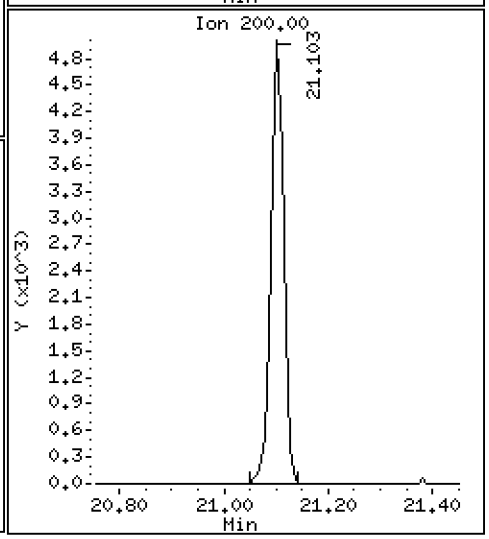












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

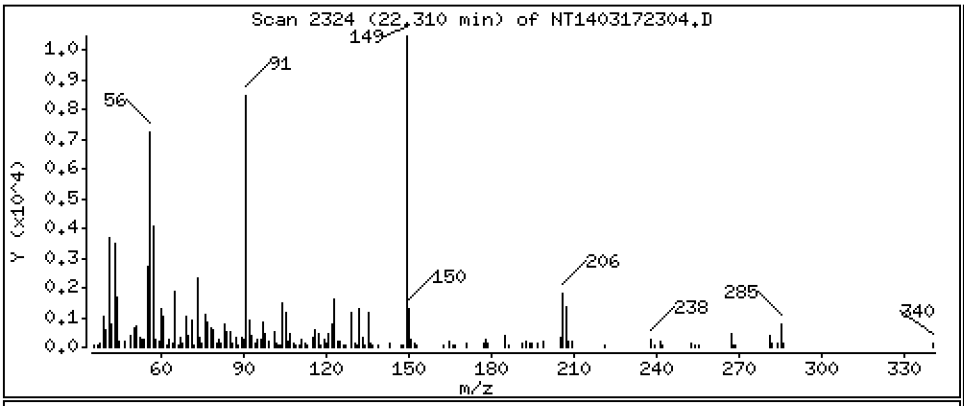
Operator: JGR

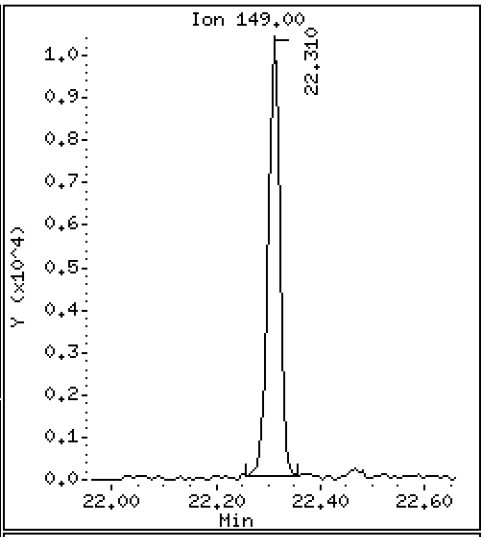
Column phase: ZB-5msi

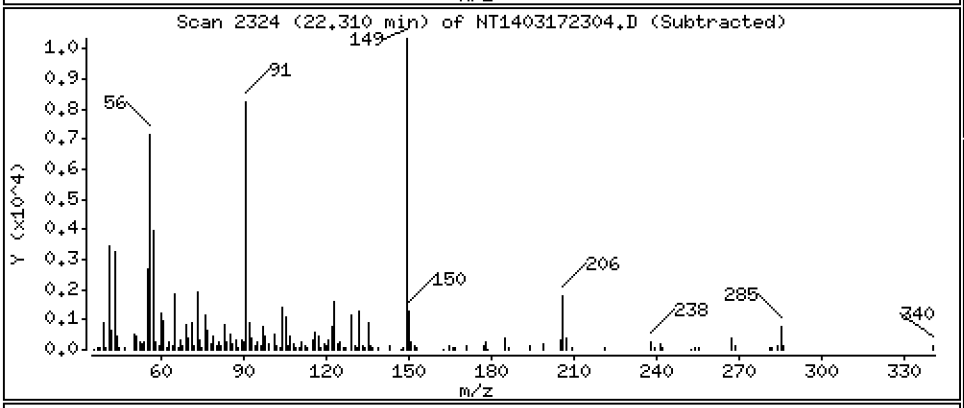
Column diameter: 0.25

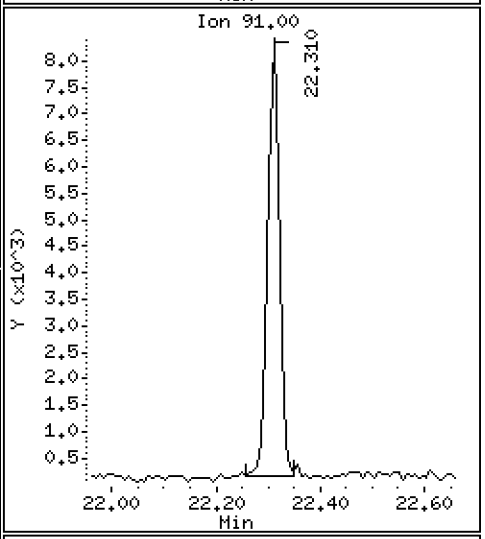
67 Butylbenzylphthalate

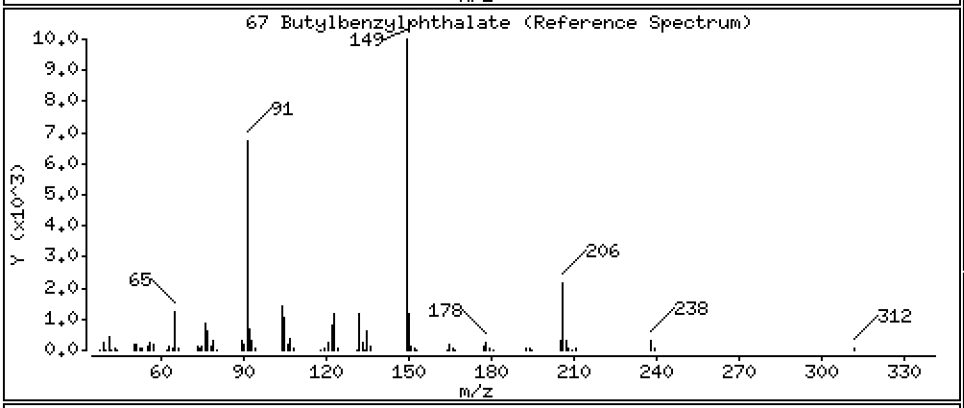
Concentration: 0.1836 ug/mL

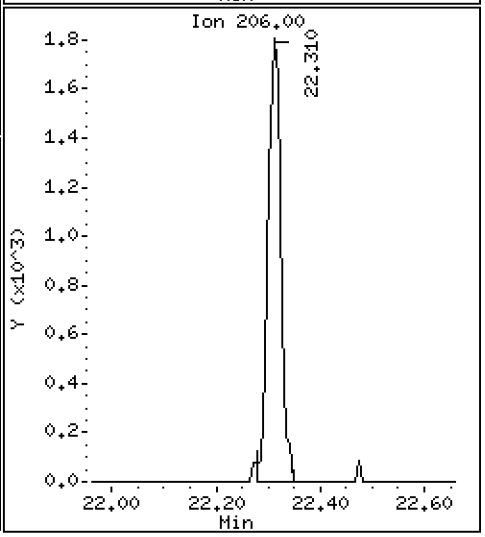


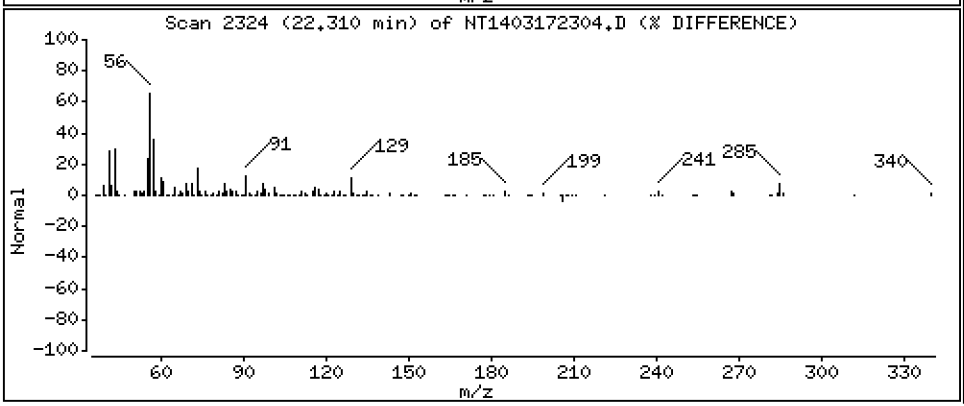












Date : 17-MAR-2023 16:16

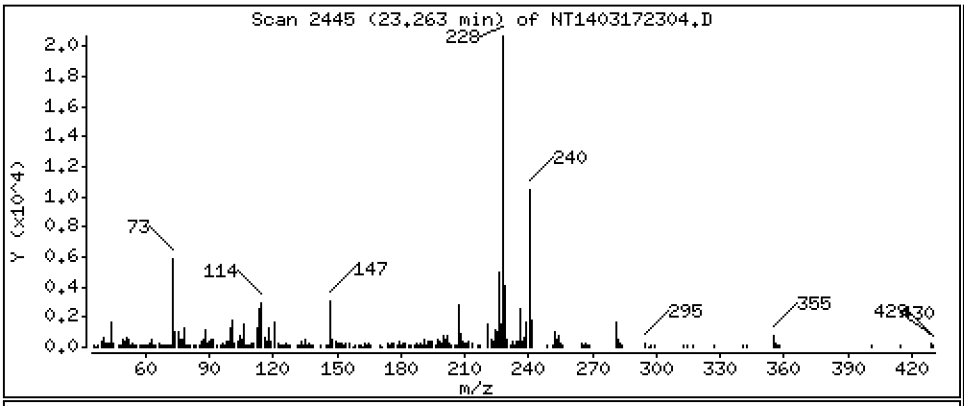
Client ID: Instrument: nt14.i

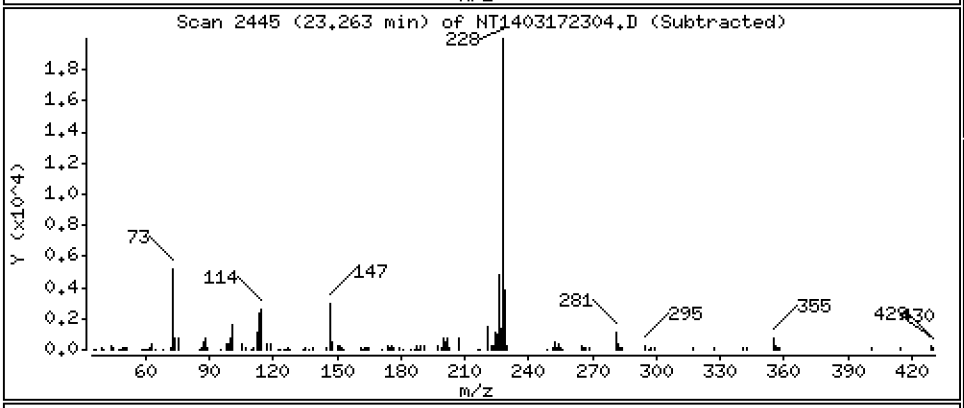
Sample Info: SLC0335-LCV1

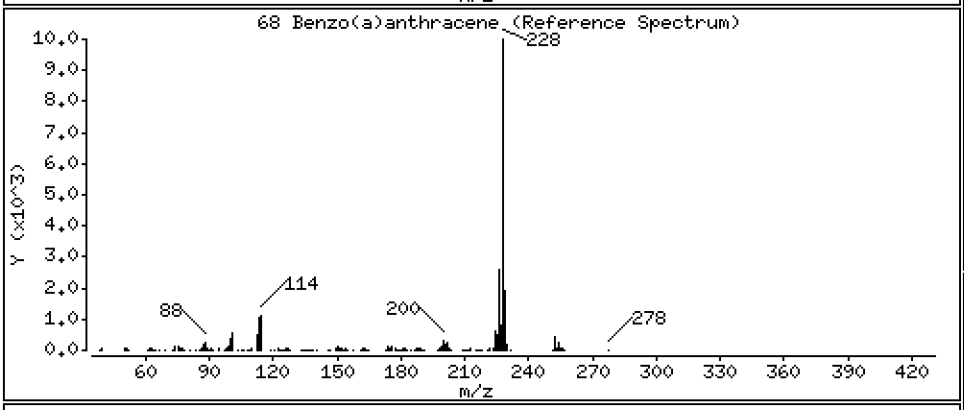
Operator: JGR

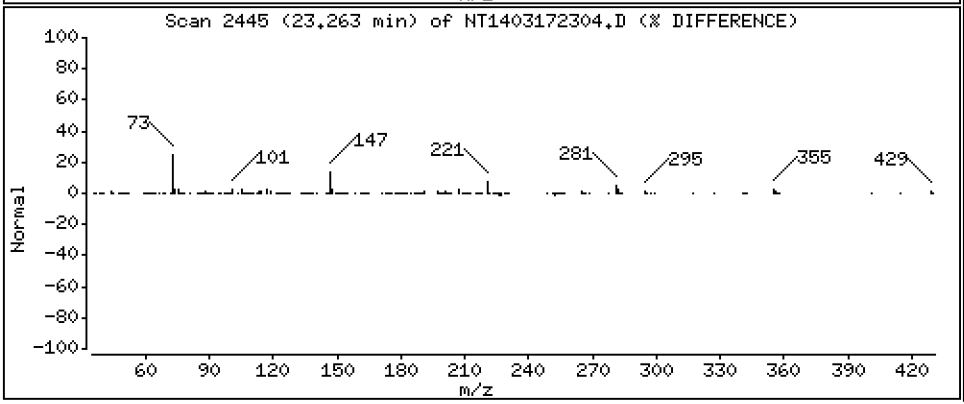
Column phase: ZB-5msi Column diameter: 0.25

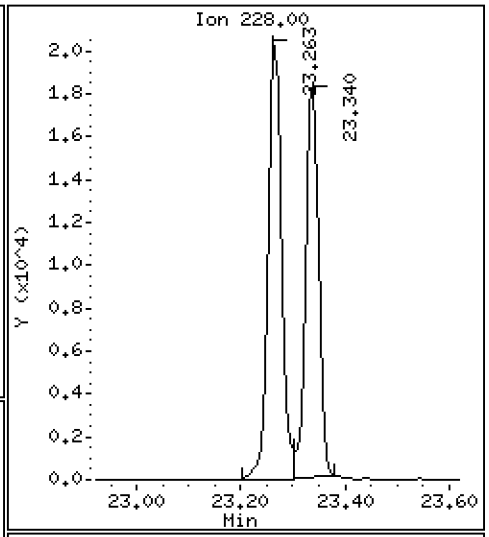
68 Benzo(a)anthracene Concentration: 0.2082 ug/mL

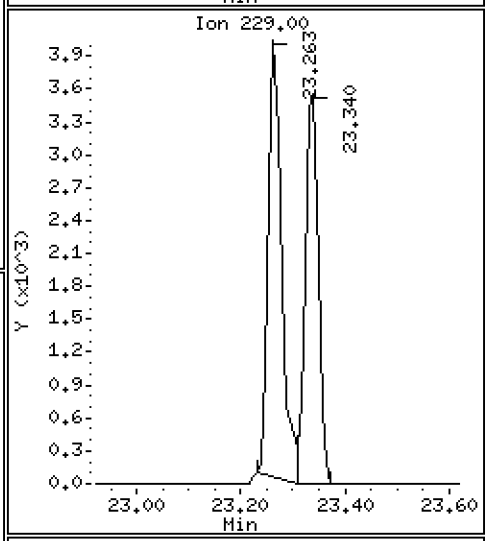


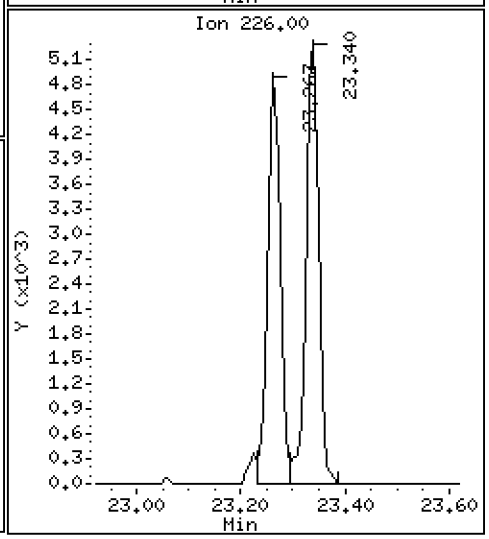












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

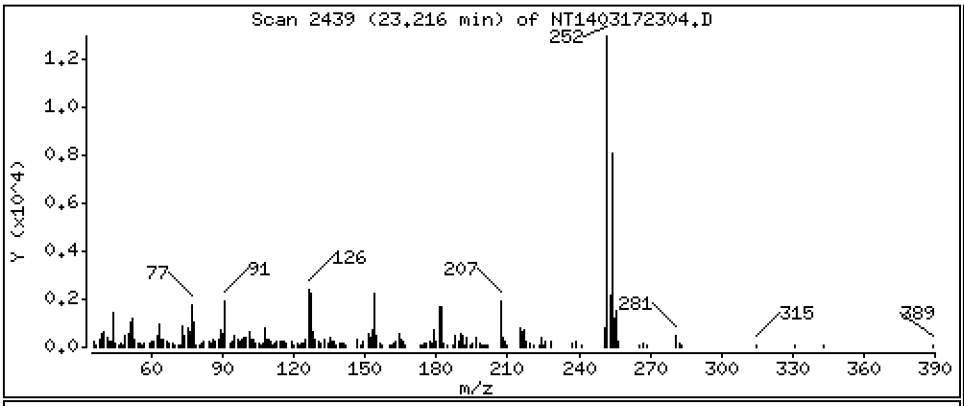
Operator: JGR

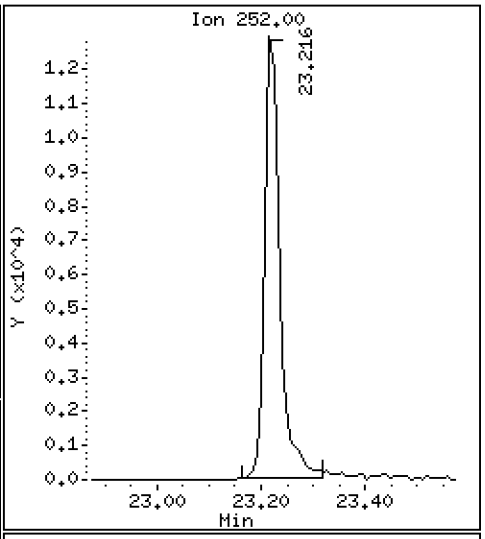
Column phase: ZB-5msi

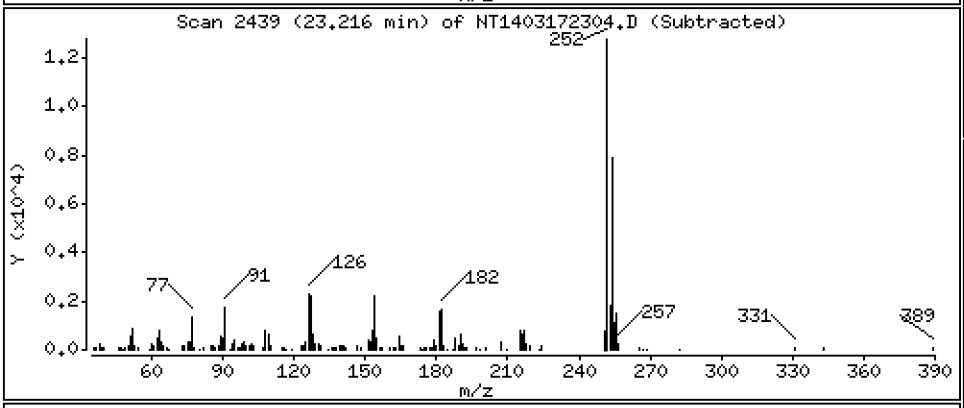
Column diameter: 0.25

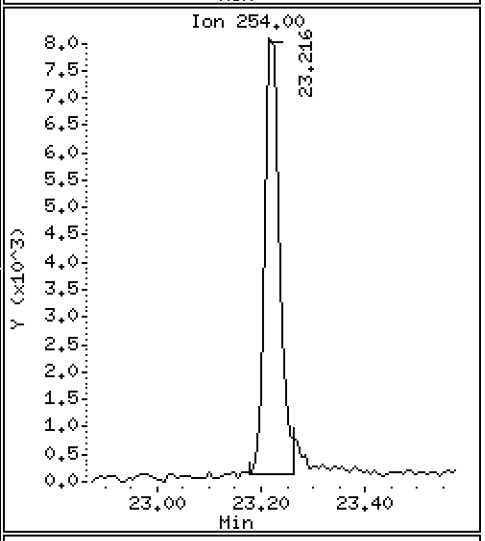
70 3,3'-Dichlorobenzidine

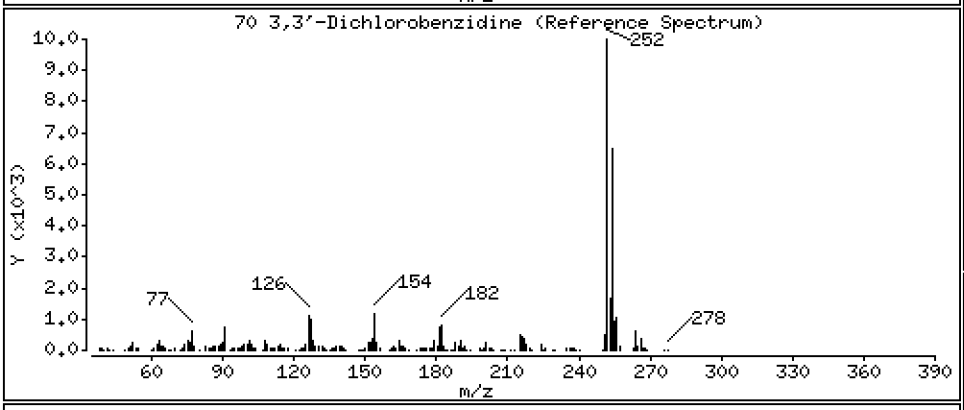
Concentration: 0.5150 ug/mL

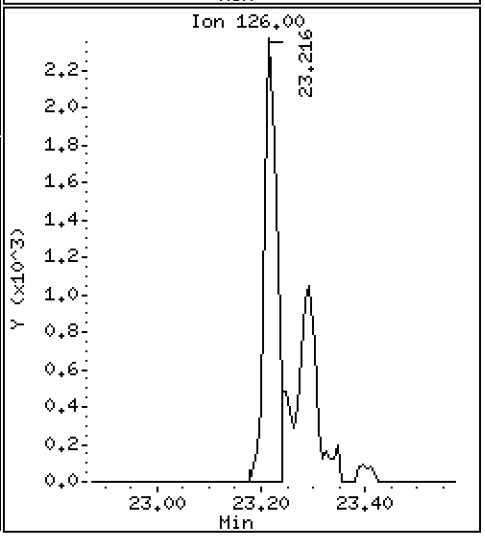


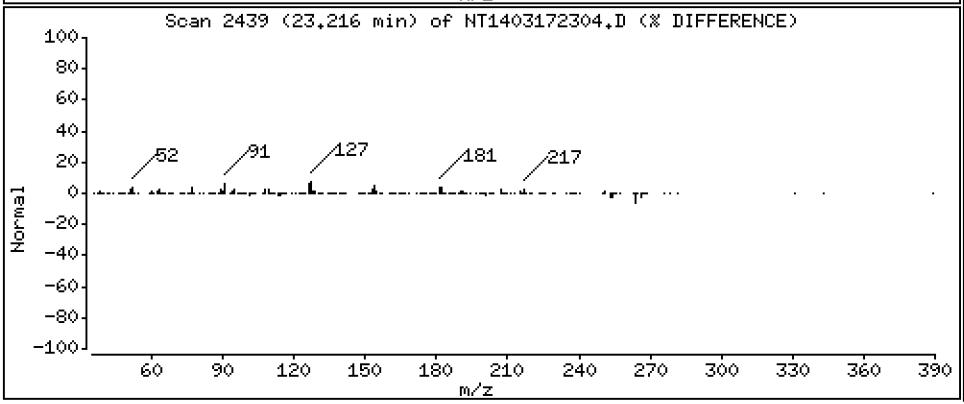












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

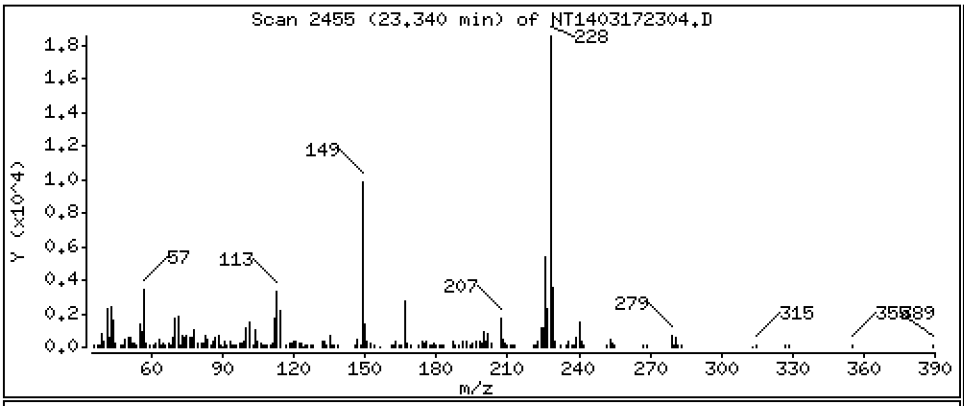
Operator: JGR

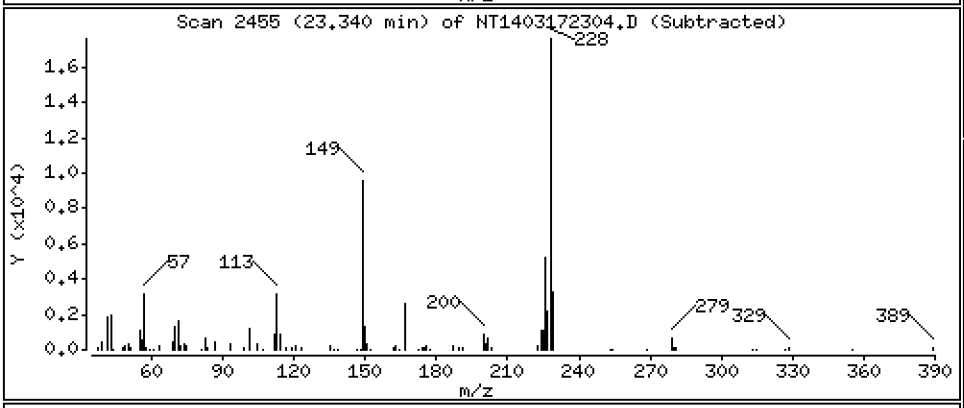
Column phase: ZB-5msi

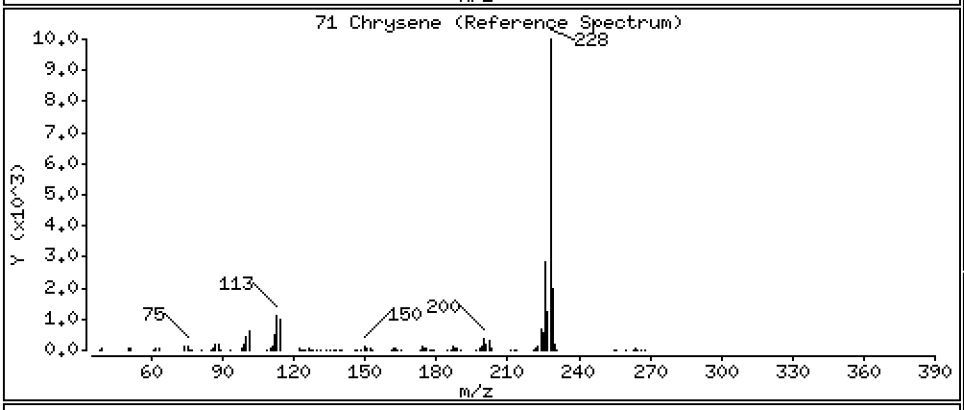
Column diameter: 0.25

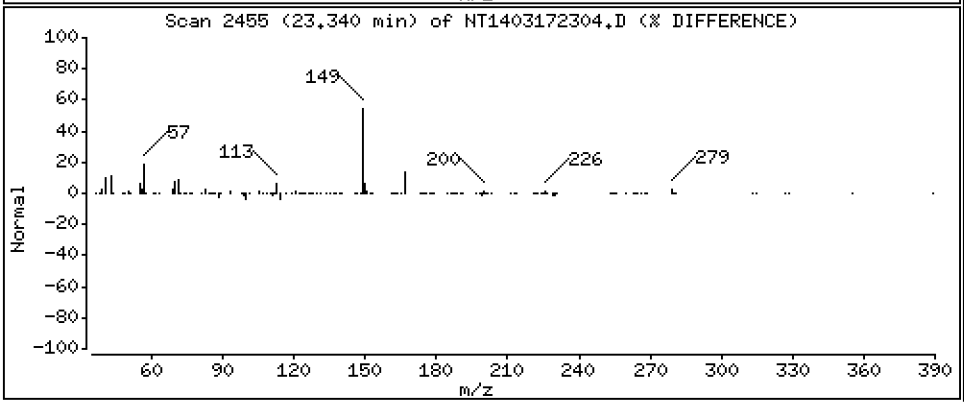
71 Chrysene

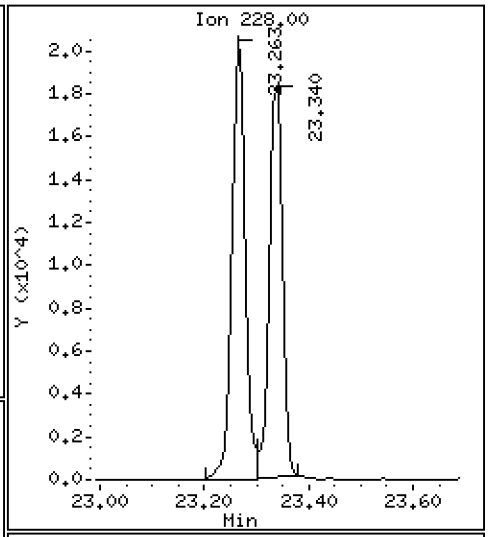
Concentration: 0.2012 ug/mL

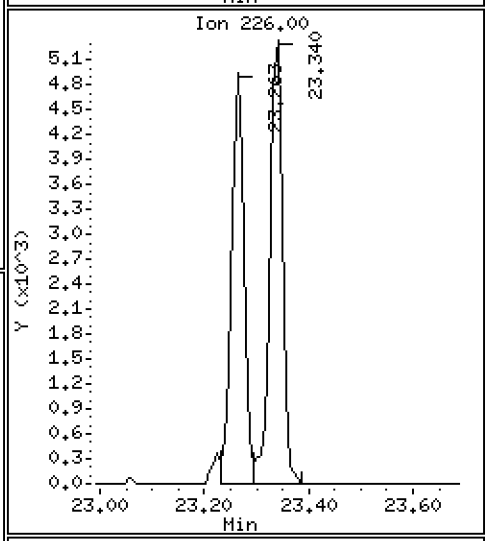


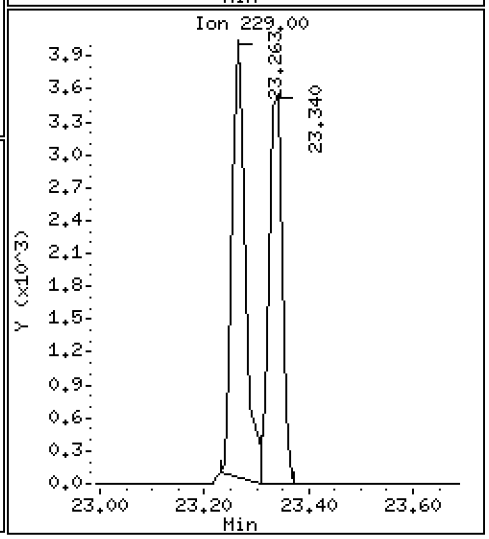












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

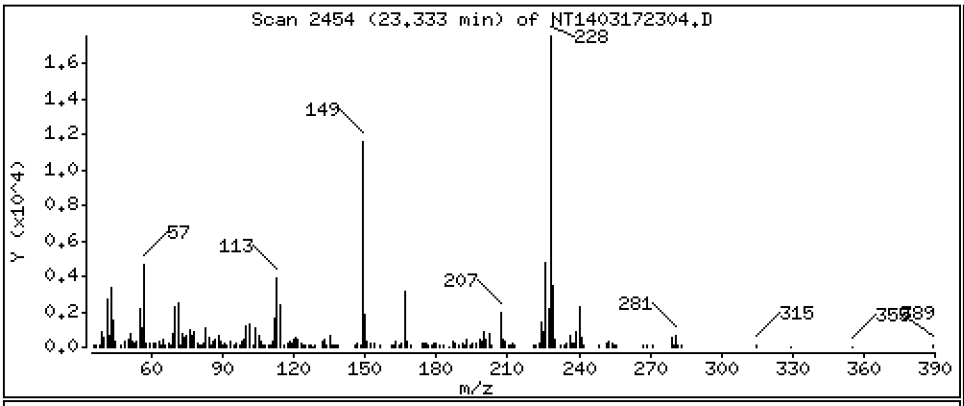
Operator: JGR

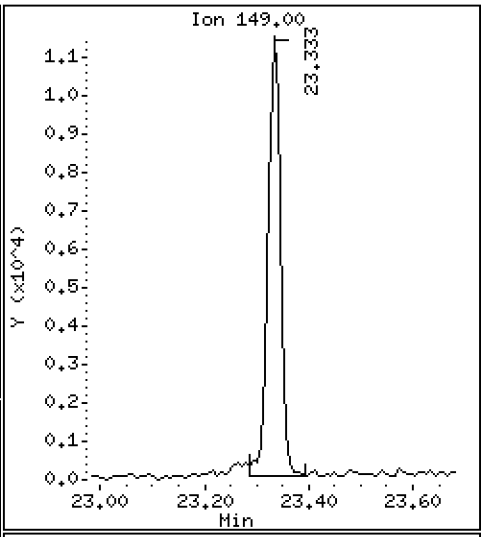
Column phase: ZB-5msi

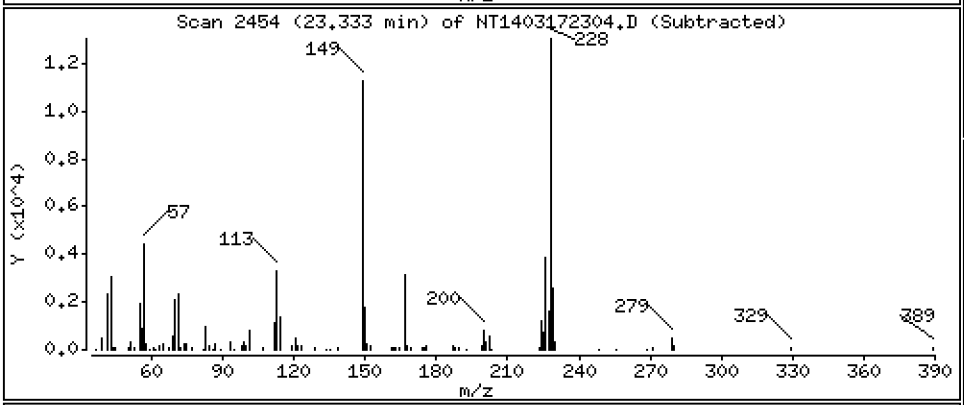
Column diameter: 0.25

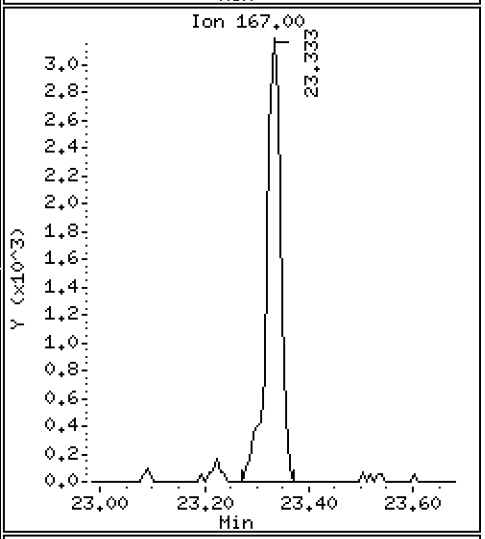
72 bis(2-Ethylhexyl)phthalate

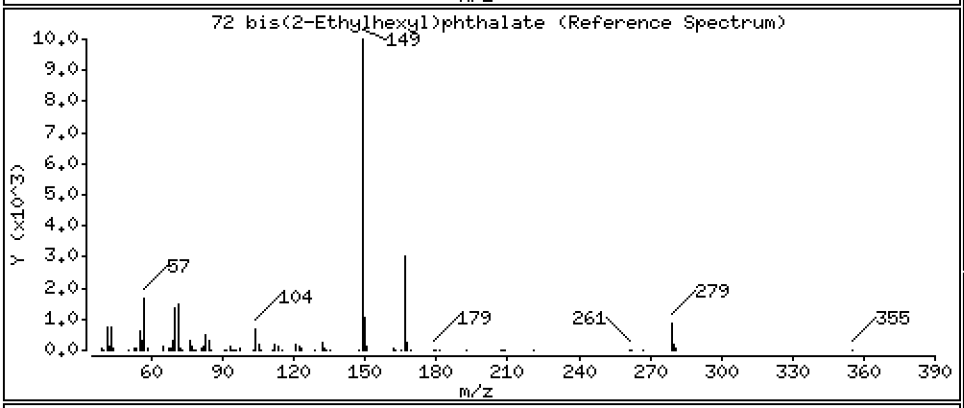
Concentration: 0.1958 ug/mL

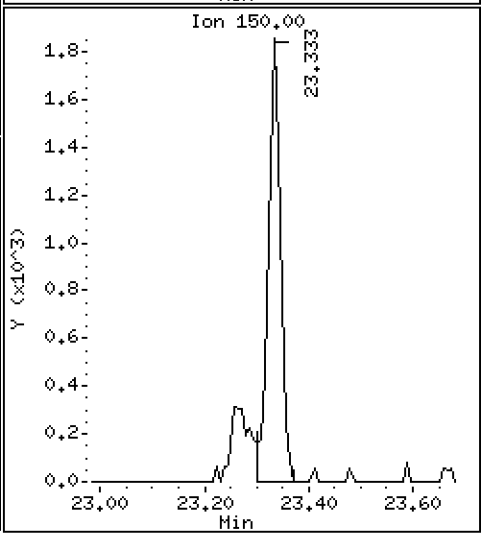


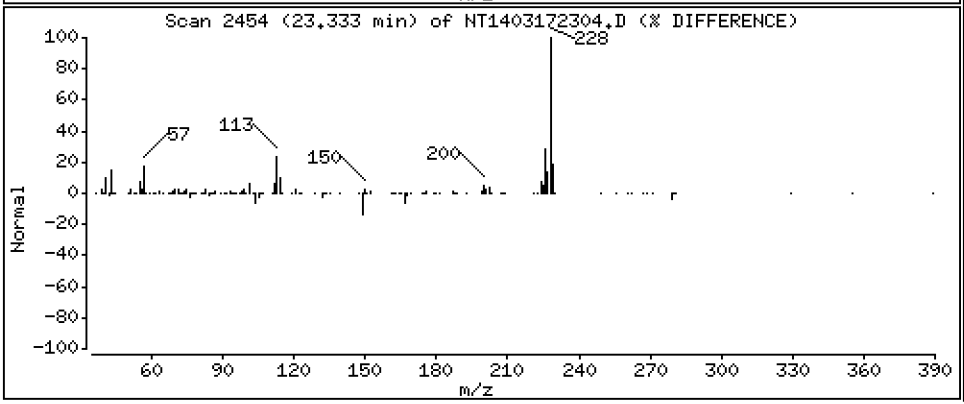












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

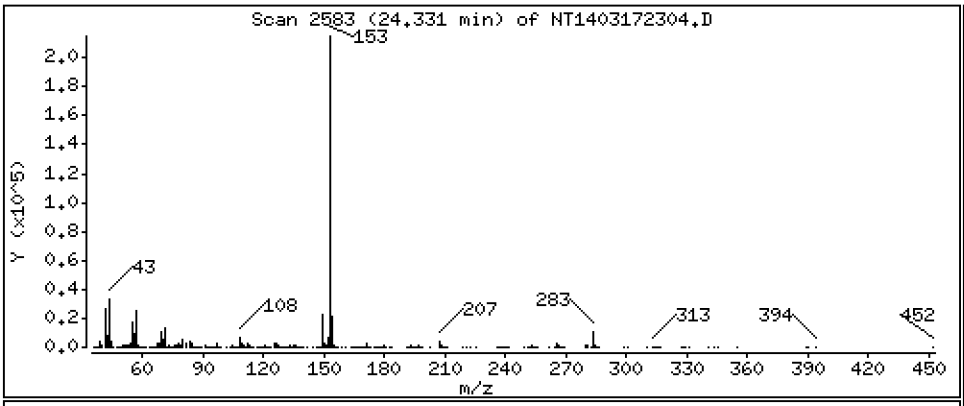
Operator: JGR

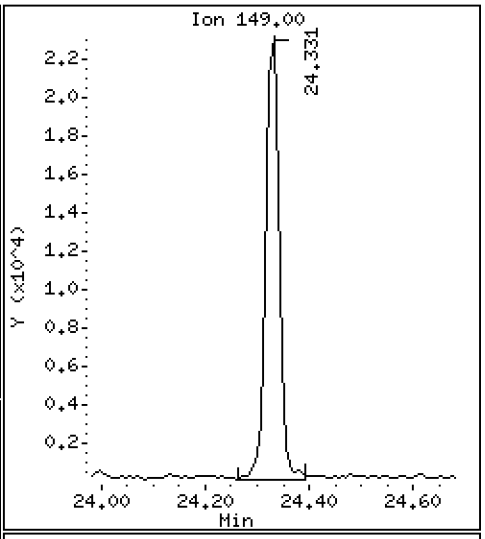
Column phase: ZB-5msi

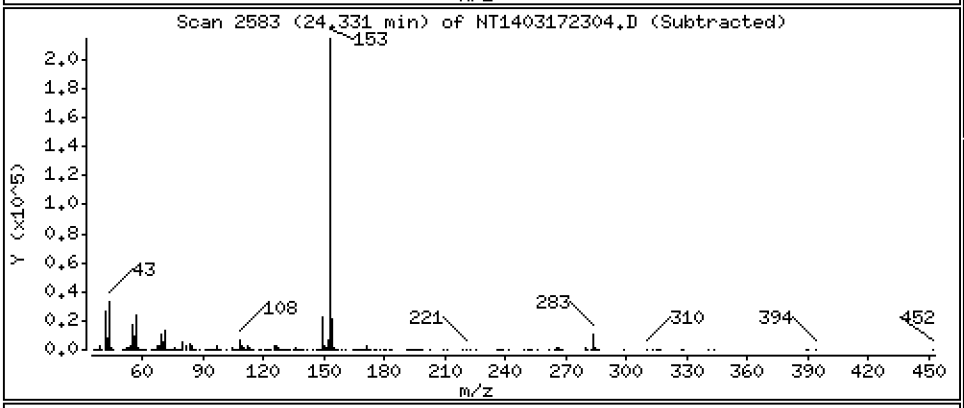
Column diameter: 0.25

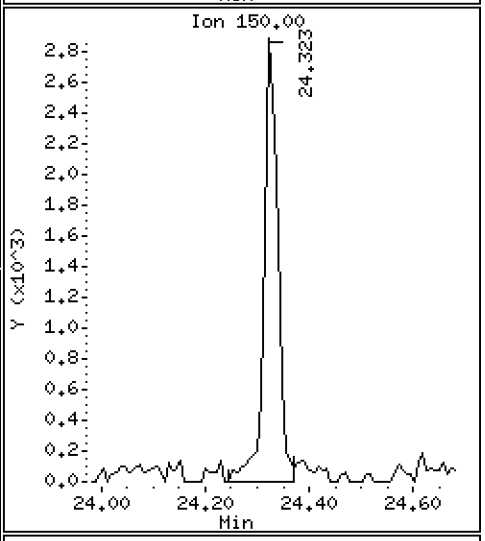
73 Di-n-octylphthalate

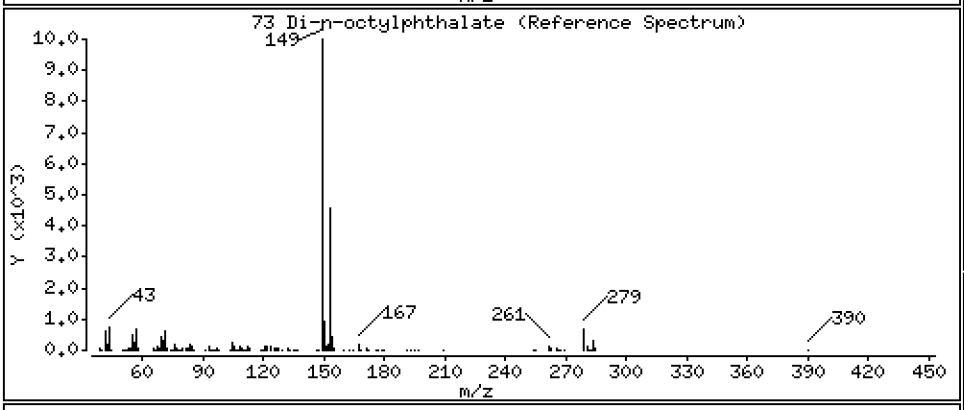
Concentration: 0.2178 ug/mL

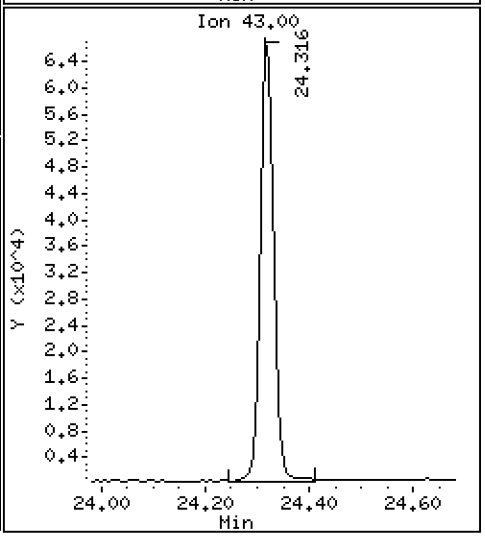


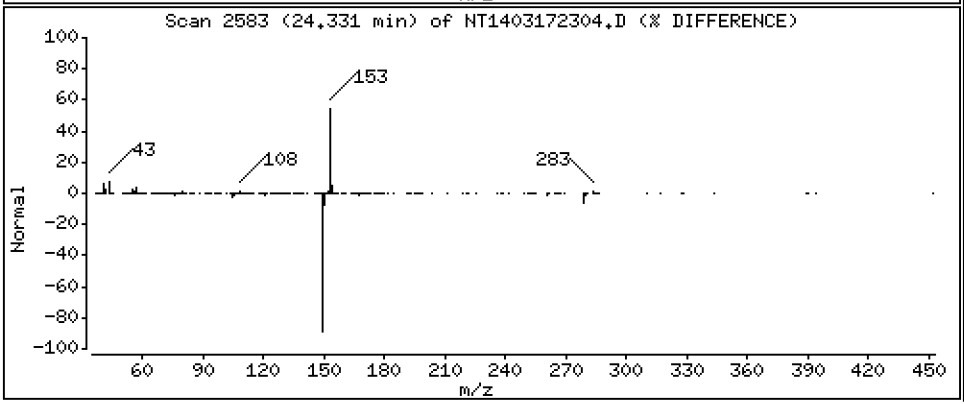












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

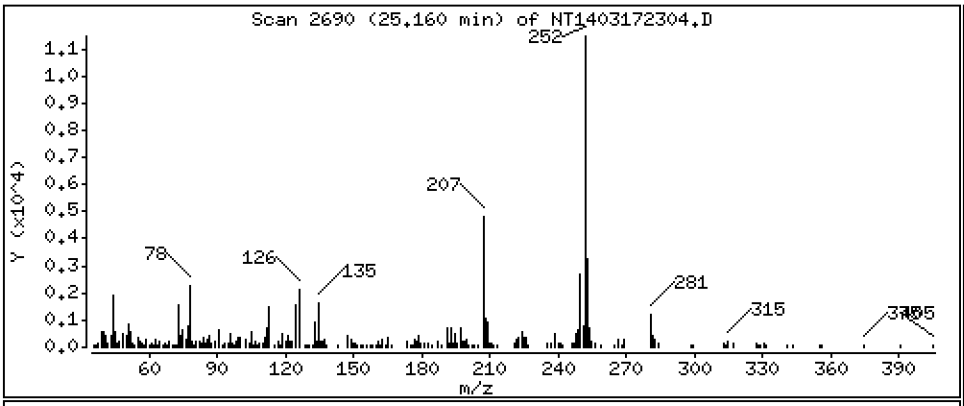
Operator: JGR

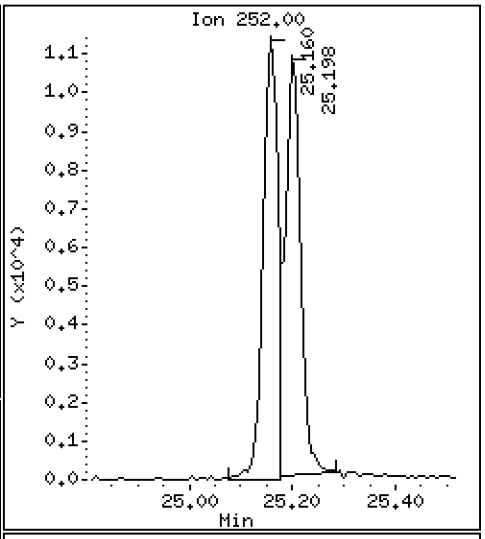
Column phase: ZB-5msi

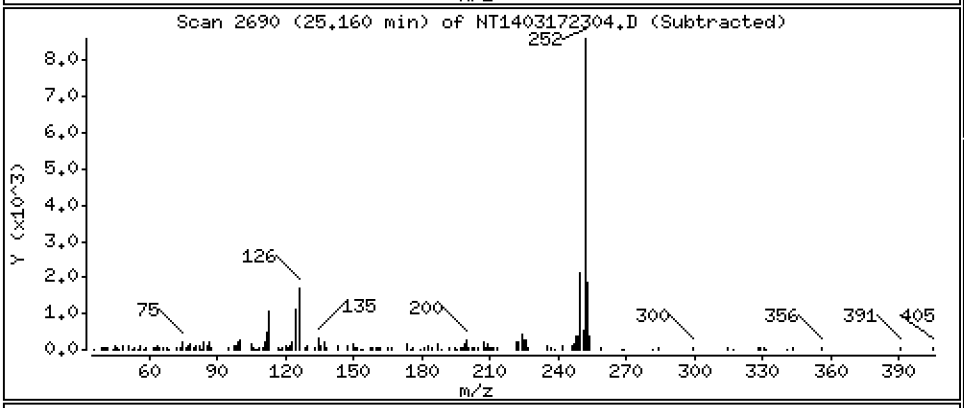
Column diameter: 0.25

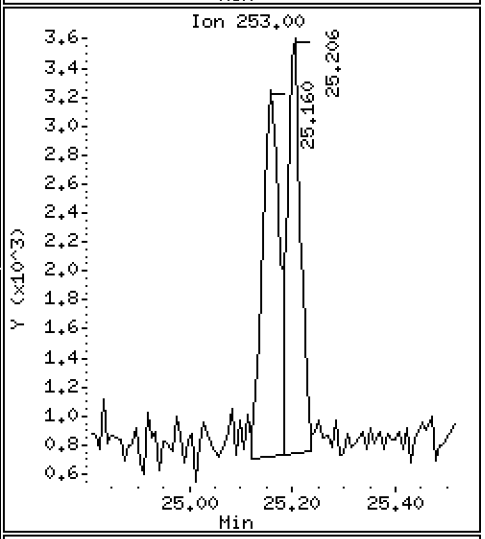
74 Benzo(b)fluoranthene

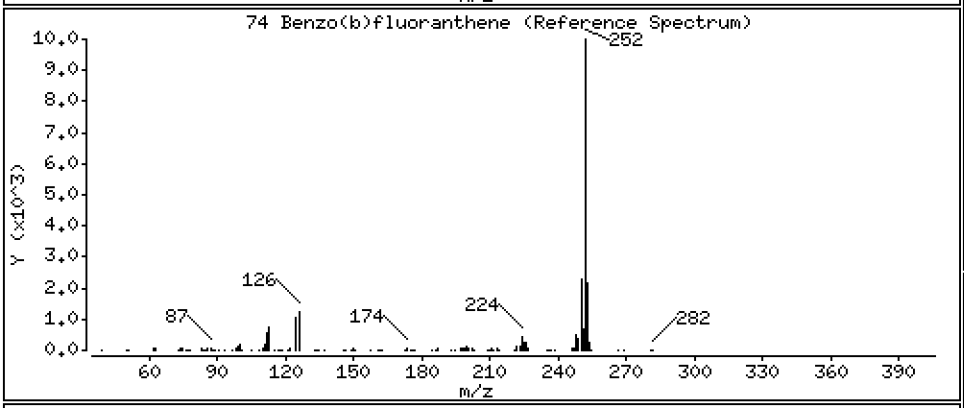
Concentration: 0.1881 ug/mL

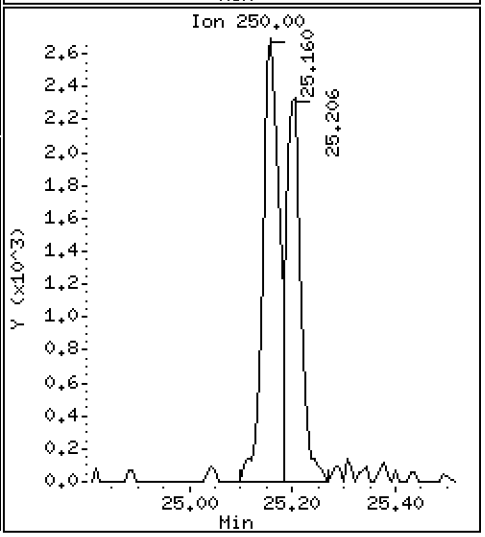


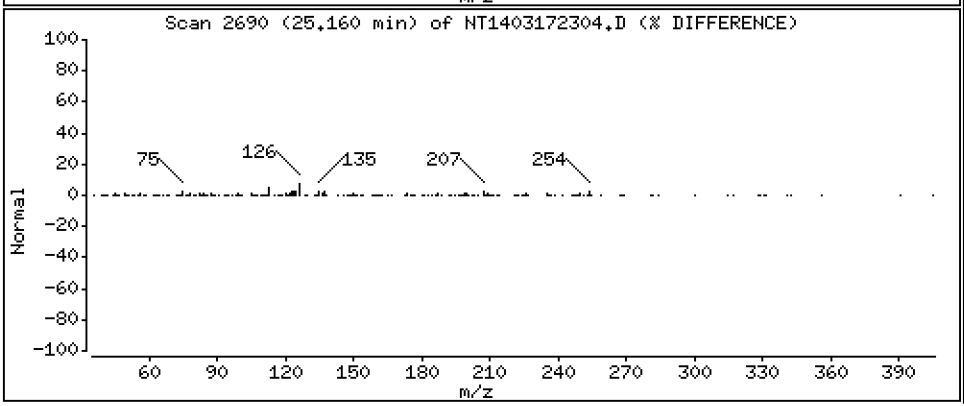












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

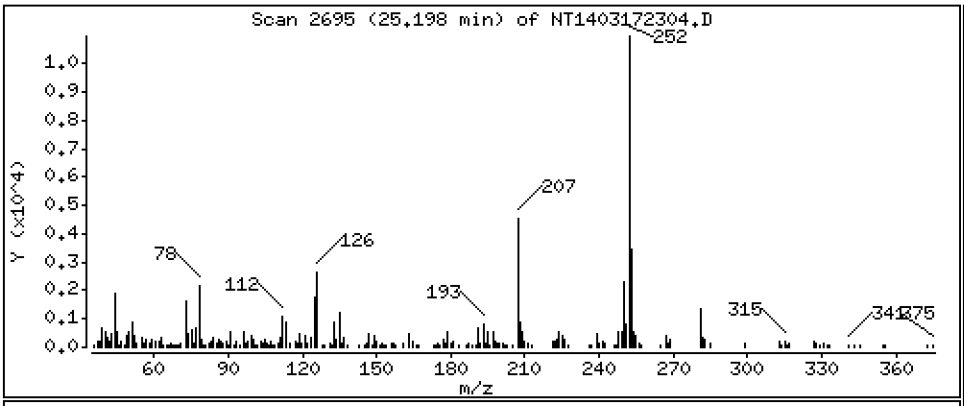
Operator: JGR

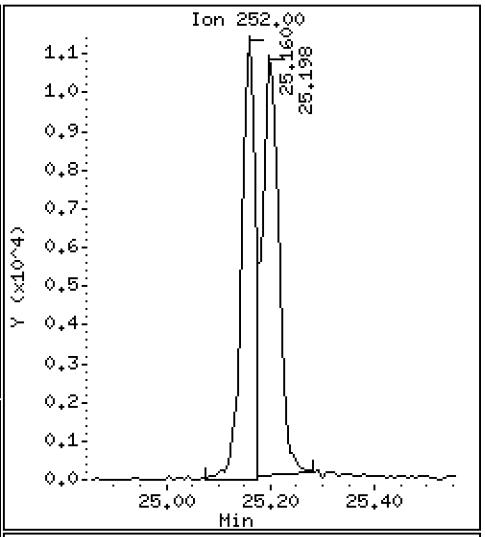
Column phase: ZB-5msi

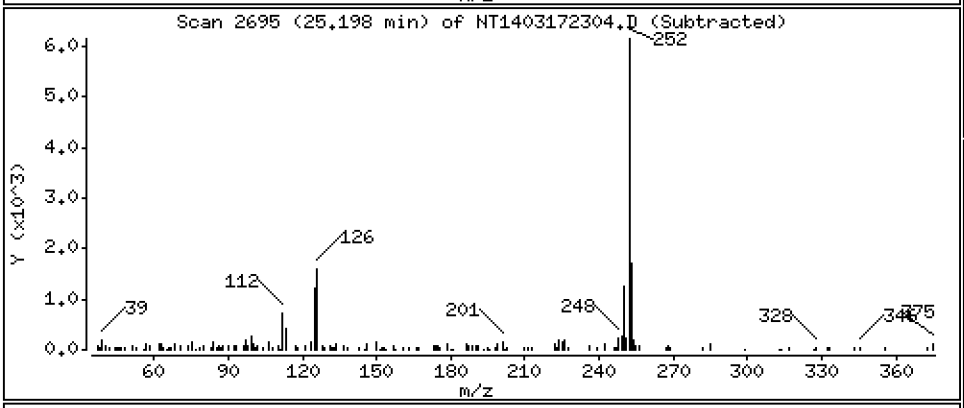
Column diameter: 0.25

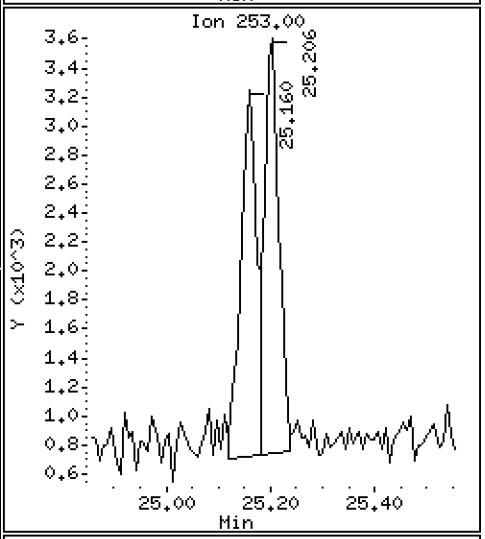
75 Benzo(k)fluoranthene

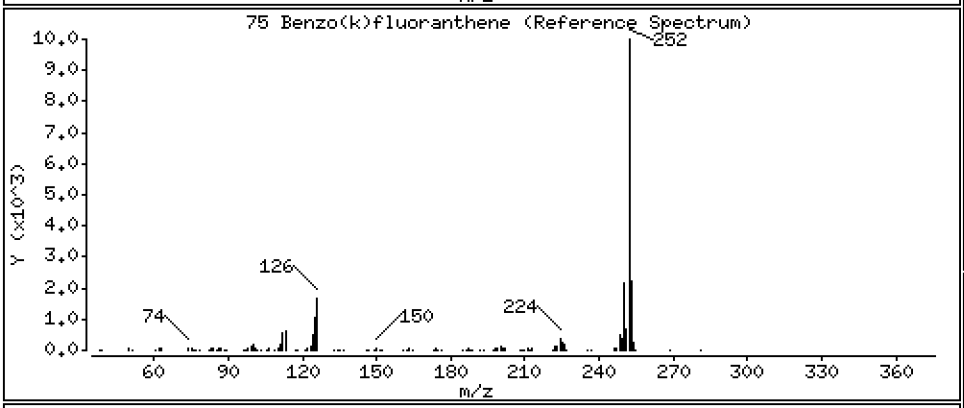
Concentration: 0.2144 ug/mL

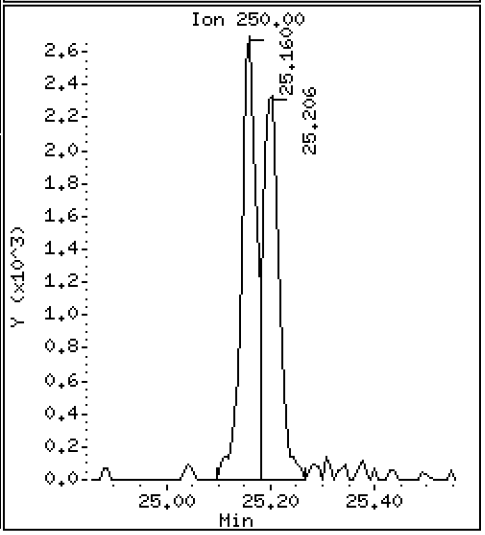


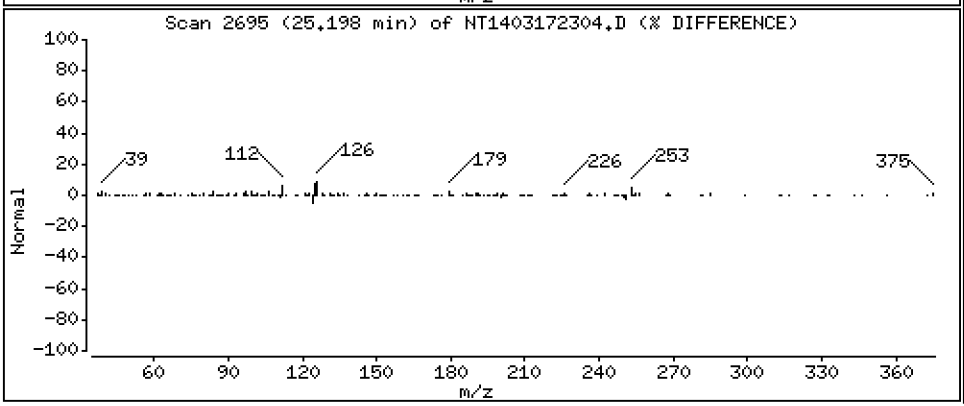












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

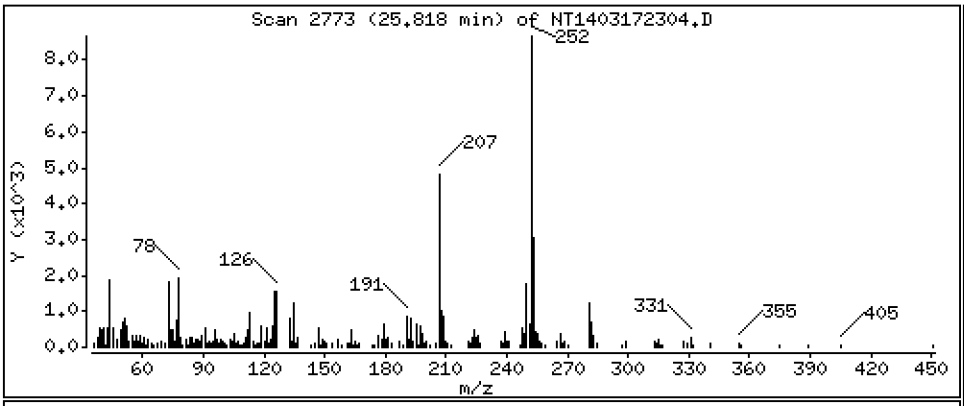
Operator: JGR

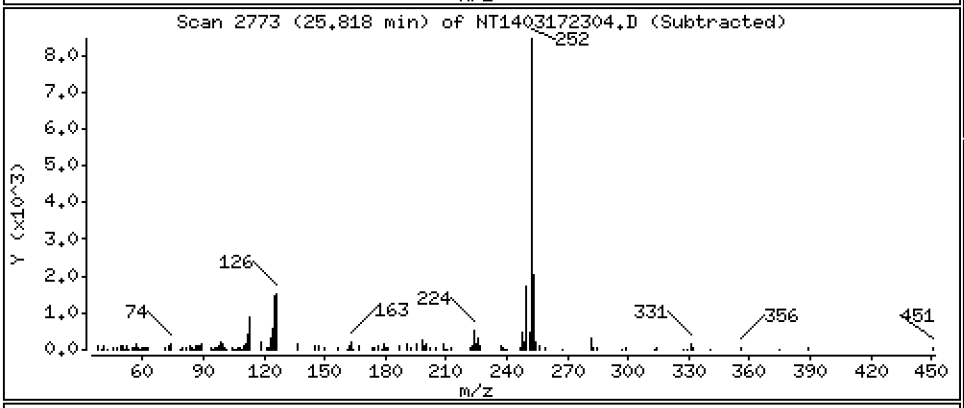
Column phase: ZB-5msi

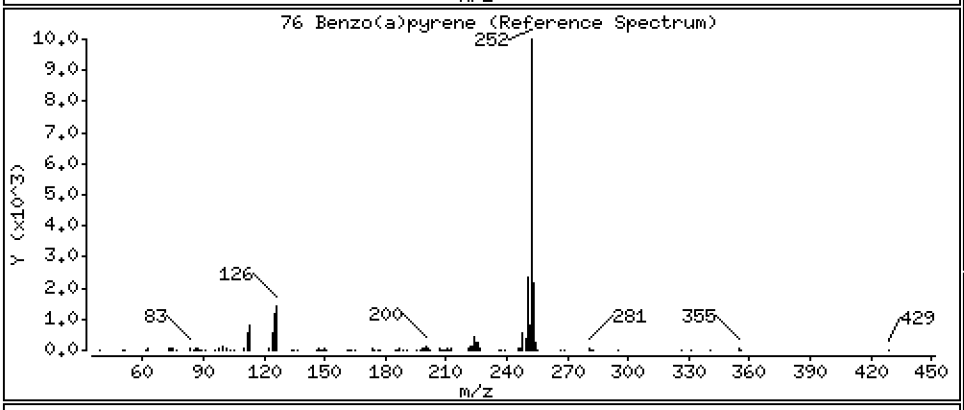
Column diameter: 0.25

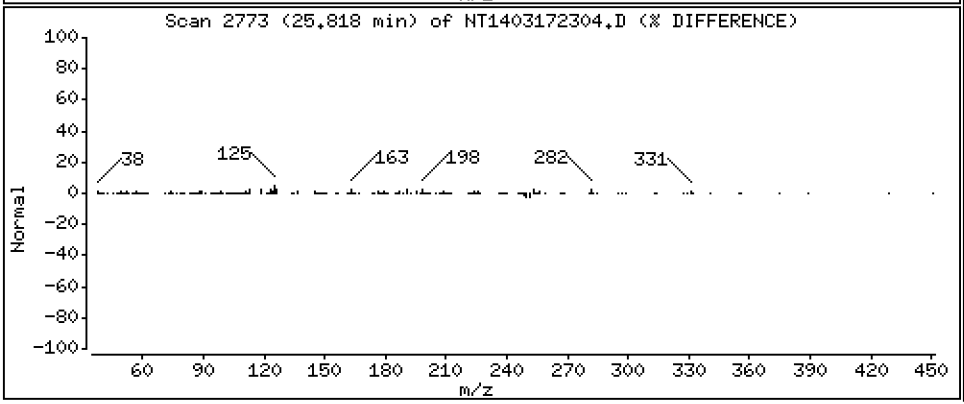
76 Benzo(a)pyrene

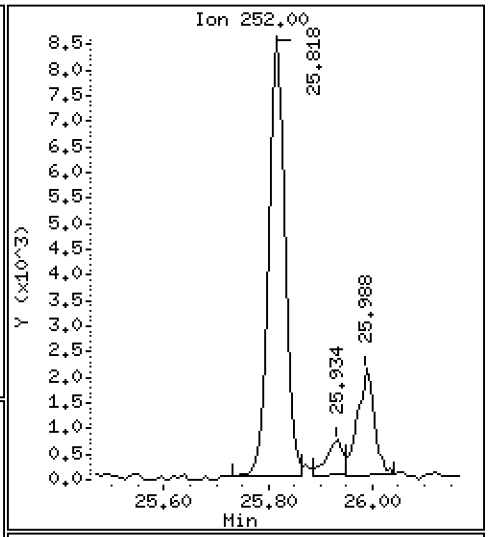
Concentration: 0.1803 ug/mL

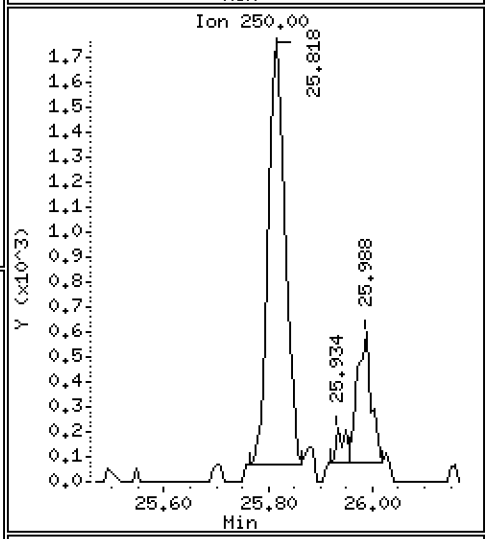


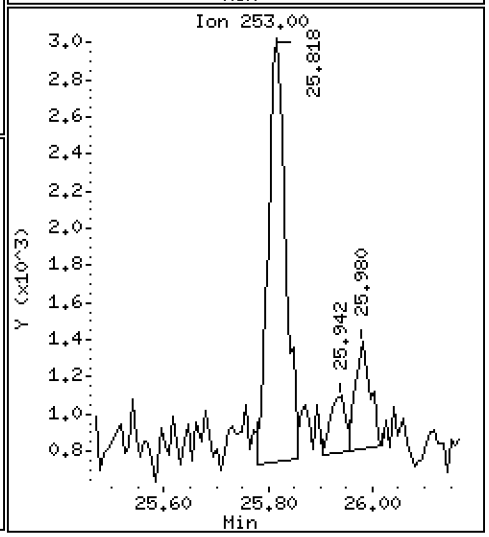












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

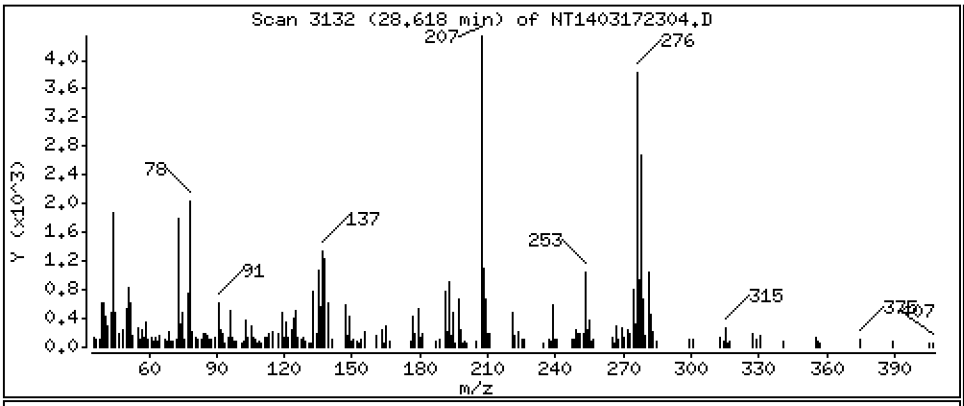
Operator: JGR

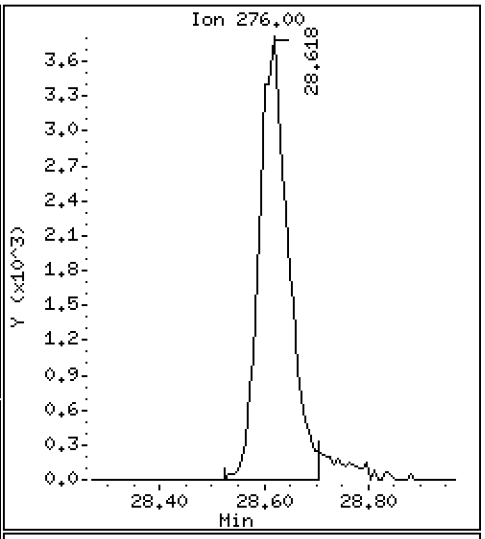
Column phase: ZB-5msi

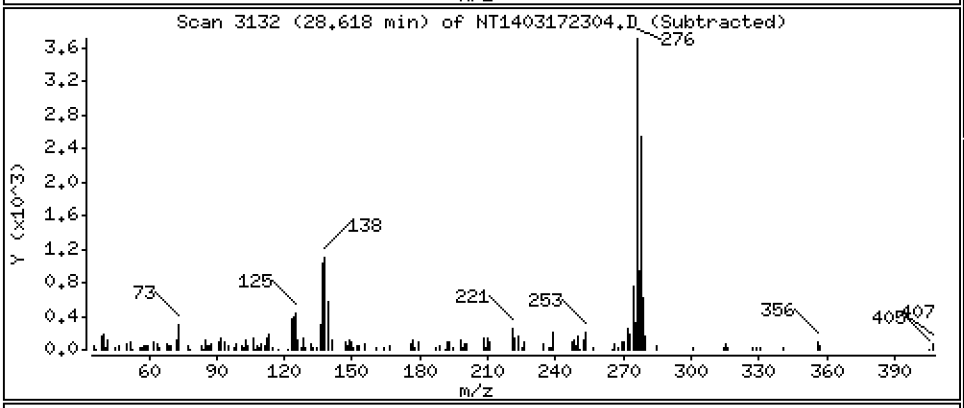
Column diameter: 0.25

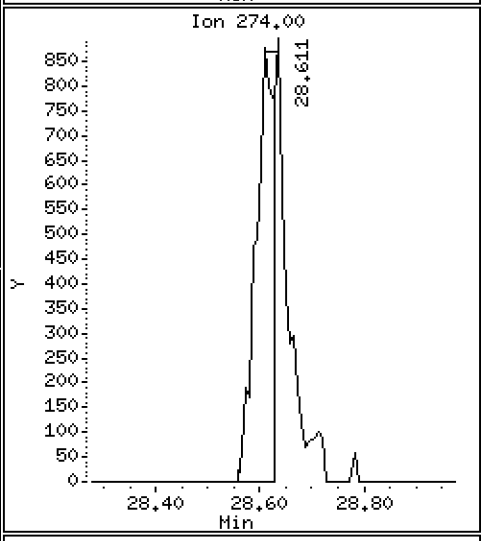
78 Indeno(1,2,3-cd)pyrene

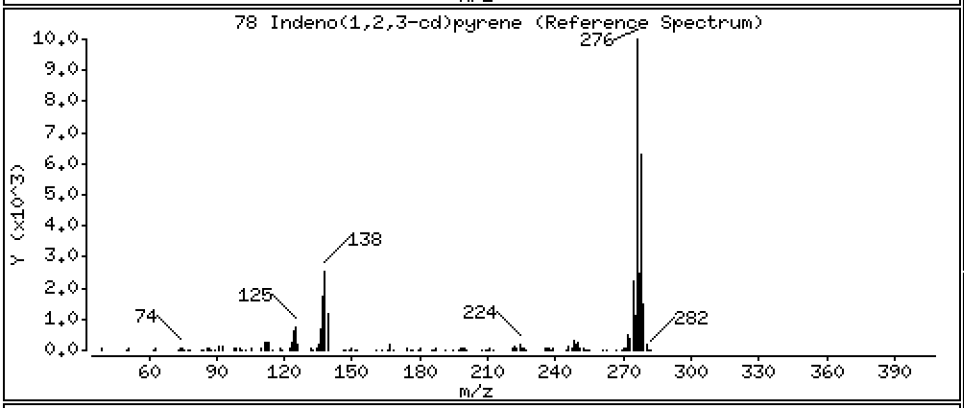
Concentration: 0.1366 ug/mL

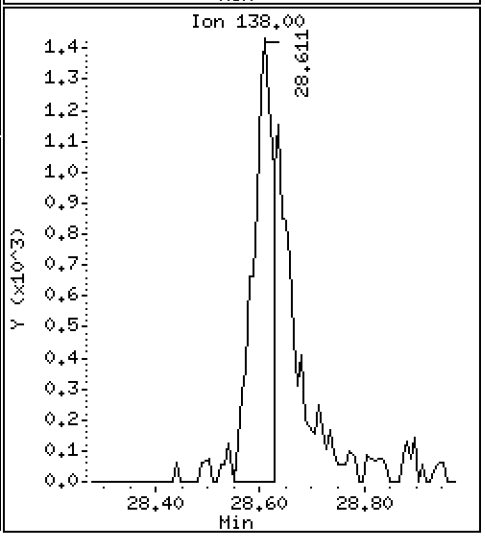


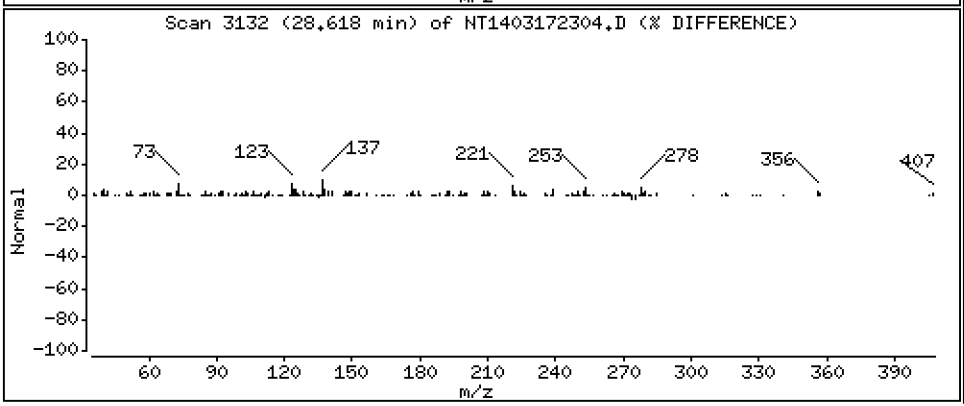












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

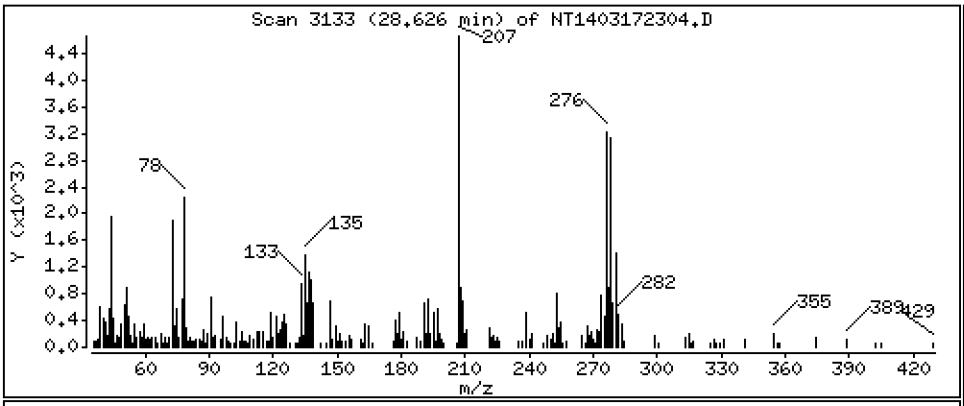
Operator: JGR

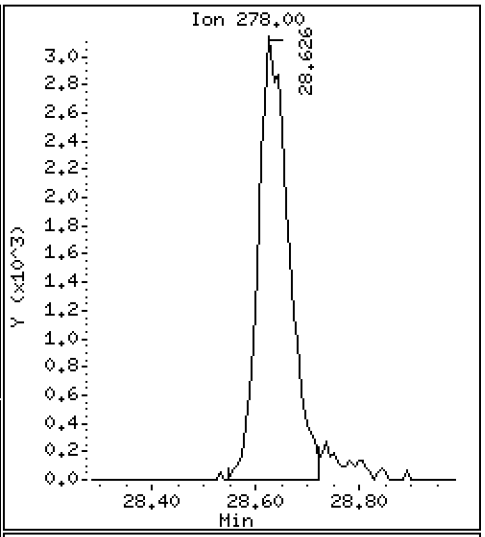
Column phase: ZB-5msi

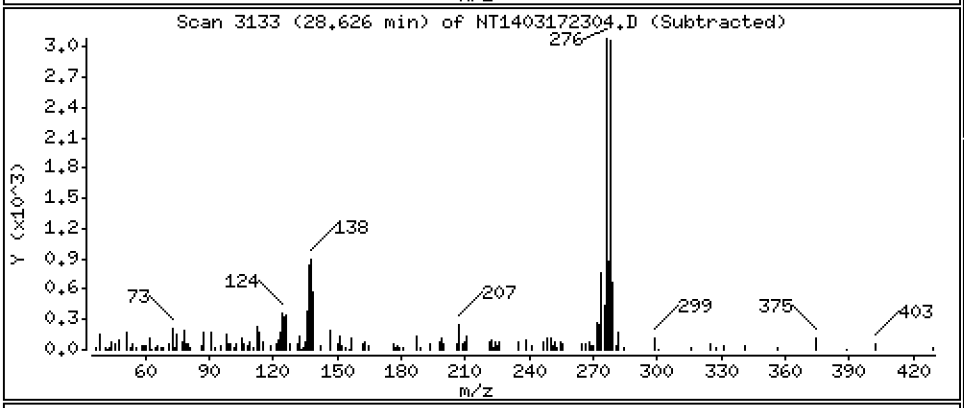
Column diameter: 0.25

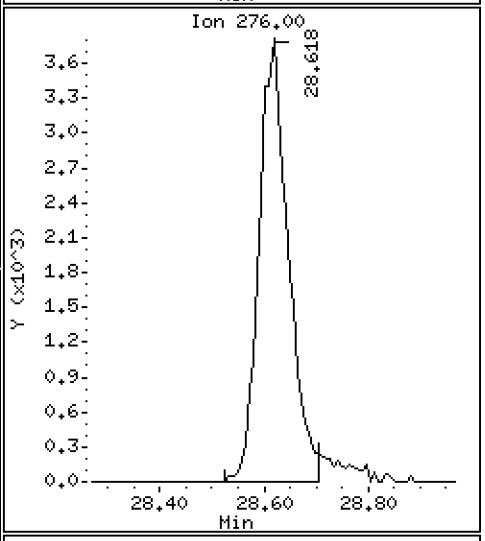
79 Dibenzo(a,h)anthracene

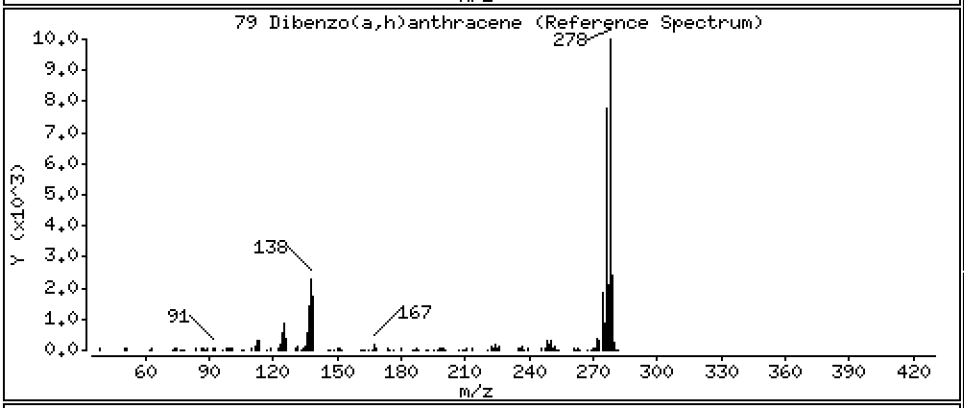
Concentration: 0.1407 ug/mL

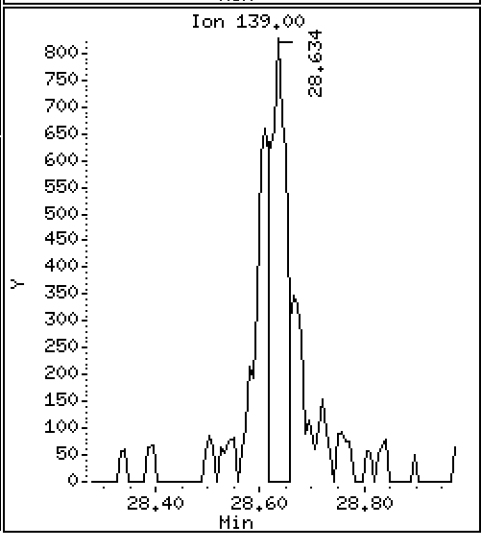


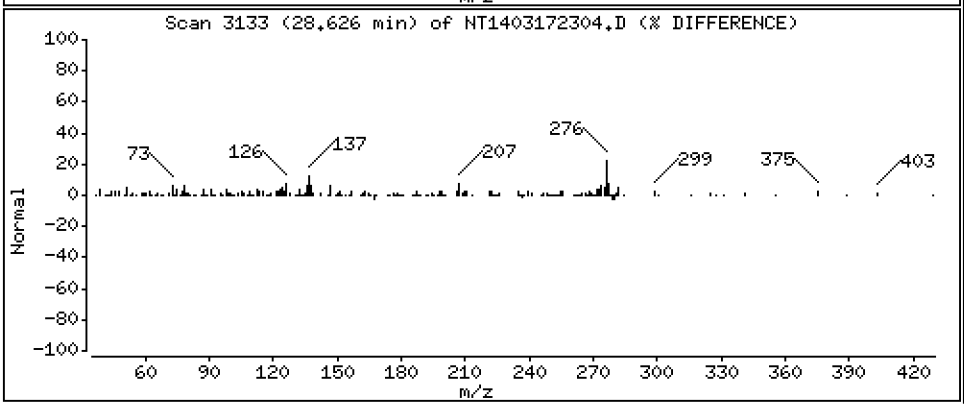












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

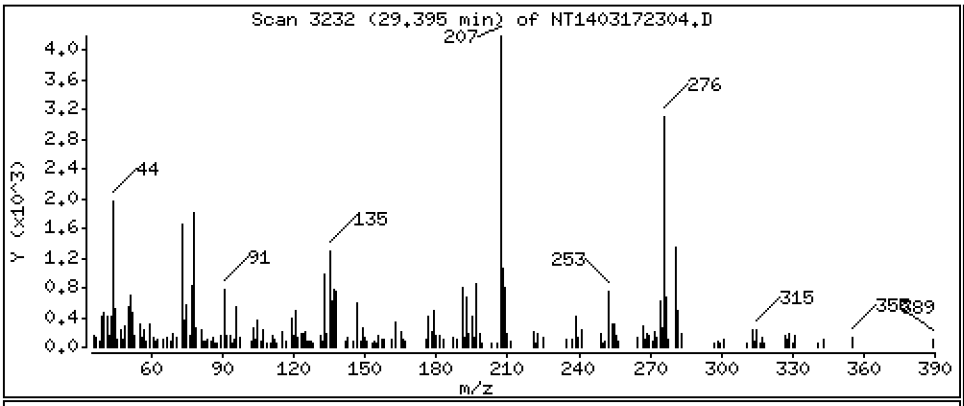
Operator: JGR

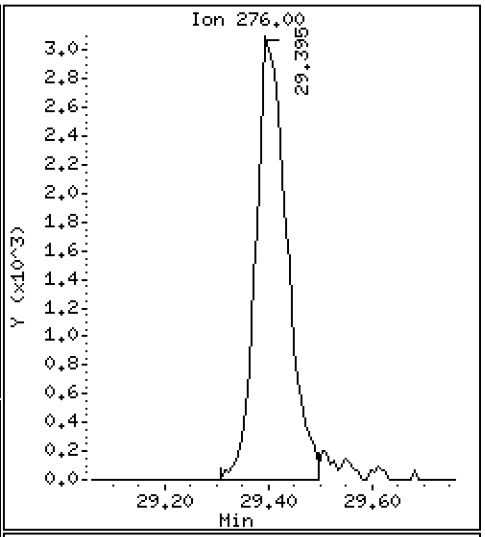
Column phase: ZB-5msi

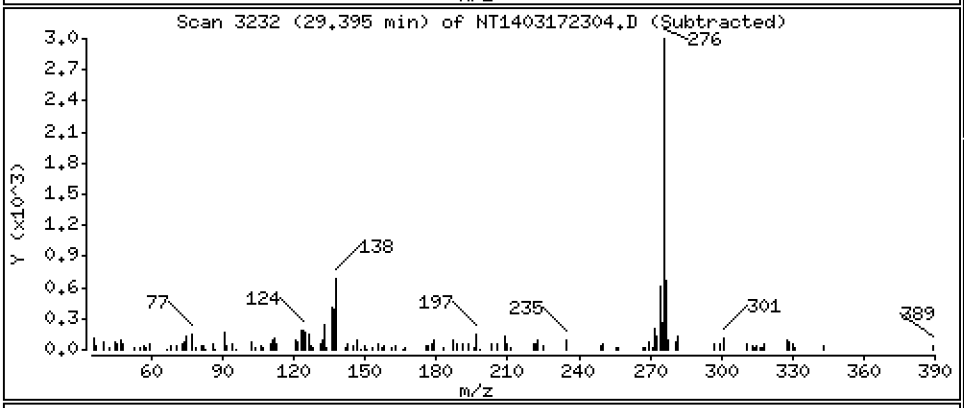
Column diameter: 0.25

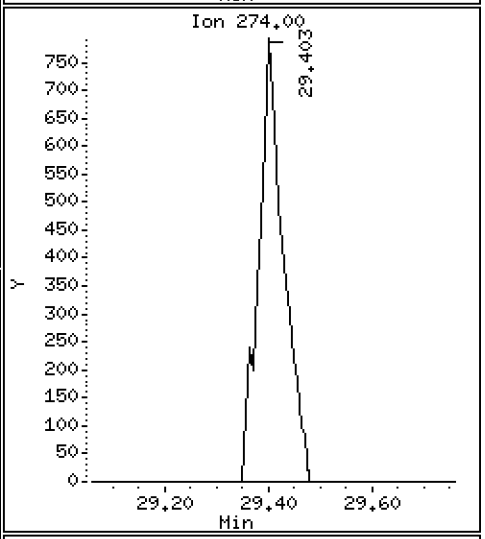
80 Benzo(g,h,i)perylene

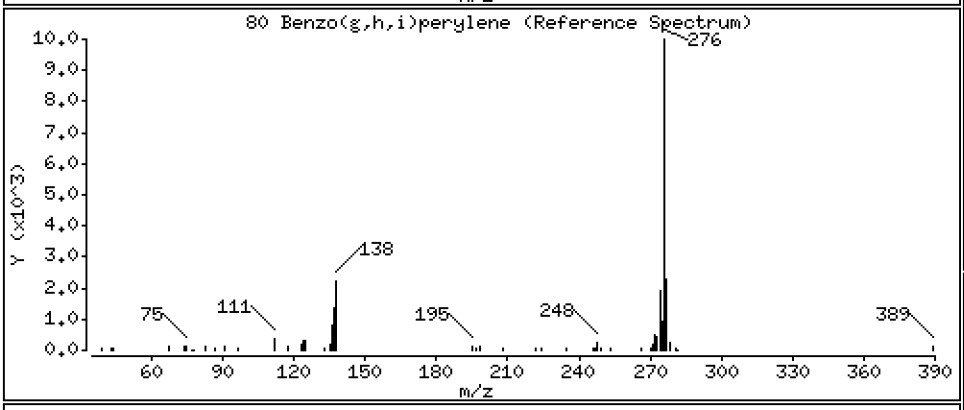
Concentration: 0.1438 ug/mL

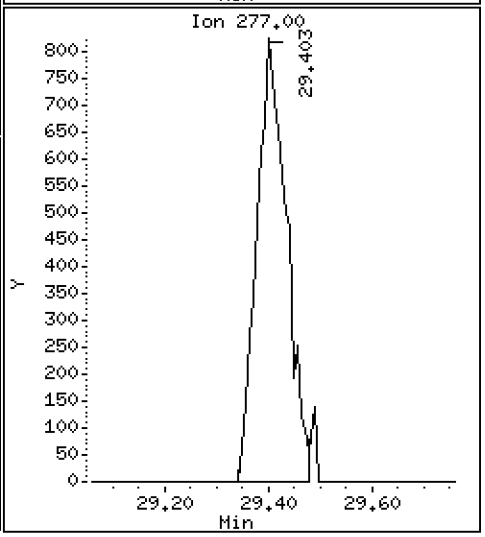


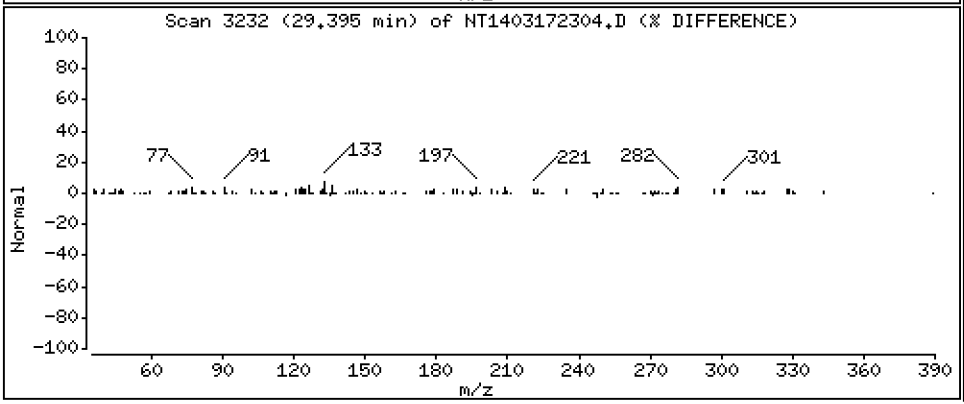












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

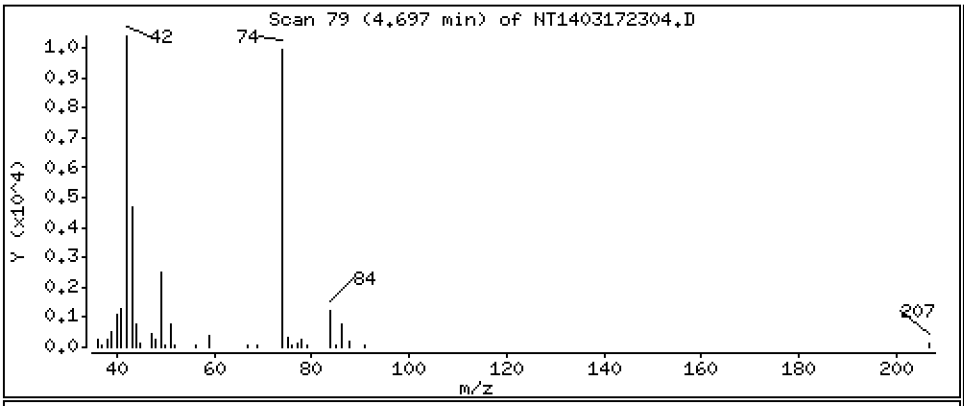
Operator: JGR

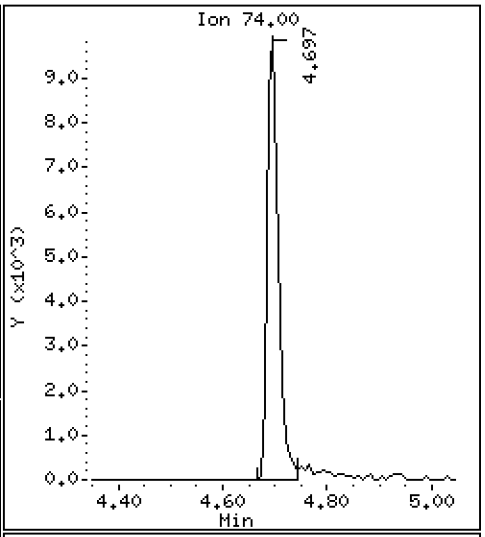
Column phase: ZB-5msi

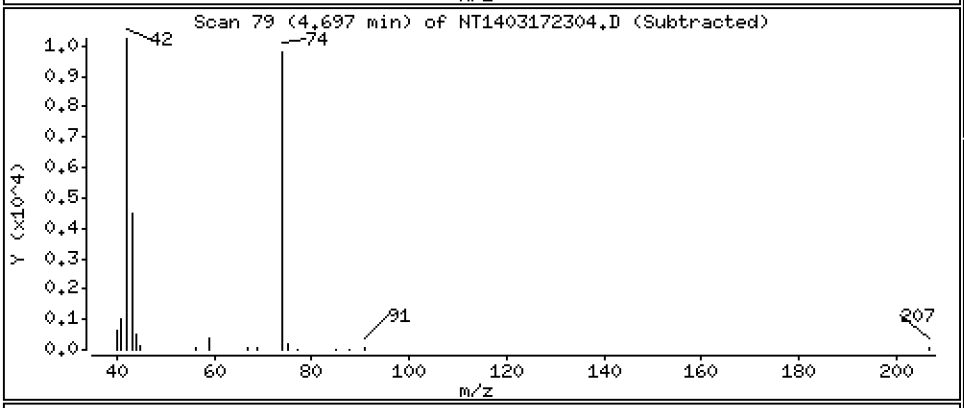
Column diameter: 0.25

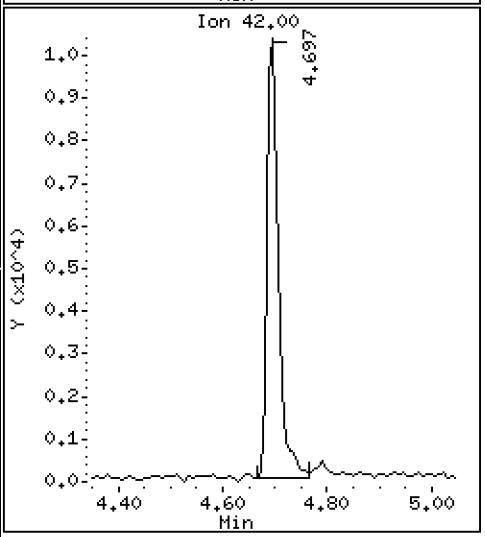
90 N-Nitrosodimethylamine

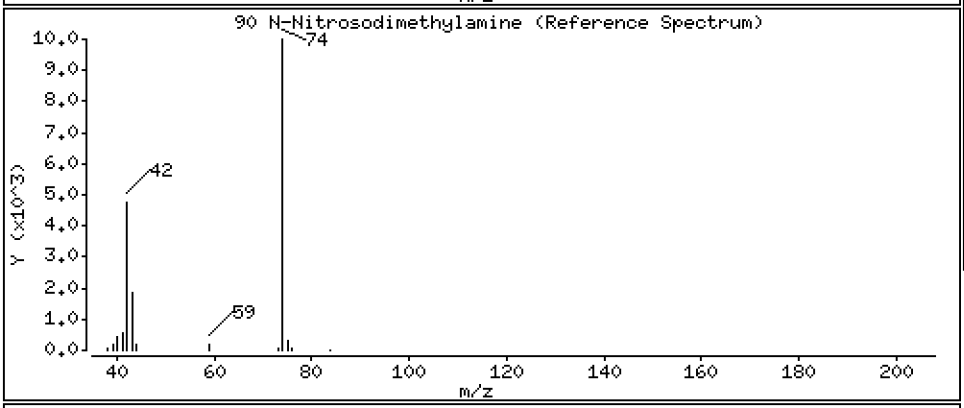
Concentration: 0.2949 ug/mL

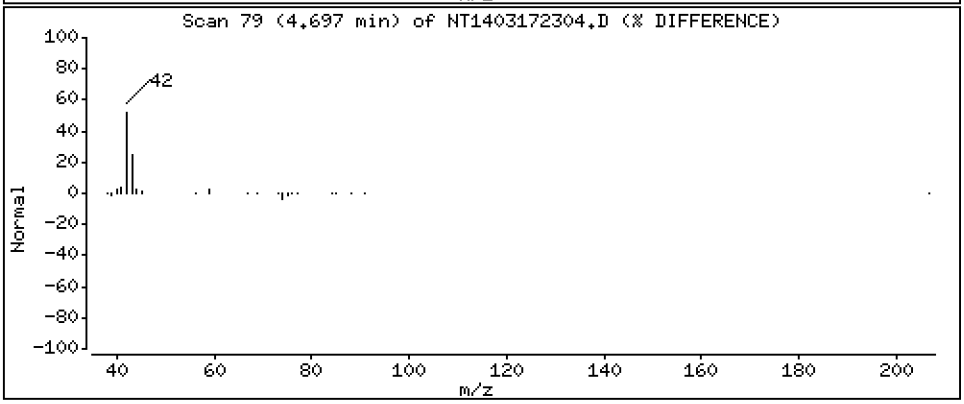












Date : 17-MAR-2023 16:16

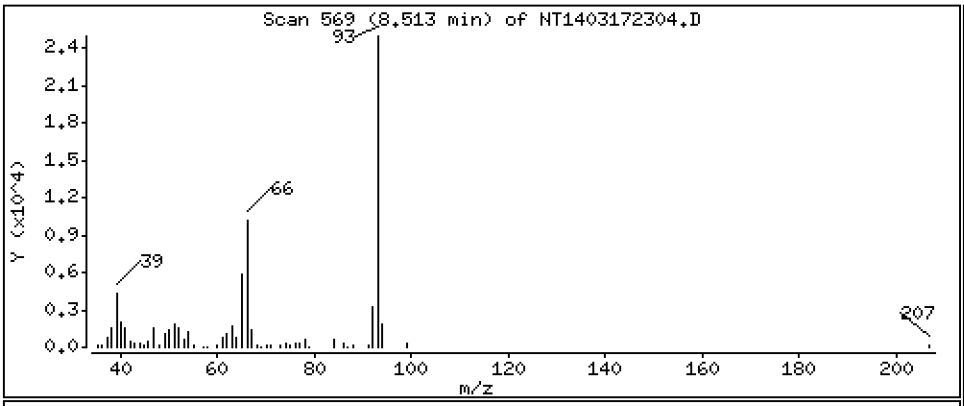
Client ID: Instrument: nt14.i

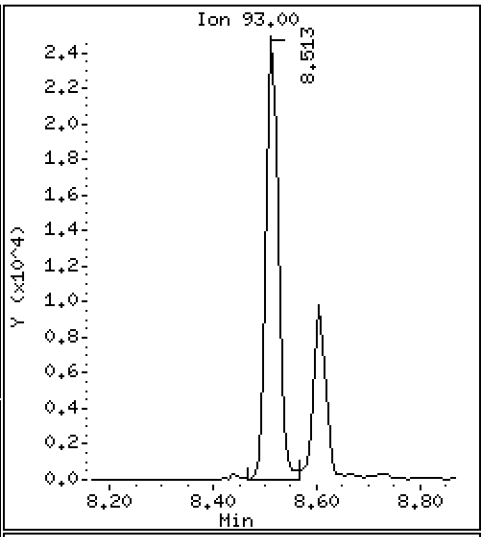
Sample Info: SLC0335-LCV1

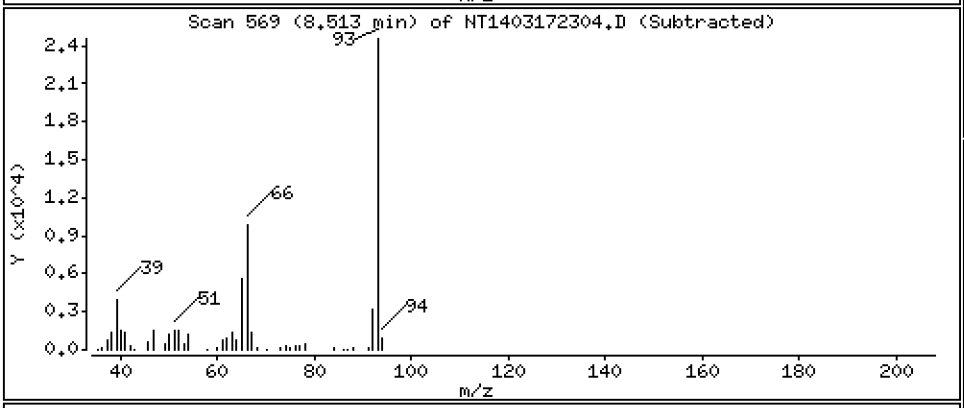
Operator: JGR

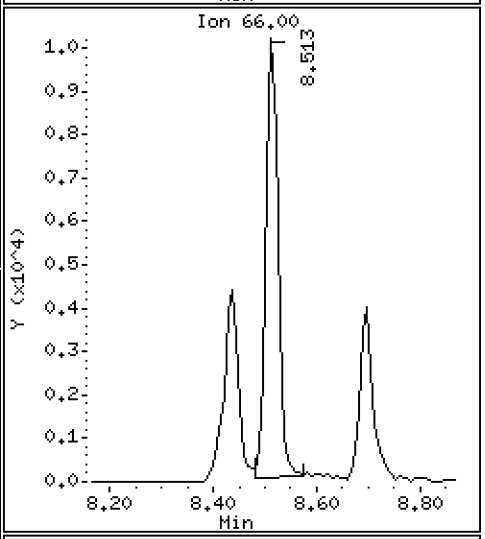
Column phase: ZB-5msi Column diameter: 0.25

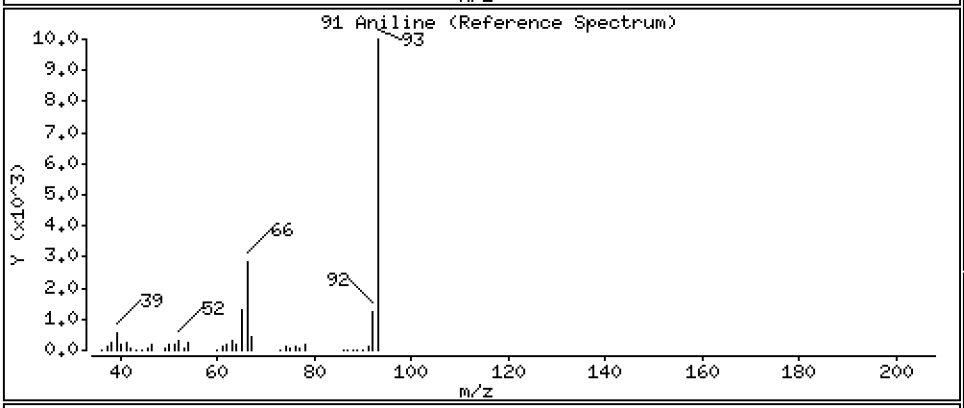
91 Aniline Concentration: 0.3769 ug/mL

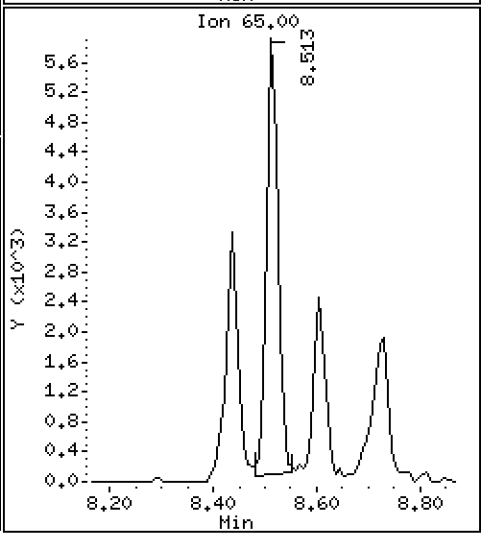


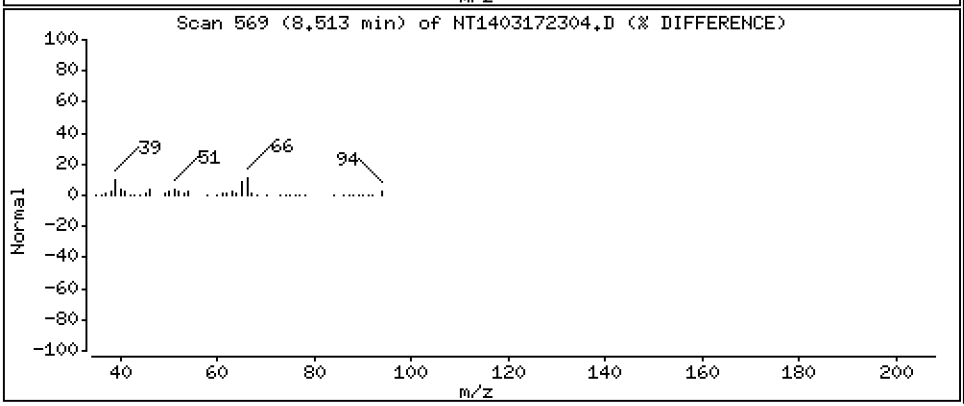












Date : 17-MAR-2023 16:16

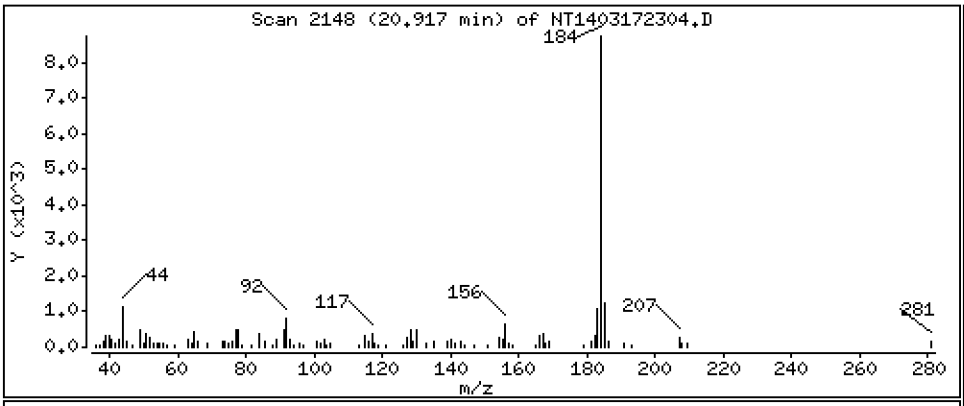
Client ID: Instrument: nt14.i

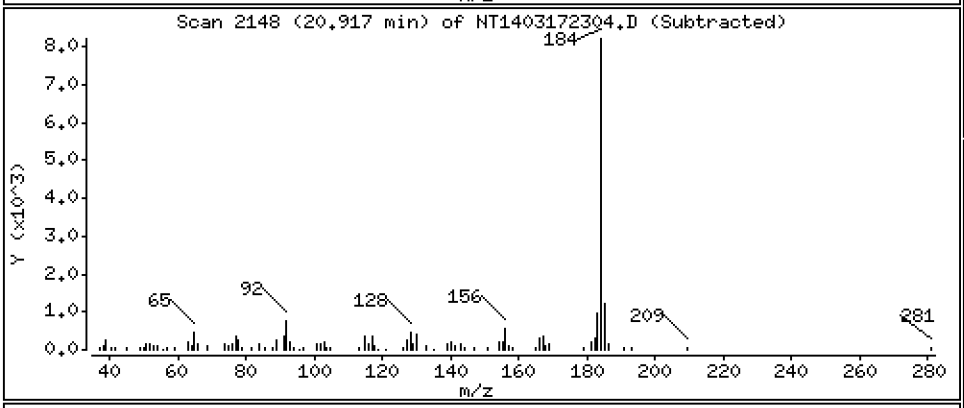
Sample Info: SLC0335-LCV1

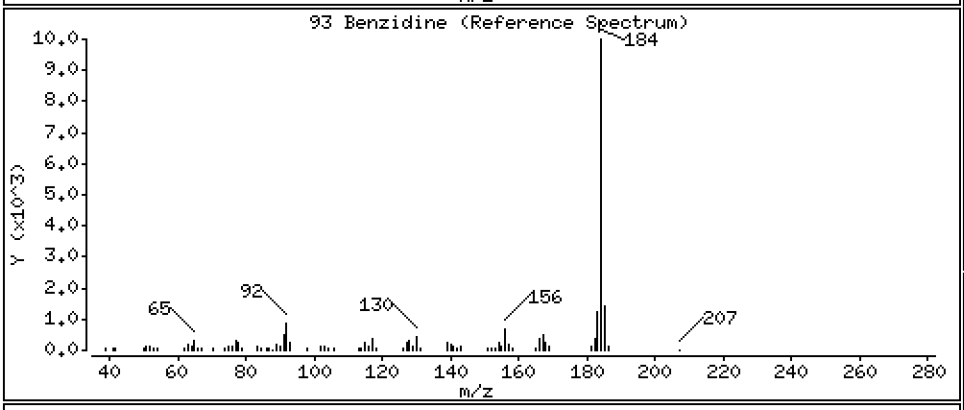
Operator: JGR

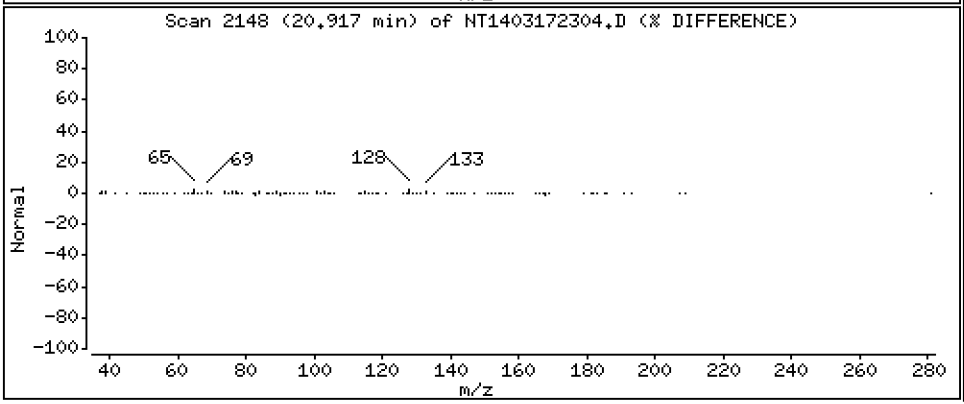
Column phase: ZB-5msi Column diameter: 0.25

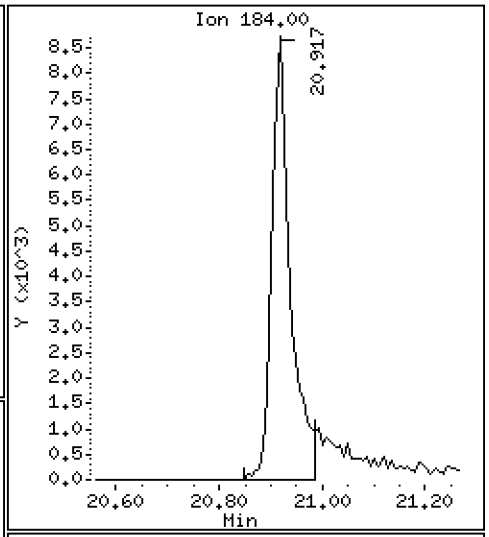
93 Benzidine Concentration: 0.2853 ug/mL

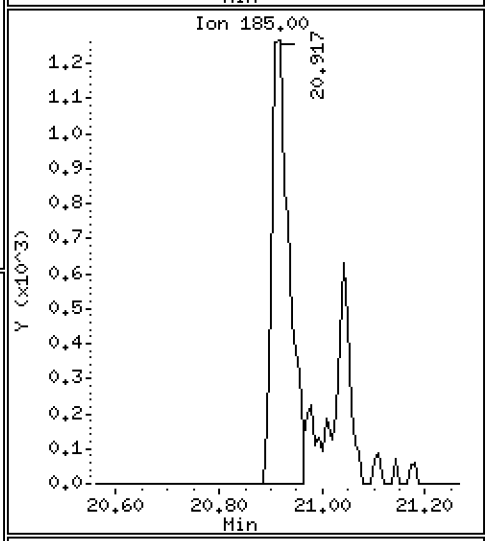


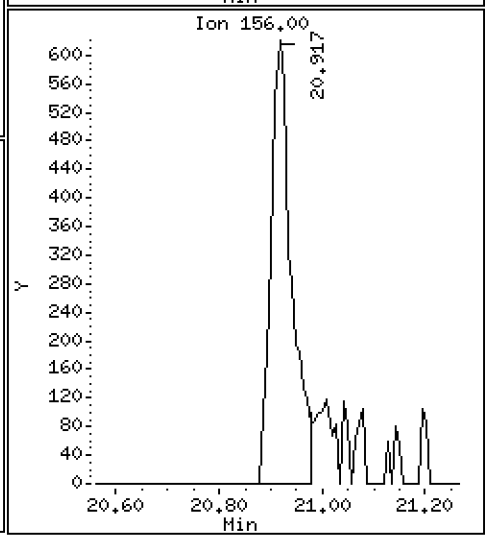












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

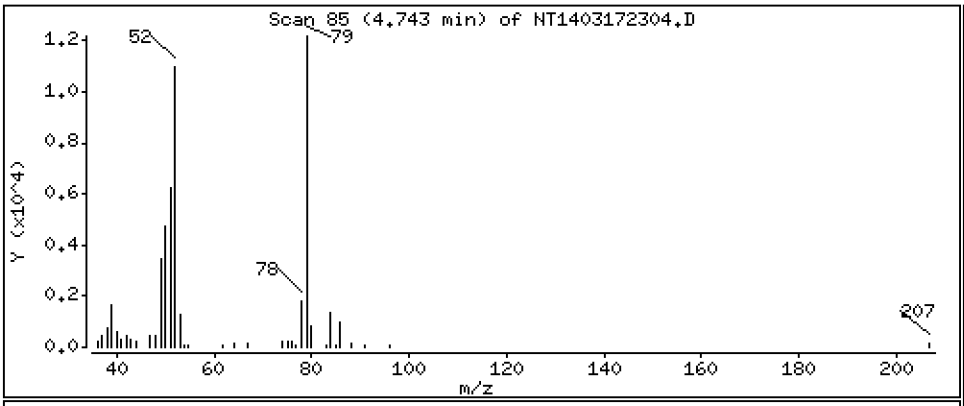
Operator: JGR

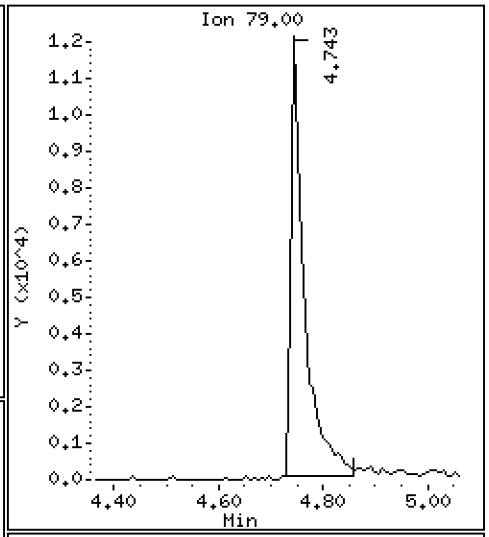
Column phase: ZB-5msi

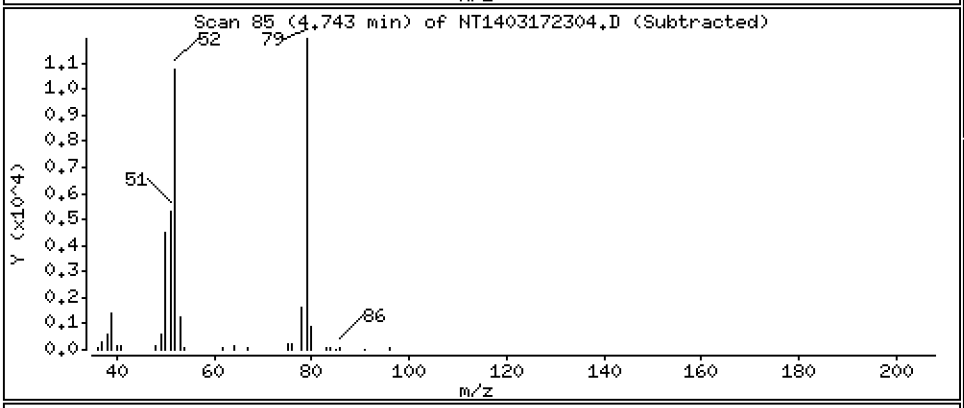
Column diameter: 0.25

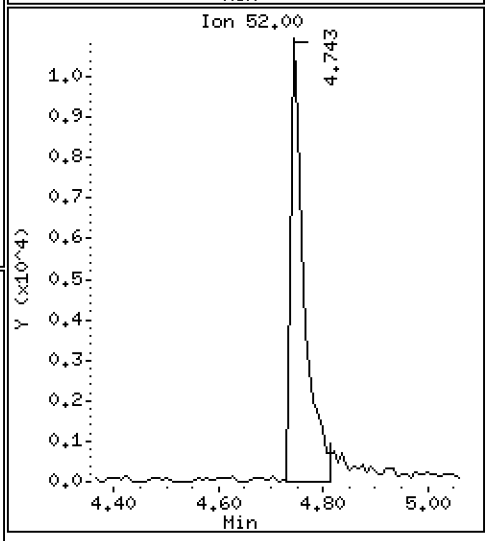
103 Pyridine

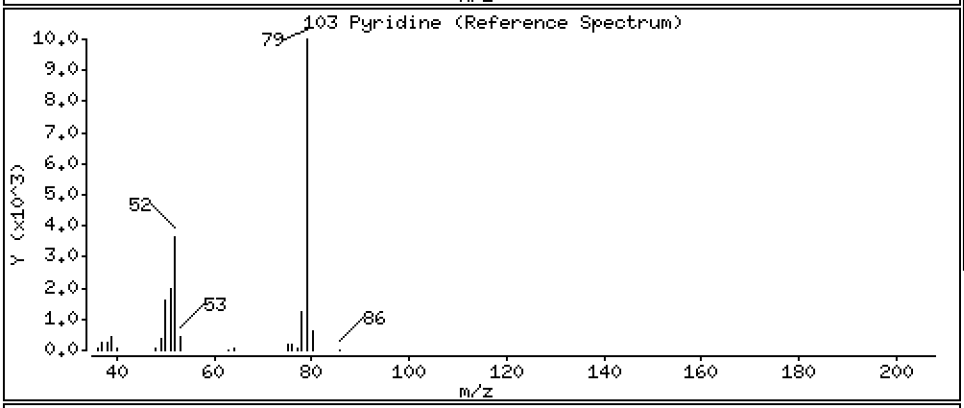
Concentration: 0.1554 ug/mL

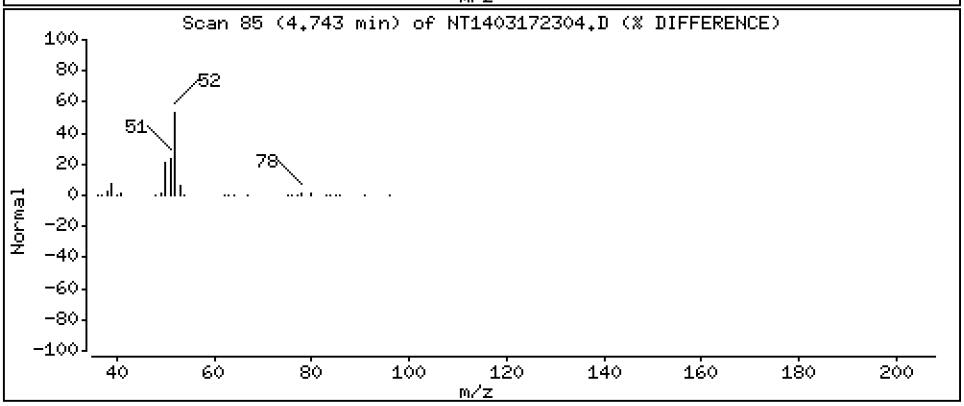












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

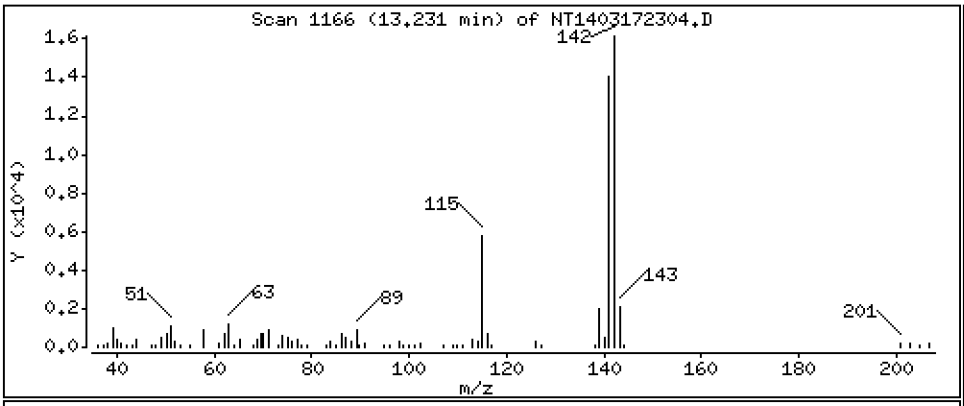
Operator: JGR

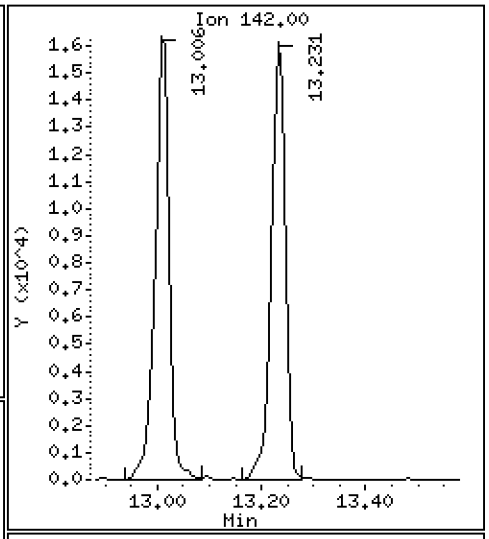
Column phase: ZB-5msi

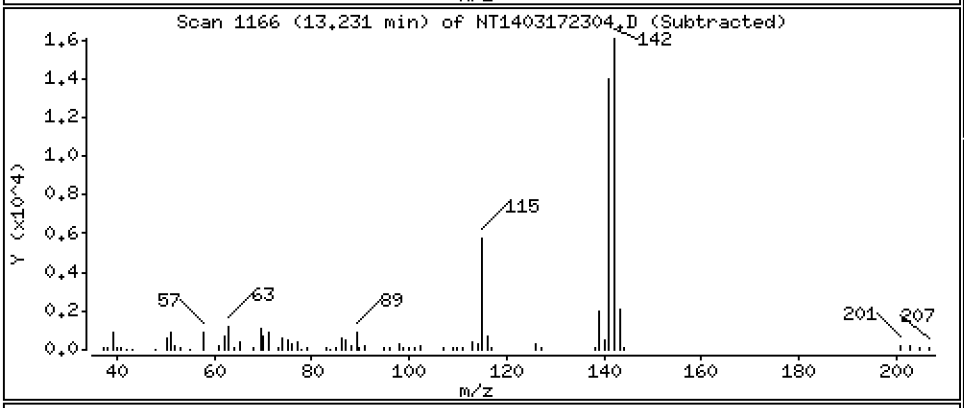
Column diameter: 0.25

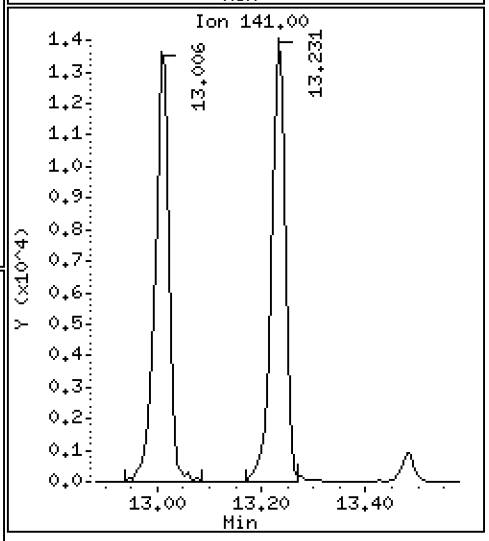
105 1-methylnaphthalene

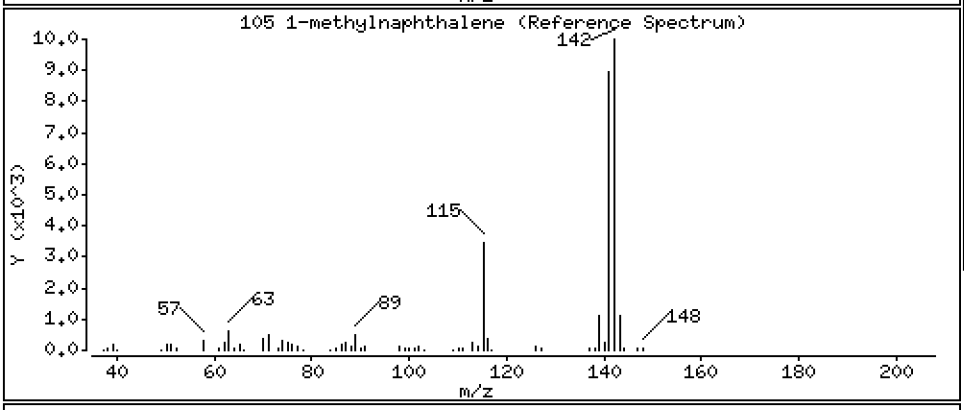
Concentration: 0.2079 ug/mL

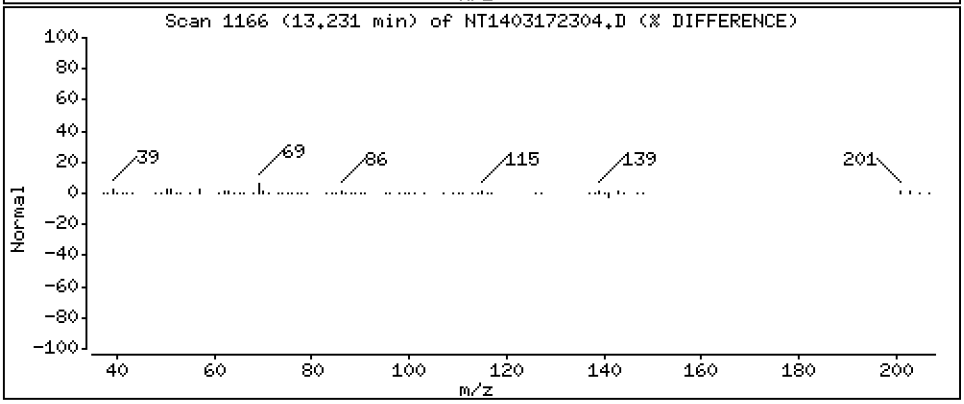












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

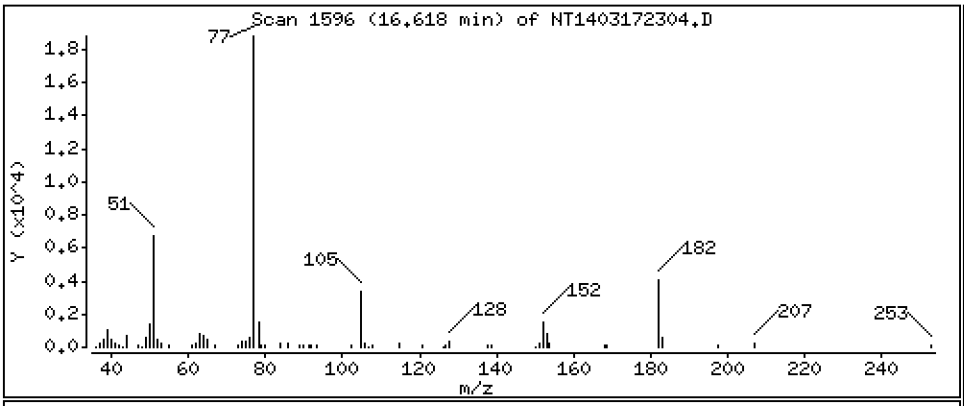
Operator: JGR

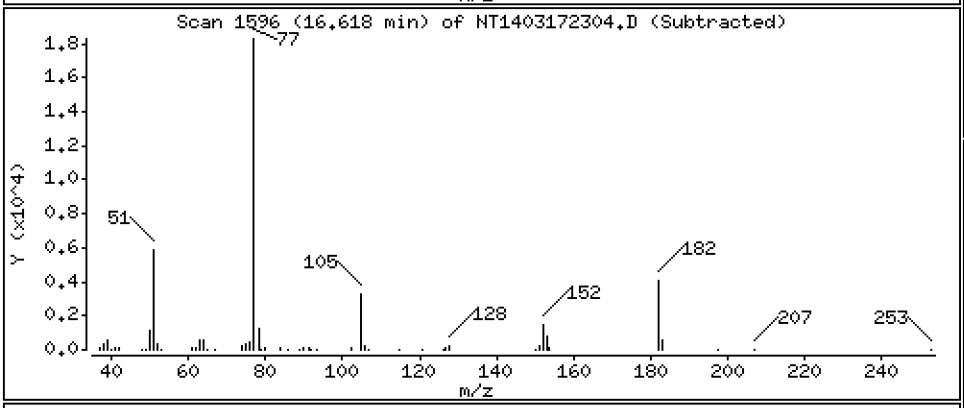
Column phase: ZB-5msi

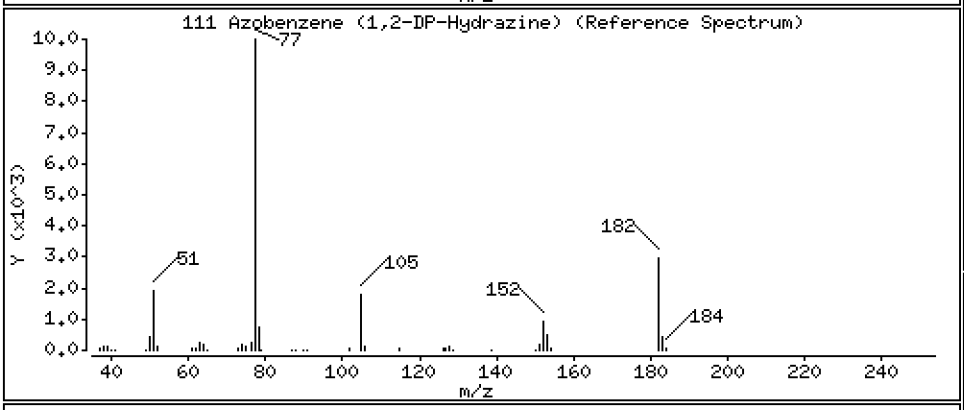
Column diameter: 0.25

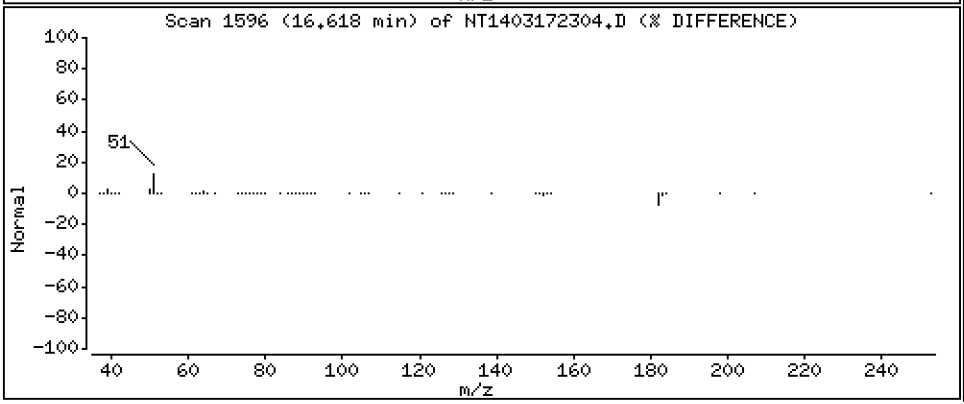
111 Azobenzene (1,2-DP-Hydrazine)

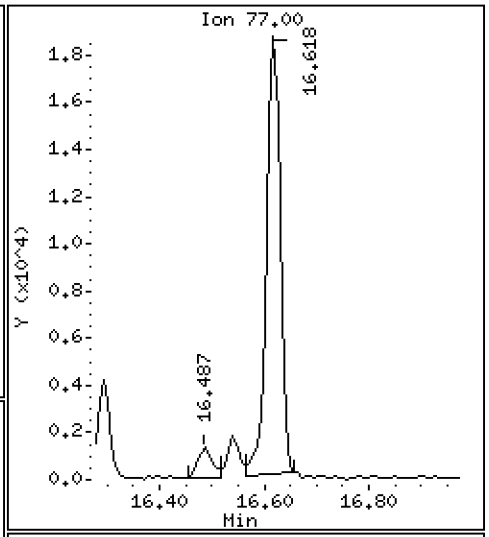
Concentration: 0.1856 ug/mL

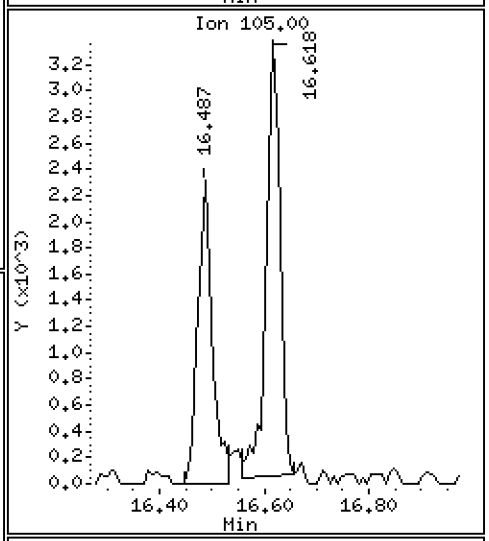


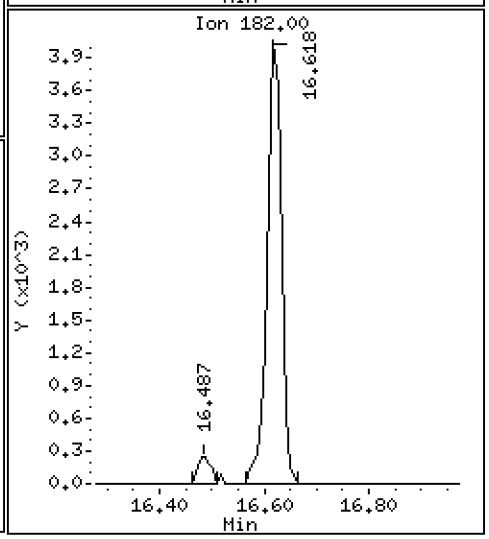












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

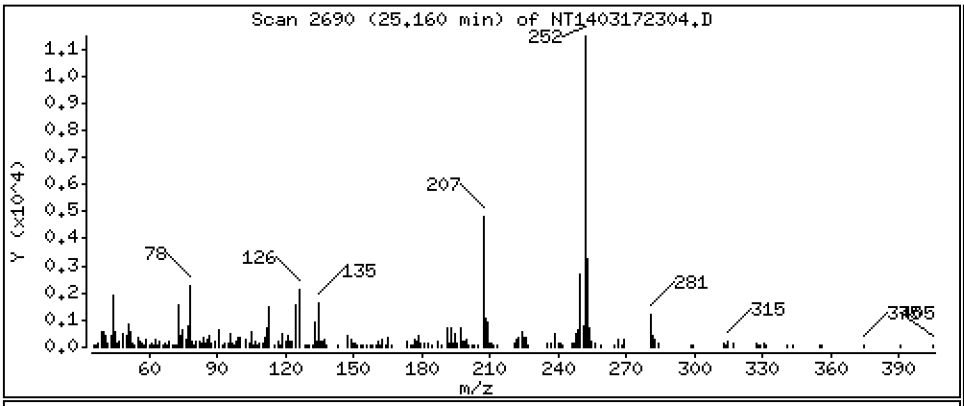
Operator: JGR

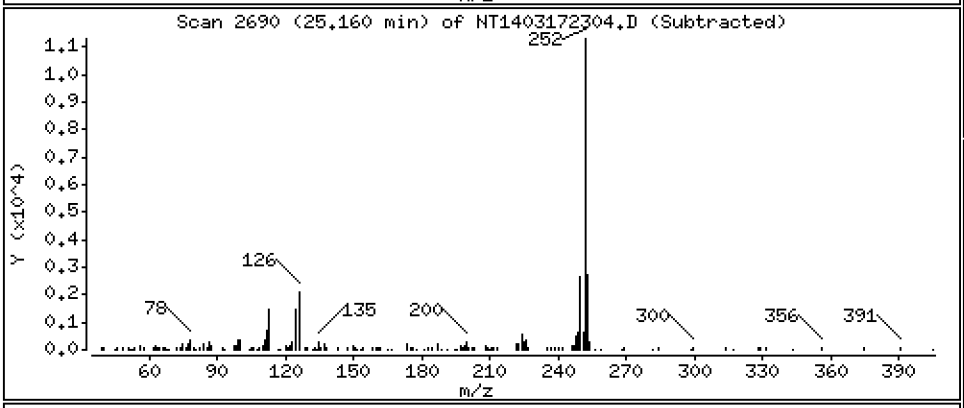
Column phase: ZB-5msi

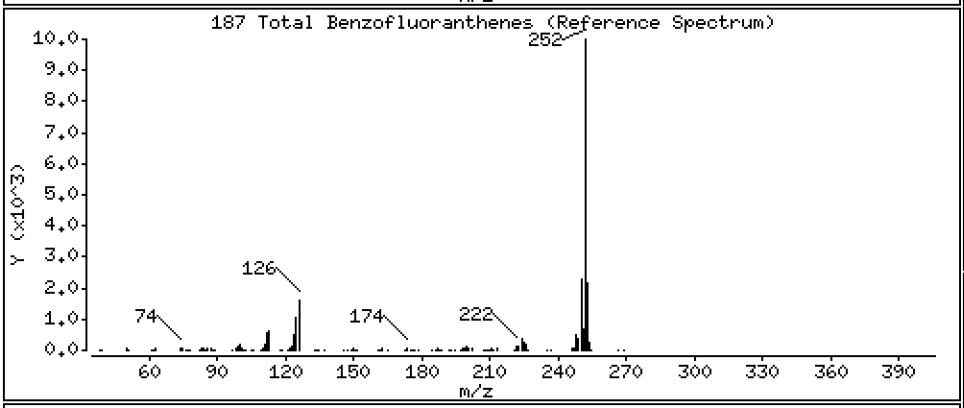
Column diameter: 0.25

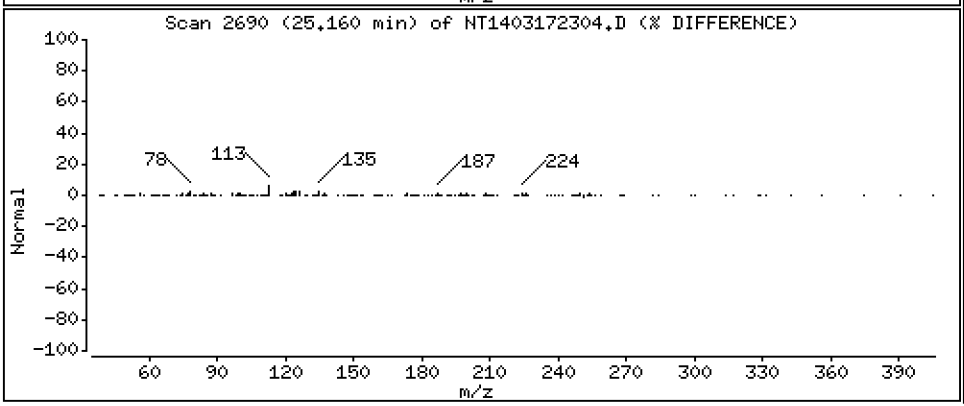
187 Total Benzofluoranthenes

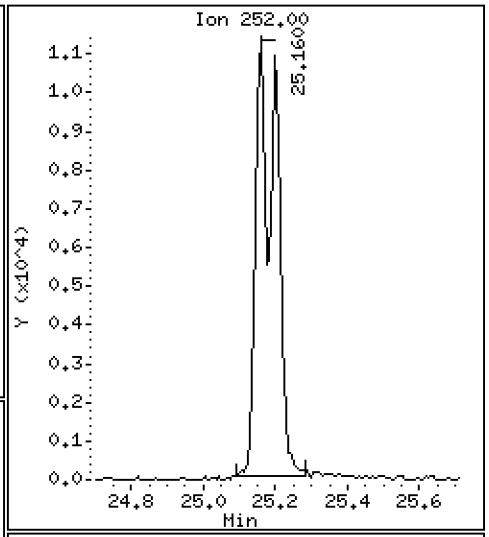
Concentration: 0.3949 ug/mL

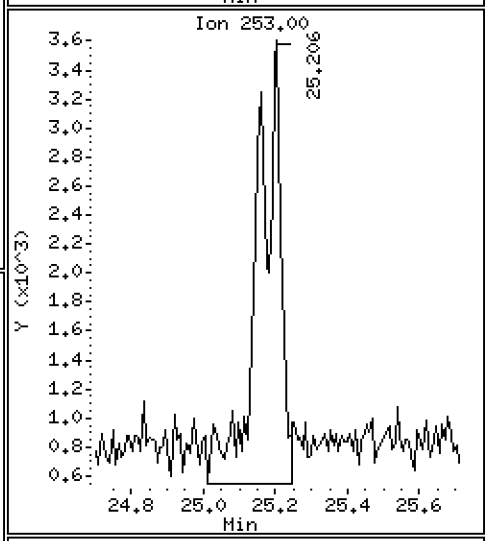


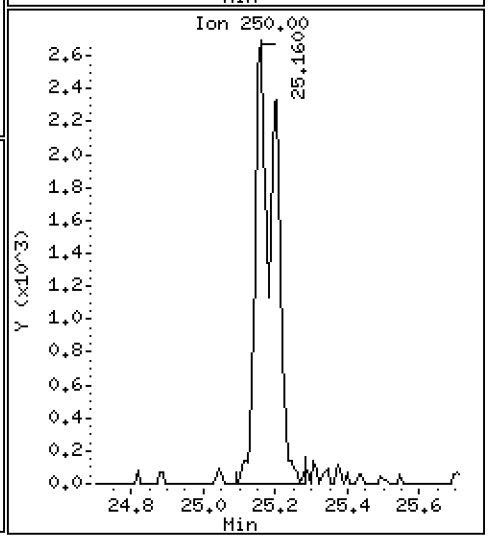












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

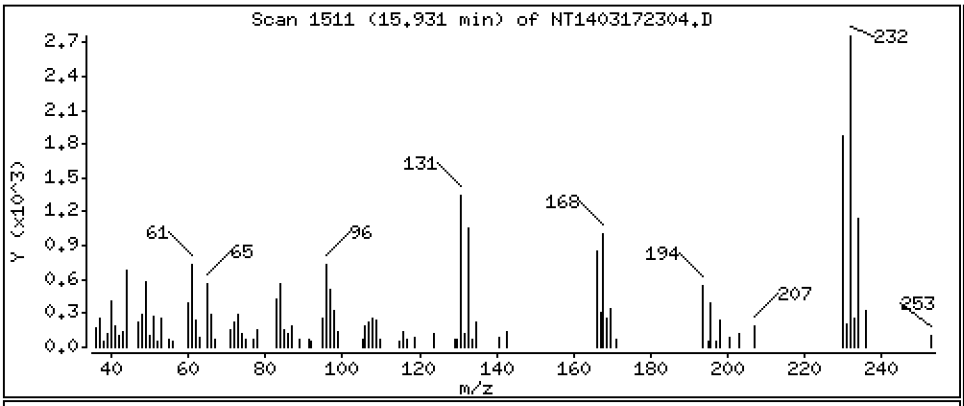
Operator: JGR

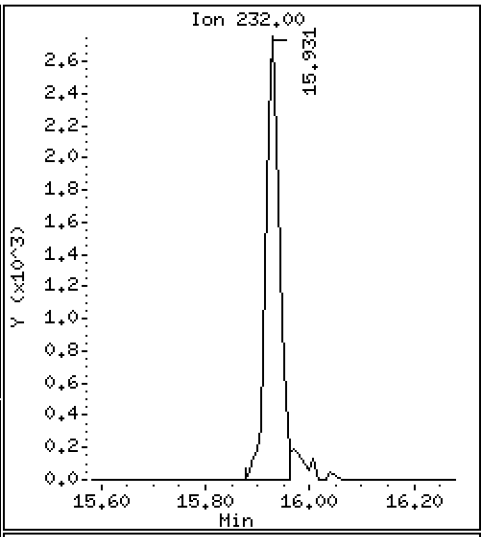
Column phase: ZB-5msi

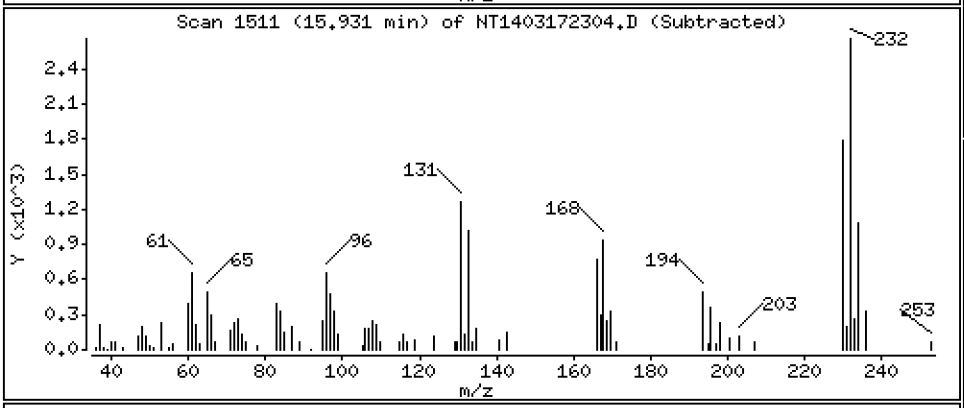
Column diameter: 0.25

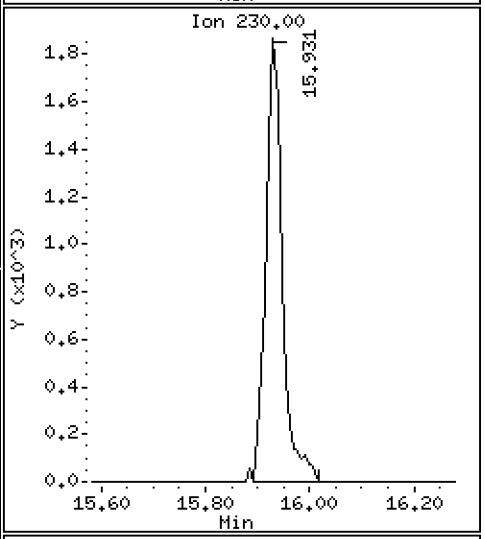
120 2,3,4,6-Tetrachlorophenol

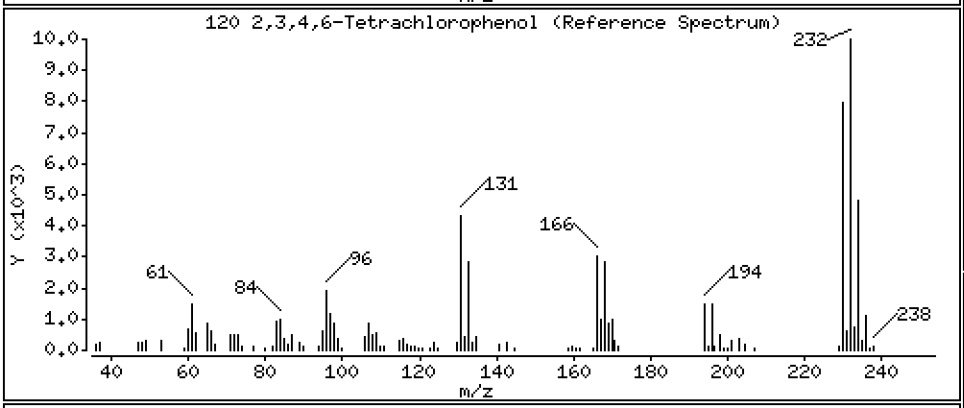
Concentration: 0.1132 ug/mL

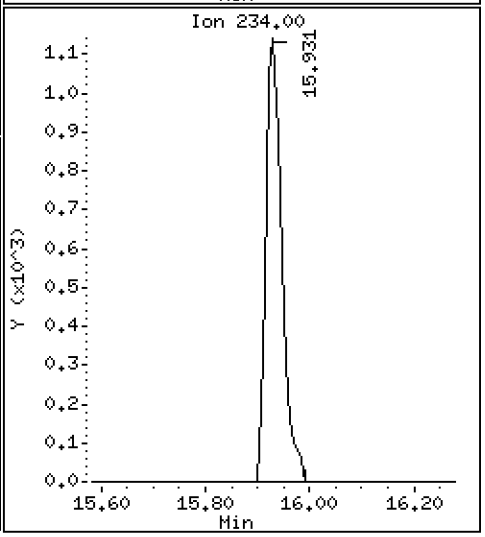


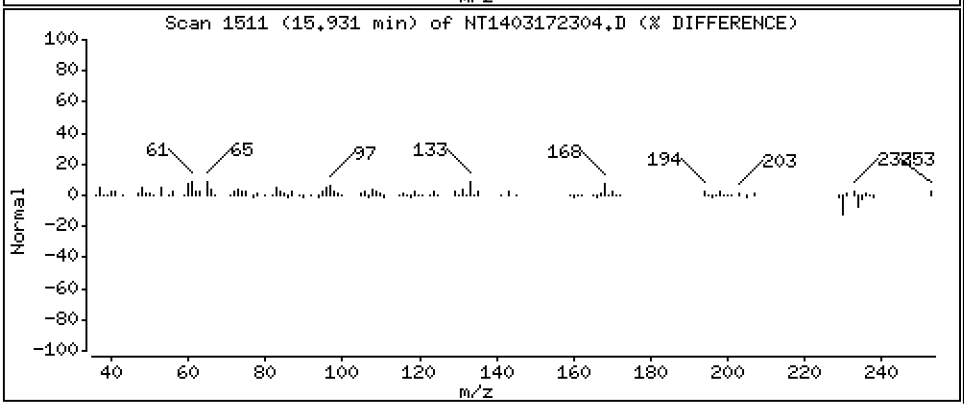












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230317.b\NT1403172304.D
Lab Smp Id: SLC0335-LCV1
Inj Date : 17-MAR-2023 16:16 MS Autotune Date: 11-MAR-2023 16:01
Operator : JGR Inst ID: nt14.i
Smp Info : SLC0335-LCV1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230317.b\ABN.m
Meth Date : 22-Mar-2023 08:03 van Quant Type: ISTD
Cal Date : 15-MAR-2023 15:50 Cal File: NT1403152308.D
Als bottle: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

							CONCENTRATIONS	
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.828	6.821	(1.000)	18594	0.25189	0.2519
$	2 Phenol-d5	99	8.412	8.412	(1.000)	24582	0.25293	0.2529
	3 Phenol	94	8.435	8.435	(1.000)	16555	0.16028	0.1603
$	5 2-Chlorophenol-d4	132	8.698	8.698	(1.000)	22189	0.28960	0.2896
	4 Bis(2-Chloroethyl)ether	93	8.605	8.605	(1.000)	14905	0.20040	0.2004
	6 2-Chlorophenol	128	8.729	8.729	(1.000)	15015	0.18470	0.1847
	7 1,3-Dichlorobenzene	146	9.000	9.000	(1.000)	18302	0.22240	0.2224
*	8 1,4-Dichlorobenzene-d4	152	9.062	9.062	(1.000)	217316	4.00000	(M)
	9 1,4-Dichlorobenzene	146	9.101	9.093	(1.000)	16921	0.21348	0.2135
$	10 1,2-Dichlorobenzene-d4	152	9.426	9.426	(1.000)	11108	0.21700	0.2170
	12 1,2-Dichlorobenzene	146	9.458	9.450	(1.000)	16866	0.21528	0.2153
	11 Benzyl alcohol	108	9.333	9.333	(1.000)	6933	0.14418	0.1442
	14 2,2'-oxybis(1-Chloropropane)	121	9.644	9.644	(1.064)	4910	0.20770	0.2077(M)
	13 2-Methylphenol	108	9.558	9.558	(1.000)	12696	0.17386	0.1739
	17 Hexachloroethane	117	10.055	10.055	(1.000)	6893	0.20334	0.2033
	16 N-Nitroso-di-n-propylamine	70	9.900	9.900	(1.000)	9706	0.16882	0.1688
	15 4-Methylphenol	108	9.830	9.830	(1.000)	13688	0.15831	0.1583
$	18 Nitrobenzene-d5	82	10.164	10.164	(0.879)	15853	0.18189	0.1819
	19 Nitrobenzene	77	10.195	10.203	(0.881)	15610	0.18399	0.1840
	20 Isophorone	82	10.653	10.653	(0.921)	17641	0.15229	0.1523
	21 2-Nitrophenol	139	10.831	10.831	(0.936)	5816	0.12142	0.1214
	22 2,4-Dimethylphenol	107	10.885	10.885	(0.941)	29837	0.41118	0.4112
	23 Bis(2-Chloroethoxy)methane	93	11.079	11.087	(0.958)	14401	0.18466	0.1847
	24 Benzoic acid	105	10.978	11.103	(0.949)	7828	0.12953	0.1295(M)
	25 2,4-Dichlorophenol	162	11.289	11.289	(0.976)	19763	0.34246	0.3425
	26 1,2,4-Trichlorobenzene	180	11.482	11.482	(0.993)	14434	0.20346	0.2035
*	27 Naphthalene-d8	136	11.567	11.567	(1.000)	823606	4.00000	
	28 Naphthalene	128	11.606	11.606	(1.003)	45873	0.20848	0.2085
	29 4-Chloroaniline	127	11.737	11.737	(1.015)	31151	0.33819	0.3382
	30 Hexachlorobutadiene	225	11.976	11.976	(1.035)	7118	0.22222	0.2222
	31 4-Chloro-3-methylphenol	107	12.696	12.696	(1.098)	22025	0.31584	0.3158
	32 2-Methylnaphthalene	142	13.006	13.013	(1.124)	30490	0.19870	0.1987
	33 Hexachlorocyclopentadiene	237	13.478	13.478	(0.887)	9116	0.26060	0.2606

		QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
Compounds								
34	2,4,6-Trichlorophenol	196	13.633	13.633	(0.897)	12570	0.29444	0.2944
35	2,4,5-Trichlorophenol	196	13.710	13.702	(0.902)	13329	0.29962	0.2996
$ 36	2-Fluorobiphenyl	172	13.795	13.795	(0.908)	31403	0.20605	0.2060
37	2-Chloronaphthalene	162	14.004	14.012	(0.922)	26527	0.20308	0.2031
38	2-Nitroaniline	65	14.267	14.267	(0.939)	14704	0.29152	0.2915
39	Dimethylphthalate	163	14.693	14.701	(0.967)	27457	0.19566	0.1957
40	Acenaphthylene	152	14.879	14.879	(0.979)	42509	0.19375	0.1937
41	2,6-Dinitrotoluene	165	14.832	14.840	(0.976)	10259	0.31646	0.3165
* 42	Acenaphthene-d10	164	15.196	15.196	(1.000)	420838	4.00000	
43	3-Nitroaniline	138	15.119	15.126	(0.995)	11607	0.25953	0.2595
44	Acenaphthene	153	15.258	15.265	(1.004)	25936	0.20247	0.2025
45	2,4-Dinitrophenol	184	15.335	15.335	(1.009)	1883	0.07503	0.07503
46	Dibenzofuran	168	15.590	15.590	(1.026)	37357	0.20427	0.2043
47	4-Nitrophenol	109	15.459	15.435	(1.017)	2414	0.10197	0.1020
48	2,4-Dinitrotoluene	165	15.644	15.652	(1.030)	13166	0.28650	0.2865
50	Diethylphthalate	149	16.155	16.170	(1.063)	29117	0.20068	0.2007
49	Fluorene	166	16.309	16.309	(1.073)	29637	0.17096	0.1710
51	4-Chlorophenyl-phenylether	204	16.294	16.301	(1.072)	12967	0.17426	0.1743
52	4-Nitroaniline	138	16.394	16.394	(1.079)	10172	0.26150	0.2615
53	4,6-Dinitro-2-methylphenol	198	16.486	16.494	(0.904)	7582	0.28913	0.2891
54	N-Nitrosodiphenylamine	169	16.540	16.548	(0.907)	19386	0.18831	0.1883
$ 55	2,4,6-Tribromophenol	330	16.841	16.841	(1.108)	3716	0.23258	0.2326
56	4-Bromophenyl-phenylether	248	17.304	17.304	(0.949)	6658	0.19183	0.1918
57	Hexachlorobenzene	284	17.620	17.620	(0.966)	7606	0.20769	0.2077
58	Pentachlorophenol	266	17.984	17.976	(0.986)	3079	0.12204	0.1220
* 59	Phenanthrene-d10	188	18.240	18.247	(1.000)	757941	4.00000	
60	Phenanthrene	178	18.286	18.294	(1.003)	43188	0.19943	0.1994
61	Anthracene	178	18.379	18.387	(1.008)	36981	0.17725	0.1773
62	Carbazole	167	18.712	18.711	(1.026)	32491	0.17503	0.1750
63	Di-n-butylphthalate	149	19.508	19.508	(1.070)	36311	0.15432	0.1543
64	Fluoranthene	202	20.677	20.677	(0.888)	38705	0.20915	0.2091
65	Pyrene	202	21.102	21.102	(0.906)	40464	0.21322	0.2132
$ 66	Terphenyl-d14	244	21.389	21.389	(0.918)	29120	0.22666	0.2267
67	Butylbenzylphthalate	149	22.310	22.310	(0.958)	15269	0.18364	0.1836
68	Benzo(a)anthracene	228	23.262	23.270	(0.999)	34915	0.20818	0.2082
* 69	Chrysene-d12	240	23.293	23.293	(1.000)	454867	4.00000	
70	3,3'-Dichlorobenzidine	252	23.216	23.224	(0.997)	24773	0.51505	0.5150
71	Chrysene	228	23.340	23.340	(1.002)	30534	0.20116	0.2012
72	bis(2-Ethylhexyl)phthalate	149	23.332	23.332	(0.960)	18300	0.19578	0.1958
* 134	Di-n-octylphthalate-d4	153	24.315	24.323	(1.000)	710040	4.00000	
73	Di-n-octylphthalate	149	24.331	24.331	(1.001)	39746	0.21775	0.2178
74	Benzo(b)fluoranthene	252	25.159	25.159	(0.970)	21964	0.18808	0.1881
75	Benzo(k)fluoranthene	252	25.198	25.205	(0.972)	24822	0.21442	0.2144
76	Benzo(a)pyrene	252	25.817	25.817	(0.996)	18002	0.18027	0.1803
* 77	Perylene-d12	264	25.933	25.933	(1.000)	330470	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.618	28.618	(1.104)	14842	0.13656	0.1366
79	Dibenzo(a,h)anthracene	278	28.626	28.633	(1.104)	12885	0.14066	0.1407
80	Benzo(g,h,i)perylene	276	29.395	29.410	(1.133)	12878	0.14377	0.1438
90	N-Nitrosodimethylamine	74	4.697	4.697	(1.000)	13786	0.29487	0.2949
91	Aniline	93	8.513	8.513	(1.000)	39158	0.37694	0.3769
93	Benzidine	184	20.917	20.909	(0.898)	21244	0.28526	0.2853
103	Pyridine	79	4.743	4.712	(1.000)	22503	0.15542	0.1554
105	1-methylnaphthalene	142	13.230	13.230	(1.144)	28901	0.20789	0.2079
111	Azobenzene (1,2-DP-Hydrazine)	77	16.617	16.625	(1.094)	32160	0.18562	0.1856

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.159	25.205	(0.970)	43799	0.39492	0.3949
120 2,3,4,6-Tetrachlorophenol	232	15.930	15.930	(1.048)	4827	0.11321	0.1132

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1403172304.D
Lab Smp Id: SLC0335-LCV1
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt14.i\20230317.b\ABN.m
Misc Info:

Calibration Date: 17-MAR-2023
Calibration Time: 15:03
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	221219	110610	442438	217316	-1.76
27 Naphthalene-d8	809500	404750	1619000	823606	1.74
42 Acenaphthene-d10	420689	210345	841378	420838	0.04
59 Phenanthrene-d10	757520	378760	1515040	757941	0.06
69 Chrysene-d12	450500	225250	901000	454867	0.97
134 Di-n-octylphthala	828388	414194	1656776	710040	-14.29
77 Perylene-d12	339914	169957	679828	330470	-2.78

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.06	8.56	9.56	9.06	0.00
27 Naphthalene-d8	11.57	11.07	12.07	11.57	0.00
42 Acenaphthene-d10	15.20	14.70	15.70	15.20	0.00
59 Phenanthrene-d10	18.25	17.75	18.75	18.24	-0.04
69 Chrysene-d12	23.29	22.79	23.79	23.29	0.00
134 Di-n-octylphthala	24.32	23.82	24.82	24.32	-0.03
77 Perylene-d12	25.93	25.43	26.43	25.93	0.00

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

REVIEW SUMMARY FOR FILE - NT1403172304.D

Lab ID: SLC0335-LCV1
nt14.i, ABN.m, 17-MAR-2023 16:16

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
1.064	1.000	0.0642	2,2'-oxybis(1-Chloropropane)
0.949	0.960	-0.0107	Benzoic acid

RRT check based on Ccal File: NT1403172302.D

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

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

Quant Ion Manual Peak Adjustment Report

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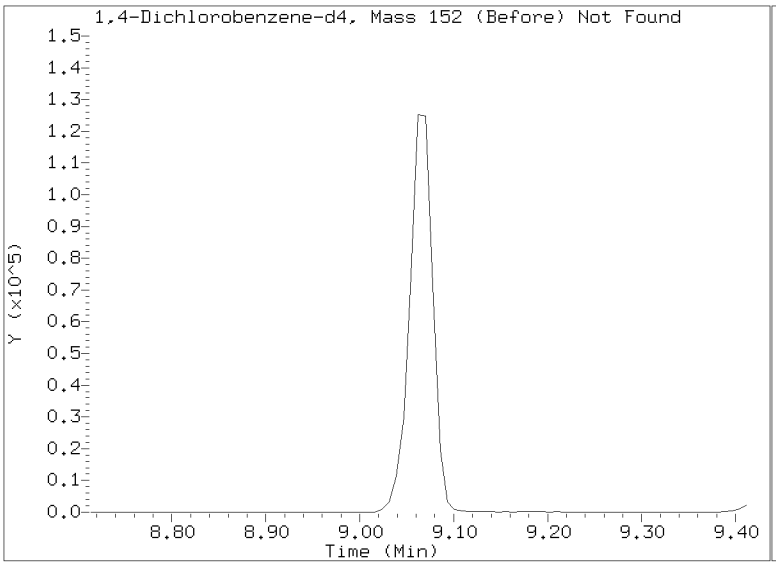
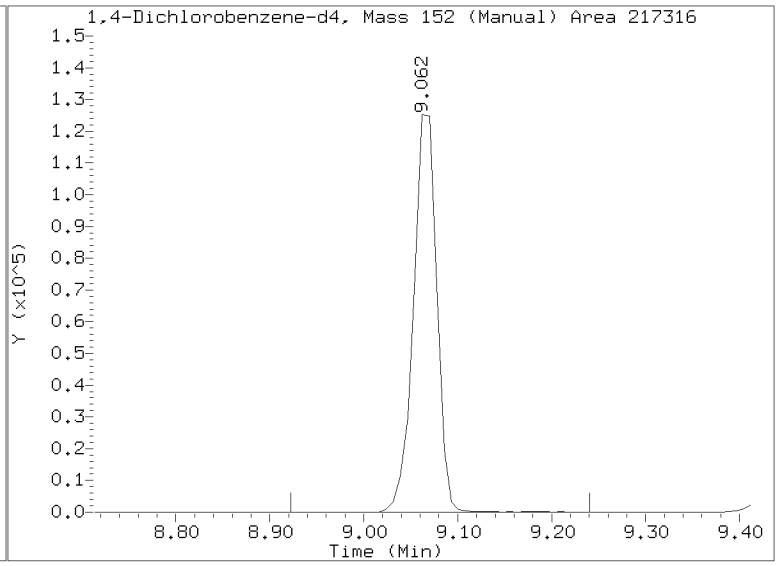
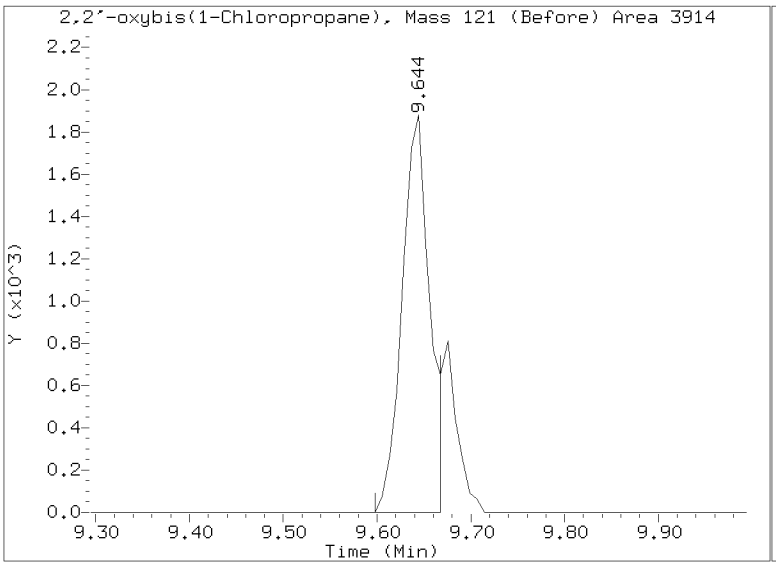
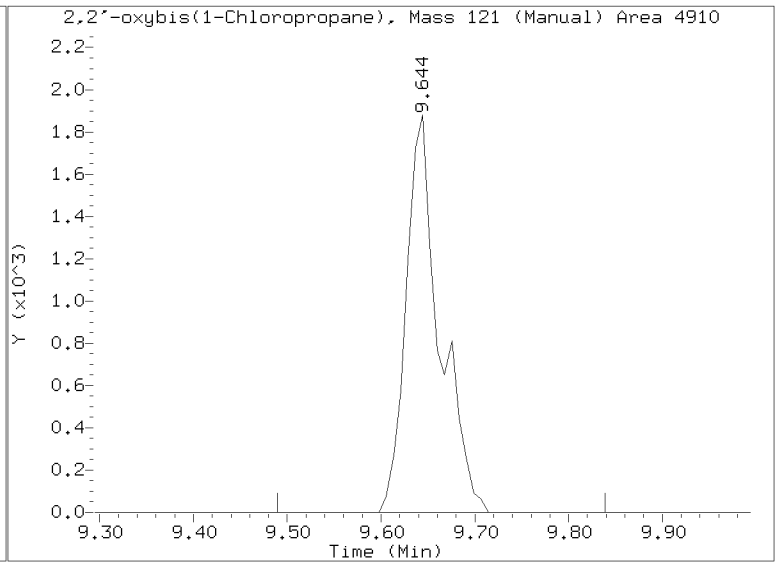
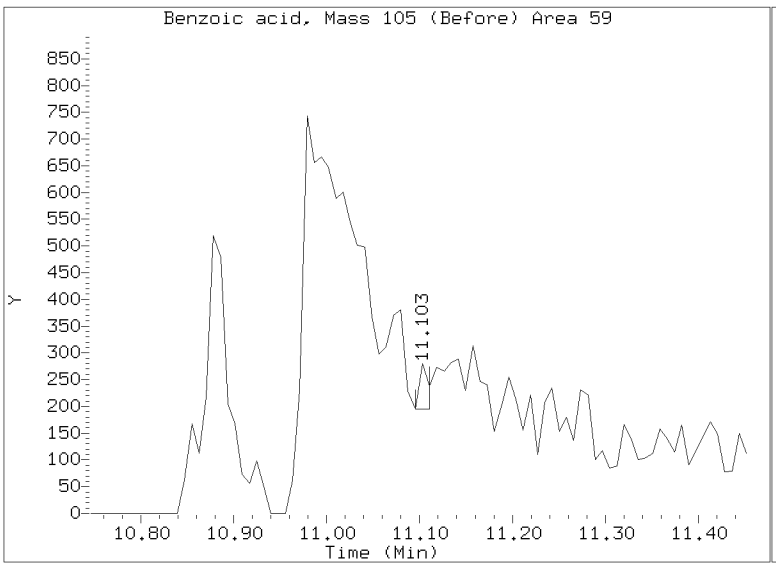
Injection Date: 17-MAR-2023 16:16
Lab ID:SLC0335-LCV1 Client ID:
Report Date: 03/22/2023 08:11

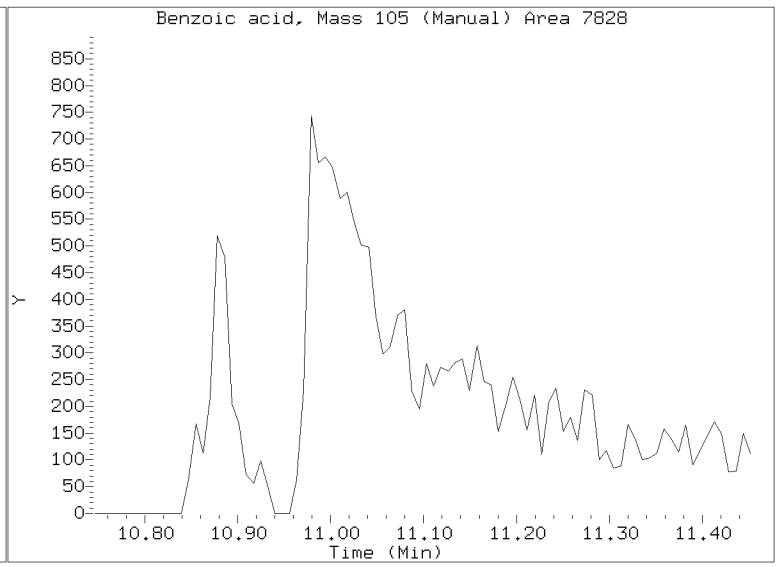












LOW-CONCENTRATION CALIBRATION VERIFICATION

EPA 8270E

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GC00048
Laboratory ID: SLC0335-LCV2
Sequence: SLC0335
Standard ID: K011105

ANALYTE	EXPECTED (ug/mL)	FOUND (ug/mL)	% DRIFT	QC LIMIT
Phenol	0.20000	0.2	-19.1	50.00
4-Methylphenol	0.20000	0.2	-21.1	50.00
Naphthalene	0.20000	0.2	1.0	50.00
2-Methylnaphthalene	0.20000	0.2	-1.2	50.00
Acenaphthylene	0.20000	0.2	-3.9	50.00
Dimethylphthalate	0.20000	0.2	-4.9	50.00
Acenaphthene	0.20000	0.2	-3.0	50.00
Dibenzofuran	0.20000	0.2	-0.1	50.00
Fluorene	0.20000	0.2	-15.2	50.00
Phenanthrene	0.20000	0.2	-0.3	50.00
Anthracene	0.20000	0.2	-8.4	50.00
Fluoranthene	0.20000	0.2	12.1	50.00
Pyrene	0.20000	0.2	15.3	50.00
Butylbenzylphthalate	0.20000	0.2	0.9	50.00
Benzo(a)anthracene	0.20000	0.2	-0.7	50.00
Chrysene	0.20000	0.2	-4.9	50.00
bis(2-Ethylhexyl)phthalate	0.20000	0.2	2.5	50.00
Benzofluoranthenes, Total	0.40000	0.4	4.3	50.00
Benzo(a)pyrene	0.20000	0.2	-10.3	50.00
Indeno(1,2,3-cd)pyrene	0.20000	0.1	-27.5	50.00
Dibenzo(a,h)anthracene	0.20000	0.1	-29.6	50.00
Benzo(g,h,i)perylene	0.20000	0.2	-24.0	50.00
2-Fluorophenol	0.30000	0.231	-22.8	50.00
Phenol-d5	0.30000	0.246	-18.0	50.00
2-Chlorophenol-d4	0.30000	0.275	-8.4	50.00
1,2-Dichlorobenzene-d4	0.20000	0.224	12.0	50.00
Nitrobenzene-d5	0.20000	0.183	-8.3	50.00
2-Fluorobiphenyl	0.20000	0.209	4.4	50.00
2,4,6-Tribromophenol	0.30000	0.191	-36.3	50.00

LOW-CONCENTRATION CALIBRATION VERIFICATION
EPA 8270E

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GC00048
Laboratory ID: SLC0335-LCV2
Sequence: SLC0335
Standard ID: K011105

p-Terphenyl-d14	0.20000	0.243	21.7	50.00

* Values outside of QC limits

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Date : 18-MAR-2023 00:43

Client ID:

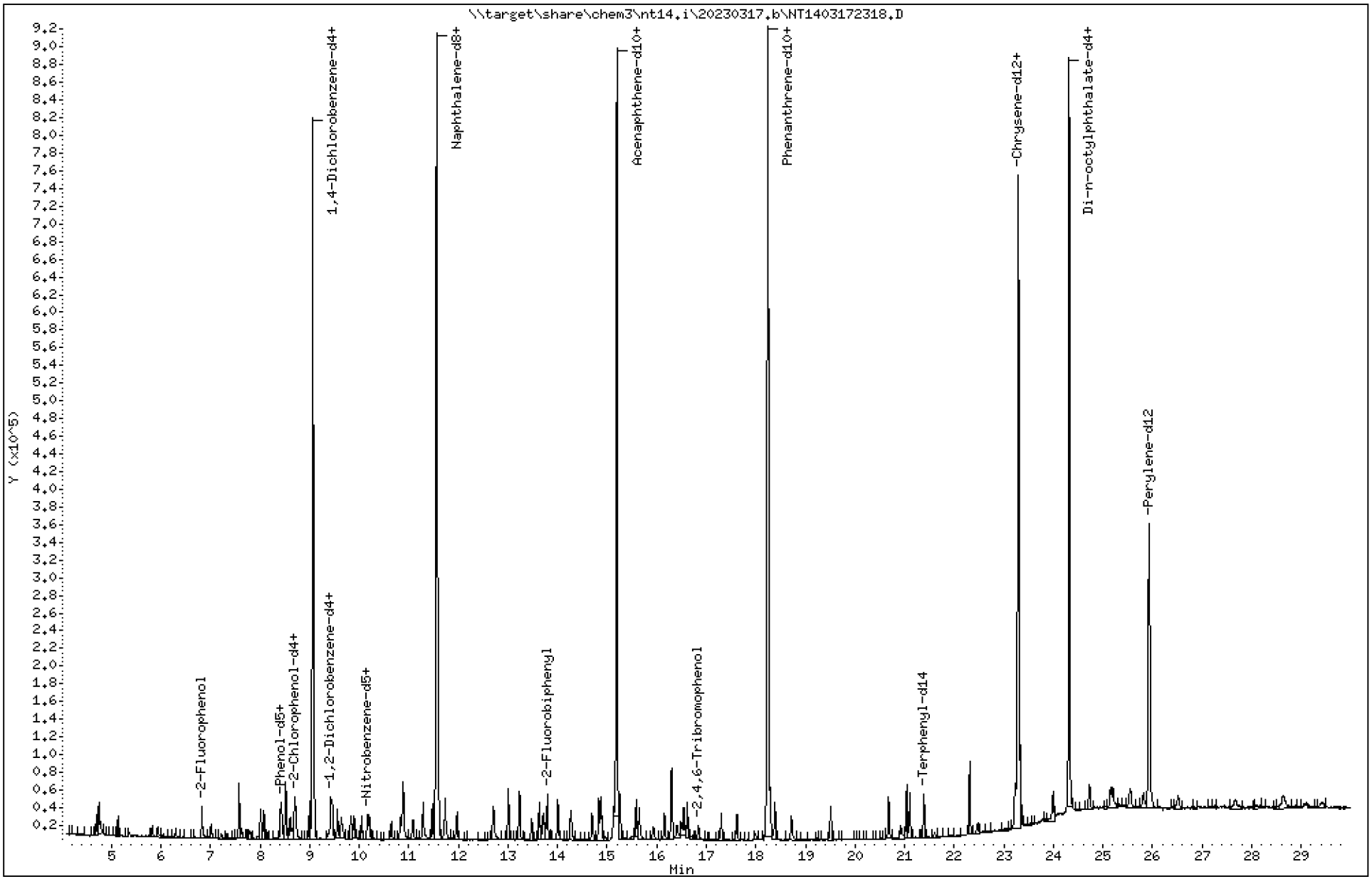
Instrument: nt14.i

Sample Info: SLC0335-LCV2

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

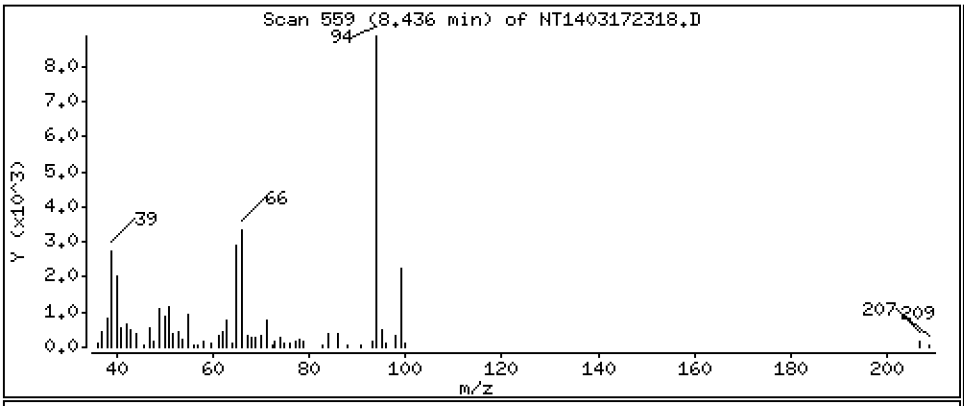
Operator: JGR

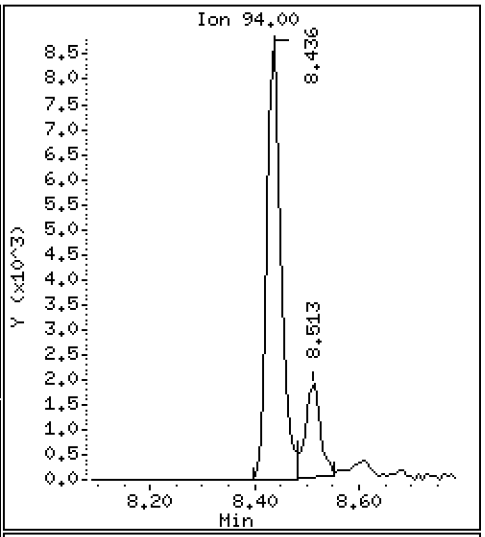
Column phase: ZB-5msi

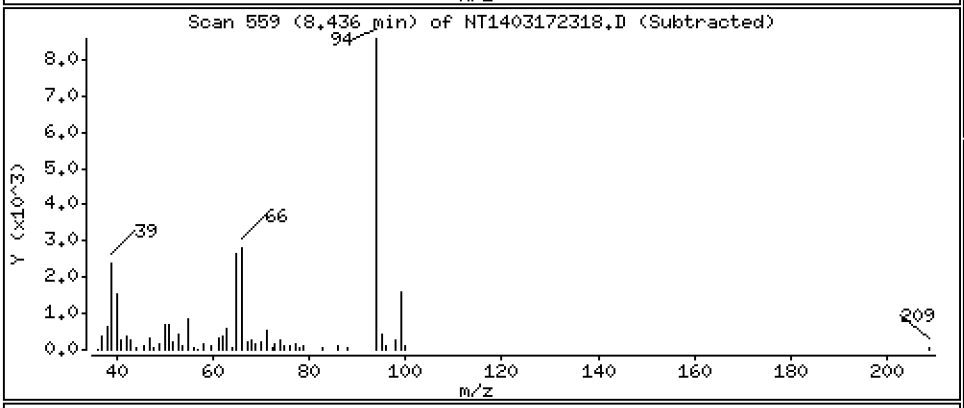
Column diameter: 0.25

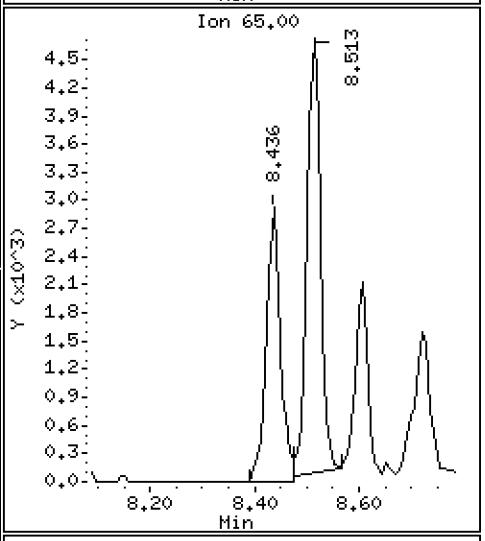
3 Phenol

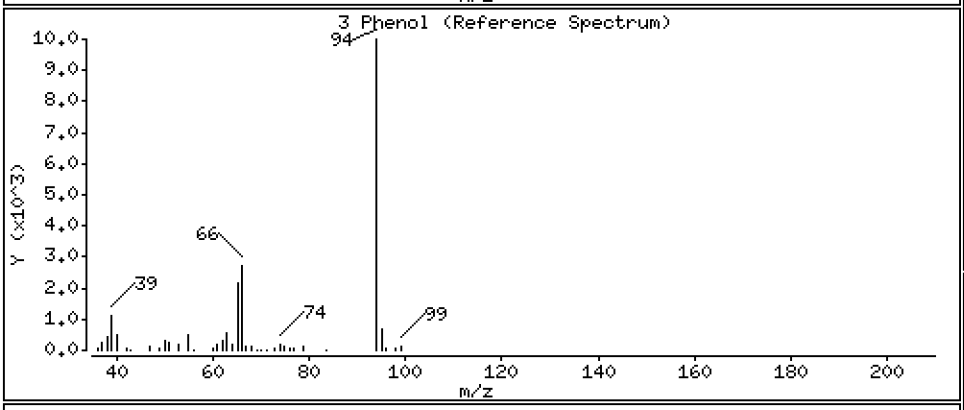
Concentration: 0.1618 ug/mL

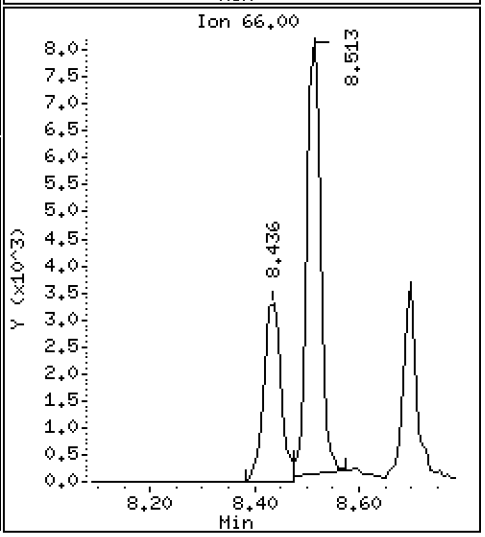


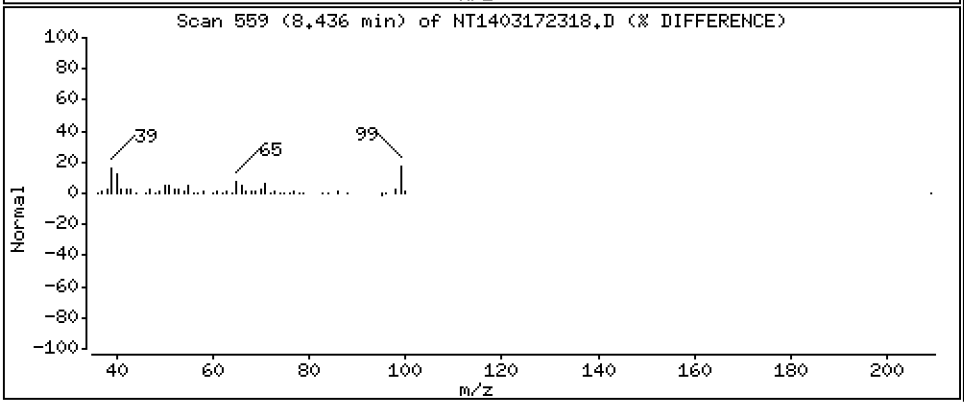












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

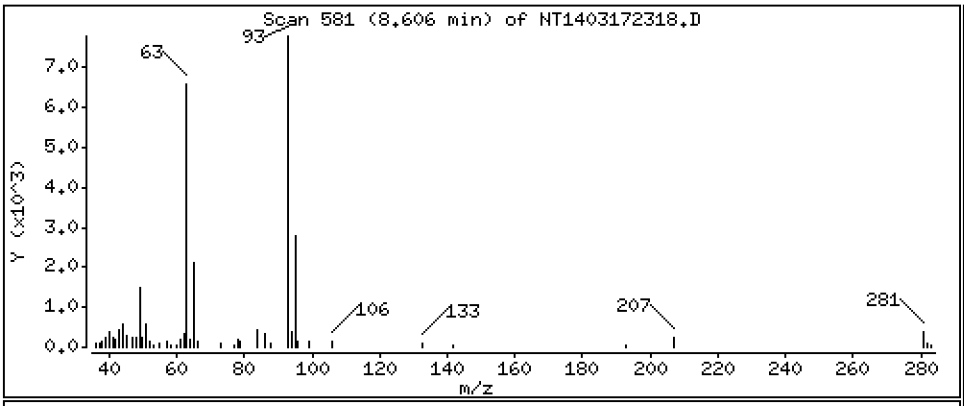
Operator: JGR

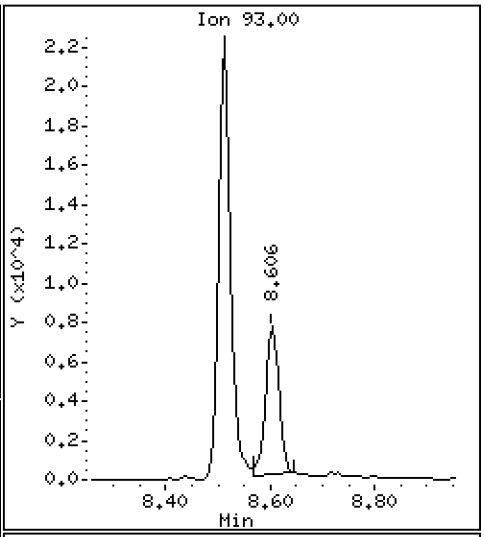
Column phase: ZB-5msi

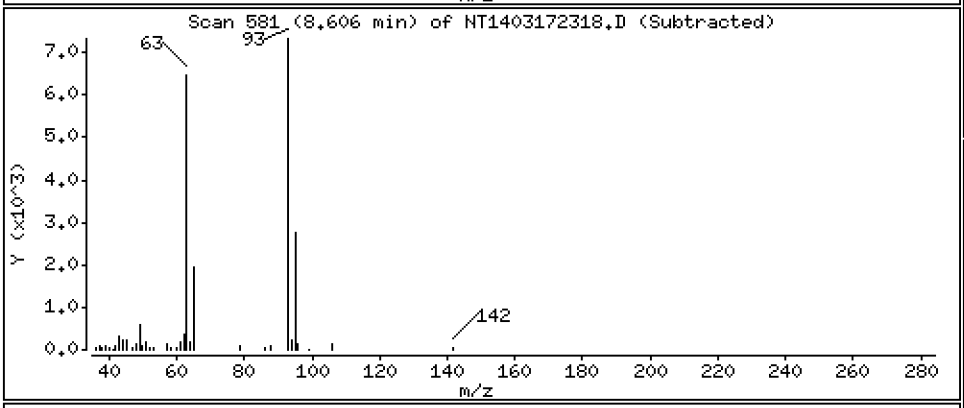
Column diameter: 0.25

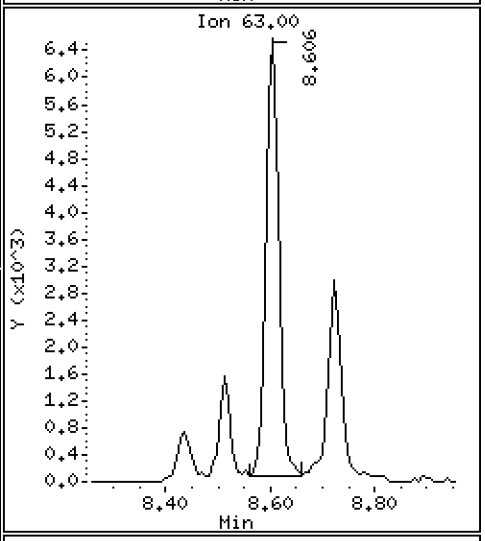
4 Bis(2-Chloroethyl)ether

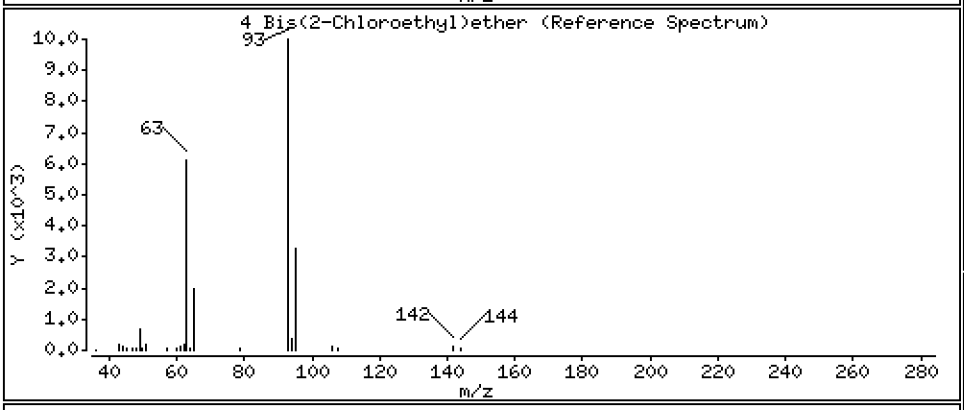
Concentration: 0.1837 ug/mL

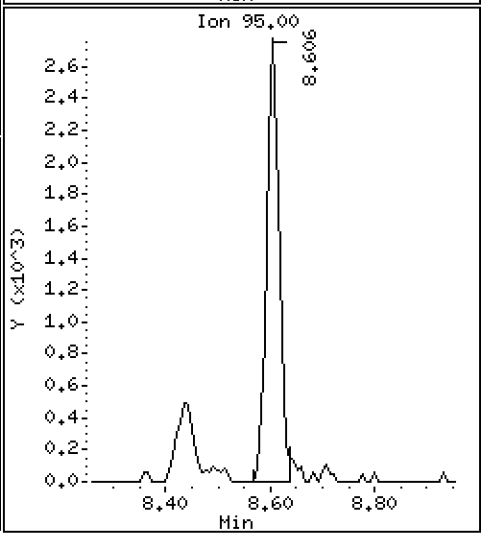


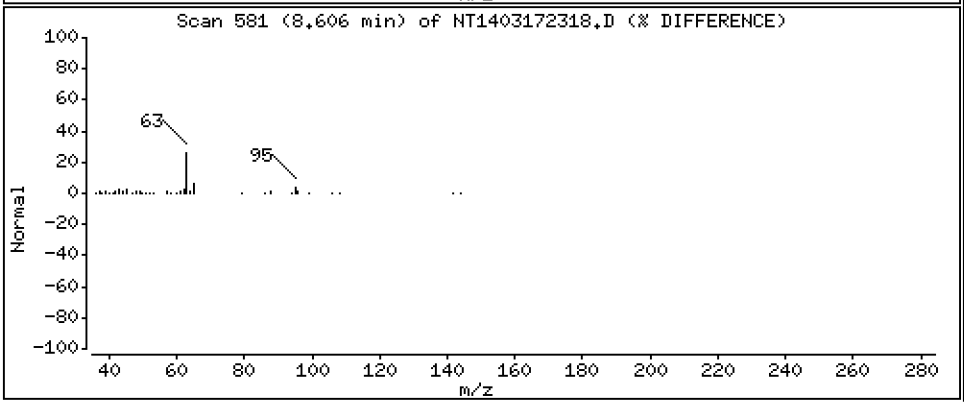












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

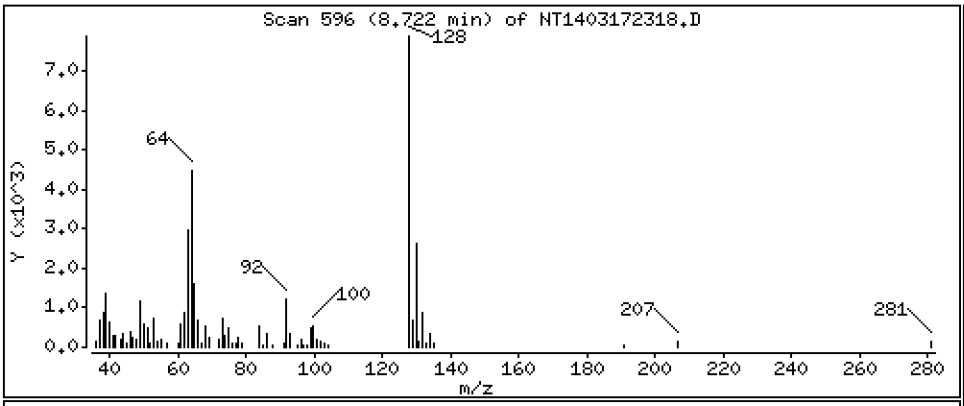
Operator: JGR

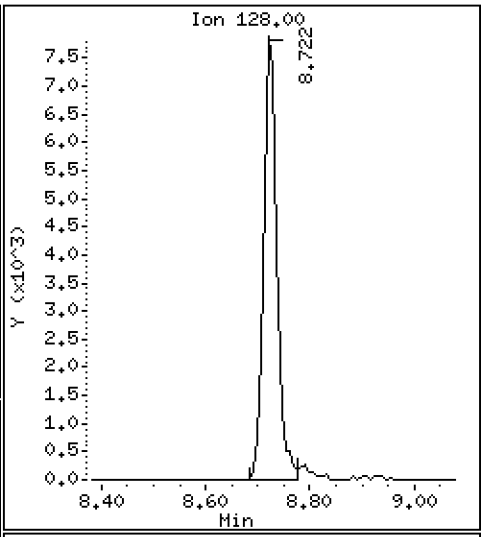
Column phase: ZB-5msi

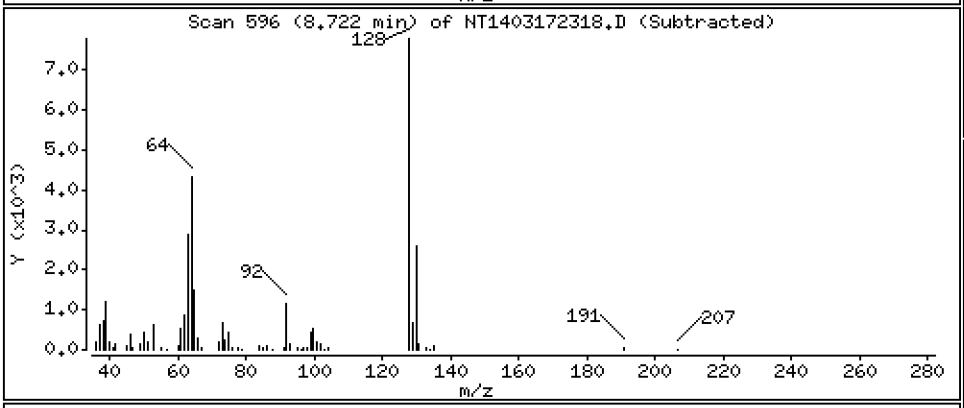
Column diameter: 0.25

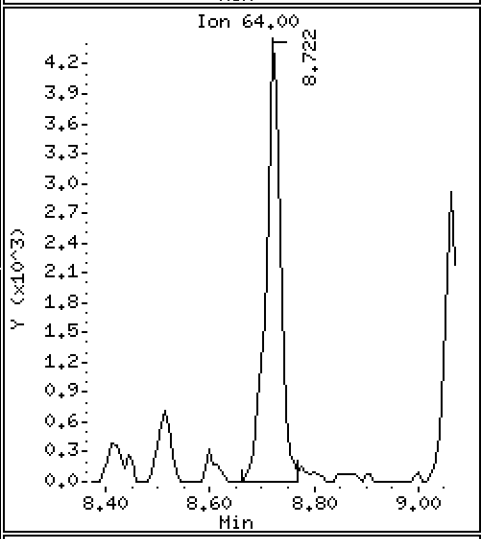
6 2-Chlorophenol

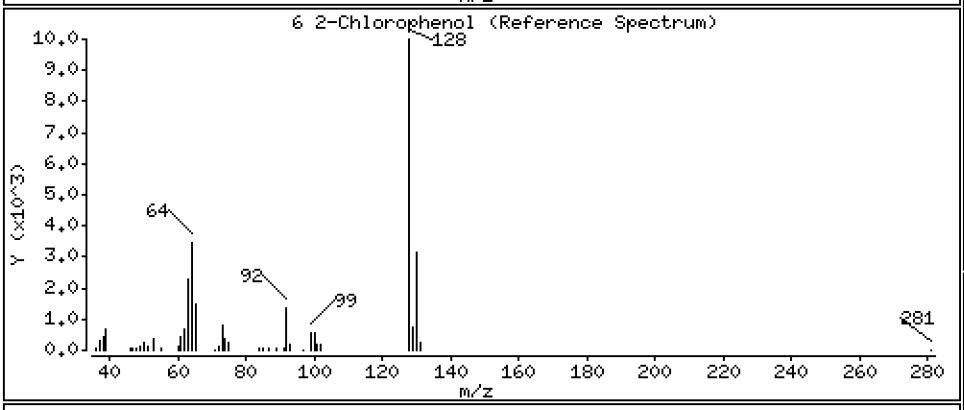
Concentration: 0.1831 ug/mL

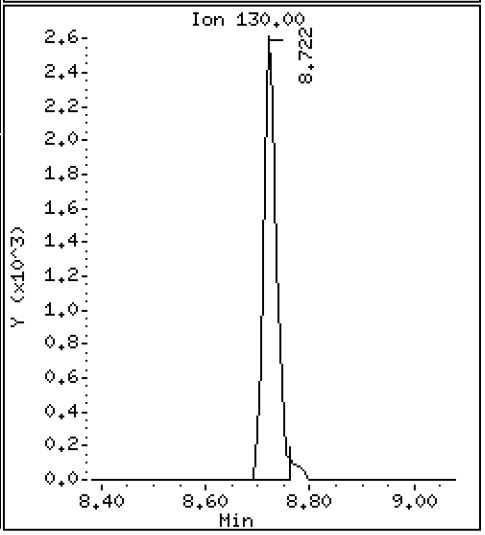


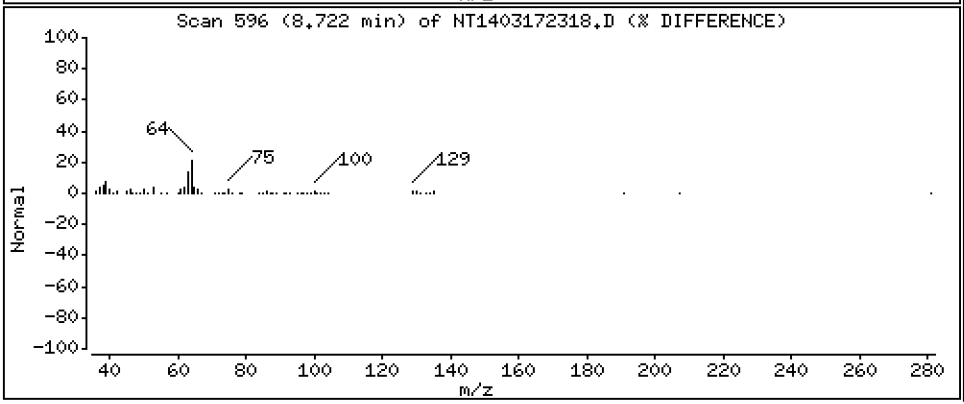












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

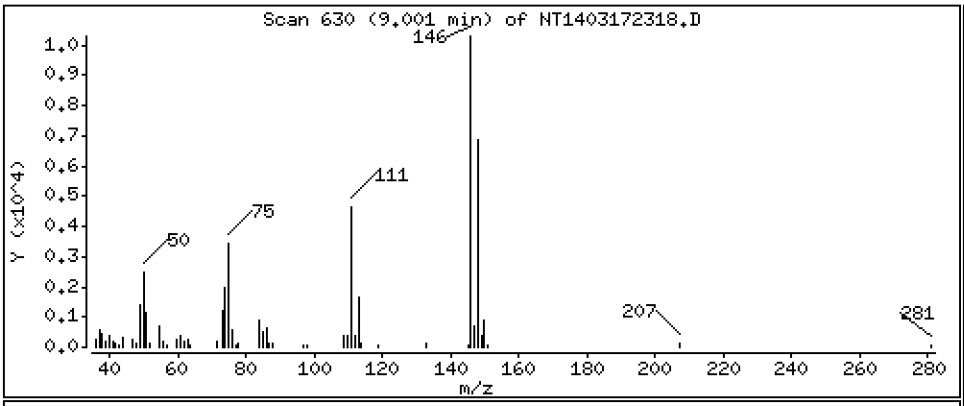
Operator: JGR

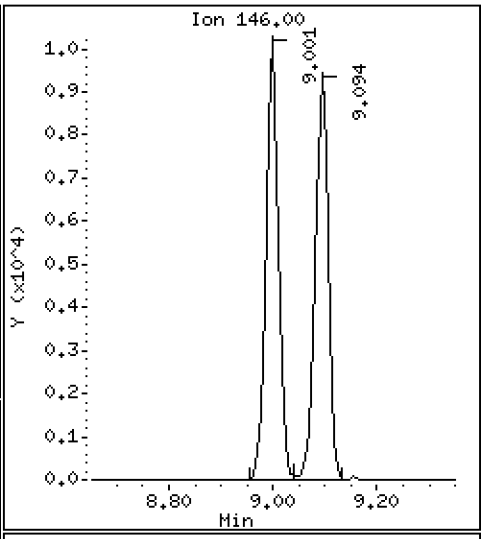
Column phase: ZB-5msi

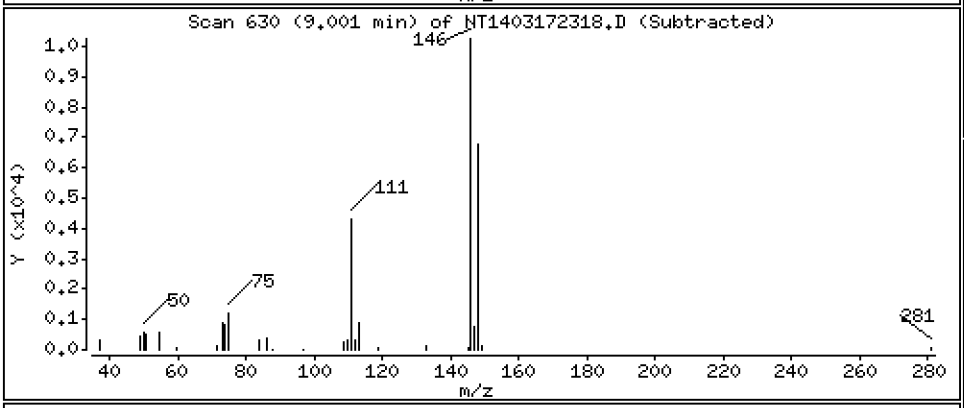
Column diameter: 0.25

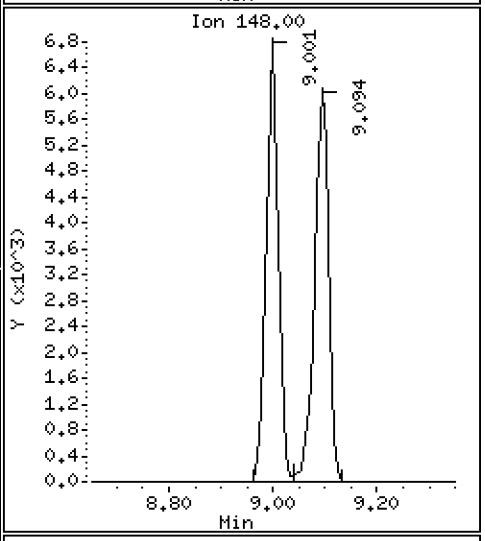
7 1,3-Dichlorobenzene

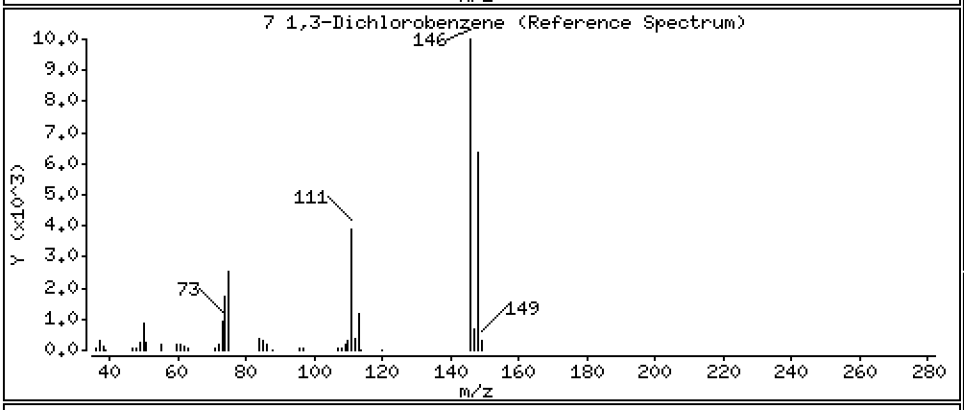
Concentration: 0.2146 ug/mL

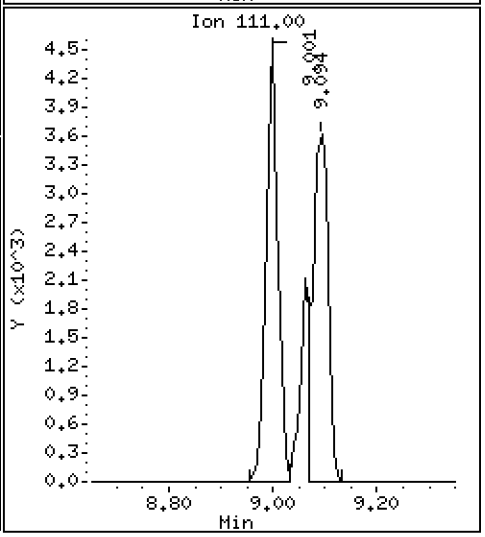


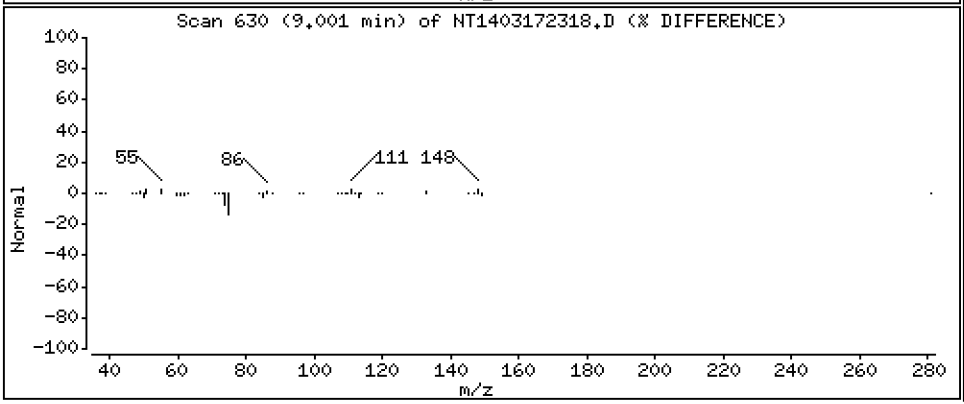












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

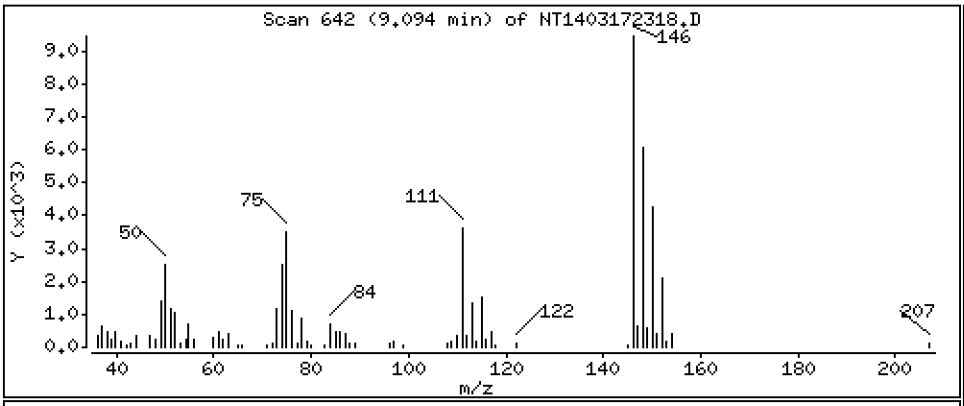
Operator: JGR

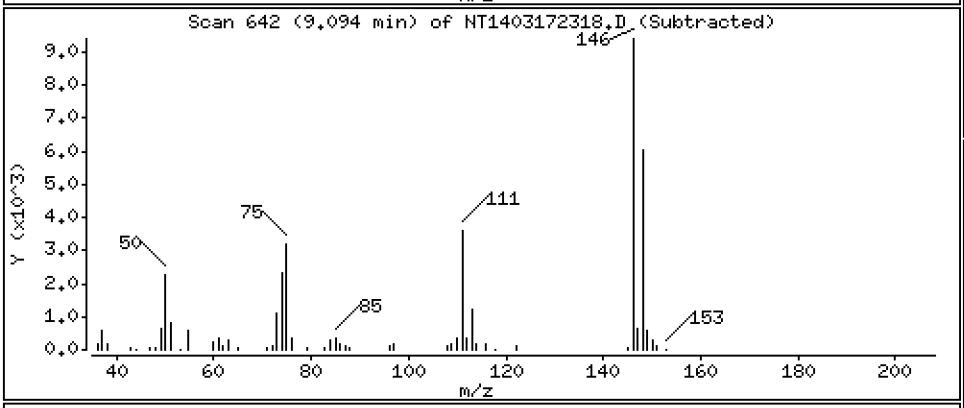
Column phase: ZB-5msi

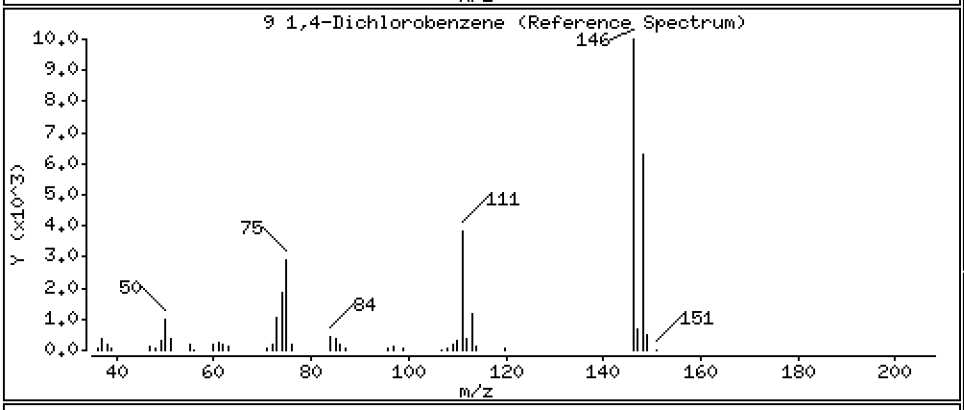
Column diameter: 0.25

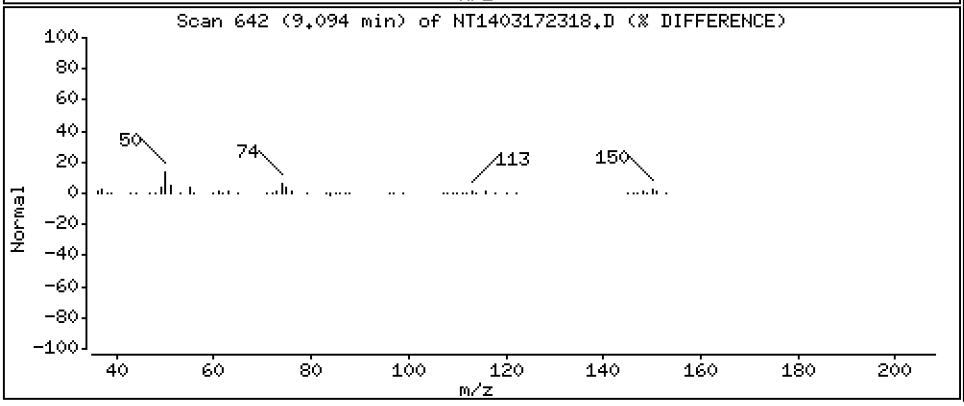
9 1,4-Dichlorobenzene

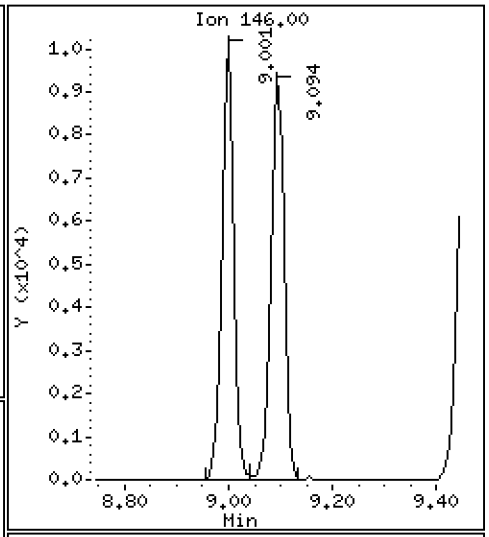
Concentration: 0.2091 ug/mL

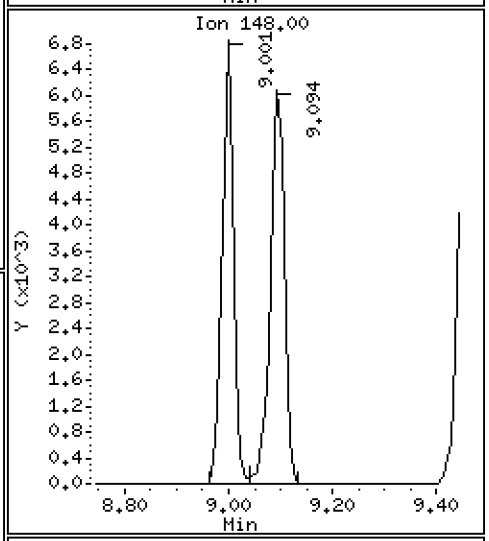


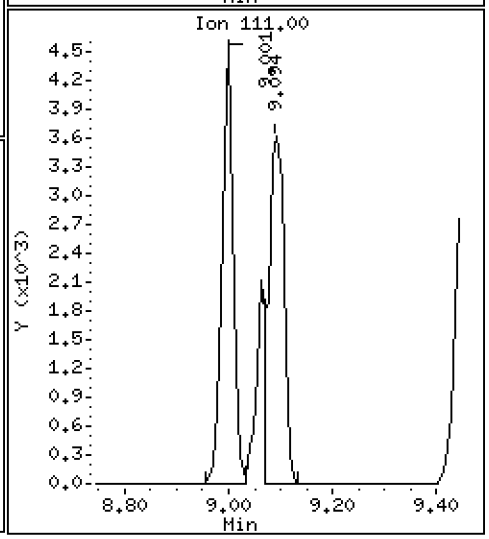












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

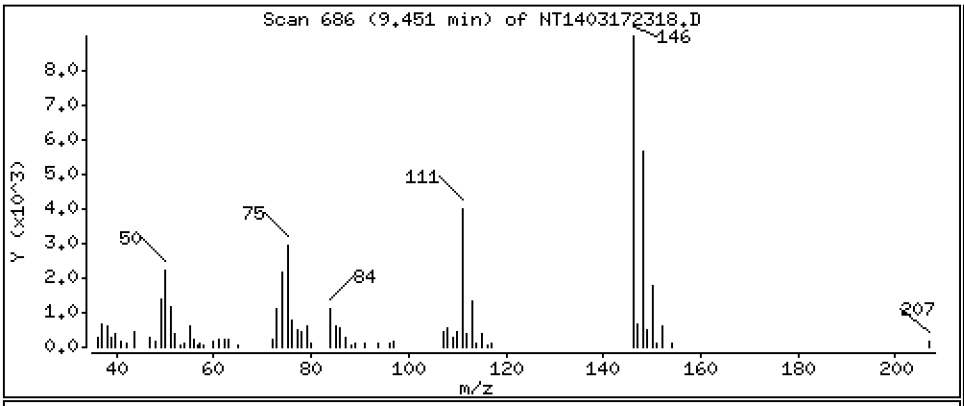
Operator: JGR

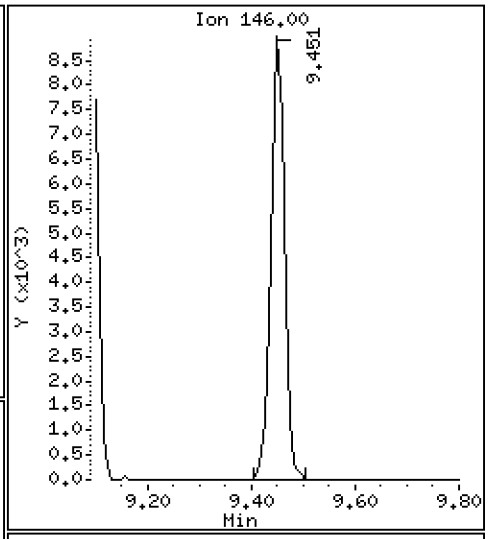
Column phase: ZB-5msi

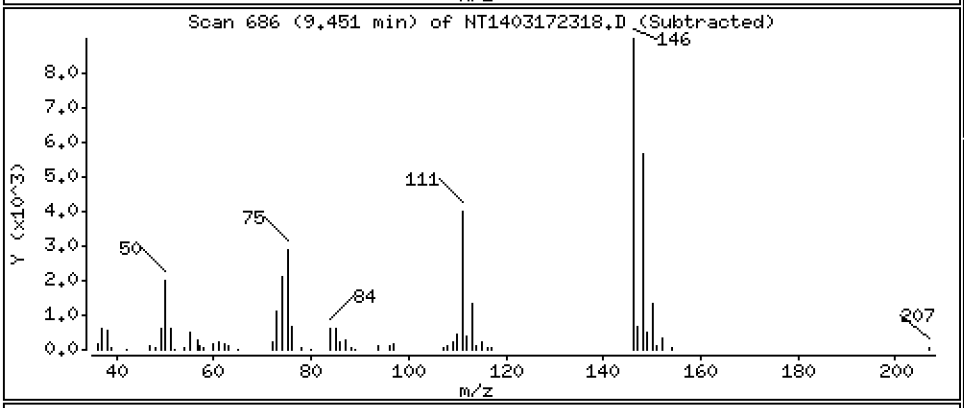
Column diameter: 0.25

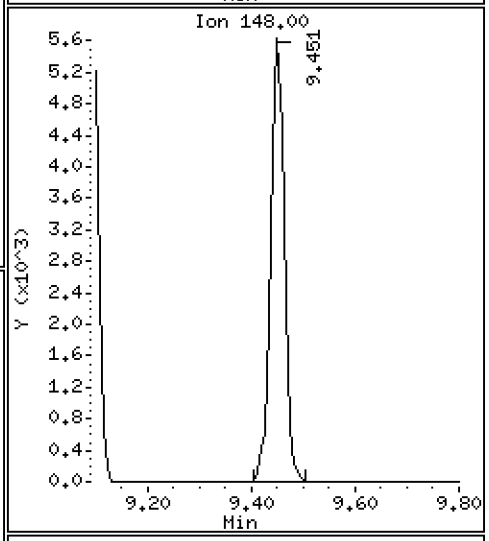
12 1,2-Dichlorobenzene

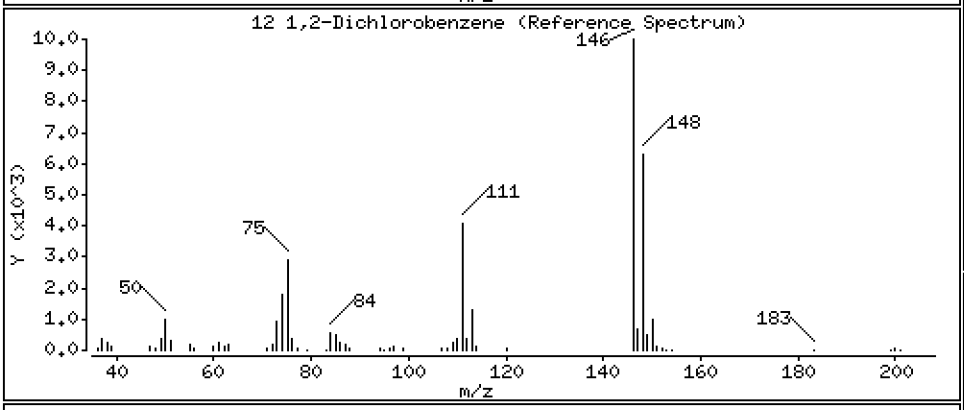
Concentration: 0.2094 ug/mL

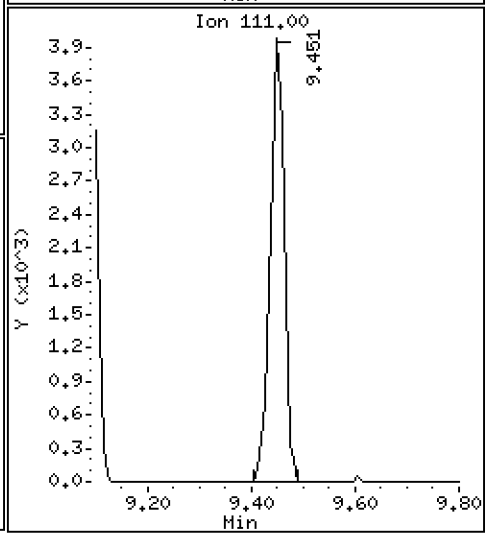


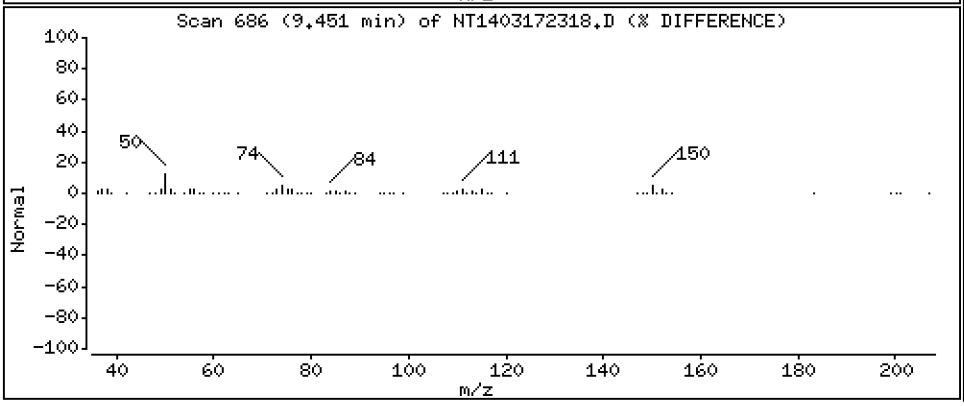












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

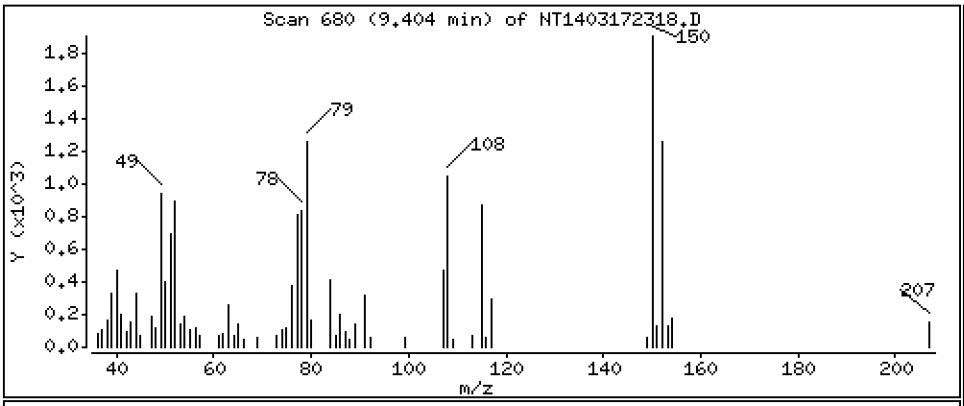
Operator: JGR

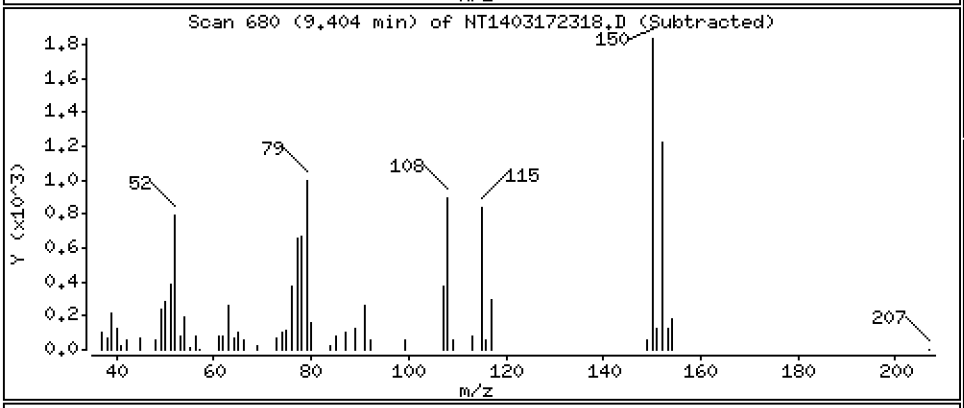
Column phase: ZB-5msi

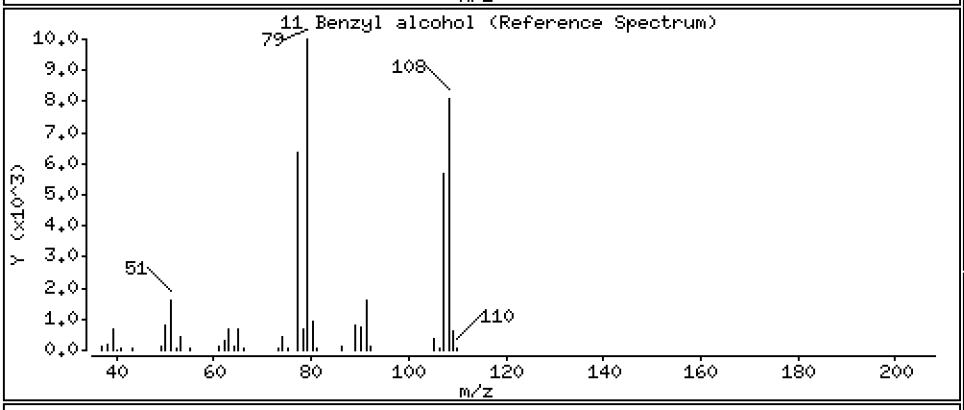
Column diameter: 0.25

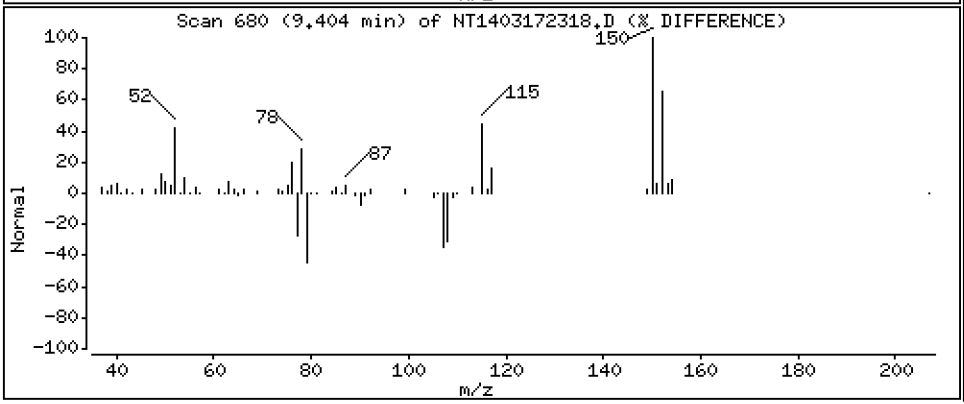
11 Benzyl alcohol

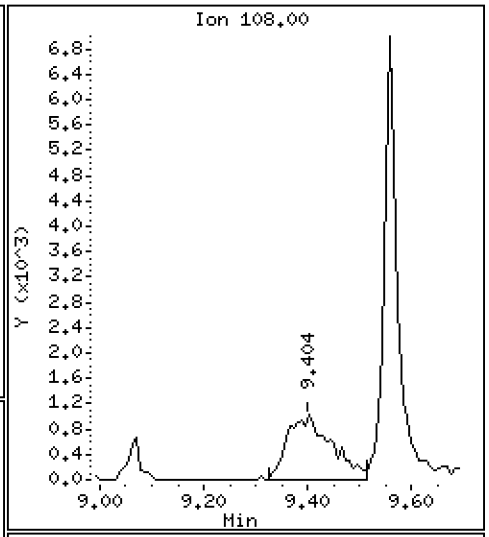
Concentration: 0.1341 ug/mL

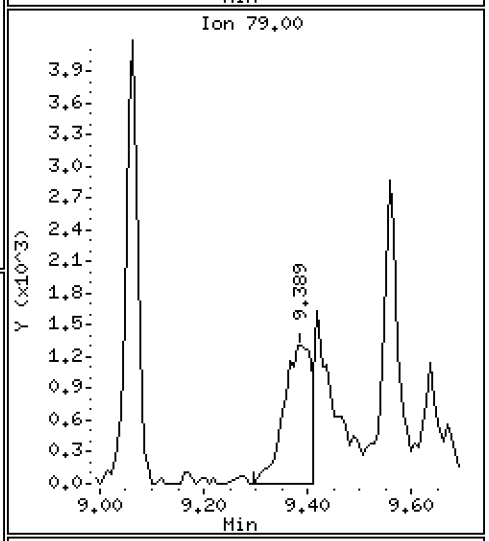


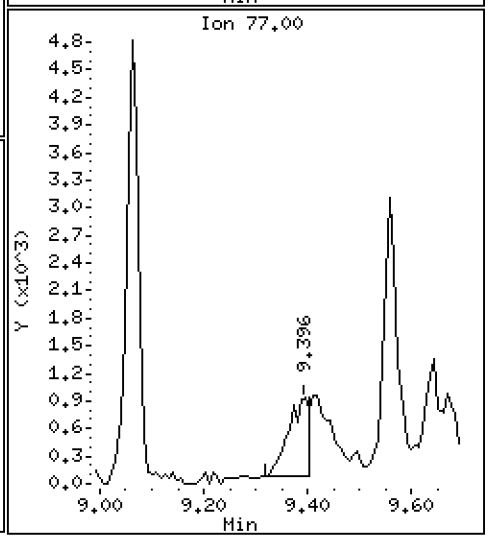












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

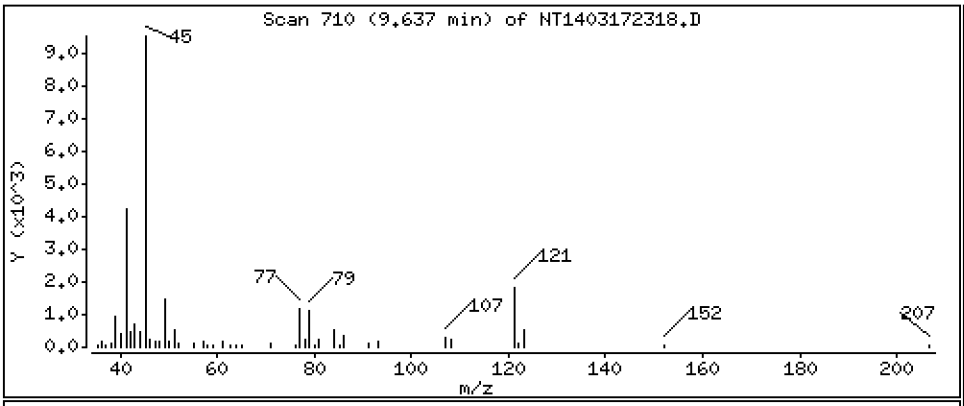
Operator: JGR

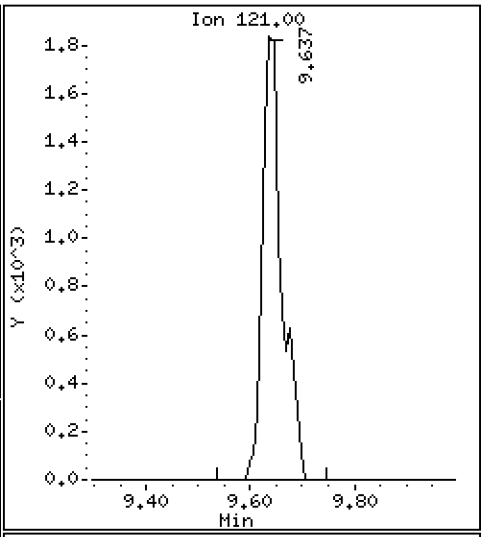
Column phase: ZB-5msi

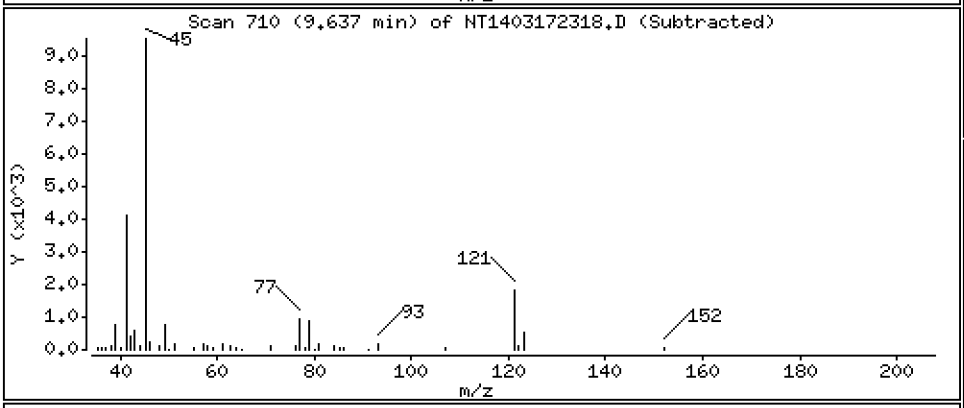
Column diameter: 0.25

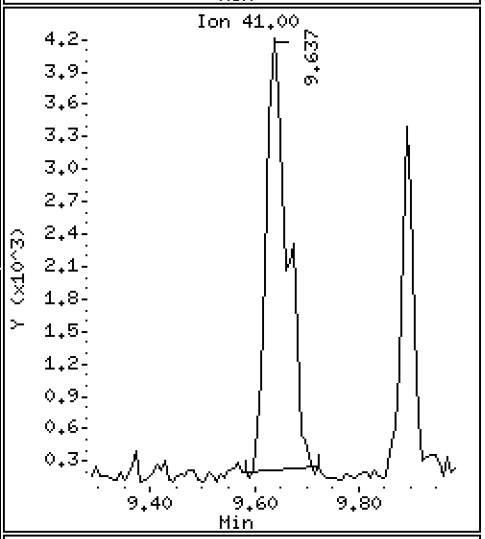
14 2,2'-oxybis(1-Chloropropane)

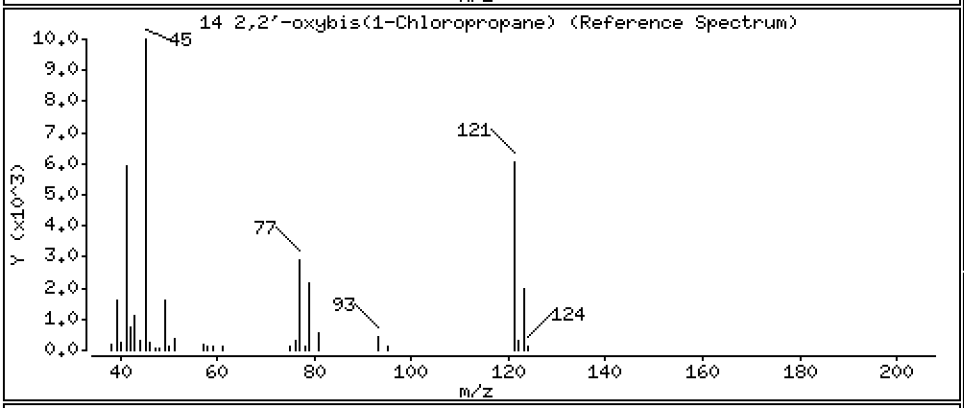
Concentration: 0.2112 ug/mL

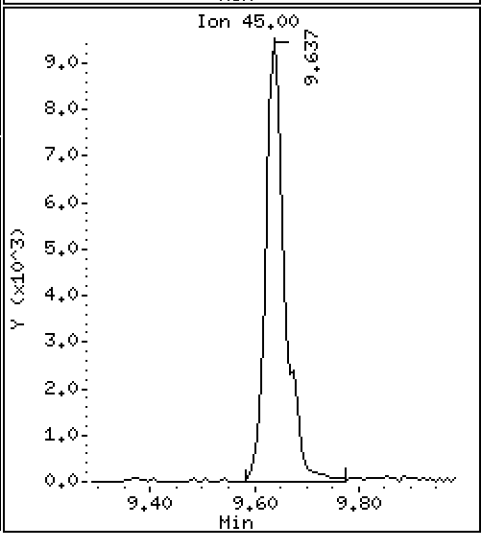


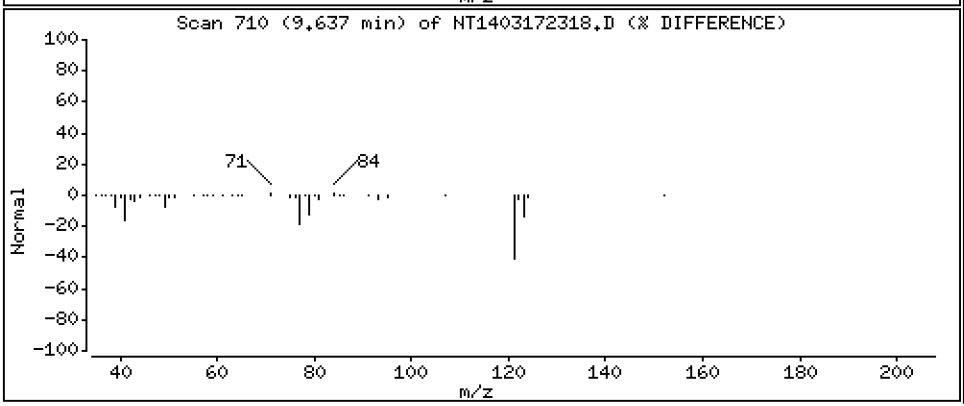












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

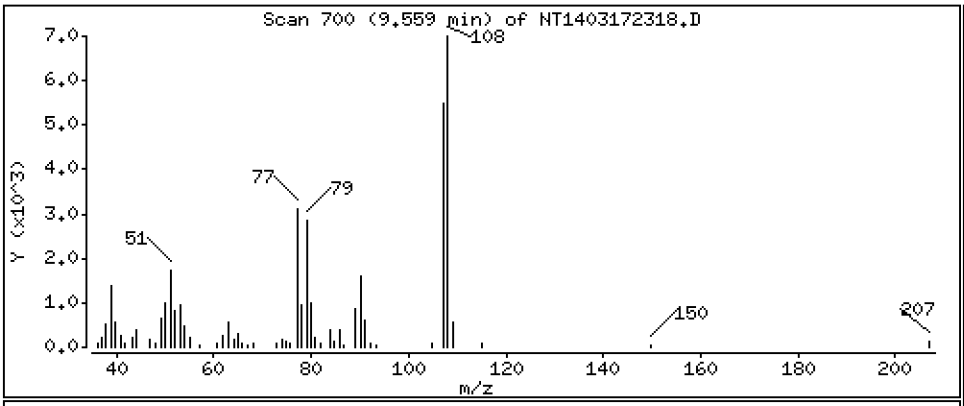
Operator: JGR

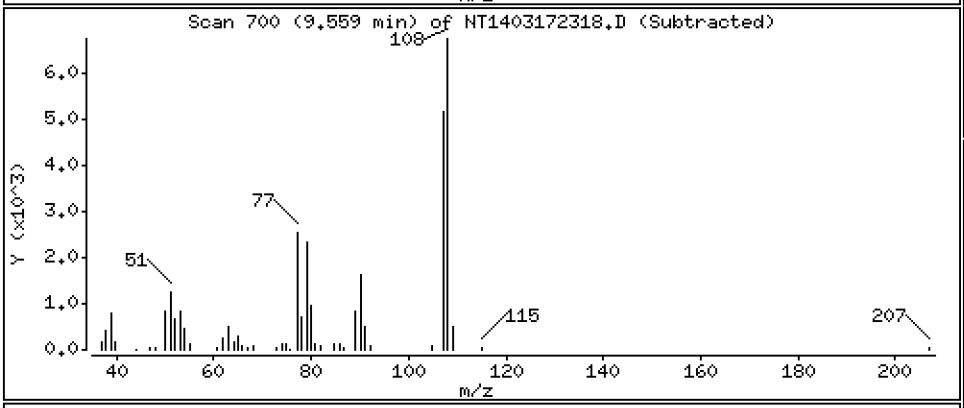
Column phase: ZB-5msi

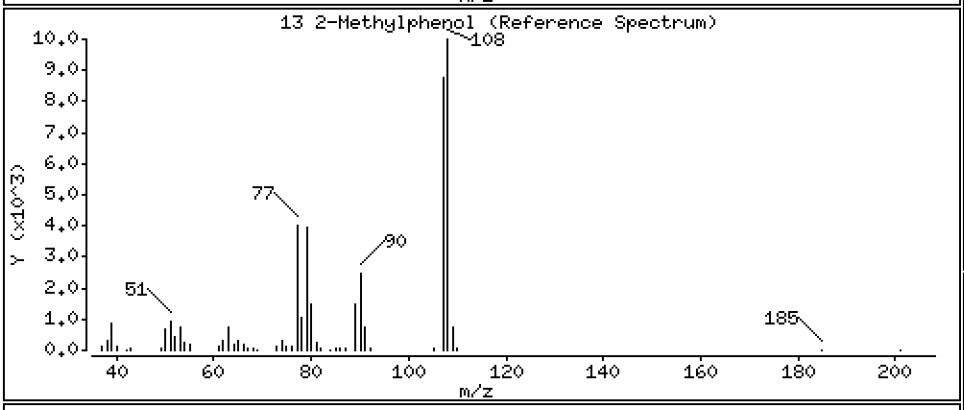
Column diameter: 0.25

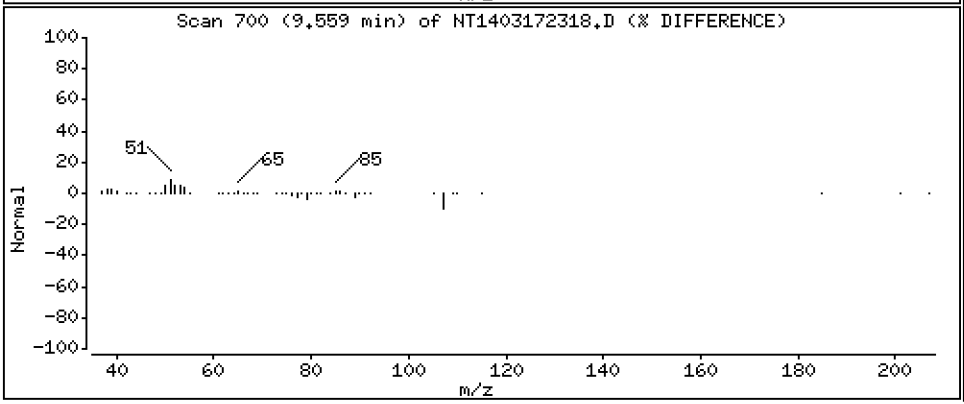
13 2-Methylphenol

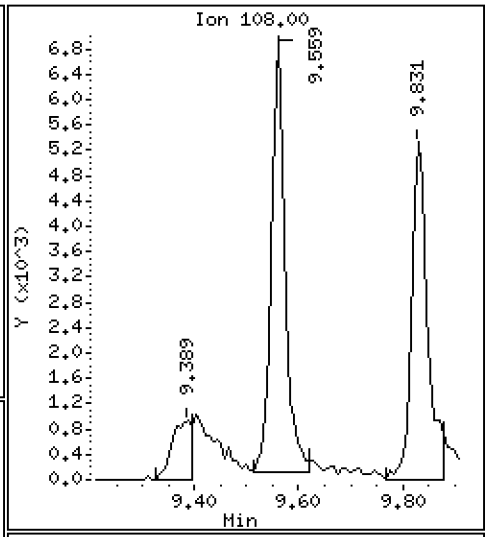
Concentration: 0.1749 ug/mL

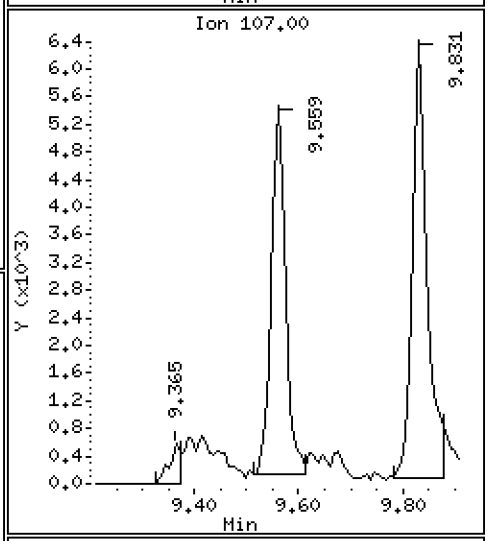


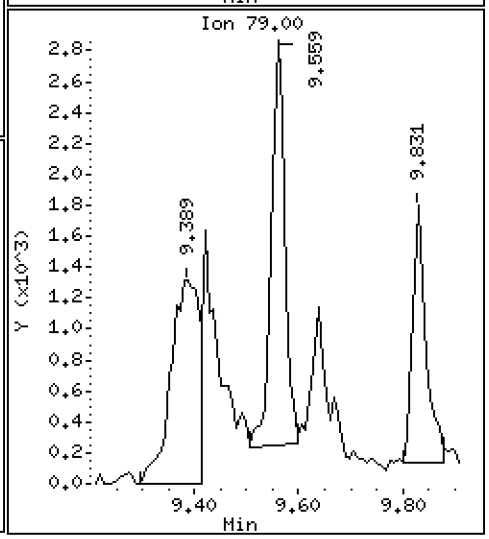












Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172318.D

Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

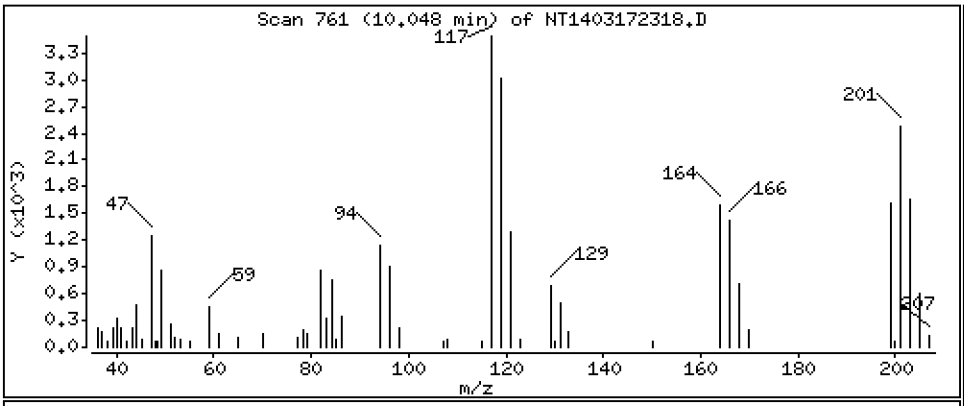
Operator: JGR

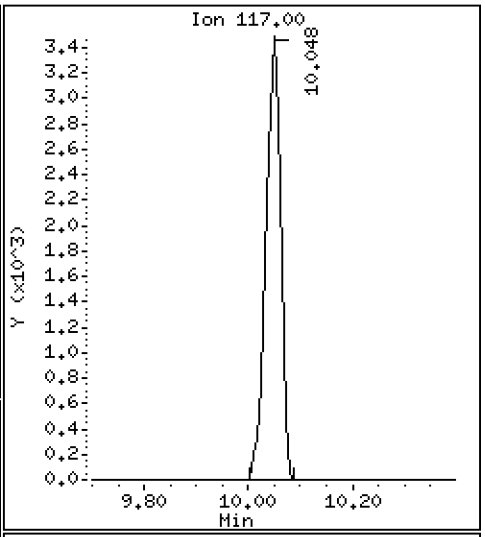
Column phase: ZB-5msi

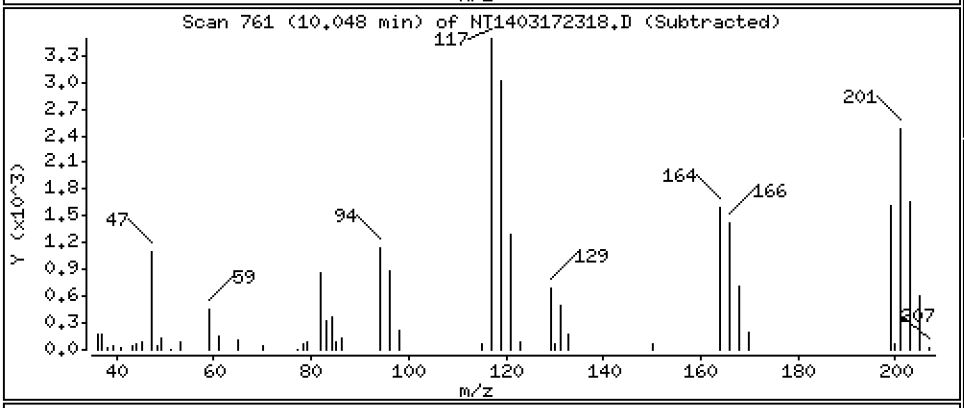
Column diameter: 0.25

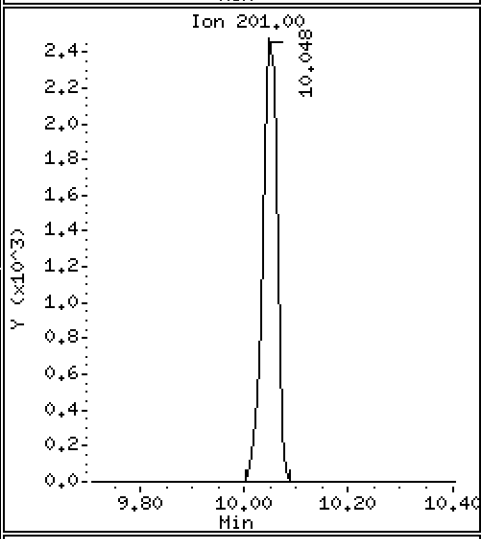
17 Hexachloroethane

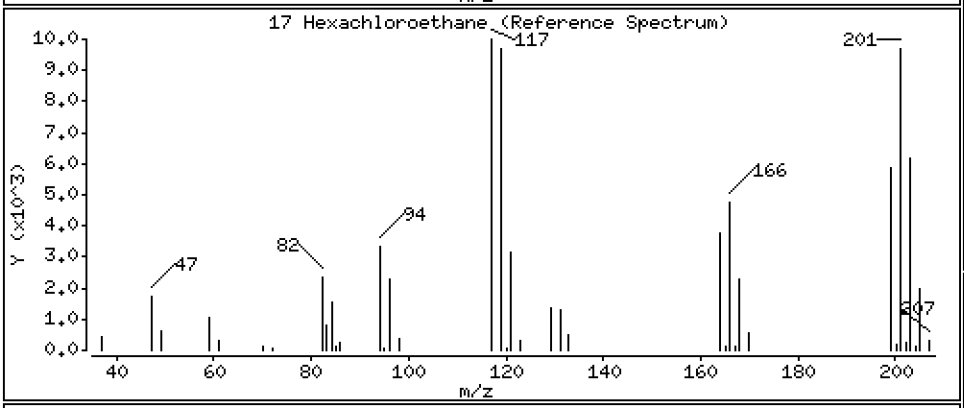
Concentration: 0.2068 ug/mL

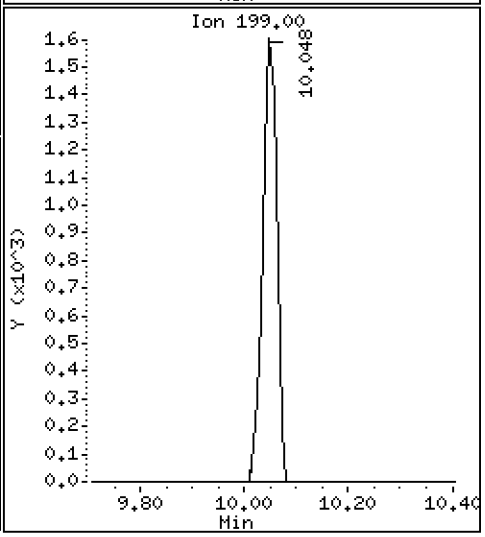


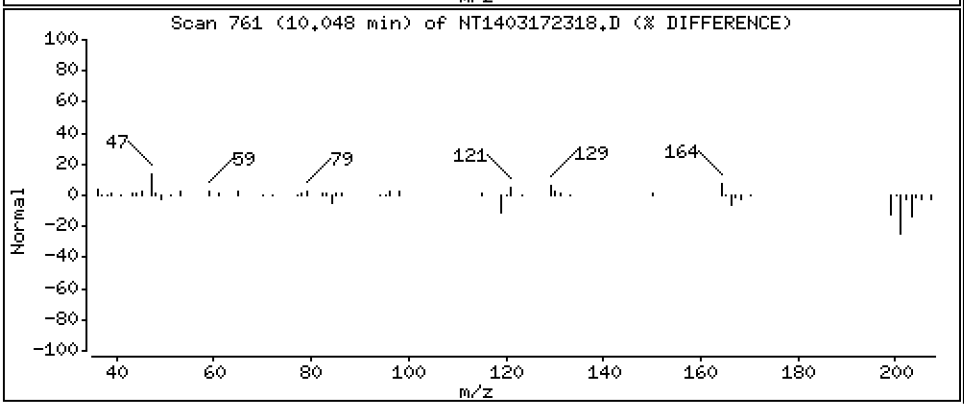












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

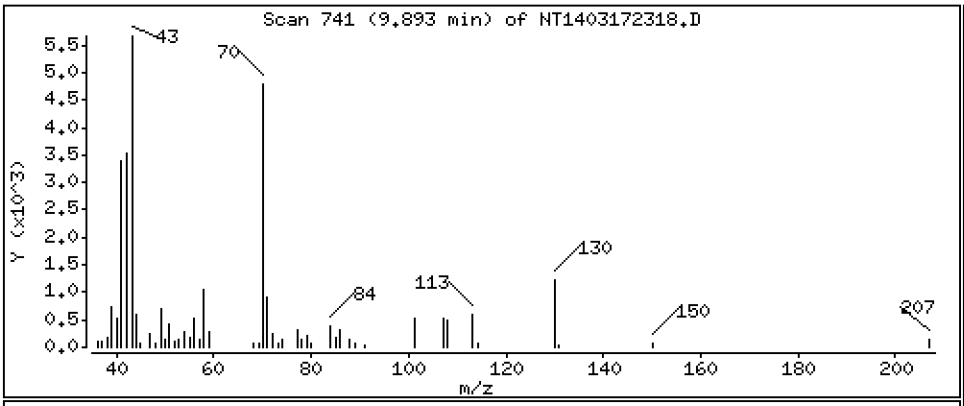
Operator: JGR

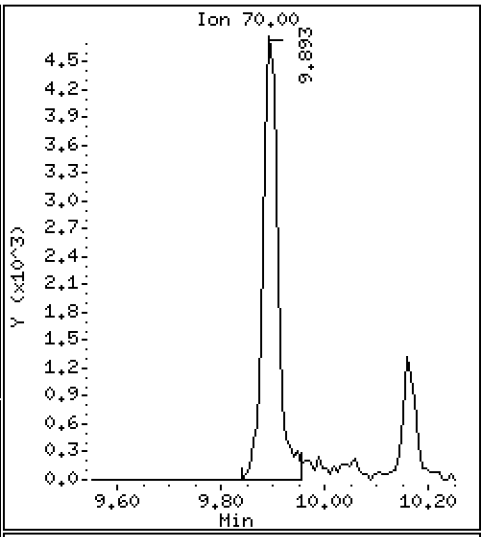
Column phase: ZB-5msi

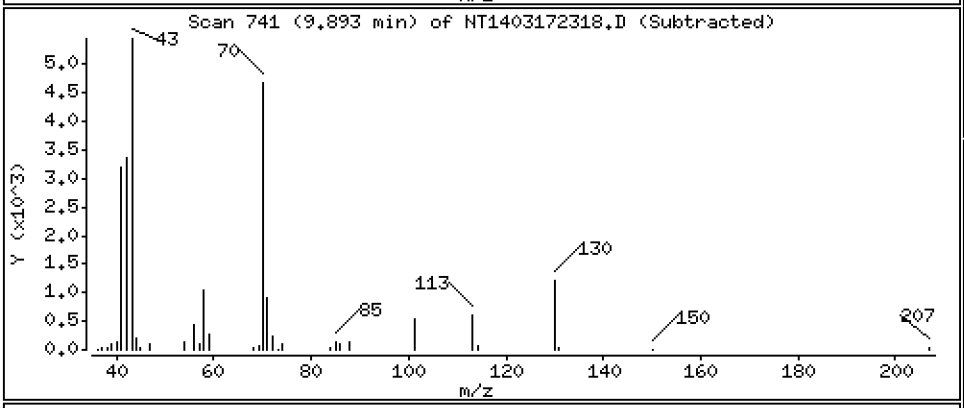
Column diameter: 0.25

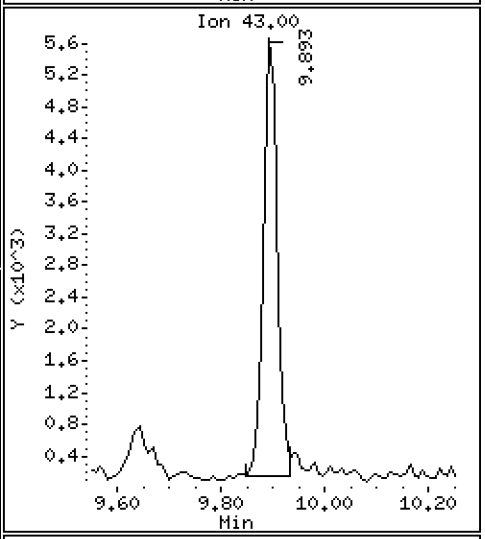
16 N-Nitroso-di-n-propylamine

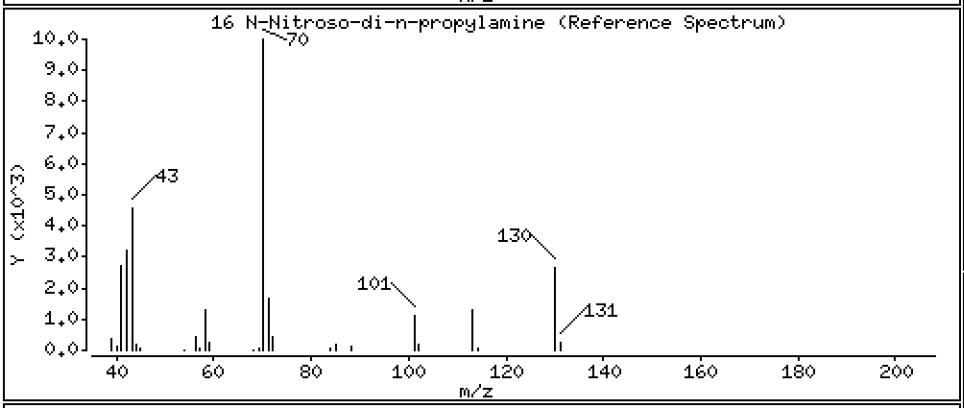
Concentration: 0.1717 ug/mL

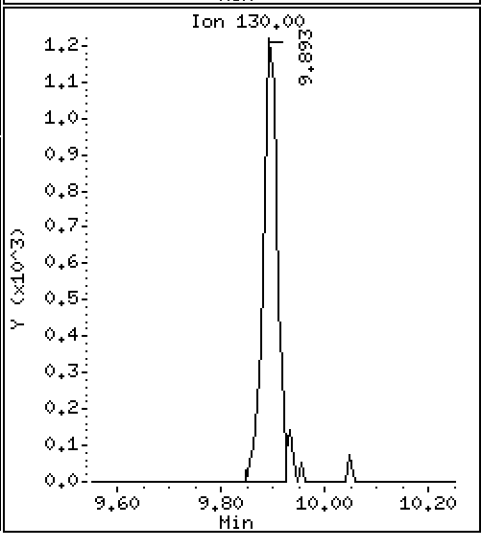


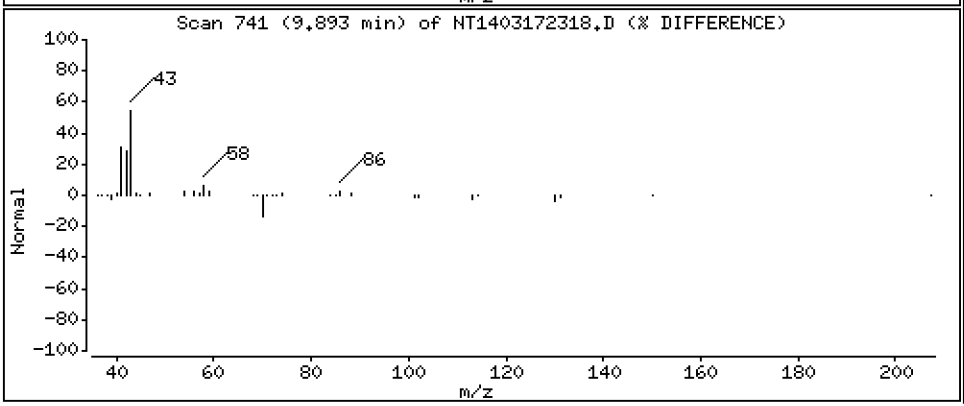












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

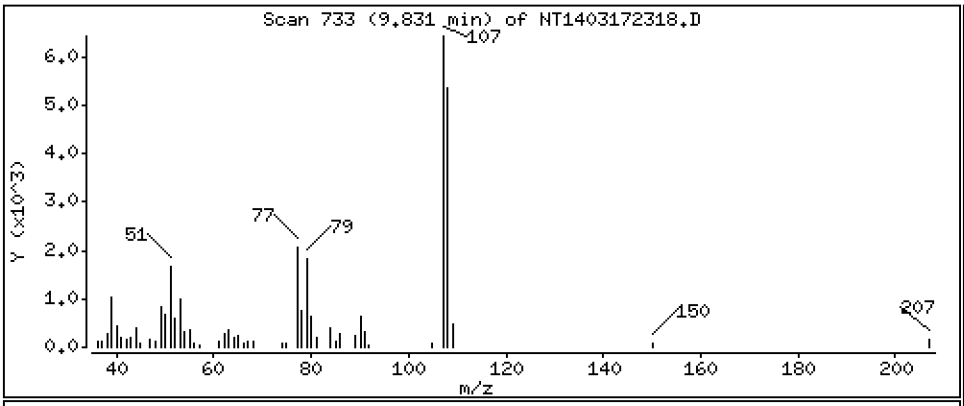
Operator: JGR

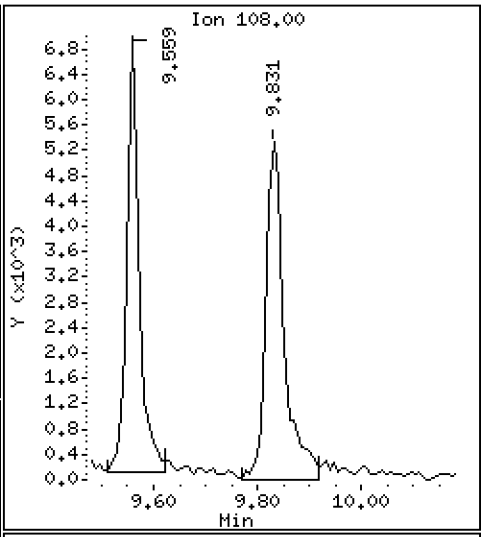
Column phase: ZB-5msi

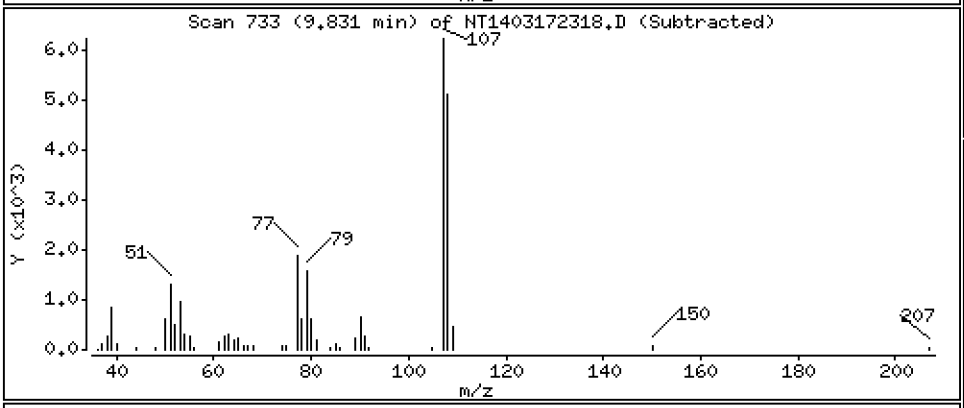
Column diameter: 0.25

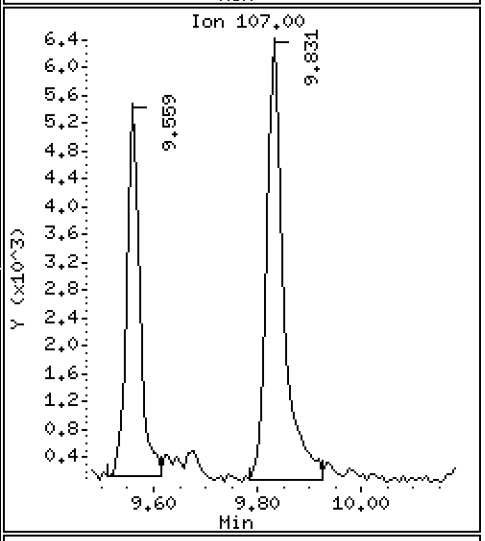
15 4-Methylphenol

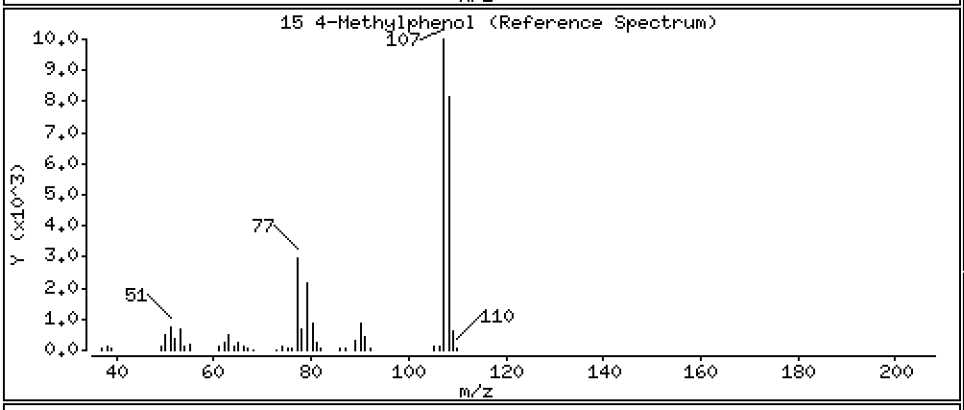
Concentration: 0.1578 ug/mL

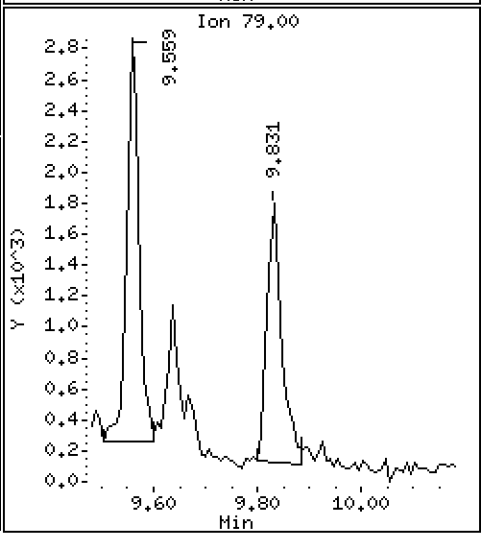


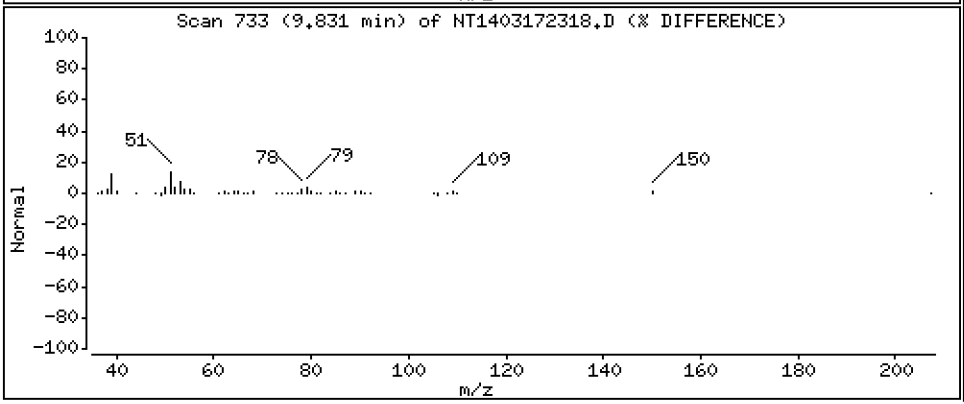












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

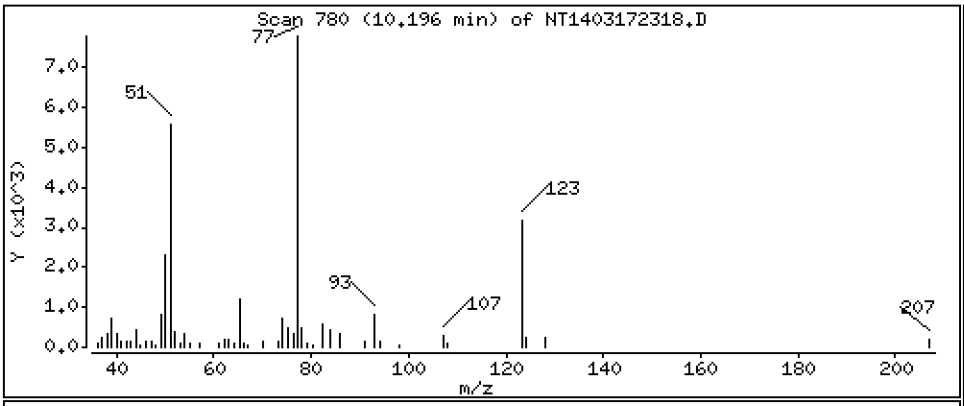
Operator: JGR

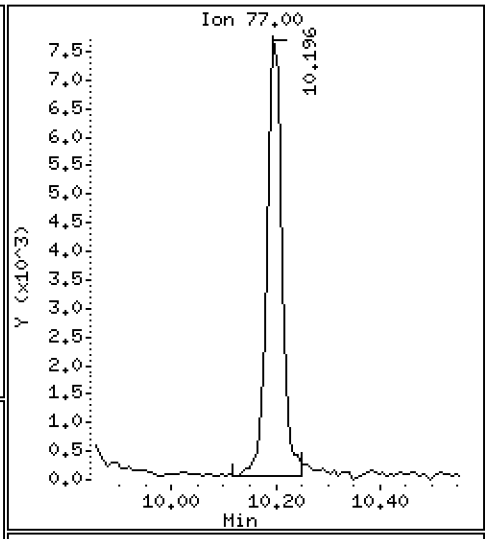
Column phase: ZB-5msi

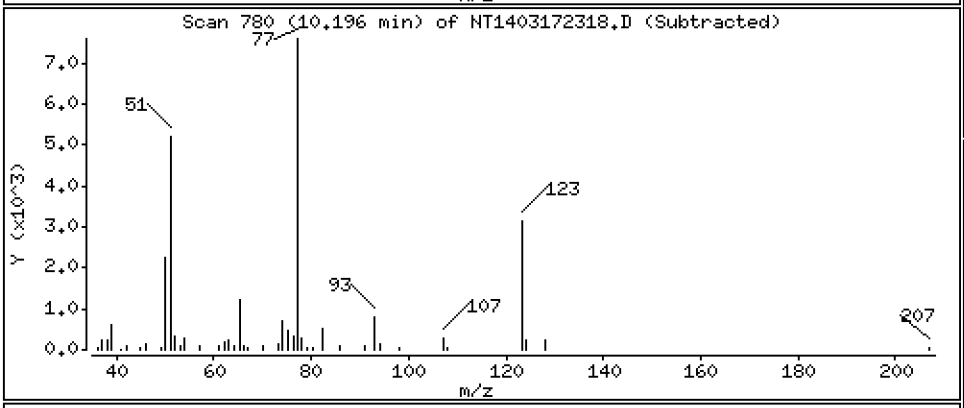
Column diameter: 0.25

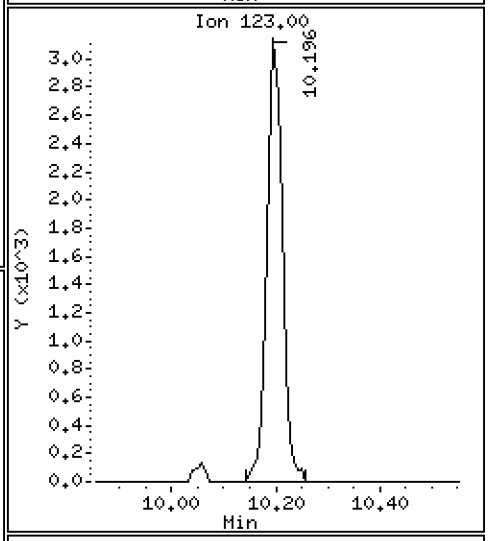
19 Nitrobenzene

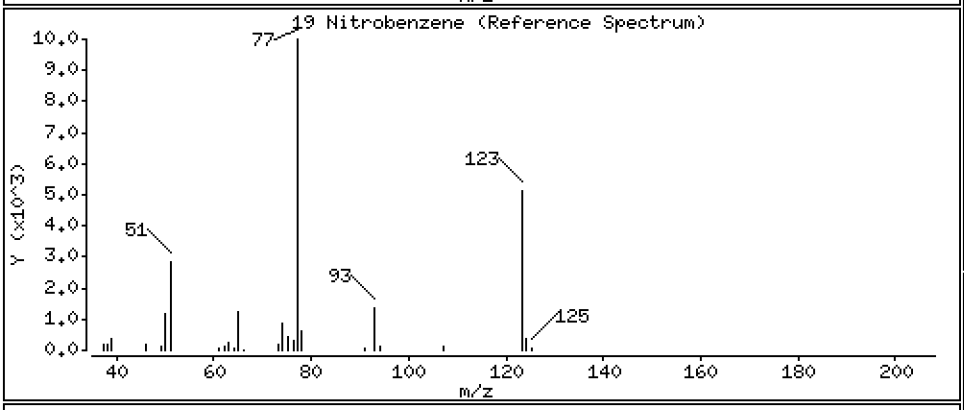
Concentration: 0.1856 ug/mL

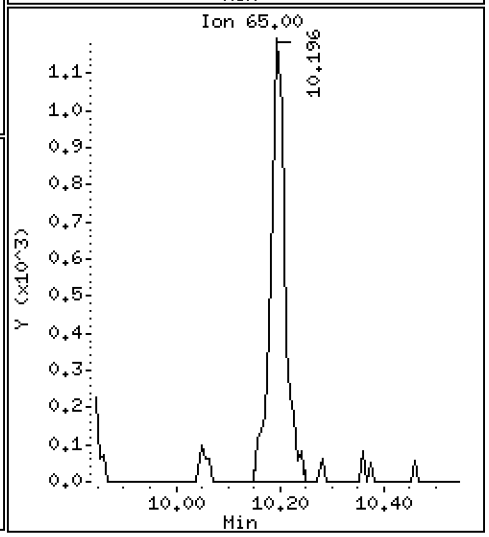


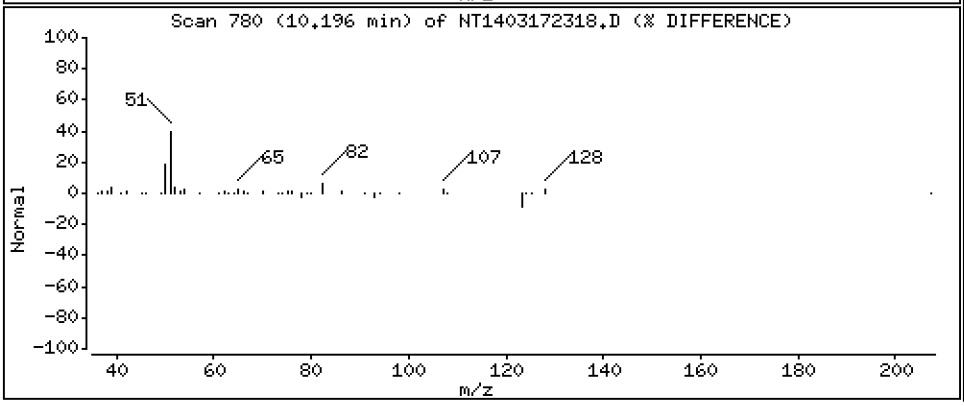












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

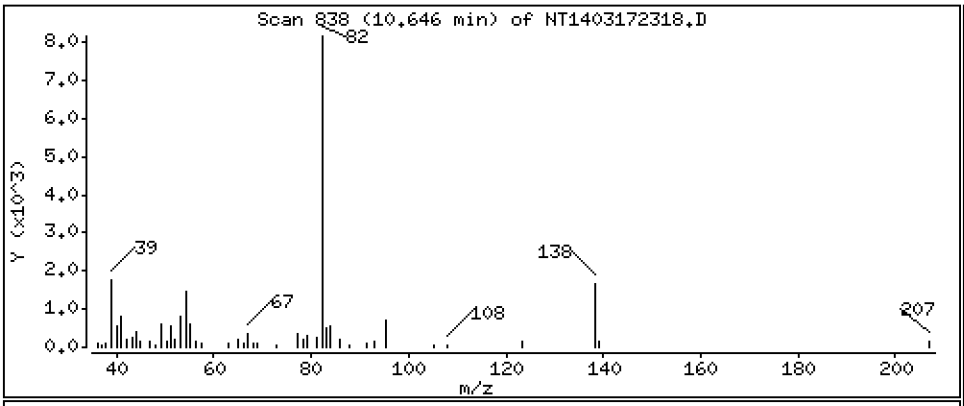
Operator: JGR

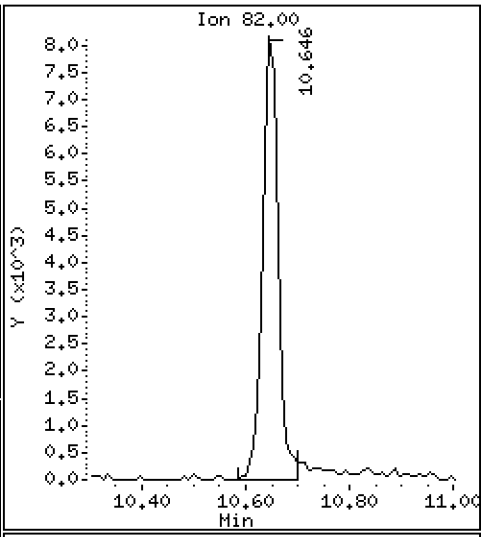
Column phase: ZB-5msi

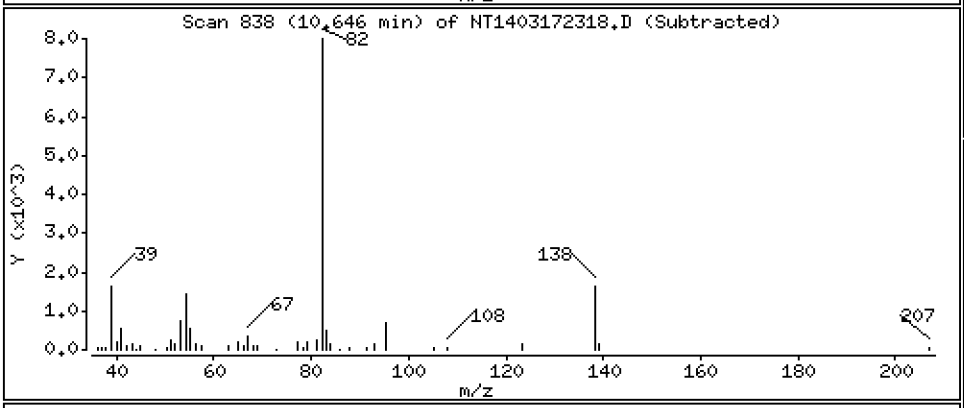
Column diameter: 0.25

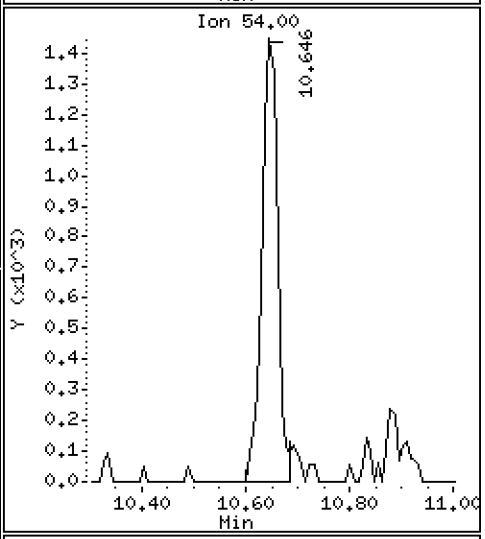
20 Isophorone

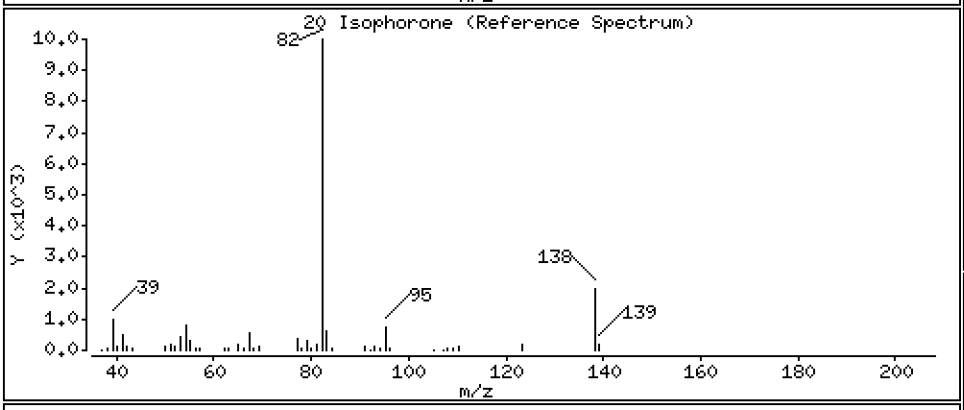
Concentration: 0.1499 ug/mL

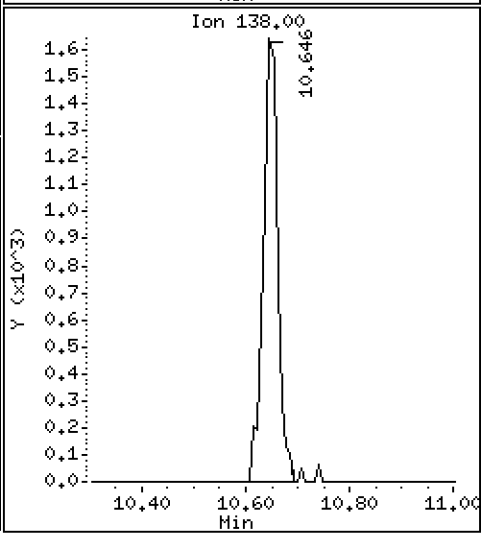


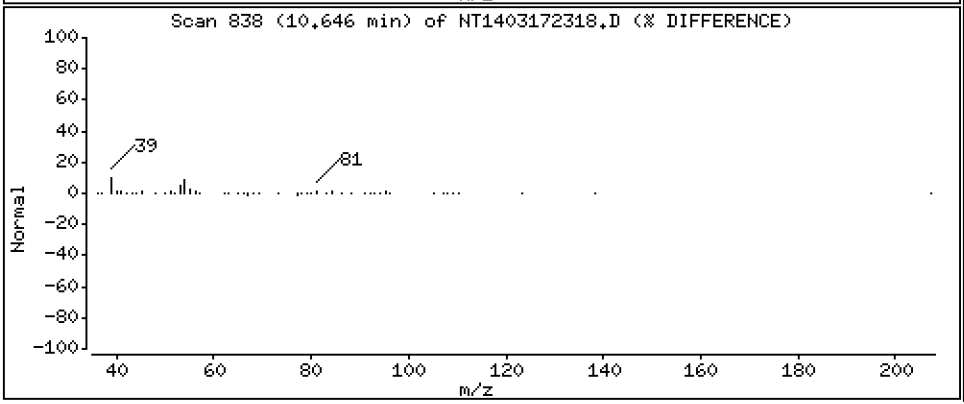












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

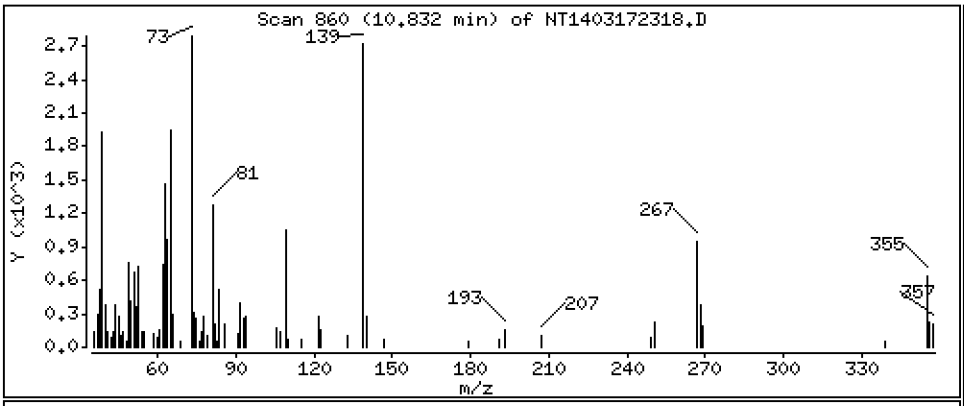
Operator: JGR

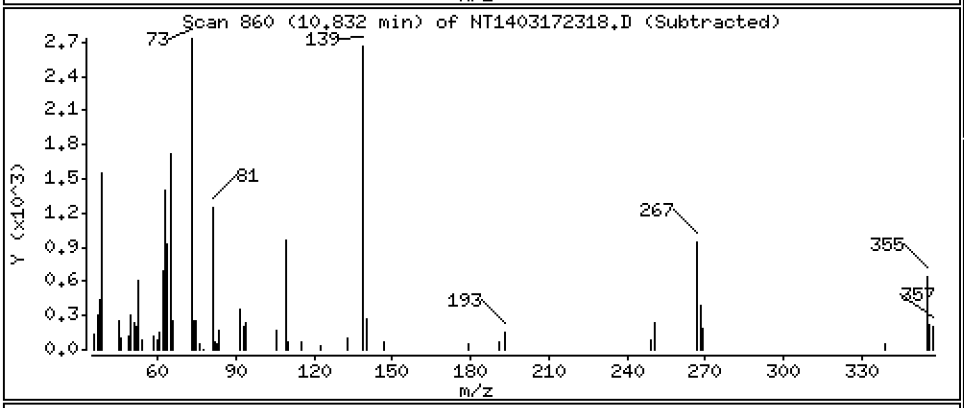
Column phase: ZB-5msi

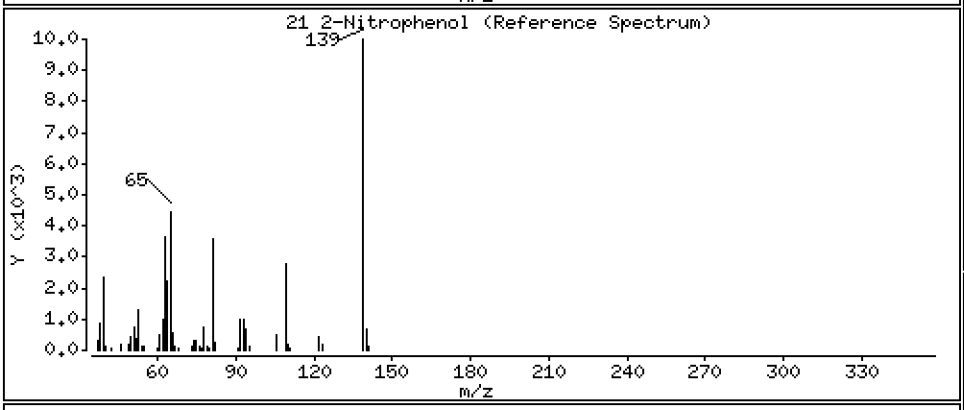
Column diameter: 0.25

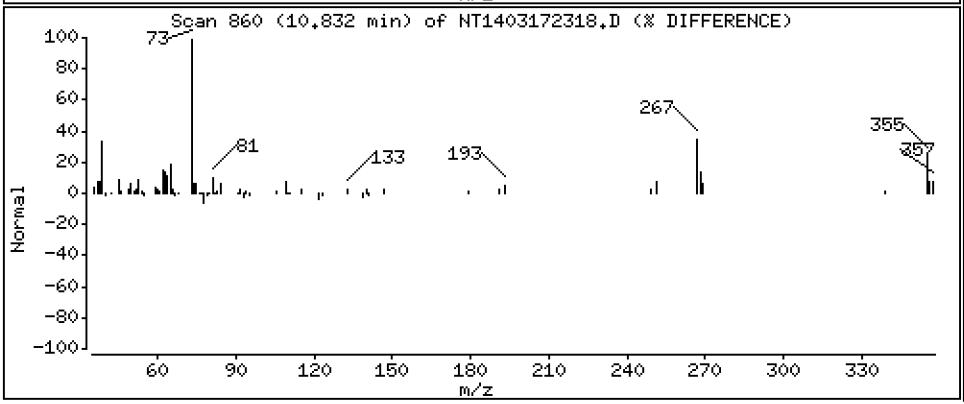
21 2-Nitrophenol

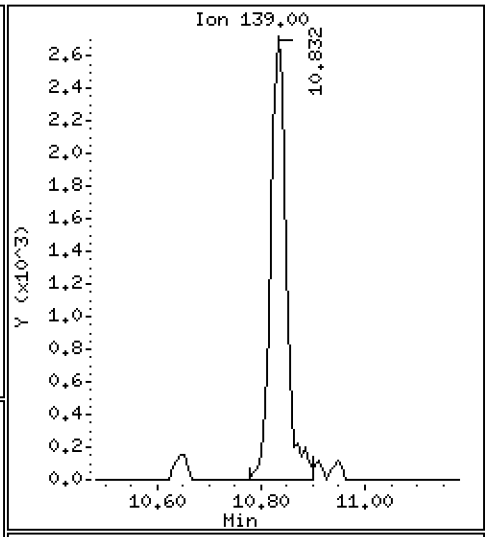
Concentration: 0.1226 ug/mL

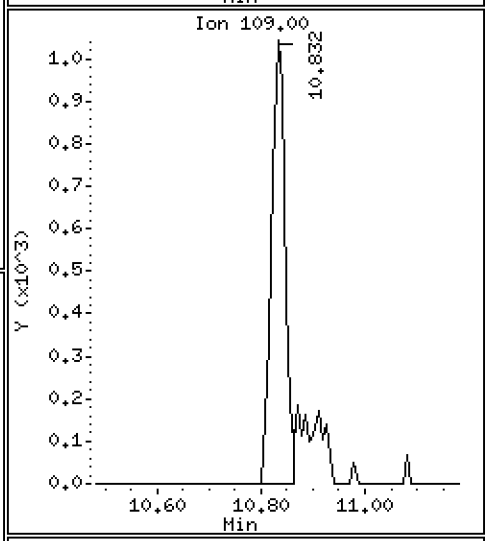


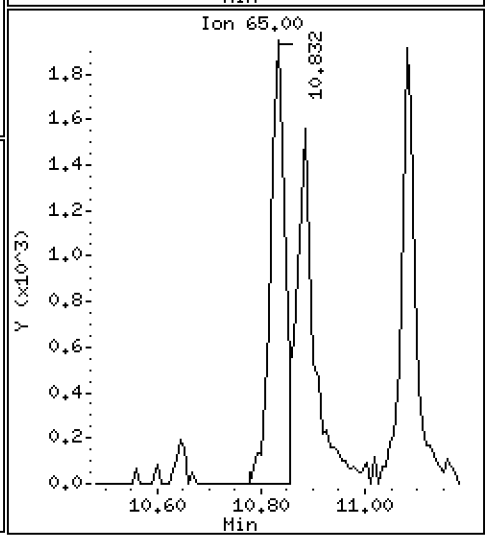












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

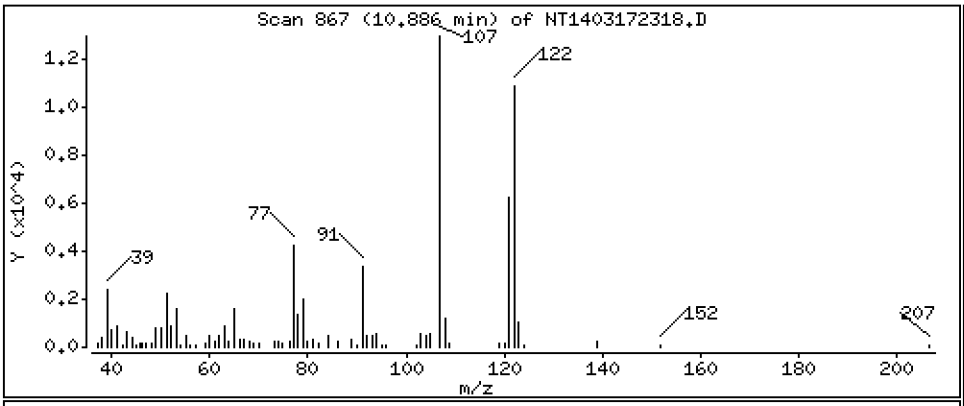
Operator: JGR

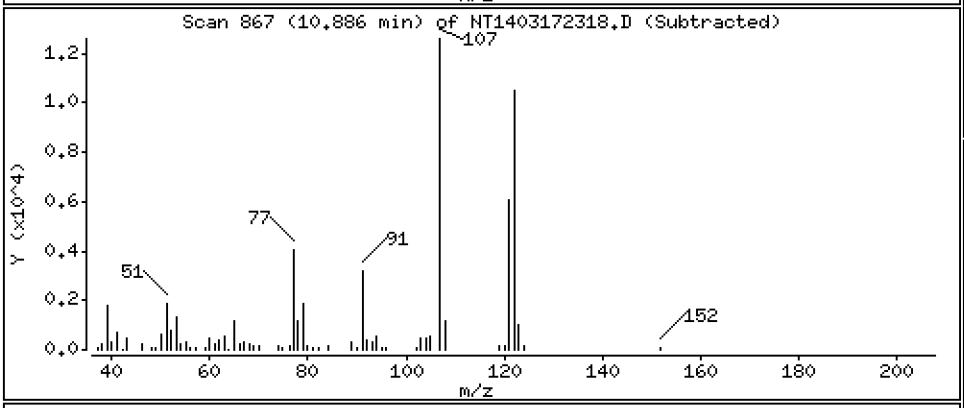
Column phase: ZB-5msi

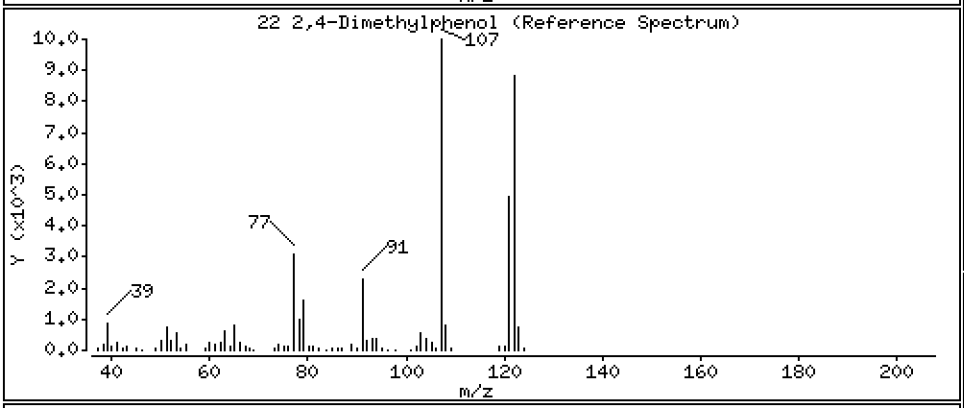
Column diameter: 0.25

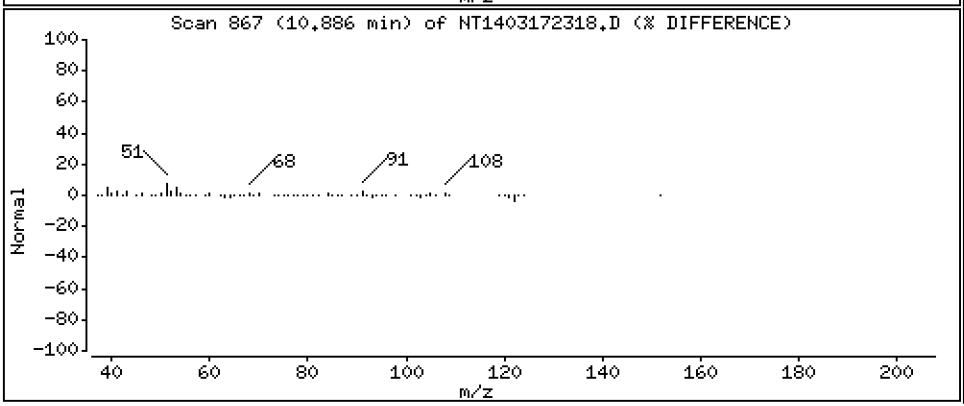
22 2,4-Dimethylphenol

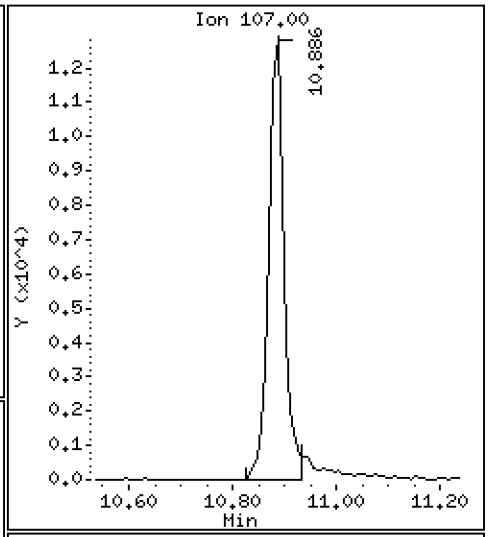
Concentration: 0.3712 ug/mL

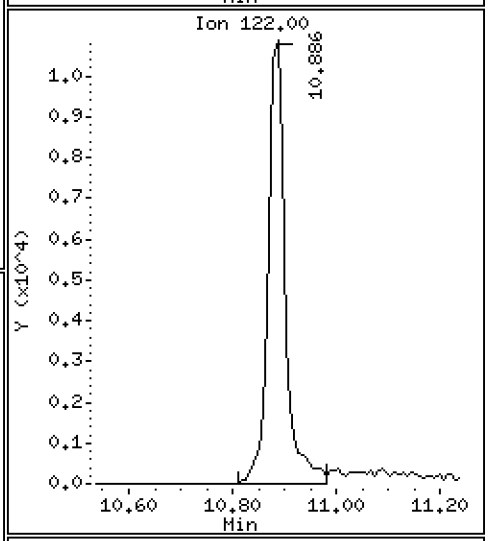


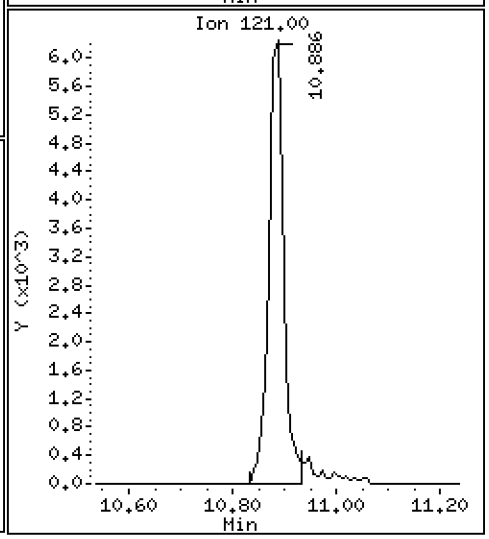












Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172318.D

Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

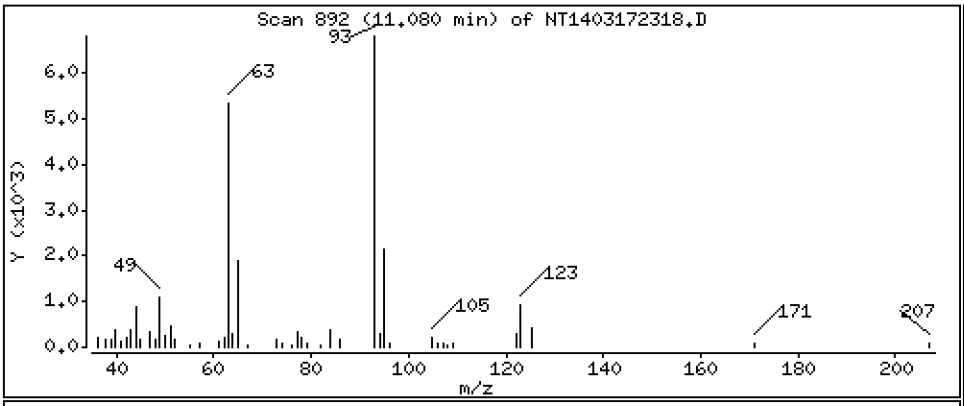
Operator: JGR

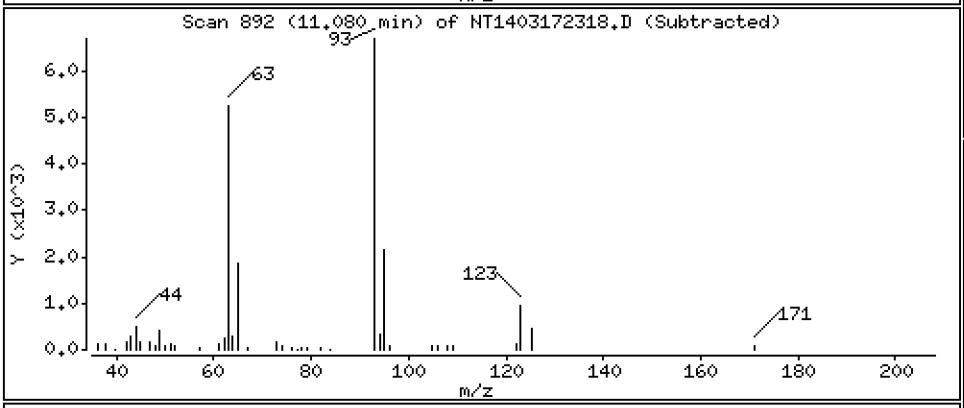
Column phase: ZB-5msi

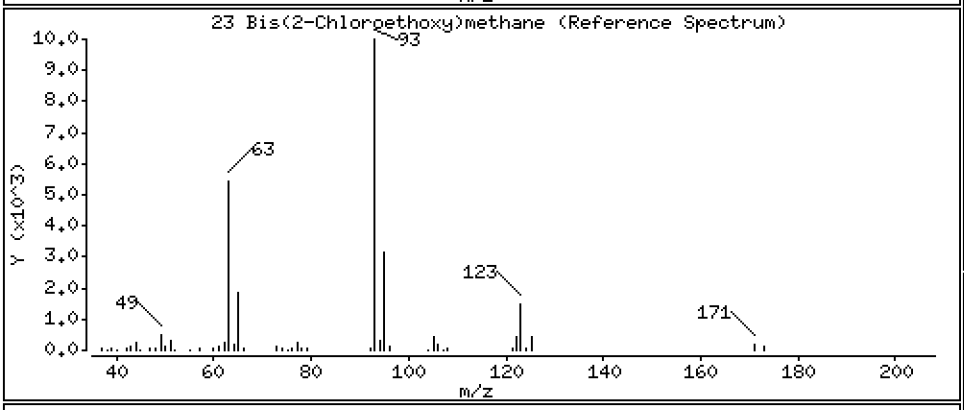
Column diameter: 0.25

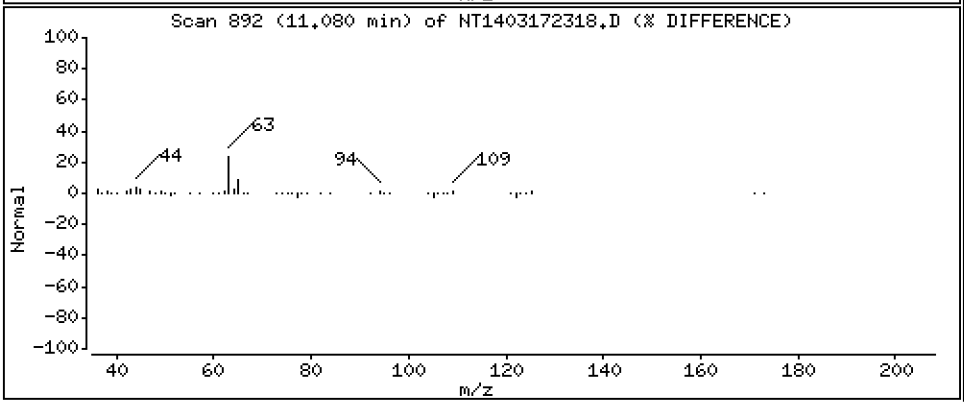
23 Bis(2-Chloroethoxy)methane

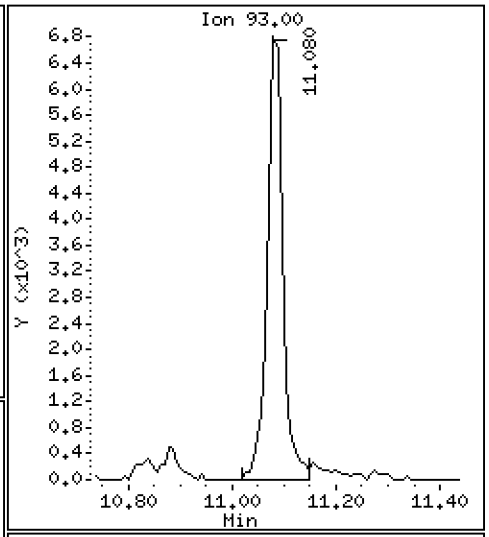
Concentration: 0.1857 ug/mL

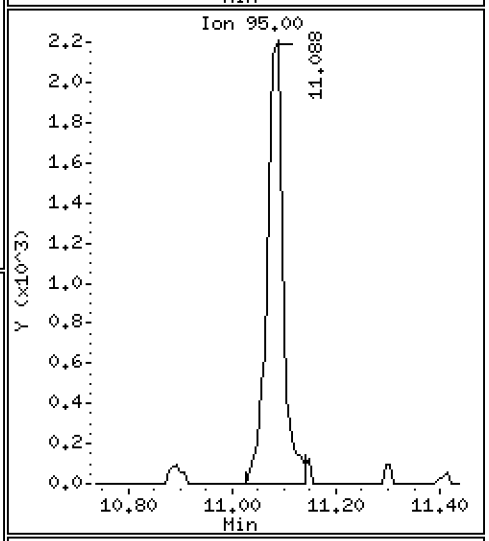


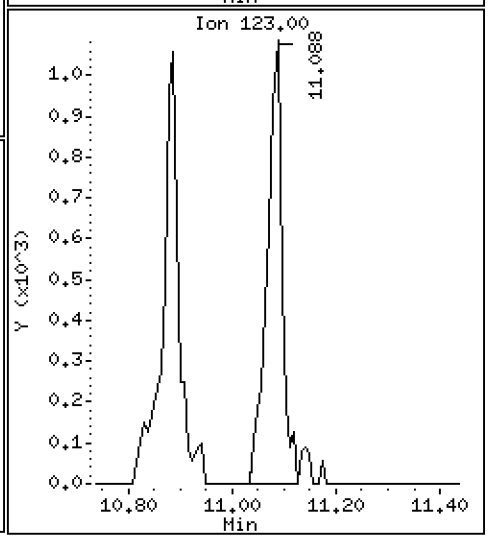












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

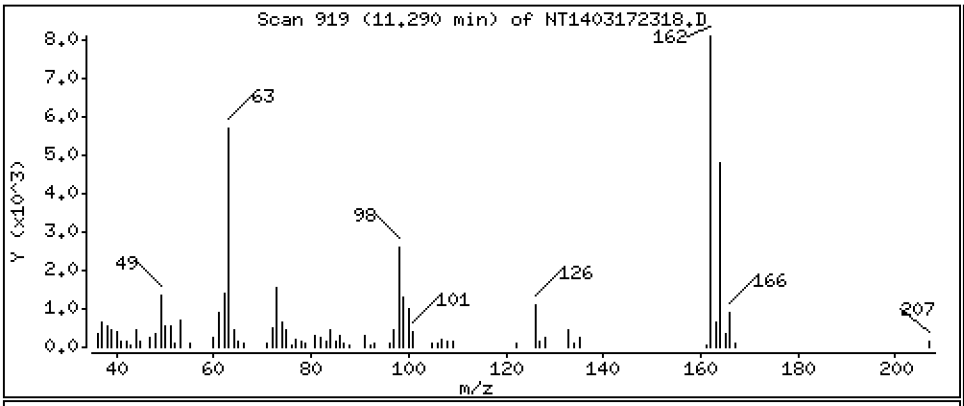
Operator: JGR

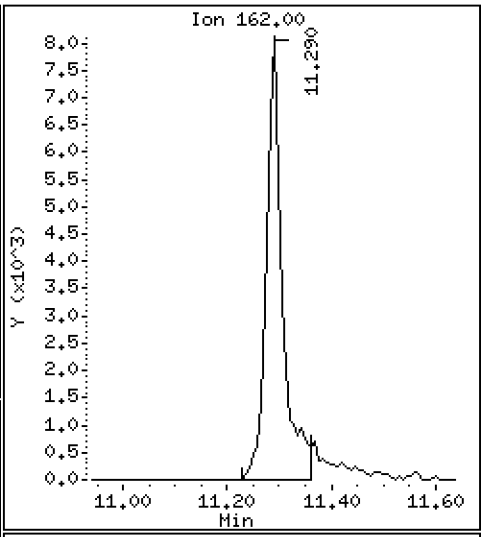
Column phase: ZB-5msi

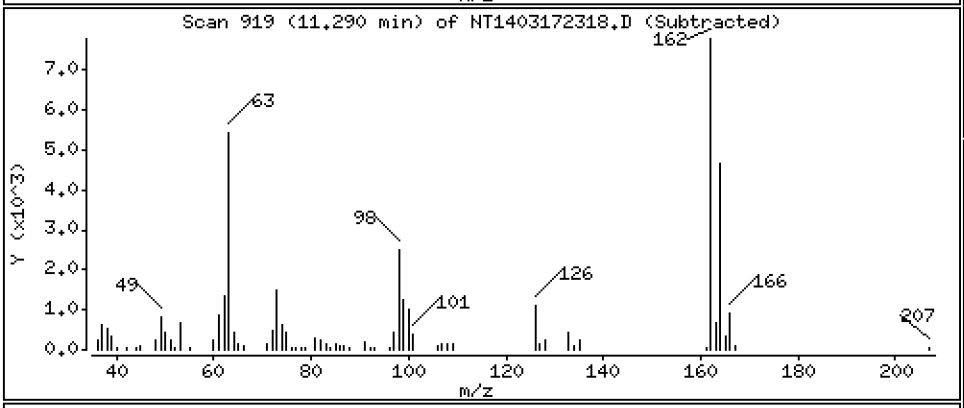
Column diameter: 0.25

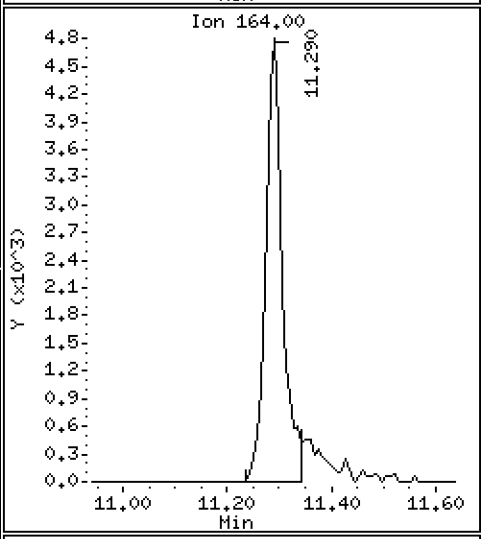
25 2,4-Dichlorophenol

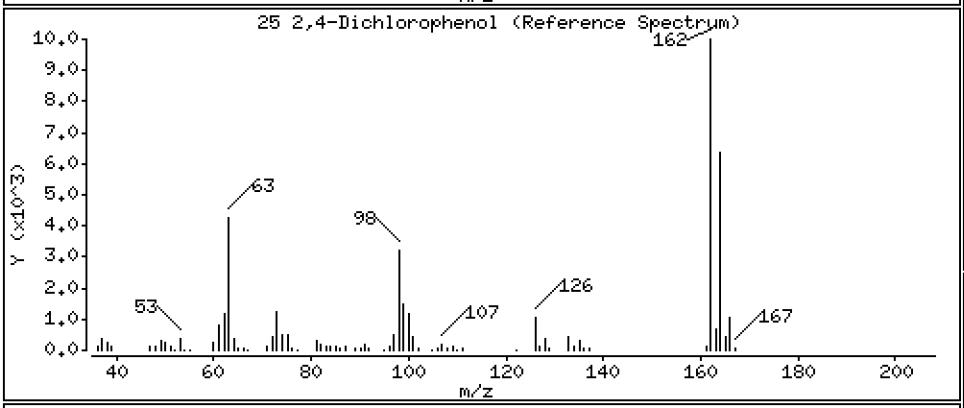
Concentration: 0.3147 ug/mL

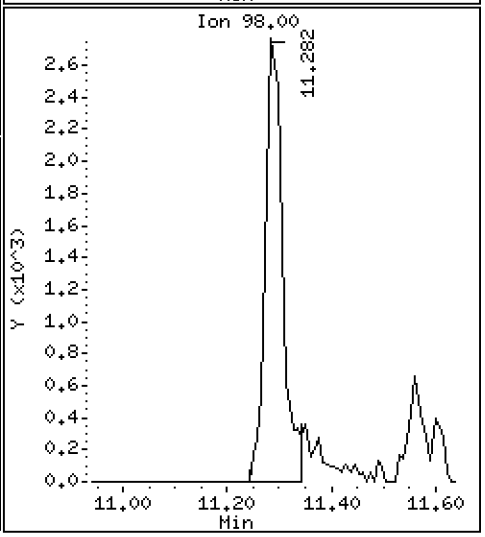


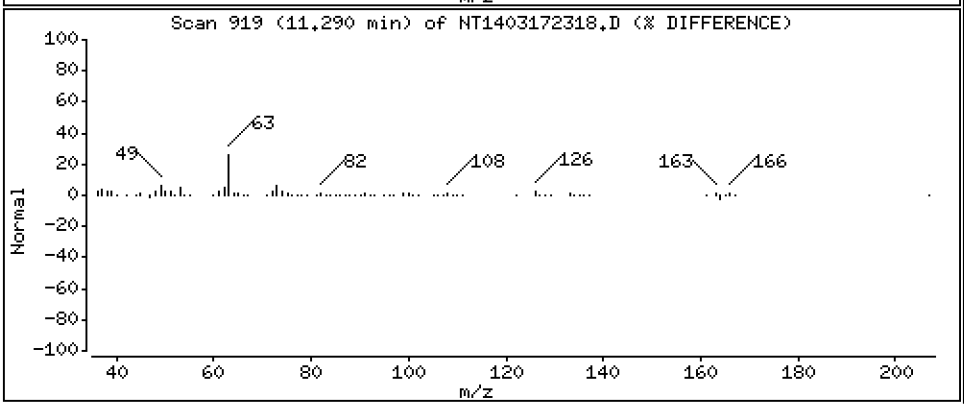












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

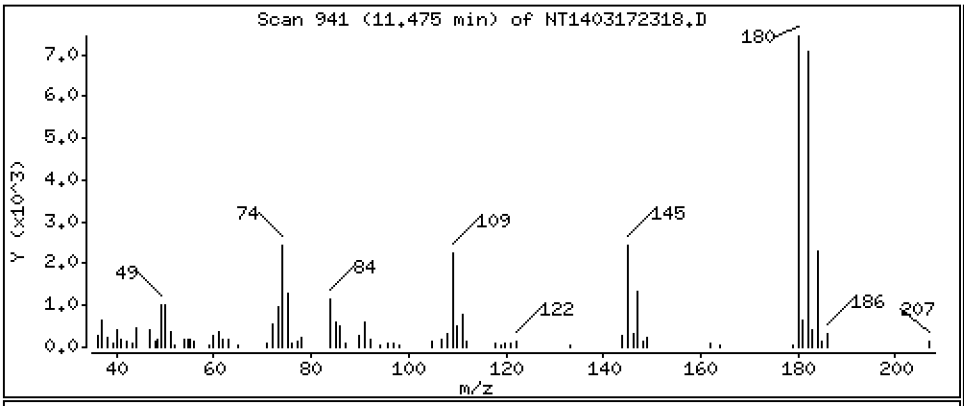
Operator: JGR

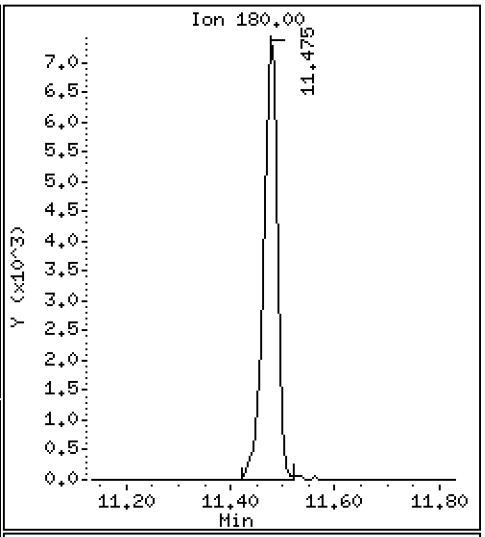
Column phase: ZB-5msi

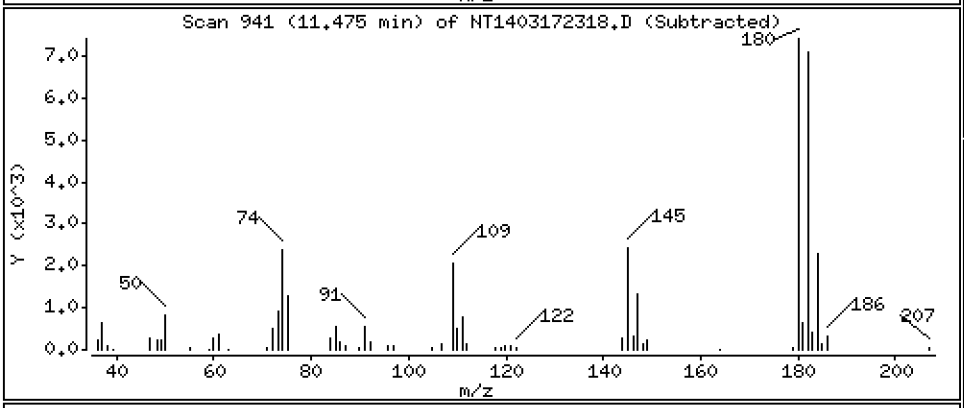
Column diameter: 0.25

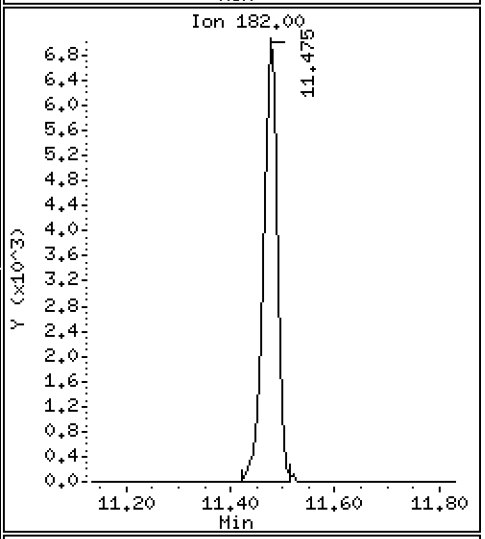
26 1,2,4-Trichlorobenzene

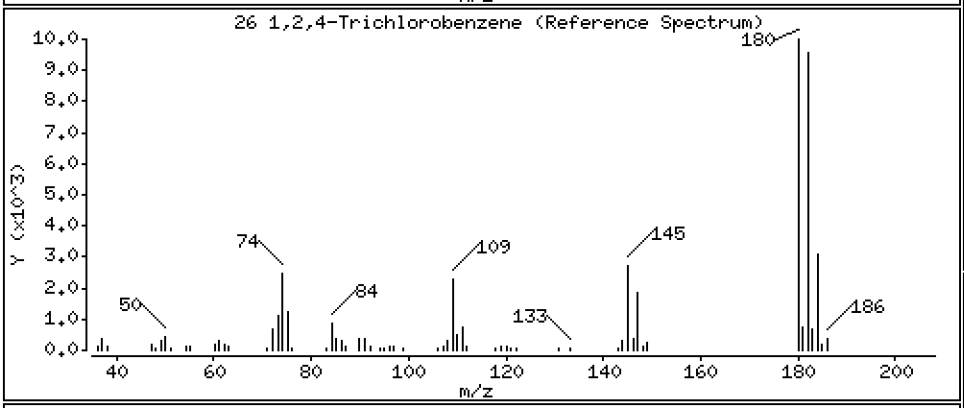
Concentration: 0.1956 ug/mL

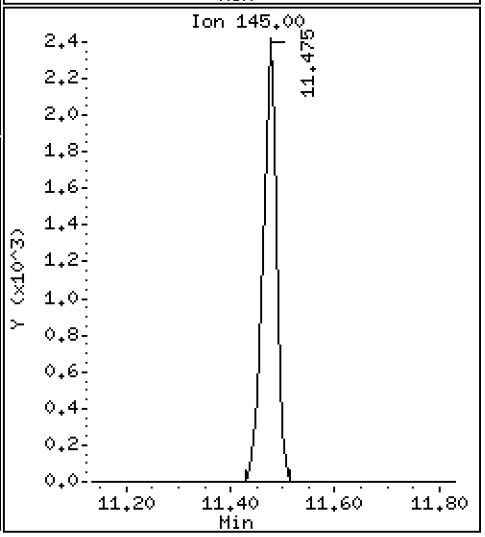


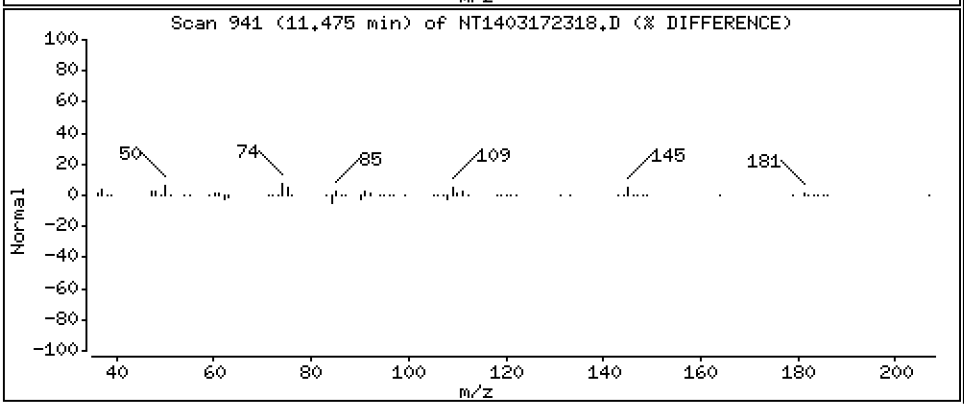












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

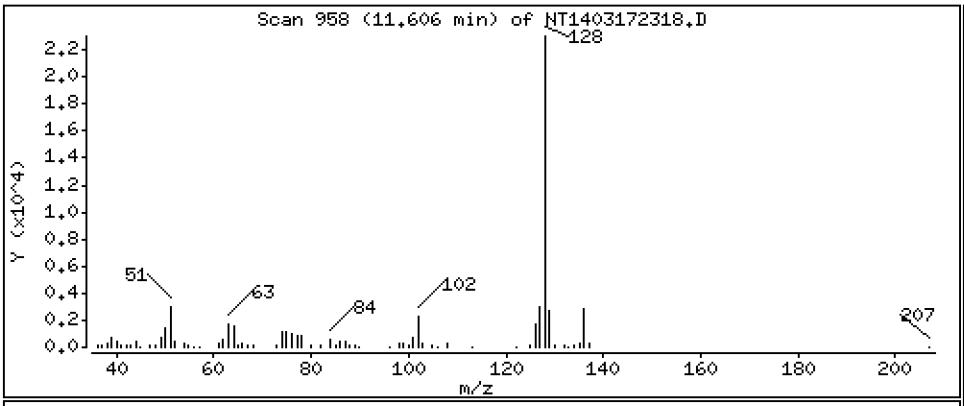
Operator: JGR

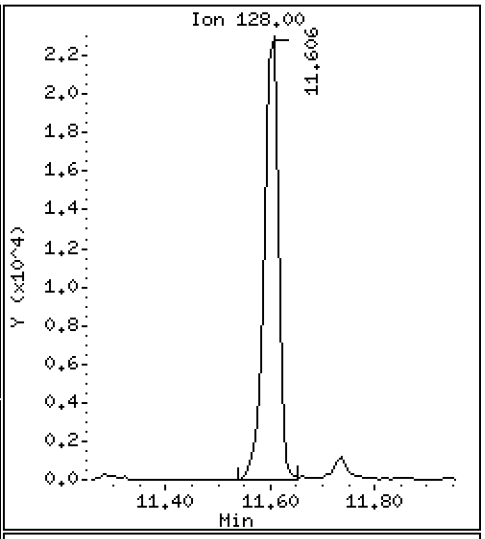
Column phase: ZB-5msi

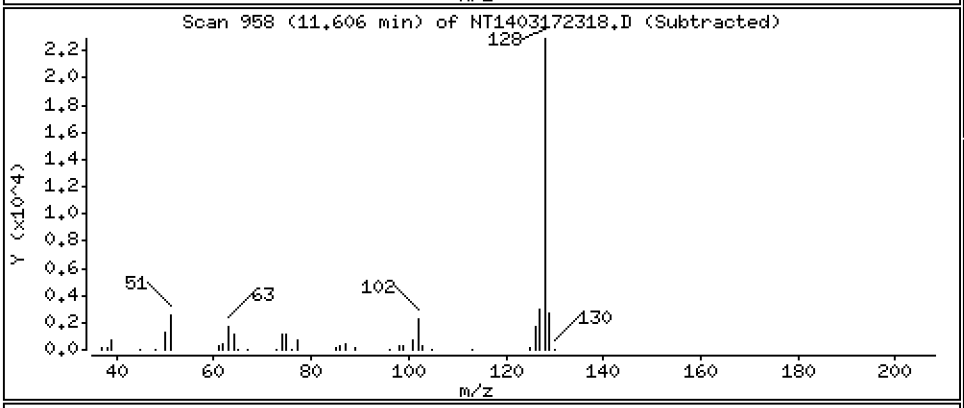
Column diameter: 0.25

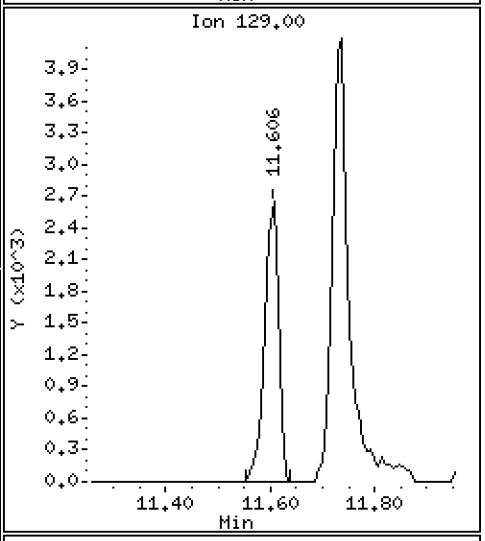
28 Naphthalene

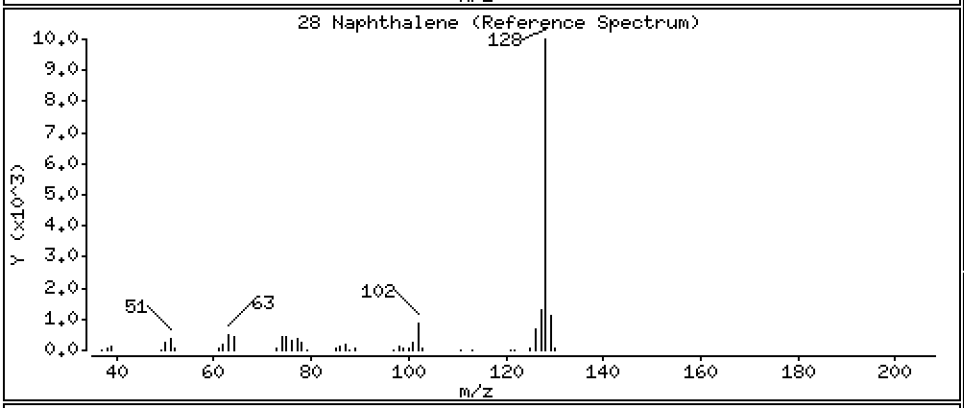
Concentration: 0.2019 ug/mL

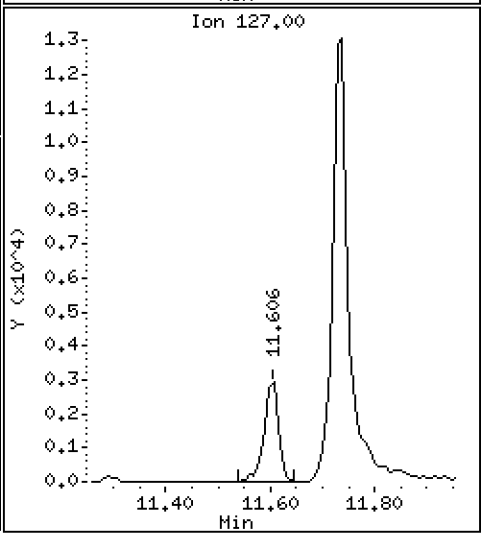


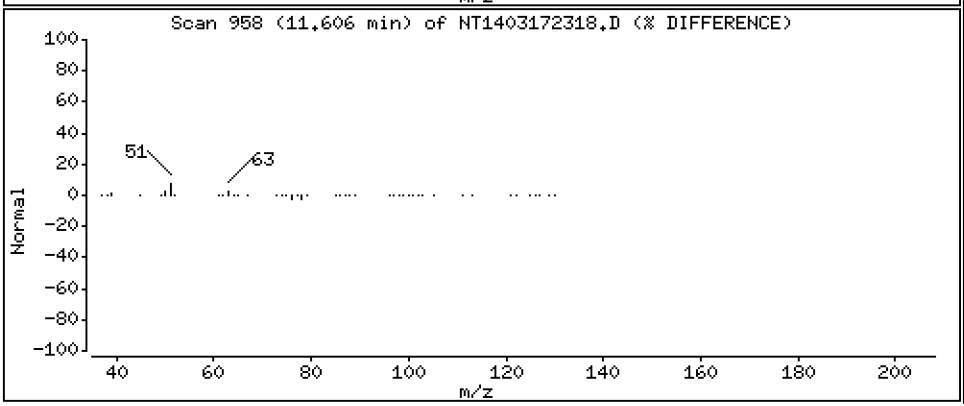












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

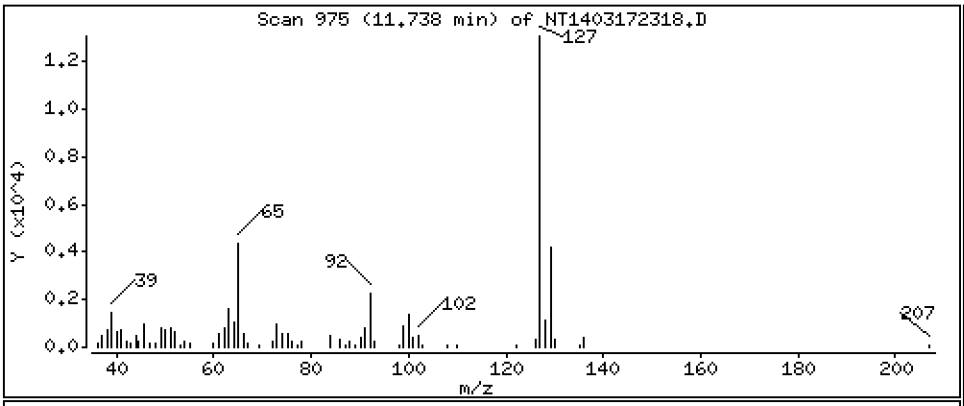
Operator: JGR

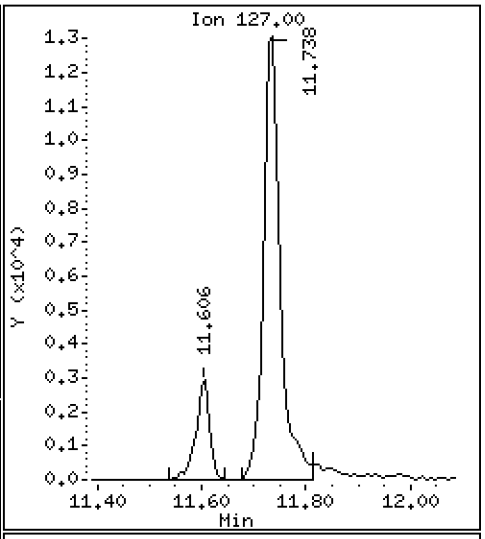
Column phase: ZB-5msi

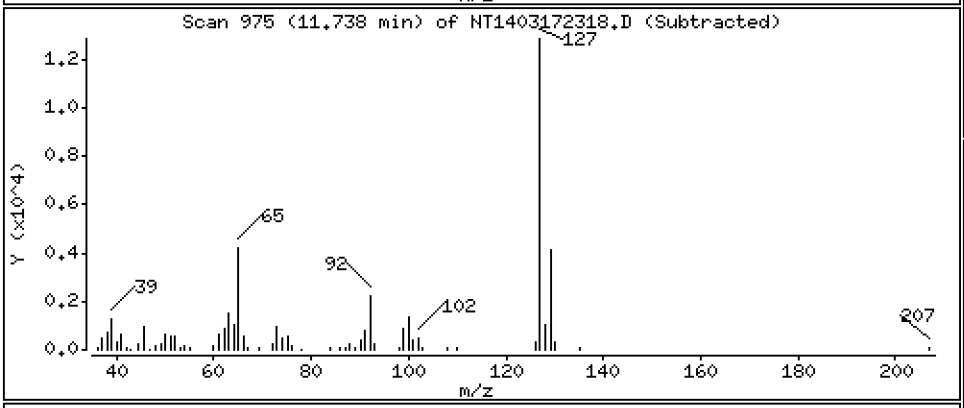
Column diameter: 0.25

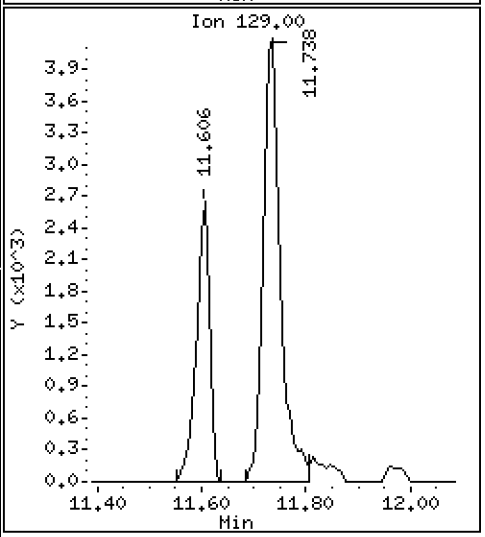
29 4-Chloroaniline

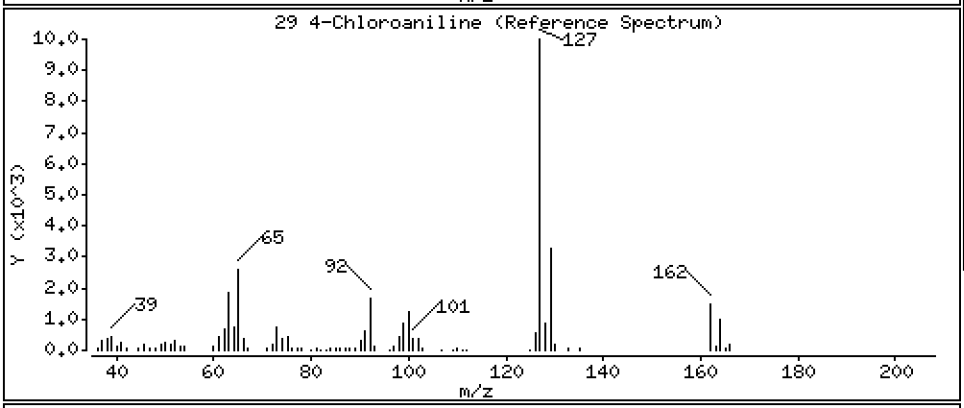
Concentration: 0.3283 ug/mL

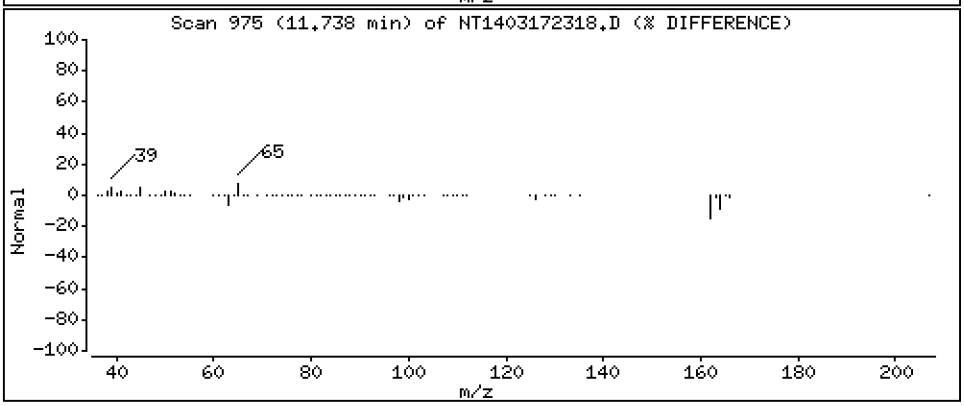












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

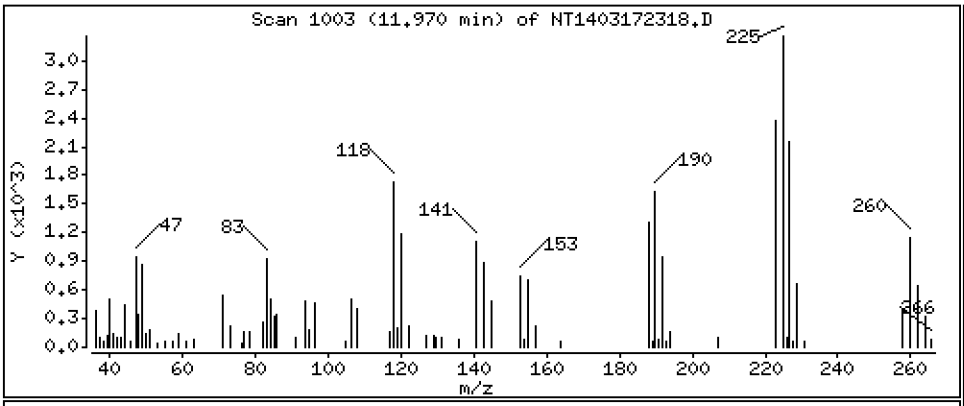
Operator: JGR

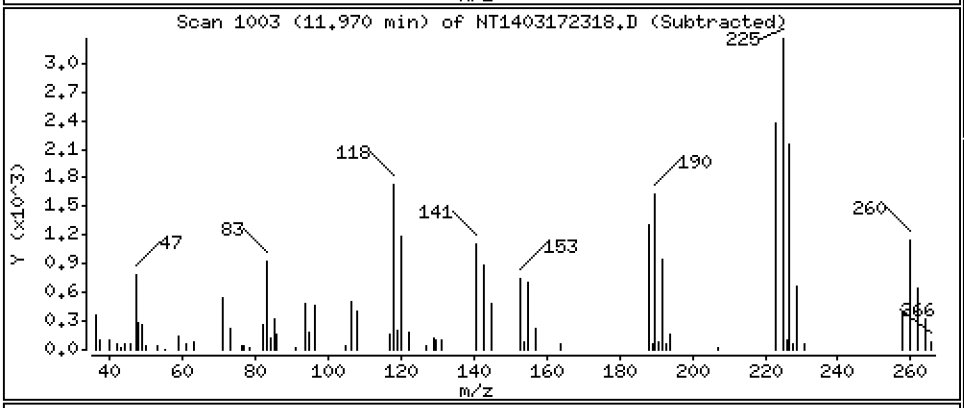
Column phase: ZB-5msi

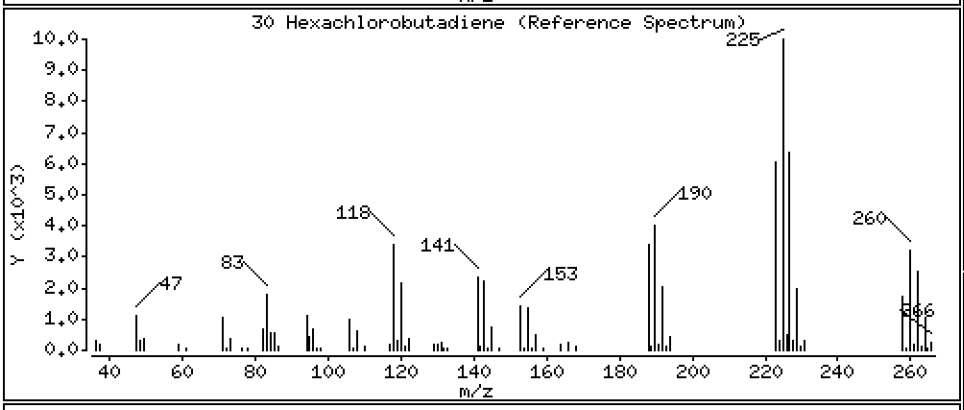
Column diameter: 0.25

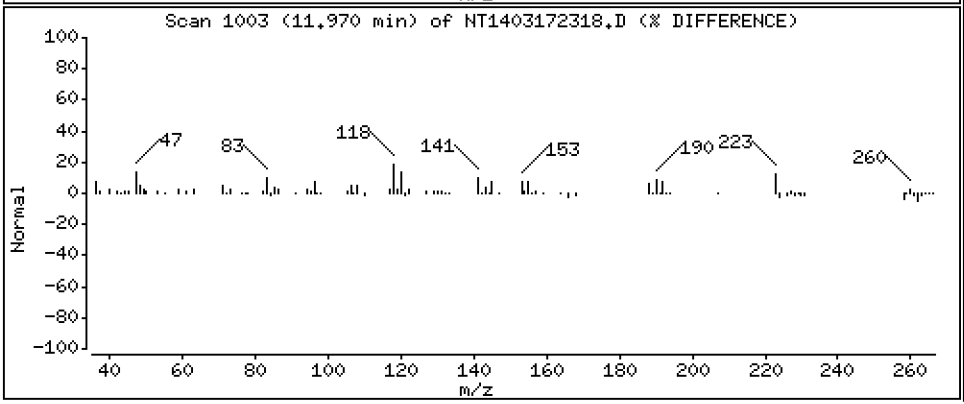
30 Hexachlorobutadiene

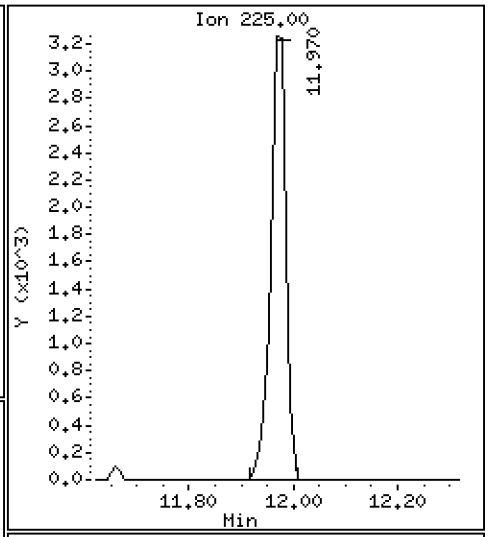
Concentration: 0.2090 ug/mL

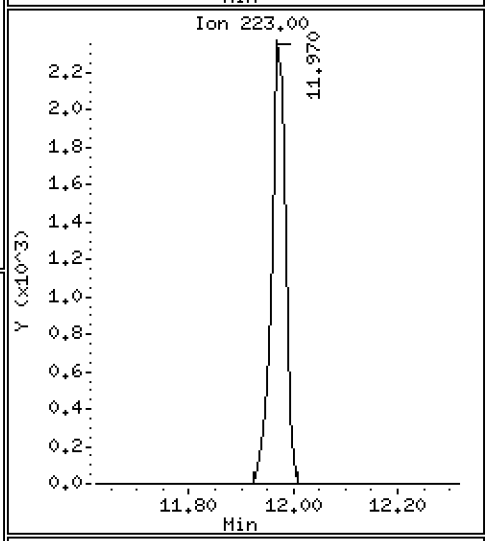


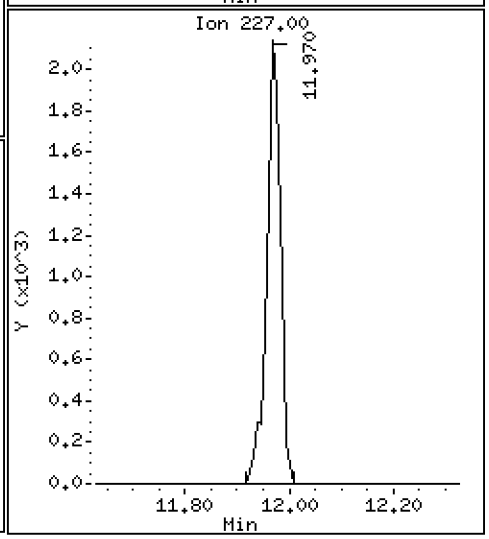












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

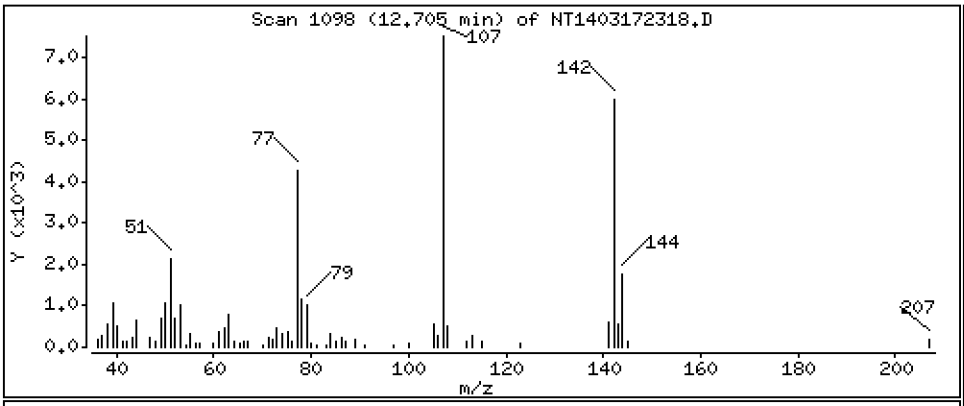
Operator: JGR

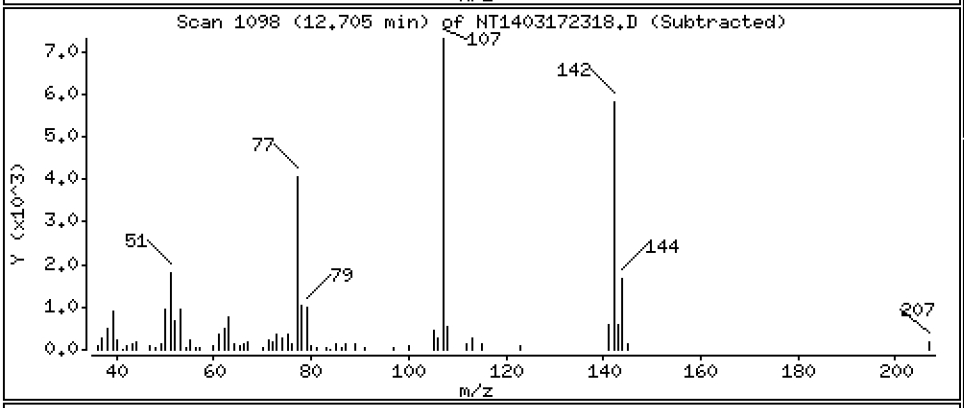
Column phase: ZB-5msi

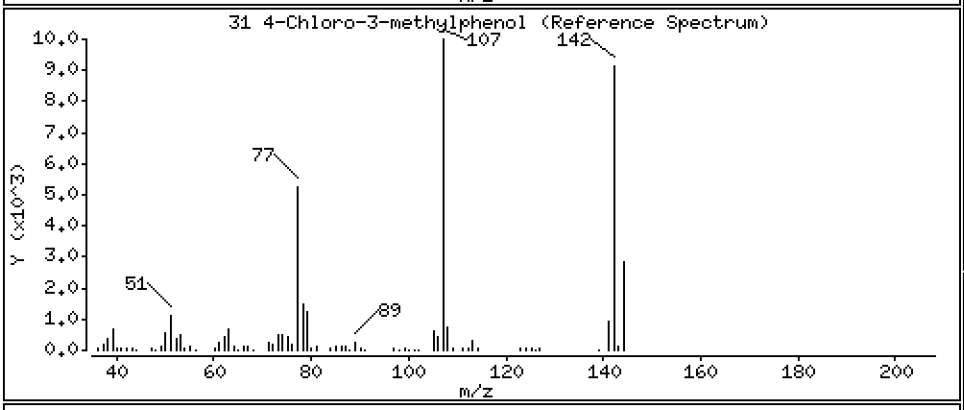
Column diameter: 0.25

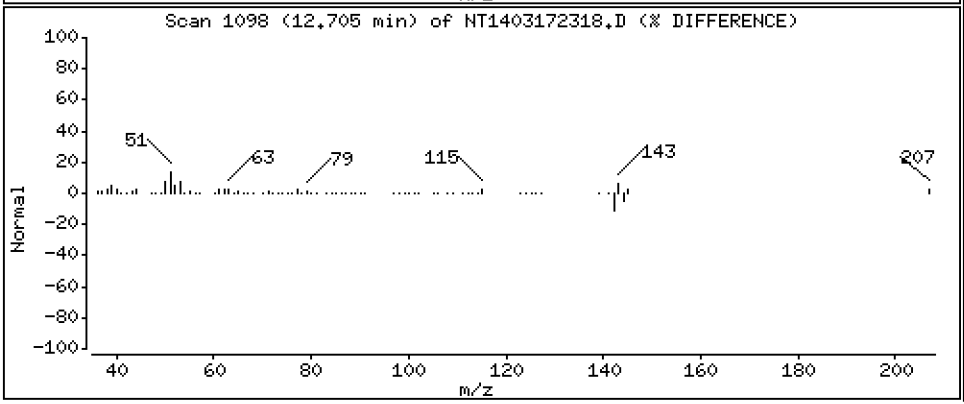
31 4-Chloro-3-methylphenol

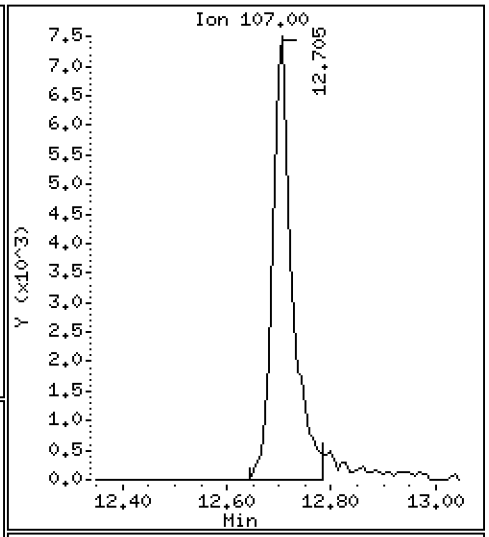
Concentration: 0.2961 ug/mL

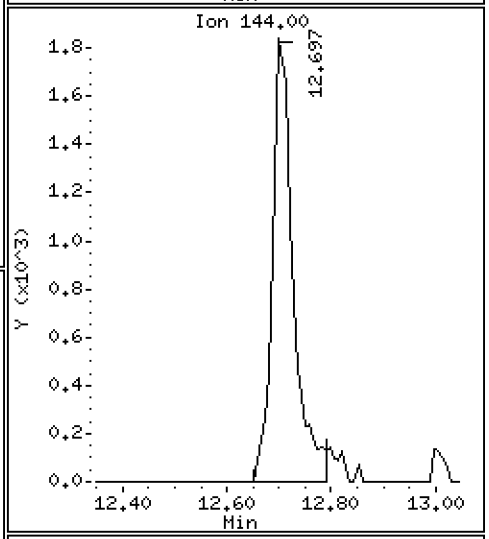


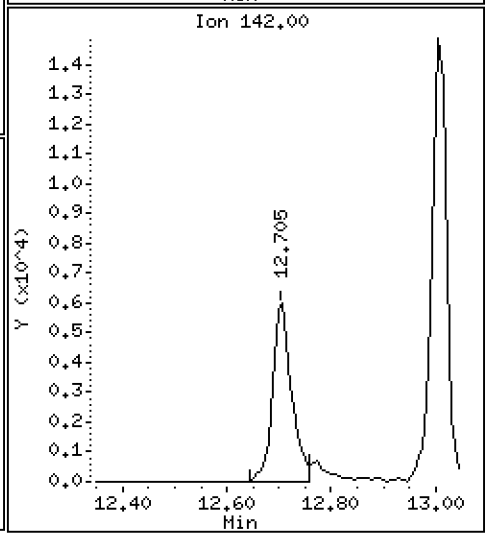












Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172318.D

Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

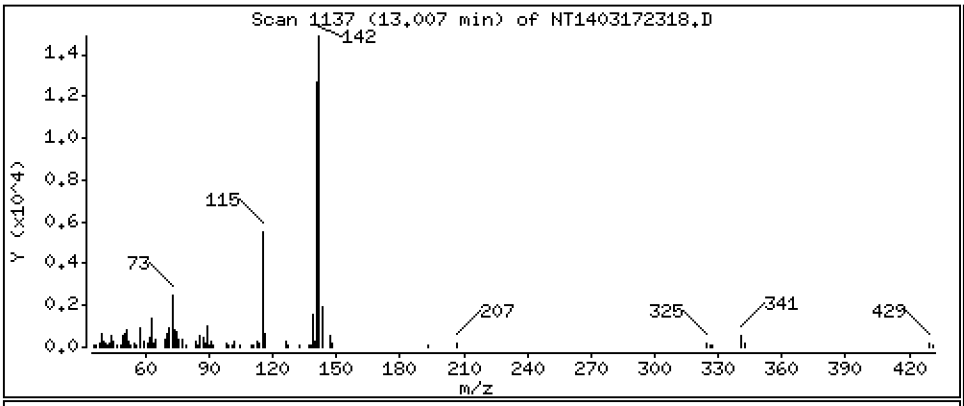
Operator: JGR

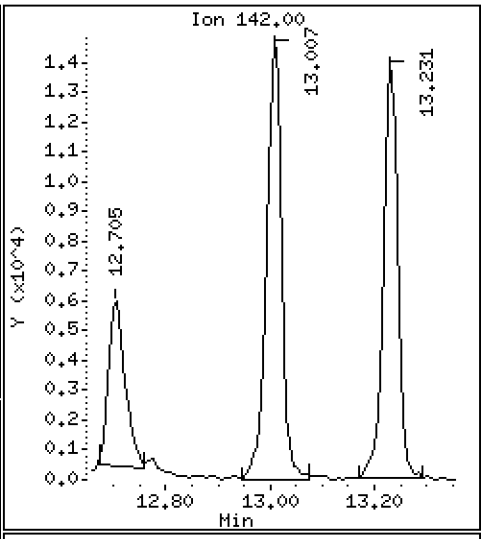
Column phase: ZB-5msi

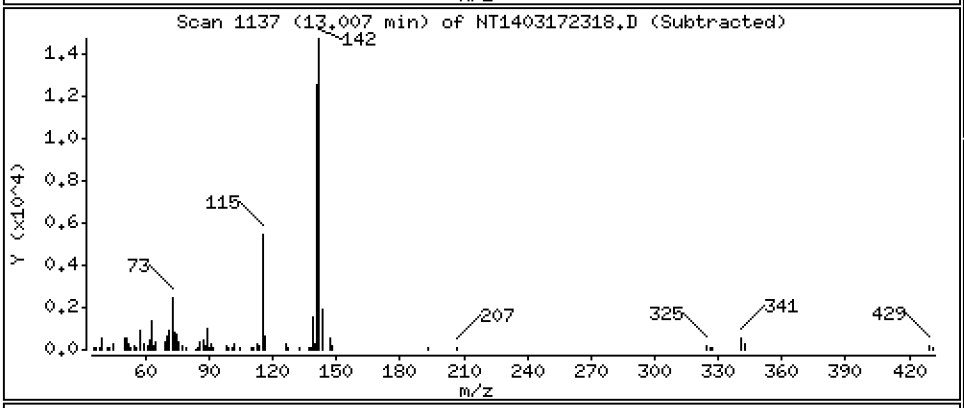
Column diameter: 0.25

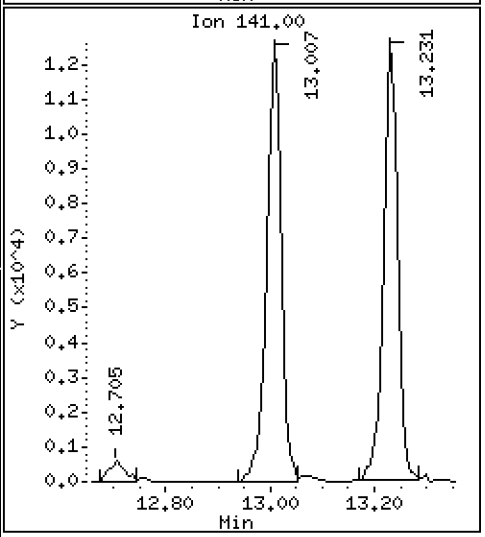
32 2-Methylnaphthalene

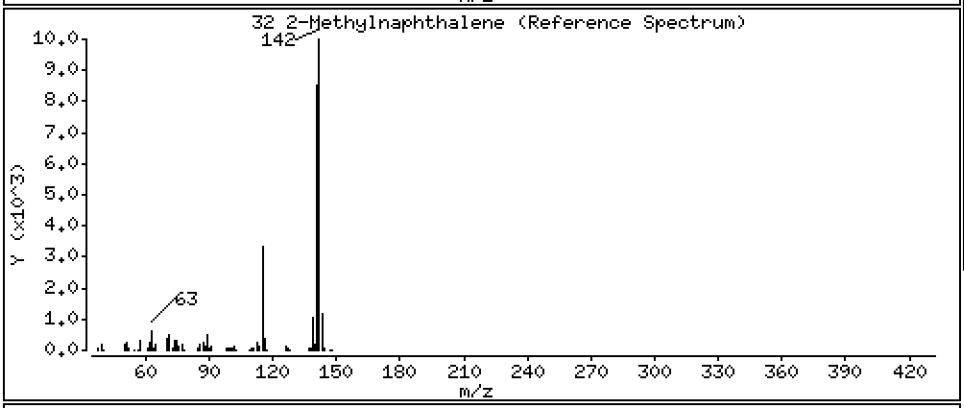
Concentration: 0.1975 ug/mL

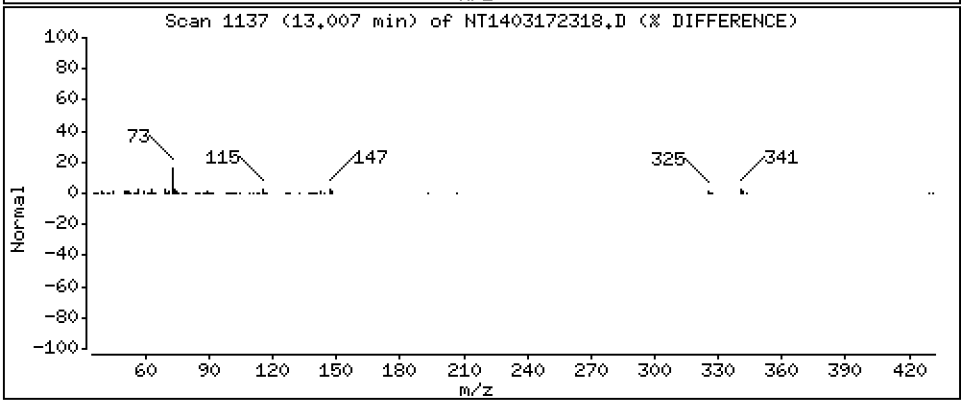












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

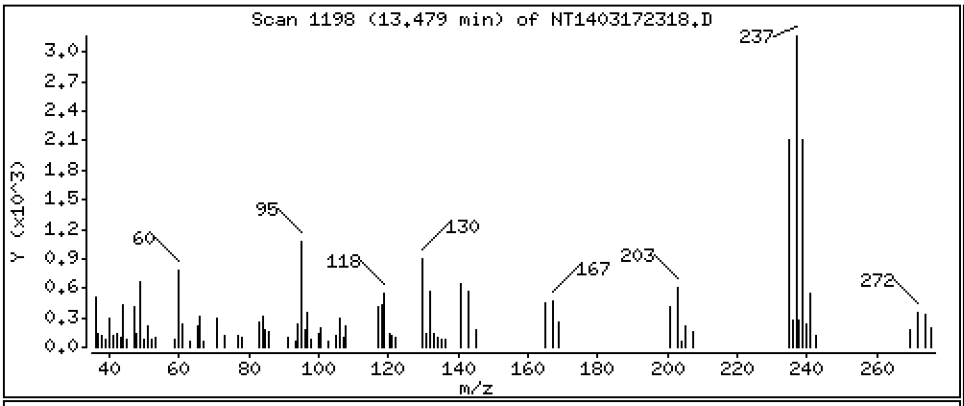
Operator: JGR

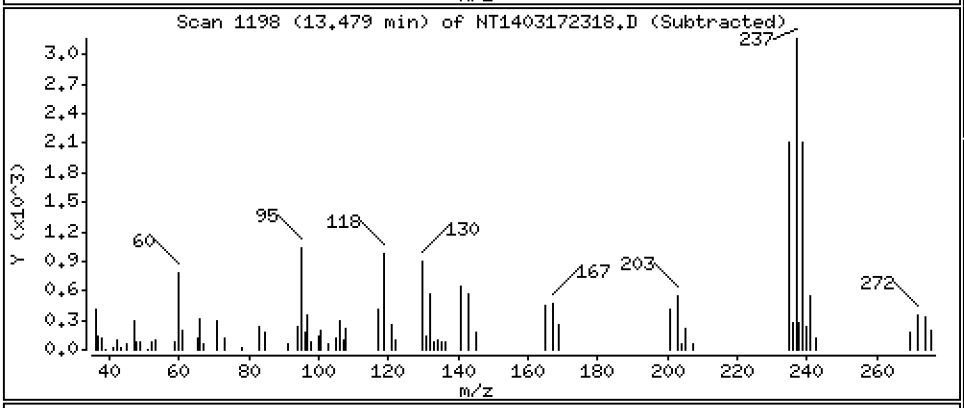
Column phase: ZB-5msi

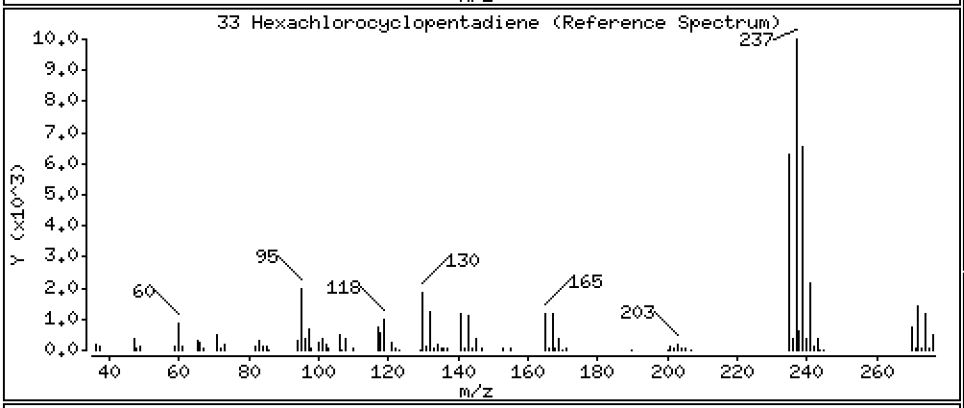
Column diameter: 0.25

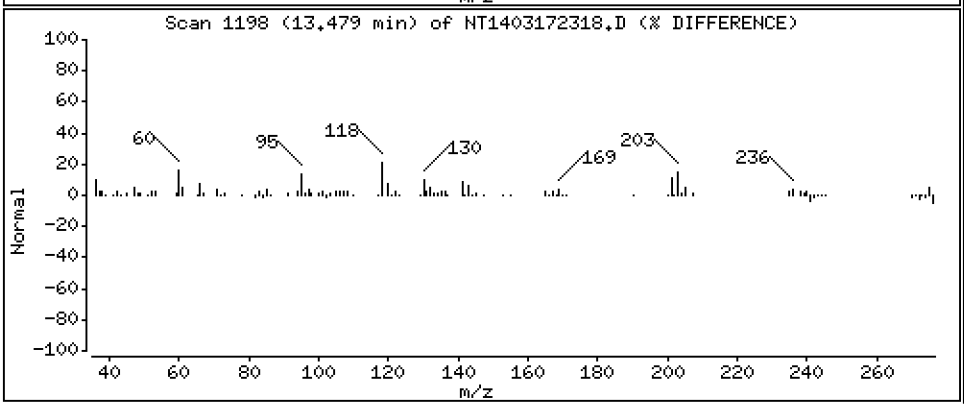
33 Hexachlorocyclopentadiene

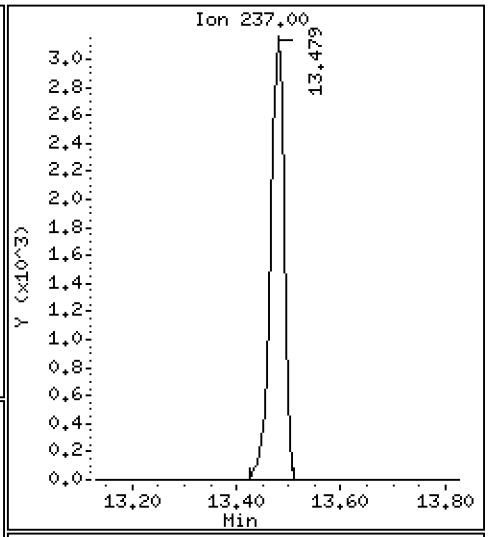
Concentration: 0.1718 ug/mL

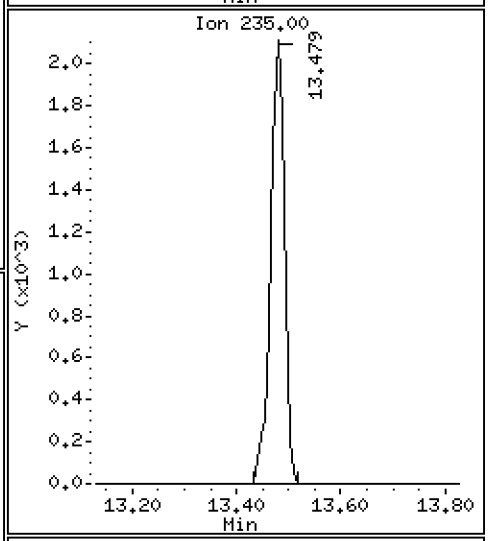


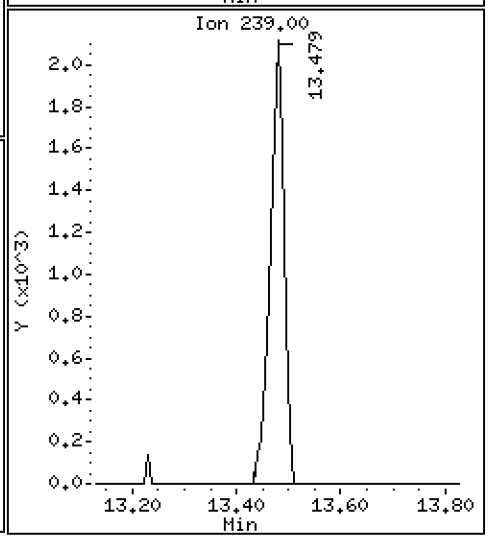












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

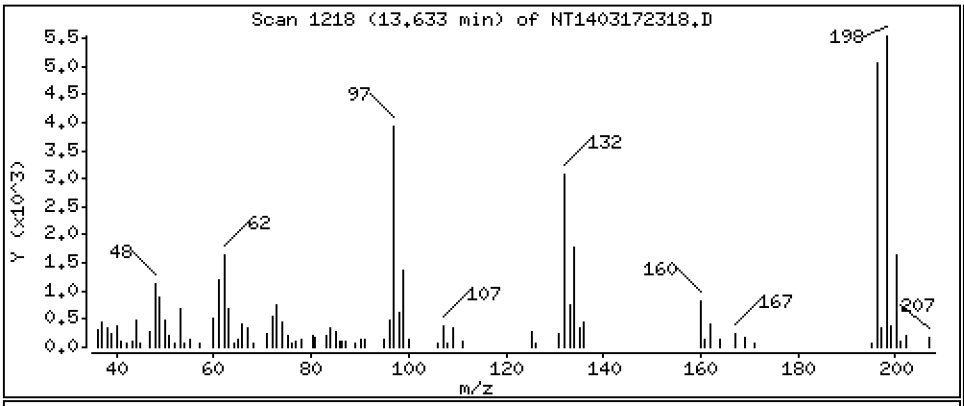
Operator: JGR

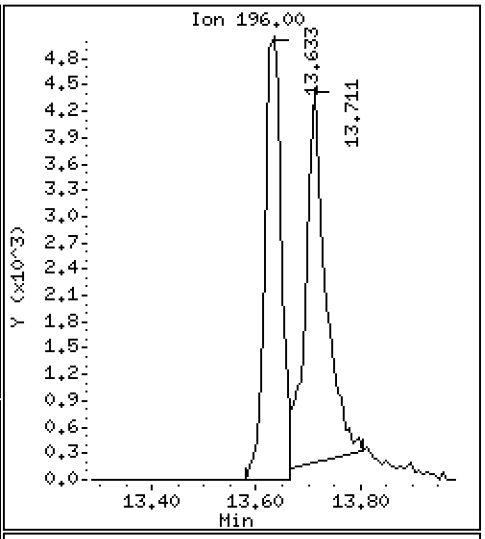
Column phase: ZB-5msi

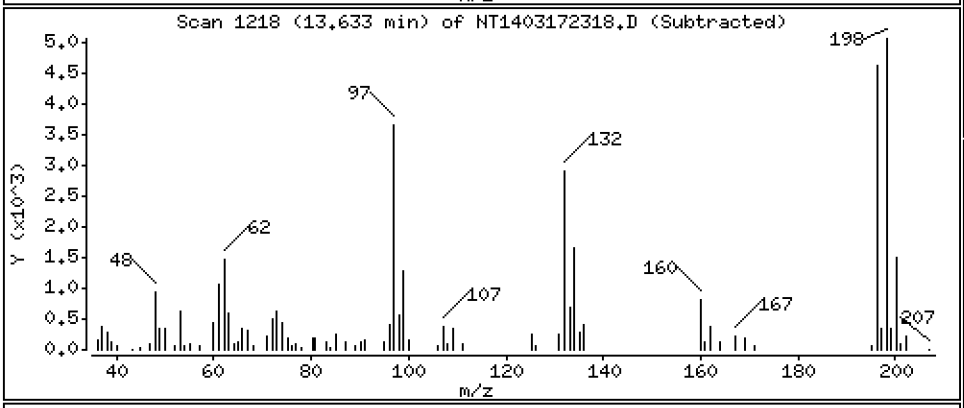
Column diameter: 0.25

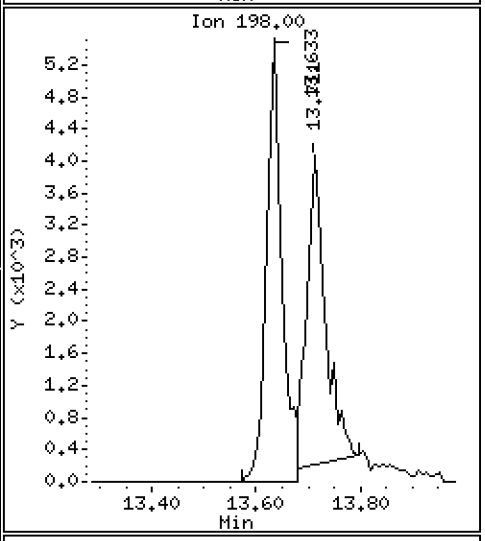
34 2,4,6-Trichlorophenol

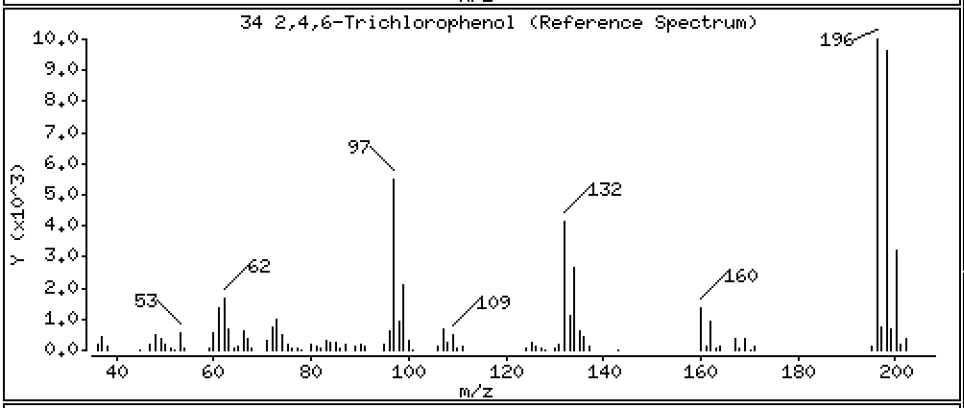
Concentration: 0.2769 ug/mL

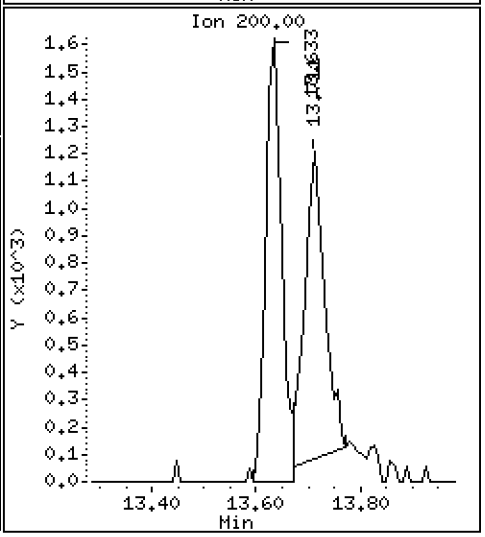


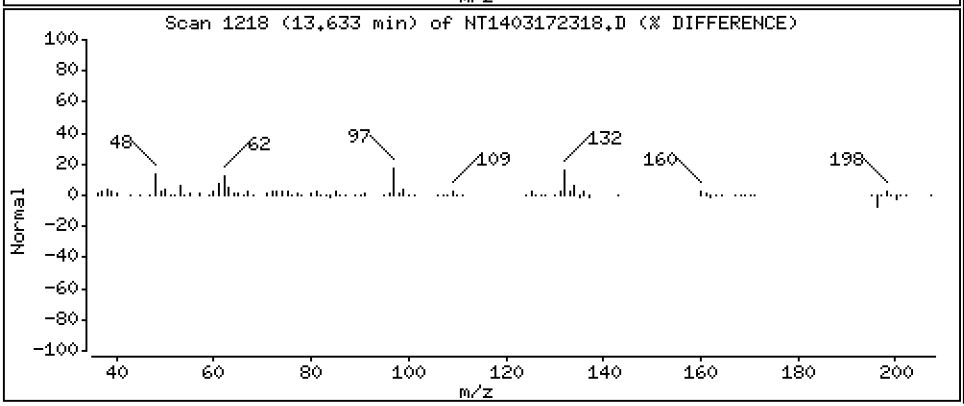












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

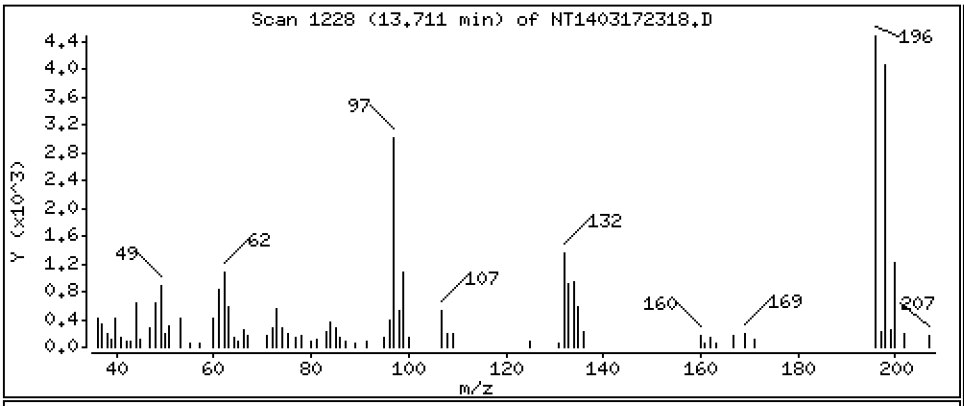
Operator: JGR

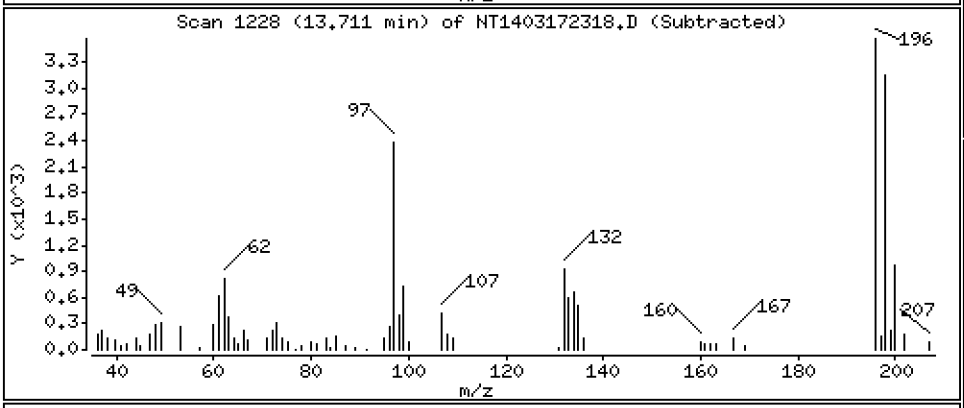
Column phase: ZB-5msi

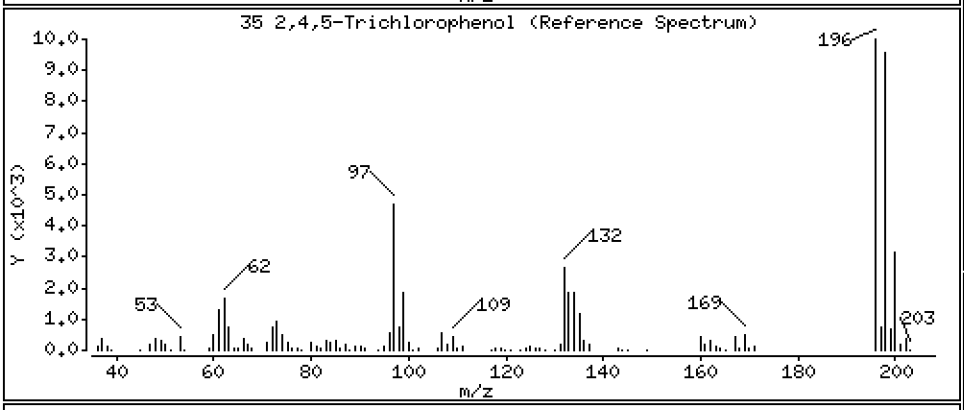
Column diameter: 0.25

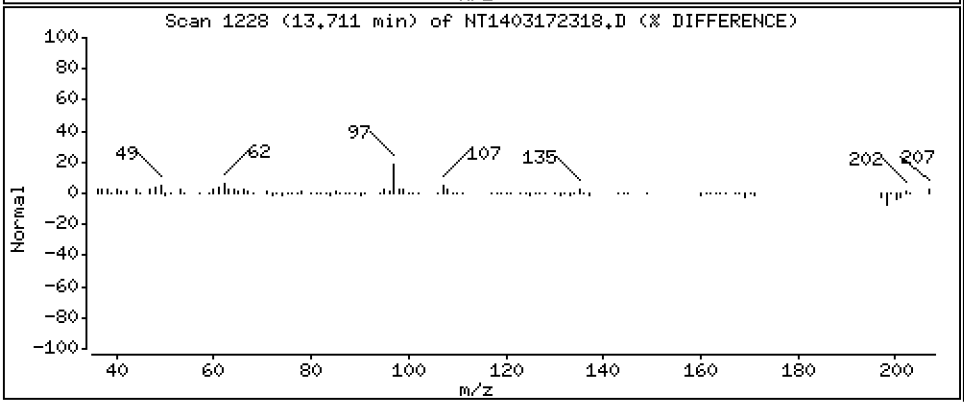
35 2,4,5-Trichlorophenol

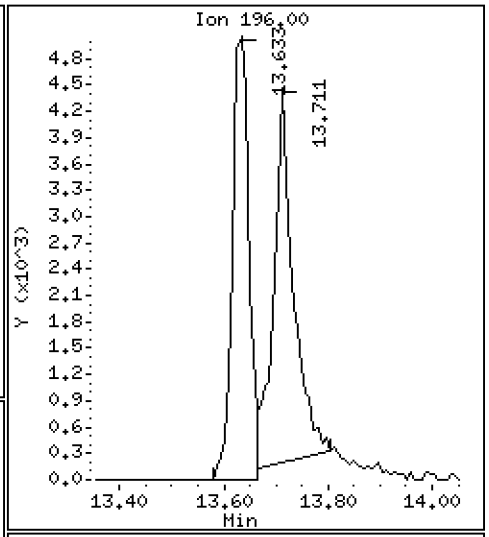
Concentration: 0.2803 ug/mL

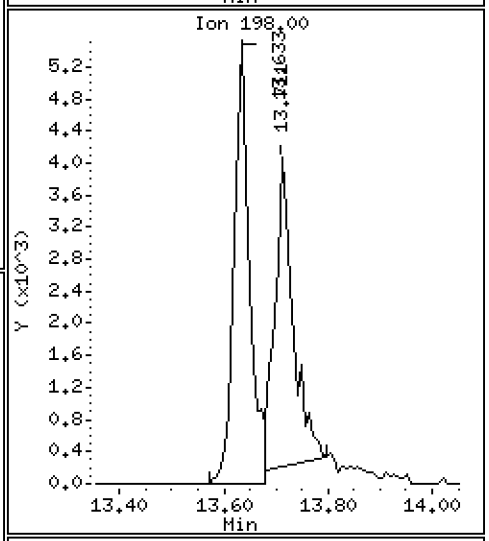


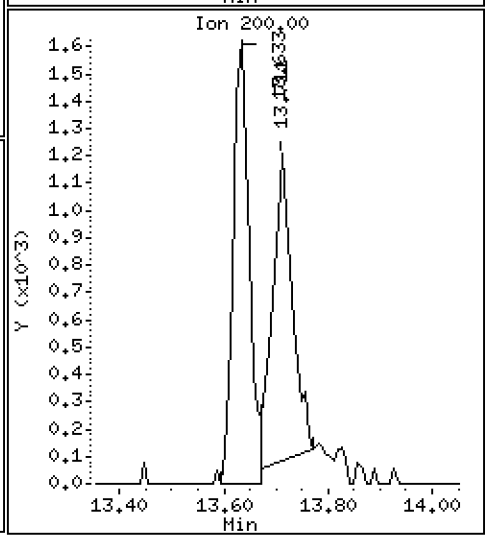












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

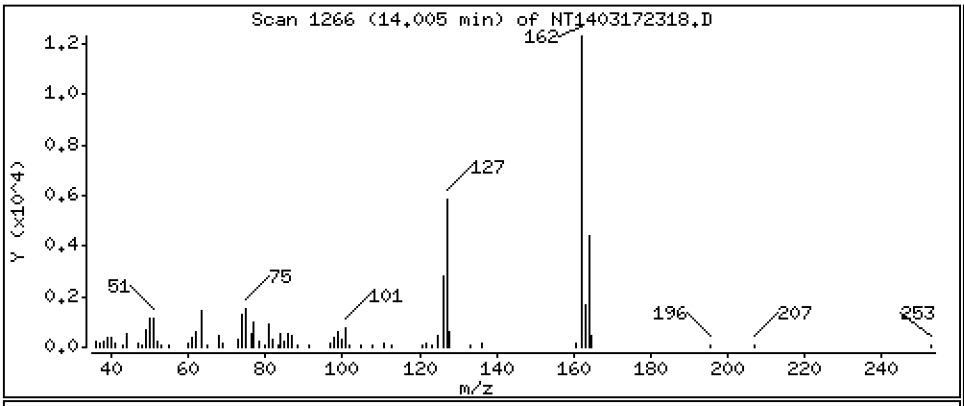
Operator: JGR

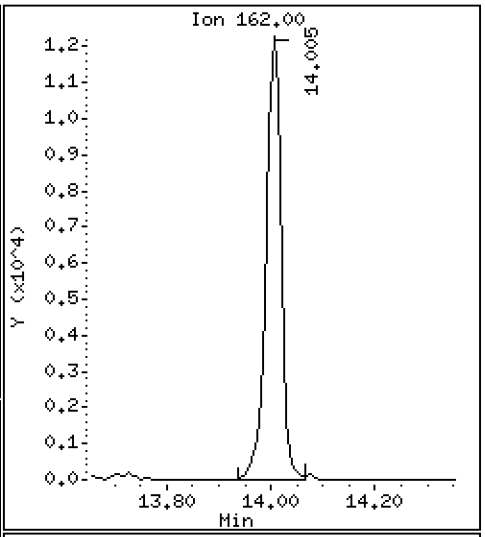
Column phase: ZB-5msi

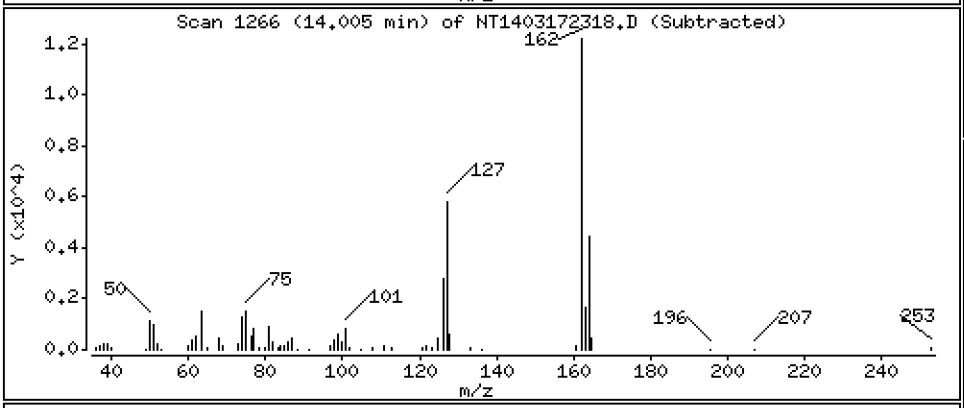
Column diameter: 0.25

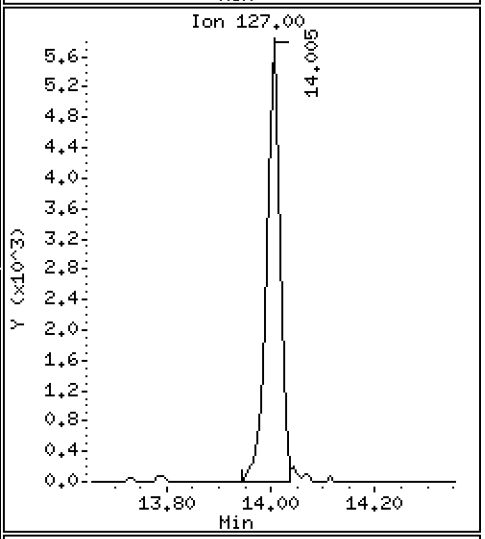
37 2-Chloronaphthalene

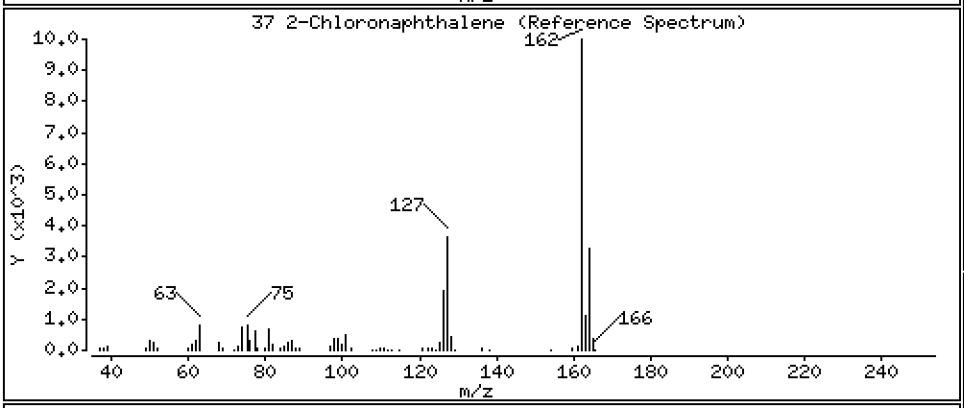
Concentration: 0.2000 ug/mL

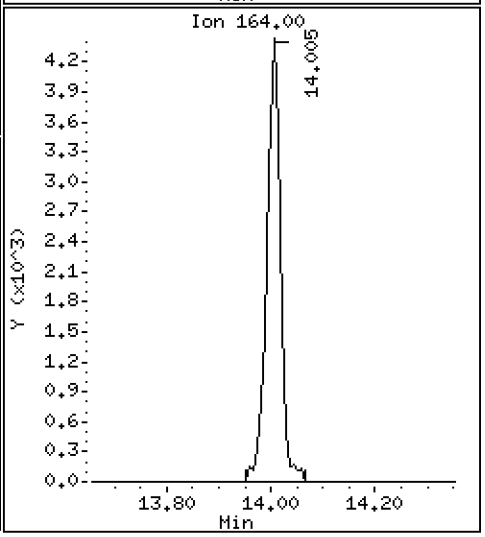


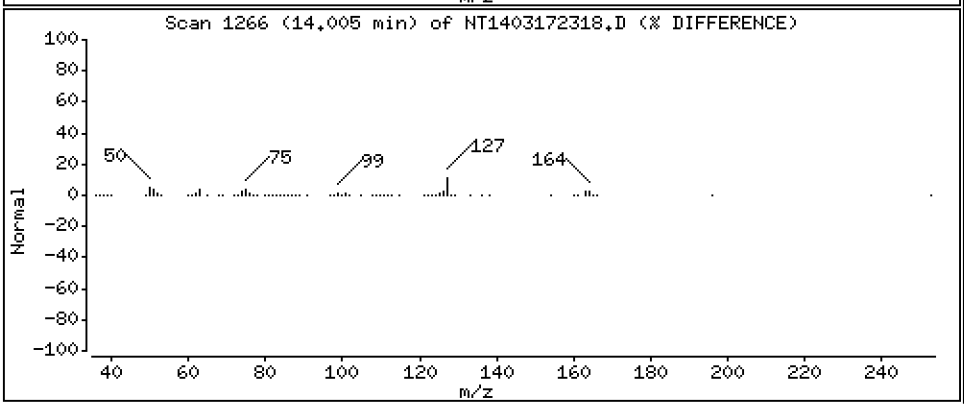












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

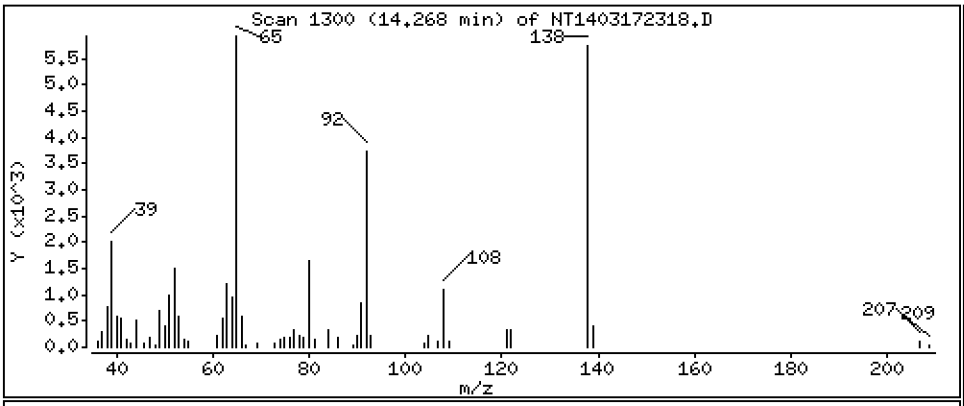
Operator: JGR

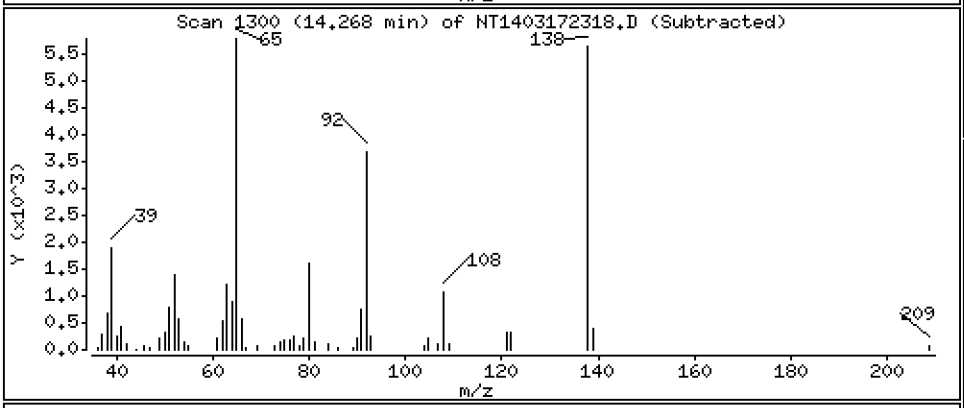
Column phase: ZB-5msi

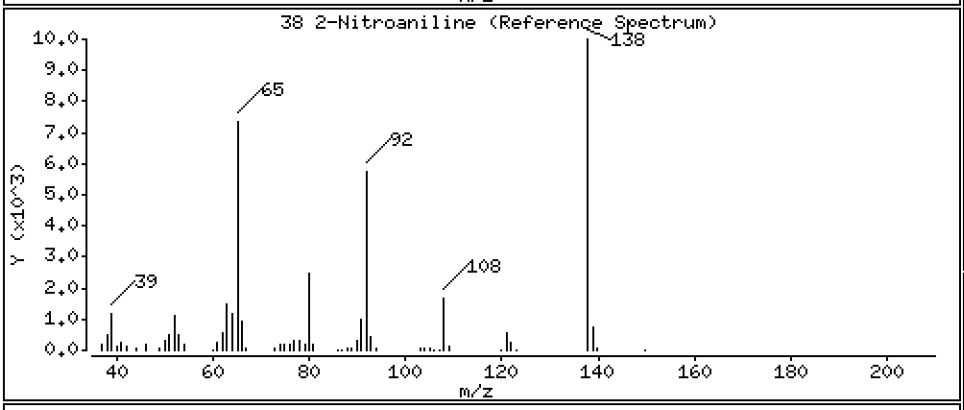
Column diameter: 0.25

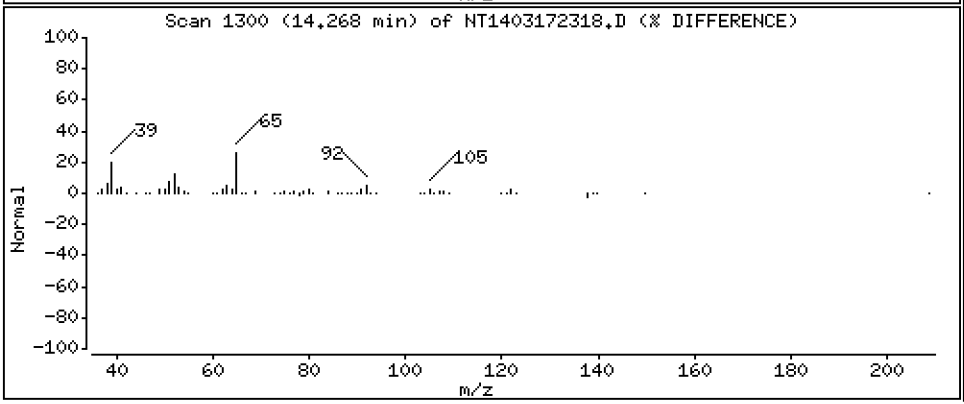
38 2-Nitroaniline

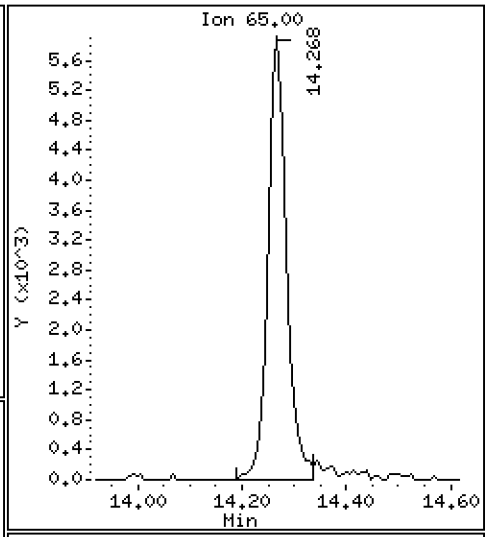
Concentration: 0.3073 ug/mL

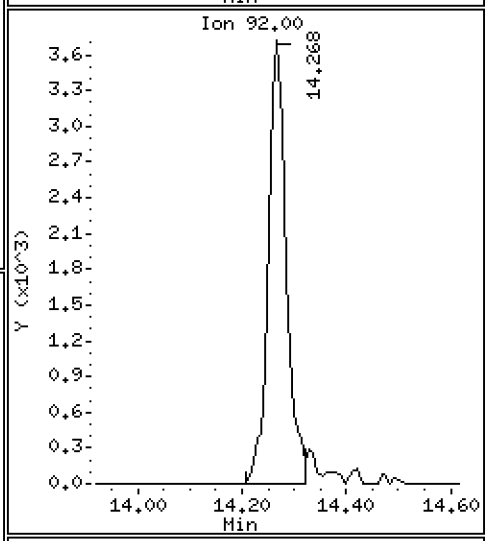


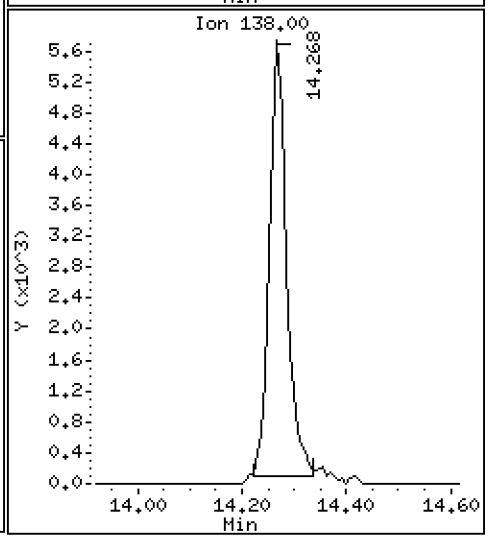












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

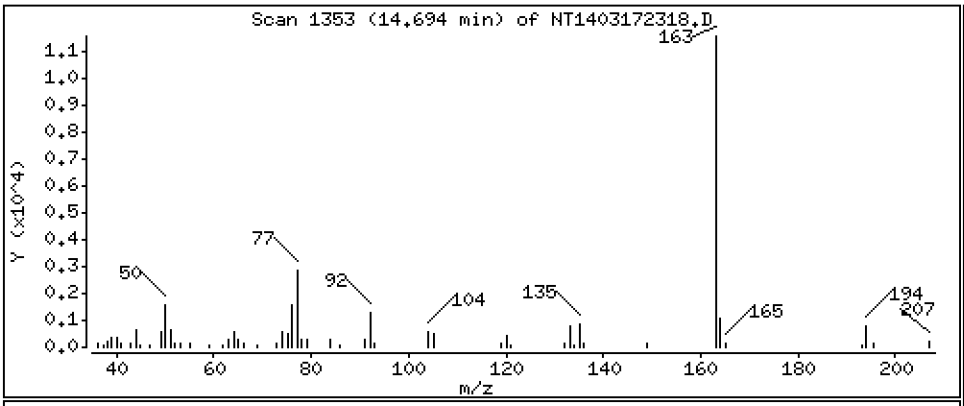
Operator: JGR

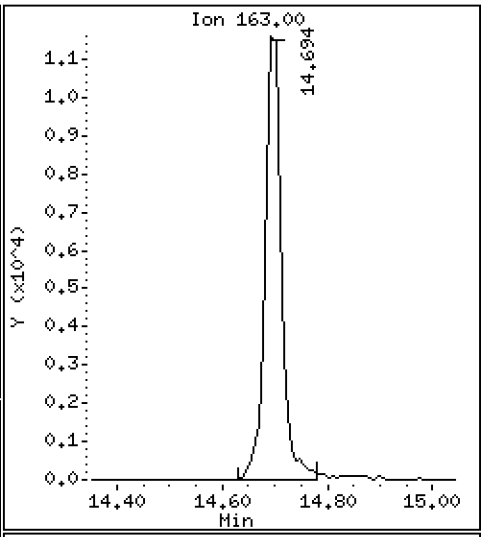
Column phase: ZB-5msi

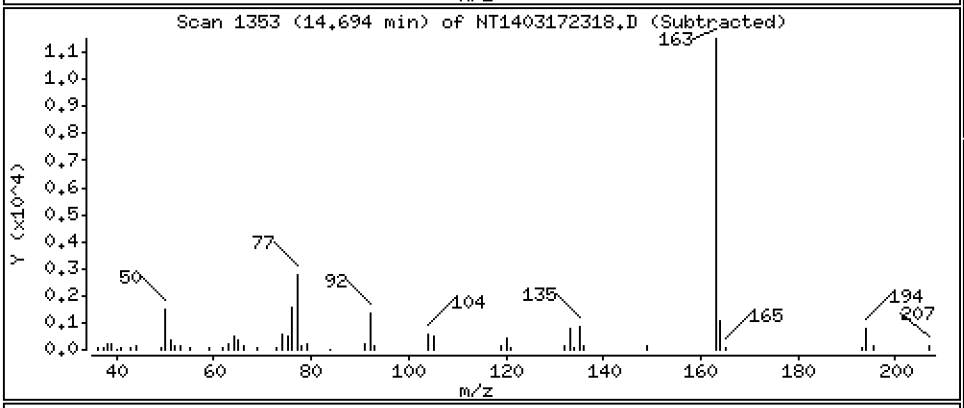
Column diameter: 0.25

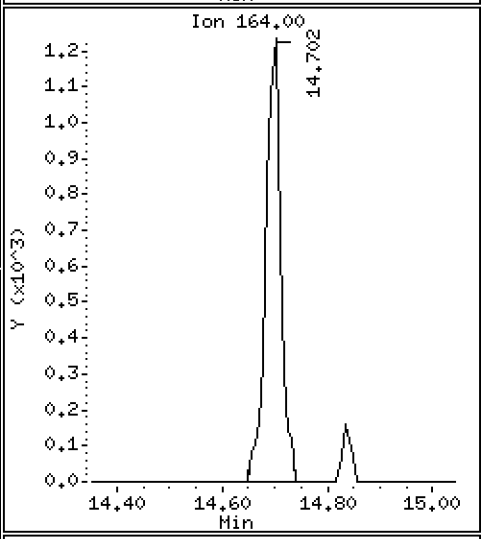
39 Dimethylphthalate

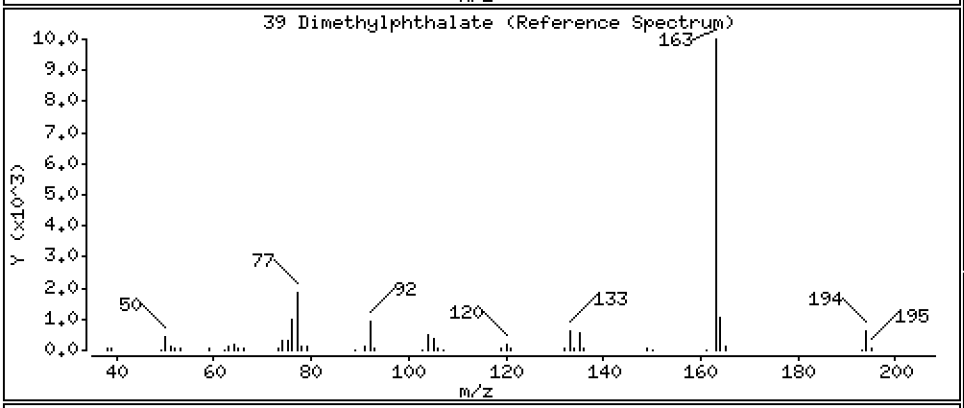
Concentration: 0.1902 ug/mL

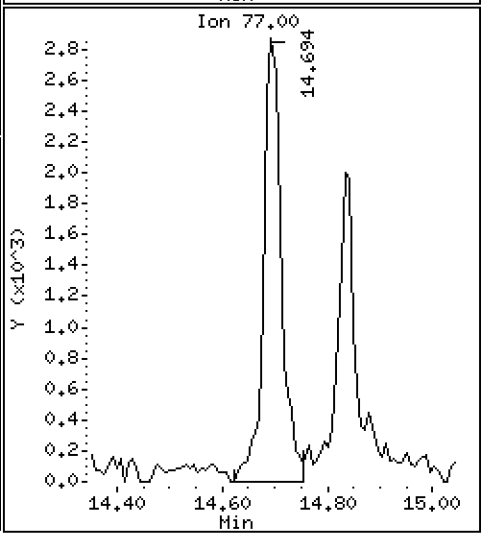


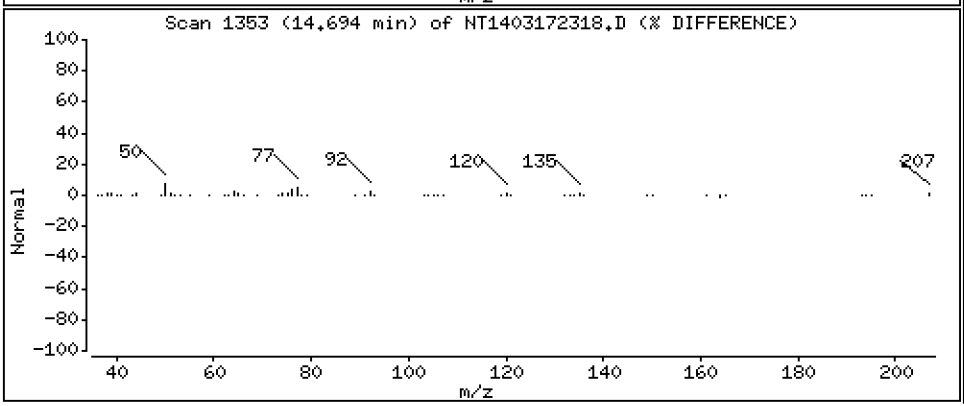












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

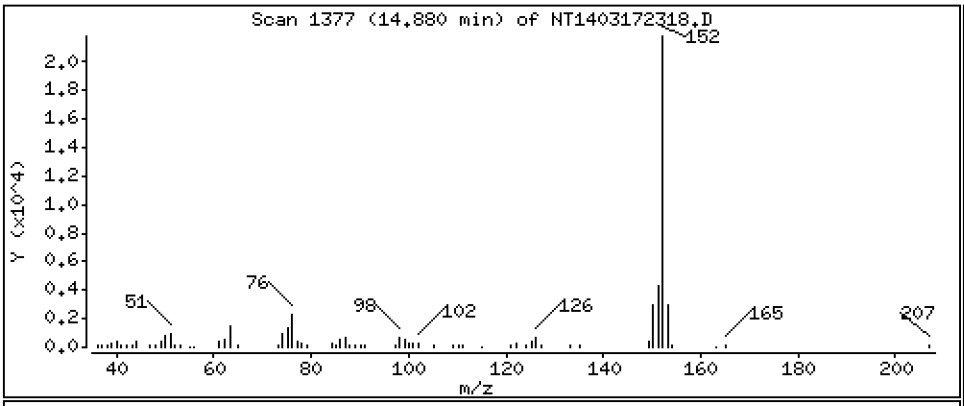
Operator: JGR

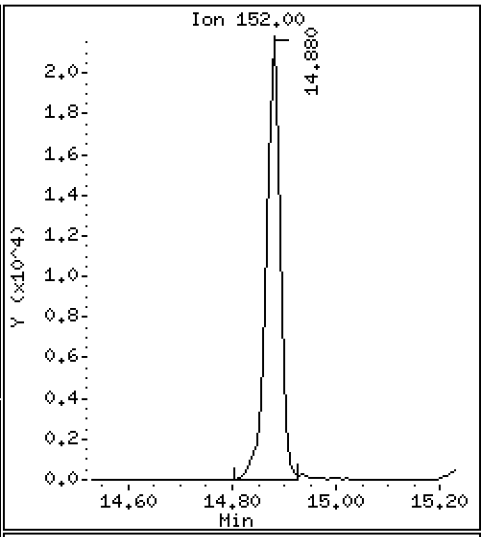
Column phase: ZB-5msi

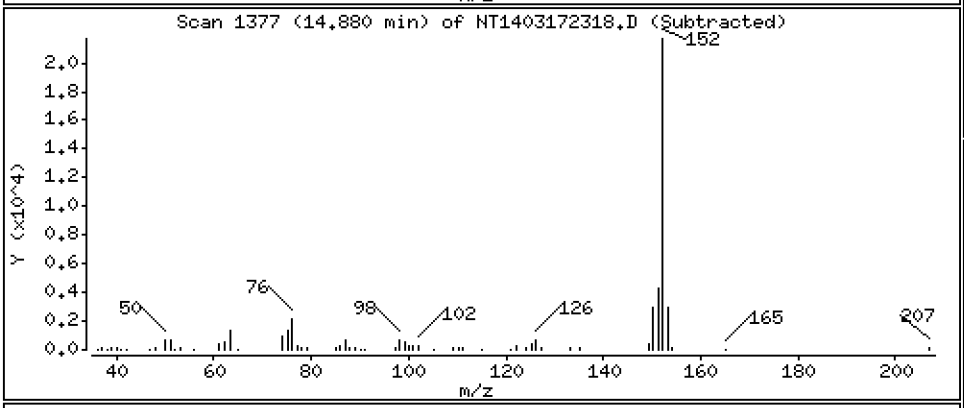
Column diameter: 0.25

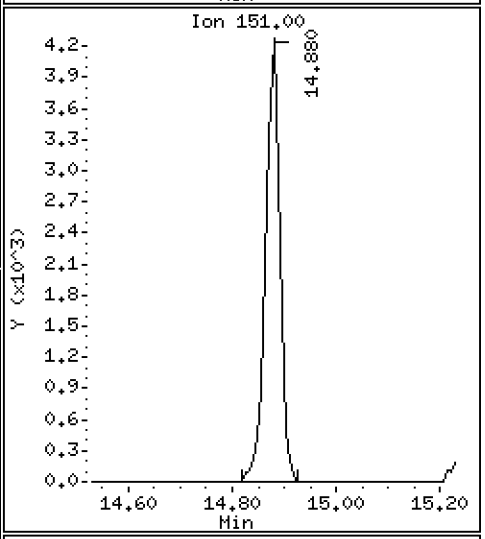
40 Acenaphthylene

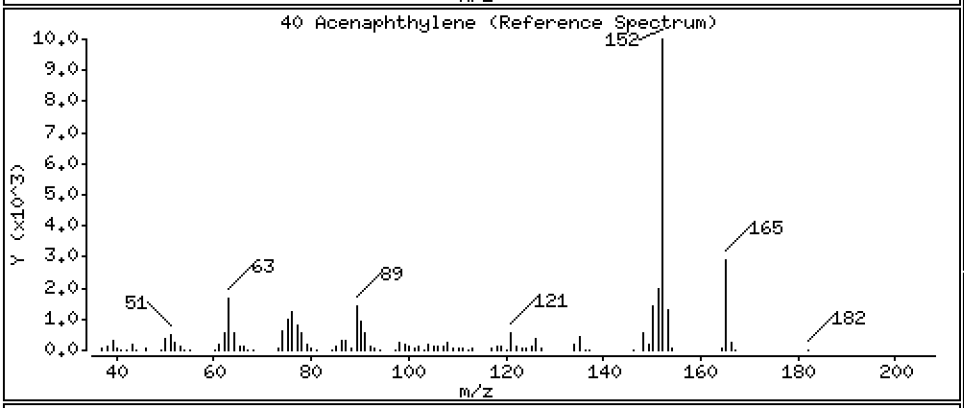
Concentration: 0.1922 ug/mL

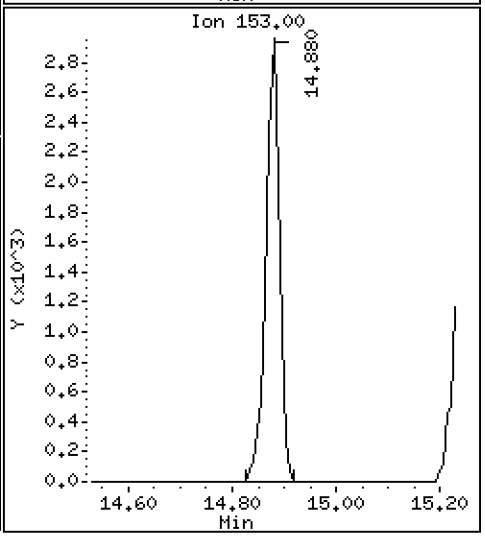


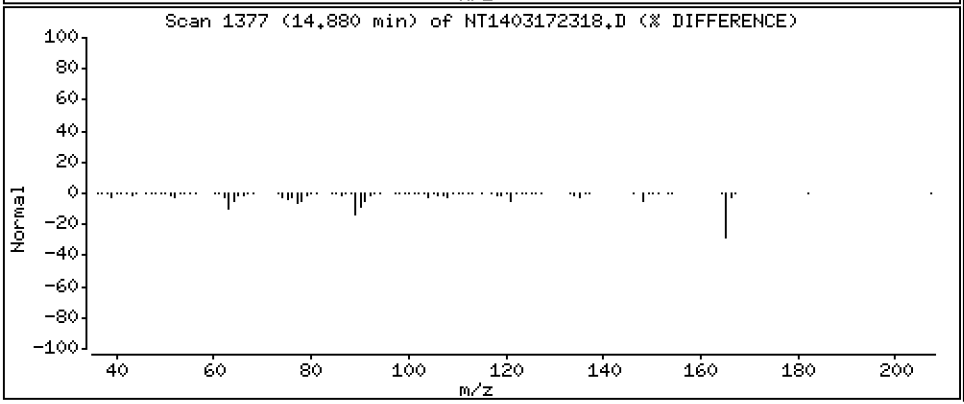












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

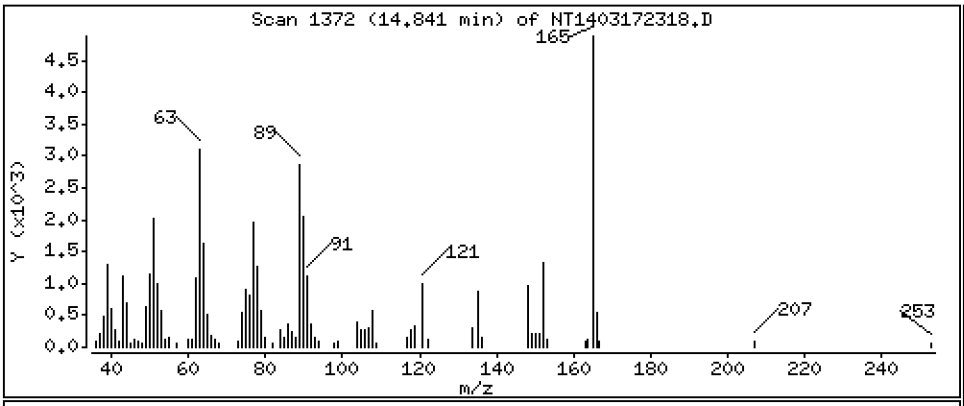
Operator: JGR

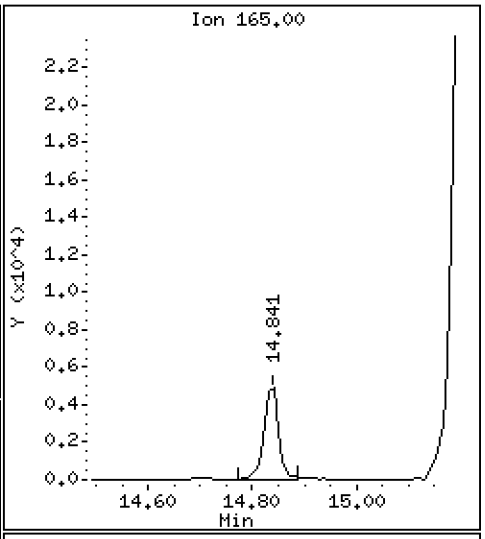
Column phase: ZB-5msi

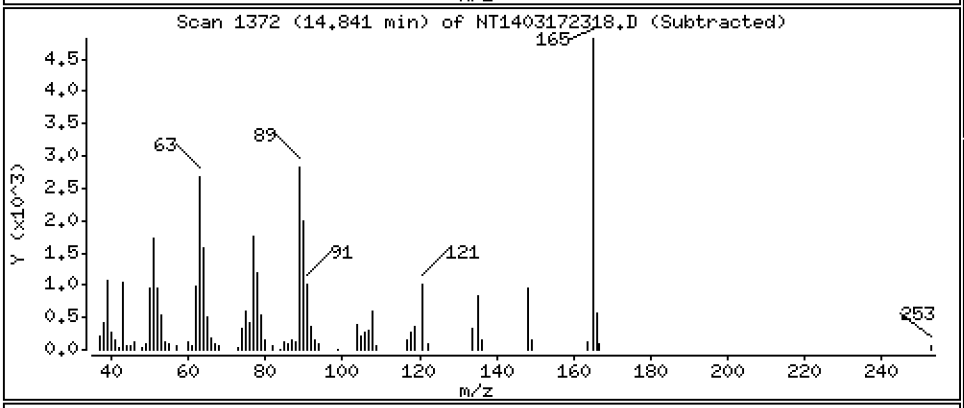
Column diameter: 0.25

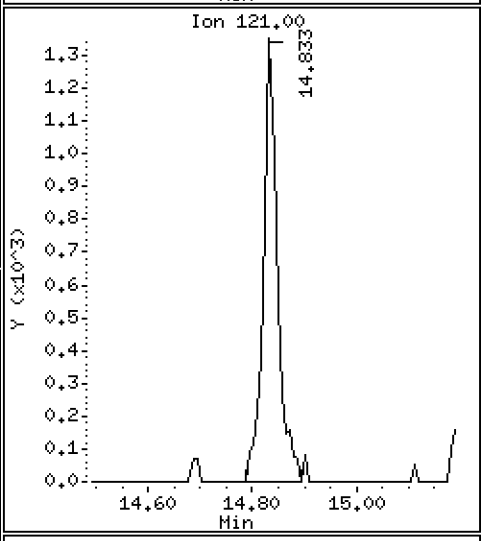
41 2,6-Dinitrotoluene

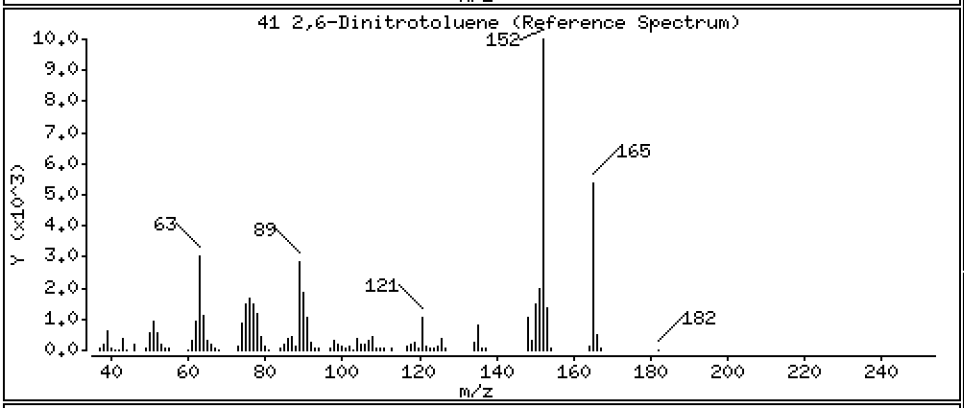
Concentration: 0.3118 ug/mL

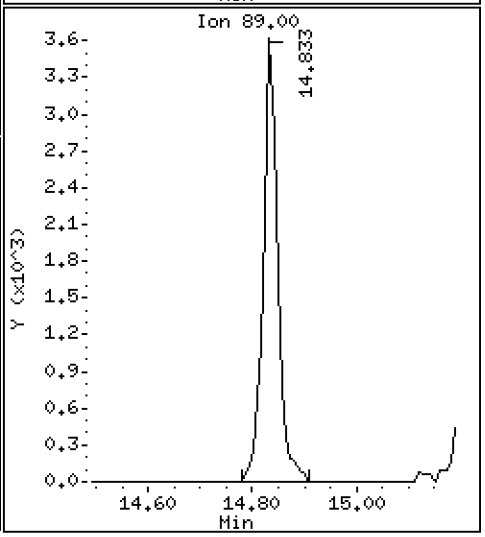


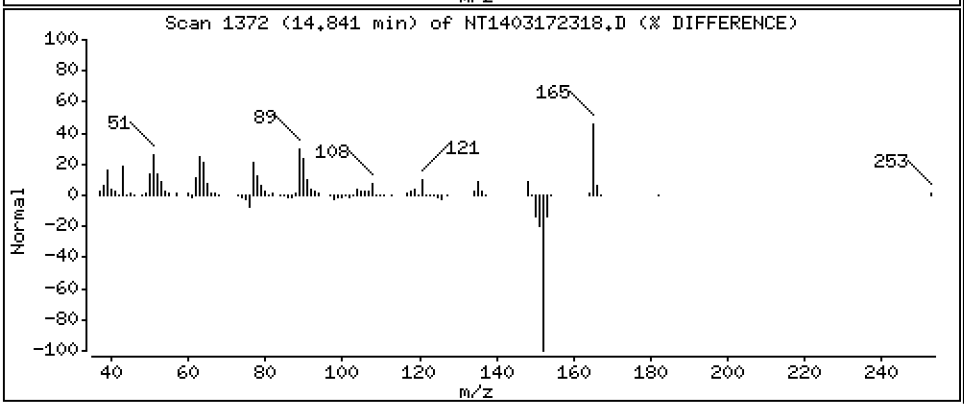












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

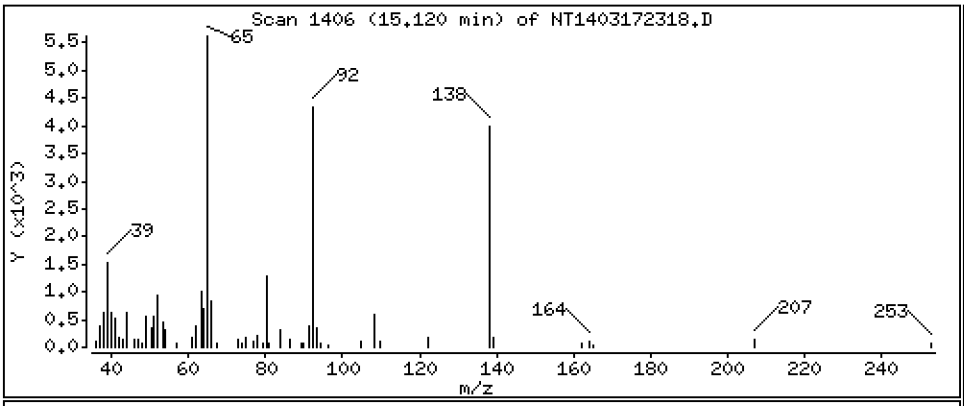
Operator: JGR

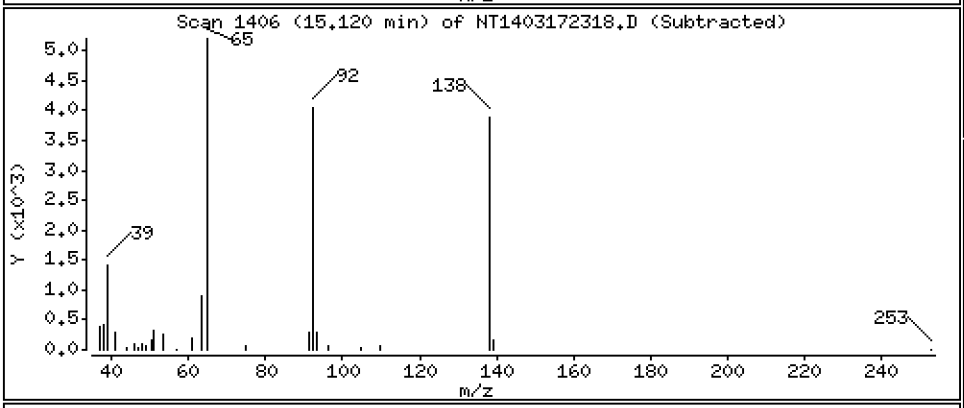
Column phase: ZB-5msi

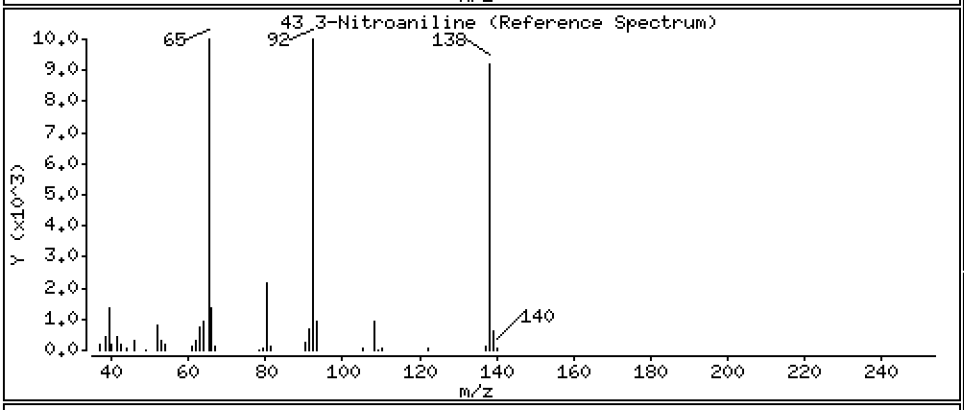
Column diameter: 0.25

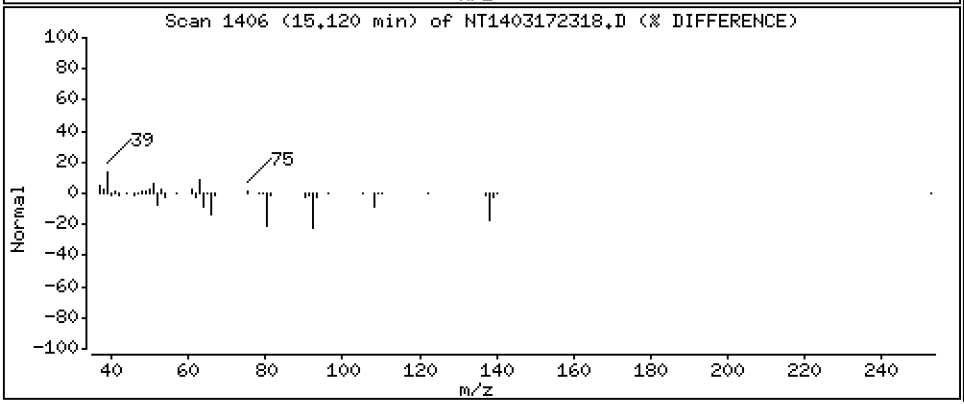
43 3-Nitroaniline

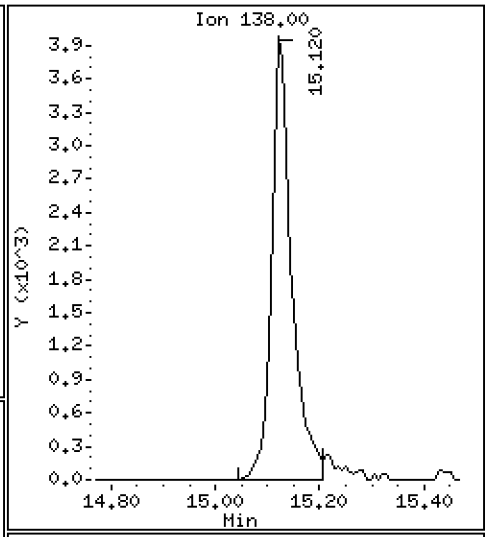
Concentration: 0.2816 ug/mL

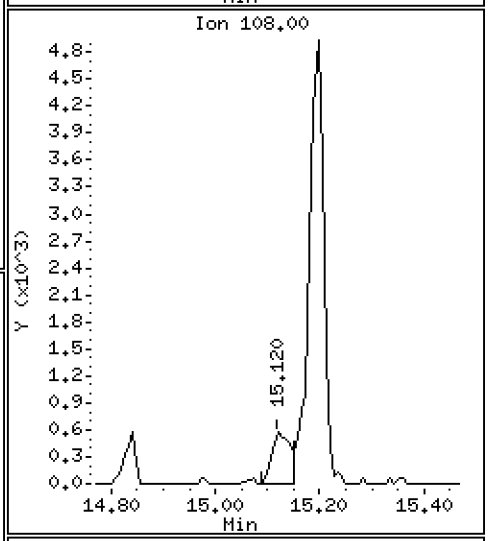


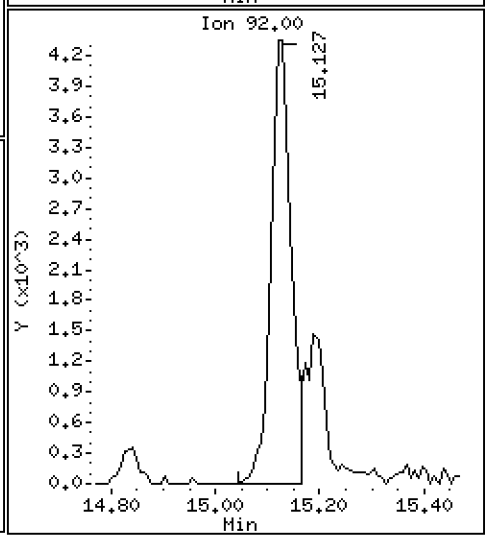












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

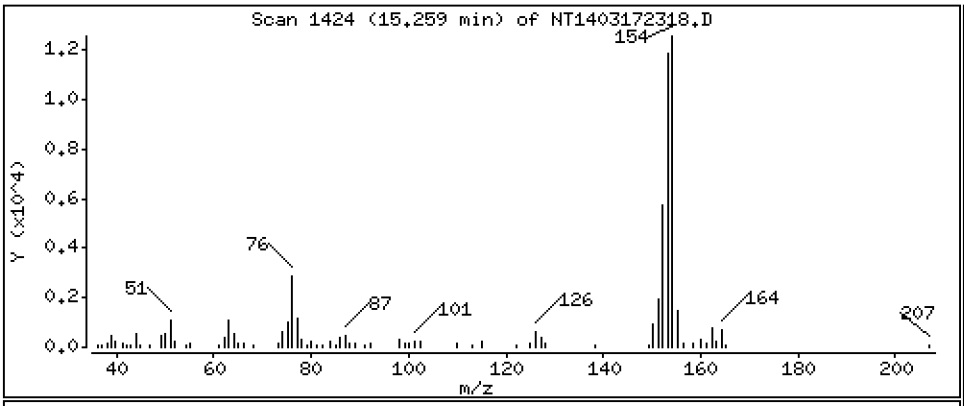
Operator: JGR

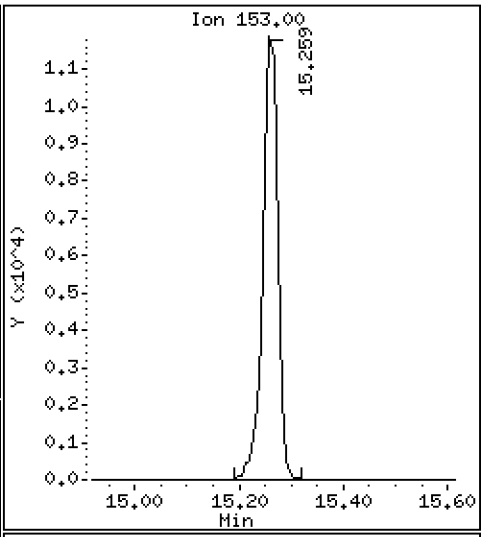
Column phase: ZB-5msi

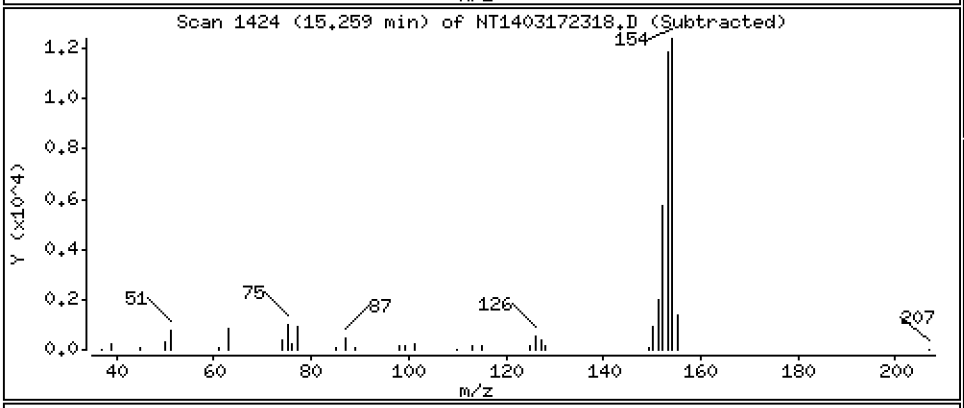
Column diameter: 0.25

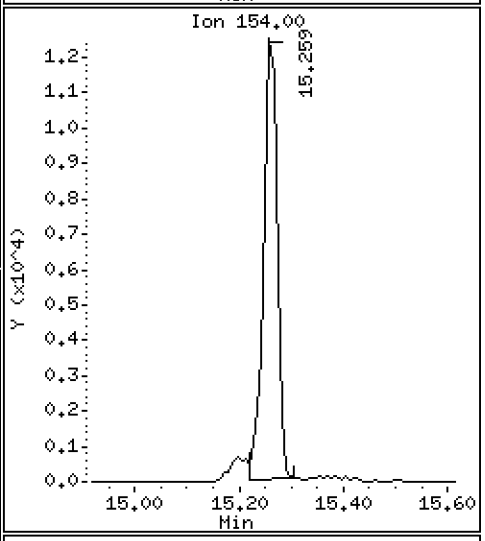
44 Acenaphthene

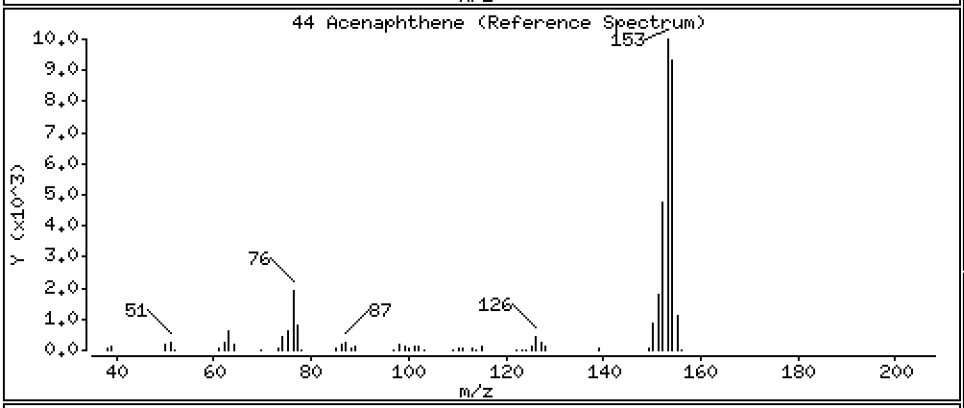
Concentration: 0.1939 ug/mL

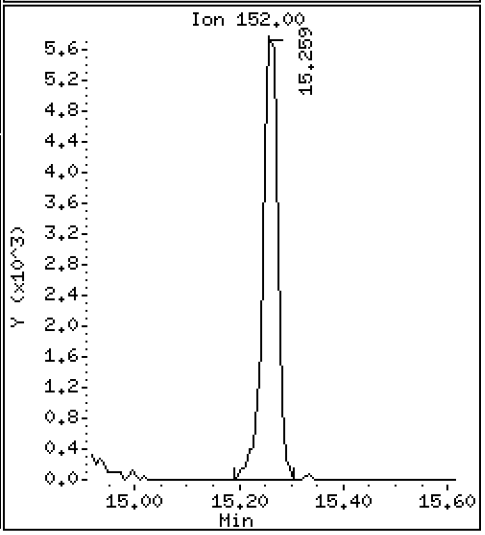


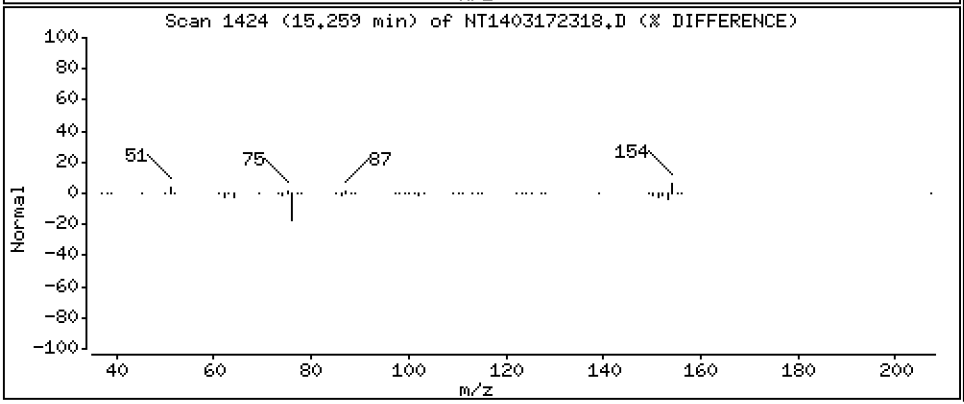












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

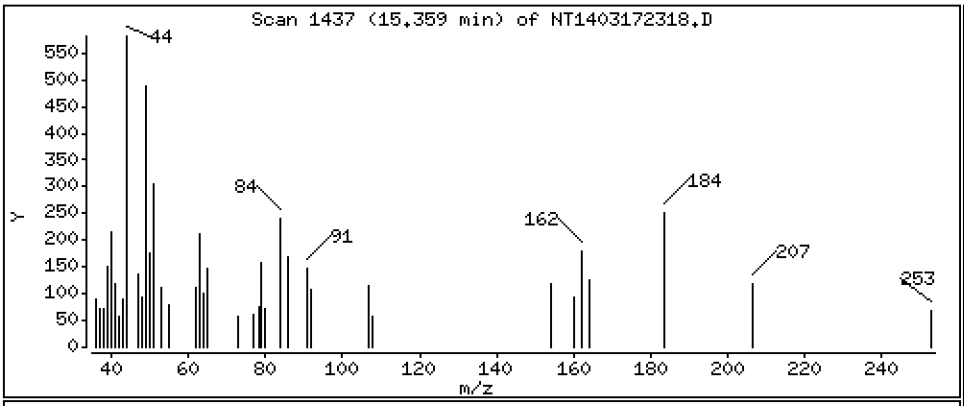
Operator: JGR

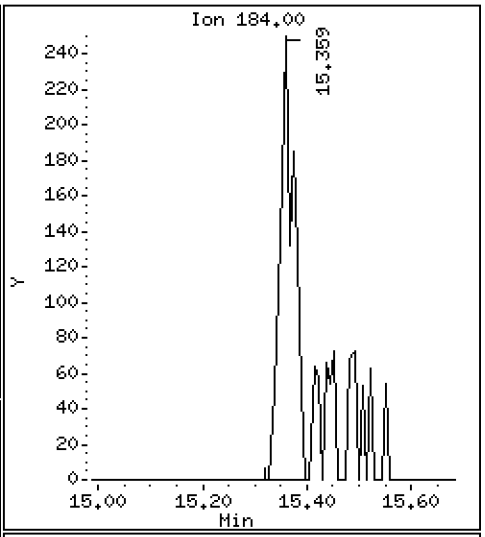
Column phase: ZB-5msi

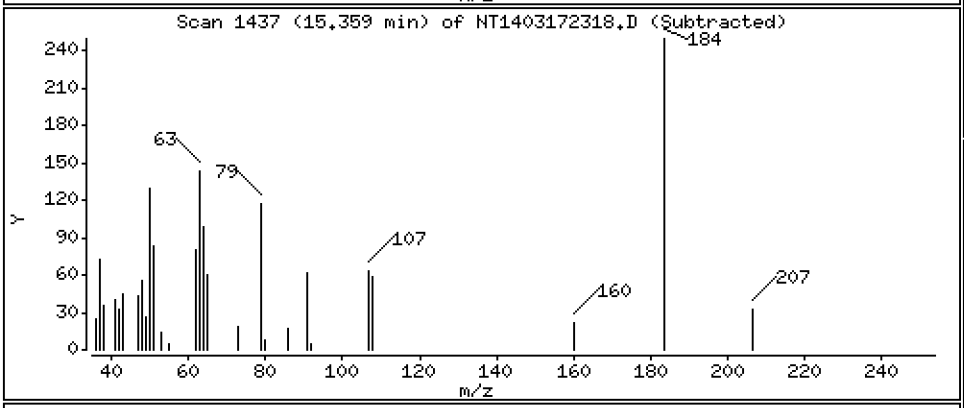
Column diameter: 0.25

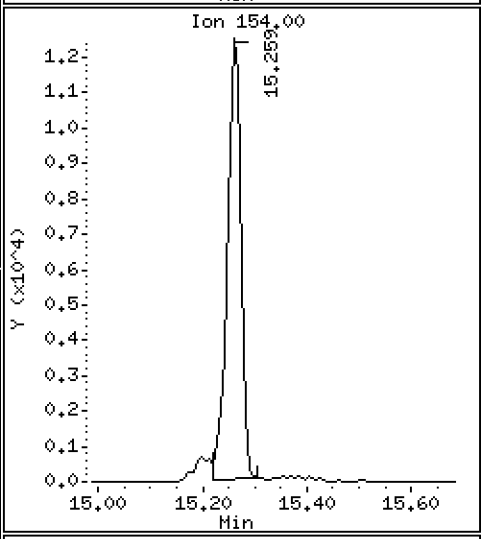
45 2,4-Dinitrophenol

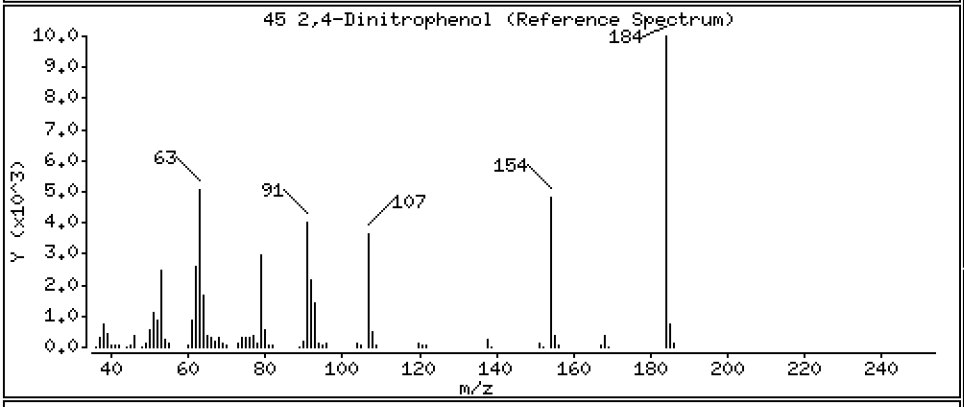
Concentration: 0.02168 ug/mL

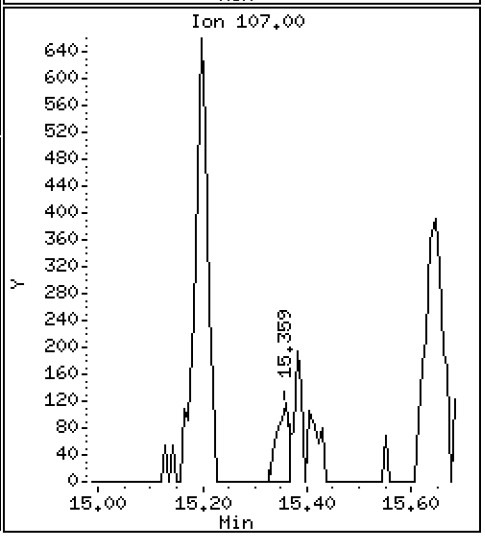


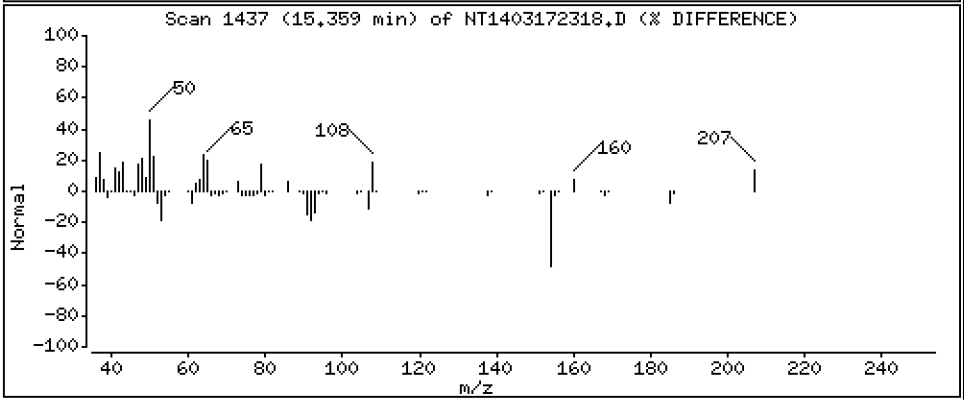












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

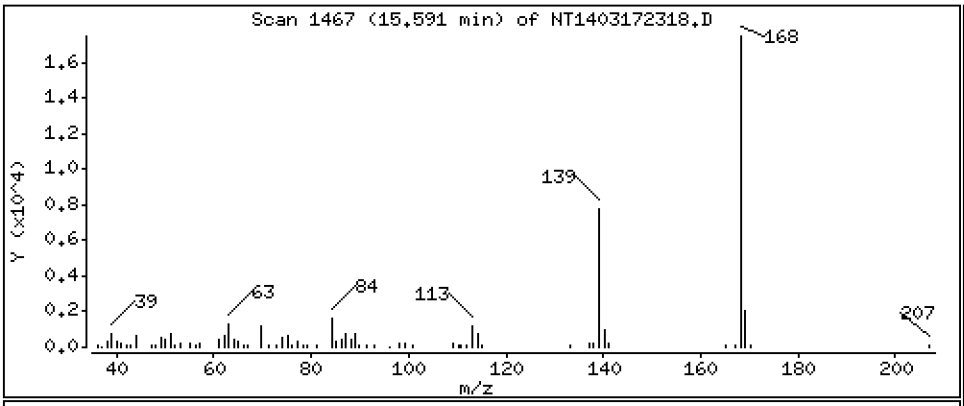
Operator: JGR

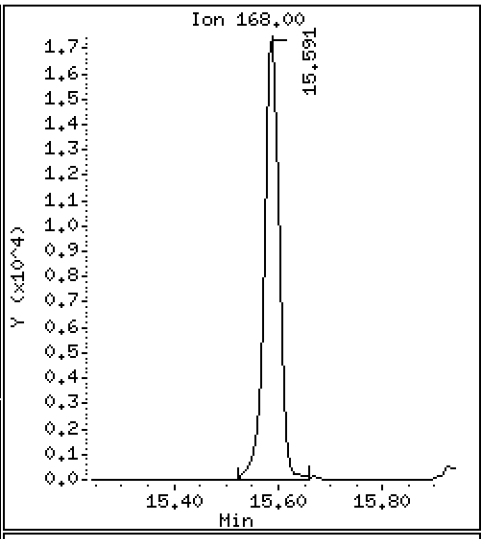
Column phase: ZB-5msi

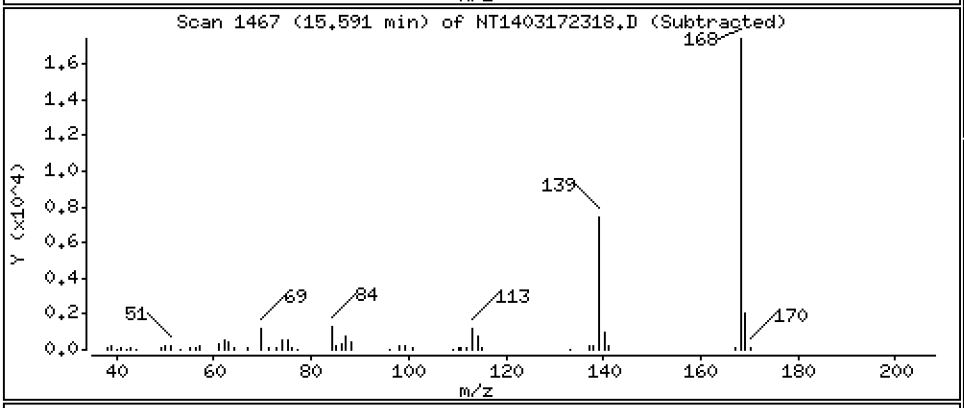
Column diameter: 0.25

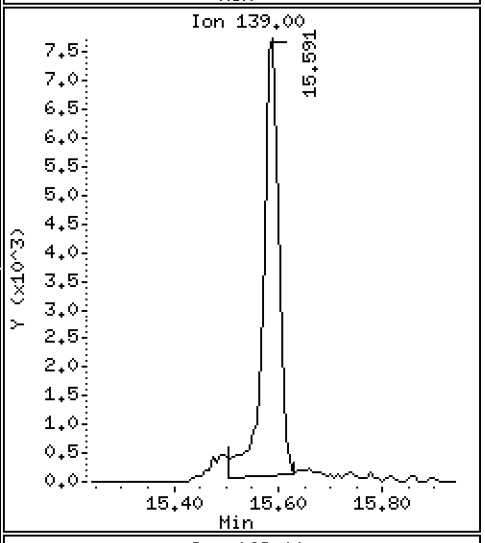
46 Dibenzofuran

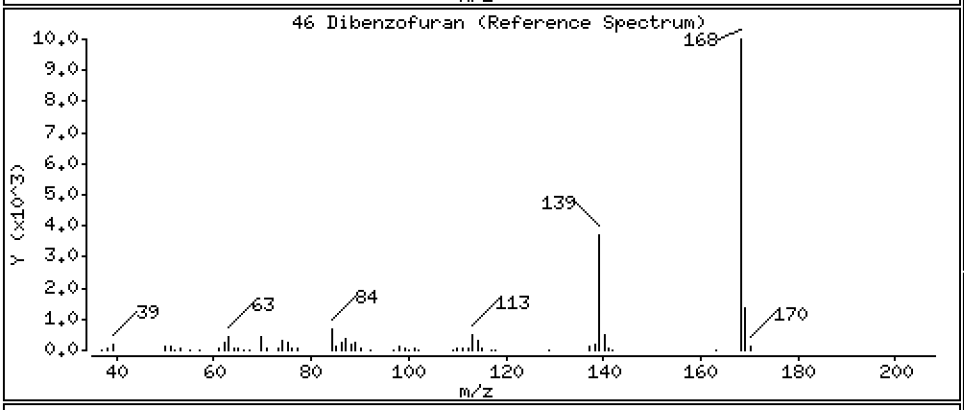
Concentration: 0.1998 ug/mL

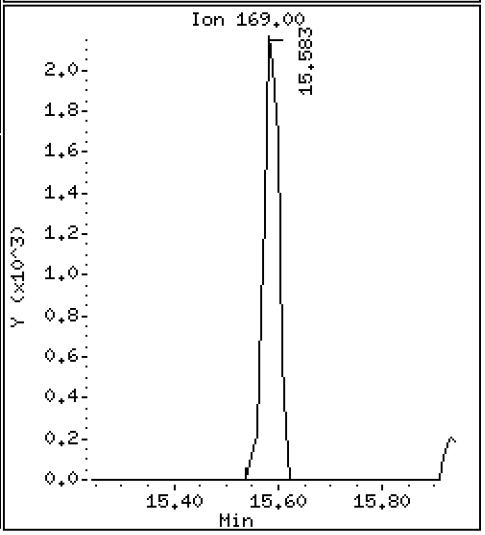


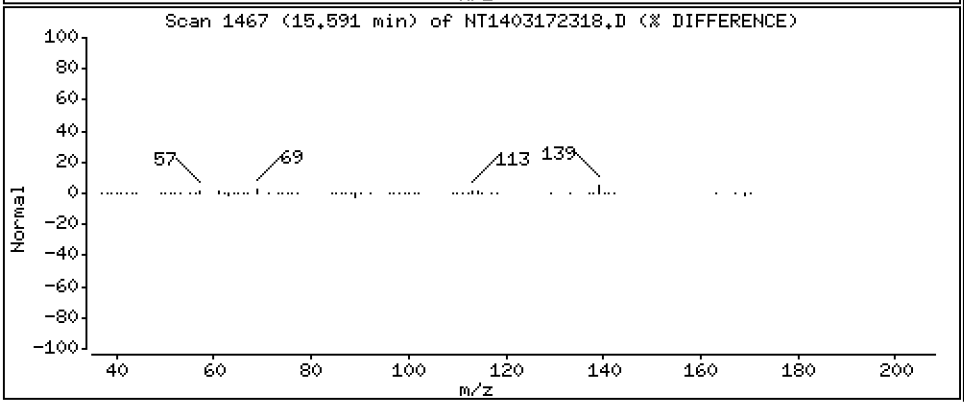












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

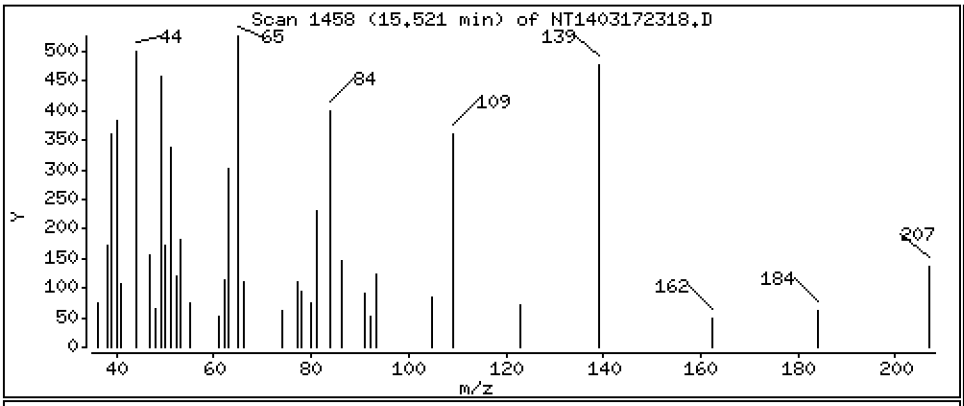
Operator: JGR

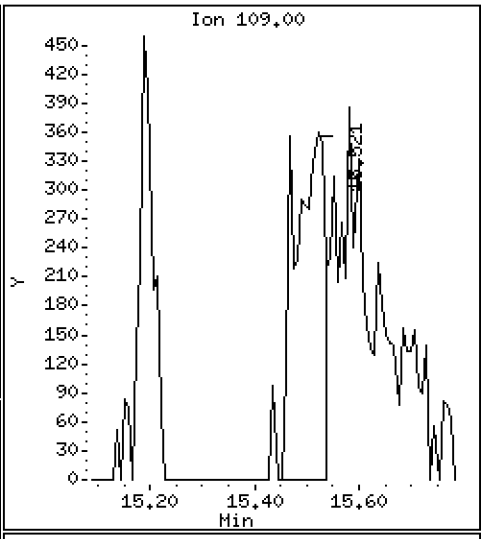
Column phase: ZB-5msi

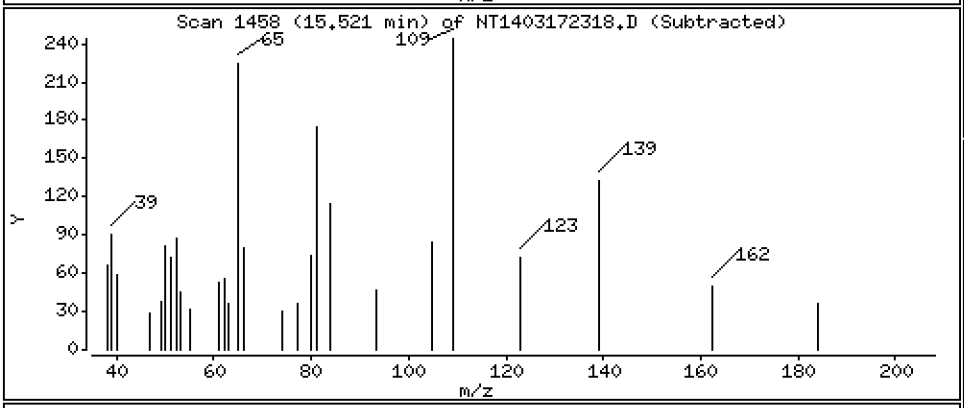
Column diameter: 0.25

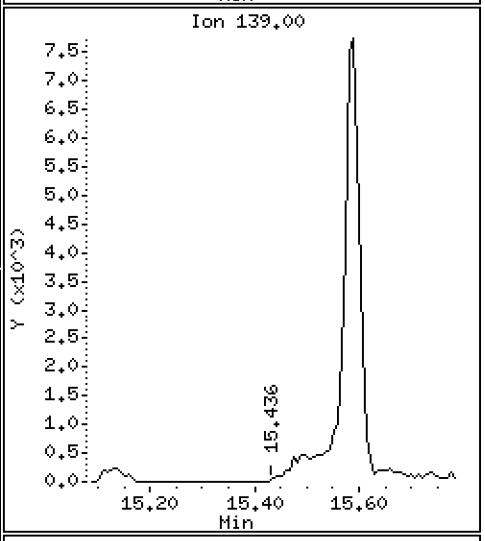
47 4-Nitrophenol

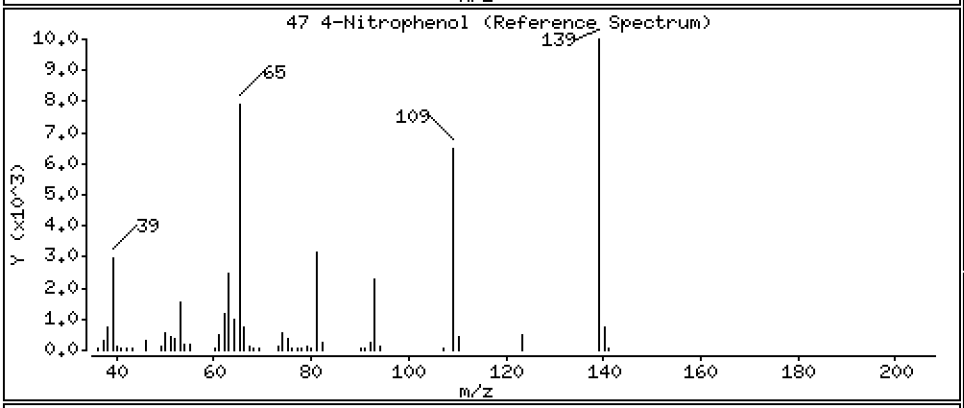
Concentration: 0.06483 ug/mL

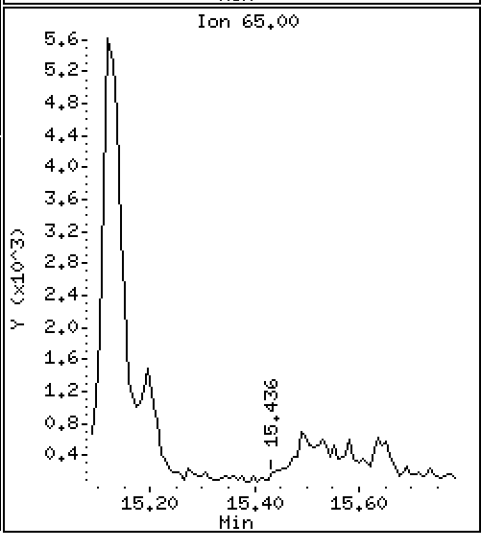


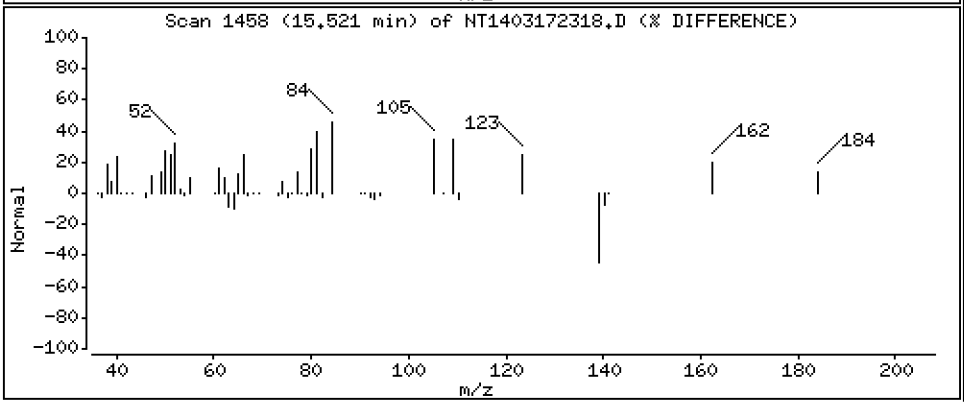












Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172318.D

Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

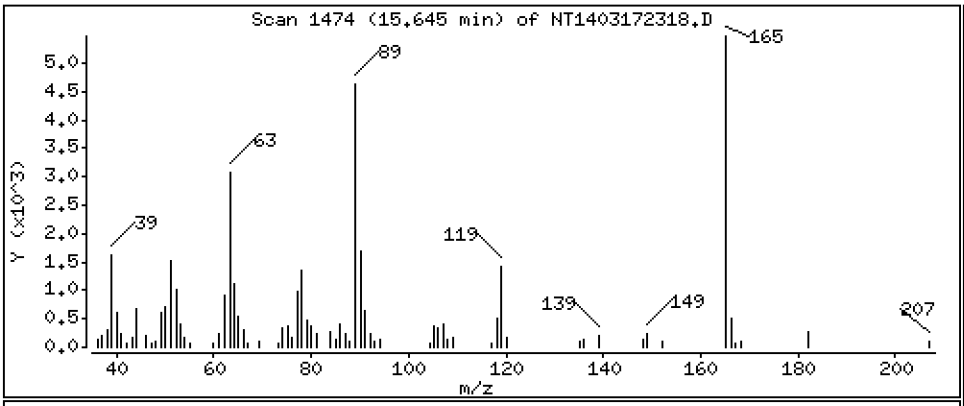
Operator: JGR

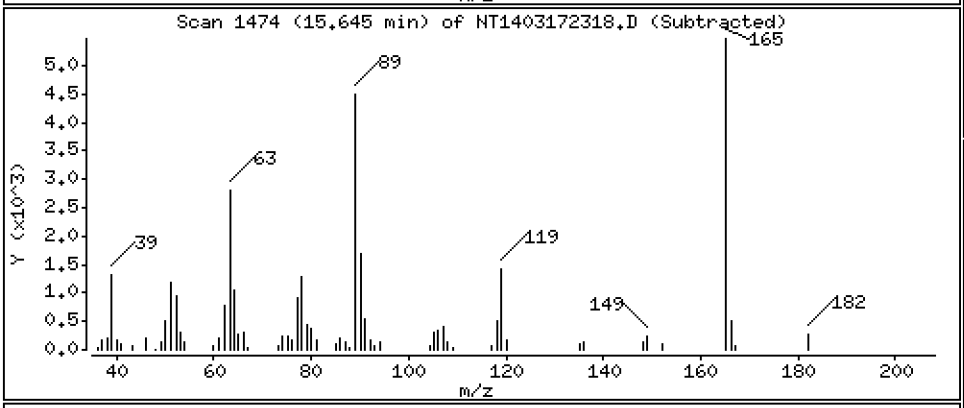
Column phase: ZB-5msi

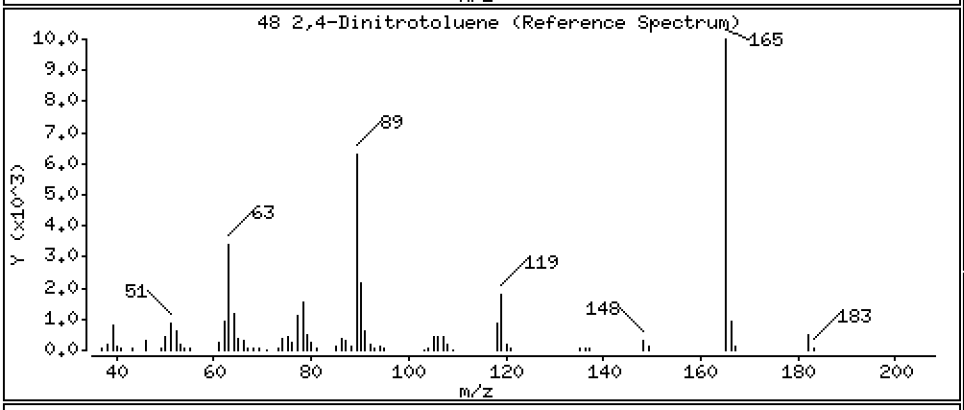
Column diameter: 0.25

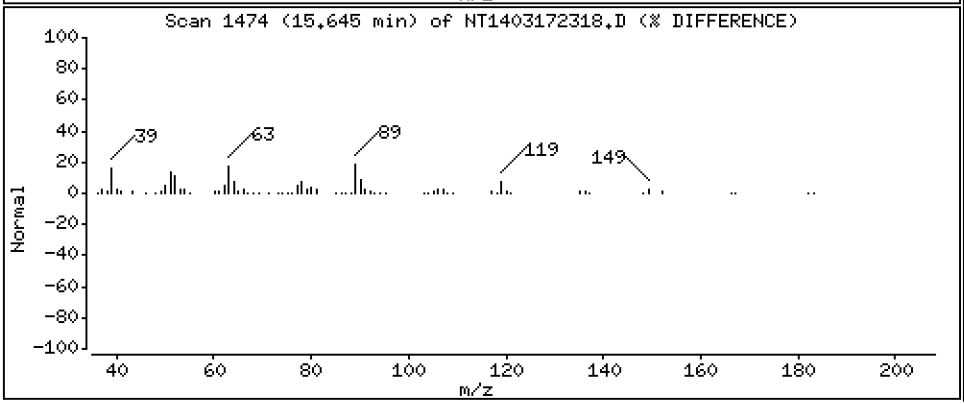
48 2,4-Dinitrotoluene

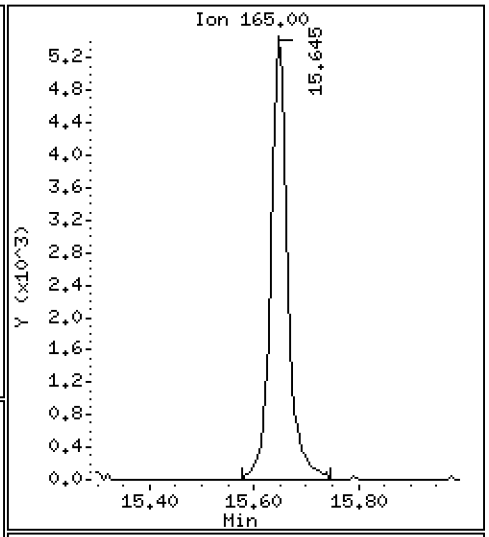
Concentration: 0.2845 ug/mL

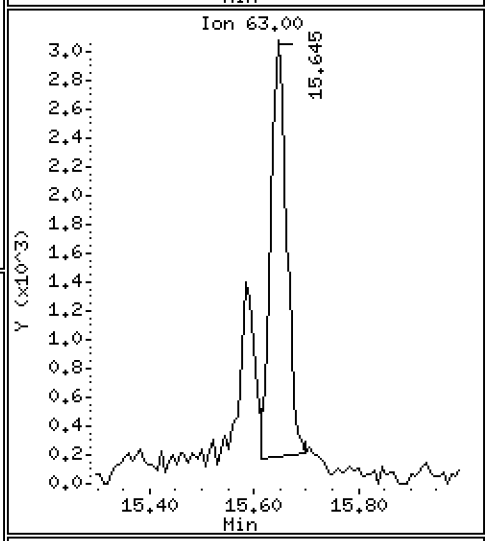


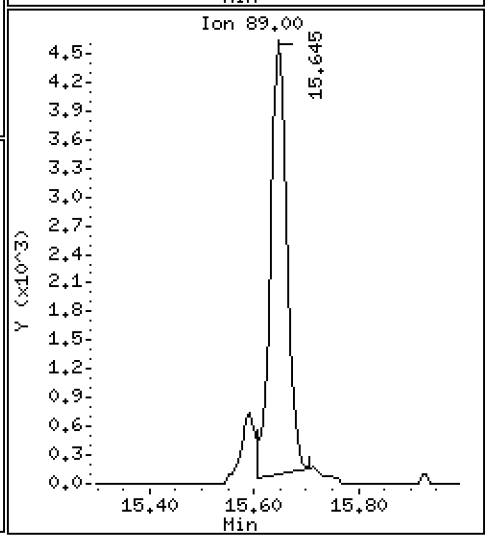












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

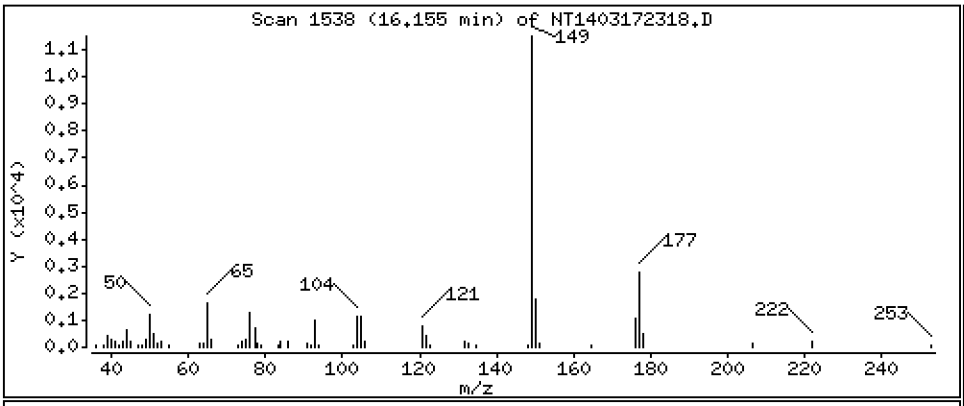
Operator: JGR

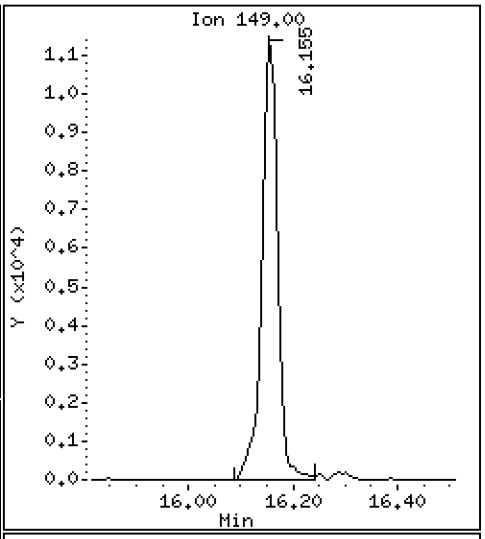
Column phase: ZB-5msi

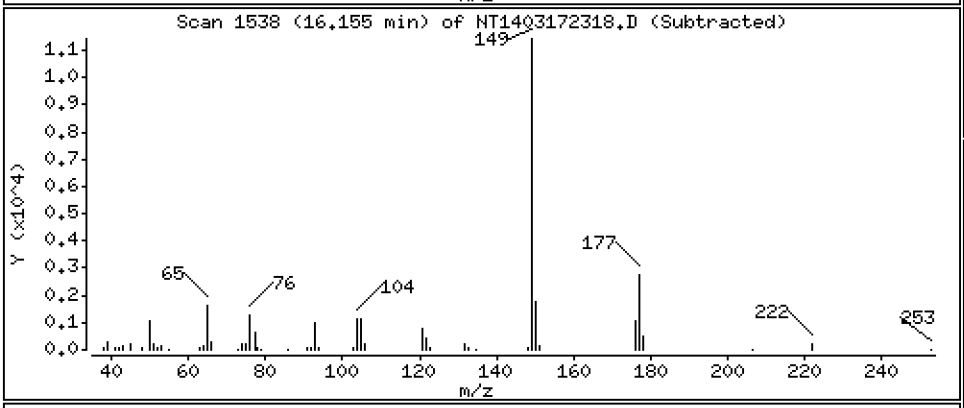
Column diameter: 0.25

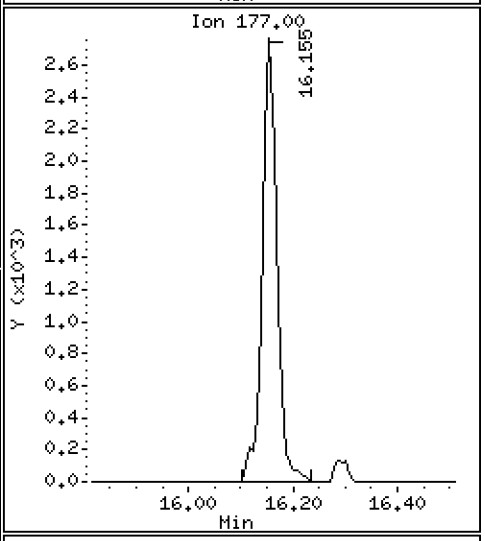
50 Diethylphthalate

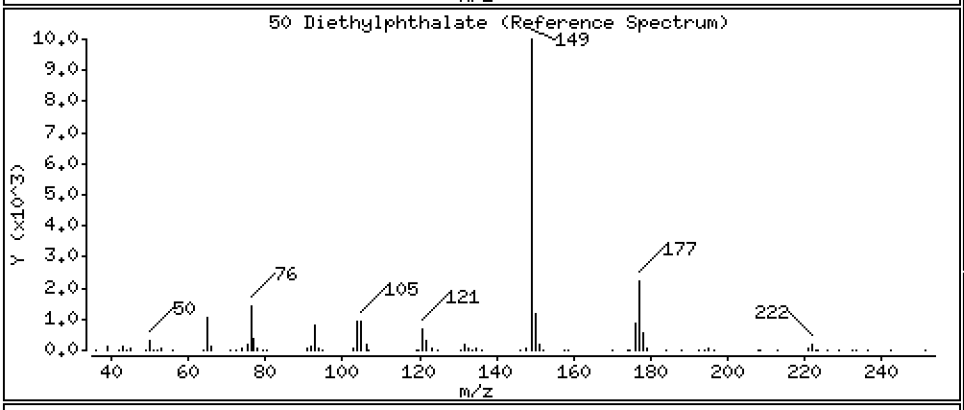
Concentration: 0.1917 ug/mL

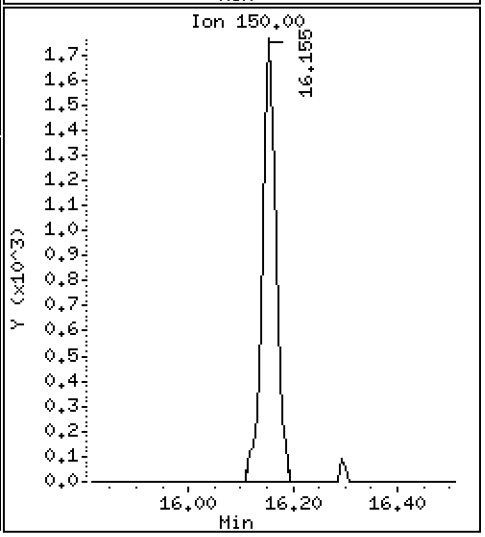


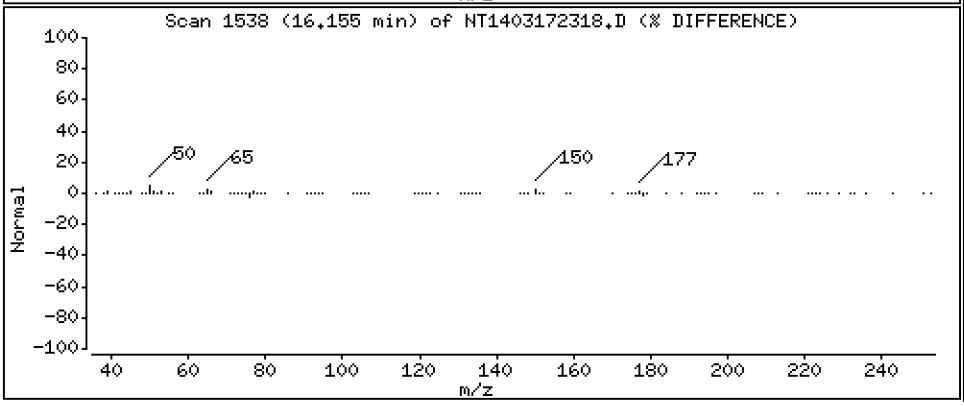












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

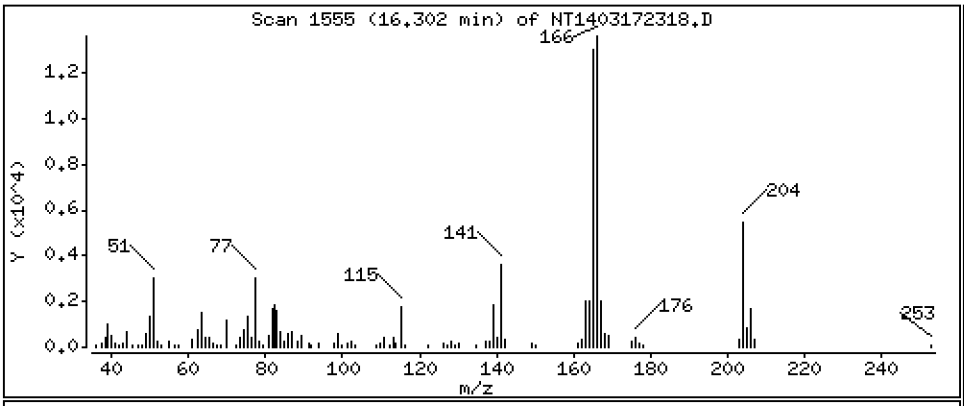
Operator: JGR

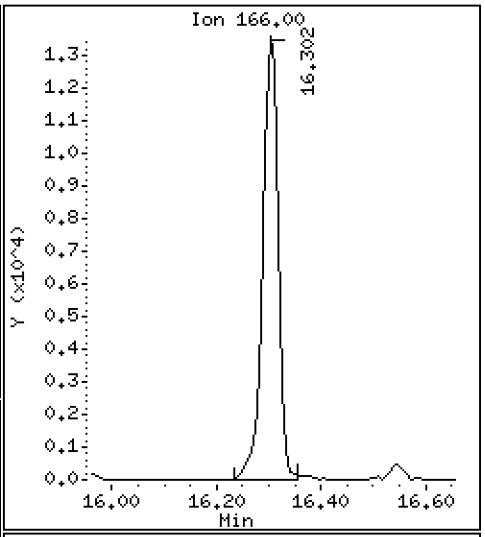
Column phase: ZB-5msi

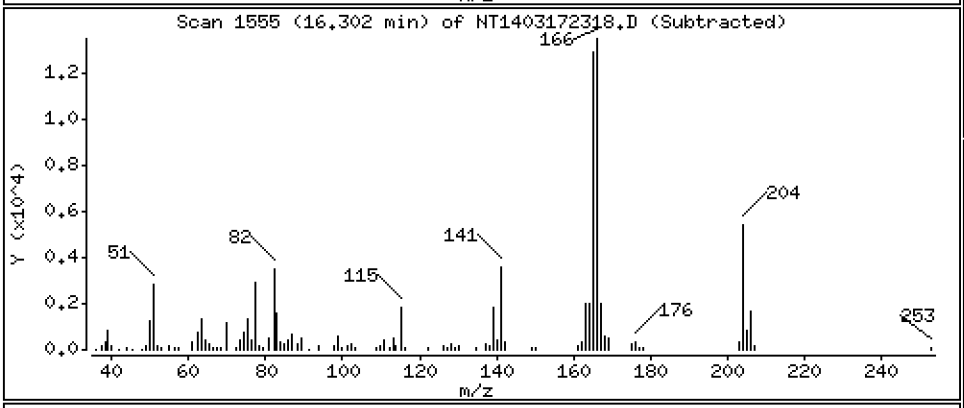
Column diameter: 0.25

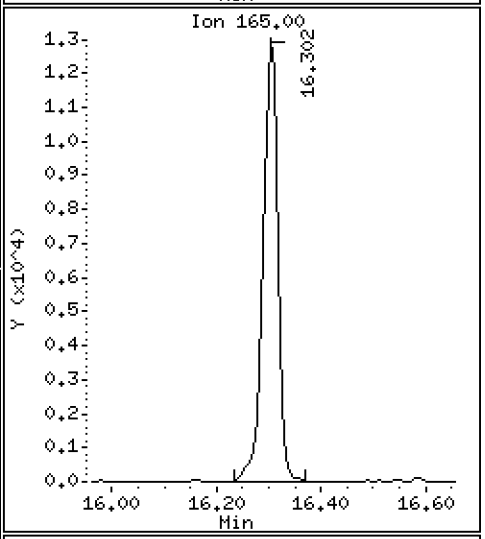
49 Fluorene

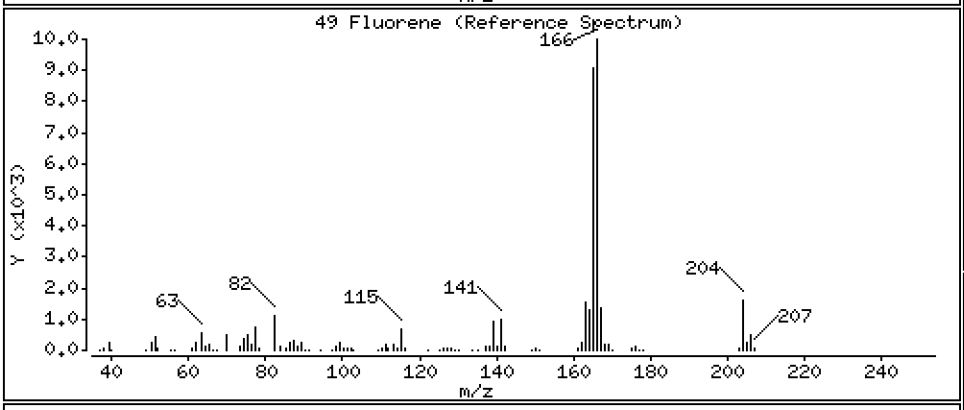
Concentration: 0.1696 ug/mL

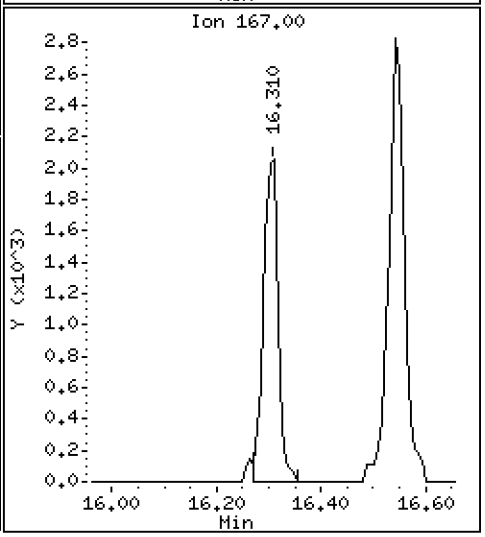


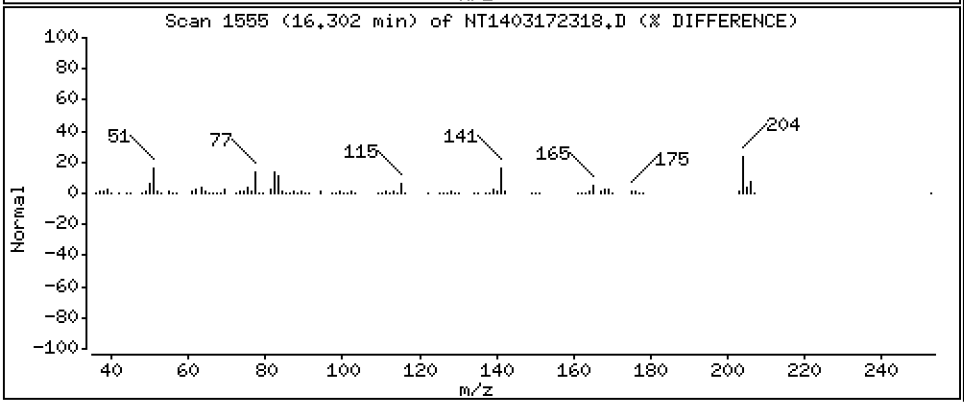












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

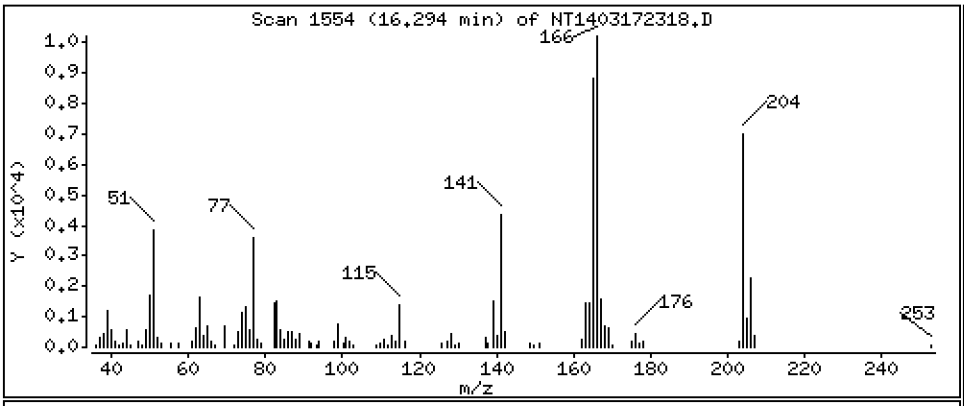
Operator: JGR

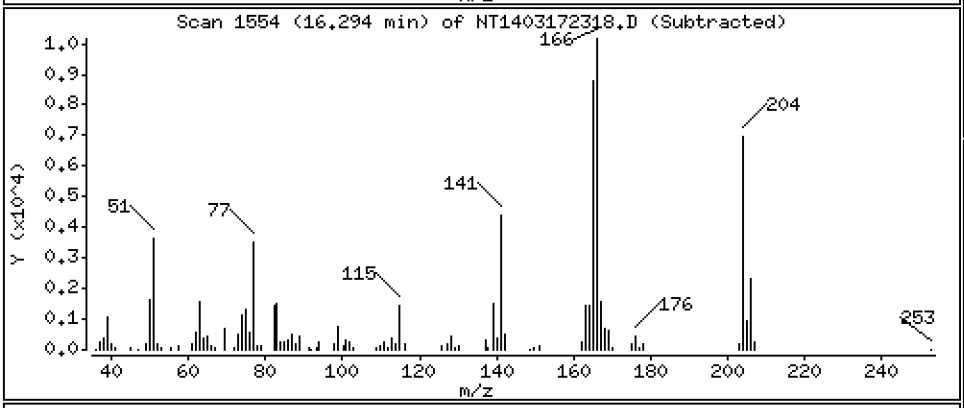
Column phase: ZB-5msi

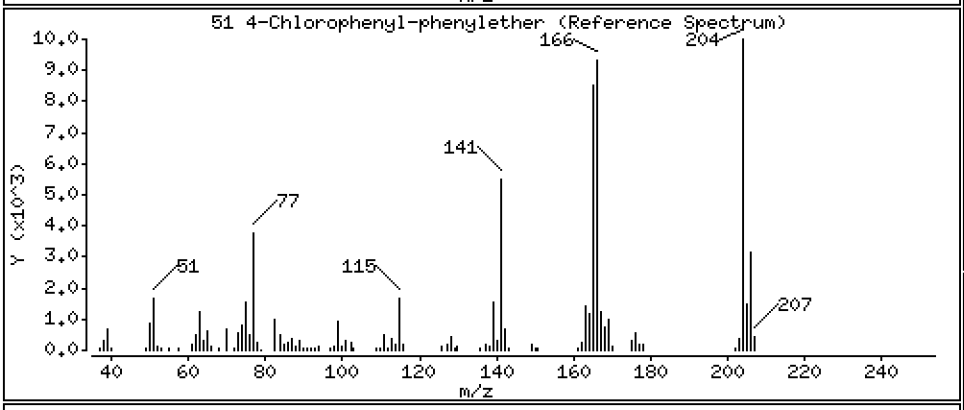
Column diameter: 0.25

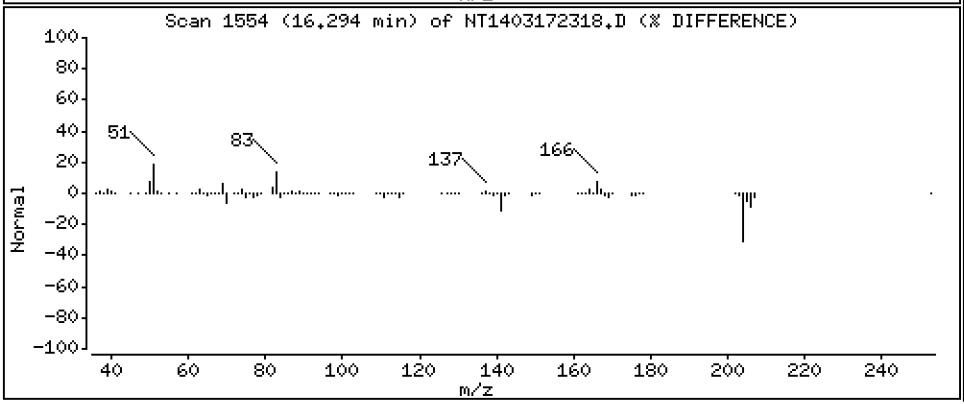
51 4-Chlorophenyl-phenylether

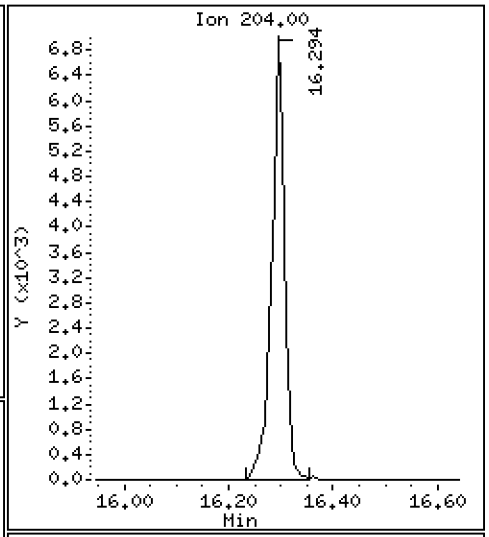
Concentration: 0.1733 ug/mL

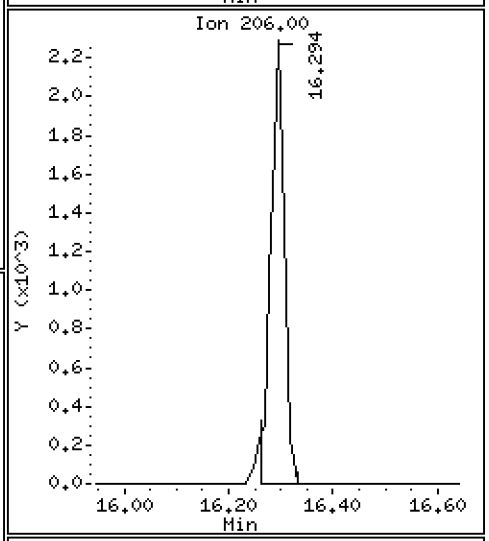


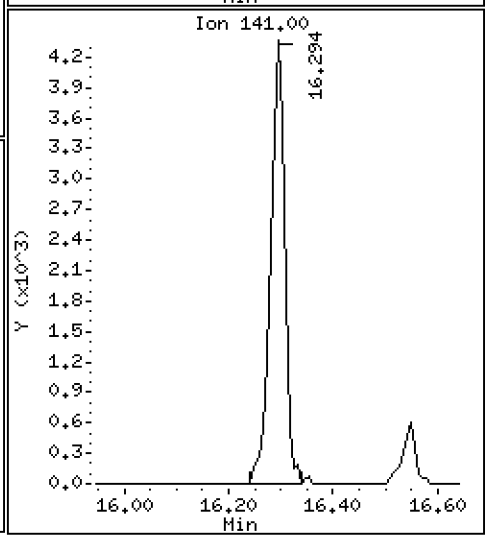












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

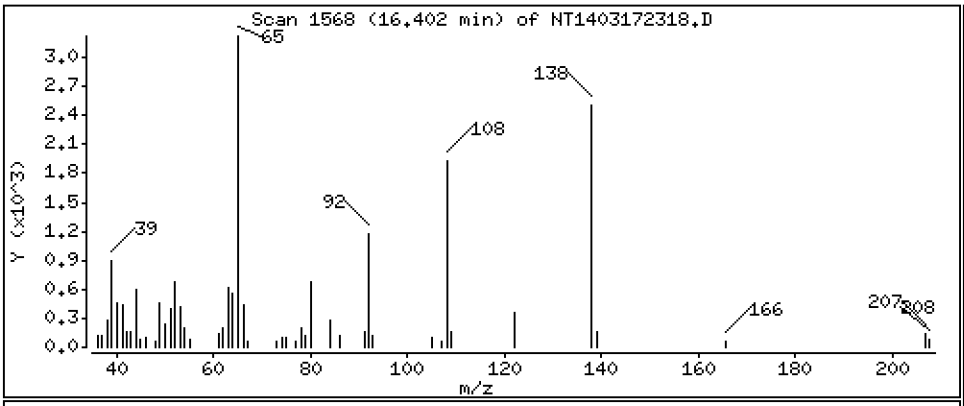
Operator: JGR

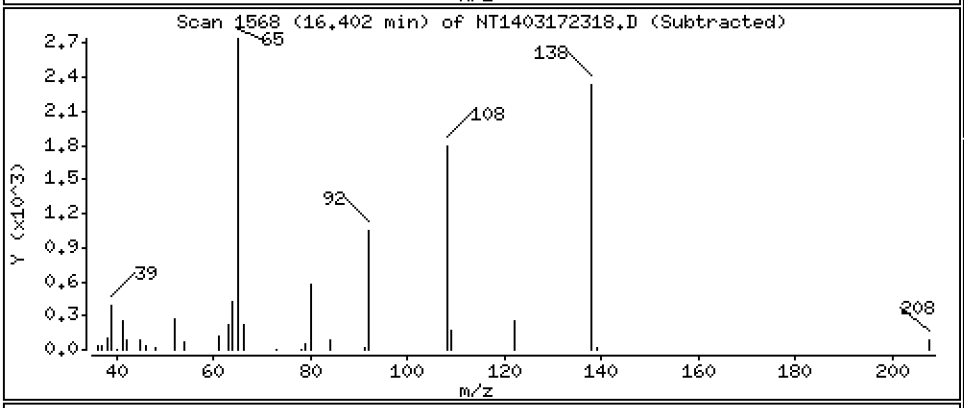
Column phase: ZB-5msi

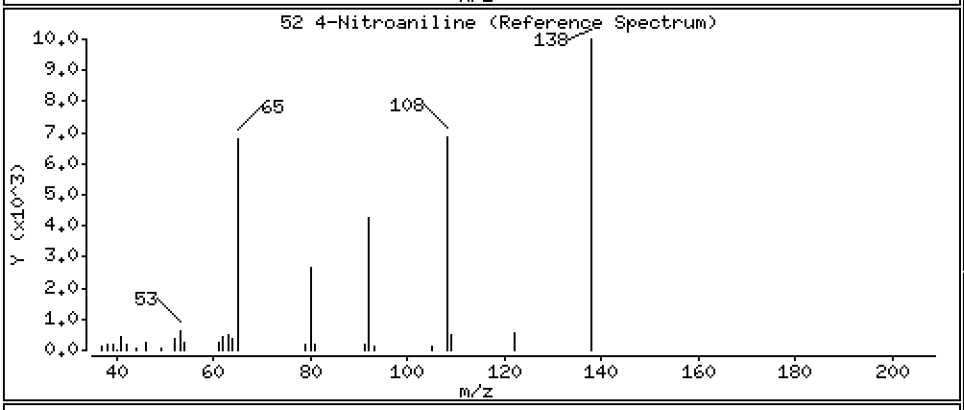
Column diameter: 0.25

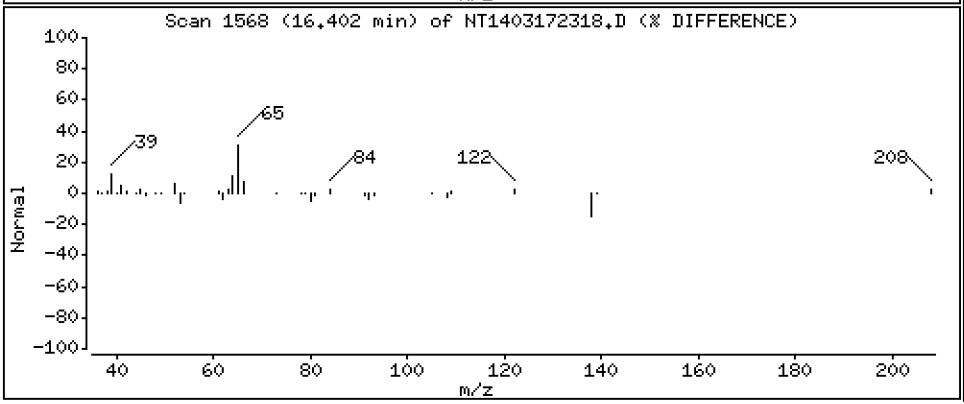
52 4-Nitroaniline

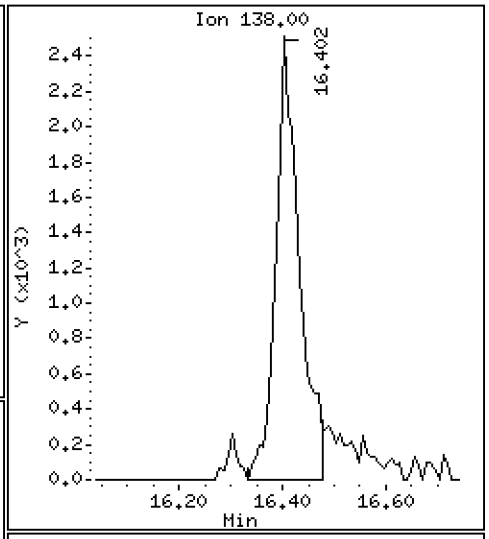
Concentration: 0.2262 ug/mL

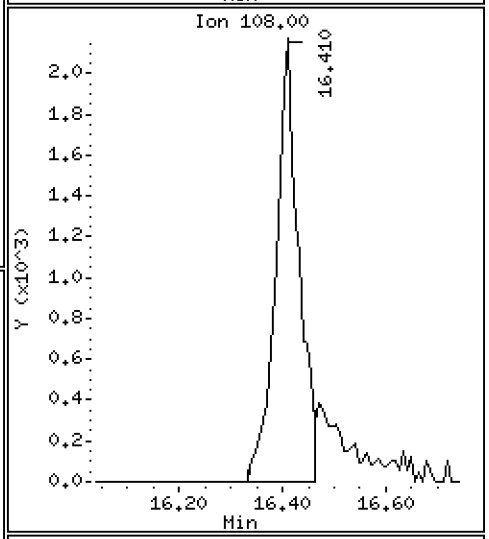


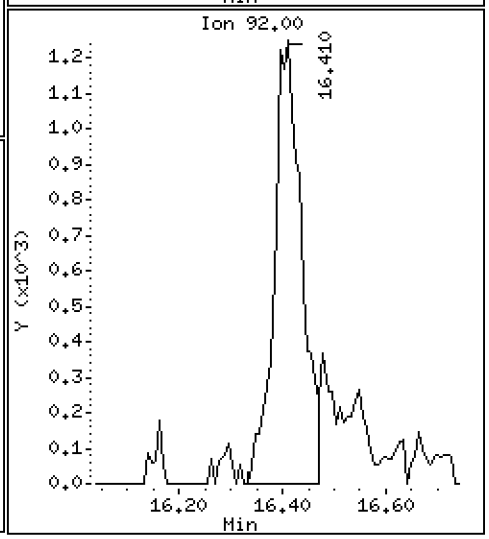












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

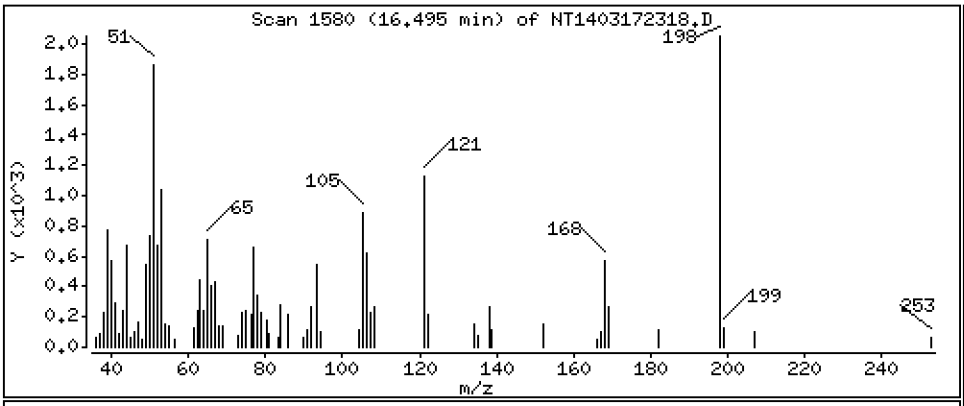
Operator: JGR

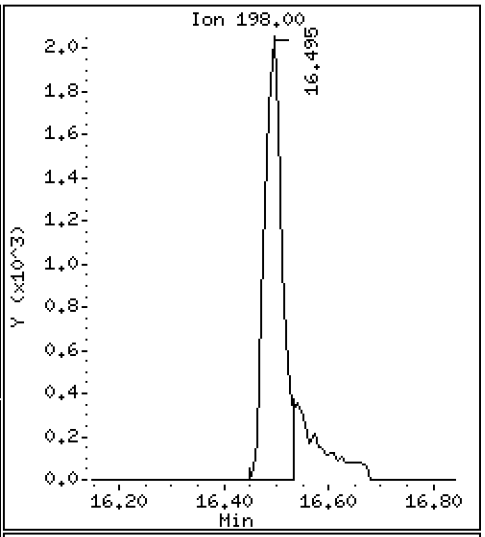
Column phase: ZB-5msi

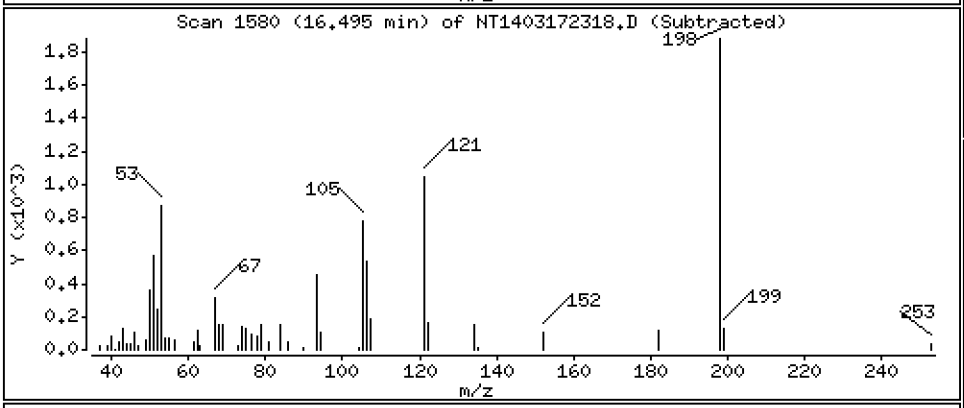
Column diameter: 0.25

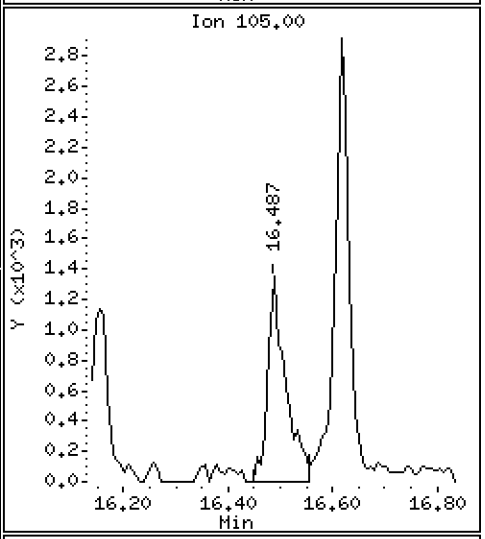
53 4,6-Dinitro-2-methylphenol

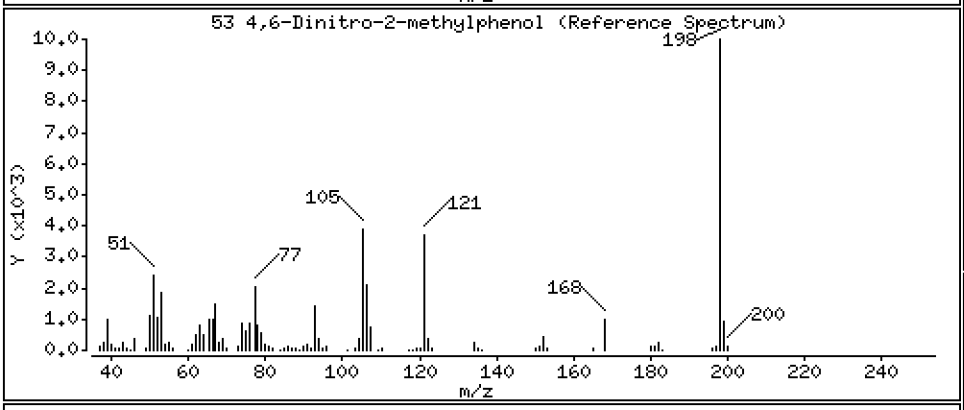
Concentration: 0.2002 ug/mL

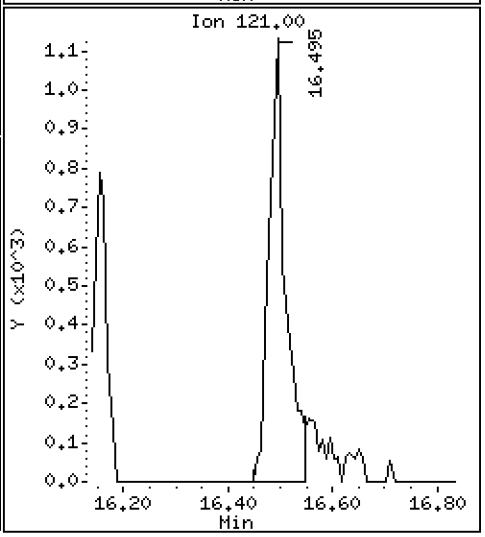


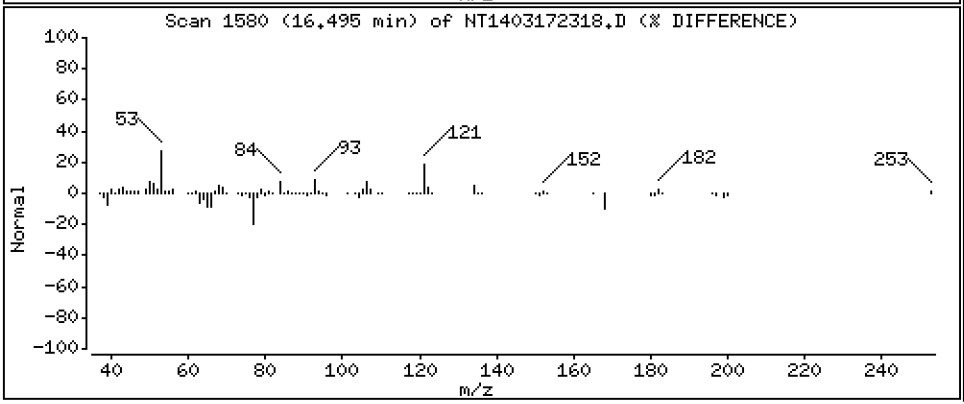












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

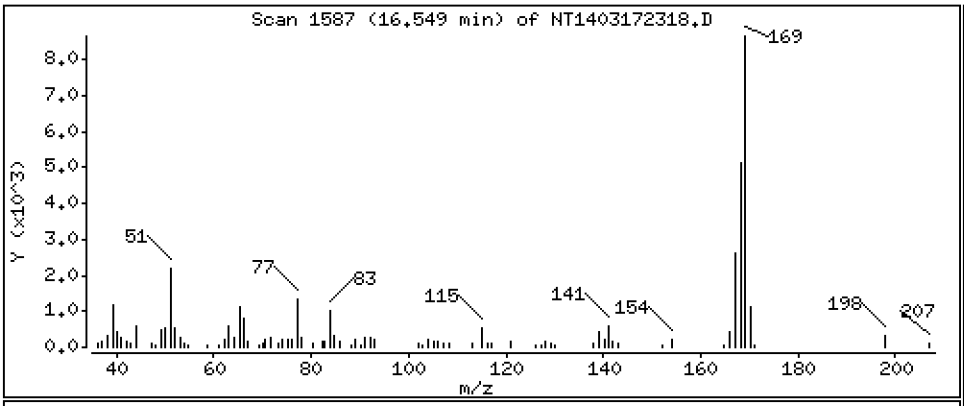
Operator: JGR

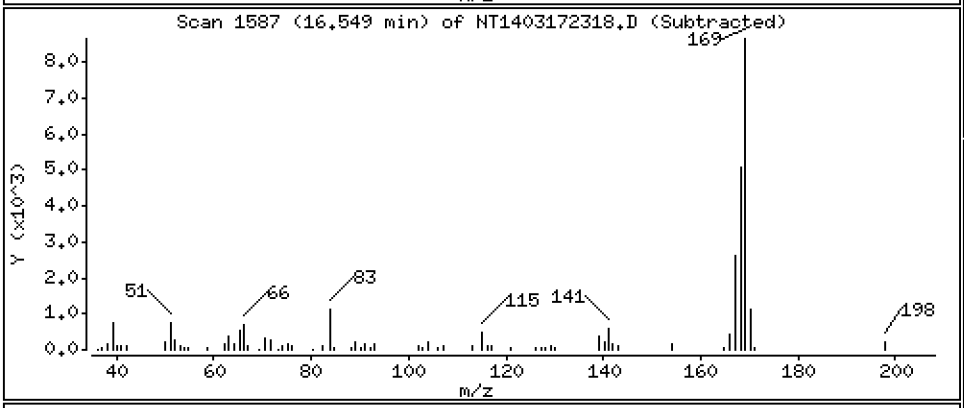
Column phase: ZB-5msi

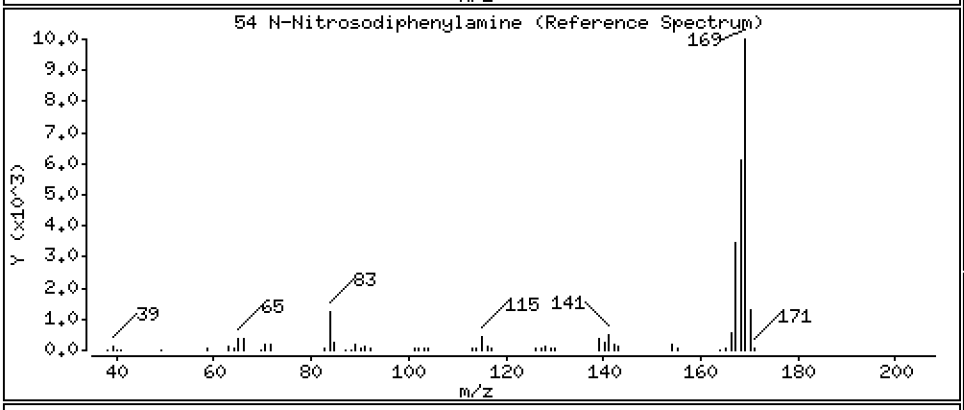
Column diameter: 0.25

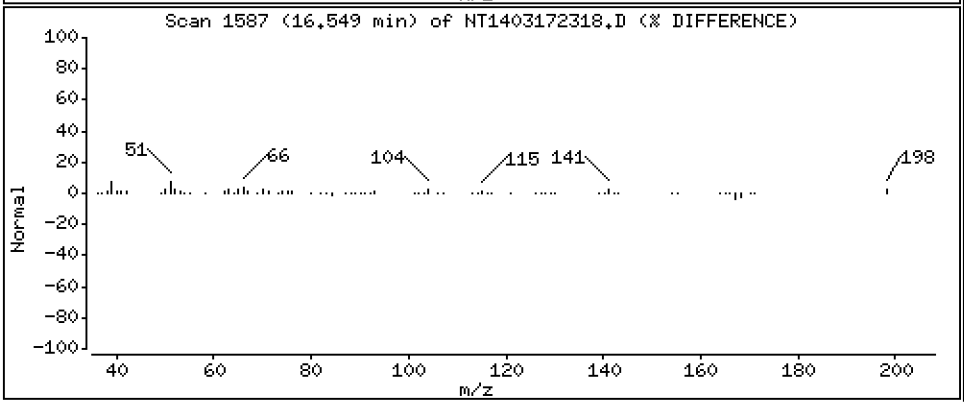
54 N-Nitrosodiphenylamine

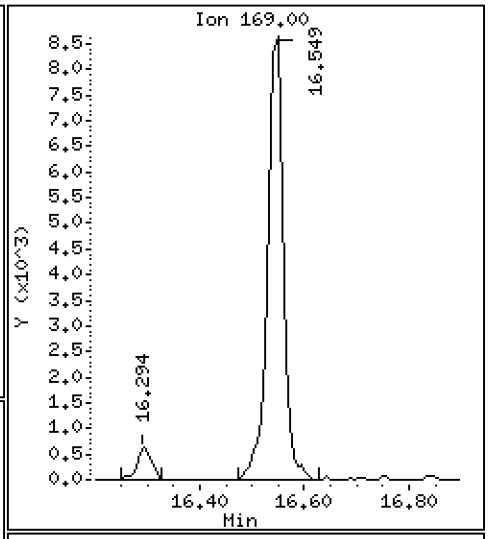
Concentration: 0.1901 ug/mL

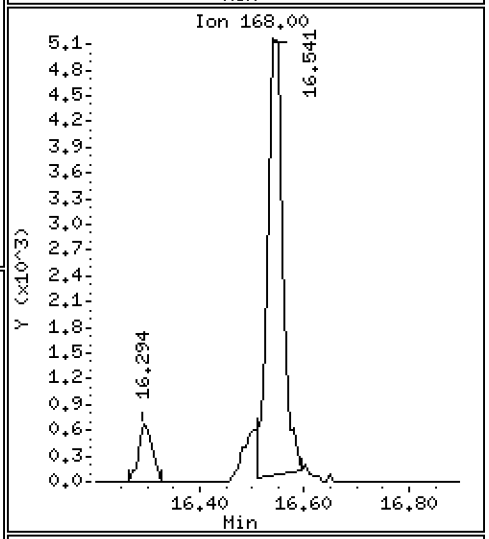


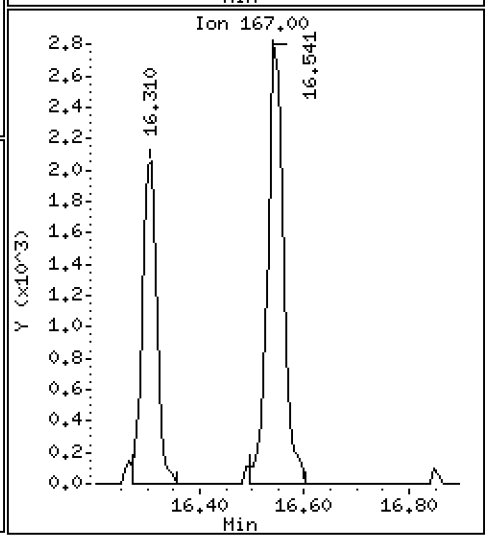












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

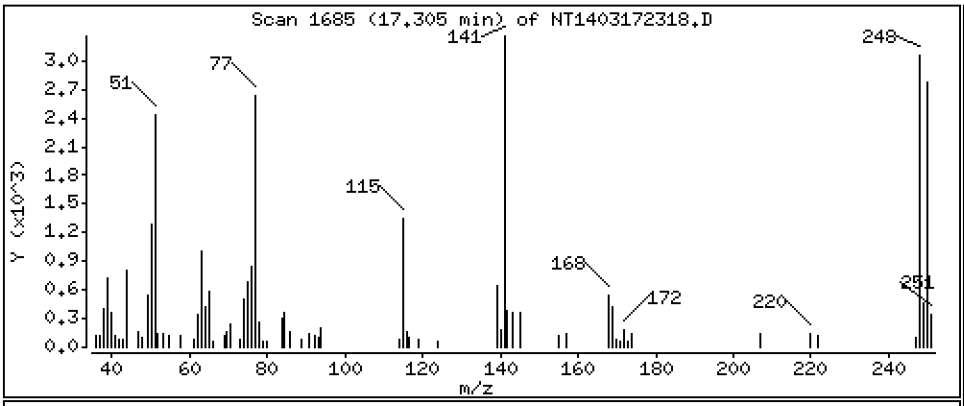
Operator: JGR

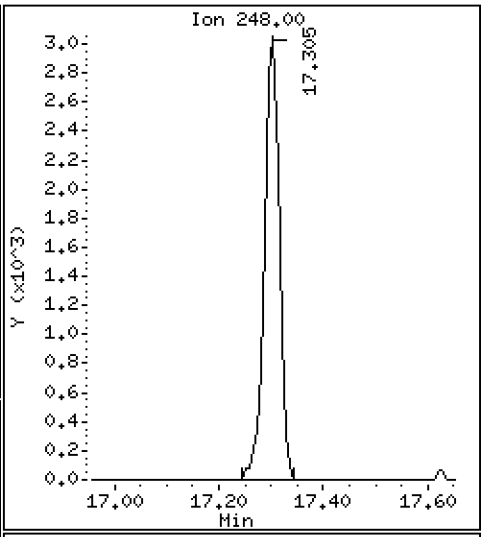
Column phase: ZB-5msi

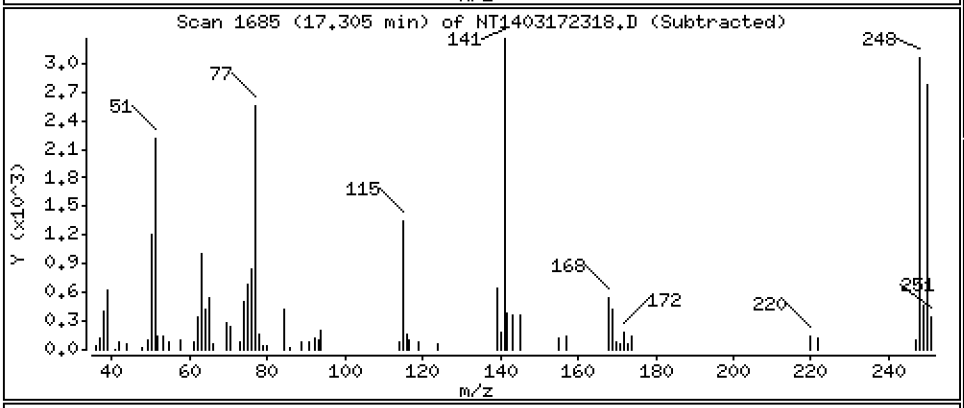
Column diameter: 0.25

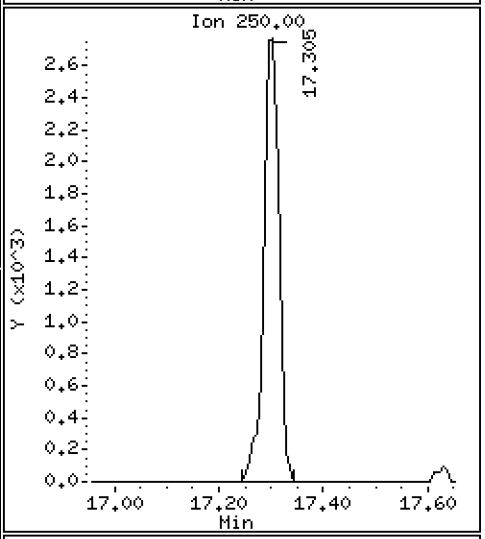
56 4-Bromophenyl-phenylether

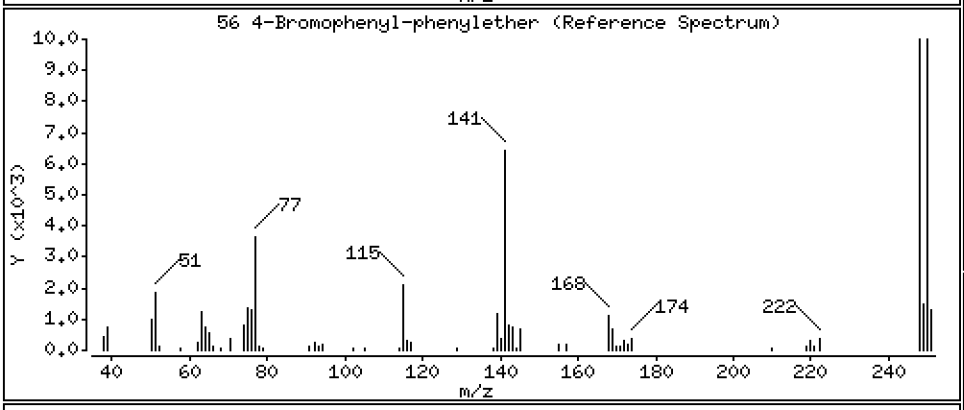
Concentration: 0.1868 ug/mL

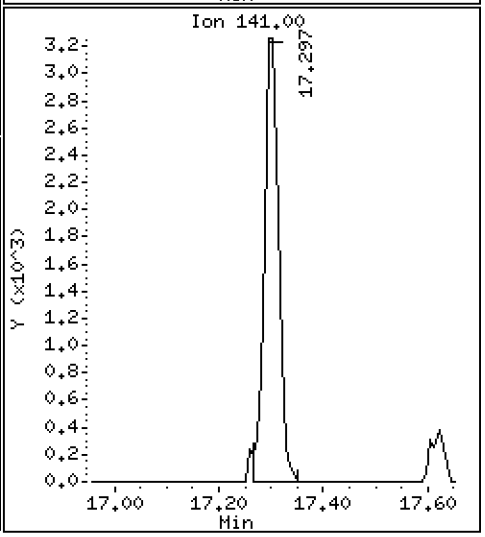


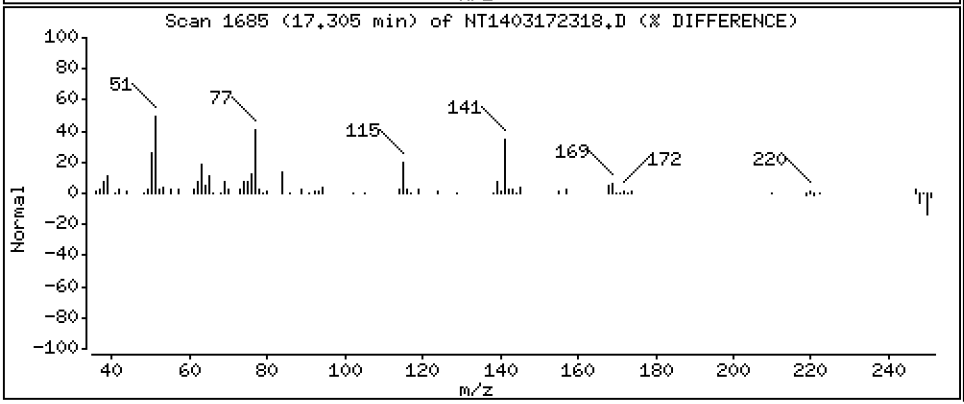












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

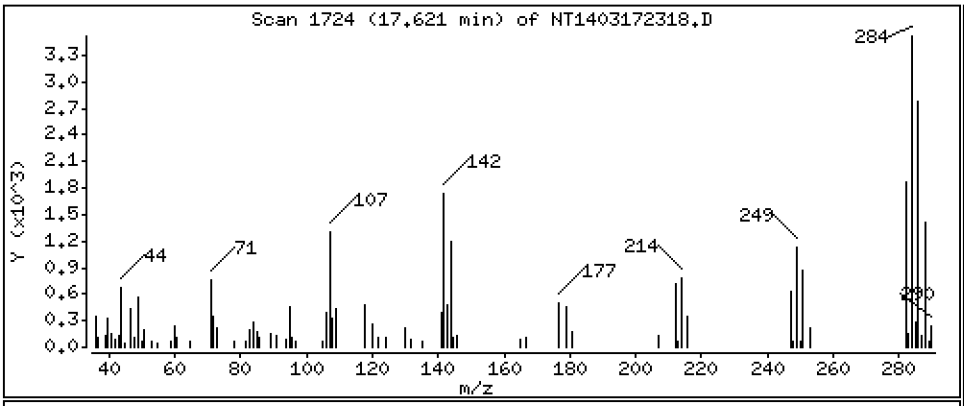
Operator: JGR

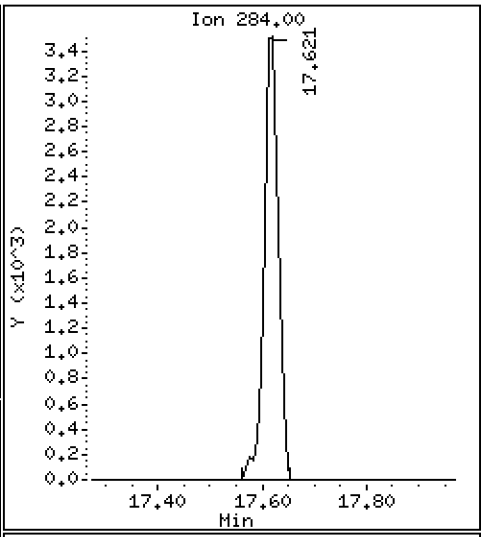
Column phase: ZB-5msi

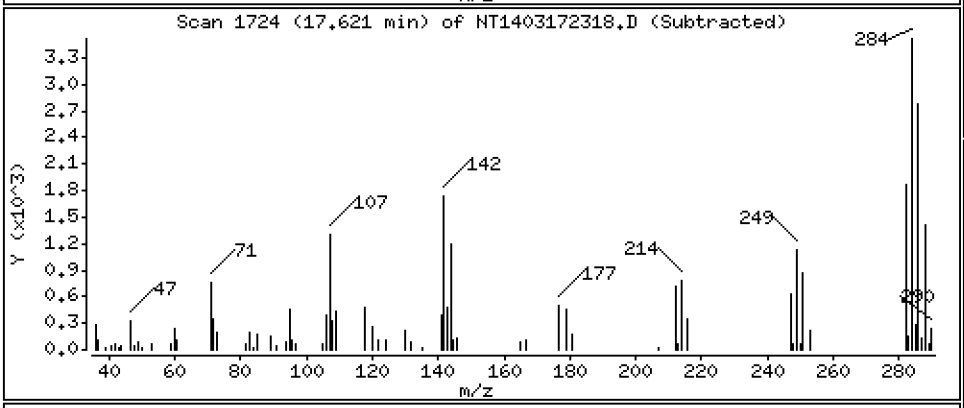
Column diameter: 0.25

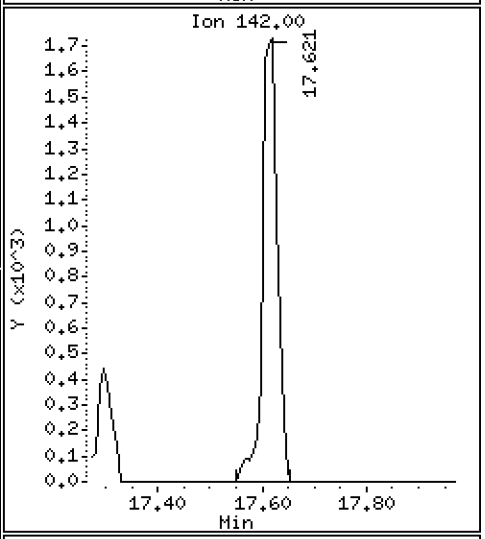
57 Hexachlorobenzene

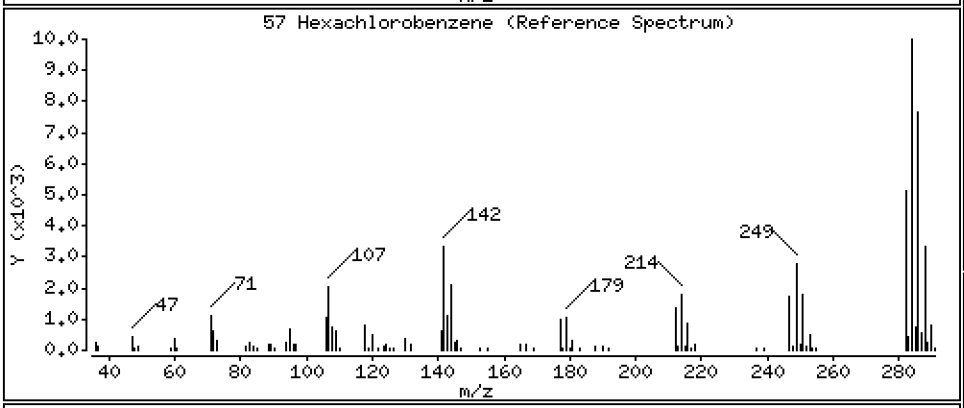
Concentration: 0.2040 ug/mL

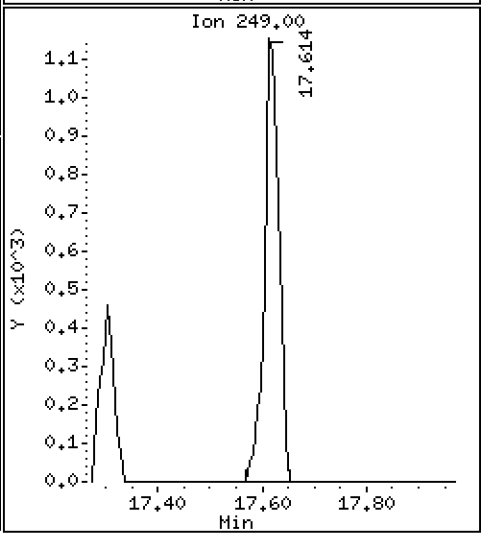


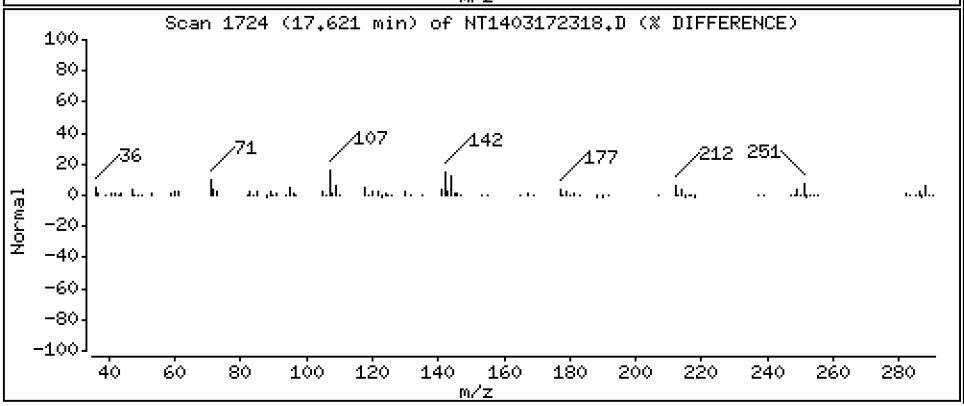












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

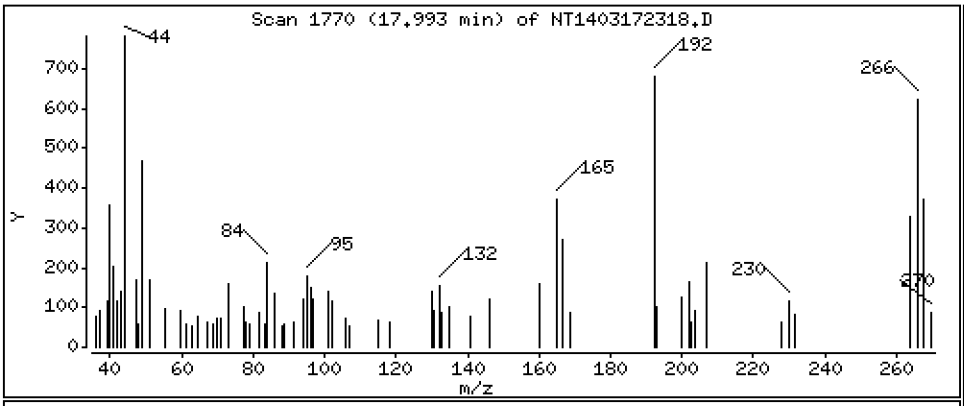
Operator: JGR

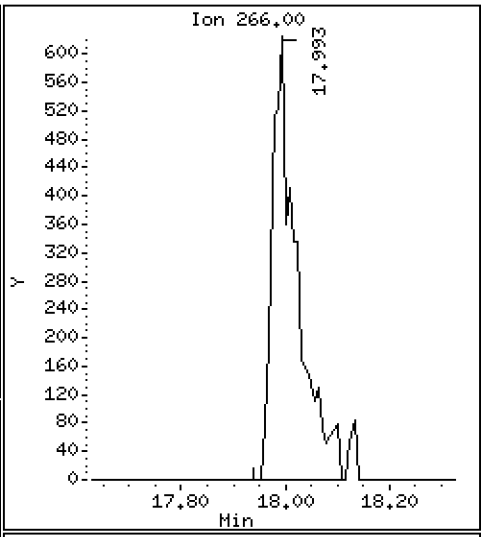
Column phase: ZB-5msi

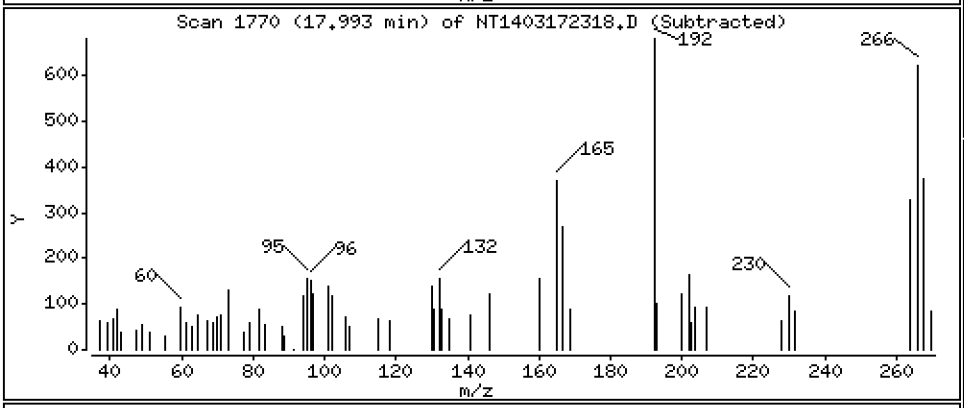
Column diameter: 0.25

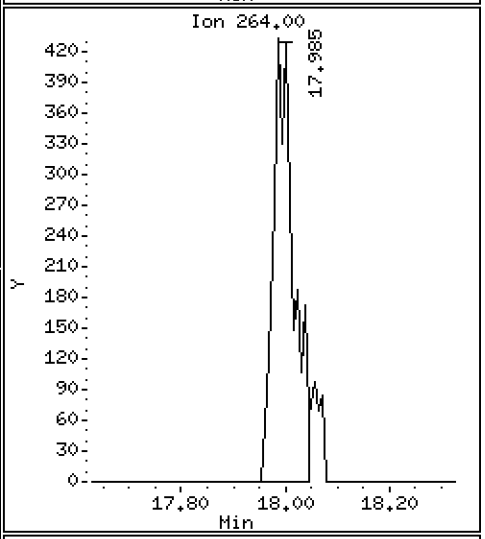
58 Pentachlorophenol

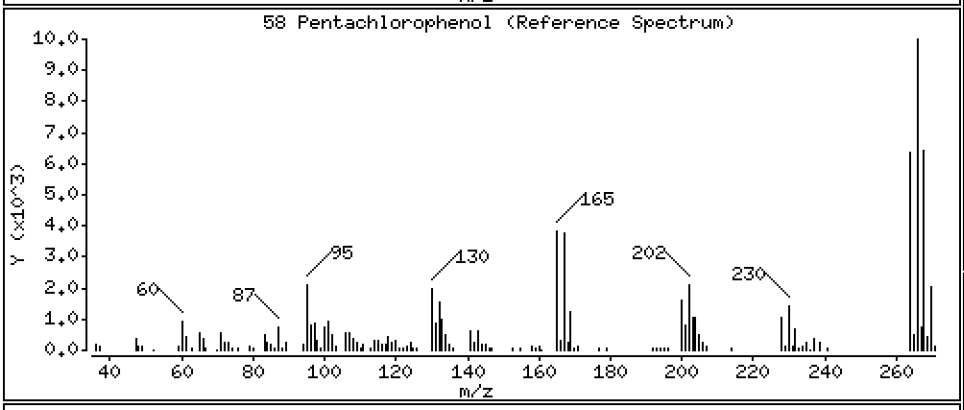
Concentration: 0.09107 ug/mL

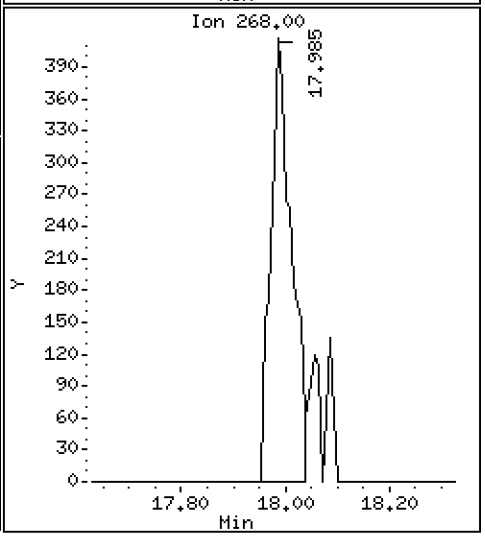


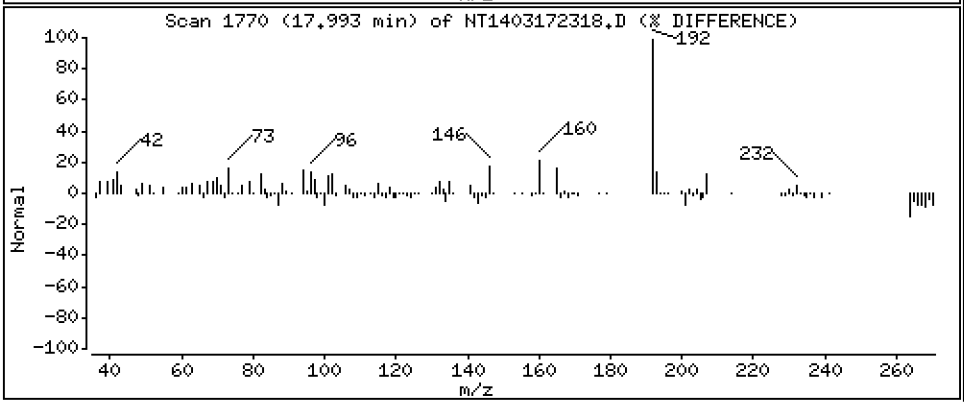












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

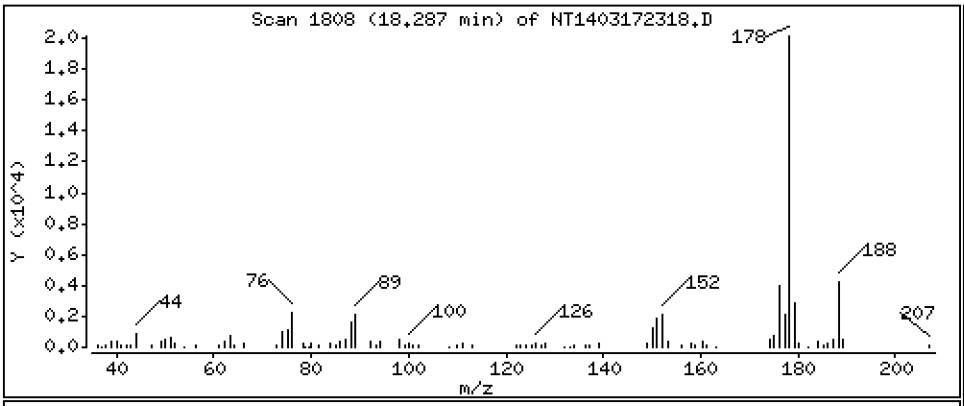
Operator: JGR

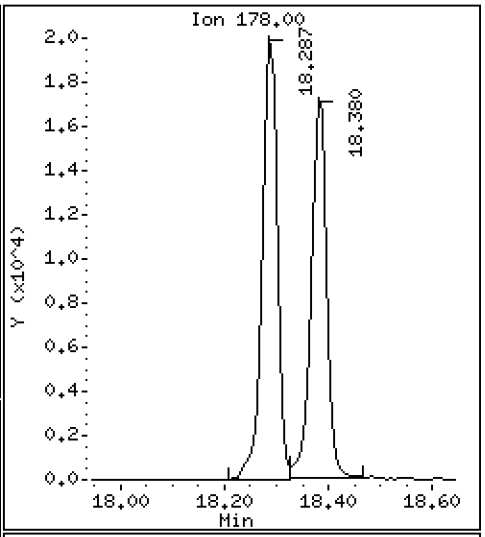
Column phase: ZB-5msi

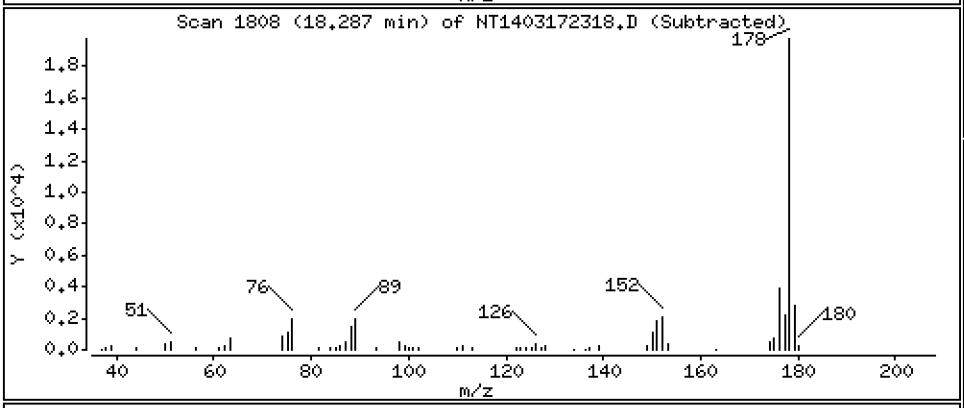
Column diameter: 0.25

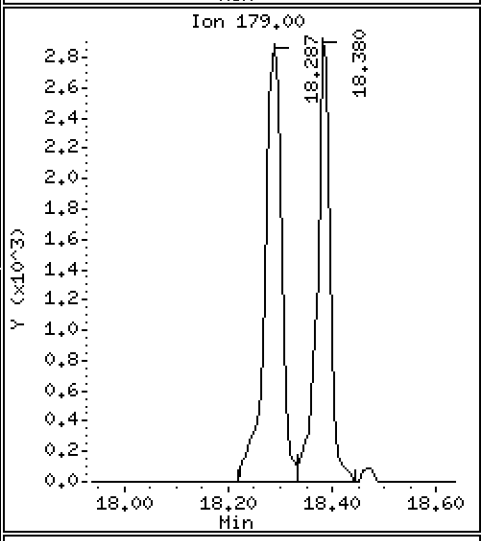
60 Phenanthrene

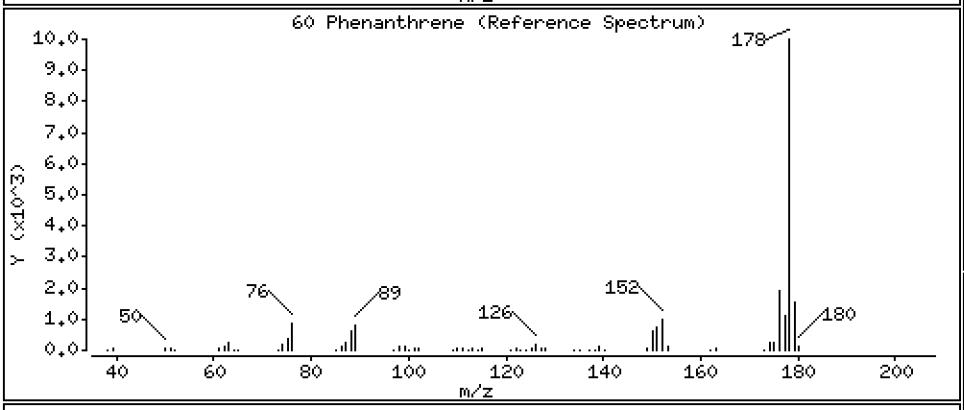
Concentration: 0.1994 ug/mL

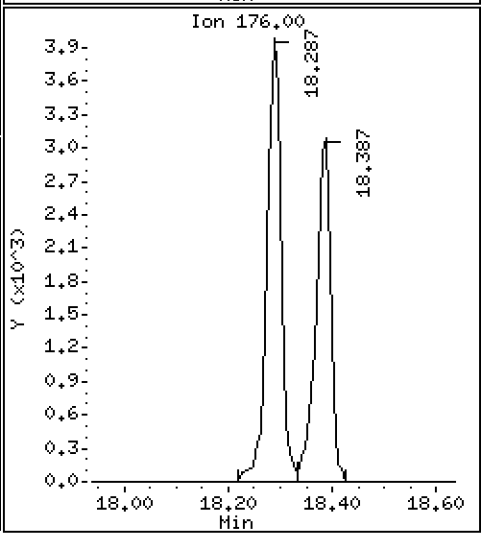


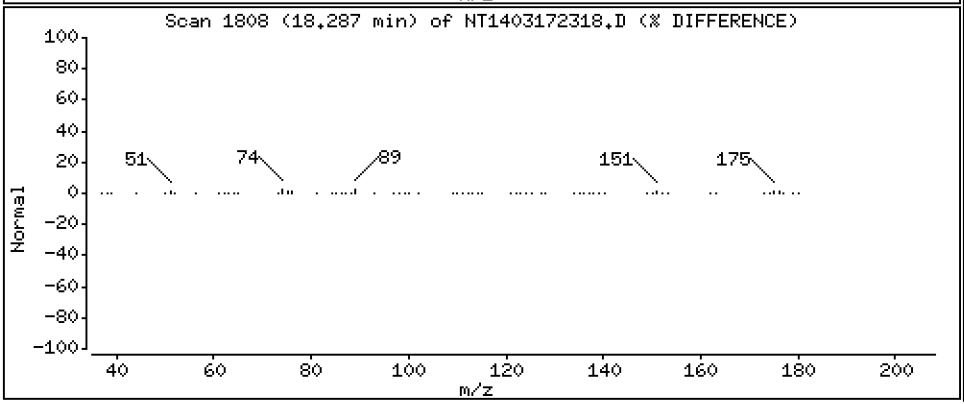












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

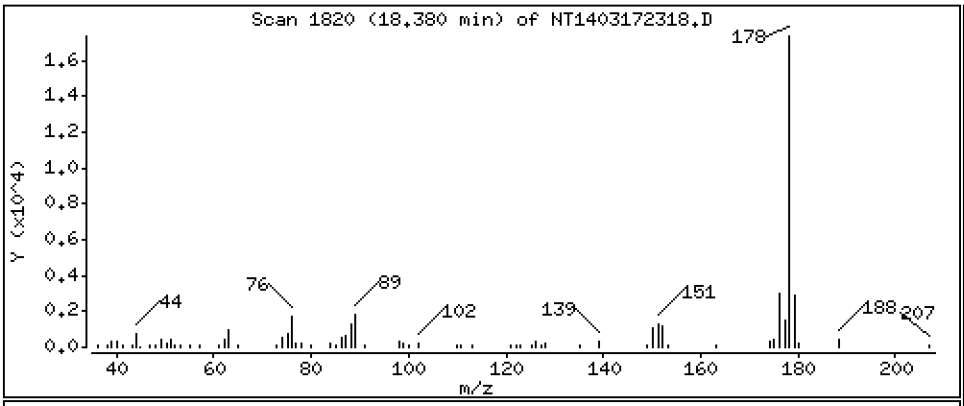
Operator: JGR

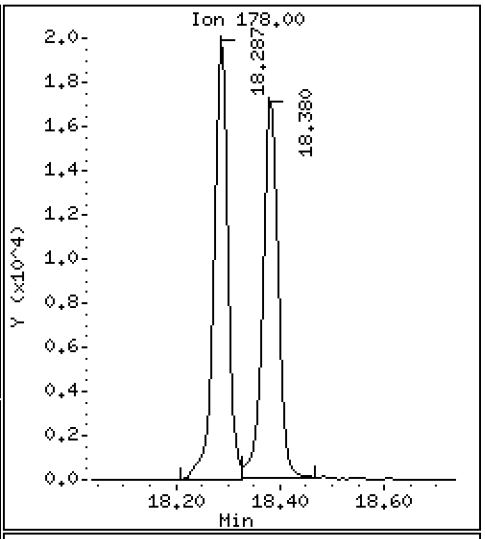
Column phase: ZB-5msi

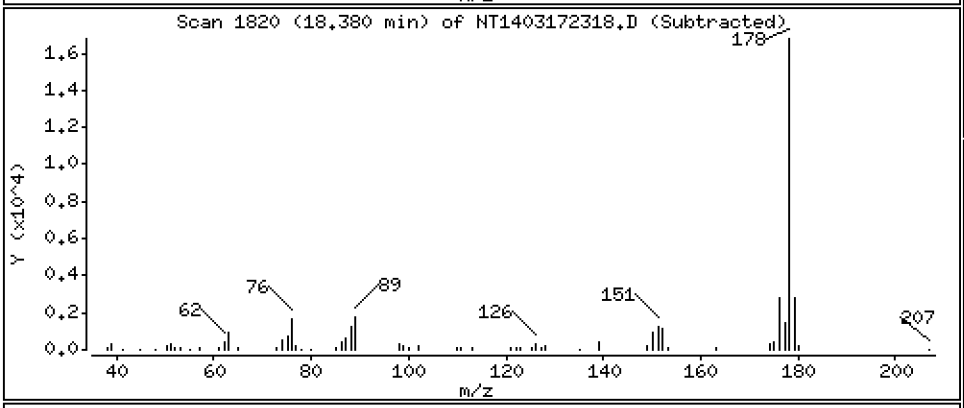
Column diameter: 0.25

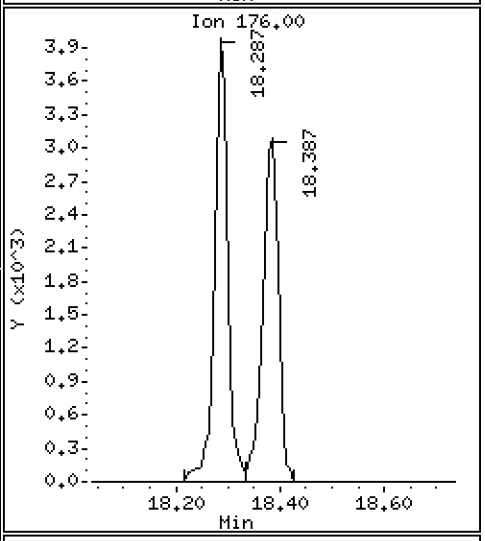
61 Anthracene

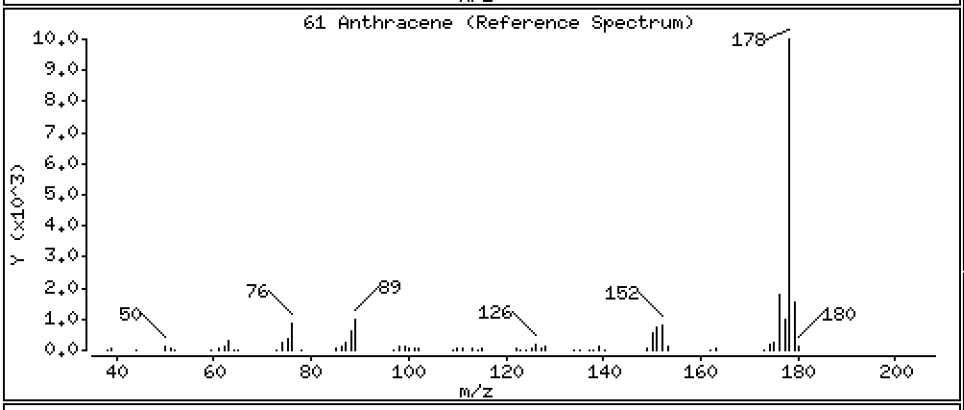
Concentration: 0.1833 ug/mL

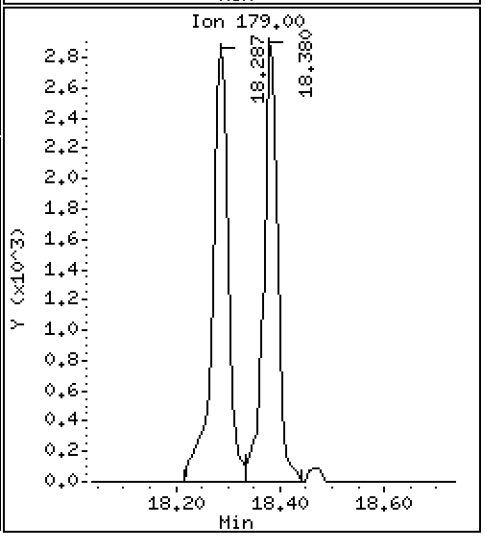


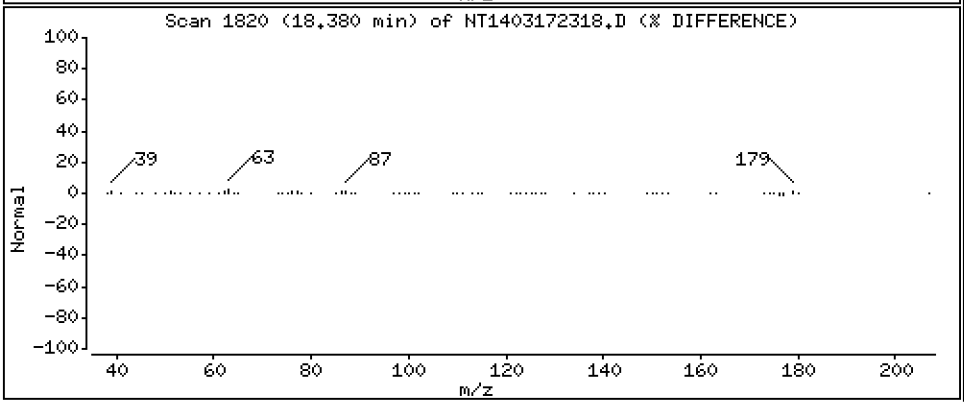












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

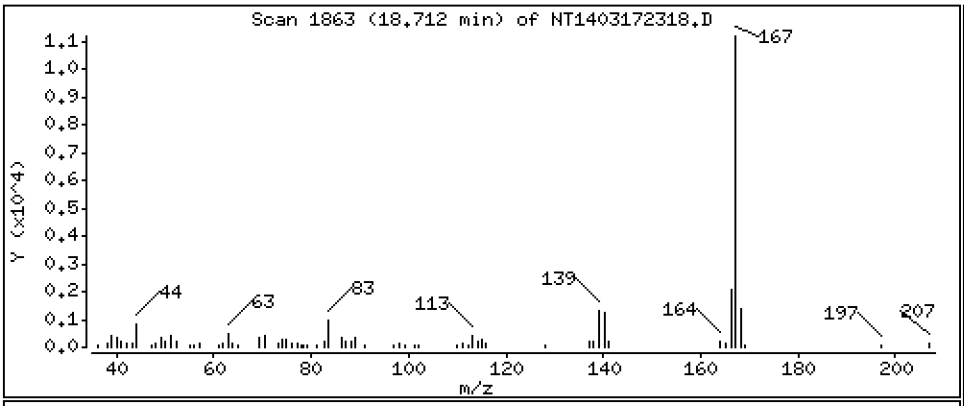
Operator: JGR

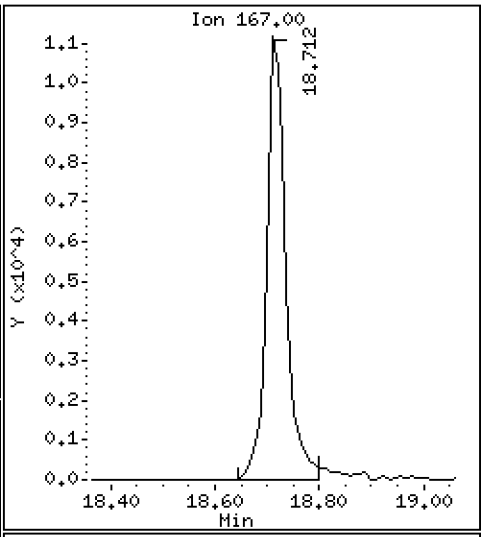
Column phase: ZB-5msi

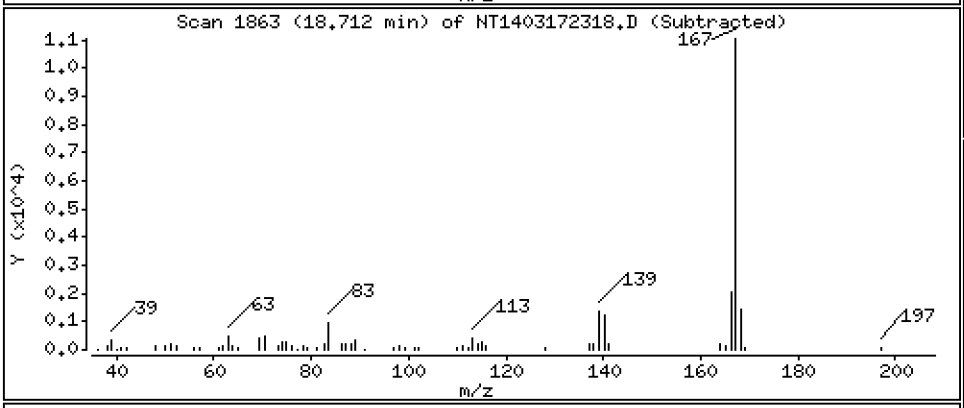
Column diameter: 0.25

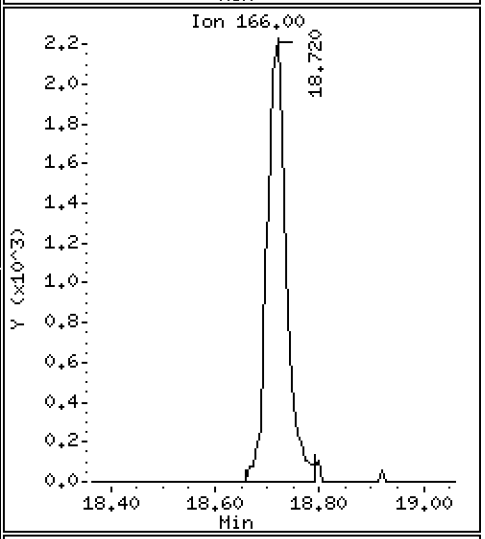
62 Carbazole

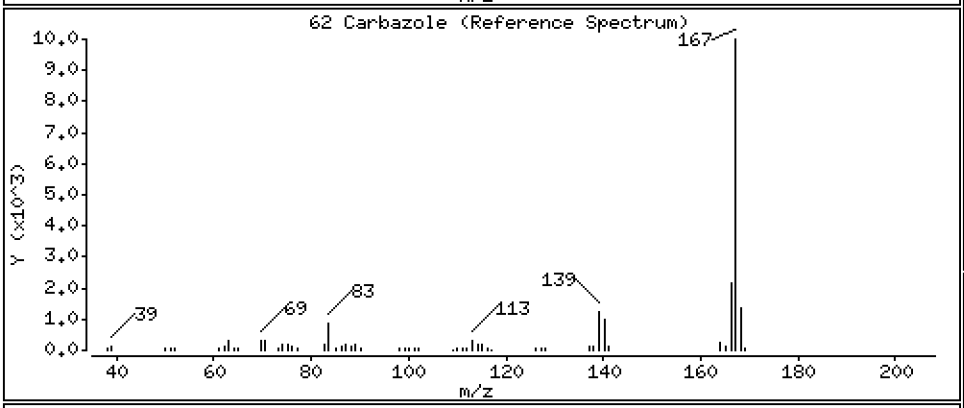
Concentration: 0.1654 ug/mL

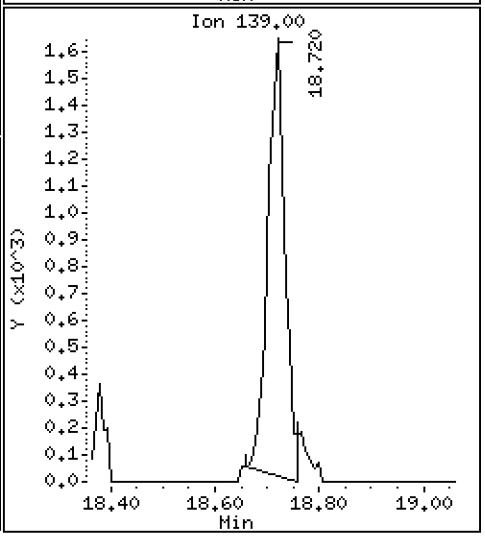


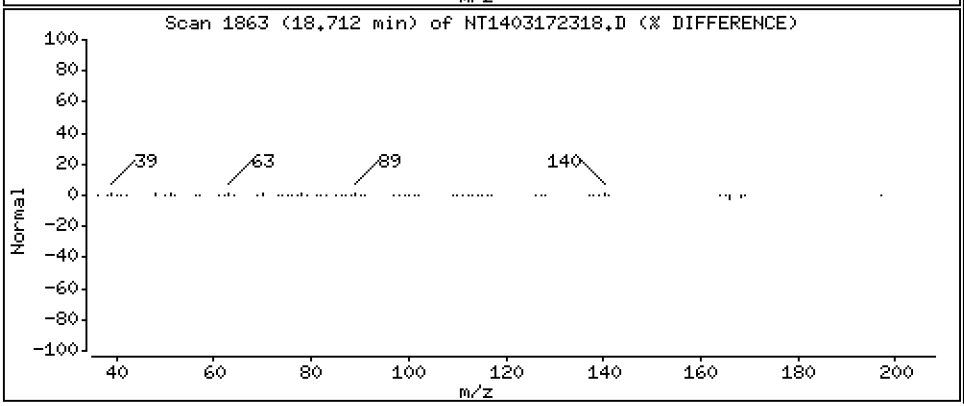












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

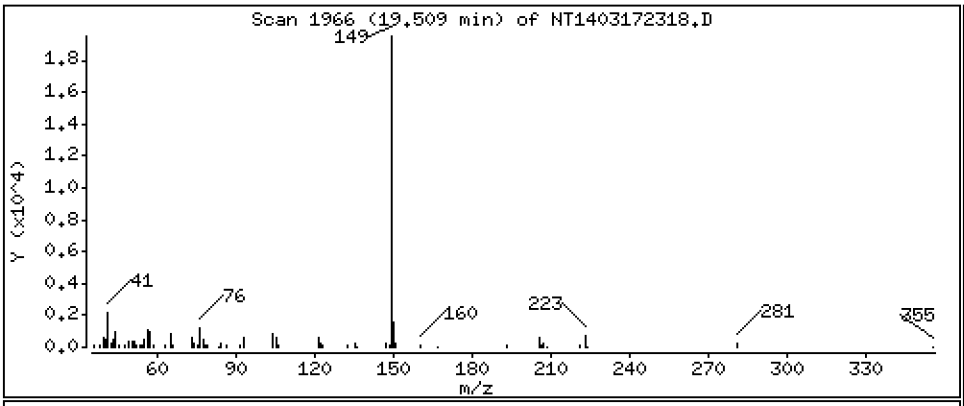
Operator: JGR

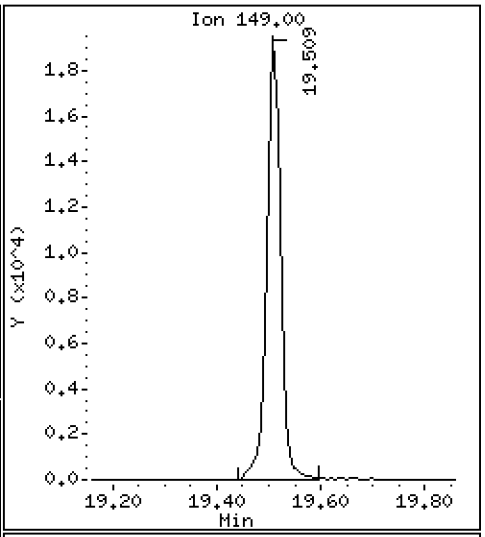
Column phase: ZB-5msi

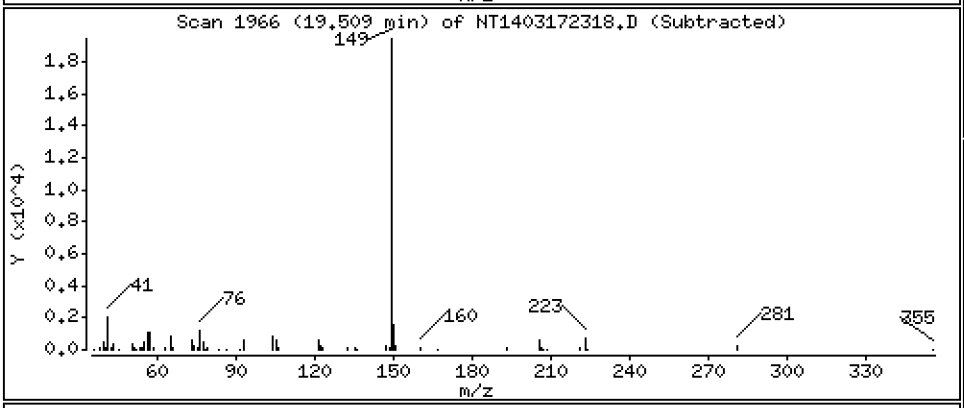
Column diameter: 0.25

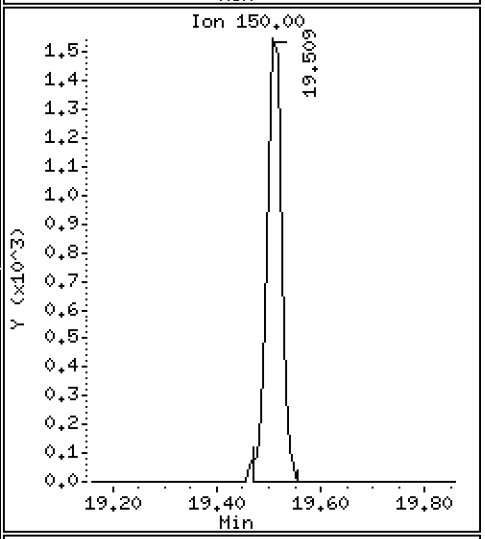
63 Di-n-butylphthalate

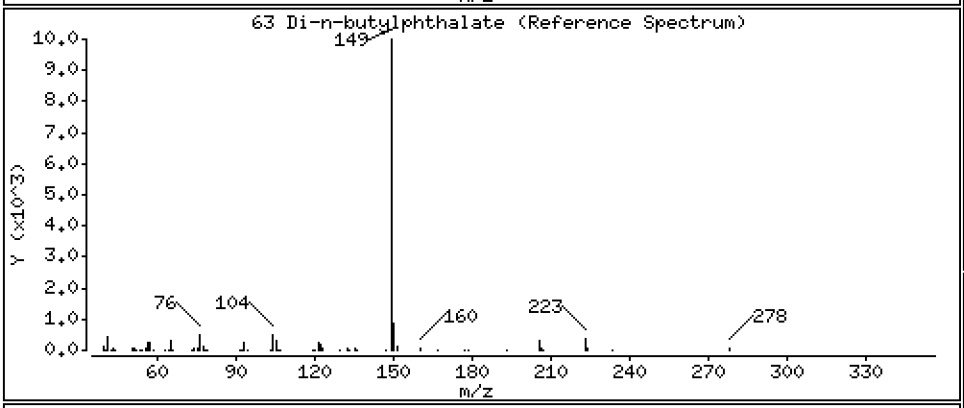
Concentration: 0.1620 ug/mL

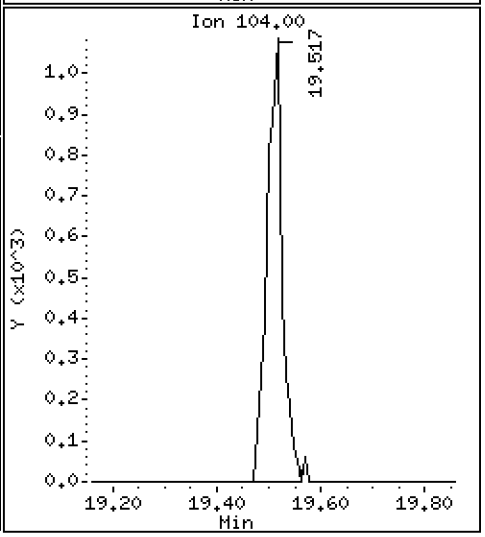


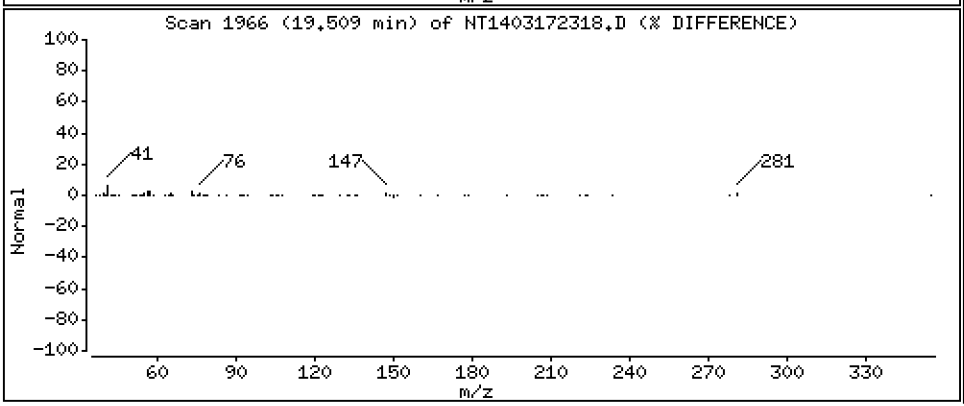












Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172318.D

Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

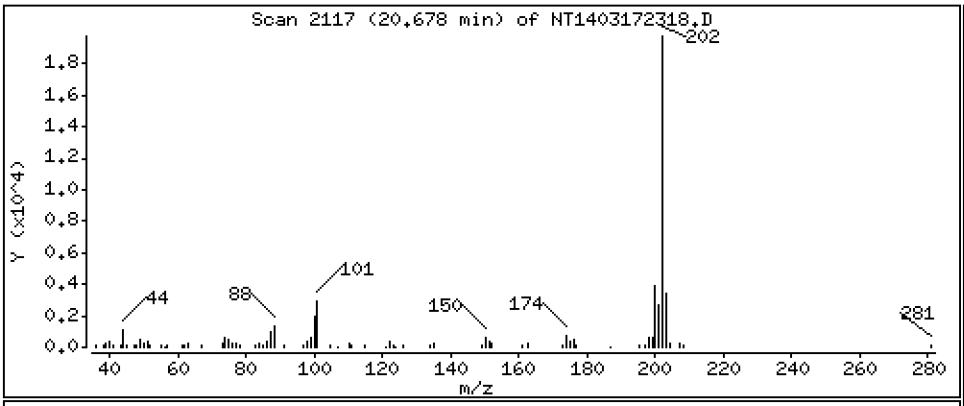
Operator: JGR

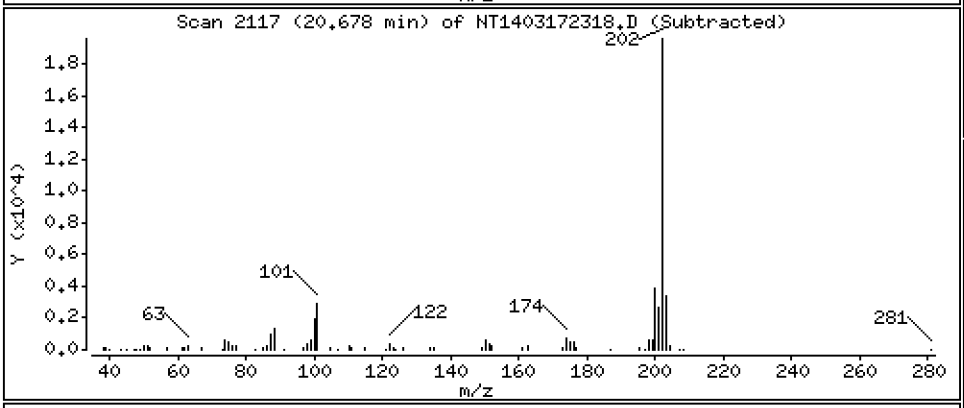
Column phase: ZB-5msi

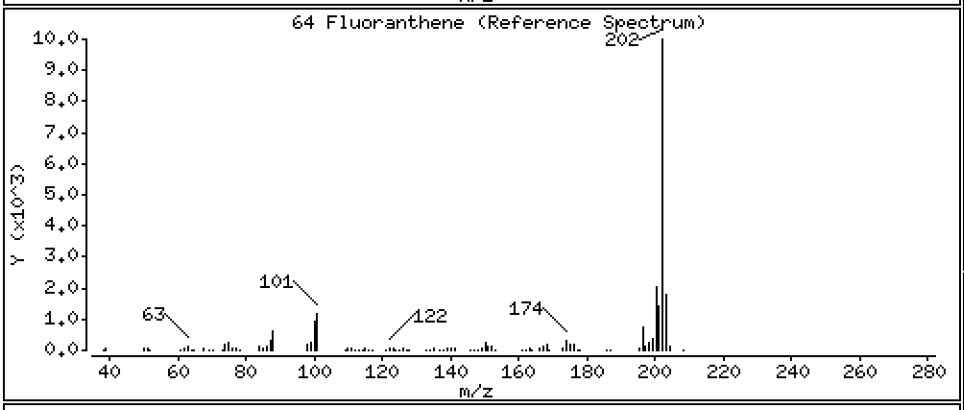
Column diameter: 0.25

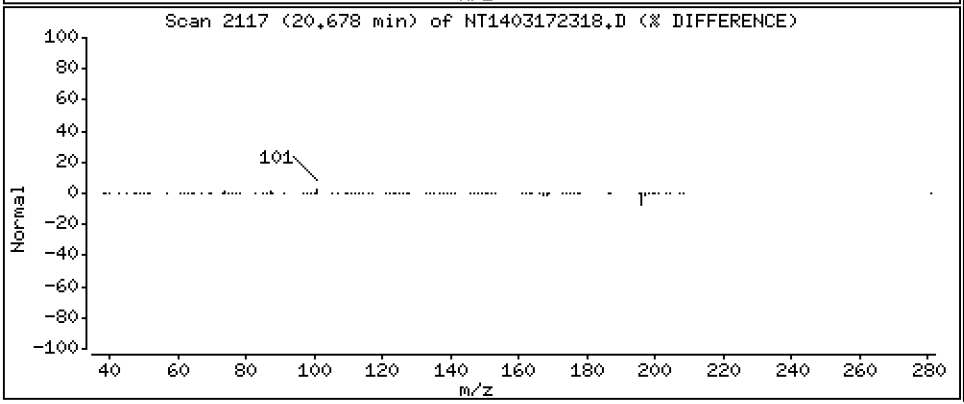
64 Fluoranthene

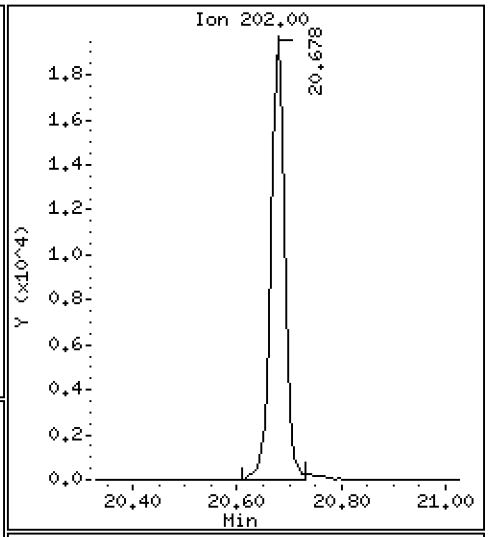
Concentration: 0.2242 ug/mL

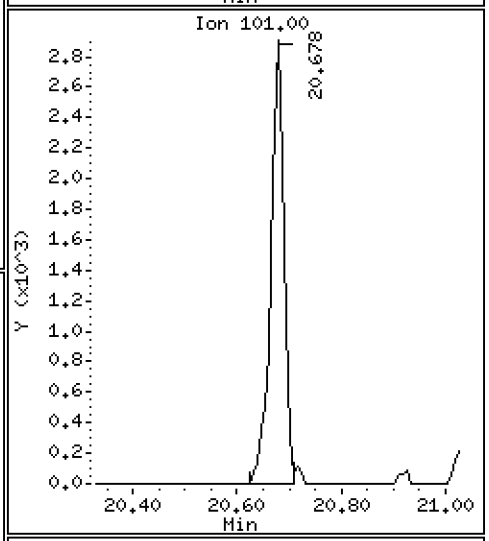


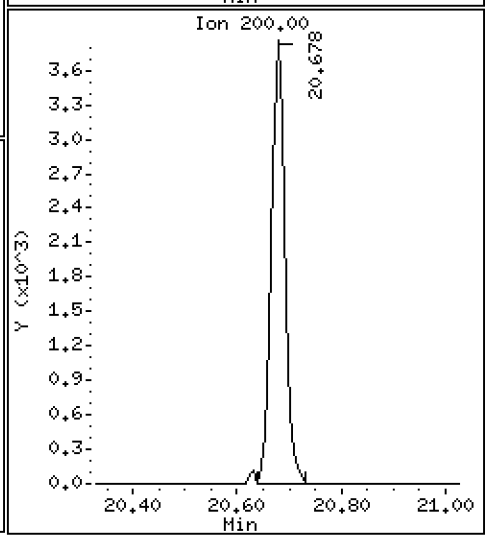












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

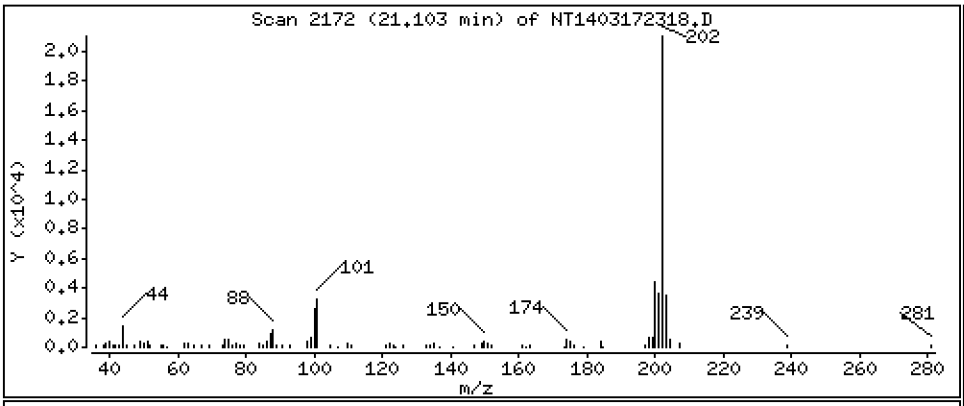
Operator: JGR

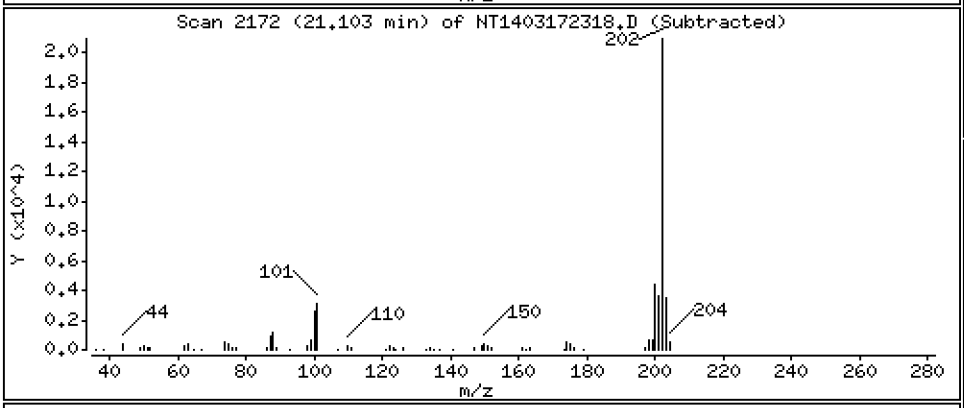
Column phase: ZB-5msi

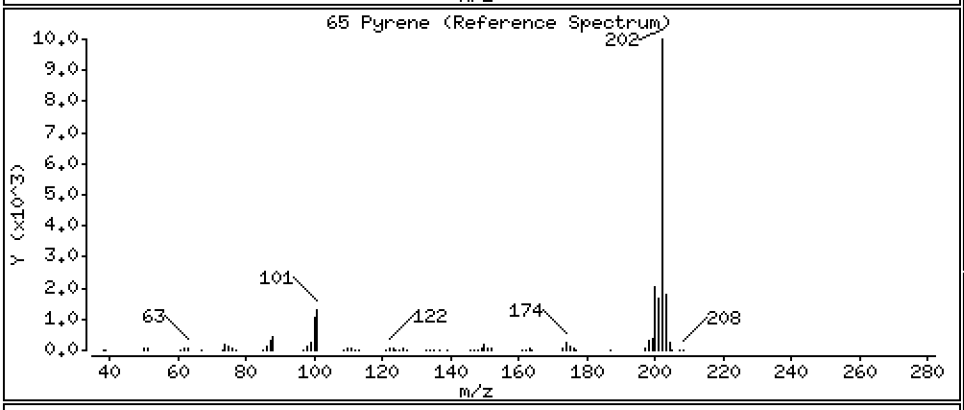
Column diameter: 0.25

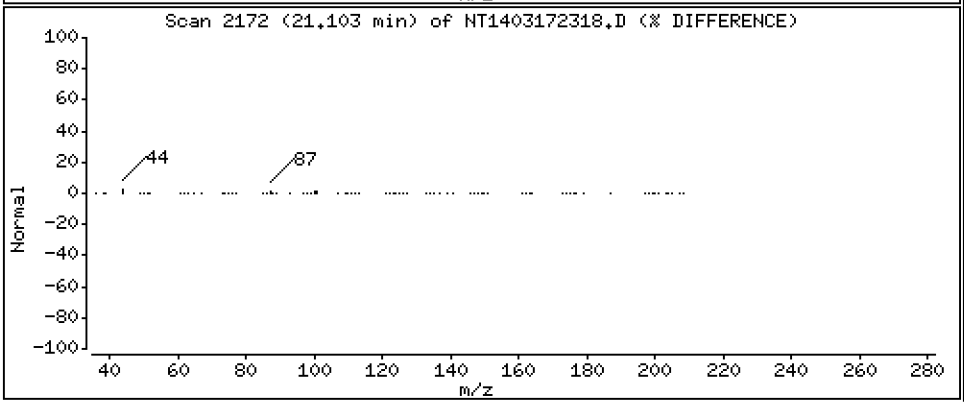
65 Pyrene

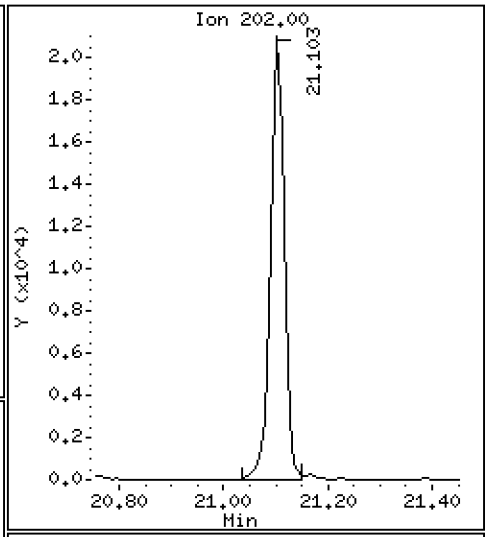
Concentration: 0.2306 ug/mL

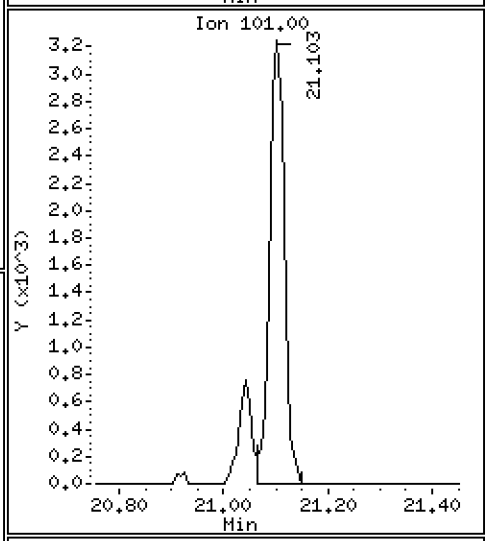


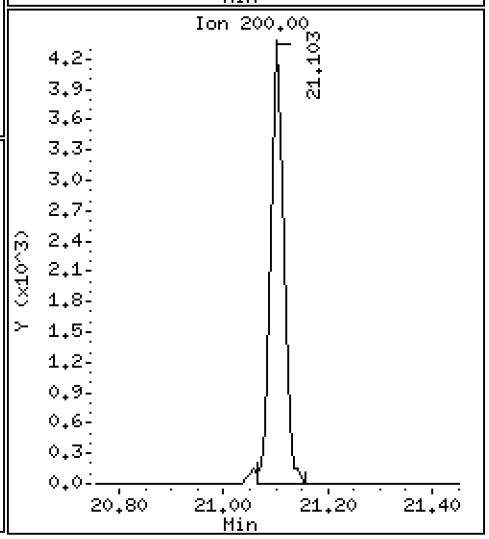












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

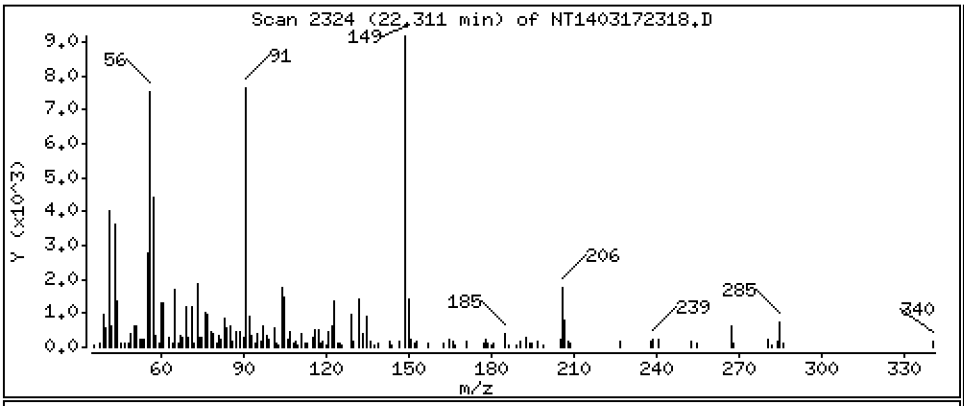
Operator: JGR

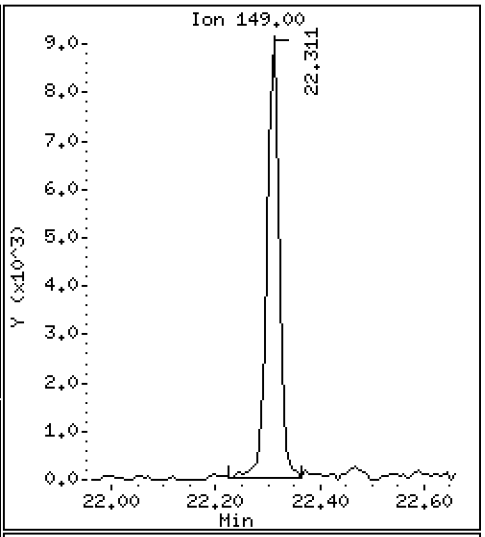
Column phase: ZB-5msi

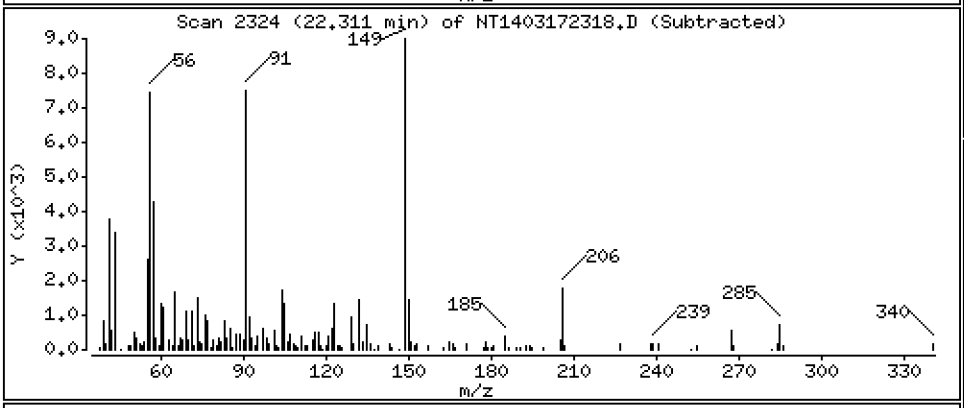
Column diameter: 0.25

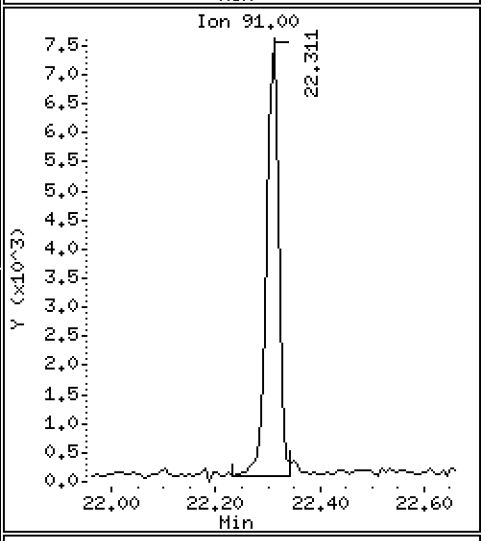
67 Butylbenzylphthalate

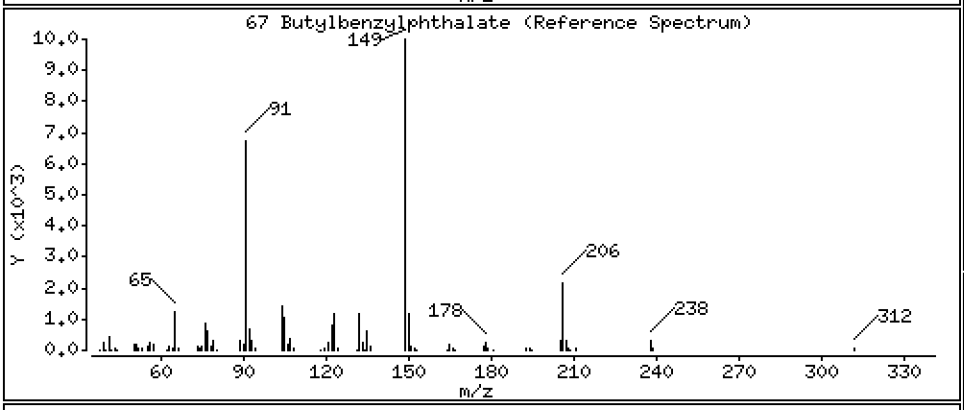
Concentration: 0.2018 ug/mL

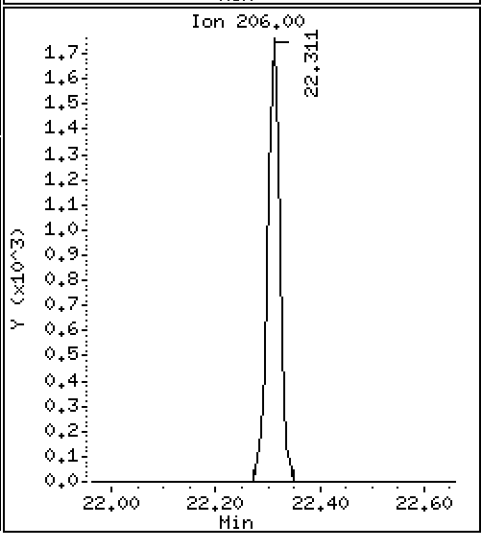


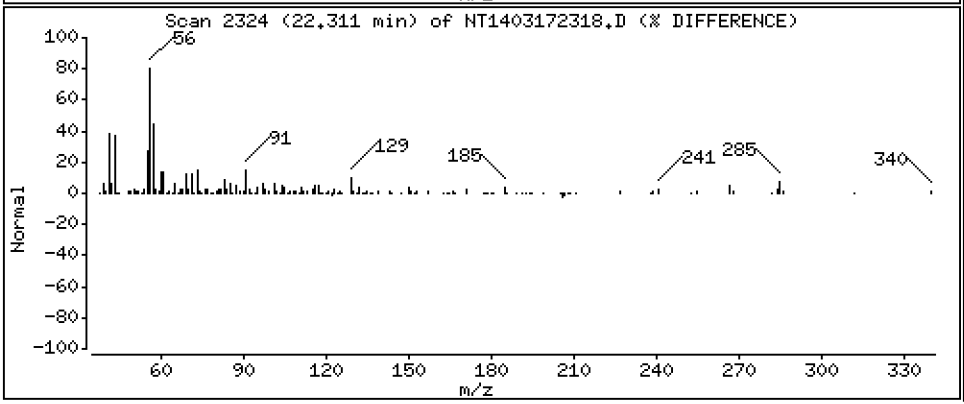












Date : 18-MAR-2023 00:43

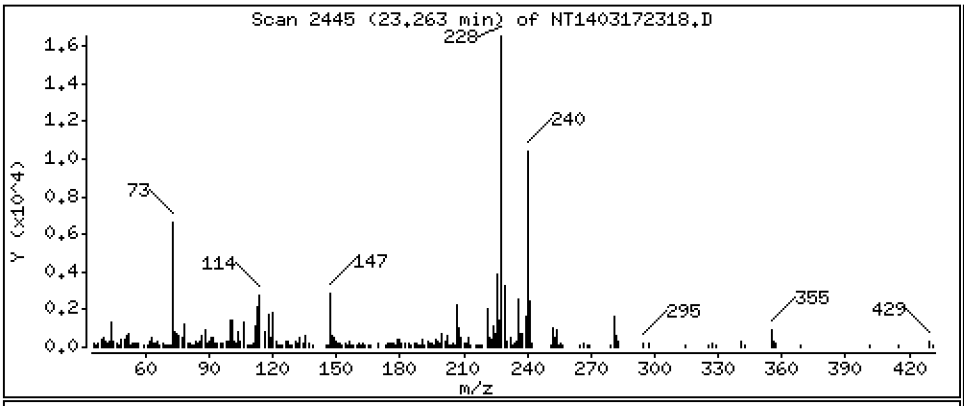
Client ID: Instrument: nt14.i

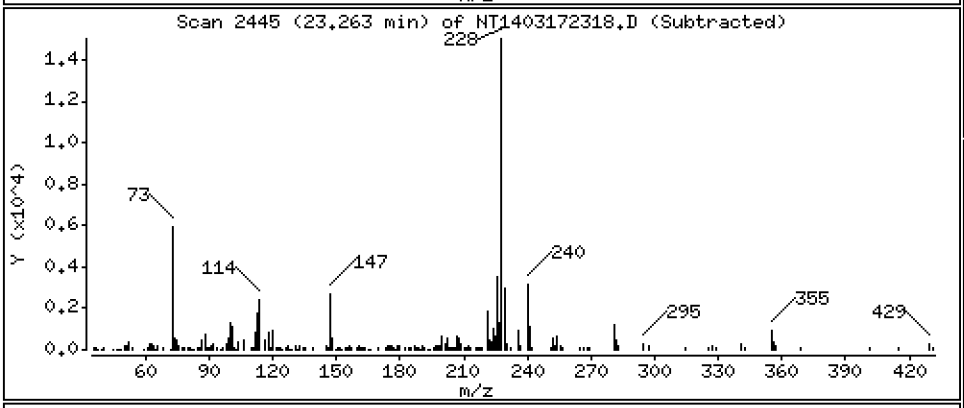
Sample Info: SLC0335-LCV2

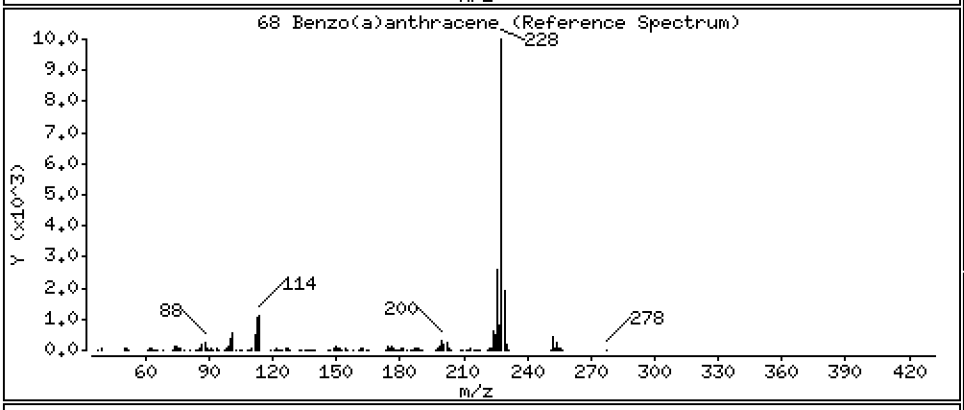
Operator: JGR

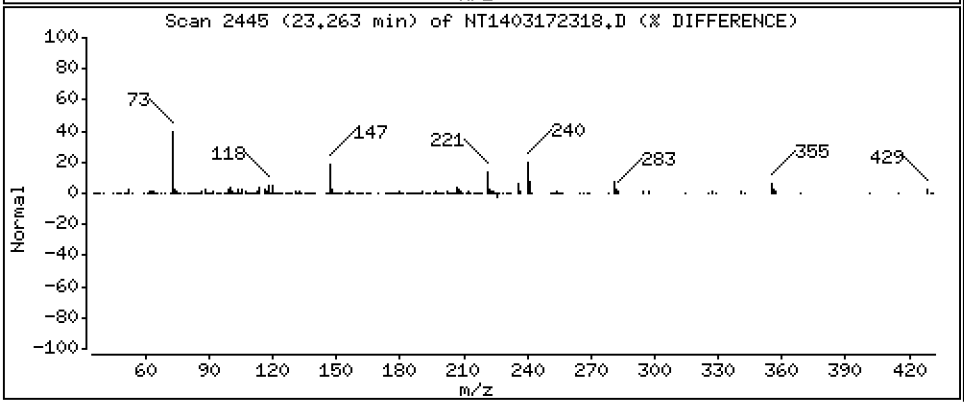
Column phase: ZB-5msi Column diameter: 0.25

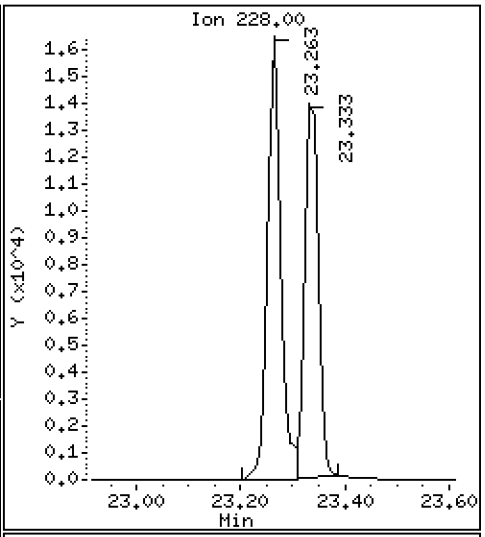
68 Benzo(a)anthracene Concentration: 0.1986 ug/mL

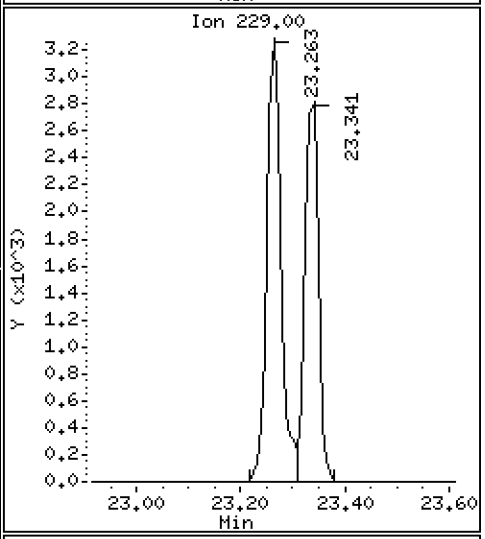


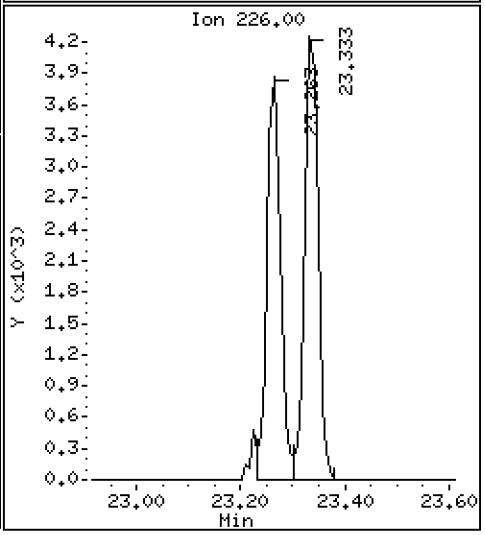












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

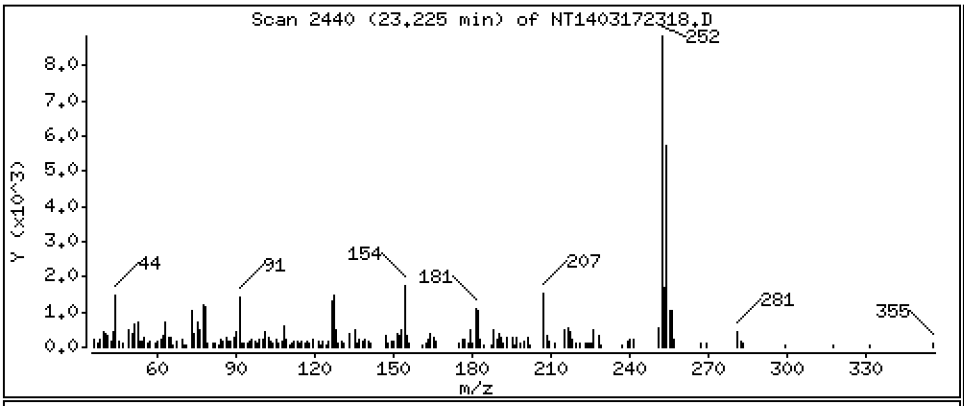
Operator: JGR

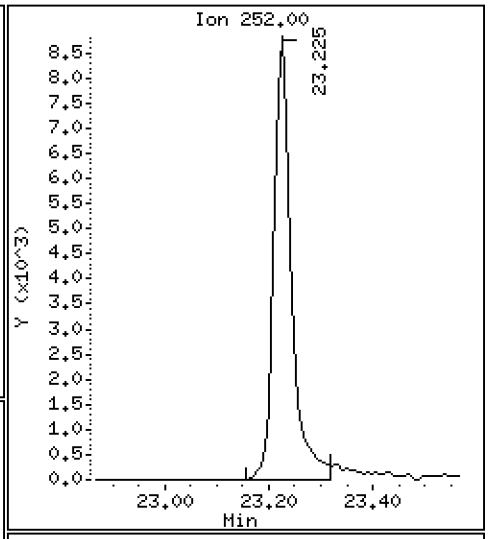
Column phase: ZB-5msi

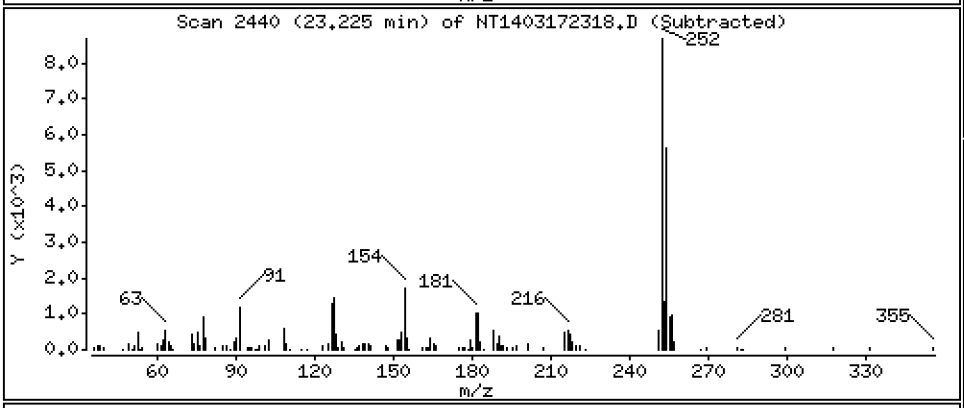
Column diameter: 0.25

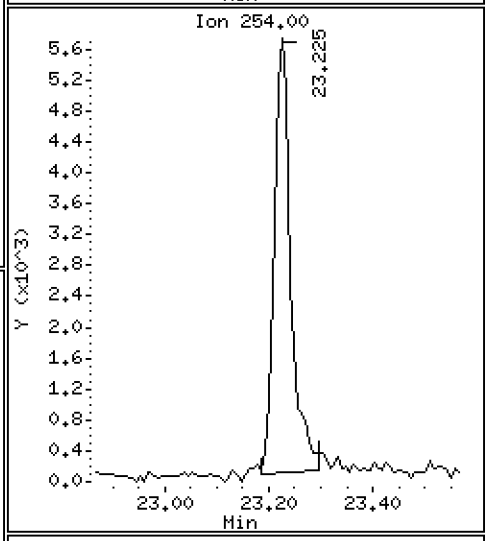
70 3,3'-Dichlorobenzidine

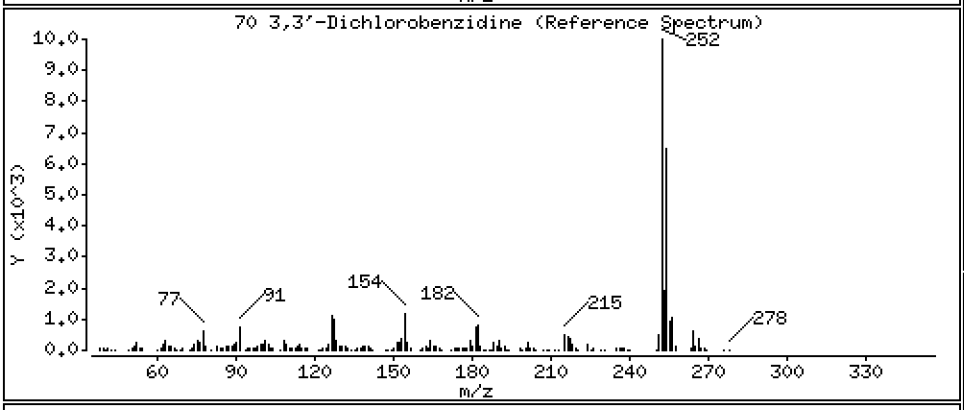
Concentration: 0.5100 ug/mL

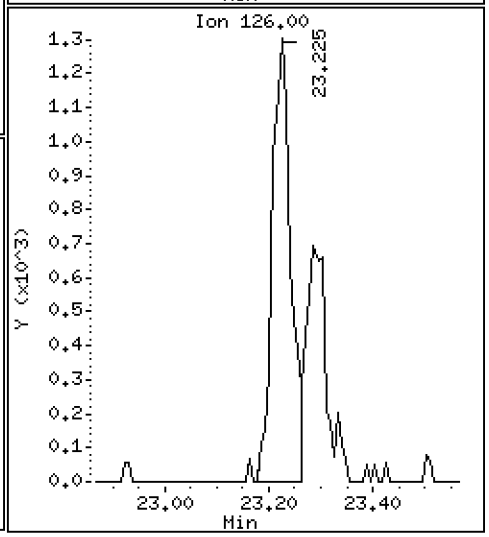


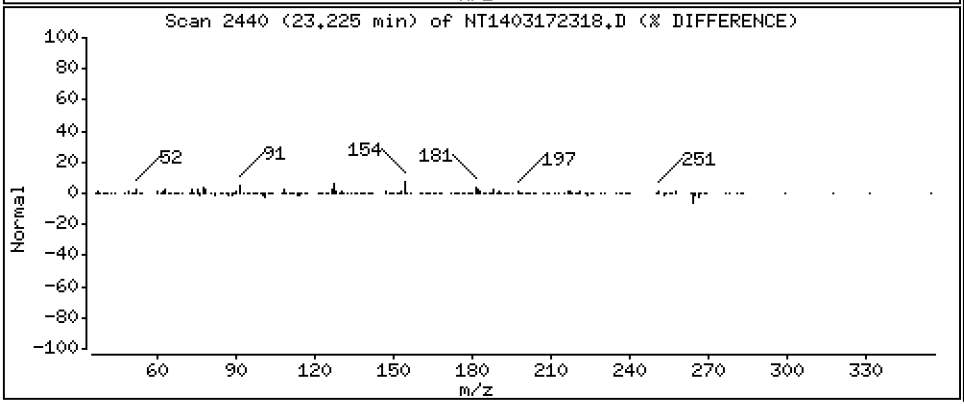












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

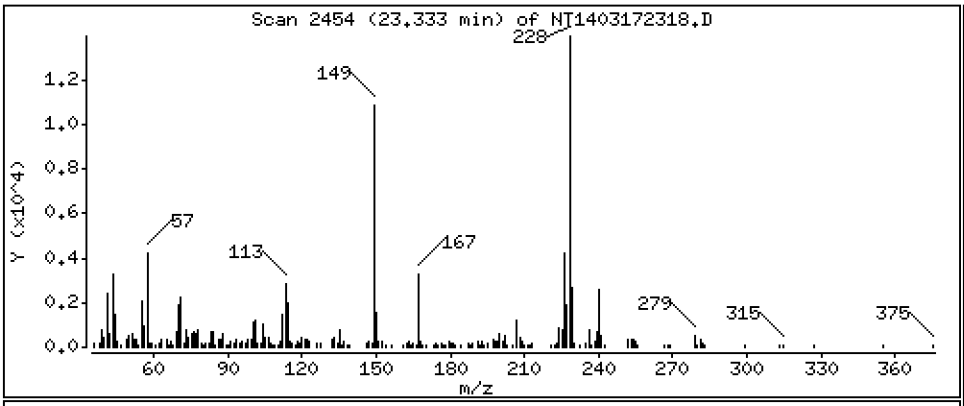
Operator: JGR

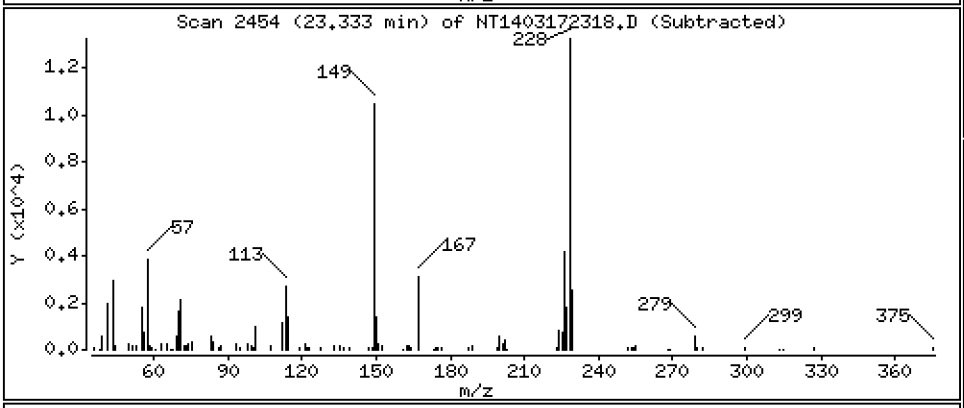
Column phase: ZB-5msi

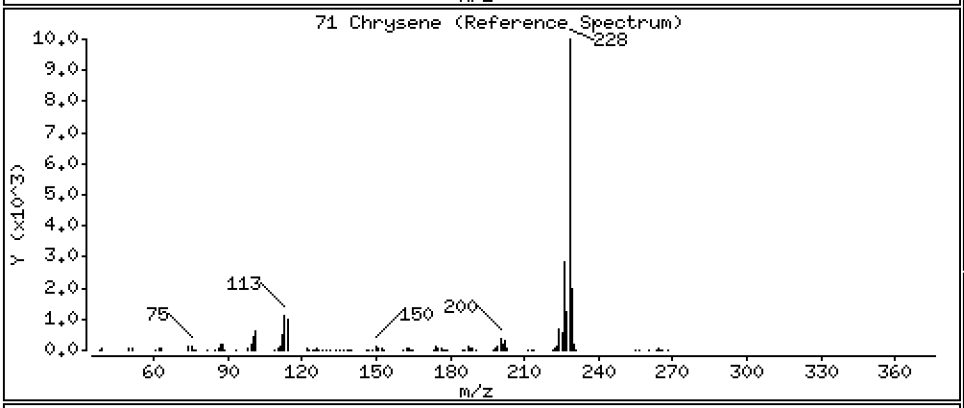
Column diameter: 0.25

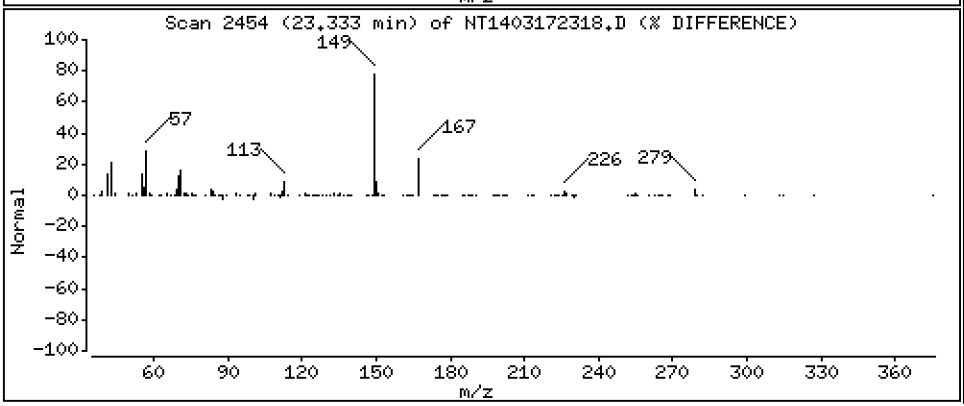
71 Chrysene

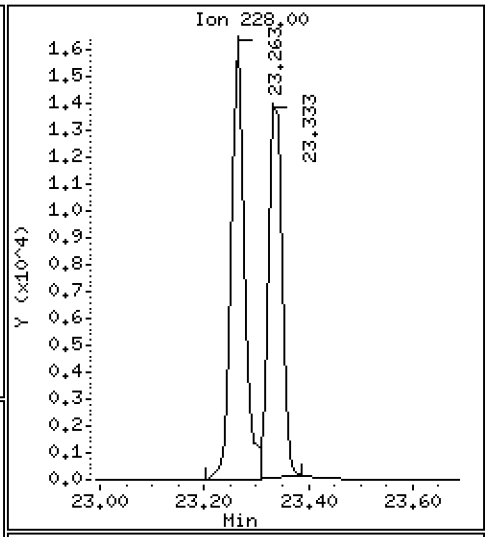
Concentration: 0.1902 ug/mL

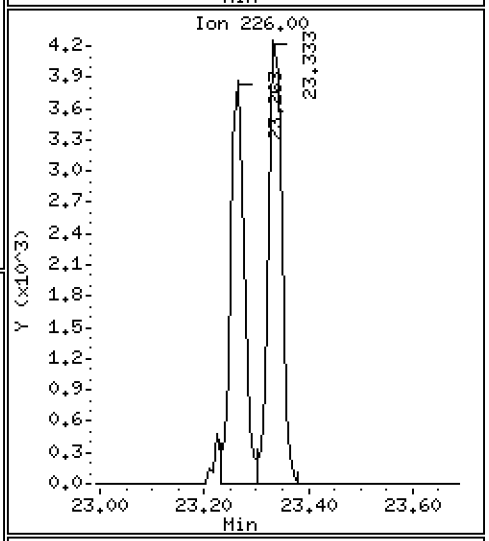


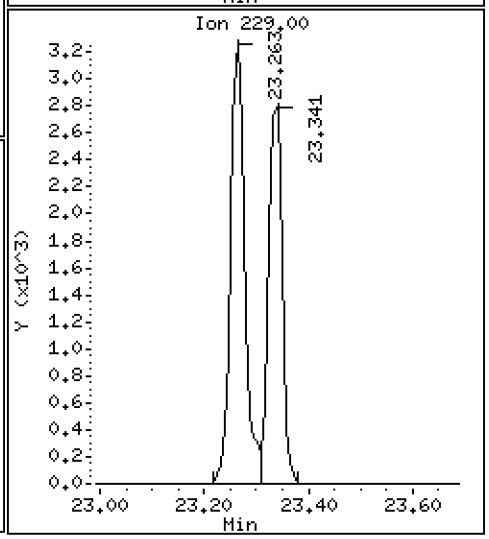












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

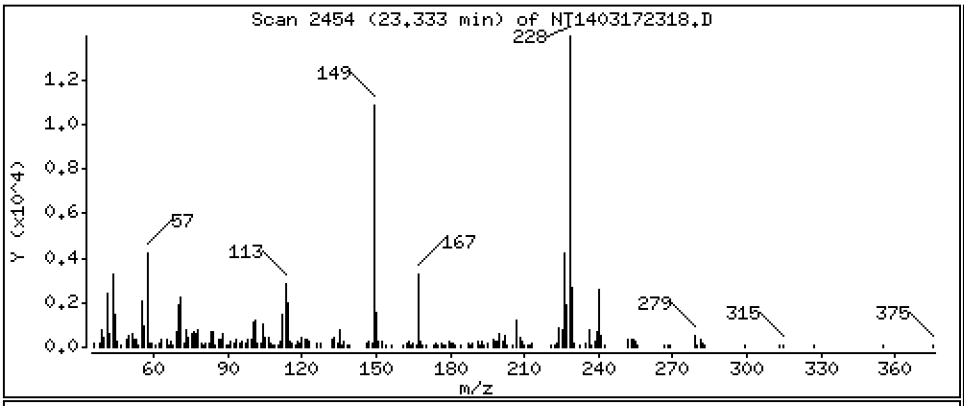
Operator: JGR

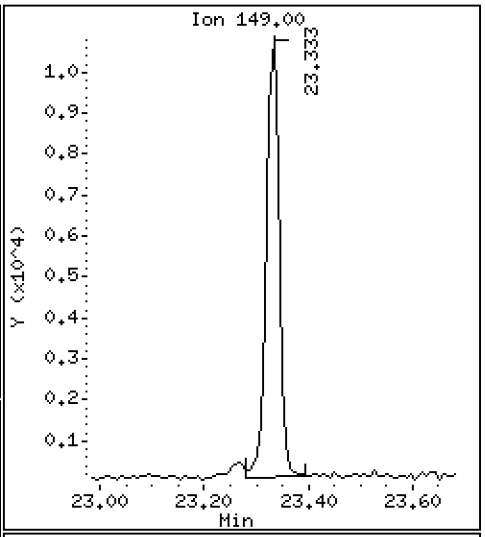
Column phase: ZB-5msi

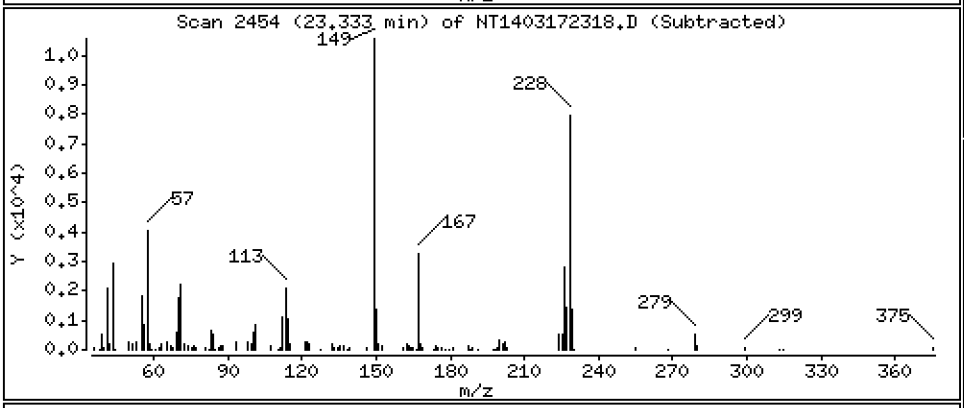
Column diameter: 0.25

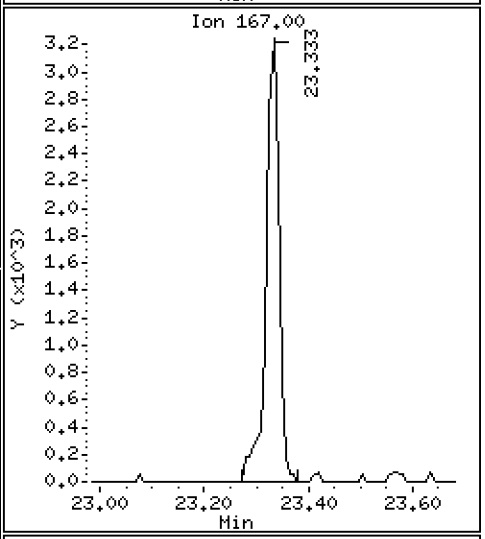
72 bis(2-Ethylhexyl)phthalate

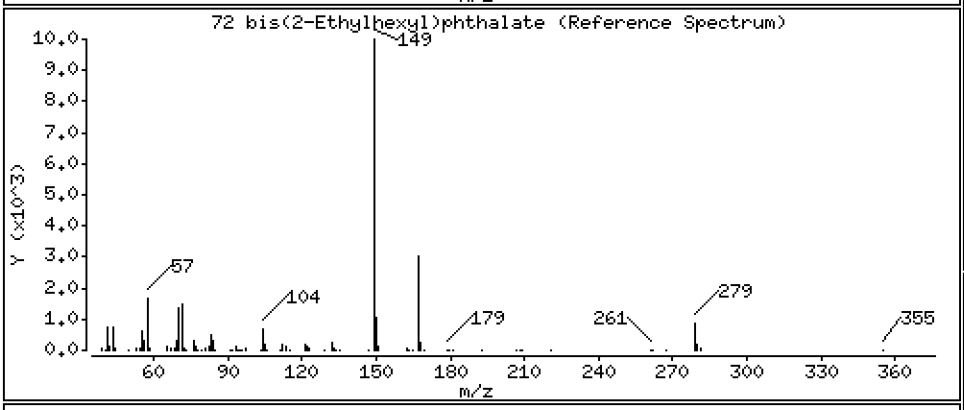
Concentration: 0.2051 ug/mL

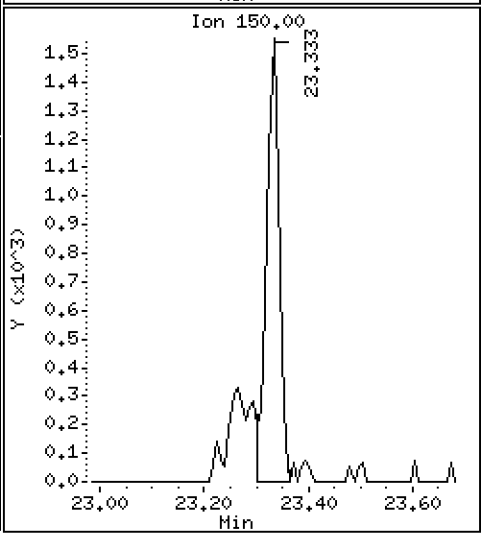


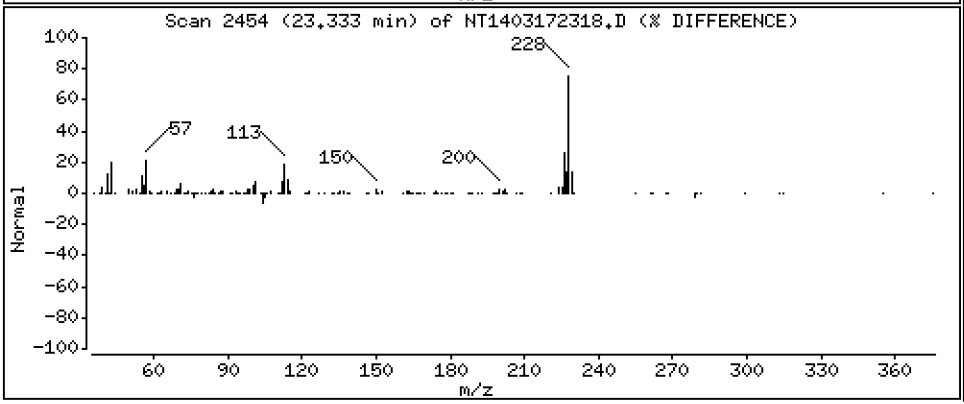












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

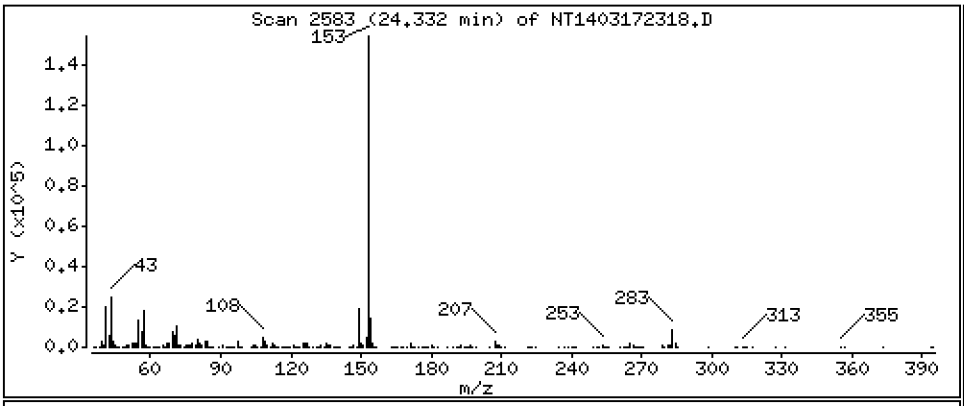
Operator: JGR

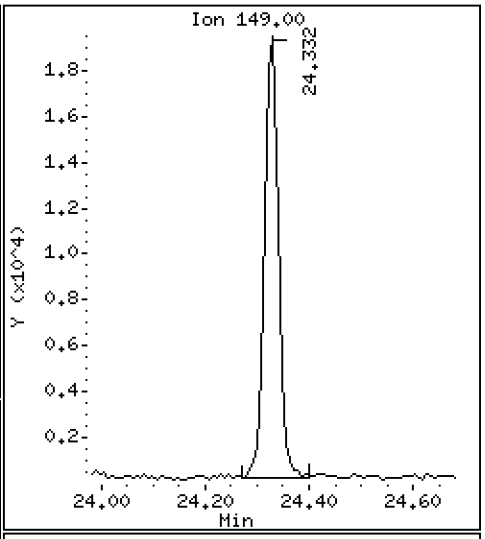
Column phase: ZB-5msi

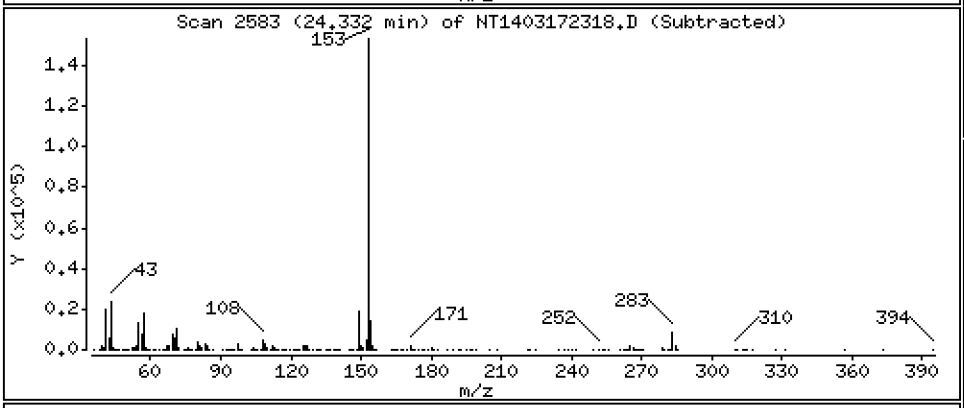
Column diameter: 0.25

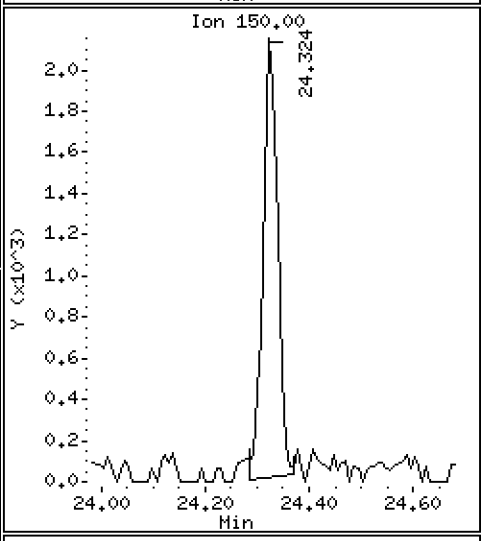
73 Di-n-octylphthalate

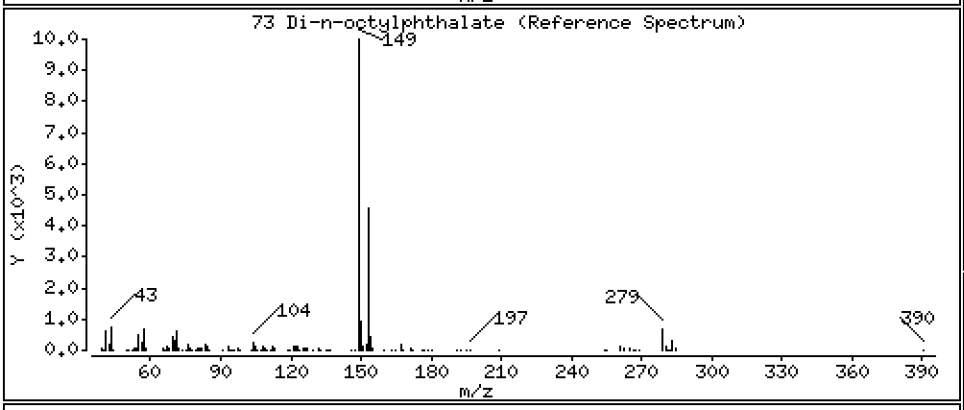
Concentration: 0.2086 ug/mL

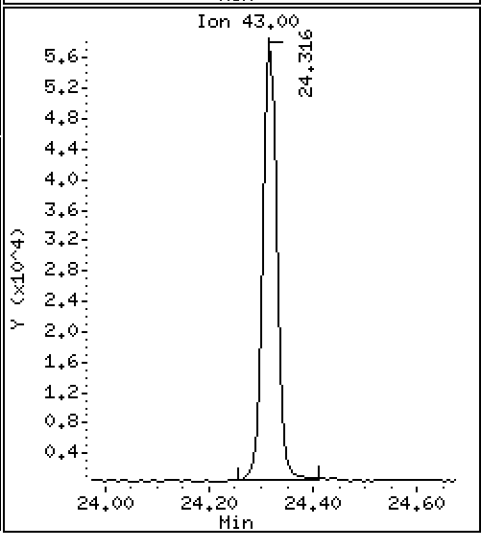


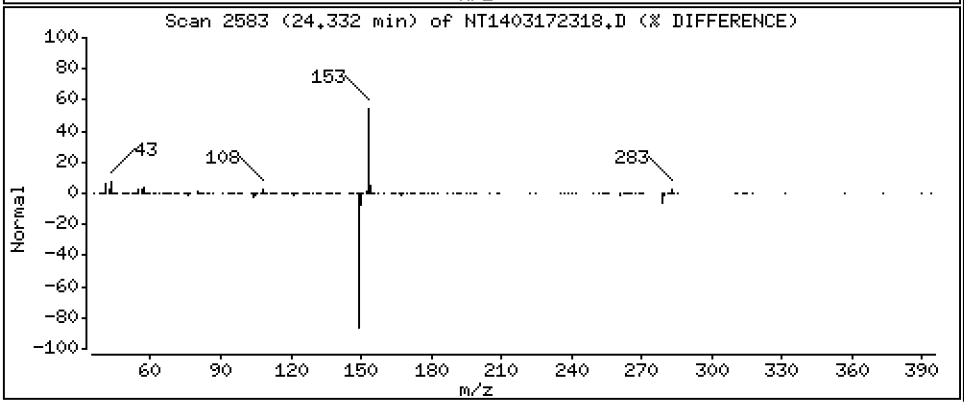












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

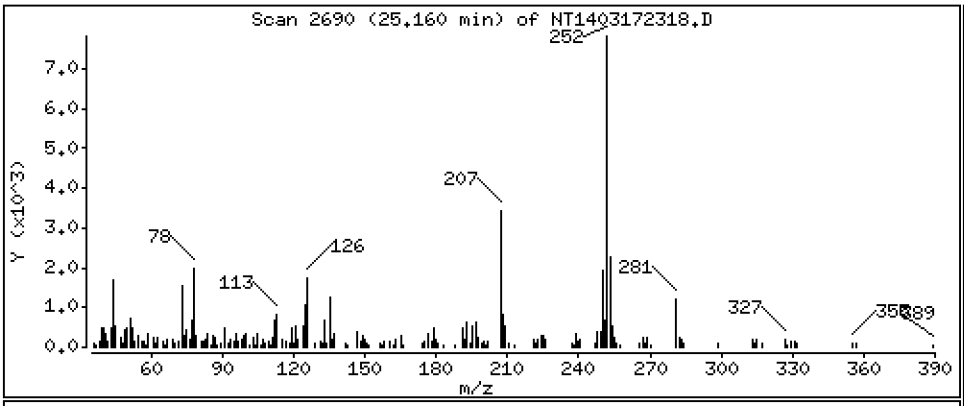
Operator: JGR

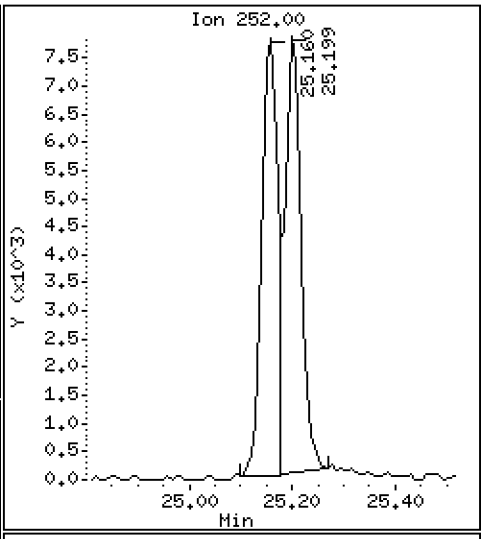
Column phase: ZB-5msi

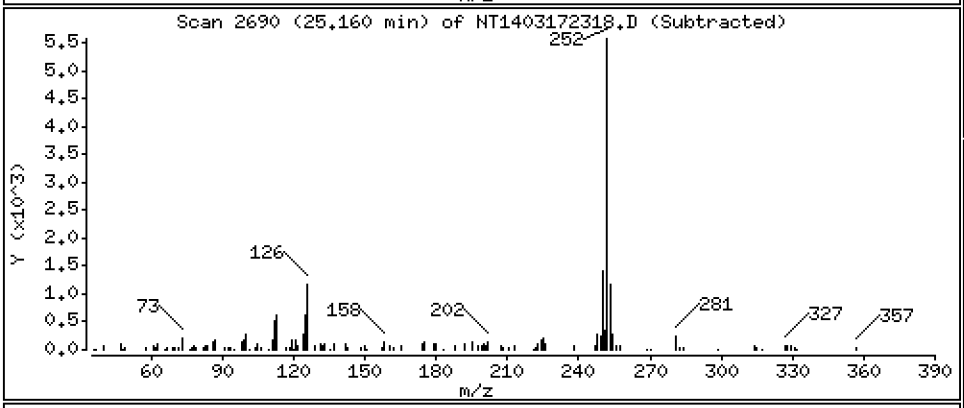
Column diameter: 0.25

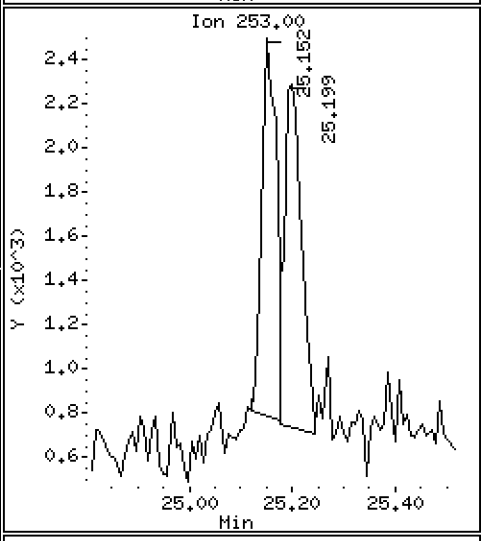
74 Benzo(b)fluoranthene

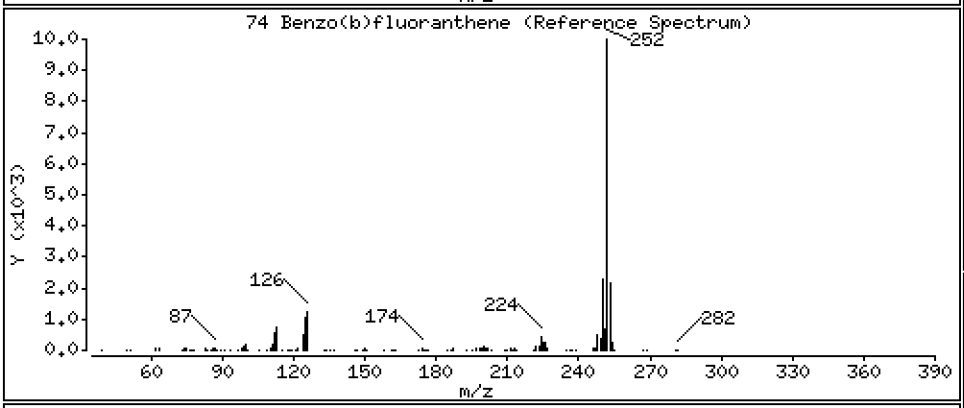
Concentration: 0.1871 ug/mL

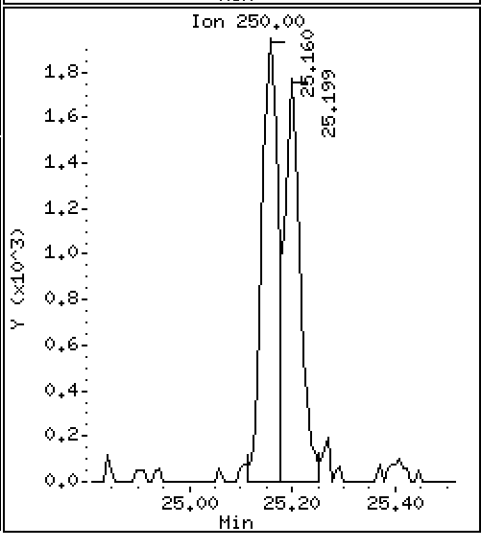


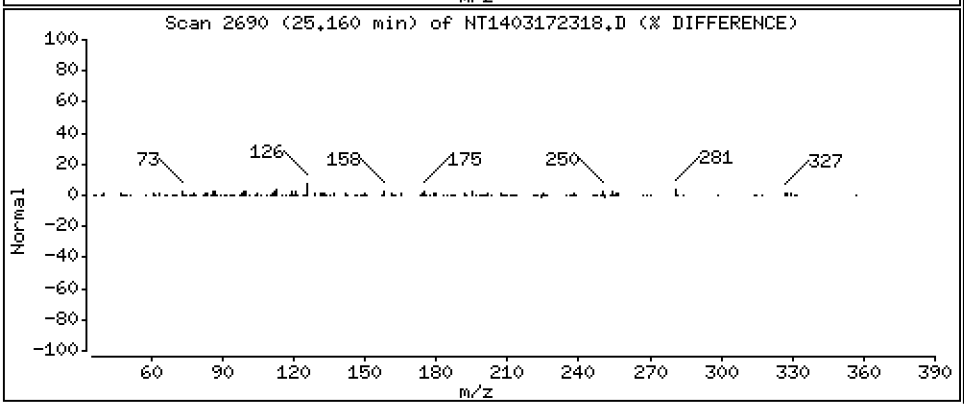












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

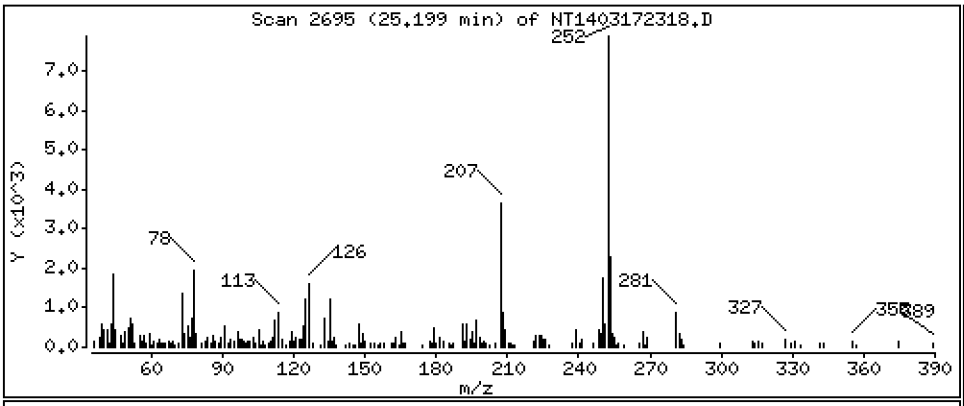
Operator: JGR

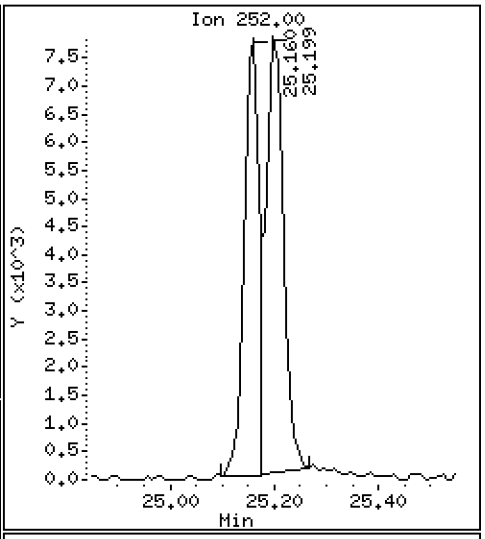
Column phase: ZB-5msi

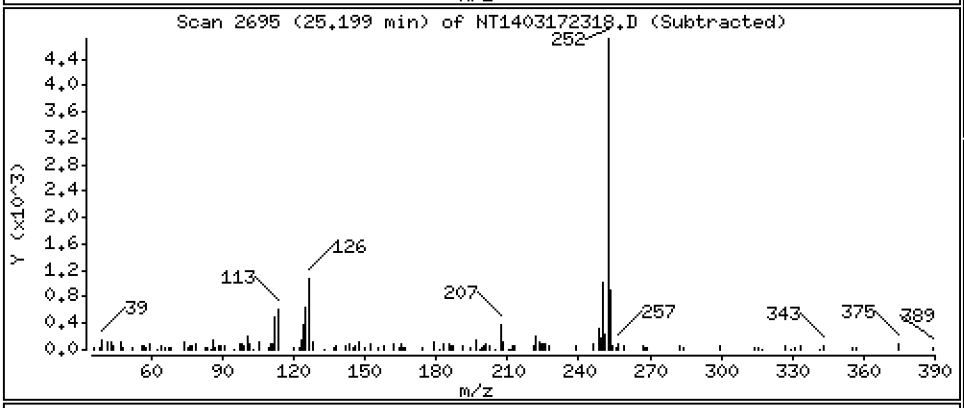
Column diameter: 0.25

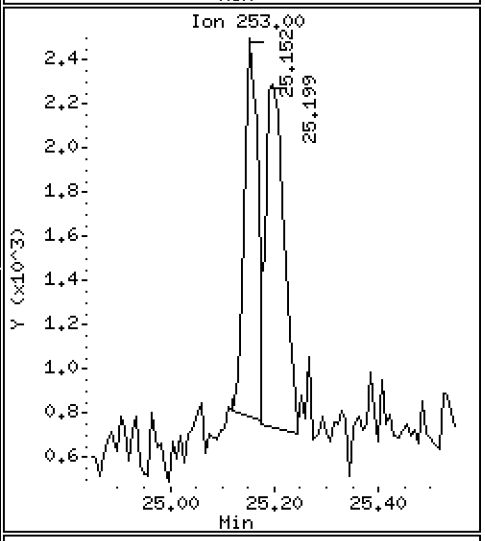
75 Benzo(k)fluoranthene

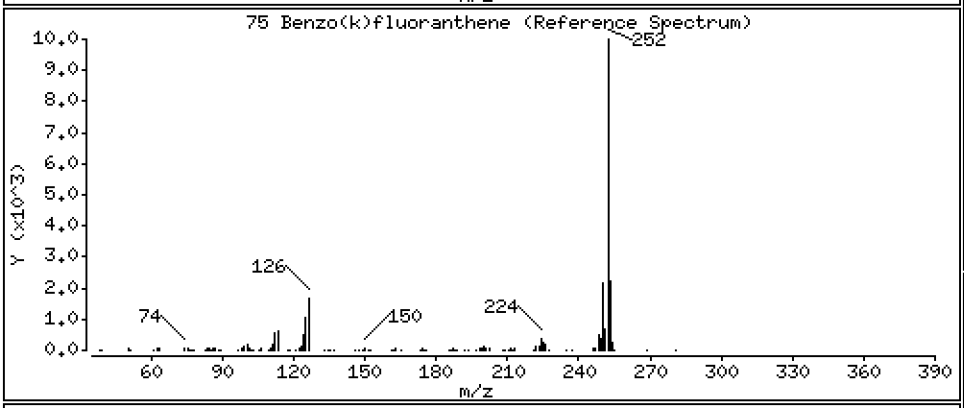
Concentration: 0.2162 ug/mL

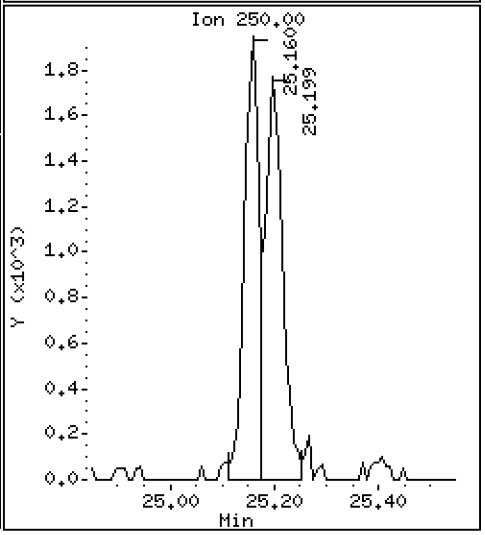


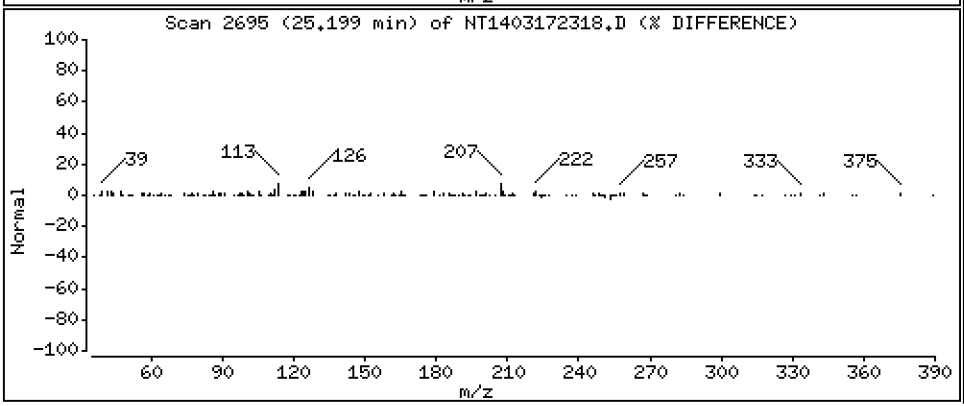












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

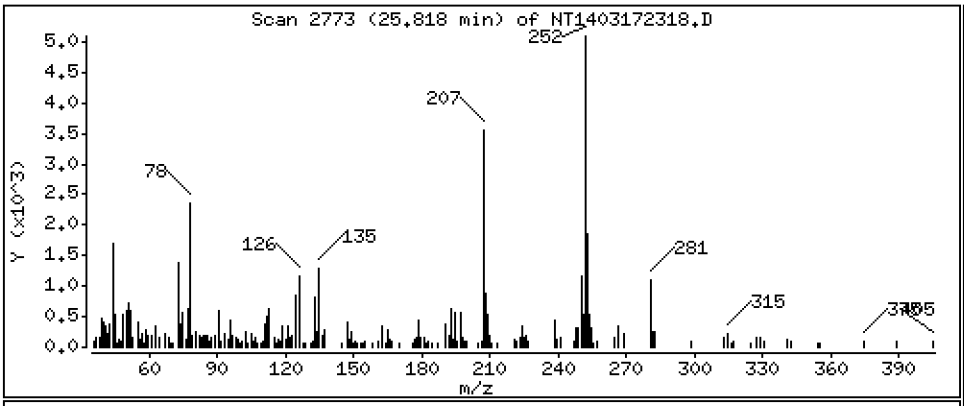
Operator: JGR

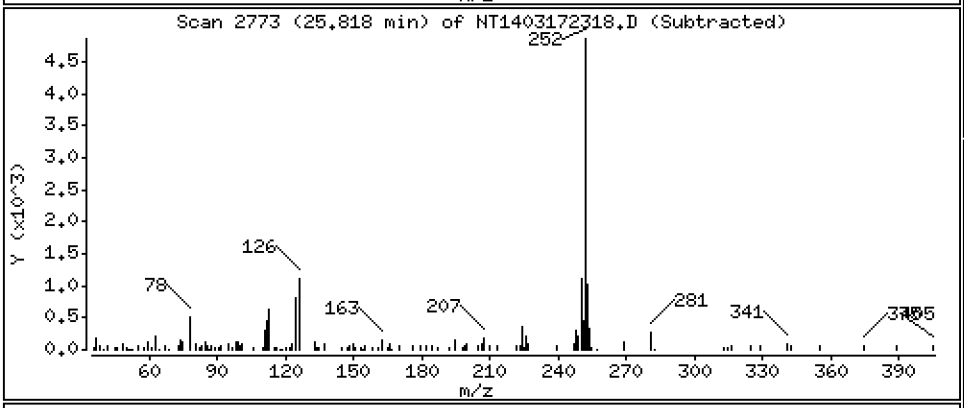
Column phase: ZB-5msi

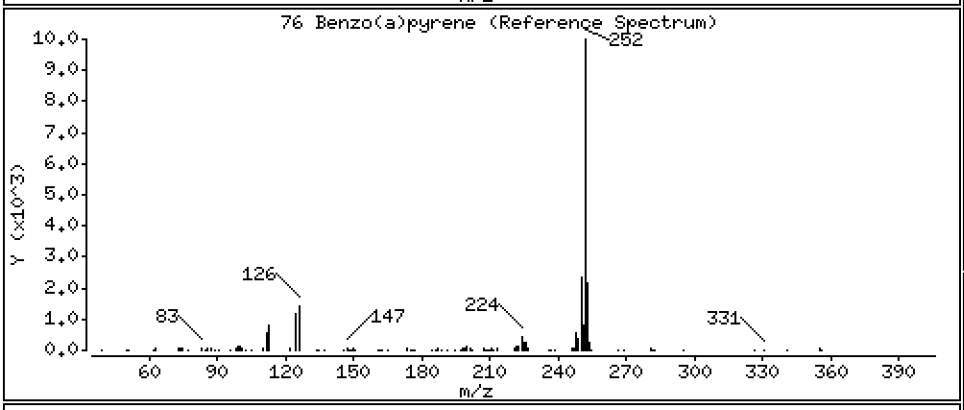
Column diameter: 0.25

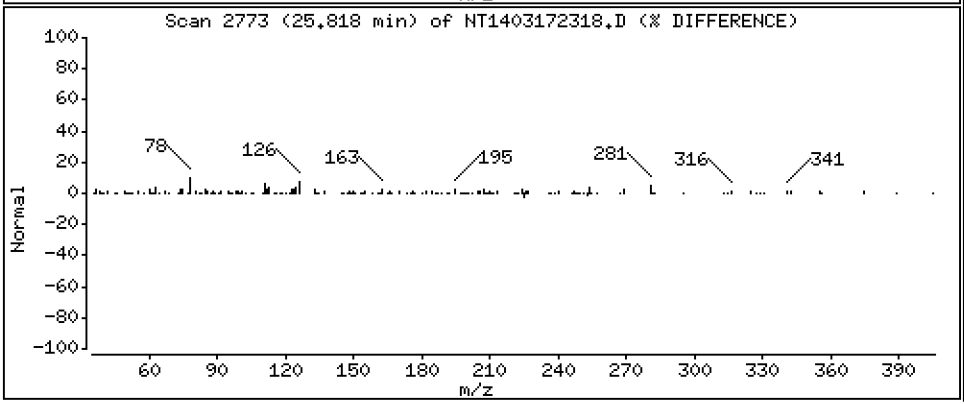
76 Benzo(a)pyrene

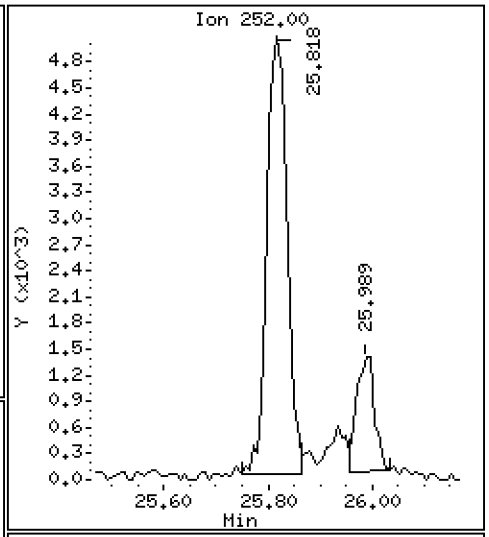
Concentration: 0.1794 ug/mL

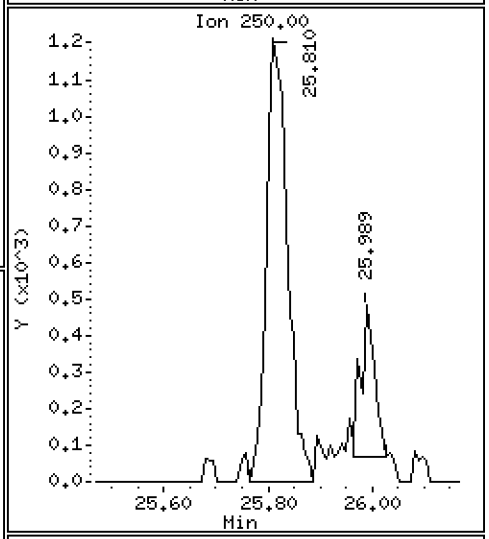


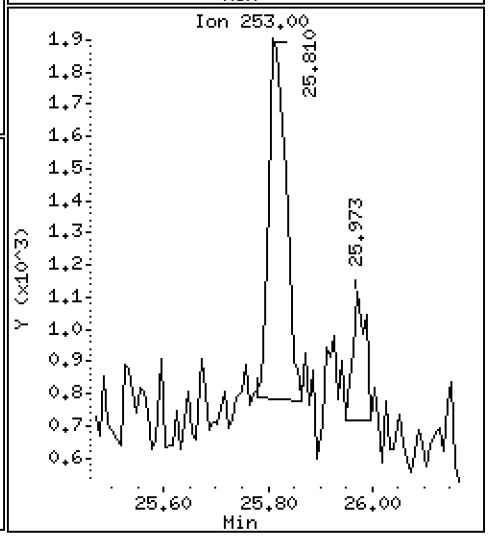












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

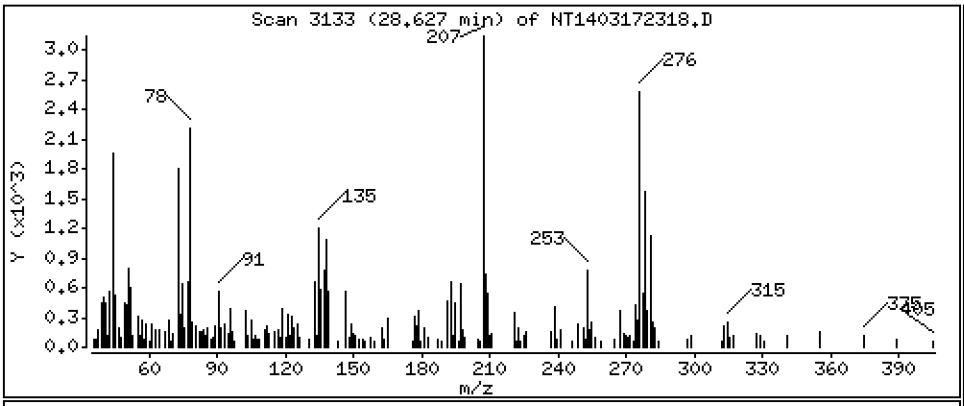
Operator: JGR

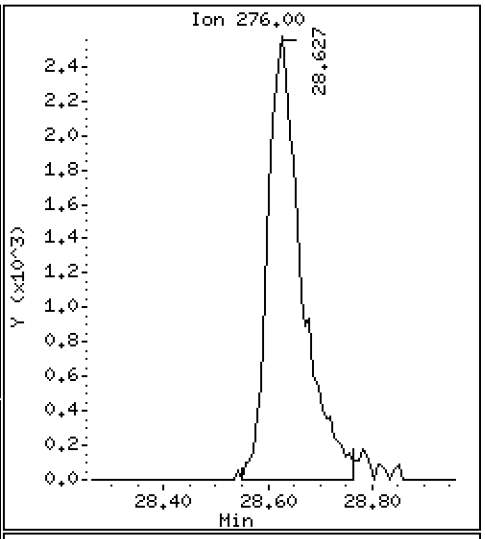
Column phase: ZB-5msi

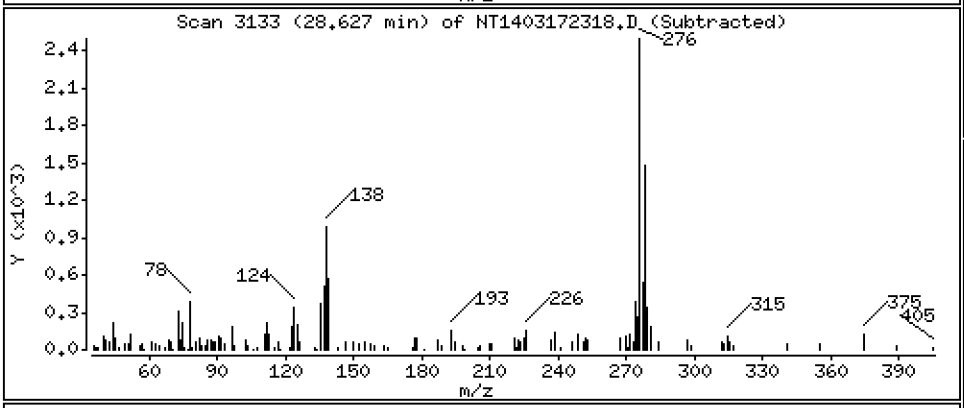
Column diameter: 0.25

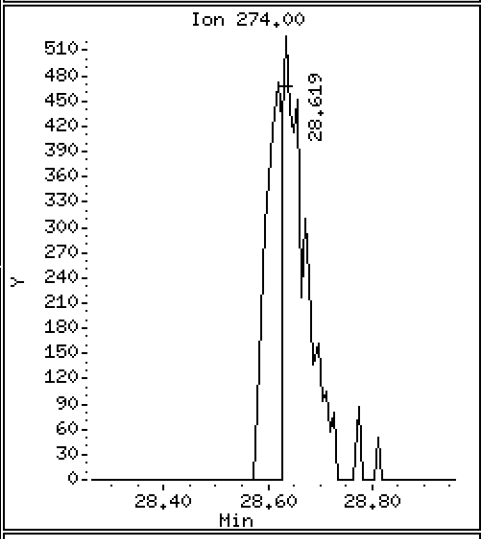
78 Indeno(1,2,3-cd)pyrene

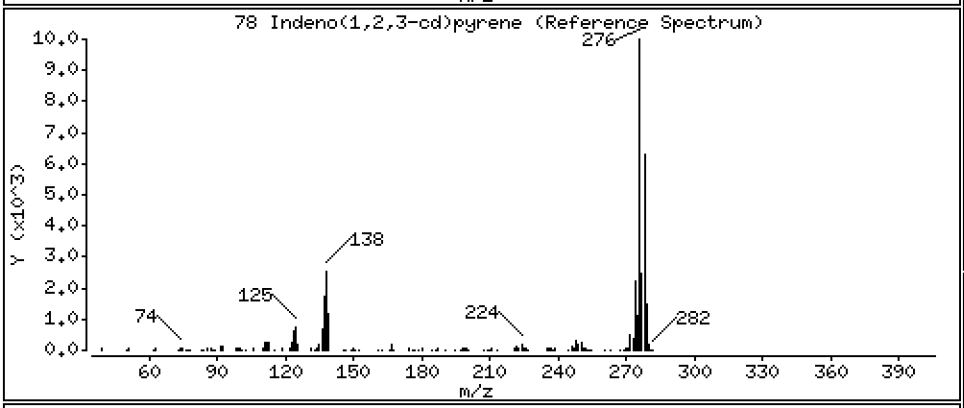
Concentration: 0.1449 ug/mL

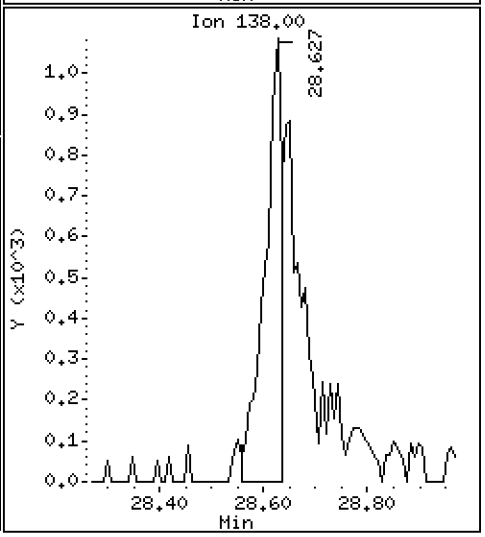


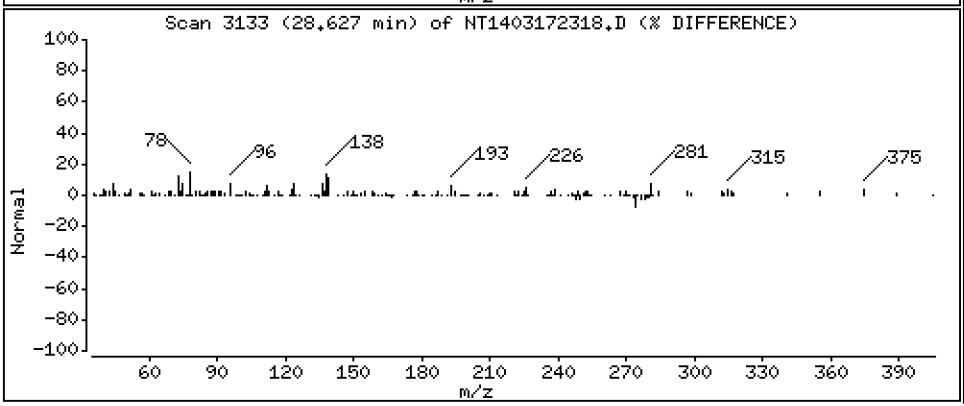












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

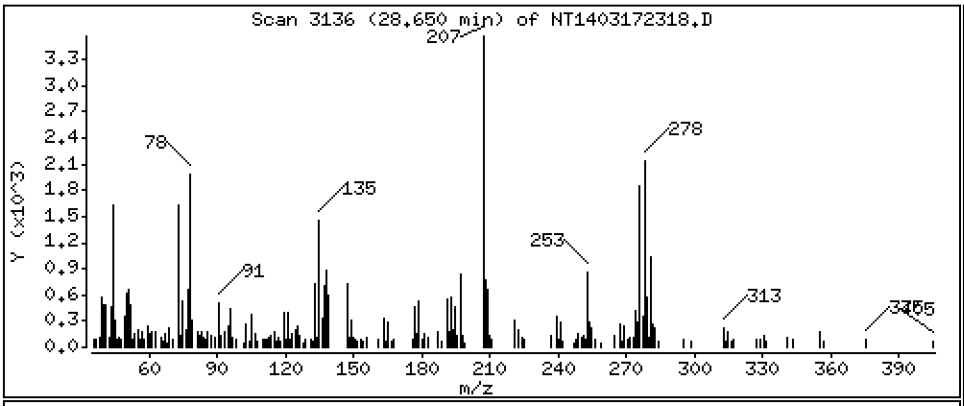
Operator: JGR

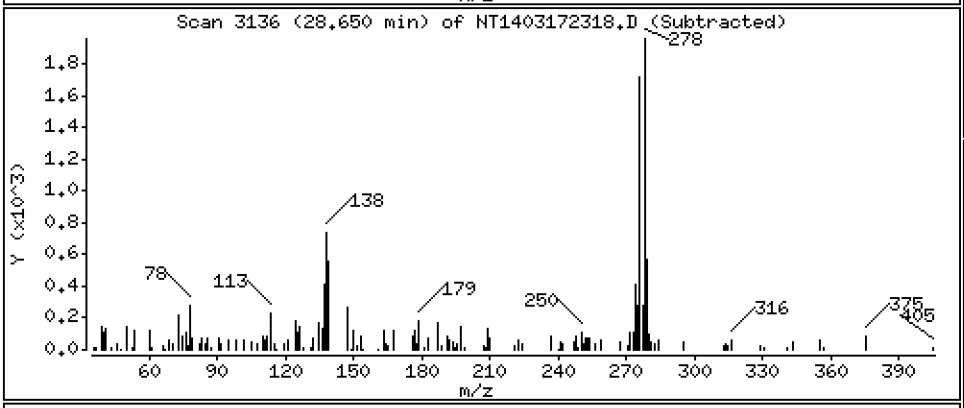
Column phase: ZB-5msi

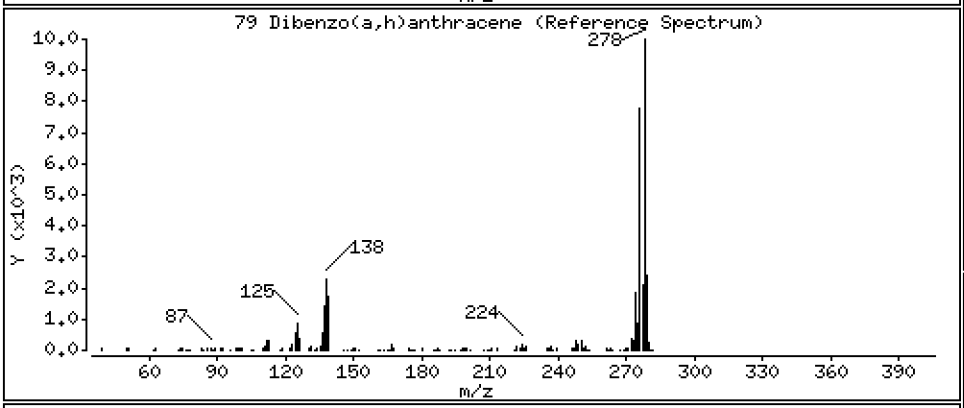
Column diameter: 0.25

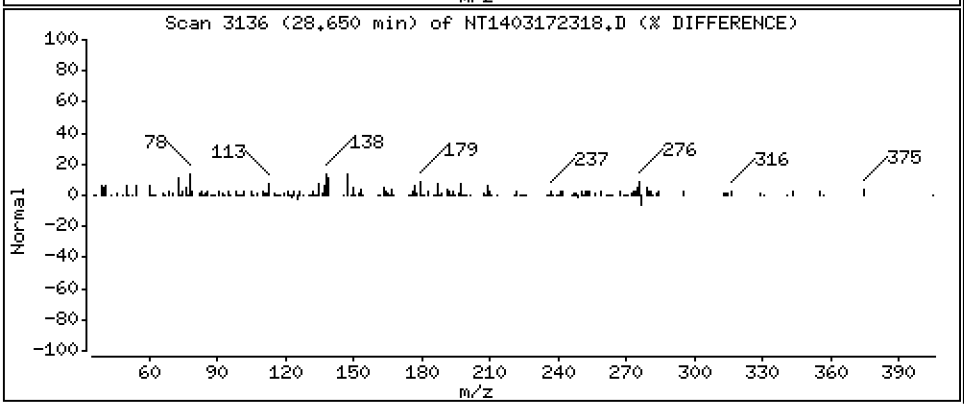
79 Dibenzo(a,h)anthracene

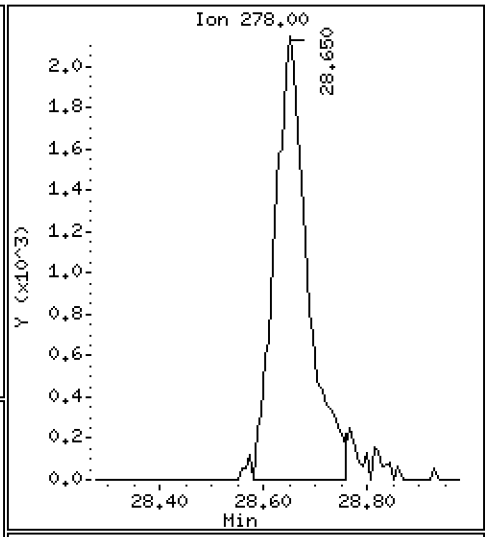
Concentration: 0.1409 ug/mL

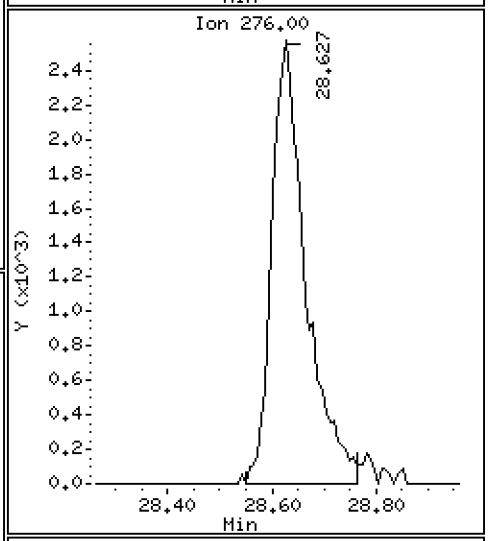


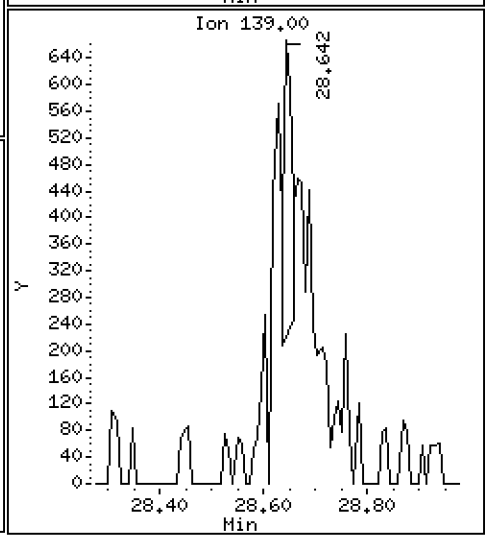












Date : 18-MAR-2023 00:43

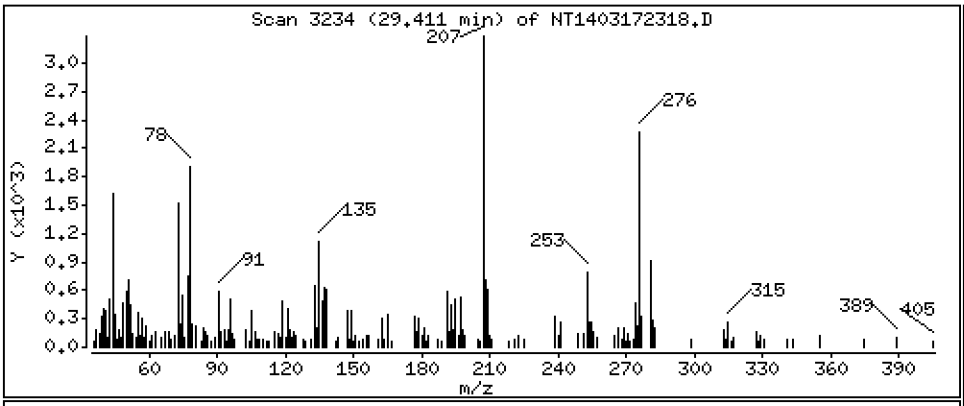
Client ID: Instrument: nt14.i

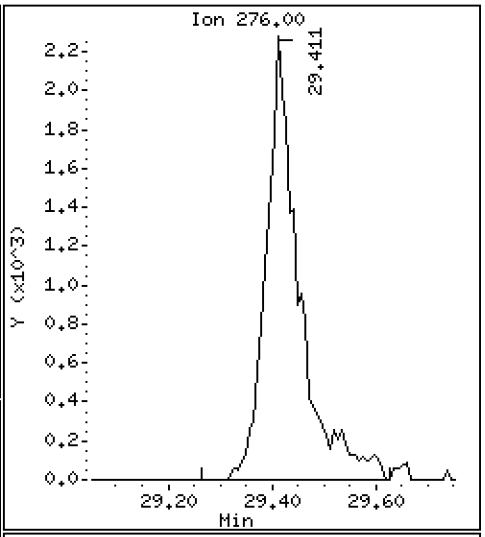
Sample Info: SLC0335-LCV2

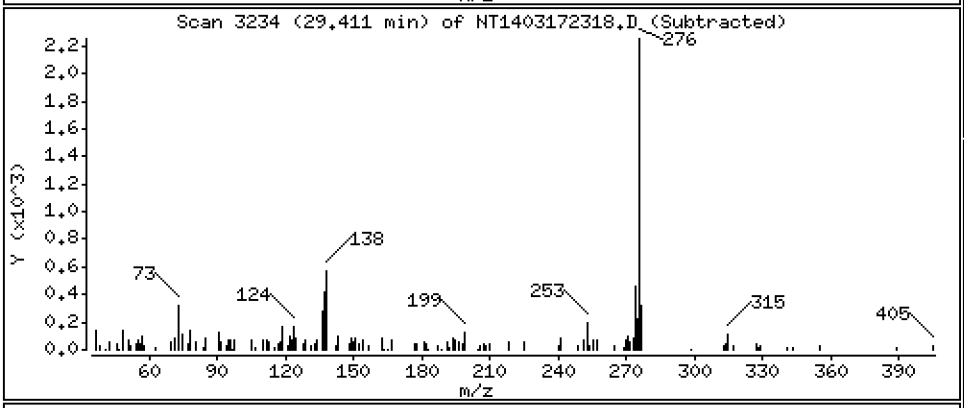
Operator: JGR

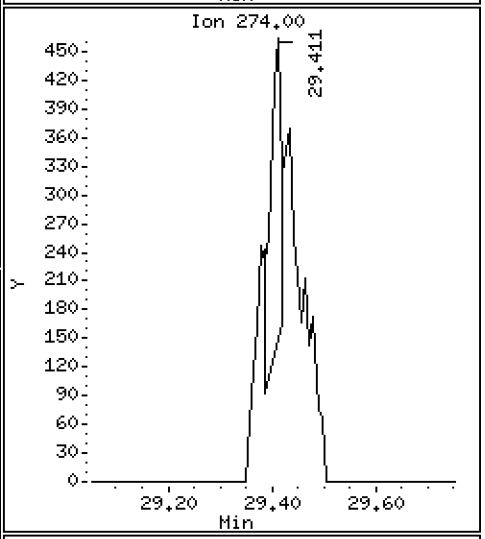
Column phase: ZB-5msi Column diameter: 0.25

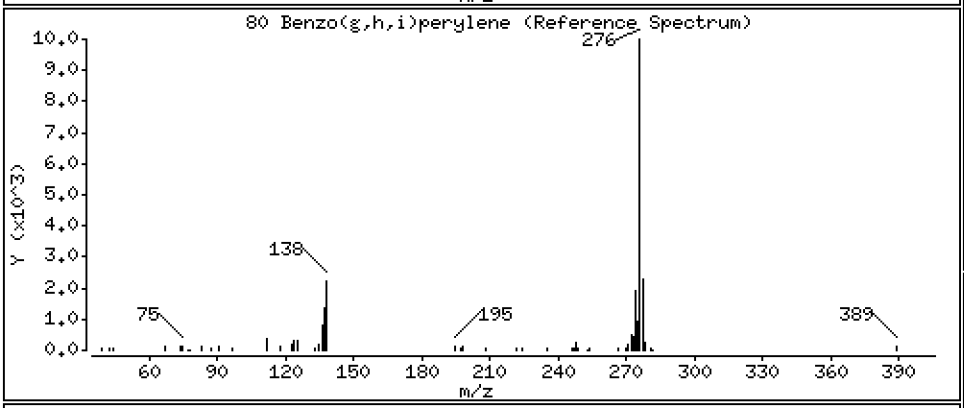
80 Benzo(g,h,i)perylene Concentration: 0.1521 ug/mL

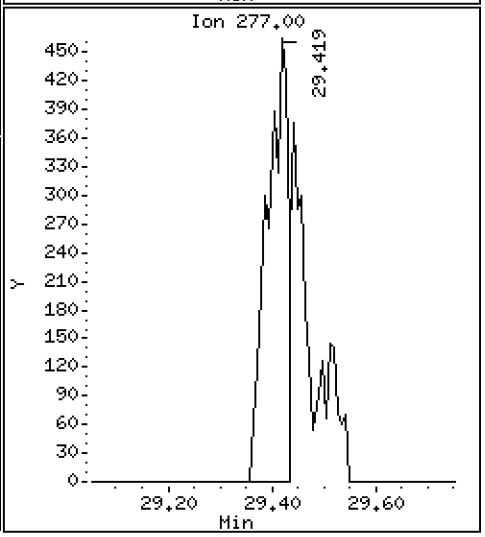


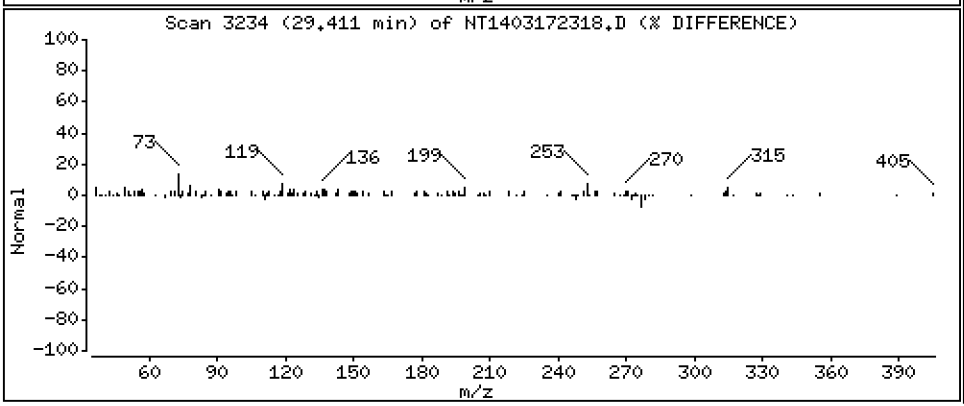












Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172318.D

Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

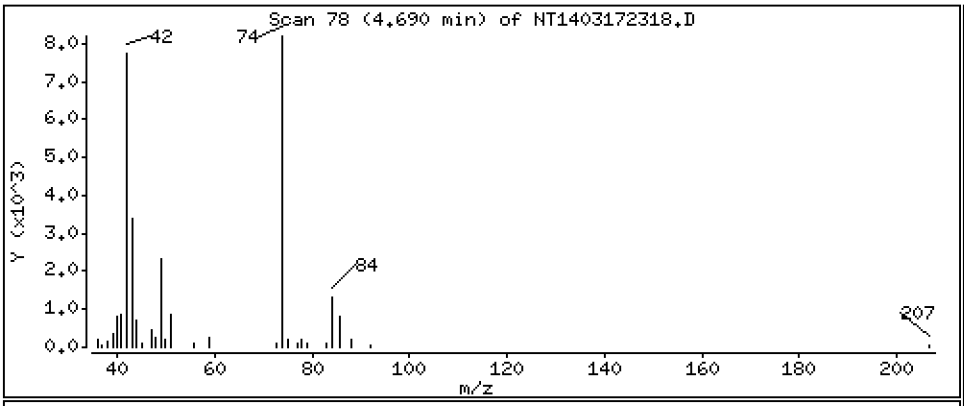
Operator: JGR

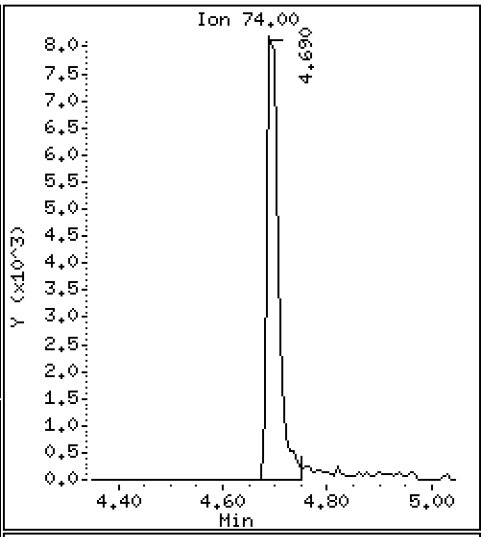
Column phase: ZB-5msi

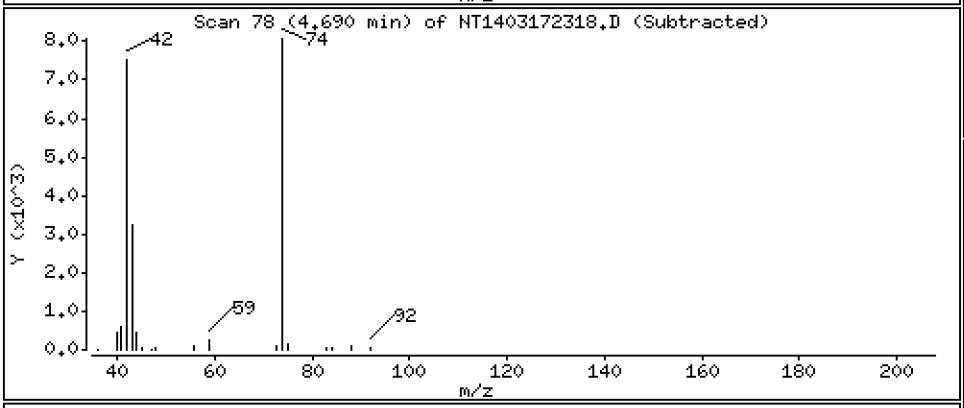
Column diameter: 0.25

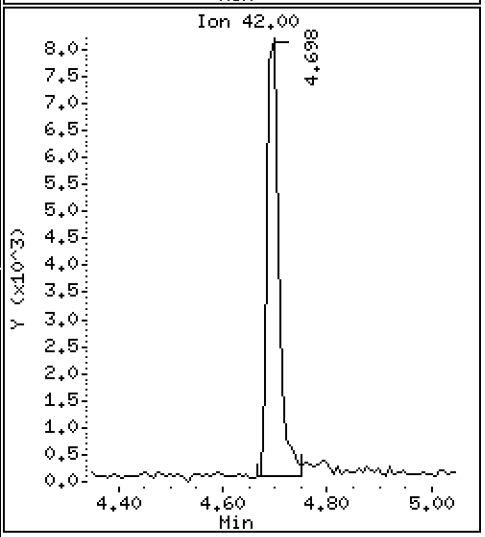
90 N-Nitrosodimethylamine

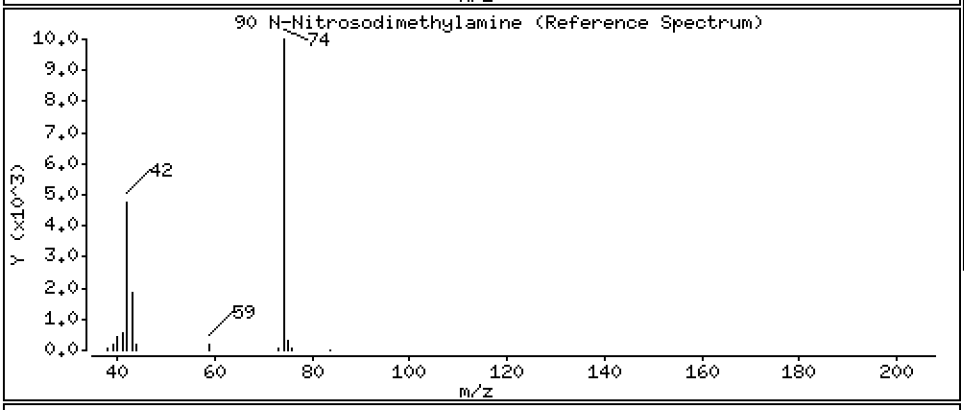
Concentration: 0.2681 ug/mL

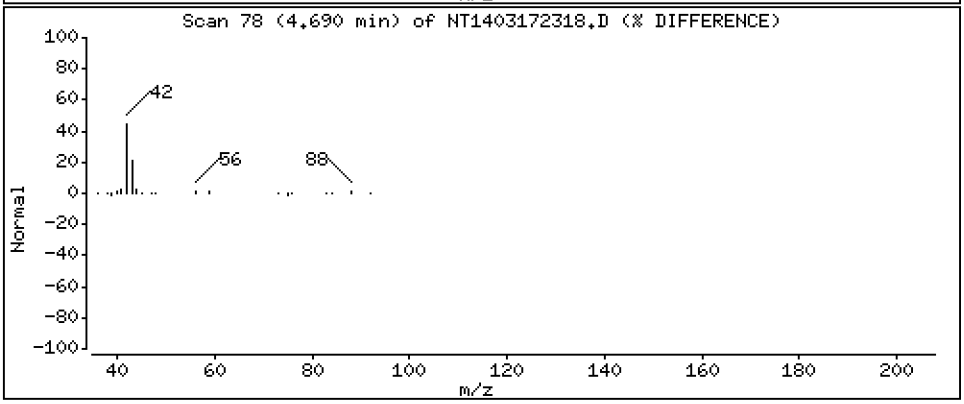












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

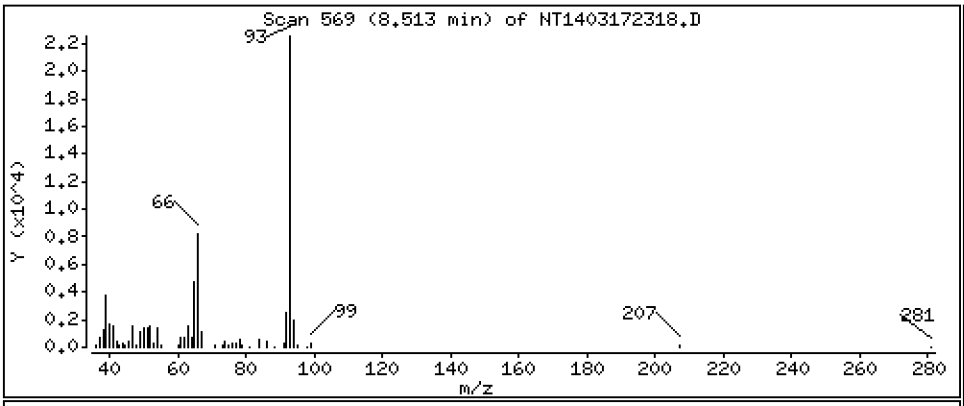
Operator: JGR

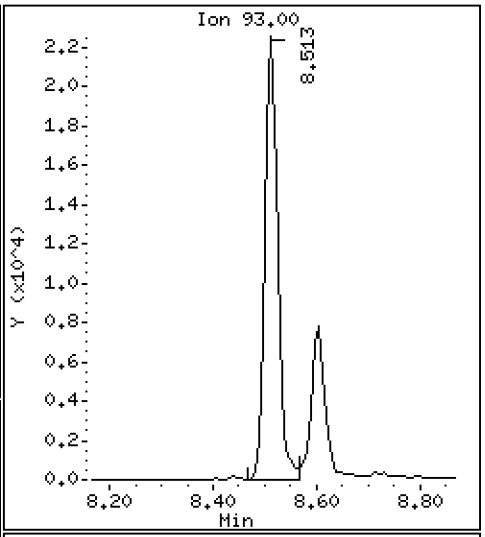
Column phase: ZB-5msi

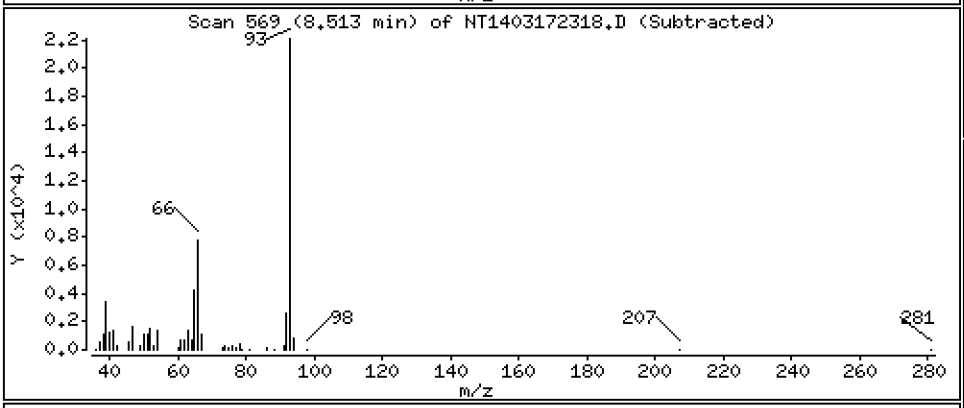
Column diameter: 0.25

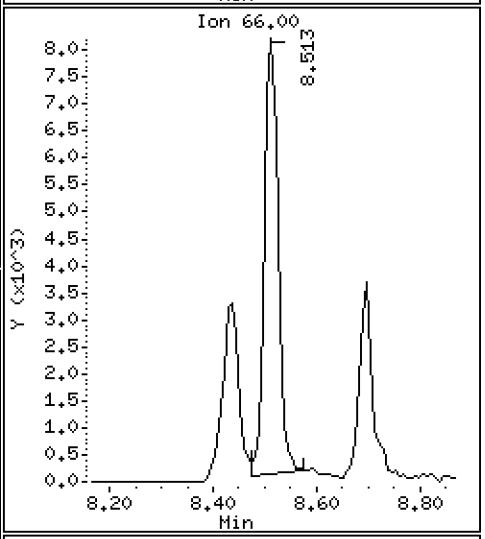
91 Aniline

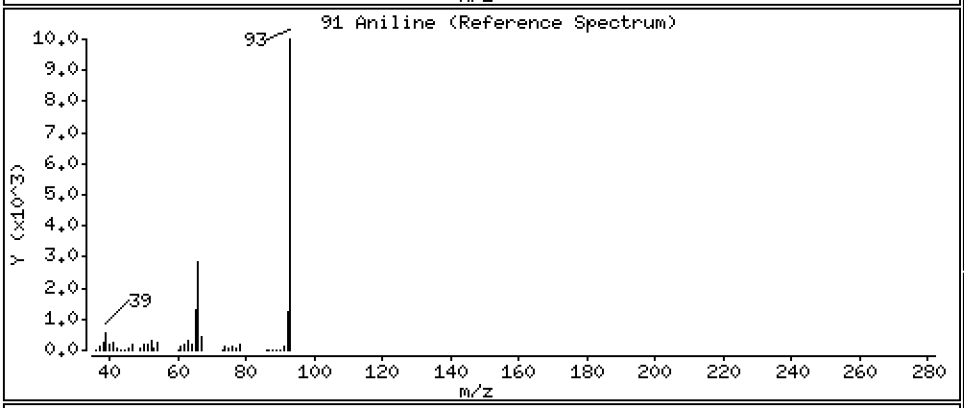
Concentration: 0.3747 ug/mL

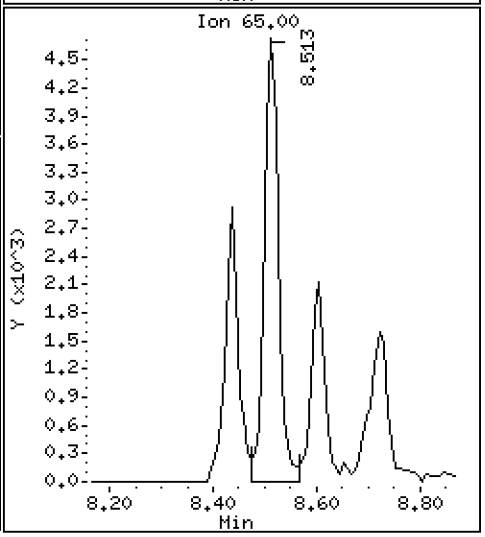


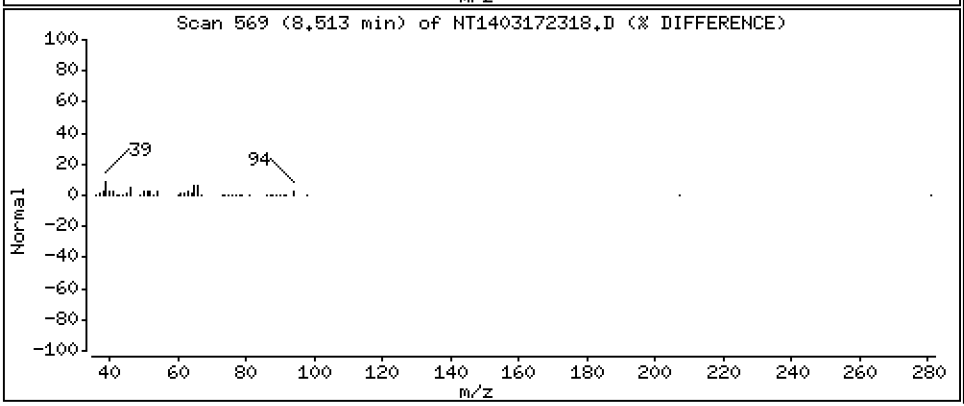












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

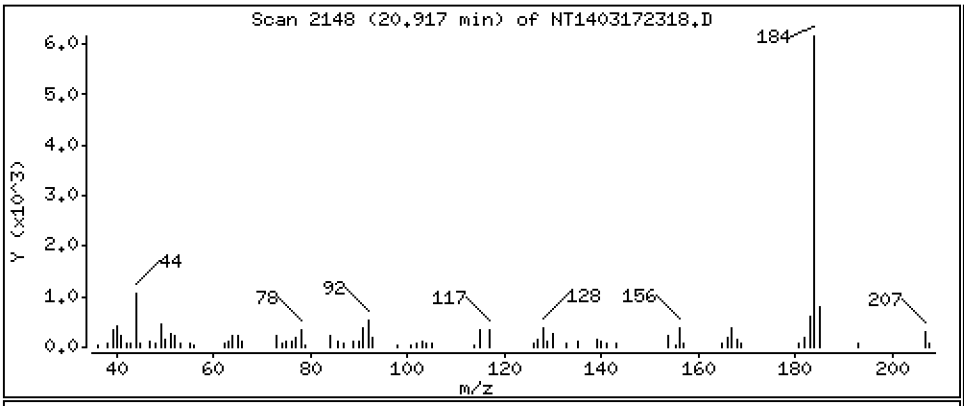
Operator: JGR

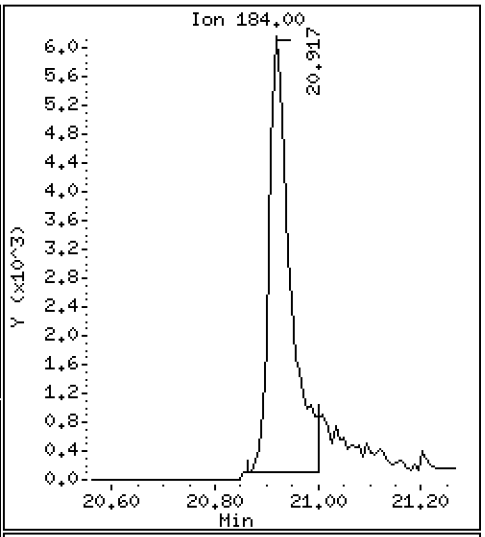
Column phase: ZB-5msi

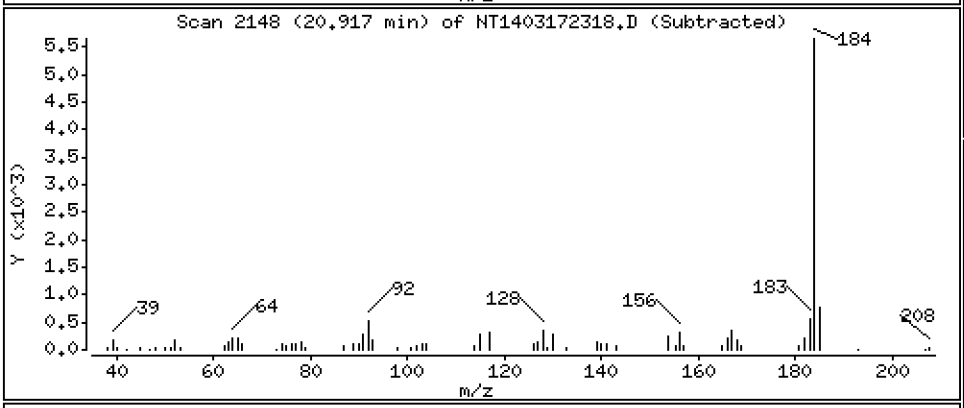
Column diameter: 0.25

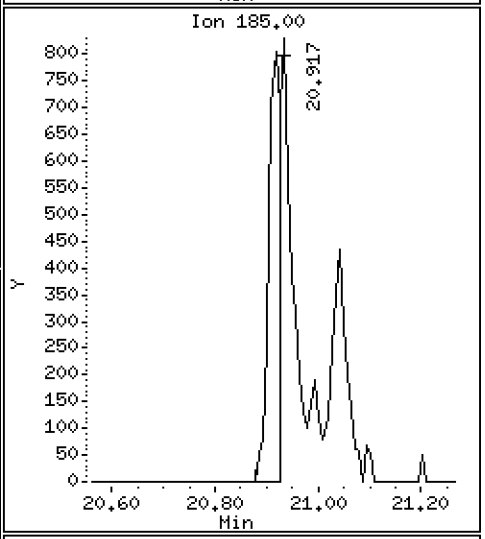
93 Benzidine

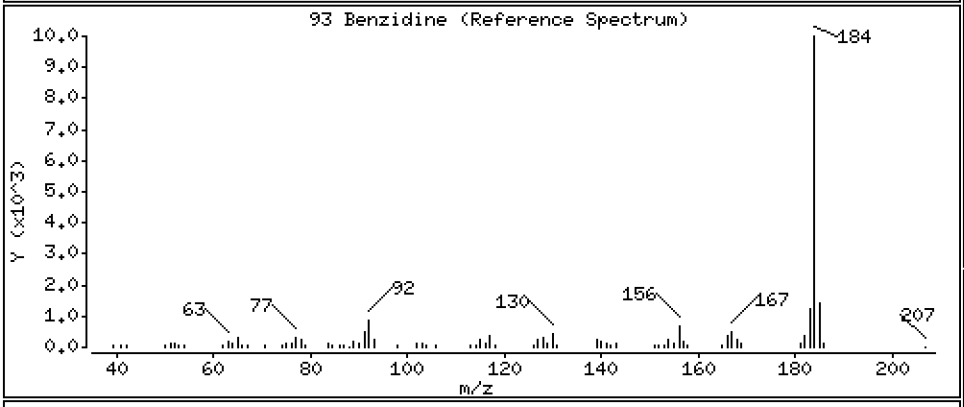
Concentration: 0.2724 ug/mL

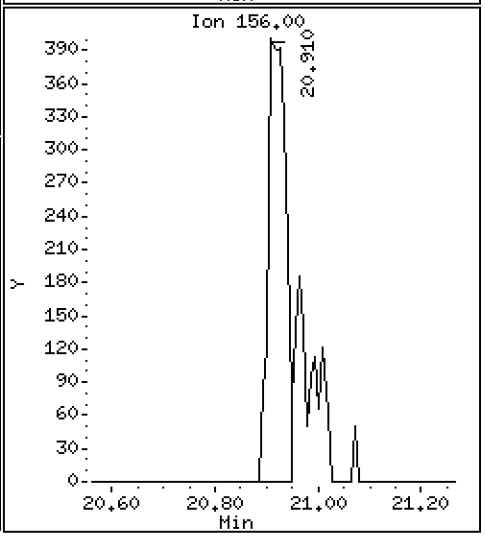


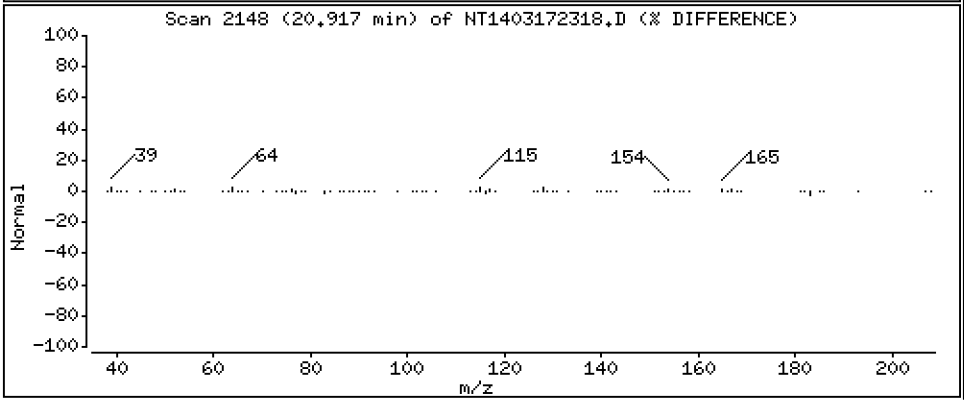












Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172318.D

Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

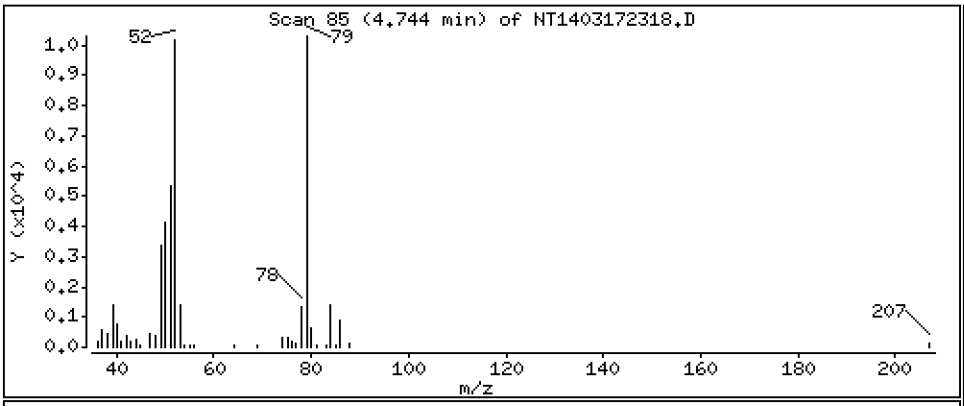
Operator: JGR

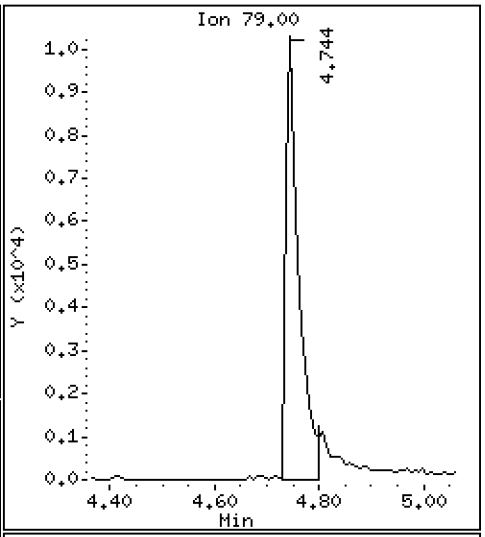
Column phase: ZB-5msi

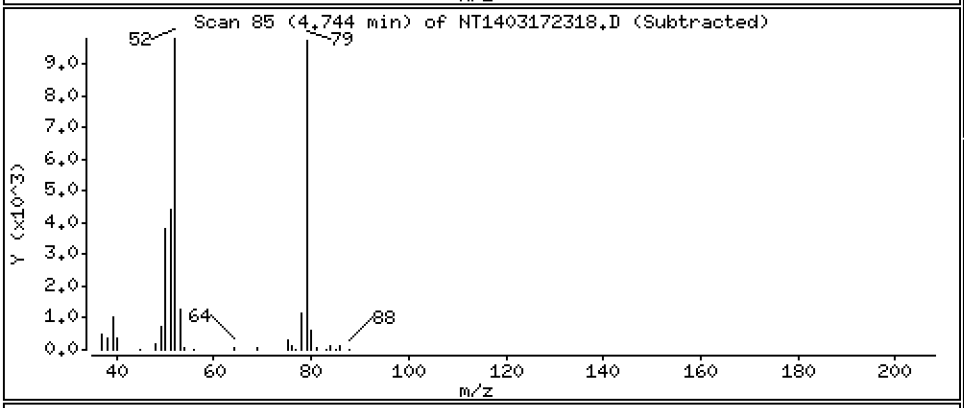
Column diameter: 0.25

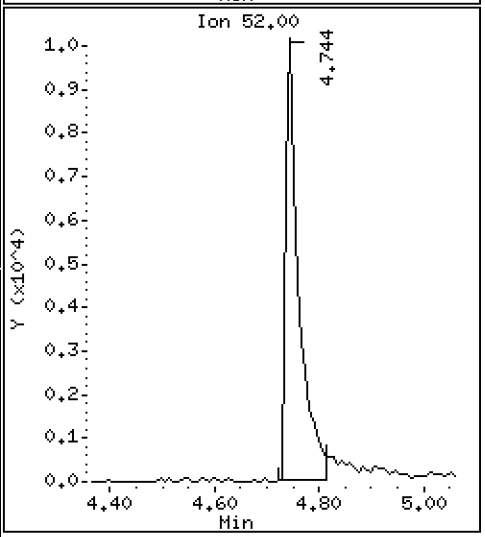
103 Pyridine

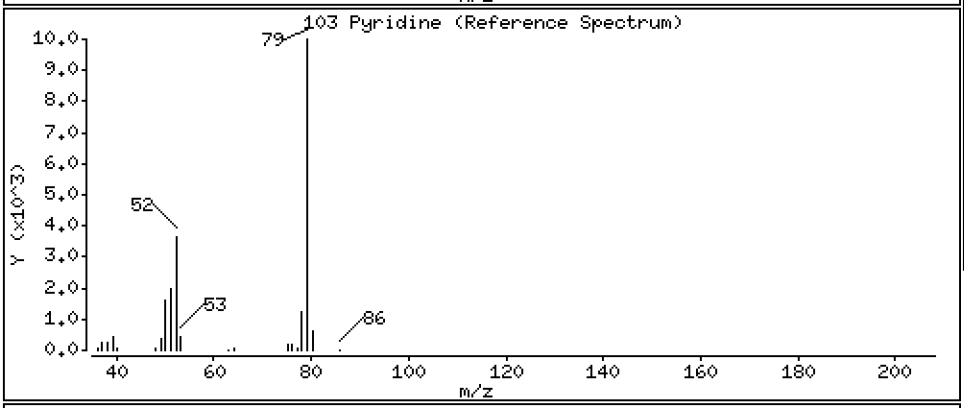
Concentration: 0.1356 ug/mL

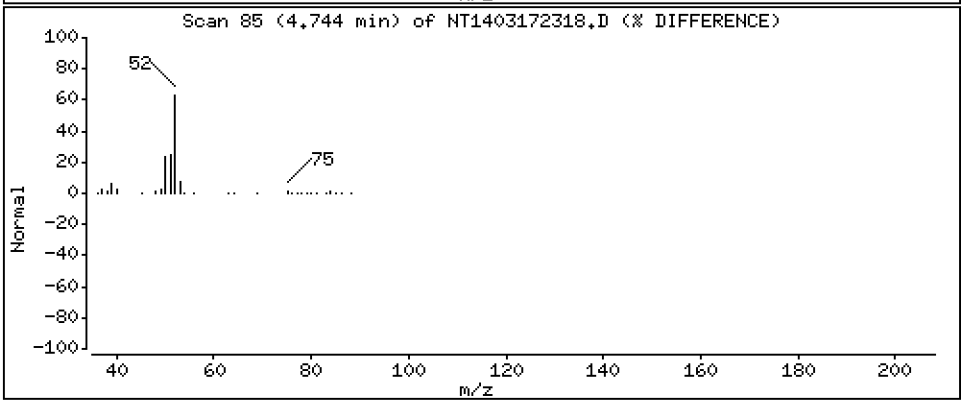












Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172318.D

Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

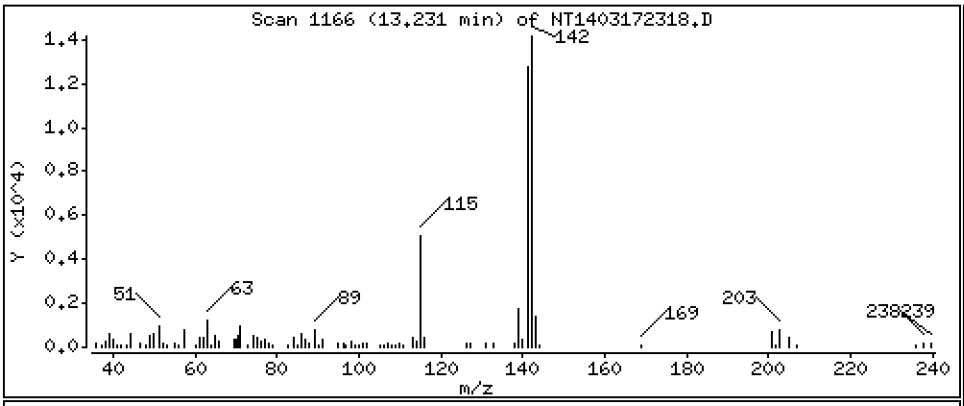
Operator: JGR

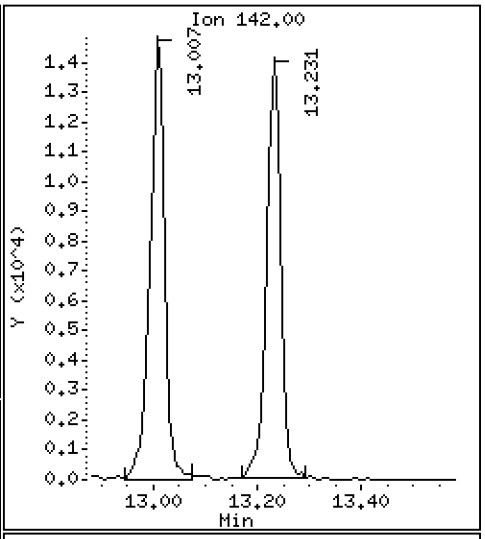
Column phase: ZB-5msi

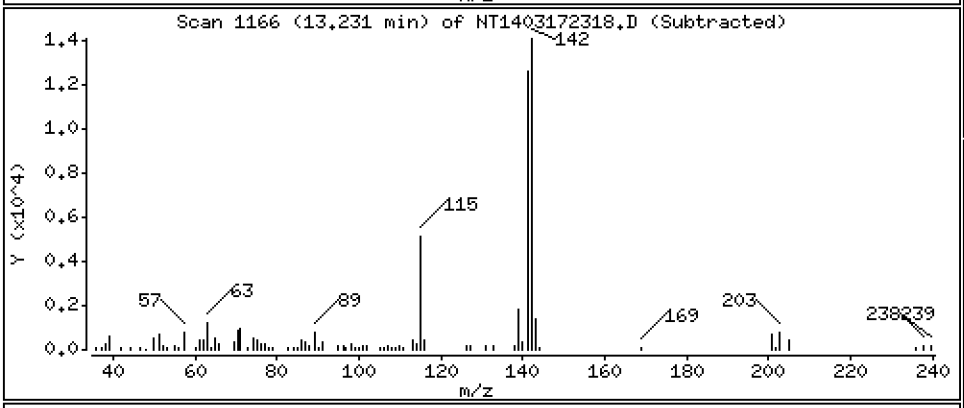
Column diameter: 0.25

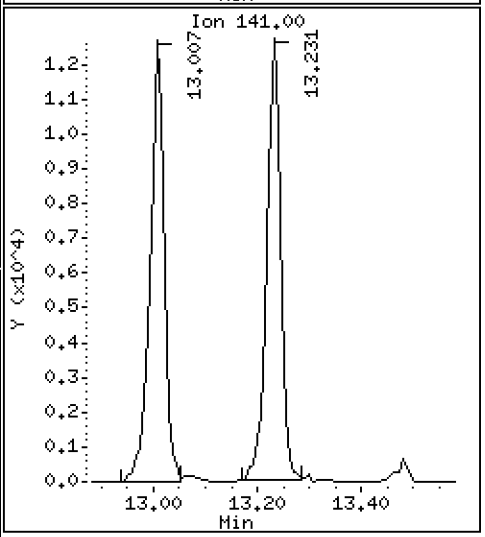
105 1-methylnaphthalene

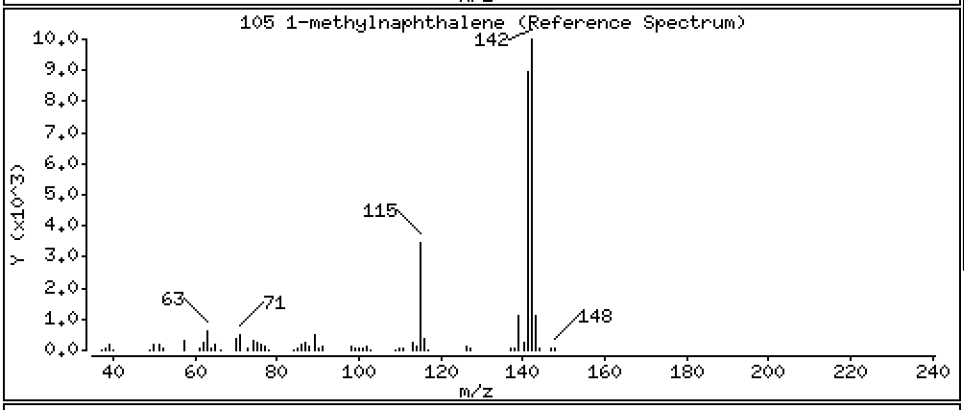
Concentration: 0.1940 ug/mL

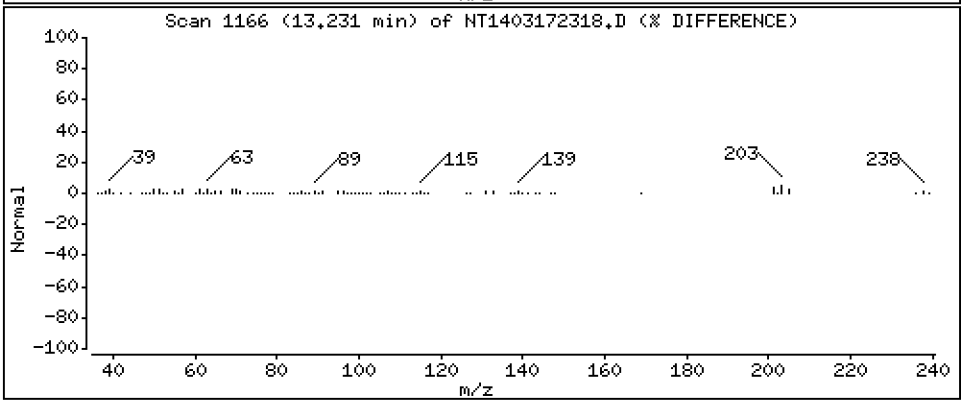












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

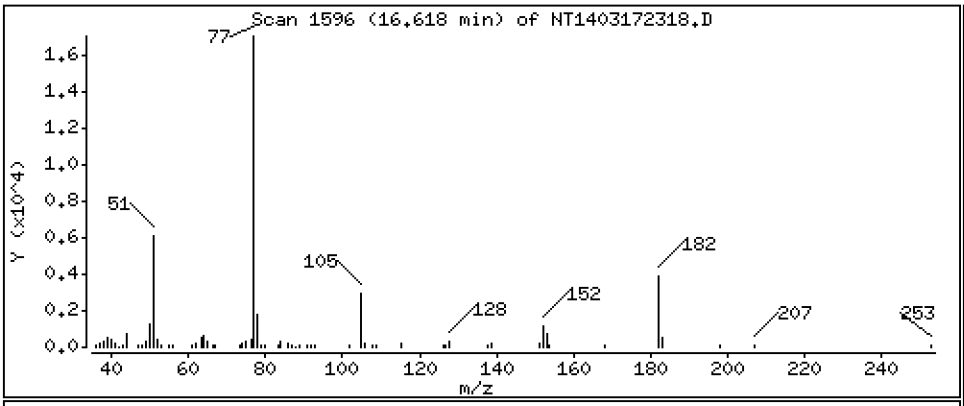
Operator: JGR

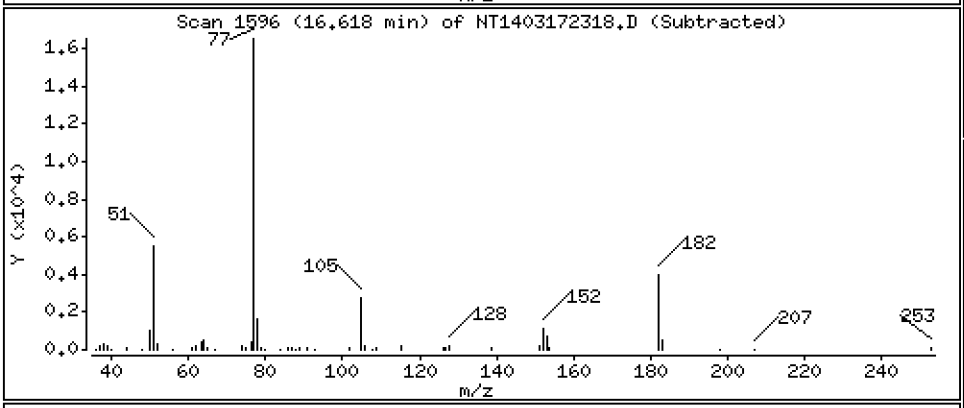
Column phase: ZB-5msi

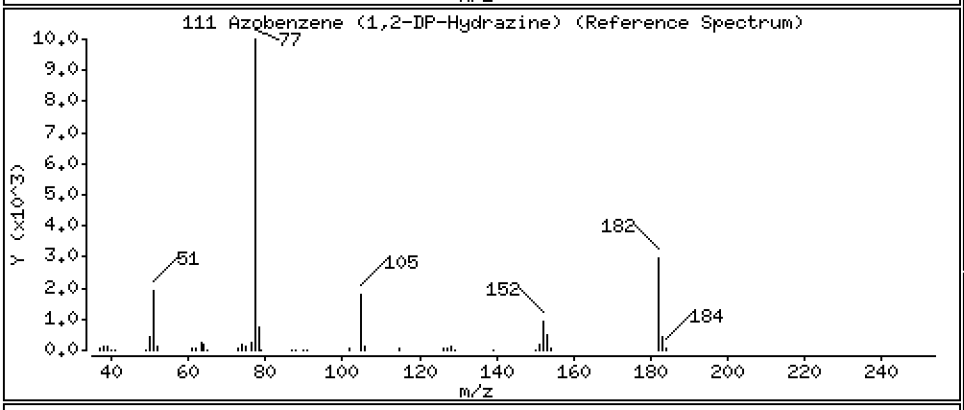
Column diameter: 0.25

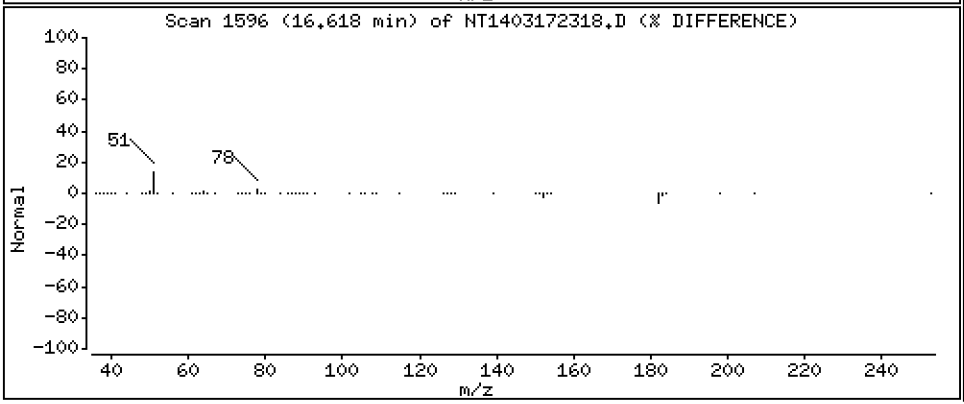
111 Azobenzene (1,2-DP-Hydrazine)

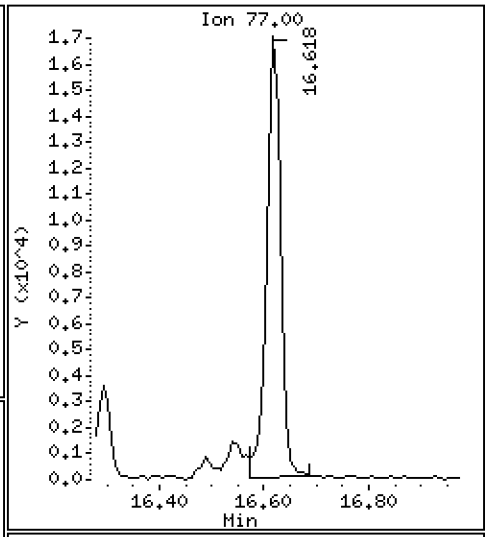
Concentration: 0.1900 ug/mL

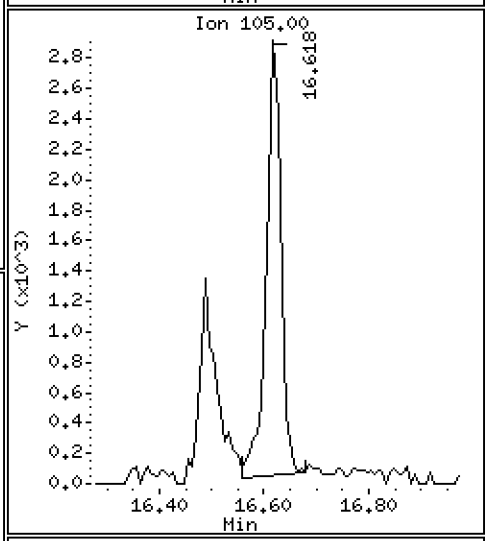


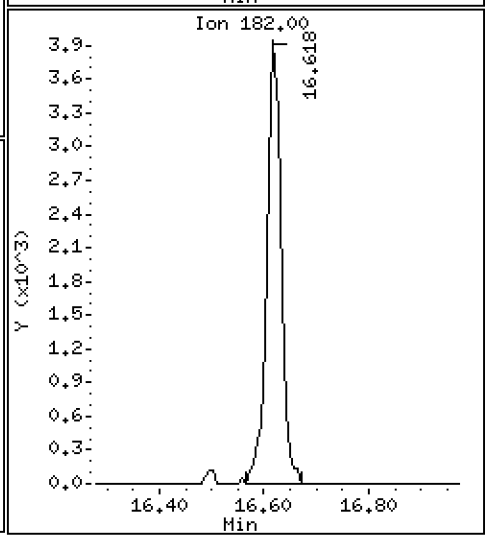












Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172318.D

Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

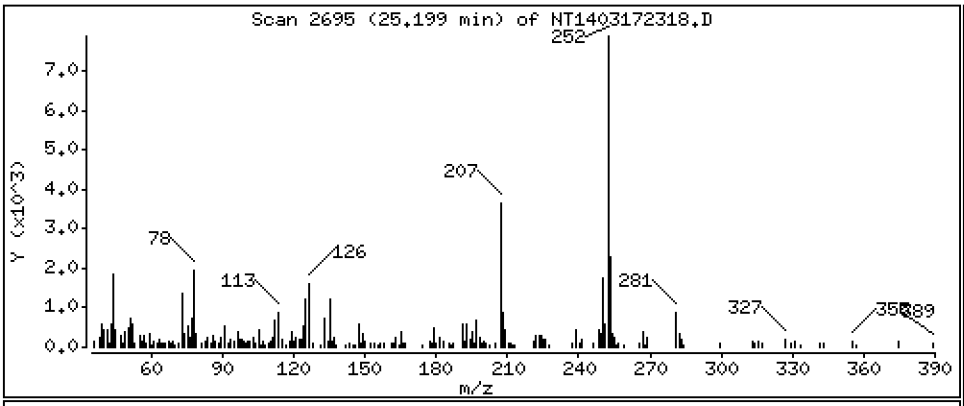
Operator: JGR

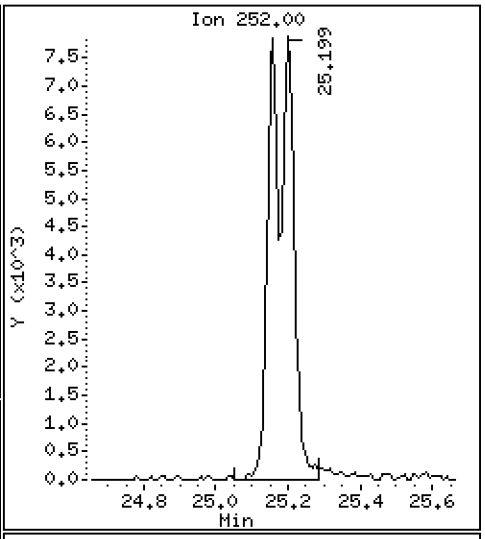
Column phase: ZB-5msi

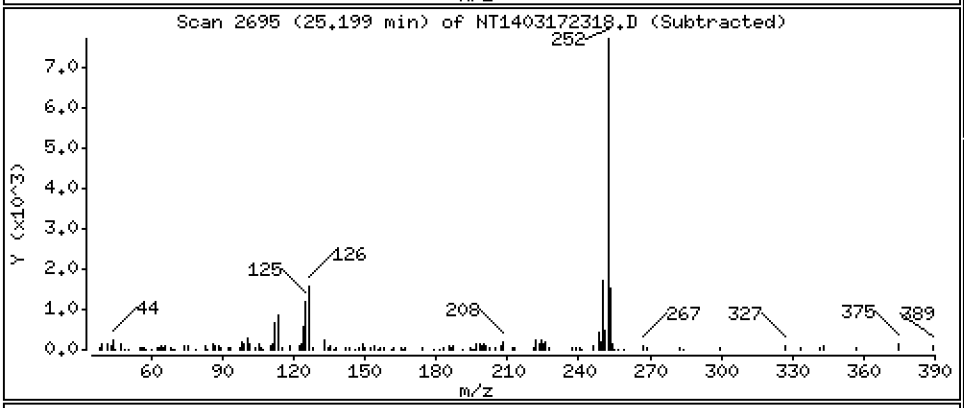
Column diameter: 0.25

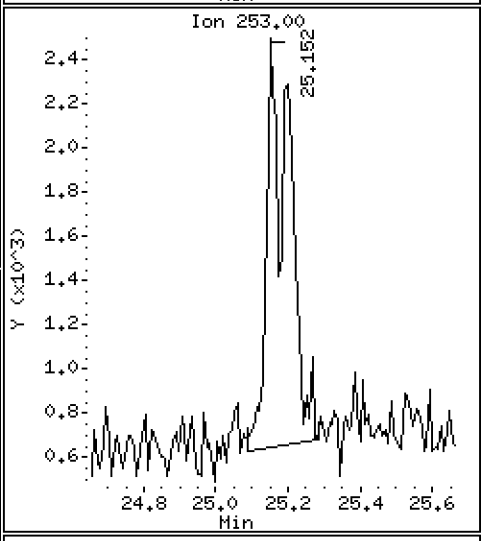
187 Total Benzofluoranthenes

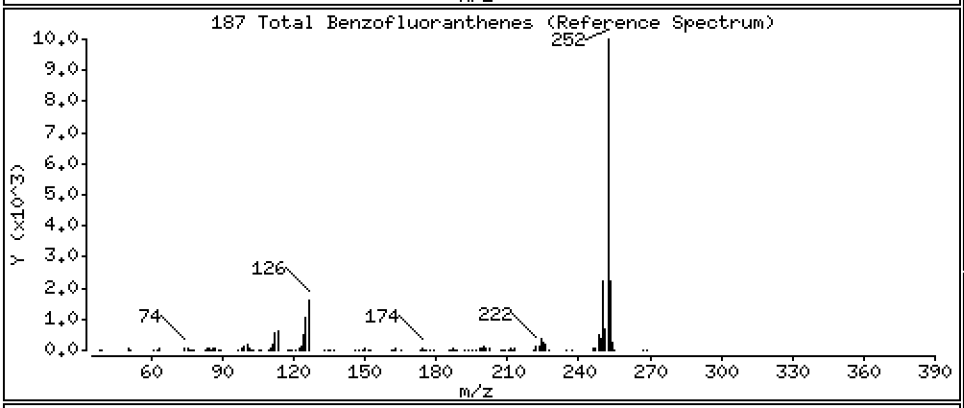
Concentration: 0.4172 ug/mL

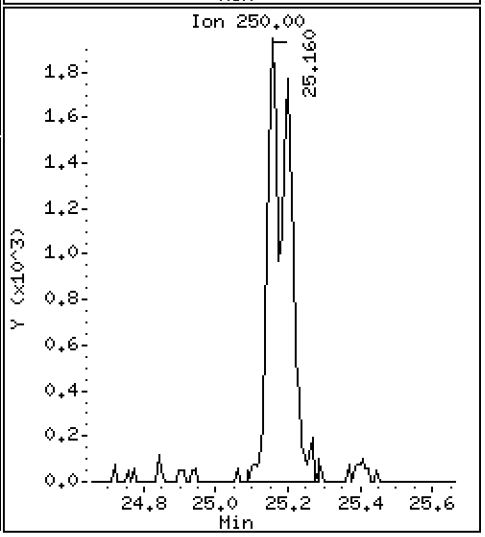


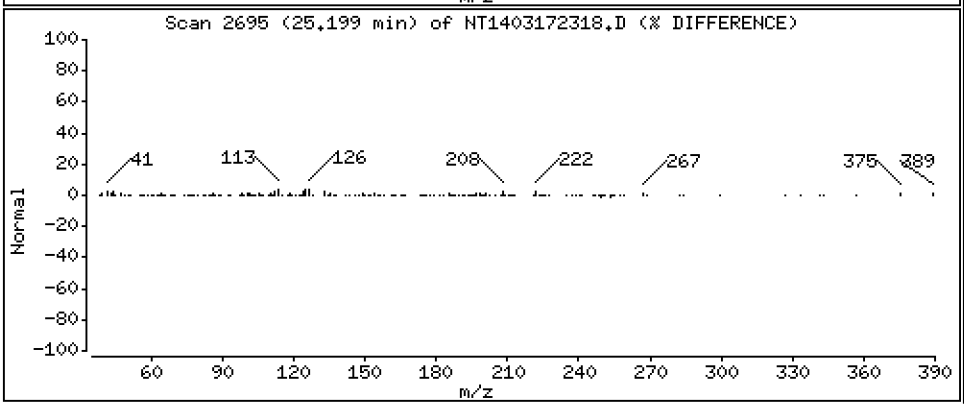












Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172318.D

Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

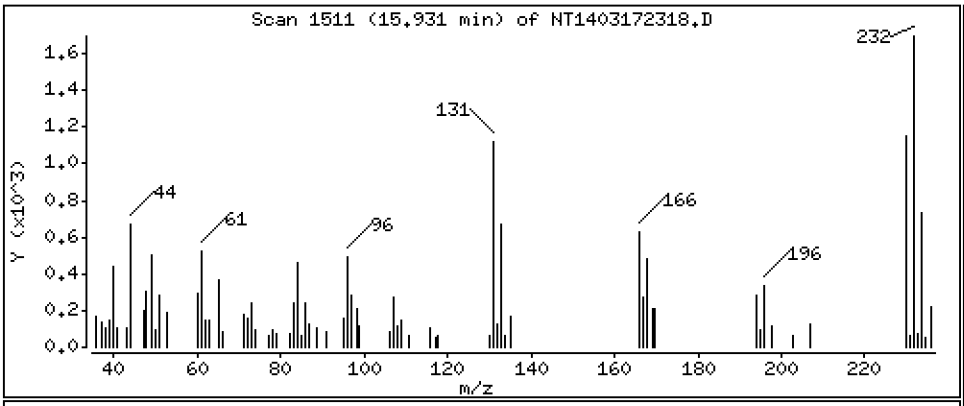
Operator: JGR

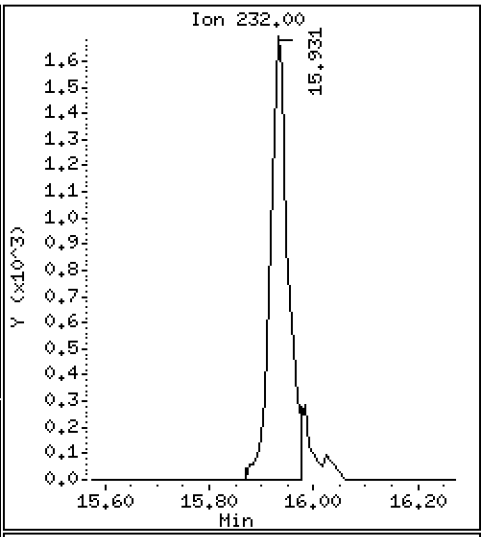
Column phase: ZB-5msi

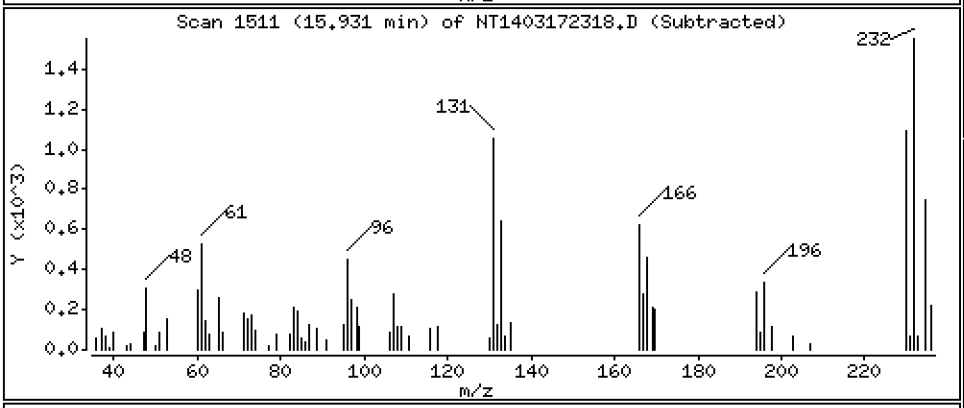
Column diameter: 0.25

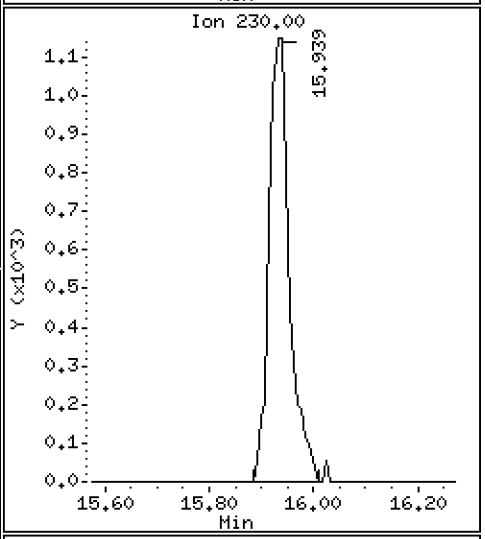
120 2,3,4,6-Tetrachlorophenol

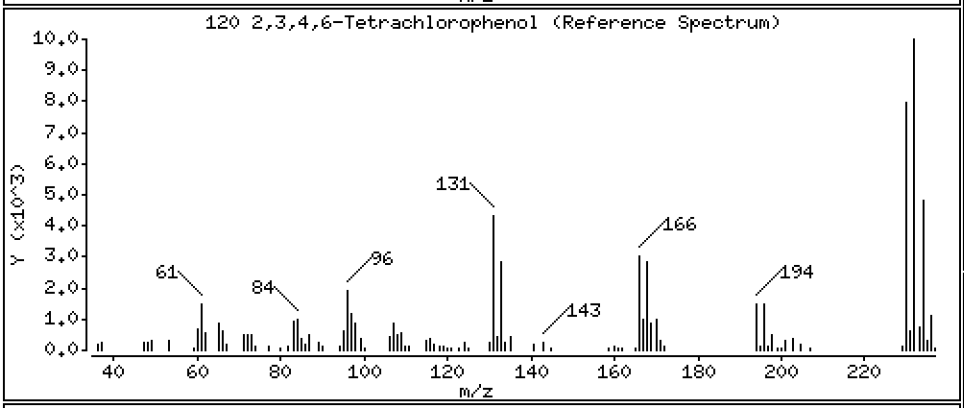
Concentration: 0.1003 ug/mL

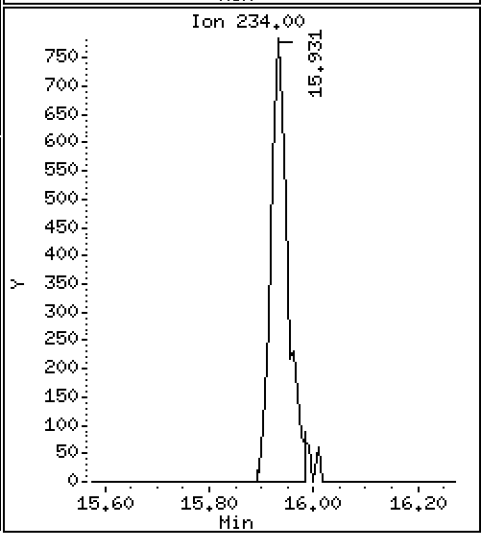


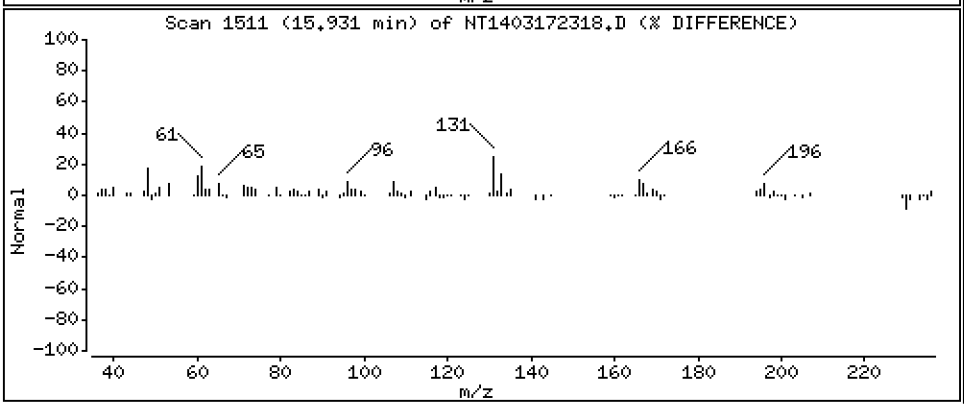












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230317.b\NT1403172318.D
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Inj Date : 18-MAR-2023 00:43 MS Autotune Date: 11-MAR-2023 16:01
Operator : JGR Inst ID: nt14.i
Smp Info : SLC0335-LCV2
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230317.b\ABN.m
Meth Date : 22-Mar-2023 08:57 van Quant Type: ISTD
Cal Date : 15-MAR-2023 15:50 Cal File: NT1403152308.D
Als bottle: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)	
$	1 2-Fluorophenol	112	6.821	6.821	(1.000)	16043	0.23147	0.2315	
$	2 Phenol-d5	99	8.413	8.412	(1.000)	22436	0.24588	0.2459	
	3 Phenol	94	8.436	8.436	(1.000)	15686	0.16175	0.1618	
$	5 2-Chlorophenol-d4	132	8.698	8.698	(1.000)	19774	0.27487	0.2749	
	4 Bis(2-Chloroethyl)ether	93	8.606	8.606	(1.000)	12828	0.18370	0.1837	
	6 2-Chlorophenol	128	8.722	8.729	(1.000)	13975	0.18309	0.1831	
	7 1,3-Dichlorobenzene	146	9.000	9.000	(1.000)	16579	0.21457	0.2146	
*	8 1,4-Dichlorobenzene-d4	152	9.062	9.062	(1.000)	204038	4.00000		(M)
	9 1,4-Dichlorobenzene	146	9.093	9.093	(1.000)	15564	0.20914	0.2091	
$	10 1,2-Dichlorobenzene-d4	152	9.427	9.427	(1.000)	10767	0.22403	0.2240	
	12 1,2-Dichlorobenzene	146	9.450	9.450	(1.000)	15401	0.20937	0.2094	
	11 Benzyl alcohol	108	9.404	9.341	(1.038)	6056	0.13414	0.1341	(M)
	14 2,2'-oxybis(1-Chloropropane)	121	9.637	9.644	(1.063)	4687	0.21117	0.2112	(M)
	13 2-Methylphenol	108	9.559	9.559	(1.000)	11991	0.17489	0.1749	
	17 Hexachloroethane	117	10.048	10.048	(1.000)	6581	0.20677	0.2068	
	16 N-Nitroso-di-n-propylamine	70	9.893	9.900	(1.000)	9269	0.17171	0.1717	
	15 4-Methylphenol	108	9.831	9.830	(1.000)	12807	0.15776	0.1578	
$	18 Nitrobenzene-d5	82	10.164	10.164	(0.879)	15064	0.18345	0.1835	
	19 Nitrobenzene	77	10.195	10.203	(0.882)	14833	0.18557	0.1856	
	20 Isophorone	82	10.645	10.653	(0.921)	16359	0.14989	0.1499	
	21 2-Nitrophenol	139	10.832	10.831	(0.937)	5533	0.12260	0.1226	
	22 2,4-Dimethylphenol	107	10.886	10.886	(0.942)	25374	0.37115	0.3712	
	23 Bis(2-Chloroethoxy)methane	93	11.080	11.087	(0.958)	13647	0.18574	0.1857	
	24 Benzoic acid	105	Compound Not Detected.						
	25 2,4-Dichlorophenol	162	11.289	11.289	(0.977)	17112	0.31474	0.3147	
	26 1,2,4-Trichlorobenzene	180	11.475	11.482	(0.993)	13070	0.19555	0.1956	
*	27 Naphthalene-d8	136	11.560	11.567	(1.000)	775937	4.00000		
	28 Naphthalene	128	11.606	11.606	(1.004)	41862	0.20194	0.2019	
	29 4-Chloroaniline	127	11.737	11.737	(1.015)	28494	0.32835	0.3283	
	30 Hexachlorobutadiene	225	11.969	11.969	(1.035)	6307	0.20900	0.2090	
	31 4-Chloro-3-methylphenol	107	12.704	12.696	(1.099)	19456	0.29614	0.2961	
	32 2-Methylnaphthalene	142	13.006	13.006	(1.125)	28554	0.19751	0.1975	
	33 Hexachlorocyclopentadiene	237	13.478	13.478	(0.887)	5490	0.17179	0.1718	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
	34 2,4,6-Trichlorophenol	196	13.633	13.633	(0.897)	10802	0.27695	0.2769
	35 2,4,5-Trichlorophenol	196	13.710	13.702	(0.902)	11391	0.28027	0.2803
$	36 2-Fluorobiphenyl	172	13.795	13.795	(0.908)	29072	0.20879	0.2088
	37 2-Chloronaphthalene	162	14.004	14.004	(0.922)	23866	0.19998	0.2000
	38 2-Nitroaniline	65	14.268	14.267	(0.939)	14161	0.30730	0.3073
	39 Dimethylphthalate	163	14.693	14.701	(0.967)	24385	0.19020	0.1902
	40 Acenaphthylene	152	14.879	14.879	(0.979)	38524	0.19219	0.1922
	41 2,6-Dinitrotoluene	165	14.840	14.840	(0.977)	9236	0.31184	0.3118
*	42 Acenaphthene-d10	164	15.196	15.196	(1.000)	384479	4.00000	
	43 3-Nitroaniline	138	15.119	15.119	(0.995)	11505	0.28158	0.2816
	44 Acenaphthene	153	15.258	15.266	(1.004)	22698	0.19395	0.1939
	45 2,4-Dinitrophenol	184	15.359	15.335	(1.011)	497	0.02168	0.02168(M)
	46 Dibenzofuran	168	15.591	15.590	(1.026)	33382	0.19980	0.1998
	47 4-Nitrophenol	109	15.521	15.436	(1.021)	1402	0.06483	0.06483(M)
	48 2,4-Dinitrotoluene	165	15.645	15.645	(1.030)	11945	0.28452	0.2845
	50 Diethylphthalate	149	16.155	16.163	(1.063)	25406	0.19167	0.1917
	49 Fluorene	166	16.302	16.309	(1.073)	26861	0.16960	0.1696
	51 4-Chlorophenyl-phenylether	204	16.294	16.294	(1.072)	11780	0.17328	0.1733
	52 4-Nitroaniline	138	16.402	16.394	(1.079)	8037	0.22615	0.2262
	53 4,6-Dinitro-2-methylphenol	198	16.494	16.494	(0.904)	4699	0.20016	0.2002
	54 N-Nitrosodiphenylamine	169	16.548	16.548	(0.907)	17523	0.19011	0.1901
$	55 2,4,6-Tribromophenol	330	16.841	16.841	(1.108)	2788	0.19100	0.1910
	56 4-Bromophenyl-phenylether	248	17.304	17.304	(0.949)	5805	0.18680	0.1868
	57 Hexachlorobenzene	284	17.621	17.621	(0.966)	6690	0.20403	0.2040
	58 Pentachlorophenol	266	17.992	17.977	(0.986)	2057	0.09107	0.09107(M)
*	59 Phenanthrene-d10	188	18.240	18.240	(1.000)	678623	4.00000	
	60 Phenanthrene	178	18.286	18.294	(1.003)	38655	0.19936	0.1994
	61 Anthracene	178	18.379	18.387	(1.008)	34239	0.18329	0.1833
	62 Carbazole	167	18.712	18.712	(1.026)	27483	0.16536	0.1654
	63 Di-n-butylphthalate	149	19.509	19.509	(1.070)	34134	0.16203	0.1620
	64 Fluoranthene	202	20.677	20.677	(0.888)	34573	0.22419	0.2242
	65 Pyrene	202	21.103	21.103	(0.906)	36468	0.23059	0.2306
$	66 Terphenyl-d14	244	21.389	21.389	(0.918)	26055	0.24336	0.2434
	67 Butylbenzylphthalate	149	22.310	22.310	(0.958)	13984	0.20183	0.2018
	68 Benzo(a)anthracene	228	23.263	23.263	(0.999)	27759	0.19861	0.1986
*	69 Chrysene-d12	240	23.294	23.294	(1.000)	379052	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.224	23.216	(0.997)	20441	0.50999	0.5100
	71 Chrysene	228	23.332	23.340	(1.002)	24062	0.19022	0.1902
	72 bis(2-Ethylhexyl)phthalate	149	23.332	23.332	(0.960)	17448	0.20508	0.2051
*	134 Di-n-octylphthalate-d4	153	24.316	24.316	(1.000)	646291	4.00000	
	73 Di-n-octylphthalate	149	24.331	24.331	(1.001)	34651	0.20856	0.2086
	74 Benzo(b)fluoranthene	252	25.160	25.159	(0.970)	16214	0.18713	0.1871
	75 Benzo(k)fluoranthene	252	25.198	25.198	(0.972)	18568	0.21618	0.2162
	76 Benzo(a)pyrene	252	25.818	25.818	(0.996)	13291	0.17938	0.1794
*	77 Perylene-d12	264	25.934	25.934	(1.000)	245193	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	28.626	28.610	(1.104)	11686	0.14491	0.1449
	79 Dibenzo(a,h)anthracene	278	28.649	28.626	(1.105)	9576	0.14090	0.1409
	80 Benzo(g,h,i)perylene	276	29.411	29.403	(1.134)	10108	0.15209	0.1521(M)
	90 N-Nitrosodimethylamine	74	4.689	4.697	(1.000)	11768	0.26809	0.2681
	91 Aniline	93	8.513	8.513	(1.000)	36551	0.37474	0.3747
	93 Benzidine	184	20.917	20.909	(0.898)	16903	0.27237	0.2724
	103 Pyridine	79	4.743	4.712	(1.000)	18433	0.13560	0.1356
	105 1-methylnaphthalene	142	13.231	13.230	(1.145)	25403	0.19395	0.1940
	111 Azobenzene (1,2-DP-Hydrazine)	77	16.618	16.625	(1.094)	30076	0.19001	0.1900

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.198	25.159	(0.972)	34327	0.41716	0.4172
120 2,3,4,6-Tetrachlorophenol	232	15.931	15.923	(1.048)	3906	0.10028	0.1003

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1403172318.D
Lab Smp Id: SLC0335-LCV2
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt14.i\20230317.b\ABN.m
Misc Info:

Calibration Date: 17-MAR-2023
Calibration Time: 23:31
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	231017	115509	462034	204038	-11.68
27 Naphthalene-d8	843789	421895	1687578	775937	-8.04
42 Acenaphthene-d10	432455	216228	864910	384479	-11.09
59 Phenanthrene-d10	793780	396890	1587560	678623	-14.51
69 Chrysene-d12	411057	205529	822114	379052	-7.79
134 Di-n-octylphthala	799010	399505	1598020	646291	-19.11
77 Perylene-d12	254782	127391	509564	245193	-3.76

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.06	8.56	9.56	9.06	0.00
27 Naphthalene-d8	11.57	11.07	12.07	11.56	-0.07
42 Acenaphthene-d10	15.20	14.70	15.70	15.20	0.00
59 Phenanthrene-d10	18.24	17.74	18.74	18.24	0.00
69 Chrysene-d12	23.29	22.79	23.79	23.29	0.00
134 Di-n-octylphthala	24.32	23.82	24.82	24.32	0.00
77 Perylene-d12	25.93	25.43	26.43	25.93	0.00

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

REVIEW SUMMARY FOR FILE - NT1403172318.D

Lab ID: SLC0335-LCV2
nt14.i, ABN.m, 18-MAR-2023 00:43

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
1.038	1.000	0.0377	Benzyl alcohol
1.063	1.000	0.0634	2,2'-oxybis(1-Chloropropane)
1.021	1.016	0.0056	4-Nitrophenol

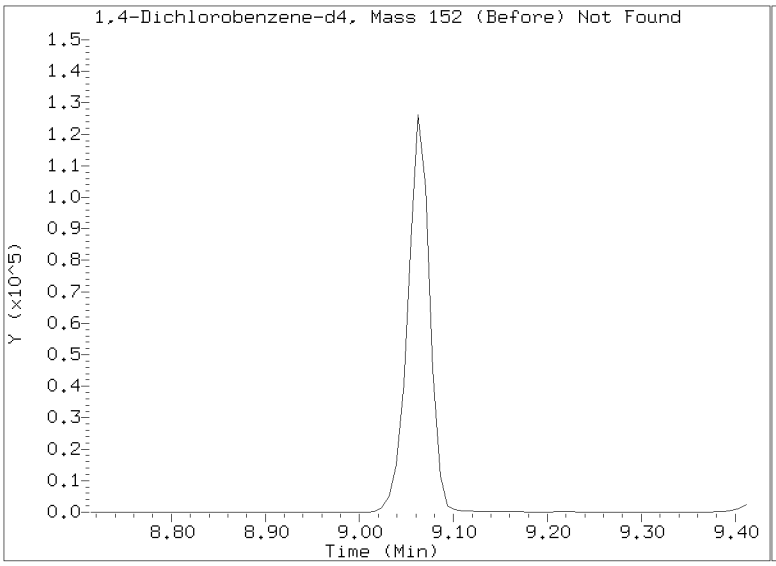
RRT check based on Ccal File: NT1403172316.D

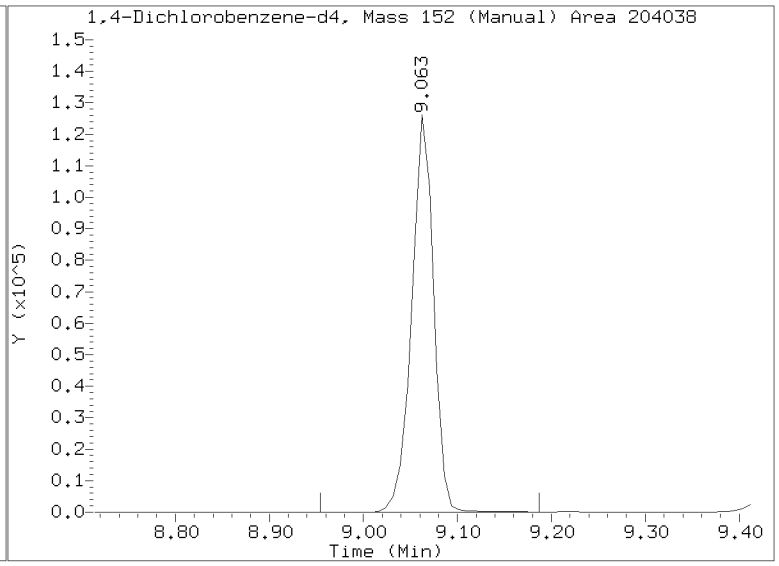
On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

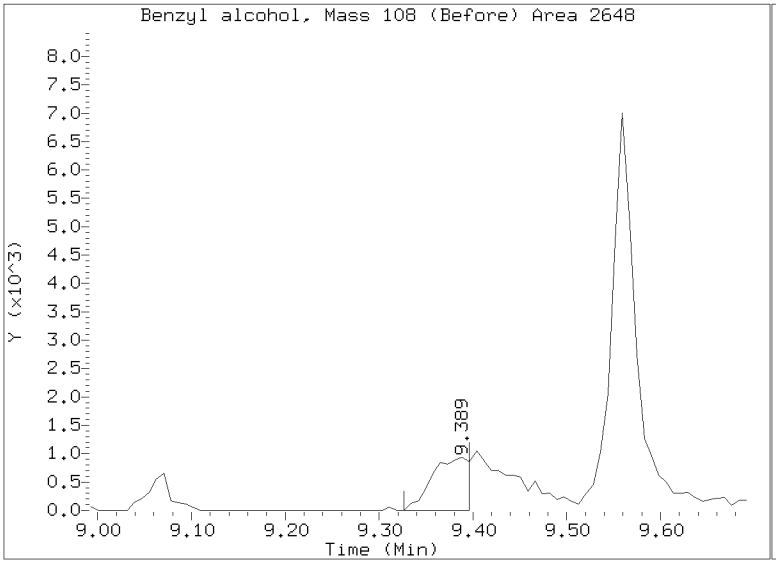
* Only compounds listed in the work order have been verified by the analyst *

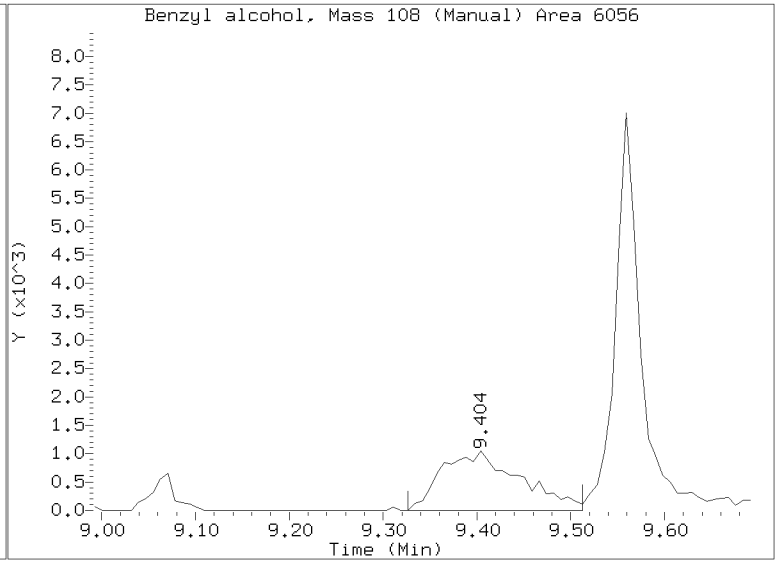
Quant Ion Manual Peak Adjustment Report

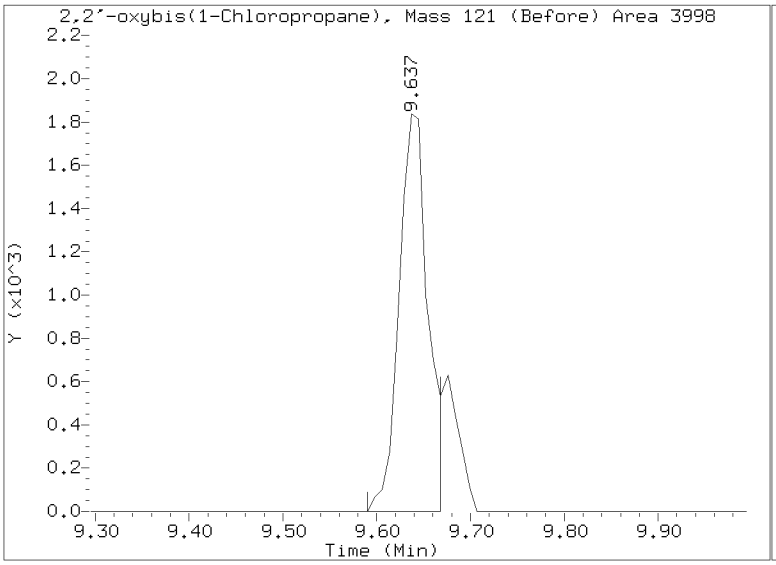
Datafile: //target/share/chem3/nt14.i/20230317.b/NT1403172318.D
Injection Date: 18-MAR-2023 00:43
Lab ID:SLC0335-LCV2 Client ID:
Report Date: 03/22/2023 09:49

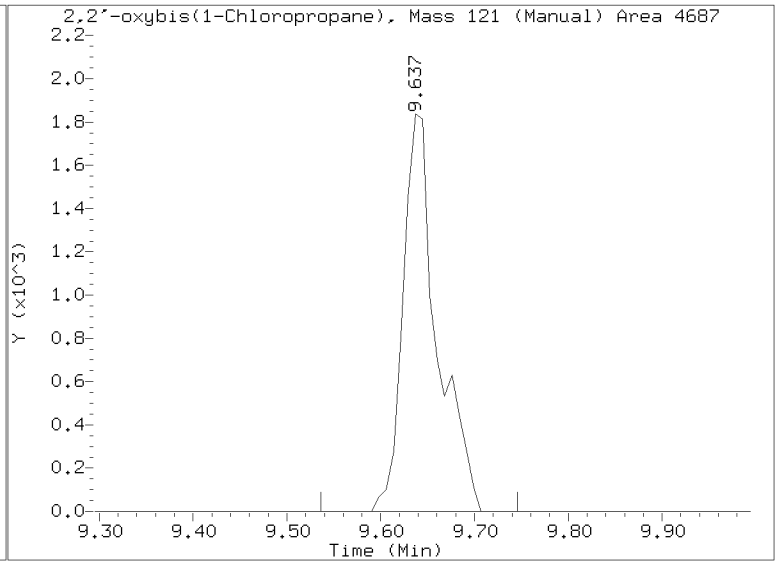












Quant Ion Manual Peak Adjustment Report

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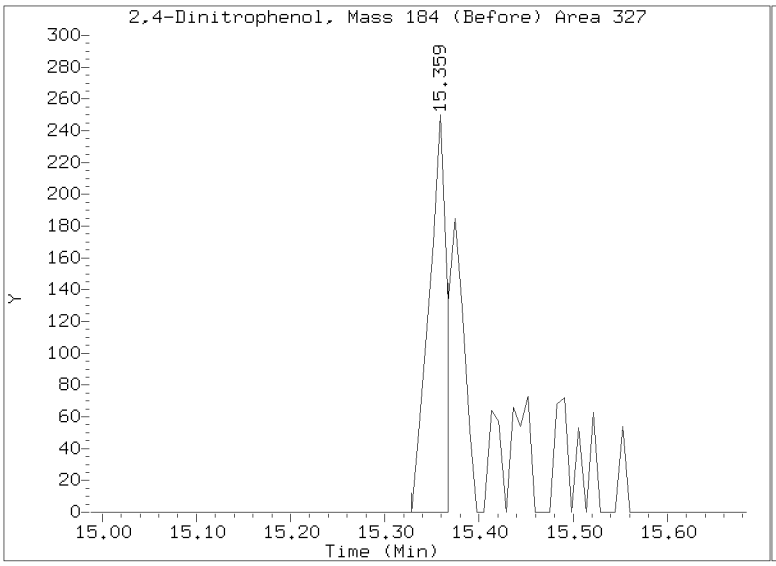
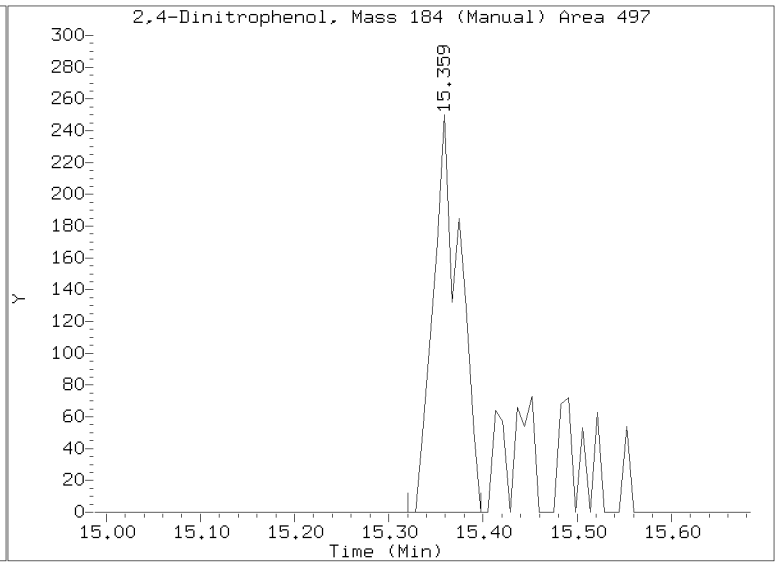
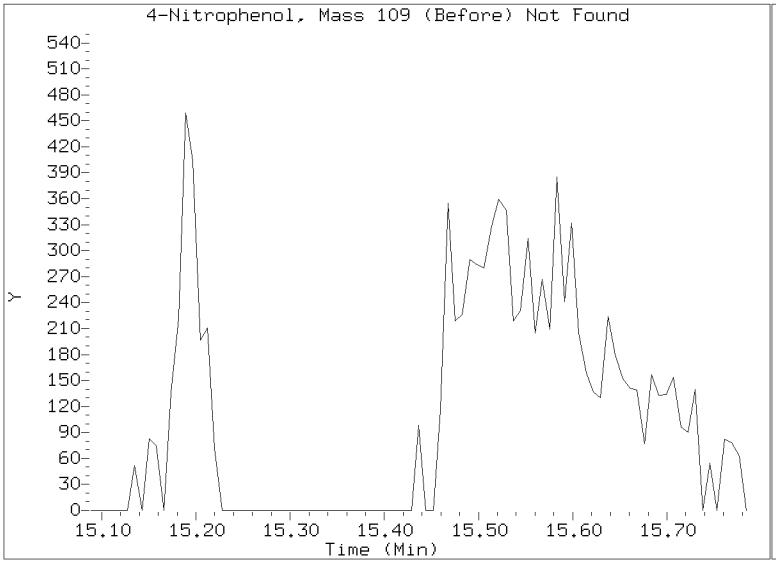
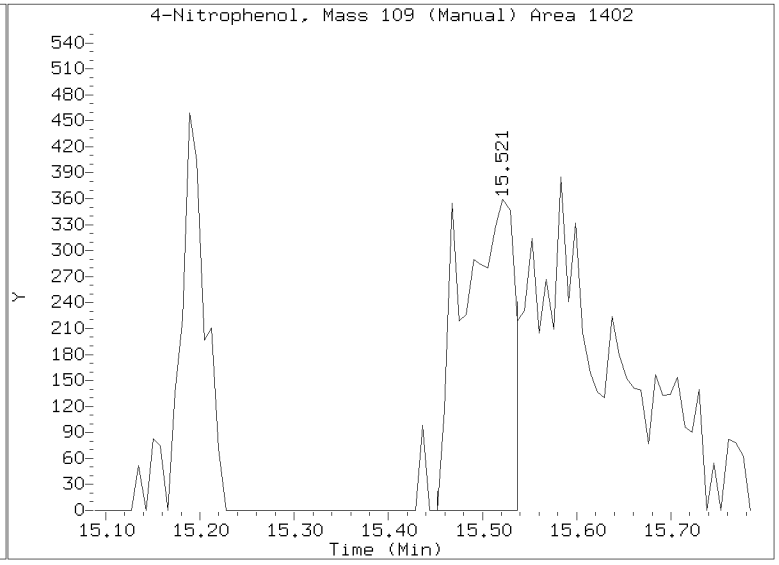
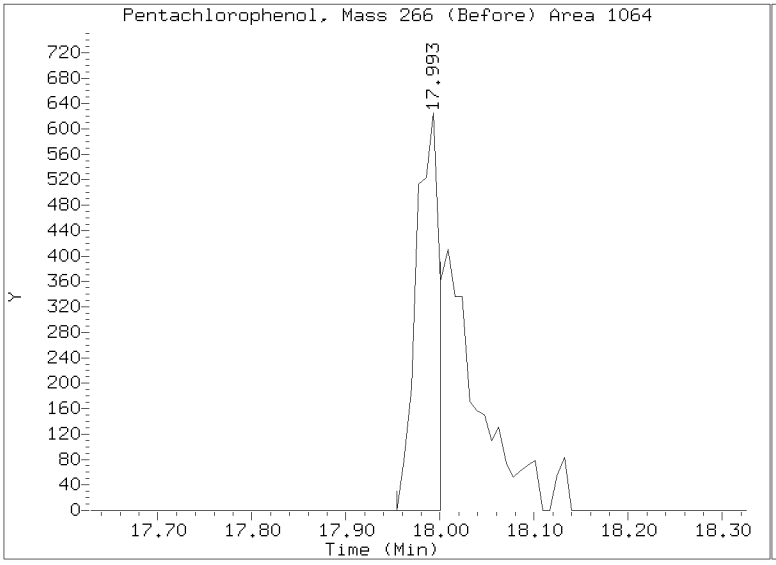
Lab ID:SLC0335-LCV2 Client ID:
Report Date: 03/22/2023 09:49

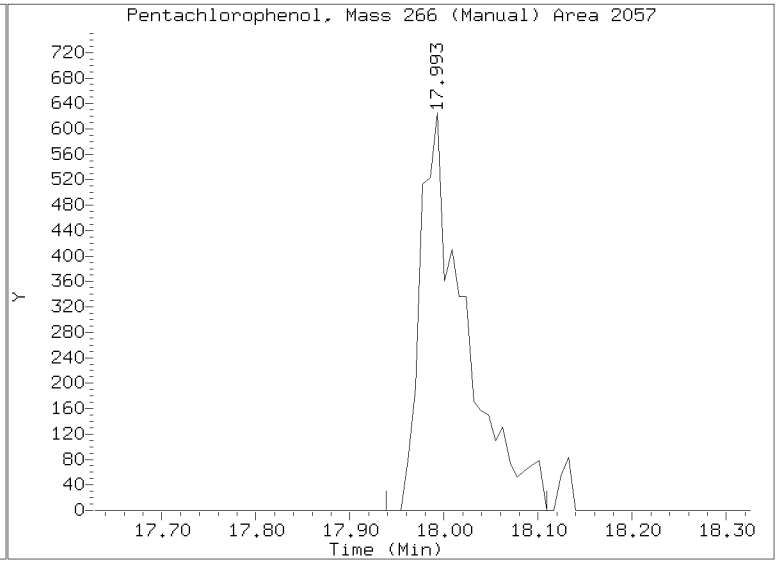












Quant Ion Manual Peak Adjustment Report

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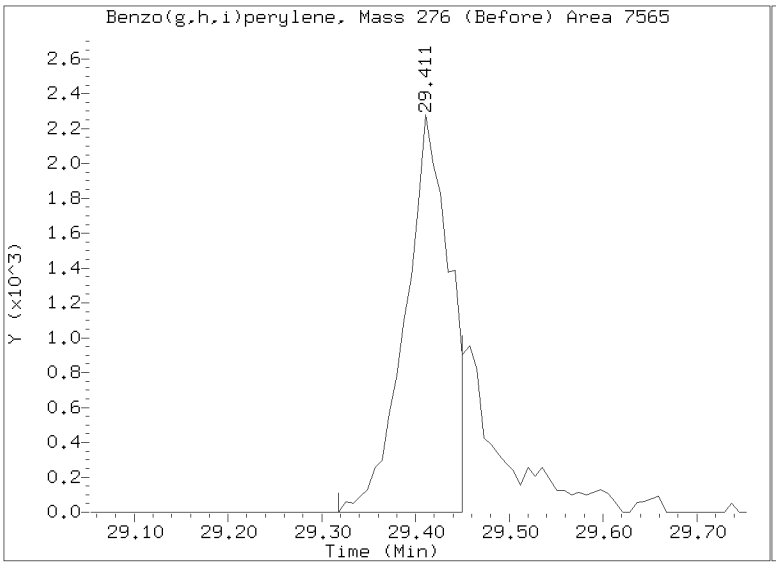
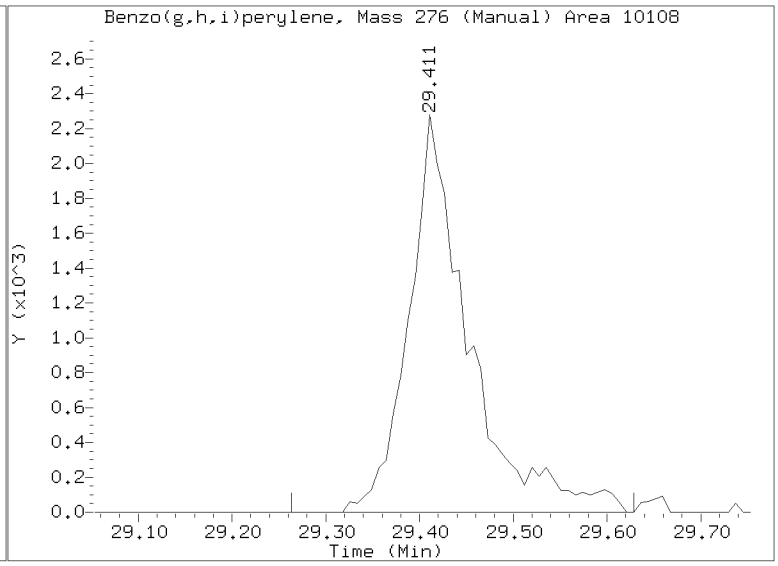
Injection Date: 18-MAR-2023 00:43
Lab ID:SLC0335-LCV2 Client ID:
Report Date: 03/22/2023 09:49





LOW-CONCENTRATION CALIBRATION VERIFICATION

EPA 8270E

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GC00048
Laboratory ID: SLC0355-LCV2
Sequence: SLC0355
Standard ID: K011105

ANALYTE	EXPECTED (ug/mL)	FOUND (ug/mL)	% DRIFT	QC LIMIT
Phenol	0.20000	0.2	-14.0	50.00
4-Methylphenol	0.20000	0.1	-25.2	50.00
Naphthalene	0.20000	0.2	6.8	50.00
2-Methylnaphthalene	0.20000	0.2	0.4	50.00
Acenaphthylene	0.20000	0.2	3.2	50.00
Dimethylphthalate	0.20000	0.2	4.0	50.00
Acenaphthene	0.20000	0.2	1.5	50.00
Dibenzofuran	0.20000	0.2	2.0	50.00
Fluorene	0.20000	0.2	1.5	50.00
Phenanthrene	0.20000	0.2	-0.5	50.00
Anthracene	0.20000	0.2	-6.4	50.00
Fluoranthene	0.20000	0.2	23.0	50.00
Pyrene	0.20000	0.2	20.5	50.00
Butylbenzylphthalate	0.20000	0.3	31.3	50.00
Benzo(a)anthracene	0.20000	0.2	7.6	50.00
Chrysene	0.20000	0.2	3.5	50.00
bis(2-Ethylhexyl)phthalate	0.20000	0.2	14.2	50.00
Benzofluoranthenes, Total	0.40000	0.4	-3.8	50.00
Benzo(a)pyrene	0.20000	0.2	-0.7	50.00
Indeno(1,2,3-cd)pyrene	0.20000	0.2	-11.3	50.00
Dibenzo(a,h)anthracene	0.20000	0.2	-3.8	50.00
Benzo(g,h,i)perylene	0.20000	0.2	-21.8	50.00
2-Fluorophenol	0.30000	0.276	-8.0	50.00
Phenol-d5	0.30000	0.264	-12.2	50.00
2-Chlorophenol-d4	0.30000	0.279	-6.9	50.00
1,2-Dichlorobenzene-d4	0.20000	0.210	5.0	50.00
Nitrobenzene-d5	0.20000	0.200	-0.2	50.00
2-Fluorobiphenyl	0.20000	0.212	6.1	50.00
2,4,6-Tribromophenol	0.30000	0.238	-20.6	50.00

Analytical Resources, LLC
Analytical Chemists and Consultants

LOW-CONCENTRATION CALIBRATION VERIFICATION
EPA 8270E

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GC00048
Laboratory ID: SLC0355-LCV2
Sequence: SLC0355
Standard ID: K011105

p-Terphenyl-d14	0.20000	0.247	23.7	50.00

* Values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20230318.b\NT1403182320.D

Page 1

Date : 19-MAR-2023 04:28

Client ID:

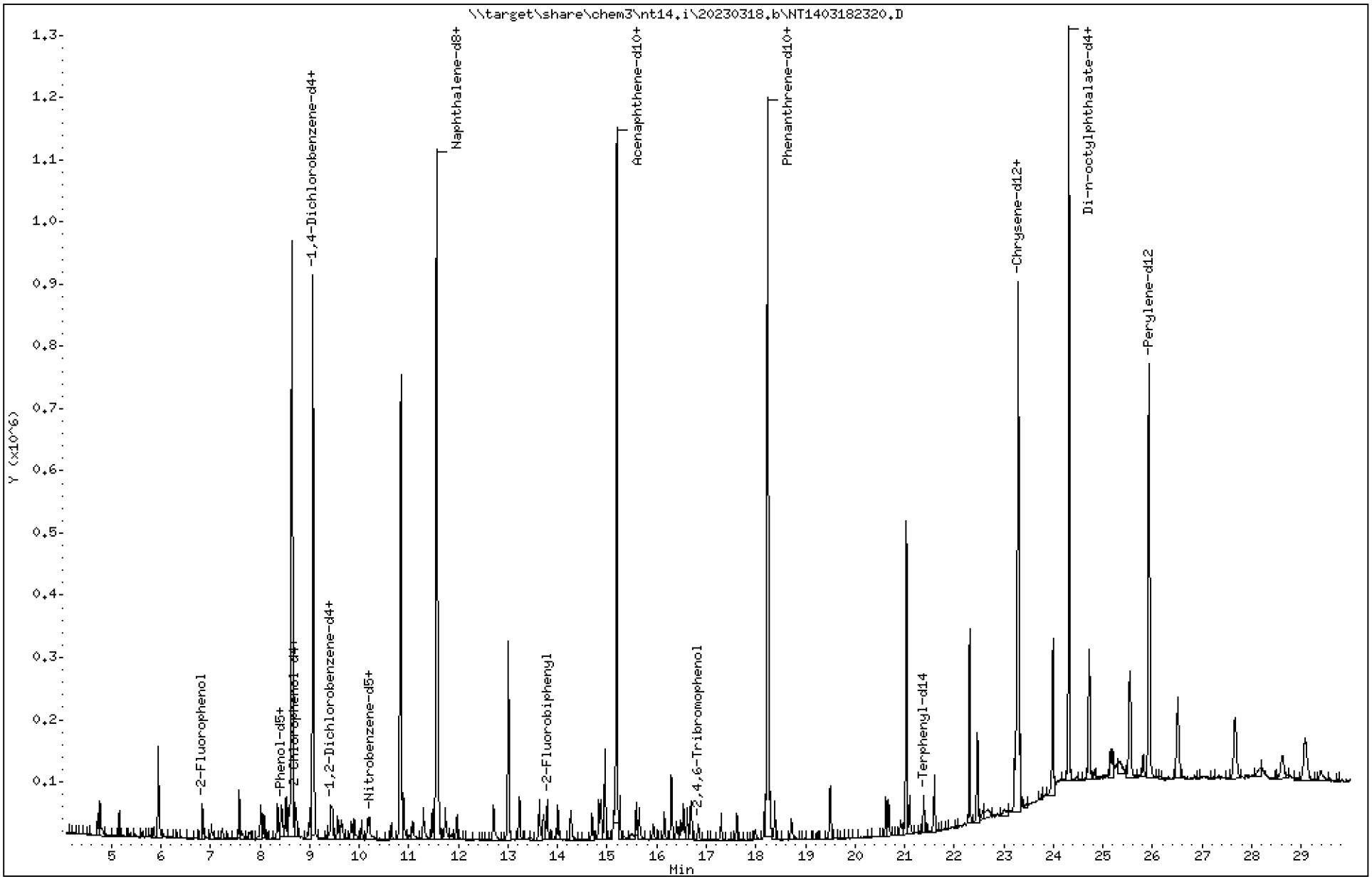
Instrument: nt14.i

Sample Info: SLC0355-LCV2

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

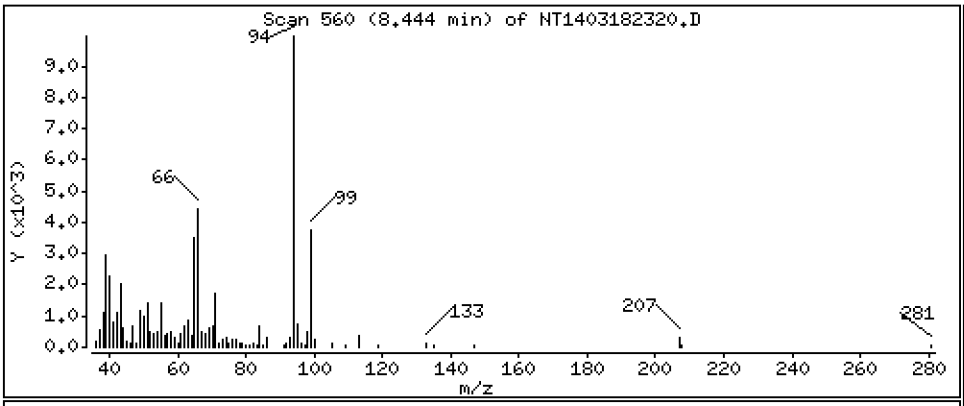
Operator: JGR

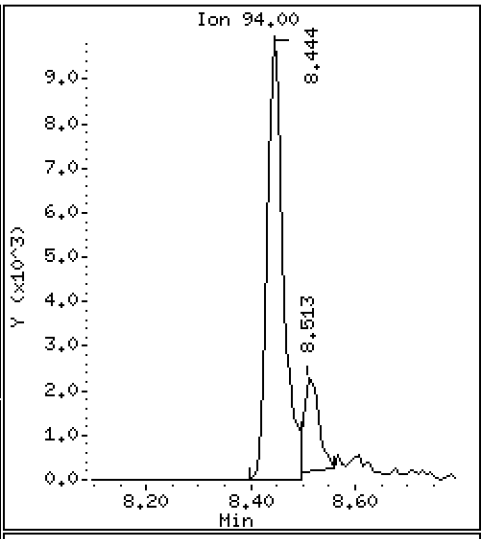
Column phase: ZB-5msi

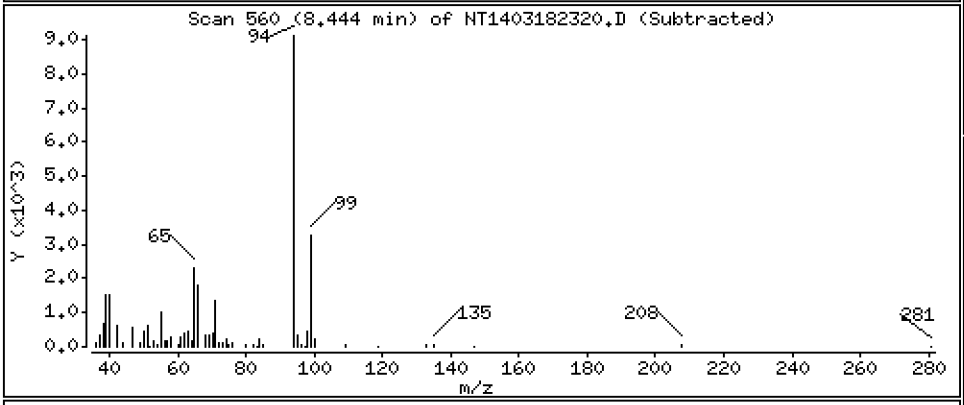
Column diameter: 0.25

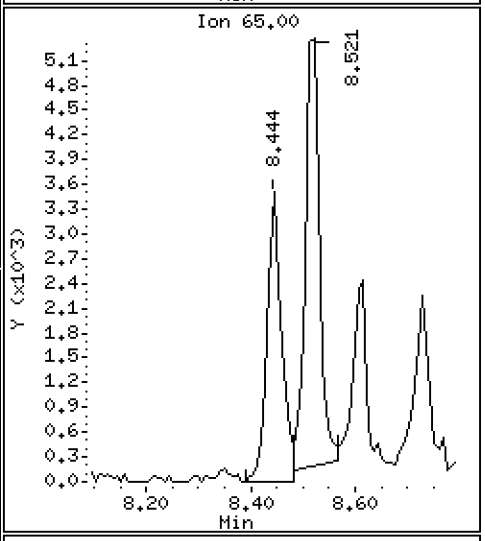
3 Phenol

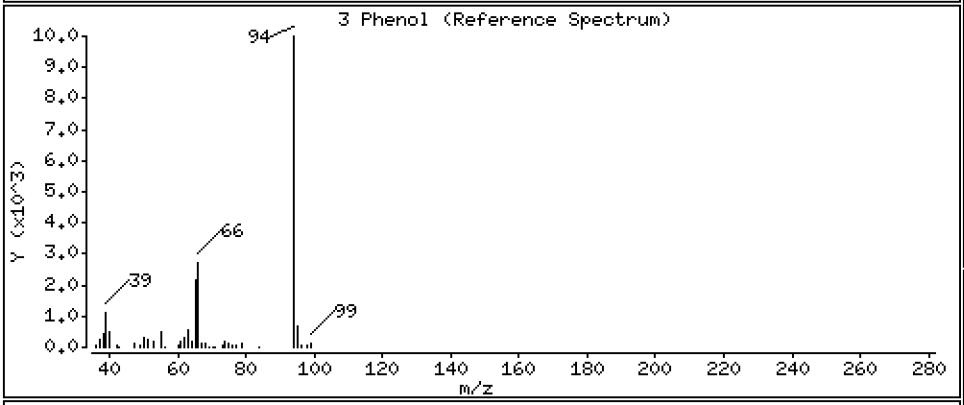
Concentration: 0.1720 ug/mL

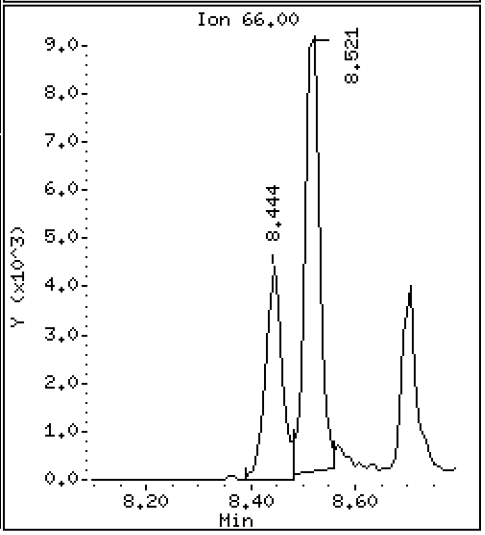


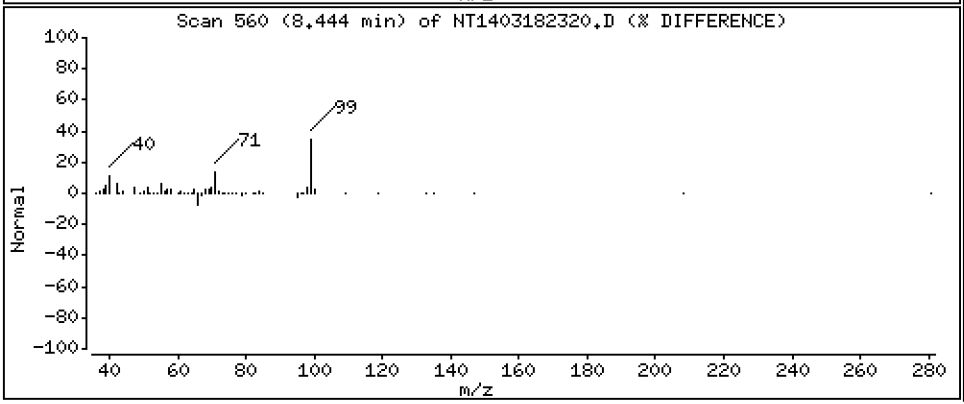












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

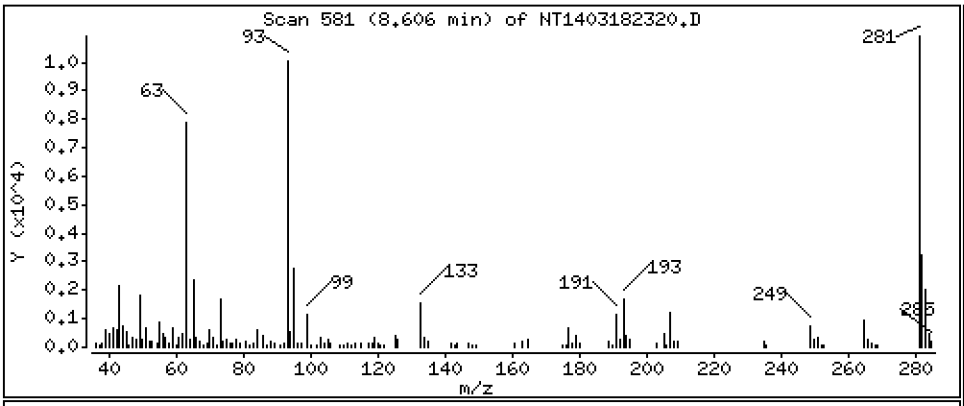
Operator: JGR

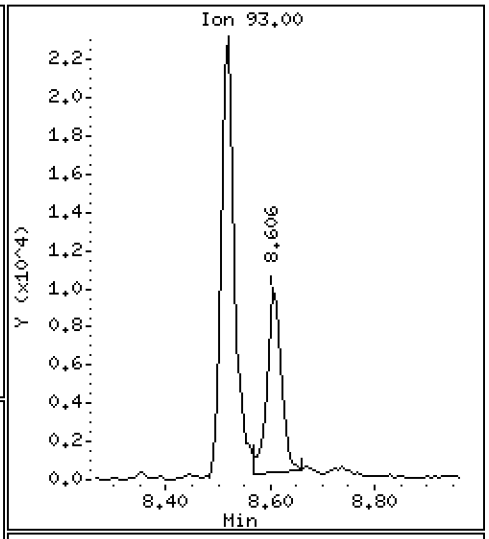
Column phase: ZB-5msi

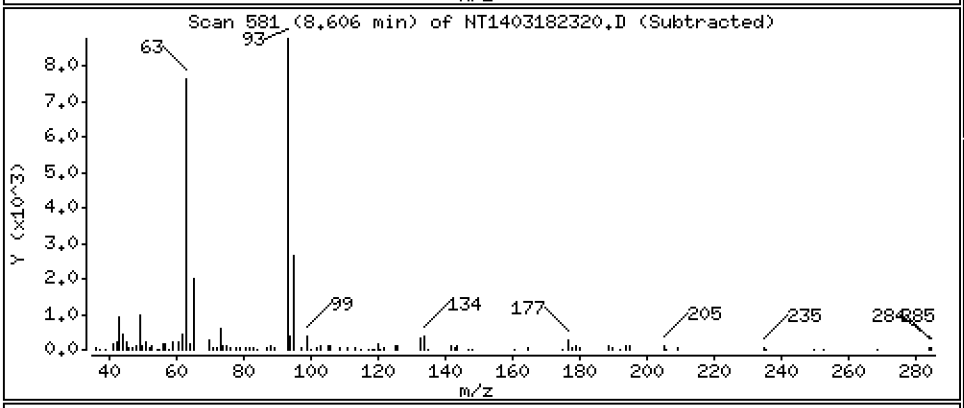
Column diameter: 0.25

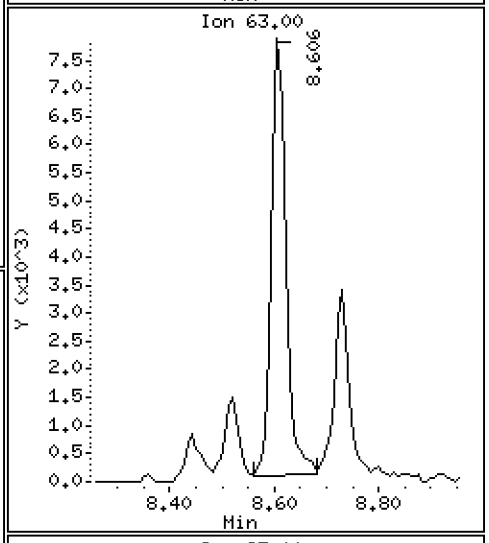
4 Bis(2-Chloroethyl)ether

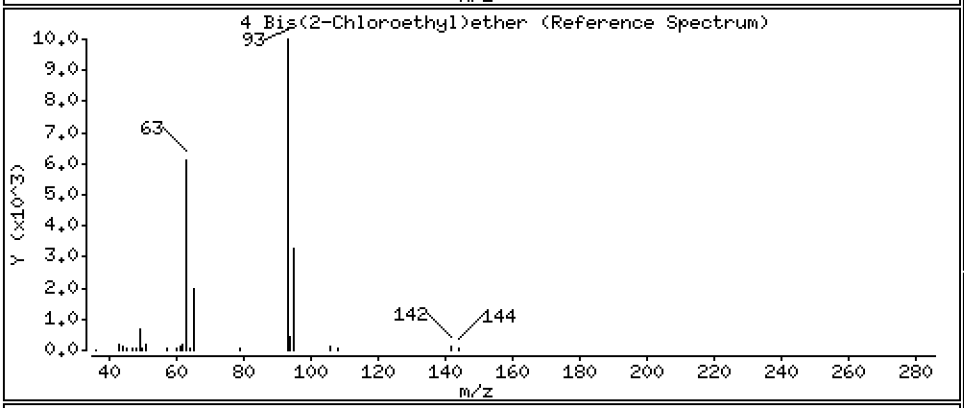
Concentration: 0.2035 ug/mL

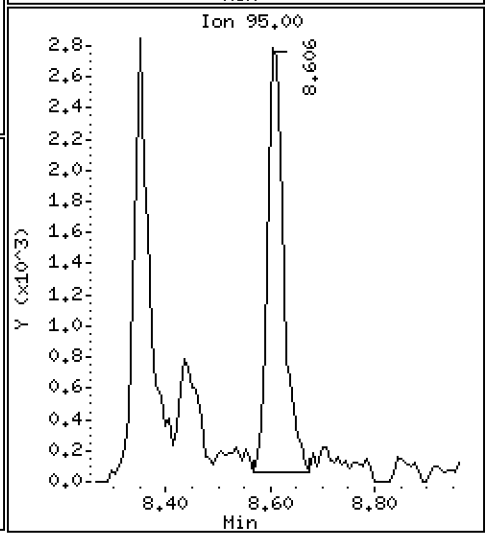


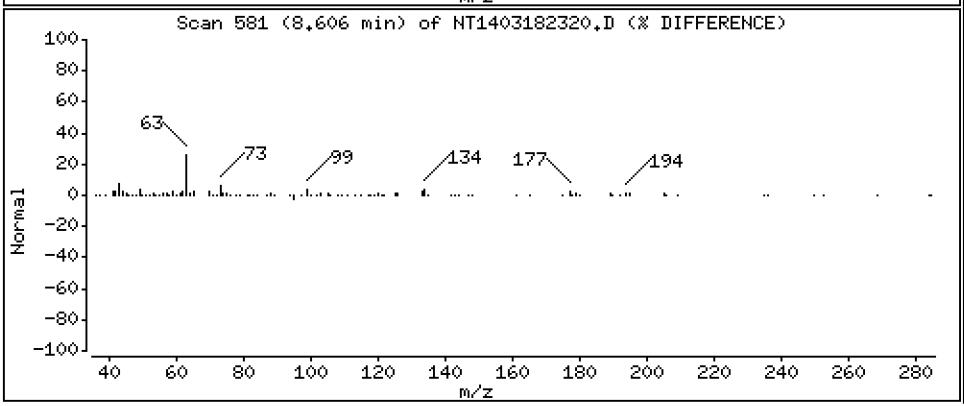












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

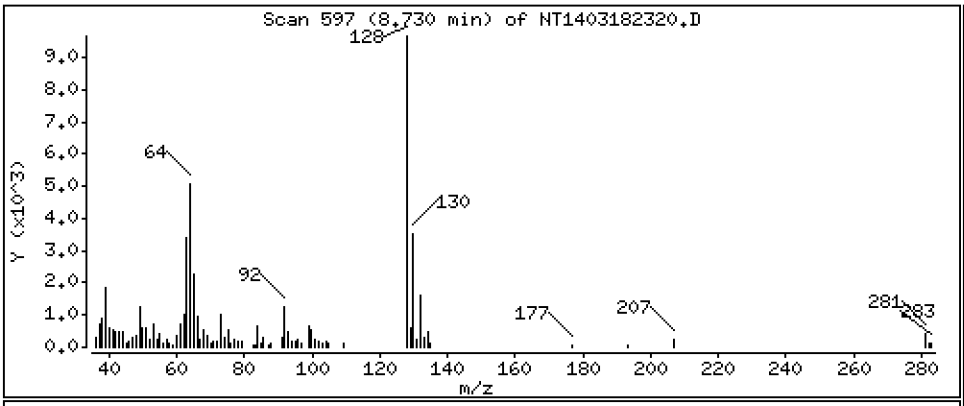
Operator: JGR

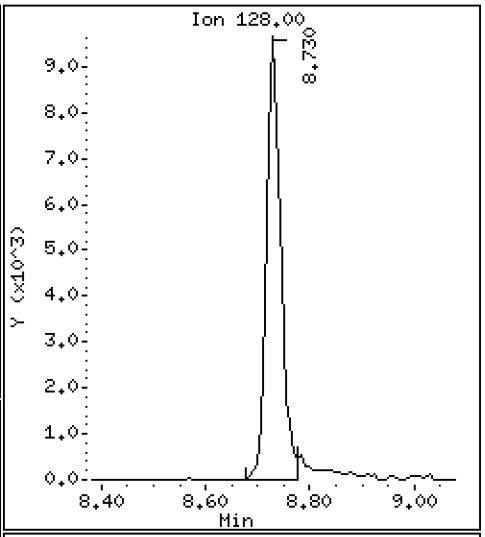
Column phase: ZB-5msi

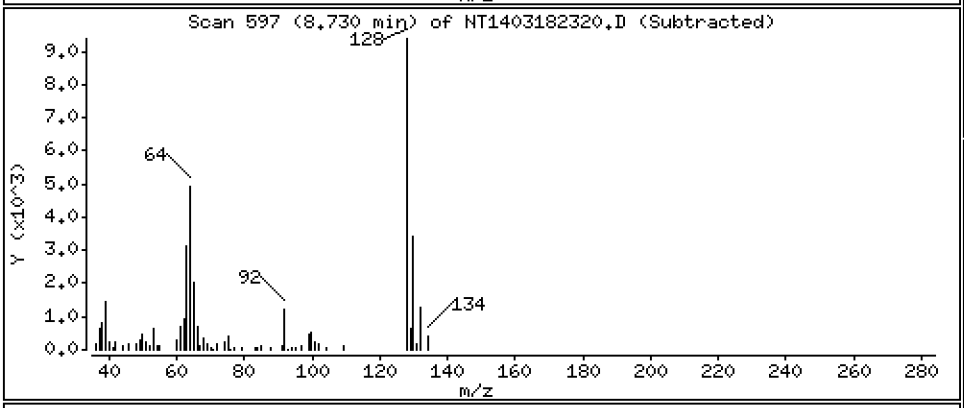
Column diameter: 0.25

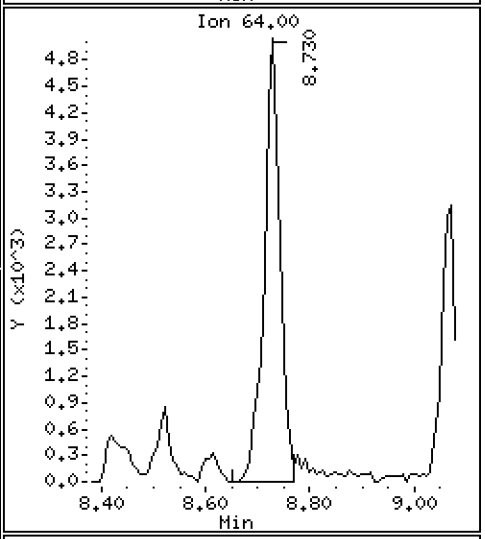
6 2-Chlorophenol

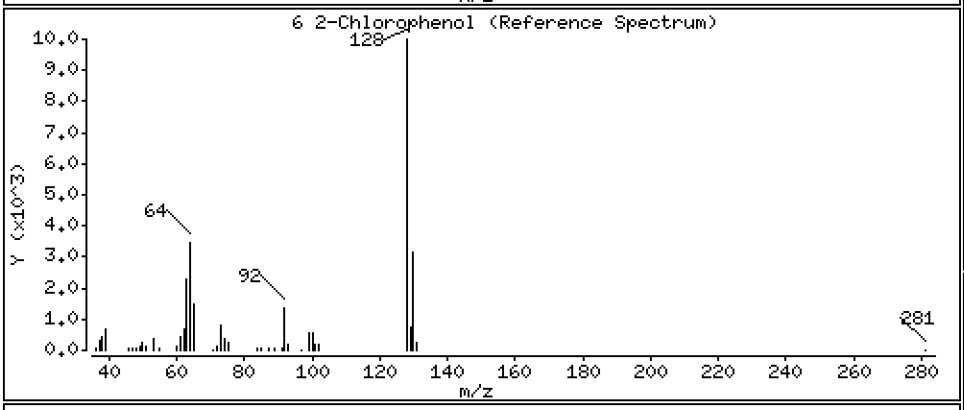
Concentration: 0.1894 ug/mL

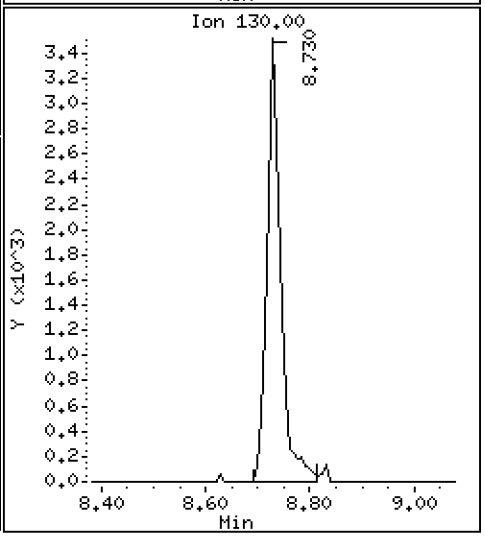


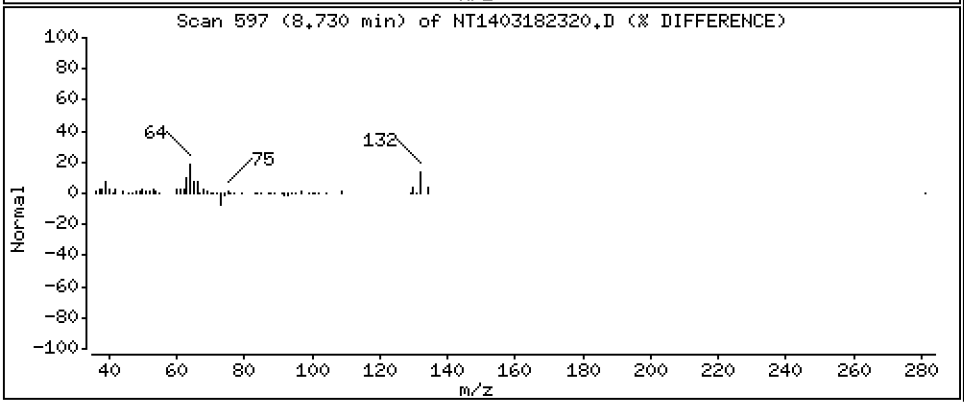












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

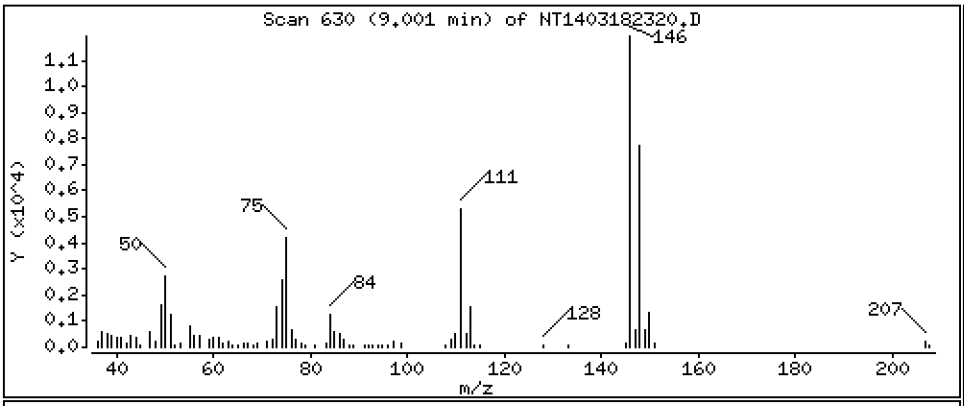
Operator: JGR

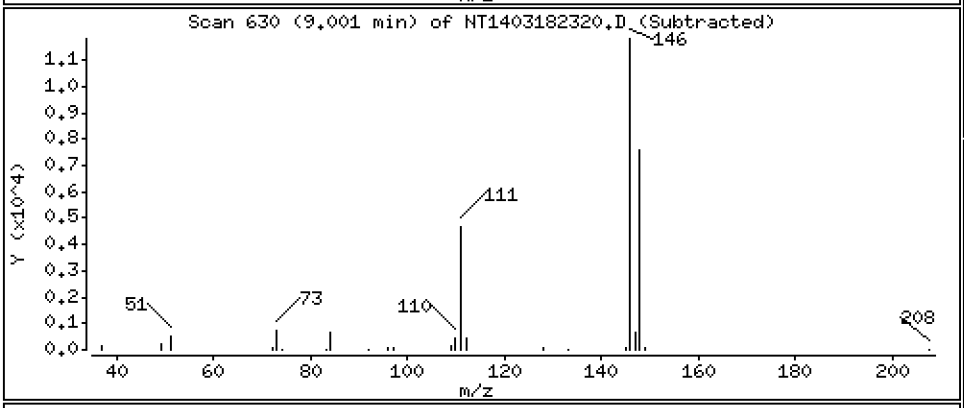
Column phase: ZB-5msi

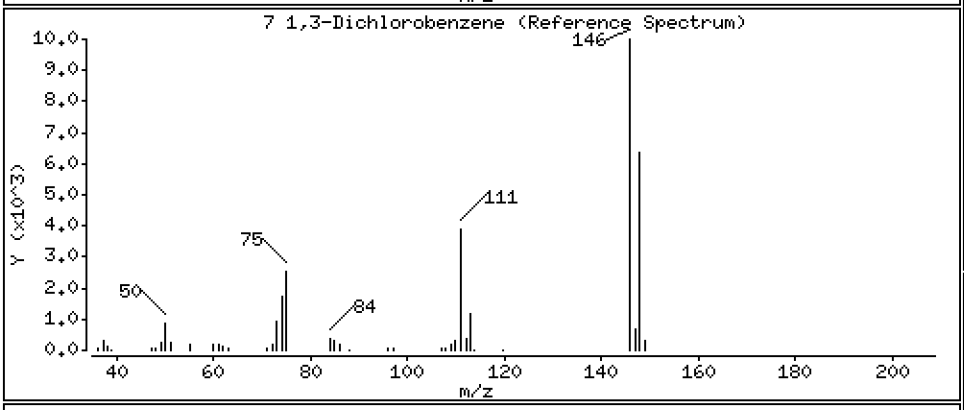
Column diameter: 0.25

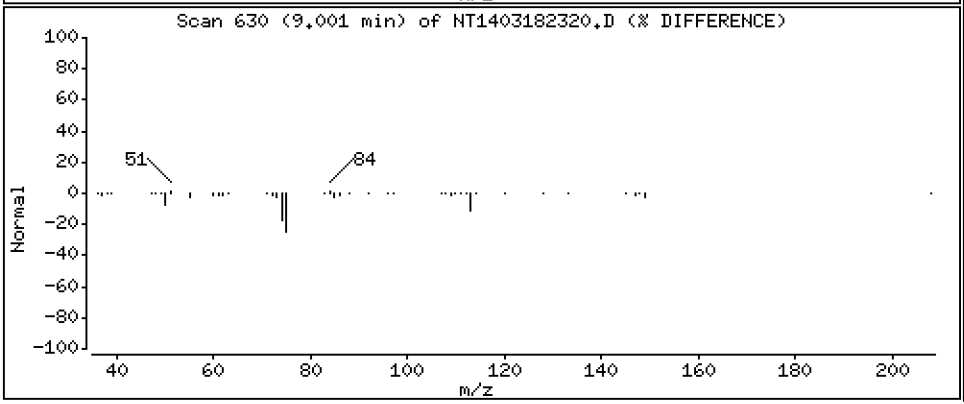
7 1,3-Dichlorobenzene

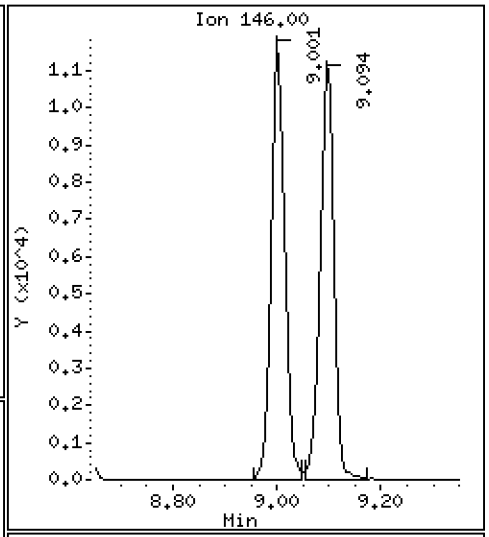
Concentration: 0.2138 ug/mL

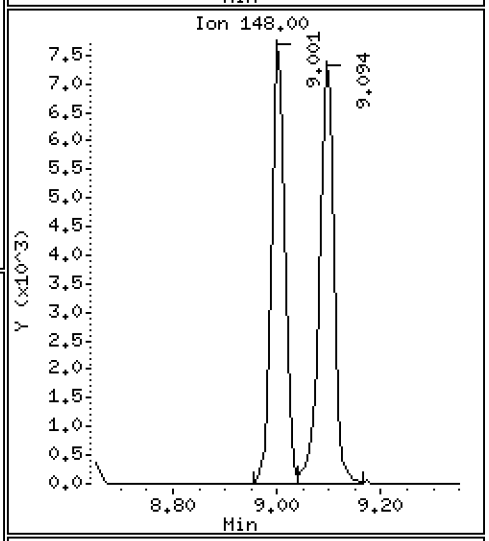


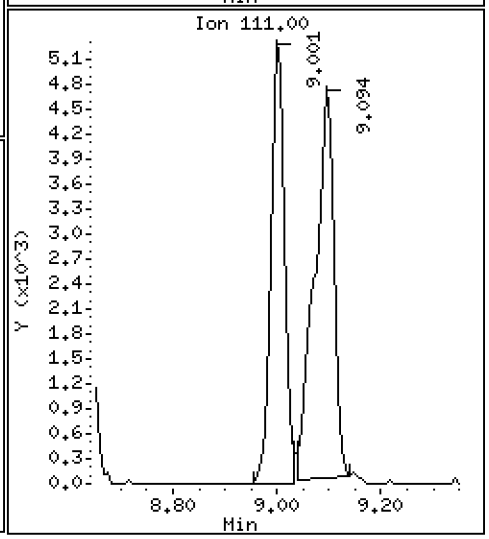












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

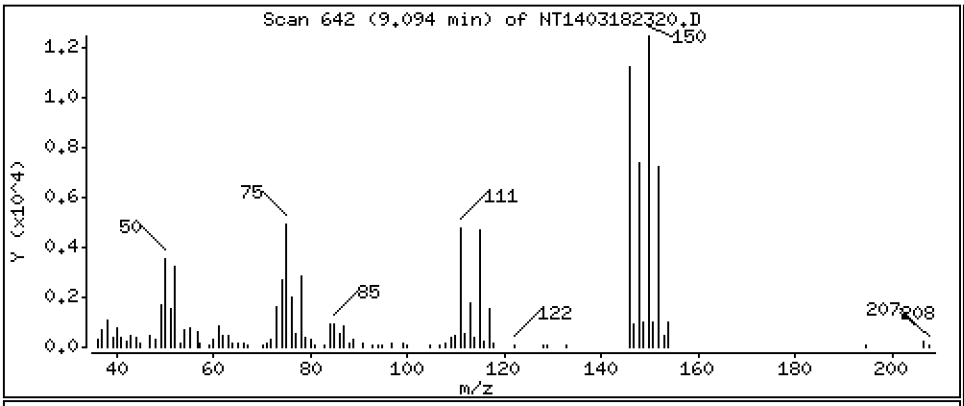
Operator: JGR

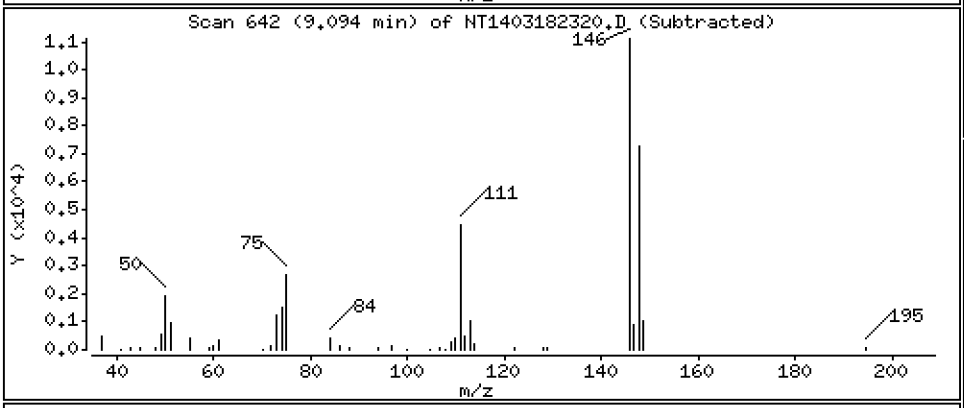
Column phase: ZB-5msi

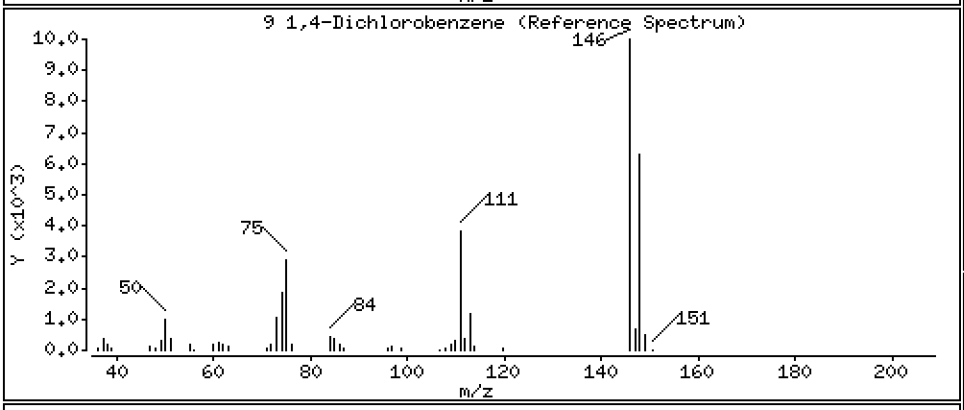
Column diameter: 0.25

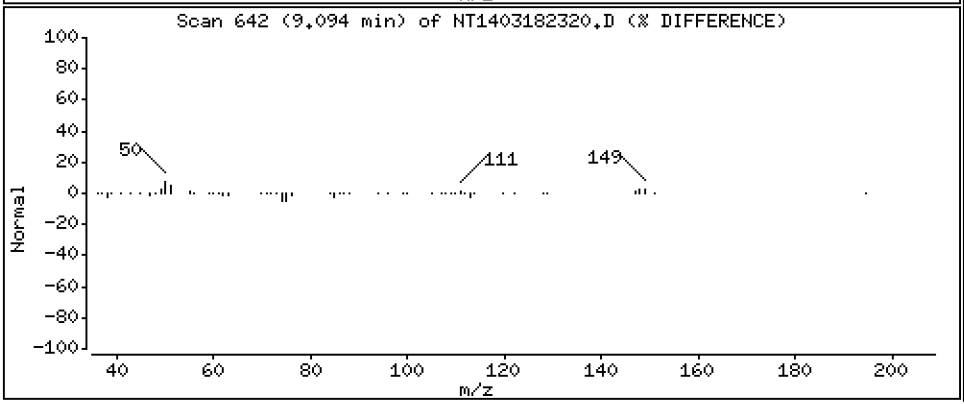
9 1,4-Dichlorobenzene

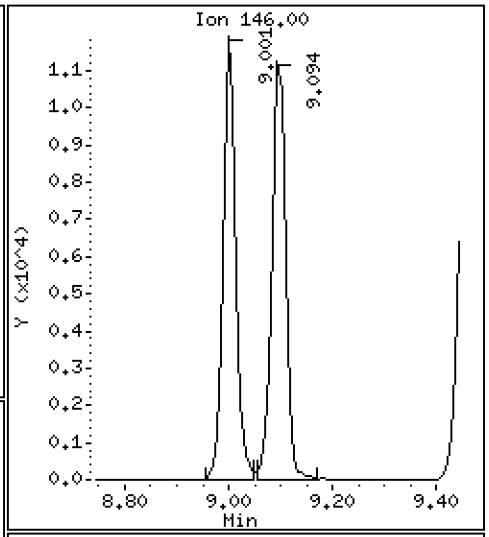
Concentration: 0.2120 ug/mL

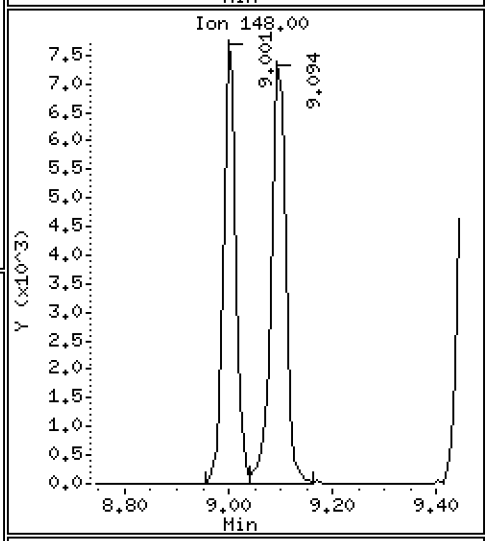


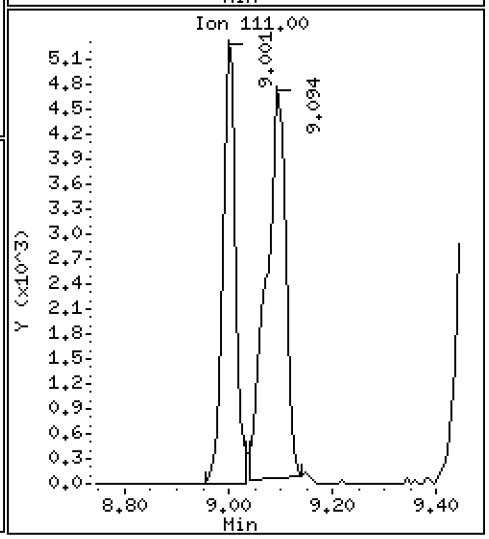












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

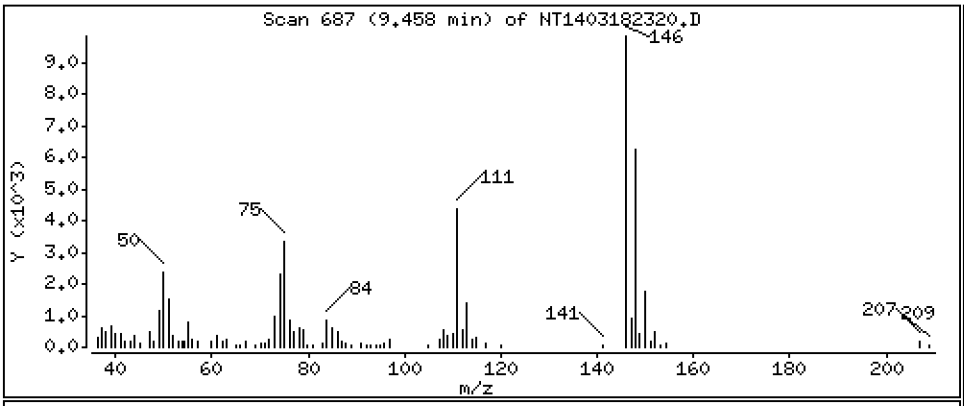
Operator: JGR

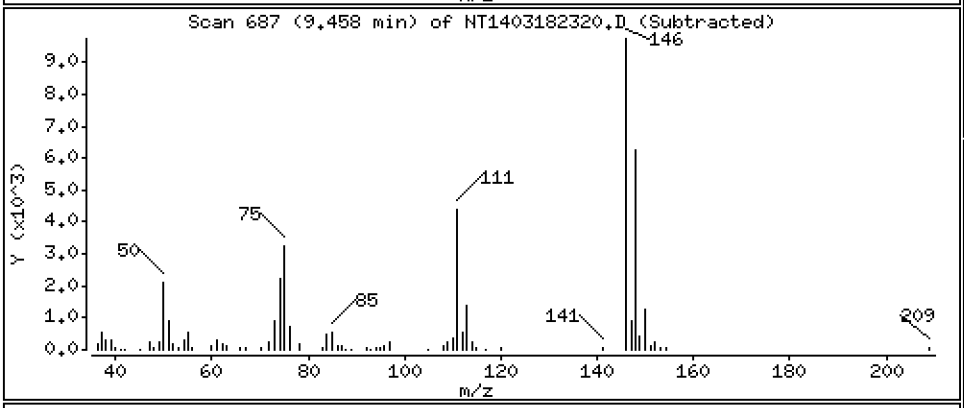
Column phase: ZB-5msi

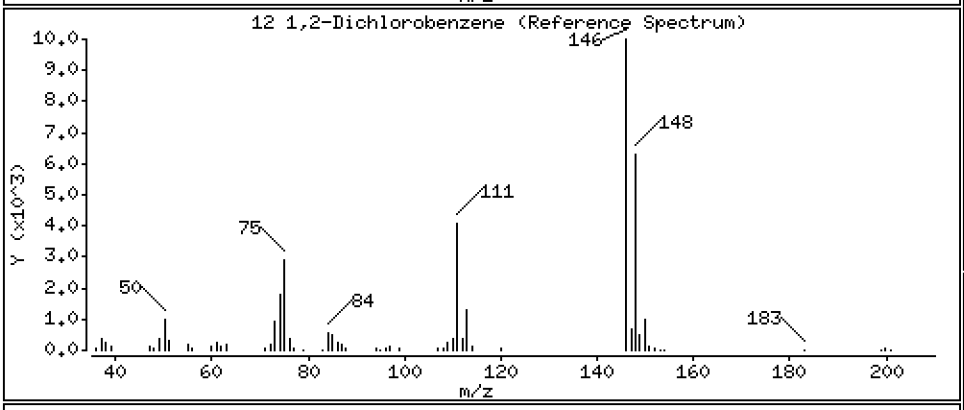
Column diameter: 0.25

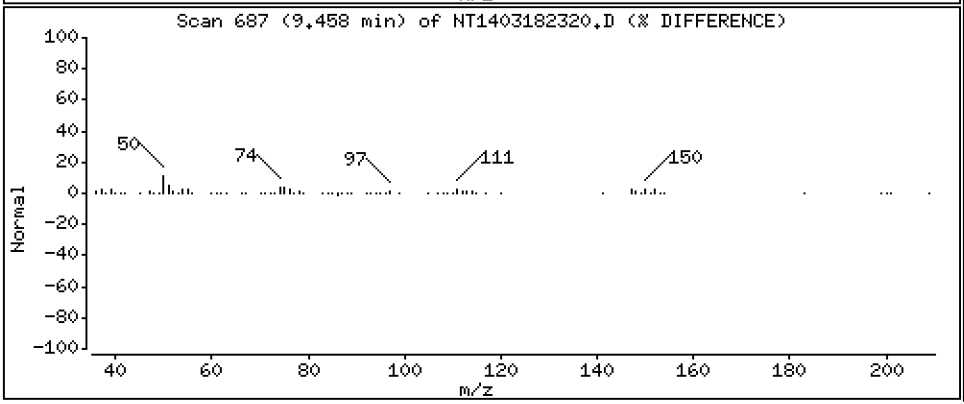
12 1,2-Dichlorobenzene

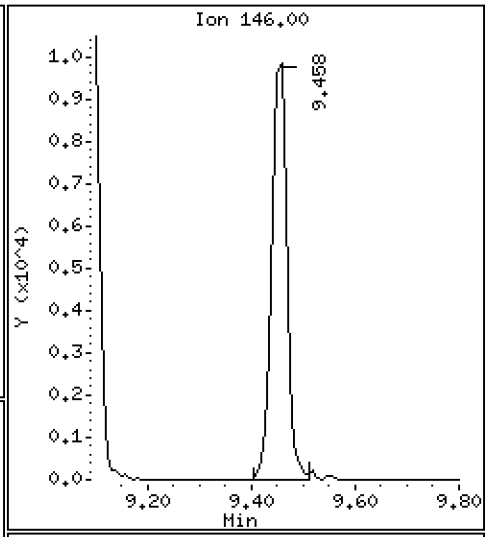
Concentration: 0.2105 ug/mL

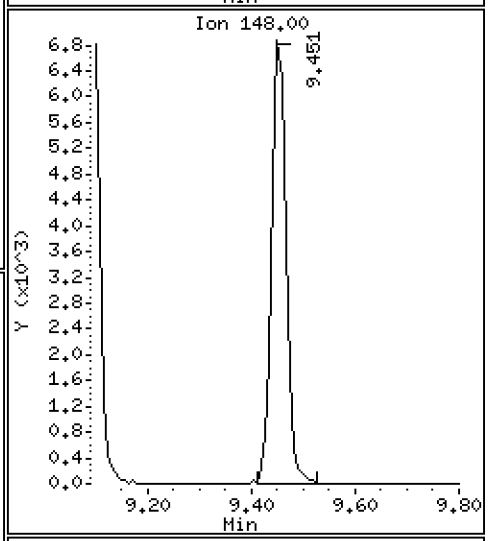


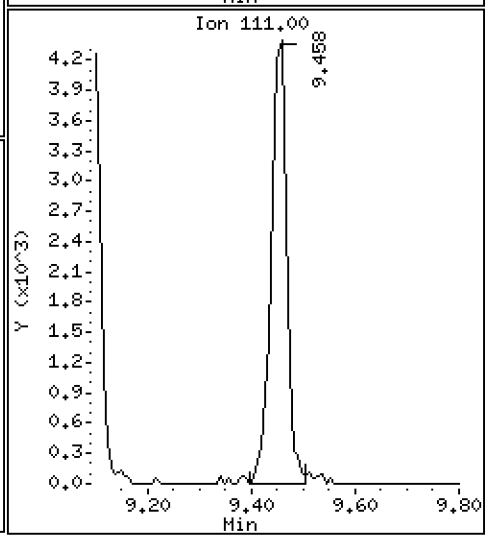












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

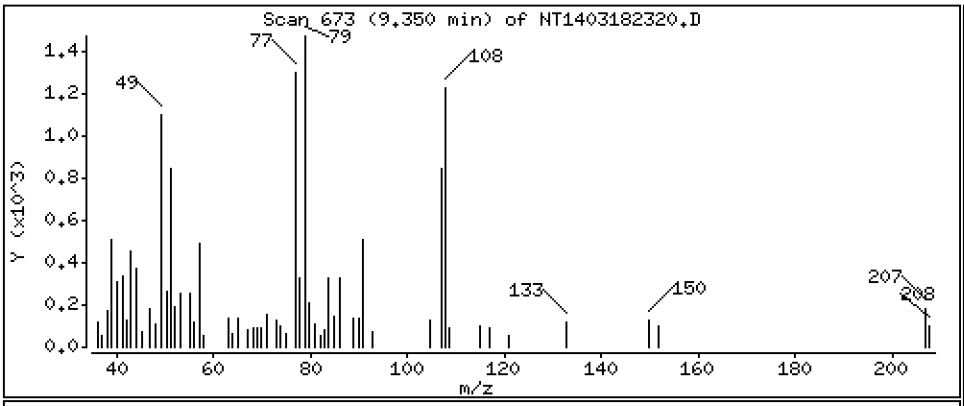
Operator: JGR

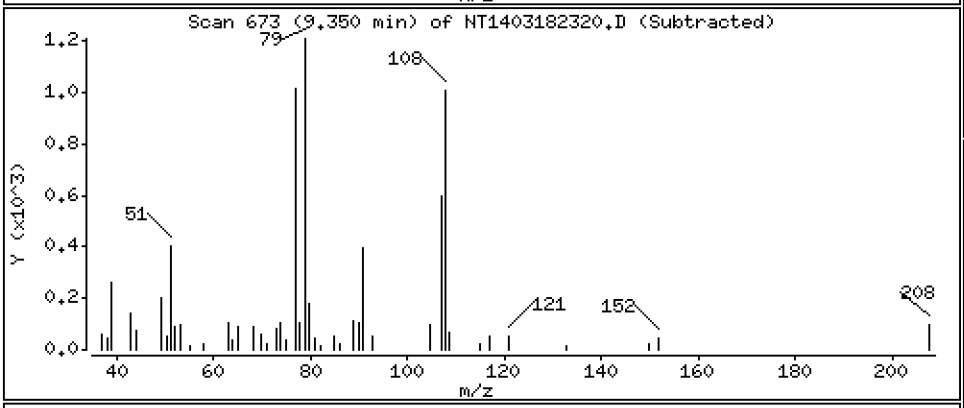
Column phase: ZB-5msi

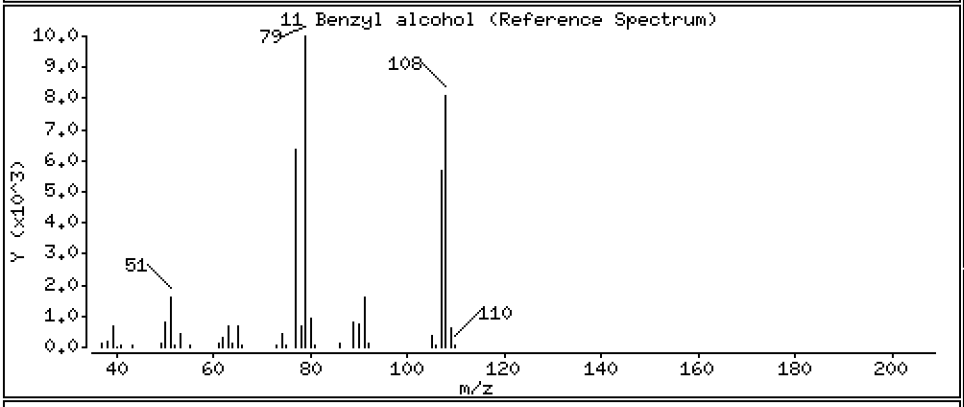
Column diameter: 0.25

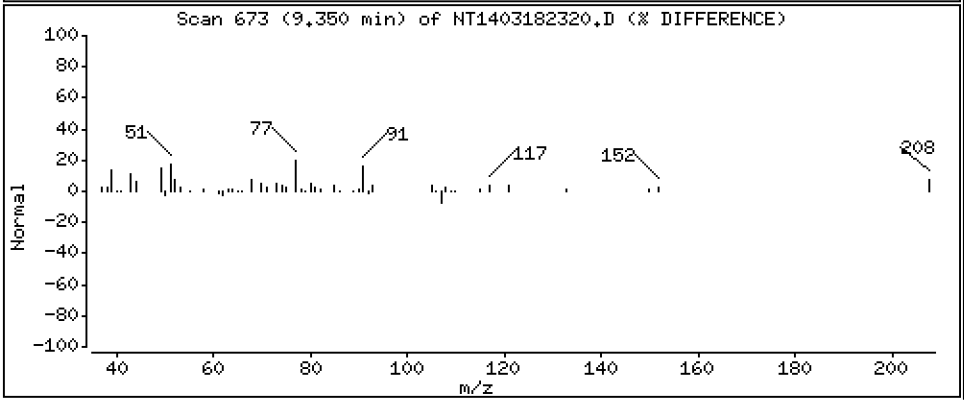
11 Benzyl alcohol

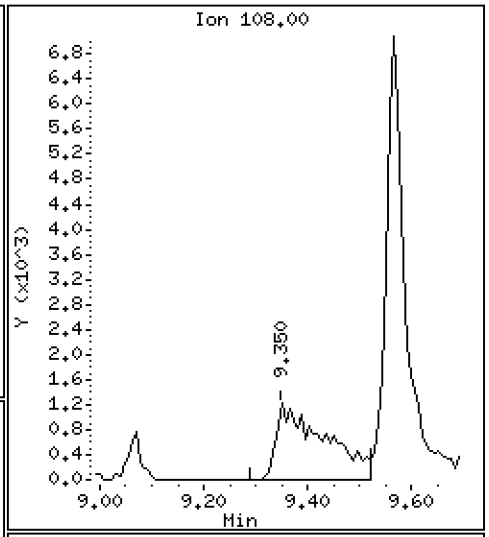
Concentration: 0.1385 ug/mL

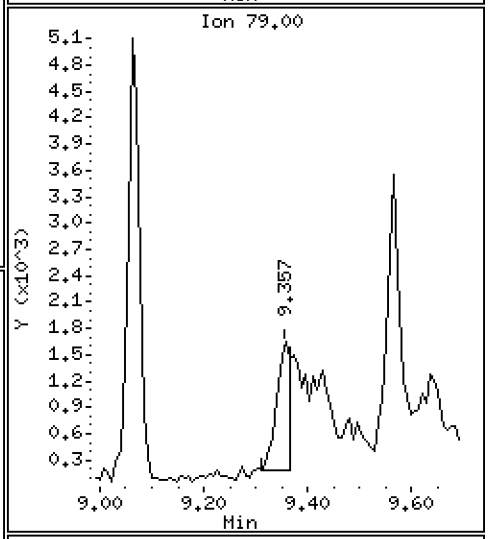


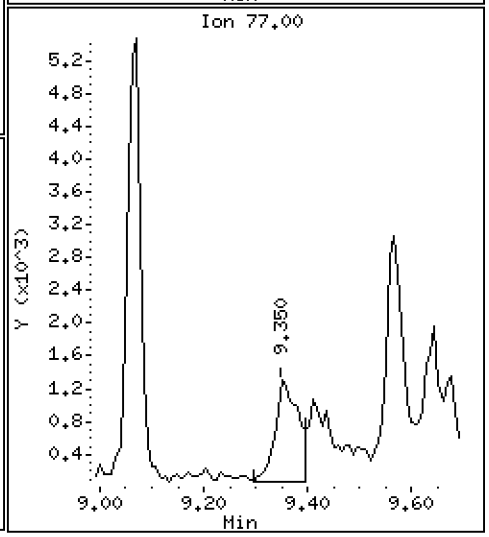












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

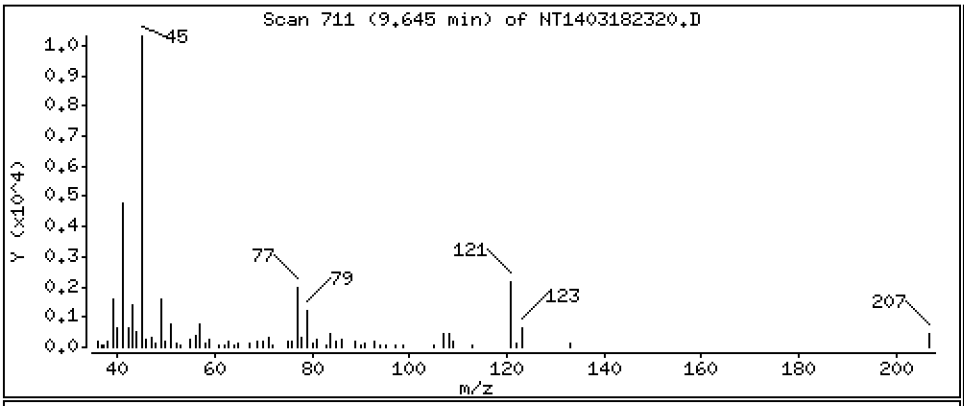
Operator: JGR

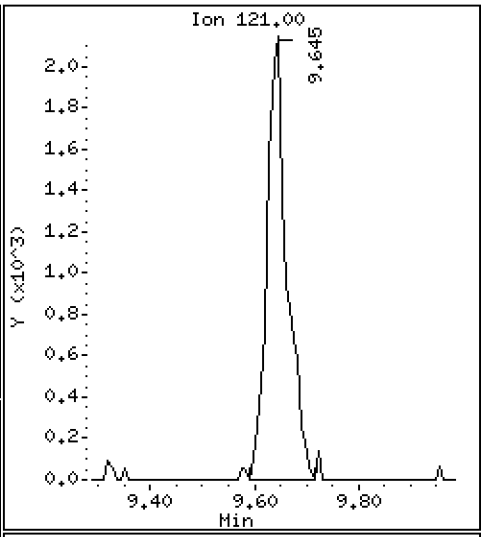
Column phase: ZB-5msi

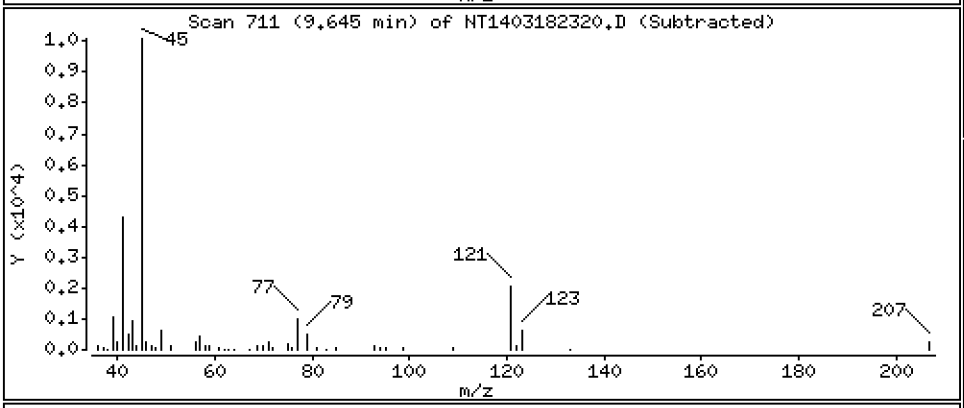
Column diameter: 0.25

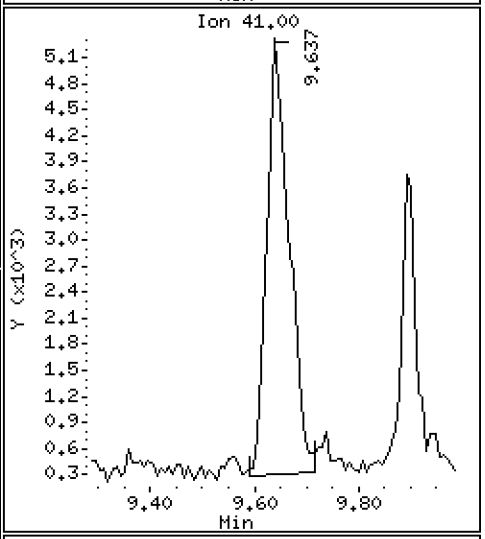
14 2,2'-oxybis(1-Chloropropane)

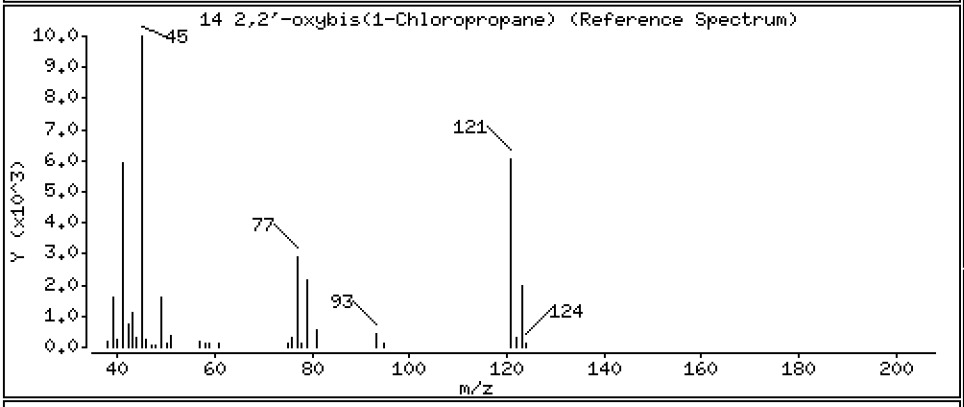
Concentration: 0.2283 ug/mL

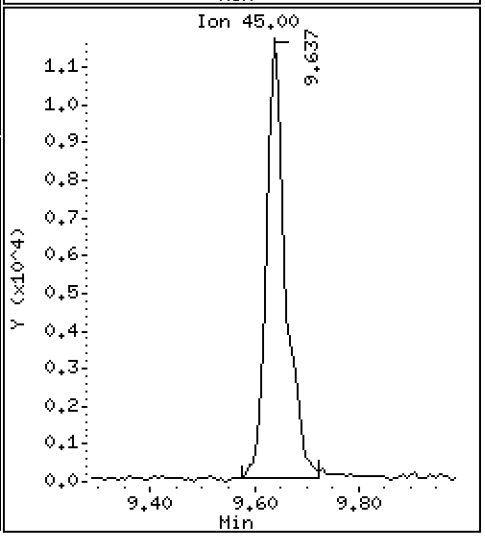


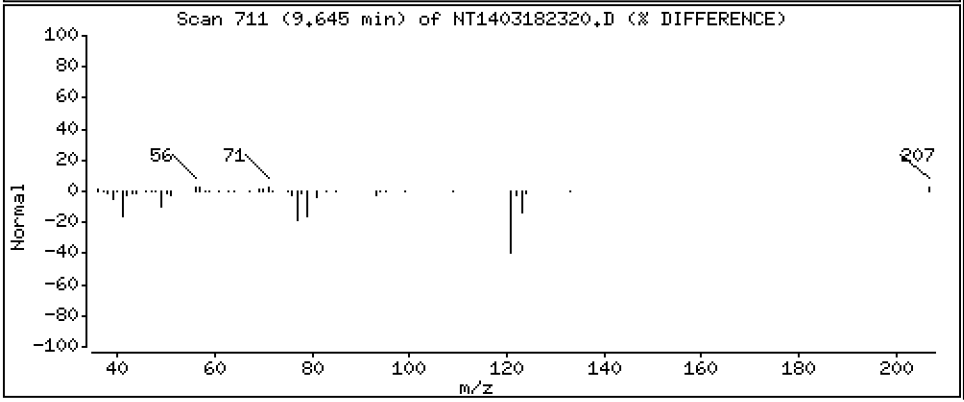












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

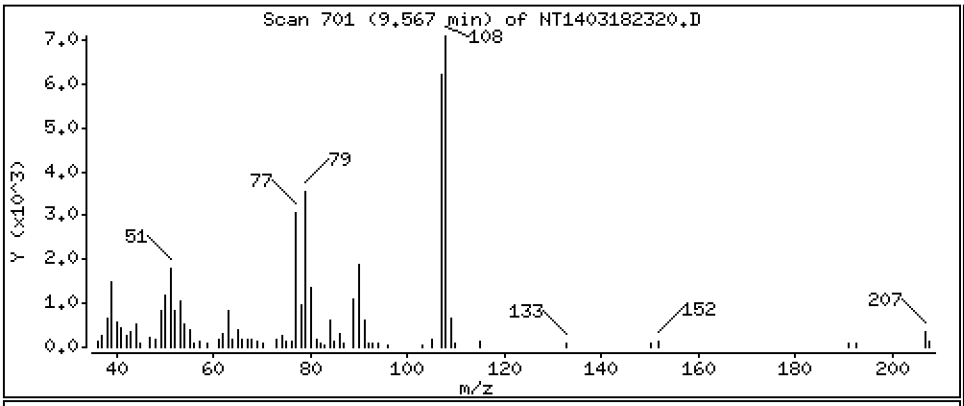
Operator: JGR

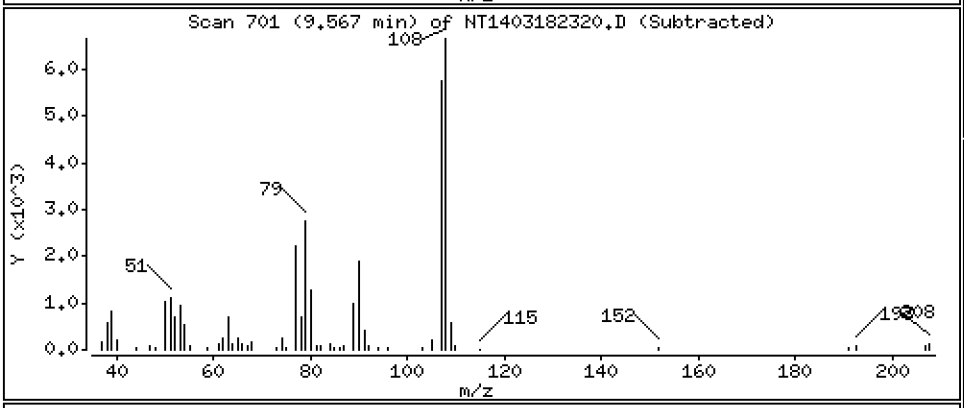
Column phase: ZB-5msi

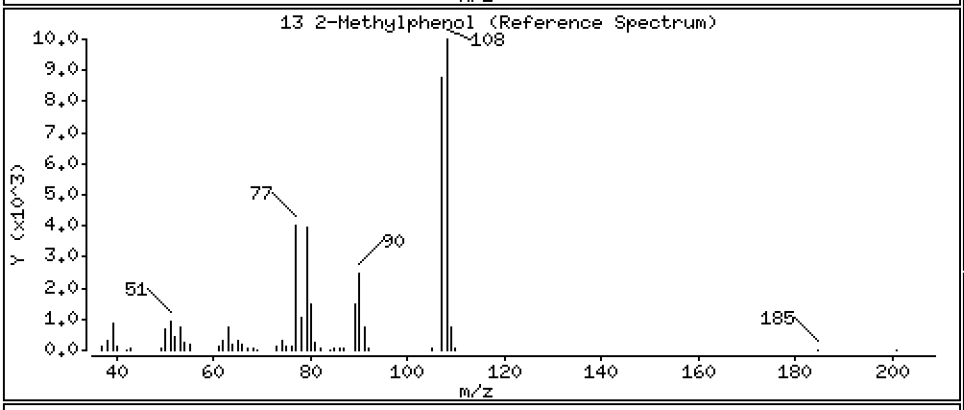
Column diameter: 0.25

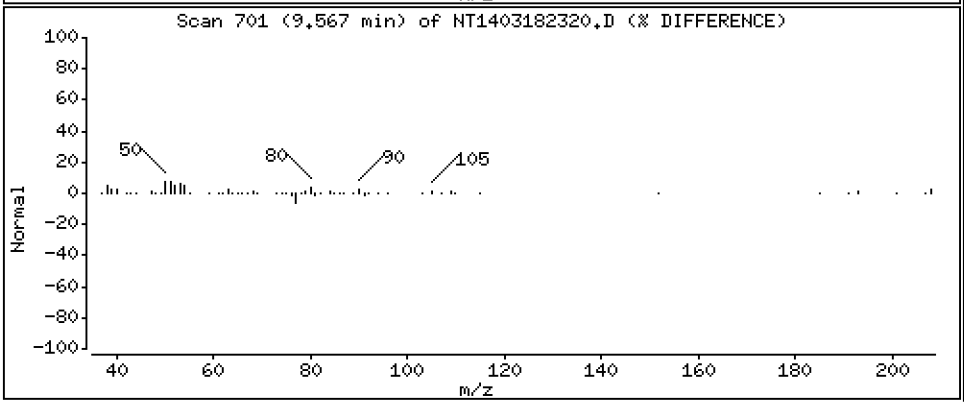
13 2-Methylphenol

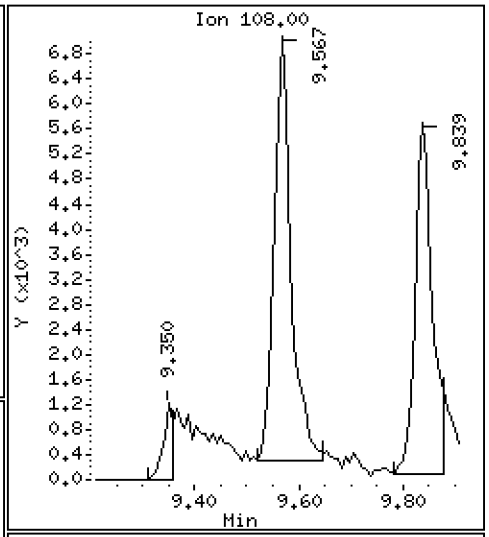
Concentration: 0.1763 ug/mL

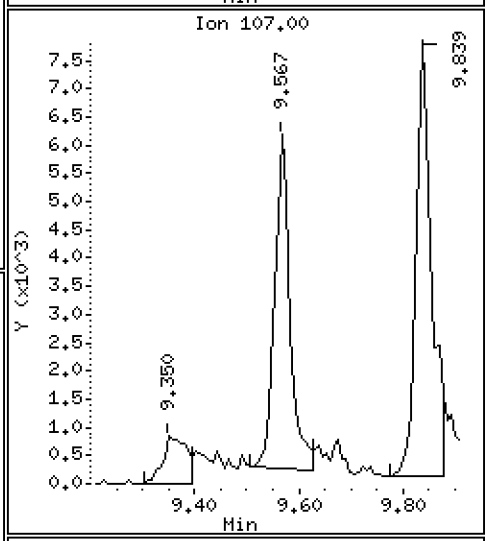


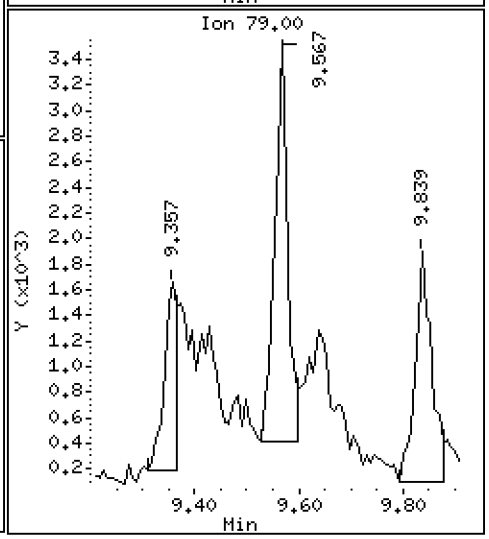












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

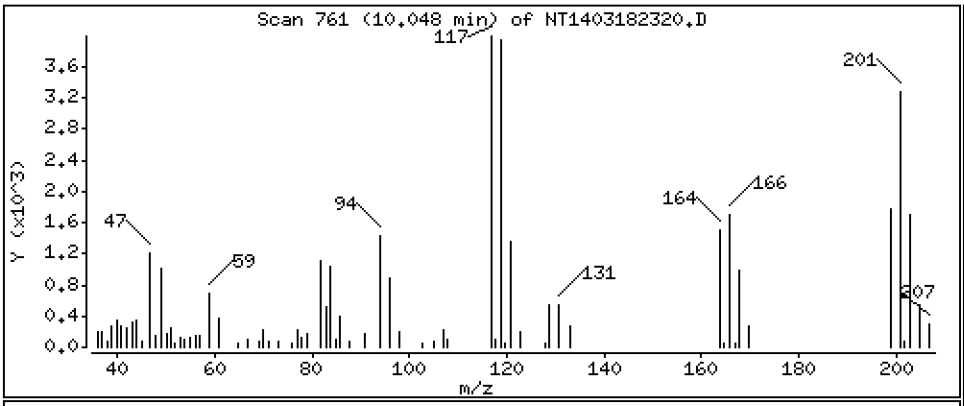
Operator: JGR

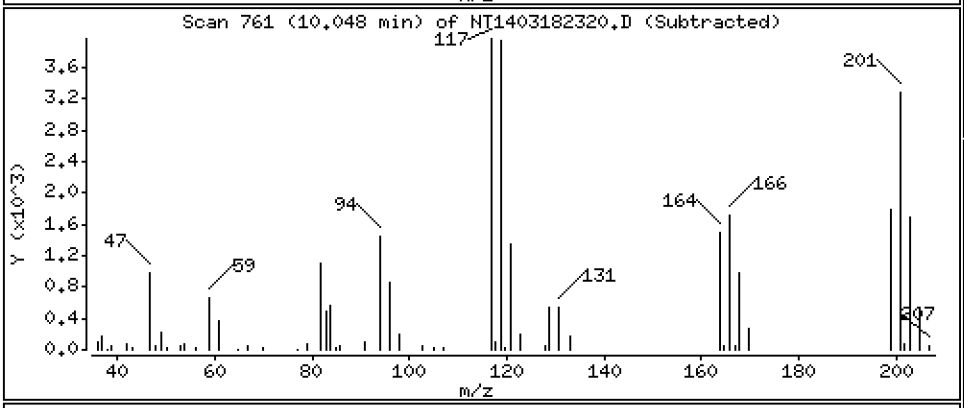
Column phase: ZB-5msi

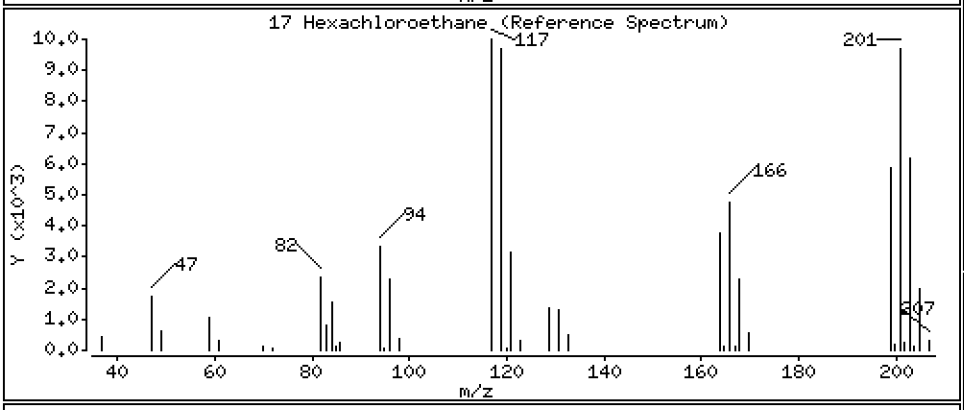
Column diameter: 0.25

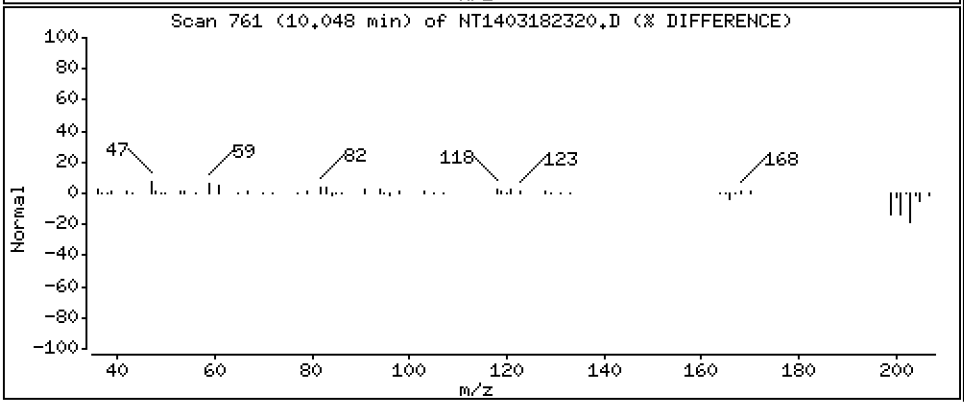
17 Hexachloroethane

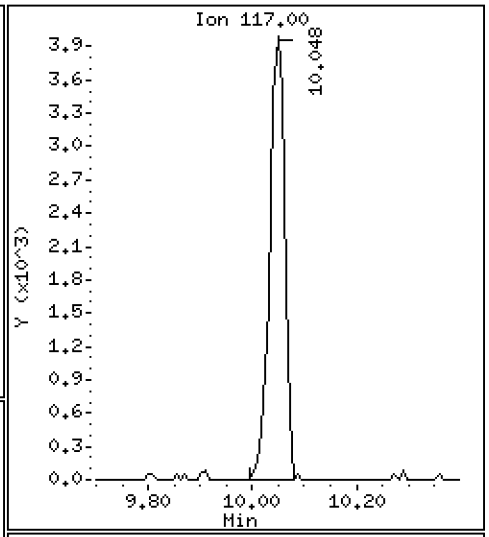
Concentration: 0.1935 ug/mL

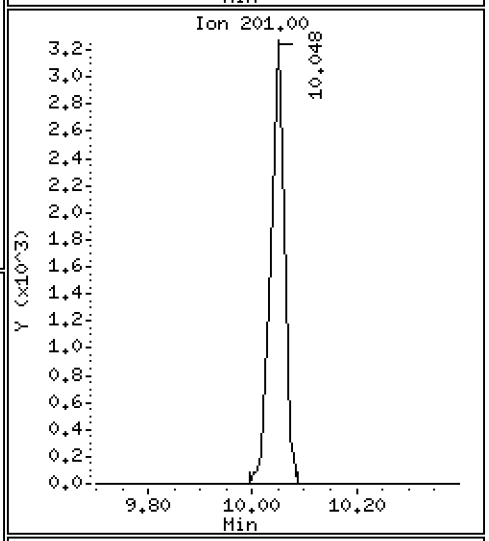


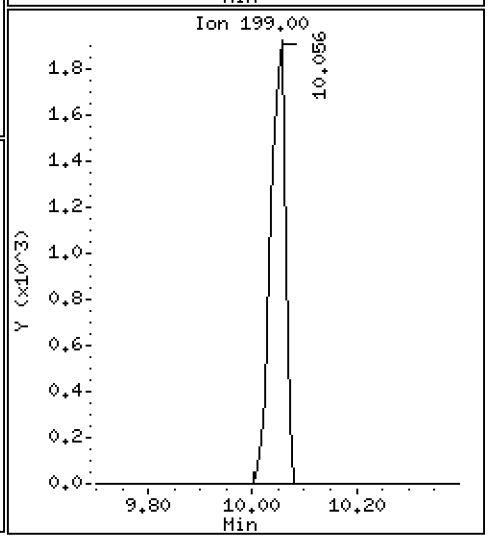












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

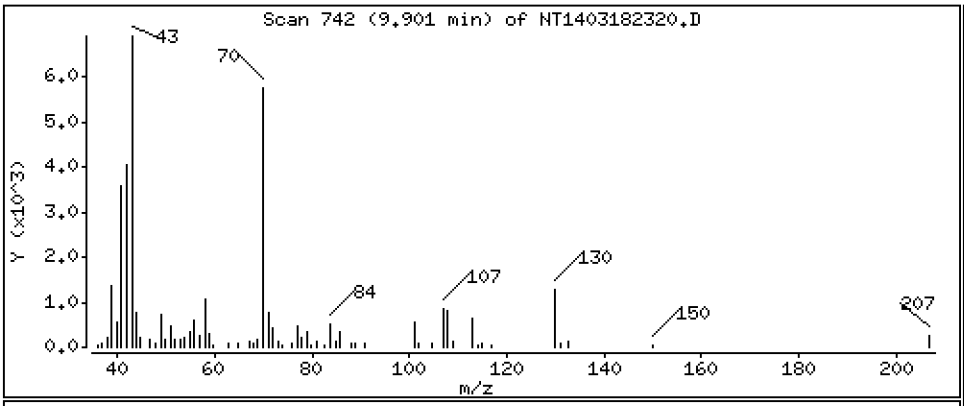
Operator: JGR

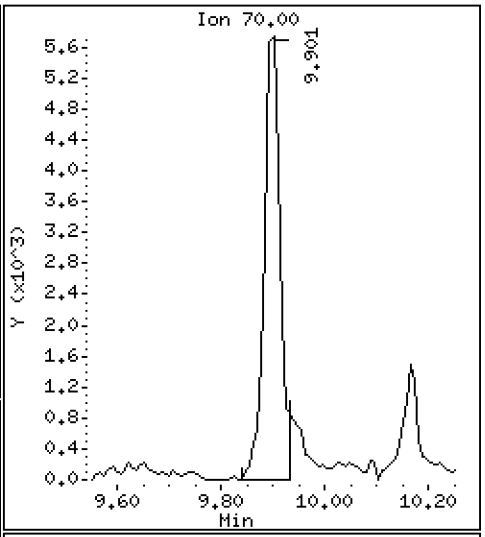
Column phase: ZB-5msi

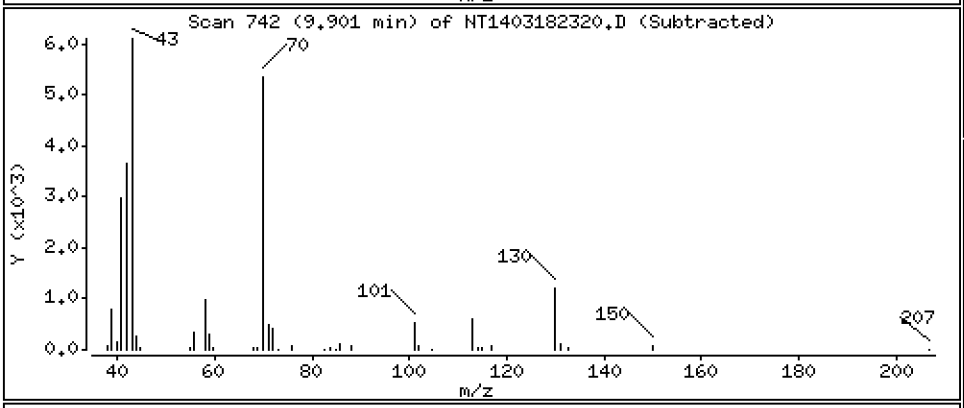
Column diameter: 0.25

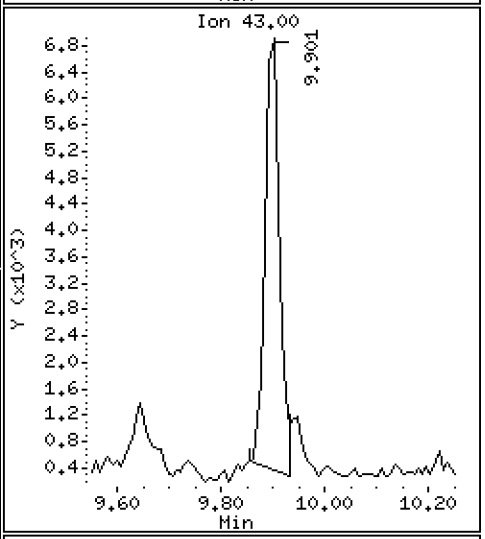
16 N-Nitroso-di-n-propylamine

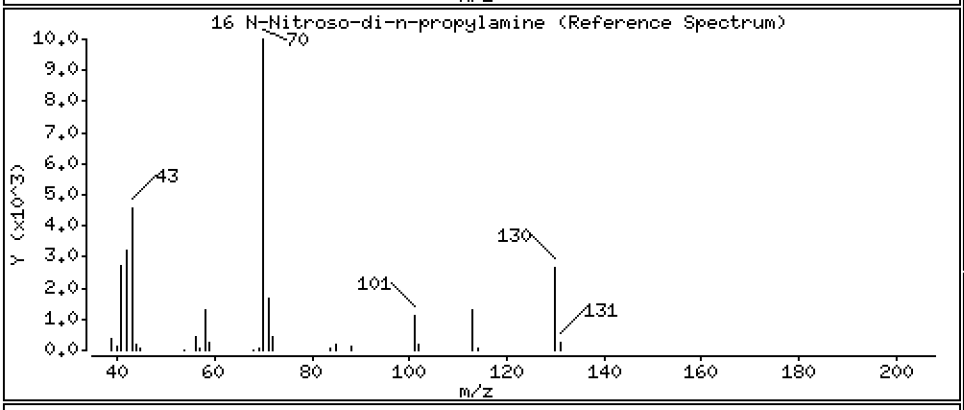
Concentration: 0.1756 ug/mL

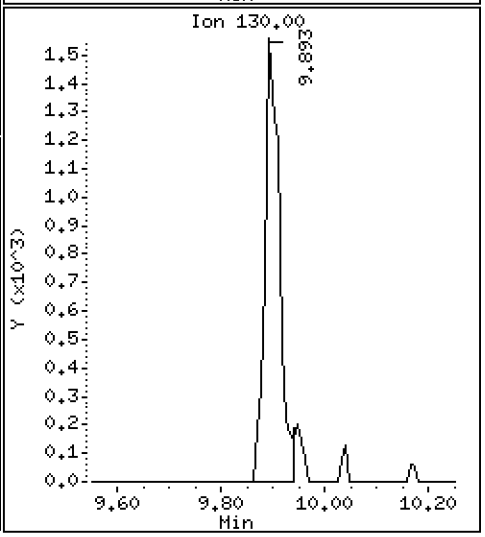


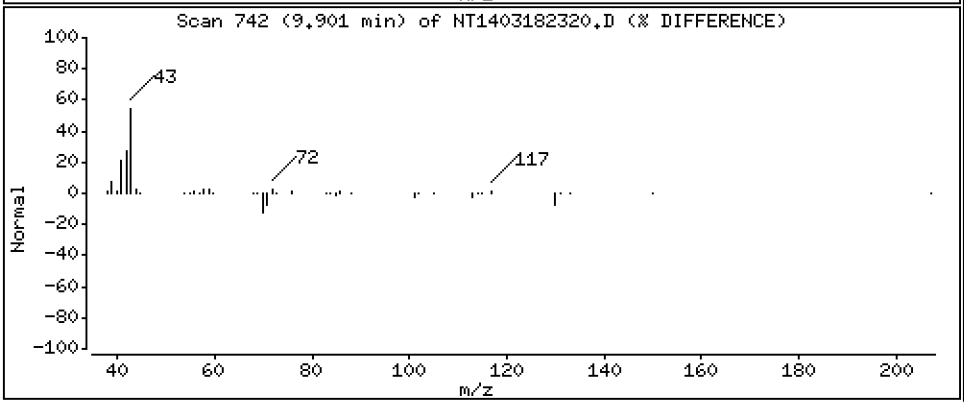












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

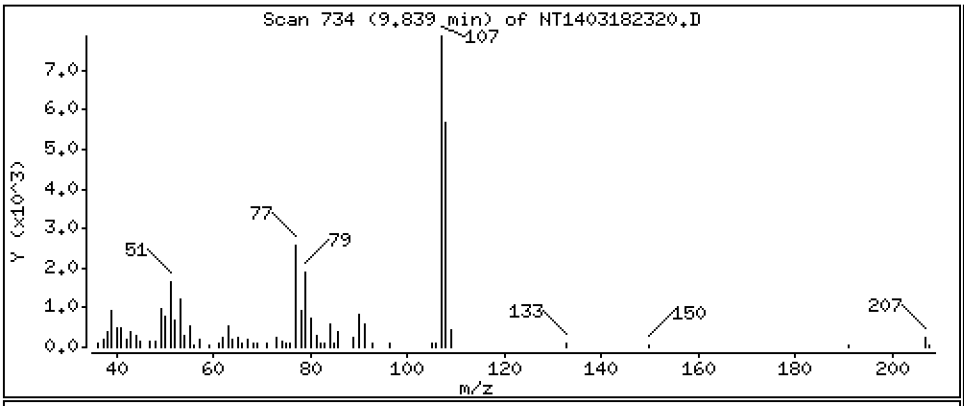
Operator: JGR

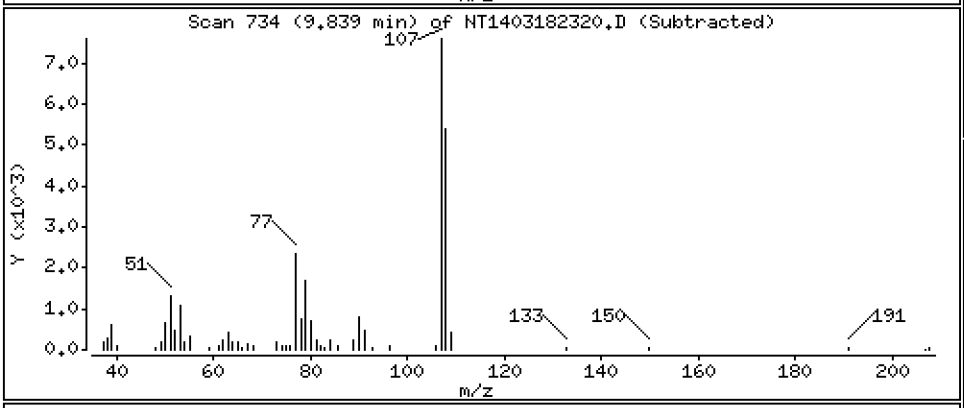
Column phase: ZB-5msi

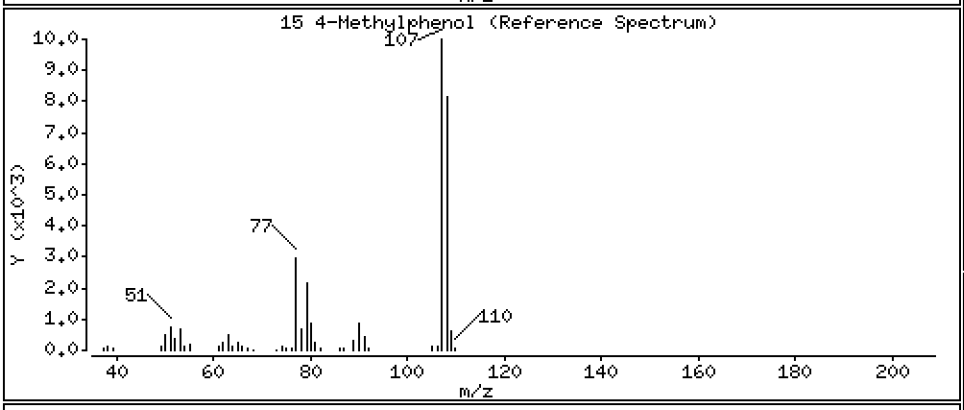
Column diameter: 0.25

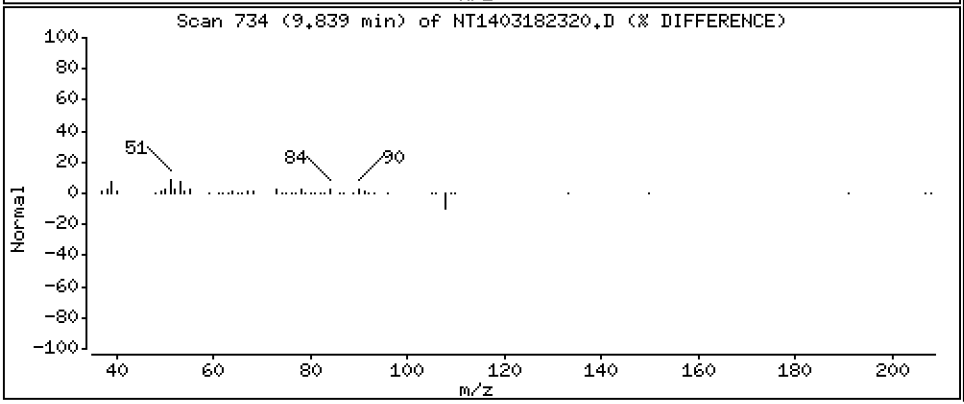
15 4-Methylphenol

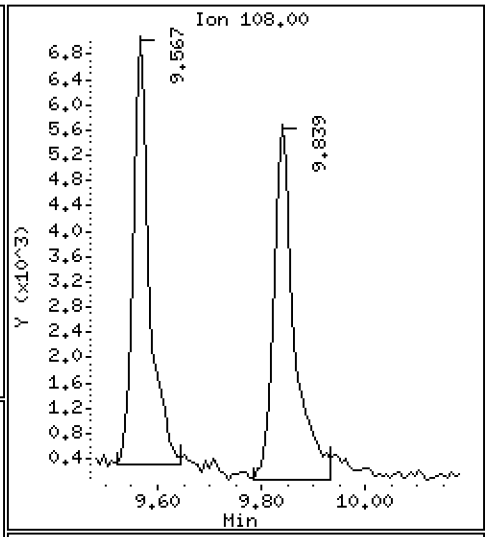
Concentration: 0.1496 ug/mL

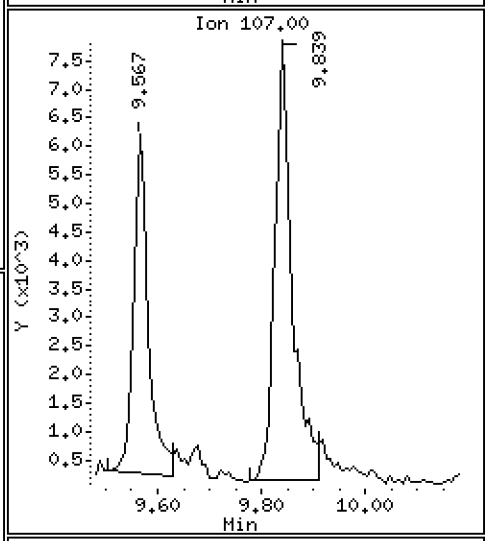


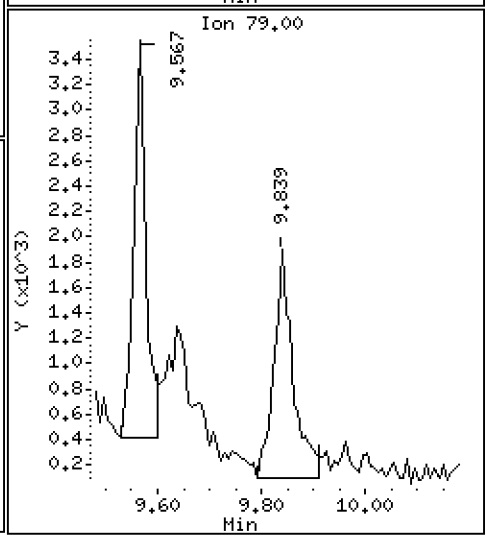












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

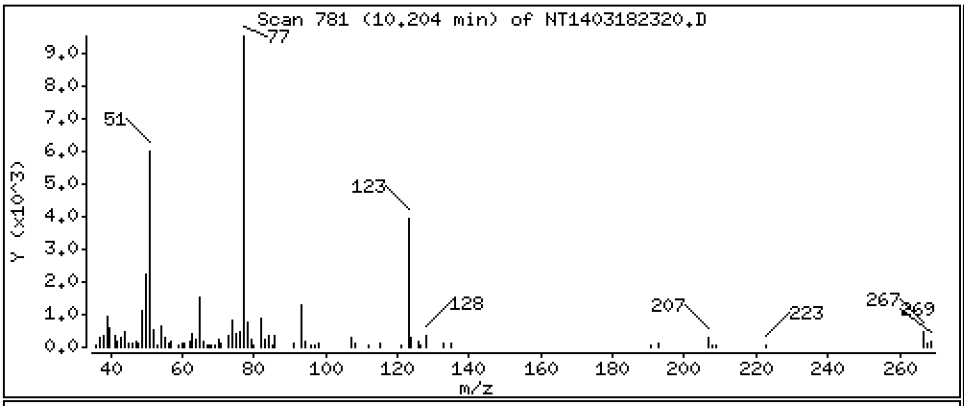
Operator: JGR

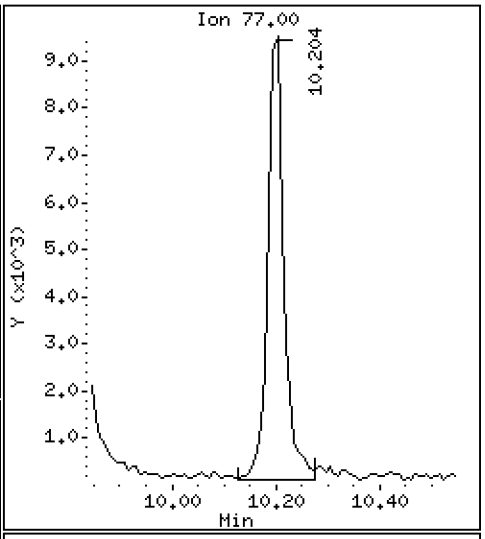
Column phase: ZB-5msi

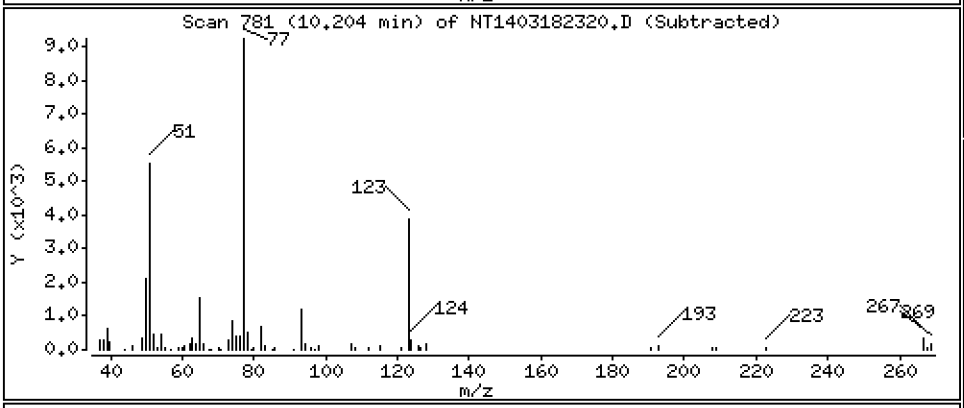
Column diameter: 0.25

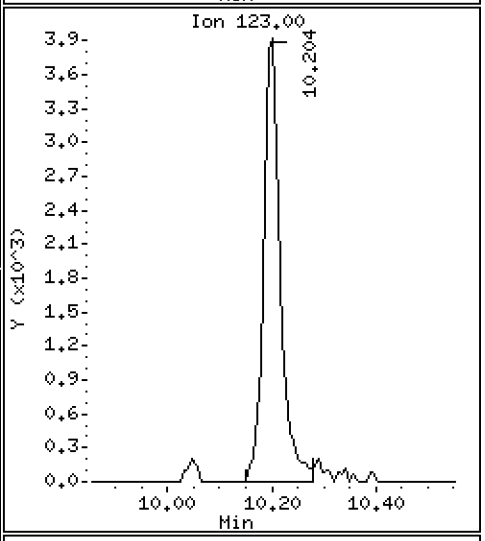
19 Nitrobenzene

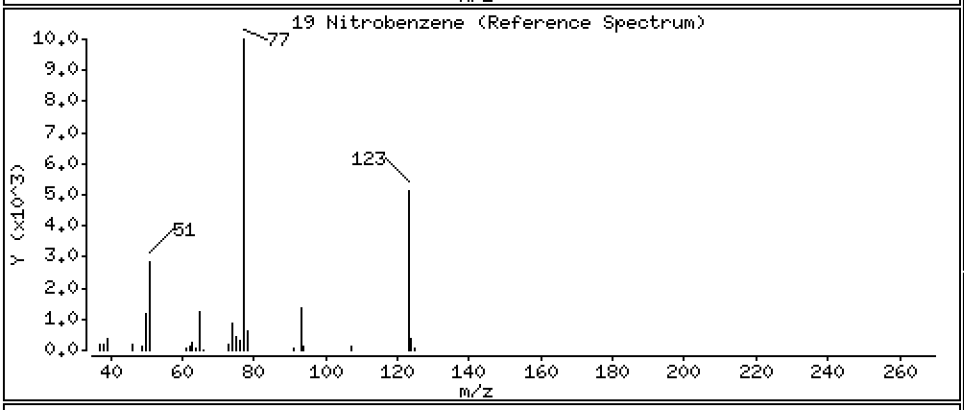
Concentration: 0.1949 ug/mL

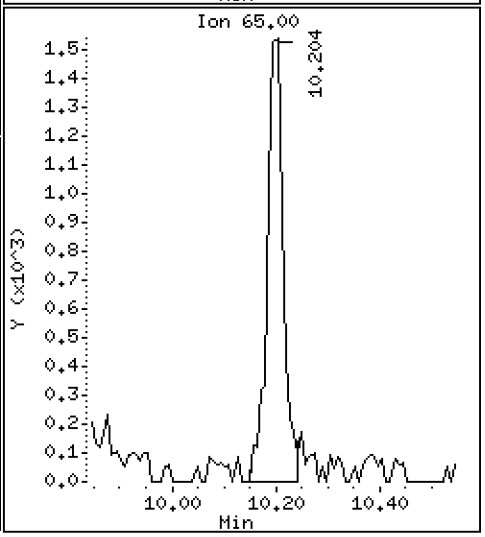


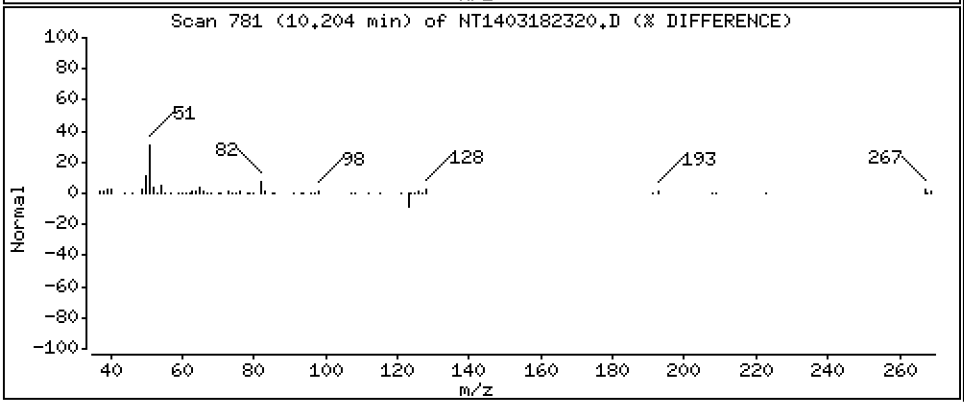












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

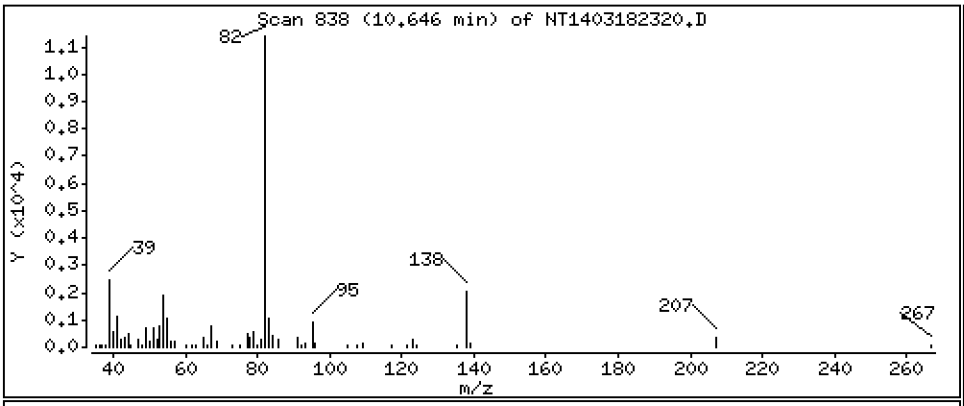
Operator: JGR

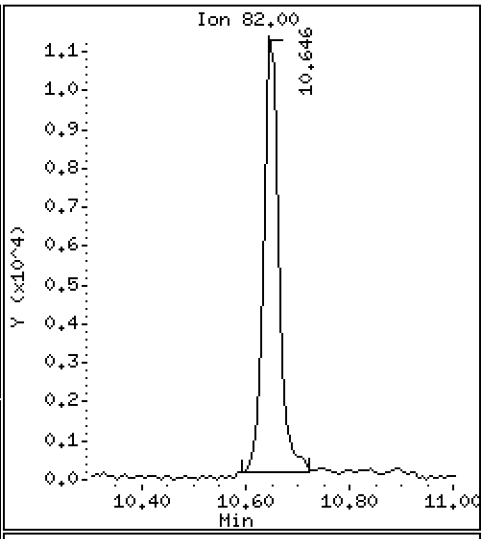
Column phase: ZB-5msi

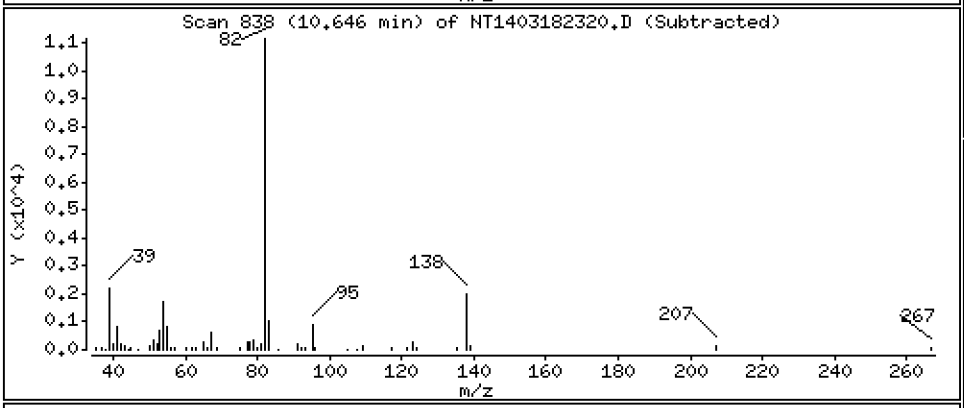
Column diameter: 0.25

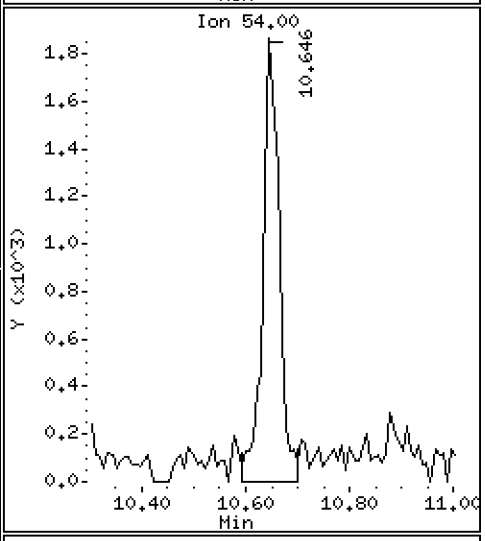
20 Isophorone

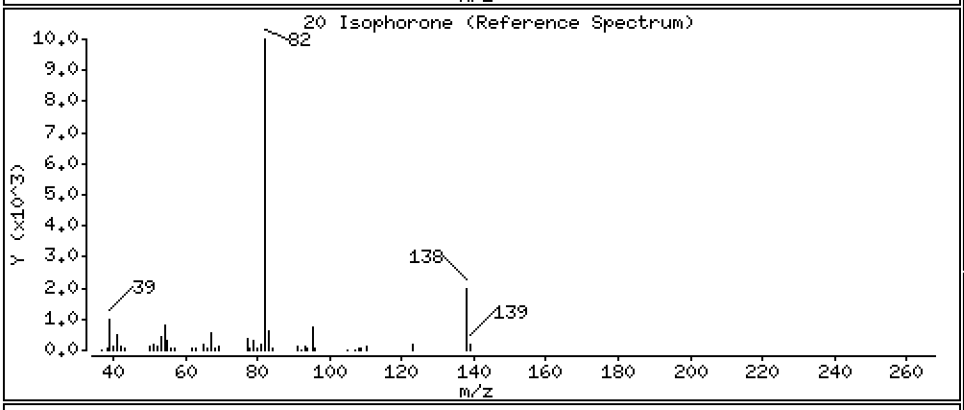
Concentration: 0.1613 ug/mL

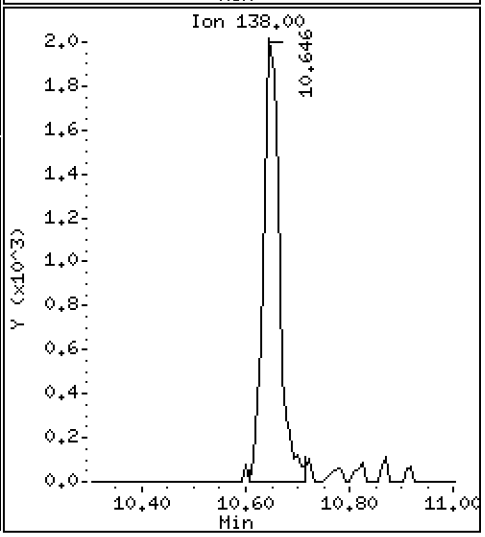


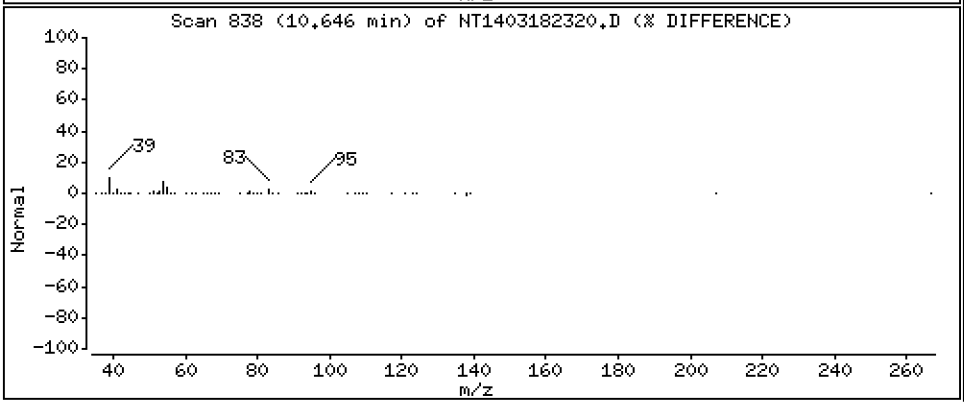












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

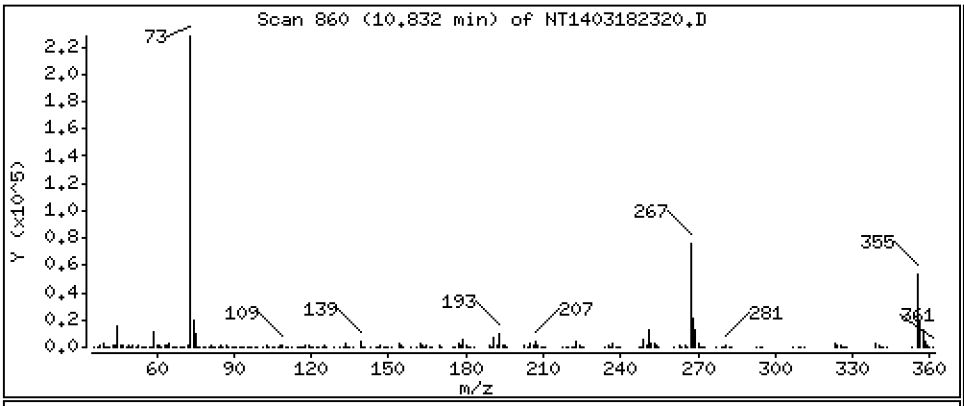
Operator: JGR

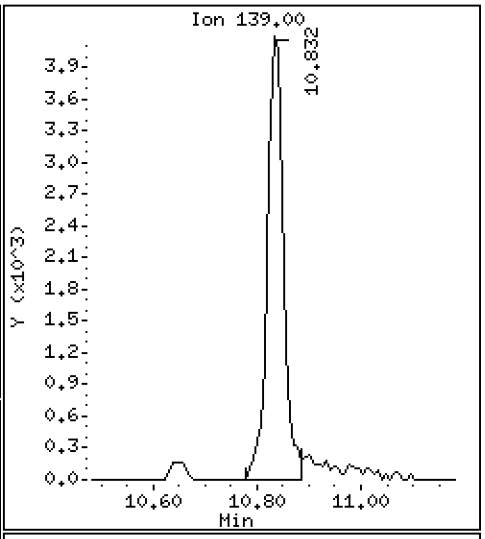
Column phase: ZB-5msi

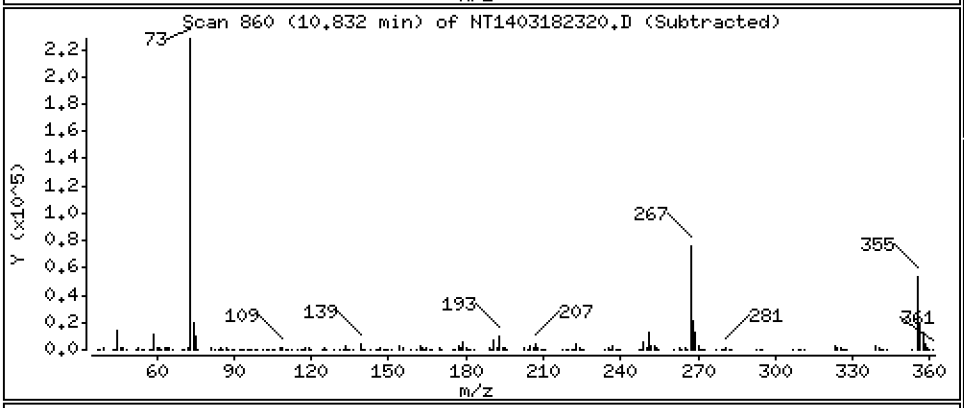
Column diameter: 0.25

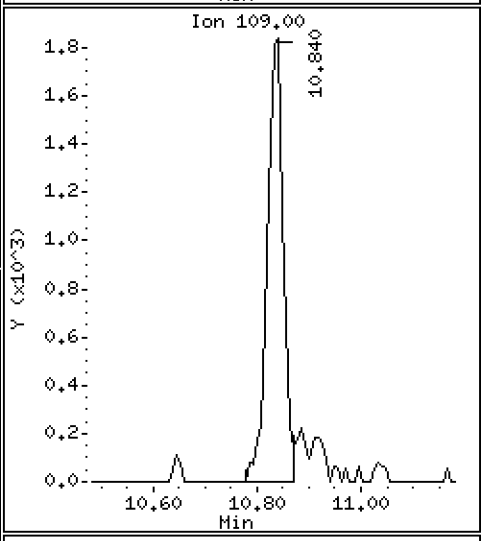
21 2-Nitrophenol

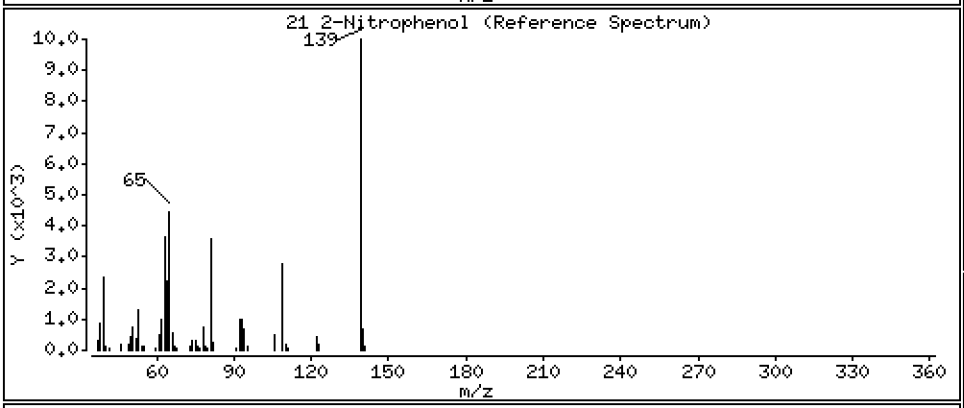
Concentration: 0.1562 ug/mL

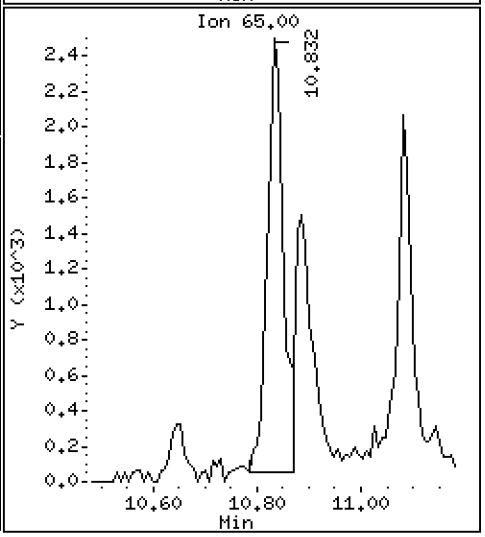


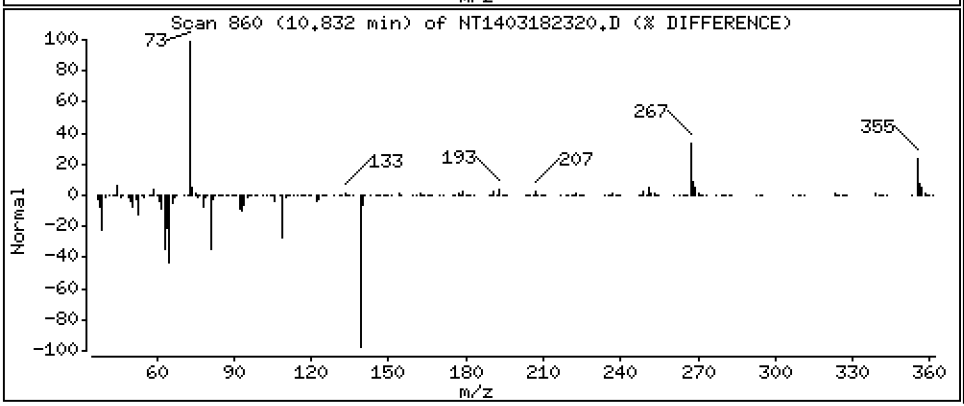












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

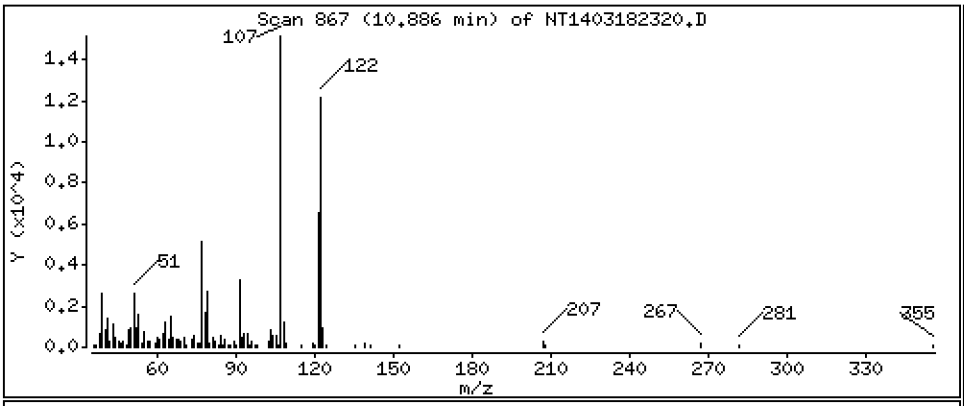
Operator: JGR

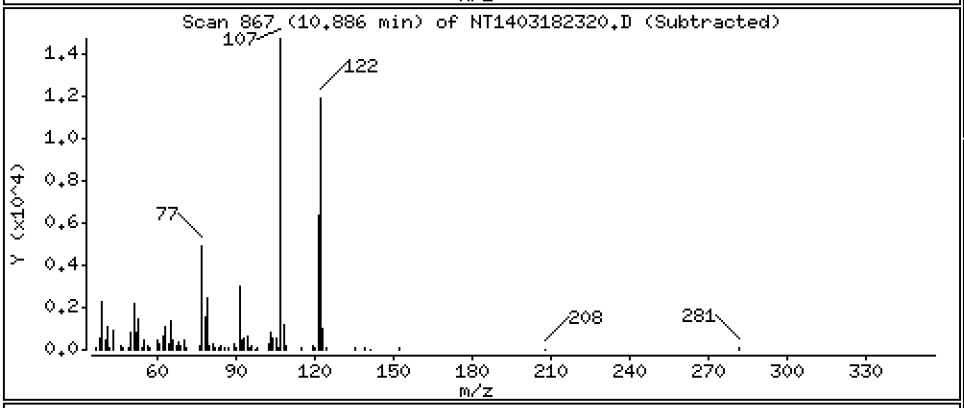
Column phase: ZB-5msi

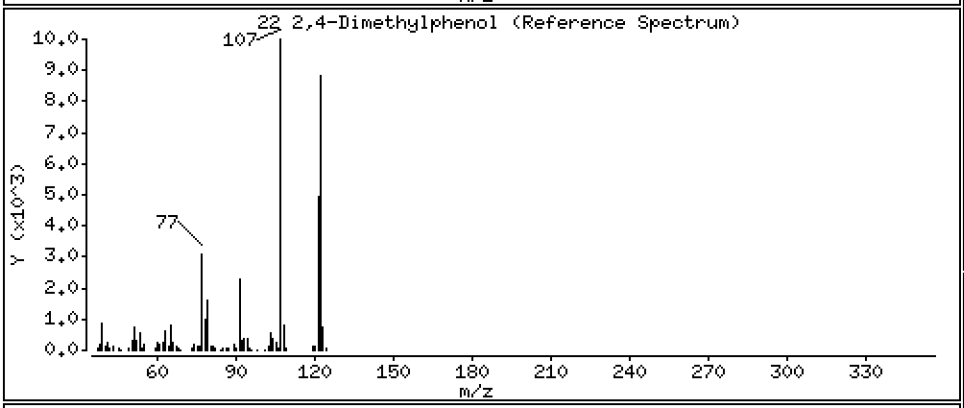
Column diameter: 0.25

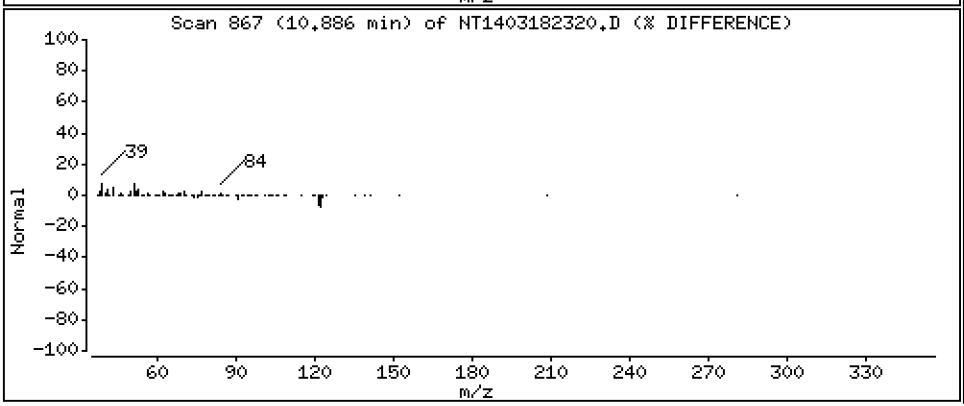
22 2,4-Dimethylphenol

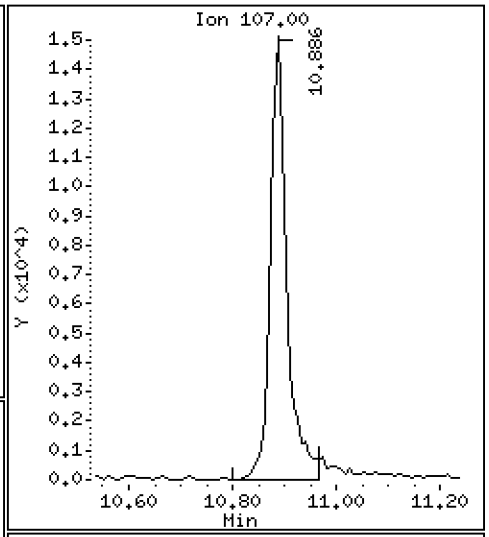
Concentration: 0.3789 ug/mL

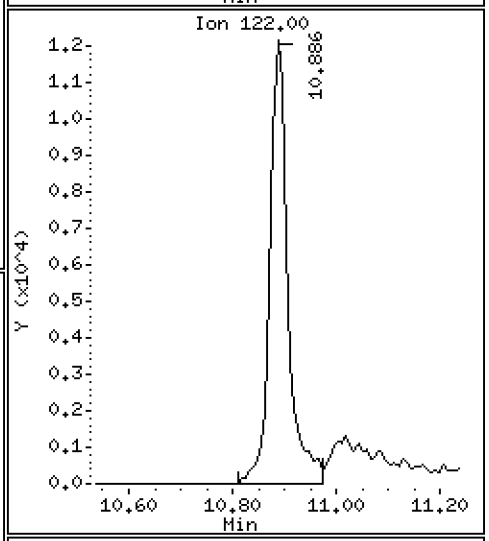


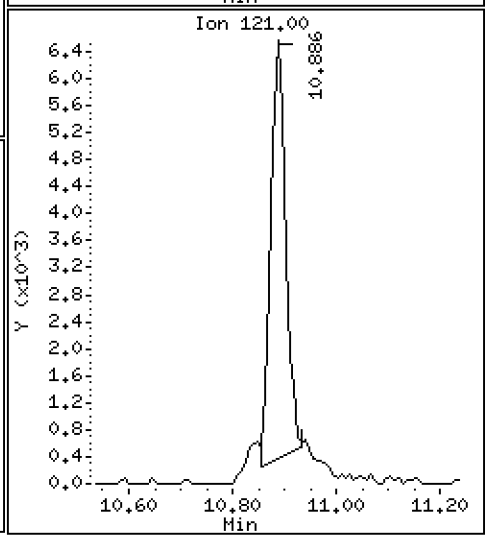












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

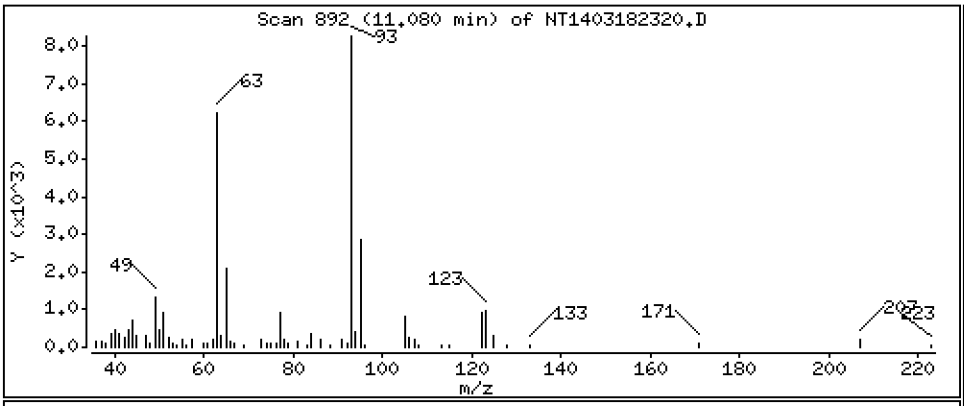
Operator: JGR

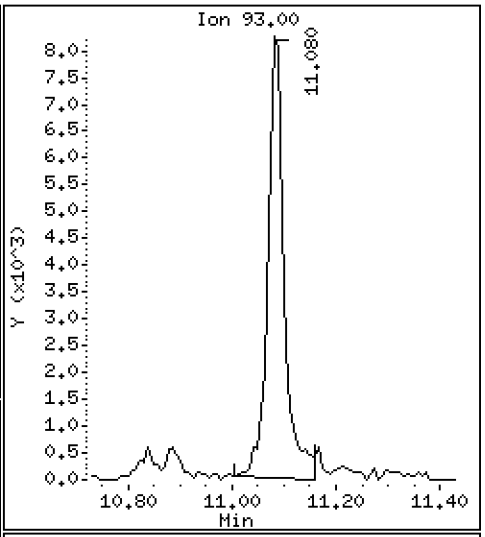
Column phase: ZB-5msi

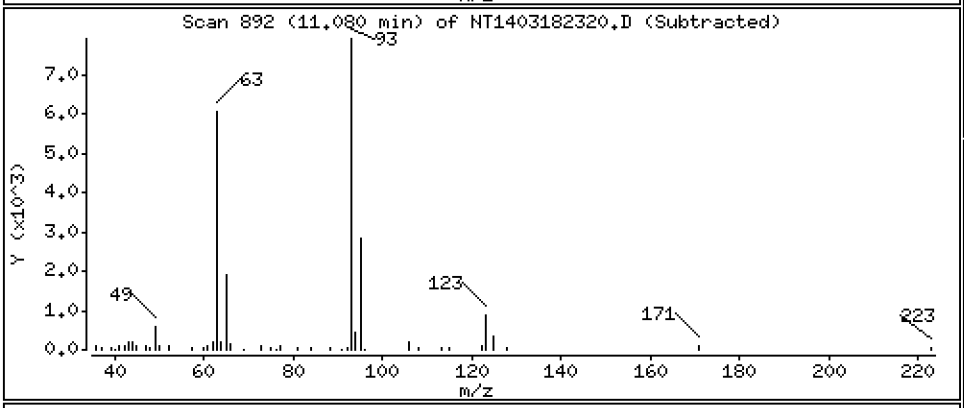
Column diameter: 0.25

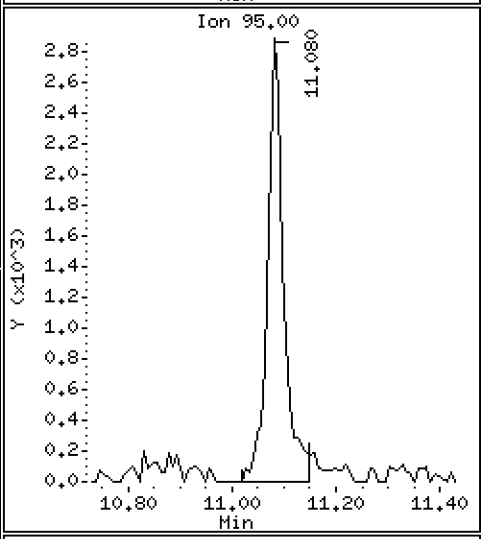
23 Bis(2-Chloroethoxy)methane

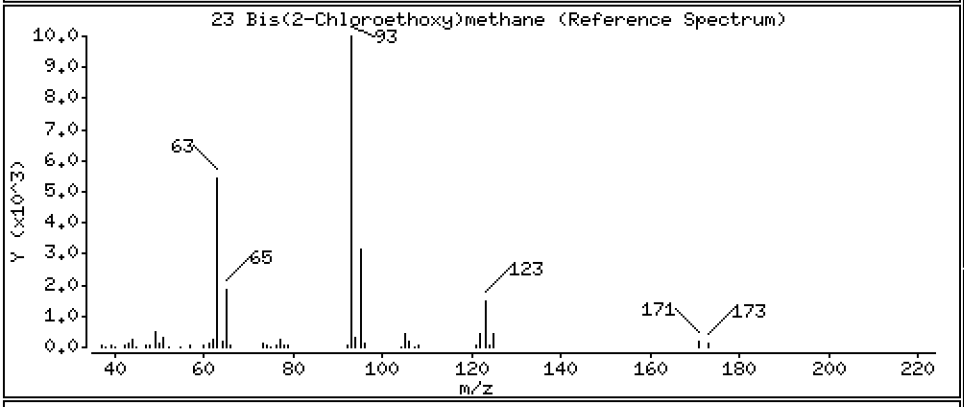
Concentration: 0.1909 ug/mL

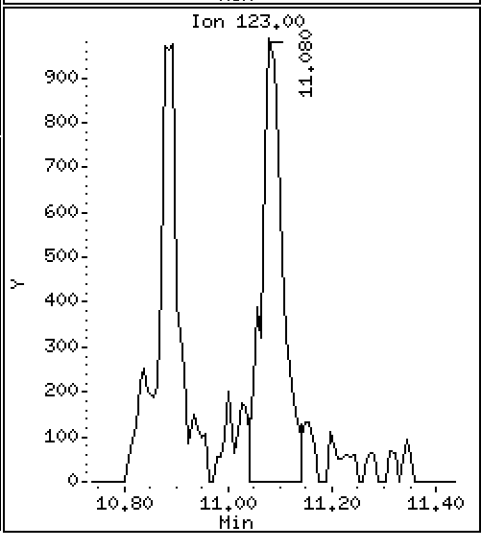


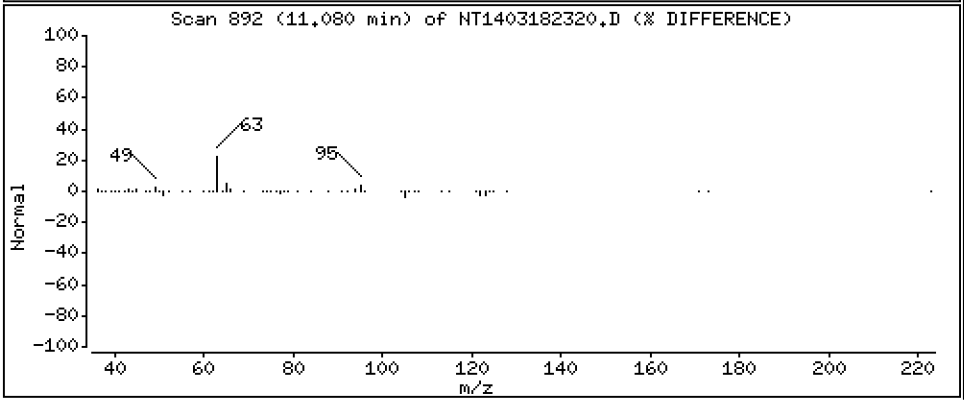












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

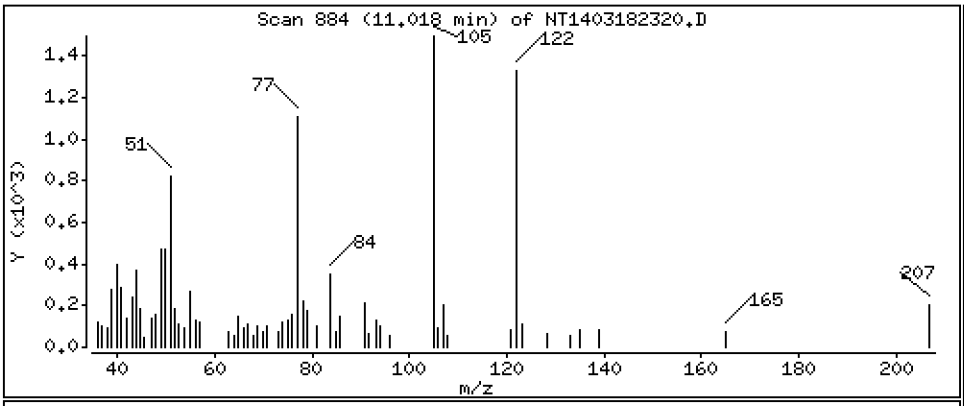
Operator: JGR

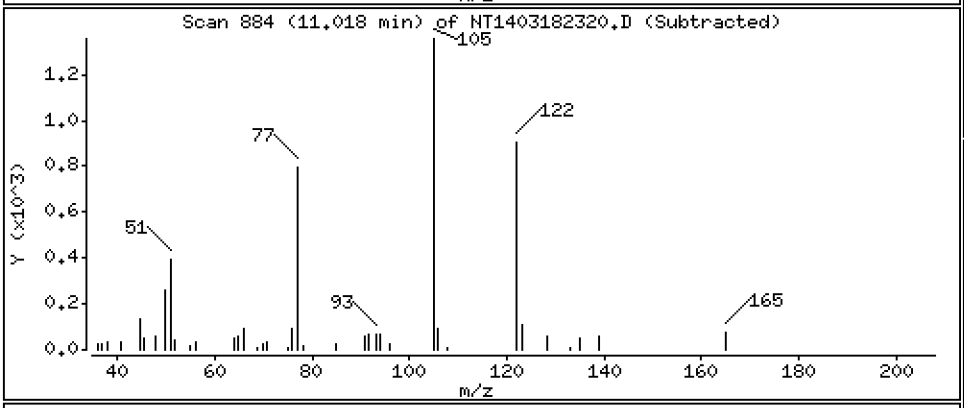
Column phase: ZB-5msi

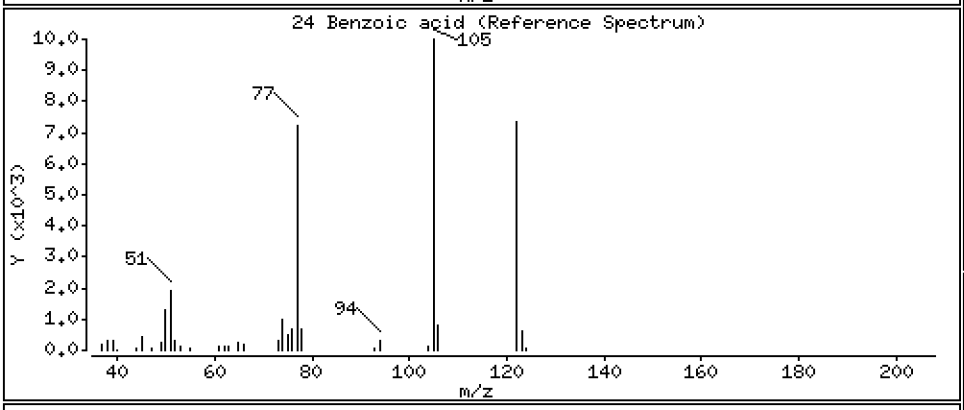
Column diameter: 0.25

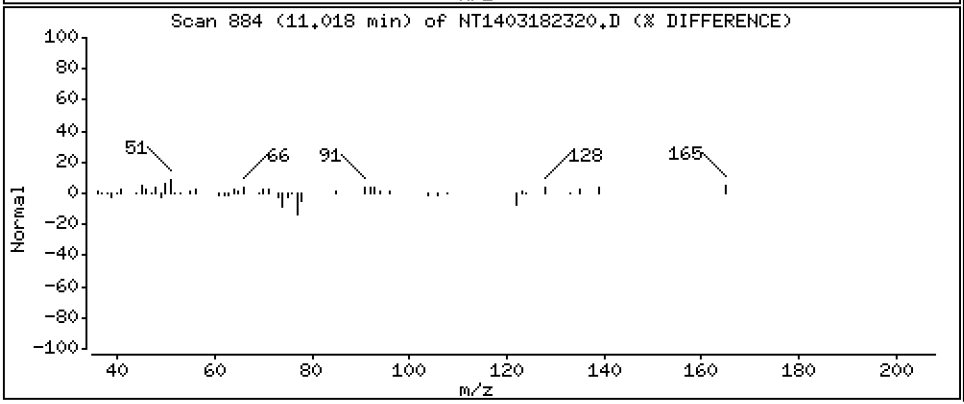
24 Benzoic acid

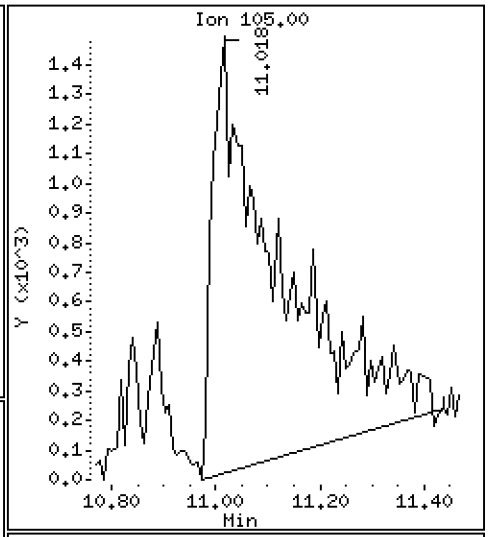
Concentration: 0.1958 ug/mL

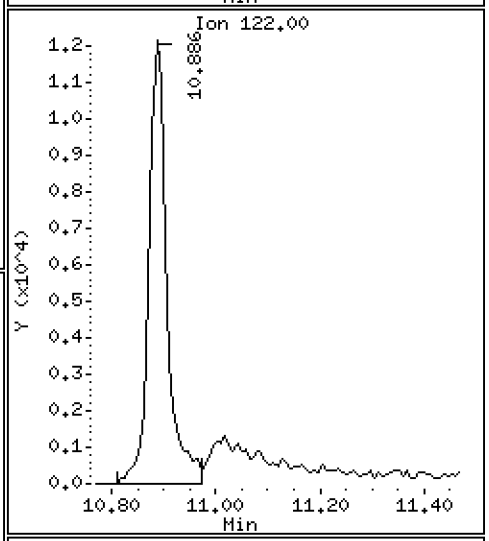


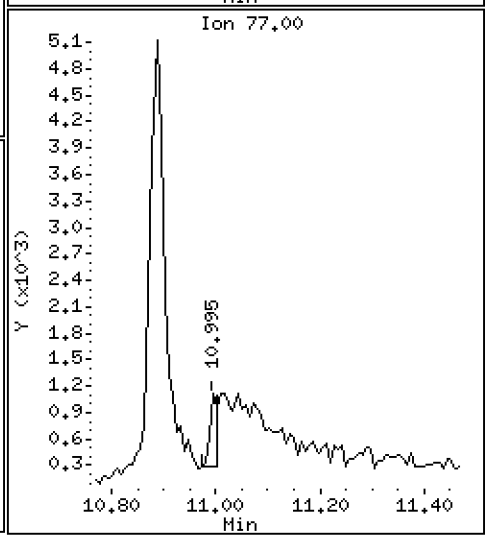












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

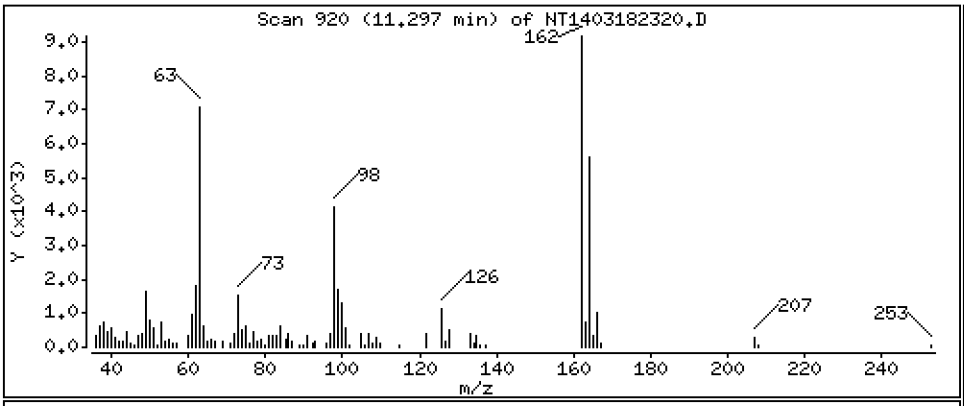
Operator: JGR

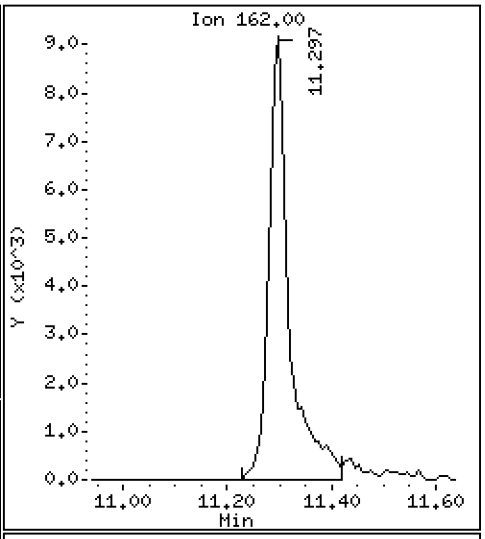
Column phase: ZB-5msi

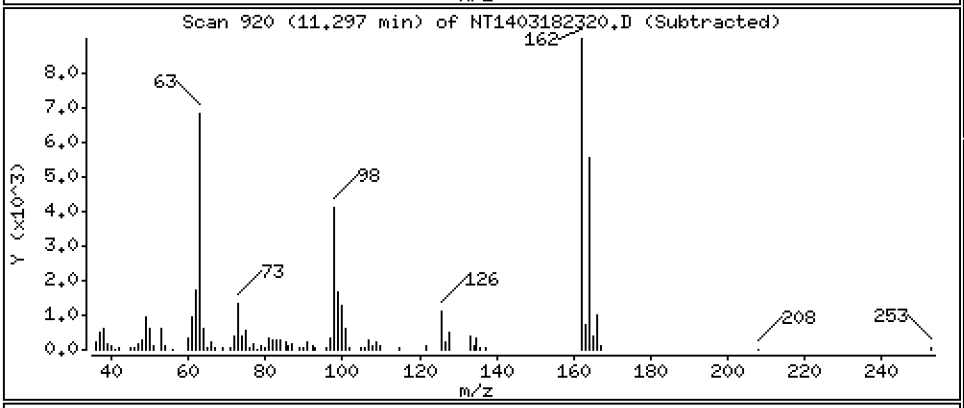
Column diameter: 0.25

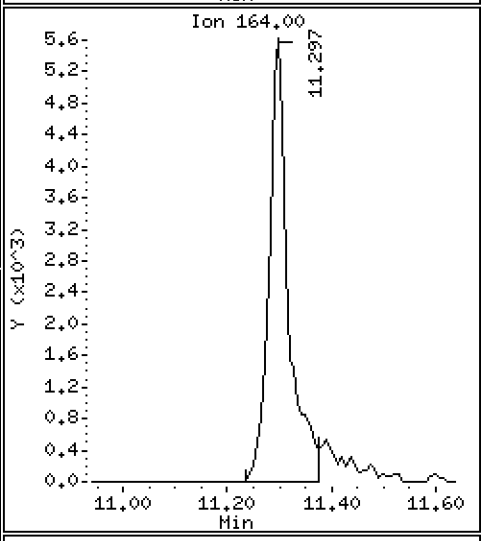
25 2,4-Dichlorophenol

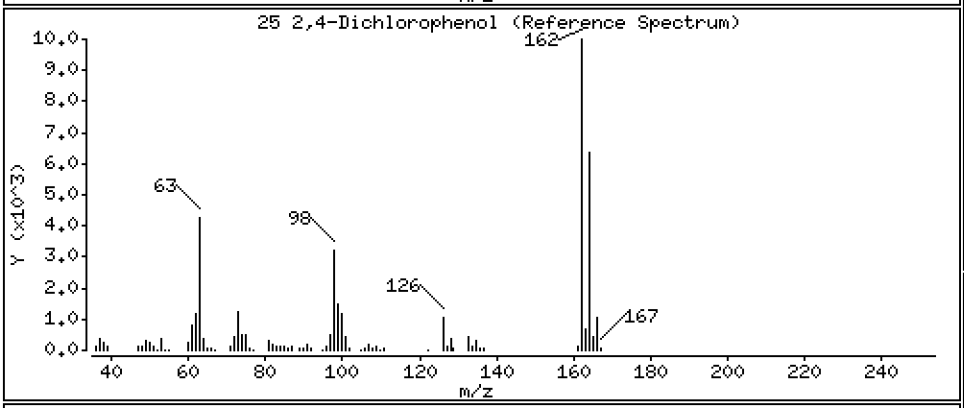
Concentration: 0.3983 ug/mL

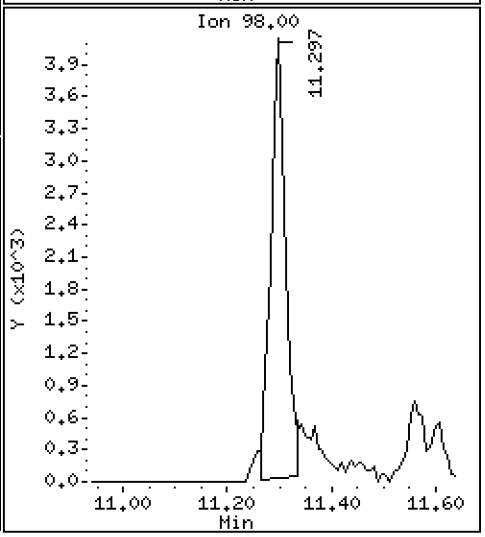


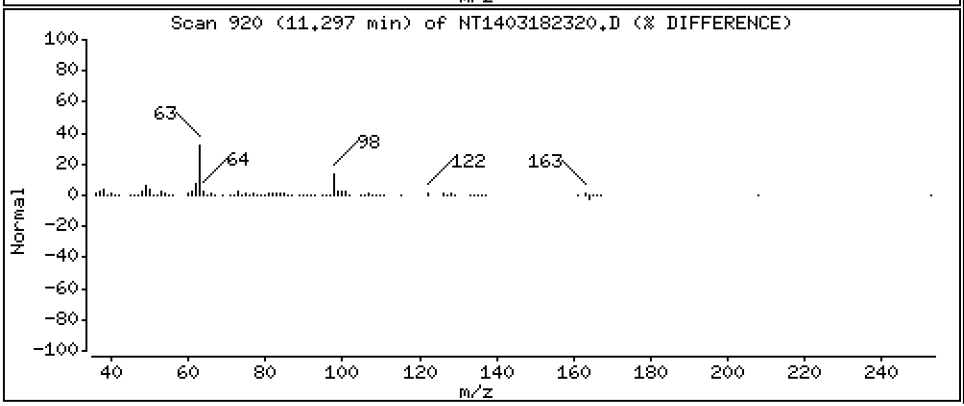












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

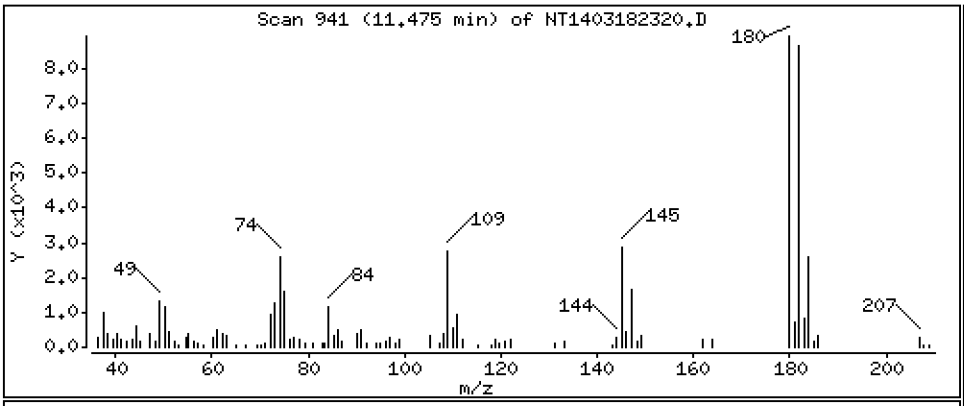
Operator: JGR

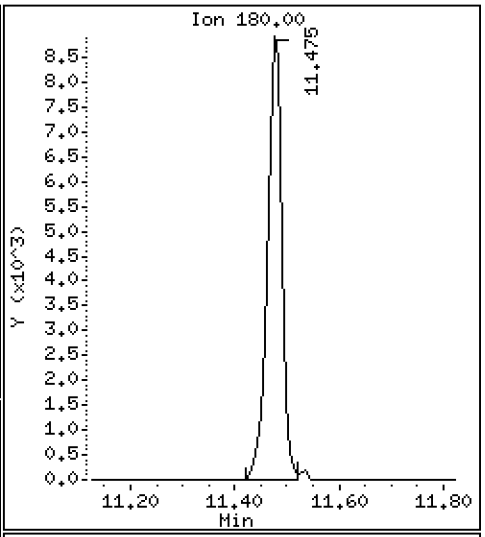
Column phase: ZB-5msi

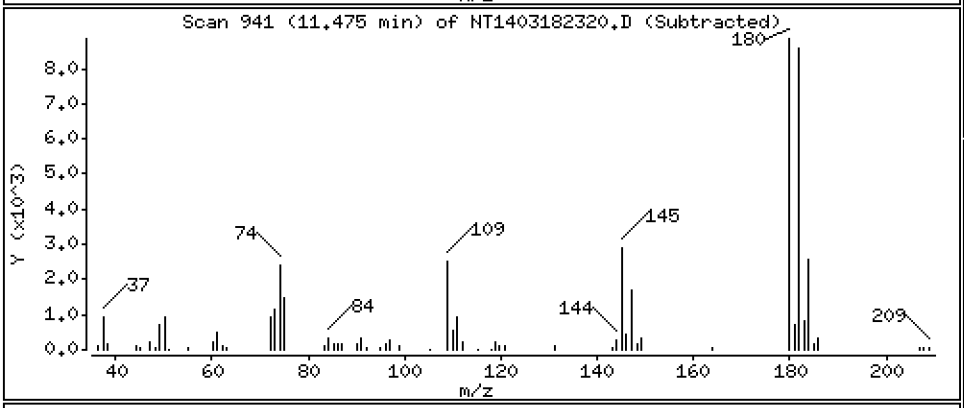
Column diameter: 0.25

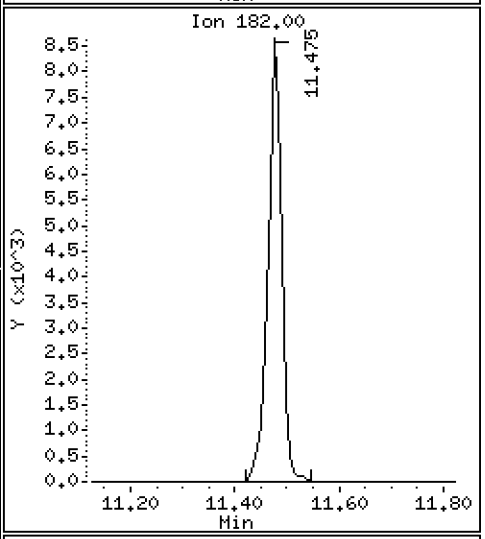
26 1,2,4-Trichlorobenzene

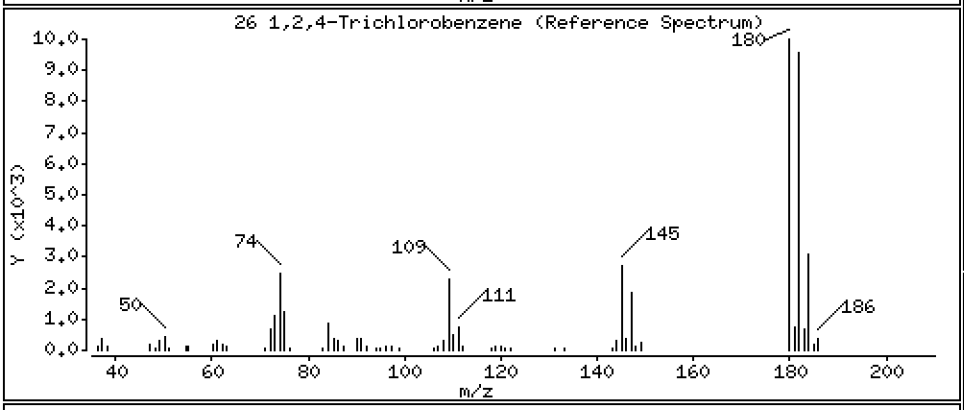
Concentration: 0.2039 ug/mL

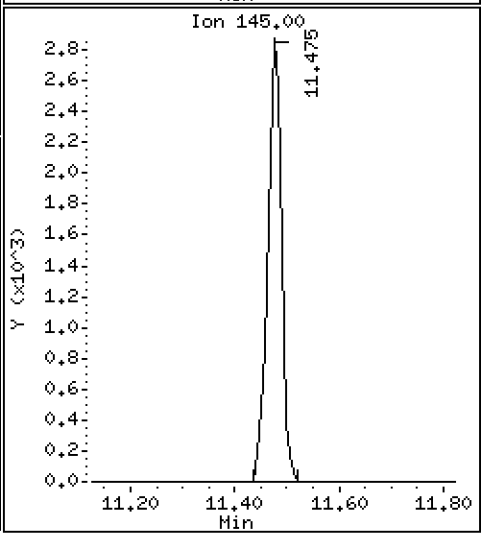


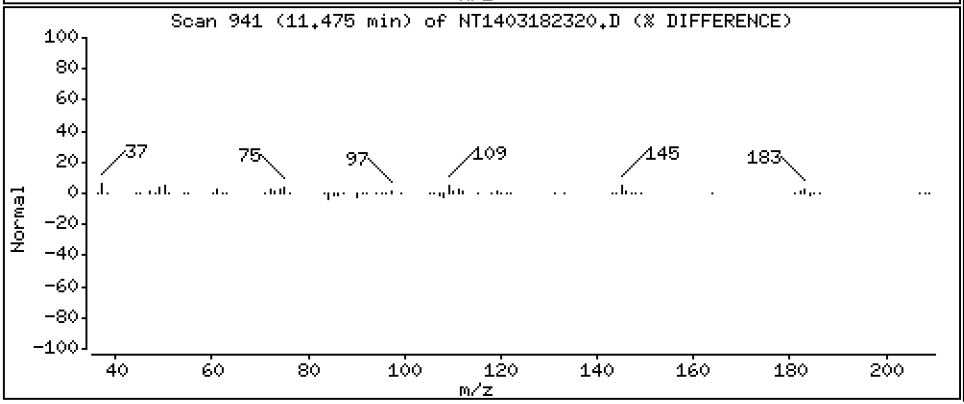












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

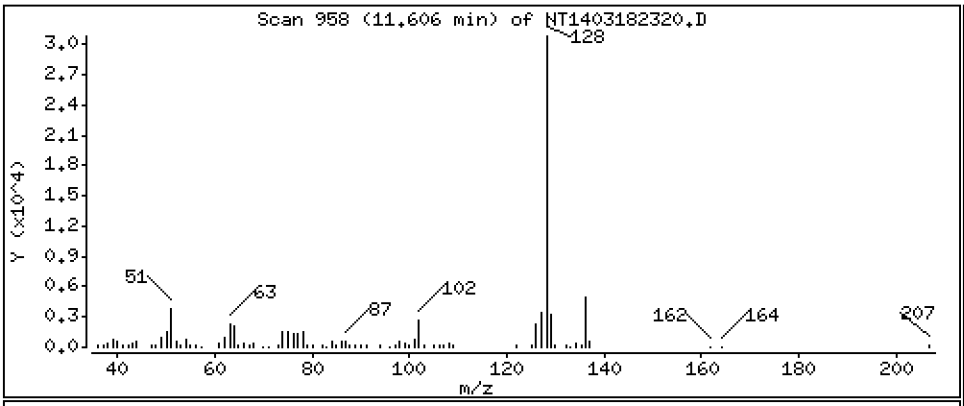
Operator: JGR

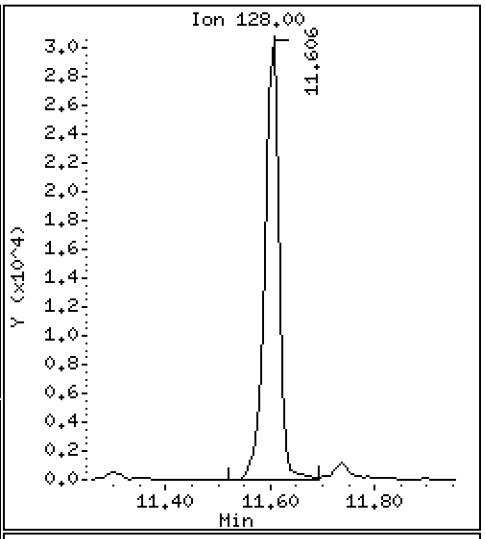
Column phase: ZB-5msi

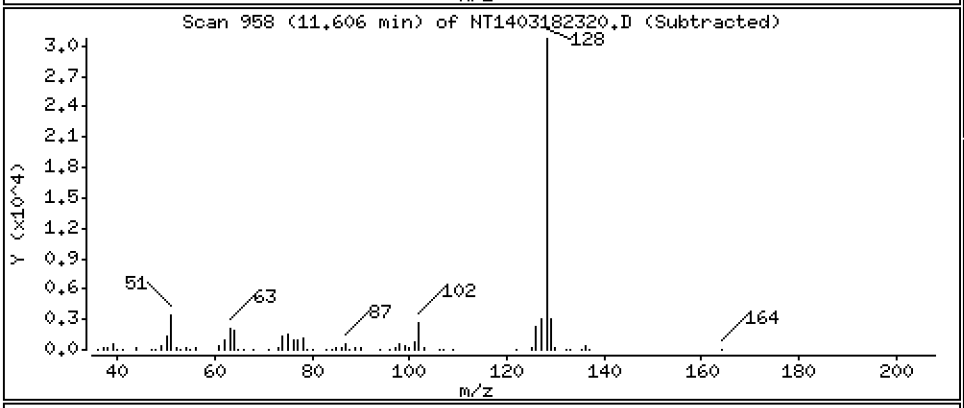
Column diameter: 0.25

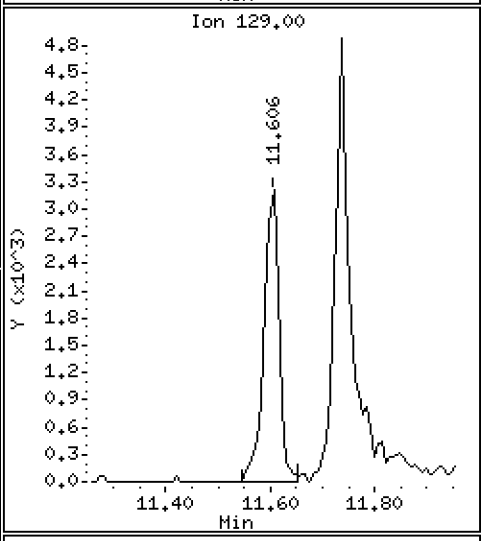
28 Naphthalene

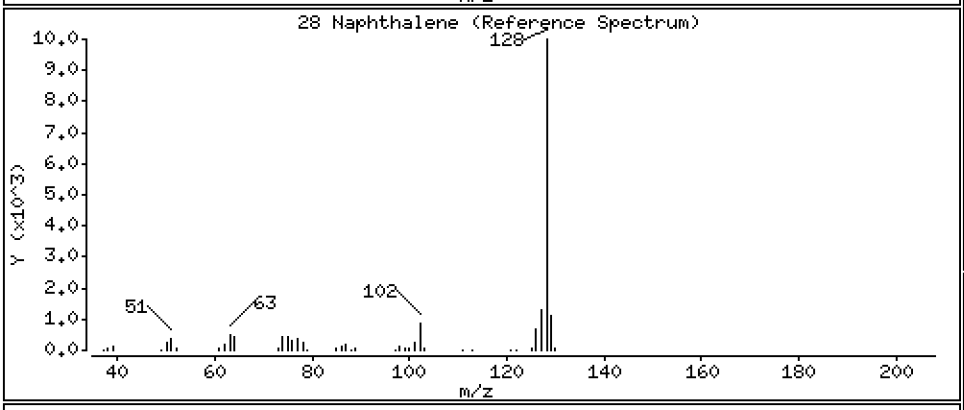
Concentration: 0.2136 ug/mL

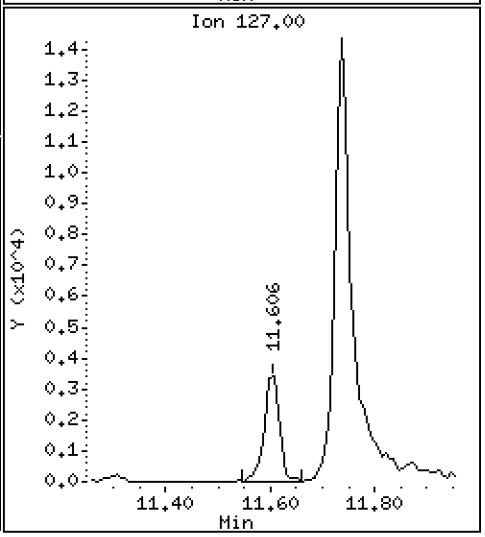


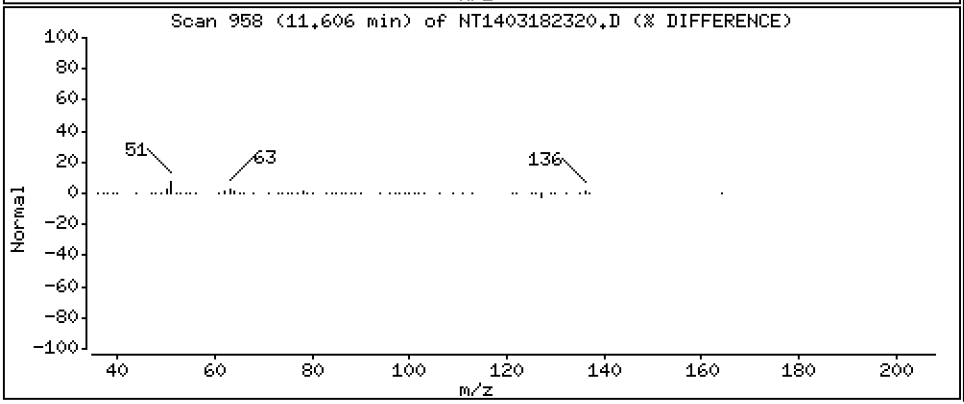












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

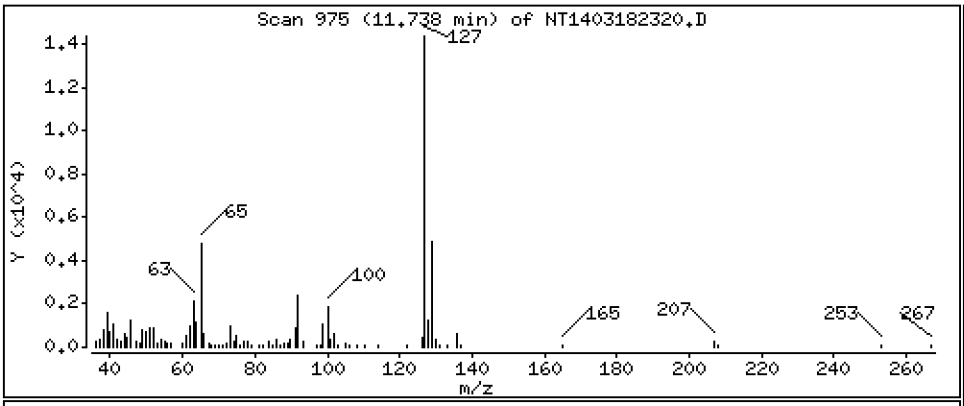
Operator: JGR

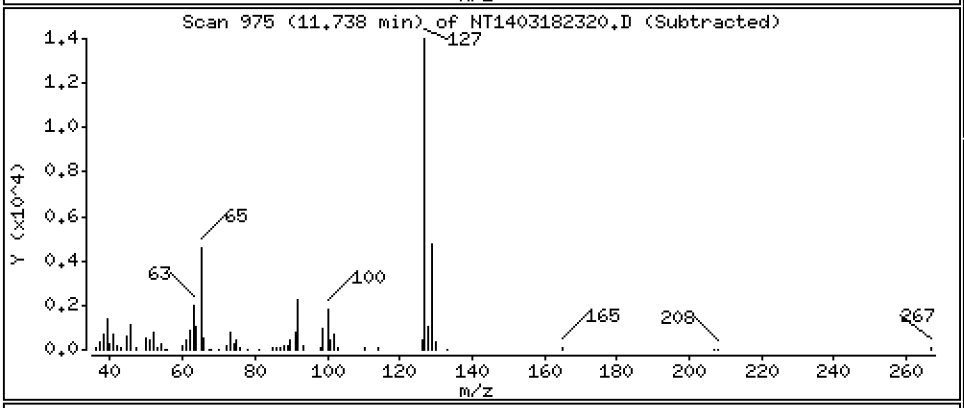
Column phase: ZB-5msi

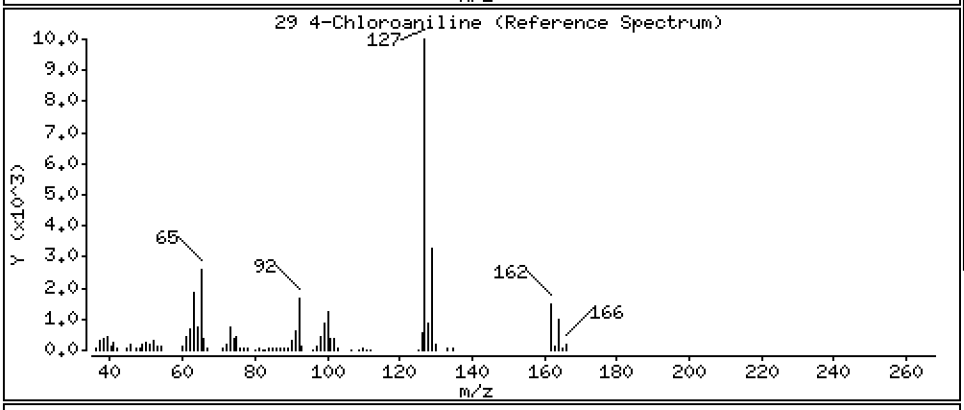
Column diameter: 0.25

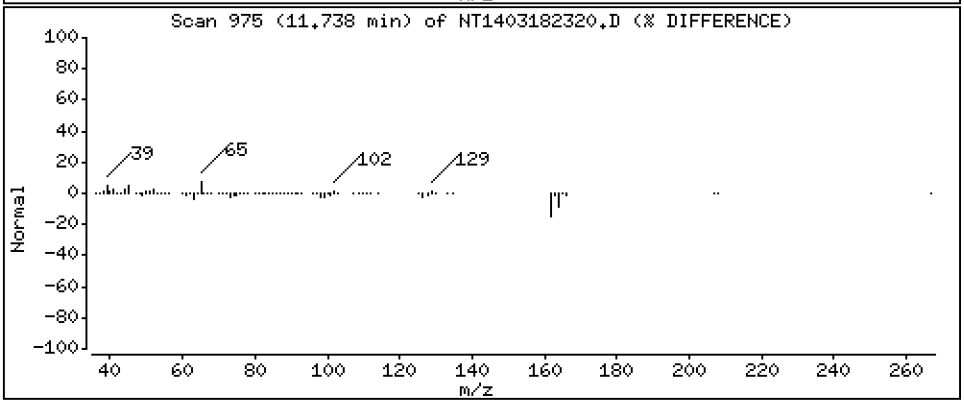
29 4-Chloroaniline

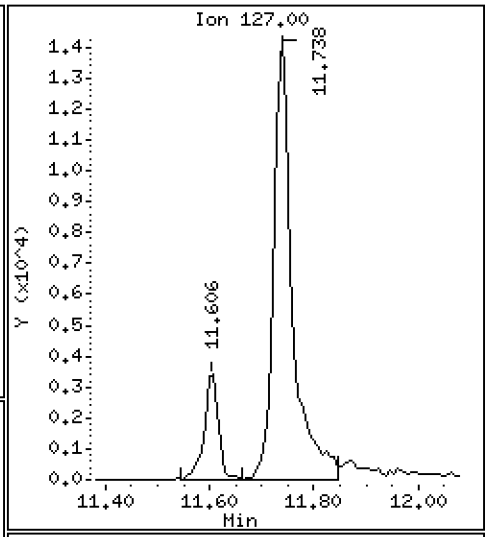
Concentration: 0.3212 ug/mL

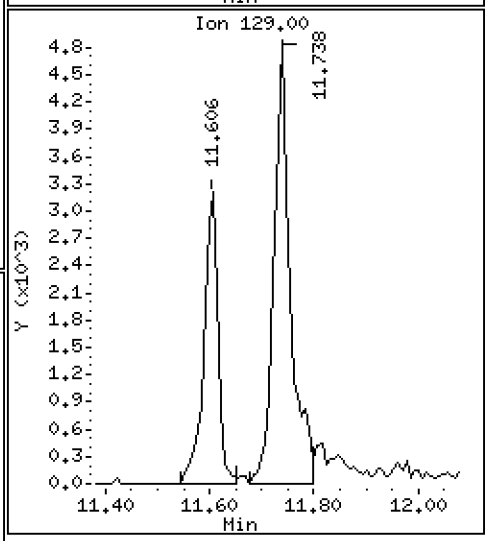












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

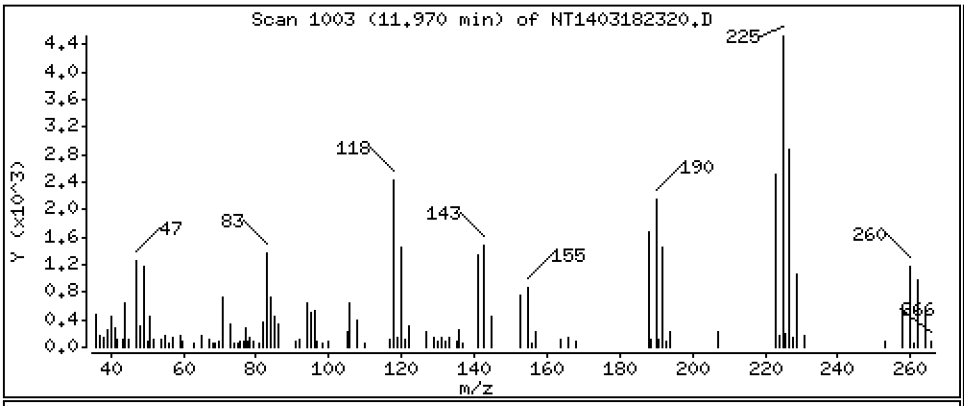
Operator: JGR

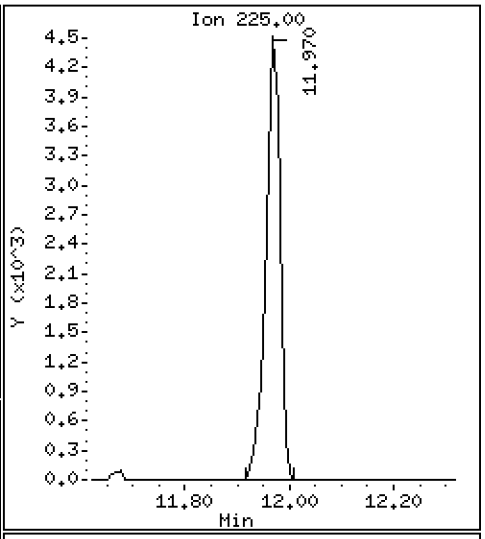
Column phase: ZB-5msi

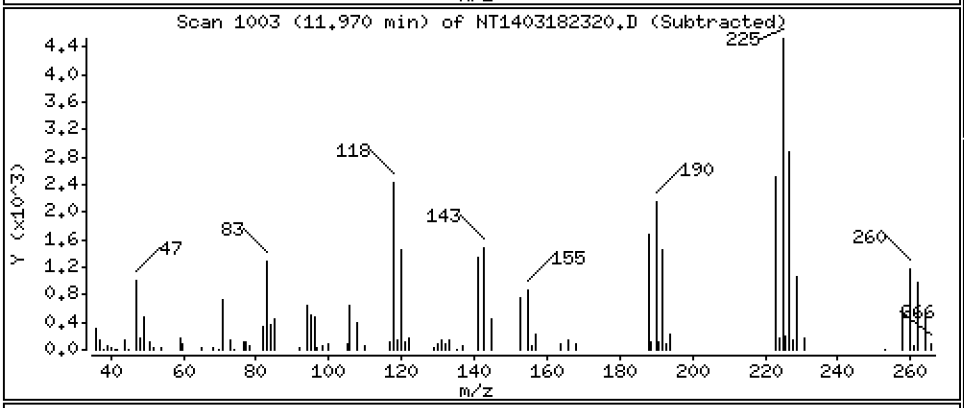
Column diameter: 0.25

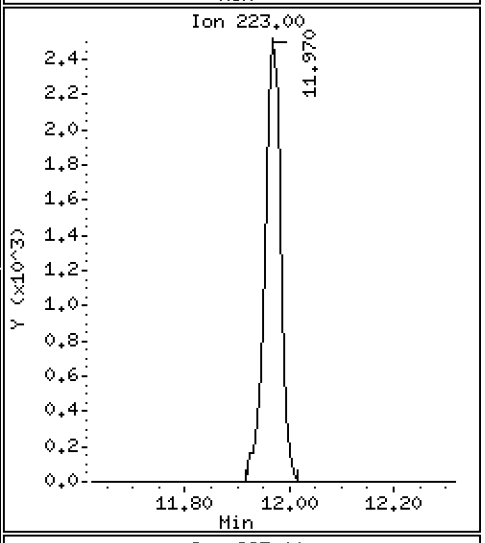
30 Hexachlorobutadiene

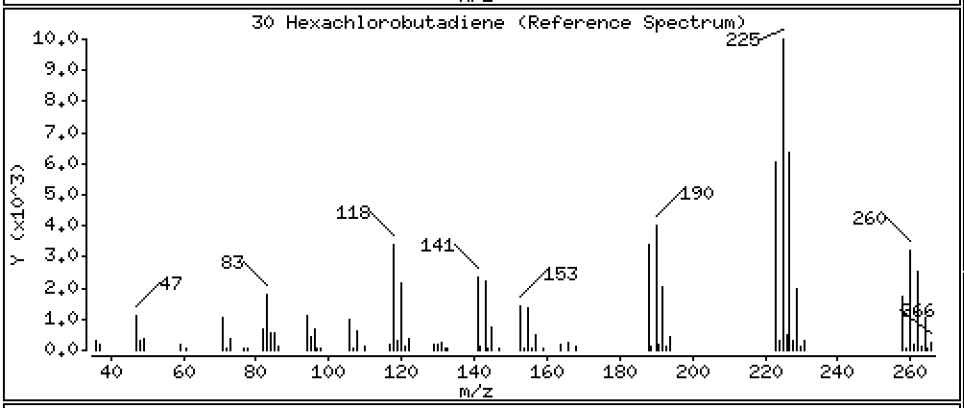
Concentration: 0.2176 ug/mL

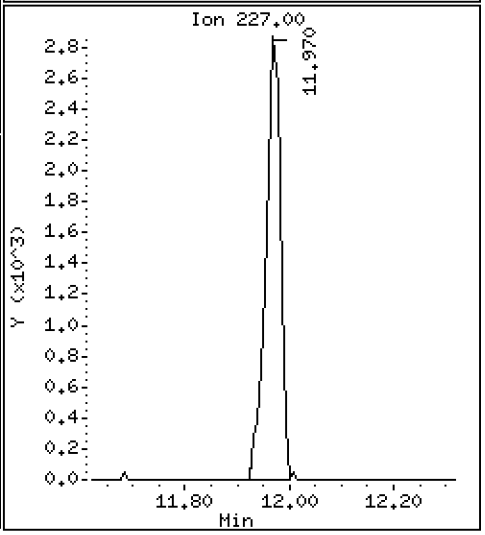


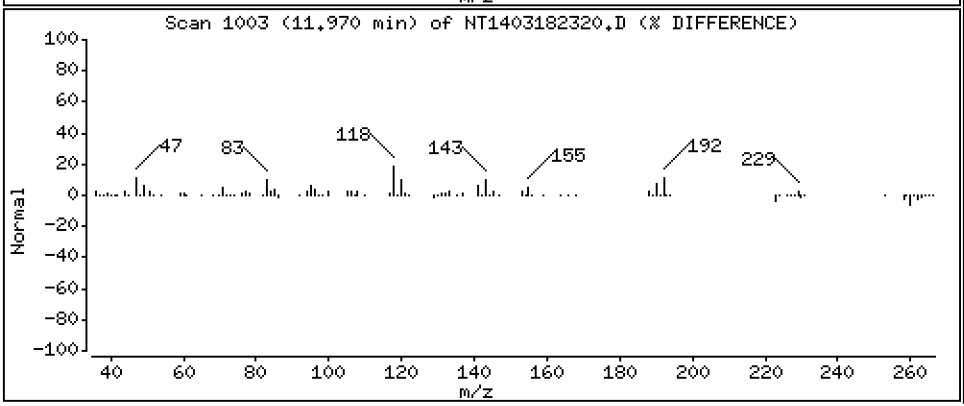












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

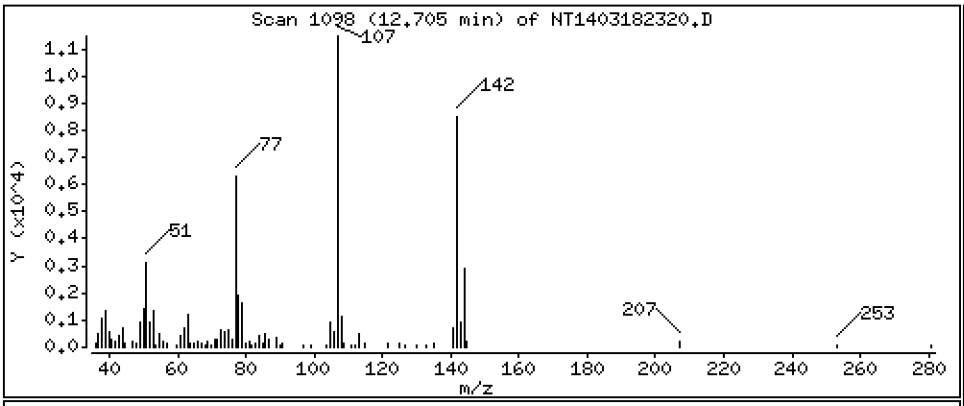
Operator: JGR

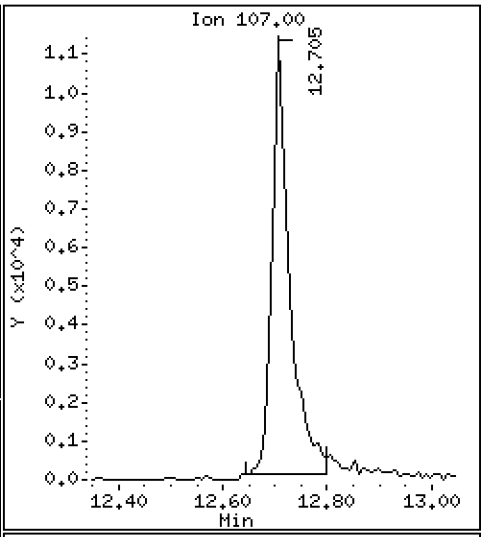
Column phase: ZB-5msi

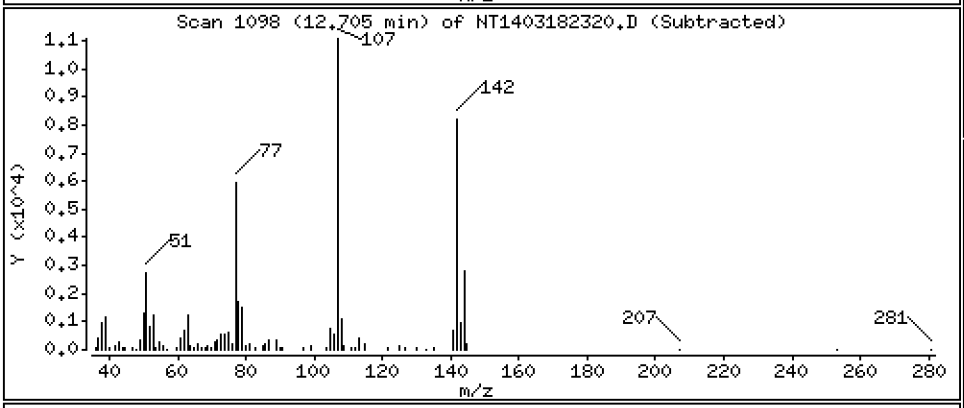
Column diameter: 0.25

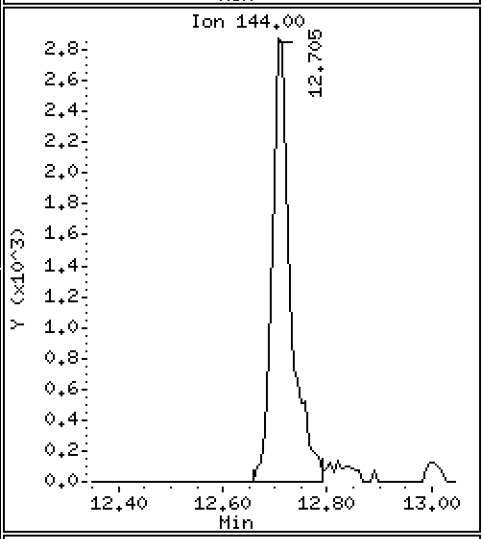
31 4-Chloro-3-methylphenol

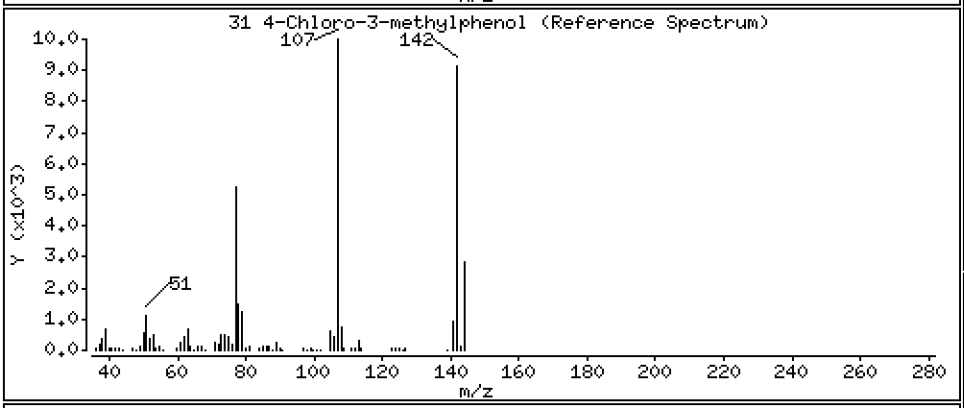
Concentration: 0.3256 ug/mL

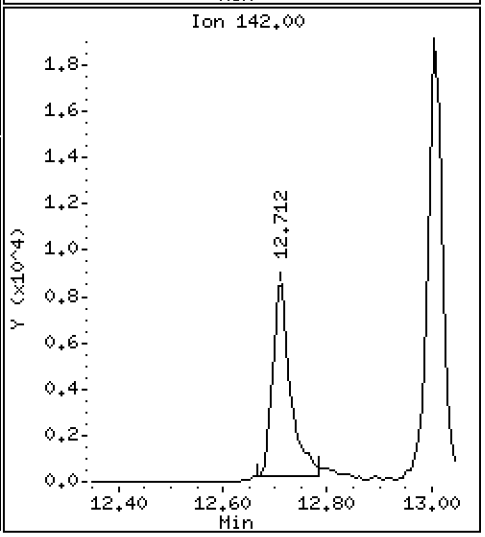


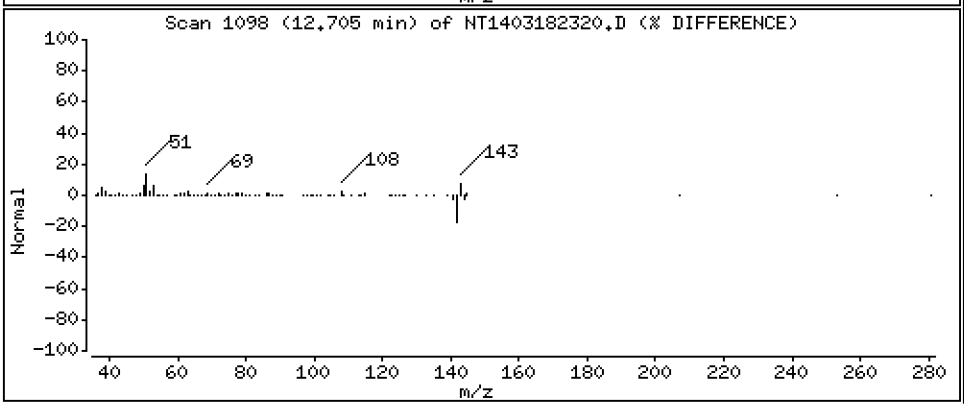












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

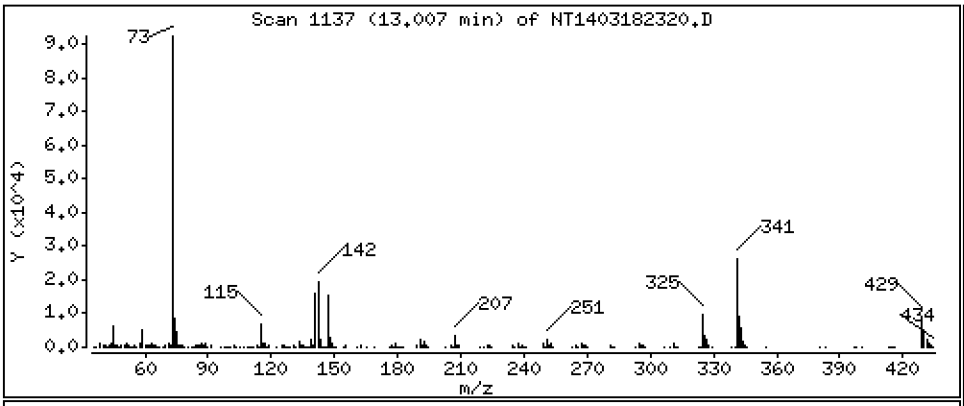
Operator: JGR

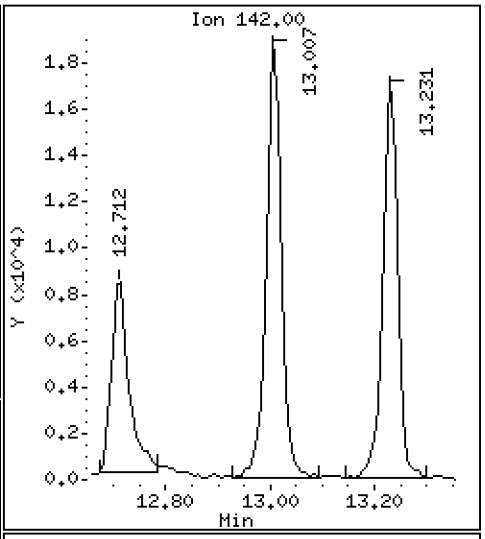
Column phase: ZB-5msi

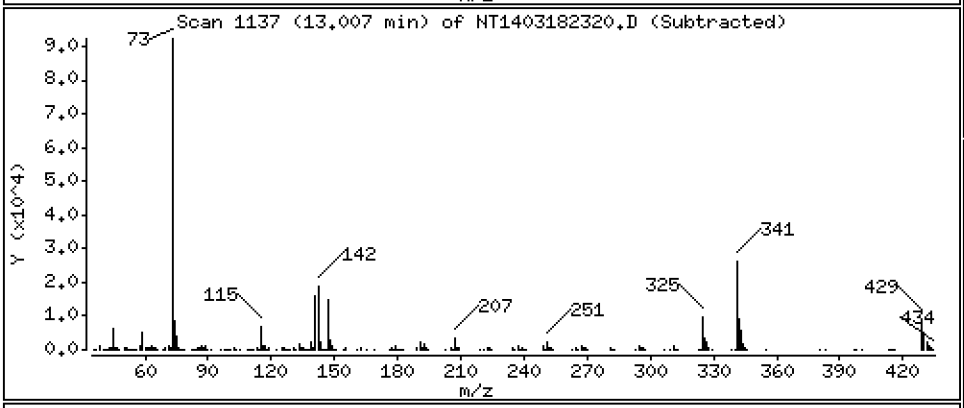
Column diameter: 0.25

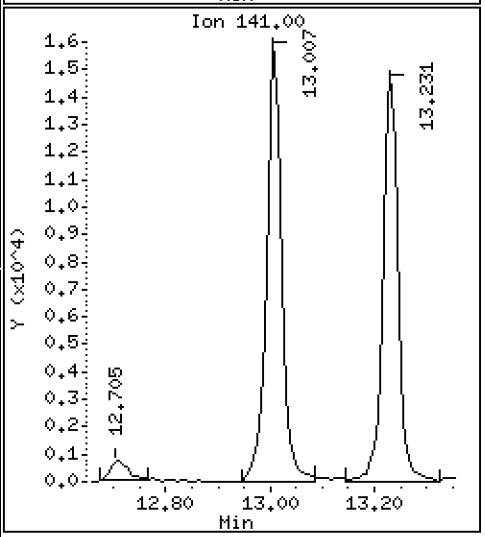
32 2-Methylnaphthalene

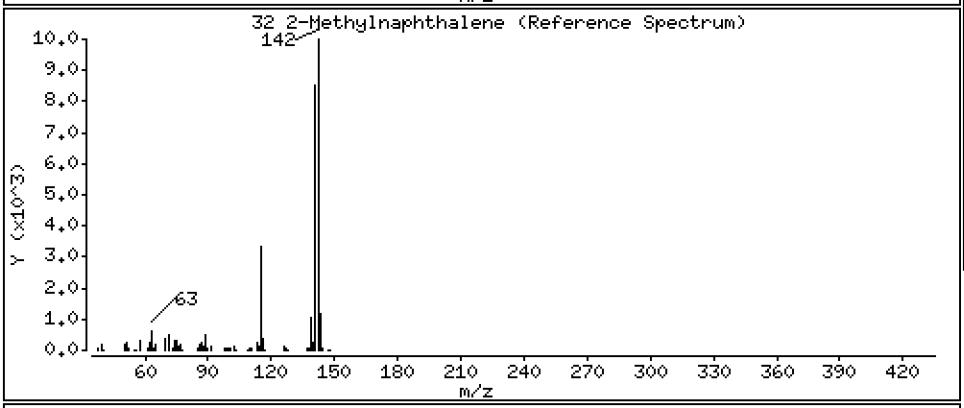
Concentration: 0.2009 ug/mL

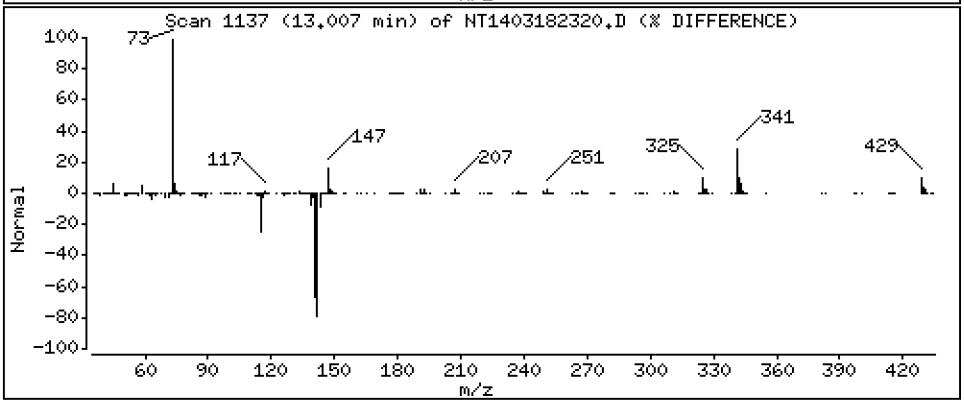












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

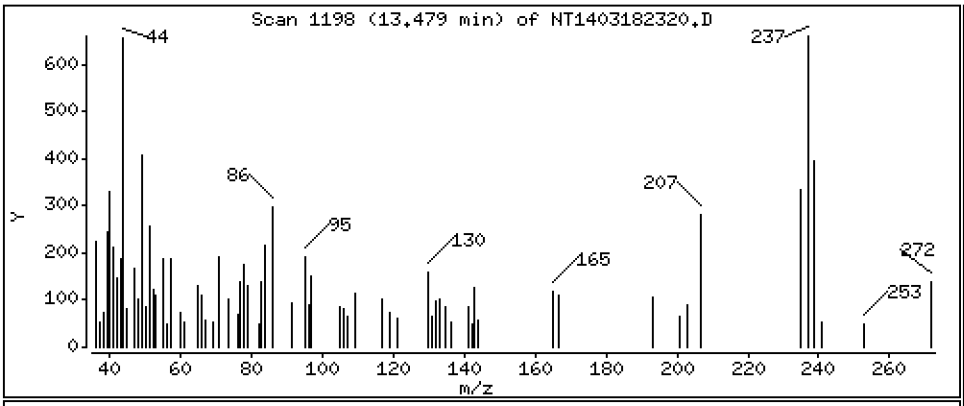
Operator: JGR

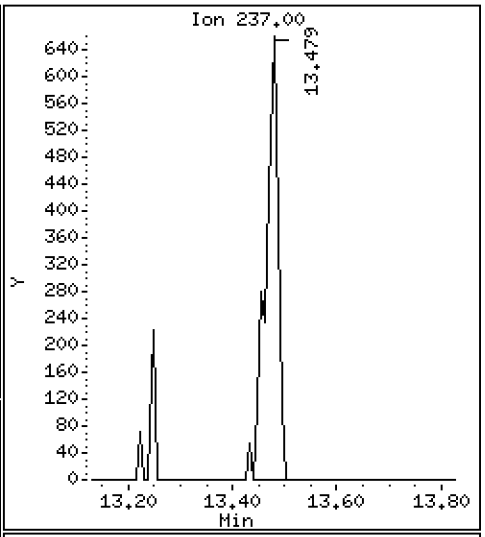
Column phase: ZB-5msi

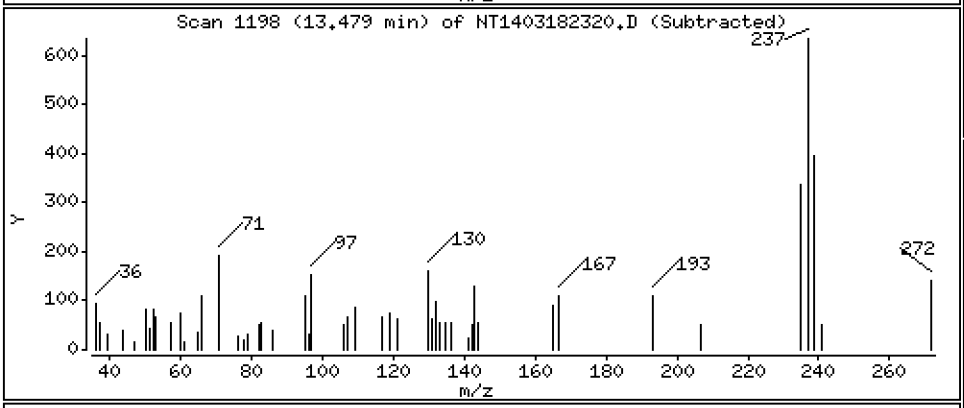
Column diameter: 0.25

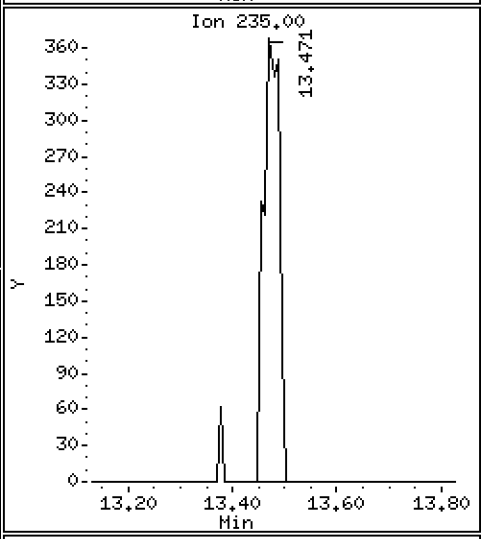
33 Hexachlorocyclopentadiene

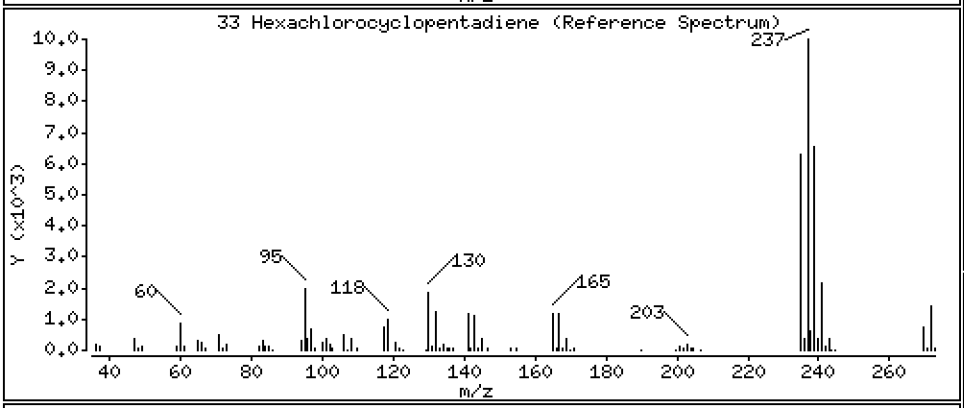
Concentration: 0.02526 ug/mL

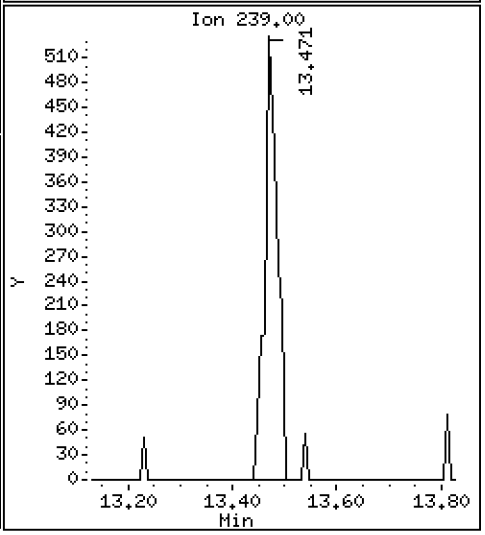


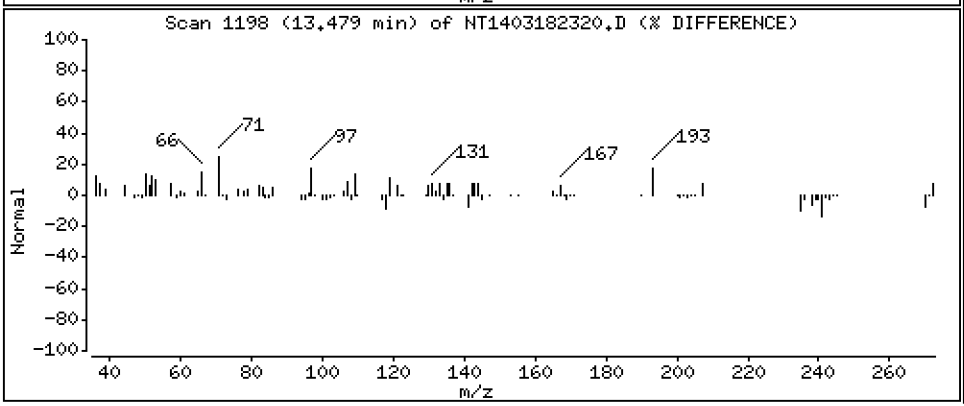












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

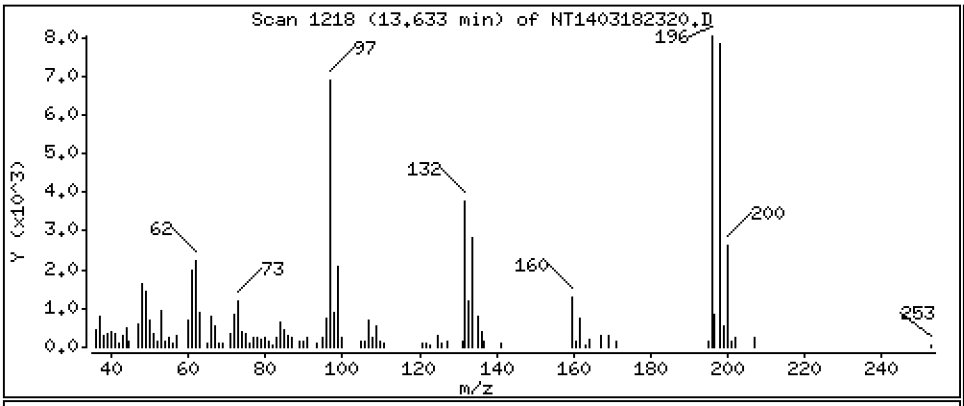
Operator: JGR

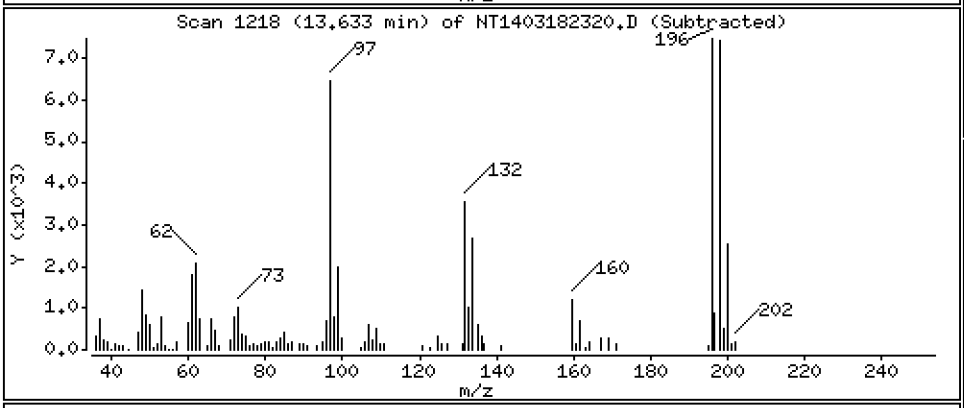
Column phase: ZB-5msi

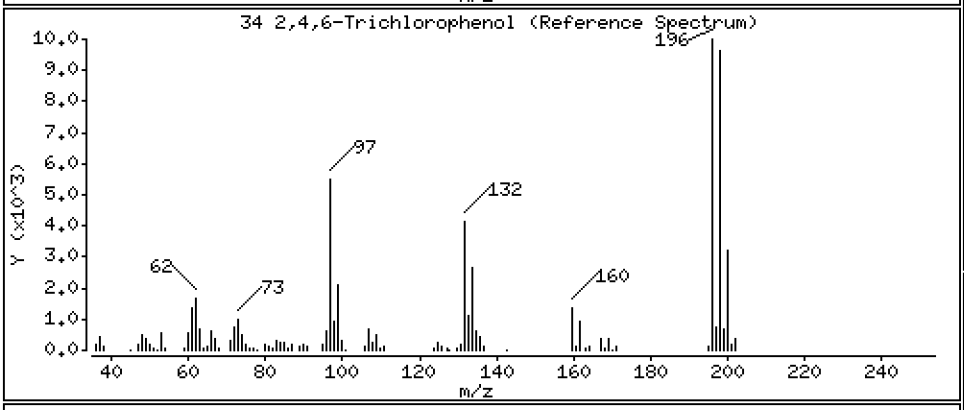
Column diameter: 0.25

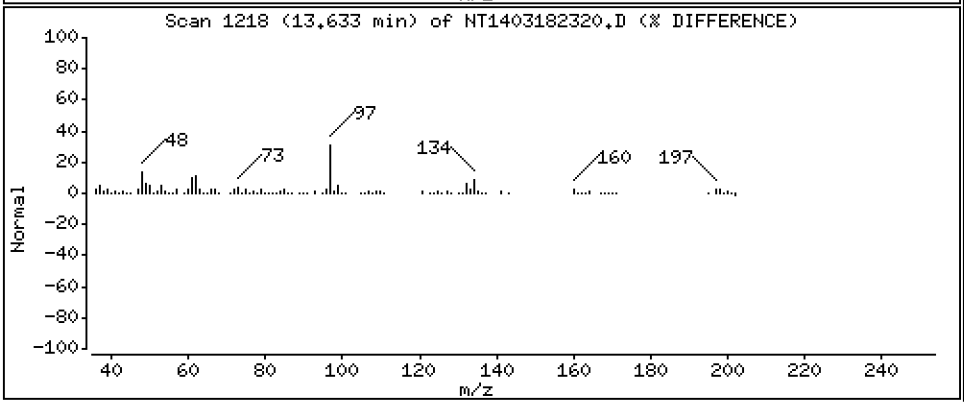
34 2,4,6-Trichlorophenol

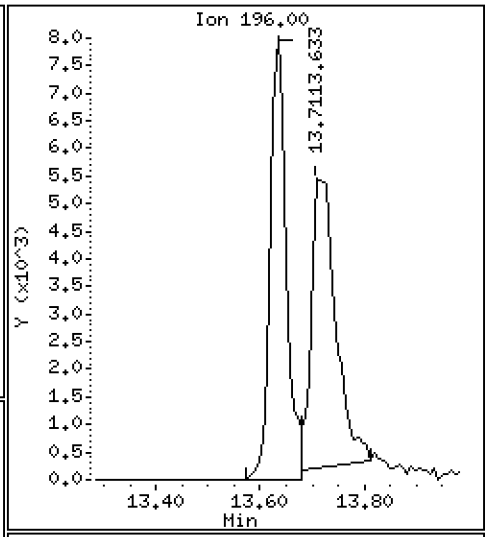
Concentration: 0.3390 ug/mL

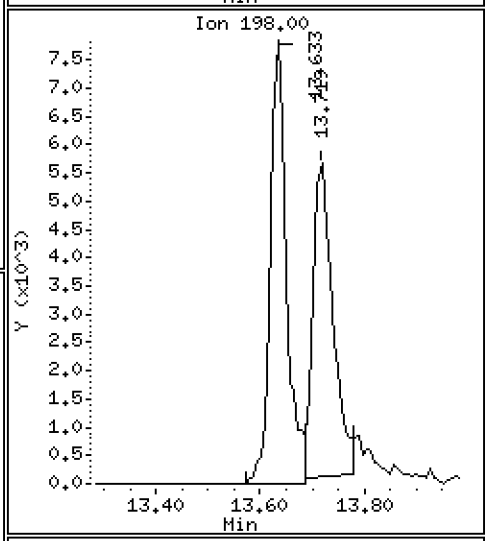


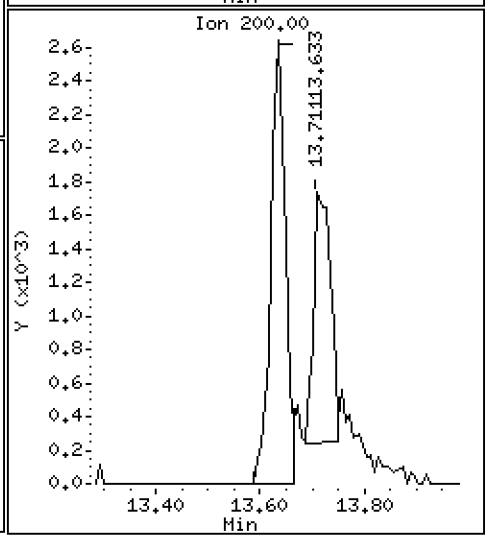












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

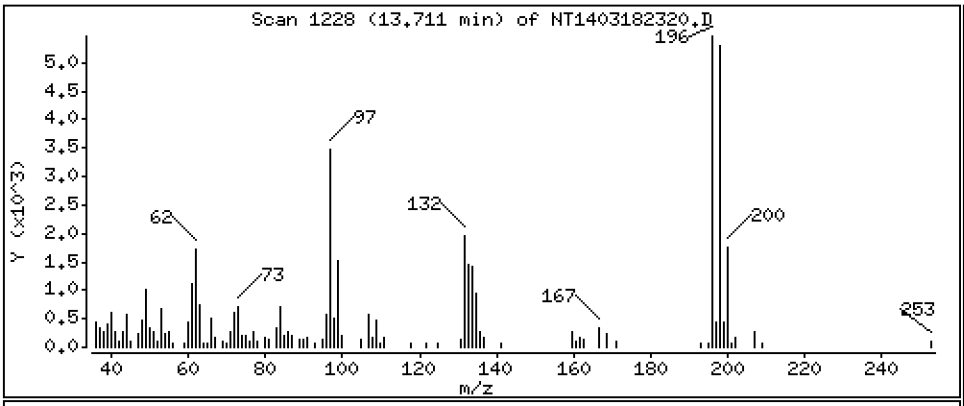
Operator: JGR

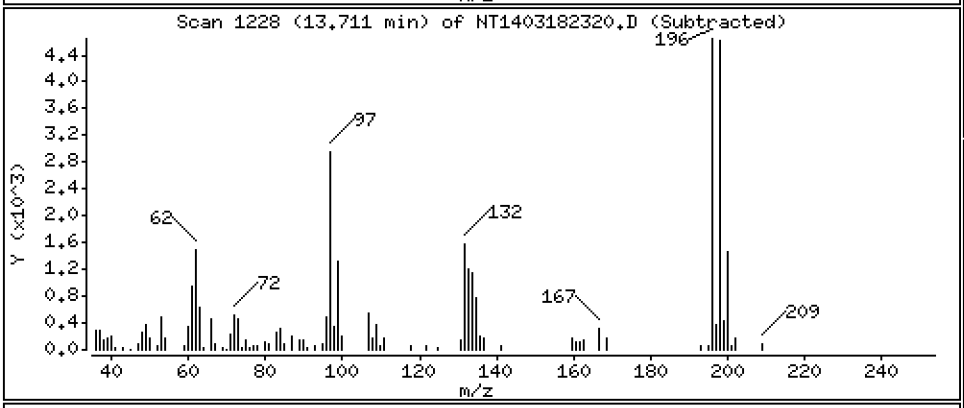
Column phase: ZB-5msi

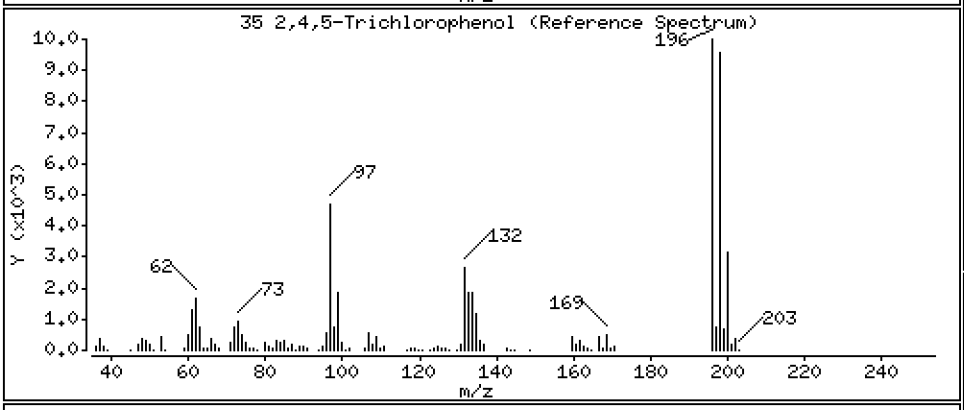
Column diameter: 0.25

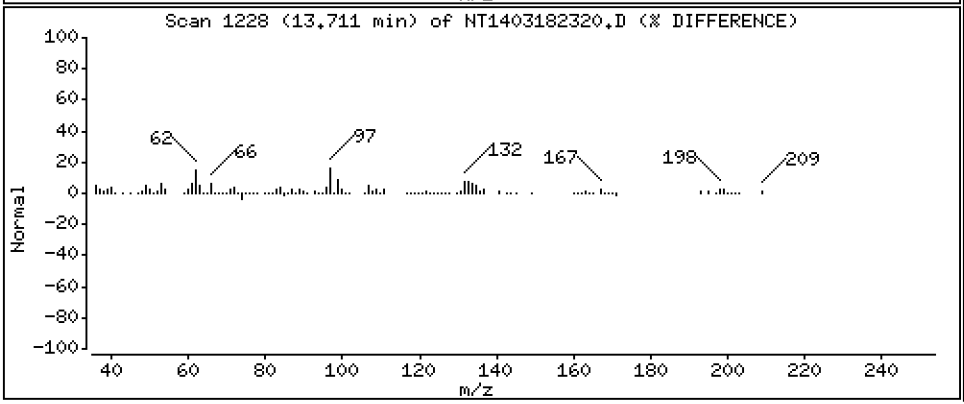
35 2,4,5-Trichlorophenol

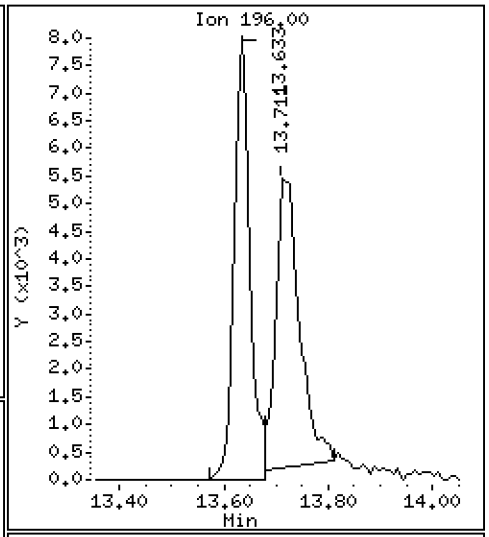
Concentration: 0.3283 ug/mL

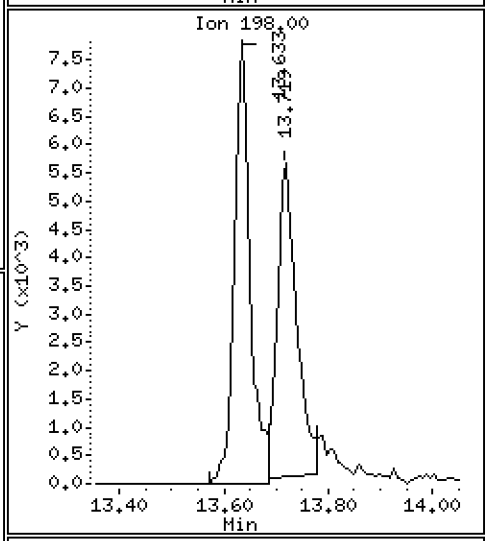


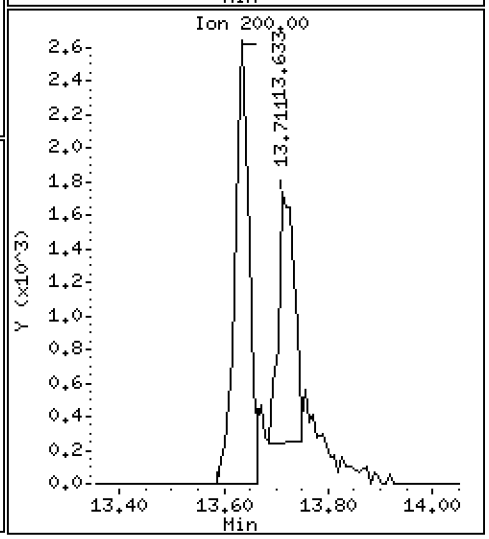












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

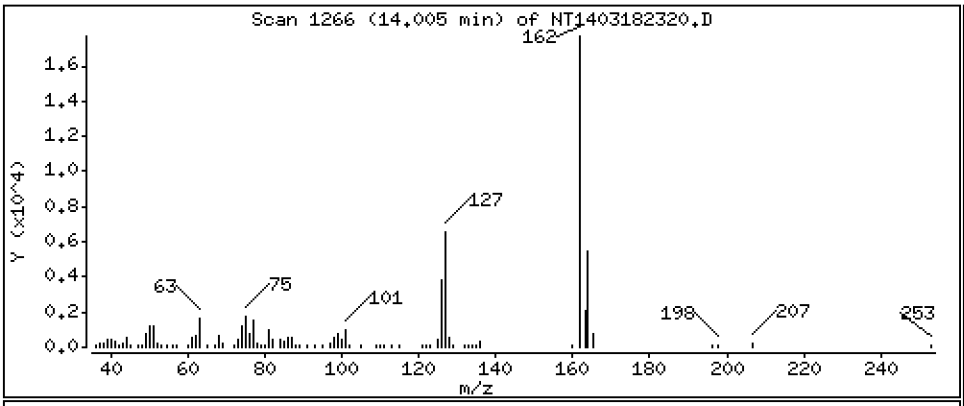
Operator: JGR

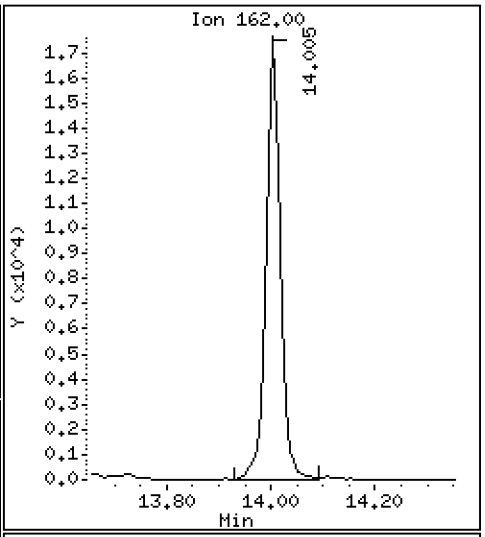
Column phase: ZB-5msi

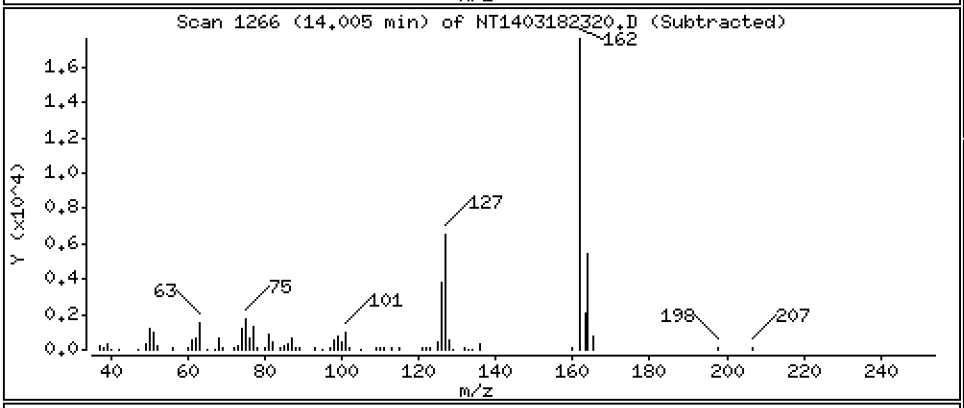
Column diameter: 0.25

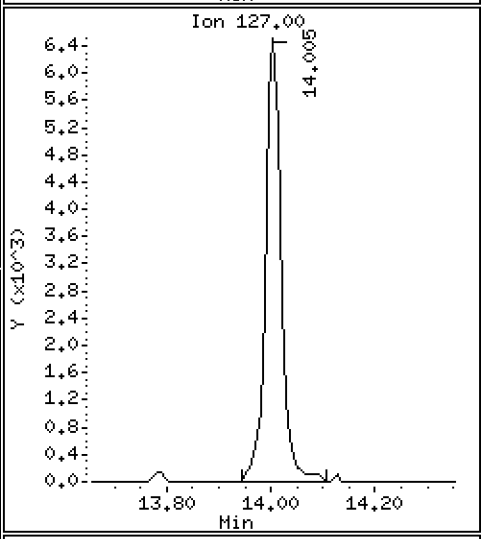
37 2-Chloronaphthalene

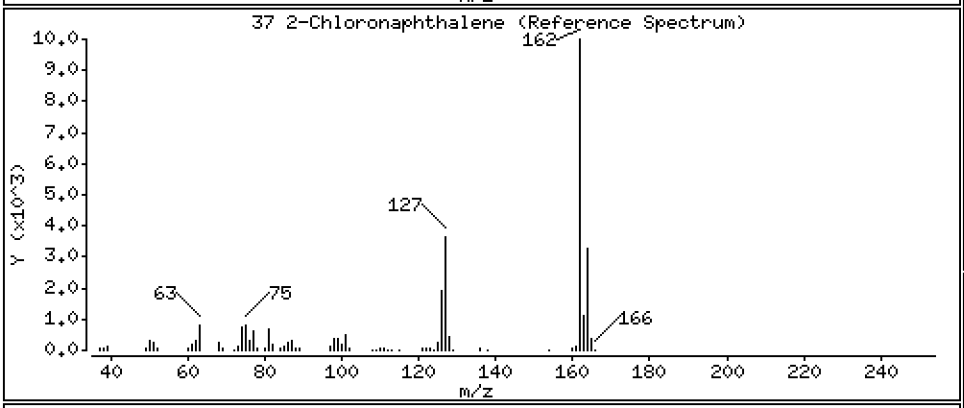
Concentration: 0.2094 ug/mL

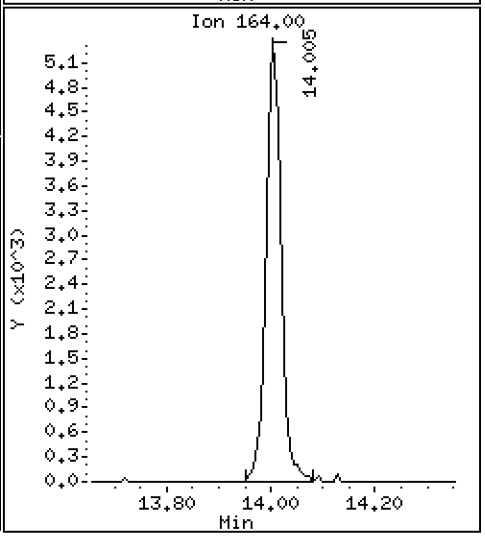


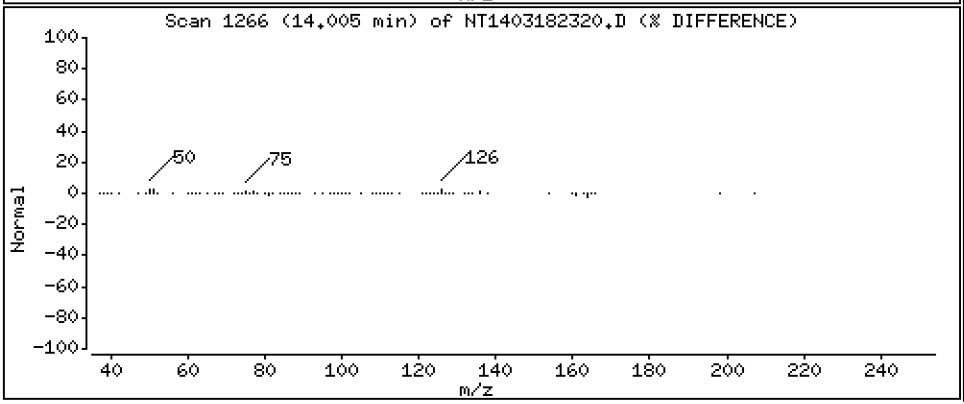












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

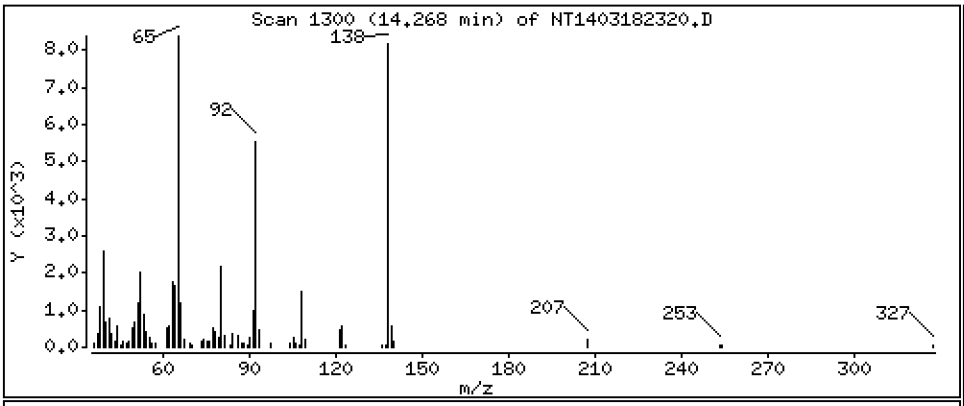
Operator: JGR

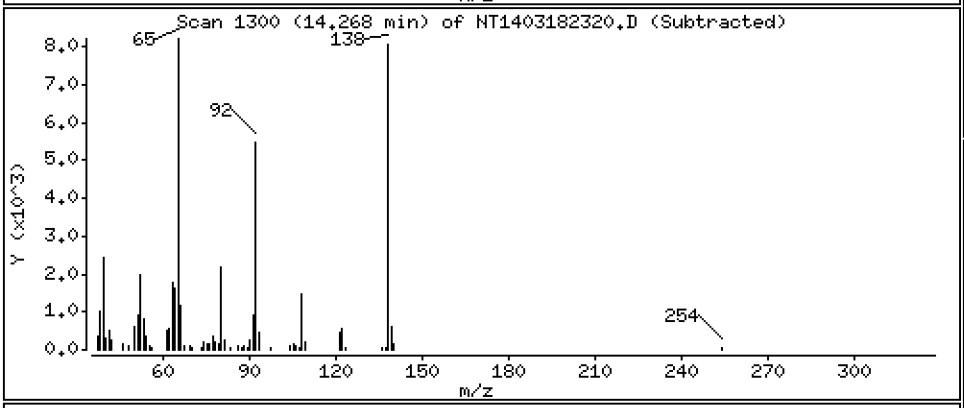
Column phase: ZB-5msi

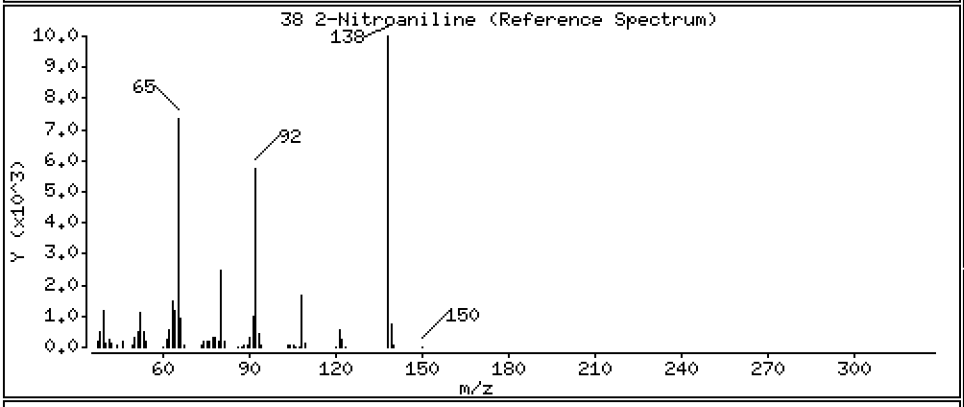
Column diameter: 0.25

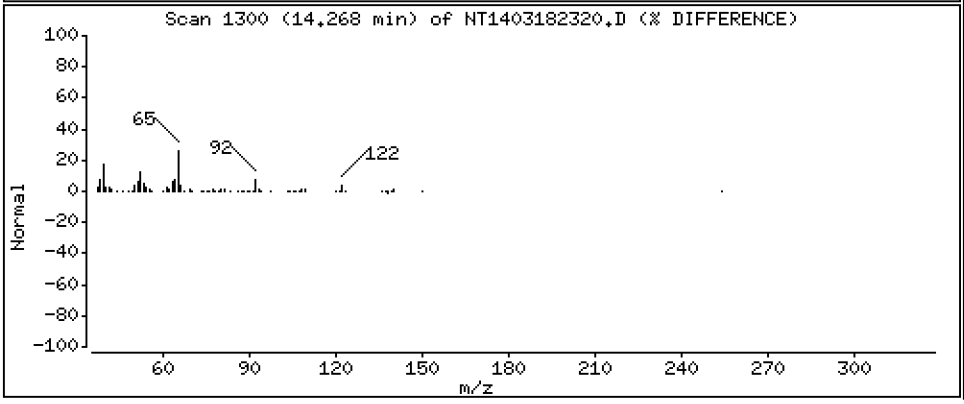
38 2-Nitroaniline

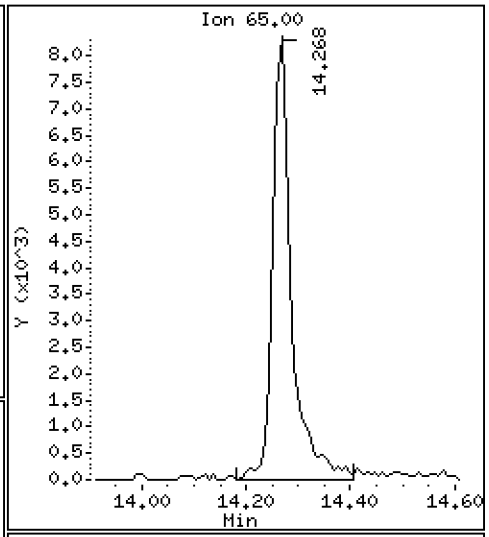
Concentration: 0.3533 ug/mL

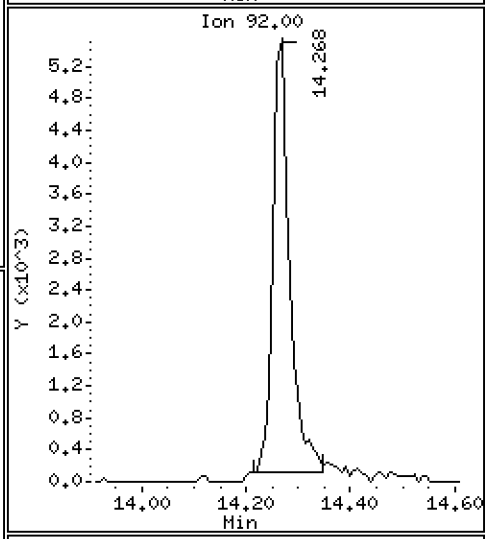


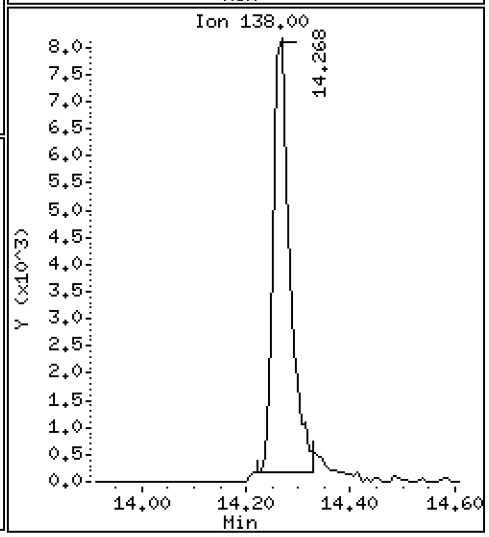












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

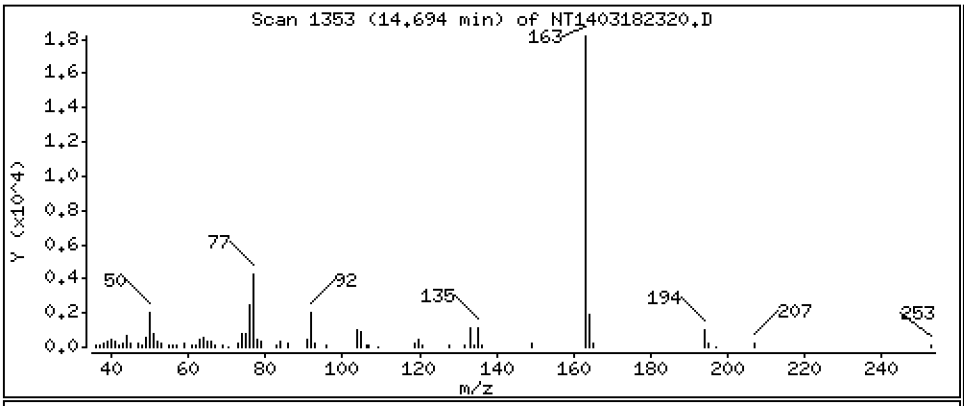
Operator: JGR

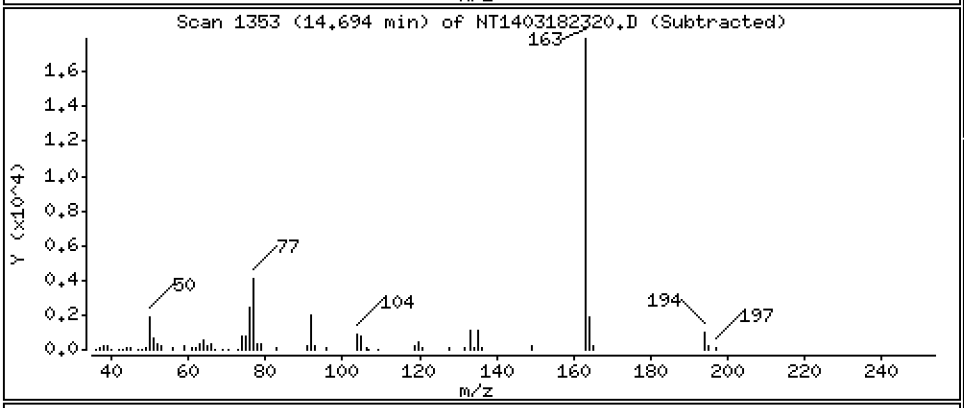
Column phase: ZB-5msi

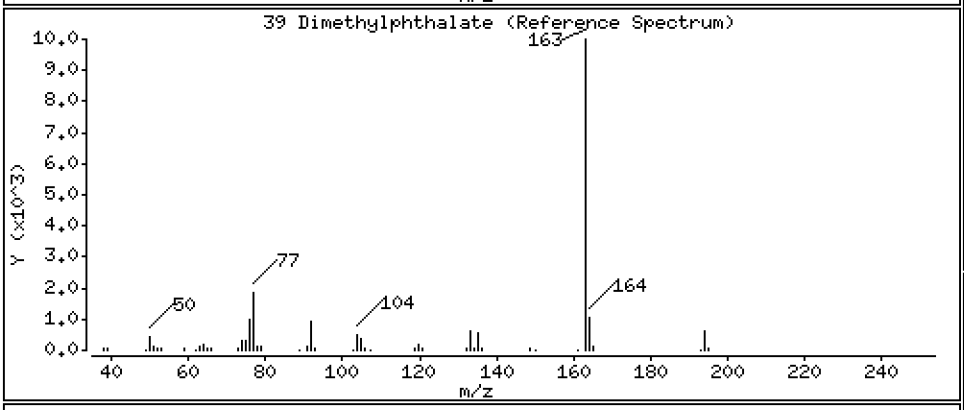
Column diameter: 0.25

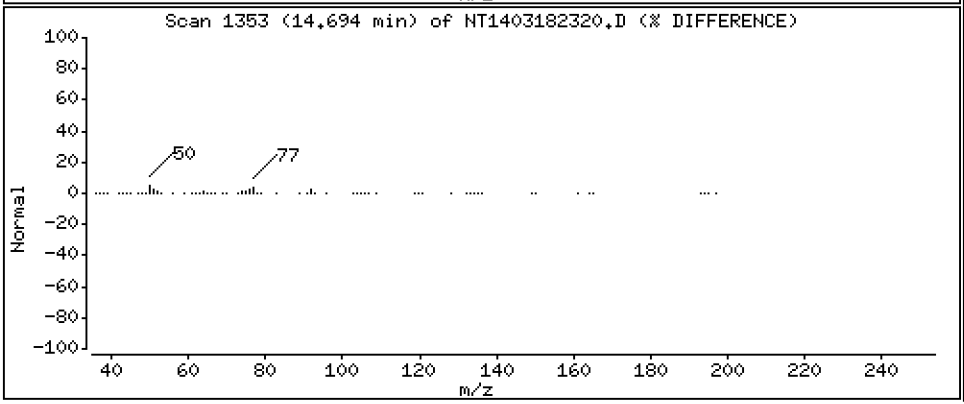
39 Dimethylphthalate

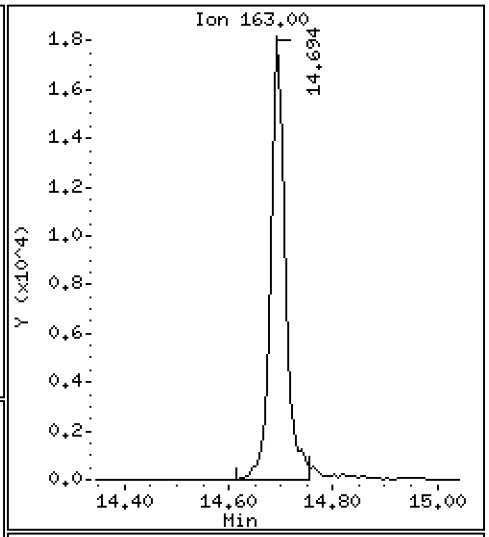
Concentration: 0.2079 ug/mL

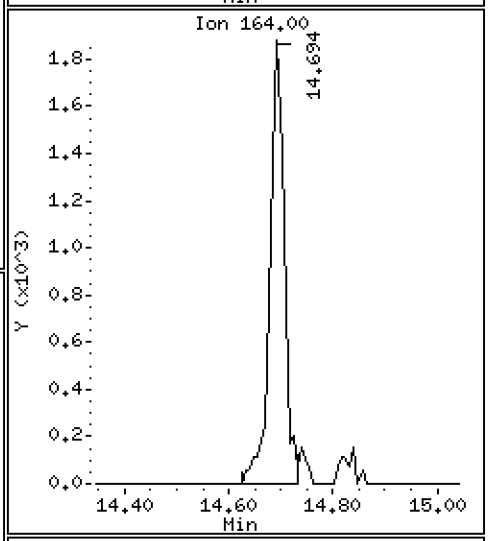


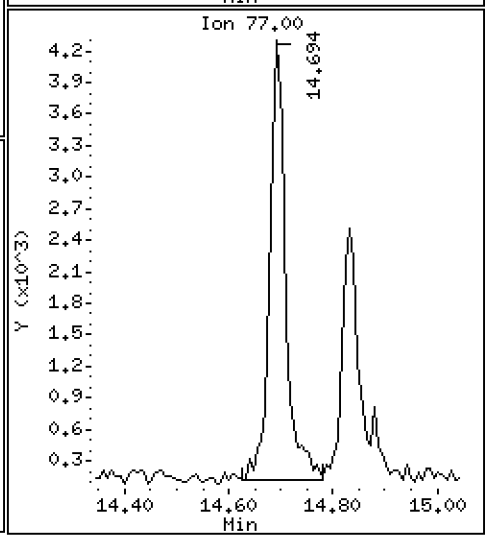












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

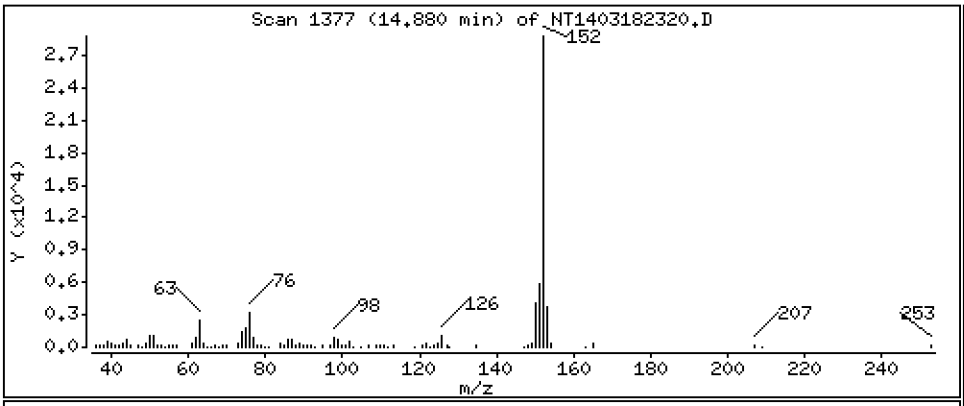
Operator: JGR

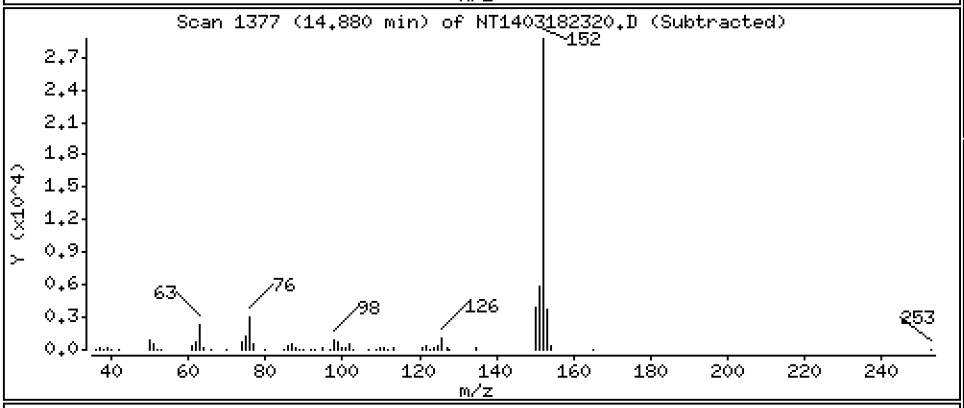
Column phase: ZB-5msi

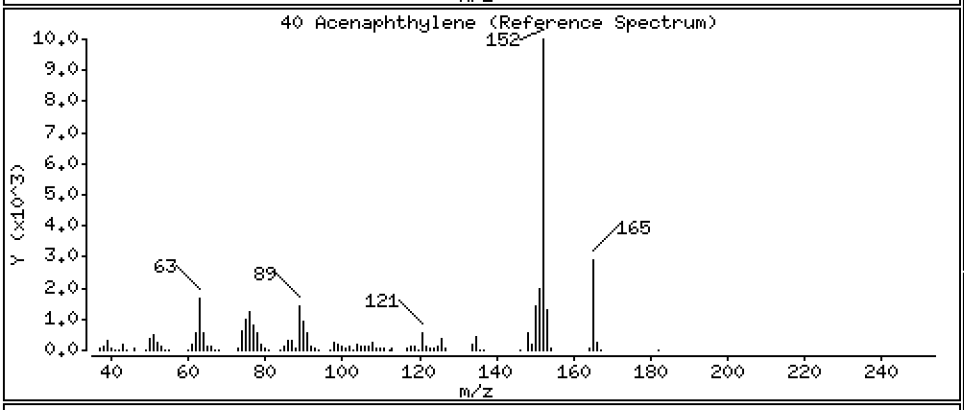
Column diameter: 0.25

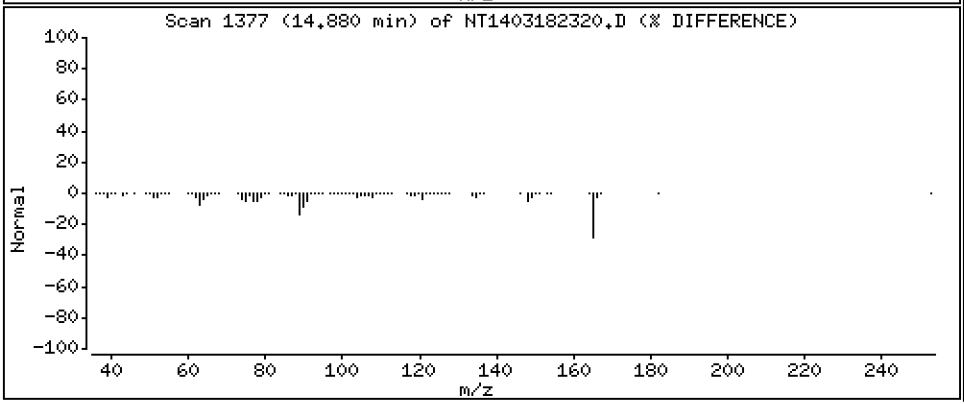
40 Acenaphthylene

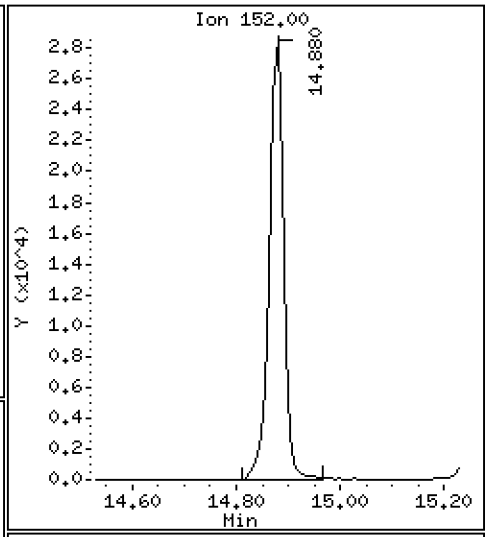
Concentration: 0.2063 ug/mL

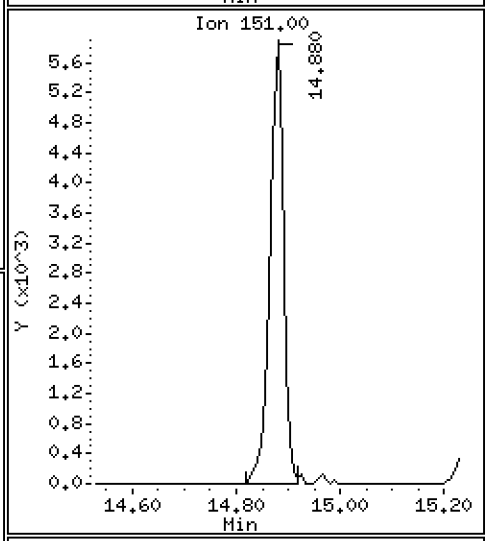


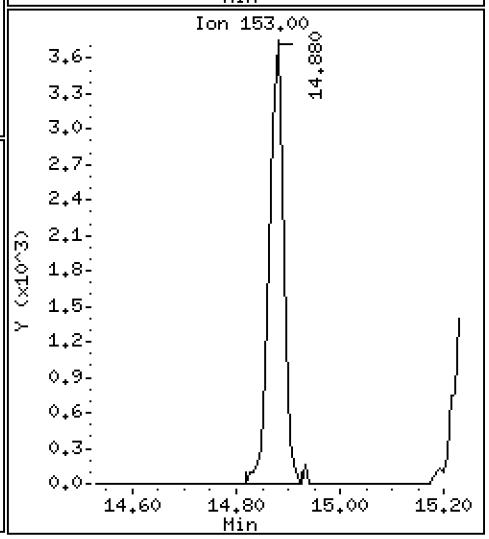












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

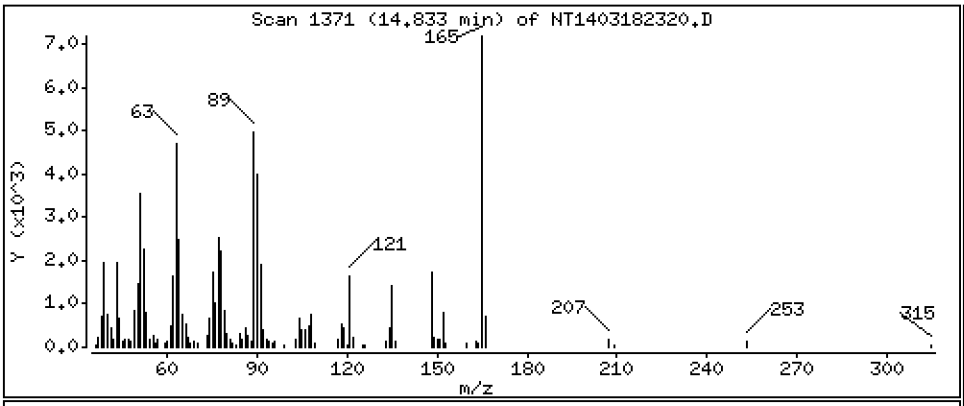
Operator: JGR

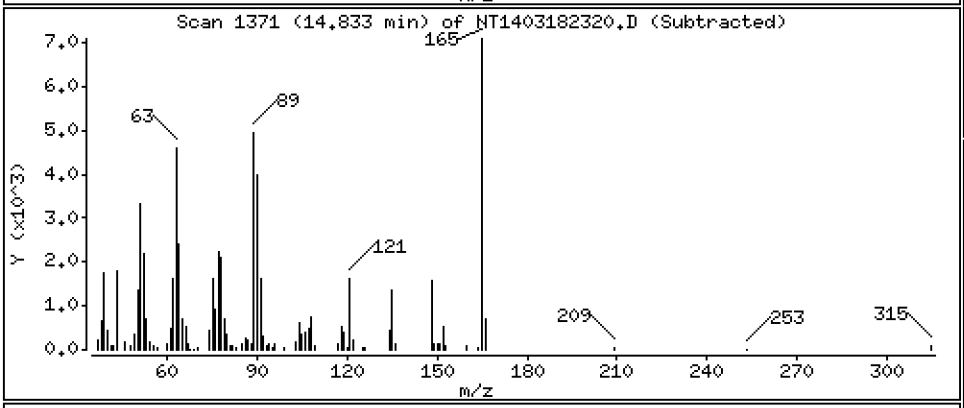
Column phase: ZB-5msi

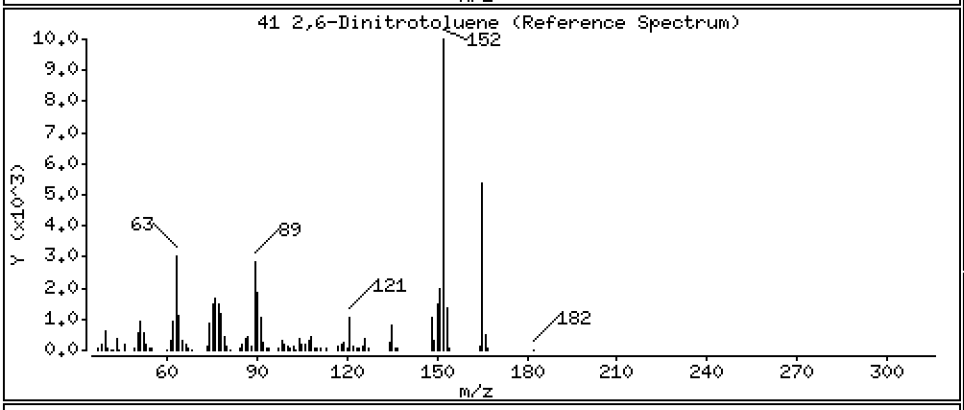
Column diameter: 0.25

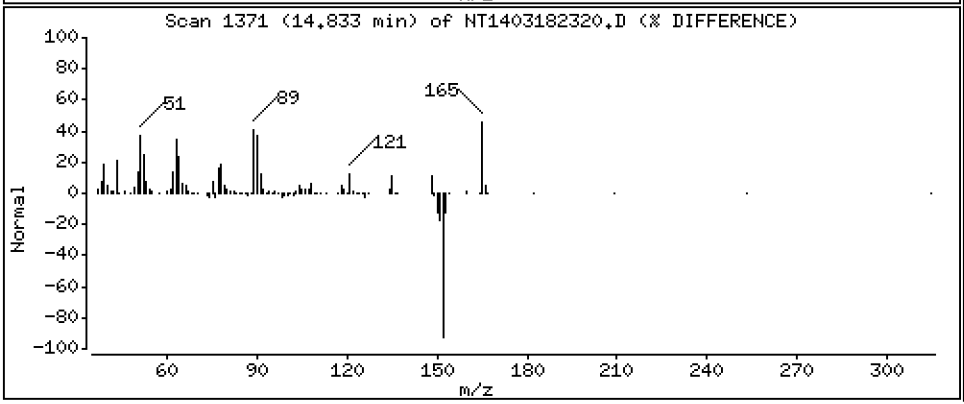
41 2,6-Dinitrotoluene

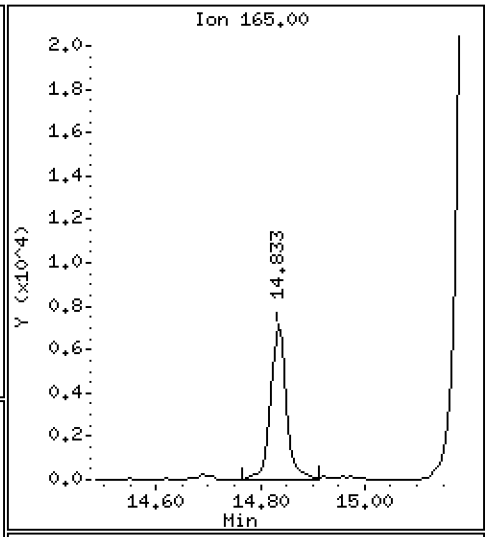
Concentration: 0.3859 ug/mL

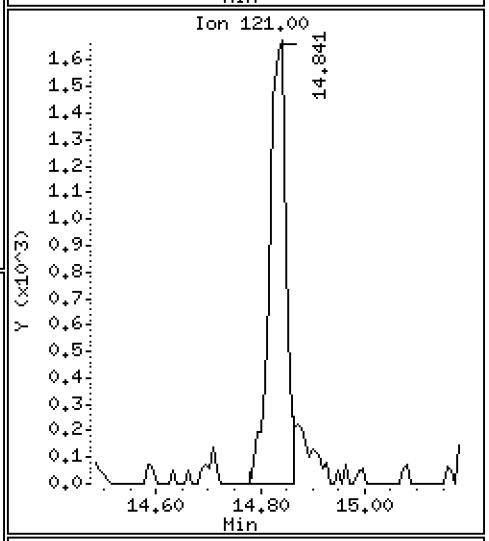


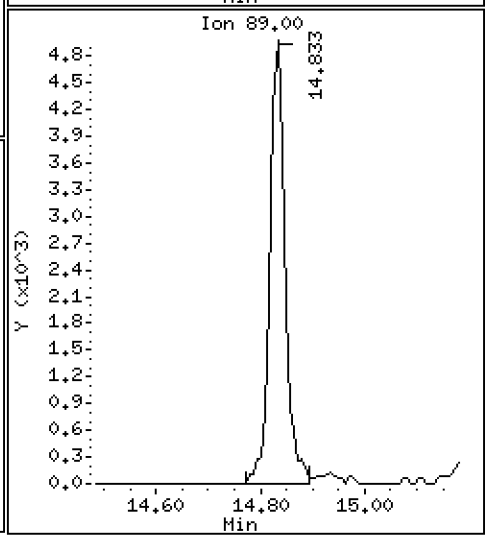












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

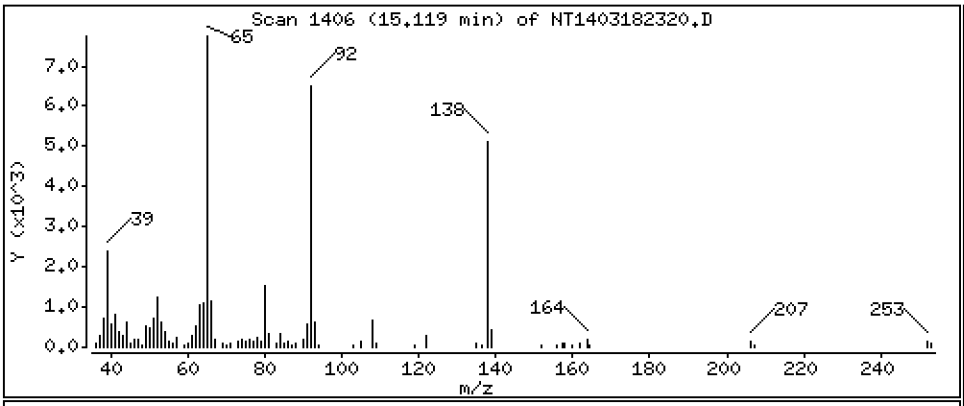
Operator: JGR

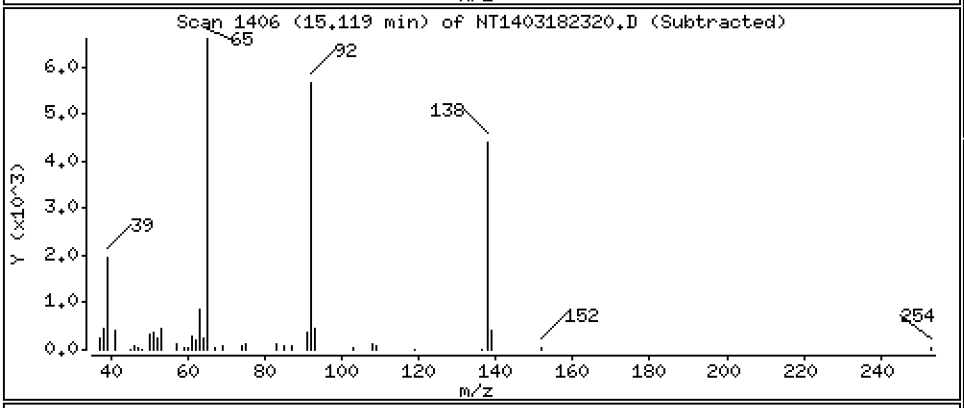
Column phase: ZB-5msi

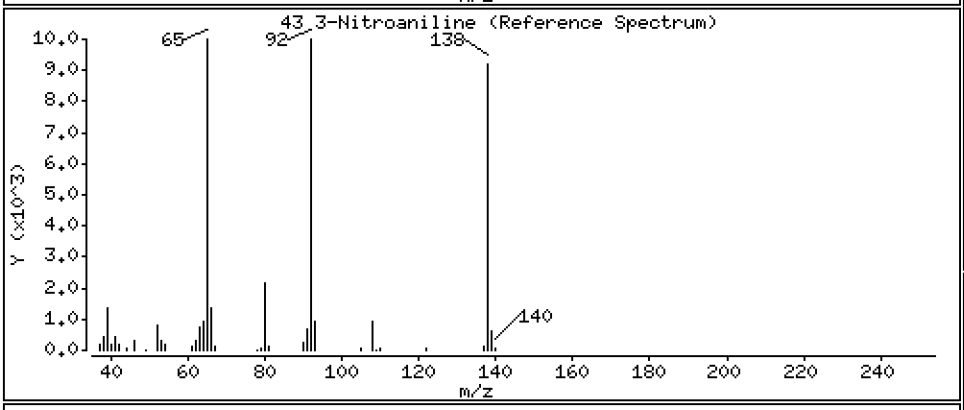
Column diameter: 0.25

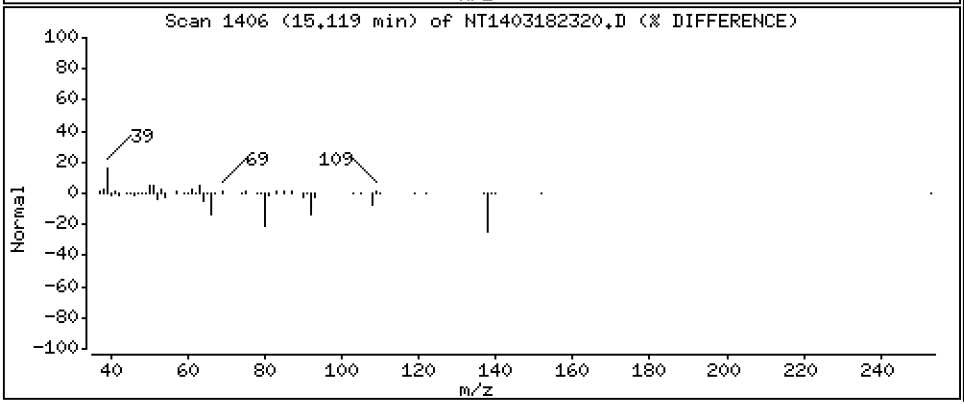
43 3-Nitroaniline

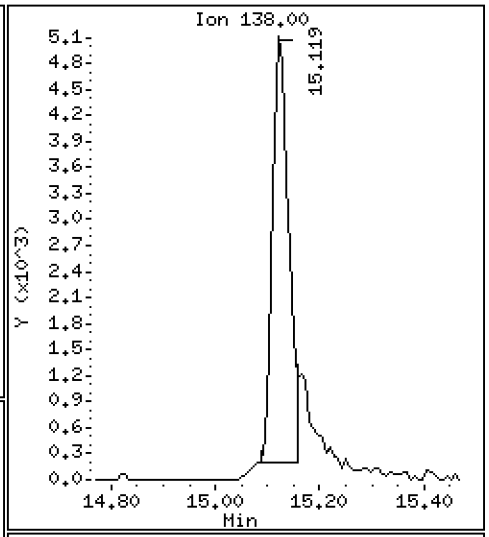
Concentration: 0.2002 ug/mL

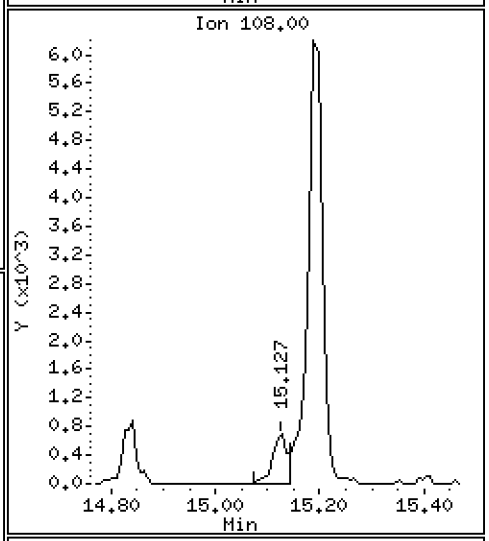


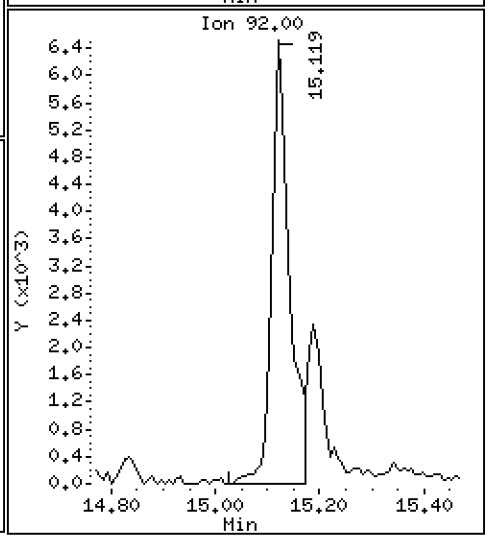












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

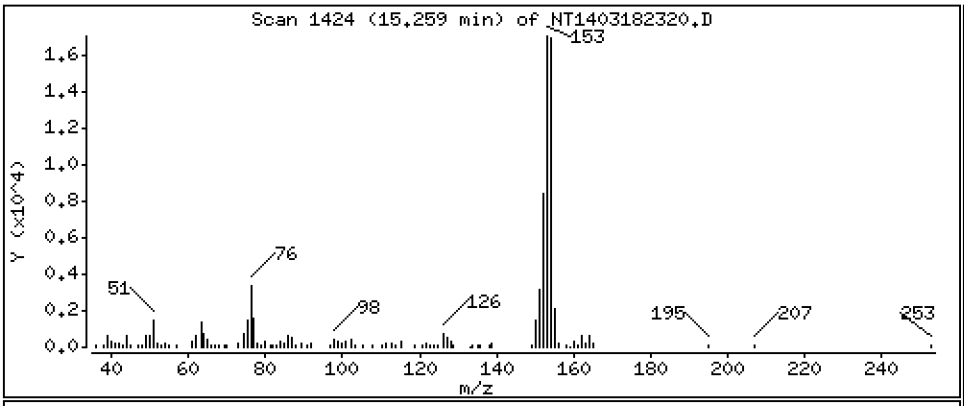
Operator: JGR

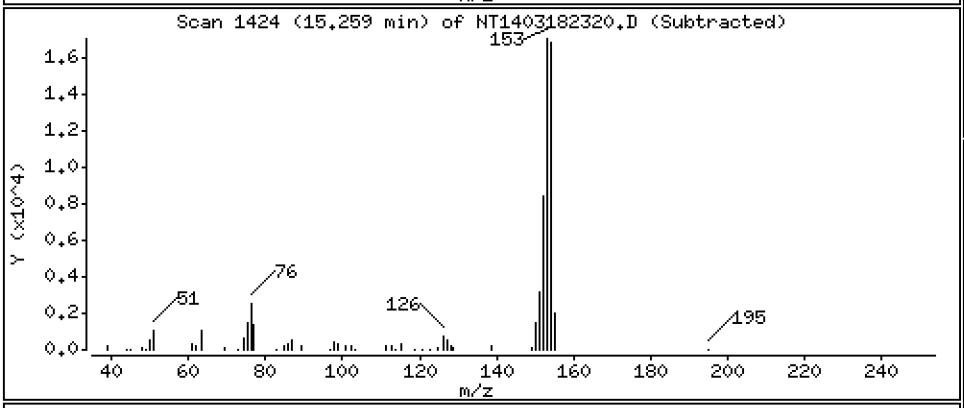
Column phase: ZB-5msi

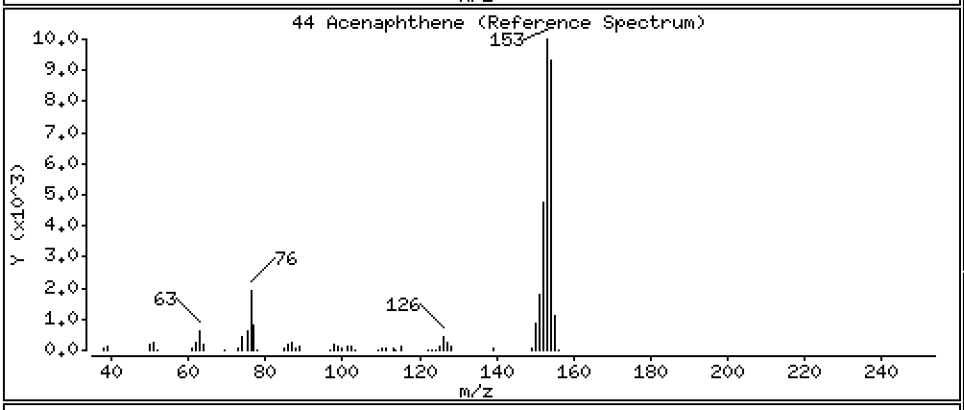
Column diameter: 0.25

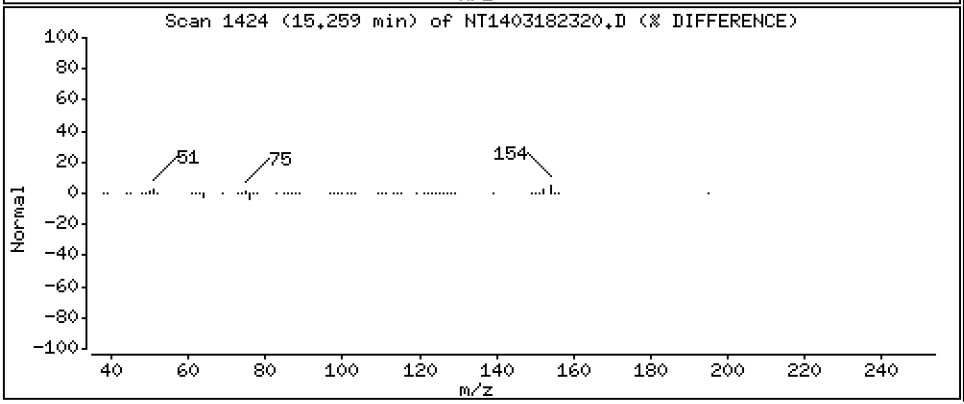
44 Acenaphthene

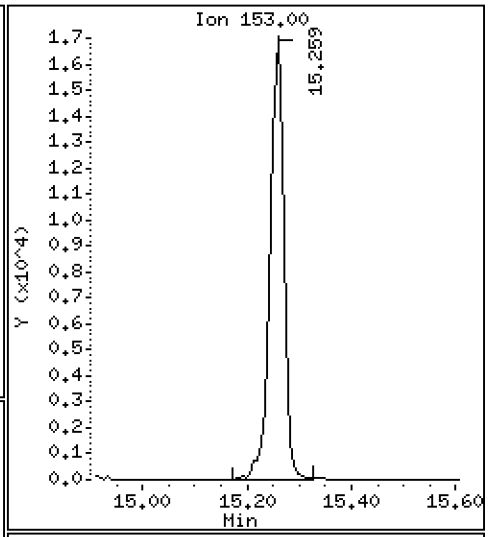
Concentration: 0.2030 ug/mL

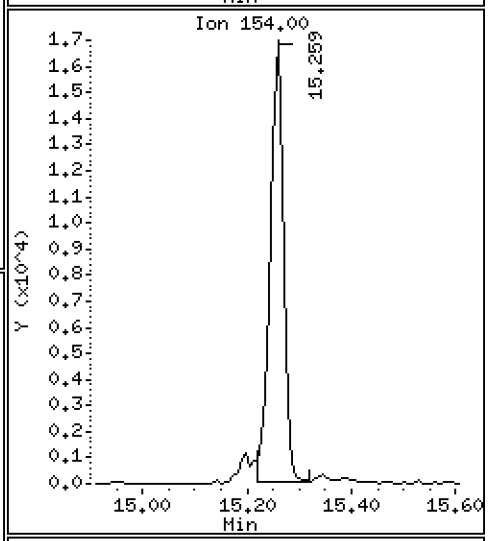


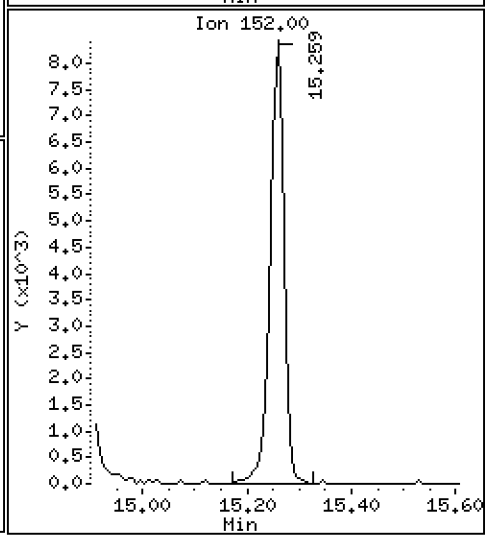












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

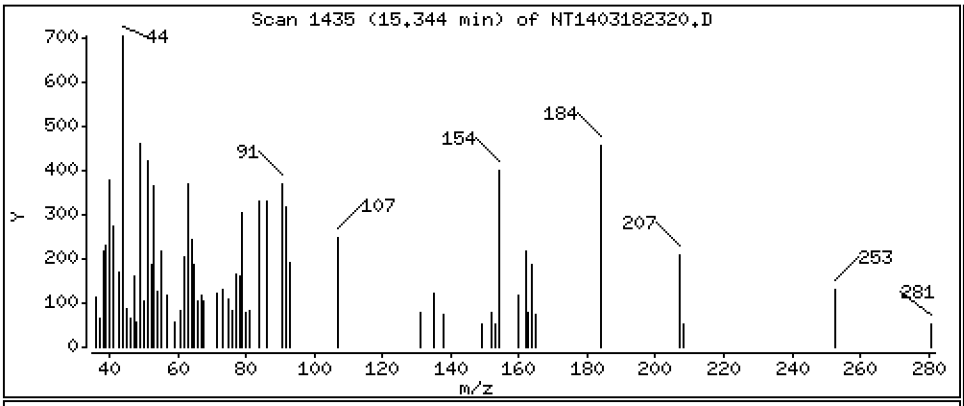
Operator: JGR

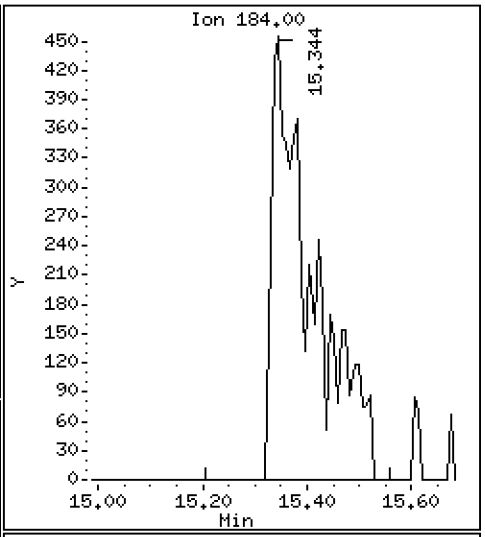
Column phase: ZB-5msi

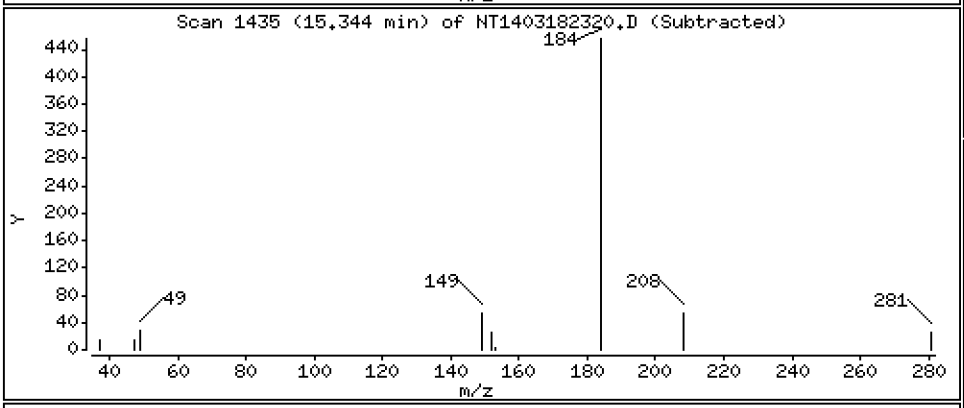
Column diameter: 0.25

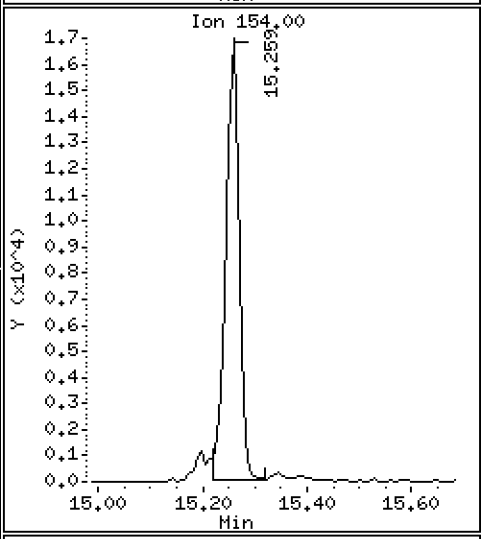
45 2,4-Dinitrophenol

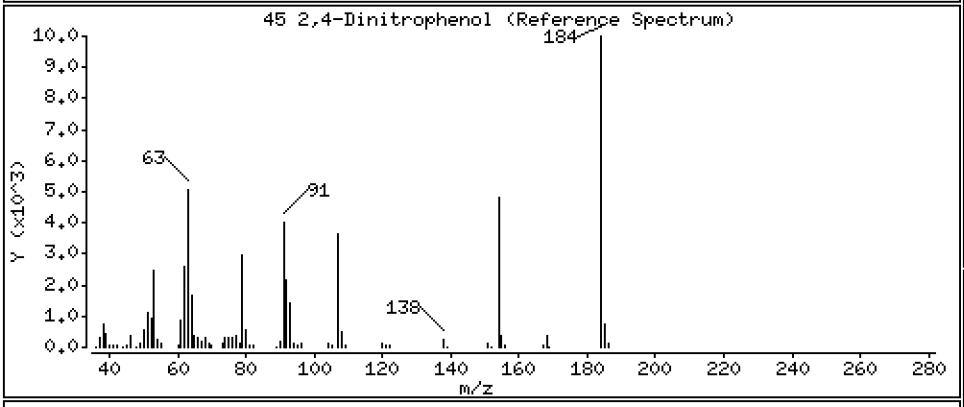
Concentration: 0.08347 ug/mL

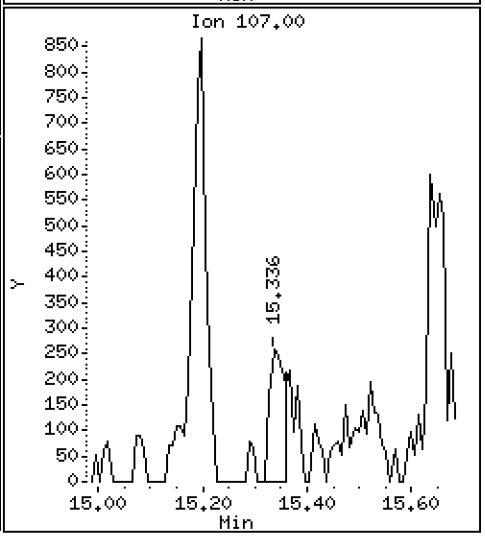


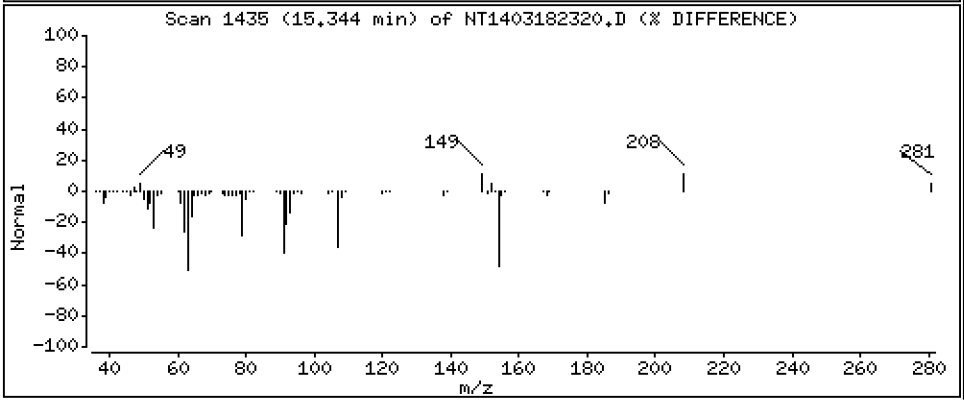












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

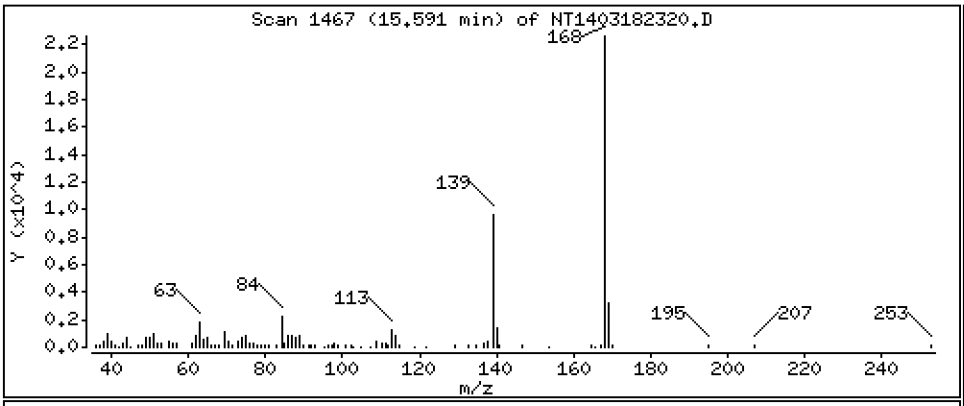
Operator: JGR

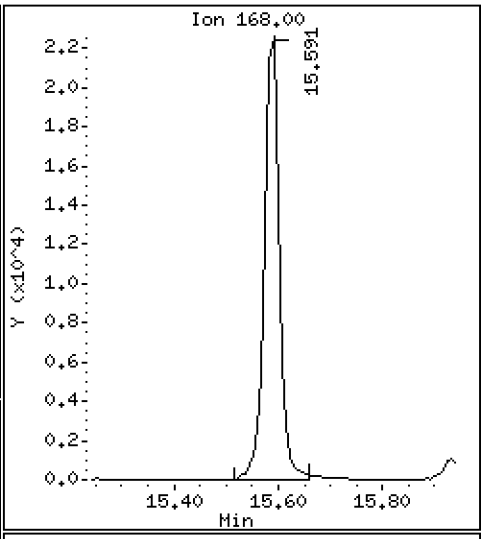
Column phase: ZB-5msi

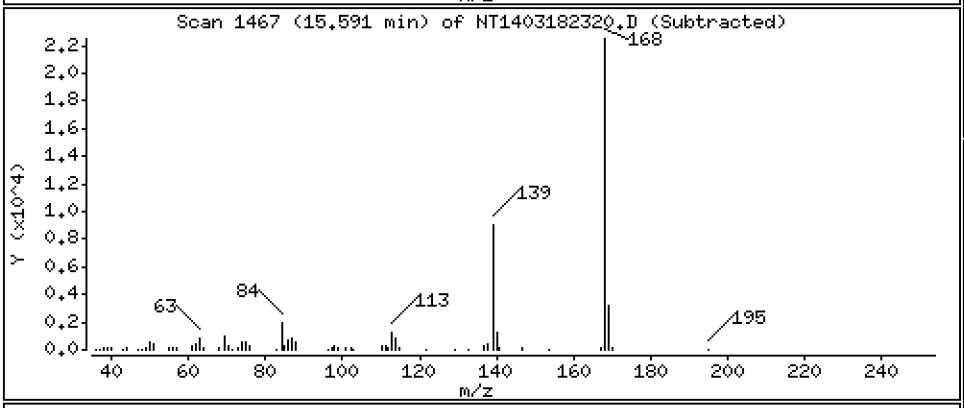
Column diameter: 0.25

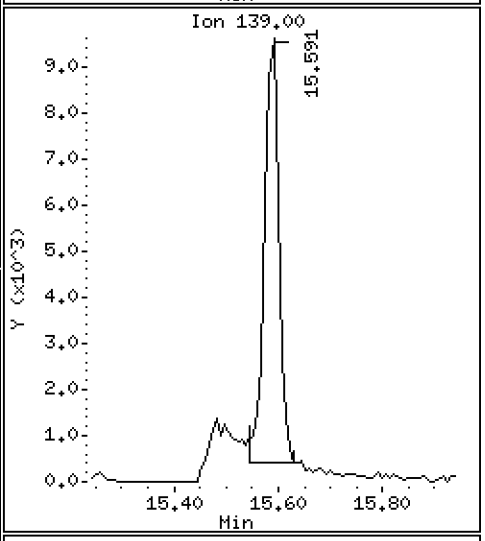
46 Dibenzofuran

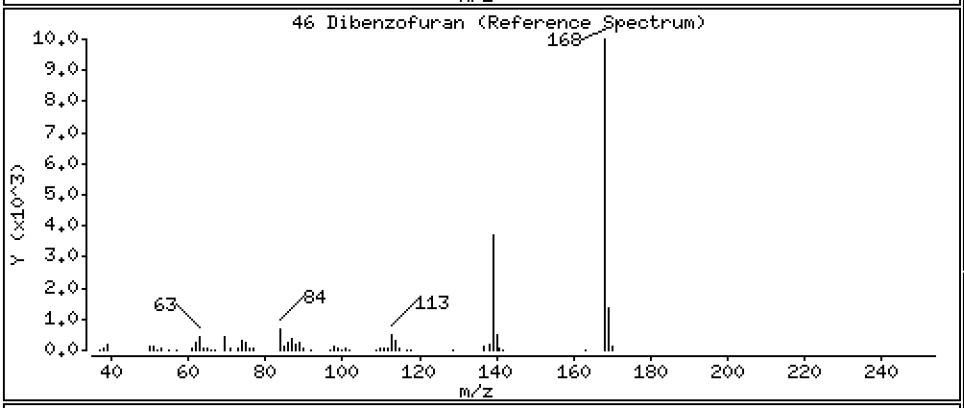
Concentration: 0.2040 ug/mL

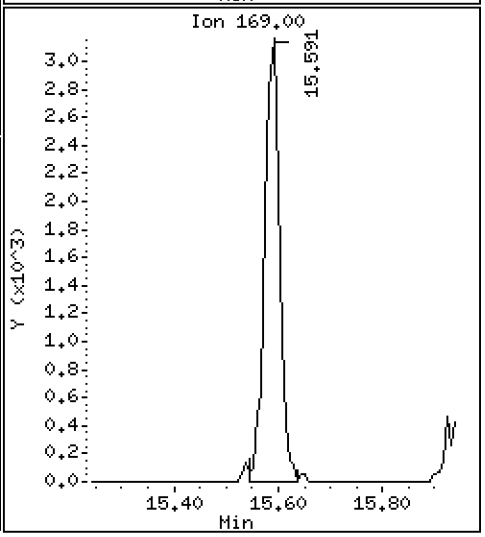


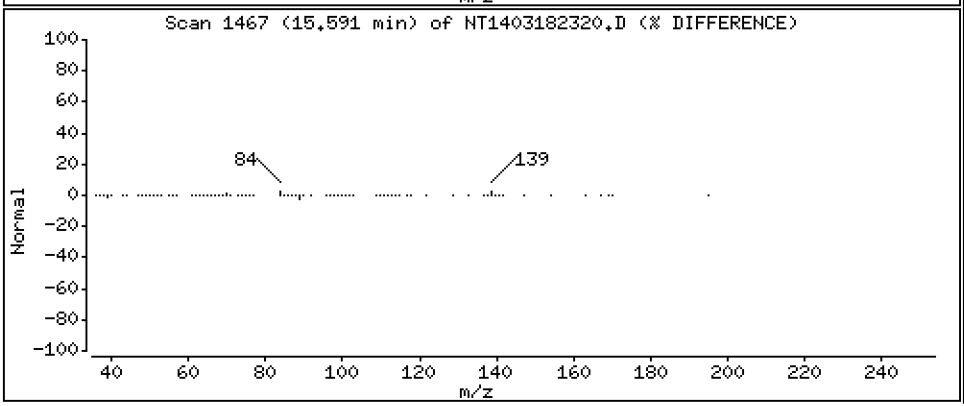












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

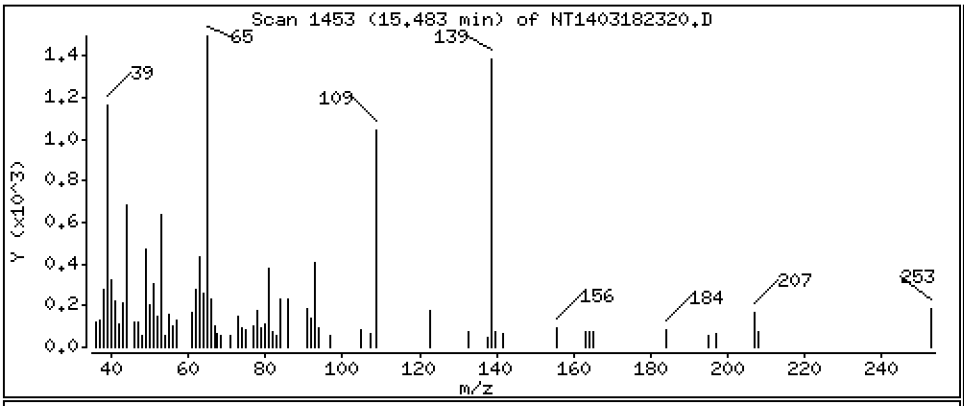
Operator: JGR

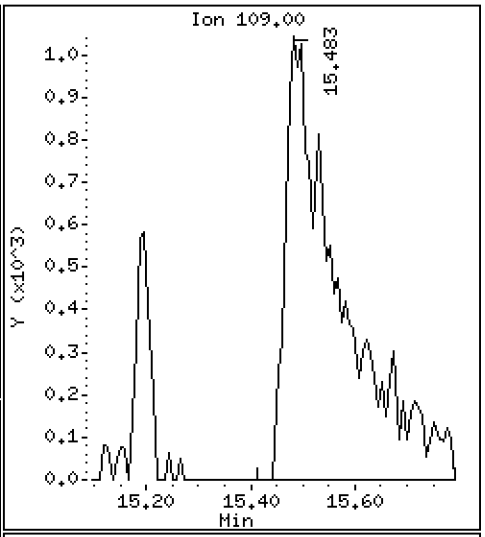
Column phase: ZB-5msi

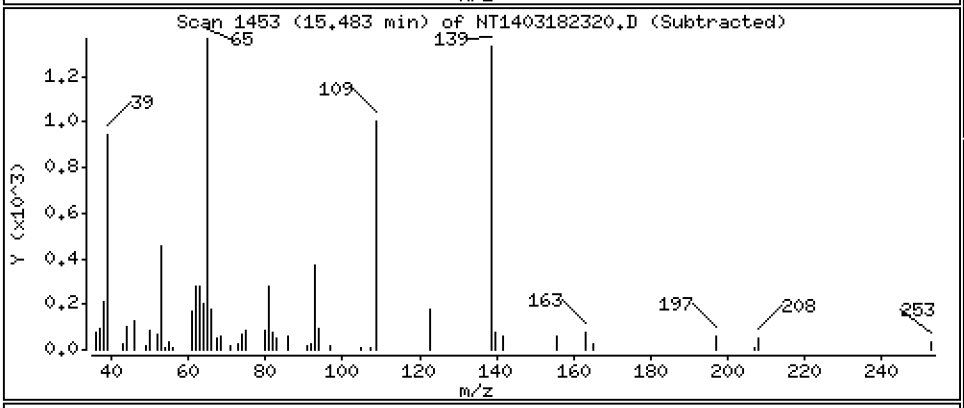
Column diameter: 0.25

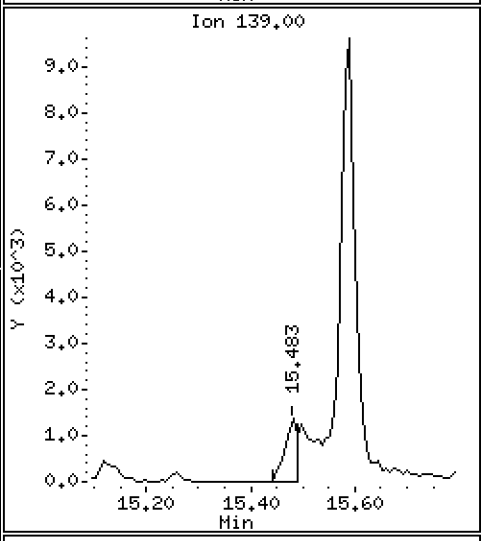
47 4-Nitrophenol

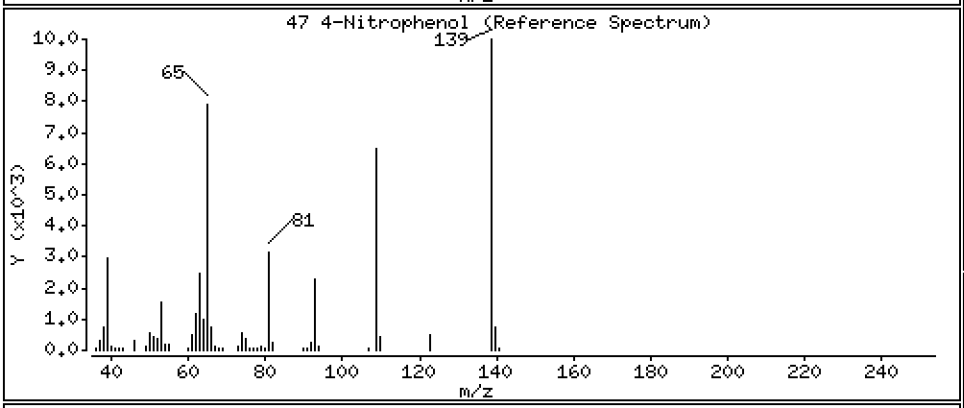
Concentration: 0.2784 ug/mL

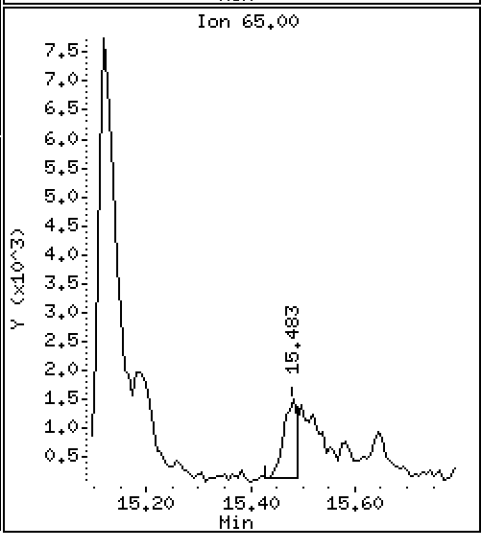


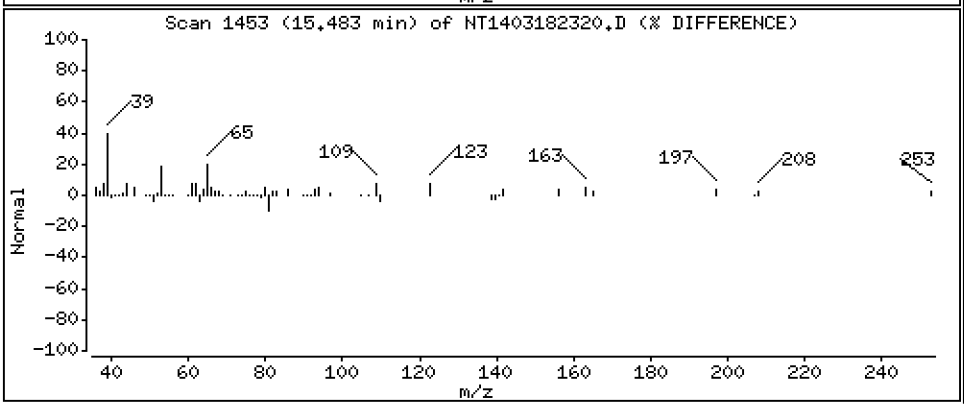












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

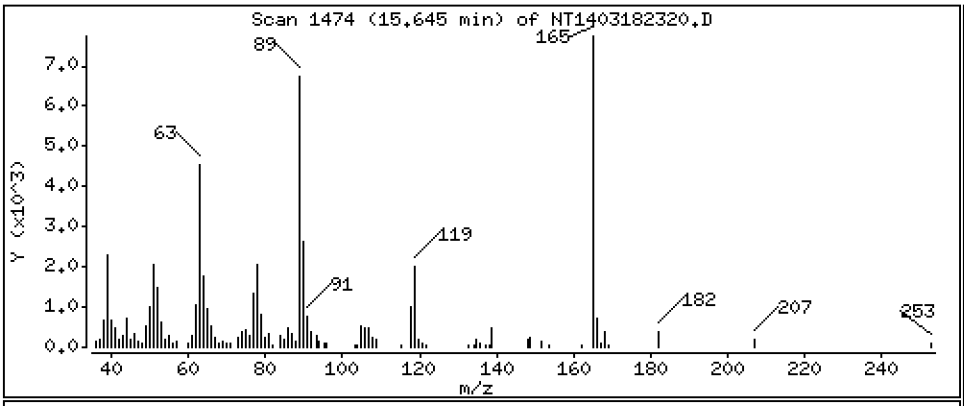
Operator: JGR

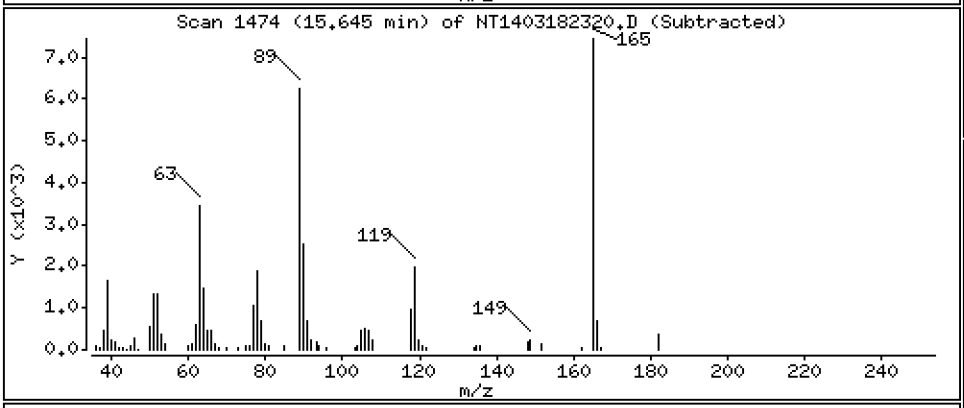
Column phase: ZB-5msi

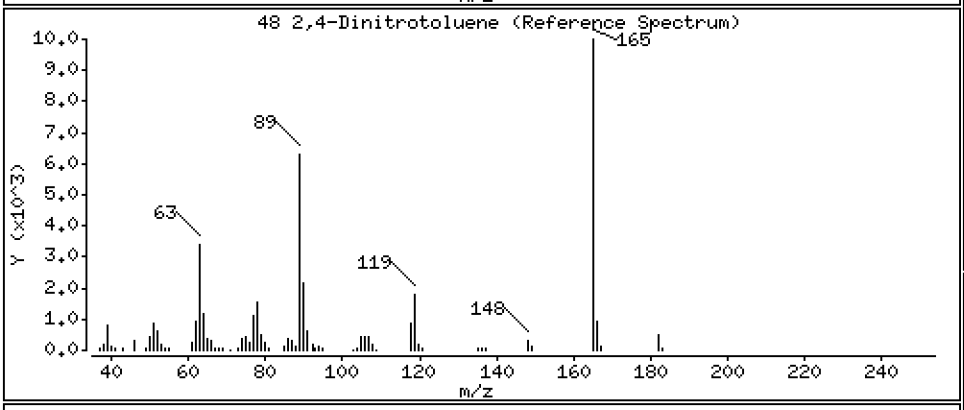
Column diameter: 0.25

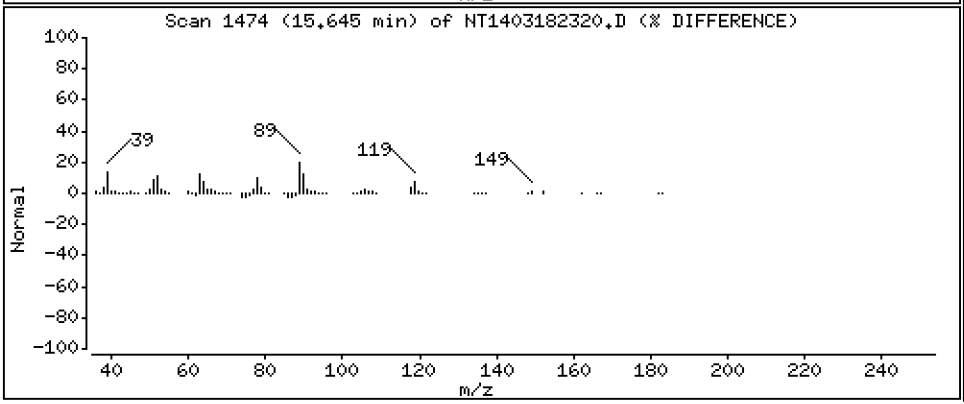
48 2,4-Dinitrotoluene

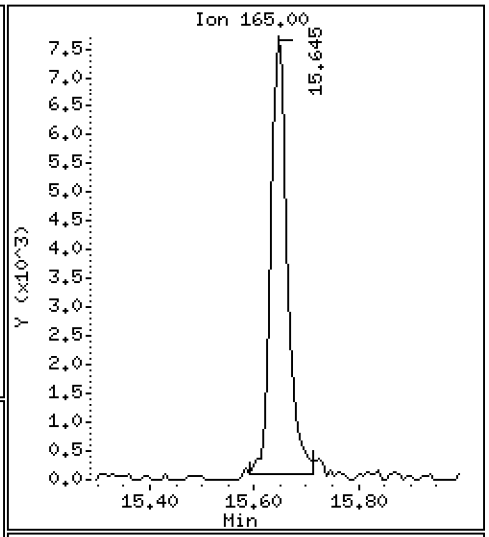
Concentration: 0.3045 ug/mL

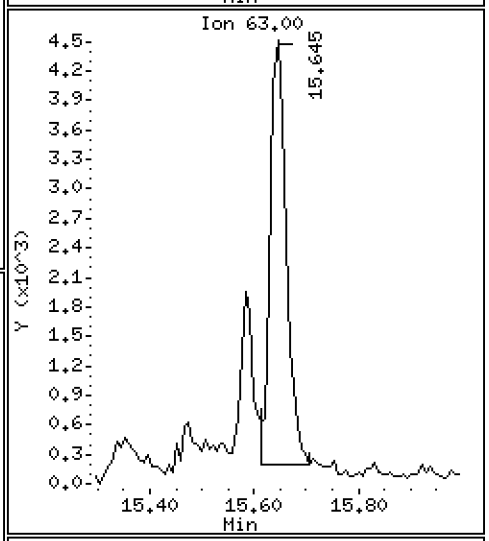


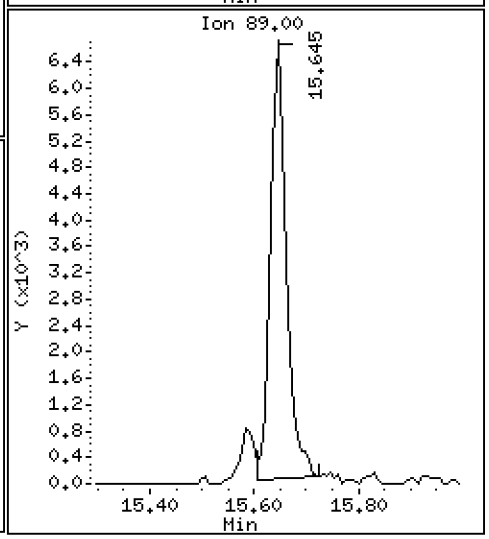












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

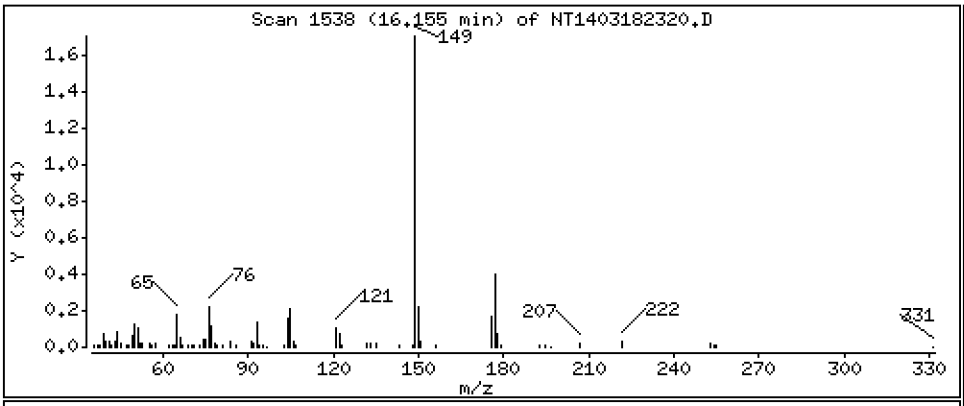
Operator: JGR

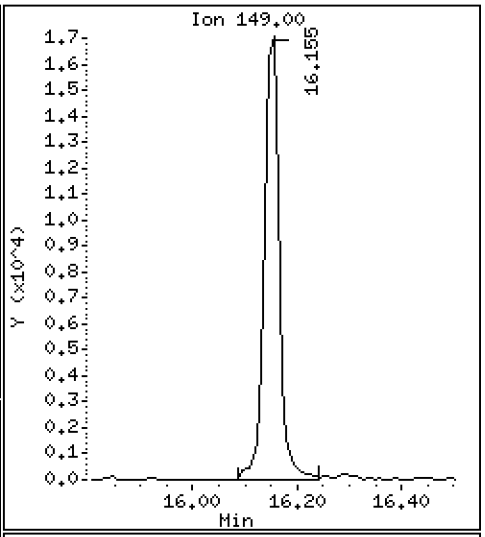
Column phase: ZB-5msi

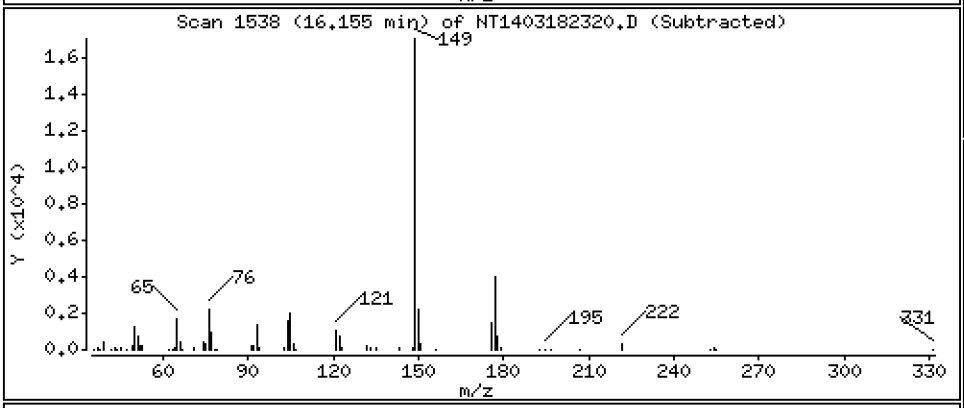
Column diameter: 0.25

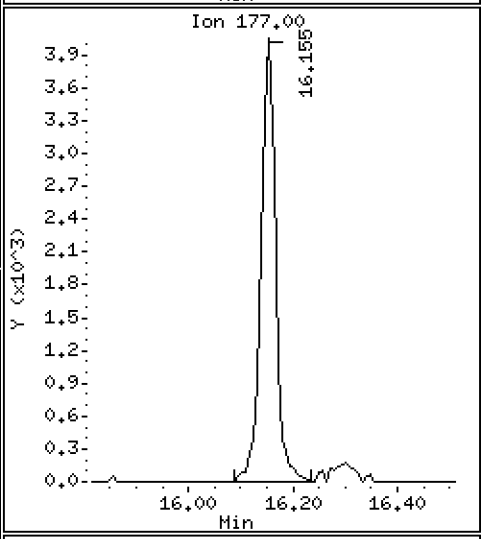
50 Diethylphthalate

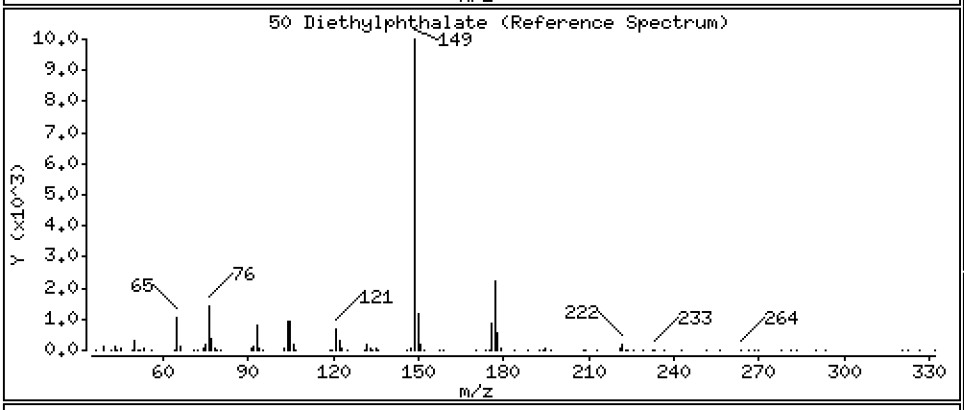
Concentration: 0.2157 ug/mL

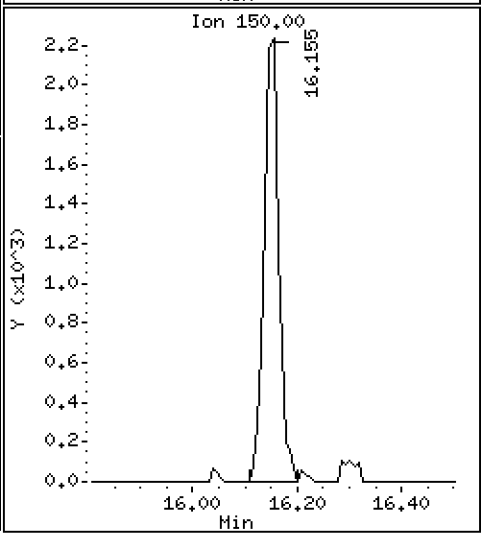


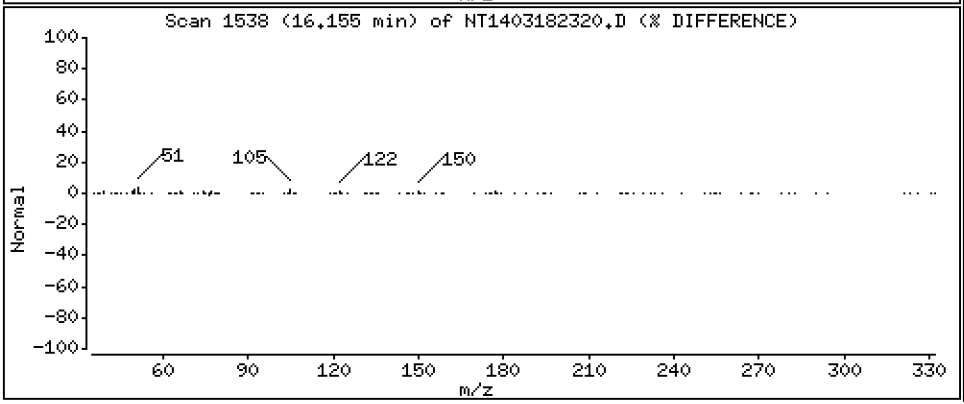












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

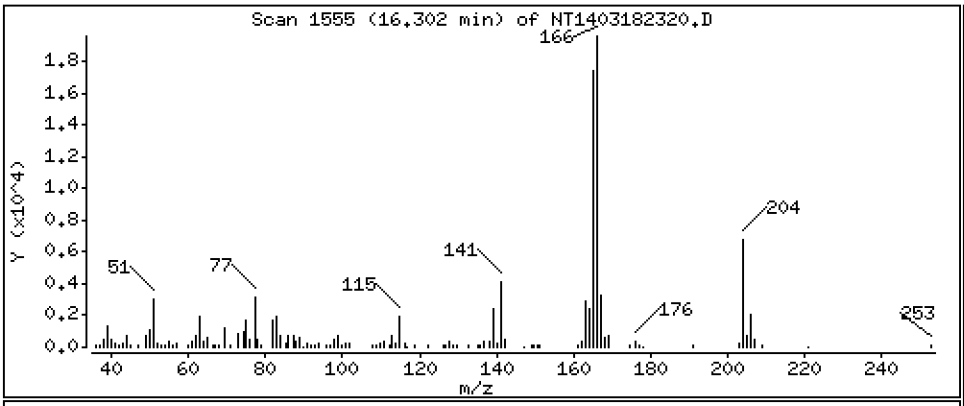
Operator: JGR

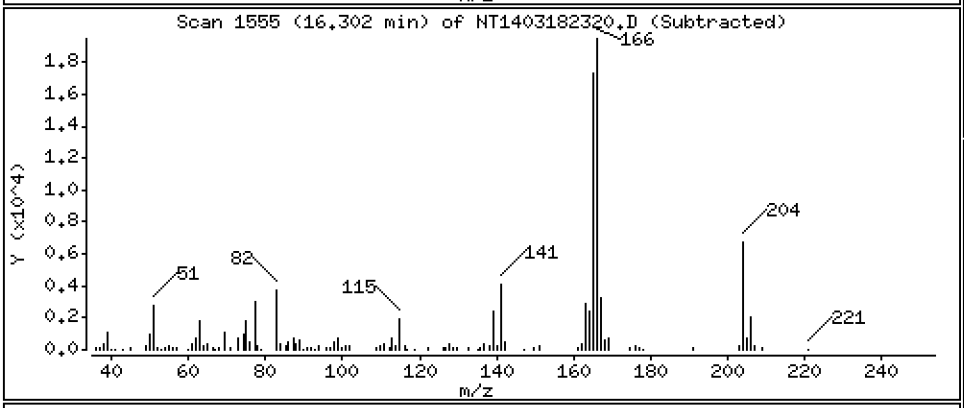
Column phase: ZB-5msi

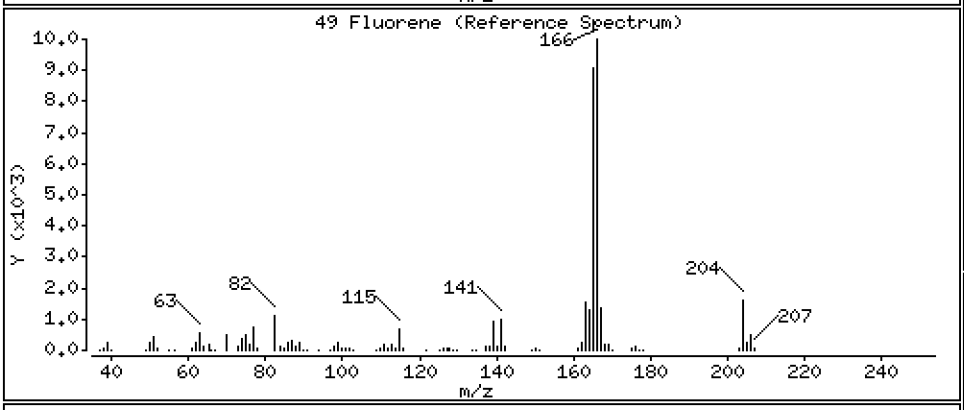
Column diameter: 0.25

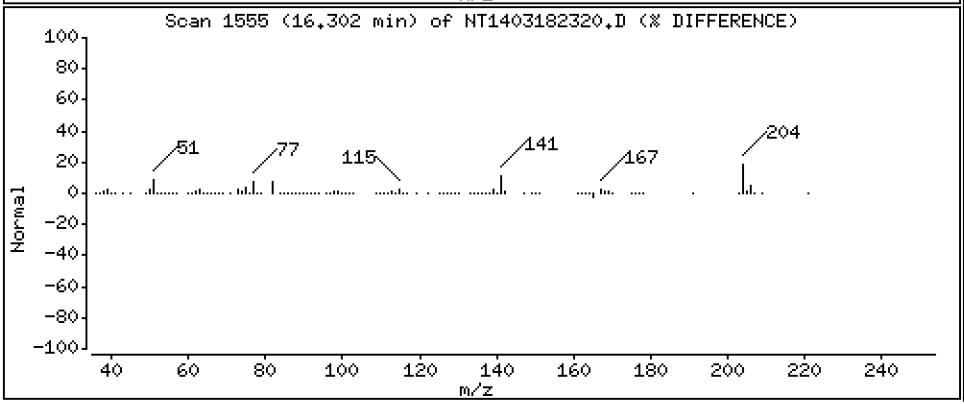
49 Fluorene

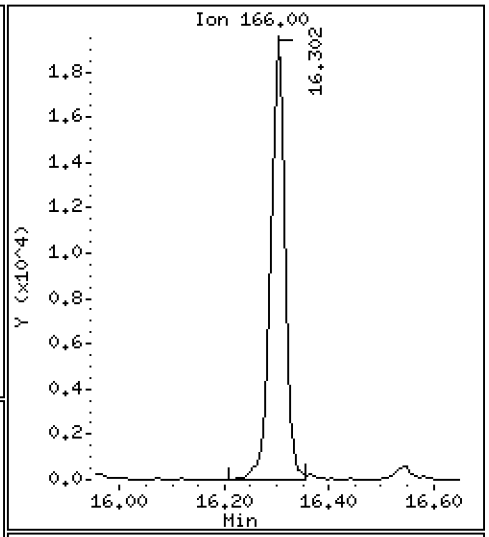
Concentration: 0.2030 ug/mL

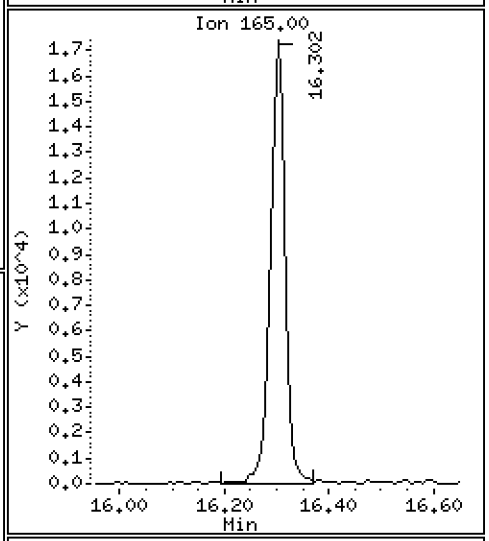


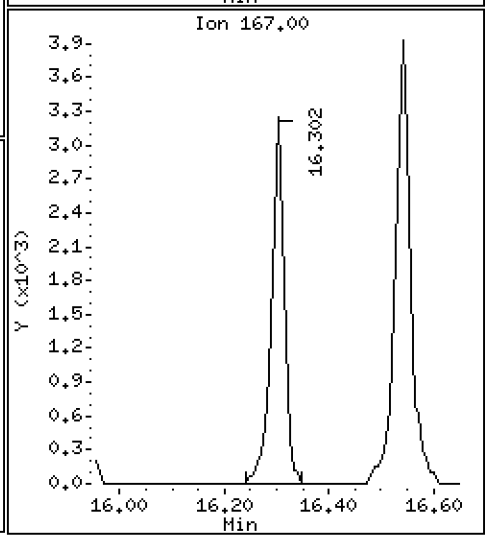












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

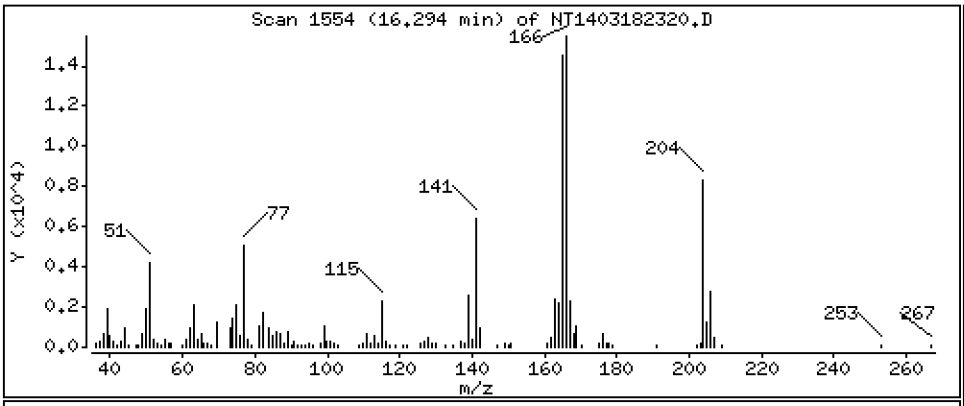
Operator: JGR

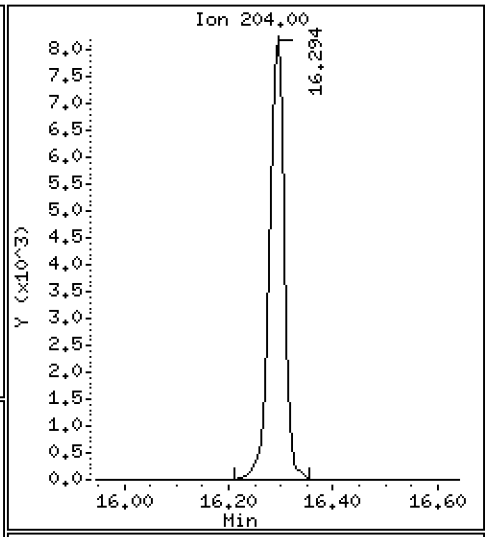
Column phase: ZB-5msi

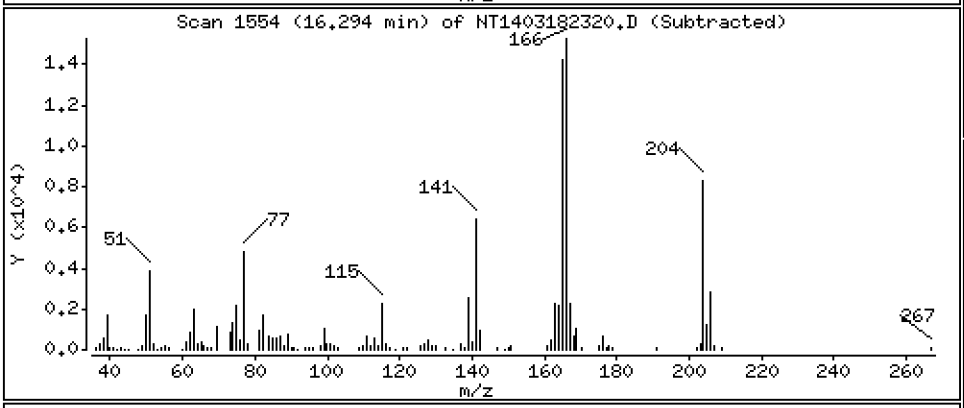
Column diameter: 0.25

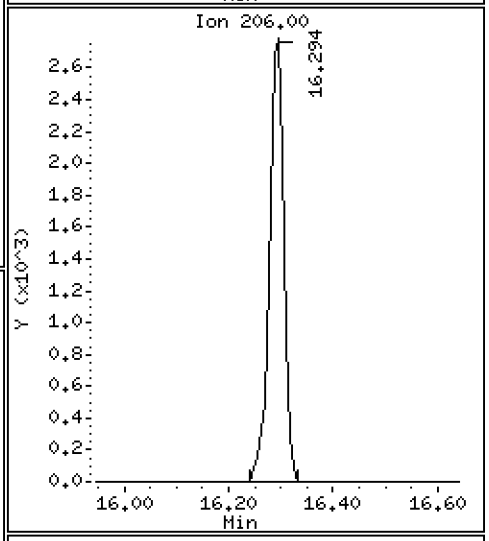
51 4-Chlorophenyl-phenylether

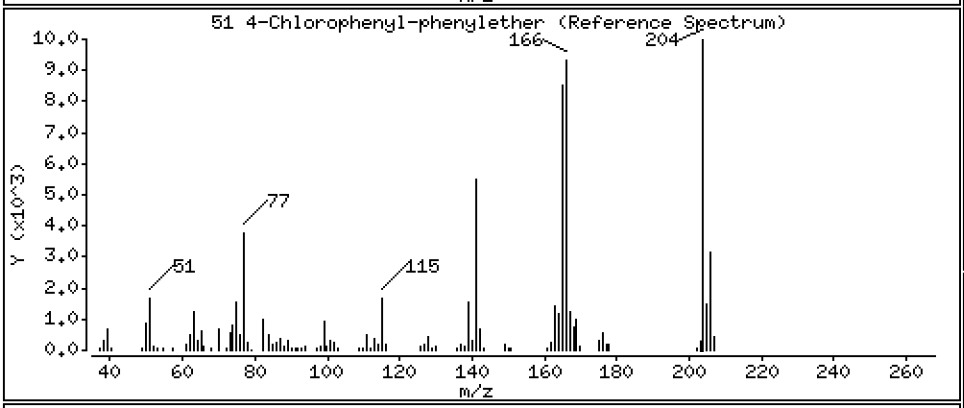
Concentration: 0.2061 ug/mL

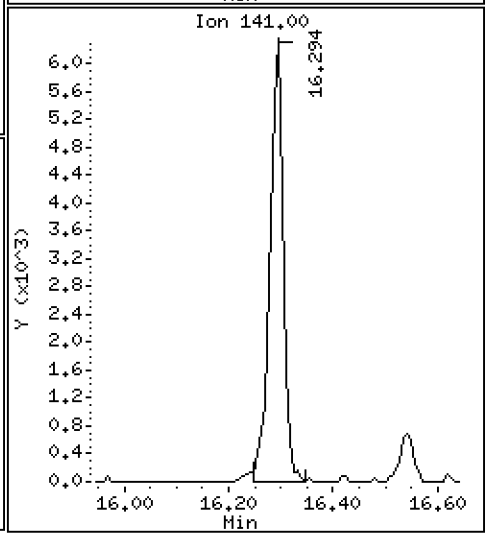


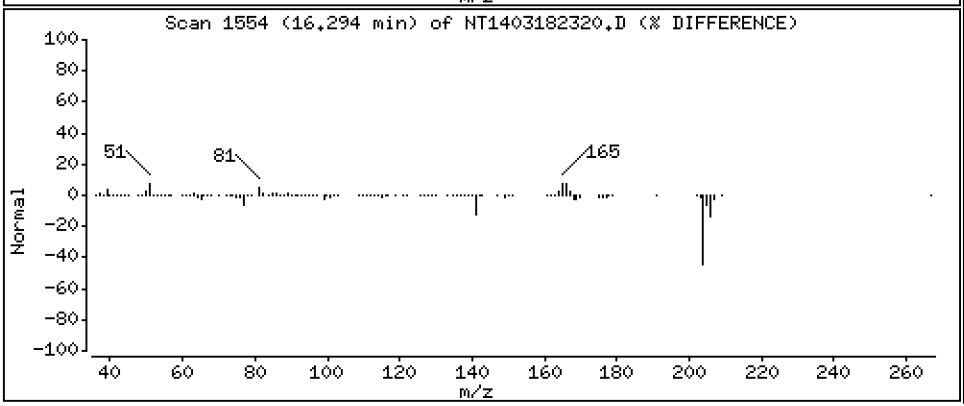












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

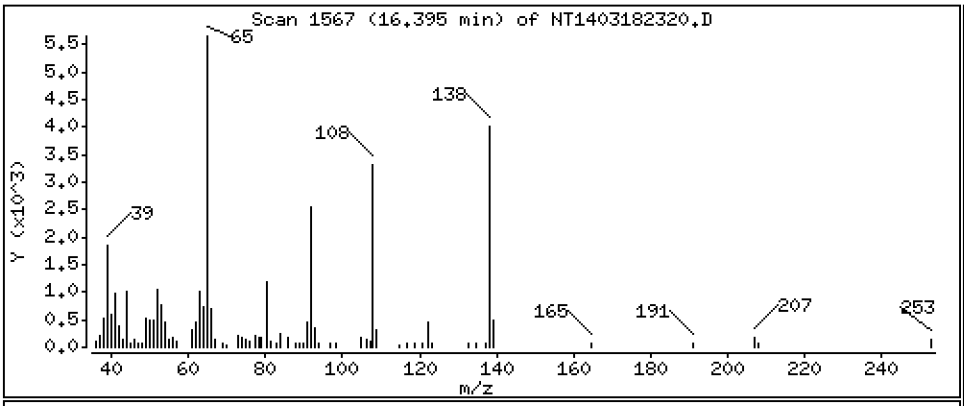
Operator: JGR

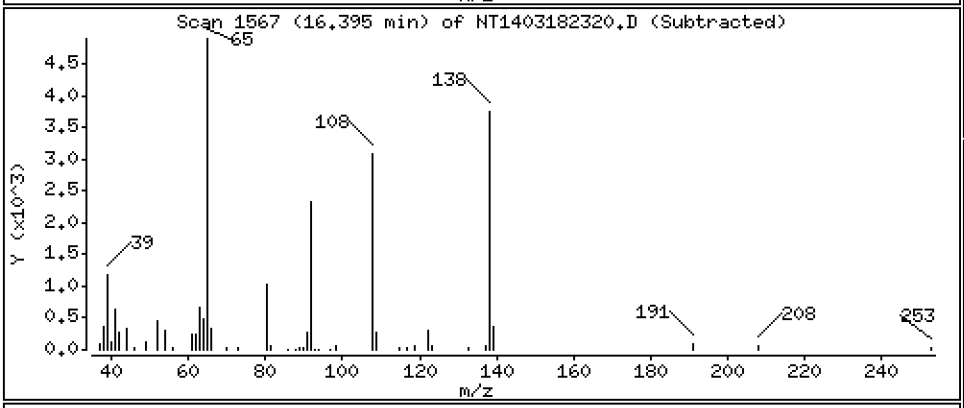
Column phase: ZB-5msi

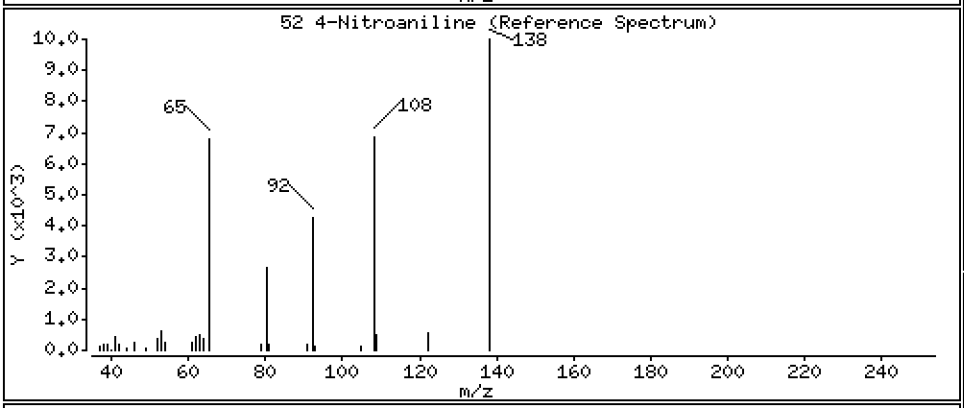
Column diameter: 0.25

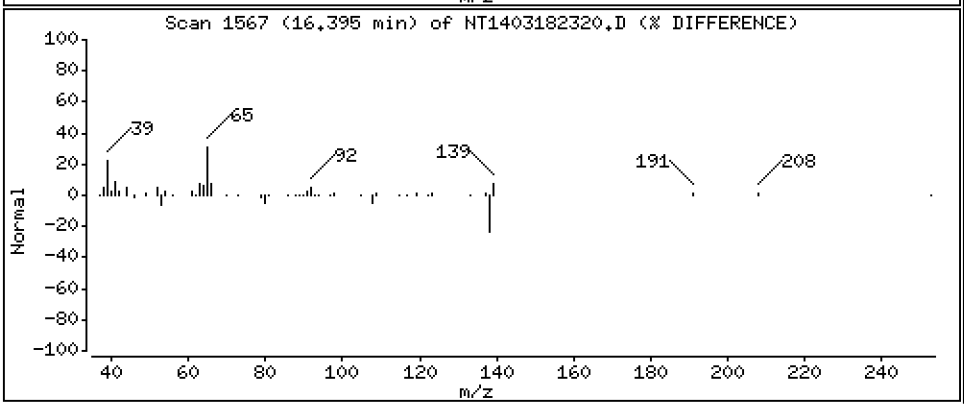
52 4-Nitroaniline

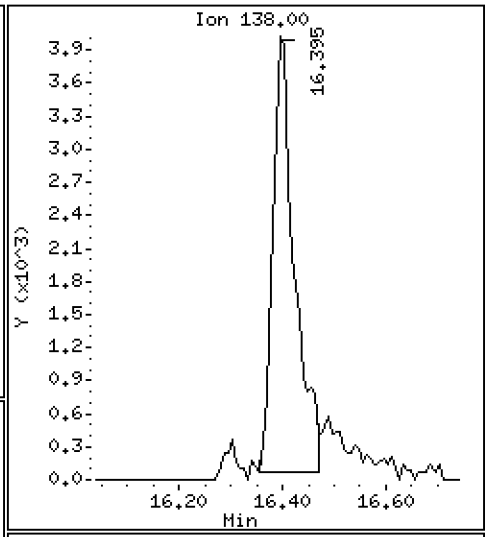
Concentration: 0.2532 ug/mL

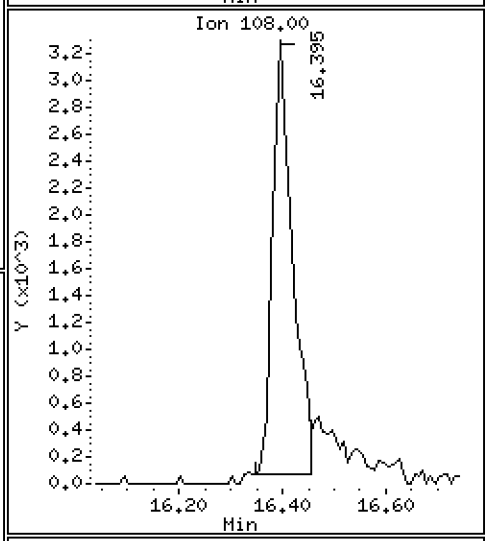


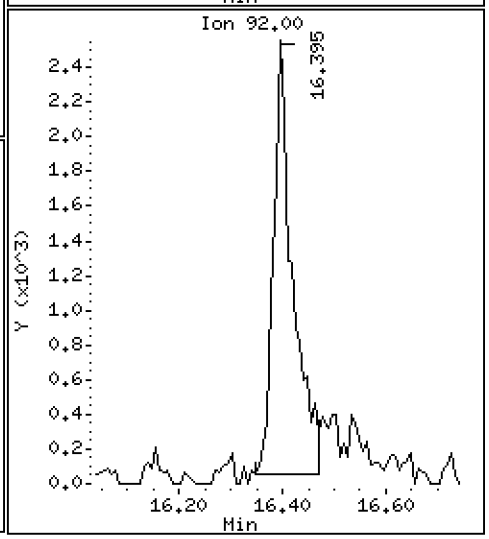












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

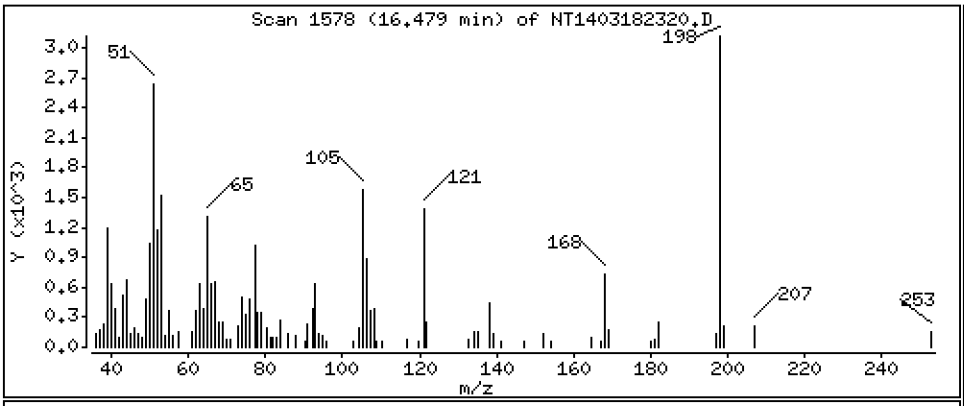
Operator: JGR

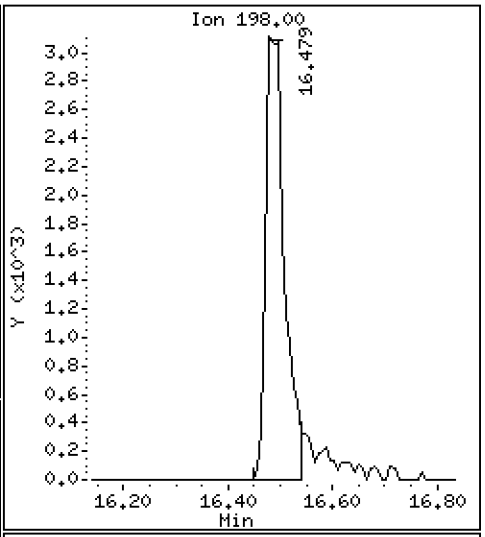
Column phase: ZB-5msi

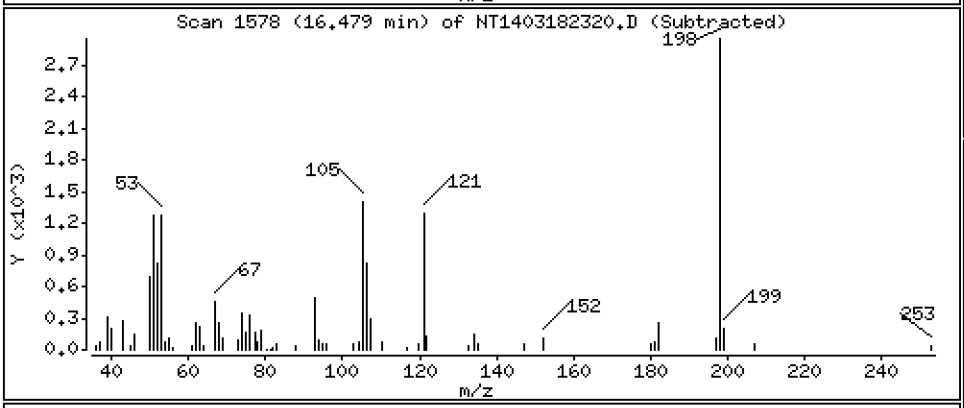
Column diameter: 0.25

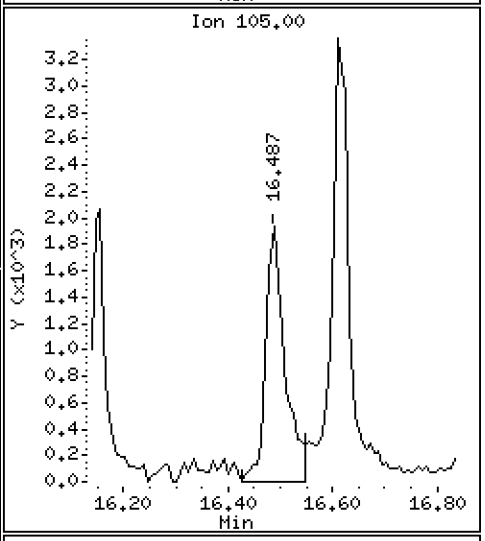
53 4,6-Dinitro-2-methylphenol

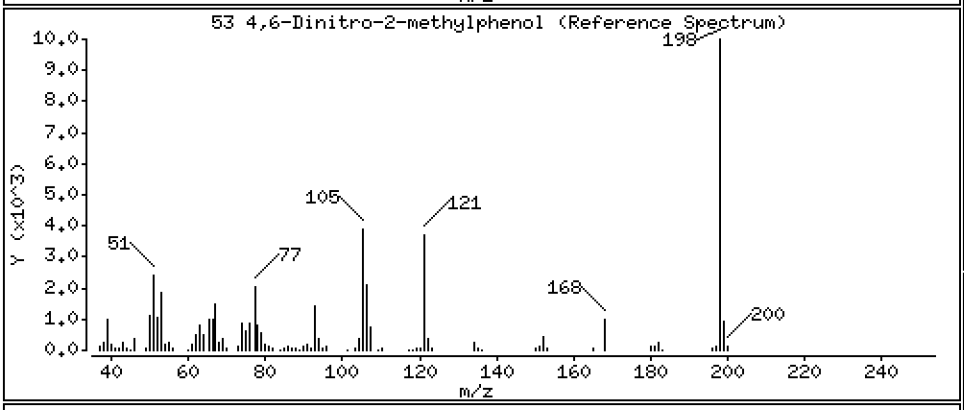
Concentration: 0.2578 ug/mL

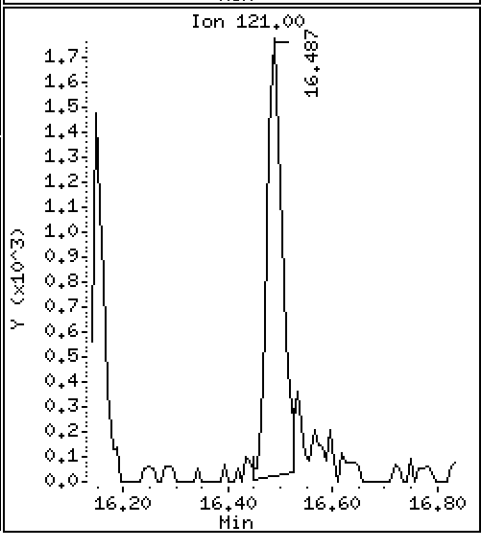


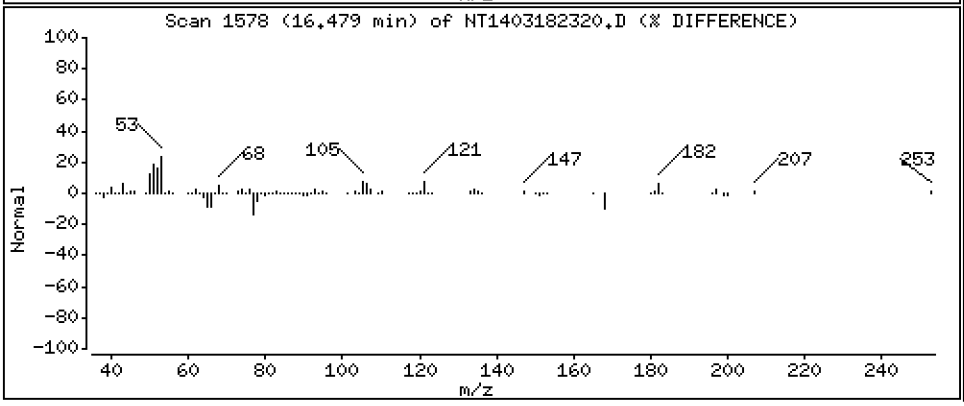












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

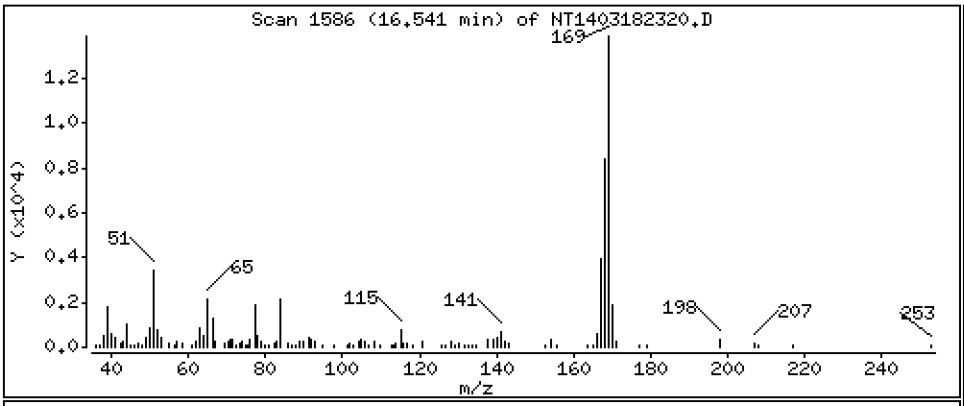
Operator: JGR

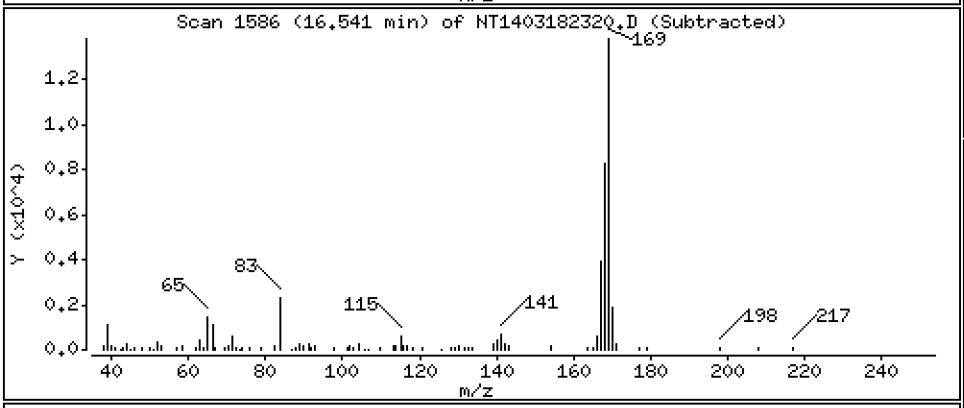
Column phase: ZB-5msi

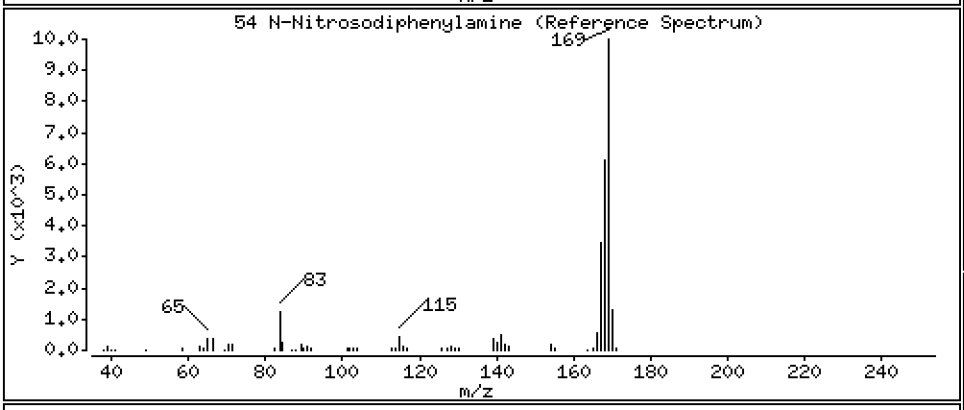
Column diameter: 0.25

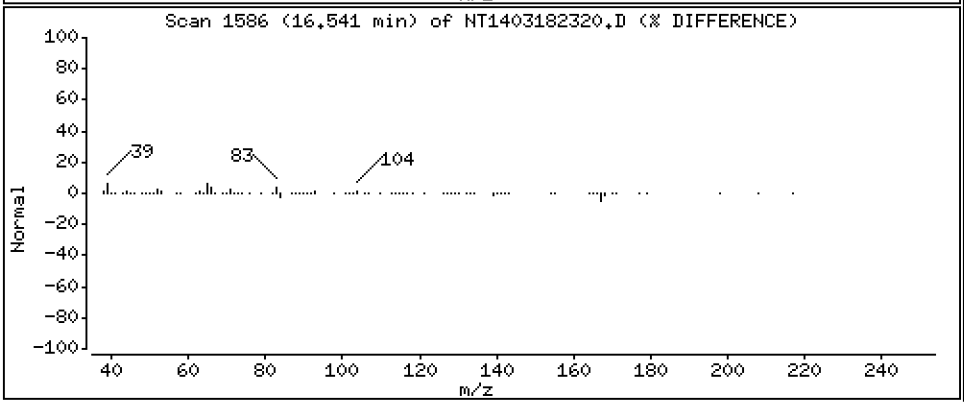
54 N-Nitrosodiphenylamine

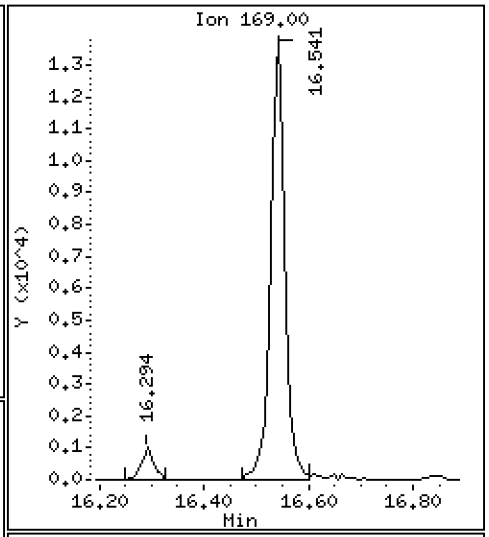
Concentration: 0.2130 ug/mL

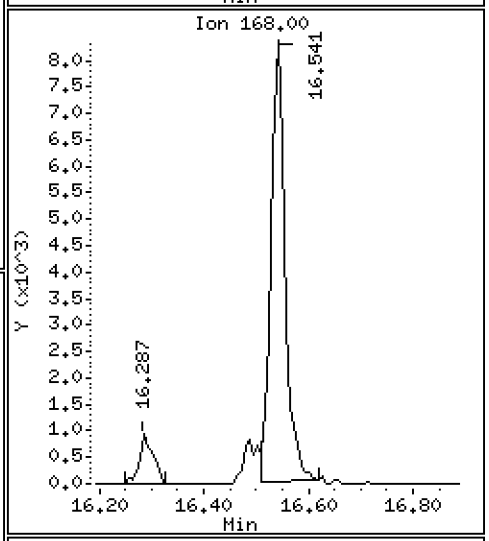


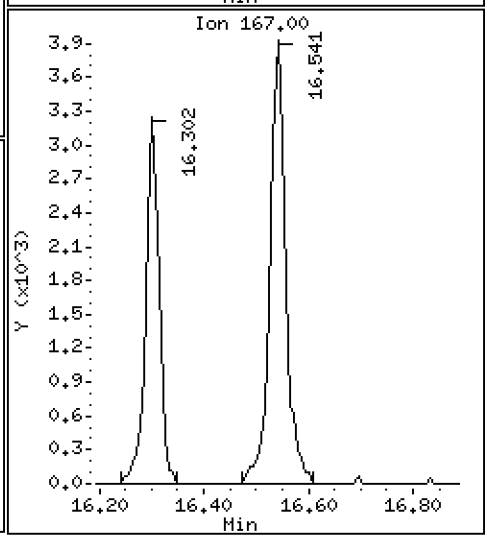












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

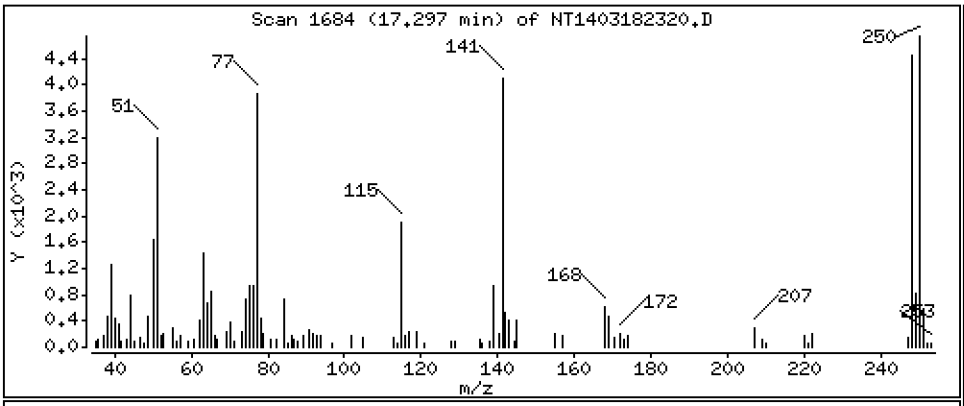
Operator: JGR

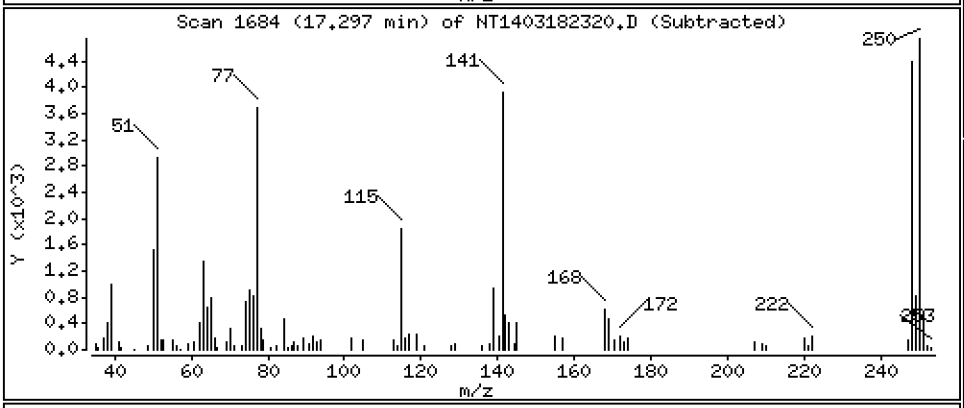
Column phase: ZB-5msi

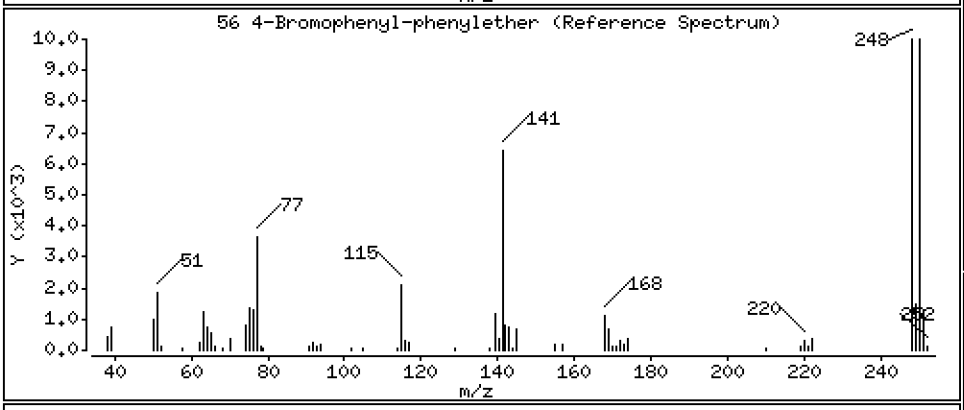
Column diameter: 0.25

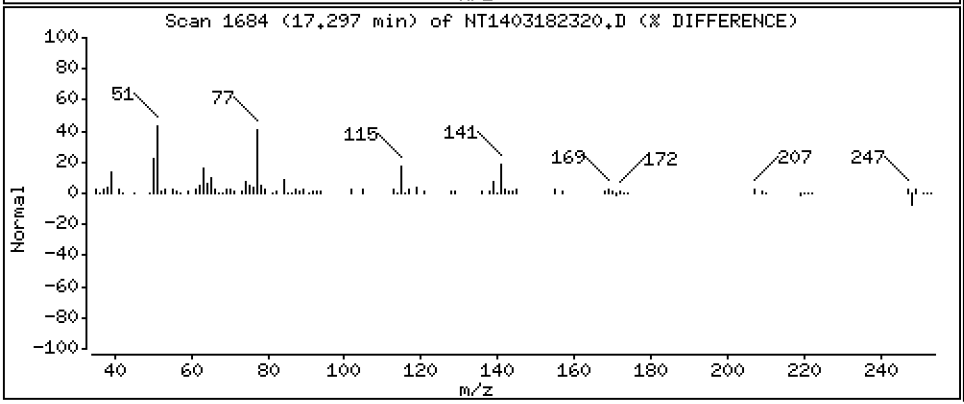
56 4-Bromophenyl-phenylether

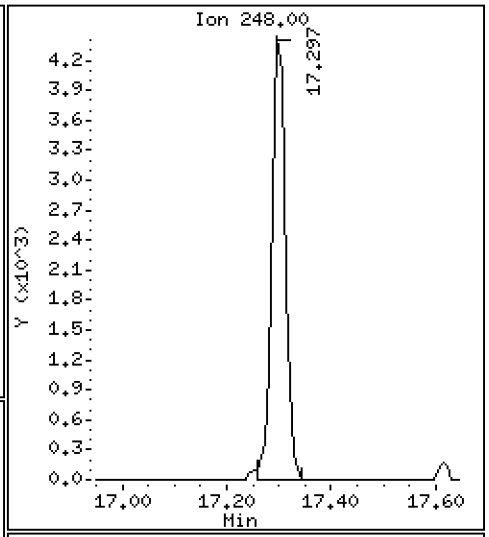
Concentration: 0.1930 ug/mL

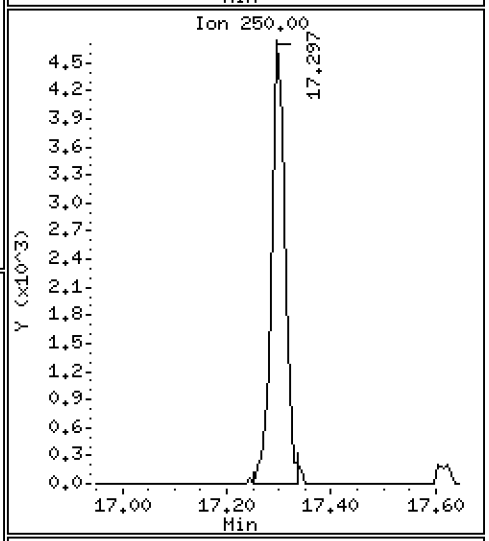


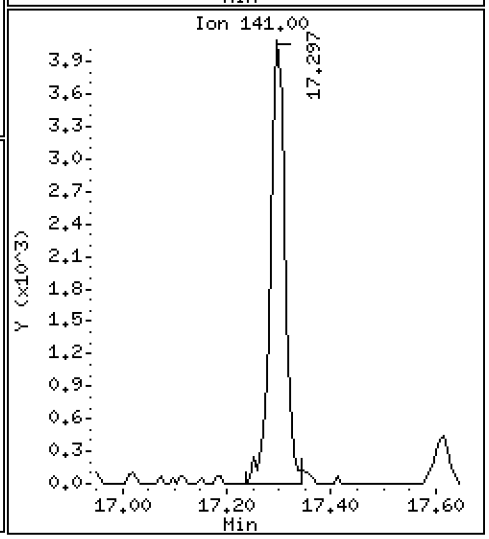












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

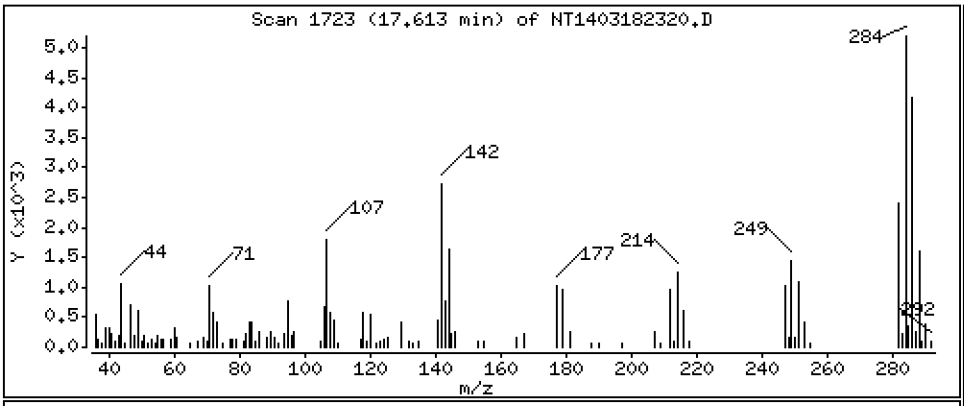
Operator: JGR

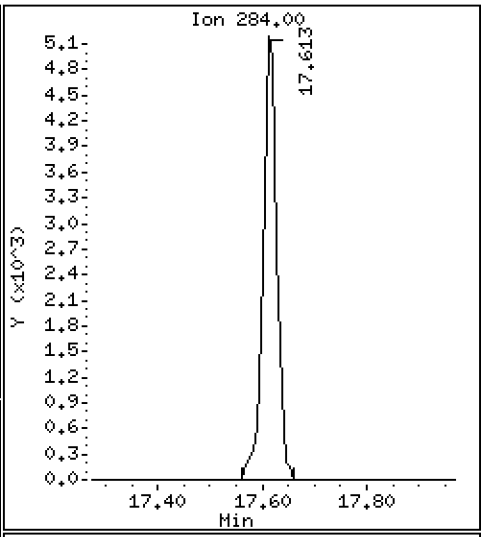
Column phase: ZB-5msi

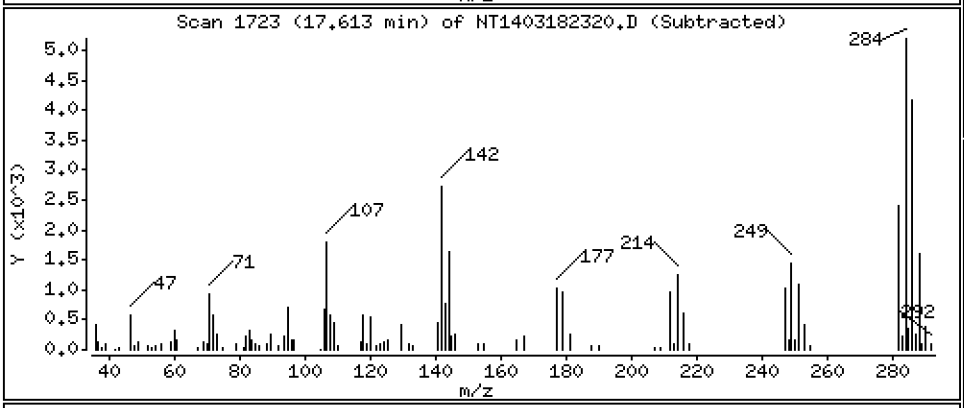
Column diameter: 0.25

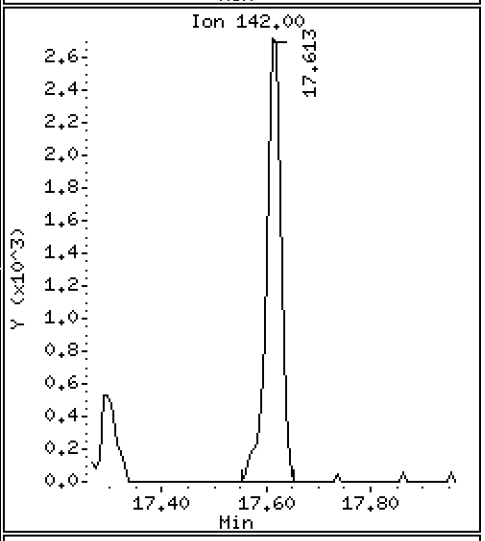
57 Hexachlorobenzene

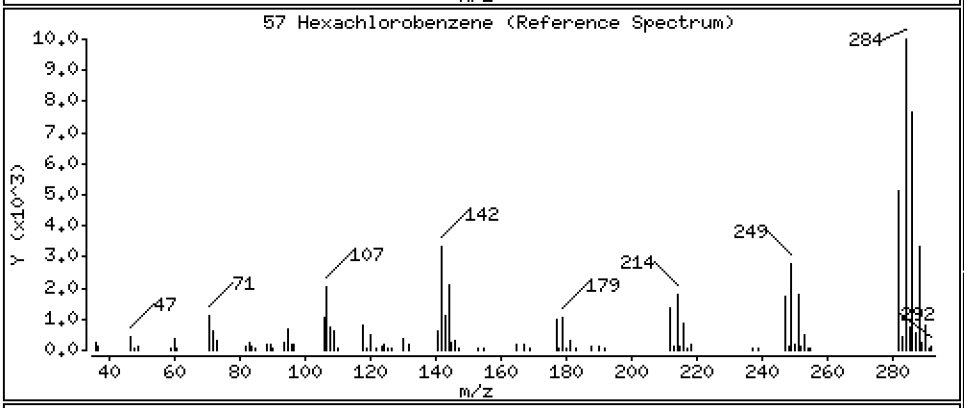
Concentration: 0.2326 ug/mL

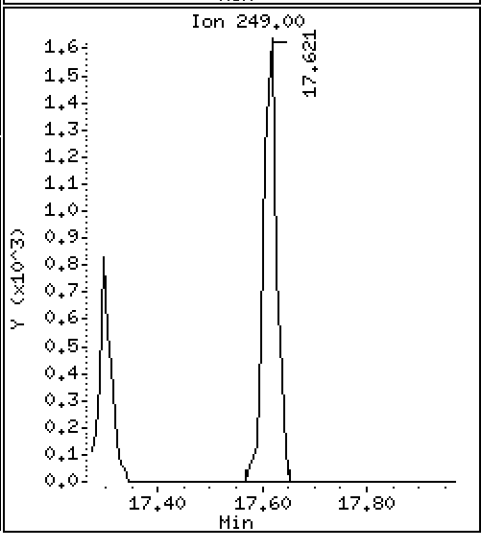


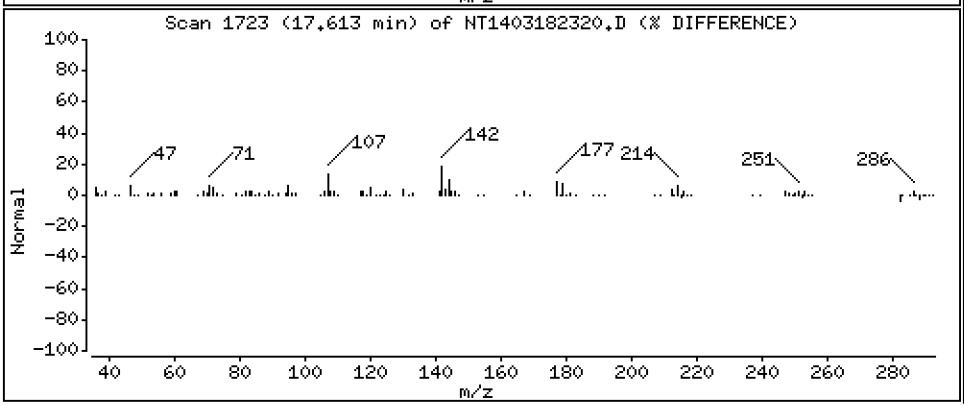












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

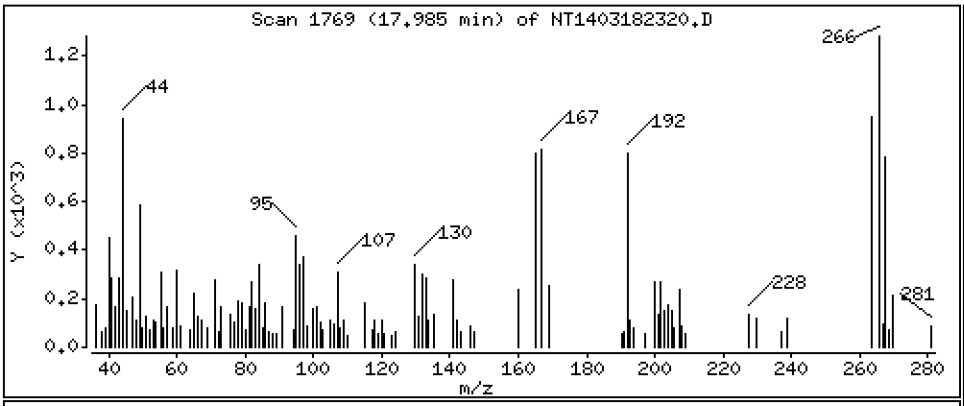
Operator: JGR

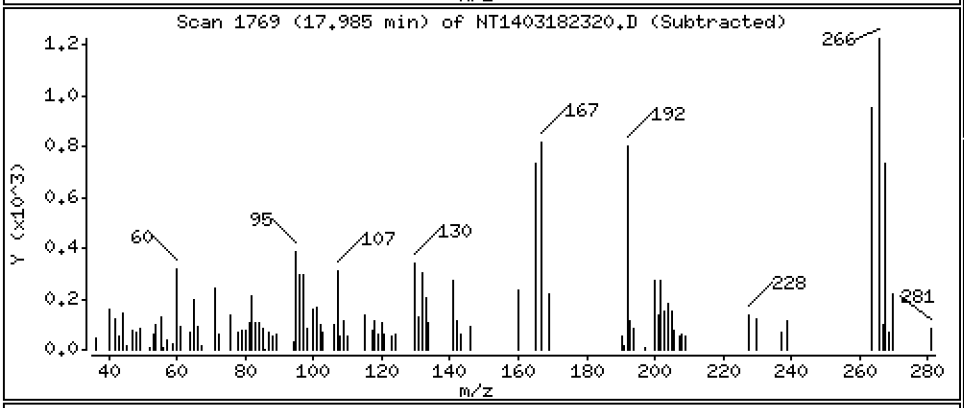
Column phase: ZB-5msi

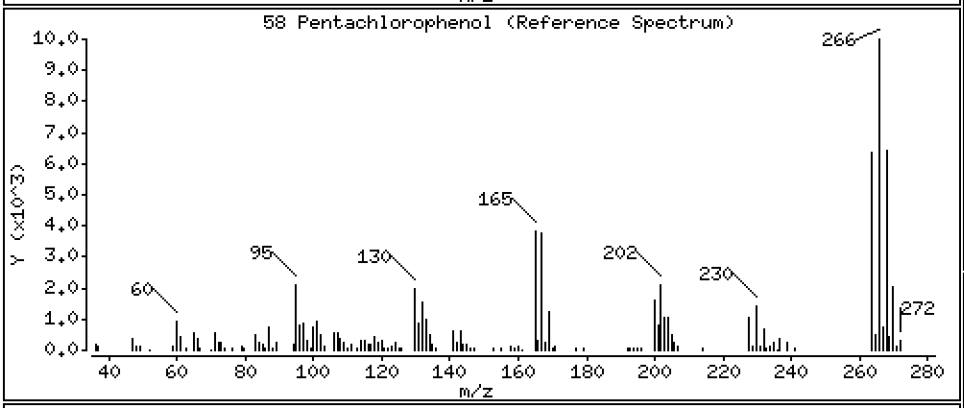
Column diameter: 0.25

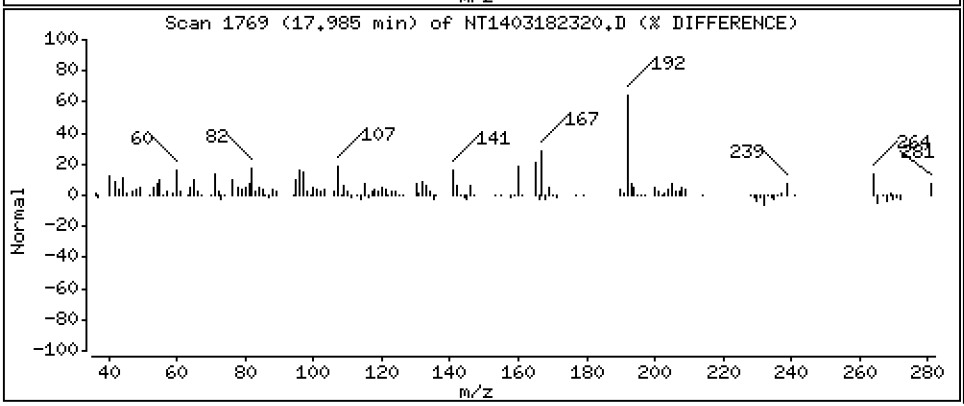
58 Pentachlorophenol

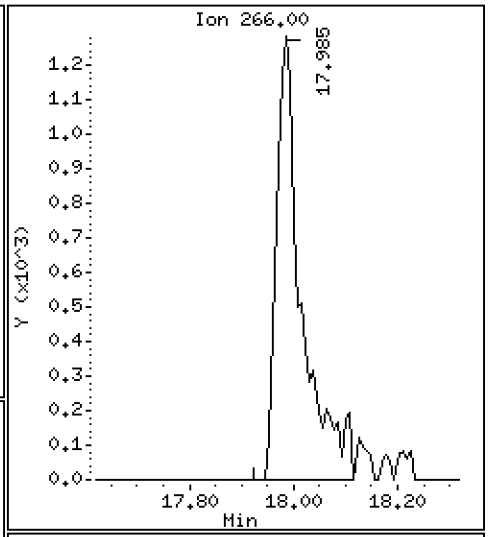
Concentration: 0.1516 ug/mL

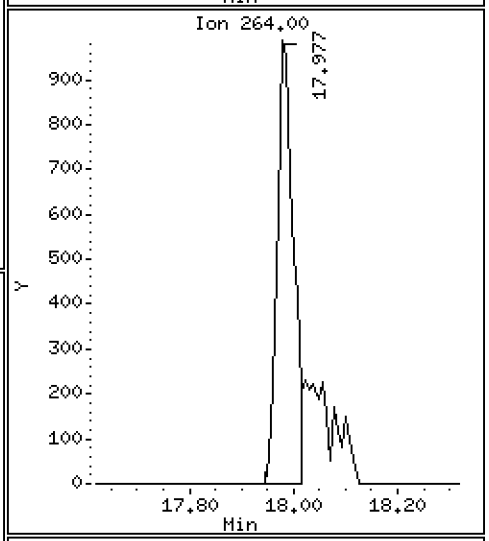


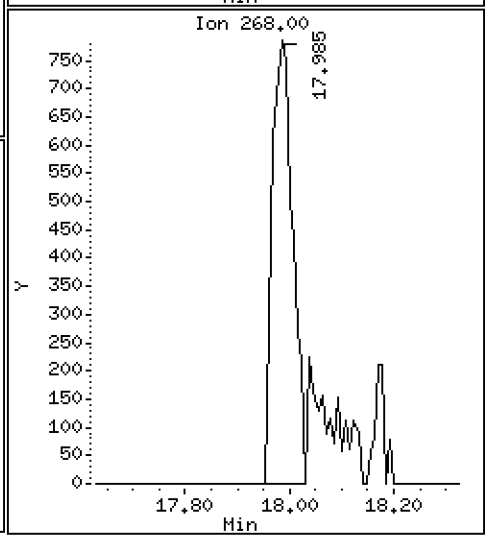












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

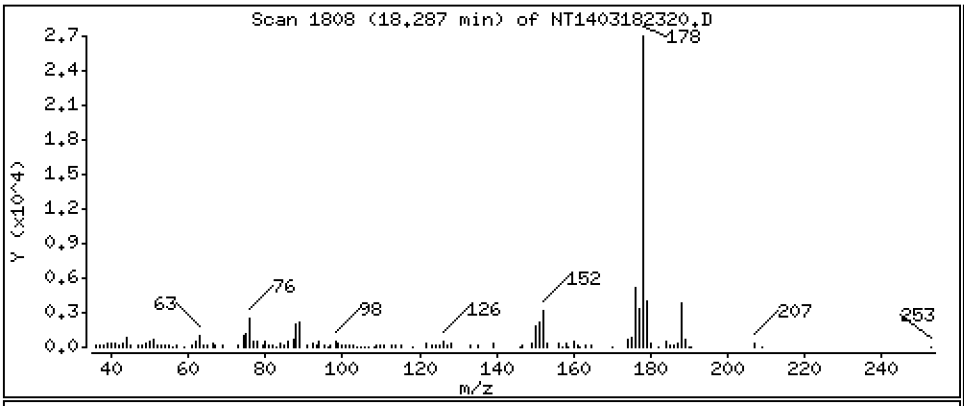
Operator: JGR

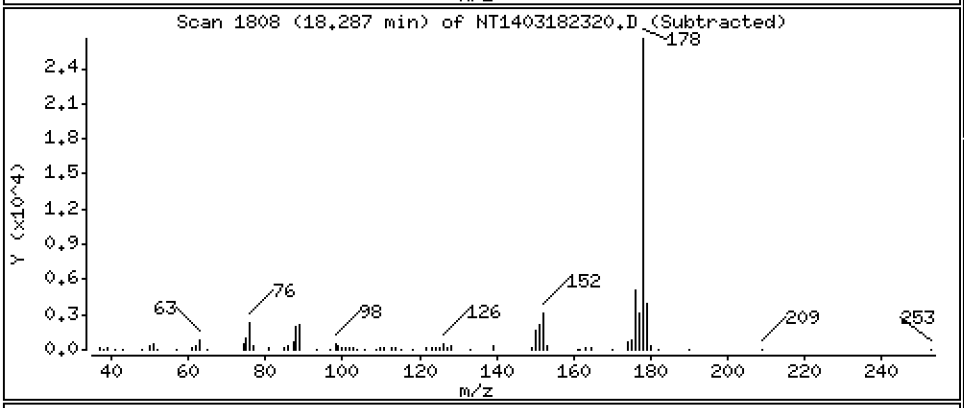
Column phase: ZB-5msi

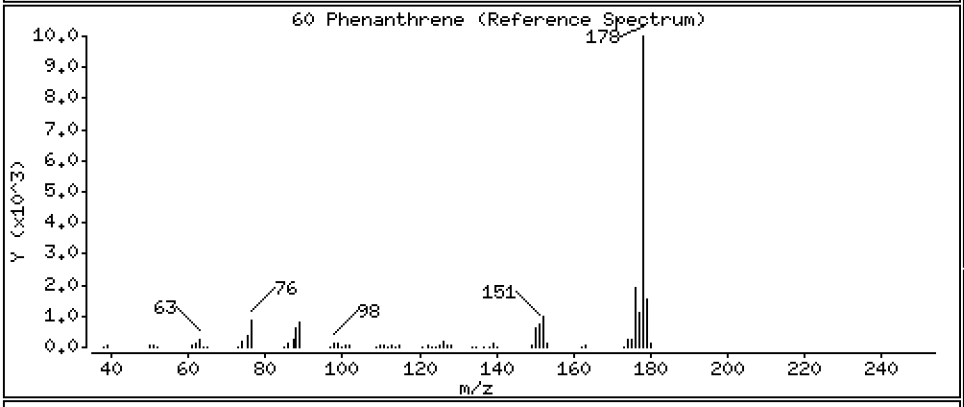
Column diameter: 0.25

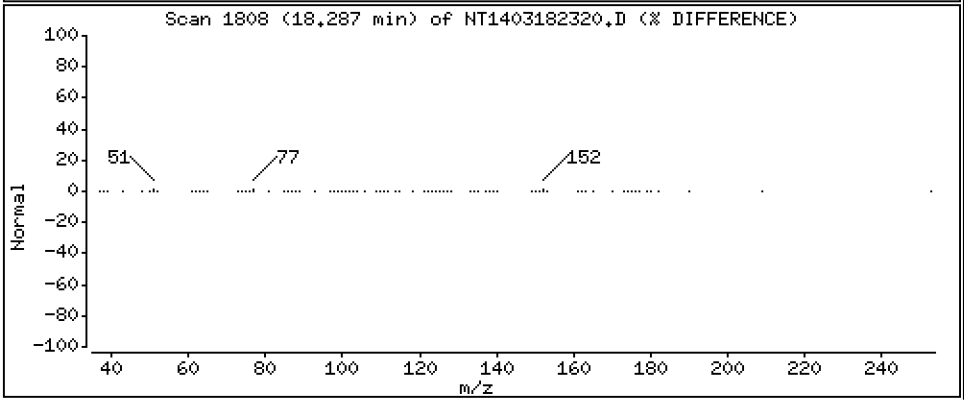
60 Phenanthrene

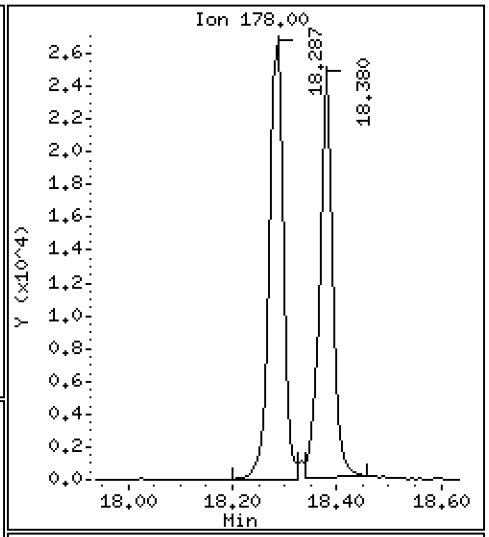
Concentration: 0.1990 ug/mL

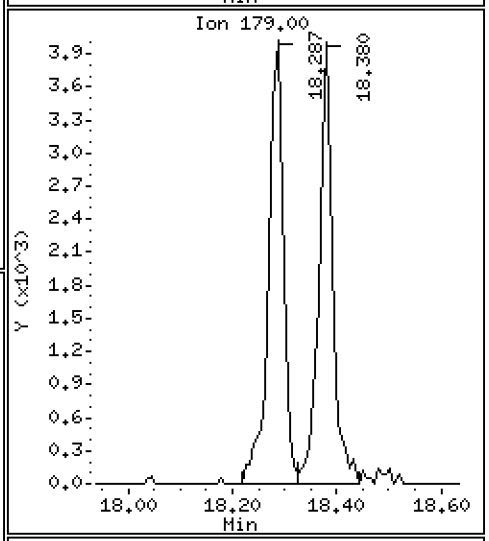


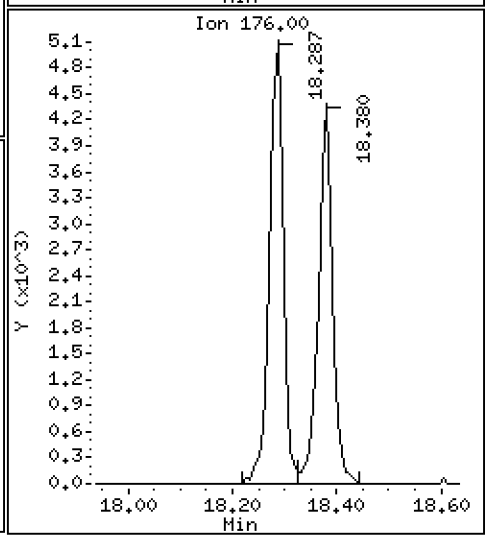












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

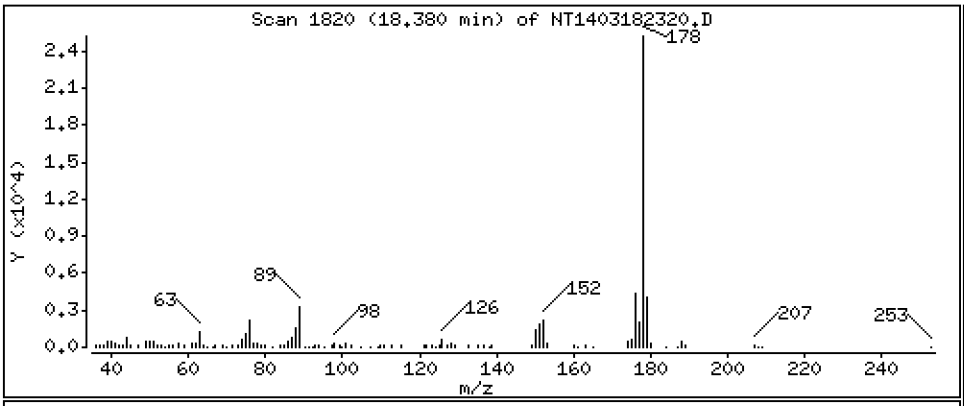
Operator: JGR

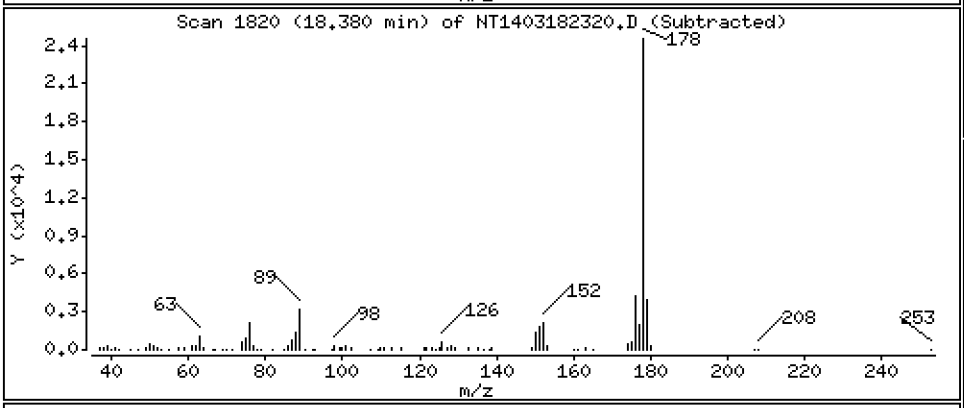
Column phase: ZB-5msi

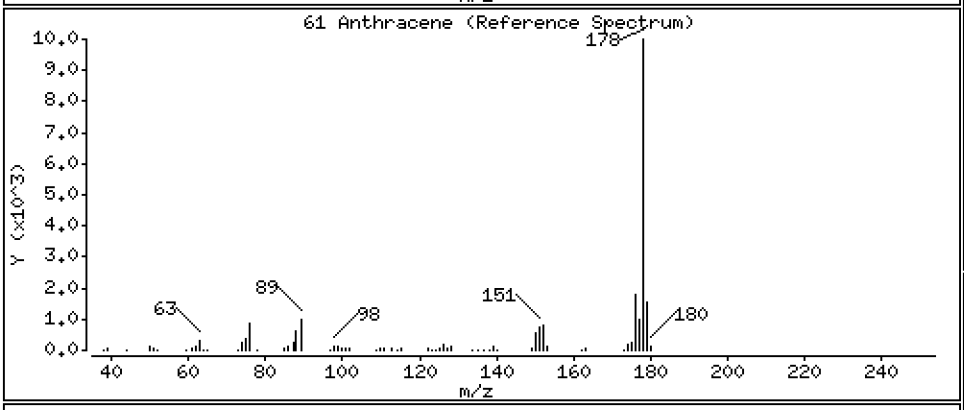
Column diameter: 0.25

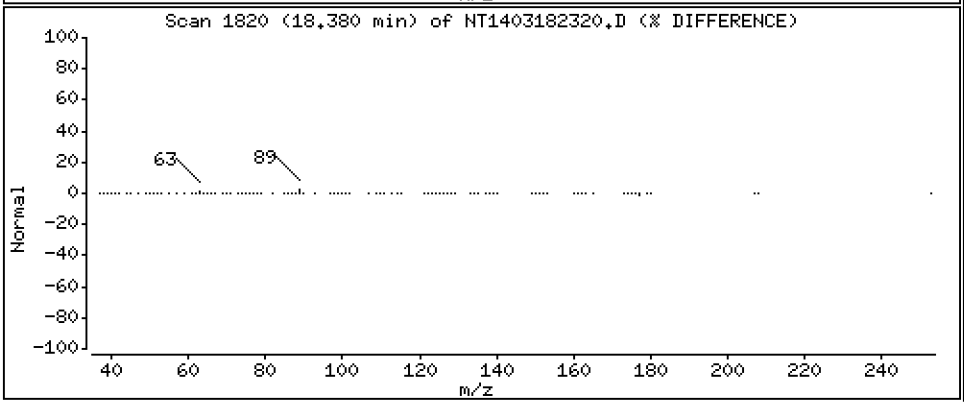
61 Anthracene

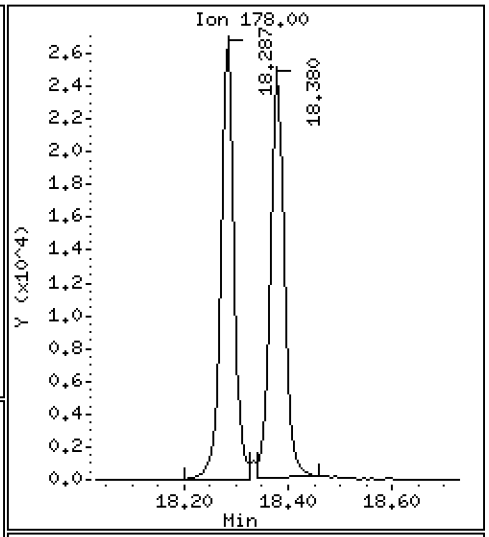
Concentration: 0.1873 ug/mL

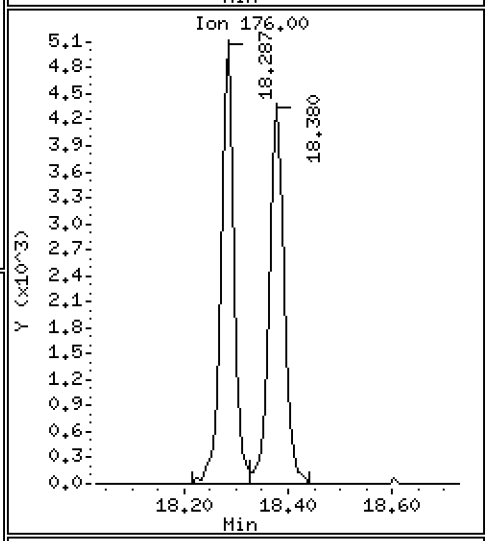


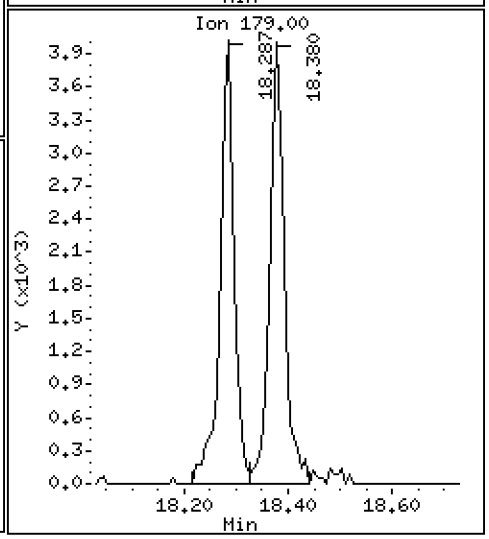












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

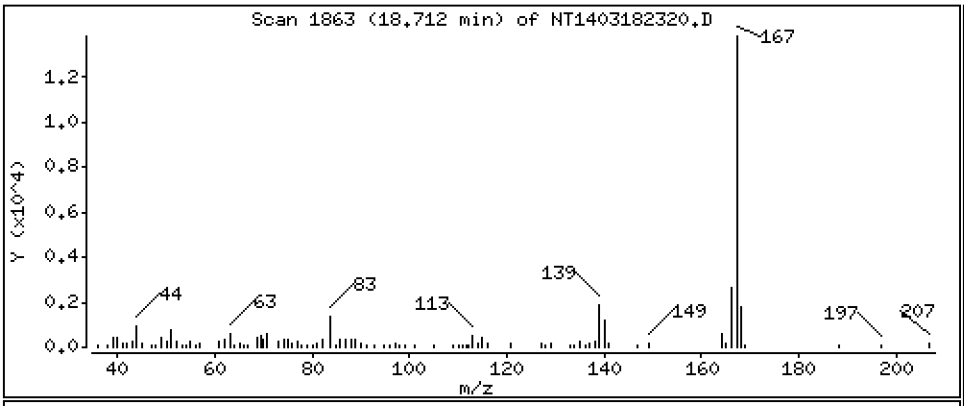
Operator: JGR

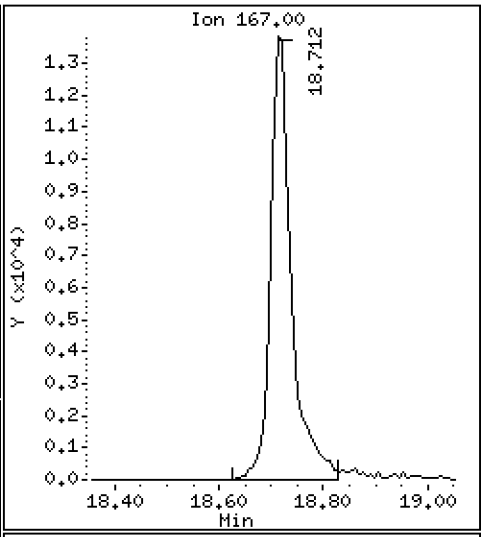
Column phase: ZB-5msi

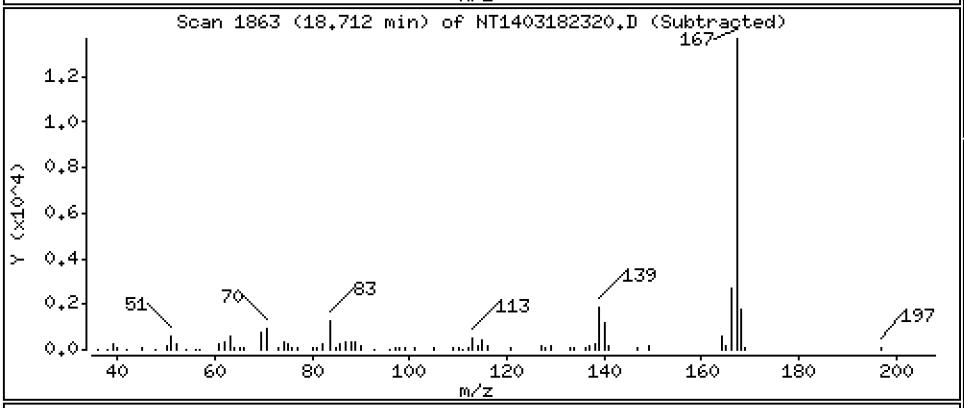
Column diameter: 0.25

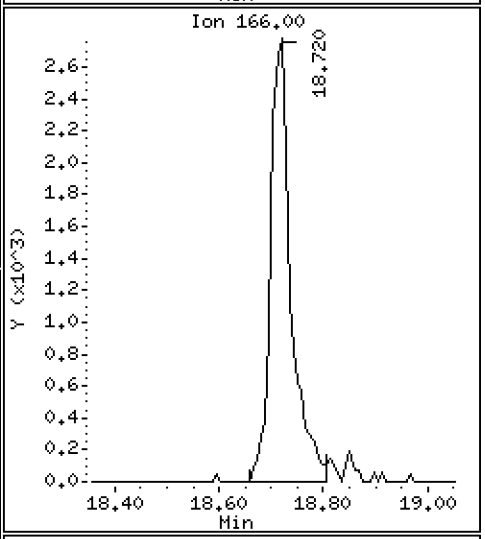
62 Carbazole

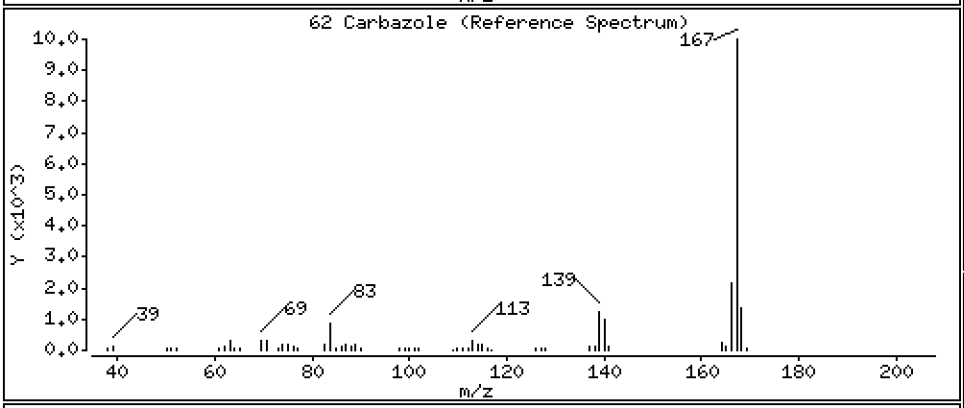
Concentration: 0.1801 ug/mL

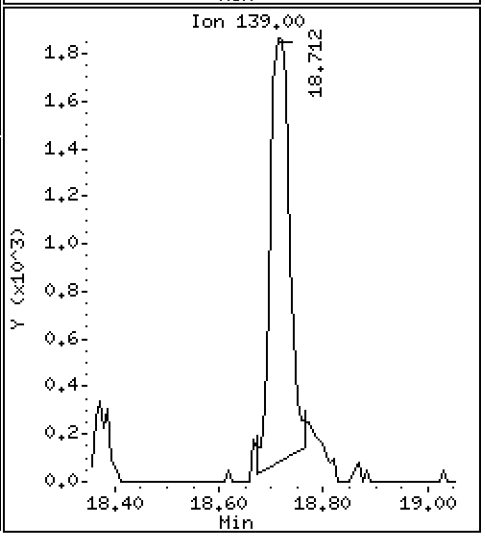


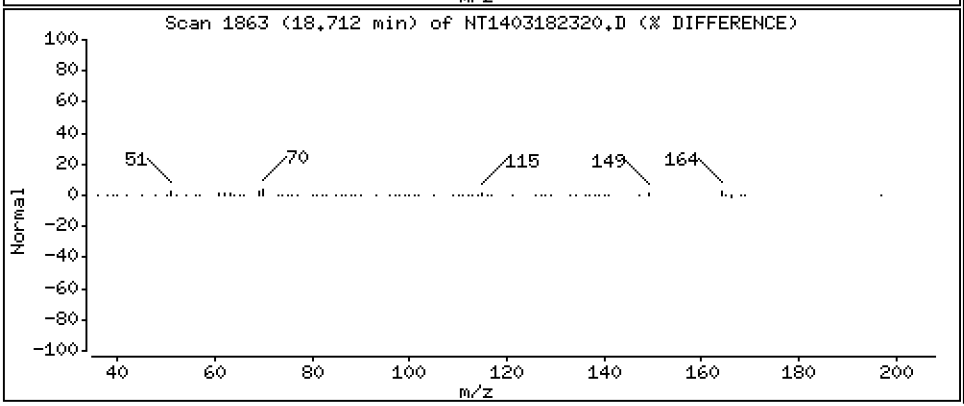












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

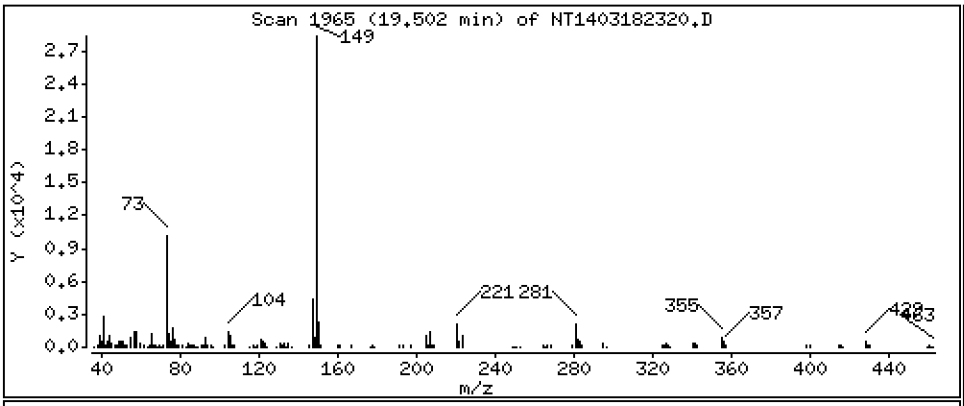
Operator: JGR

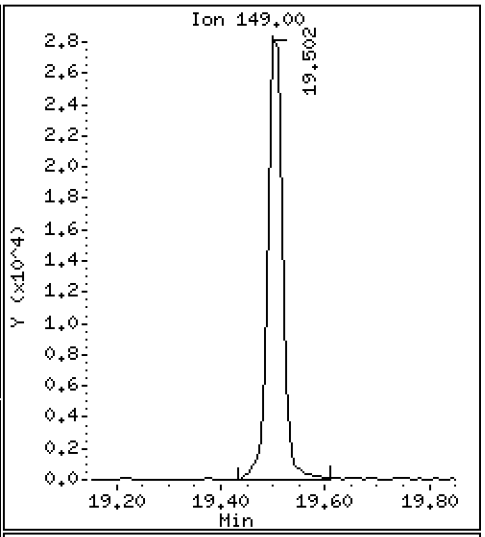
Column phase: ZB-5msi

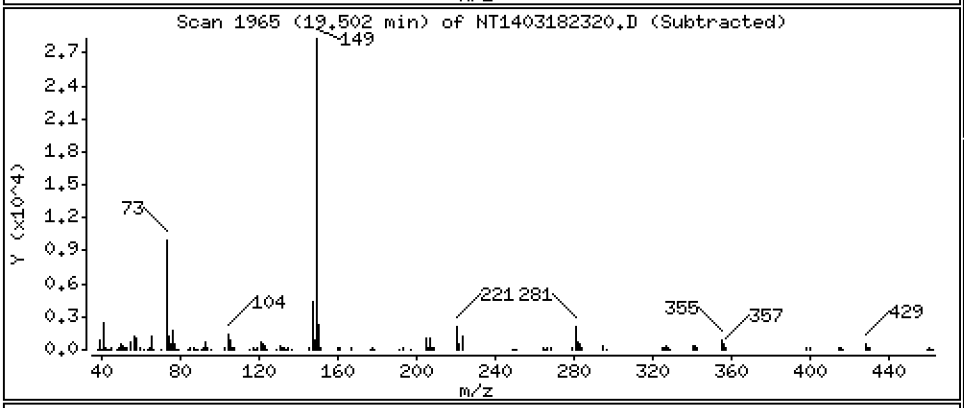
Column diameter: 0.25

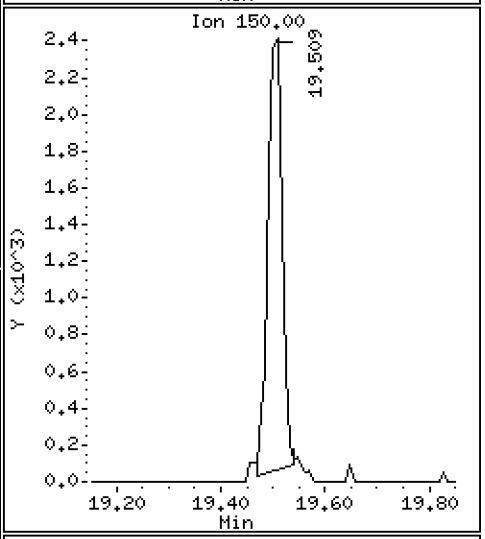
63 Di-n-butylphthalate

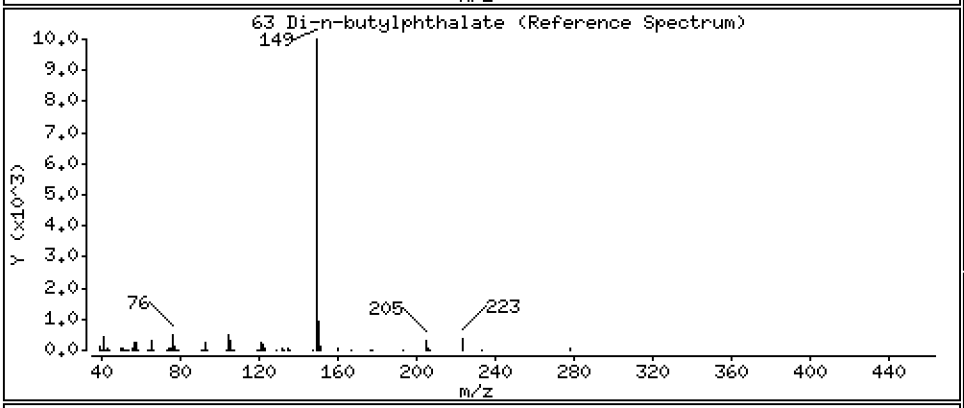
Concentration: 0.2032 ug/mL

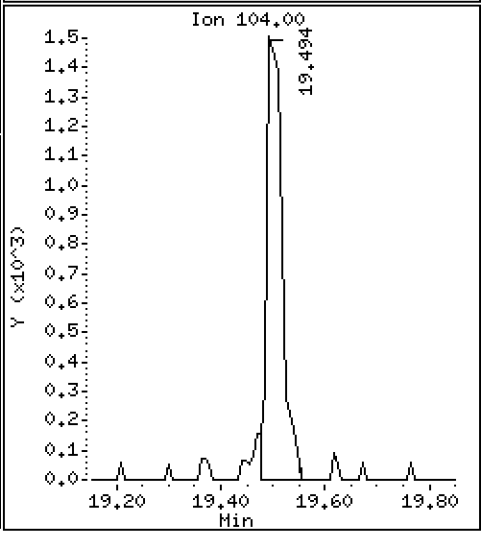


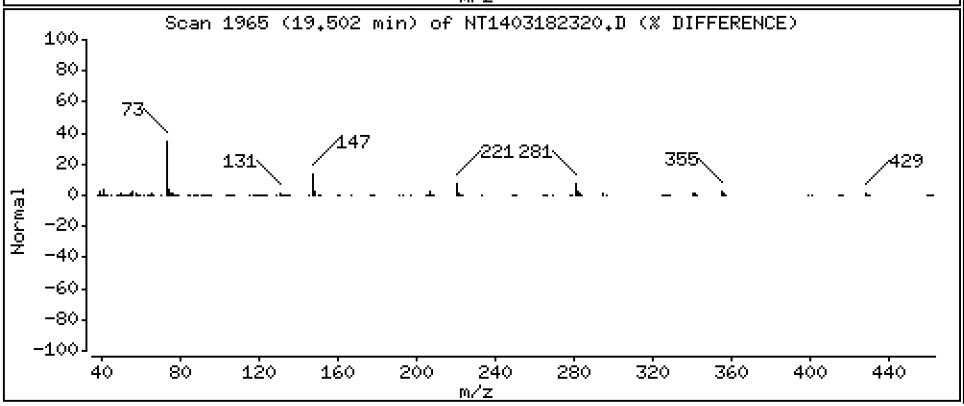












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

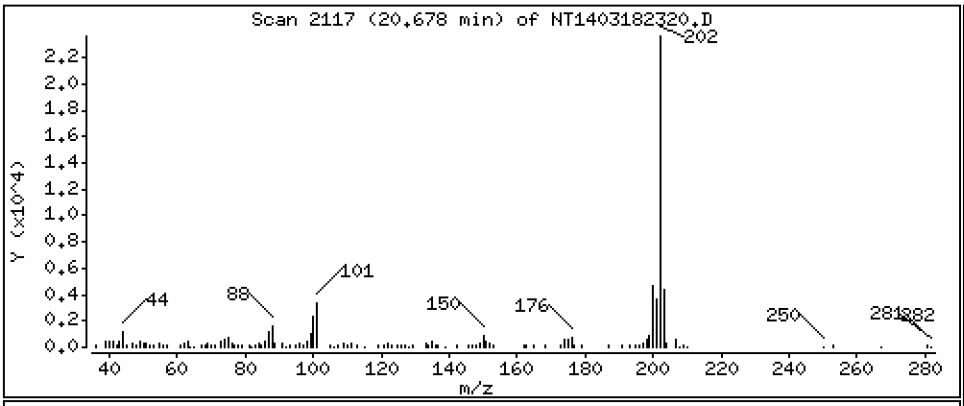
Operator: JGR

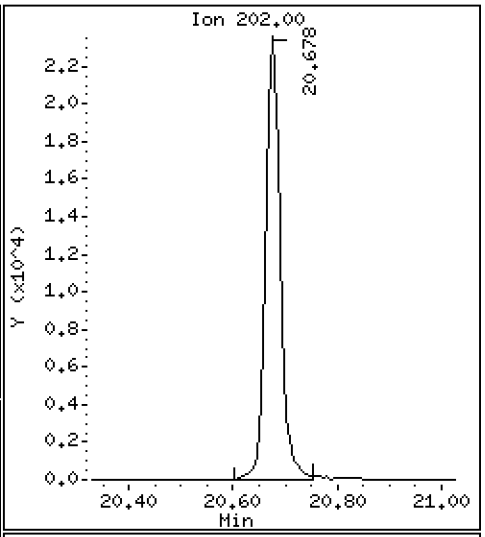
Column phase: ZB-5msi

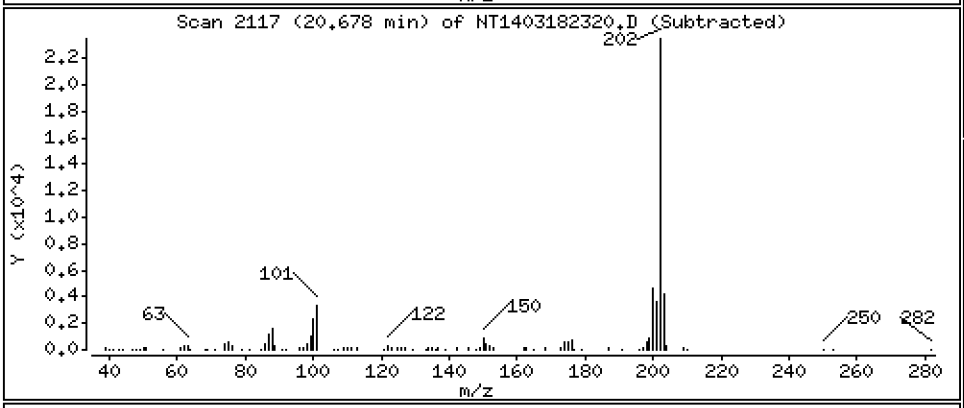
Column diameter: 0.25

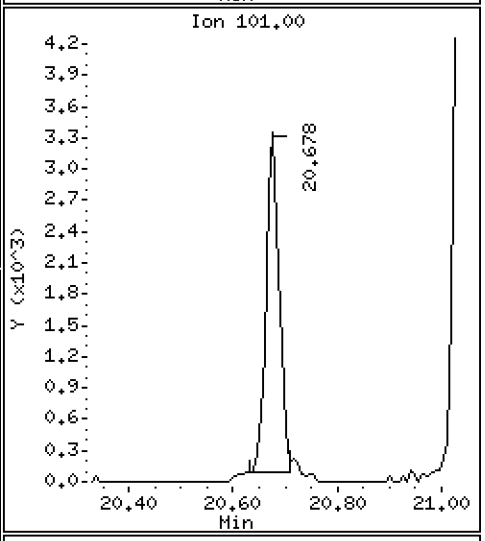
64 Fluoranthene

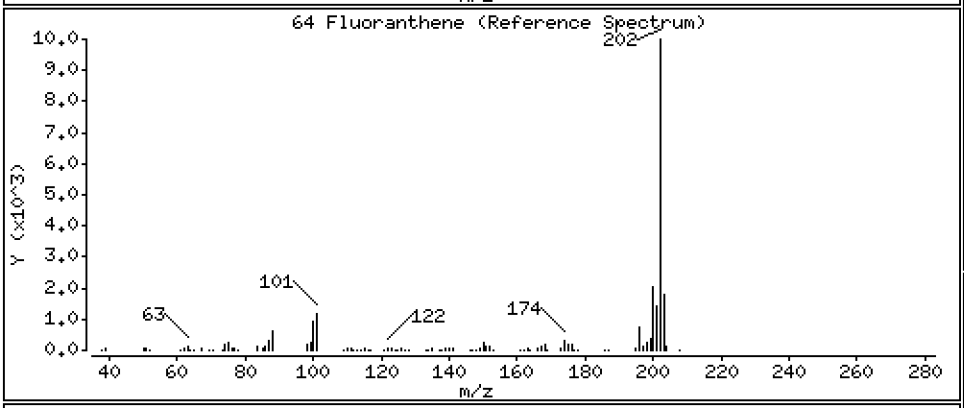
Concentration: 0.2459 ug/mL

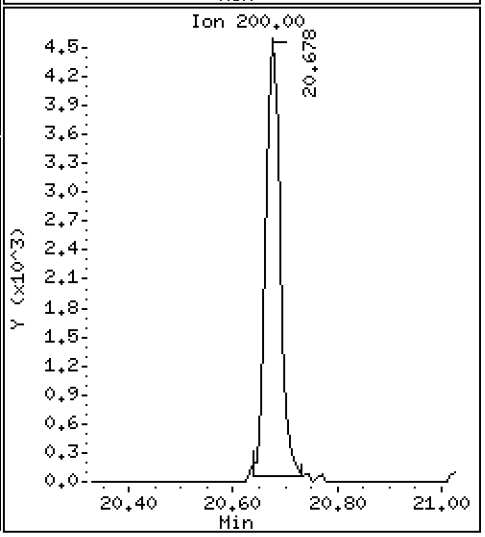


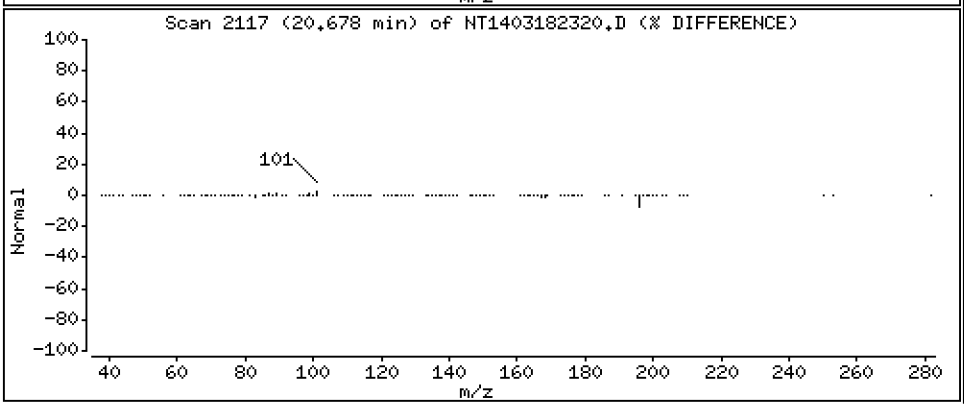












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

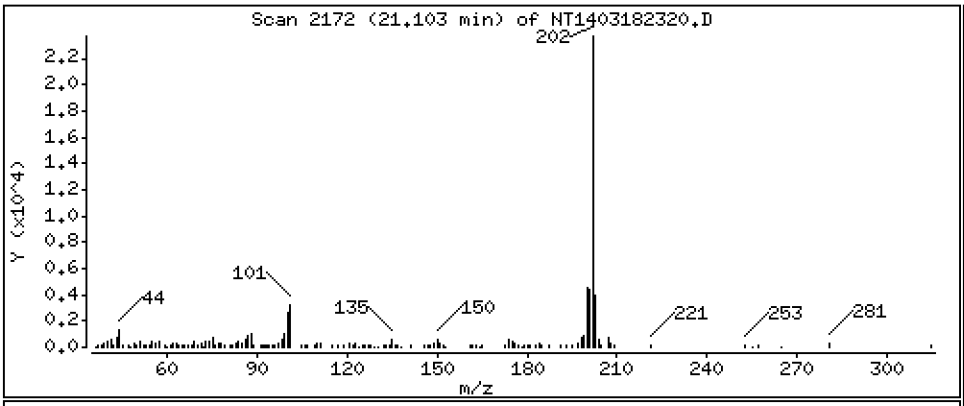
Operator: JGR

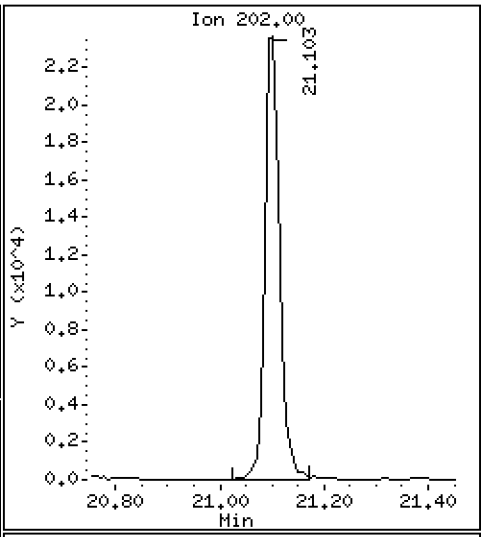
Column phase: ZB-5msi

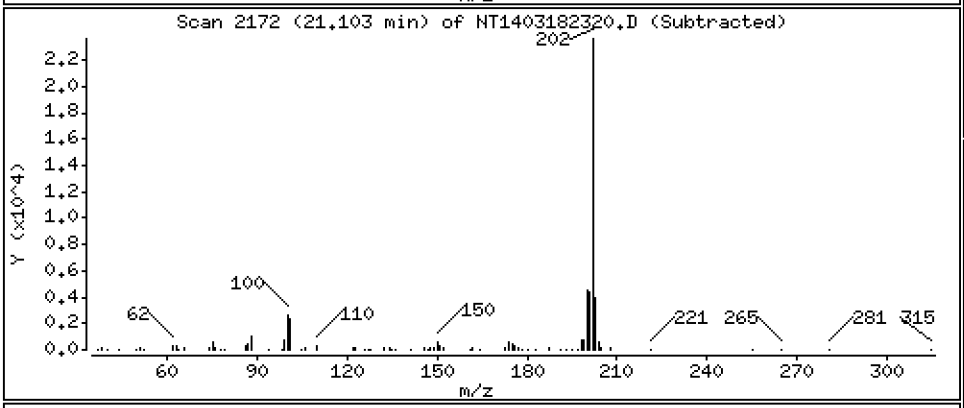
Column diameter: 0.25

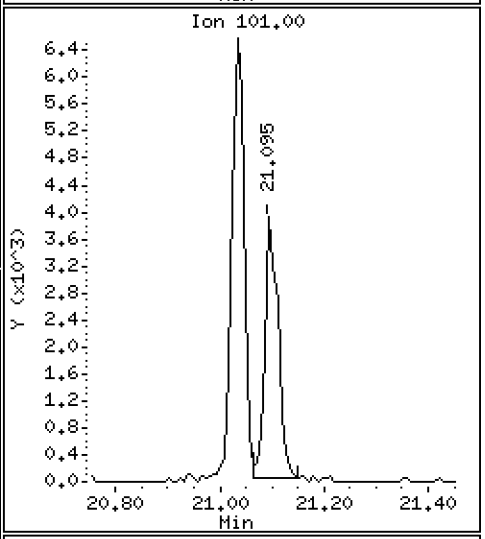
65 Pyrene

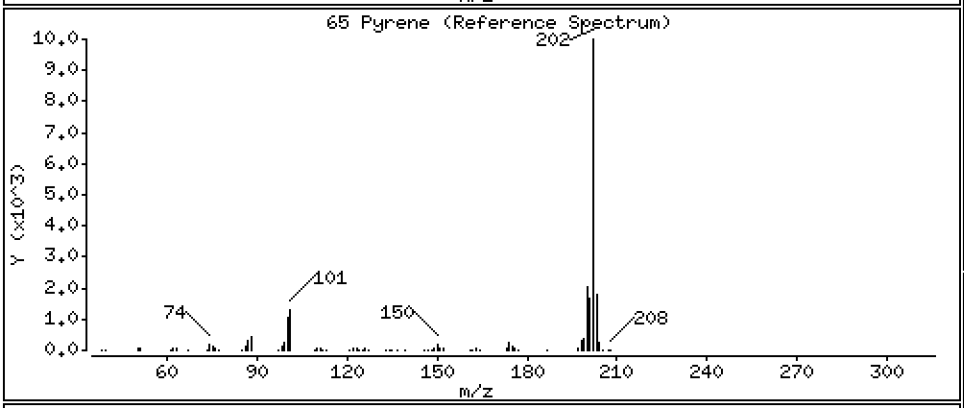
Concentration: 0.2411 ug/mL

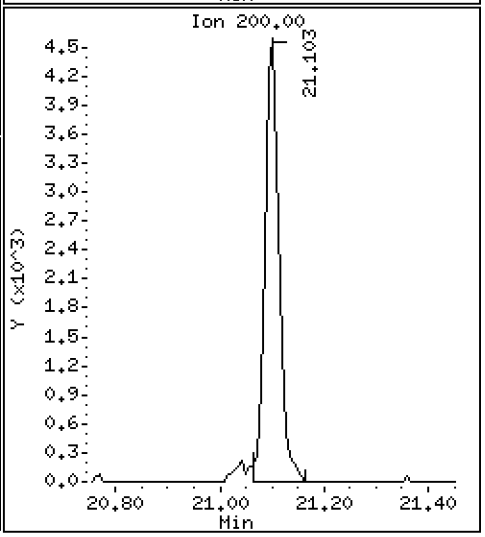


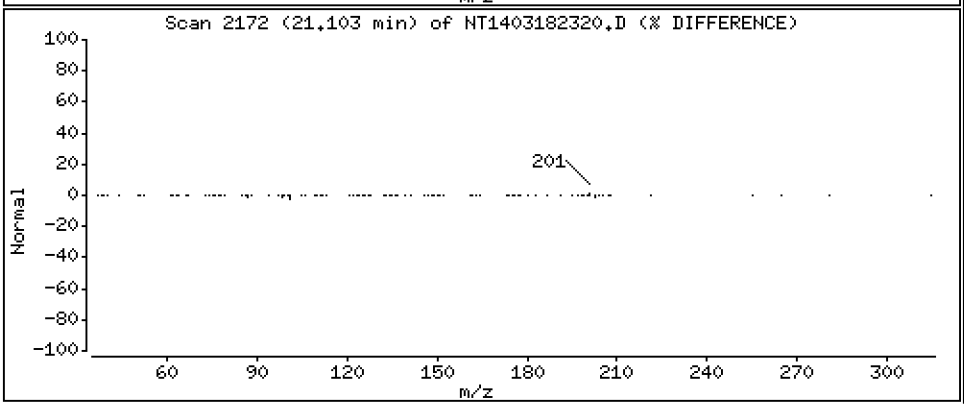












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

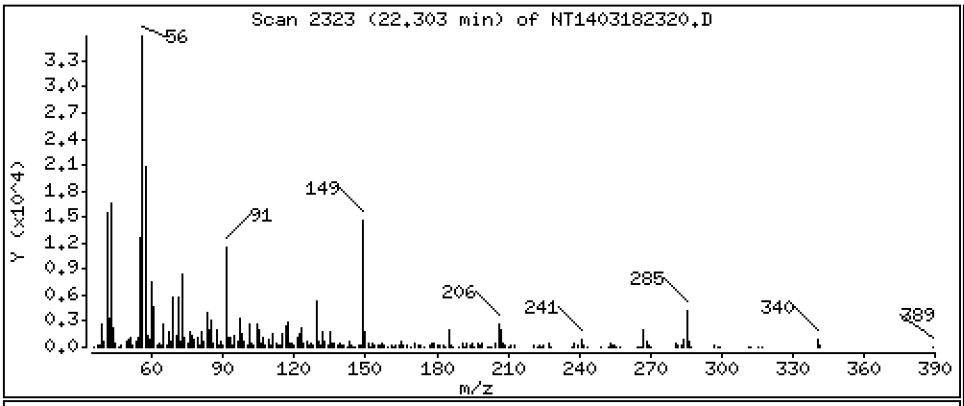
Operator: JGR

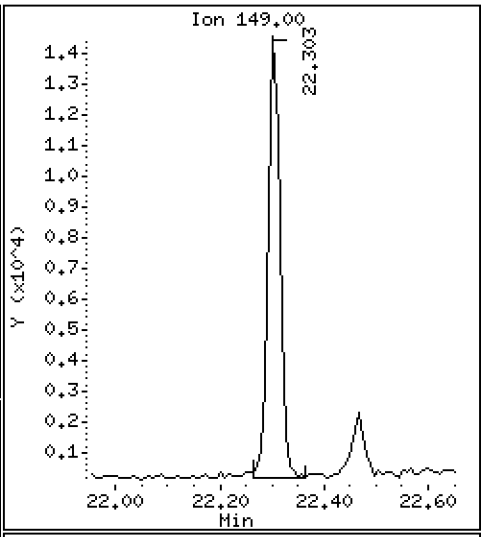
Column phase: ZB-5msi

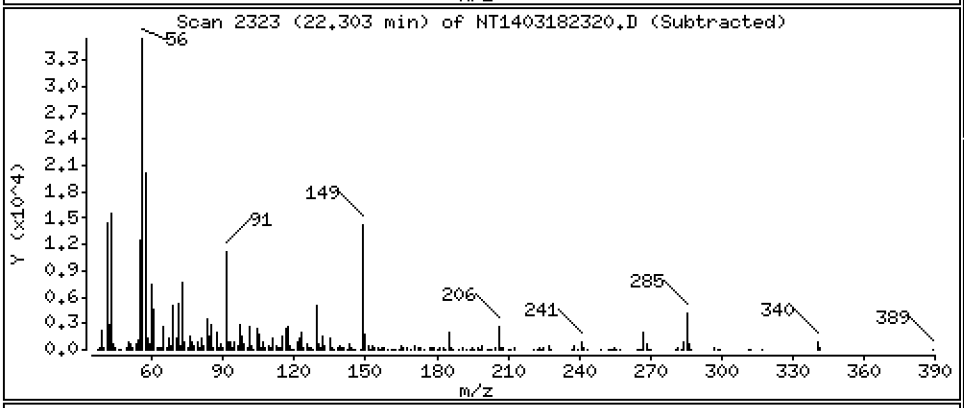
Column diameter: 0.25

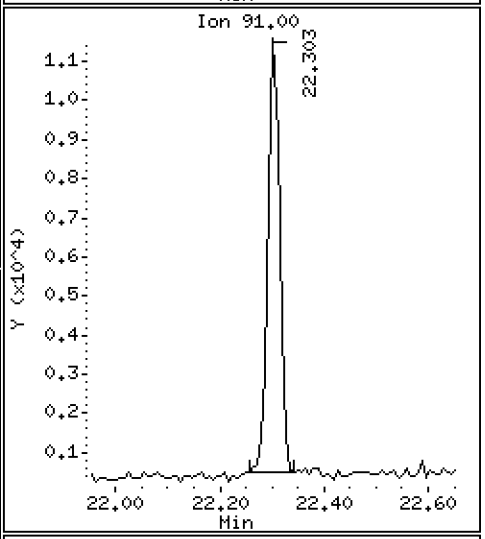
67 Butylbenzylphthalate

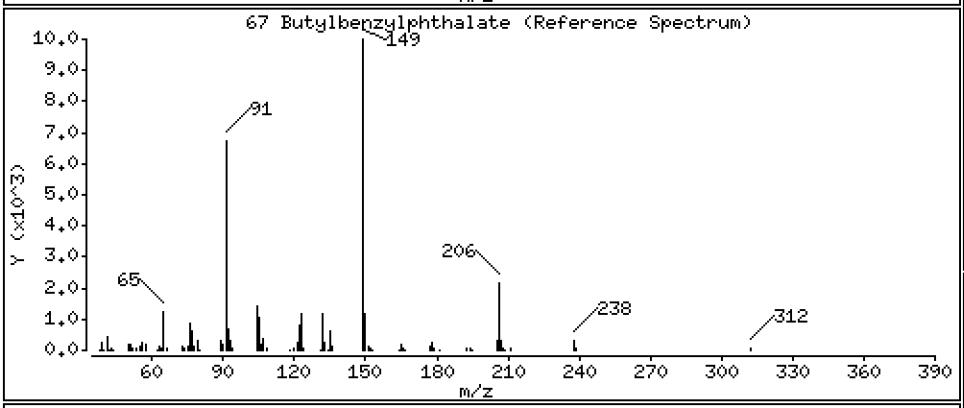
Concentration: 0.2626 ug/mL

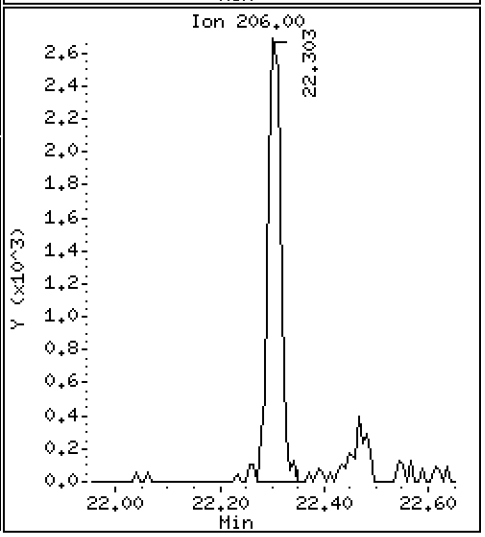


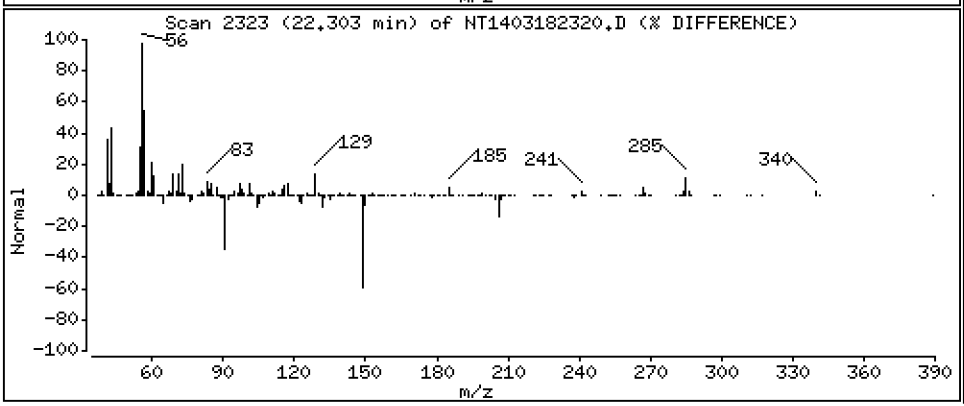












Date : 19-MAR-2023 04:28

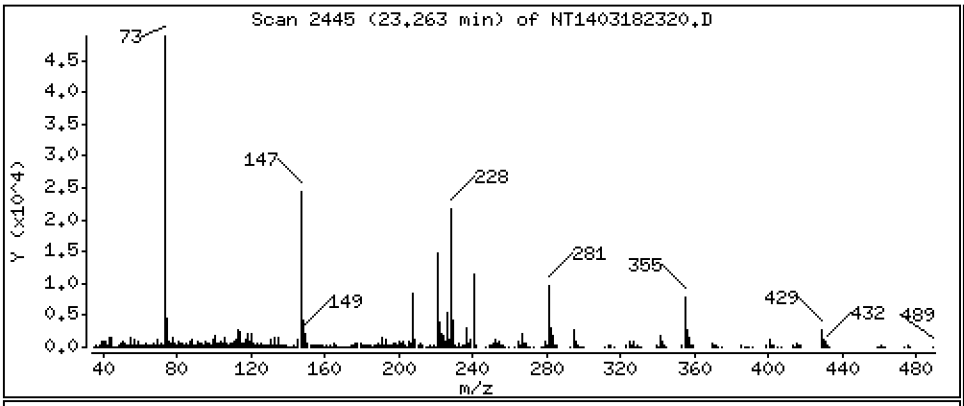
Client ID: Instrument: nt14.i

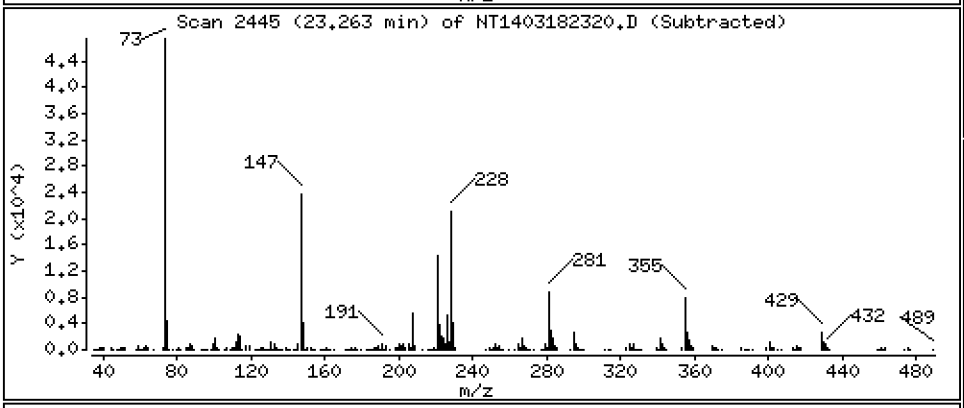
Sample Info: SLC0355-LCV2

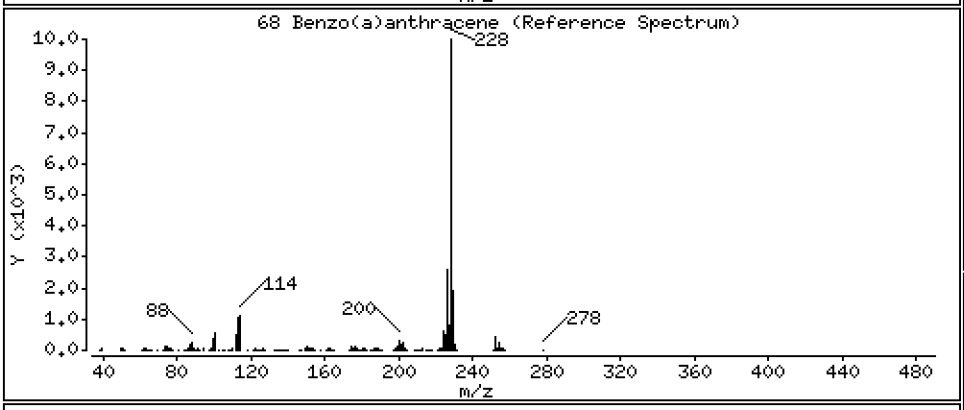
Operator: JGR

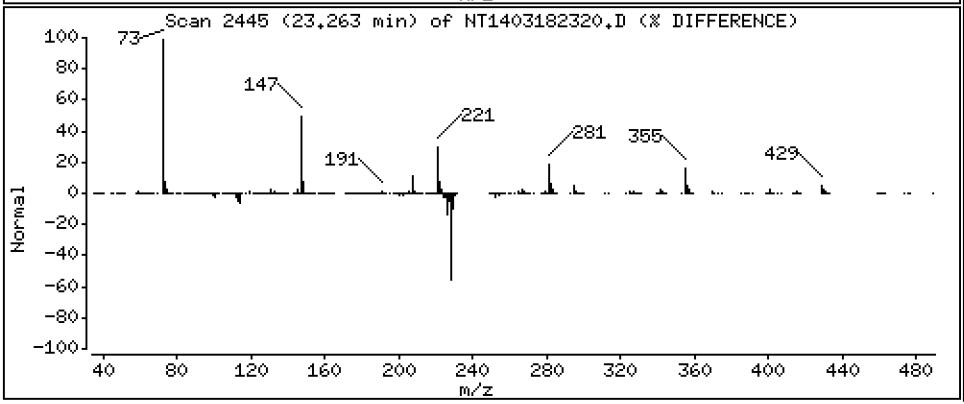
Column phase: ZB-5msi Column diameter: 0.25

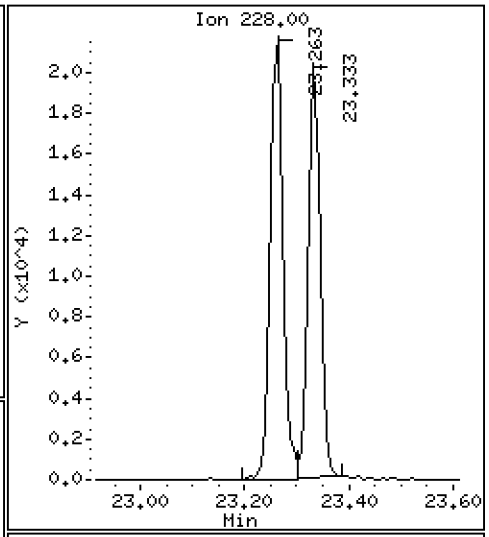
68 Benzo(a)anthracene Concentration: 0.2153 ug/mL

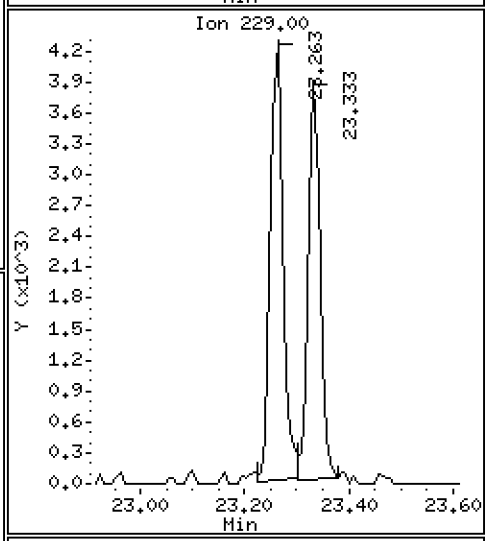


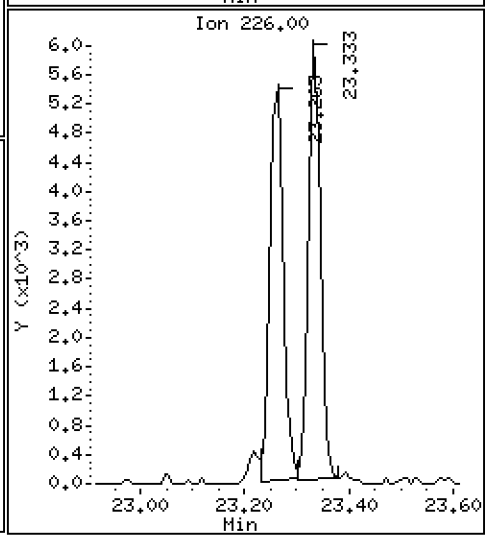












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

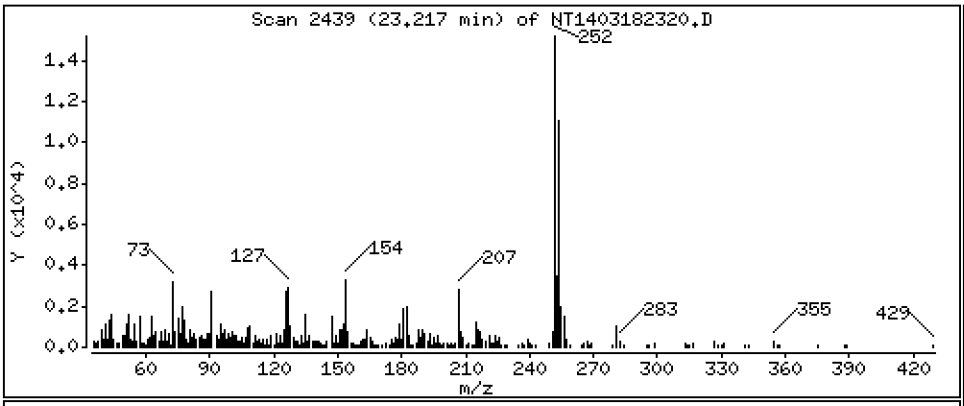
Operator: JGR

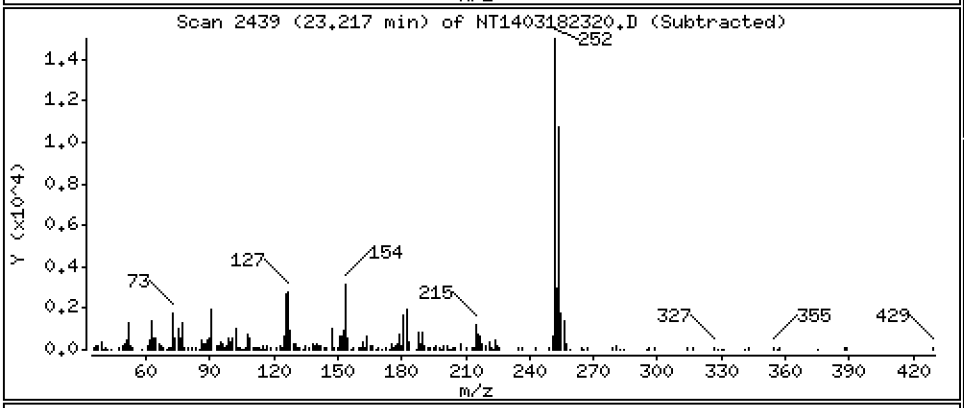
Column phase: ZB-5msi

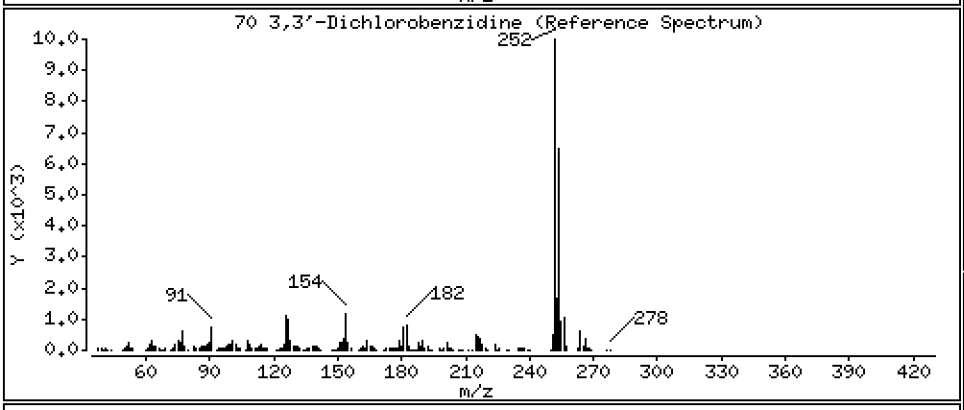
Column diameter: 0.25

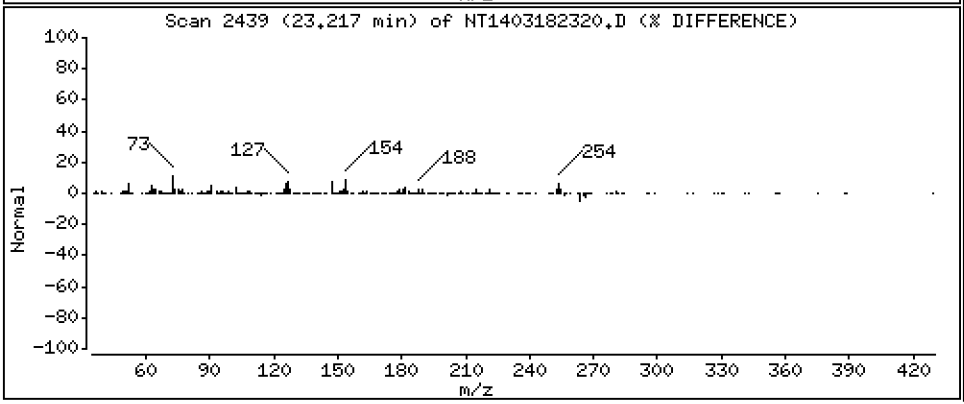
70 3,3'-Dichlorobenzidine

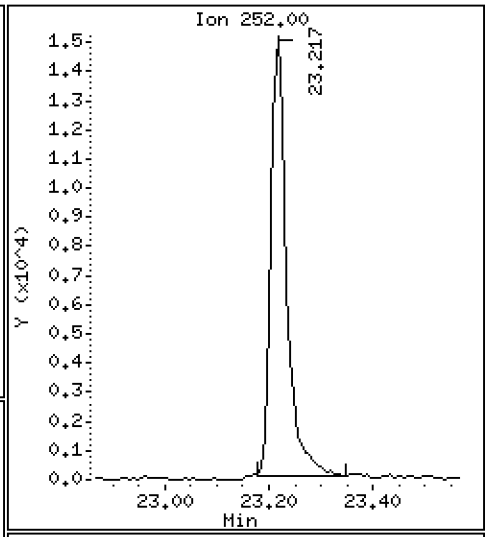
Concentration: 0.6487 ug/mL

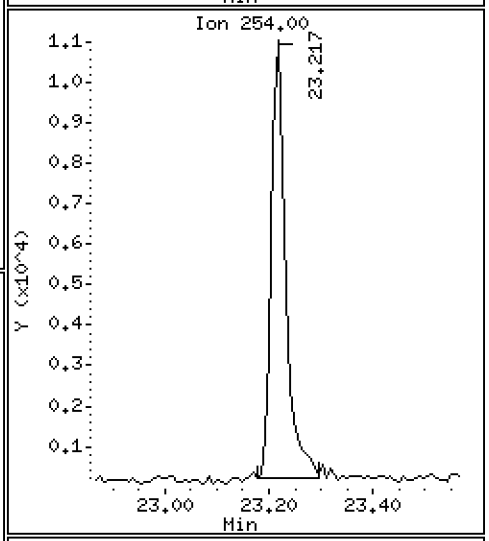


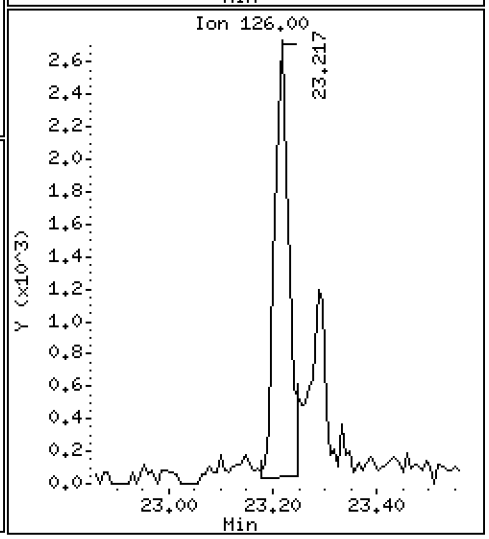












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

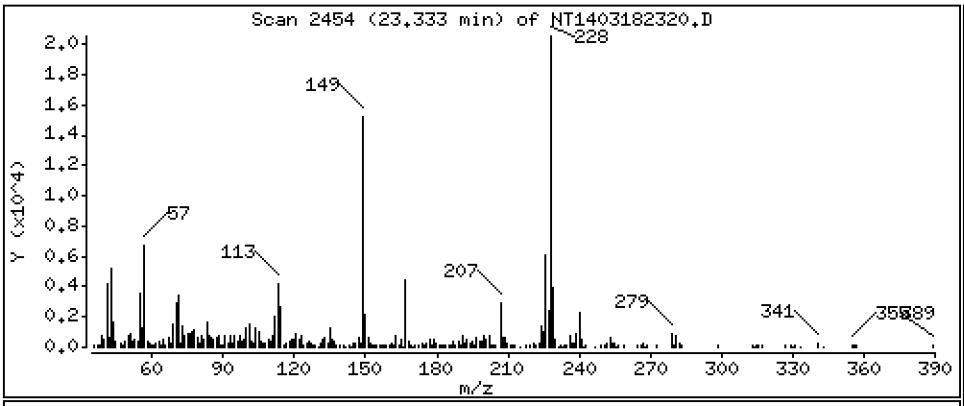
Operator: JGR

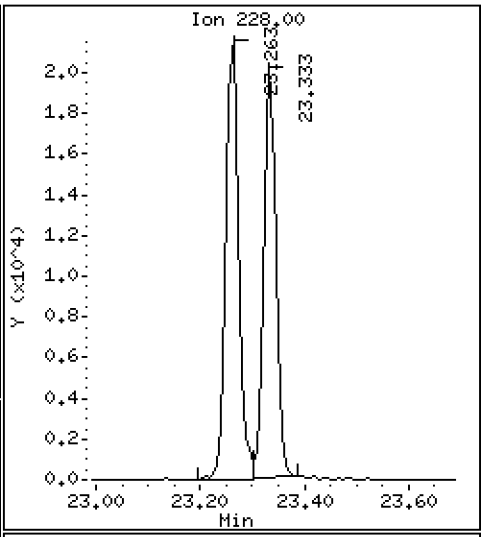
Column phase: ZB-5msi

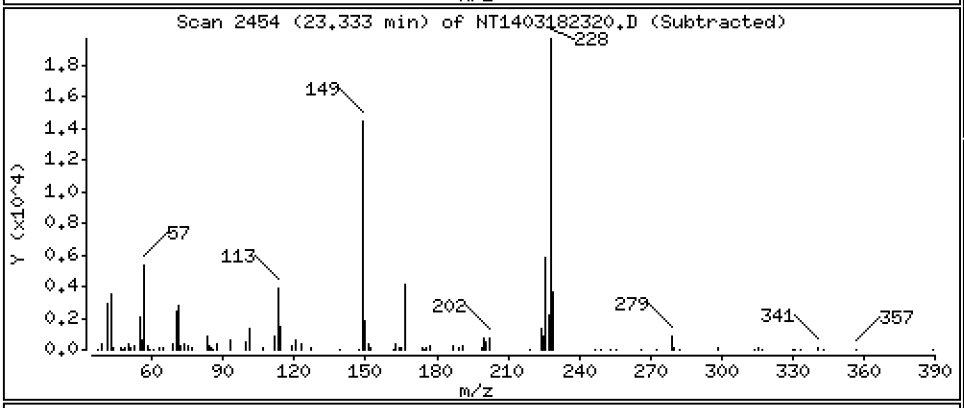
Column diameter: 0.25

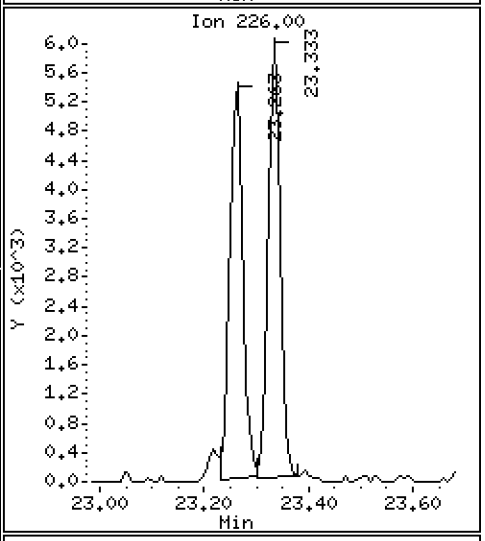
71 Chrysene

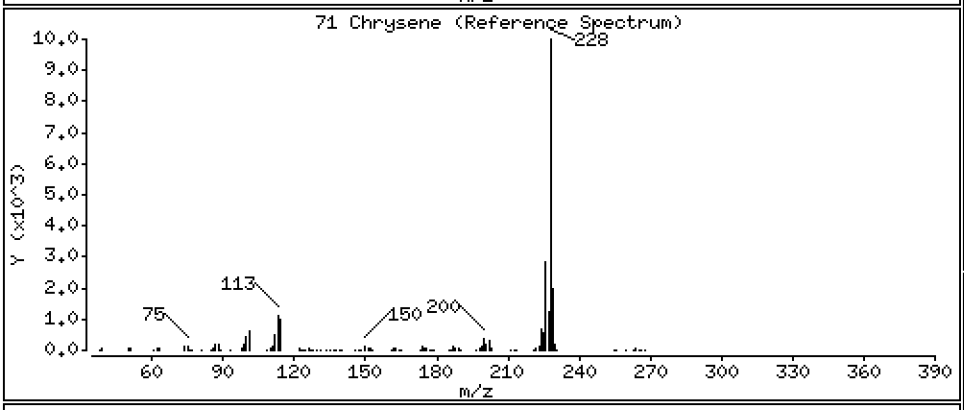
Concentration: 0.2071 ug/mL

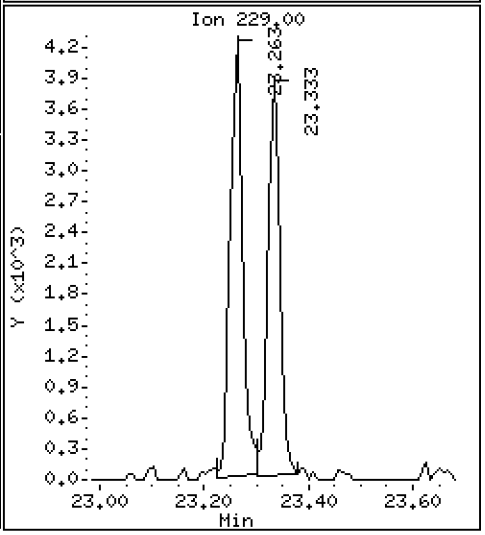


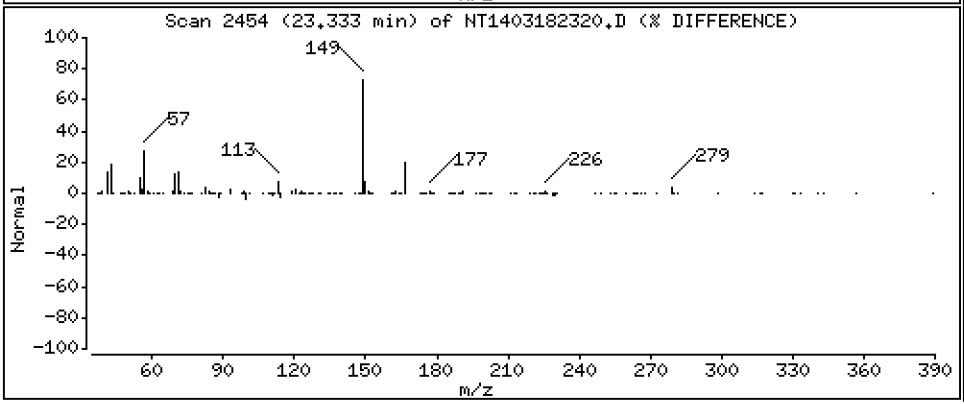












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

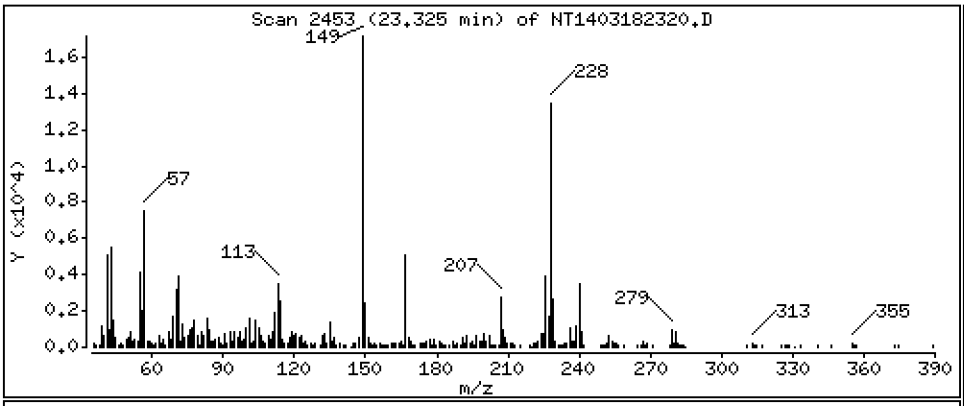
Operator: JGR

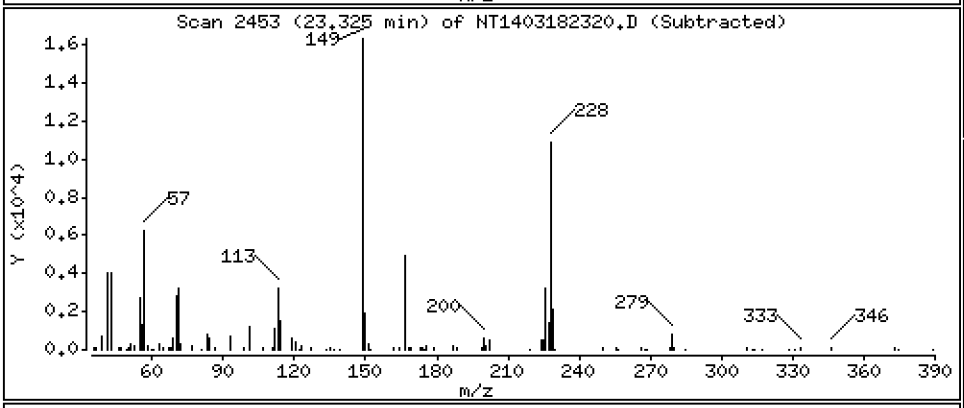
Column phase: ZB-5msi

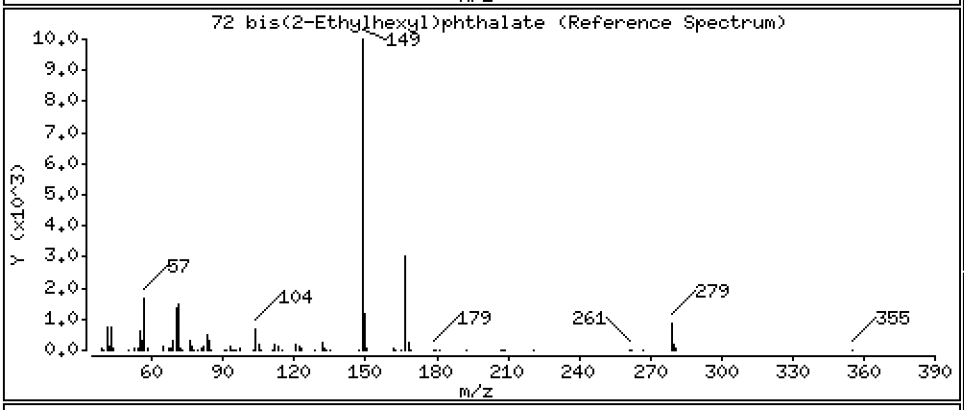
Column diameter: 0.25

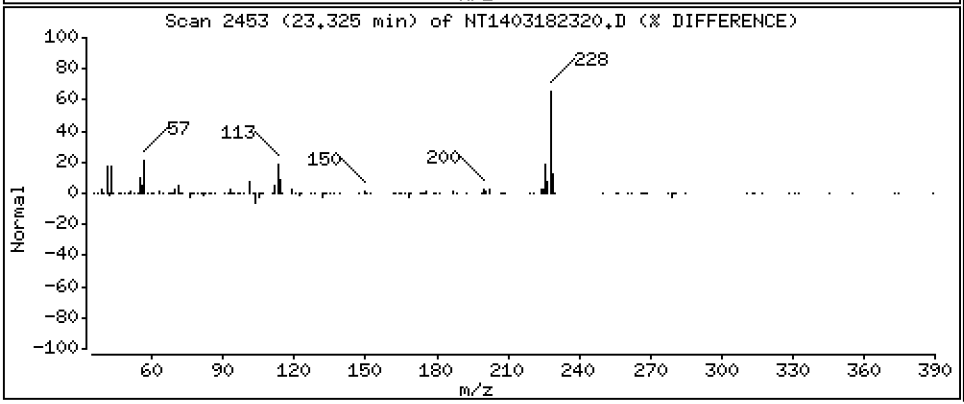
72 bis(2-Ethylhexyl)phthalate

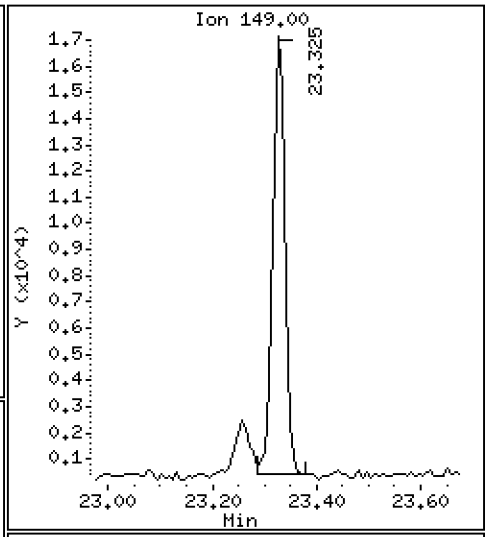
Concentration: 0.2285 ug/mL

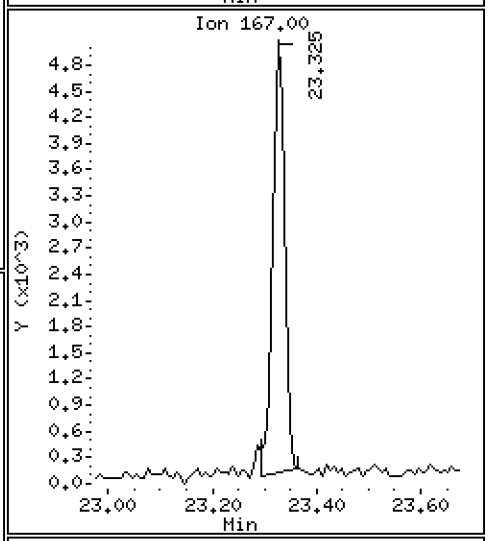


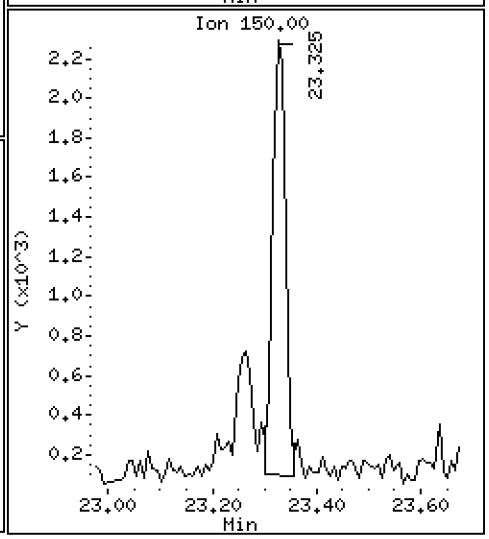












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

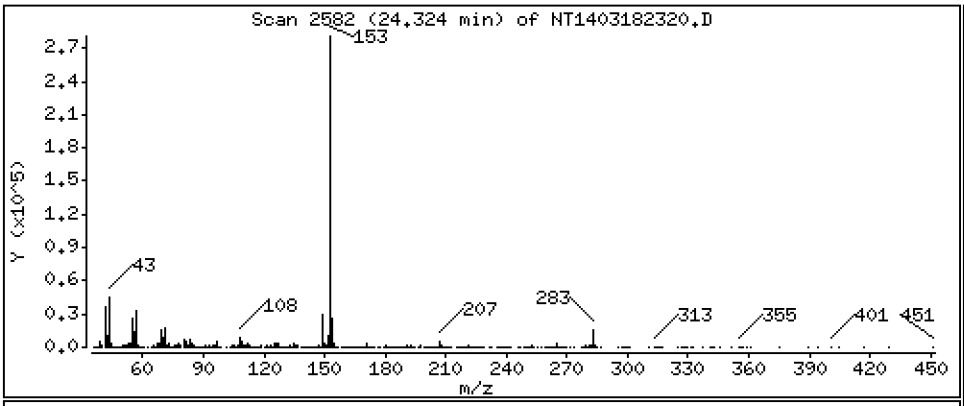
Operator: JGR

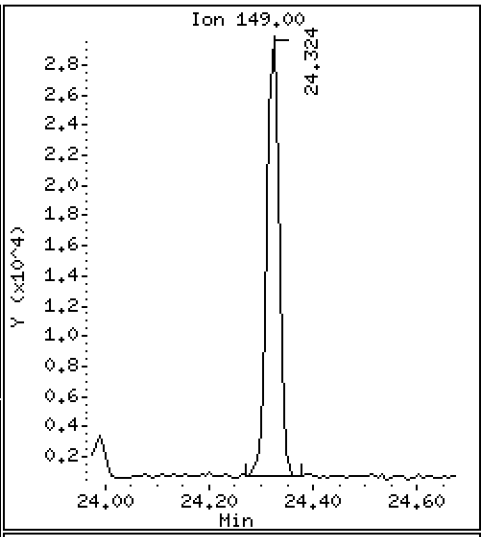
Column phase: ZB-5msi

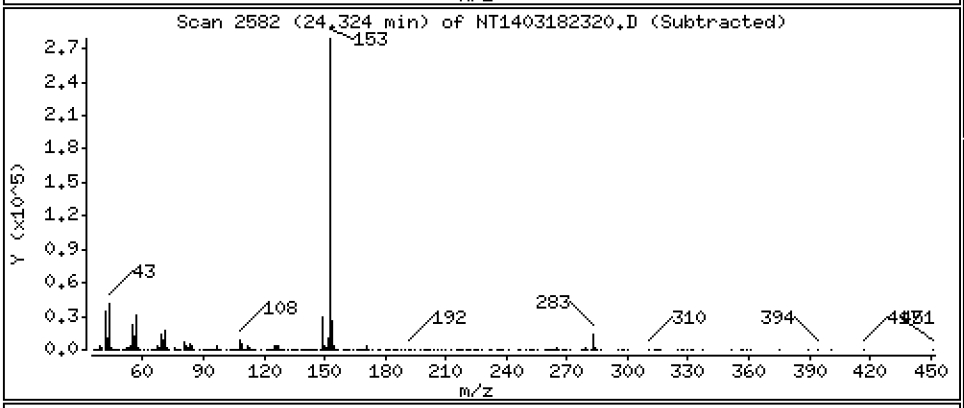
Column diameter: 0.25

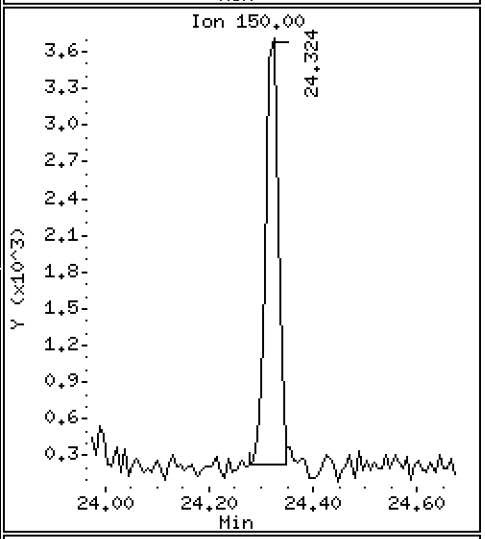
73 Di-n-octylphthalate

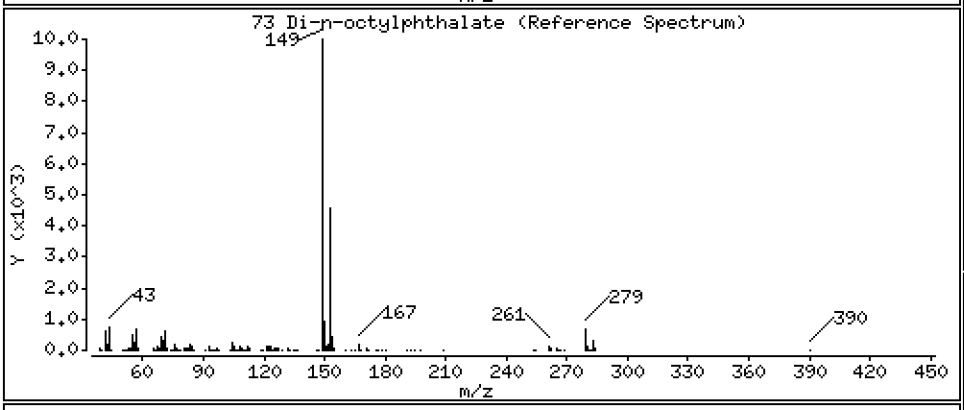
Concentration: 0.2058 ug/mL

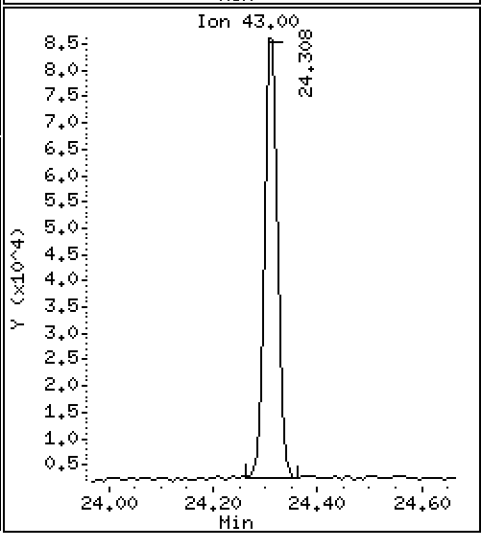


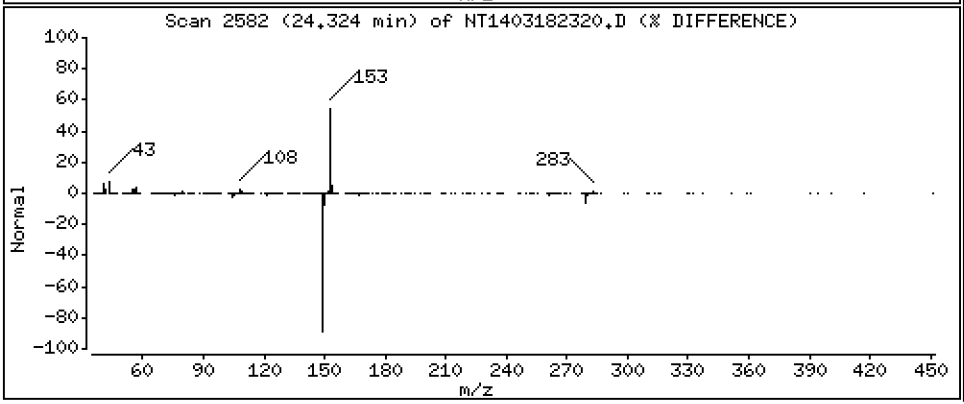












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

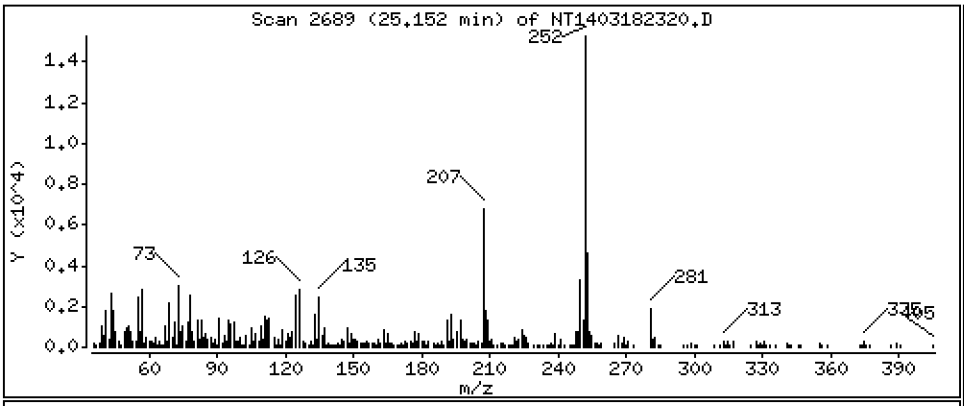
Operator: JGR

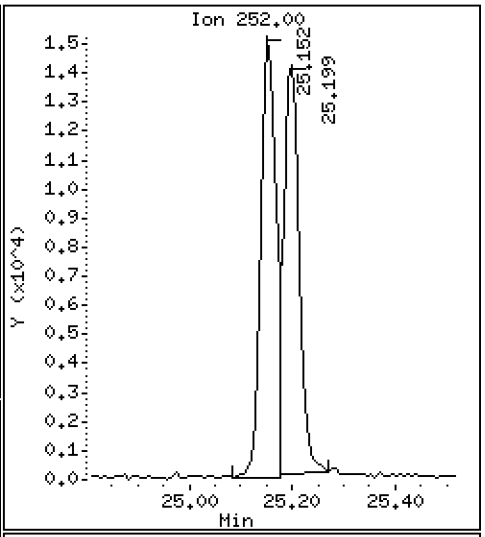
Column phase: ZB-5msi

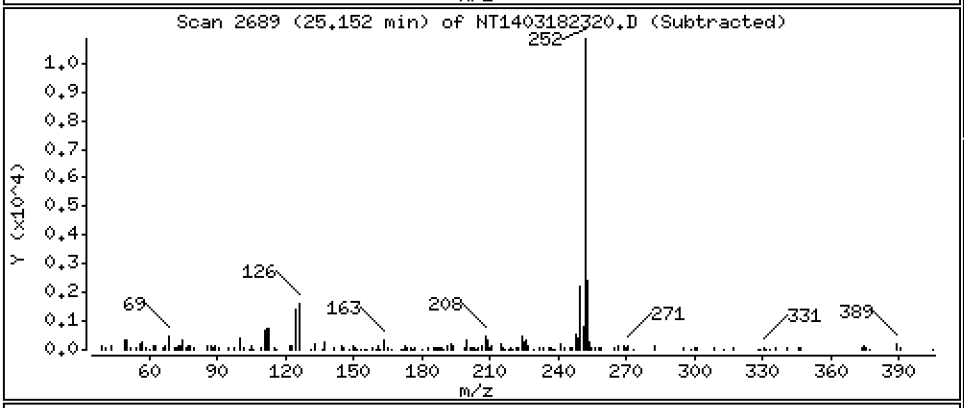
Column diameter: 0.25

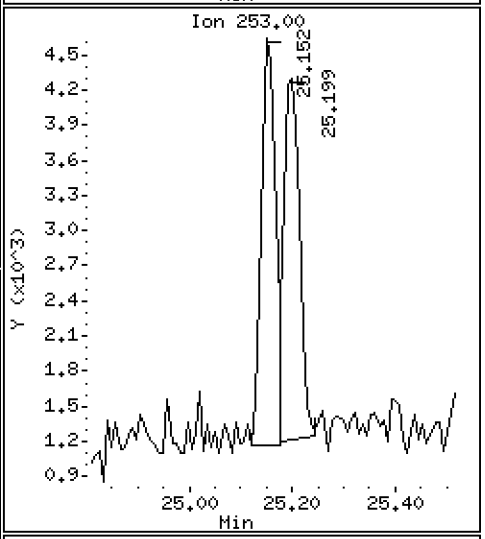
74 Benzo(b)fluoranthene

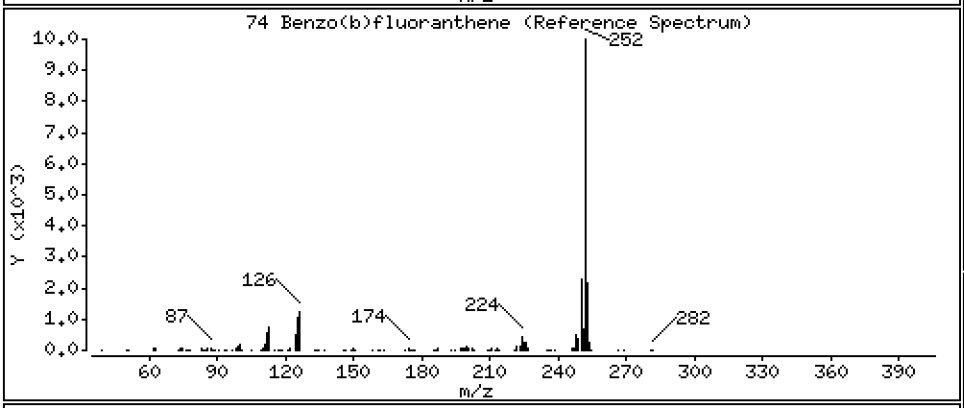
Concentration: 0.1855 ug/mL

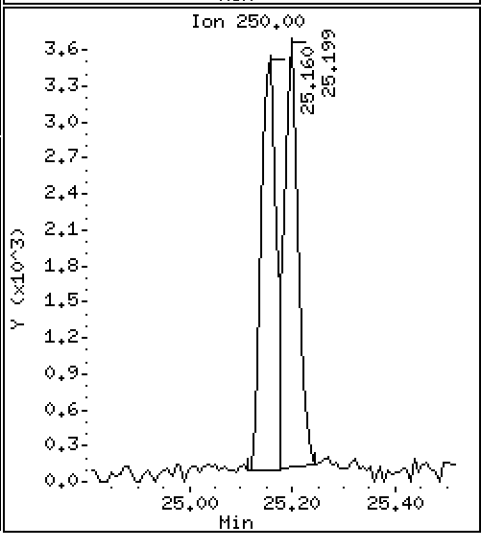


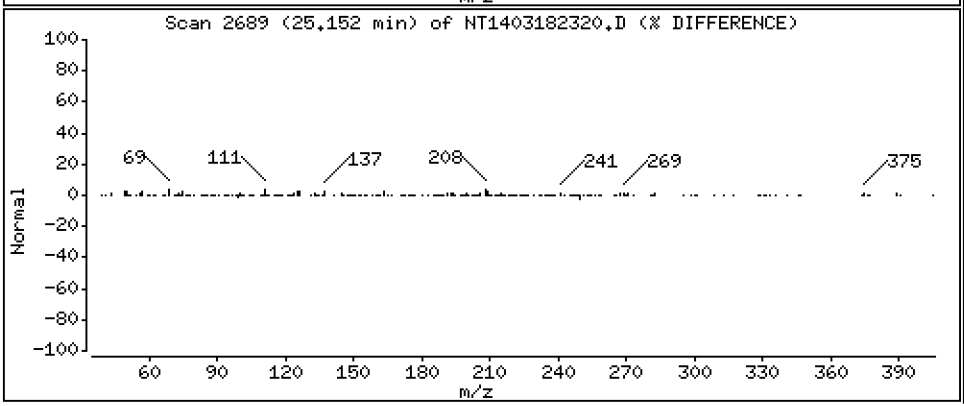












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

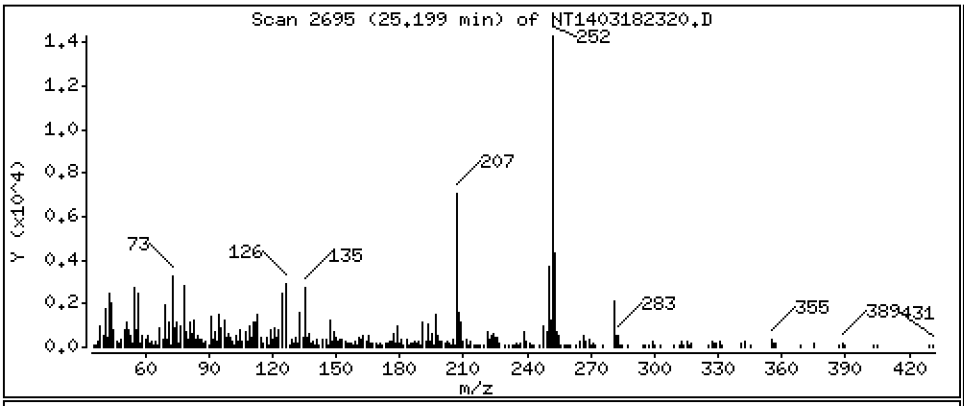
Operator: JGR

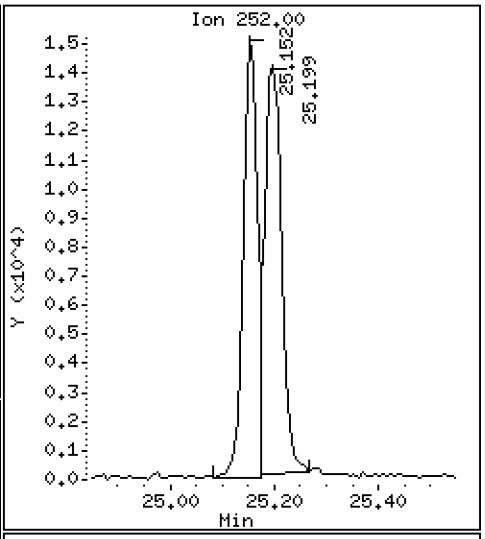
Column phase: ZB-5msi

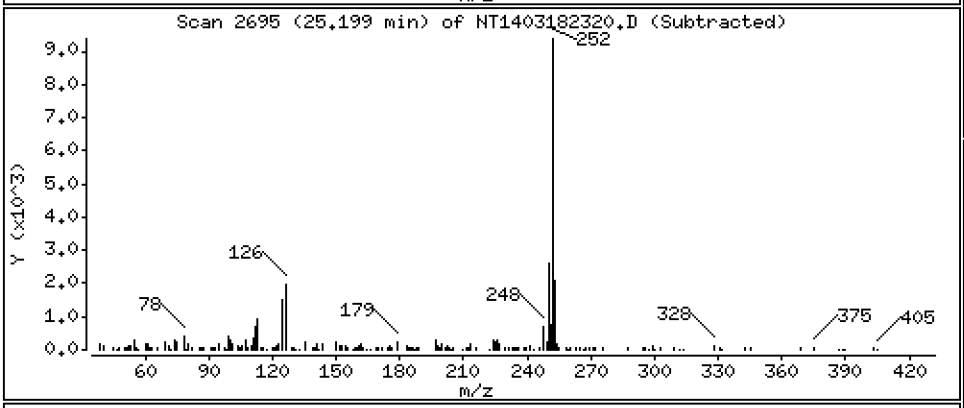
Column diameter: 0.25

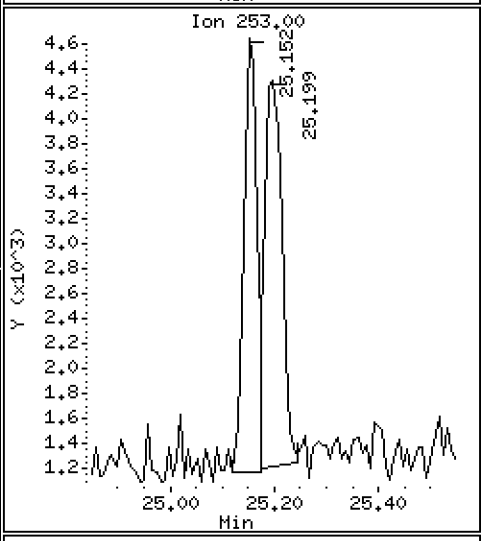
75 Benzo(k)fluoranthene

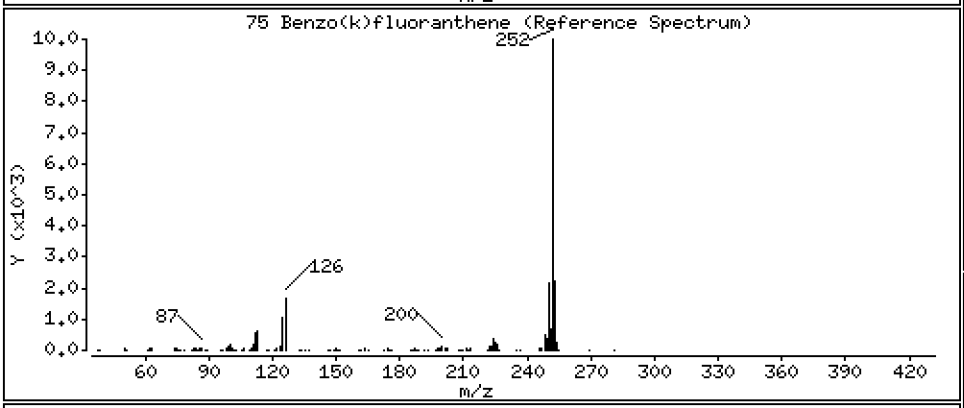
Concentration: 0.1949 ug/mL

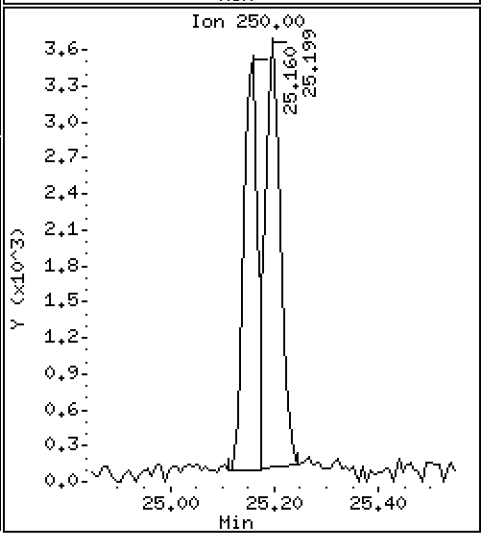


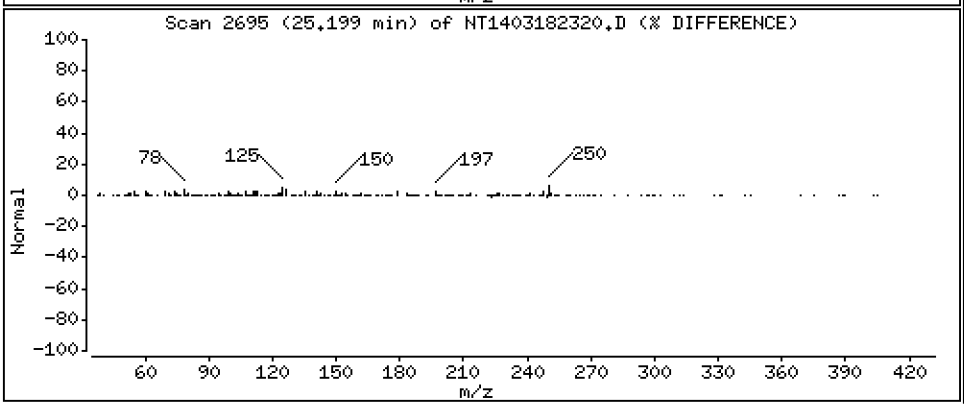












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

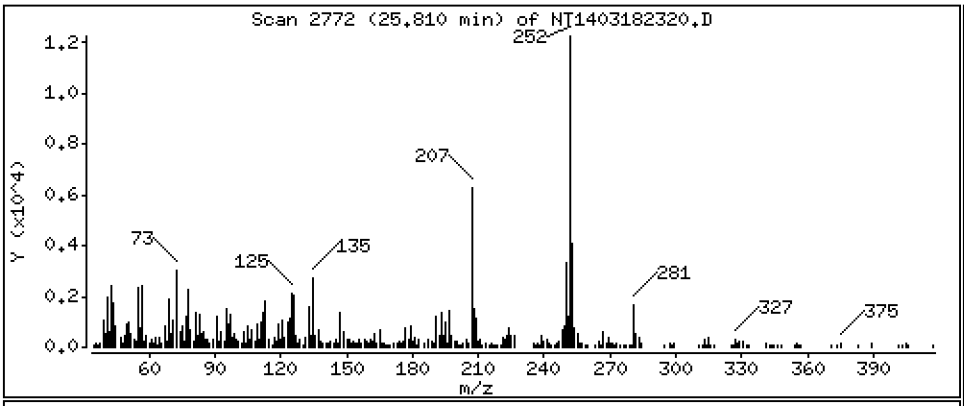
Operator: JGR

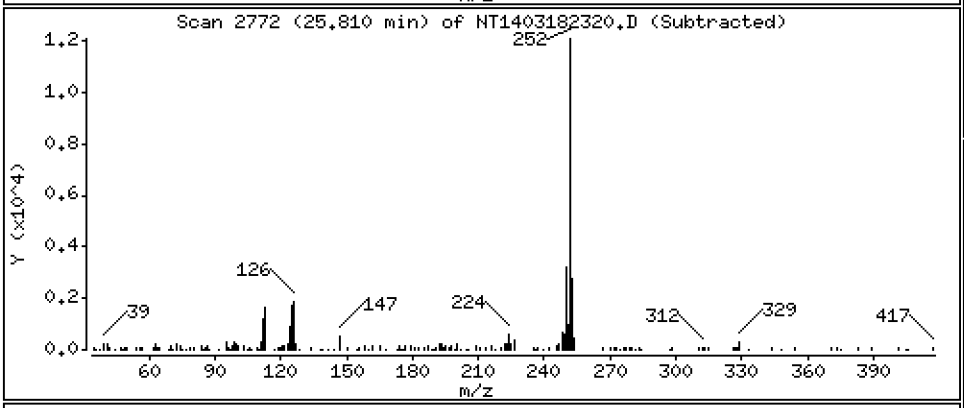
Column phase: ZB-5msi

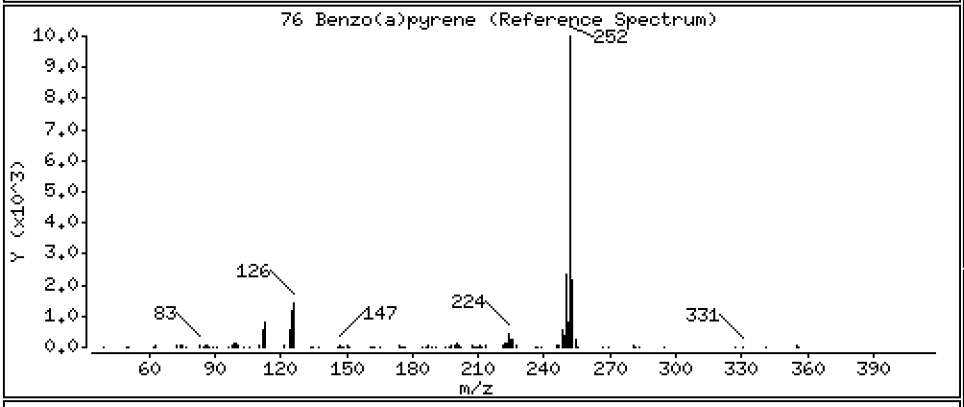
Column diameter: 0.25

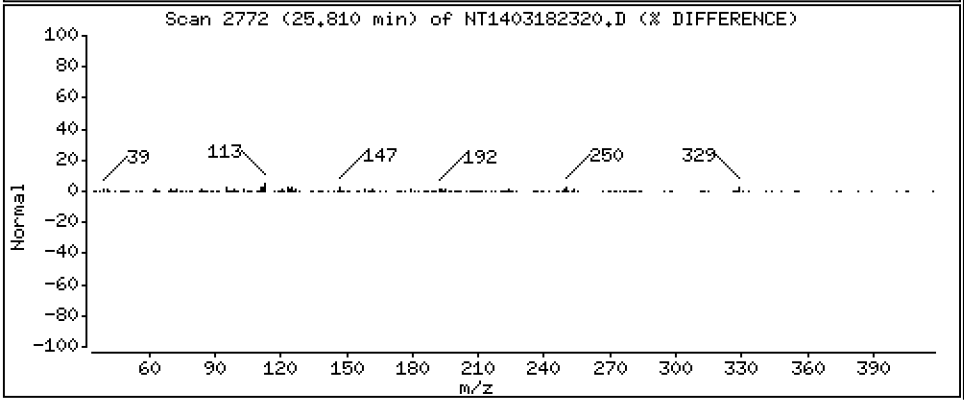
76 Benzo(a)pyrene

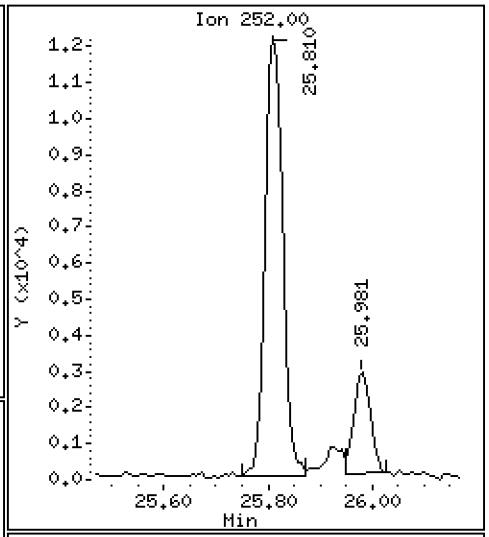
Concentration: 0.1986 ug/mL

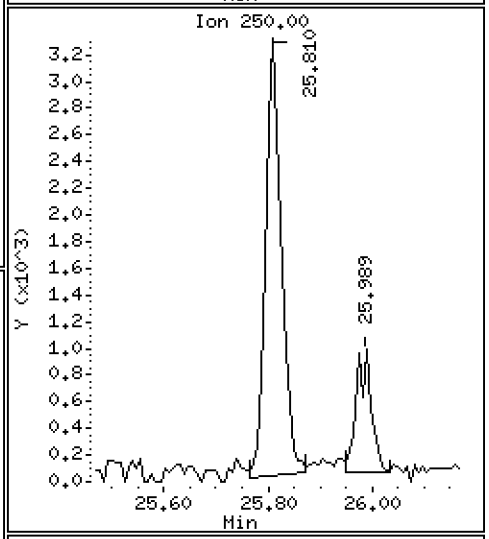


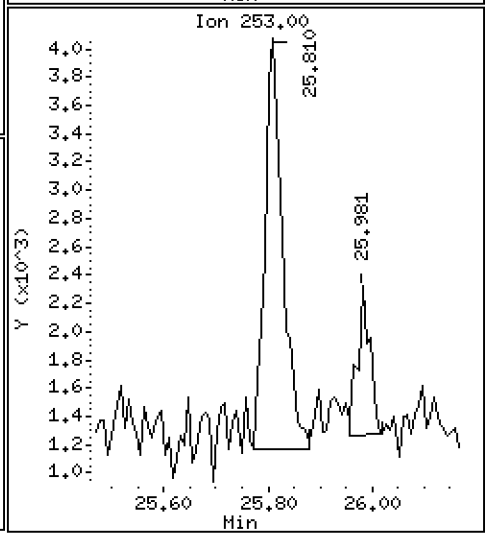












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

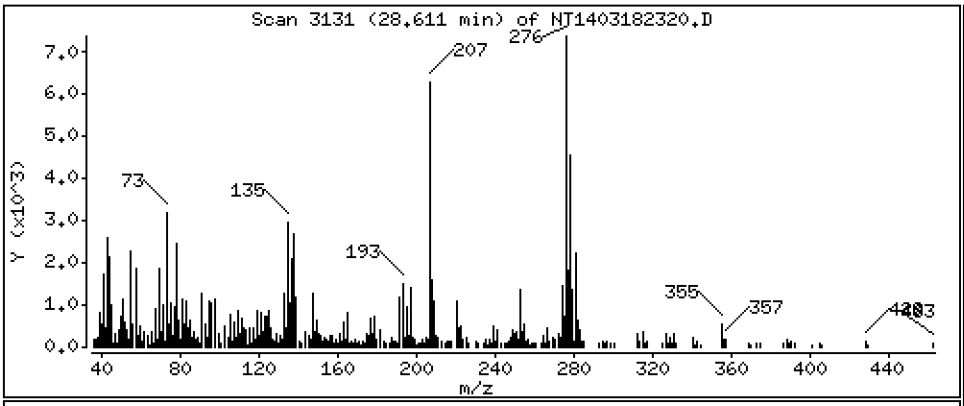
Operator: JGR

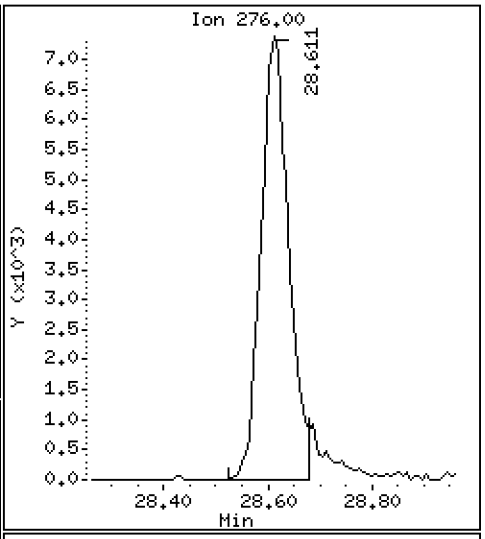
Column phase: ZB-5msi

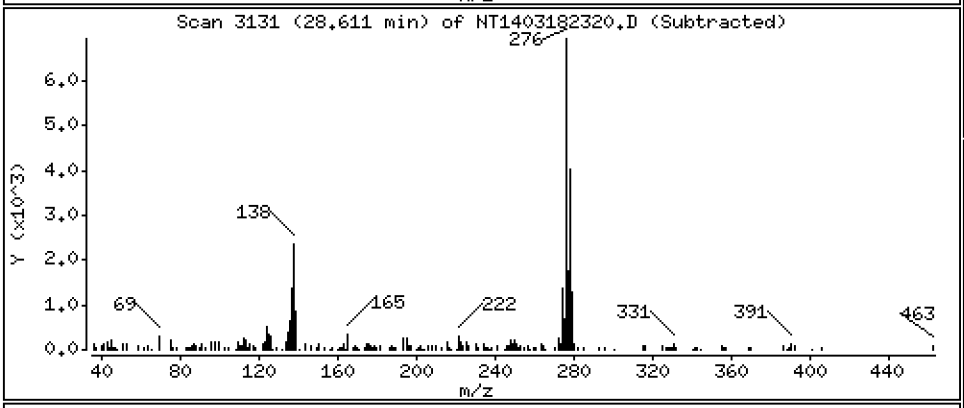
Column diameter: 0.25

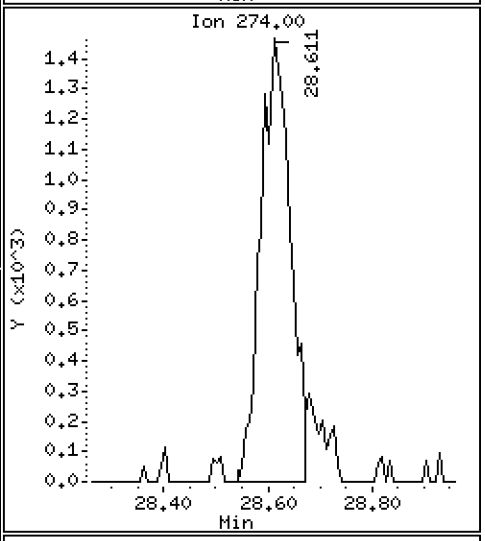
78 Indeno(1,2,3-cd)pyrene

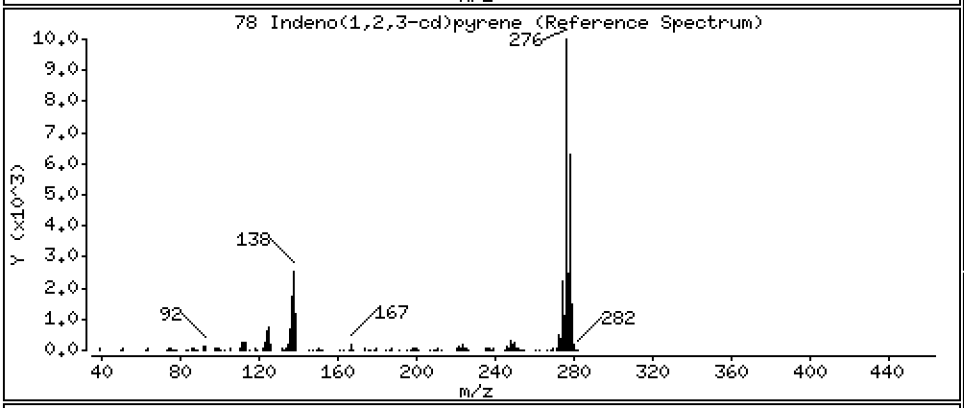
Concentration: 0.1774 ug/mL

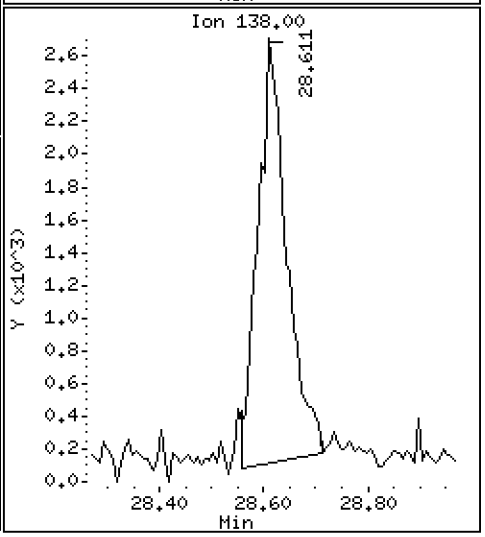


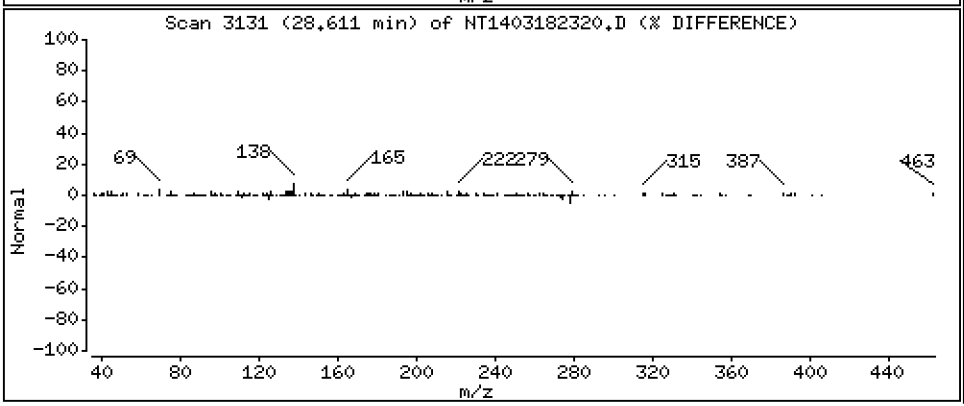












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

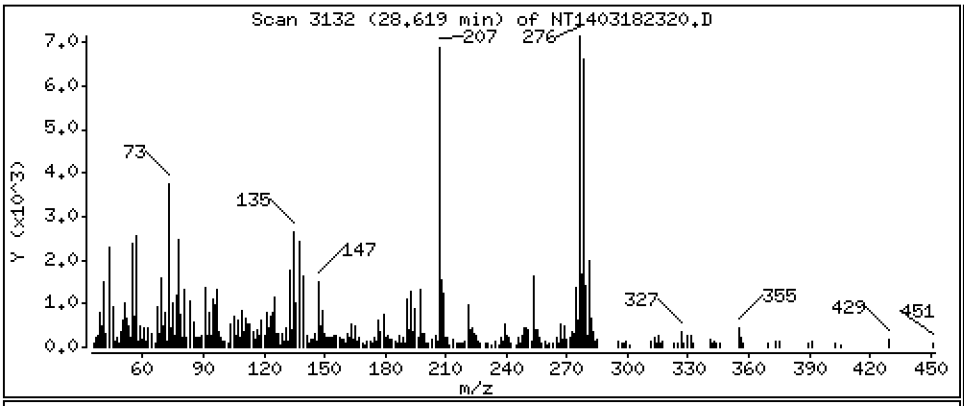
Operator: JGR

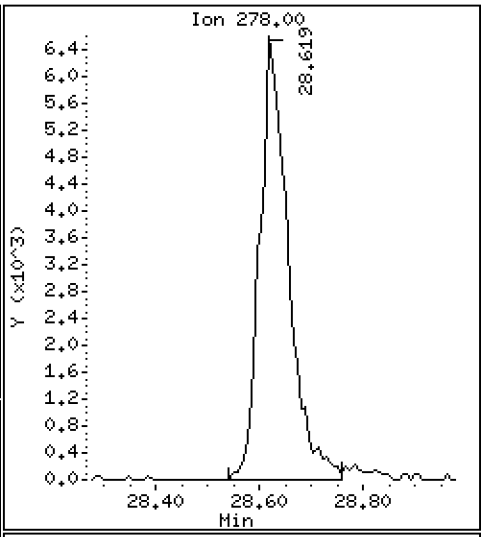
Column phase: ZB-5msi

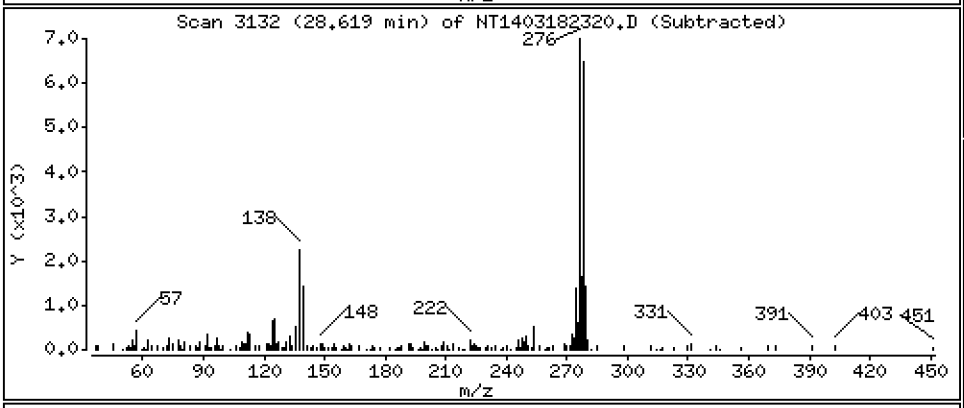
Column diameter: 0.25

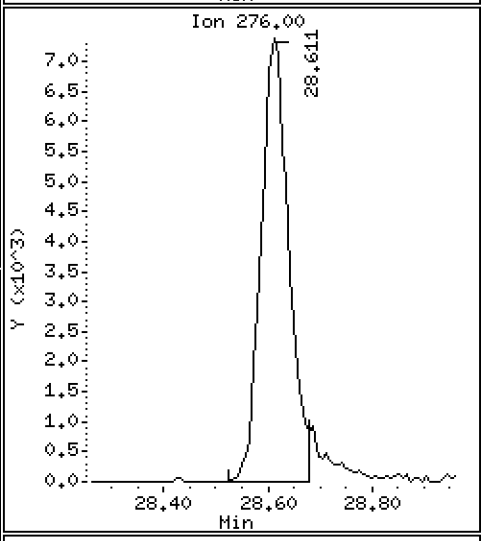
79 Dibenzo(a,h)anthracene

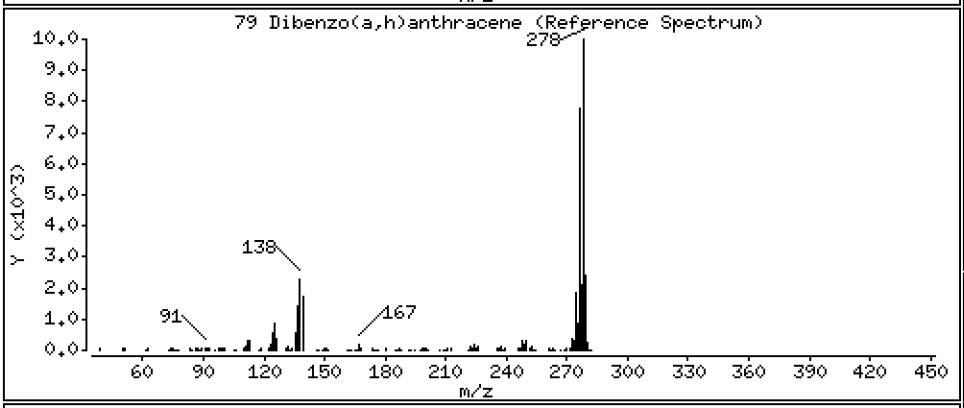
Concentration: 0.1924 ug/mL

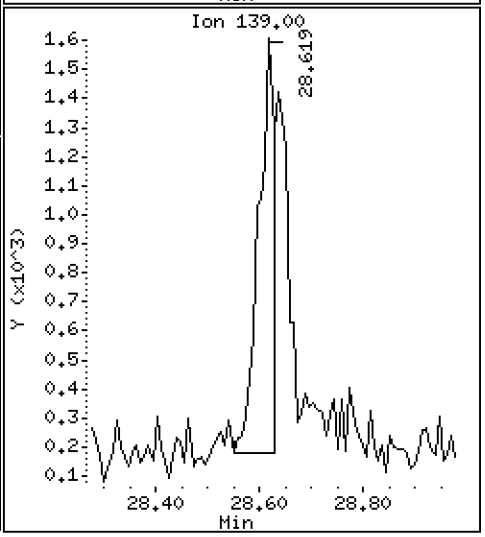


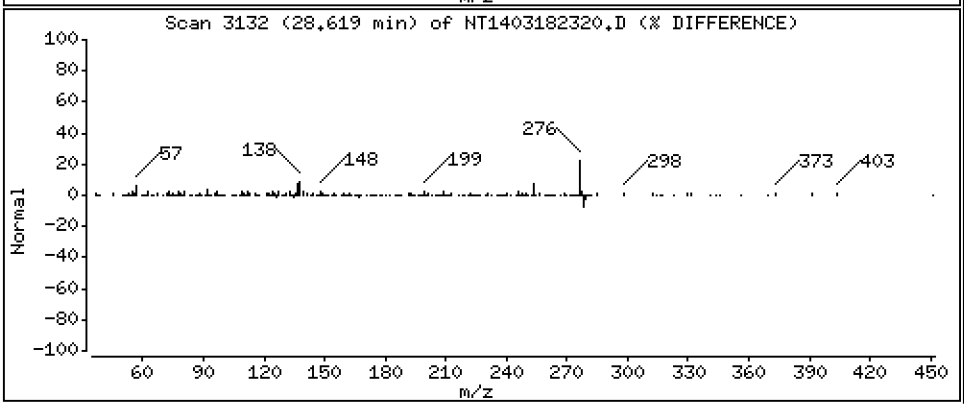












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

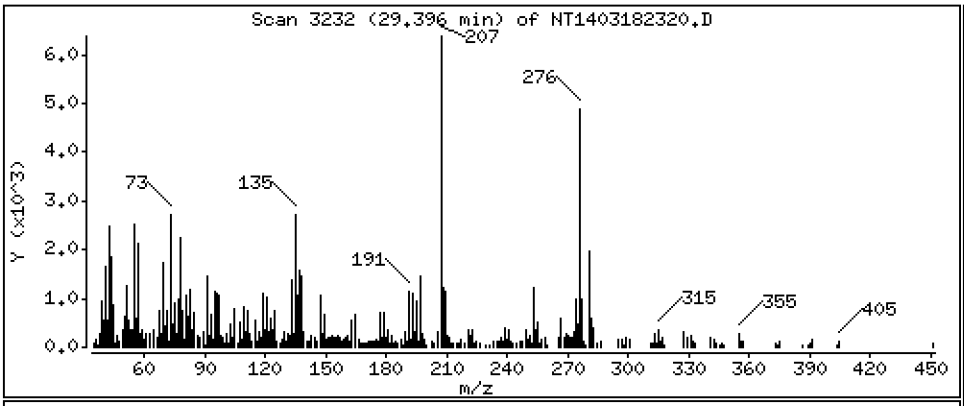
Operator: JGR

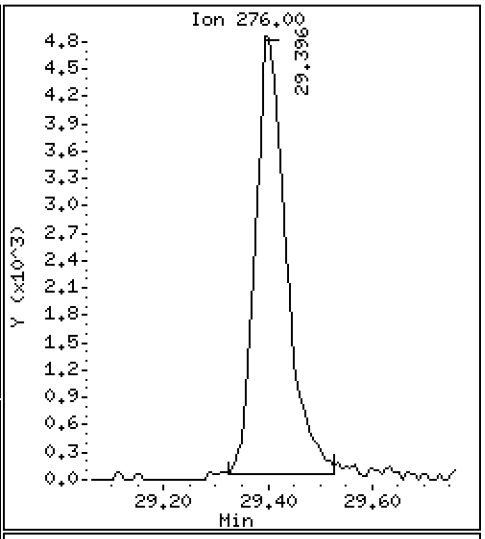
Column phase: ZB-5msi

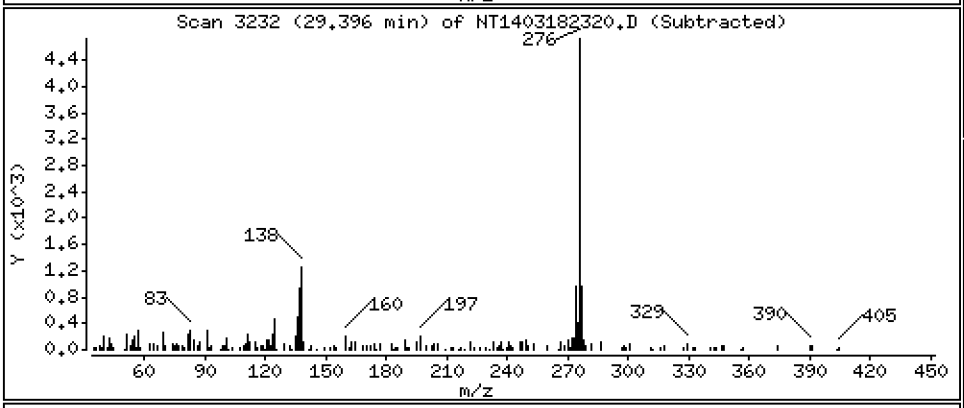
Column diameter: 0.25

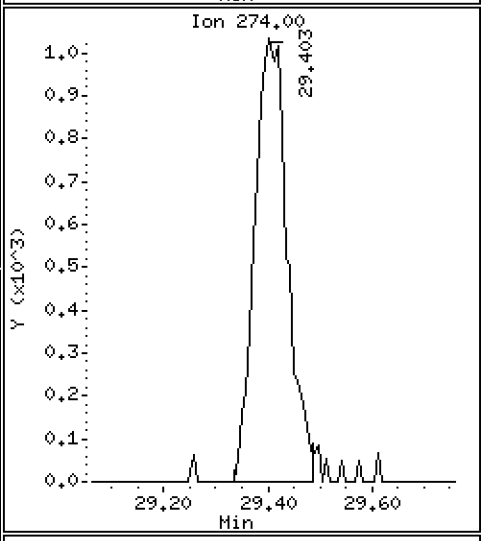
80 Benzo(g,h,i)perylene

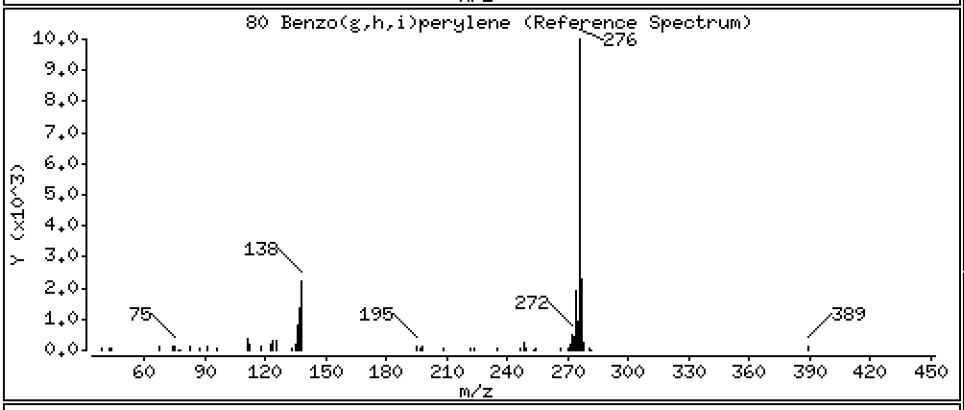
Concentration: 0.1564 ug/mL

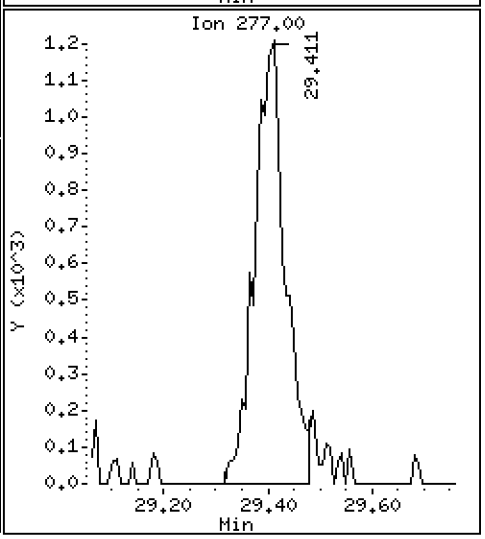


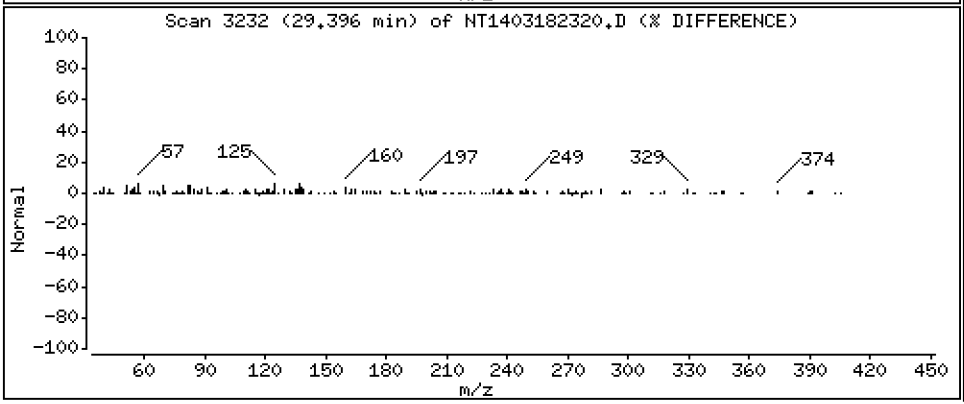












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

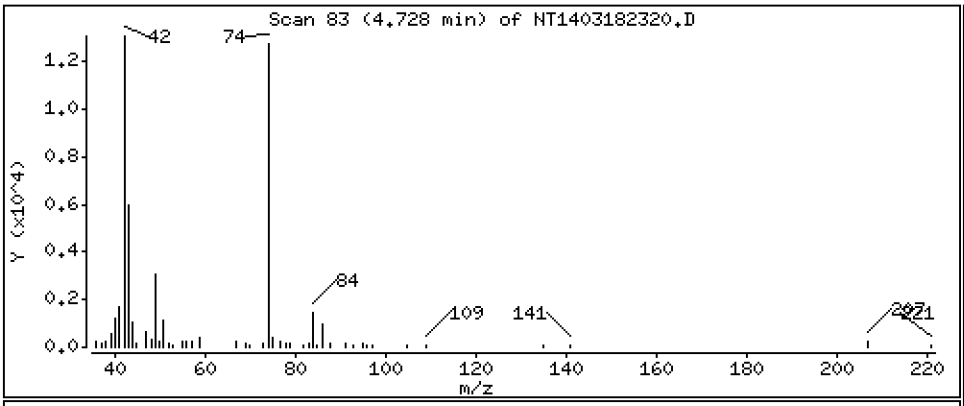
Operator: JGR

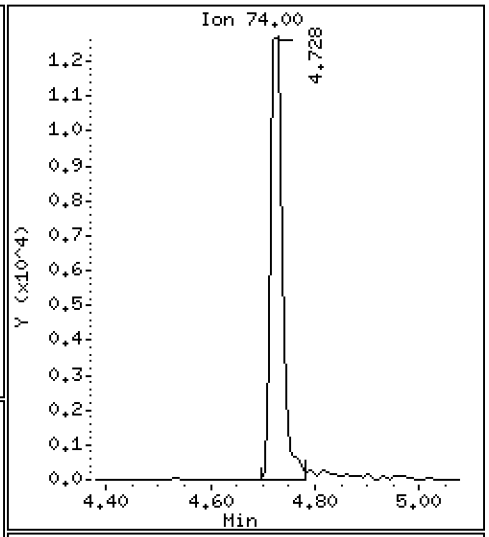
Column phase: ZB-5msi

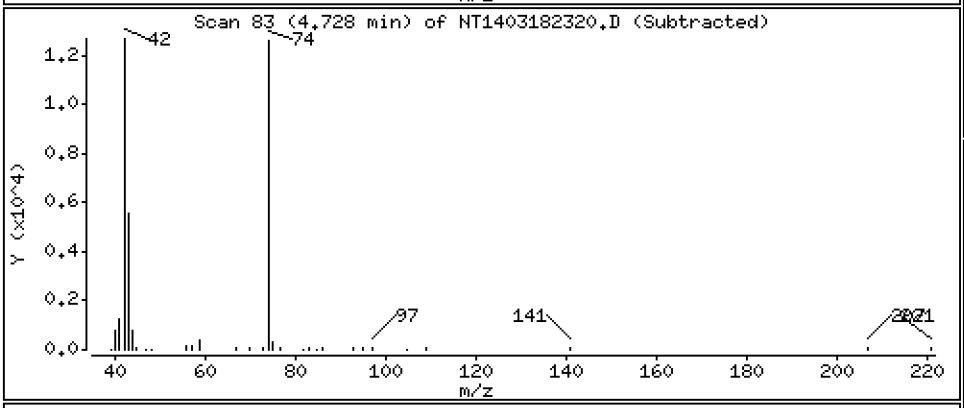
Column diameter: 0.25

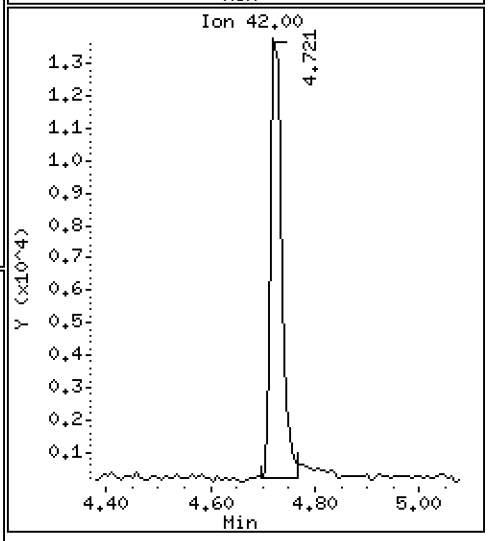
90 N-Nitrosodimethylamine

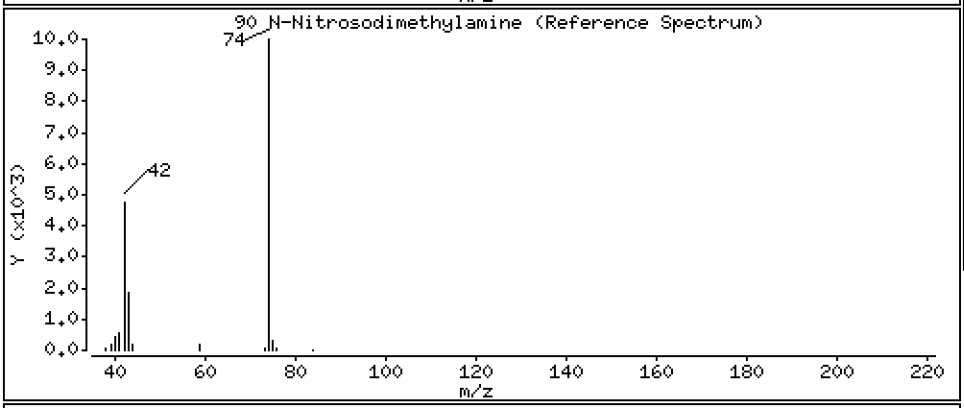
Concentration: 0.3433 ug/mL

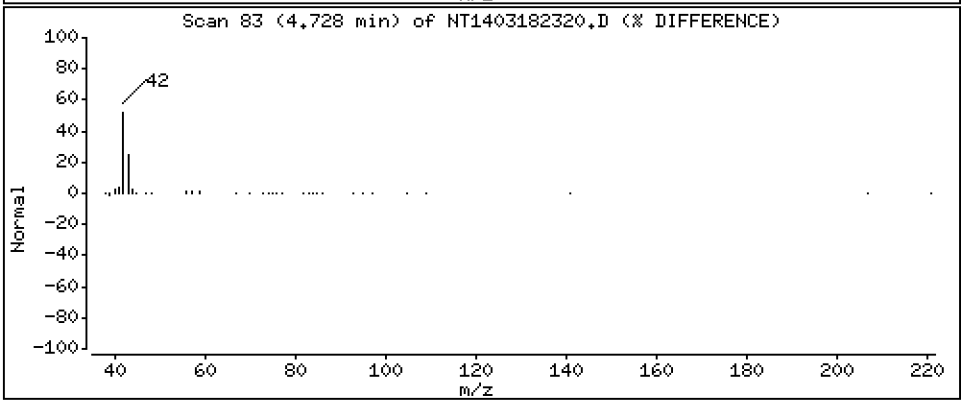












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

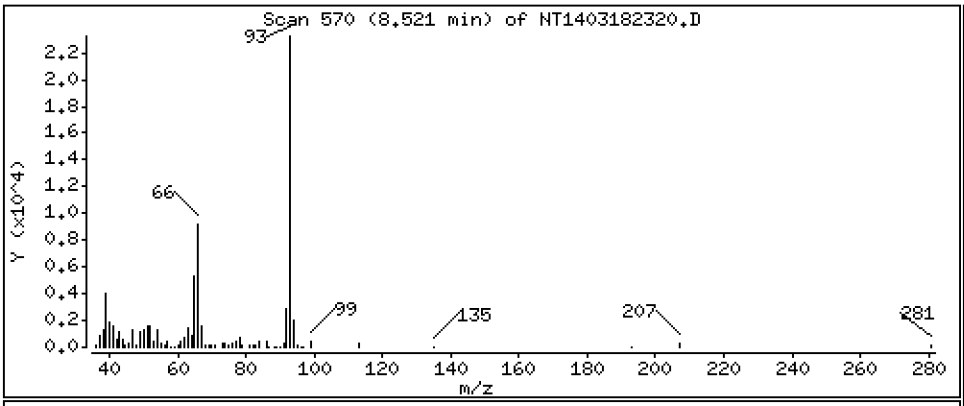
Operator: JGR

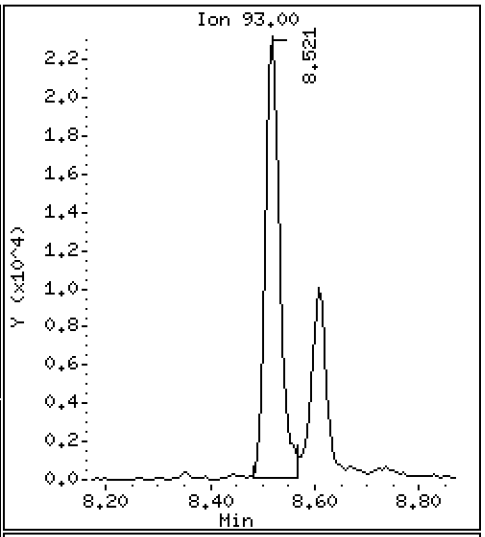
Column phase: ZB-5msi

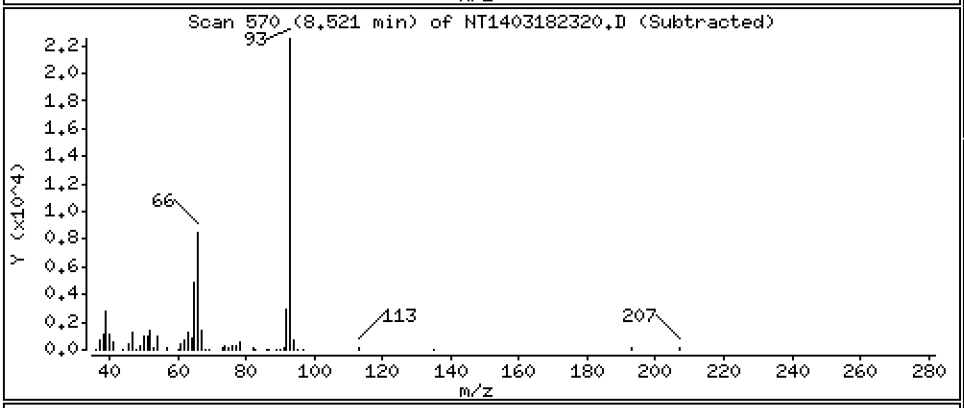
Column diameter: 0.25

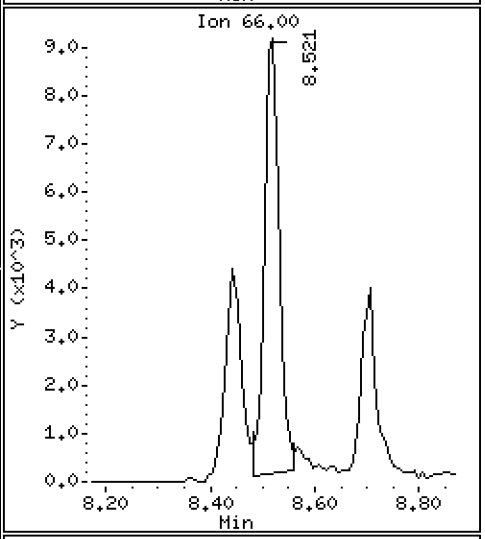
91 Aniline

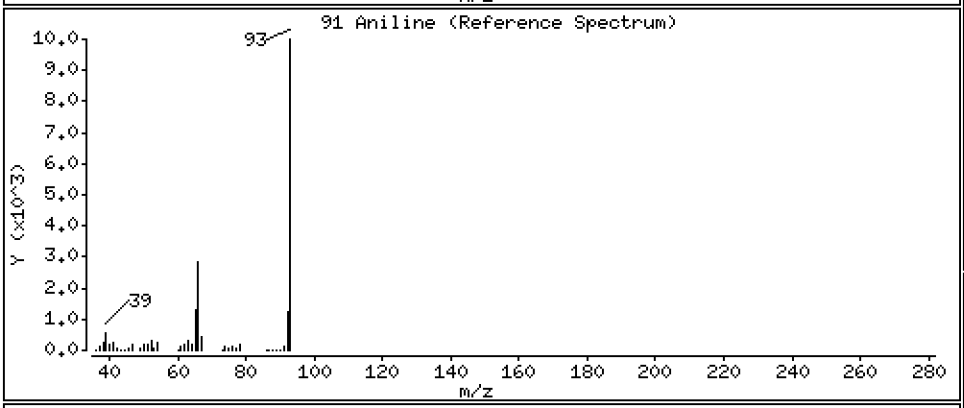
Concentration: 0.3486 ug/mL

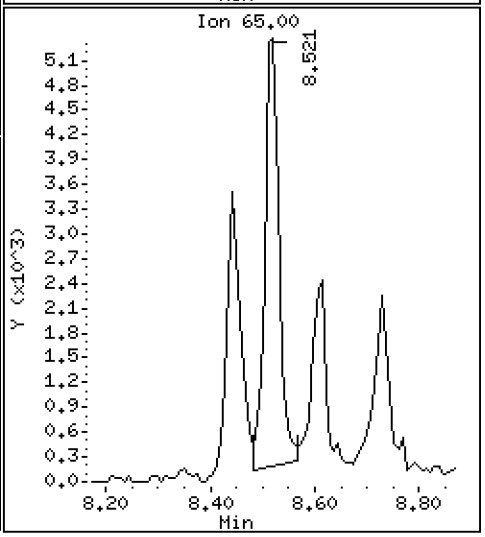


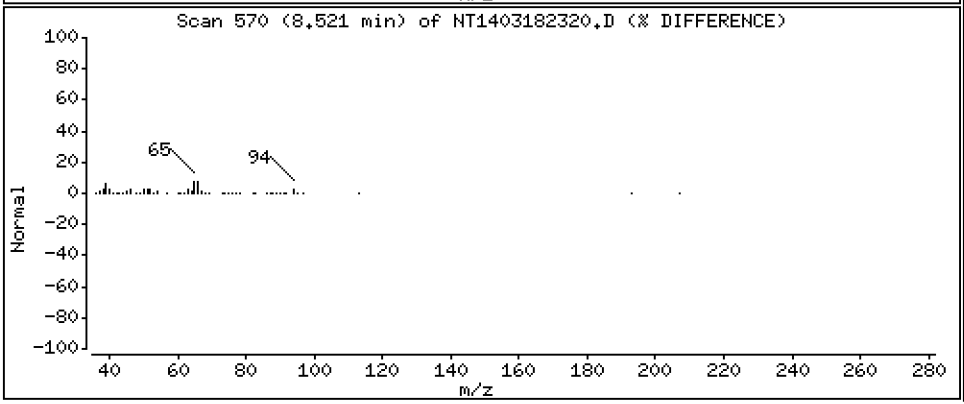












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

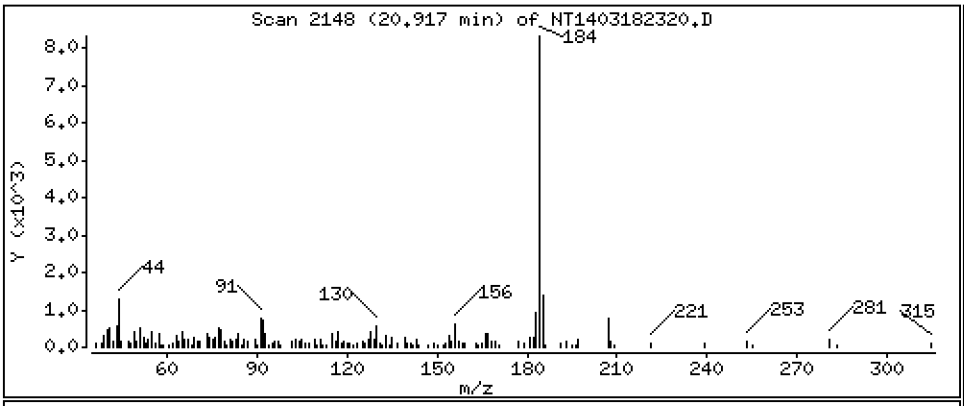
Operator: JGR

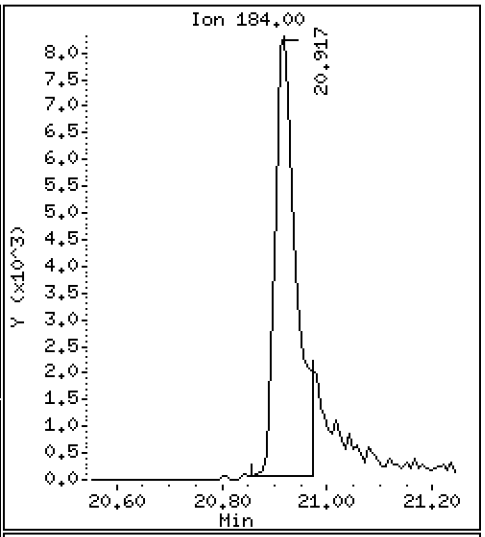
Column phase: ZB-5msi

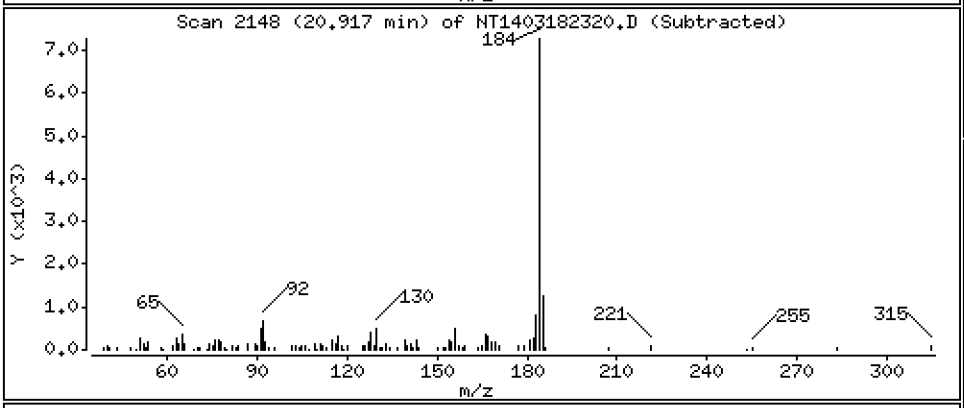
Column diameter: 0.25

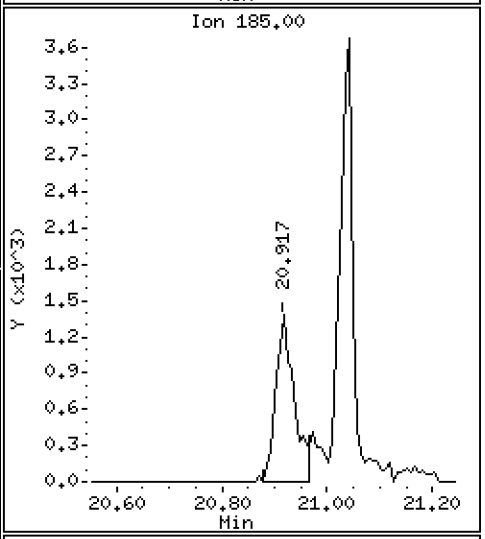
93 Benzidine

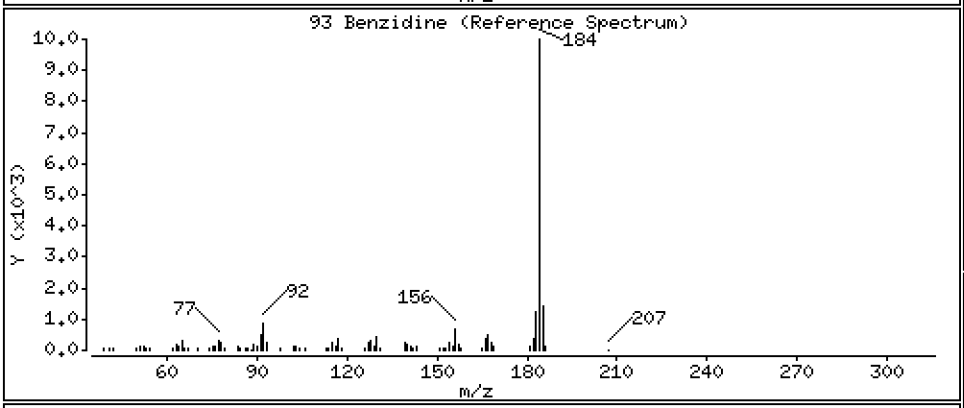
Concentration: 0.3153 ug/mL

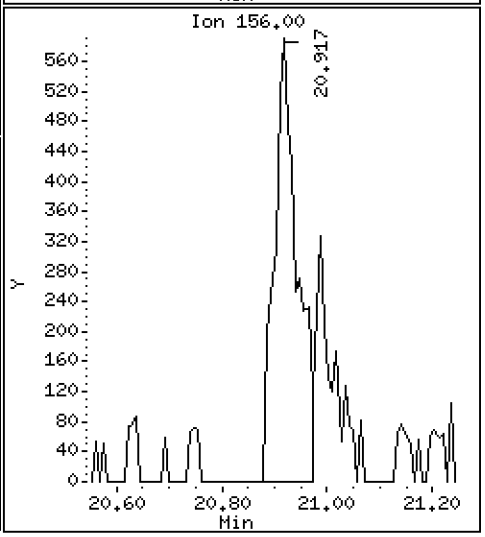


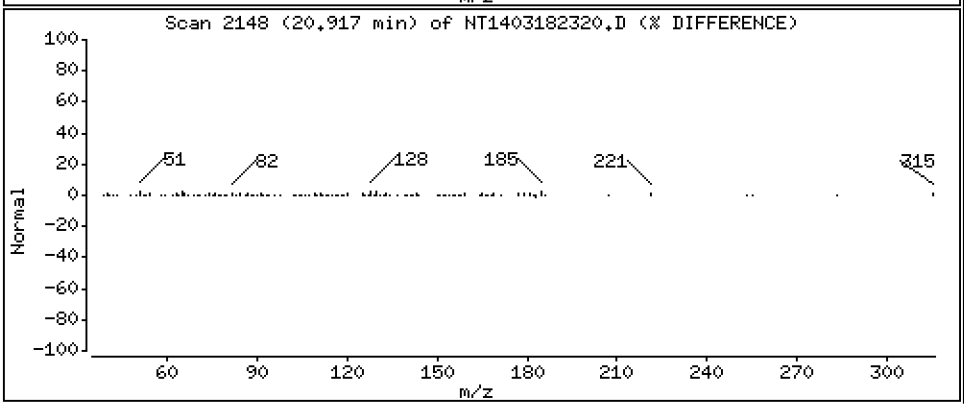












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

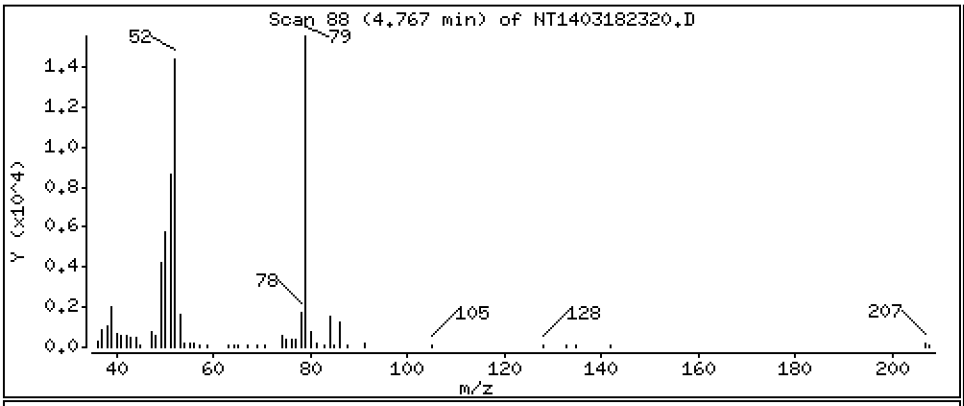
Operator: JGR

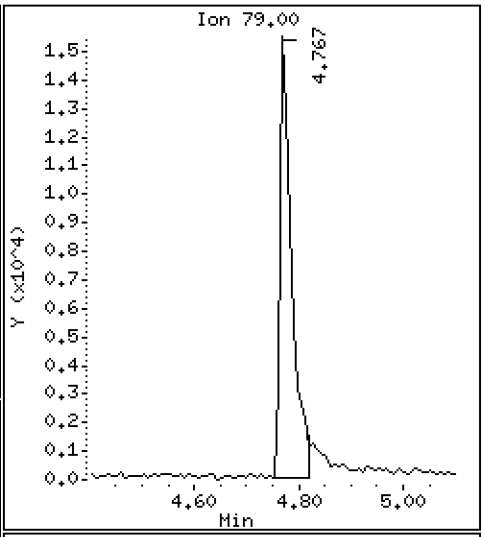
Column phase: ZB-5msi

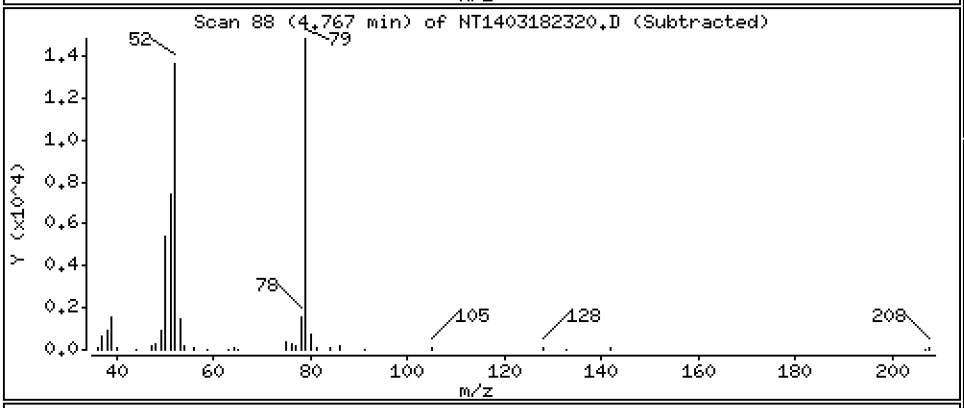
Column diameter: 0.25

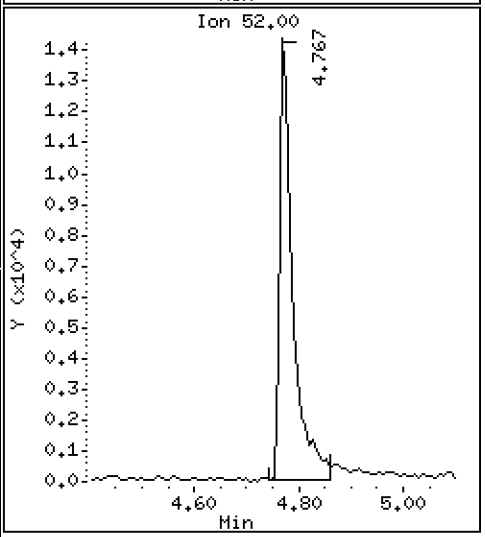
103 Pyridine

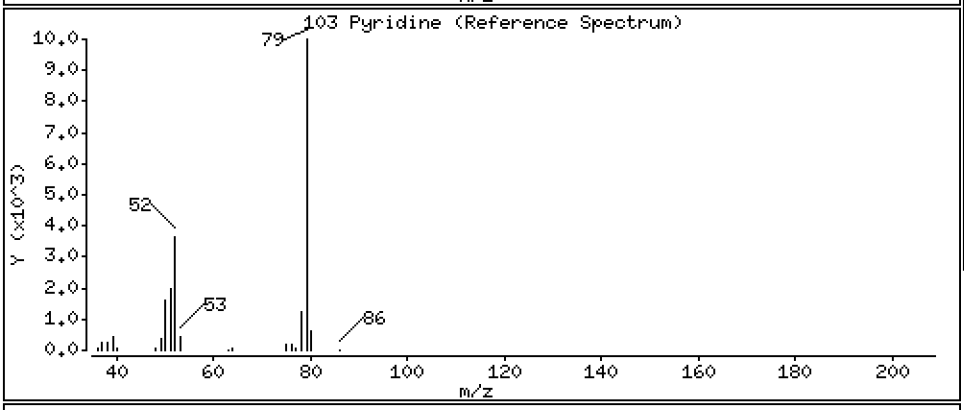
Concentration: 0.1486 ug/mL

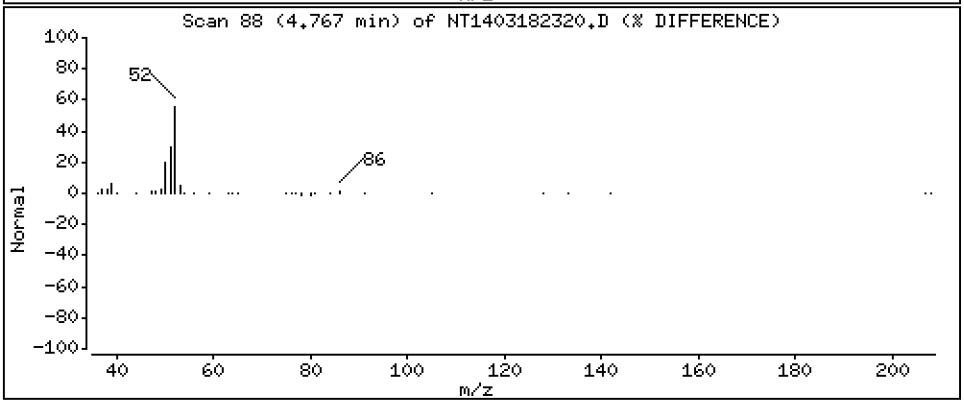












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

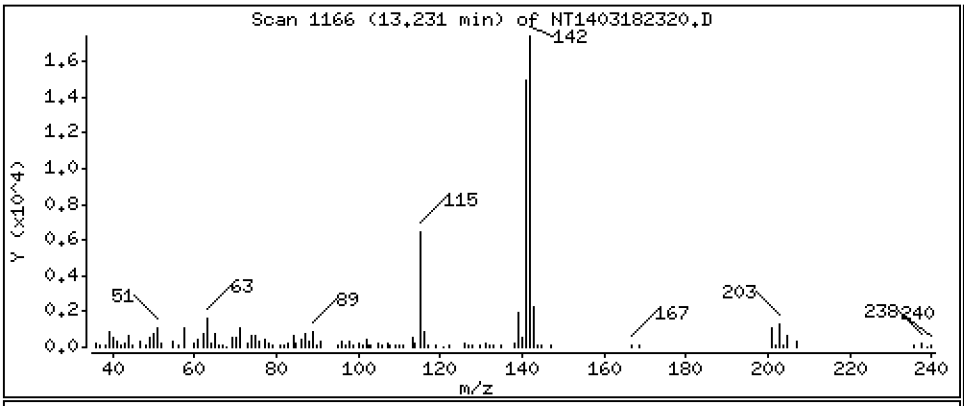
Operator: JGR

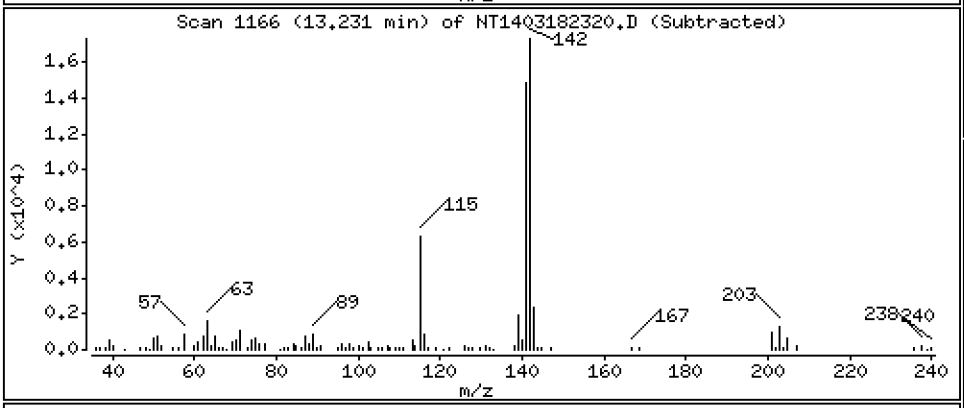
Column phase: ZB-5msi

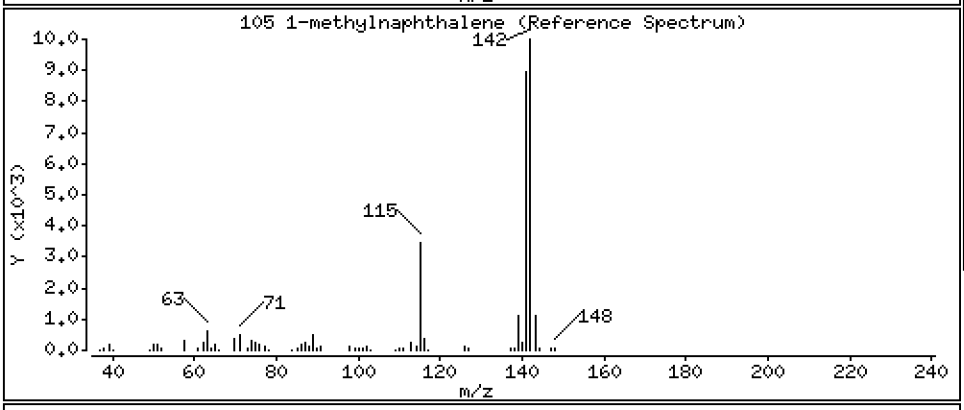
Column diameter: 0.25

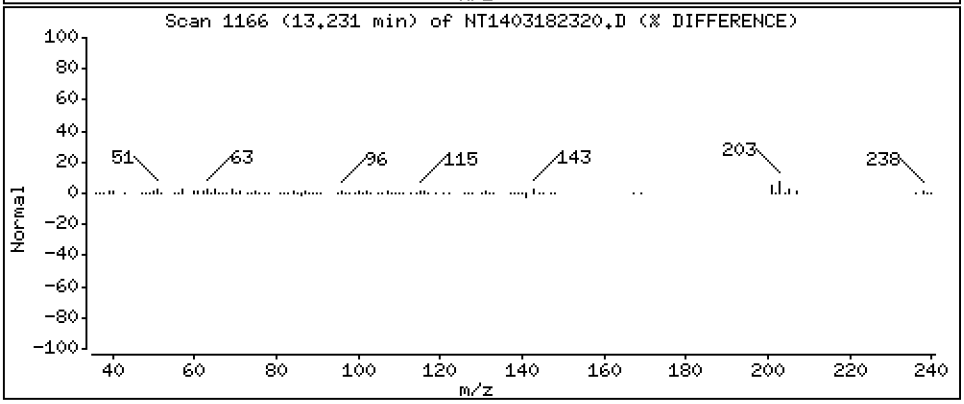
105 1-methylnaphthalene

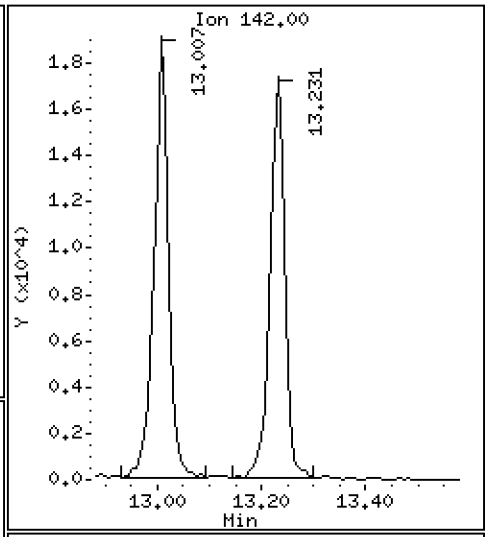
Concentration: 0.1988 ug/mL

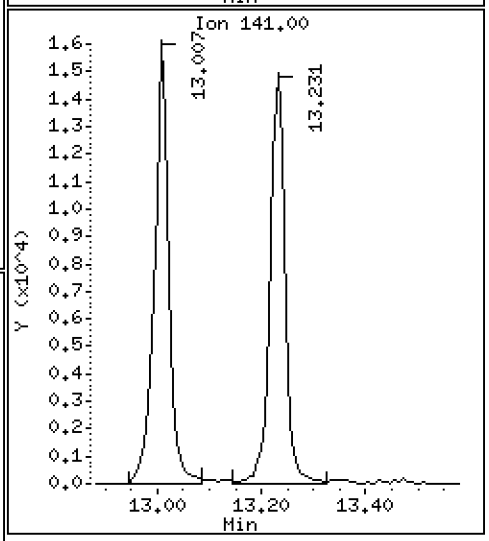












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

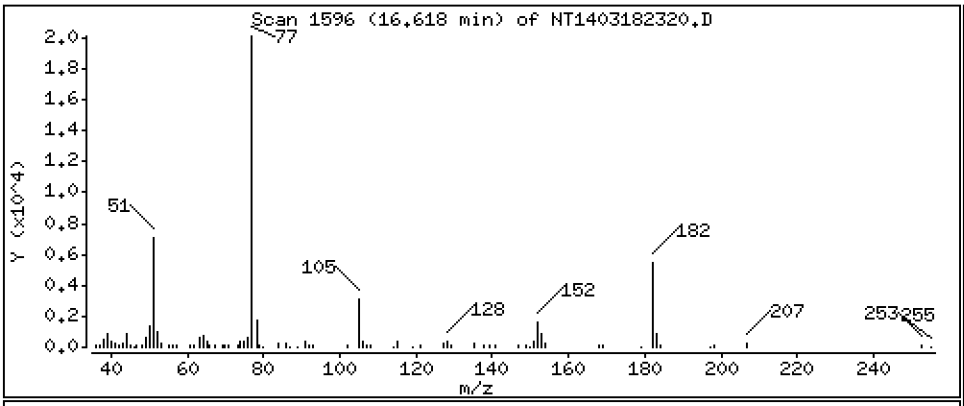
Operator: JGR

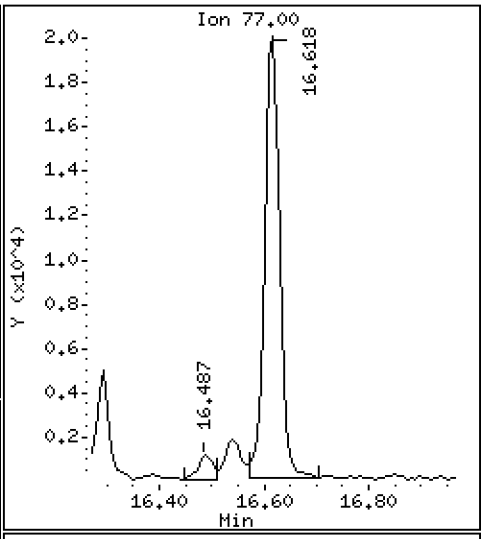
Column phase: ZB-5msi

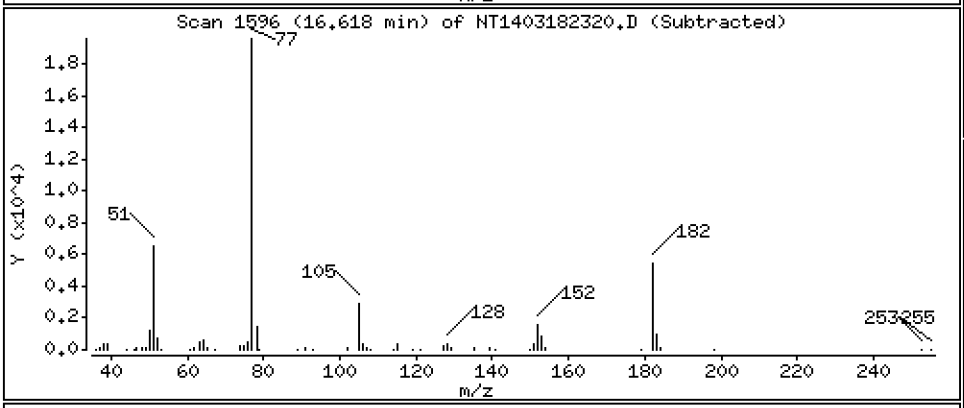
Column diameter: 0.25

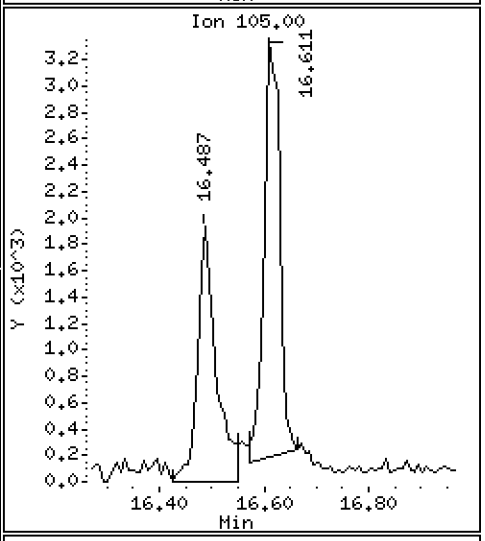
111 Azobenzene (1,2-DP-Hydrazine)

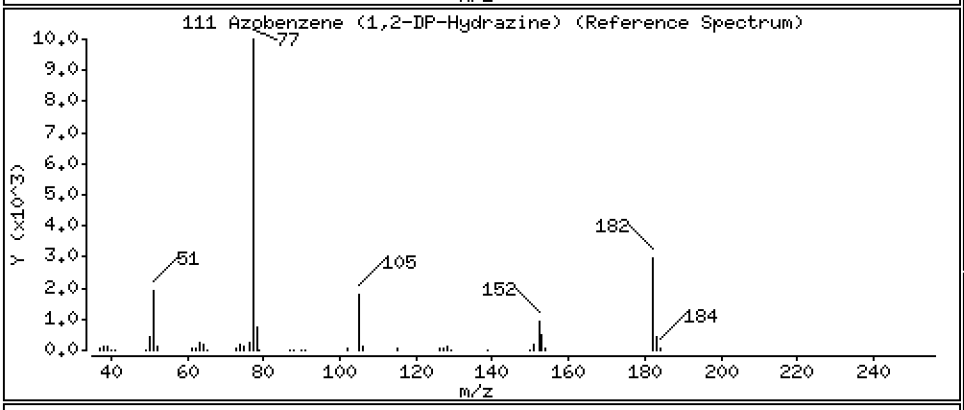
Concentration: 0.1904 ug/mL

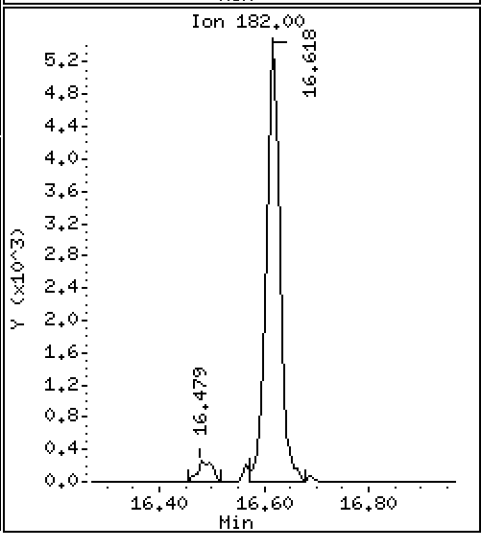


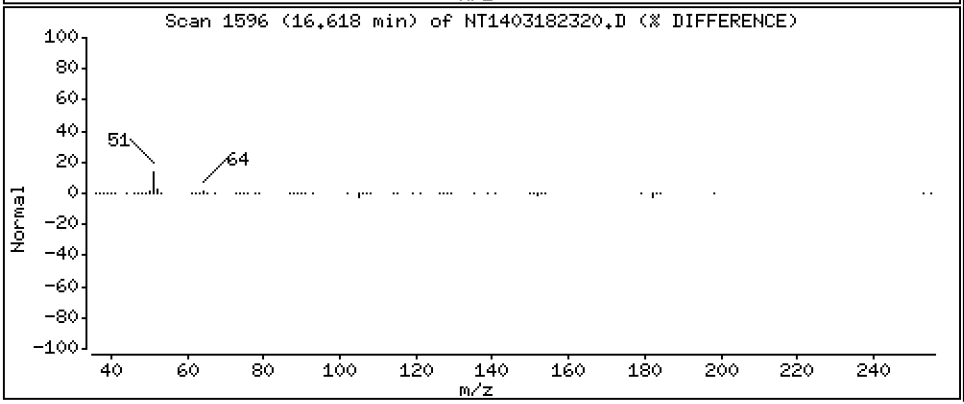












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

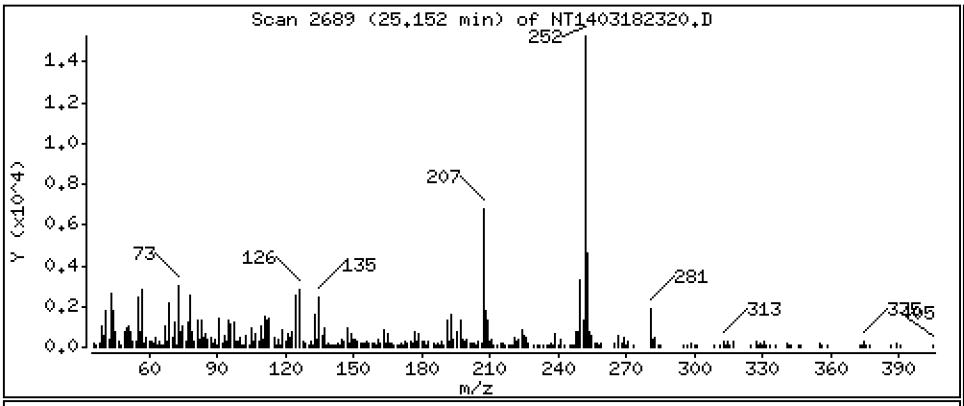
Operator: JGR

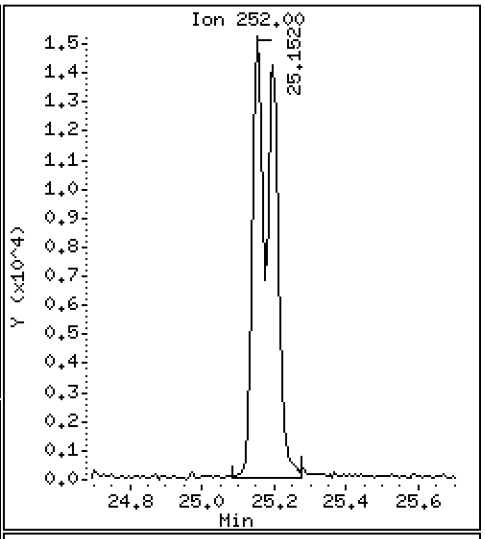
Column phase: ZB-5msi

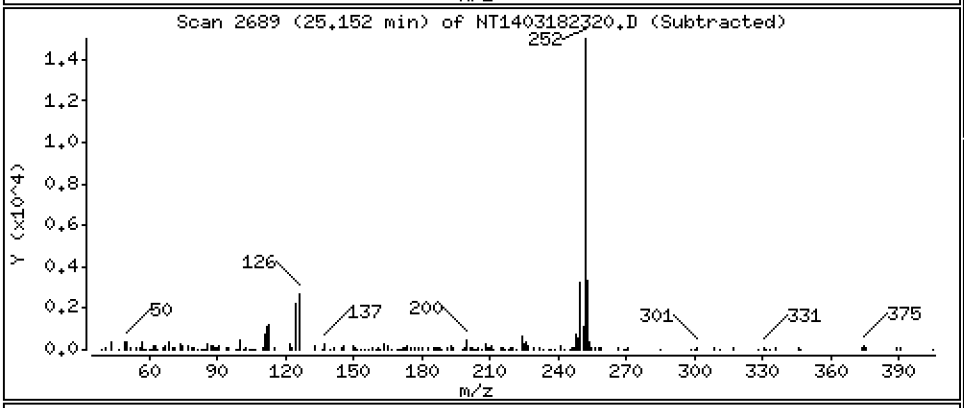
Column diameter: 0.25

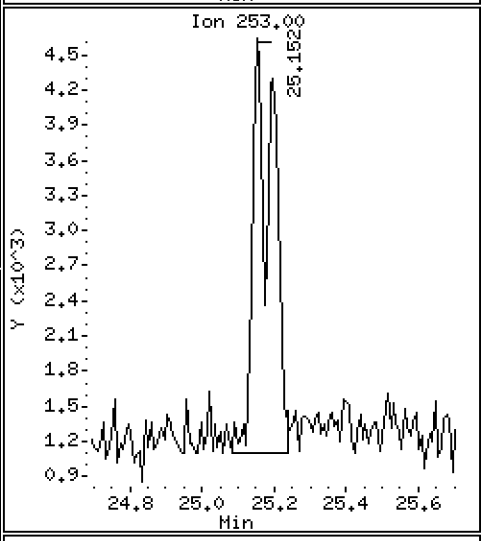
187 Total Benzofluoranthenes

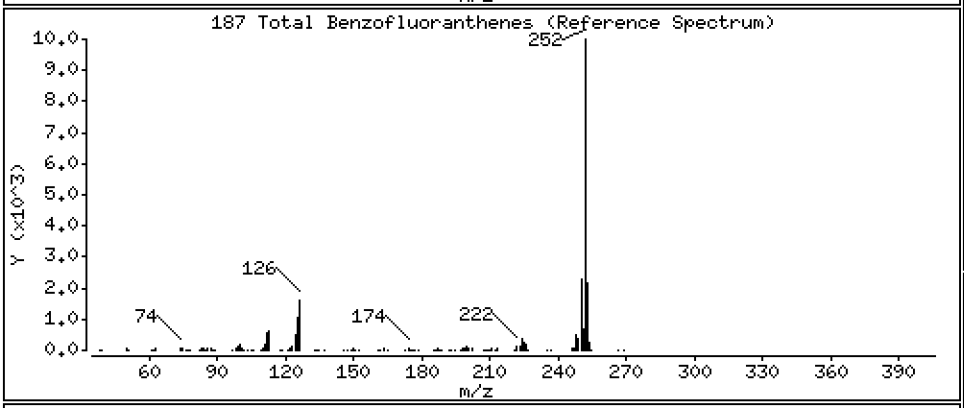
Concentration: 0.3850 ug/mL

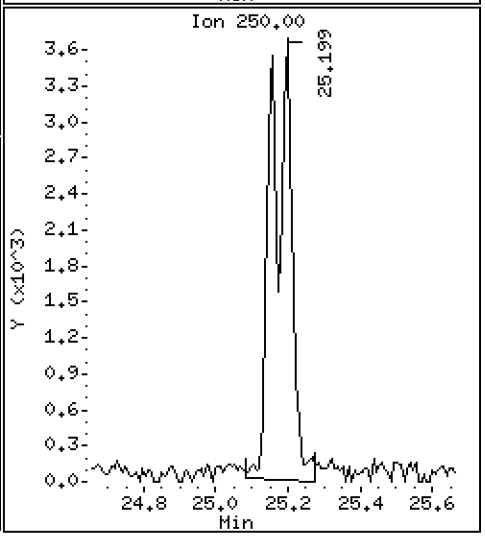


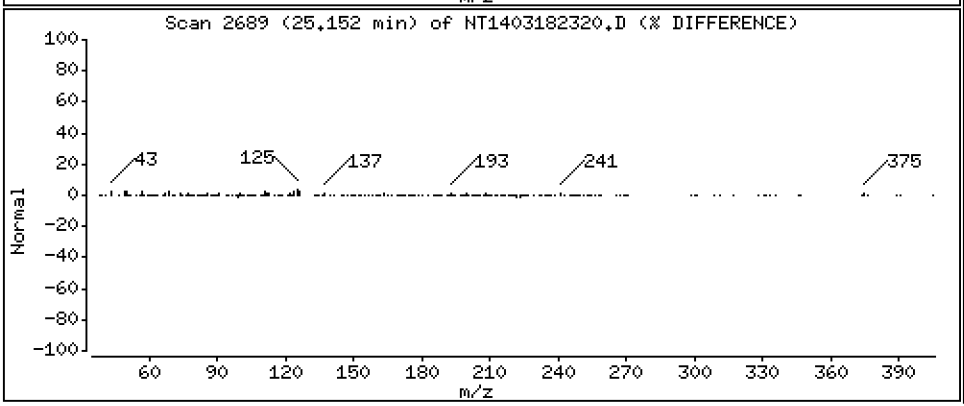












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

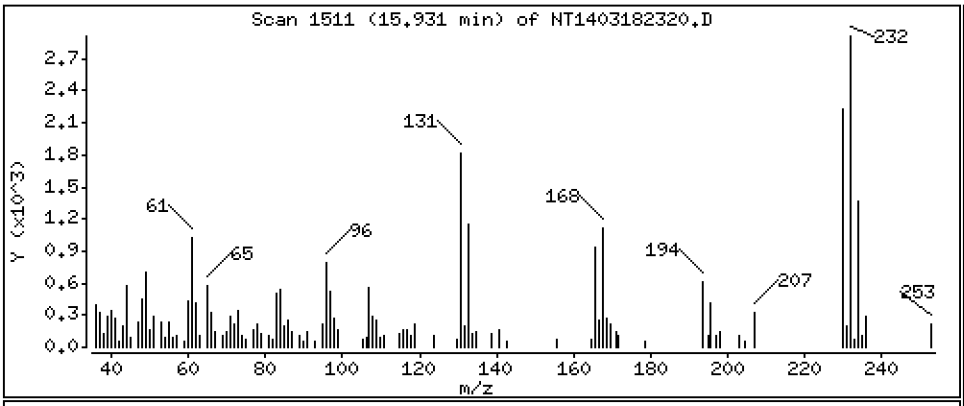
Operator: JGR

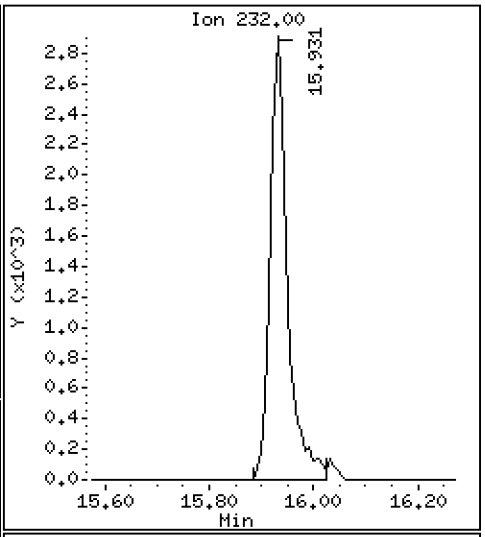
Column phase: ZB-5msi

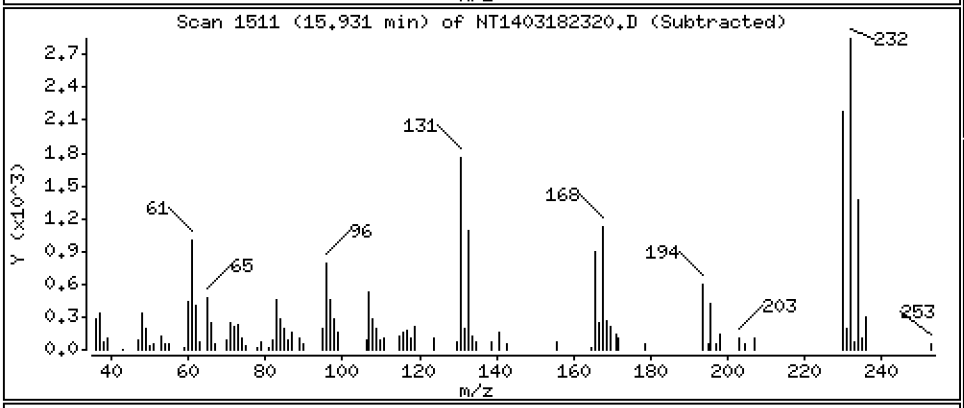
Column diameter: 0.25

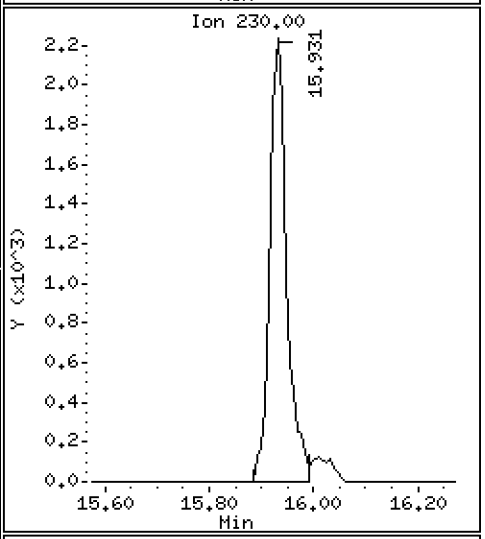
120 2,3,4,6-Tetrachlorophenol

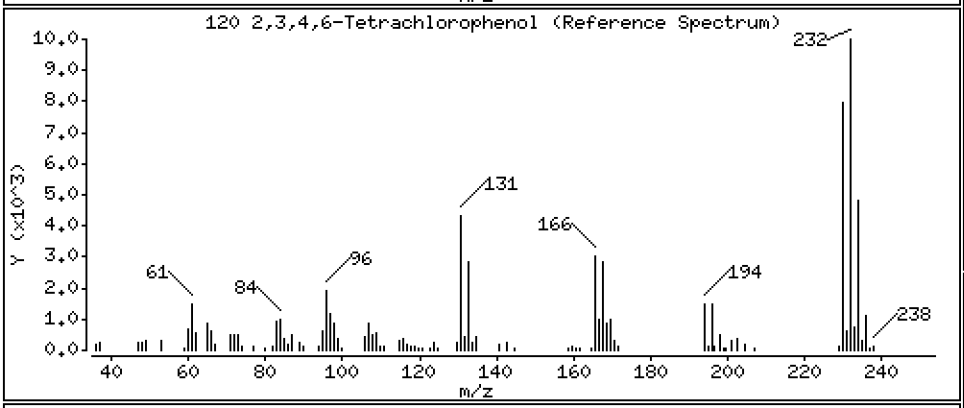
Concentration: 0.1312 ug/mL

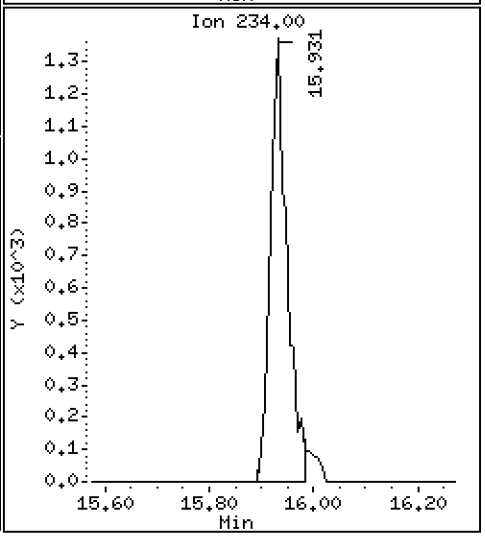


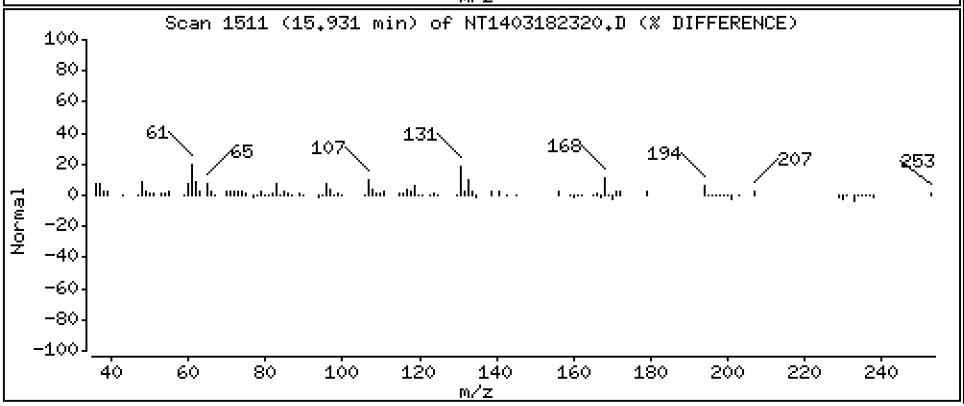












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230318.b\NT1403182320.D
Lab Smp Id: SLC0355-LCV2
Inj Date : 19-MAR-2023 04:28 MS Autotune Date: 11-MAR-2023 16:01
Operator : JGR Inst ID: nt14.i
Smp Info : SLC0355-LCV2
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230318.b\ABN.m
Meth Date : 23-Mar-2023 08:01 van Quant Type: ISTD
Cal Date : 15-MAR-2023 15:50 Cal File: NT1403152308.D
Als bottle: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.836	6.837	(1.000)	23878	0.27614	0.2761
$	2 Phenol-d5	99	8.420	8.420	(1.000)	30003	0.26355	0.2635
	3 Phenol	94	8.443	8.444	(1.000)	20806	0.17197	0.1720
$	5 2-Chlorophenol-d4	132	8.706	8.698	(1.000)	25062	0.27924	0.2792
	4 Bis(2-Chloroethyl)ether	93	8.606	8.613	(1.000)	17729	0.20349	0.2035
	6 2-Chlorophenol	128	8.729	8.729	(1.000)	18038	0.18942	0.1894
	7 1,3-Dichlorobenzene	146	9.000	9.000	(1.000)	20607	0.21377	0.2138
*	8 1,4-Dichlorobenzene-d4	152	9.070	9.062	(1.000)	254560	4.00000	(M)
	9 1,4-Dichlorobenzene	146	9.093	9.093	(1.000)	19687	0.21204	0.2120
$	10 1,2-Dichlorobenzene-d4	152	9.427	9.427	(1.000)	12596	0.21007	0.2101
	12 1,2-Dichlorobenzene	146	9.458	9.450	(1.000)	19314	0.21046	0.2105
	11 Benzyl alcohol	108	9.349	9.342	(1.031)	7800	0.13848	0.1385(M)
	14 2,2'-oxybis(1-Chloropropane)	121	9.644	9.637	(1.000)	5687	0.22835	0.2283
	13 2-Methylphenol	108	9.567	9.559	(1.000)	15079	0.17628	0.1763
	17 Hexachloroethane	117	10.048	10.048	(1.000)	7682	0.19346	0.1935
	16 N-Nitroso-di-n-propylamine	70	9.900	9.901	(1.000)	11827	0.17561	0.1756
	15 4-Methylphenol	108	9.838	9.831	(1.000)	15155	0.14964	0.1496
$	18 Nitrobenzene-d5	82	10.164	10.164	(0.879)	20426	0.19962	0.1996
	19 Nitrobenzene	77	10.203	10.195	(0.883)	19415	0.19492	0.1949
	20 Isophorone	82	10.645	10.653	(0.921)	21931	0.16126	0.1613
	21 2-Nitrophenol	139	10.832	10.832	(0.937)	8788	0.15625	0.1562
	22 2,4-Dimethylphenol	107	10.886	10.886	(0.942)	32276	0.37887	0.3789
	23 Bis(2-Chloroethoxy)methane	93	11.080	11.080	(0.958)	17477	0.19089	0.1909
	24 Benzoic acid	105	11.018	11.118	(0.953)	13412	0.19576	0.1958(M)
	25 2,4-Dichlorophenol	162	11.297	11.289	(0.977)	26984	0.39829	0.3983
	26 1,2,4-Trichlorobenzene	180	11.475	11.475	(0.993)	16986	0.20395	0.2039
*	27 Naphthalene-d8	136	11.560	11.560	(1.000)	966904	4.00000	
	28 Naphthalene	128	11.606	11.606	(1.004)	55165	0.21356	0.2136
	29 4-Chloroaniline	127	11.737	11.730	(1.015)	34733	0.32119	0.3212
	30 Hexachlorobutadiene	225	11.969	11.969	(1.035)	8181	0.21756	0.2176
	31 4-Chloro-3-methylphenol	107	12.704	12.697	(1.099)	26660	0.32564	0.3256
	32 2-Methylnaphthalene	142	13.006	13.006	(1.125)	36188	0.20088	0.2009
	33 Hexachlorocyclopentadiene	237	13.478	13.478	(0.887)	1023	0.02526	0.02526

		QUANT SIG					CONCENTRATIONS	
	Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
	34 2,4,6-Trichlorophenol	196	13.633	13.633	(0.897)	16753	0.33900	0.3390
	35 2,4,5-Trichlorophenol	196	13.710	13.703	(0.902)	16908	0.32834	0.3283
$	36 2-Fluorobiphenyl	172	13.795	13.796	(0.908)	37440	0.21222	0.2122
	37 2-Chloronaphthalene	162	14.004	14.004	(0.922)	31661	0.20939	0.2094
	38 2-Nitroaniline	65	14.268	14.260	(0.939)	20628	0.35330	0.3533
	39 Dimethylphthalate	163	14.693	14.693	(0.967)	33772	0.20790	0.2079
	40 Acenaphthylene	152	14.879	14.879	(0.979)	52401	0.20632	0.2063
	41 2,6-Dinitrotoluene	165	14.833	14.833	(0.976)	14481	0.38589	0.3859
*	42 Acenaphthene-d10	164	15.196	15.196	(1.000)	487144	4.00000	
	43 3-Nitroaniline	138	15.119	15.119	(0.995)	10366	0.20023	0.2002
	44 Acenaphthene	153	15.258	15.258	(1.004)	30100	0.20299	0.2030
	45 2,4-Dinitrophenol	184	15.343	15.335	(1.010)	2425	0.08347	0.08347(M)
	46 Dibenzofuran	168	15.590	15.591	(1.026)	43188	0.20401	0.2040
	47 4-Nitrophenol	109	15.482	15.444	(1.019)	7628	0.27837	0.2784(M)
	48 2,4-Dinitrotoluene	165	15.645	15.645	(1.030)	16198	0.30451	0.3045
	50 Diethylphthalate	149	16.155	16.155	(1.063)	36219	0.21565	0.2157
	49 Fluorene	166	16.302	16.302	(1.073)	40744	0.20304	0.2030
	51 4-Chlorophenyl-phenylether	204	16.294	16.294	(1.072)	17751	0.20608	0.2061
	52 4-Nitroaniline	138	16.394	16.394	(1.079)	11402	0.25322	0.2532
	53 4,6-Dinitro-2-methylphenol	198	16.479	16.487	(0.903)	7625	0.25778	0.2578
	54 N-Nitrosodiphenylamine	169	16.541	16.541	(0.907)	24729	0.21296	0.2130
$	55 2,4,6-Tribromophenol	330	16.841	16.841	(1.108)	4562	0.23819	0.2382
	56 4-Bromophenyl-phenylether	248	17.296	17.296	(0.948)	7556	0.19300	0.1930
	57 Hexachlorobenzene	284	17.613	17.621	(0.966)	9608	0.23259	0.2326
	58 Pentachlorophenol	266	17.985	17.969	(0.986)	4315	0.15161	0.1516(M)
*	59 Phenanthrene-d10	188	18.240	18.240	(1.000)	854961	4.00000	
	60 Phenanthrene	178	18.286	18.286	(1.003)	48620	0.19904	0.1990
	61 Anthracene	178	18.379	18.379	(1.008)	44080	0.18730	0.1873
	62 Carbazole	167	18.712	18.704	(1.026)	37716	0.18012	0.1801
	63 Di-n-butylphthalate	149	19.501	19.501	(1.069)	53926	0.20318	0.2032
	64 Fluoranthene	202	20.677	20.677	(0.888)	44498	0.24594	0.2459
	65 Pyrene	202	21.103	21.103	(0.906)	44730	0.24107	0.2411
$	66 Terphenyl-d14	244	21.381	21.381	(0.918)	31064	0.24730	0.2473
	67 Butylbenzylphthalate	149	22.303	22.303	(0.957)	21350	0.26264	0.2626
	68 Benzo(a)anthracene	228	23.263	23.263	(0.999)	35300	0.21527	0.2153
*	69 Chrysene-d12	240	23.294	23.294	(1.000)	444724	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.216	23.216	(0.997)	30519	0.64872	0.6487
	71 Chrysene	228	23.332	23.340	(1.002)	30728	0.20705	0.2071
	72 bis(2-Ethylhexyl)phthalate	149	23.325	23.325	(0.959)	25814	0.22845	0.2285
*	134 Di-n-octylphthalate-d4	153	24.316	24.316	(1.000)	858353	4.00000	
	73 Di-n-octylphthalate	149	24.323	24.323	(1.000)	45409	0.20579	0.2058
	74 Benzo(b)fluoranthene	252	25.152	25.160	(0.970)	30713	0.18547	0.1855
	75 Benzo(k)fluoranthene	252	25.198	25.198	(0.972)	31989	0.19487	0.1949
	76 Benzo(a)pyrene	252	25.810	25.818	(0.996)	28121	0.19859	0.1986
*	77 Perylene-d12	264	25.926	25.934	(1.000)	468611	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	28.610	28.611	(1.104)	27343	0.17741	0.1774
	79 Dibenzo(a,h)anthracene	278	28.618	28.626	(1.104)	24993	0.19241	0.1924
	80 Benzo(g,h,i)perylene	276	29.395	29.411	(1.134)	19870	0.15643	0.1564
	90 N-Nitrosodimethylamine	74	4.728	4.728	(1.000)	18801	0.34330	0.3433
	91 Aniline	93	8.521	8.521	(1.000)	42418	0.34858	0.3486
	93 Benzidine	184	20.917	20.902	(0.898)	22954	0.31525	0.3153
	103 Pyridine	79	4.766	4.751	(1.000)	25203	0.14860	0.1486
	105 1-methylnaphthalene	142	13.230	13.231	(1.145)	32446	0.19880	0.1988
	111 Azobenzene (1,2-DP-Hydrazine)	77	16.618	16.618	(1.094)	38191	0.19043	0.1904

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.152	25.198	(0.970)	60449	0.38498	0.3850
120 2,3,4,6-Tetrachlorophenol	232	15.931	15.923	(1.048)	6474	0.13116	0.1312

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1403182320.D
Lab Smp Id: SLC0355-LCV2
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt14.i\20230318.b\ABN.m
Misc Info:

Calibration Date: 19-MAR-2023
Calibration Time: 03:16
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	237594	118797	475188	254560	7.14
27 Naphthalene-d8	944151	472076	1888302	966904	2.41
42 Acenaphthene-d10	498100	249050	996200	487144	-2.20
59 Phenanthrene-d10	845417	422709	1690834	854961	1.13
69 Chrysene-d12	410836	205418	821672	444724	8.25
134 Di-n-octylphthala	914780	457390	1829560	858353	-6.17
77 Perylene-d12	441517	220759	883034	468611	6.14

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.06	8.56	9.56	9.07	0.08
27 Naphthalene-d8	11.56	11.06	12.06	11.56	-0.00
42 Acenaphthene-d10	15.20	14.70	15.70	15.20	-0.00
59 Phenanthrene-d10	18.24	17.74	18.74	18.24	-0.00
69 Chrysene-d12	23.29	22.79	23.79	23.29	-0.00
134 Di-n-octylphthala	24.32	23.82	24.82	24.32	-0.00
77 Perylene-d12	25.93	25.43	26.43	25.93	-0.03

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

REVIEW SUMMARY FOR FILE - NT1403182320.D

Lab ID: SLC0355-LCV2
nt14.i, ABN.m, 19-MAR-2023 04:28

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
1.031	1.000	0.0308	Benzyl alcohol
1.000	1.063	-0.0634	2,2'-oxybis(1-Chloropropane)
0.953	0.962	-0.0087	Benzoic acid

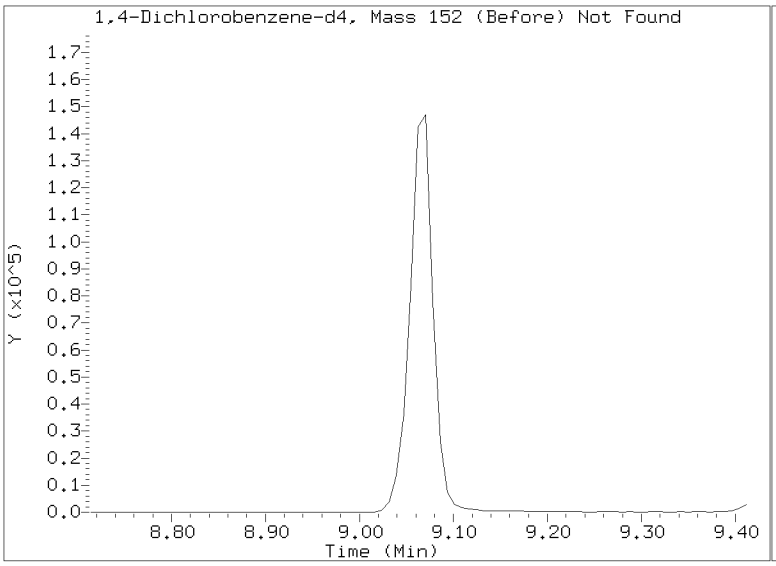
RRT check based on Ccal File: NT1403182318.D

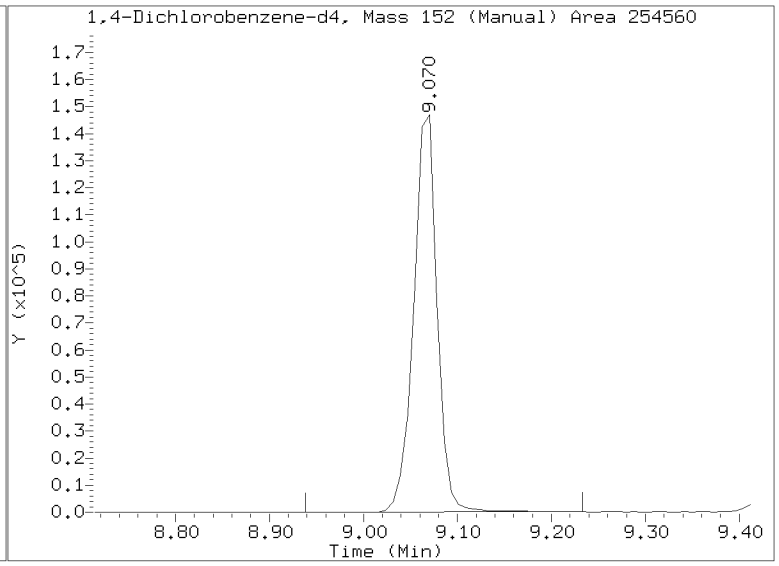
On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

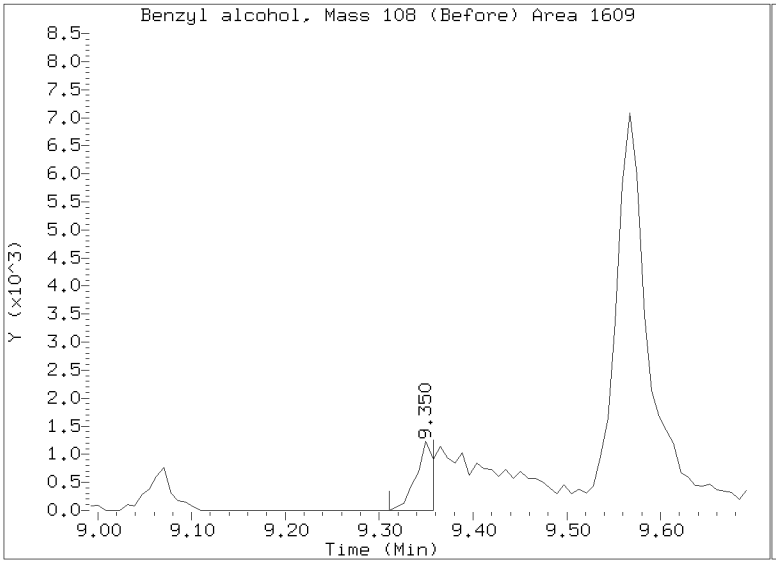
* Only compounds listed in the work order have been verified by the analyst *

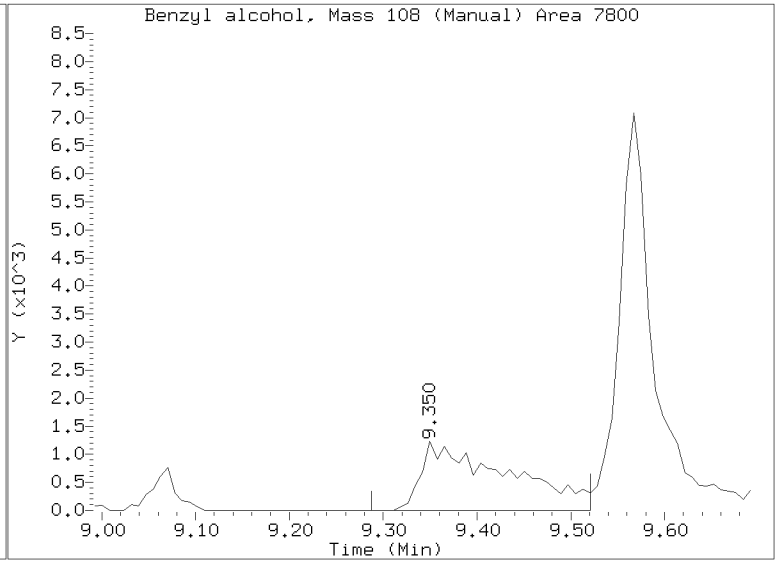
Quant Ion Manual Peak Adjustment Report

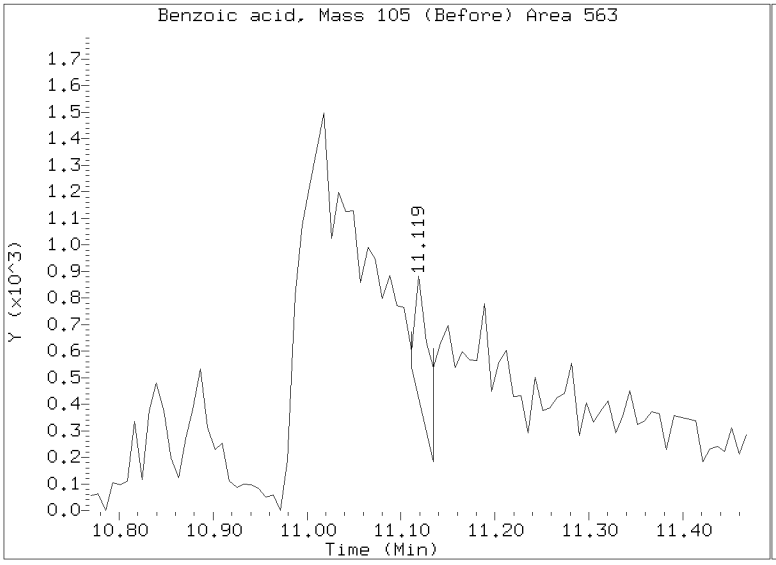
Datafile: //target/share/chem3/nt14.i/20230318.b/NT1403182320.D
Injection Date: 19-MAR-2023 04:28
Lab ID:SLC0355-LCV2 Client ID:
Report Date: 03/23/2023 08:01

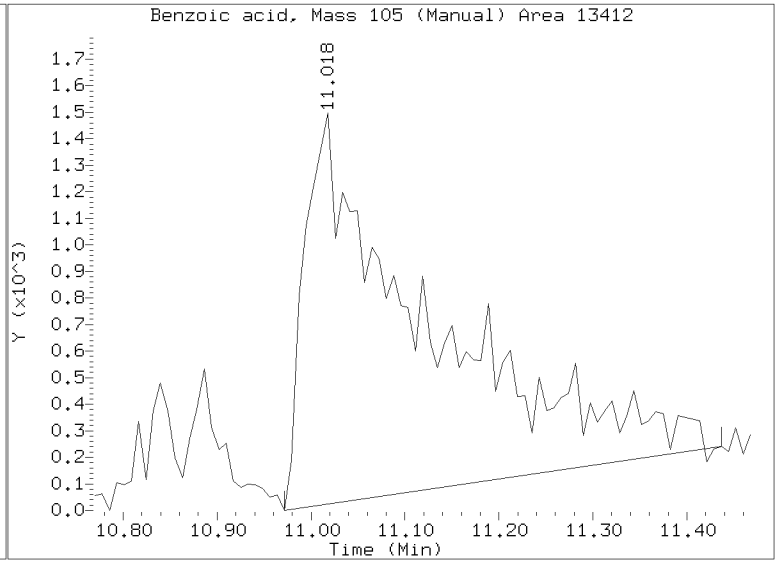






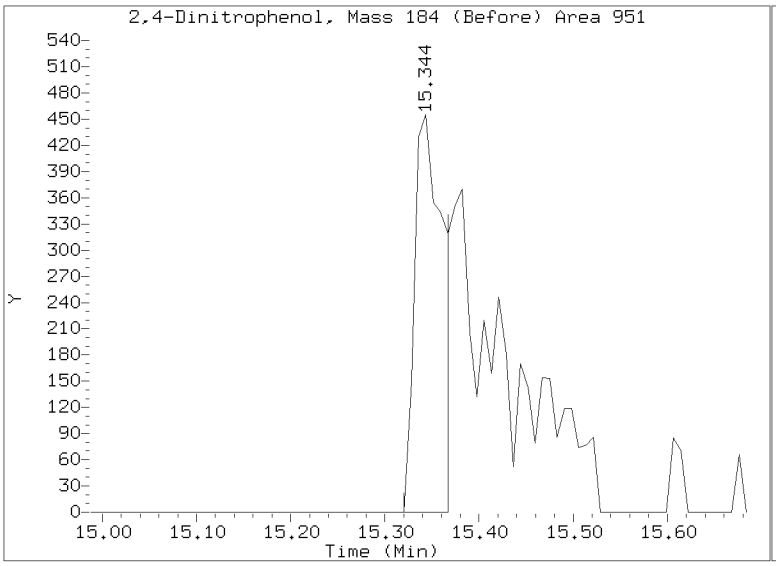


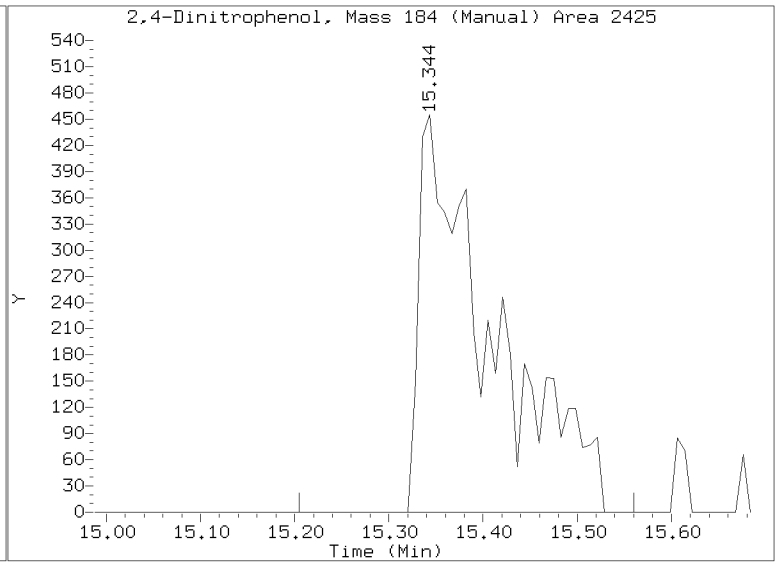


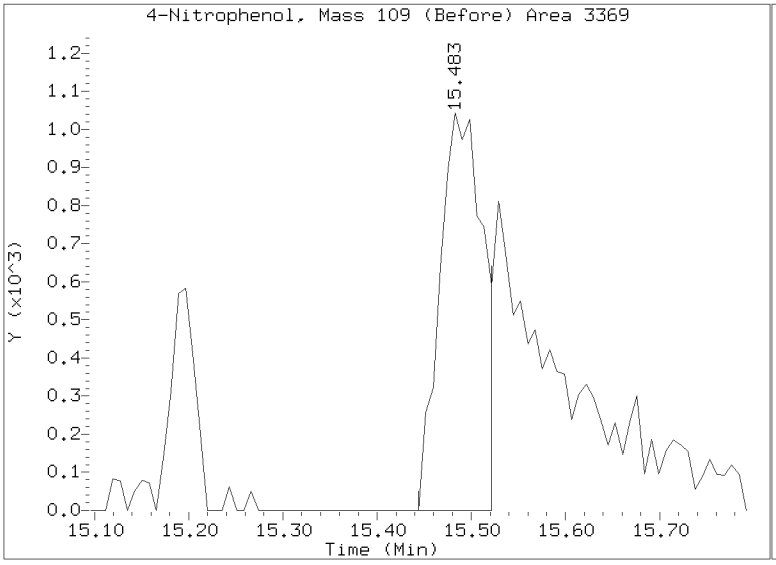


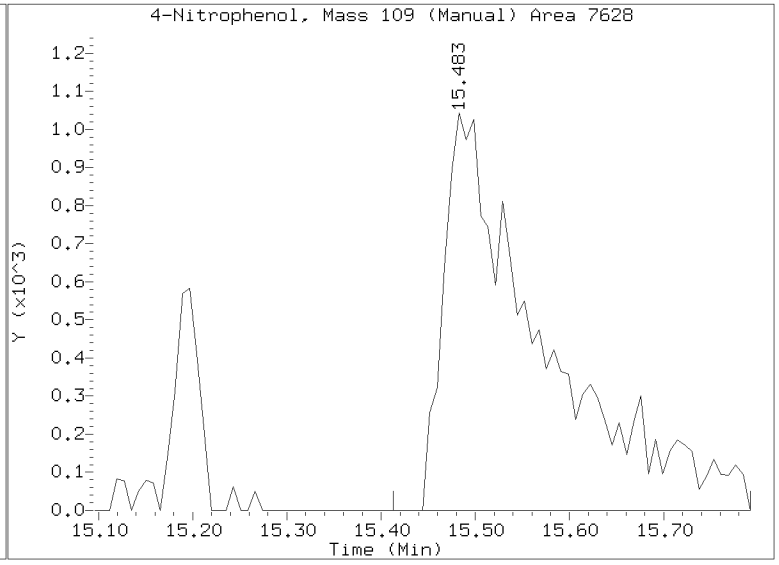
Quant Ion Manual Peak Adjustment Report

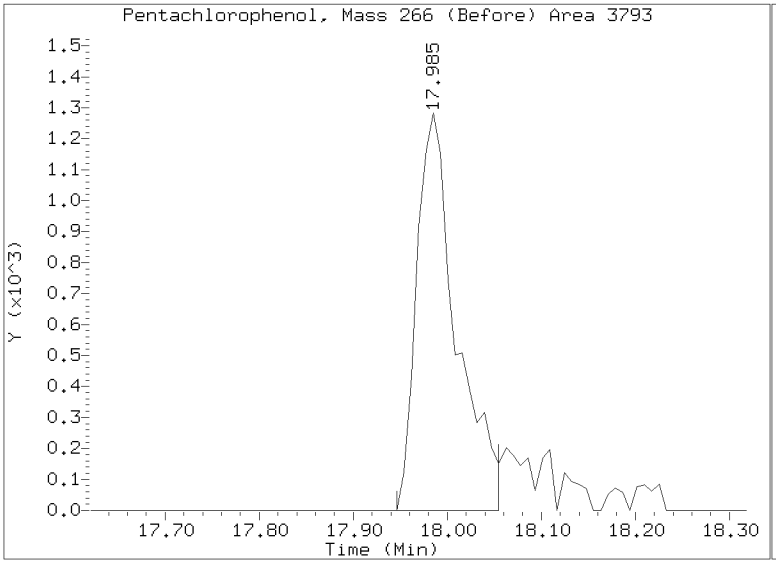
Datafile: //target/share/chem3/nt14.i/20230318.b/NT1403182320.D
Injection Date: 19-MAR-2023 04:28
Lab ID:SLC0355-LCV2 Client ID:
Report Date: 03/23/2023 08:01

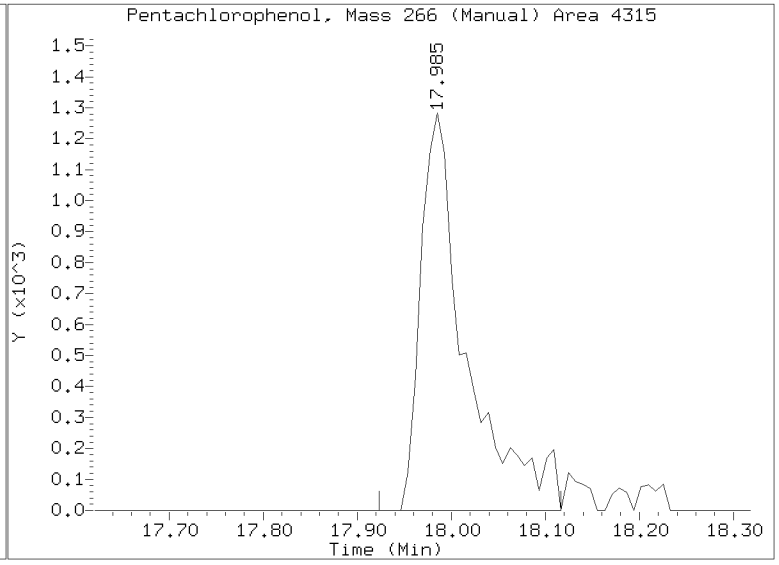












Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT14	Calibration:	GC00048
Lab File ID:	NT1403172302.D	Calibration Date:	03/15/2023
Sequence:	SLC0335	Injection Date:	03/17/23
Lab Sample ID:	SLC0335-ICV1	Injection Time:	15:03
Sequence Name:	SICV1		

		CONC. (ug/mL)		RESPONSE FACTOR			% DRIFT/DIFF		
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT	
Phenol	A	5.0000	4.6	1.9011440	1.7478170		-8.1	+/-20	
4-Methylphenol	A	5.0000	4.3	1.5914380	1.3551960		-14.8	+/-20	
Naphthalene	A	5.0000	4.8	1.0686200	1.0351970		-3.1	+/-20	
2-Methylnaphthalene	A	5.0000	5.0	0.7452524	0.7483049		0.4	+/-20	
Acenaphthylene	A	5.0000	4.8	2.0854140	1.9937370		-4.4	+/-20	
Dimethylphthalate	A	5.0000	4.8	1.3338450	1.2861530		-3.6	+/-20	
Acenaphthene	A	5.0000	4.8	1.2175690	1.1700200		-3.9	+/-20	
Dibenzofuran	A	5.0000	4.9	1.7382550	1.7157240		-1.3	+/-20	
Fluorene	A	5.0000	4.8	1.6477120	1.5943600		-3.2	+/-20	
Phenanthrene	A	5.0000	4.7	1.1428510	1.0756920		-5.9	+/-20	
Anthracene	A	5.0000	4.9	1.1010610	1.0890030		-1.1	+/-20	
Fluoranthene	A	5.0000	5.8	1.6273660	1.8950480		16.4	+/-20	
Pyrene	A	5.0000	5.5	1.6688810	1.8268750		9.5	+/-20	
Butylbenzylphthalate	A	5.0000	5.8	0.7311588	0.8433794		15.3	+/-20	
Benzo(a)anthracene	A	5.0000	5.0	1.4748830	1.4732660		-0.1	+/-20	
Chrysene	A	5.0000	4.9	1.3348290	1.3099030		-1.9	+/-20	
bis(2-Ethylhexyl)phthalate	A	5.0000	5.6	0.5265649	0.5917227		12.4	+/-20	
Benzofluoranthenes, Total	A	10.000	10.8	1.3424190	1.4461980		7.7	+/-20	
Benzo(a)pyrene	A	5.0000	5.2	1.2087150	1.2538280		3.7	+/-20	
Indeno(1,2,3-cd)pyrene	A	5.0000	4.2	1.3155660	1.1062120		-15.9	+/-20	
Dibenzo(a,h)anthracene	A	5.0000	4.2	1.1087420	0.9294304		-16.2	+/-20	
Benzo(g,h,i)perylene	A	5.0000	4.0	1.0842080	0.8648282		-20.2	+/-20	*
2-Fluorophenol	A	7.5000	7.33	1.3587350	1.3274760		-2.3	+/-20	
Phenol-d5	A	7.5000	7.23	1.7888720	1.7234040		-3.7	+/-20	
2-Chlorophenol-d4	A	7.5000	7.29	1.4103050	1.3702670		-2.8	+/-20	
1,2-Dichlorobenzene-d4	A	5.0000	4.85	0.9421955	0.9138383		-3.0	+/-20	
Nitrobenzene-d5	A	5.0000	5.08	0.4233007	0.4302636		1.6	+/-20	
2-Fluorobiphenyl	A	5.0000	5.00	1.4485960	1.4473230		-0.08	+/-20	
2,4,6-Tribromophenol	A	7.5000	7.42	0.1518639	0.1502399		-1.1	+/-20	
p-Terphenyl-d14	A	5.0000	5.70	1.1297810	1.2888190		14.1	+/-20	

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT14	Calibration:	GC00048
Lab File ID:	NT1403172302.D	Calibration Date:	03/15/2023
Sequence:	SLC0335	Injection Date:	03/17/23
Lab Sample ID:	SLC0335-ICV1	Injection Time:	15:03
Sequence Name:	SICV1		

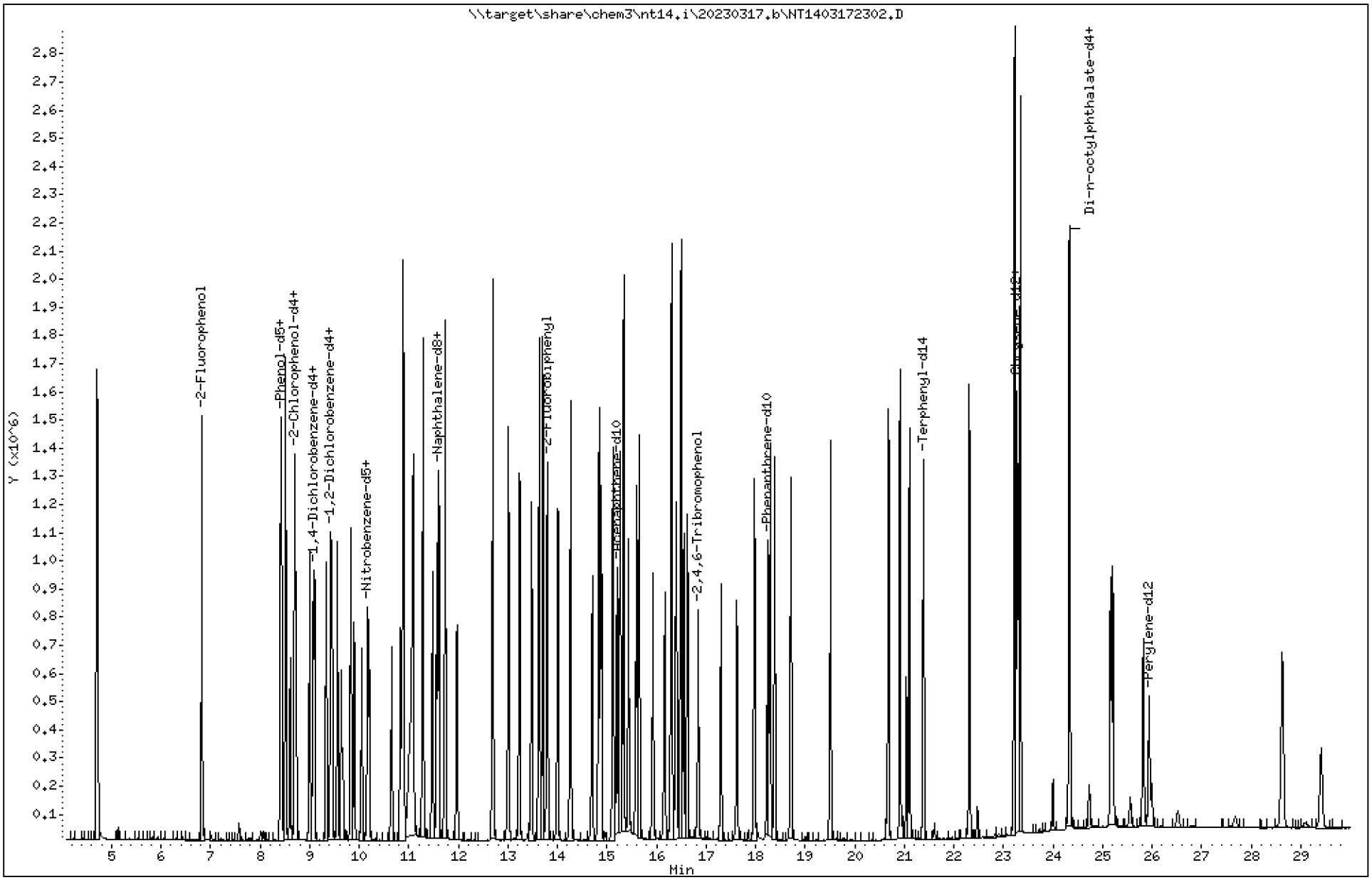
		CONC. (ug/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
1,4-Dichlorobenzene-d4	A	4.0000	4.0	48445.4300	1.0000		0.0	
Naphthalene-d8	A	4.0000	4.0	183571.5000	1.0000		0.0	
Acenaphthene-d10	A	4.0000	4.0	95634.1400	1.0000		0.0	
Phenanthrene-d10	A	4.0000	4.0	176078.0000	1.0000		0.0	
Chrysene-d12	A	4.0000	4.0	127293.4000	1.0000		0.0	
Di-n-Octylphthalate-d4	A	4.0000	4.0	236003.4000	1.0000		0.0	
Perylene-d12	A	4.0000	4.0	121097.1000	1.0000		0.0	

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172302.D
Date : 17-MAR-2023 15:03
Client ID:
Sample Info: SLC0335-ICV1

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



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230317.b\NT1403172302.D
Lab Smp Id: SLC0335-ICV1
Inj Date : 17-MAR-2023 15:03 MS Autotune Date: 11-MAR-2023 16:01
Operator : JGR Inst ID: nt14.i
Smp Info : SLC0335-ICV1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230317.b\ABN.m
Meth Date : 22-Mar-2023 08:03 van Quant Type: ISTD
Cal Date : 15-MAR-2023 15:50 Cal File: NT1403152308.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)	
$	1 2-Fluorophenol	112	6.821	6.821	(1.000)	550618	7.50000	7.327	
$	2 Phenol-d5	99	8.412	8.412	(1.000)	714843	7.50000	7.226	
	3 Phenol	94	8.435	8.435	(1.000)	483313	5.00000	4.597	
$	5 2-Chlorophenol-d4	132	8.698	8.698	(1.000)	568367	7.50000	7.287	
	4 Bis(2-Chloroethyl)ether	93	8.605	8.605	(1.000)	346607	5.00000	4.578	
	6 2-Chlorophenol	128	8.729	8.729	(1.000)	386577	5.00000	4.671	
	7 1,3-Dichlorobenzene	146	9.000	9.000	(1.000)	395007	5.00000	4.715	
*	8 1,4-Dichlorobenzene-d4	152	9.062	9.062	(1.000)	221219	4.00000	(M)	
	9 1,4-Dichlorobenzene	146	9.093	9.093	(1.000)	382660	5.00000	4.743	
$	10 1,2-Dichlorobenzene-d4	152	9.426	9.426	(1.000)	252698	5.00000	4.850	
	12 1,2-Dichlorobenzene	146	9.450	9.450	(1.000)	374974	5.00000	4.702	
	11 Benzyl alcohol	108	9.333	9.333	(1.000)	243337	5.00000	4.971	
	14 2,2'-oxybis(1-Chloropropane)	121	9.644	9.644	(1.000)	111978	5.00000	4.653	
	13 2-Methylphenol	108	9.558	9.558	(1.000)	348982	5.00000	4.695	
	17 Hexachloroethane	117	10.055	10.055	(1.000)	169906	5.00000	4.924	
	16 N-Nitroso-di-n-propylamine	70	9.900	9.900	(1.000)	268975	5.00000	4.596	
	15 4-Methylphenol	108	9.830	9.830	(1.000)	374744	5.00000	4.258	
$	18 Nitrobenzene-d5	82	10.164	10.164	(0.879)	435373	5.00000	5.082	
	19 Nitrobenzene	77	10.203	10.203	(0.882)	411915	5.00000	4.940	
	20 Isophorone	82	10.653	10.653	(0.921)	527720	5.00000	4.635	
	21 2-Nitrophenol	139	10.831	10.831	(0.936)	209678	5.00000	4.376	
	22 2,4-Dimethylphenol	107	10.885	10.885	(0.941)	722162	10.0000	10.13	
	23 Bis(2-Chloroethoxy)methane	93	11.087	11.087	(0.959)	361497	5.00000	4.716	
	24 Benzoic acid	105	11.103	11.103	(0.960)	1003884	20.0000	16.48	
	25 2,4-Dichlorophenol	162	11.289	11.289	(0.976)	564058	10.0000	9.944	
	26 1,2,4-Trichlorobenzene	180	11.482	11.482	(0.993)	353725	5.00000	5.073	
*	27 Naphthalene-d8	136	11.567	11.567	(1.000)	809500	4.00000		
	28 Naphthalene	128	11.606	11.606	(1.003)	1047490	5.00000	4.844	
	29 4-Chloroaniline	127	11.737	11.737	(1.015)	960993	10.0000	10.61	
	30 Hexachlorobutadiene	225	11.976	11.976	(1.035)	159746	5.00000	5.074	
	31 4-Chloro-3-methylphenol	107	12.696	12.696	(1.098)	664962	10.0000	9.702	
	32 2-Methylnaphthalene	142	13.013	13.013	(1.125)	757191	5.00000	5.020	
	33 Hexachlorocyclopentadiene	237	13.478	13.478	(0.887)	348302	10.0000	9.961	

		QUANT SIG					AMOUNTS CAL-AMT	AMOUNTS ON-COL
Compounds		MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
34	2,4,6-Trichlorophenol	196	13.633	13.633	(0.897)	416763	10.0000	9.766
35	2,4,5-Trichlorophenol	196	13.702	13.702	(0.902)	441138	10.0000	9.920
$ 36	2-Fluorobiphenyl	172	13.795	13.795	(0.908)	761091	5.00000	4.996
37	2-Chloronaphthalene	162	14.012	14.012	(0.922)	639201	5.00000	4.895
38	2-Nitroaniline	65	14.267	14.267	(0.939)	496351	10.0000	9.844
39	Dimethylphthalate	163	14.701	14.701	(0.967)	676338	5.00000	4.821
40	Acenaphthylene	152	14.879	14.879	(0.979)	1048429	5.00000	4.780
41	2,6-Dinitrotoluene	165	14.840	14.840	(0.977)	318619	10.0000	9.832
* 42	Acenaphthene-d10	164	15.196	15.196	(1.000)	420689	4.00000	
43	3-Nitroaniline	138	15.126	15.126	(0.995)	435753	10.0000	9.747
44	Acenaphthene	153	15.265	15.265	(1.005)	615268	5.00000	4.805
45	2,4-Dinitrophenol	184	15.335	15.335	(1.009)	436308	20.0000	16.89
46	Dibenzofuran	168	15.590	15.590	(1.026)	902233	5.00000	4.935
47	4-Nitrophenol	109	15.435	15.435	(1.016)	218372	10.0000	9.228
48	2,4-Dinitrotoluene	165	15.652	15.652	(1.030)	443446	10.0000	9.653
50	Diethylphthalate	149	16.170	16.170	(1.064)	691600	5.00000	4.768
49	Fluorene	166	16.309	16.309	(1.073)	838412	5.00000	4.838
51	4-Chlorophenyl-phenylether	204	16.301	16.301	(1.073)	361344	5.00000	4.858
52	4-Nitroaniline	138	16.394	16.394	(1.079)	381409	10.0000	9.809
53	4,6-Dinitro-2-methylphenol	198	16.494	16.494	(0.904)	505514	20.0000	18.81
54	N-Nitrosodiphenylamine	169	16.548	16.548	(0.907)	501160	5.00000	4.871
$ 55	2,4,6-Tribromophenol	330	16.841	16.841	(1.108)	118508	7.50000	7.420
56	4-Bromophenyl-phenylether	248	17.304	17.304	(0.948)	174537	5.00000	5.032
57	Hexachlorobenzene	284	17.620	17.620	(0.966)	177179	5.00000	4.841
58	Pentachlorophenol	266	17.976	17.976	(0.985)	231845	10.0000	8.966
* 59	Phenanthrene-d10	188	18.247	18.247	(1.000)	757520	4.00000	
60	Phenanthrene	178	18.294	18.294	(1.003)	1018573	5.00000	4.706
61	Anthracene	178	18.387	18.387	(1.008)	1031177	5.00000	4.945
62	Carbazole	167	18.711	18.711	(1.025)	928059	5.00000	5.002
63	Di-n-butylphthalate	149	19.508	19.508	(1.069)	1219887	5.00000	5.187
64	Fluoranthene	202	20.677	20.677	(0.888)	1067149	5.00000	5.822
65	Pyrene	202	21.102	21.102	(0.906)	1028759	5.00000	5.473
$ 66	Terphenyl-d14	244	21.389	21.389	(0.918)	725766	5.00000	5.704
67	Butylbenzylphthalate	149	22.310	22.310	(0.958)	474928	5.00000	5.767
68	Benzo(a)anthracene	228	23.270	23.270	(0.999)	829633	5.00000	4.995
* 69	Chrysene-d12	240	23.293	23.293	(1.000)	450500	4.00000	
70	3,3'-Dichlorobenzidine	252	23.224	23.224	(0.997)	883473	15.0000	17.55
71	Chrysene	228	23.340	23.340	(1.002)	737639	5.00000	4.907
72	bis(2-Ethylhexyl)phthalate	149	23.332	23.332	(0.959)	612720	5.00000	5.619
* 134	Di-n-octylphthalate-d4	153	24.323	24.323	(1.000)	828388	4.00000	
73	Di-n-octylphthalate	149	24.331	24.331	(1.000)	1018494	5.00000	4.783
74	Benzo(b)fluoranthene	252	25.159	25.159	(0.970)	643020	5.00000	5.353
75	Benzo(k)fluoranthene	252	25.205	25.205	(0.972)	648399	5.00000	5.446
76	Benzo(a)pyrene	252	25.817	25.817	(0.996)	532742	5.00000	5.187
* 77	Perylene-d12	264	25.933	25.933	(1.000)	339914	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.618	28.618	(1.104)	470021	5.00000	4.204
79	Dibenzo(a,h)anthracene	278	28.633	28.633	(1.104)	394908	5.00000	4.191
80	Benzo(g,h,i)perylene	276	29.410	29.410	(1.134)	367459	5.00000	3.988
90	N-Nitrosodimethylamine	74	4.697	4.697	(1.000)	421348	10.0000	8.853
91	Aniline	93	8.513	8.513	(1.000)	988884	10.0000	9.351
93	Benzidine	184	20.909	20.909	(0.898)	1107296	10.0000	15.01
103	Pyridine	79	4.712	4.712	(1.000)	666229	5.00000	4.520
105	1-methylnaphthalene	142	13.230	13.230	(1.144)	681137	5.00000	4.985
111	Azobenzene (1,2-DP-Hydrazine)	77	16.625	16.625	(1.094)	830671	5.00000	4.796

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
187 Total Benzofluoranthenes	252	25.205	25.205	(0.972)	1228957	10.0000	10.77
120 2,3,4,6-Tetrachlorophenol	232	15.930	15.930	(1.048)	193840	5.00000	4.432

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1403172302.D
Lab Smp Id: SLC0335-ICV1
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt14.i\20230317.b\ABN.m
Misc Info:

Calibration Date: 15-MAR-2023
Calibration Time: 13:26
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	221219	110610	442438	221219	0.00
27 Naphthalene-d8	809500	404750	1619000	809500	0.00
42 Acenaphthene-d10	420689	210345	841378	420689	0.00
59 Phenanthrene-d10	757520	378760	1515040	757520	0.00
69 Chrysene-d12	450500	225250	901000	450500	0.00
134 Di-n-octylphthala	828388	414194	1656776	828388	0.00
77 Perylene-d12	339914	169957	679828	339914	0.00

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.06	8.56	9.56	9.06	0.00
27 Naphthalene-d8	11.57	11.07	12.07	11.57	0.00
42 Acenaphthene-d10	15.20	14.70	15.70	15.20	0.00
59 Phenanthrene-d10	18.25	17.75	18.75	18.25	0.00
69 Chrysene-d12	23.29	22.79	23.79	23.29	0.00
134 Di-n-octylphthala	24.32	23.82	24.82	24.32	0.00
77 Perylene-d12	25.93	25.43	26.43	25.93	0.00

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

REVIEW SUMMARY FOR FILE - NT1403172302.D

Lab ID: SLC0335-ICV1
nt14.i, ABN.m, 17-MAR-2023 15:03

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

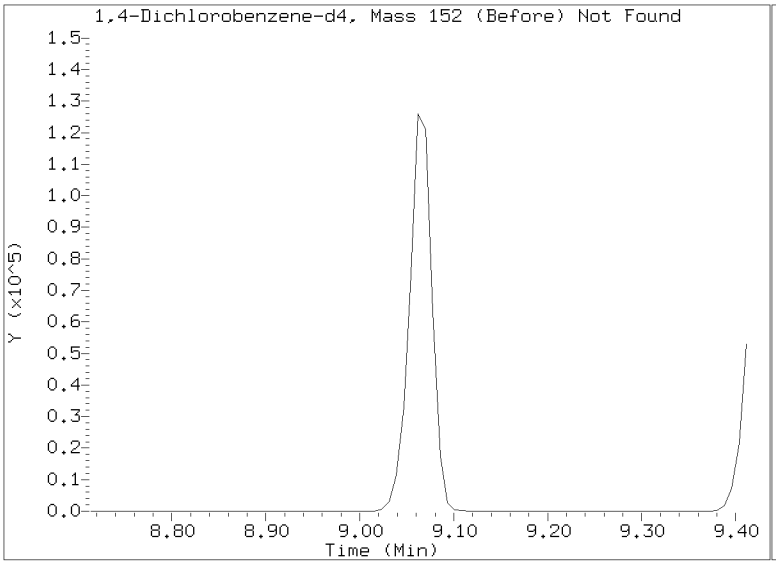
No RRT check. Ccal file.

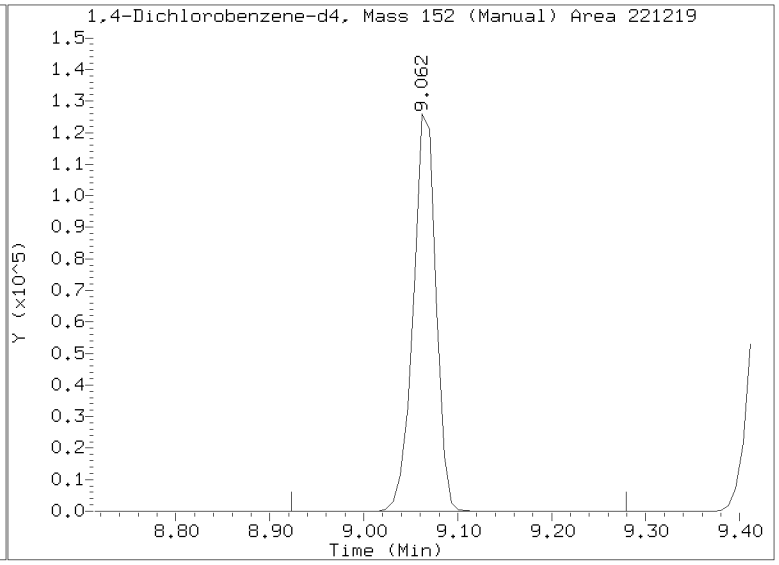
On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

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

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230317.b/NT1403172302.D
Injection Date: 17-MAR-2023 15:03
Lab ID:SLC0335-ICV1 Client ID:
Report Date: 03/22/2023 08:11





Q-FLAG SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230317.b

Instrument: nt14.i Date: 17-MAR-2023 Method: ABN.m

INITIAL CAL: 15-MAR-2023

Compound	%RSD or R^2
NO Q-FLAGS	

ICV CAL: NT1403172302.D 17-MAR-2023 15:03

Compound	%D
Benzo(g,h,i)perylene	-20.23
Benzidine	50.13

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT14	Calibration:	GC00048
Lab File ID:	NT1403172316.D	Calibration Date:	03/15/2023
Sequence:	SLC0335	Injection Date:	03/17/23
Lab Sample ID:	SLC0335-ICV2	Injection Time:	23:31
Sequence Name:	SSTD005		

		CONC. (ug/mL)		RESPONSE FACTOR			% DRIFT/DIFF		
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT	
Phenol	A	5.0000	4.5	1.9011440	1.7067590		-10.2	+/-20	
4-Methylphenol	A	5.0000	4.2	1.5914380	1.3426200		-15.6	+/-20	
Naphthalene	A	5.0000	4.8	1.0686200	1.0278110		-3.8	+/-20	
2-Methylnaphthalene	A	5.0000	5.0	0.7452524	0.7456717		0.06	+/-20	
Acenaphthylene	A	5.0000	4.8	2.0854140	2.0224720		-3.0	+/-20	
Dimethylphthalate	A	5.0000	4.8	1.3338450	1.2891790		-3.3	+/-20	
Acenaphthene	A	5.0000	4.9	1.2175690	1.1831670		-2.8	+/-20	
Dibenzofuran	A	5.0000	5.0	1.7382550	1.7338680		-0.3	+/-20	
Fluorene	A	5.0000	4.9	1.6477120	1.6101450		-2.3	+/-20	
Phenanthrene	A	5.0000	4.7	1.1428510	1.0752890		-5.9	+/-20	
Anthracene	A	5.0000	4.9	1.1010610	1.0807260		-1.8	+/-20	
Fluoranthene	A	5.0000	6.4	1.6273660	2.0876370		28.3	+/-20	*
Pyrene	A	5.0000	5.9	1.6688810	1.9781880		18.5	+/-20	
Butylbenzylphthalate	A	5.0000	6.4	0.7311588	0.9354284		27.9	+/-20	*
Benzo(a)anthracene	A	5.0000	4.9	1.4748830	1.4523400		-1.5	+/-20	
Chrysene	A	5.0000	4.7	1.3348290	1.2567480		-5.8	+/-20	
bis(2-Ethylhexyl)phthalate	A	5.0000	5.8	0.5265649	0.6089646		15.6	+/-20	
Benzofluoranthenes, Total	A	10.000	11.1	1.3424190	1.4898130		11.0	+/-20	
Benzo(a)pyrene	A	5.0000	5.1	1.2087150	1.2310410		1.8	+/-20	
Indeno(1,2,3-cd)pyrene	A	5.0000	4.0	1.3155660	1.0580940		-19.6	+/-20	
Dibenzo(a,h)anthracene	A	5.0000	3.9	1.1087420	0.8644033		-22.0	+/-20	*
Benzo(g,h,i)perylene	A	5.0000	3.7	1.0842080	0.7952116		-26.7	+/-20	*
2-Fluorophenol	A	7.5000	7.04	1.3587350	1.2758130		-6.1	+/-20	
Phenol-d5	A	7.5000	7.09	1.7888720	1.6899510		-5.5	+/-20	
2-Chlorophenol-d4	A	7.5000	7.23	1.4103050	1.3603450		-3.5	+/-20	
1,2-Dichlorobenzene-d4	A	5.0000	4.77	0.9421955	0.8996948		-4.5	+/-20	
Nitrobenzene-d5	A	5.0000	5.12	0.4233007	0.4335160		2.4	+/-20	
2-Fluorobiphenyl	A	5.0000	5.02	1.4485960	1.4552470		0.5	+/-20	
2,4,6-Tribromophenol	A	7.5000	7.71	0.1518639	0.1562046		2.9	+/-20	
p-Terphenyl-d14	A	5.0000	6.23	1.1297810	1.4086360		24.7	+/-20	*

* Values outside of QC limits

INITIAL CALIBRATION CHECK
EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT14	Calibration:	GC00048
Lab File ID:	NT1403172316.D	Calibration Date:	03/15/2023
Sequence:	SLC0335	Injection Date:	03/17/23
Lab Sample ID:	SLC0335-ICV2	Injection Time:	23:31
Sequence Name:	SSTD005		

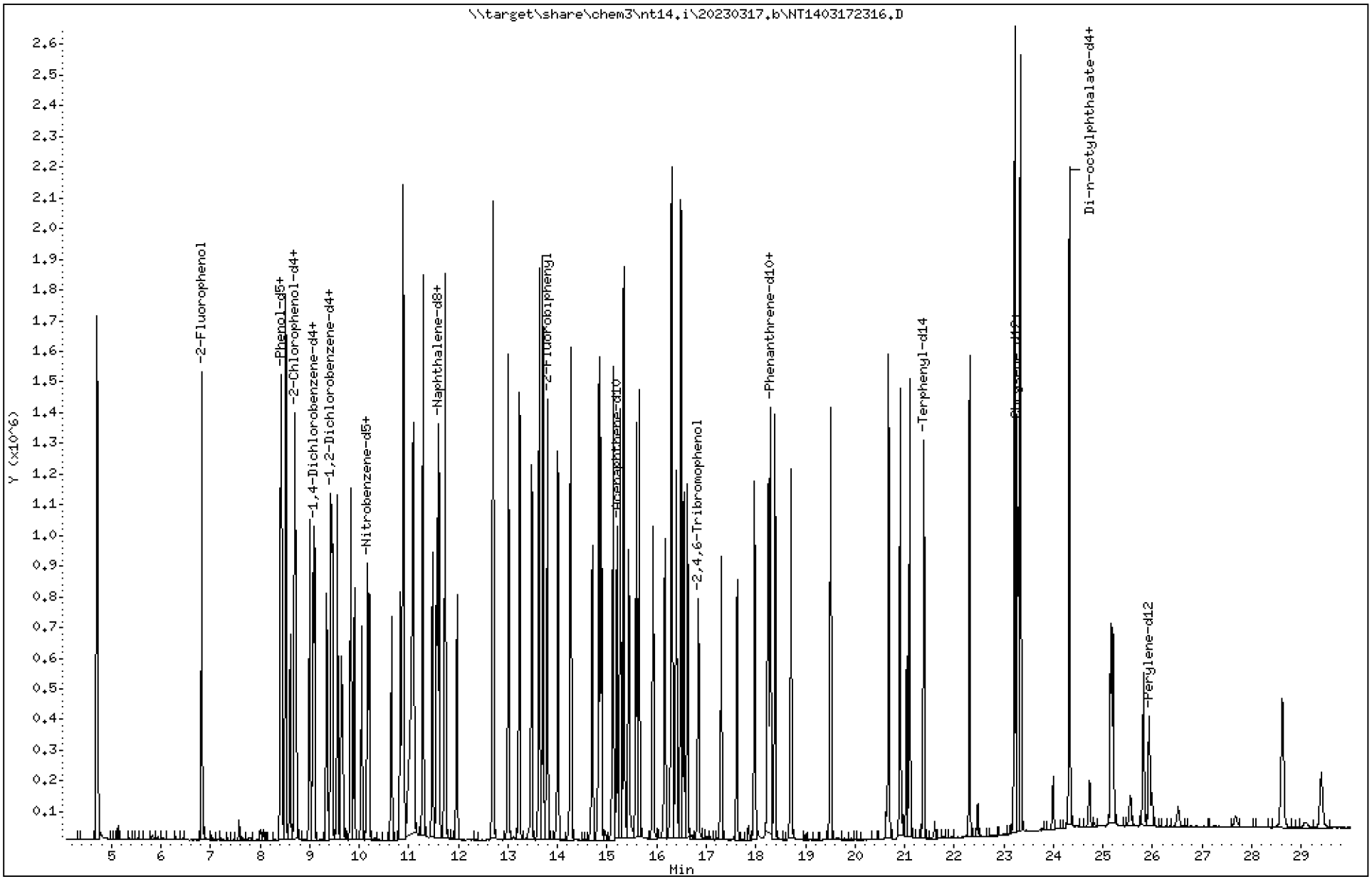
		CONC. (ug/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
1,4-Dichlorobenzene-d4	A	4.0000	4.0	48445.4300	1.0000		0.0	
Naphthalene-d8	A	4.0000	4.0	183571.5000	1.0000		0.0	
Acenaphthene-d10	A	4.0000	4.0	95634.1400	1.0000		0.0	
Phenanthrene-d10	A	4.0000	4.0	176078.0000	1.0000		0.0	
Chrysene-d12	A	4.0000	4.0	127293.4000	1.0000		0.0	
Di-n-Octylphthalate-d4	A	4.0000	4.0	236003.4000	1.0000		0.0	
Perylene-d12	A	4.0000	4.0	121097.1000	1.0000		0.0	

* Values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172316.D
Date : 17-MAR-2023 23:31
Client ID:
Sample Info: SLC0335-ICV2

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

Column phase: ZB-5msi



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230317.b\NT1403172316.D
Lab Smp Id: SLC0335-ICV2
Inj Date : 17-MAR-2023 23:31 MS Autotune Date: 11-MAR-2023 16:01
Operator : JGR Inst ID: nt14.i
Smp Info : SLC0335-ICV2
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230317.b\ABN.m
Meth Date : 22-Mar-2023 08:57 van Quant Type: ISTD
Cal Date : 15-MAR-2023 15:50 Cal File: NT1403152308.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

			QUANT SIG					AMOUNTS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1	2-Fluorophenol	112	6.821	6.821	(1.000)	552627	7.50000	7.042
$	2	Phenol-d5	99	8.412	8.412	(1.000)	732014	7.50000	7.085
	3	Phenol	94	8.436	8.436	(1.000)	492863	5.00000	4.489
$	5	2-Chlorophenol-d4	132	8.698	8.698	(1.000)	589243	7.50000	7.234
	4	Bis(2-Chloroethyl)ether	93	8.606	8.606	(1.000)	350404	5.00000	4.432
	6	2-Chlorophenol	128	8.729	8.729	(1.000)	402991	5.00000	4.663
	7	1,3-Dichlorobenzene	146	9.000	9.000	(1.000)	404070	5.00000	4.619
*	8	1,4-Dichlorobenzene-d4	152	9.062	9.062	(1.000)	231017	4.00000	(M)
	9	1,4-Dichlorobenzene	146	9.093	9.093	(1.000)	391934	5.00000	4.652
$	10	1,2-Dichlorobenzene-d4	152	9.427	9.427	(1.000)	259806	5.00000	4.774
	12	1,2-Dichlorobenzene	146	9.450	9.450	(1.000)	384703	5.00000	4.619
	11	Benzyl alcohol	108	9.341	9.341	(1.000)	245616	5.00000	4.805
	14	2,2'-oxybis(1-Chloropropane)	121	9.644	9.644	(1.000)	113824	5.00000	4.529
	13	2-Methylphenol	108	9.559	9.559	(1.000)	357977	5.00000	4.611
	17	Hexachloroethane	117	10.048	10.048	(1.000)	175252	5.00000	4.863
	16	N-Nitroso-di-n-propylamine	70	9.900	9.900	(1.000)	278682	5.00000	4.560
	15	4-Methylphenol	108	9.830	9.830	(1.000)	387710	5.00000	4.218
$	18	Nitrobenzene-d5	82	10.164	10.164	(0.879)	457245	5.00000	5.121
	19	Nitrobenzene	77	10.203	10.203	(0.882)	429696	5.00000	4.944
	20	Isophorone	82	10.653	10.653	(0.921)	553125	5.00000	4.661
	21	2-Nitrophenol	139	10.831	10.831	(0.936)	248655	5.00000	4.966
	22	2,4-Dimethylphenol	107	10.886	10.886	(0.941)	745186	10.0000	10.02
	23	Bis(2-Chloroethoxy)methane	93	11.087	11.087	(0.959)	376050	5.00000	4.707
	24	Benzoic acid	105	11.103	11.103	(0.960)	1010902	20.0000	15.94
	25	2,4-Dichlorophenol	162	11.289	11.289	(0.976)	586144	10.0000	9.914
	26	1,2,4-Trichlorobenzene	180	11.482	11.482	(0.993)	368156	5.00000	5.065
*	27	Naphthalene-d8	136	11.567	11.567	(1.000)	843789	4.00000	
	28	Naphthalene	128	11.606	11.606	(1.003)	1084070	5.00000	4.809
	29	4-Chloroaniline	127	11.737	11.737	(1.015)	999352	10.0000	10.59
	30	Hexachlorobutadiene	225	11.969	11.969	(1.035)	164075	5.00000	5.000
	31	4-Chloro-3-methylphenol	107	12.696	12.696	(1.098)	693102	10.0000	9.701
	32	2-Methylnaphthalene	142	13.006	13.006	(1.124)	786487	5.00000	5.003
	33	Hexachlorocyclopentadiene	237	13.478	13.478	(0.887)	337054	10.0000	9.377

		QUANT SIG					AMOUNTS CAL-AMT	AMOUNTS ON-COL
Compounds		MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
34	2,4,6-Trichlorophenol	196	13.633	13.633	(0.897)	434640	10.0000	9.907
35	2,4,5-Trichlorophenol	196	13.702	13.702	(0.902)	467141	10.0000	10.22
$ 36	2-Fluorobiphenyl	172	13.795	13.795	(0.908)	786661	5.00000	5.023
37	2-Chloronaphthalene	162	14.004	14.004	(0.922)	666898	5.00000	4.968
38	2-Nitroaniline	65	14.267	14.267	(0.939)	519689	10.0000	10.03
39	Dimethylphthalate	163	14.701	14.701	(0.967)	696890	5.00000	4.833
40	Acenaphthylene	152	14.879	14.879	(0.979)	1093285	5.00000	4.849
41	2,6-Dinitrotoluene	165	14.840	14.840	(0.977)	334830	10.0000	10.05
* 42	Acenaphthene-d10	164	15.196	15.196	(1.000)	432455	4.00000	
43	3-Nitroaniline	138	15.119	15.119	(0.995)	449932	10.0000	9.790
44	Acenaphthene	153	15.266	15.266	(1.005)	639583	5.00000	4.859
45	2,4-Dinitrophenol	184	15.335	15.335	(1.009)	426420	20.0000	16.08
46	Dibenzofuran	168	15.590	15.590	(1.026)	937275	5.00000	4.987
47	4-Nitrophenol	109	15.436	15.436	(1.016)	210345	10.0000	8.647
48	2,4-Dinitrotoluene	165	15.645	15.645	(1.030)	465718	10.0000	9.862
50	Diethylphthalate	149	16.163	16.163	(1.064)	797912	5.00000	5.352
49	Fluorene	166	16.309	16.309	(1.073)	870394	5.00000	4.886
51	4-Chlorophenyl-phenylether	204	16.294	16.294	(1.072)	371769	5.00000	4.862
52	4-Nitroaniline	138	16.394	16.394	(1.079)	390281	10.0000	9.764
53	4,6-Dinitro-2-methylphenol	198	16.494	16.494	(0.904)	508856	20.0000	18.09
54	N-Nitrosodiphenylamine	169	16.548	16.548	(0.907)	526989	5.00000	4.888
$ 55	2,4,6-Tribromophenol	330	16.841	16.841	(1.108)	126659	7.50000	7.714
56	4-Bromophenyl-phenylether	248	17.304	17.304	(0.949)	181194	5.00000	4.985
57	Hexachlorobenzene	284	17.621	17.621	(0.966)	187265	5.00000	4.883
58	Pentachlorophenol	266	17.977	17.977	(0.986)	226626	10.0000	8.379
* 59	Phenanthrene-d10	188	18.240	18.240	(1.000)	793780	4.00000	
60	Phenanthrene	178	18.294	18.294	(1.003)	1066929	5.00000	4.704
61	Anthracene	178	18.387	18.387	(1.008)	1072323	5.00000	4.908
62	Carbazole	167	18.712	18.712	(1.026)	958958	5.00000	4.933
63	Di-n-butylphthalate	149	19.509	19.509	(1.070)	1263889	5.00000	5.129
64	Fluoranthene	202	20.677	20.677	(0.888)	1072672	5.00000	6.414
65	Pyrene	202	21.103	21.103	(0.906)	1016435	5.00000	5.927
$ 66	Terphenyl-d14	244	21.389	21.389	(0.918)	723787	5.00000	6.234
67	Butylbenzylphthalate	149	22.310	22.310	(0.958)	480643	5.00000	6.397
68	Benzo(a)anthracene	228	23.263	23.263	(0.999)	746243	5.00000	4.924
* 69	Chrysene-d12	240	23.294	23.294	(1.000)	411057	4.00000	
70	3,3'-Dichlorobenzidine	252	23.216	23.216	(0.997)	750640	15.0000	16.40
71	Chrysene	228	23.340	23.340	(1.002)	645744	5.00000	4.708
72	bis(2-Ethylhexyl)phthalate	149	23.332	23.332	(0.960)	608211	5.00000	5.782
* 134	Di-n-octylphthalate-d4	153	24.316	24.316	(1.000)	799010	4.00000	
73	Di-n-octylphthalate	149	24.331	24.331	(1.001)	977528	5.00000	4.759
74	Benzo(b)fluoranthene	252	25.159	25.159	(0.970)	527337	5.00000	5.857
75	Benzo(k)fluoranthene	252	25.198	25.198	(0.972)	473131	5.00000	5.301
76	Benzo(a)pyrene	252	25.818	25.818	(0.996)	392059	5.00000	5.092
* 77	Perylene-d12	264	25.934	25.934	(1.000)	254782	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.610	28.610	(1.103)	336979	5.00000	4.021
79	Dibenzo(a,h)anthracene	278	28.626	28.626	(1.104)	275293	5.00000	3.898
80	Benzo(g,h,i)perylene	276	29.403	29.403	(1.134)	253257	5.00000	3.667
90	N-Nitrosodimethylamine	74	4.697	4.697	(1.000)	410993	10.0000	8.269
91	Aniline	93	8.513	8.513	(1.000)	1009932	10.0000	9.145
93	Benzidine	184	20.909	20.909	(0.898)	972542	10.0000	14.45
103	Pyridine	79	4.712	4.712	(1.000)	641216	5.00000	4.166
105	1-methylnaphthalene	142	13.230	13.230	(1.144)	712804	5.00000	5.005
111	Azobenzene (1,2-DP-Hydrazine)	77	16.625	16.625	(1.094)	866273	5.00000	4.866

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
187 Total Benzofluoranthenes	252	25.159	25.159	(0.970)	948944	10.0000	11.10
120 2,3,4,6-Tetrachlorophenol	232	15.923	15.923	(1.048)	205137	5.00000	4.559

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1403172316.D
Lab Smp Id: SLC0335-ICV2
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt14.i\20230317.b\ABN.m
Misc Info:

Calibration Date: 17-MAR-2023
Calibration Time: 15:03
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	221219	110610	442438	231017	4.43
27 Naphthalene-d8	809500	404750	1619000	843789	4.24
42 Acenaphthene-d10	420689	210345	841378	432455	2.80
59 Phenanthrene-d10	757520	378760	1515040	793780	4.79
69 Chrysene-d12	450500	225250	901000	411057	-8.76
134 Di-n-octylphthala	828388	414194	1656776	799010	-3.55
77 Perylene-d12	339914	169957	679828	254782	-25.05

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.06	8.56	9.56	9.06	0.00
27 Naphthalene-d8	11.57	11.07	12.07	11.57	0.00
42 Acenaphthene-d10	15.20	14.70	15.70	15.20	0.00
59 Phenanthrene-d10	18.25	17.75	18.75	18.24	-0.04
69 Chrysene-d12	23.29	22.79	23.79	23.29	0.00
134 Di-n-octylphthala	24.32	23.82	24.82	24.32	-0.03
77 Perylene-d12	25.93	25.43	26.43	25.93	0.00

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

REVIEW SUMMARY FOR FILE - NT1403172316.D

Lab ID: SLC0335-ICV2
nt14.i, ABN.m, 17-MAR-2023 23:31

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

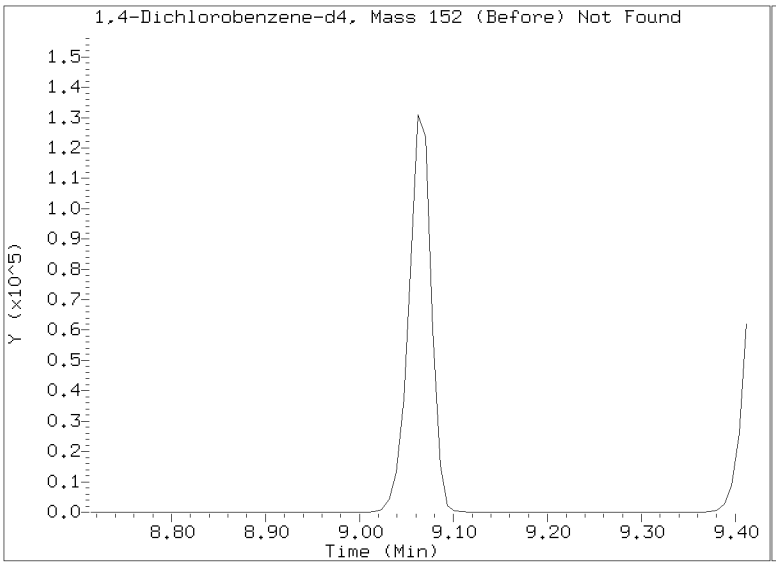
No RRT check. Ccal file.

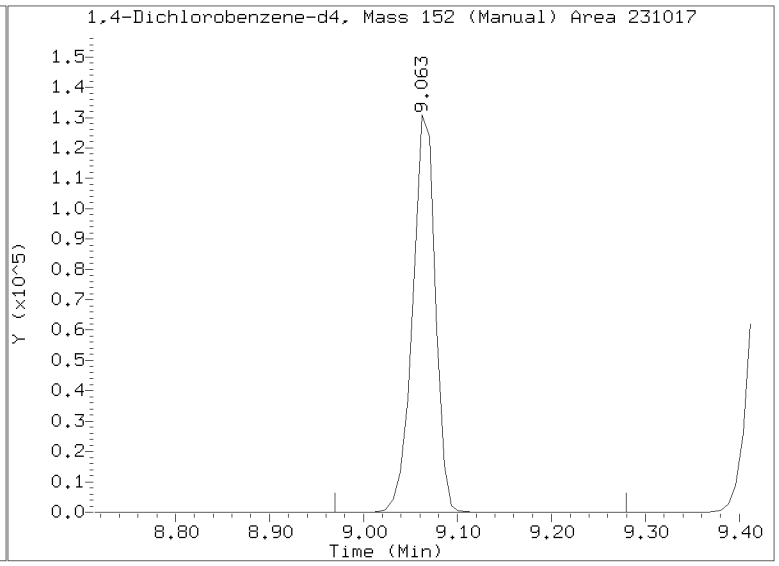
On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

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

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230317.b/NT1403172316.D
Injection Date: 17-MAR-2023 23:31
Lab ID:SLC0335-ICV2 Client ID:
Report Date: 03/22/2023 09:49





Q-FLAG SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230317.b

Instrument: nt14.i Date: 17-MAR-2023 Method: ABN.m

INITIAL CAL: 15-MAR-2023

Compound	%RSD or R^2
NO Q-FLAGS	

ICV CAL: NT1403172316.D 17-MAR-2023 23:31

Compound	%D
Benzoic acid	-20.3
Fluoranthene	28.28
Butylbenzylphthalate	27.94
Dibenzo(a,h)anthracene	-22.04
Benzo(g,h,i)perylene	-26.66
Benzidine	44.51
Terphenyl-d14	24.68

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT14	Calibration:	GC00048
Lab File ID:	NT1403182302.D	Calibration Date:	03/15/2023
Sequence:	SLC0355	Injection Date:	03/18/23
Lab Sample ID:	SLC0355-ICV1	Injection Time:	17:38
Sequence Name:	SICV1		

		CONC. (ug/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Phenol	A	5.0000	4.9	1.9011440	1.8500600		-2.7	+/-20
4-Methylphenol	A	5.0000	4.5	1.5914380	1.4188590		-10.8	+/-20
Naphthalene	A	5.0000	5.0	1.0686200	1.0631850		-0.5	+/-20
2-Methylnaphthalene	A	5.0000	5.0	0.7452524	0.7525314		1.0	+/-20
Acenaphthylene	A	5.0000	4.9	2.0854140	2.0257590		-2.9	+/-20
Dimethylphthalate	A	5.0000	5.0	1.3338450	1.3253870		-0.6	+/-20
Acenaphthene	A	5.0000	4.8	1.2175690	1.1777280		-3.3	+/-20
Dibenzofuran	A	5.0000	5.0	1.7382550	1.7272240		-0.6	+/-20
Fluorene	A	5.0000	4.9	1.6477120	1.6036040		-2.7	+/-20
Phenanthrene	A	5.0000	4.8	1.1428510	1.1022910		-3.5	+/-20
Anthracene	A	5.0000	5.0	1.1010610	1.0933180		-0.7	+/-20
Fluoranthene	A	5.0000	5.9	1.6273660	1.9240420		18.2	+/-20
Pyrene	A	5.0000	5.6	1.6688810	1.8741450		12.3	+/-20
Butylbenzylphthalate	A	5.0000	6.0	0.7311588	0.8806851		20.5	+/-20
Benzo(a)anthracene	A	5.0000	5.0	1.4748830	1.4750700		0.02	+/-20
Chrysene	A	5.0000	5.0	1.3348290	1.3278740		-0.5	+/-20
bis(2-Ethylhexyl)phthalate	A	5.0000	5.5	0.5265649	0.5739771		9.0	+/-20
Benzofluoranthenes, Total	A	10.000	10.5	1.3424190	1.4085150		5.1	+/-20
Benzo(a)pyrene	A	5.0000	5.1	1.2087150	1.2396010		2.6	+/-20
Indeno(1,2,3-cd)pyrene	A	5.0000	4.9	1.3155660	1.2990110		-1.3	+/-20
Dibenzo(a,h)anthracene	A	5.0000	4.9	1.1087420	1.0860060		-2.1	+/-20
Benzo(g,h,i)perylene	A	5.0000	4.8	1.0842080	1.0449220		-3.6	+/-20
2-Fluorophenol	A	7.5000	7.20	1.3587350	1.3049490		-4.0	+/-20
Phenol-d5	A	7.5000	7.32	1.7888720	1.7463830		-2.4	+/-20
2-Chlorophenol-d4	A	7.5000	7.58	1.4103050	1.4244690		1.0	+/-20
1,2-Dichlorobenzene-d4	A	5.0000	4.98	0.9421955	0.9387508		-0.4	+/-20
Nitrobenzene-d5	A	5.0000	5.06	0.4233007	0.4284437		1.2	+/-20
2-Fluorobiphenyl	A	5.0000	4.94	1.4485960	1.4308460		-1.2	+/-20
2,4,6-Tribromophenol	A	7.5000	7.54	0.1518639	0.1581807		0.6	+/-20
p-Terphenyl-d14	A	5.0000	5.62	1.1297810	1.2689780		12.3	+/-20

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT14	Calibration:	GC00048
Lab File ID:	NT1403182302.D	Calibration Date:	03/15/2023
Sequence:	SLC0355	Injection Date:	03/18/23
Lab Sample ID:	SLC0355-ICV1	Injection Time:	17:38
Sequence Name:	SICV1		

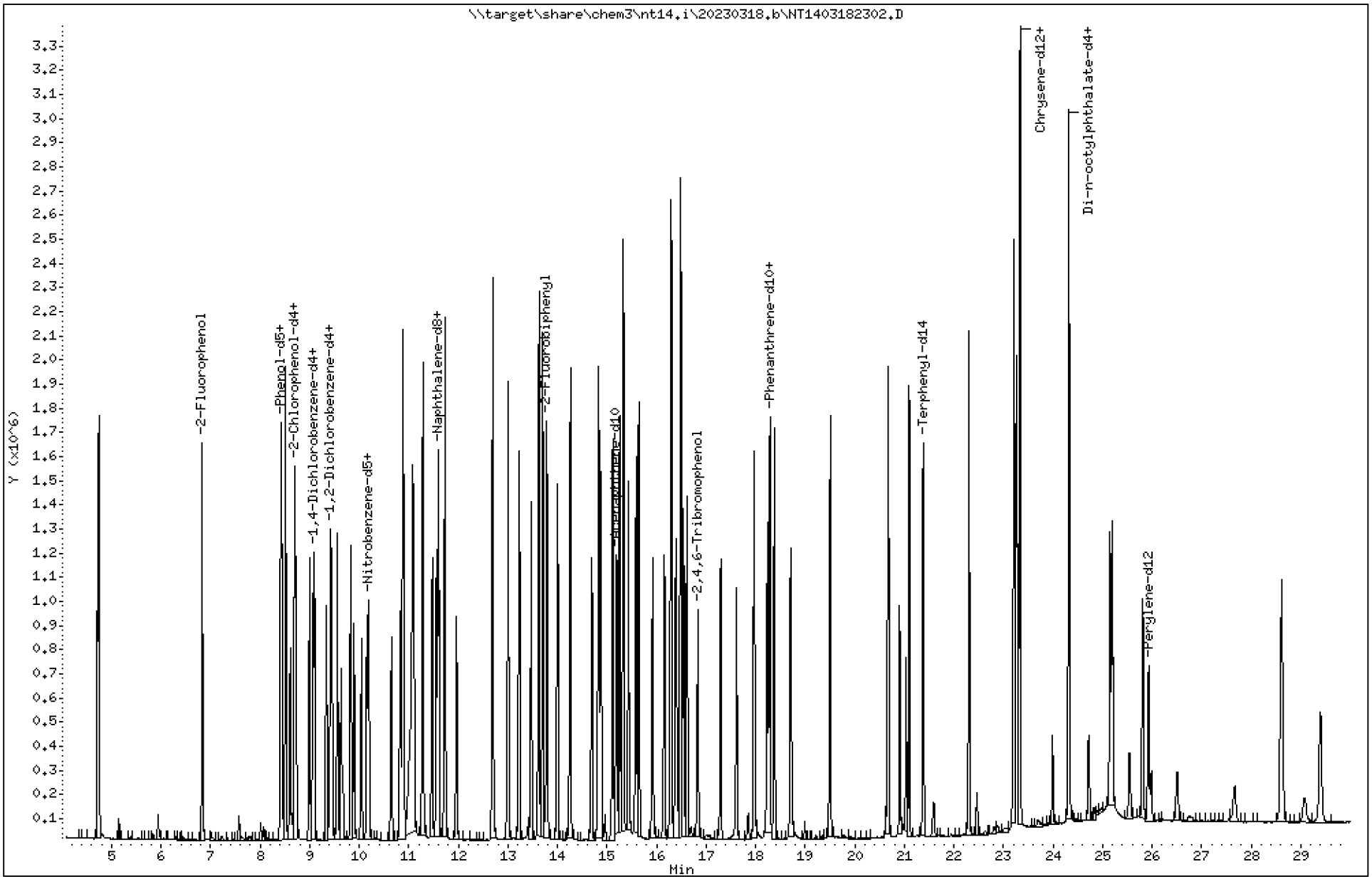
		CONC. (ug/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
1,4-Dichlorobenzene-d4	A	4.0000	4.0	48445.4300	1.0000		0.0	
Naphthalene-d8	A	4.0000	4.0	183571.5000	1.0000		0.0	
Acenaphthene-d10	A	4.0000	4.0	95634.1400	1.0000		0.0	
Phenanthrene-d10	A	4.0000	4.0	176078.0000	1.0000		0.0	
Chrysene-d12	A	4.0000	4.0	127293.4000	1.0000		0.0	
Di-n-Octylphthalate-d4	A	4.0000	4.0	236003.4000	1.0000		0.0	
Perylene-d12	A	4.0000	4.0	121097.1000	1.0000		0.0	

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20230318.b\NT1403182302.D
Date : 18-MAR-2023 17:38
Client ID:
Sample Info: SLC0355-ICV1

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



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230318.b\NT1403182302.D
Lab Smp Id: SLC0355-ICV1
Inj Date : 18-MAR-2023 17:38 MS Autotune Date: 11-MAR-2023 16:01
Operator : JGR Inst ID: nt14.i
Smp Info : SLC0355-ICV1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230318.b\ABN.m
Meth Date : 23-Mar-2023 10:18 van Quant Type: ISTD
Cal Date : 15-MAR-2023 15:50 Cal File: NT1403152308.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)	
$	1 2-Fluorophenol	112	6.829	6.829	(1.000)	605874	7.50000	7.203	
$	2 Phenol-d5	99	8.420	8.420	(1.000)	810827	7.50000	7.322	
	3 Phenol	94	8.435	8.435	(1.000)	572642	5.00000	4.866	
$	5 2-Chlorophenol-d4	132	8.698	8.698	(1.000)	661366	7.50000	7.575	
	4 Bis(2-Chloroethyl)ether	93	8.605	8.605	(1.000)	404611	5.00000	4.774	
	6 2-Chlorophenol	128	8.721	8.721	(1.000)	459680	5.00000	4.962	
	7 1,3-Dichlorobenzene	146	9.000	9.000	(1.000)	460017	5.00000	4.906	
*	8 1,4-Dichlorobenzene-d4	152	9.062	9.062	(1.000)	247621	4.00000		(M)
	9 1,4-Dichlorobenzene	146	9.093	9.093	(1.000)	437816	5.00000	4.848	
$	10 1,2-Dichlorobenzene-d4	152	9.427	9.427	(1.000)	290568	5.00000	4.982	
	12 1,2-Dichlorobenzene	146	9.450	9.450	(1.000)	441709	5.00000	4.948	
	11 Benzyl alcohol	108	9.333	9.333	(1.000)	264802	5.00000	4.833	
	14 2,2'-oxybis(1-Chloropropane)	121	9.636	9.636	(1.063)	128696	5.00000	5.312	(M)
	13 2-Methylphenol	108	9.559	9.559	(1.000)	410543	5.00000	4.934	
	17 Hexachloroethane	117	10.048	10.048	(1.000)	196239	5.00000	5.080	
	16 N-Nitroso-di-n-propylamine	70	9.900	9.900	(1.000)	321142	5.00000	4.902	
	15 4-Methylphenol	108	9.830	9.830	(1.000)	439174	5.00000	4.458	
$	18 Nitrobenzene-d5	82	10.156	10.156	(0.879)	511602	5.00000	5.061	
	19 Nitrobenzene	77	10.195	10.195	(0.882)	494052	5.00000	5.021	
	20 Isophorone	82	10.645	10.645	(0.921)	694478	5.00000	5.169	
	21 2-Nitrophenol	139	10.831	10.831	(0.937)	282146	5.00000	4.977	
	22 2,4-Dimethylphenol	107	10.878	10.878	(0.941)	782447	10.0000	9.296	
	23 Bis(2-Chloroethoxy)methane	93	11.079	11.079	(0.958)	422176	5.00000	4.667	
	24 Benzoic acid	105	11.110	11.110	(0.961)	1221554	20.0000	17.90	
	25 2,4-Dichlorophenol	162	11.289	11.289	(0.977)	738913	10.0000	11.04	
	26 1,2,4-Trichlorobenzene	180	11.475	11.475	(0.993)	434887	5.00000	5.285	
*	27 Naphthalene-d8	136	11.559	11.559	(1.000)	955275	4.00000		
	28 Naphthalene	128	11.598	11.598	(1.003)	1269542	5.00000	4.975	
	29 4-Chloroaniline	127	11.729	11.729	(1.015)	1145838	10.0000	10.73	
	30 Hexachlorobutadiene	225	11.969	11.969	(1.035)	191773	5.00000	5.162	
	31 4-Chloro-3-methylphenol	107	12.696	12.696	(1.098)	831506	10.0000	10.28	
	32 2-Methylnaphthalene	142	13.006	13.006	(1.125)	898593	5.00000	5.049	
	33 Hexachlorocyclopentadiene	237	13.470	13.470	(0.887)	378458	10.0000	8.917	

		QUANT SIG					AMOUNTS	
	Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
	34 2,4,6-Trichlorophenol	196	13.625	13.625	(0.897)	521880	10.0000	10.08
	35 2,4,5-Trichlorophenol	196	13.702	13.702	(0.902)	562529	10.0000	10.42
$	36 2-Fluorobiphenyl	172	13.787	13.787	(0.908)	913218	5.00000	4.939
	37 2-Chloronaphthalene	162	14.004	14.004	(0.922)	789027	5.00000	4.979
	38 2-Nitroaniline	65	14.260	14.260	(0.939)	604784	10.0000	9.883
	39 Dimethylphthalate	163	14.693	14.693	(0.967)	845910	5.00000	4.968
	40 Acenaphthylene	152	14.879	14.879	(0.980)	1292913	5.00000	4.857
	41 2,6-Dinitrotoluene	165	14.832	14.832	(0.977)	402243	10.0000	10.23
*	42 Acenaphthene-d10	164	15.188	15.188	(1.000)	510589	4.00000	
	43 3-Nitroaniline	138	15.119	15.119	(0.995)	510950	10.0000	9.417
	44 Acenaphthene	153	15.258	15.258	(1.005)	751669	5.00000	4.836
	45 2,4-Dinitrophenol	184	15.327	15.327	(1.009)	547123	20.0000	17.44
	46 Dibenzofuran	168	15.583	15.583	(1.026)	1102377	5.00000	4.968
	47 4-Nitrophenol	109	15.436	15.436	(1.016)	292213	10.0000	10.17
	48 2,4-Dinitrotoluene	165	15.644	15.644	(1.030)	565695	10.0000	10.15
	50 Diethylphthalate	149	16.155	16.155	(1.064)	1034367	5.00000	5.876
	49 Fluorene	166	16.301	16.301	(1.073)	1023478	5.00000	4.866
	51 4-Chlorophenyl-phenylether	204	16.286	16.286	(1.072)	460518	5.00000	5.101
	52 4-Nitroaniline	138	16.386	16.386	(1.079)	459998	10.0000	9.747
	53 4,6-Dinitro-2-methylphenol	198	16.486	16.486	(0.904)	642904	20.0000	19.66
	54 N-Nitrosodiphenylamine	169	16.540	16.540	(0.907)	608344	5.00000	4.864
$	55 2,4,6-Tribromophenol	330	16.833	16.833	(1.108)	151435	7.50000	7.543
	56 4-Bromophenyl-phenylether	248	17.296	17.296	(0.949)	224076	5.00000	5.314
	57 Hexachlorobenzene	284	17.613	17.613	(0.966)	226055	5.00000	5.081
	58 Pentachlorophenol	266	17.969	17.969	(0.986)	280522	10.0000	8.926
*	59 Phenanthrene-d10	188	18.232	18.232	(1.000)	920812	4.00000	
	60 Phenanthrene	178	18.286	18.286	(1.003)	1268753	5.00000	4.823
	61 Anthracene	178	18.379	18.379	(1.008)	1258425	5.00000	4.965
	62 Carbazole	167	18.704	18.704	(1.026)	1091185	5.00000	4.839
	63 Di-n-butylphthalate	149	19.501	19.501	(1.070)	1503182	5.00000	5.259
	64 Fluoranthene	202	20.669	20.669	(0.887)	1314813	5.00000	5.912
	65 Pyrene	202	21.095	21.095	(0.906)	1280716	5.00000	5.615
$	66 Terphenyl-d14	244	21.381	21.381	(0.918)	867169	5.00000	5.616
	67 Butylbenzylphthalate	149	22.302	22.302	(0.957)	601825	5.00000	6.023
	68 Benzo(a)anthracene	228	23.263	23.263	(0.999)	1008004	5.00000	5.001
*	69 Chrysene-d12	240	23.294	23.294	(1.000)	546688	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.208	23.208	(0.996)	792264	15.0000	13.16
	71 Chrysene	228	23.332	23.332	(1.002)	907416	5.00000	4.974
	72 bis(2-Ethylhexyl)phthalate	149	23.324	23.324	(0.959)	766108	5.00000	5.450
*	134 Di-n-octylphthalate-d4	153	24.315	24.315	(1.000)	1067789	4.00000	
	73 Di-n-octylphthalate	149	24.323	24.323	(1.000)	1330617	5.00000	4.848
	74 Benzo(b)fluoranthene	252	25.152	25.152	(0.970)	834688	5.00000	5.302
	75 Benzo(k)fluoranthene	252	25.198	25.198	(0.972)	813128	5.00000	5.210
	76 Benzo(a)pyrene	252	25.810	25.810	(0.996)	690334	5.00000	5.128
*	77 Perylene-d12	264	25.926	25.926	(1.000)	445520	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	28.610	28.610	(1.104)	723419	5.00000	4.937
	79 Dibenzo(a,h)anthracene	278	28.618	28.618	(1.104)	604797	5.00000	4.897
	80 Benzo(g,h,i)perylene	276	29.395	29.395	(1.134)	581917	5.00000	4.819
	90 N-Nitrosodimethylamine	74	4.720	4.720	(1.000)	479089	10.0000	8.993
	91 Aniline	93	8.513	8.513	(1.000)	1119032	10.0000	9.454
	93 Benzidine	184	20.901	20.901	(0.897)	643222	10.0000	7.186
	103 Pyridine	79	4.743	4.743	(1.000)	705669	5.00000	4.277
	105 1-methylnaphthalene	142	13.223	13.223	(1.144)	811768	5.00000	5.034
	111 Azobenzene (1,2-DP-Hydrazine)	77	16.618	16.618	(1.094)	1012296	5.00000	4.816

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
187 Total Benzofluoranthenes	252	25.198	25.198	(0.972)	1568804	10.0000	10.51
120 2,3,4,6-Tetrachlorophenol	232	15.923	15.923	(1.048)	248136	5.00000	4.668

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1403182302.D
Lab Smp Id: SLC0355-ICV1
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt14.i\20230318.b\ABN.m
Misc Info:

Calibration Date: 19-MAR-2023
Calibration Time: 03:16
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	247621	123811	495242	247621	0.00
27 Naphthalene-d8	955275	477638	1910550	955275	0.00
42 Acenaphthene-d10	510589	255295	1021178	510589	0.00
59 Phenanthrene-d10	920812	460406	1841624	920812	0.00
69 Chrysene-d12	546688	273344	1093376	546688	0.00
134 Di-n-octylphthala	1067789	533895	2135578	1067789	0.00
77 Perylene-d12	445520	222760	891040	445520	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.06	8.56	9.56	9.06	0.00
27 Naphthalene-d8	11.56	11.06	12.06	11.56	0.00
42 Acenaphthene-d10	15.19	14.69	15.69	15.19	0.00
59 Phenanthrene-d10	18.23	17.73	18.73	18.23	0.00
69 Chrysene-d12	23.29	22.79	23.79	23.29	0.00
134 Di-n-octylphthala	24.32	23.82	24.82	24.32	0.00
77 Perylene-d12	25.93	25.43	26.43	25.93	0.00

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

REVIEW SUMMARY FOR FILE - NT1403182302.D

Lab ID: SLC0355-ICV1
nt14.i, ABN.m, 18-MAR-2023 17:38

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

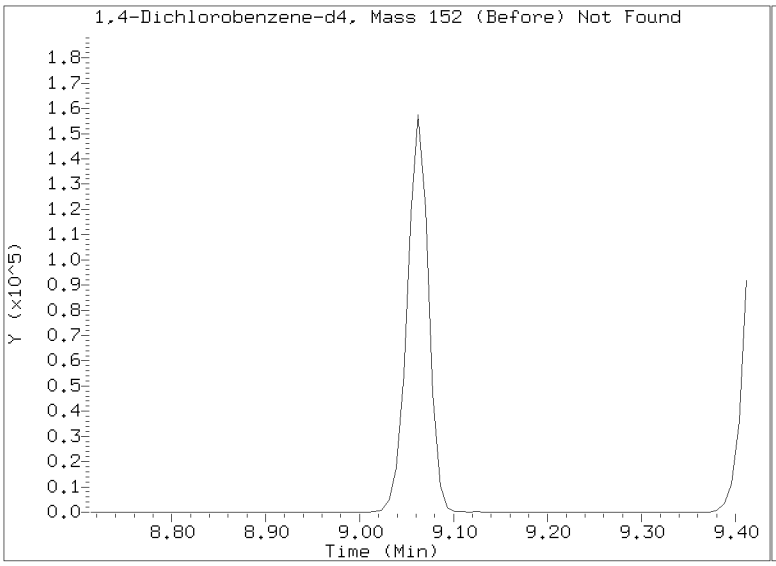
No RRT check. Ccal file.

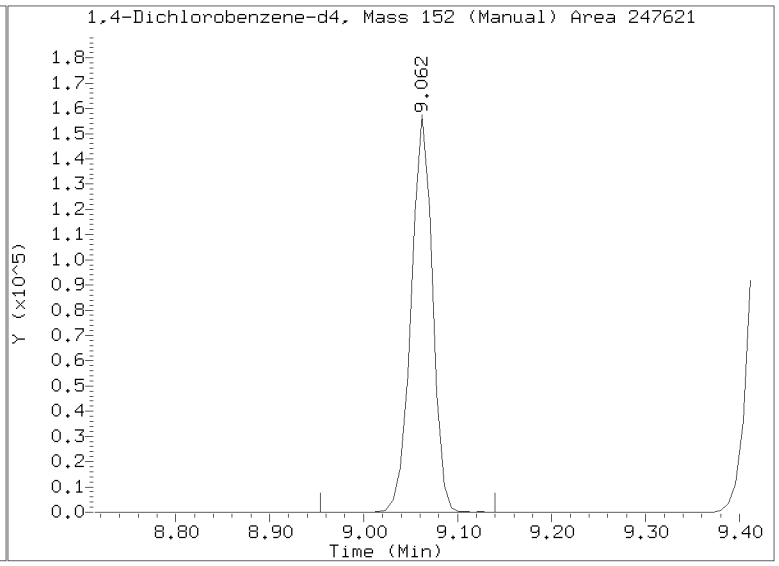
On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

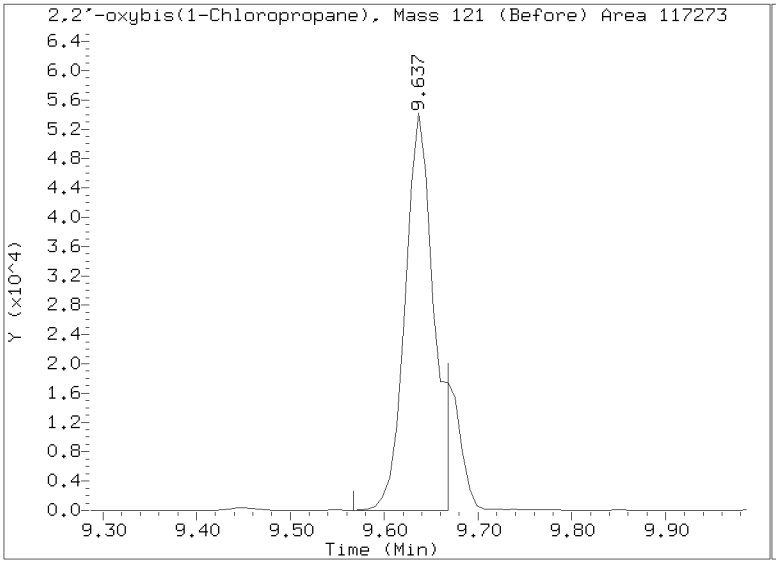
* Only compounds listed in the work order have been verified by the analyst *

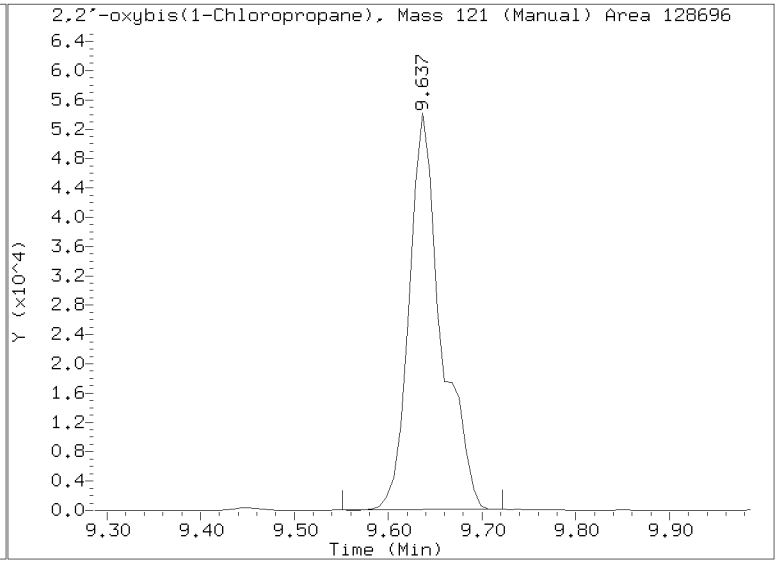
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230318.b/NT1403182302.D
Injection Date: 18-MAR-2023 17:38
Lab ID:SLC0355-ICV1 Client ID:
Report Date: 03/23/2023 11:34









Q-FLAG SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230318.b

Instrument: nt14.i Date: 18-MAR-2023 Method: ABN.m

INITIAL CAL: 28-FEB-2023

Compound	%RSD or R^2
NO Q-FLAGS	

ICV CAL: NT1403182302.D 18-MAR-2023 17:38

Compound	%D
Butylbenzylphthalate	20.45
Benzidine	-28.14

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT14	Calibration:	GC00048
Lab File ID:	NT1403182318.D	Calibration Date:	03/15/2023
Sequence:	SLC0355	Injection Date:	03/19/23
Lab Sample ID:	SLC0355-ICV2	Injection Time:	03:16
Sequence Name:	SSTD005		

		CONC. (ug/mL)		RESPONSE FACTOR			% DRIFT/DIFF		
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT	
Phenol	A	5.0000	4.8	1.9011440	1.8433260		-3.0	+/-20	
4-Methylphenol	A	5.0000	4.5	1.5914380	1.4480130		-9.0	+/-20	
Naphthalene	A	5.0000	4.9	1.0686200	1.0417970		-2.5	+/-20	
2-Methylnaphthalene	A	5.0000	5.0	0.7452524	0.7448588		-0.06	+/-20	
Acenaphthylene	A	5.0000	4.9	2.0854140	2.0410210		-2.1	+/-20	
Dimethylphthalate	A	5.0000	5.0	1.3338450	1.3233410		-0.8	+/-20	
Acenaphthene	A	5.0000	4.8	1.2175690	1.1795530		-3.1	+/-20	
Dibenzofuran	A	5.0000	4.9	1.7382550	1.7031280		-2.0	+/-20	
Fluorene	A	5.0000	4.8	1.6477120	1.5820450		-4.0	+/-20	
Phenanthrene	A	5.0000	4.7	1.1428510	1.0832560		-5.2	+/-20	
Anthracene	A	5.0000	5.0	1.1010610	1.1073420		0.6	+/-20	
Fluoranthene	A	5.0000	6.4	1.6273660	2.0832350		28.0	+/-20	*
Pyrene	A	5.0000	6.0	1.6688810	2.0191160		21.0	+/-20	*
Butylbenzylphthalate	A	5.0000	6.7	0.7311588	0.9724640		33.0	+/-20	*
Benzo(a)anthracene	A	5.0000	5.0	1.4748830	1.4651390		-0.7	+/-20	
Chrysene	A	5.0000	5.1	1.3348290	1.3527440		1.3	+/-20	
bis(2-Ethylhexyl)phthalate	A	5.0000	5.5	0.5265649	0.5812090		10.4	+/-20	
Benzofluoranthenes, Total	A	10.000	9.4	1.3424190	1.2548430		-6.4	+/-20	
Benzo(a)pyrene	A	5.0000	5.0	1.2087150	1.2180480		0.8	+/-20	
Indeno(1,2,3-cd)pyrene	A	5.0000	4.9	1.3155660	1.2889470		-2.0	+/-20	
Dibenzo(a,h)anthracene	A	5.0000	5.1	1.1087420	1.1316290		2.1	+/-20	
Benzo(g,h,i)perylene	A	5.0000	4.4	1.0842080	0.9549132		-11.9	+/-20	
2-Fluorophenol	A	7.5000	7.13	1.3587350	1.2915190		-4.9	+/-20	
Phenol-d5	A	7.5000	7.41	1.7888720	1.7674120		-1.2	+/-20	
2-Chlorophenol-d4	A	7.5000	7.56	1.4103050	1.4213130		0.8	+/-20	
1,2-Dichlorobenzene-d4	A	5.0000	5.06	0.9421955	0.9530914		1.2	+/-20	
Nitrobenzene-d5	A	5.0000	4.99	0.4233007	0.4227197		-0.1	+/-20	
2-Fluorobiphenyl	A	5.0000	4.96	1.4485960	1.4364260		-0.8	+/-20	
2,4,6-Tribromophenol	A	7.5000	7.55	0.1518639	0.1583318		0.7	+/-20	
p-Terphenyl-d14	A	5.0000	6.05	1.1297810	1.3670700		21.0	+/-20	*

* Values outside of QC limits

INITIAL CALIBRATION CHECK
EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT14	Calibration:	GC00048
Lab File ID:	NT1403182318.D	Calibration Date:	03/15/2023
Sequence:	SLC0355	Injection Date:	03/19/23
Lab Sample ID:	SLC0355-ICV2	Injection Time:	03:16
Sequence Name:	SSTD005		

		CONC. (ug/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
1,4-Dichlorobenzene-d4	A	4.0000	4.0	48445.4300	1.0000		0.0	
Naphthalene-d8	A	4.0000	4.0	183571.5000	1.0000		0.0	
Acenaphthene-d10	A	4.0000	4.0	95634.1400	1.0000		0.0	
Phenanthrene-d10	A	4.0000	4.0	176078.0000	1.0000		0.0	
Chrysene-d12	A	4.0000	4.0	127293.4000	1.0000		0.0	
Di-n-Octylphthalate-d4	A	4.0000	4.0	236003.4000	1.0000		0.0	
Perylene-d12	A	4.0000	4.0	121097.1000	1.0000		0.0	

* Values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20230318.b\NT1403182318.D

Date : 19-MAR-2023 03:16

Client ID:

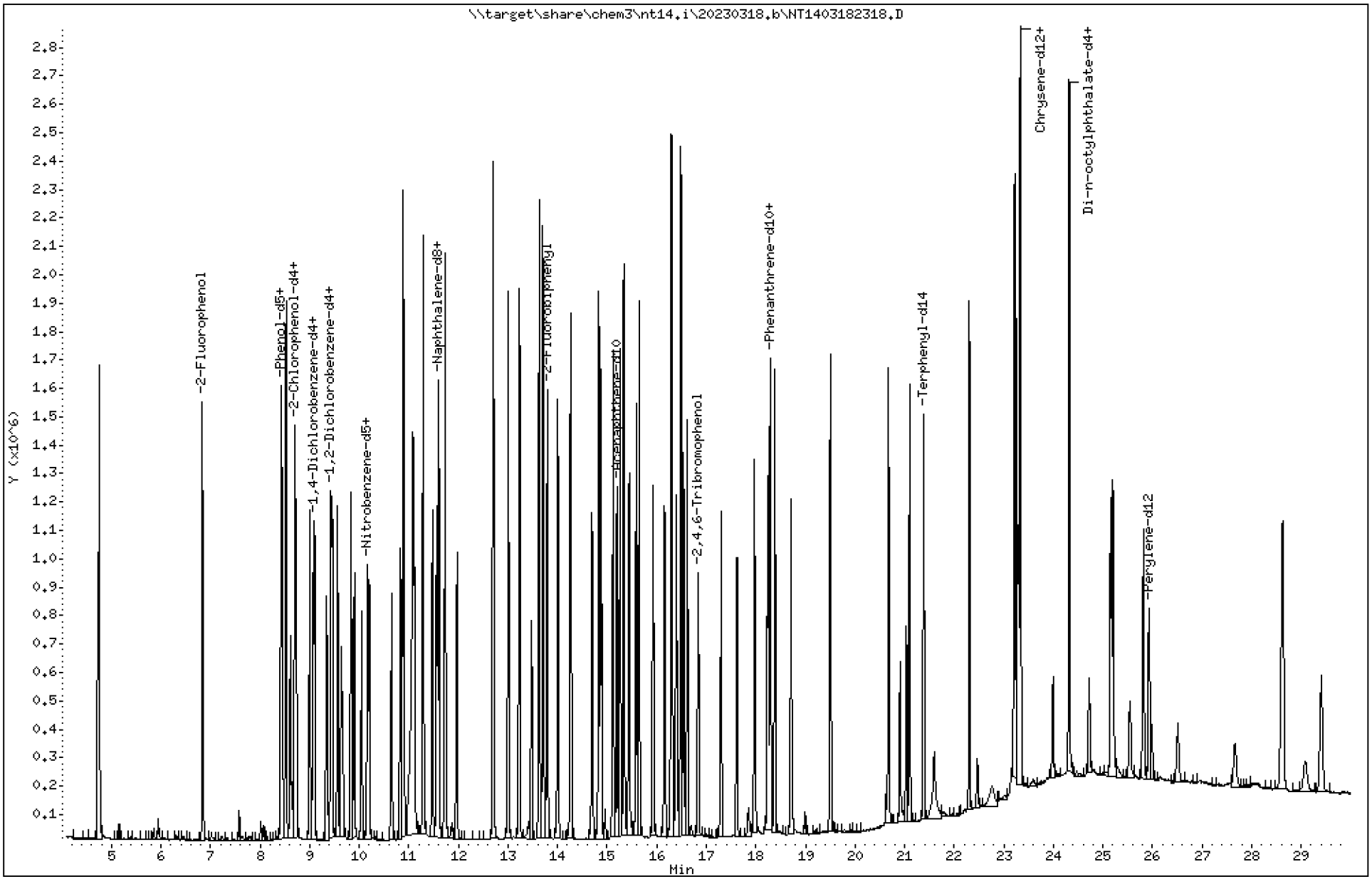
Sample Info: SLC0355-ICV2

Column phase: ZB-5msi

Instrument: nt14.i

Operator: JGR

Column diameter: 0.25



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230318.b\NT1403182318.D
Lab Smp Id: SLC0355-ICV2
Inj Date : 19-MAR-2023 03:16 MS Autotune Date: 11-MAR-2023 16:01
Operator : JGR Inst ID: nt14.i
Smp Info : SLC0355-ICV2
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230318.b\ABN.m
Meth Date : 23-Mar-2023 08:01 van Quant Type: ISTD
Cal Date : 15-MAR-2023 15:50 Cal File: NT1403152308.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

							AMOUNTS	
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.837	6.837	(1.000)	575357	7.50000	7.129
$	2 Phenol-d5	99	8.420	8.420	(1.000)	787362	7.50000	7.410
	3 Phenol	94	8.444	8.444	(1.000)	547454	5.00000	4.848
$	5 2-Chlorophenol-d4	132	8.698	8.698	(1.000)	633179	7.50000	7.559
	4 Bis(2-Chloroethyl)ether	93	8.613	8.613	(1.000)	392444	5.00000	4.826
	6 2-Chlorophenol	128	8.729	8.729	(1.000)	445529	5.00000	5.013
	7 1,3-Dichlorobenzene	146	9.000	9.000	(1.000)	444445	5.00000	4.940
*	8 1,4-Dichlorobenzene-d4	152	9.062	9.062	(1.000)	237594	4.00000	(M)
	9 1,4-Dichlorobenzene	146	9.093	9.093	(1.000)	427289	5.00000	4.931
$	10 1,2-Dichlorobenzene-d4	152	9.427	9.427	(1.000)	283061	5.00000	5.058
	12 1,2-Dichlorobenzene	146	9.450	9.450	(1.000)	427235	5.00000	4.988
	11 Benzyl alcohol	108	9.342	9.342	(1.000)	254192	5.00000	4.835
	14 2,2'-oxybis(1-Chloropropane)	121	9.637	9.637	(1.063)	125597	5.00000	5.403(M)
	13 2-Methylphenol	108	9.559	9.559	(1.000)	400784	5.00000	5.020
	17 Hexachloroethane	117	10.048	10.048	(1.000)	186247	5.00000	5.025
	16 N-Nitroso-di-n-propylamine	70	9.901	9.901	(1.000)	313745	5.00000	4.991
	15 4-Methylphenol	108	9.831	9.831	(1.000)	430049	5.00000	4.549
$	18 Nitrobenzene-d5	82	10.164	10.164	(0.879)	498889	5.00000	4.993
	19 Nitrobenzene	77	10.195	10.195	(0.882)	472416	5.00000	4.857
	20 Isophorone	82	10.653	10.653	(0.922)	691527	5.00000	5.207
	21 2-Nitrophenol	139	10.832	10.832	(0.937)	282859	5.00000	5.047
	22 2,4-Dimethylphenol	107	10.886	10.886	(0.942)	756918	10.0000	9.099
	23 Bis(2-Chloroethoxy)methane	93	11.080	11.080	(0.958)	422030	5.00000	4.721
	24 Benzoic acid	105	11.118	11.118	(0.962)	1196243	20.0000	17.74
	25 2,4-Dichlorophenol	162	11.289	11.289	(0.977)	729232	10.0000	11.02
	26 1,2,4-Trichlorobenzene	180	11.475	11.475	(0.993)	416995	5.00000	5.127
*	27 Naphthalene-d8	136	11.560	11.560	(1.000)	944151	4.00000	
	28 Naphthalene	128	11.606	11.606	(1.004)	1229517	5.00000	4.874
	29 4-Chloroaniline	127	11.730	11.730	(1.015)	1101750	10.0000	10.43
	30 Hexachlorobutadiene	225	11.969	11.969	(1.035)	188370	5.00000	5.130
	31 4-Chloro-3-methylphenol	107	12.697	12.697	(1.098)	798938	10.0000	9.994
	32 2-Methylnaphthalene	142	13.006	13.006	(1.125)	879074	5.00000	4.997
	33 Hexachlorocyclopentadiene	237	13.478	13.478	(0.887)	209978	10.0000	5.072

		QUANT SIG					AMOUNTS CAL-AMT	AMOUNTS ON-COL
Compounds		MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
34	2,4,6-Trichlorophenol	196	13.633	13.633	(0.897)	511091	10.0000	10.11
35	2,4,5-Trichlorophenol	196	13.703	13.703	(0.902)	550549	10.0000	10.46
$ 36	2-Fluorobiphenyl	172	13.796	13.796	(0.908)	894355	5.00000	4.958
37	2-Chloronaphthalene	162	14.004	14.004	(0.922)	774464	5.00000	5.009
38	2-Nitroaniline	65	14.260	14.260	(0.938)	585882	10.0000	9.814
39	Dimethylphthalate	163	14.693	14.693	(0.967)	823945	5.00000	4.961
40	Acenaphthylene	152	14.879	14.879	(0.979)	1270791	5.00000	4.894
41	2,6-Dinitrotoluene	165	14.833	14.833	(0.976)	396658	10.0000	10.34
* 42	Acenaphthene-d10	164	15.196	15.196	(1.000)	498100	4.00000	
43	3-Nitroaniline	138	15.119	15.119	(0.995)	495660	10.0000	9.364
44	Acenaphthene	153	15.258	15.258	(1.004)	734419	5.00000	4.844
45	2,4-Dinitrophenol	184	15.335	15.335	(1.009)	451412	20.0000	14.82
46	Dibenzofuran	168	15.591	15.591	(1.026)	1060410	5.00000	4.899
47	4-Nitrophenol	109	15.444	15.444	(1.016)	255472	10.0000	9.118
48	2,4-Dinitrotoluene	165	15.645	15.645	(1.030)	547629	10.0000	10.07
50	Diethylphthalate	149	16.155	16.155	(1.063)	928742	5.00000	5.408
49	Fluorene	166	16.302	16.302	(1.073)	985021	5.00000	4.801
51	4-Chlorophenyl-phenylether	204	16.294	16.294	(1.072)	439607	5.00000	4.991
52	4-Nitroaniline	138	16.394	16.394	(1.079)	417705	10.0000	9.073
53	4,6-Dinitro-2-methylphenol	198	16.487	16.487	(0.904)	578866	20.0000	19.29
54	N-Nitrosodiphenylamine	169	16.541	16.541	(0.907)	593305	5.00000	5.167
$ 55	2,4,6-Tribromophenol	330	16.841	16.841	(1.108)	147872	7.50000	7.551
56	4-Bromophenyl-phenylether	248	17.296	17.296	(0.948)	210314	5.00000	5.433
57	Hexachlorobenzene	284	17.621	17.621	(0.966)	216889	5.00000	5.310
58	Pentachlorophenol	266	17.969	17.969	(0.985)	244469	10.0000	8.484
* 59	Phenanthrene-d10	188	18.240	18.240	(1.000)	845417	4.00000	
60	Phenanthrene	178	18.286	18.286	(1.003)	1144754	5.00000	4.739
61	Anthracene	178	18.379	18.379	(1.008)	1170207	5.00000	5.029
62	Carbazole	167	18.704	18.704	(1.025)	943269	5.00000	4.556
63	Di-n-butylphthalate	149	19.501	19.501	(1.069)	1372012	5.00000	5.228
64	Fluoranthene	202	20.677	20.677	(0.888)	1069835	5.00000	6.401
65	Pyrene	202	21.103	21.103	(0.906)	1036907	5.00000	6.049
$ 66	Terphenyl-d14	244	21.381	21.381	(0.918)	702052	5.00000	6.050
67	Butylbenzylphthalate	149	22.303	22.303	(0.957)	499404	5.00000	6.650
68	Benzo(a)anthracene	228	23.263	23.263	(0.999)	752415	5.00000	4.967
* 69	Chrysene-d12	240	23.294	23.294	(1.000)	410836	4.00000	
70	3,3'-Dichlorobenzidine	252	23.216	23.216	(0.997)	695144	15.0000	15.26
71	Chrysene	228	23.340	23.340	(1.002)	694695	5.00000	5.067
72	bis(2-Ethylhexyl)phthalate	149	23.325	23.325	(0.959)	664598	5.00000	5.519
* 134	Di-n-octylphthalate-d4	153	24.316	24.316	(1.000)	914780	4.00000	
73	Di-n-octylphthalate	149	24.323	24.323	(1.000)	1127893	5.00000	4.796
74	Benzo(b)fluoranthene	252	25.160	25.160	(0.970)	693312	5.00000	4.444
75	Benzo(k)fluoranthene	252	25.198	25.198	(0.972)	764778	5.00000	4.945
76	Benzo(a)pyrene	252	25.818	25.818	(0.996)	672236	5.00000	5.039
* 77	Perylene-d12	264	25.934	25.934	(1.000)	441517	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.611	28.611	(1.103)	711365	5.00000	4.899
79	Dibenzo(a,h)anthracene	278	28.626	28.626	(1.104)	624542	5.00000	5.103
80	Benzo(g,h,i)perylene	276	29.411	29.411	(1.134)	527013	5.00000	4.404
90	N-Nitrosodimethylamine	74	4.728	4.728	(1.000)	434711	10.0000	8.504
91	Aniline	93	8.521	8.521	(1.000)	1093738	10.0000	9.630
93	Benzidine	184	20.902	20.902	(0.897)	388520	10.0000	5.776
103	Pyridine	79	4.751	4.751	(1.000)	626881	5.00000	3.960
105	1-methylnaphthalene	142	13.231	13.231	(1.145)	798402	5.00000	5.010
111	Azobenzene (1,2-DP-Hydrazine)	77	16.618	16.618	(1.094)	975920	5.00000	4.759

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
187 Total Benzofluoranthenes	252	25.198	25.198	(0.972)	1385086	10.0000	9.362
120 2,3,4,6-Tetrachlorophenol	232	15.923	15.923	(1.048)	259766	5.00000	4.998

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1403182318.D
Lab Smp Id: SLC0355-ICV2
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt14.i\20230318.b\ABN.m
Misc Info:

Calibration Date: 18-MAR-2023
Calibration Time: 17:38
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	237594	118797	475188	237594	0.00
27 Naphthalene-d8	944151	472076	1888302	944151	0.00
42 Acenaphthene-d10	498100	249050	996200	498100	0.00
59 Phenanthrene-d10	845417	422709	1690834	845417	0.00
69 Chrysene-d12	410836	205418	821672	410836	0.00
134 Di-n-octylphthala	914780	457390	1829560	914780	0.00
77 Perylene-d12	441517	220759	883034	441517	0.00

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.06	8.56	9.56	9.06	0.00
27 Naphthalene-d8	11.56	11.06	12.06	11.56	0.00
42 Acenaphthene-d10	15.20	14.70	15.70	15.20	0.00
59 Phenanthrene-d10	18.24	17.74	18.74	18.24	0.00
69 Chrysene-d12	23.29	22.79	23.79	23.29	0.00
134 Di-n-octylphthala	24.32	23.82	24.82	24.32	0.00
77 Perylene-d12	25.93	25.43	26.43	25.93	0.00

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

REVIEW SUMMARY FOR FILE - NT1403182318.D

Lab ID: SLC0355-ICV2
nt14.i, ABN.m, 19-MAR-2023 03:16

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

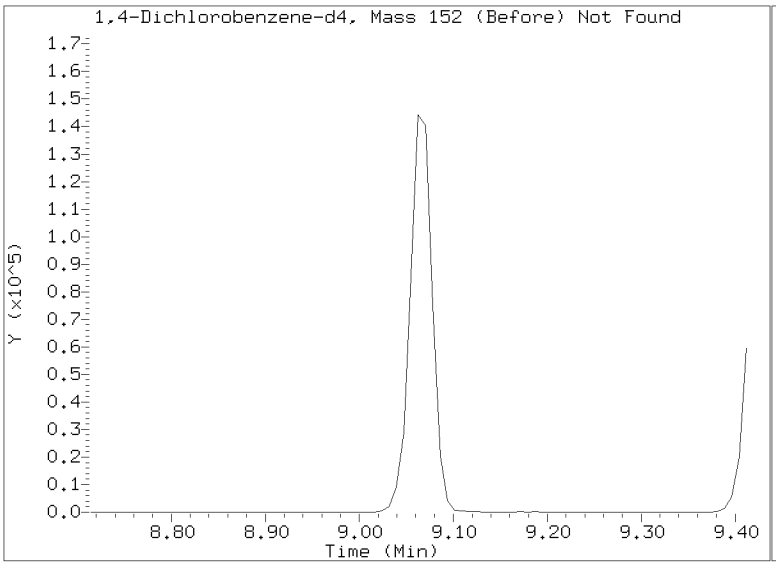
No RRT check. Ccal file.

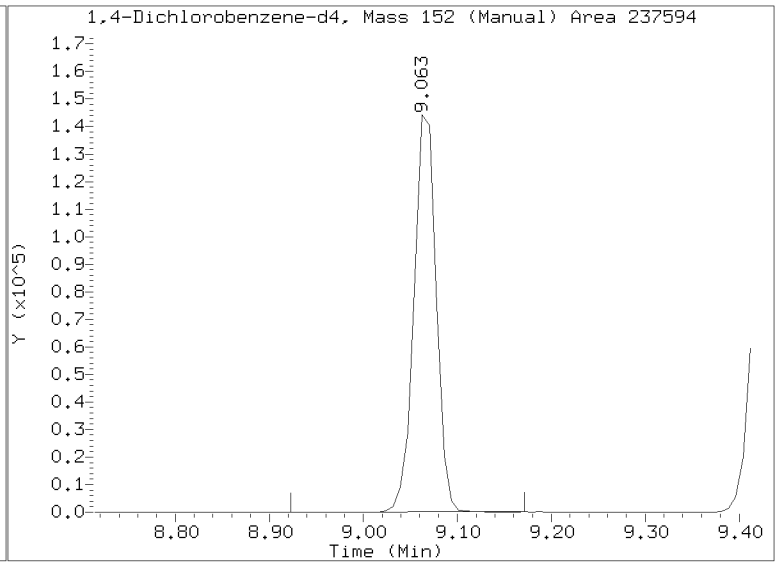
On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

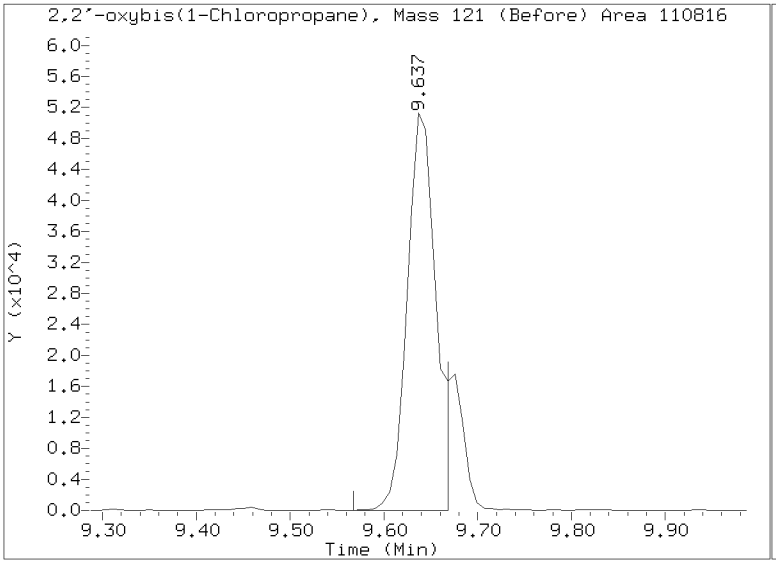
* Only compounds listed in the work order have been verified by the analyst *

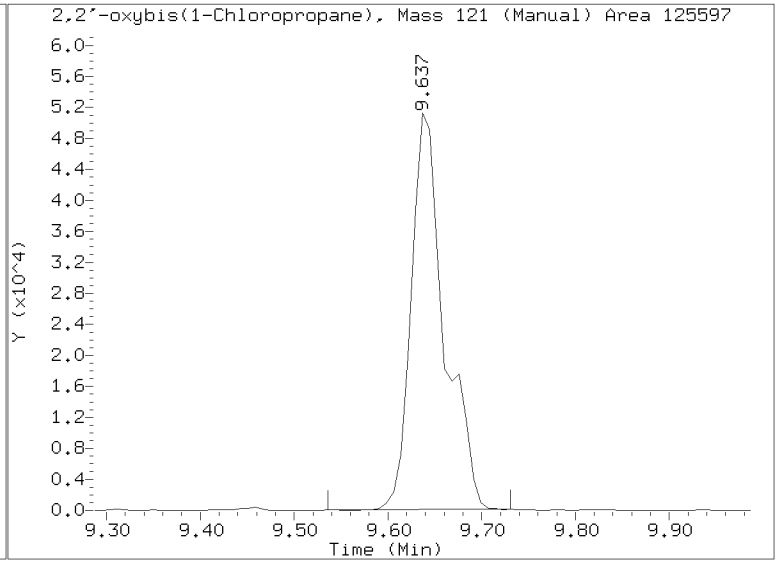
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230318.b/NT1403182318.D
Injection Date: 19-MAR-2023 03:16
Lab ID:SLC0355-ICV2 Client ID:
Report Date: 03/23/2023 08:01









Q-FLAG SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230318.b

Instrument: nt14.i Date: 19-MAR-2023 Method: ABN.m

INITIAL CAL: 28-FEB-2023

Compound	%RSD or R^2
NO Q-FLAGS	

ICV CAL: NT1403182318.D 19-MAR-2023 03:16

Compound	%D
Hexachlorocyclopentadiene	-49.28
2,4-Dinitrophenol	-25.9
Fluoranthene	28.01
Pyrene	20.99
Butylbenzylphthalate	33.00
Benzidine	-42.24
Pyridine	-20.80
Terphenyl-d14	21.00

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT14	Calibration:	GC00048
Lab File ID:	NT1403152311.D	Calibration Date:	03/15/2023
Sequence:	SLC0160	Injection Date:	03/15/23
Lab Sample ID:	SLC0160-SCV1	Injection Time:	17:39
Sequence Name:	SCV 5.0		

		CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT	
Phenol	A	5.0000	4.4	1.9011440	1.6607710		-12.6	+/-20	
bis(2-chloroethyl) ether	A	5.0000	5.3	1.3689940	1.4396980		5.2	+/-20	
2-Chlorophenol	A	5.0000	4.4	1.4963410	1.3103810		-12.4	+/-20	
1,3-Dichlorobenzene	A	5.0000	4.8	1.5147140	1.4520630		-4.1	+/-20	
1,4-Dichlorobenzene	A	5.0000	4.9	1.4589130	1.4266320		-2.2	+/-20	
1,2-Dichlorobenzene	A	5.0000	4.8	1.4420330	1.3804340		-4.3	+/-20	
Benzyl Alcohol	A	5.0000	5.1	0.8850644	0.8940373		1.0	+/-20	
2,2'-Oxybis(1-chloropropane)	A	5.0000	5.3	0.4351304	0.4628617		6.4	+/-20	
2-Methylphenol	A	5.0000	4.1	1.3441210	1.1067930		-17.7	+/-20	
Hexachloroethane	A	5.0000	5.0	0.6239658	0.6183509		-0.9	+/-20	
N-Nitroso-di-n-Propylamine	A	5.0000	5.0	1.0582520	1.0546880		-0.3	+/-20	
4-Methylphenol	A	5.0000	4.3	1.5914380	1.3692150		-14.0	+/-20	
Nitrobenzene	A	5.0000	5.0	0.4120485	0.4139177		0.5	+/-20	
Isophorone	A	5.0000	6.8	0.5626055	0.7618281		35.4	+/-20	*
2-Nitrophenol	A	5.0000	4.5	0.2157234	0.2146804		-9.4	+/-20	
2,4-Dimethylphenol	A	5.0000	3.9	0.3524265	0.2759150		-21.7	+/-20	*
Bis(2-Chloroethoxy)methane	A	5.0000	5.9	0.3787631	0.4438520		17.2	+/-20	
2,4-Dichlorophenol	A	5.0000	4.8	0.2802759	0.2679043		-4.4	+/-20	
1,2,4-Trichlorobenzene	A	5.0000	5.1	0.3445492	0.3481241		1.0	+/-20	
Naphthalene	A	5.0000	4.8	1.0686200	1.0320390		-3.4	+/-20	
Benzoic acid	A	10.000	8.2	0.2689191	0.2450443		-17.5	+/-20	
4-Chloroaniline	A	5.0000	4.0	0.4473571	0.3608194		-19.3	+/-20	
Hexachlorobutadiene	A	5.0000	4.9	0.1555637	0.1526999		-1.8	+/-20	
4-Chloro-3-Methylphenol	A	5.0000	4.9	0.3386850	0.3286762		-3.0	+/-20	
2-Methylnaphthalene	A	5.0000	4.9	0.7452524	0.7235437		-2.9	+/-20	
Hexachlorocyclopentadiene	A	5.0000	5.2	0.3324825	0.3477613		4.6	+/-20	
2,4,6-Trichlorophenol	A	5.0000	4.7	0.4057798	0.3829138		-5.6	+/-20	
2,4,5-Trichlorophenol	A	5.0000	4.7	0.4228403	0.3941632		-6.8	+/-20	
2-Chloronaphthalene	A	5.0000	5.0	1.2415760	1.2359120		-0.5	+/-20	
2-Nitroaniline	A	5.0000	5.1	0.4794195	0.4889937		2.0	+/-20	
Acenaphthylene	A	5.0000	4.9	2.0854140	2.0351050		-2.4	+/-20	
Dimethylphthalate	A	5.0000	5.0	1.3338450	1.3419960		0.6	+/-20	
2,6-Dinitrotoluene	A	5.0000	5.2	0.3081292	0.3216540		4.4	+/-20	

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT14	Calibration:	GC00048
Lab File ID:	NT1403152311.D	Calibration Date:	03/15/2023
Sequence:	SLC0160	Injection Date:	03/15/23
Lab Sample ID:	SLC0160-SCV1	Injection Time:	17:39
Sequence Name:	SCV 5.0		

		CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT	
Acenaphthene	A	5.0000	5.0	1.2175690	1.2090570		-0.7	+/-20	
3-Nitroaniline	A	5.0000	5.2	0.4250863	0.4429031		4.2	+/-20	
2,4-Dinitrophenol	A	5.0000	3.1	0.2096741	0.1475404		-38.5	+/-20	*
Dibenzofuran	A	5.0000	5.0	1.7382550	1.7228270		-0.9	+/-20	
4-Nitrophenol	A	5.0000	4.8	0.2250052	0.2172748		-3.4	+/-20	
2,4-Dinitrotoluene	A	5.0000	5.1	0.4367856	0.4471572		2.4	+/-20	
Fluorene	A	5.0000	4.8	1.6477120	1.5961640		-3.1	+/-20	
4-Chlorophenylphenyl ether	A	5.0000	5.0	0.7072865	0.7051737		-0.3	+/-20	
Diethyl phthalate	A	5.0000	5.2	1.3790520	1.4351260		4.1	+/-20	
4-Nitroaniline	A	5.0000	4.8	0.3697249	0.3562130		-3.7	+/-20	
4,6-Dinitro-2-methylphenol	A	5.0000	4.4	0.1216791	0.1235466		-11.2	+/-20	
N-Nitrosodiphenylamine	A	5.0000	5.0	0.5432885	0.5383020		-0.9	+/-20	
4-Bromophenyl phenyl ether	A	5.0000	5.2	0.1831666	0.1914307		4.5	+/-20	
Hexachlorobenzene	A	5.0000	4.8	0.1932690	0.1847668		-4.4	+/-20	
Pentachlorophenol	A	5.0000	4.5	0.1275457	0.1206709		-10.5	+/-20	
Phenanthrene	A	5.0000	4.7	1.1428510	1.0820580		-5.3	+/-20	
Anthracene	A	5.0000	4.3	1.1010610	0.9427480		-14.4	+/-20	
Carbazole	A	5.0000	4.6	0.9796404	0.8986244		-8.3	+/-20	
Di-n-Butylphthalate	A	5.0000	5.5	1.2417490	1.3675950		10.1	+/-20	
Fluoranthene	A	5.0000	5.0	1.6273660	1.6351750		0.5	+/-20	
Pyrene	A	5.0000	5.0	1.6688810	1.6548710		-0.8	+/-20	
Butylbenzylphthalate	A	5.0000	5.7	0.7311588	0.8390010		14.7	+/-20	
Benzo(a)anthracene	A	5.0000	4.8	1.4748830	1.4237160		-3.5	+/-20	
3,3'-Dichlorobenzidine	A	10.000	10.6	0.4321372	0.4648865		6.5	+/-20	
Chrysene	A	5.0000	4.7	1.3348290	1.2608580		-5.5	+/-20	
bis(2-Ethylhexyl)phthalate	A	5.0000	5.4	0.5265649	0.5716160		8.6	+/-20	
Di-n-Octylphthalate	A	5.0000	5.1	1.0282720	1.0561260		2.7	+/-20	
Benzofluoranthenes, Total	A	10.000	9.8	1.3424190	1.3096450		-2.4	+/-20	
Benzo(a)pyrene	A	5.0000	5.0	1.2087150	1.2033910		-0.4	+/-20	
Indeno(1,2,3-cd)pyrene	A	5.0000	4.9	1.3155660	1.3005930		-1.1	+/-20	
Dibenzo(a,h)anthracene	A	5.0000	4.9	1.1087420	1.0788060		-2.7	+/-20	
Benzo(g,h,i)perylene	A	5.0000	4.9	1.0842080	1.0710130		-1.2	+/-20	
1-Methylnaphthalene	A	5.0000	5.1	0.6751941	0.6890913		2.1	+/-20	

* Values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20230315.b\NT1403152311.D

Date : 15-MAR-2023 17:39

Client ID:

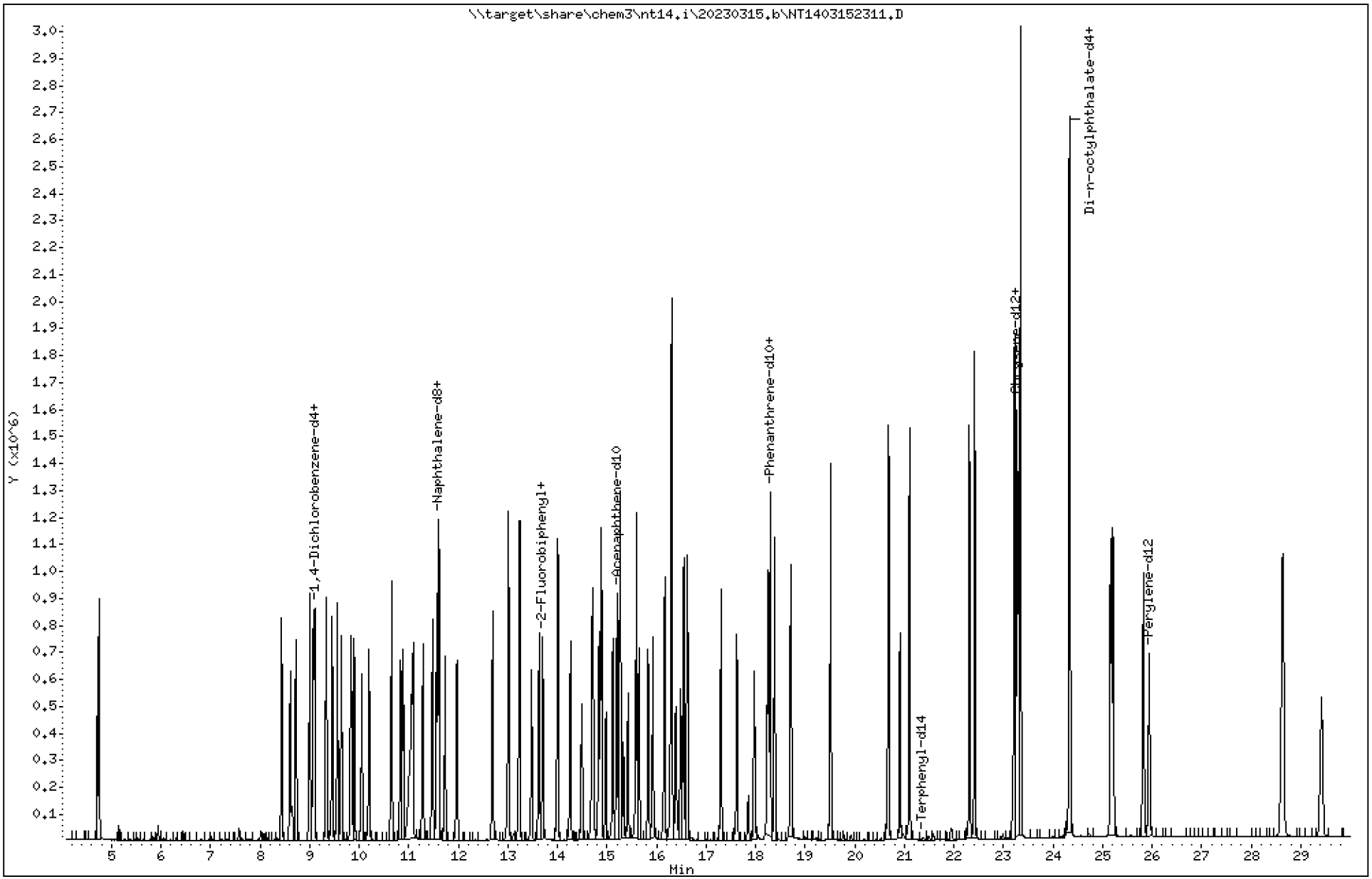
Instrument: nt14.i

Sample Info: SLC0160-SCV1

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

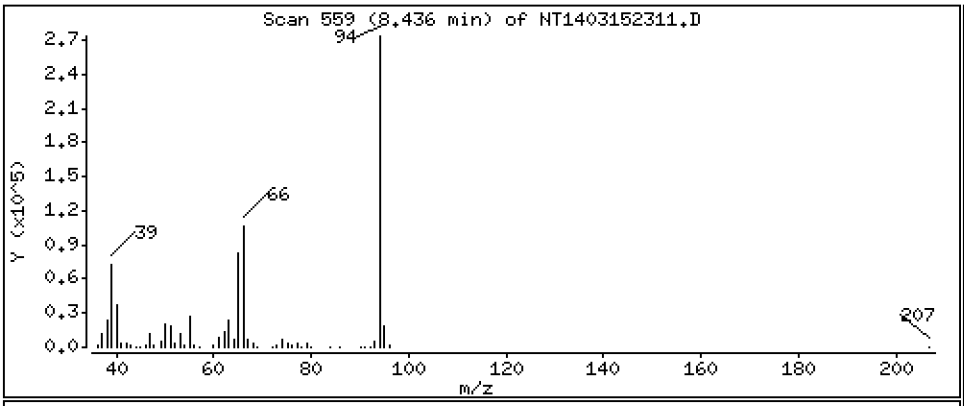
Operator: JGR

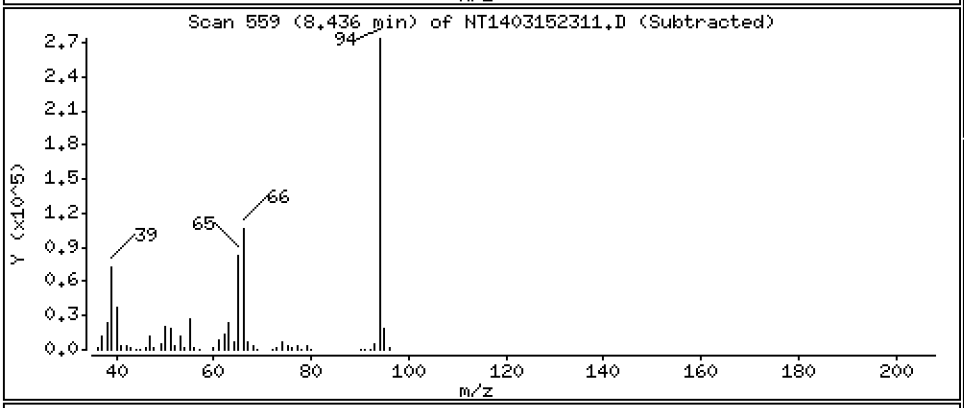
Column phase: ZB-5msi

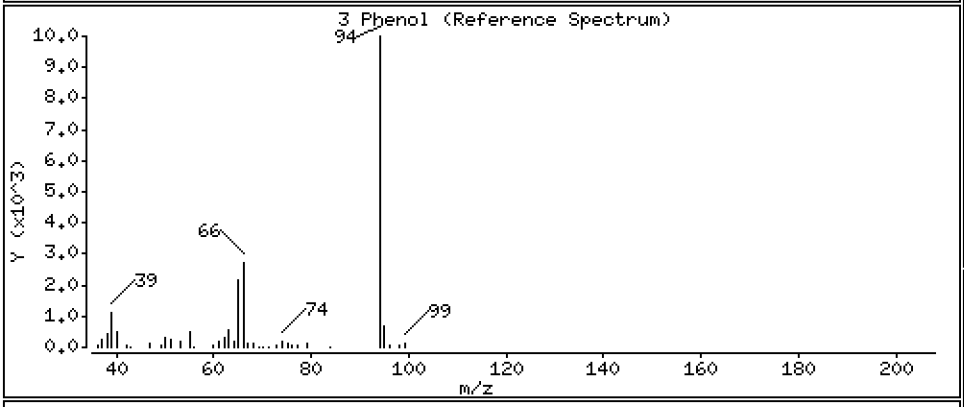
Column diameter: 0.25

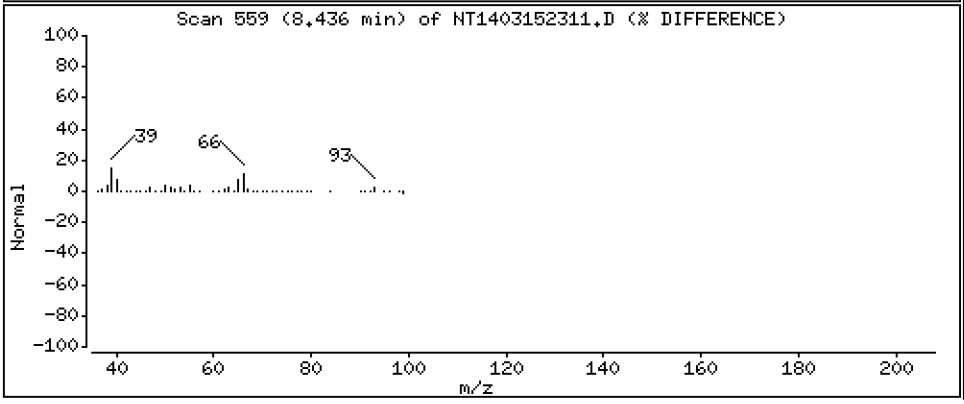
3 Phenol

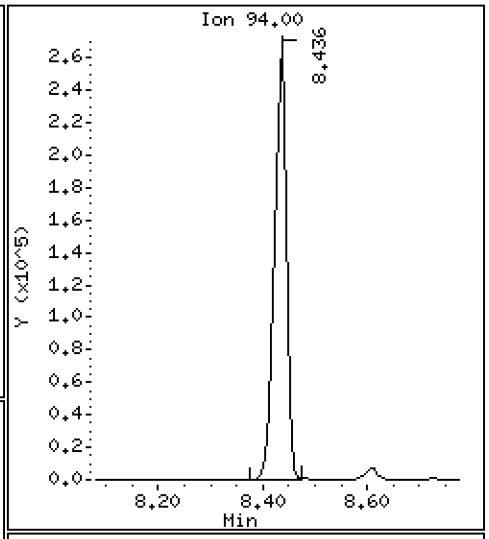
Concentration: 4.368 ug/mL

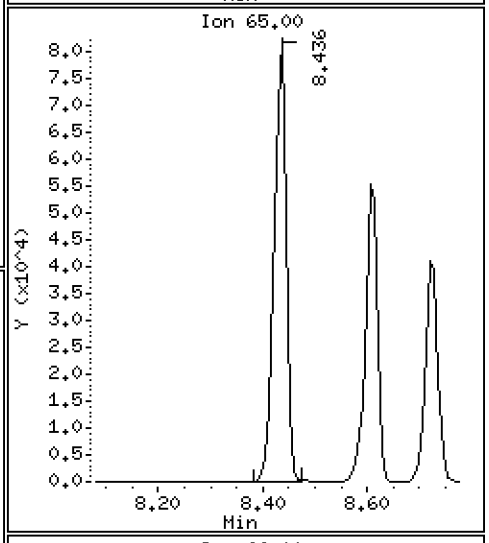


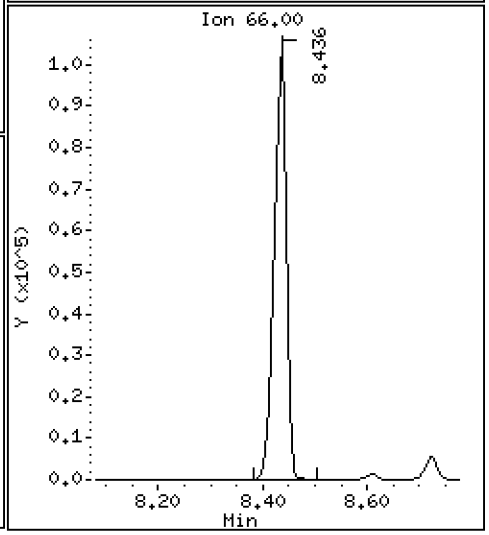












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

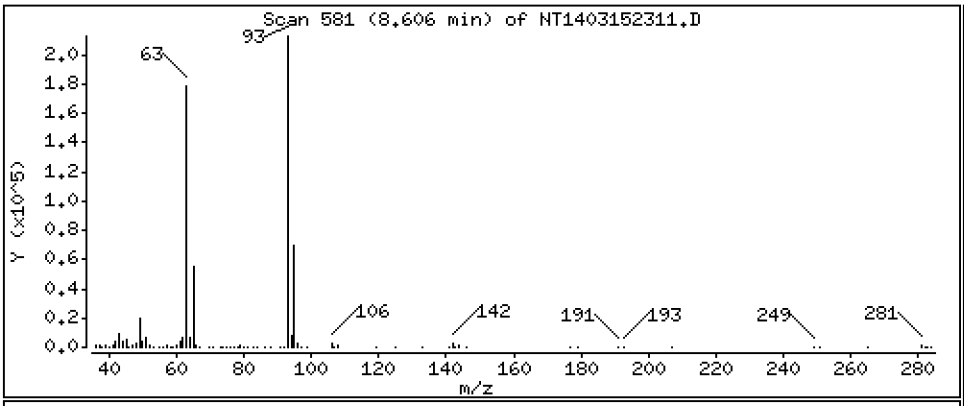
Operator: JGR

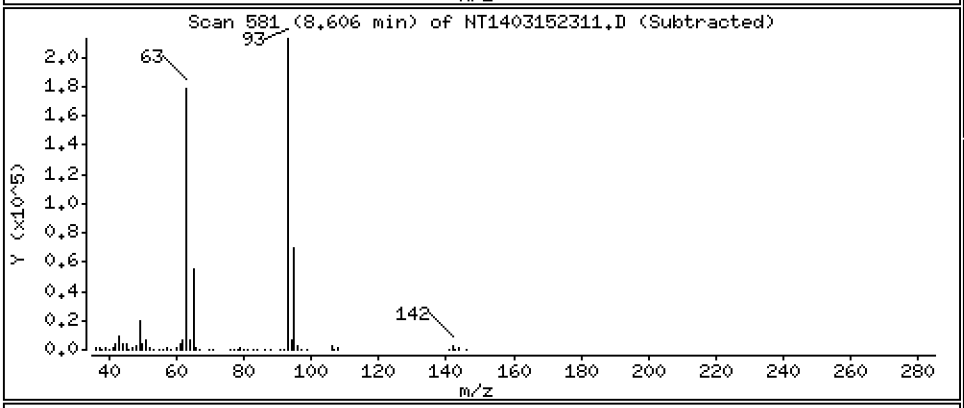
Column phase: ZB-5msi

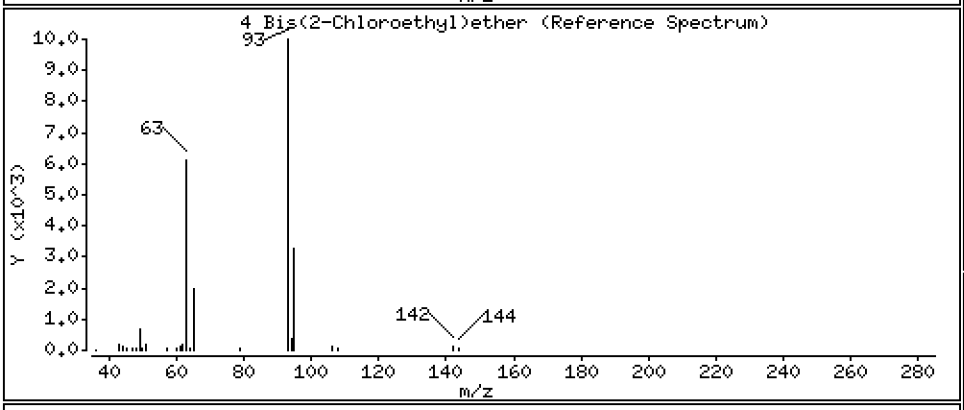
Column diameter: 0.25

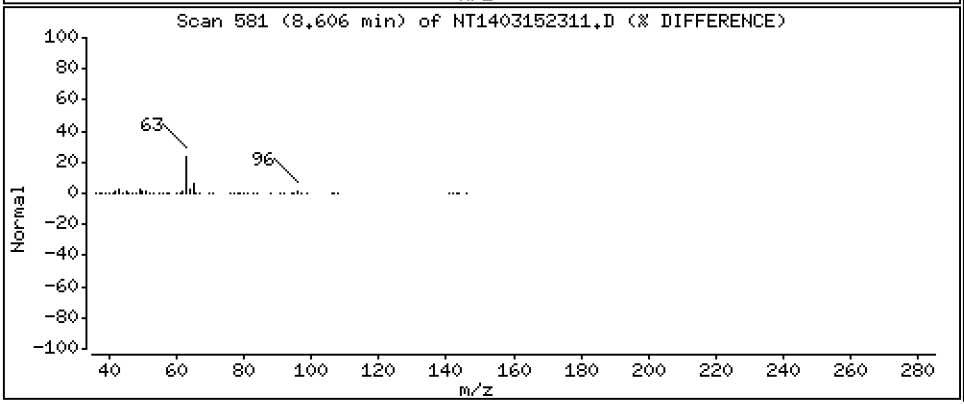
4 Bis(2-Chloroethyl)ether

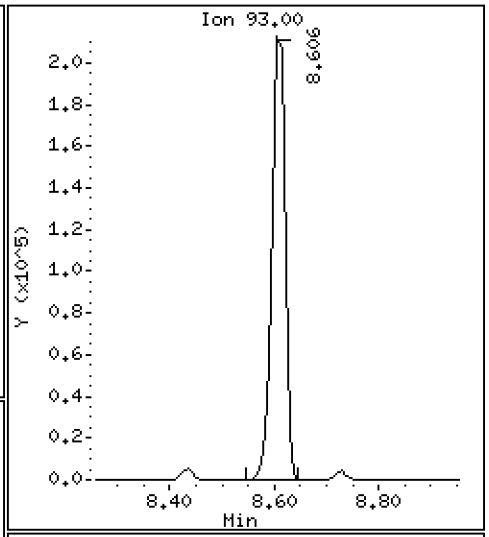
Concentration: 5.258 ug/mL

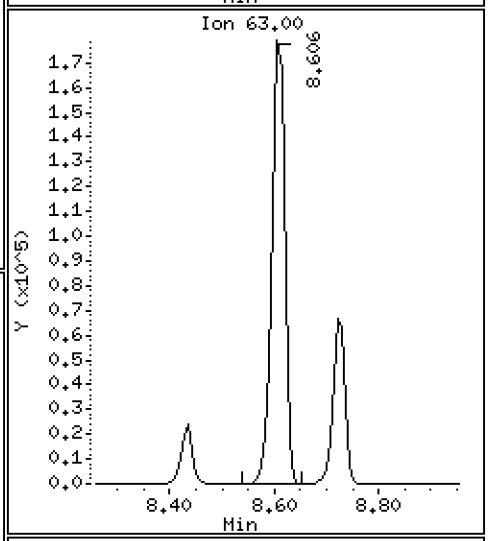


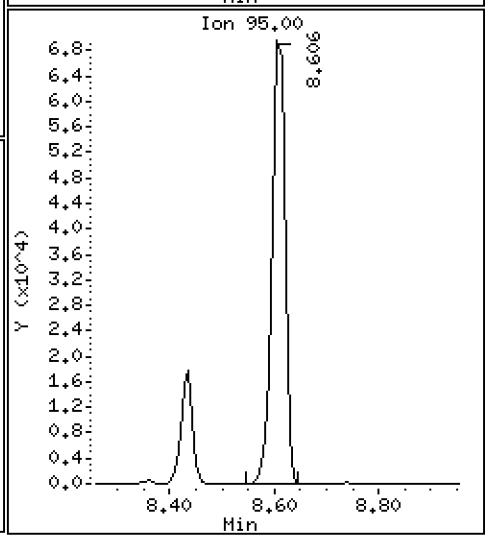












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

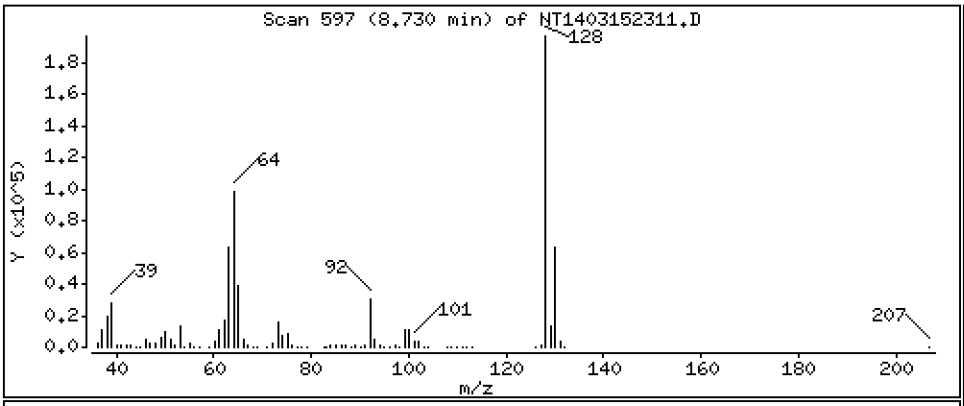
Operator: JGR

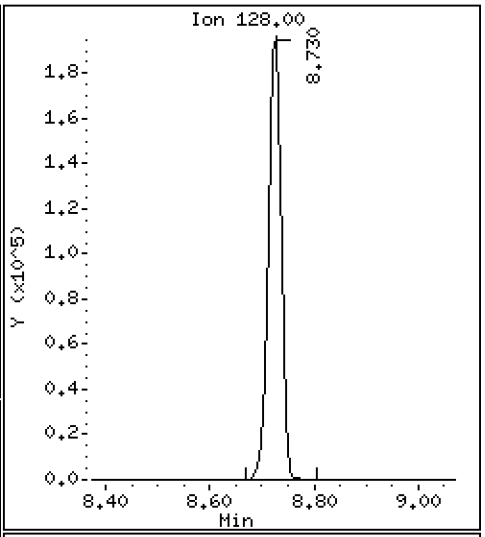
Column phase: ZB-5msi

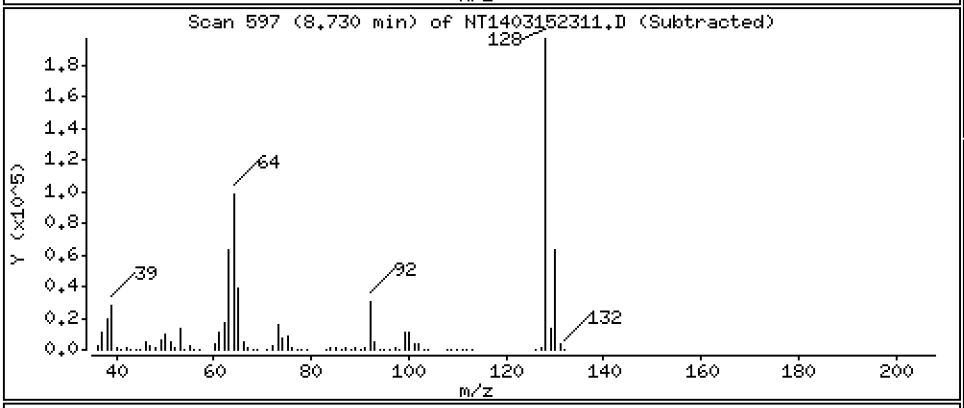
Column diameter: 0.25

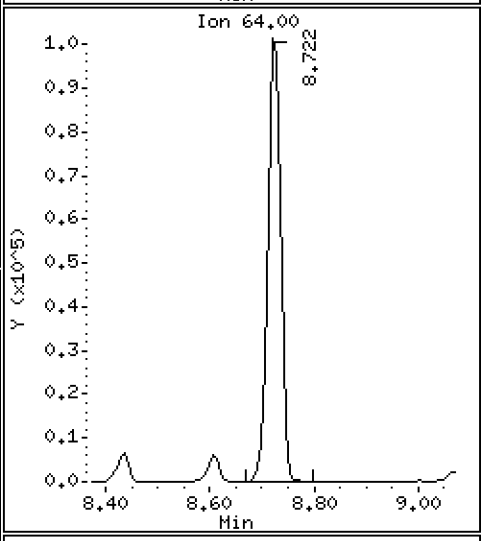
6 2-Chlorophenol

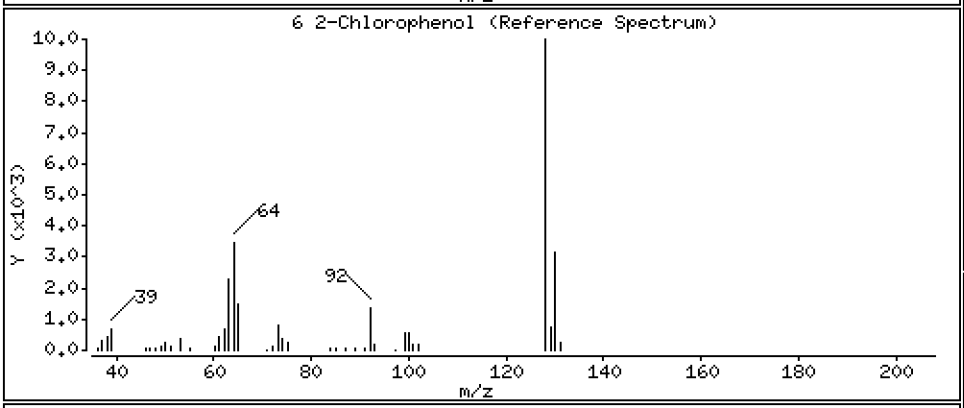
Concentration: 4.379 ug/mL

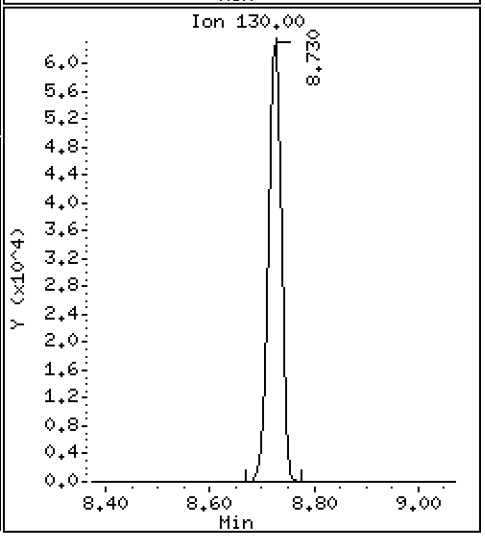


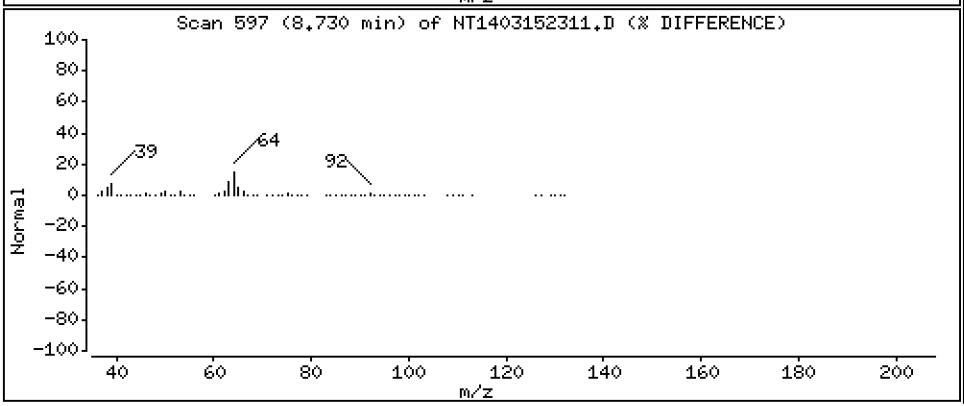












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

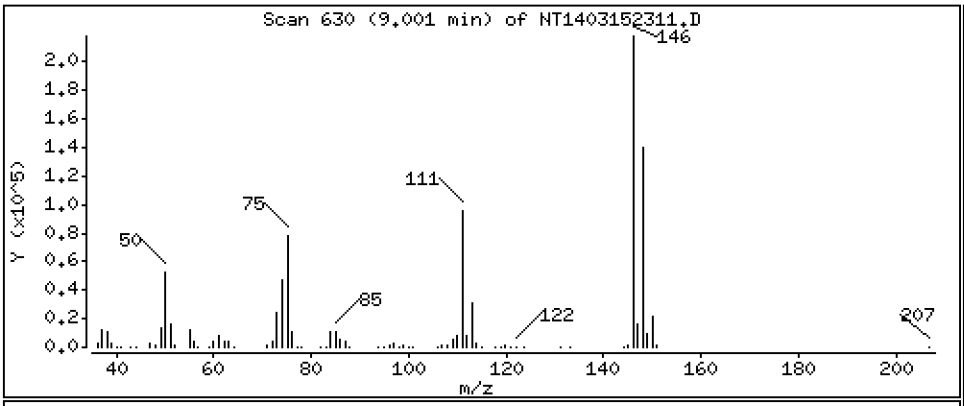
Operator: JGR

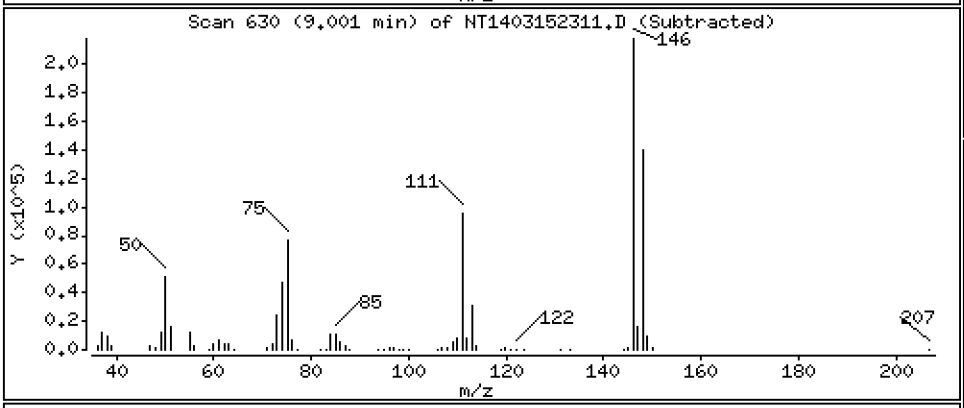
Column phase: ZB-5msi

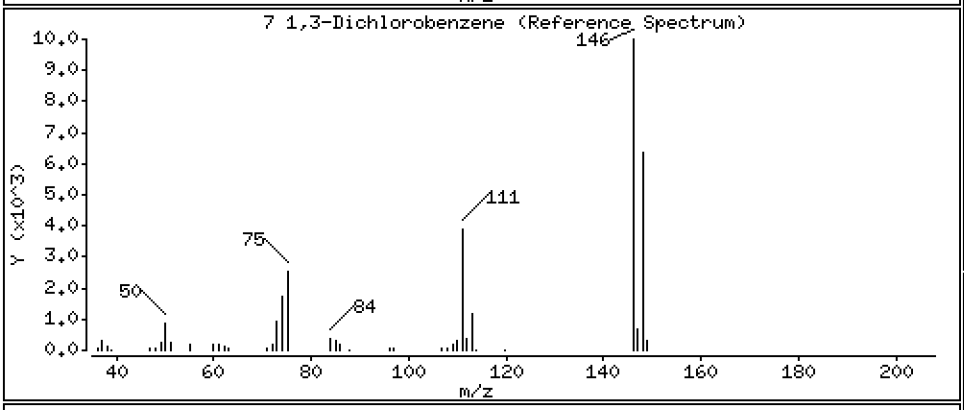
Column diameter: 0.25

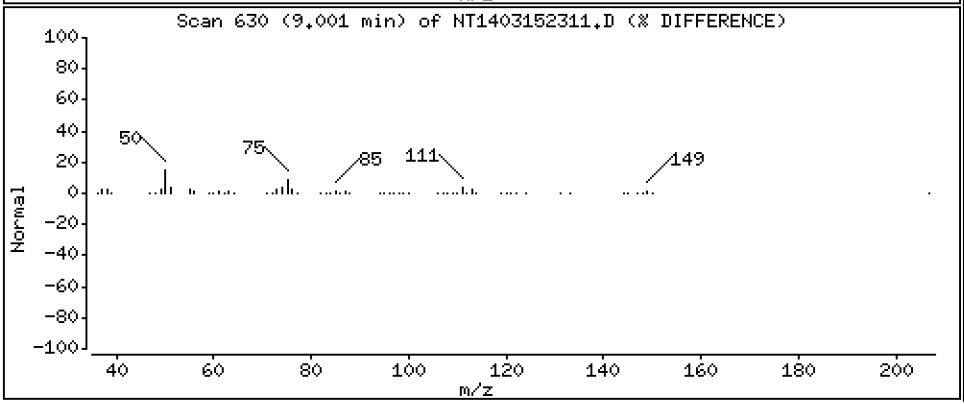
7 1,3-Dichlorobenzene

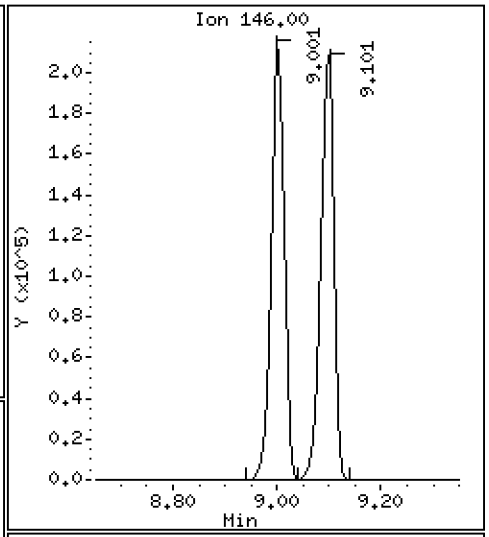
Concentration: 4.793 ug/mL

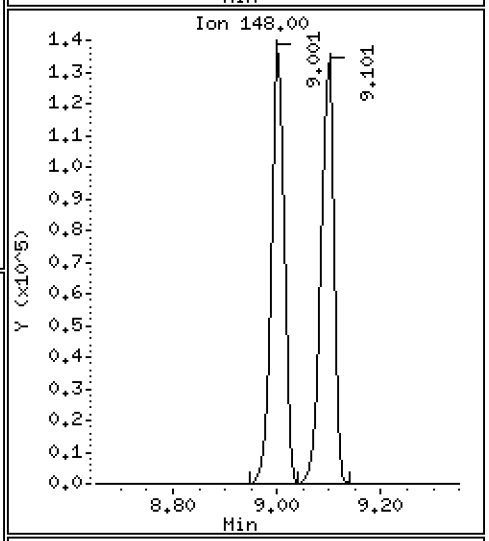


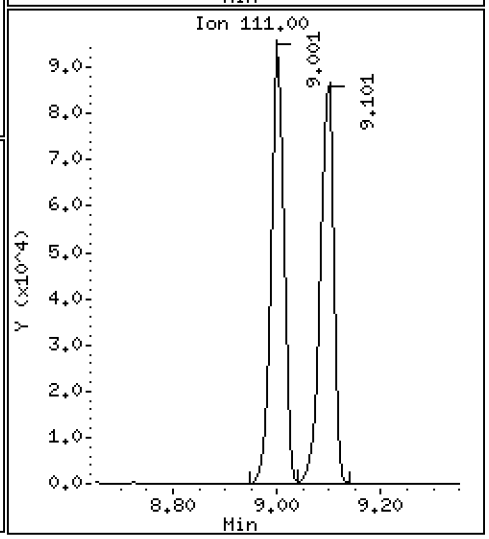












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

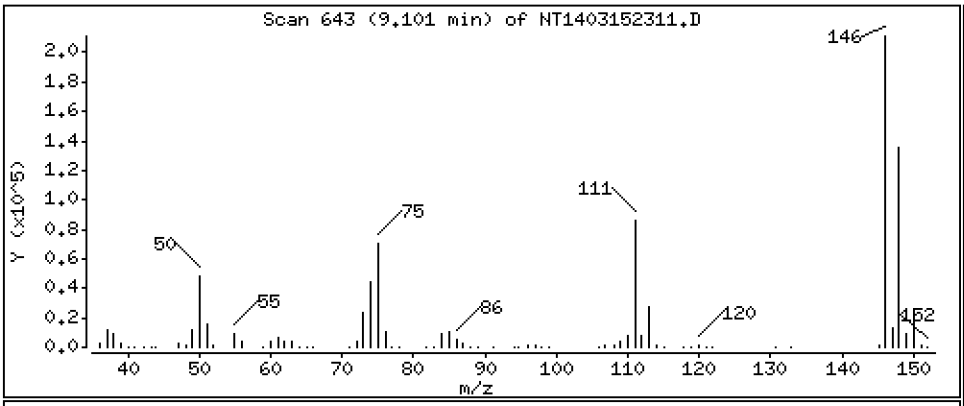
Operator: JGR

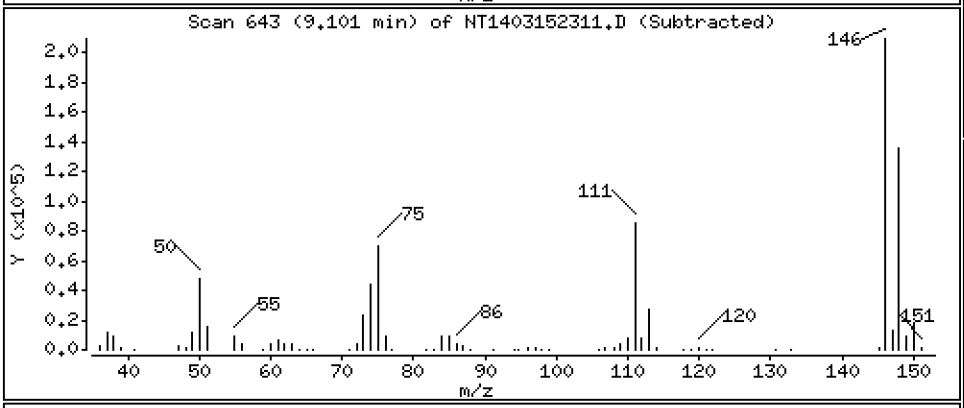
Column phase: ZB-5msi

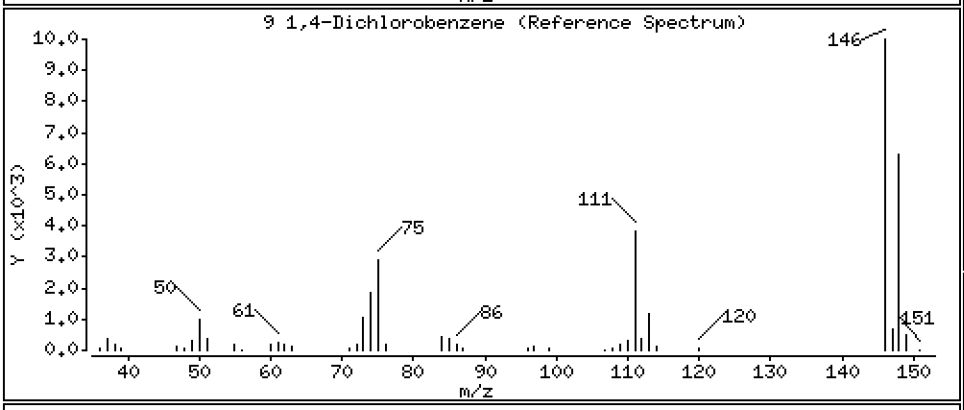
Column diameter: 0.25

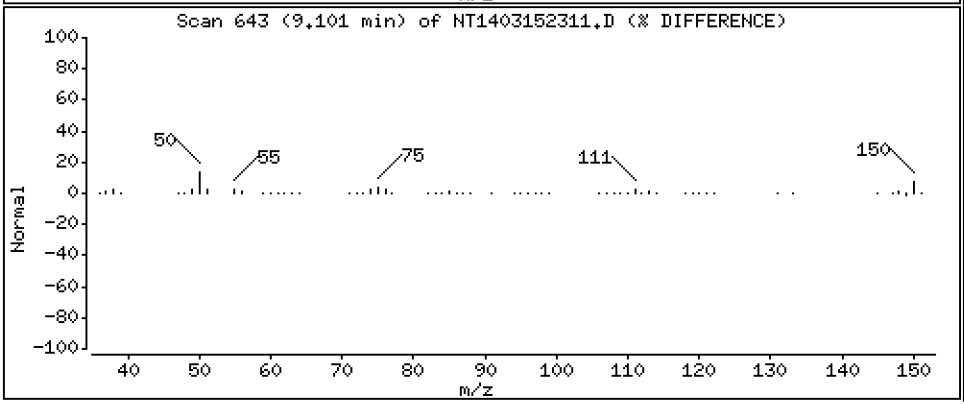
9 1,4-Dichlorobenzene

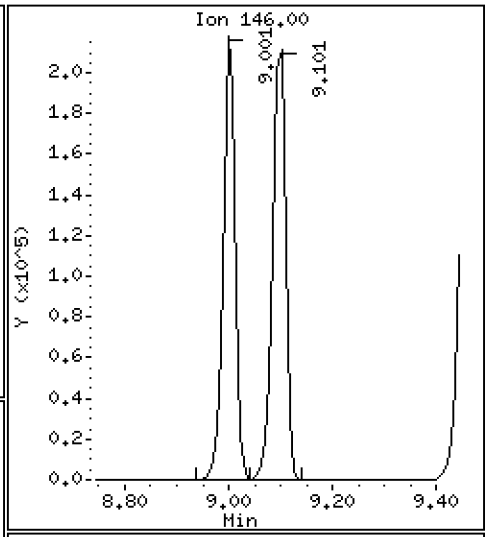
Concentration: 4.889 ug/mL

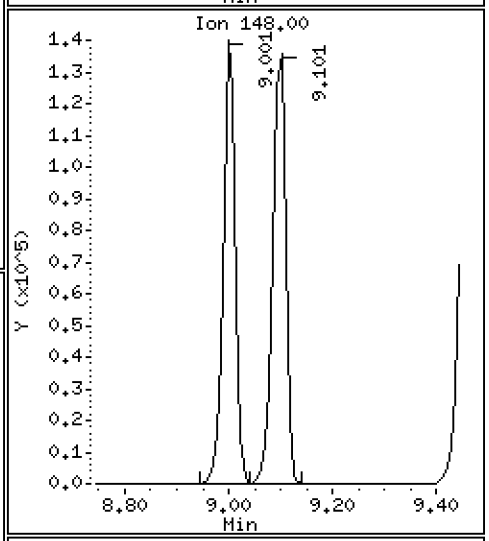


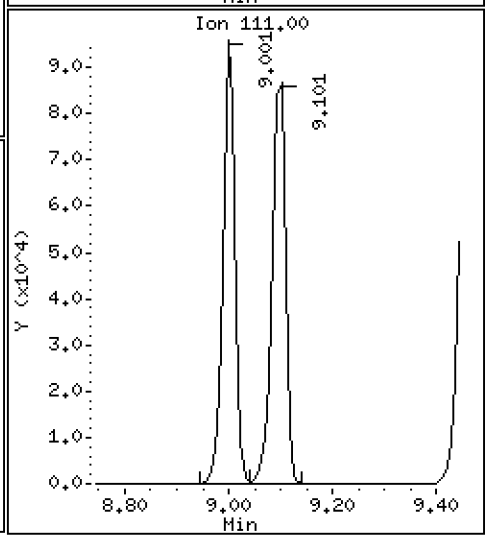












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

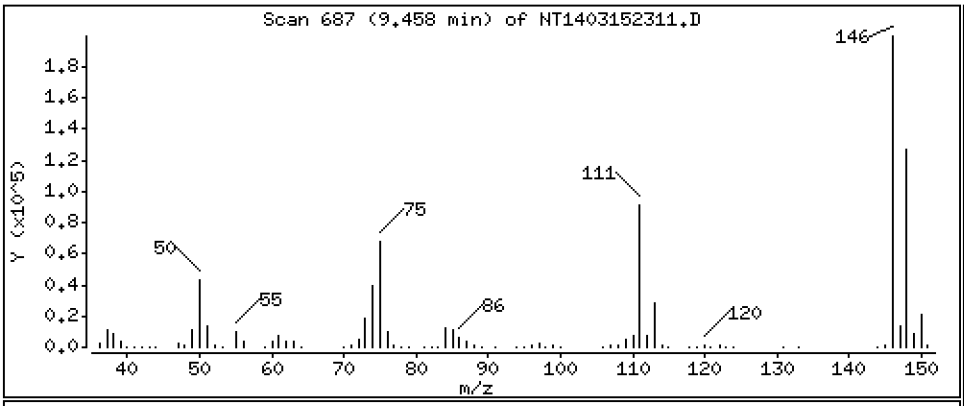
Operator: JGR

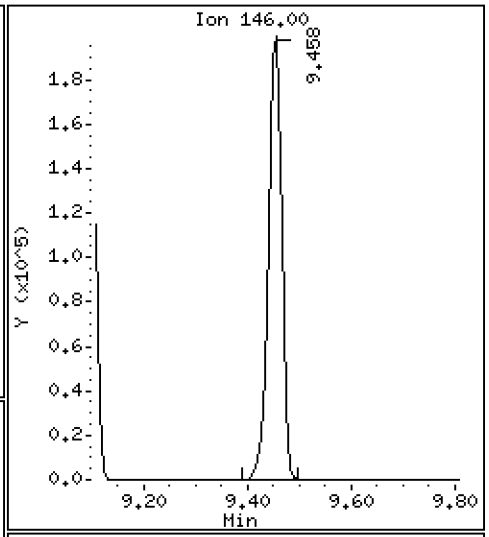
Column phase: ZB-5msi

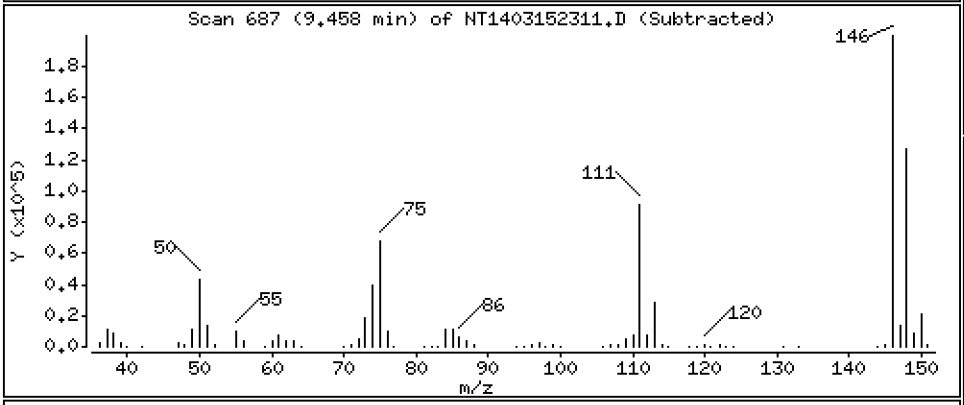
Column diameter: 0.25

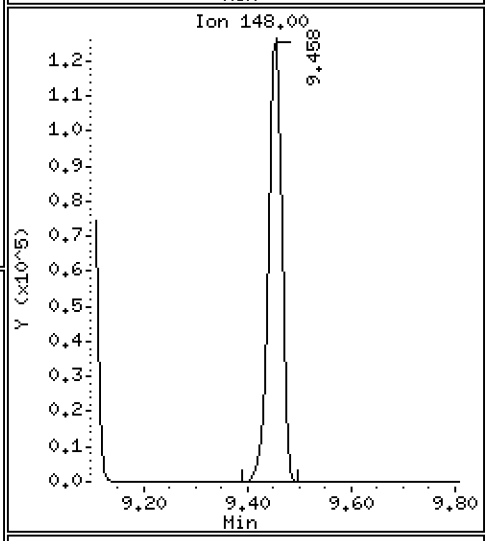
12 1,2-Dichlorobenzene

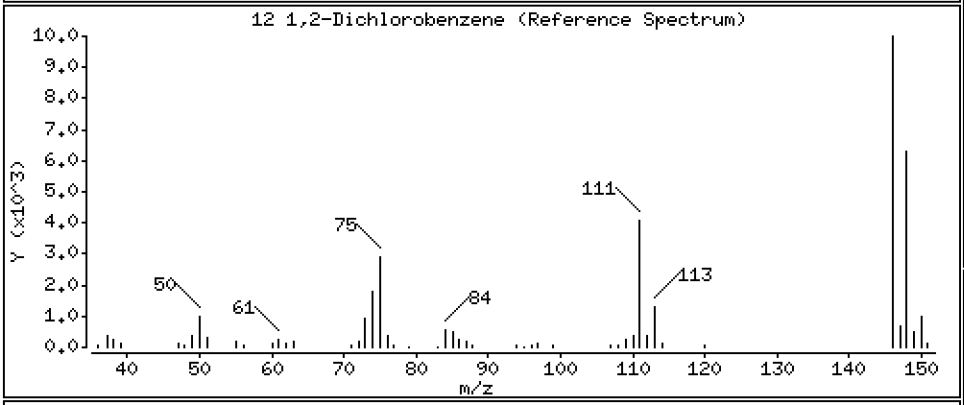
Concentration: 4.786 ug/mL

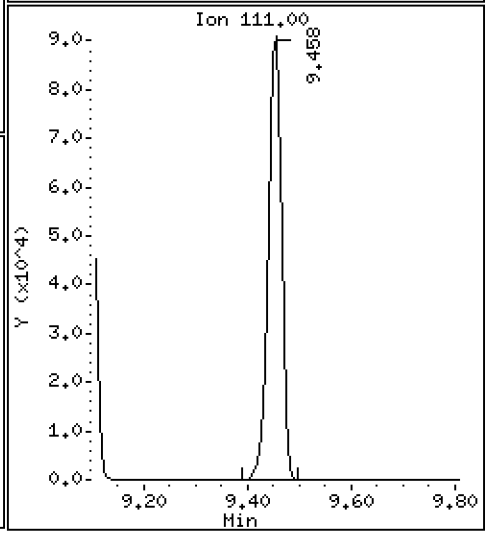


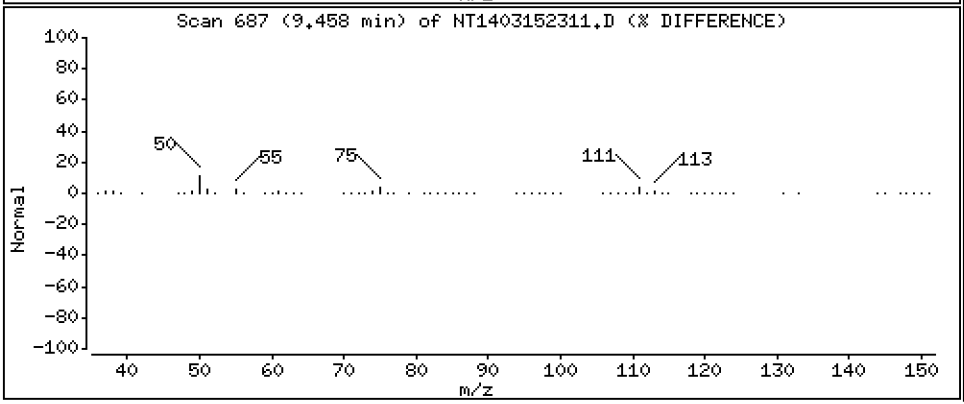












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

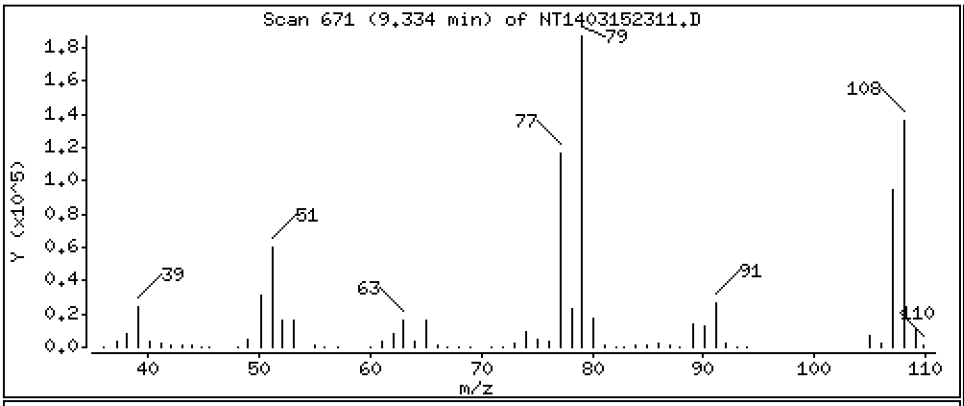
Operator: JGR

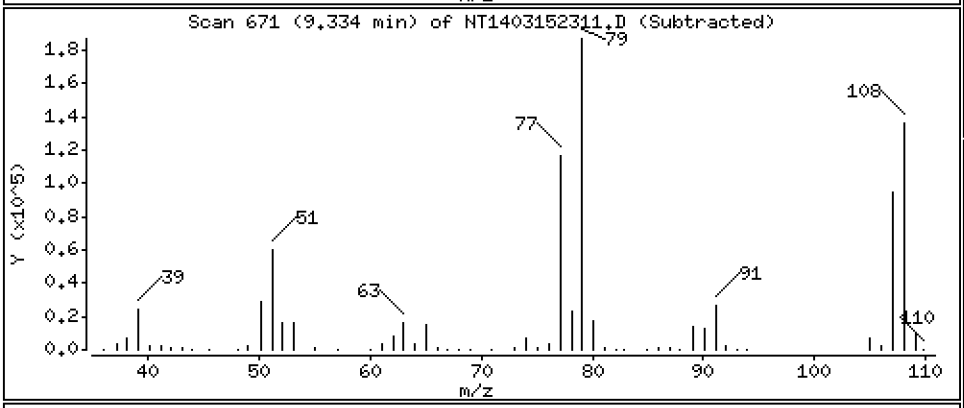
Column phase: ZB-5msi

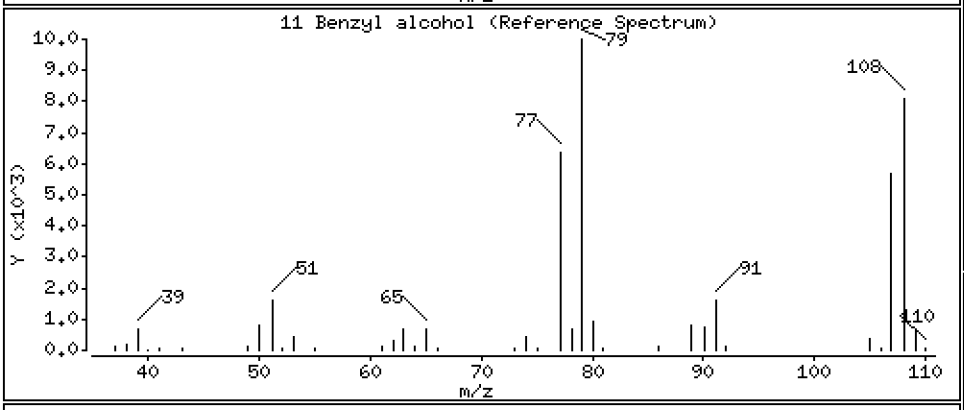
Column diameter: 0.25

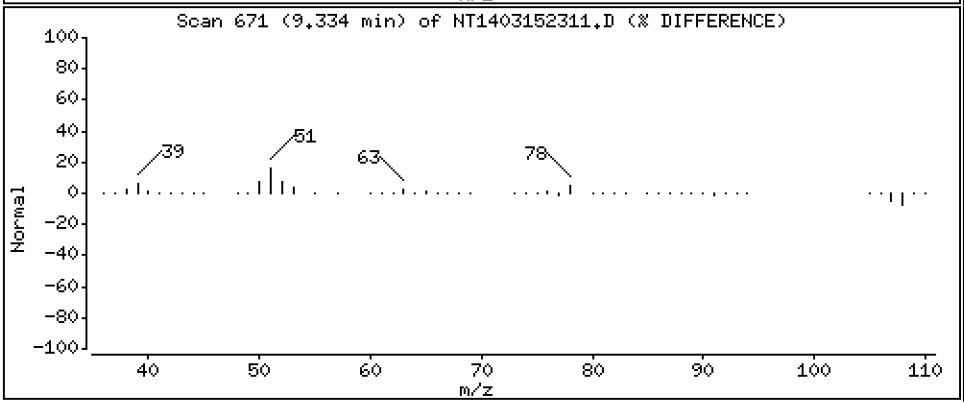
11 Benzyl alcohol

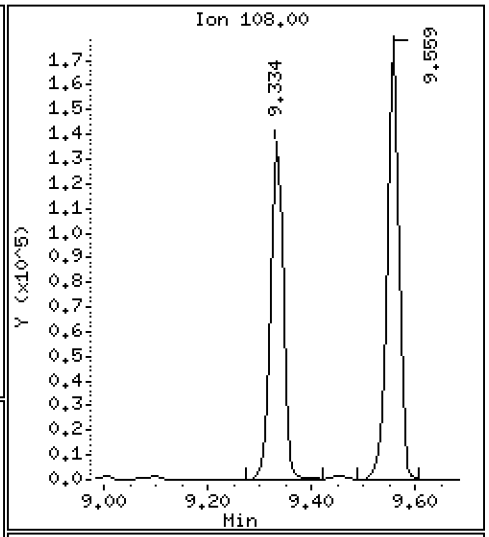
Concentration: 5.051 ug/mL

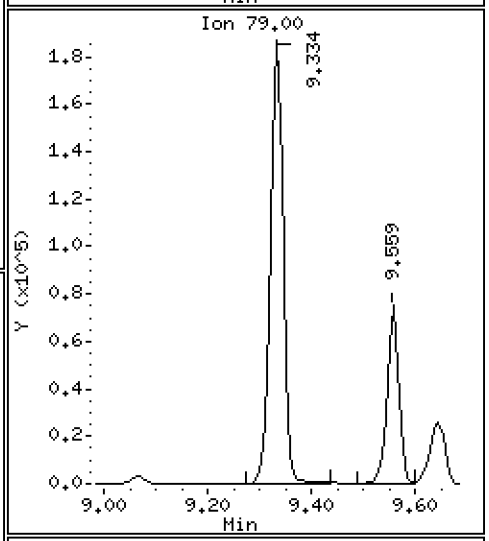


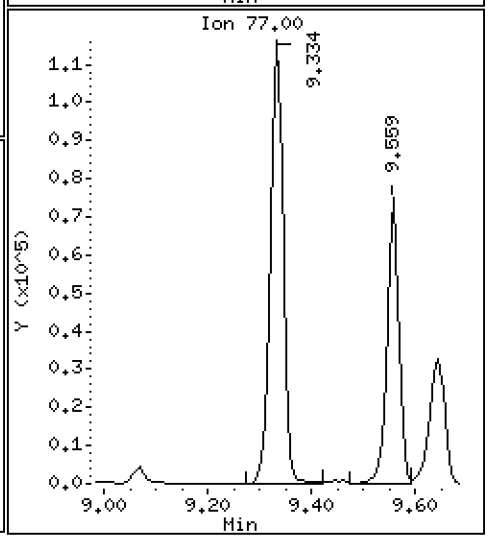












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

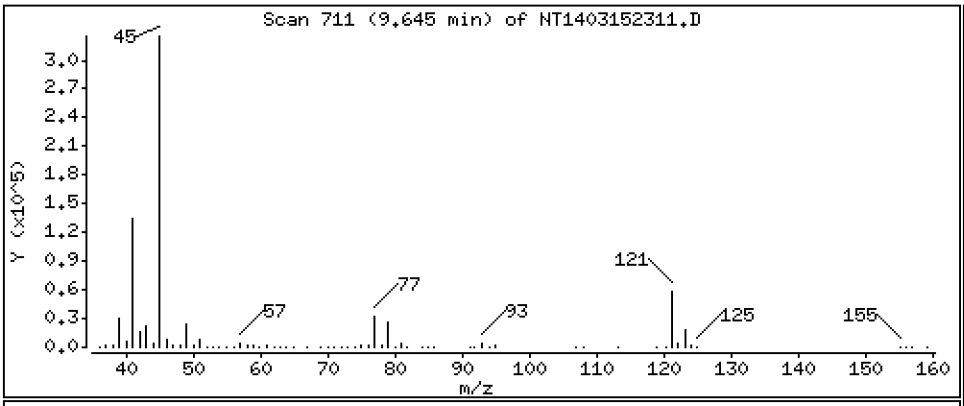
Operator: JGR

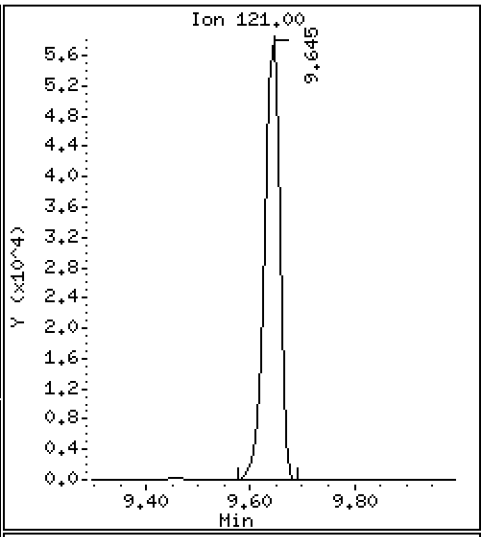
Column phase: ZB-5msi

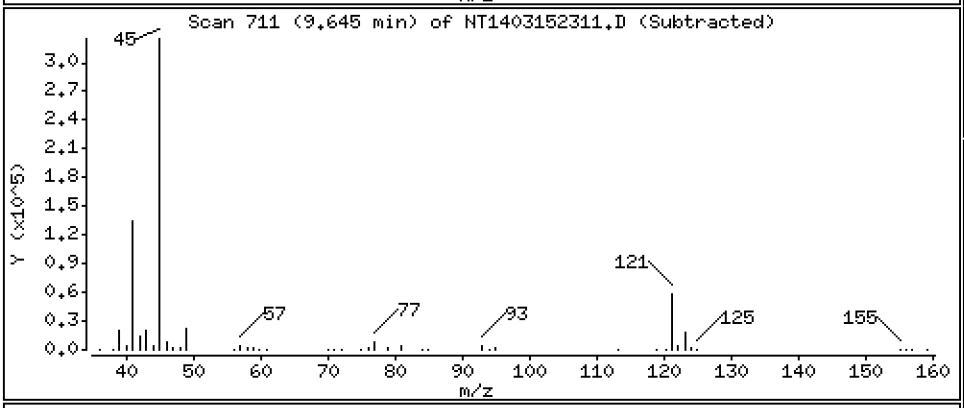
Column diameter: 0.25

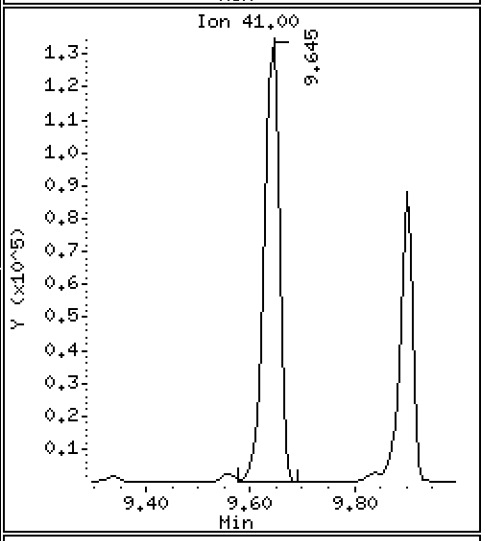
14 2,2'-oxybis(1-Chloropropane)

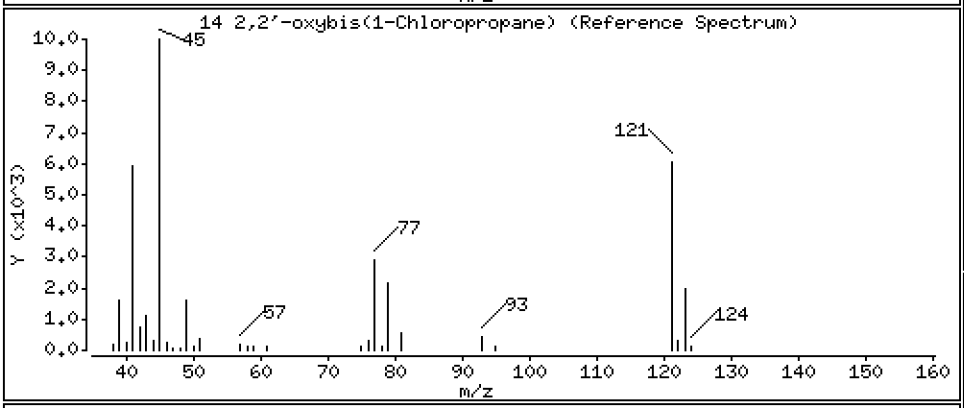
Concentration: 5.319 ug/mL

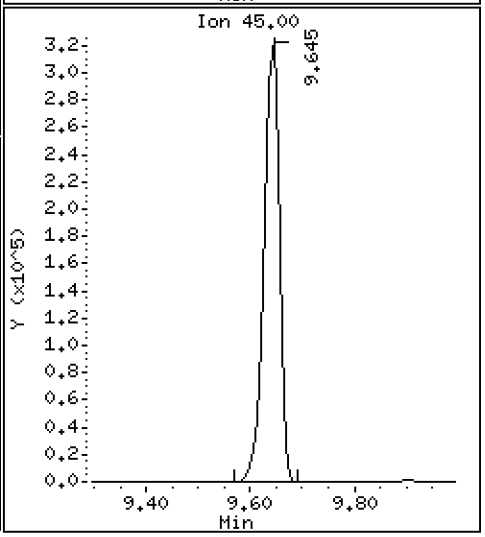


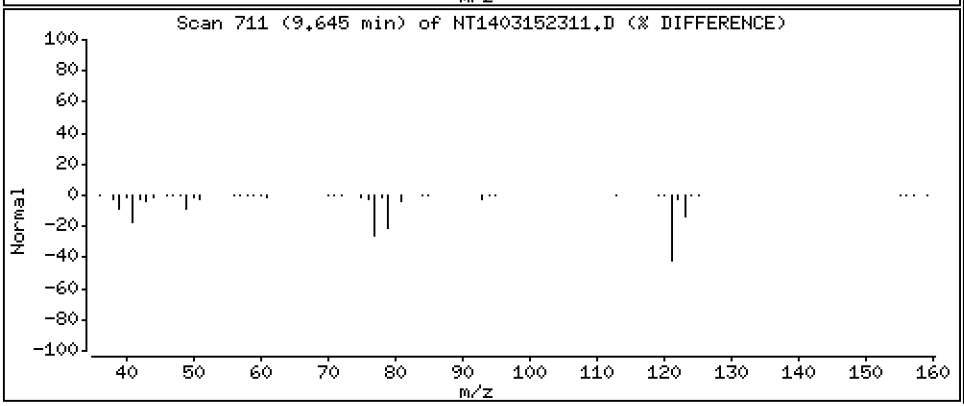












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

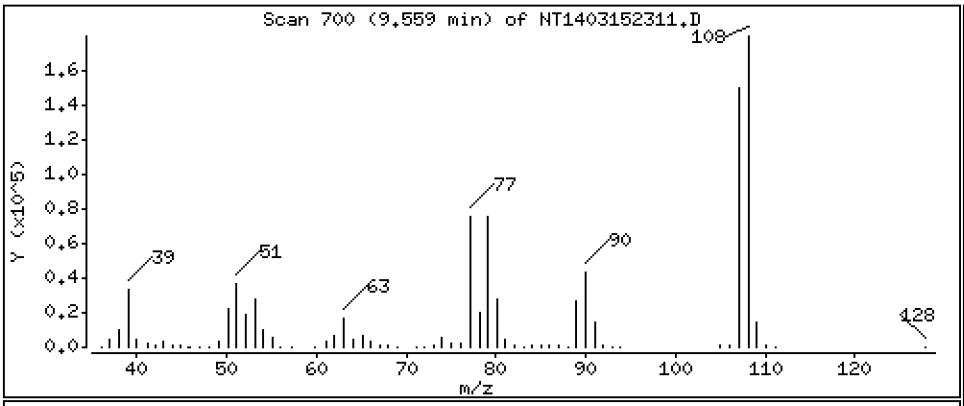
Operator: JGR

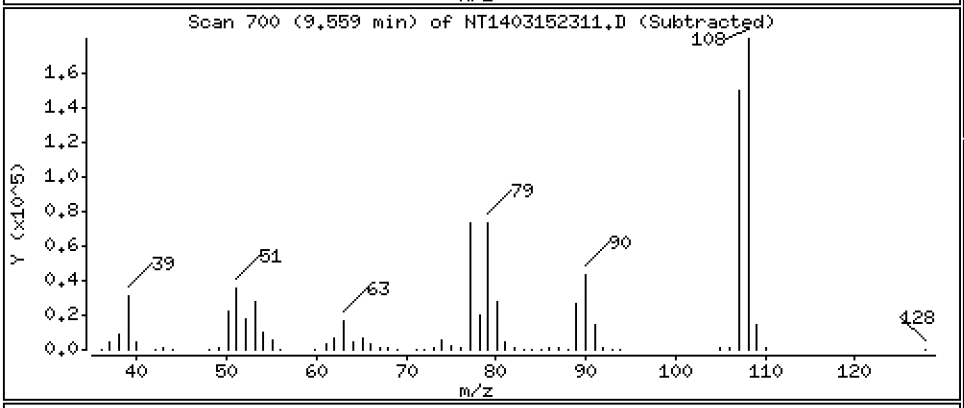
Column phase: ZB-5msi

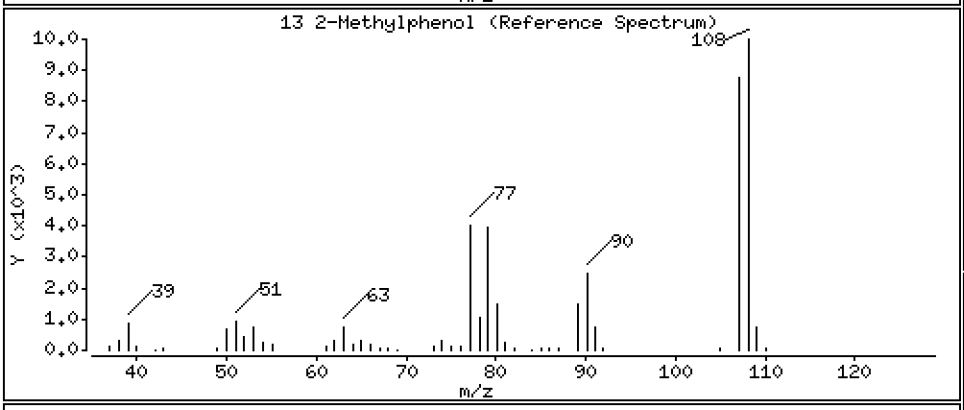
Column diameter: 0.25

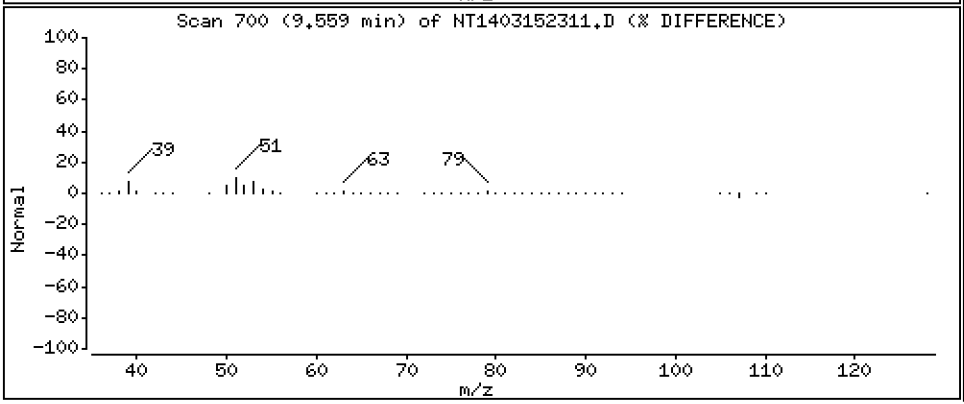
13 2-Methylphenol

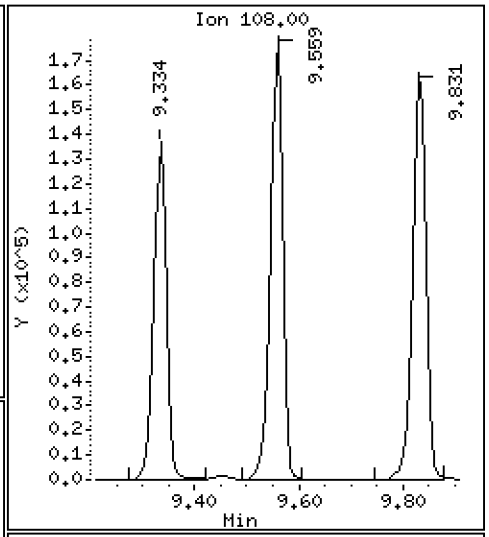
Concentration: 4.117 ug/mL

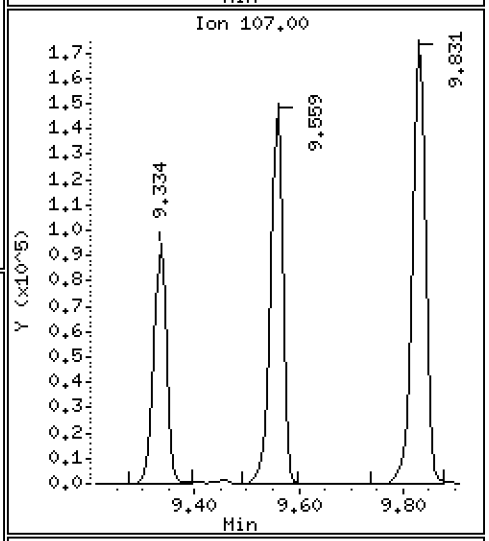


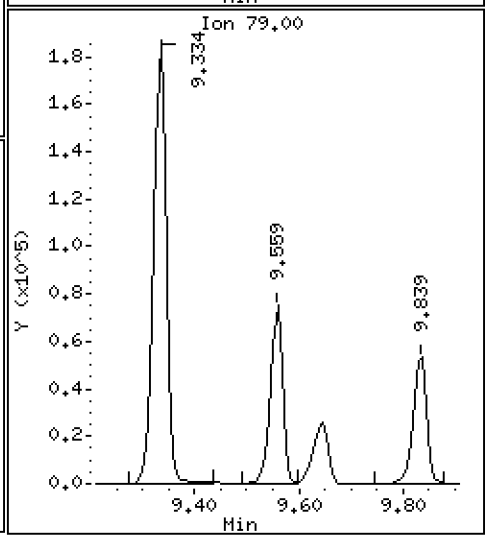












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

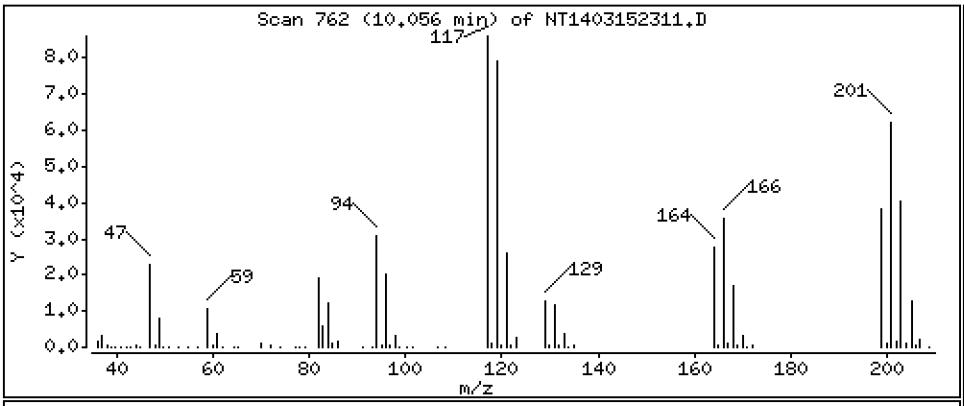
Operator: JGR

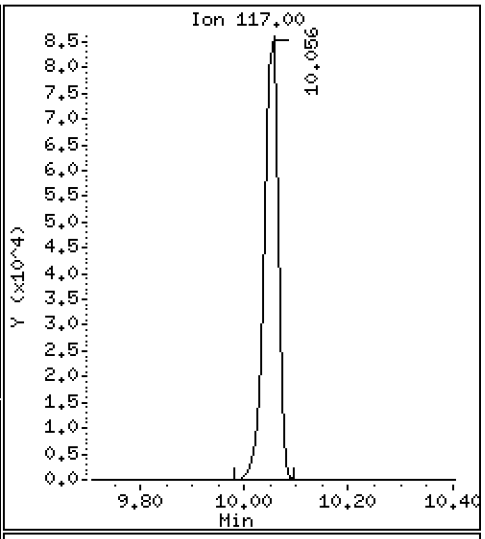
Column phase: ZB-5msi

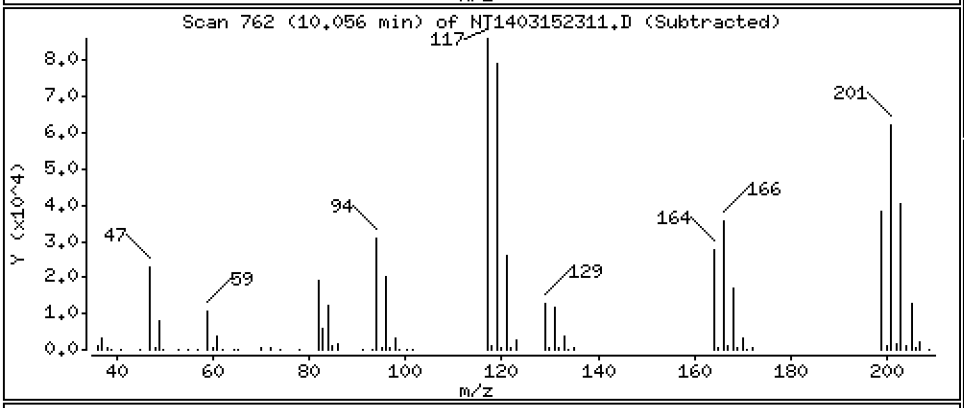
Column diameter: 0.25

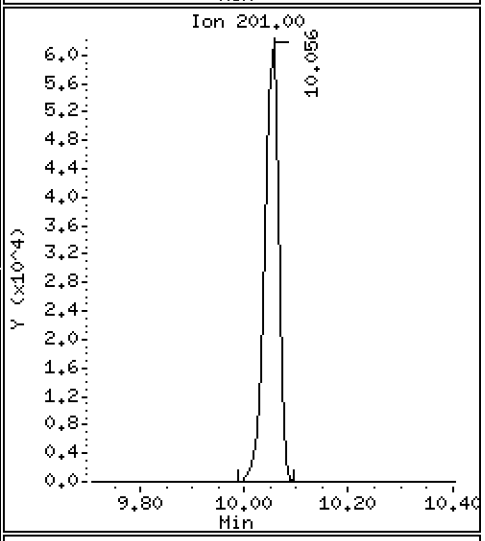
17 Hexachloroethane

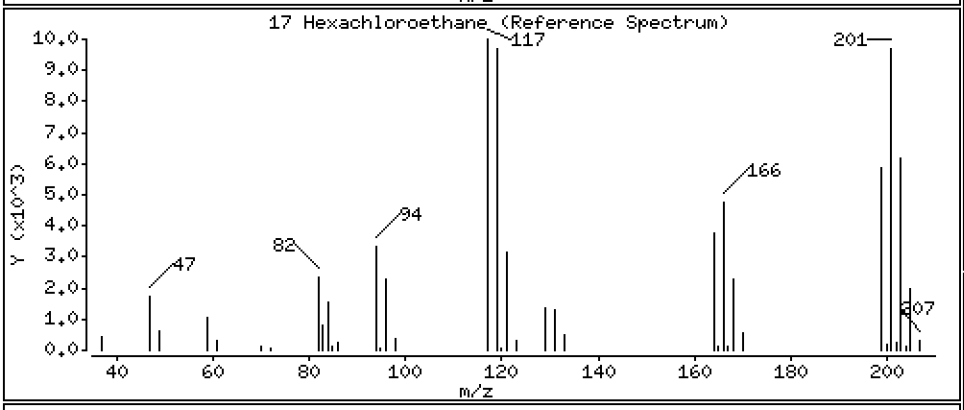
Concentration: 4.955 ug/mL

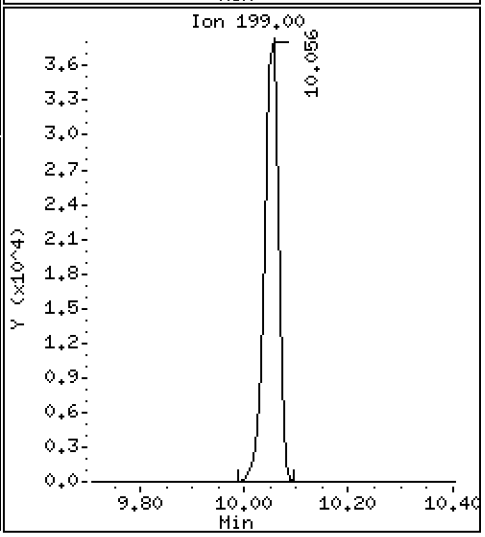


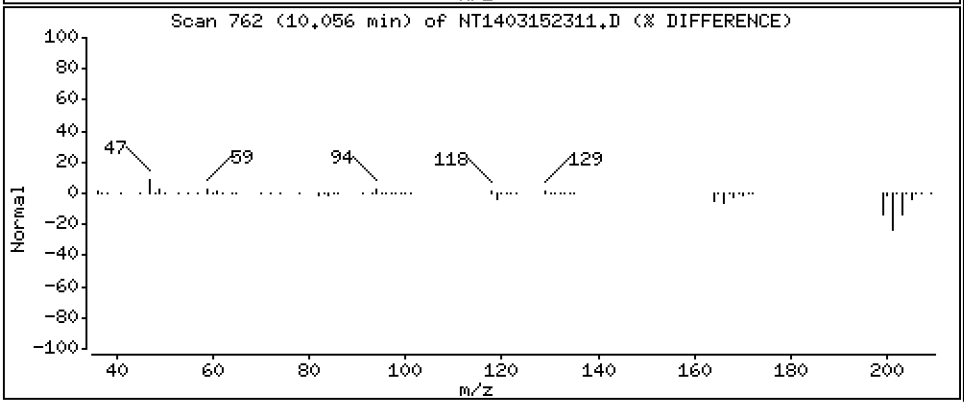












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

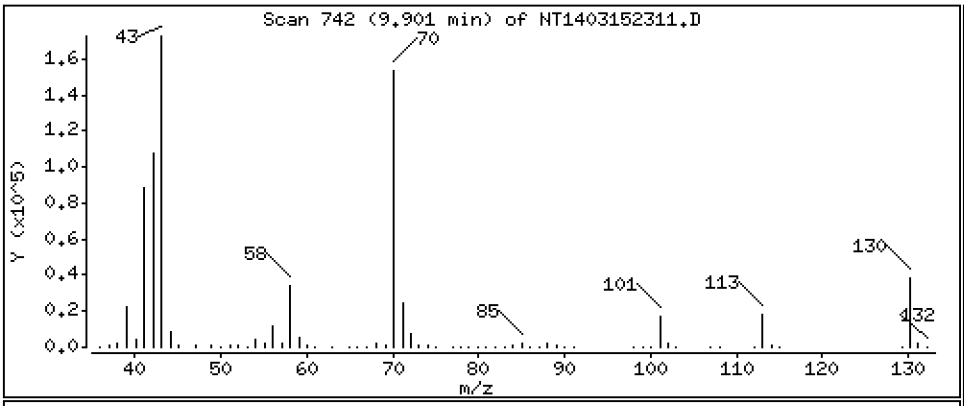
Operator: JGR

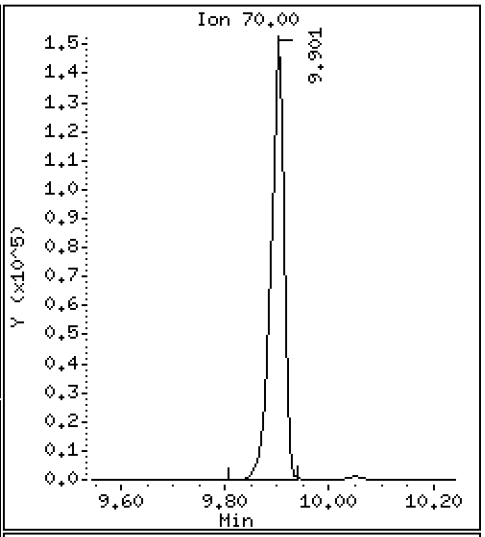
Column phase: ZB-5msi

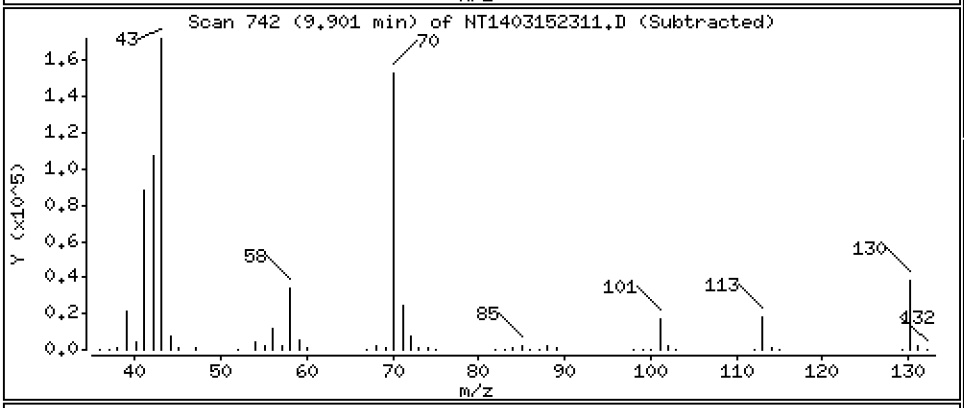
Column diameter: 0.25

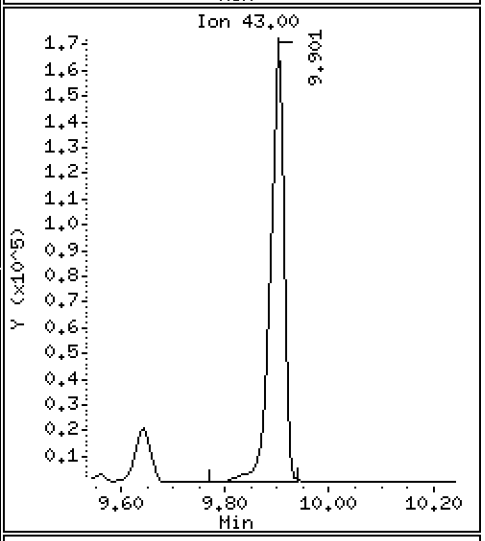
16 N-Nitroso-di-n-propylamine

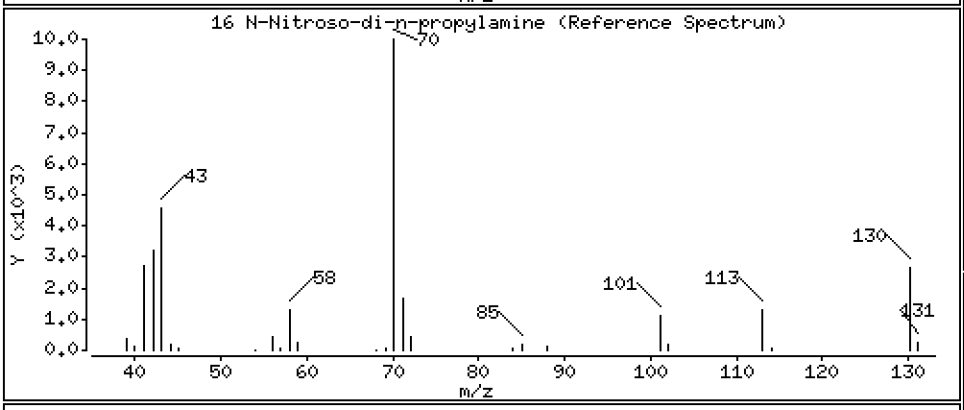
Concentration: 4.983 ug/mL

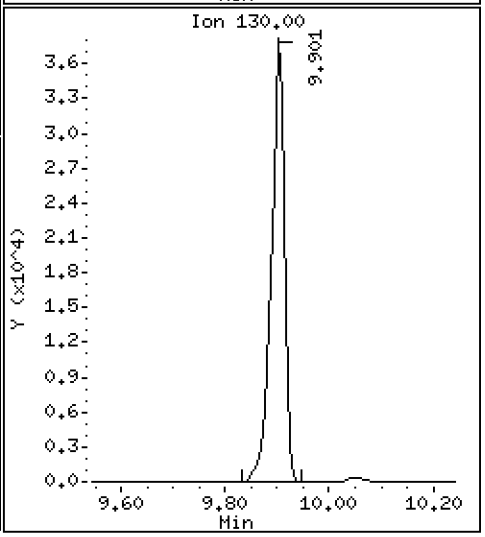


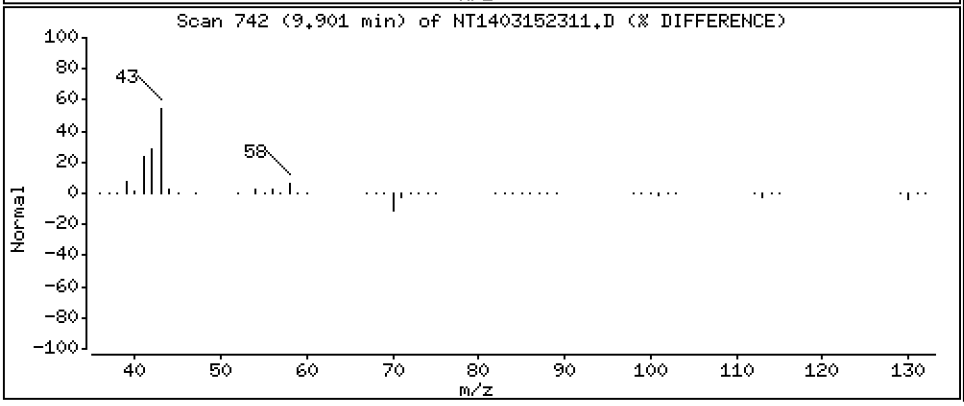












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

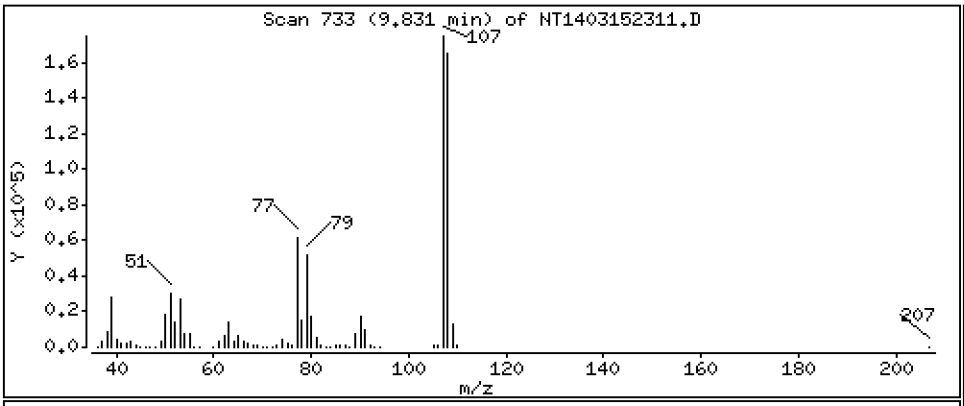
Operator: JGR

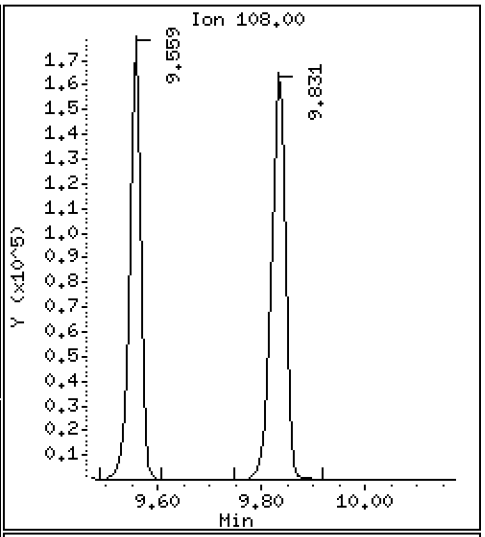
Column phase: ZB-5msi

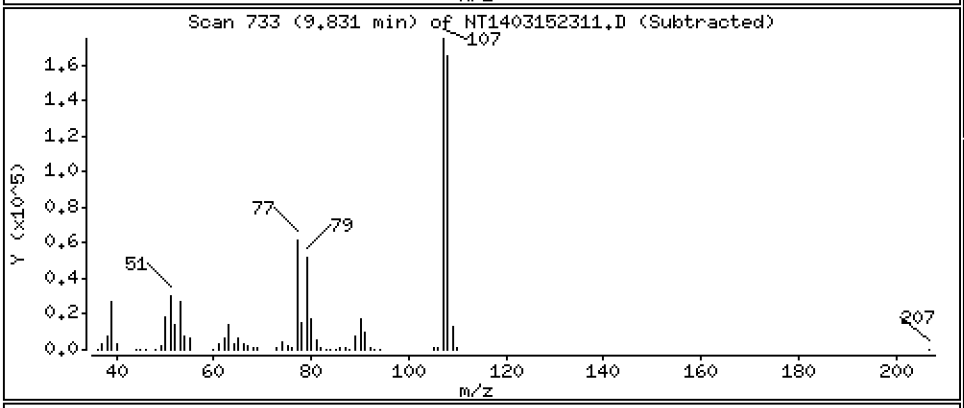
Column diameter: 0.25

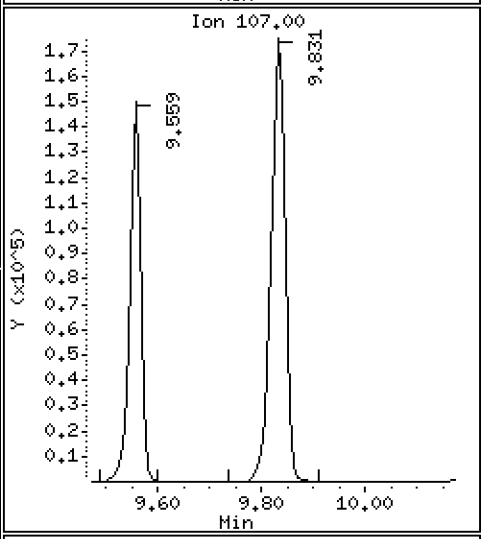
15 4-Methylphenol

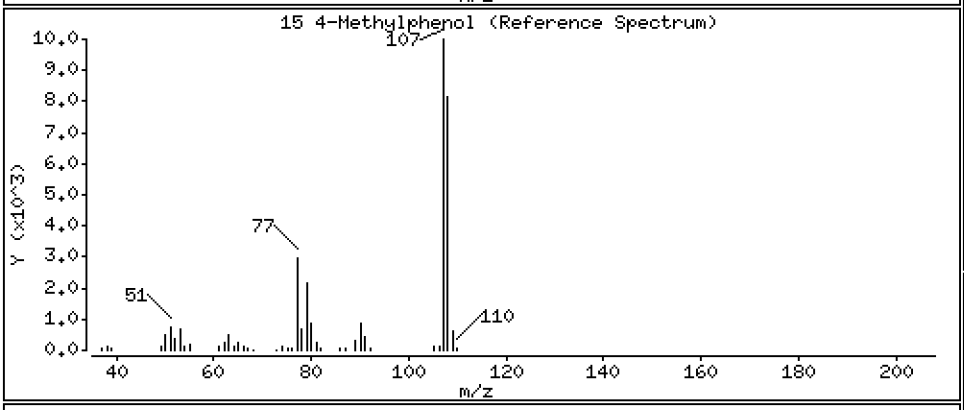
Concentration: 4.302 ug/mL

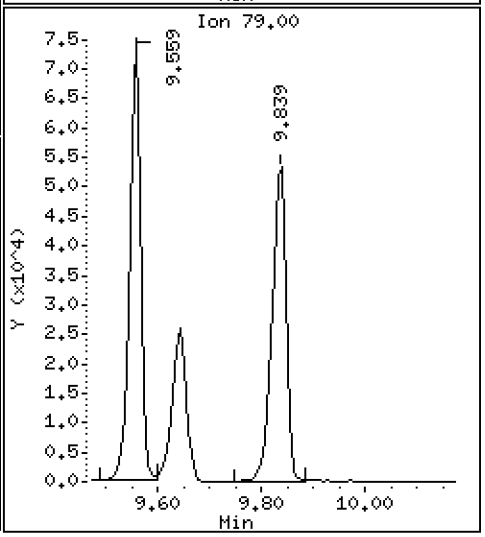


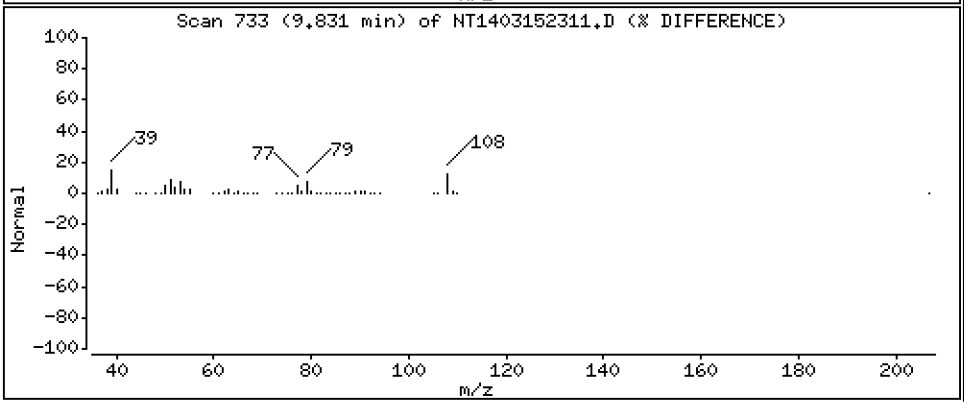












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

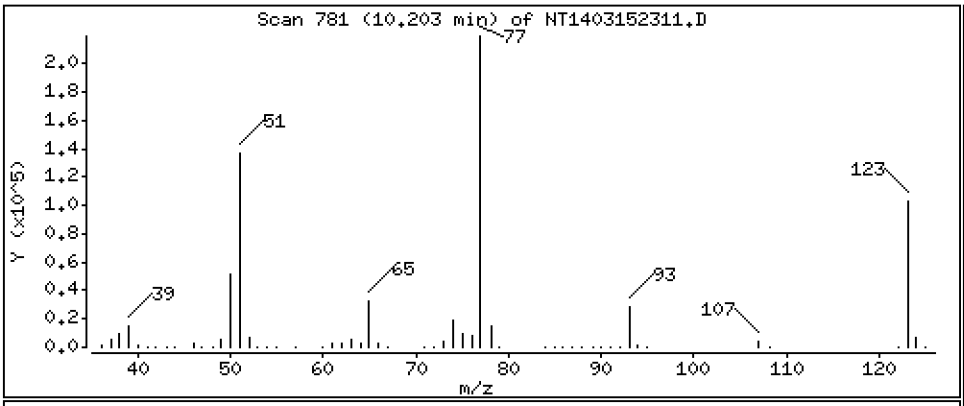
Operator: JGR

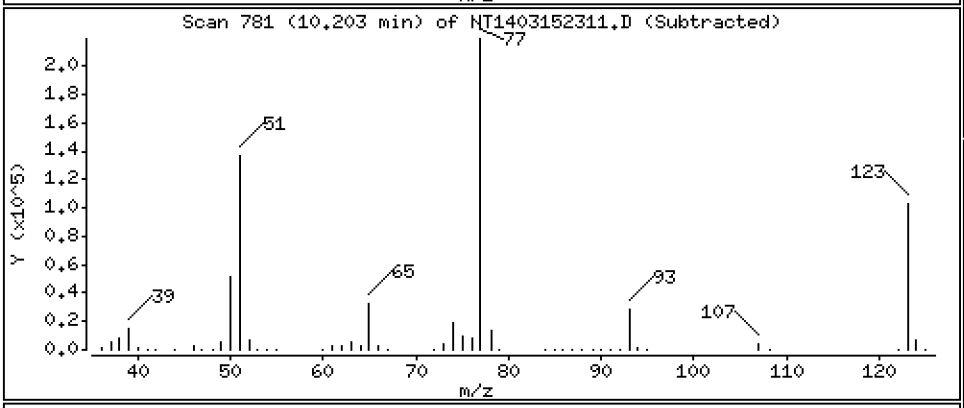
Column phase: ZB-5msi

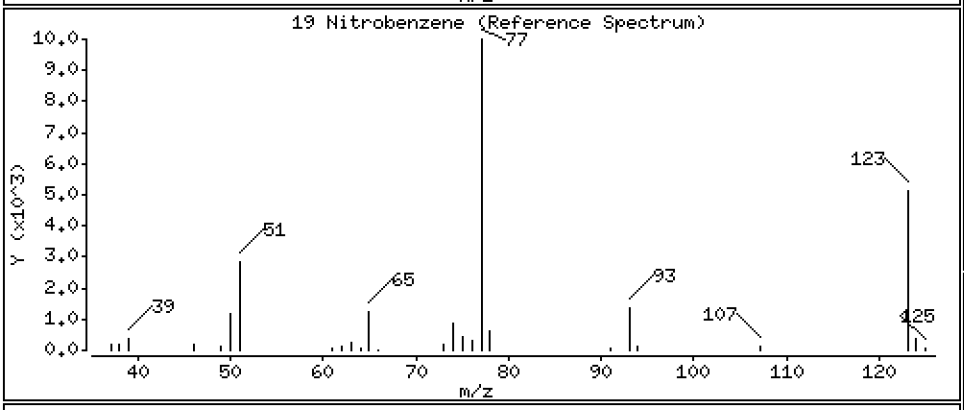
Column diameter: 0.25

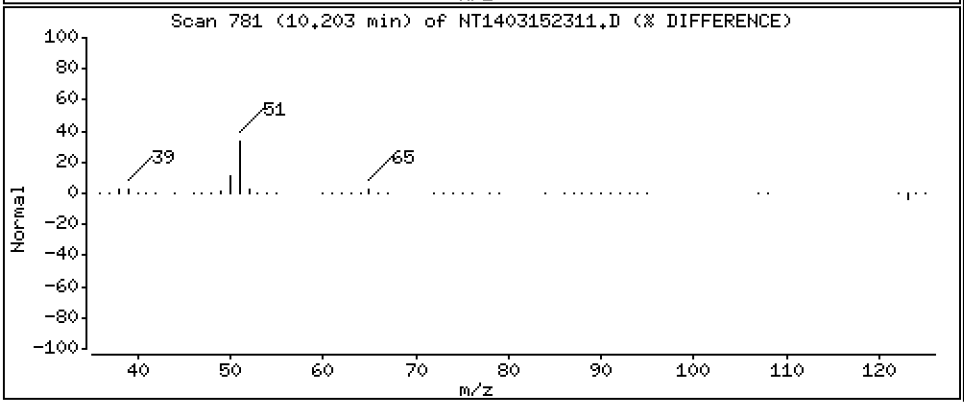
19 Nitrobenzene

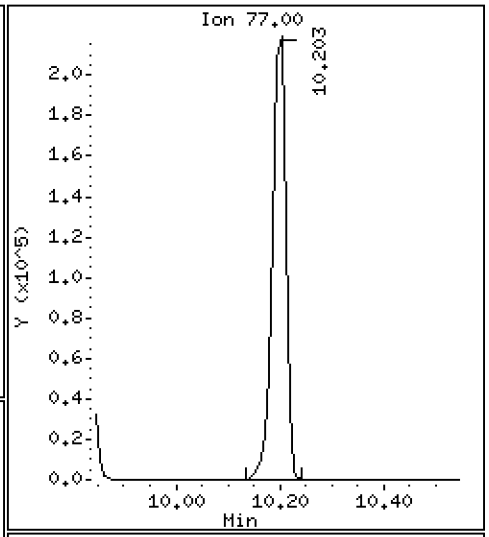
Concentration: 5.023 ug/mL

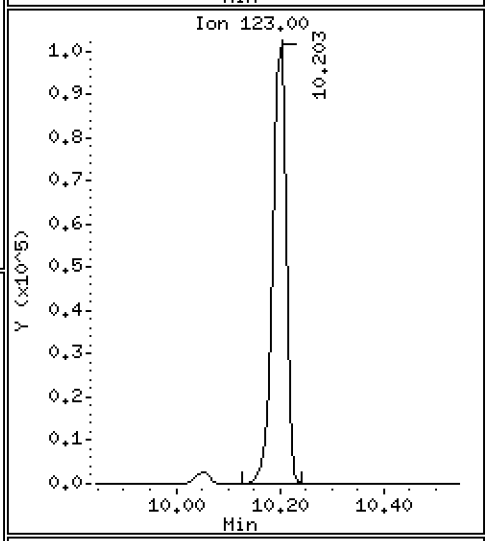


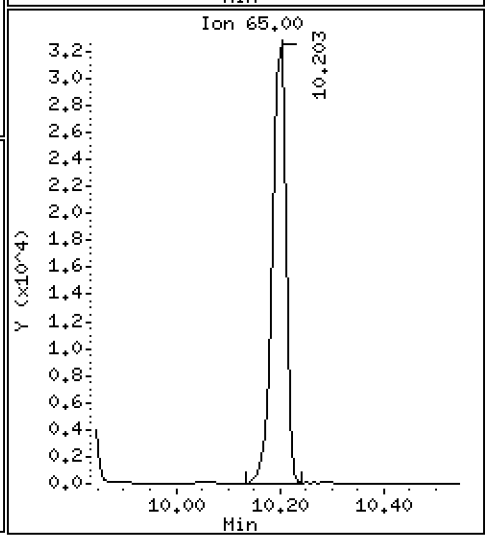












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

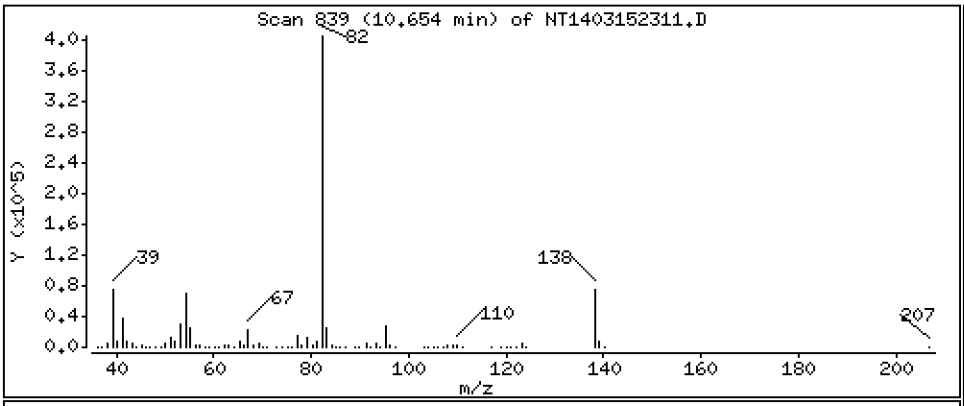
Operator: JGR

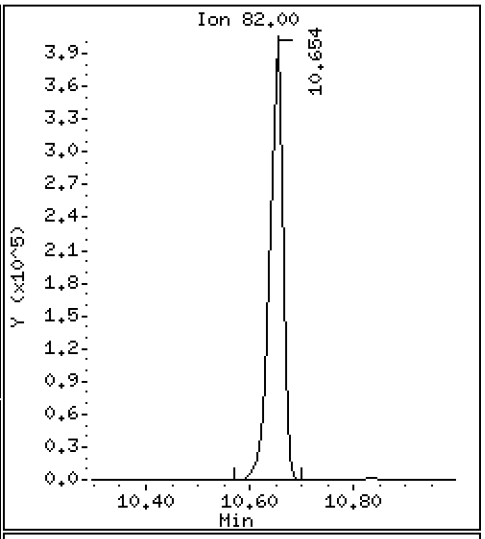
Column phase: ZB-5msi

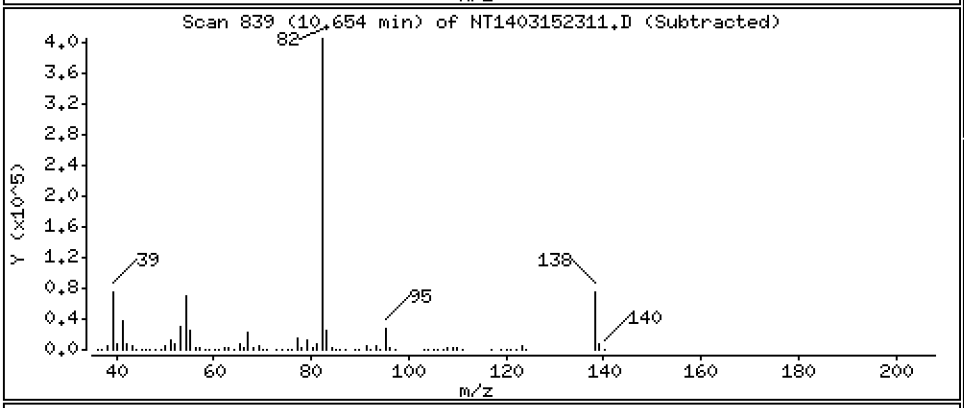
Column diameter: 0.25

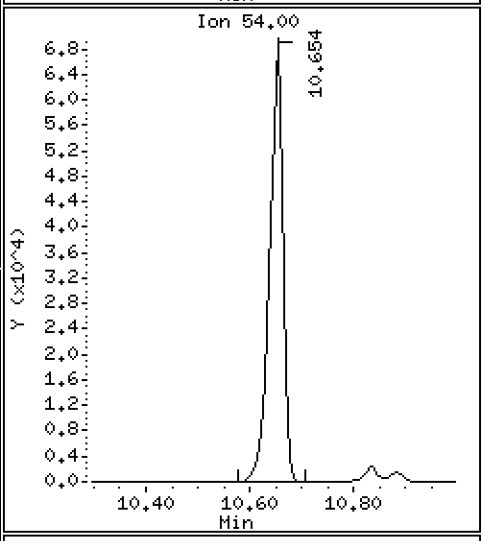
20 Isophorone

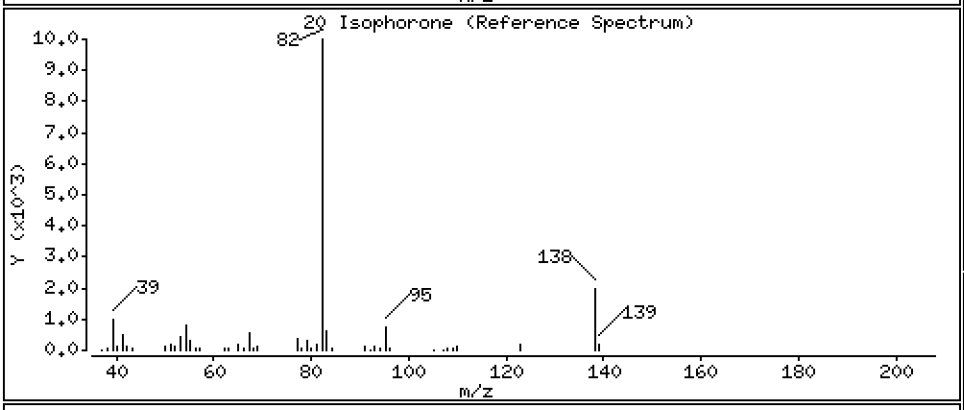
Concentration: 6.771 ug/mL

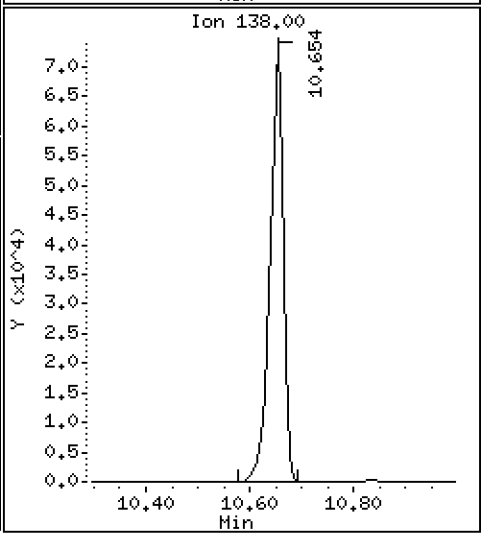


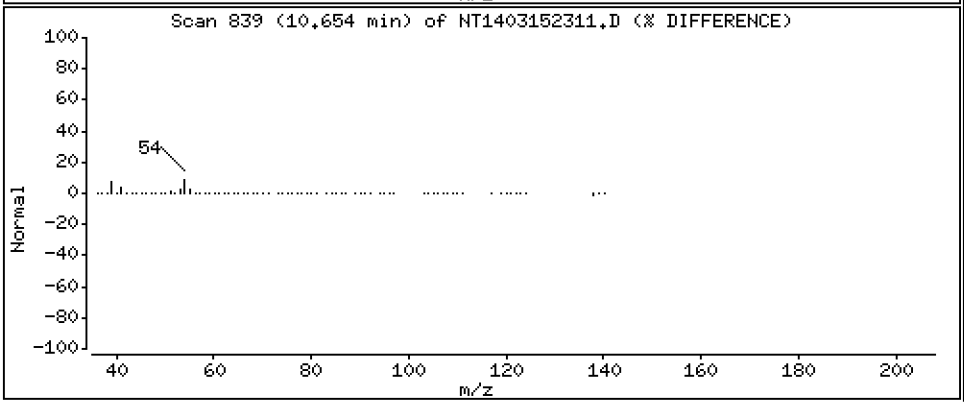












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

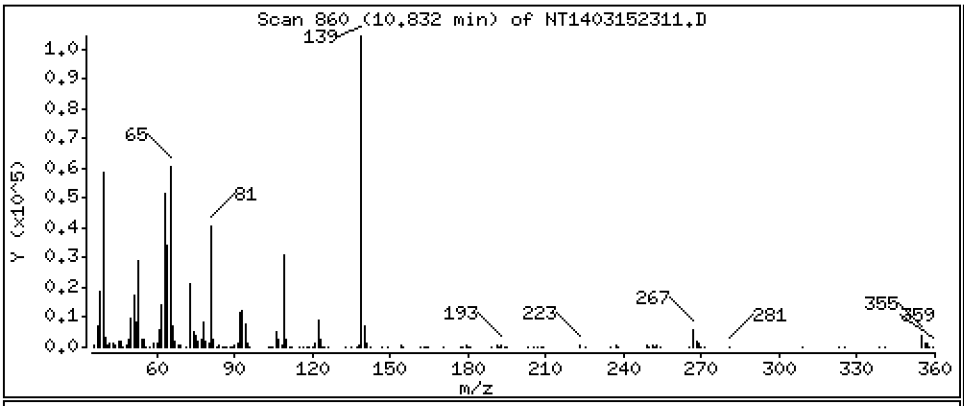
Operator: JGR

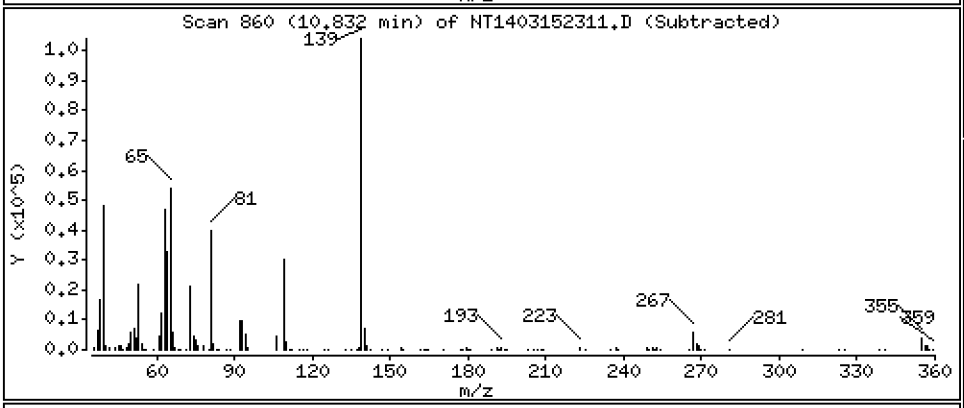
Column phase: ZB-5msi

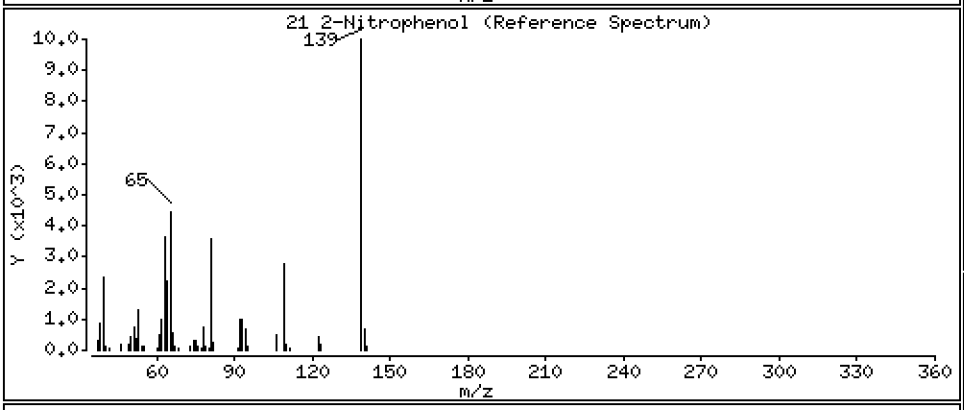
Column diameter: 0.25

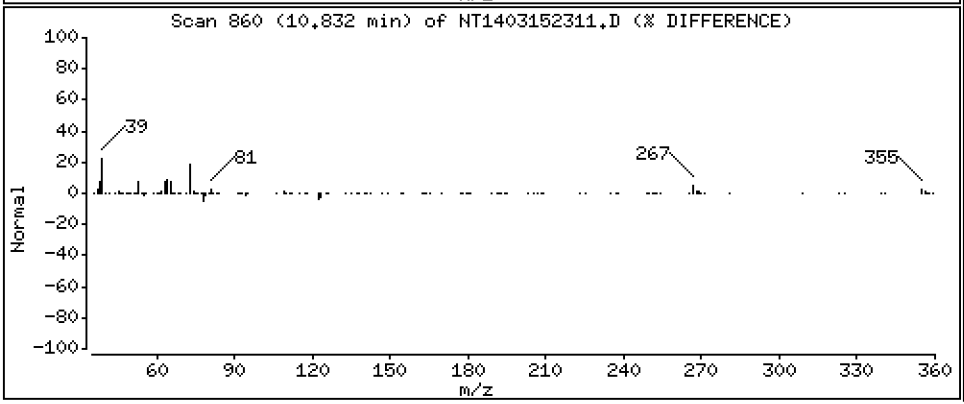
21 2-Nitrophenol

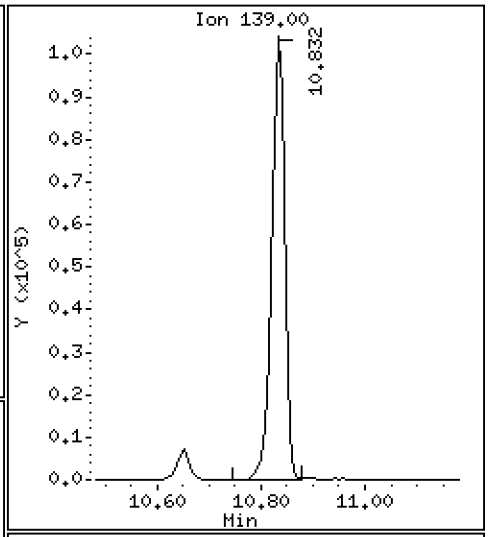
Concentration: 4.530 ug/mL

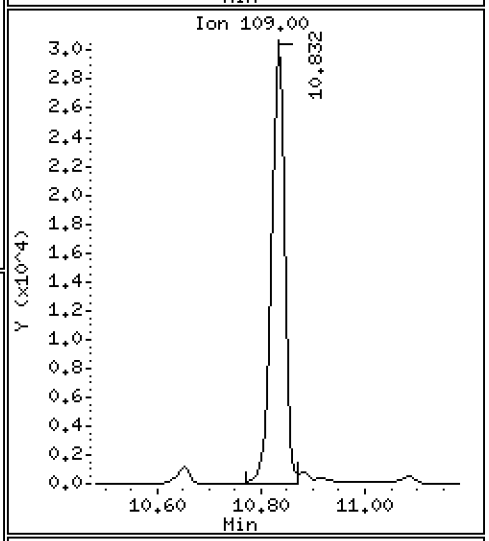


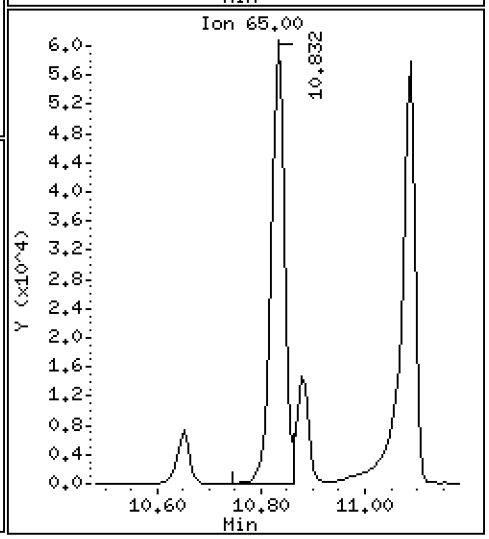












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

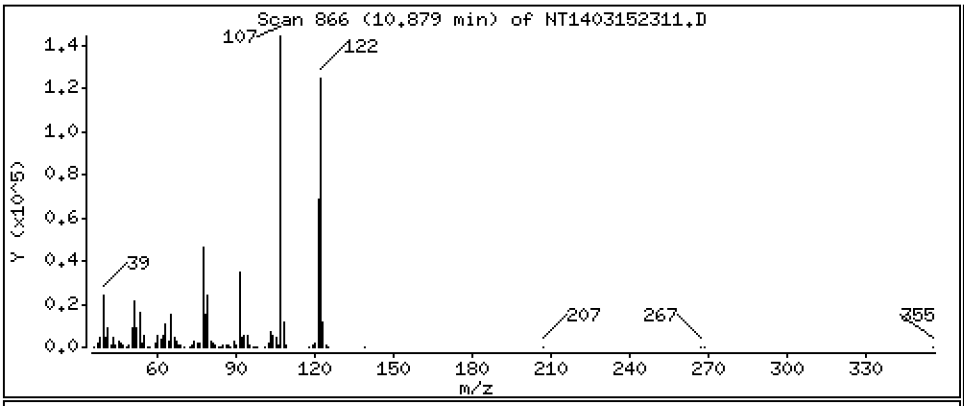
Operator: JGR

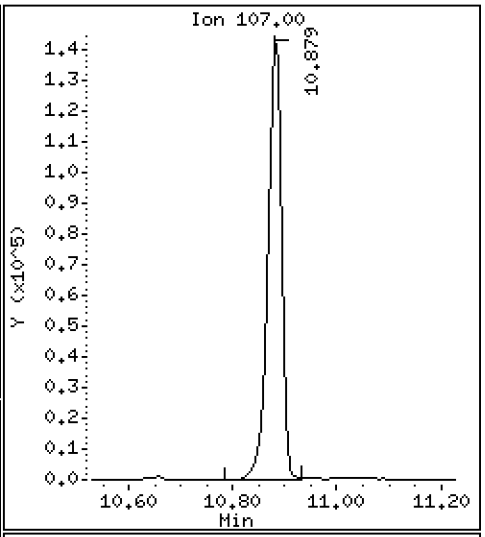
Column phase: ZB-5msi

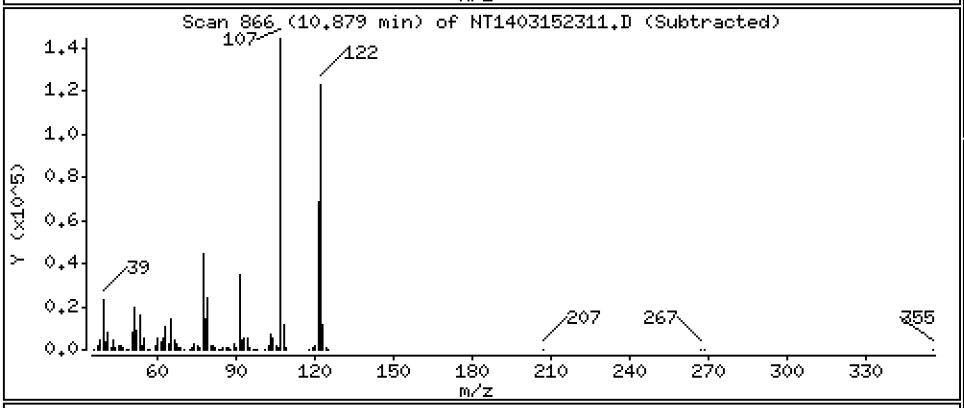
Column diameter: 0.25

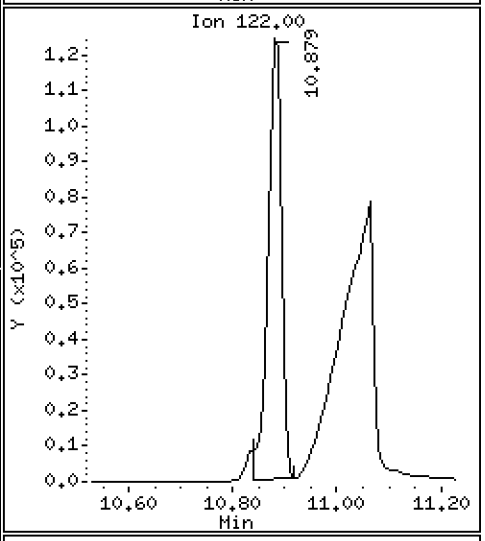
22 2,4-Dimethylphenol

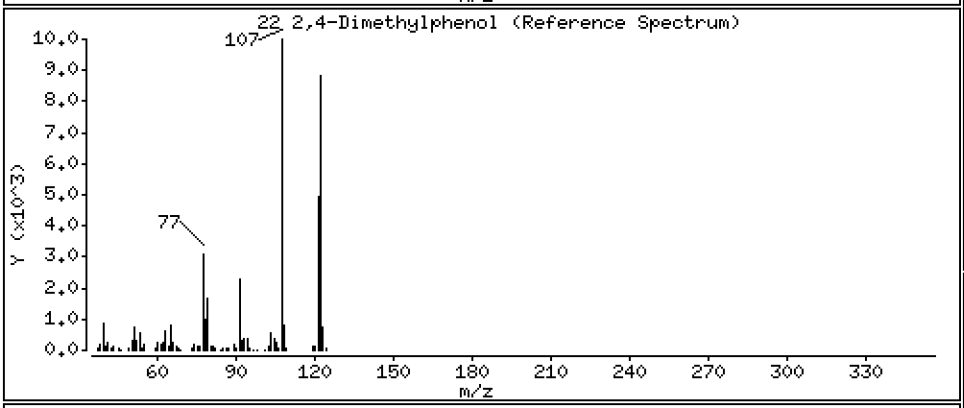
Concentration: 3.915 ug/mL

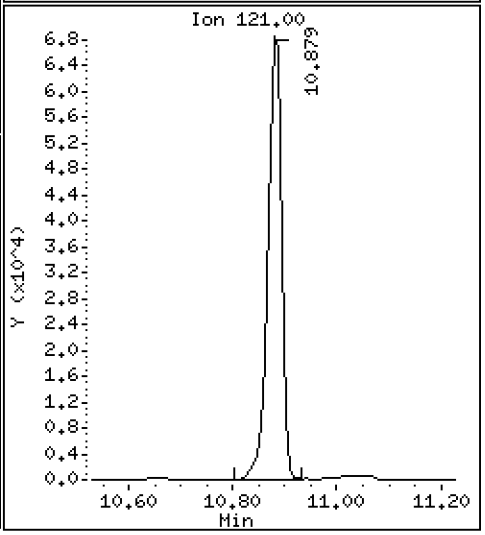


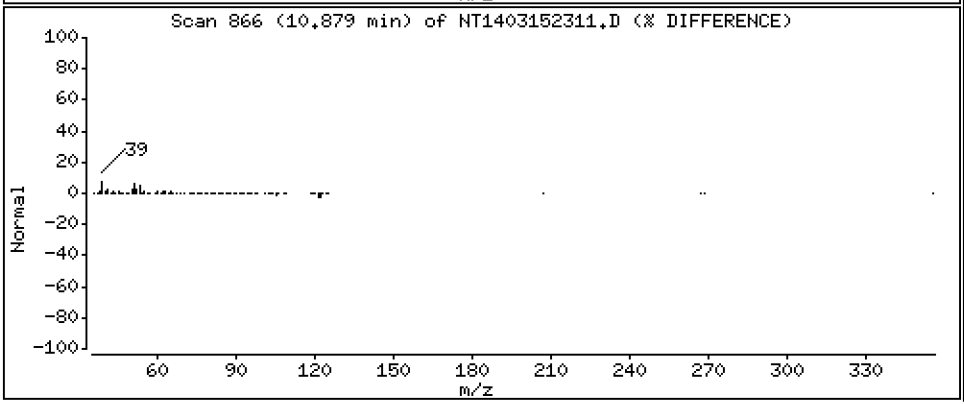












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

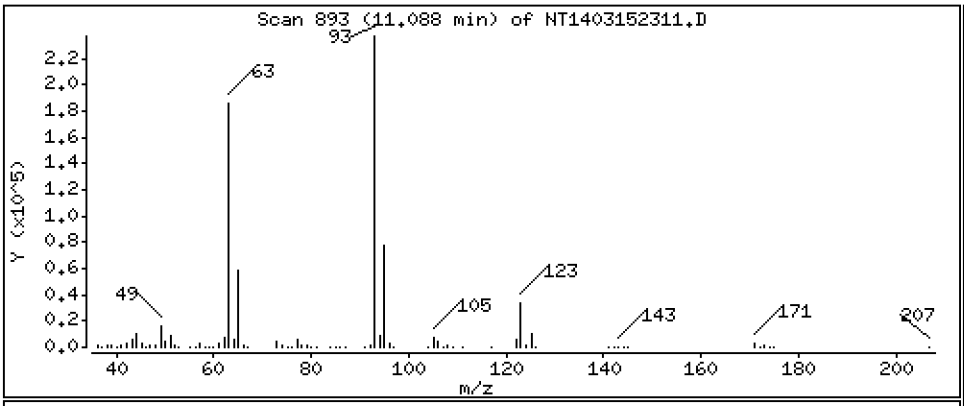
Operator: JGR

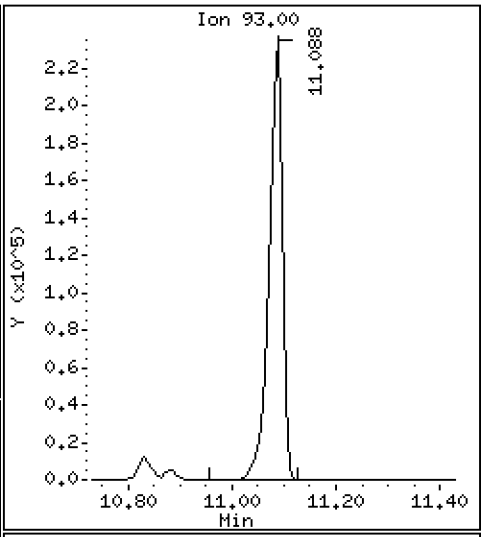
Column phase: ZB-5msi

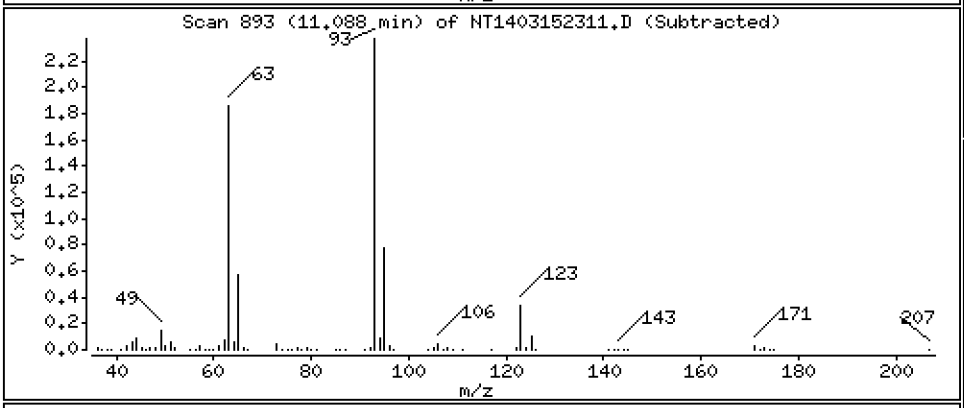
Column diameter: 0.25

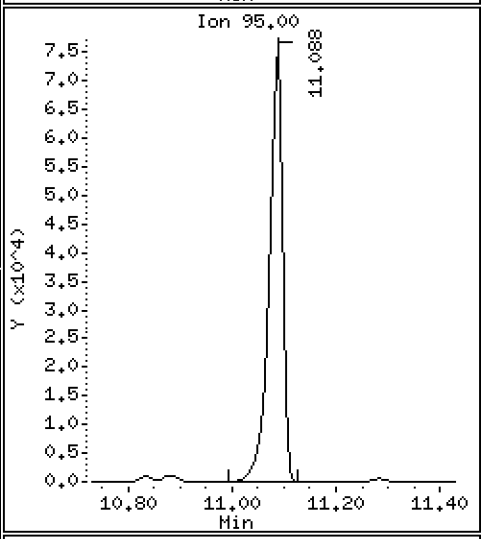
23 Bis(2-Chloroethoxy)methane

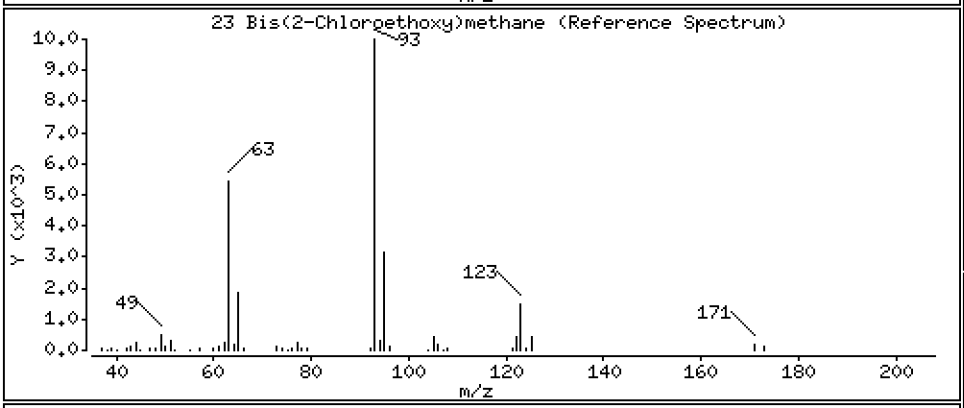
Concentration: 5.859 ug/mL

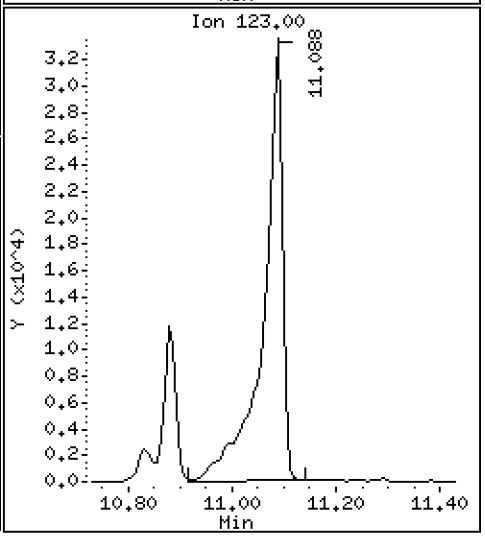


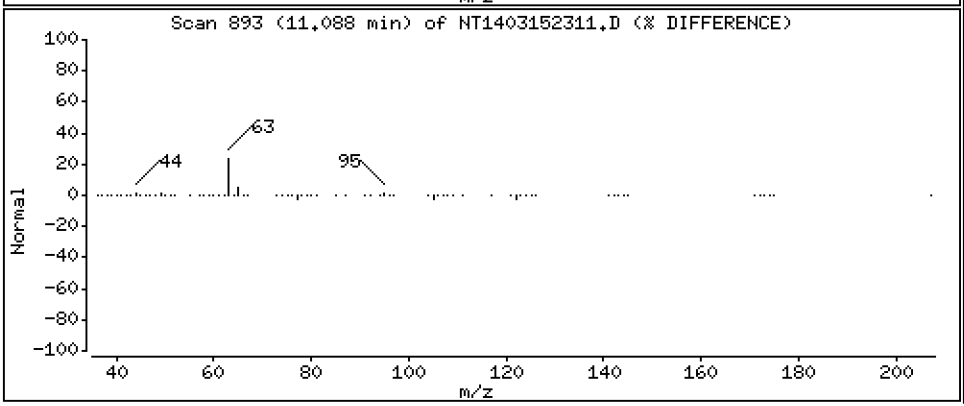












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

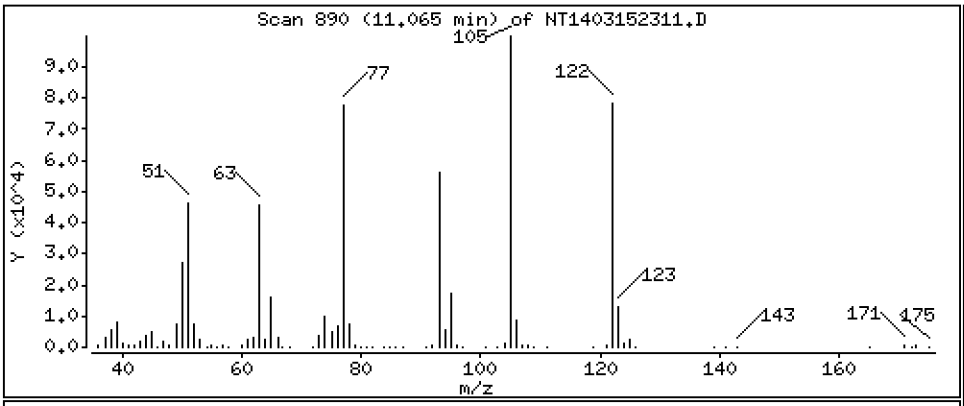
Operator: JGR

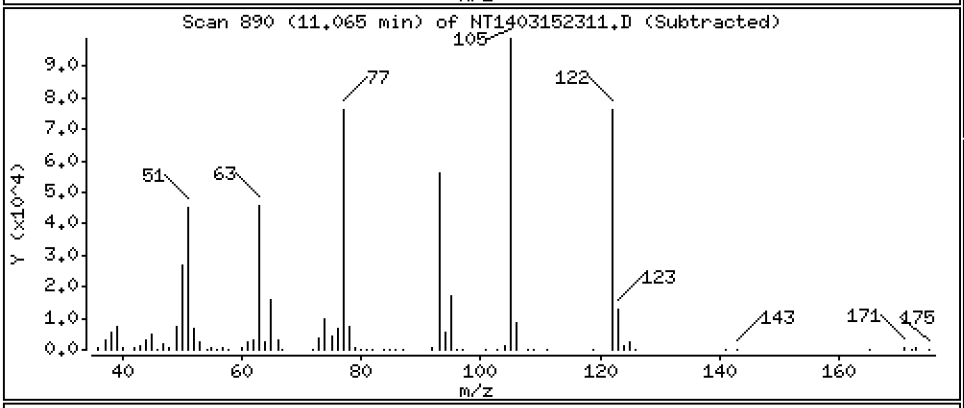
Column phase: ZB-5msi

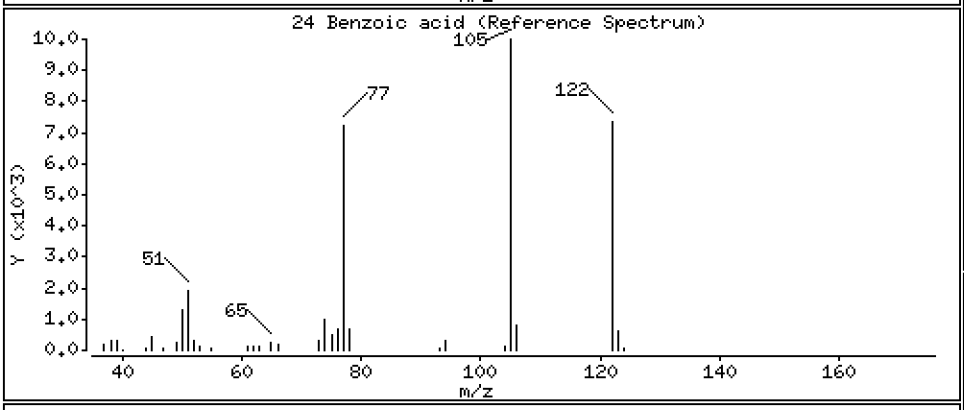
Column diameter: 0.25

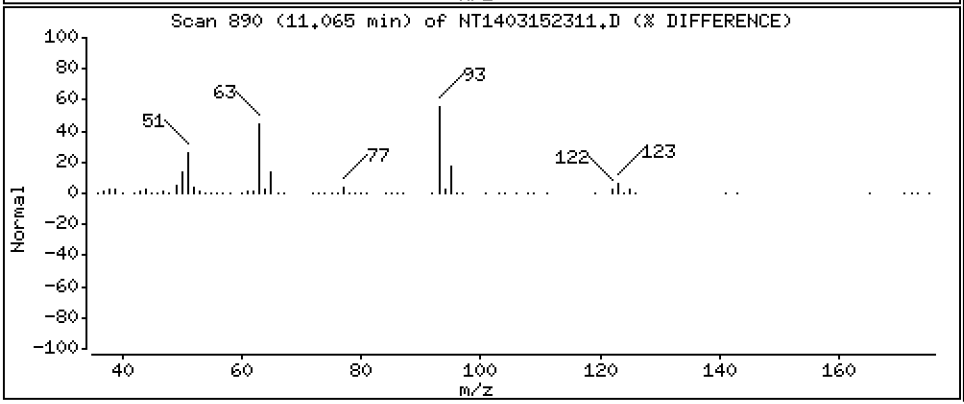
24 Benzoic acid

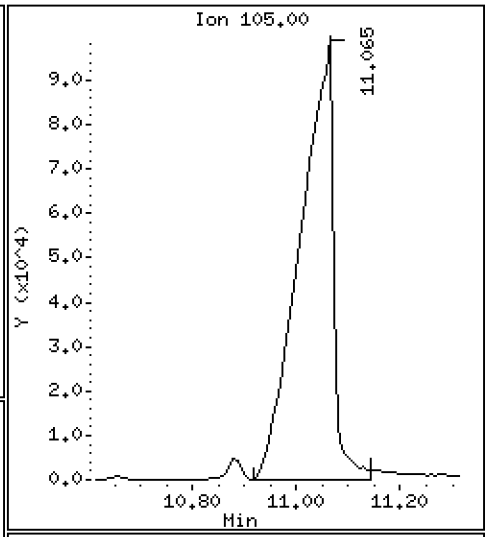
Concentration: 8.248 ug/mL

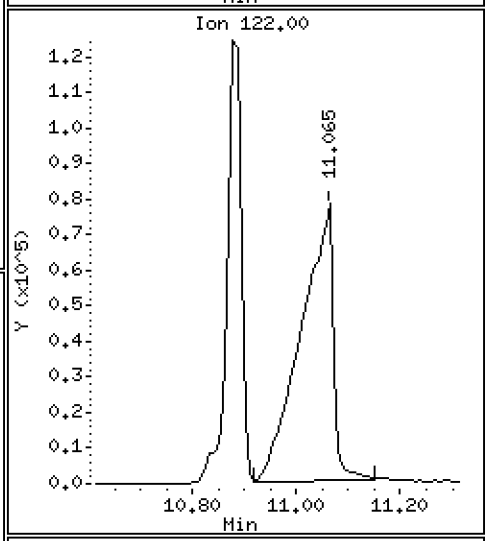


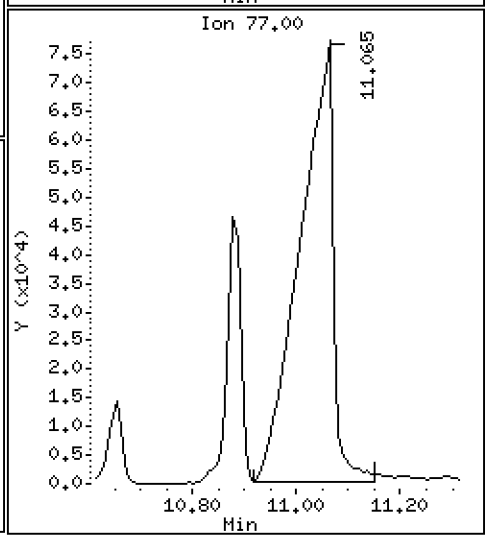












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

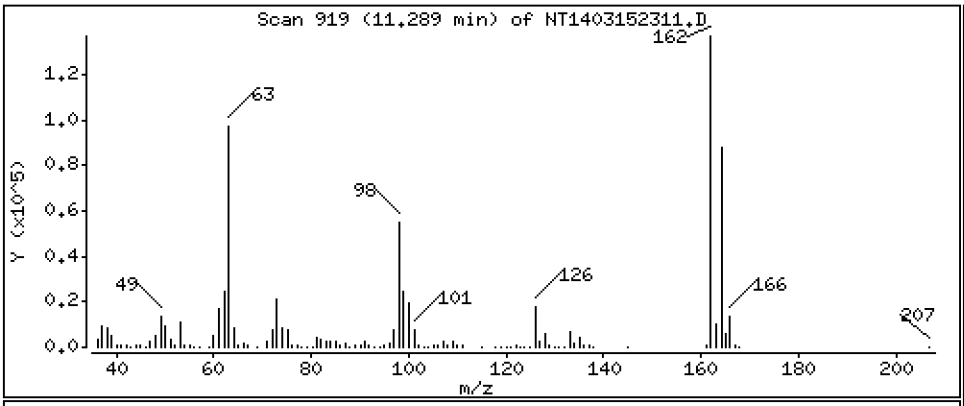
Operator: JGR

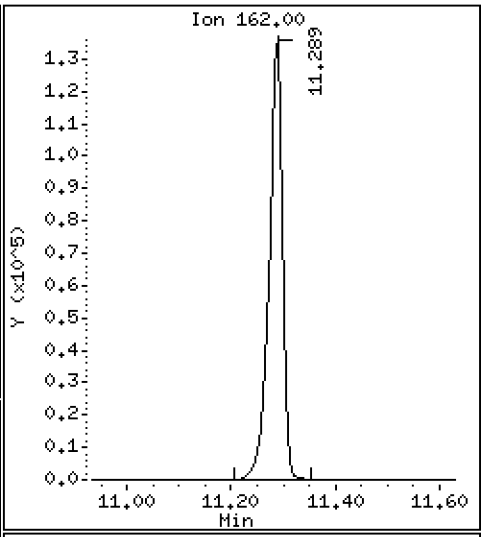
Column phase: ZB-5msi

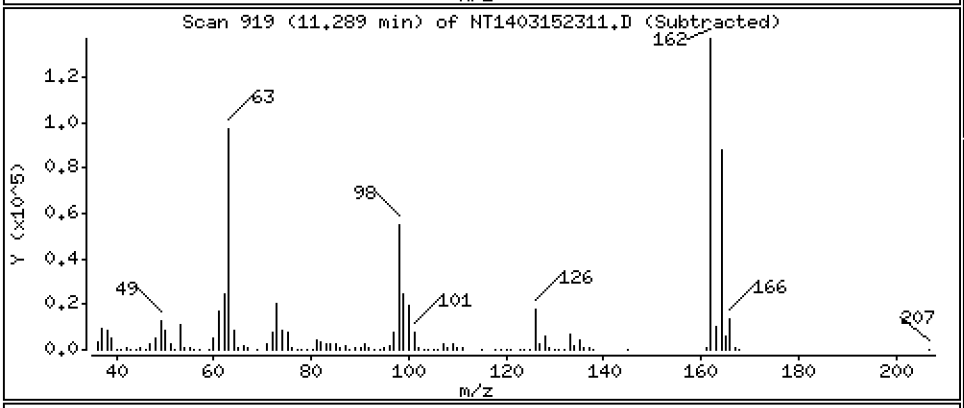
Column diameter: 0.25

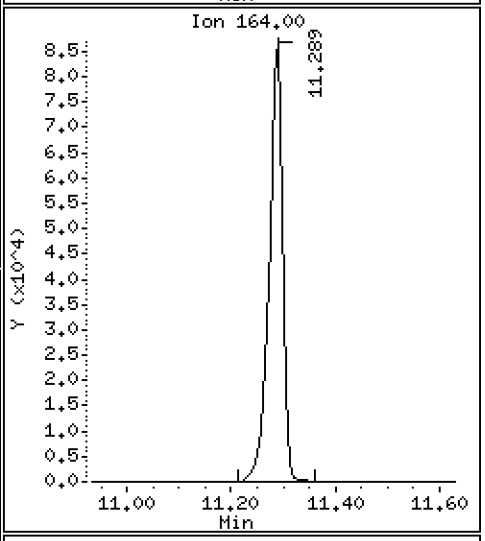
25 2,4-Dichlorophenol

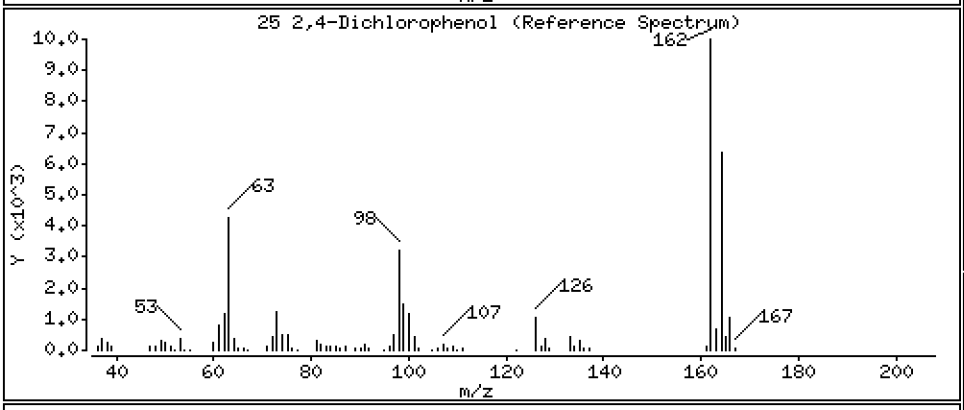
Concentration: 4.779 ug/mL

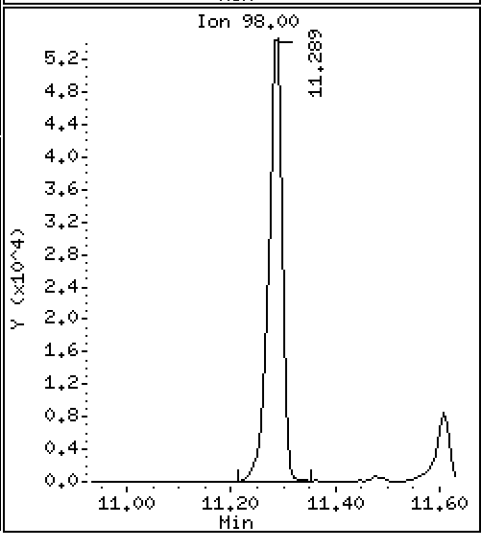


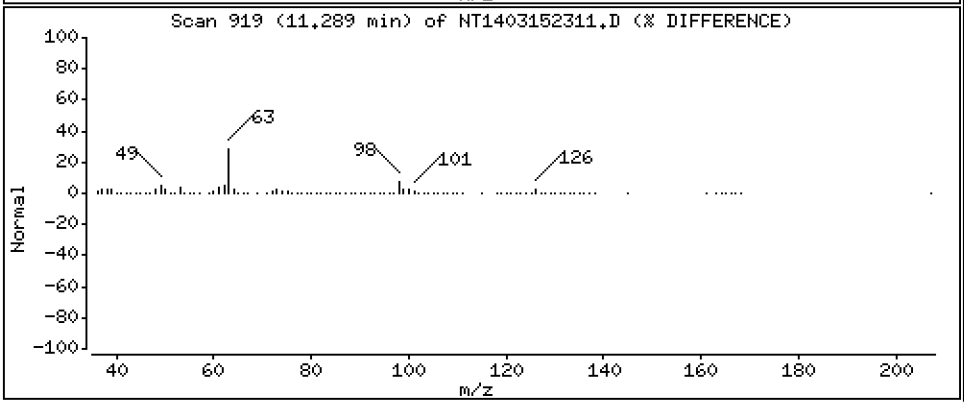












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

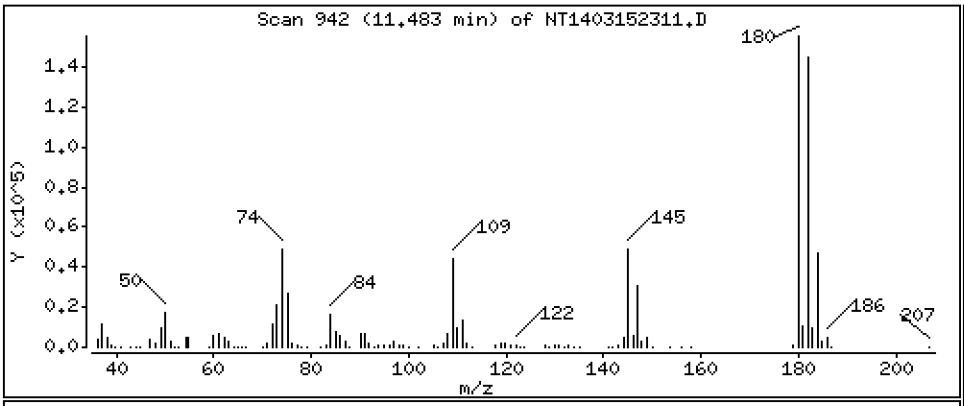
Operator: JGR

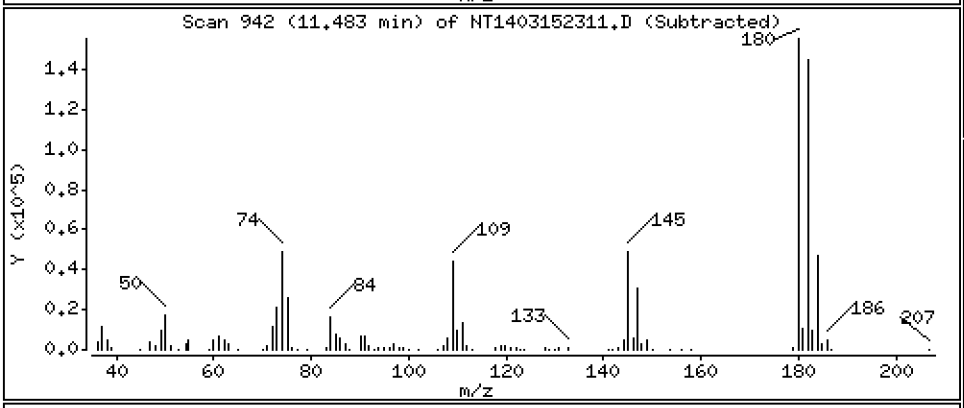
Column phase: ZB-5msi

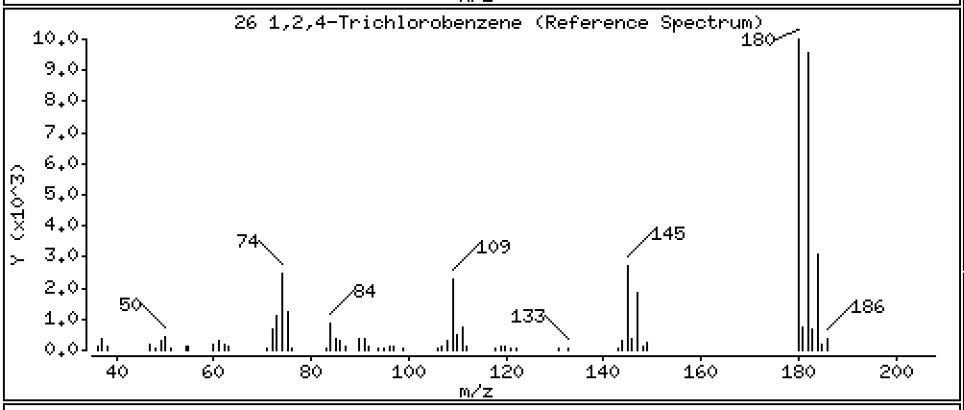
Column diameter: 0.25

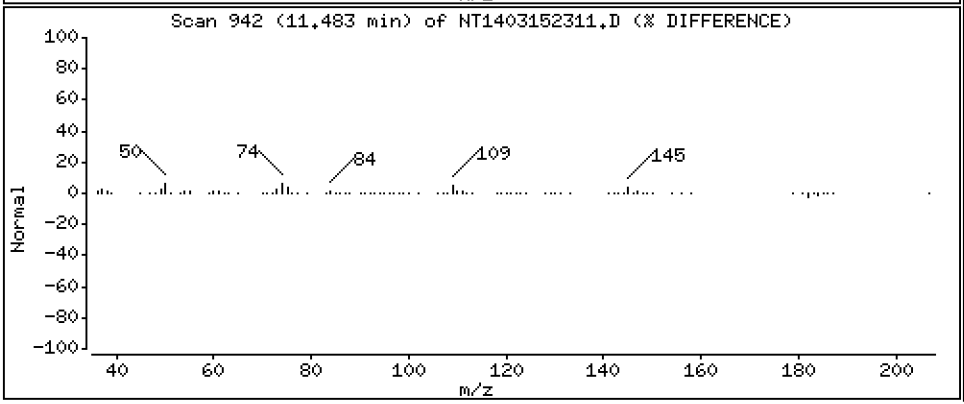
26 1,2,4-Trichlorobenzene

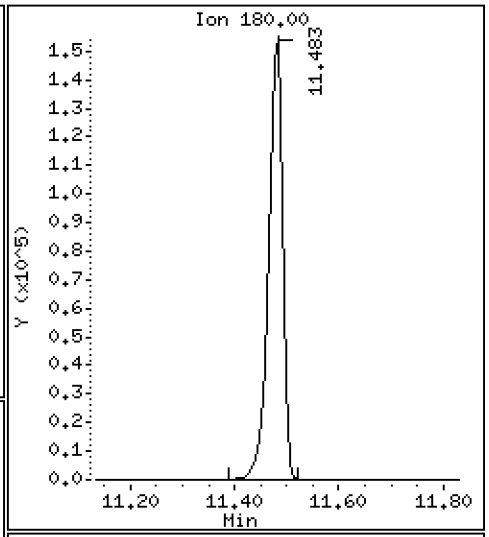
Concentration: 5.052 ug/mL

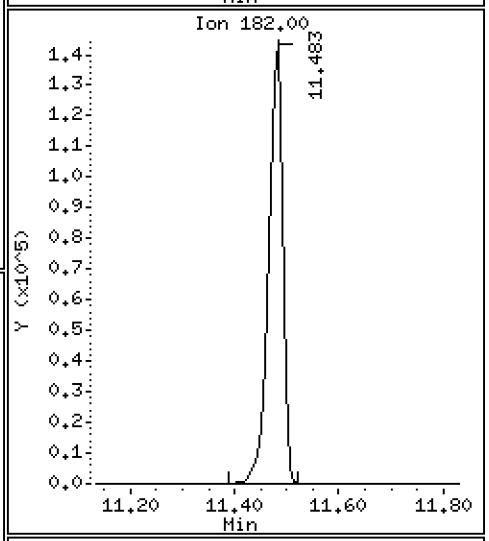


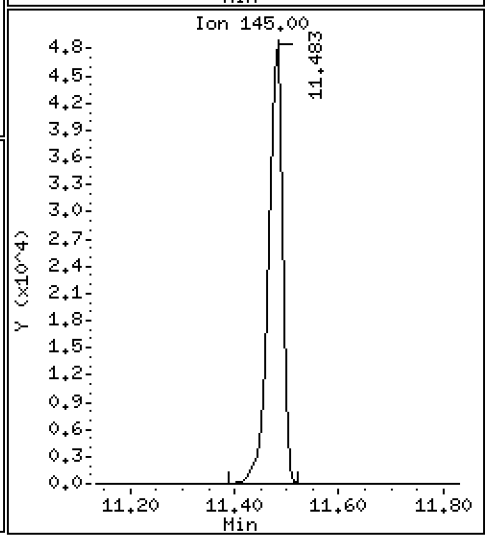












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

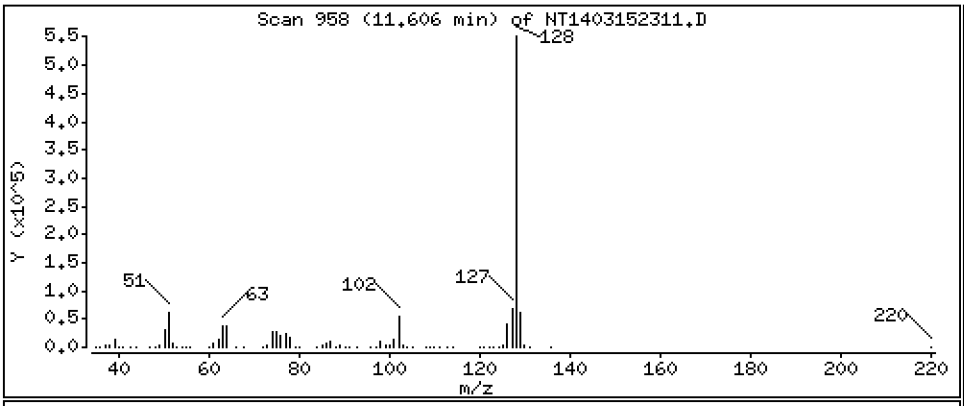
Operator: JGR

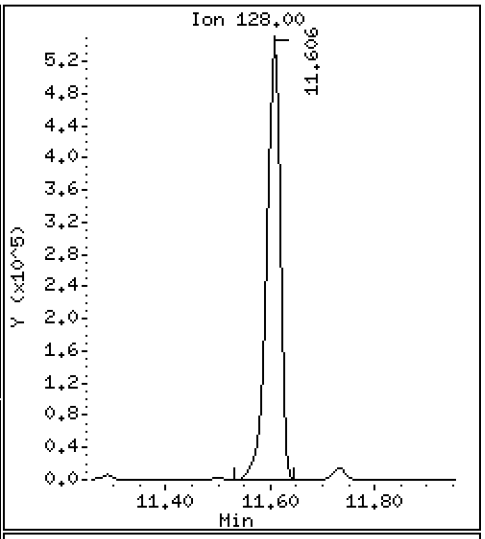
Column phase: ZB-5msi

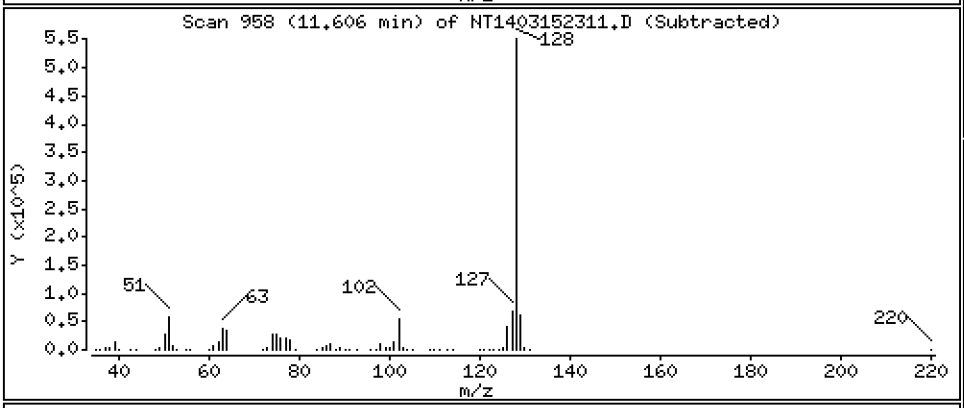
Column diameter: 0.25

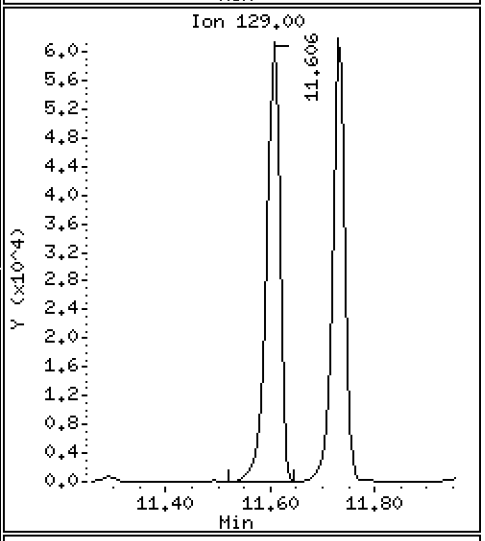
28 Naphthalene

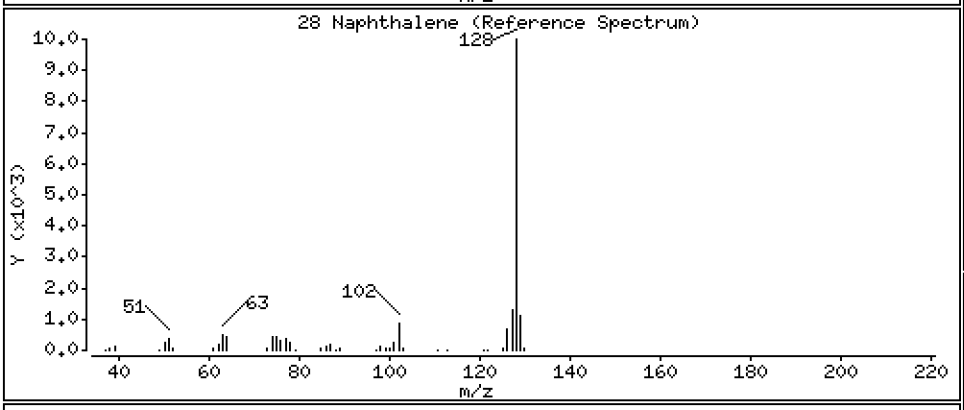
Concentration: 4.829 ug/mL

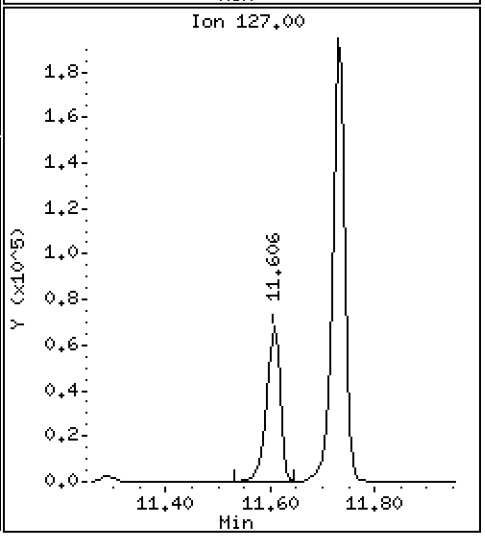


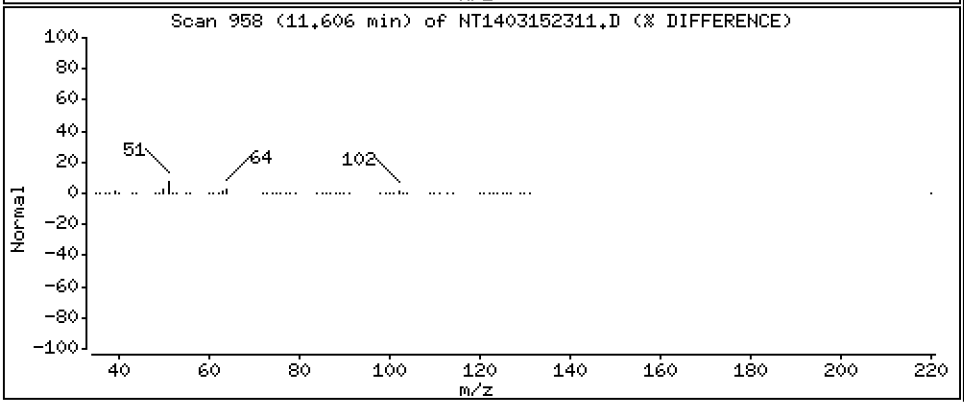












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

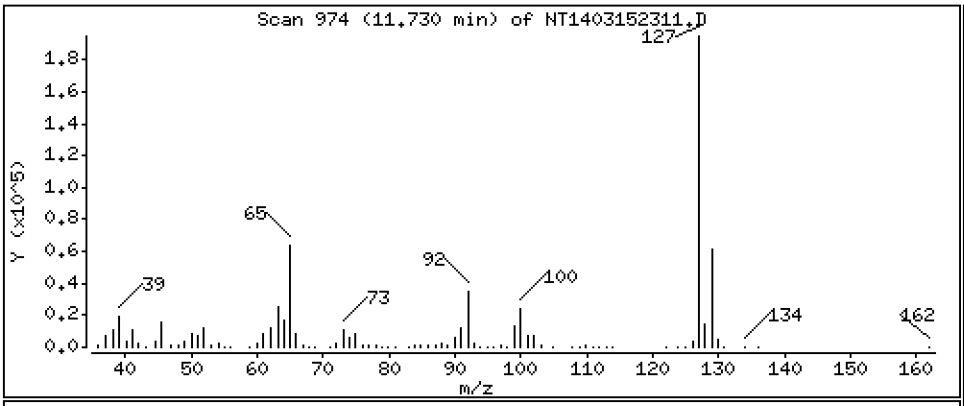
Operator: JGR

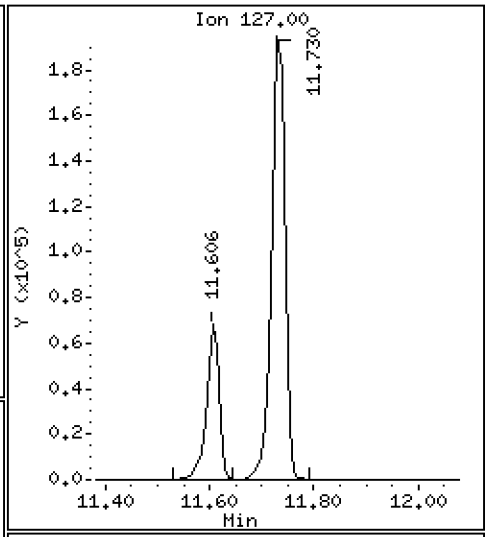
Column phase: ZB-5msi

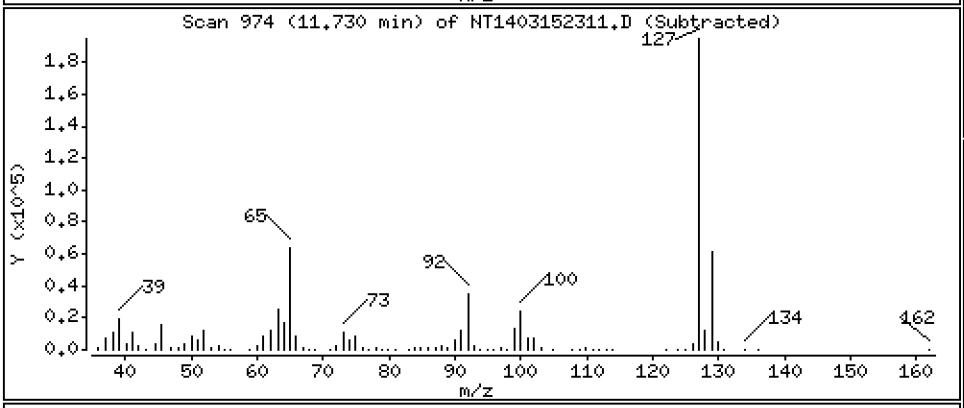
Column diameter: 0.25

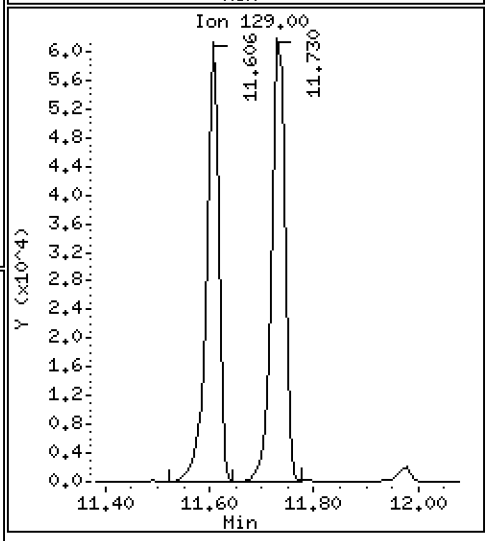
29 4-Chloroaniline

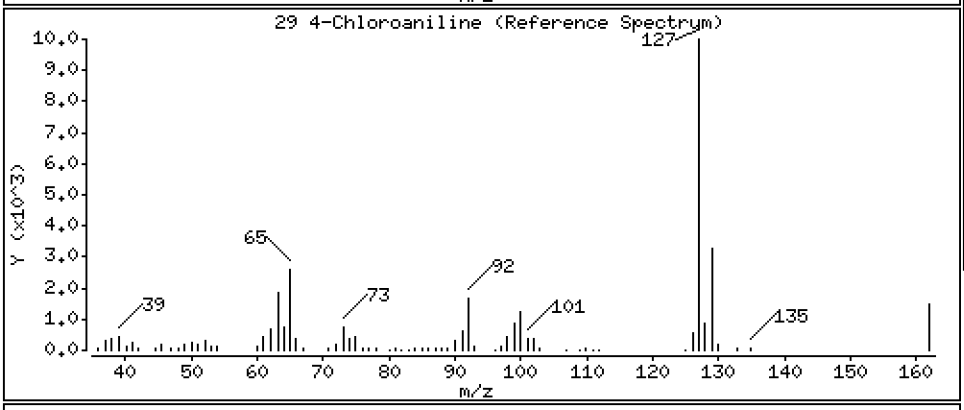
Concentration: 4.033 ug/mL

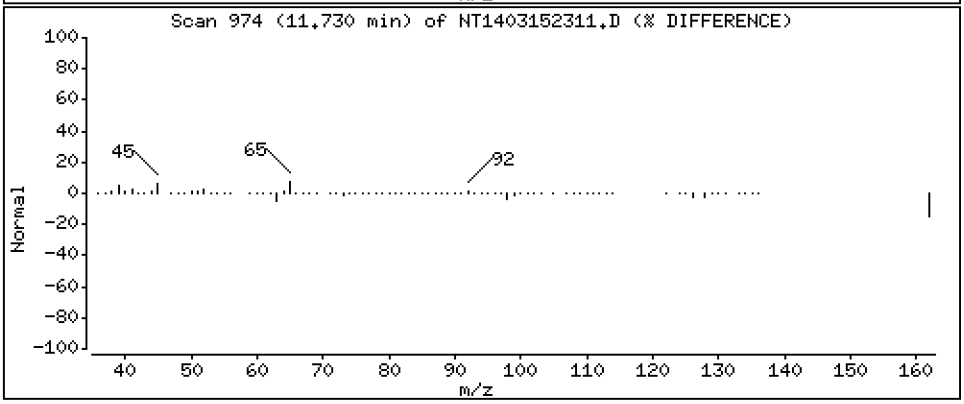












Data File: \\target\share\chem3\nt14.i\20230315.b\NT1403152311.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

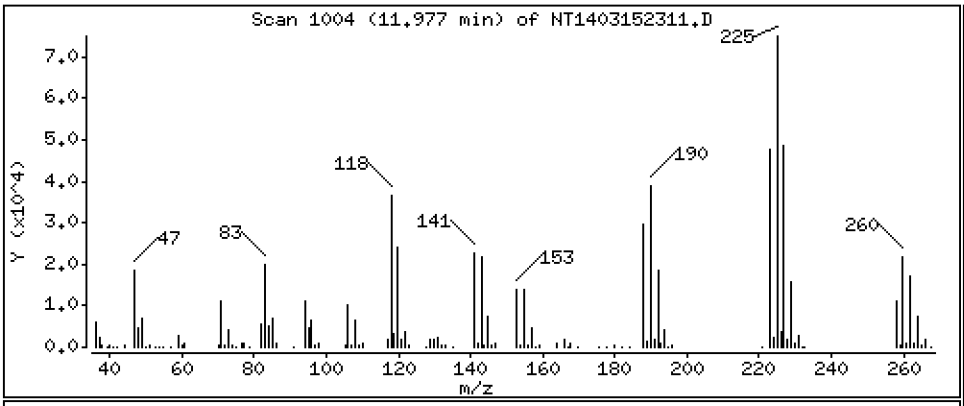
Operator: JGR

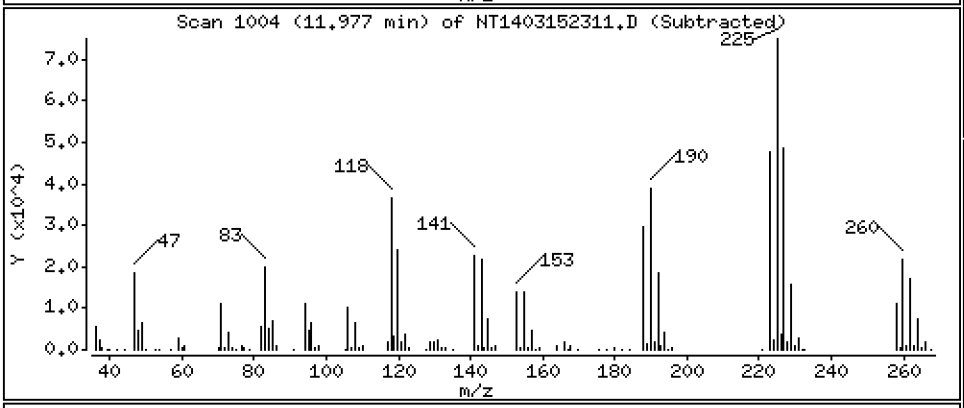
Column phase: ZB-5msi

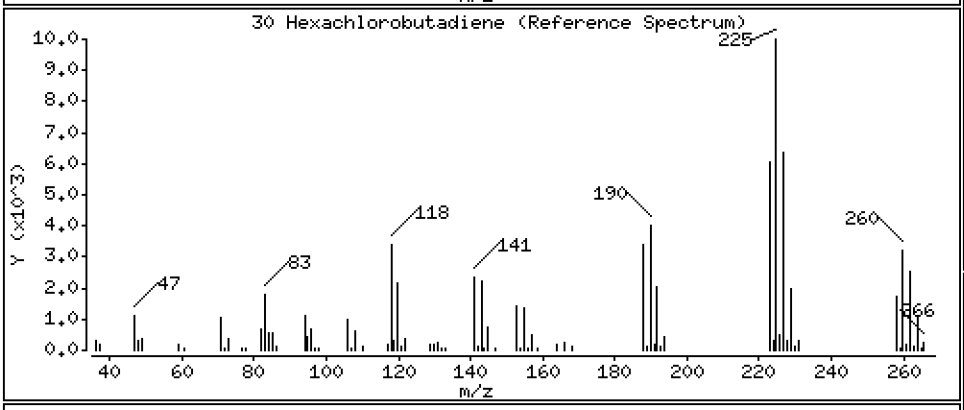
Column diameter: 0.25

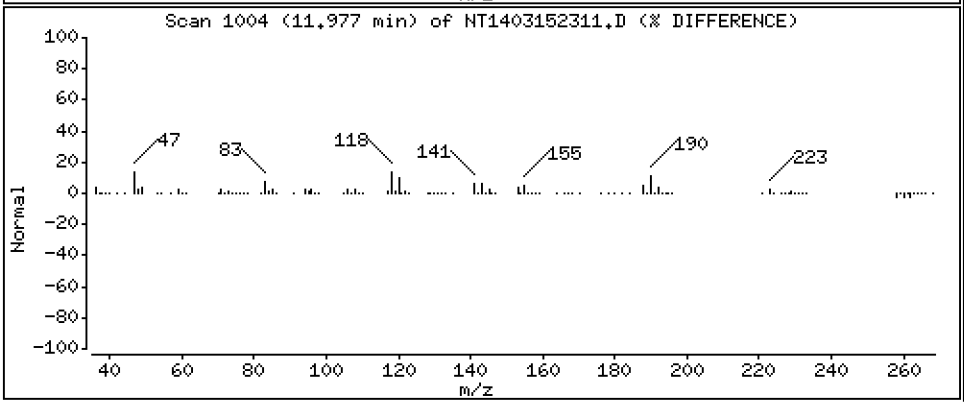
30 Hexachlorobutadiene

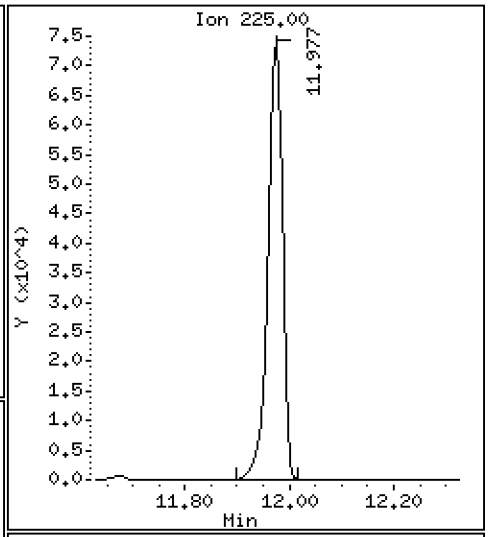
Concentration: 4.908 ug/mL

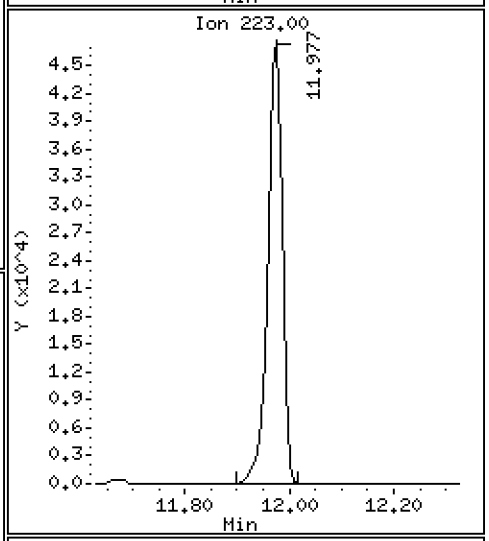


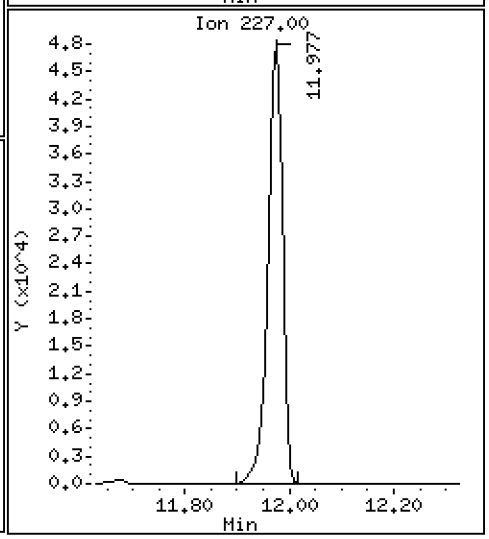












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

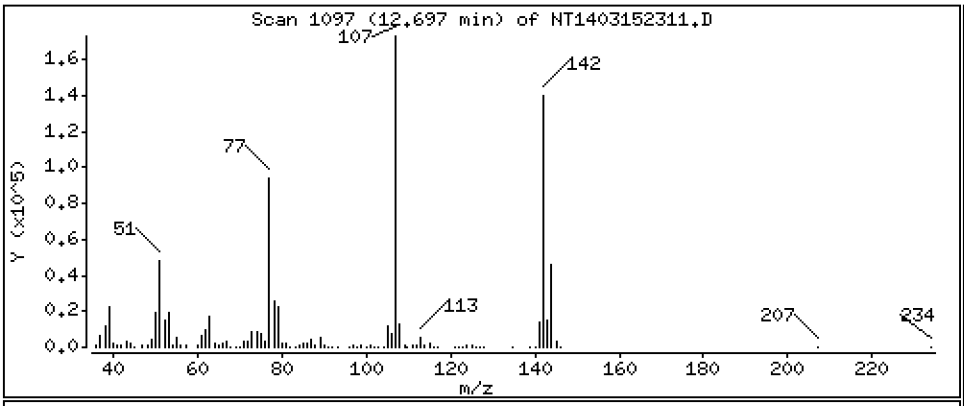
Operator: JGR

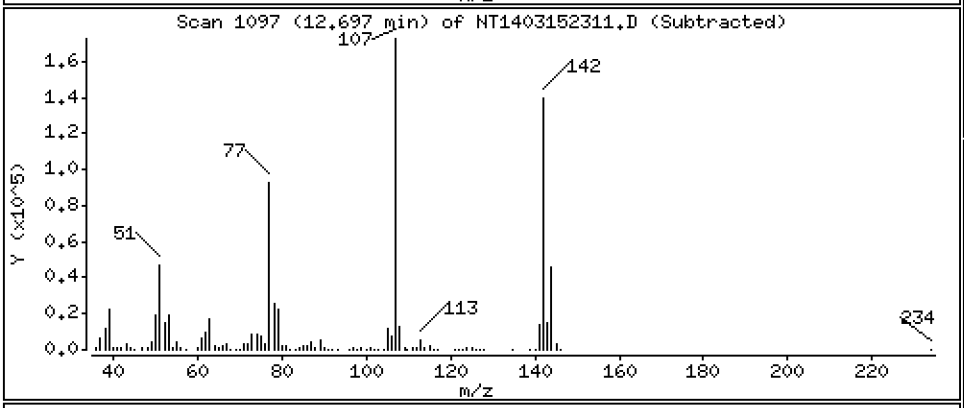
Column phase: ZB-5msi

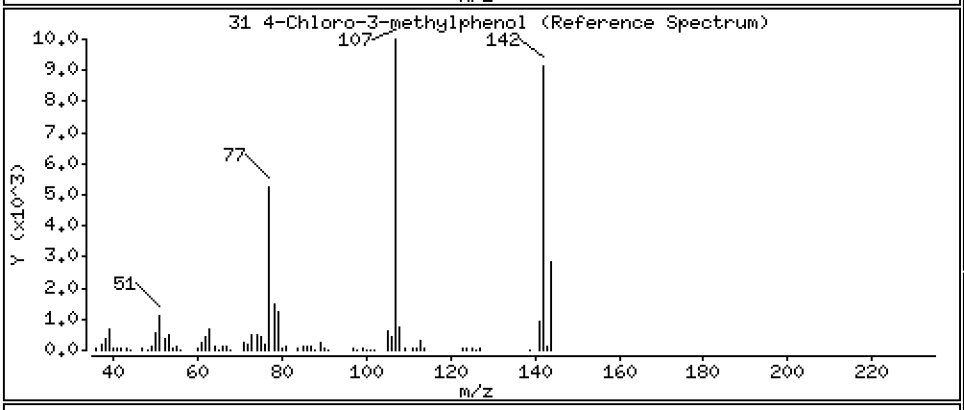
Column diameter: 0.25

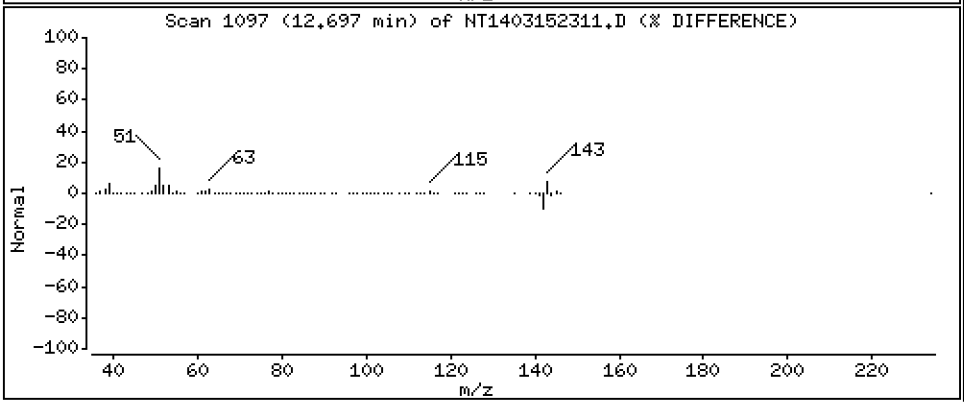
31 4-Chloro-3-methylphenol

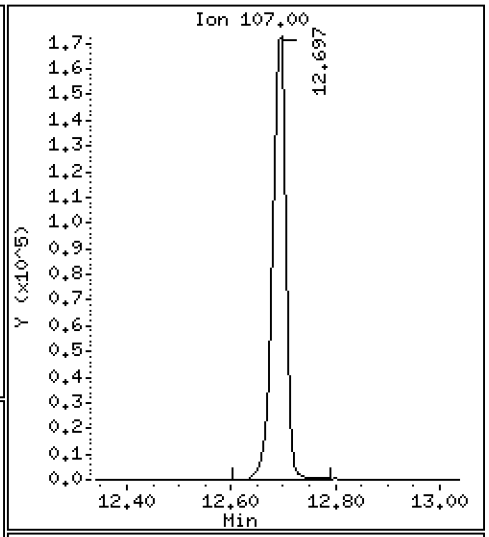
Concentration: 4.852 ug/mL

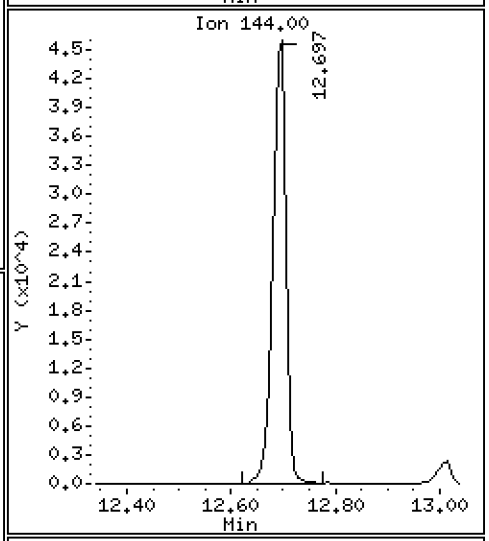


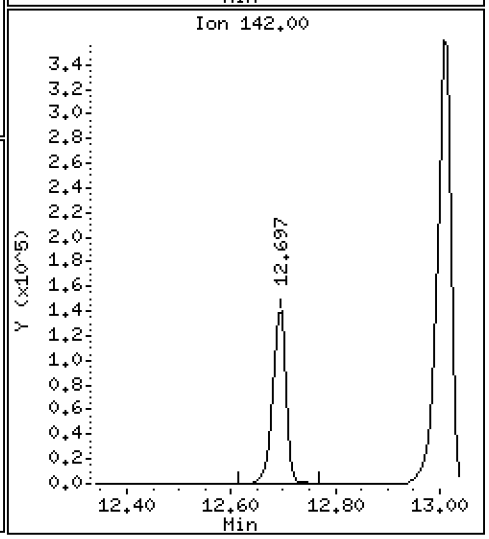












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

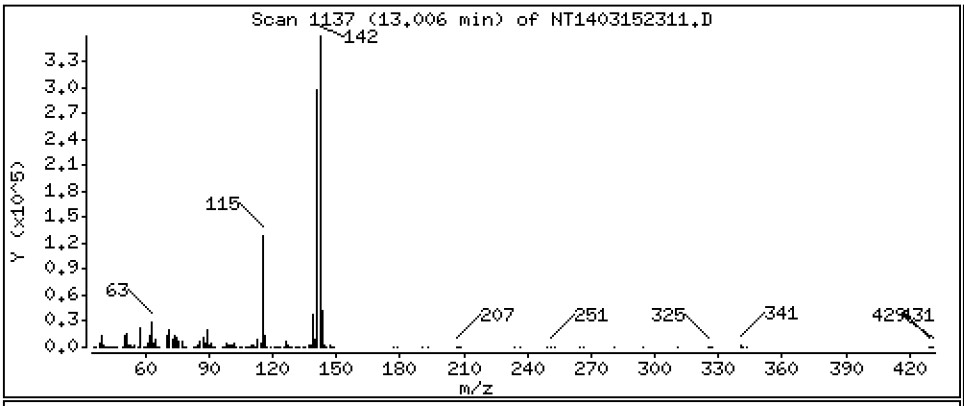
Operator: JGR

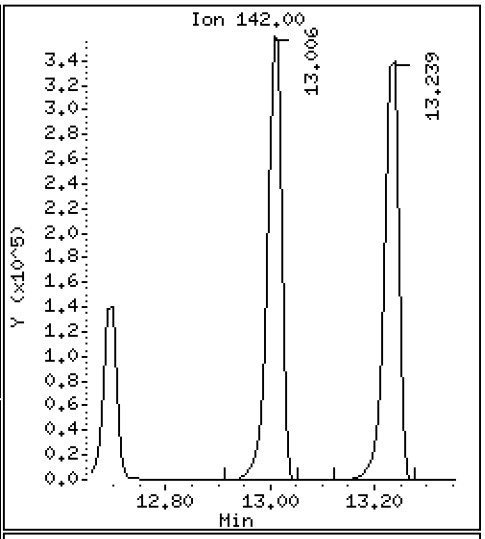
Column phase: ZB-5msi

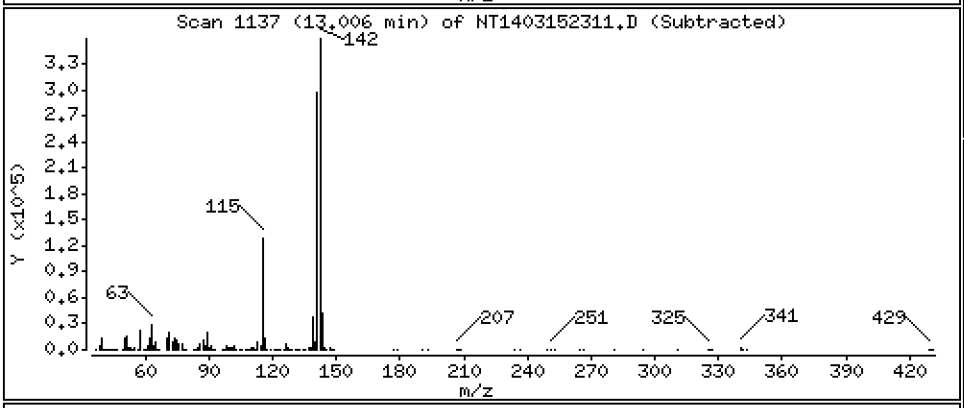
Column diameter: 0.25

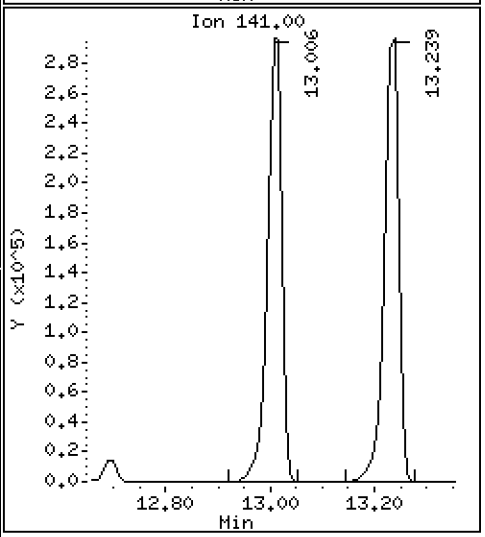
32 2-Methylnaphthalene

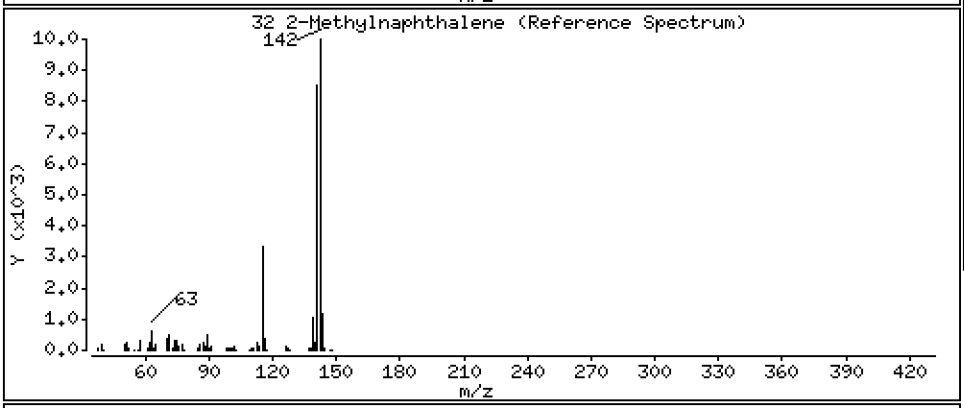
Concentration: 4.854 ug/mL

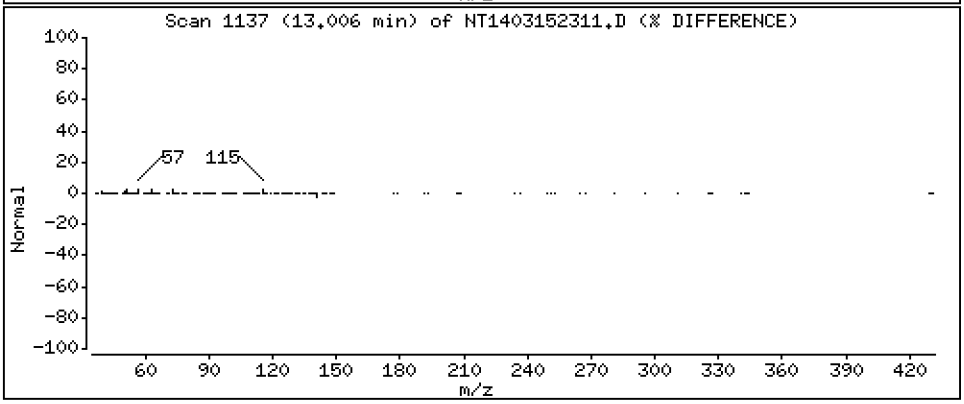












Data File: \\target\share\chem3\nt14.i\20230315.b\NT1403152311.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

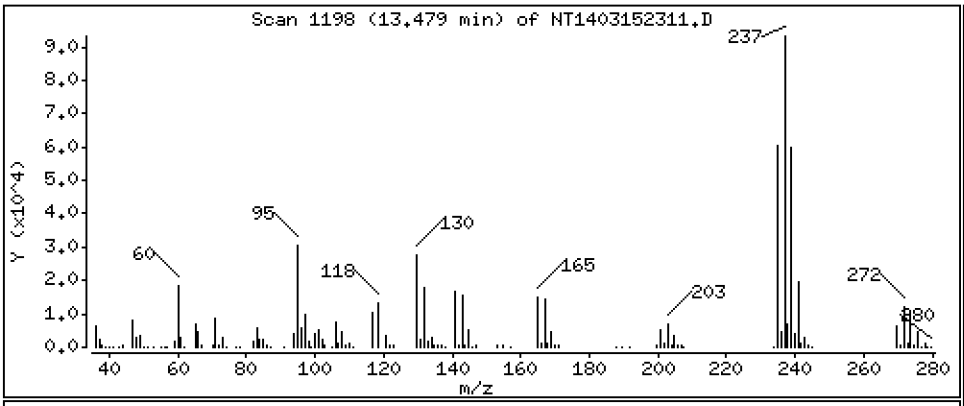
Operator: JGR

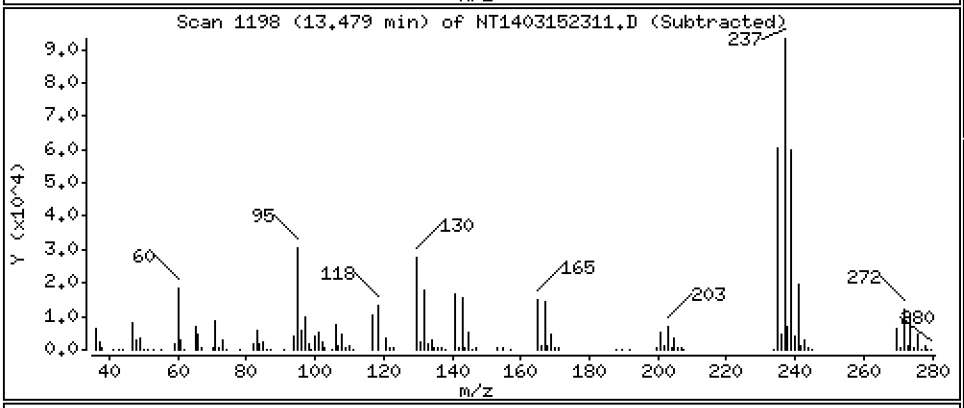
Column phase: ZB-5msi

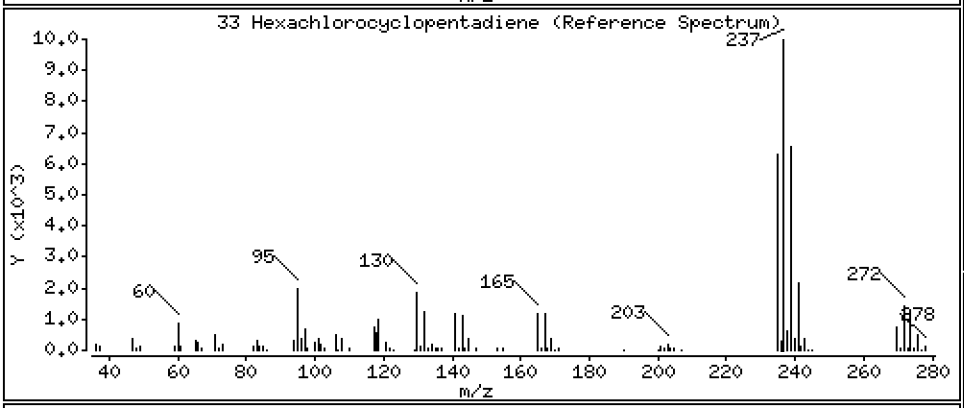
Column diameter: 0.25

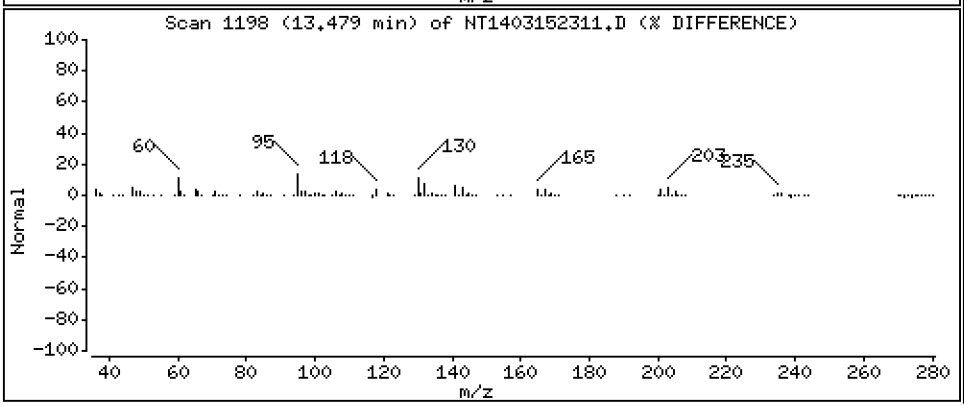
33 Hexachlorocyclopentadiene

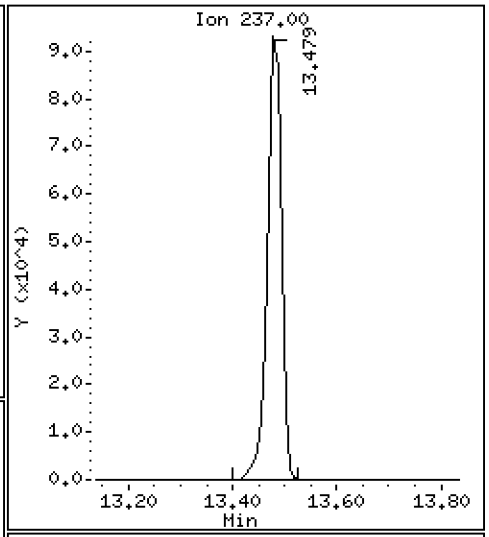
Concentration: 5.230 ug/mL

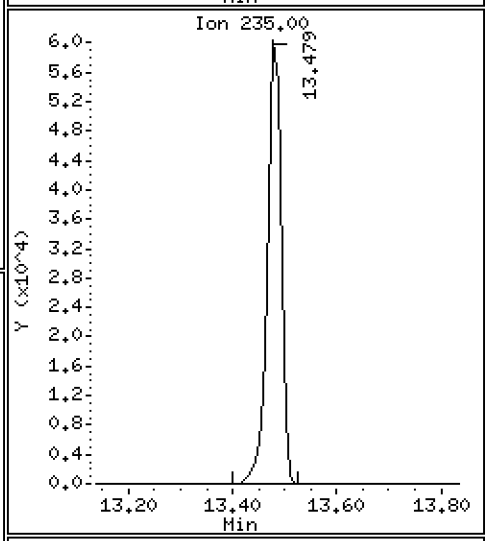


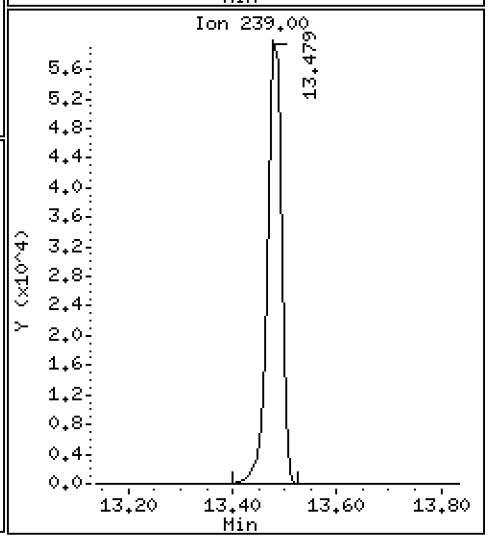












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

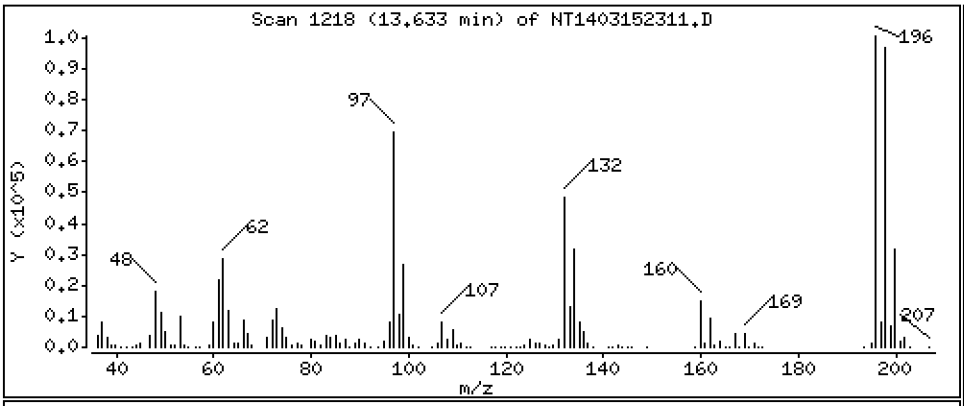
Operator: JGR

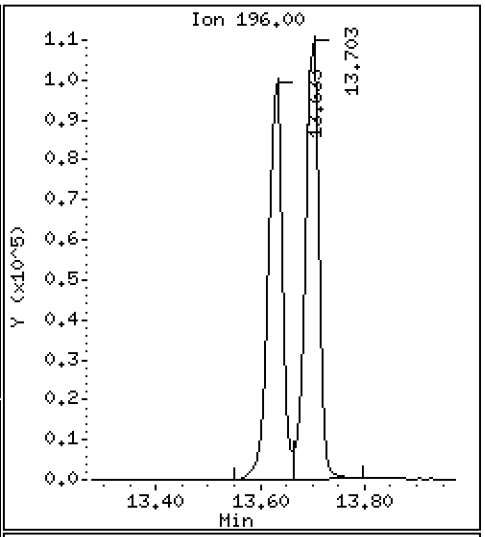
Column phase: ZB-5msi

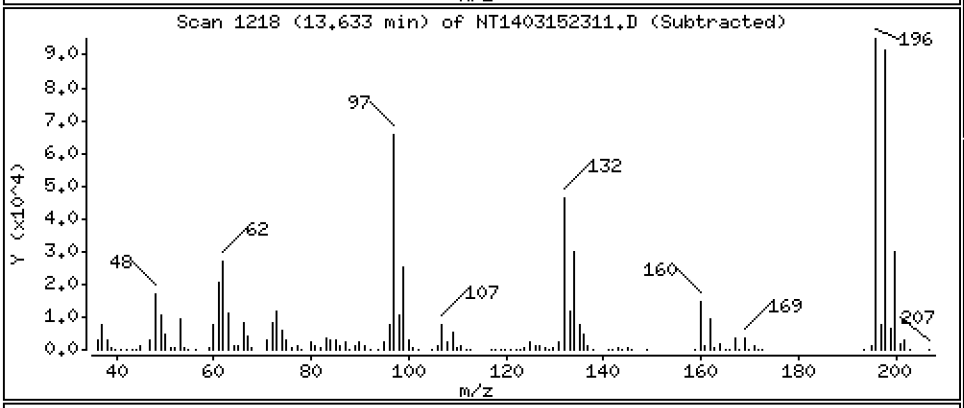
Column diameter: 0.25

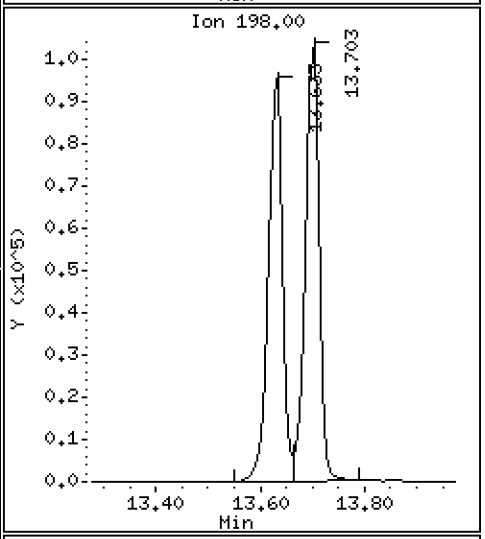
34 2,4,6-Trichlorophenol

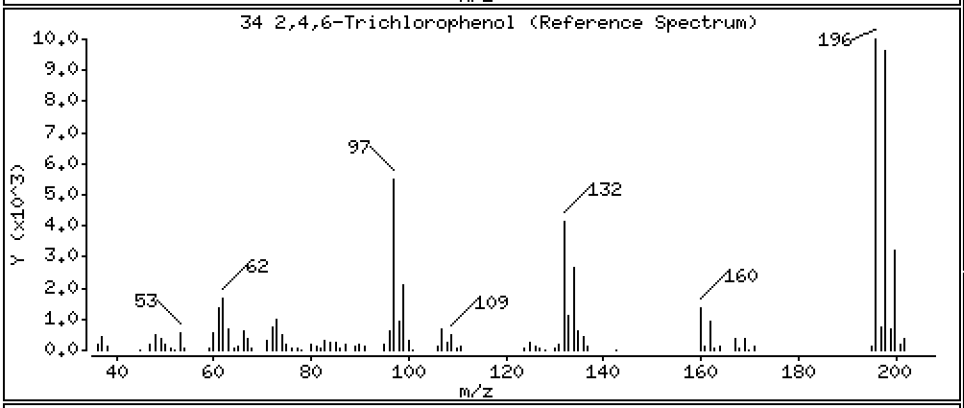
Concentration: 4.718 ug/mL

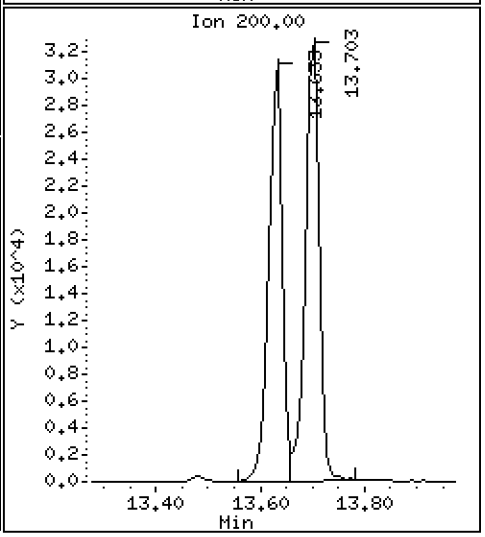


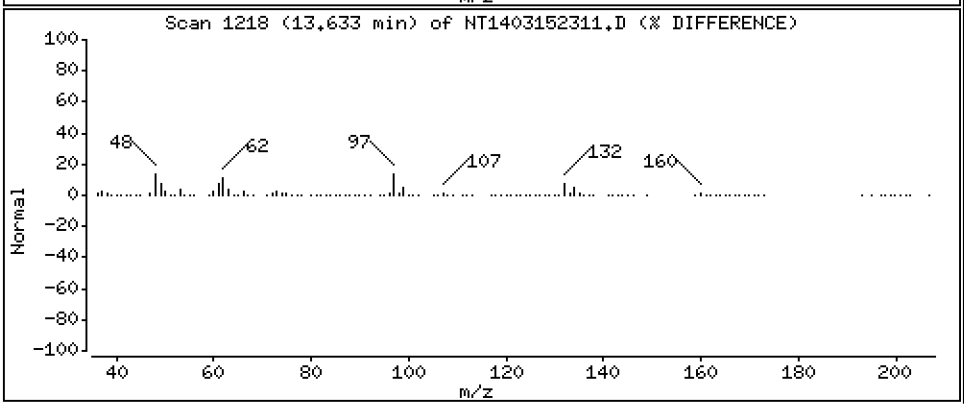












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

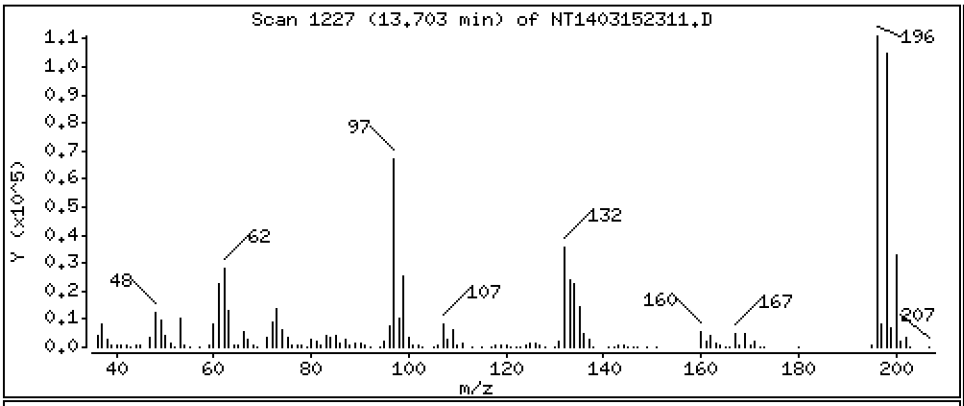
Operator: JGR

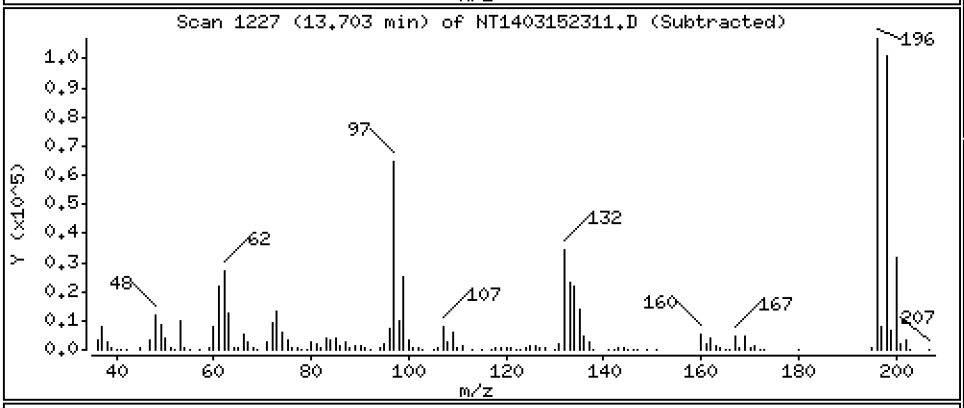
Column phase: ZB-5msi

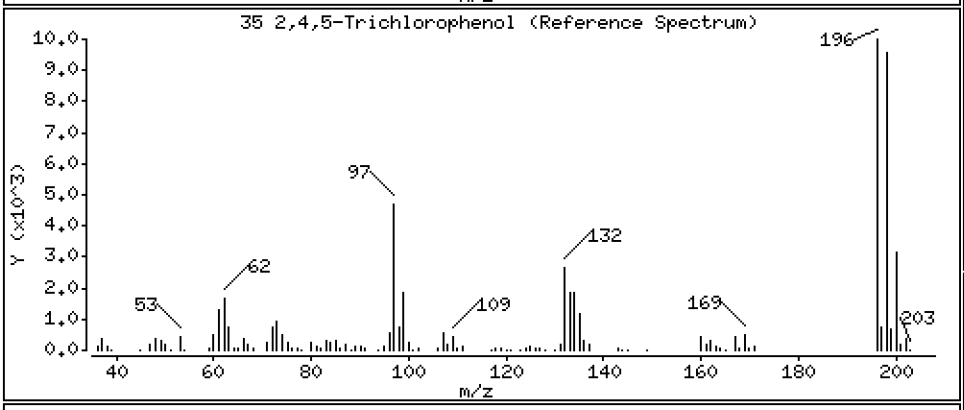
Column diameter: 0.25

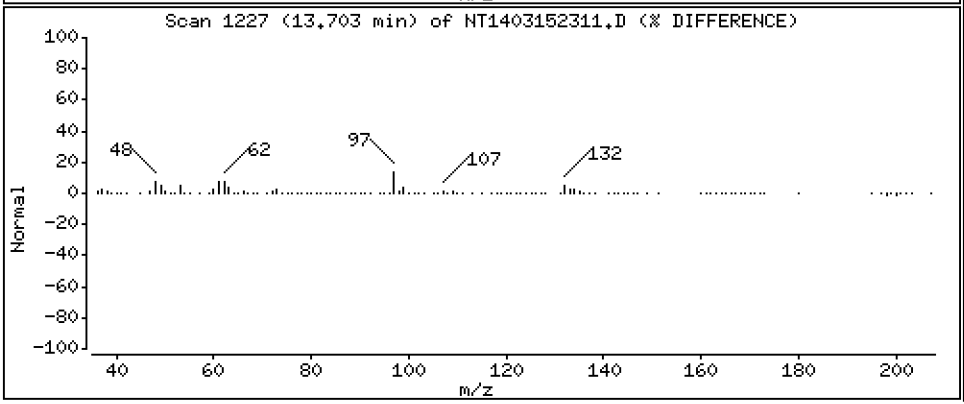
35 2,4,5-Trichlorophenol

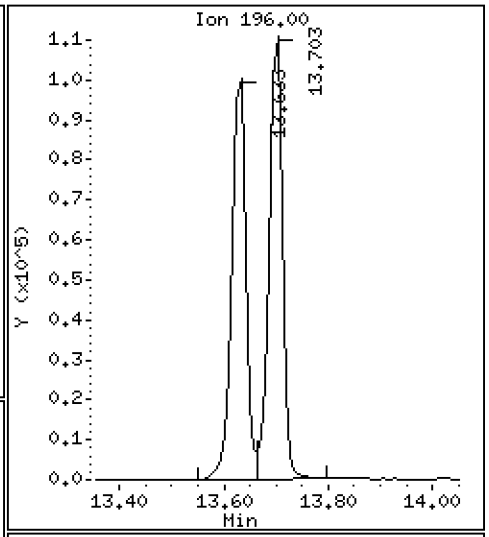
Concentration: 4.661 ug/mL

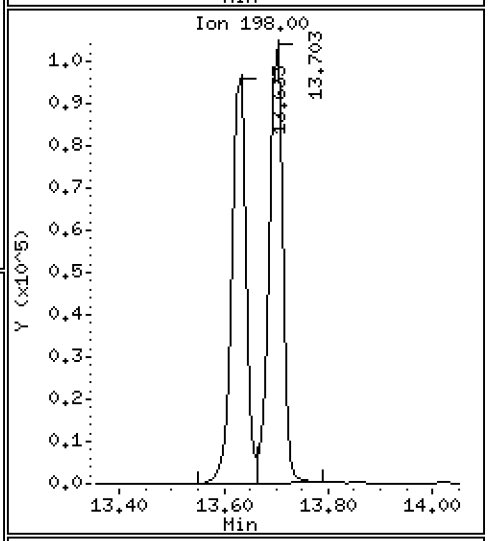


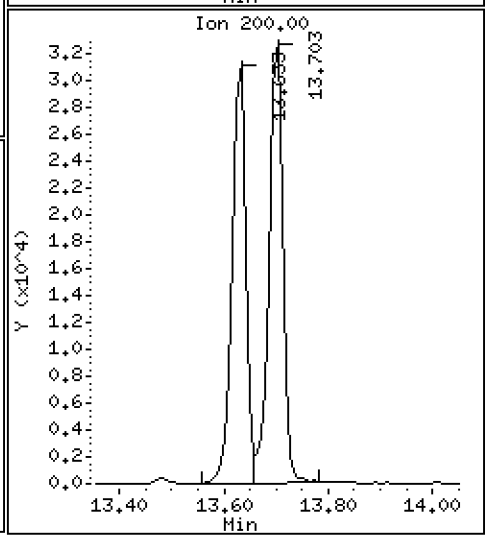












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

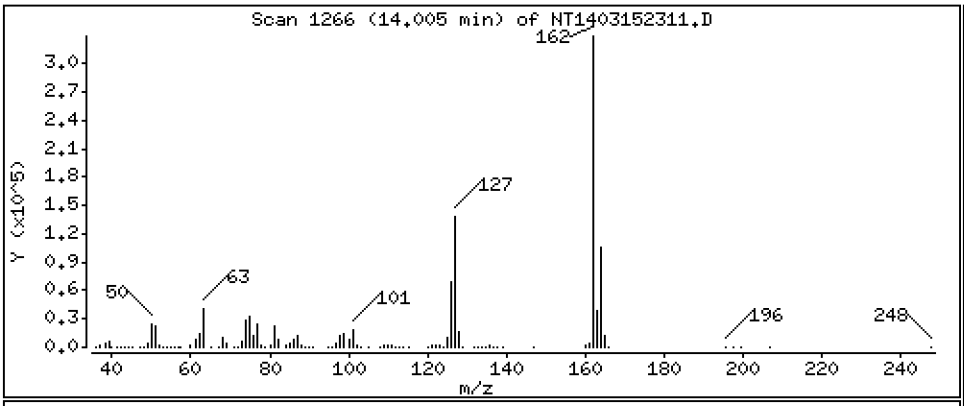
Operator: JGR

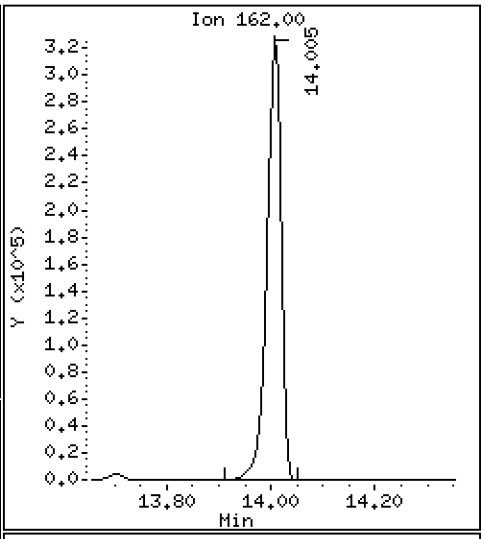
Column phase: ZB-5msi

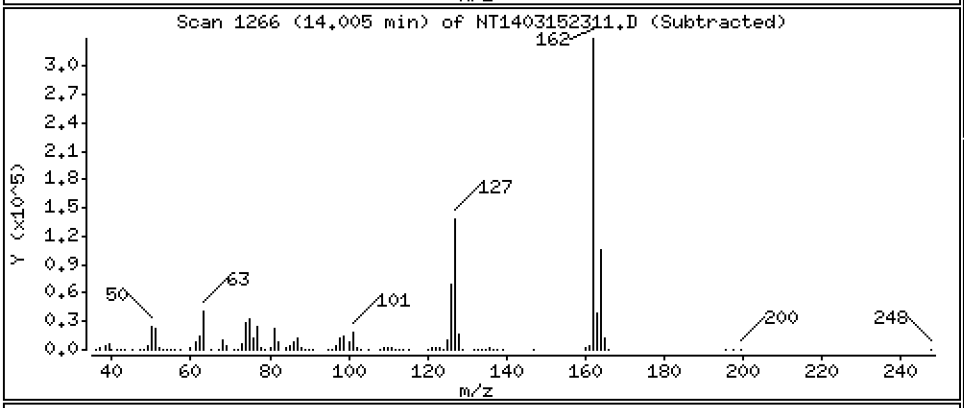
Column diameter: 0.25

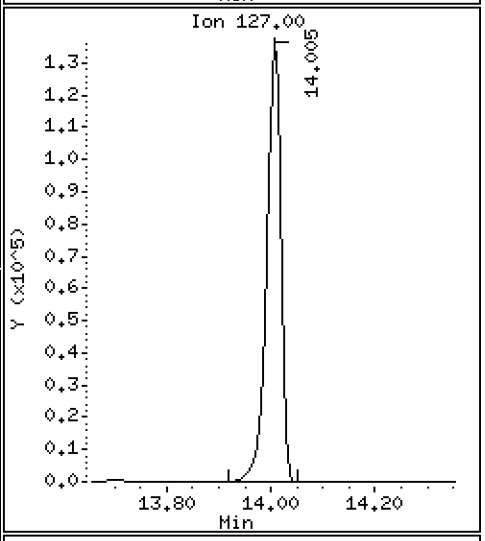
37 2-Chloronaphthalene

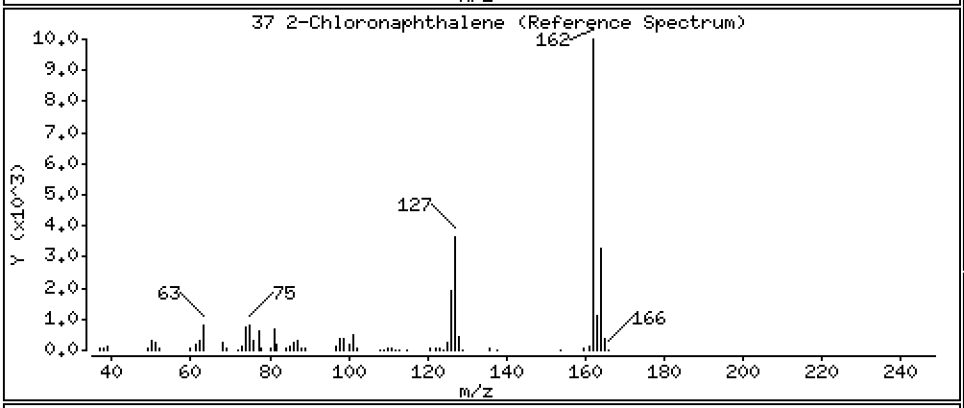
Concentration: 4.977 ug/mL

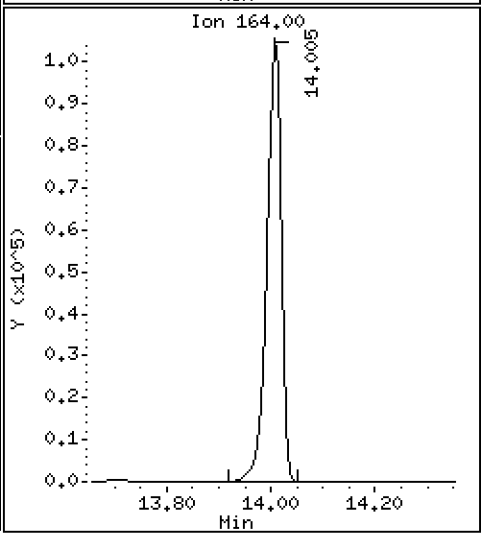


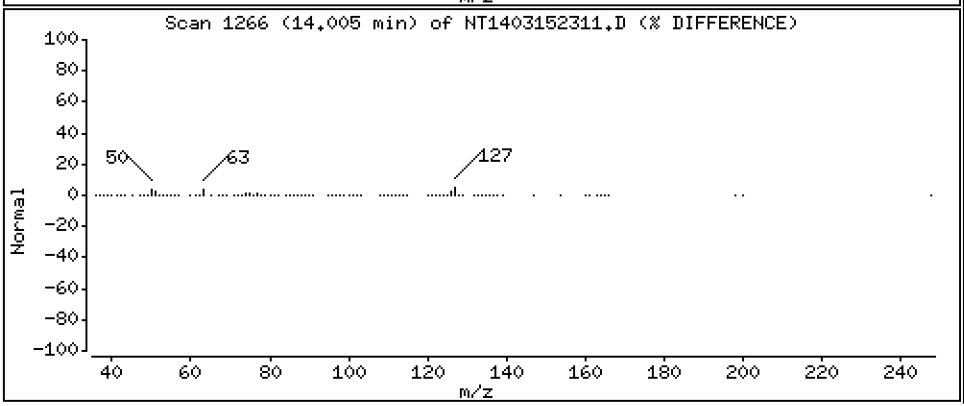












Data File: \\target\share\chem3\nt14.i\20230315.b\NT1403152311.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

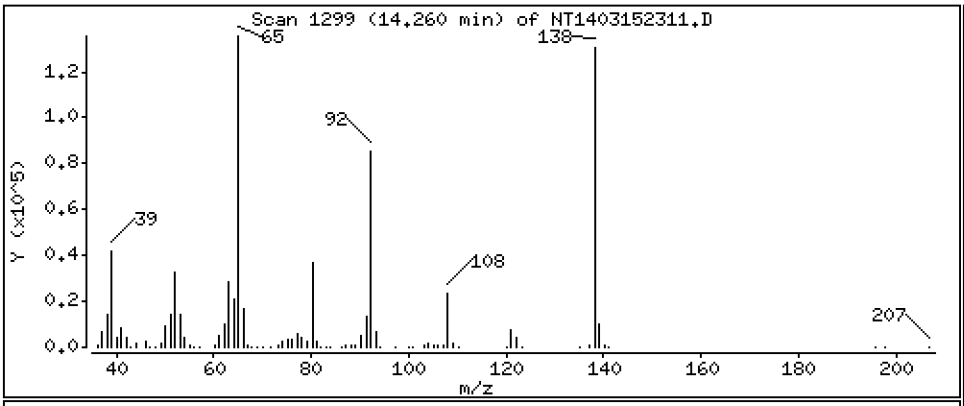
Operator: JGR

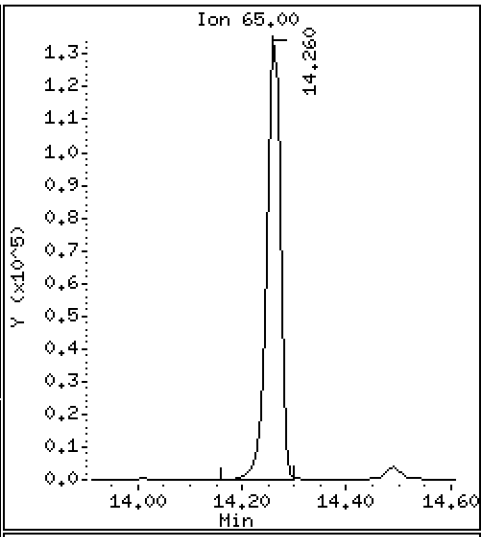
Column phase: ZB-5msi

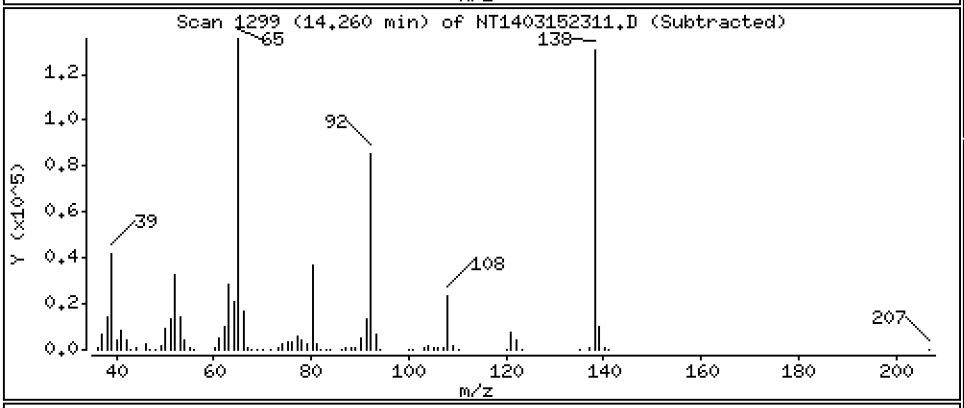
Column diameter: 0.25

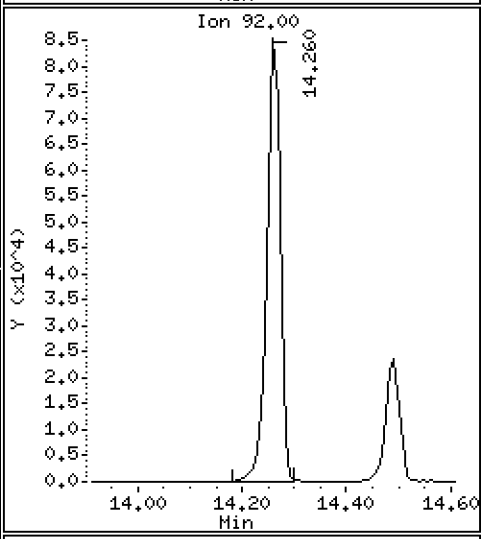
38 2-Nitroaniline

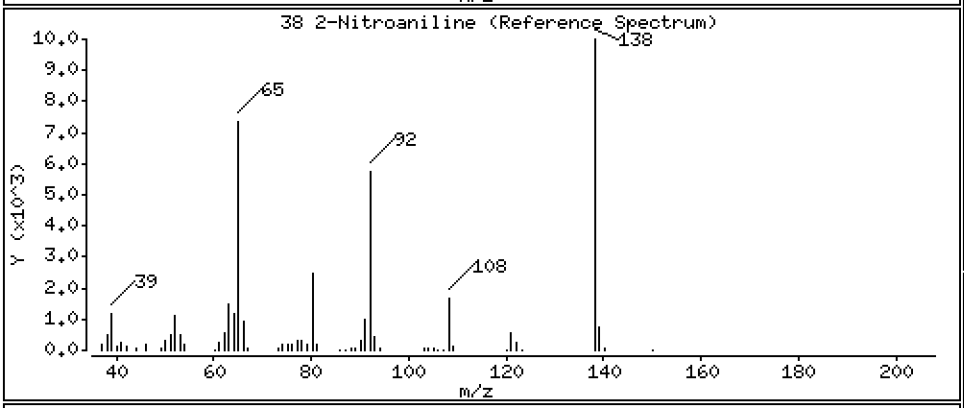
Concentration: 5.100 ug/mL

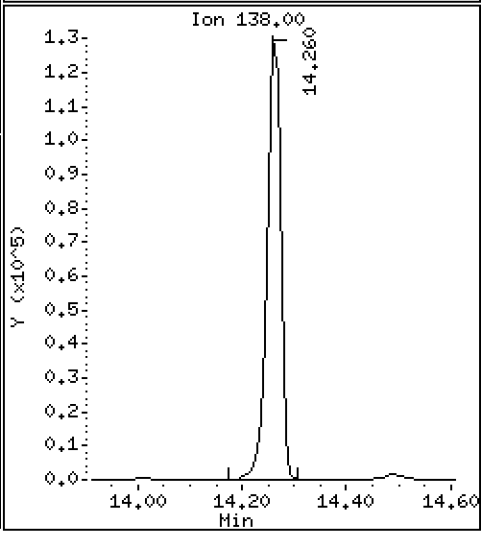


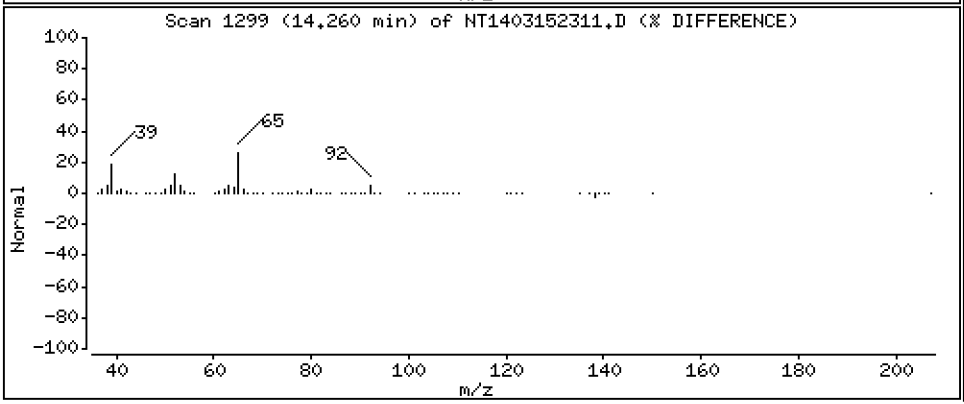












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

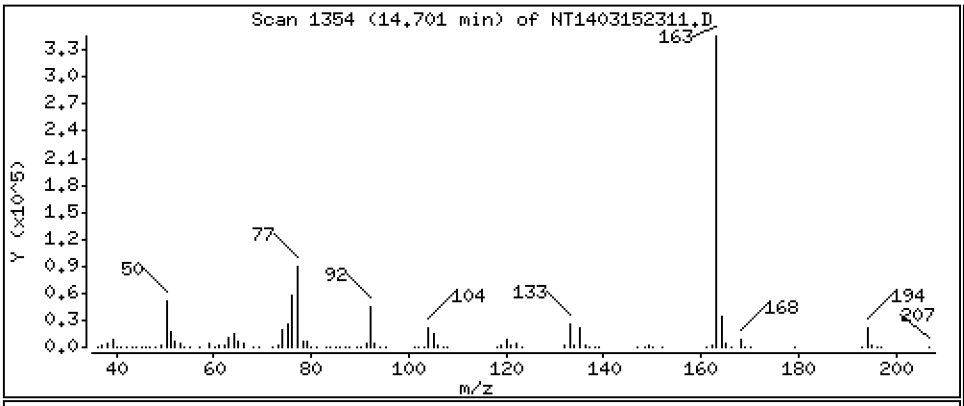
Operator: JGR

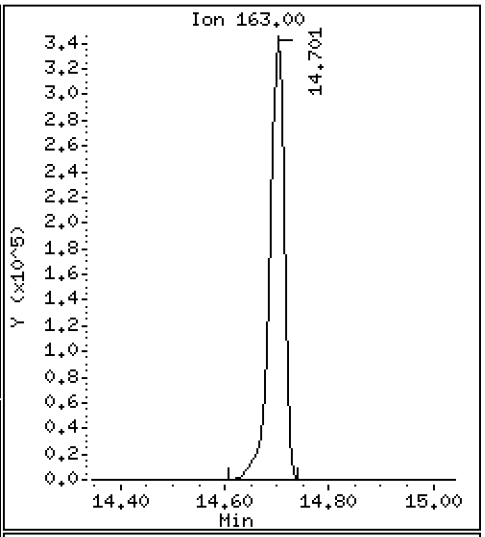
Column phase: ZB-5msi

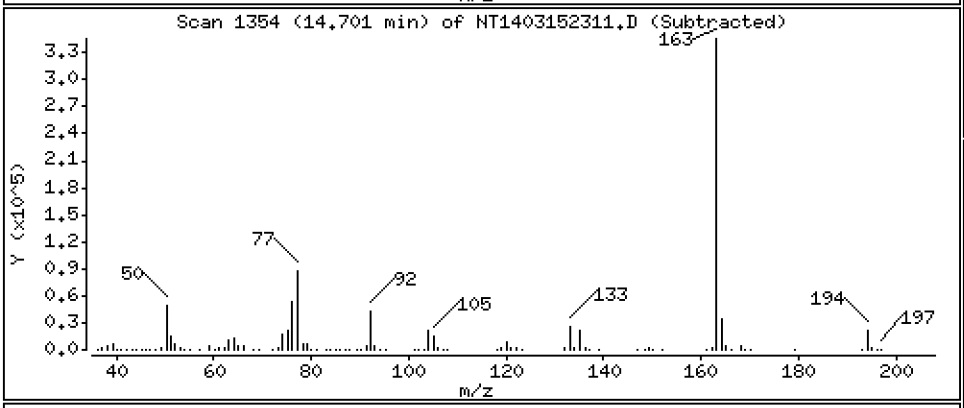
Column diameter: 0.25

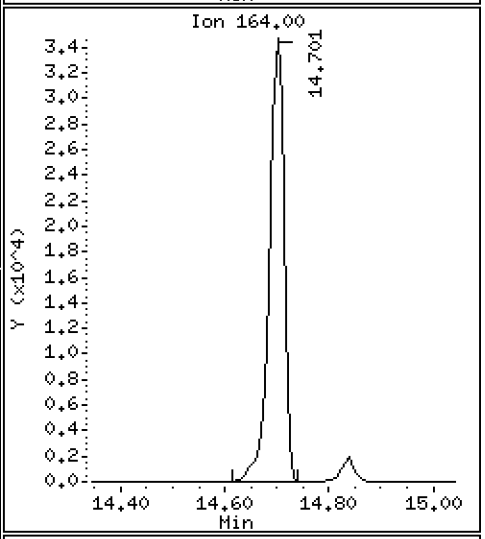
39 Dimethylphthalate

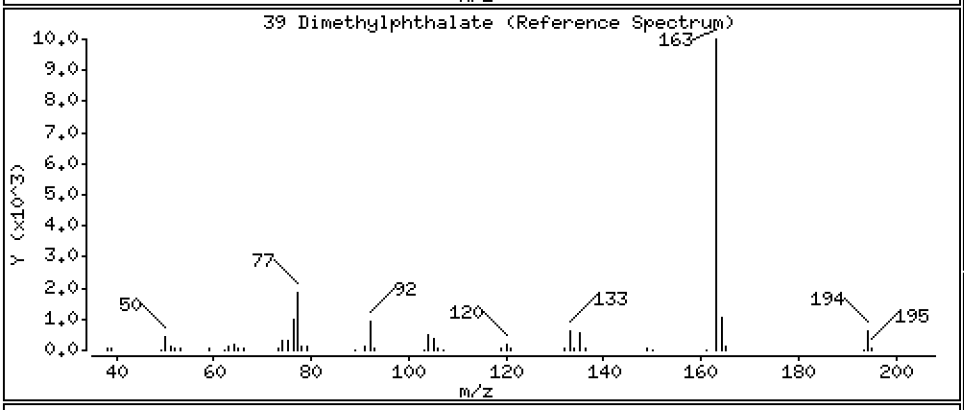
Concentration: 5.031 ug/mL

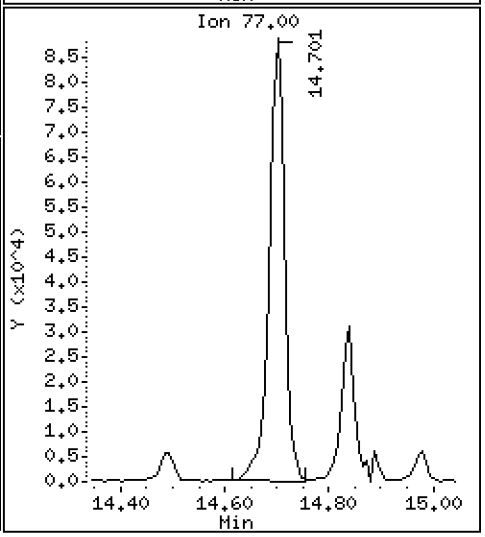


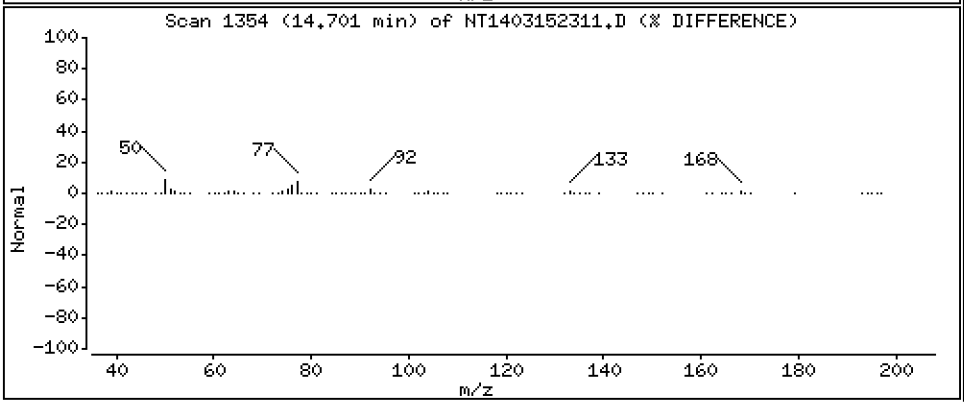












Data File: \\target\share\chem3\nt14.i\20230315.b\NT1403152311.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

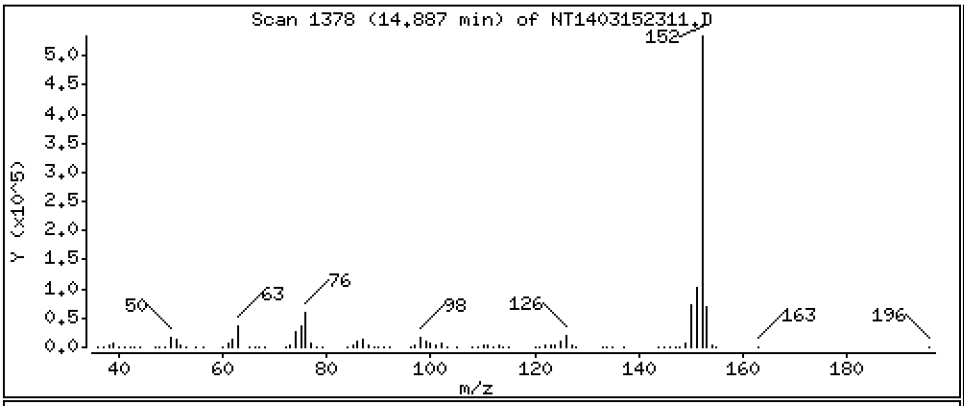
Operator: JGR

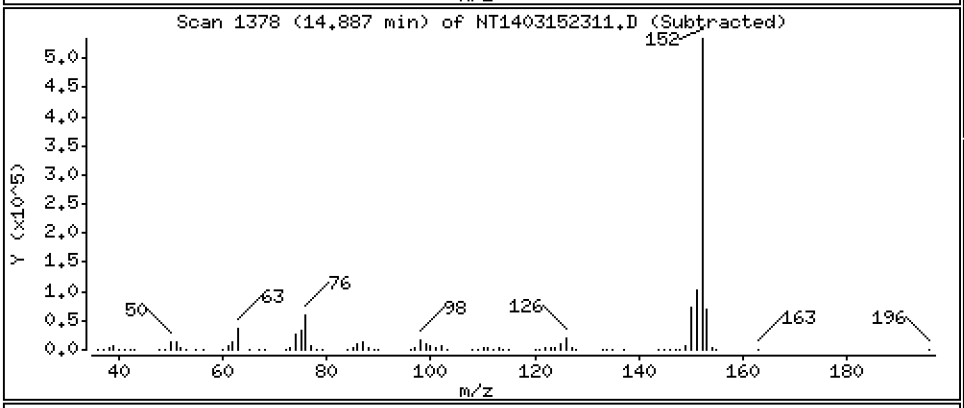
Column phase: ZB-5msi

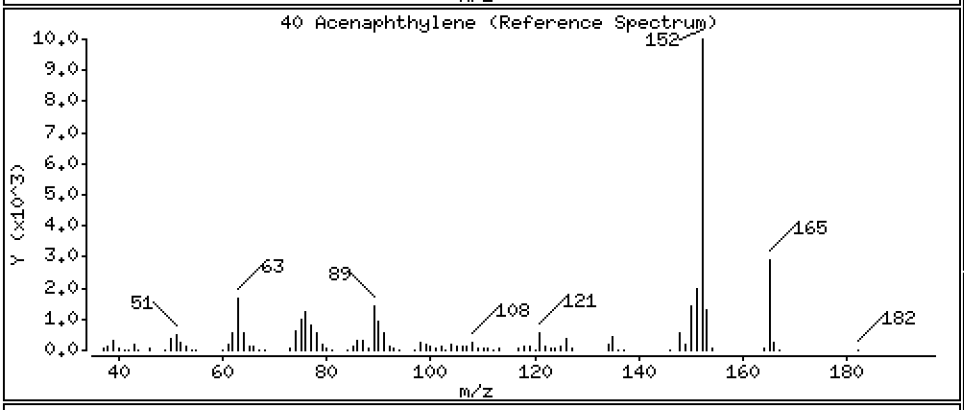
Column diameter: 0.25

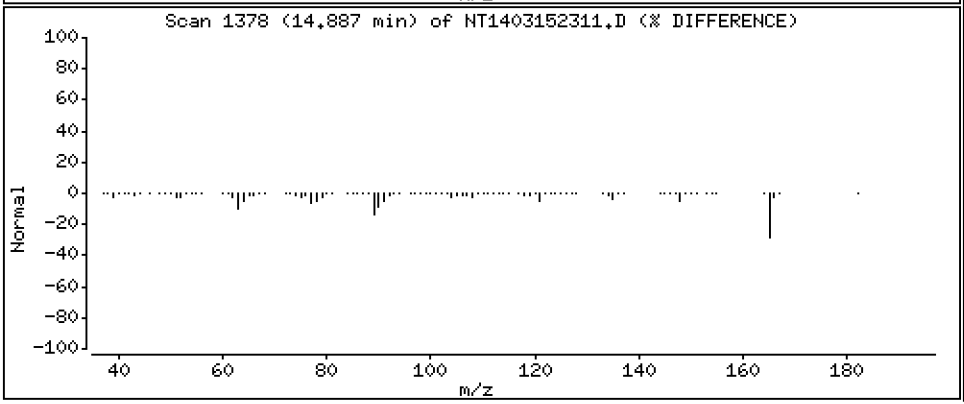
40 Acenaphthylene

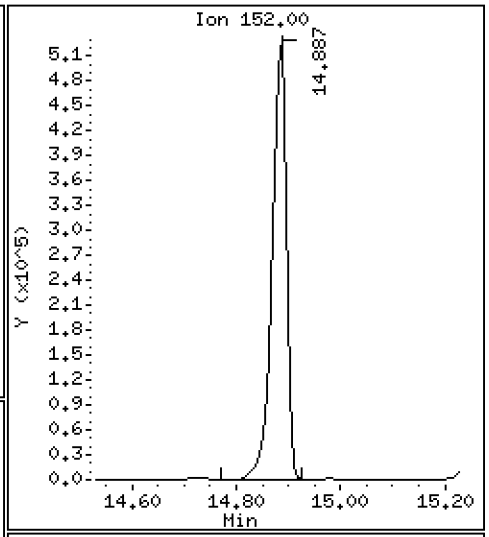
Concentration: 4.879 ug/mL

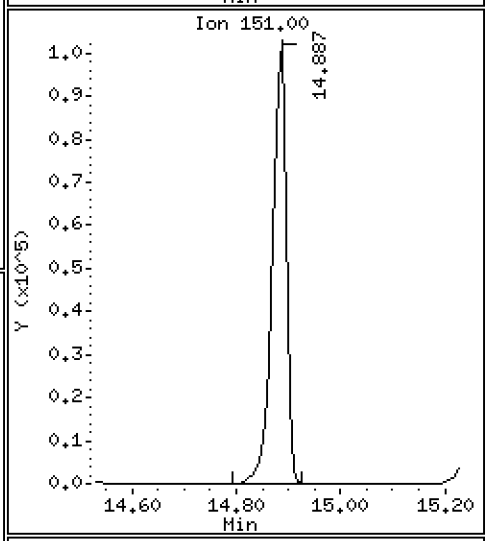


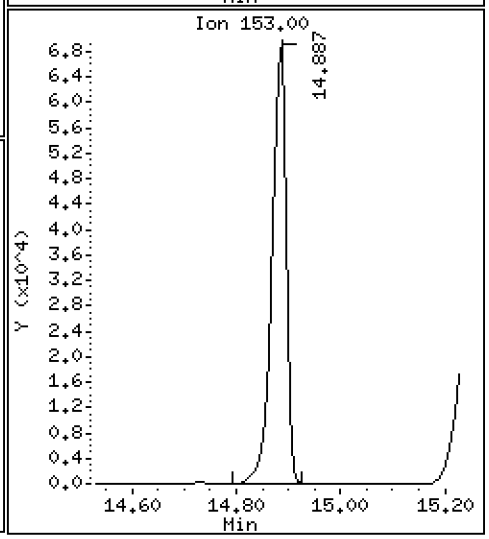












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

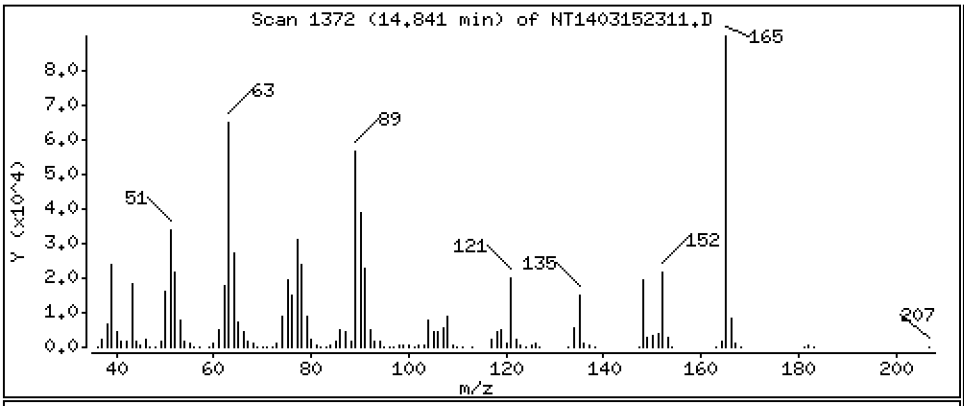
Operator: JGR

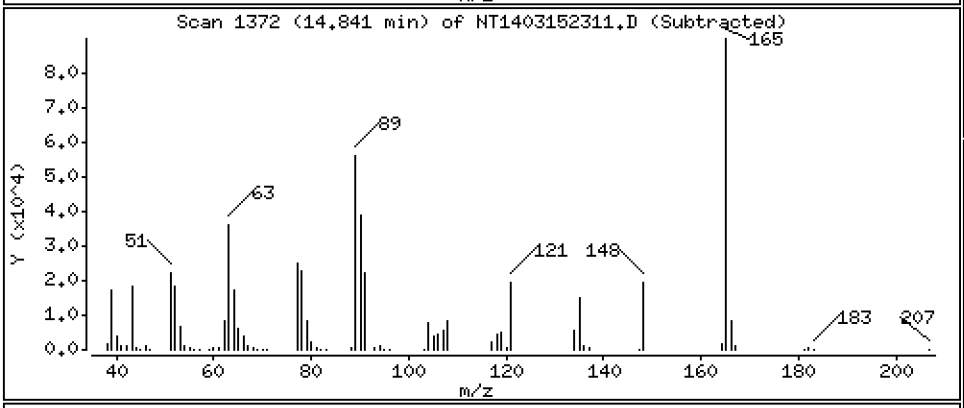
Column phase: ZB-5msi

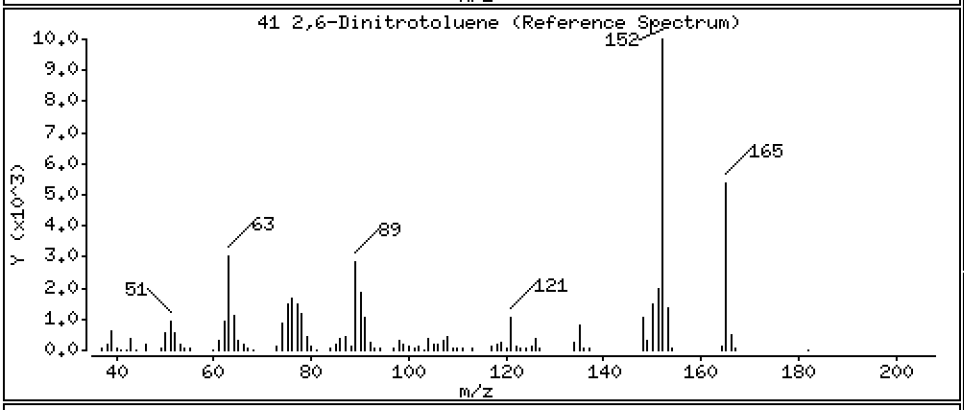
Column diameter: 0.25

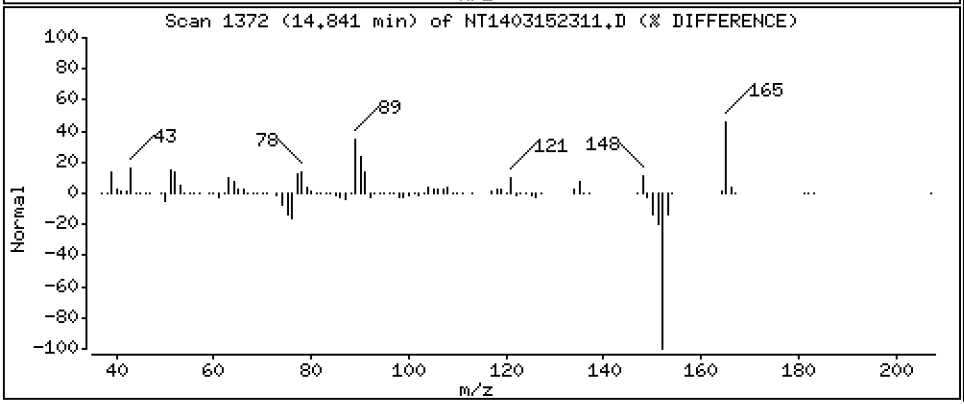
41 2,6-Dinitrotoluene

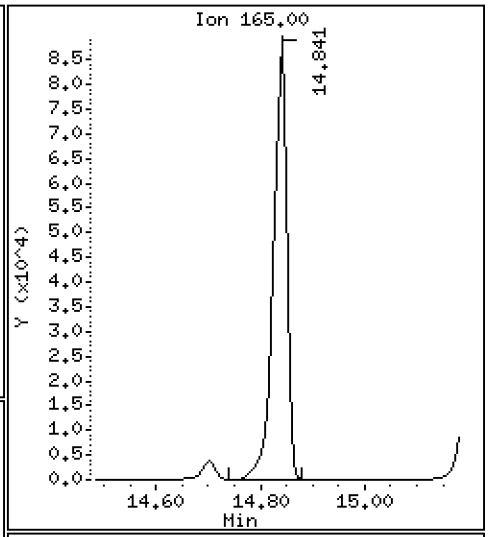
Concentration: 5.219 ug/mL

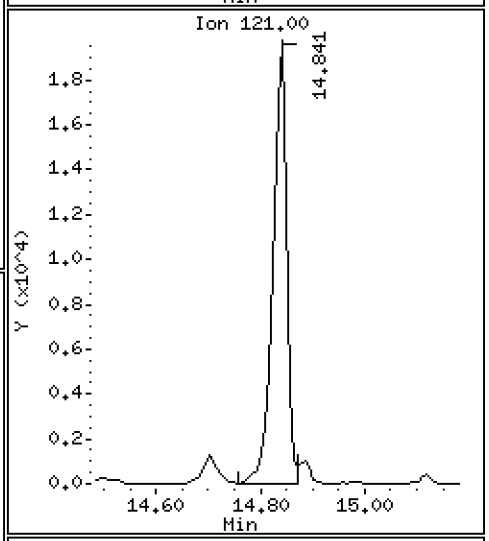


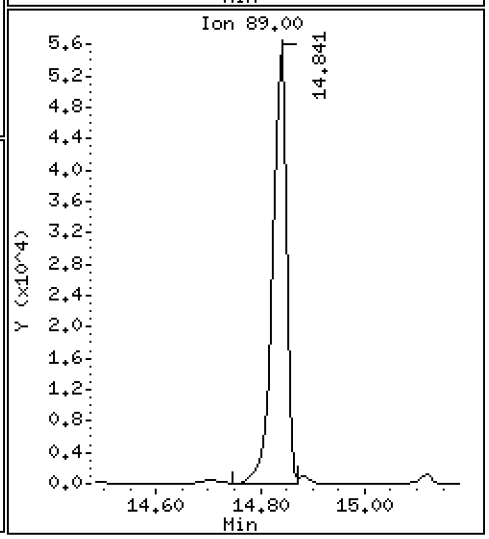












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

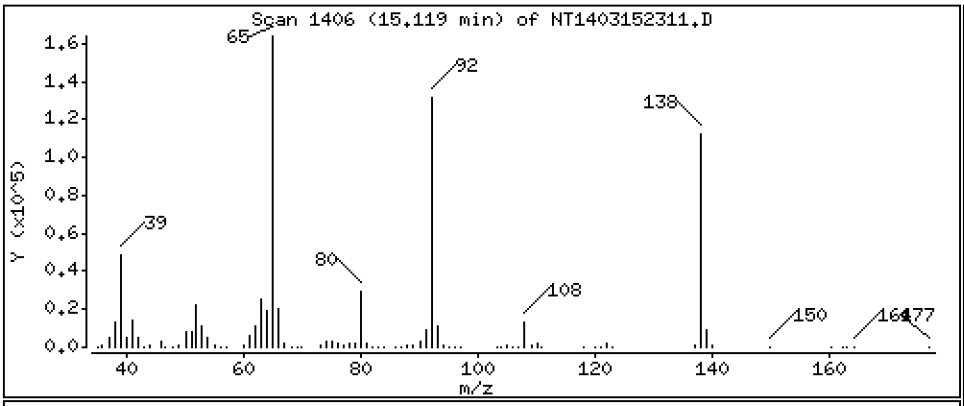
Operator: JGR

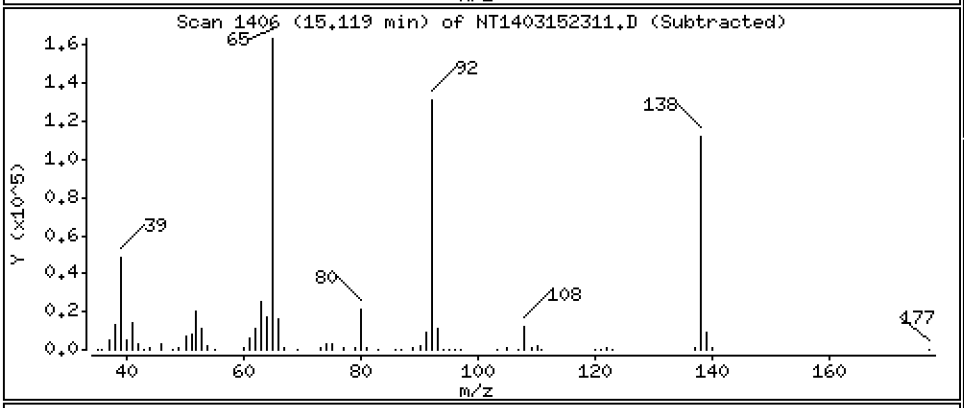
Column phase: ZB-5msi

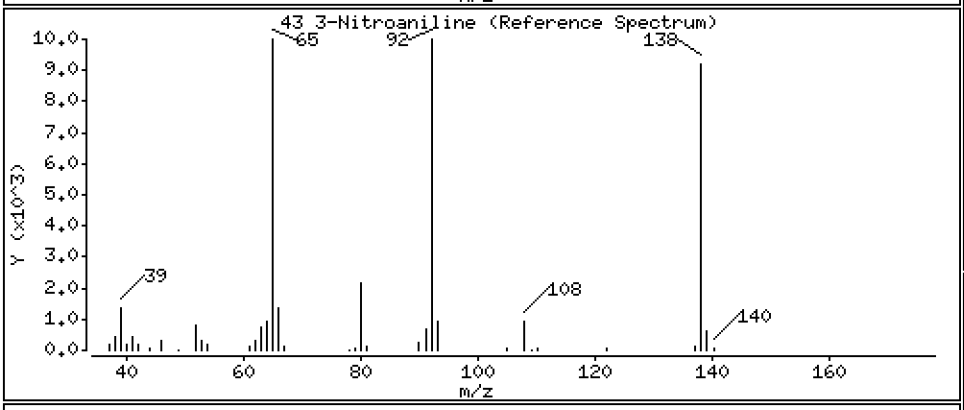
Column diameter: 0.25

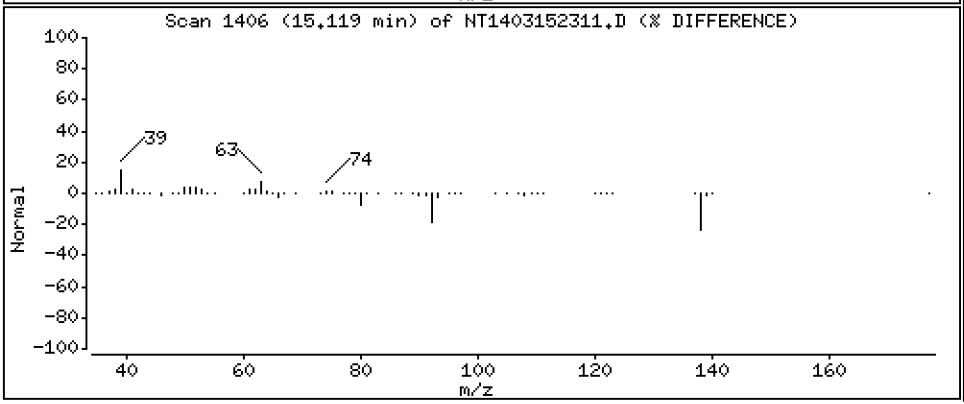
43 3-Nitroaniline

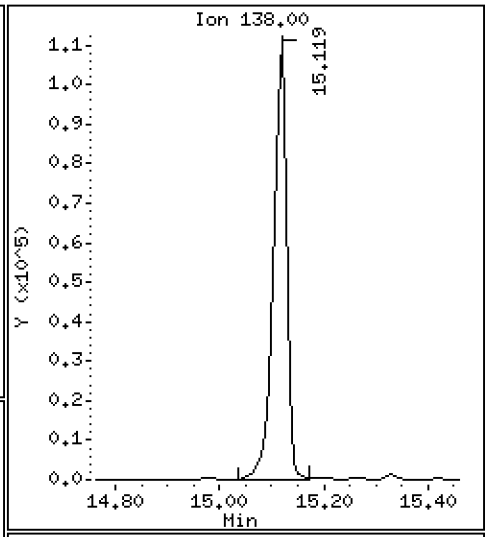
Concentration: 5.210 ug/mL

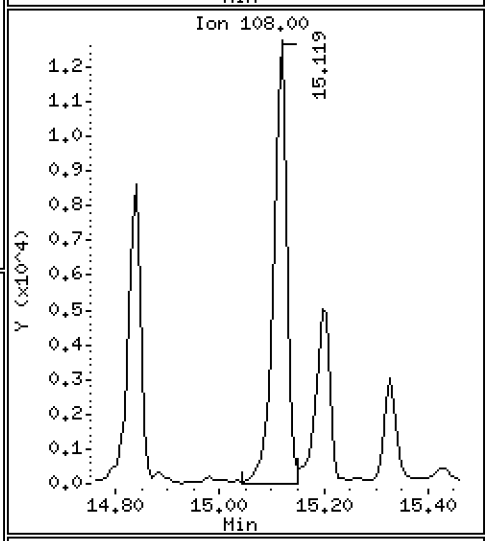


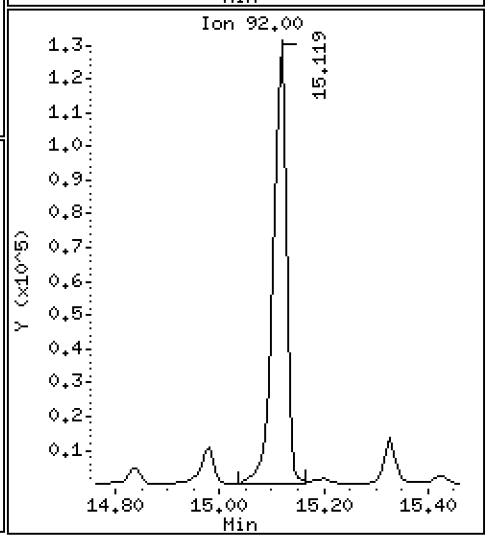












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

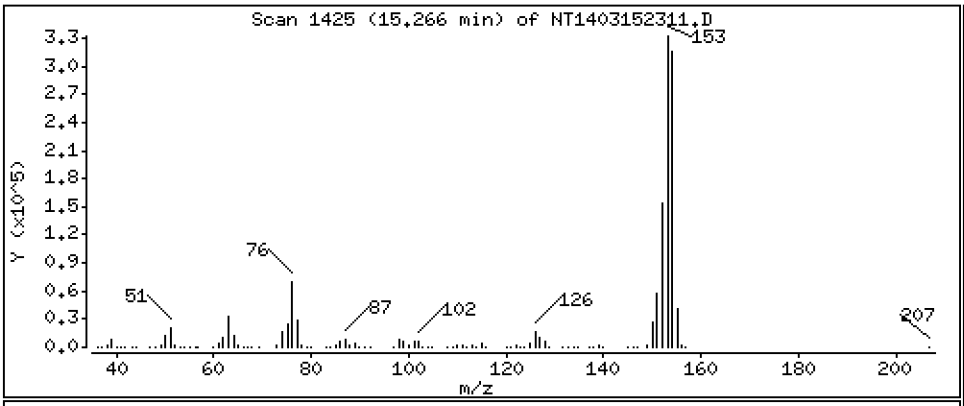
Operator: JGR

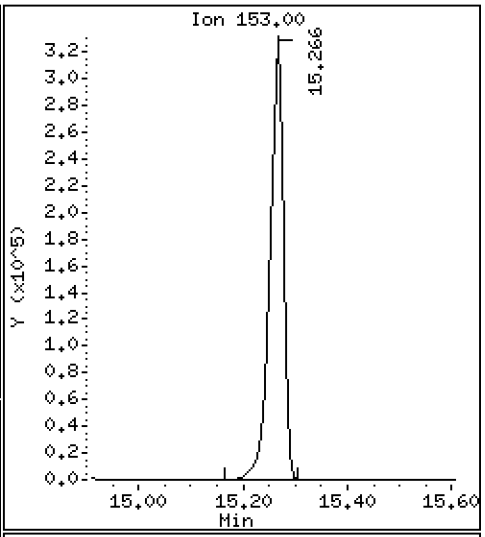
Column phase: ZB-5msi

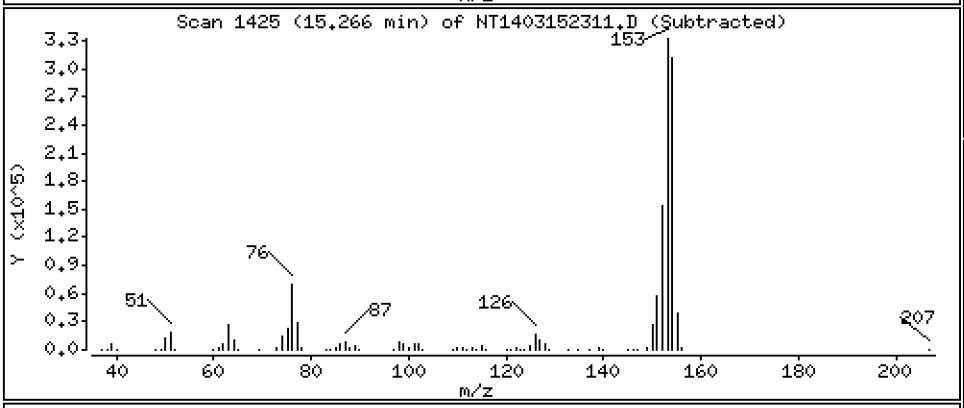
Column diameter: 0.25

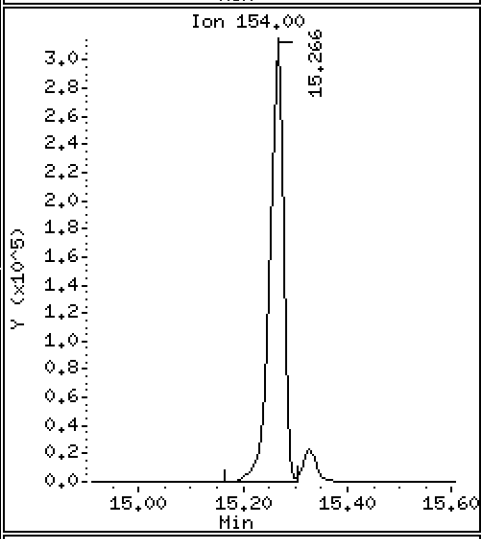
44 Acenaphthene

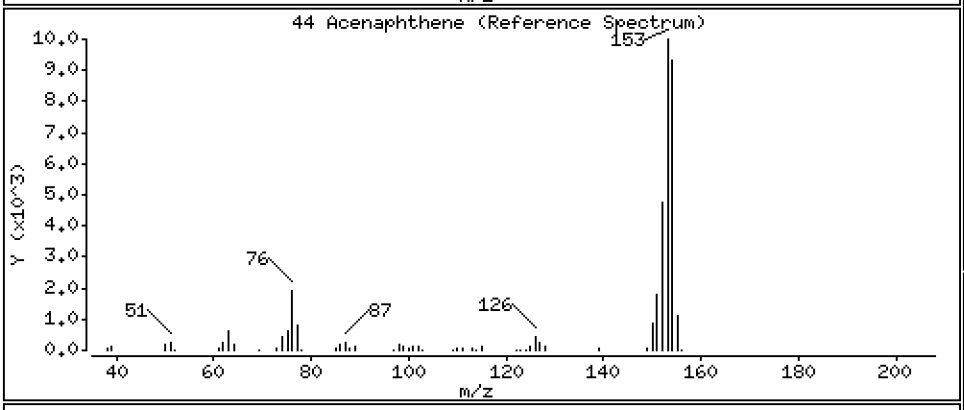
Concentration: 4.965 ug/mL

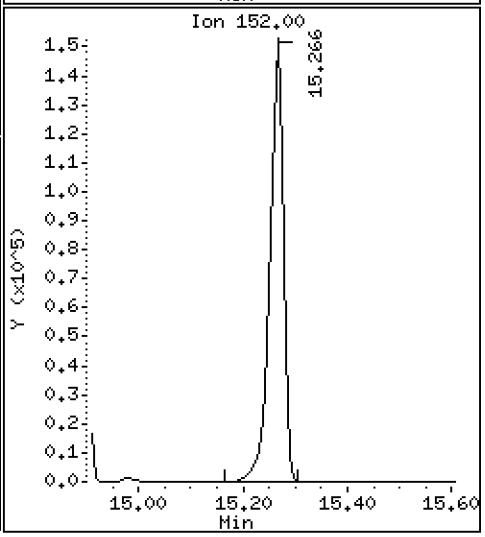


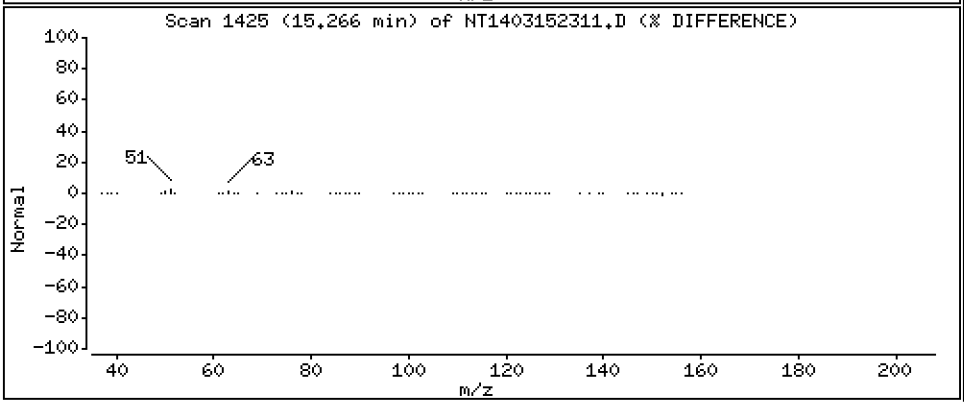












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

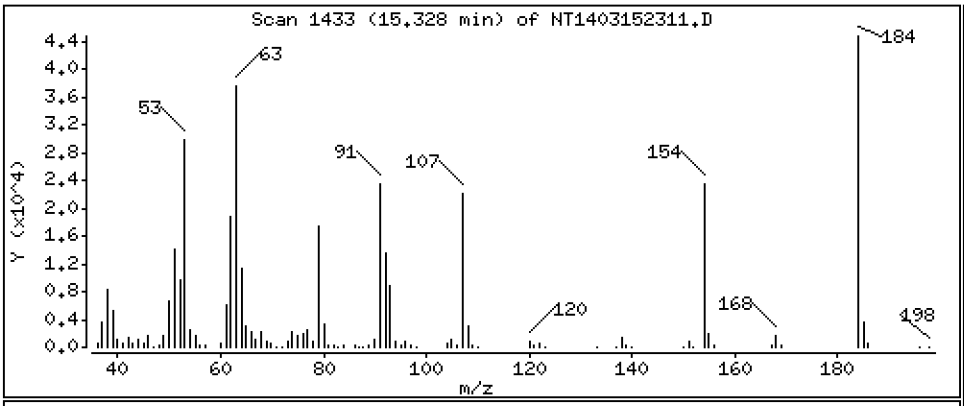
Operator: JGR

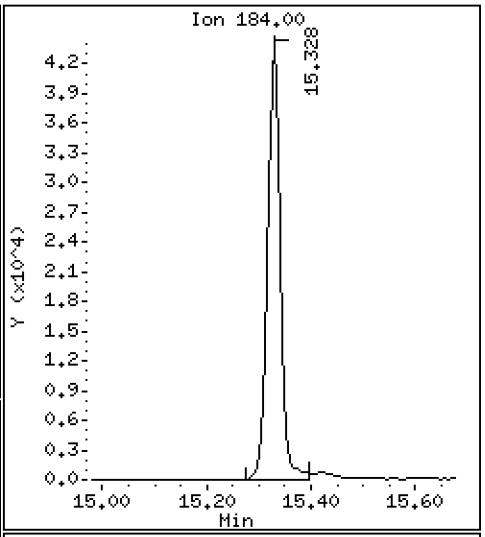
Column phase: ZB-5msi

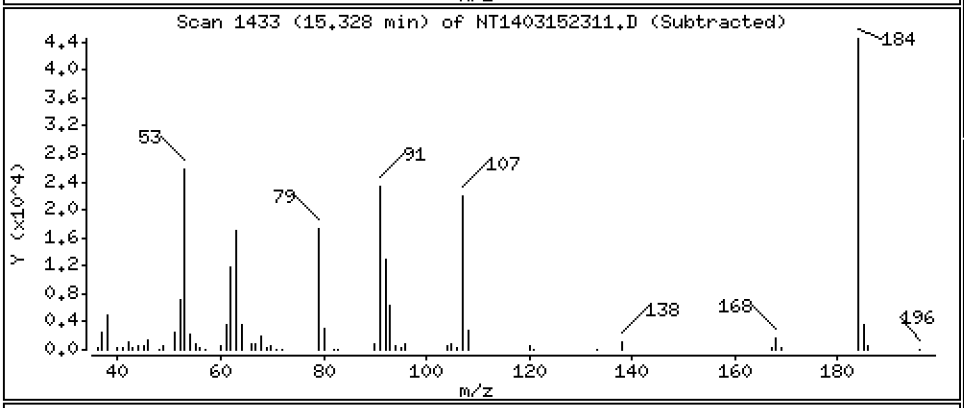
Column diameter: 0.25

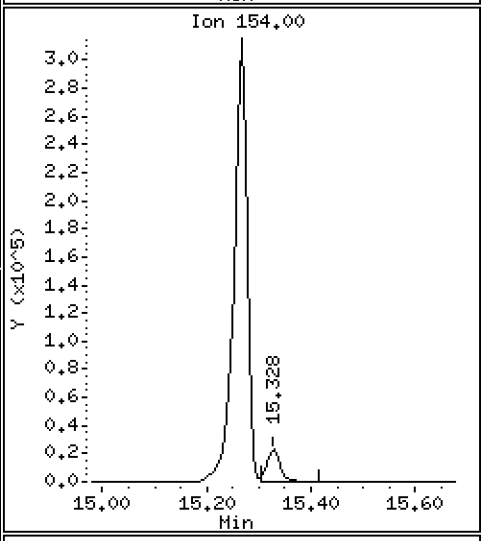
45 2,4-Dinitrophenol

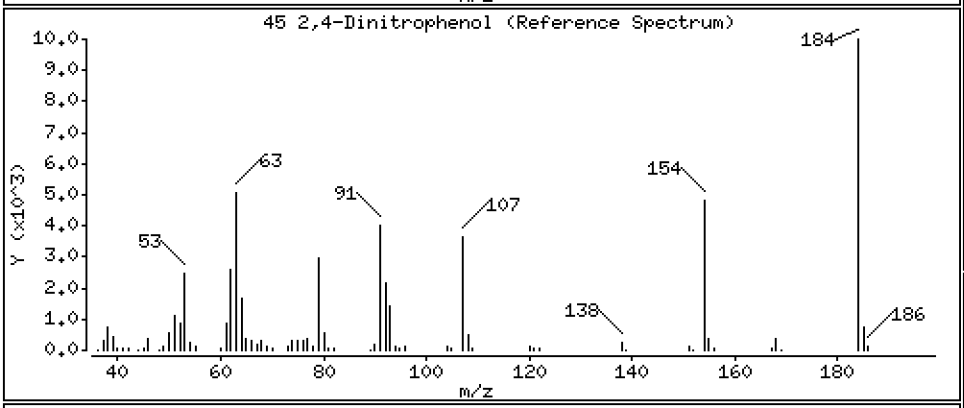
Concentration: 3.077 ug/mL

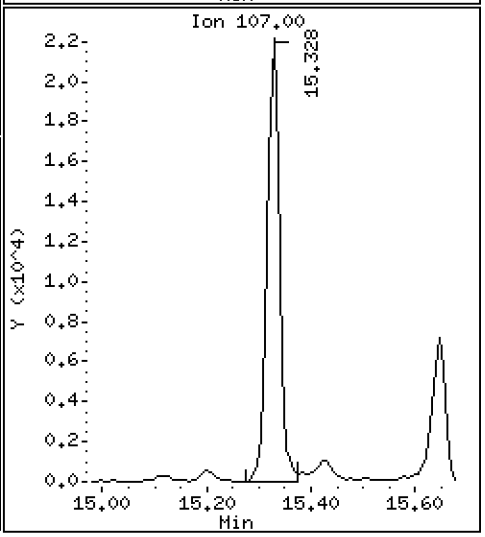


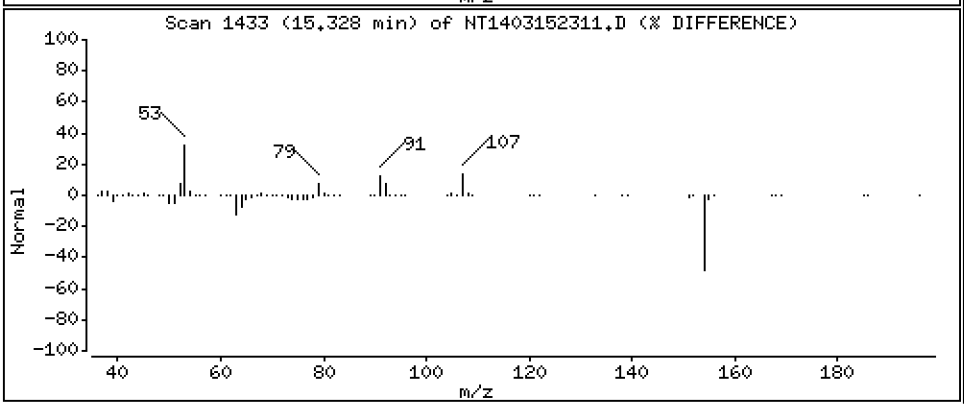












Data File: \\target\share\chem3\nt14.i\20230315.b\NT1403152311.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

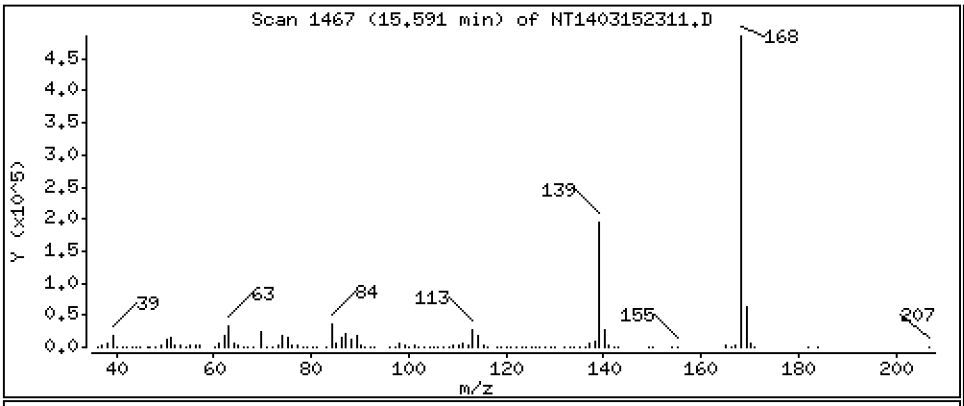
Operator: JGR

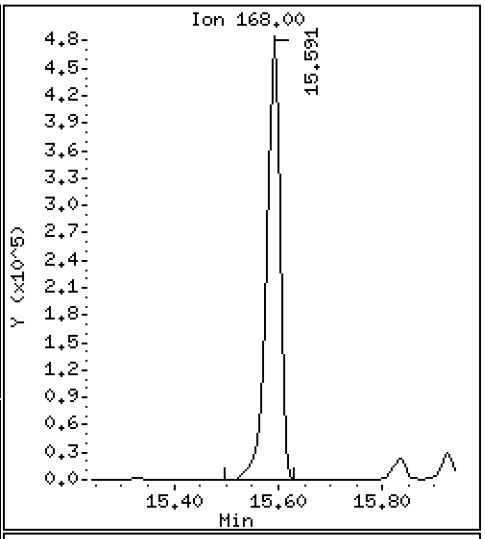
Column phase: ZB-5msi

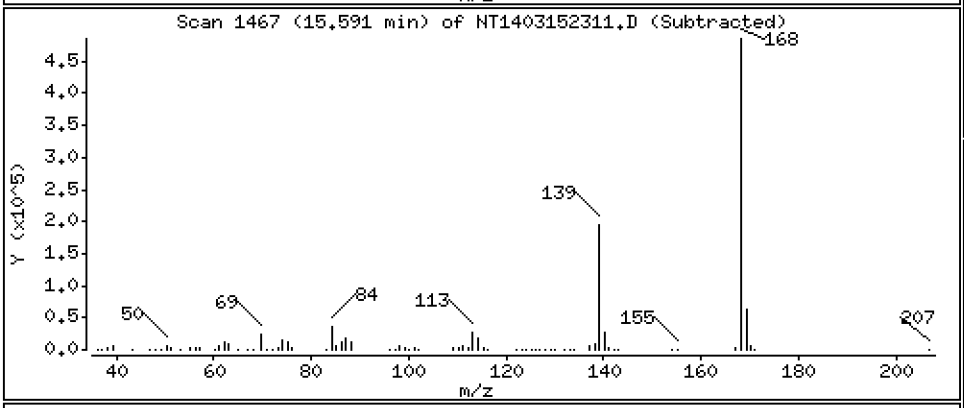
Column diameter: 0.25

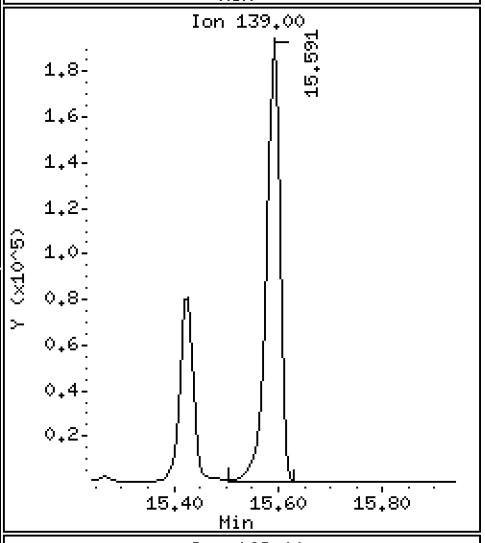
46 Dibenzofuran

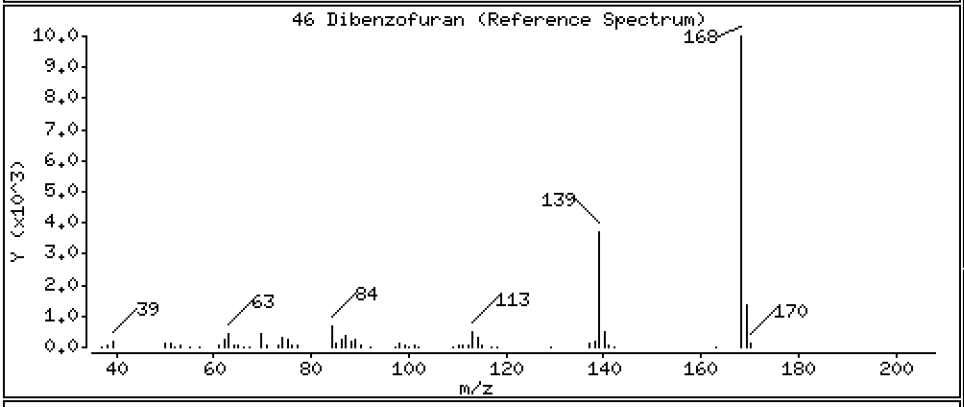
Concentration: 4.956 ug/mL

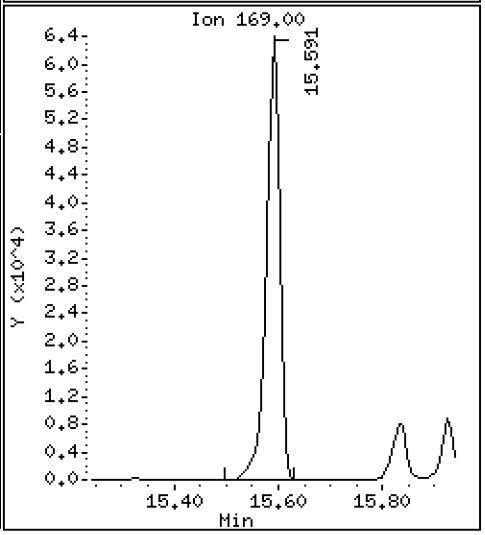


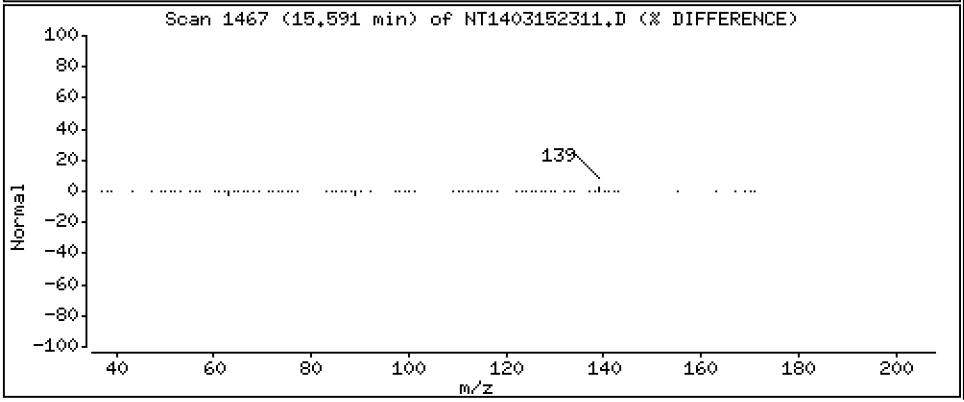












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

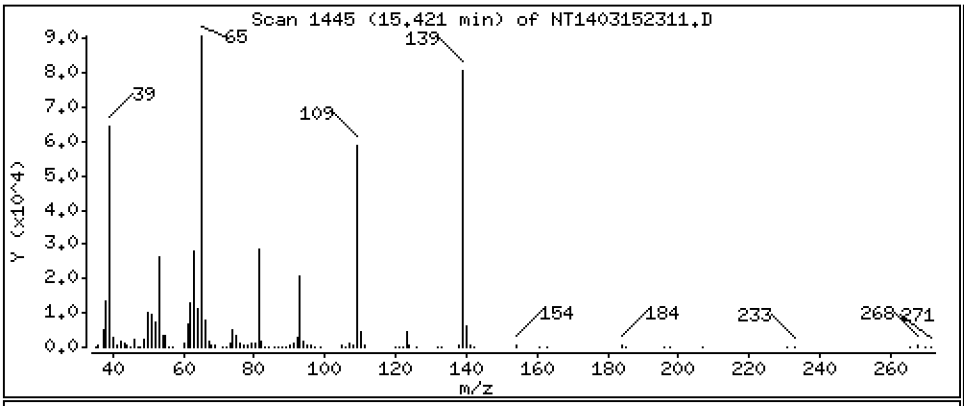
Operator: JGR

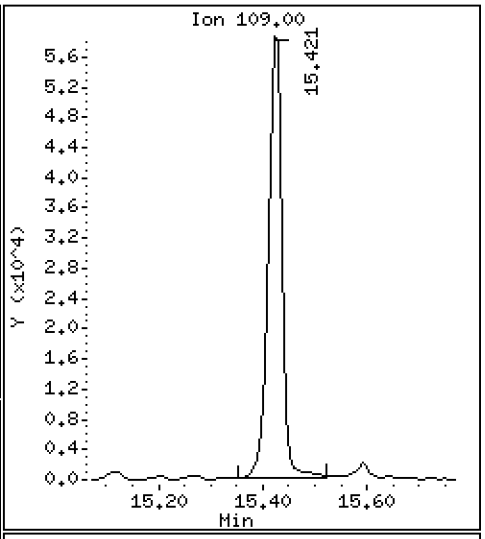
Column phase: ZB-5msi

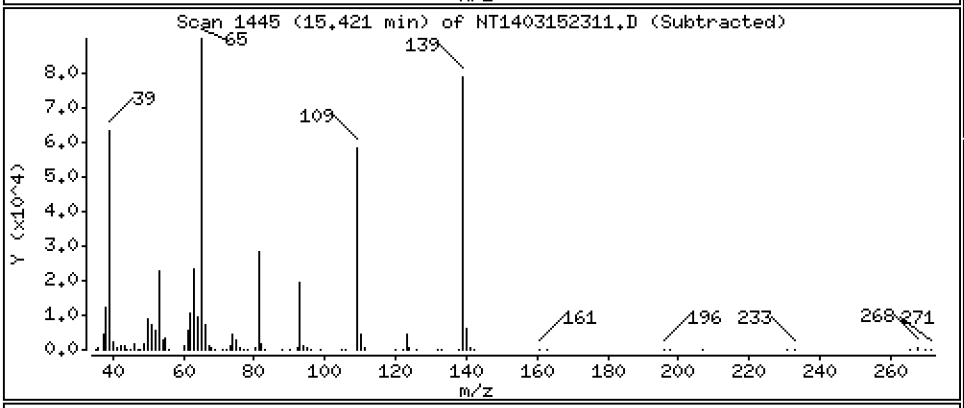
Column diameter: 0.25

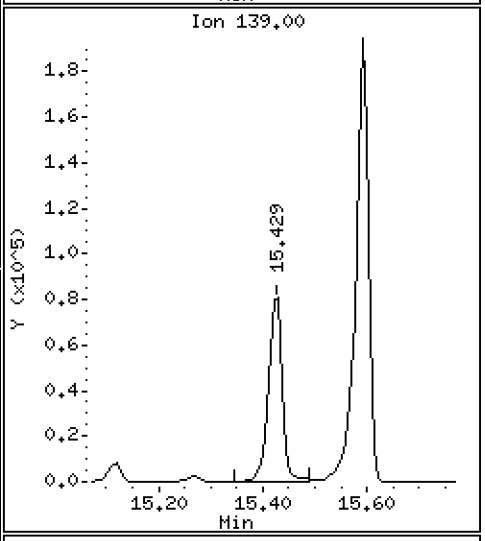
47 4-Nitrophenol

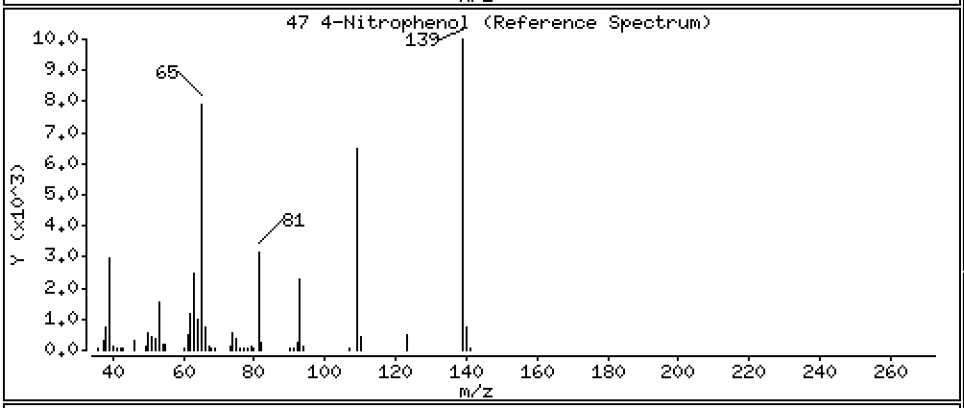
Concentration: 4.828 ug/mL

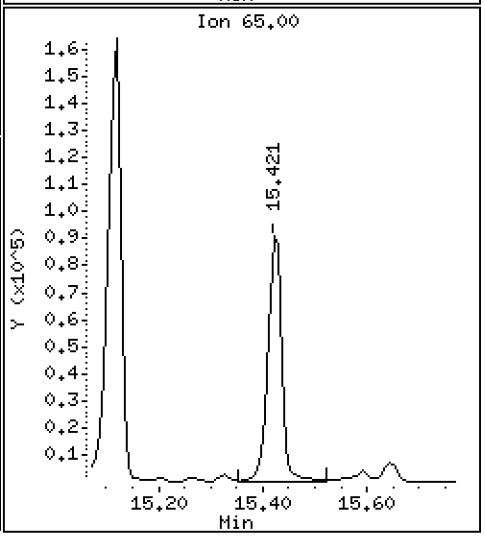


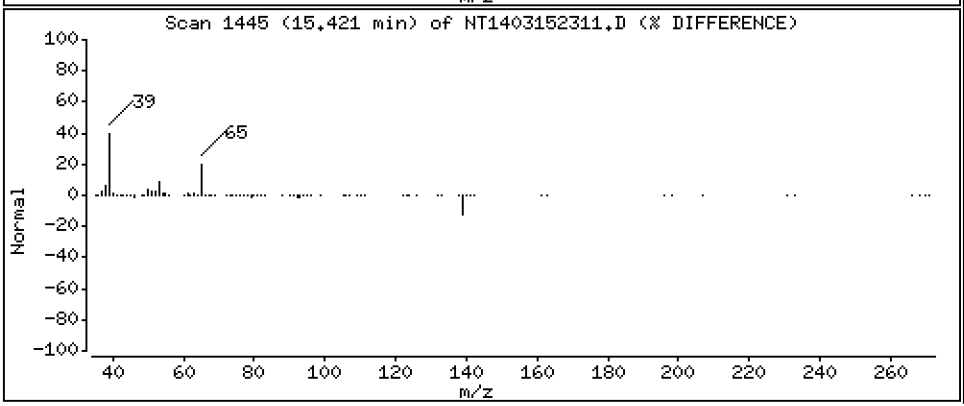












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

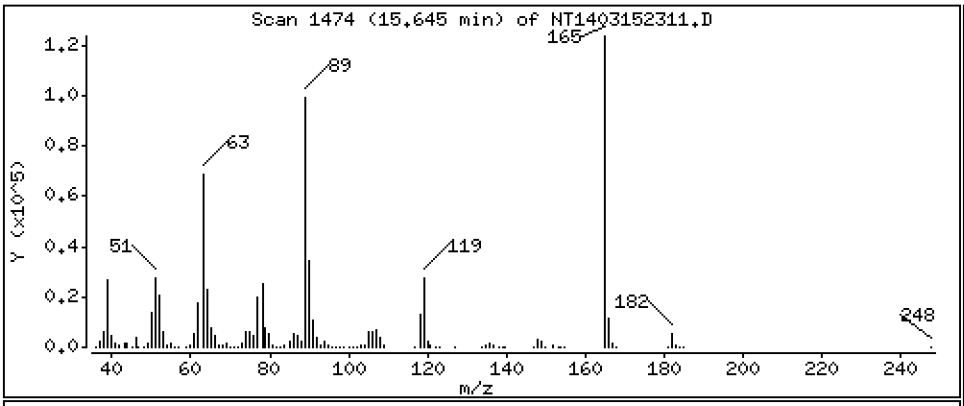
Operator: JGR

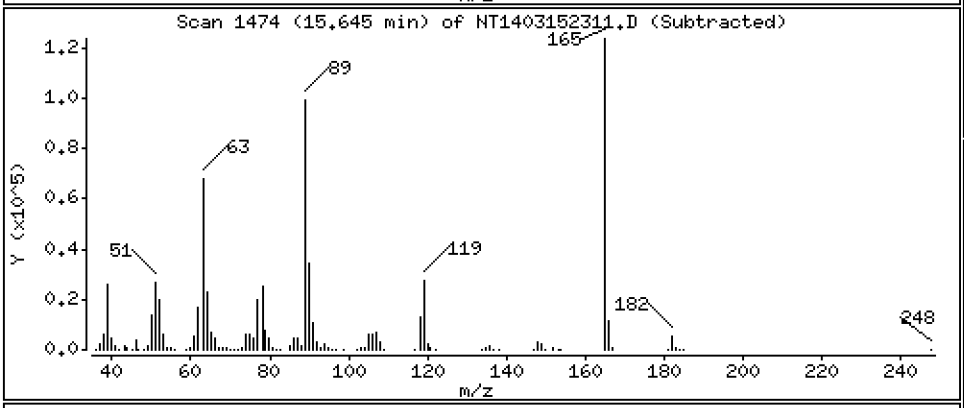
Column phase: ZB-5msi

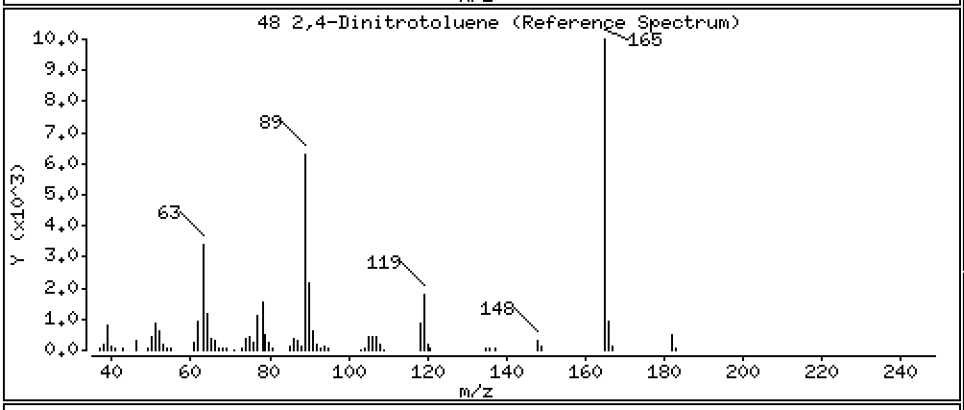
Column diameter: 0.25

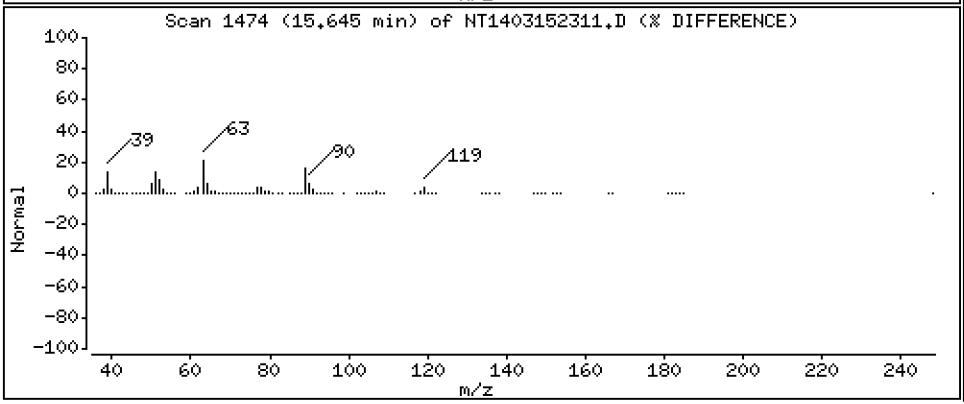
48 2,4-Dinitrotoluene

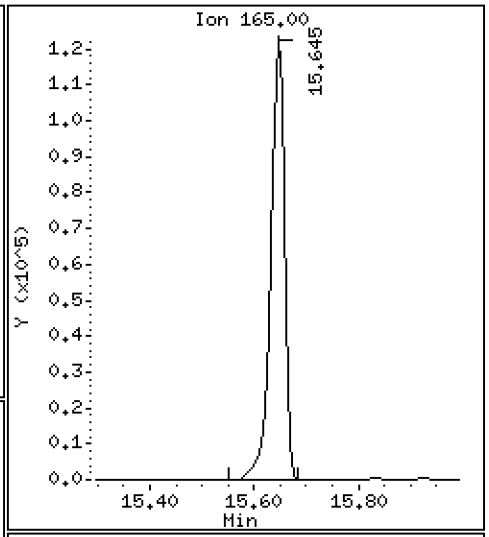
Concentration: 5.119 ug/mL

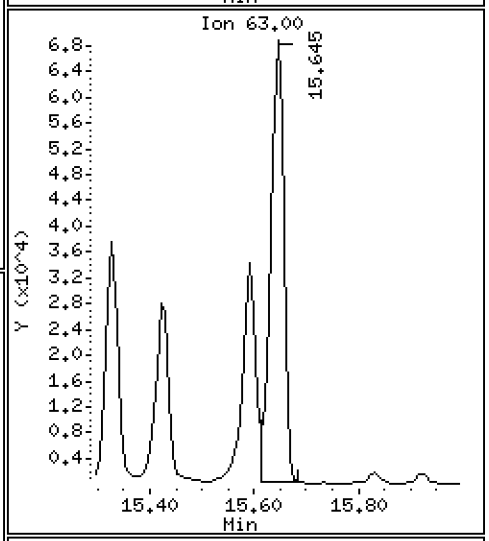


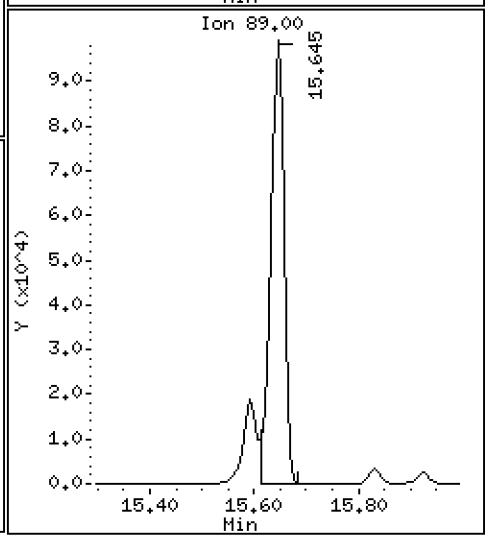












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

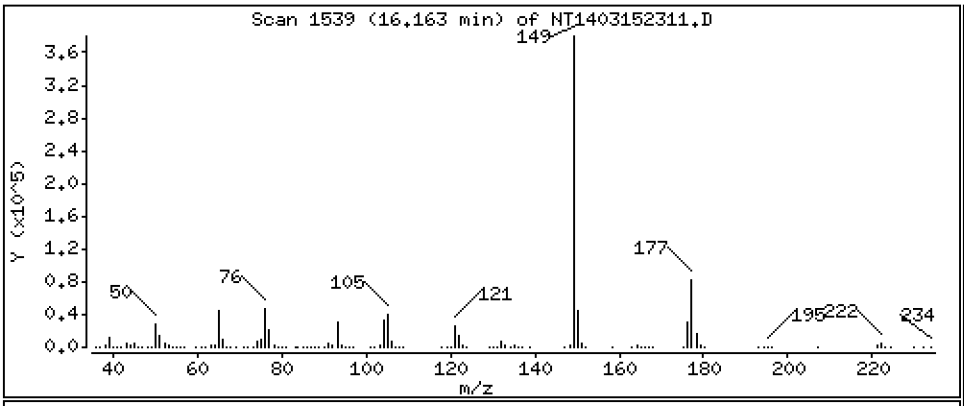
Operator: JGR

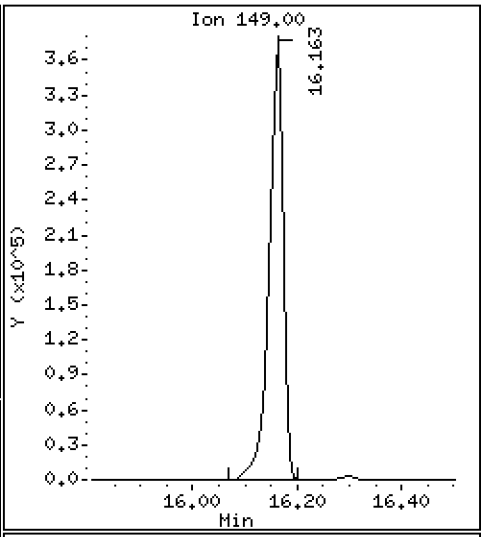
Column phase: ZB-5msi

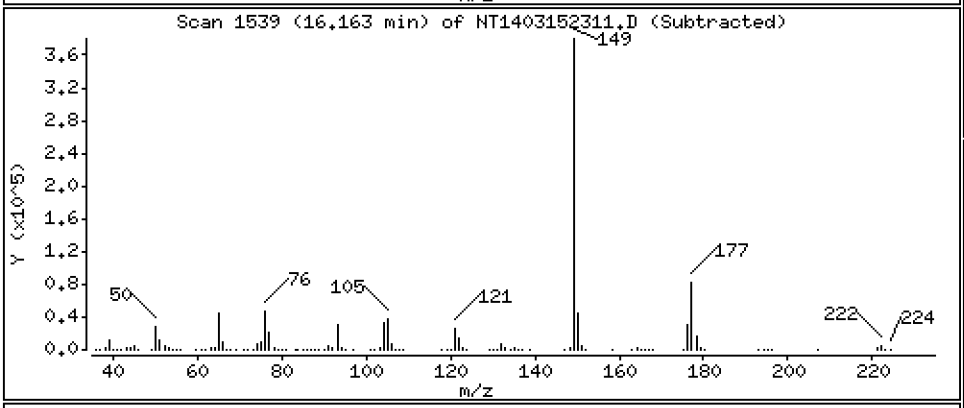
Column diameter: 0.25

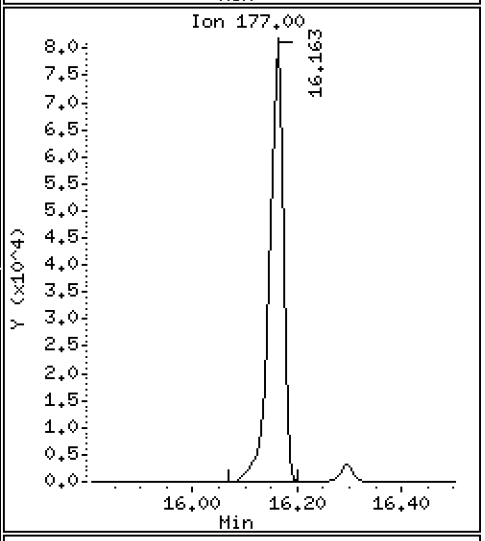
50 Diethylphthalate

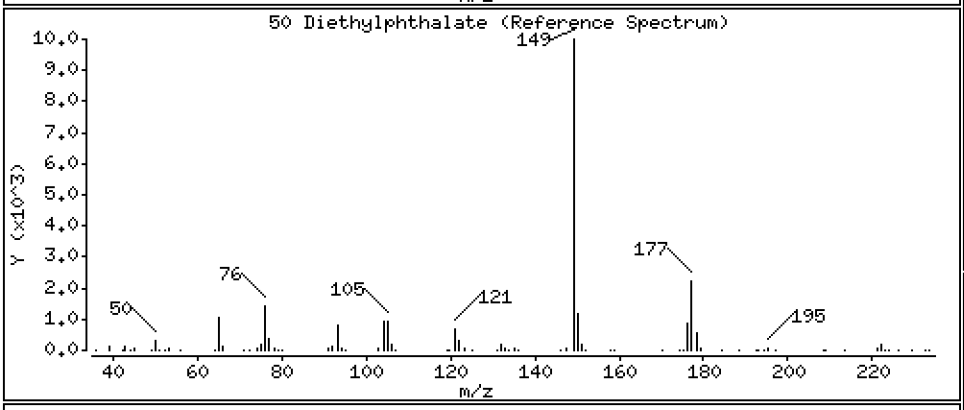
Concentration: 5.203 ug/mL

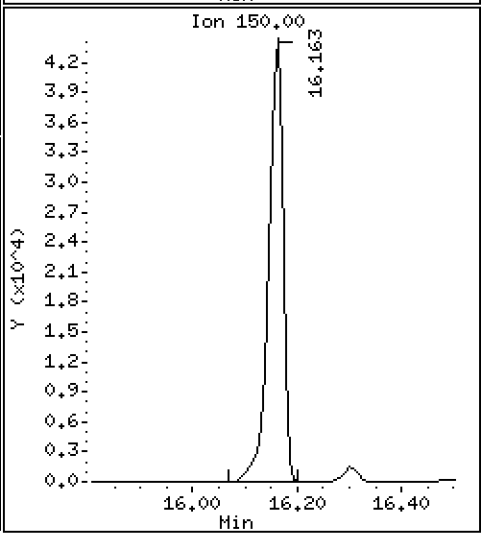


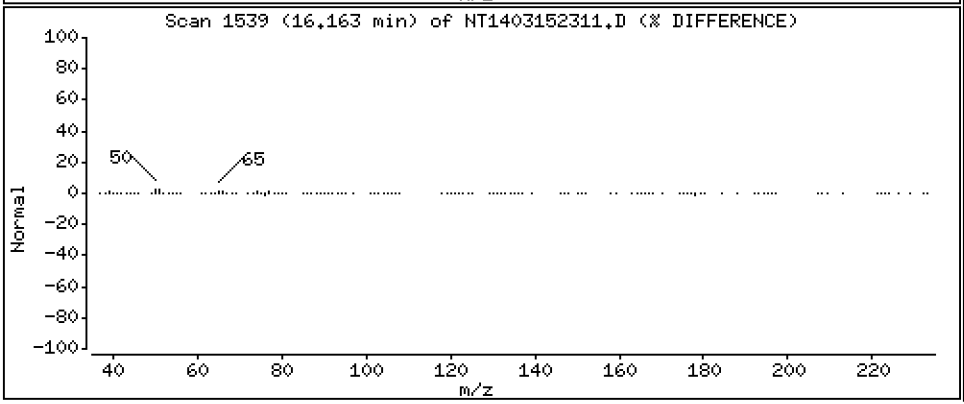












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

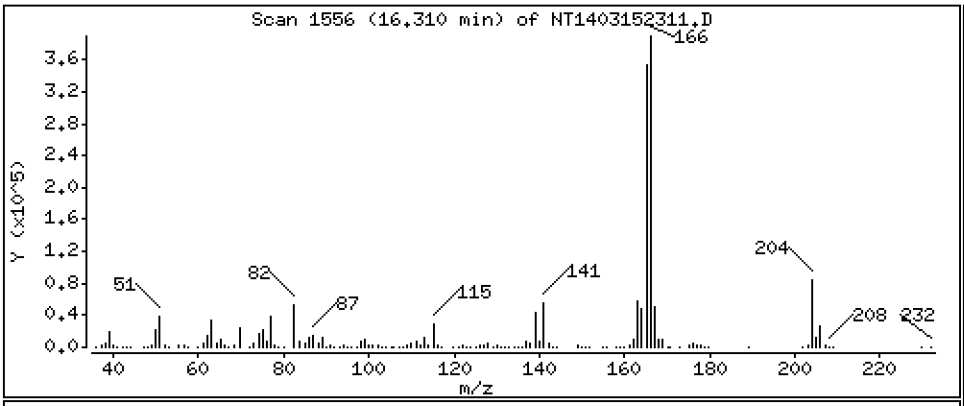
Operator: JGR

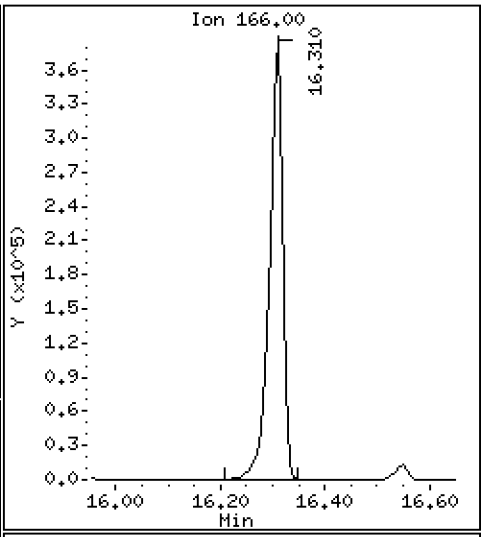
Column phase: ZB-5msi

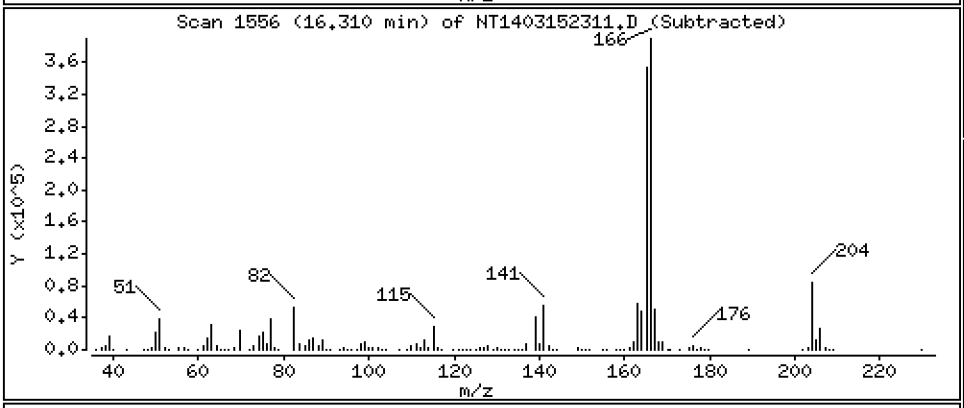
Column diameter: 0.25

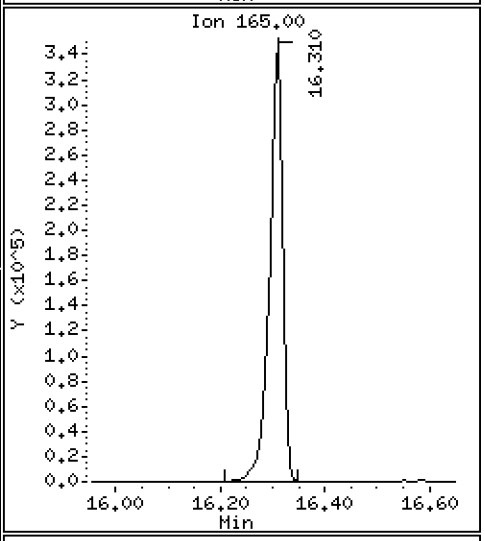
49 Fluorene

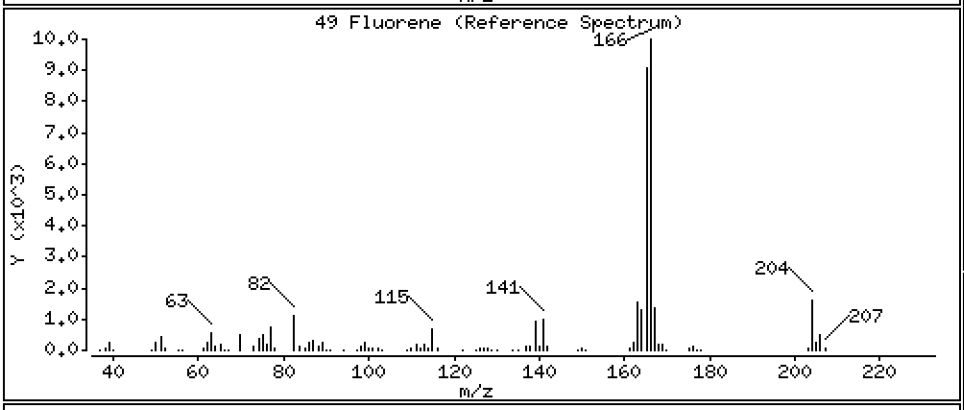
Concentration: 4.844 ug/mL

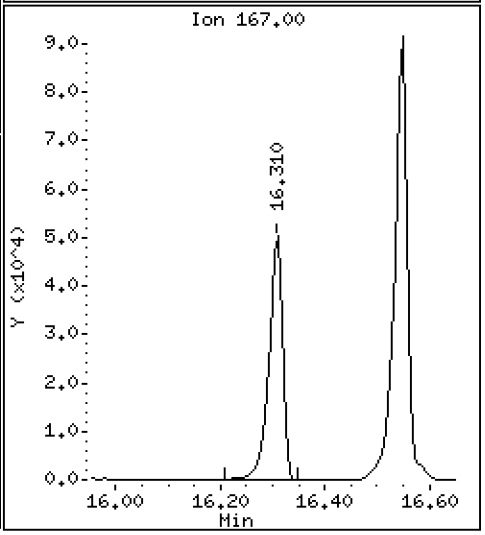


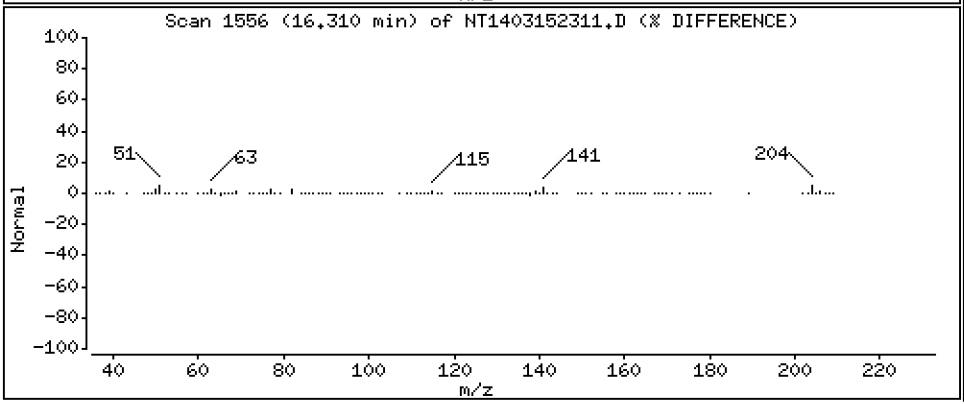












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

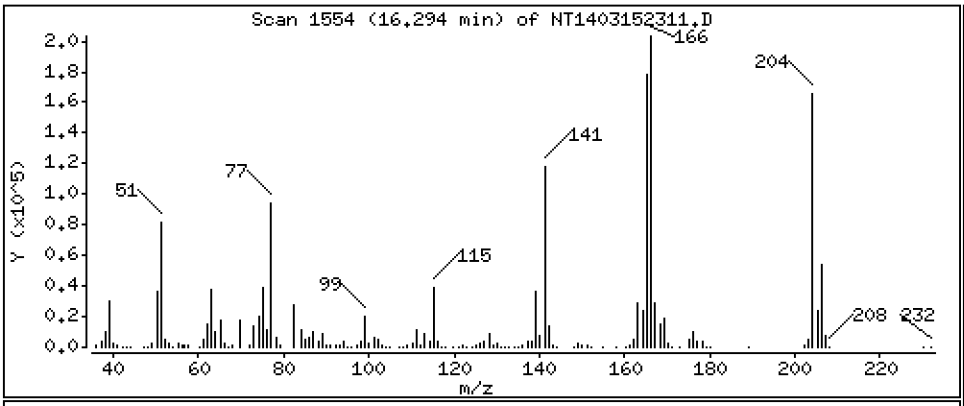
Operator: JGR

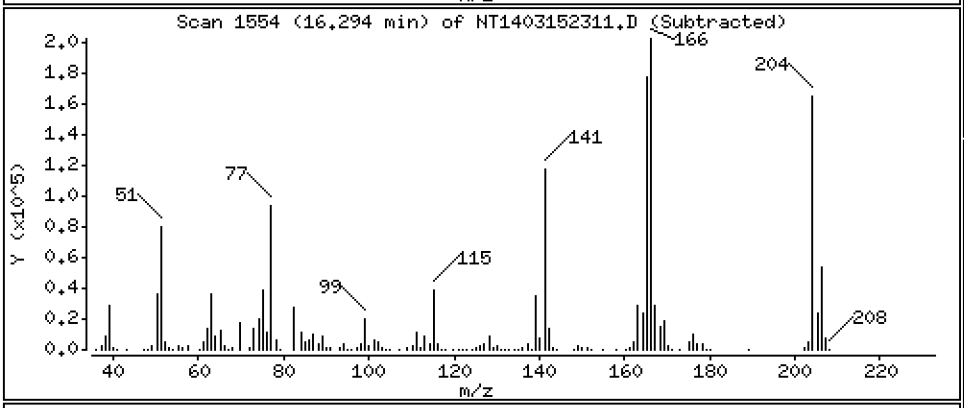
Column phase: ZB-5msi

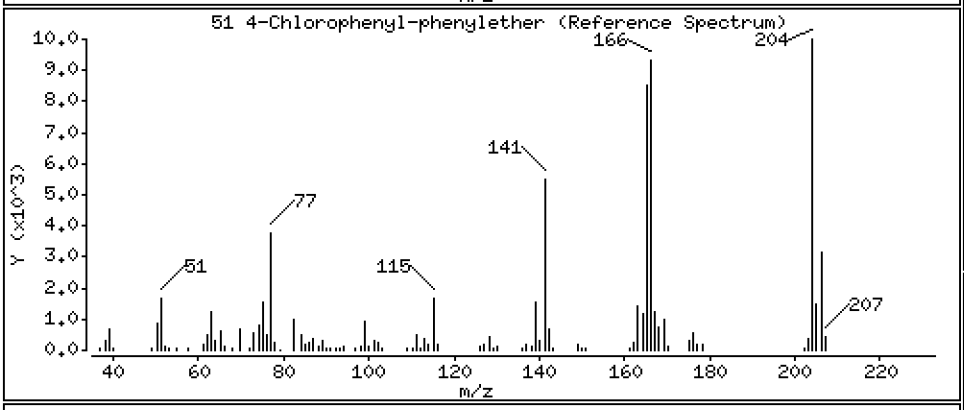
Column diameter: 0.25

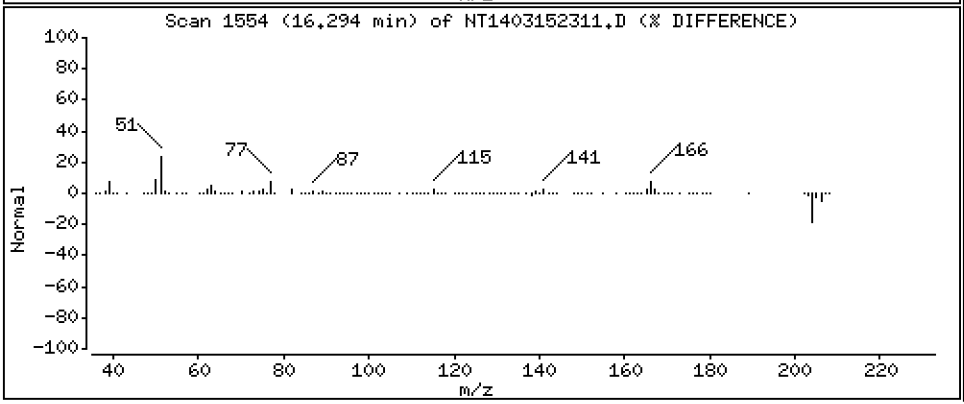
51 4-Chlorophenyl-phenylether

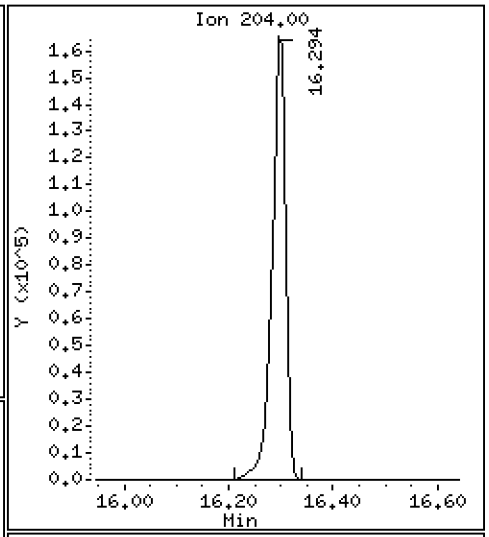
Concentration: 4.985 ug/mL

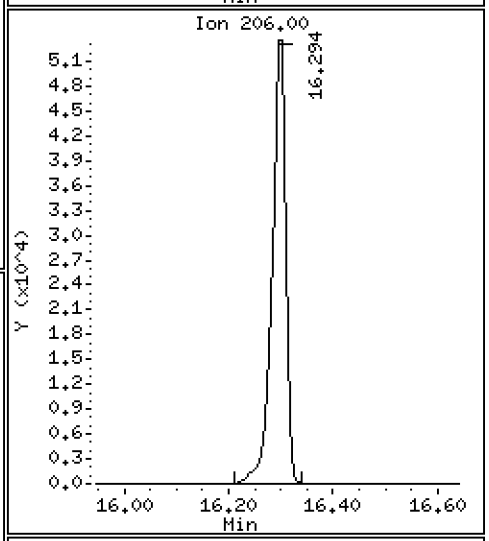


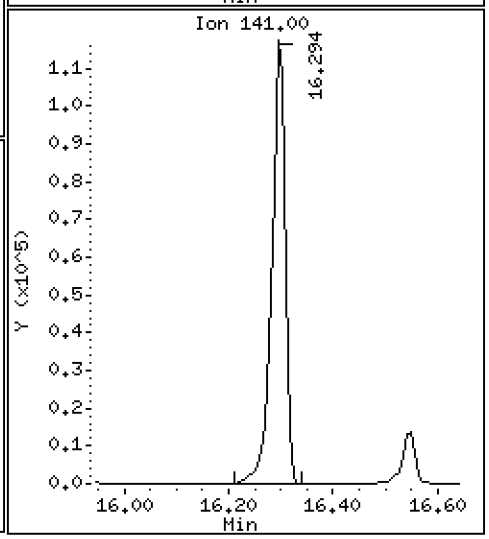












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

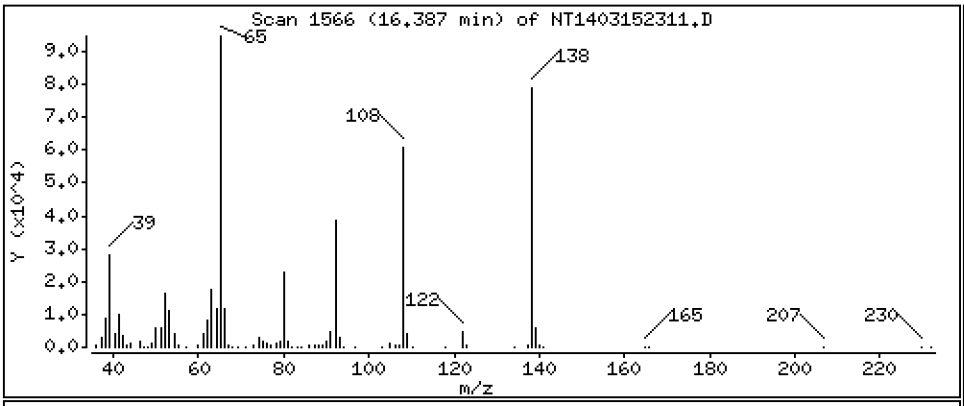
Operator: JGR

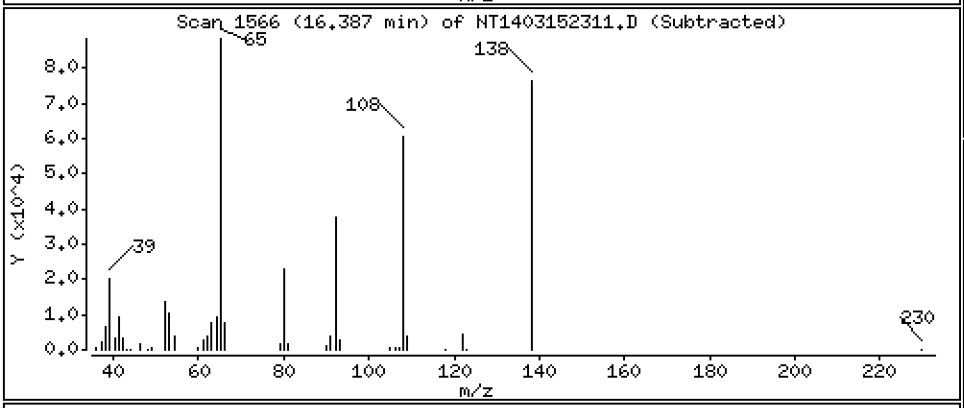
Column phase: ZB-5msi

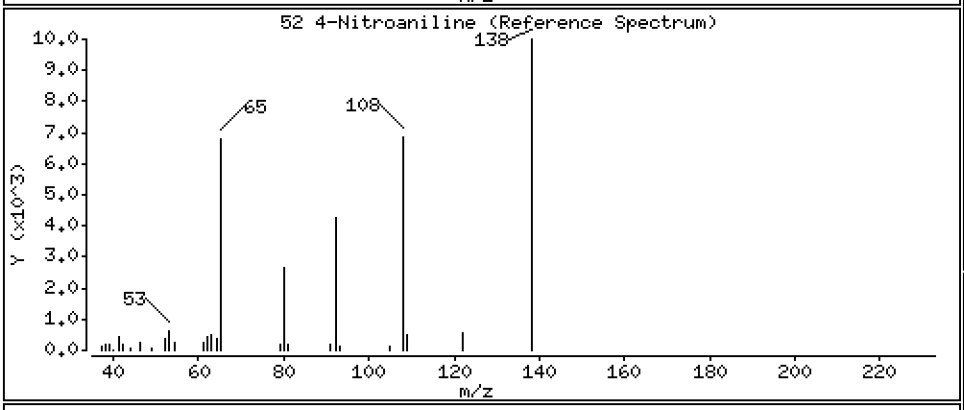
Column diameter: 0.25

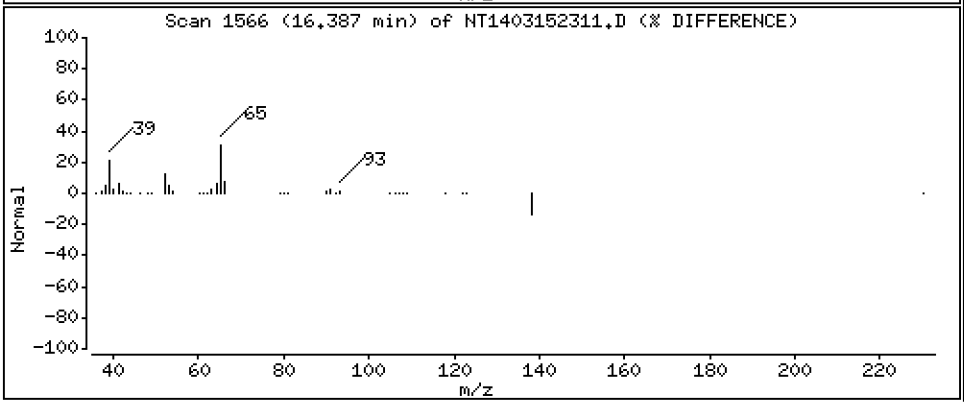
52 4-Nitroaniline

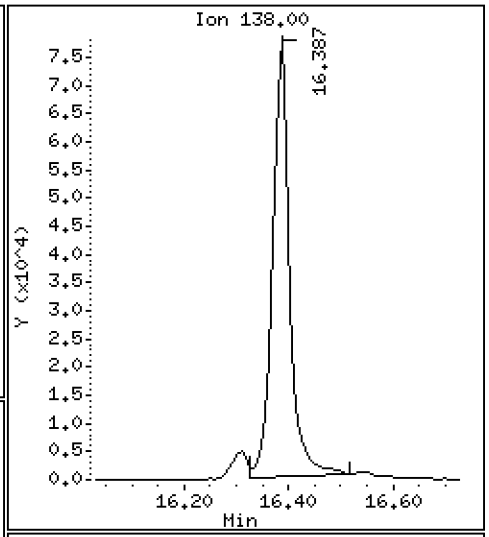
Concentration: 4.817 ug/mL

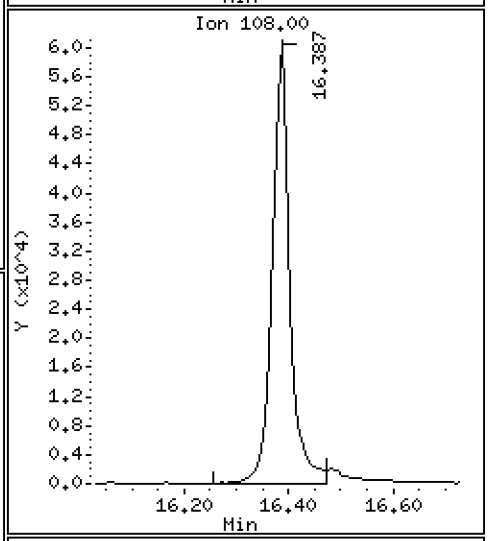


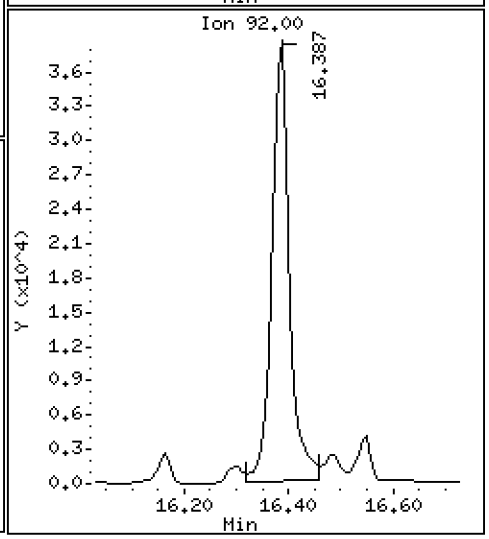












Data File: \\target\share\chem3\nt14.i\20230315.b\NT1403152311.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

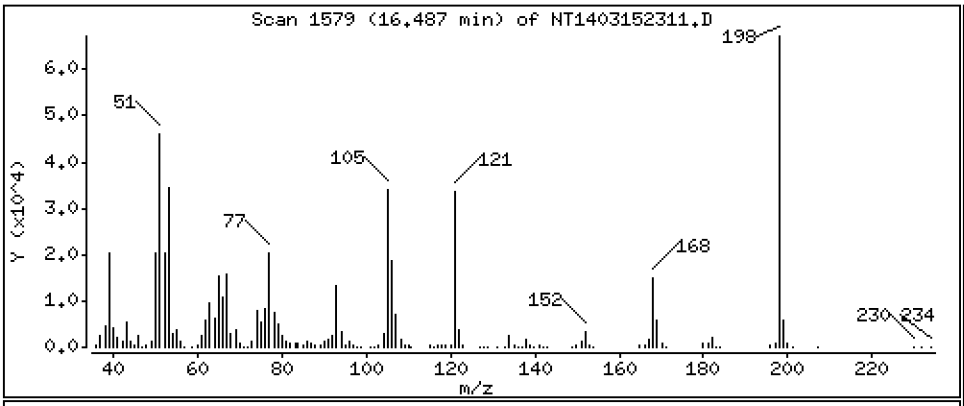
Operator: JGR

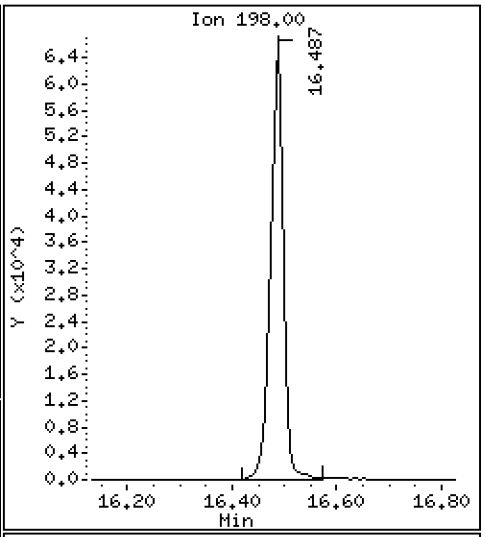
Column phase: ZB-5msi

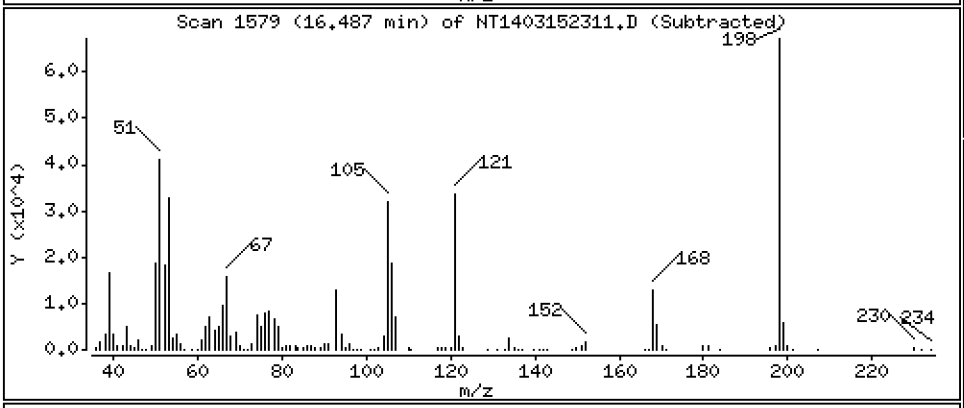
Column diameter: 0.25

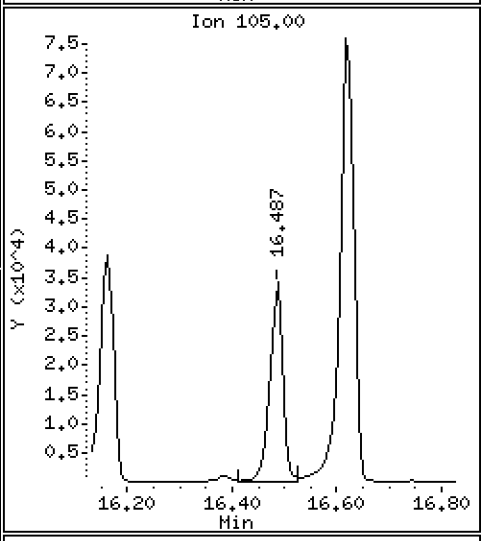
53 4,6-Dinitro-2-methylphenol

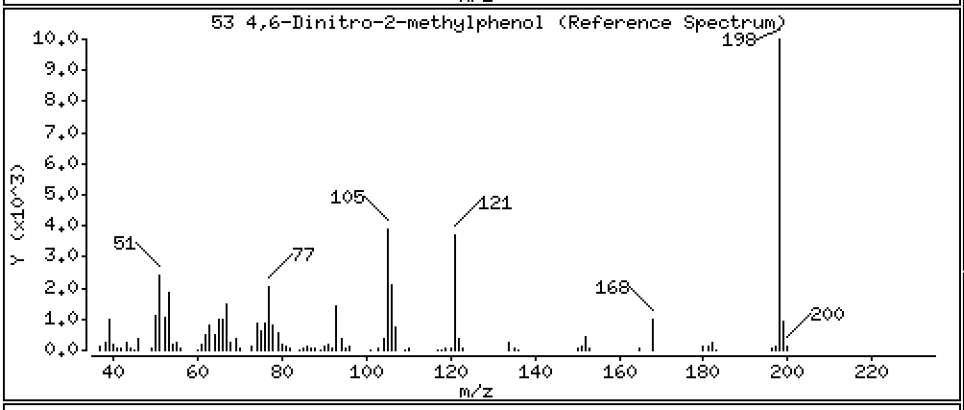
Concentration: 4.439 ug/mL

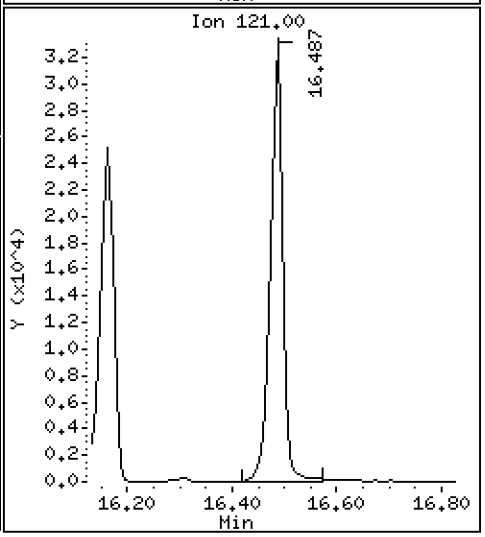


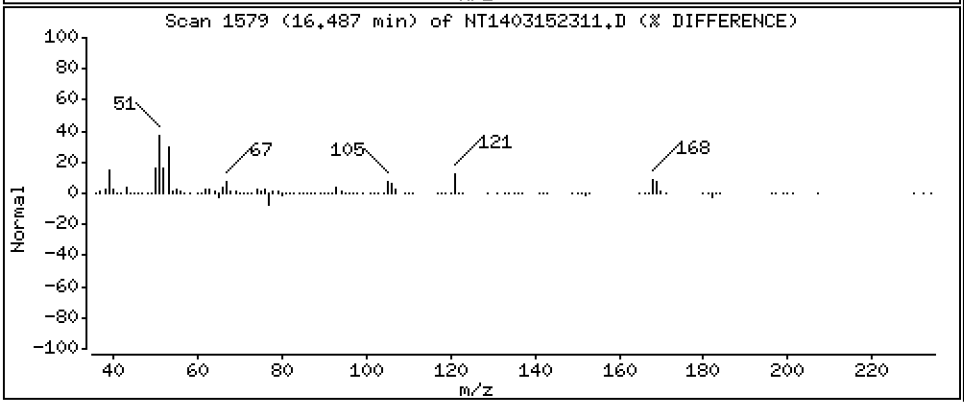












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

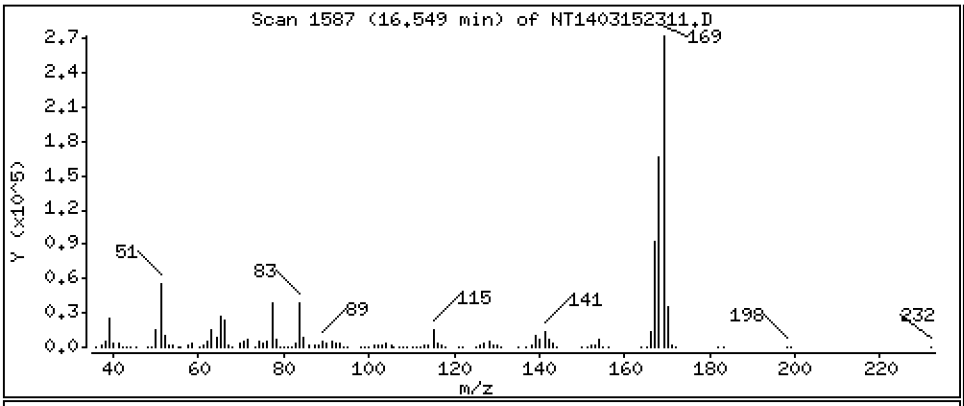
Operator: JGR

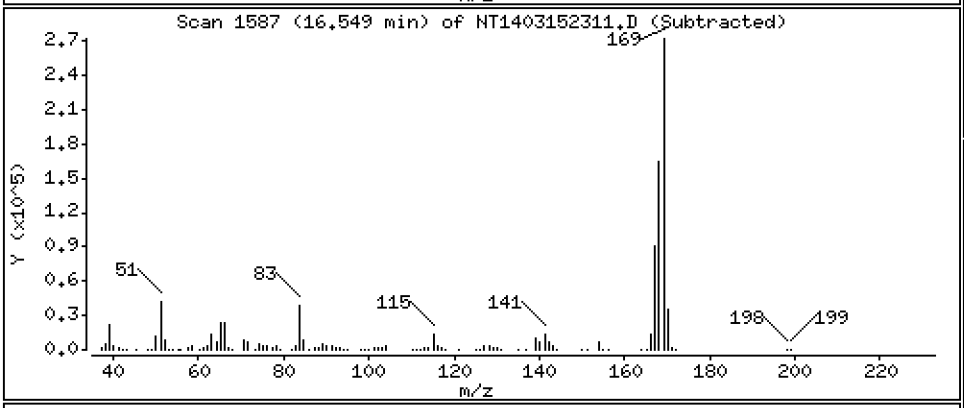
Column phase: ZB-5msi

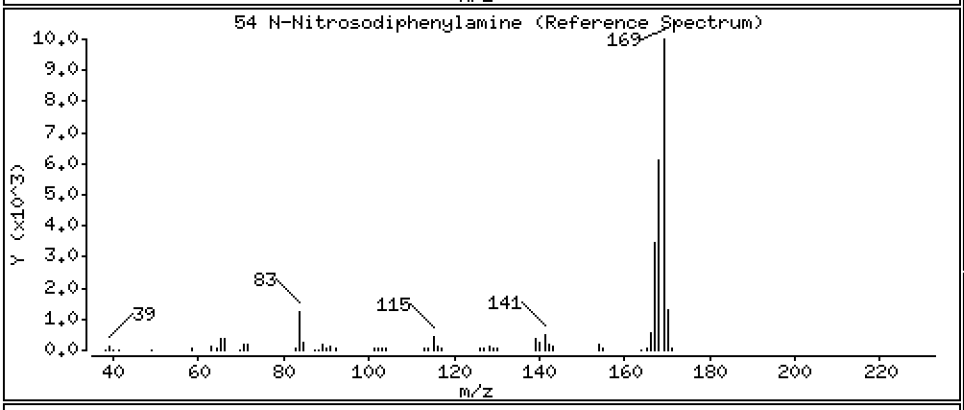
Column diameter: 0.25

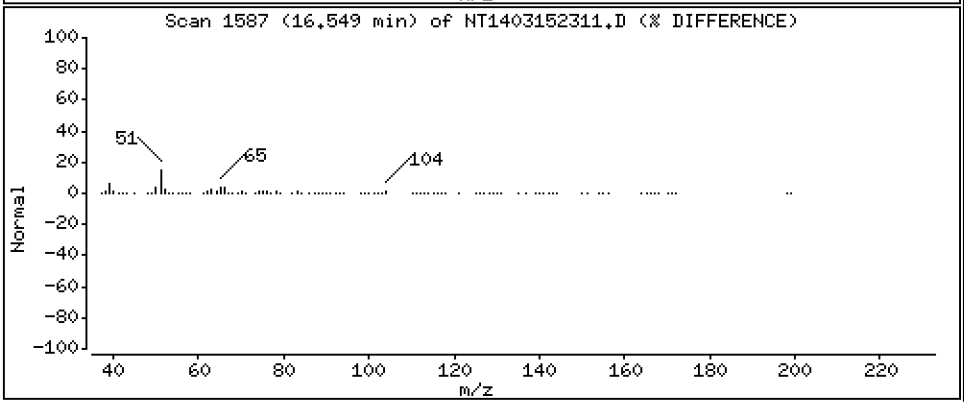
54 N-Nitrosodiphenylamine

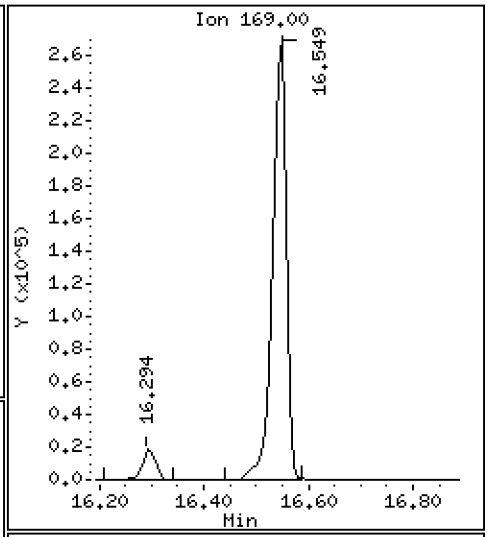
Concentration: 4.954 ug/mL

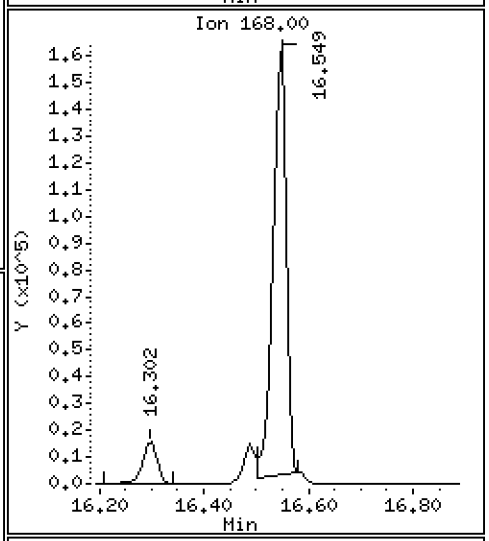


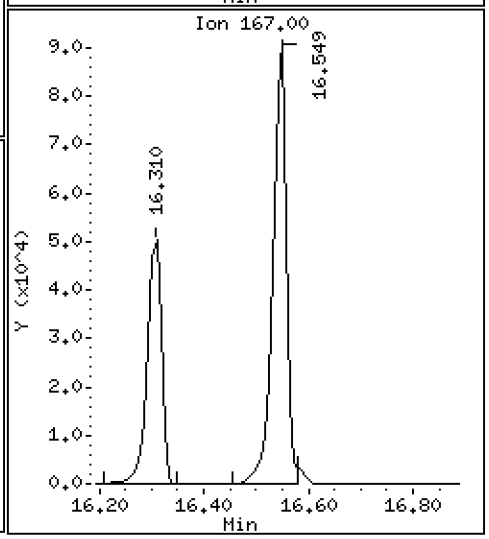












Data File: \\target\share\chem3\nt14.i\20230315.b\NT1403152311.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

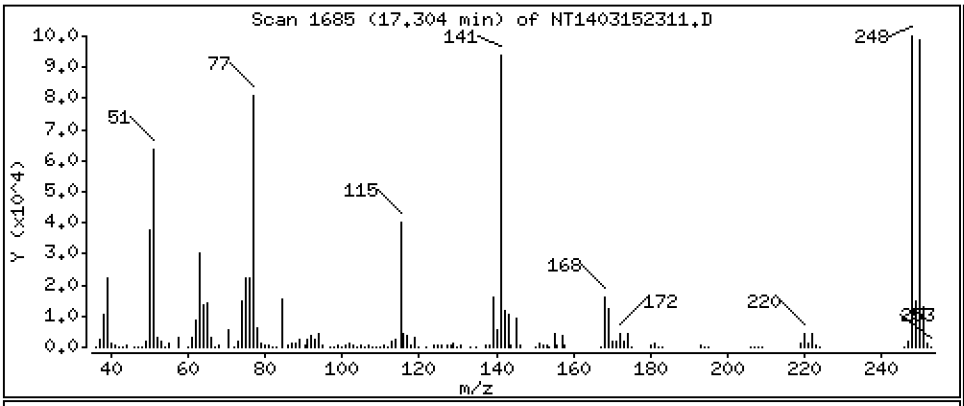
Operator: JGR

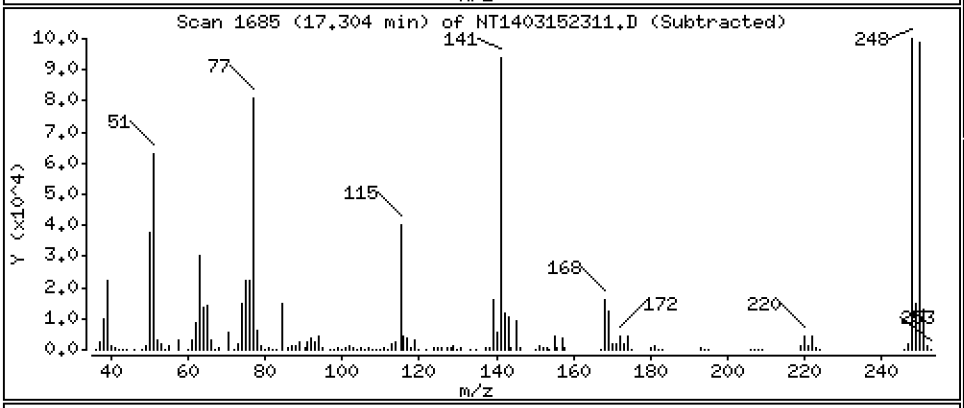
Column phase: ZB-5msi

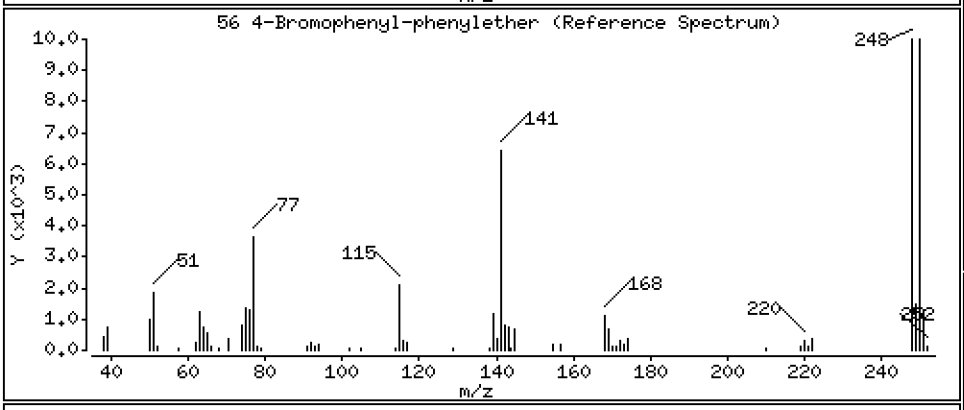
Column diameter: 0.25

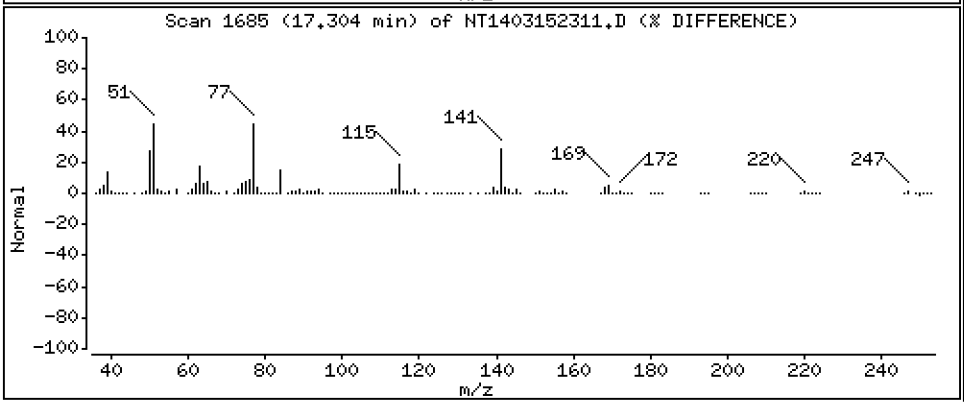
56 4-Bromophenyl-phenylether

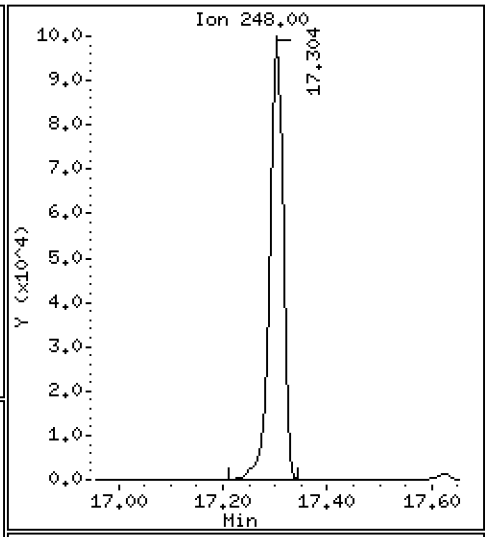
Concentration: 5.226 ug/mL

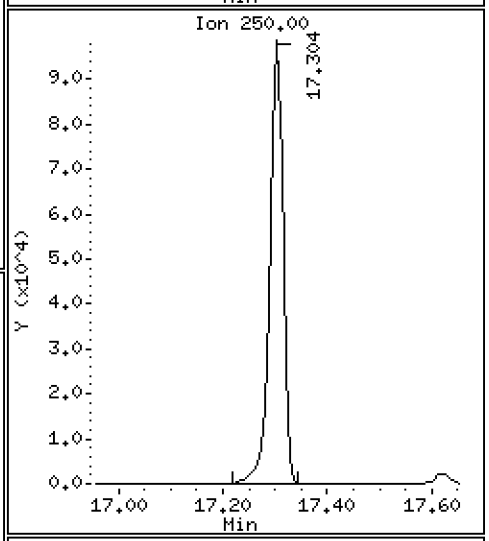


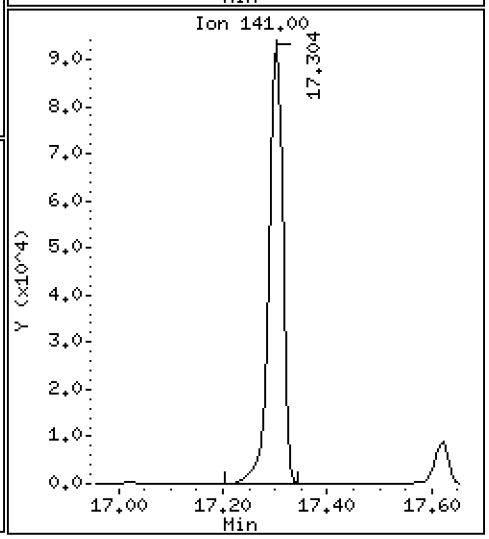












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

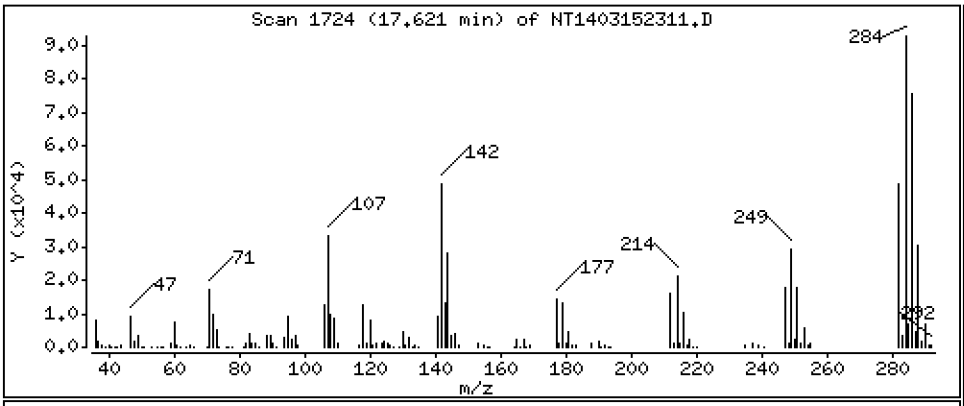
Operator: JGR

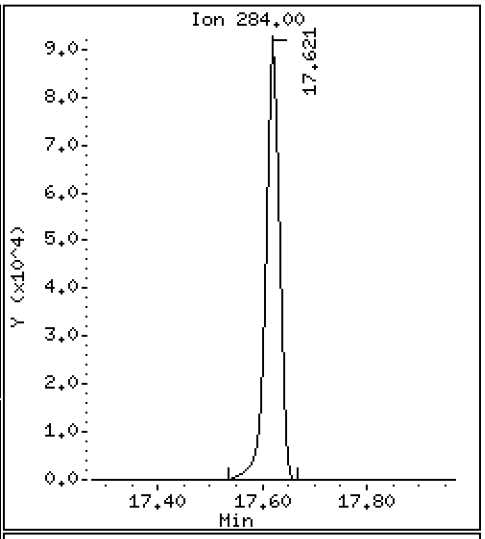
Column phase: ZB-5msi

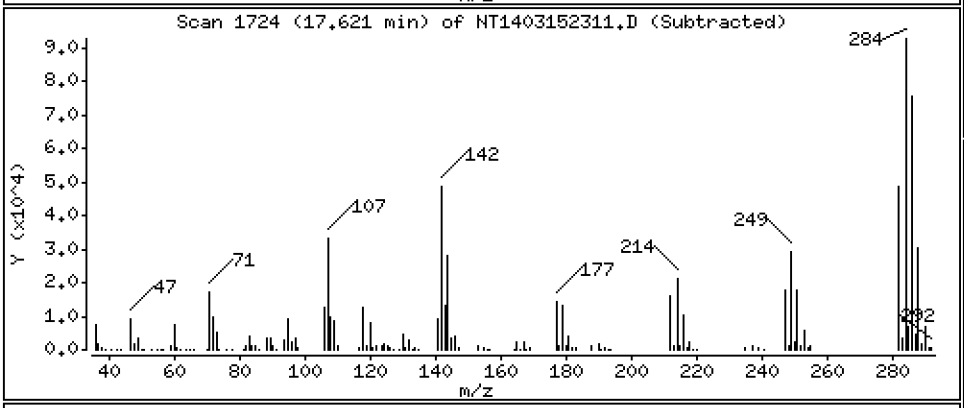
Column diameter: 0.25

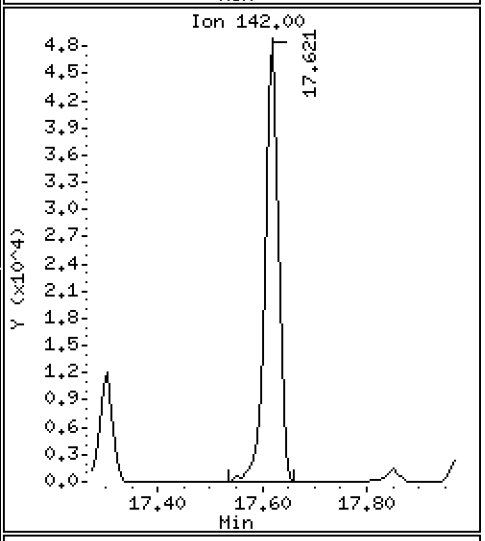
57 Hexachlorobenzene

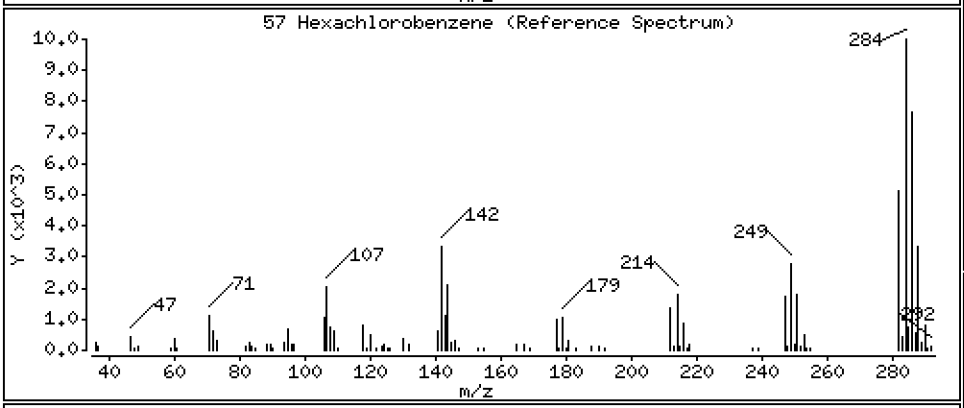
Concentration: 4.780 ug/mL

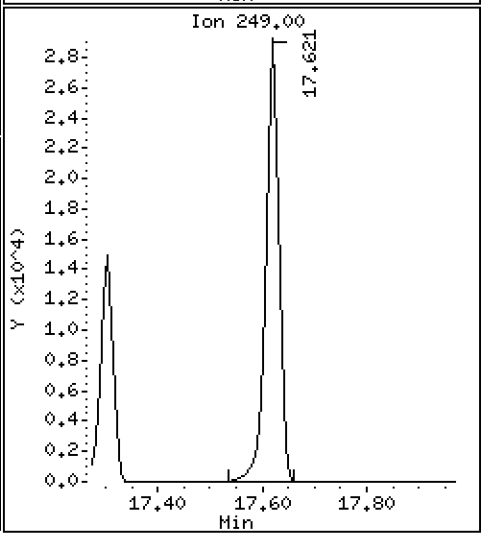


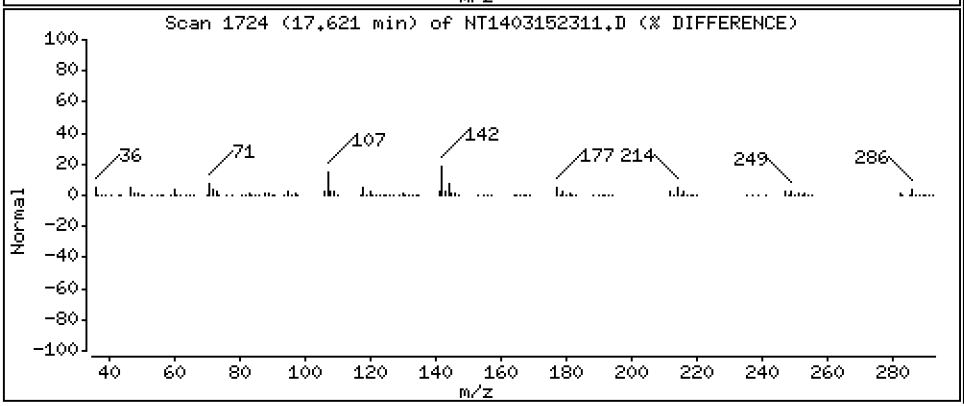












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

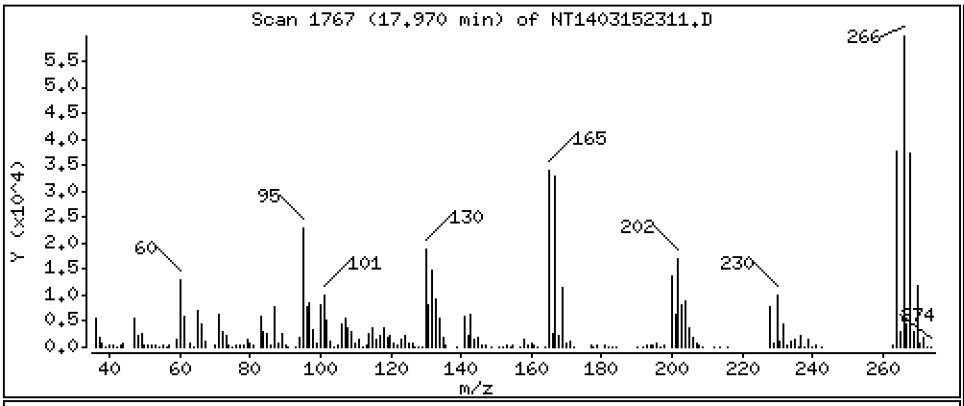
Operator: JGR

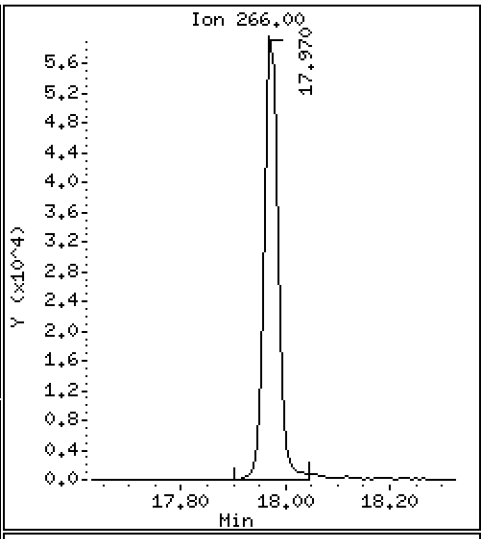
Column phase: ZB-5msi

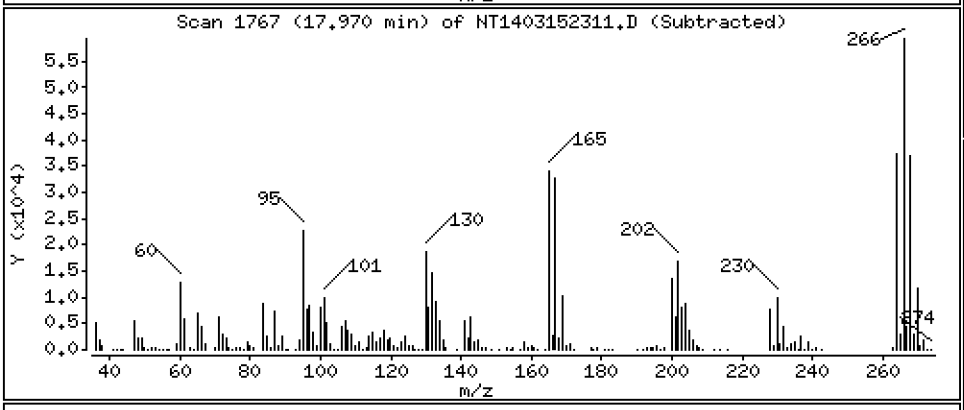
Column diameter: 0.25

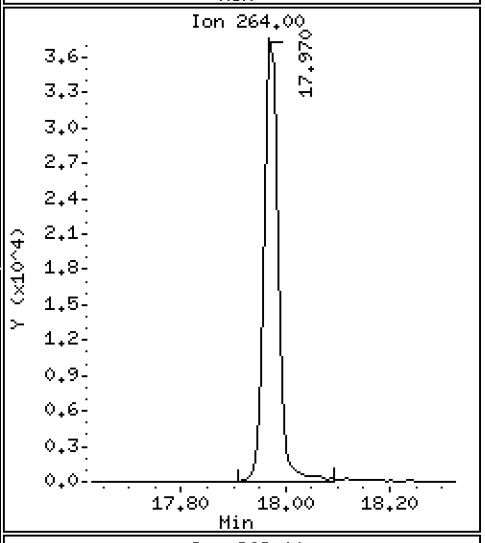
58 Pentachlorophenol

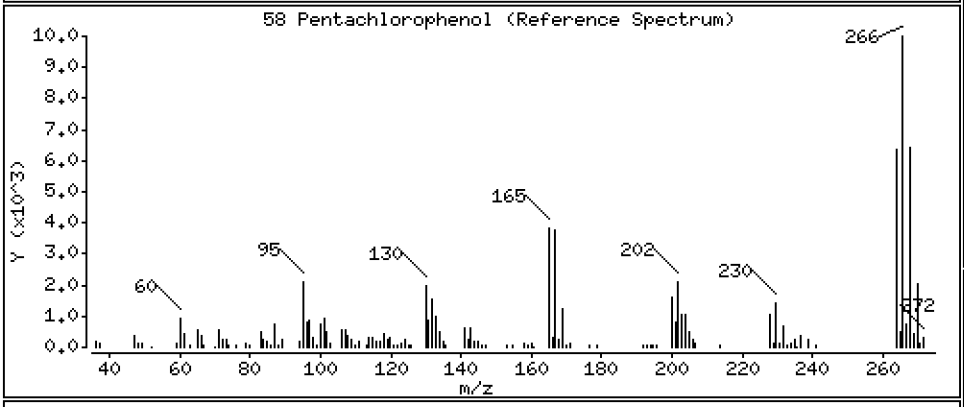
Concentration: 4.477 ug/mL

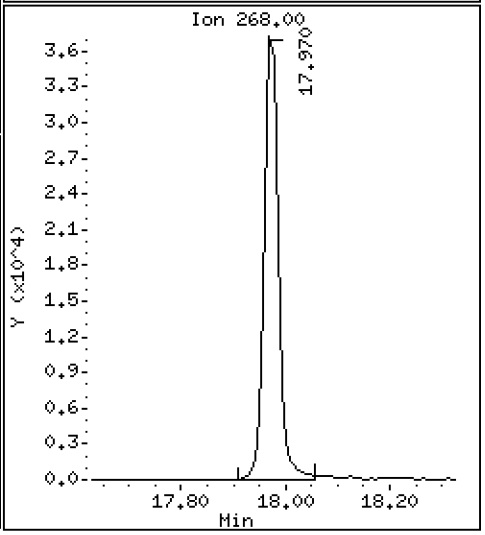


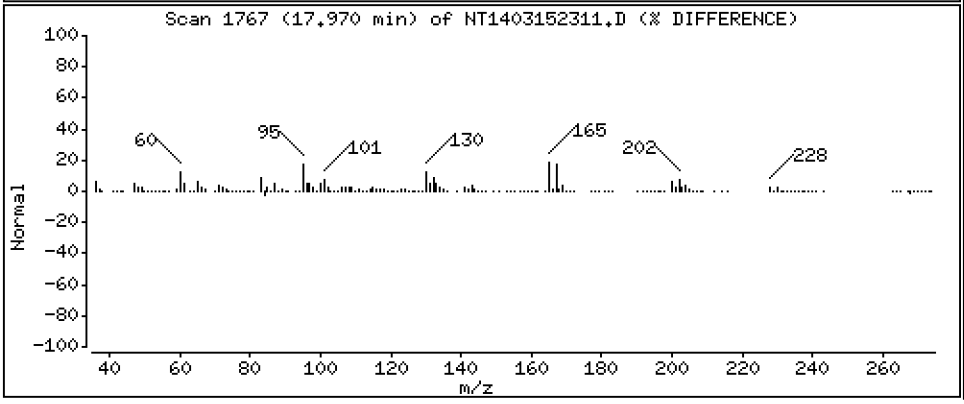












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

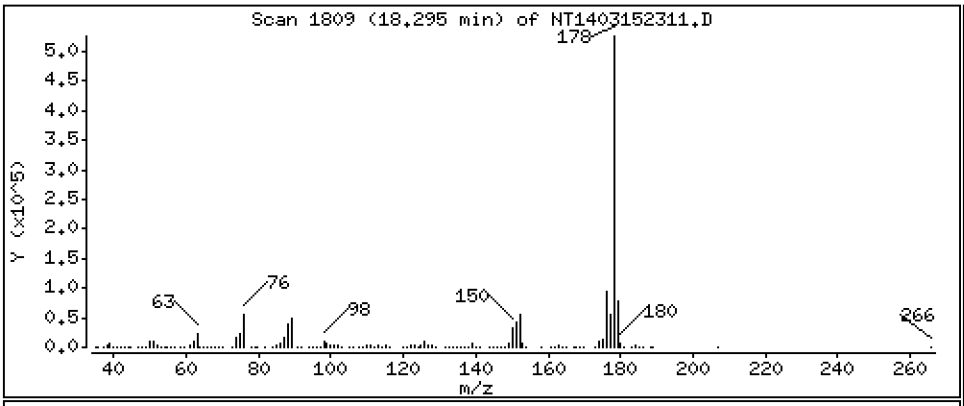
Operator: JGR

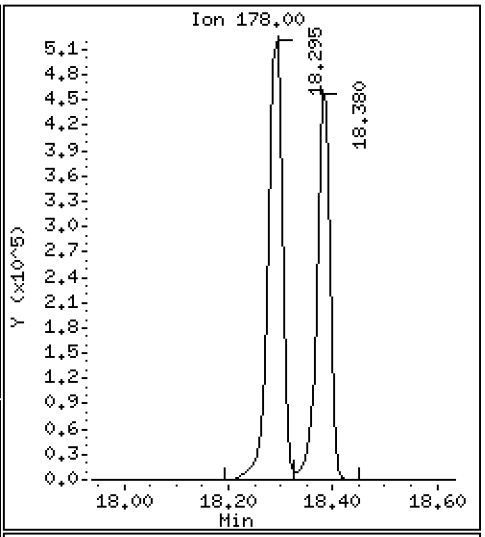
Column phase: ZB-5msi

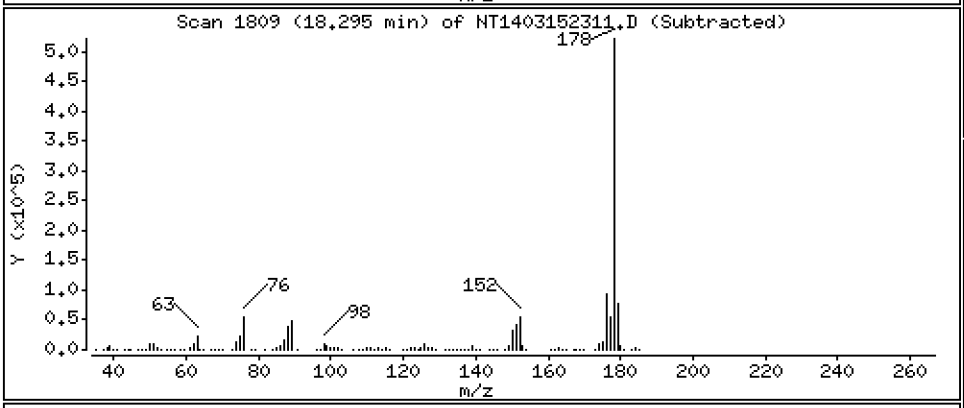
Column diameter: 0.25

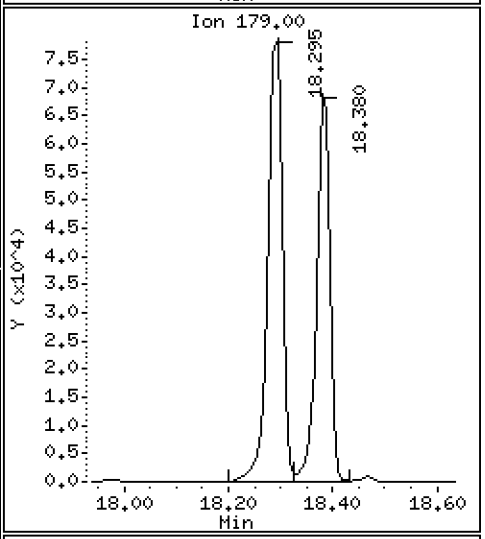
60 Phenanthrene

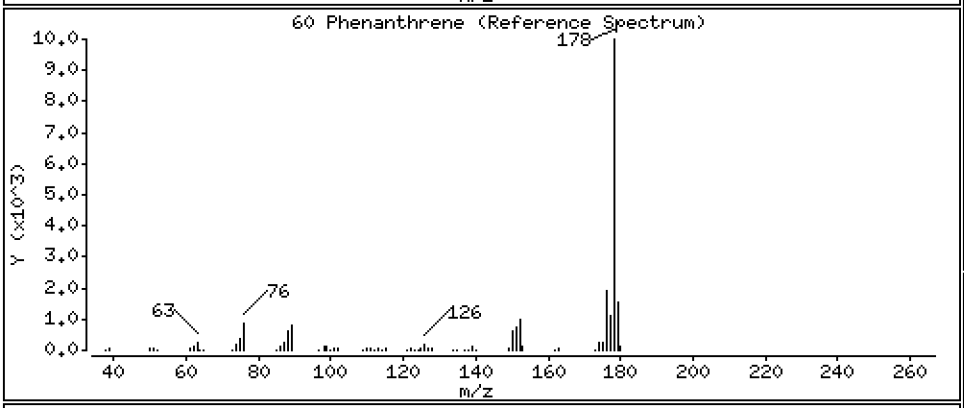
Concentration: 4.734 ug/mL

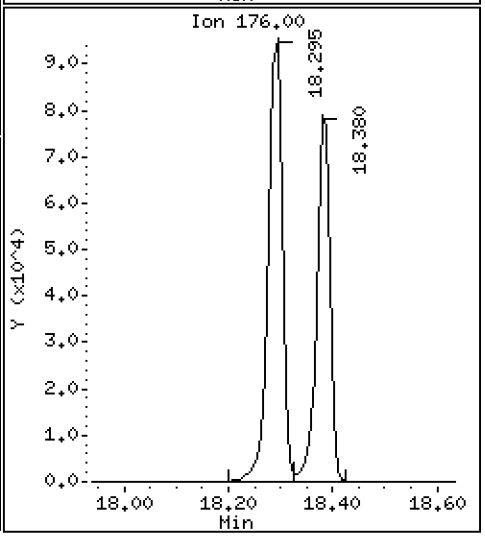


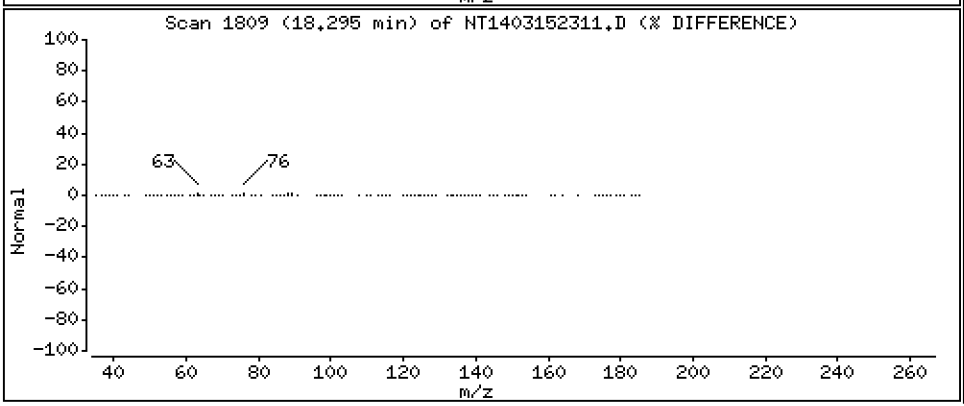












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

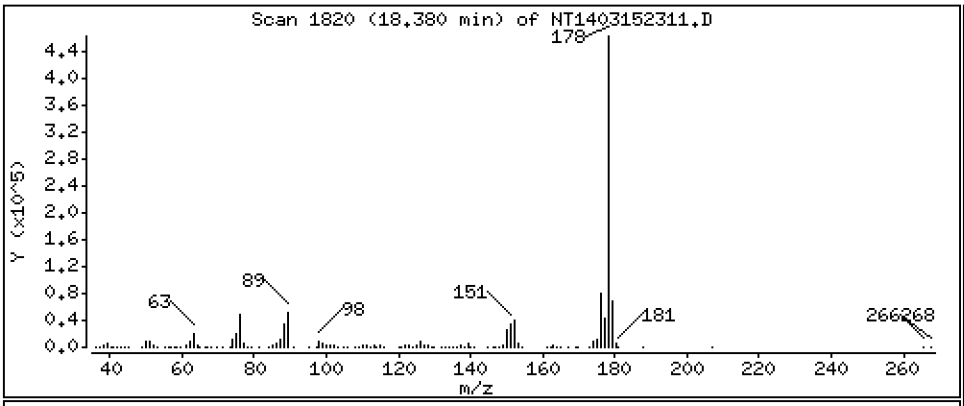
Operator: JGR

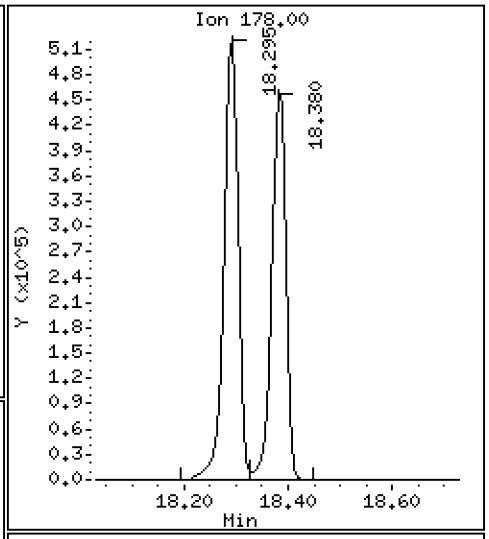
Column phase: ZB-5msi

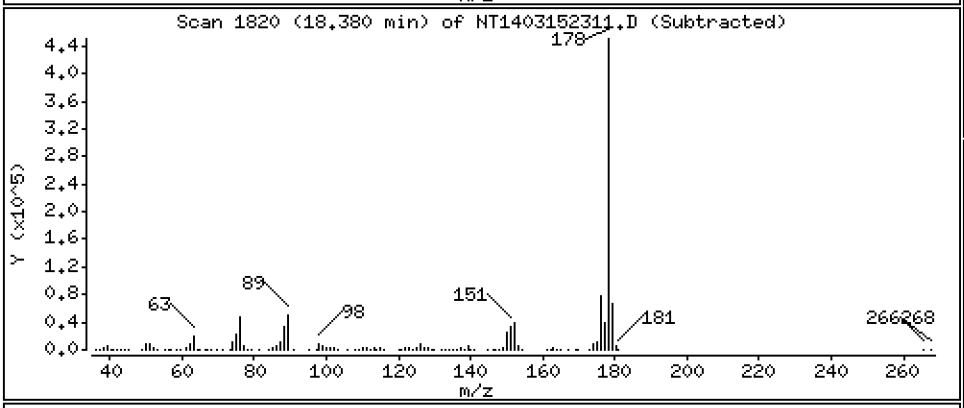
Column diameter: 0.25

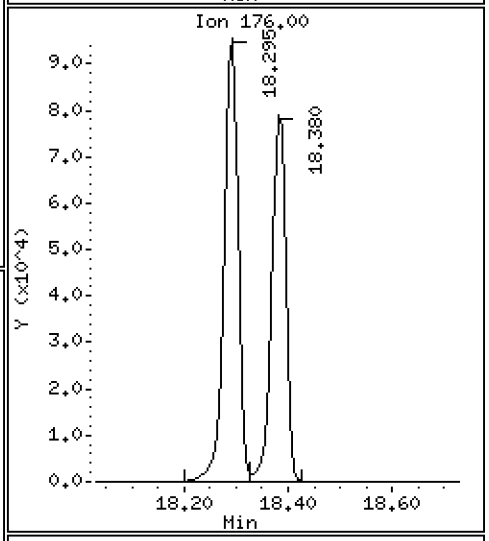
61 Anthracene

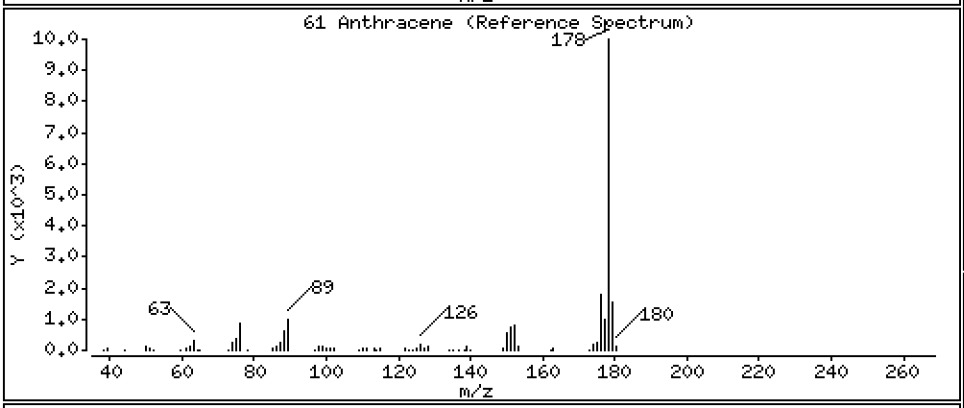
Concentration: 4.281 ug/mL

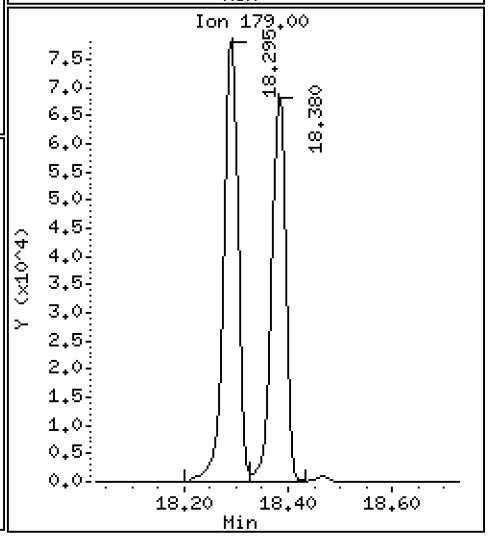


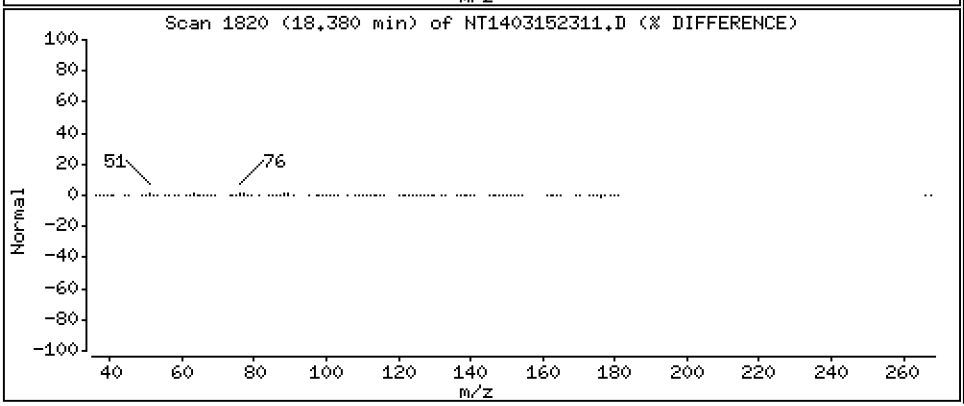












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

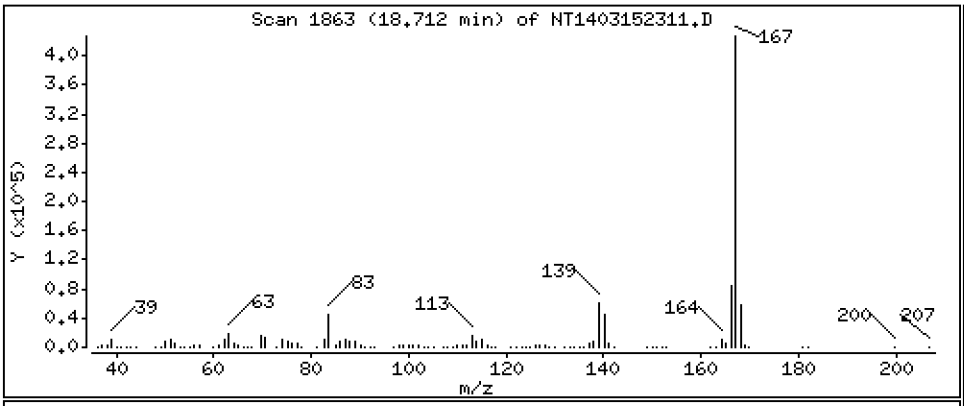
Operator: JGR

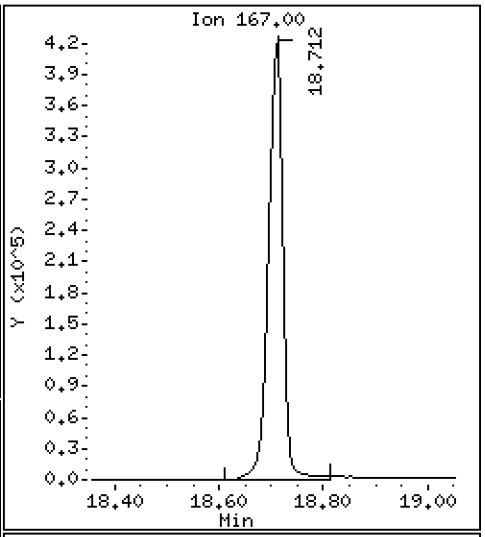
Column phase: ZB-5msi

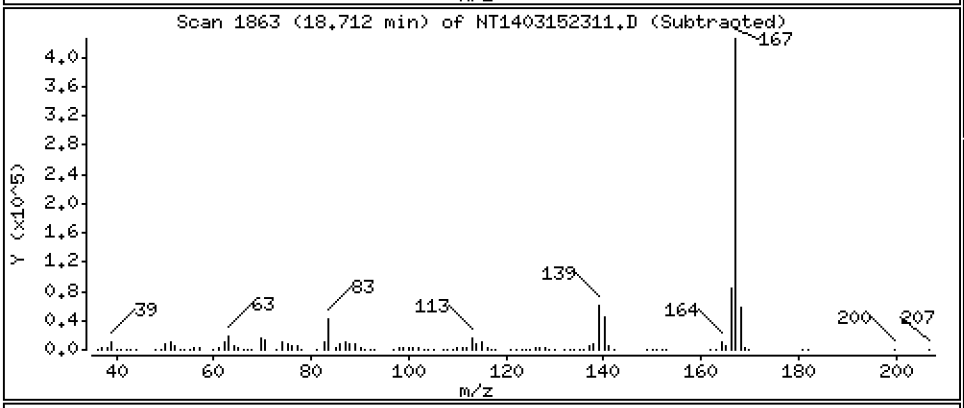
Column diameter: 0.25

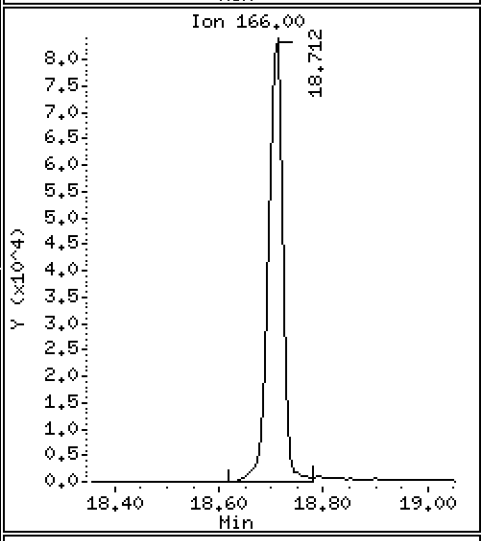
62 Carbazole

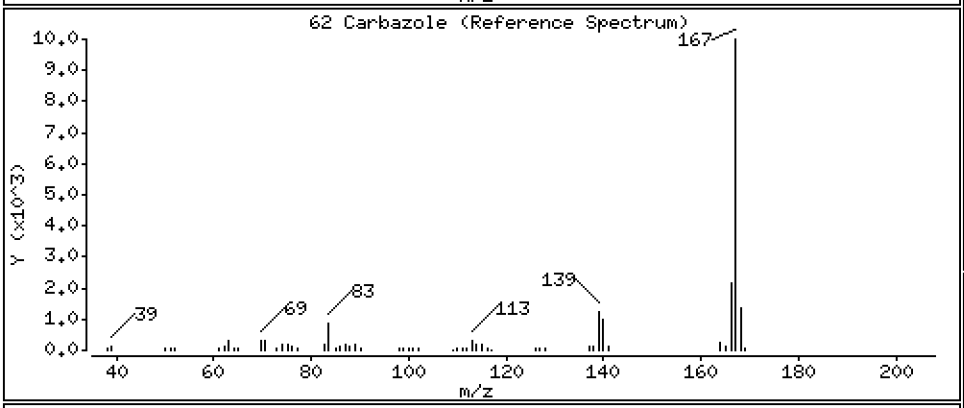
Concentration: 4.587 ug/mL

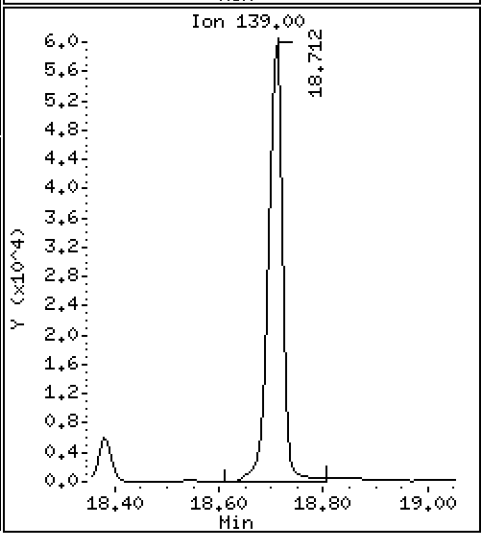


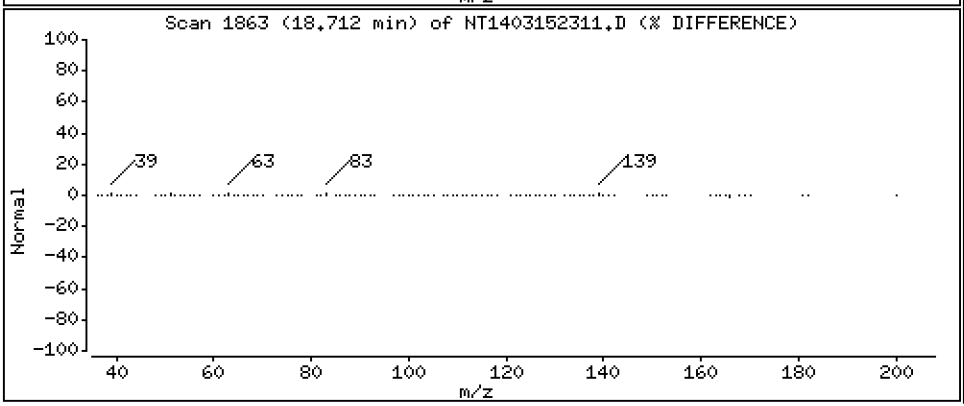












Date : 15-MAR-2023 17:39

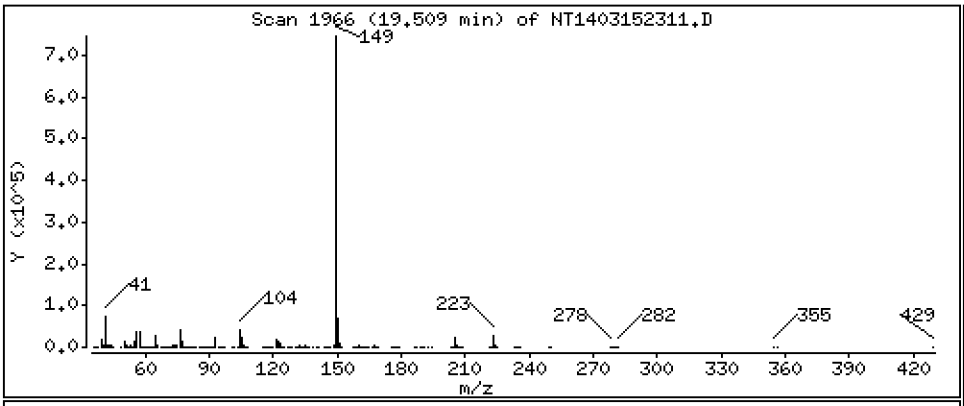
Client ID: Instrument: nt14.i

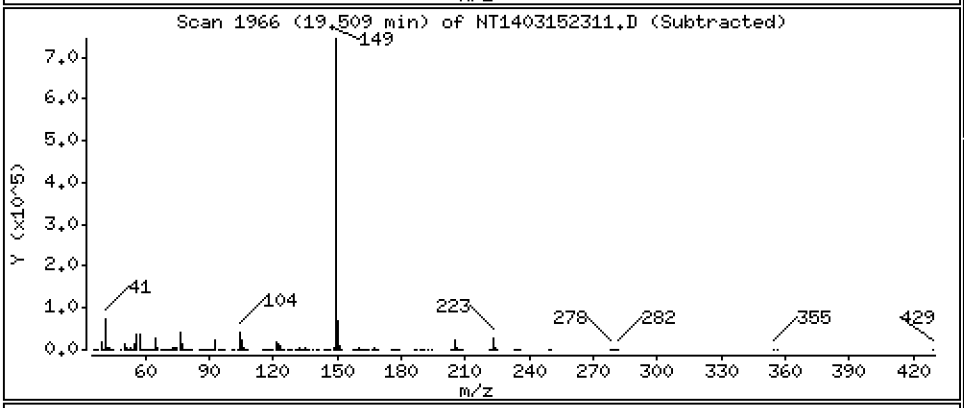
Sample Info: SLC0160-SCV1

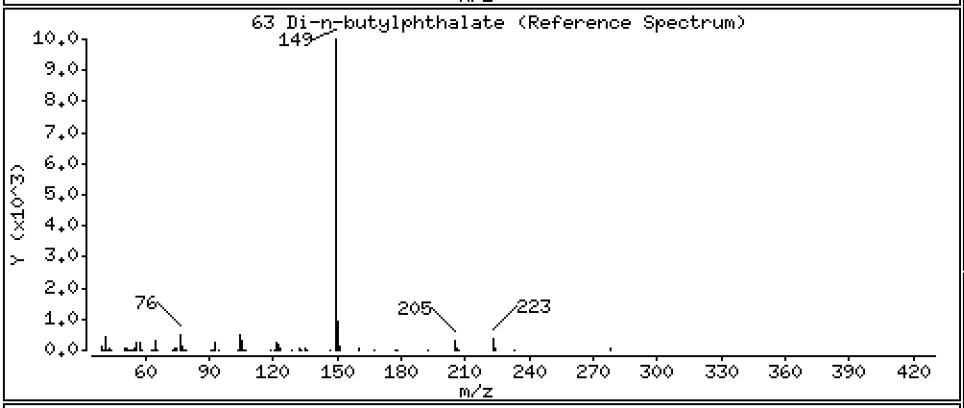
Operator: JGR

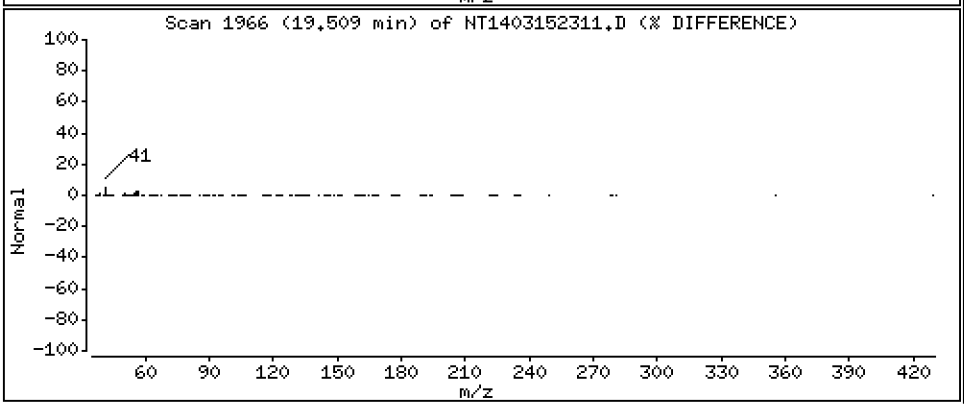
Column phase: ZB-5msi Column diameter: 0.25

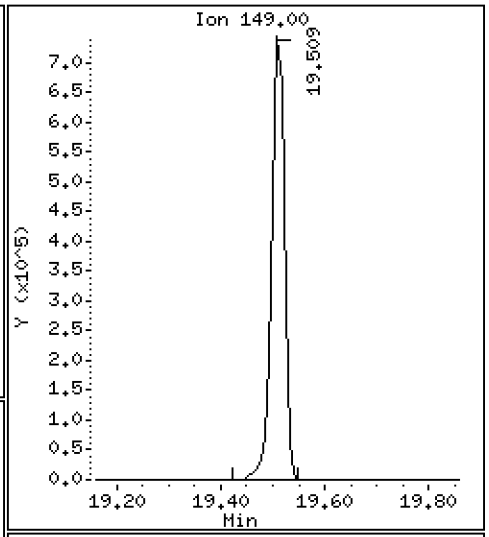
63 Di-n-butylphthalate Concentration: 5.507 ug/mL

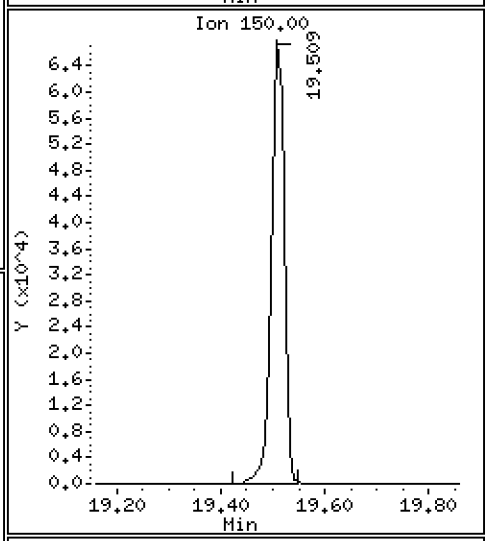


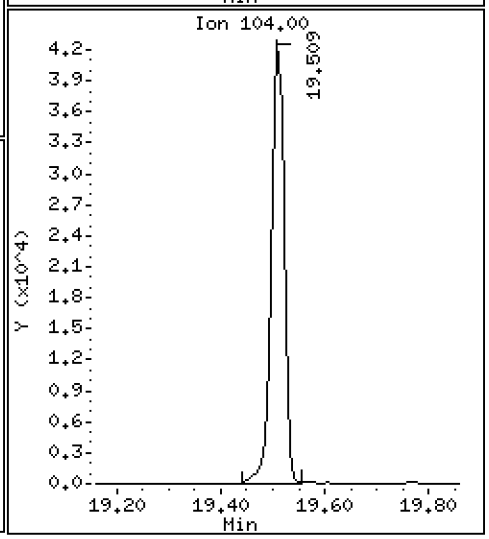












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

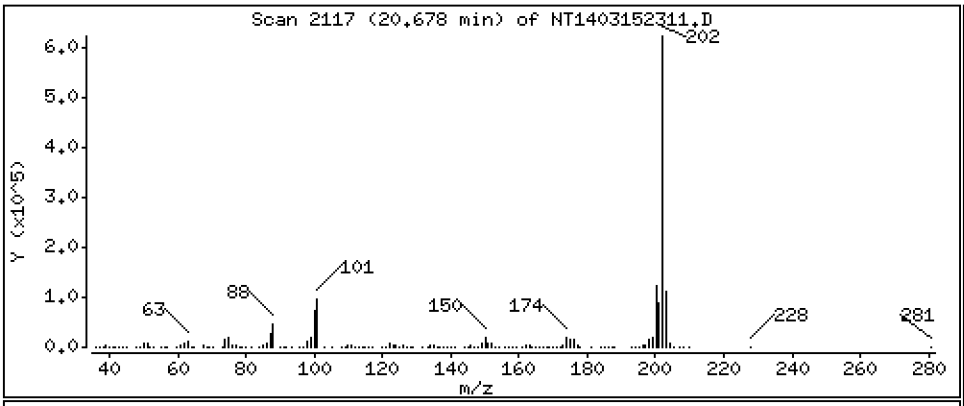
Operator: JGR

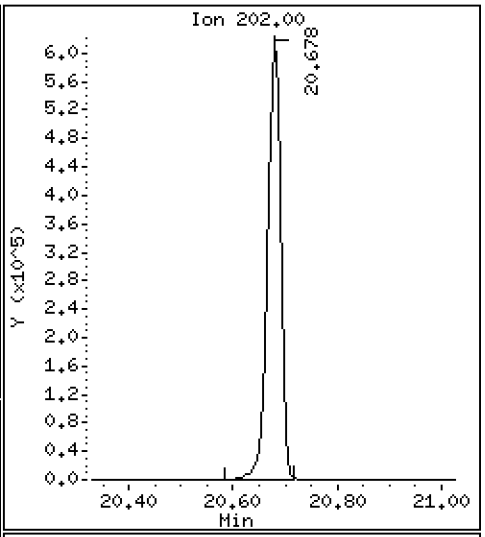
Column phase: ZB-5msi

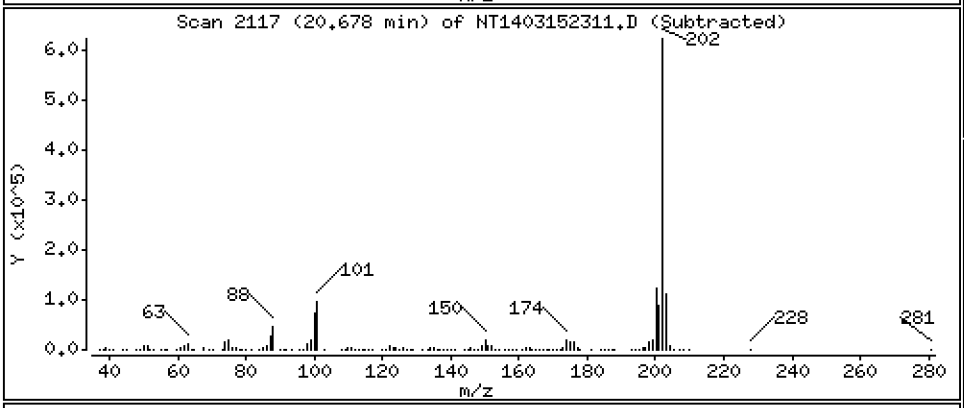
Column diameter: 0.25

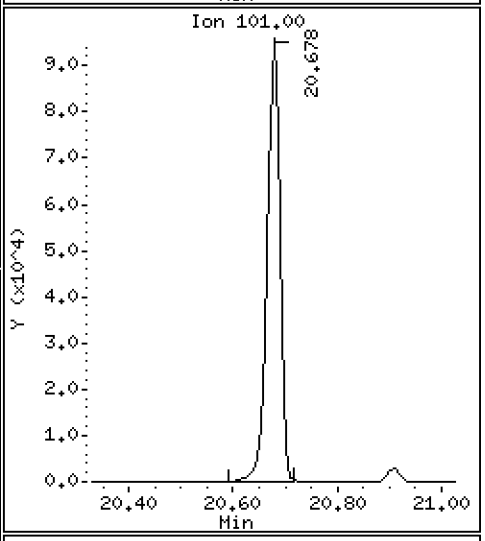
64 Fluoranthene

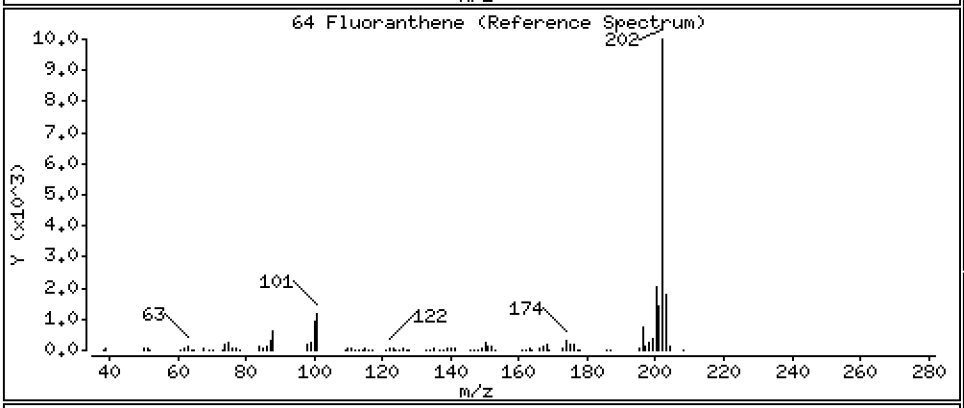
Concentration: 5.024 ug/mL

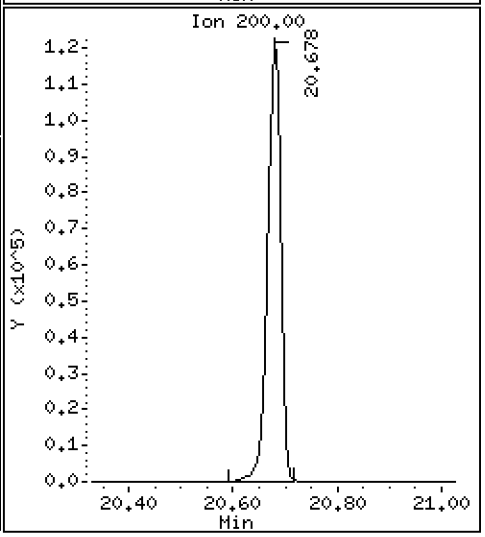


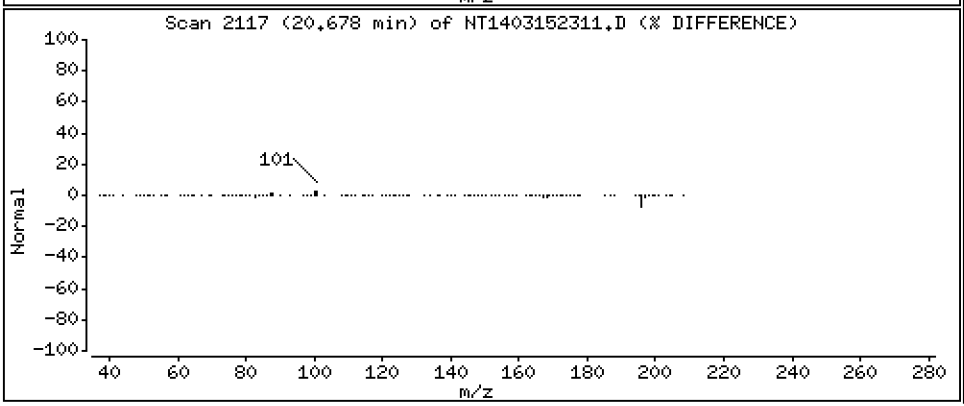












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

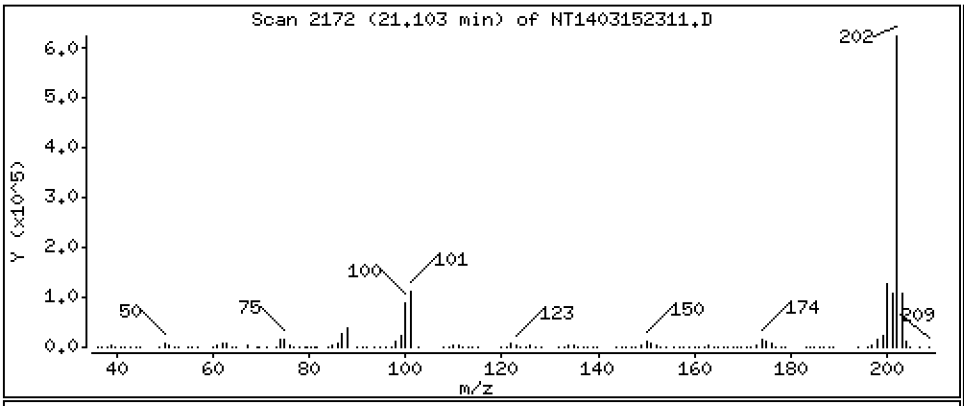
Operator: JGR

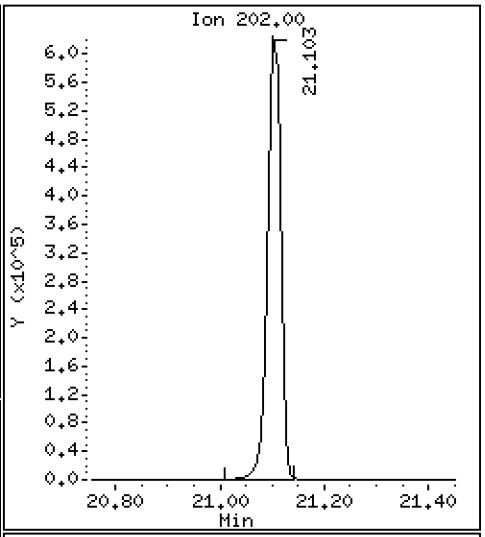
Column phase: ZB-5msi

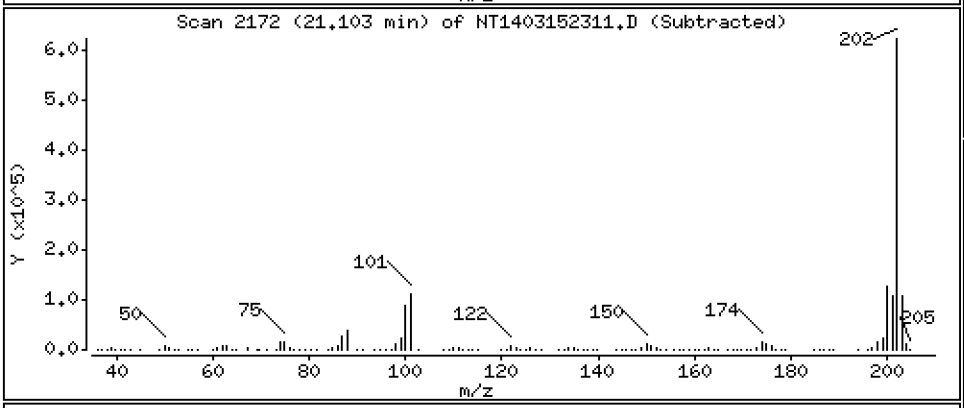
Column diameter: 0.25

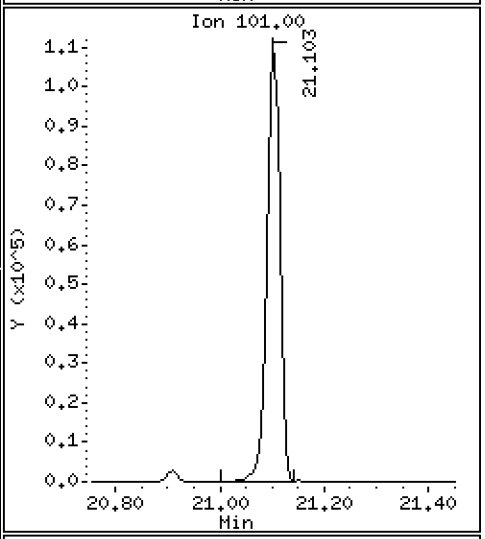
65 Pyrene

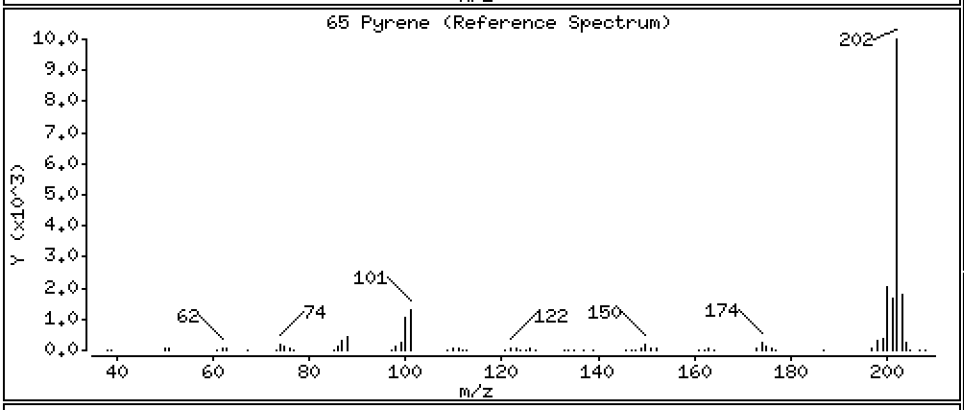
Concentration: 4.958 ug/mL

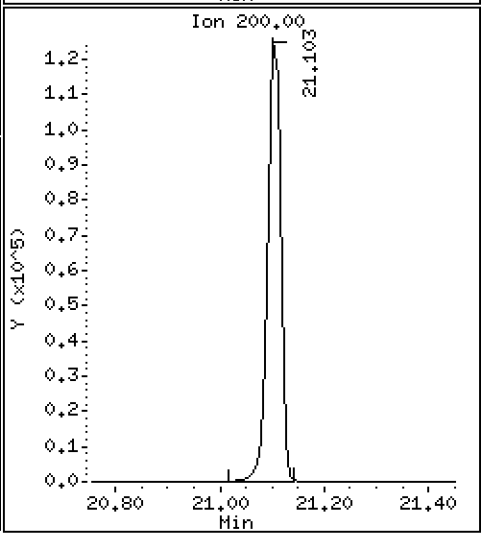


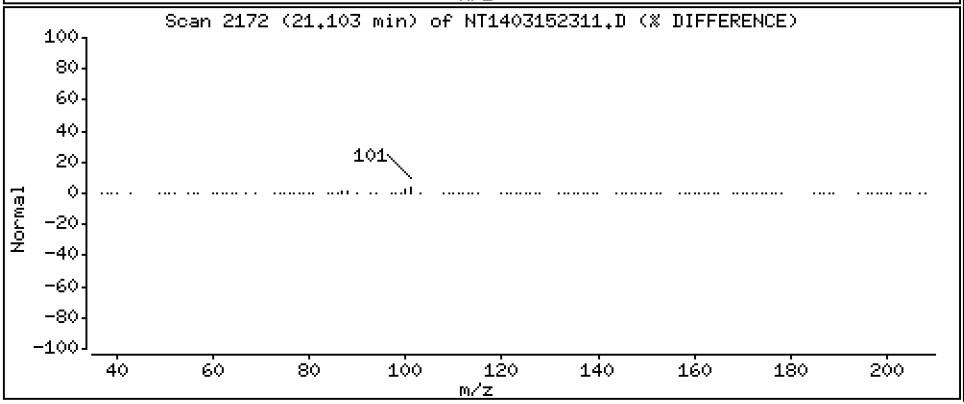












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

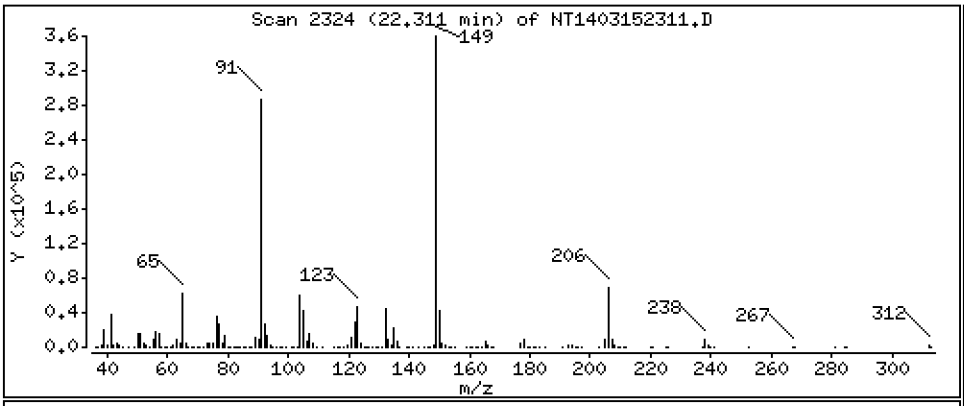
Operator: JGR

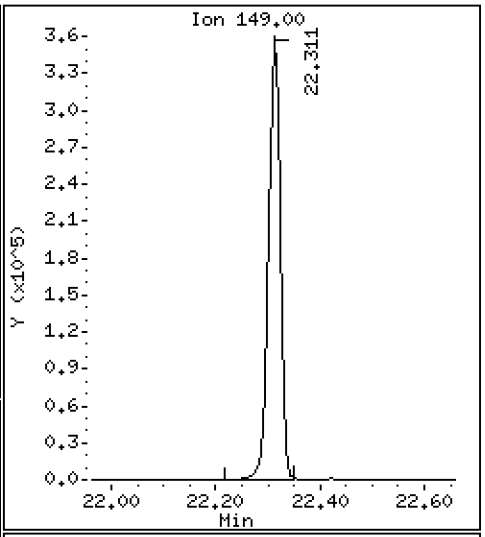
Column phase: ZB-5msi

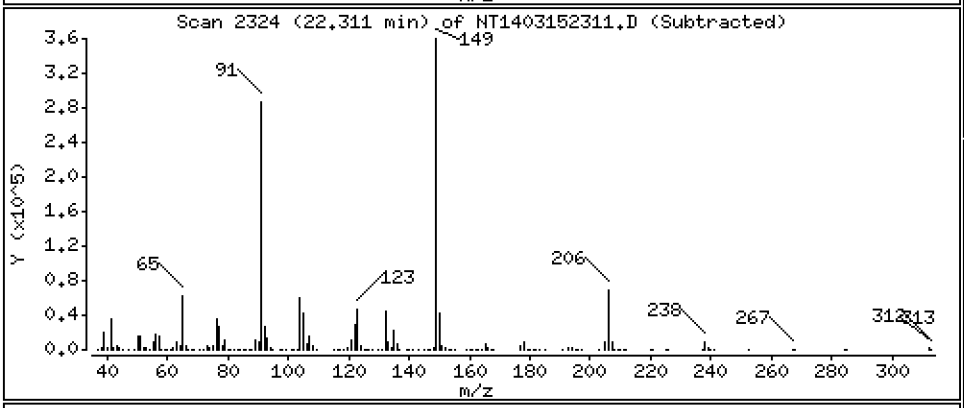
Column diameter: 0.25

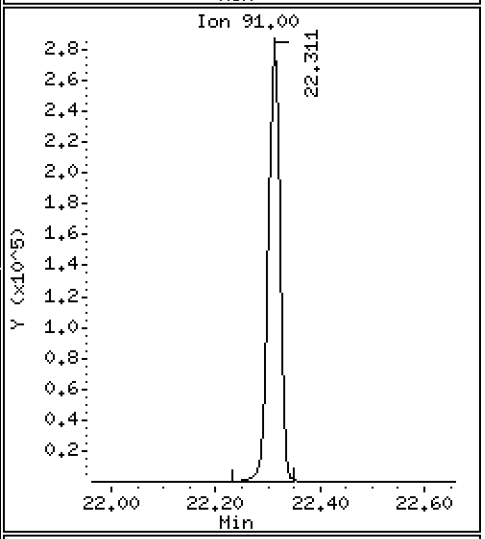
67 Butylbenzylphthalate

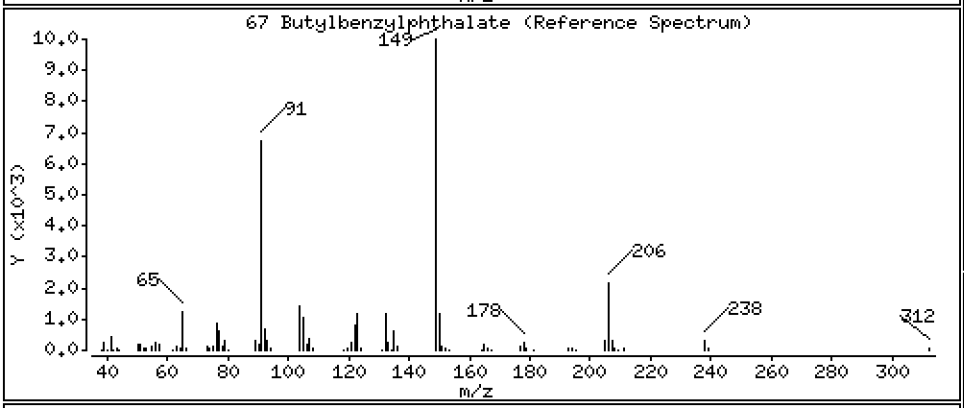
Concentration: 5.737 ug/mL

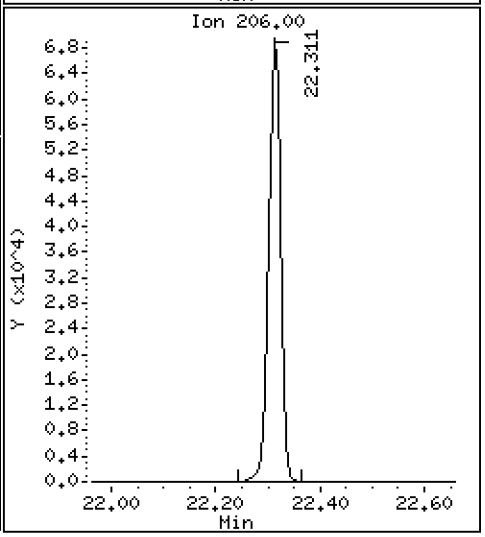


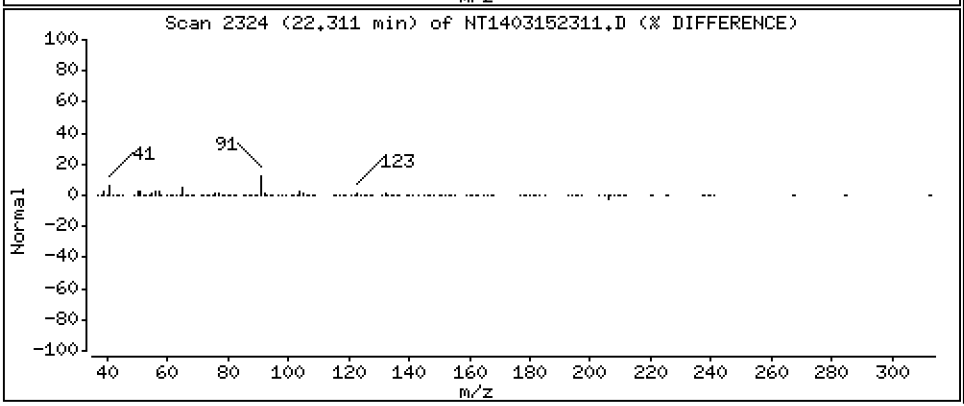












Date : 15-MAR-2023 17:39

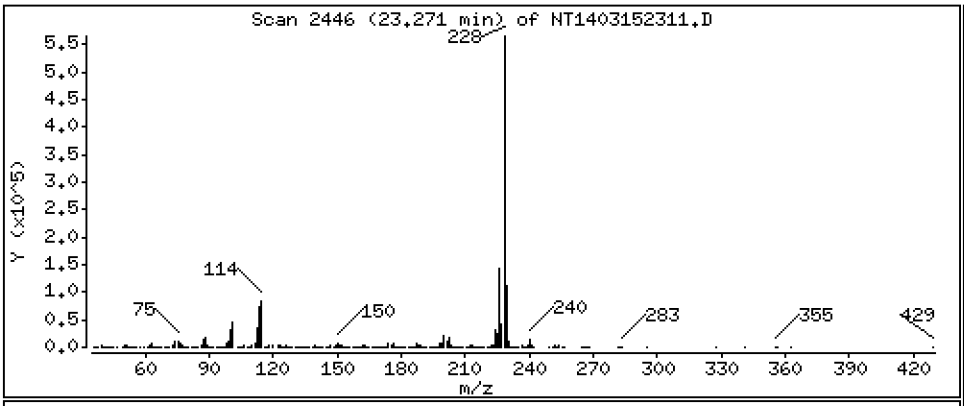
Client ID: Instrument: nt14.i

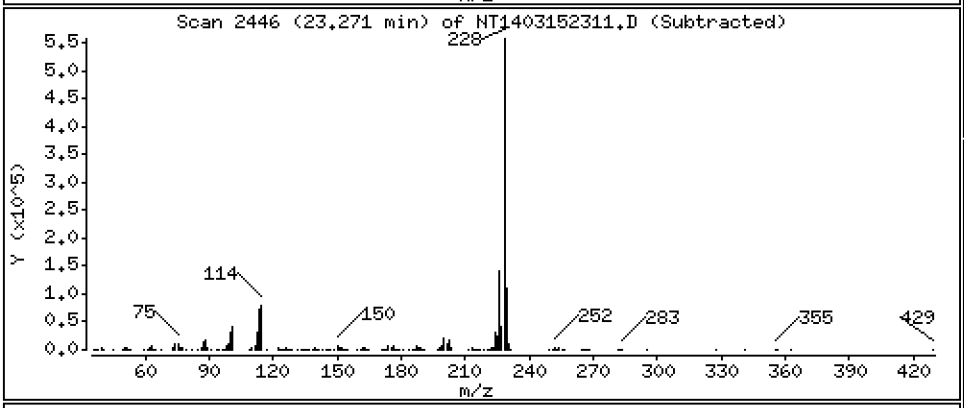
Sample Info: SLC0160-SCV1

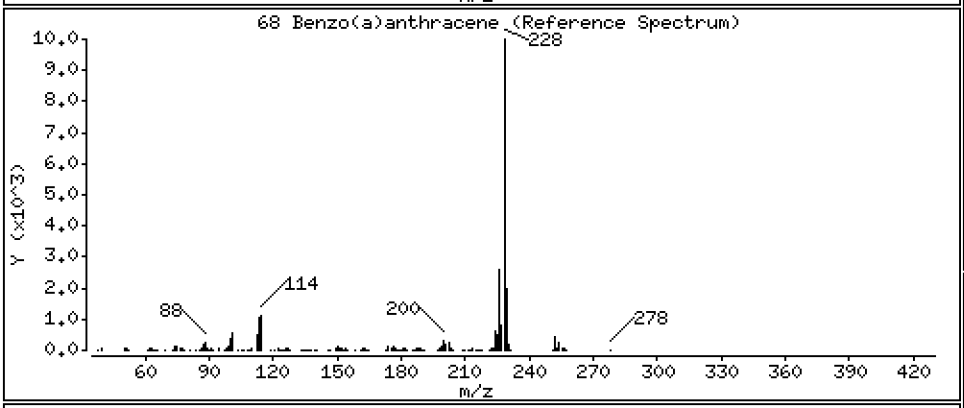
Operator: JGR

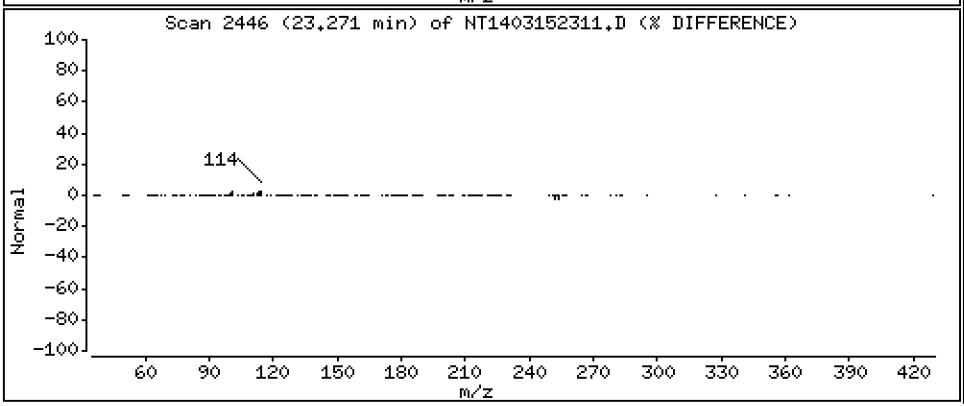
Column phase: ZB-5msi Column diameter: 0.25

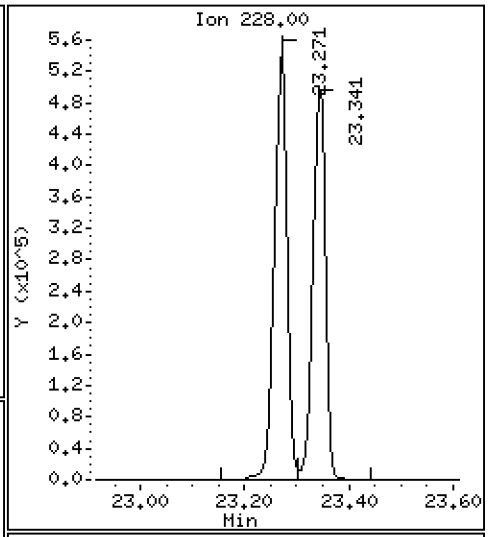
68 Benzo(a)anthracene Concentration: 4.827 ug/mL

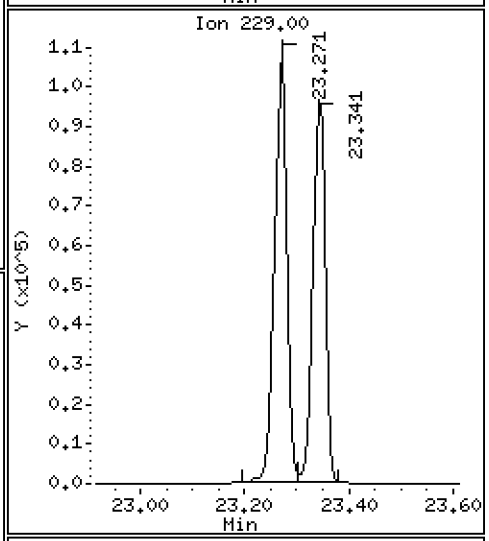


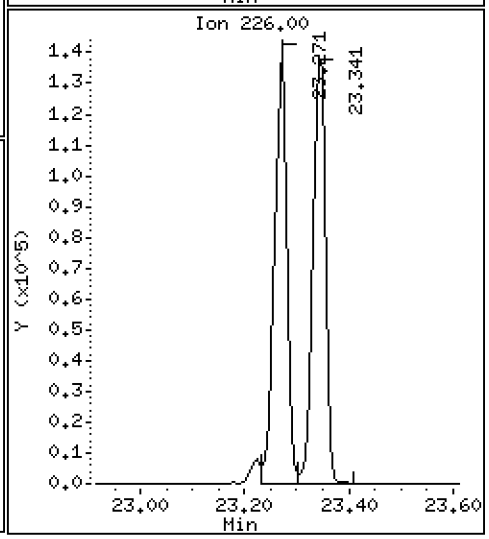












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

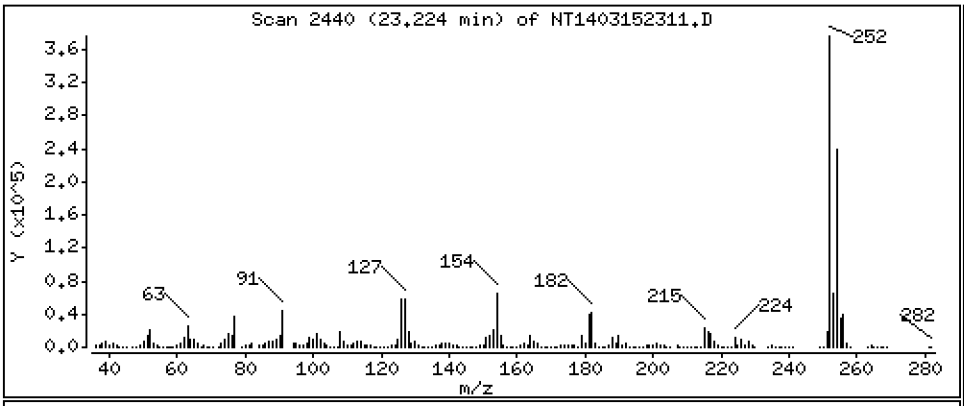
Operator: JGR

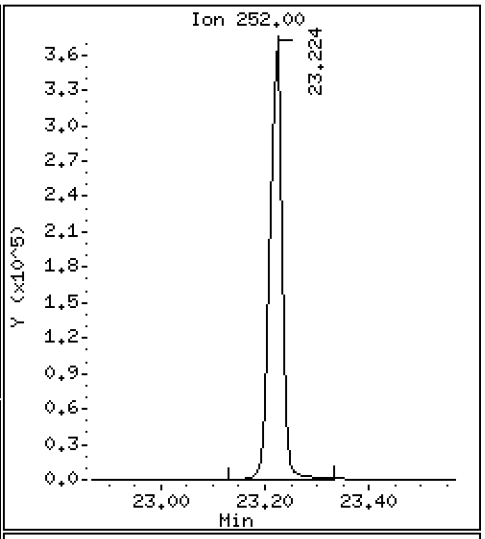
Column phase: ZB-5msi

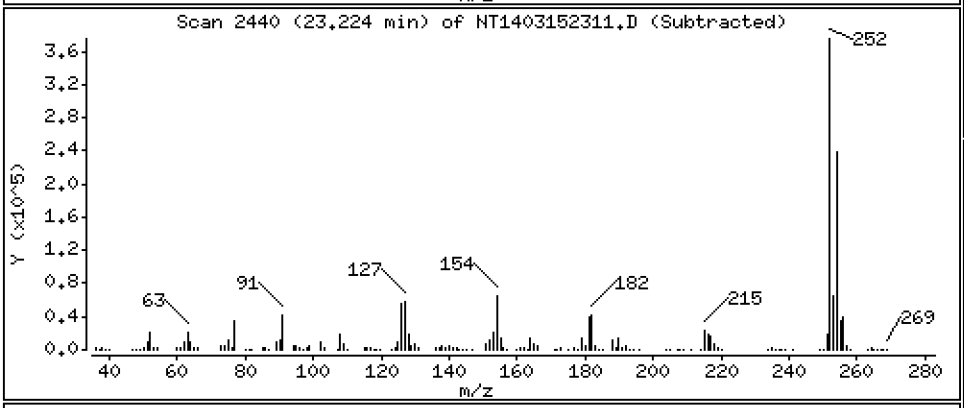
Column diameter: 0.25

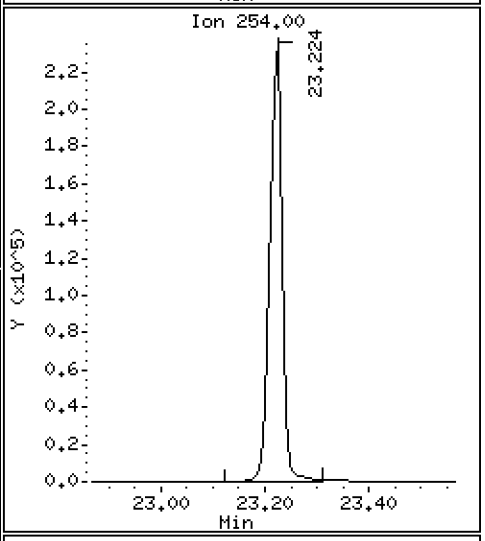
70 3,3'-Dichlorobenzidine

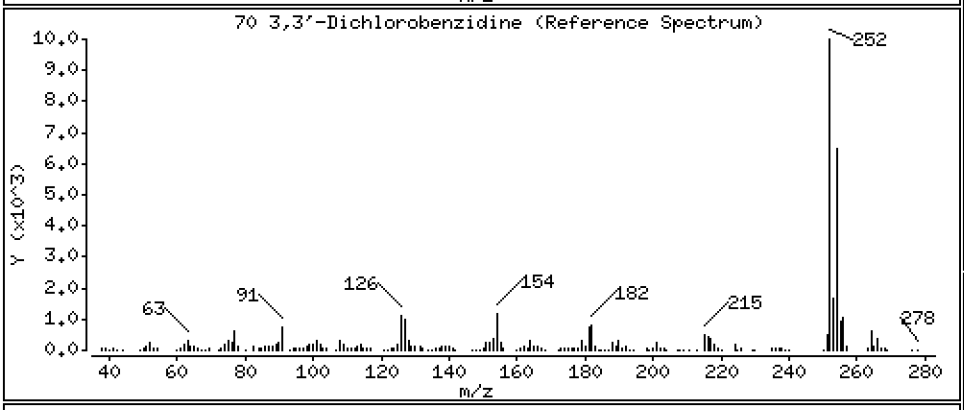
Concentration: 10.65 ug/mL

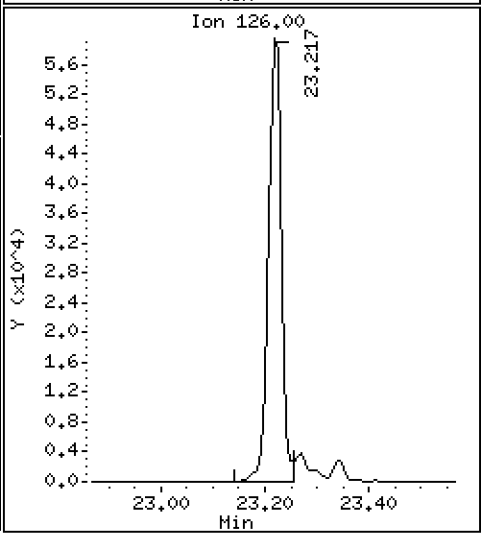


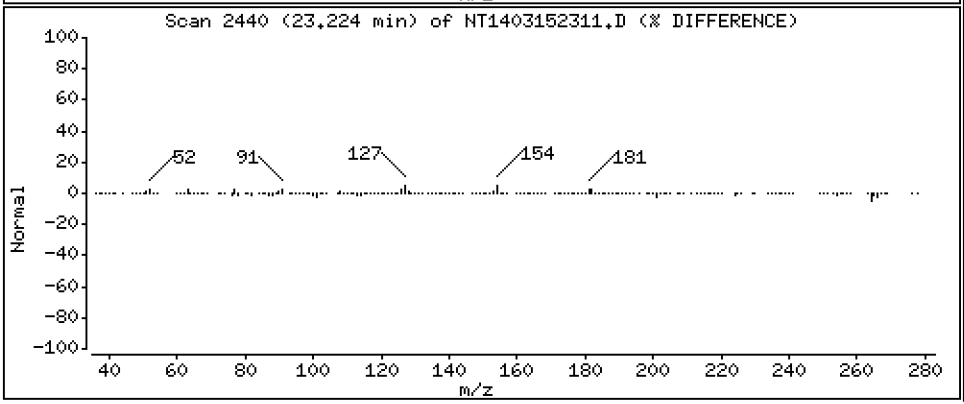












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

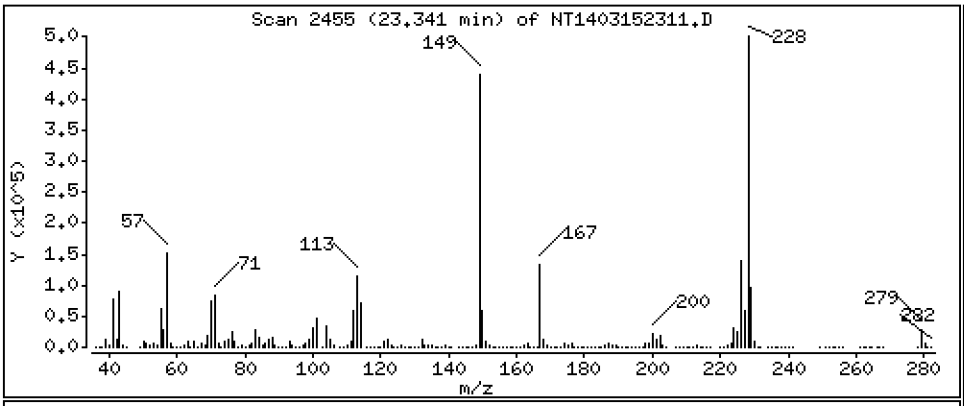
Operator: JGR

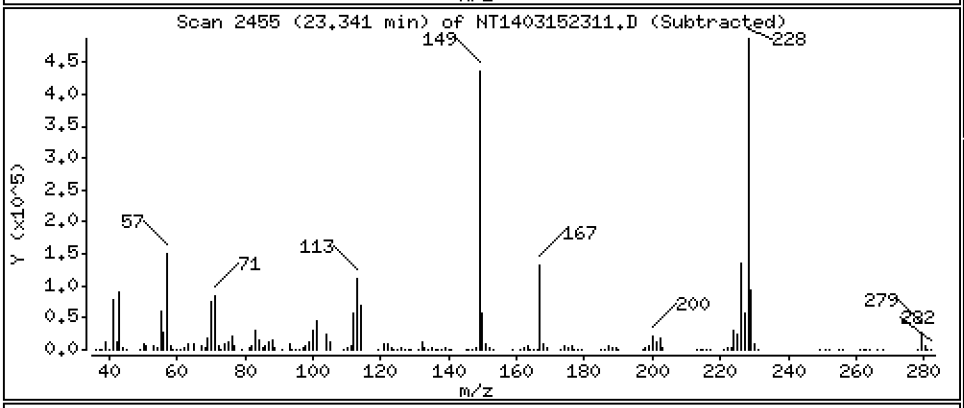
Column phase: ZB-5msi

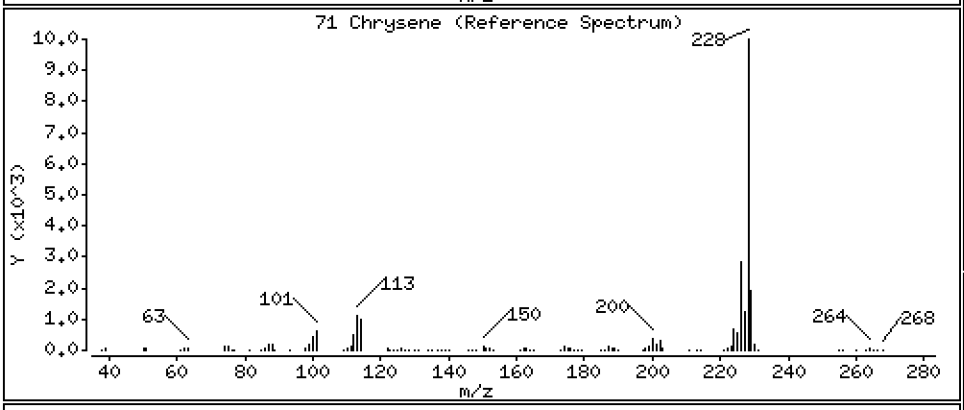
Column diameter: 0.25

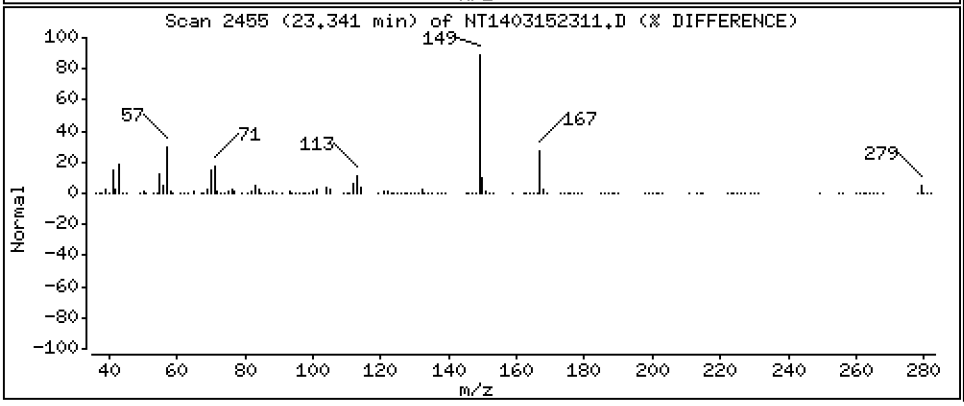
71 Chrysene

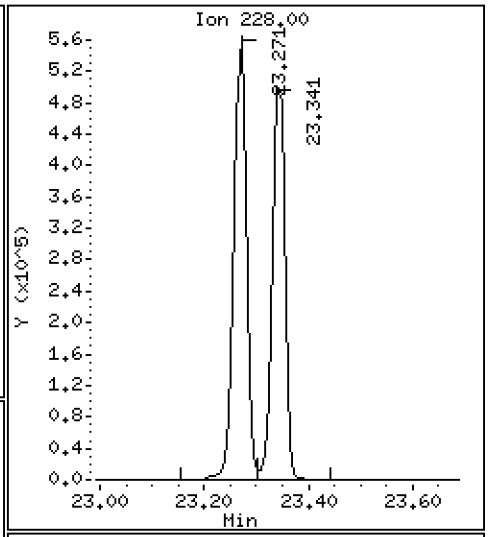
Concentration: 4.723 ug/mL

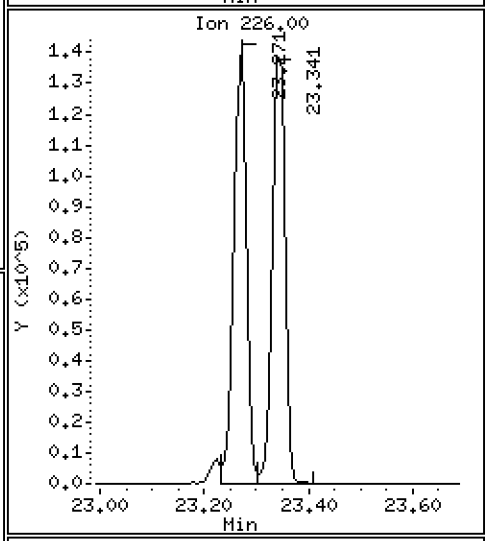


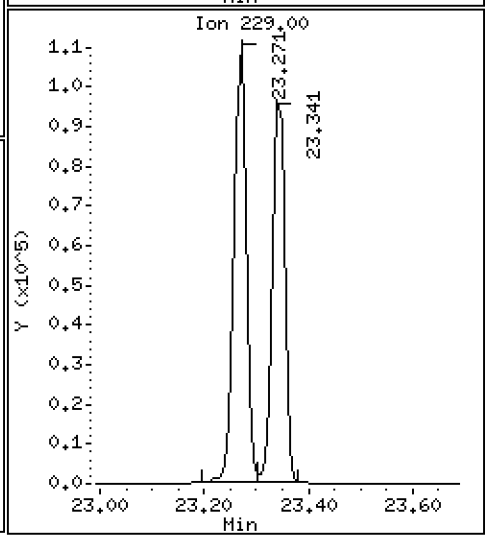












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

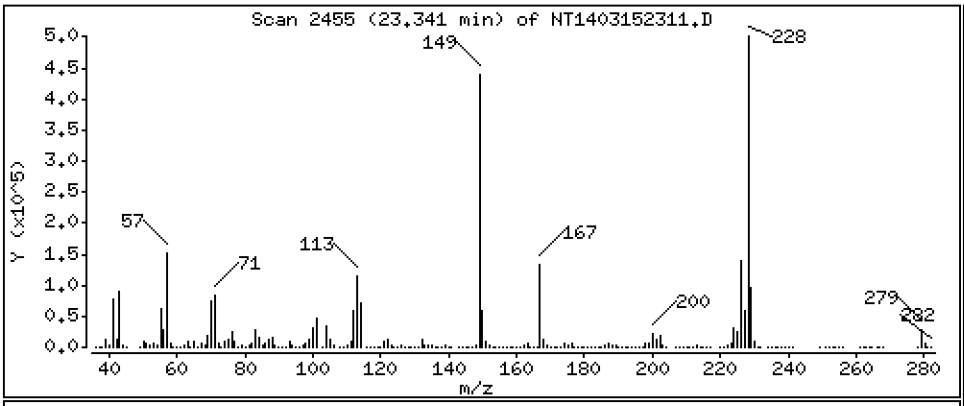
Operator: JGR

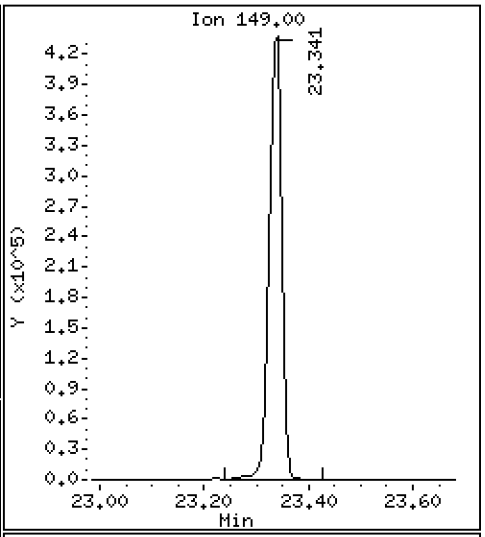
Column phase: ZB-5msi

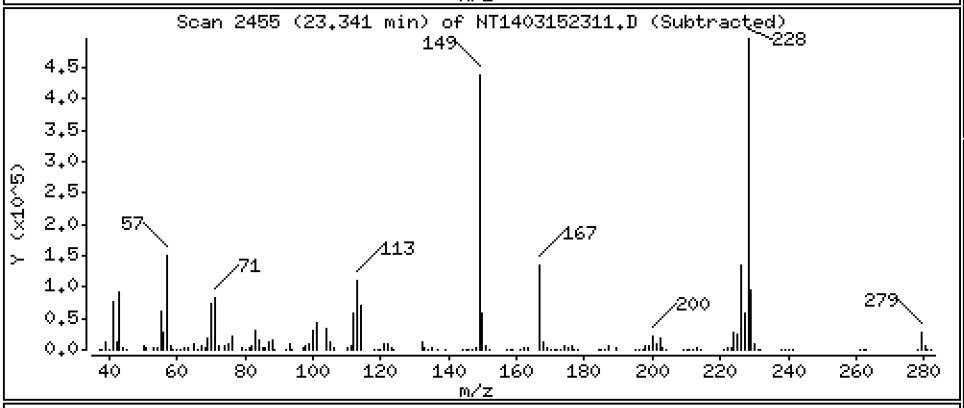
Column diameter: 0.25

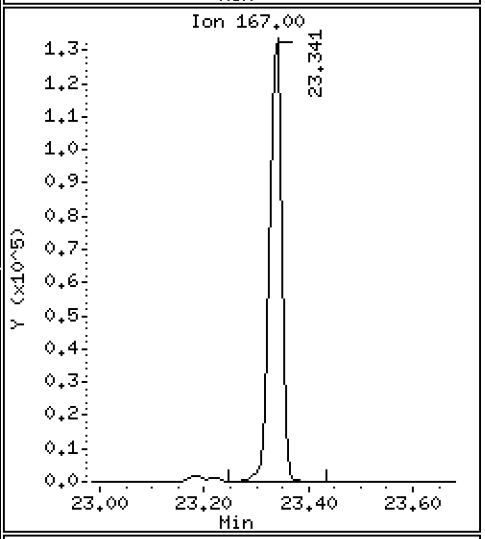
72 bis(2-Ethylhexyl)phthalate

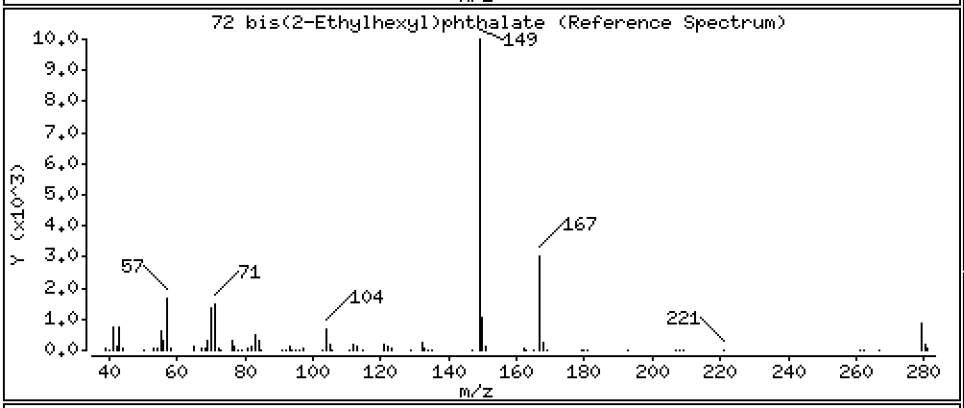
Concentration: 5.428 ug/mL

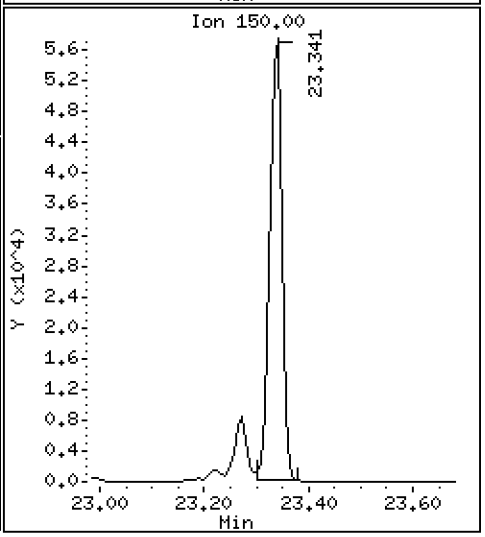


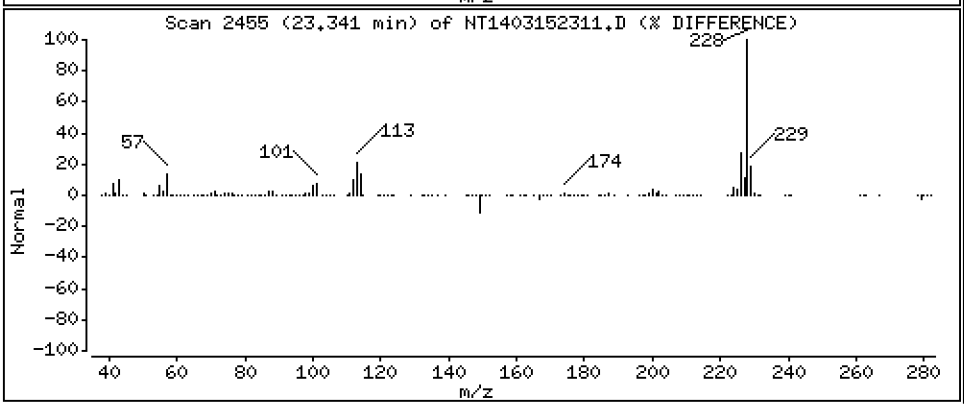












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

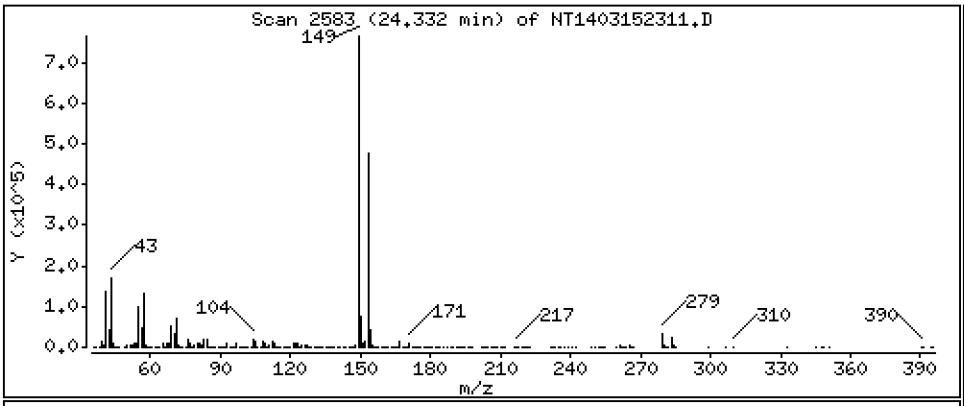
Operator: JGR

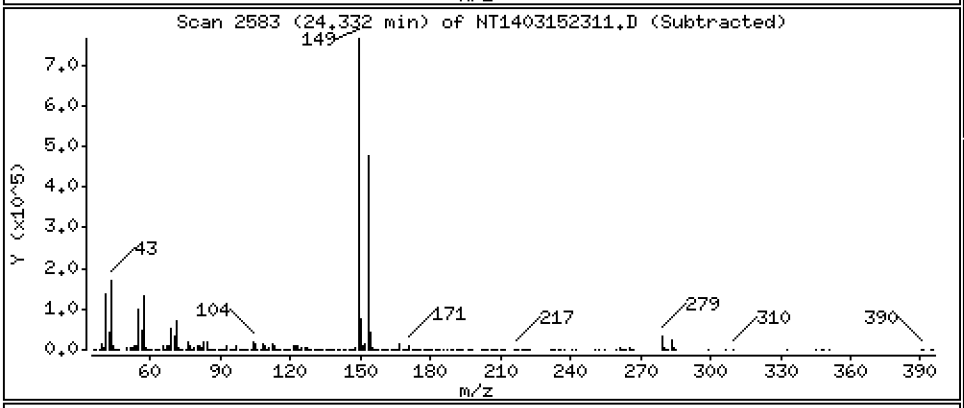
Column phase: ZB-5msi

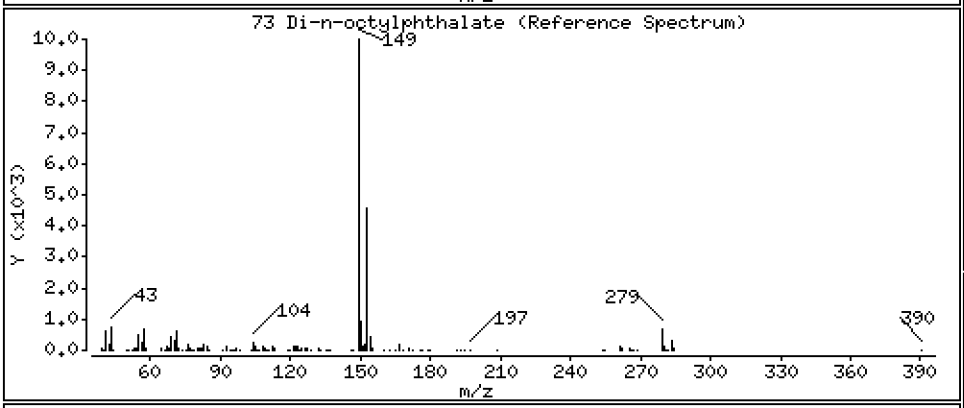
Column diameter: 0.25

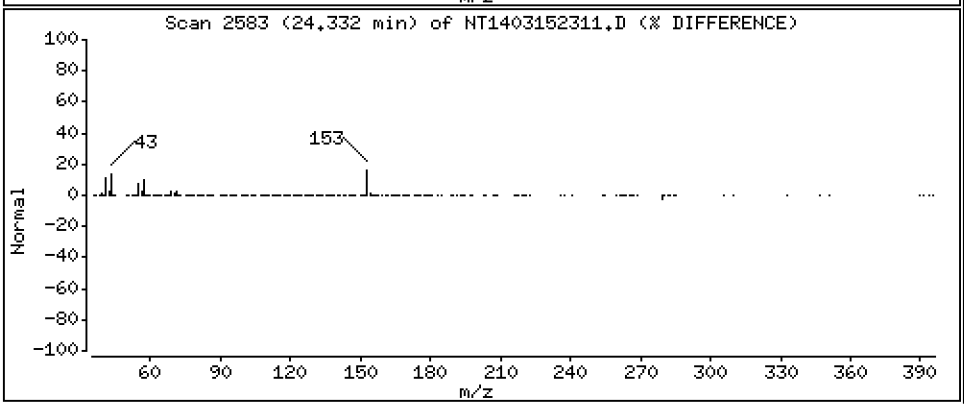
73 Di-n-octylphthalate

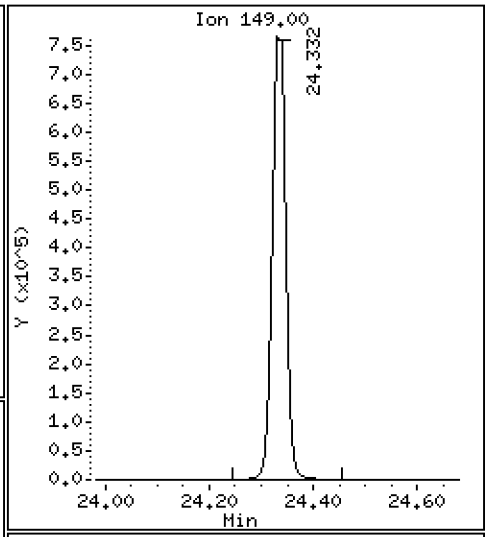
Concentration: 5.135 ug/mL

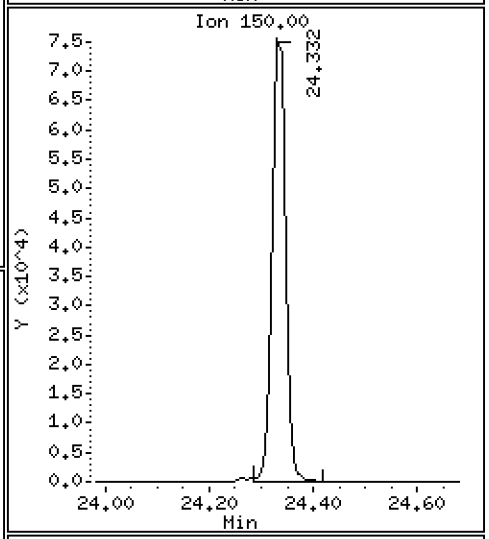


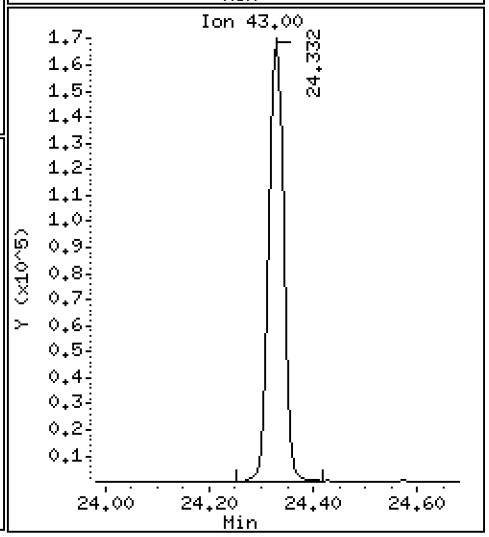












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

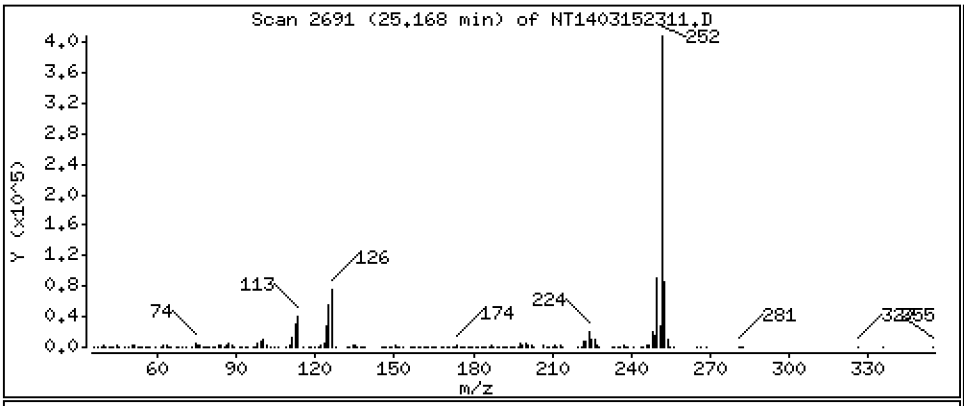
Operator: JGR

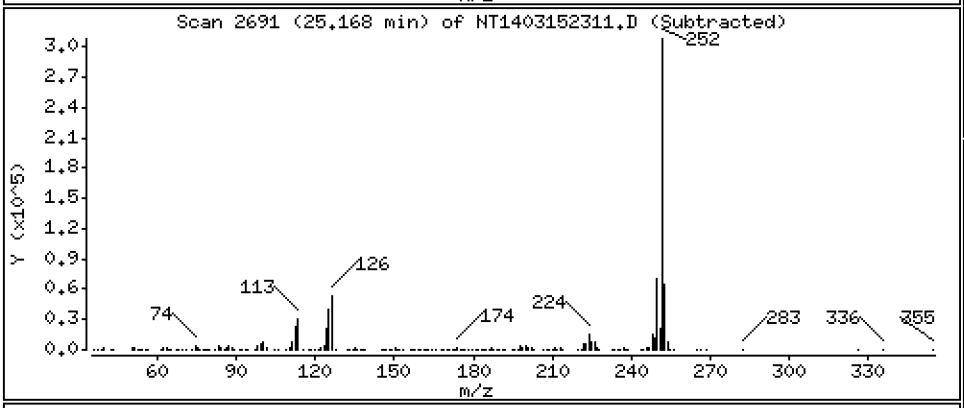
Column phase: ZB-5msi

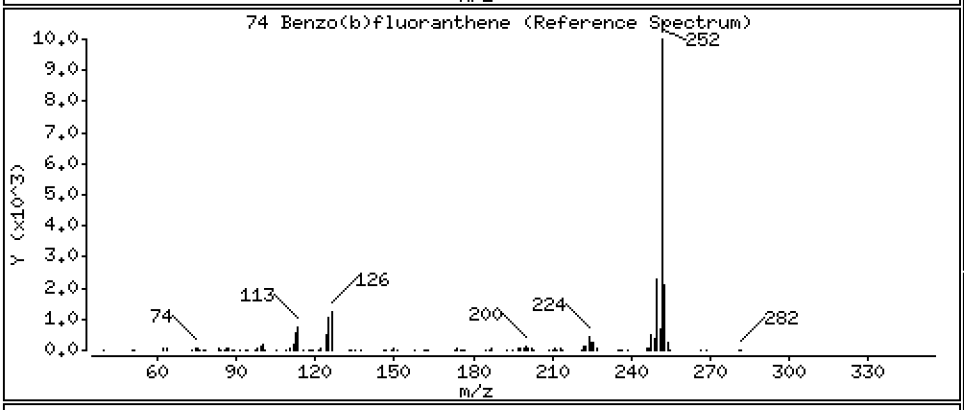
Column diameter: 0.25

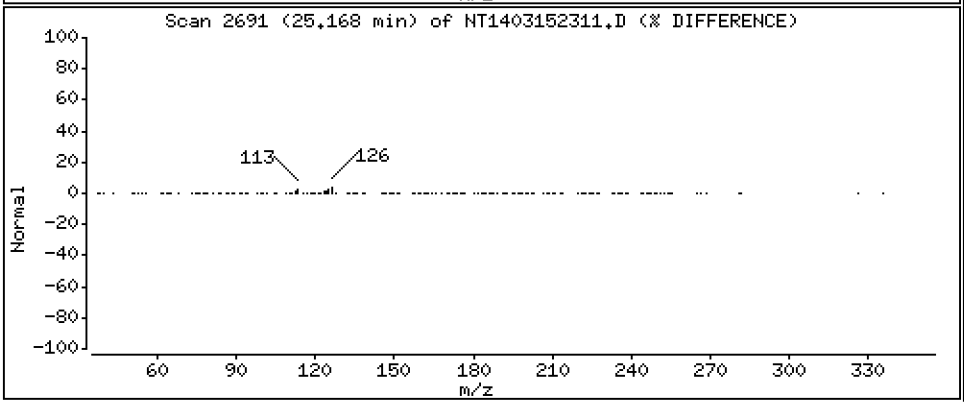
74 Benzo(b)fluoranthene

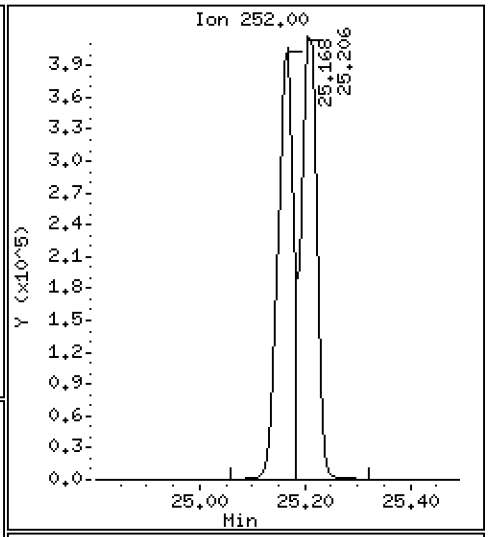
Concentration: 4.774 ug/mL

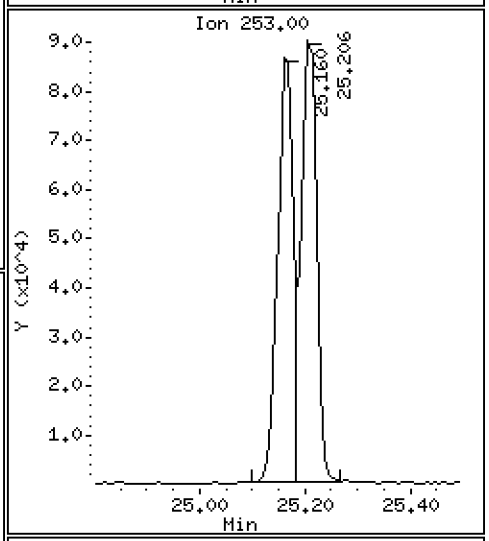


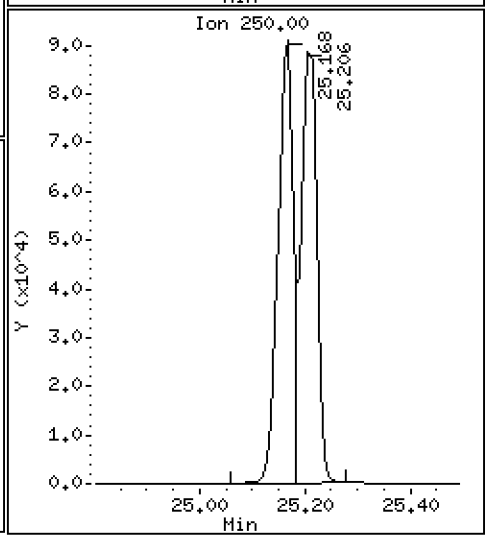












Date : 15-MAR-2023 17:39

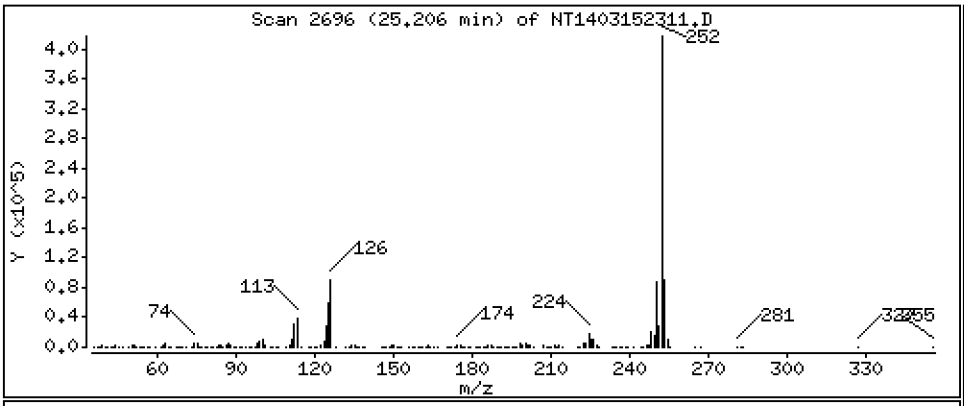
Client ID: Instrument: nt14.i

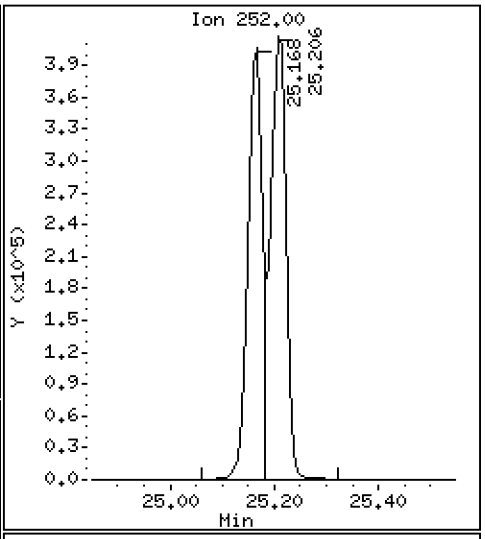
Sample Info: SLC0160-SCV1

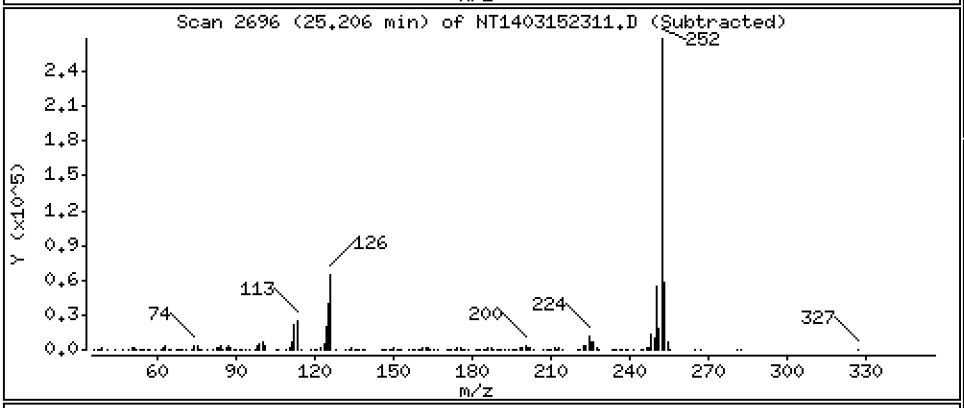
Operator: JGR

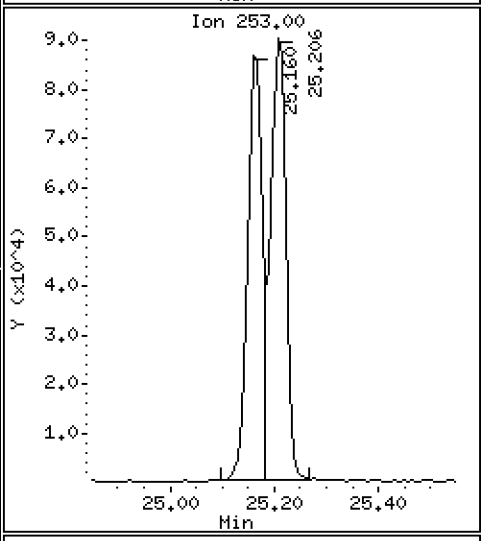
Column phase: ZB-5msi Column diameter: 0.25

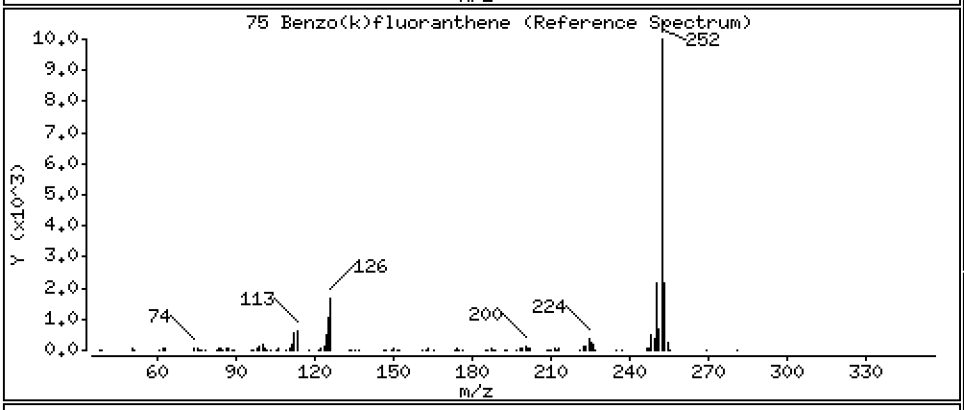
75 Benzo(k)fluoranthene Concentration: 5.100 ug/mL

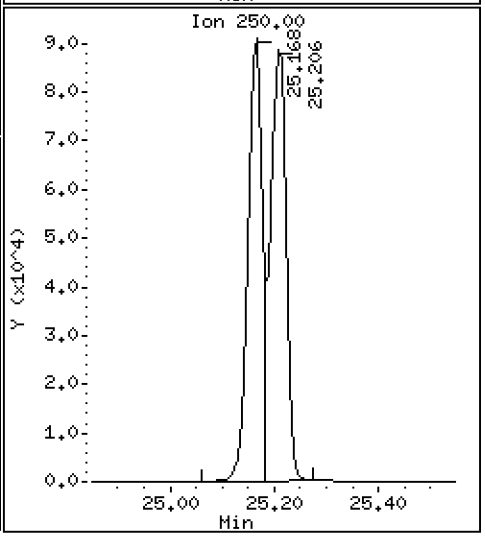


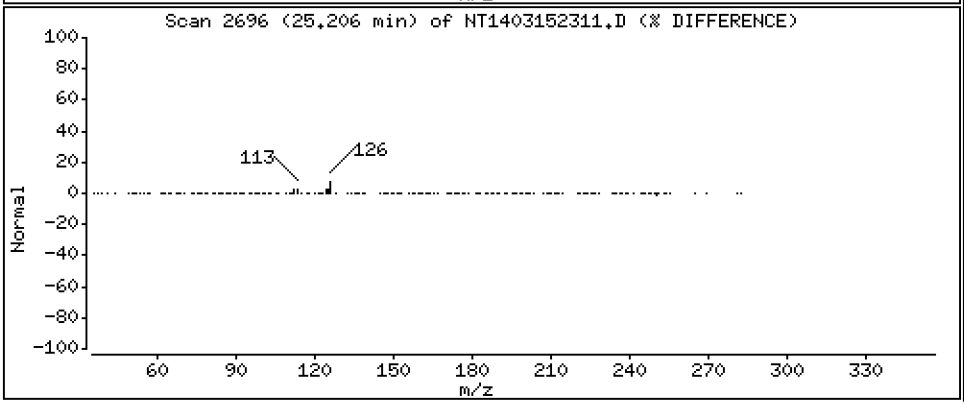












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

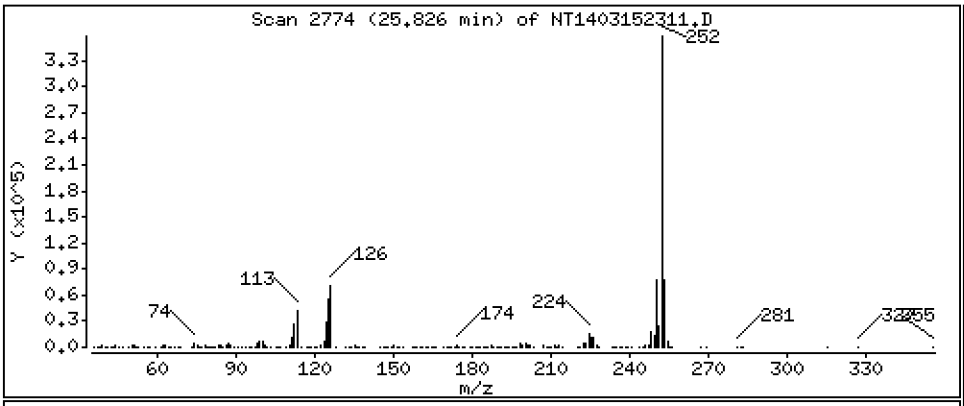
Operator: JGR

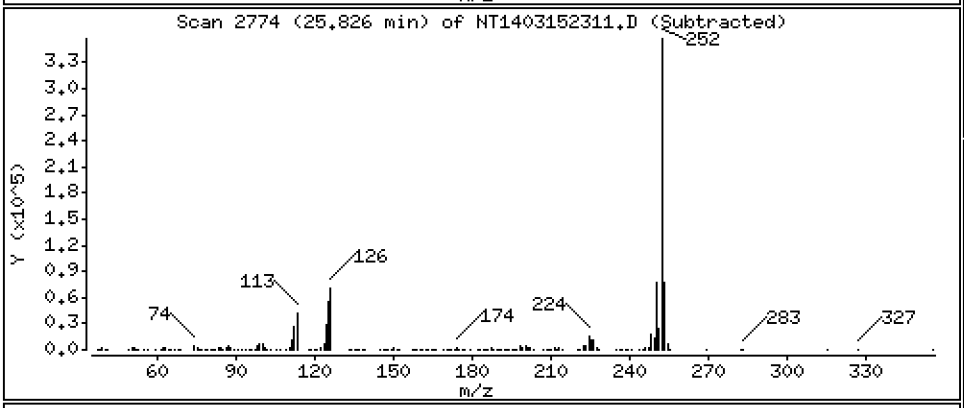
Column phase: ZB-5msi

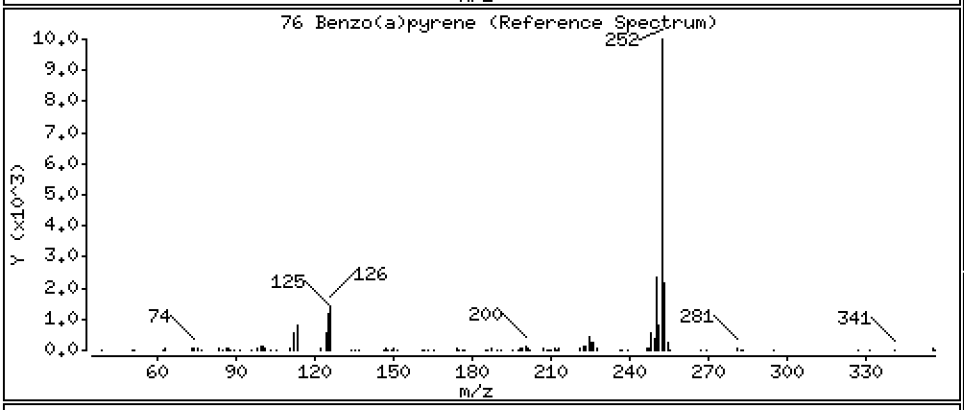
Column diameter: 0.25

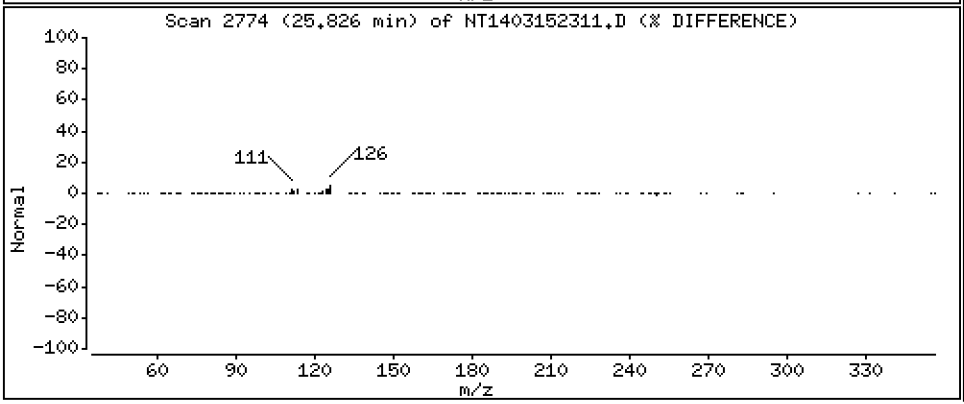
76 Benzo(a)pyrene

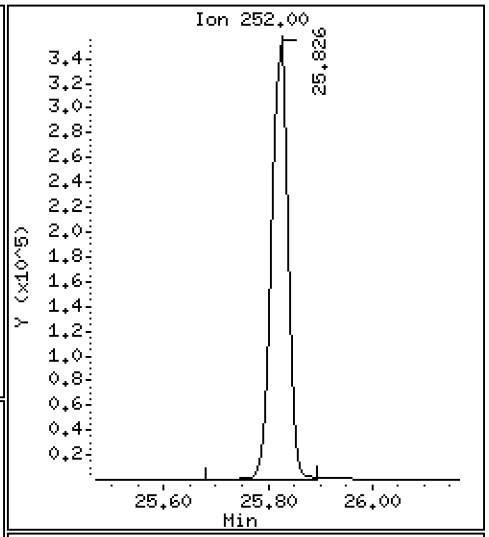
Concentration: 4.978 ug/mL

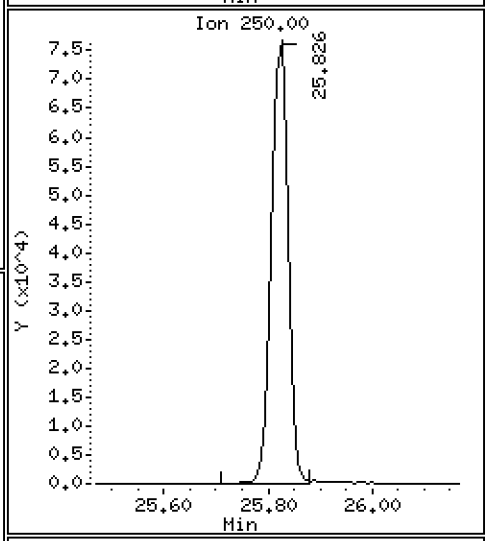


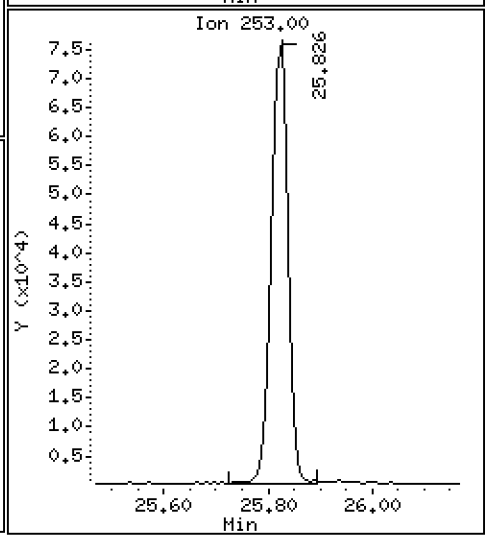












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

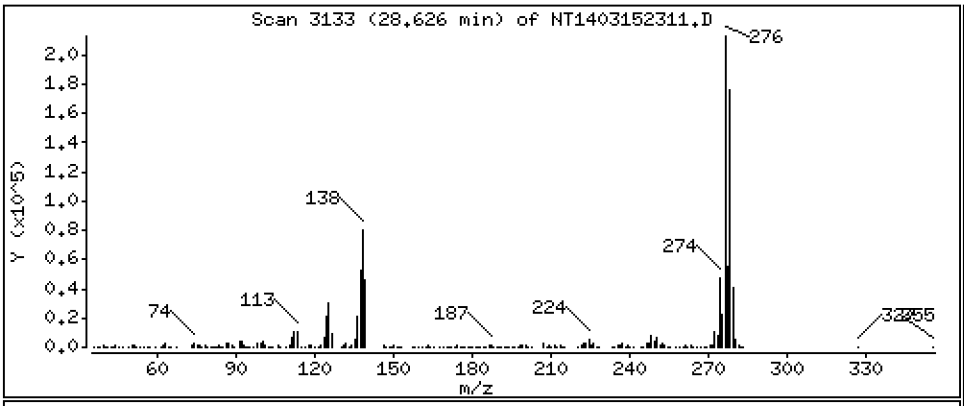
Operator: JGR

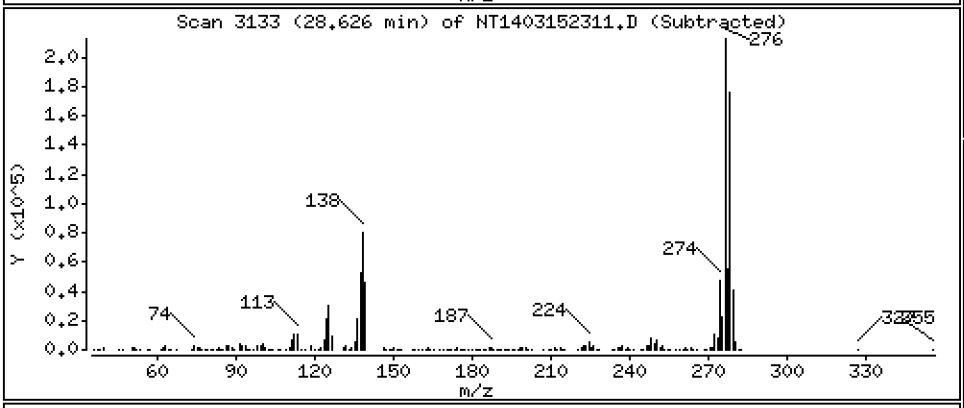
Column phase: ZB-5msi

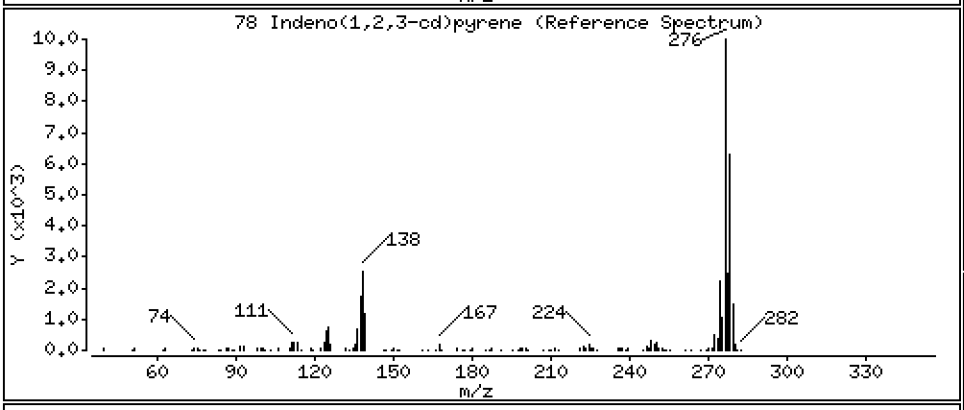
Column diameter: 0.25

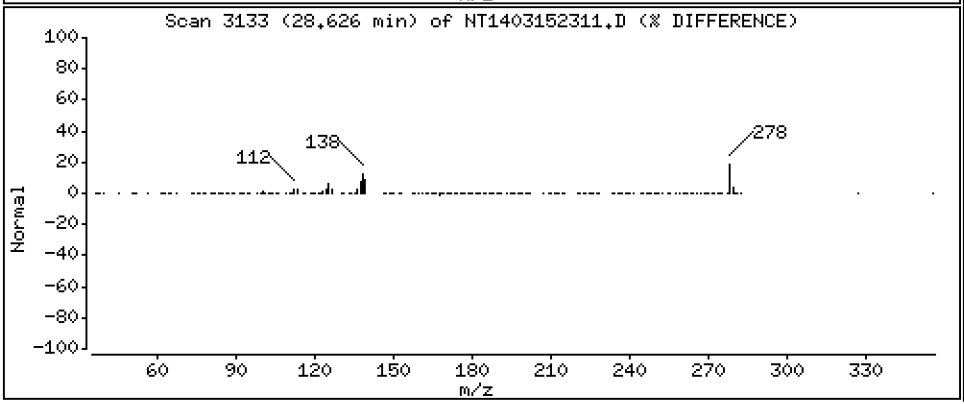
78 Indeno(1,2,3-cd)pyrene

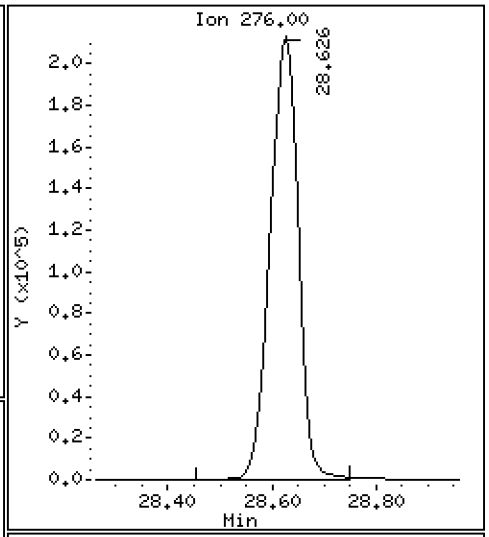
Concentration: 4.943 ug/mL

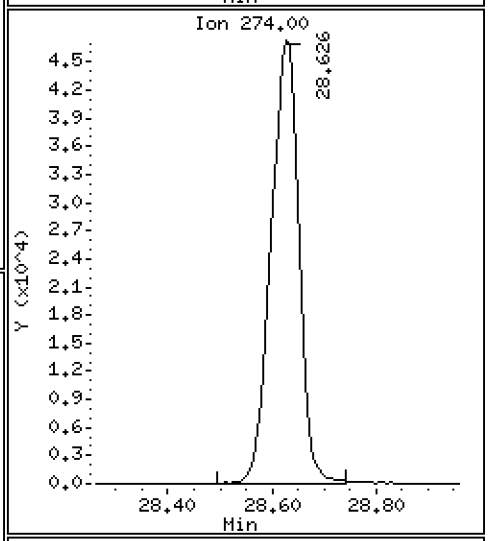


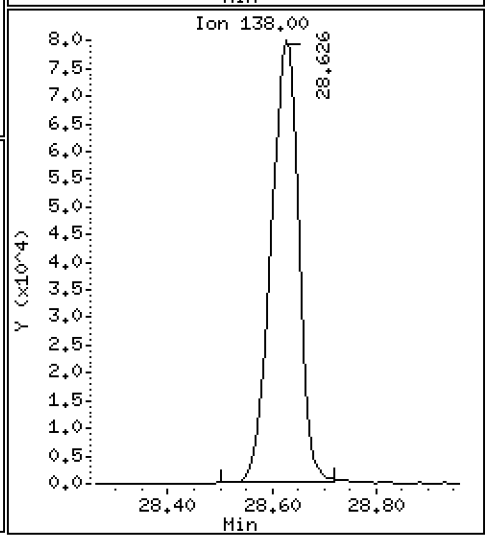












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

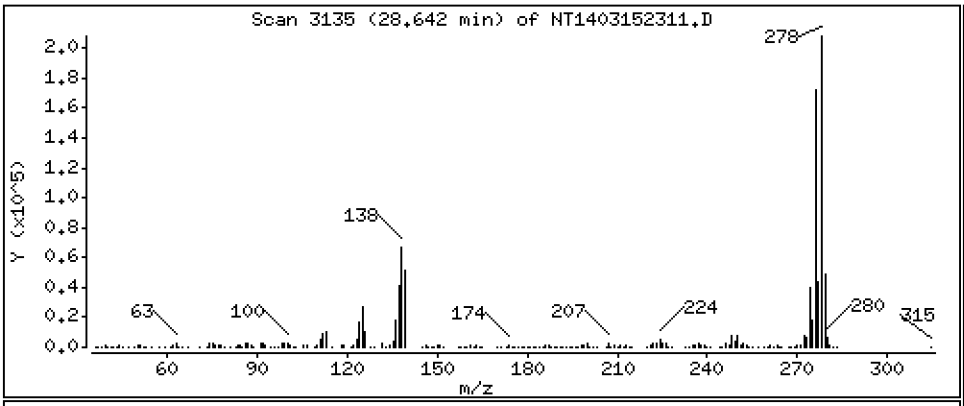
Operator: JGR

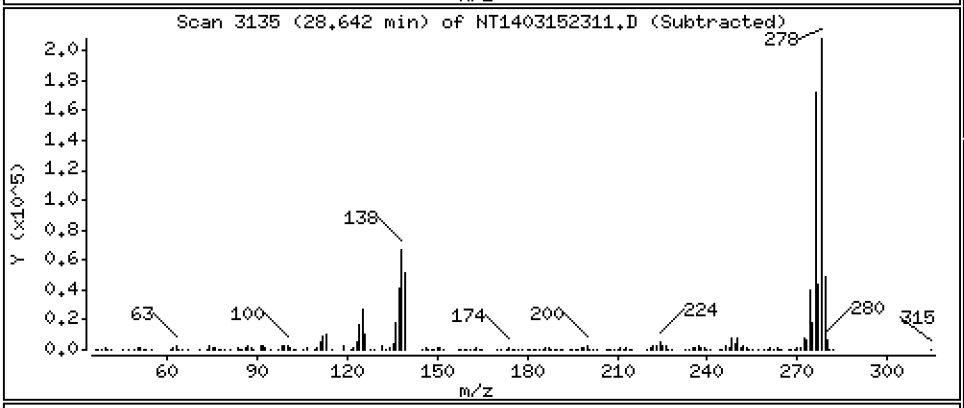
Column phase: ZB-5msi

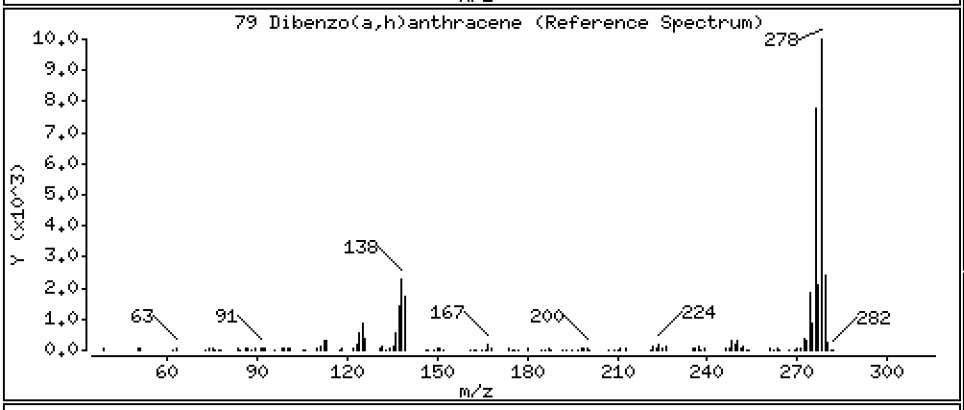
Column diameter: 0.25

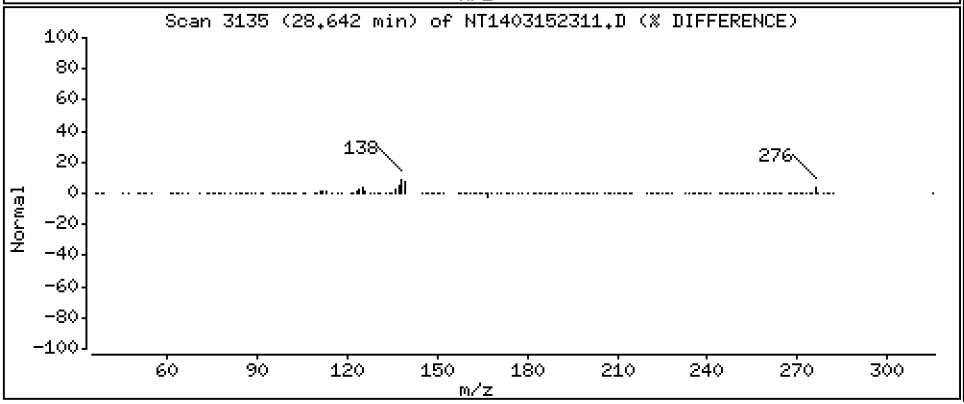
79 Dibenzo(a,h)anthracene

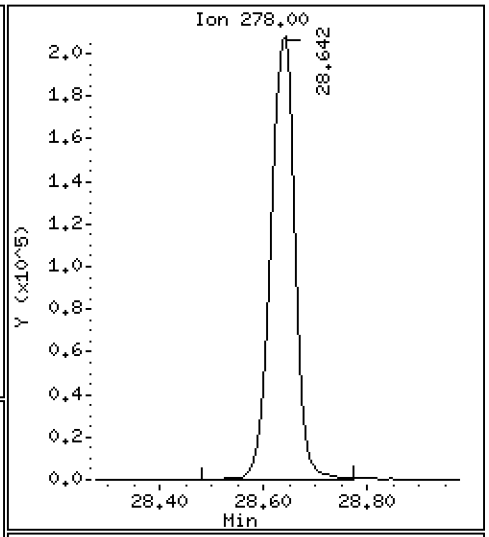
Concentration: 4.865 ug/mL

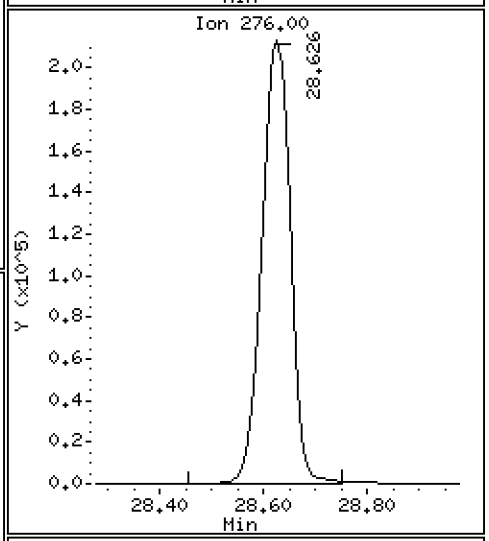


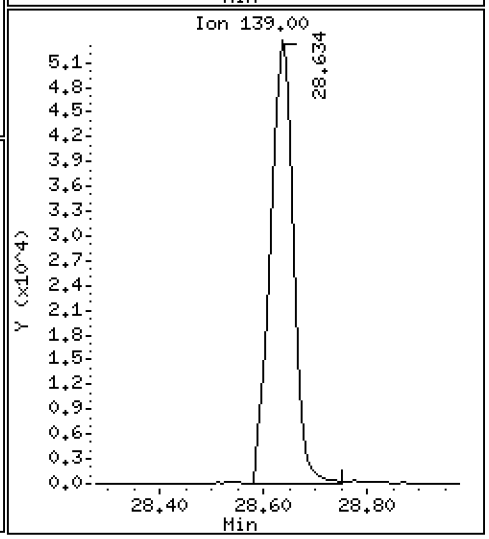












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

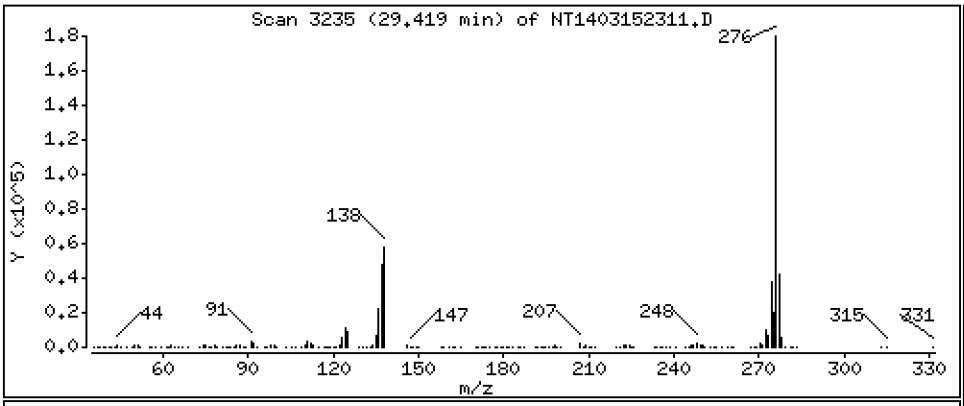
Operator: JGR

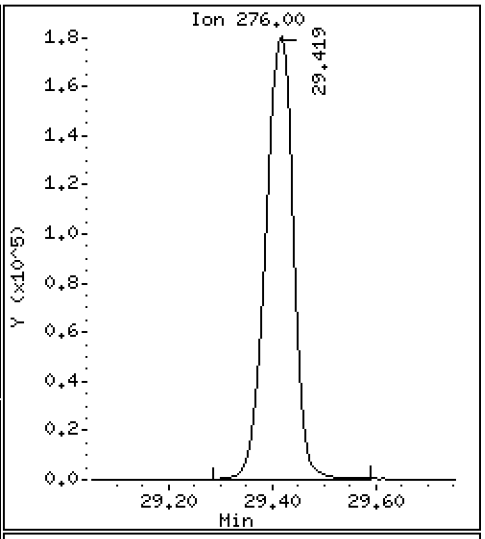
Column phase: ZB-5msi

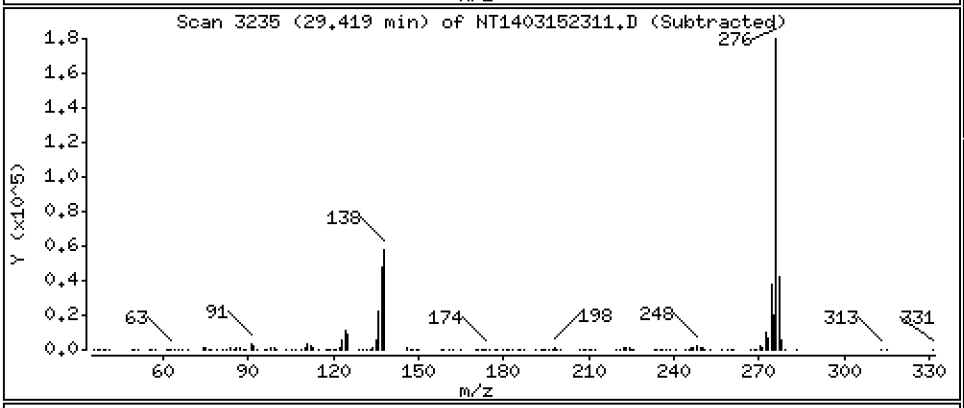
Column diameter: 0.25

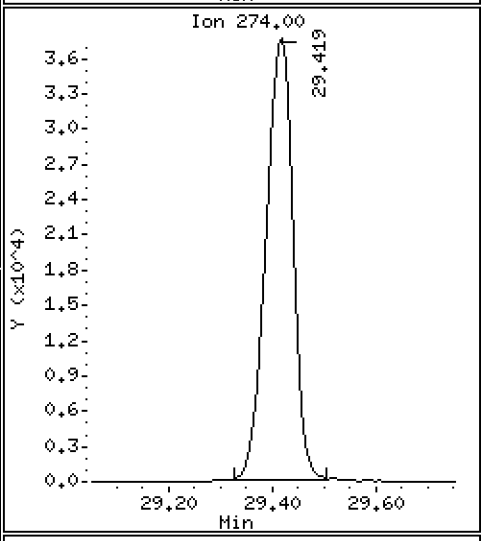
80 Benzo(g,h,i)perylene

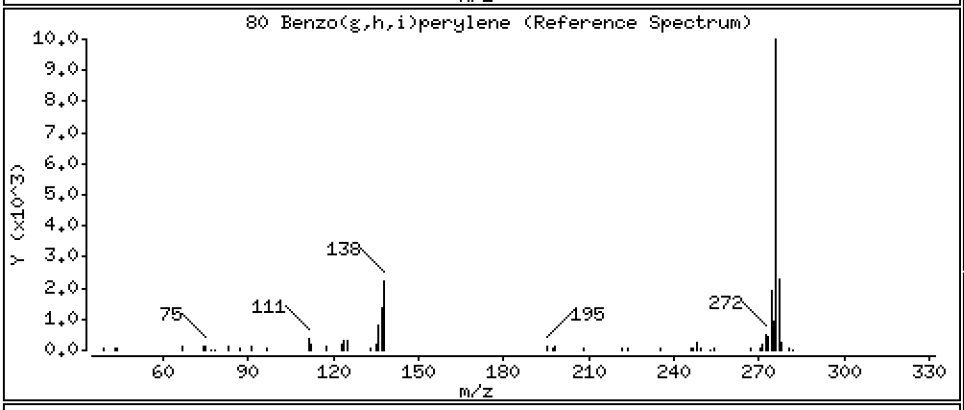
Concentration: 4.939 ug/mL

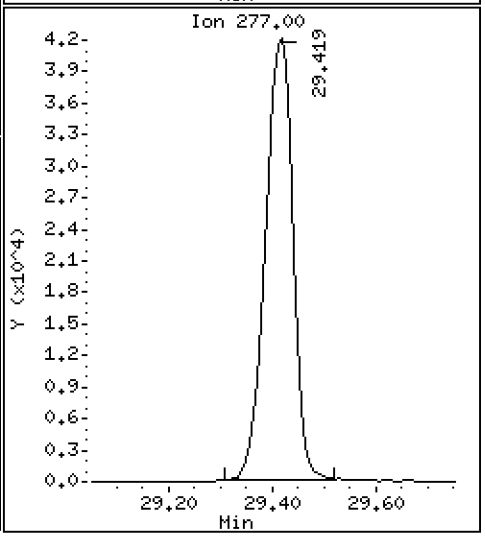


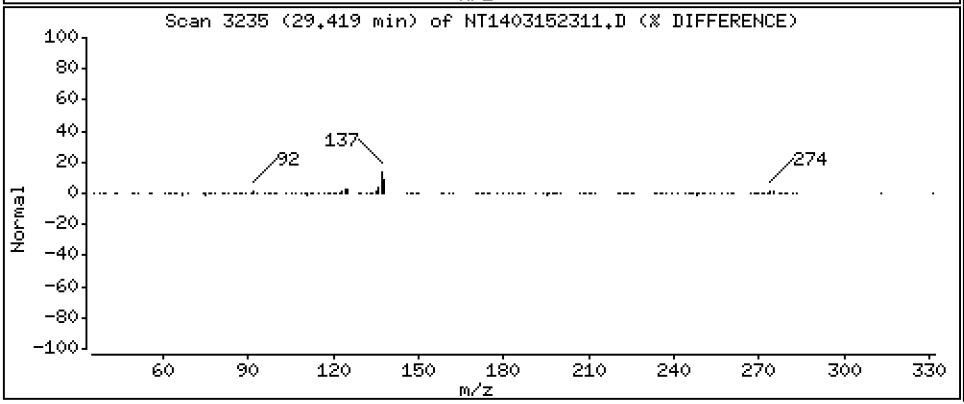












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

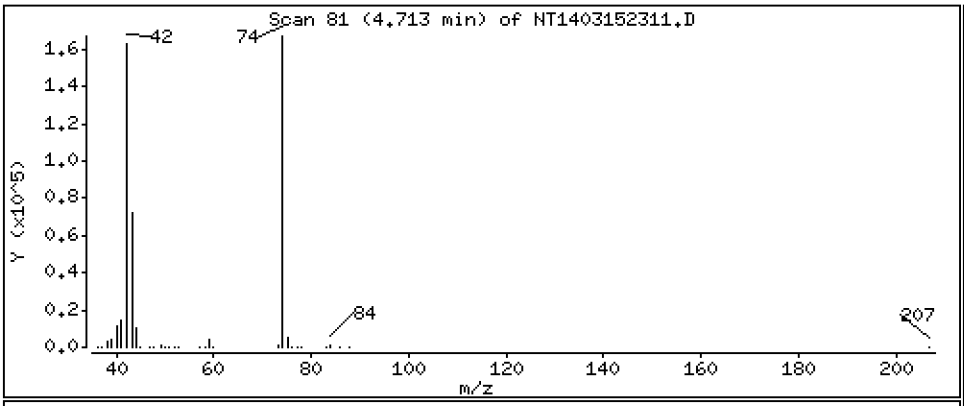
Operator: JGR

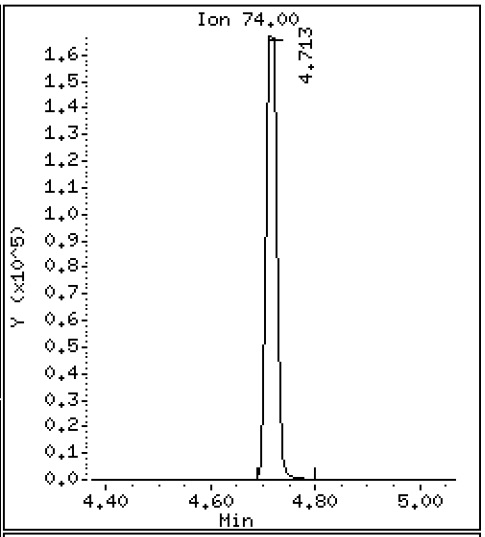
Column phase: ZB-5msi

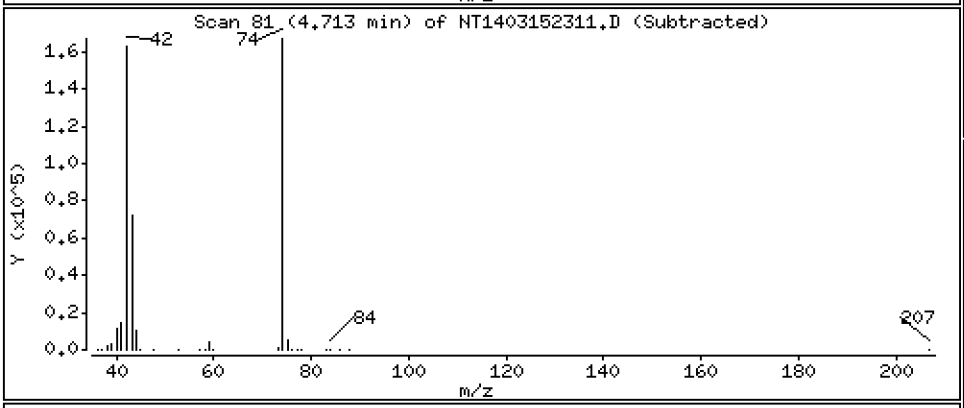
Column diameter: 0.25

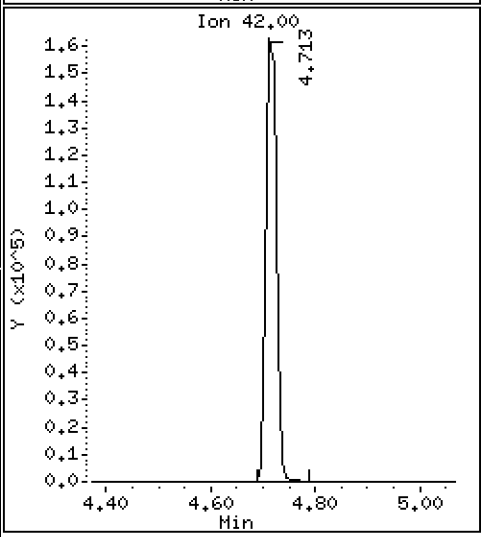
90 N-Nitrosodimethylamine

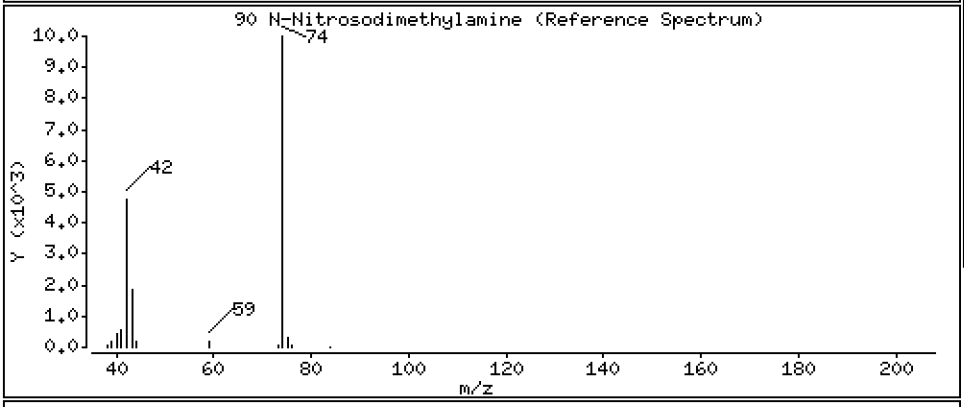
Concentration: 5.200 ug/mL

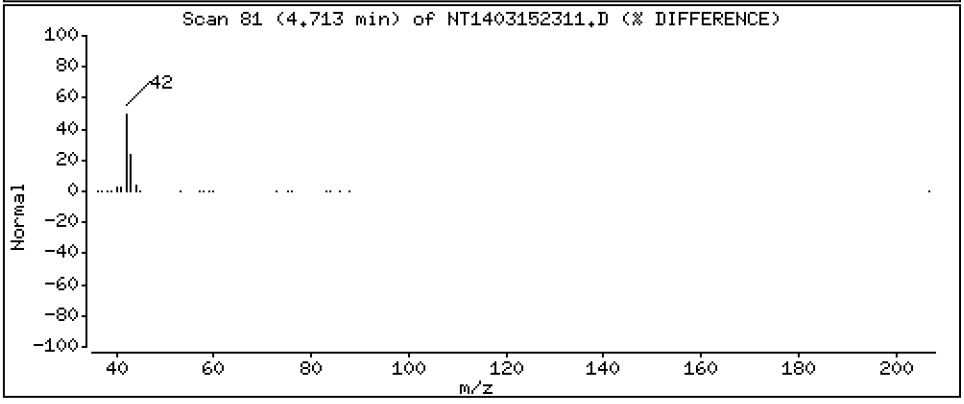












Date : 15-MAR-2023 17:39

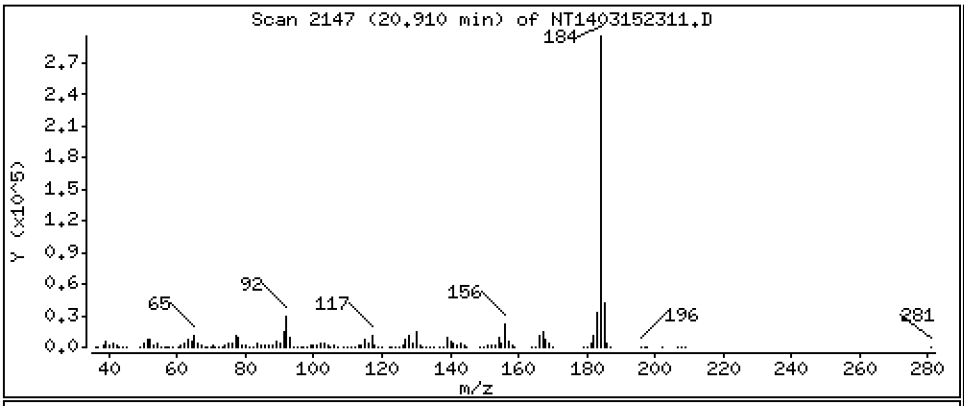
Client ID: Instrument: nt14.i

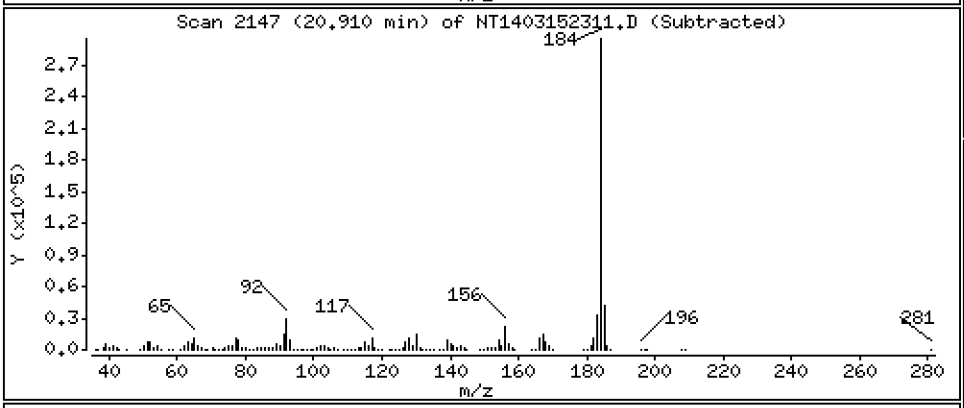
Sample Info: SLC0160-SCV1

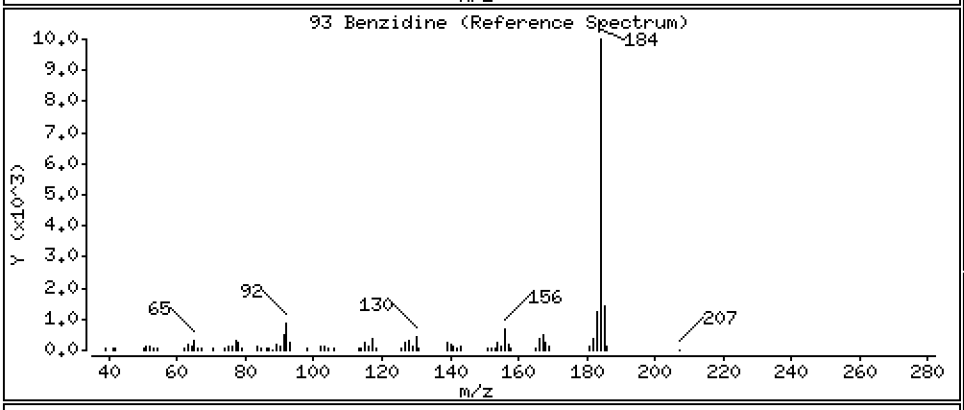
Operator: JGR

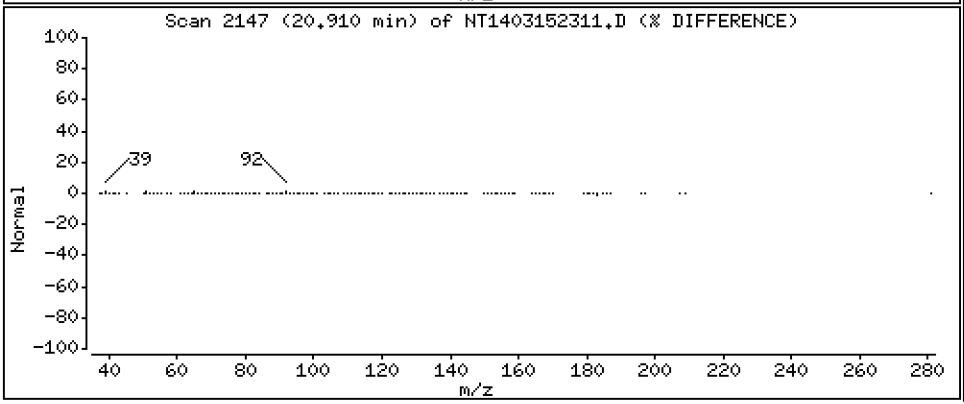
Column phase: ZB-5msi Column diameter: 0.25

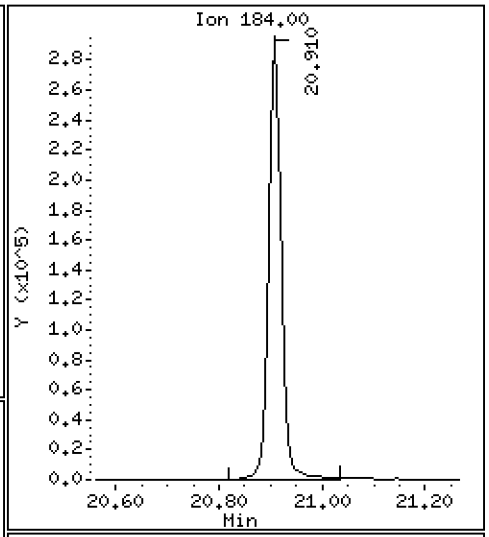
93 Benzidine Concentration: 5.646 ug/mL

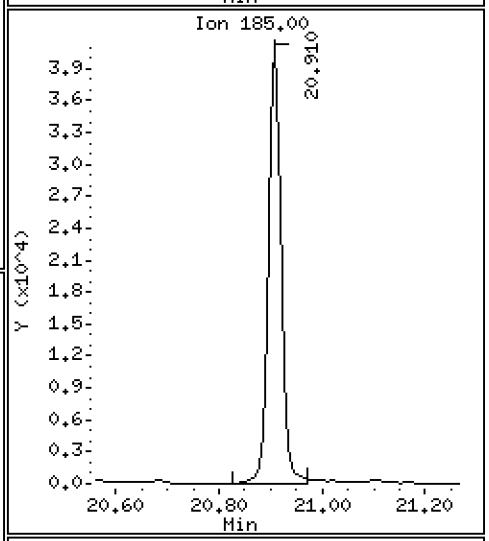


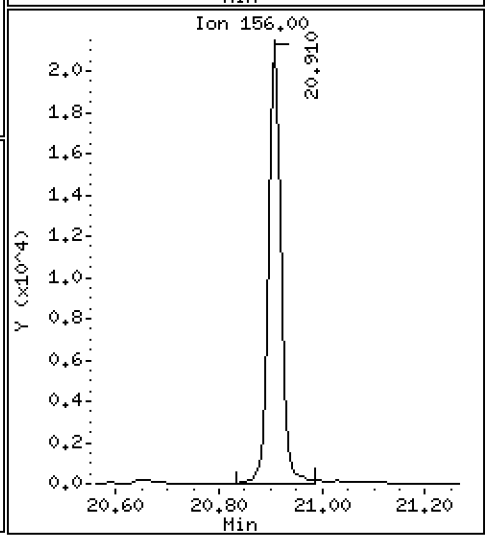












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

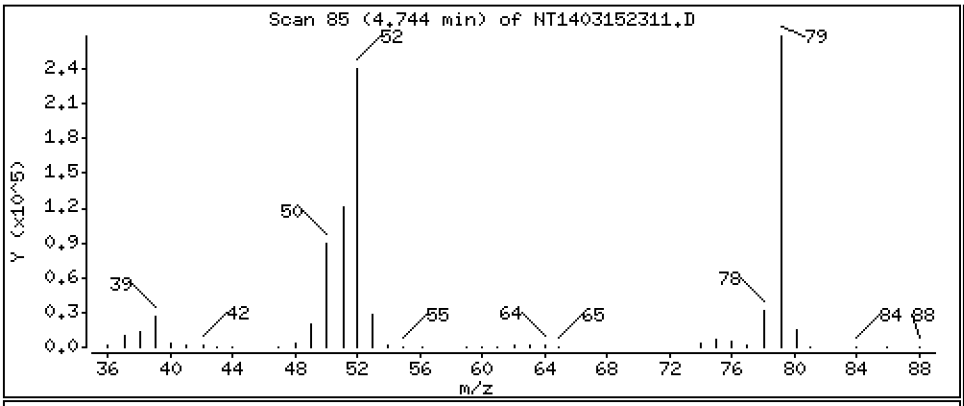
Operator: JGR

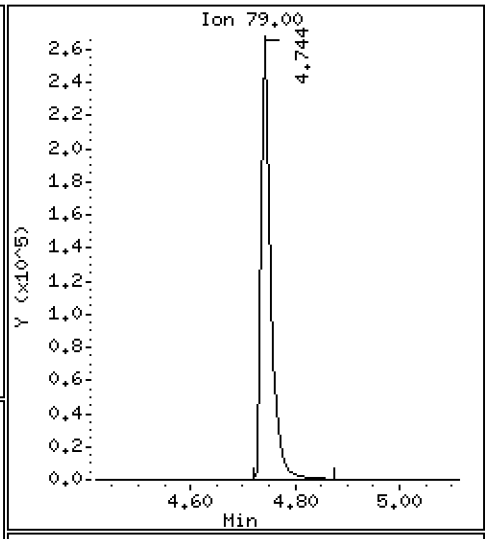
Column phase: ZB-5msi

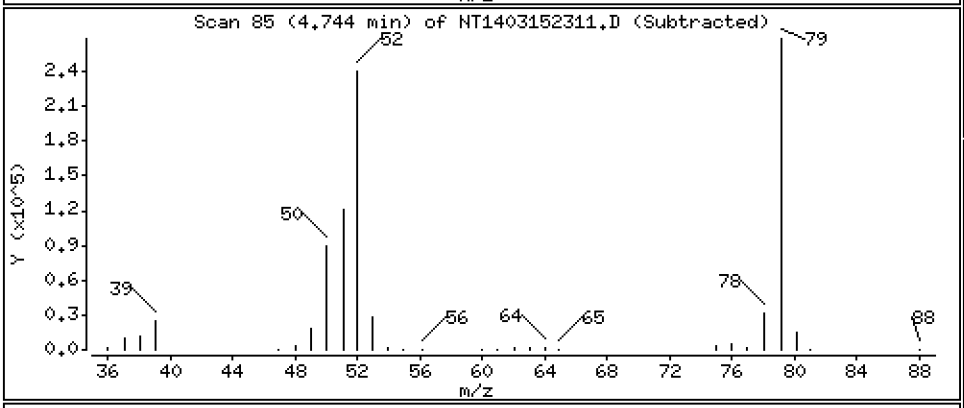
Column diameter: 0.25

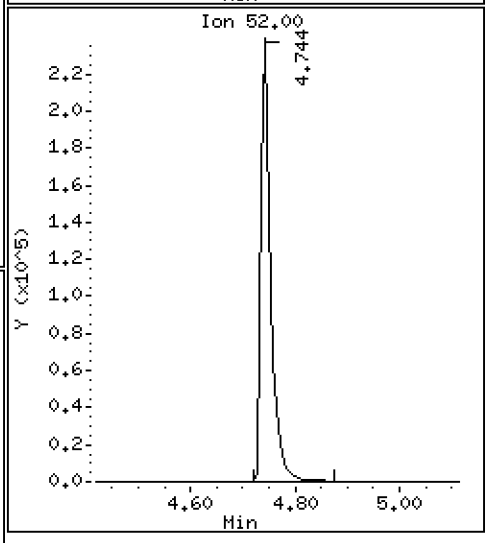
103 Pyridine

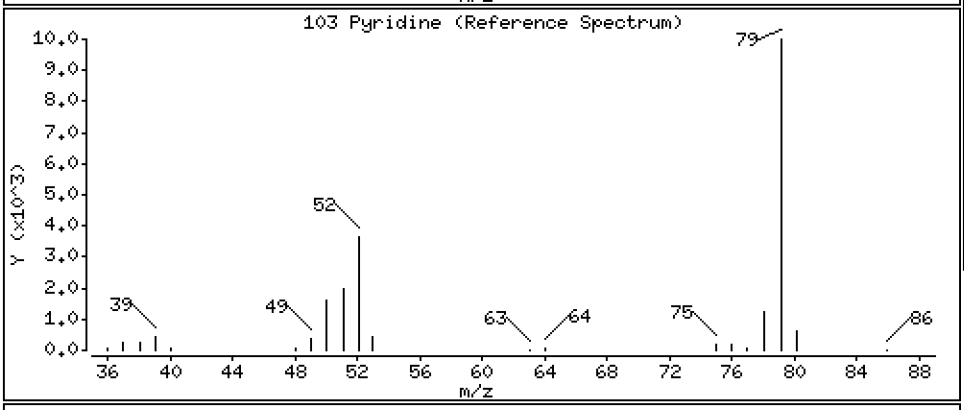
Concentration: 2.648 ug/mL

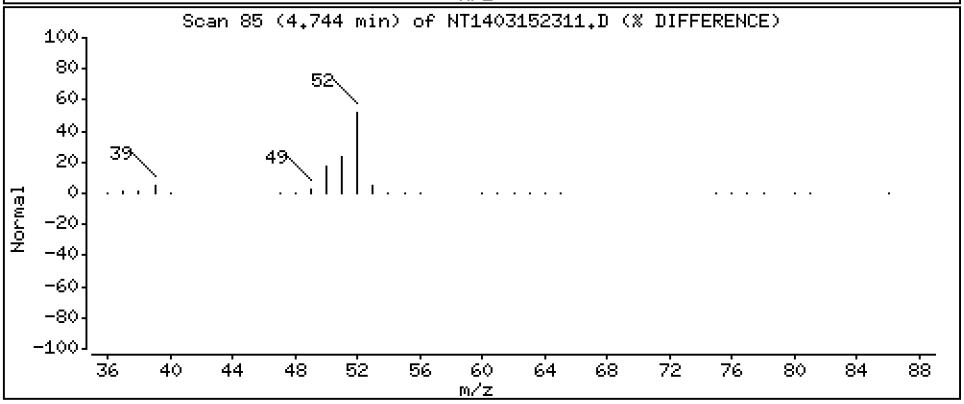












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

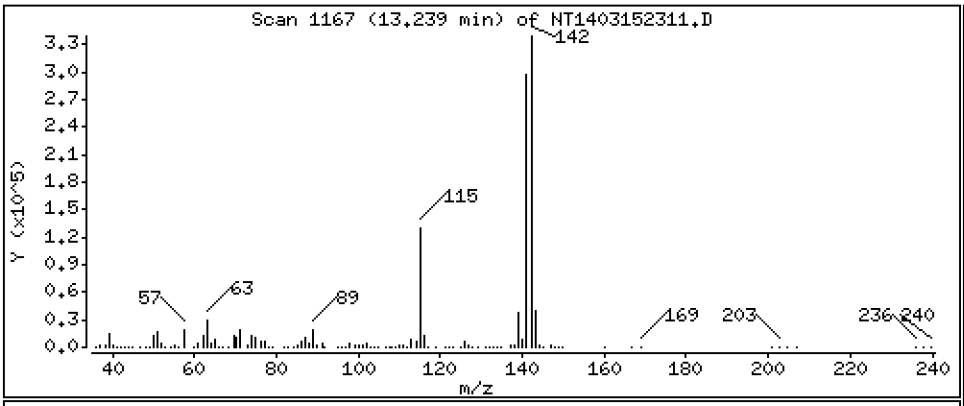
Operator: JGR

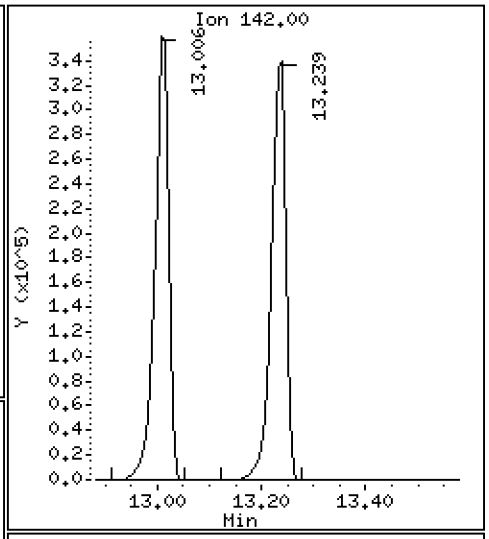
Column phase: ZB-5msi

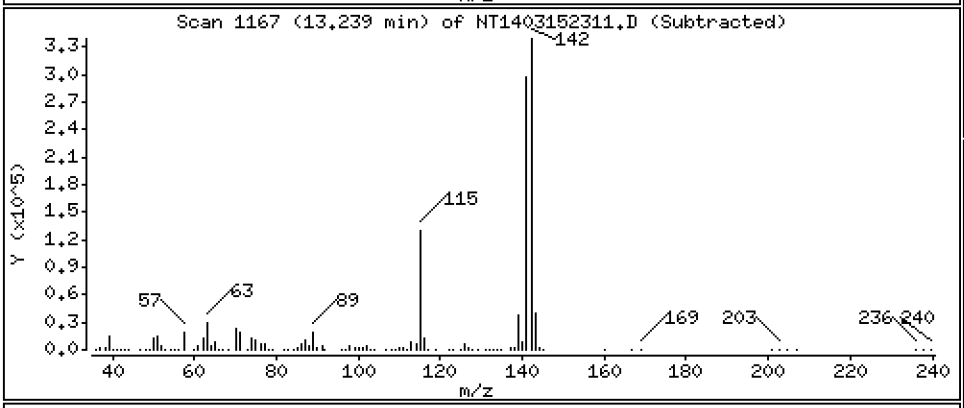
Column diameter: 0.25

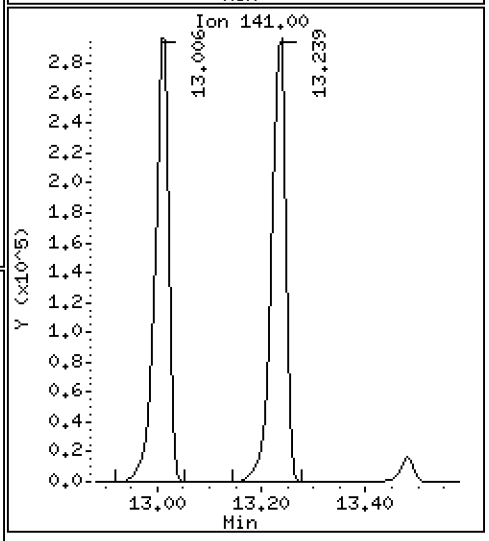
105 1-methylnaphthalene

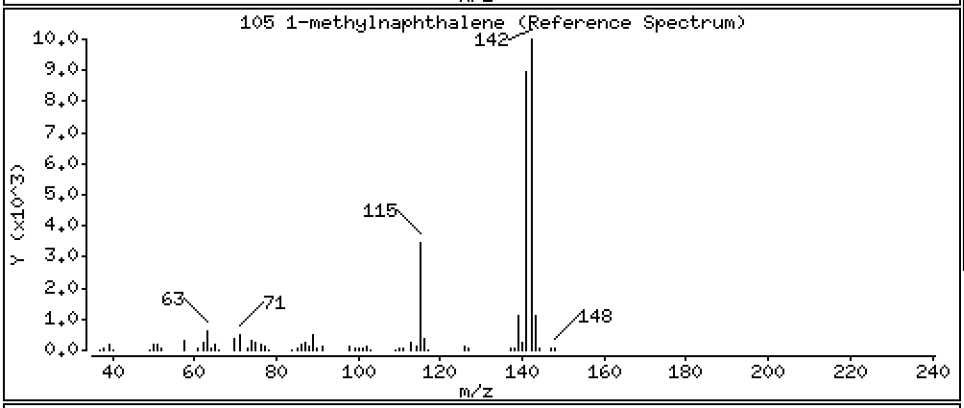
Concentration: 5.103 ug/mL

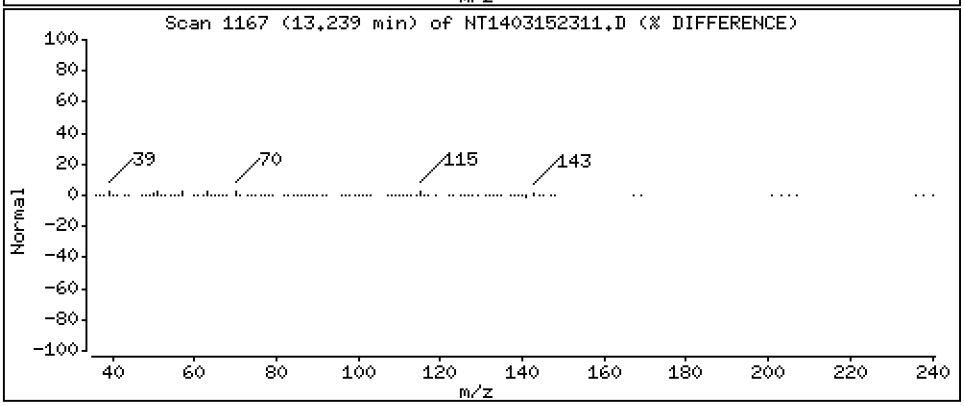












Data File: \\target\share\chem3\nt14.i\20230315.b\NT1403152311.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

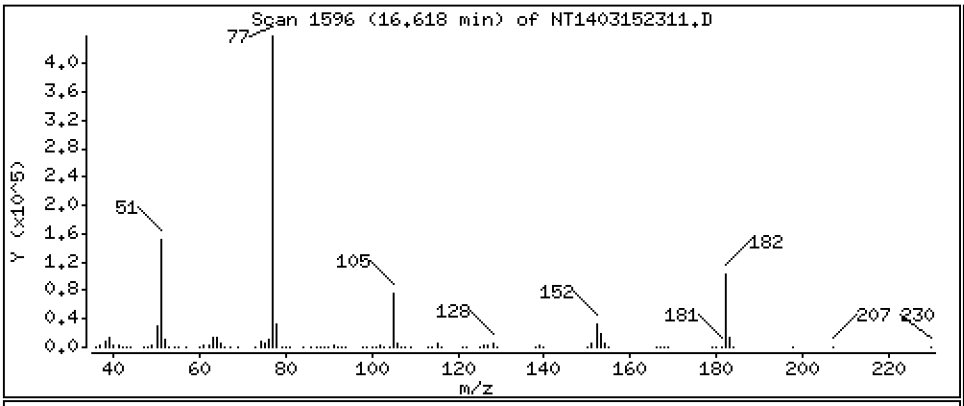
Operator: JGR

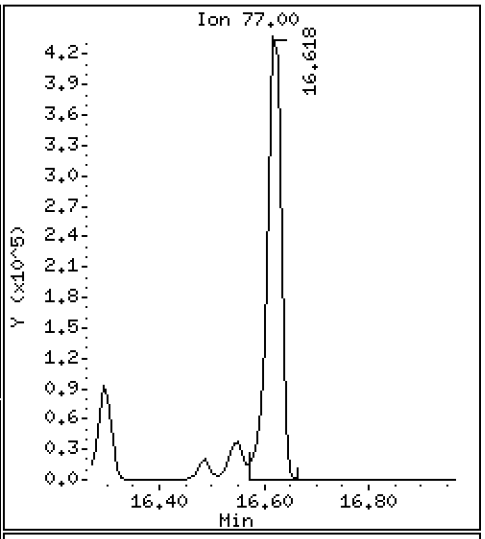
Column phase: ZB-5msi

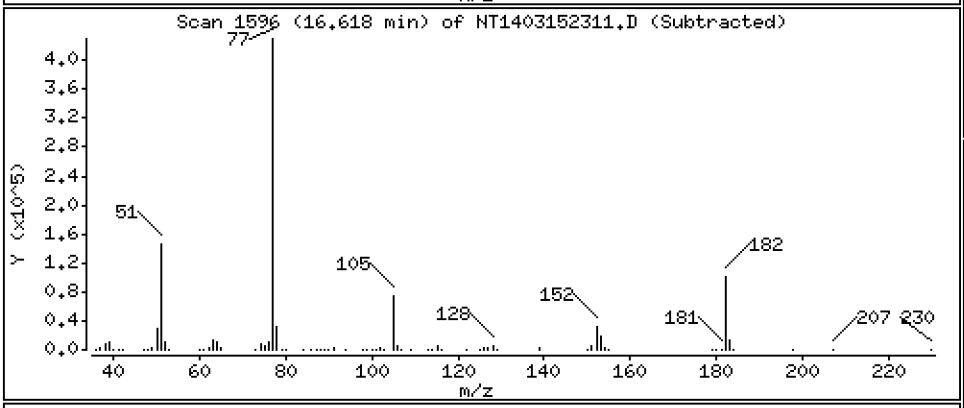
Column diameter: 0.25

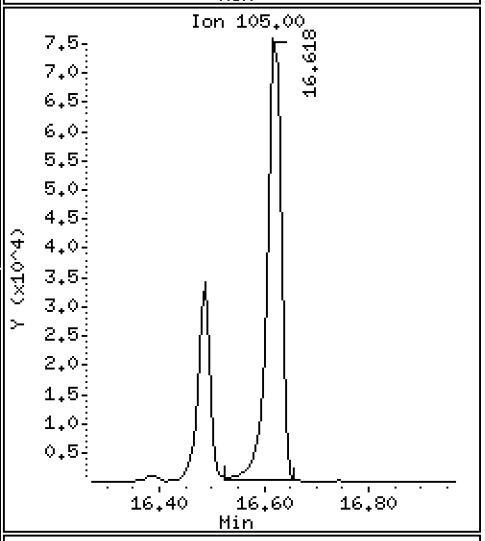
111 Azobenzene (1,2-DP-Hydrazine)

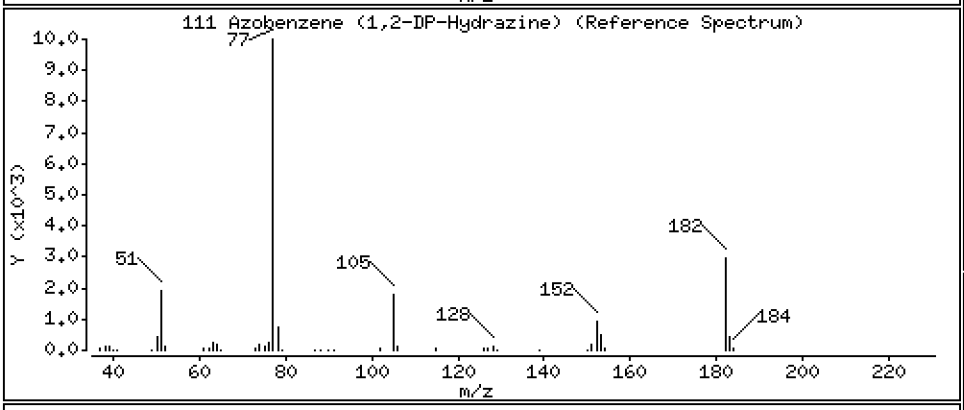
Concentration: 5.002 ug/mL

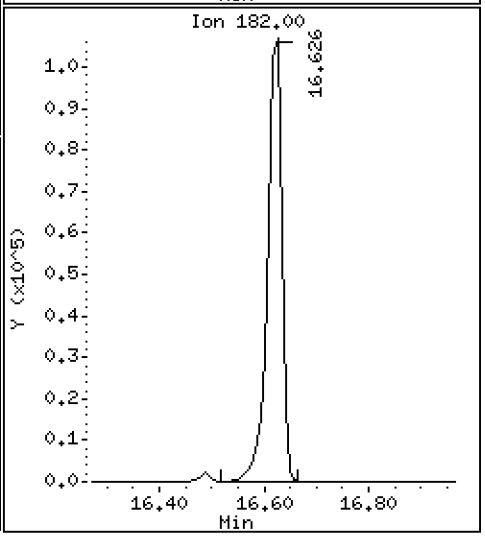


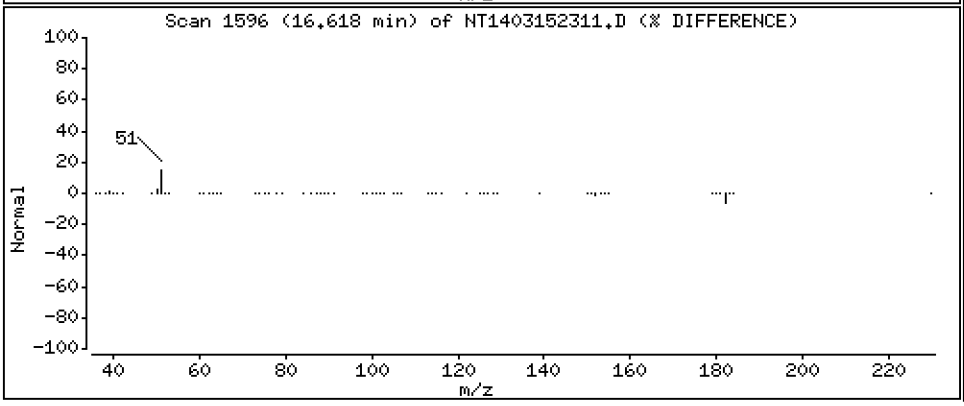












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

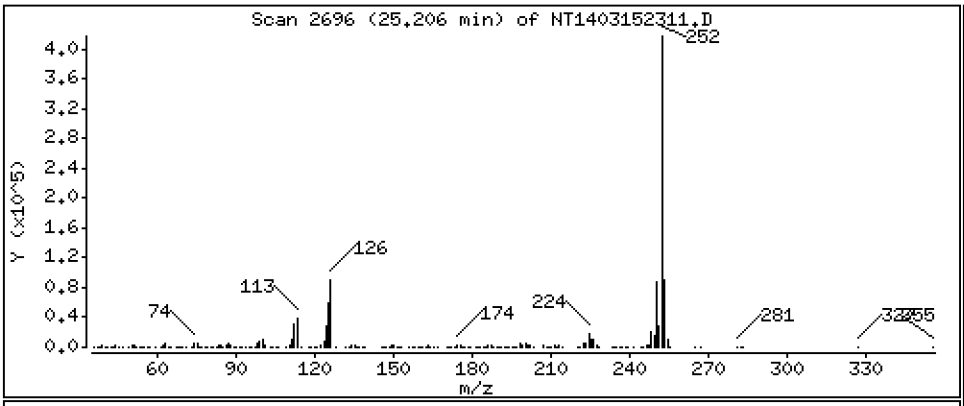
Operator: JGR

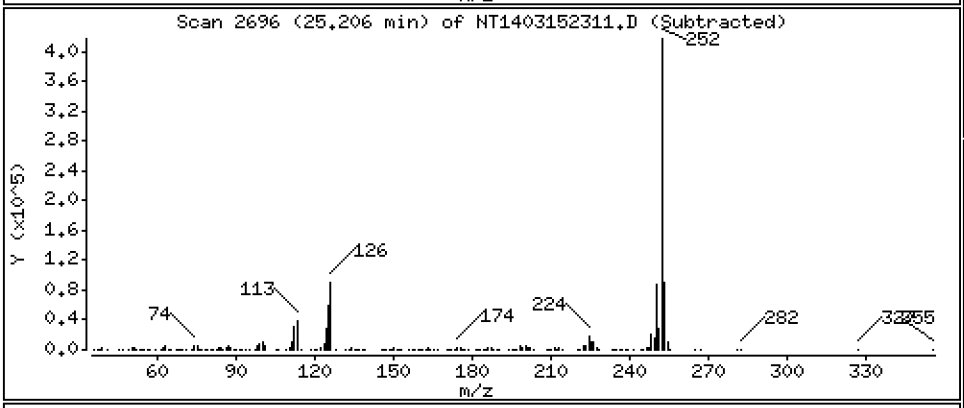
Column phase: ZB-5msi

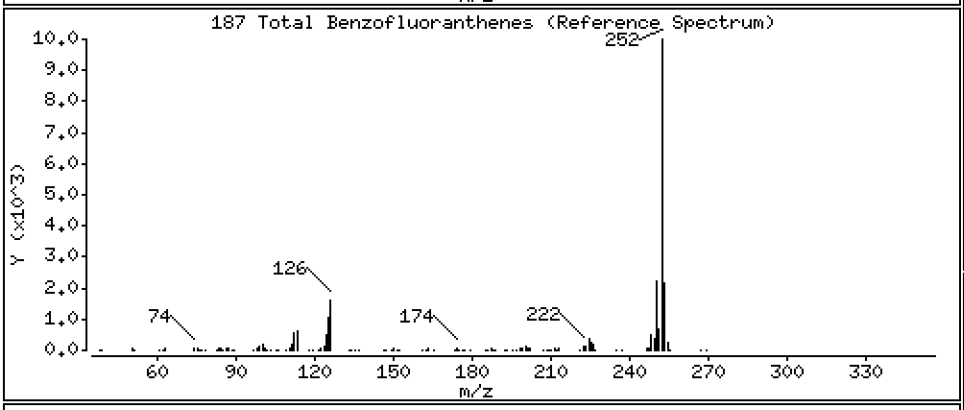
Column diameter: 0.25

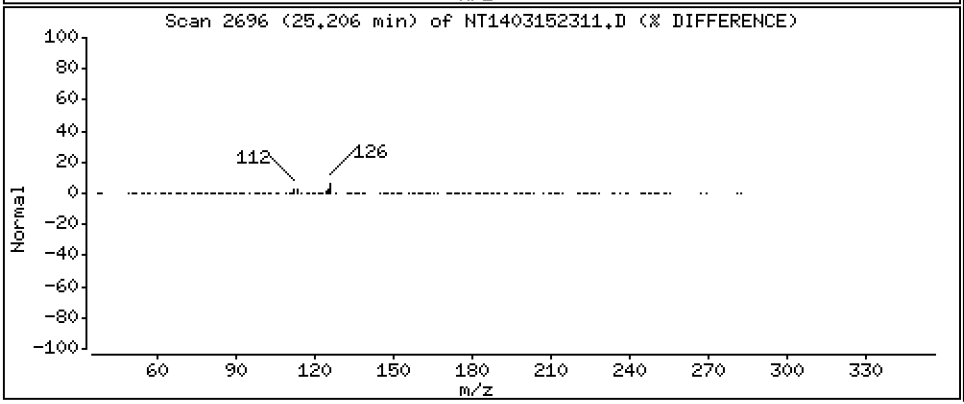
187 Total Benzofluoranthenes

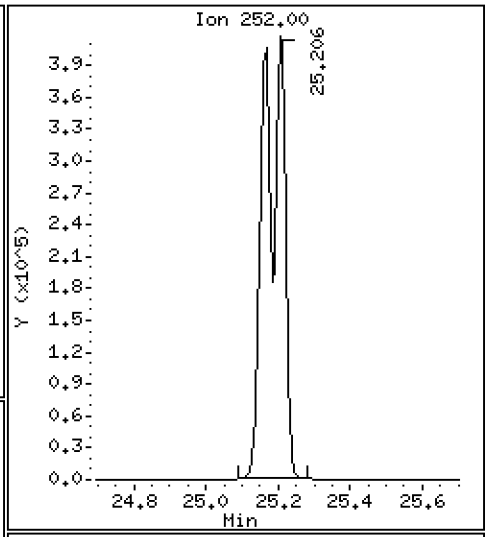
Concentration: 9.756 ug/mL

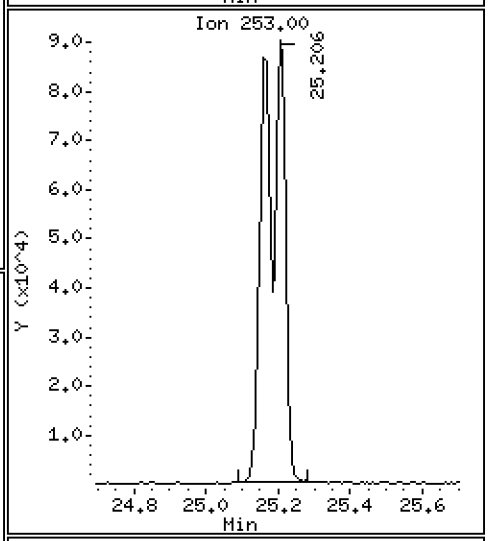


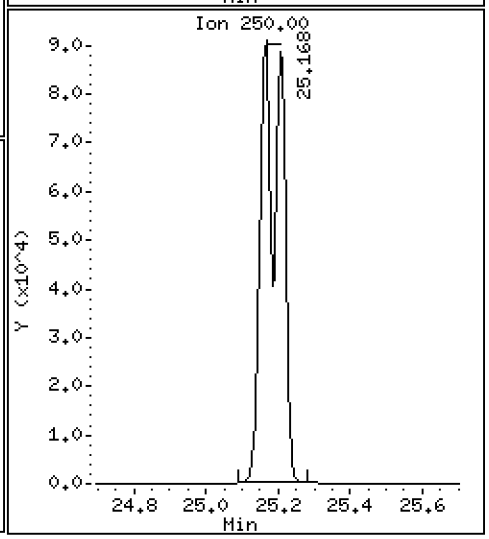












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0160-SCV1

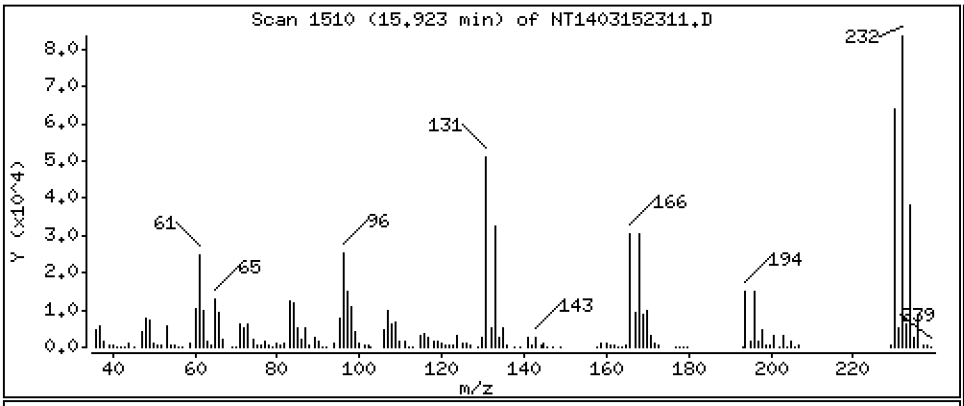
Operator: JGR

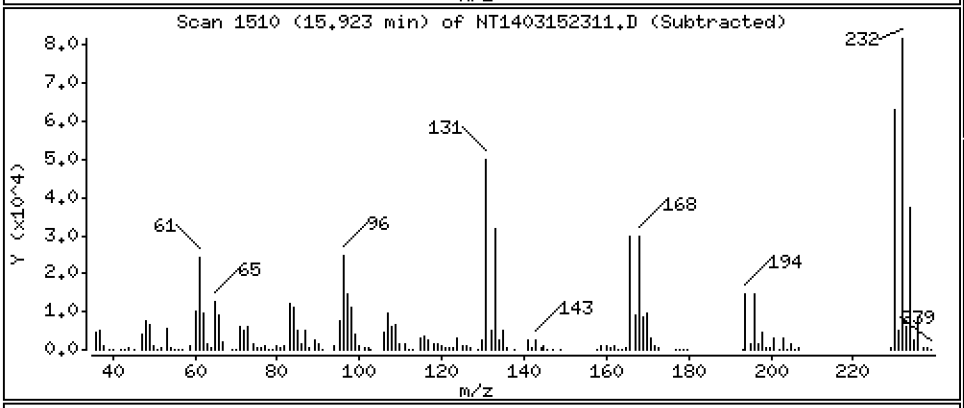
Column phase: ZB-5msi

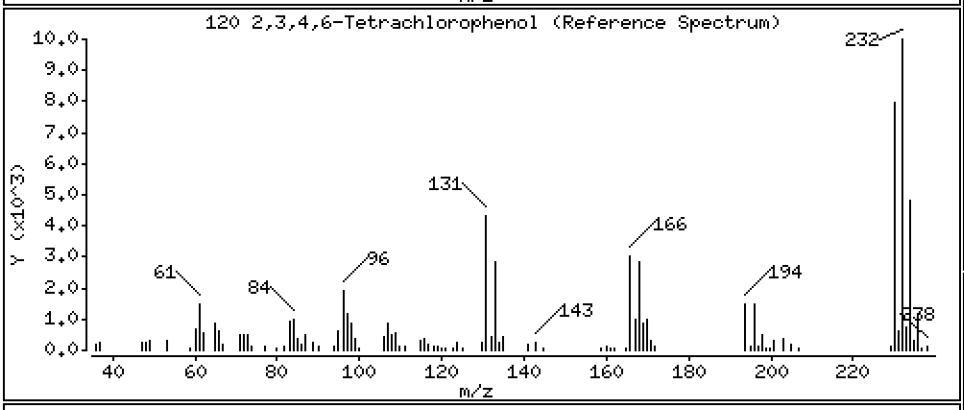
Column diameter: 0.25

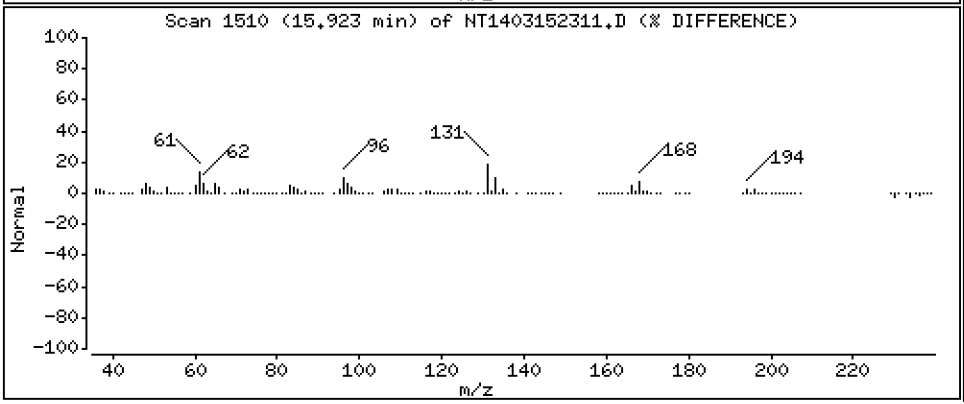
120 2,3,4,6-Tetrachlorophenol

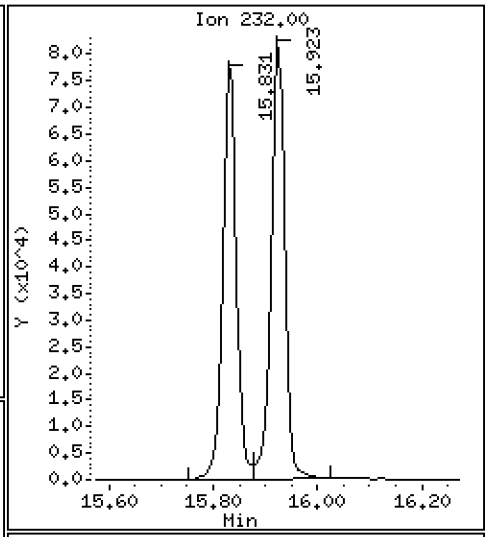
Concentration: 3.569 ug/mL

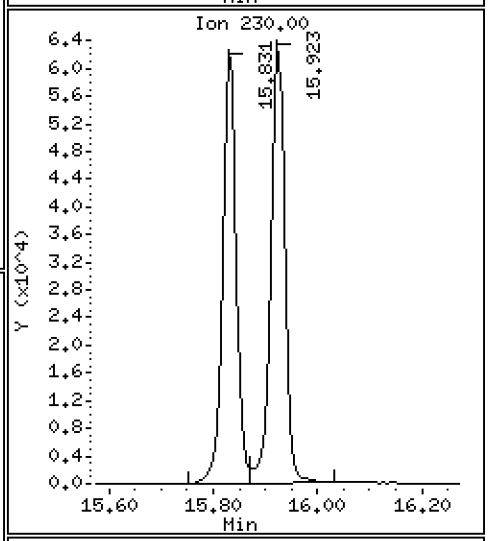


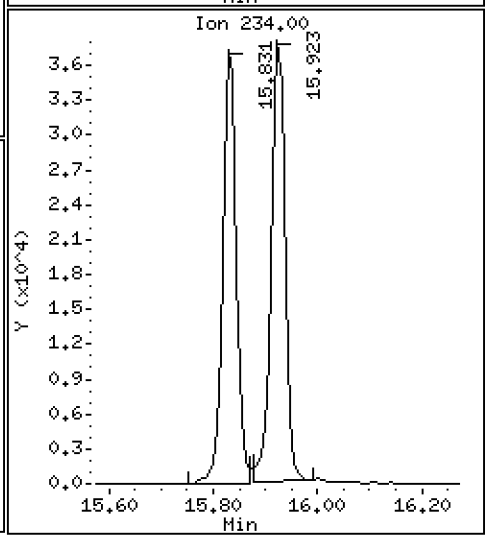












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230315.b\NT1403152311.D
Lab Smp Id: SLC0160-SCV1
Inj Date : 15-MAR-2023 17:39 MS Autotune Date: 11-MAR-2023 16:01
Operator : JGR Inst ID: nt14.i
Smp Info : SLC0160-SCV1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230315.b\ABN.m
Meth Date : 21-Mar-2023 12:29 van Quant Type: ISTD
Cal Date : 15-MAR-2023 15:50 Cal File: NT1403152308.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)	
$	1 2-Fluorophenol	112	Compound Not Detected.						
$	2 Phenol-d5	99	Compound Not Detected.						
	3 Phenol	94	8.436	8.428	(1.000)	409924	4.36782	4.368	
$	5 2-Chlorophenol-d4	132	Compound Not Detected.						
	4 Bis(2-Chloroethyl)ether	93	8.606	8.606	(1.000)	355357	5.25823	5.258	
	6 2-Chlorophenol	128	8.729	8.721	(1.000)	323438	4.37862	4.379	
	7 1,3-Dichlorobenzene	146	9.000	9.000	(1.000)	358409	4.79319	4.793	
*	8 1,4-Dichlorobenzene-d4	152	9.070	9.062	(1.000)	197462	4.00000	(M)	
	9 1,4-Dichlorobenzene	146	9.101	9.093	(1.000)	352132	4.88937	4.889	
$	10 1,2-Dichlorobenzene-d4	152	Compound Not Detected.						
	12 1,2-Dichlorobenzene	146	9.458	9.458	(1.000)	340729	4.78641	4.786	
	11 Benzyl alcohol	108	9.334	9.334	(1.000)	220673	5.05069	5.051	
	14 2,2'-oxybis(1-Chloropropane)	121	9.644	9.644	(1.000)	114247	5.31866	5.319	
	13 2-Methylphenol	108	9.559	9.559	(1.000)	273187	4.11716	4.117	
	17 Hexachloroethane	117	10.056	10.056	(1.000)	152626	4.95501	4.955	
	16 N-Nitroso-di-n-propylamine	70	9.900	9.893	(1.000)	260326	4.98316	4.983	
	15 4-Methylphenol	108	9.830	9.823	(1.000)	337960	4.30182	4.302	
$	18 Nitrobenzene-d5	82	Compound Not Detected.						
	19 Nitrobenzene	77	10.203	10.195	(0.882)	375695	5.02268	5.023	
	20 Isophorone	82	10.653	10.645	(0.921)	691478	6.77053	6.771	
	21 2-Nitrophenol	139	10.831	10.831	(0.936)	194856	4.53030	4.530	
	22 2,4-Dimethylphenol	107	10.878	10.878	(0.940)	250436	3.91450	3.915	
	23 Bis(2-Chloroethoxy)methane	93	11.087	11.080	(0.959)	402865	5.85923	5.859	
	24 Benzoic acid	105	11.064	10.963	(0.956)	444832	8.24795	8.248	
	25 2,4-Dichlorophenol	162	11.289	11.281	(0.976)	243165	4.77930	4.779	
	26 1,2,4-Trichlorobenzene	180	11.482	11.482	(0.993)	315977	5.05188	5.052	
*	27 Naphthalene-d8	136	11.567	11.567	(1.000)	726125	4.00000		
	28 Naphthalene	128	11.606	11.606	(1.003)	936737	4.82884	4.829	
	29 4-Chloroaniline	127	11.729	11.729	(1.014)	327500	4.03279	4.033	
	30 Hexachlorobutadiene	225	11.977	11.977	(1.035)	138599	4.90795	4.908	
	31 4-Chloro-3-methylphenol	107	12.696	12.689	(1.098)	298325	4.85224	4.852	
	32 2-Methylnaphthalene	142	13.006	13.006	(1.124)	656729	4.85435	4.854	
	33 Hexachlorocyclopentadiene	237	13.478	13.486	(0.887)	166439	5.22977	5.230	

		QUANT SIG					CONCENTRATIONS	
	Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
	34 2,4,6-Trichlorophenol	196	13.633	13.625	(0.897)	183263	4.71824	4.718
	35 2,4,5-Trichlorophenol	196	13.703	13.702	(0.902)	188647	4.66090	4.661
$	36 2-Fluorobiphenyl	172	13.695	13.795	(0.901)	426	0.00307	0.003072
	37 2-Chloronaphthalene	162	14.004	14.004	(0.922)	591509	4.97719	4.977
	38 2-Nitroaniline	65	14.260	14.260	(0.938)	234033	5.09985	5.100
	39 Dimethylphthalate	163	14.701	14.693	(0.967)	642281	5.03056	5.031
	40 Acenaphthylene	152	14.887	14.879	(0.980)	974004	4.87938	4.879
	41 2,6-Dinitrotoluene	165	14.840	14.833	(0.977)	153944	5.21947	5.219
*	42 Acenaphthene-d10	164	15.196	15.196	(1.000)	382881	4.00000	
	43 3-Nitroaniline	138	15.119	15.111	(0.995)	211974	5.20957	5.210
	44 Acenaphthene	153	15.266	15.258	(1.005)	578656	4.96504	4.965
	45 2,4-Dinitrophenol	184	15.328	15.328	(1.009)	70613	3.07711	3.077
	46 Dibenzofuran	168	15.590	15.590	(1.026)	824547	4.95562	4.956
	47 4-Nitrophenol	109	15.420	15.420	(1.015)	103988	4.82822	4.828
	48 2,4-Dinitrotoluene	165	15.645	15.645	(1.030)	214010	5.11873	5.119
	50 Diethylphthalate	149	16.163	16.155	(1.064)	686853	5.20331	5.203
	49 Fluorene	166	16.309	16.302	(1.073)	763926	4.84358	4.844
	51 4-Chlorophenyl-phenylether	204	16.294	16.294	(1.072)	337497	4.98506	4.985
	52 4-Nitroaniline	138	16.386	16.379	(1.078)	170484	4.81727	4.817
	53 4,6-Dinitro-2-methylphenol	198	16.487	16.479	(0.904)	109125	4.43923	4.439
	54 N-Nitrosodiphenylamine	169	16.548	16.541	(0.907)	475466	4.95411	4.954
$	55 2,4,6-Tribromophenol	330	Compound Not Detected.					
	56 4-Bromophenyl-phenylether	248	17.304	17.304	(0.949)	169085	5.22559	5.226
	57 Hexachlorobenzene	284	17.621	17.621	(0.966)	163199	4.78004	4.780
	58 Pentachlorophenol	266	17.969	17.977	(0.985)	106585	4.47687	4.477
*	59 Phenanthrene-d10	188	18.240	18.240	(1.000)	706616	4.00000	
	60 Phenanthrene	178	18.294	18.286	(1.003)	955749	4.73403	4.734
	61 Anthracene	178	18.379	18.379	(1.008)	832701	4.28109	4.281
	62 Carbazole	167	18.712	18.704	(1.026)	793728	4.58650	4.587
	63 Di-n-butylphthalate	149	19.509	19.509	(1.070)	1207956	5.50673	5.507
	64 Fluoranthene	202	20.677	20.677	(0.887)	1031812	5.02399	5.024
	65 Pyrene	202	21.103	21.103	(0.906)	1044240	4.95802	4.958
$	66 Terphenyl-d14	244	21.381	21.389	(0.918)	662	0.00464	0.004643
	67 Butylbenzylphthalate	149	22.310	22.310	(0.957)	529418	5.73747	5.737
	68 Benzo(a)anthracene	228	23.270	23.263	(0.999)	898379	4.82654	4.827
*	69 Chrysene-d12	240	23.301	23.294	(1.000)	504808	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.224	23.216	(0.997)	586696	10.6467	10.65
	71 Chrysene	228	23.340	23.340	(1.002)	795614	4.72292	4.723
	72 bis(2-Ethylhexyl)phthalate	149	23.340	23.332	(0.960)	706123	5.42778	5.428
*	134 Di-n-octylphthalate-d4	153	24.323	24.323	(1.000)	988248	4.00000	
	73 Di-n-octylphthalate	149	24.331	24.331	(1.000)	1304643	5.13544	5.135
	74 Benzo(b)fluoranthene	252	25.167	25.152	(0.970)	838016	4.77369	4.774
	75 Benzo(k)fluoranthene	252	25.206	25.198	(0.972)	887530	5.10013	5.100
	76 Benzo(a)pyrene	252	25.825	25.818	(0.996)	747283	4.97798	4.978
*	77 Perylene-d12	264	25.941	25.934	(1.000)	496785	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	28.626	28.610	(1.103)	807644	4.94309	4.943
	79 Dibenzo(a,h)anthracene	278	28.641	28.626	(1.104)	669918	4.86500	4.865
	80 Benzo(g,h,i)perylene	276	29.418	29.403	(1.134)	665079	4.93915	4.939
	90 N-Nitrosodimethylamine	74	4.712	4.720	(1.000)	220898	5.19984	5.200
	91 Aniline	93	Compound Not Detected.					
	93 Benzidine	184	20.909	20.909	(0.897)	466644	5.64609	5.646
	103 Pyridine	79	4.743	4.766	(1.000)	348414	2.64838	2.648
	105 1-methylnaphthalene	142	13.238	13.230	(1.144)	625458	5.10291	5.103
	111 Azobenzene (1,2-DP-Hydrazine)	77	16.618	16.618	(1.094)	788522	5.00236	5.002

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.206	25.199	(0.972)	1626530	9.75586	9.756
120 2,3,4,6-Tetrachlorophenol	232	15.923	15.923	(1.048)	141312	3.56895	3.569

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1403152311.D
Lab Smp Id: SLC0160-SCV1
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt14.i\20230315.b\ABN.m
Misc Info:

Calibration Date: 15-MAR-2023
Calibration Time: 13:26
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	194517	97259	389034	197462	1.51
27 Naphthalene-d8	721321	360661	1442642	726125	0.67
42 Acenaphthene-d10	379602	189801	759204	382881	0.86
59 Phenanthrene-d10	703194	351597	1406388	706616	0.49
69 Chrysene-d12	504769	252385	1009538	504808	0.01
134 Di-n-octylphthala	978492	489246	1956984	988248	1.00
77 Perylene-d12	484073	242037	968146	496785	2.63

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.07	8.57	9.57	9.07	-0.00
27 Naphthalene-d8	11.57	11.07	12.07	11.57	-0.00
42 Acenaphthene-d10	15.20	14.70	15.70	15.20	-0.05
59 Phenanthrene-d10	18.25	17.75	18.75	18.24	-0.04
69 Chrysene-d12	23.30	22.80	23.80	23.30	-0.00
134 Di-n-octylphthala	24.32	23.82	24.82	24.32	-0.00
77 Perylene-d12	25.94	25.44	26.44	25.94	-0.00

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

REVIEW SUMMARY FOR FILE - NT1403152311.D

Lab ID: SLC0160-SCV1
nt14.i, ABN.m, 15-MAR-2023 17:39

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

** FIRST SURROGATE NOT FOUND. ICAL Check not performed **

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
1.000	1.064	-0.0642	2,2'-oxybis(1-Chloropropane)
0.956	0.948	0.0087	Benzoic acid
0.901	0.908	-0.0066	2-Fluorobiphenyl

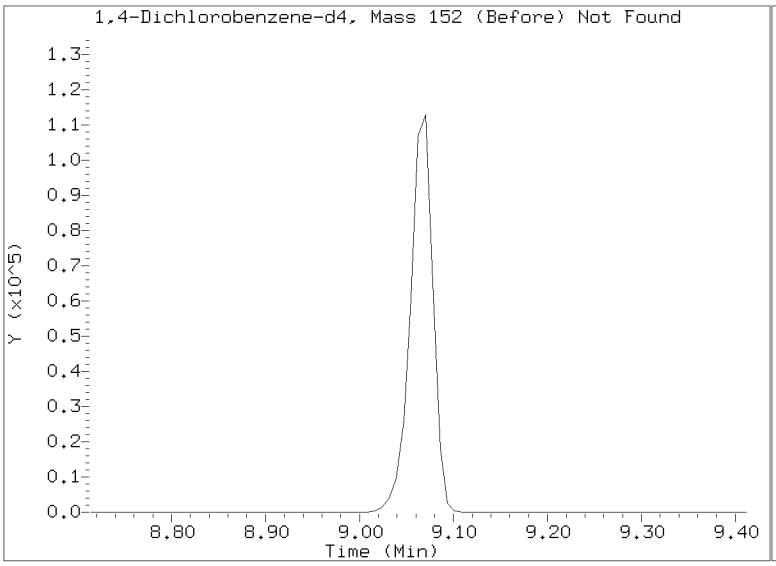
RRT check based on Ccal File: NT1403152308.D

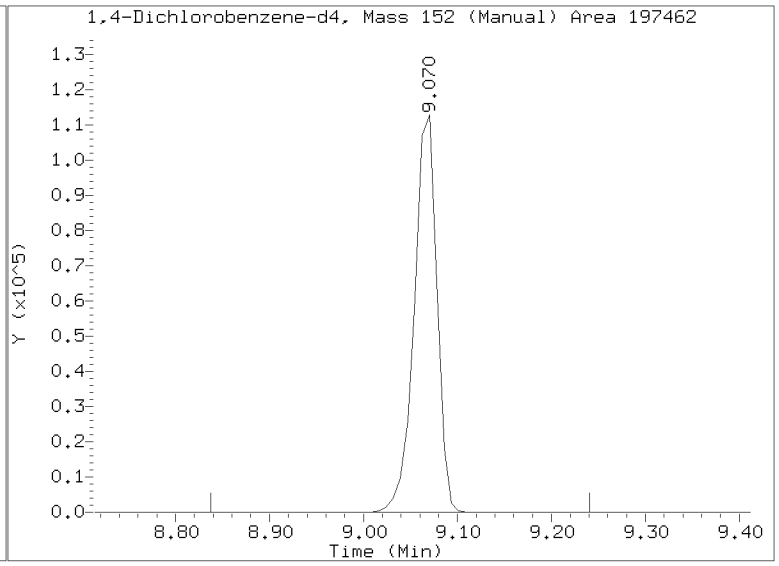
On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

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

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230315.b/NT1403152311.D
Injection Date: 15-MAR-2023 17:39
Lab ID:SLC0160-SCV1 Client ID:
Report Date: 03/21/2023 12:48





Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT14	Calibration:	GC00048
Lab File ID:	NT1403172330.D	Calibration Date:	03/15/2023
Sequence:	SLC0335	Injection Date:	03/18/23
Lab Sample ID:	SLC0335-CCV1	Injection Time:	07:54
Sequence Name:	Calibration Check		

		CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT	
Phenol	A	5.0000	4.7	1.9011440	1.7826460		-6.2	+/-50	
4-Methylphenol	A	5.0000	4.4	1.5914380	1.3931290		-12.5	+/-50	
Naphthalene	A	5.0000	4.8	1.0686200	1.0322160		-3.4	+/-50	
2-Methylnaphthalene	A	5.0000	4.9	0.7452524	0.7377859		-1.0	+/-50	
Acenaphthylene	A	5.0000	4.9	2.0854140	2.0286110		-2.7	+/-50	
Dimethylphthalate	A	5.0000	5.0	1.3338450	1.3269510		-0.5	+/-50	
Acenaphthene	A	5.0000	4.8	1.2175690	1.1803840		-3.1	+/-50	
Dibenzofuran	A	5.0000	5.0	1.7382550	1.7400100		0.1	+/-50	
Fluorene	A	5.0000	4.7	1.6477120	1.5511220		-5.9	+/-50	
Phenanthrene	A	5.0000	4.7	1.1428510	1.0653690		-6.8	+/-50	
Anthracene	A	5.0000	4.8	1.1010610	1.0662860		-3.2	+/-50	
Fluoranthene	A	5.0000	8.2	1.6273660	2.6680680		64.0	+/-50	*
Pyrene	A	5.0000	7.5	1.6688810	2.4907480		49.2	+/-50	
Butylbenzylphthalate	A	5.0000	8.8	0.7311588	1.2858080		75.9	+/-50	*
Benzo(a)anthracene	A	5.0000	4.9	1.4748830	1.4395480		-2.4	+/-50	
Chrysene	A	5.0000	4.9	1.3348290	1.3127330		-1.7	+/-50	
bis(2-Ethylhexyl)phthalate	A	5.0000	6.5	0.5265649	0.6884214		30.7	+/-50	
Benzofluoranthenes, Total	A	10.000	10.0	1.3424190	1.3467800		0.3	+/-50	
Benzo(a)pyrene	A	5.0000	4.8	1.2087150	1.1672140		-3.4	+/-50	
Indeno(1,2,3-cd)pyrene	A	5.0000	4.3	1.3155660	1.1279620		-14.3	+/-50	
Dibenzo(a,h)anthracene	A	5.0000	4.4	1.1087420	0.9691667		-12.6	+/-50	
Benzo(g,h,i)perylene	A	5.0000	3.9	1.0842080	0.8405490		-22.5	+/-50	
2-Fluorophenol	A	7.5000	7.20	1.3587350	1.3045660		-4.0	+/-50	
Phenol-d5	A	7.5000	7.28	1.7888720	1.7367810		-2.9	+/-50	
2-Chlorophenol-d4	A	7.5000	7.59	1.4103050	1.4276540		1.2	+/-50	
1,2-Dichlorobenzene-d4	A	5.0000	5.13	0.9421955	0.9671395		2.6	+/-50	
Nitrobenzene-d5	A	5.0000	5.09	0.4233007	0.4310995		1.8	+/-50	
2-Fluorobiphenyl	A	5.0000	5.21	1.4485960	1.5102360		4.3	+/-50	
2,4,6-Tribromophenol	A	7.5000	7.12	0.1518639	0.1441679		-5.1	+/-50	
p-Terphenyl-d14	A	5.0000	8.26	1.1297810	1.8660960		65.2	+/-50	*

* Values outside of QC limits

* Values outside of QC limits

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Date : 18-MAR-2023 07:54

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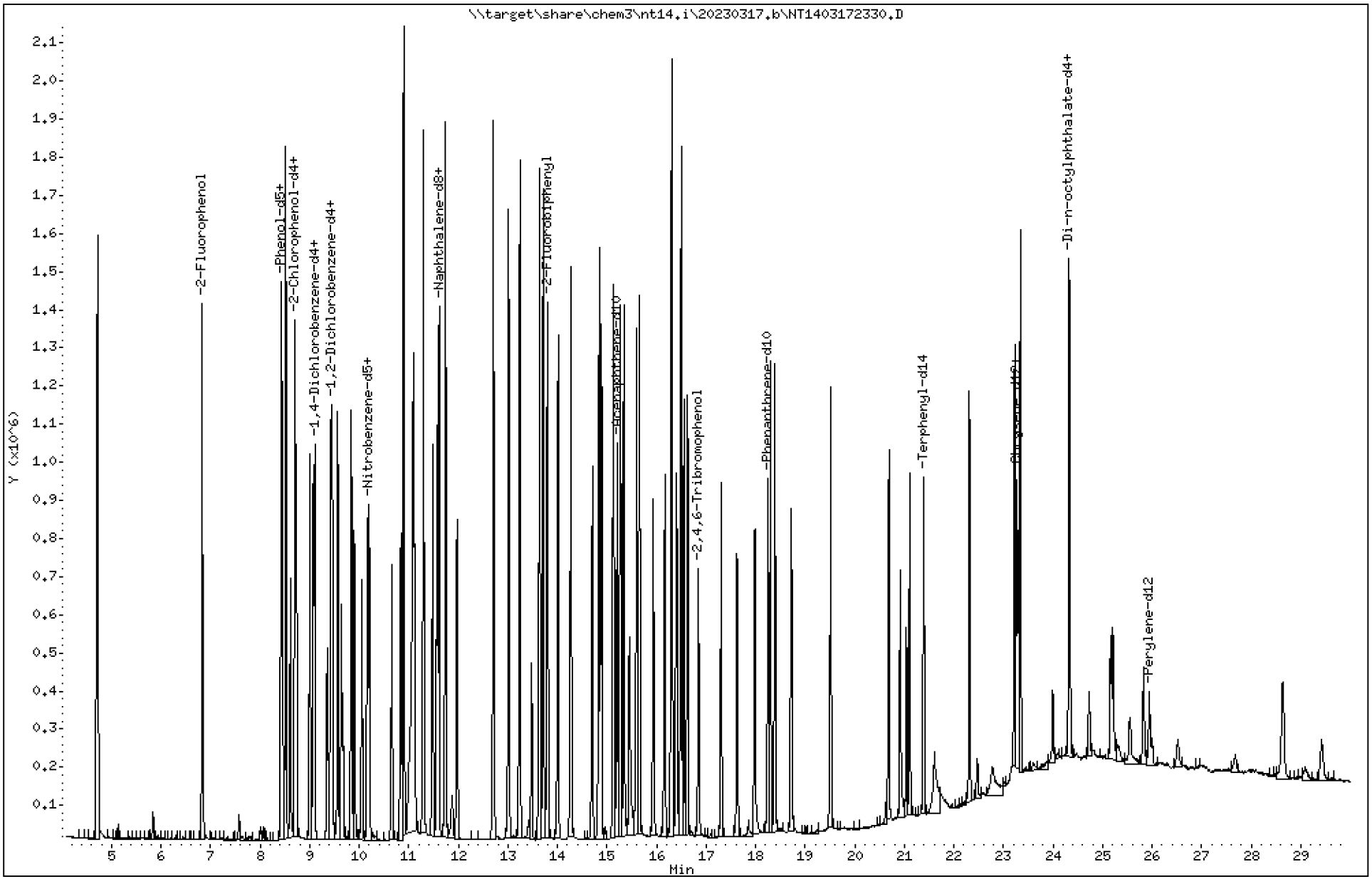
Instrument: nt14.i

Sample Info: SLC0335-CCV1

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

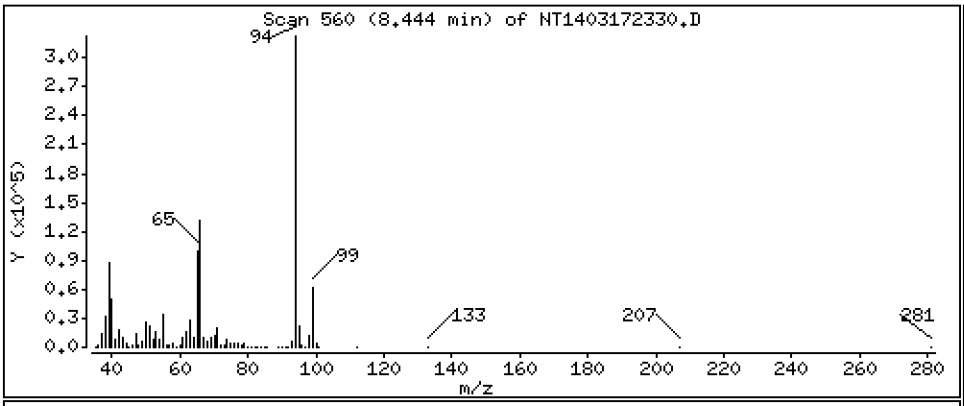
Operator: JGR

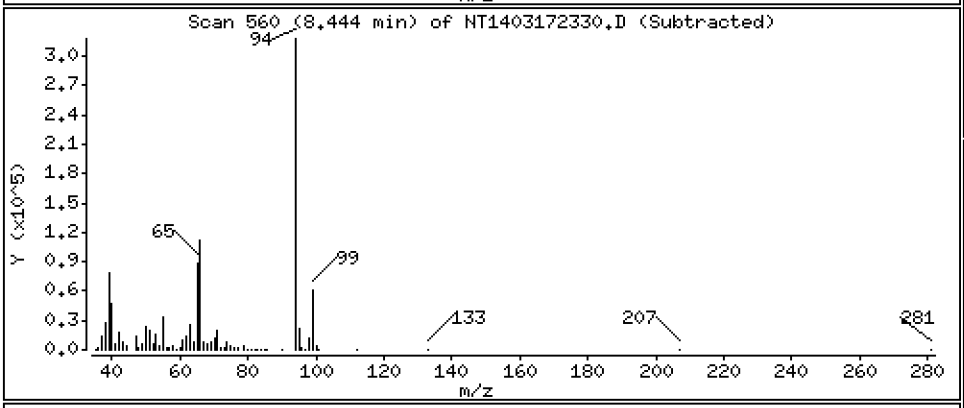
Column phase: ZB-5msi

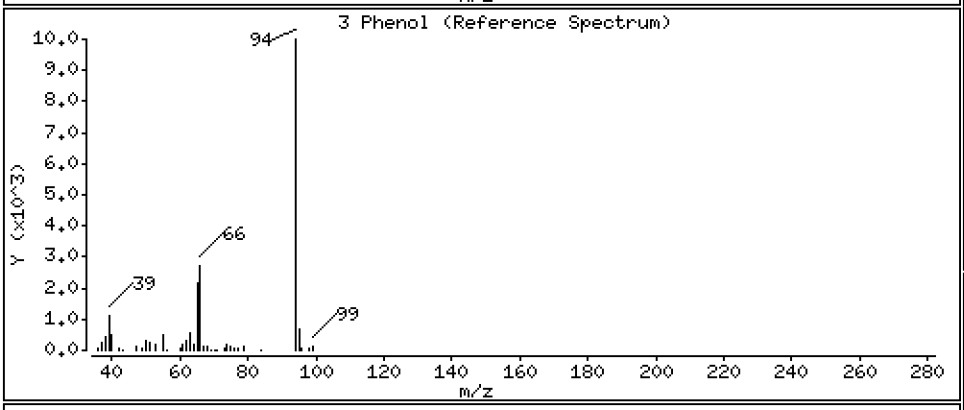
Column diameter: 0.25

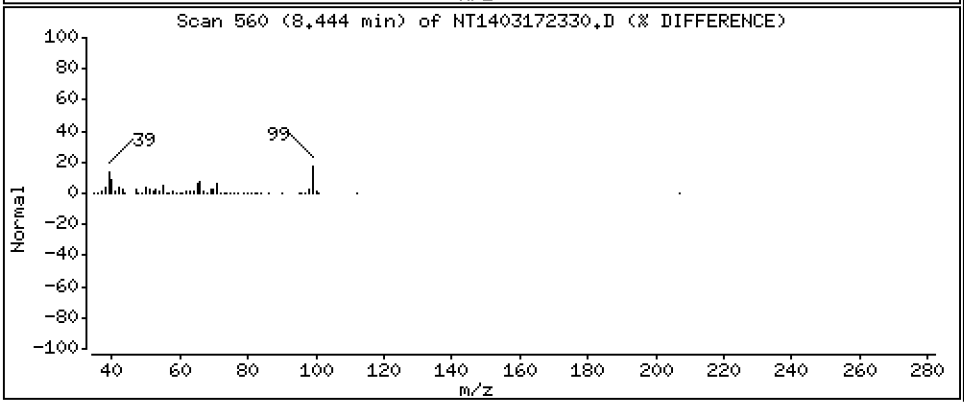
3 Phenol

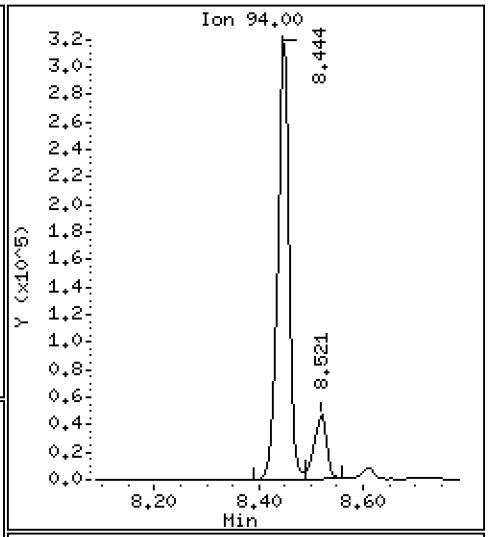
Concentration: 4.688 ug/mL

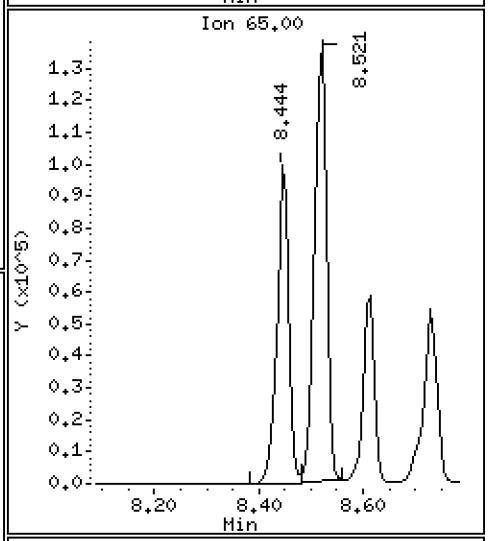


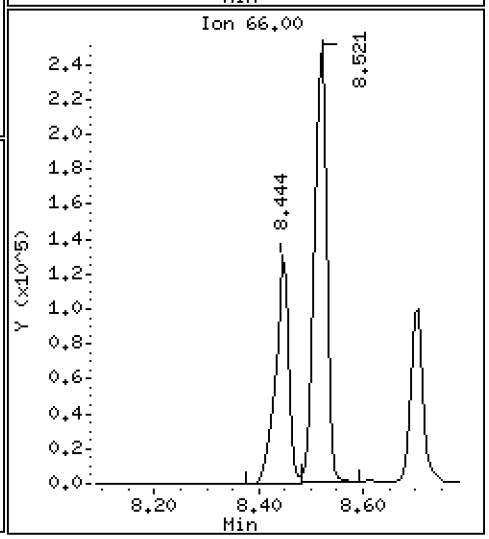












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

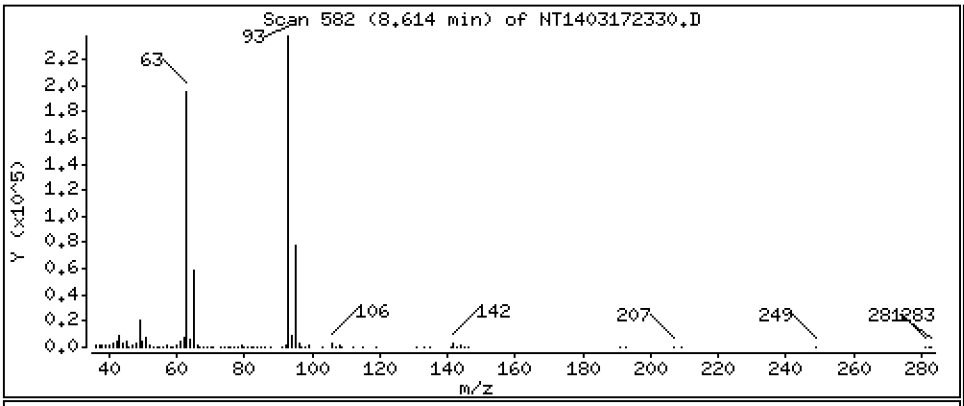
Operator: JGR

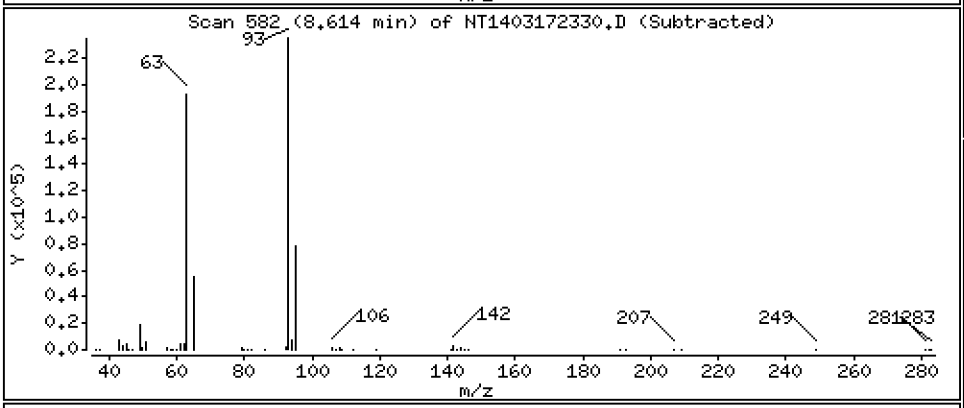
Column phase: ZB-5msi

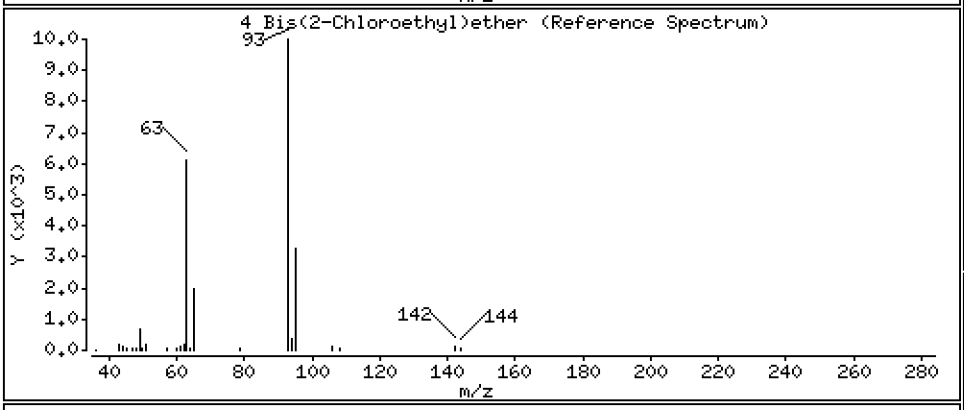
Column diameter: 0.25

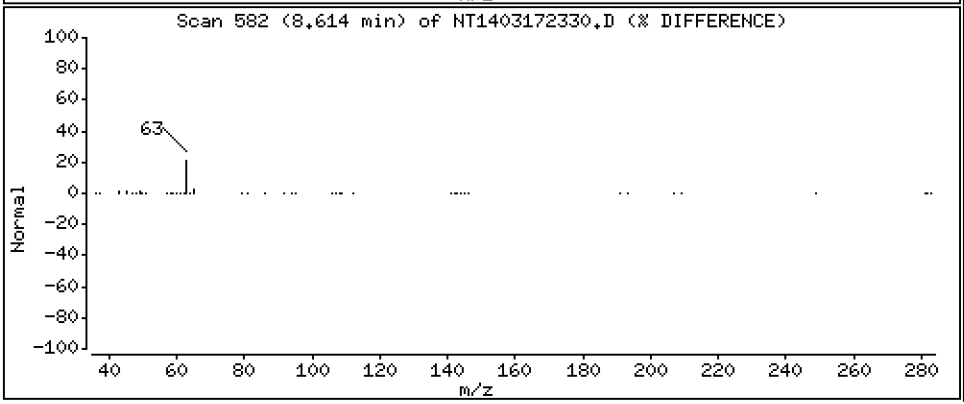
4 Bis(2-Chloroethyl)ether

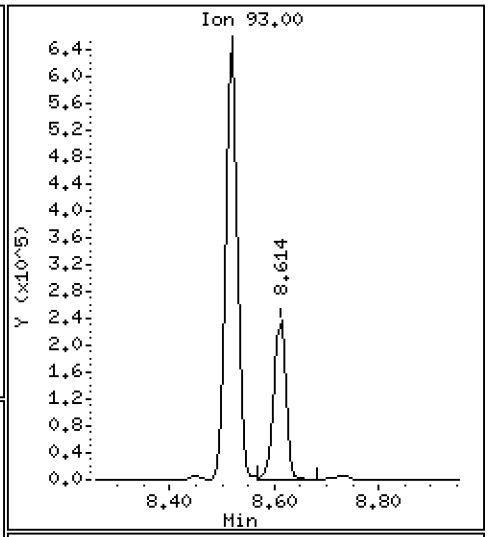
Concentration: 4.763 ug/mL

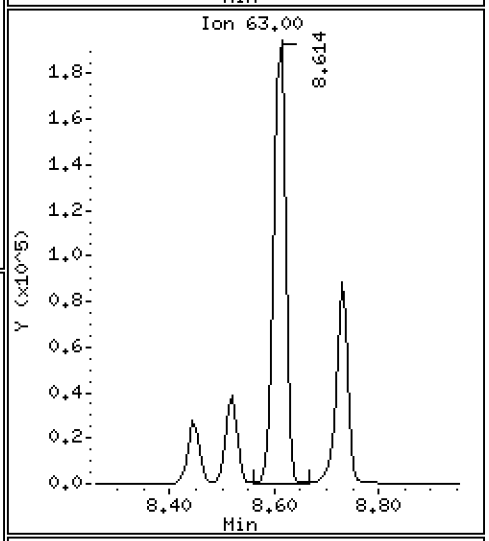


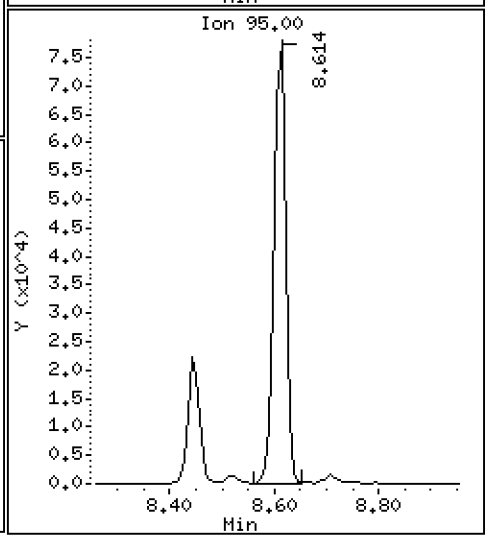












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

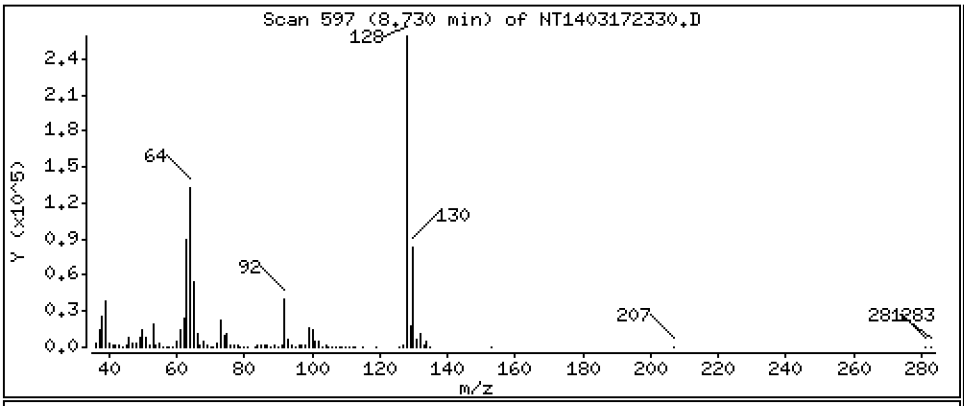
Operator: JGR

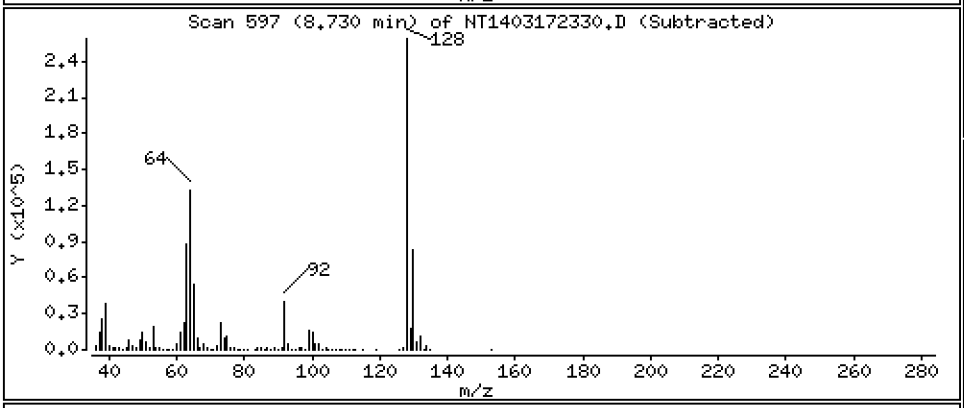
Column phase: ZB-5msi

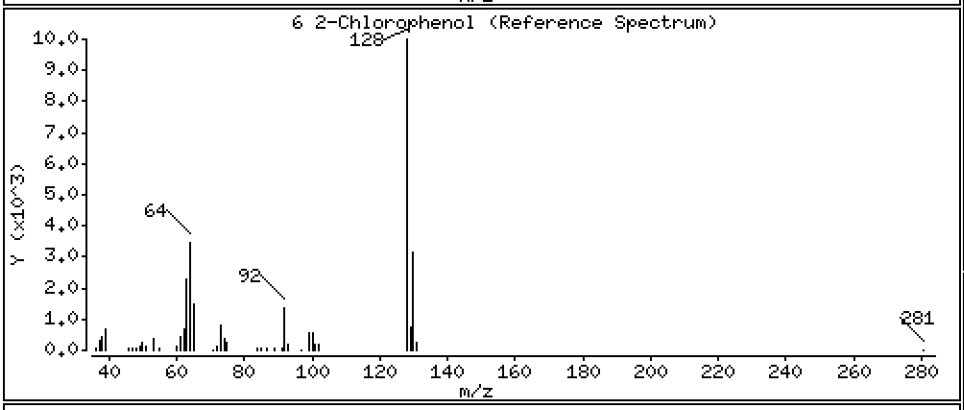
Column diameter: 0.25

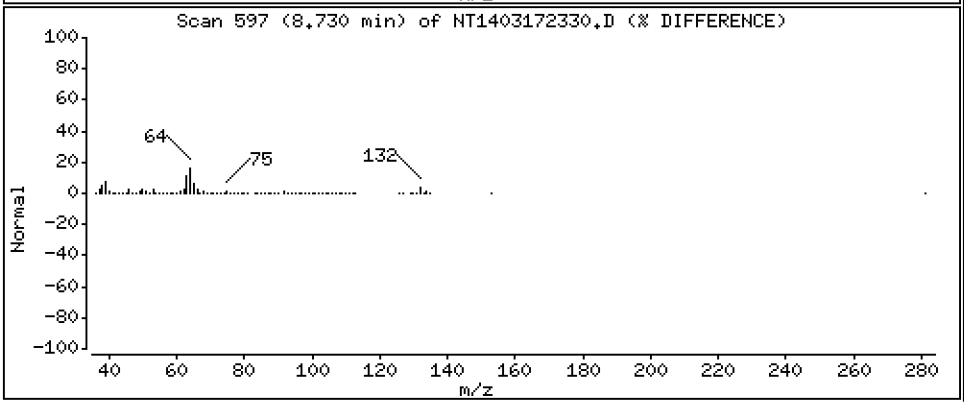
6 2-Chlorophenol

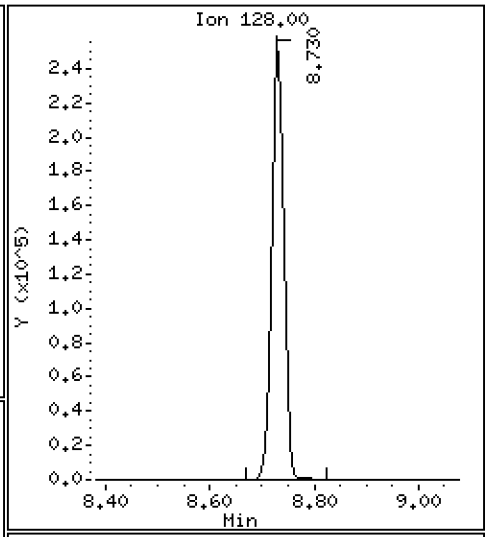
Concentration: 4.863 ug/mL

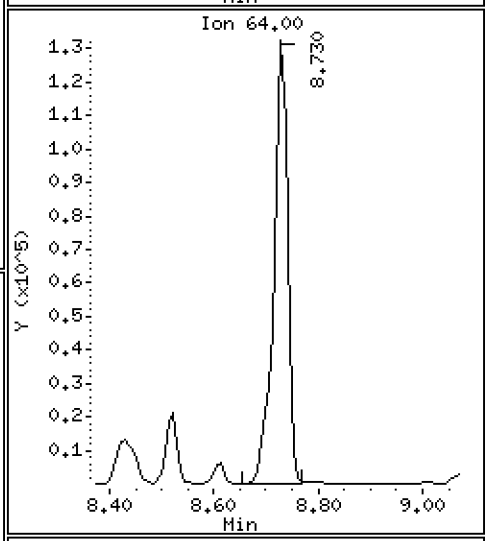


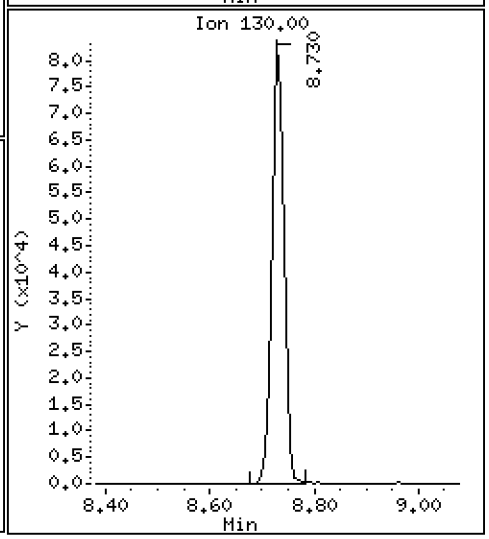












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

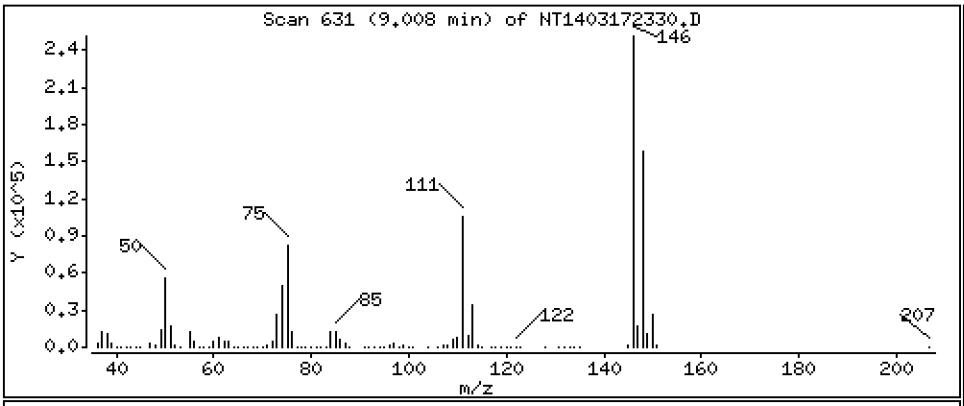
Operator: JGR

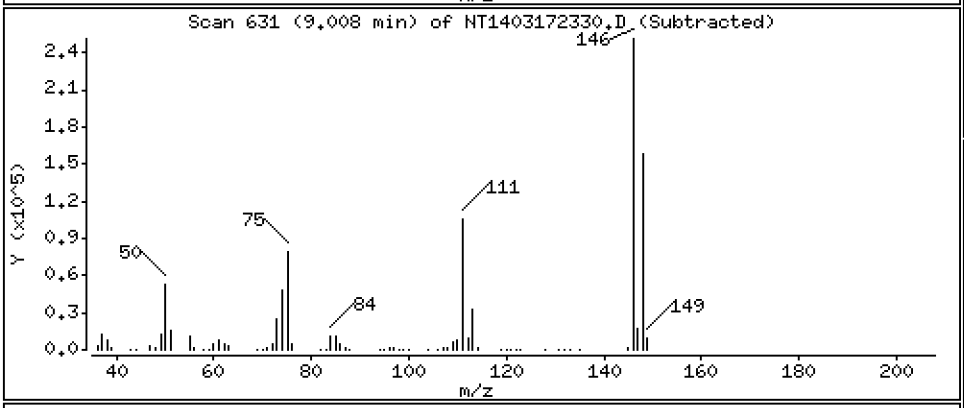
Column phase: ZB-5msi

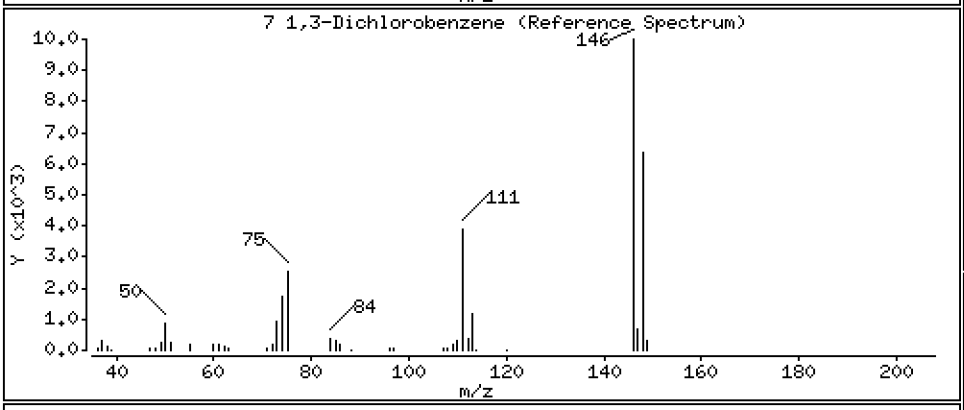
Column diameter: 0.25

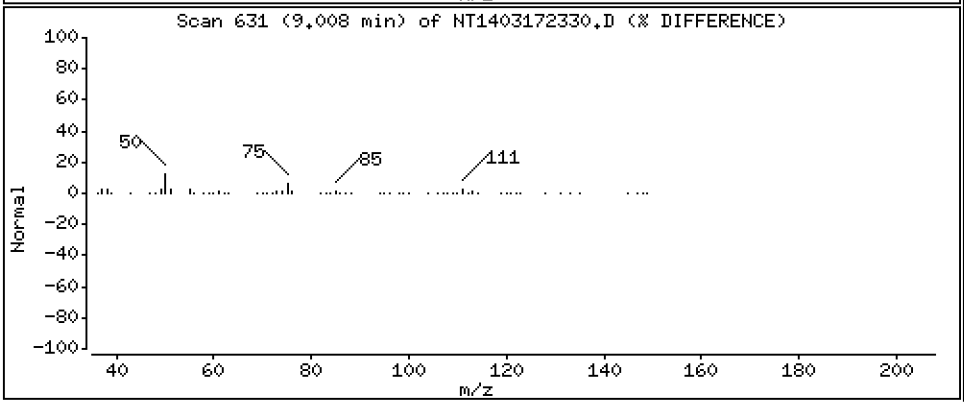
7 1,3-Dichlorobenzene

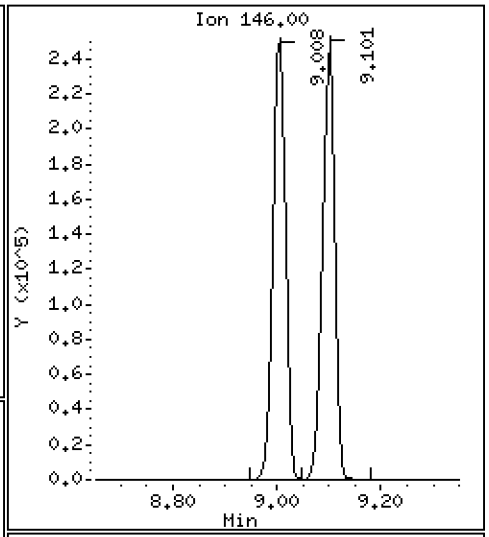
Concentration: 4.922 ug/mL

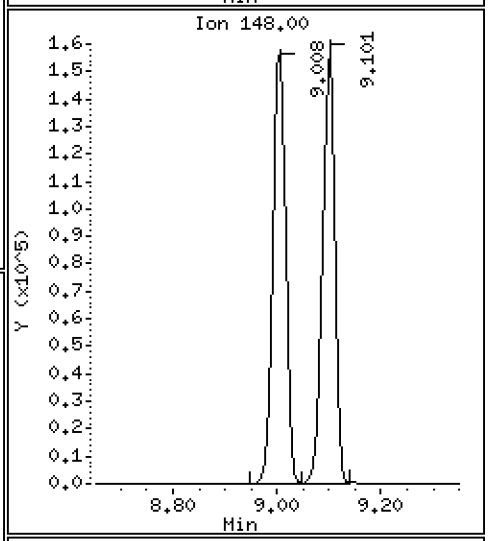


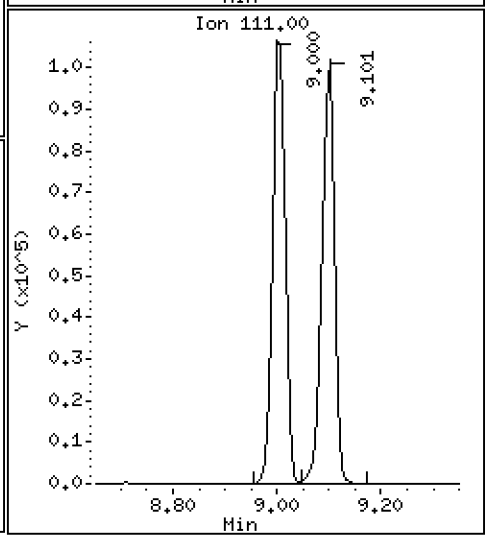












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

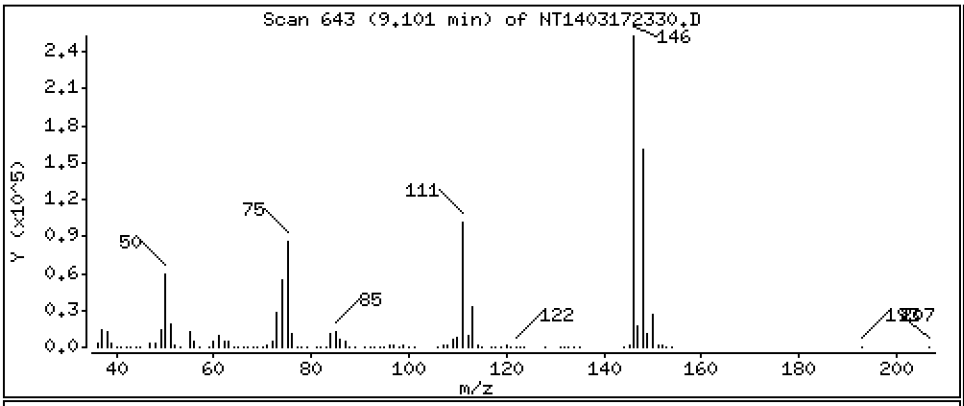
Operator: JGR

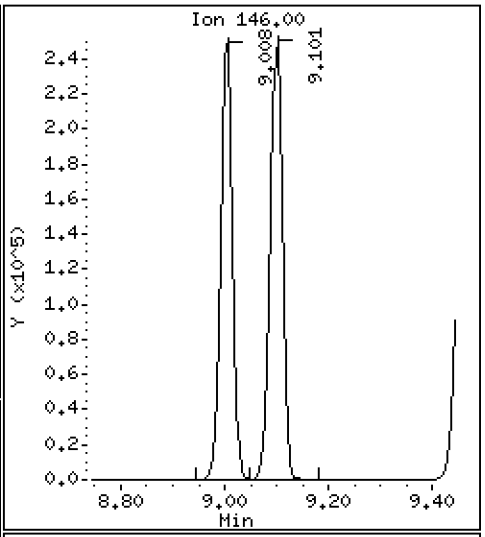
Column phase: ZB-5msi

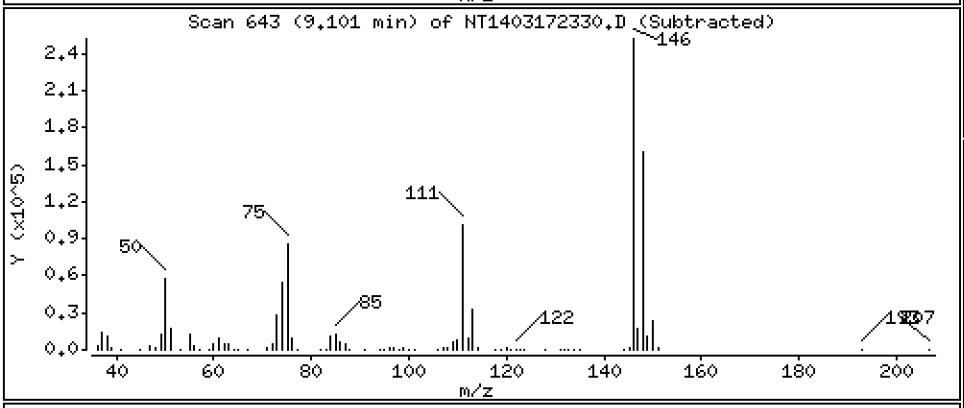
Column diameter: 0.25

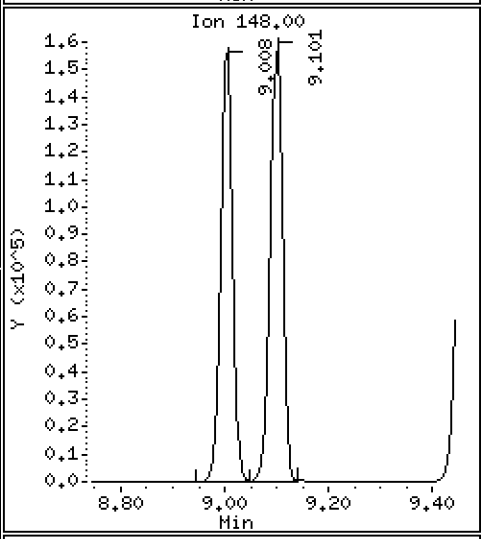
9 1,4-Dichlorobenzene

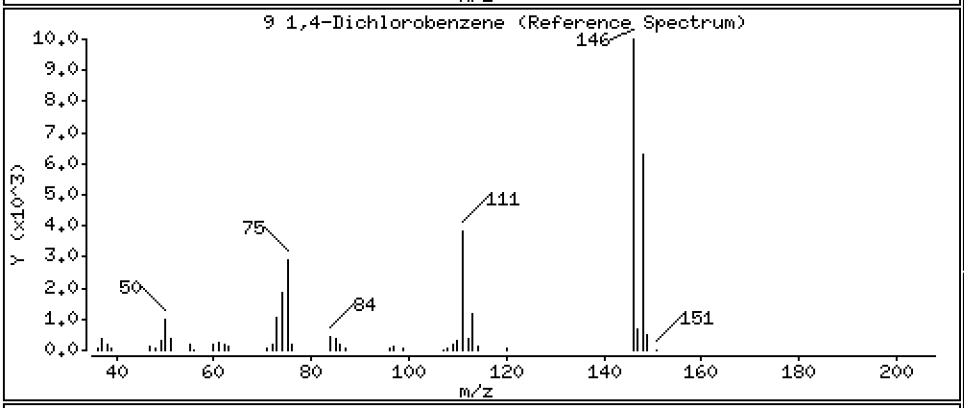
Concentration: 4.941 ug/mL

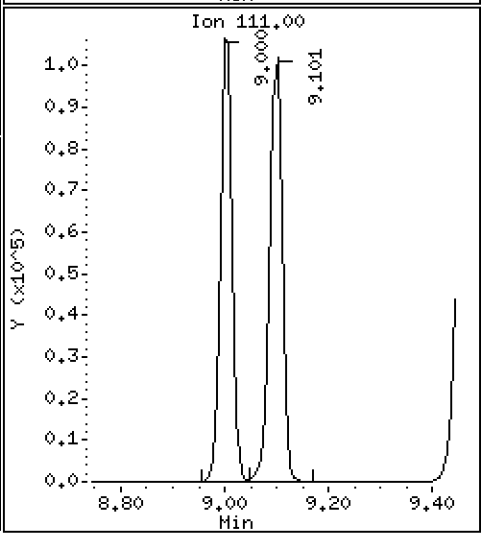


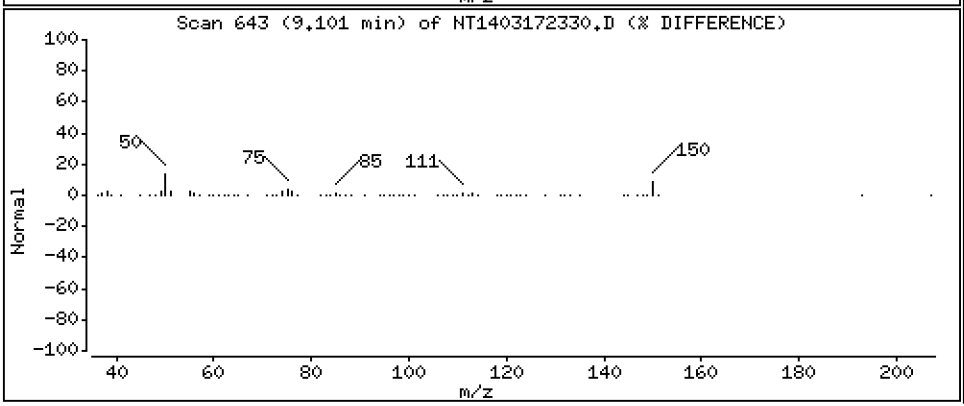












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

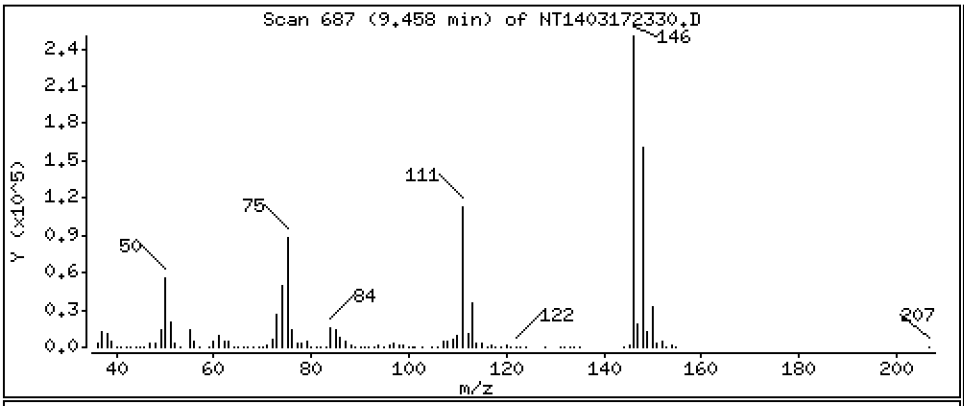
Operator: JGR

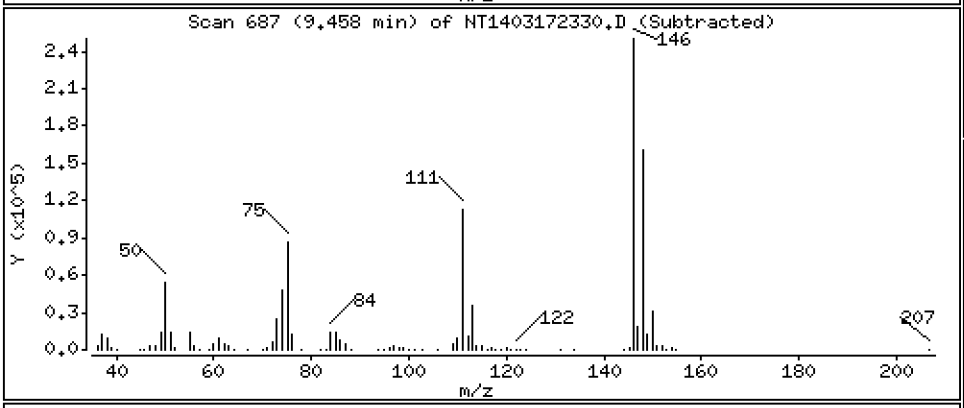
Column phase: ZB-5msi

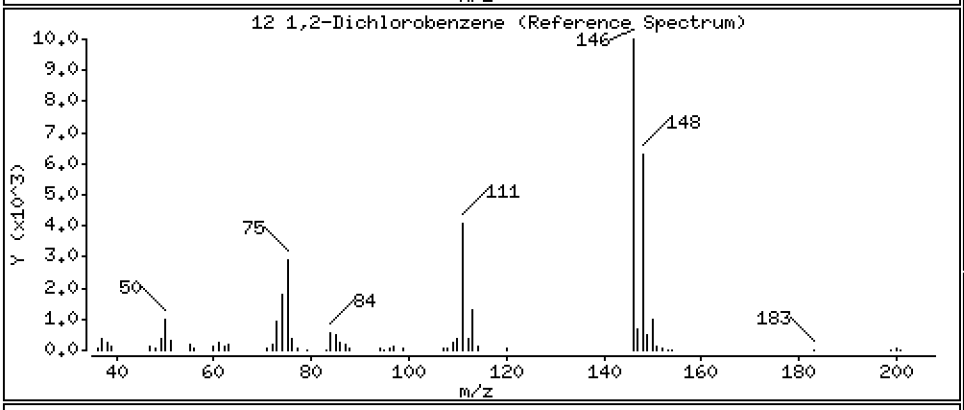
Column diameter: 0.25

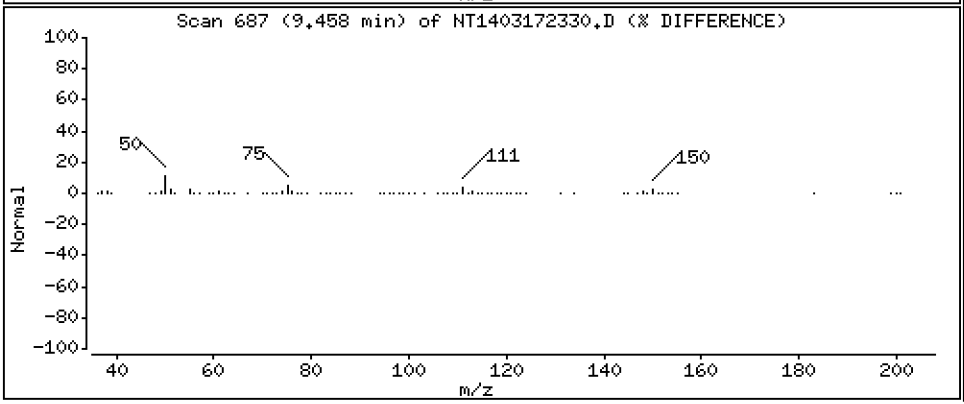
12 1,2-Dichlorobenzene

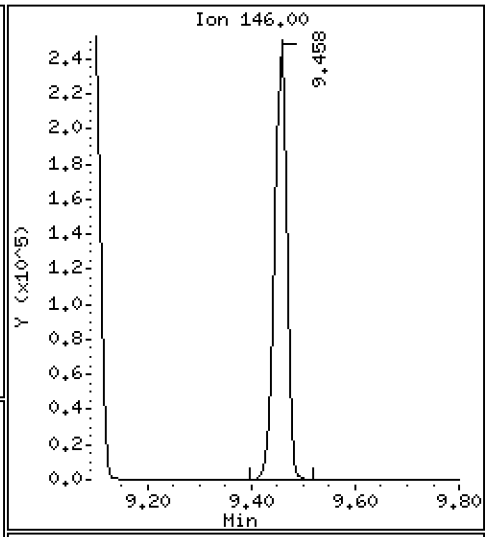
Concentration: 4.878 ug/mL

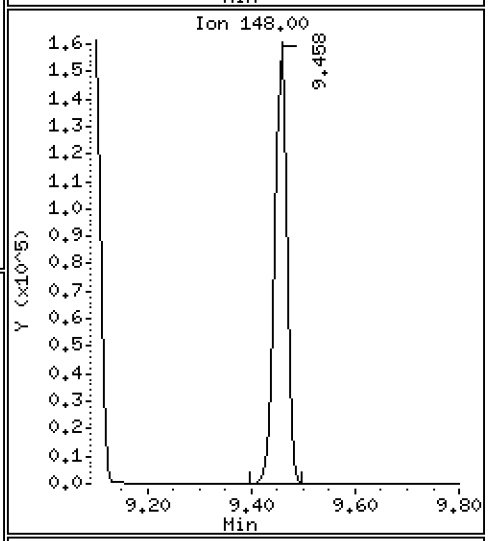


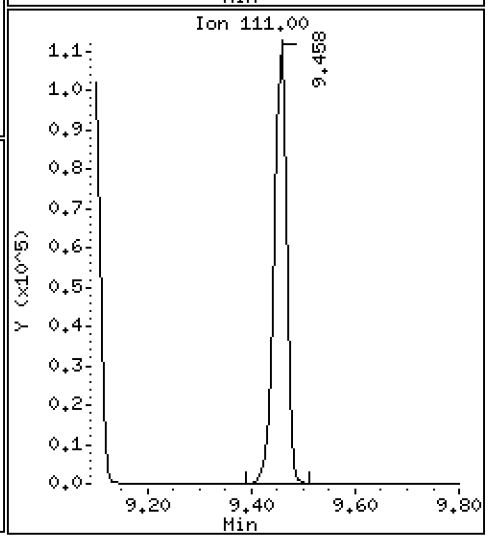












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

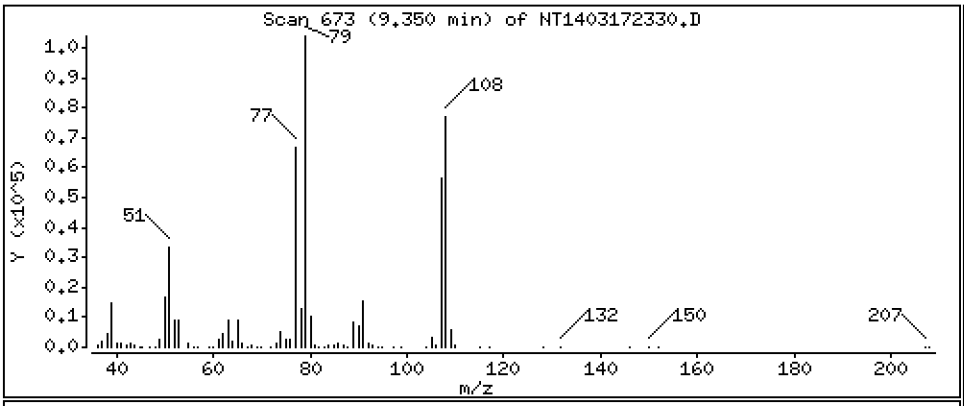
Operator: JGR

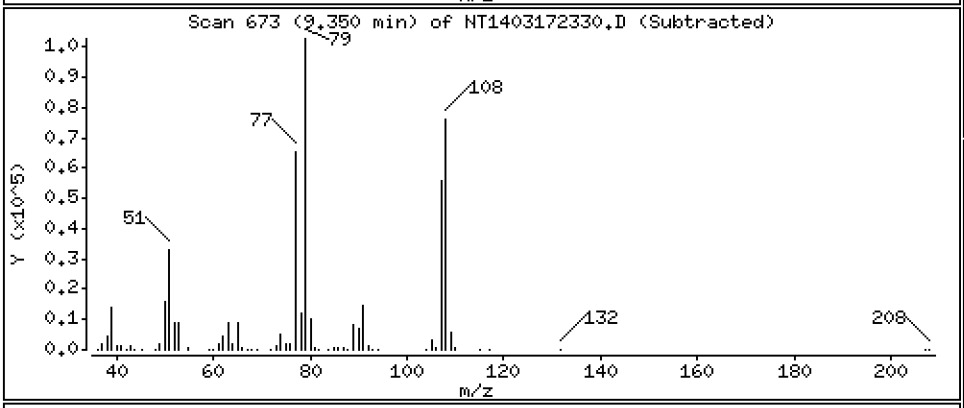
Column phase: ZB-5msi

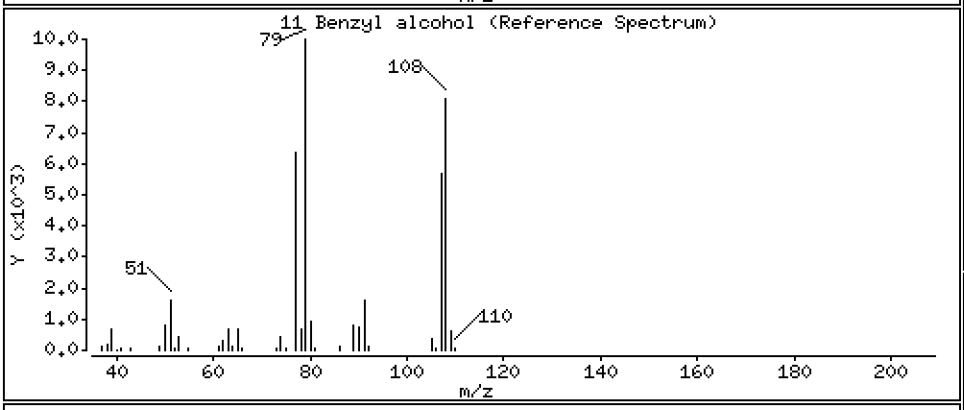
Column diameter: 0.25

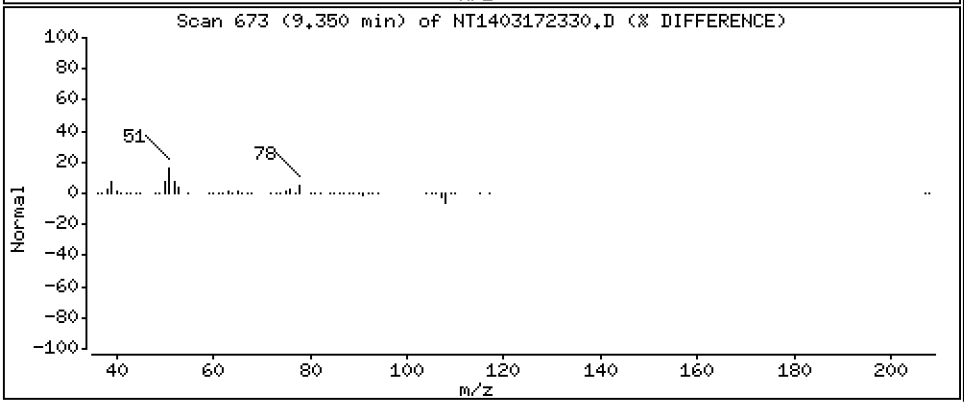
11 Benzyl alcohol

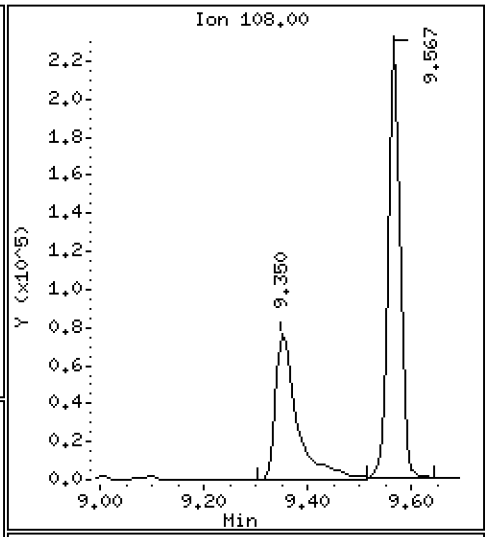
Concentration: 4.543 ug/mL

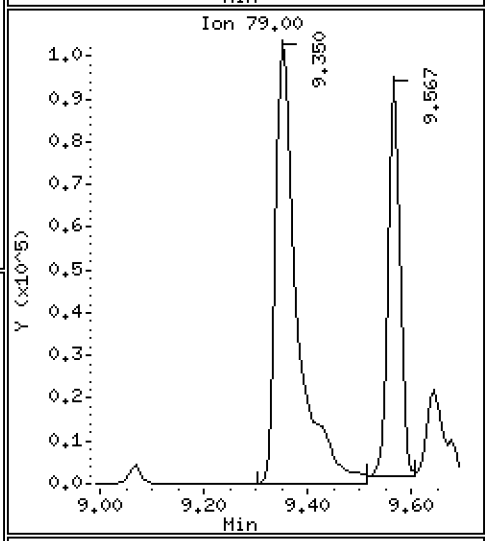


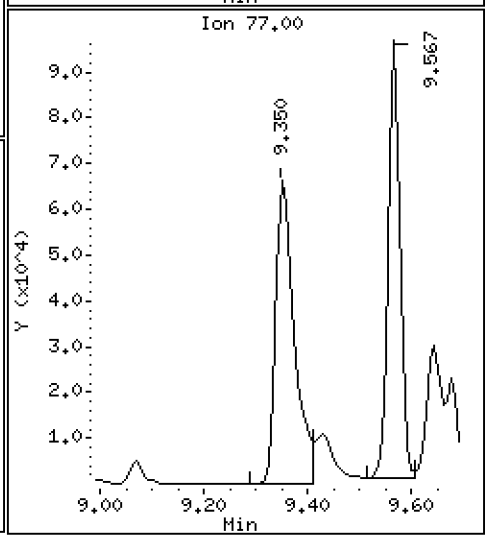












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

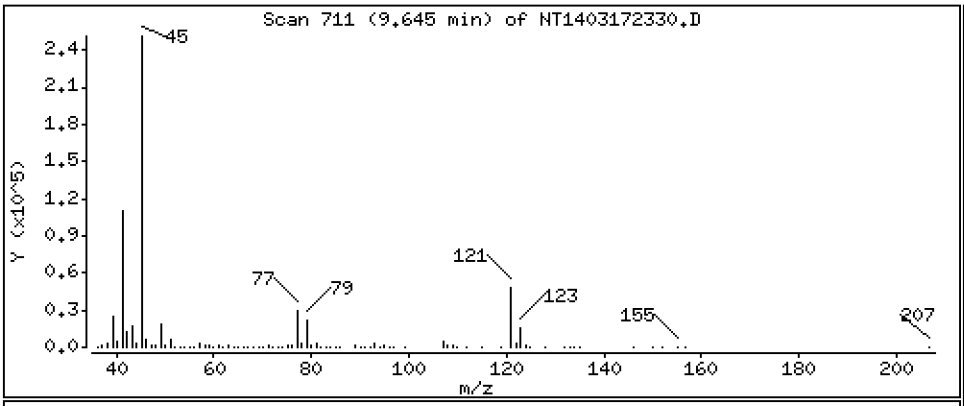
Operator: JGR

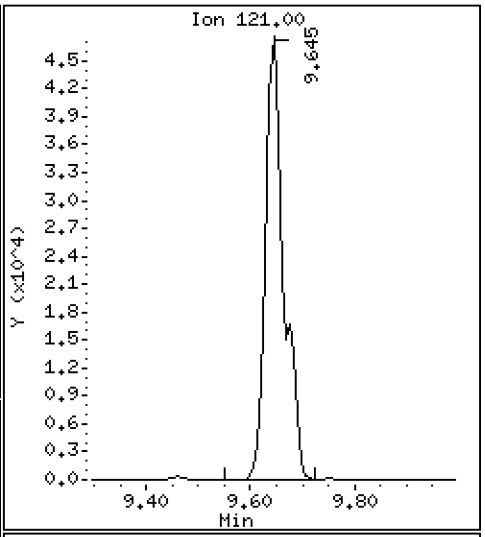
Column phase: ZB-5msi

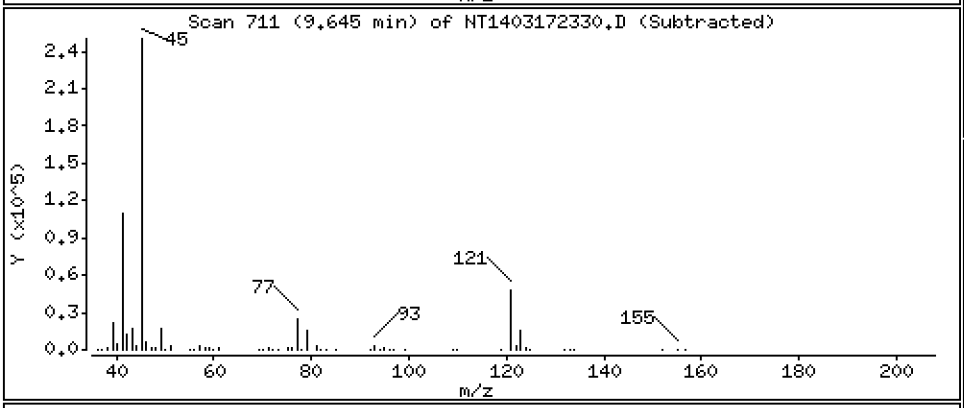
Column diameter: 0.25

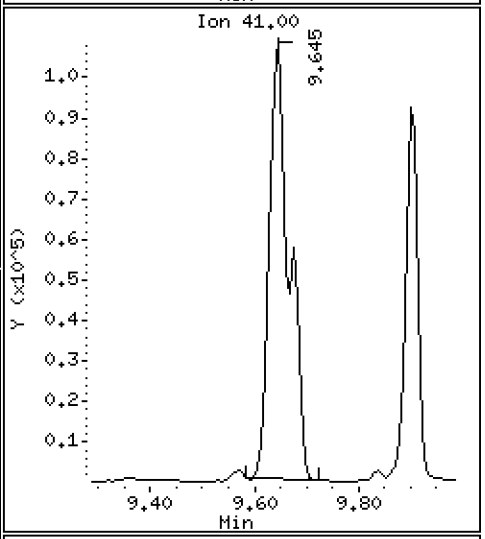
14 2,2'-oxybis(1-Chloropropane)

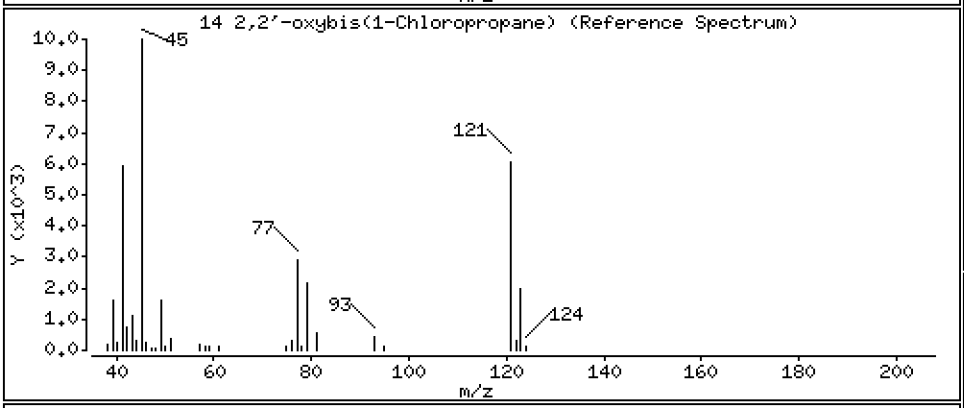
Concentration: 4.763 ug/mL

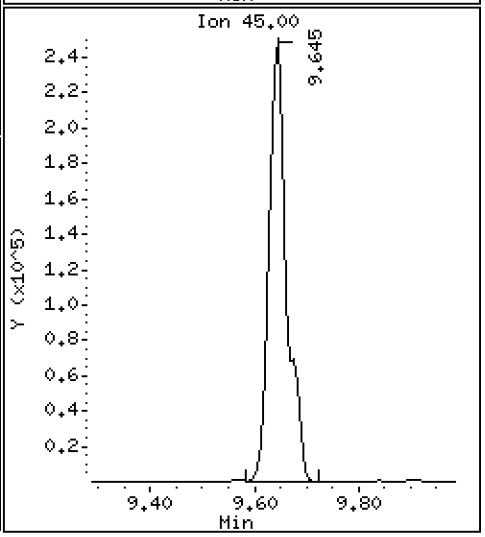


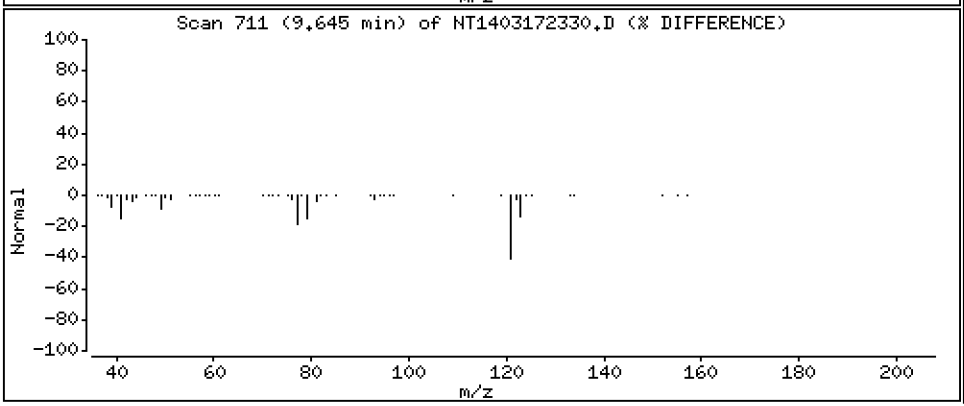












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

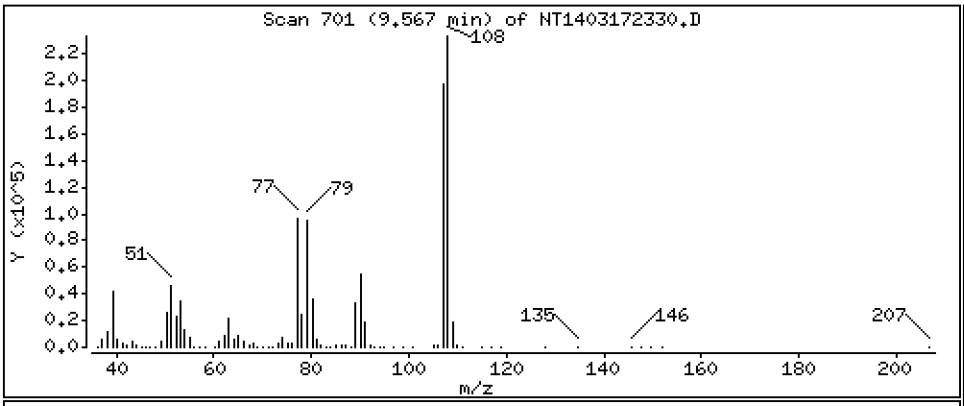
Operator: JGR

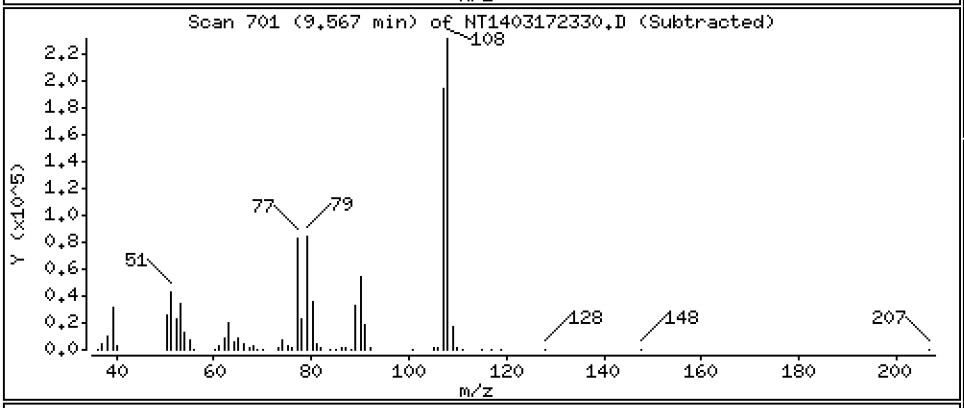
Column phase: ZB-5msi

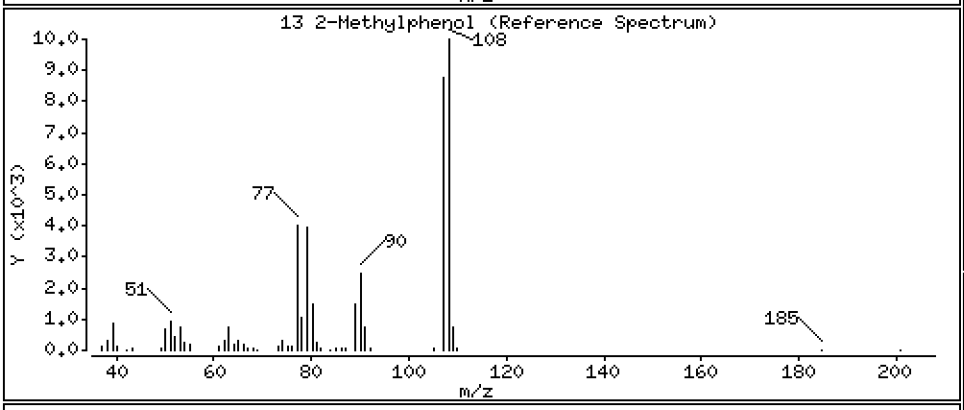
Column diameter: 0.25

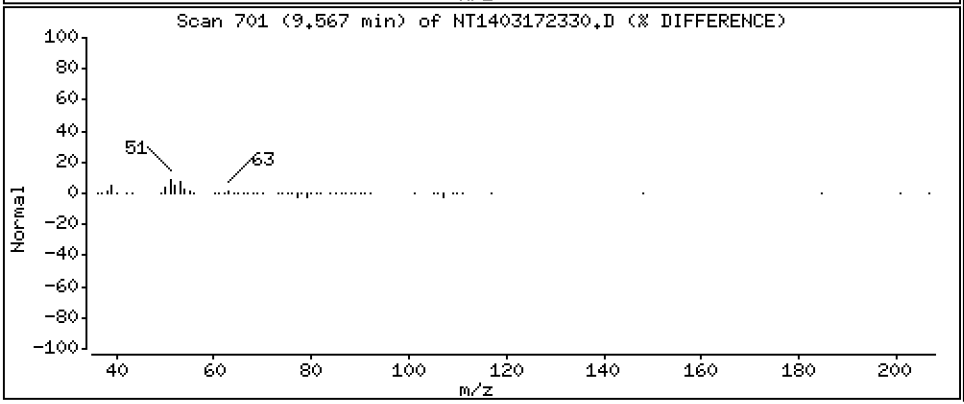
13 2-Methylphenol

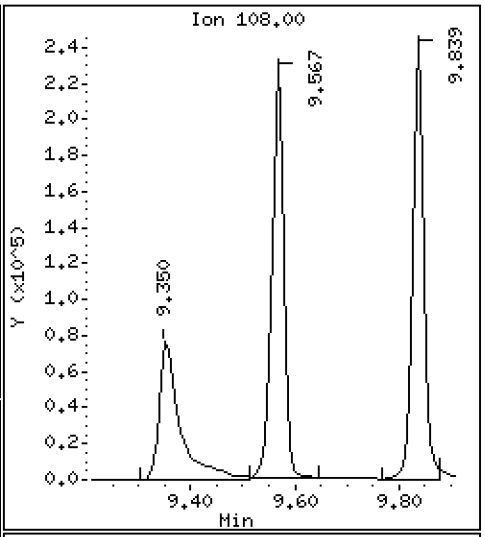
Concentration: 4.840 ug/mL

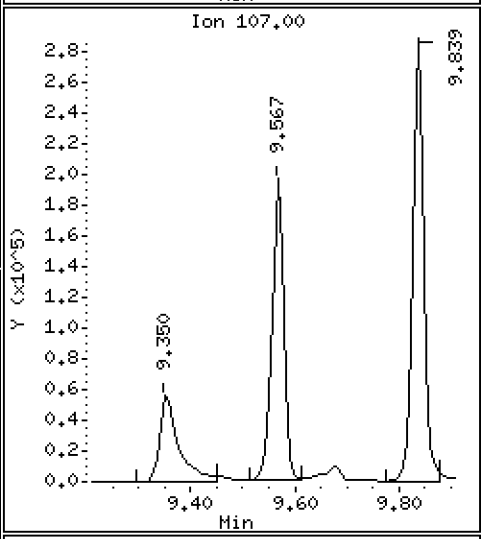


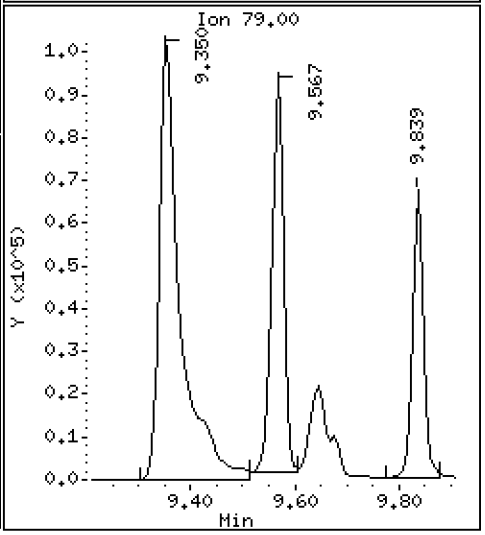












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

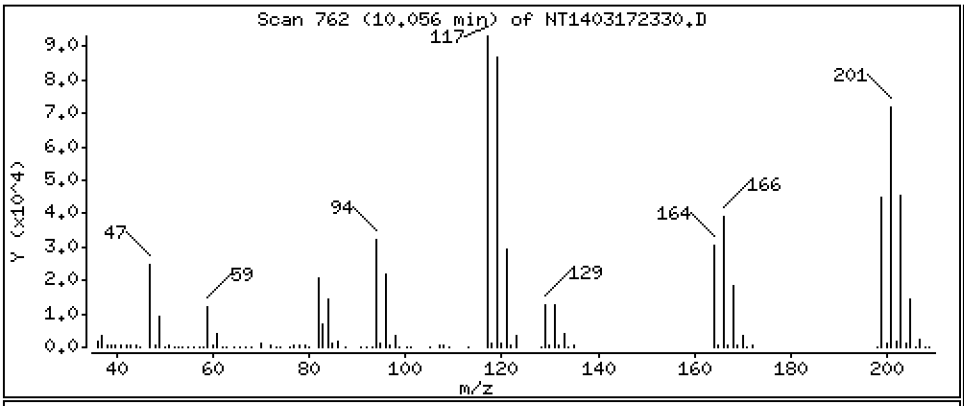
Operator: JGR

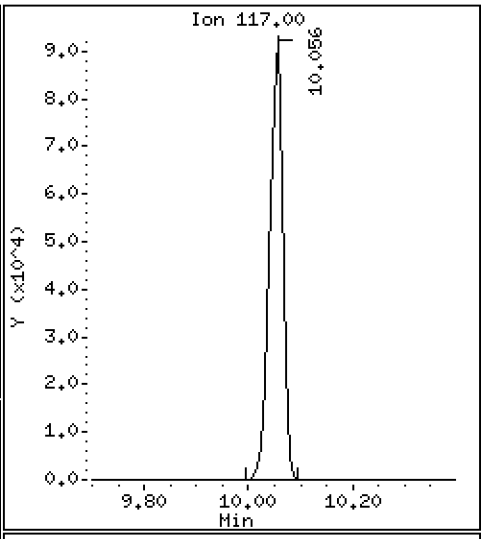
Column phase: ZB-5msi

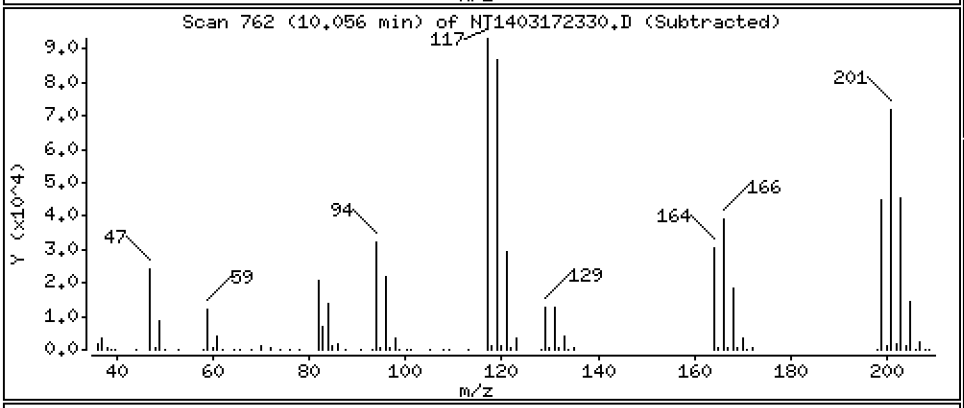
Column diameter: 0.25

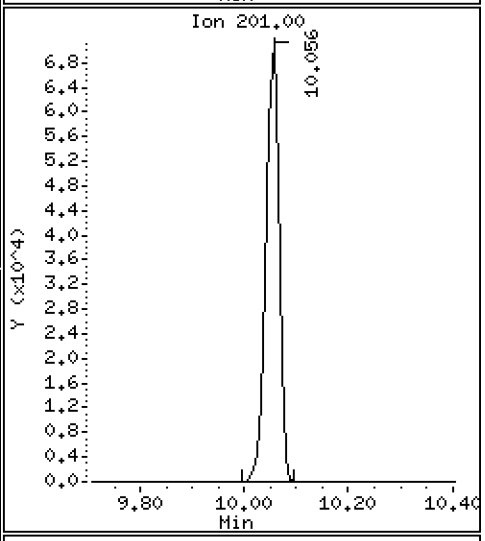
17 Hexachloroethane

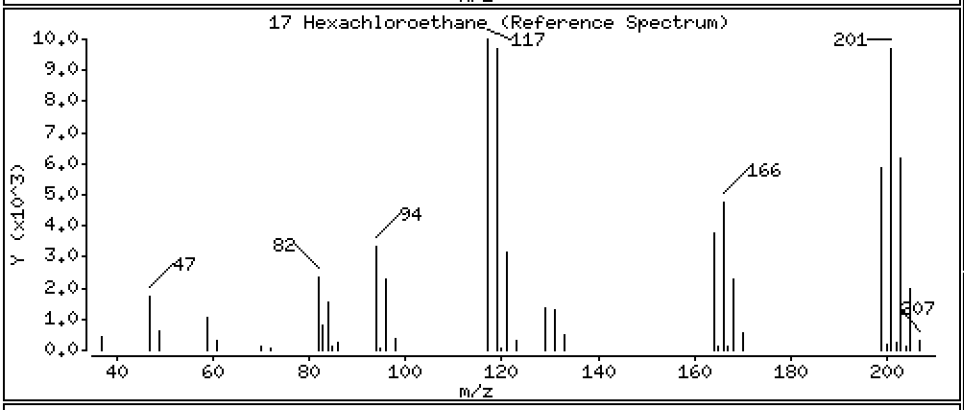
Concentration: 4.667 ug/mL

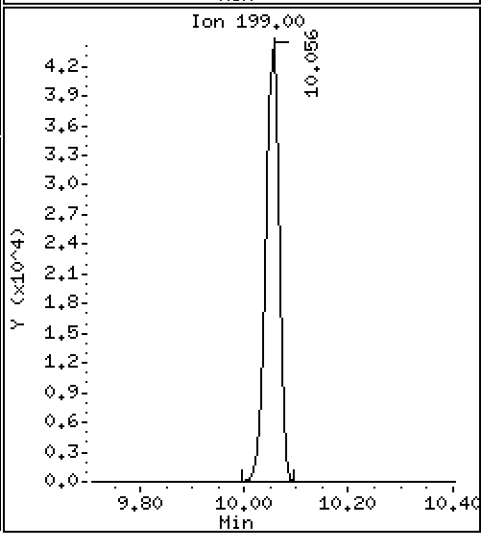


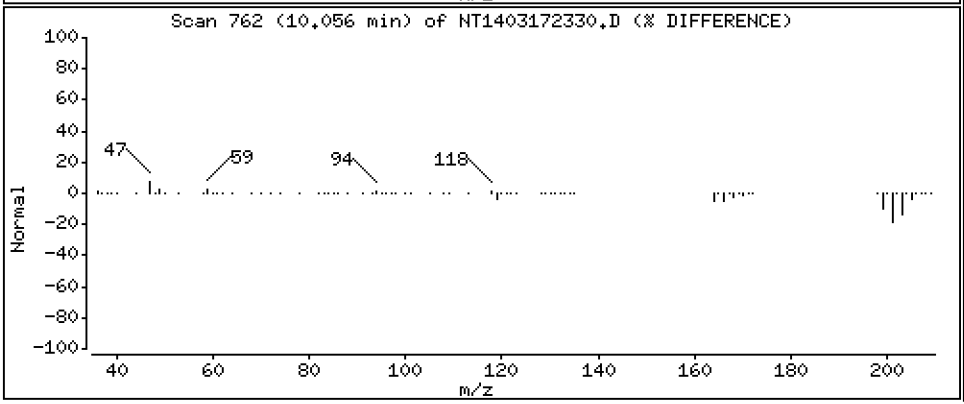












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

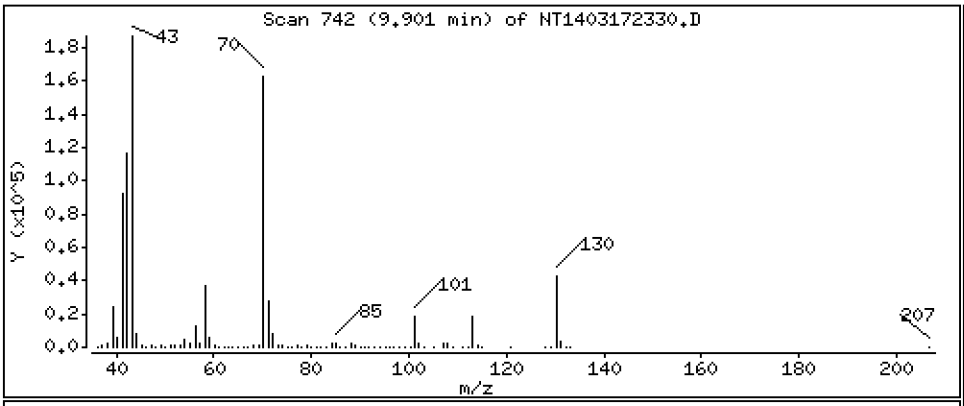
Operator: JGR

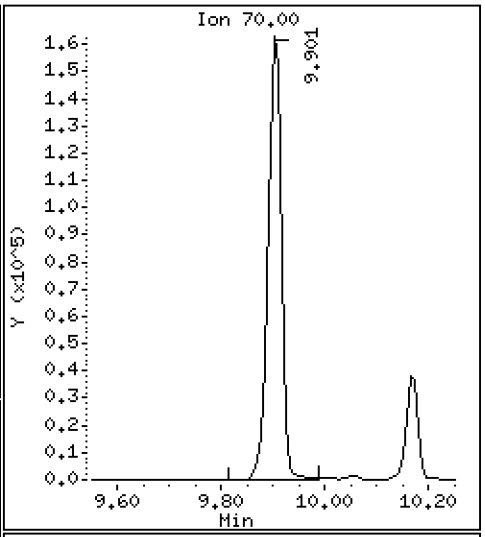
Column phase: ZB-5msi

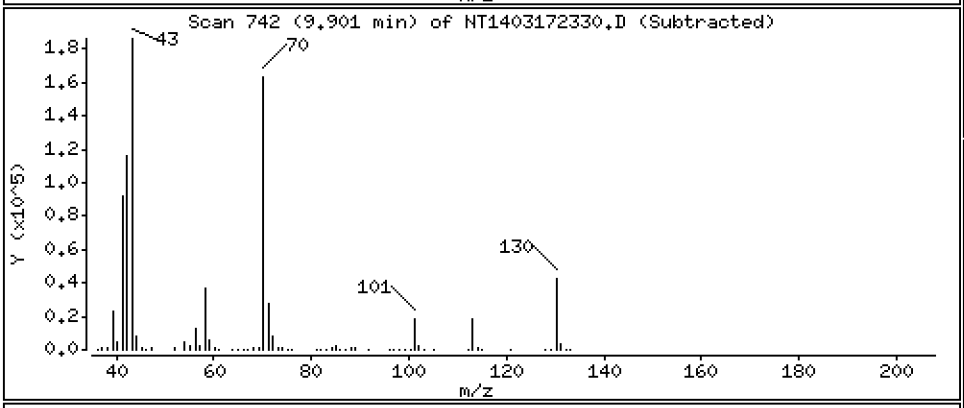
Column diameter: 0.25

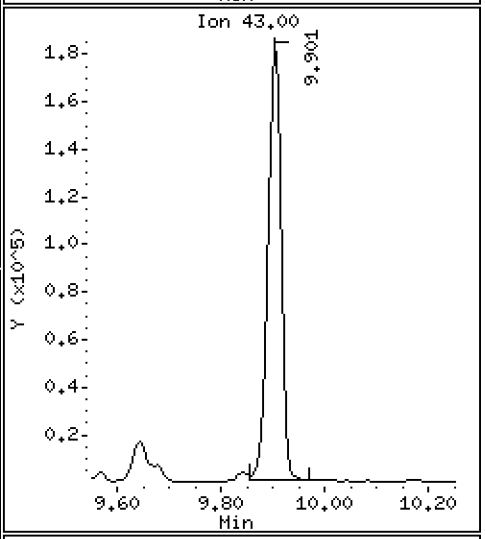
16 N-Nitroso-di-n-propylamine

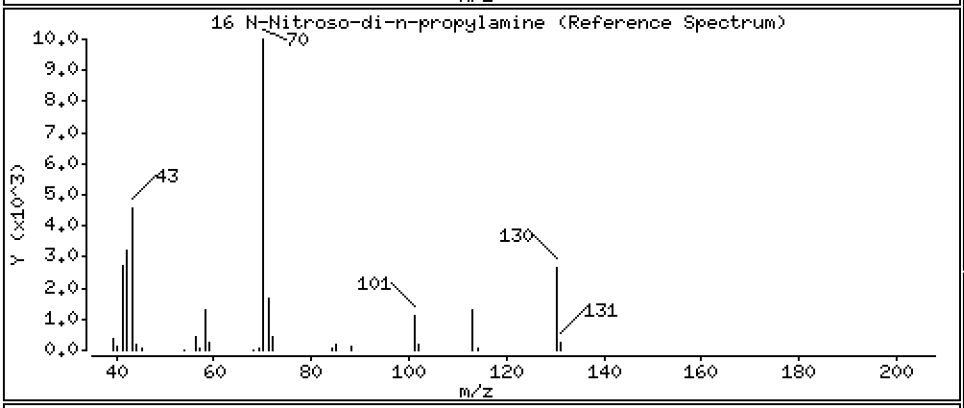
Concentration: 4.823 ug/mL

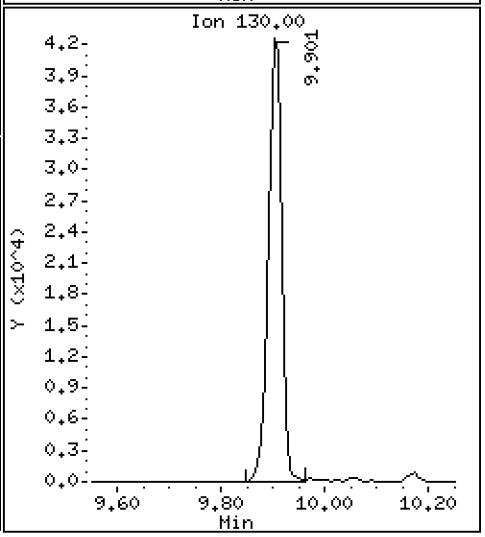


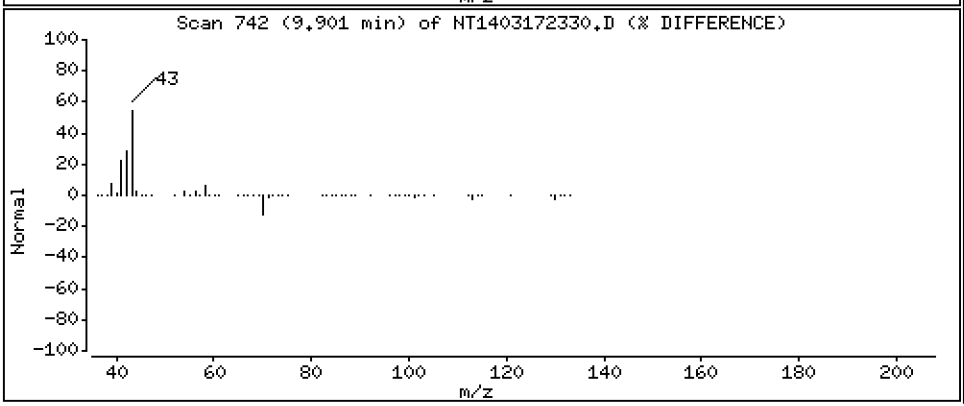












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

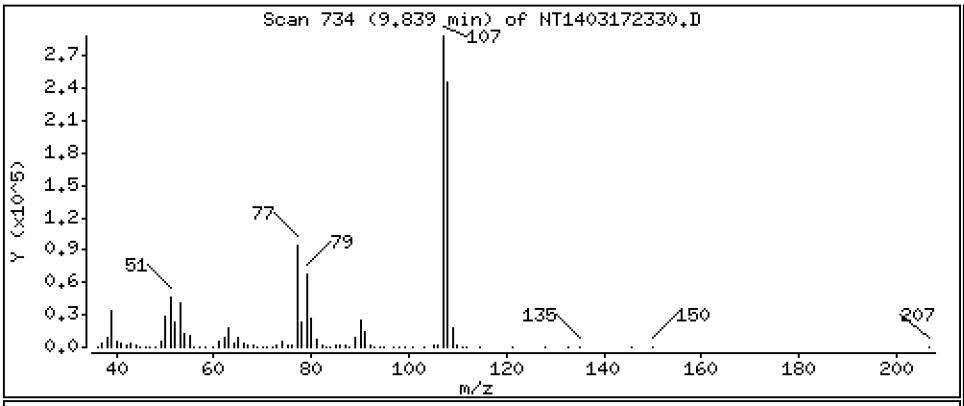
Operator: JGR

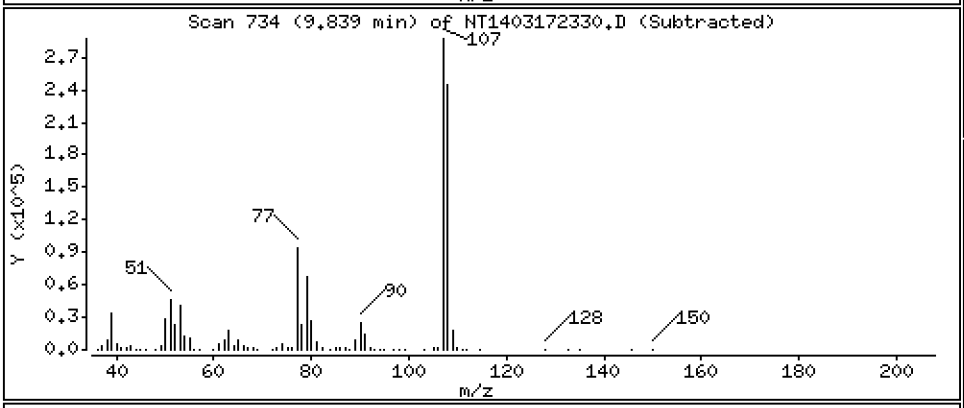
Column phase: ZB-5msi

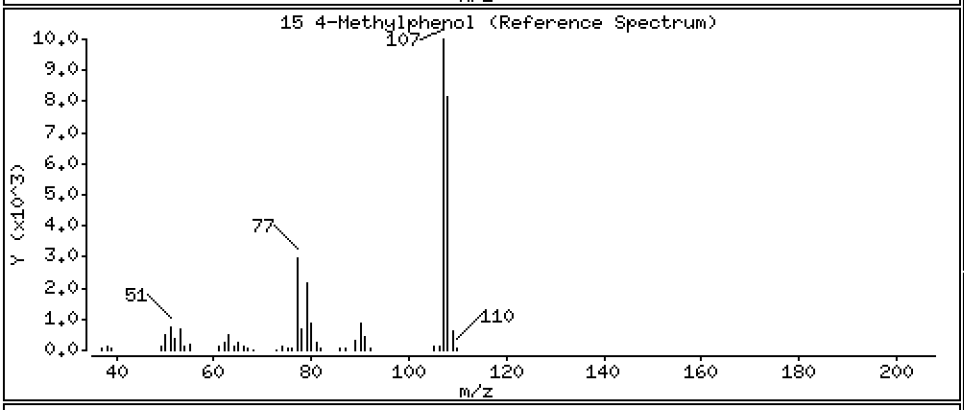
Column diameter: 0.25

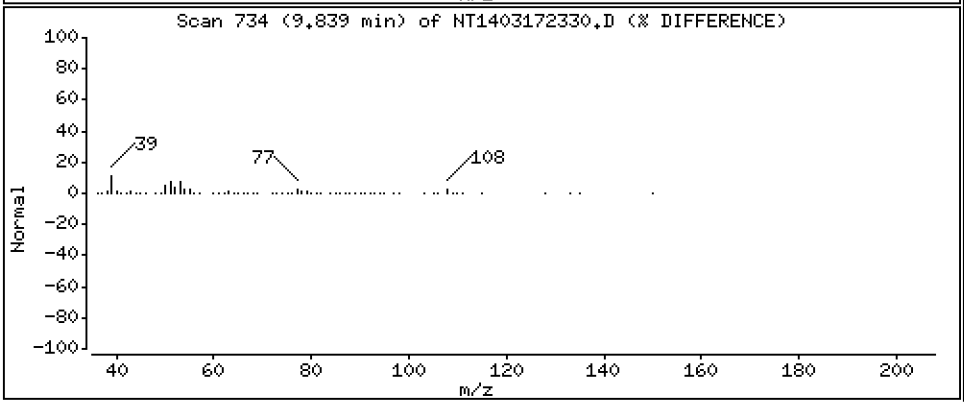
15 4-Methylphenol

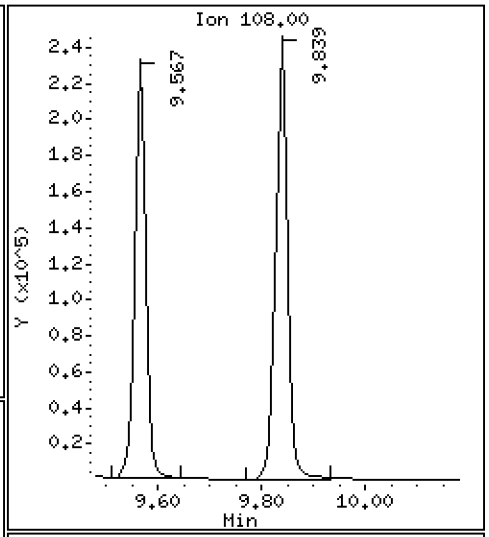
Concentration: 4.377 ug/mL

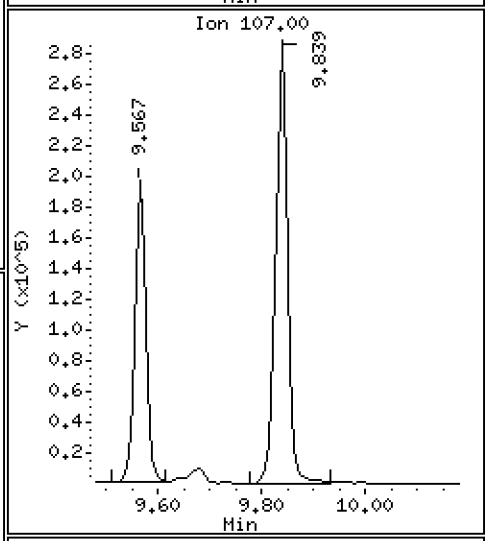


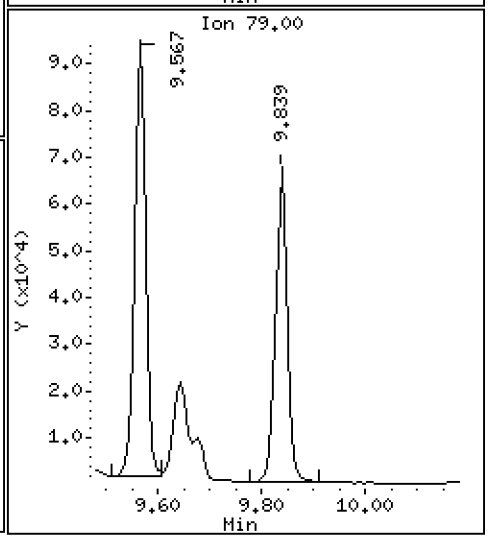












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

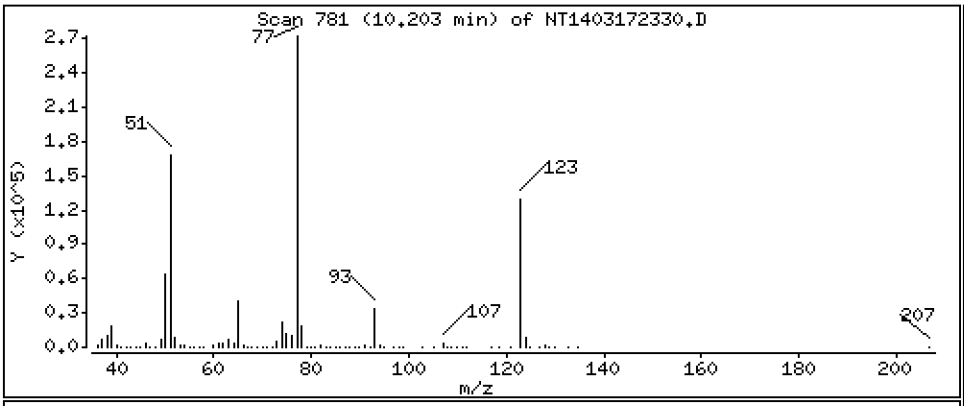
Operator: JGR

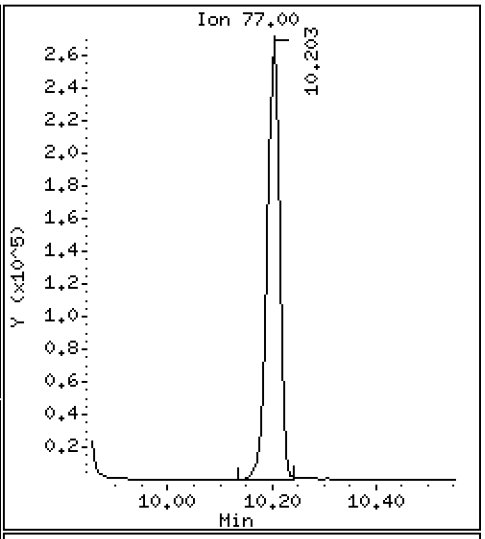
Column phase: ZB-5msi

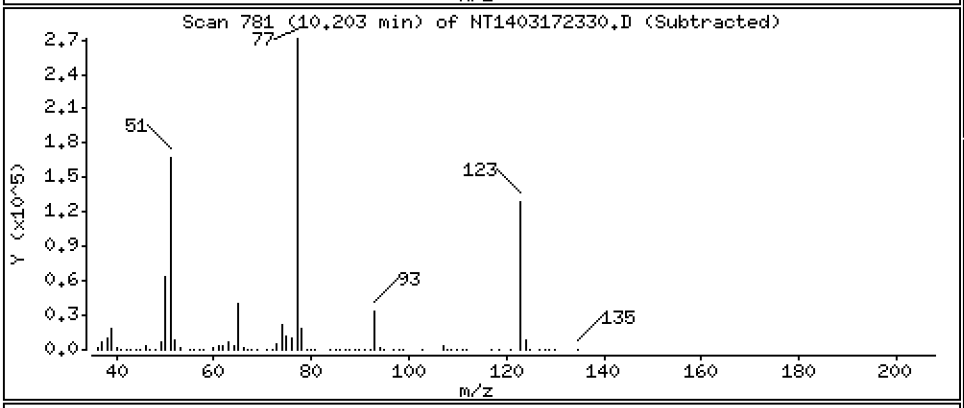
Column diameter: 0.25

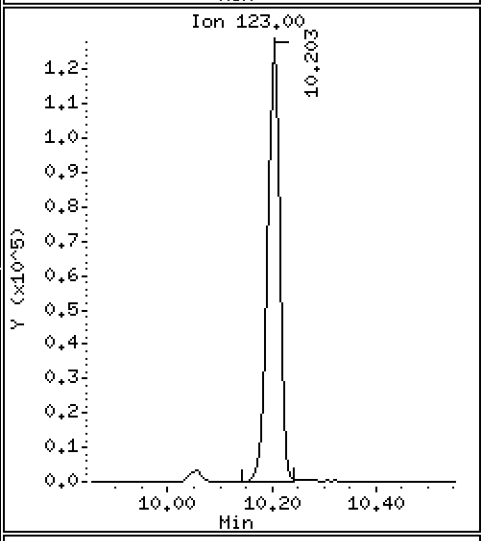
19 Nitrobenzene

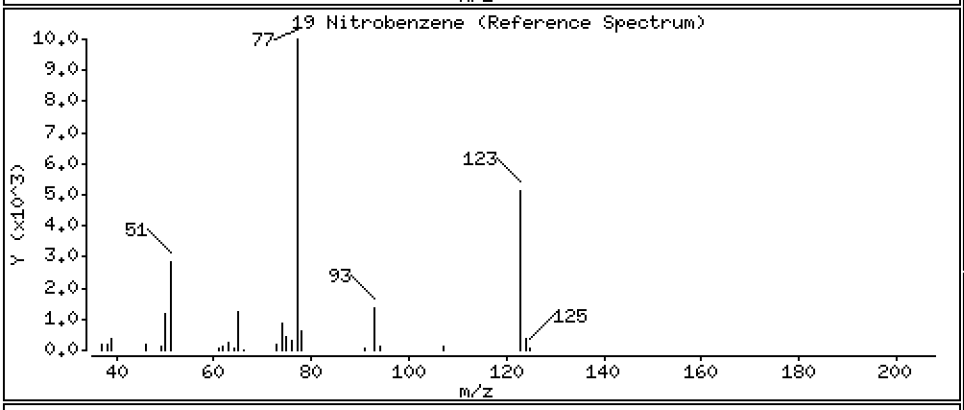
Concentration: 4.830 ug/mL

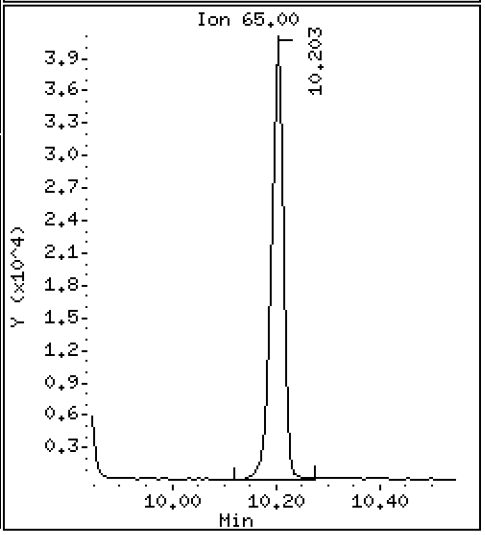


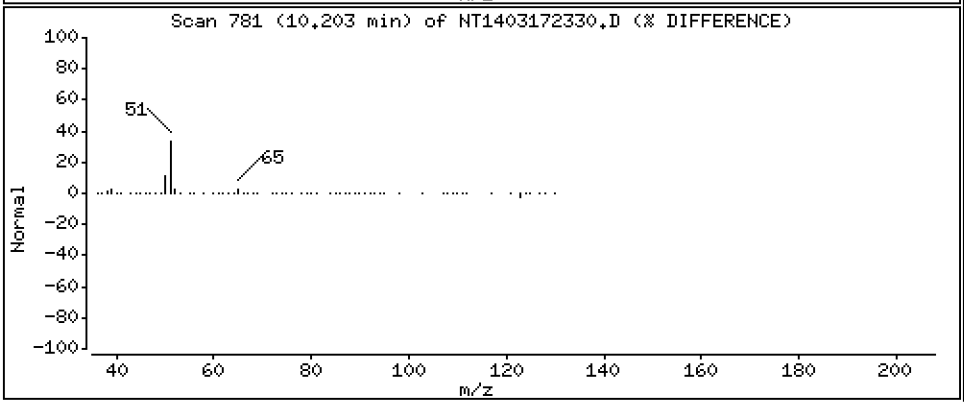












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

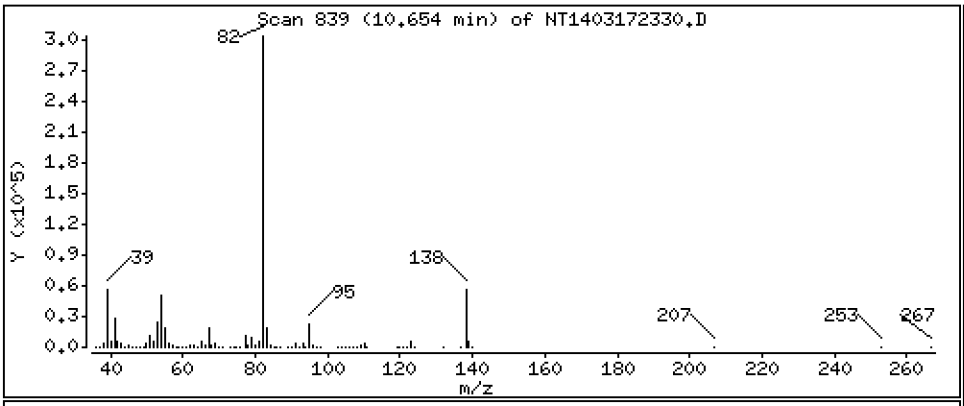
Operator: JGR

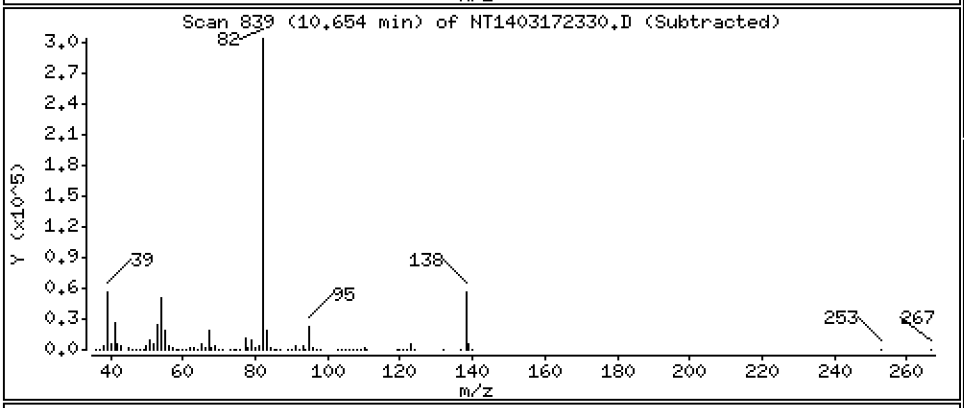
Column phase: ZB-5msi

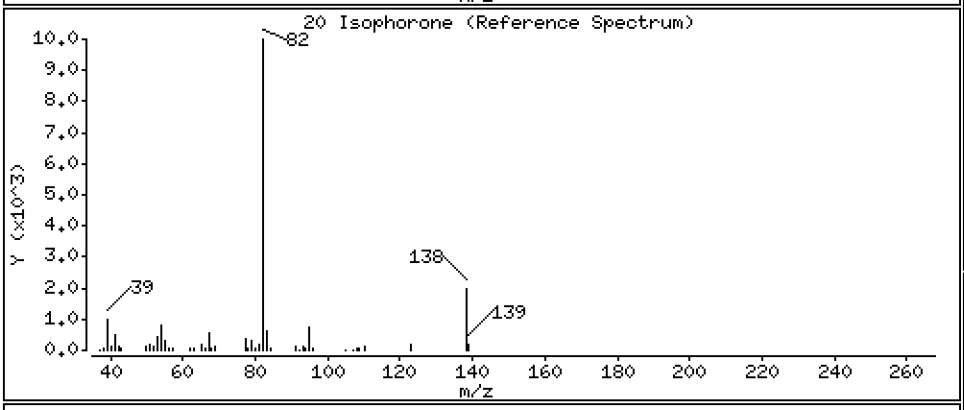
Column diameter: 0.25

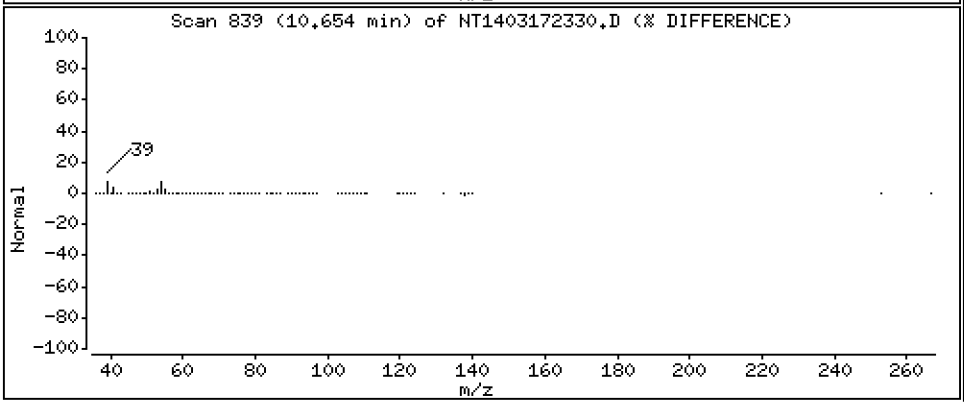
20 Isophorone

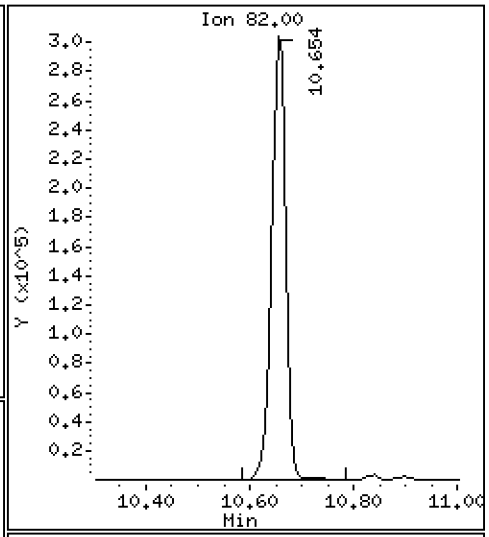
Concentration: 5.002 ug/mL

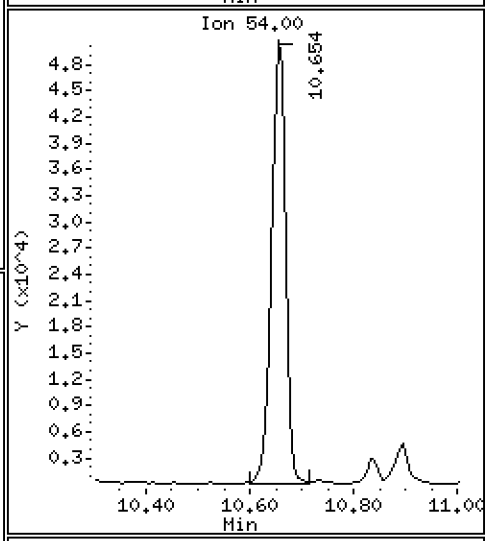


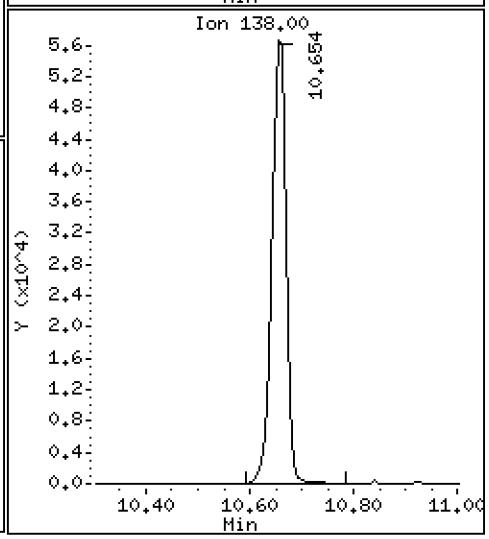












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

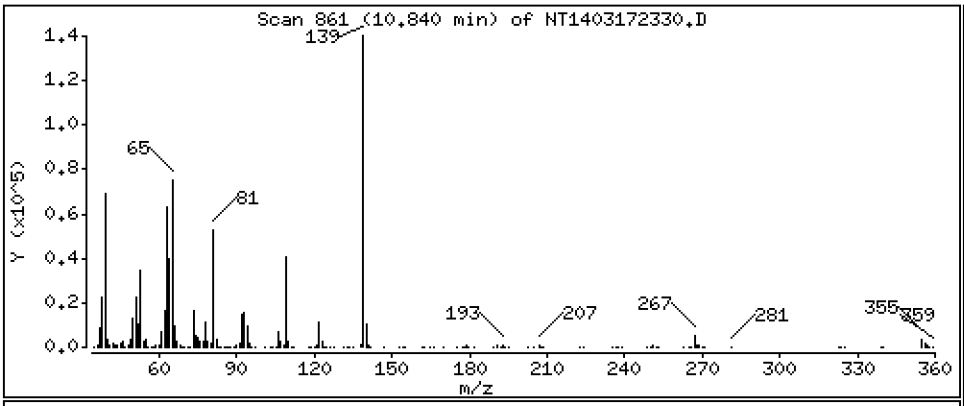
Operator: JGR

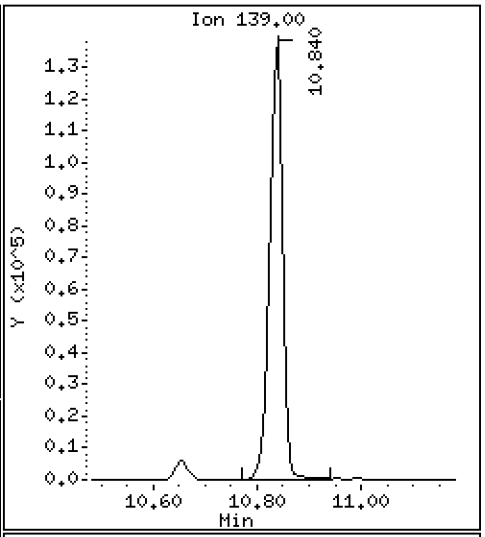
Column phase: ZB-5msi

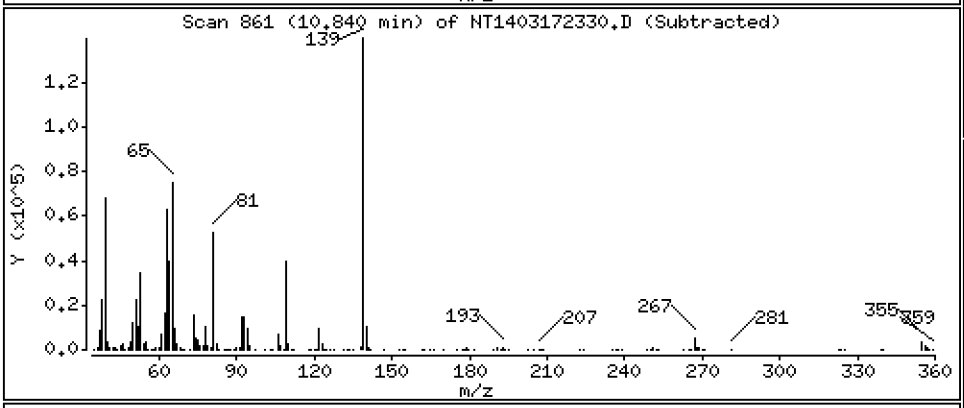
Column diameter: 0.25

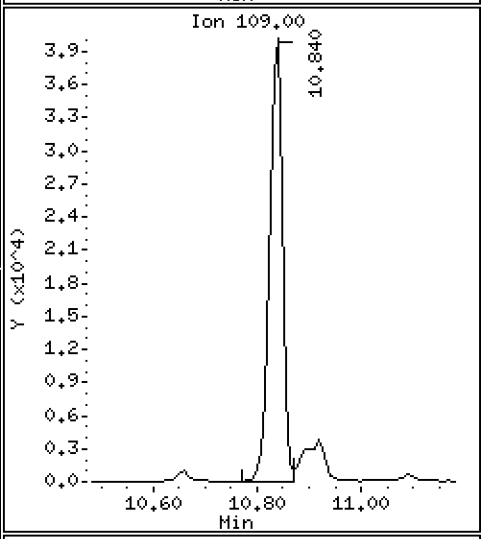
21 2-Nitrophenol

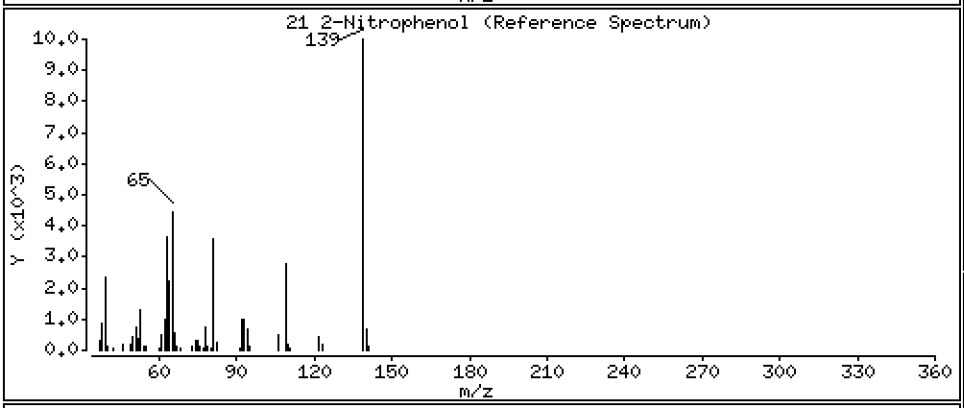
Concentration: 4.623 ug/mL

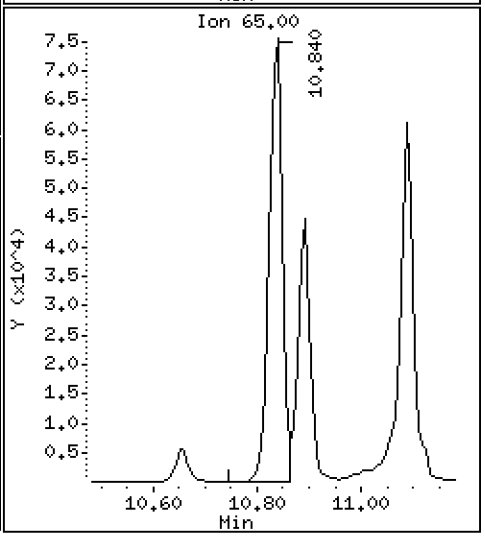


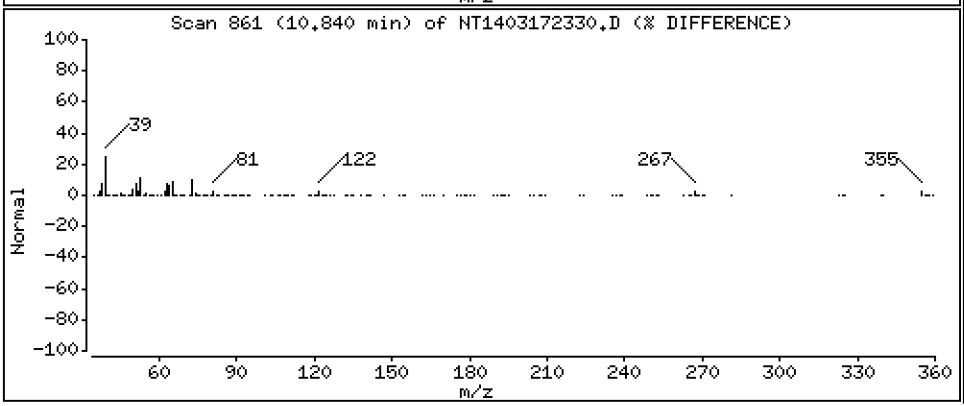












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

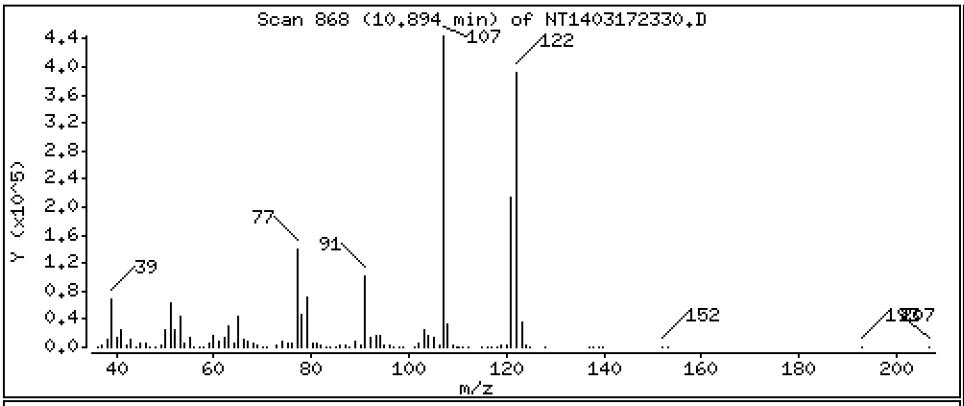
Operator: JGR

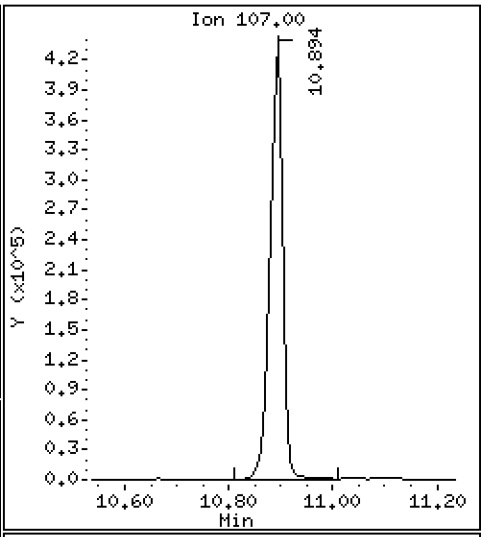
Column phase: ZB-5msi

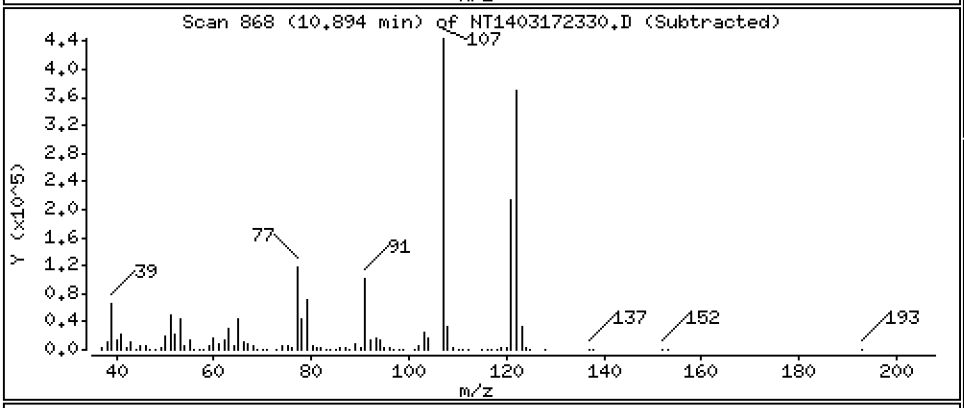
Column diameter: 0.25

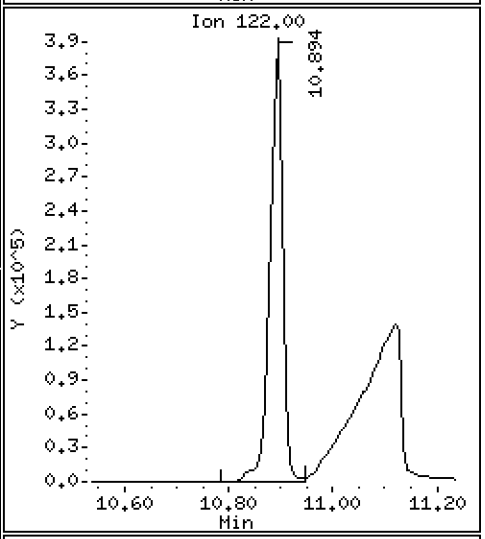
22 2,4-Dimethylphenol

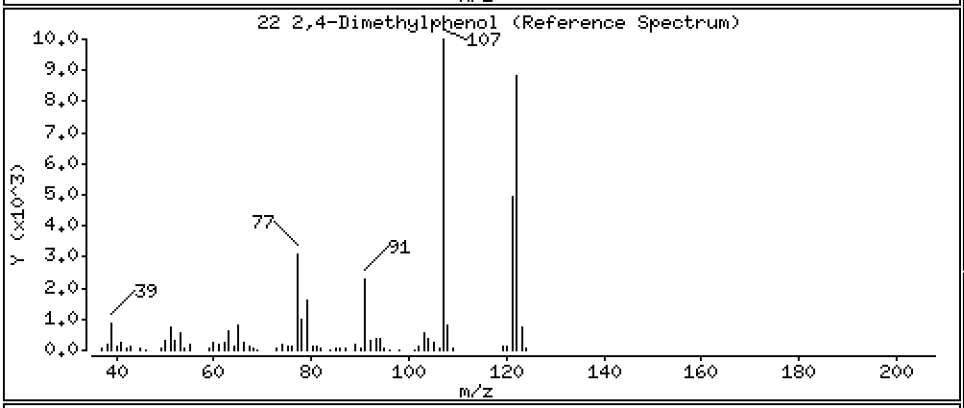
Concentration: 9.712 ug/mL

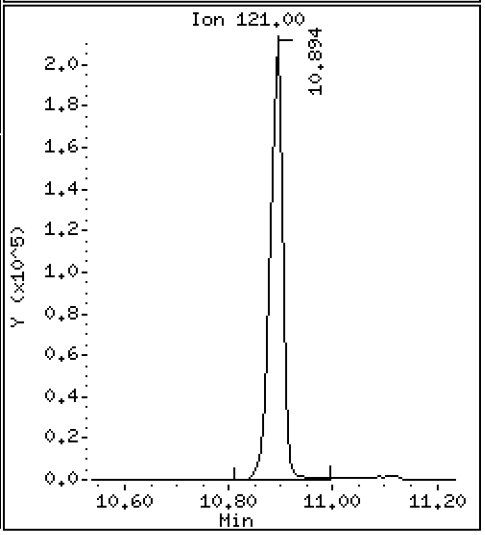


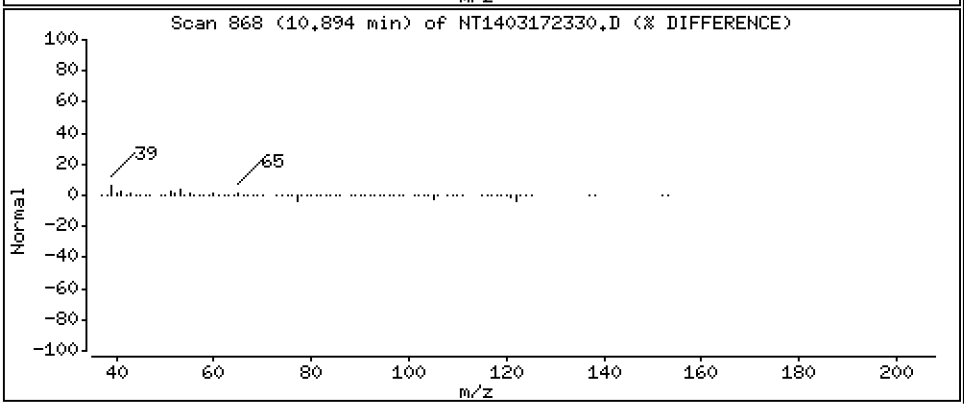












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

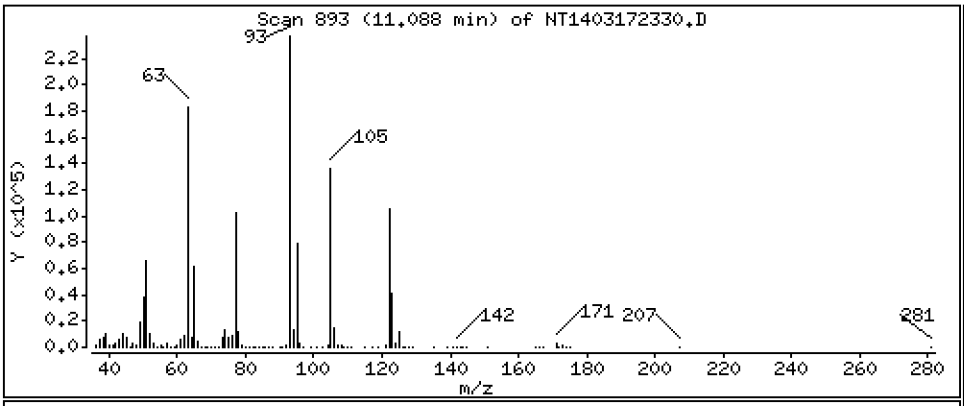
Operator: JGR

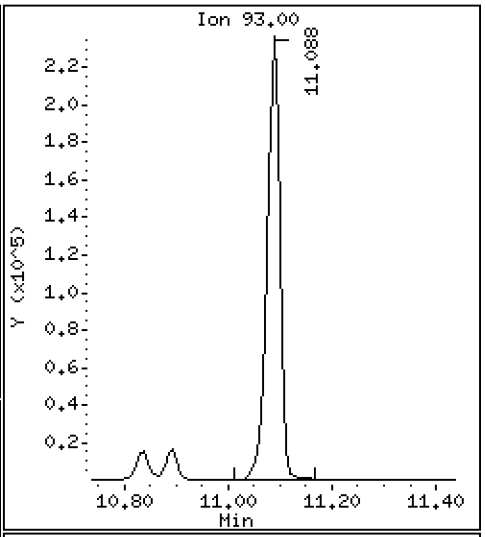
Column phase: ZB-5msi

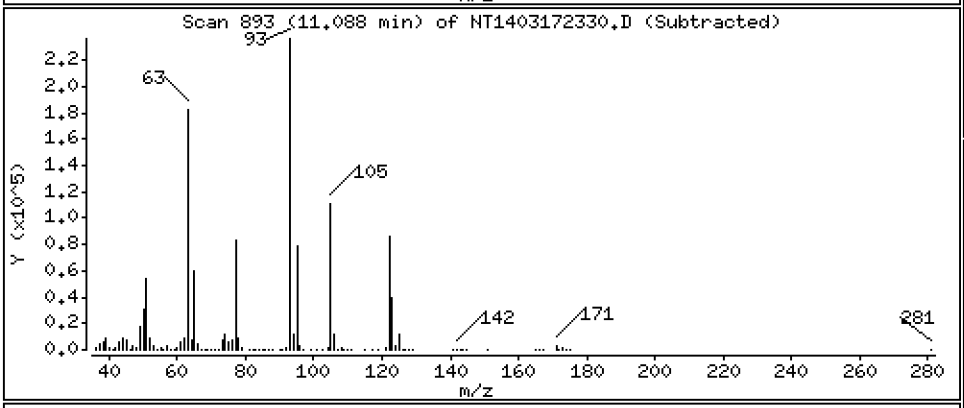
Column diameter: 0.25

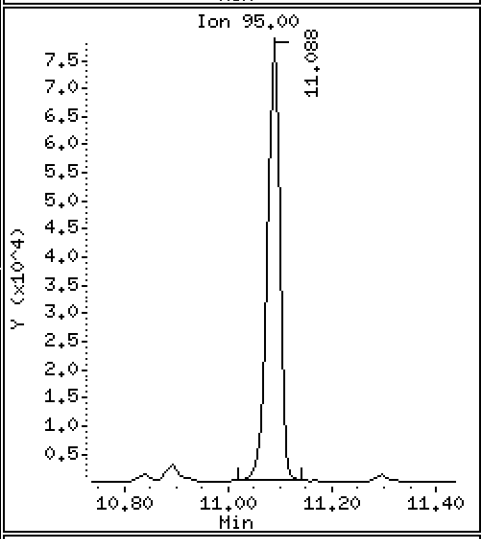
23 Bis(2-Chloroethoxy)methane

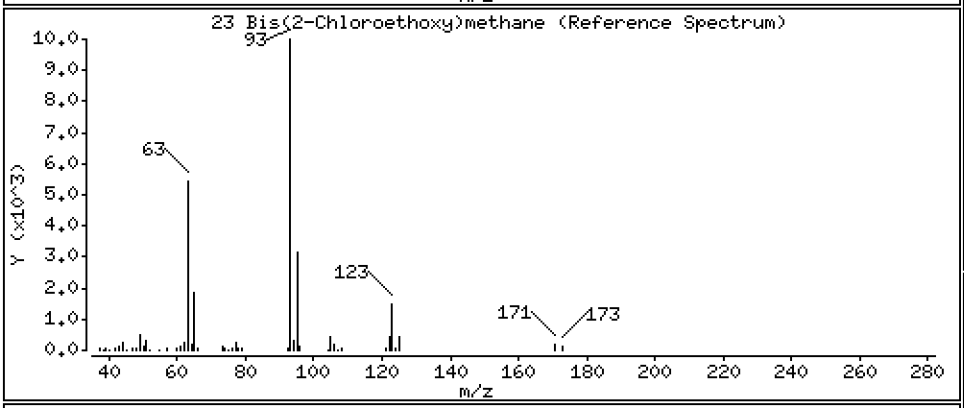
Concentration: 4.769 ug/mL

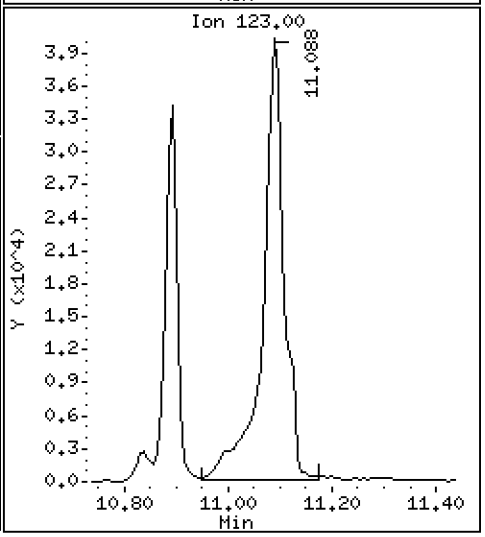


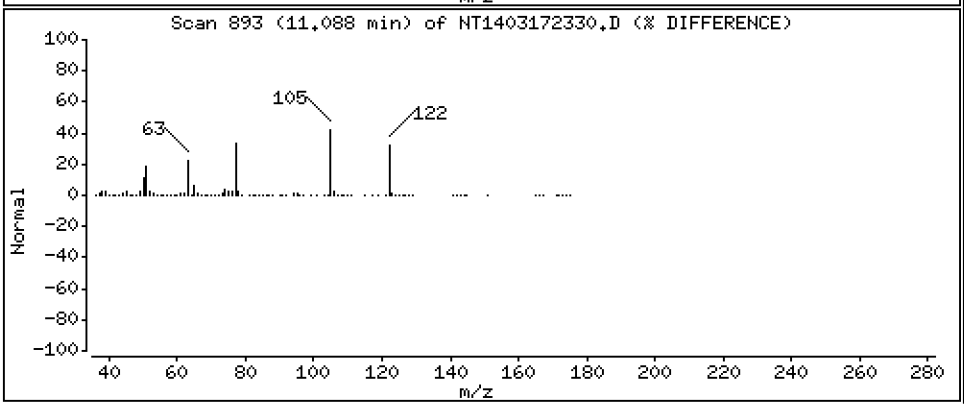












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

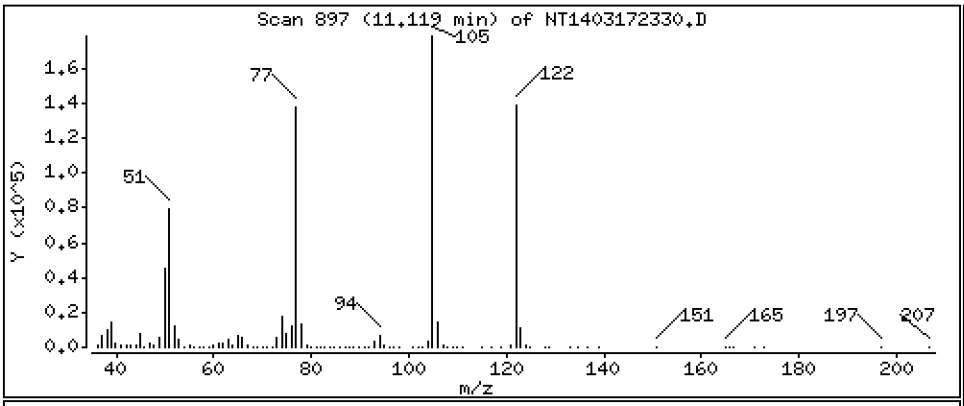
Operator: JGR

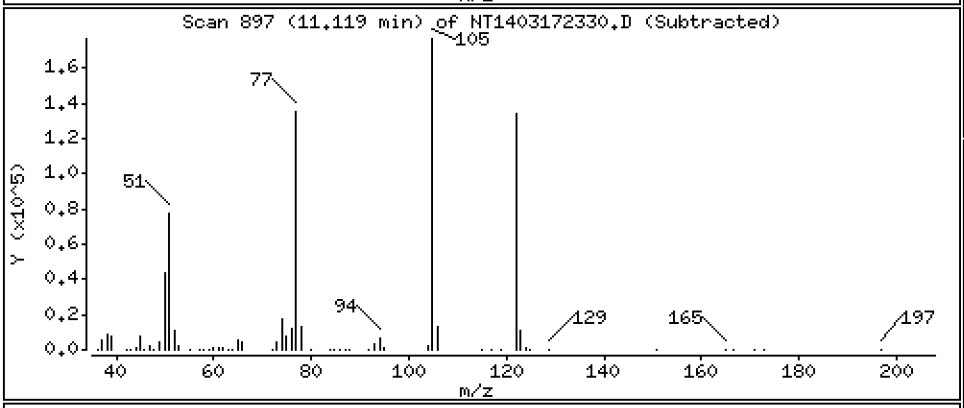
Column phase: ZB-5msi

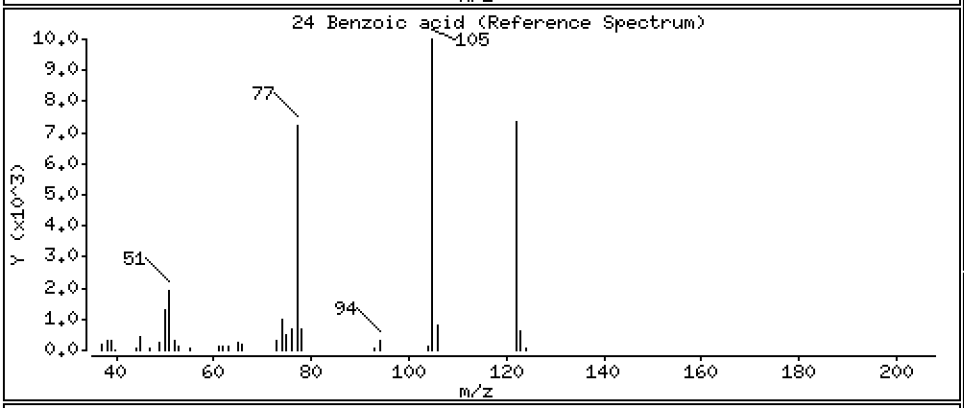
Column diameter: 0.25

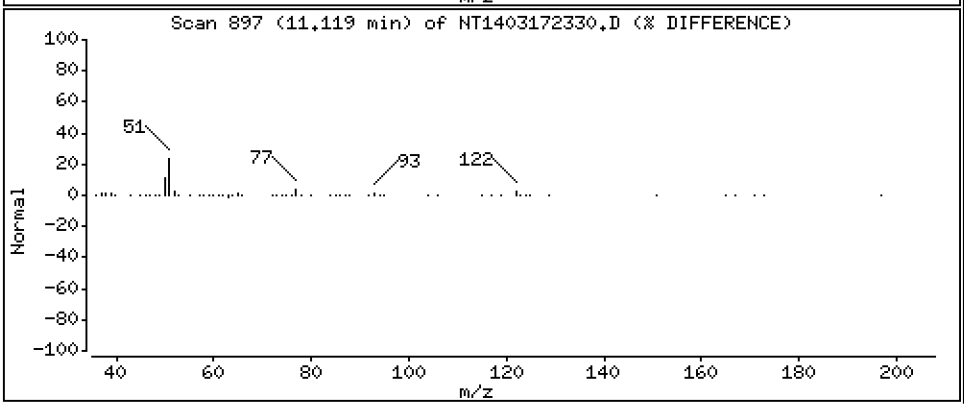
24 Benzoic acid

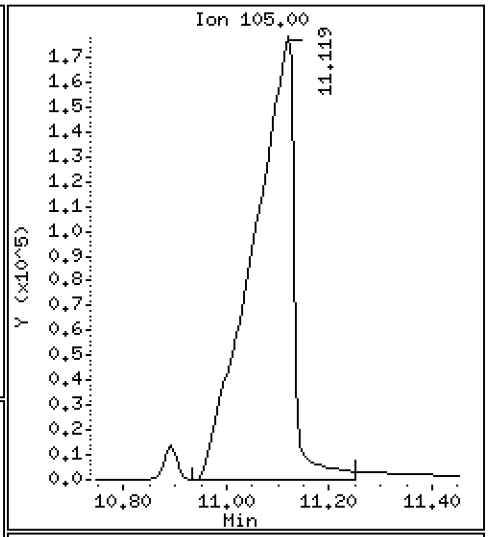
Concentration: 15.59 ug/mL

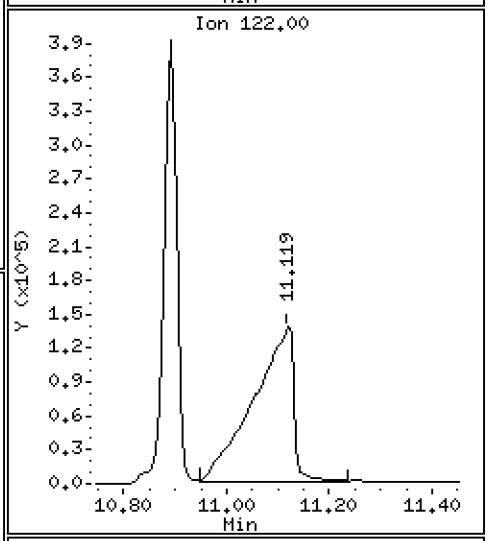


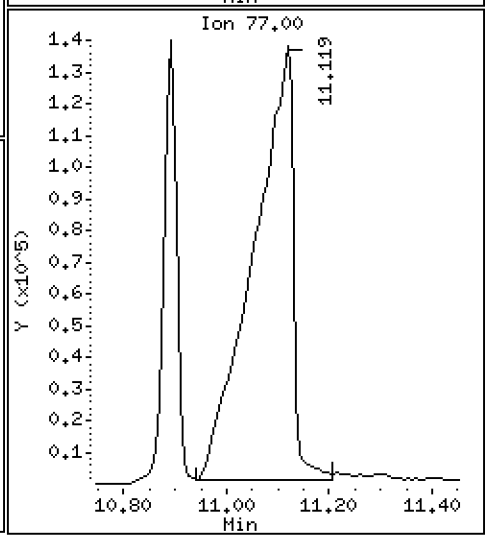












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

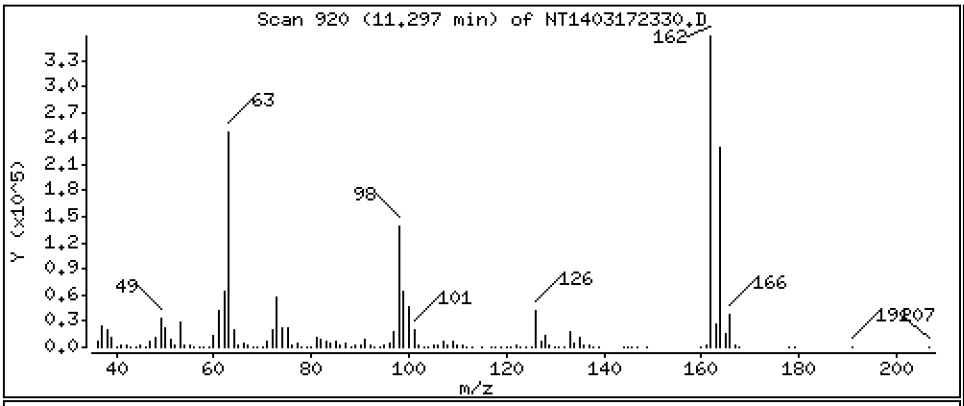
Operator: JGR

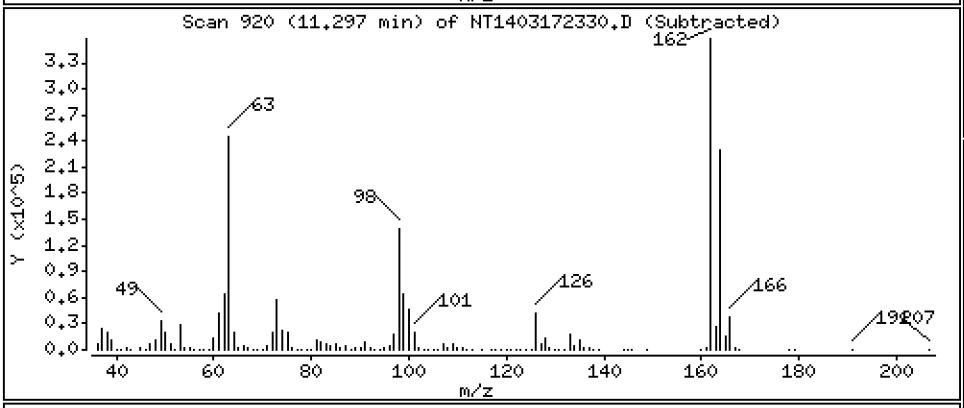
Column phase: ZB-5msi

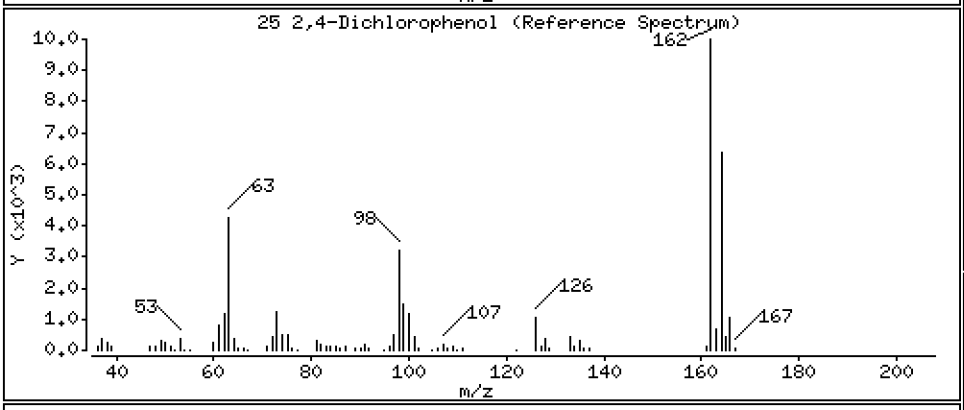
Column diameter: 0.25

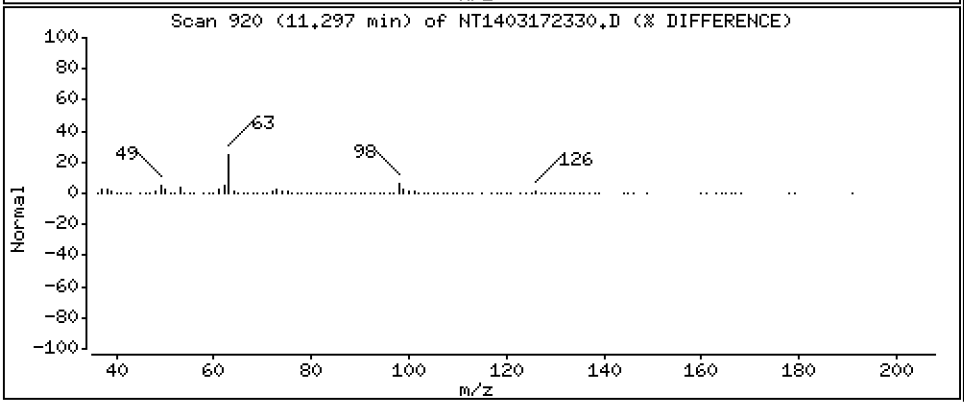
25 2,4-Dichlorophenol

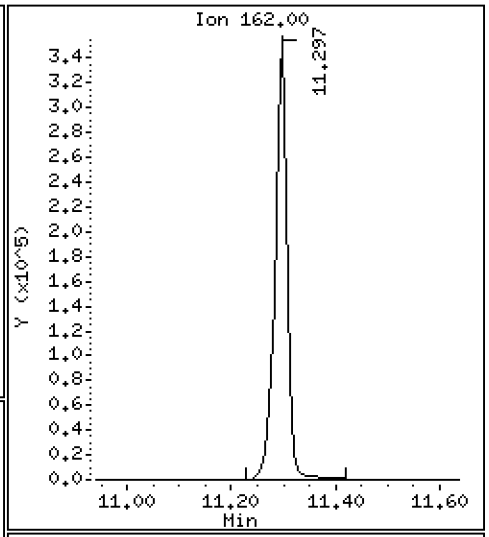
Concentration: 10.58 ug/mL

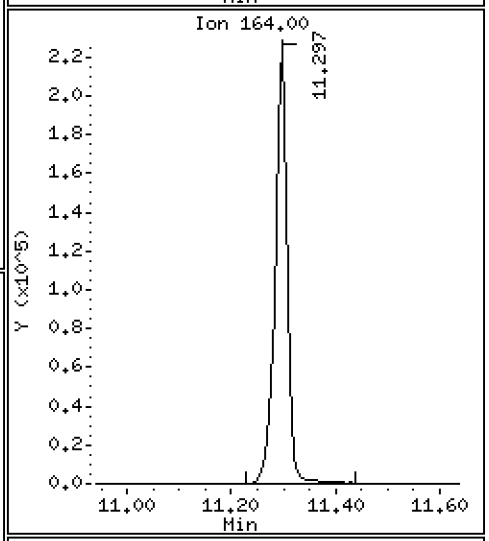


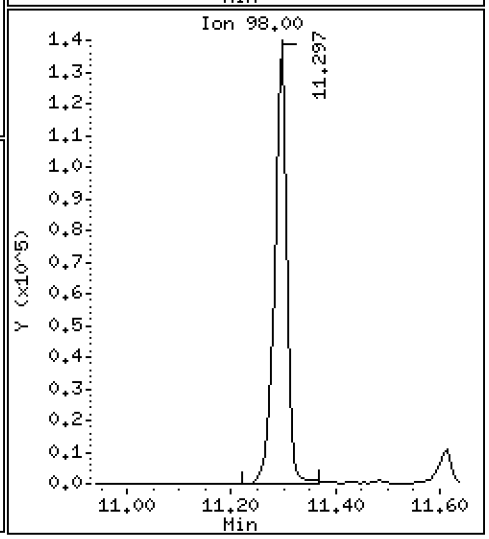












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

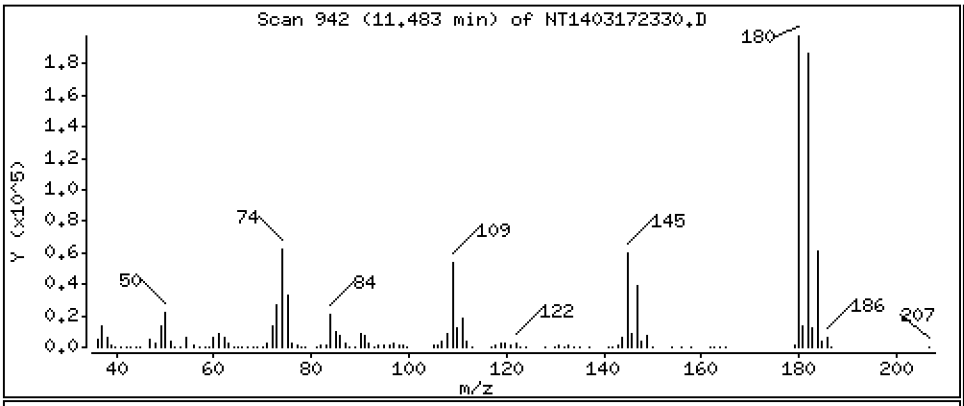
Operator: JGR

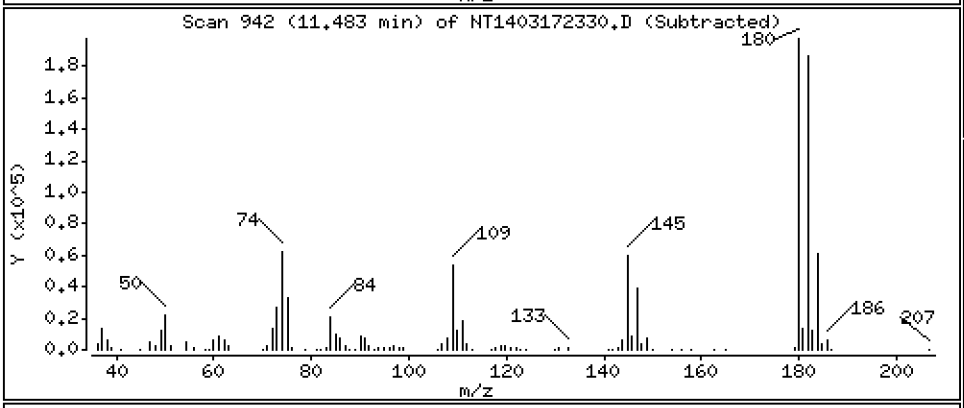
Column phase: ZB-5msi

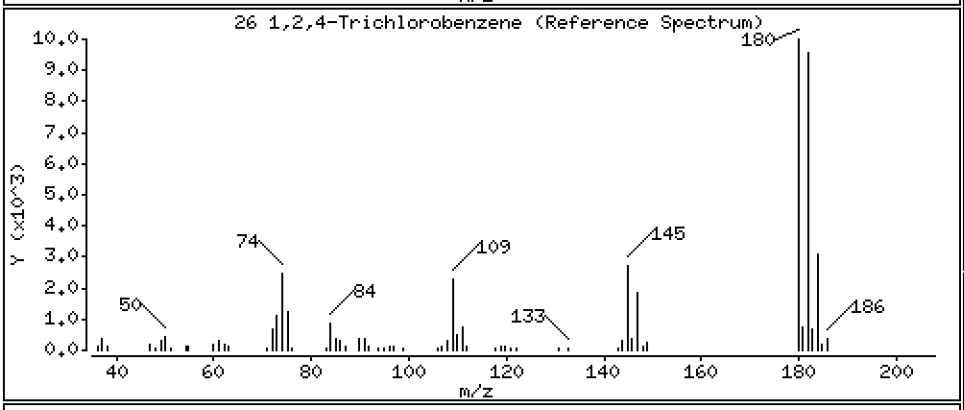
Column diameter: 0.25

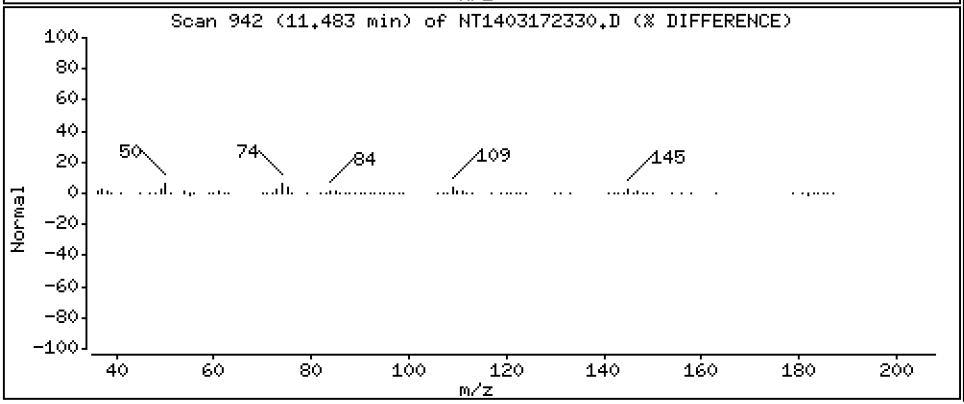
26 1,2,4-Trichlorobenzene

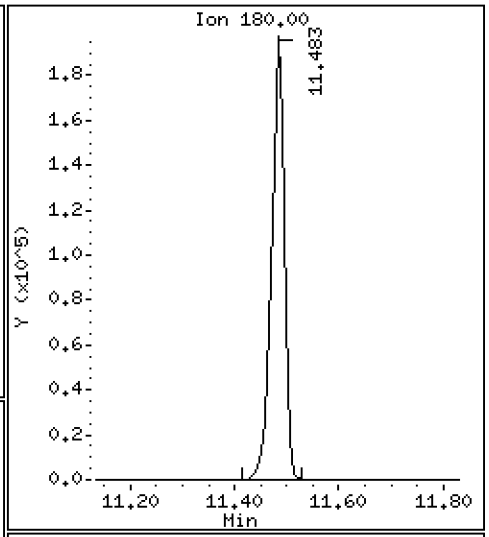
Concentration: 4.488 ug/mL

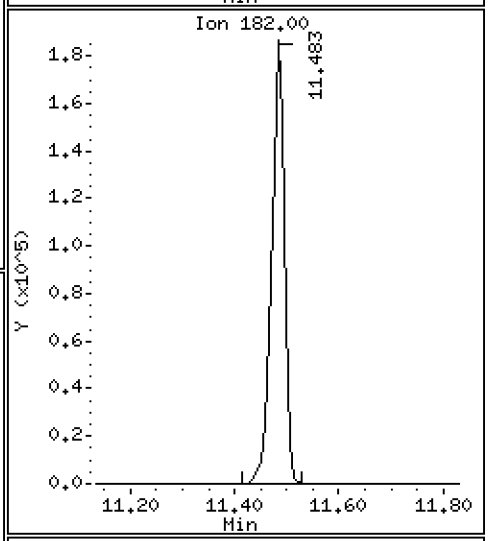


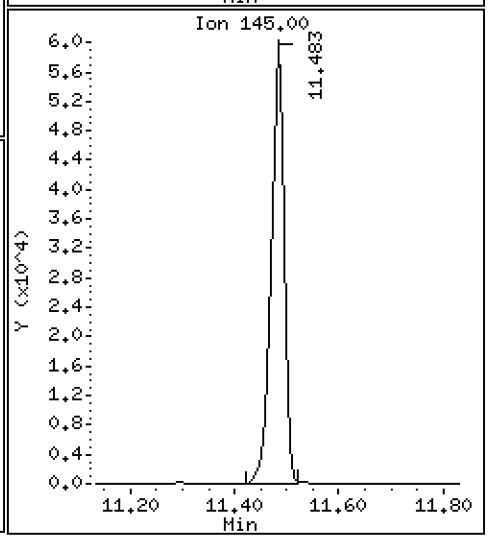












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

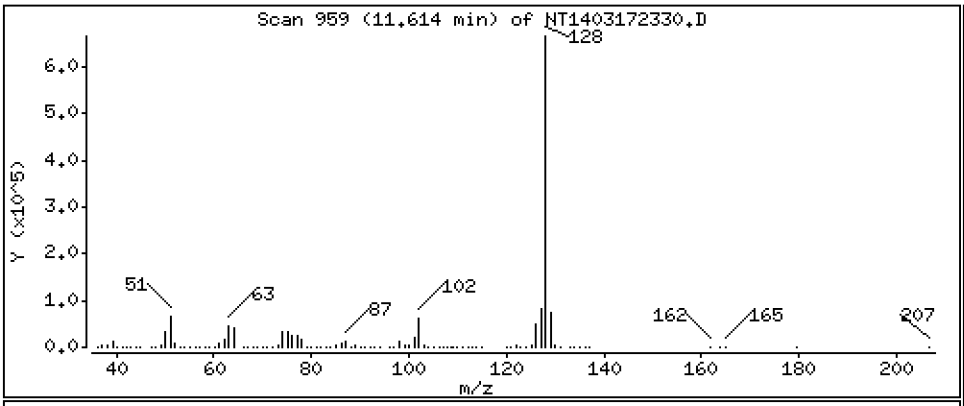
Operator: JGR

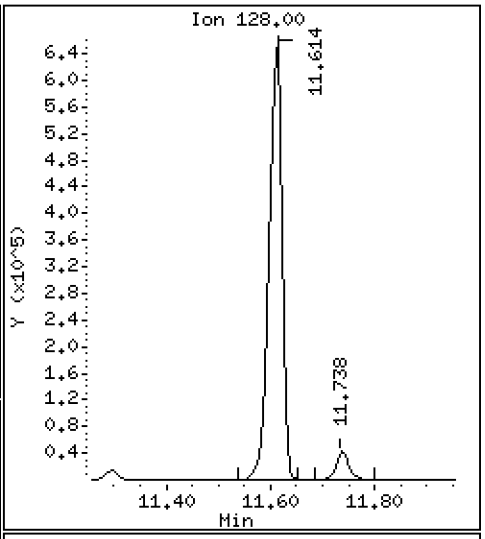
Column phase: ZB-5msi

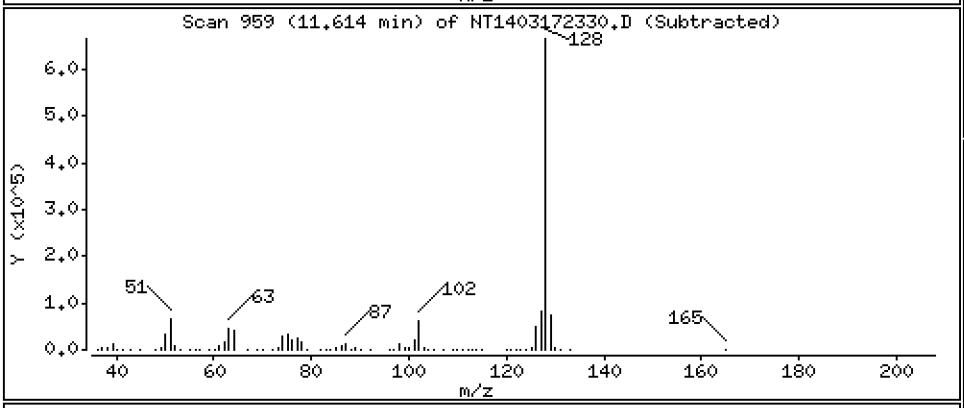
Column diameter: 0.25

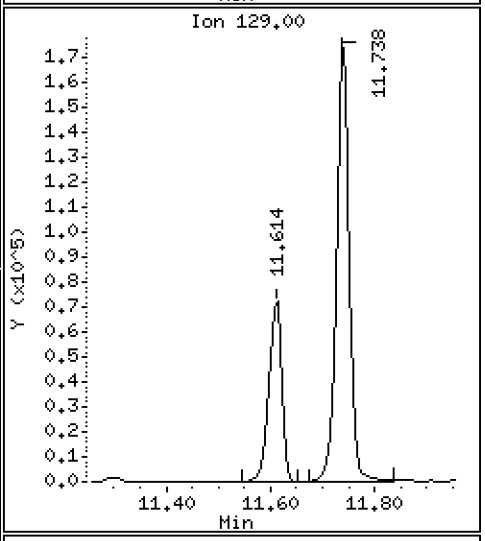
28 Naphthalene

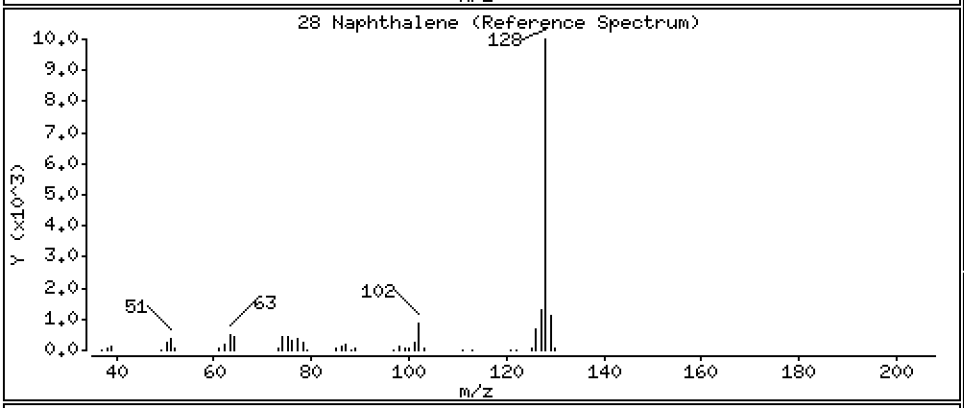
Concentration: 4.830 ug/mL

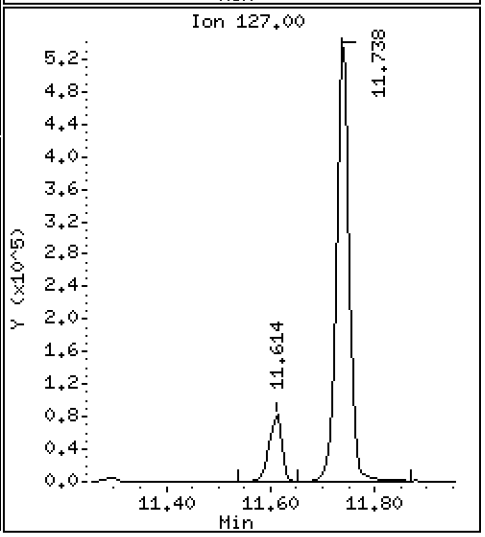


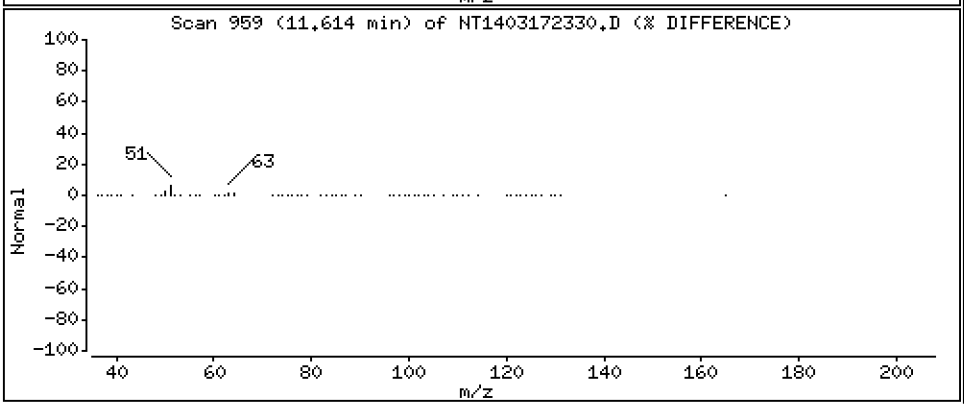












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

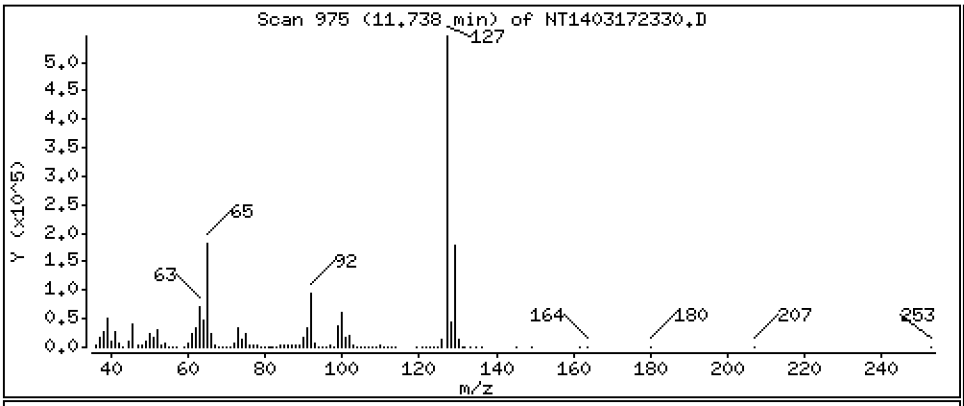
Operator: JGR

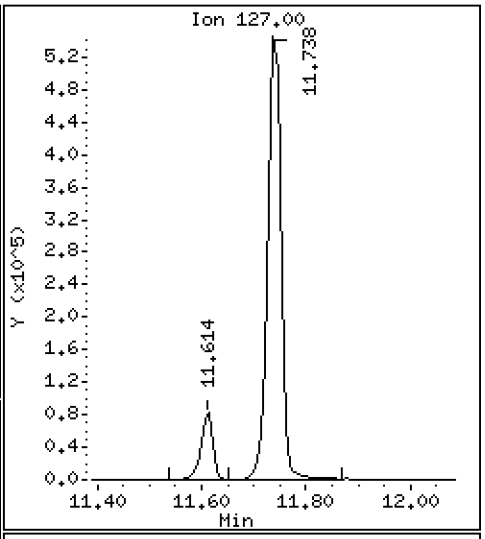
Column phase: ZB-5msi

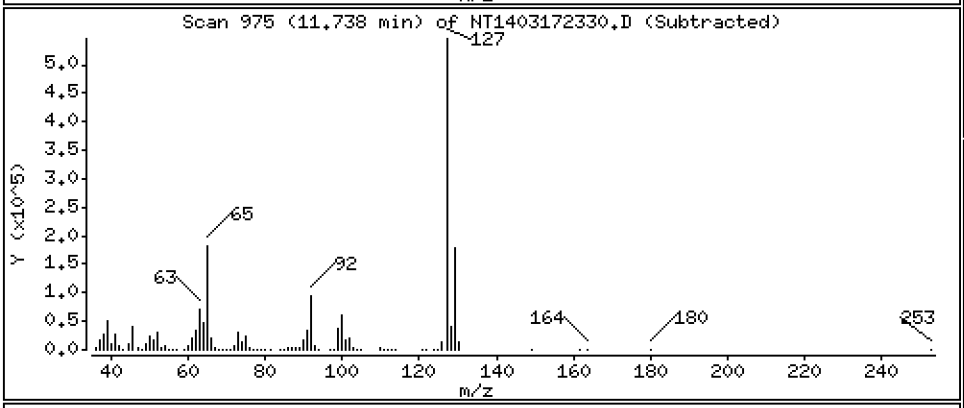
Column diameter: 0.25

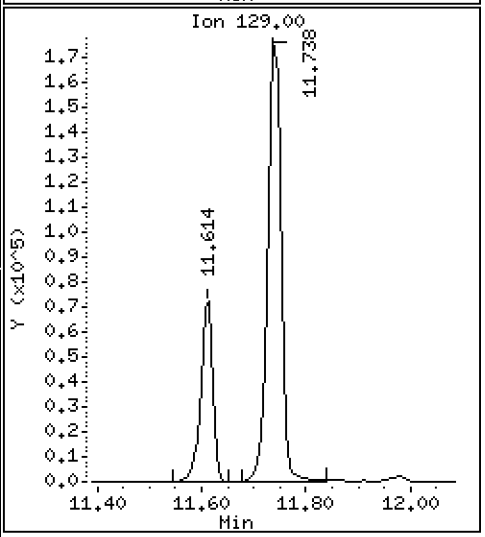
29 4-Chloroaniline

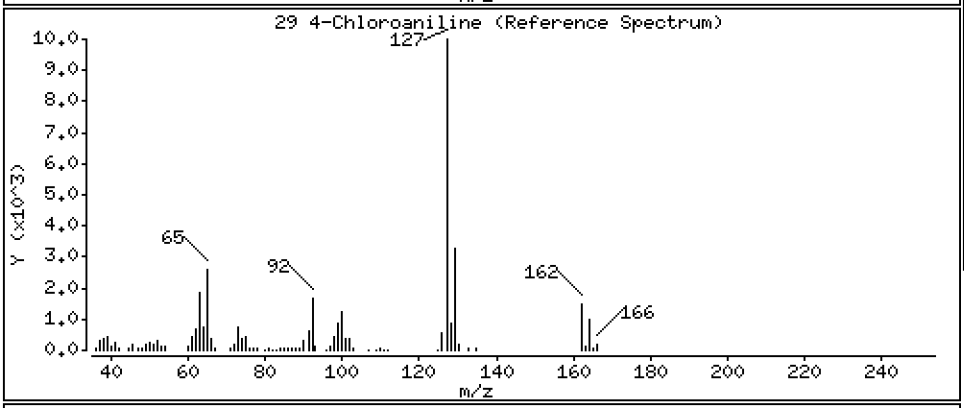
Concentration: 10.55 ug/mL

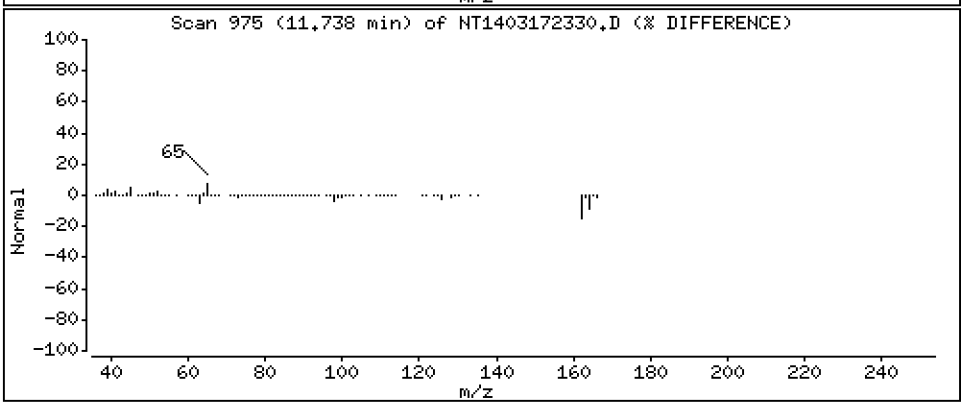












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

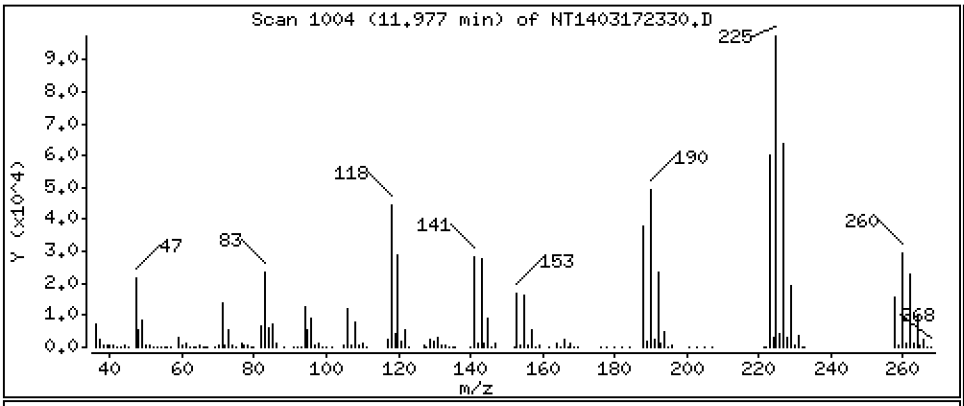
Operator: JGR

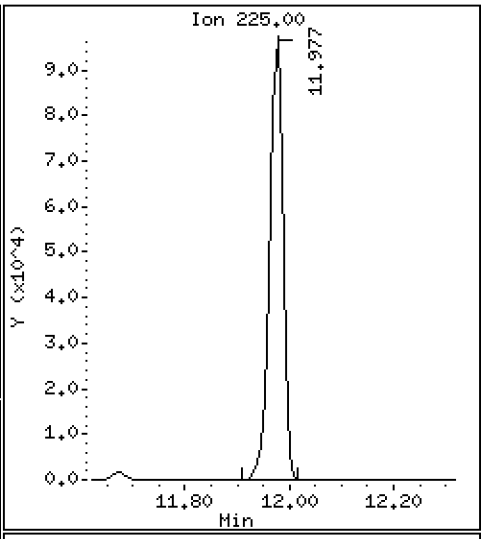
Column phase: ZB-5msi

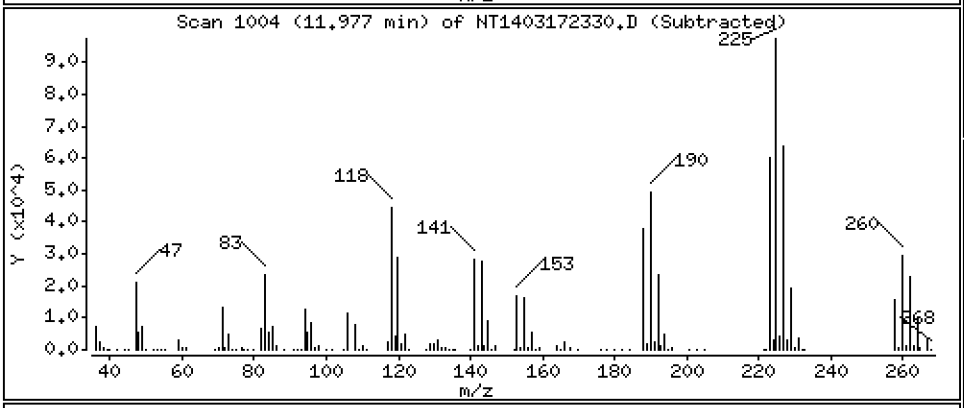
Column diameter: 0.25

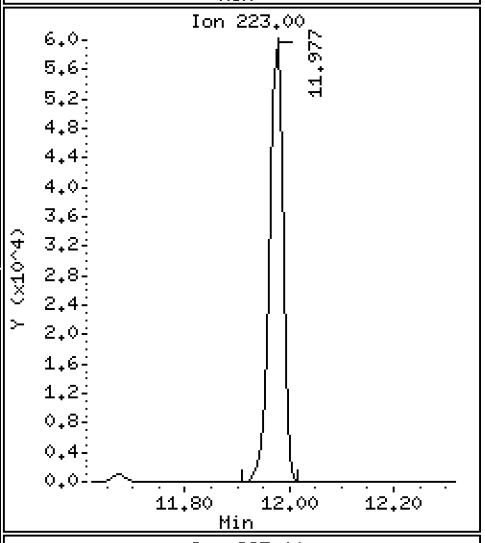
30 Hexachlorobutadiene

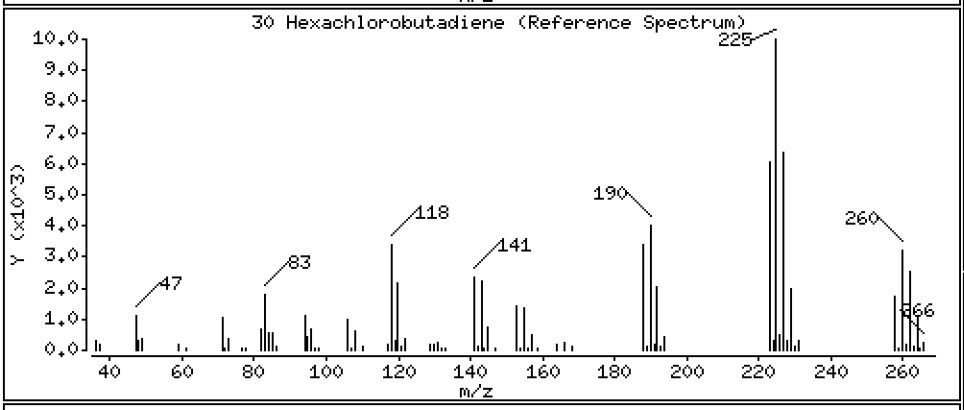
Concentration: 5.042 ug/mL

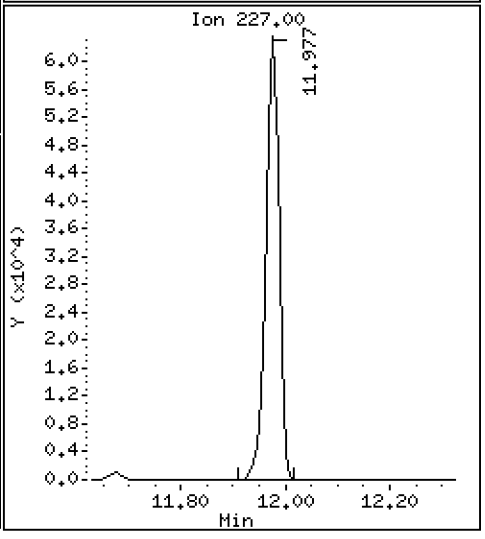


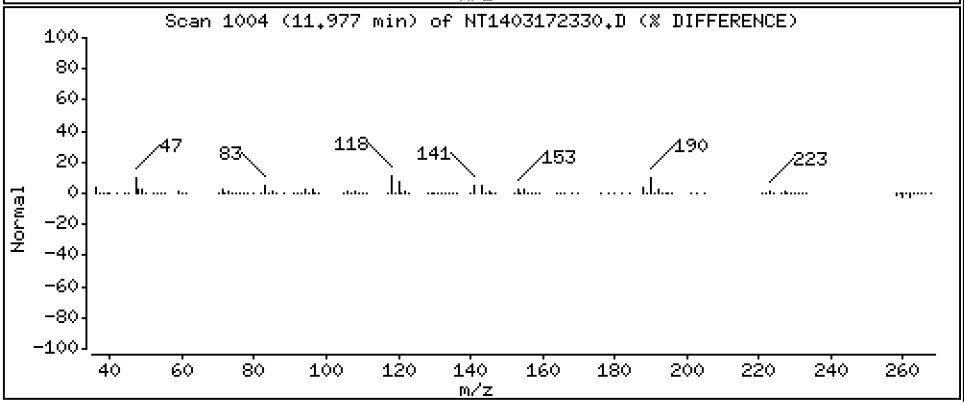












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

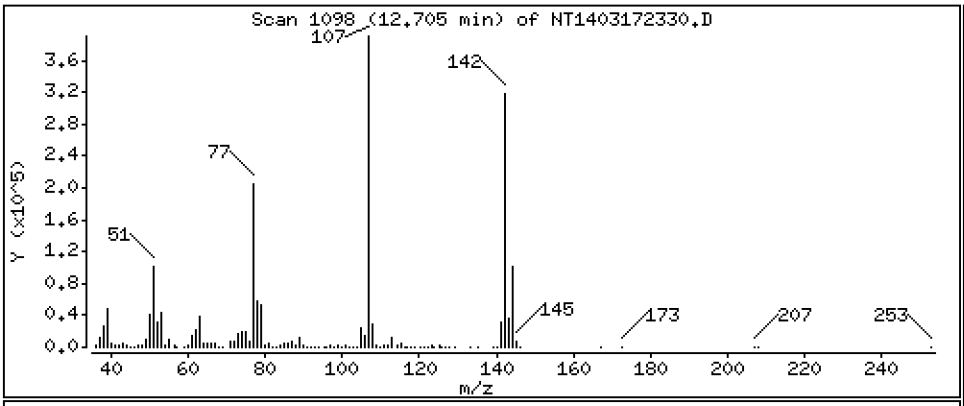
Operator: JGR

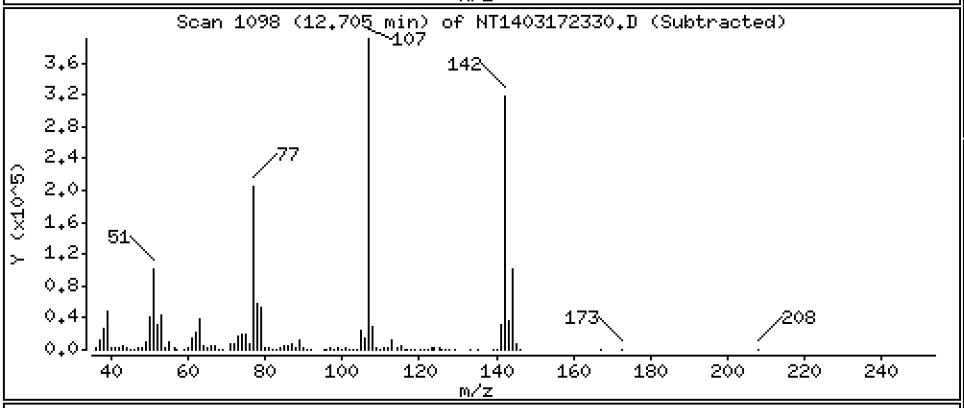
Column phase: ZB-5msi

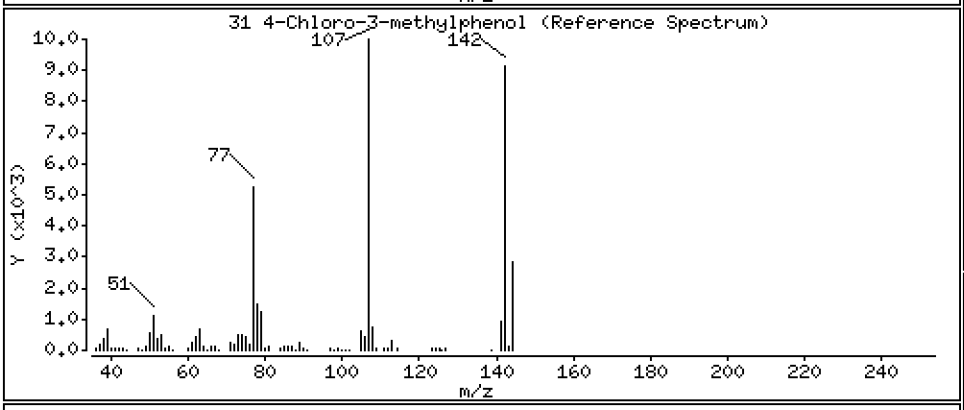
Column diameter: 0.25

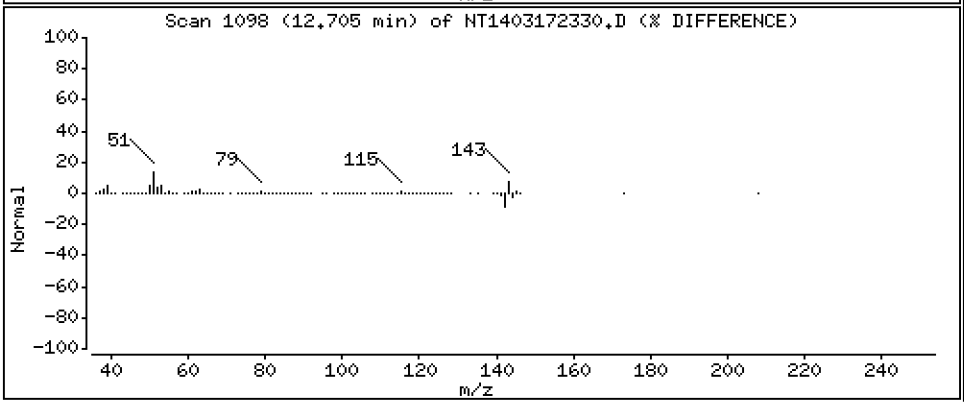
31 4-Chloro-3-methylphenol

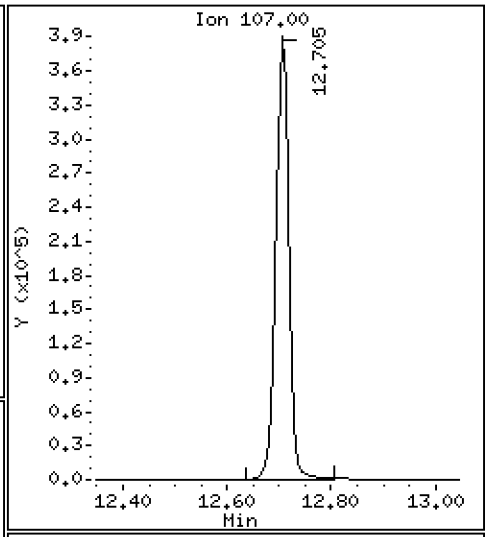
Concentration: 9.026 ug/mL

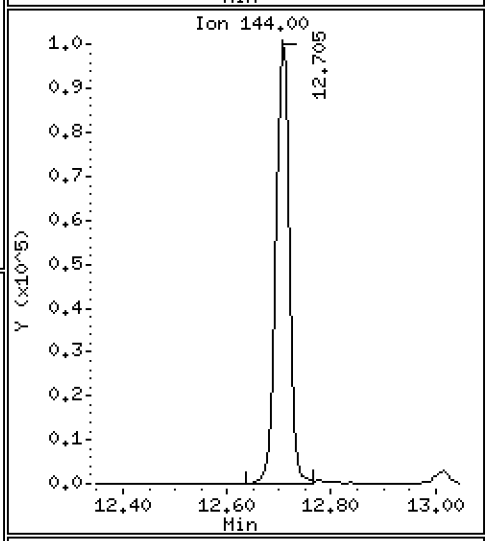


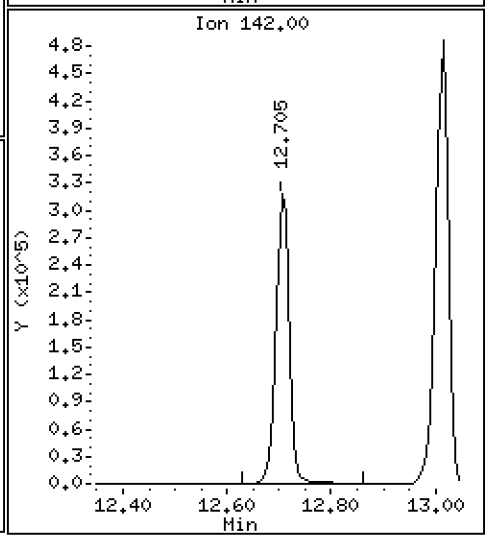












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

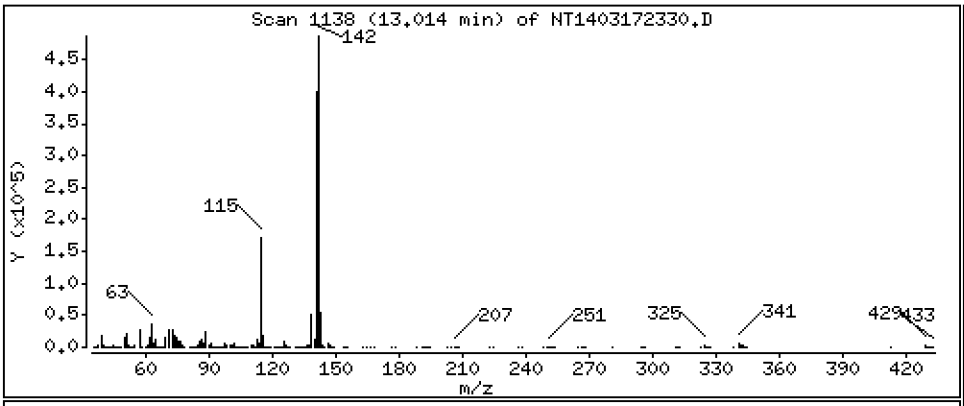
Operator: JGR

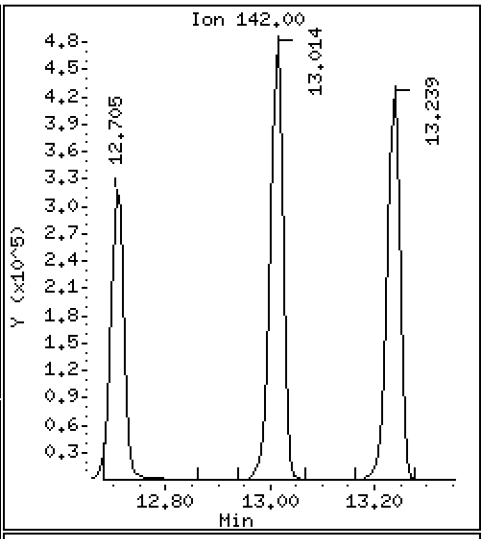
Column phase: ZB-5msi

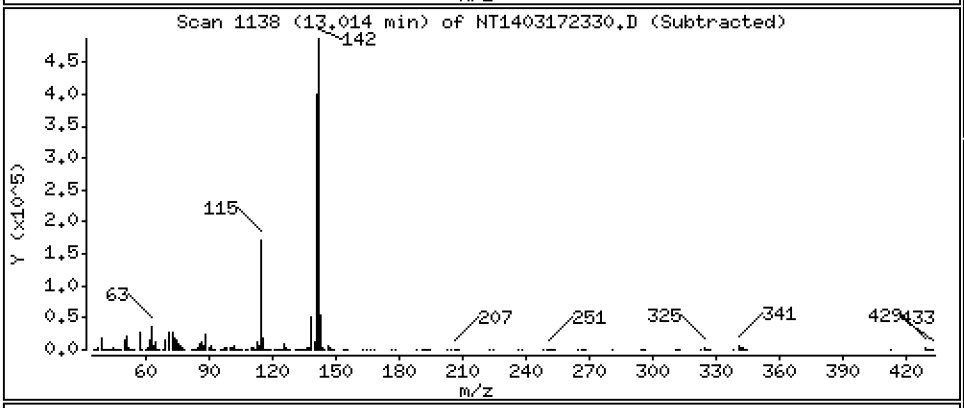
Column diameter: 0.25

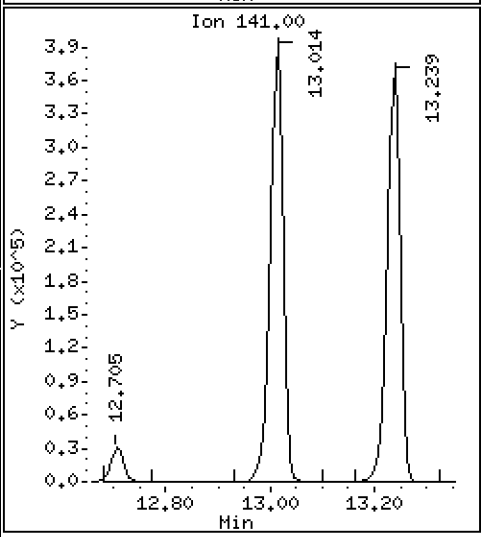
32 2-Methylnaphthalene

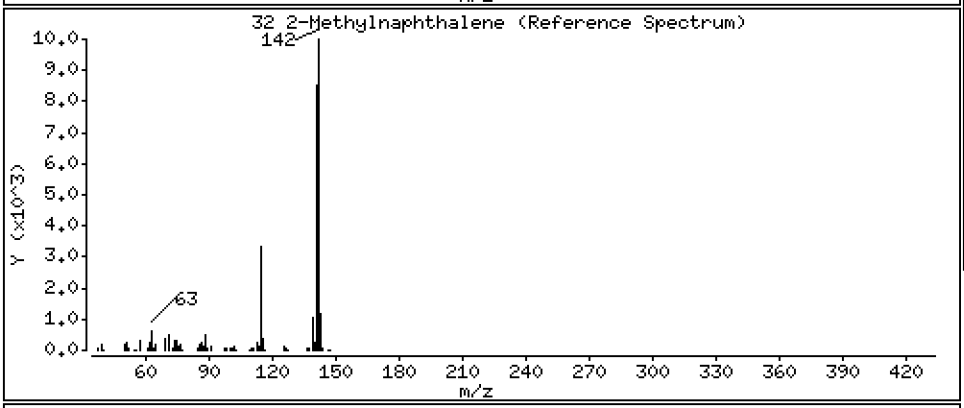
Concentration: 4.950 ug/mL

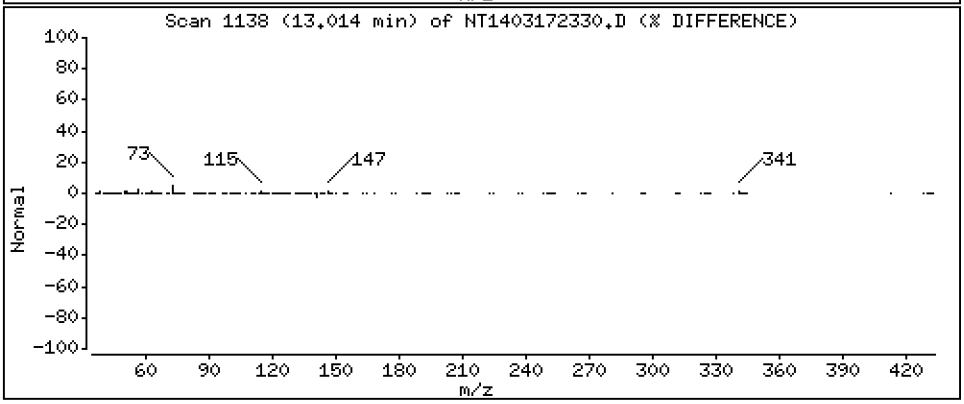












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

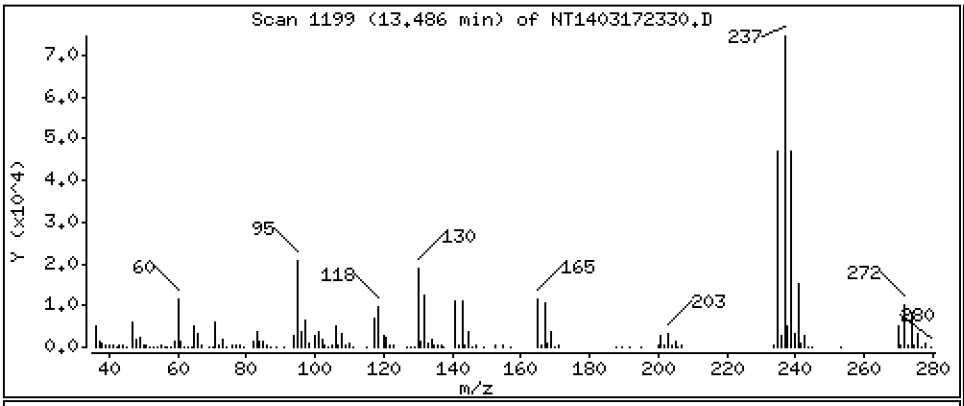
Operator: JGR

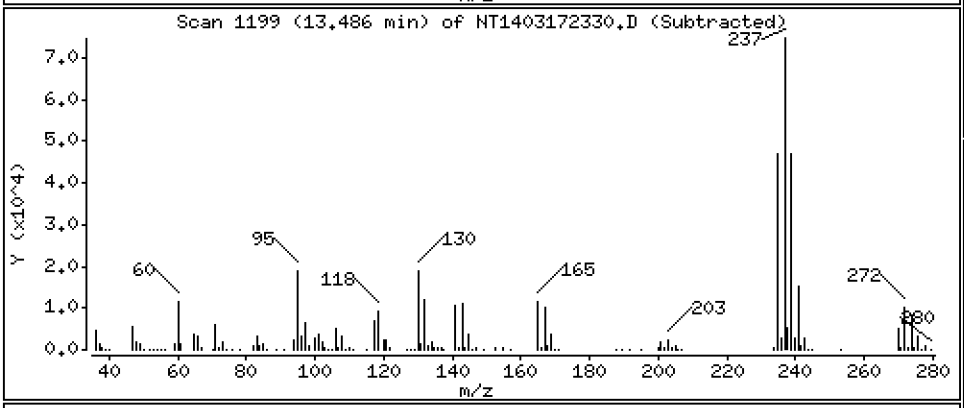
Column phase: ZB-5msi

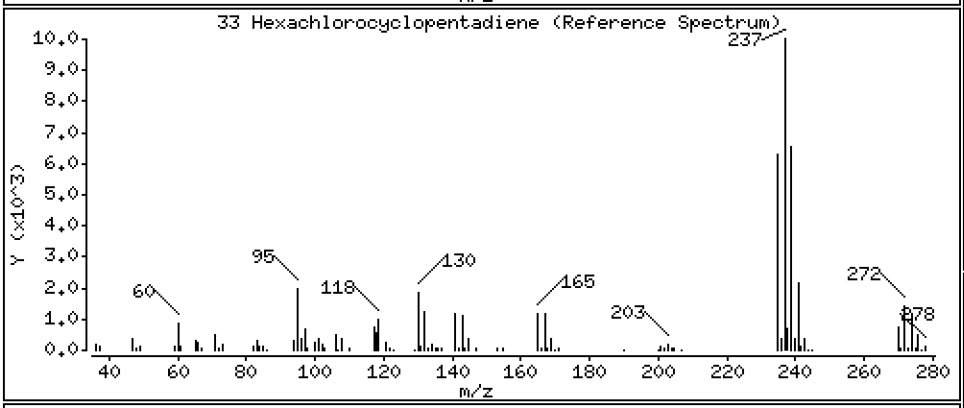
Column diameter: 0.25

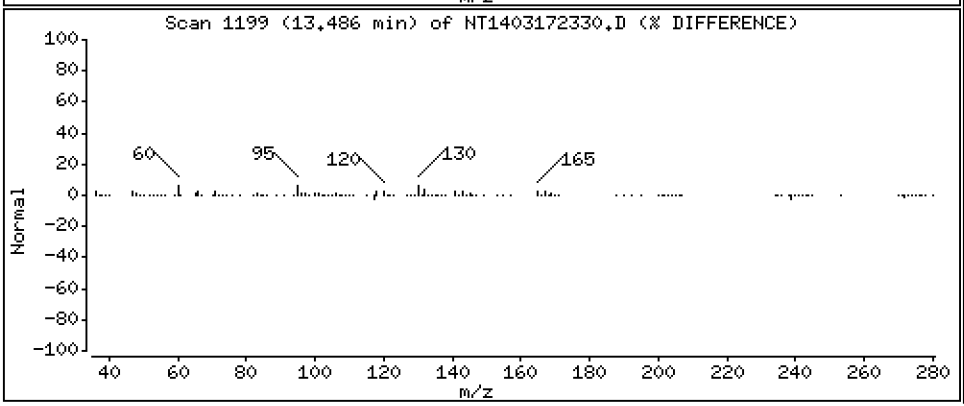
33 Hexachlorocyclopentadiene

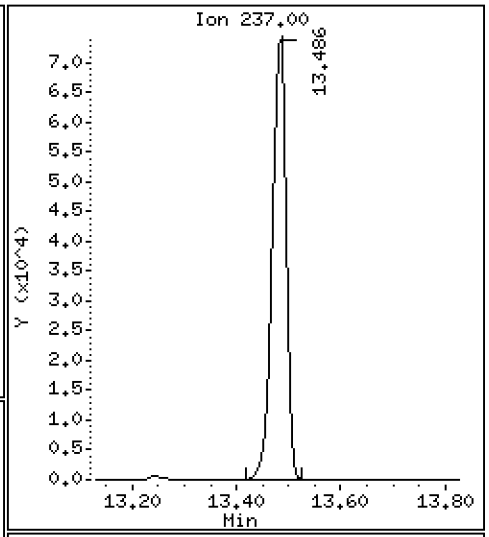
Concentration: 3.869 ug/mL

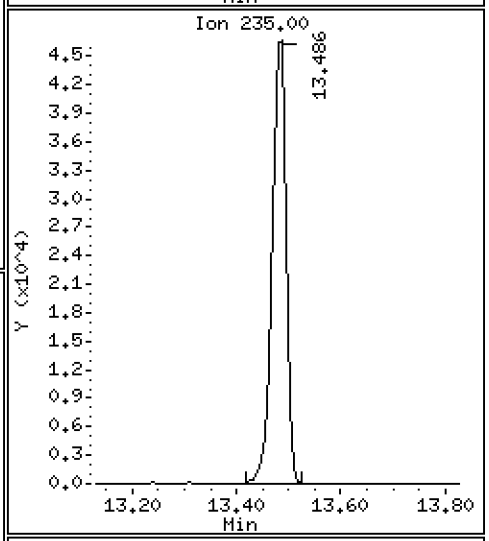


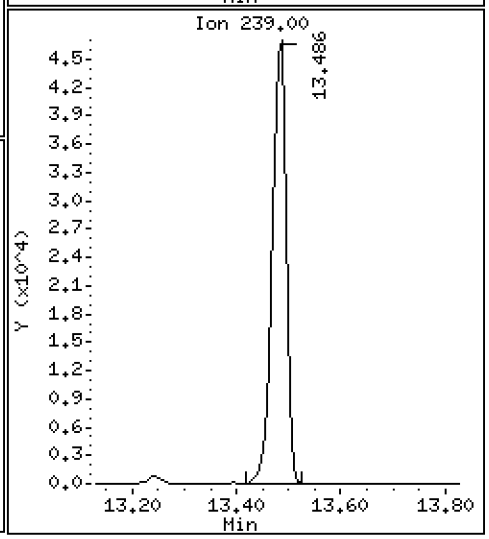












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

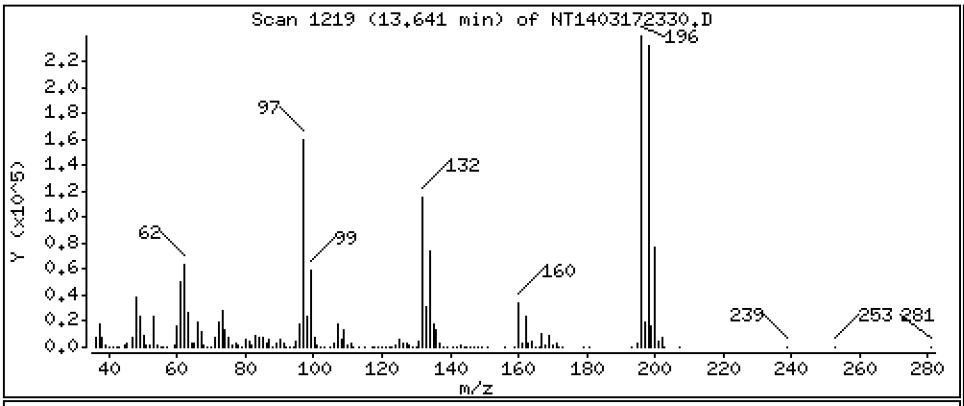
Operator: JGR

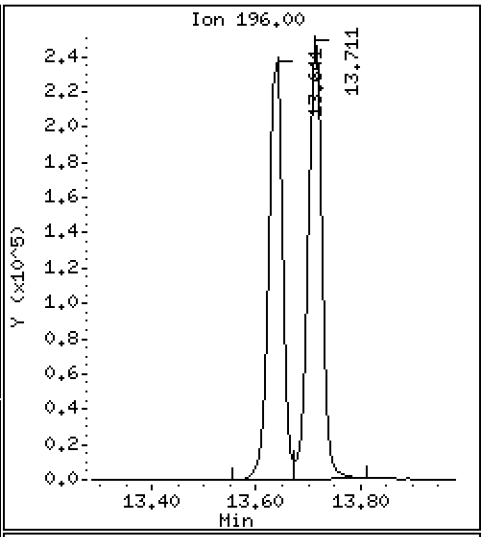
Column phase: ZB-5msi

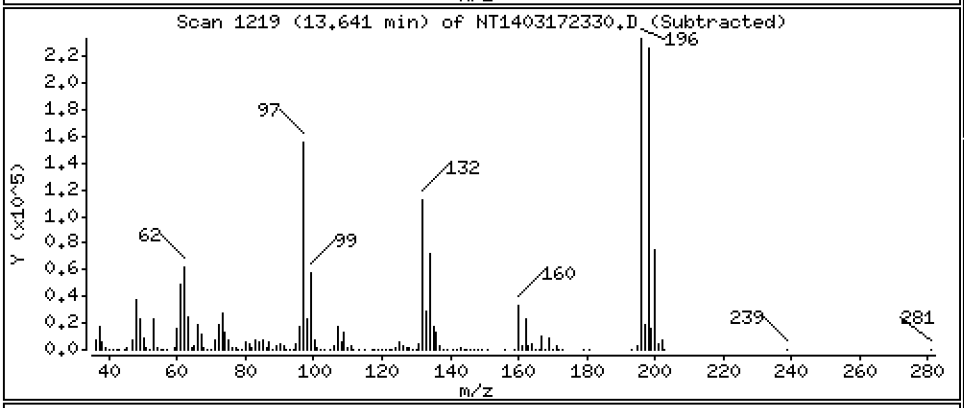
Column diameter: 0.25

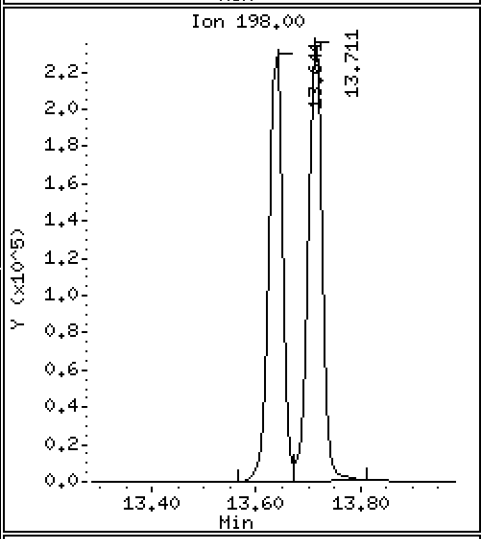
34 2,4,6-Trichlorophenol

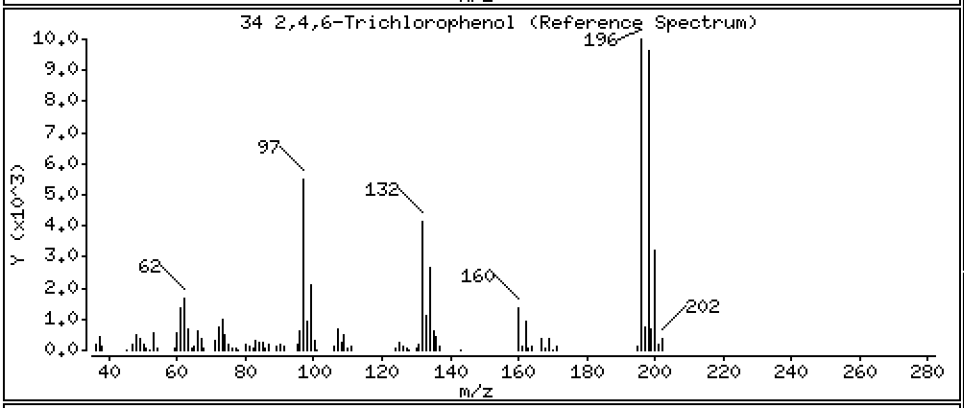
Concentration: 10.02 ug/mL

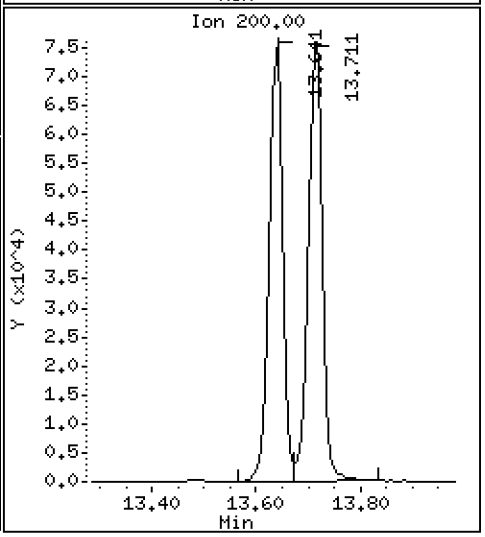


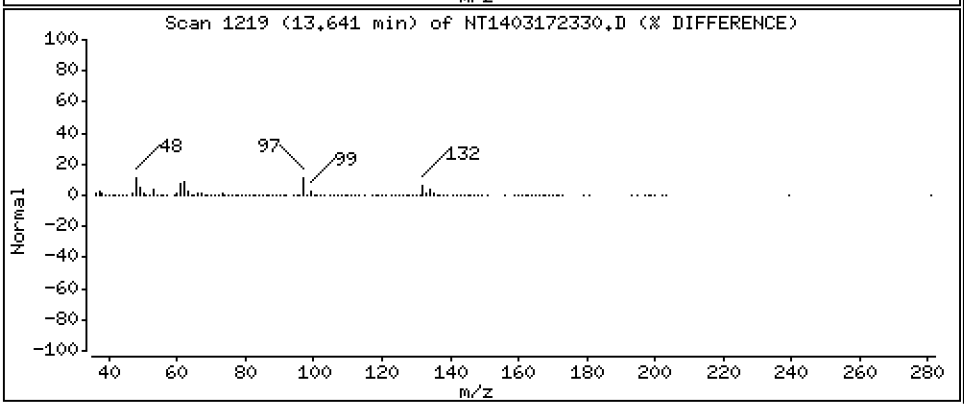












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

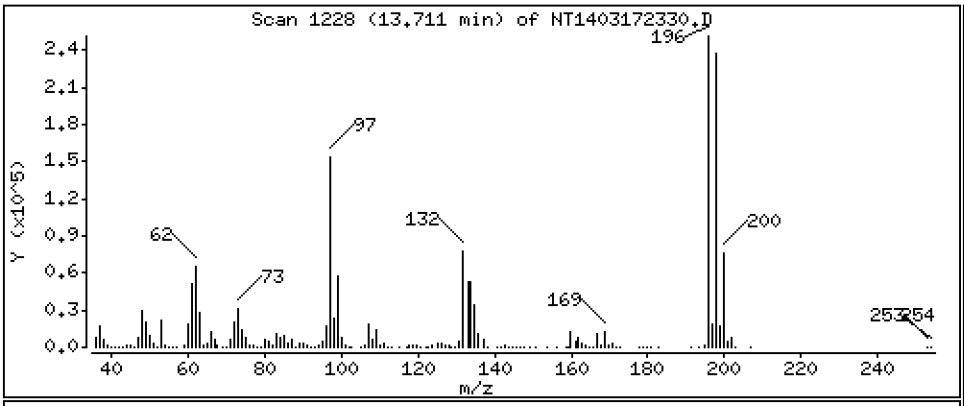
Operator: JGR

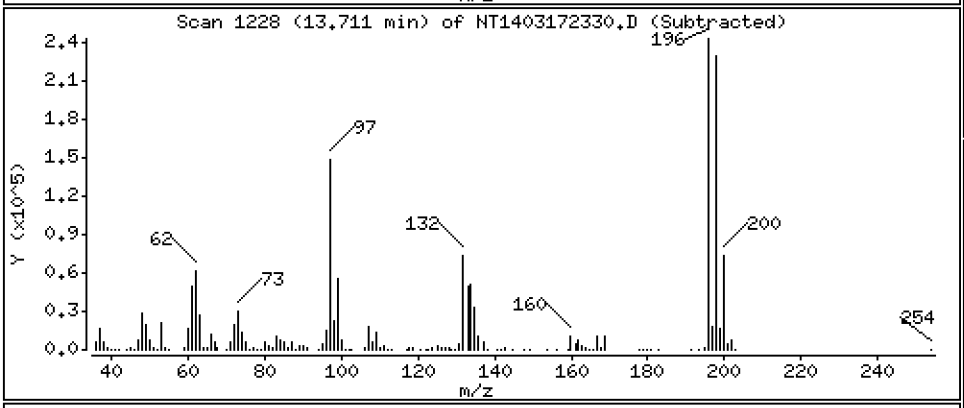
Column phase: ZB-5msi

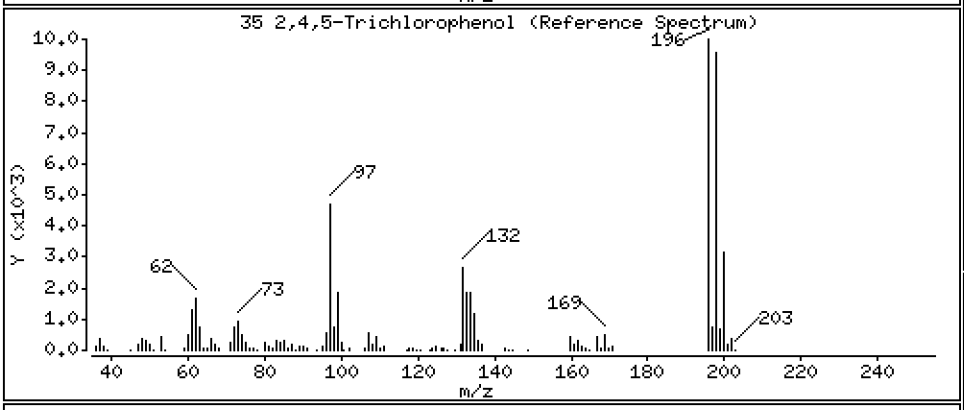
Column diameter: 0.25

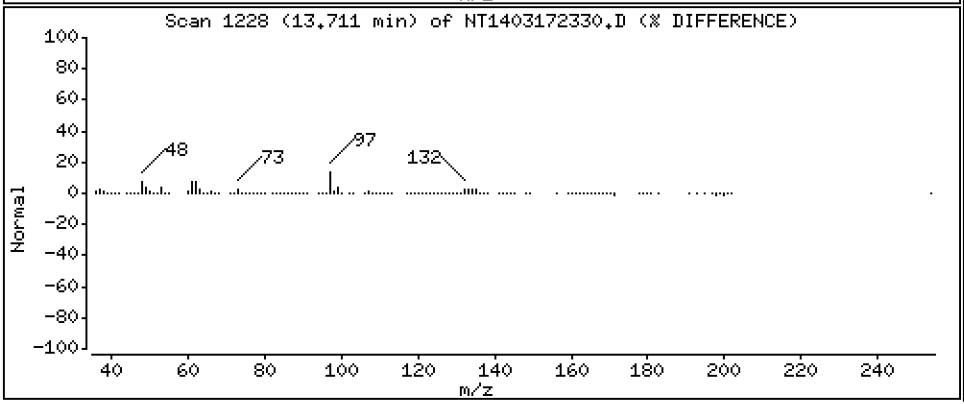
35 2,4,5-Trichlorophenol

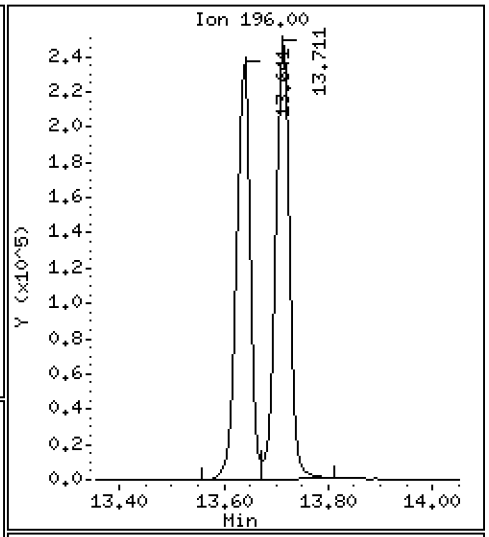
Concentration: 10.18 ug/mL

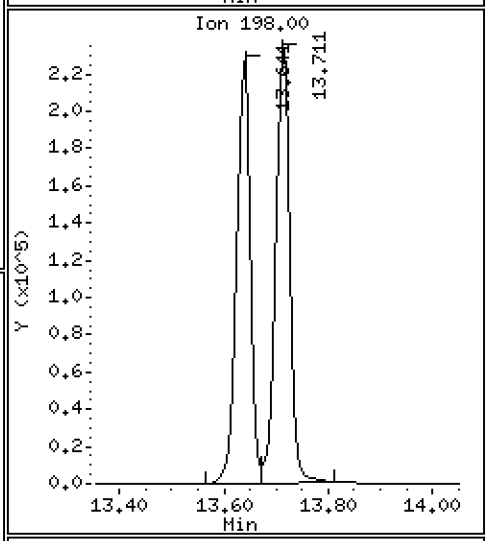


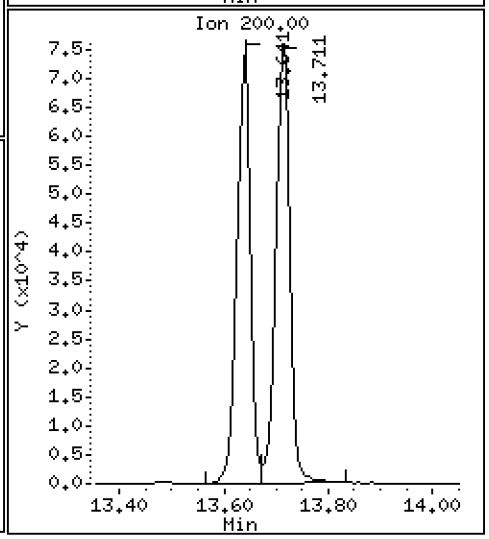












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

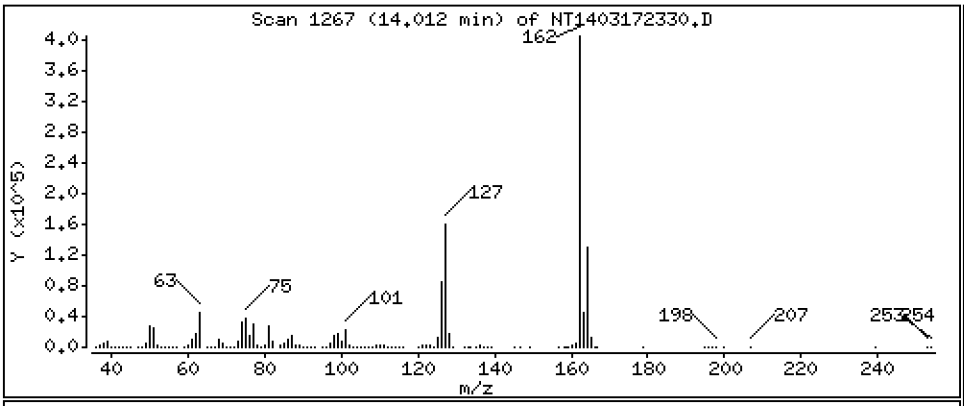
Operator: JGR

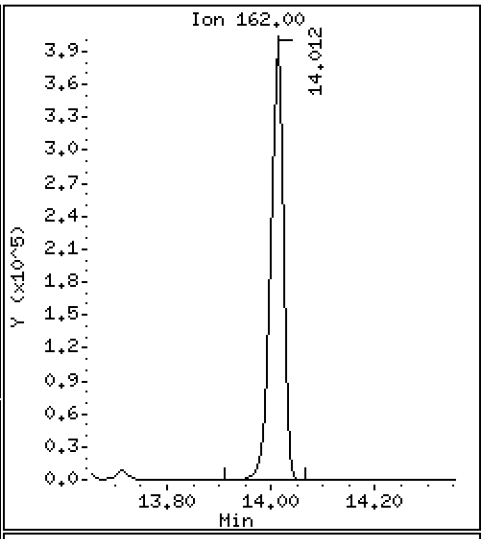
Column phase: ZB-5msi

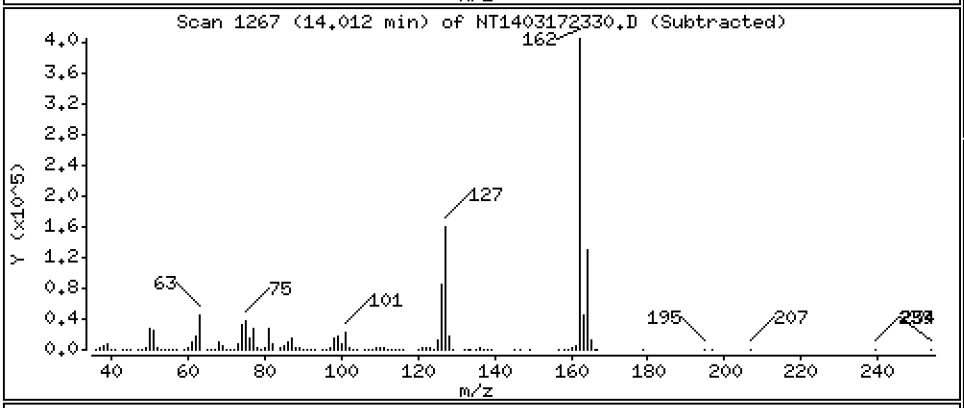
Column diameter: 0.25

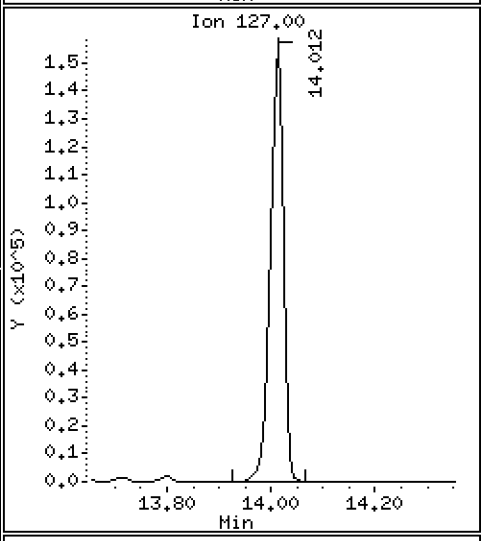
37 2-Chloronaphthalene

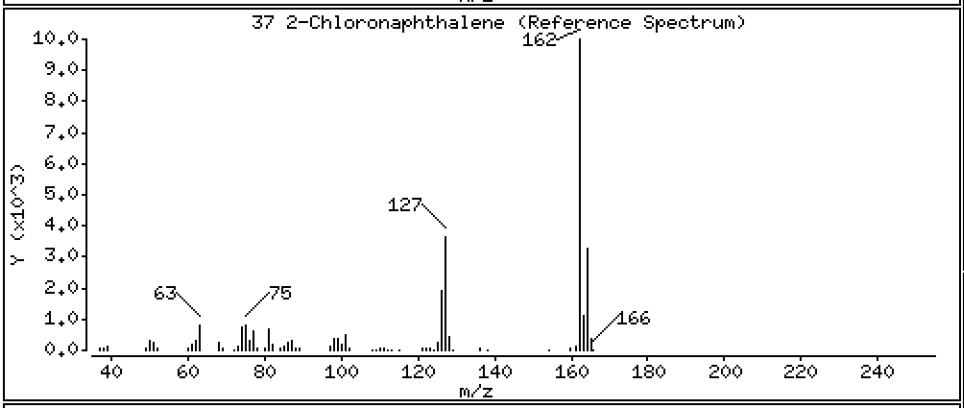
Concentration: 5.153 ug/mL

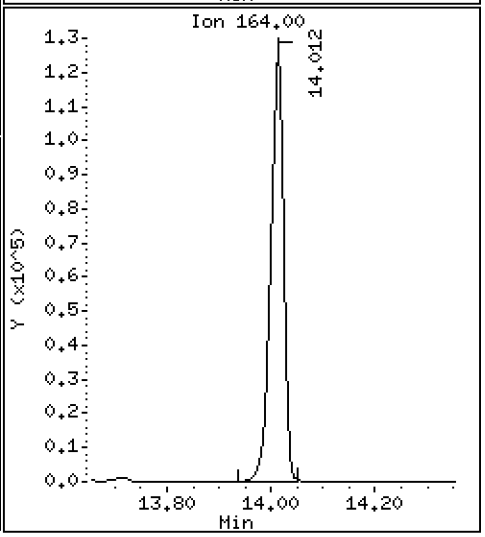


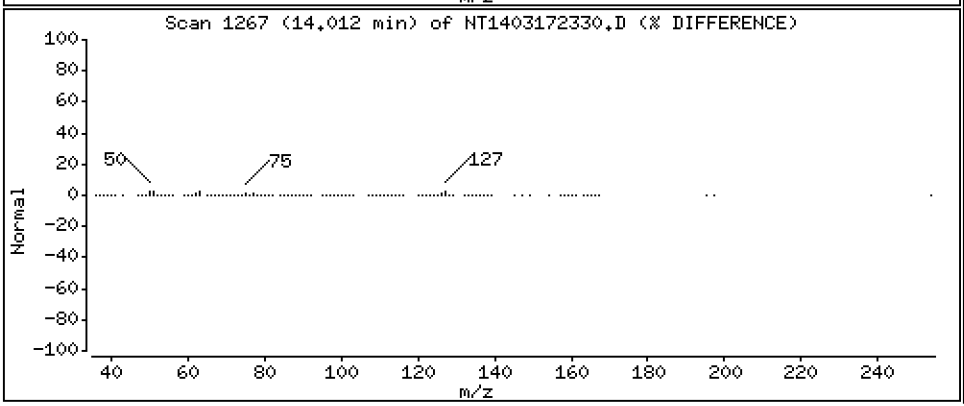












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

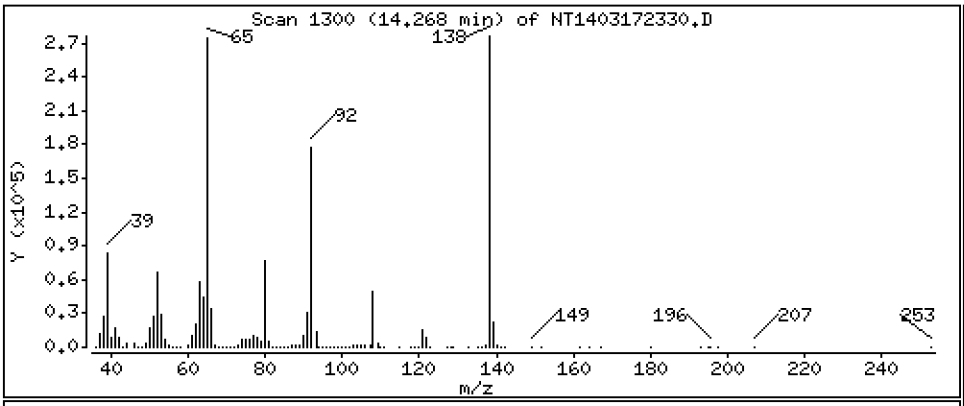
Operator: JGR

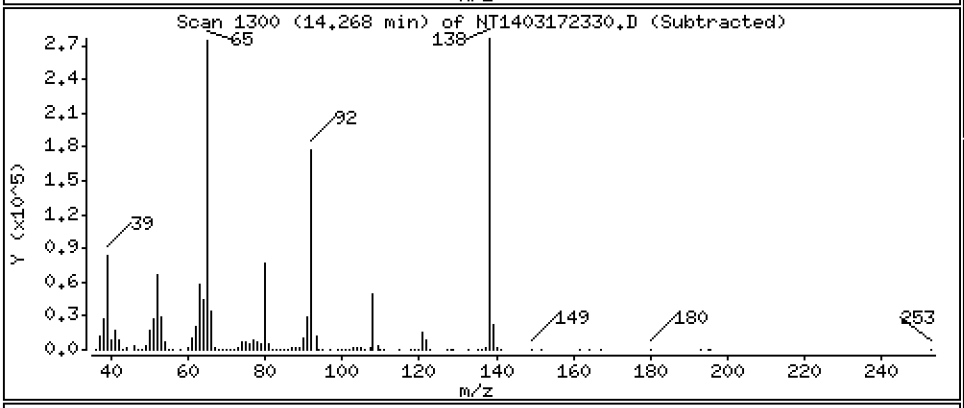
Column phase: ZB-5msi

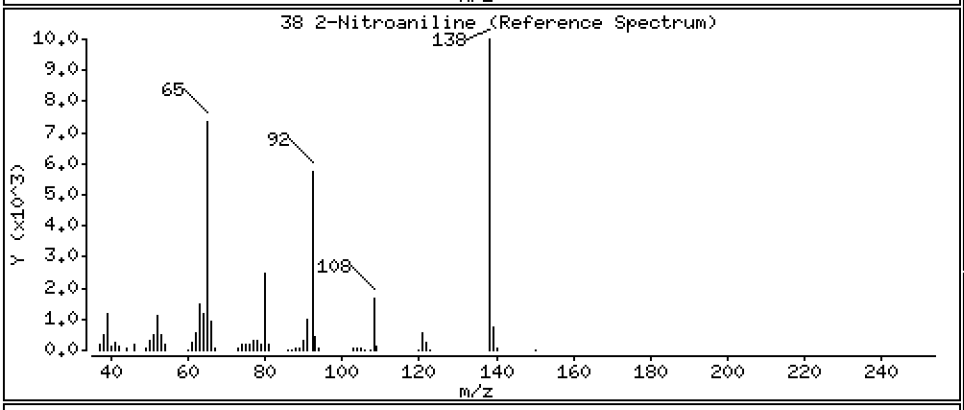
Column diameter: 0.25

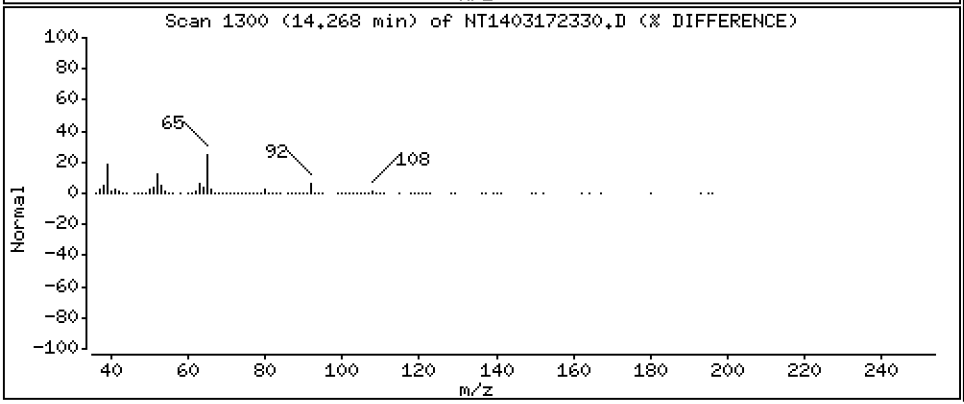
38 2-Nitroaniline

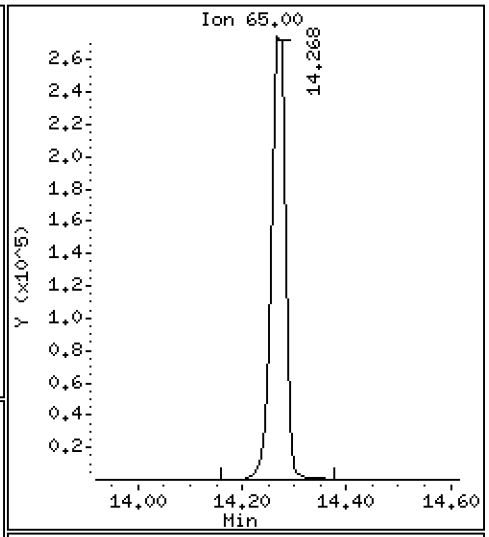
Concentration: 10.01 ug/mL

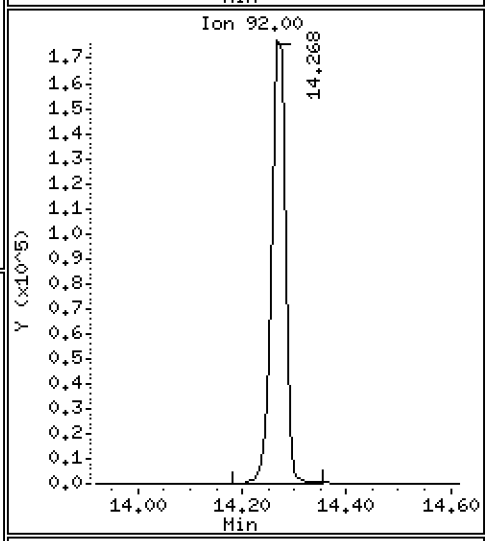


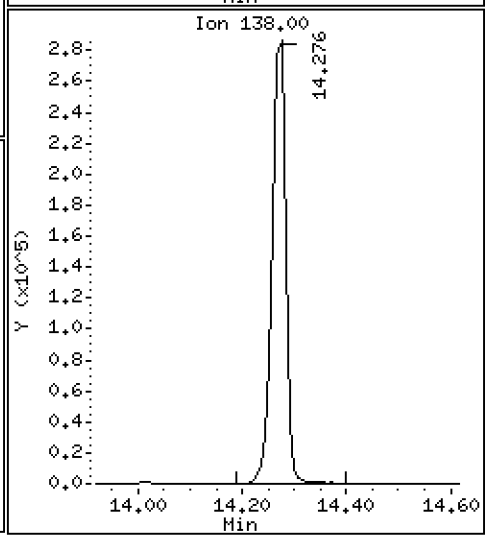












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

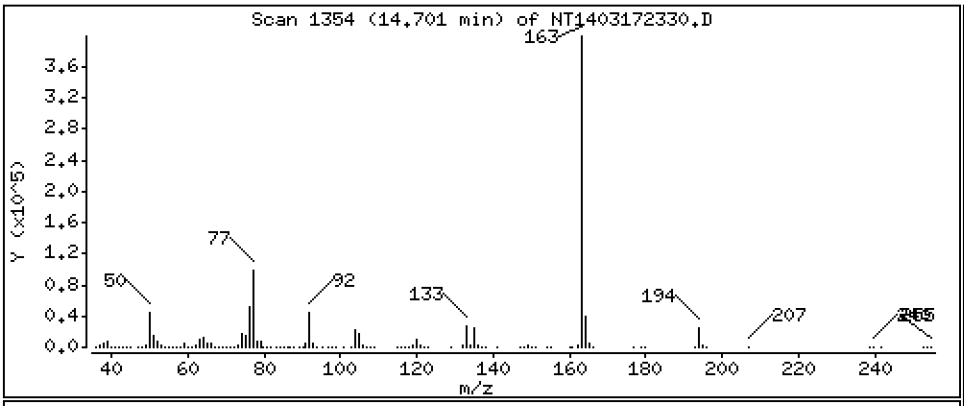
Operator: JGR

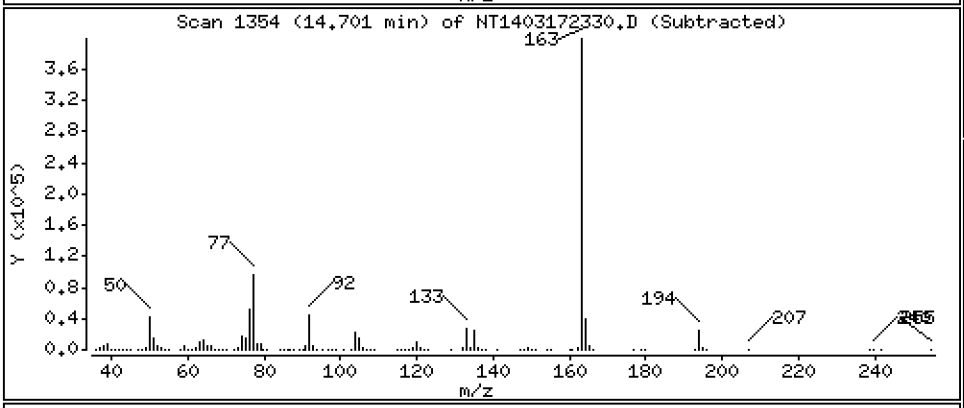
Column phase: ZB-5msi

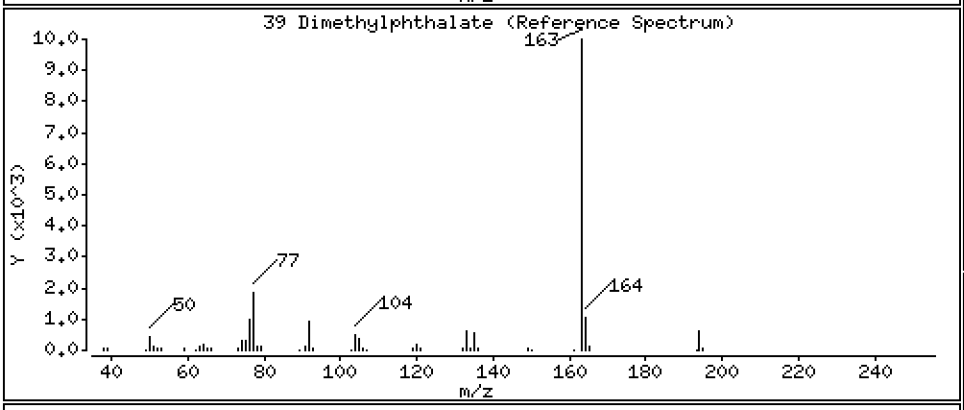
Column diameter: 0.25

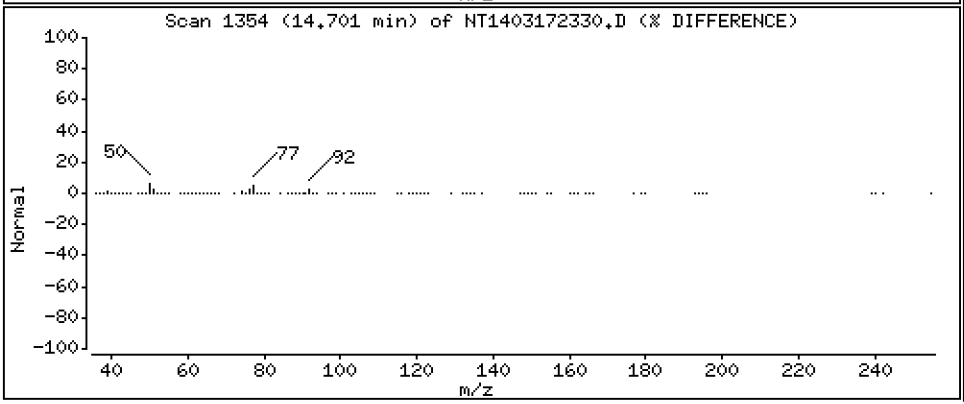
39 Dimethylphthalate

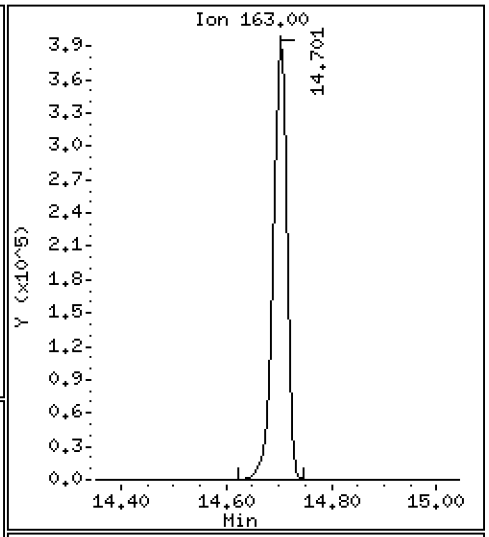
Concentration: 4.974 ug/mL

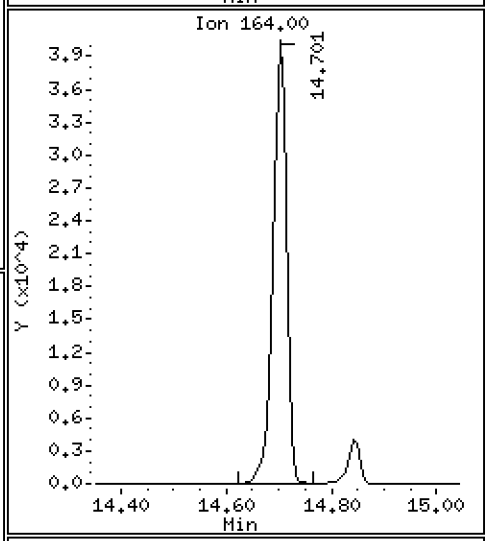


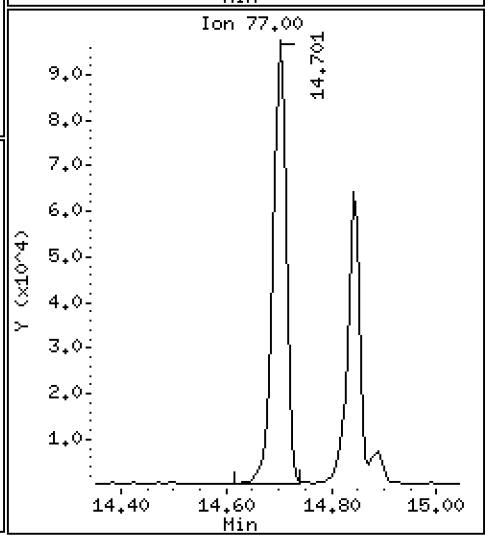












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

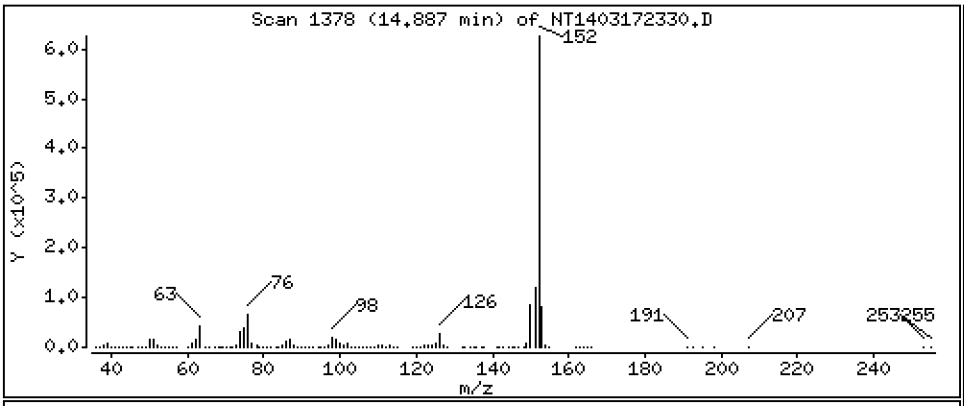
Operator: JGR

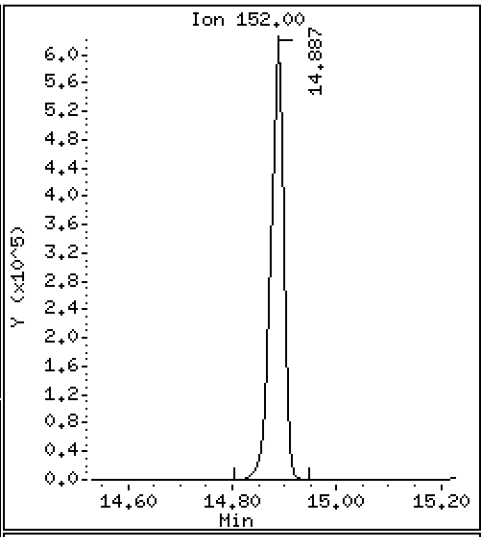
Column phase: ZB-5msi

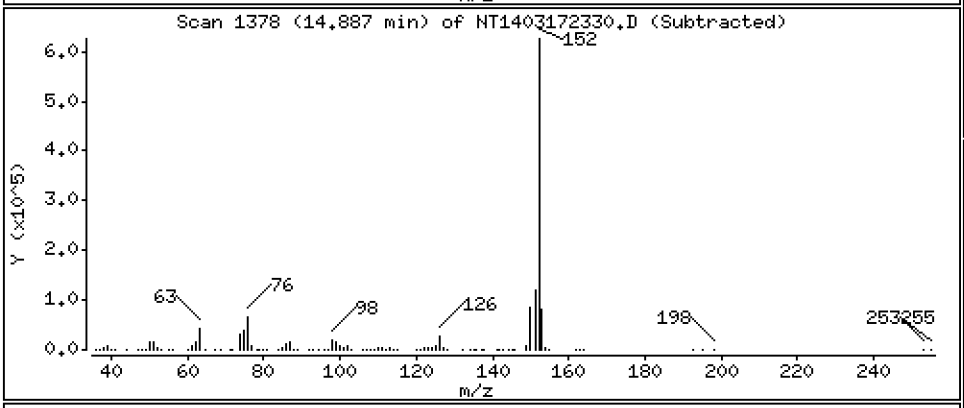
Column diameter: 0.25

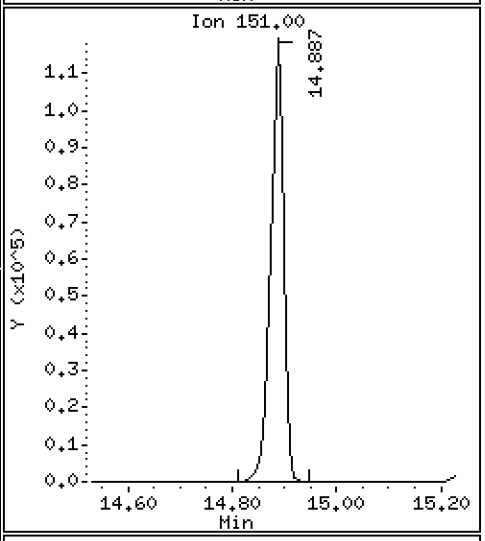
40 Acenaphthylene

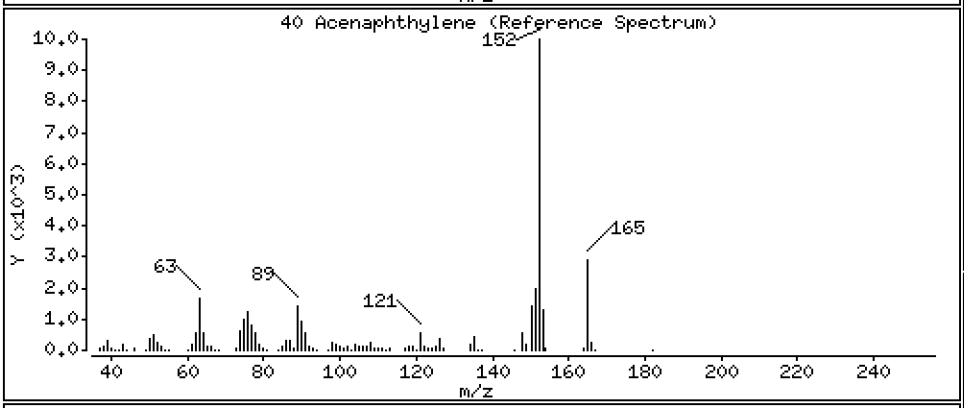
Concentration: 4.864 ug/mL

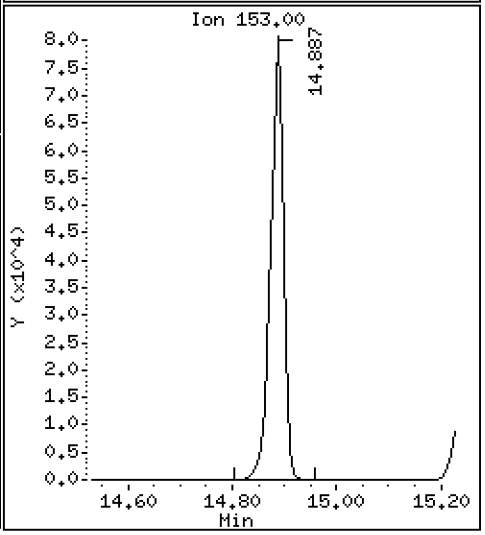


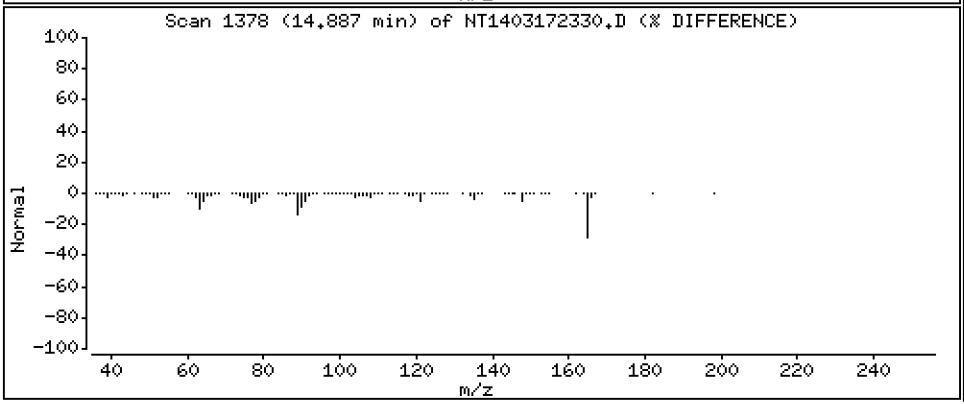












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

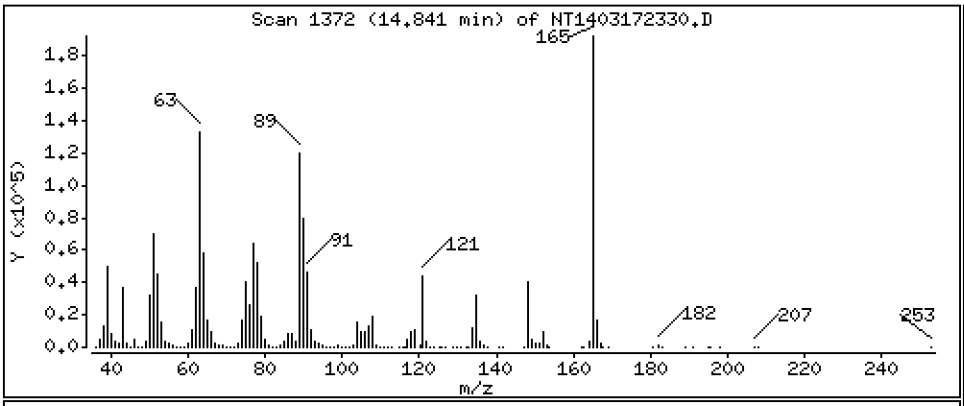
Operator: JGR

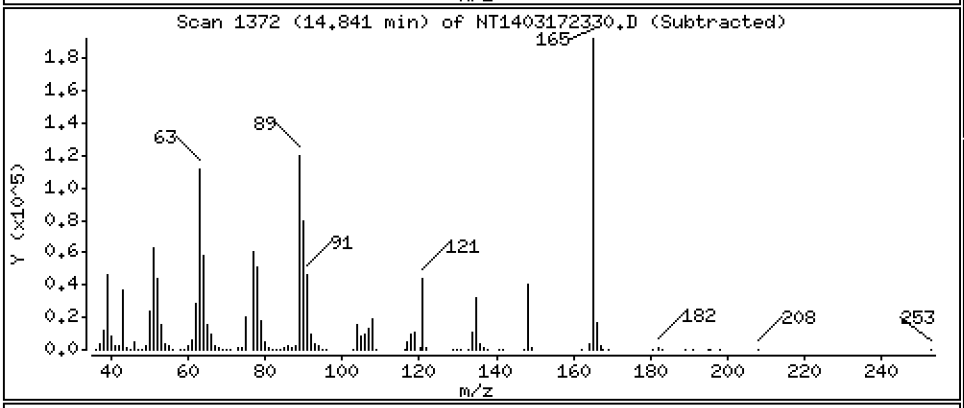
Column phase: ZB-5msi

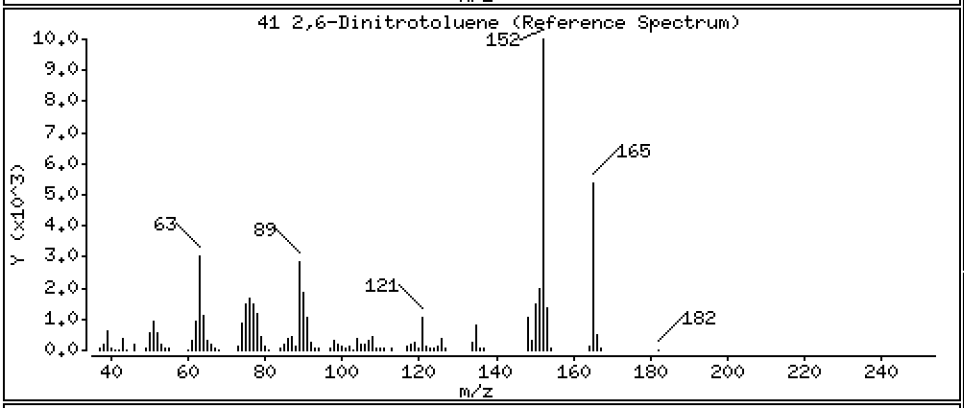
Column diameter: 0.25

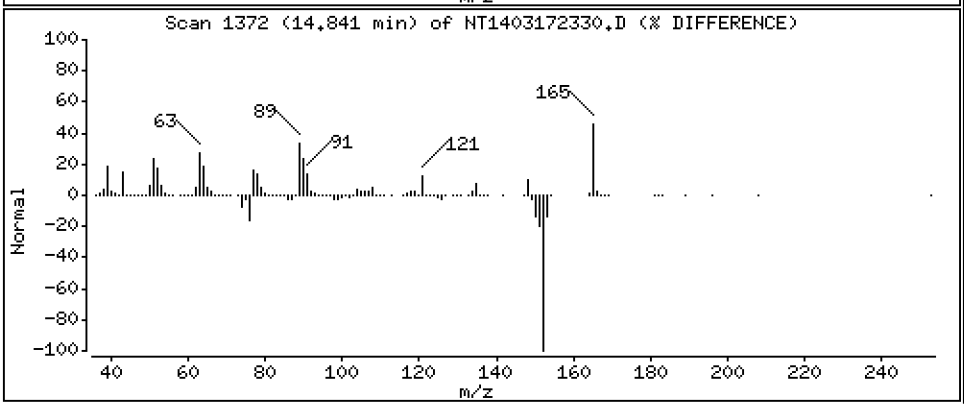
41 2,6-Dinitrotoluene

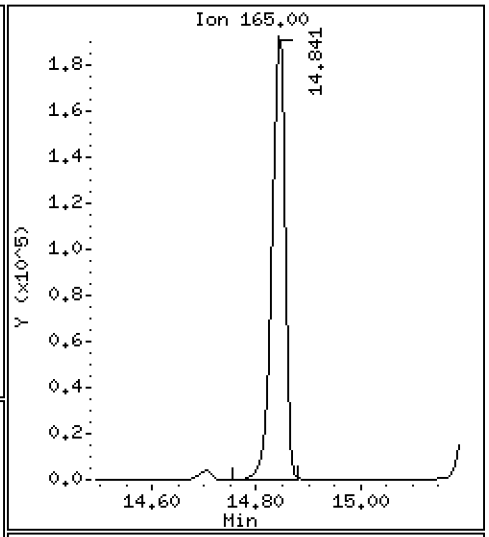
Concentration: 10.11 ug/mL

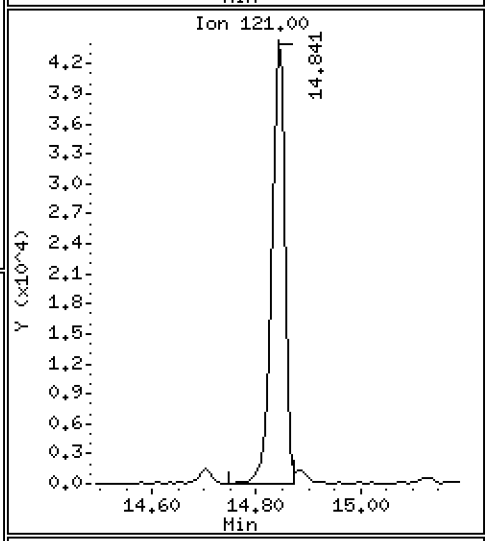


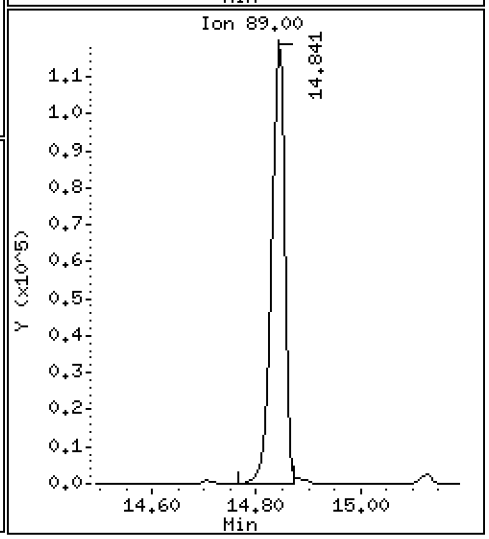












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

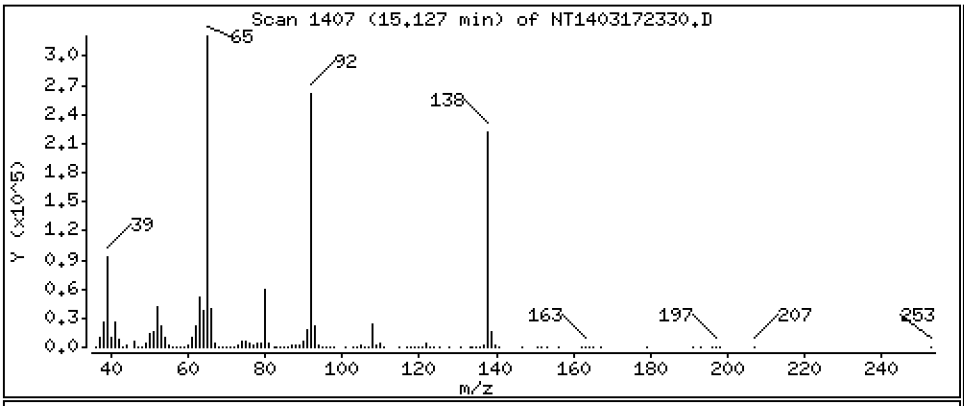
Operator: JGR

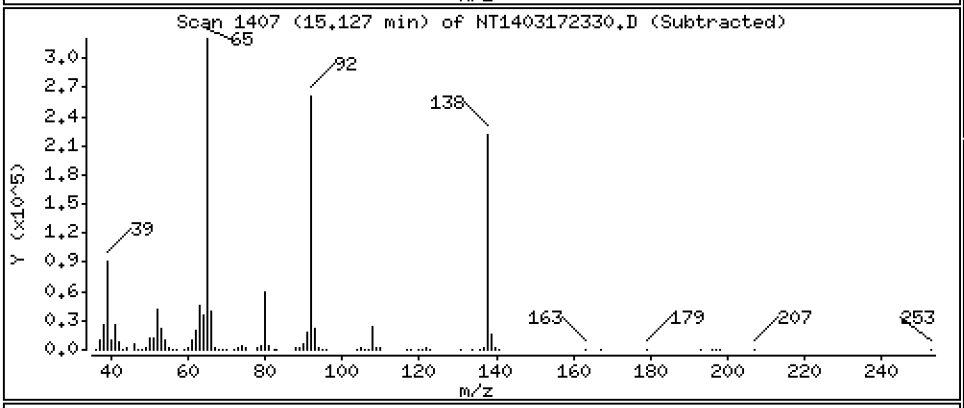
Column phase: ZB-5msi

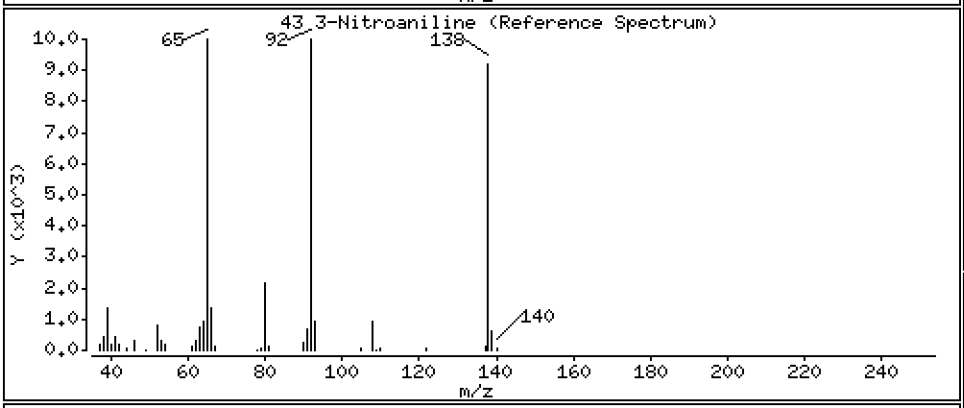
Column diameter: 0.25

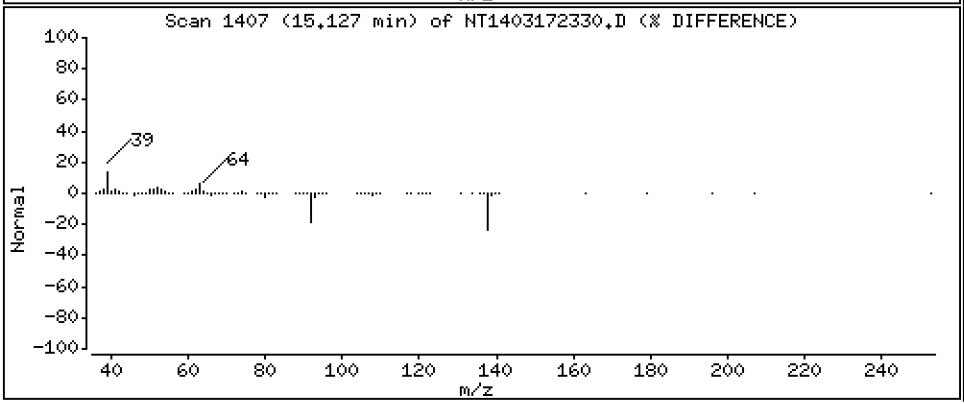
43 3-Nitroaniline

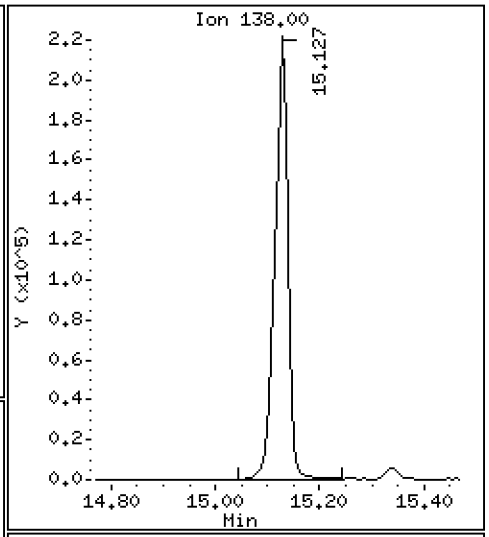
Concentration: 9.354 ug/mL

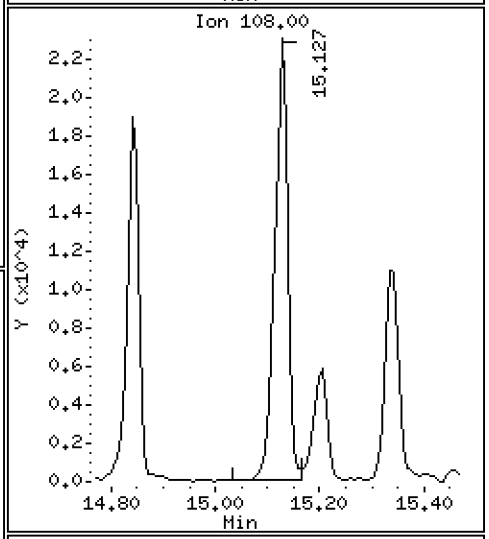


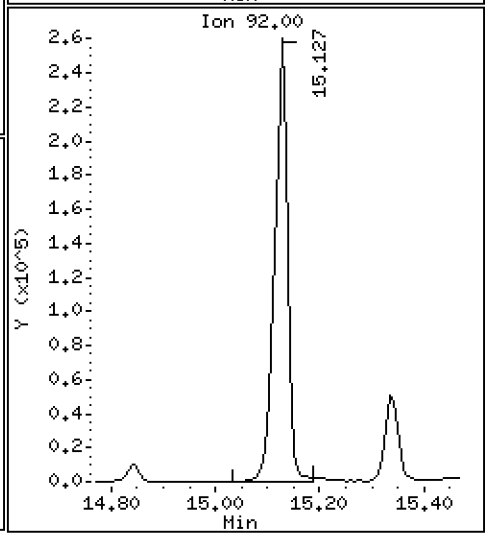












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

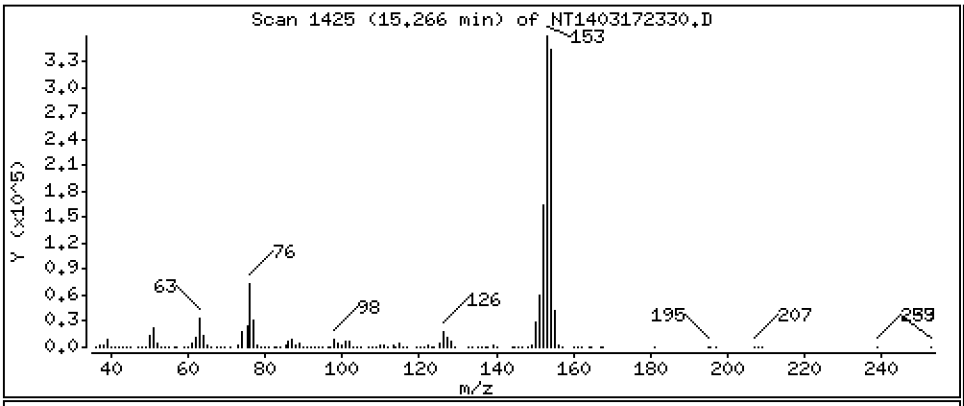
Operator: JGR

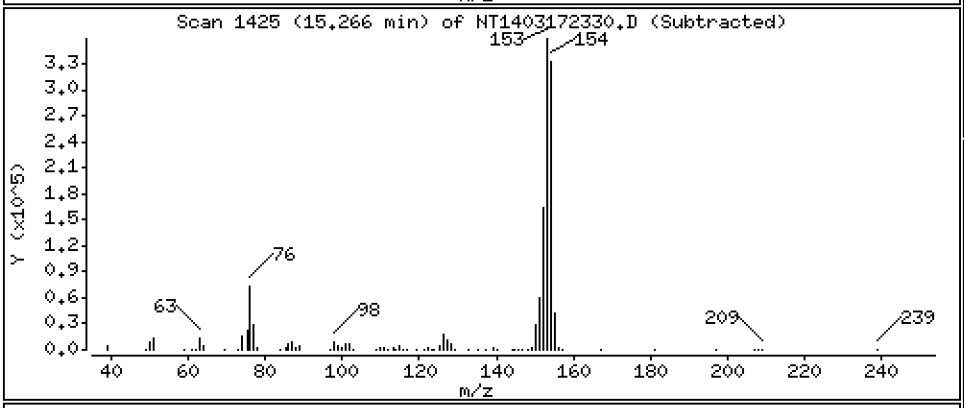
Column phase: ZB-5msi

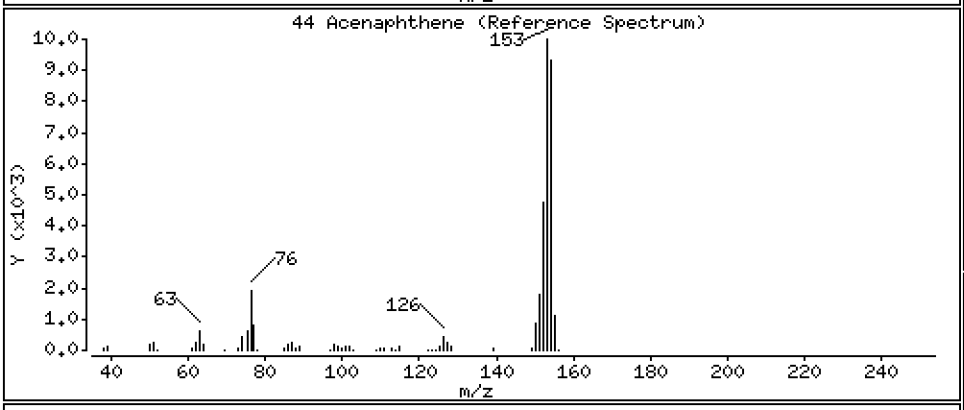
Column diameter: 0.25

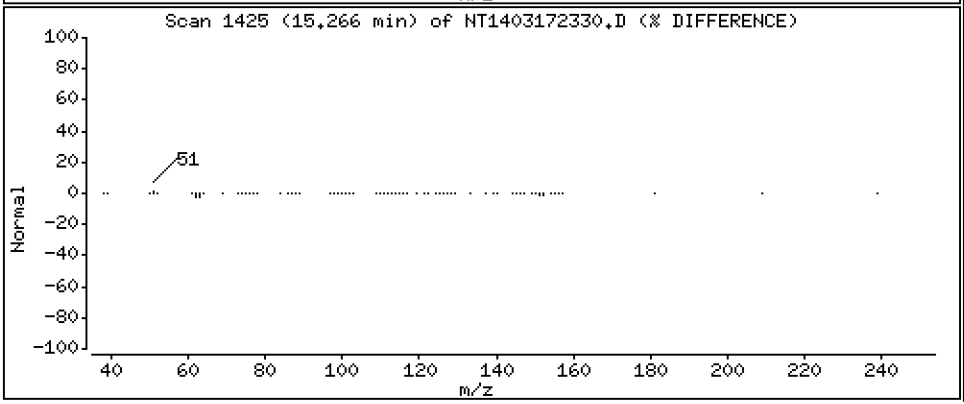
44 Acenaphthene

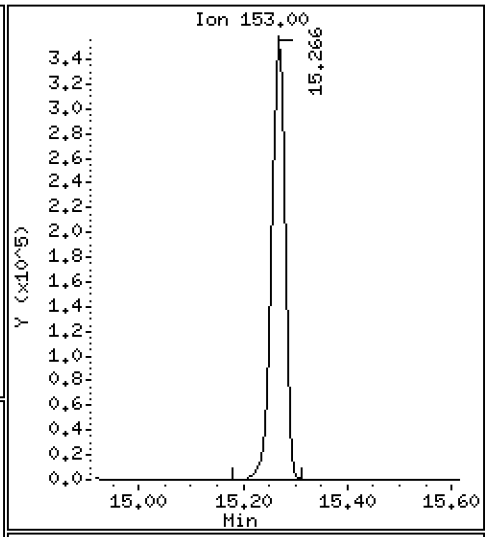
Concentration: 4.847 ug/mL

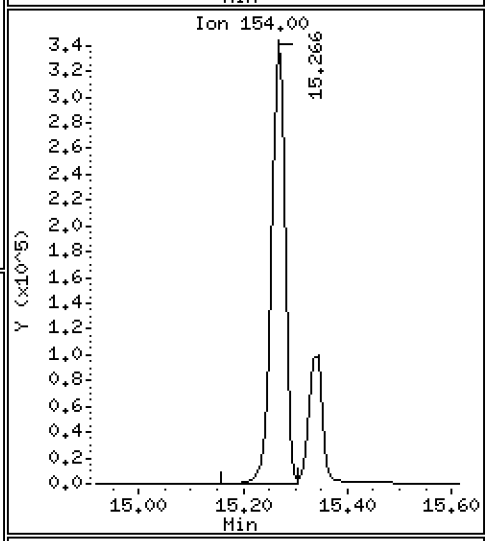


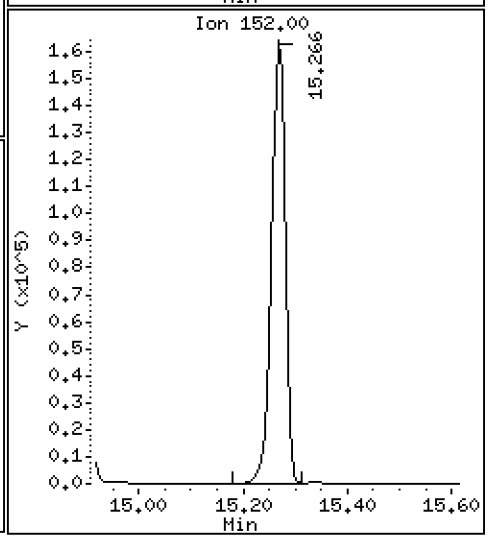












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

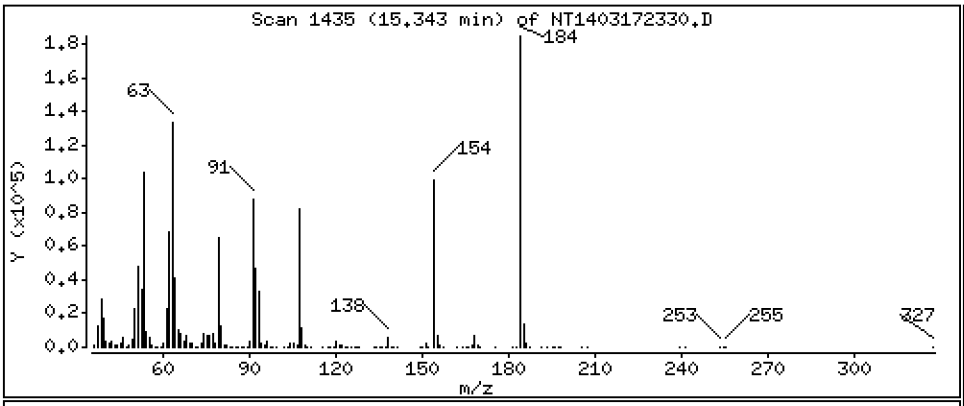
Operator: JGR

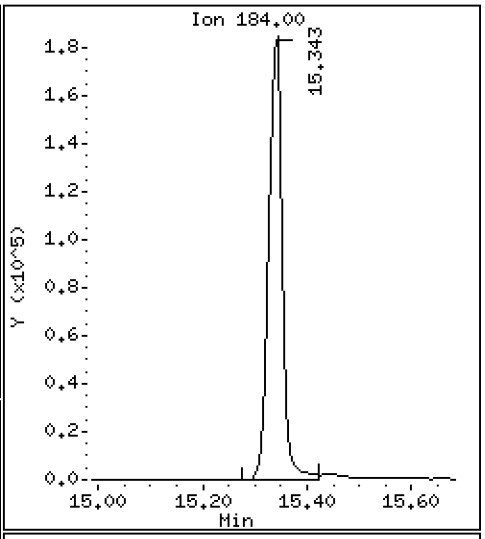
Column phase: ZB-5msi

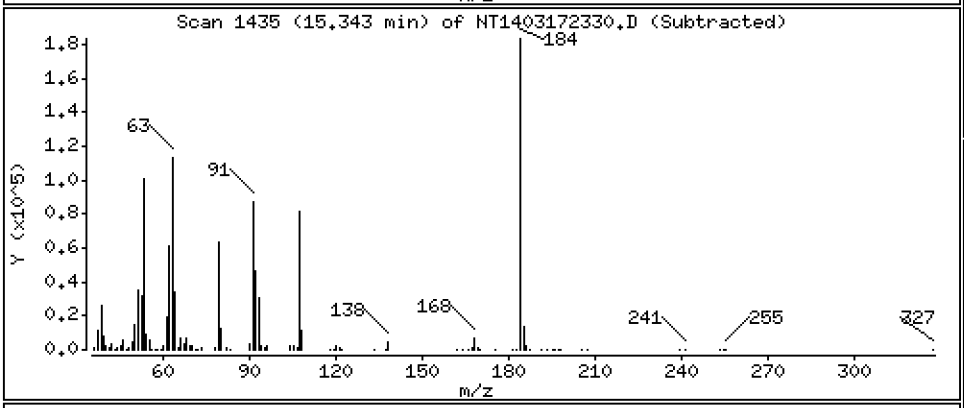
Column diameter: 0.25

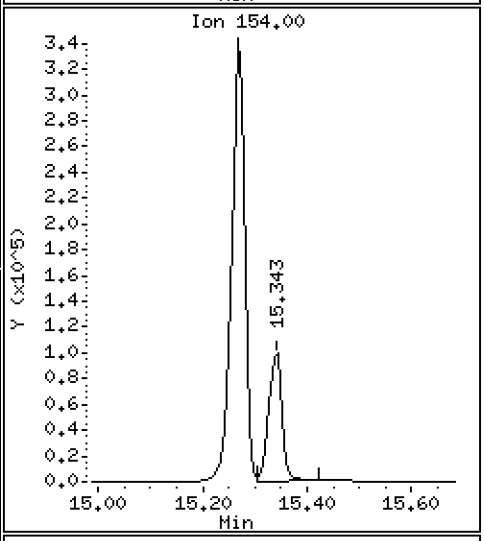
45 2,4-Dinitrophenol

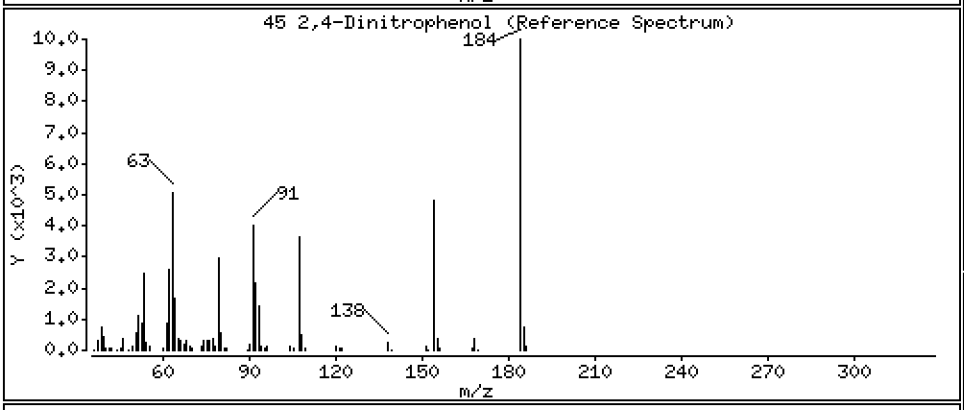
Concentration: 12.71 ug/mL

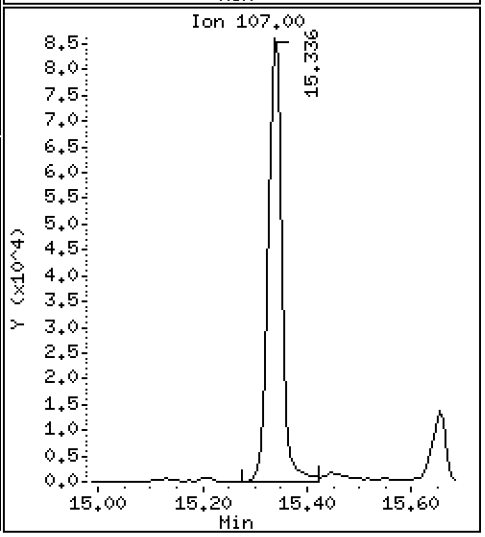


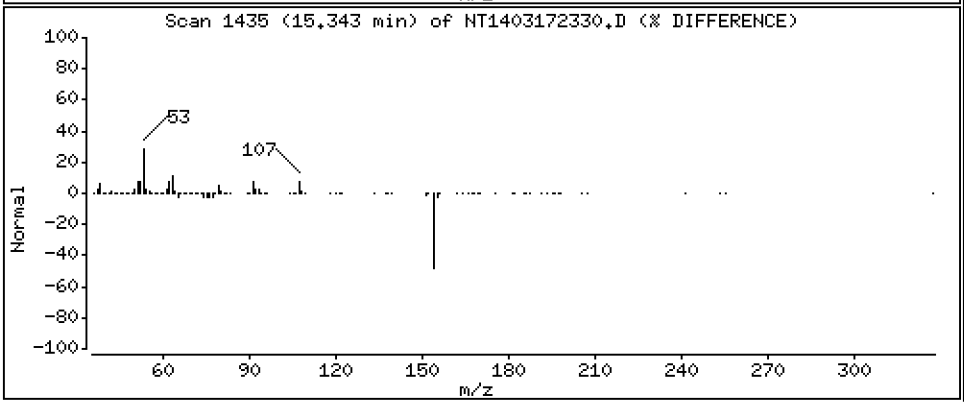












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

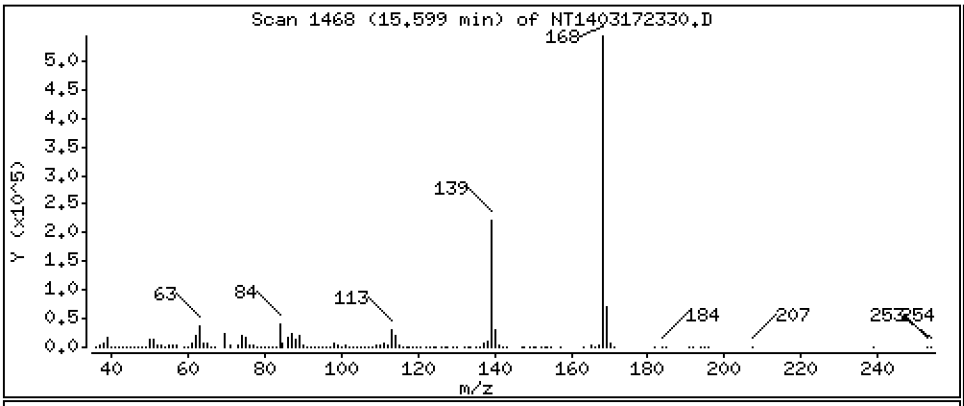
Operator: JGR

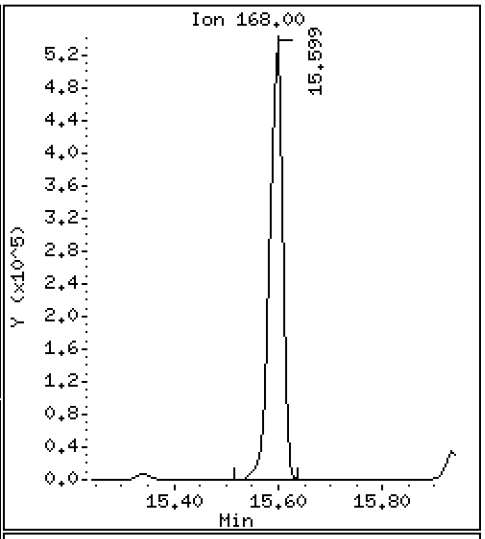
Column phase: ZB-5msi

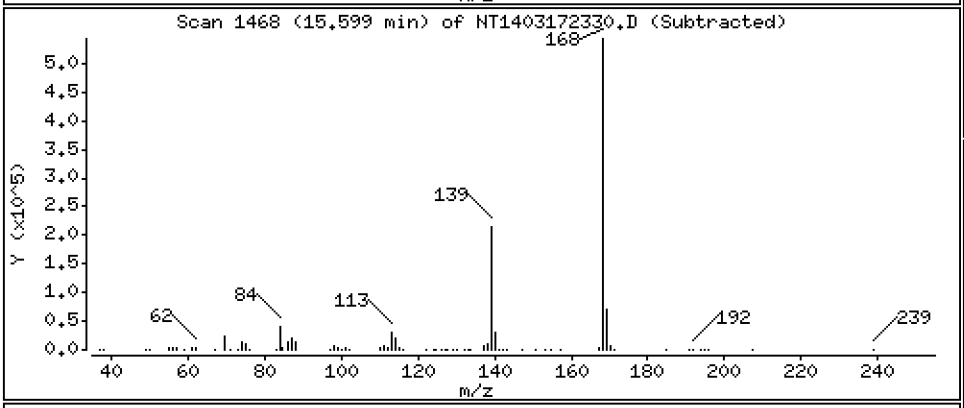
Column diameter: 0.25

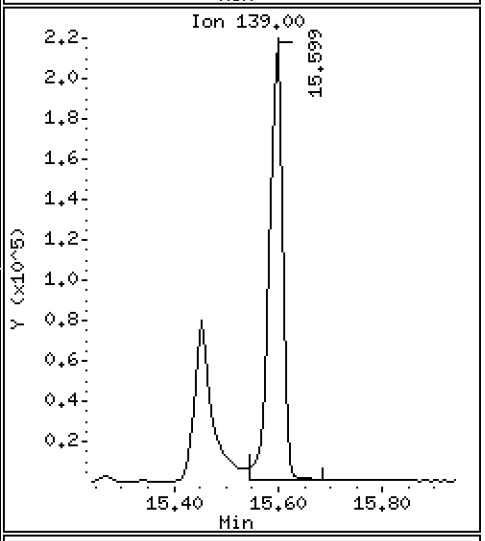
46 Dibenzofuran

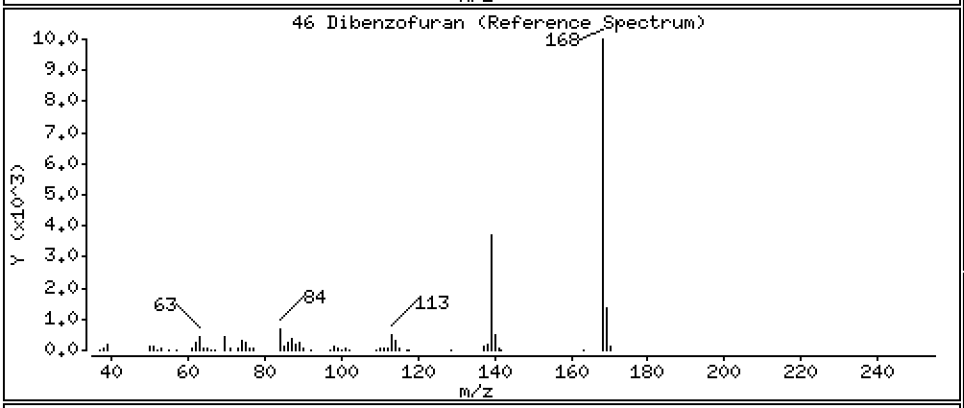
Concentration: 5.005 ug/mL

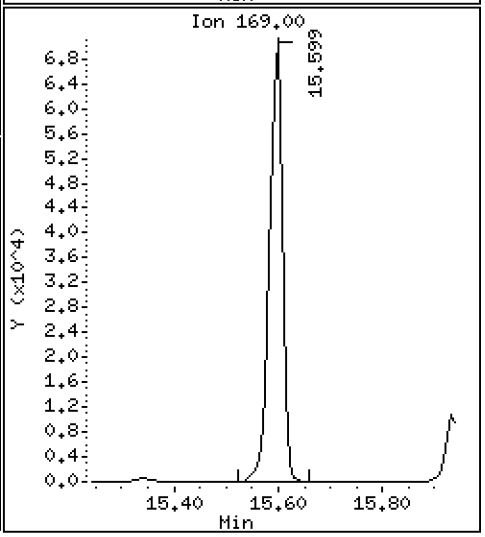


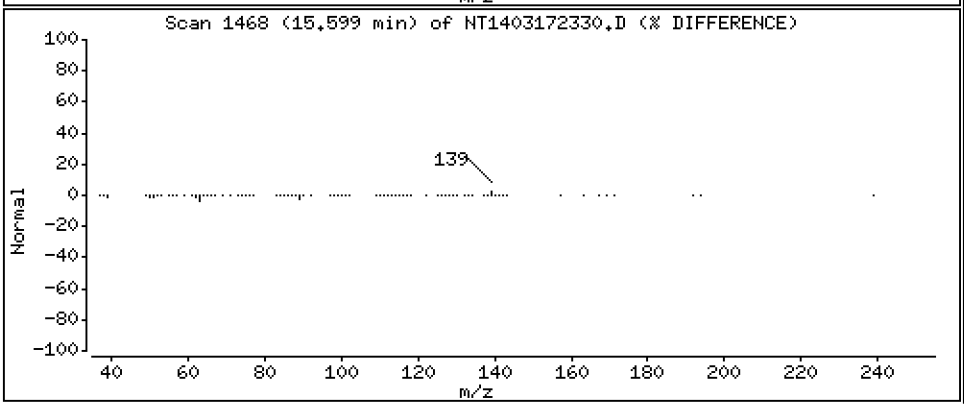












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

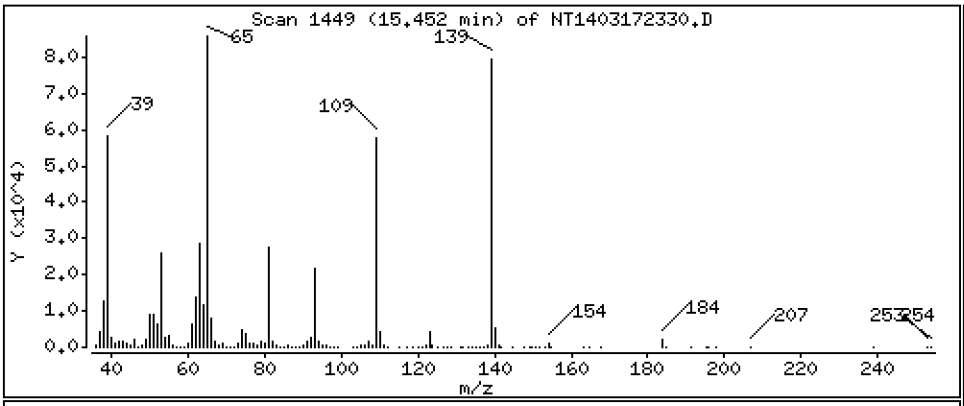
Operator: JGR

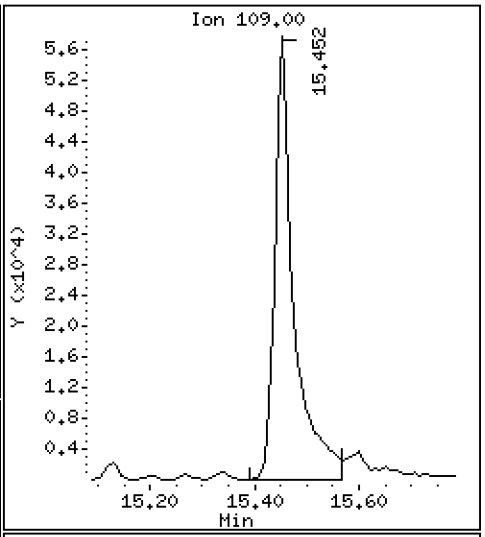
Column phase: ZB-5msi

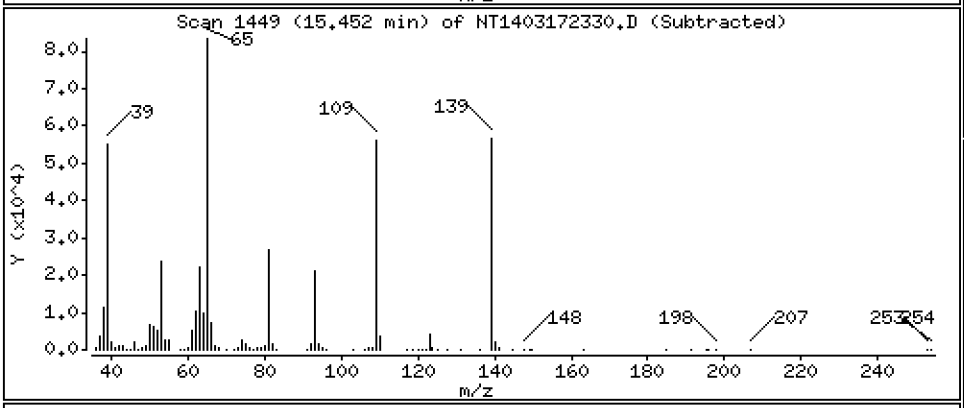
Column diameter: 0.25

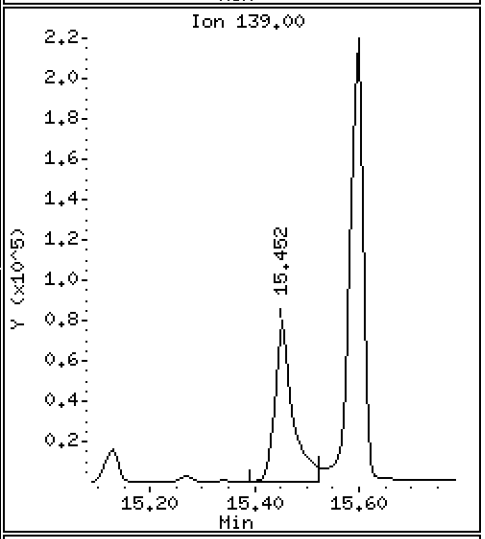
47 4-Nitrophenol

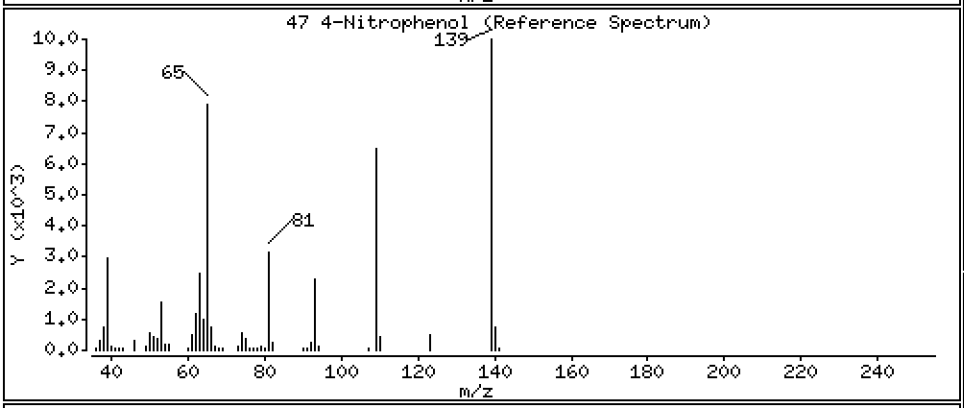
Concentration: 6.349 ug/mL

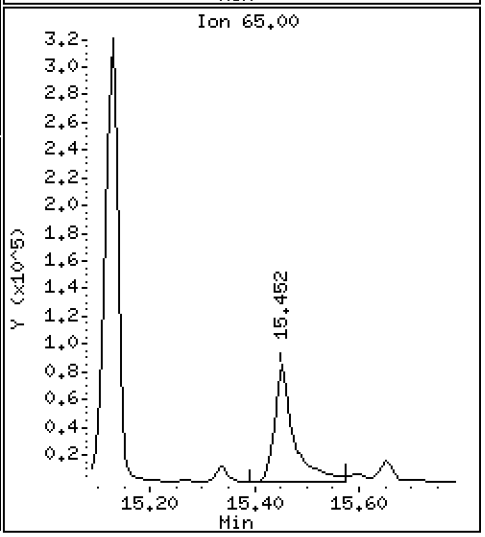


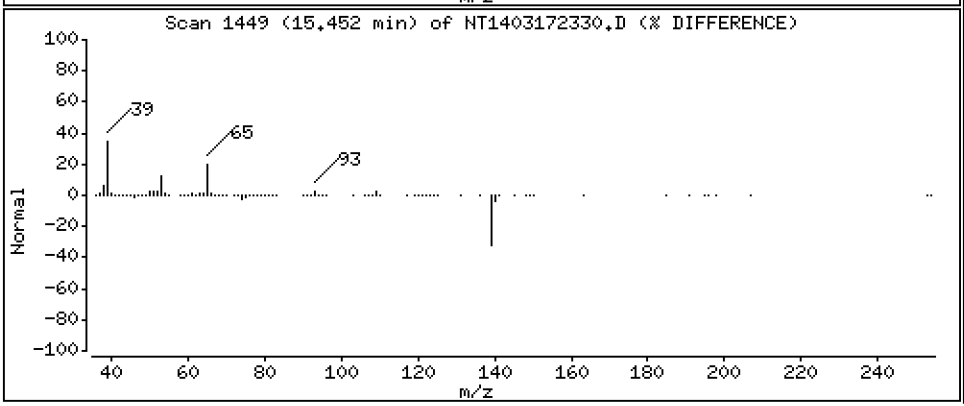












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

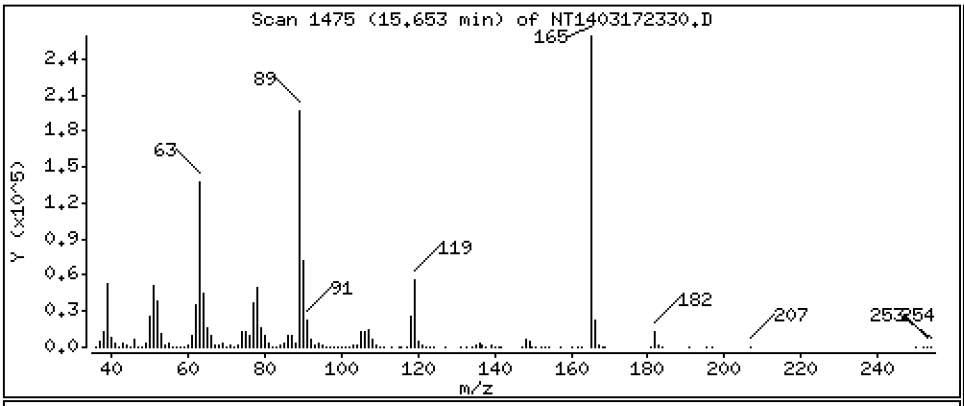
Operator: JGR

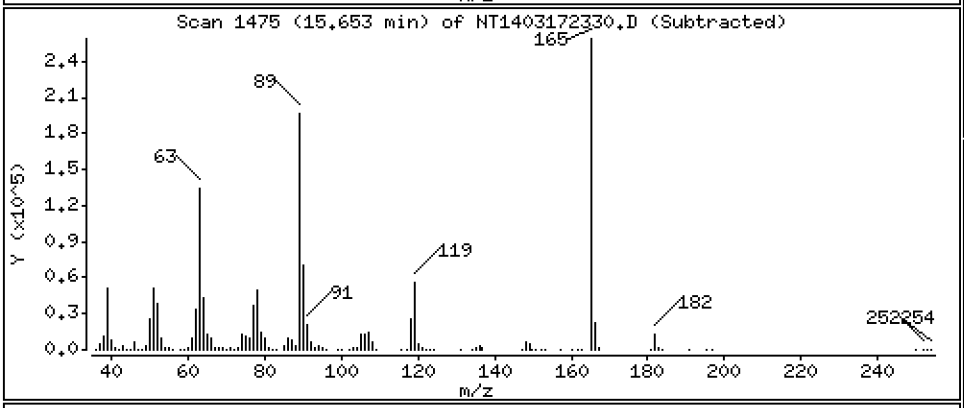
Column phase: ZB-5msi

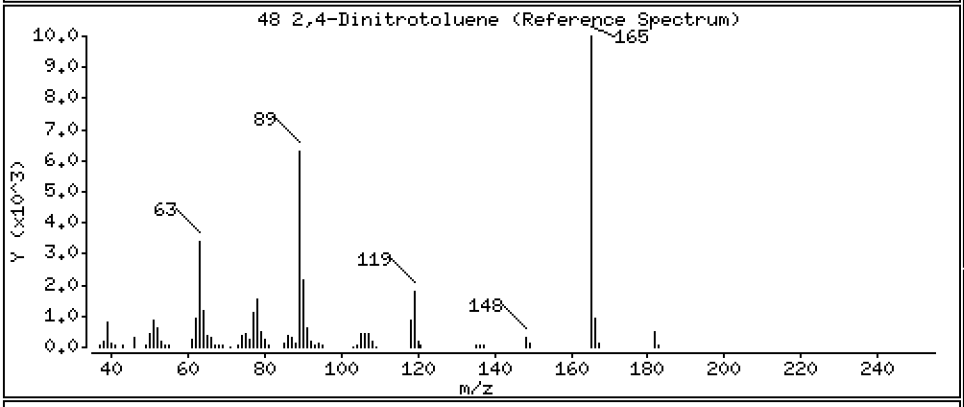
Column diameter: 0.25

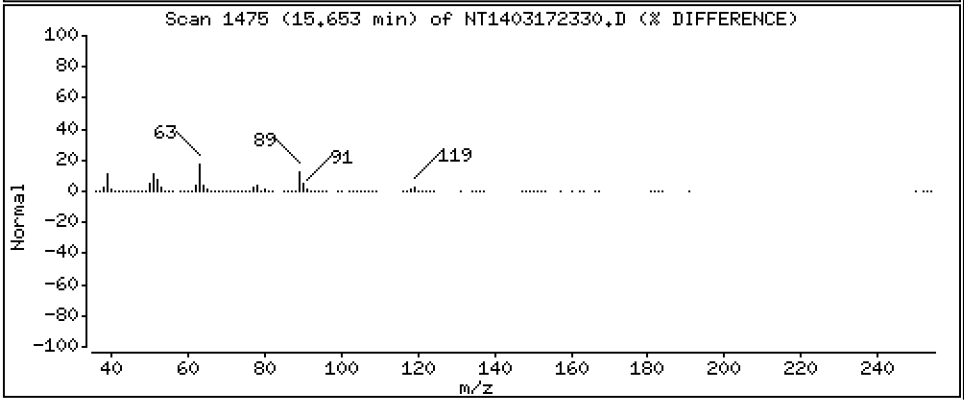
48 2,4-Dinitrotoluene

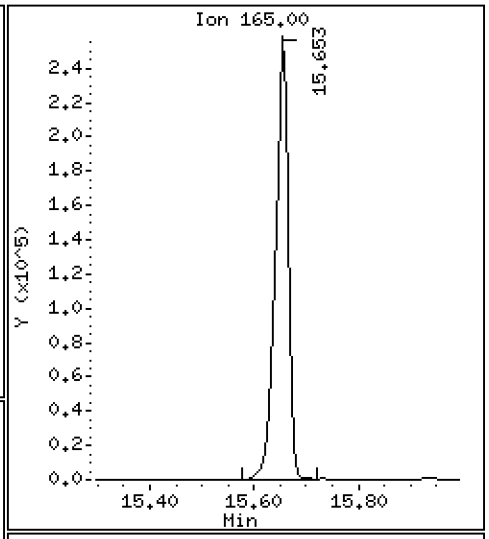
Concentration: 9.611 ug/mL

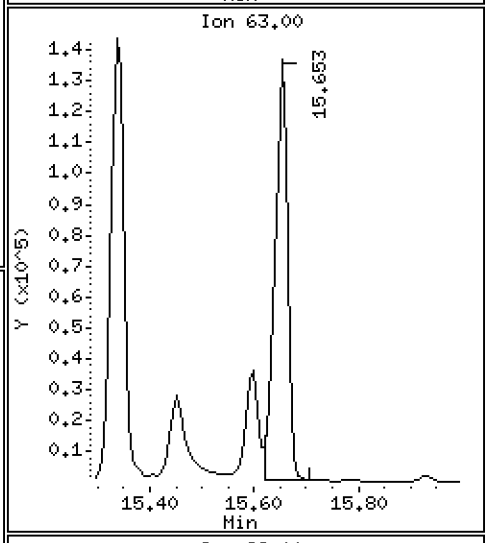


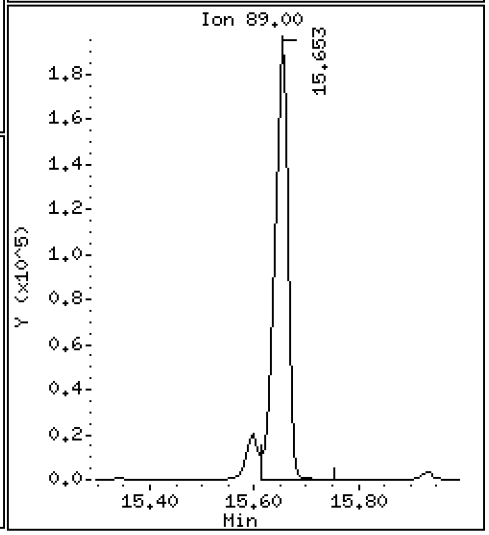












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

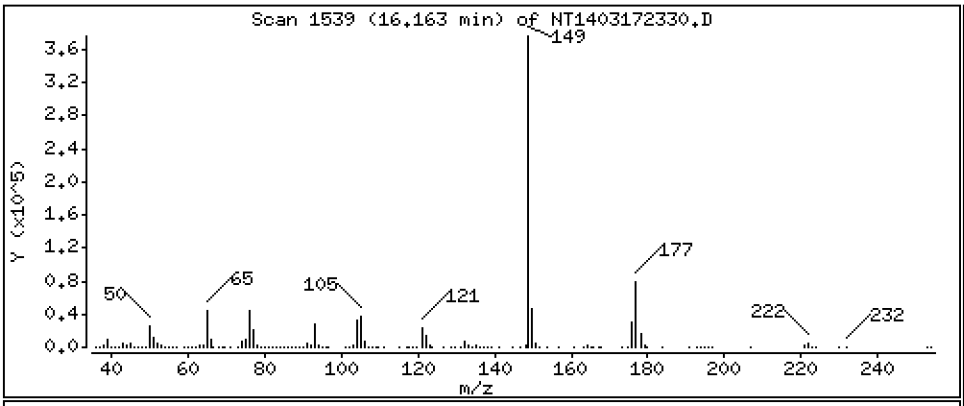
Operator: JGR

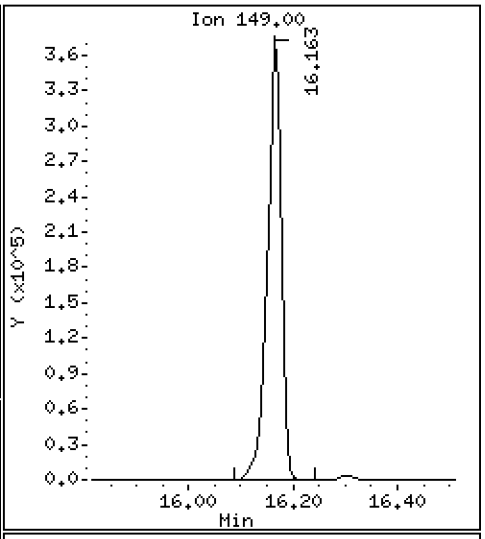
Column phase: ZB-5msi

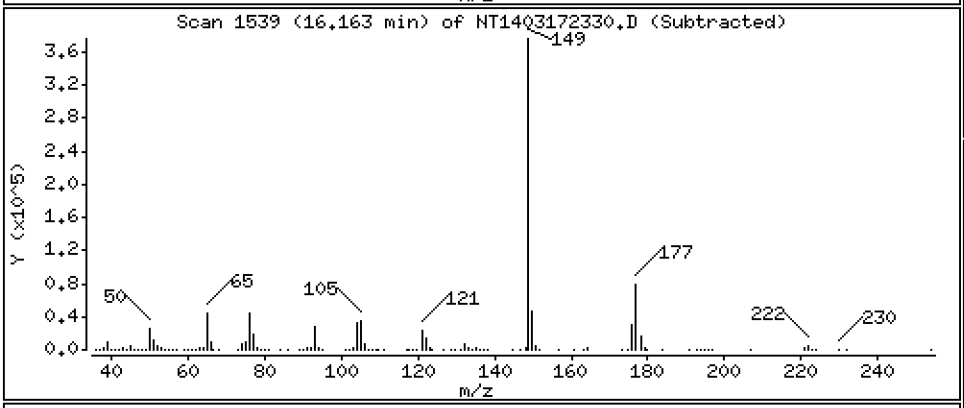
Column diameter: 0.25

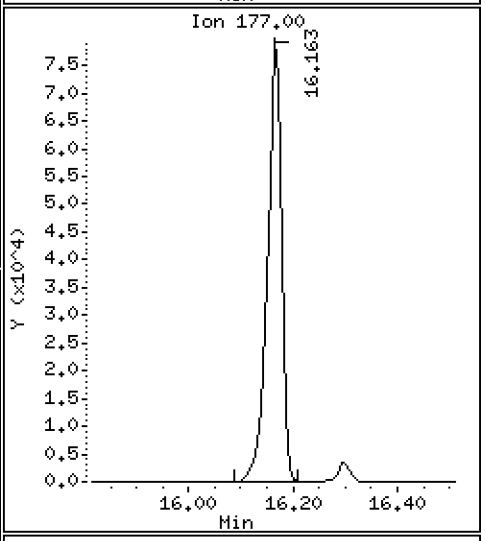
50 Diethylphthalate

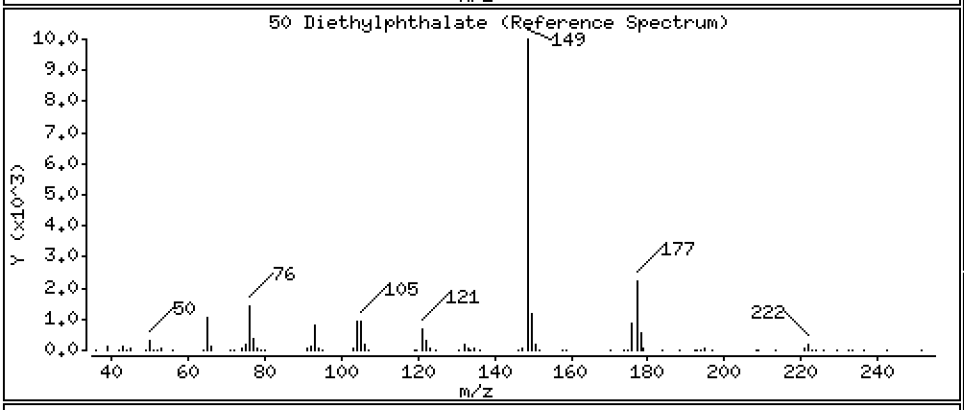
Concentration: 5.328 ug/mL

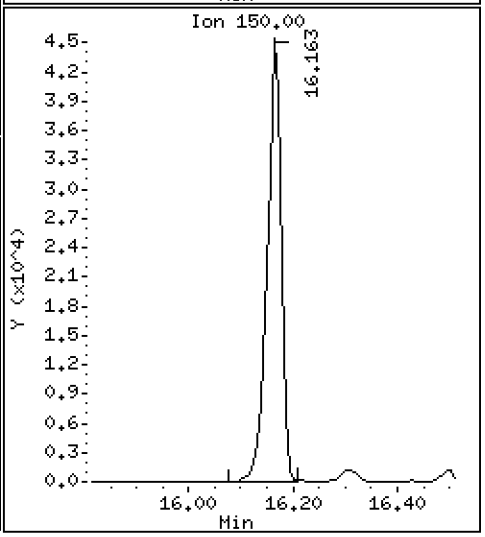


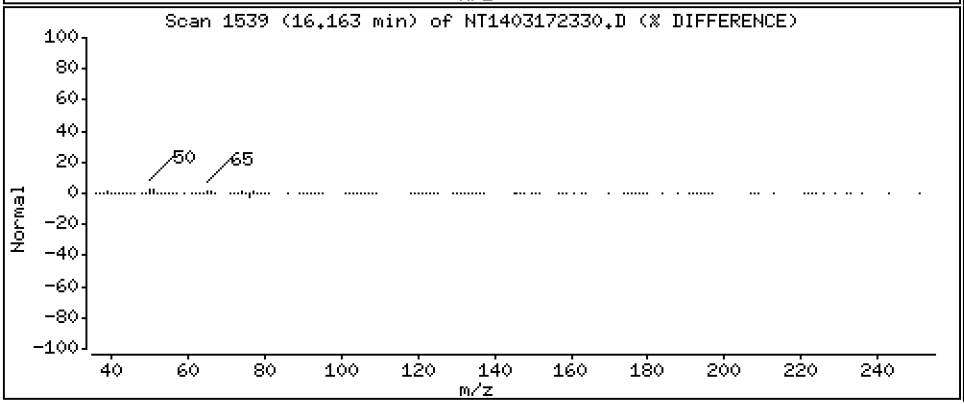












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

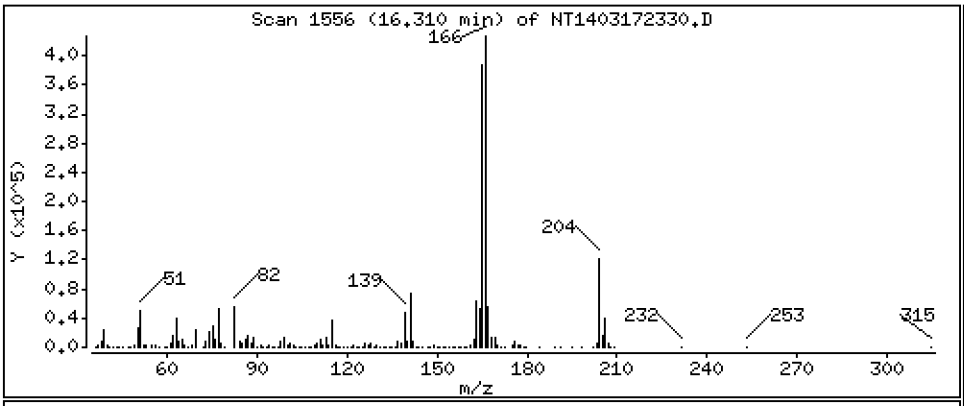
Operator: JGR

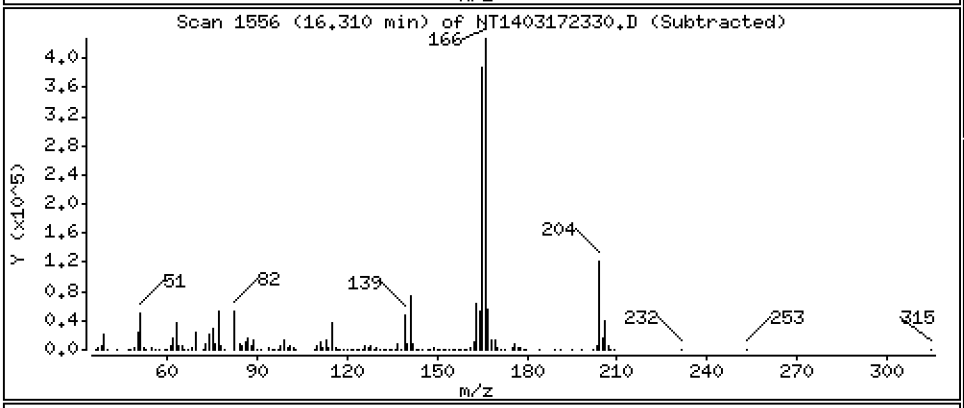
Column phase: ZB-5msi

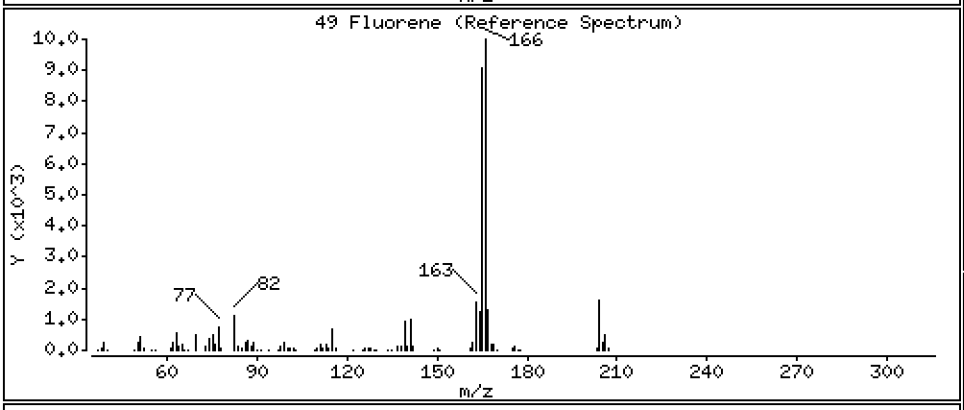
Column diameter: 0.25

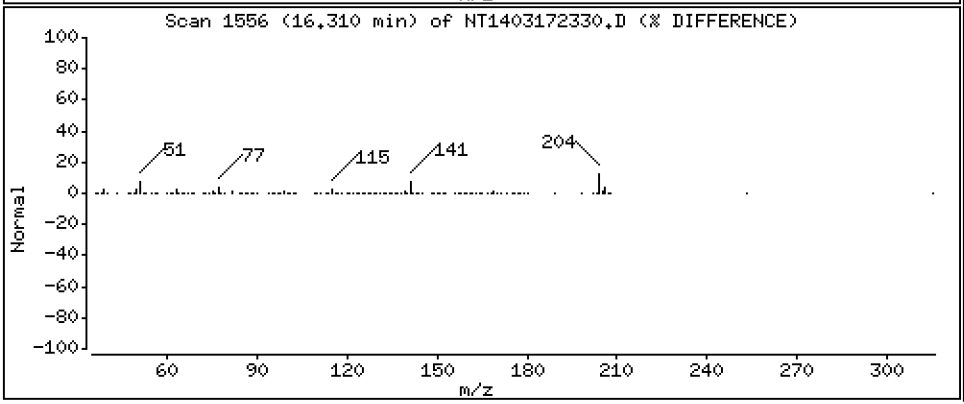
49 Fluorene

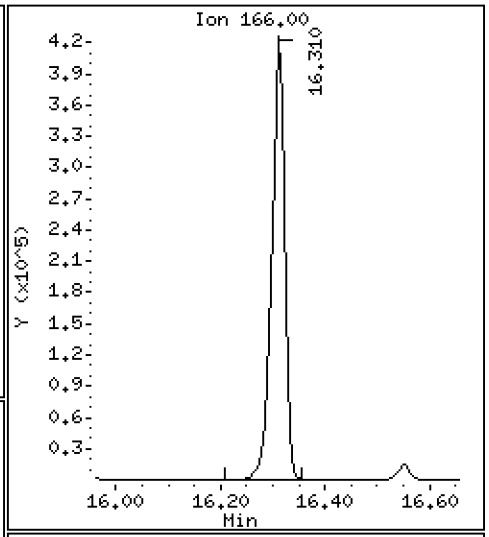
Concentration: 4.707 ug/mL

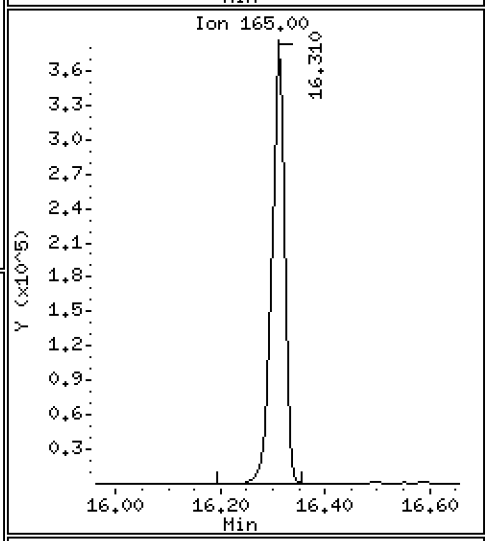


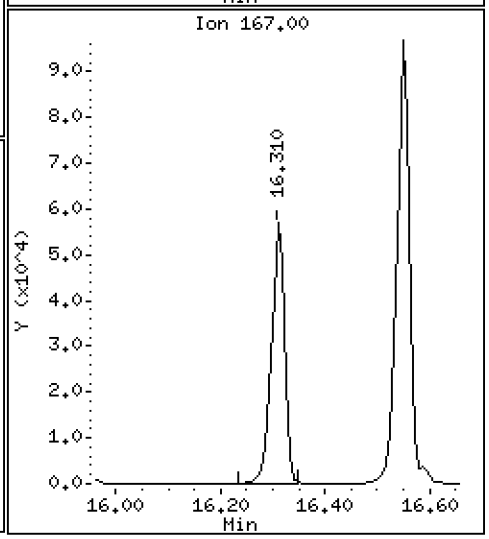












Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172330.D

Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

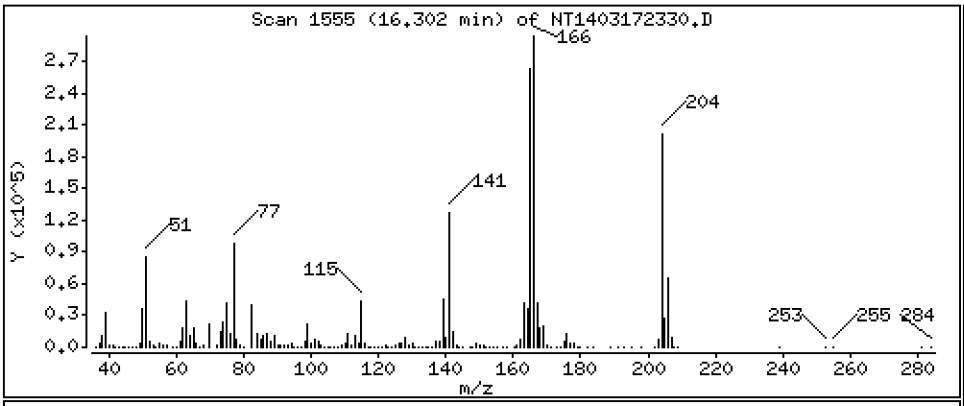
Operator: JGR

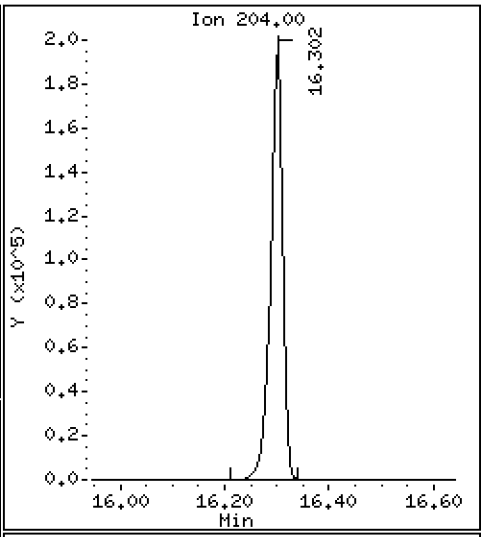
Column phase: ZB-5msi

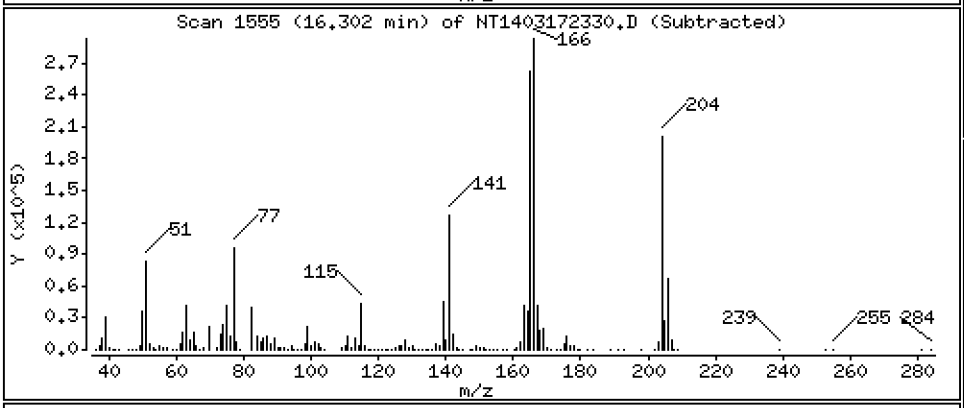
Column diameter: 0.25

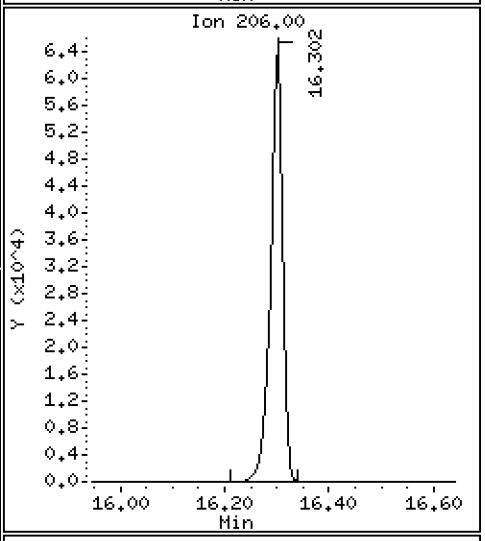
51 4-Chlorophenyl-phenylether

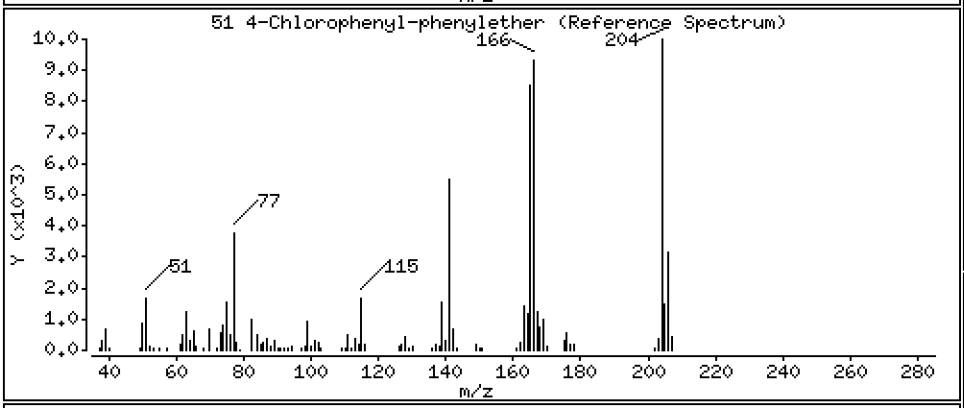
Concentration: 4.943 ug/mL

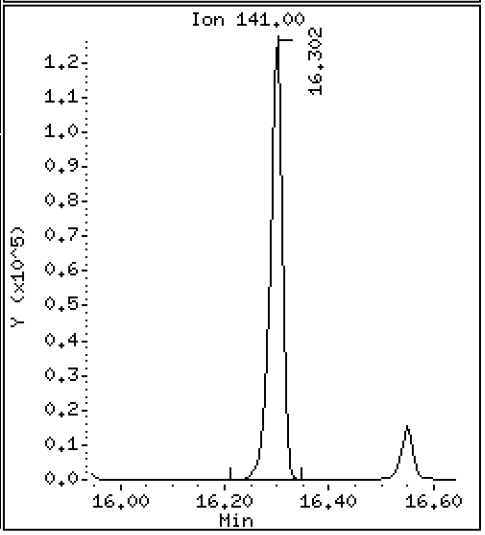


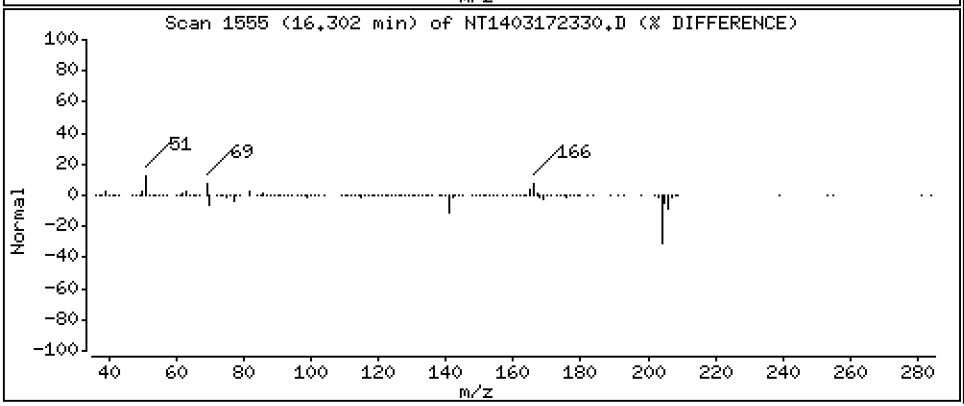












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

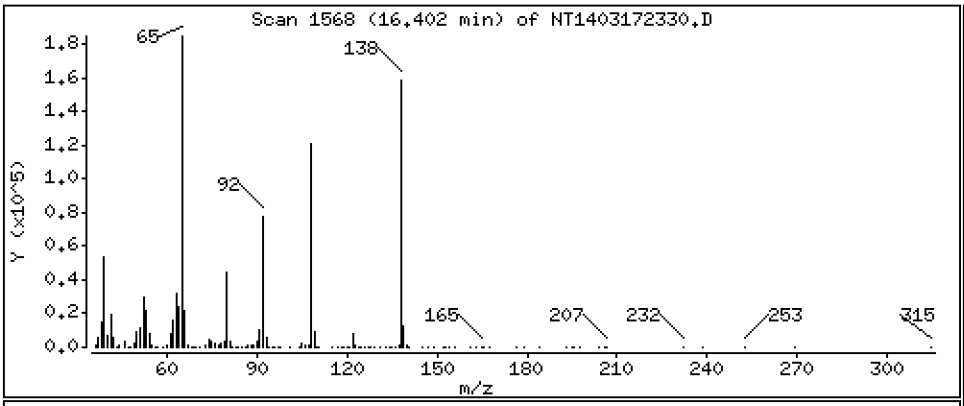
Operator: JGR

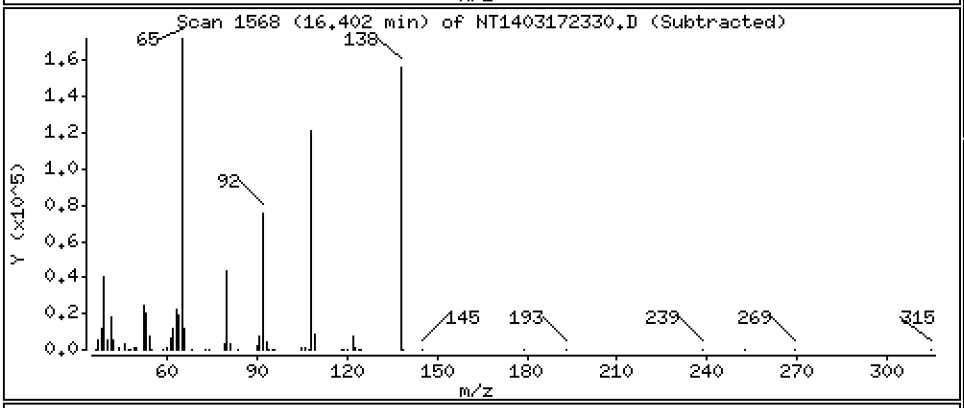
Column phase: ZB-5msi

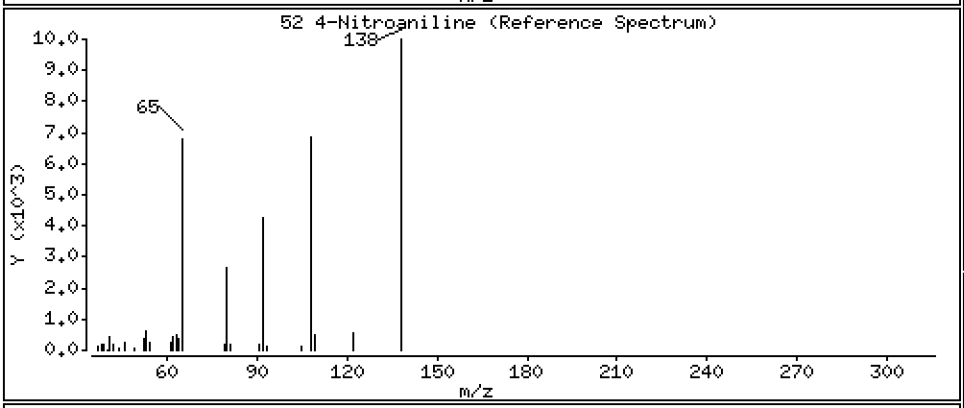
Column diameter: 0.25

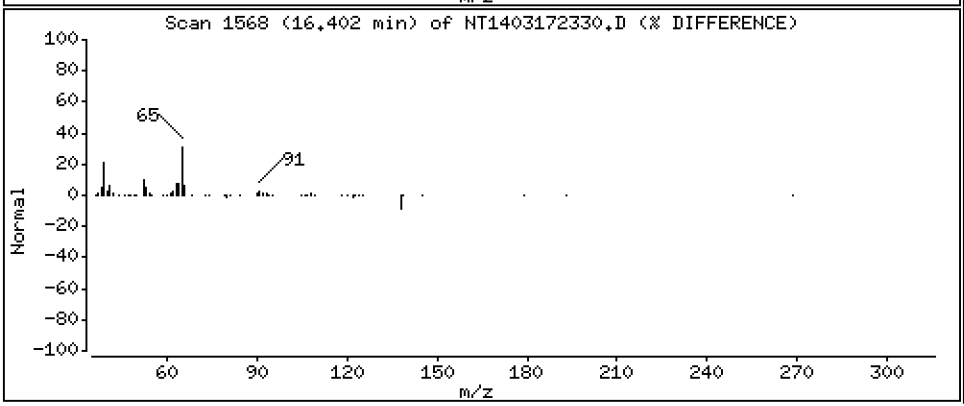
52 4-Nitroaniline

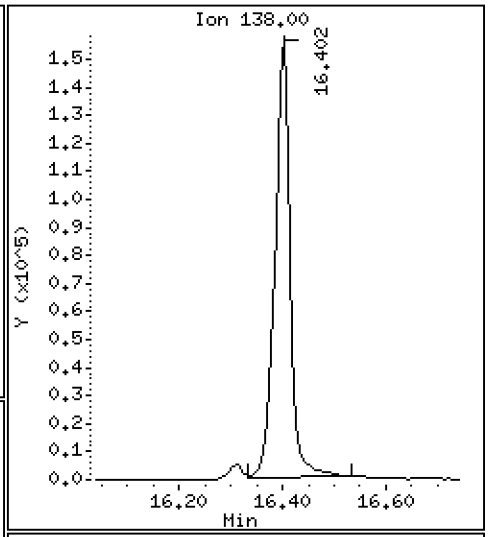
Concentration: 8.288 ug/mL

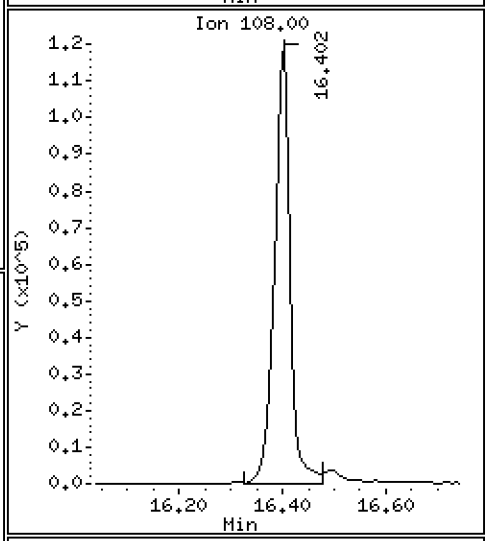


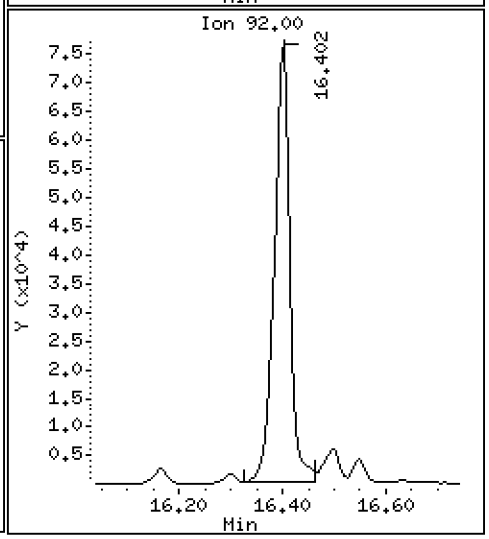












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

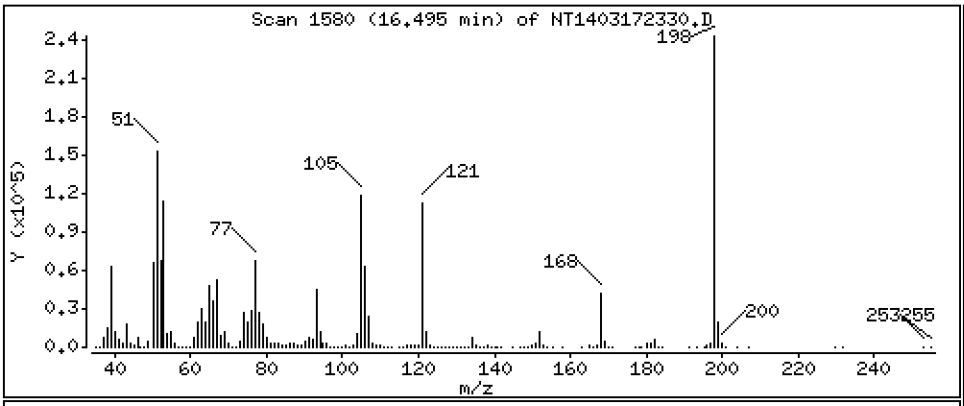
Operator: JGR

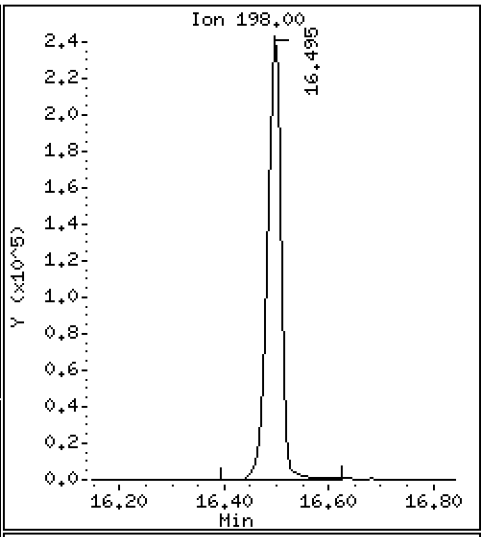
Column phase: ZB-5msi

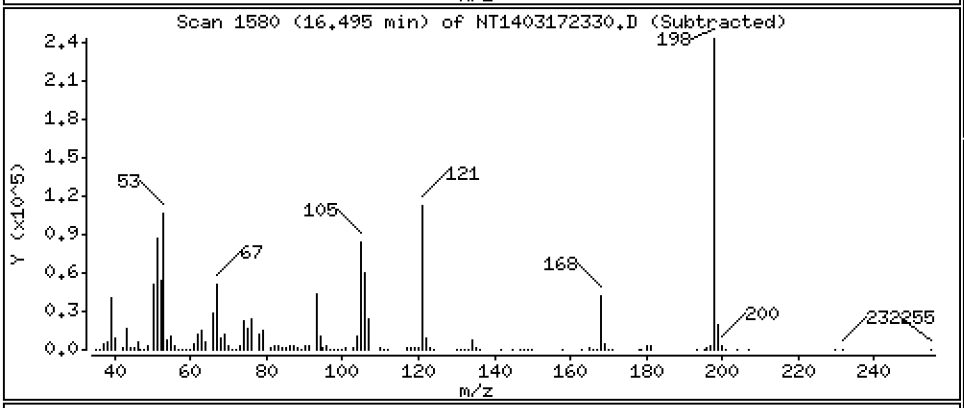
Column diameter: 0.25

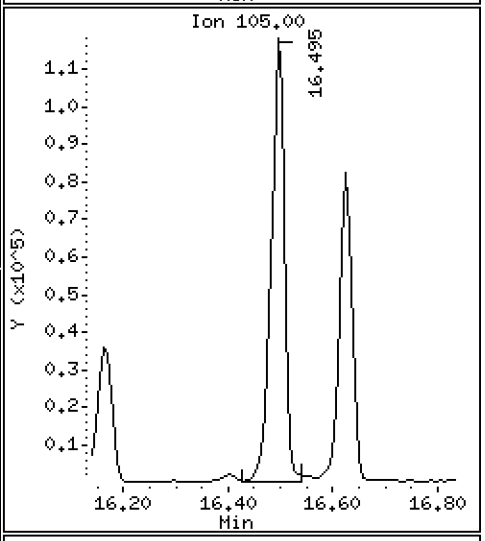
53 4,6-Dinitro-2-methylphenol

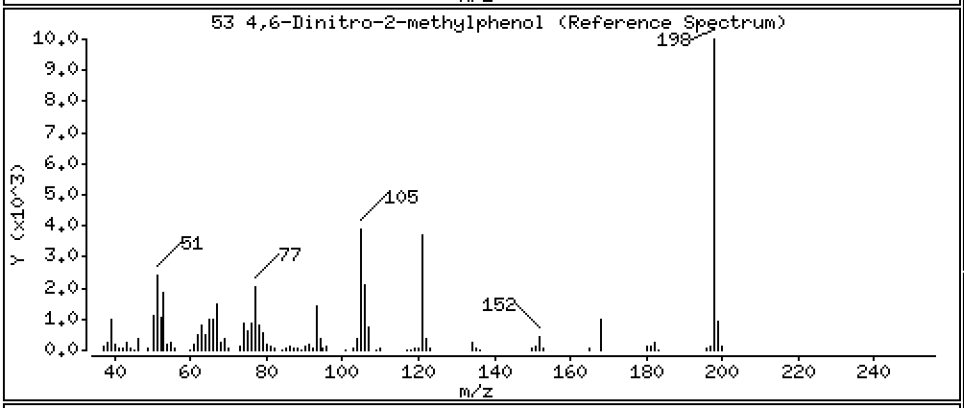
Concentration: 18.58 ug/mL

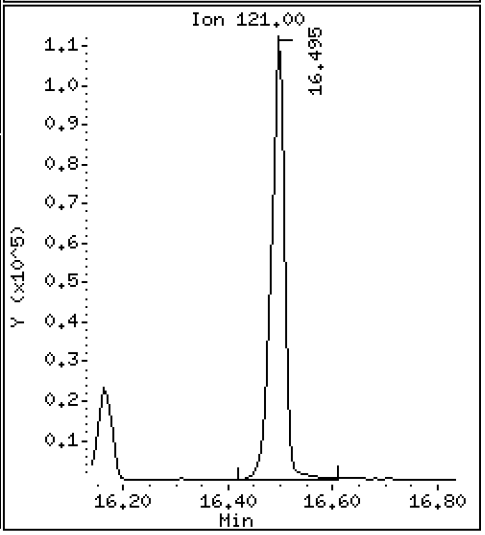


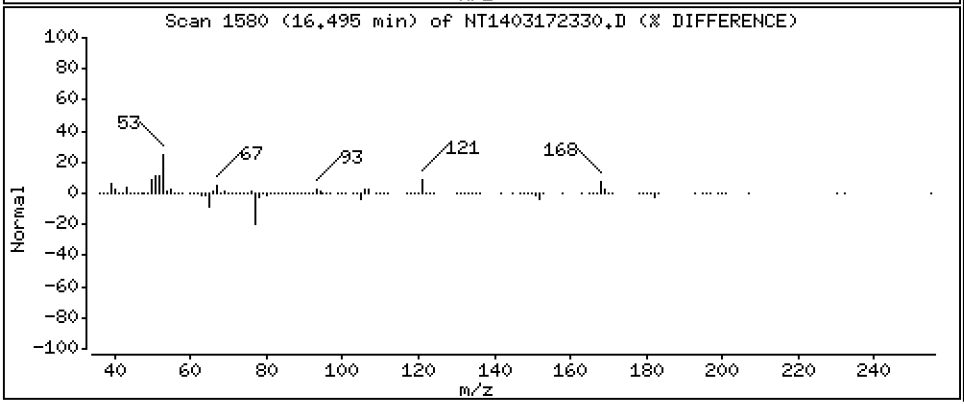












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

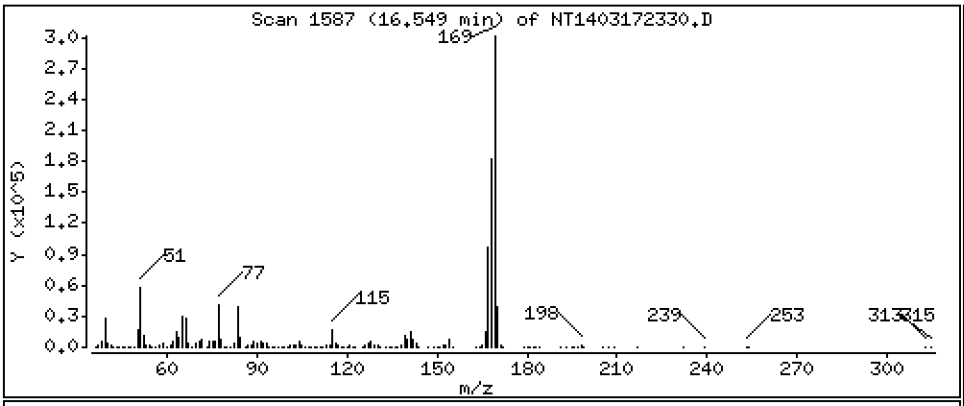
Operator: JGR

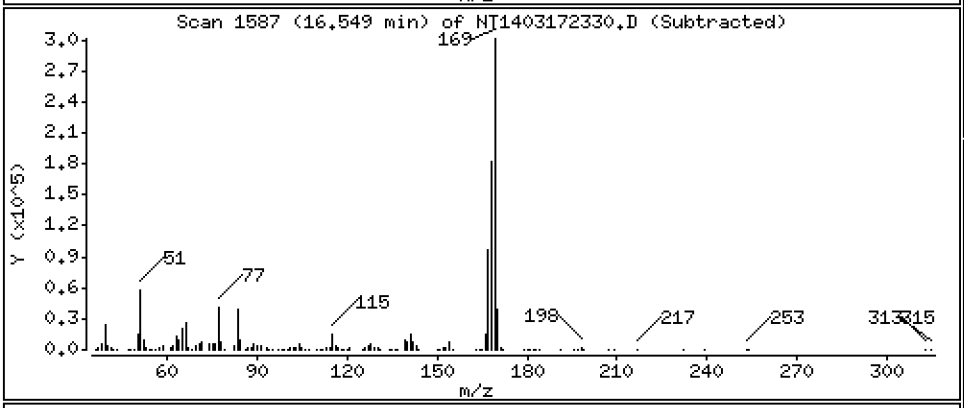
Column phase: ZB-5msi

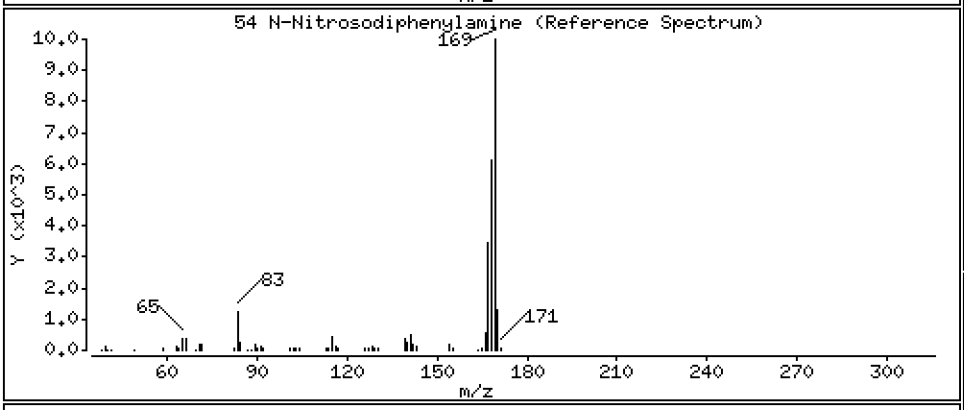
Column diameter: 0.25

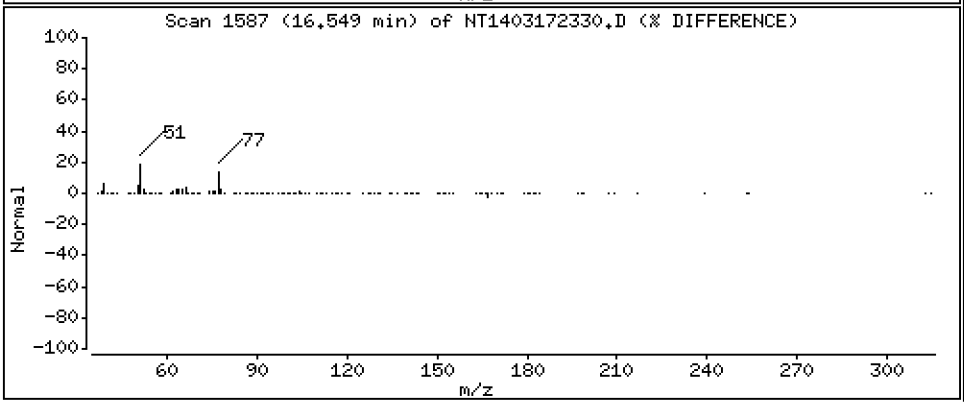
54 N-Nitrosodiphenylamine

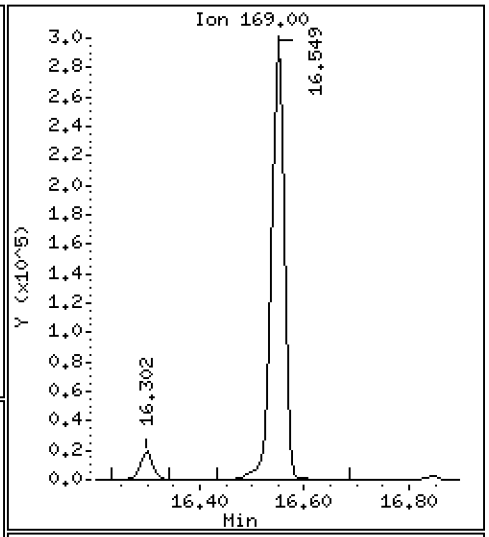
Concentration: 5.619 ug/mL

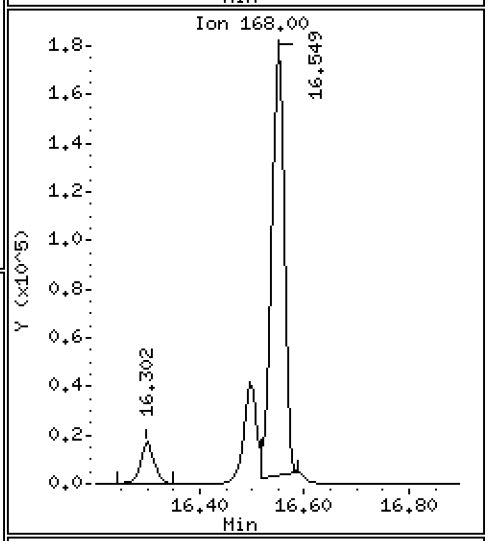


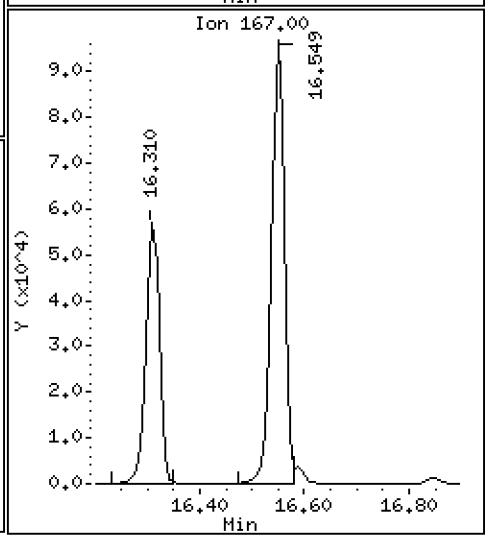












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

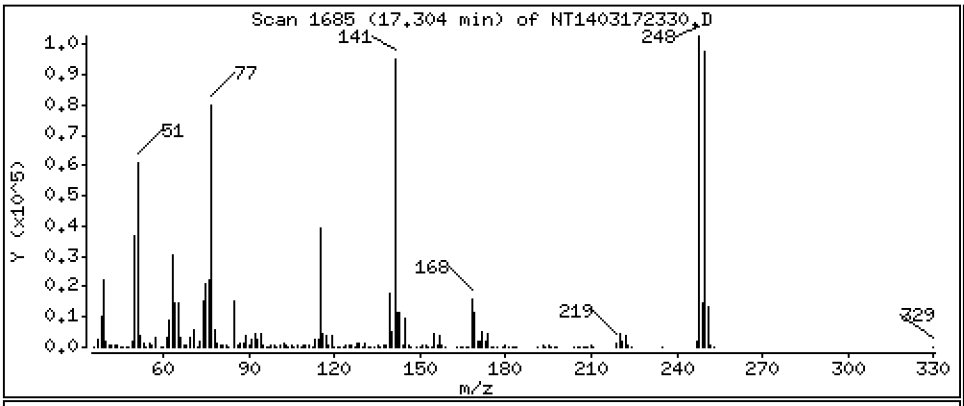
Operator: JGR

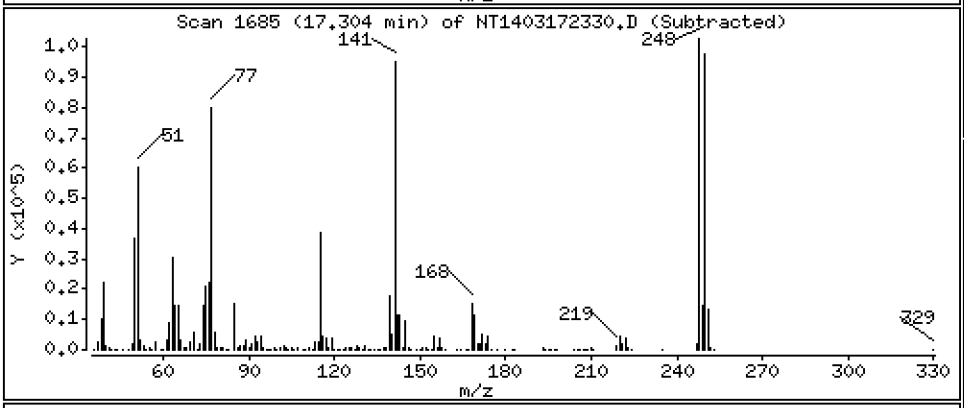
Column phase: ZB-5msi

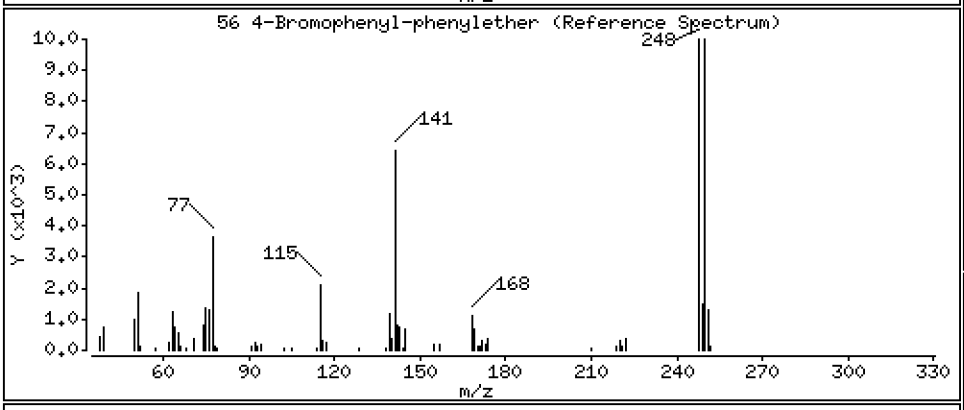
Column diameter: 0.25

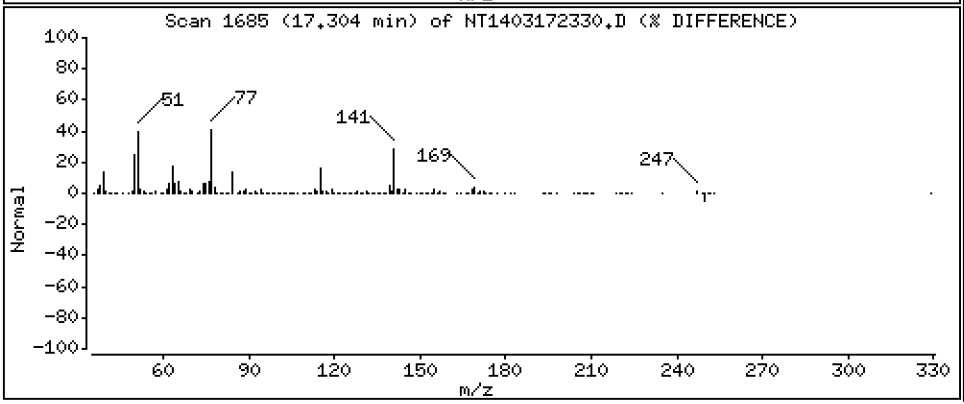
56 4-Bromophenyl-phenylether

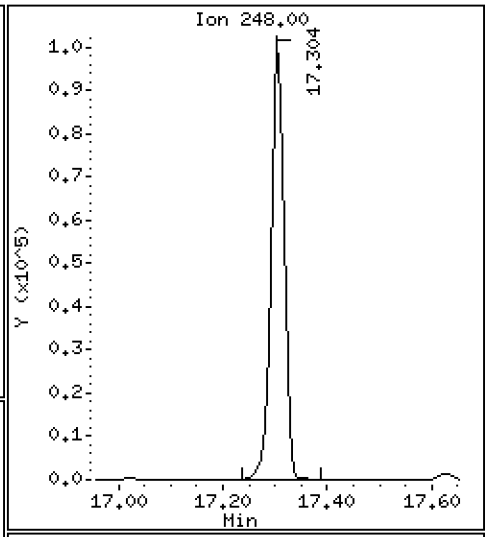
Concentration: 5.789 ug/mL

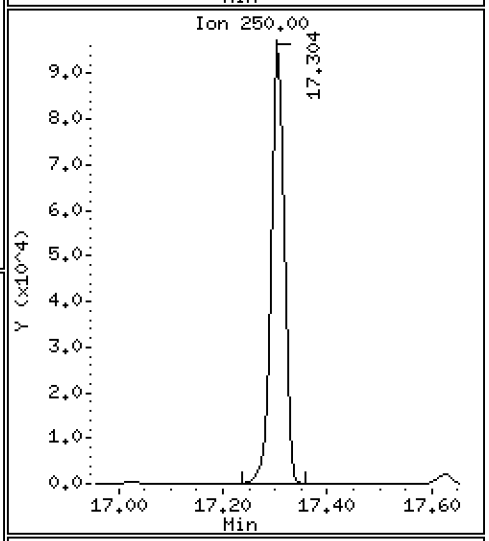


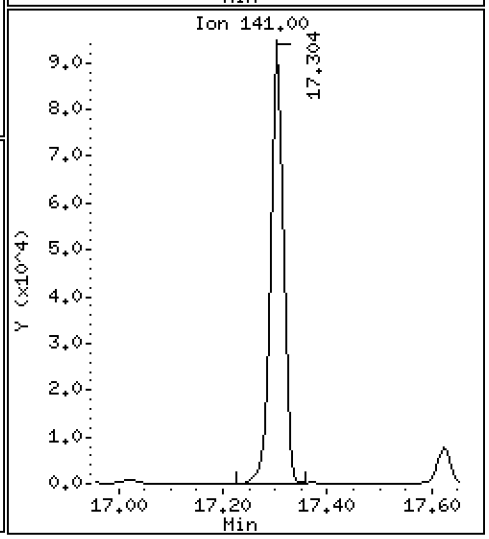












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

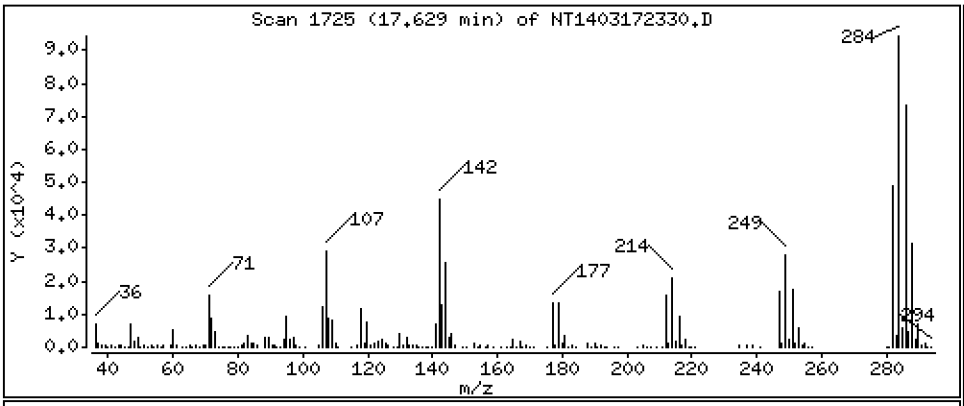
Operator: JGR

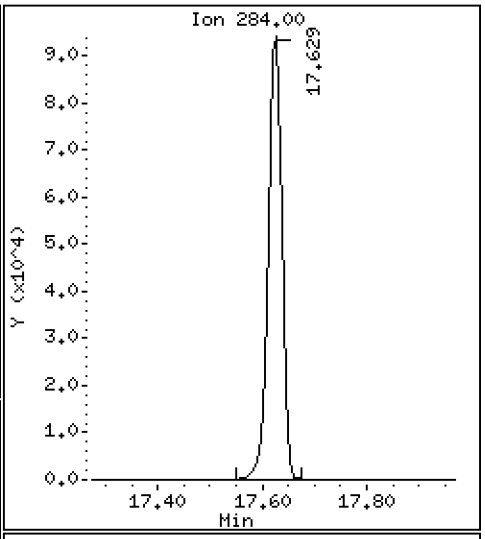
Column phase: ZB-5msi

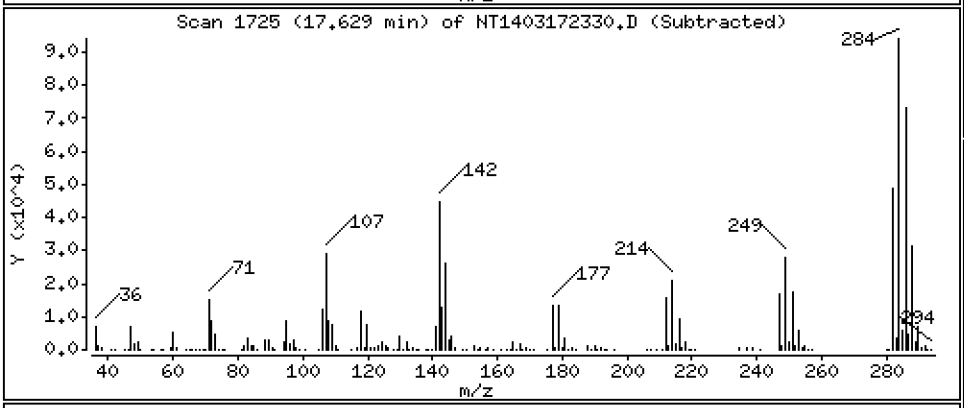
Column diameter: 0.25

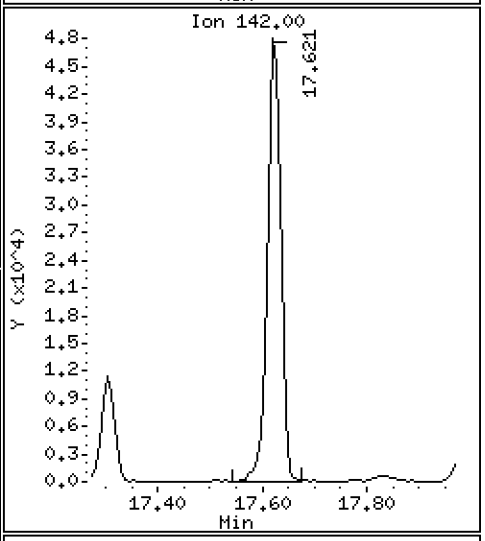
57 Hexachlorobenzene

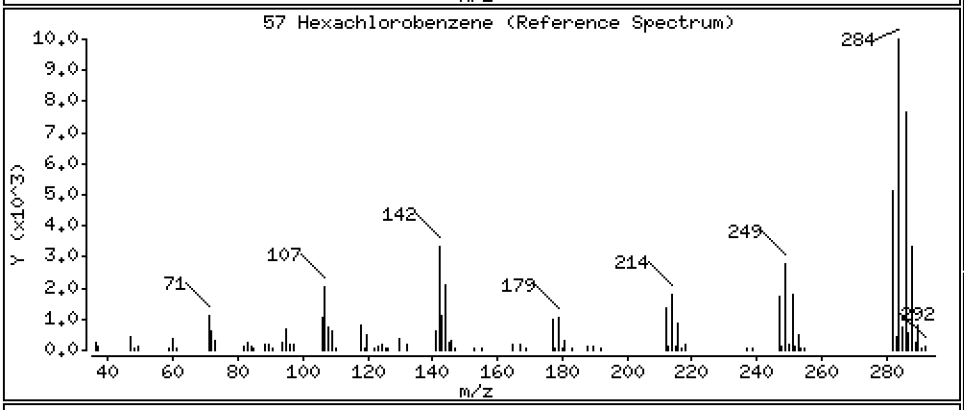
Concentration: 5.341 ug/mL

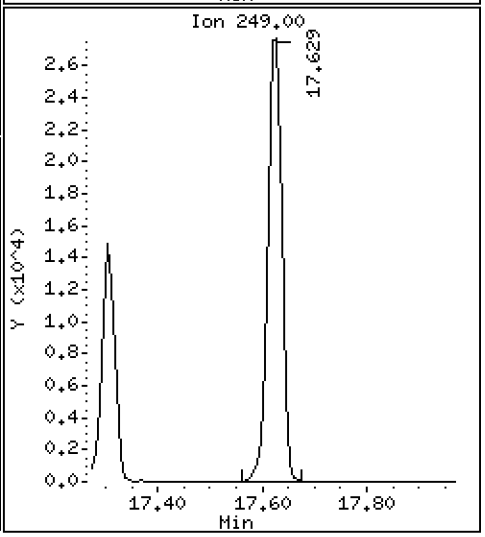


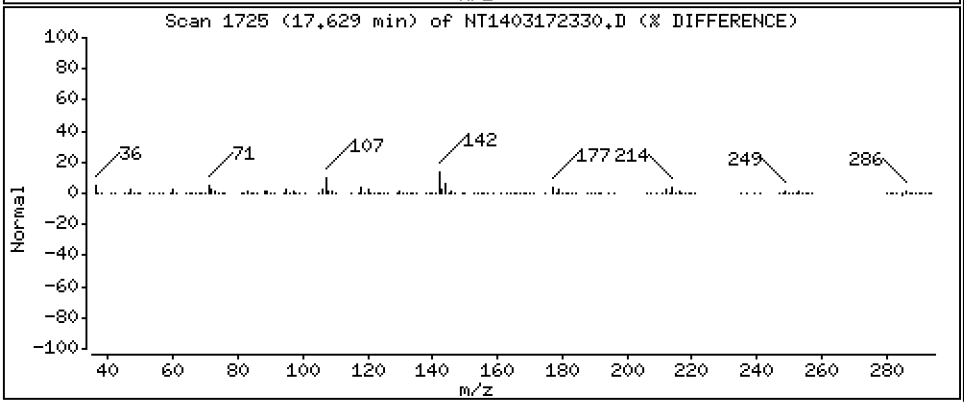












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

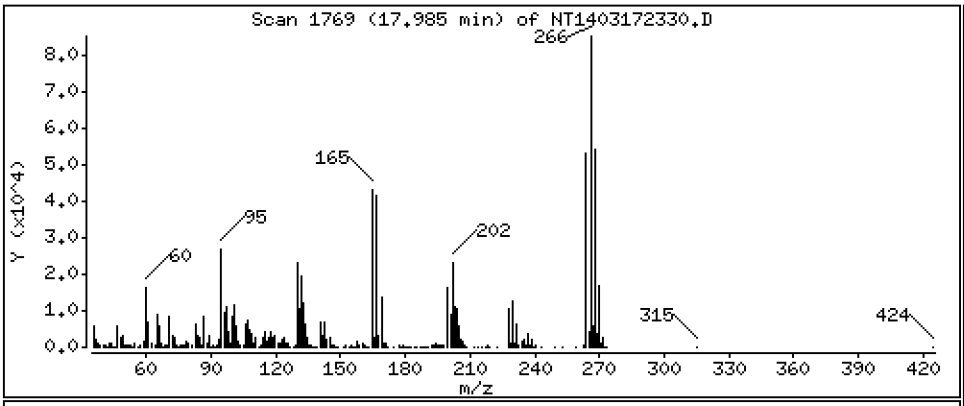
Operator: JGR

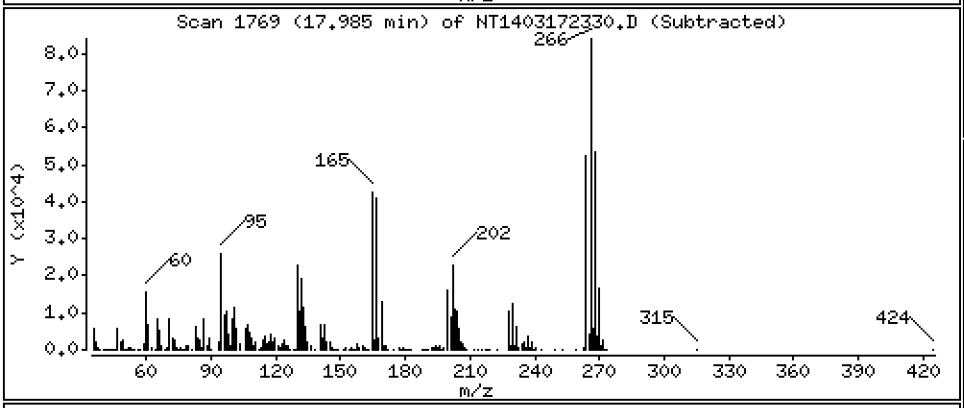
Column phase: ZB-5msi

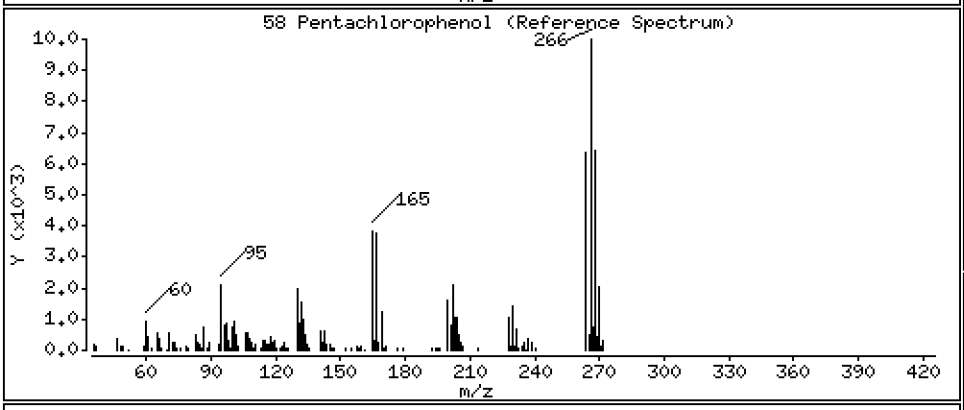
Column diameter: 0.25

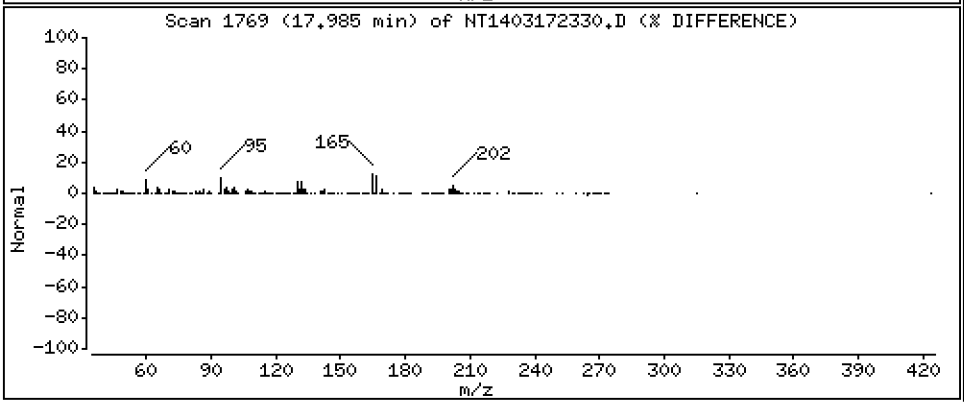
58 Pentachlorophenol

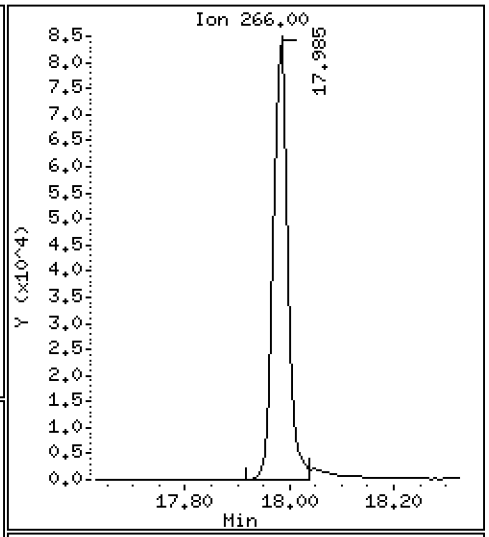
Concentration: 7.284 ug/mL

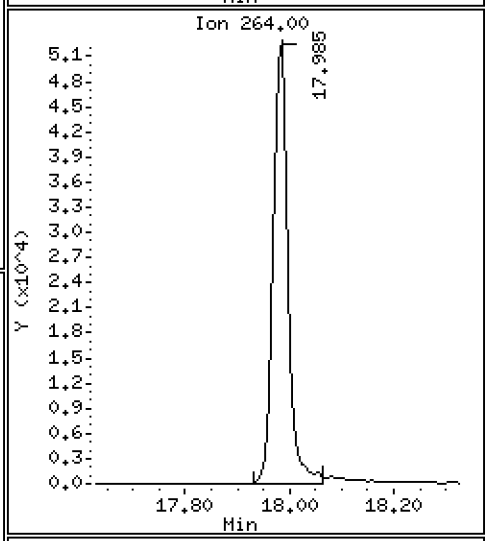


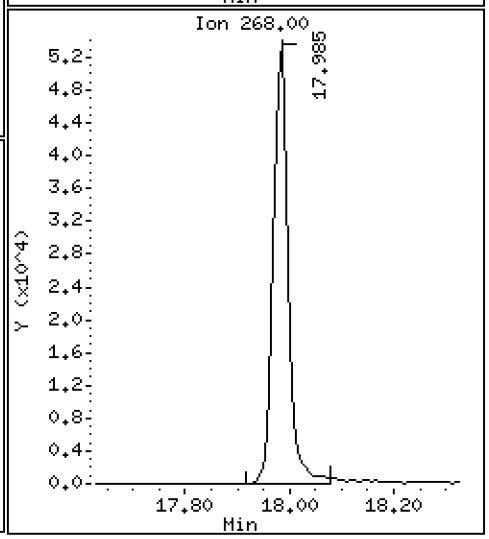












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

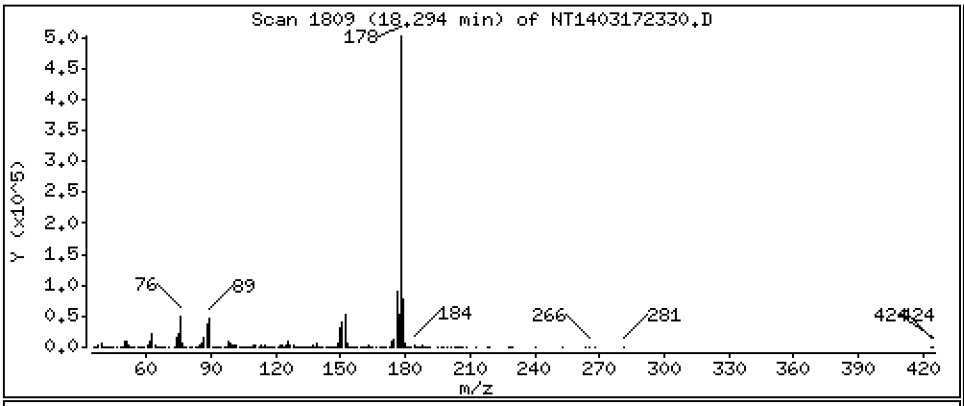
Operator: JGR

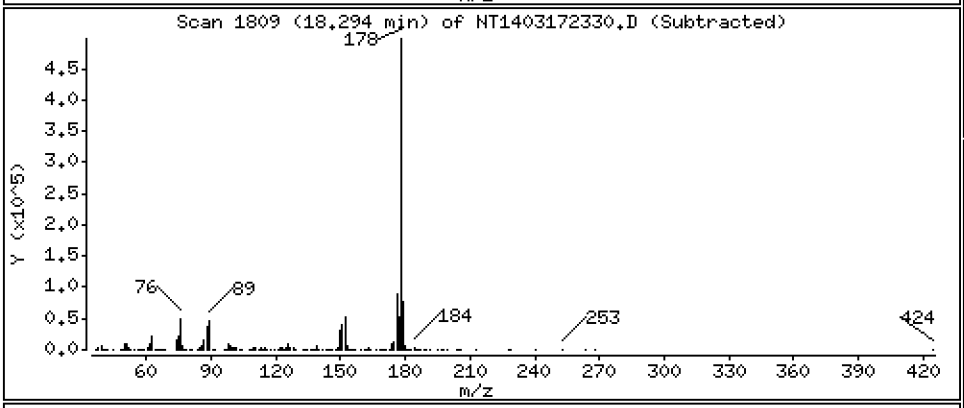
Column phase: ZB-5msi

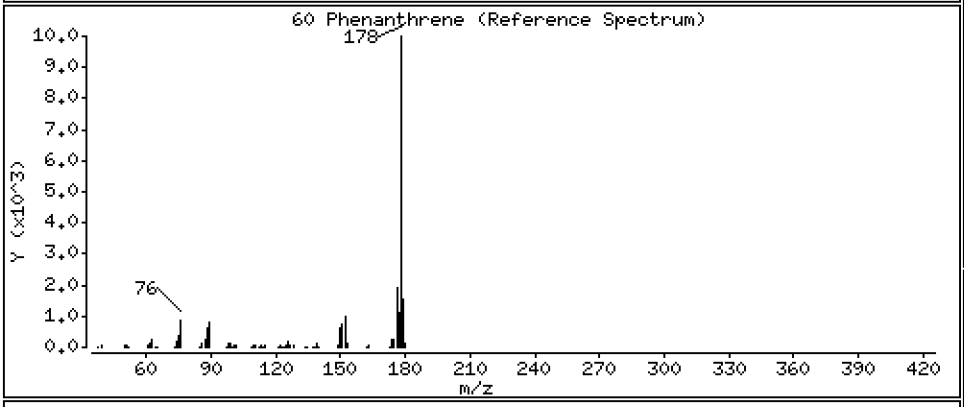
Column diameter: 0.25

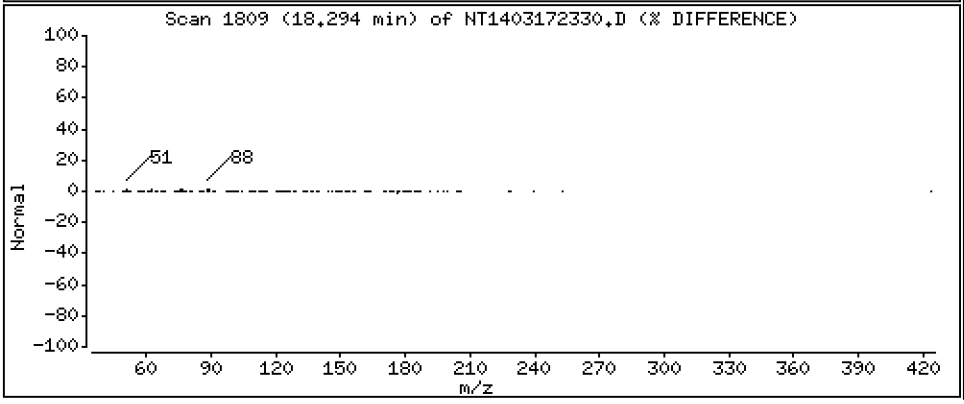
60 Phenanthrene

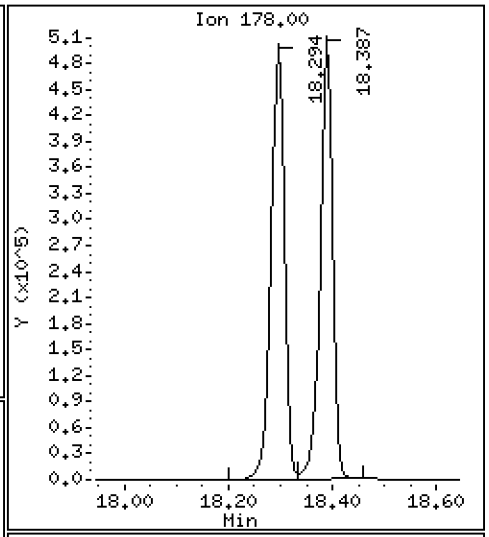
Concentration: 4.661 ug/mL

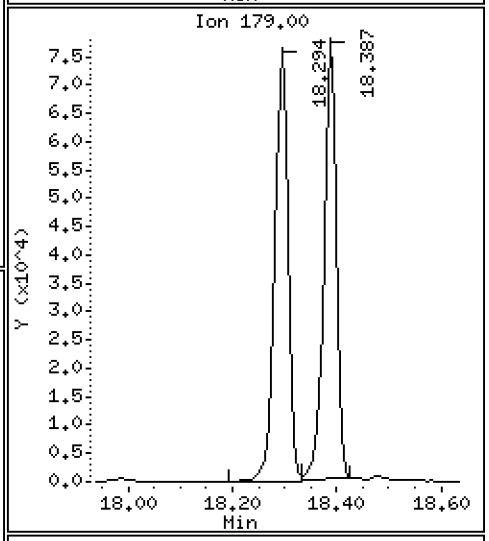


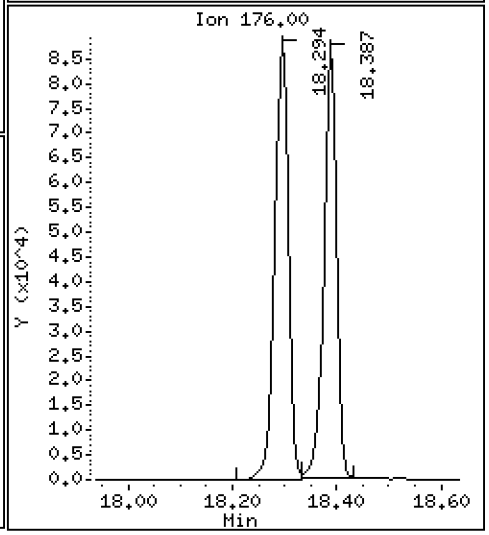












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

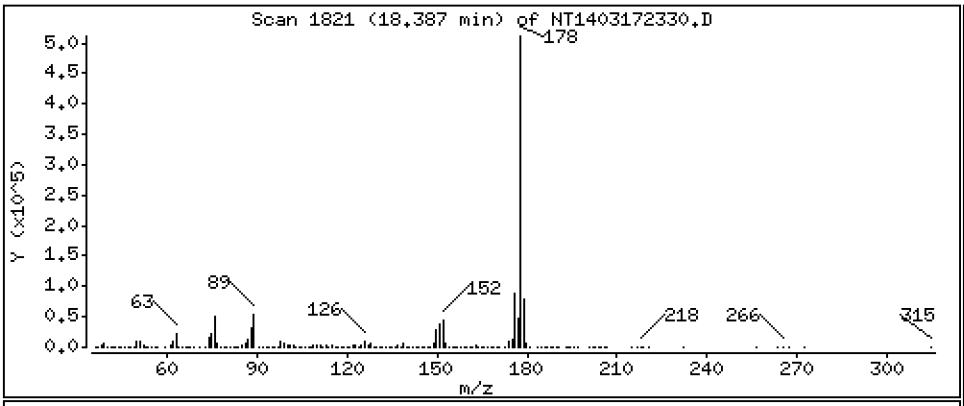
Operator: JGR

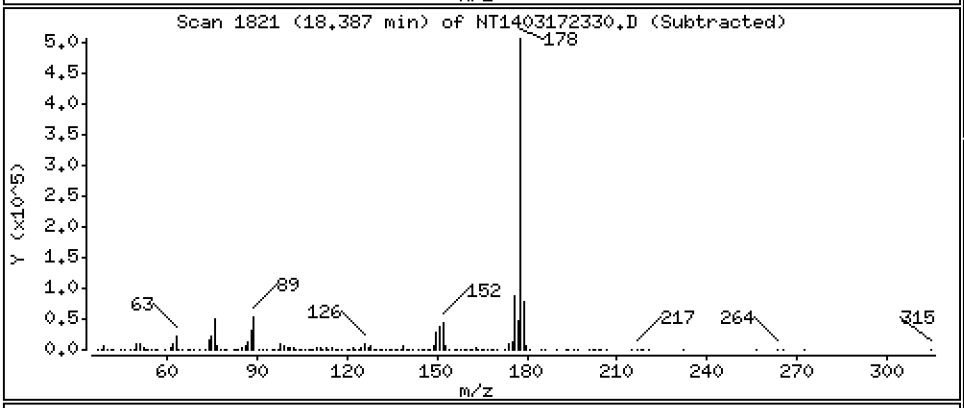
Column phase: ZB-5msi

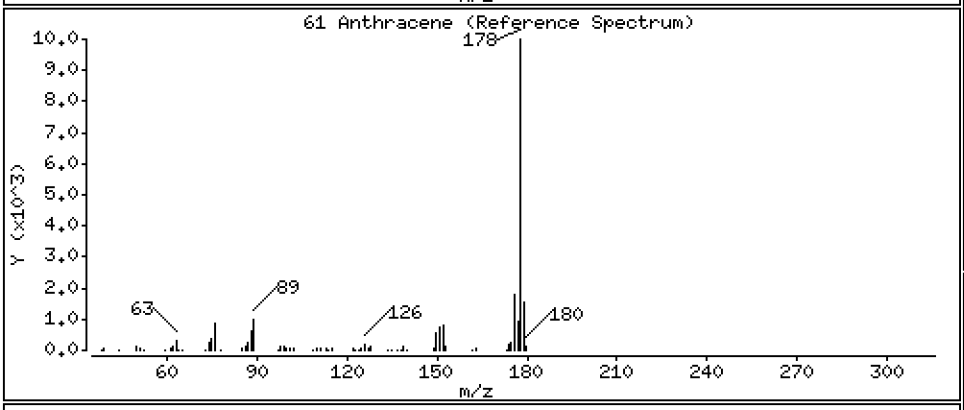
Column diameter: 0.25

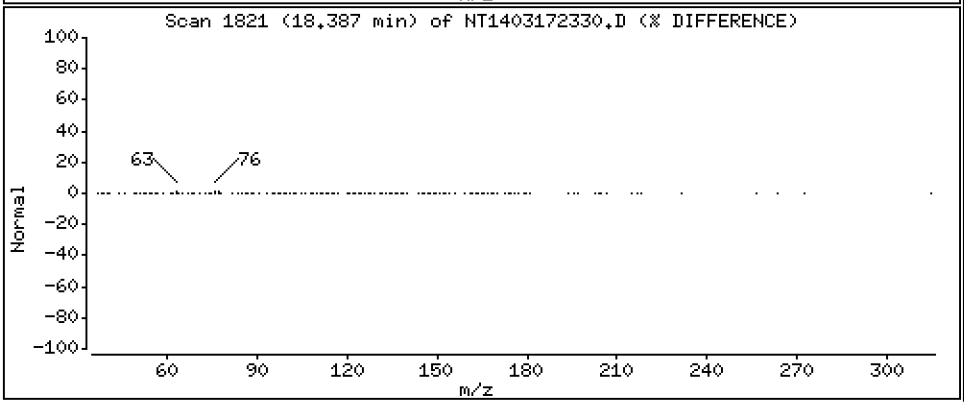
61 Anthracene

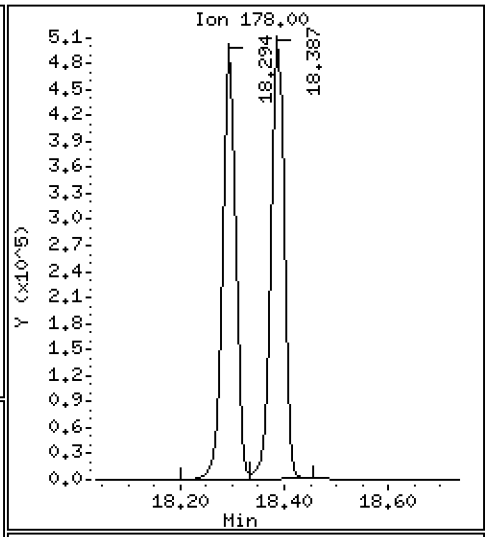
Concentration: 4.842 ug/mL

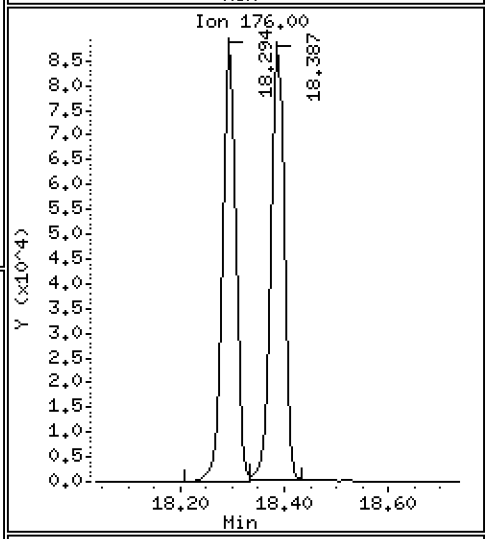


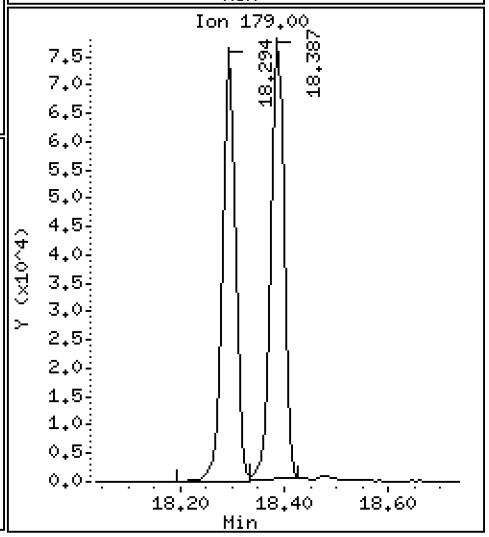












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

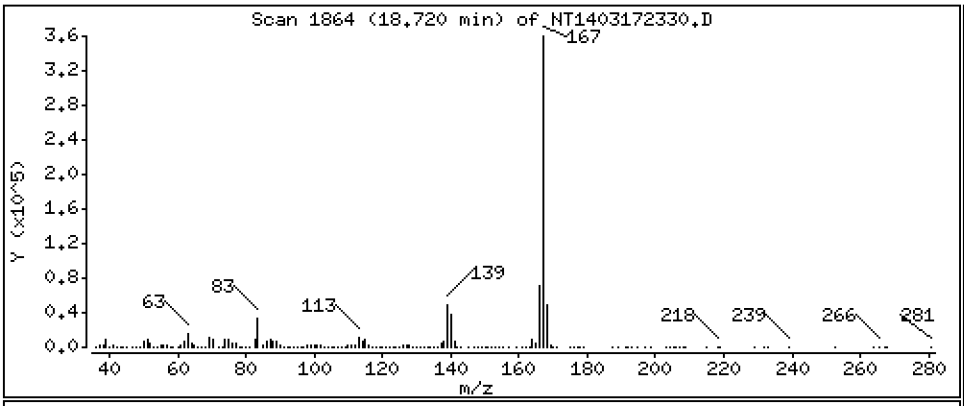
Operator: JGR

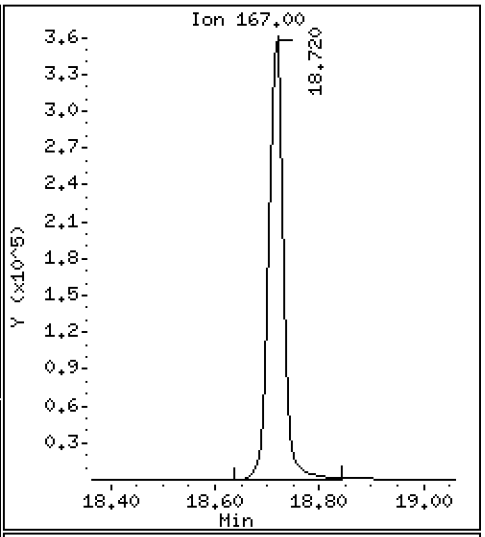
Column phase: ZB-5msi

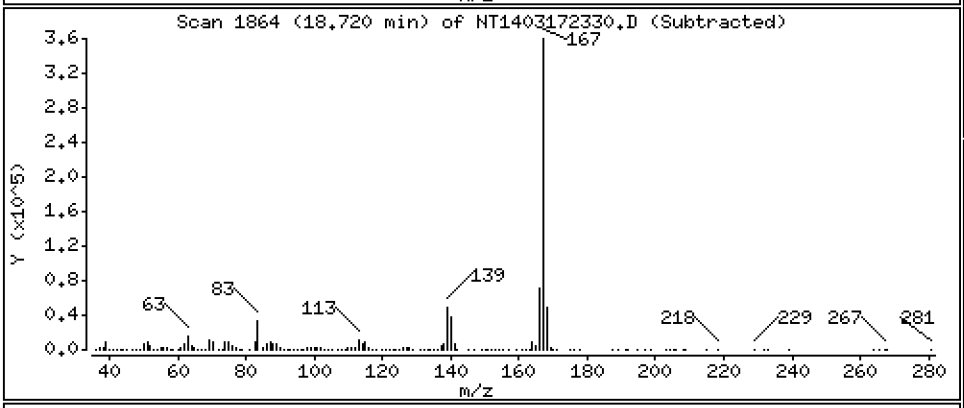
Column diameter: 0.25

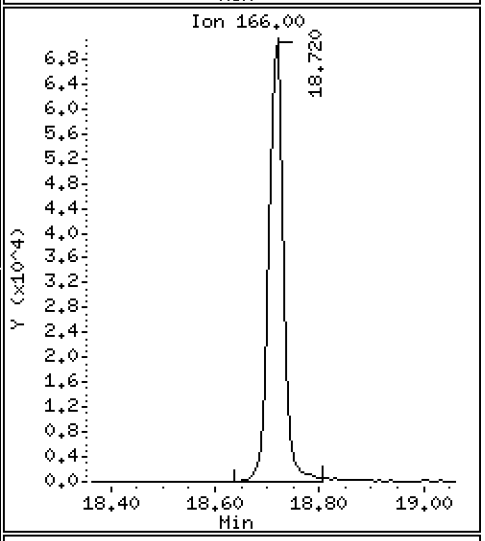
62 Carbazole

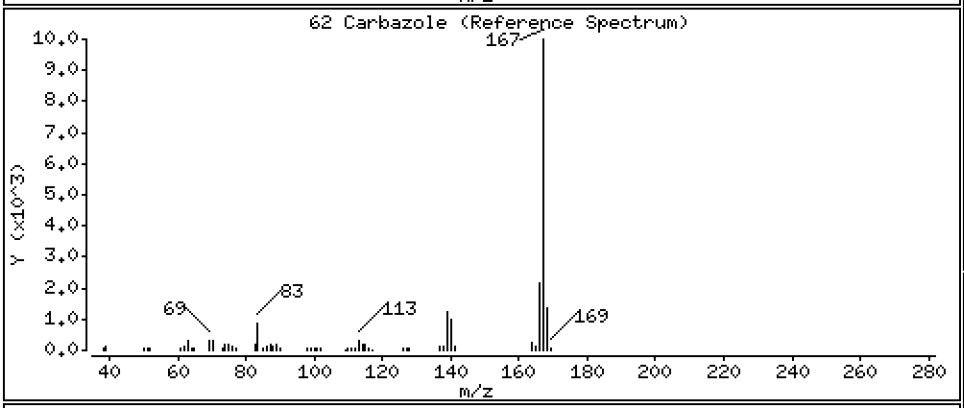
Concentration: 4.371 ug/mL

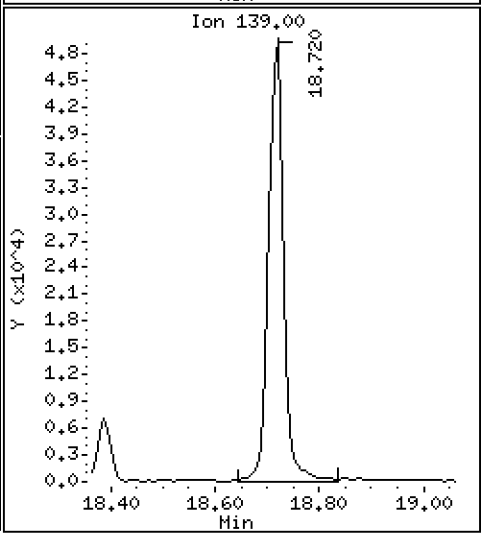


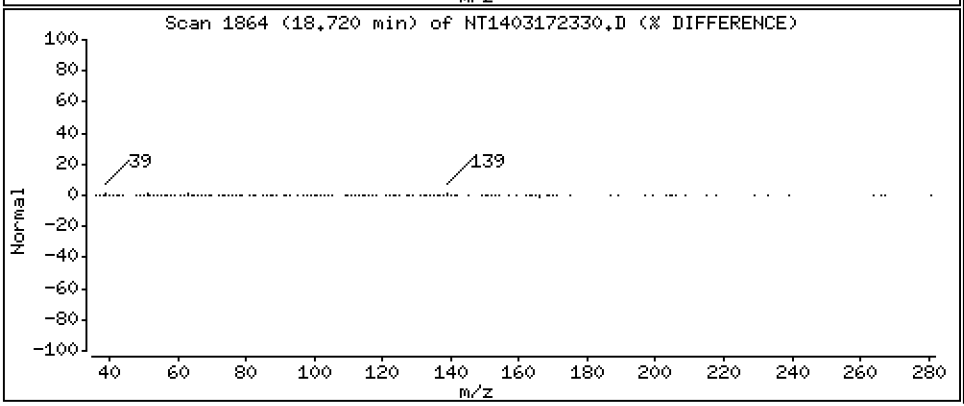












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

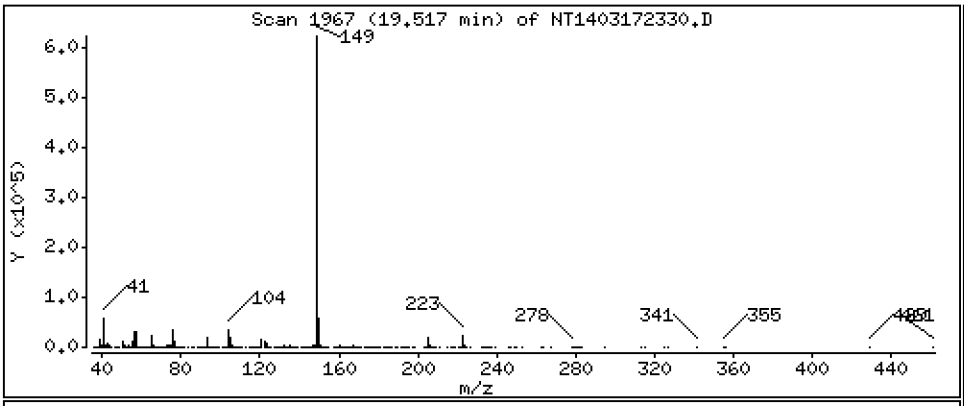
Operator: JGR

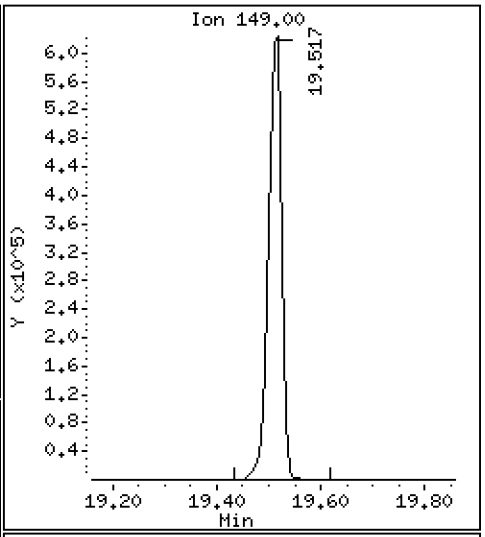
Column phase: ZB-5msi

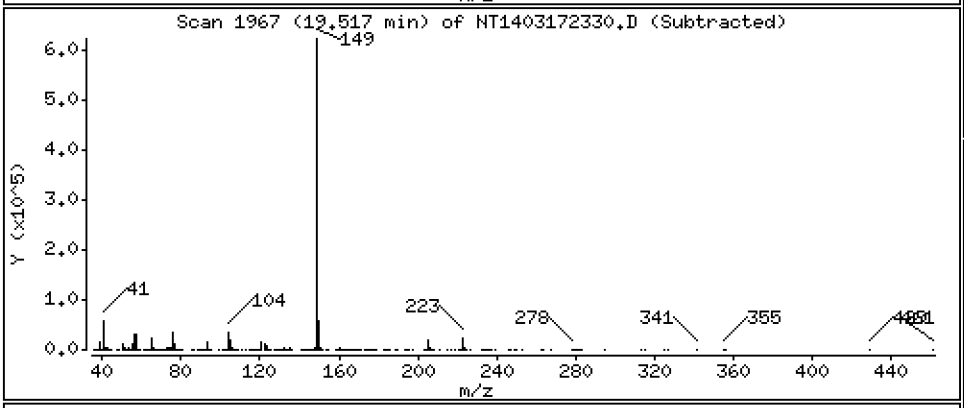
Column diameter: 0.25

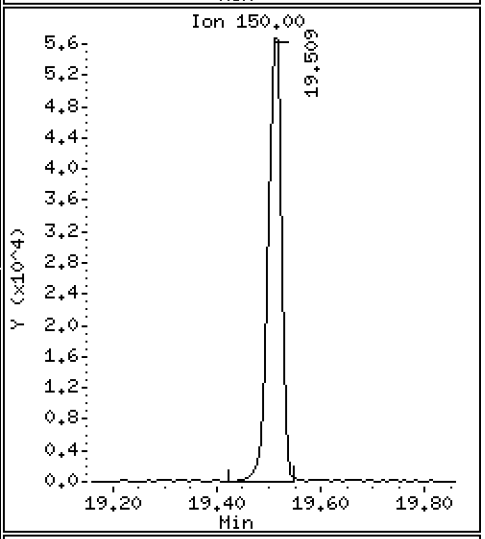
63 Di-n-butylphthalate

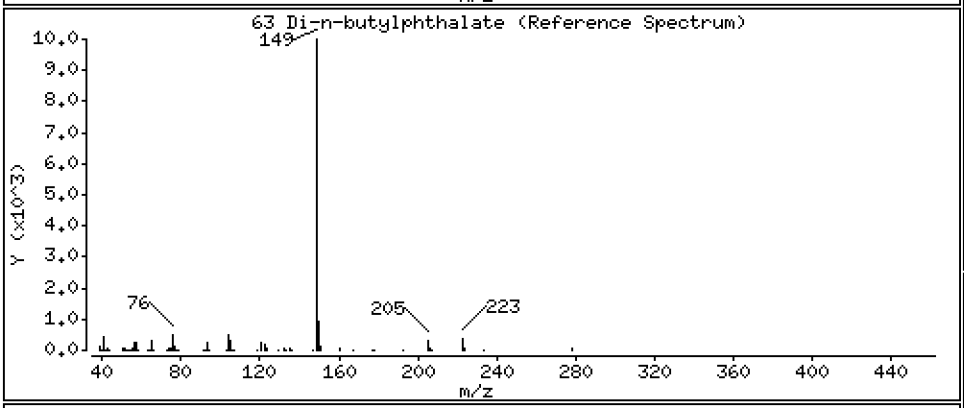
Concentration: 5.310 ug/mL

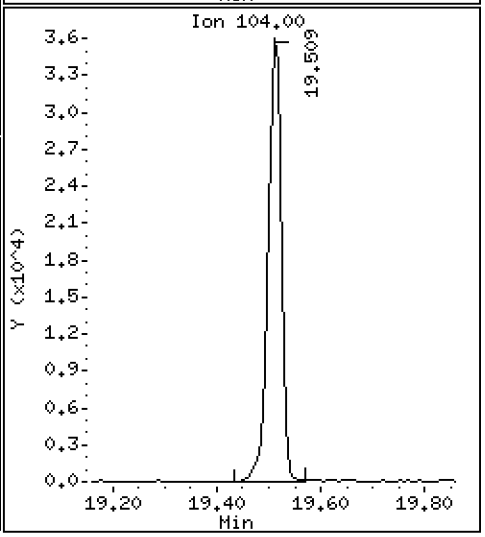


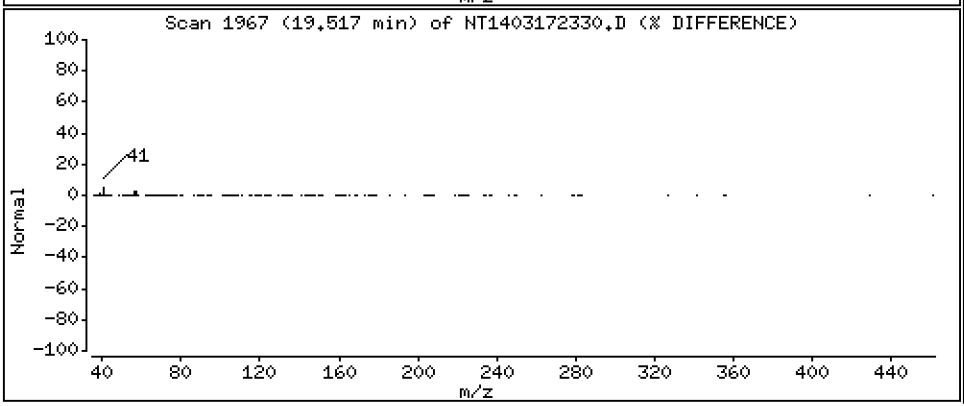












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

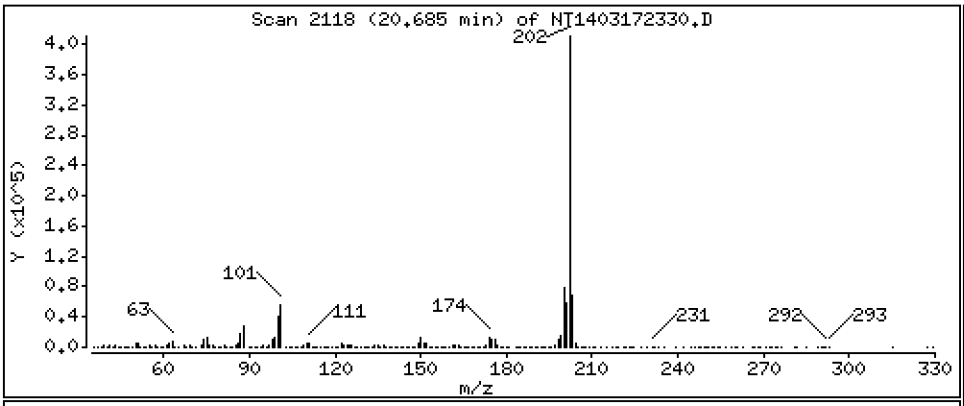
Operator: JGR

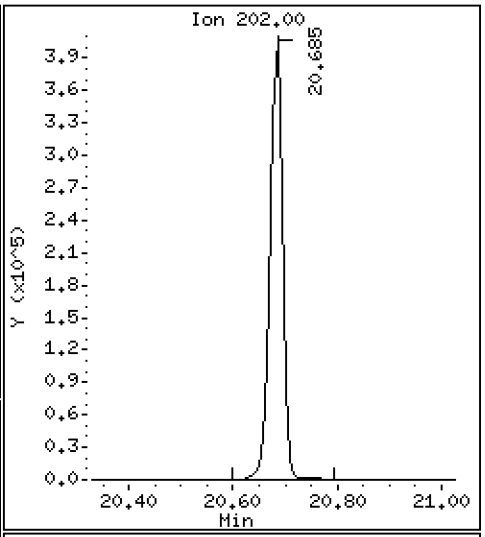
Column phase: ZB-5msi

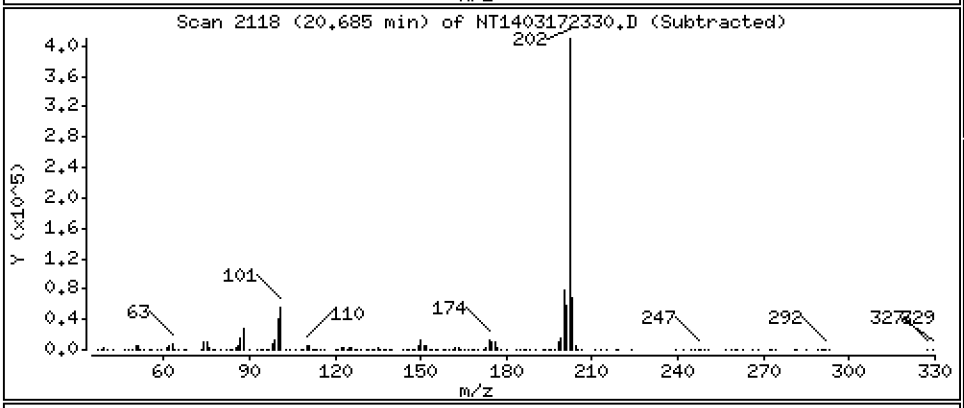
Column diameter: 0.25

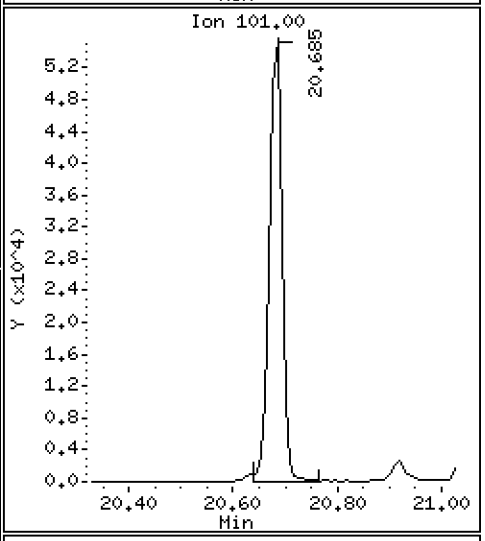
64 Fluoranthene

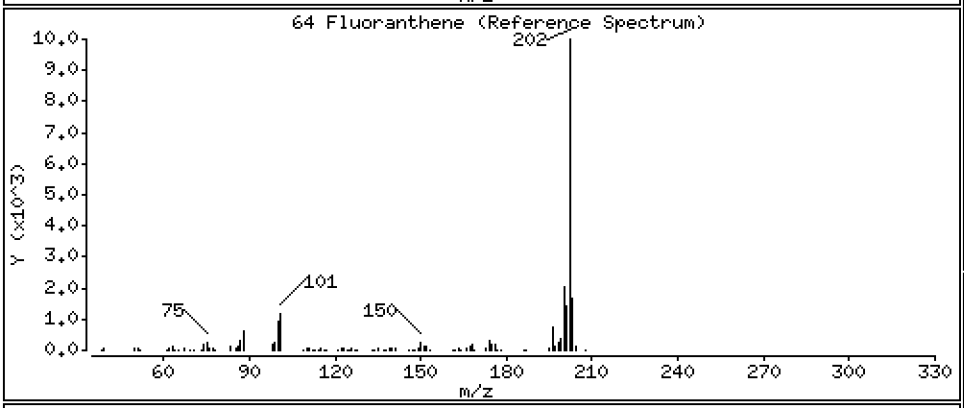
Concentration: 8.198 ug/mL

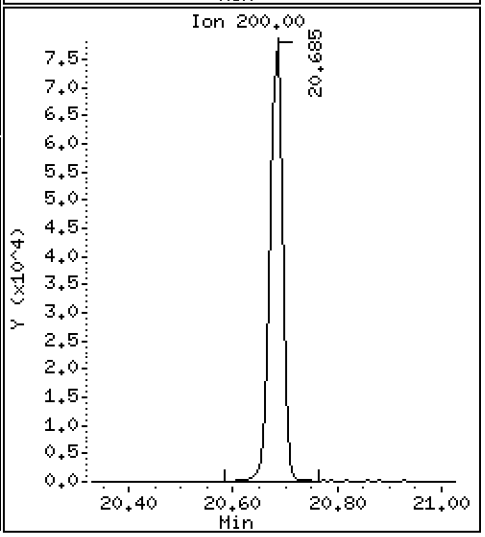


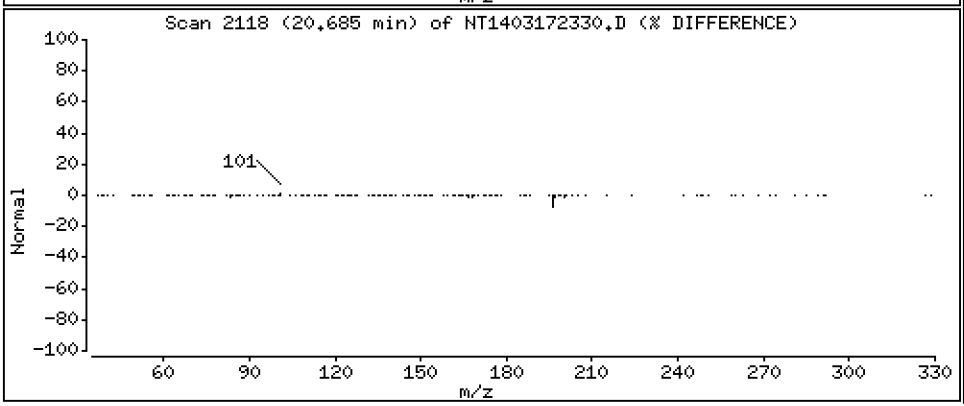












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

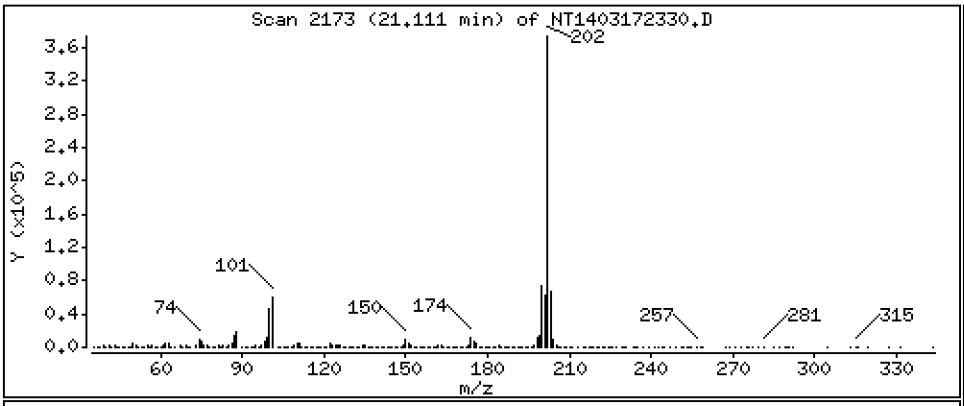
Operator: JGR

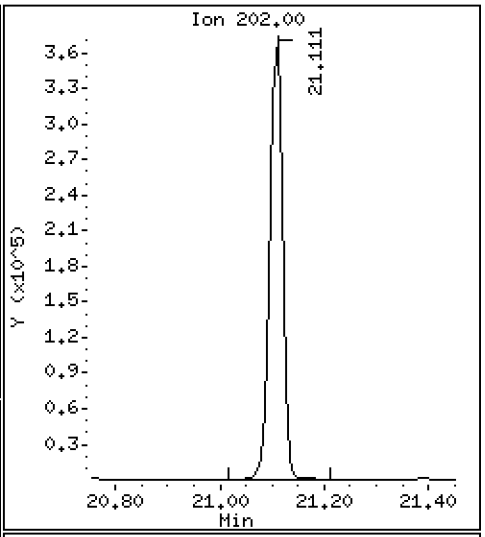
Column phase: ZB-5msi

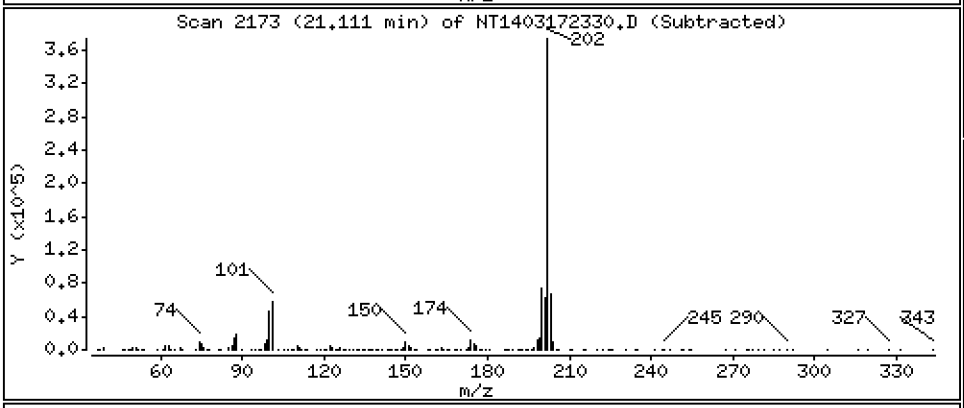
Column diameter: 0.25

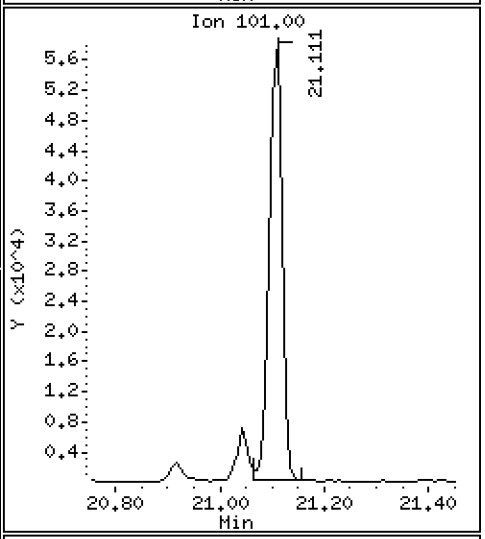
65 Pyrene

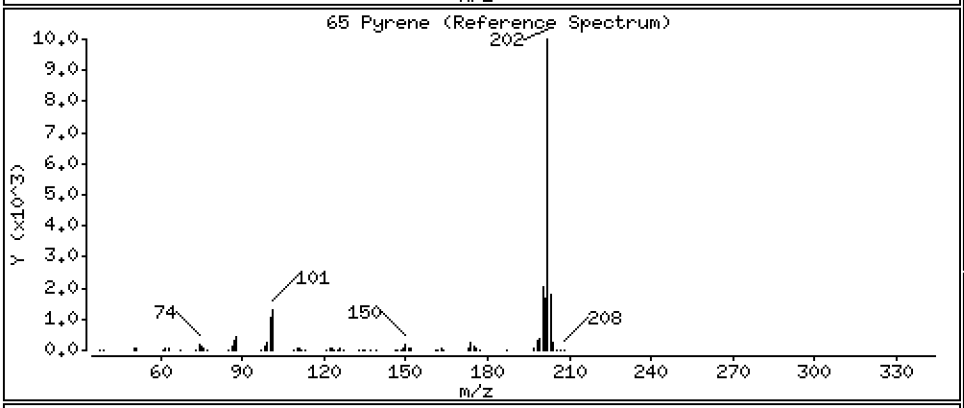
Concentration: 7.462 ug/mL

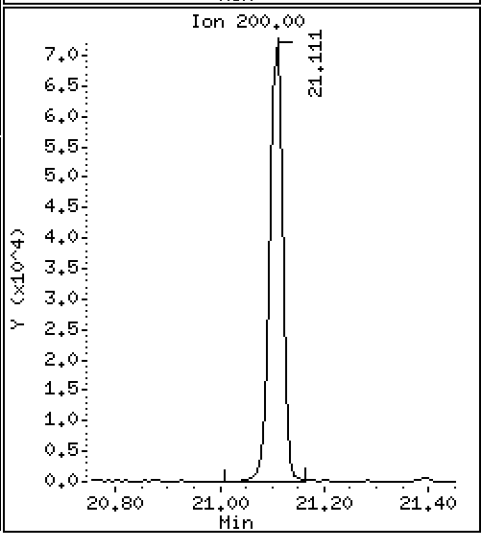


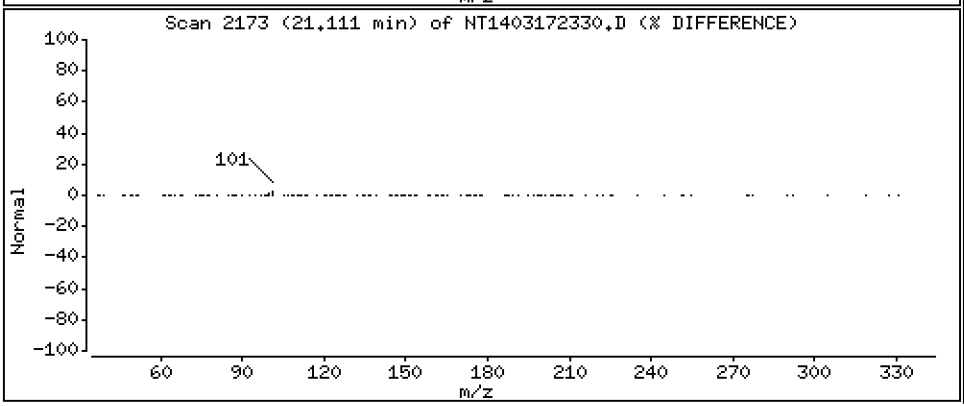












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

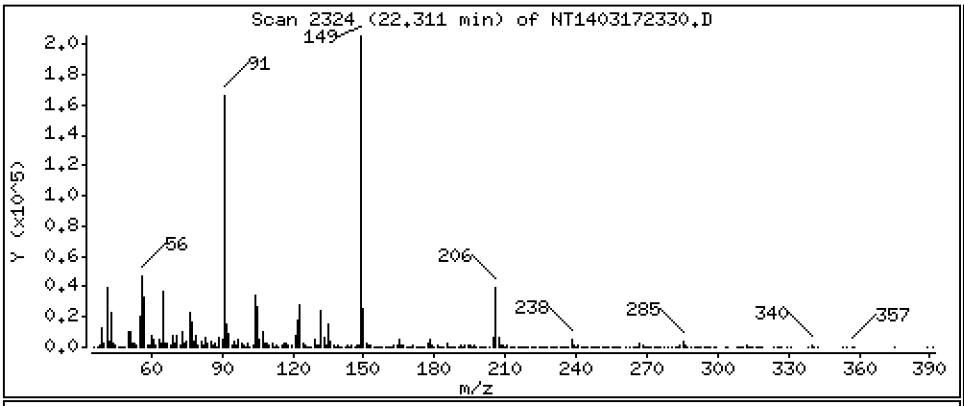
Operator: JGR

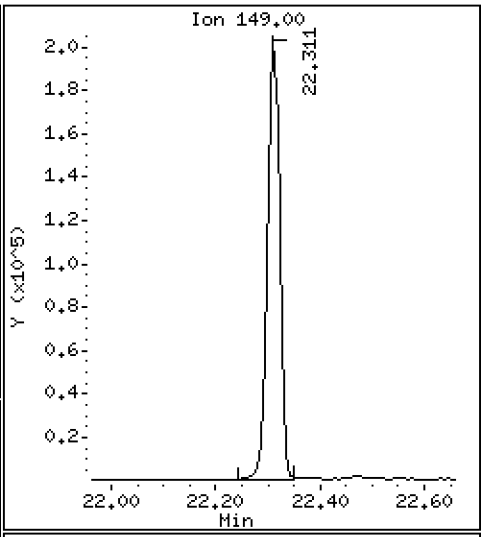
Column phase: ZB-5msi

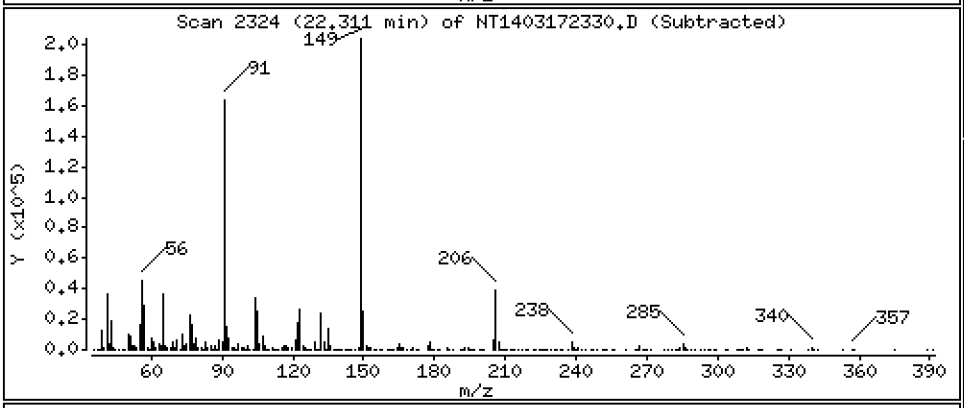
Column diameter: 0.25

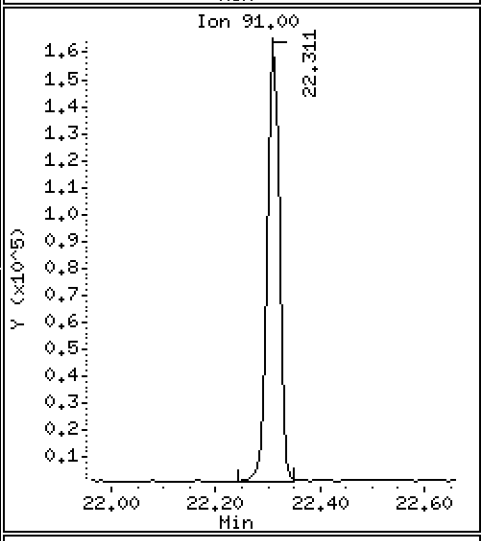
67 Butylbenzylphthalate

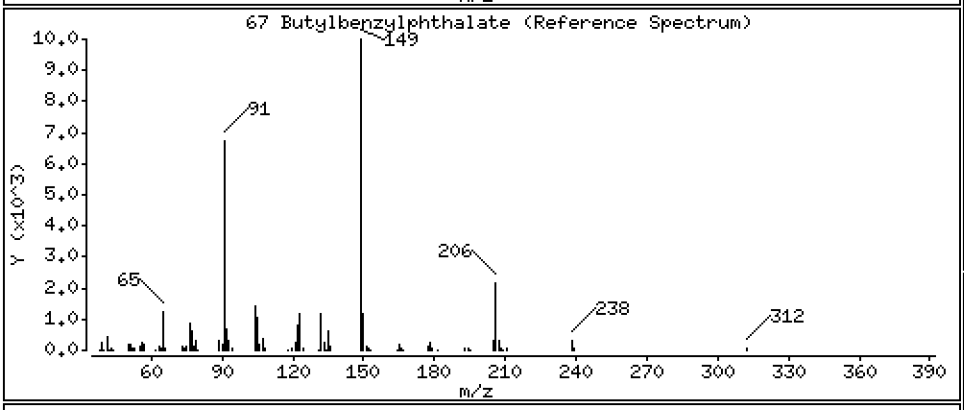
Concentration: 8.793 ug/mL

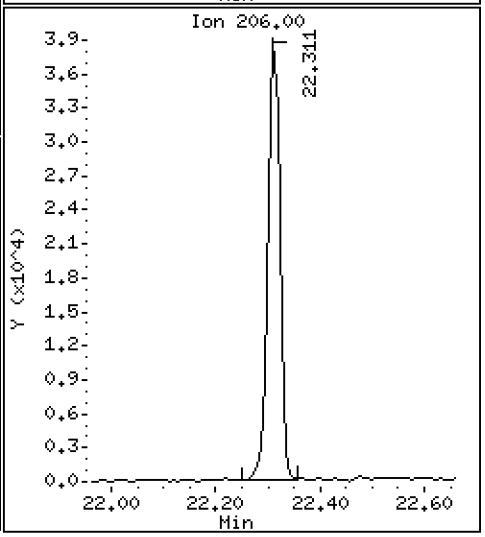


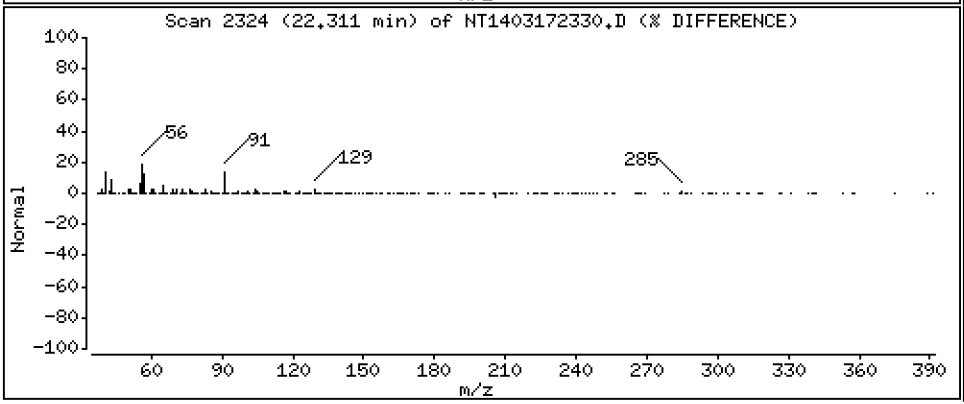












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

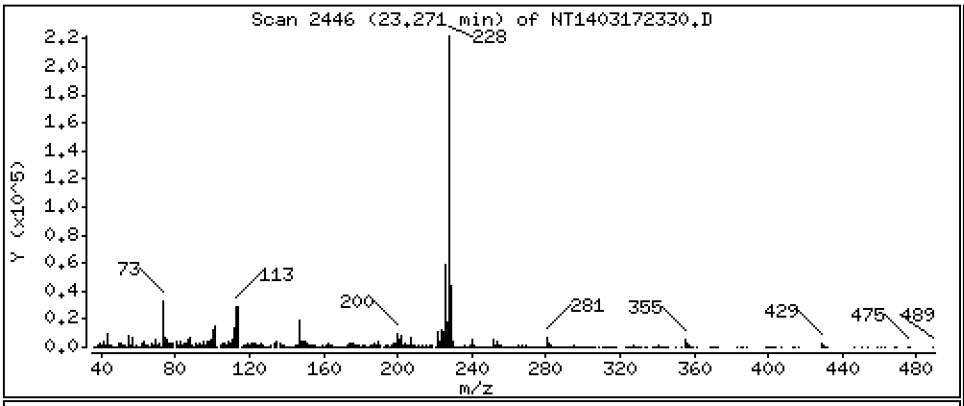
Operator: JGR

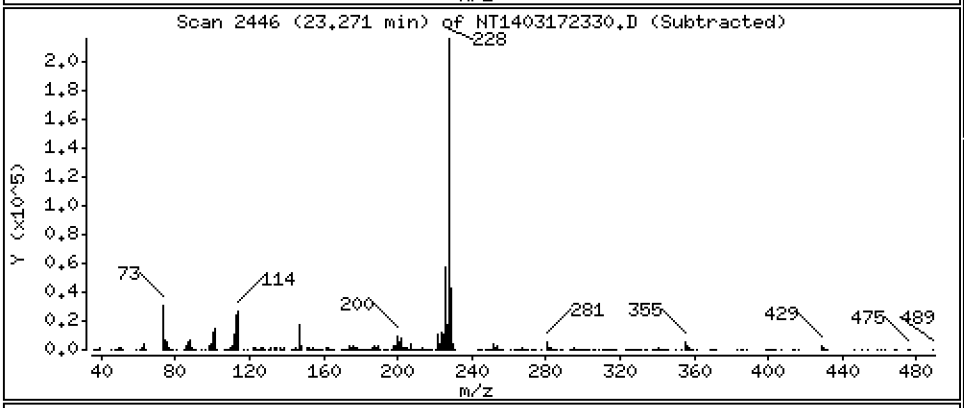
Column phase: ZB-5msi

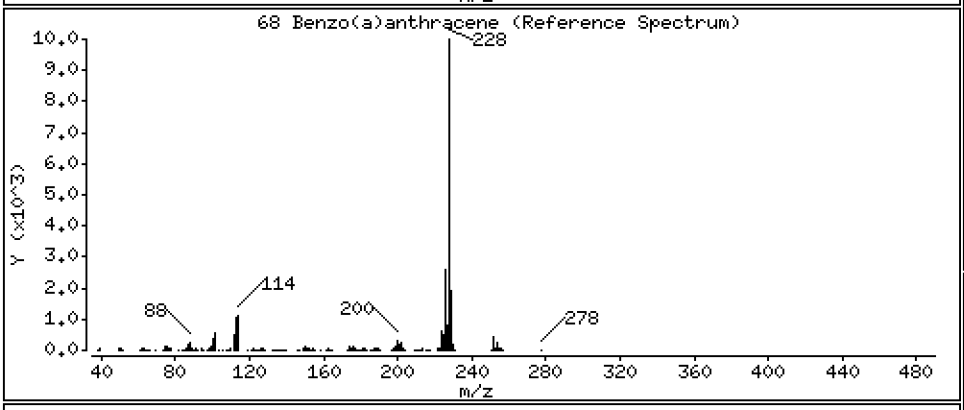
Column diameter: 0.25

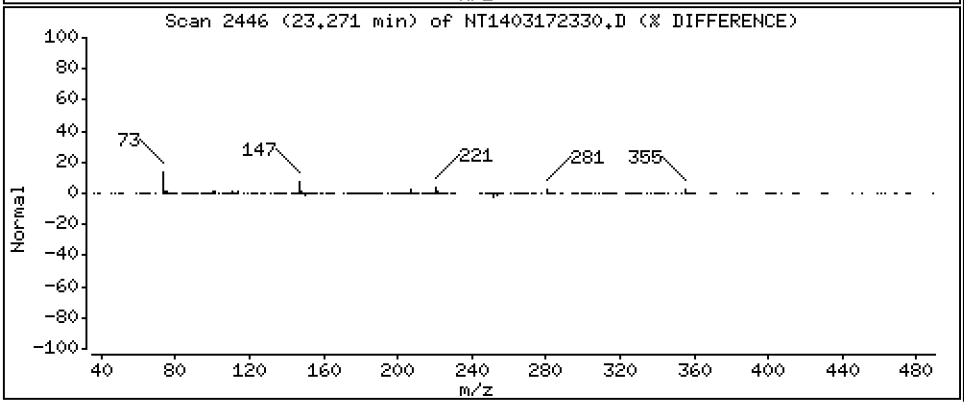
68 Benzo(a)anthracene

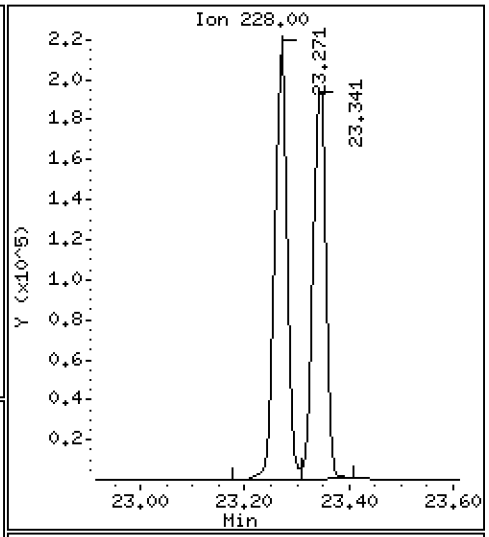
Concentration: 4.880 ug/mL

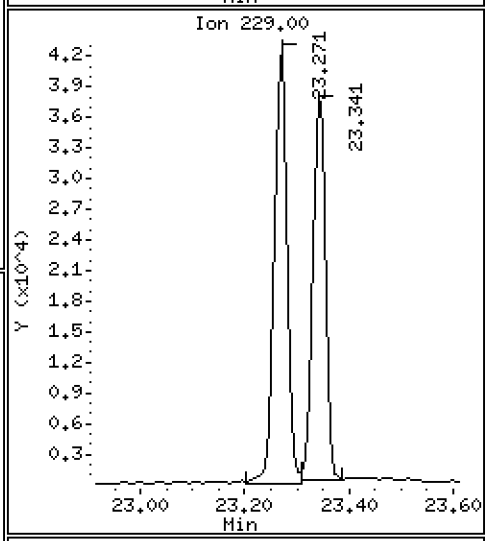


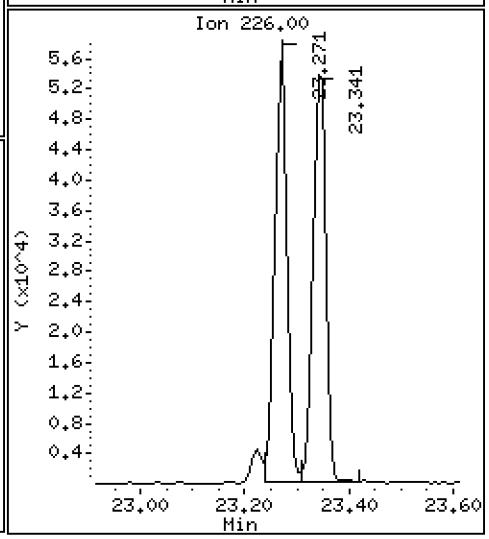












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

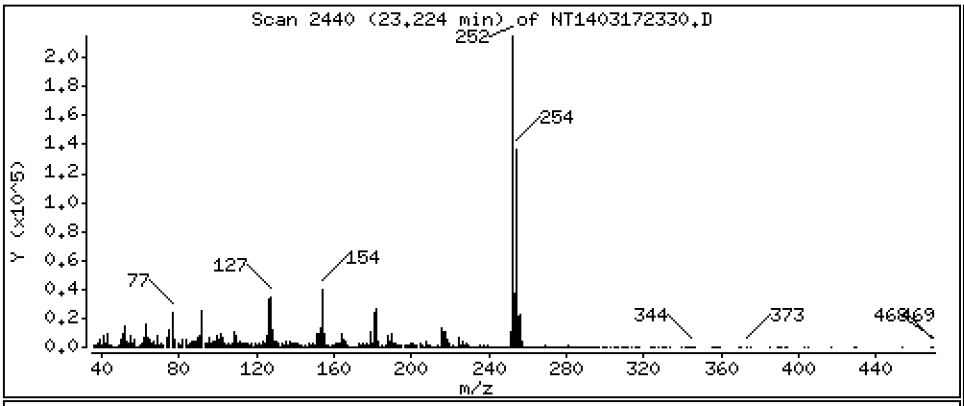
Operator: JGR

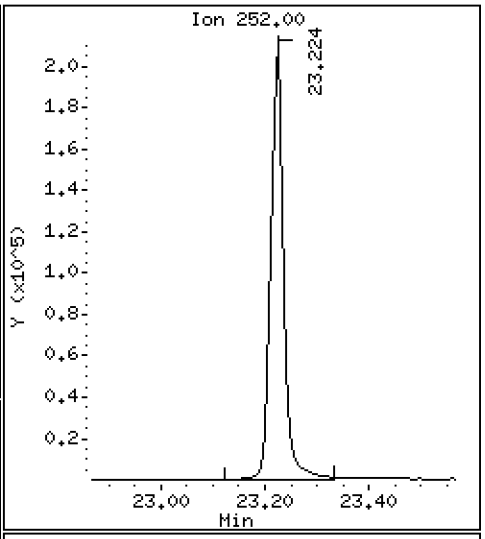
Column phase: ZB-5msi

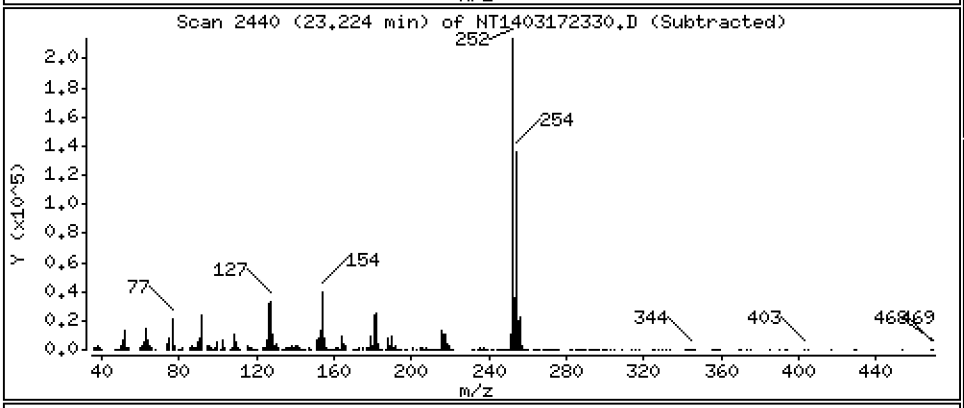
Column diameter: 0.25

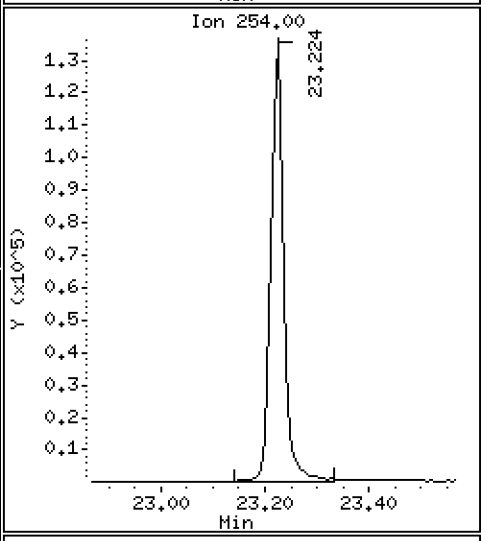
70 3,3'-Dichlorobenzidine

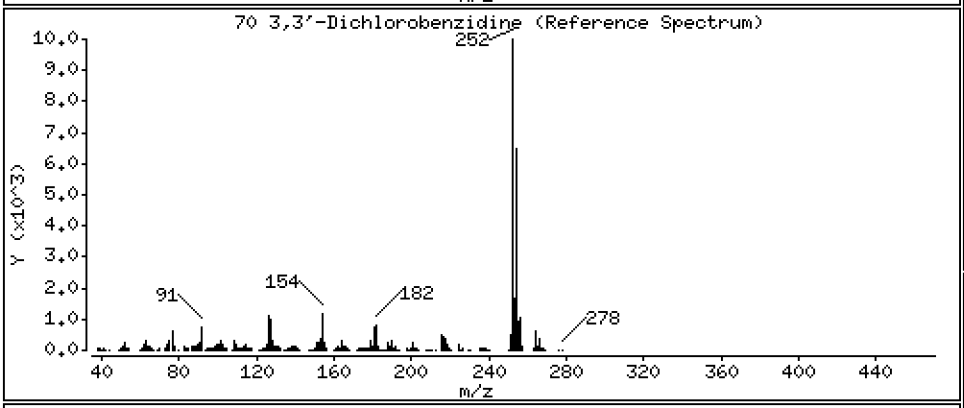
Concentration: 16.19 ug/mL

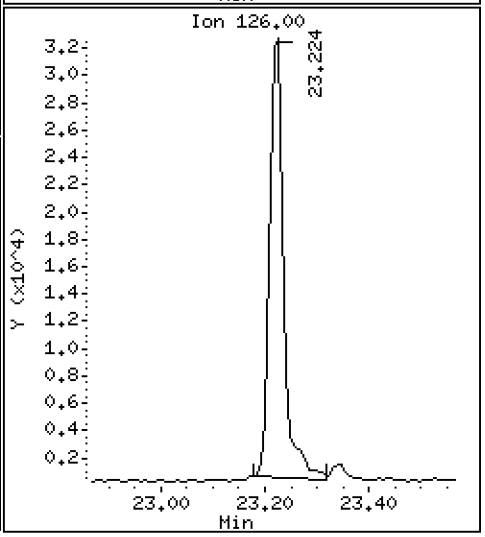


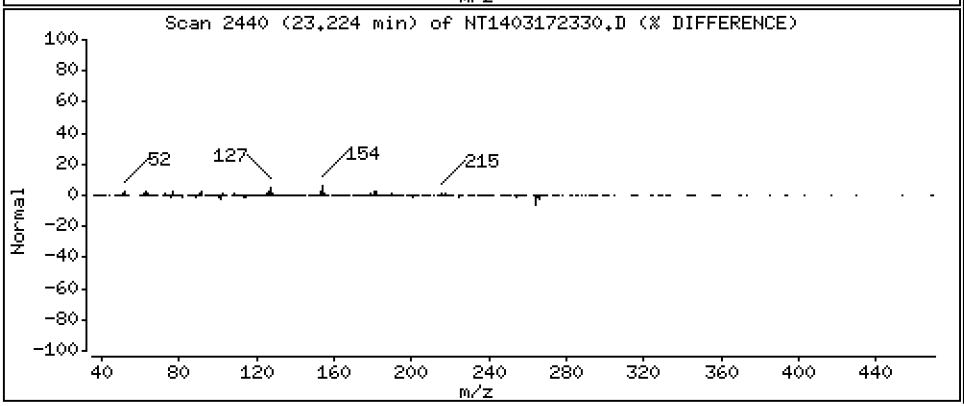












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

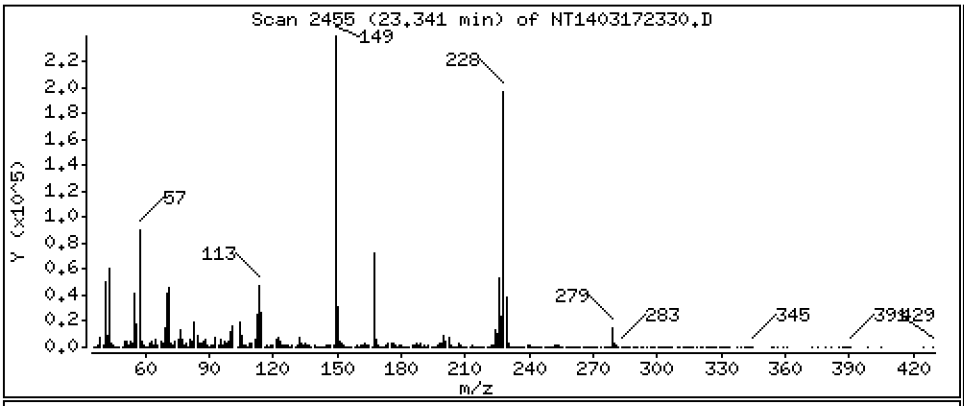
Operator: JGR

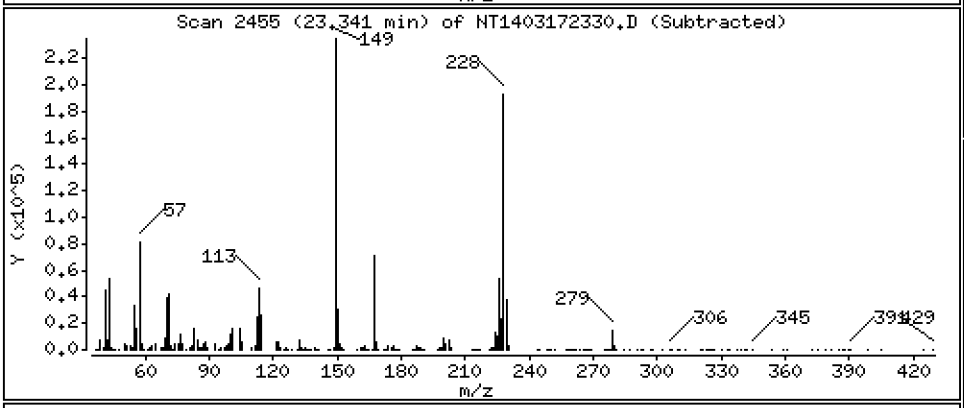
Column phase: ZB-5msi

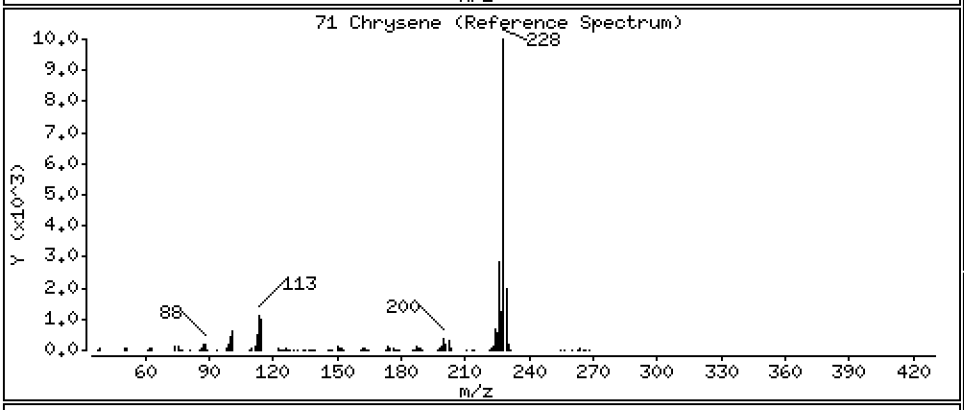
Column diameter: 0.25

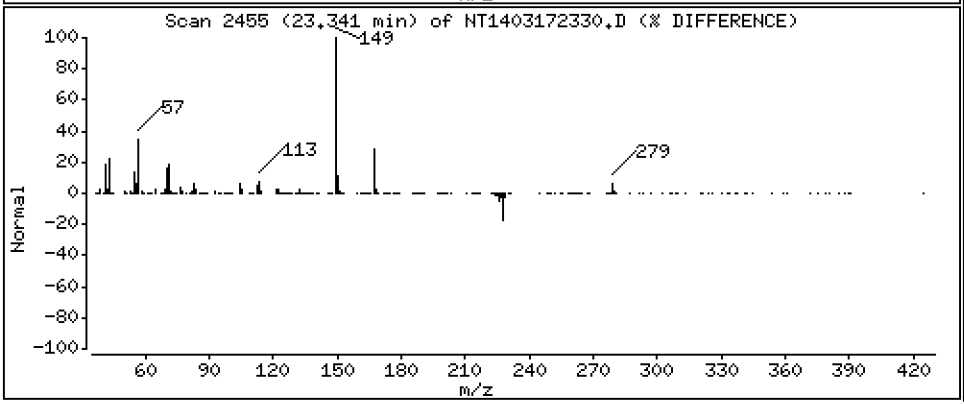
71 Chrysene

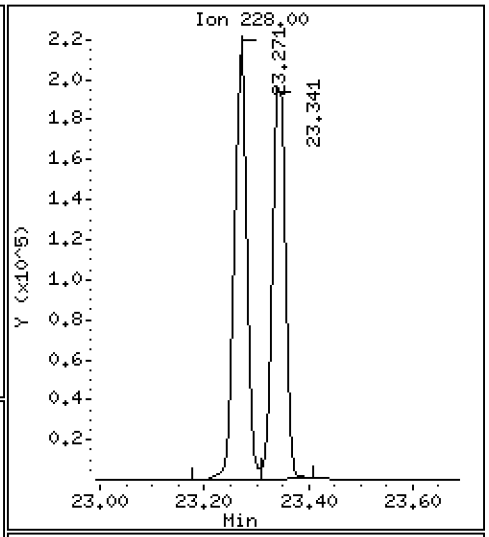
Concentration: 4.917 ug/mL

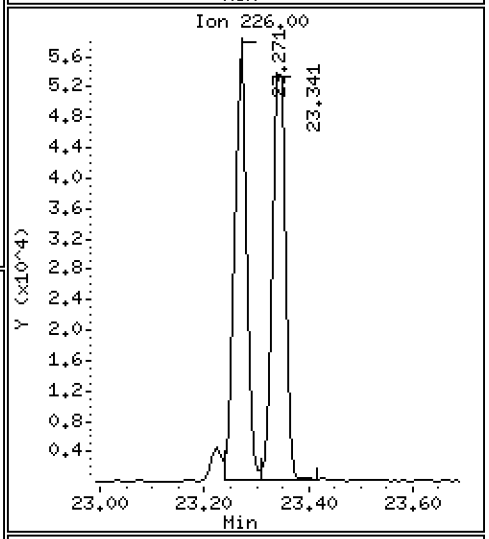


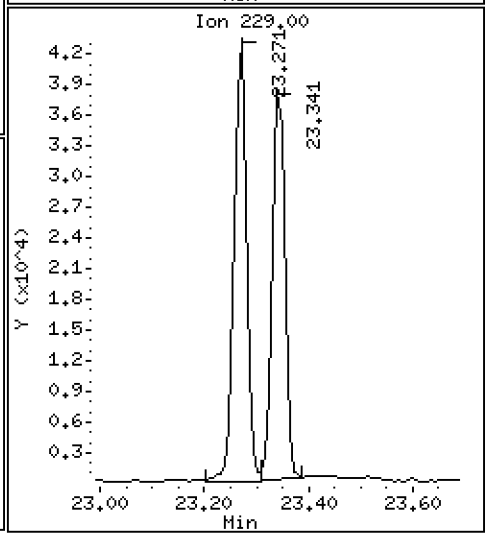












Date : 18-MAR-2023 07:54

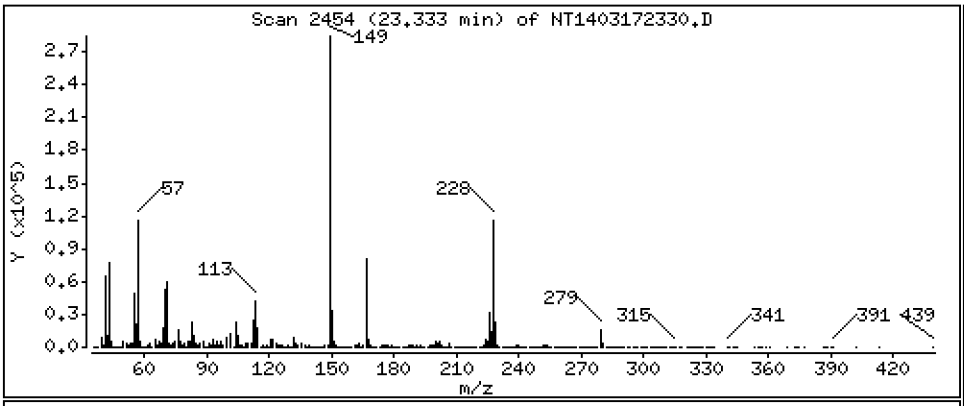
Client ID: Instrument: nt14.i

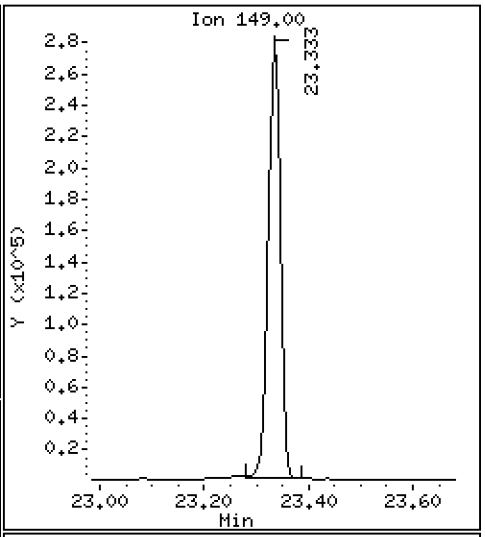
Sample Info: SLC0335-CCV1

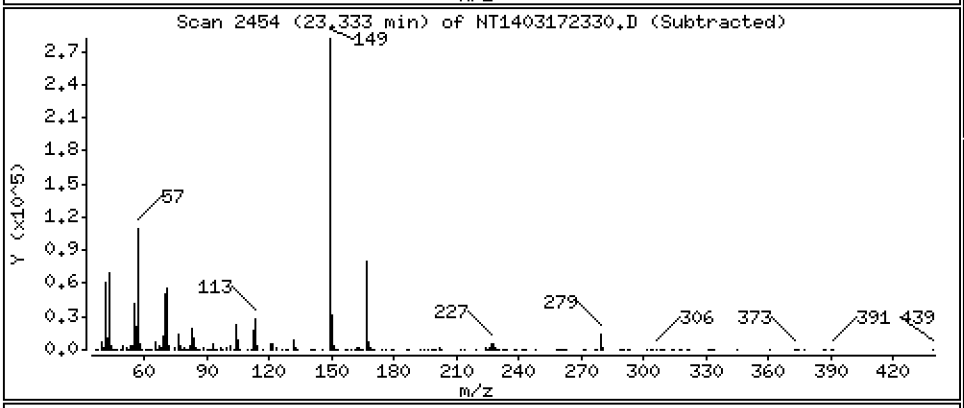
Operator: JGR

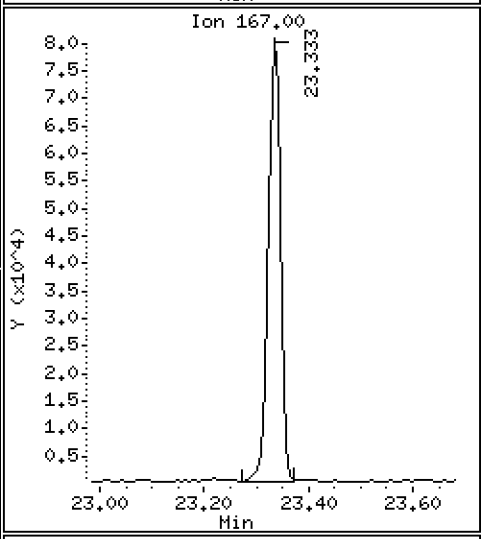
Column phase: ZB-5msi Column diameter: 0.25

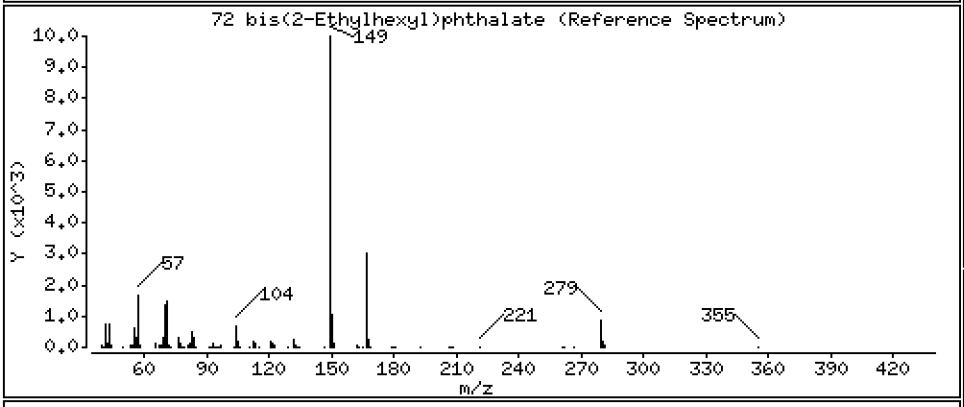
72 bis(2-Ethylhexyl)phthalate Concentration: 6.537 ug/mL

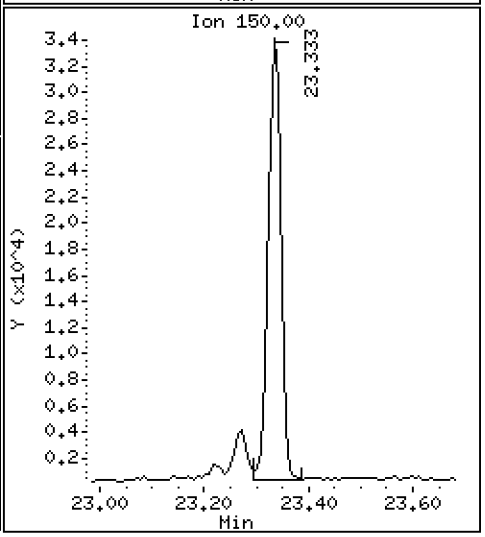


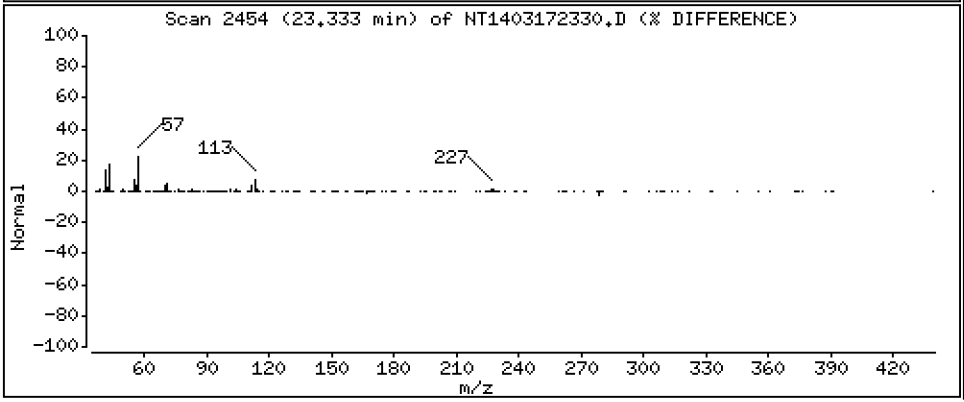












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

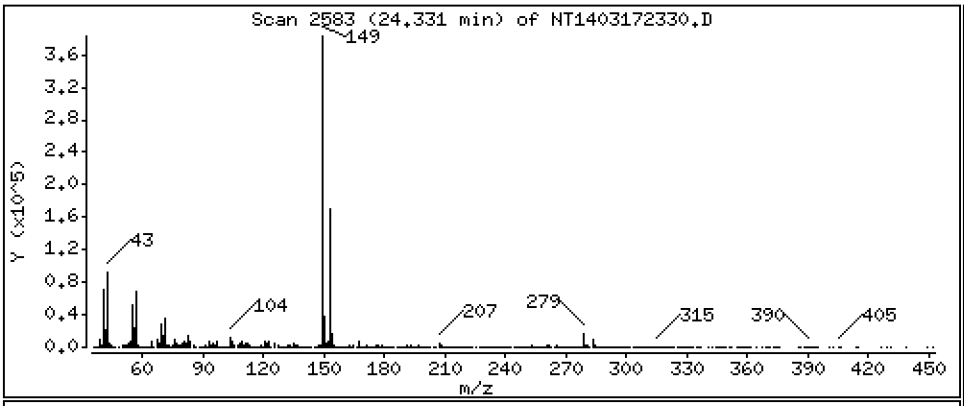
Operator: JGR

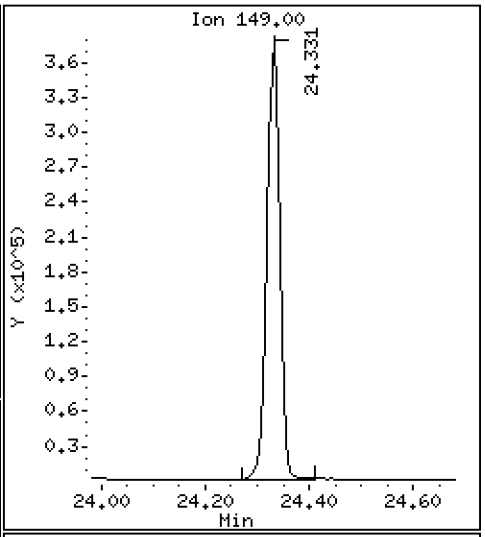
Column phase: ZB-5msi

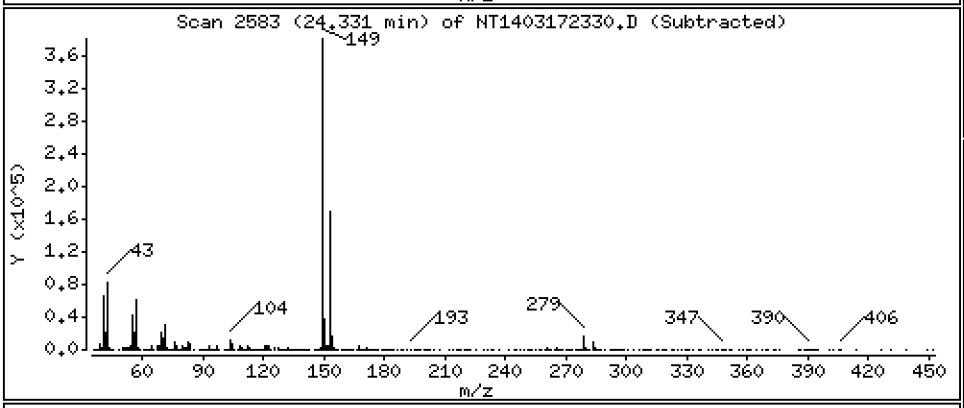
Column diameter: 0.25

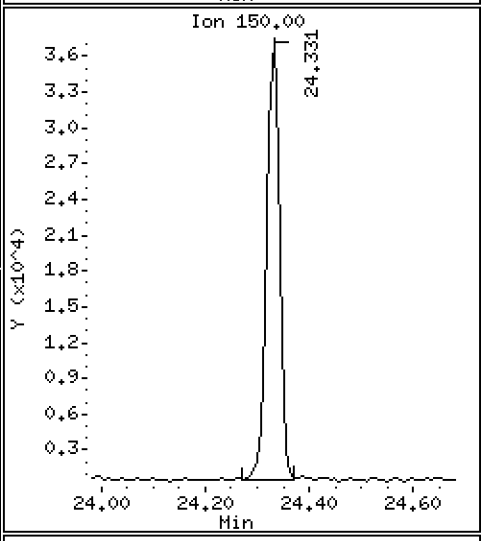
73 Di-n-octylphthalate

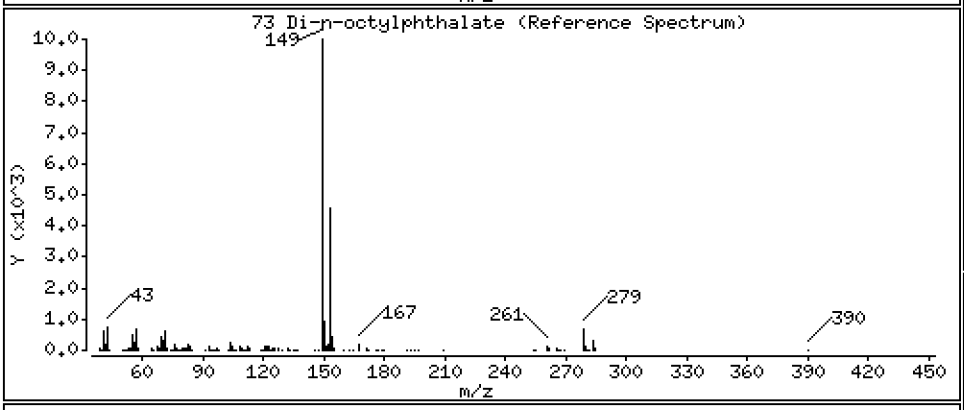
Concentration: 4.742 ug/mL

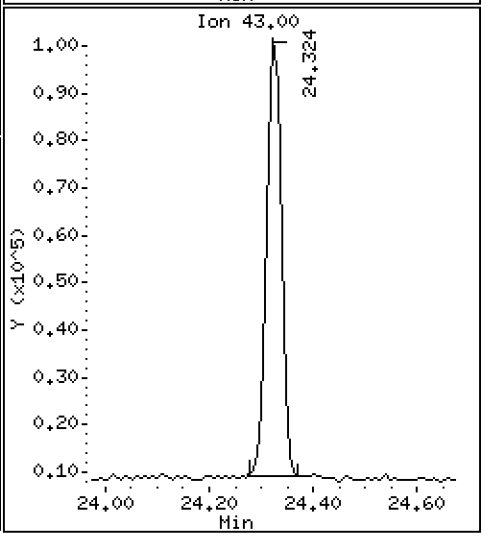


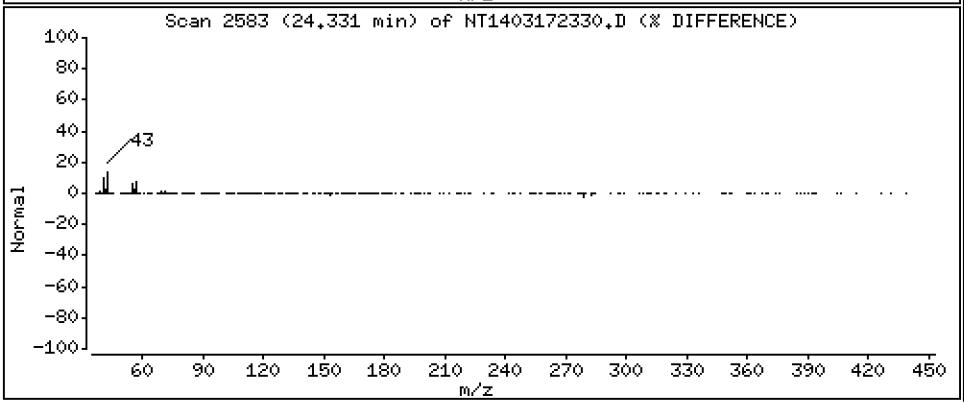












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

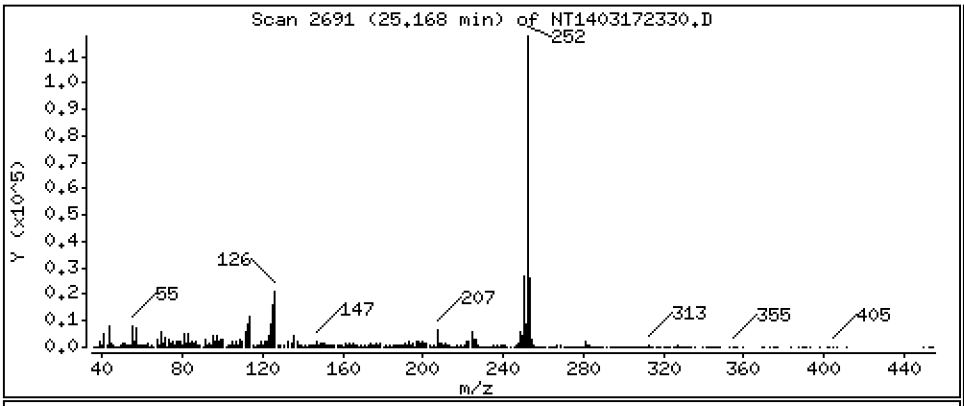
Operator: JGR

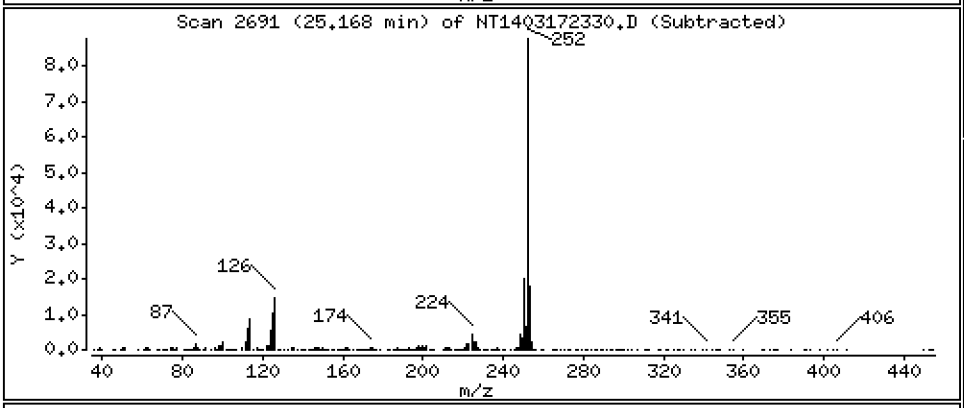
Column phase: ZB-5msi

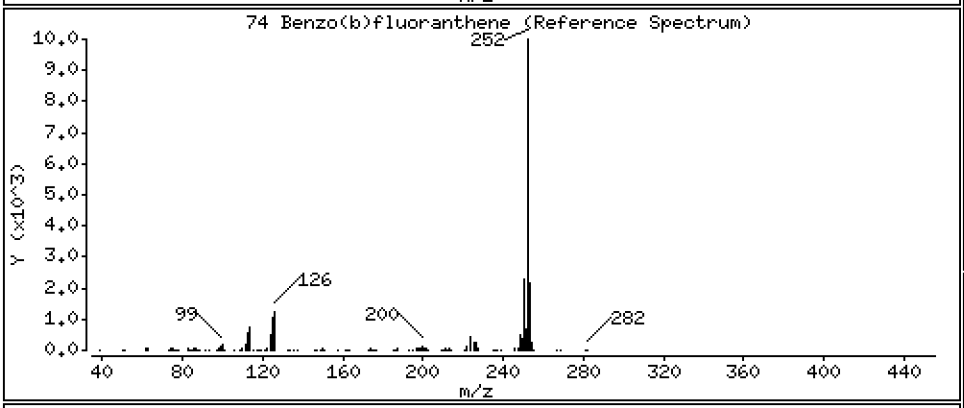
Column diameter: 0.25

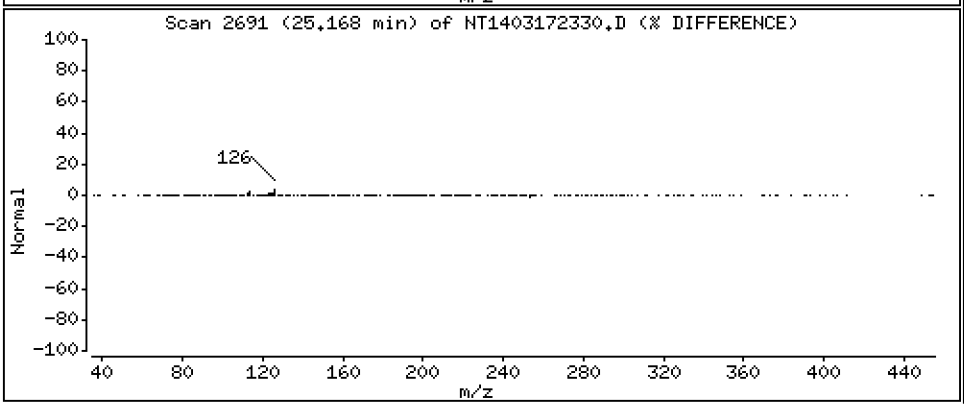
74 Benzo(b)fluoranthene

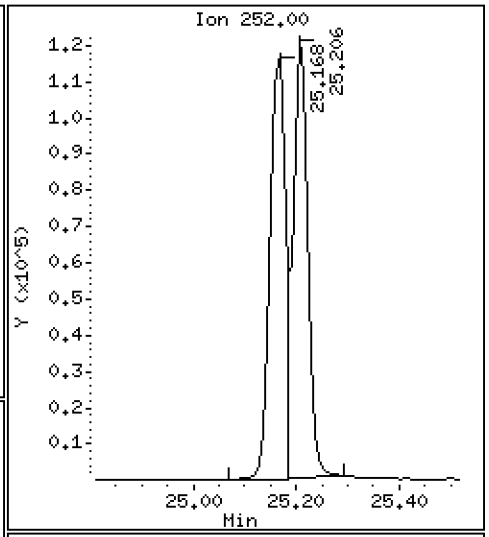
Concentration: 4.704 ug/mL

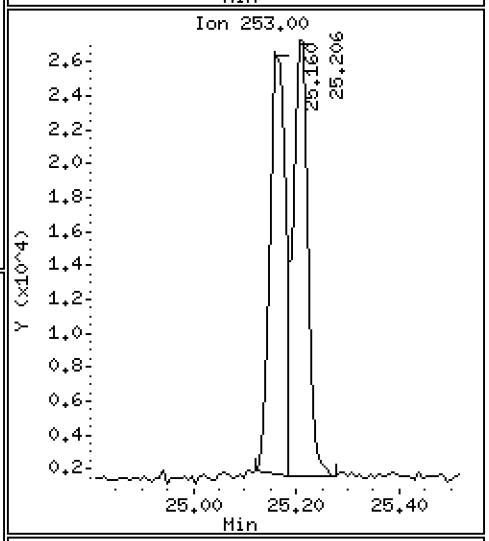


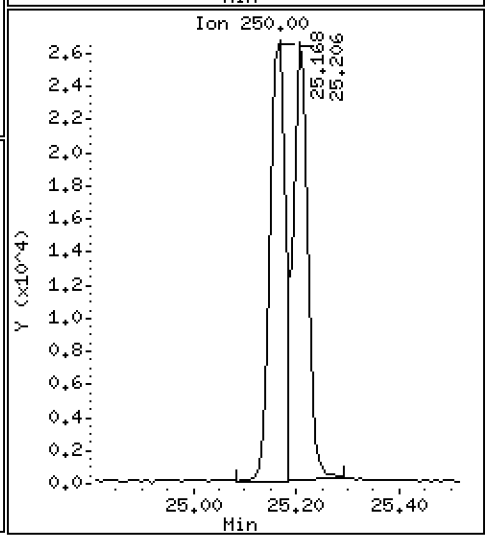












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

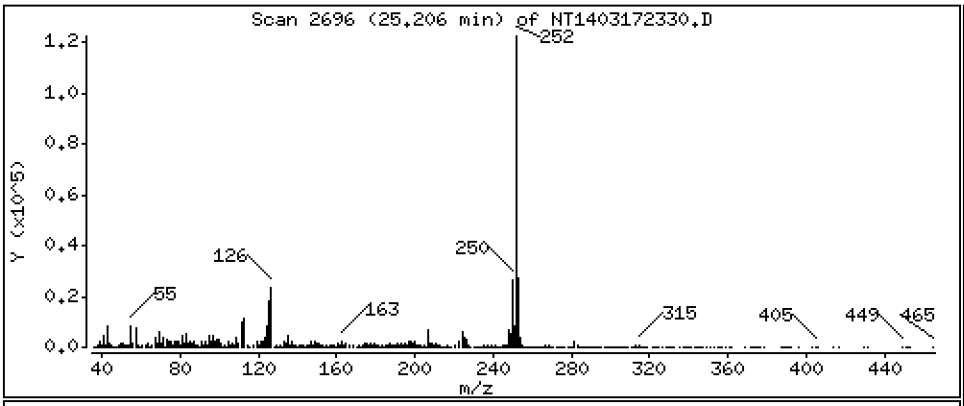
Operator: JGR

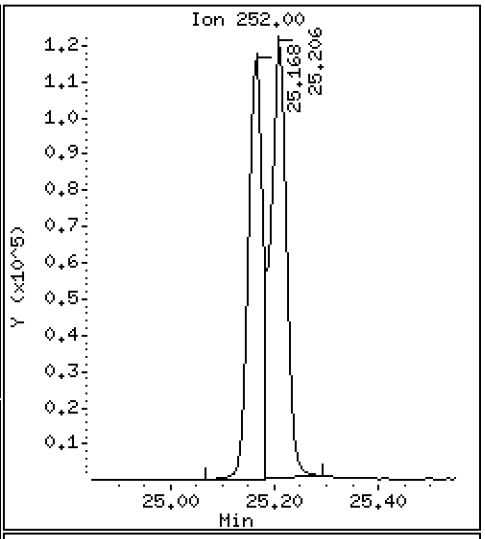
Column phase: ZB-5msi

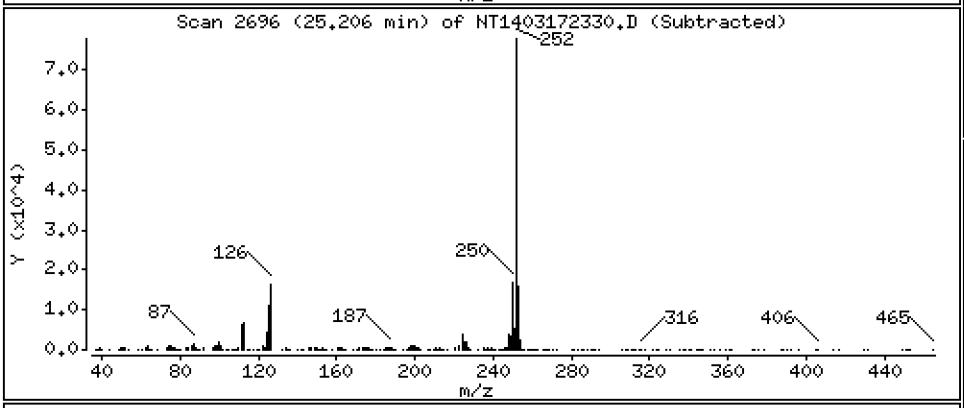
Column diameter: 0.25

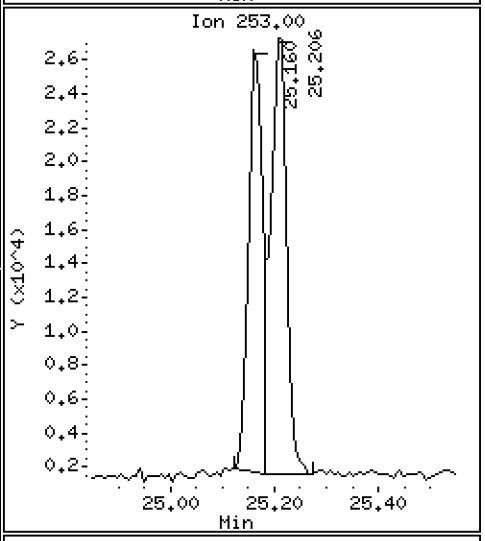
75 Benzo(k)fluoranthene

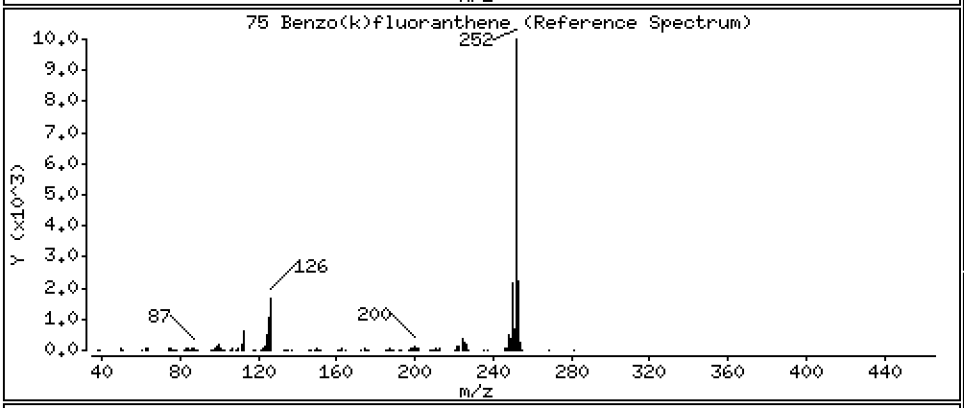
Concentration: 5.306 ug/mL

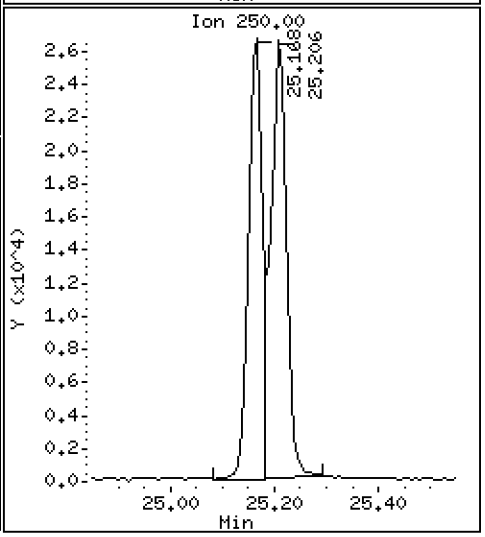


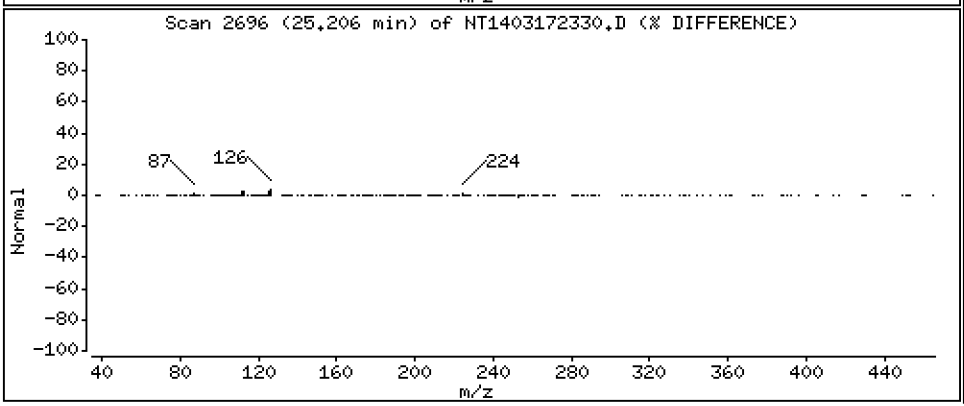












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

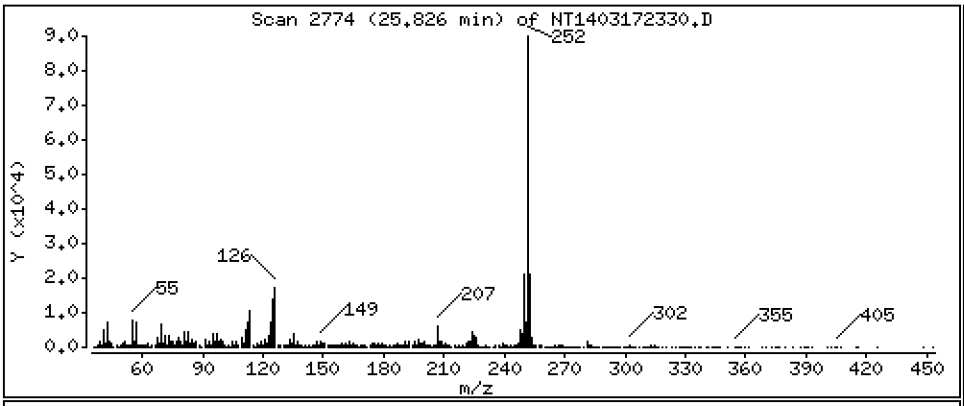
Operator: JGR

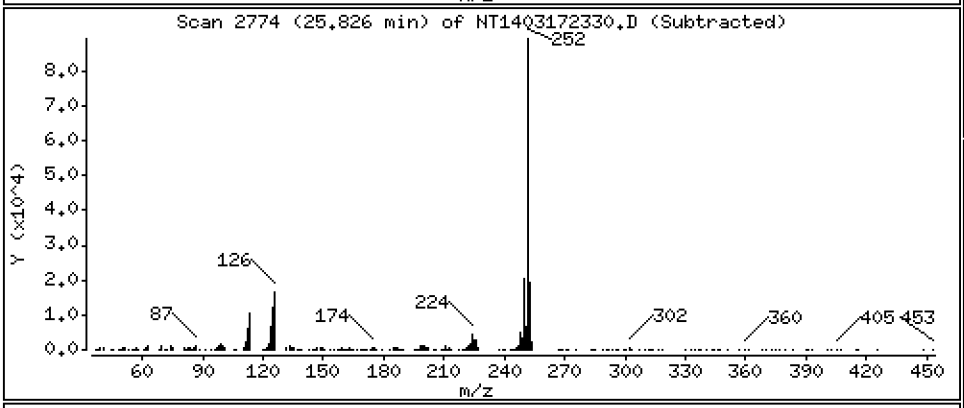
Column phase: ZB-5msi

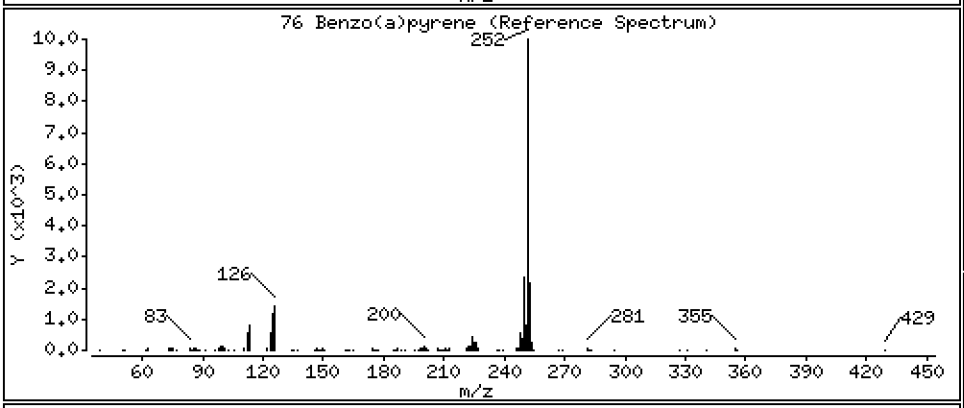
Column diameter: 0.25

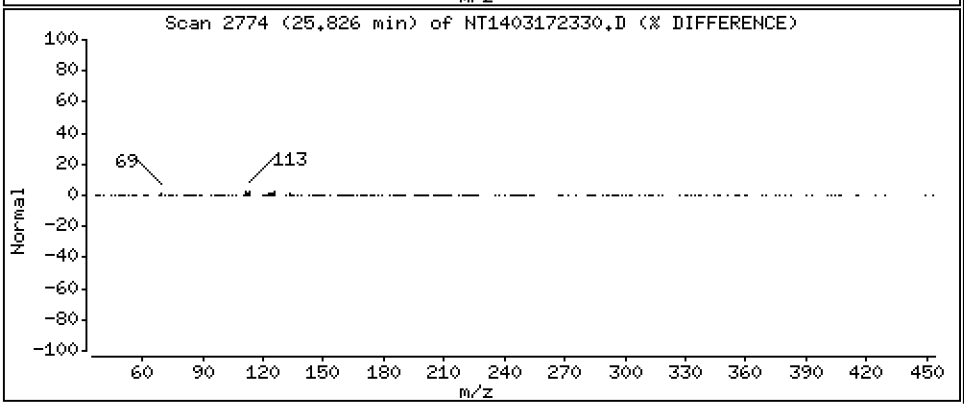
76 Benzo(a)pyrene

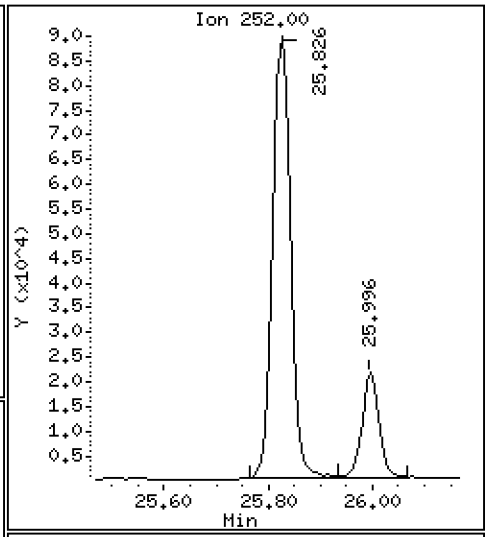
Concentration: 4.828 ug/mL

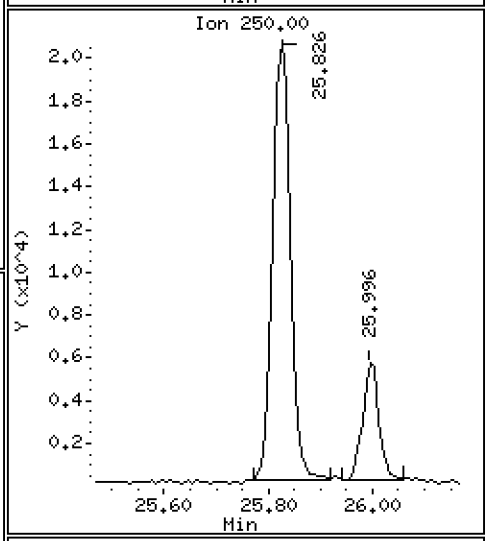


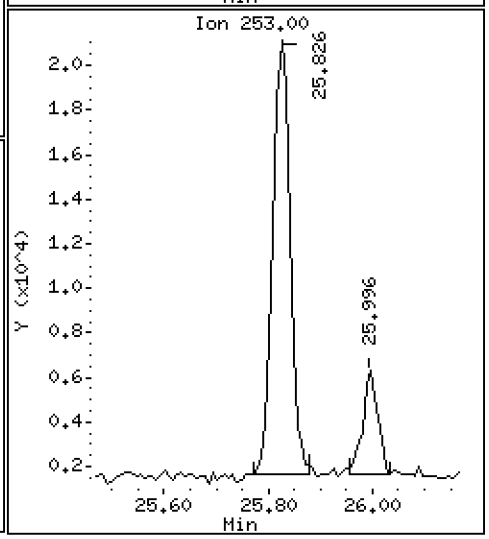












Date : 18-MAR-2023 07:54

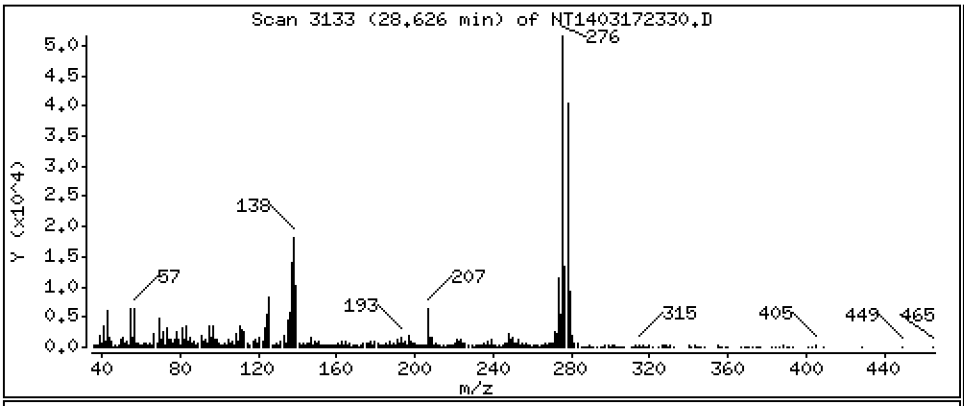
Client ID: Instrument: nt14.i

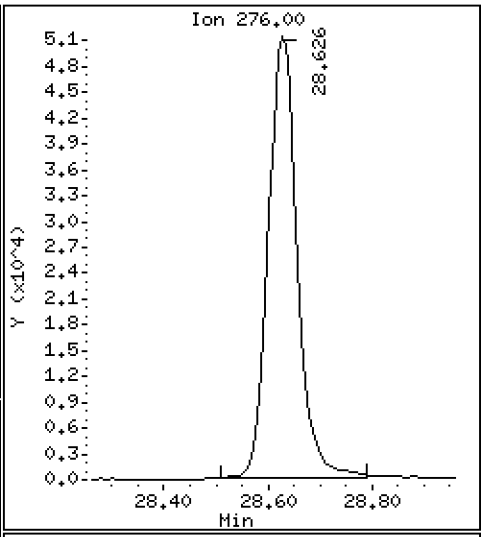
Sample Info: SLC0335-CCV1

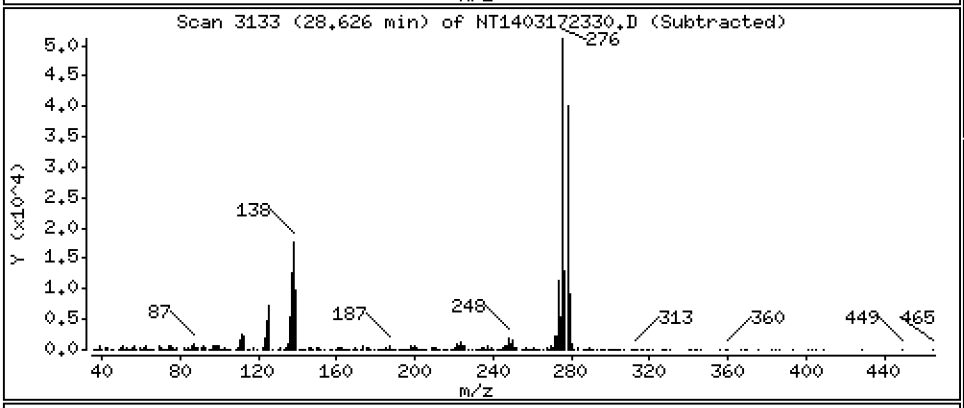
Operator: JGR

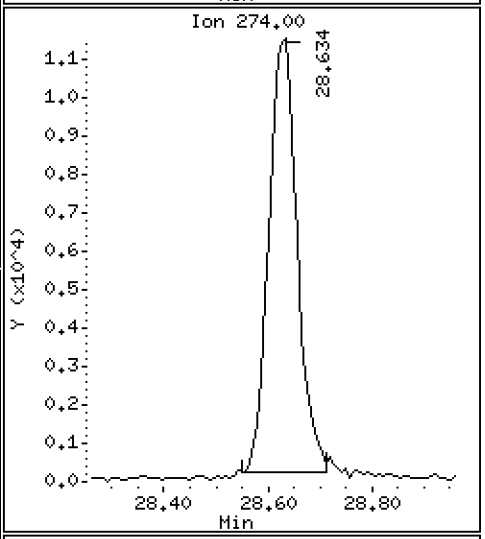
Column phase: ZB-5msi Column diameter: 0.25

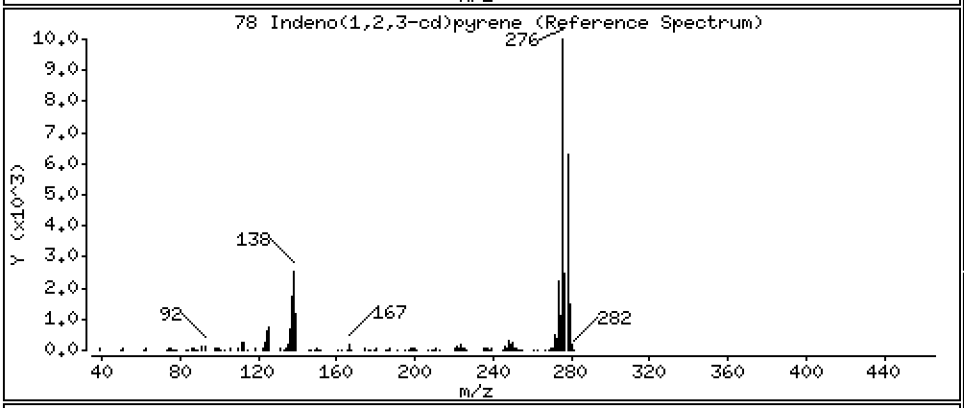
78 Indeno(1,2,3-cd)pyrene Concentration: 4.287 ug/mL

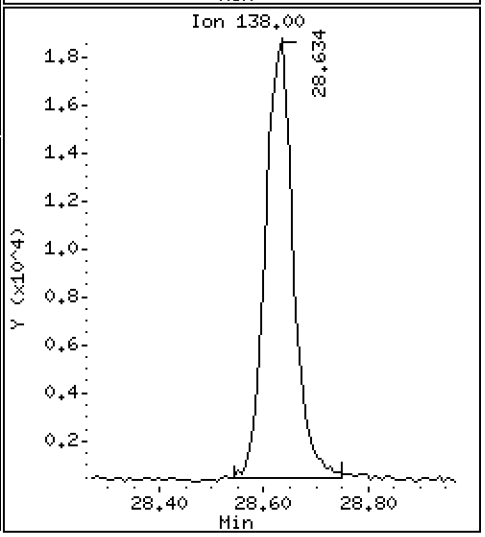


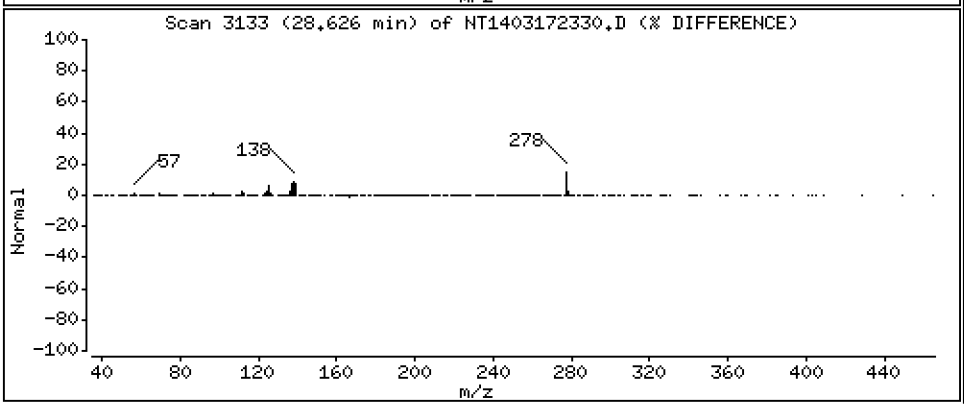












Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172330.D

Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

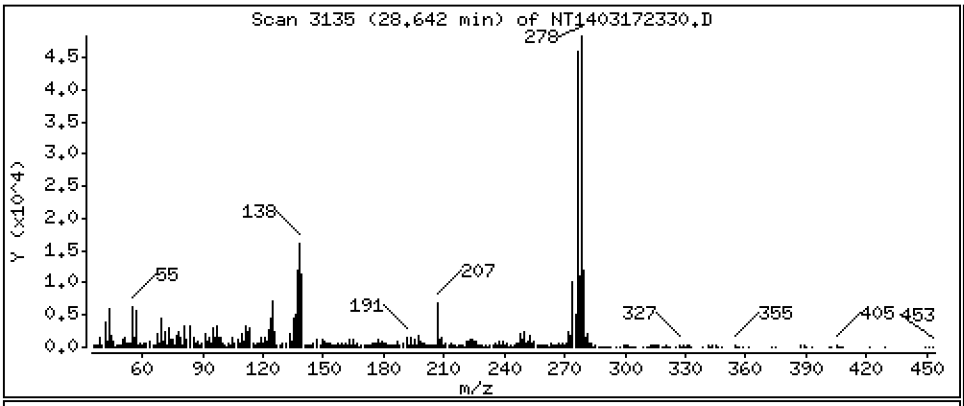
Operator: JGR

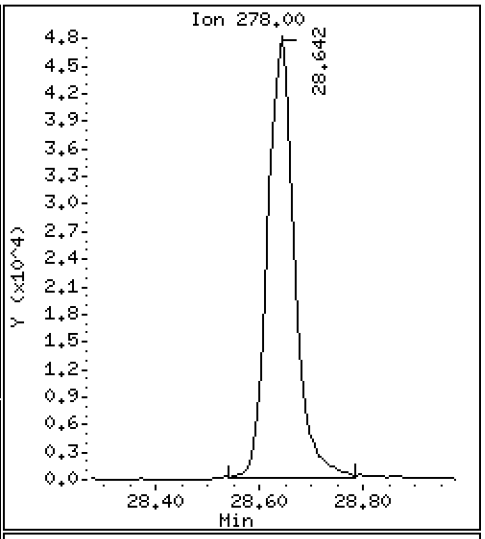
Column phase: ZB-5msi

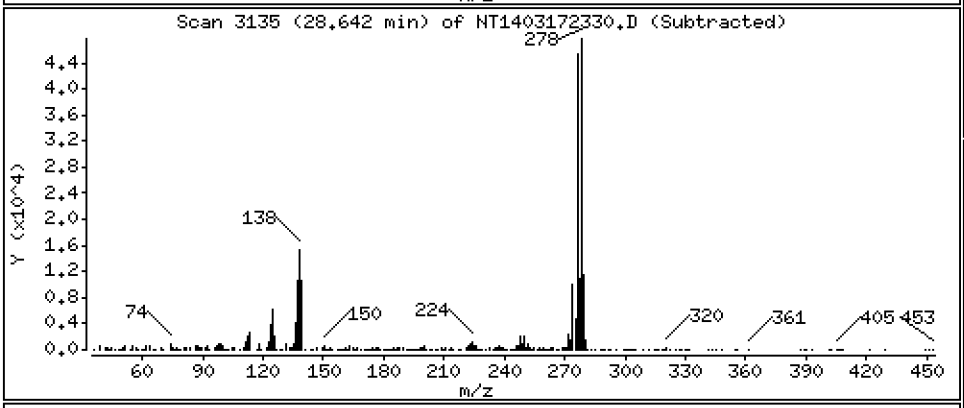
Column diameter: 0.25

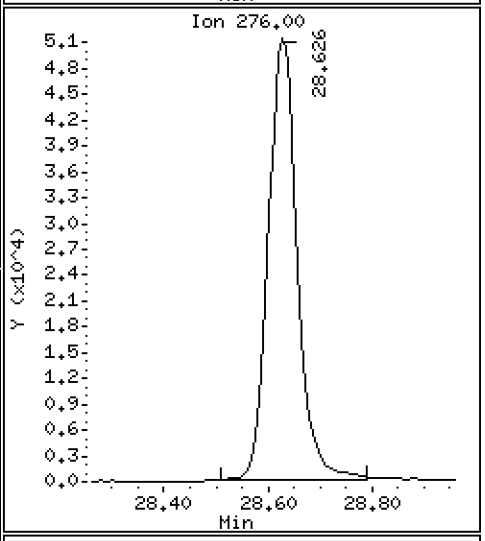
79 Dibenzo(a,h)anthracene

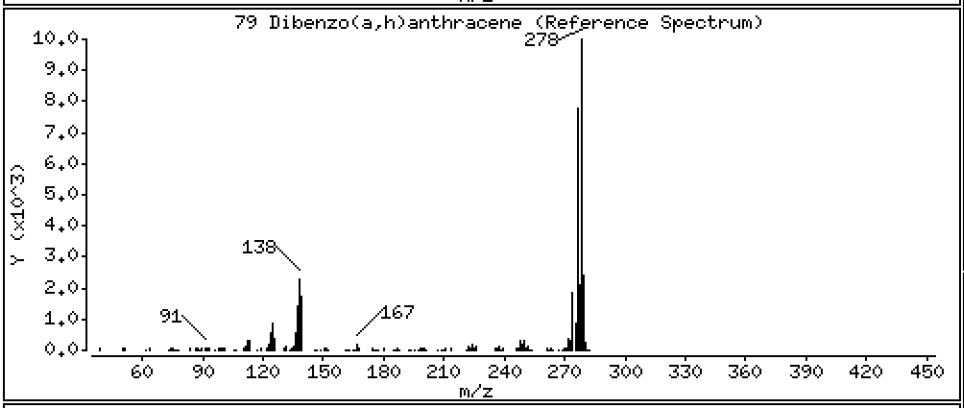
Concentration: 4.371 ug/mL

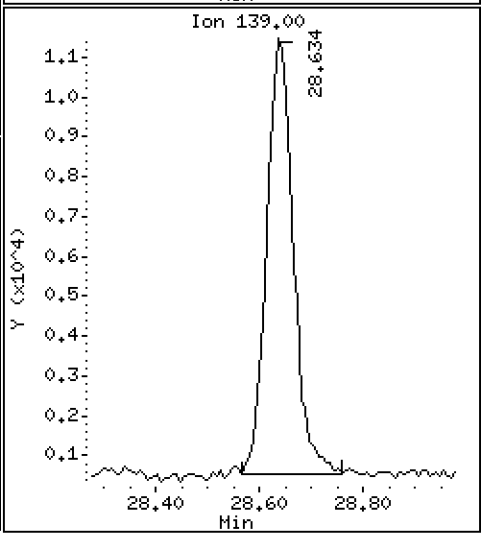


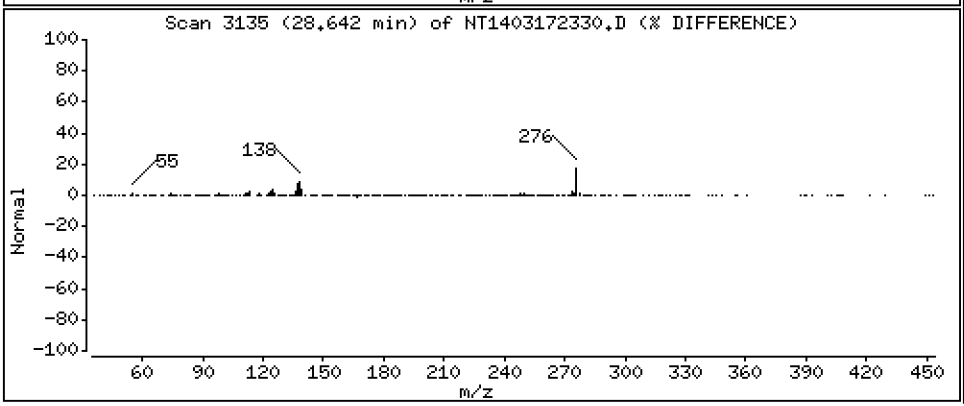












Date : 18-MAR-2023 07:54

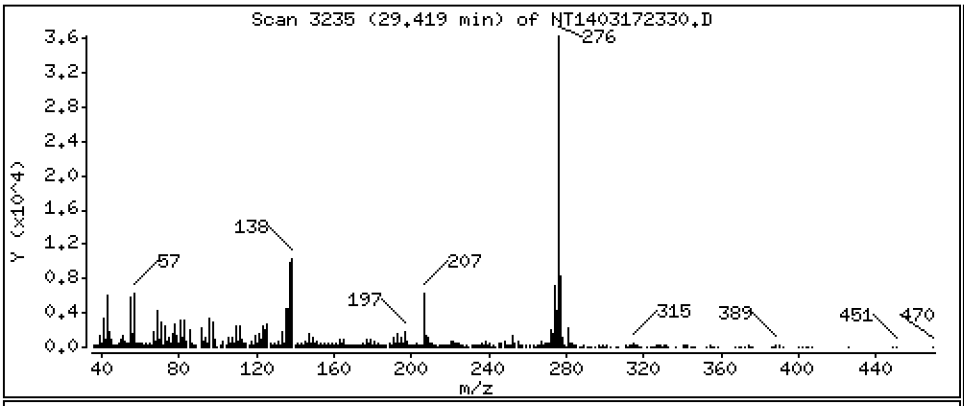
Client ID: Instrument: nt14.i

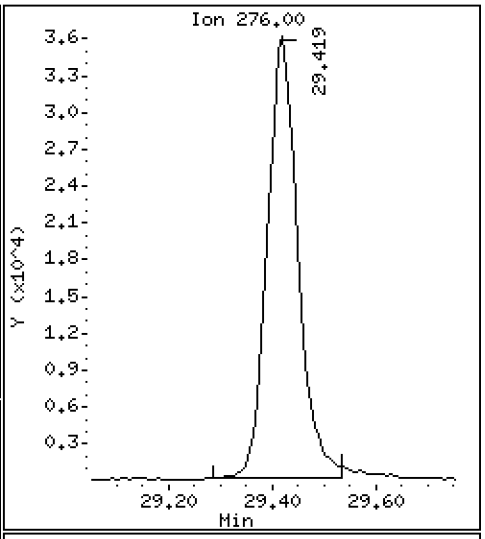
Sample Info: SLC0335-CCV1

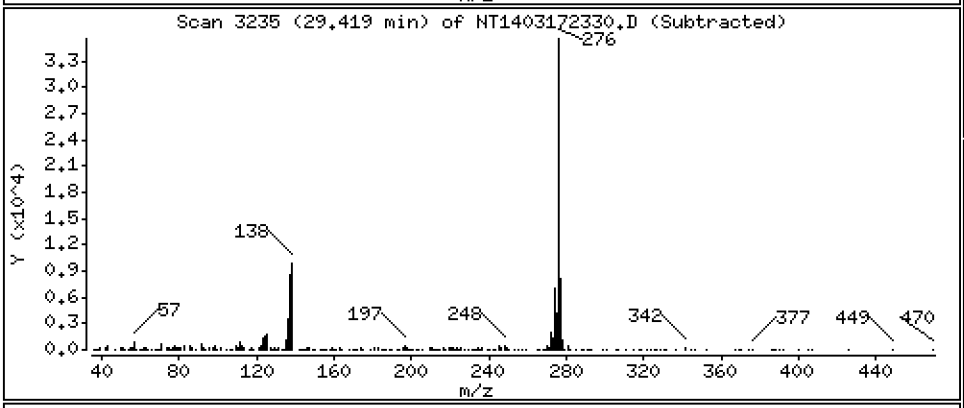
Operator: JGR

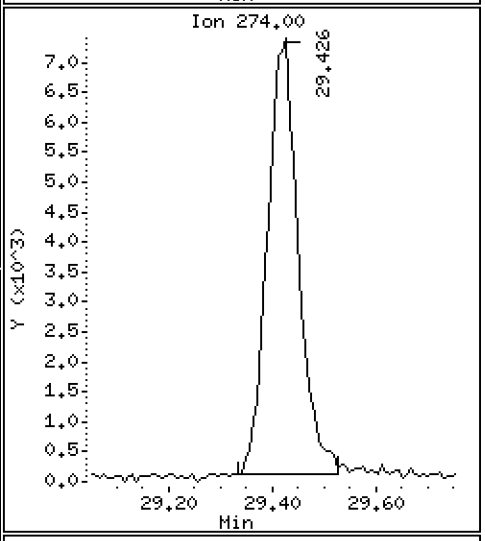
Column phase: ZB-5msi Column diameter: 0.25

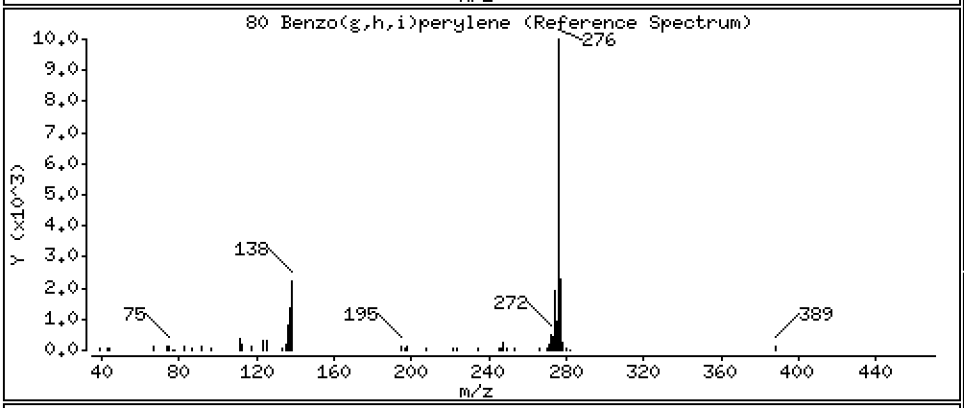
80 Benzo(g,h,i)perylene Concentration: 3.876 ug/mL

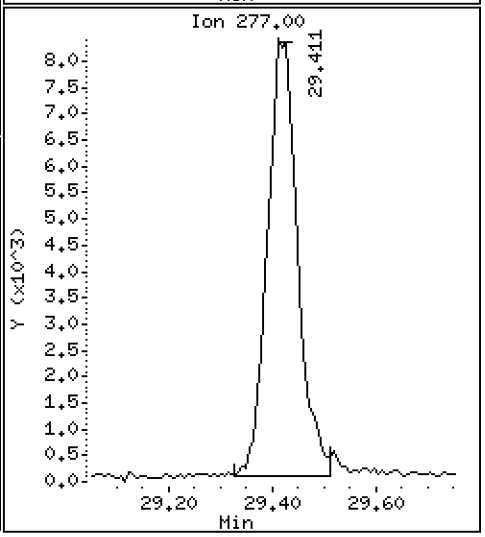


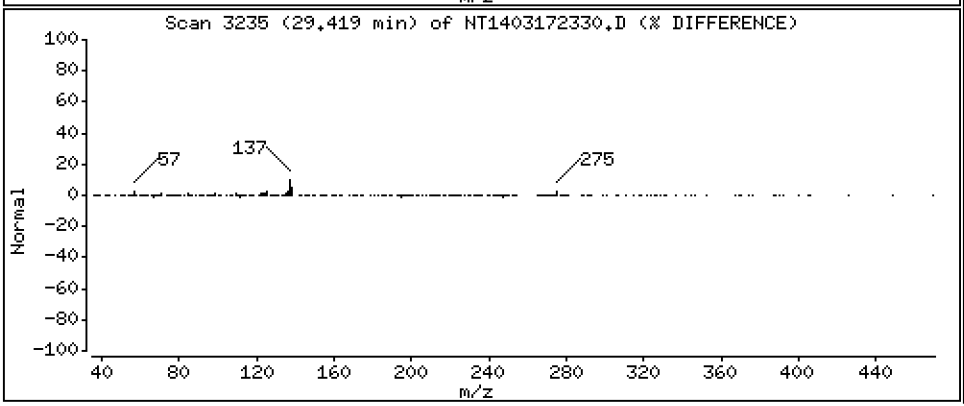












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

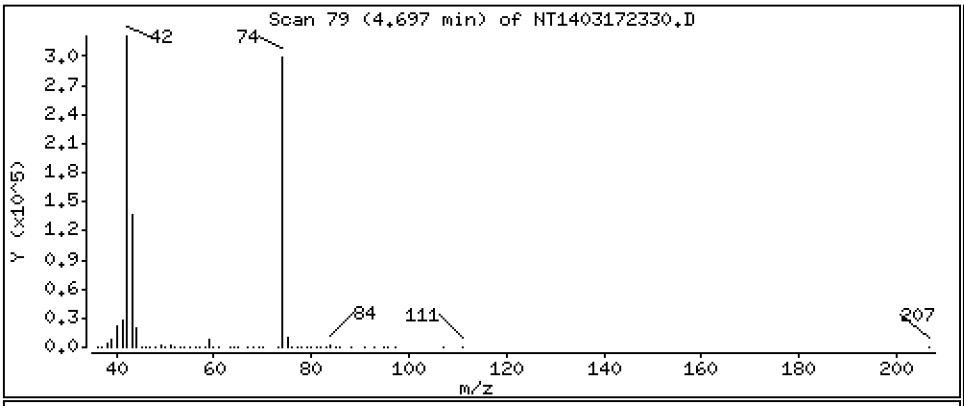
Operator: JGR

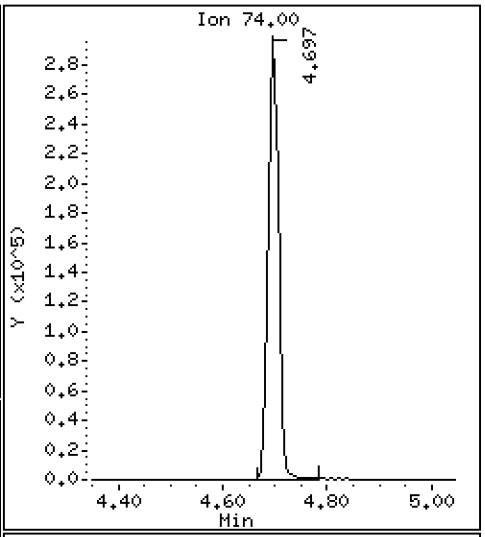
Column phase: ZB-5msi

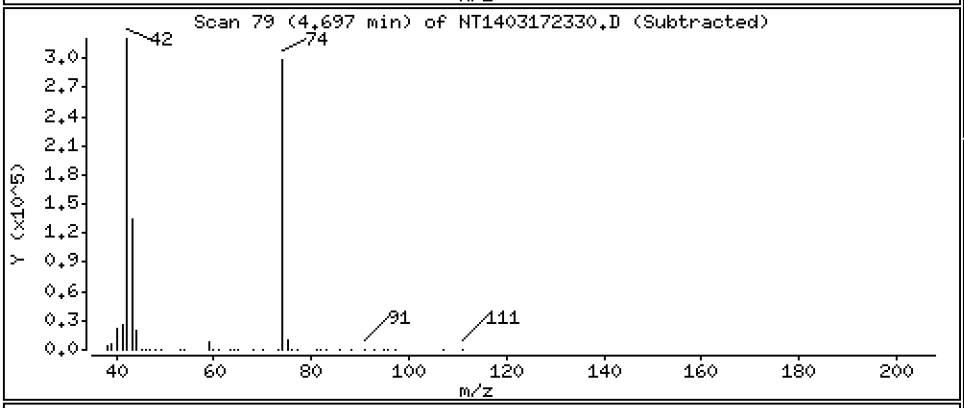
Column diameter: 0.25

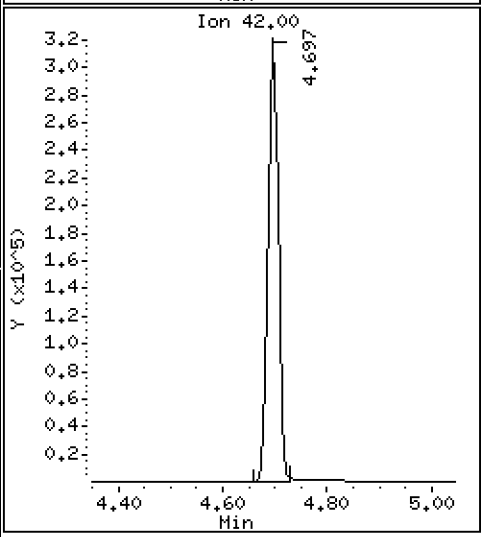
90 N-Nitrosodimethylamine

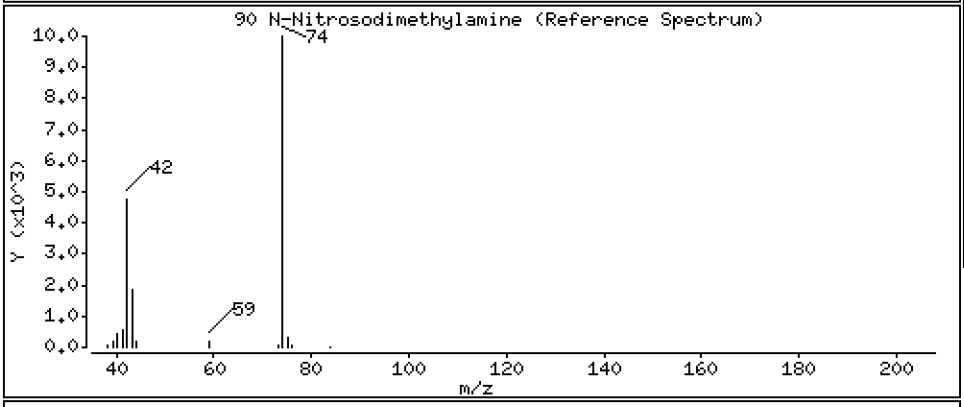
Concentration: 8.152 ug/mL

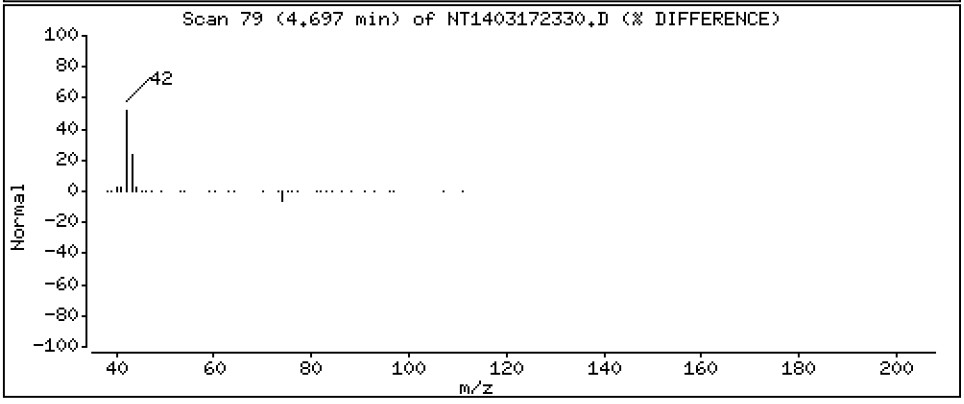












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

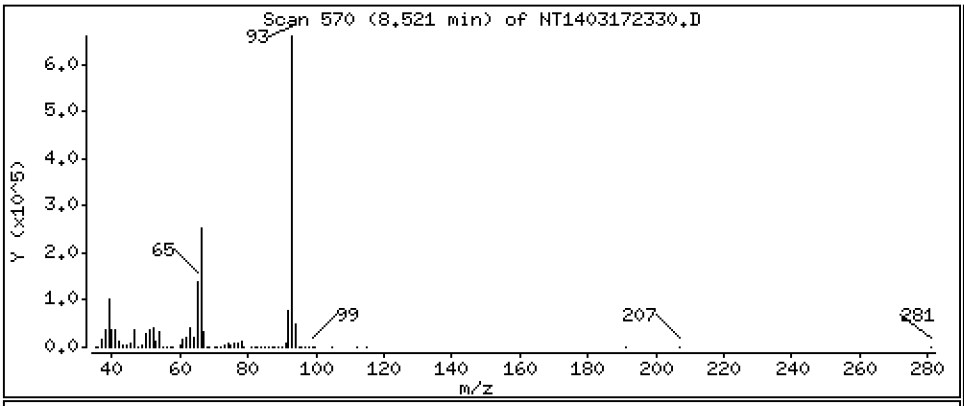
Operator: JGR

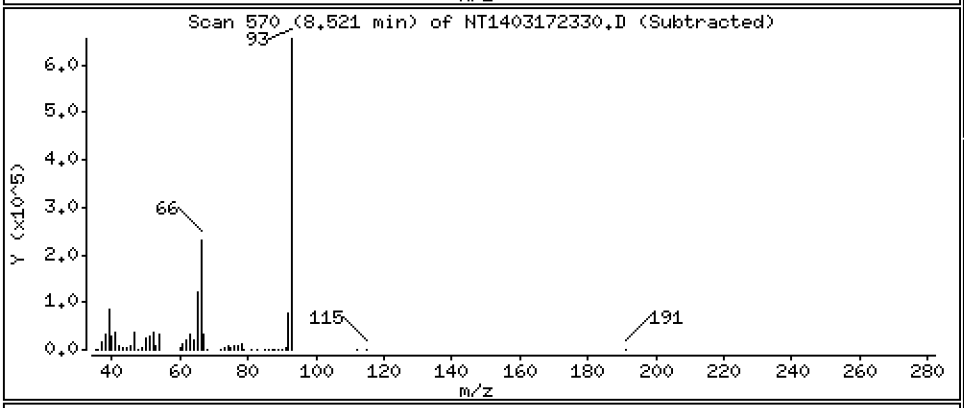
Column phase: ZB-5msi

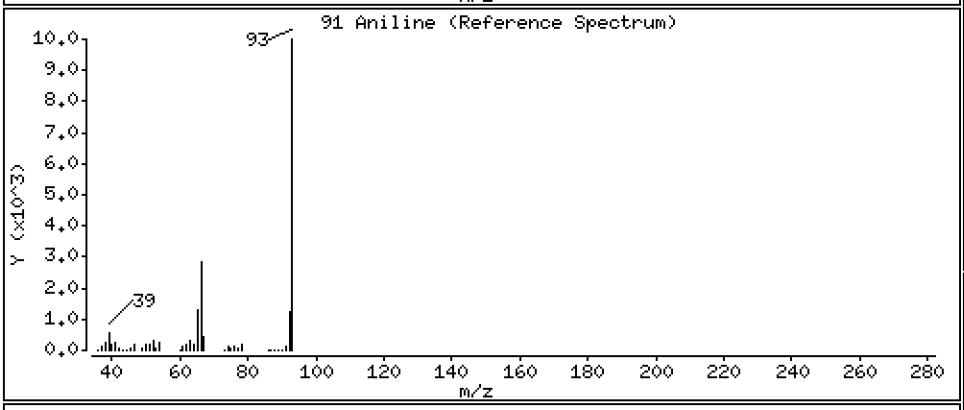
Column diameter: 0.25

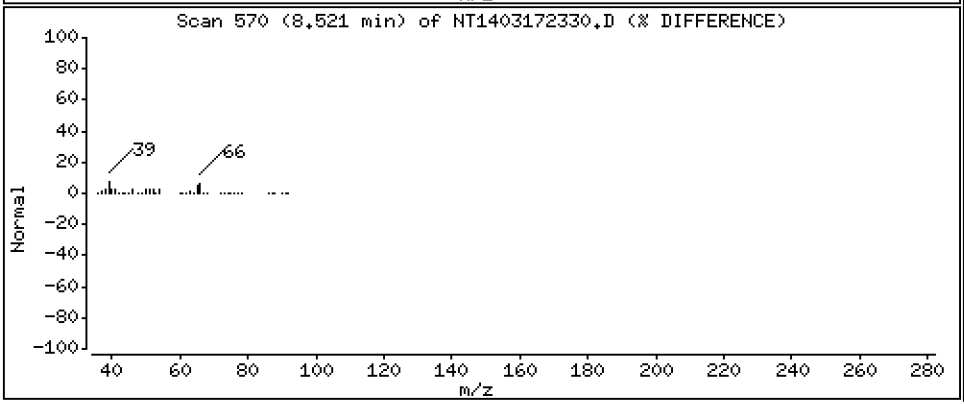
91 Aniline

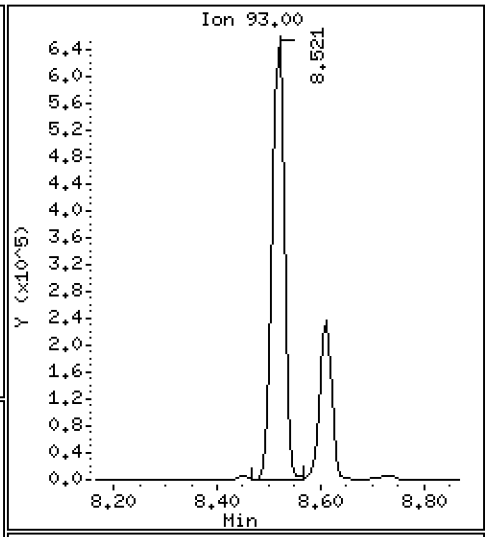
Concentration: 9.693 ug/mL

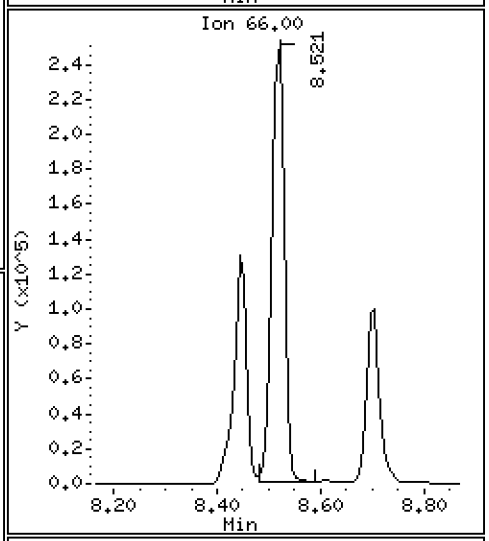


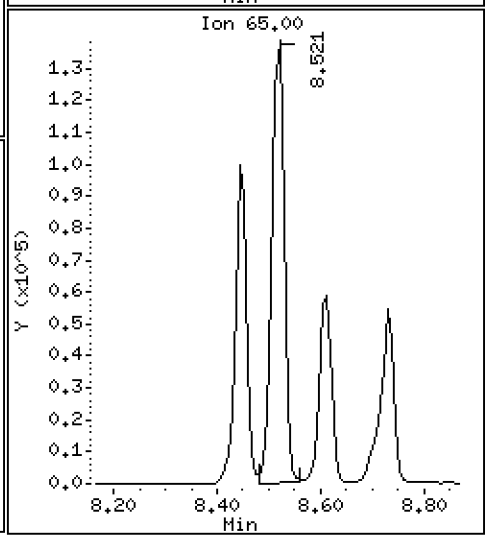












Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172330.D

Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

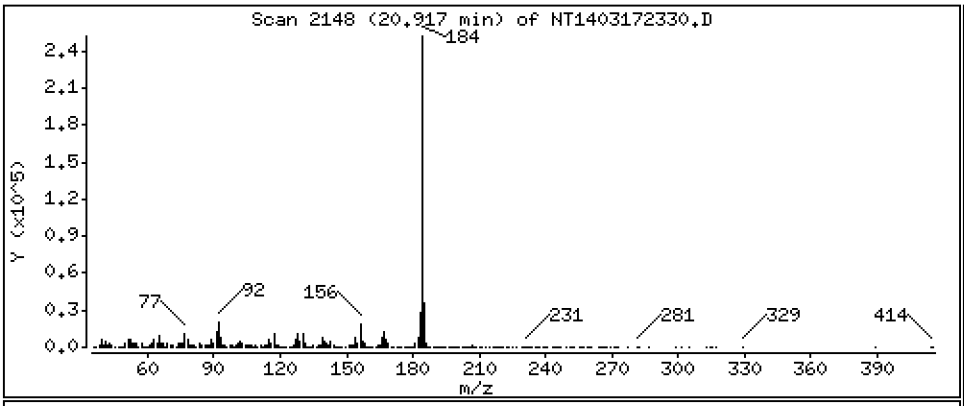
Operator: JGR

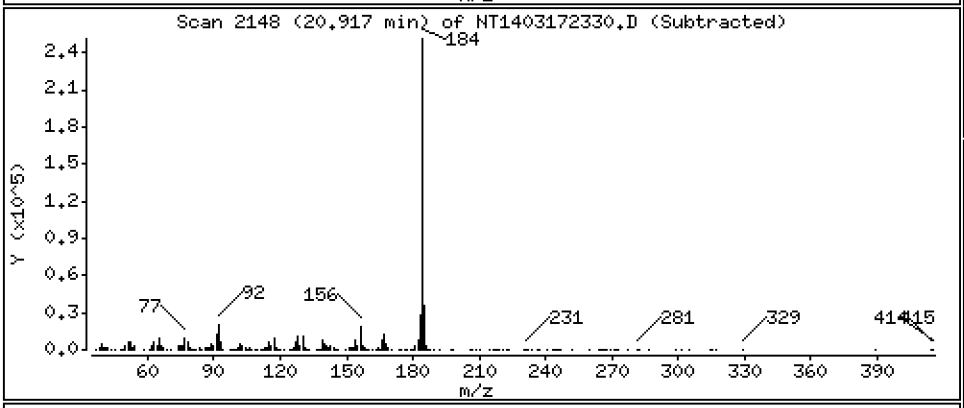
Column phase: ZB-5msi

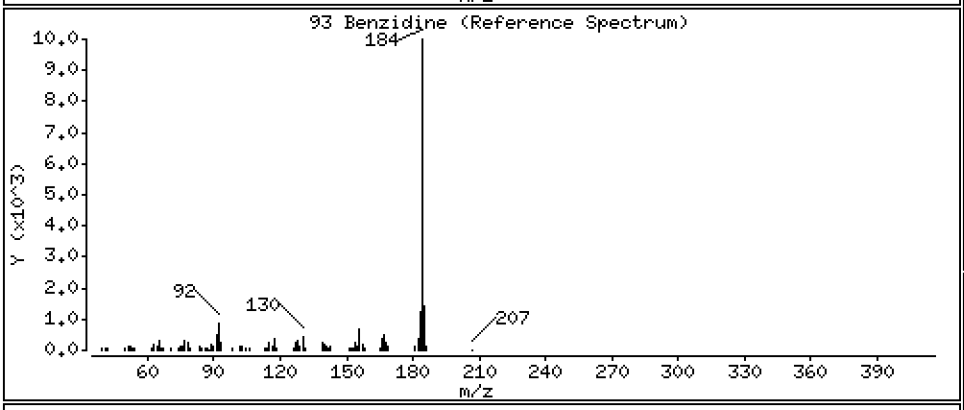
Column diameter: 0.25

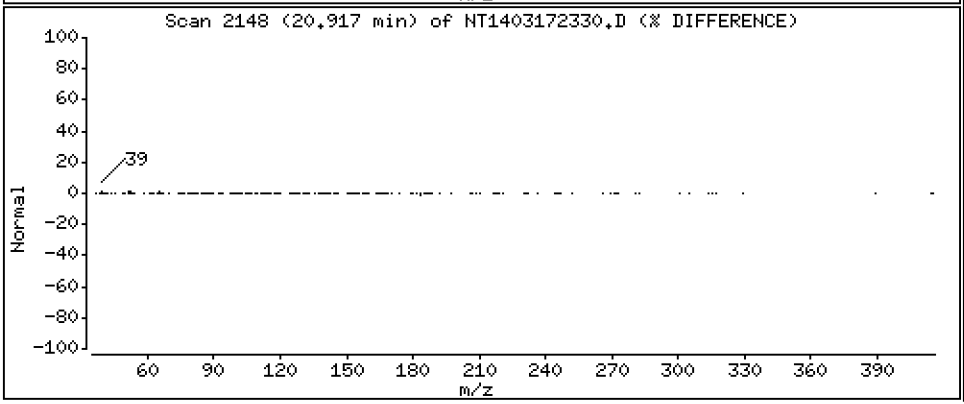
93 Benzidine

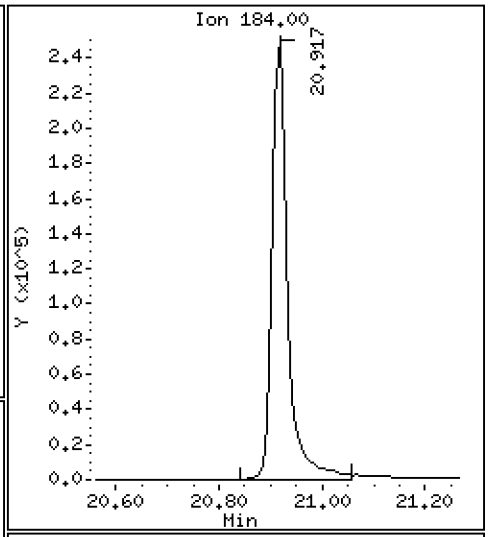
Concentration: 15.68 ug/mL

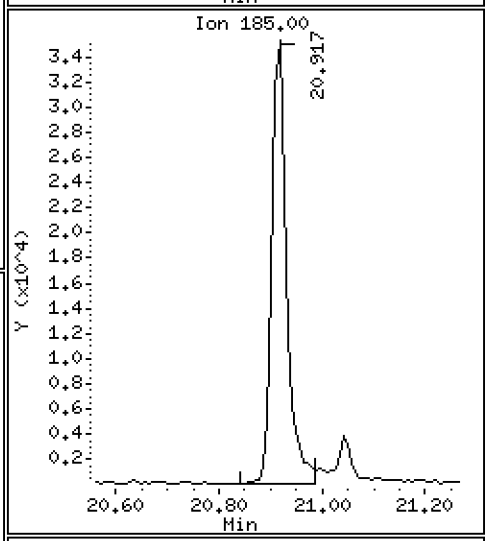


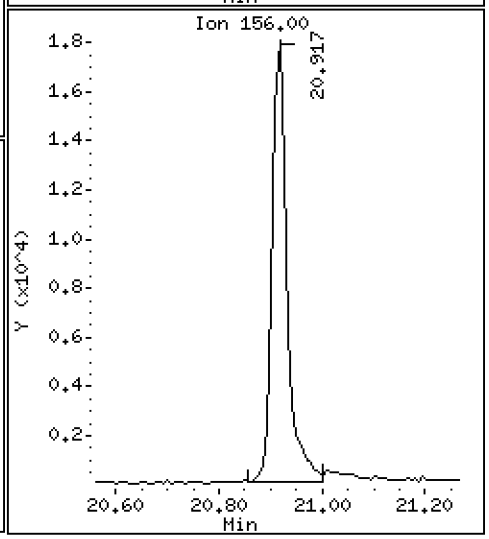












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

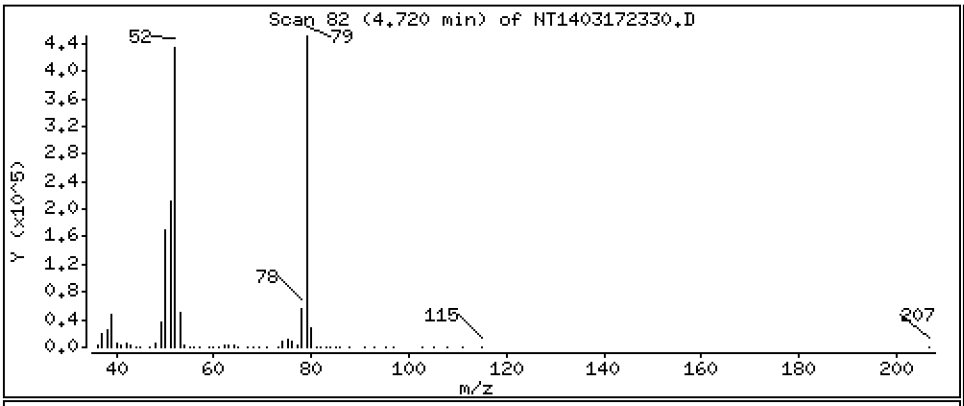
Operator: JGR

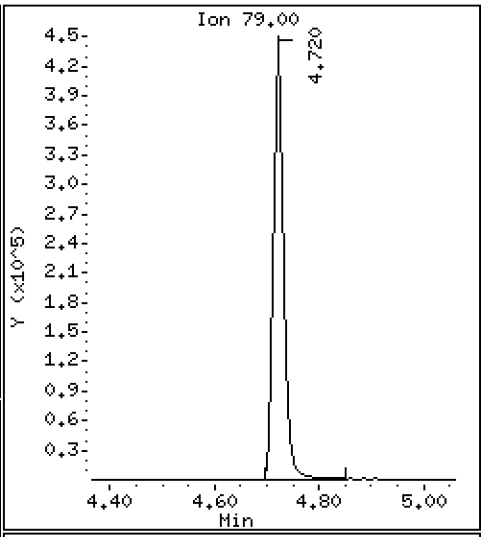
Column phase: ZB-5msi

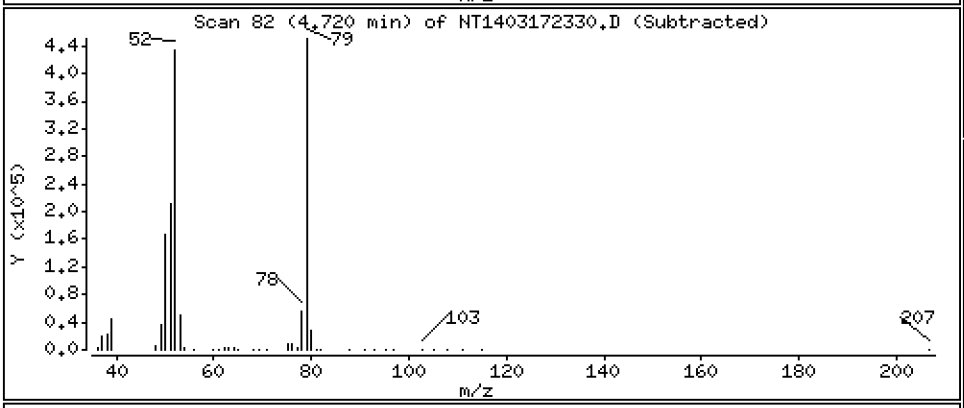
Column diameter: 0.25

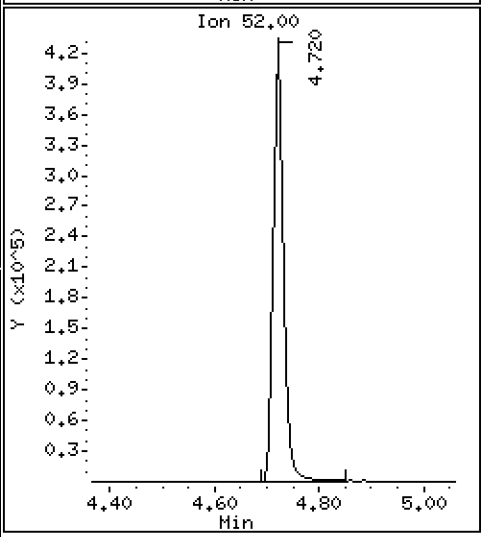
103 Pyridine

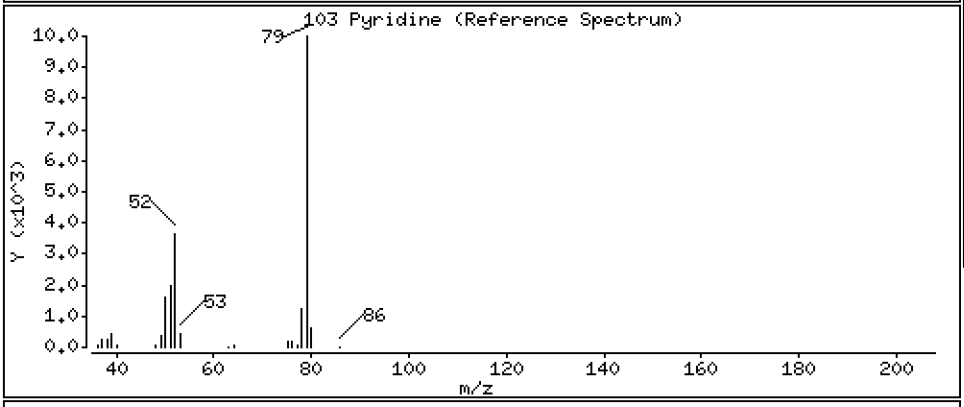
Concentration: 4.100 ug/mL

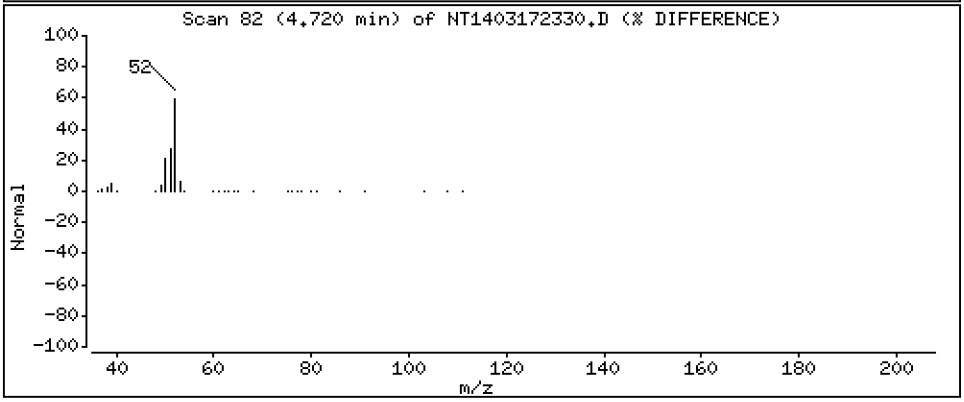












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

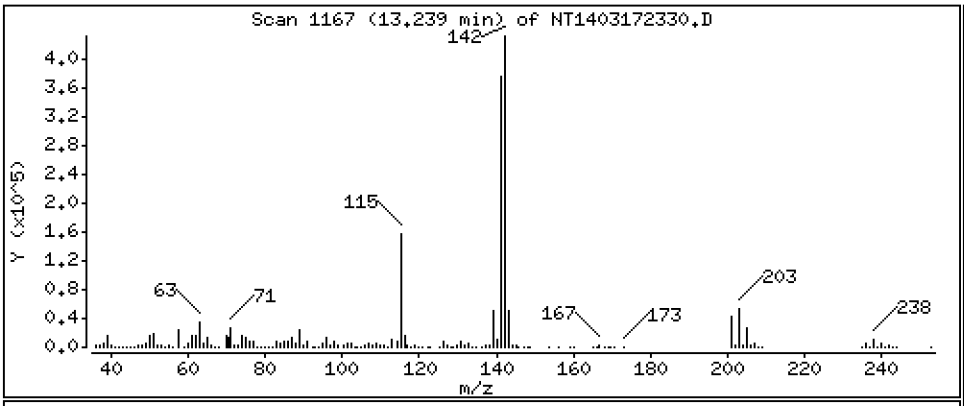
Operator: JGR

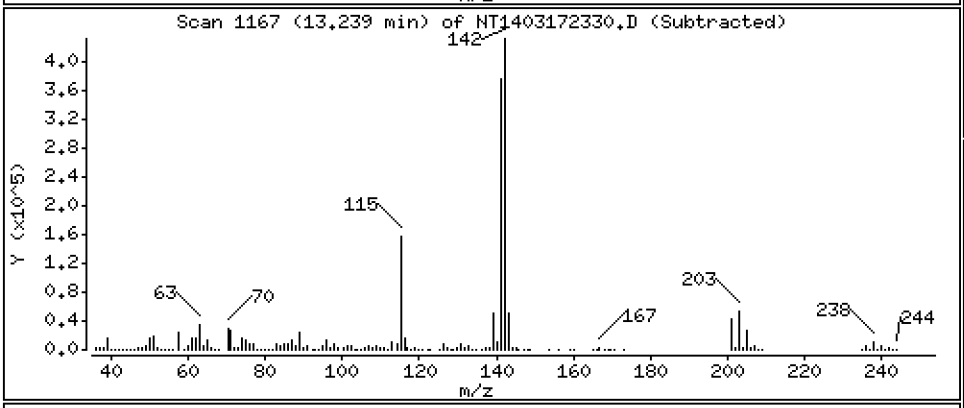
Column phase: ZB-5msi

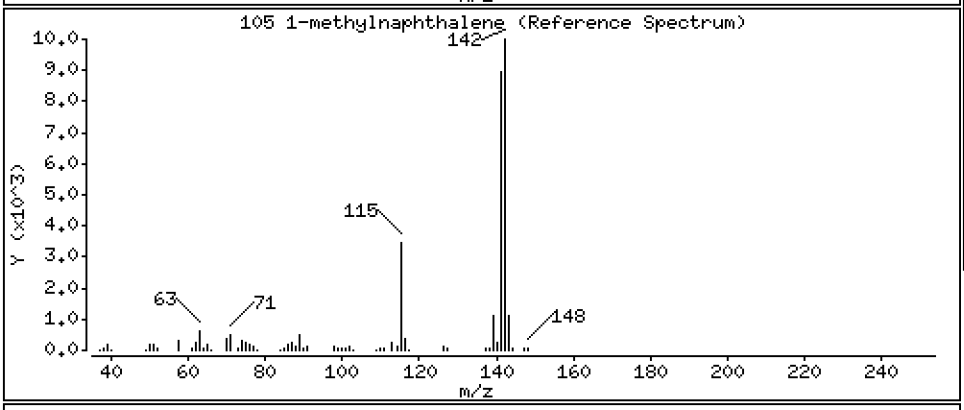
Column diameter: 0.25

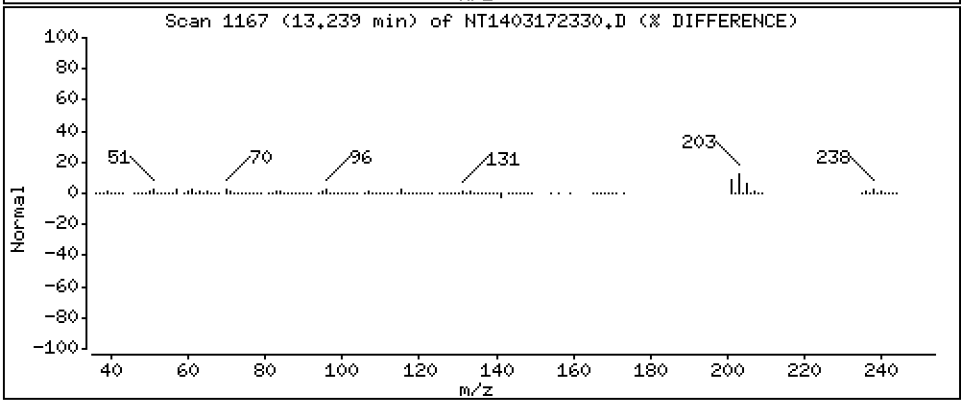
105 1-methylnaphthalene

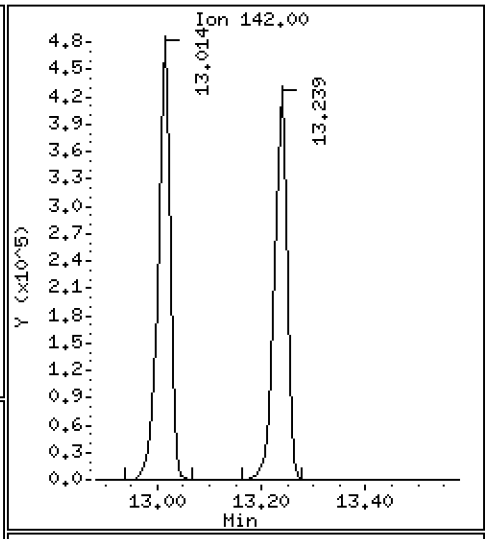
Concentration: 4.925 ug/mL

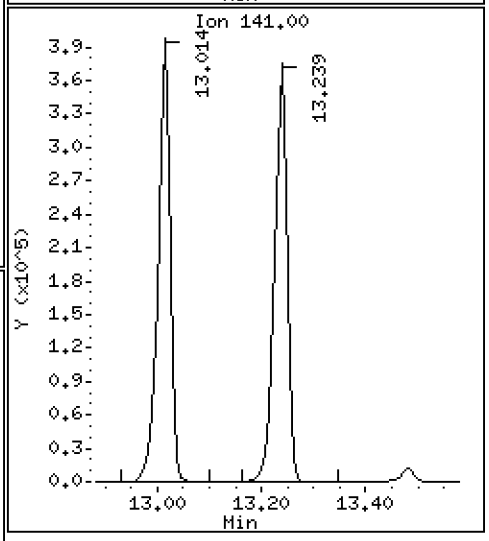












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

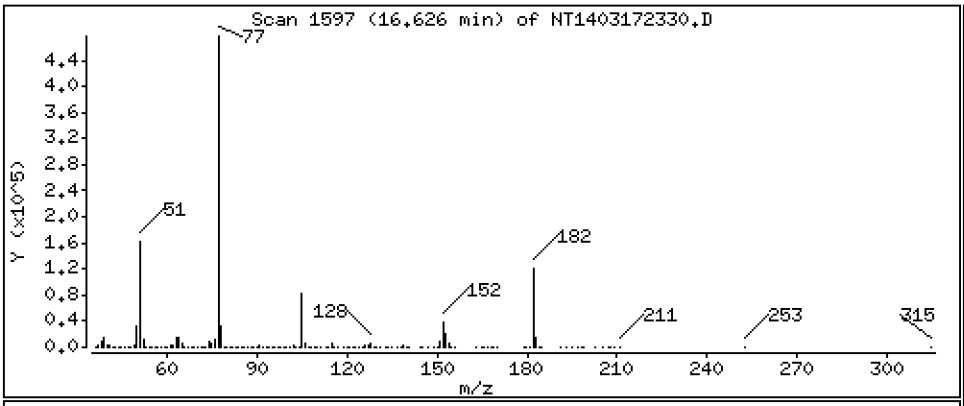
Operator: JGR

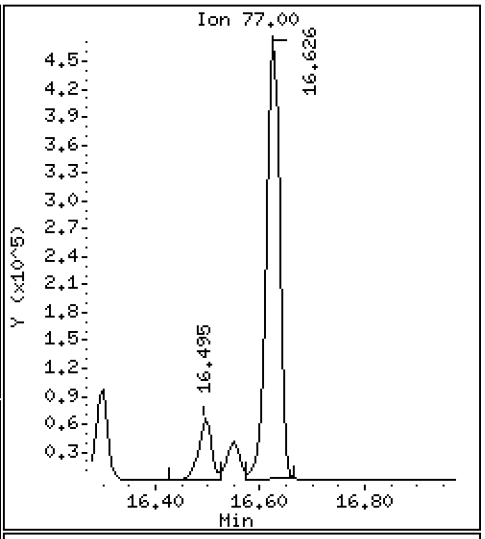
Column phase: ZB-5msi

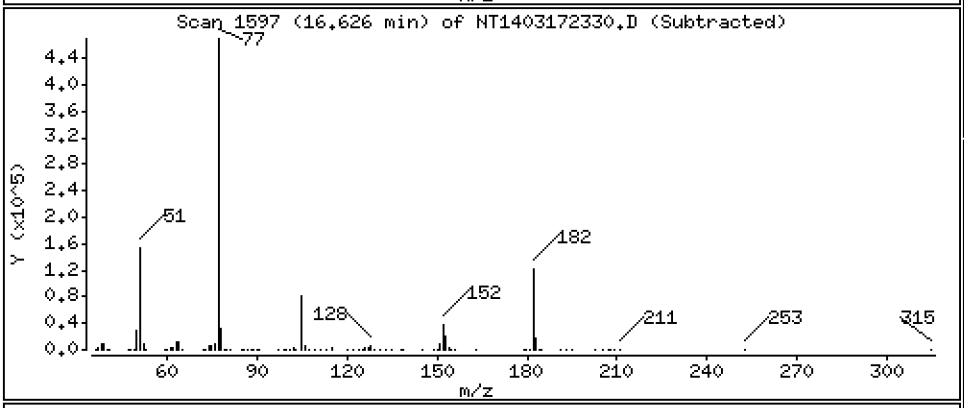
Column diameter: 0.25

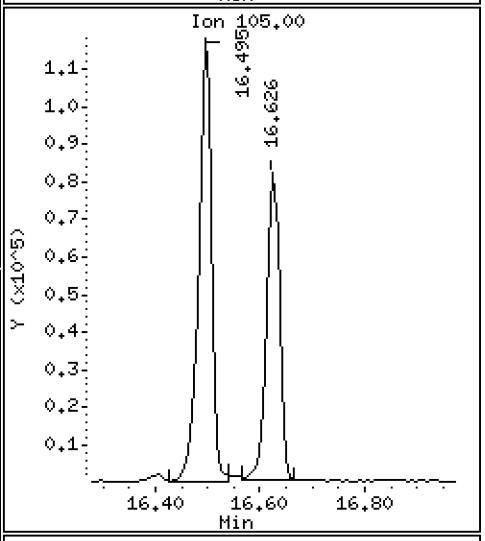
111 Azobenzene (1,2-DP-Hydrazine)

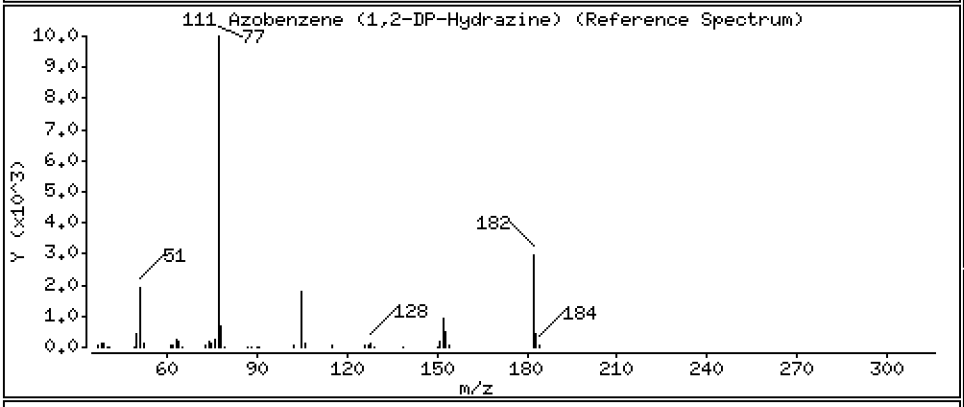
Concentration: 4.659 ug/mL

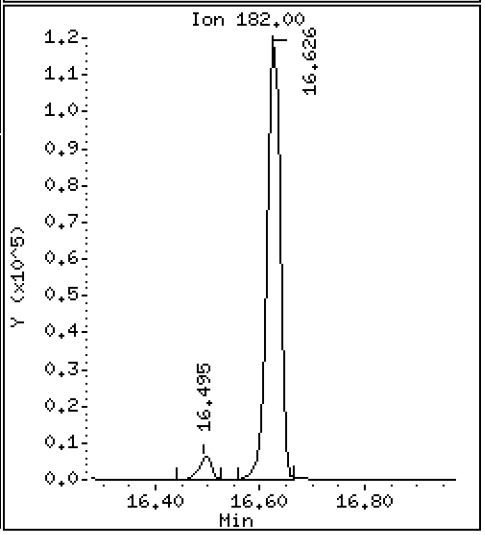


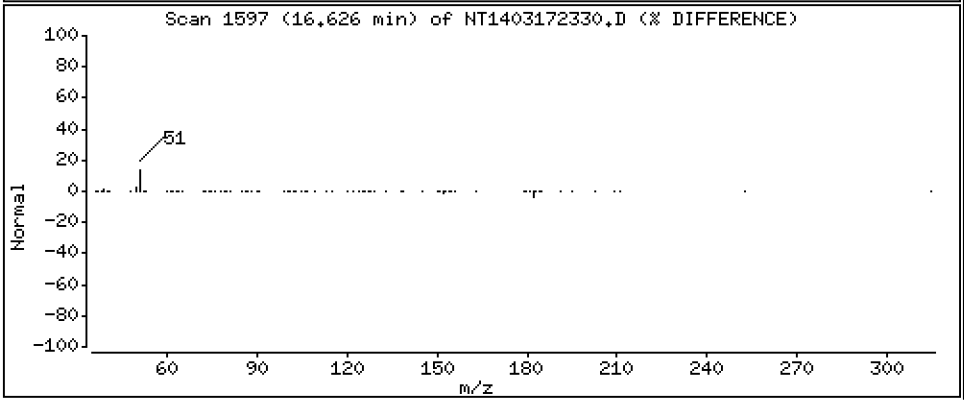












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

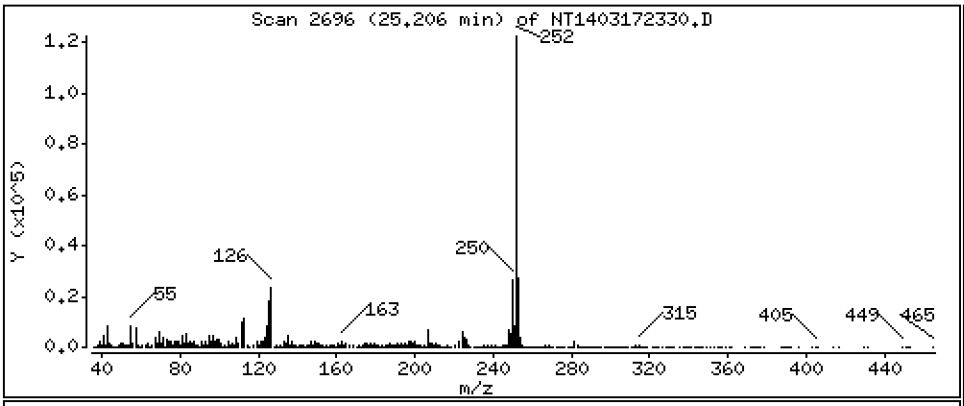
Operator: JGR

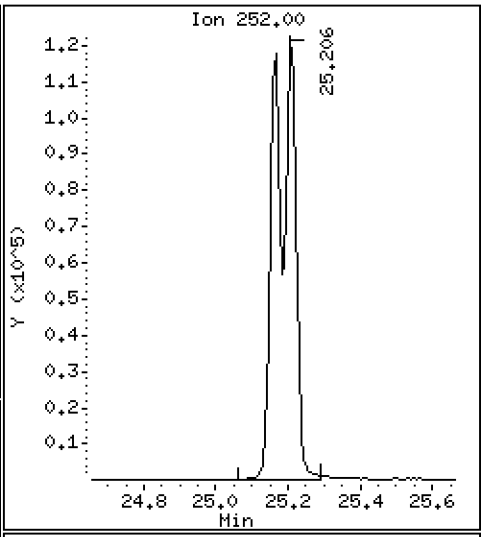
Column phase: ZB-5msi

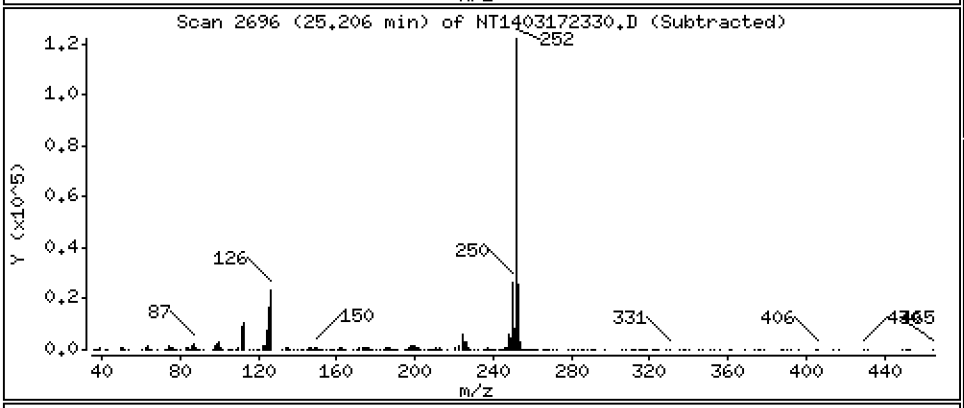
Column diameter: 0.25

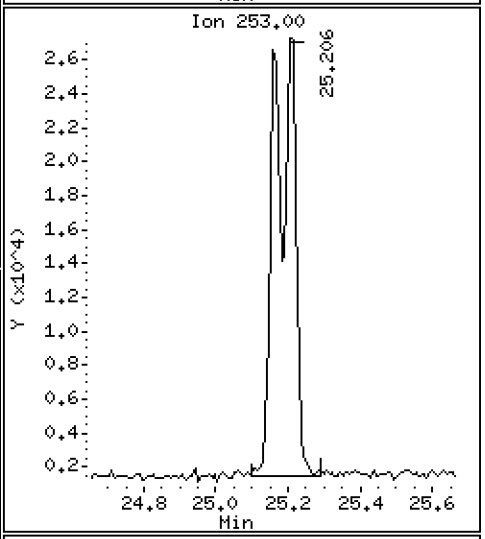
187 Total Benzofluoranthenes

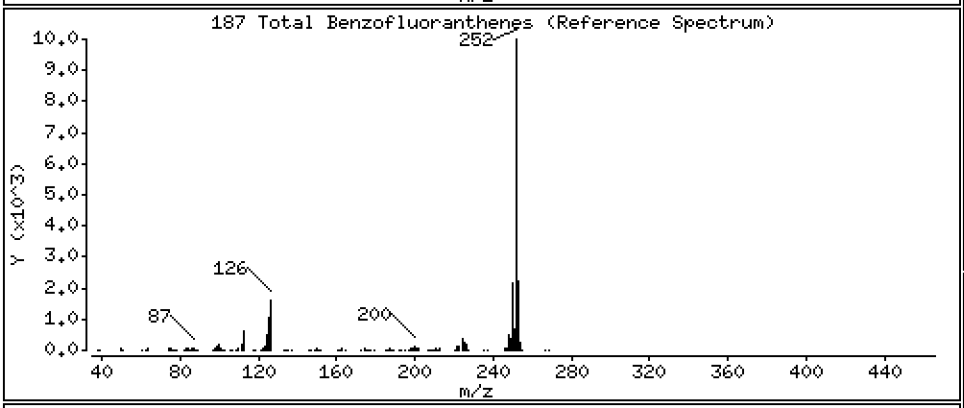
Concentration: 10.03 ug/mL

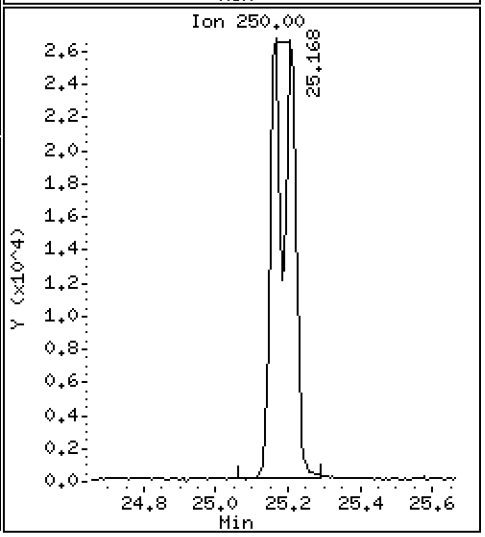


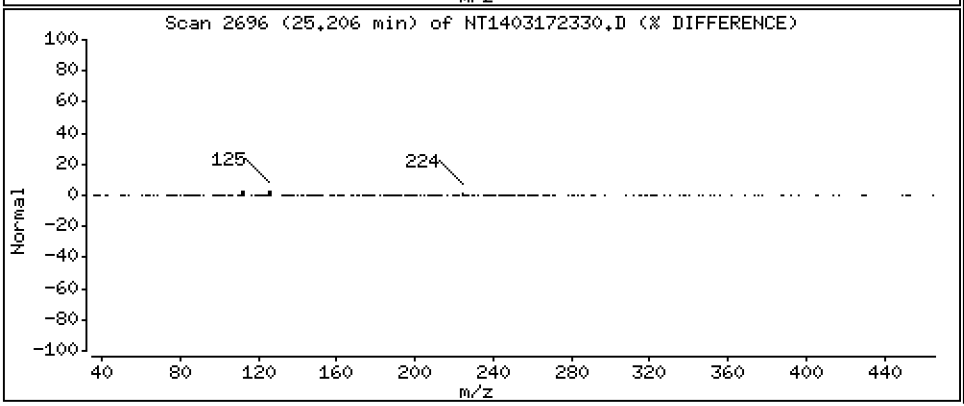












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Date : 18-MAR-2023 07:54

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-CCV1

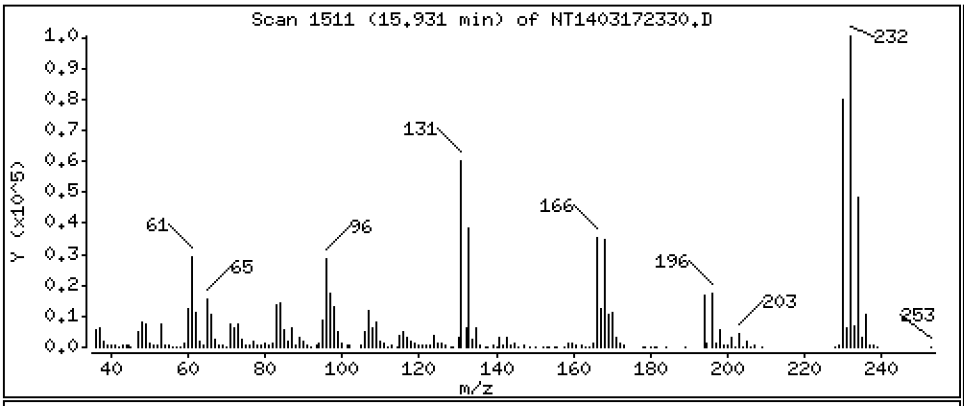
Operator: JGR

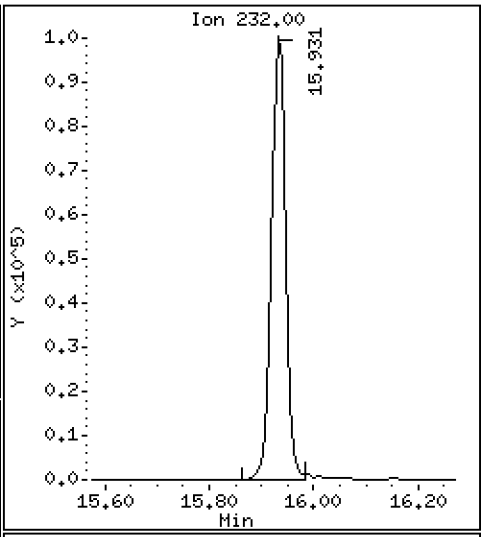
Column phase: ZB-5msi

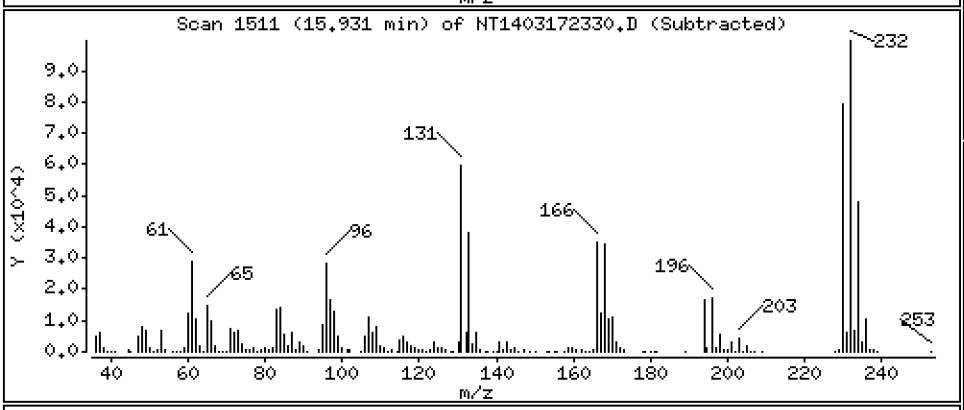
Column diameter: 0.25

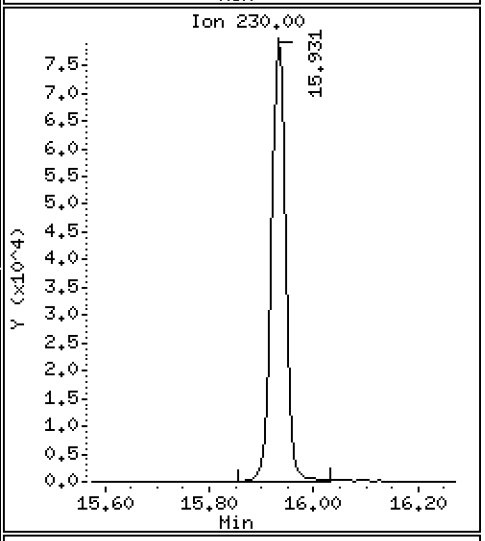
120 2,3,4,6-Tetrachlorophenol

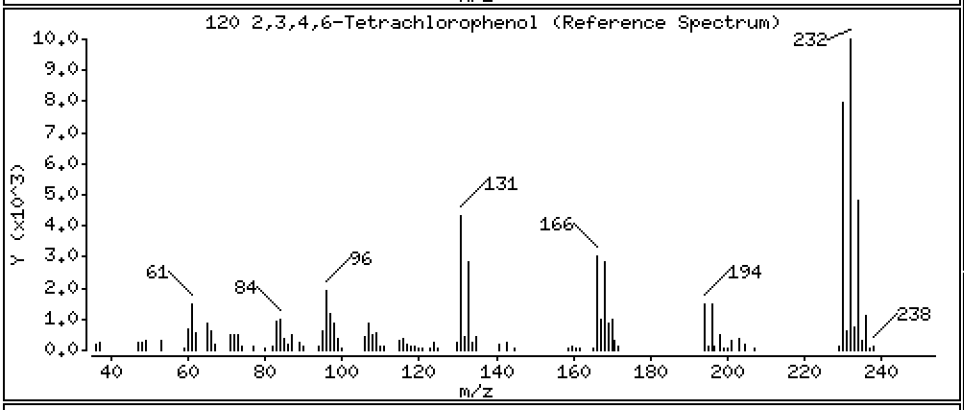
Concentration: 4.200 ug/mL

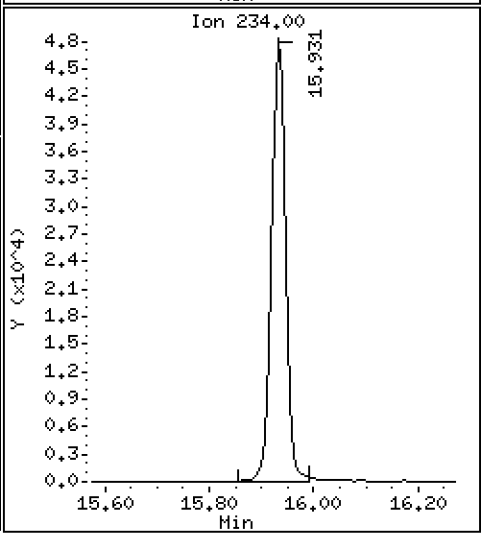


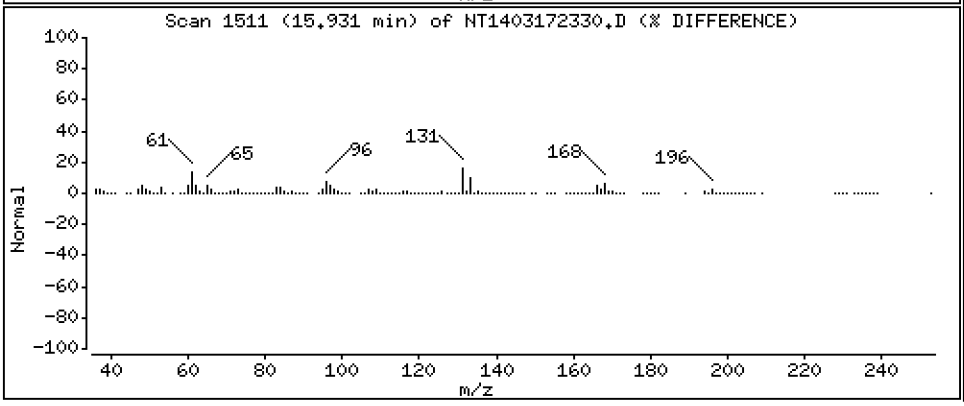












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230317.b\NT1403172330.D
Lab Smp Id: SLC0335-CCV1
Inj Date : 18-MAR-2023 07:54 MS Autotune Date: 11-MAR-2023 16:01
Operator : JGR Inst ID: nt14.i
Smp Info : SLC0335-CCV1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230317.b\ABN.m
Meth Date : 22-Mar-2023 08:57 van Quant Type: ISTD
Cal Date : 15-MAR-2023 15:50 Cal File: NT1403152308.D
Als bottle: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

							CONCENTRATIONS		
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)	
$	1 2-Fluorophenol	112	6.829	6.821	(1.000)	532170	7.20100	7.201	
$	2 Phenol-d5	99	8.428	8.412	(1.000)	708483	7.28161	7.282	
	3 Phenol	94	8.443	8.436	(1.000)	484795	4.68835	4.688	
$	5 2-Chlorophenol-d4	132	8.706	8.698	(1.000)	582381	7.59226	7.592	
	4 Bis(2-Chloroethyl)ether	93	8.613	8.606	(1.000)	354659	4.76306	4.763	
	6 2-Chlorophenol	128	8.729	8.729	(1.000)	395796	4.86315	4.863	
	7 1,3-Dichlorobenzene	146	9.008	9.000	(1.000)	405501	4.92196	4.922	
*	8 1,4-Dichlorobenzene-d4	152	9.070	9.062	(1.000)	217562	4.00000	(M)	
	9 1,4-Dichlorobenzene	146	9.101	9.093	(1.000)	392059	4.94082	4.941	
$	10 1,2-Dichlorobenzene-d4	152	9.434	9.427	(1.000)	263016	5.13237	5.132	
	12 1,2-Dichlorobenzene	146	9.458	9.450	(1.000)	382584	4.87785	4.878	
	11 Benzyl alcohol	108	9.349	9.341	(1.000)	218677	4.54261	4.543	
	14 2,2'-oxybis(1-Chloropropane)	121	9.644	9.644	(1.063)	112728	4.76310	4.763	(M)
	13 2-Methylphenol	108	9.566	9.559	(1.000)	353861	4.84029	4.840	
	17 Hexachloroethane	117	10.055	10.048	(1.000)	158383	4.66686	4.667	
	16 N-Nitroso-di-n-propylamine	70	9.900	9.900	(1.000)	277631	4.82343	4.823	
	15 4-Methylphenol	108	9.838	9.830	(1.000)	378865	4.37695	4.377	
$	18 Nitrobenzene-d5	82	10.164	10.164	(0.879)	454991	5.09212	5.092	
	19 Nitrobenzene	77	10.203	10.203	(0.882)	420090	4.82991	4.830	
	20 Isophorone	82	10.653	10.653	(0.921)	594080	5.00248	5.002	
	21 2-Nitrophenol	139	10.839	10.831	(0.937)	231289	4.62267	4.623	
	22 2,4-Dimethylphenol	107	10.893	10.886	(0.942)	722498	9.71209	9.712	
	23 Bis(2-Chloroethoxy)methane	93	11.087	11.087	(0.959)	381301	4.76919	4.769	
	24 Benzoic acid	105	11.118	11.103	(0.961)	989162	15.5943	15.59	
	25 2,4-Dichlorophenol	162	11.297	11.289	(0.977)	625800	10.5778	10.58	
	26 1,2,4-Trichlorobenzene	180	11.482	11.482	(0.993)	326403	4.48795	4.488	
*	27 Naphthalene-d8	136	11.567	11.567	(1.000)	844336	4.00000		
	28 Naphthalene	128	11.614	11.606	(1.004)	1089421	4.82966	4.830	
	29 4-Chloroaniline	127	11.737	11.737	(1.015)	996588	10.5537	10.55	
	30 Hexachlorobutadiene	225	11.977	11.969	(1.035)	165556	5.04175	5.042	
	31 4-Chloro-3-methylphenol	107	12.704	12.696	(1.098)	645260	9.02575	9.026	
	32 2-Methylnaphthalene	142	13.014	13.006	(1.125)	778674	4.94991	4.950	
	33 Hexachlorocyclopentadiene	237	13.486	13.478	(0.887)	133065	3.86929	3.869	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
	34 2,4,6-Trichlorophenol	196	13.641	13.633	(0.897)	420537	10.0196	10.02
	35 2,4,5-Trichlorophenol	196	13.710	13.702	(0.902)	445266	10.1808	10.18
$	36 2-Fluorobiphenyl	172	13.803	13.795	(0.908)	781049	5.21276	5.213
	37 2-Chloronaphthalene	162	14.012	14.004	(0.922)	661786	5.15325	5.153
	38 2-Nitroaniline	65	14.267	14.267	(0.938)	496402	10.0105	10.01
	39 Dimethylphthalate	163	14.701	14.701	(0.967)	686259	4.97416	4.974
	40 Acenaphthylene	152	14.887	14.879	(0.979)	1049137	4.86381	4.864
	41 2,6-Dinitrotoluene	165	14.840	14.840	(0.976)	322373	10.1149	10.11
*	42 Acenaphthene-d10	164	15.204	15.196	(1.000)	413736	4.00000	
	43 3-Nitroaniline	138	15.127	15.119	(0.995)	411285	9.35411	9.354
	44 Acenaphthene	153	15.266	15.266	(1.004)	610459	4.84730	4.847
	45 2,4-Dinitrophenol	184	15.343	15.335	(1.009)	320320	12.7055	12.71
	46 Dibenzofuran	168	15.598	15.590	(1.026)	899881	5.00505	5.005
	47 4-Nitrophenol	109	15.451	15.436	(1.016)	147768	6.34928	6.349
	48 2,4-Dinitrotoluene	165	15.652	15.645	(1.029)	434200	9.61077	9.611
	50 Diethylphthalate	149	16.162	16.163	(1.063)	760048	5.32840	5.328
	49 Fluorene	166	16.309	16.309	(1.073)	802194	4.70690	4.707
	51 4-Chlorophenyl-phenylether	204	16.301	16.294	(1.072)	361584	4.94254	4.943
	52 4-Nitroaniline	138	16.402	16.394	(1.079)	316946	8.28788	8.288
	53 4,6-Dinitro-2-methylphenol	198	16.494	16.494	(0.904)	422354	18.5809	18.58
	54 N-Nitrosodiphenylamine	169	16.548	16.548	(0.907)	489138	5.61930	5.619
$	55 2,4,6-Tribromophenol	330	16.849	16.841	(1.108)	111839	7.11993	7.120
	56 4-Bromophenyl-phenylether	248	17.304	17.304	(0.948)	169892	5.78906	5.789
	57 Hexachlorobenzene	284	17.628	17.621	(0.966)	165387	5.34097	5.341
	58 Pentachlorophenol	266	17.984	17.977	(0.986)	158567	7.28436	7.284
*	59 Phenanthrene-d10	188	18.248	18.240	(1.000)	640883	4.00000	
	60 Phenanthrene	178	18.294	18.294	(1.003)	853471	4.66101	4.661
	61 Anthracene	178	18.387	18.387	(1.008)	854206	4.84209	4.842
	62 Carbazole	167	18.719	18.712	(1.026)	686053	4.37091	4.371
	63 Di-n-butylphthalate	149	19.516	19.509	(1.070)	1056462	5.31008	5.310
	64 Fluoranthene	202	20.685	20.677	(0.888)	646763	8.19750	8.198
	65 Pyrene	202	21.110	21.103	(0.906)	603779	7.46233	7.462
$	66 Terphenyl-d14	244	21.389	21.389	(0.918)	452358	8.25866	8.259
	67 Butylbenzylphthalate	149	22.310	22.310	(0.957)	311691	8.79294	8.793
	68 Benzo(a)anthracene	228	23.270	23.263	(0.999)	348959	4.88021	4.880
*	69 Chrysene-d12	240	23.301	23.294	(1.000)	193927	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.224	23.216	(0.997)	349219	16.1888	16.19
	71 Chrysene	228	23.340	23.340	(1.002)	318218	4.91723	4.917
	72 bis(2-Ethylhexyl)phthalate	149	23.332	23.332	(0.959)	430309	6.53691	6.537
*	134 Di-n-octylphthalate-d4	153	24.323	24.316	(1.000)	500053	4.00000	
	73 Di-n-octylphthalate	149	24.331	24.331	(1.000)	609513	4.74153	4.742
	74 Benzo(b)fluoranthene	252	25.167	25.159	(0.970)	235798	4.70405	4.704
	75 Benzo(k)fluoranthene	252	25.206	25.198	(0.972)	263659	5.30604	5.306
	76 Benzo(a)pyrene	252	25.825	25.818	(0.996)	206966	4.82833	4.828
*	77 Perylene-d12	264	25.941	25.934	(1.000)	141853	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	28.626	28.610	(1.103)	200006	4.28698	4.287
	79 Dibenzo(a,h)anthracene	278	28.641	28.626	(1.104)	171849	4.37057	4.371
	80 Benzo(g,h,i)perylene	276	29.418	29.403	(1.134)	149043	3.87633	3.876
	90 N-Nitrosodimethylamine	74	4.697	4.697	(1.000)	381560	8.15196	8.152
	91 Aniline	93	8.521	8.513	(1.000)	1008064	9.69268	9.693
	93 Benzidine	184	20.917	20.909	(0.898)	497938	15.6829	15.68
	103 Pyridine	79	4.720	4.712	(1.000)	594327	4.10025	4.100
	105 1-methylnaphthalene	142	13.238	13.230	(1.144)	701965	4.92529	4.925
	111 Azobenzene (1,2-DP-Hydrazine)	77	16.625	16.625	(1.093)	793513	4.65861	4.659

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.206	25.159	(0.972)	477612	10.0325	10.03
120 2,3,4,6-Tetrachlorophenol	232	15.930	15.923	(1.048)	180397	4.19994	4.200

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1403172330.D
Lab Smp Id: SLC0335-CCV1
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt14.i\20230317.b\ABN.m
Misc Info:

Calibration Date: 17-MAR-2023
Calibration Time: 23:31
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	231017	115509	462034	217562	-5.82
27 Naphthalene-d8	843789	421895	1687578	844336	0.06
42 Acenaphthene-d10	432455	216228	864910	413736	-4.33
59 Phenanthrene-d10	793780	396890	1587560	640883	-19.26
69 Chrysene-d12	411057	205529	822114	193927	-52.82 <-
134 Di-n-octylphthala	799010	399505	1598020	500053	-37.42
77 Perylene-d12	254782	127391	509564	141853	-44.32

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.06	8.56	9.56	9.07	0.08
27 Naphthalene-d8	11.57	11.07	12.07	11.57	-0.00
42 Acenaphthene-d10	15.20	14.70	15.70	15.20	0.05
59 Phenanthrene-d10	18.24	17.74	18.74	18.25	0.04
69 Chrysene-d12	23.29	22.79	23.79	23.30	0.03
134 Di-n-octylphthala	24.32	23.82	24.82	24.32	0.03
77 Perylene-d12	25.93	25.43	26.43	25.94	0.03

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

REVIEW SUMMARY FOR FILE - NT1403172330.D

Lab ID: SLC0335-CCV1
nt14.i, ABN.m, 18-MAR-2023 07:54

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
1.063	1.000	0.0633	2,2'-oxybis(1-Chloropropane)

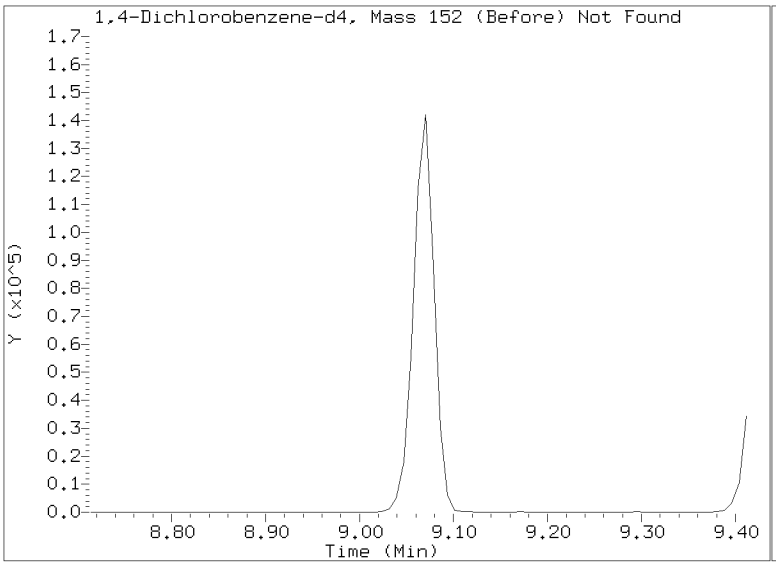
RRT check based on Ccal File: NT1403172316.D

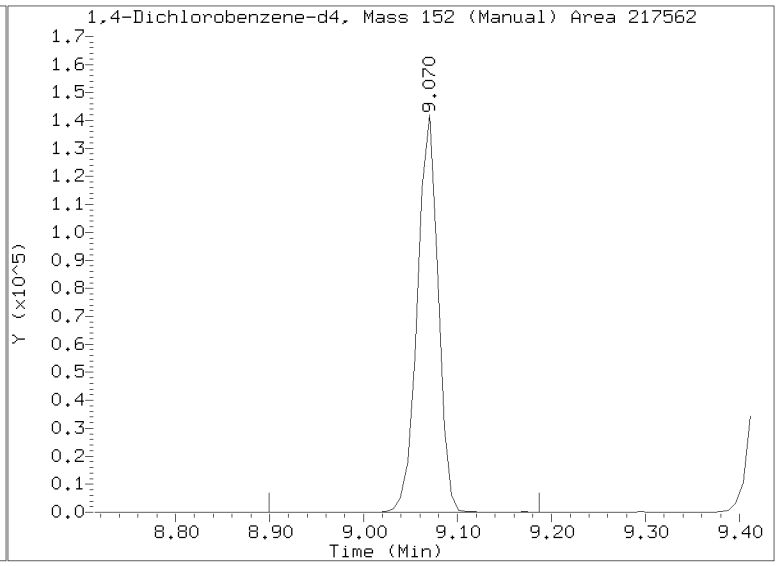
On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

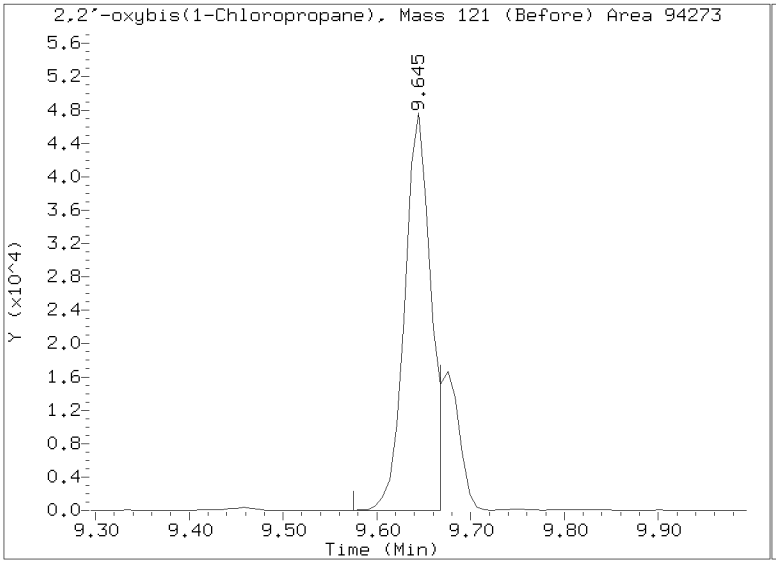
* Only compounds listed in the work order have been verified by the analyst *

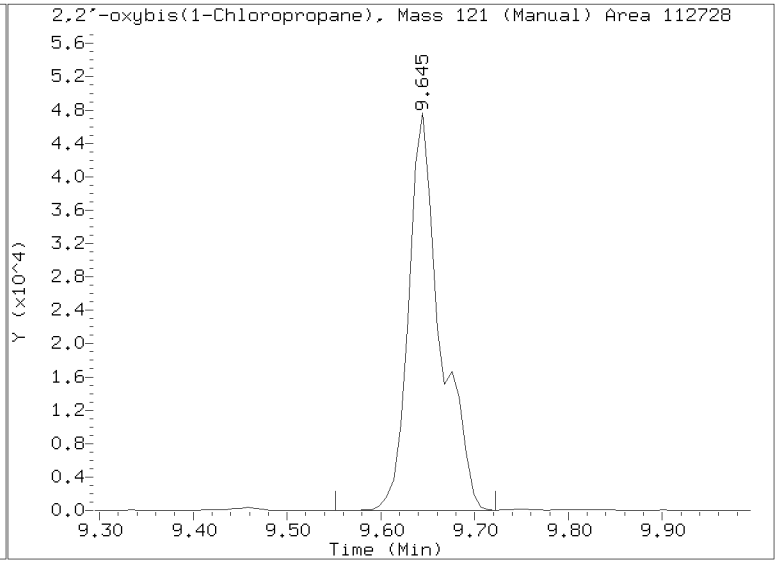
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230317.b/NT1403172330.D
Injection Date: 18-MAR-2023 07:54
Lab ID:SLC0335-CCV1 Client ID:
Report Date: 03/22/2023 09:51









Analytical Resources, LLC
Analytical Chemists and Consultants

LOW-CONCENTRATION CONTINUING CALIBRATION CHECK

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT14	Calibration:	GC00048
Lab File ID:	NT1403172304.D	Calibration Date:	03/15/2023
Sequence:	SLC0335	Injection Date:	03/17/23
Lab Sample ID:	SLC0335-LCV1	Injection Time:	16:16
Sequence Name:	ABN 0.2		

		CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Phenol	A	0.20000	0.2	1.9011440	1.5235880		-19.9	+/-50
4-Methylphenol	A	0.20000	0.2	1.5914380	1.2597320		-20.8	+/-50
Naphthalene	A	0.20000	0.2	1.0686200	1.1139550		4.2	+/-50
2-Methylnaphthalene	A	0.20000	0.2	0.7452524	0.7404026		-0.7	+/-50
Acenaphthylene	A	0.20000	0.2	2.0854140	2.0202070		-3.1	+/-50
Dimethylphthalate	A	0.20000	0.2	1.3338450	1.3048730		-2.2	+/-50
Acenaphthene	A	0.20000	0.2	1.2175690	1.2325880		1.2	+/-50
Dibenzofuran	A	0.20000	0.2	1.7382550	1.7753620		2.1	+/-50
Fluorene	A	0.20000	0.2	1.6477120	1.4084750		-14.5	+/-50
Phenanthrene	A	0.20000	0.2	1.1428510	1.1396140		-0.3	+/-50
Anthracene	A	0.20000	0.2	1.1010610	0.9758279		-11.4	+/-50
Fluoranthene	A	0.20000	0.2	1.6273660	1.7018160		4.6	+/-50
Pyrene	A	0.20000	0.2	1.6688810	1.7791570		6.6	+/-50
Butylbenzylphthalate	A	0.20000	0.2	0.7311588	0.6713611		-8.2	+/-50
Benzo(a)anthracene	A	0.20000	0.2	1.4748830	1.5351740		4.1	+/-50
Chrysene	A	0.20000	0.2	1.3348290	1.3425460		0.6	+/-50
bis(2-Ethylhexyl)phthalate	A	0.20000	0.2	0.5265649	0.5154639		-2.1	+/-50
Benzofluoranthenes, Total	A	0.40000	0.4	1.3424190	1.3253550		-1.3	+/-50
Benzo(a)pyrene	A	0.20000	0.2	1.2087150	1.0894790		-9.9	+/-50
Indeno(1,2,3-cd)pyrene	A	0.20000	0.1	1.3155660	0.8982358		-31.7	+/-50
Dibenzo(a,h)anthracene	A	0.20000	0.1	1.1087420	0.7797985		-29.7	+/-50
Benzo(g,h,i)perylene	A	0.20000	0.1	1.0842080	0.7793748		-28.1	+/-50
2-Fluorophenol	A	0.30000	0.252	1.3587350	1.1408270		-16.0	+/-50
Phenol-d5	A	0.30000	0.253	1.7888720	1.5082180		-15.7	+/-50
2-Chlorophenol-d4	A	0.30000	0.290	1.4103050	1.3613970		-3.5	+/-50
1,2-Dichlorobenzene-d4	A	0.20000	0.217	0.9421955	1.0222900		8.5	+/-50
Nitrobenzene-d5	A	0.20000	0.182	0.4233007	0.3849656		-9.1	+/-50
2-Fluorobiphenyl	A	0.20000	0.206	1.4485960	1.4924030		3.0	+/-50
2,4,6-Tribromophenol	A	0.30000	0.233	0.1518639	0.1177333		-22.5	+/-50
p-Terphenyl-d14	A	0.20000	0.227	1.1297810	1.2803740		13.3	+/-50

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172304.D

Page 1

Date : 17-MAR-2023 16:16

Client ID:

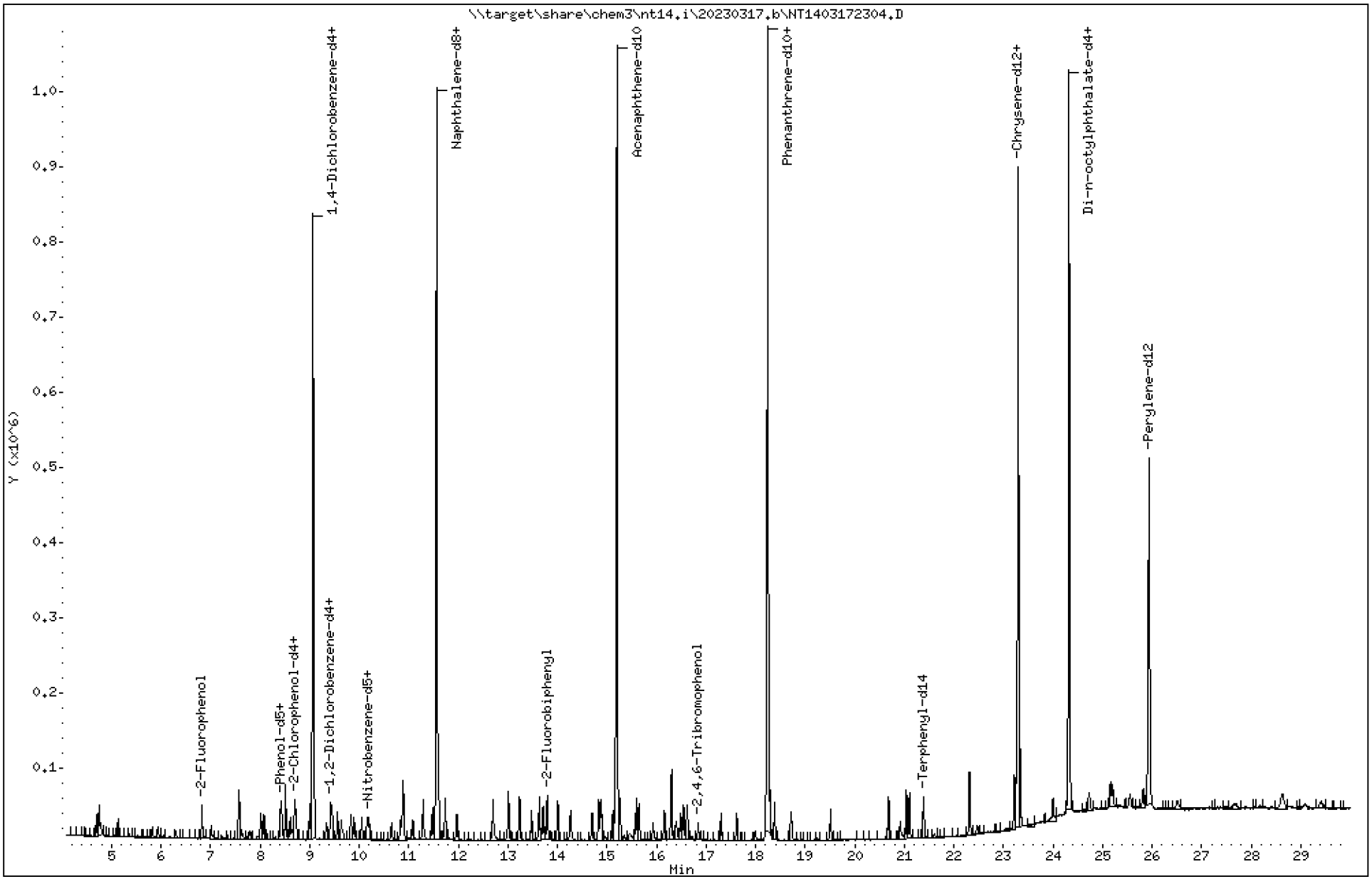
Instrument: nt14.i

Sample Info: SLC0335-LCV1

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

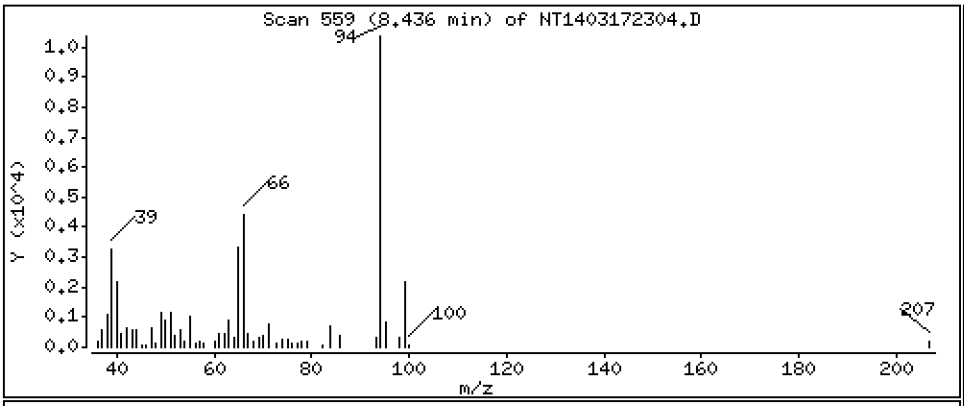
Operator: JGR

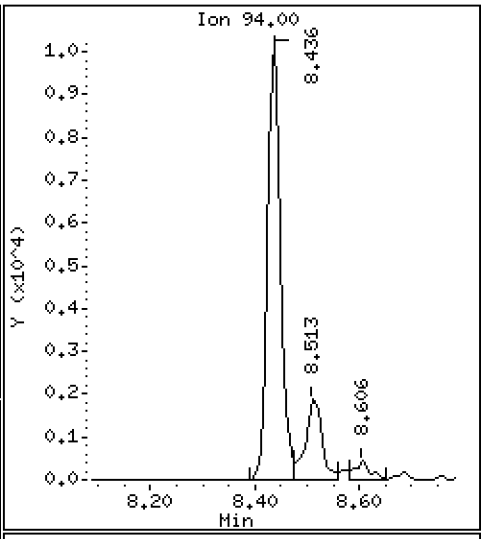
Column phase: ZB-5msi

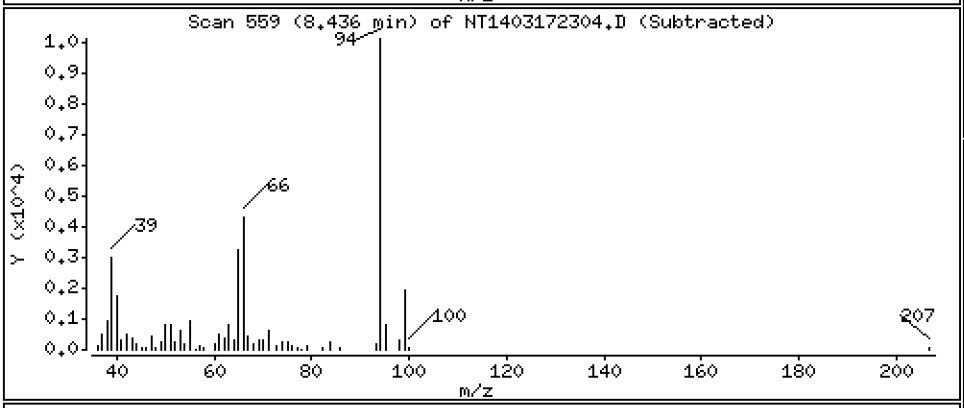
Column diameter: 0.25

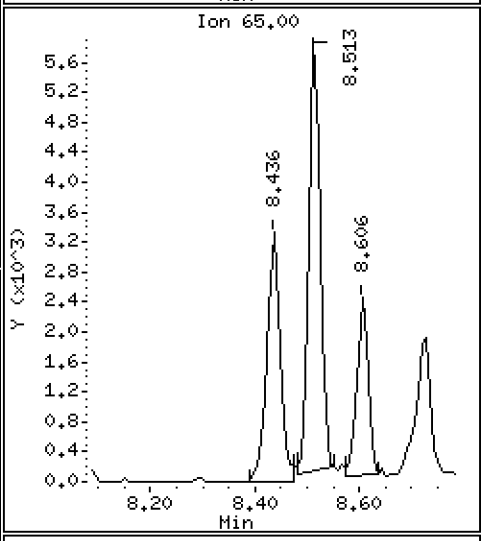
3 Phenol

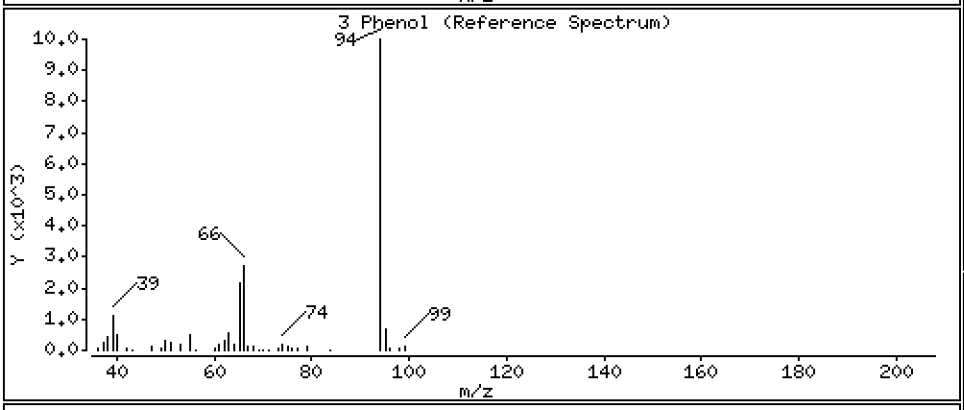
Concentration: 0.1603 ug/mL

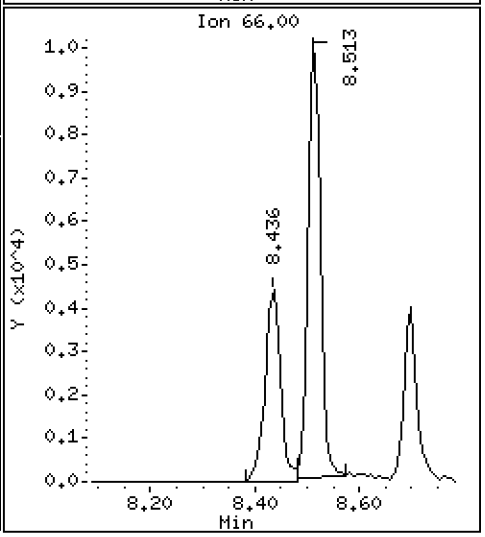


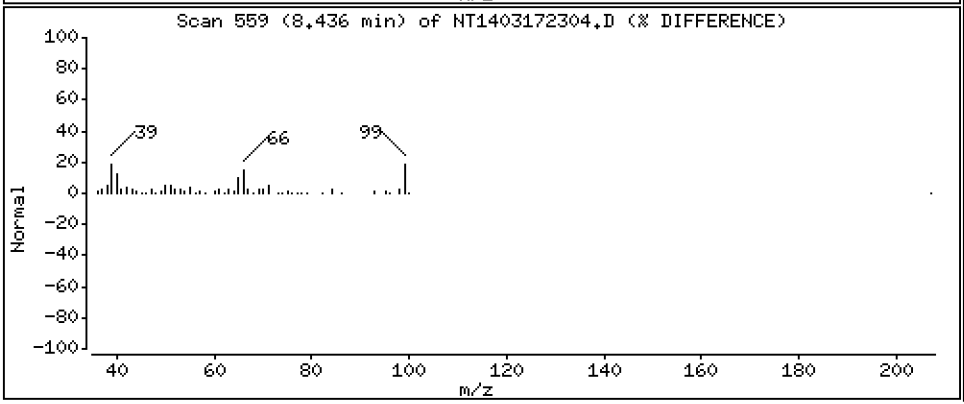












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

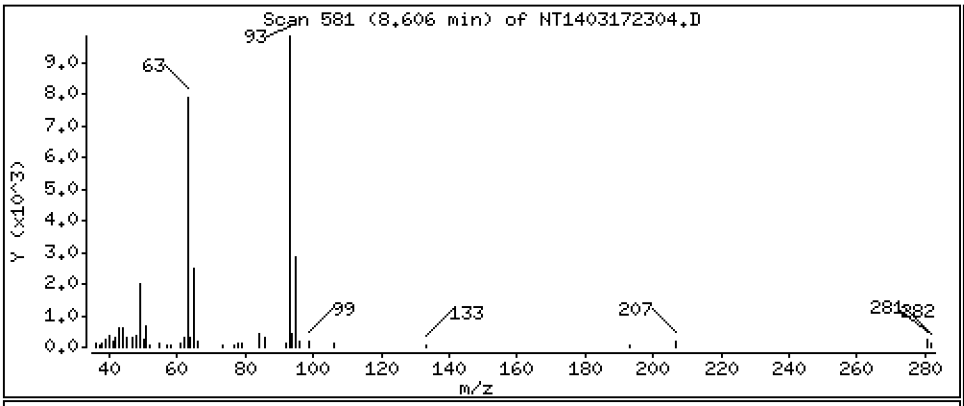
Operator: JGR

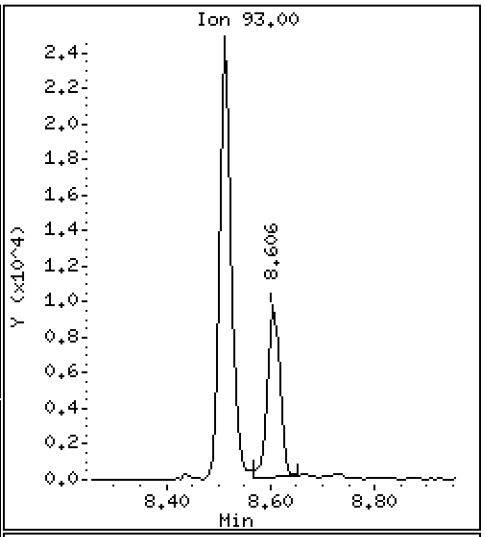
Column phase: ZB-5msi

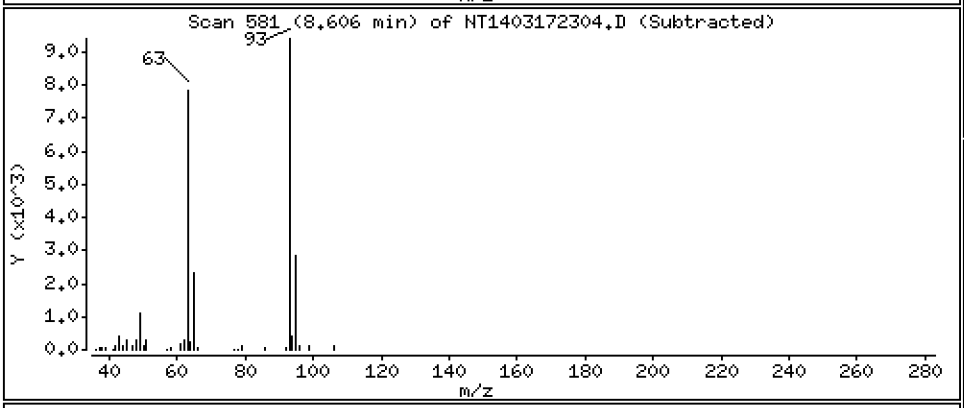
Column diameter: 0.25

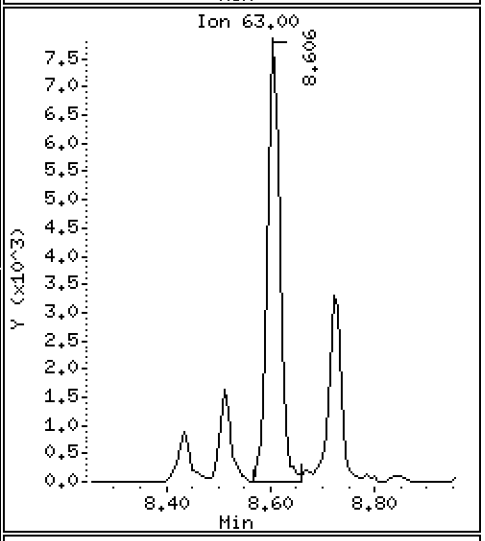
4 Bis(2-Chloroethyl)ether

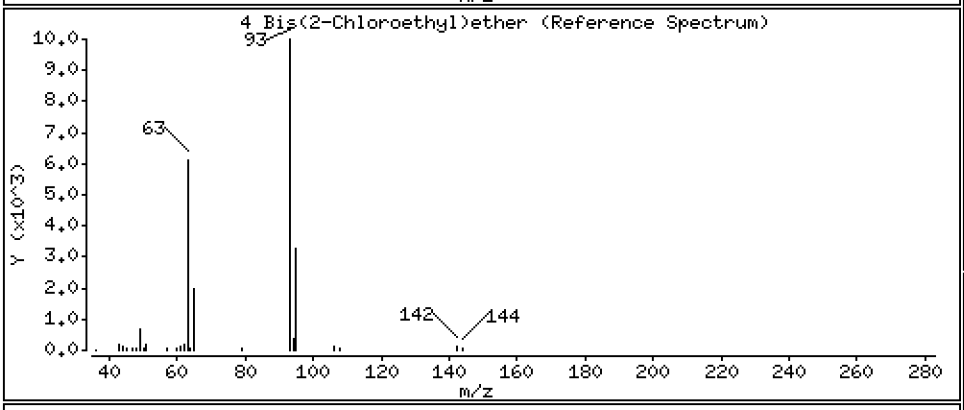
Concentration: 0.2004 ug/mL

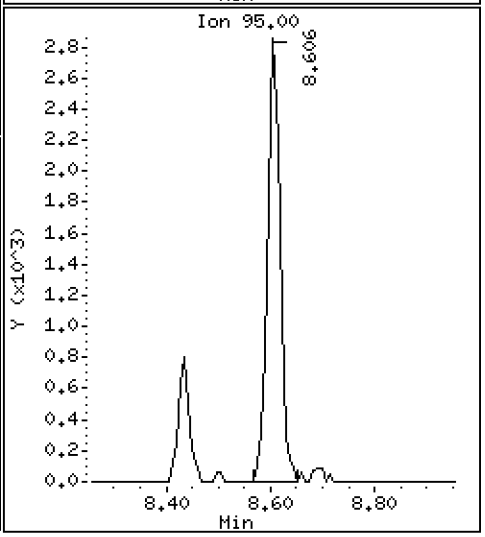


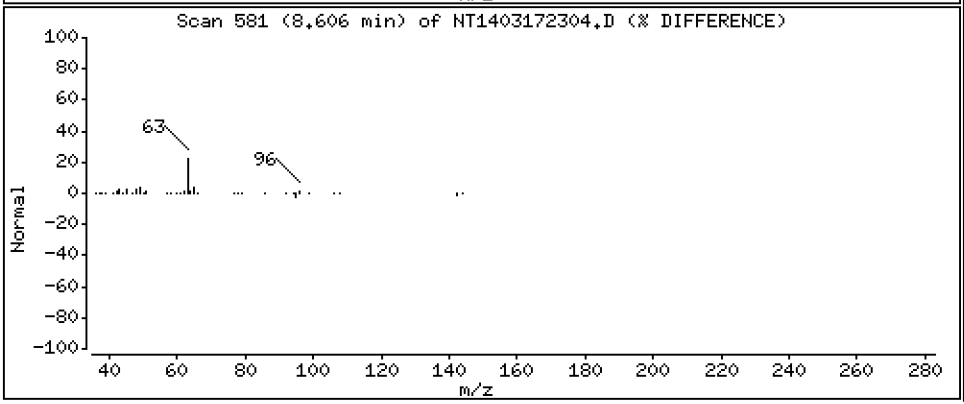












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

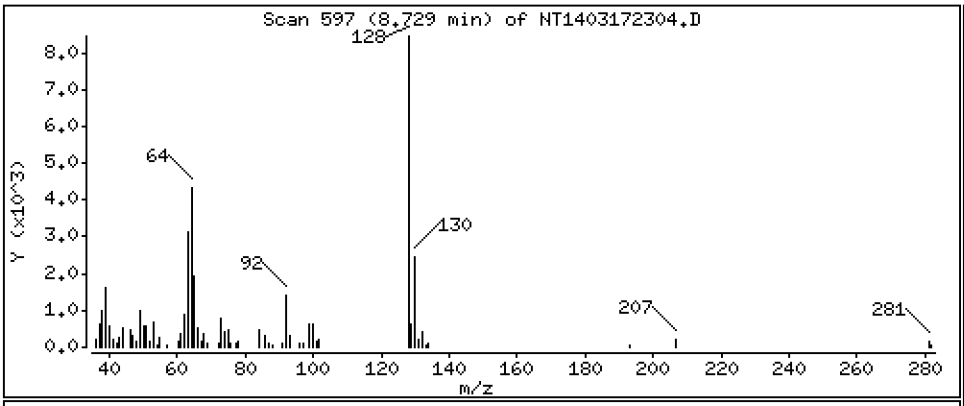
Operator: JGR

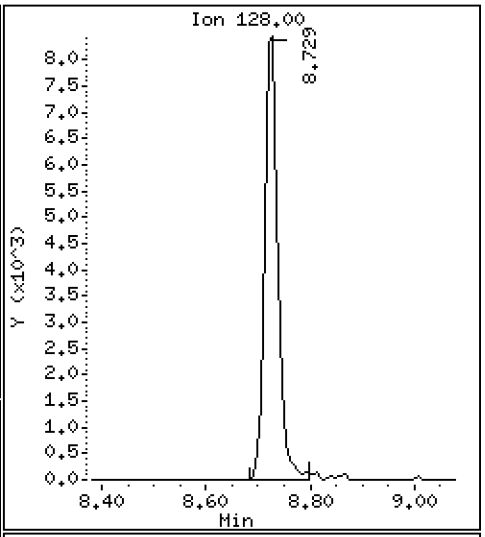
Column phase: ZB-5msi

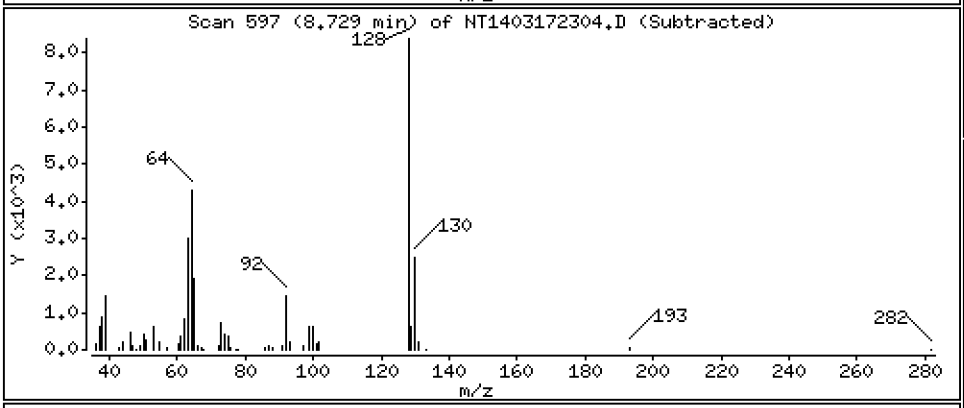
Column diameter: 0.25

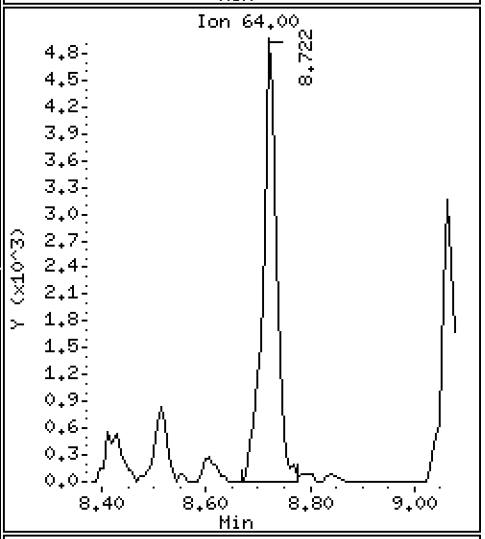
6 2-Chlorophenol

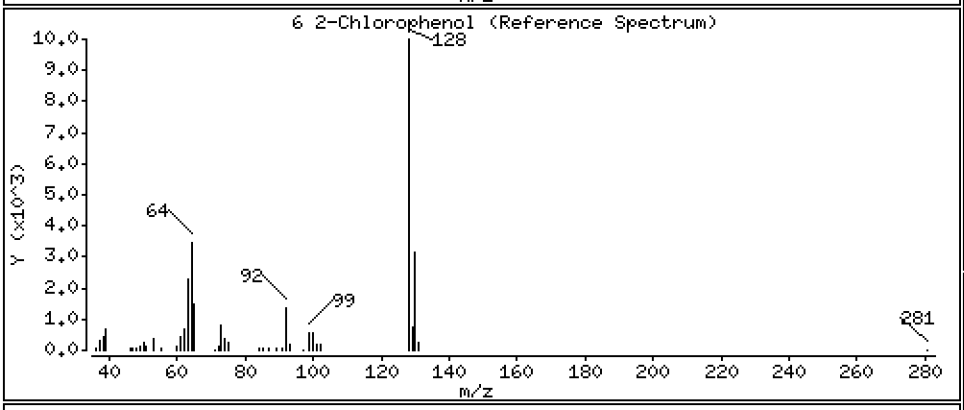
Concentration: 0.1847 ug/mL

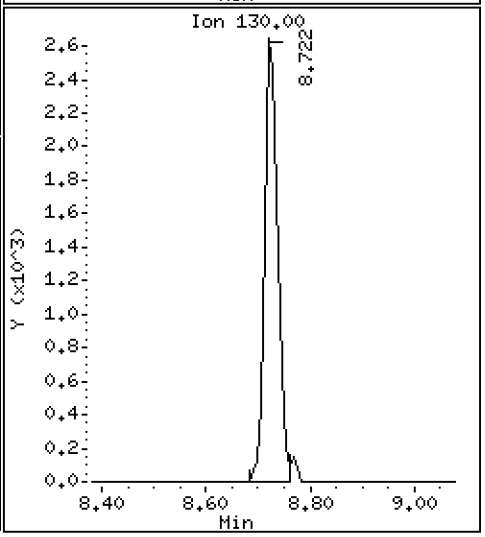


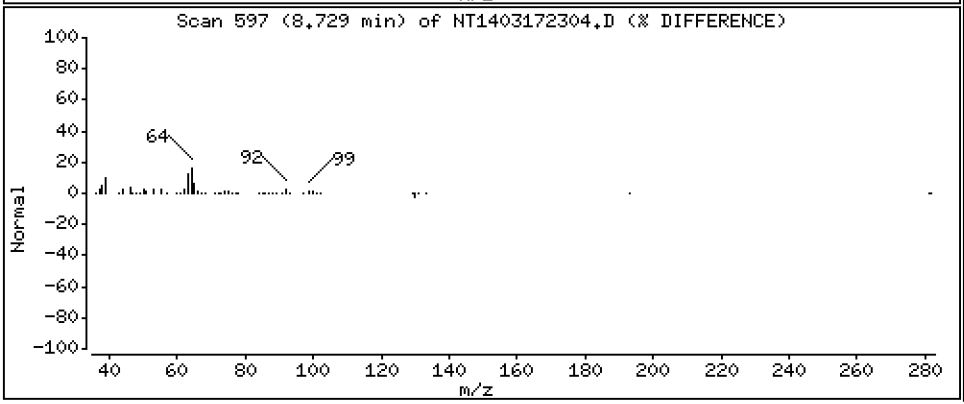












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

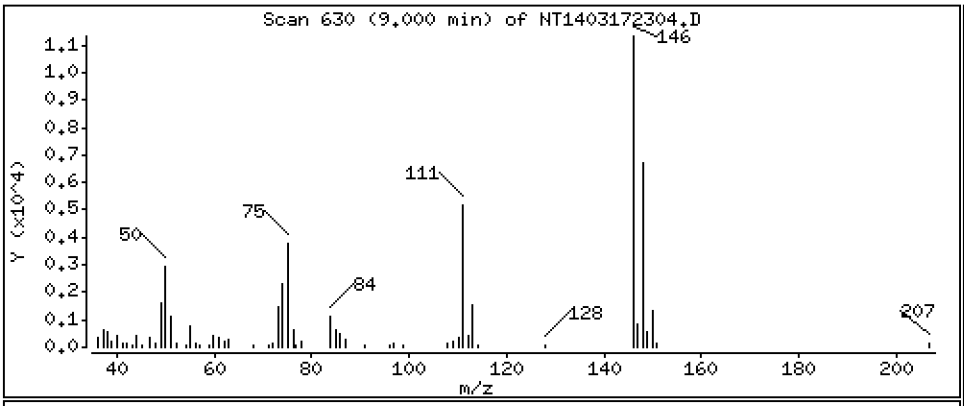
Operator: JGR

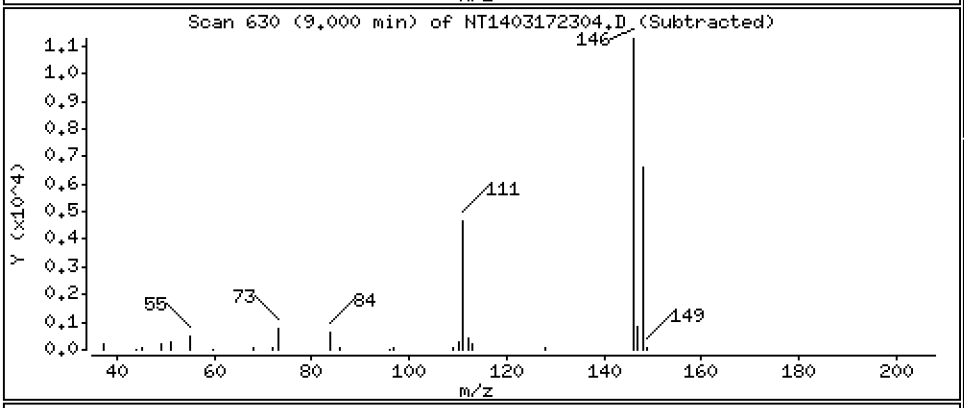
Column phase: ZB-5msi

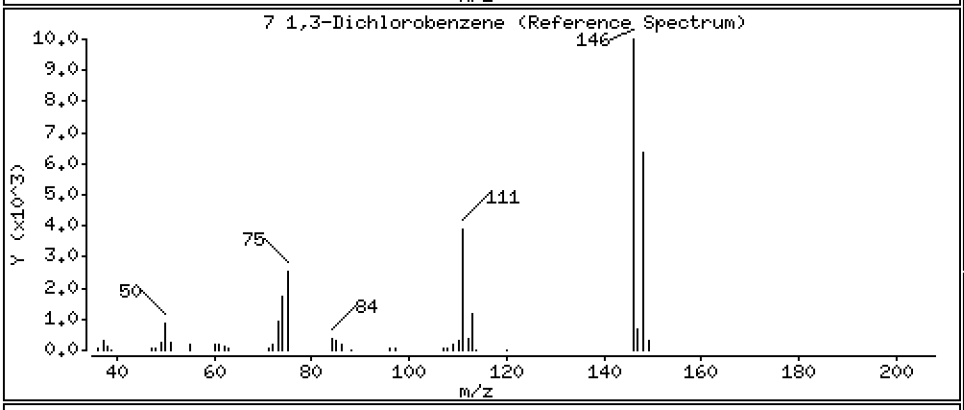
Column diameter: 0.25

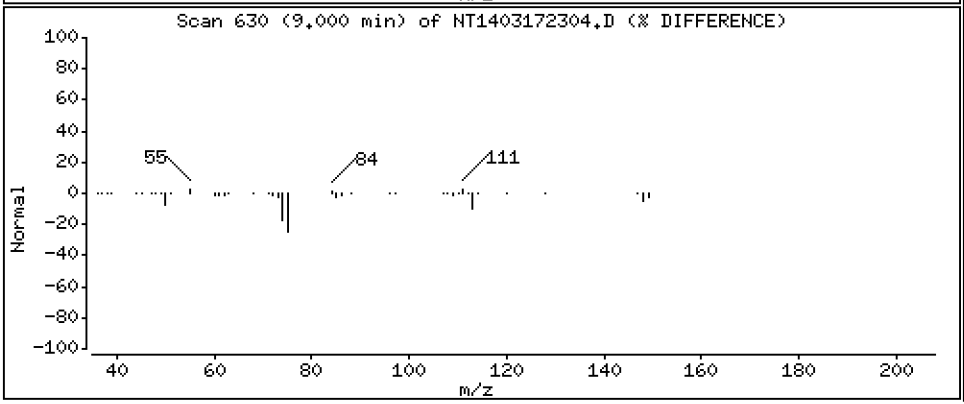
7 1,3-Dichlorobenzene

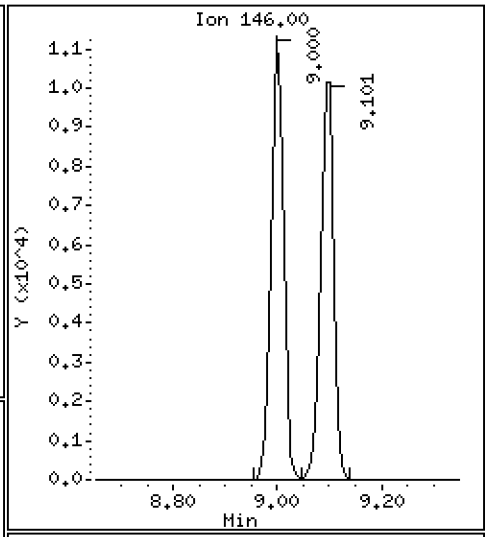
Concentration: 0.2224 ug/mL

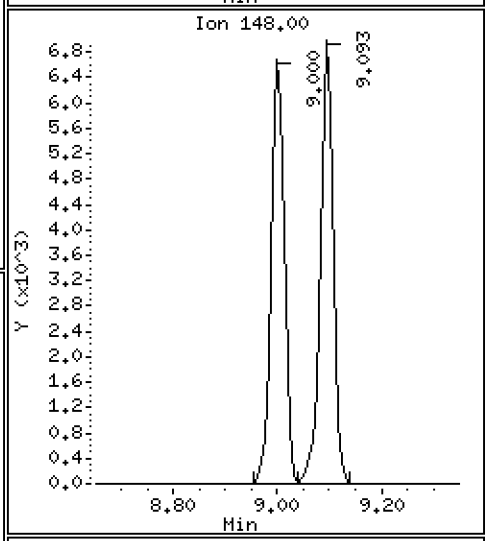


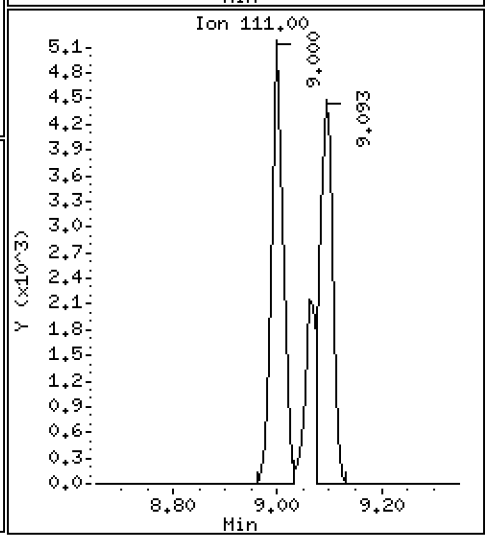












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

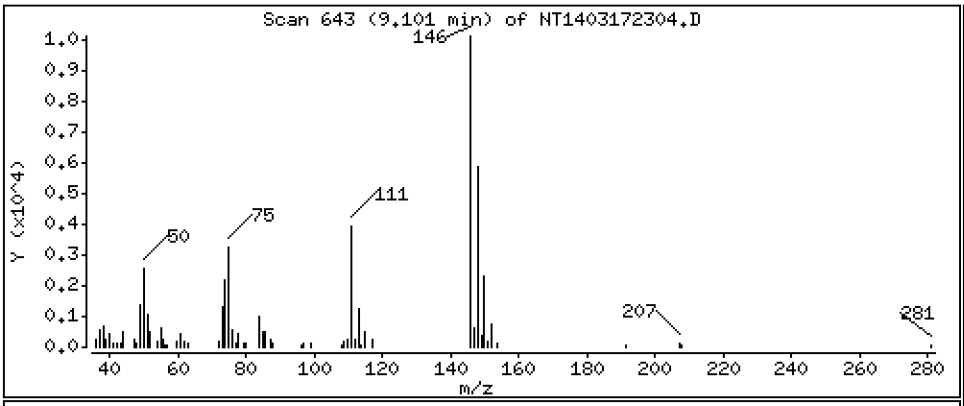
Operator: JGR

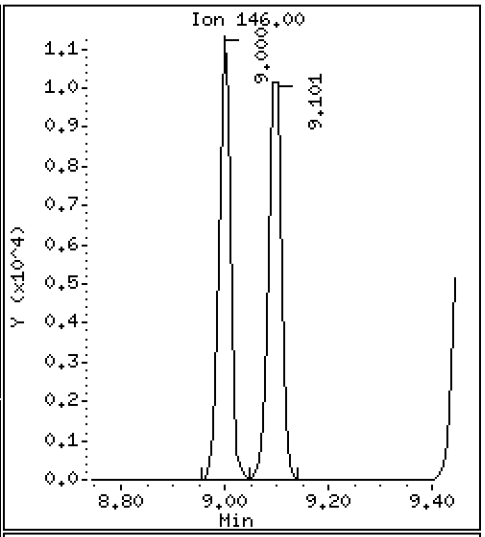
Column phase: ZB-5msi

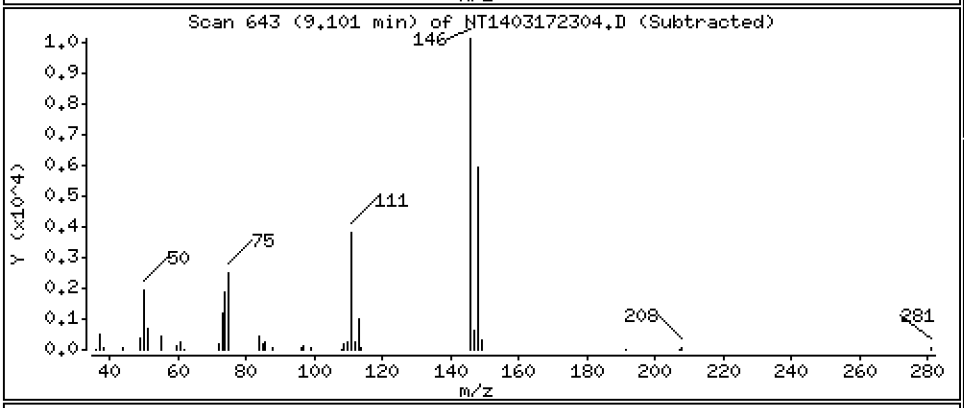
Column diameter: 0.25

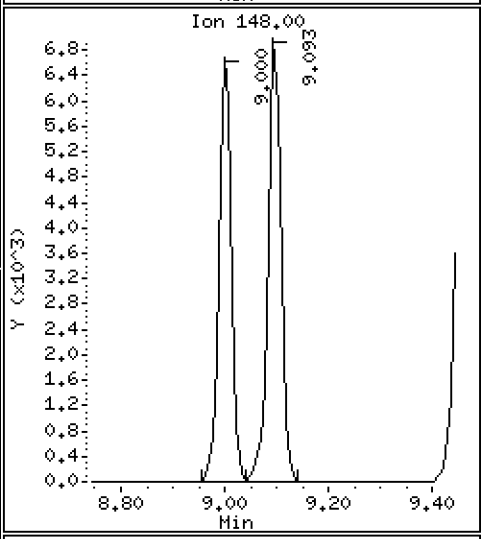
9 1,4-Dichlorobenzene

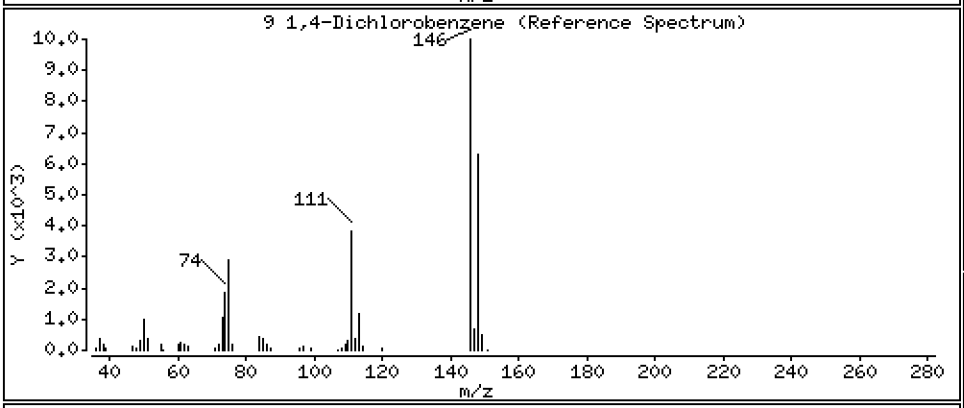
Concentration: 0.2135 ug/mL

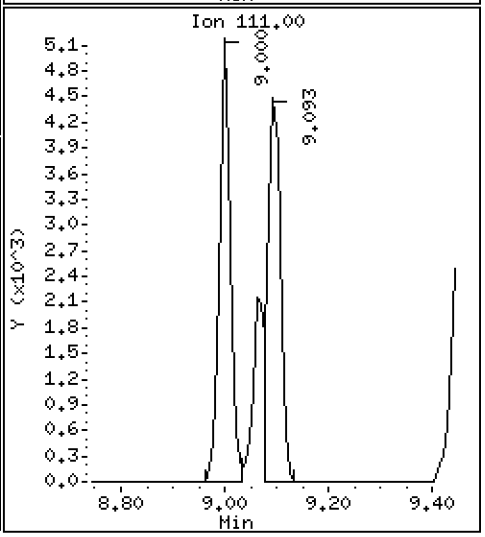


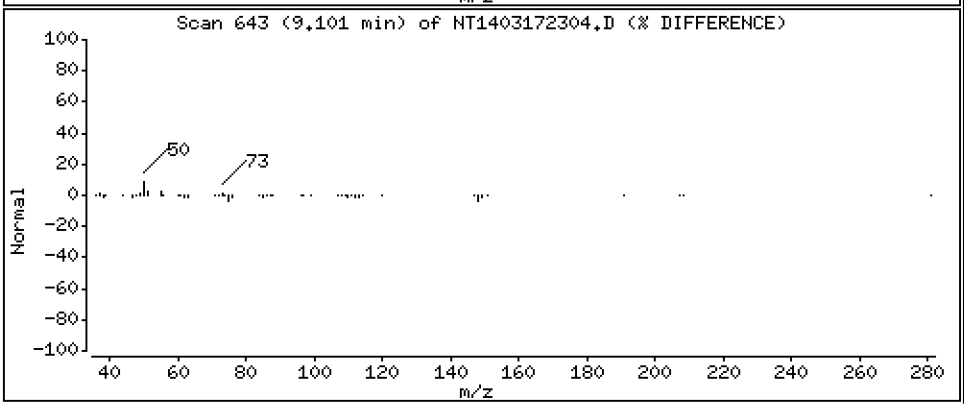












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

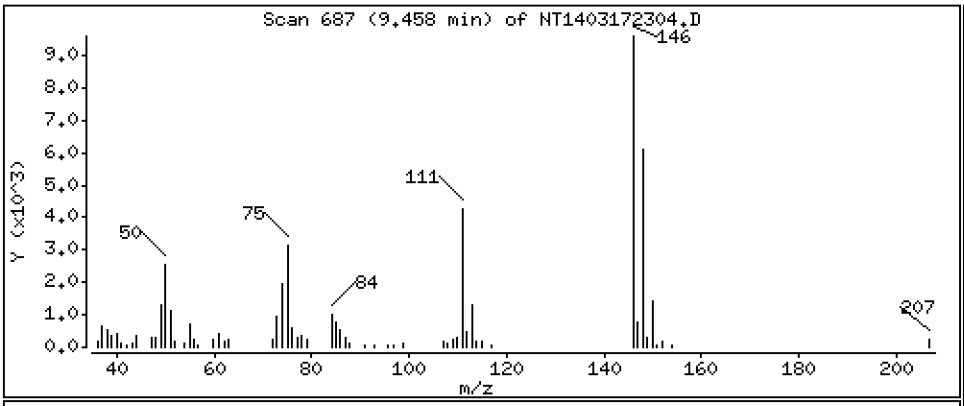
Operator: JGR

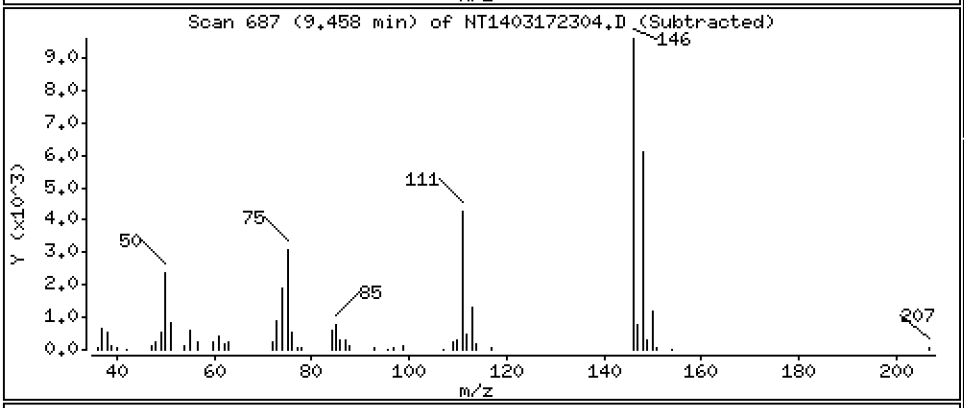
Column phase: ZB-5msi

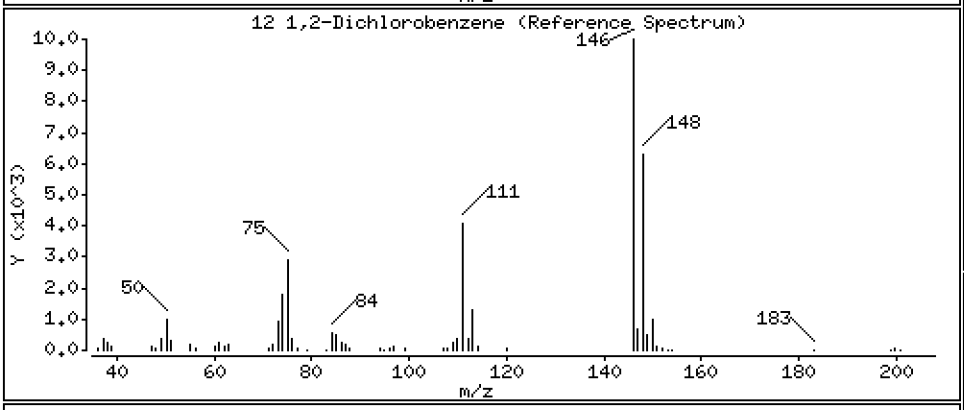
Column diameter: 0.25

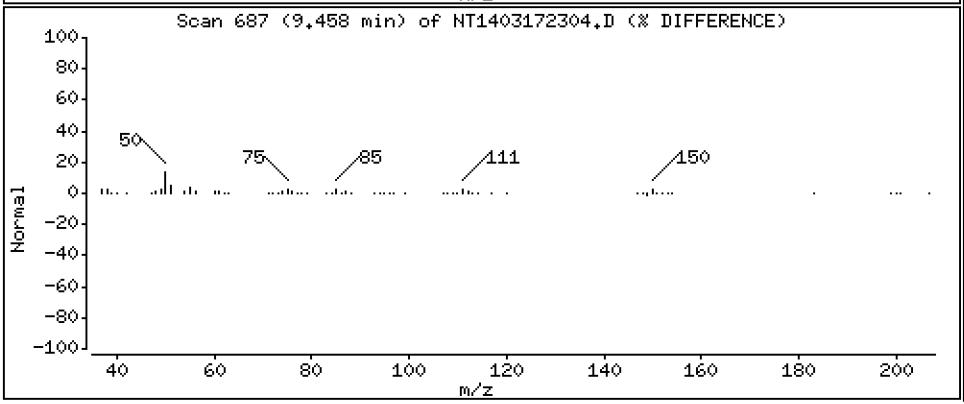
12 1,2-Dichlorobenzene

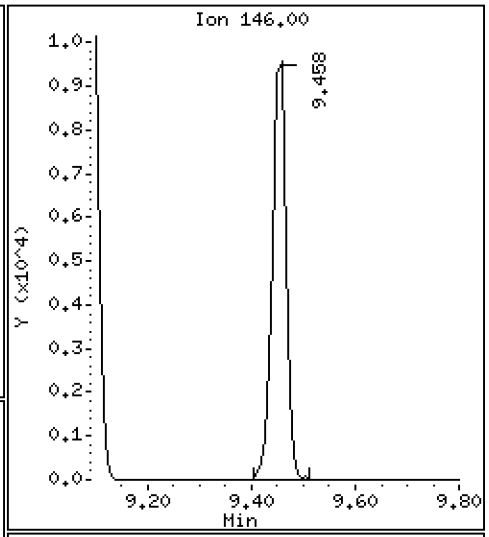
Concentration: 0.2153 ug/mL

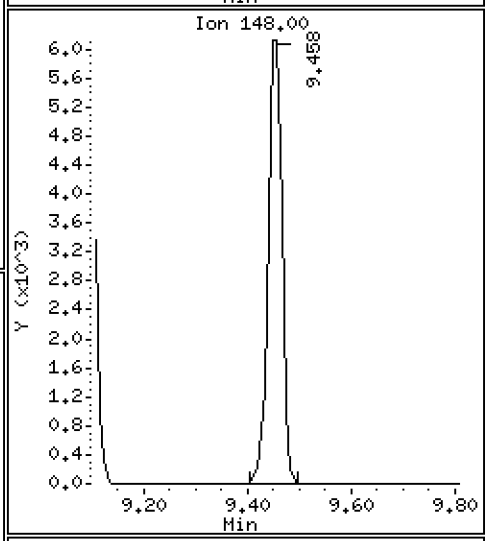


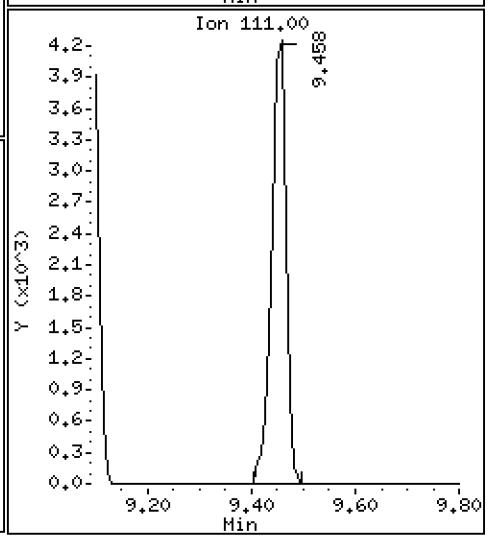












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

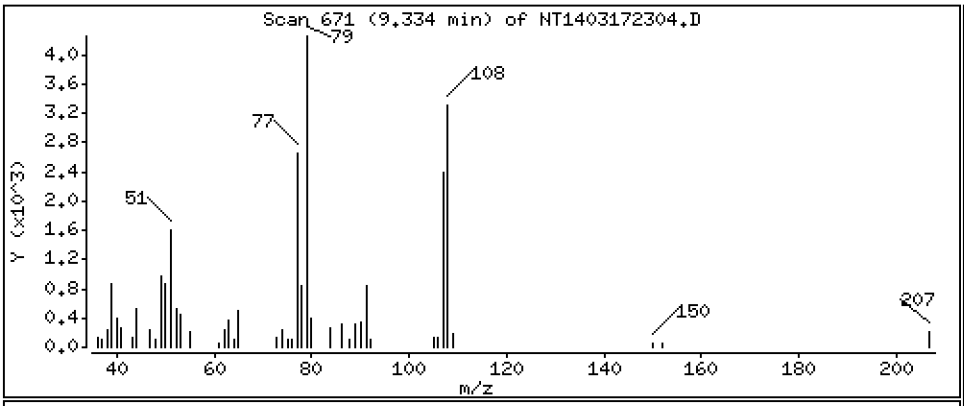
Operator: JGR

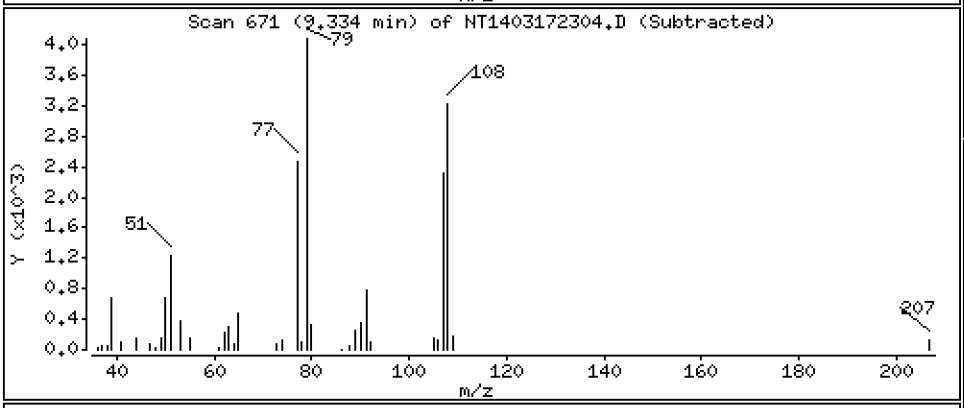
Column phase: ZB-5msi

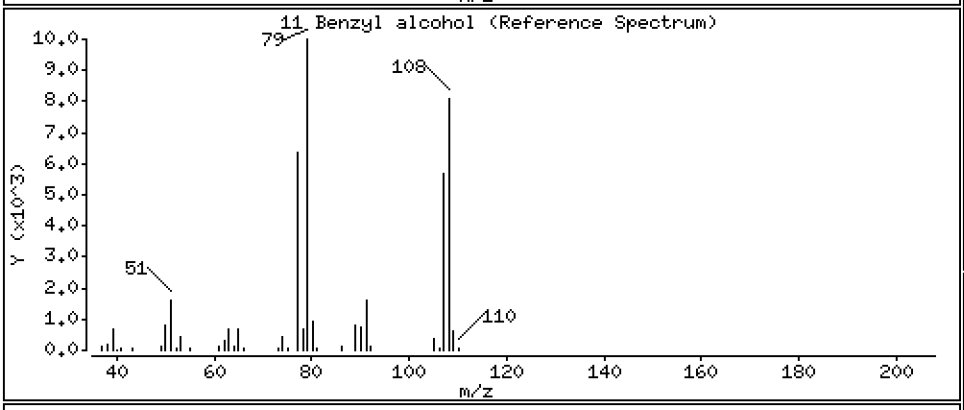
Column diameter: 0.25

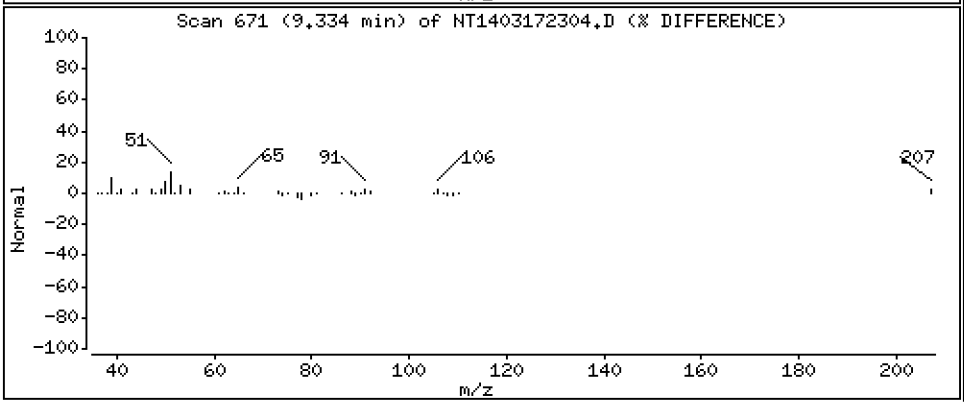
11 Benzyl alcohol

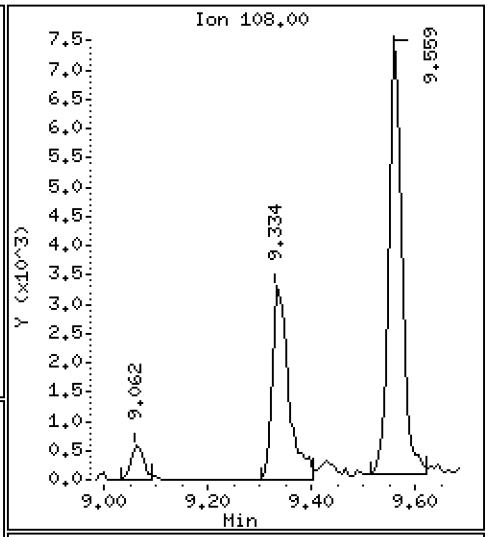
Concentration: 0.1442 ug/mL

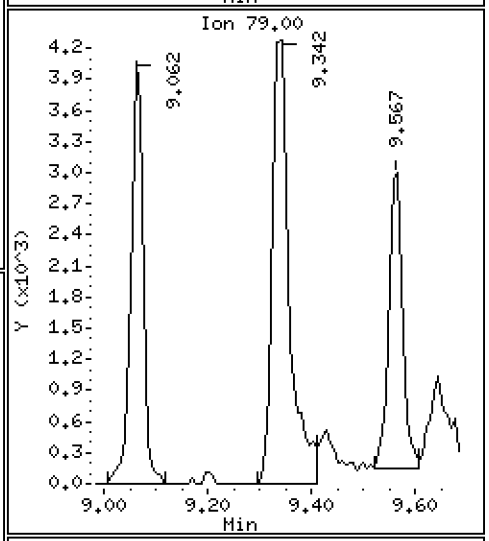


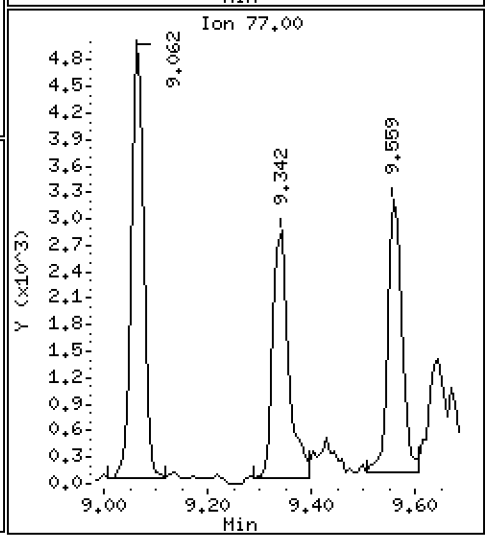












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

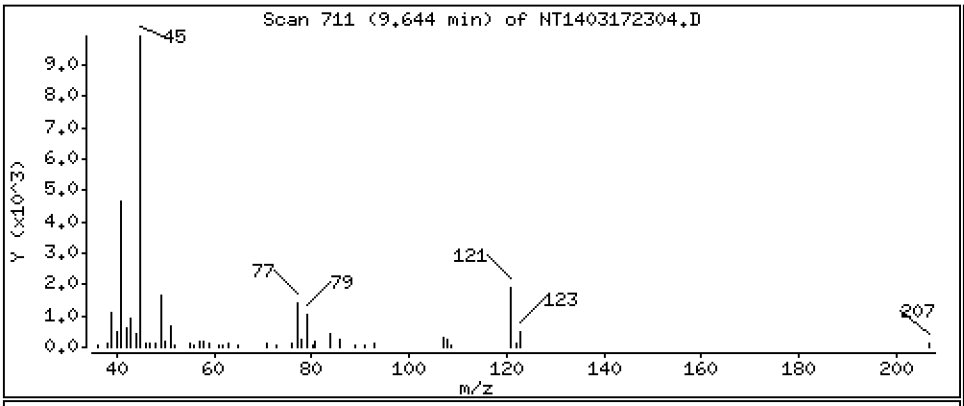
Operator: JGR

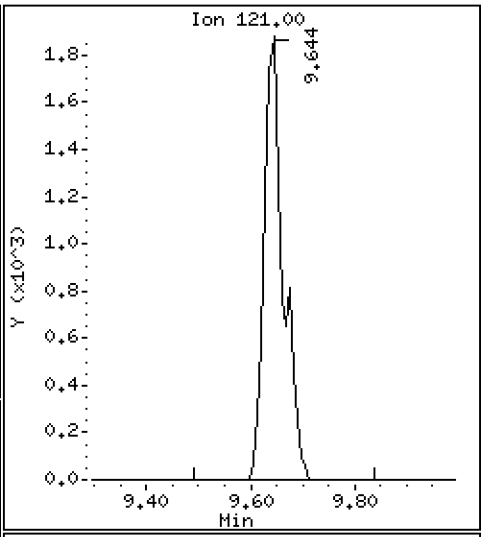
Column phase: ZB-5msi

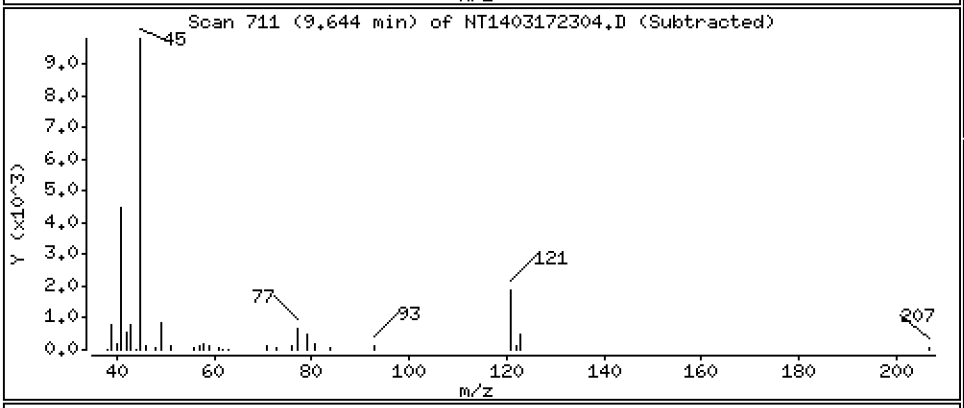
Column diameter: 0.25

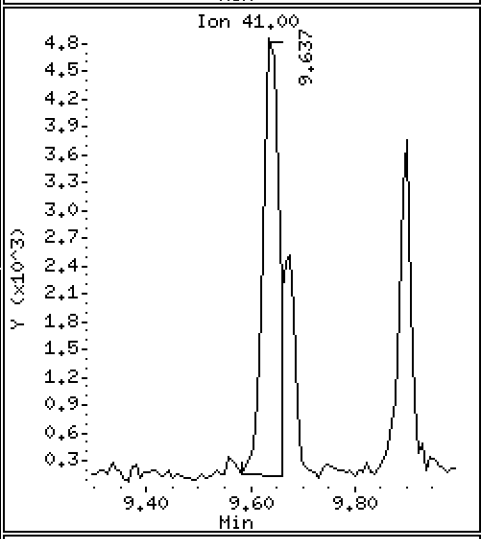
14 2,2'-oxybis(1-Chloropropane)

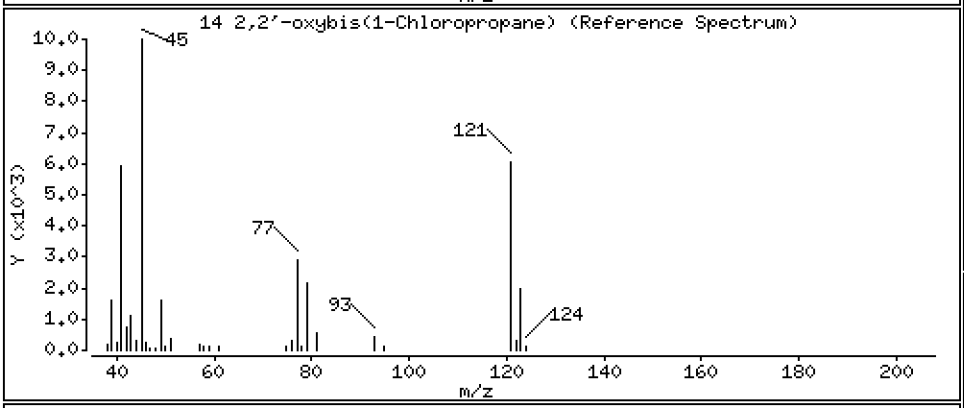
Concentration: 0.2077 ug/mL

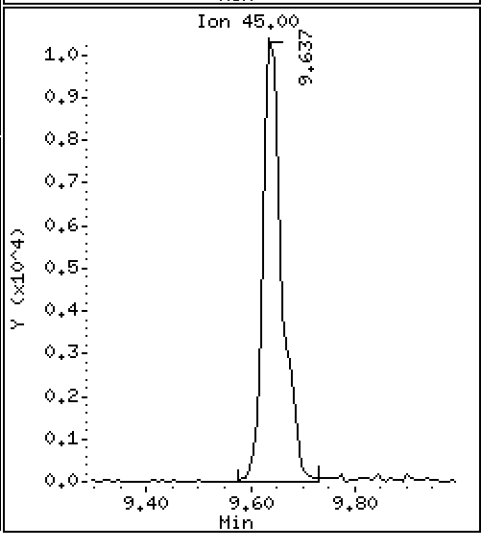


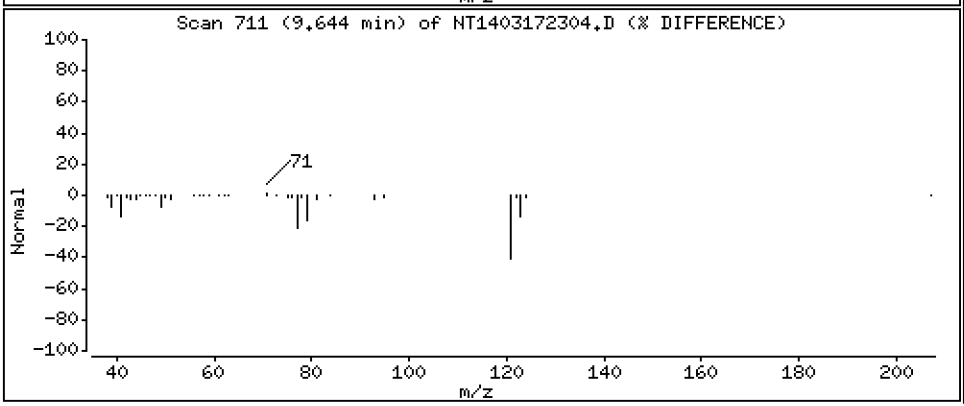












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

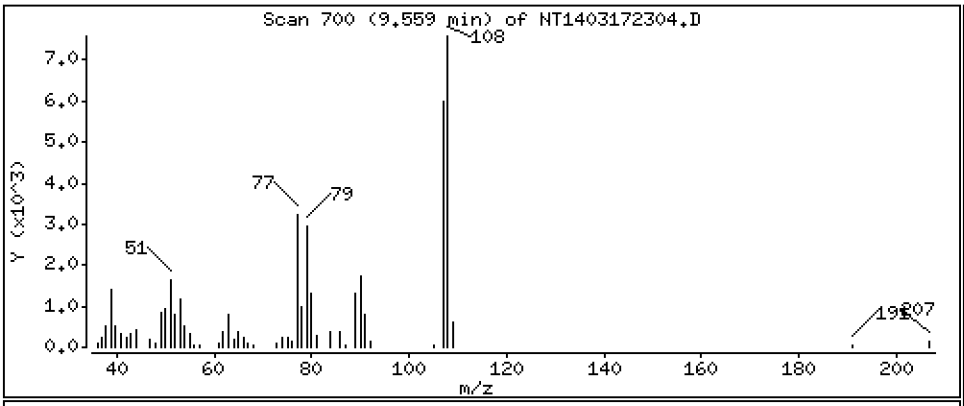
Operator: JGR

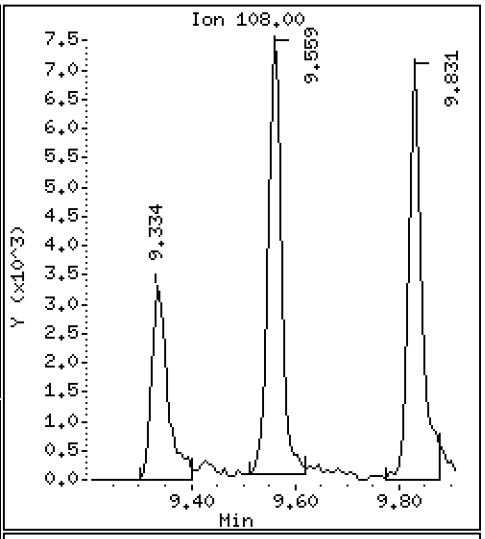
Column phase: ZB-5msi

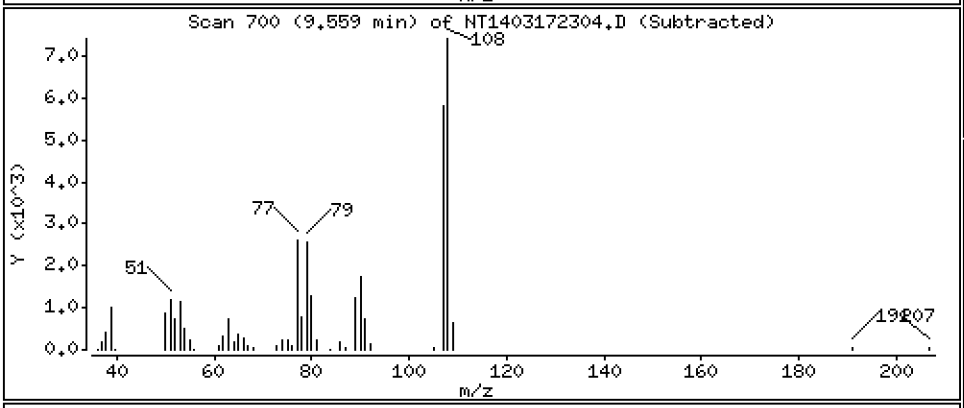
Column diameter: 0.25

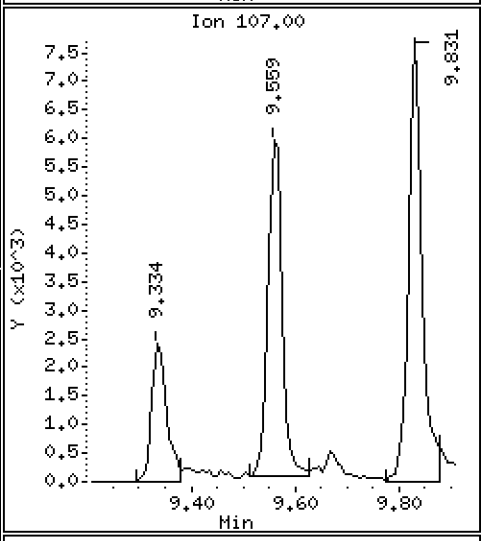
13 2-Methylphenol

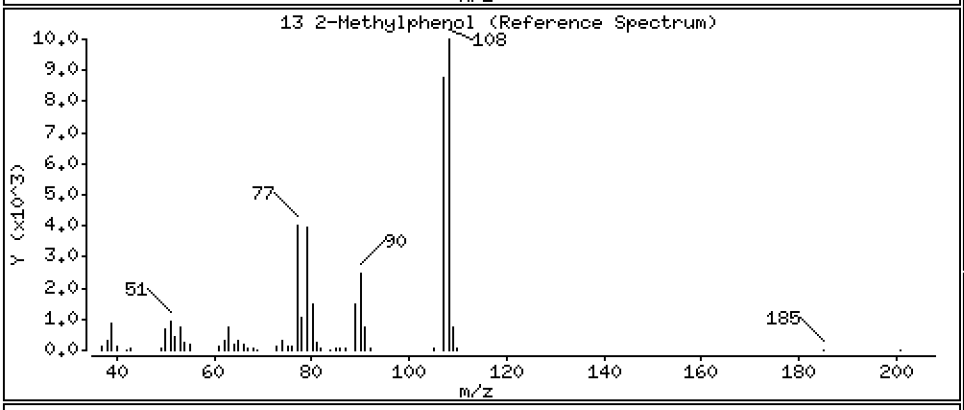
Concentration: 0.1739 ug/mL

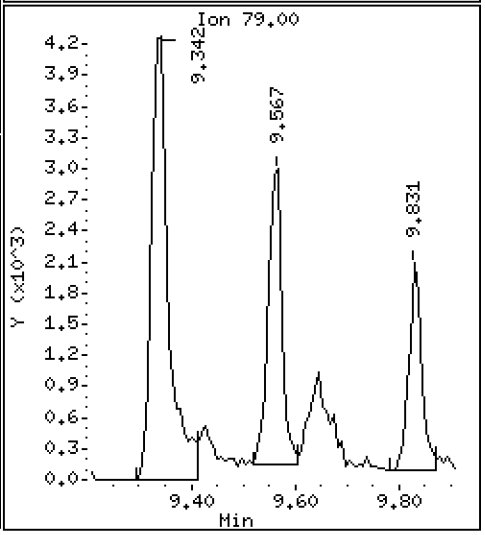


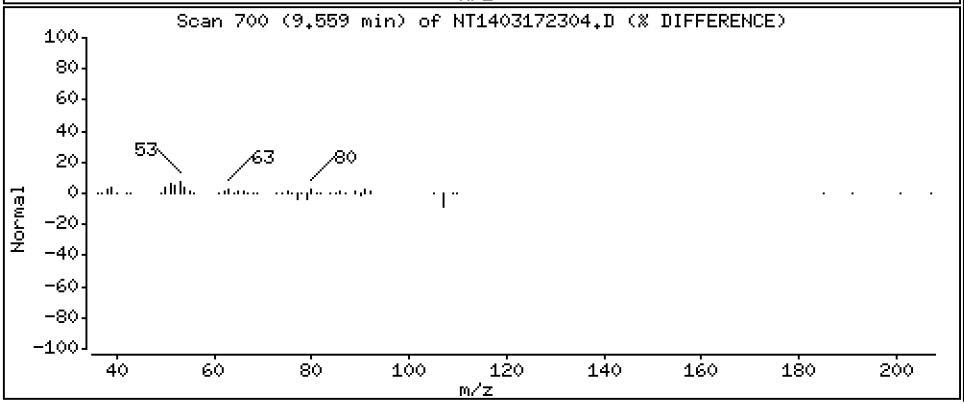












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

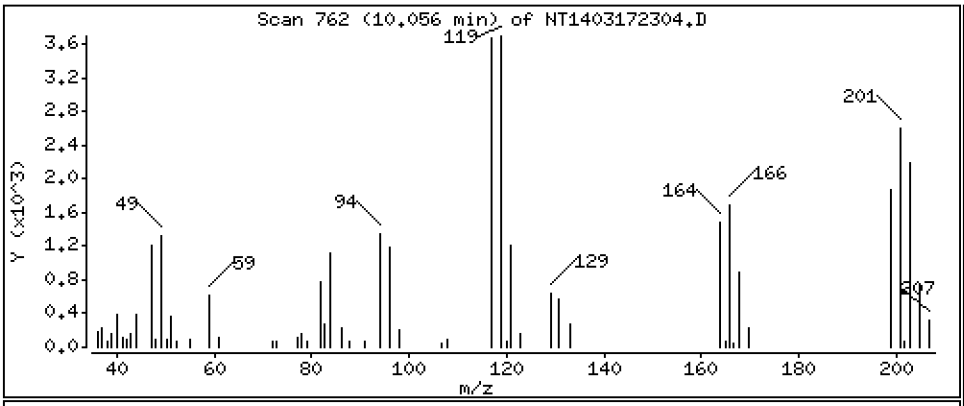
Operator: JGR

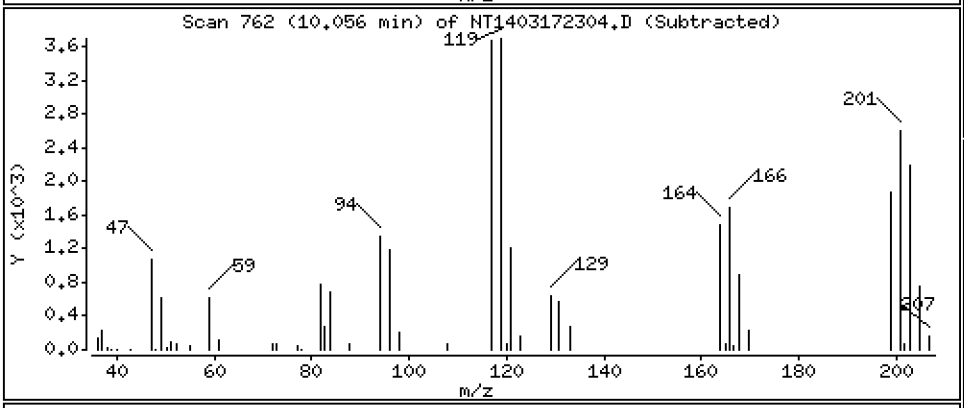
Column phase: ZB-5msi

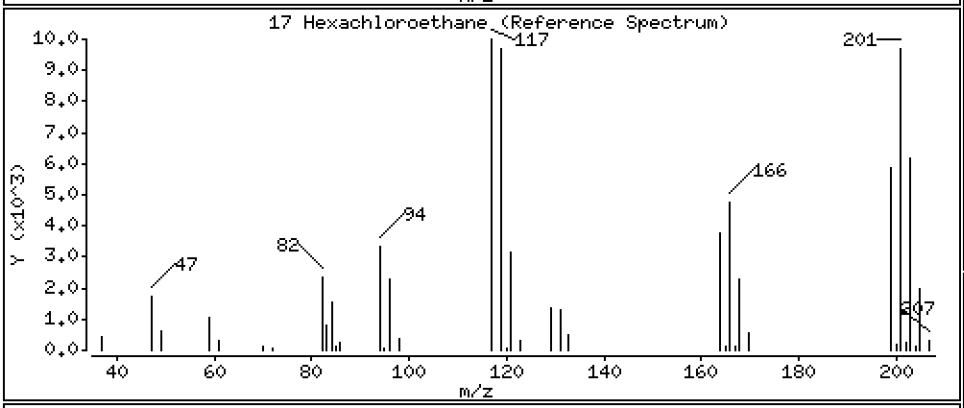
Column diameter: 0.25

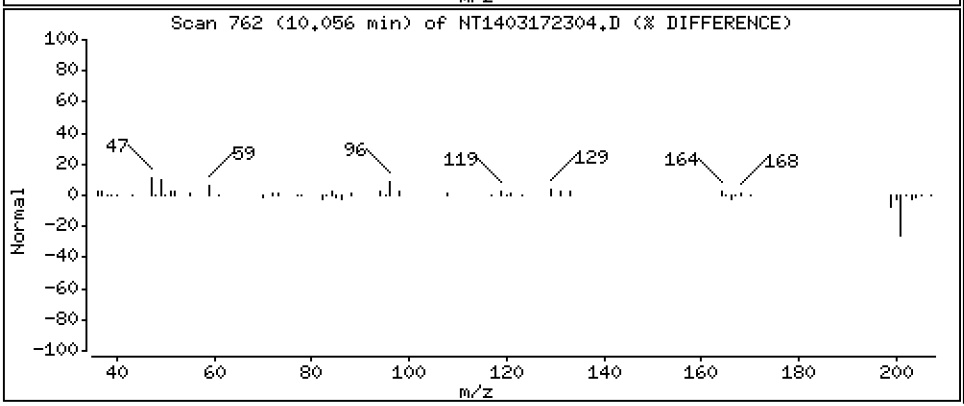
17 Hexachloroethane

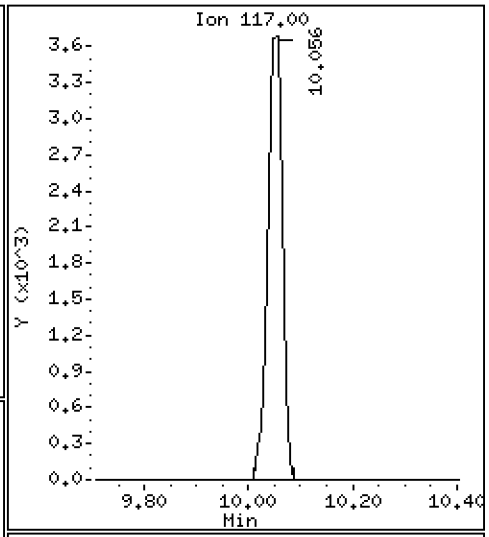
Concentration: 0.2033 ug/mL

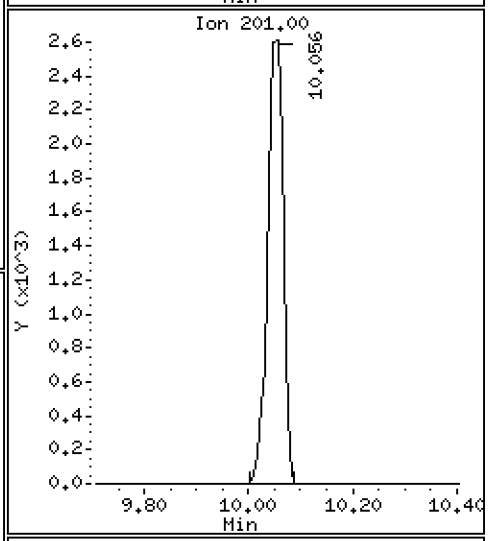


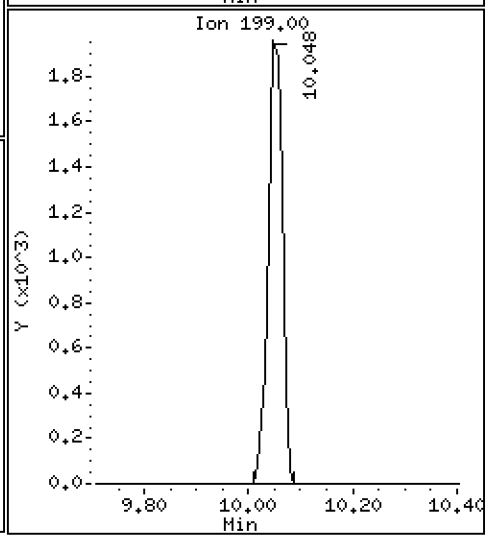












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

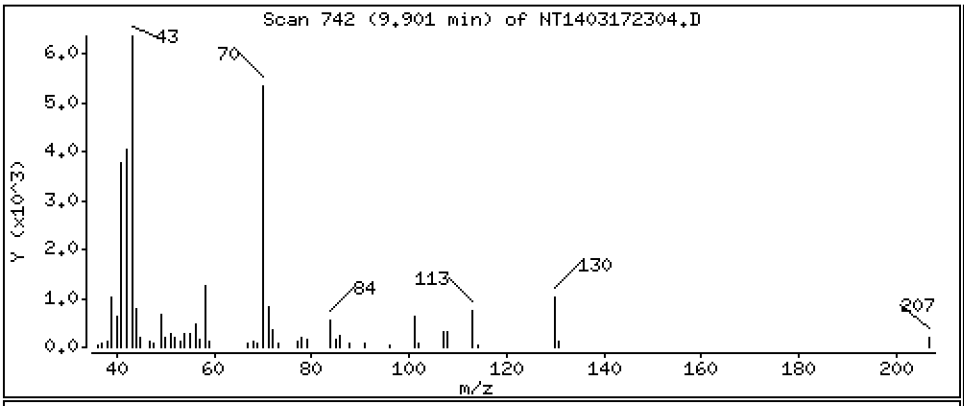
Operator: JGR

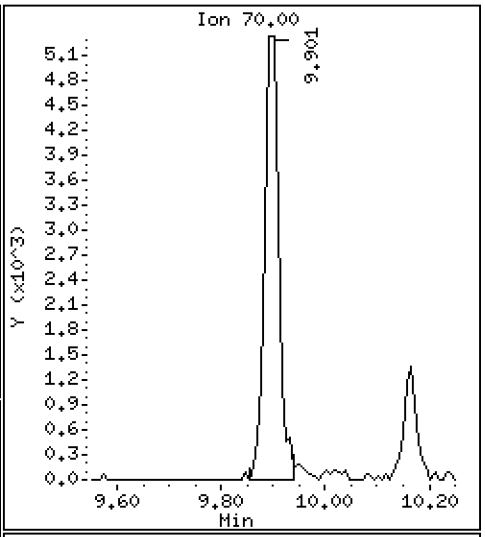
Column phase: ZB-5msi

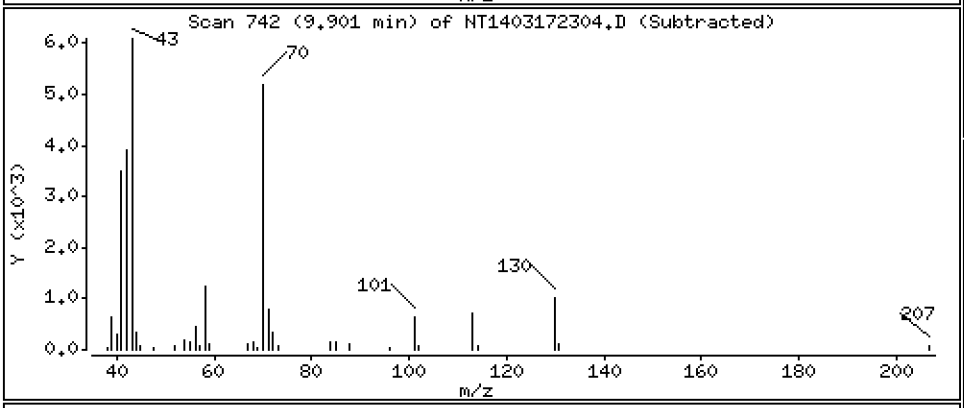
Column diameter: 0.25

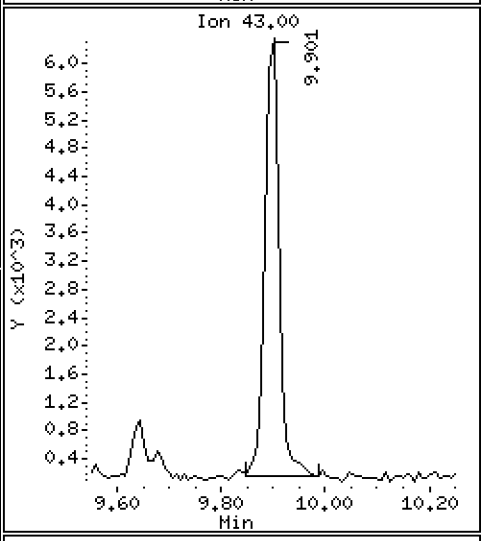
16 N-Nitroso-di-n-propylamine

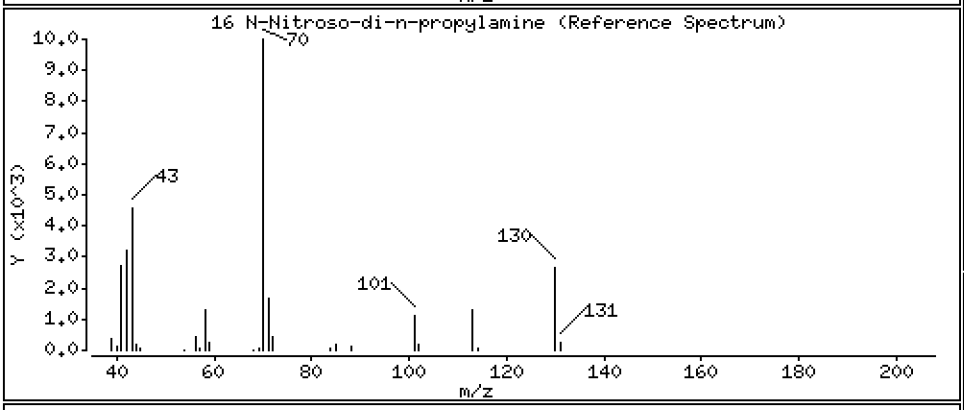
Concentration: 0.1688 ug/mL

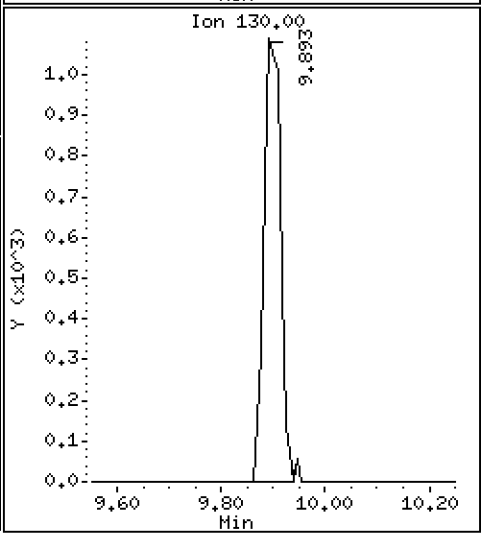


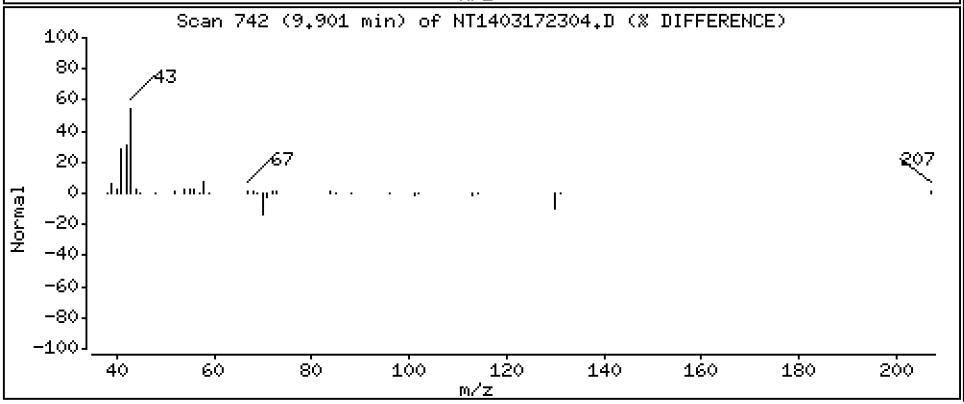












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

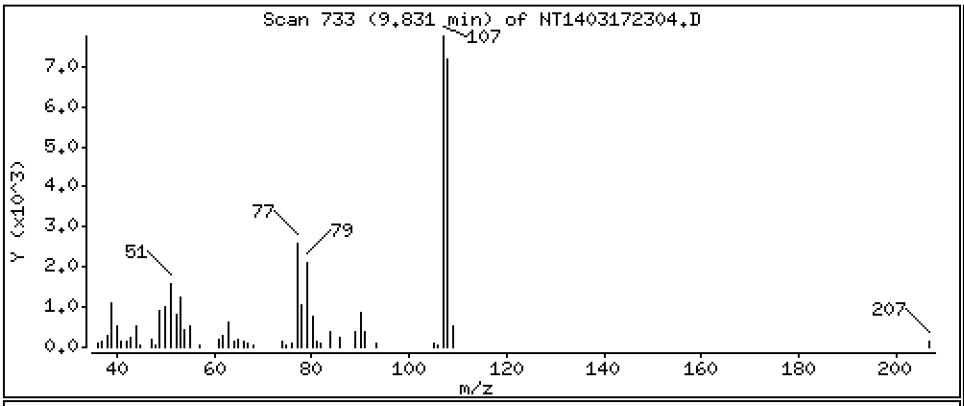
Operator: JGR

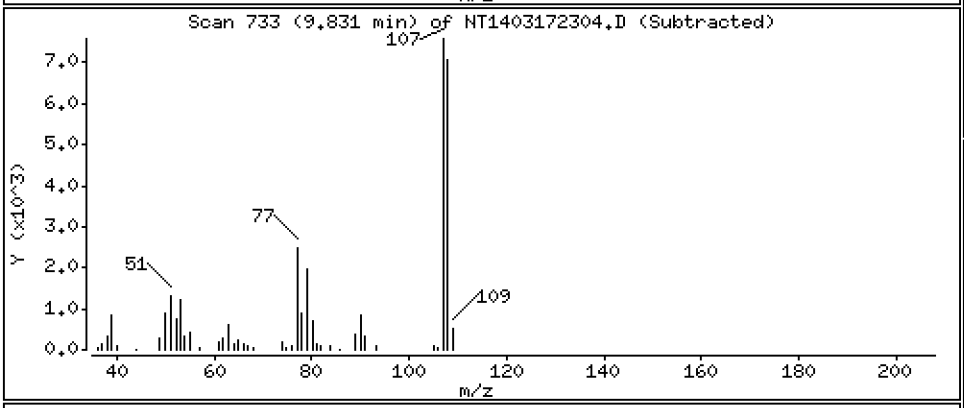
Column phase: ZB-5msi

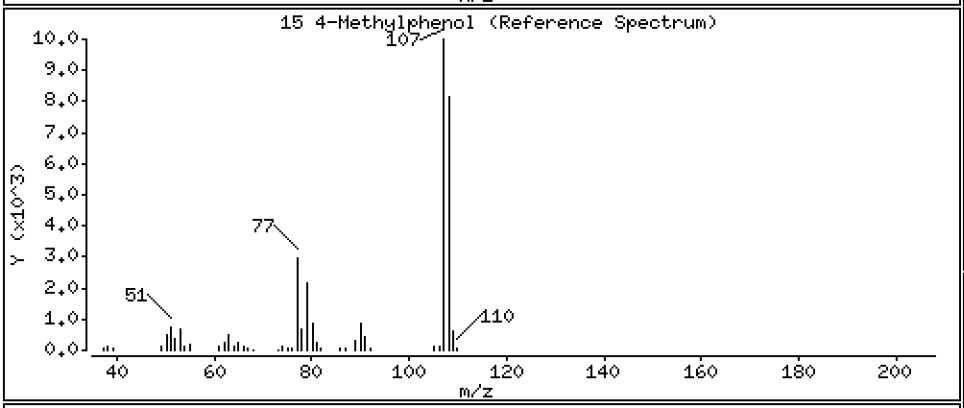
Column diameter: 0.25

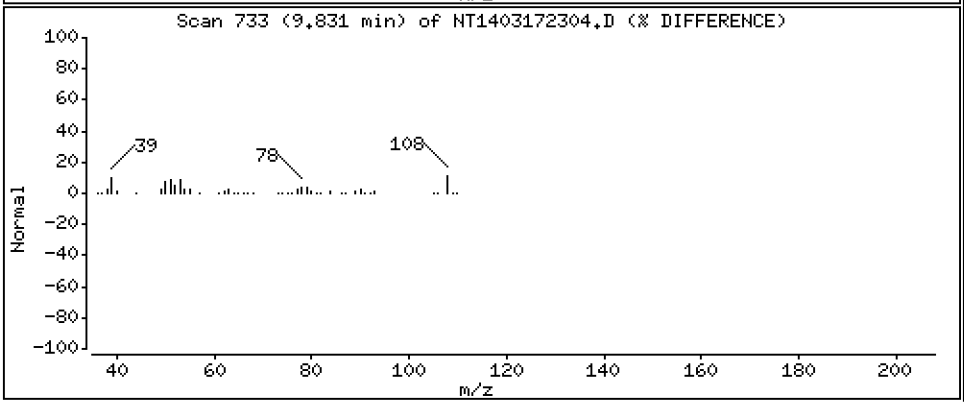
15 4-Methylphenol

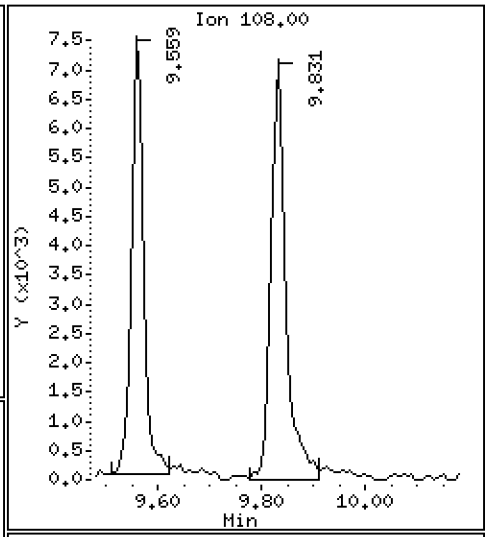
Concentration: 0.1583 ug/mL

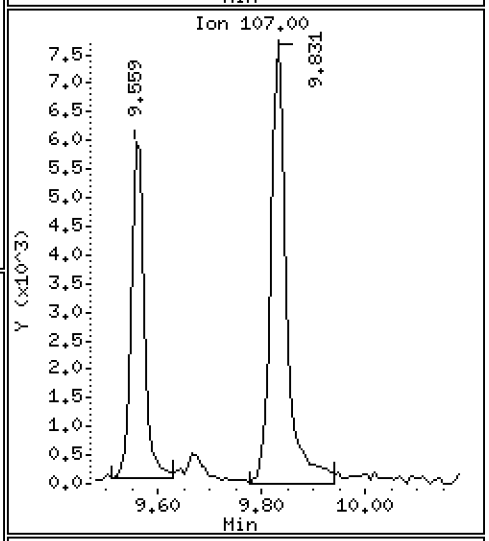


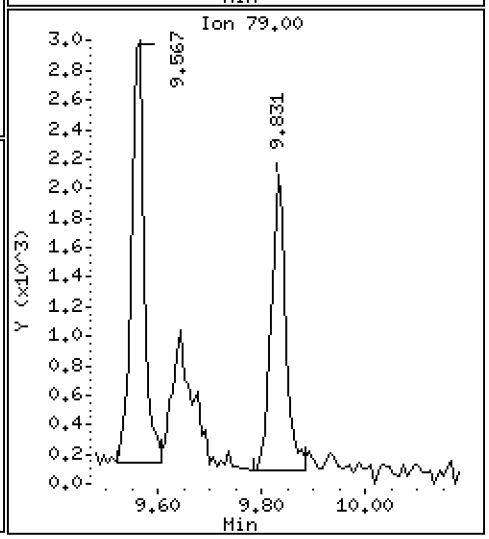












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

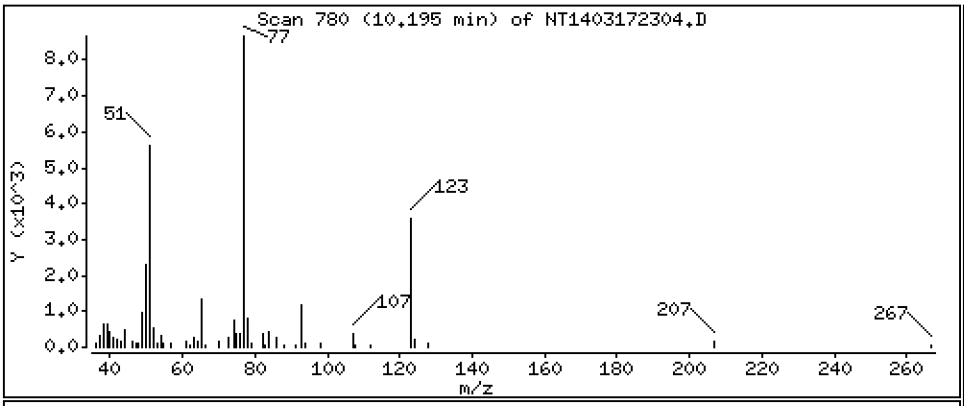
Operator: JGR

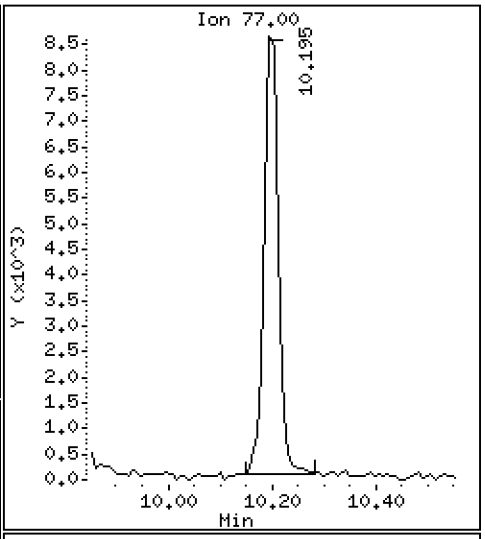
Column phase: ZB-5msi

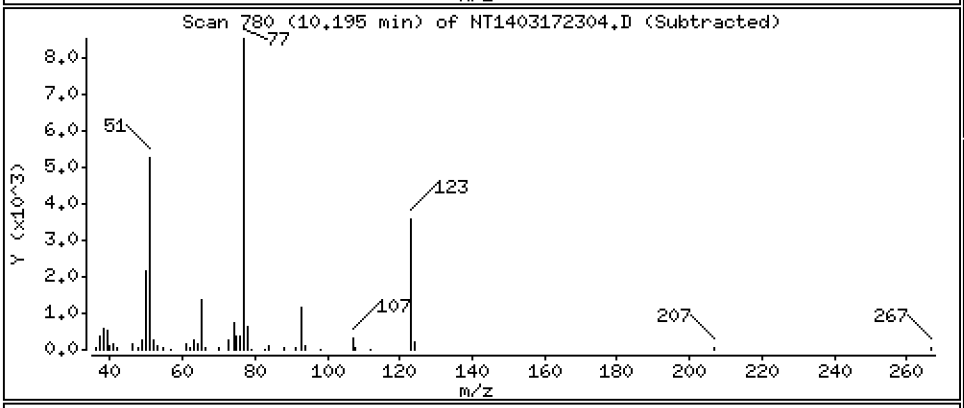
Column diameter: 0.25

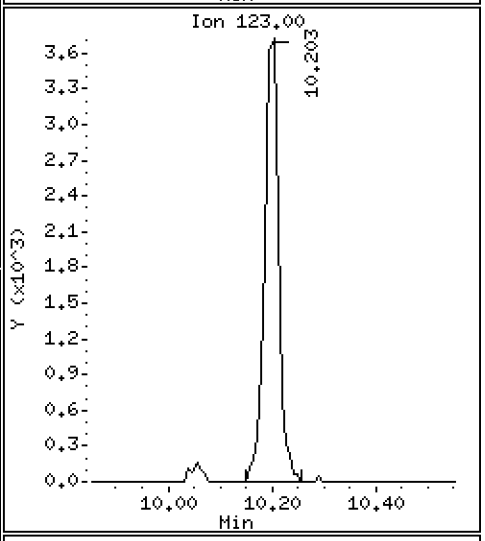
19 Nitrobenzene

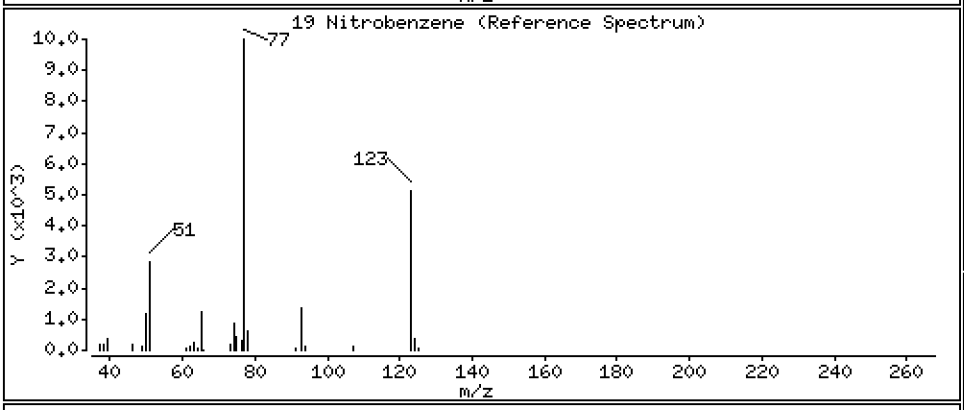
Concentration: 0.1840 ug/mL

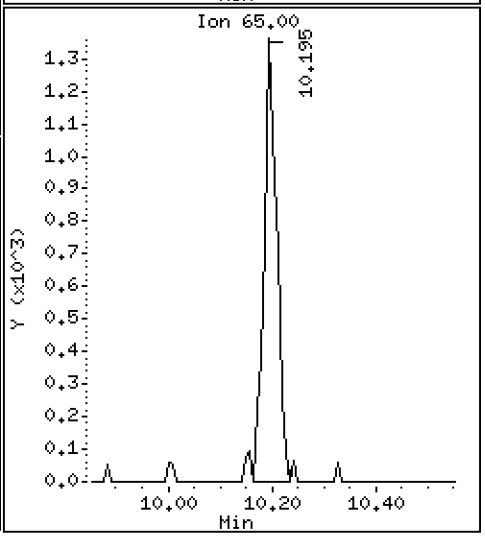


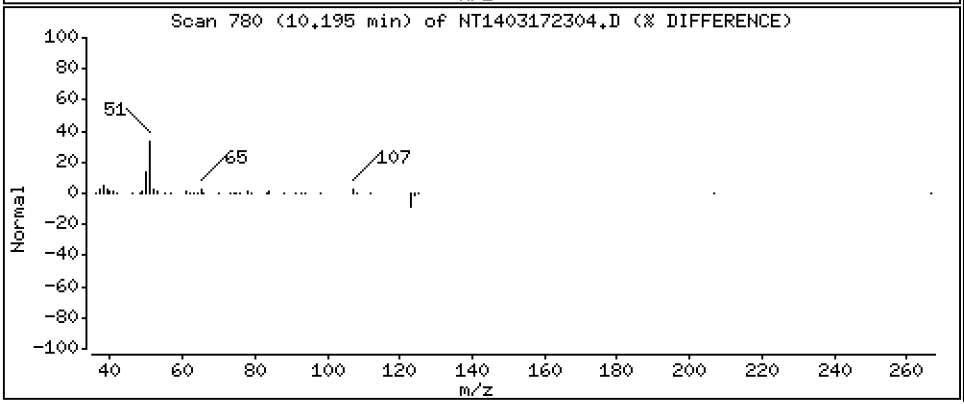












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

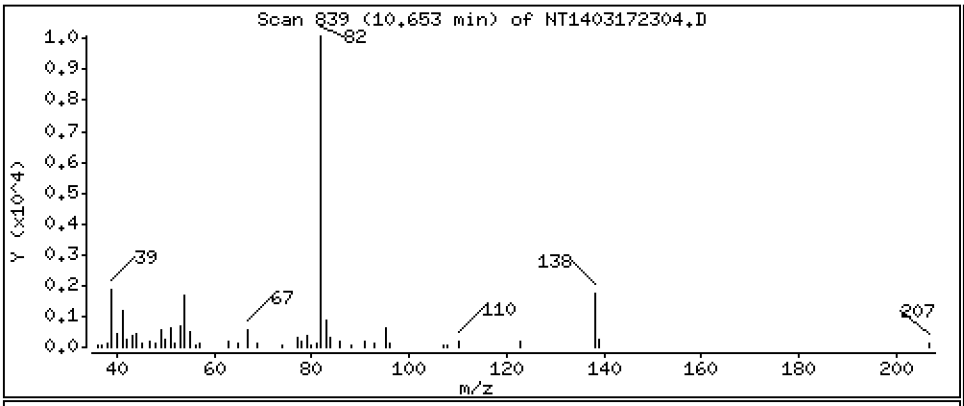
Operator: JGR

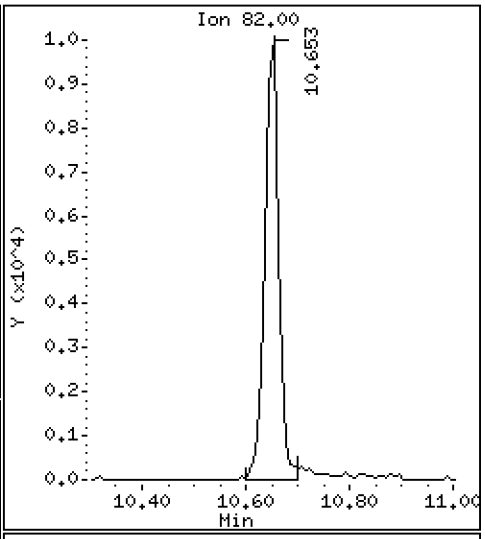
Column phase: ZB-5msi

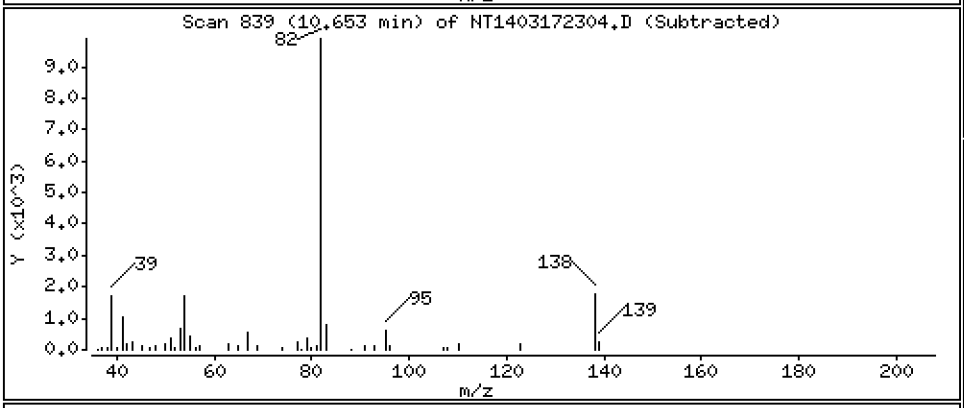
Column diameter: 0.25

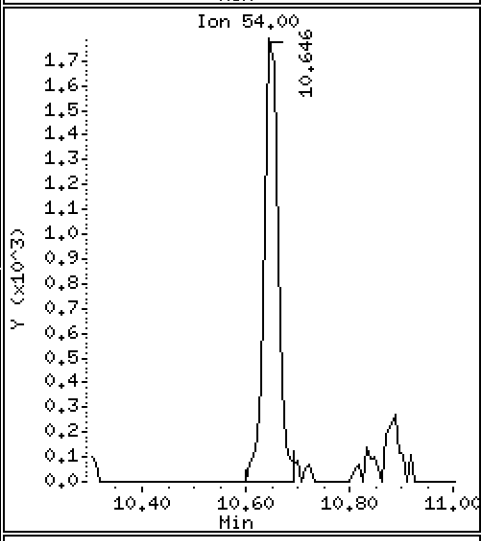
20 Isophorone

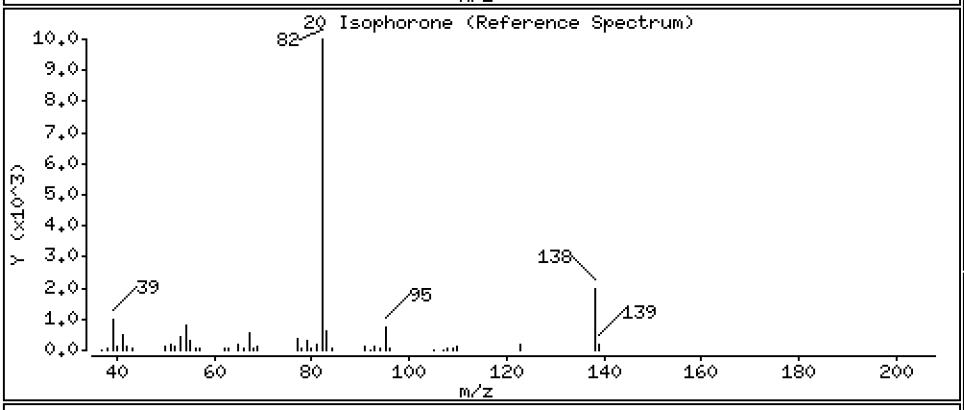
Concentration: 0.1523 ug/mL

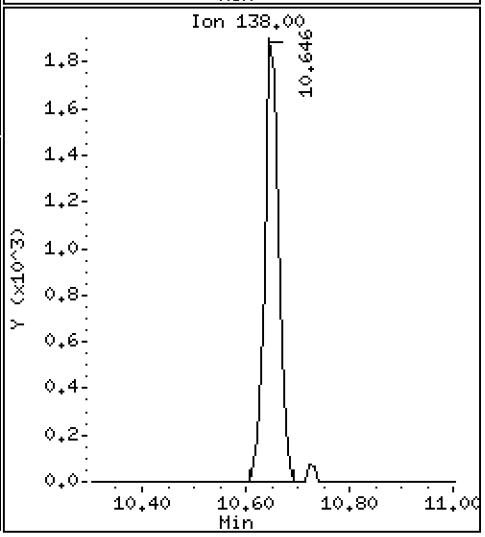


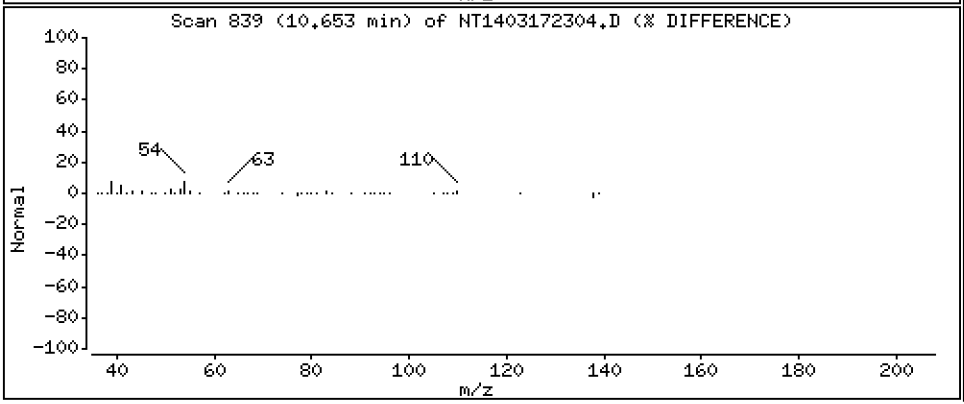












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

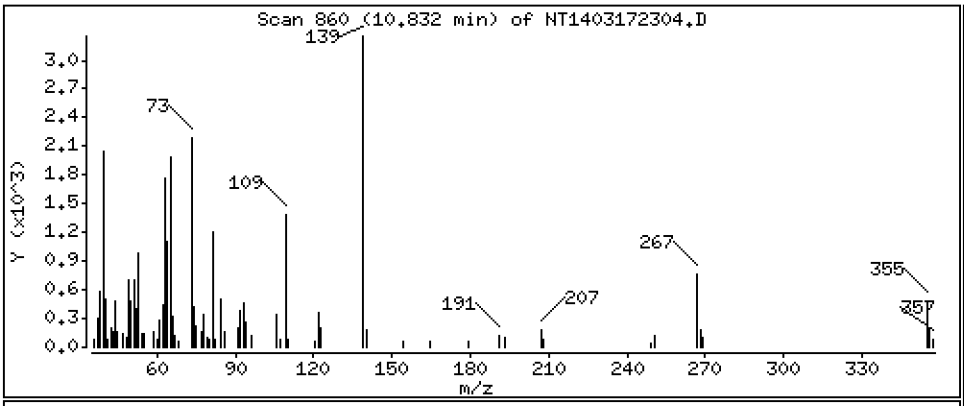
Operator: JGR

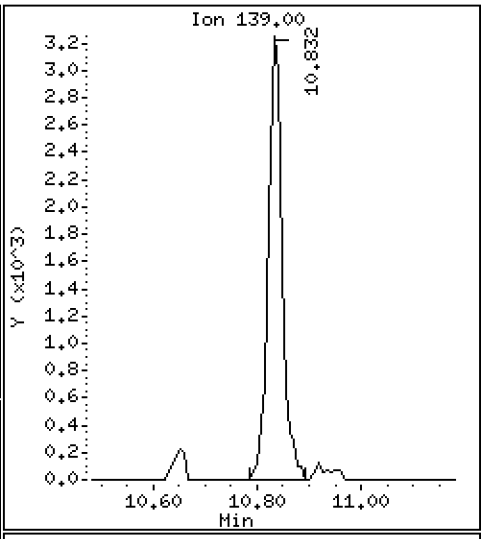
Column phase: ZB-5msi

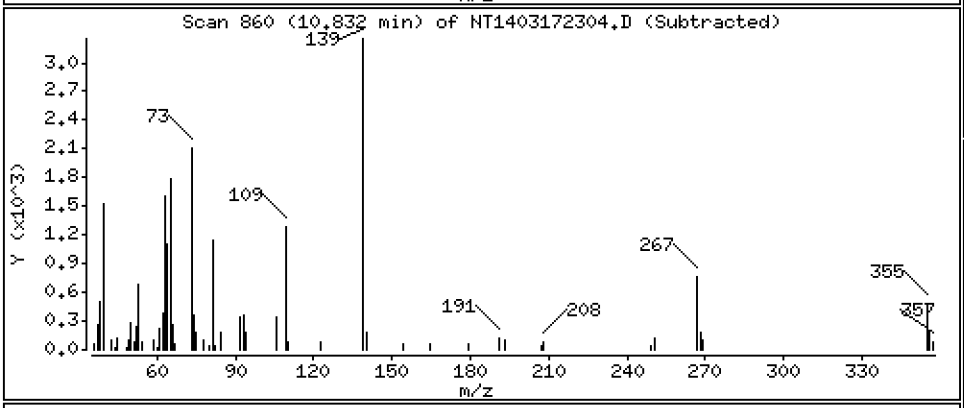
Column diameter: 0.25

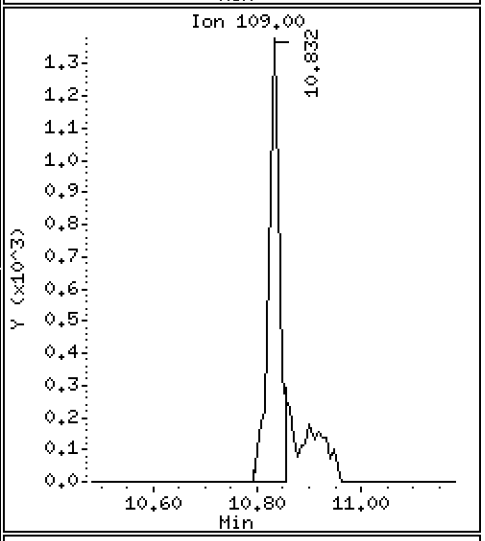
21 2-Nitrophenol

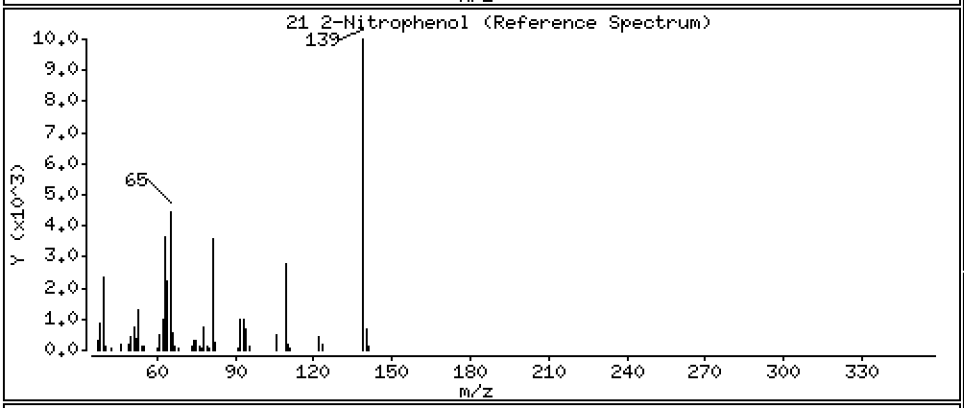
Concentration: 0.1214 ug/mL

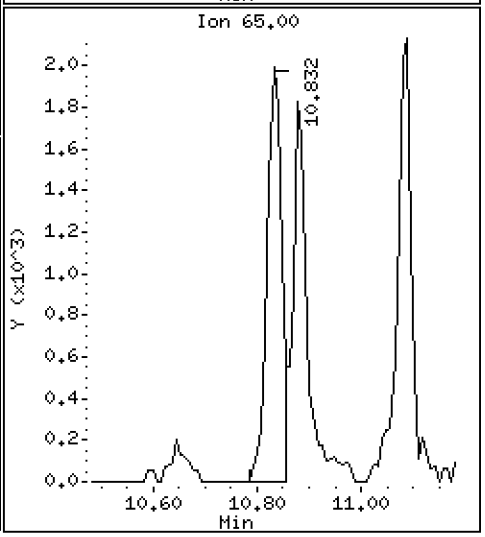


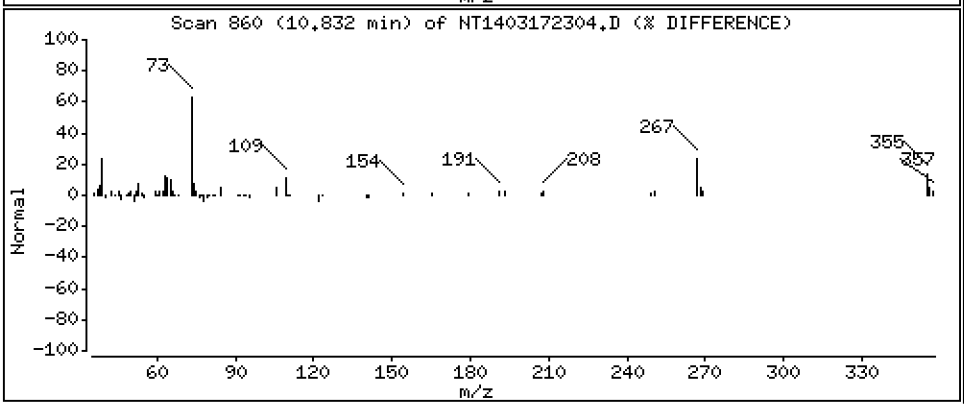












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

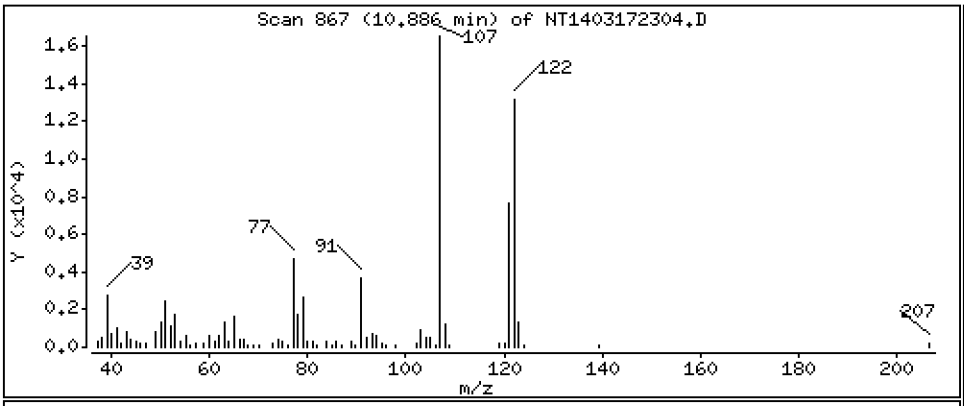
Operator: JGR

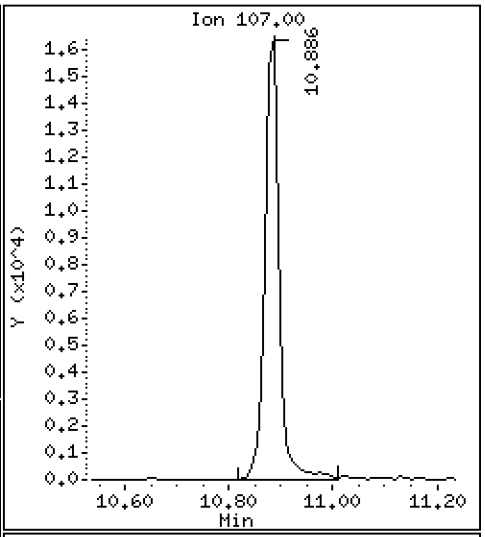
Column phase: ZB-5msi

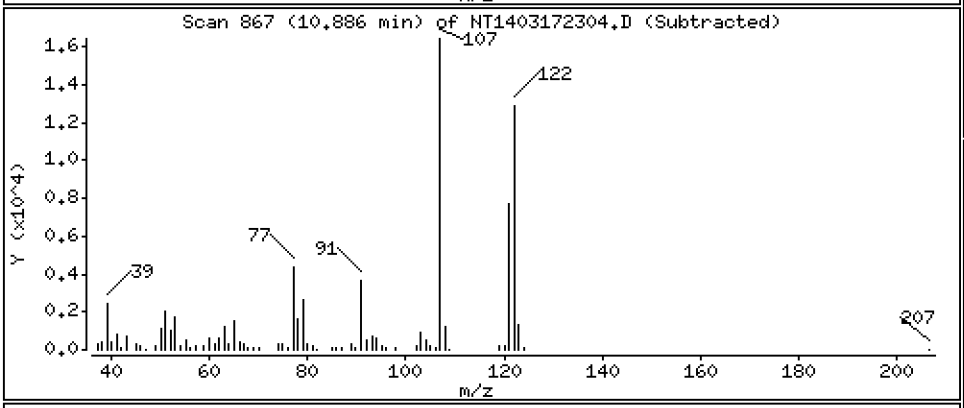
Column diameter: 0.25

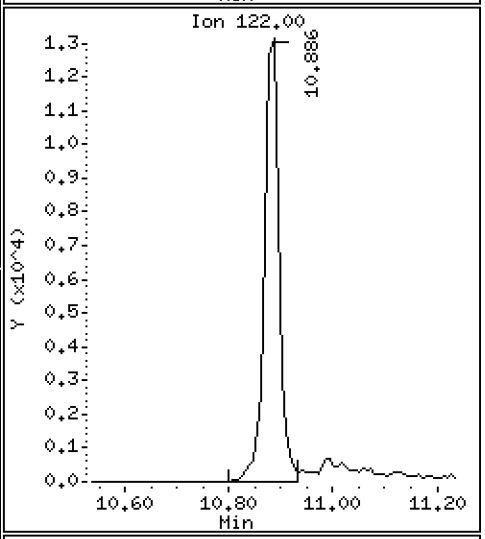
22 2,4-Dimethylphenol

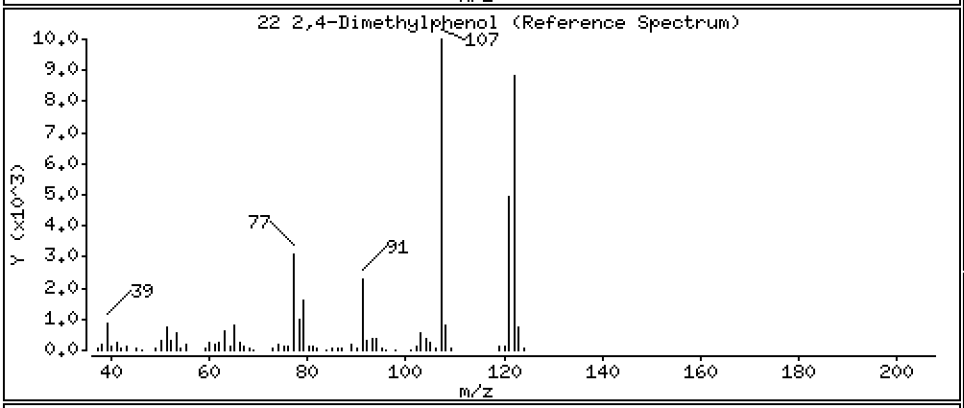
Concentration: 0.4112 ug/mL

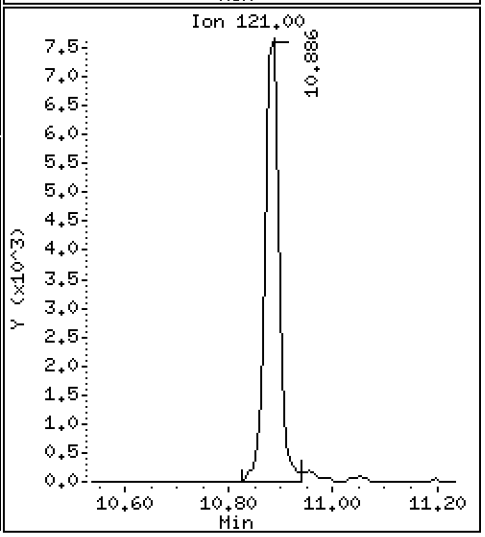


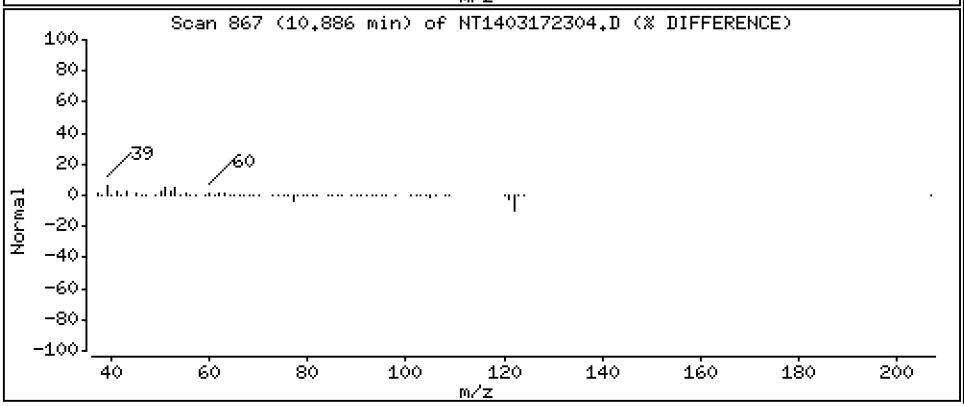












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

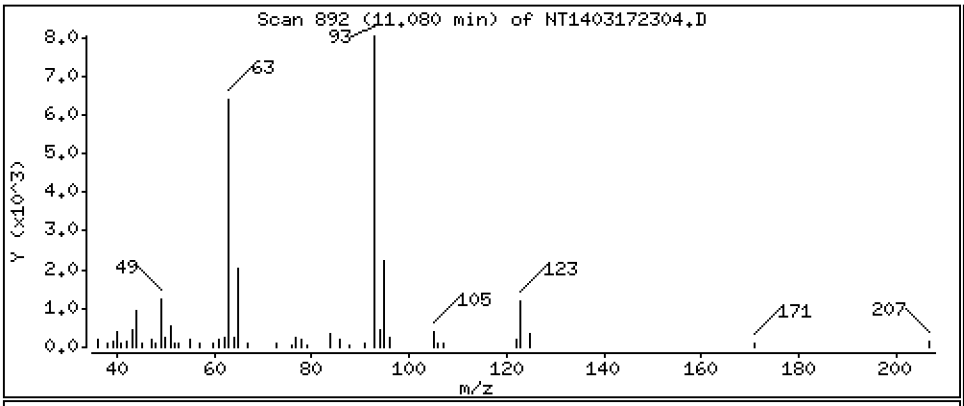
Operator: JGR

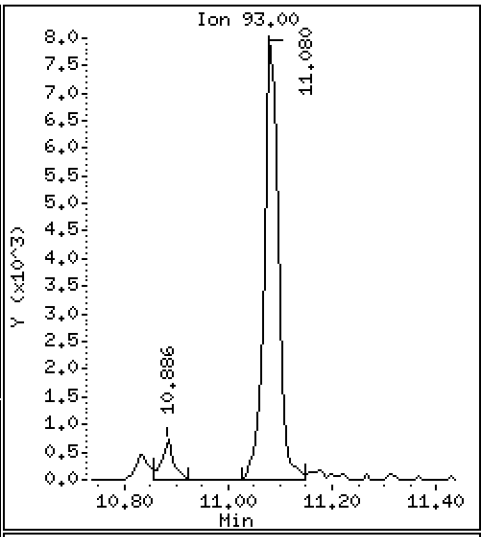
Column phase: ZB-5msi

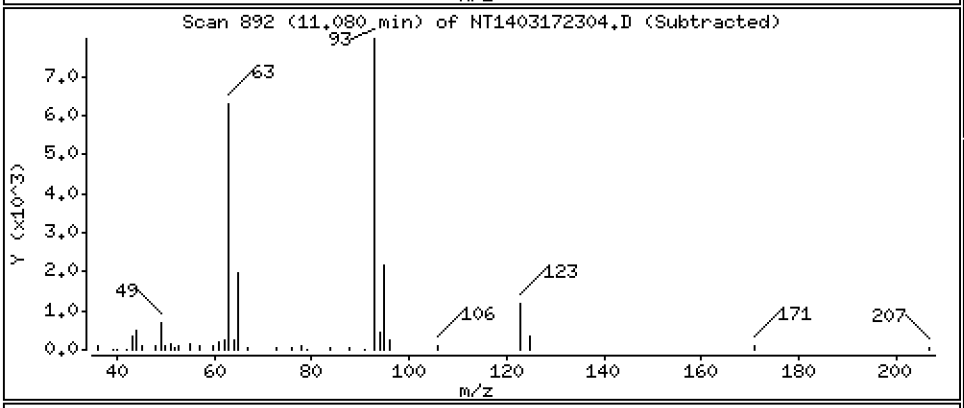
Column diameter: 0.25

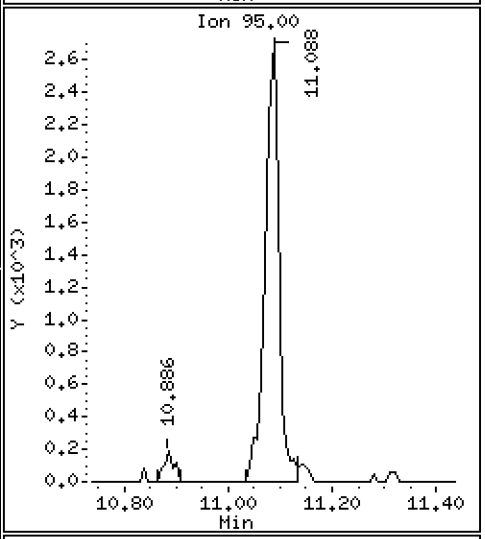
23 Bis(2-Chloroethoxy)methane

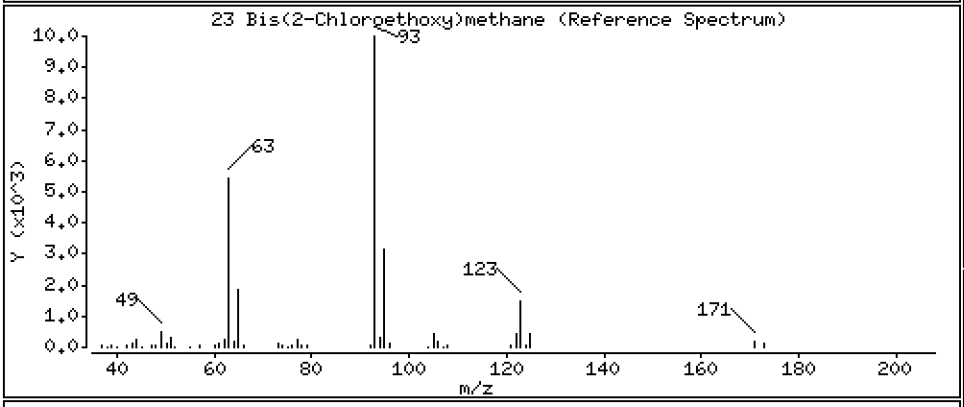
Concentration: 0.1847 ug/mL

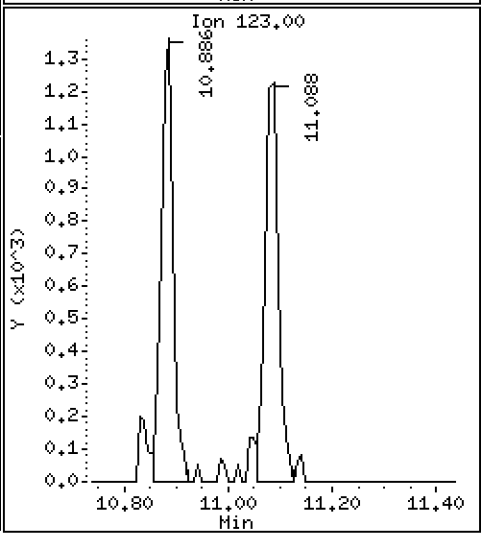


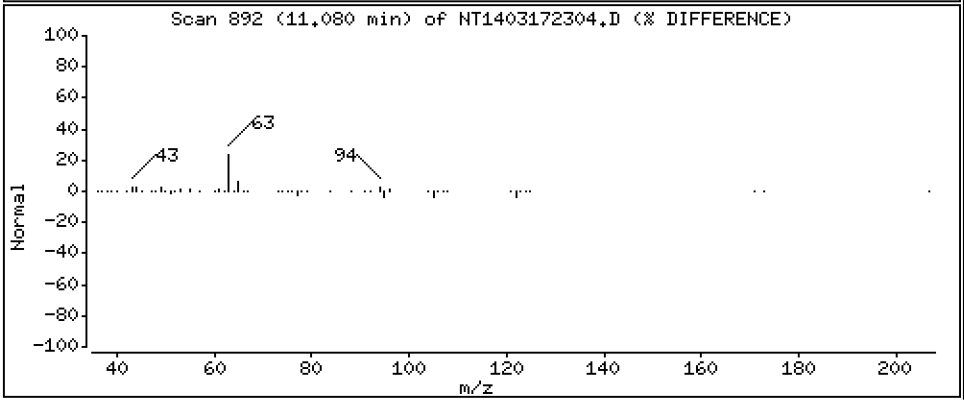












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

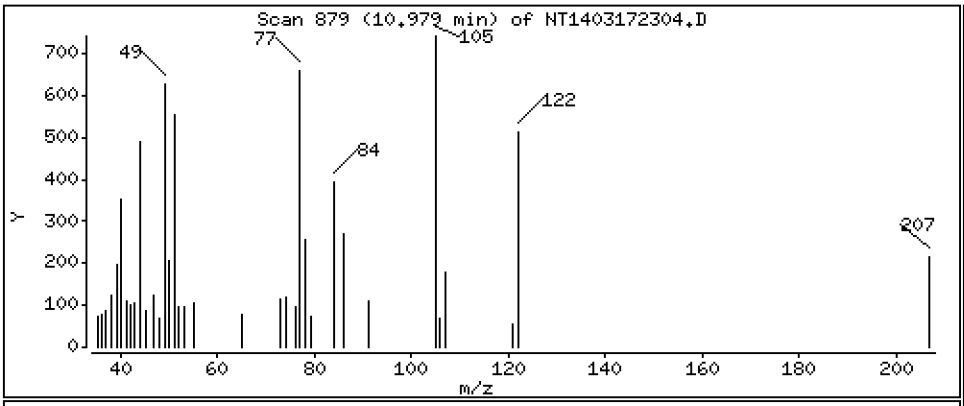
Operator: JGR

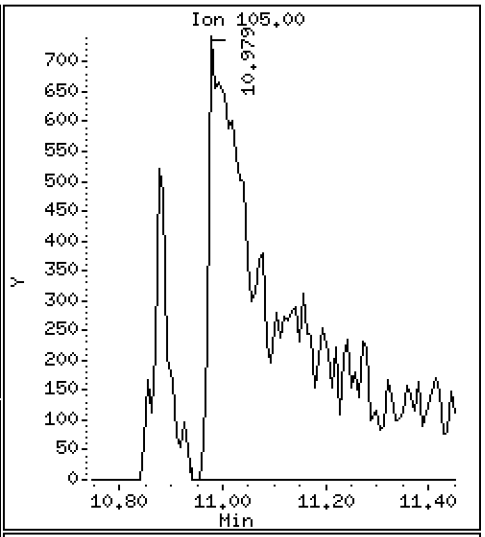
Column phase: ZB-5msi

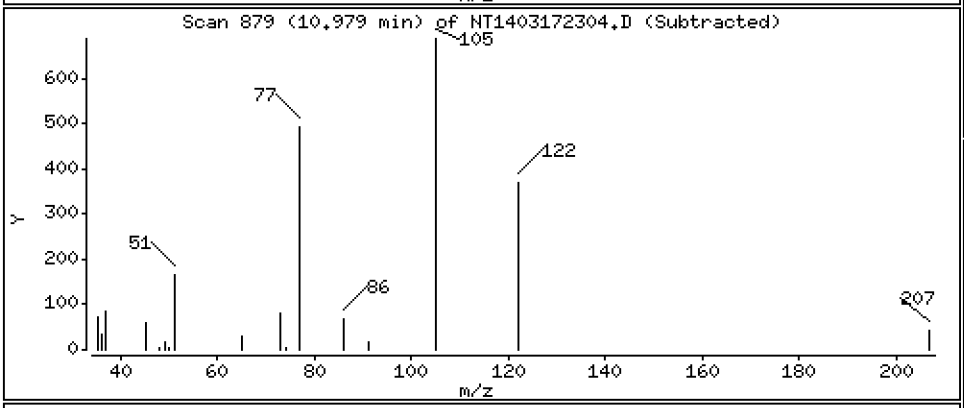
Column diameter: 0.25

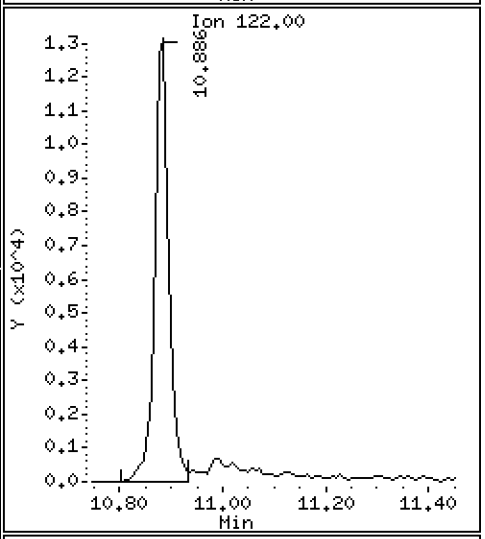
24 Benzoic acid

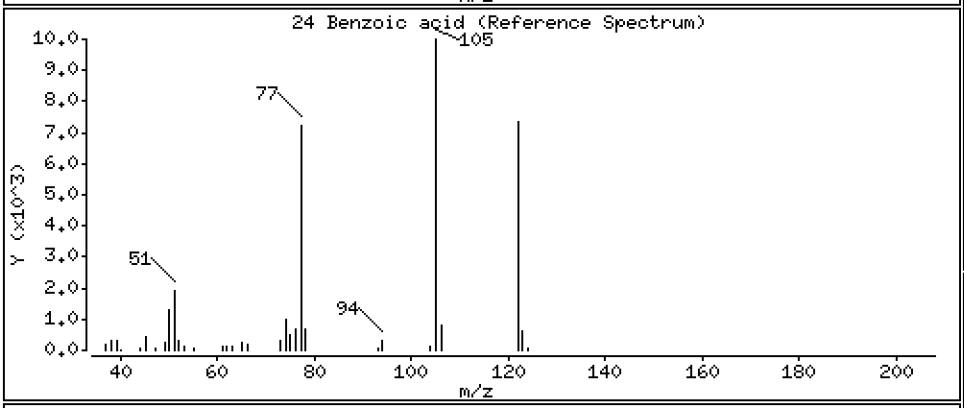
Concentration: 0.1295 ug/mL

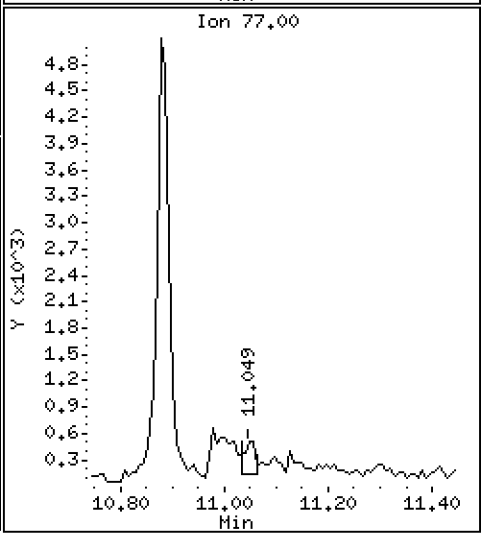


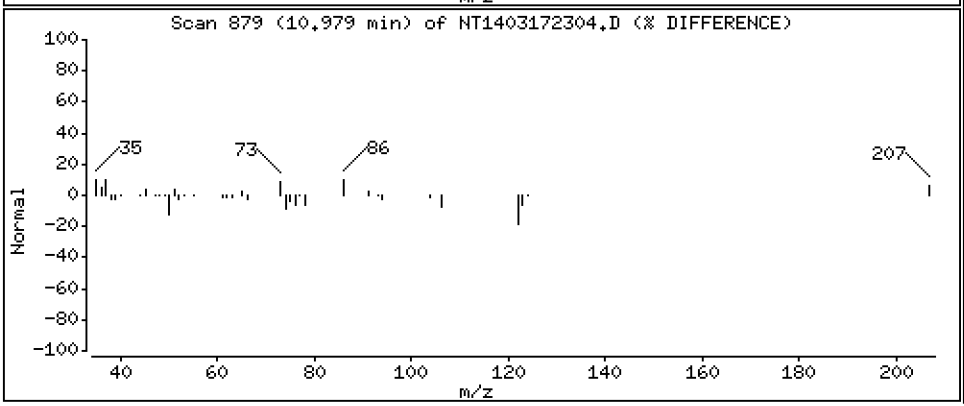












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

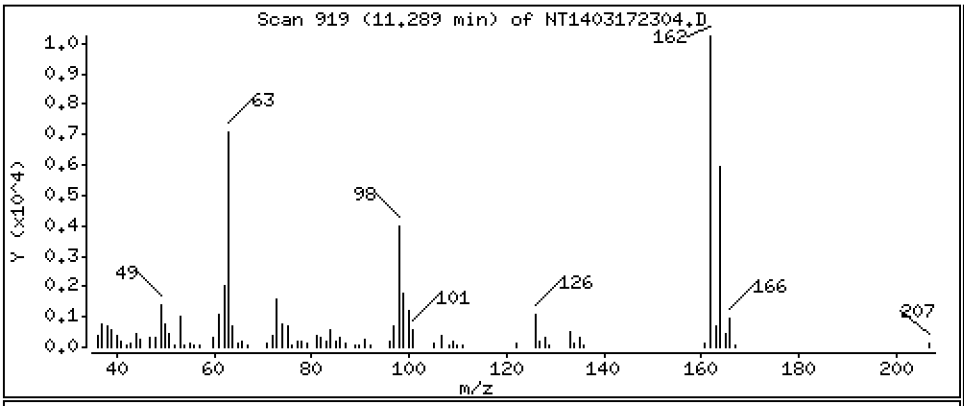
Operator: JGR

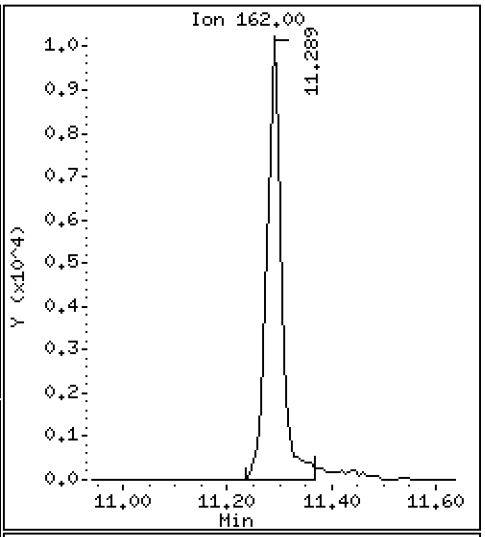
Column phase: ZB-5msi

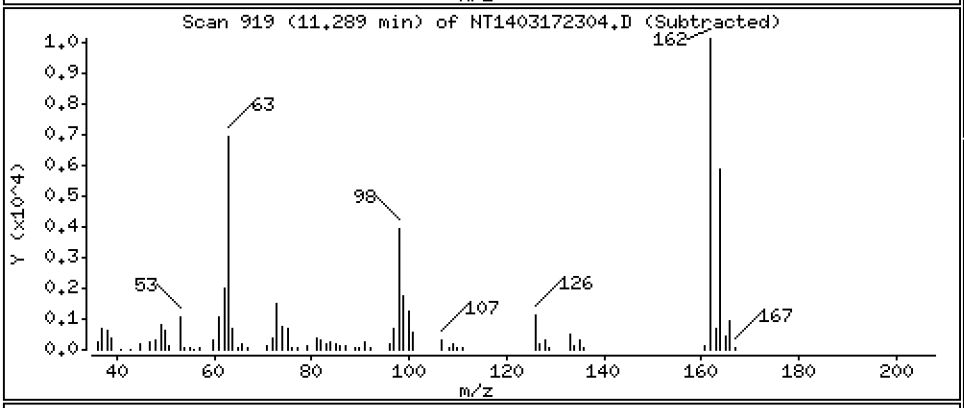
Column diameter: 0.25

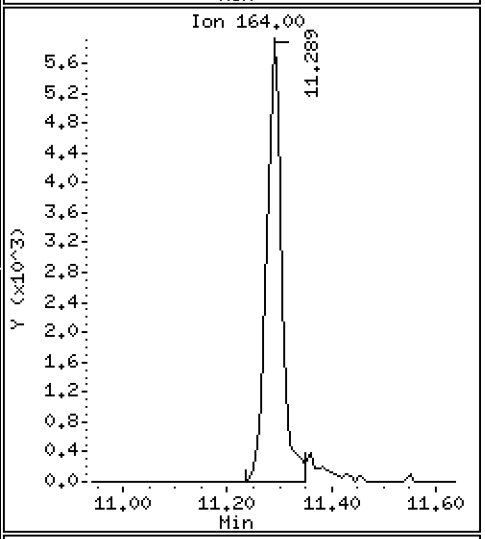
25 2,4-Dichlorophenol

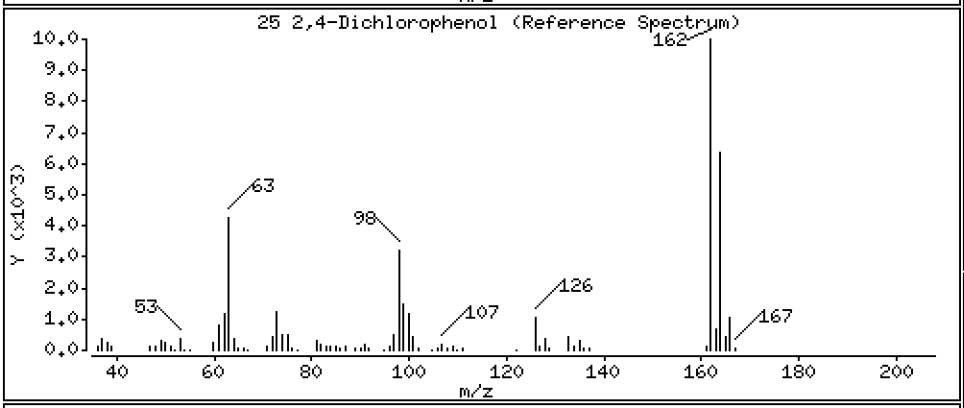
Concentration: 0.3425 ug/mL

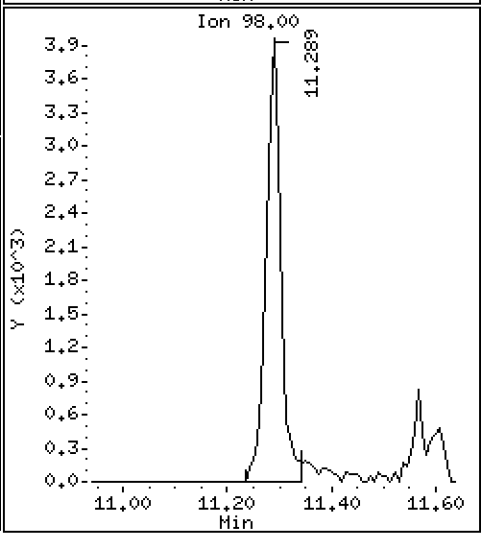


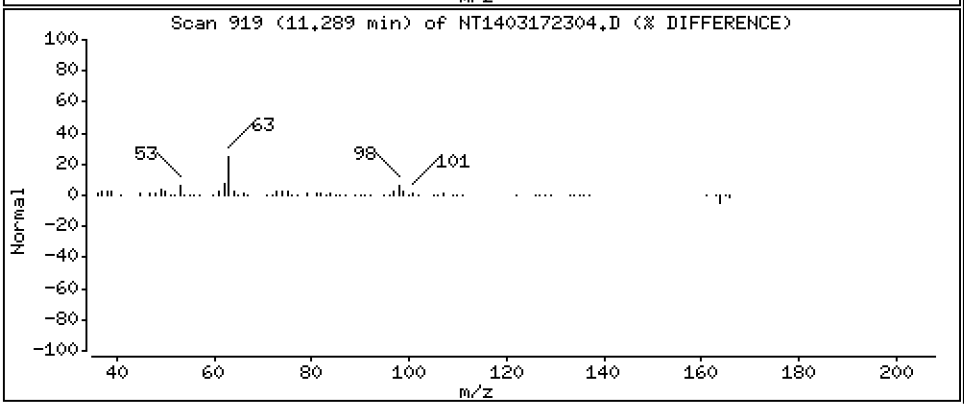












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

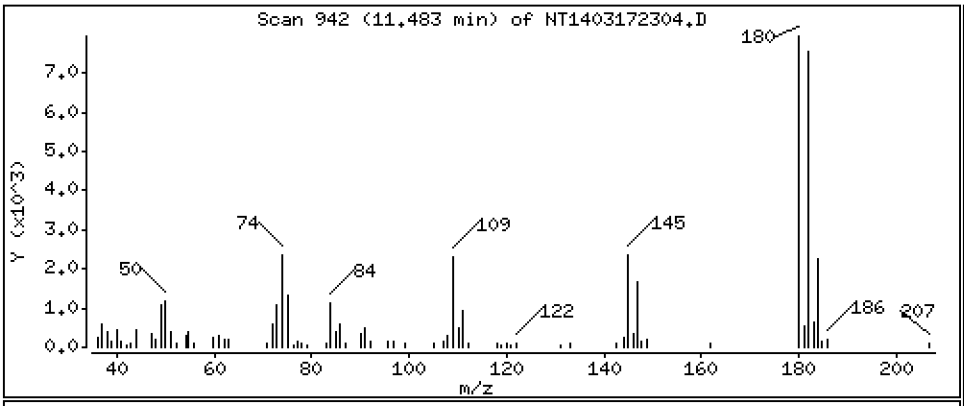
Operator: JGR

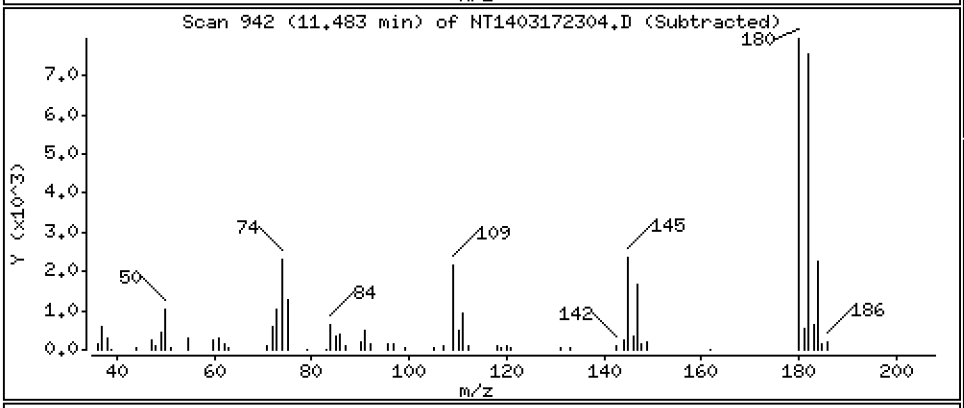
Column phase: ZB-5msi

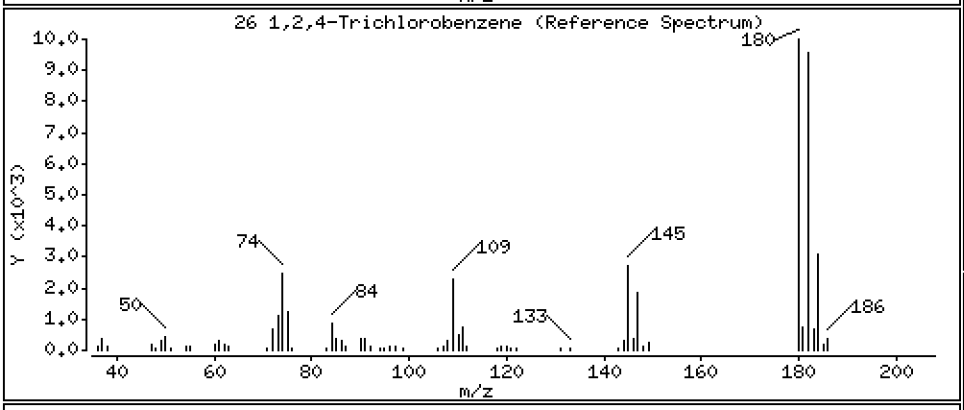
Column diameter: 0.25

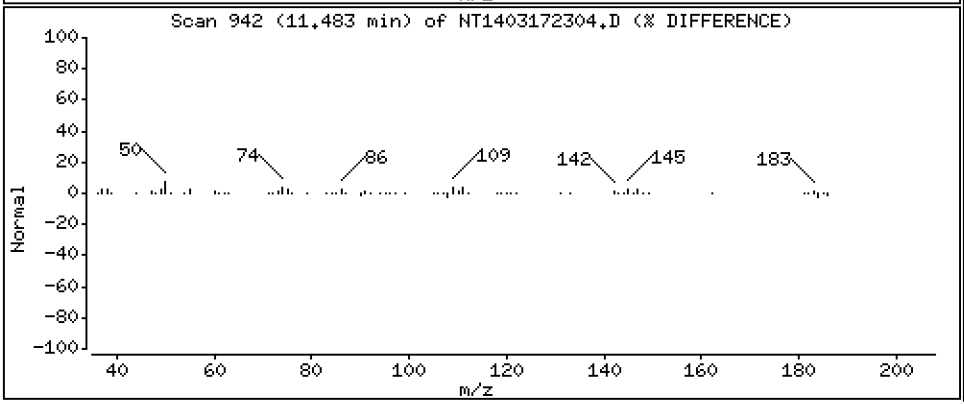
26 1,2,4-Trichlorobenzene

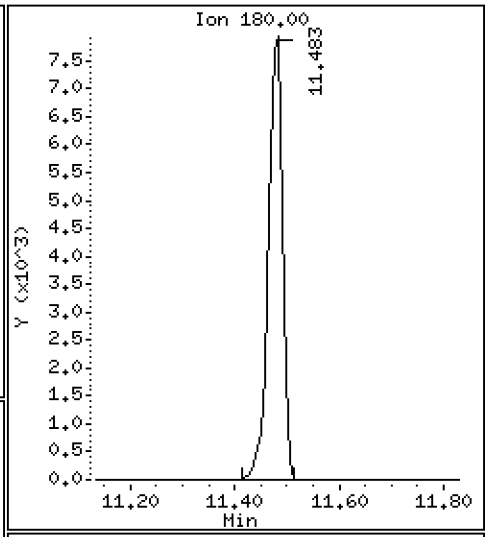
Concentration: 0.2035 ug/mL

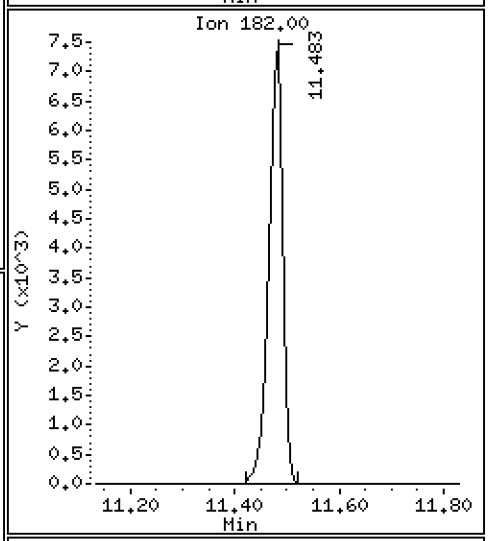


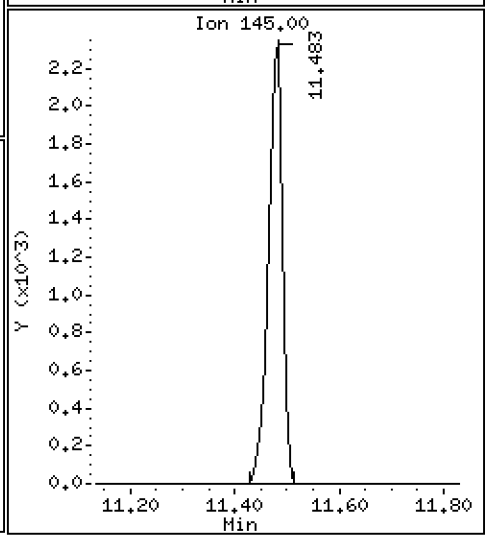












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

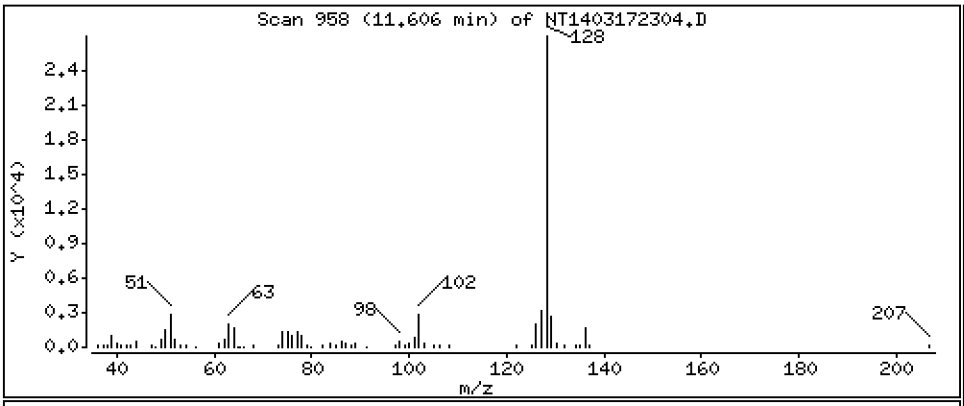
Operator: JGR

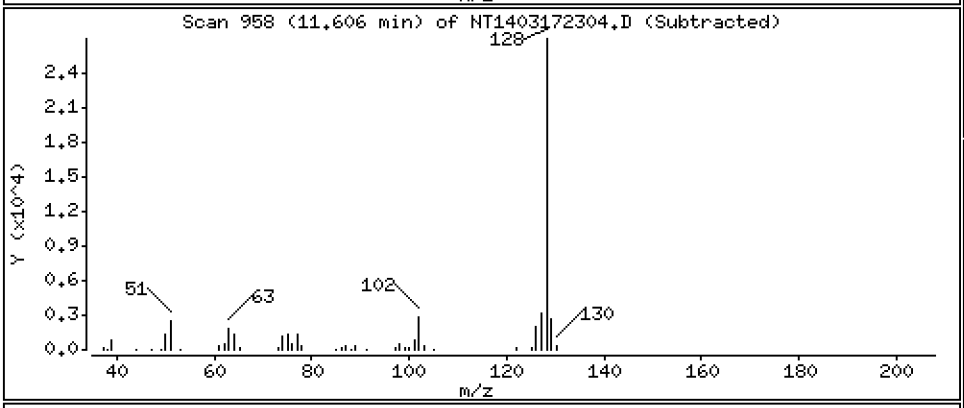
Column phase: ZB-5msi

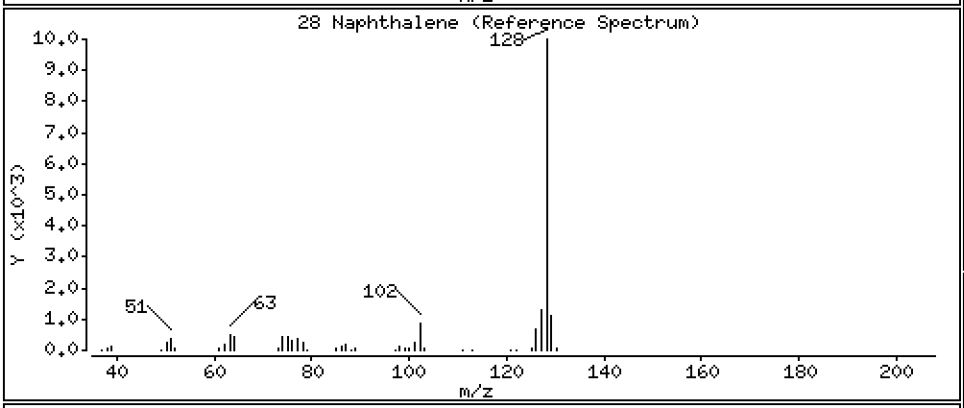
Column diameter: 0.25

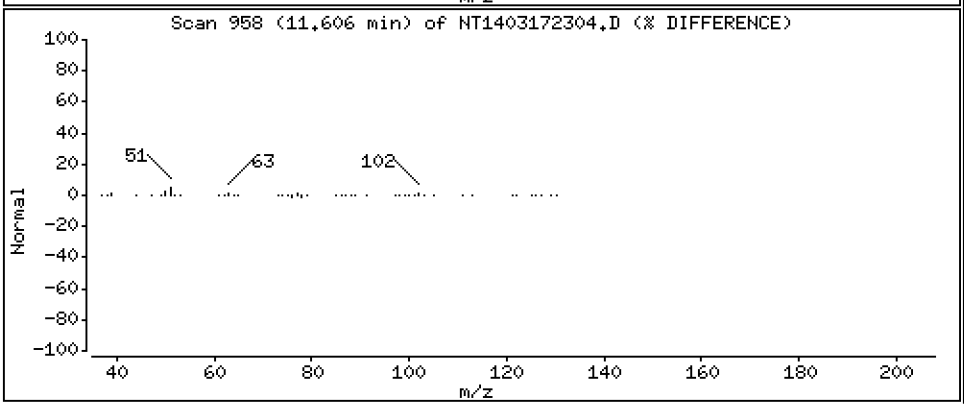
28 Naphthalene

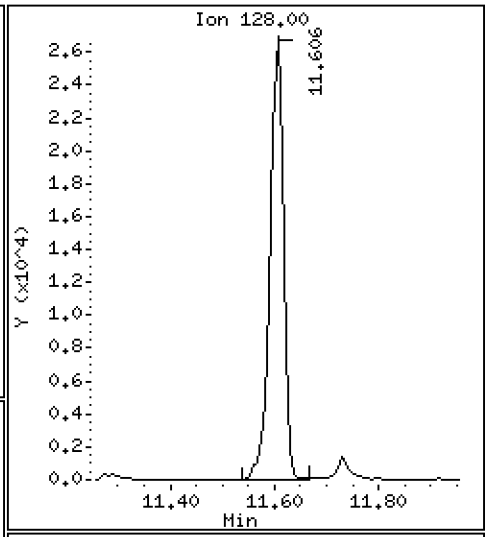
Concentration: 0.2085 ug/mL

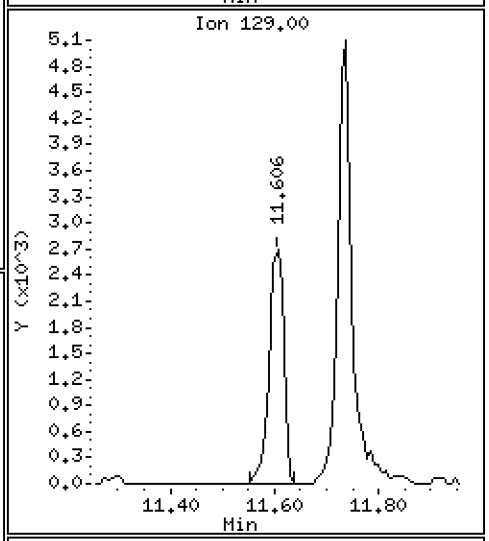


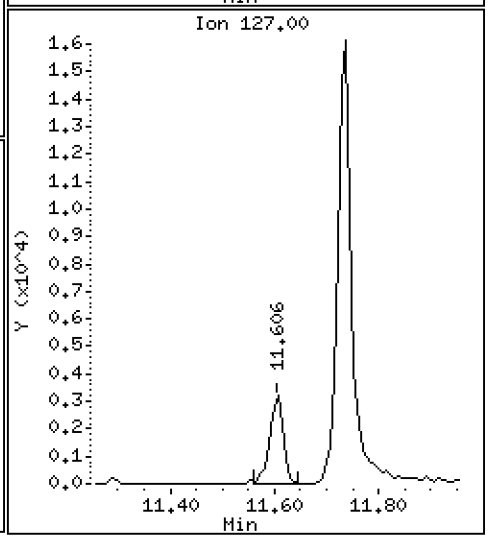












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

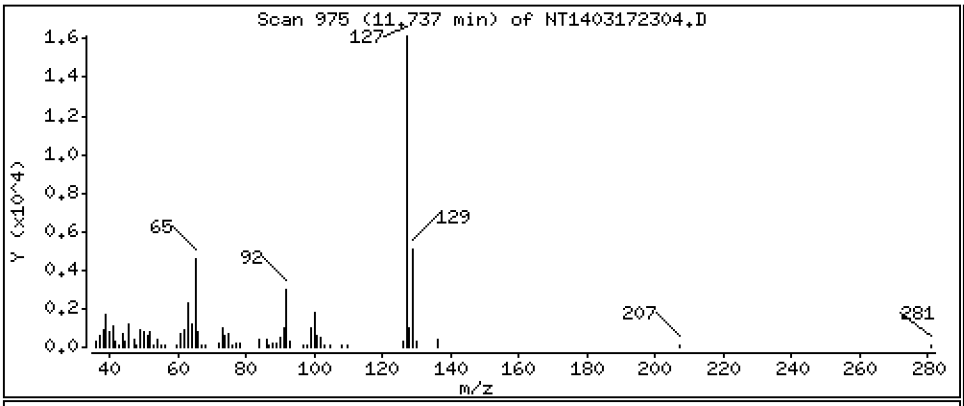
Operator: JGR

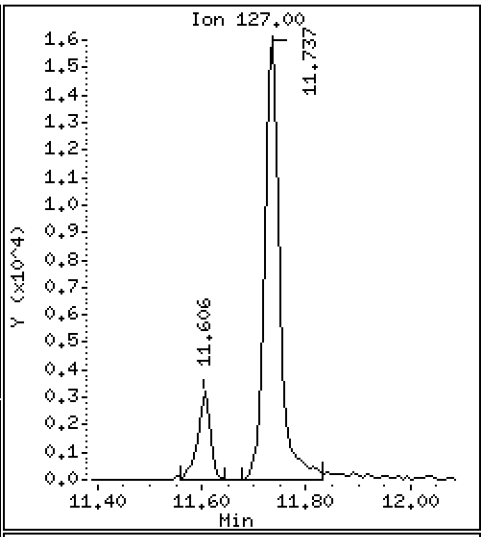
Column phase: ZB-5msi

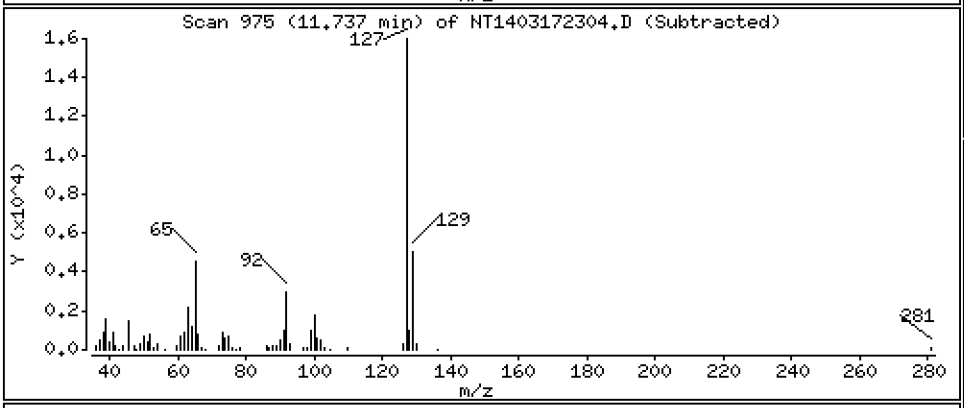
Column diameter: 0.25

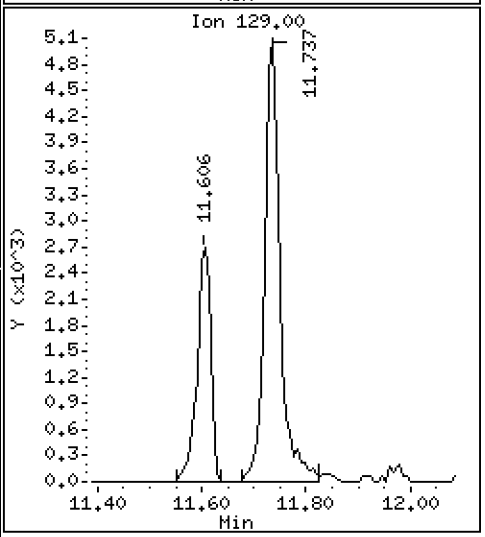
29 4-Chloroaniline

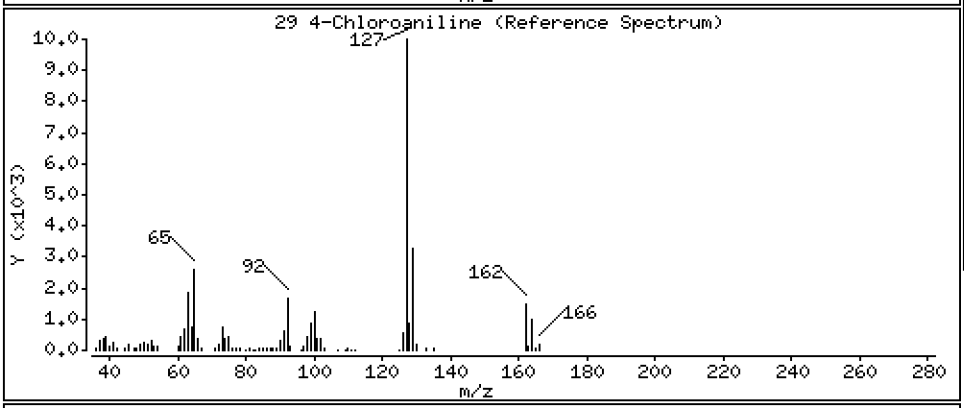
Concentration: 0.3382 ug/mL

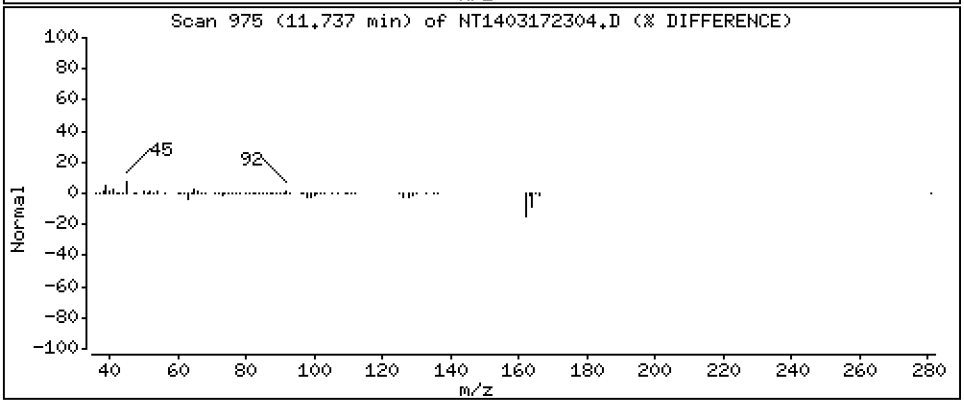












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

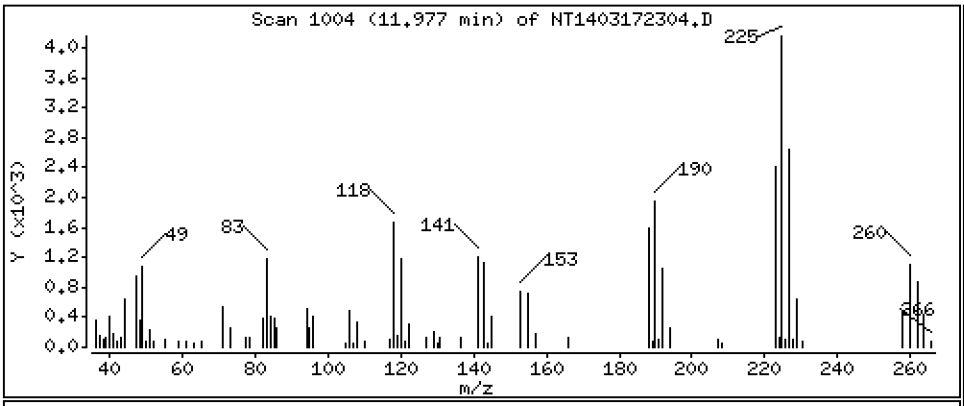
Operator: JGR

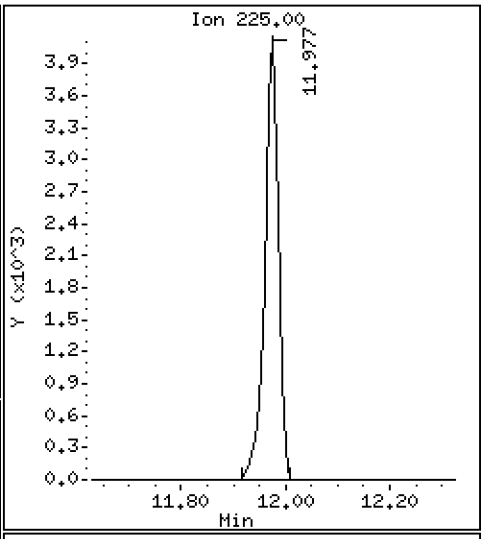
Column phase: ZB-5msi

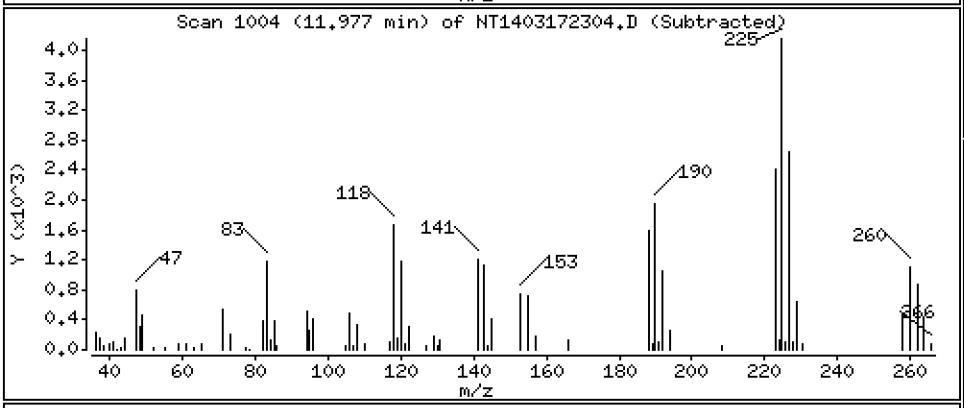
Column diameter: 0.25

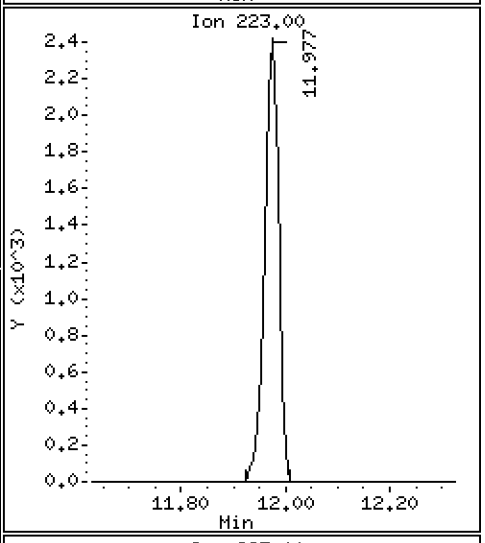
30 Hexachlorobutadiene

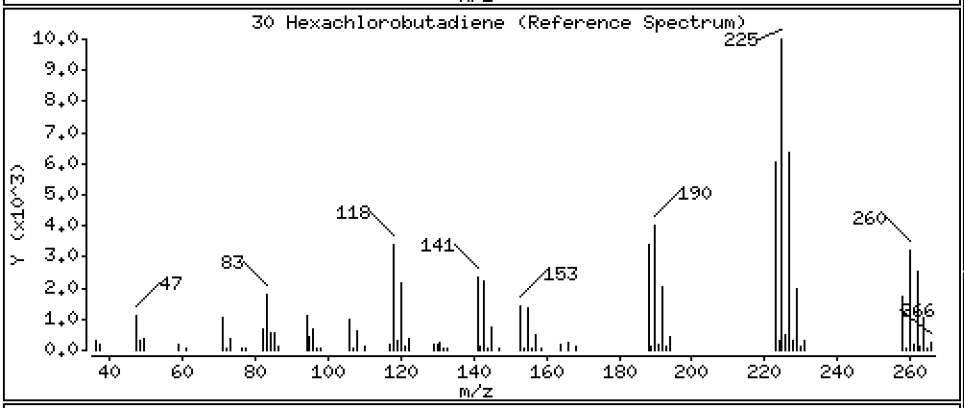
Concentration: 0.2222 ug/mL

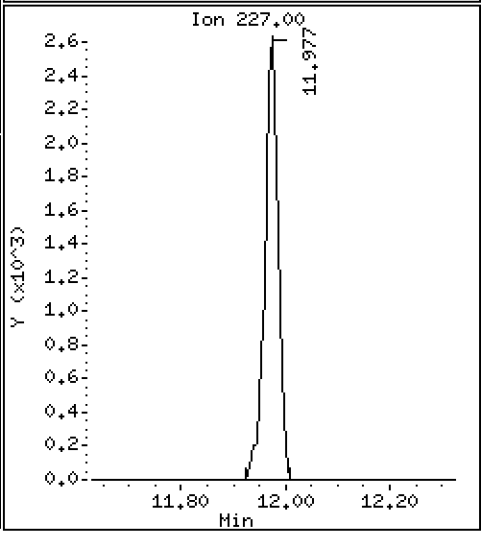


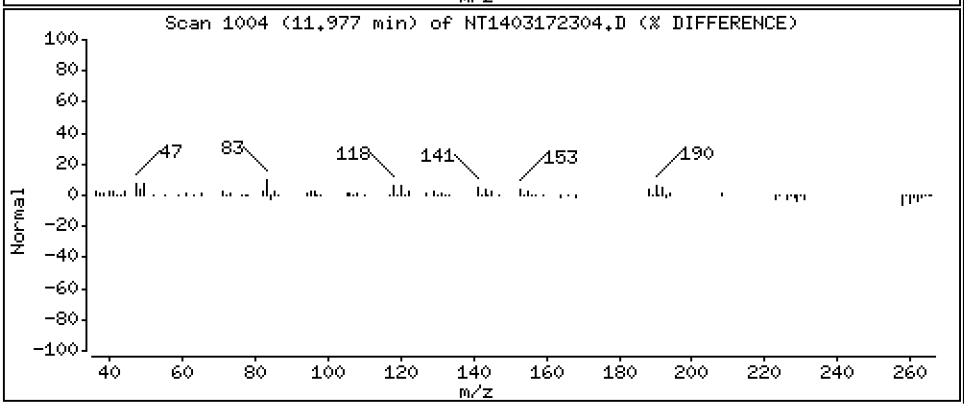












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

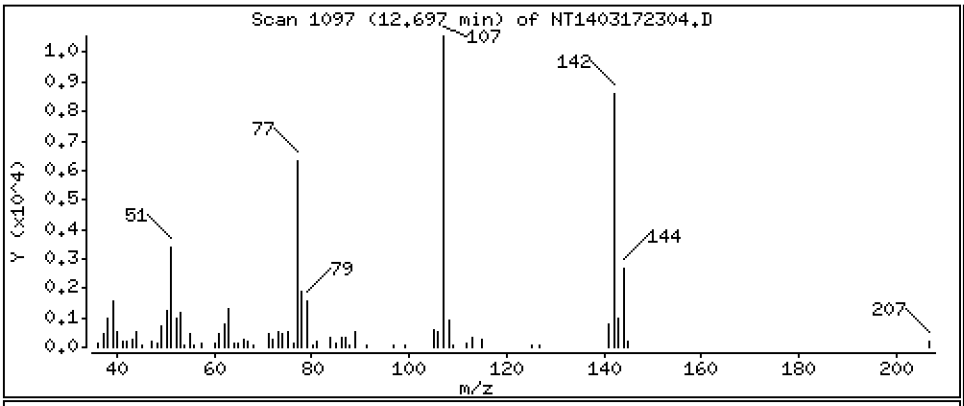
Operator: JGR

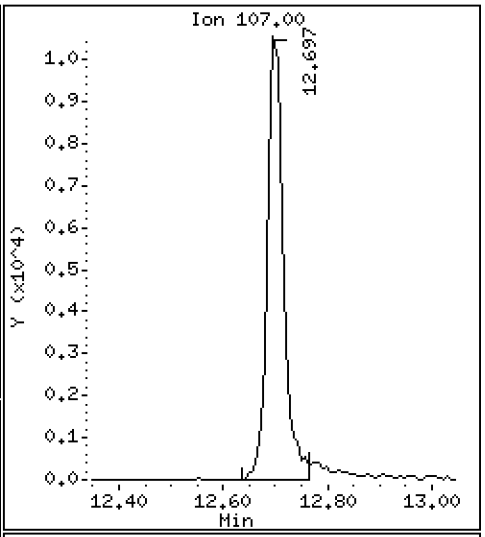
Column phase: ZB-5msi

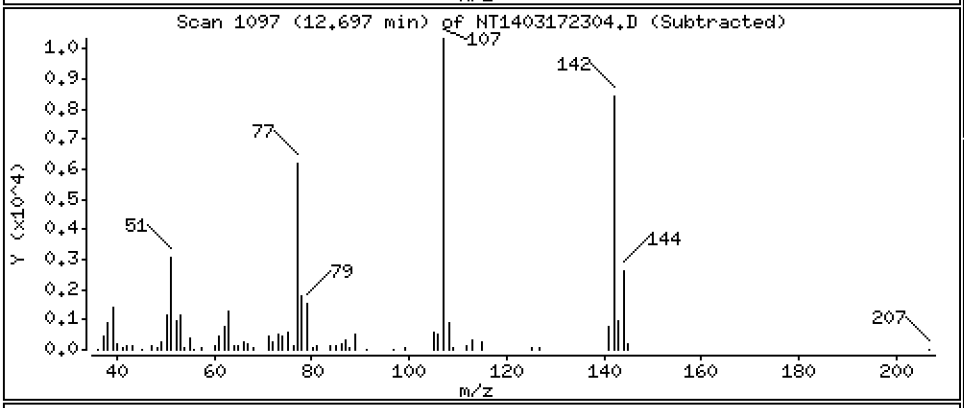
Column diameter: 0.25

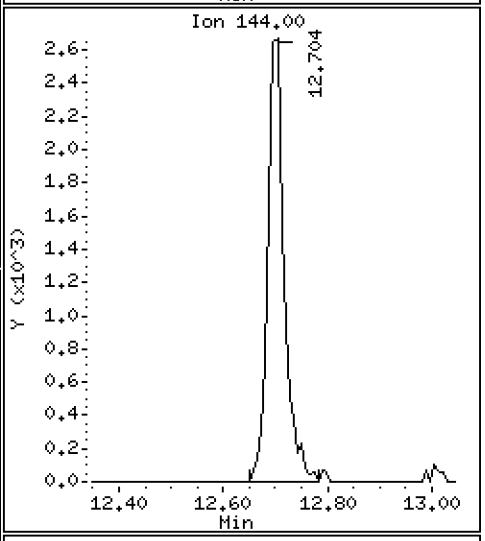
31 4-Chloro-3-methylphenol

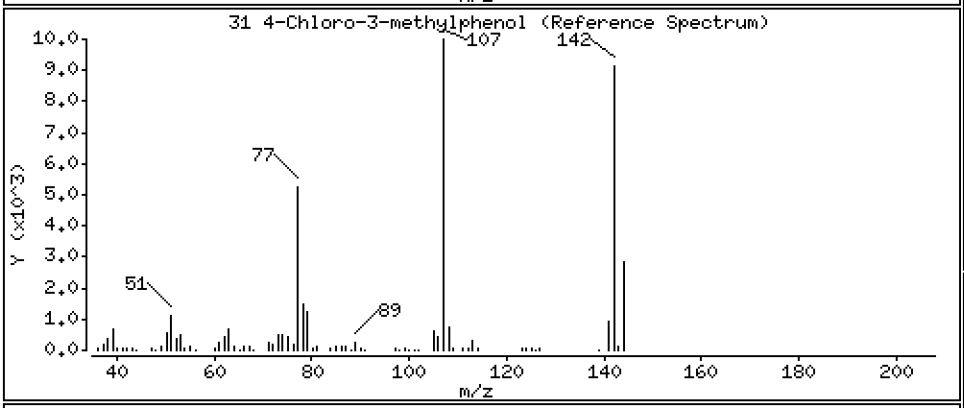
Concentration: 0.3158 ug/mL

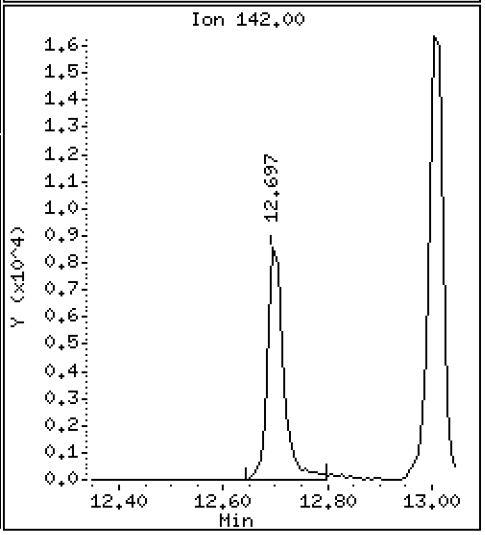


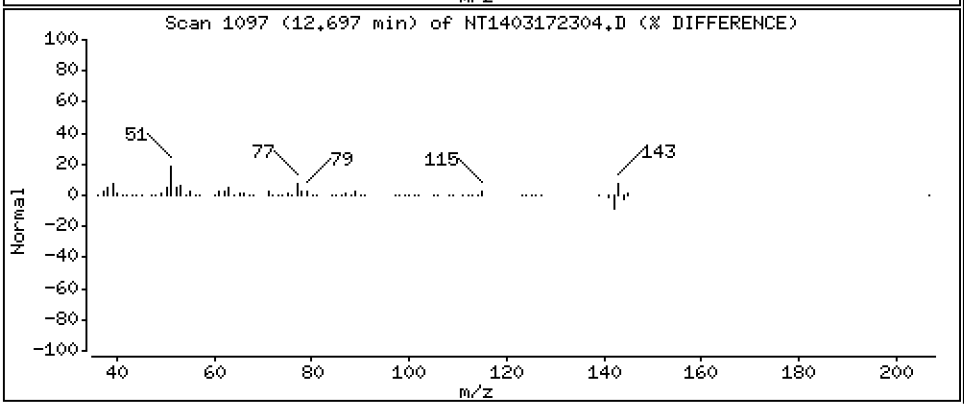












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

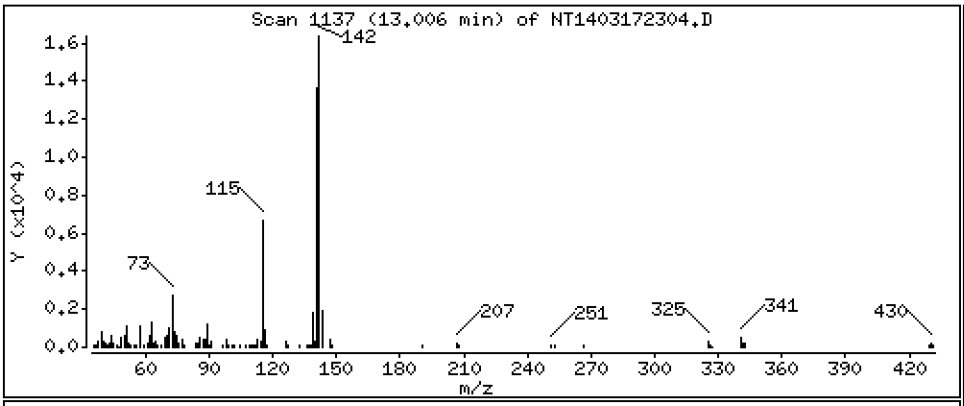
Operator: JGR

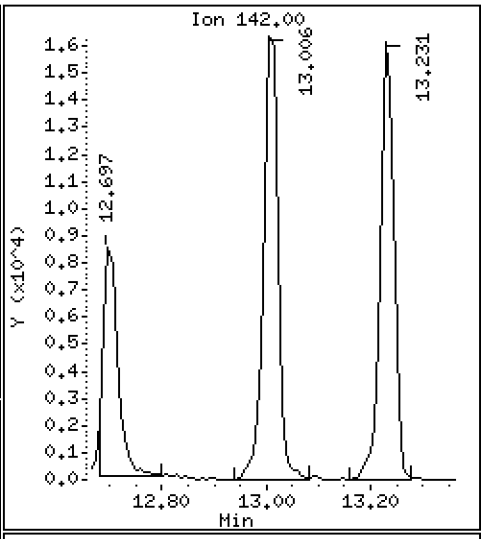
Column phase: ZB-5msi

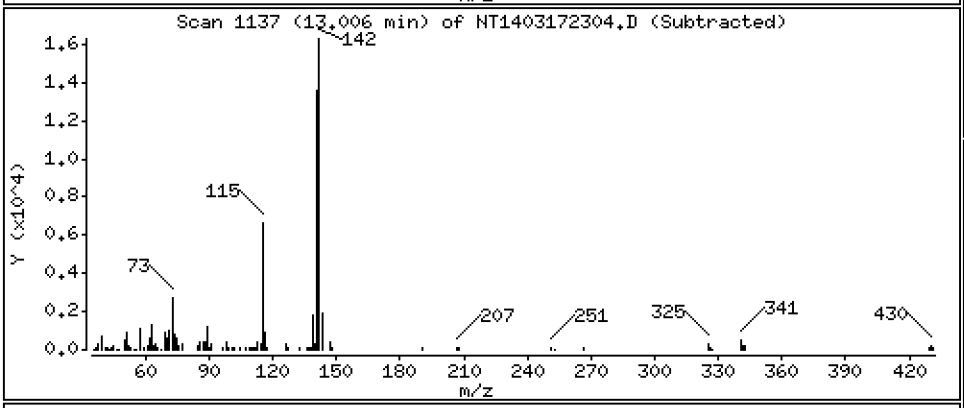
Column diameter: 0.25

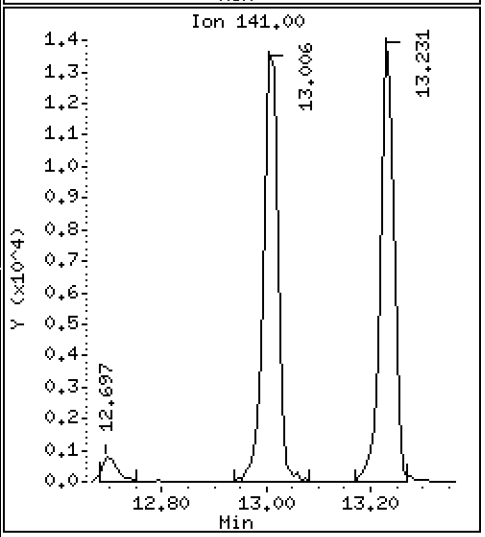
32 2-Methylnaphthalene

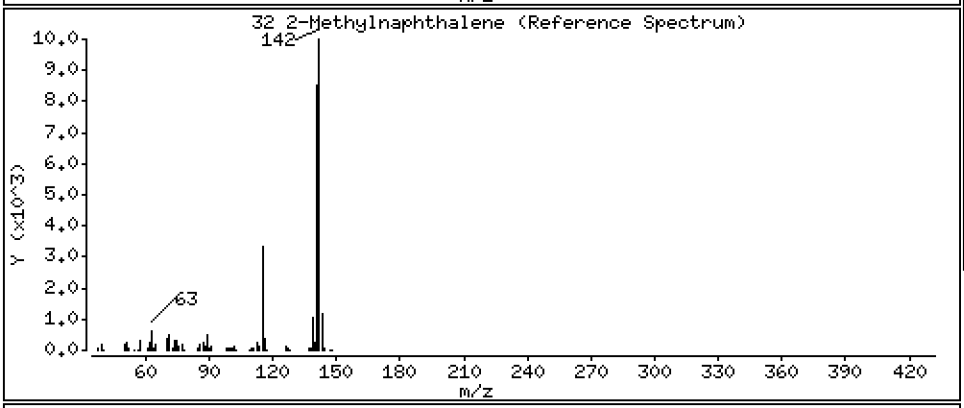
Concentration: 0.1987 ug/mL

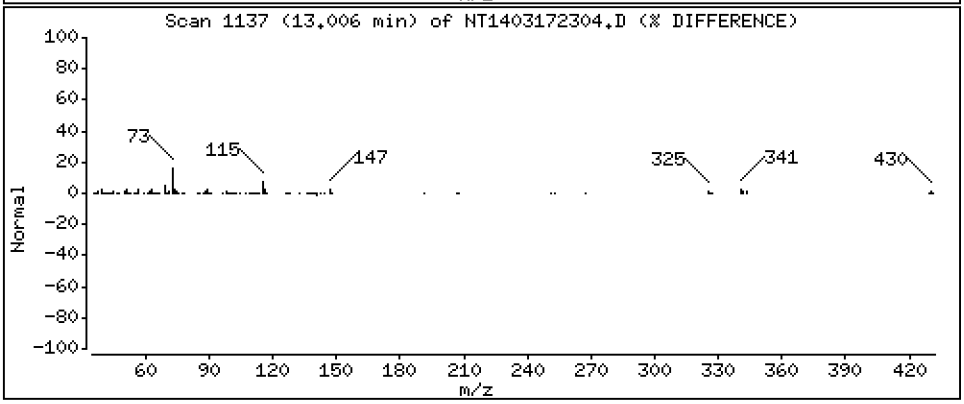












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

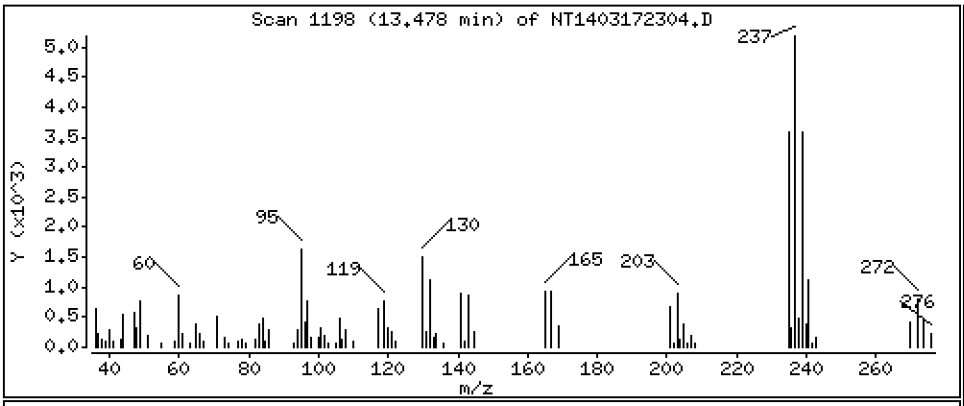
Operator: JGR

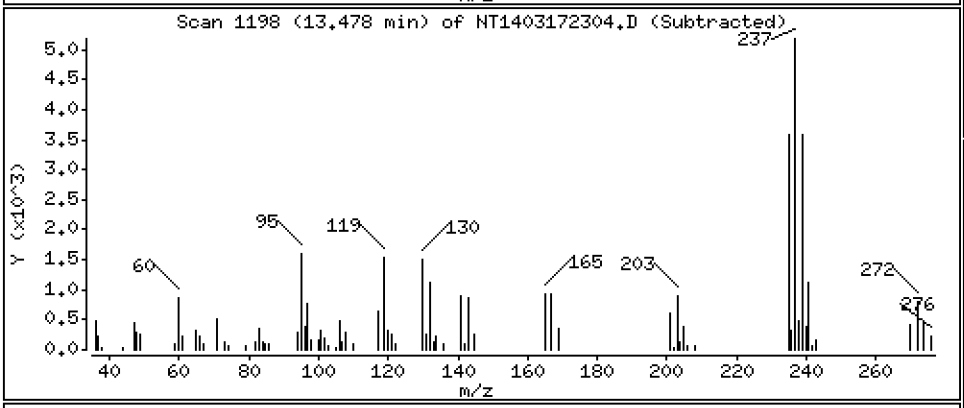
Column phase: ZB-5msi

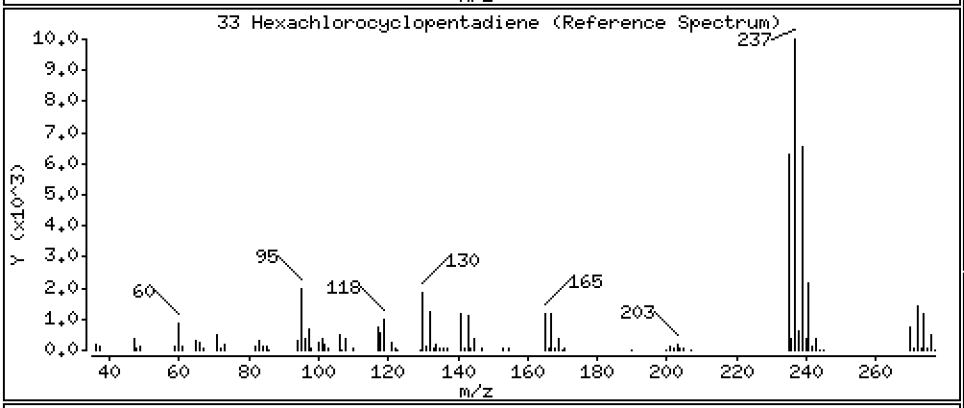
Column diameter: 0.25

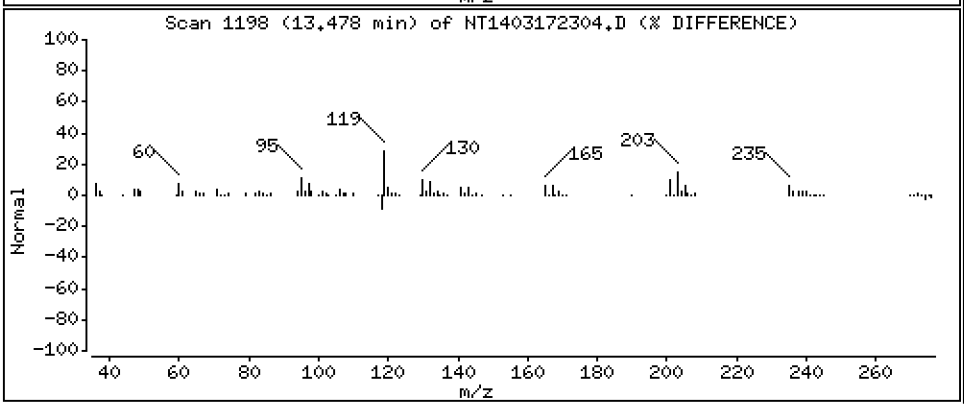
33 Hexachlorocyclopentadiene

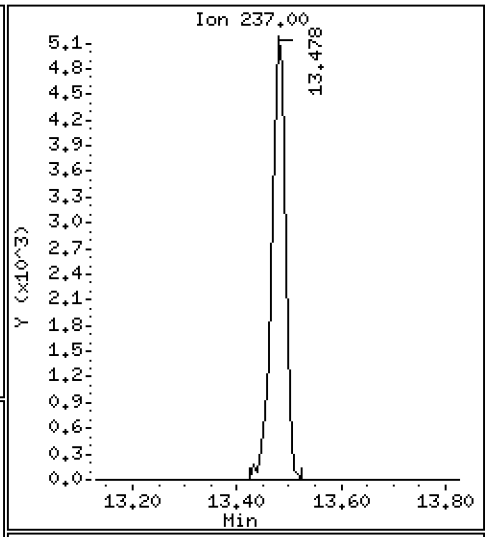
Concentration: 0.2606 ug/mL

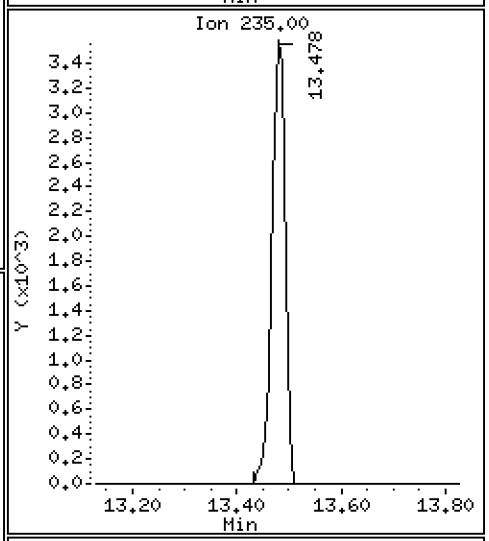


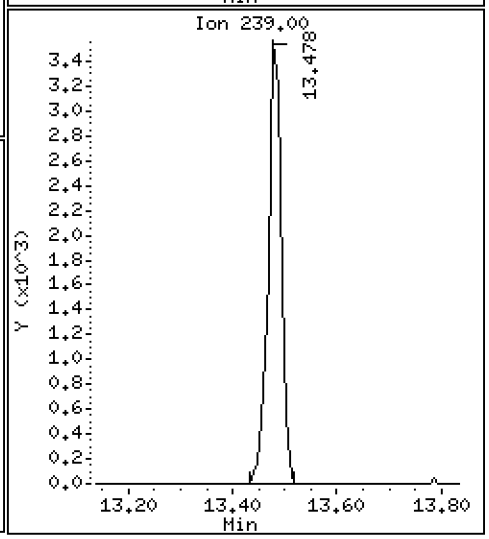












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

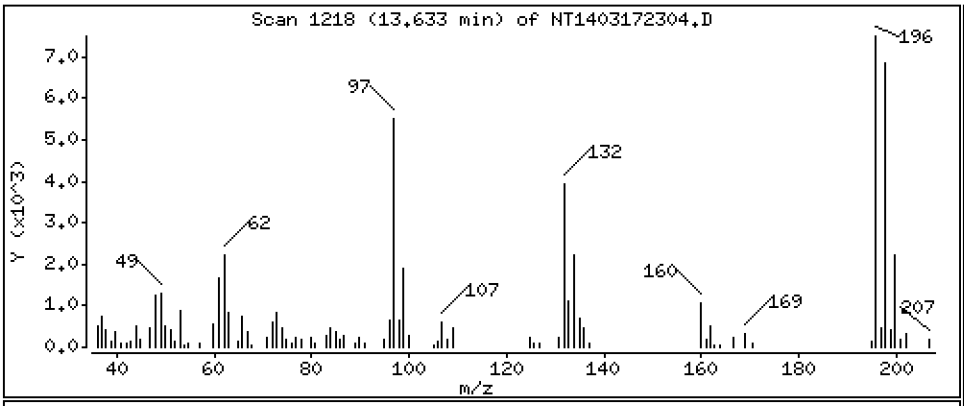
Operator: JGR

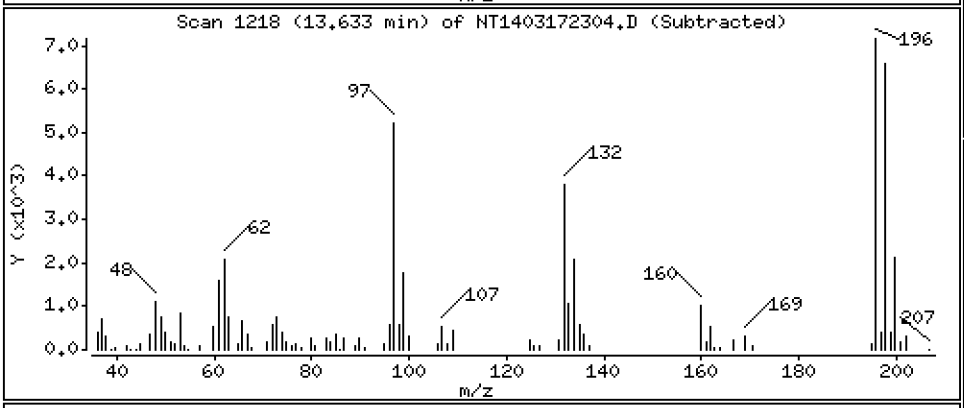
Column phase: ZB-5msi

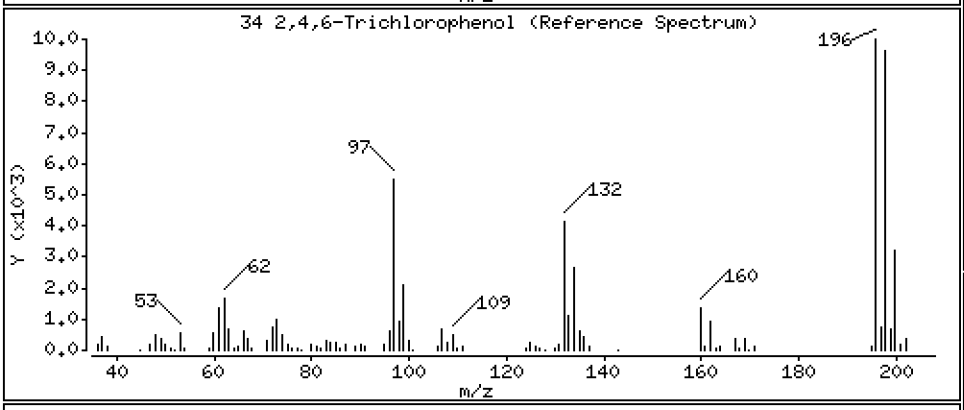
Column diameter: 0.25

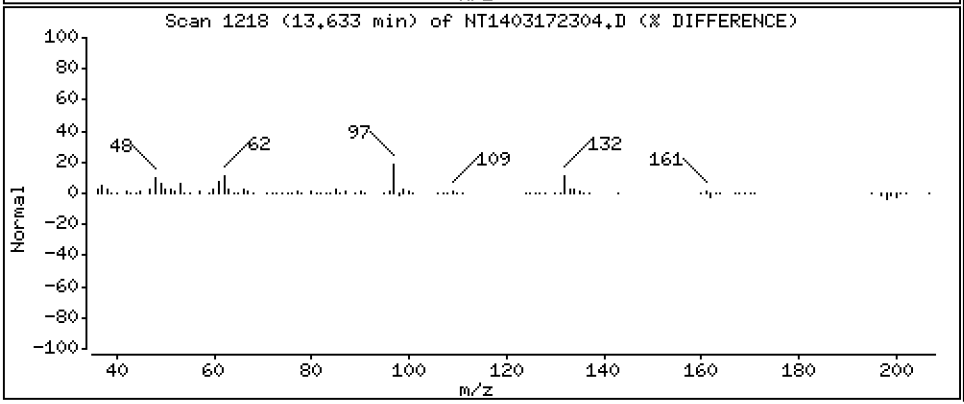
34 2,4,6-Trichlorophenol

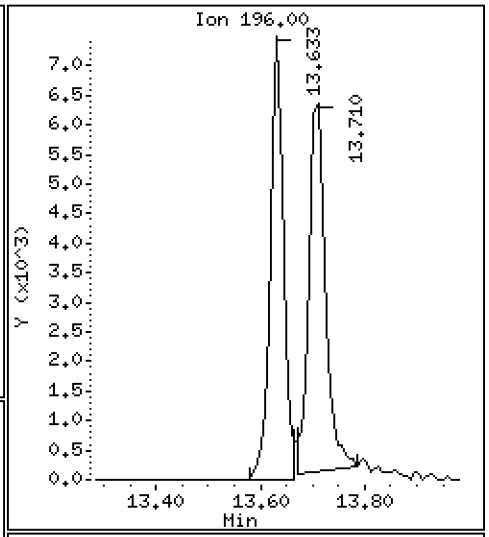
Concentration: 0.2944 ug/mL

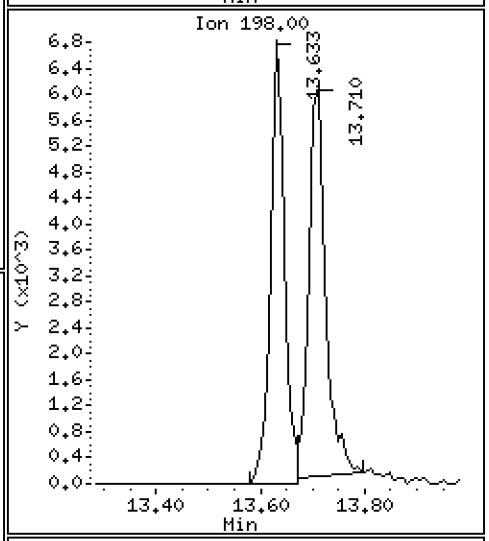


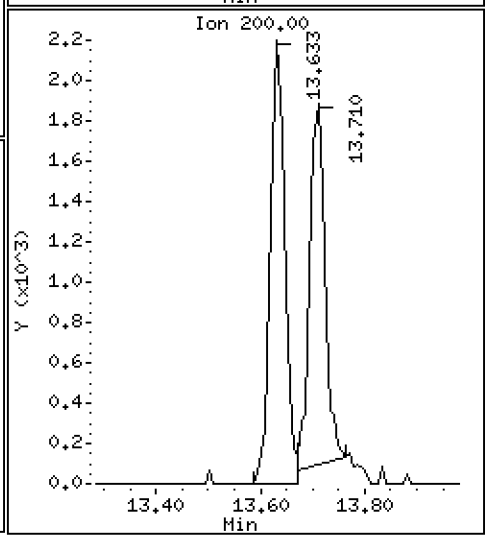












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

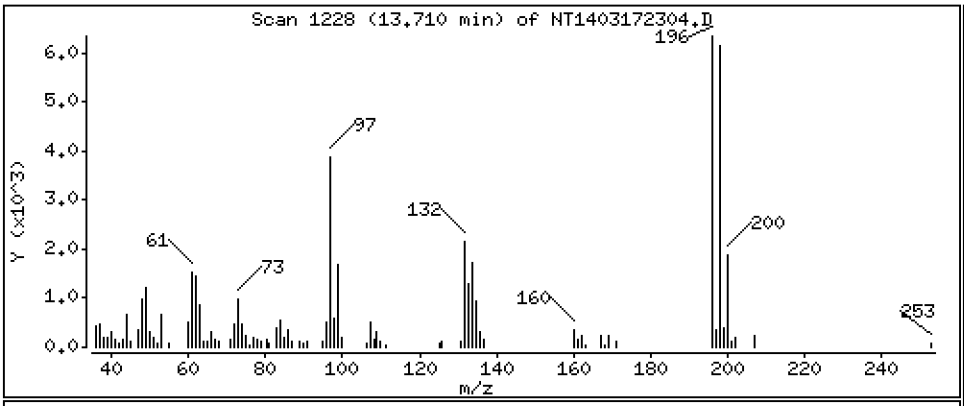
Operator: JGR

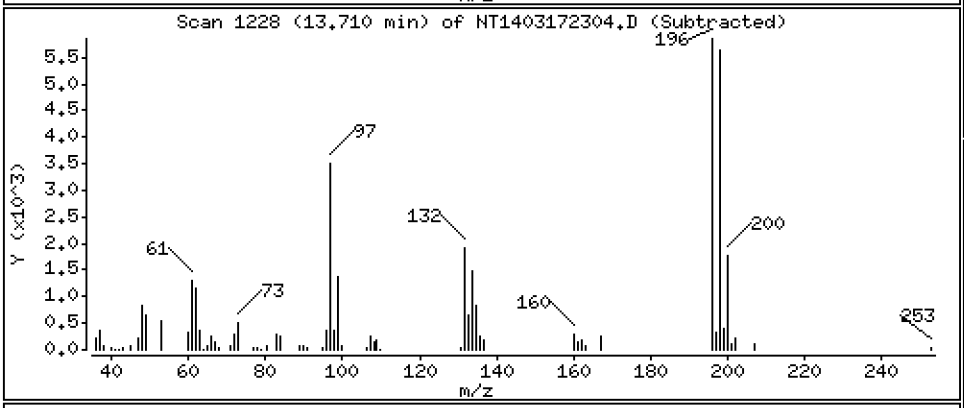
Column phase: ZB-5msi

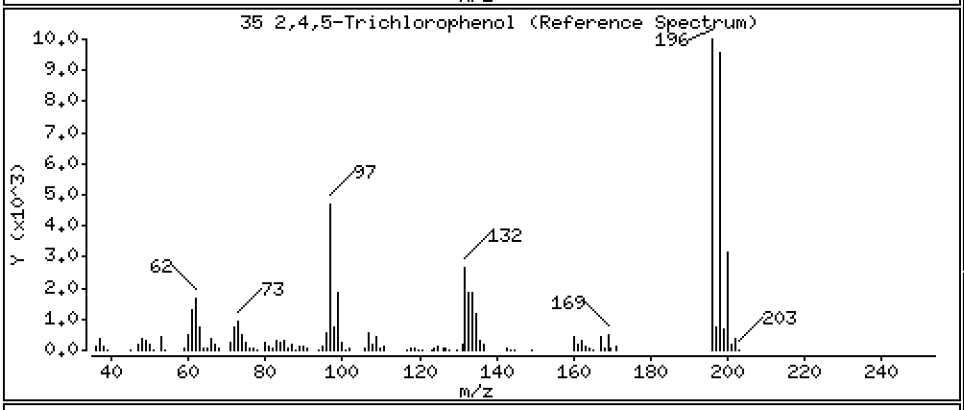
Column diameter: 0.25

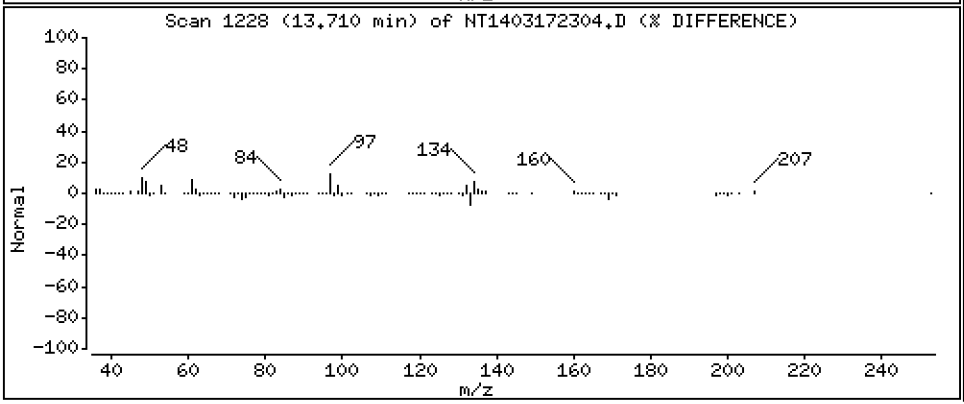
35 2,4,5-Trichlorophenol

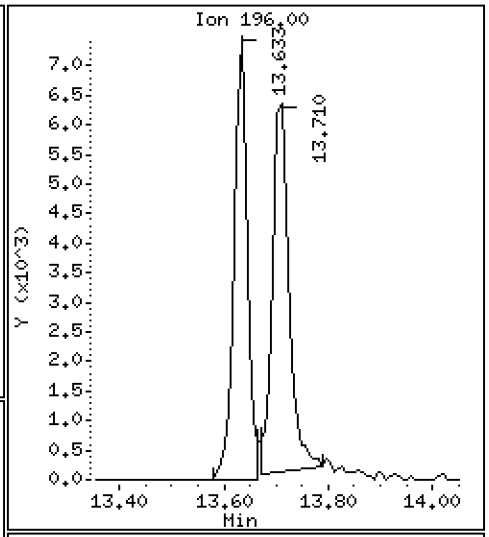
Concentration: 0.2996 ug/mL

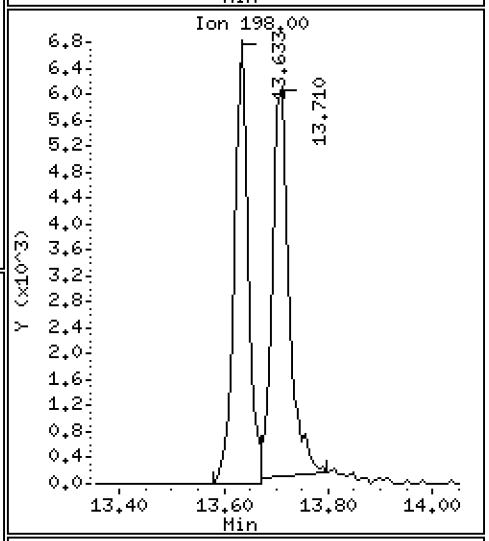


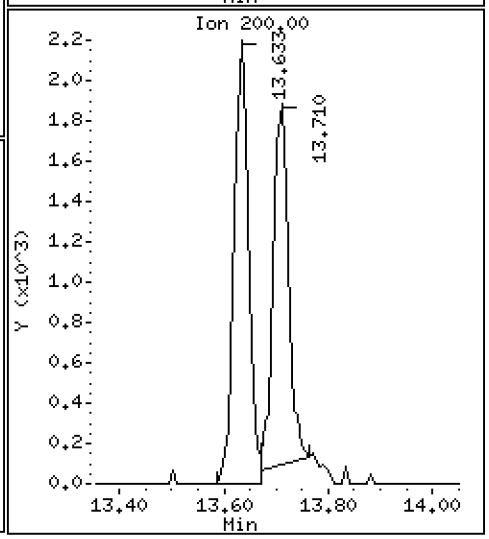












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

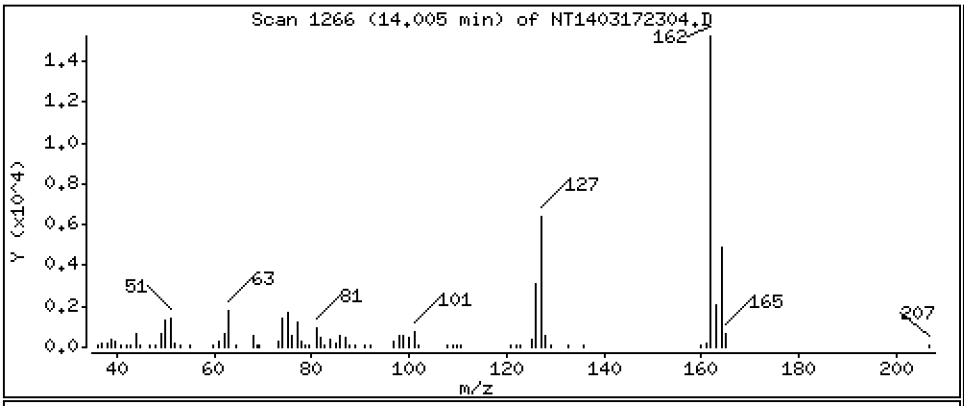
Operator: JGR

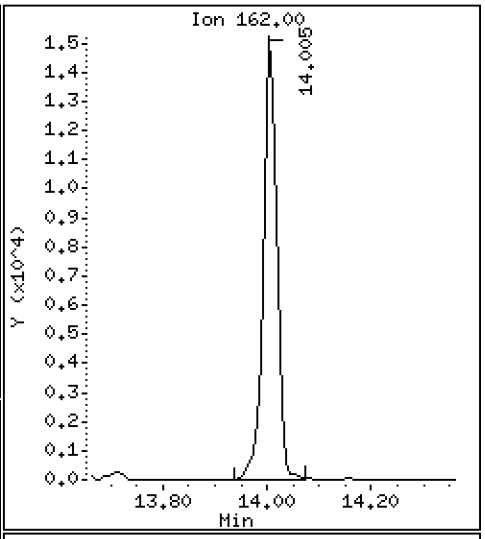
Column phase: ZB-5msi

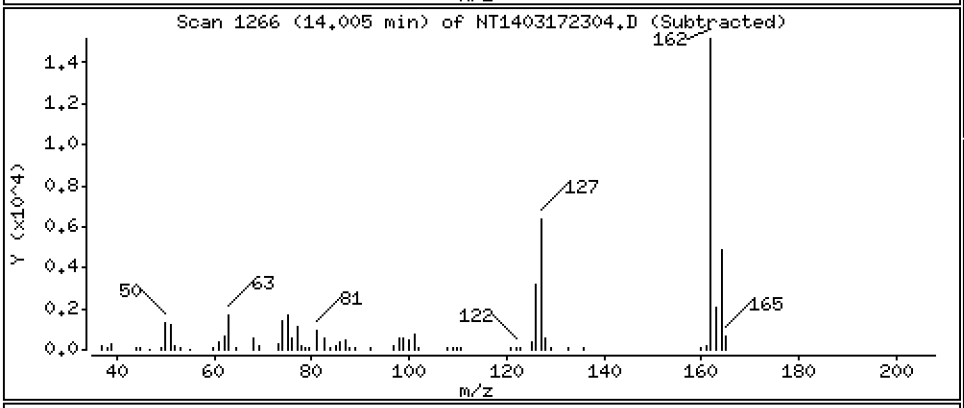
Column diameter: 0.25

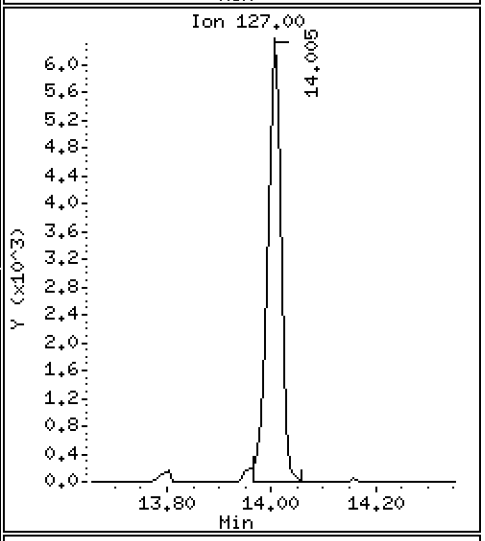
37 2-Chloronaphthalene

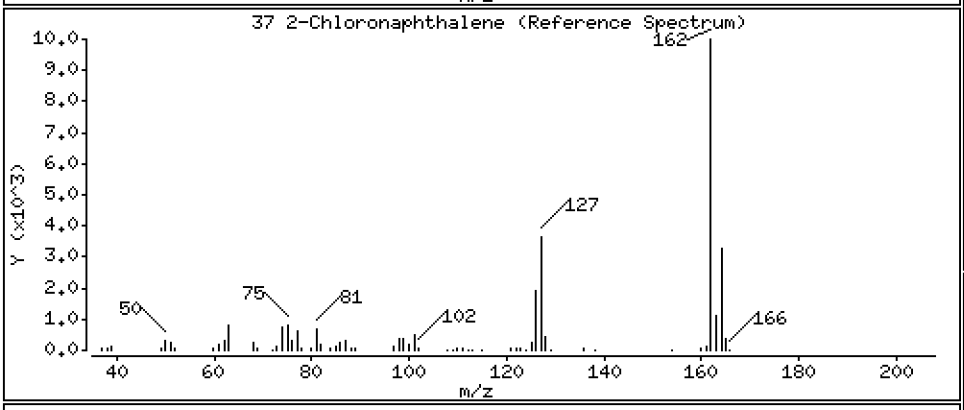
Concentration: 0.2031 ug/mL

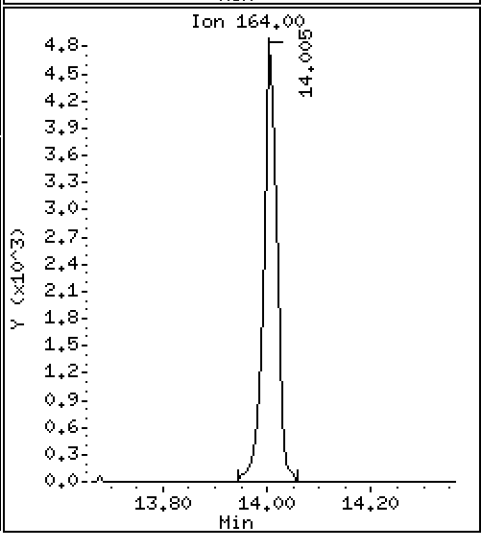


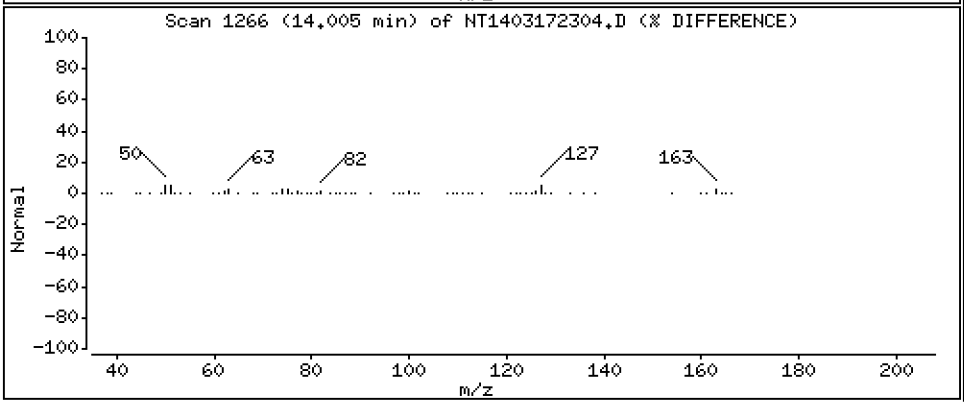












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

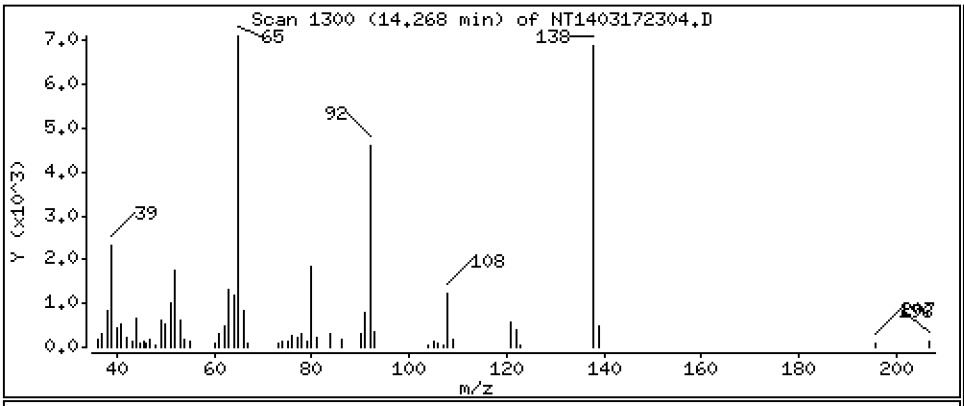
Operator: JGR

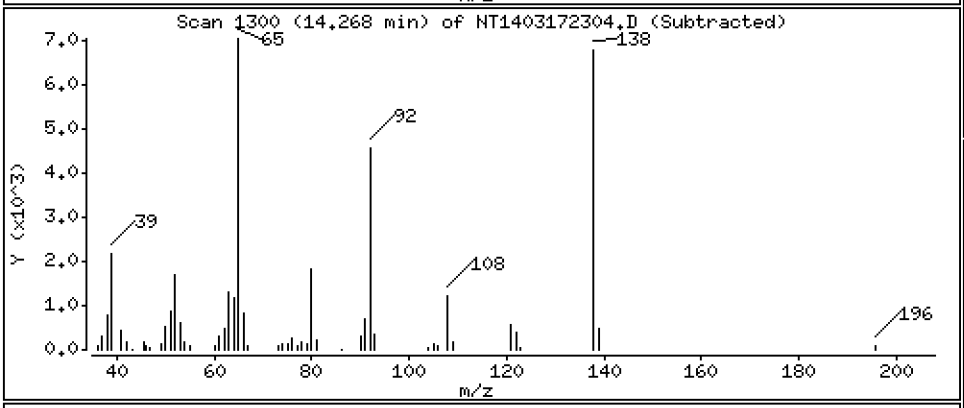
Column phase: ZB-5msi

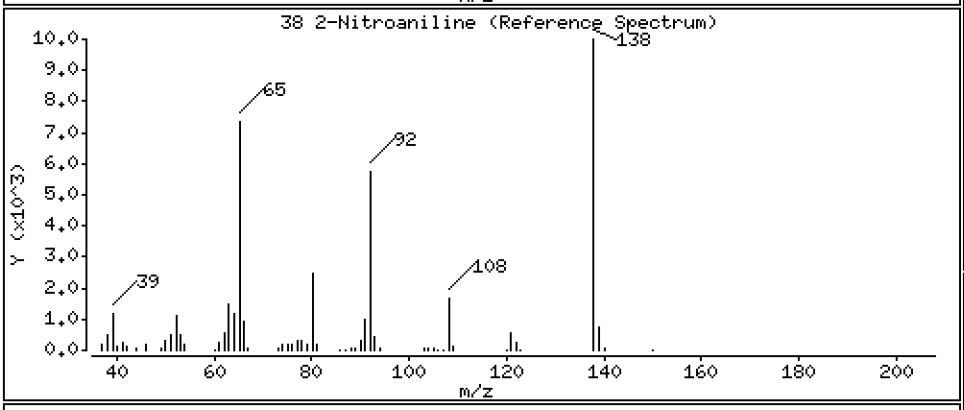
Column diameter: 0.25

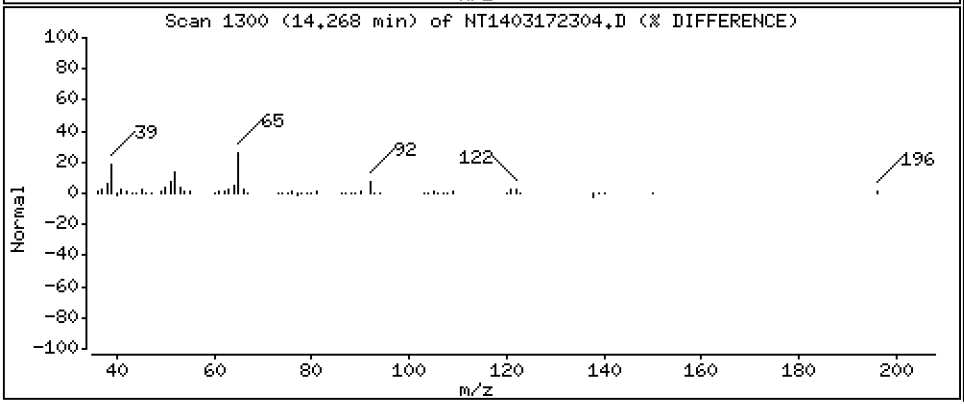
38 2-Nitroaniline

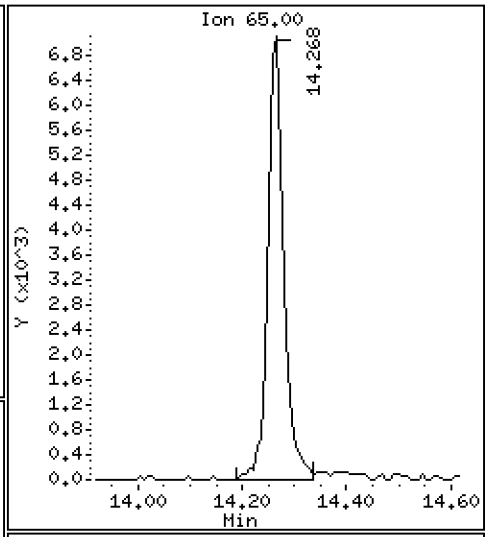
Concentration: 0.2915 ug/mL

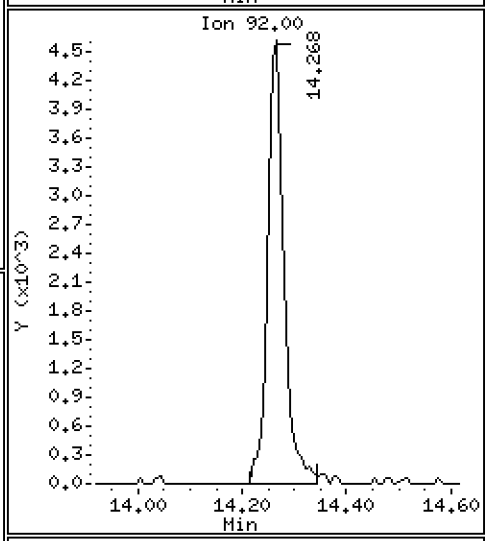


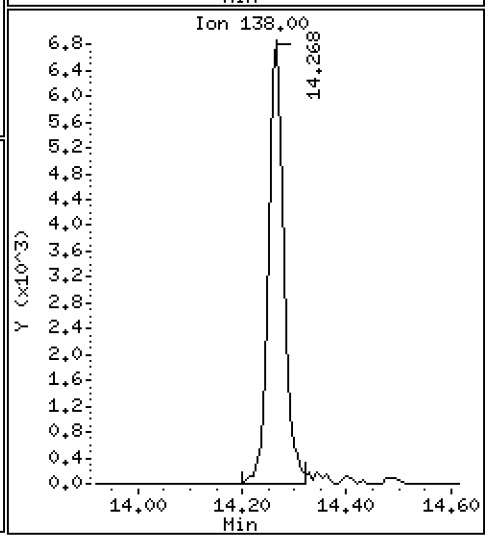












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

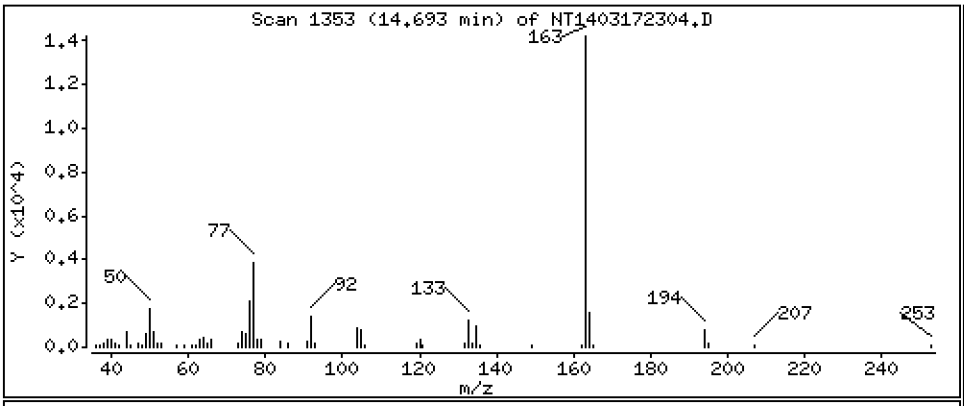
Operator: JGR

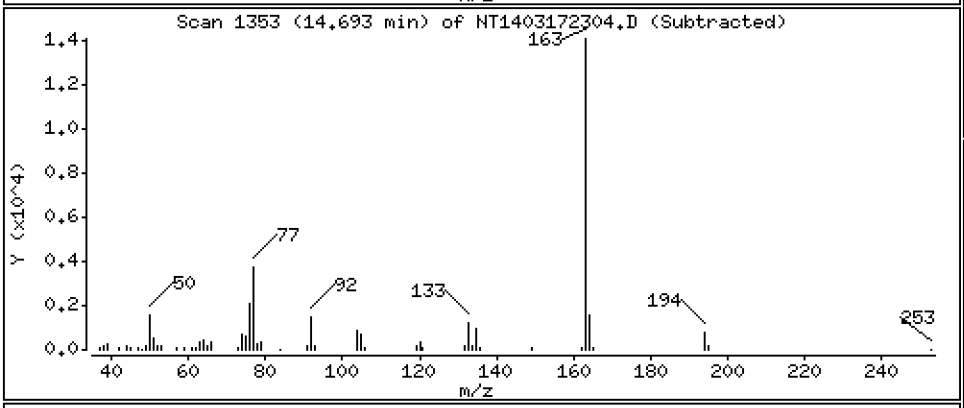
Column phase: ZB-5msi

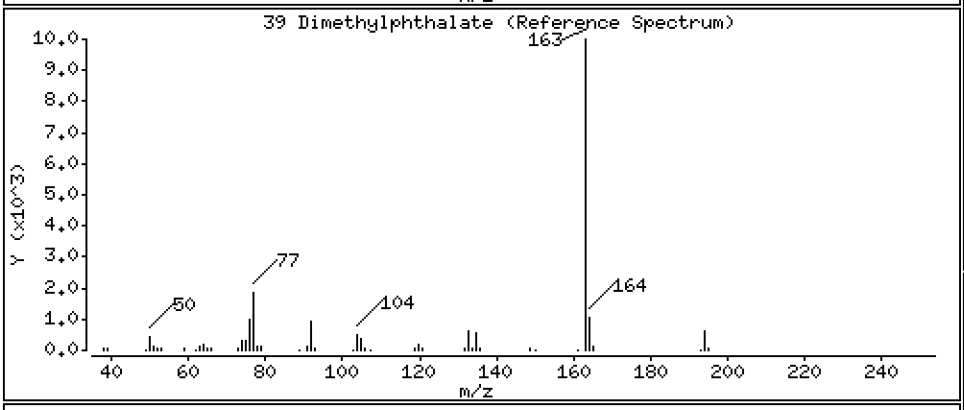
Column diameter: 0.25

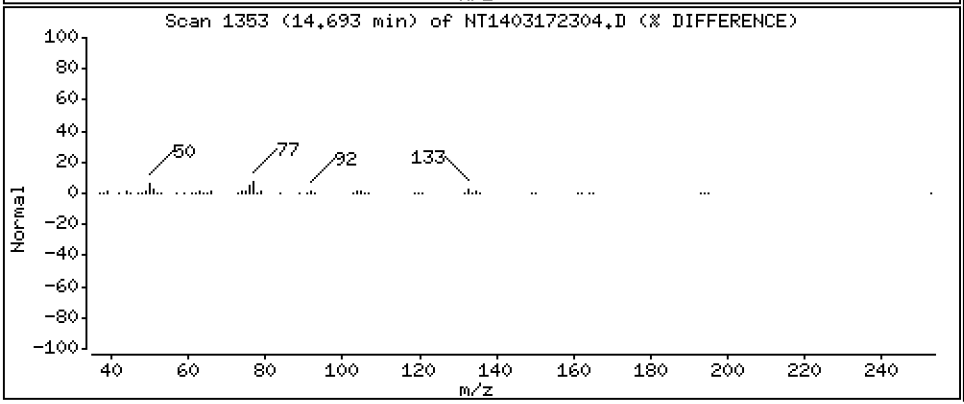
39 Dimethylphthalate

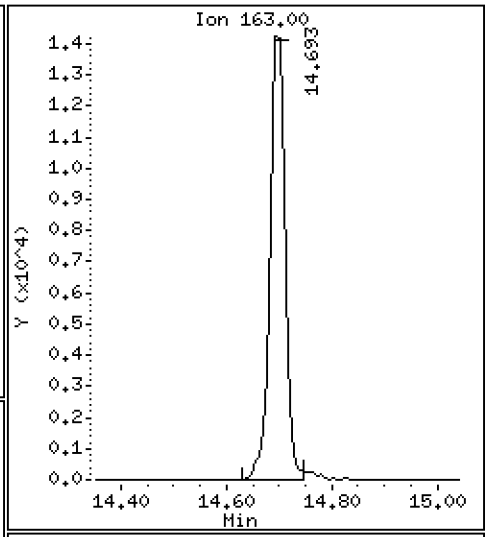
Concentration: 0.1957 ug/mL

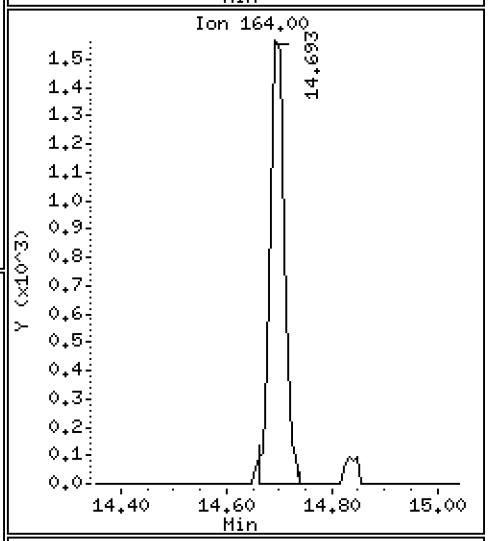


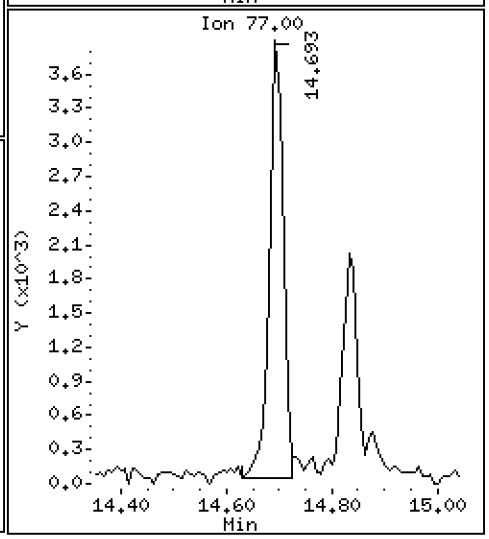












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

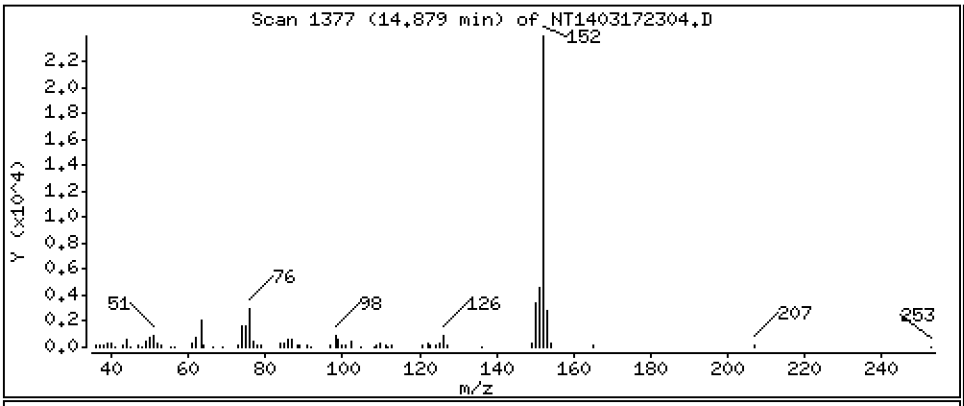
Operator: JGR

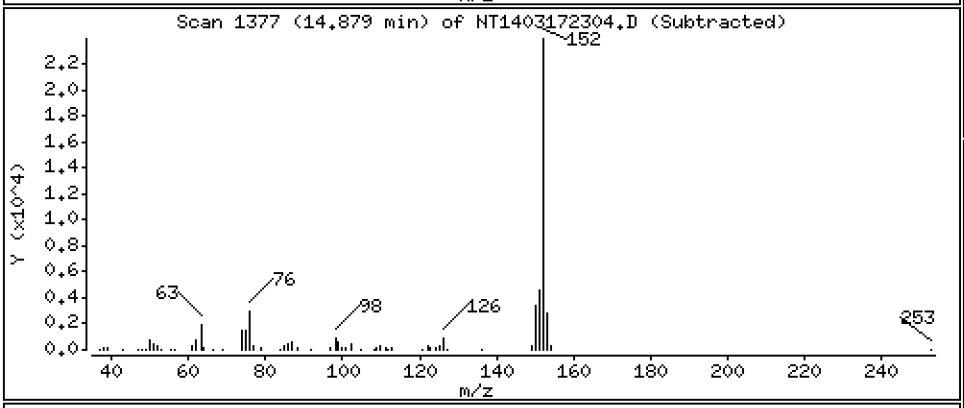
Column phase: ZB-5msi

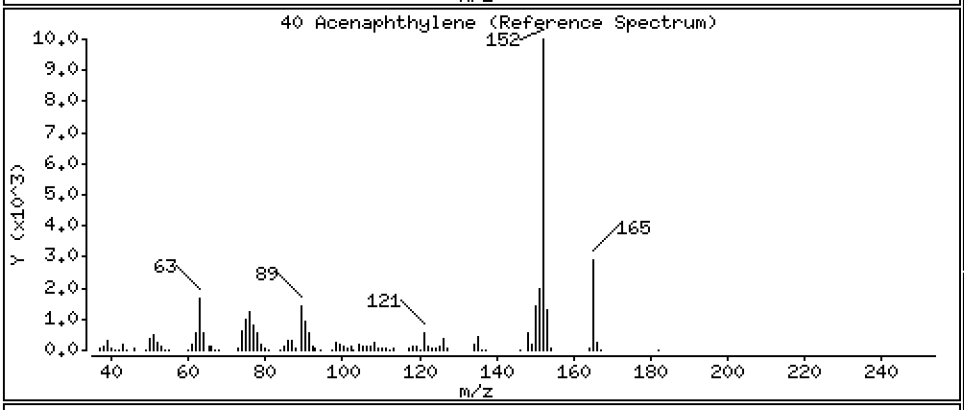
Column diameter: 0.25

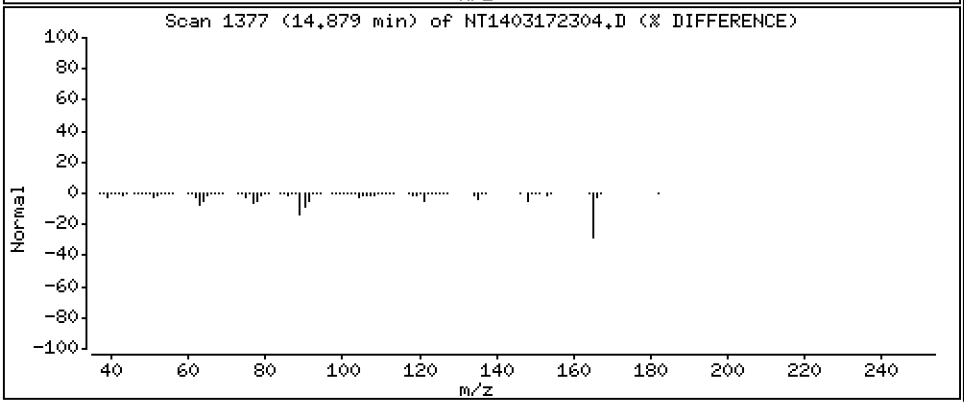
40 Acenaphthylene

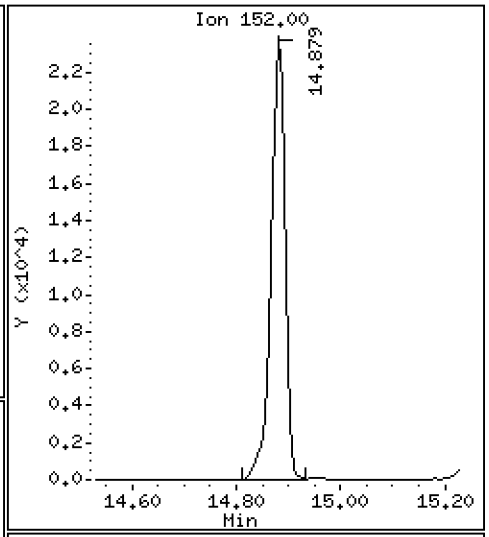
Concentration: 0.1937 ug/mL

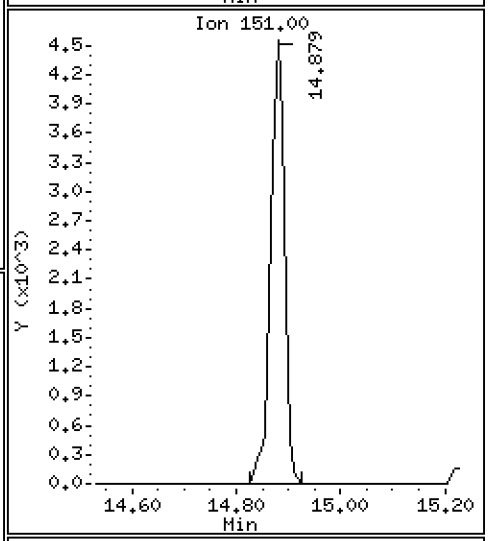


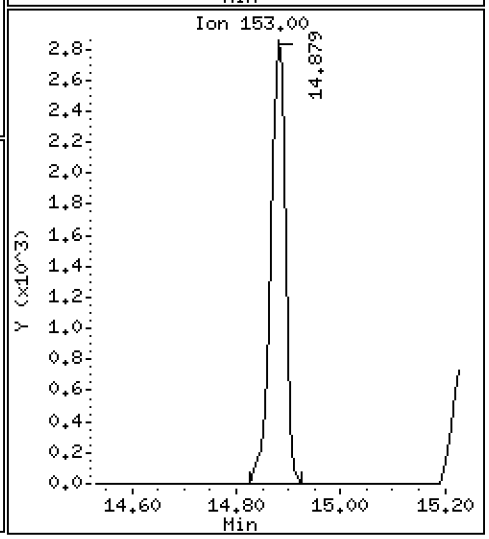












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

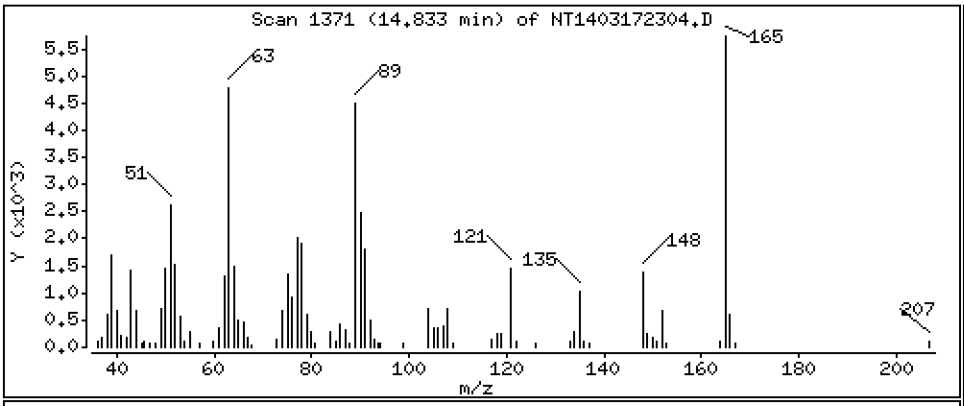
Operator: JGR

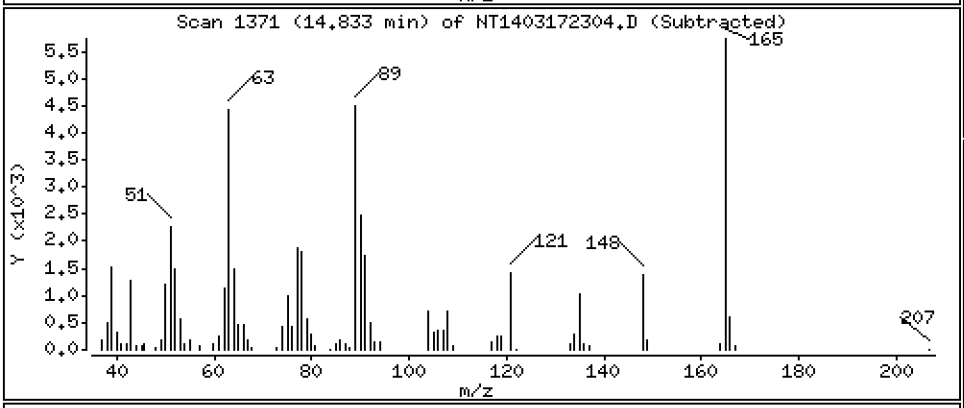
Column phase: ZB-5msi

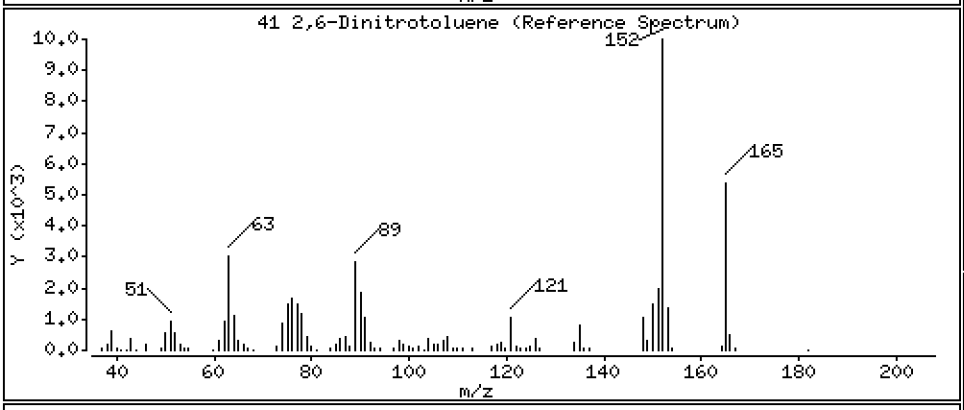
Column diameter: 0.25

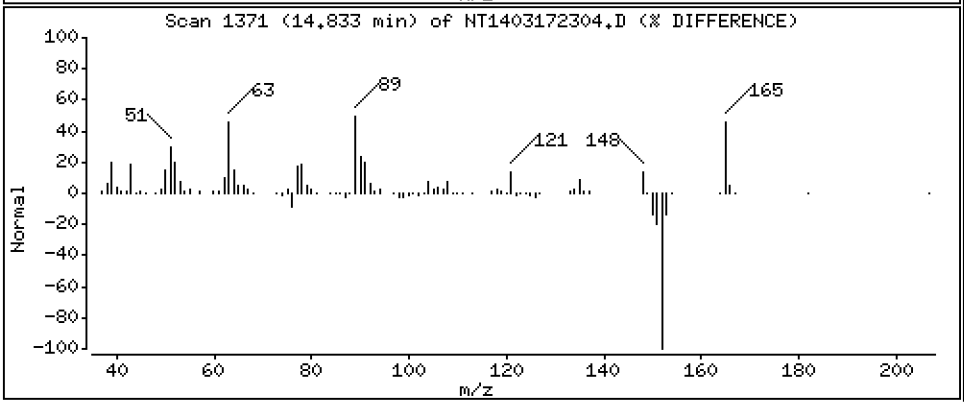
41 2,6-Dinitrotoluene

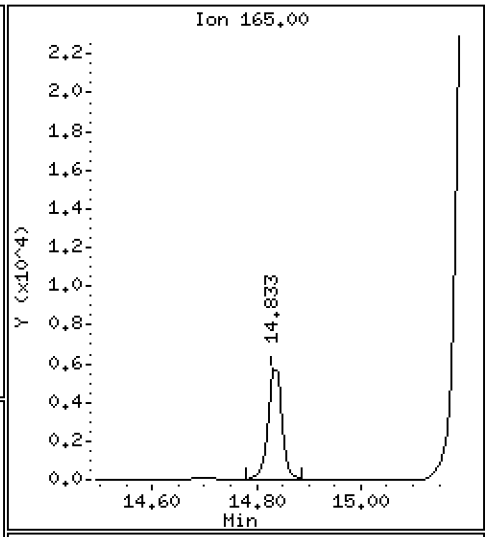
Concentration: 0.3165 ug/mL

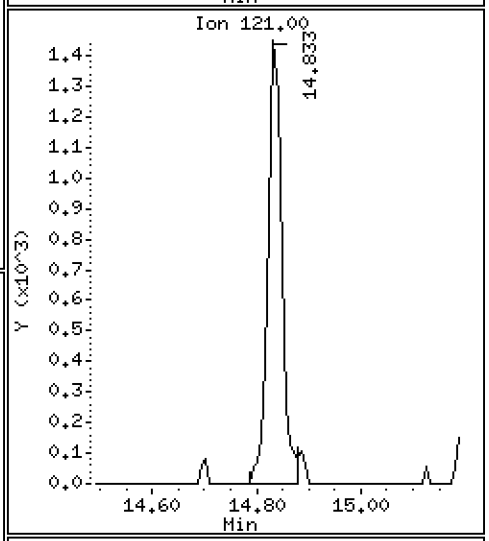


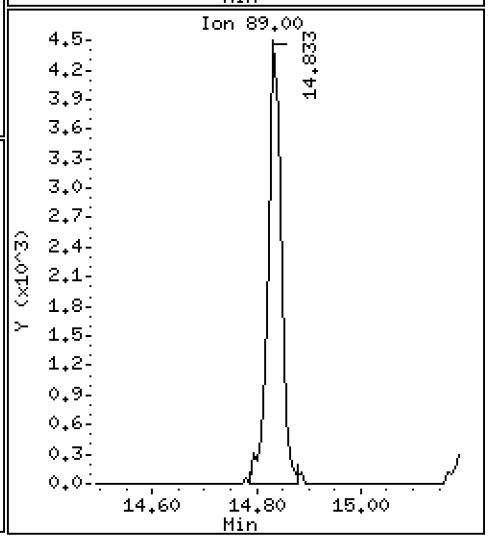












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

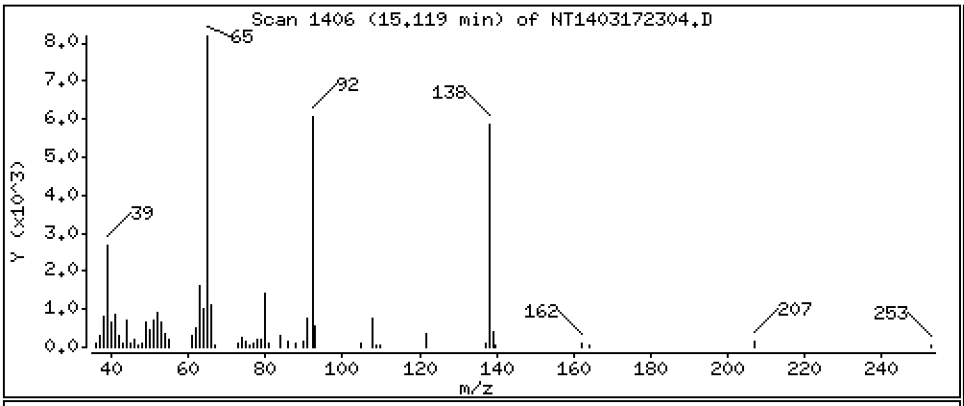
Operator: JGR

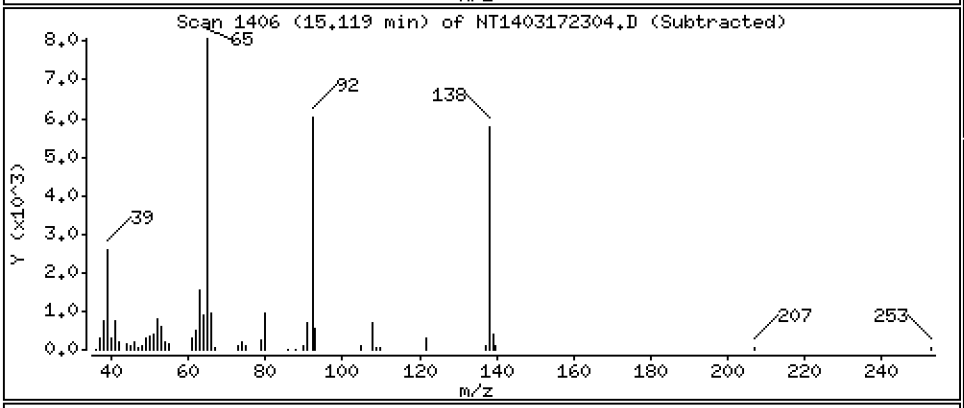
Column phase: ZB-5msi

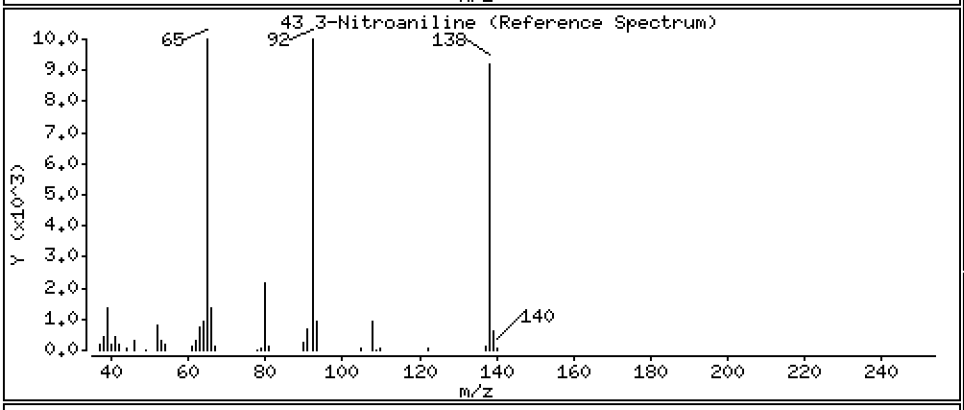
Column diameter: 0.25

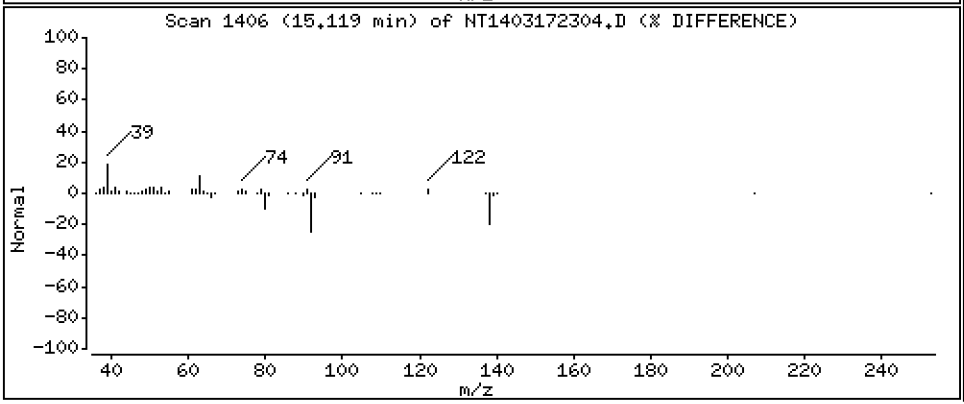
43 3-Nitroaniline

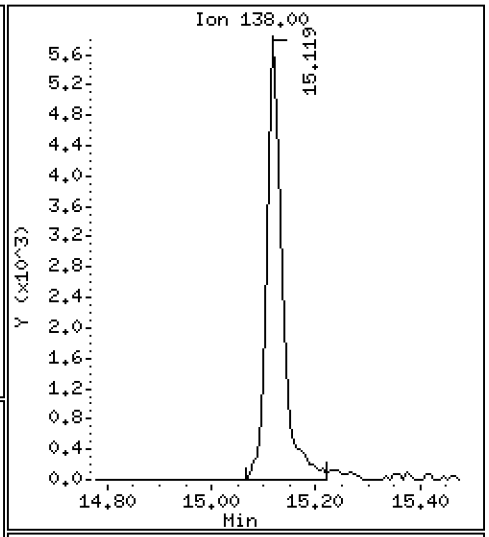
Concentration: 0.2595 ug/mL

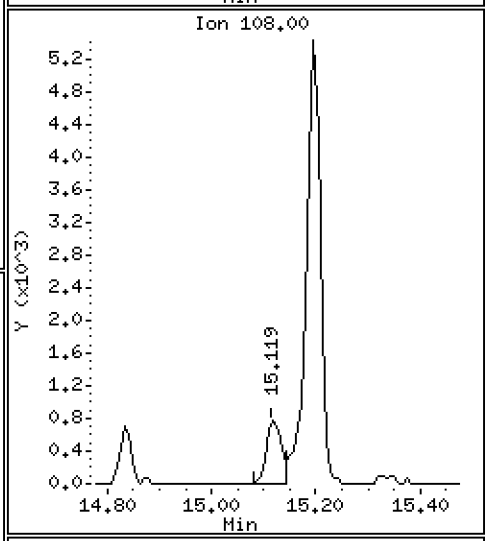


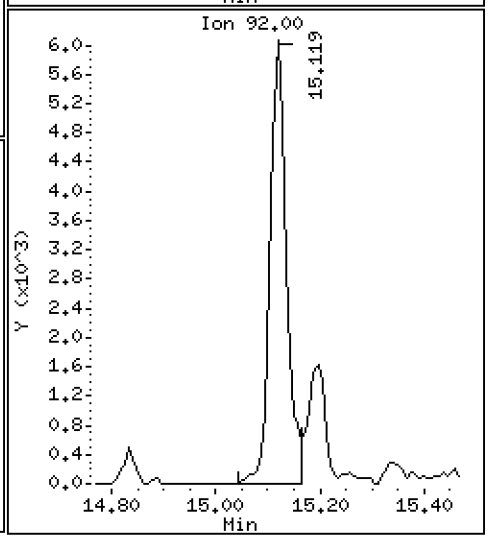












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

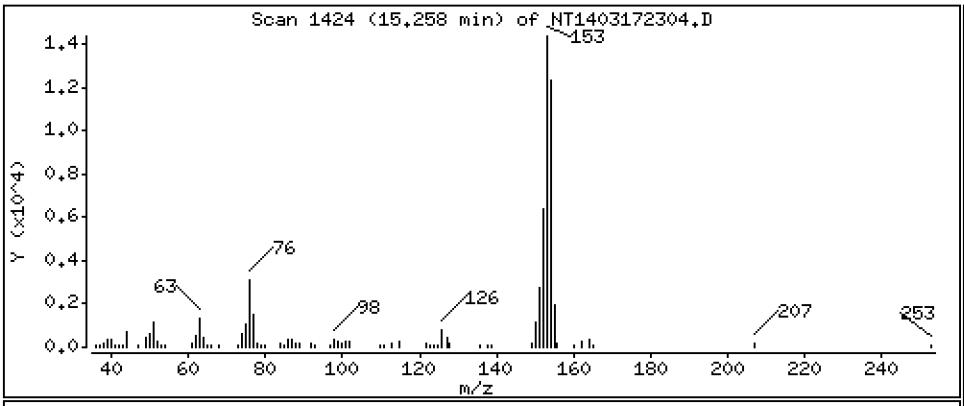
Operator: JGR

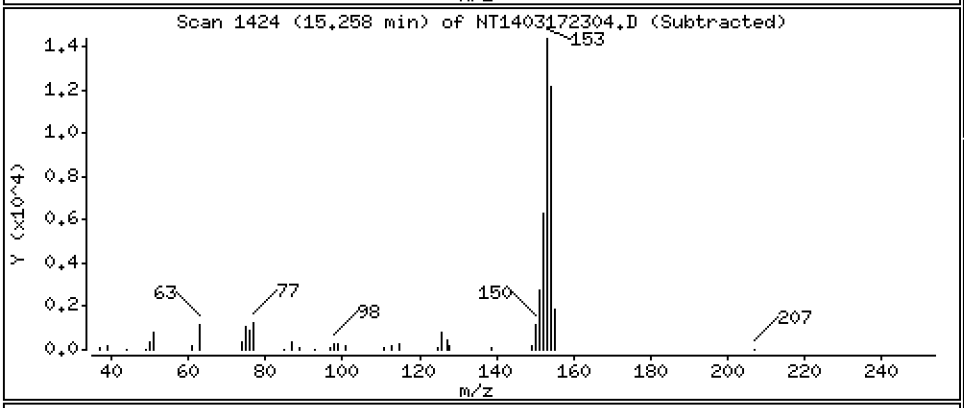
Column phase: ZB-5msi

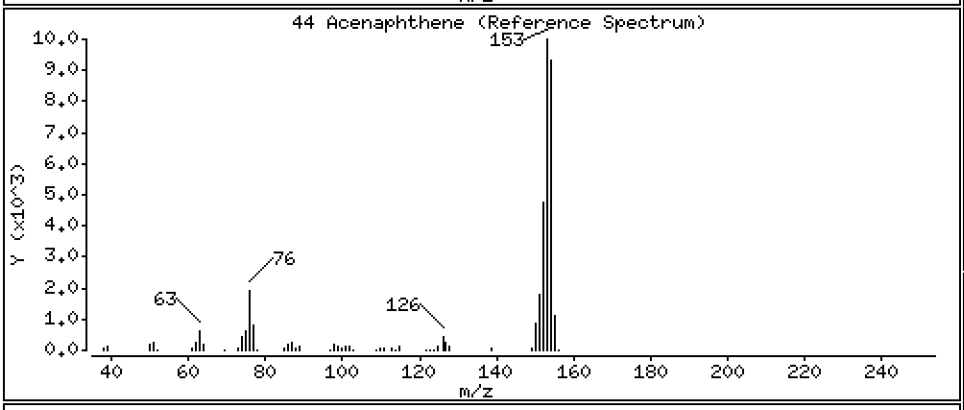
Column diameter: 0.25

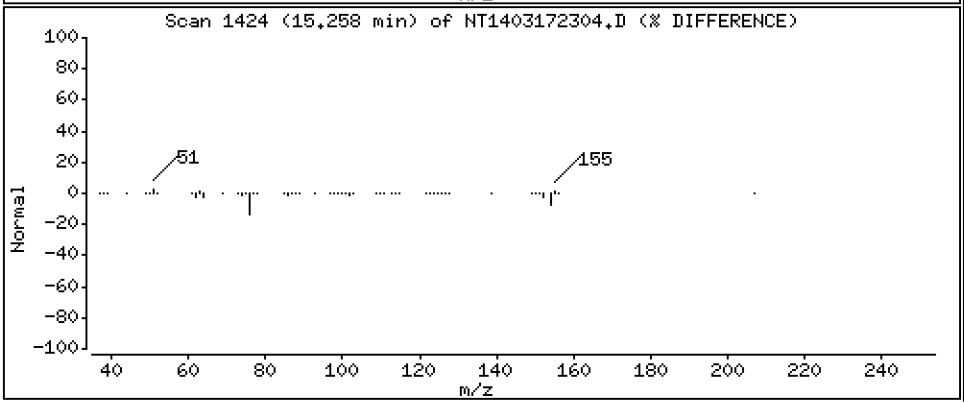
44 Acenaphthene

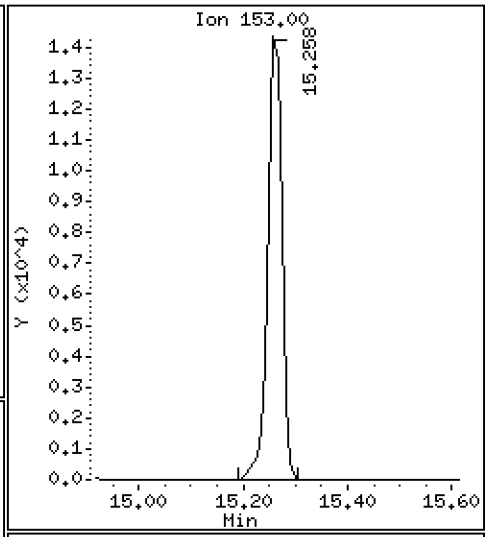
Concentration: 0.2025 ug/mL

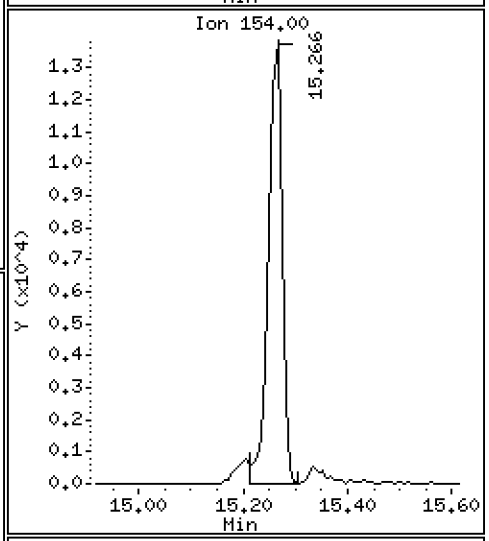


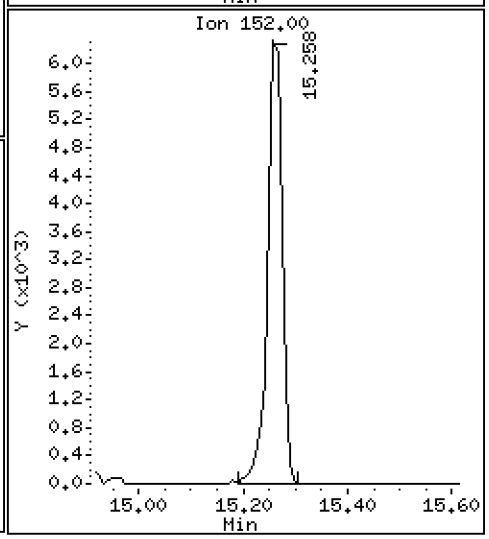












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

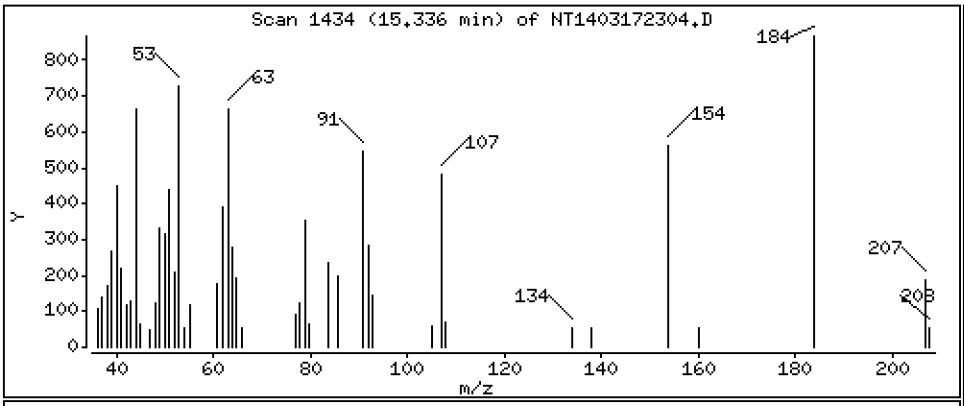
Operator: JGR

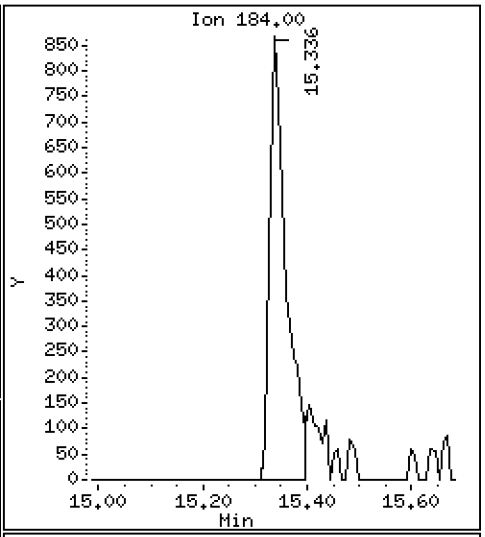
Column phase: ZB-5msi

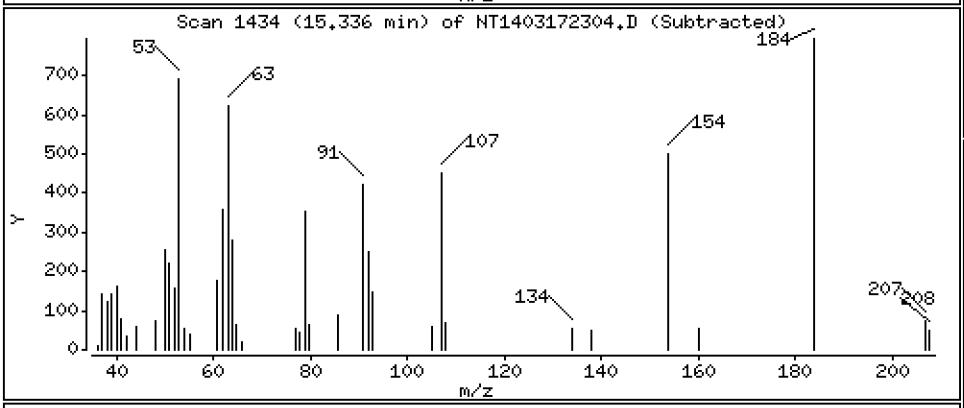
Column diameter: 0.25

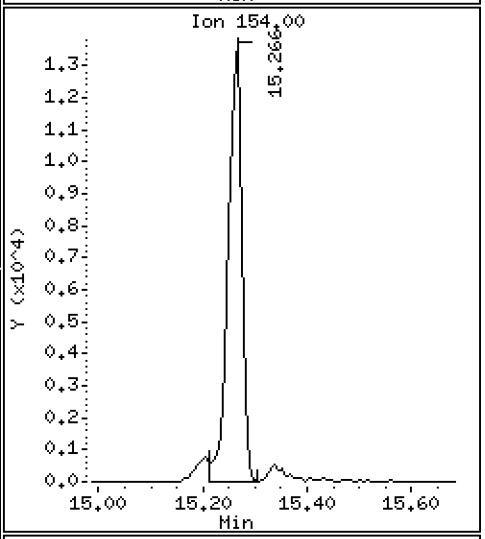
45 2,4-Dinitrophenol

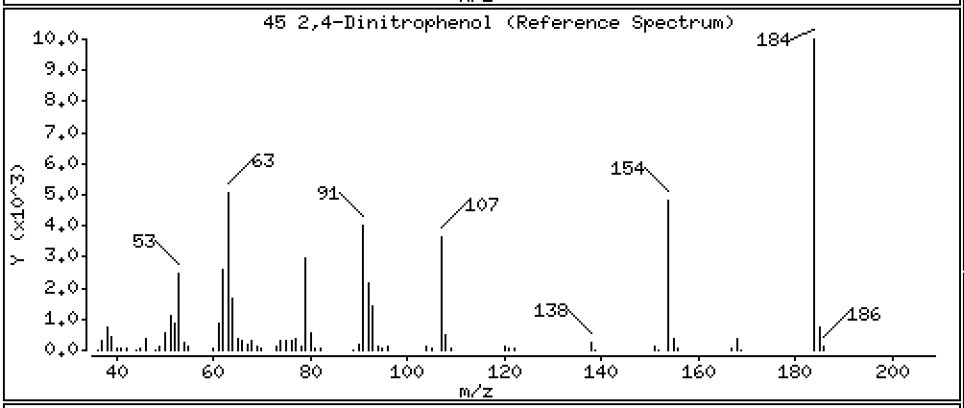
Concentration: 0.07503 ug/mL

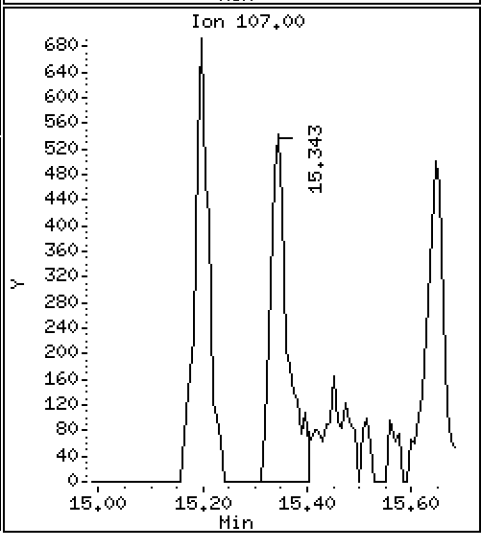


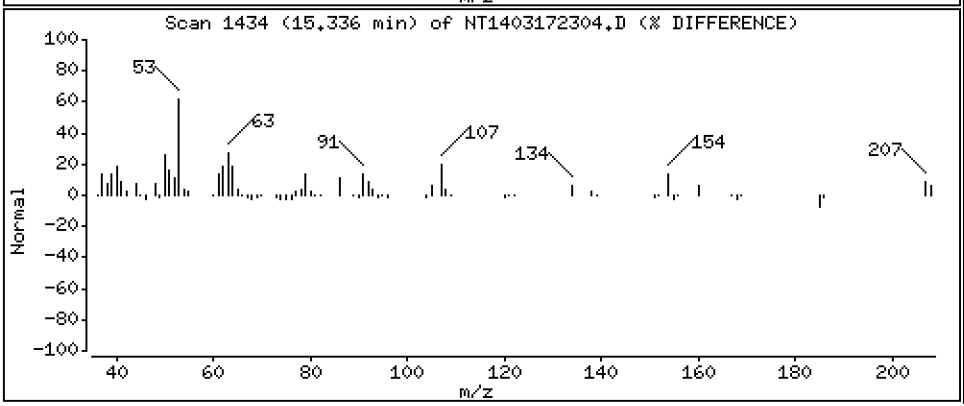












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

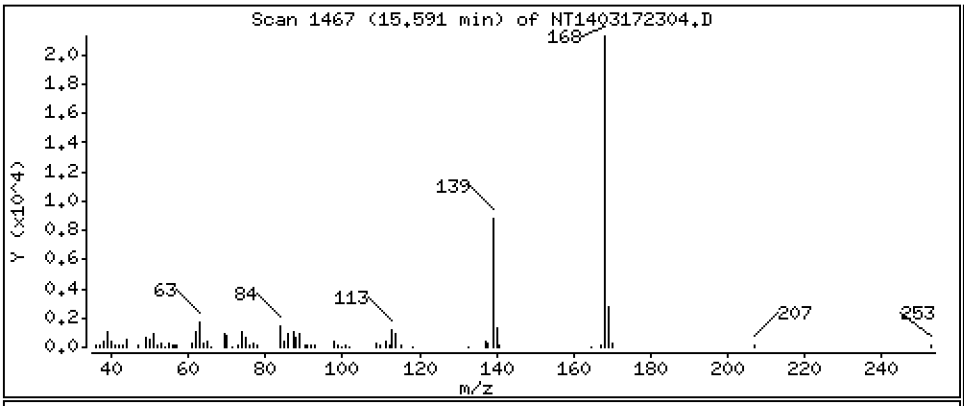
Operator: JGR

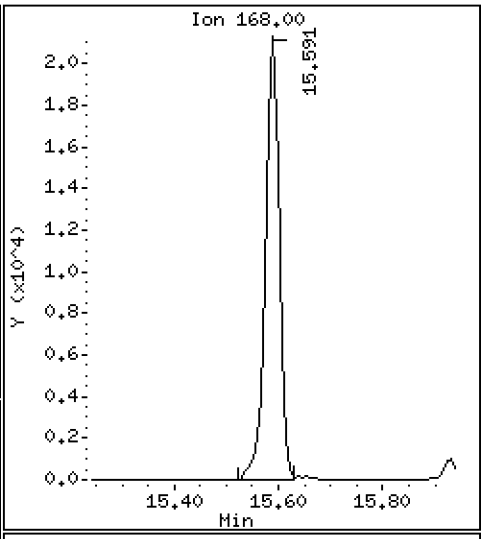
Column phase: ZB-5msi

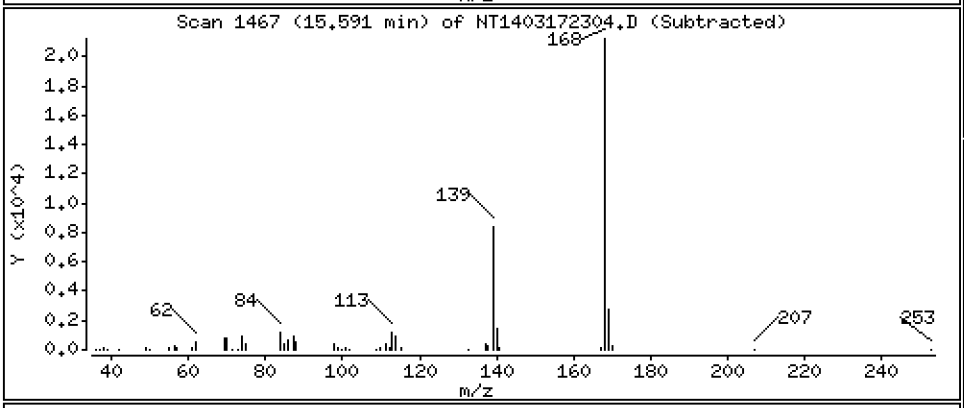
Column diameter: 0.25

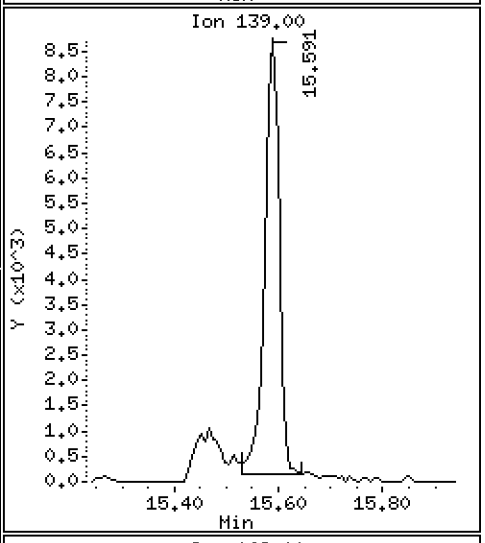
46 Dibenzofuran

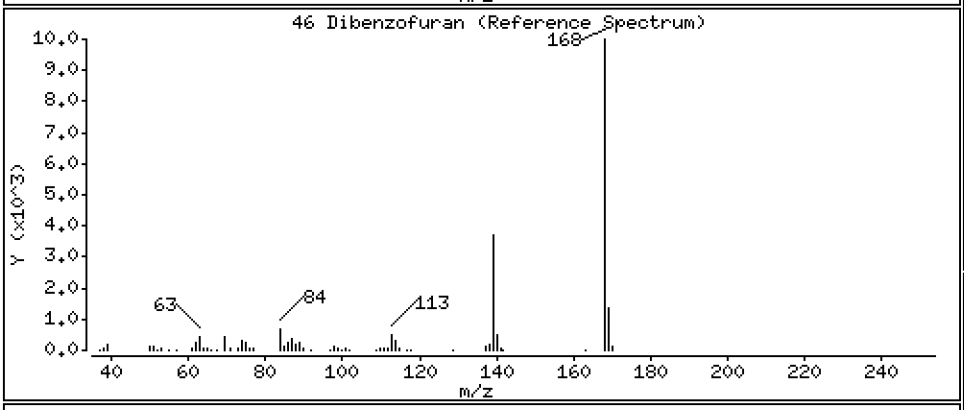
Concentration: 0.2043 ug/mL

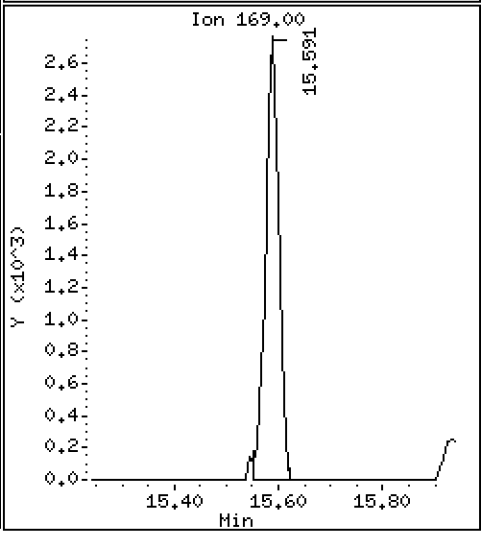


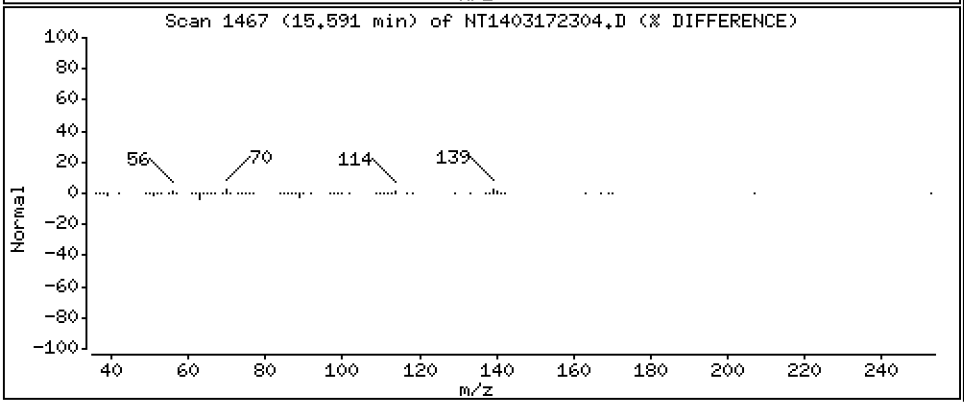












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

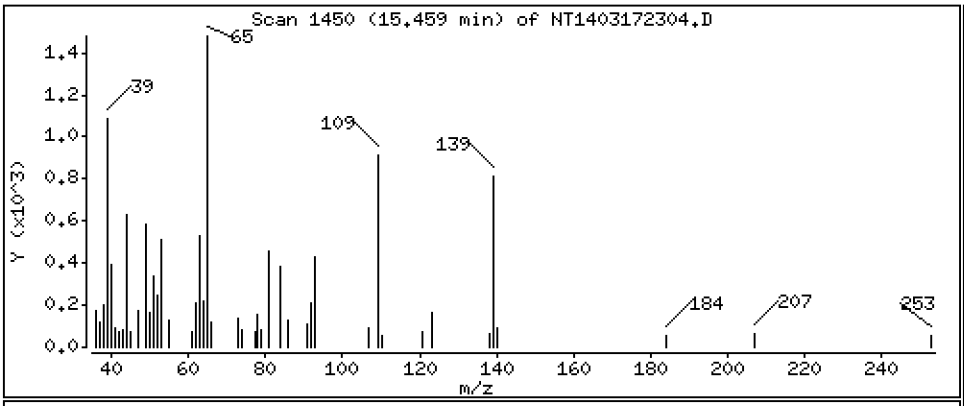
Operator: JGR

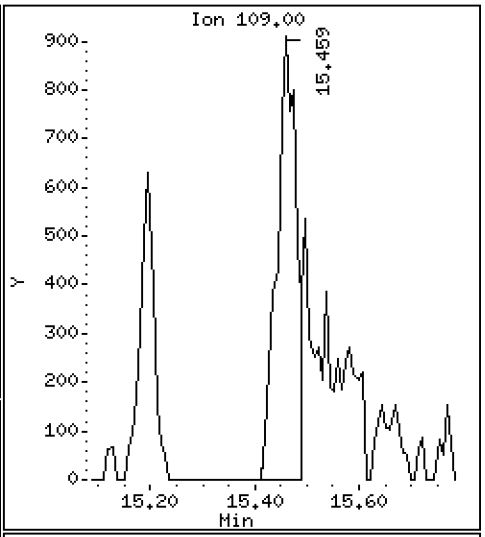
Column phase: ZB-5msi

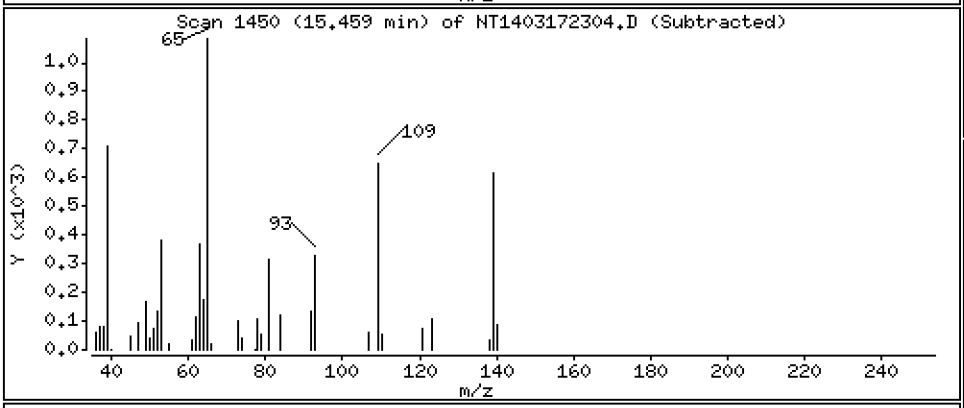
Column diameter: 0.25

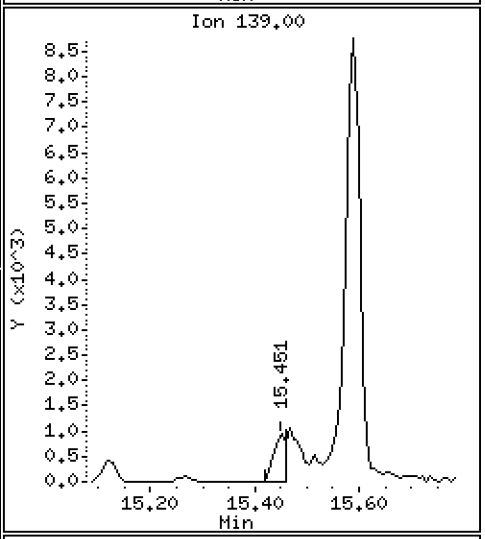
47 4-Nitrophenol

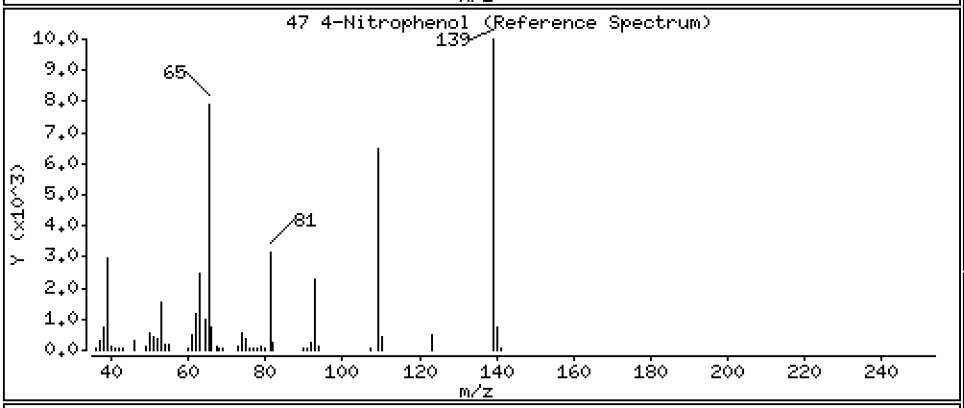
Concentration: 0.1020 ug/mL

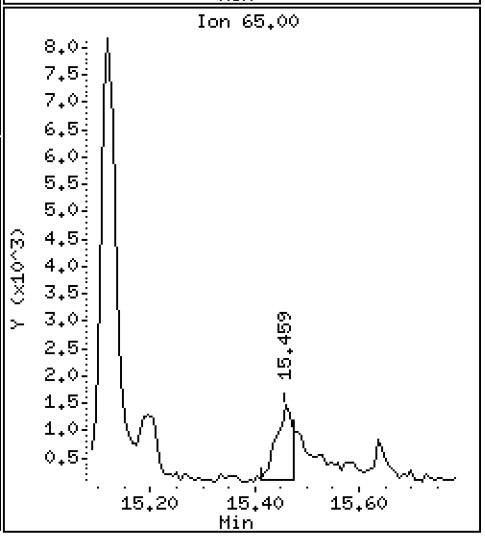


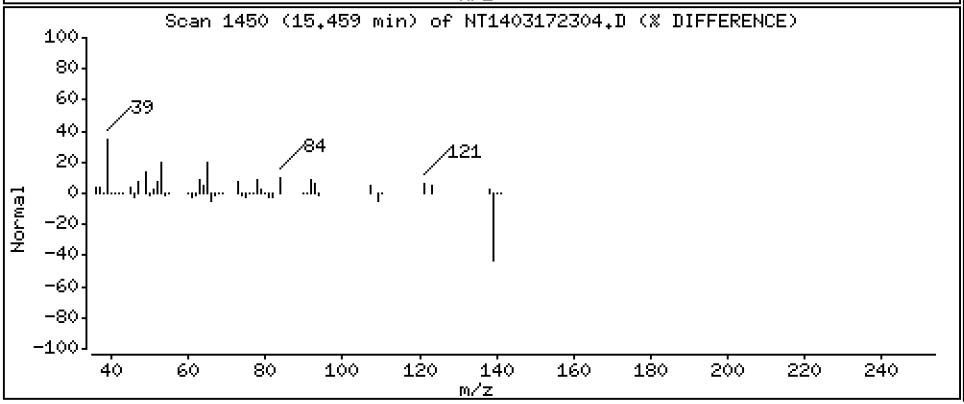












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

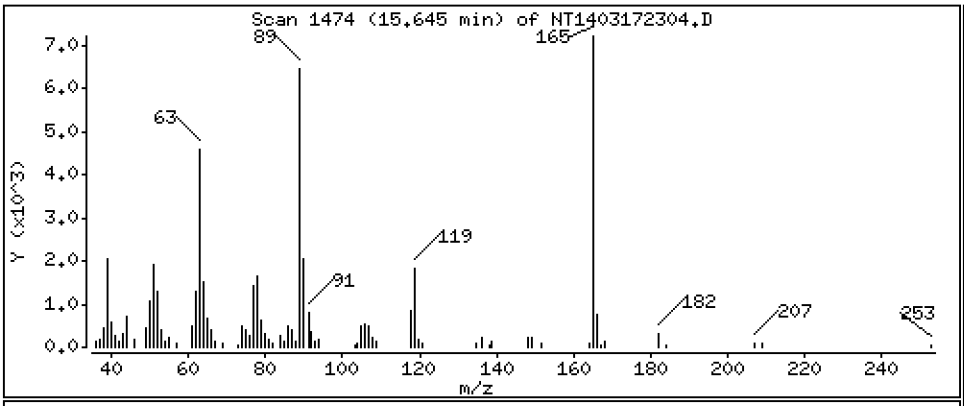
Operator: JGR

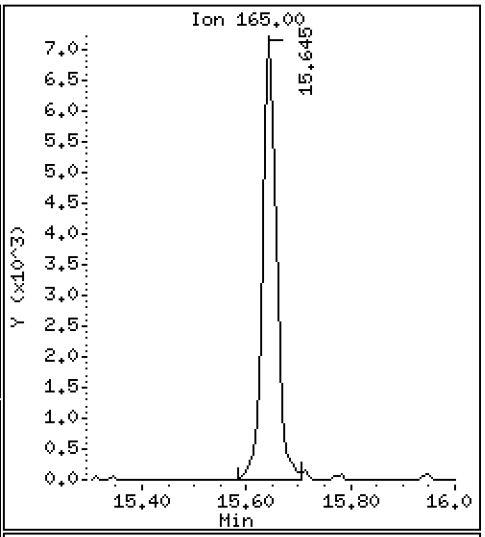
Column phase: ZB-5msi

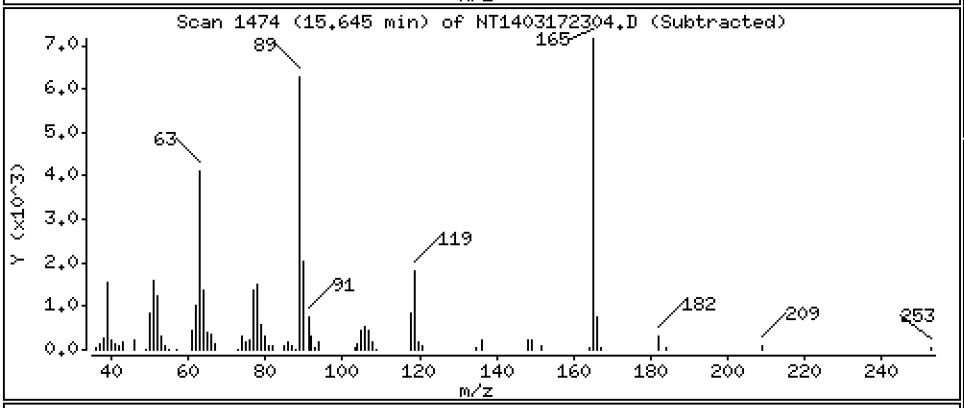
Column diameter: 0.25

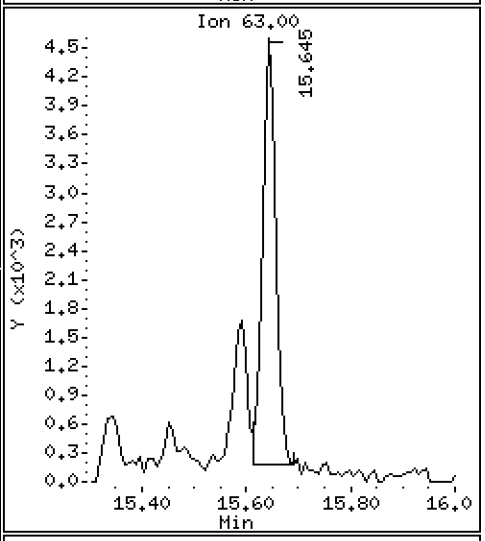
48 2,4-Dinitrotoluene

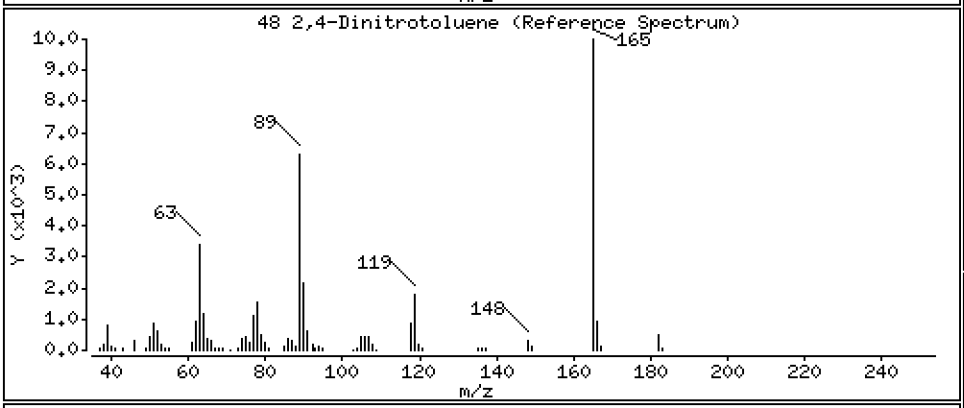
Concentration: 0.2865 ug/mL

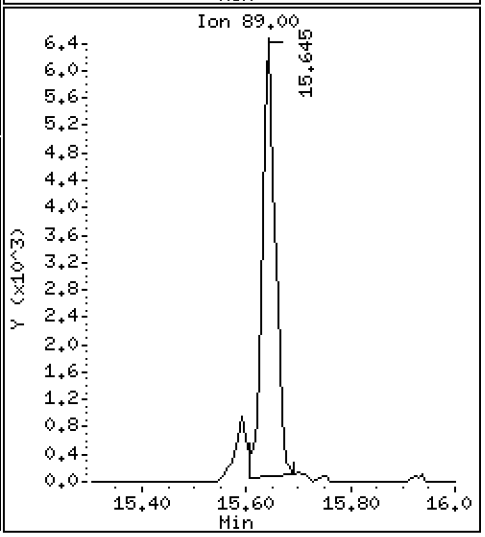


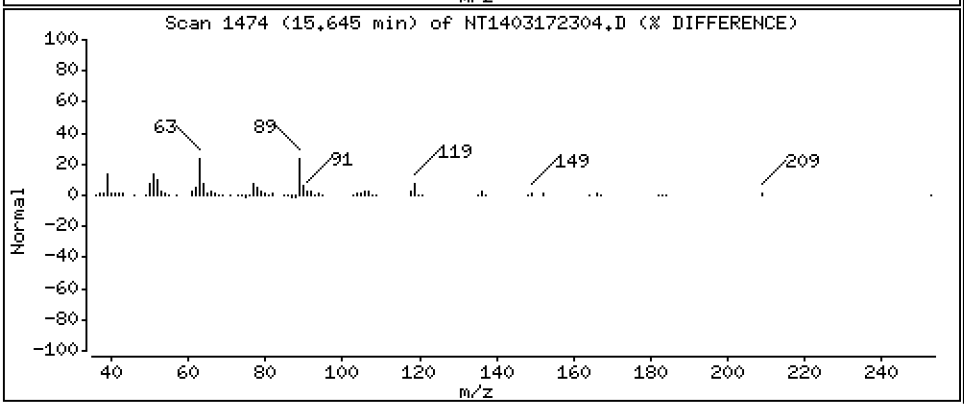












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

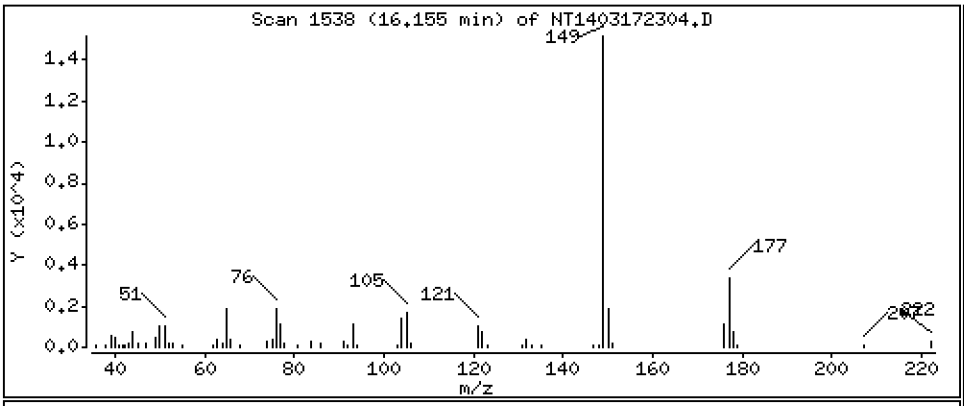
Operator: JGR

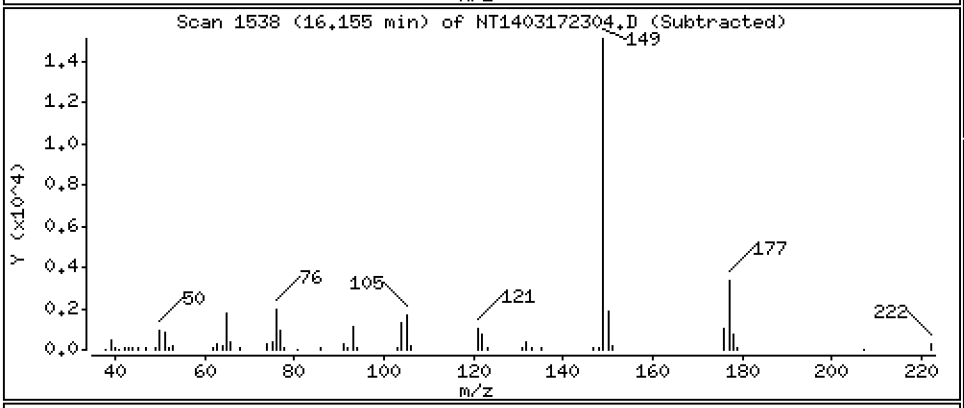
Column phase: ZB-5msi

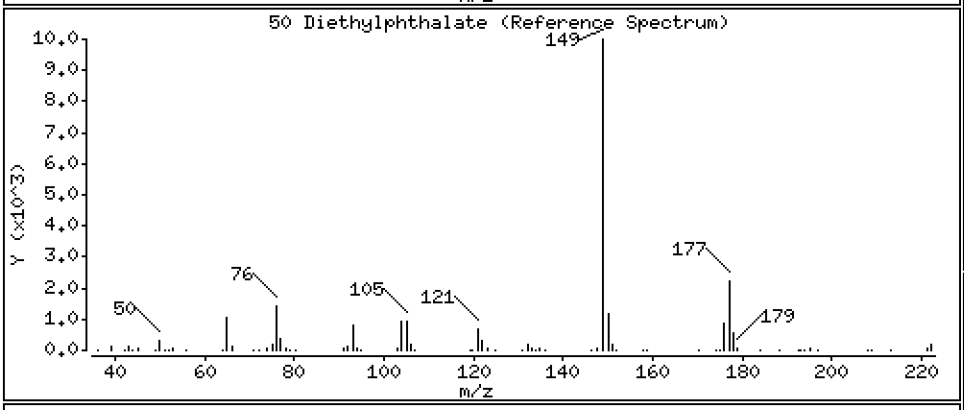
Column diameter: 0.25

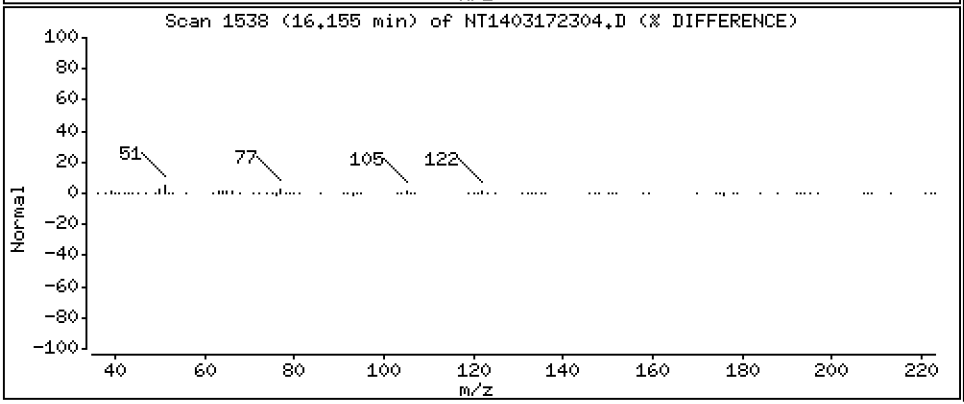
50 Diethylphthalate

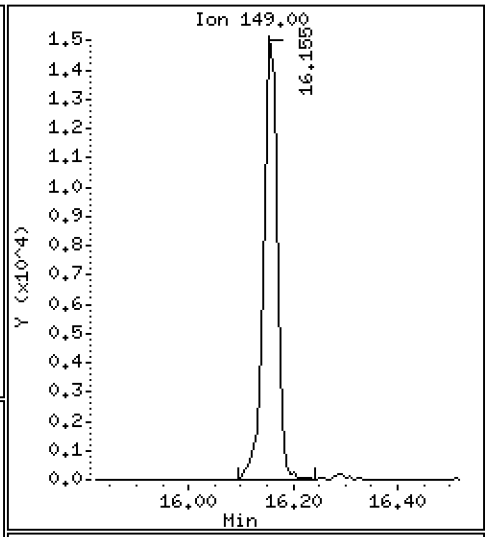
Concentration: 0.2007 ug/mL

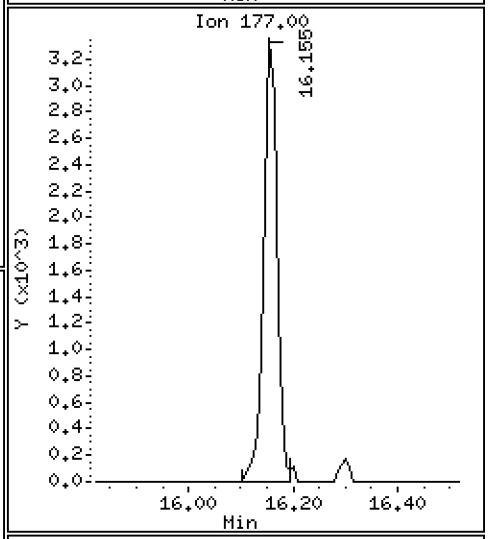


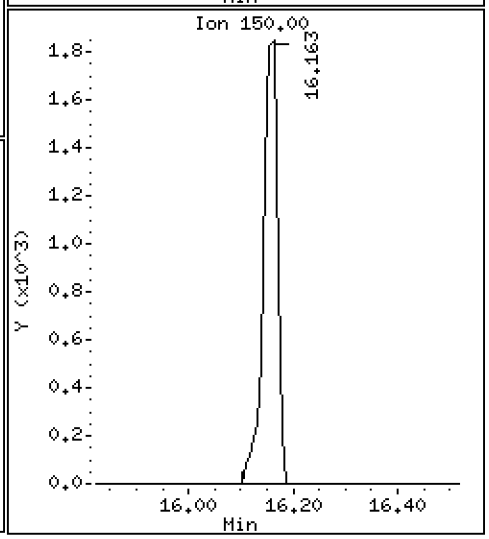












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

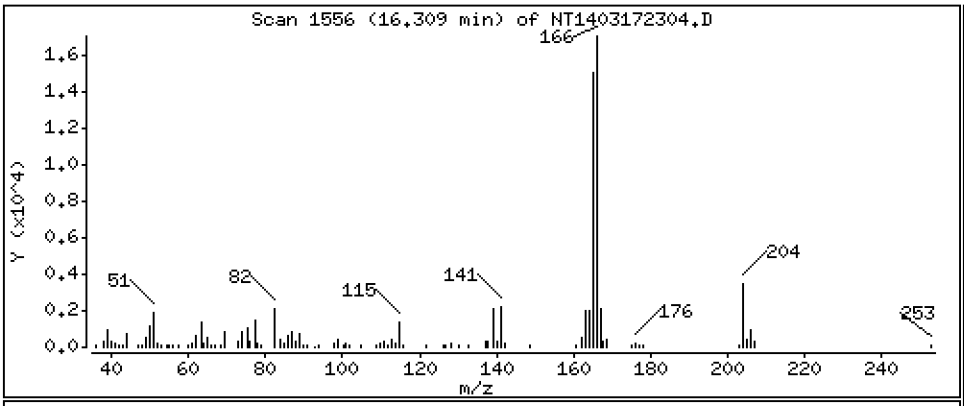
Operator: JGR

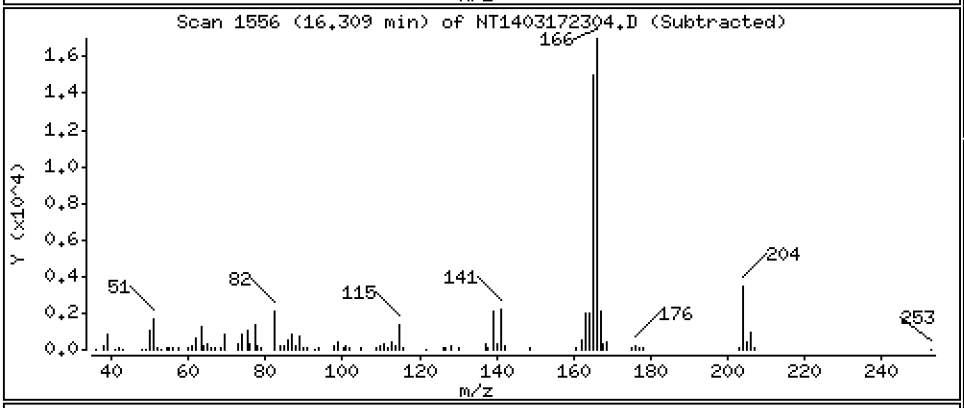
Column phase: ZB-5msi

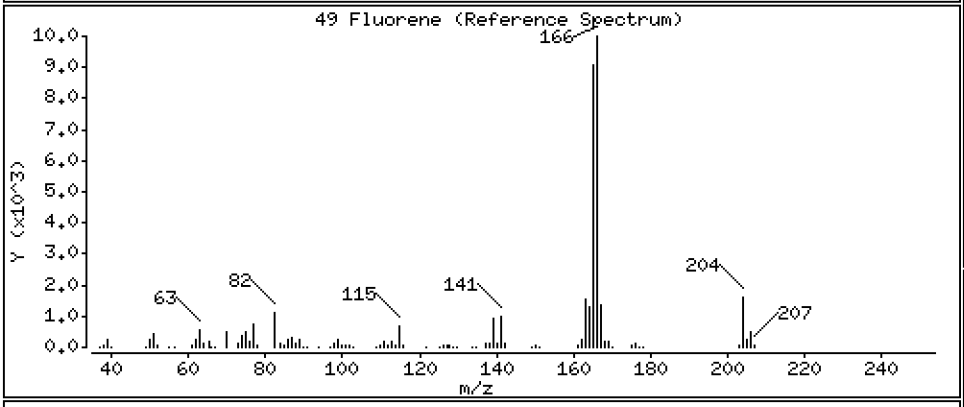
Column diameter: 0.25

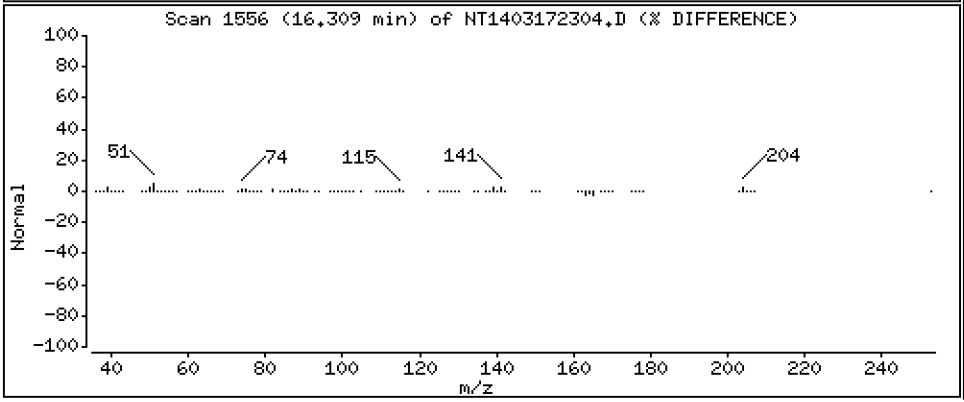
49 Fluorene

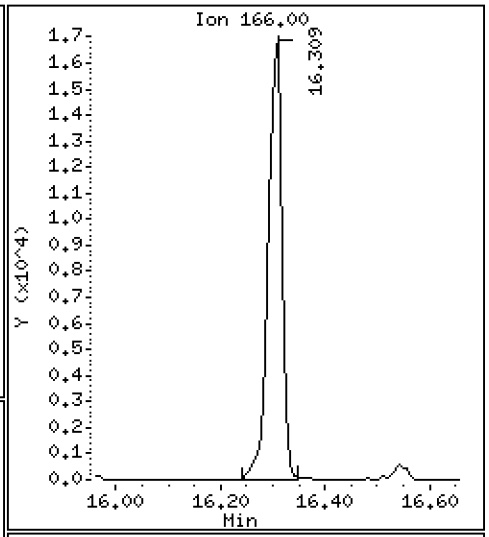
Concentration: 0.1710 ug/mL

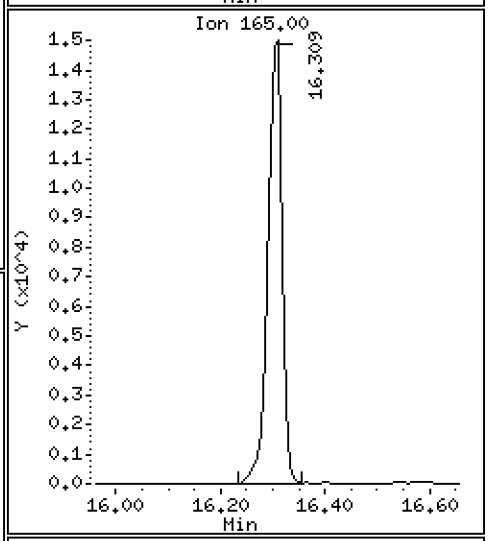


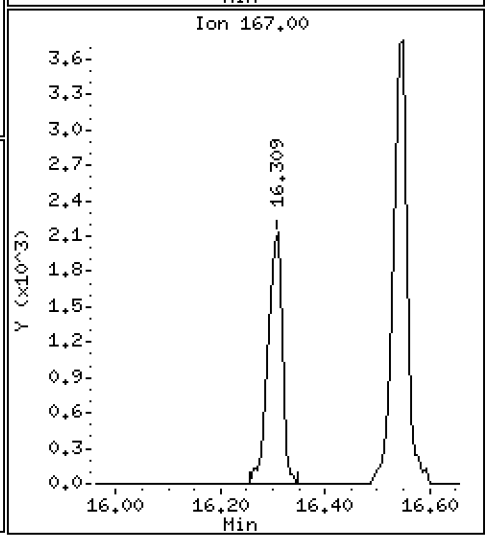












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

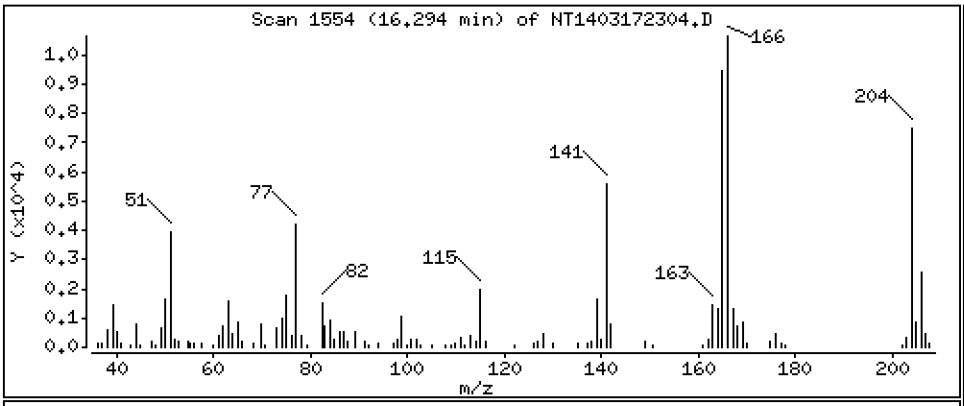
Operator: JGR

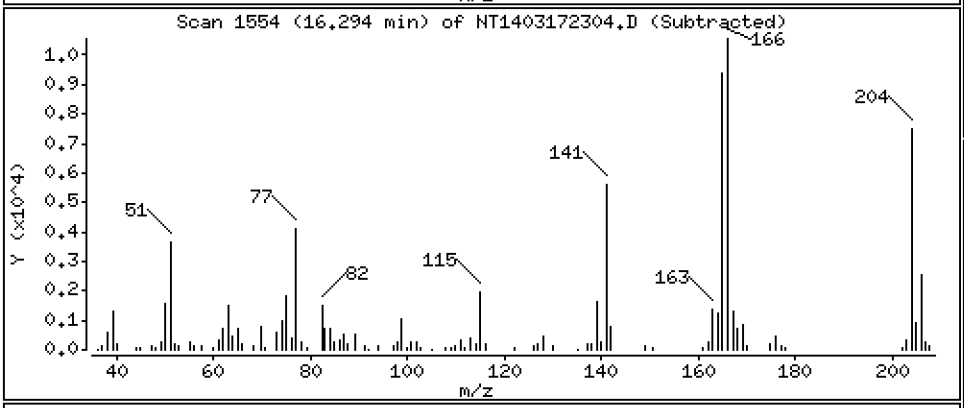
Column phase: ZB-5msi

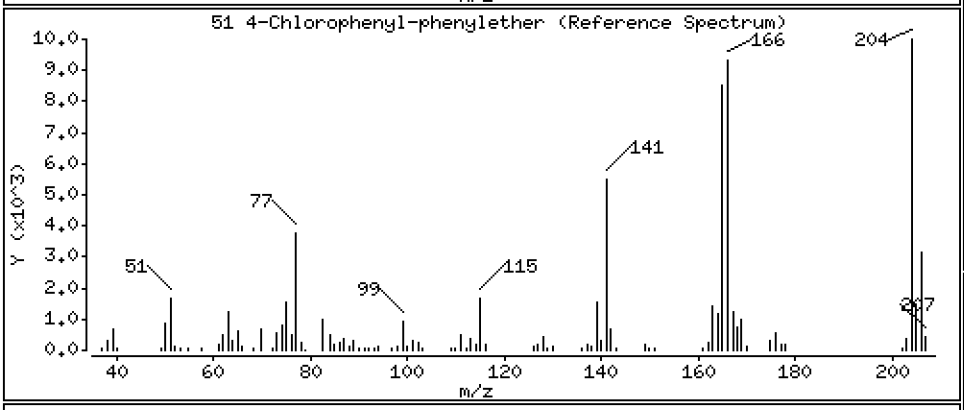
Column diameter: 0.25

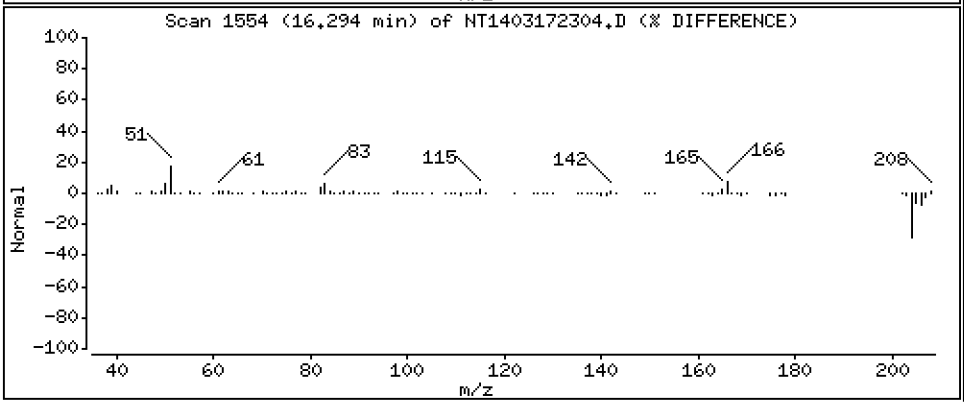
51 4-Chlorophenyl-phenylether

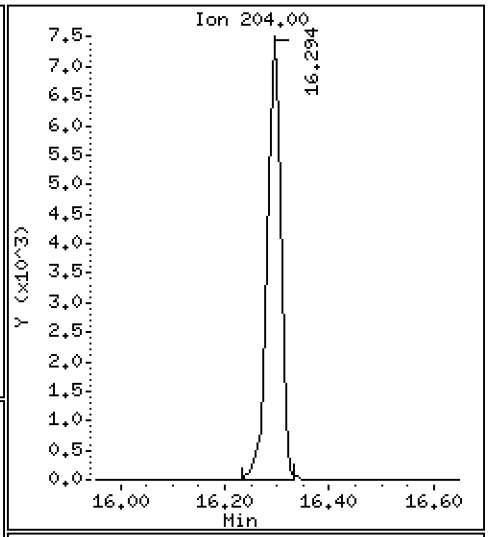
Concentration: 0.1743 ug/mL

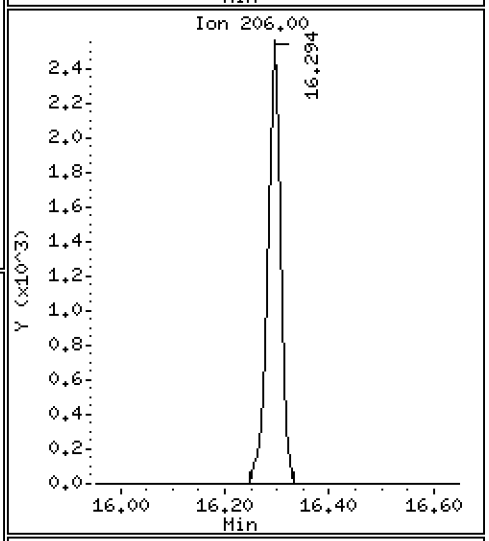


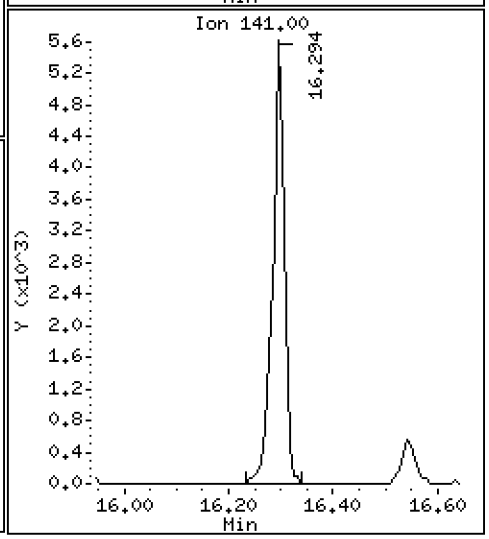












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

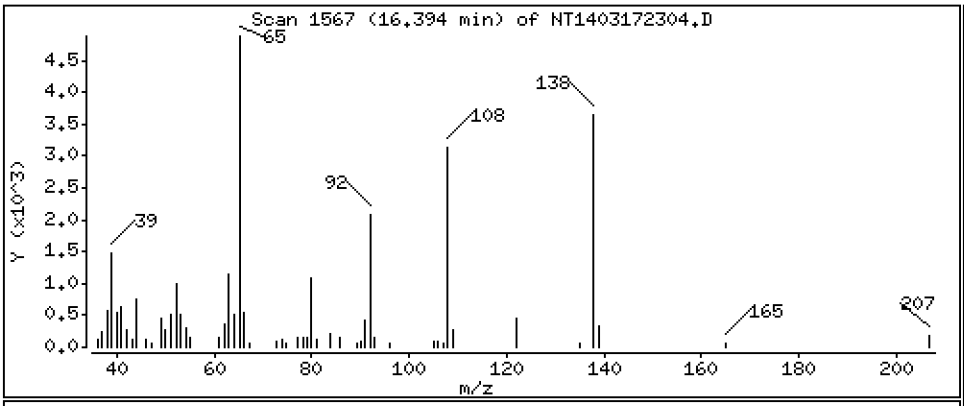
Operator: JGR

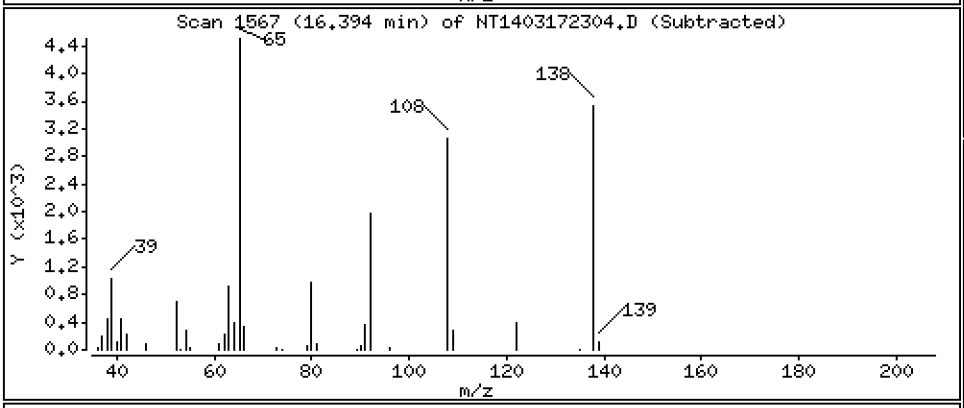
Column phase: ZB-5msi

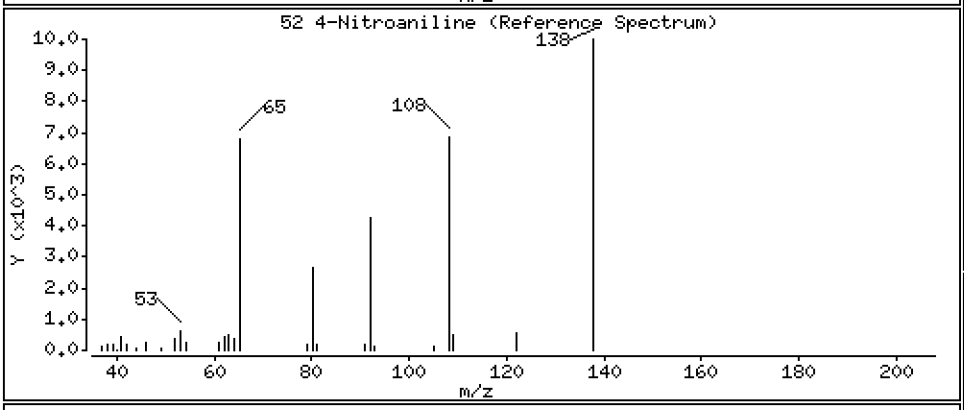
Column diameter: 0.25

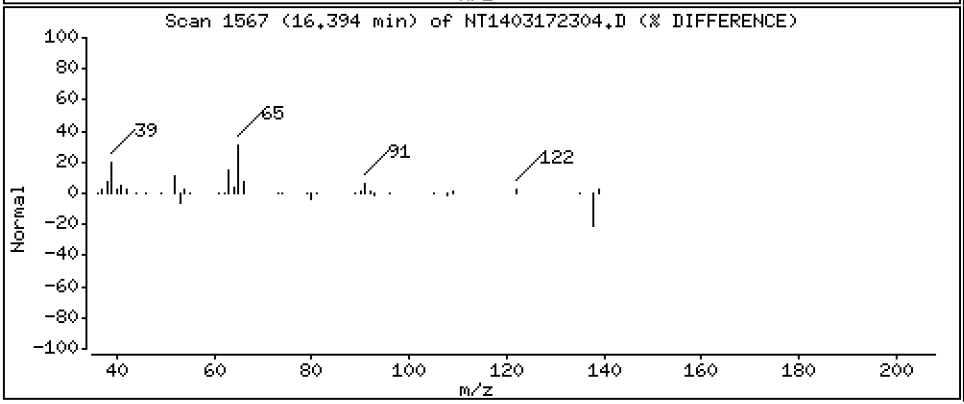
52 4-Nitroaniline

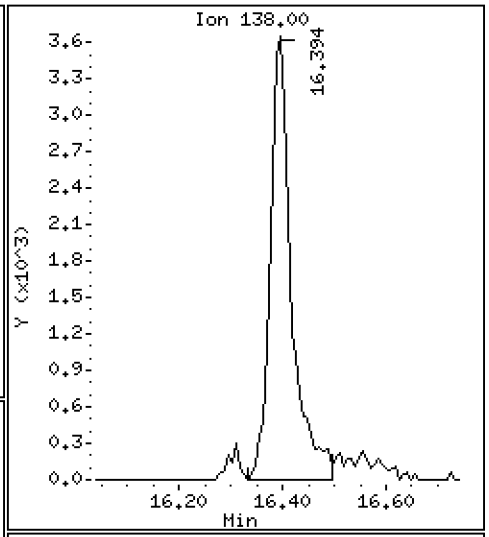
Concentration: 0.2615 ug/mL

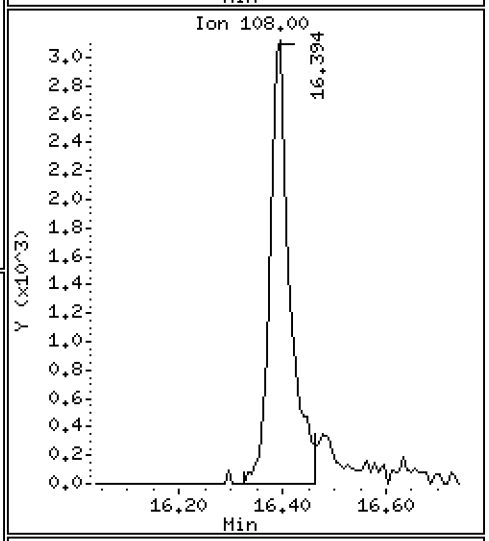


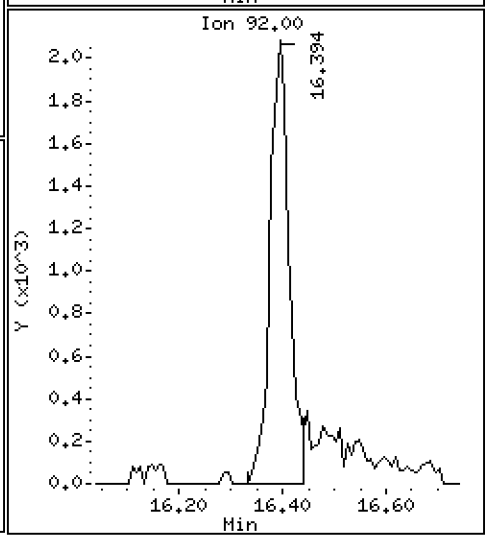












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

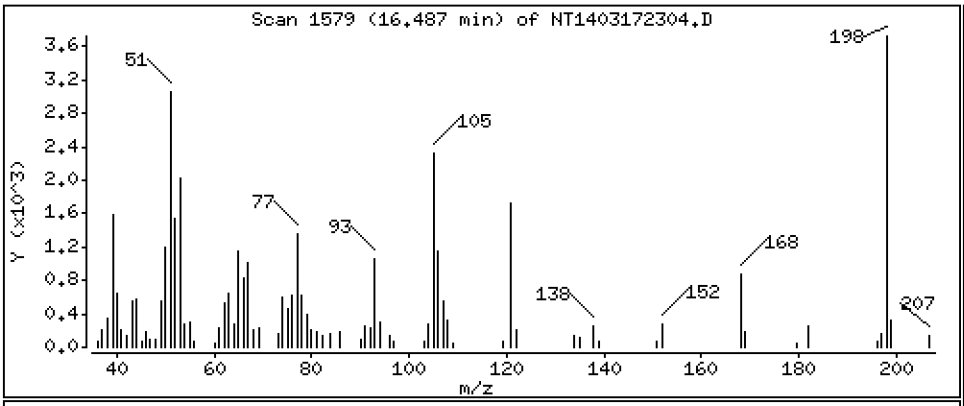
Operator: JGR

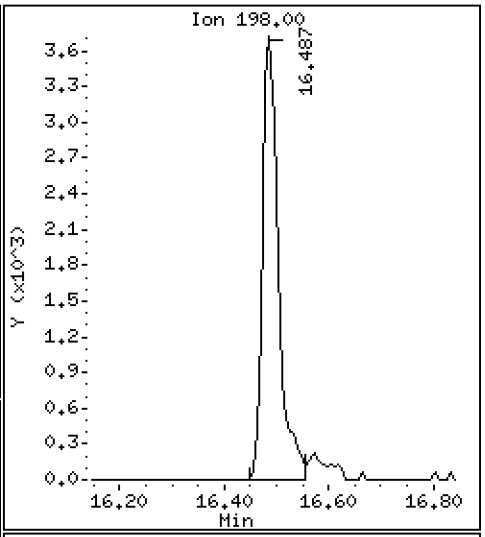
Column phase: ZB-5msi

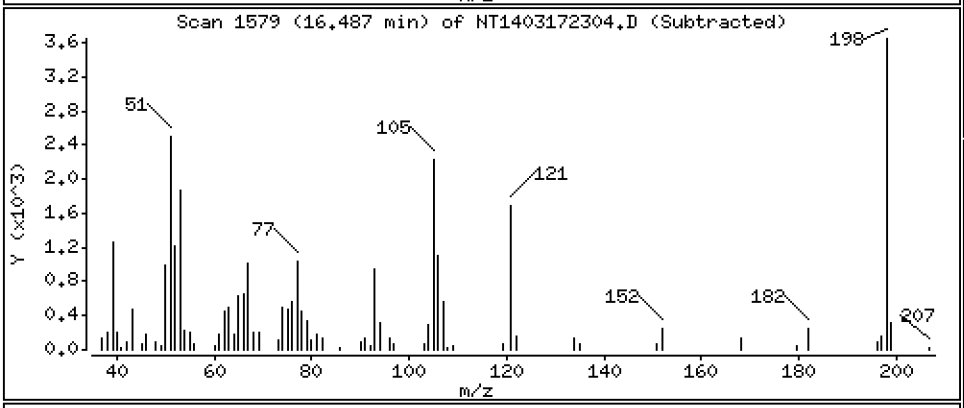
Column diameter: 0.25

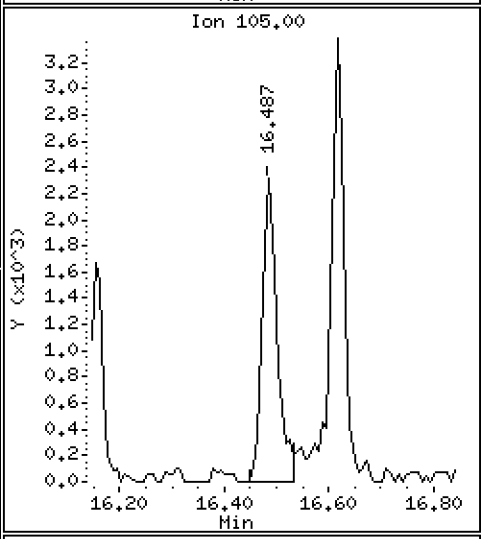
53 4,6-Dinitro-2-methylphenol

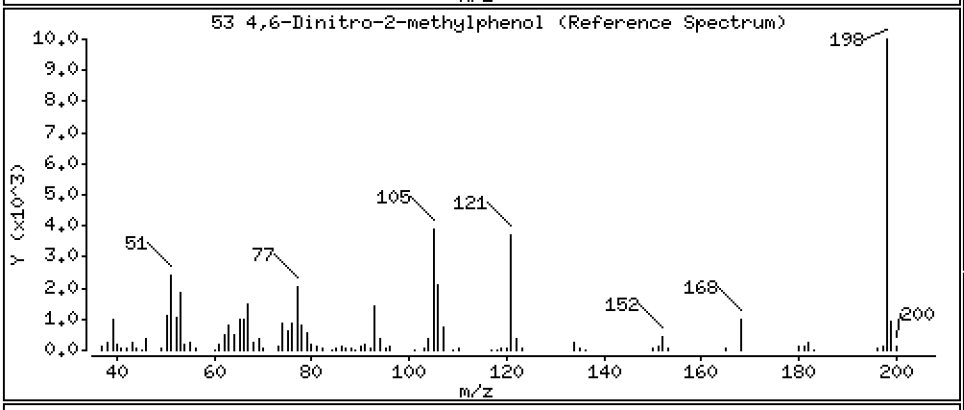
Concentration: 0.2891 ug/mL

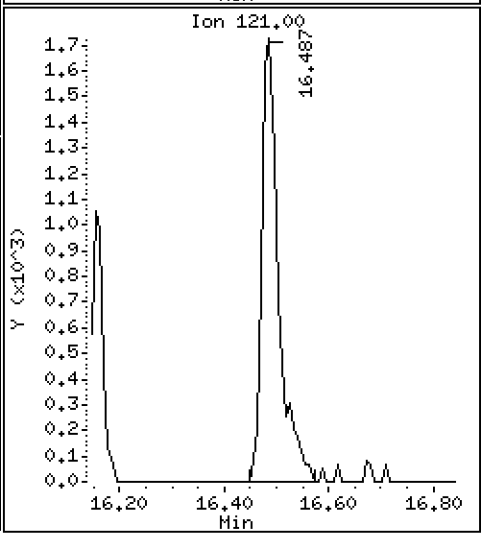


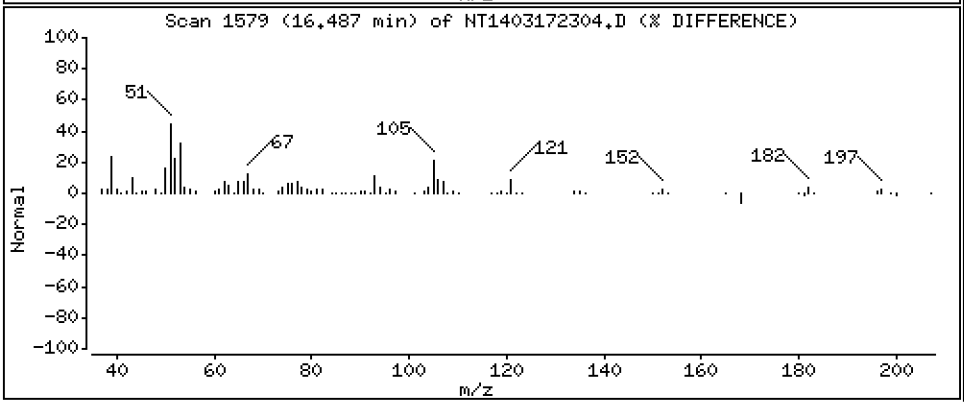












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

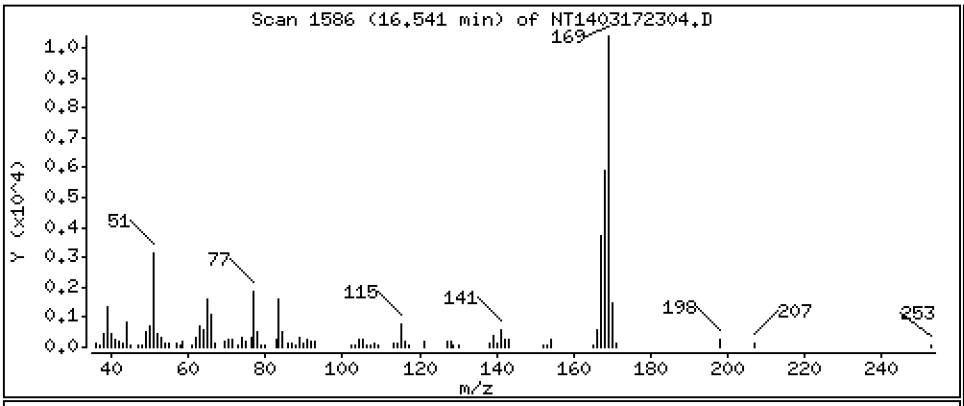
Operator: JGR

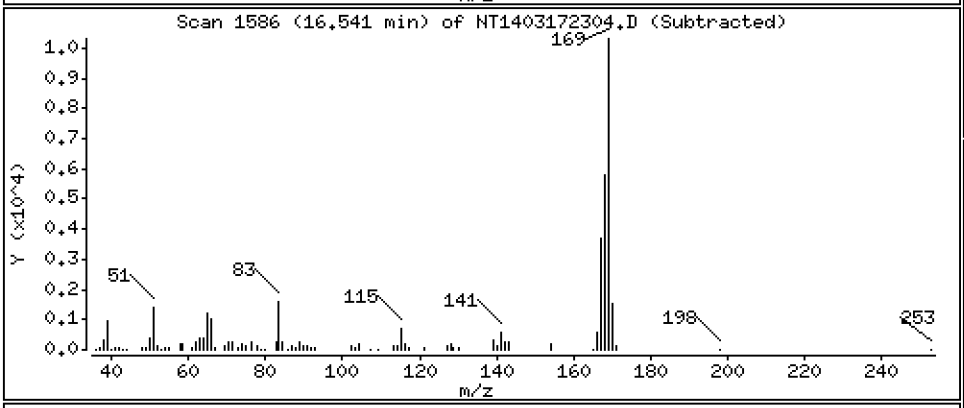
Column phase: ZB-5msi

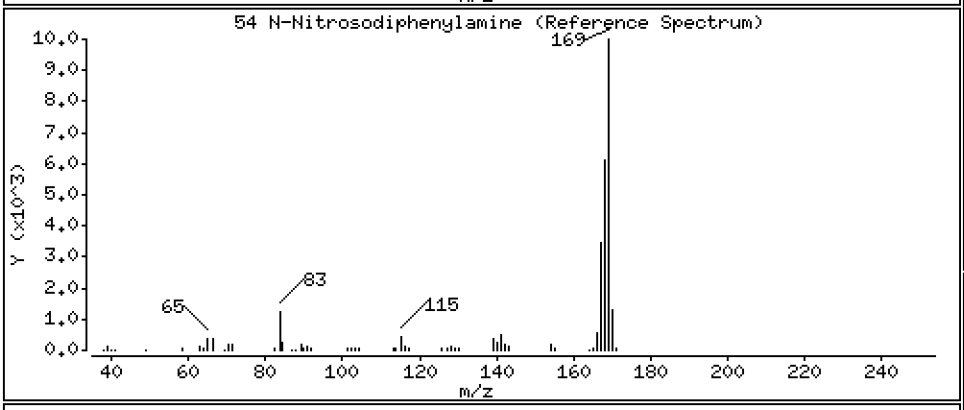
Column diameter: 0.25

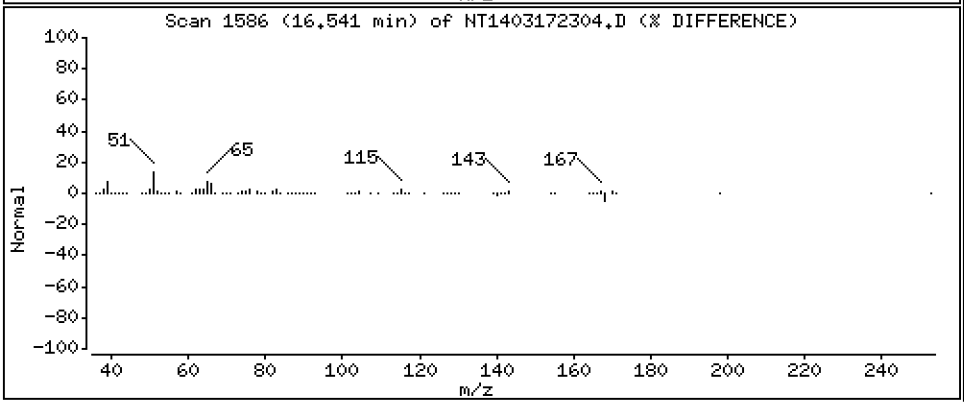
54 N-Nitrosodiphenylamine

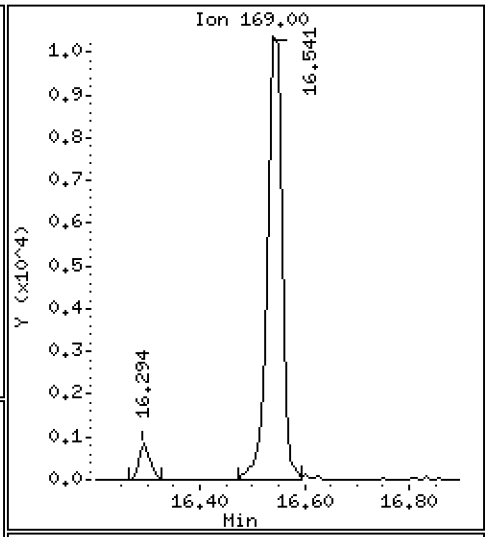
Concentration: 0.1883 ug/mL

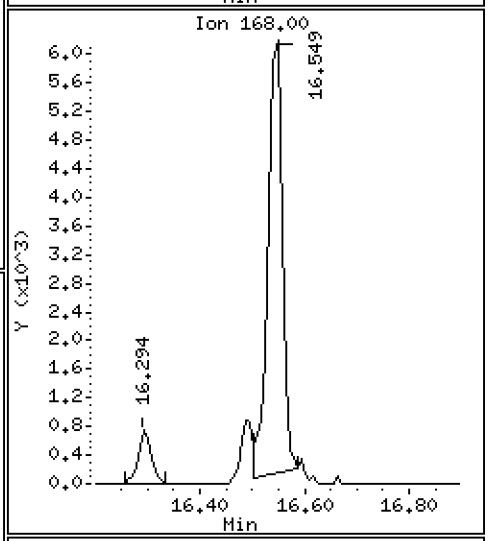


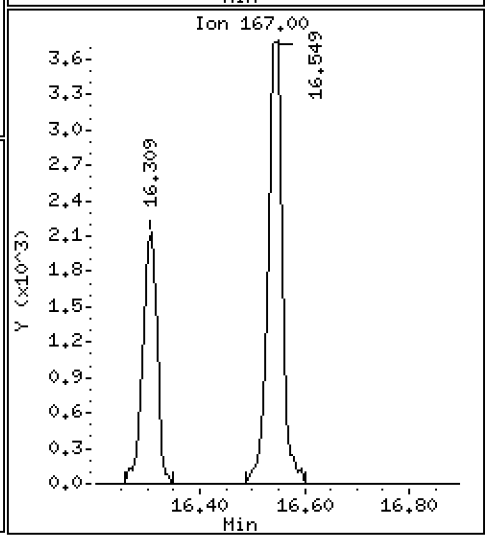












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

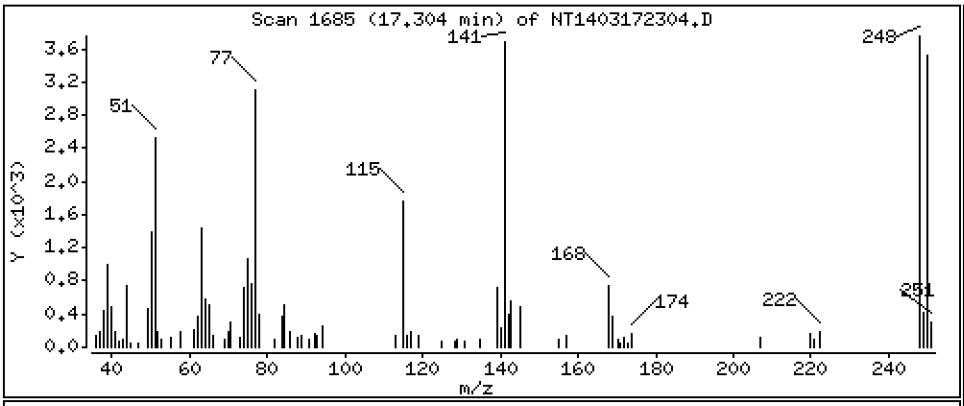
Operator: JGR

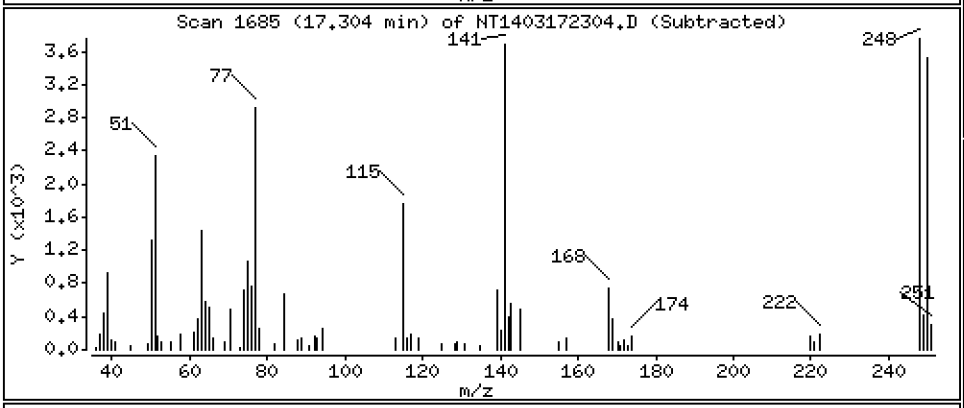
Column phase: ZB-5msi

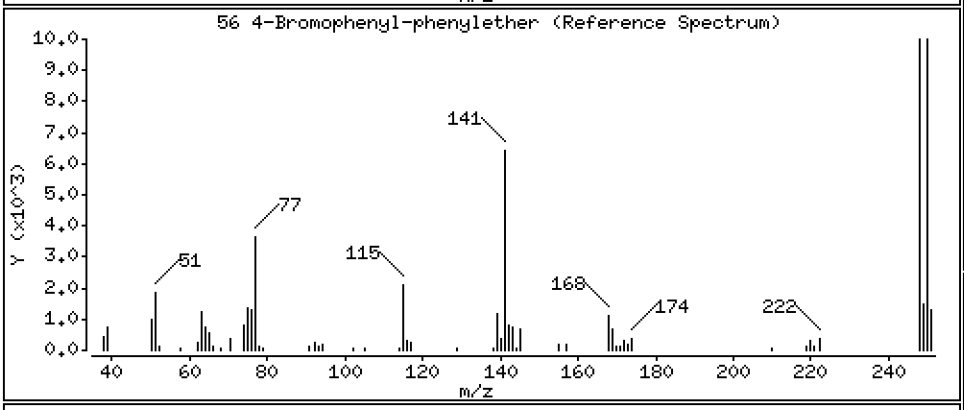
Column diameter: 0.25

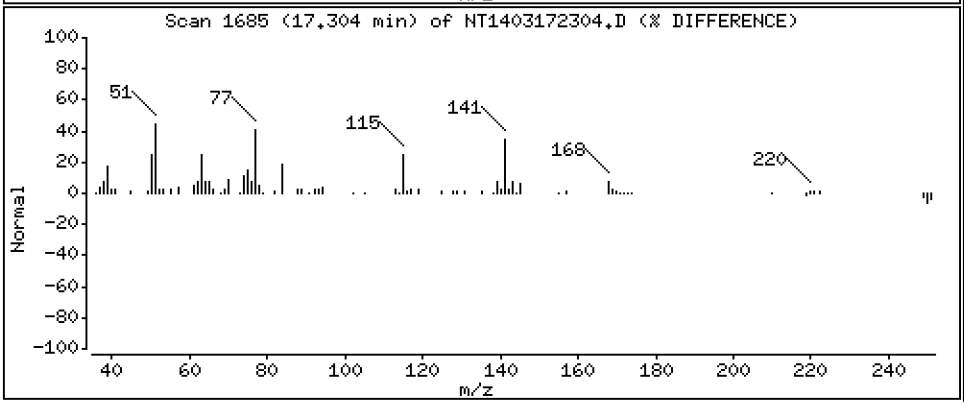
56 4-Bromophenyl-phenylether

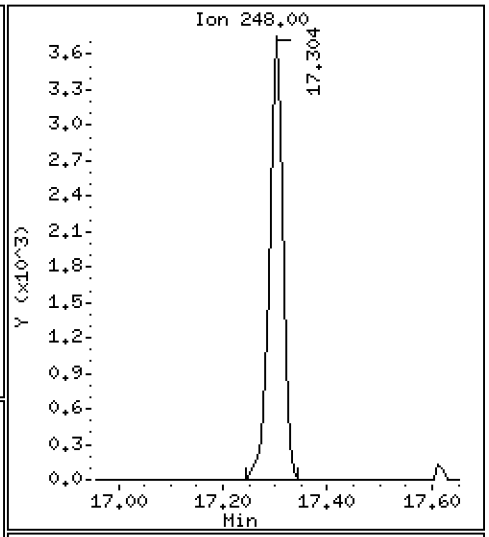
Concentration: 0.1918 ug/mL

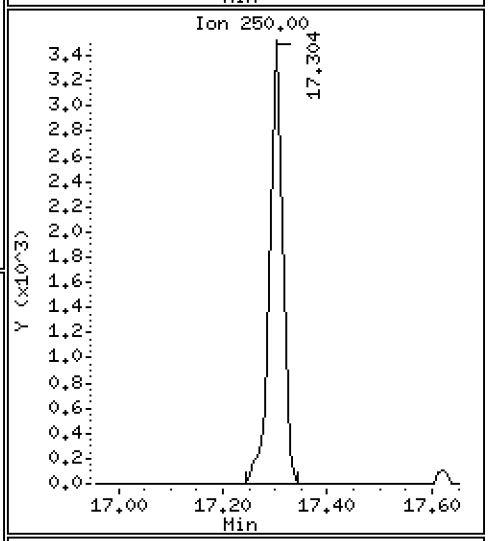


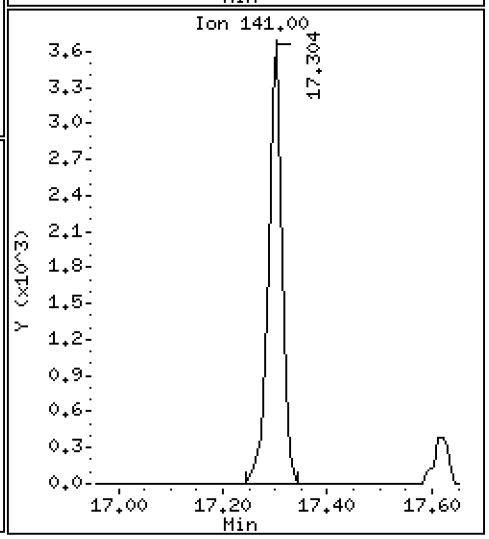












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

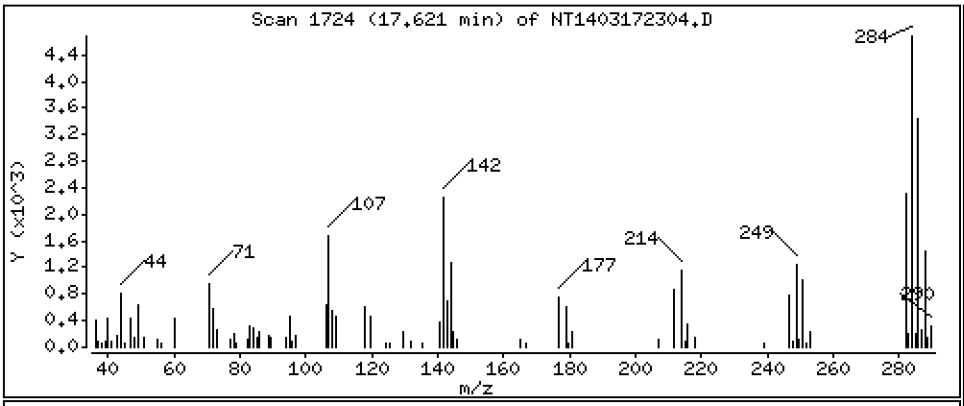
Operator: JGR

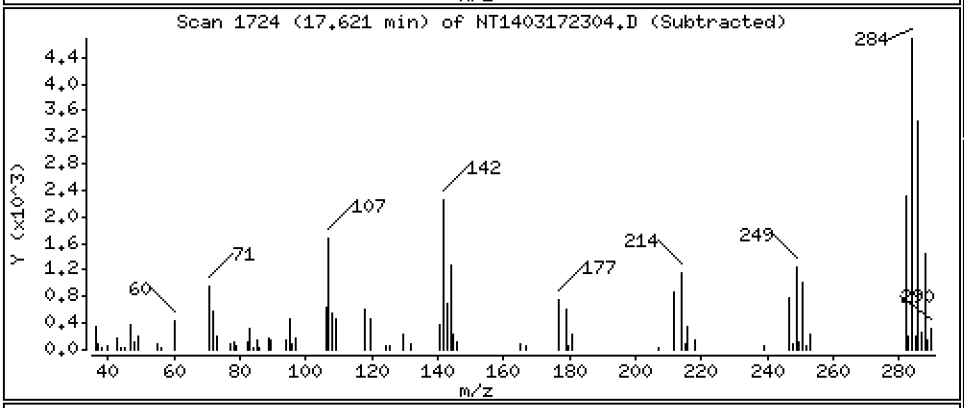
Column phase: ZB-5msi

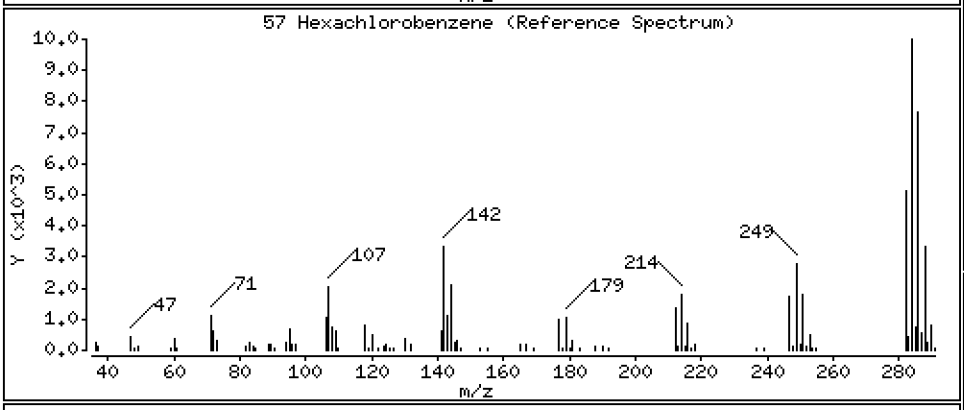
Column diameter: 0.25

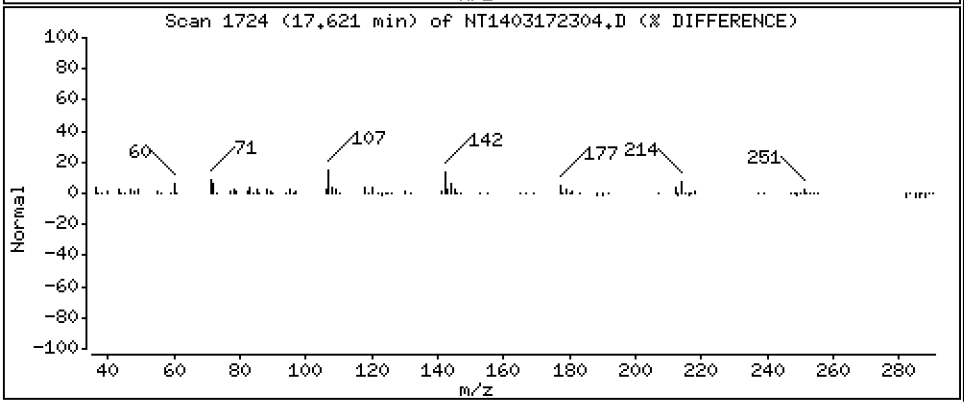
57 Hexachlorobenzene

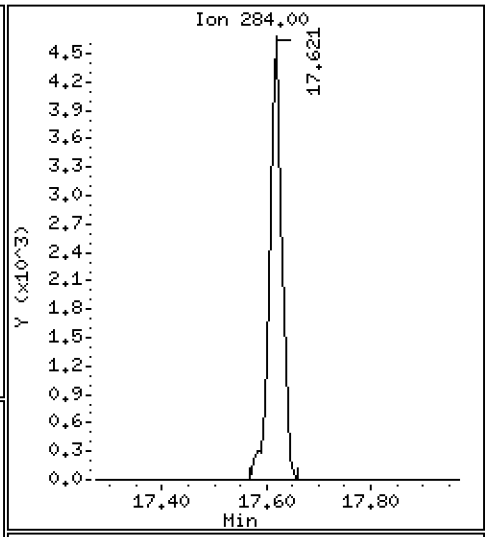
Concentration: 0.2077 ug/mL

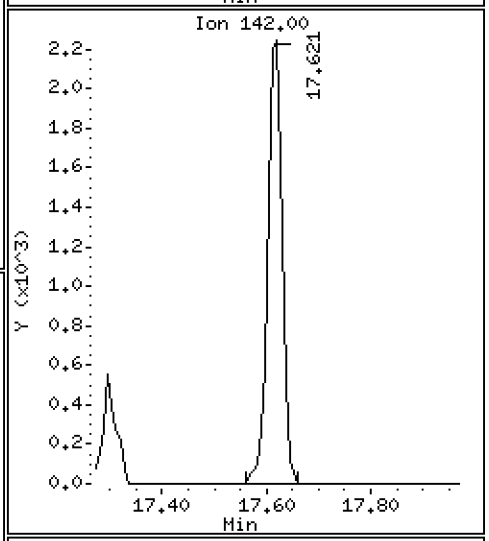


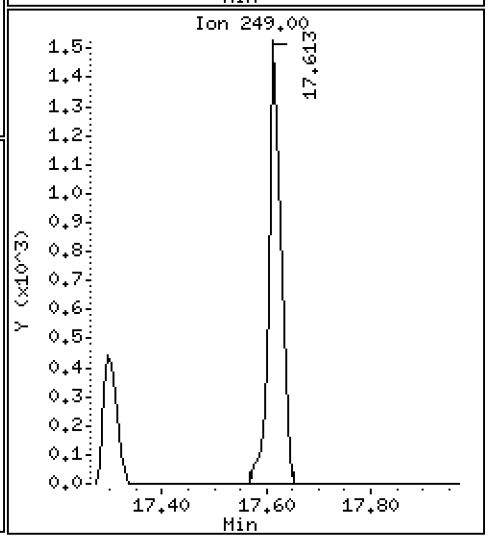












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

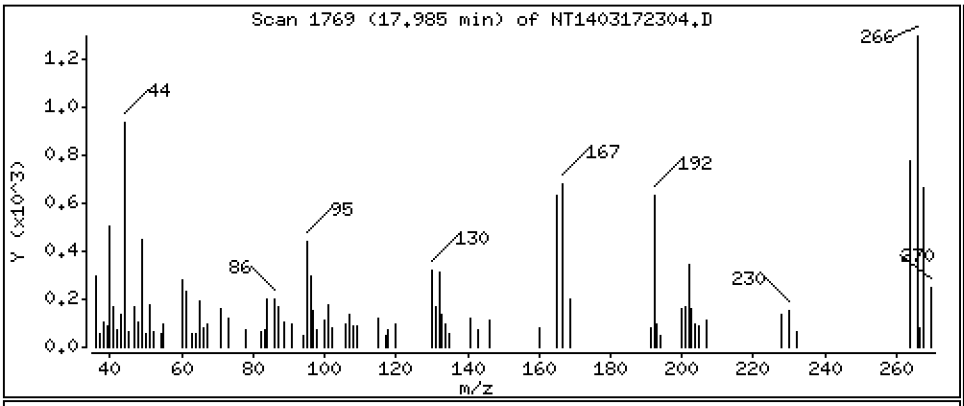
Operator: JGR

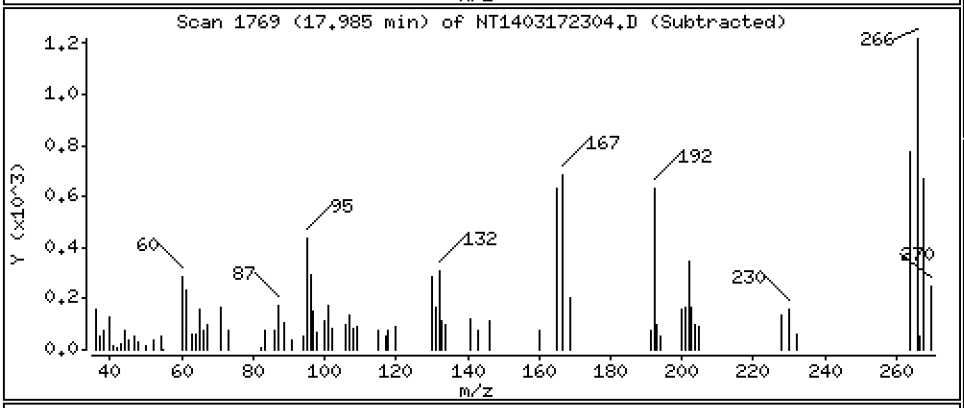
Column phase: ZB-5msi

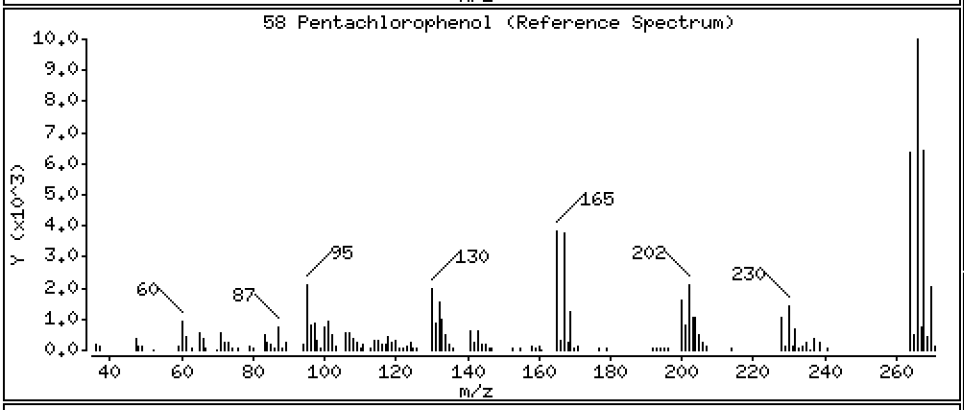
Column diameter: 0.25

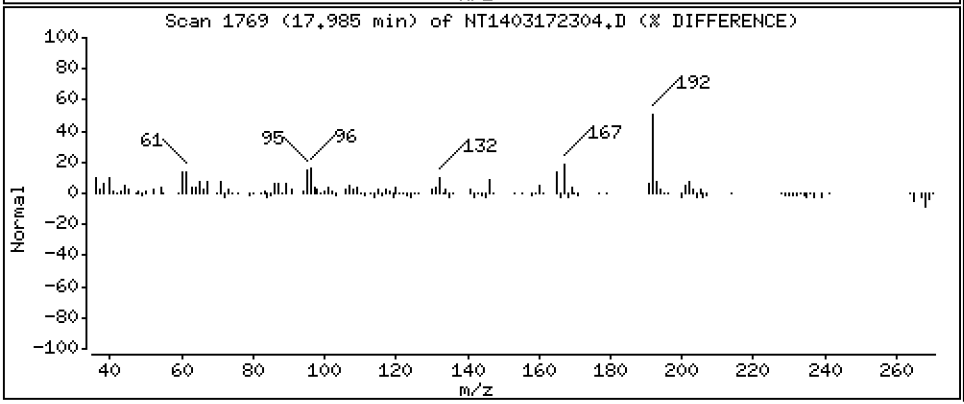
58 Pentachlorophenol

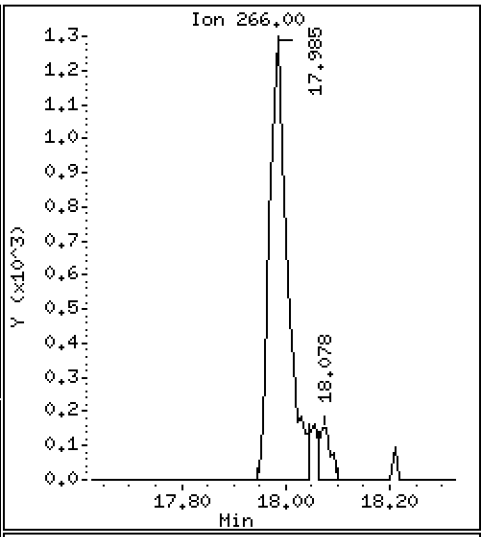
Concentration: 0.1220 ug/mL

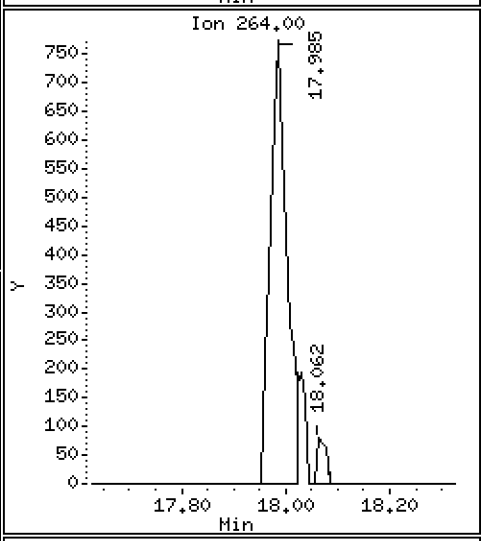


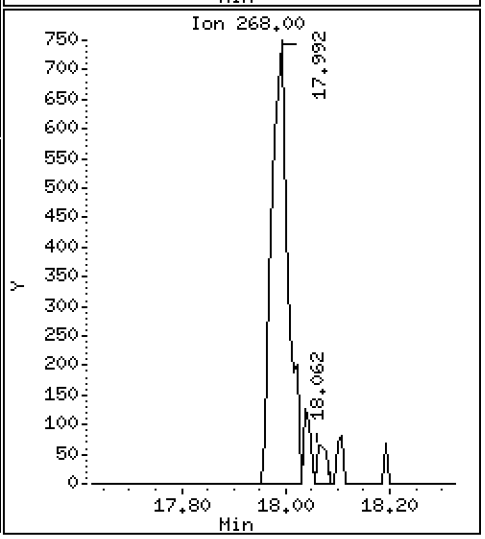












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

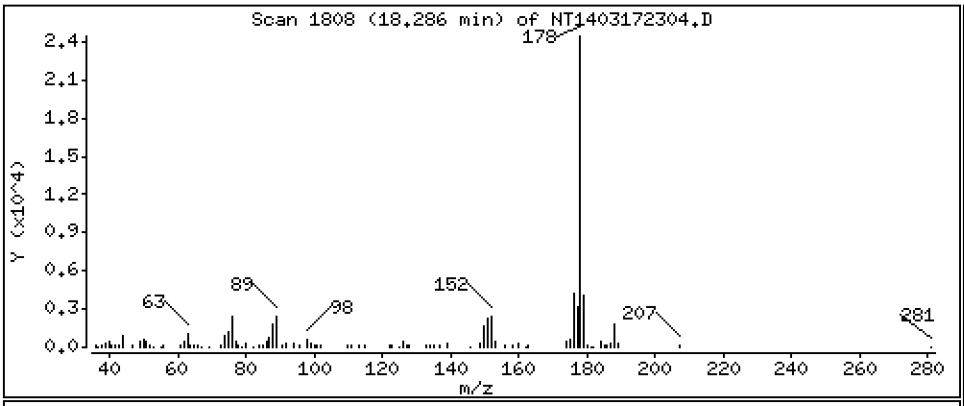
Operator: JGR

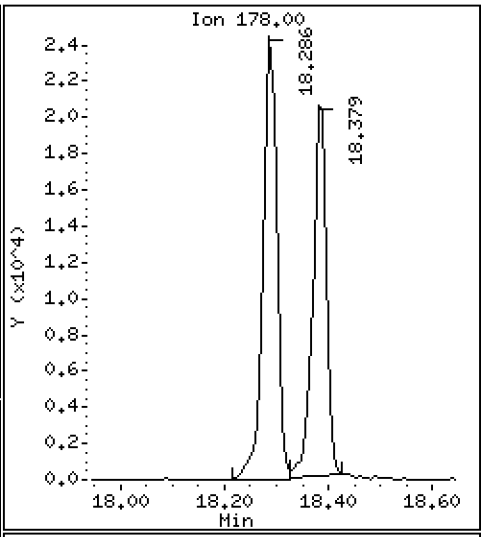
Column phase: ZB-5msi

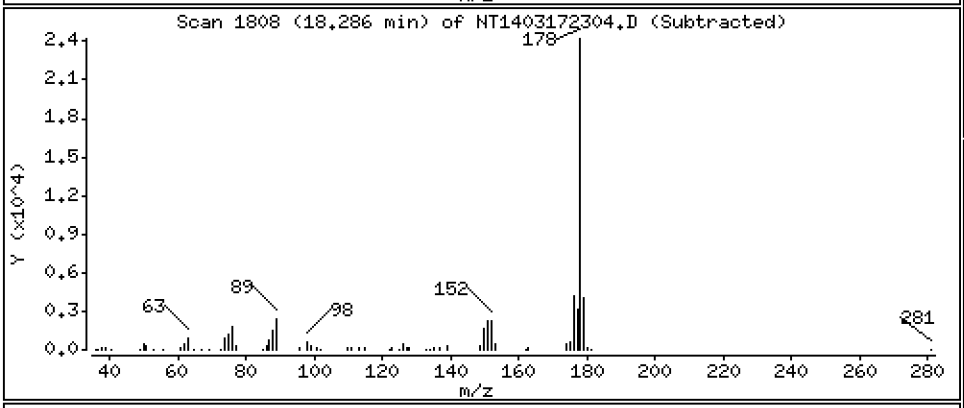
Column diameter: 0.25

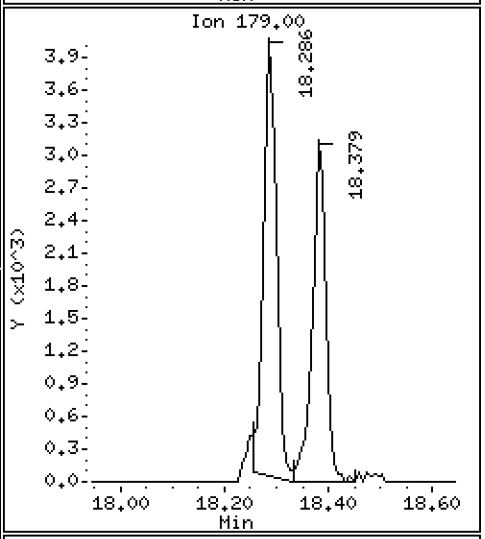
60 Phenanthrene

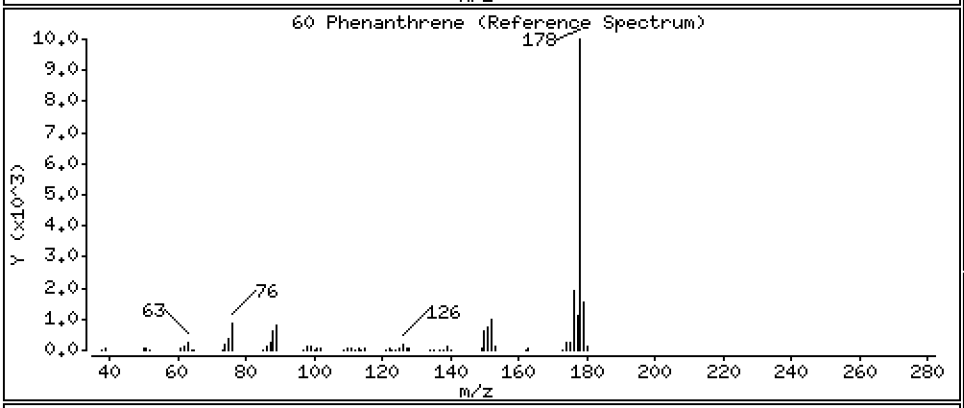
Concentration: 0.1994 ug/mL

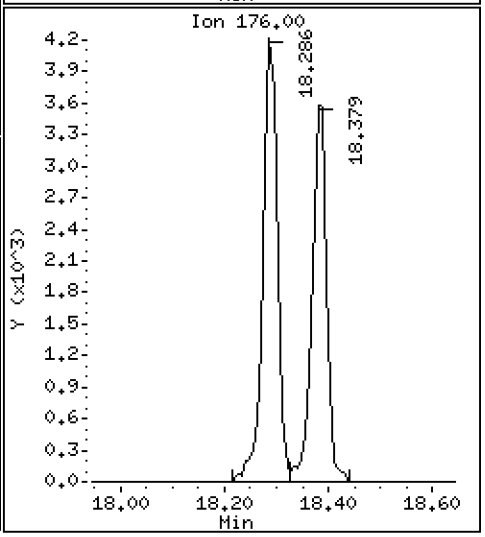


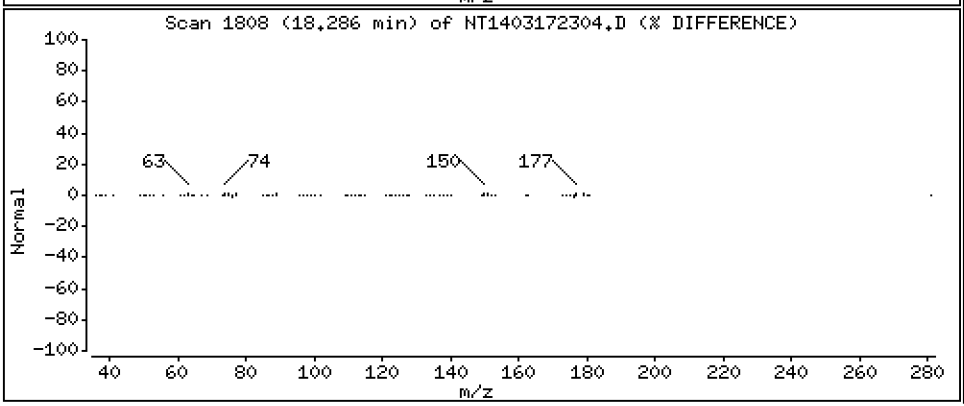












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

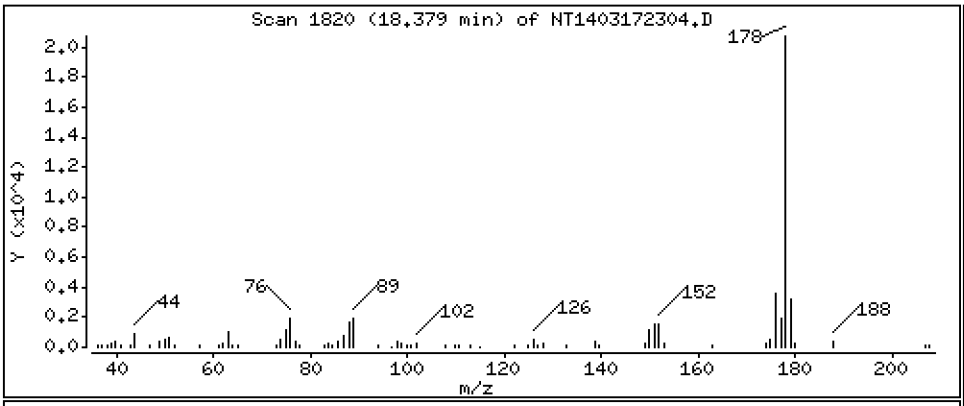
Operator: JGR

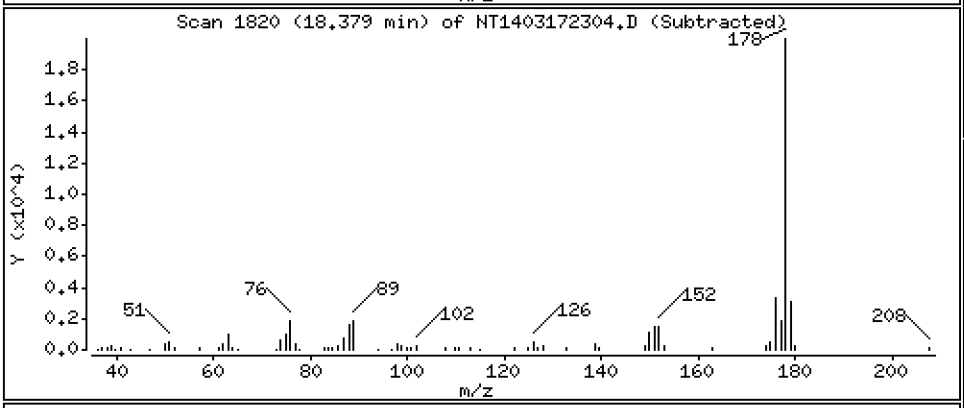
Column phase: ZB-5msi

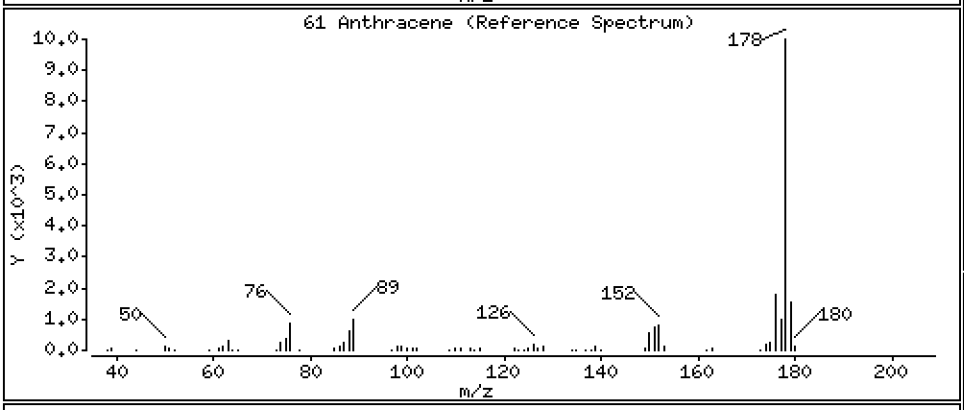
Column diameter: 0.25

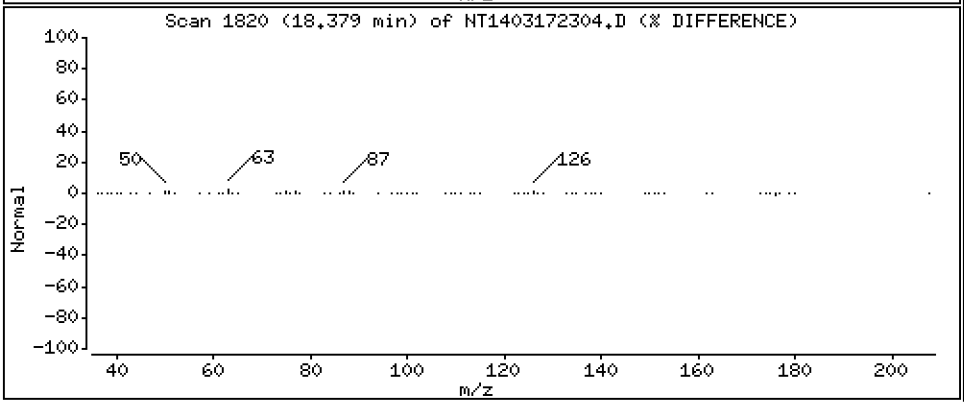
61 Anthracene

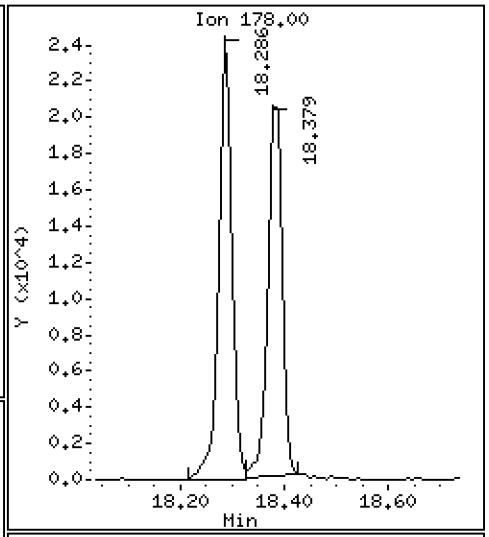
Concentration: 0.1773 ug/mL

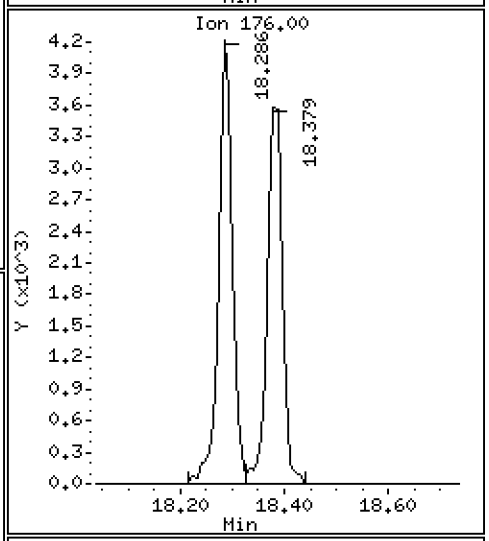


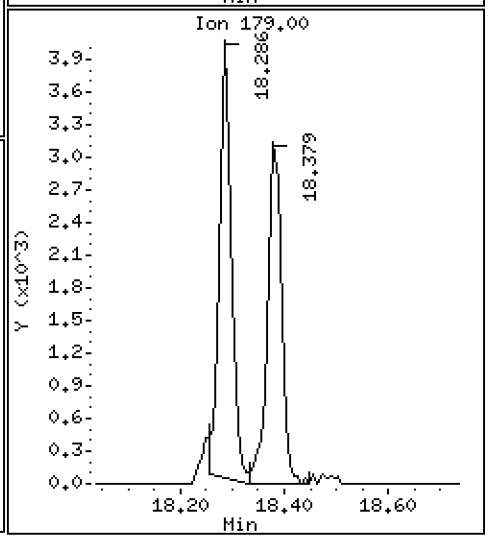












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

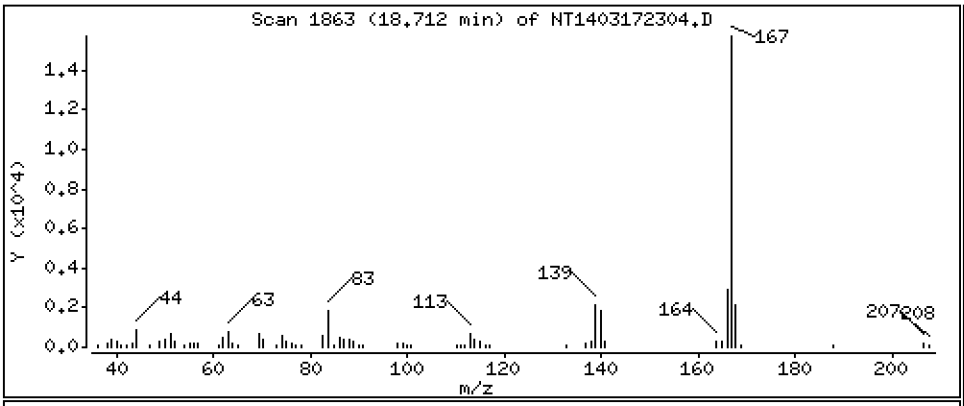
Operator: JGR

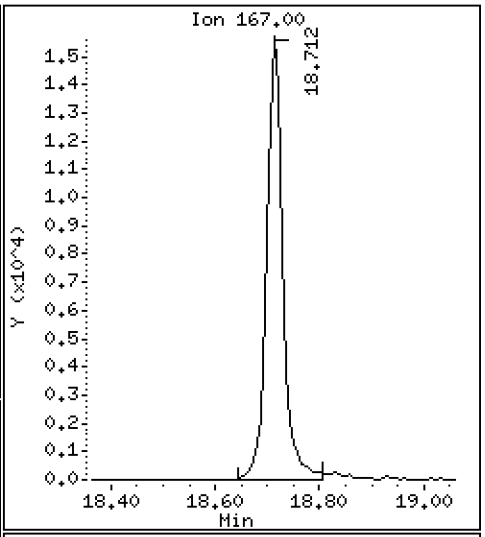
Column phase: ZB-5msi

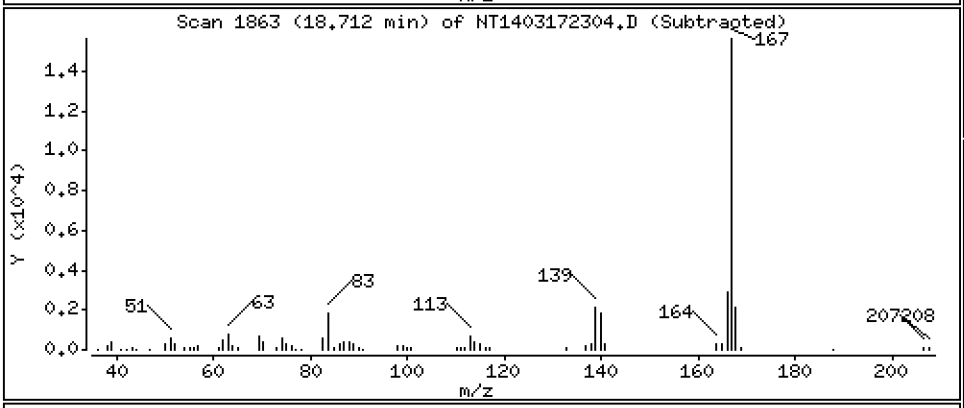
Column diameter: 0.25

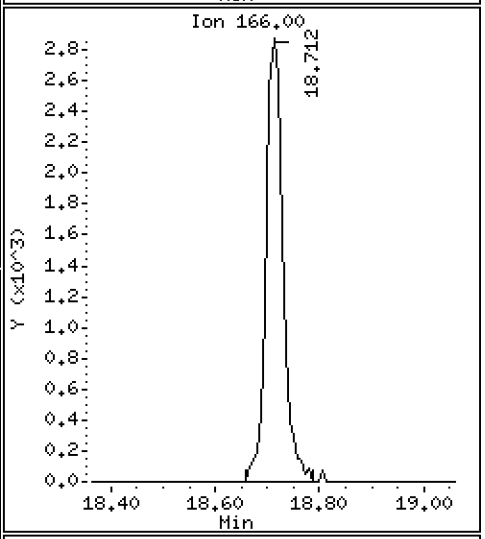
62 Carbazole

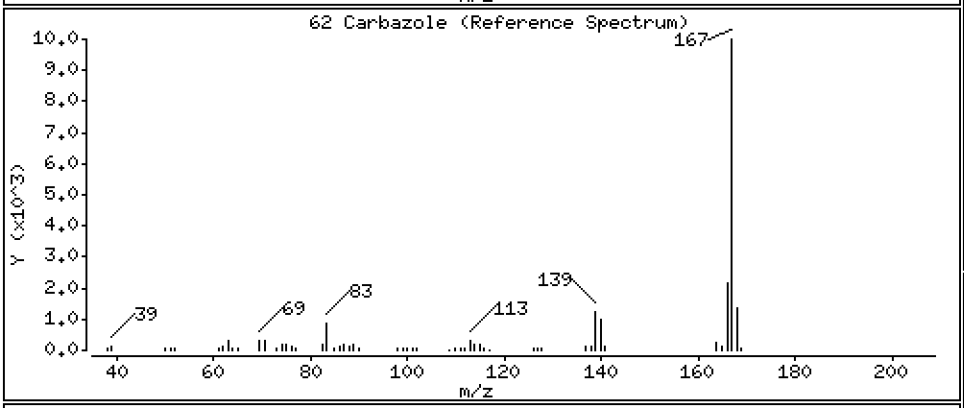
Concentration: 0.1750 ug/mL

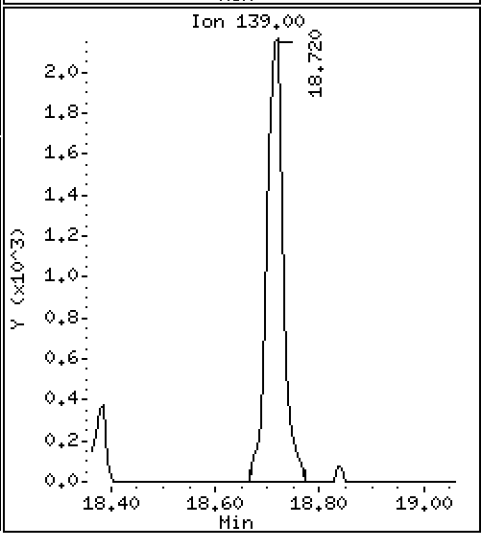


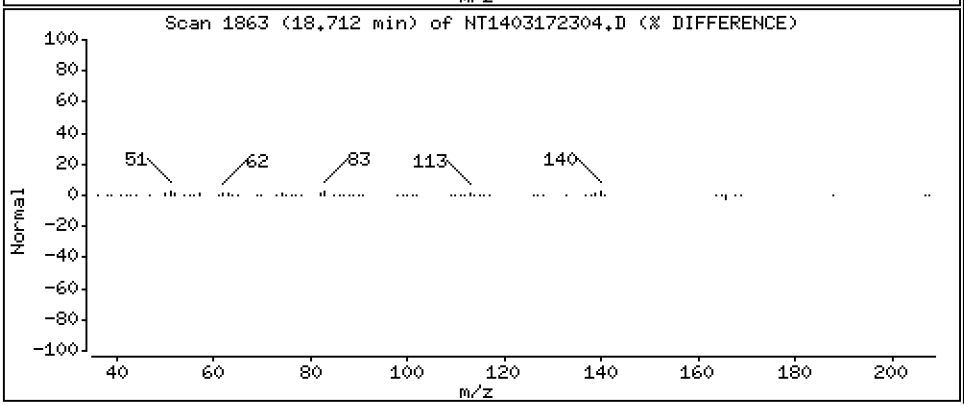












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

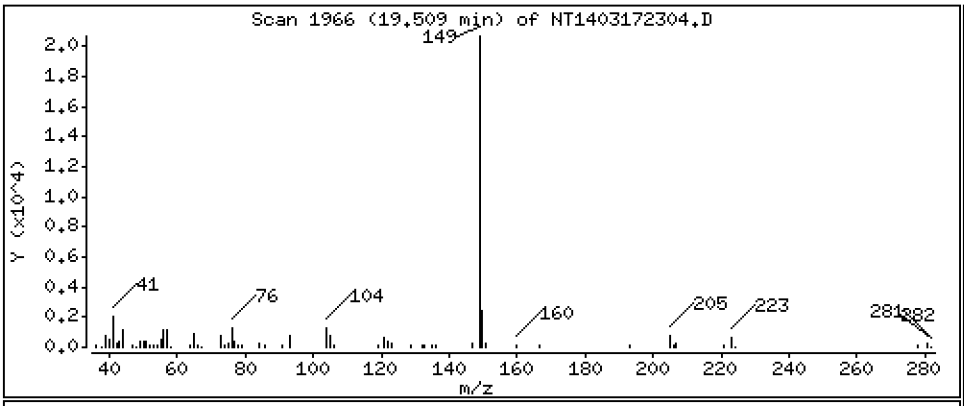
Operator: JGR

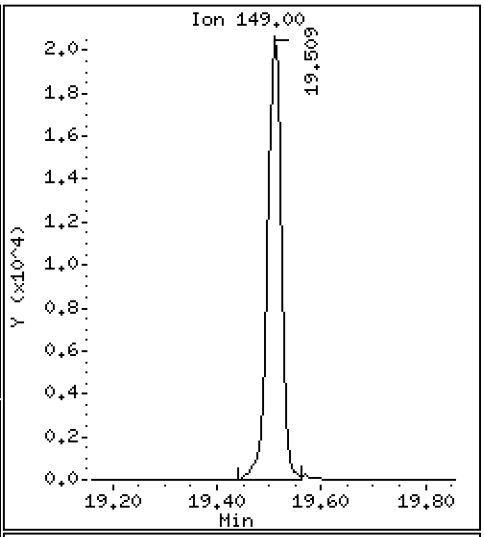
Column phase: ZB-5msi

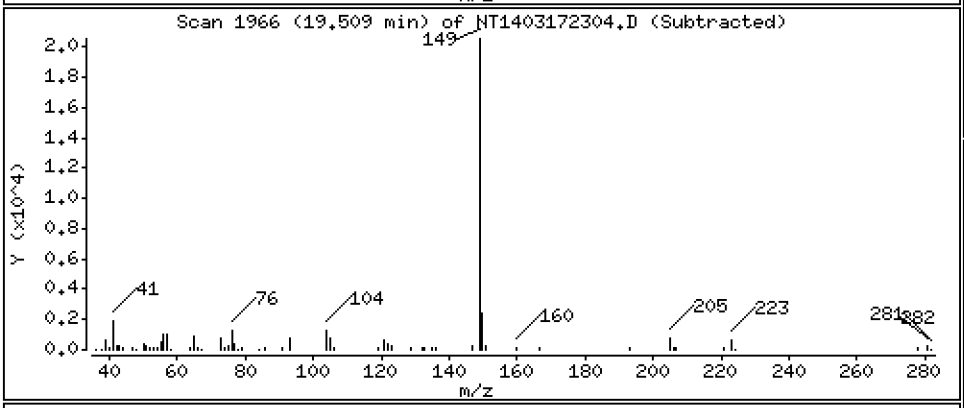
Column diameter: 0.25

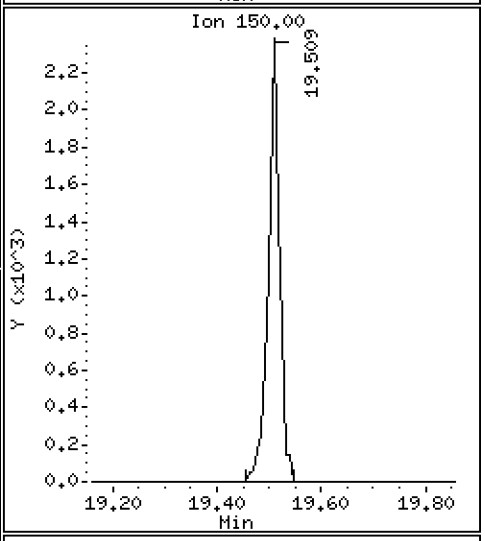
63 Di-n-butylphthalate

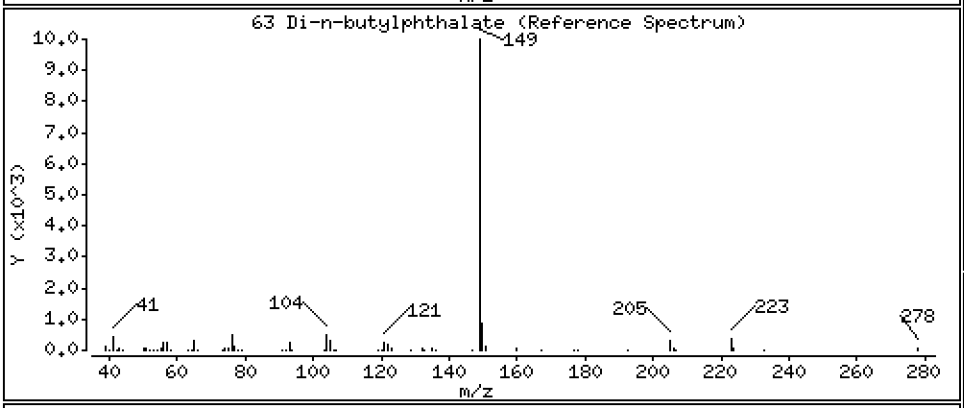
Concentration: 0.1543 ug/mL

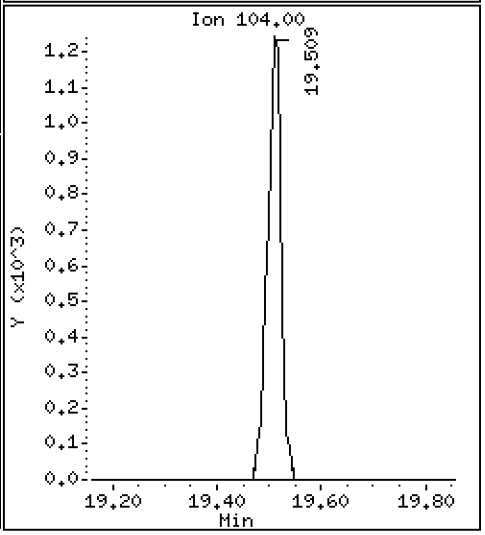


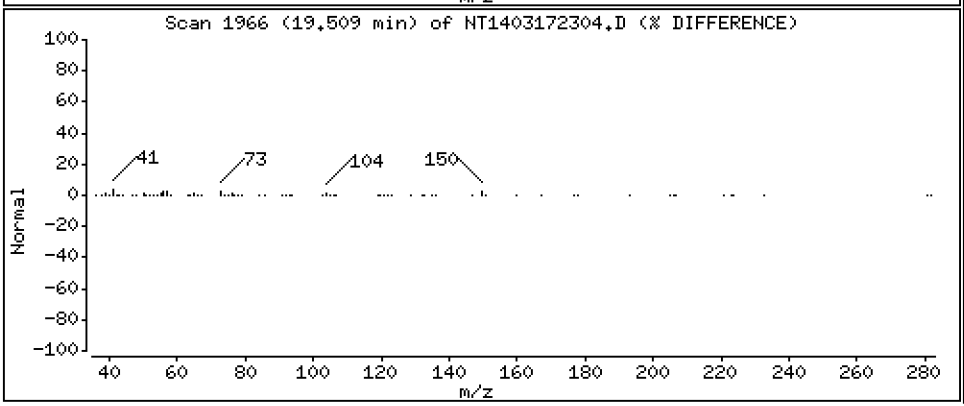












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

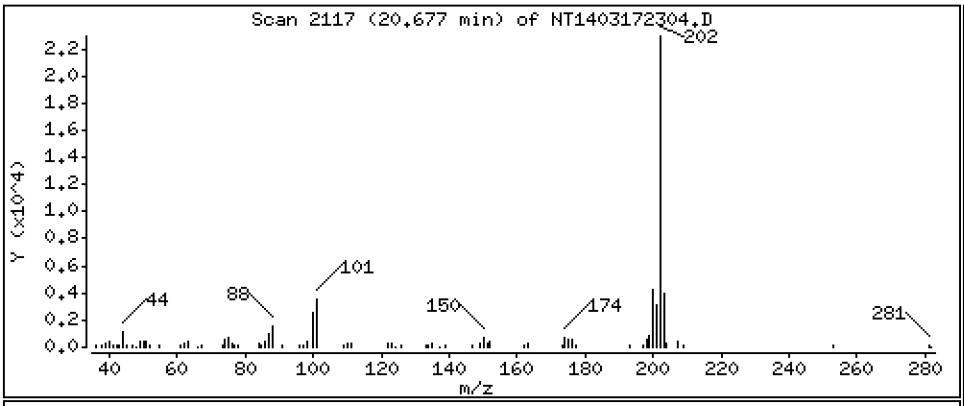
Operator: JGR

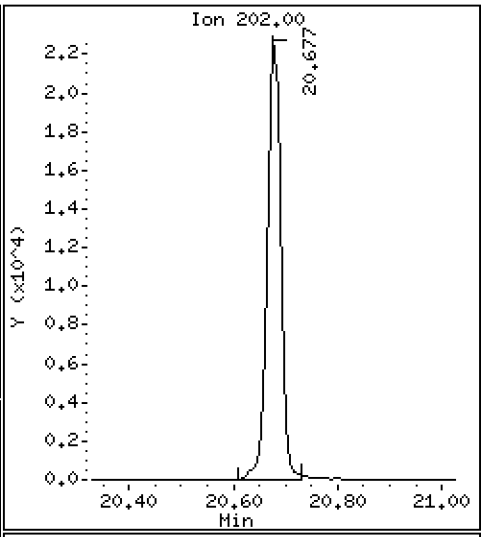
Column phase: ZB-5msi

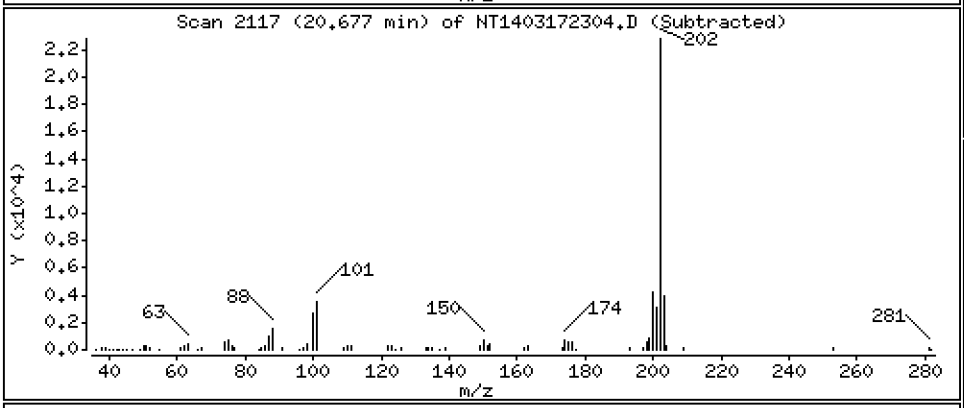
Column diameter: 0.25

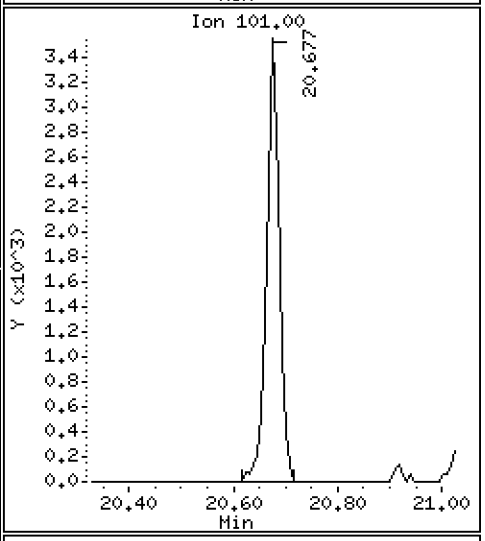
64 Fluoranthene

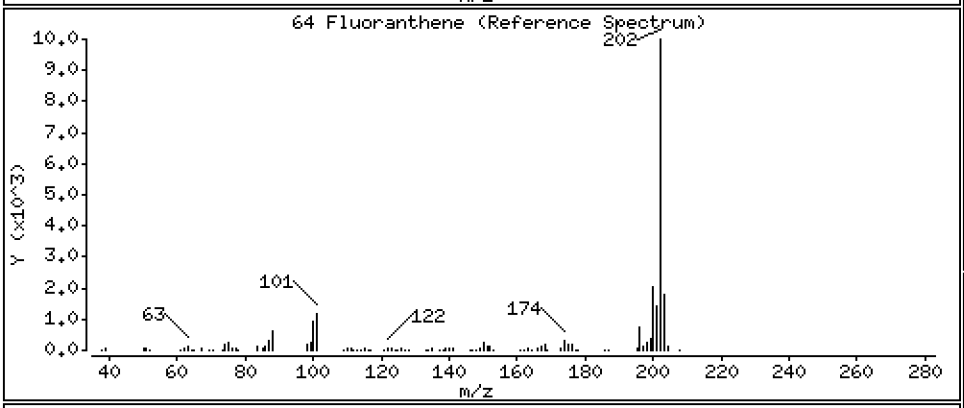
Concentration: 0.2091 ug/mL

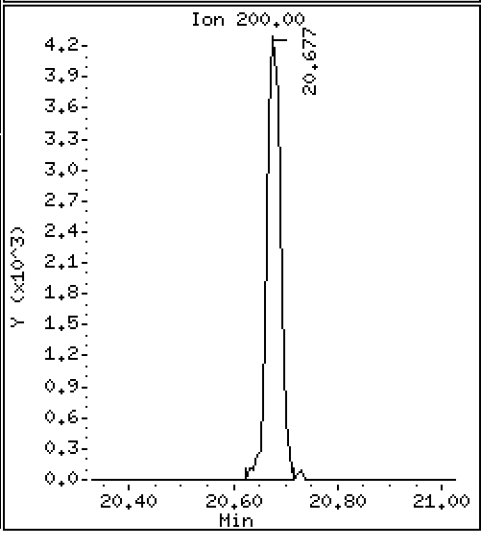


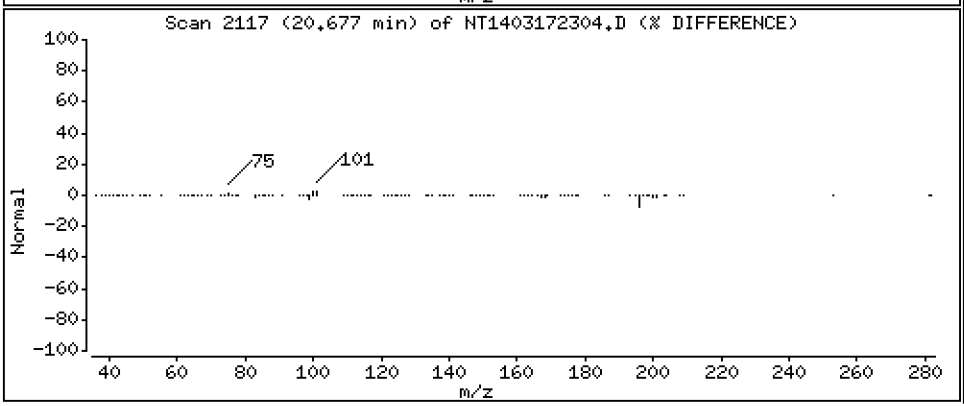












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

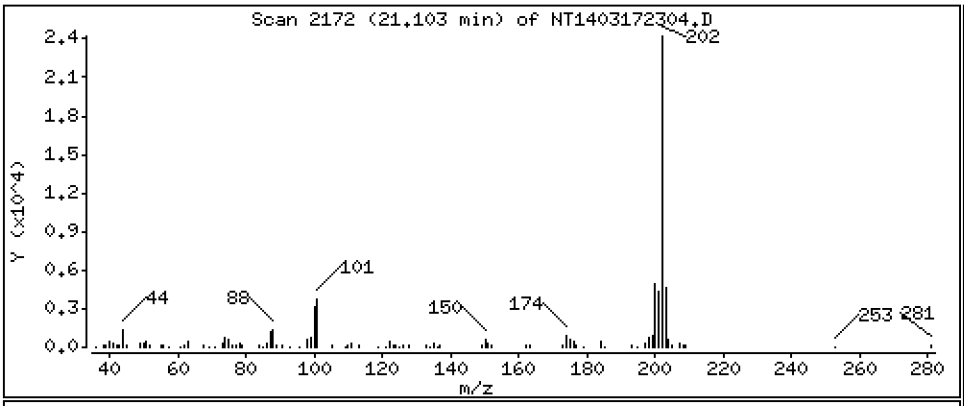
Operator: JGR

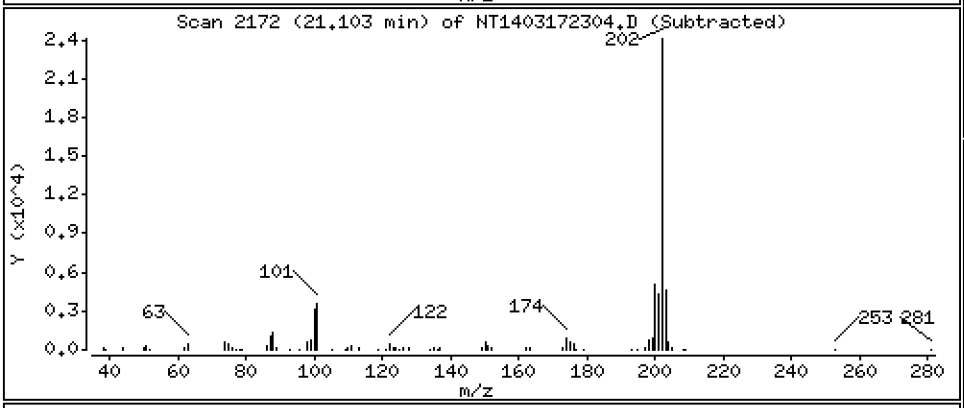
Column phase: ZB-5msi

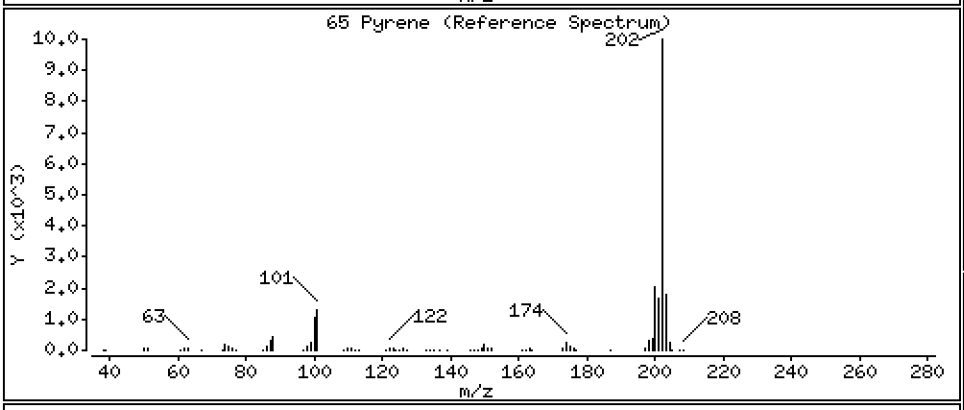
Column diameter: 0.25

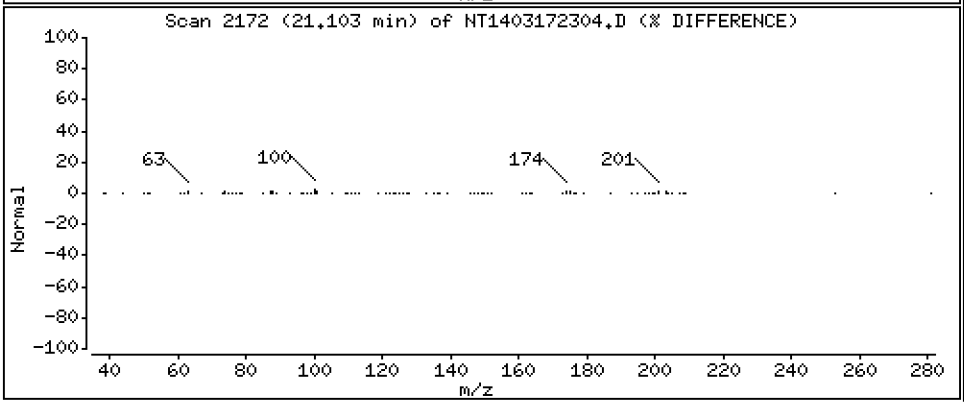
65 Pyrene

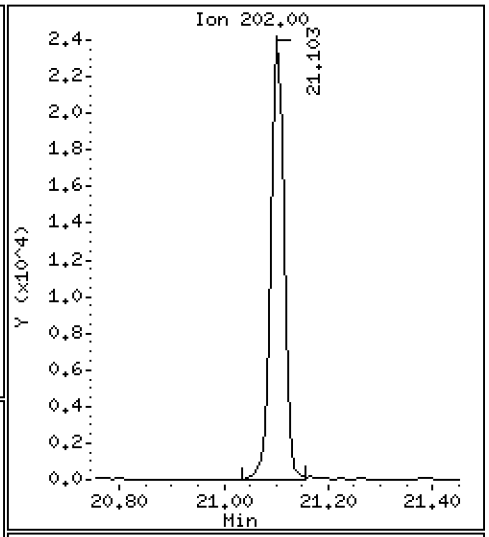
Concentration: 0.2132 ug/mL

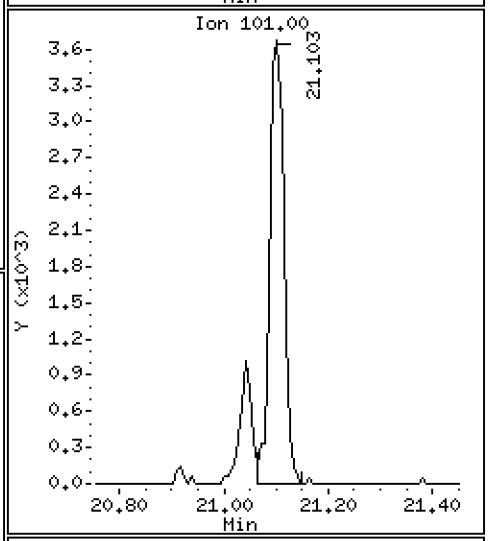


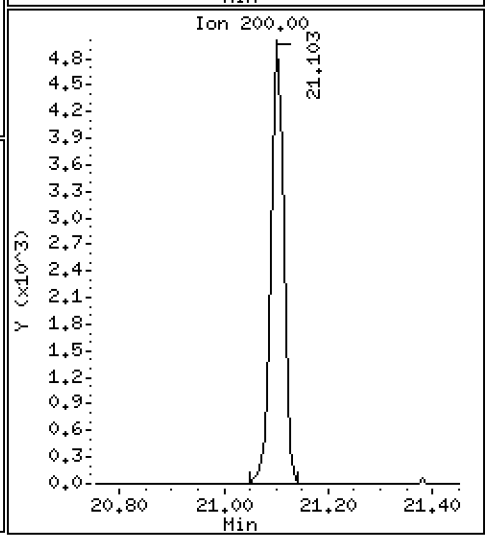












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

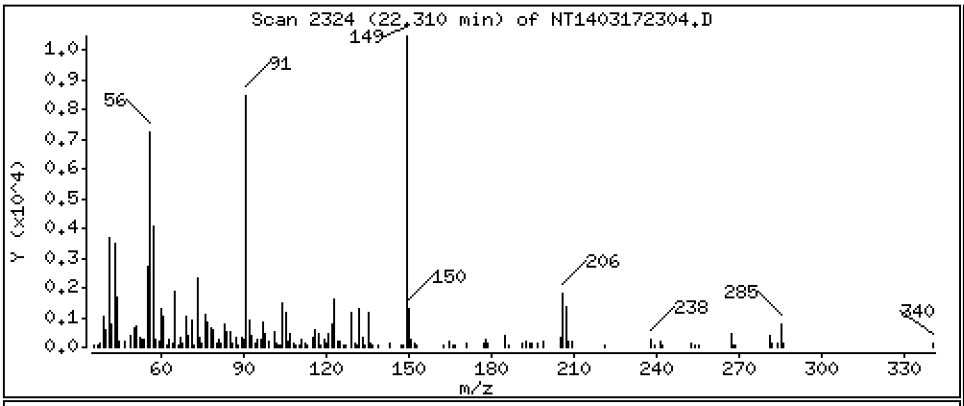
Operator: JGR

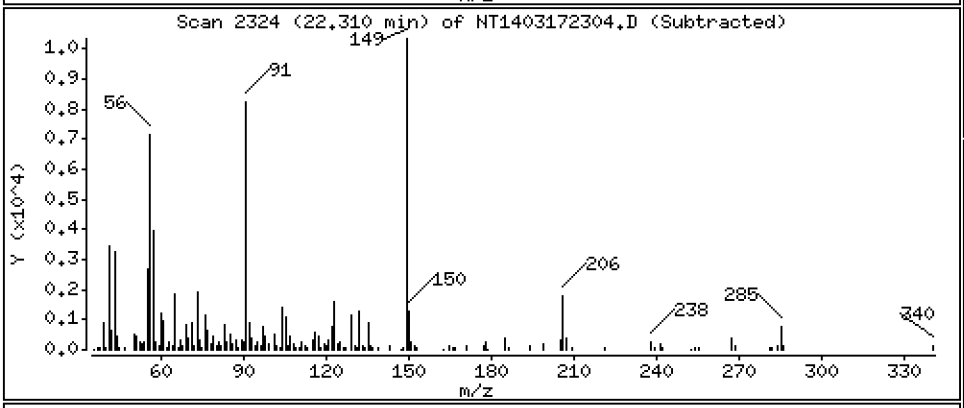
Column phase: ZB-5msi

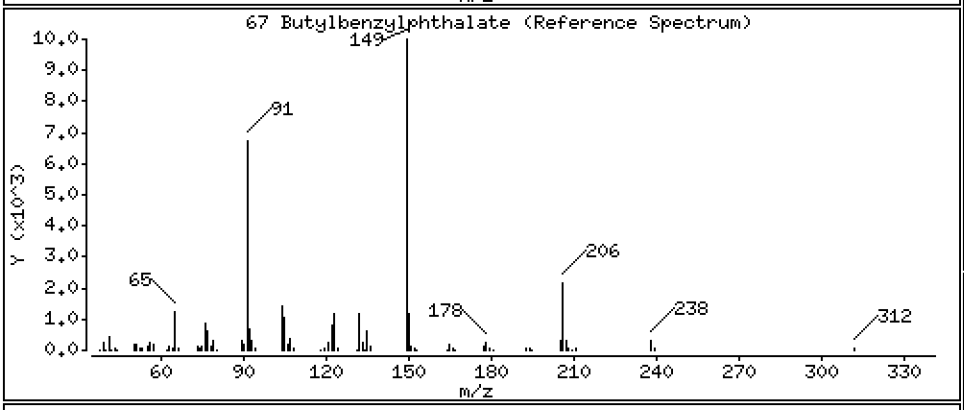
Column diameter: 0.25

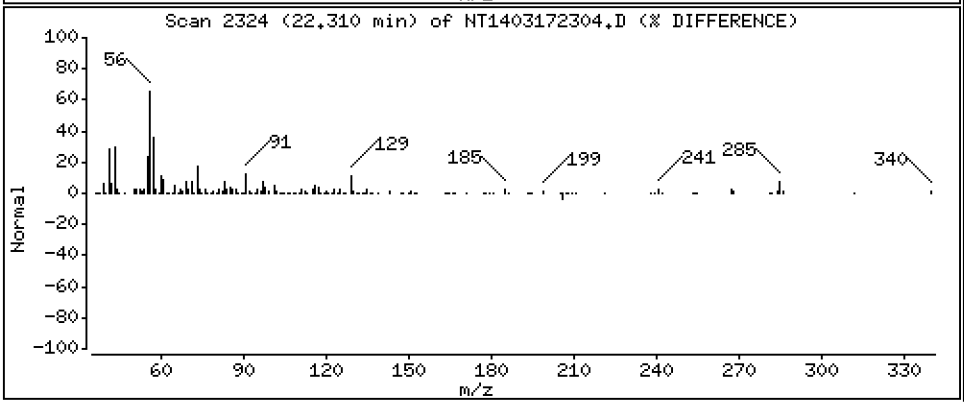
67 Butylbenzylphthalate

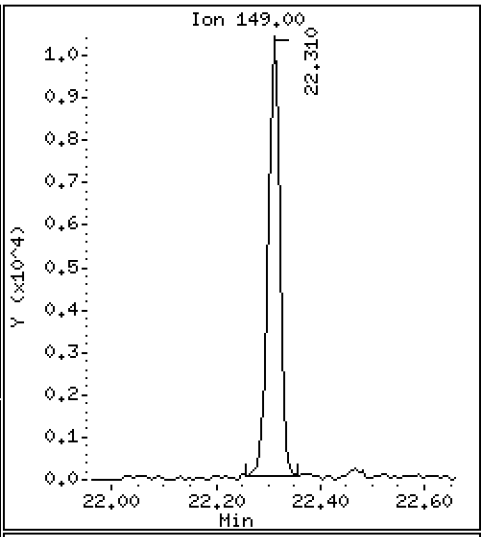
Concentration: 0.1836 ug/mL

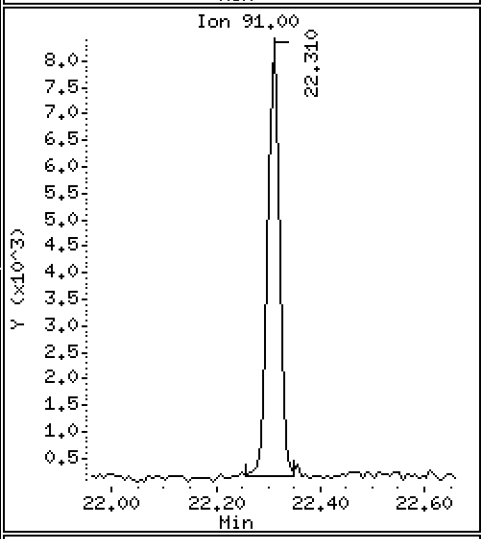


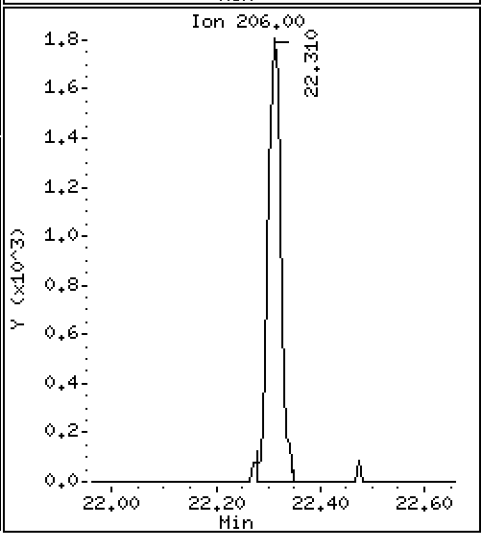












Date : 17-MAR-2023 16:16

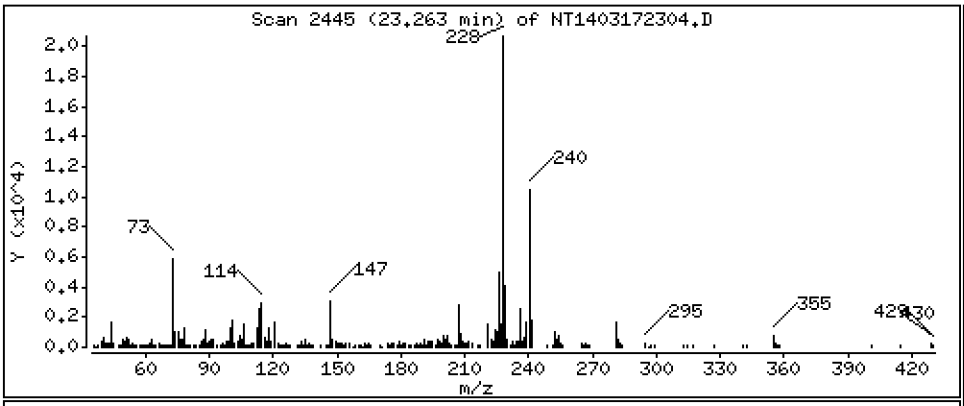
Client ID: Instrument: nt14.i

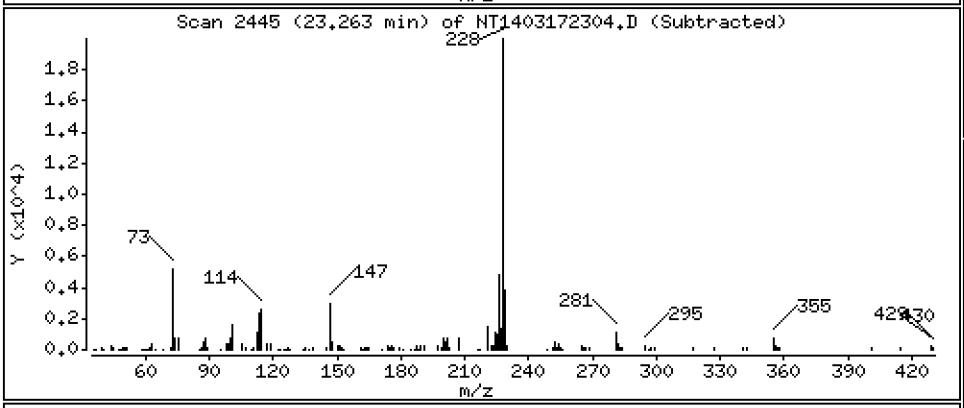
Sample Info: SLC0335-LCV1

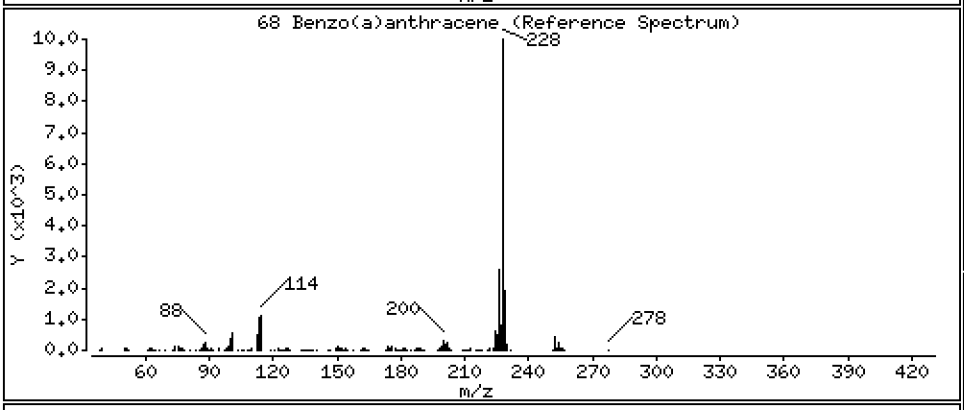
Operator: JGR

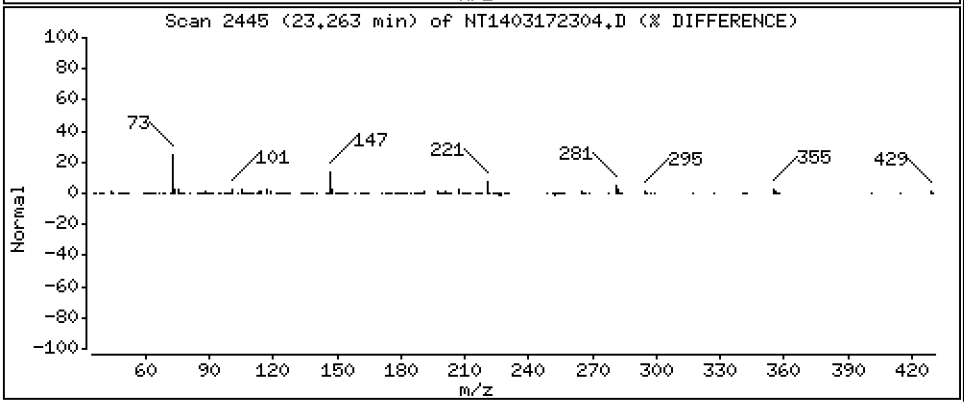
Column phase: ZB-5msi Column diameter: 0.25

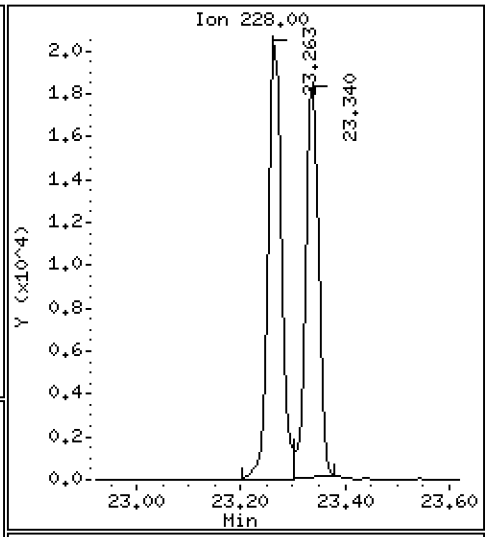
68 Benzo(a)anthracene Concentration: 0.2082 ug/mL

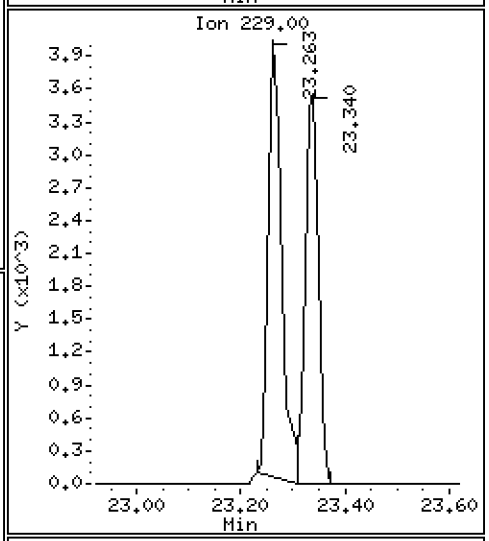


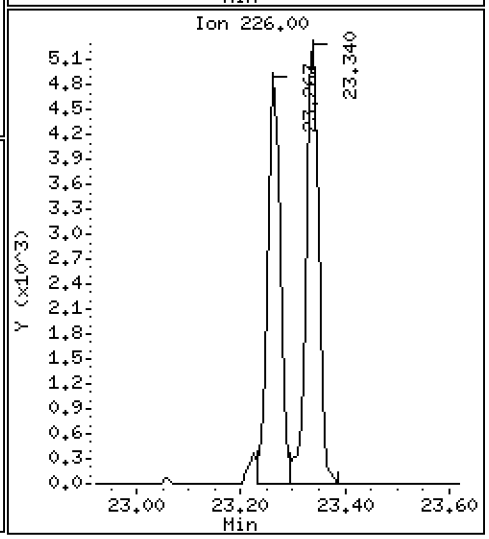












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

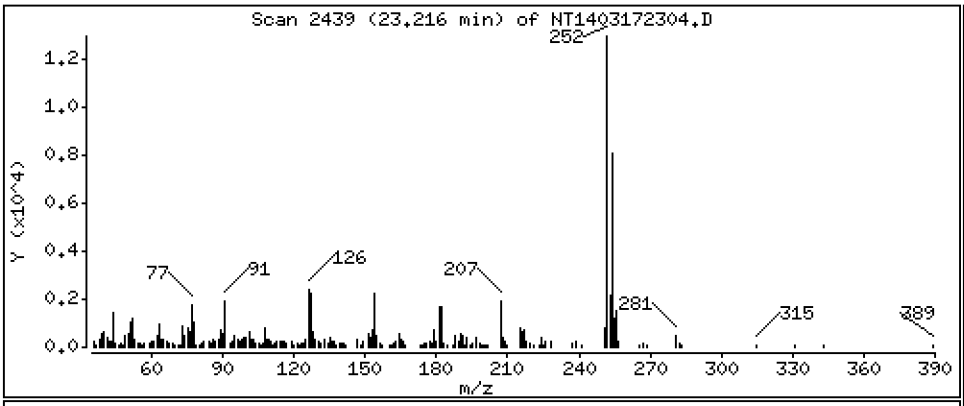
Operator: JGR

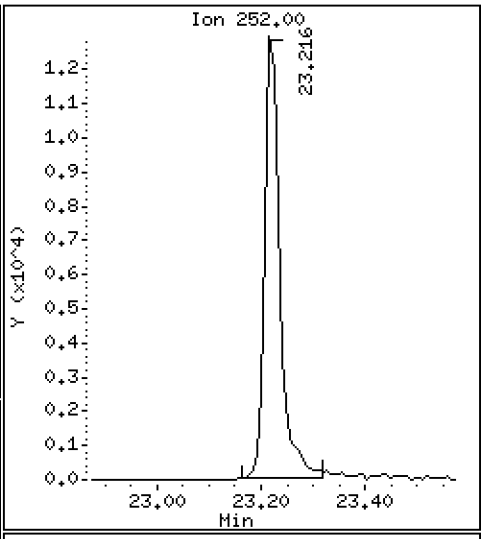
Column phase: ZB-5msi

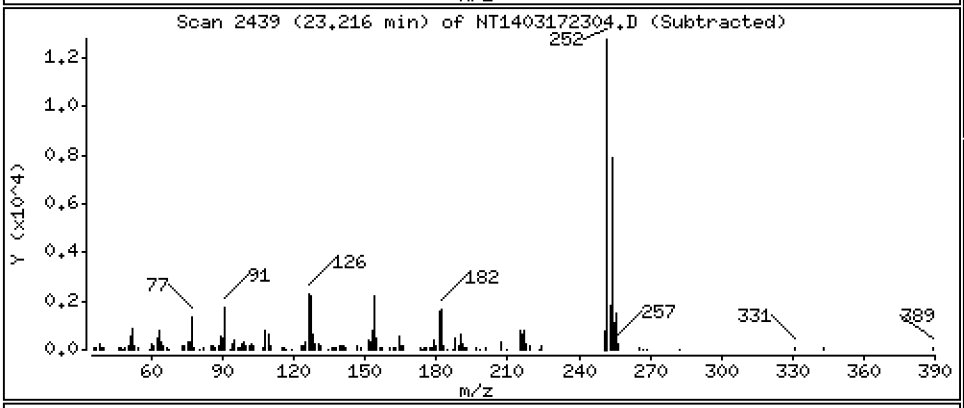
Column diameter: 0.25

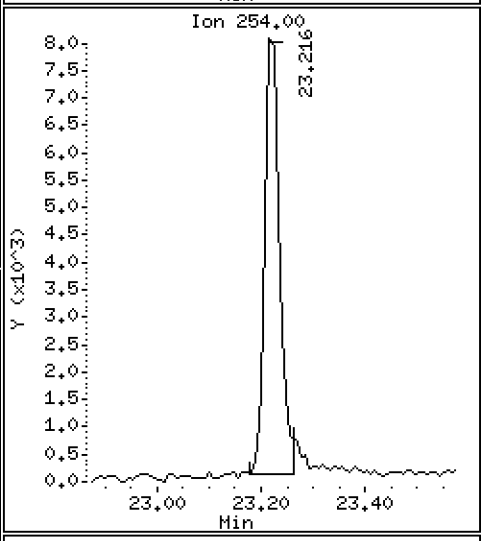
70 3,3'-Dichlorobenzidine

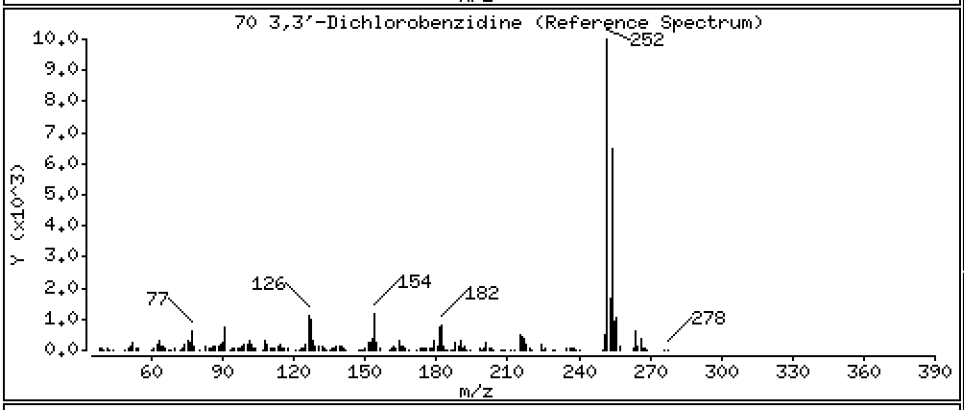
Concentration: 0.5150 ug/mL

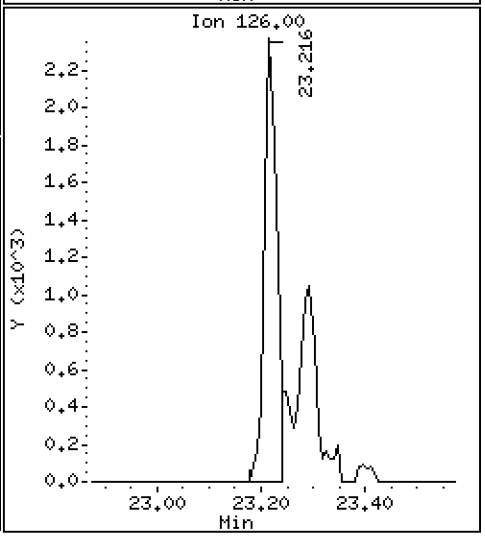


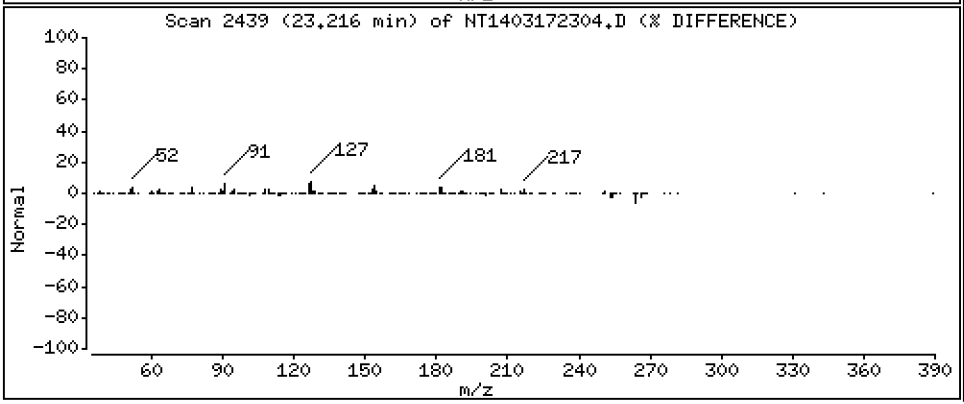












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

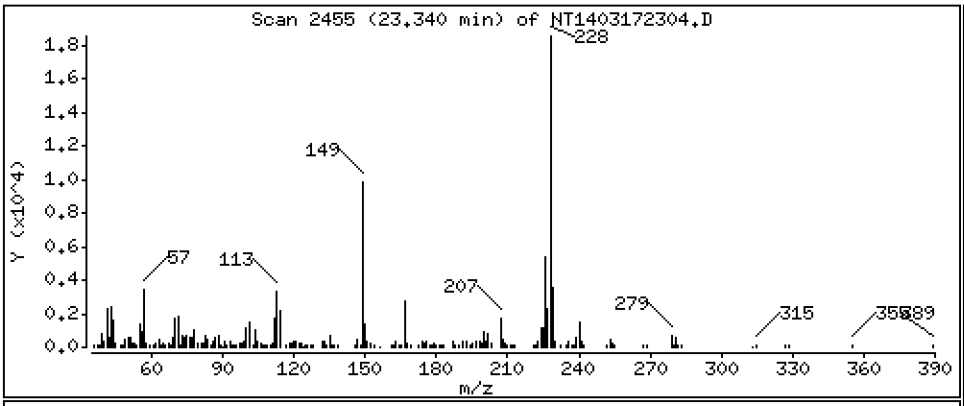
Operator: JGR

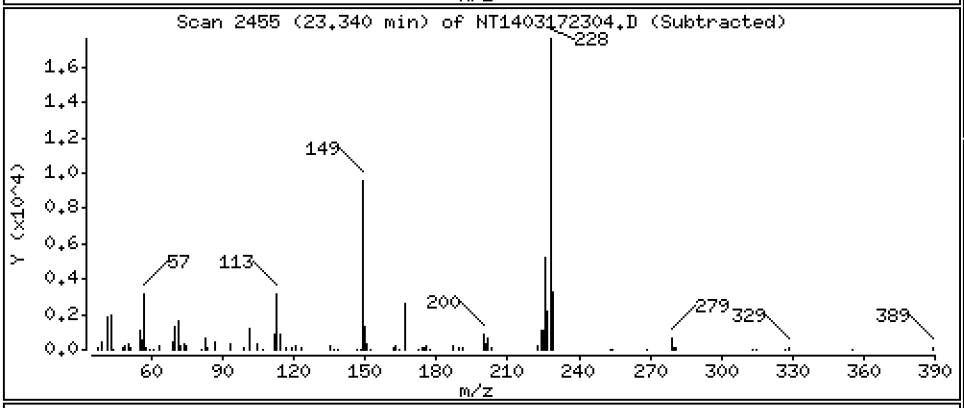
Column phase: ZB-5msi

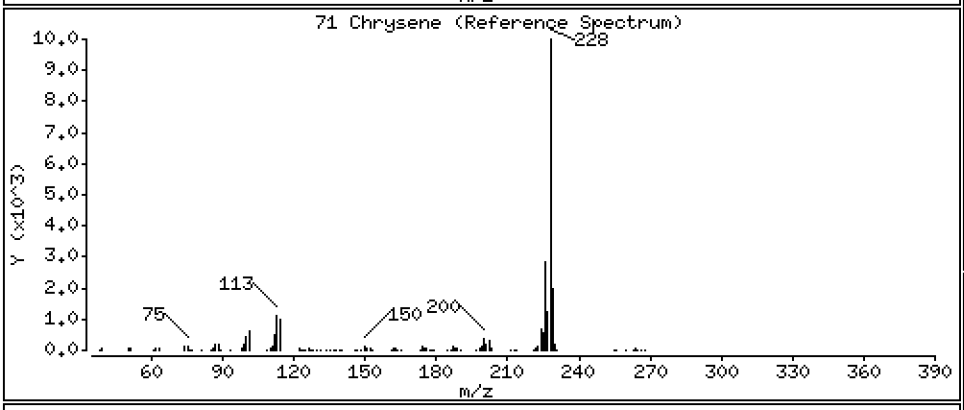
Column diameter: 0.25

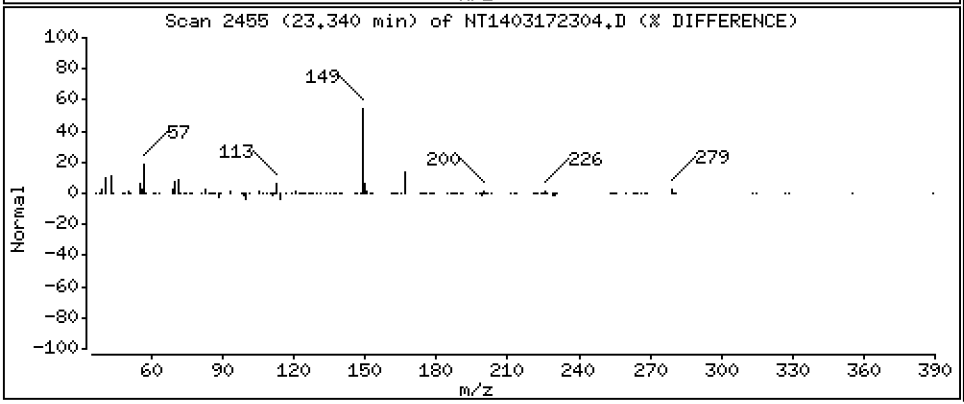
71 Chrysene

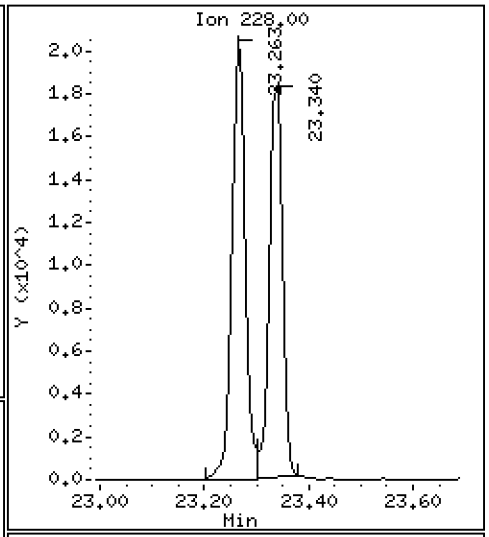
Concentration: 0.2012 ug/mL

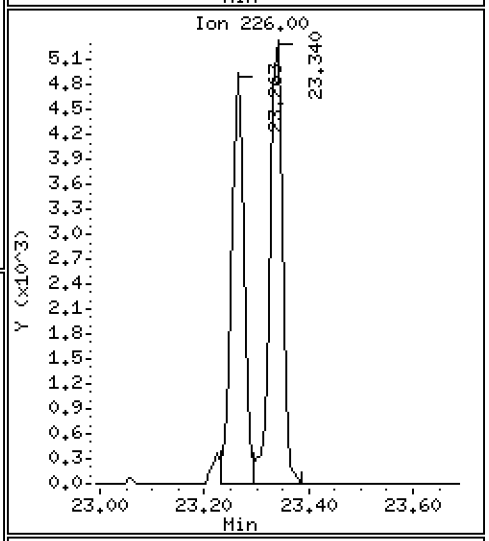


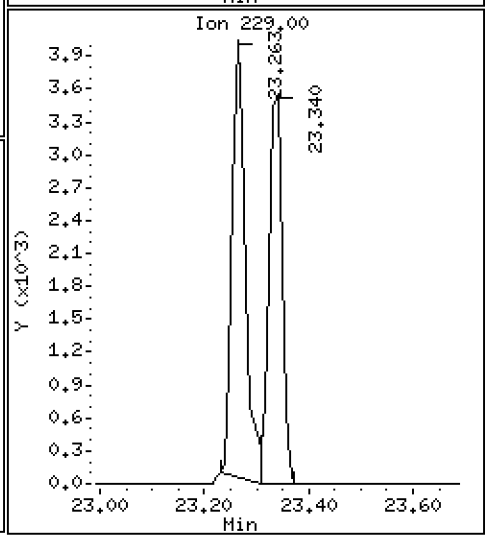












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

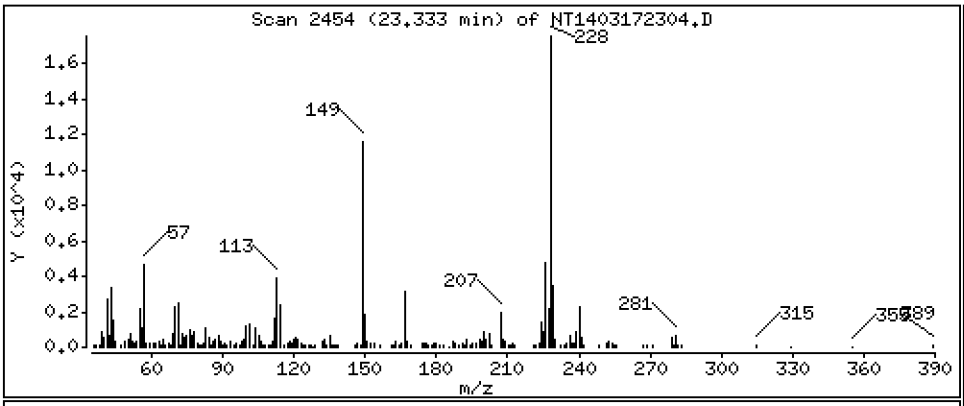
Operator: JGR

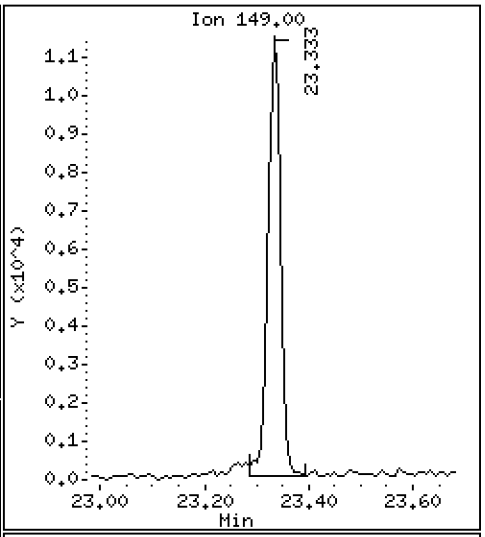
Column phase: ZB-5msi

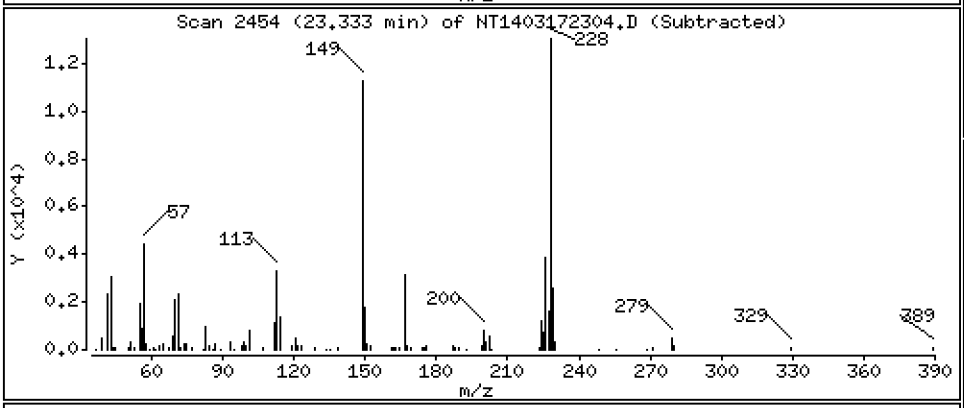
Column diameter: 0.25

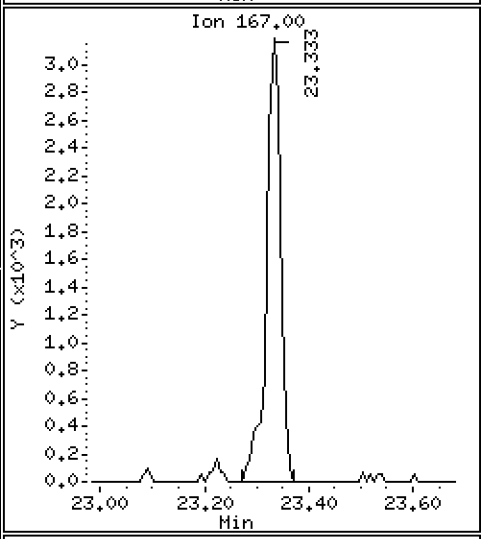
72 bis(2-Ethylhexyl)phthalate

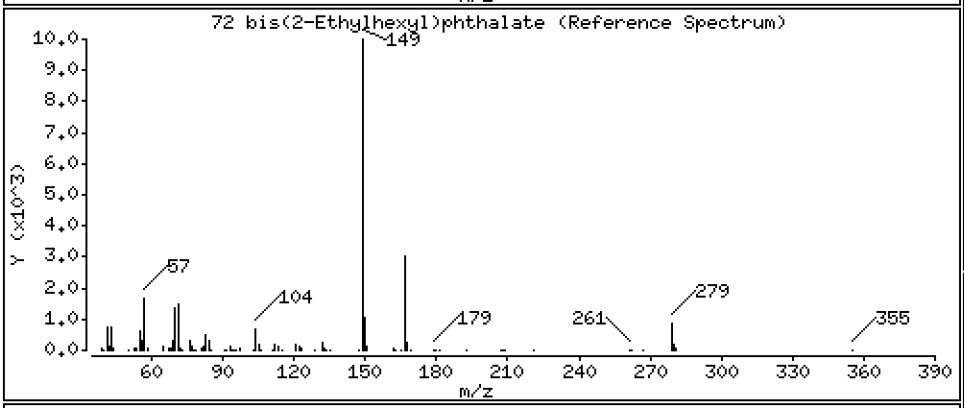
Concentration: 0.1958 ug/mL

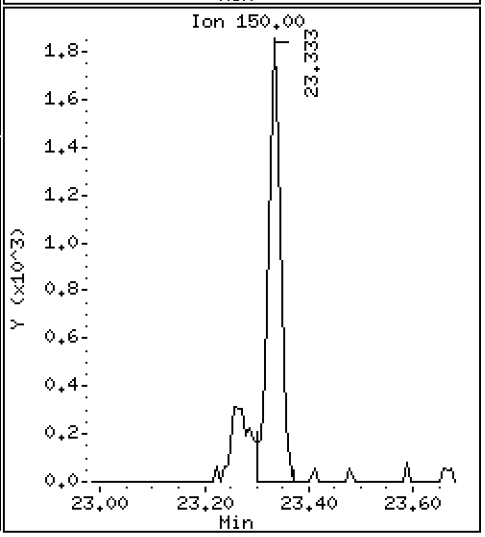


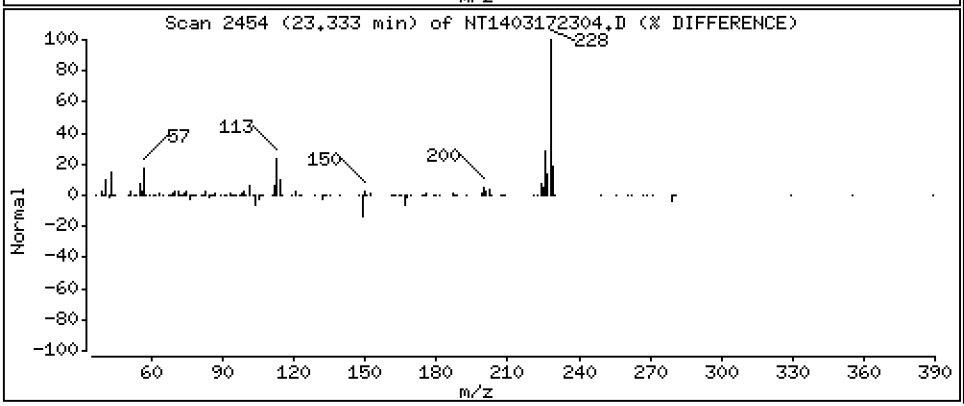












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

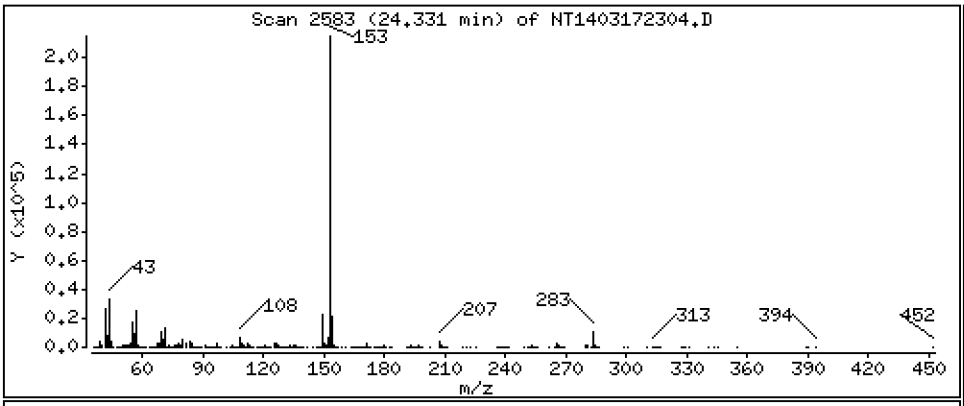
Operator: JGR

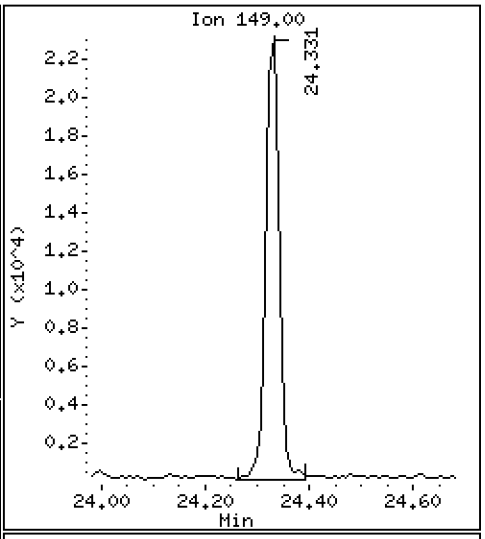
Column phase: ZB-5msi

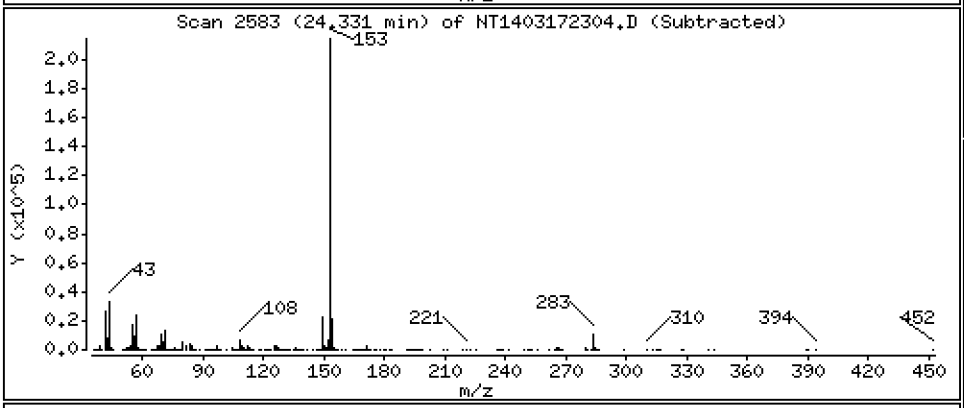
Column diameter: 0.25

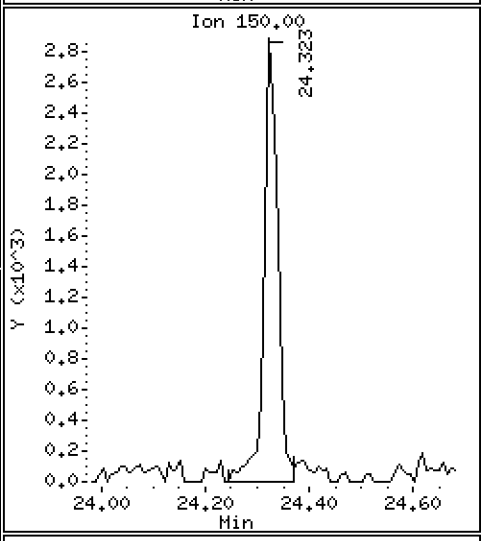
73 Di-n-octylphthalate

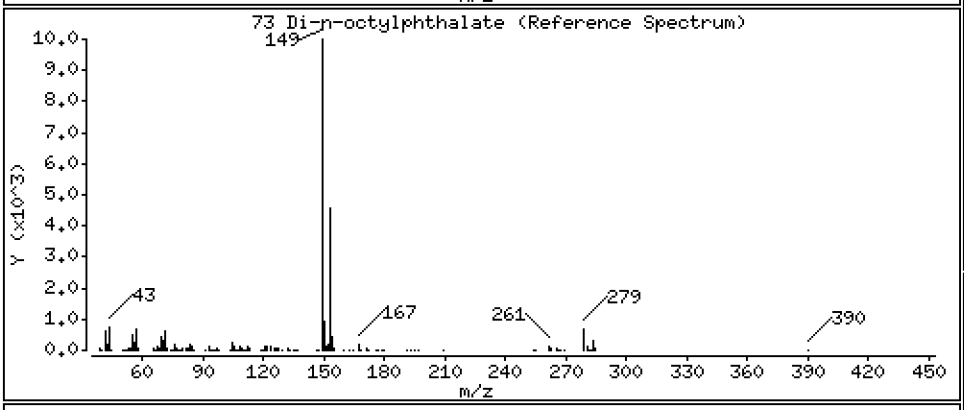
Concentration: 0.2178 ug/mL

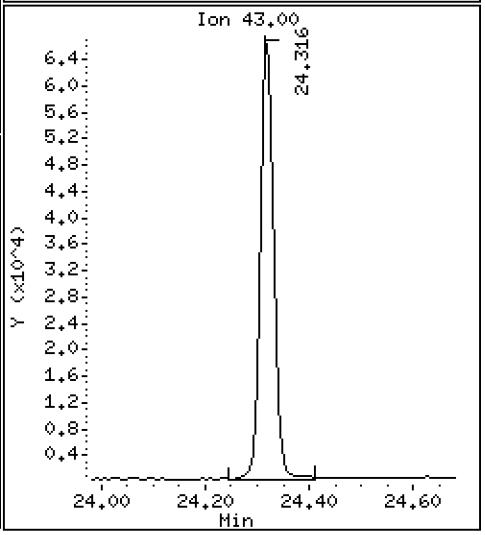


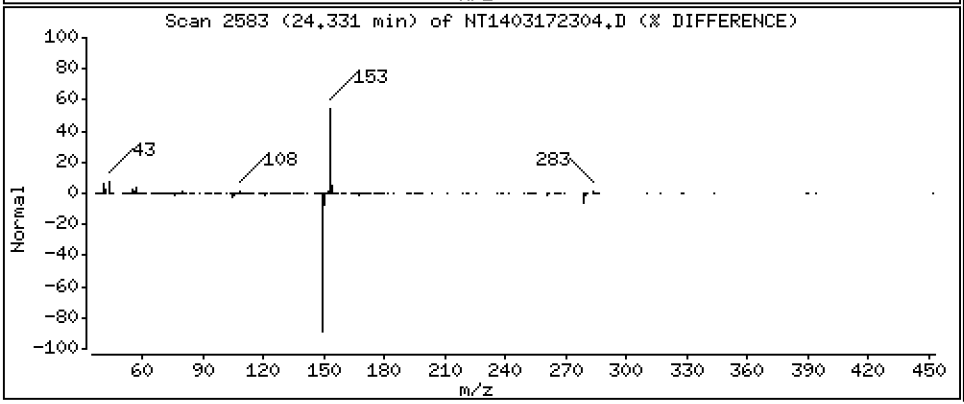












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

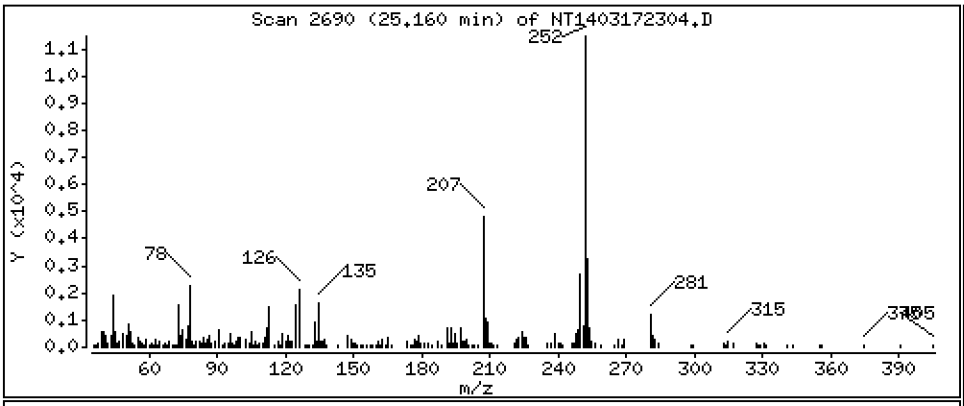
Operator: JGR

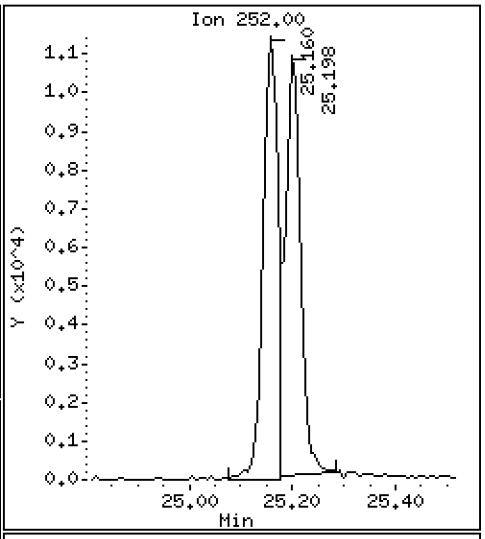
Column phase: ZB-5msi

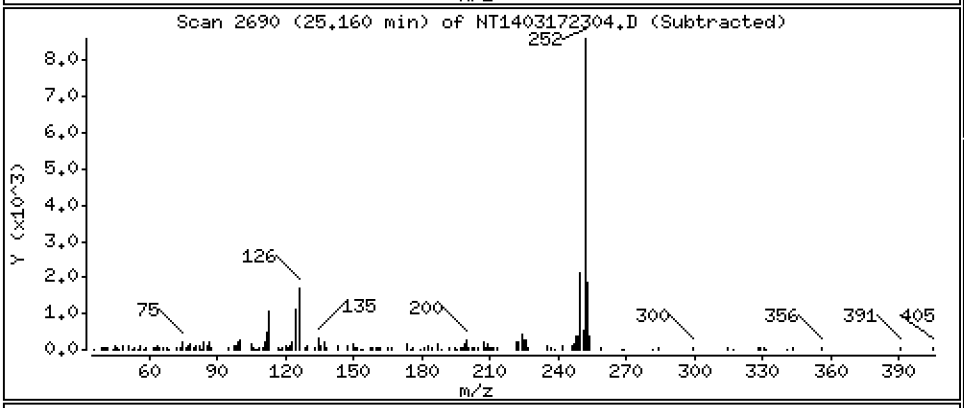
Column diameter: 0.25

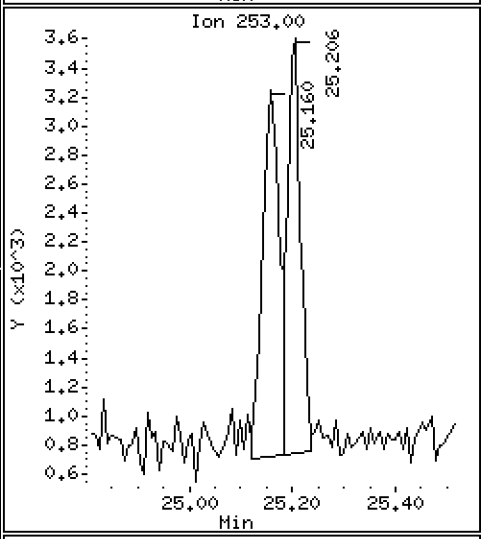
74 Benzo(b)fluoranthene

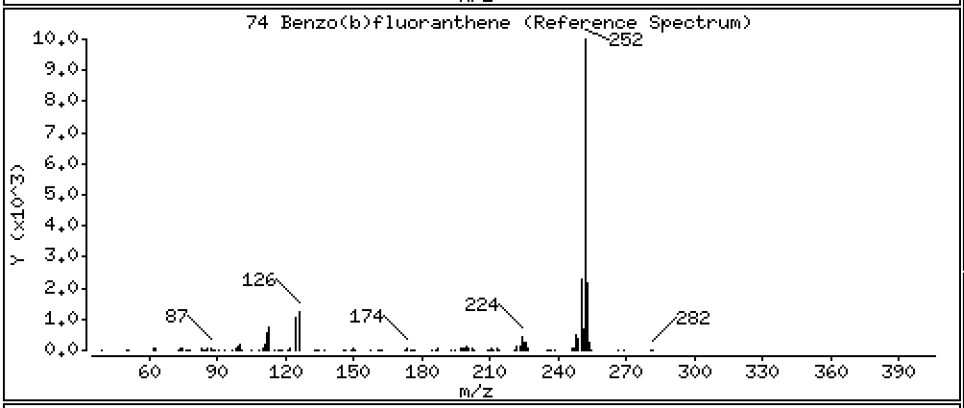
Concentration: 0.1881 ug/mL

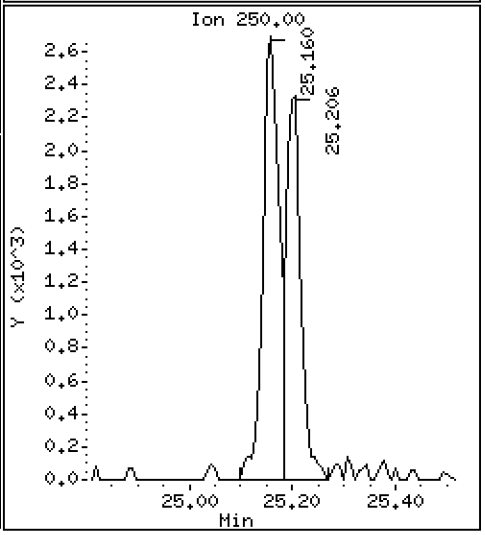


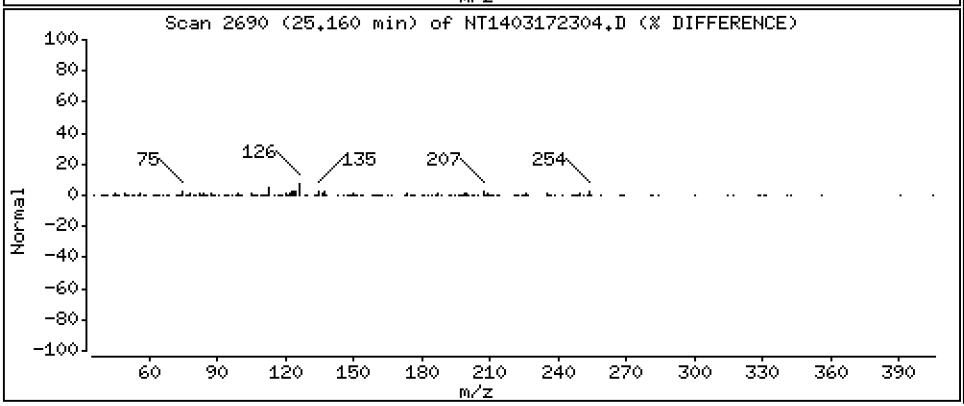












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

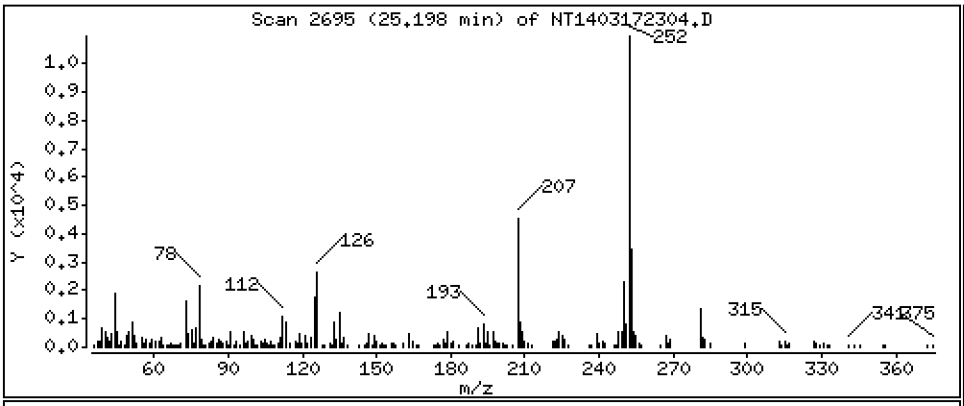
Operator: JGR

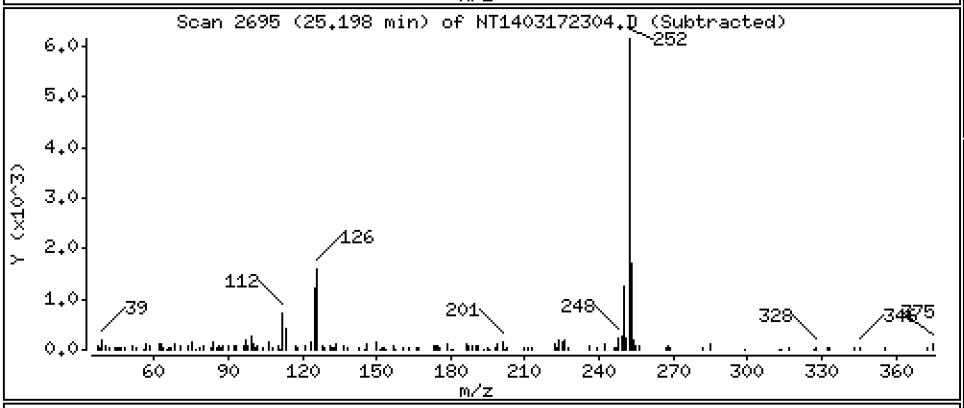
Column phase: ZB-5msi

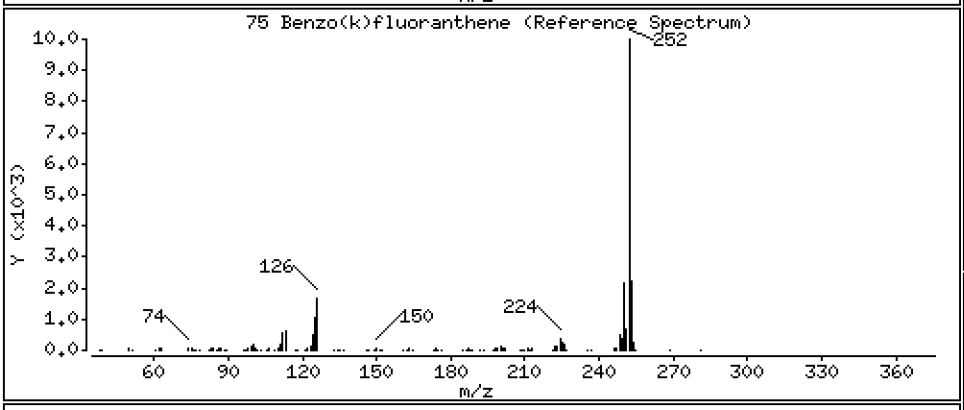
Column diameter: 0.25

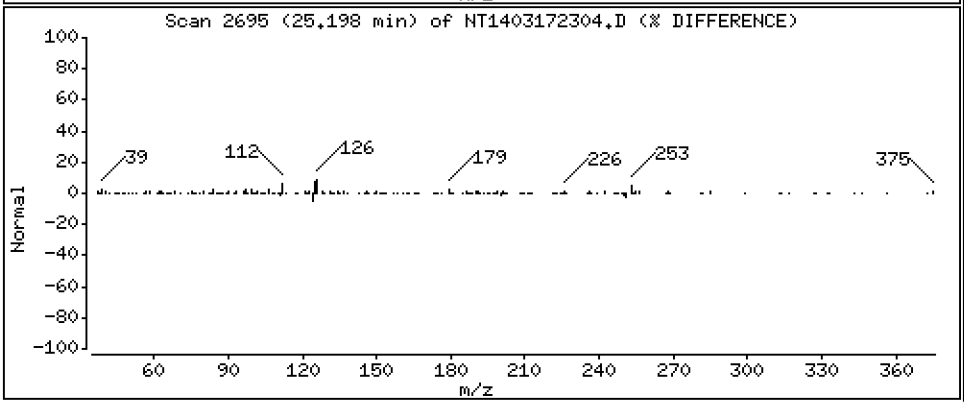
75 Benzo(k)fluoranthene

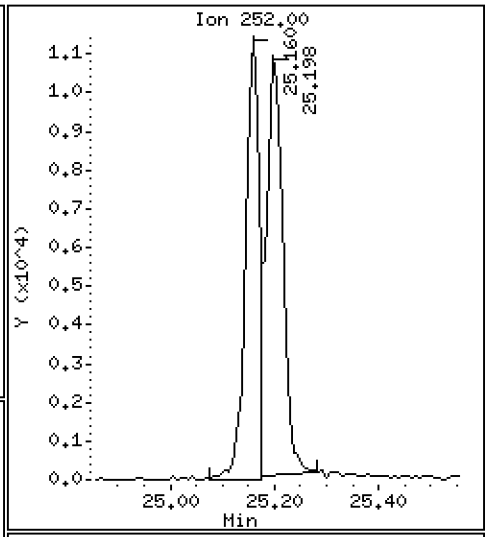
Concentration: 0.2144 ug/mL

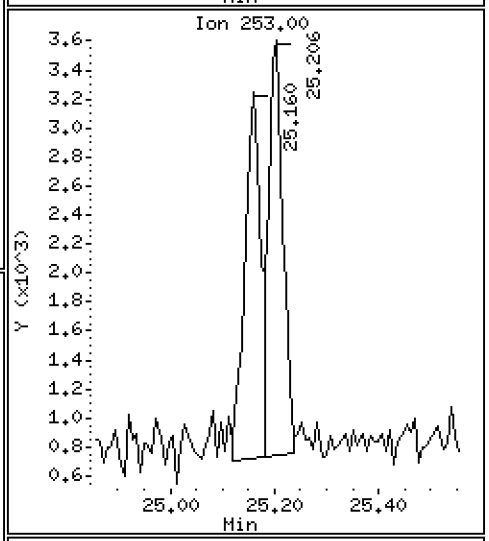


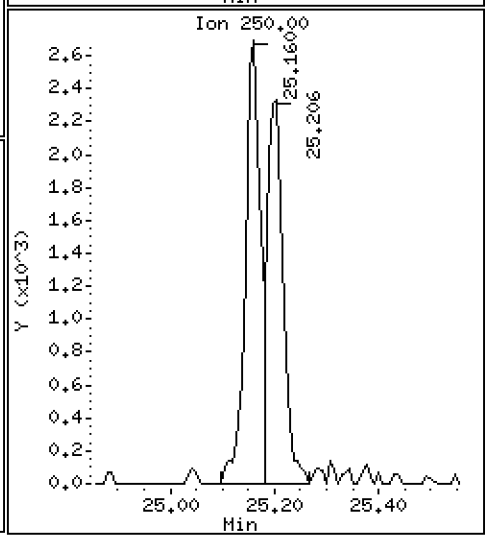












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

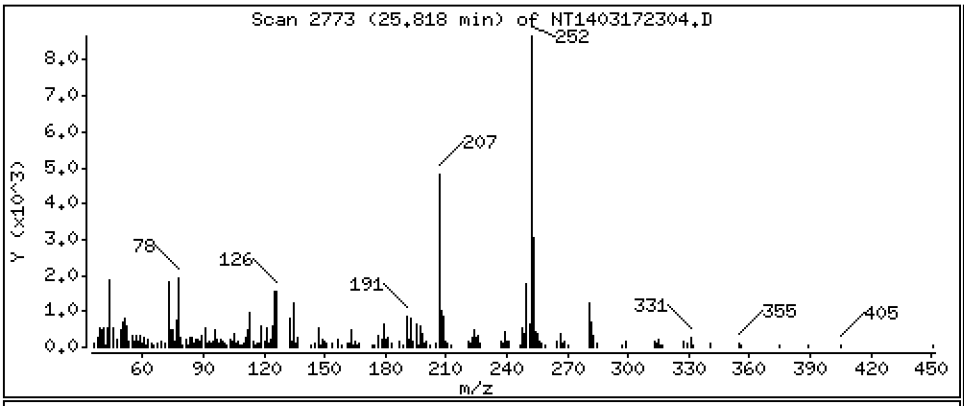
Operator: JGR

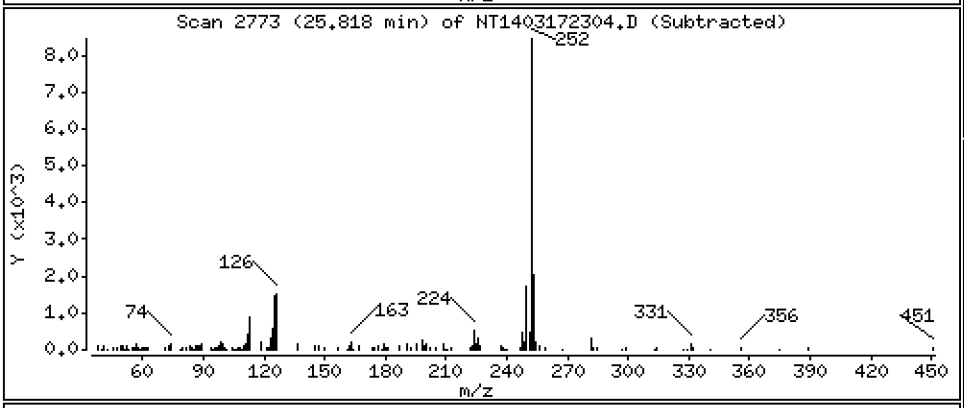
Column phase: ZB-5msi

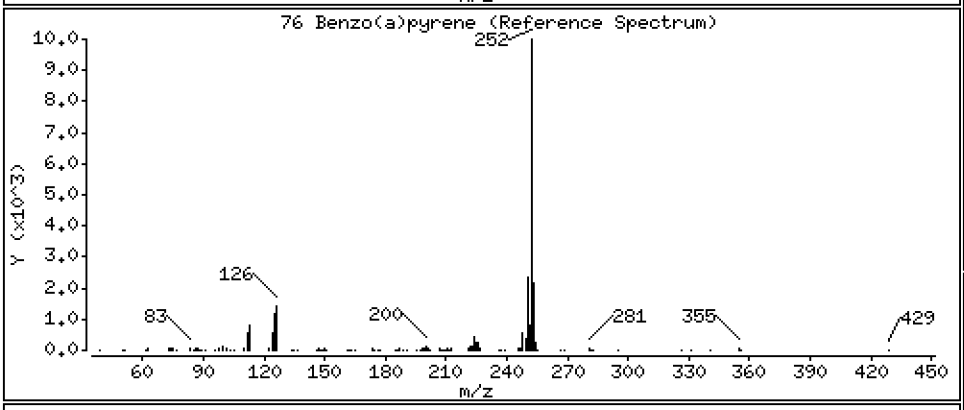
Column diameter: 0.25

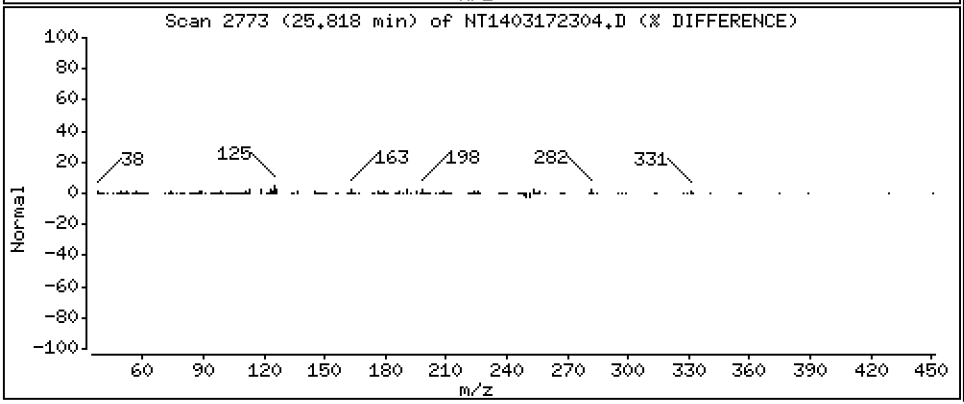
76 Benzo(a)pyrene

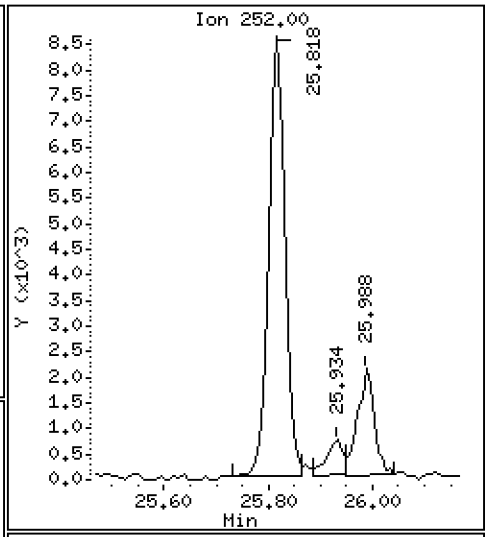
Concentration: 0.1803 ug/mL

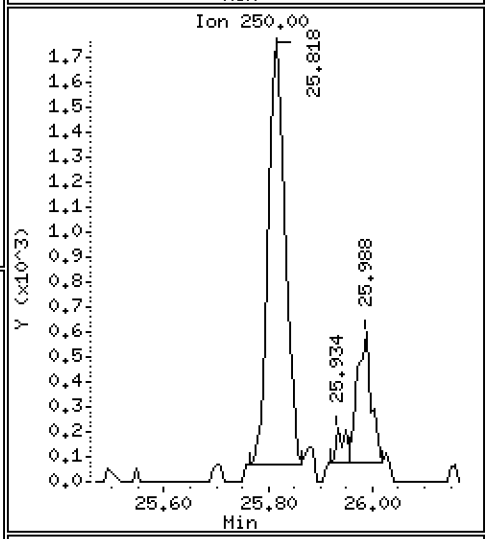


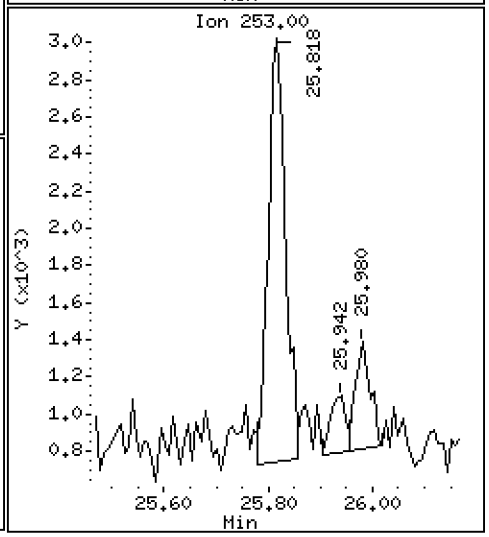












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

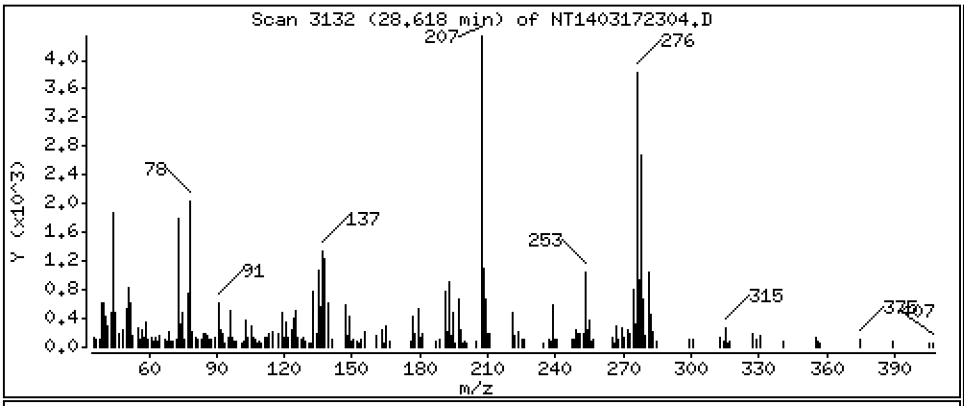
Operator: JGR

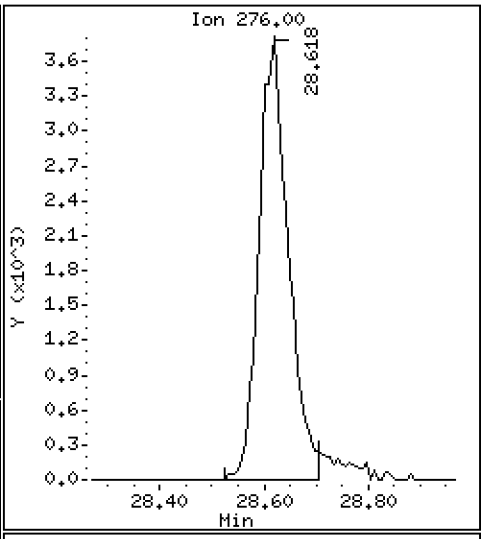
Column phase: ZB-5msi

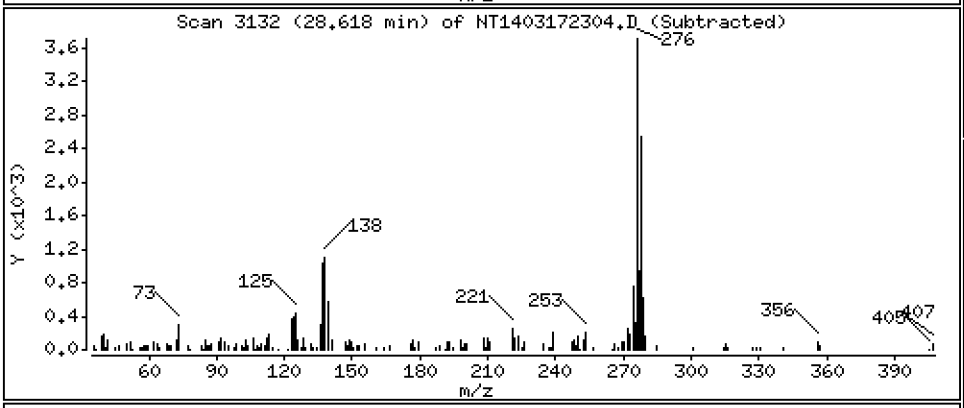
Column diameter: 0.25

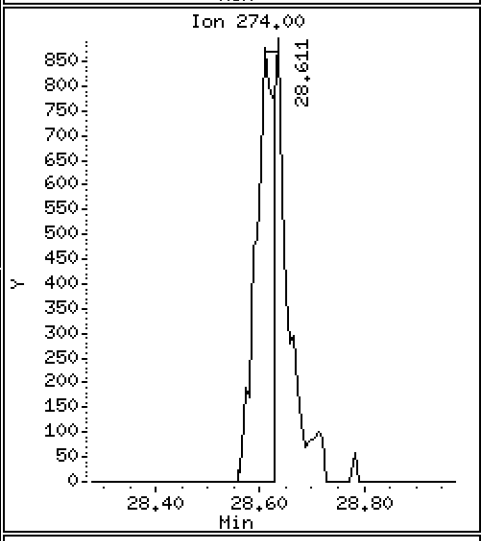
78 Indeno(1,2,3-cd)pyrene

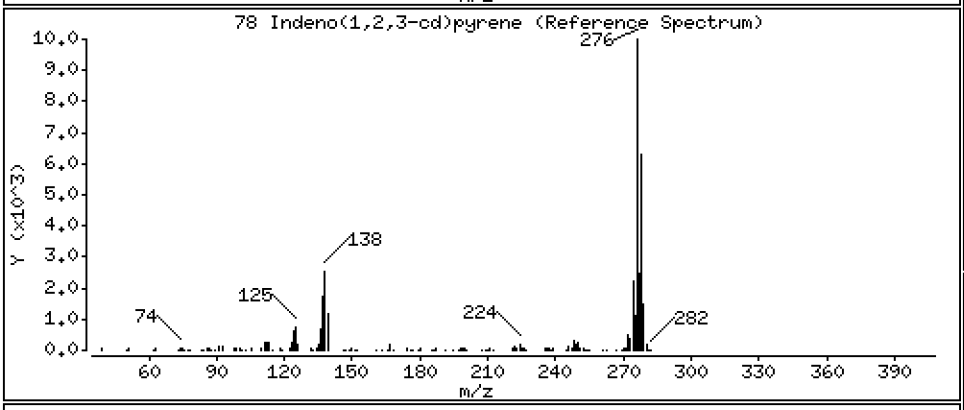
Concentration: 0.1366 ug/mL

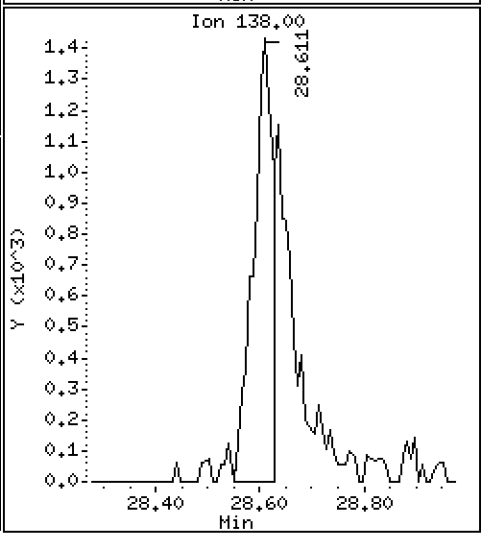


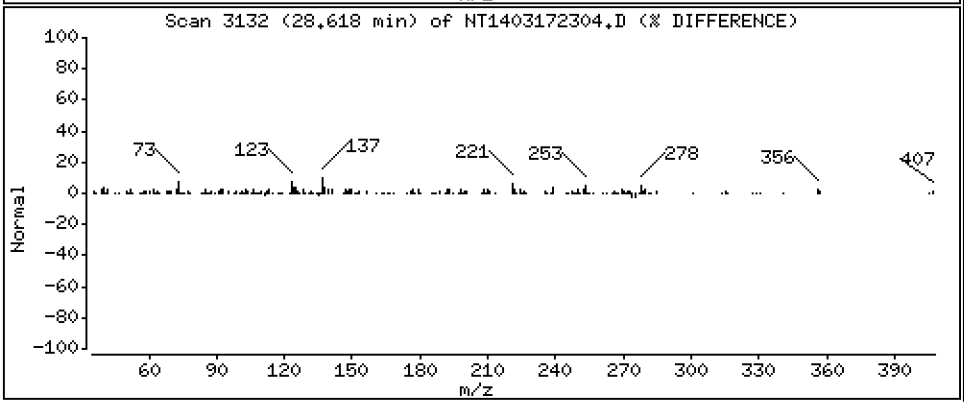












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

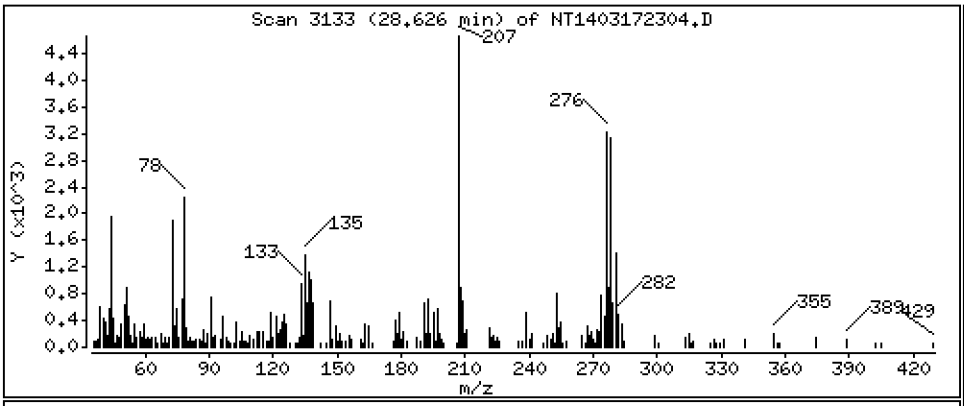
Operator: JGR

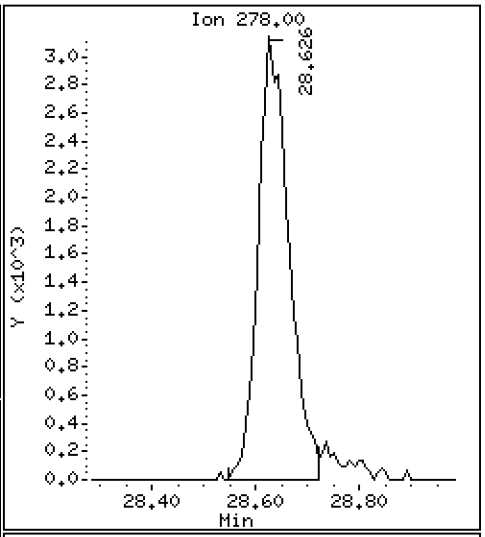
Column phase: ZB-5msi

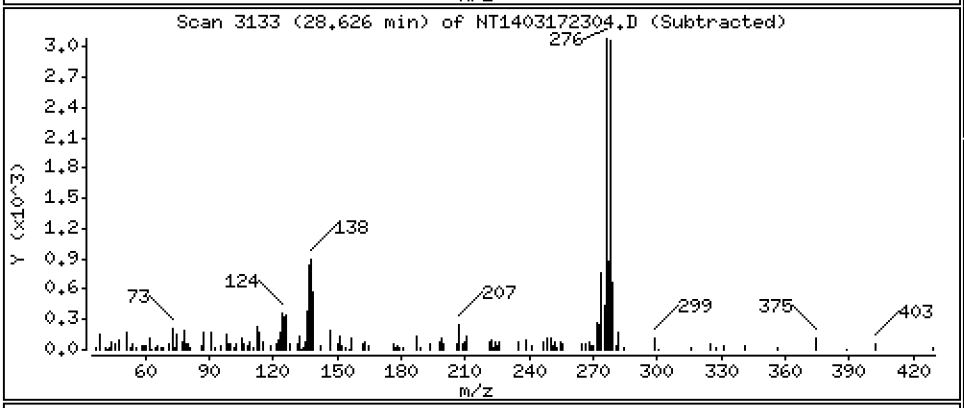
Column diameter: 0.25

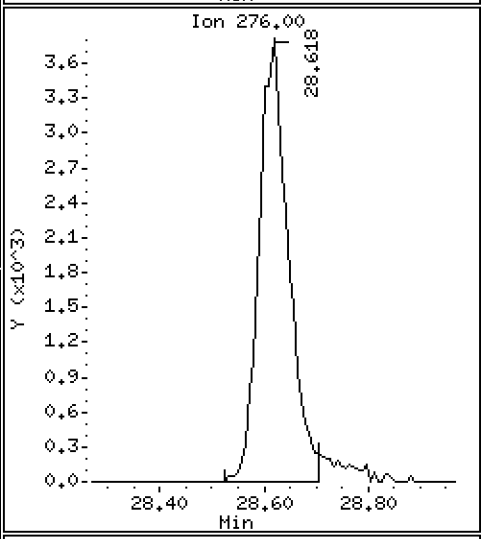
79 Dibenzo(a,h)anthracene

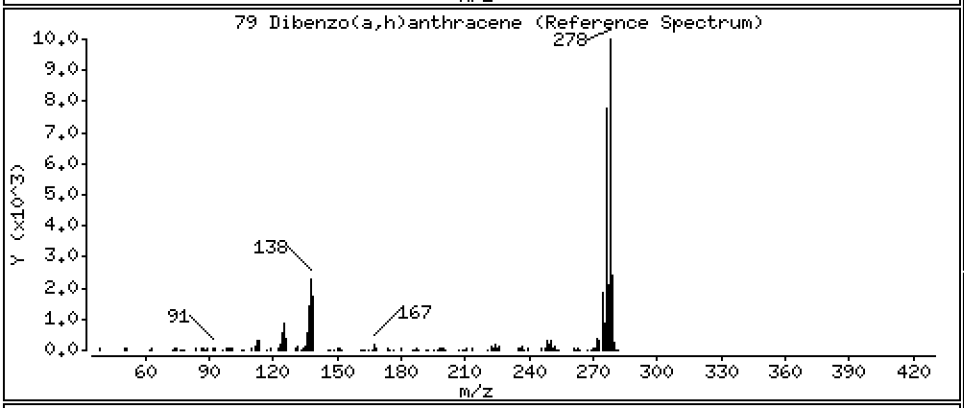
Concentration: 0.1407 ug/mL

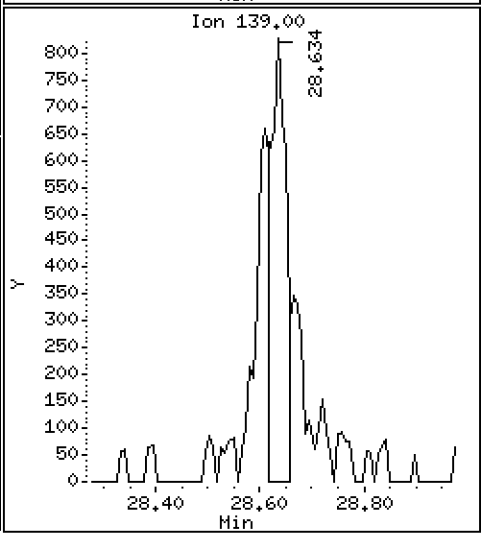


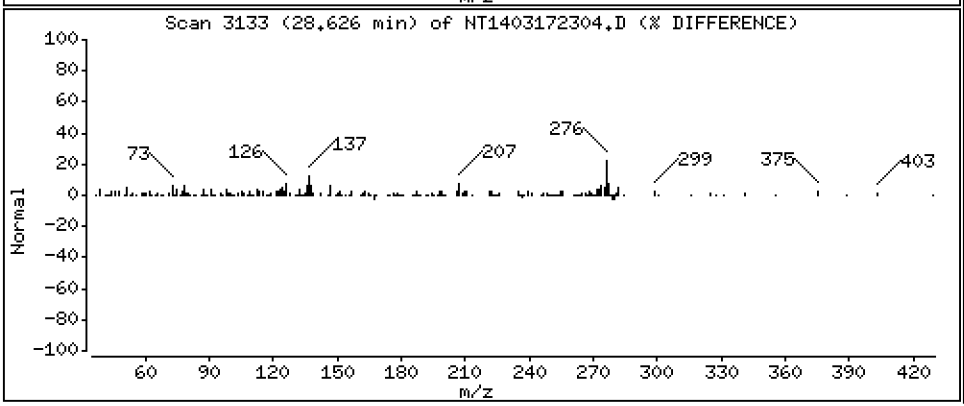












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

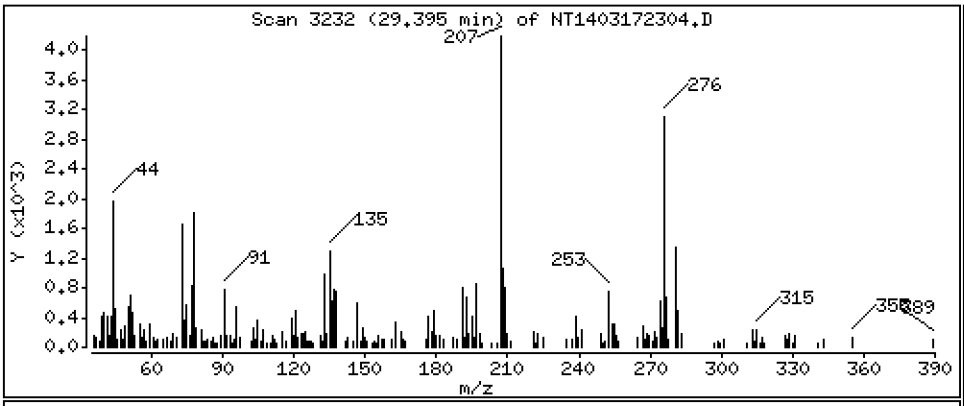
Operator: JGR

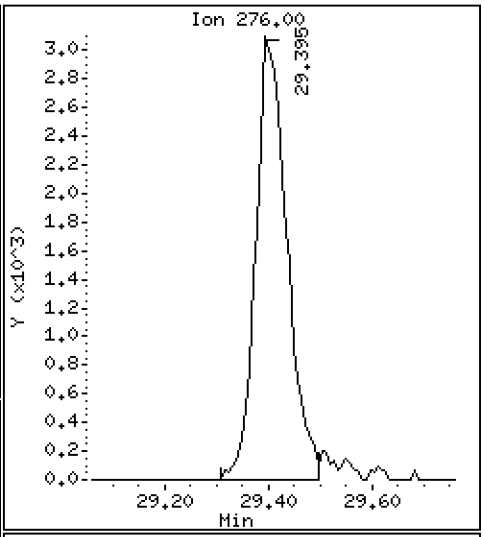
Column phase: ZB-5msi

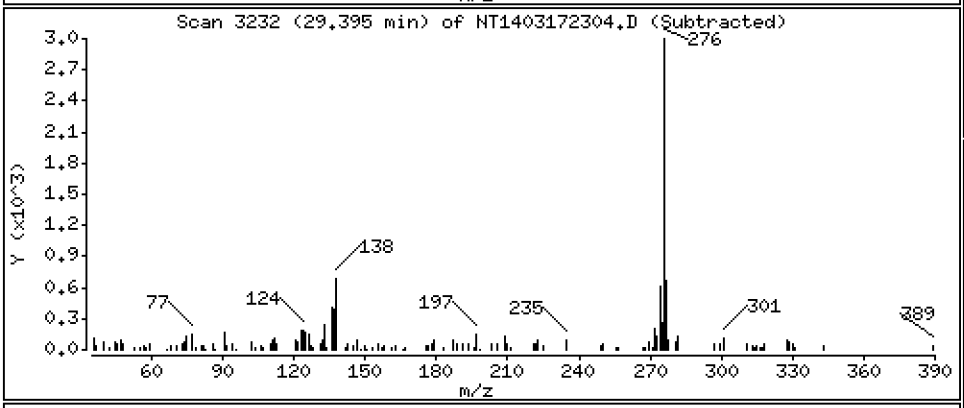
Column diameter: 0.25

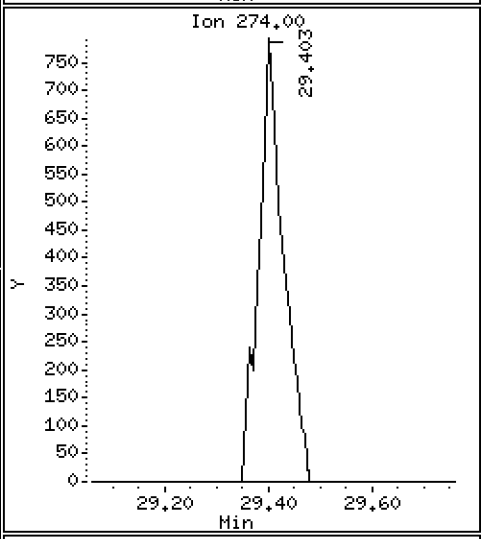
80 Benzo(g,h,i)perylene

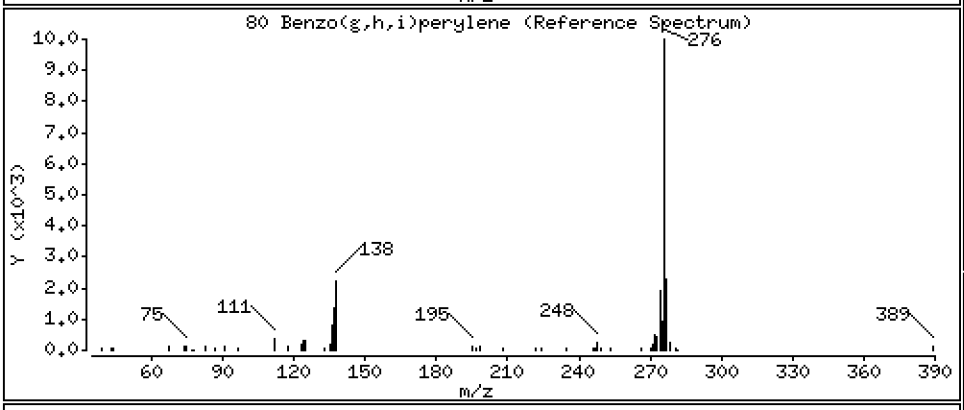
Concentration: 0.1438 ug/mL

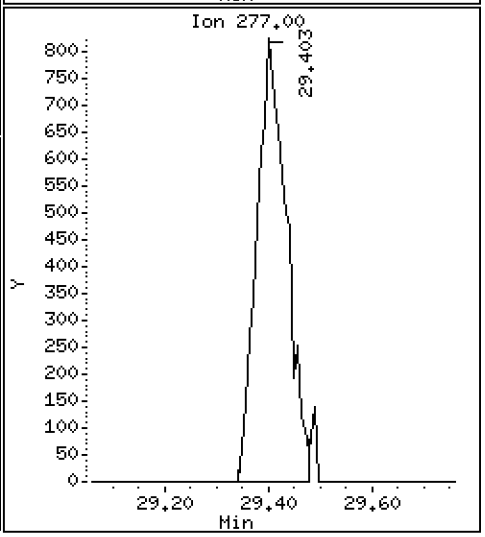


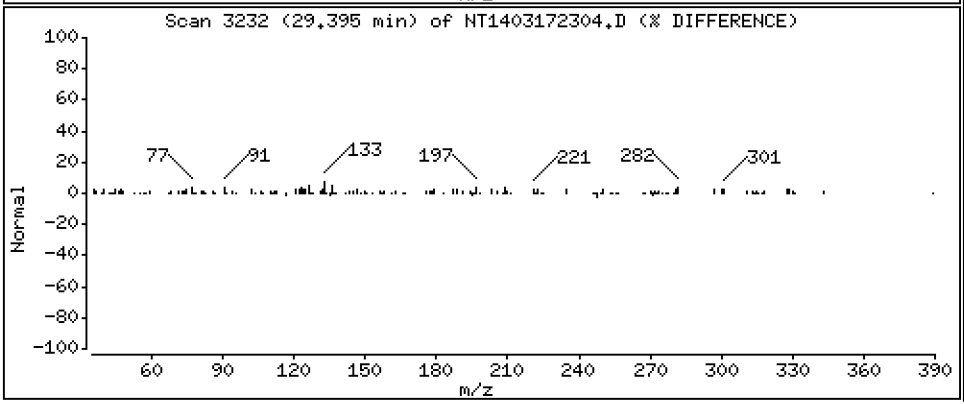












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

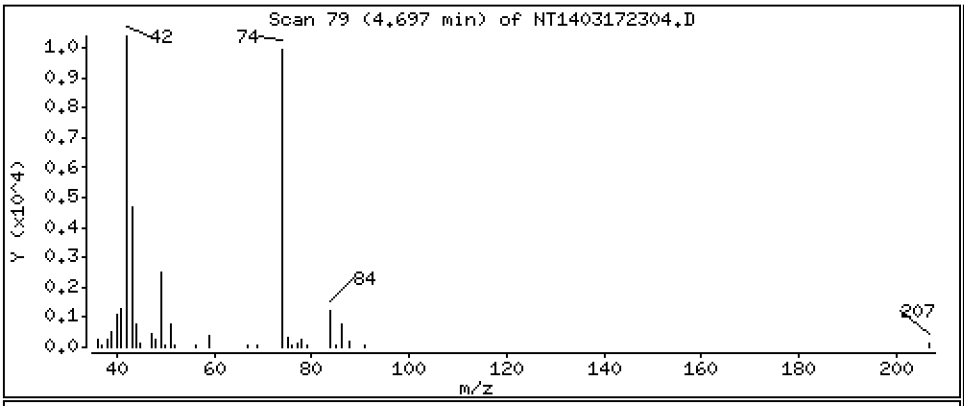
Operator: JGR

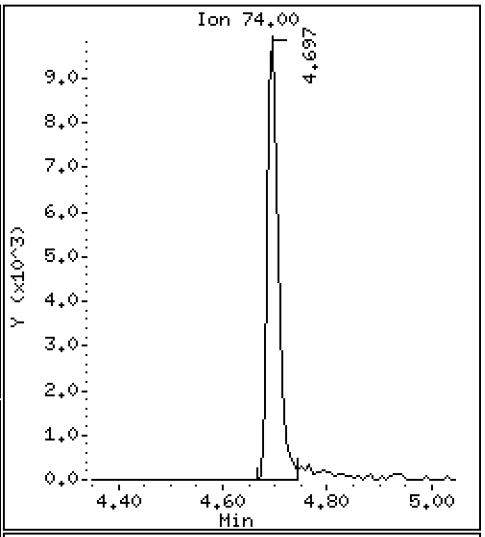
Column phase: ZB-5msi

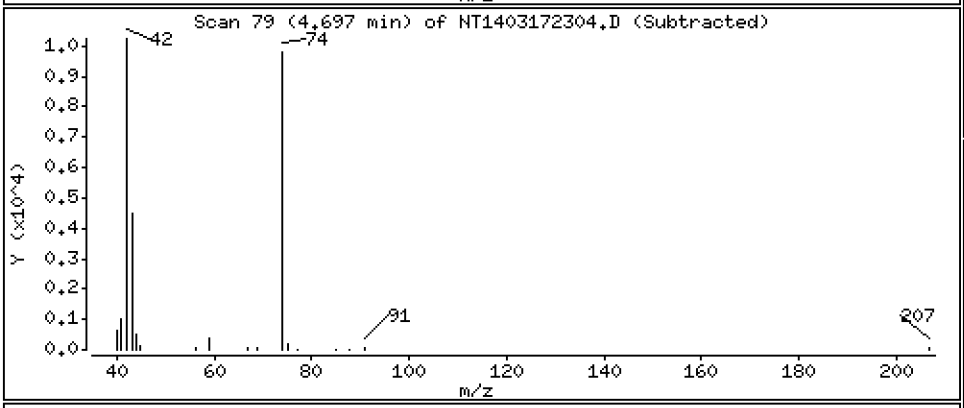
Column diameter: 0.25

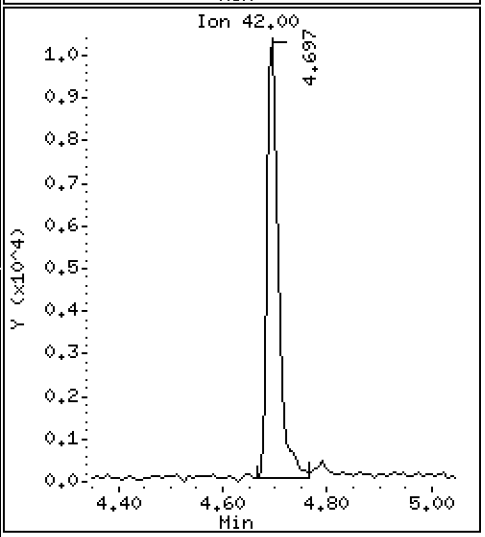
90 N-Nitrosodimethylamine

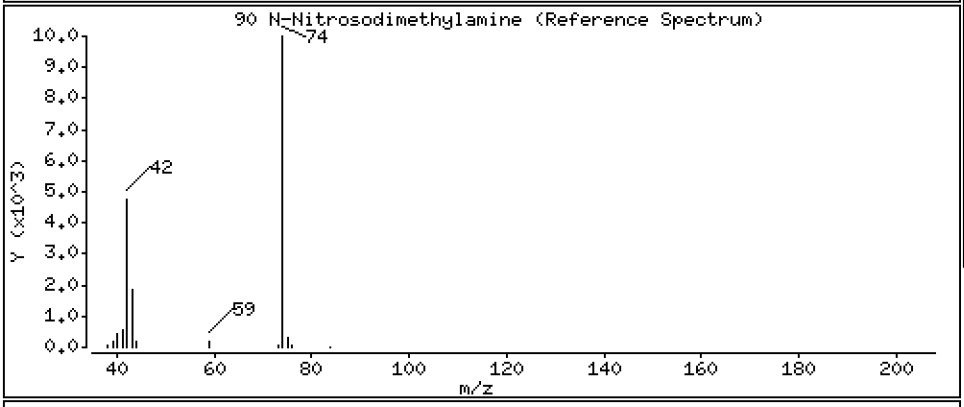
Concentration: 0.2949 ug/mL

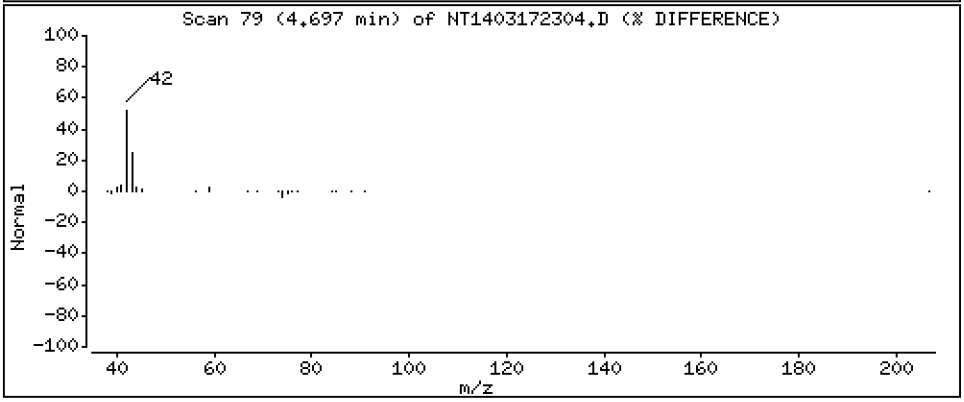












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

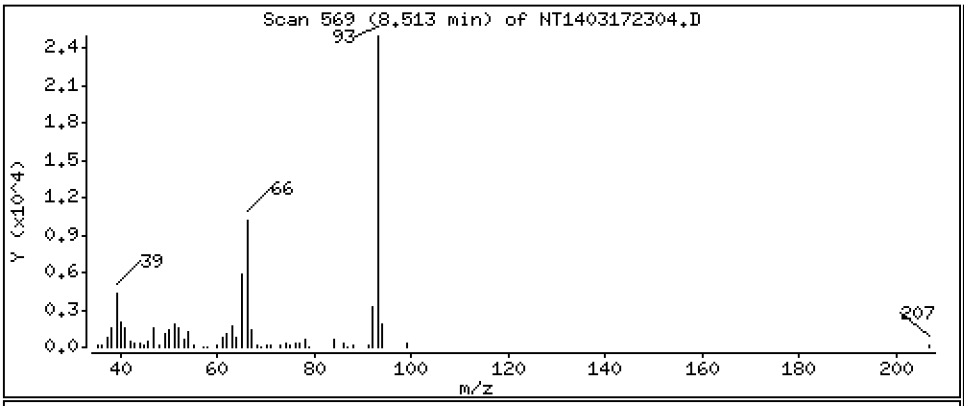
Operator: JGR

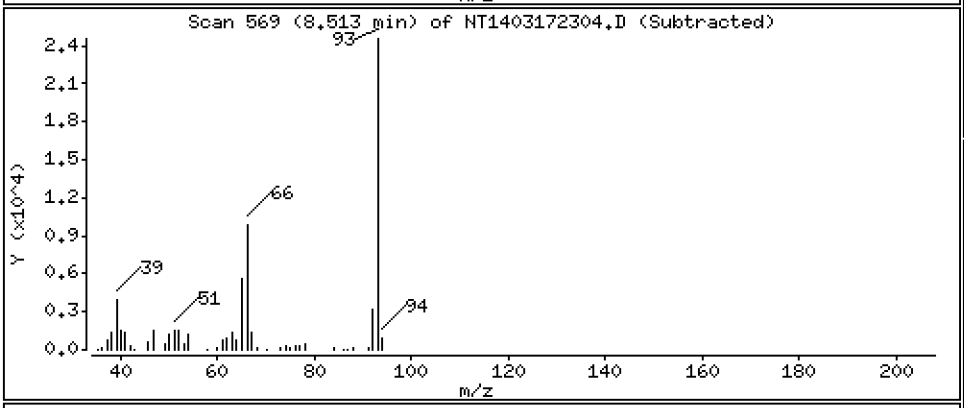
Column phase: ZB-5msi

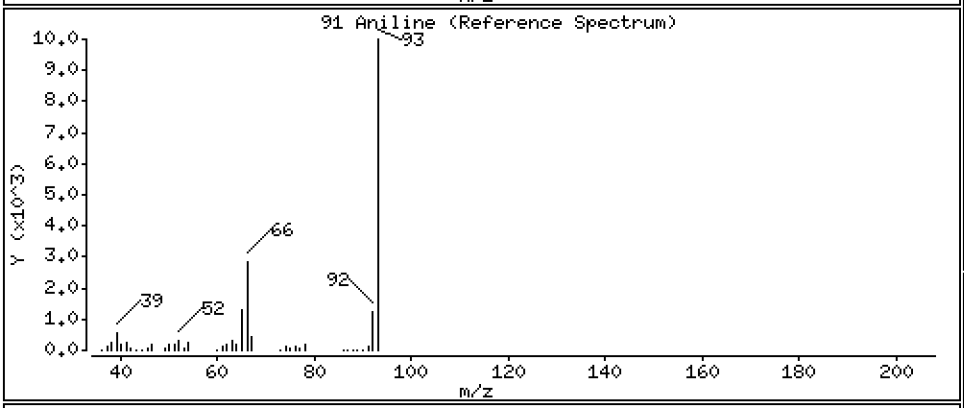
Column diameter: 0.25

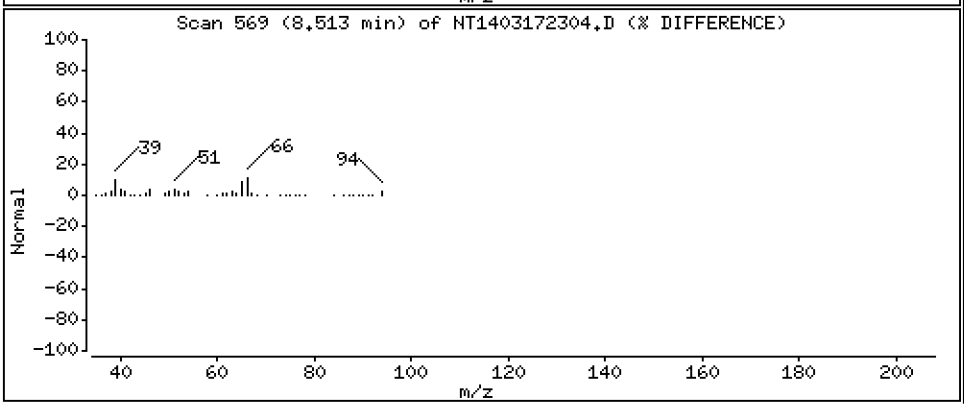
91 Aniline

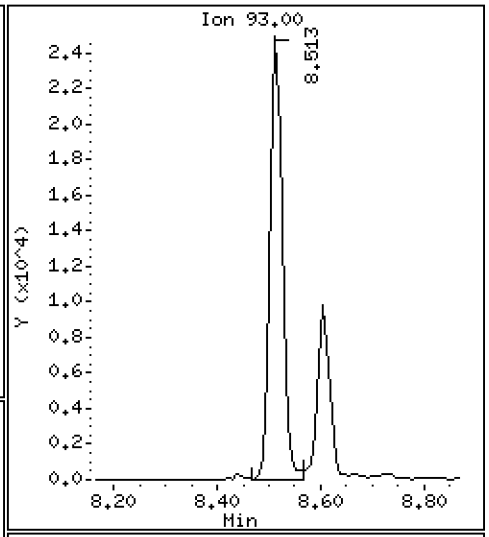
Concentration: 0.3769 ug/mL

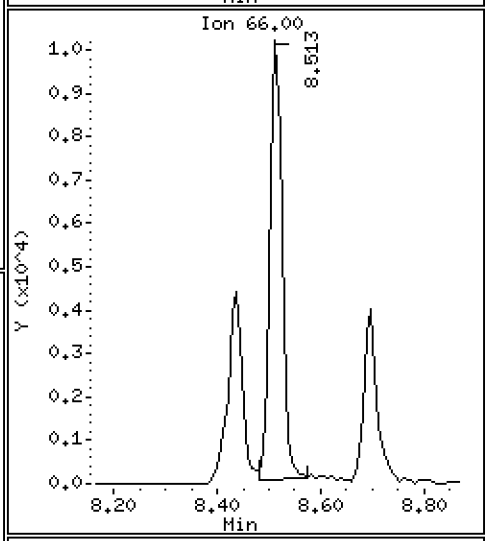


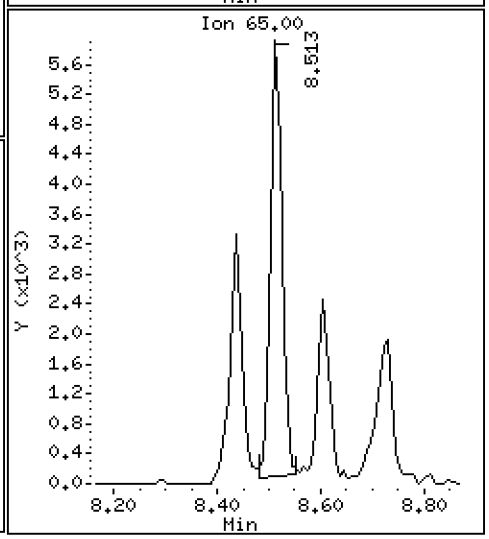












Date : 17-MAR-2023 16:16

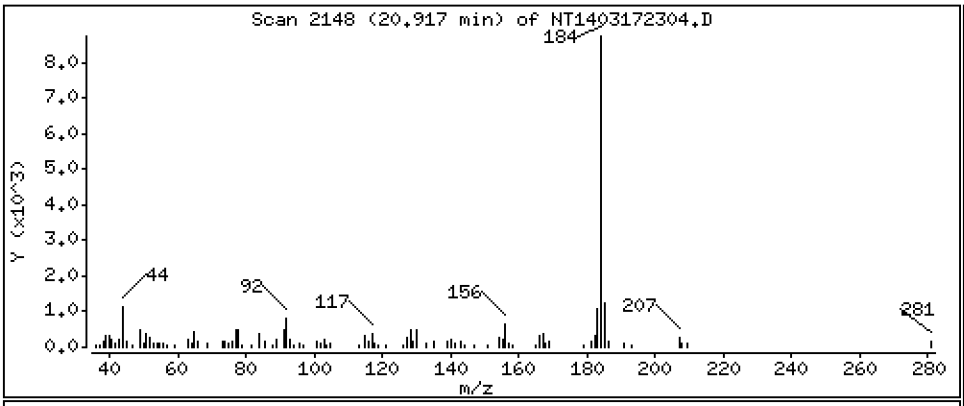
Client ID: Instrument: nt14.i

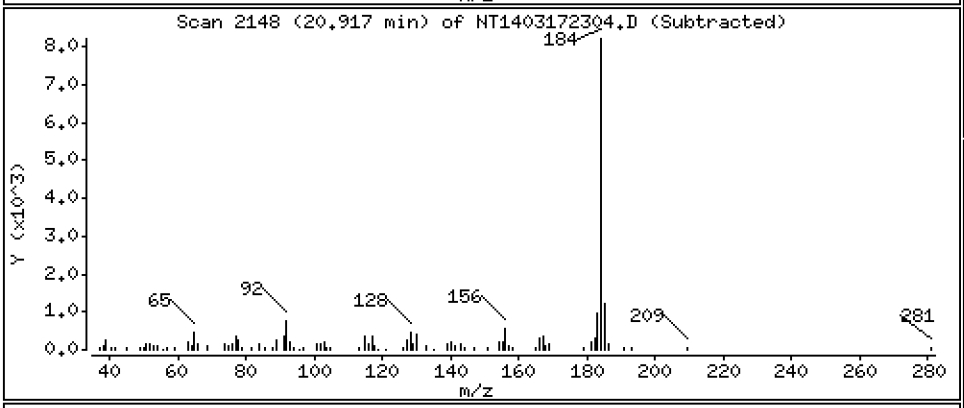
Sample Info: SLC0335-LCV1

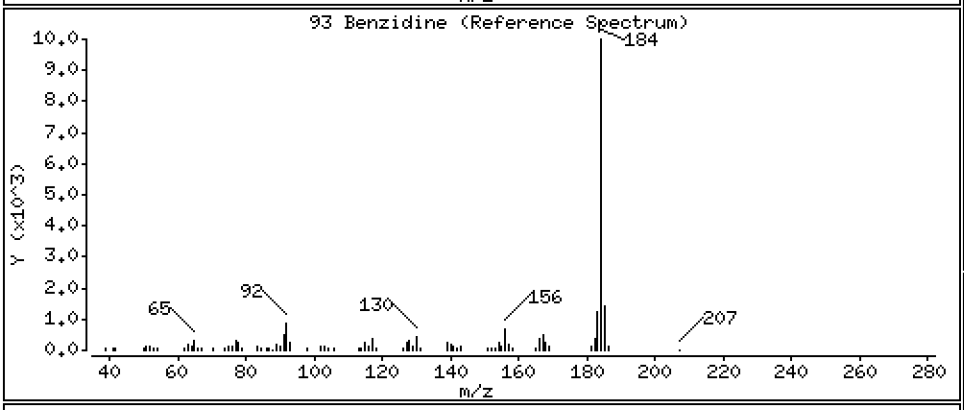
Operator: JGR

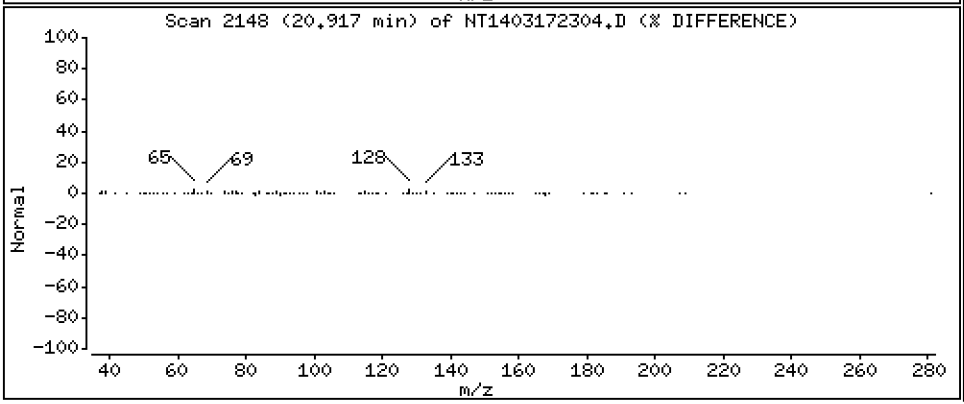
Column phase: ZB-5msi Column diameter: 0.25

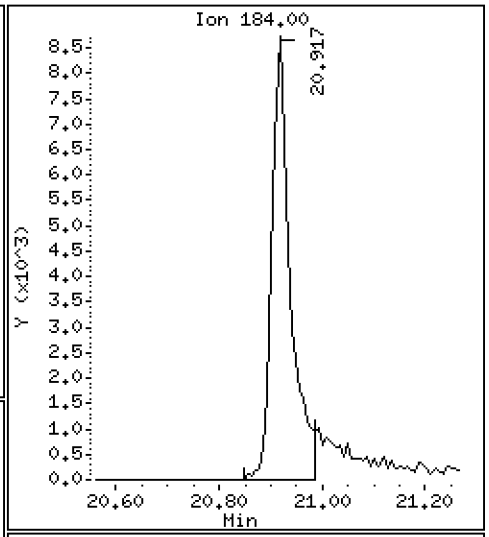
93 Benzidine Concentration: 0.2853 ug/mL

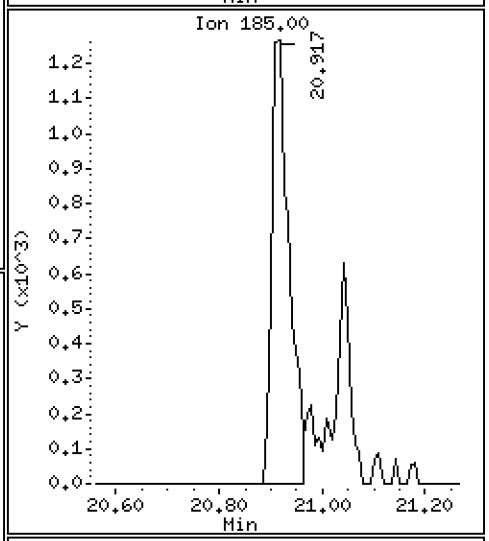


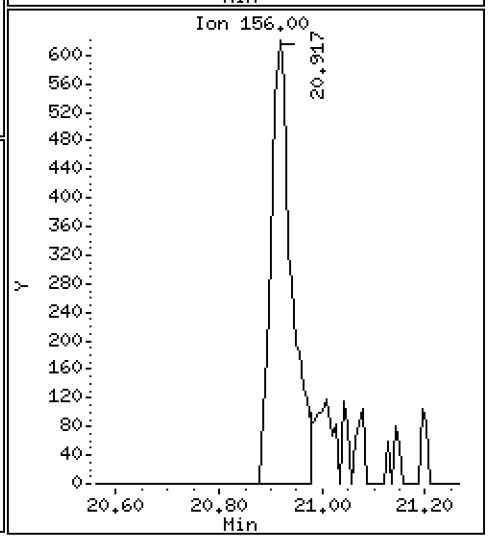












Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172304.D

Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

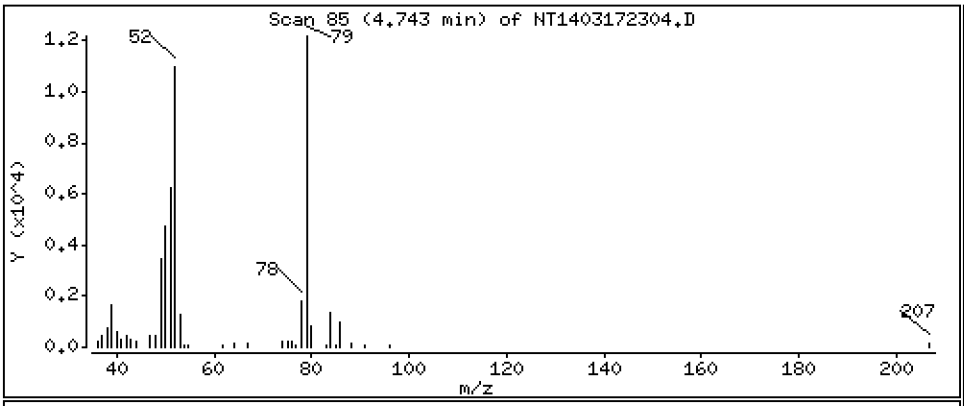
Operator: JGR

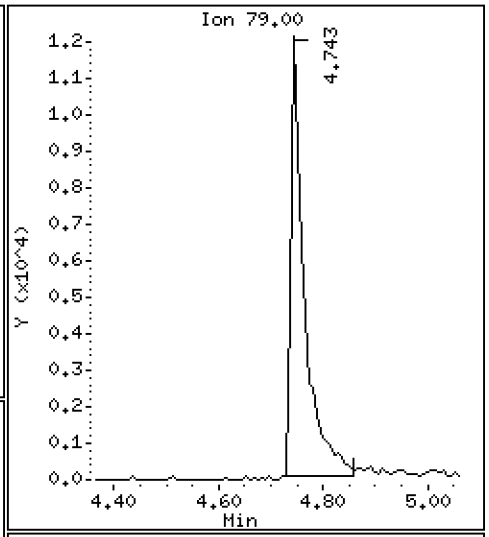
Column phase: ZB-5msi

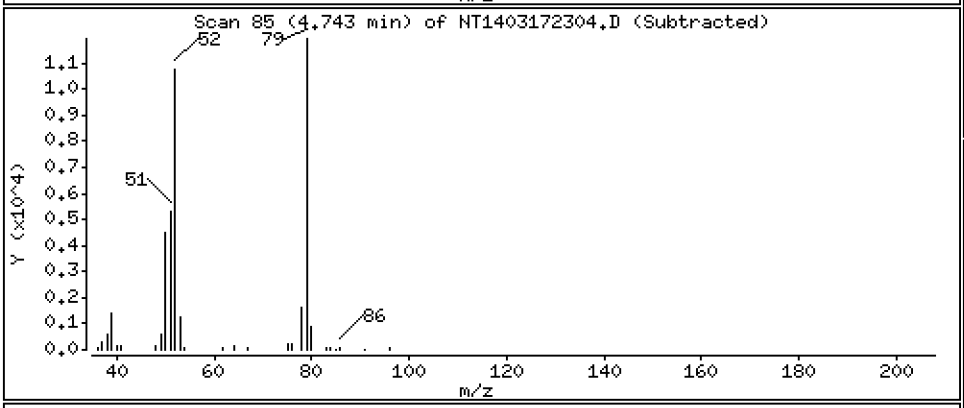
Column diameter: 0.25

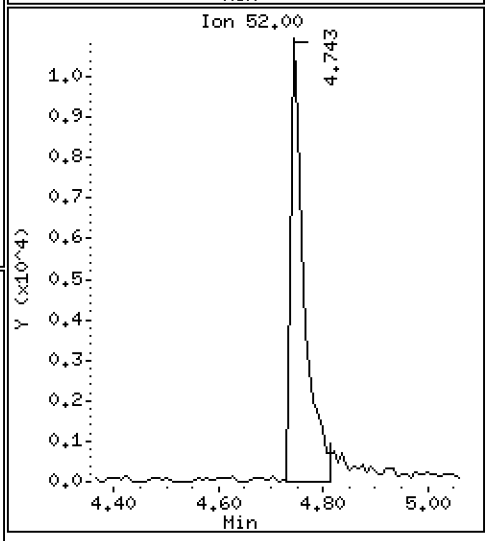
103 Pyridine

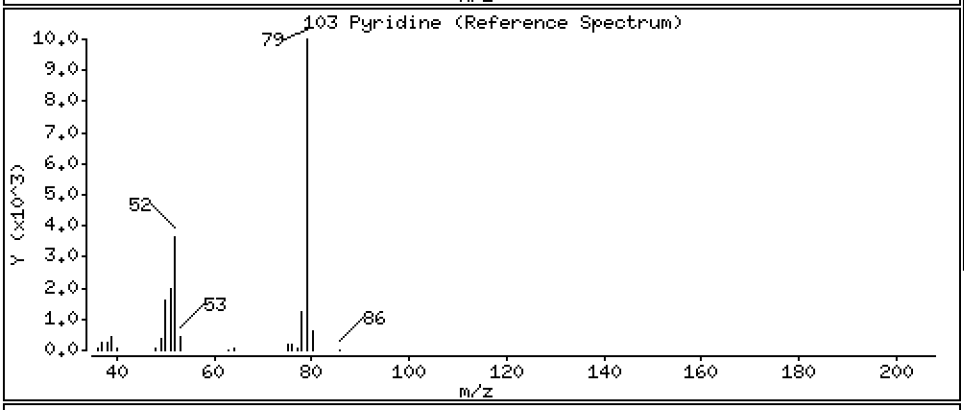
Concentration: 0.1554 ug/mL

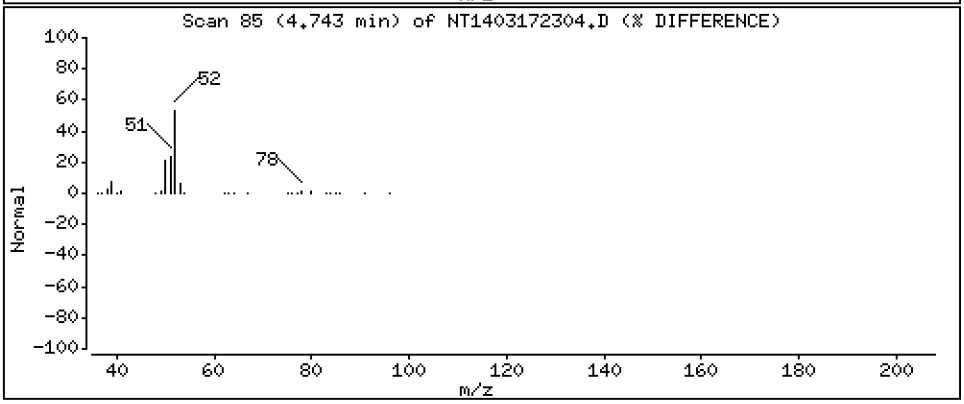












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

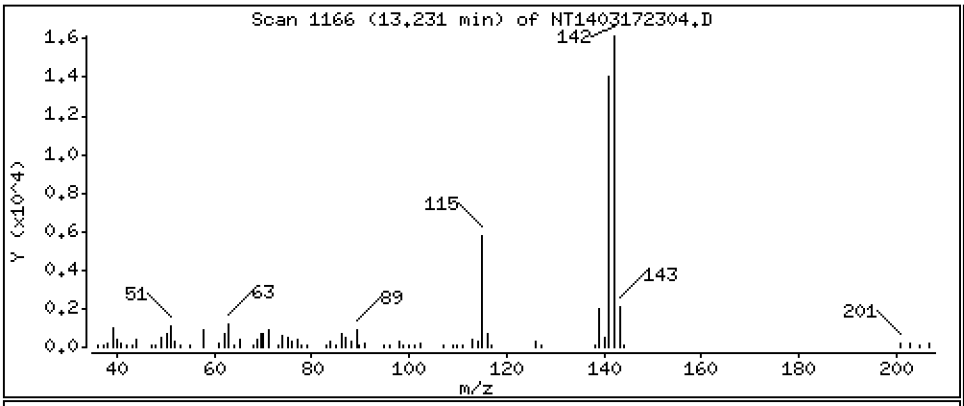
Operator: JGR

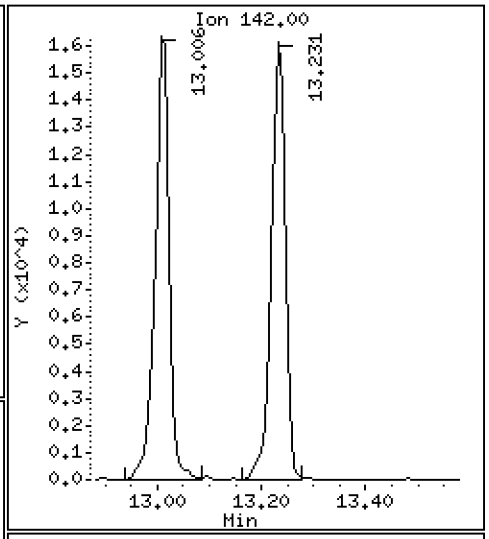
Column phase: ZB-5msi

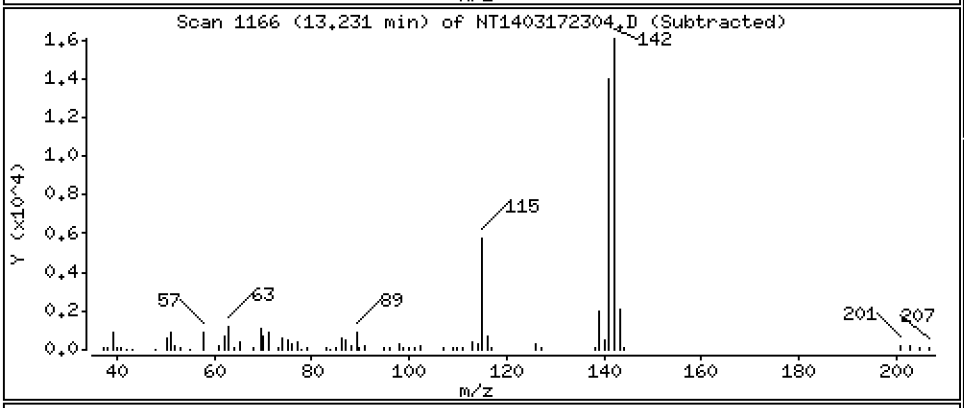
Column diameter: 0.25

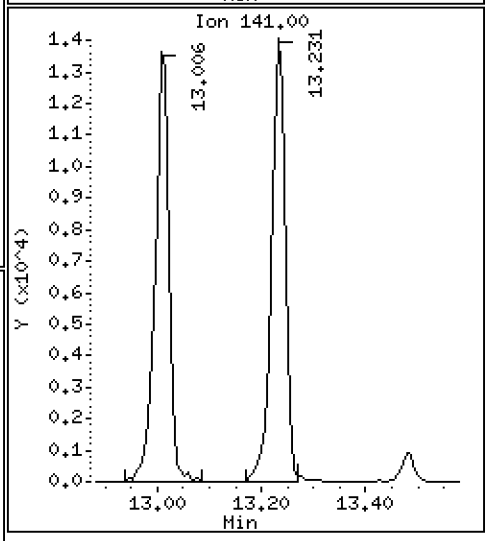
105 1-methylnaphthalene

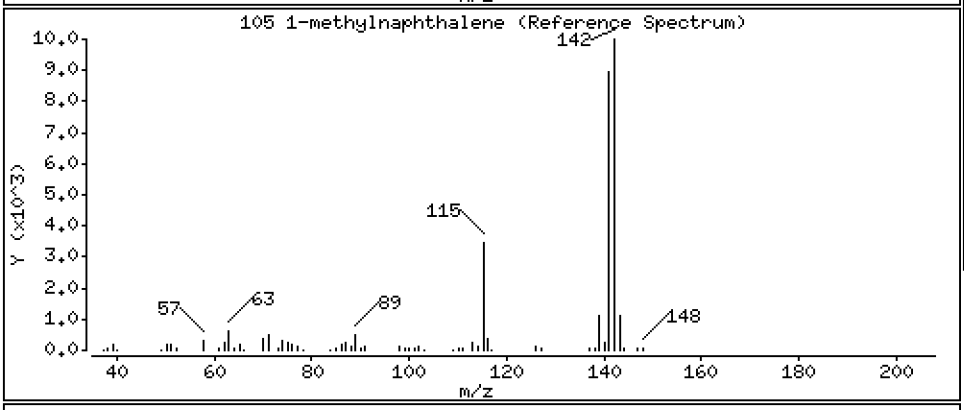
Concentration: 0.2079 ug/mL

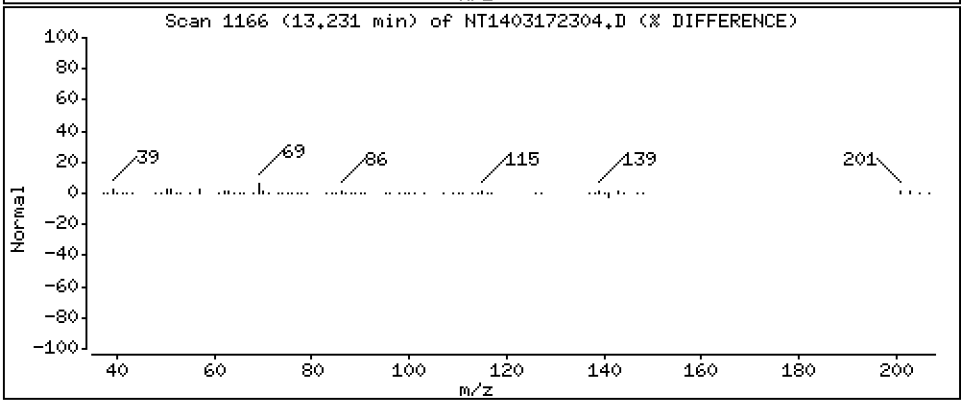












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

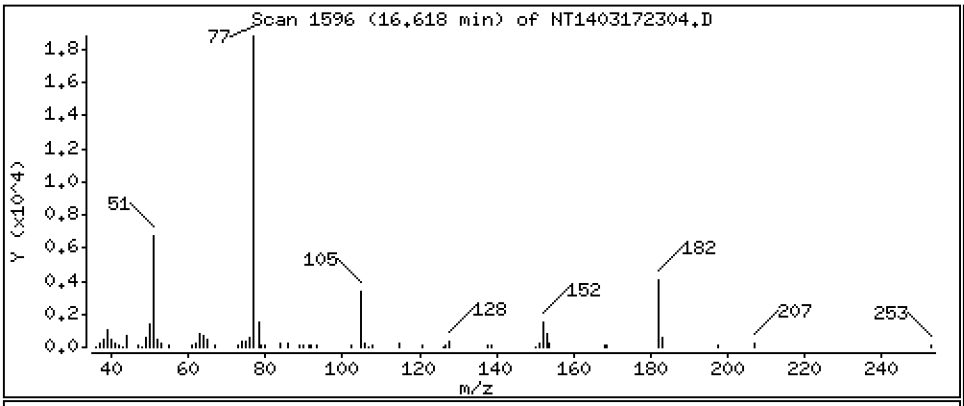
Operator: JGR

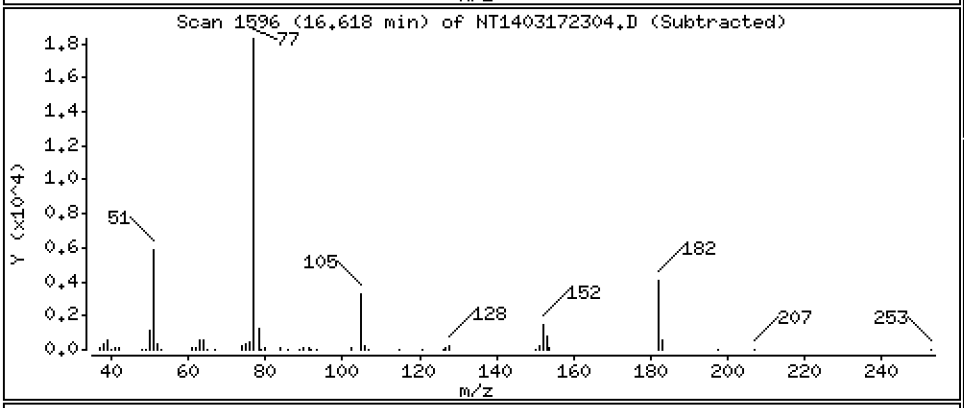
Column phase: ZB-5msi

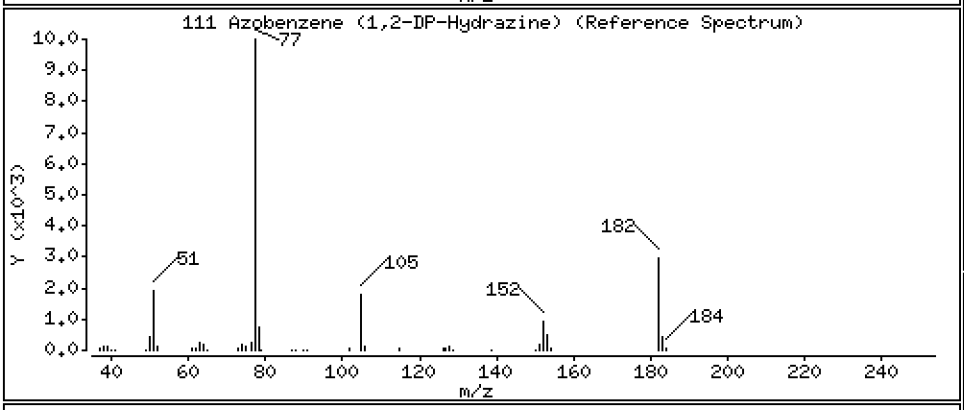
Column diameter: 0.25

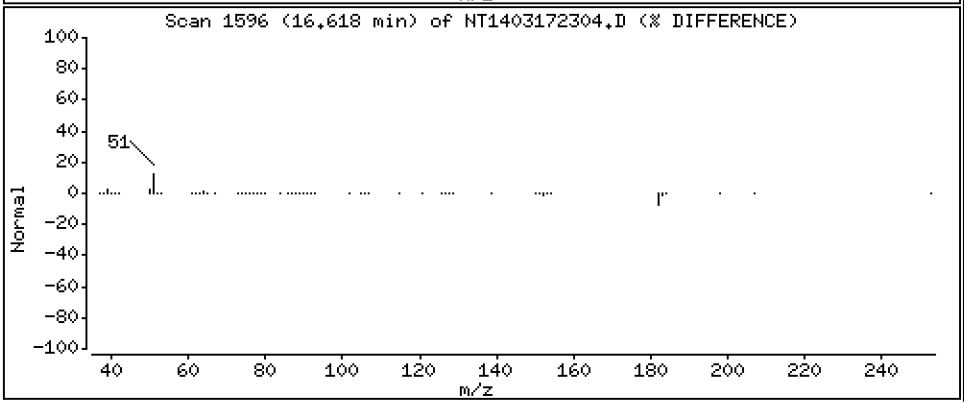
111 Azobenzene (1,2-DP-Hydrazine)

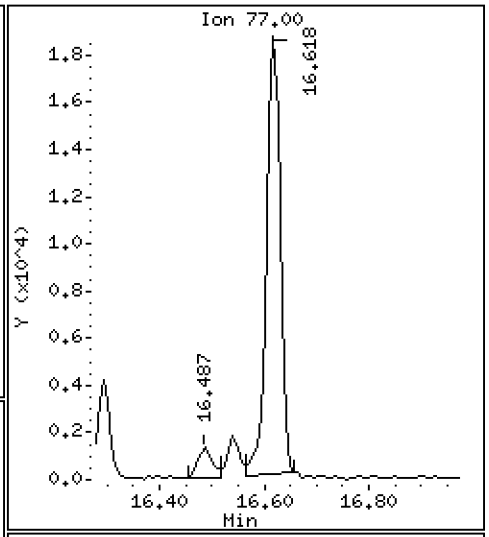
Concentration: 0.1856 ug/mL

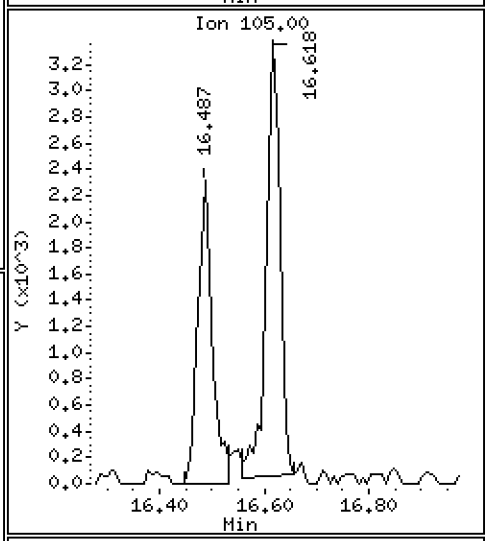


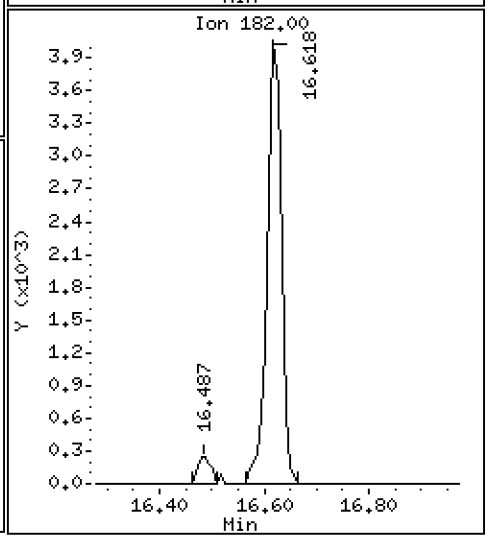












Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172304.D

Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

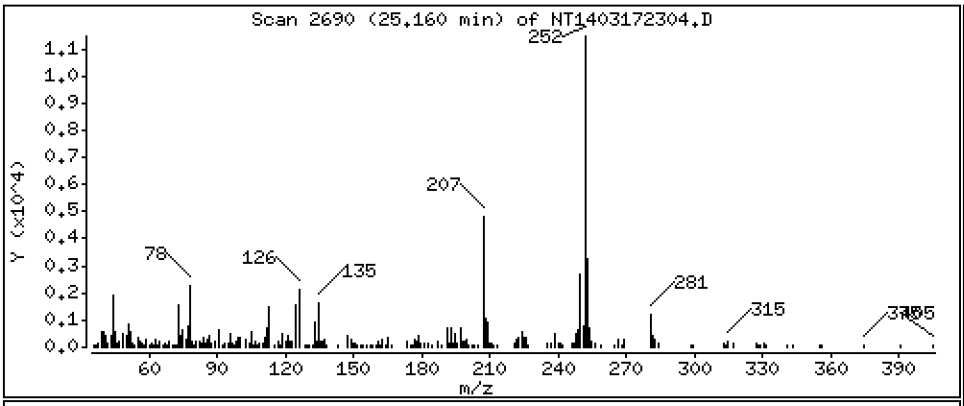
Operator: JGR

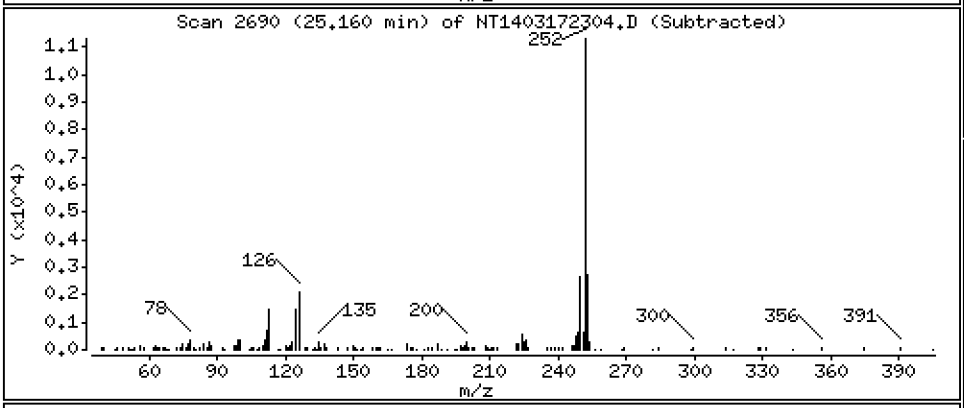
Column phase: ZB-5msi

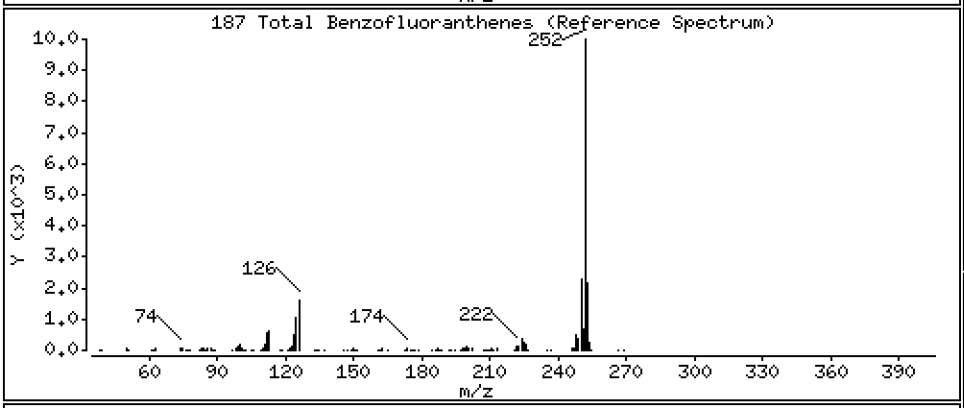
Column diameter: 0.25

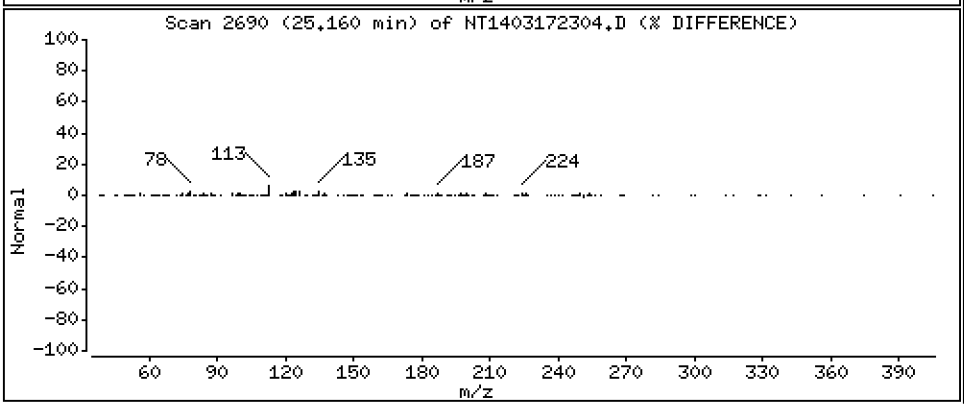
187 Total Benzofluoranthenes

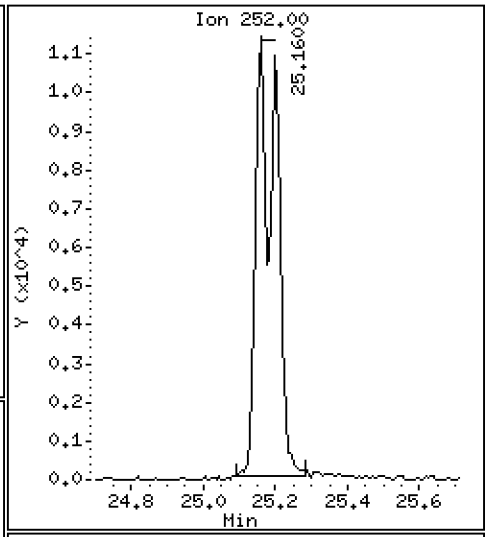
Concentration: 0.3949 ug/mL

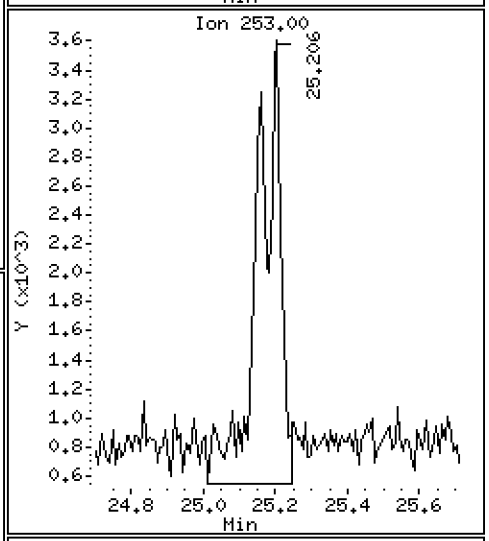


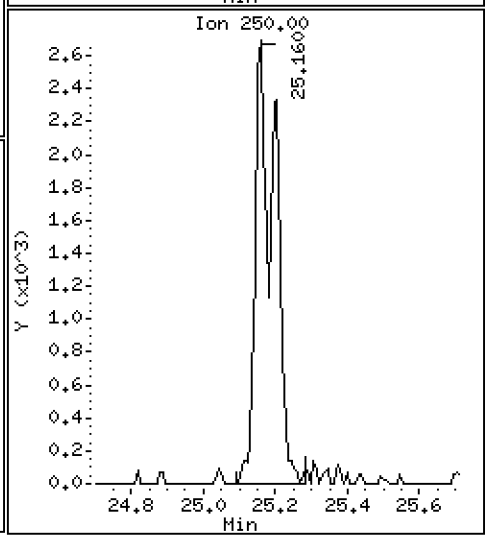












Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172304.D

Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV1

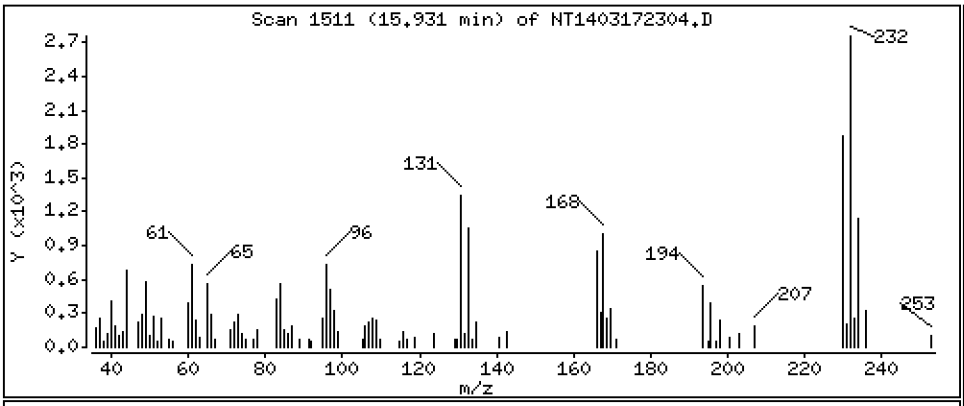
Operator: JGR

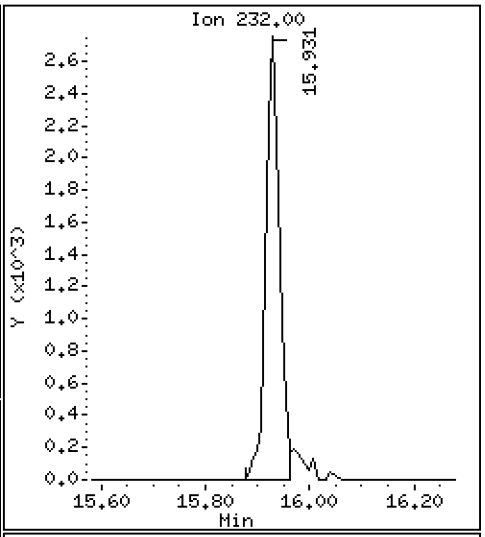
Column phase: ZB-5msi

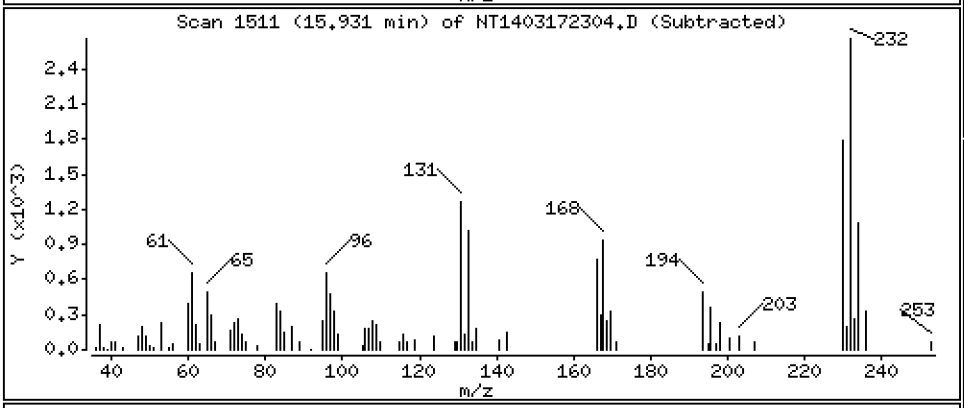
Column diameter: 0.25

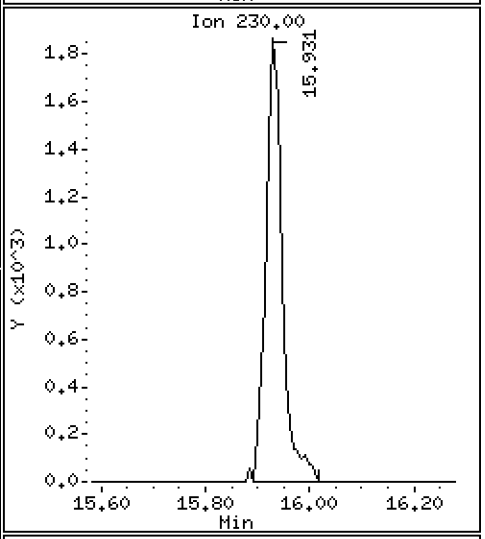
120 2,3,4,6-Tetrachlorophenol

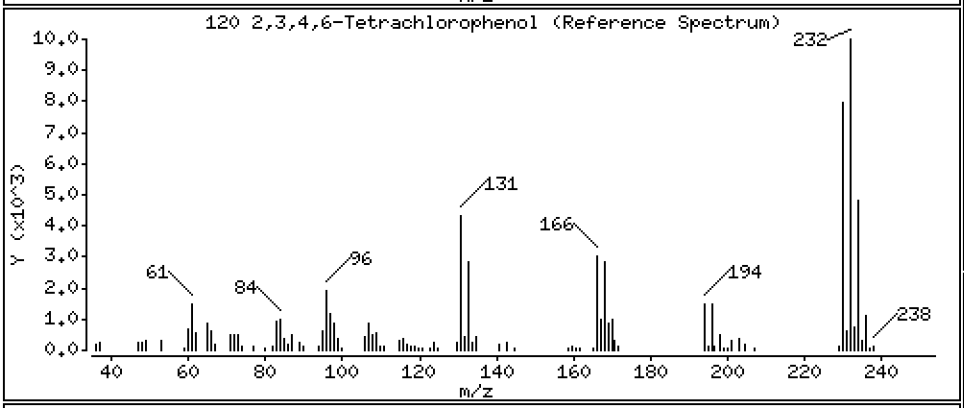
Concentration: 0.1132 ug/mL

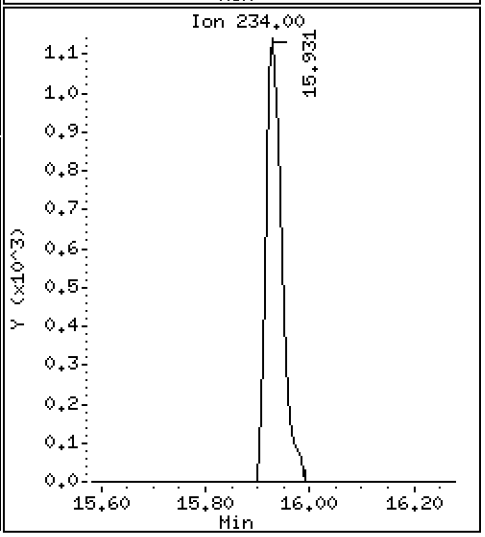


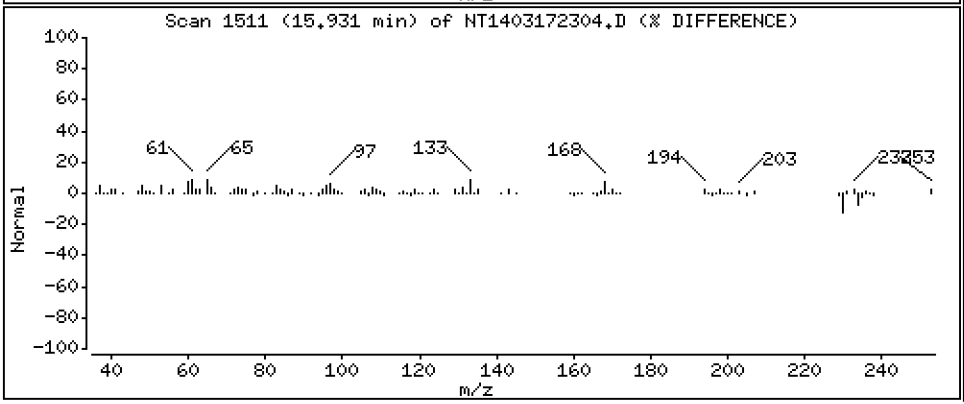












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230317.b\NT1403172304.D
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Inj Date : 17-MAR-2023 16:16 MS Autotune Date: 11-MAR-2023 16:01
Operator : JGR Inst ID: nt14.i
Smp Info : SLC0335-LCV1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230317.b\ABN.m
Meth Date : 22-Mar-2023 08:03 van Quant Type: ISTD
Cal Date : 15-MAR-2023 15:50 Cal File: NT1403152308.D
Als bottle: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.828	6.821	(1.000)	18594	0.25189	0.2519
$	2 Phenol-d5	99	8.412	8.412	(1.000)	24582	0.25293	0.2529
	3 Phenol	94	8.435	8.435	(1.000)	16555	0.16028	0.1603
$	5 2-Chlorophenol-d4	132	8.698	8.698	(1.000)	22189	0.28960	0.2896
	4 Bis(2-Chloroethyl)ether	93	8.605	8.605	(1.000)	14905	0.20040	0.2004
	6 2-Chlorophenol	128	8.729	8.729	(1.000)	15015	0.18470	0.1847
	7 1,3-Dichlorobenzene	146	9.000	9.000	(1.000)	18302	0.22240	0.2224
*	8 1,4-Dichlorobenzene-d4	152	9.062	9.062	(1.000)	217316	4.00000	(M)
	9 1,4-Dichlorobenzene	146	9.101	9.093	(1.000)	16921	0.21348	0.2135
$	10 1,2-Dichlorobenzene-d4	152	9.426	9.426	(1.000)	11108	0.21700	0.2170
	12 1,2-Dichlorobenzene	146	9.458	9.450	(1.000)	16866	0.21528	0.2153
	11 Benzyl alcohol	108	9.333	9.333	(1.000)	6933	0.14418	0.1442
	14 2,2'-oxybis(1-Chloropropane)	121	9.644	9.644	(1.064)	4910	0.20770	0.2077(M)
	13 2-Methylphenol	108	9.558	9.558	(1.000)	12696	0.17386	0.1739
	17 Hexachloroethane	117	10.055	10.055	(1.000)	6893	0.20334	0.2033
	16 N-Nitroso-di-n-propylamine	70	9.900	9.900	(1.000)	9706	0.16882	0.1688
	15 4-Methylphenol	108	9.830	9.830	(1.000)	13688	0.15831	0.1583
$	18 Nitrobenzene-d5	82	10.164	10.164	(0.879)	15853	0.18189	0.1819
	19 Nitrobenzene	77	10.195	10.203	(0.881)	15610	0.18399	0.1840
	20 Isophorone	82	10.653	10.653	(0.921)	17641	0.15229	0.1523
	21 2-Nitrophenol	139	10.831	10.831	(0.936)	5816	0.12142	0.1214
	22 2,4-Dimethylphenol	107	10.885	10.885	(0.941)	29837	0.41118	0.4112
	23 Bis(2-Chloroethoxy)methane	93	11.079	11.087	(0.958)	14401	0.18466	0.1847
	24 Benzoic acid	105	10.978	11.103	(0.949)	7828	0.12953	0.1295(M)
	25 2,4-Dichlorophenol	162	11.289	11.289	(0.976)	19763	0.34246	0.3425
	26 1,2,4-Trichlorobenzene	180	11.482	11.482	(0.993)	14434	0.20346	0.2035
*	27 Naphthalene-d8	136	11.567	11.567	(1.000)	823606	4.00000	
	28 Naphthalene	128	11.606	11.606	(1.003)	45873	0.20848	0.2085
	29 4-Chloroaniline	127	11.737	11.737	(1.015)	31151	0.33819	0.3382
	30 Hexachlorobutadiene	225	11.976	11.976	(1.035)	7118	0.22222	0.2222
	31 4-Chloro-3-methylphenol	107	12.696	12.696	(1.098)	22025	0.31584	0.3158
	32 2-Methylnaphthalene	142	13.006	13.013	(1.124)	30490	0.19870	0.1987
	33 Hexachlorocyclopentadiene	237	13.478	13.478	(0.887)	9116	0.26060	0.2606

		QUANT SIG					CONCENTRATIONS ON-COLUMN	FINAL
Compounds		MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
34	2,4,6-Trichlorophenol	196	13.633	13.633	(0.897)	12570	0.29444	0.2944
35	2,4,5-Trichlorophenol	196	13.710	13.702	(0.902)	13329	0.29962	0.2996
$ 36	2-Fluorobiphenyl	172	13.795	13.795	(0.908)	31403	0.20605	0.2060
37	2-Chloronaphthalene	162	14.004	14.012	(0.922)	26527	0.20308	0.2031
38	2-Nitroaniline	65	14.267	14.267	(0.939)	14704	0.29152	0.2915
39	Dimethylphthalate	163	14.693	14.701	(0.967)	27457	0.19566	0.1957
40	Acenaphthylene	152	14.879	14.879	(0.979)	42509	0.19375	0.1937
41	2,6-Dinitrotoluene	165	14.832	14.840	(0.976)	10259	0.31646	0.3165
* 42	Acenaphthene-d10	164	15.196	15.196	(1.000)	420838	4.00000	
43	3-Nitroaniline	138	15.119	15.126	(0.995)	11607	0.25953	0.2595
44	Acenaphthene	153	15.258	15.265	(1.004)	25936	0.20247	0.2025
45	2,4-Dinitrophenol	184	15.335	15.335	(1.009)	1883	0.07503	0.07503
46	Dibenzofuran	168	15.590	15.590	(1.026)	37357	0.20427	0.2043
47	4-Nitrophenol	109	15.459	15.435	(1.017)	2414	0.10197	0.1020
48	2,4-Dinitrotoluene	165	15.644	15.652	(1.030)	13166	0.28650	0.2865
50	Diethylphthalate	149	16.155	16.170	(1.063)	29117	0.20068	0.2007
49	Fluorene	166	16.309	16.309	(1.073)	29637	0.17096	0.1710
51	4-Chlorophenyl-phenylether	204	16.294	16.301	(1.072)	12967	0.17426	0.1743
52	4-Nitroaniline	138	16.394	16.394	(1.079)	10172	0.26150	0.2615
53	4,6-Dinitro-2-methylphenol	198	16.486	16.494	(0.904)	7582	0.28913	0.2891
54	N-Nitrosodiphenylamine	169	16.540	16.548	(0.907)	19386	0.18831	0.1883
$ 55	2,4,6-Tribromophenol	330	16.841	16.841	(1.108)	3716	0.23258	0.2326
56	4-Bromophenyl-phenylether	248	17.304	17.304	(0.949)	6658	0.19183	0.1918
57	Hexachlorobenzene	284	17.620	17.620	(0.966)	7606	0.20769	0.2077
58	Pentachlorophenol	266	17.984	17.976	(0.986)	3079	0.12204	0.1220
* 59	Phenanthrene-d10	188	18.240	18.247	(1.000)	757941	4.00000	
60	Phenanthrene	178	18.286	18.294	(1.003)	43188	0.19943	0.1994
61	Anthracene	178	18.379	18.387	(1.008)	36981	0.17725	0.1773
62	Carbazole	167	18.712	18.711	(1.026)	32491	0.17503	0.1750
63	Di-n-butylphthalate	149	19.508	19.508	(1.070)	36311	0.15432	0.1543
64	Fluoranthene	202	20.677	20.677	(0.888)	38705	0.20915	0.2091
65	Pyrene	202	21.102	21.102	(0.906)	40464	0.21322	0.2132
$ 66	Terphenyl-d14	244	21.389	21.389	(0.918)	29120	0.22666	0.2267
67	Butylbenzylphthalate	149	22.310	22.310	(0.958)	15269	0.18364	0.1836
68	Benzo(a)anthracene	228	23.262	23.270	(0.999)	34915	0.20818	0.2082
* 69	Chrysene-d12	240	23.293	23.293	(1.000)	454867	4.00000	
70	3,3'-Dichlorobenzidine	252	23.216	23.224	(0.997)	24773	0.51505	0.5150
71	Chrysene	228	23.340	23.340	(1.002)	30534	0.20116	0.2012
72	bis(2-Ethylhexyl)phthalate	149	23.332	23.332	(0.960)	18300	0.19578	0.1958
* 134	Di-n-octylphthalate-d4	153	24.315	24.323	(1.000)	710040	4.00000	
73	Di-n-octylphthalate	149	24.331	24.331	(1.001)	39746	0.21775	0.2178
74	Benzo(b)fluoranthene	252	25.159	25.159	(0.970)	21964	0.18808	0.1881
75	Benzo(k)fluoranthene	252	25.198	25.205	(0.972)	24822	0.21442	0.2144
76	Benzo(a)pyrene	252	25.817	25.817	(0.996)	18002	0.18027	0.1803
* 77	Perylene-d12	264	25.933	25.933	(1.000)	330470	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.618	28.618	(1.104)	14842	0.13656	0.1366
79	Dibenzo(a,h)anthracene	278	28.626	28.633	(1.104)	12885	0.14066	0.1407
80	Benzo(g,h,i)perylene	276	29.395	29.410	(1.133)	12878	0.14377	0.1438
90	N-Nitrosodimethylamine	74	4.697	4.697	(1.000)	13786	0.29487	0.2949
91	Aniline	93	8.513	8.513	(1.000)	39158	0.37694	0.3769
93	Benzidine	184	20.917	20.909	(0.898)	21244	0.28526	0.2853
103	Pyridine	79	4.743	4.712	(1.000)	22503	0.15542	0.1554
105	1-methylnaphthalene	142	13.230	13.230	(1.144)	28901	0.20789	0.2079
111	Azobenzene (1,2-DP-Hydrazine)	77	16.617	16.625	(1.094)	32160	0.18562	0.1856

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.159	25.205	(0.970)	43799	0.39492	0.3949
120 2,3,4,6-Tetrachlorophenol	232	15.930	15.930	(1.048)	4827	0.11321	0.1132

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1403172304.D
Lab Smp Id: SLC0335-LCV1
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt14.i\20230317.b\ABN.m
Misc Info:

Calibration Date: 17-MAR-2023
Calibration Time: 15:03
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	221219	110610	442438	217316	-1.76
27 Naphthalene-d8	809500	404750	1619000	823606	1.74
42 Acenaphthene-d10	420689	210345	841378	420838	0.04
59 Phenanthrene-d10	757520	378760	1515040	757941	0.06
69 Chrysene-d12	450500	225250	901000	454867	0.97
134 Di-n-octylphthala	828388	414194	1656776	710040	-14.29
77 Perylene-d12	339914	169957	679828	330470	-2.78

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.06	8.56	9.56	9.06	0.00
27 Naphthalene-d8	11.57	11.07	12.07	11.57	0.00
42 Acenaphthene-d10	15.20	14.70	15.70	15.20	0.00
59 Phenanthrene-d10	18.25	17.75	18.75	18.24	-0.04
69 Chrysene-d12	23.29	22.79	23.79	23.29	0.00
134 Di-n-octylphthala	24.32	23.82	24.82	24.32	-0.03
77 Perylene-d12	25.93	25.43	26.43	25.93	0.00

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

REVIEW SUMMARY FOR FILE - NT1403172304.D

Lab ID: SLC0335-LCV1
nt14.i, ABN.m, 17-MAR-2023 16:16

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
1.064	1.000	0.0642	2,2'-oxybis(1-Chloropropane)
0.949	0.960	-0.0107	Benzoic acid

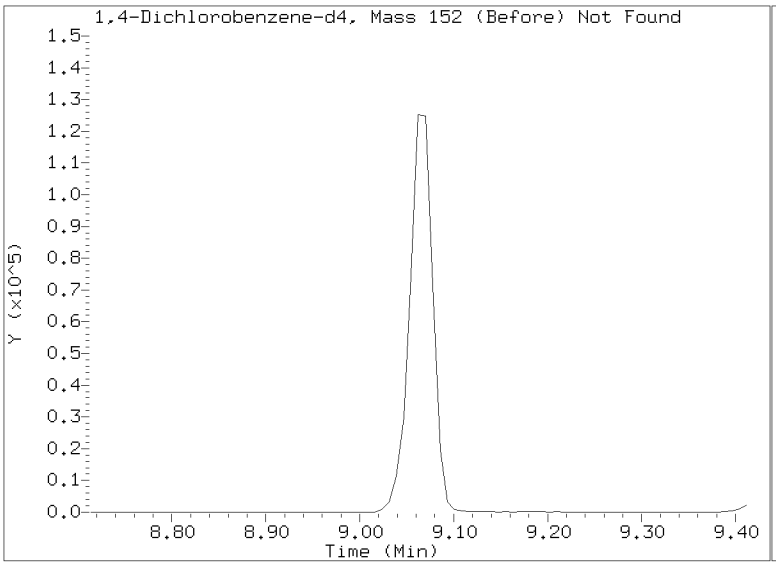
RRT check based on Ccal File: NT1403172302.D

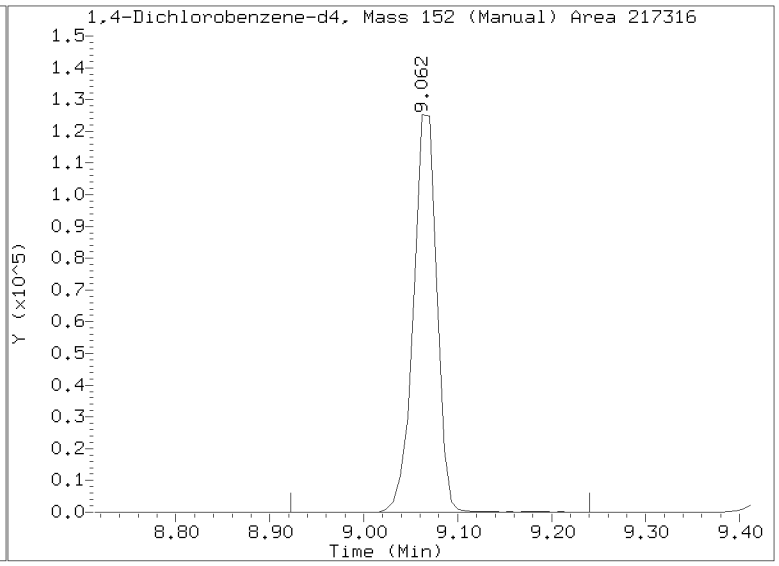
On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

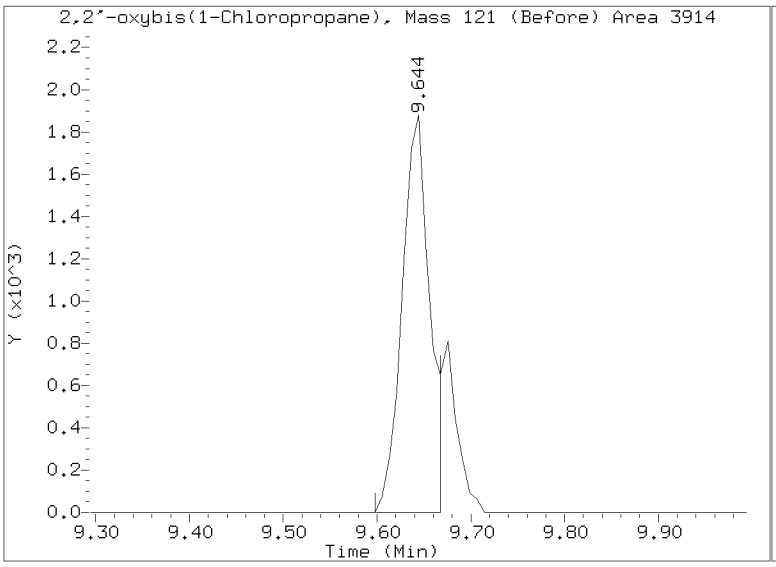
* Only compounds listed in the work order have been verified by the analyst *

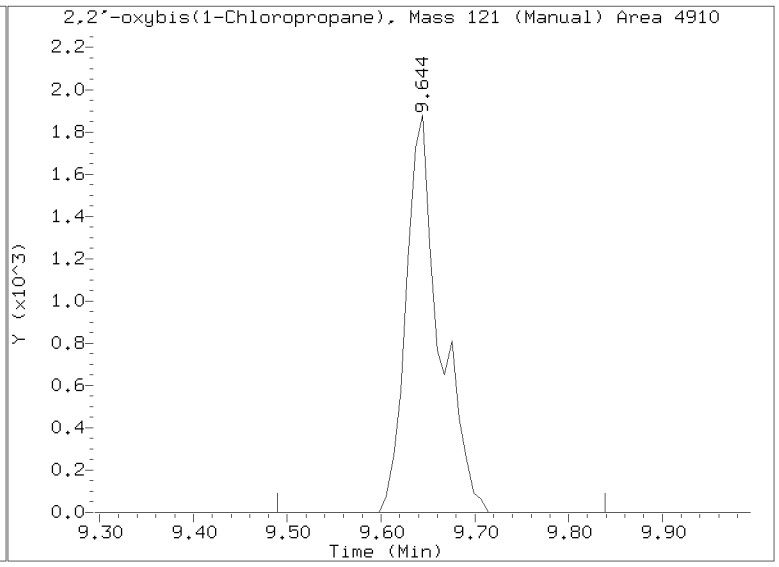
Quant Ion Manual Peak Adjustment Report

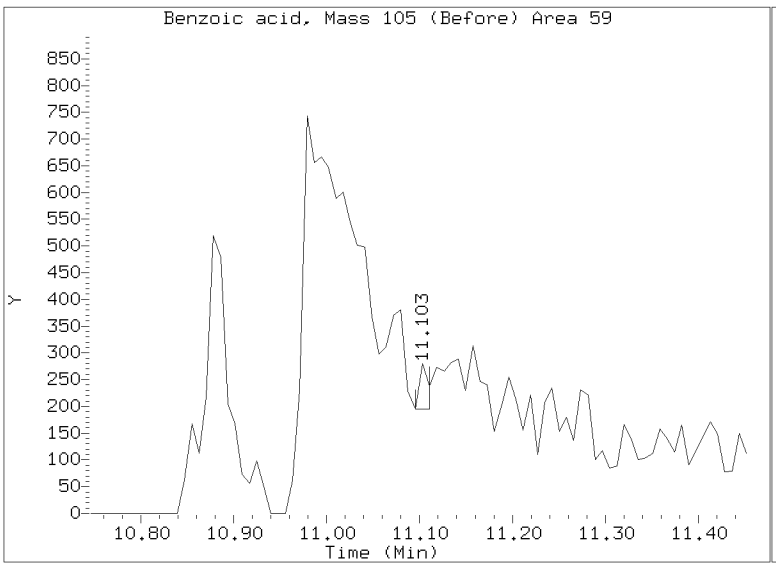
Datafile: //target/share/chem3/nt14.i/20230317.b/NT1403172304.D
Injection Date: 17-MAR-2023 16:16
Lab ID:SLC0335-LCV1 Client ID:
Report Date: 03/22/2023 08:11

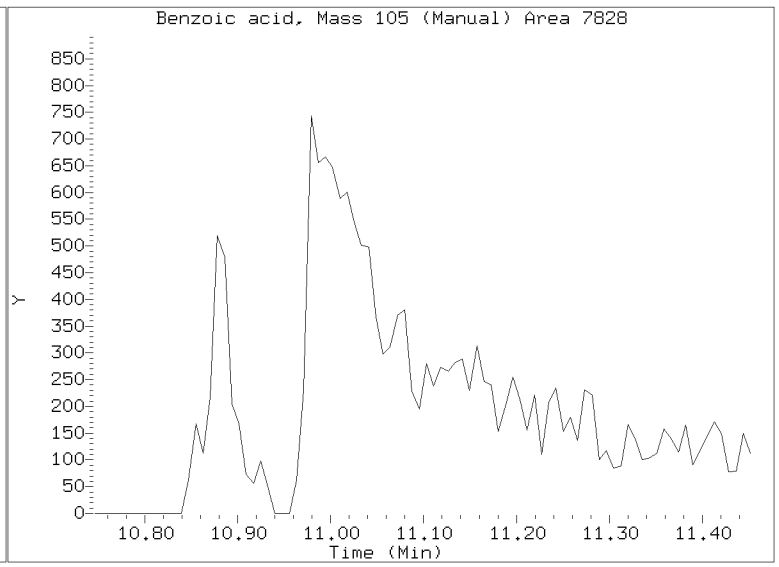












Analytical Resources, LLC
Analytical Chemists and Consultants

LOW-CONCENTRATION CONTINUING CALIBRATION CHECK

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT14	Calibration:	GC00048
Lab File ID:	NT1403172318.D	Calibration Date:	03/15/2023
Sequence:	SLC0335	Injection Date:	03/18/23
Lab Sample ID:	SLC0335-LCV2	Injection Time:	00:43
Sequence Name:	ABN 0.2		

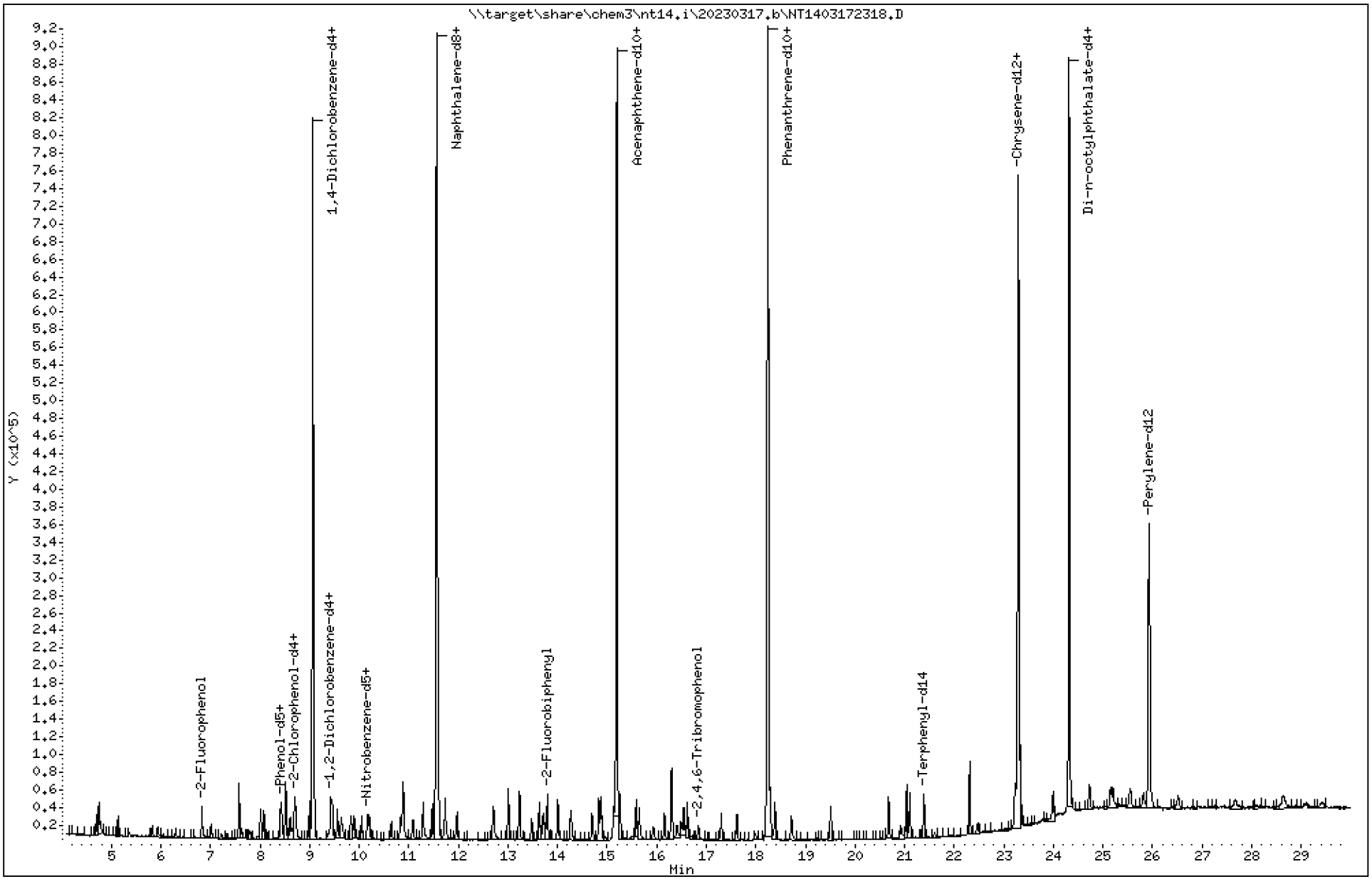
		CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Phenol	A	0.20000	0.2	1.9011440	1.5375570		-19.1	+/-50
4-Methylphenol	A	0.20000	0.2	1.5914380	1.2553540		-21.1	+/-50
Naphthalene	A	0.20000	0.2	1.0686200	1.0790050		1.0	+/-50
2-Methylnaphthalene	A	0.20000	0.2	0.7452524	0.7359876		-1.2	+/-50
Acenaphthylene	A	0.20000	0.2	2.0854140	2.0039590		-3.9	+/-50
Dimethylphthalate	A	0.20000	0.2	1.3338450	1.2684700		-4.9	+/-50
Acenaphthene	A	0.20000	0.2	1.2175690	1.1807150		-3.0	+/-50
Dibenzofuran	A	0.20000	0.2	1.7382550	1.7364800		-0.1	+/-50
Fluorene	A	0.20000	0.2	1.6477120	1.3972670		-15.2	+/-50
Phenanthrene	A	0.20000	0.2	1.1428510	1.1392190		-0.3	+/-50
Anthracene	A	0.20000	0.2	1.1010610	1.0090730		-8.4	+/-50
Fluoranthene	A	0.20000	0.2	1.6273660	1.8241820		12.1	+/-50
Pyrene	A	0.20000	0.2	1.6688810	1.9241690		15.3	+/-50
Butylbenzylphthalate	A	0.20000	0.2	0.7311588	0.7378407		0.9	+/-50
Benzo(a)anthracene	A	0.20000	0.2	1.4748830	1.4646540		-0.7	+/-50
Chrysene	A	0.20000	0.2	1.3348290	1.2695880		-4.9	+/-50
bis(2-Ethylhexyl)phthalate	A	0.20000	0.2	0.5265649	0.5399425		2.5	+/-50
Benzofluoranthenes, Total	A	0.40000	0.4	1.3424190	1.3999990		4.3	+/-50
Benzo(a)pyrene	A	0.20000	0.2	1.2087150	1.0841260		-10.3	+/-50
Indeno(1,2,3-cd)pyrene	A	0.20000	0.1	1.3155660	0.9532083		-27.5	+/-50
Dibenzo(a,h)anthracene	A	0.20000	0.1	1.1087420	0.7810990		-29.6	+/-50
Benzo(g,h,i)perylene	A	0.20000	0.2	1.0842080	0.8244934		-24.0	+/-50
2-Fluorophenol	A	0.30000	0.231	1.3587350	1.0483670		-22.8	+/-50
Phenol-d5	A	0.30000	0.246	1.7888720	1.4661320		-18.0	+/-50
2-Chlorophenol-d4	A	0.30000	0.275	1.4103050	1.2921780		-8.4	+/-50
1,2-Dichlorobenzene-d4	A	0.20000	0.224	0.9421955	1.0553920		12.0	+/-50
Nitrobenzene-d5	A	0.20000	0.183	0.4233007	0.3882789		-8.3	+/-50
2-Fluorobiphenyl	A	0.20000	0.209	1.4485960	1.5122800		4.4	+/-50
2,4,6-Tribromophenol	A	0.30000	0.191	0.1518639	0.0966850		-36.3	+/-50
p-Terphenyl-d14	A	0.20000	0.243	1.1297810	1.3747450		21.7	+/-50

* Values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172318.D
Date : 18-MAR-2023 00:43
Client ID:
Sample Info: SLC0335-LCV2

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

Column phase: ZB-5msi



Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

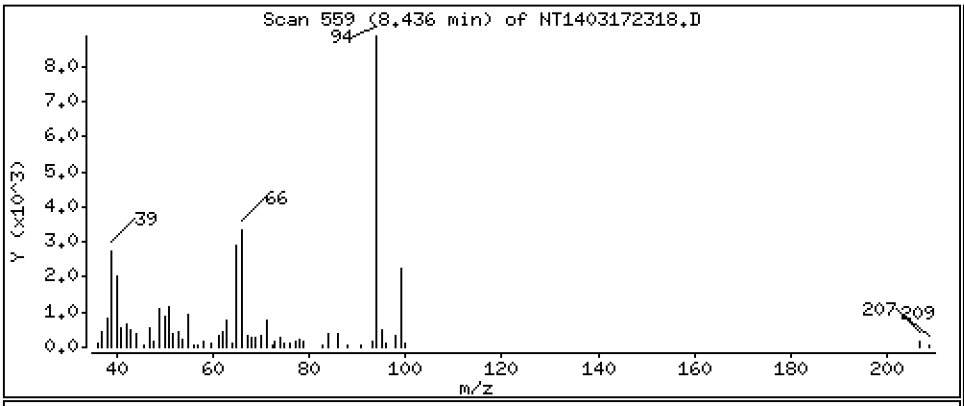
Operator: JGR

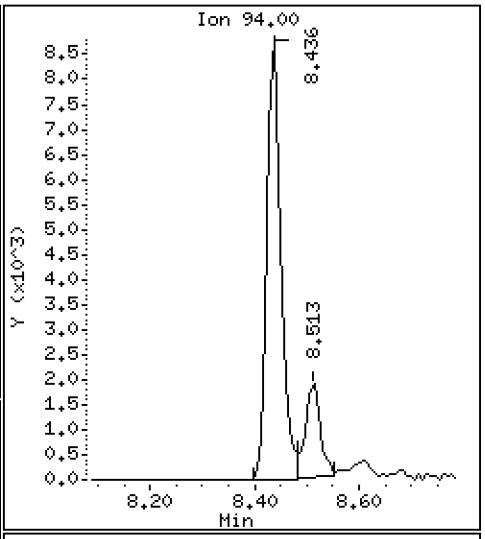
Column phase: ZB-5msi

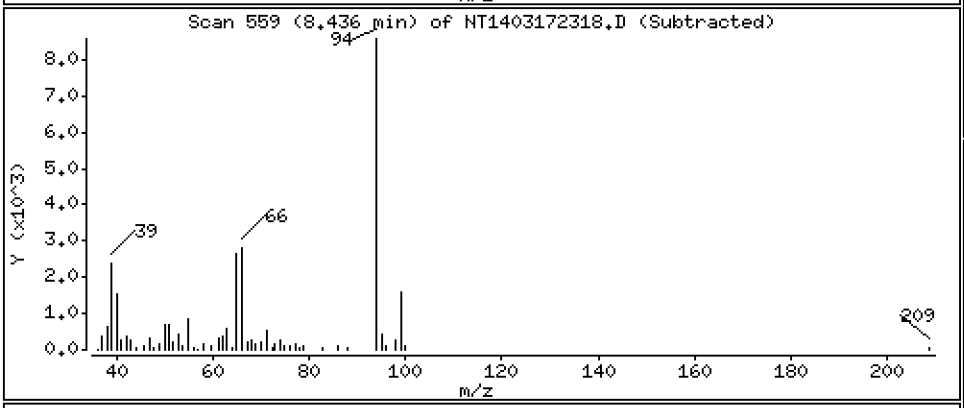
Column diameter: 0.25

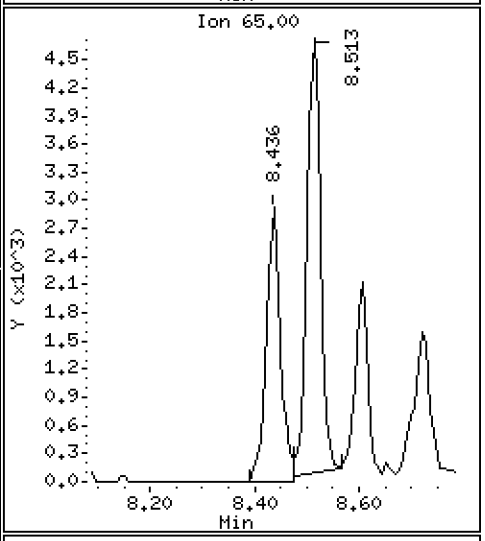
3 Phenol

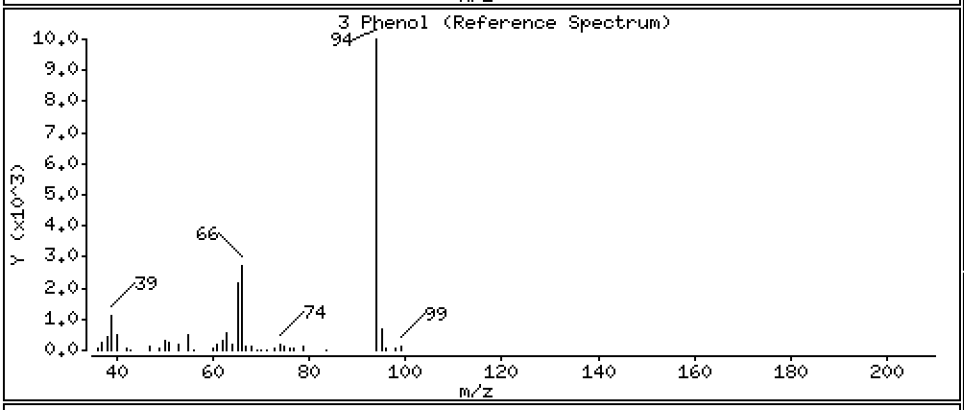
Concentration: 0.1618 ug/mL

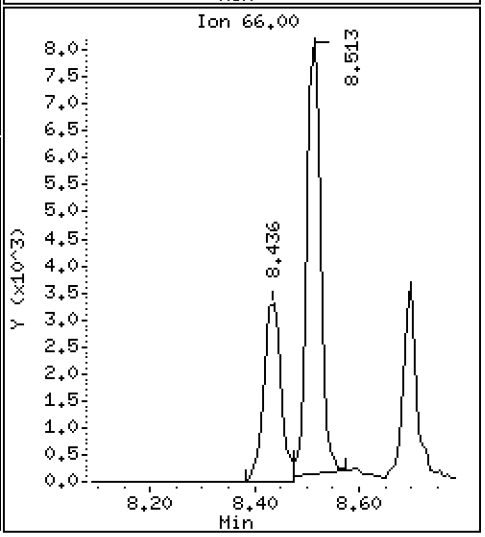


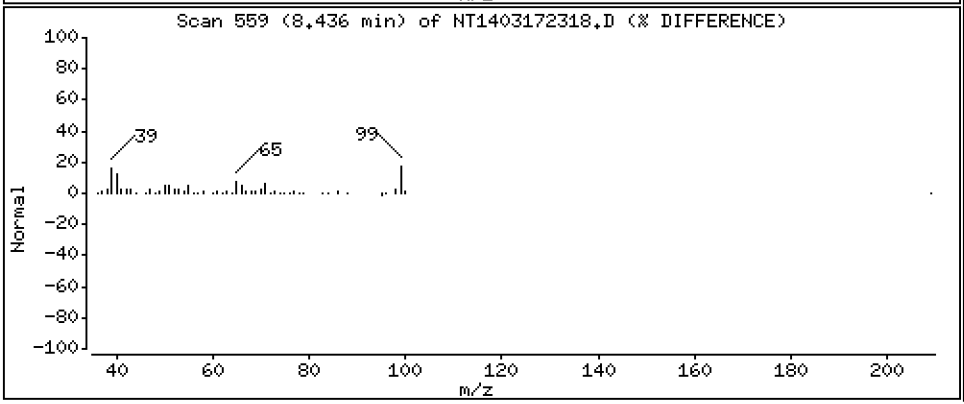












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

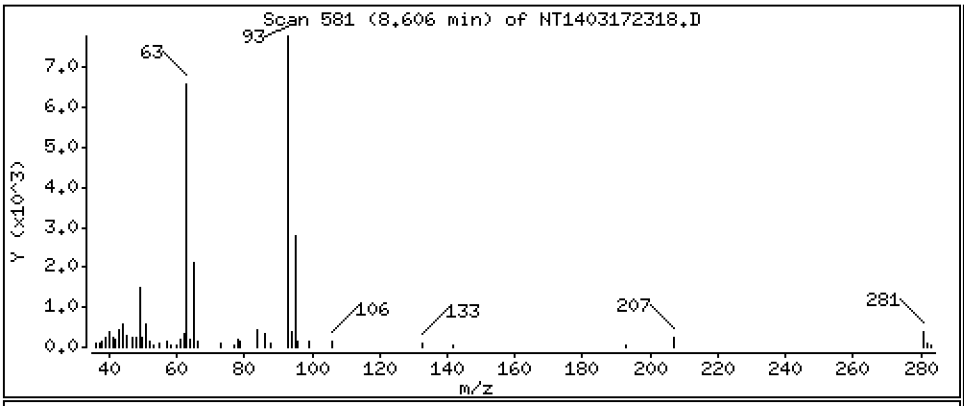
Operator: JGR

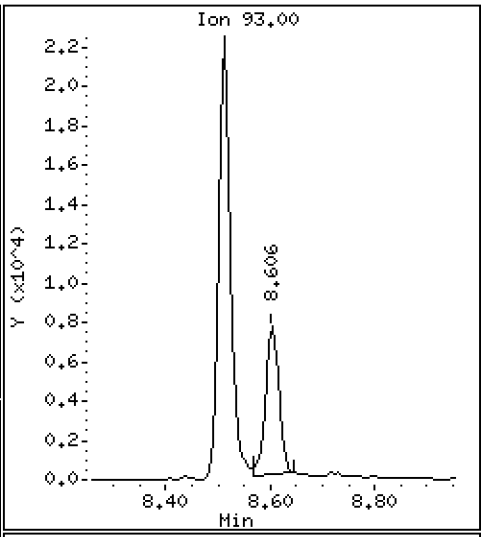
Column phase: ZB-5msi

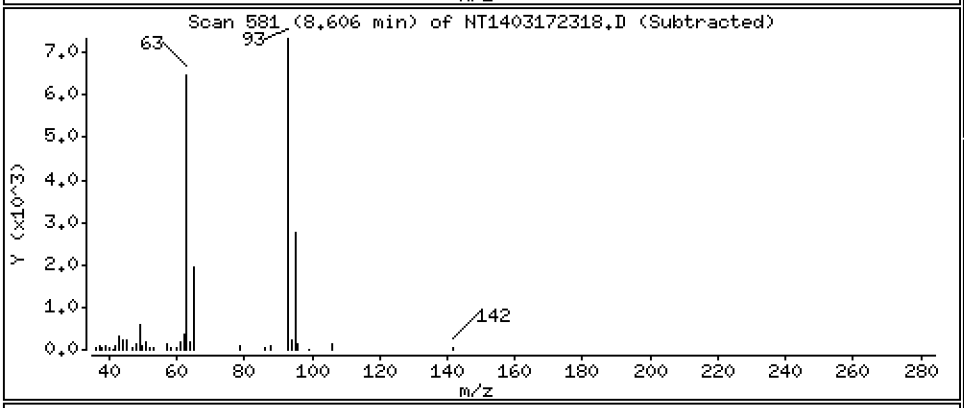
Column diameter: 0.25

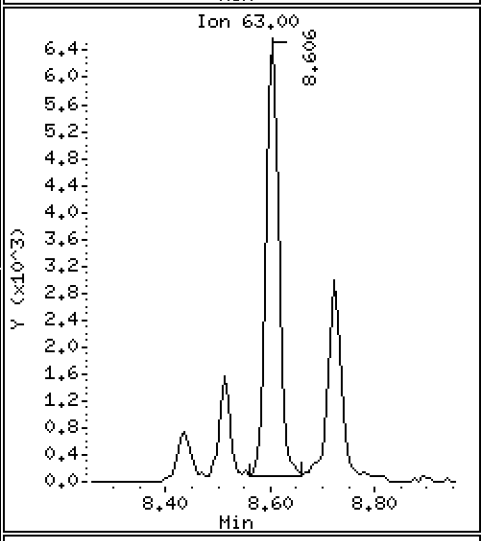
4 Bis(2-Chloroethyl)ether

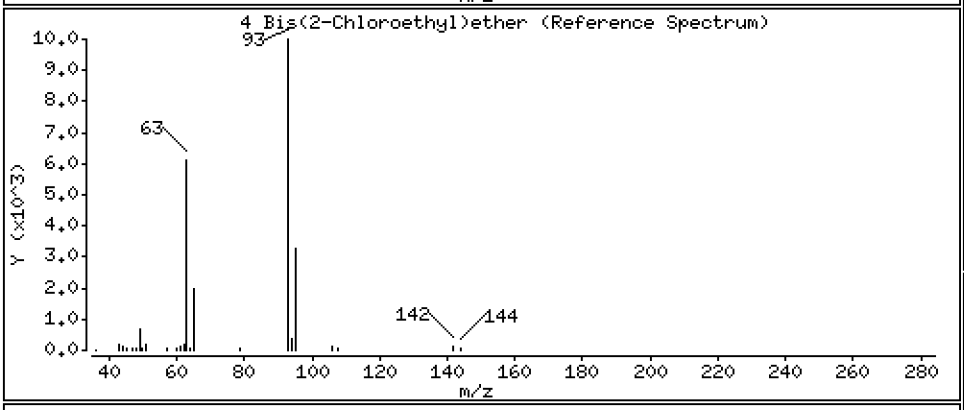
Concentration: 0.1837 ug/mL

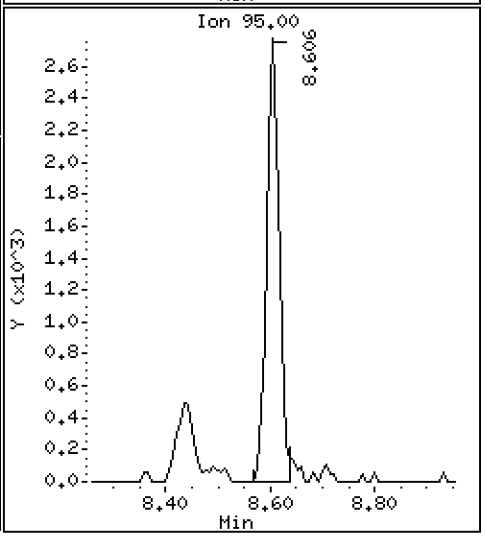


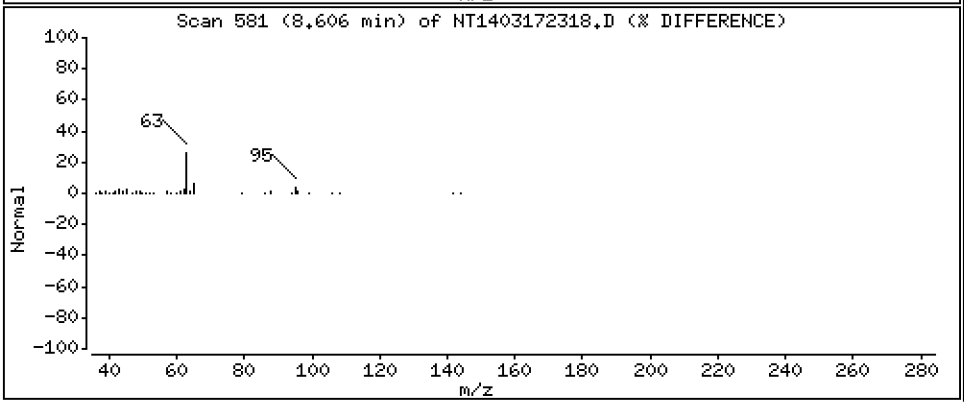












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

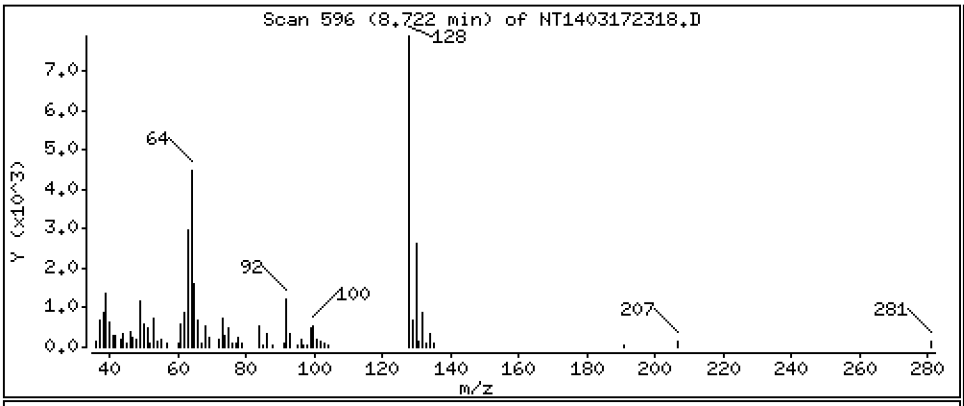
Operator: JGR

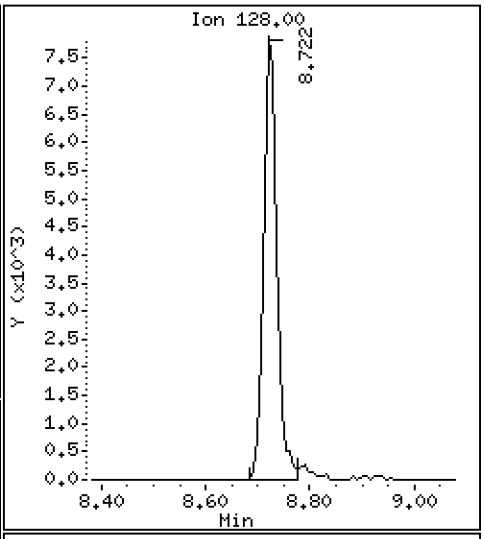
Column phase: ZB-5msi

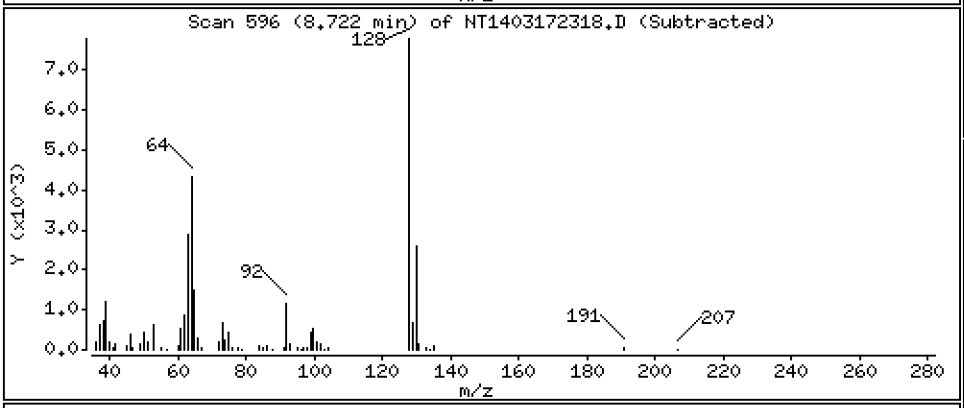
Column diameter: 0.25

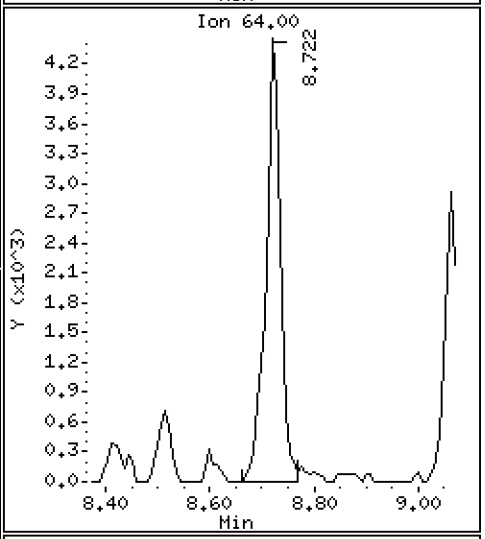
6 2-Chlorophenol

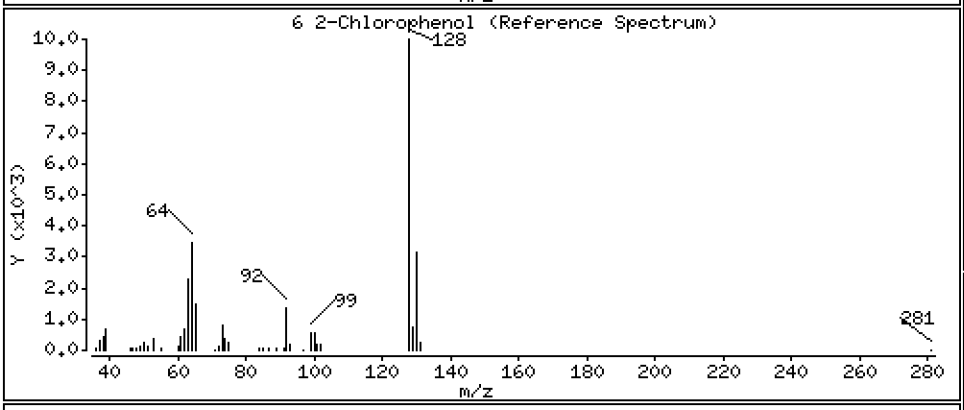
Concentration: 0.1831 ug/mL

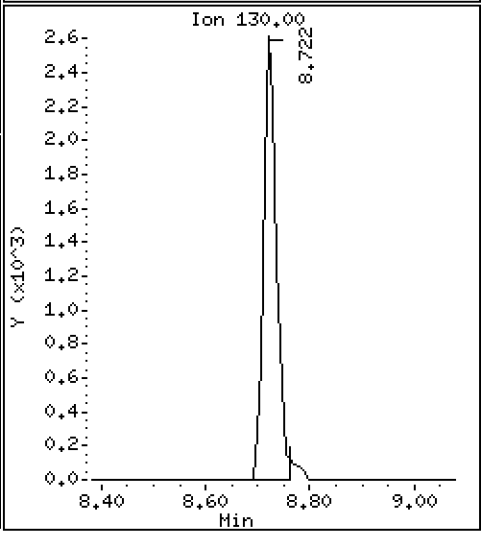


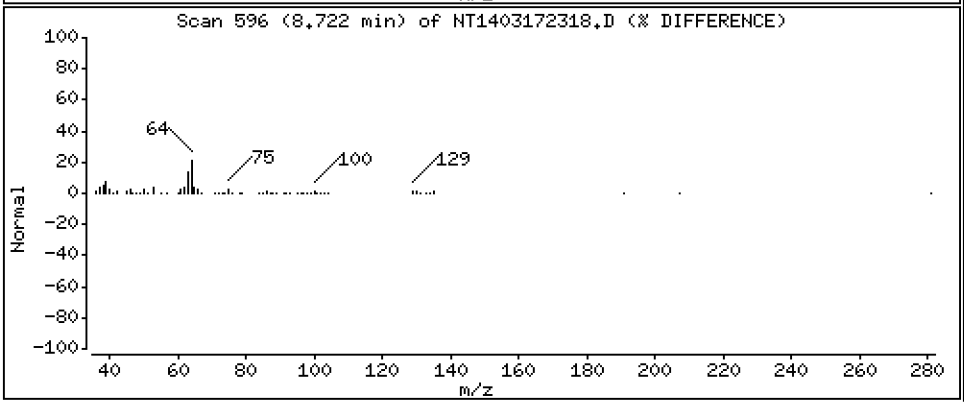












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

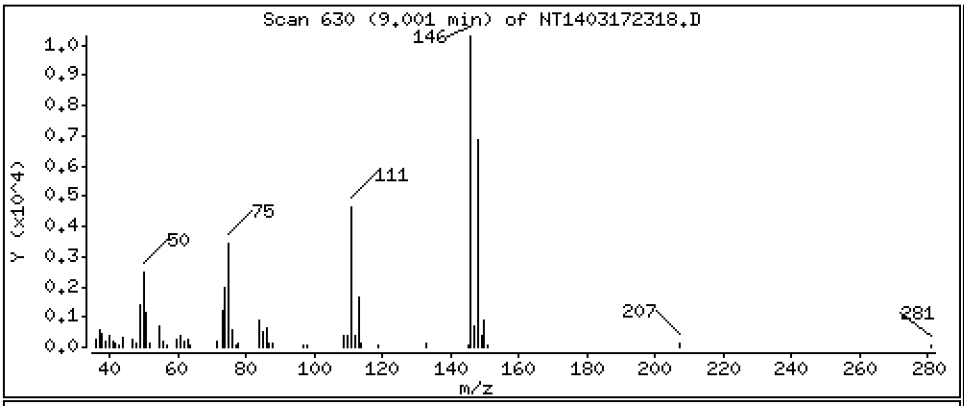
Operator: JGR

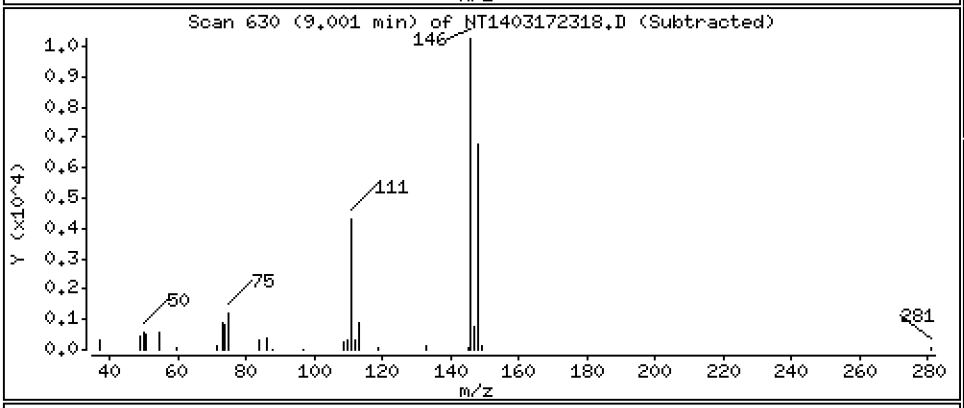
Column phase: ZB-5msi

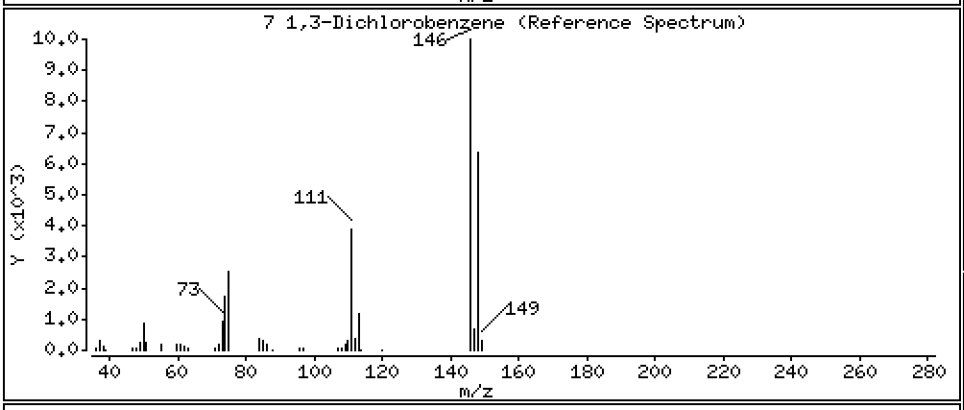
Column diameter: 0.25

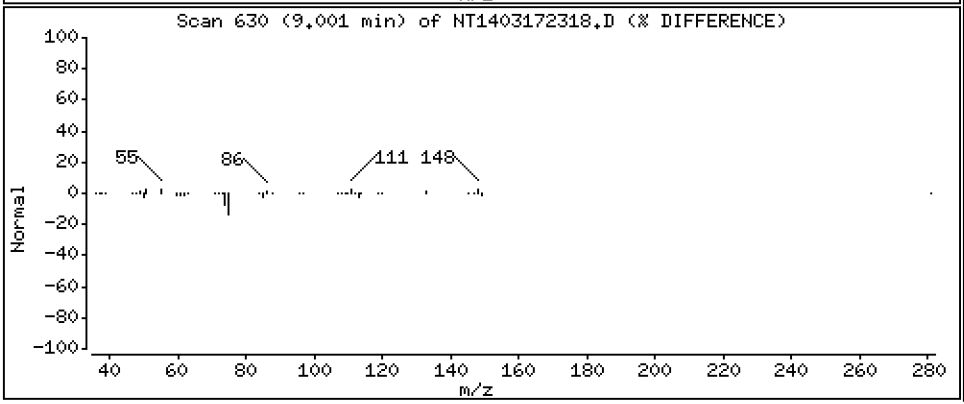
7 1,3-Dichlorobenzene

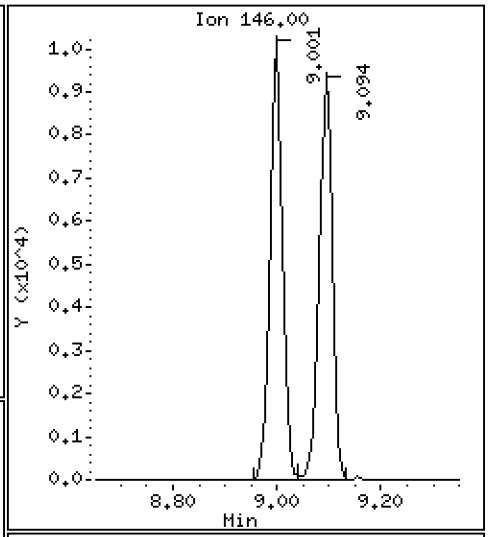
Concentration: 0.2146 ug/mL

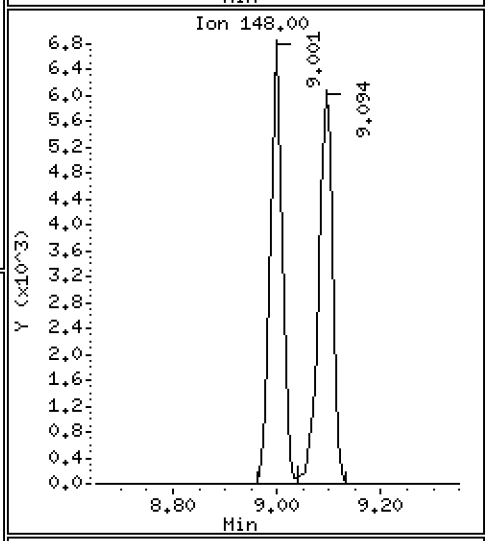


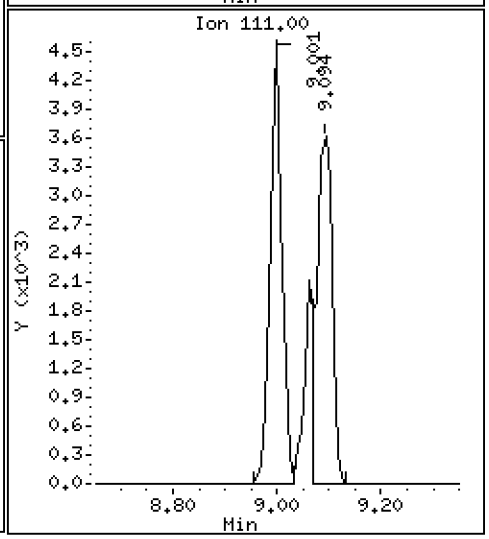












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

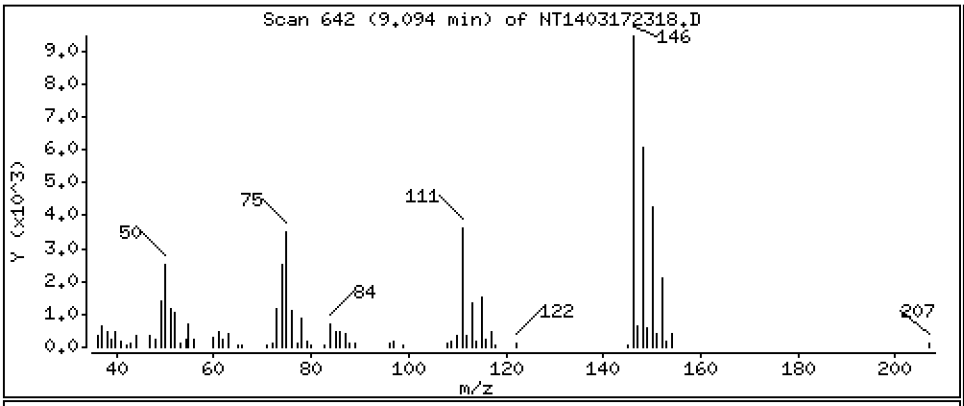
Operator: JGR

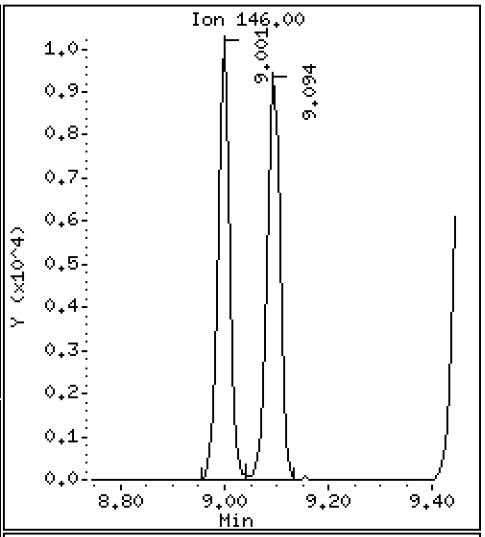
Column phase: ZB-5msi

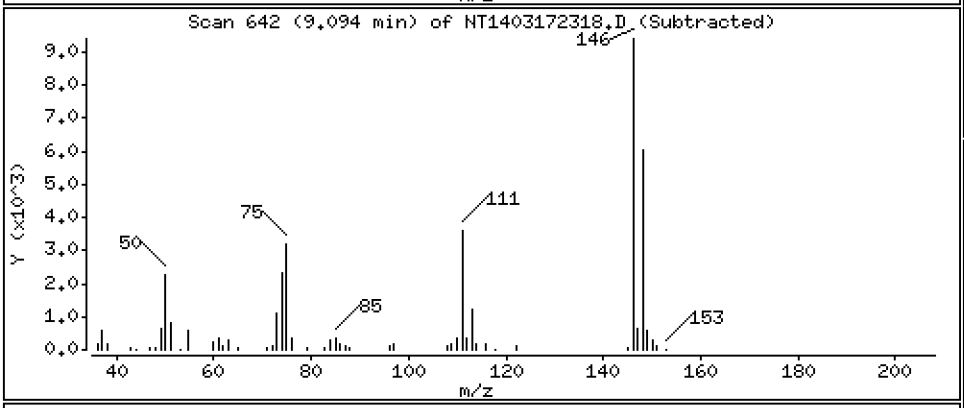
Column diameter: 0.25

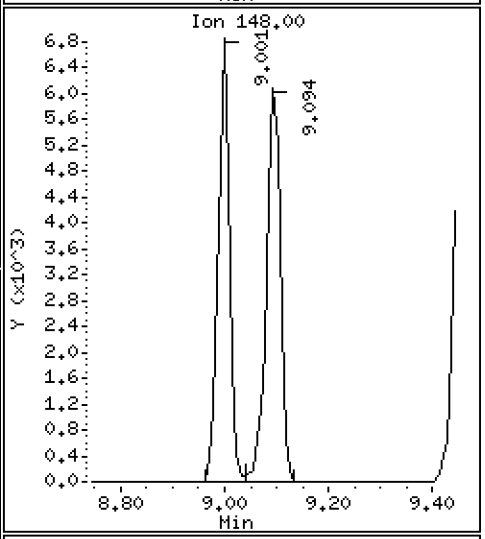
9 1,4-Dichlorobenzene

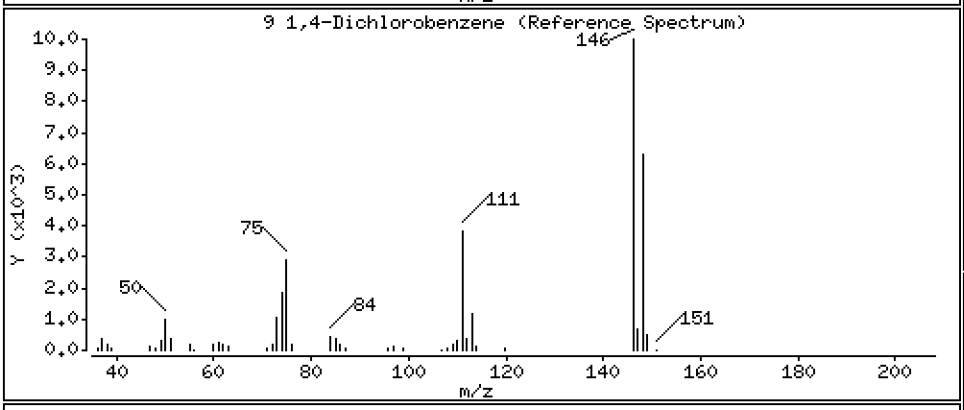
Concentration: 0.2091 ug/mL

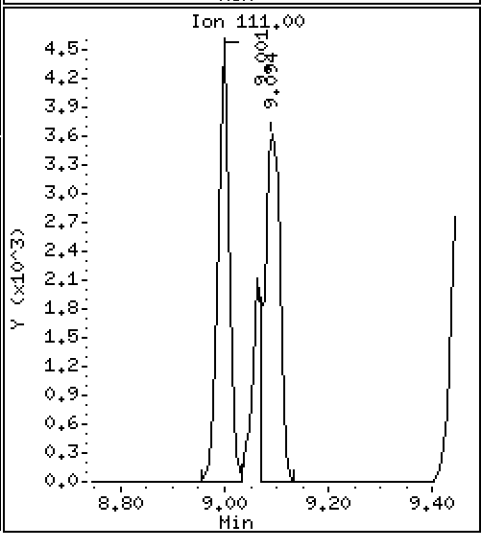


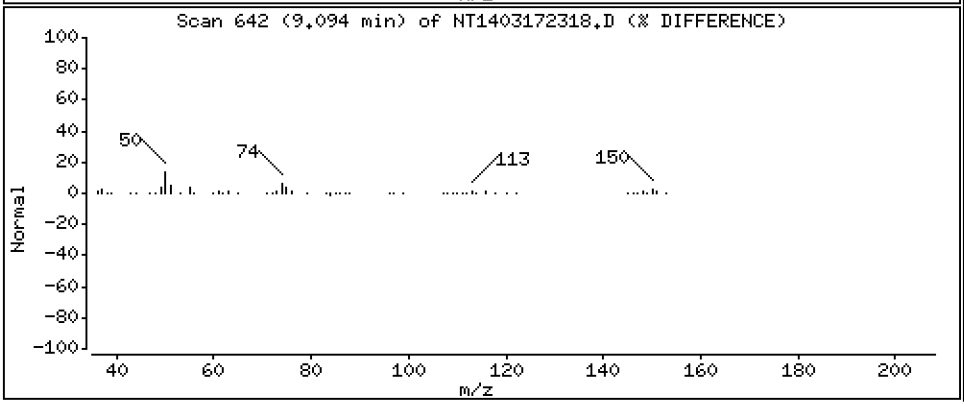












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

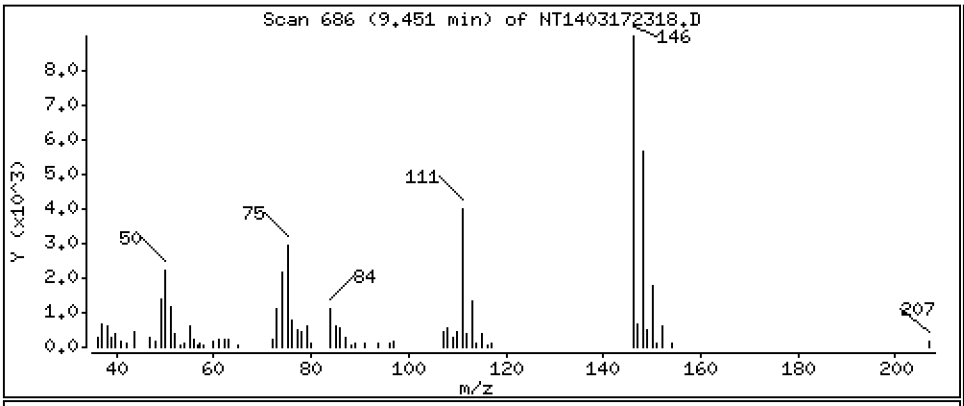
Operator: JGR

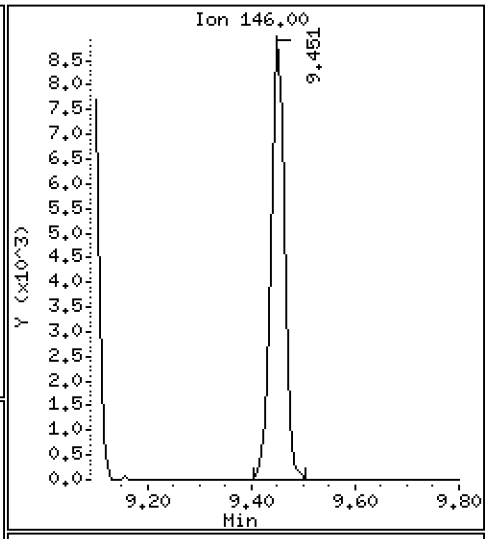
Column phase: ZB-5msi

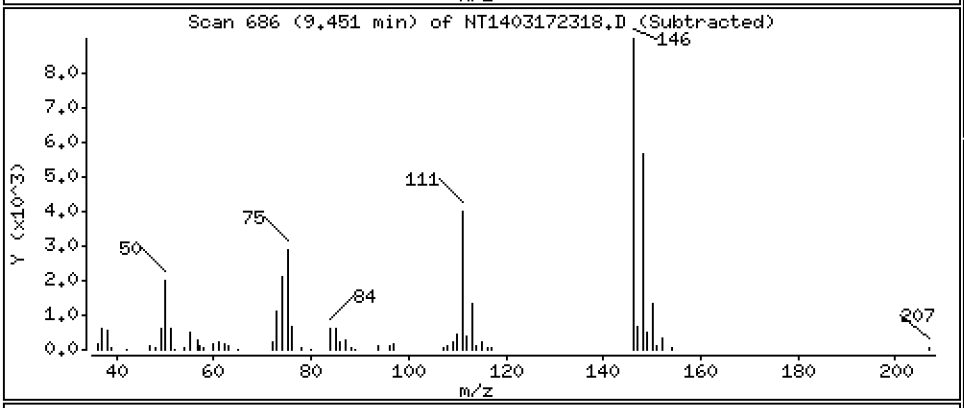
Column diameter: 0.25

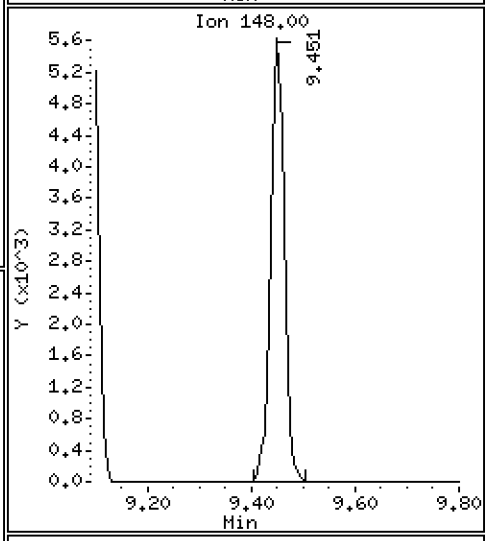
12 1,2-Dichlorobenzene

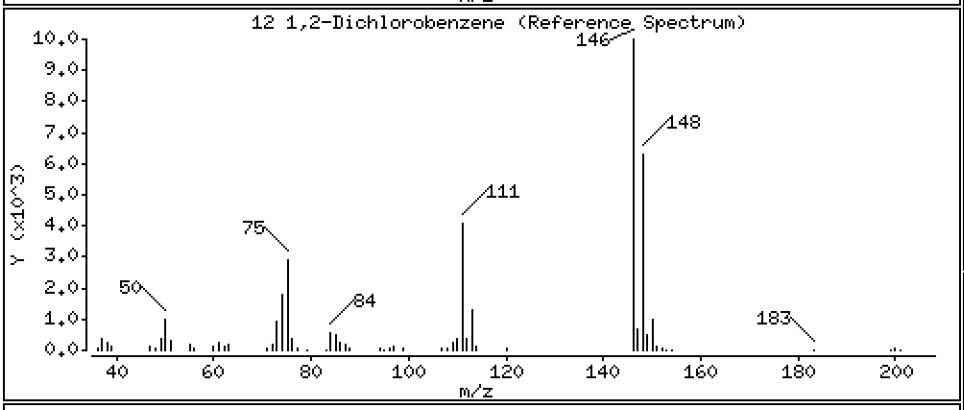
Concentration: 0.2094 ug/mL

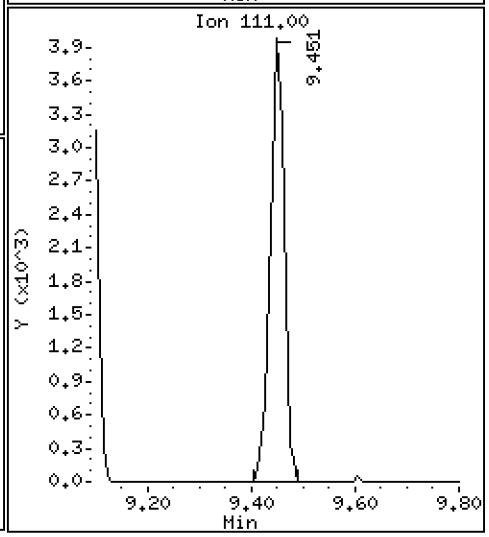


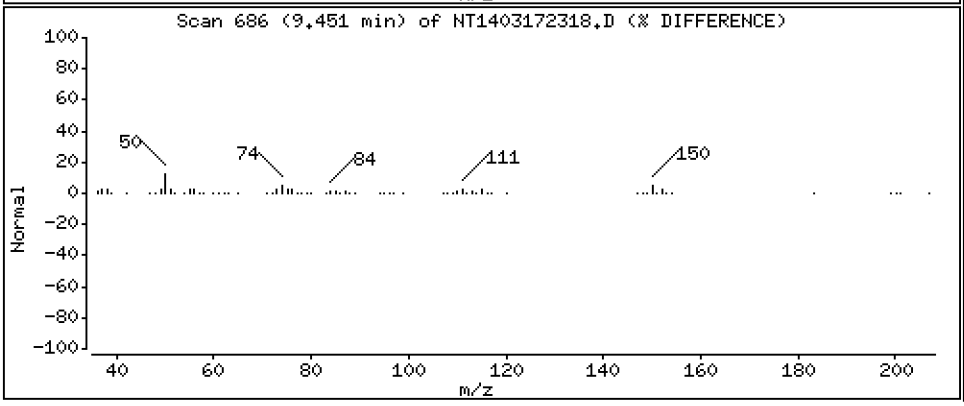












Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172318.D

Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

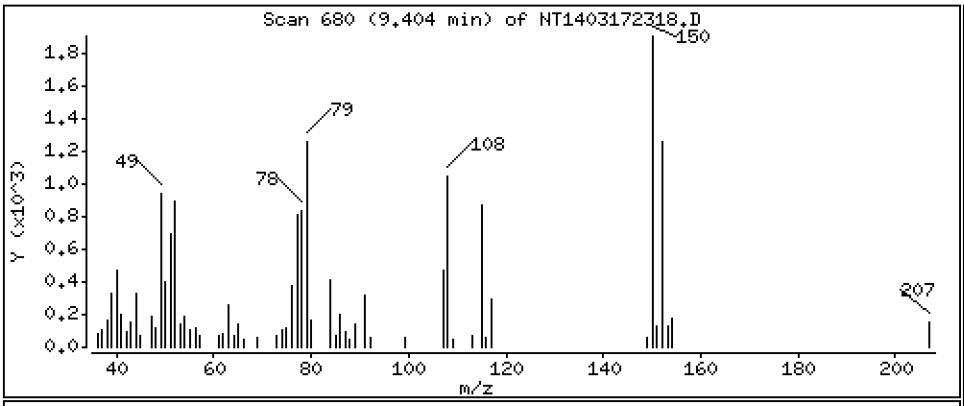
Operator: JGR

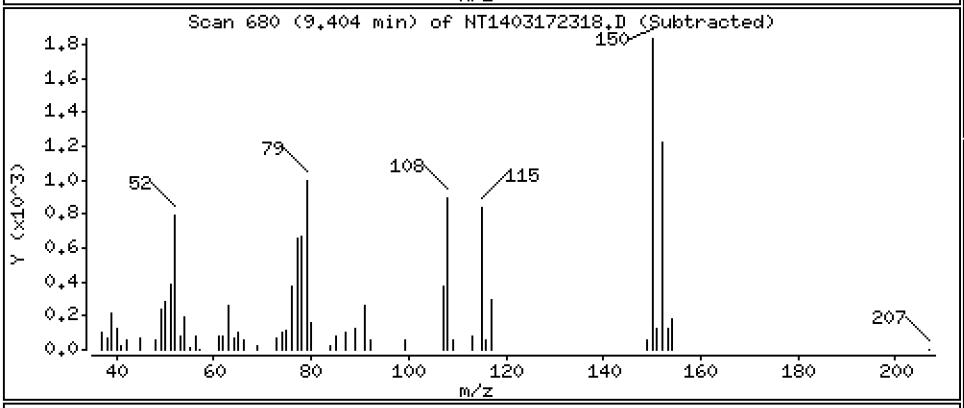
Column phase: ZB-5msi

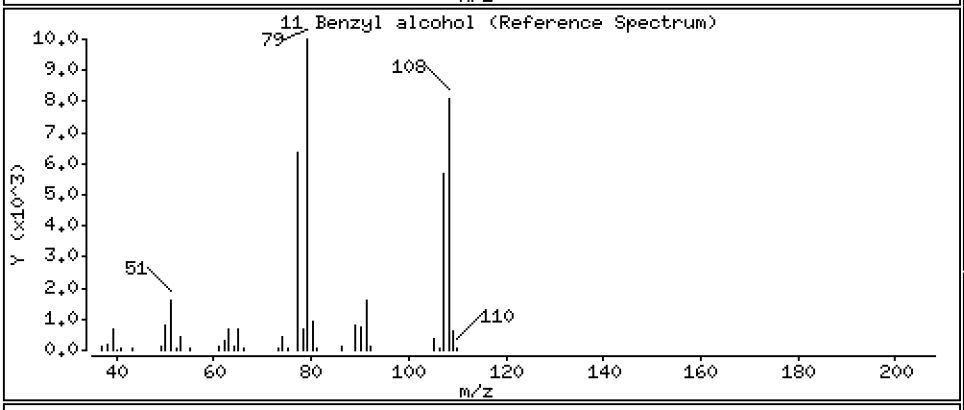
Column diameter: 0.25

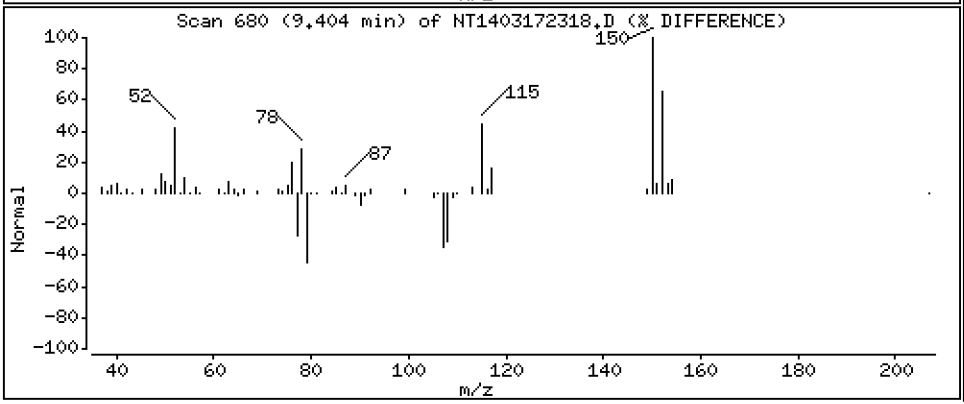
11 Benzyl alcohol

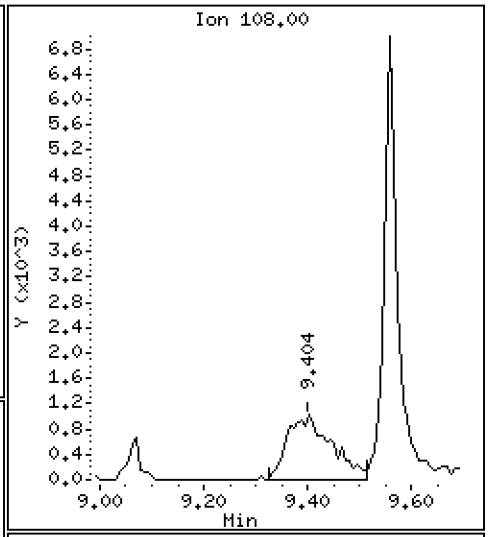
Concentration: 0.1341 ug/mL

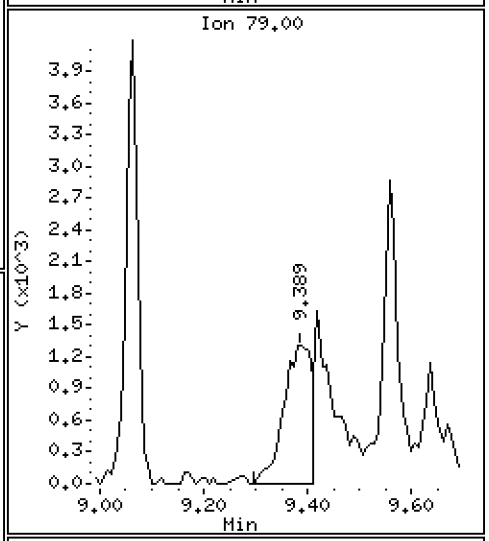


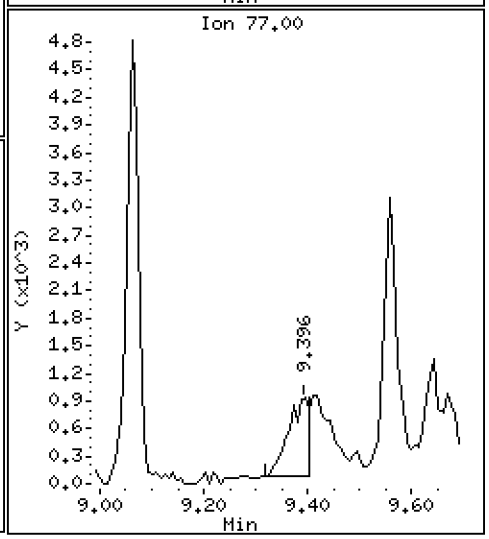












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

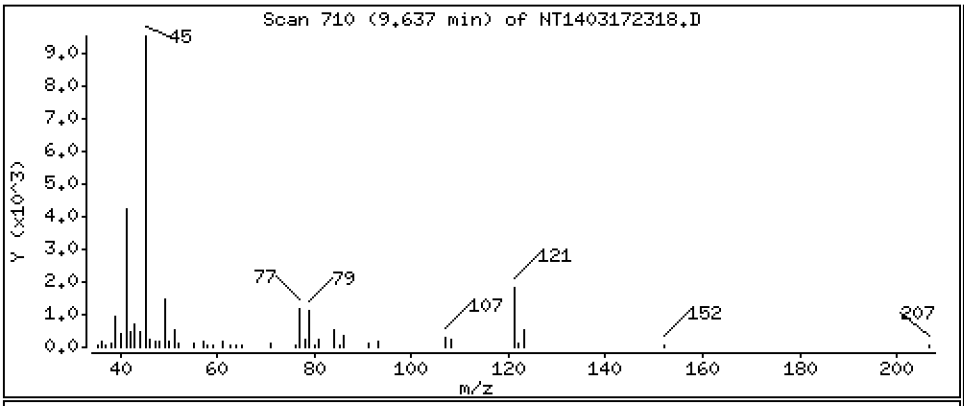
Operator: JGR

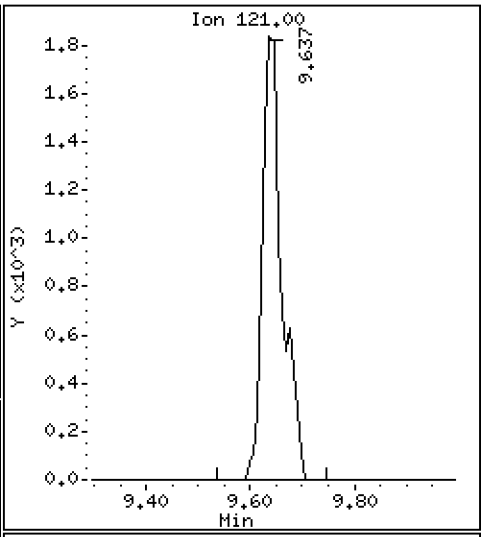
Column phase: ZB-5msi

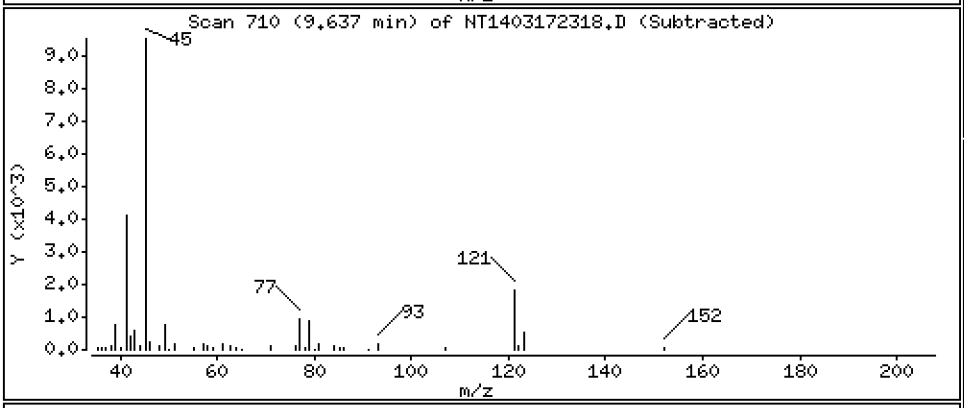
Column diameter: 0.25

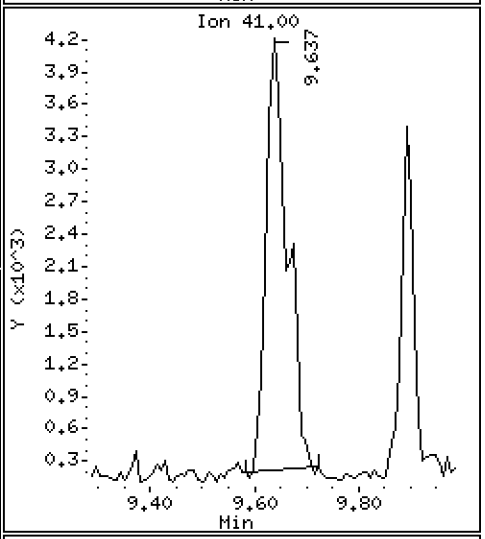
14 2,2'-oxybis(1-Chloropropane)

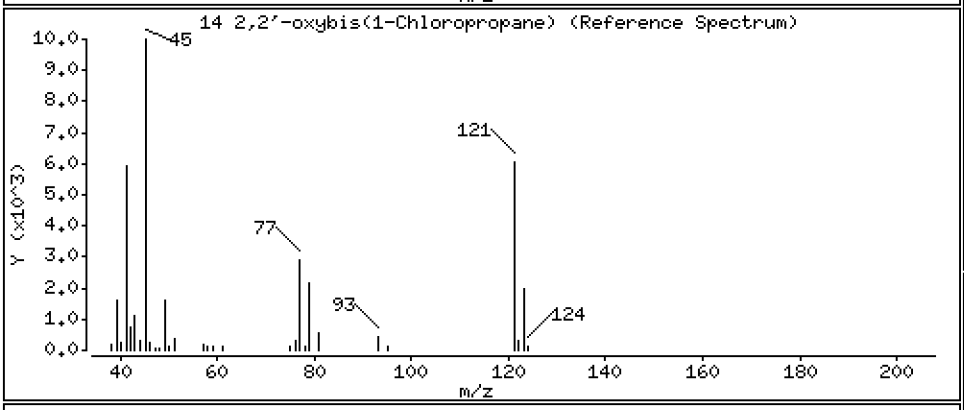
Concentration: 0.2112 ug/mL

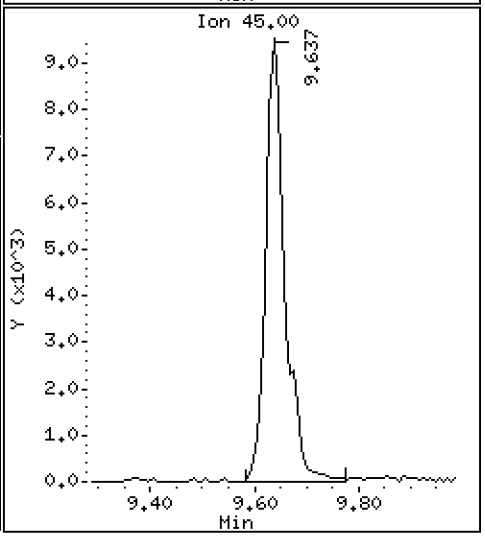


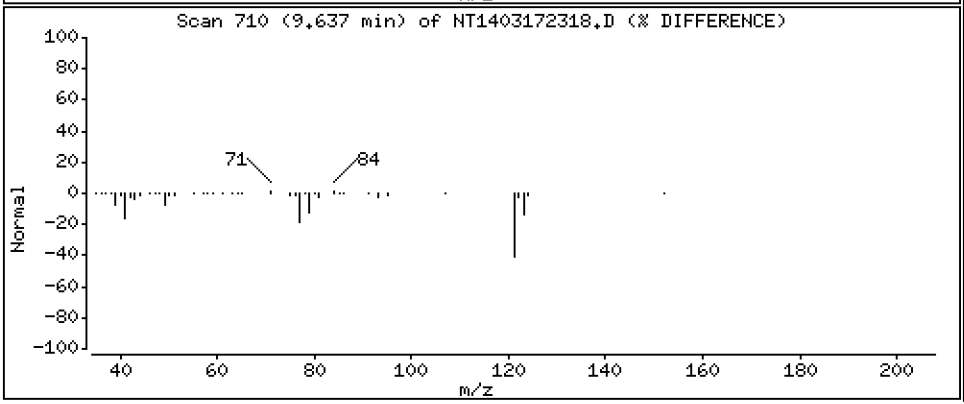












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

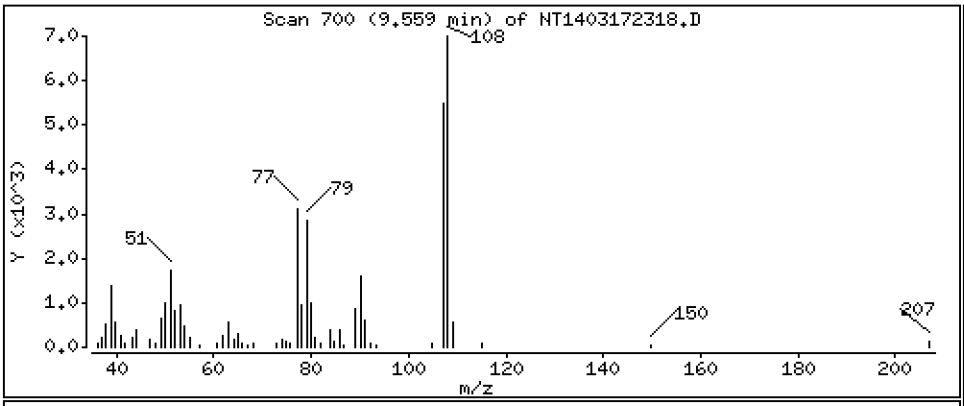
Operator: JGR

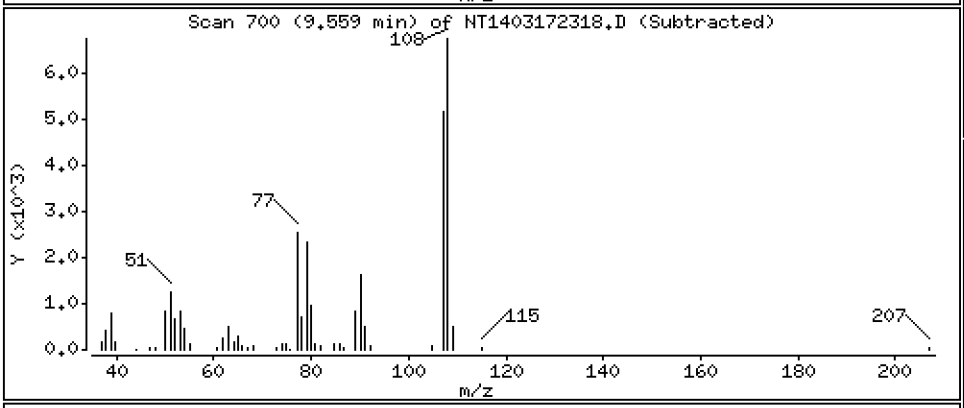
Column phase: ZB-5msi

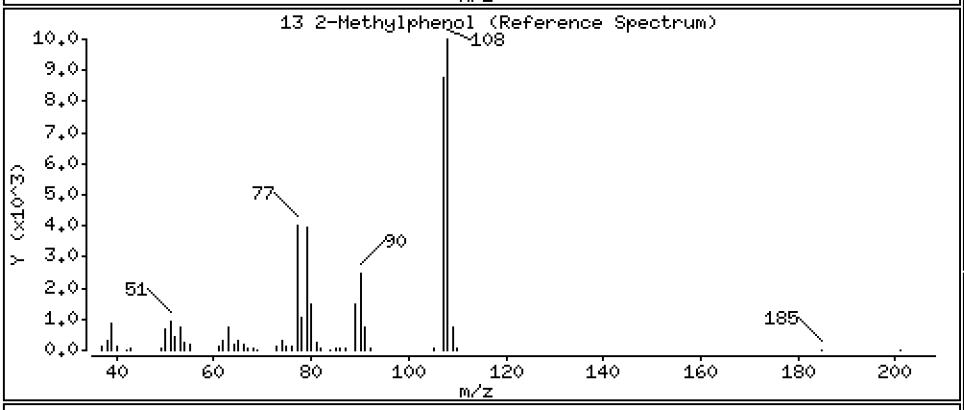
Column diameter: 0.25

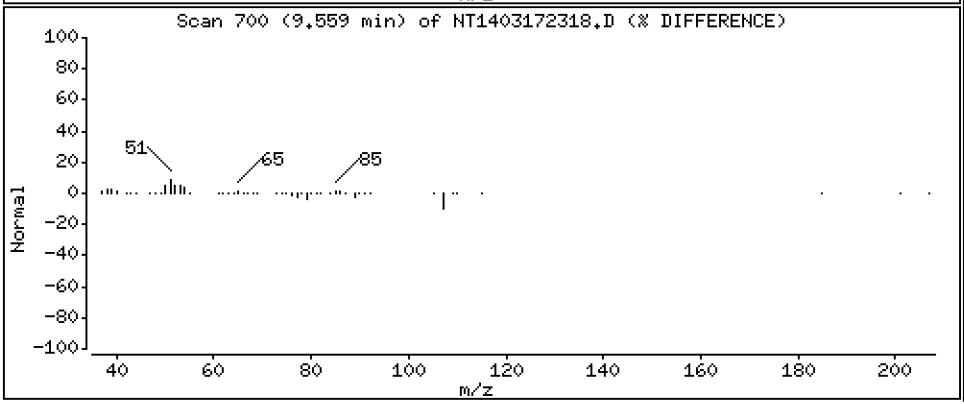
13 2-Methylphenol

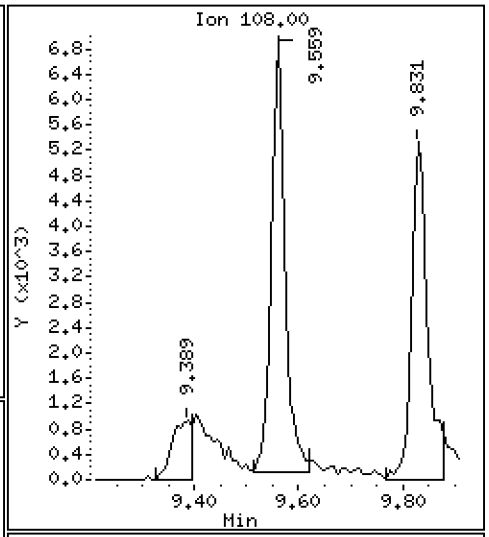
Concentration: 0.1749 ug/mL

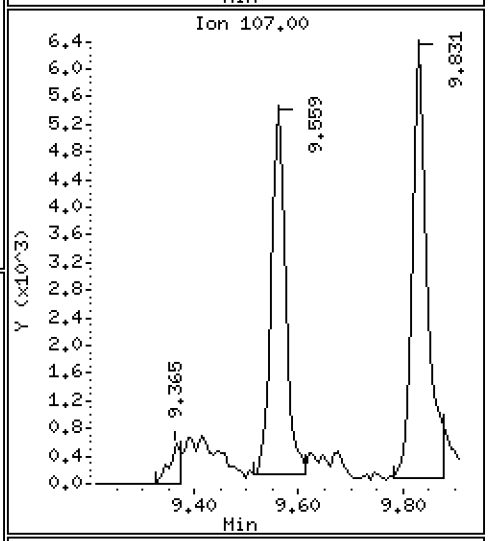


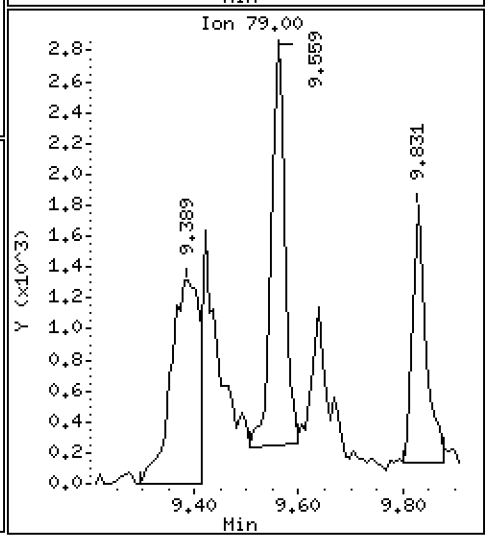












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

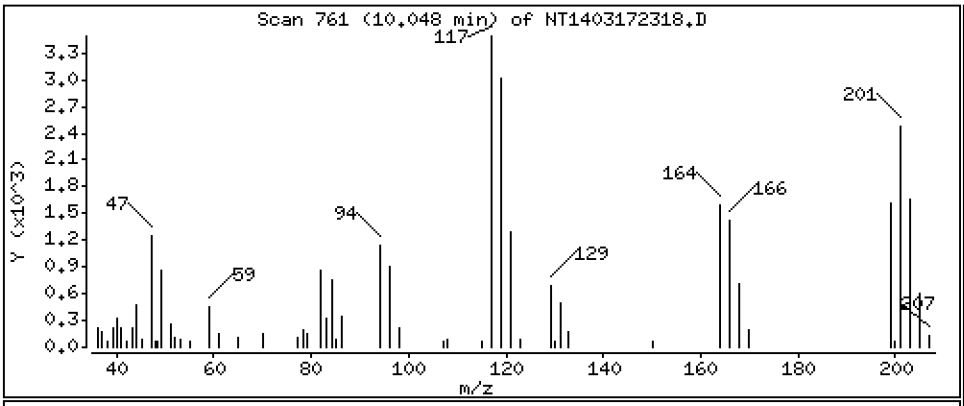
Operator: JGR

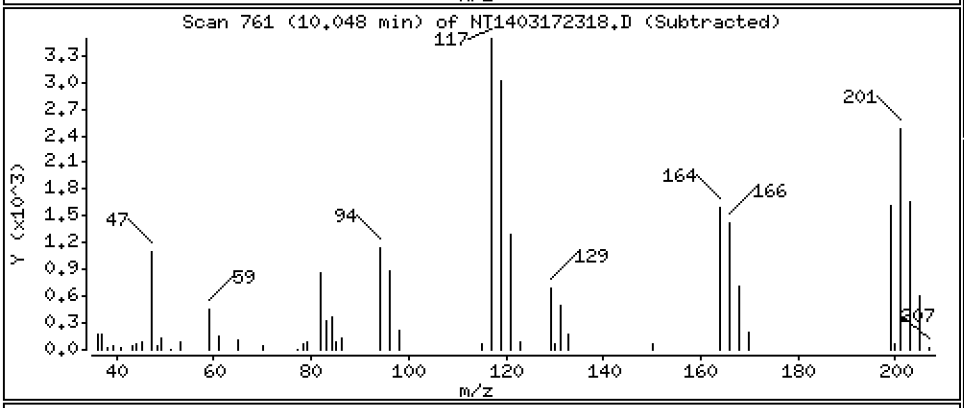
Column phase: ZB-5msi

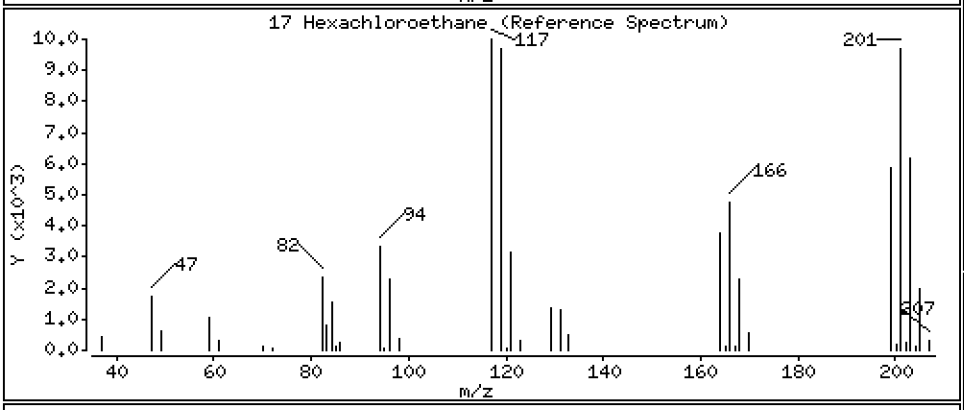
Column diameter: 0.25

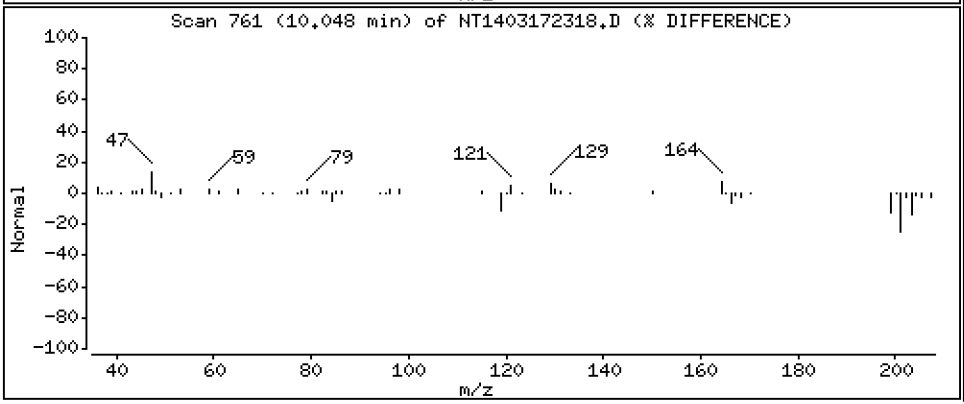
17 Hexachloroethane

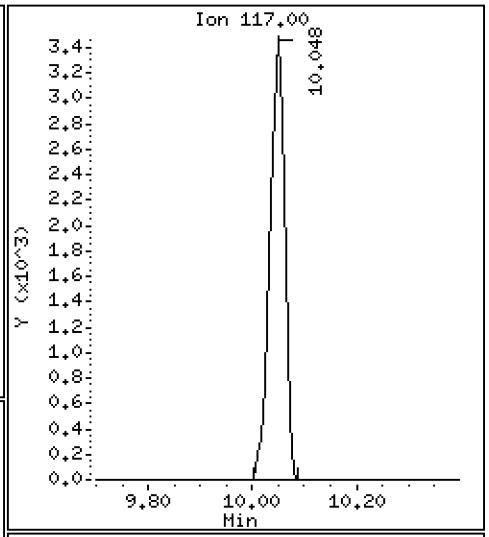
Concentration: 0.2068 ug/mL

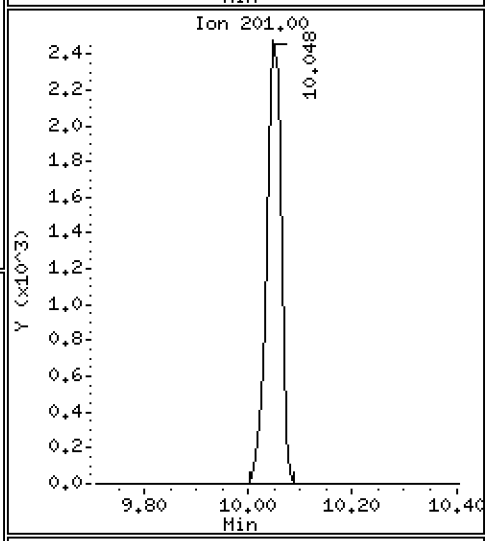


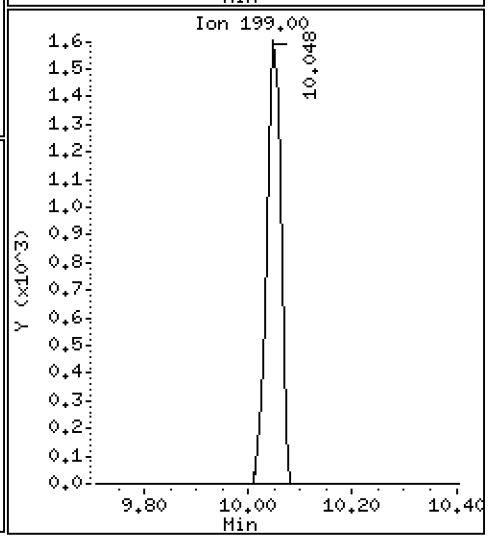












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

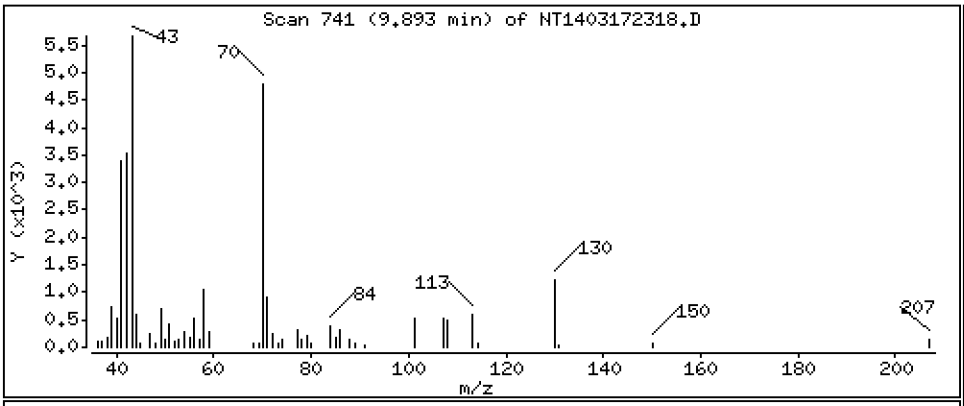
Operator: JGR

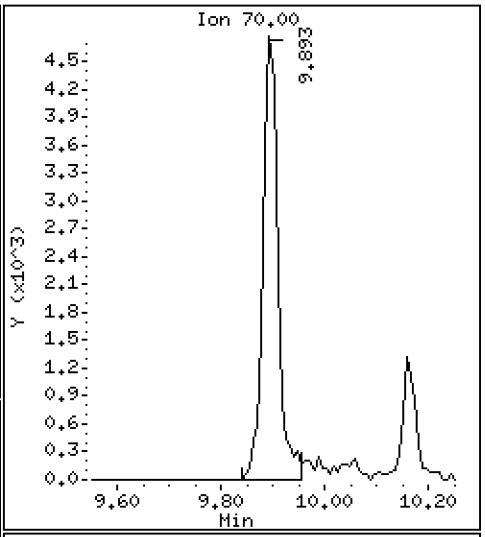
Column phase: ZB-5msi

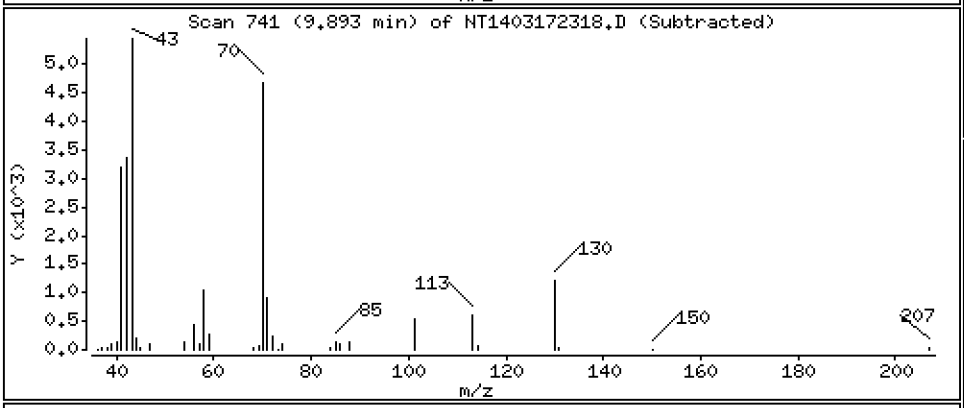
Column diameter: 0.25

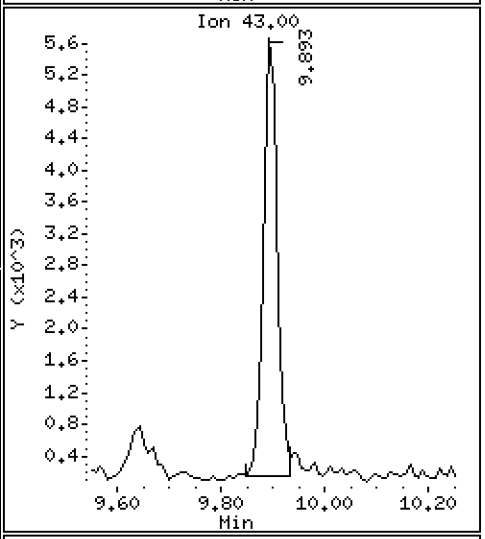
16 N-Nitroso-di-n-propylamine

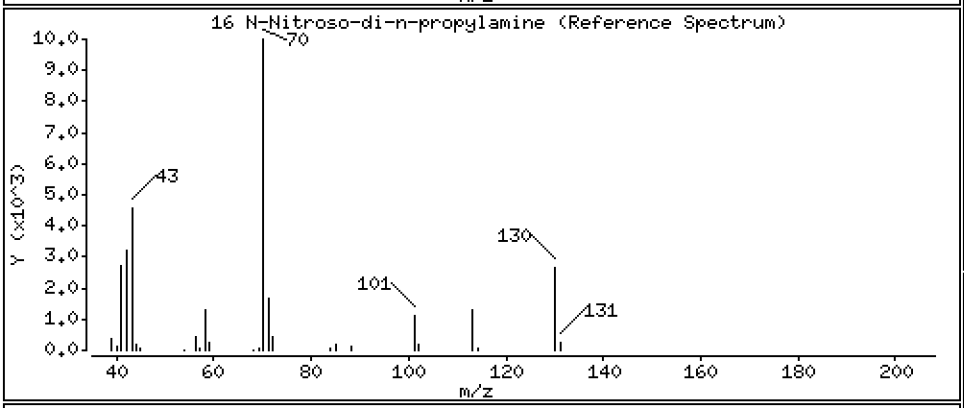
Concentration: 0.1717 ug/mL

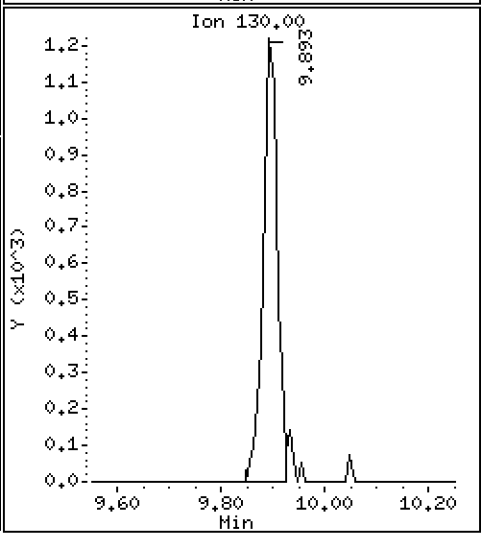


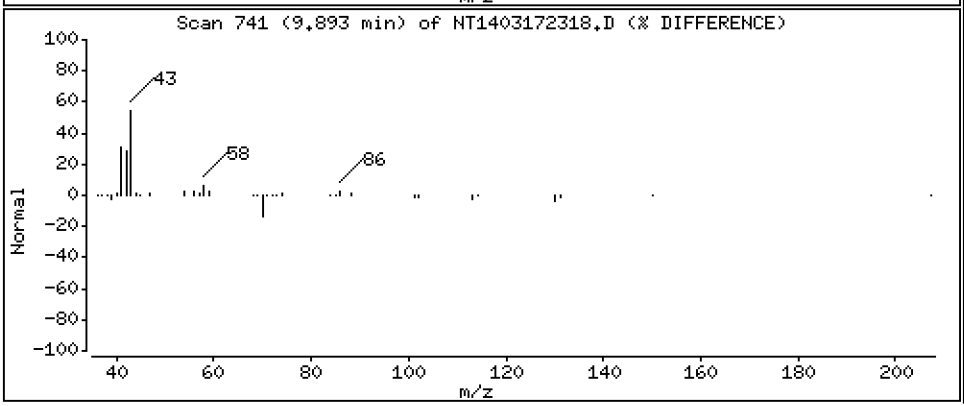












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

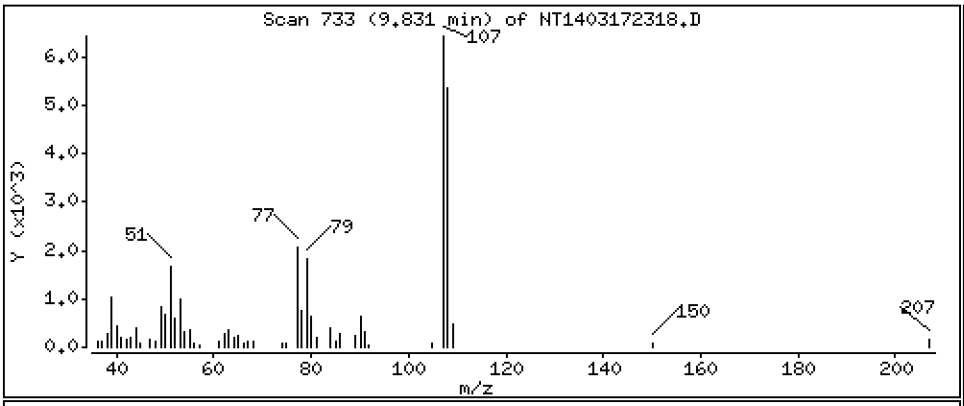
Operator: JGR

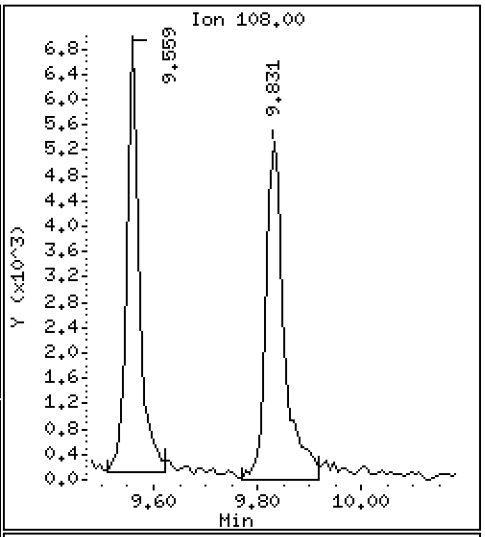
Column phase: ZB-5msi

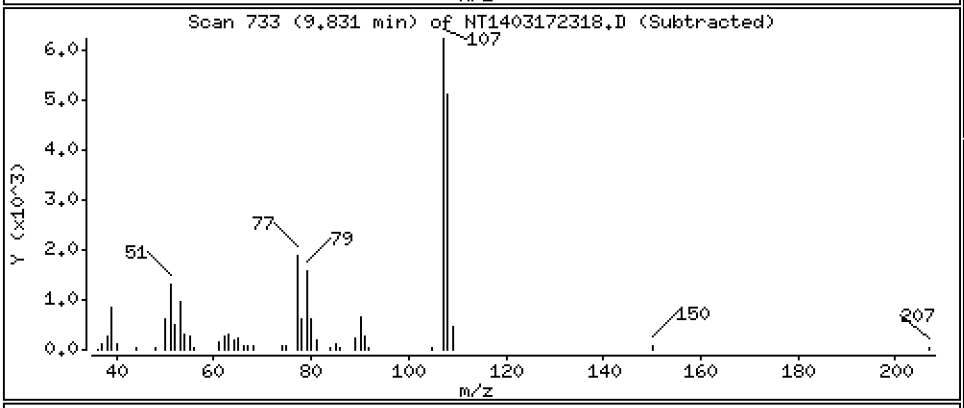
Column diameter: 0.25

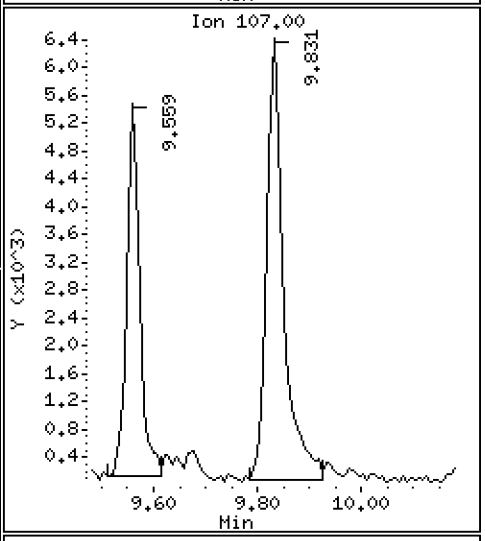
15 4-Methylphenol

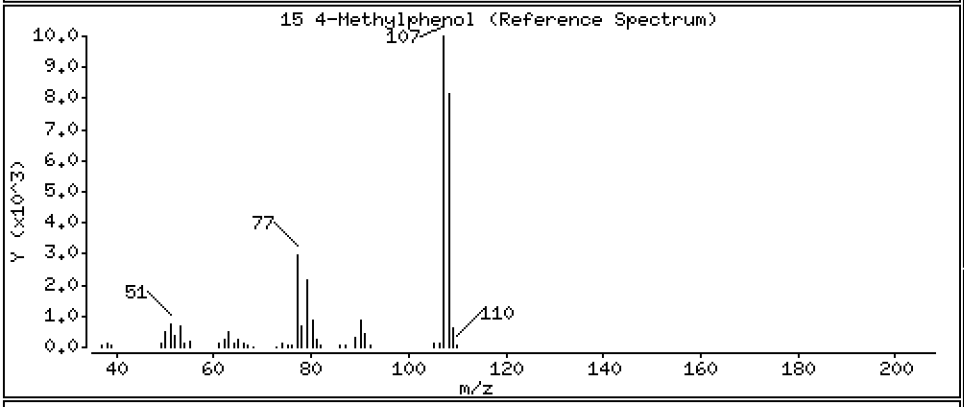
Concentration: 0.1578 ug/mL

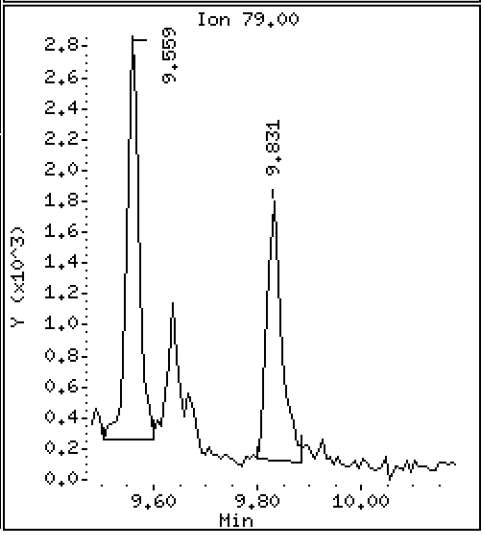


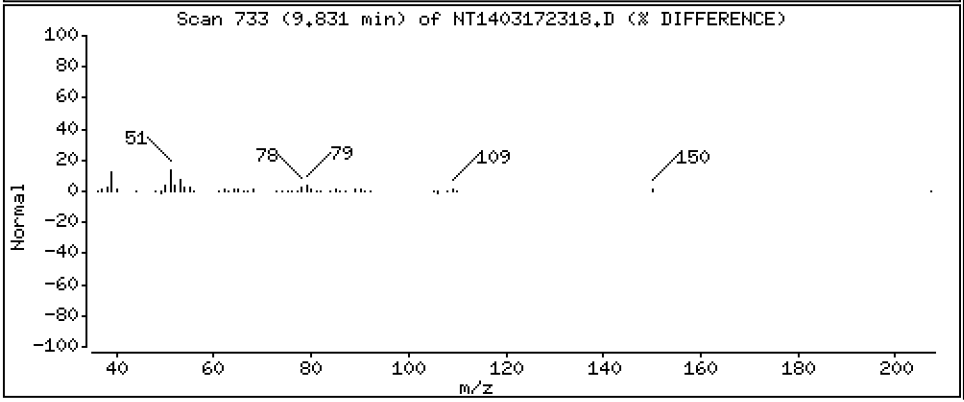












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

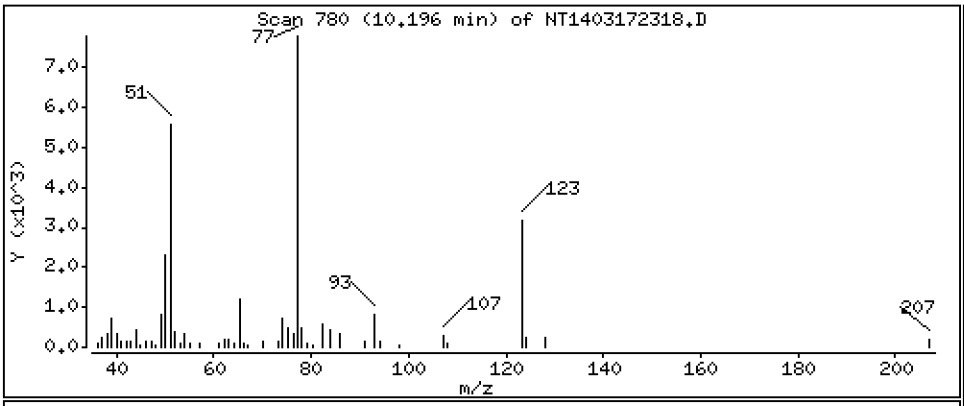
Operator: JGR

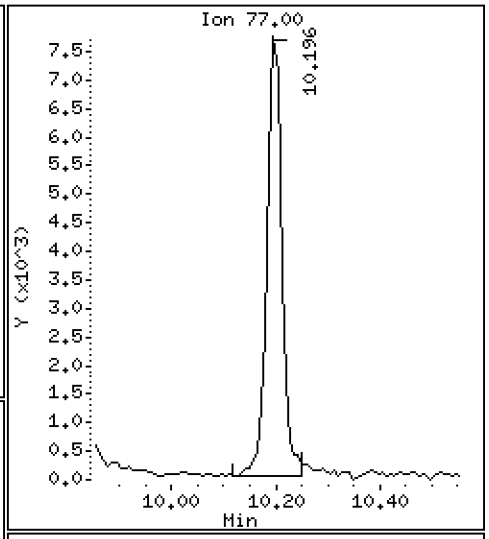
Column phase: ZB-5msi

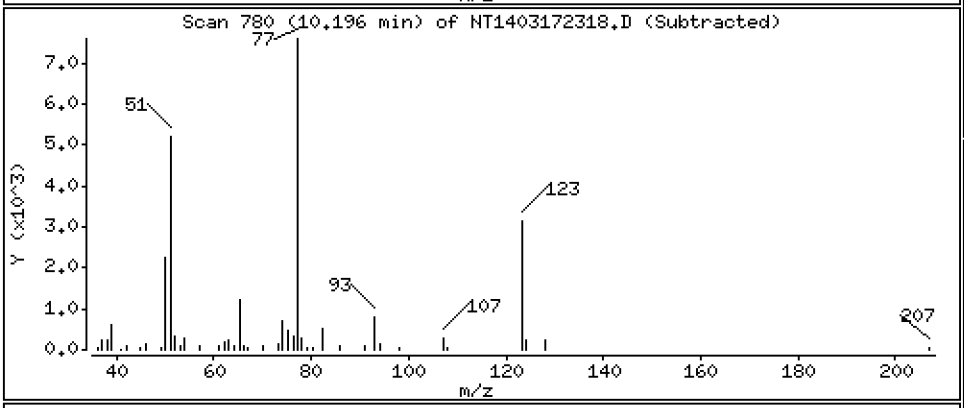
Column diameter: 0.25

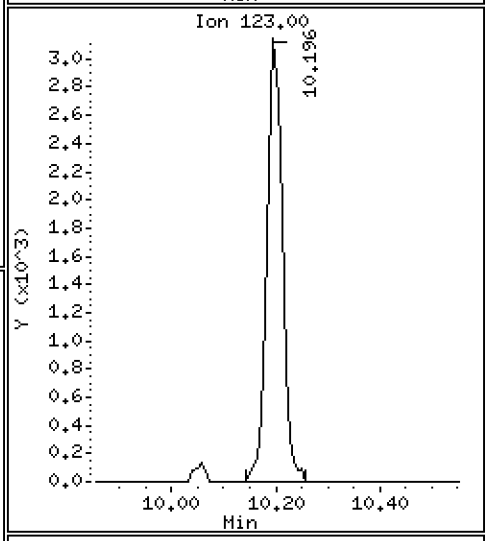
19 Nitrobenzene

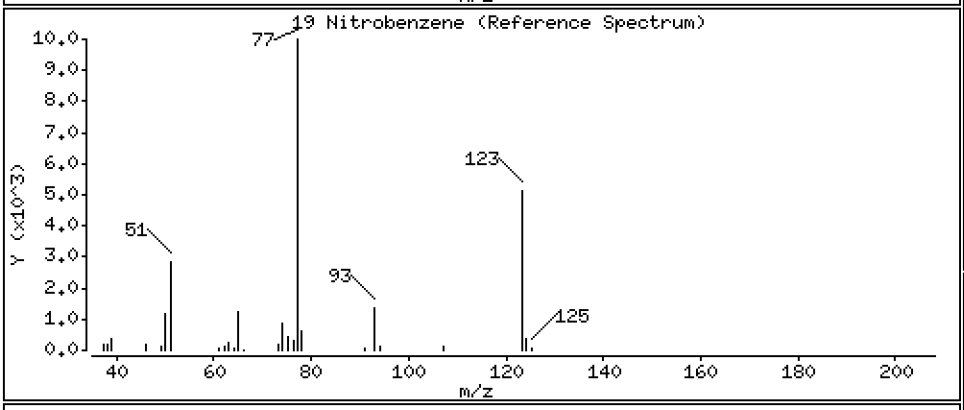
Concentration: 0.1856 ug/mL

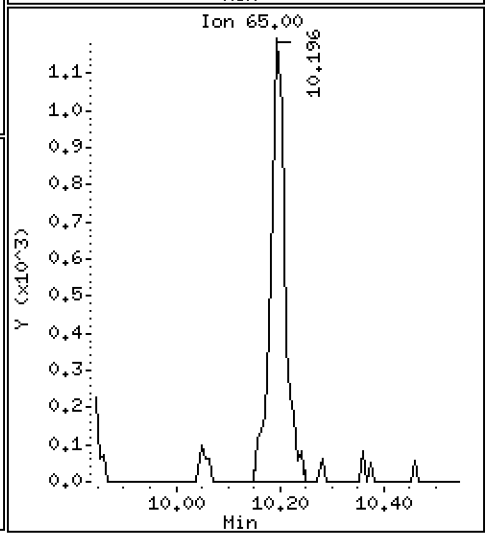


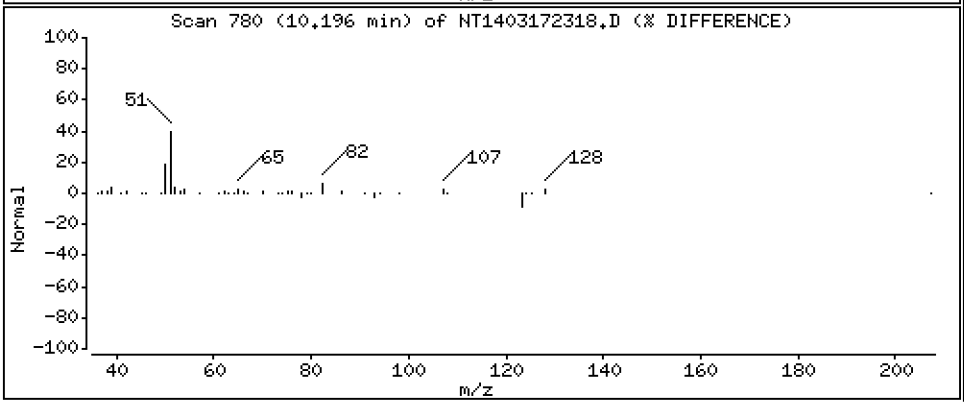












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

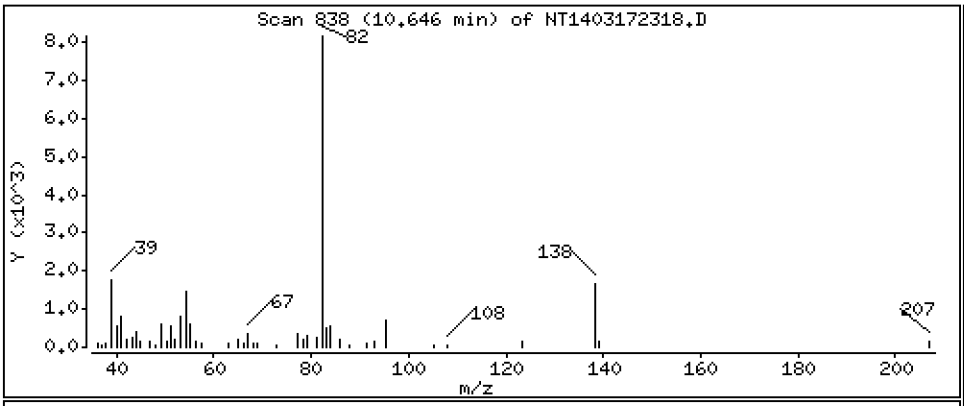
Operator: JGR

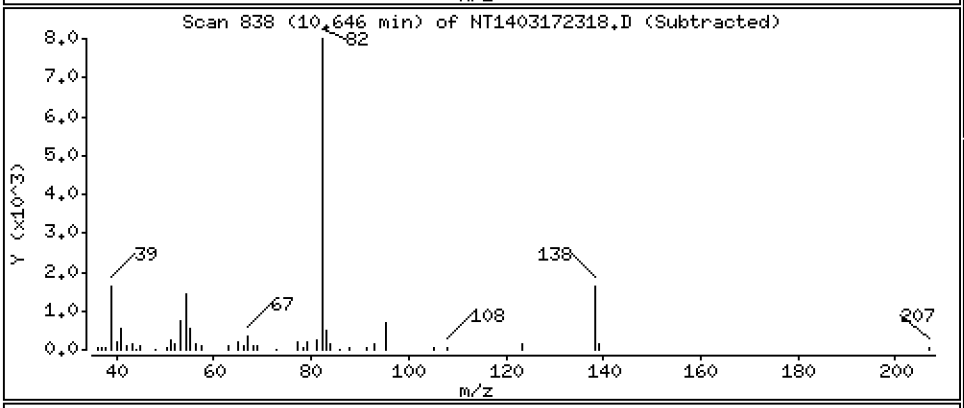
Column phase: ZB-5msi

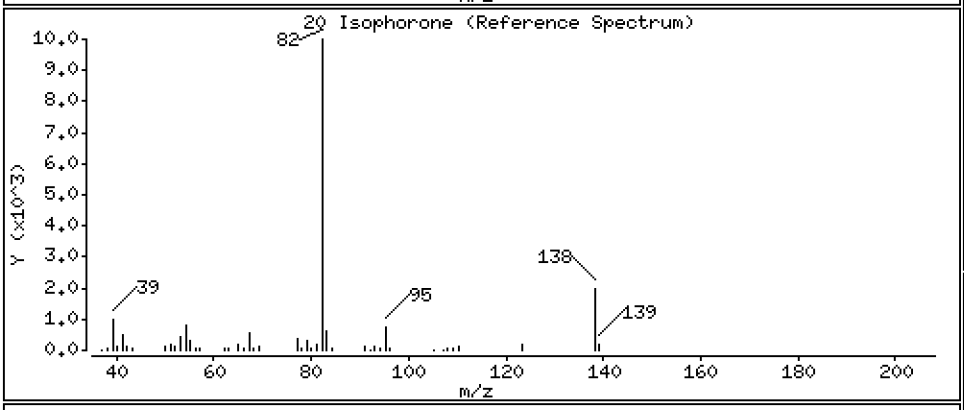
Column diameter: 0.25

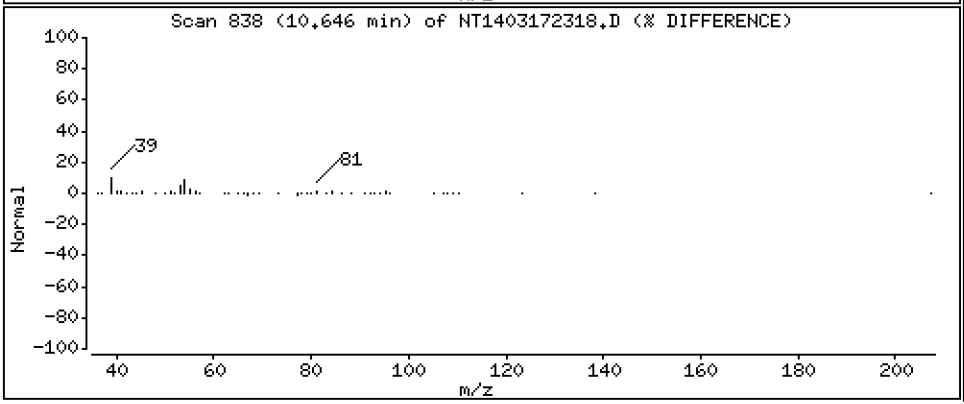
20 Isophorone

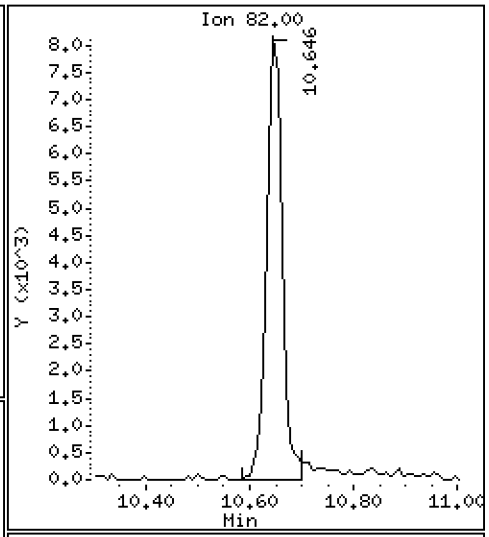
Concentration: 0.1499 ug/mL

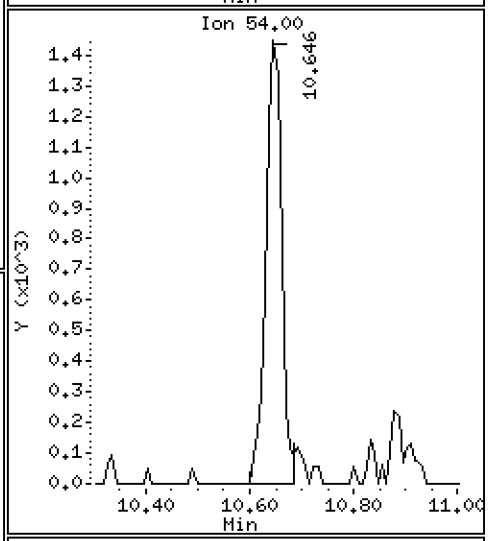


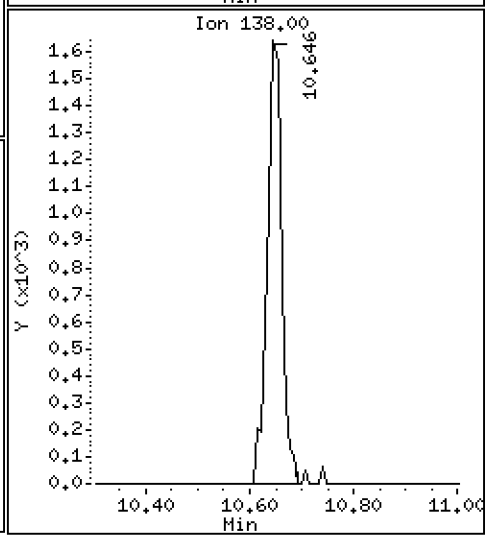












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

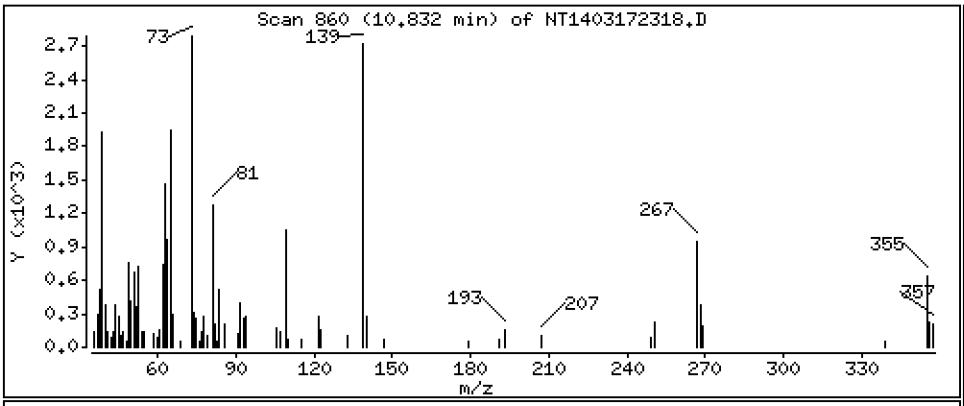
Operator: JGR

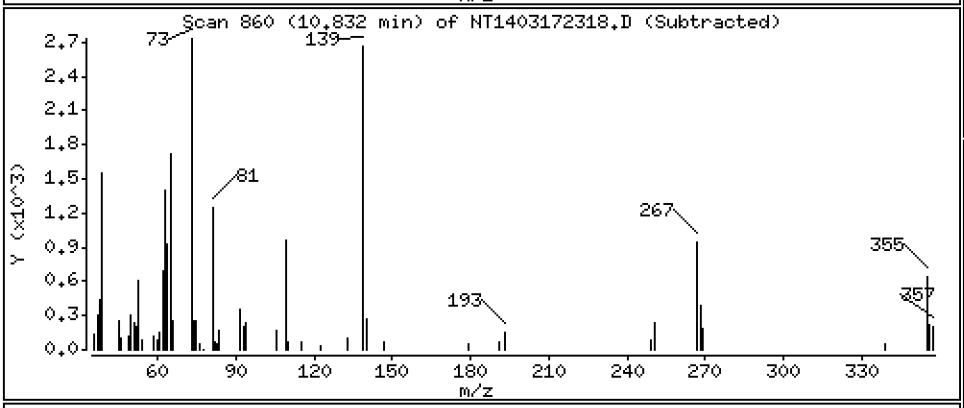
Column phase: ZB-5msi

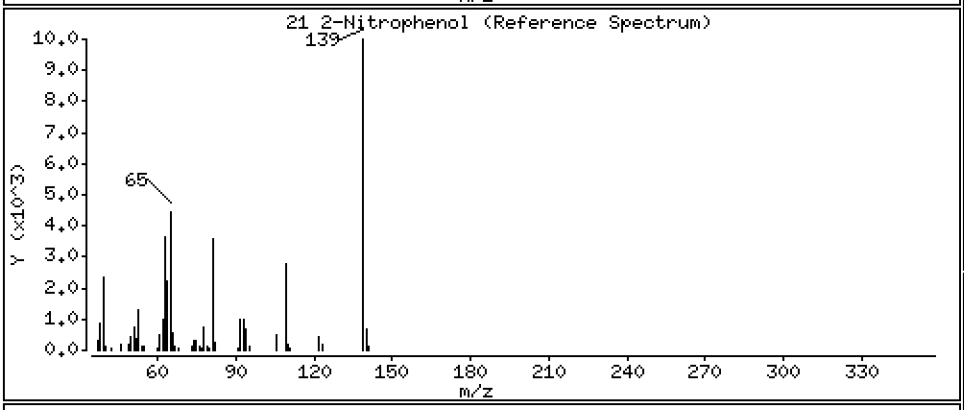
Column diameter: 0.25

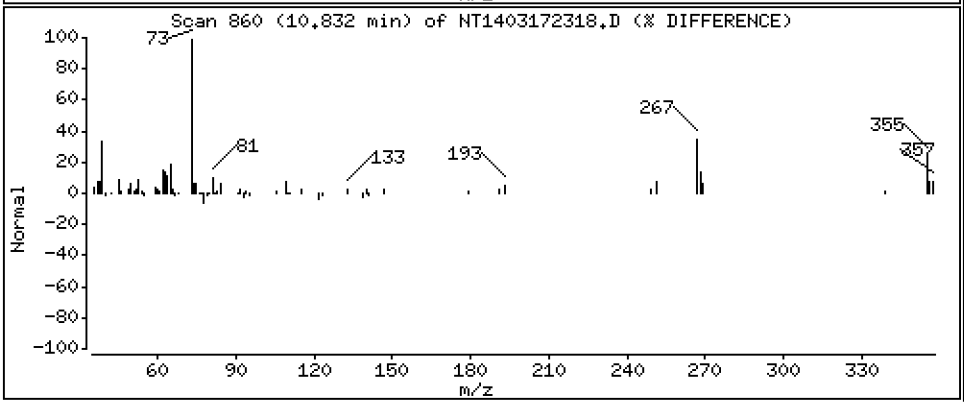
21 2-Nitrophenol

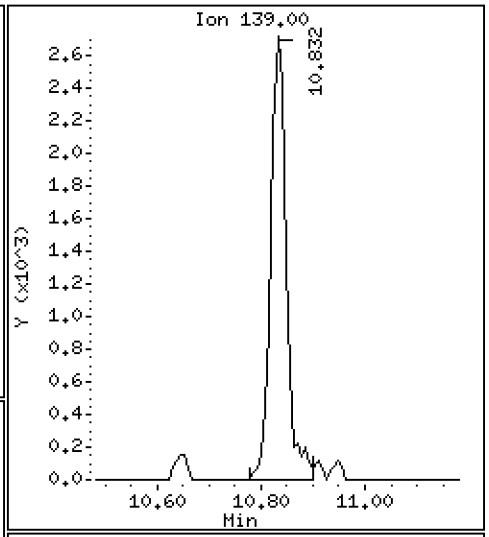
Concentration: 0.1226 ug/mL

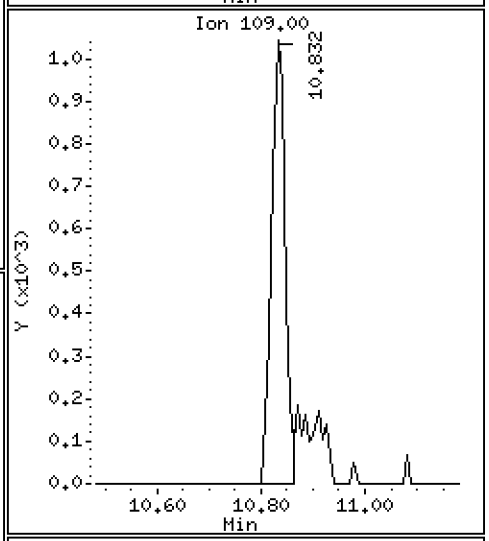


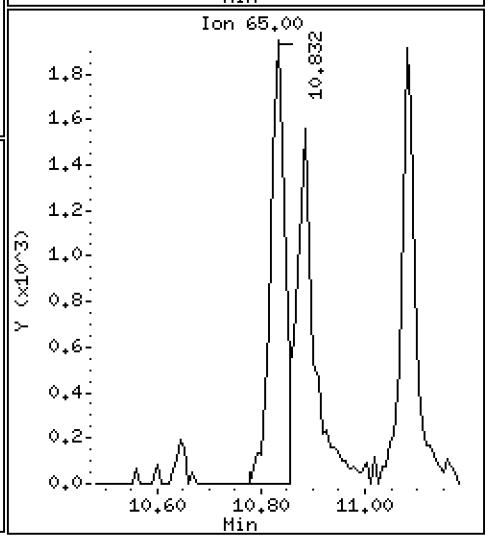












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

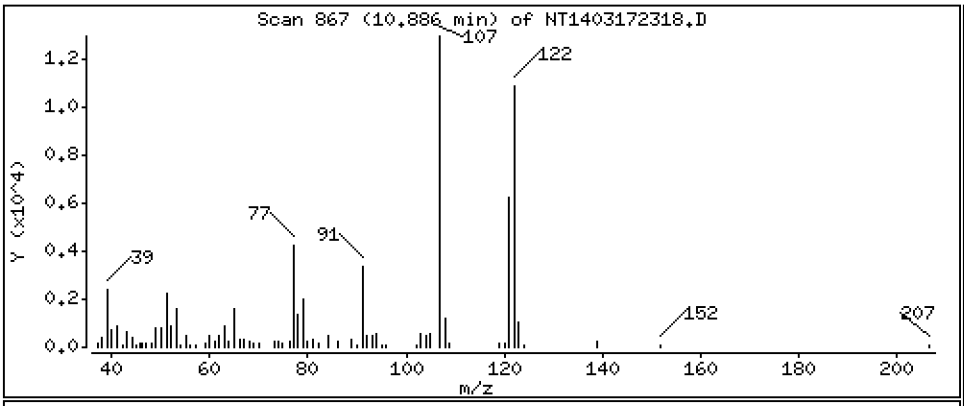
Operator: JGR

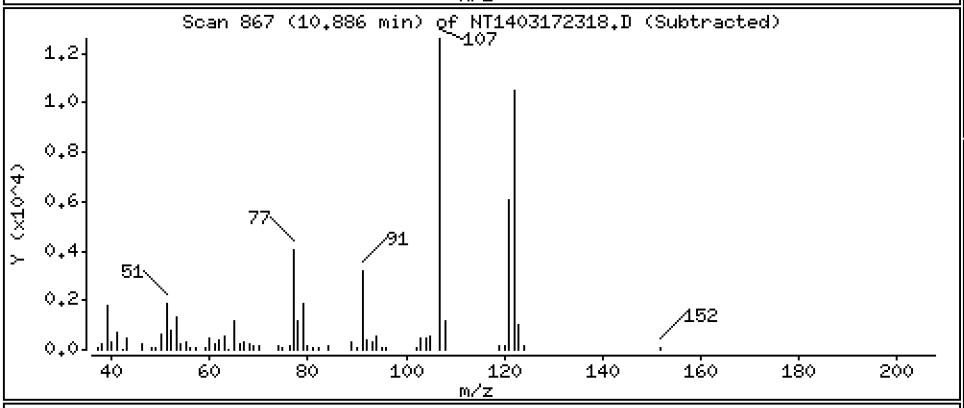
Column phase: ZB-5msi

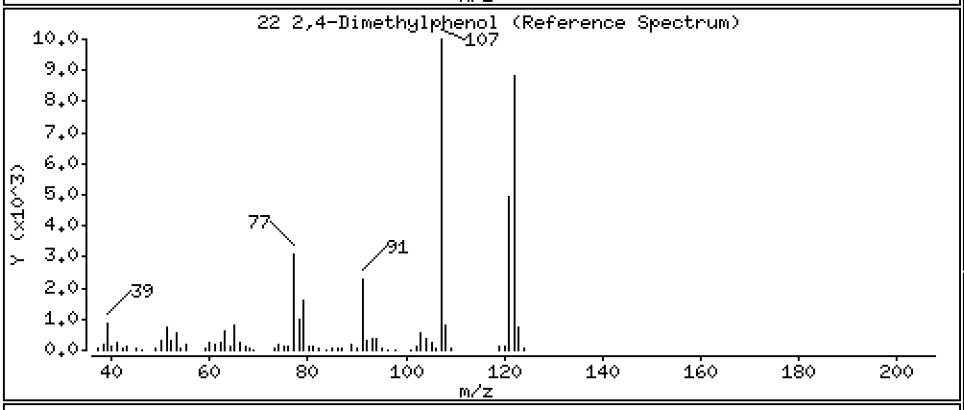
Column diameter: 0.25

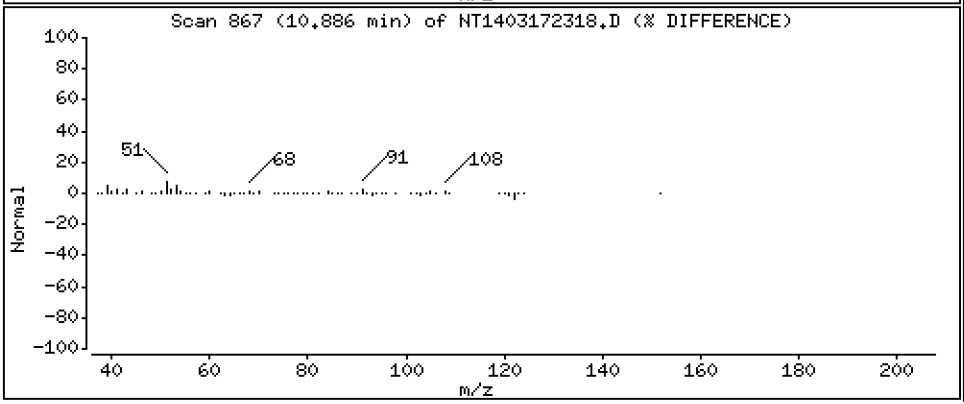
22 2,4-Dimethylphenol

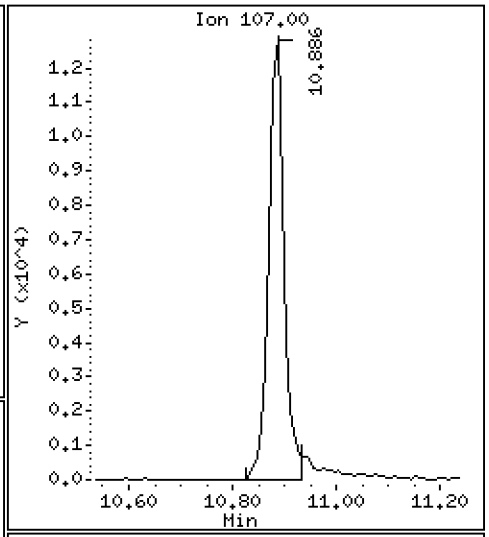
Concentration: 0.3712 ug/mL

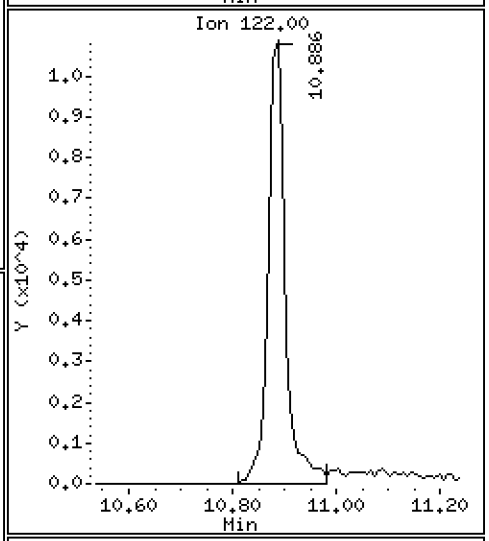


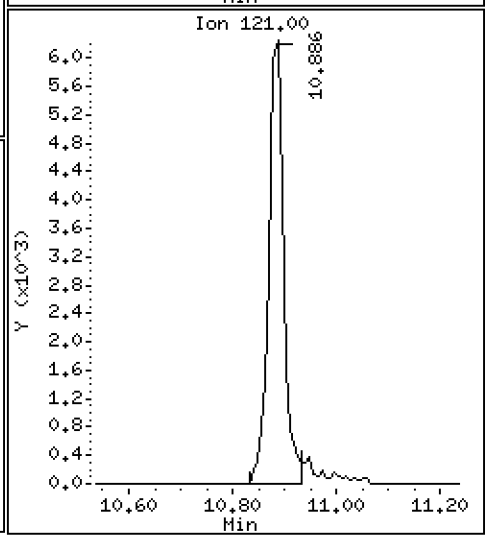












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

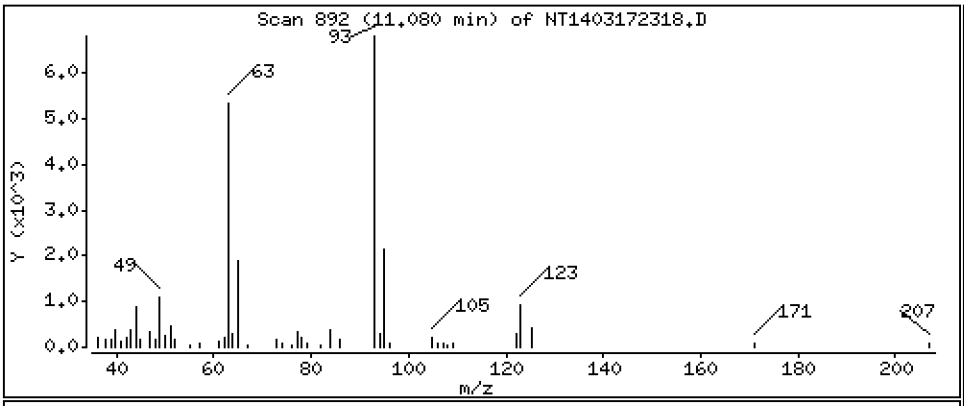
Operator: JGR

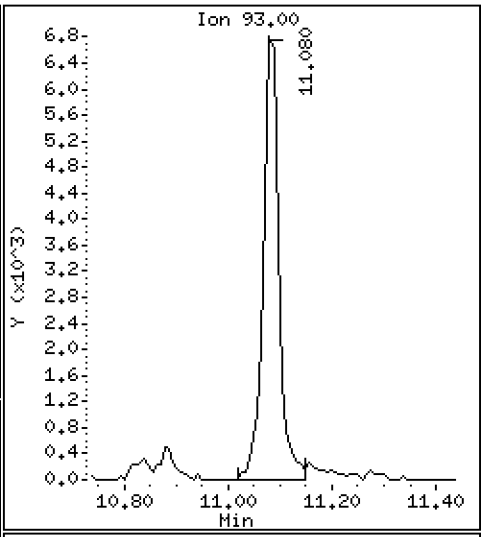
Column phase: ZB-5msi

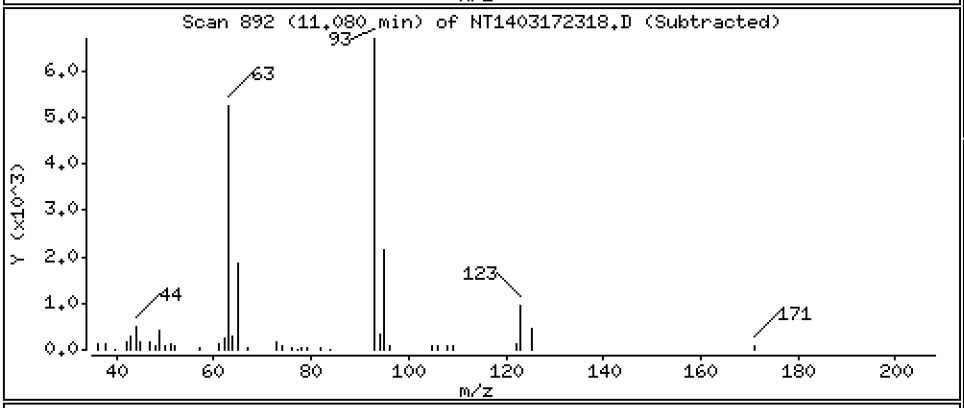
Column diameter: 0.25

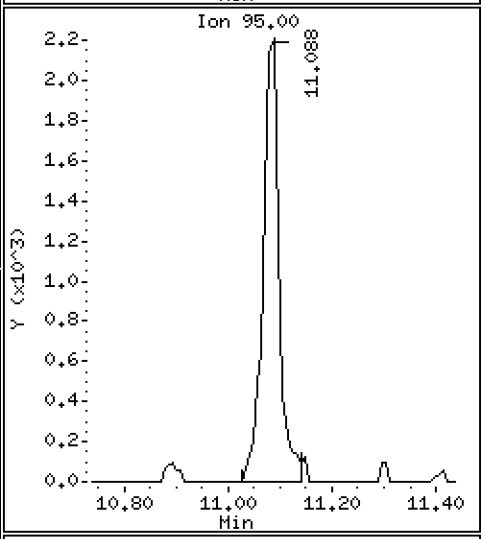
23 Bis(2-Chloroethoxy)methane

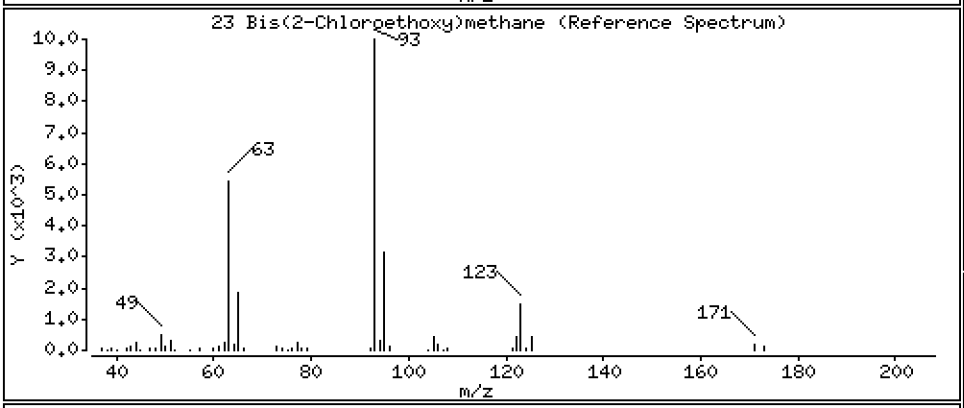
Concentration: 0.1857 ug/mL

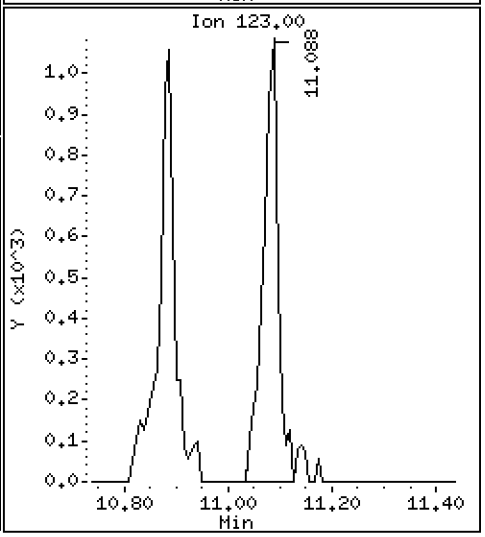


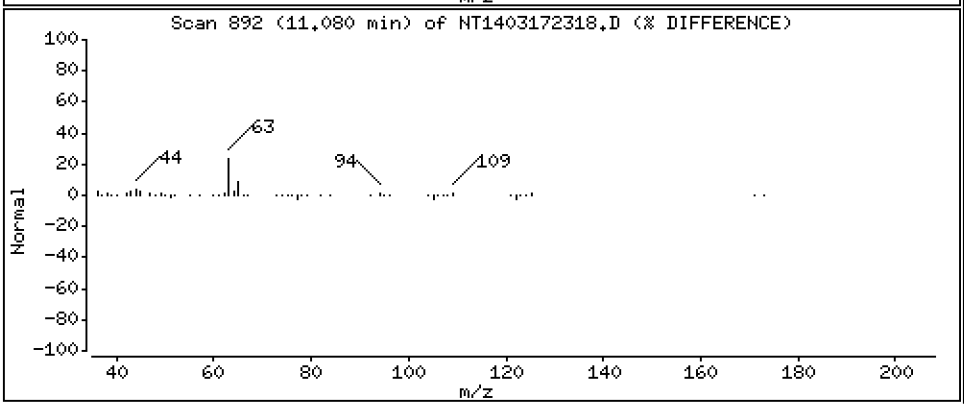












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

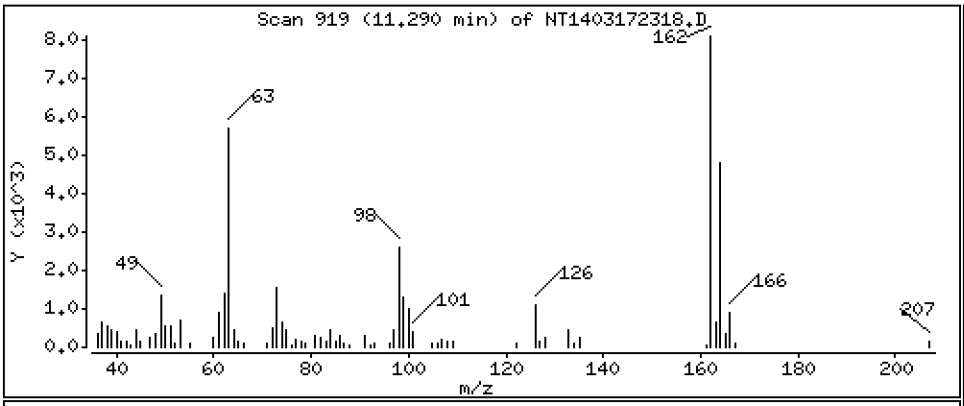
Operator: JGR

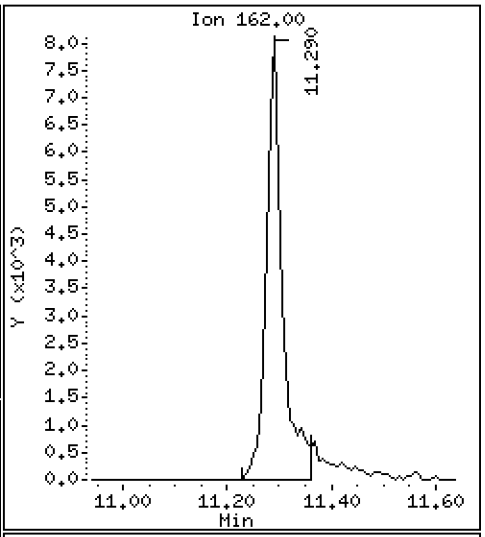
Column phase: ZB-5msi

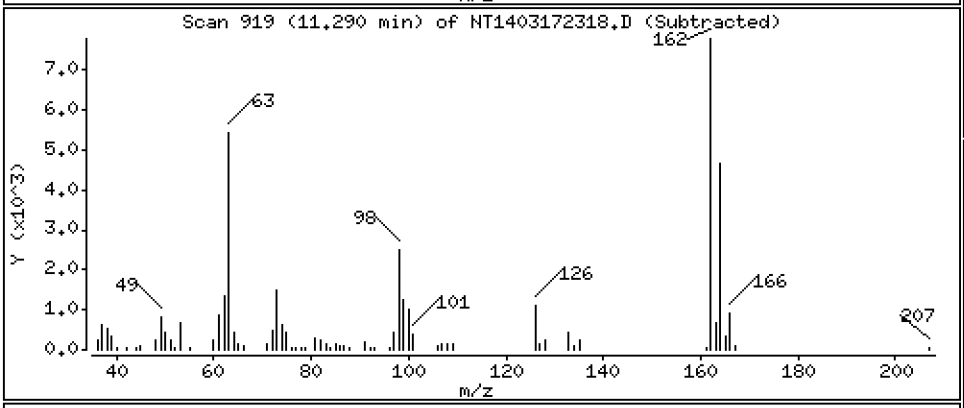
Column diameter: 0.25

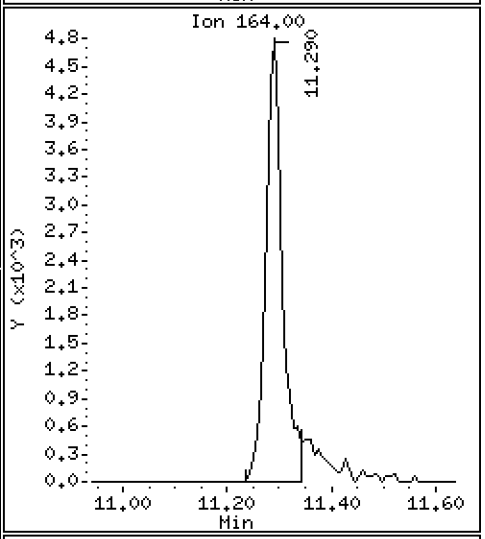
25 2,4-Dichlorophenol

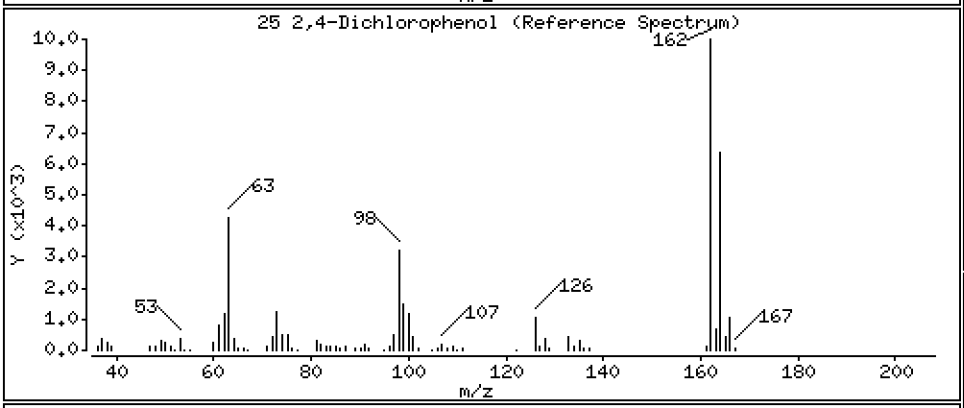
Concentration: 0.3147 ug/mL

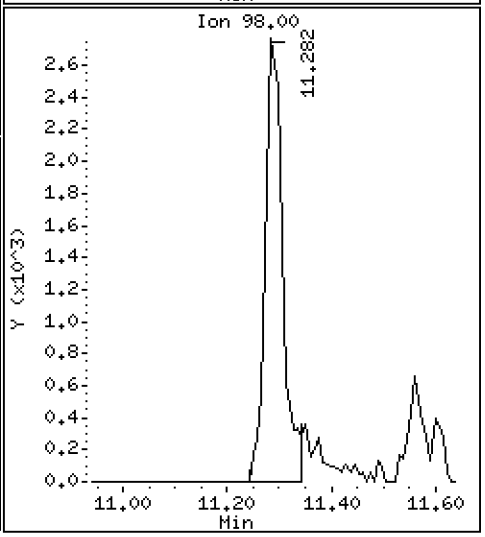


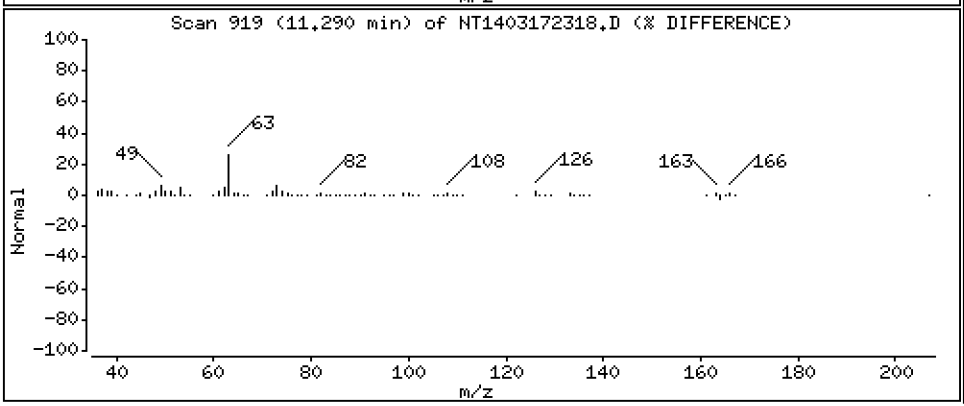












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

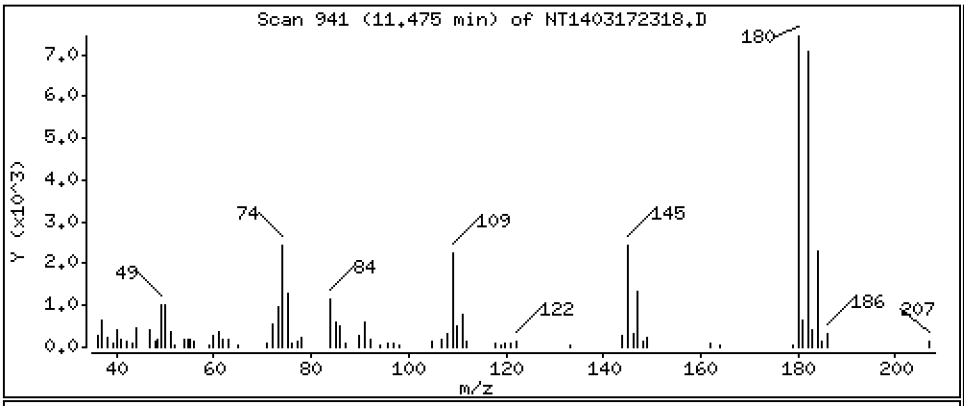
Operator: JGR

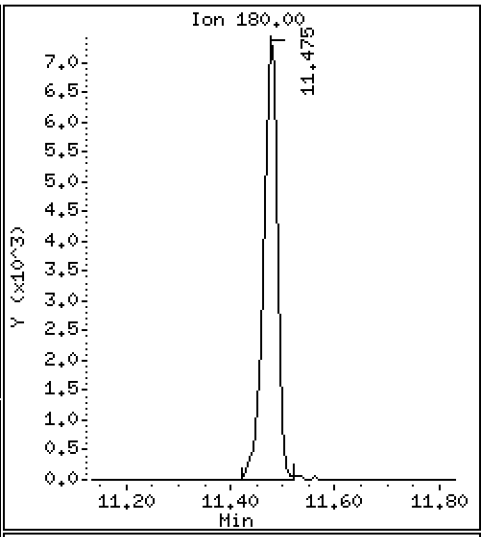
Column phase: ZB-5msi

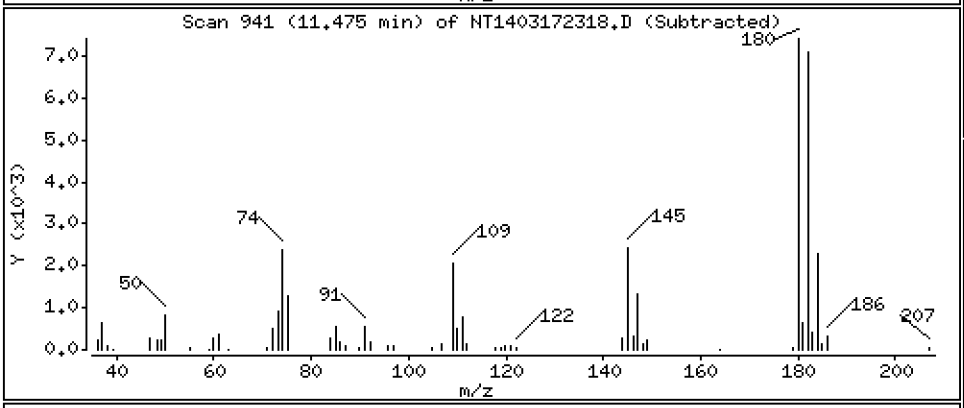
Column diameter: 0.25

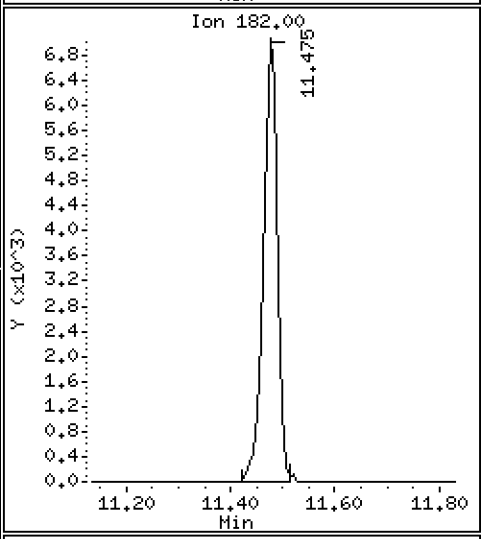
26 1,2,4-Trichlorobenzene

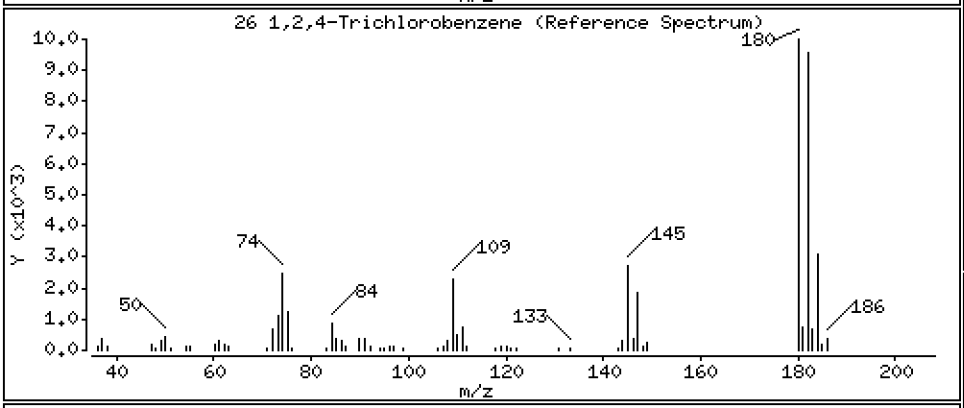
Concentration: 0.1956 ug/mL

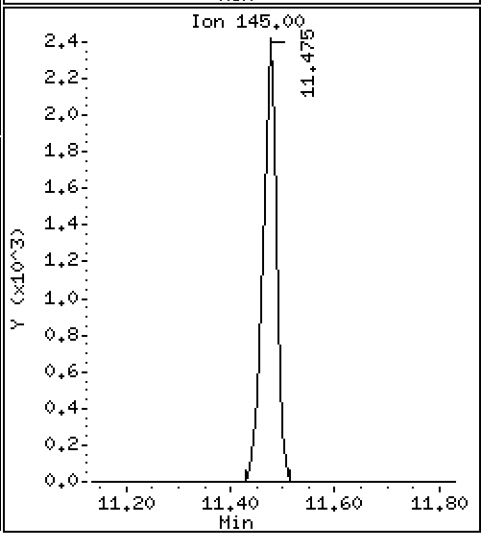


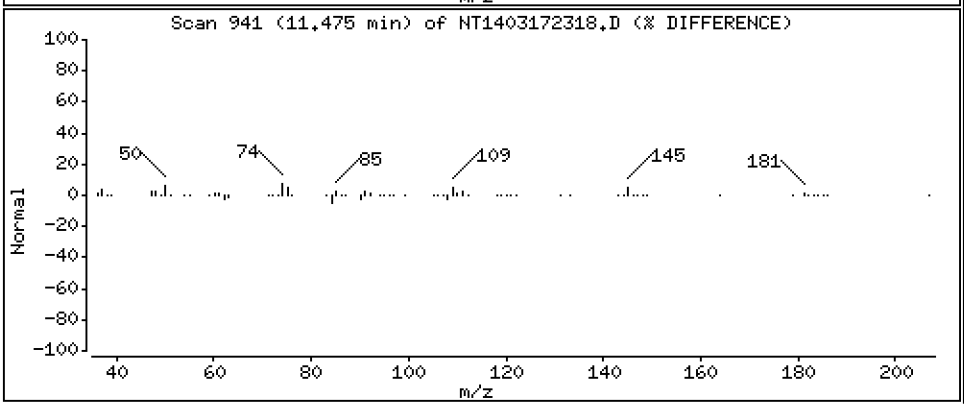












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

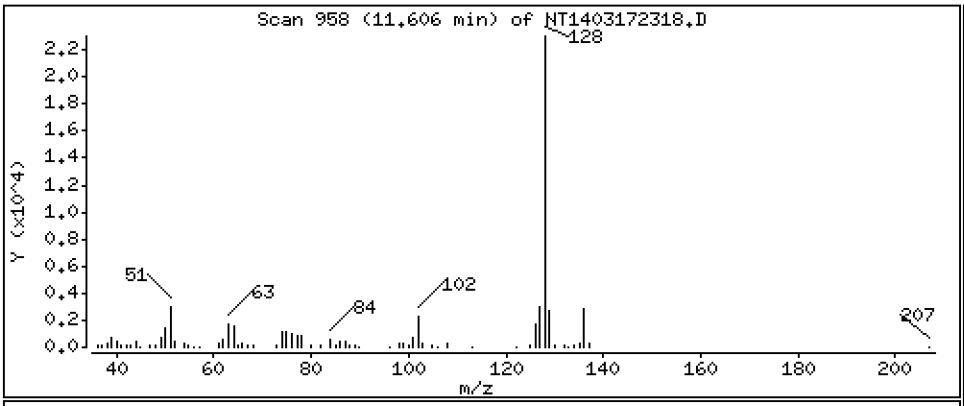
Operator: JGR

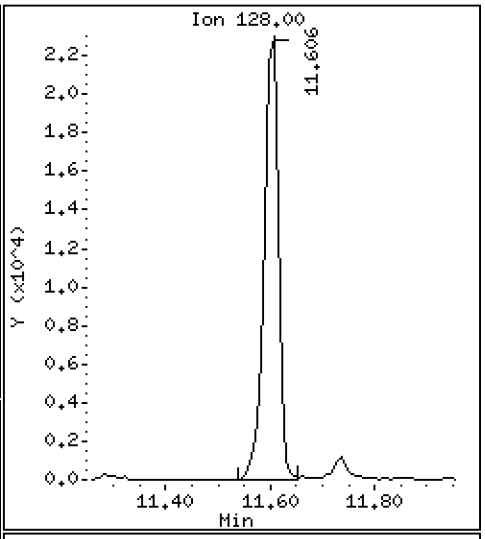
Column phase: ZB-5msi

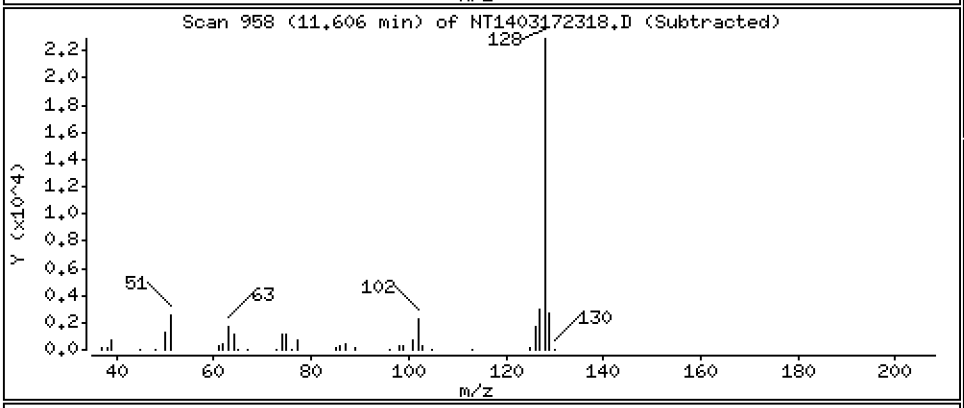
Column diameter: 0.25

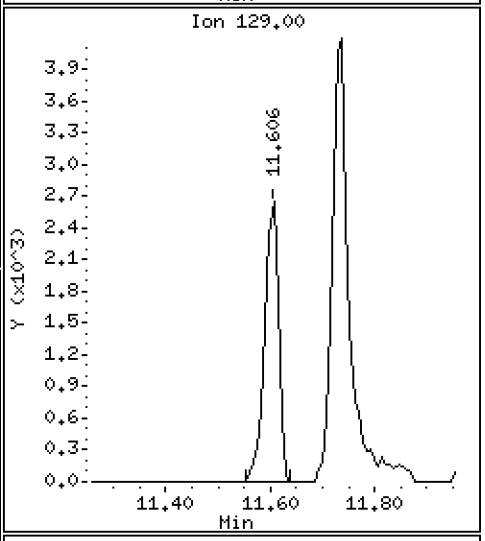
28 Naphthalene

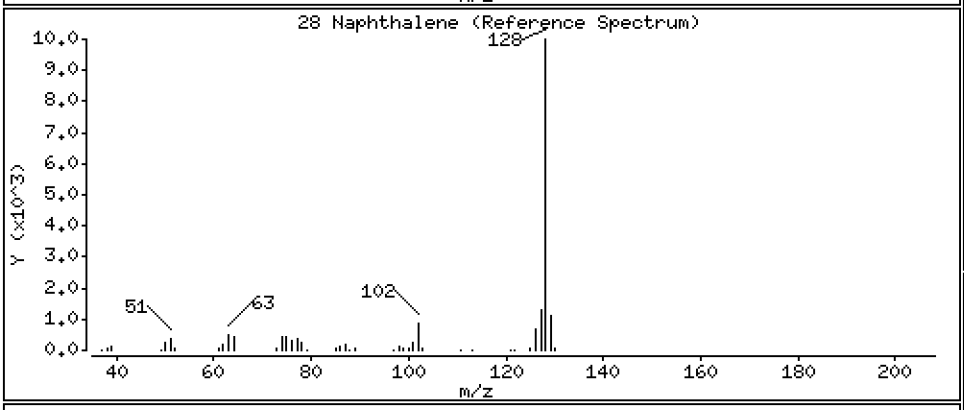
Concentration: 0.2019 ug/mL

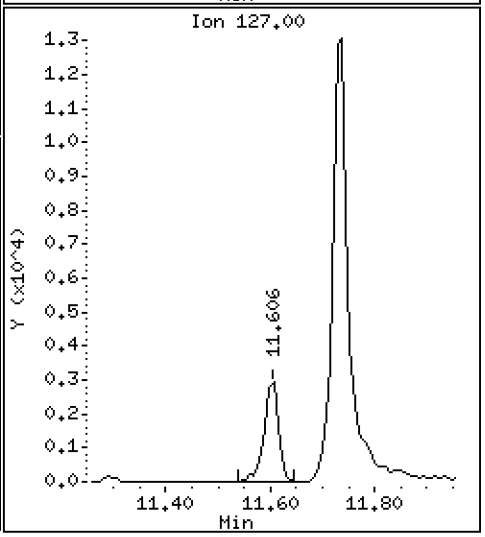


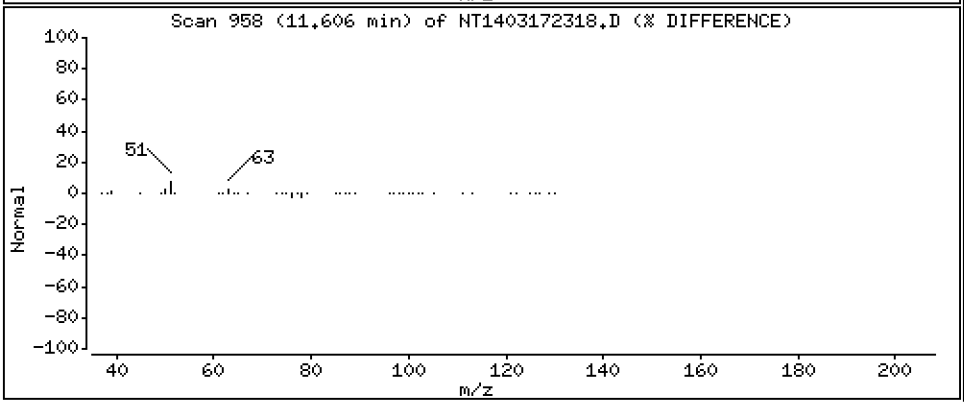












Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172318.D

Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

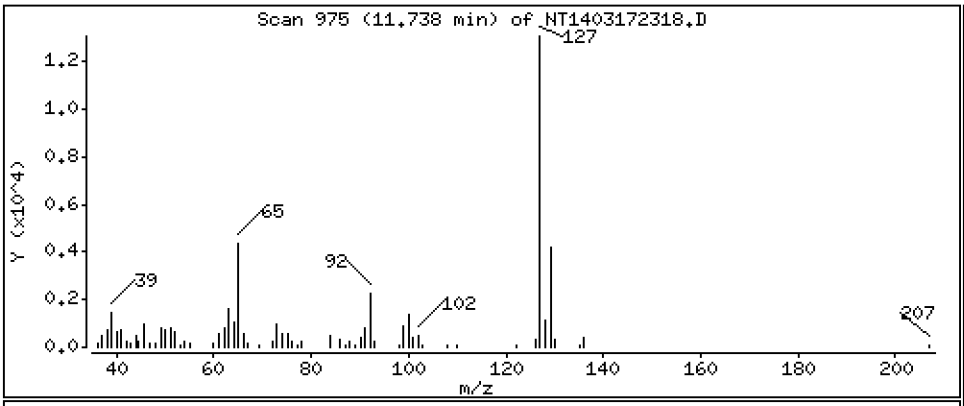
Operator: JGR

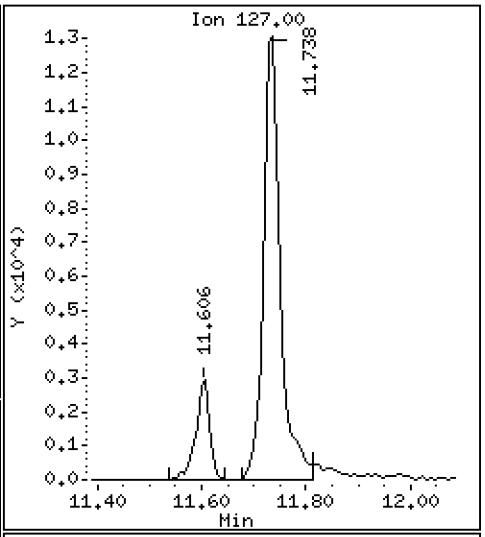
Column phase: ZB-5msi

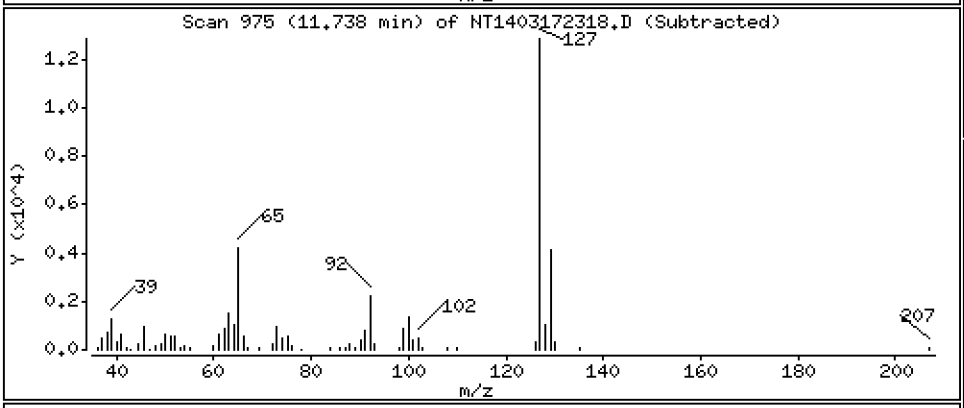
Column diameter: 0.25

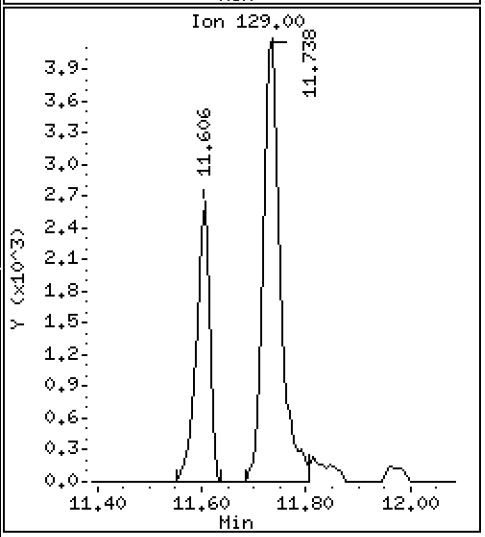
29 4-Chloroaniline

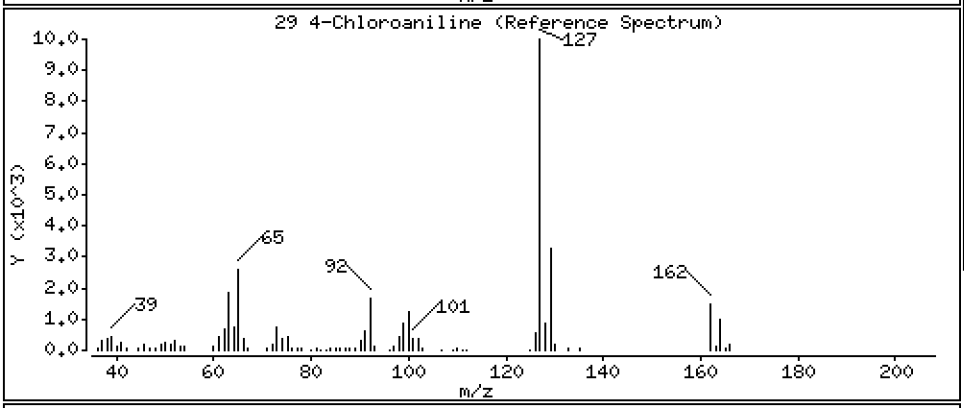
Concentration: 0.3283 ug/mL

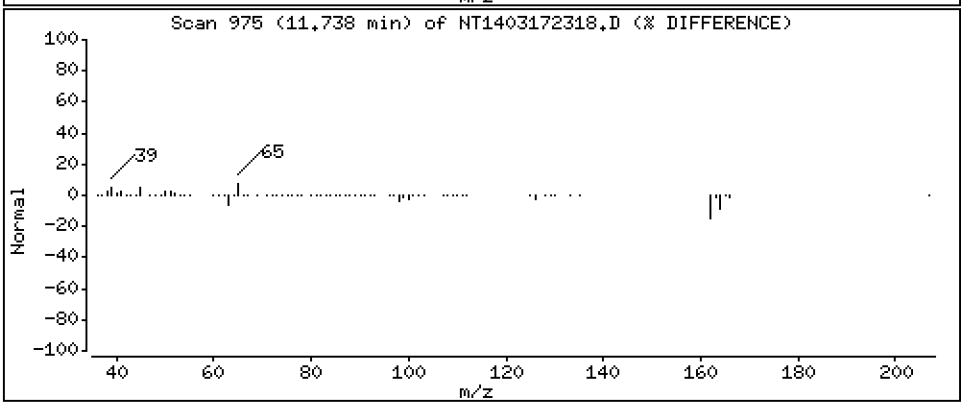












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

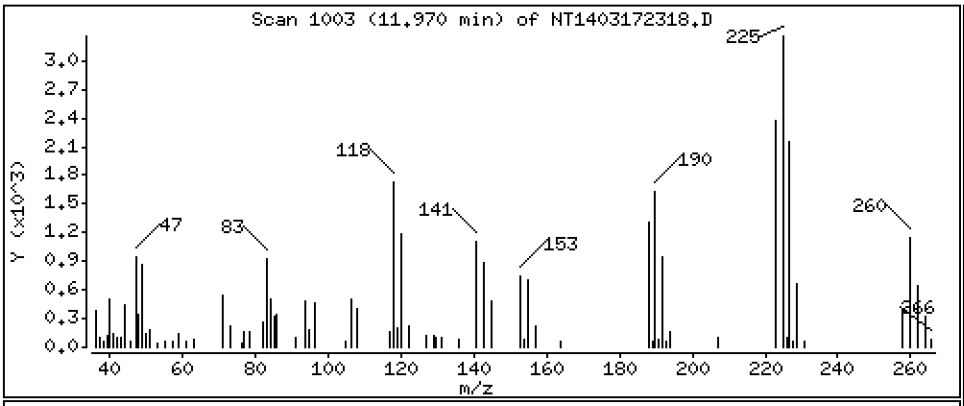
Operator: JGR

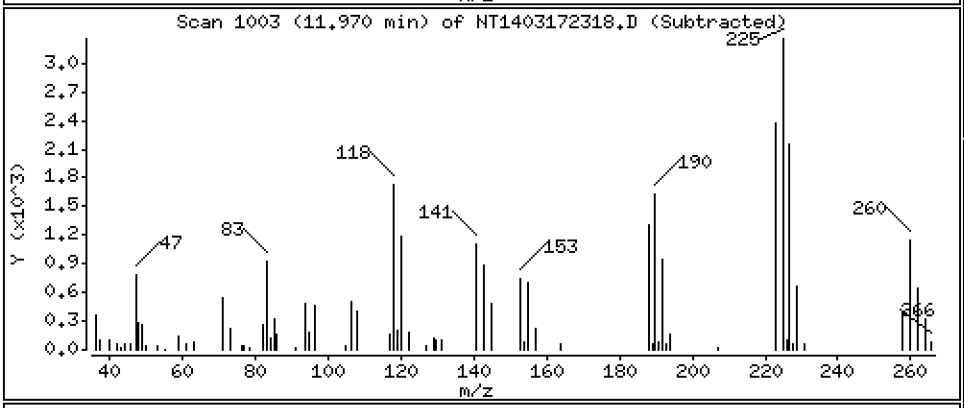
Column phase: ZB-5msi

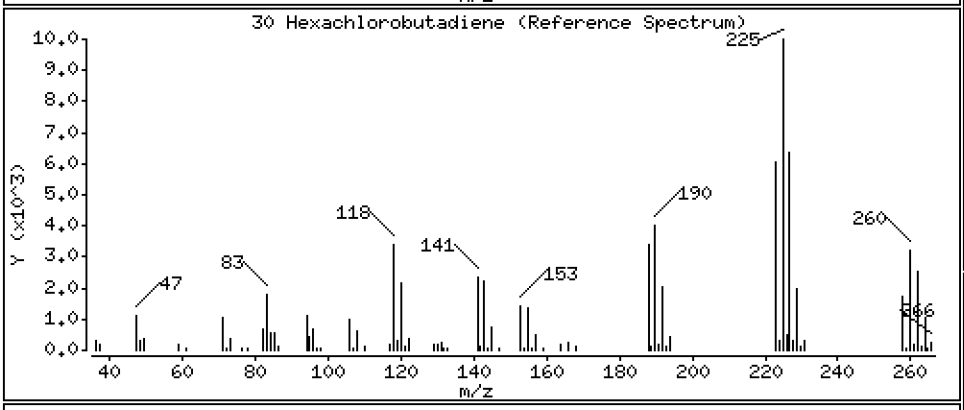
Column diameter: 0.25

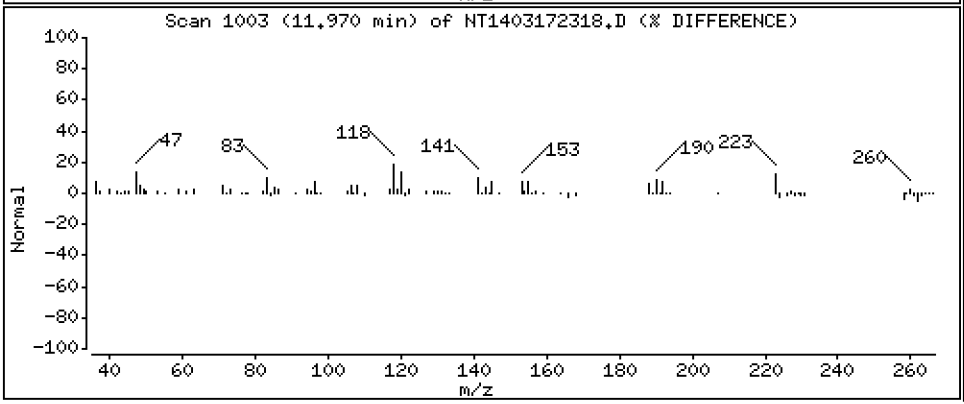
30 Hexachlorobutadiene

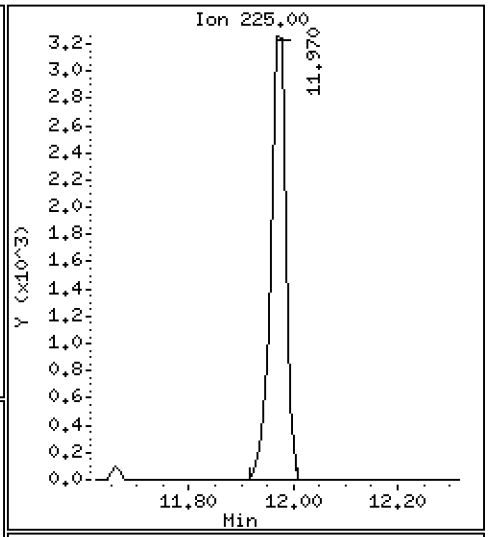
Concentration: 0.2090 ug/mL

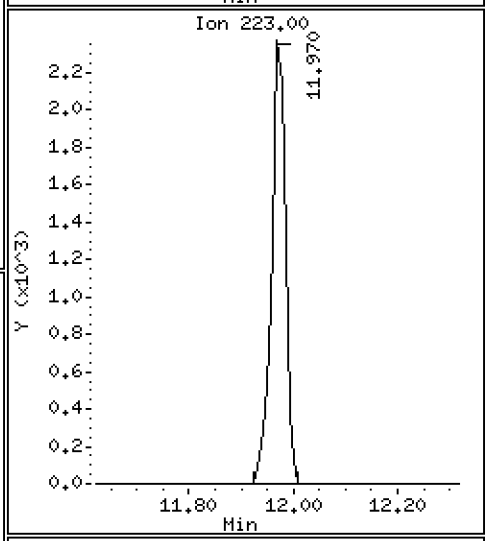


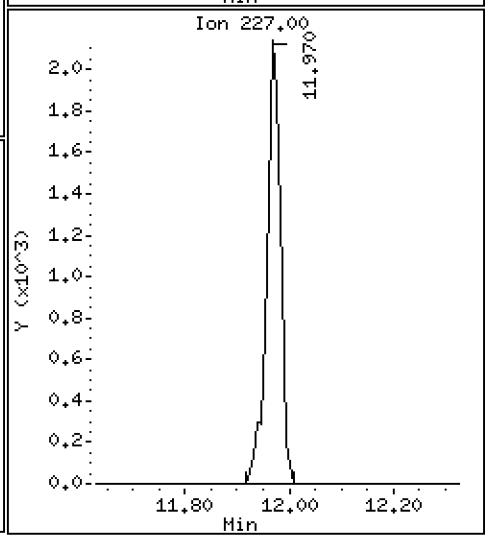












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

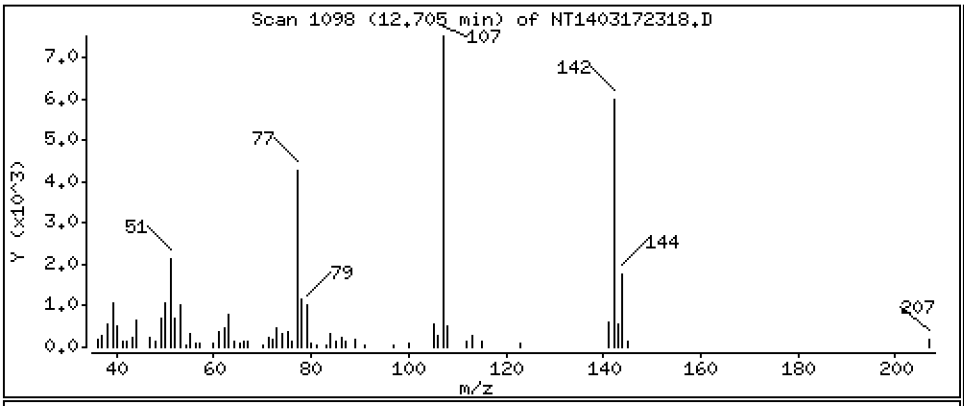
Operator: JGR

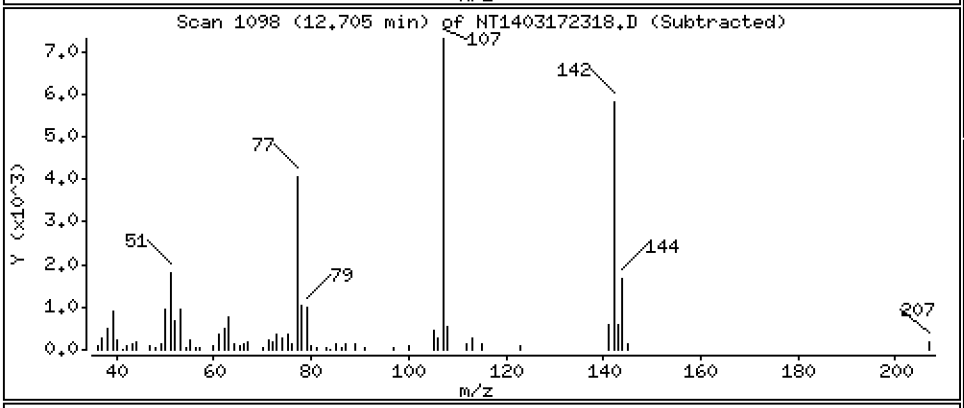
Column phase: ZB-5msi

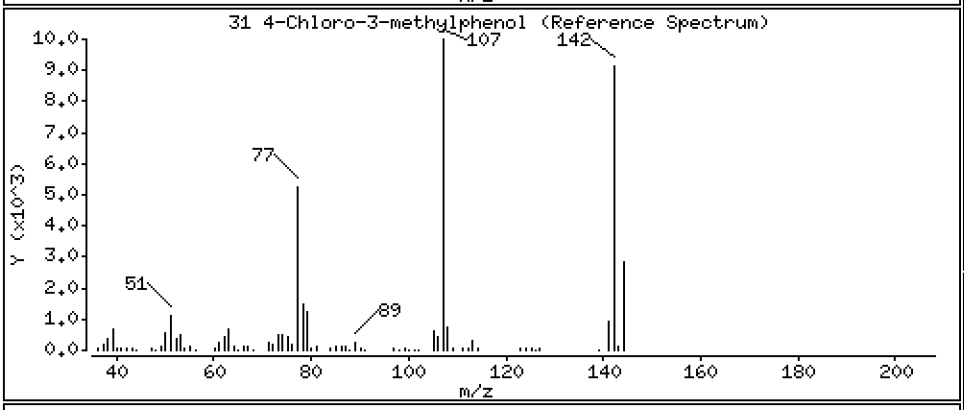
Column diameter: 0.25

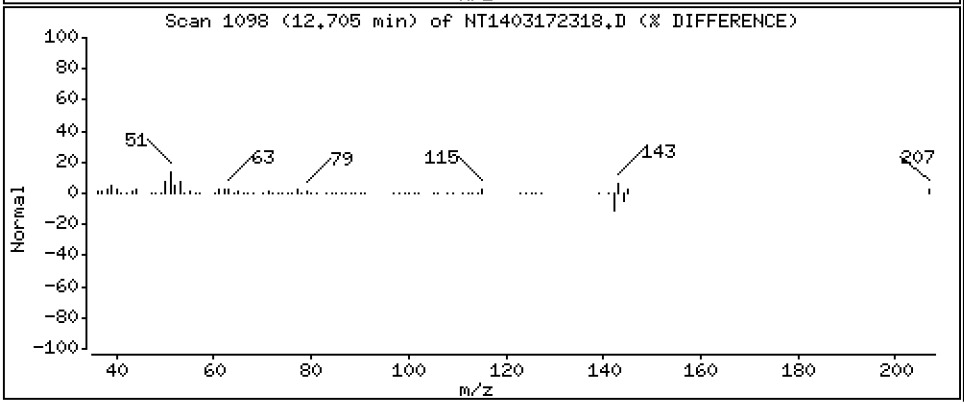
31 4-Chloro-3-methylphenol

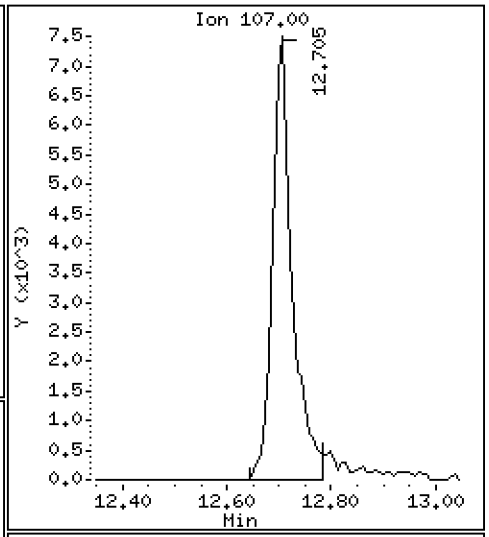
Concentration: 0.2961 ug/mL

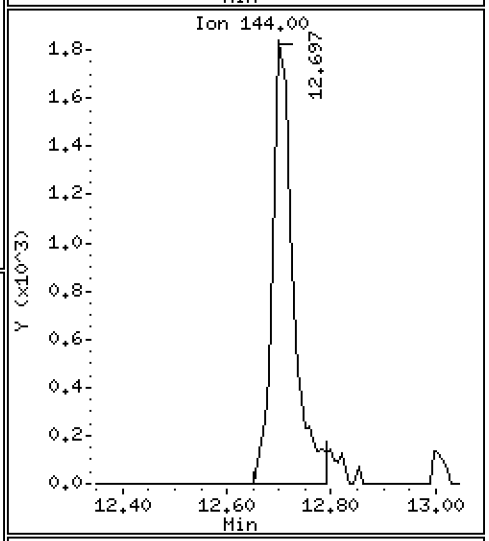


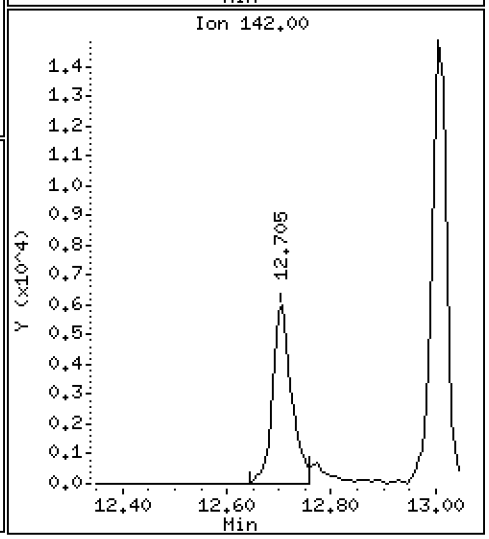












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

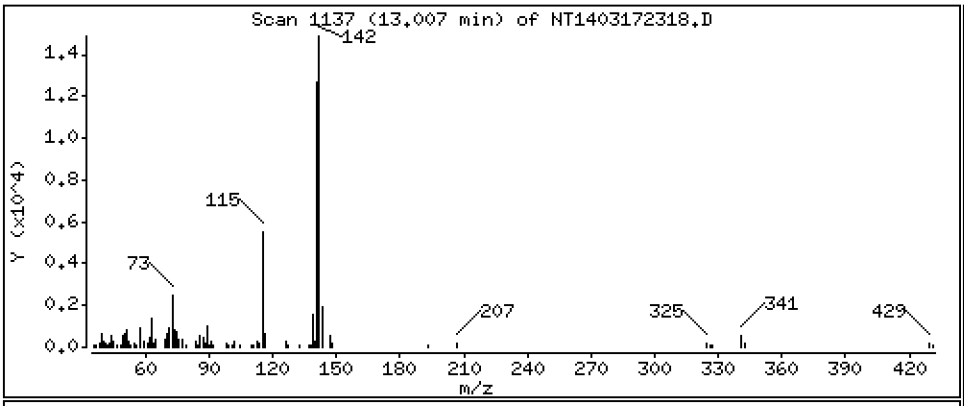
Operator: JGR

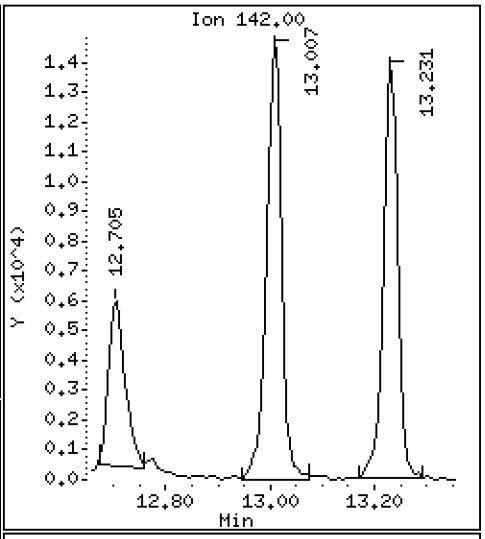
Column phase: ZB-5msi

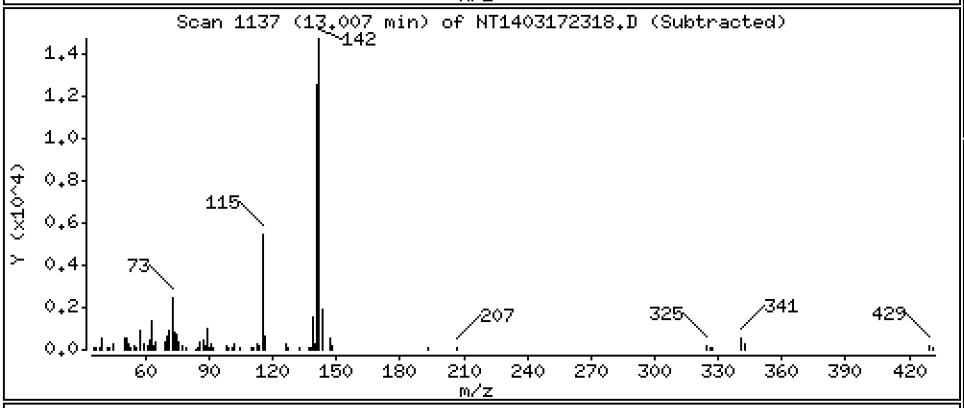
Column diameter: 0.25

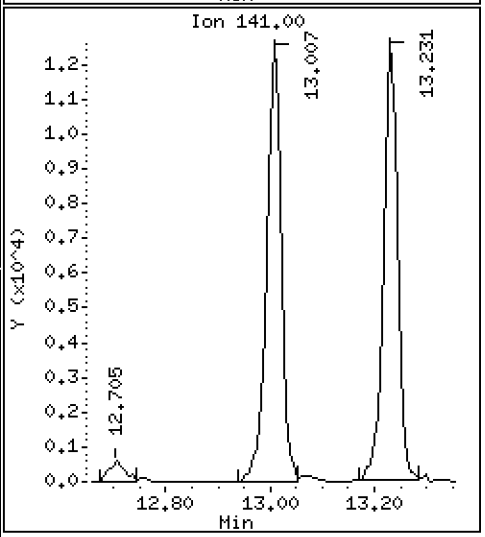
32 2-Methylnaphthalene

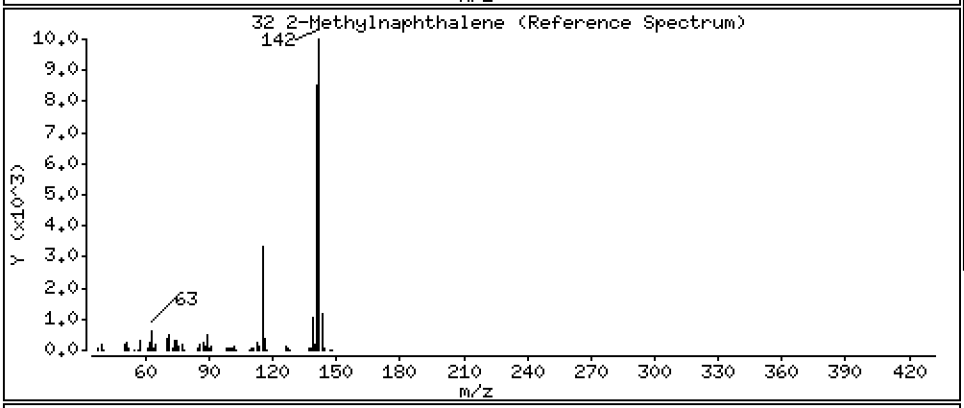
Concentration: 0.1975 ug/mL

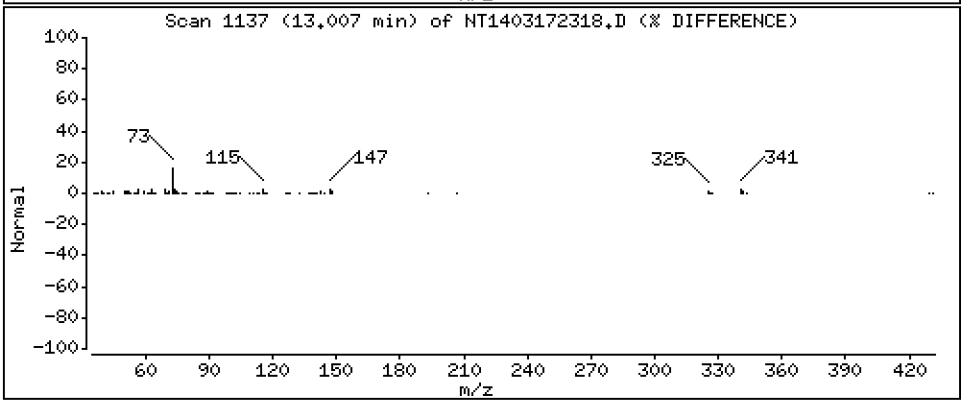












Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172318.D

Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

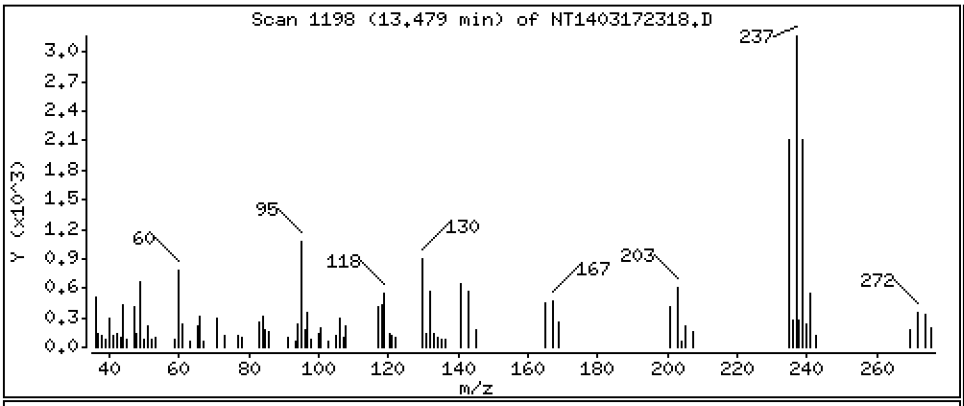
Operator: JGR

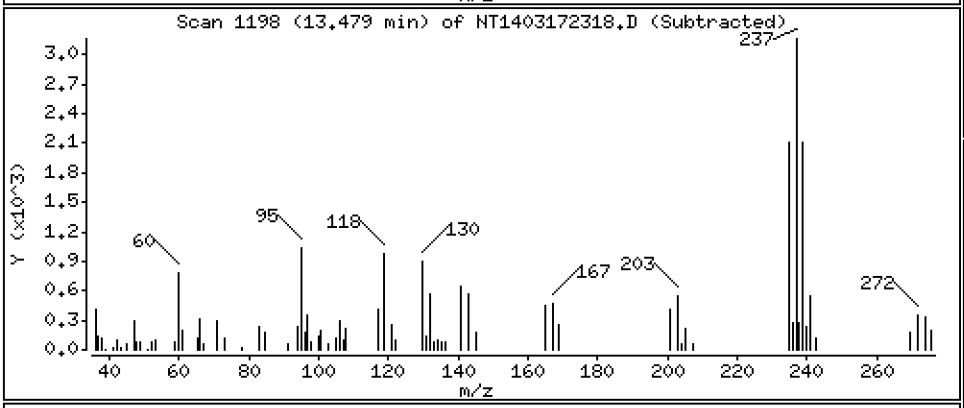
Column phase: ZB-5msi

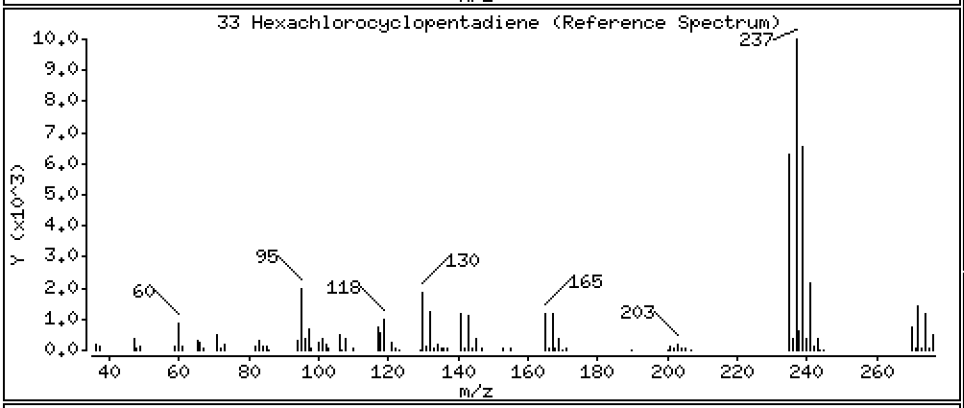
Column diameter: 0.25

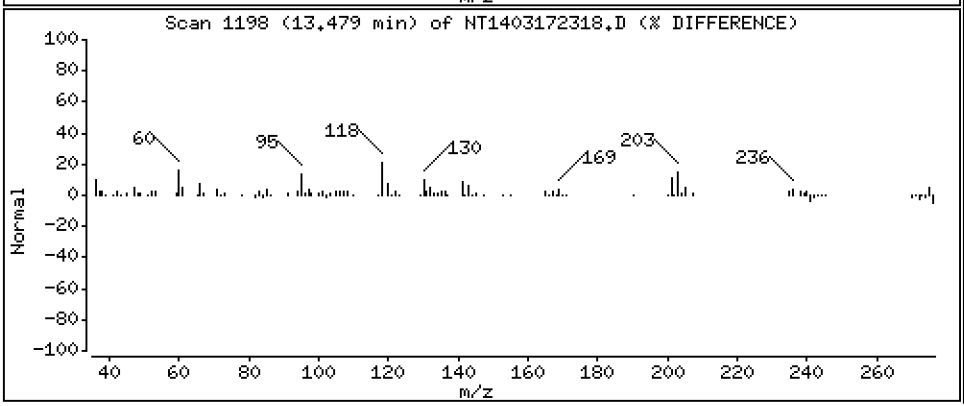
33 Hexachlorocyclopentadiene

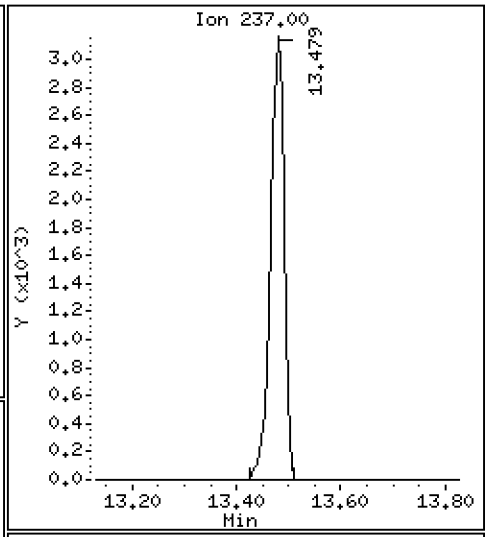
Concentration: 0.1718 ug/mL

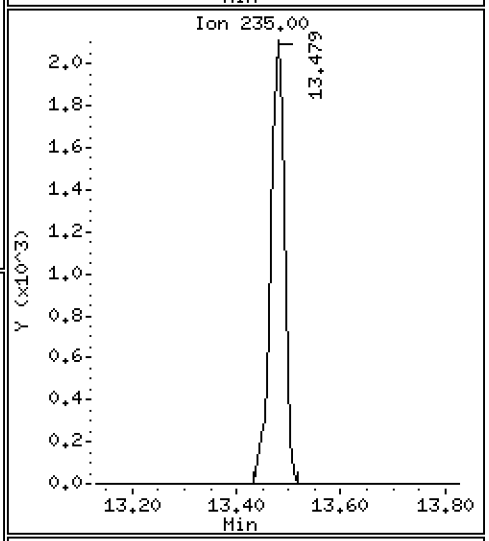


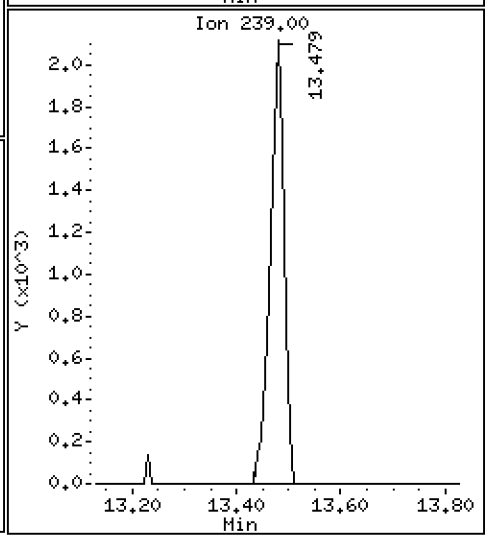












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

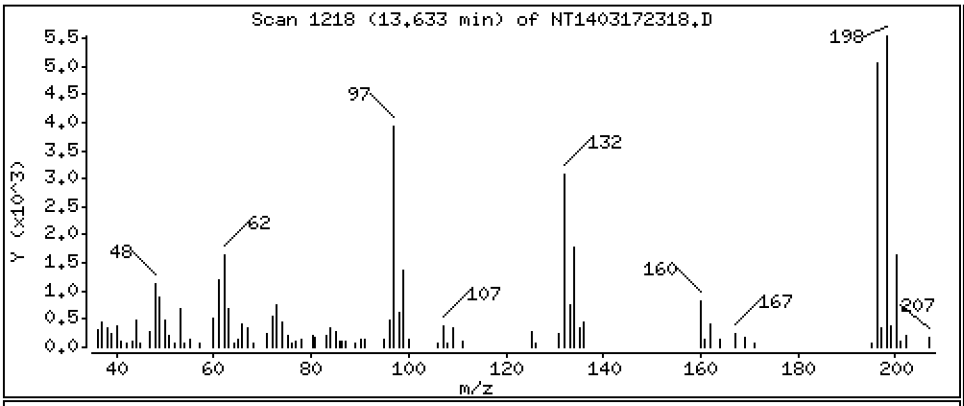
Operator: JGR

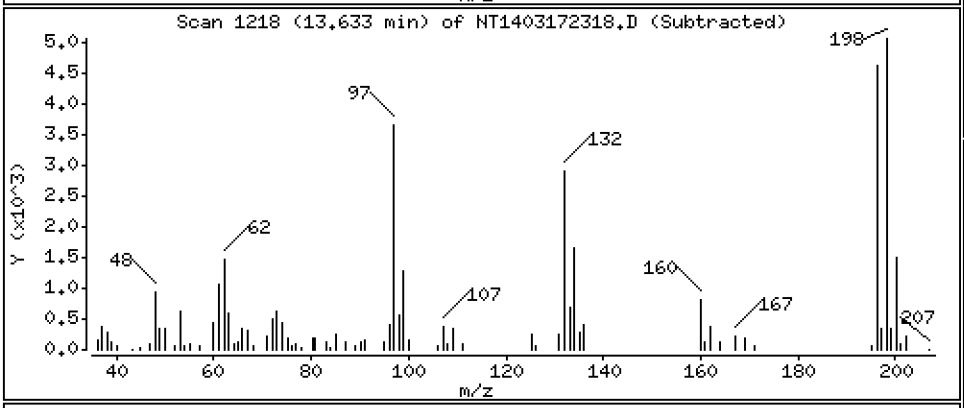
Column phase: ZB-5msi

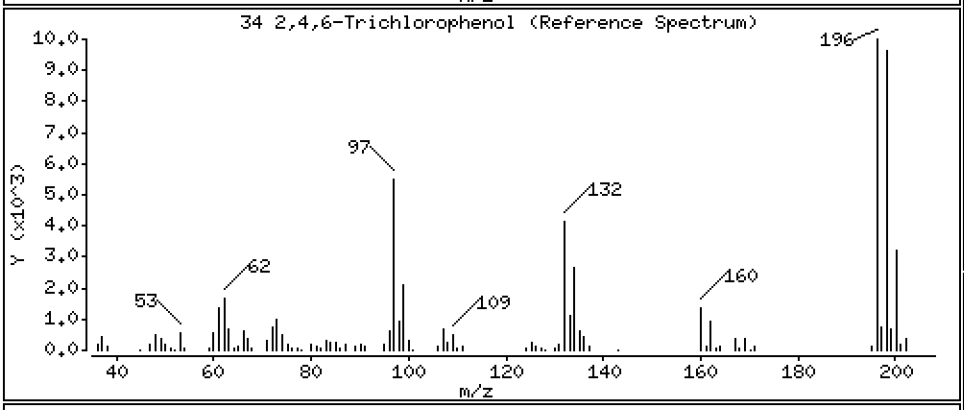
Column diameter: 0.25

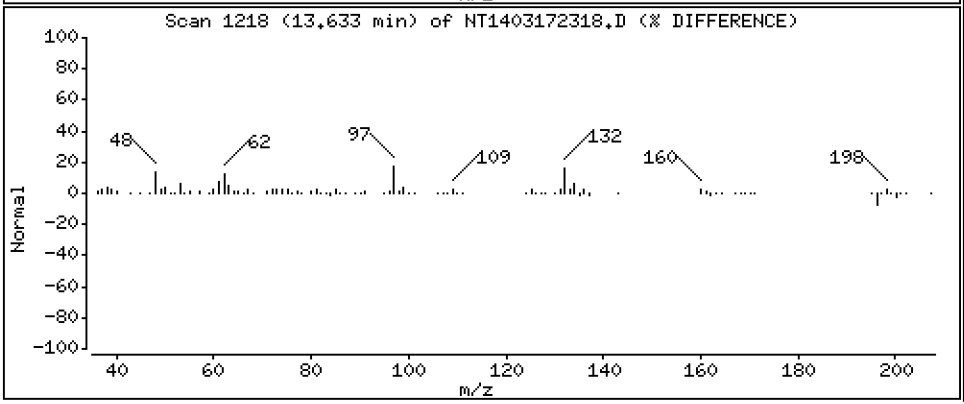
34 2,4,6-Trichlorophenol

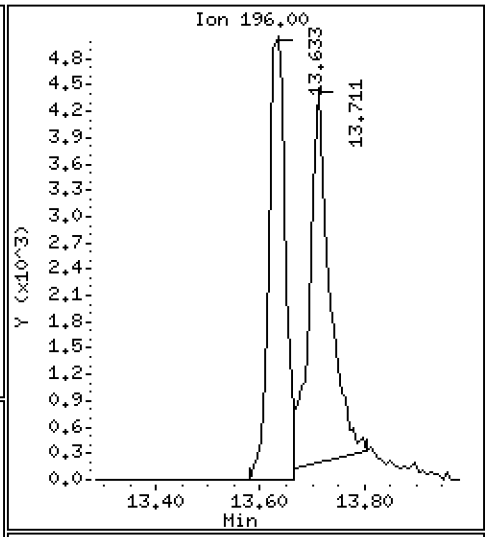
Concentration: 0.2769 ug/mL

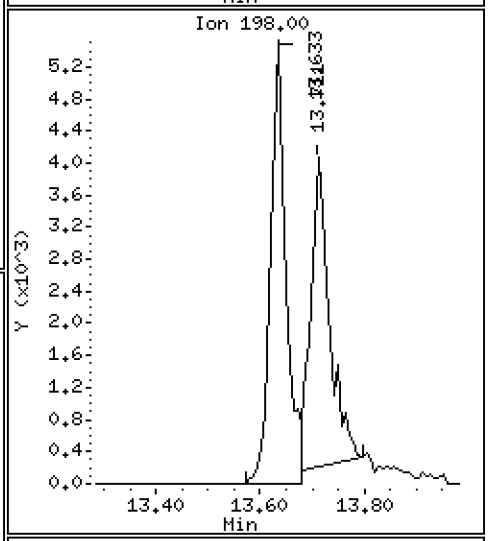


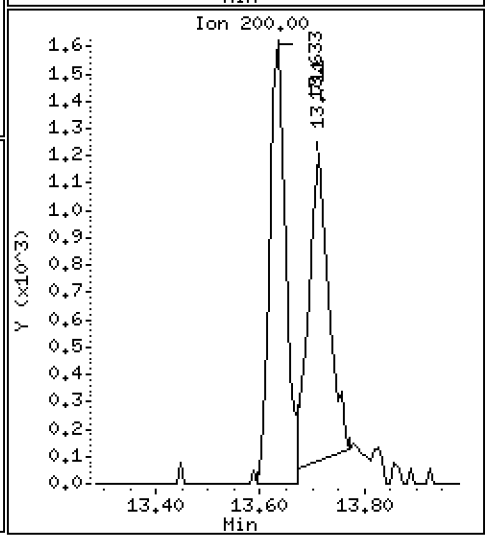












Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172318.D

Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

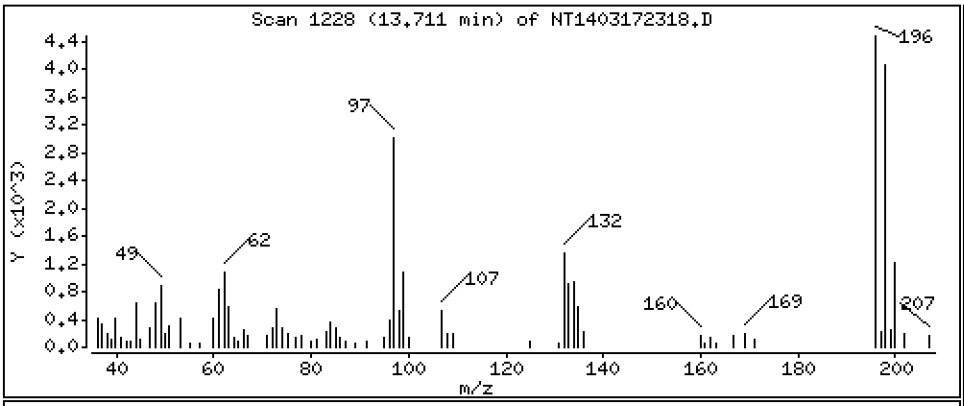
Operator: JGR

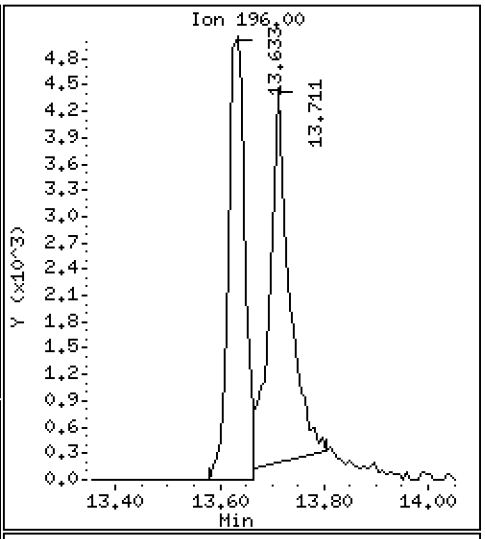
Column phase: ZB-5msi

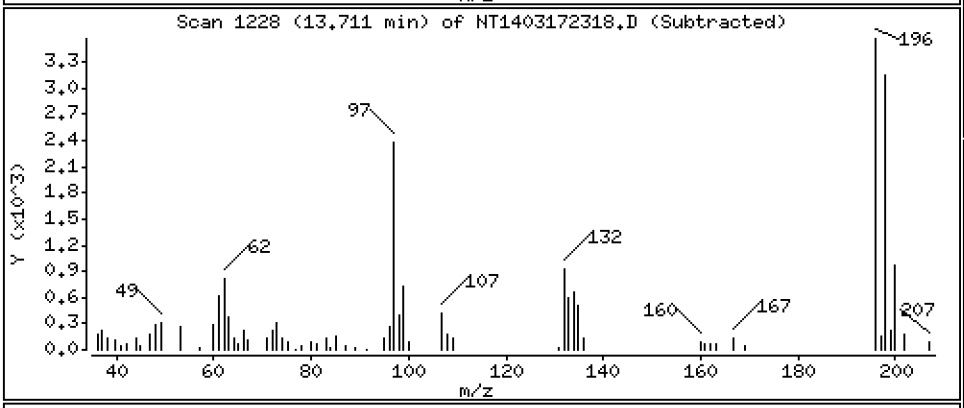
Column diameter: 0.25

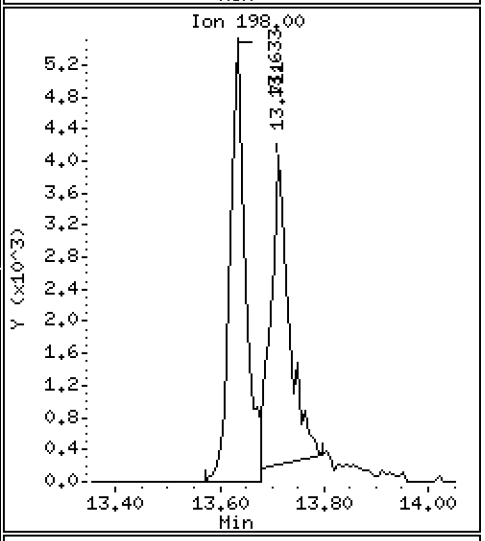
35 2,4,5-Trichlorophenol

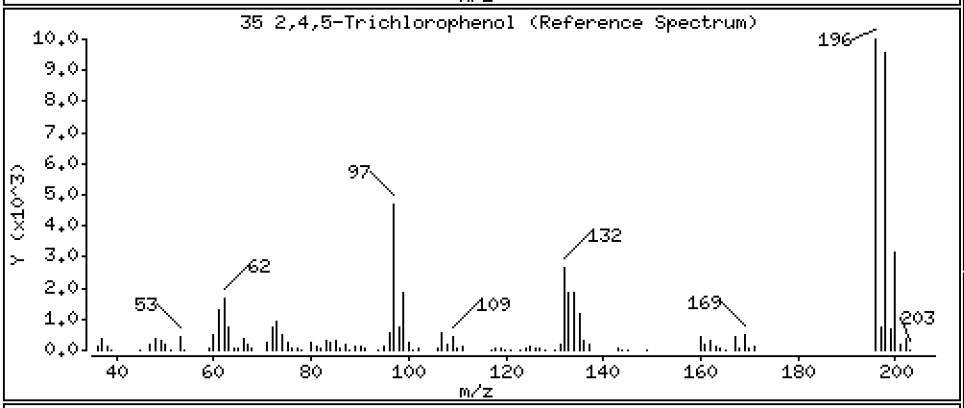
Concentration: 0.2803 ug/mL

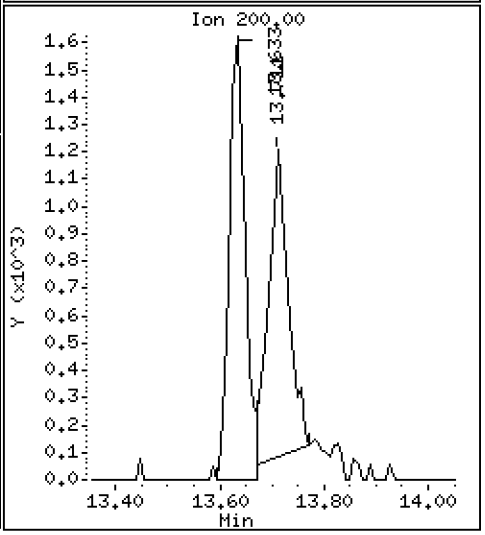


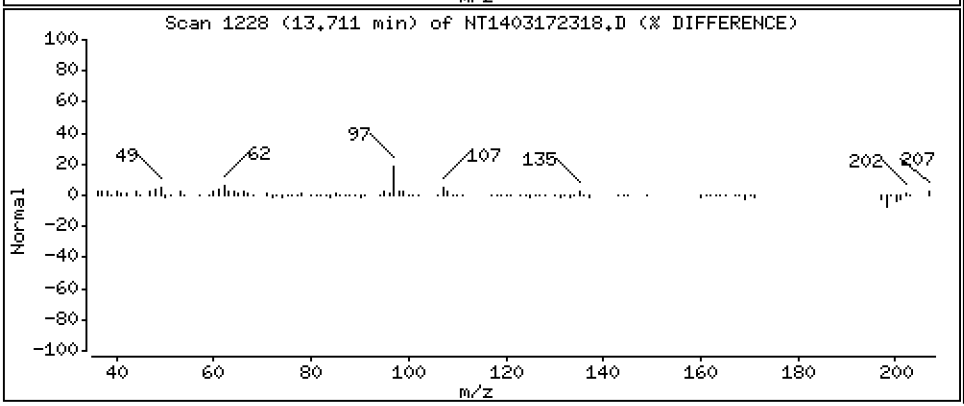












Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172318.D

Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

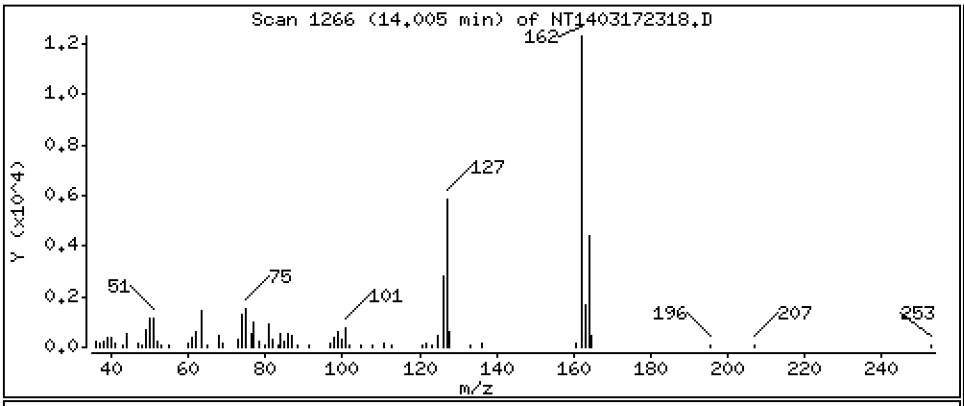
Operator: JGR

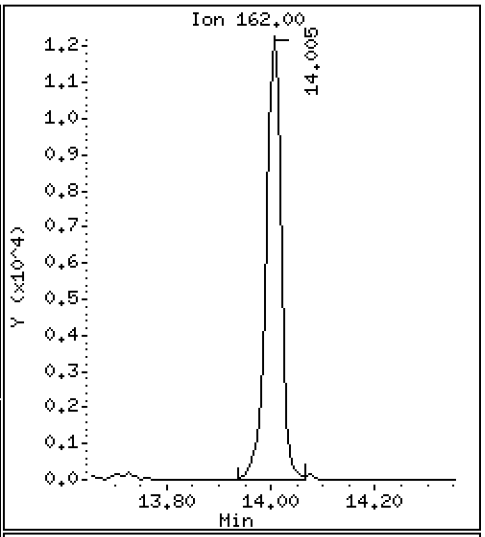
Column phase: ZB-5msi

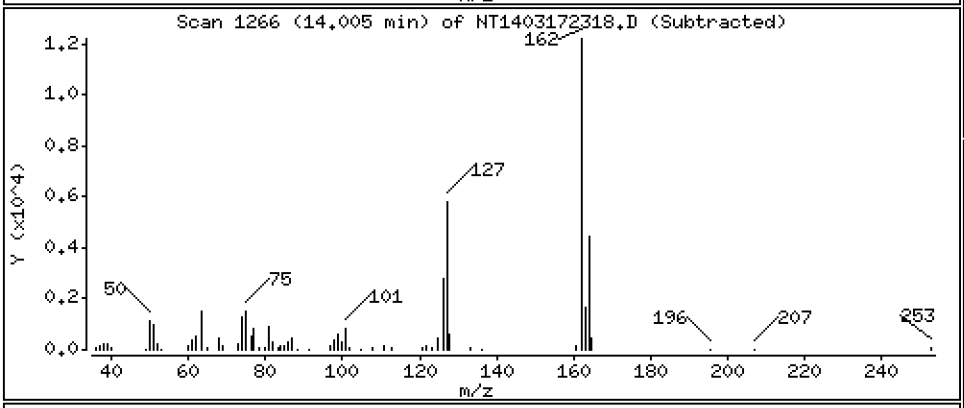
Column diameter: 0.25

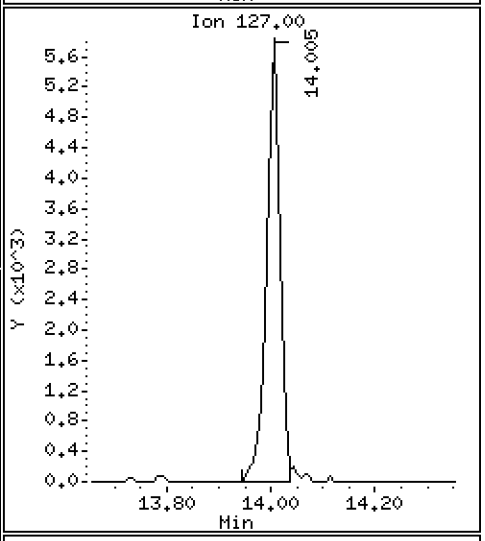
37 2-Chloronaphthalene

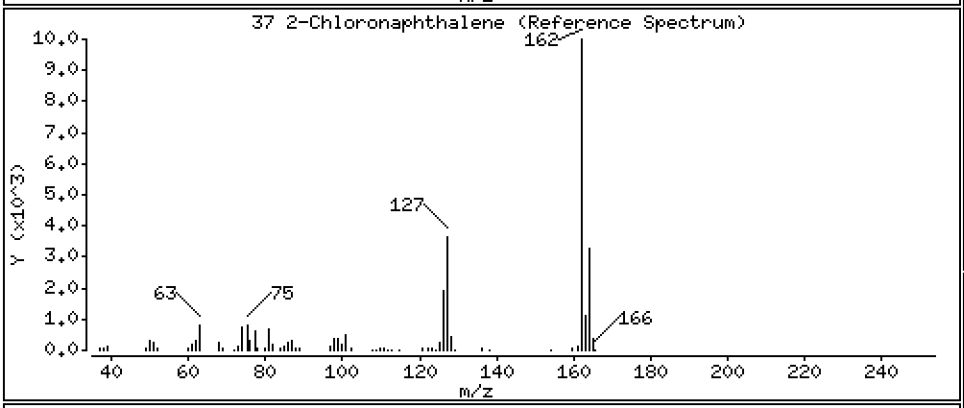
Concentration: 0.2000 ug/mL

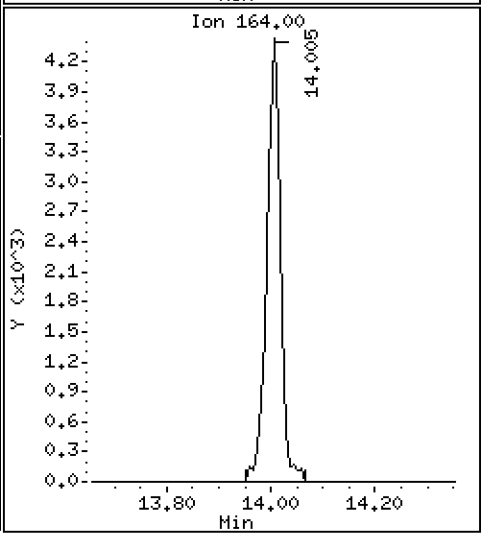


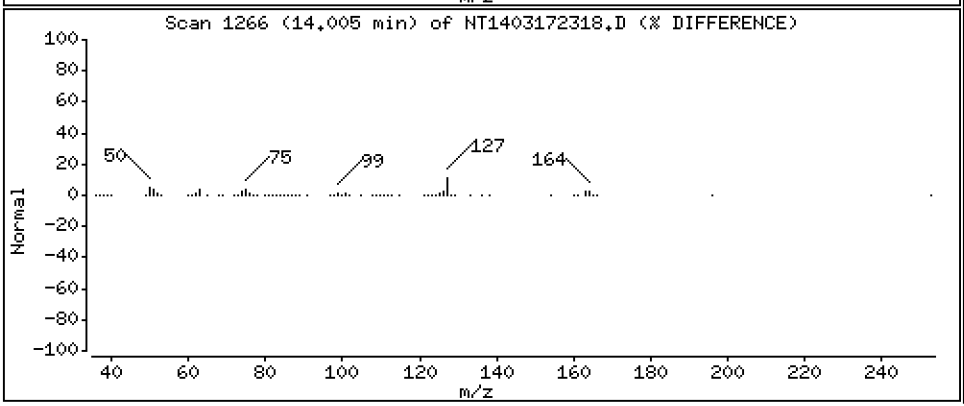












Date : 18-MAR-2023 00:43

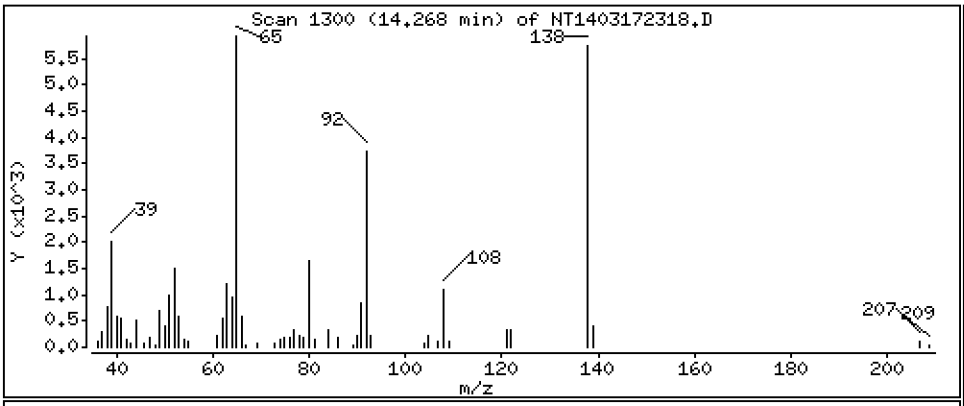
Client ID: Instrument: nt14.i

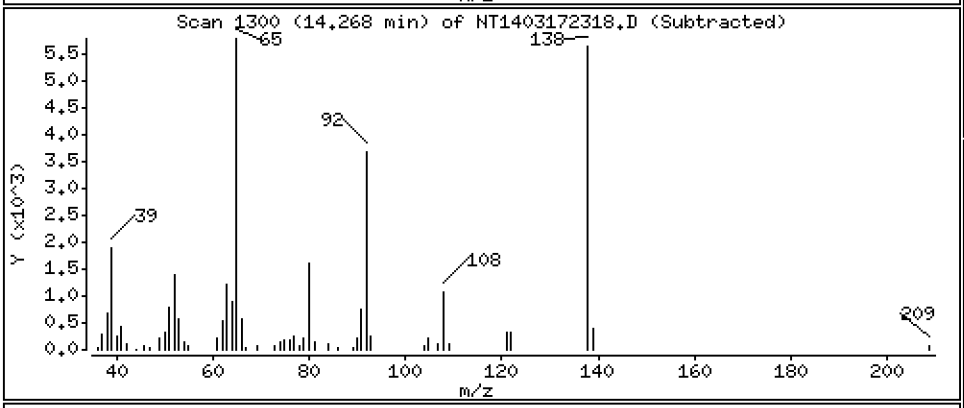
Sample Info: SLC0335-LCV2

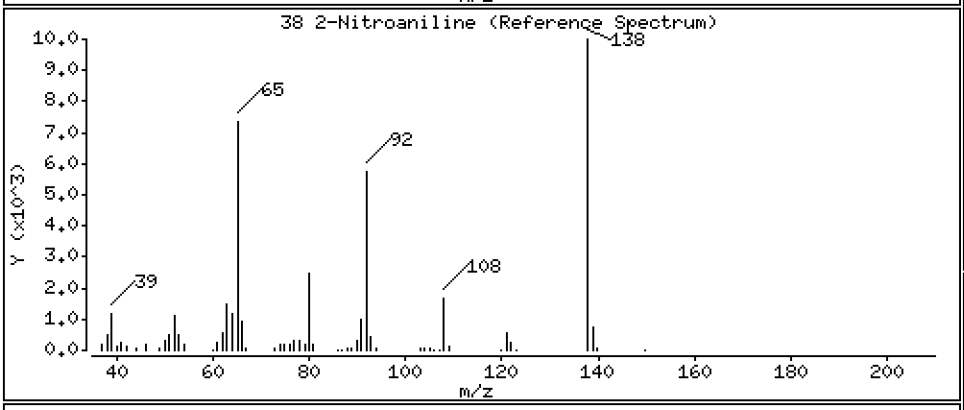
Operator: JGR

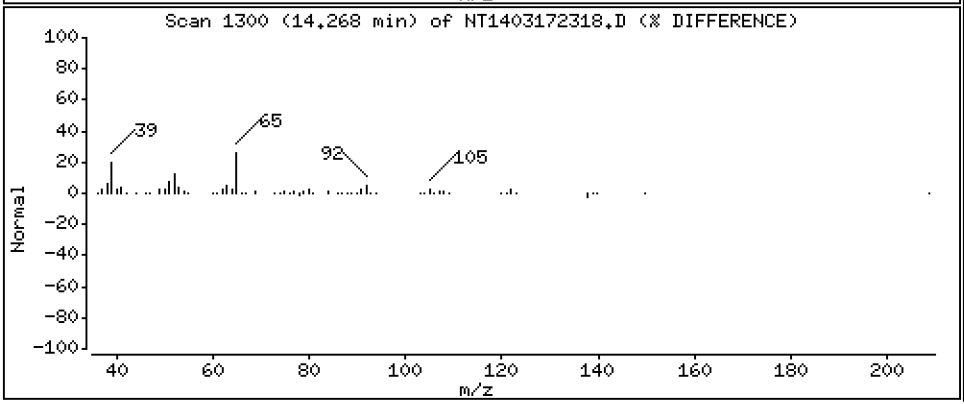
Column phase: ZB-5msi Column diameter: 0.25

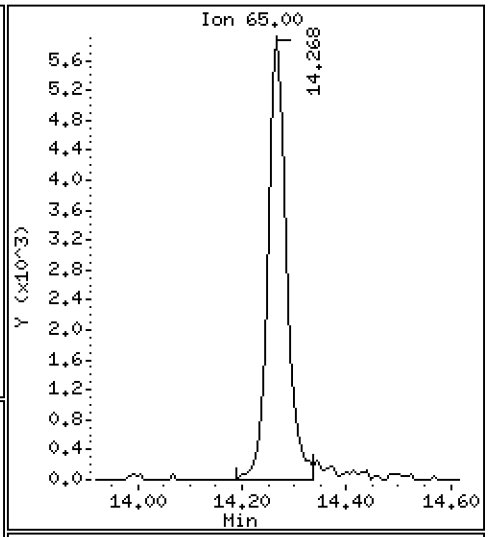
38 2-Nitroaniline Concentration: 0.3073 ug/mL

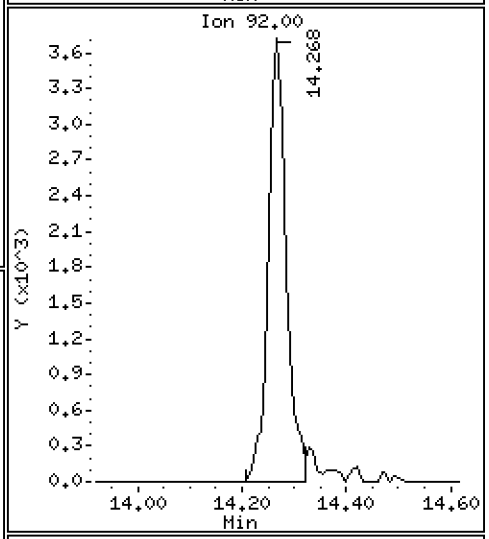


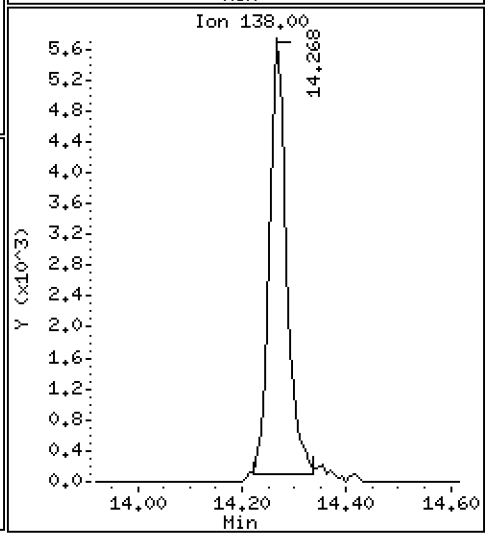












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

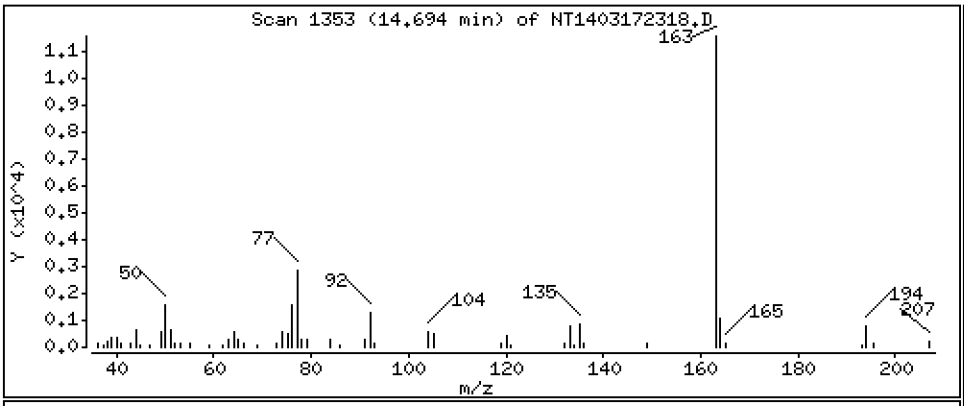
Operator: JGR

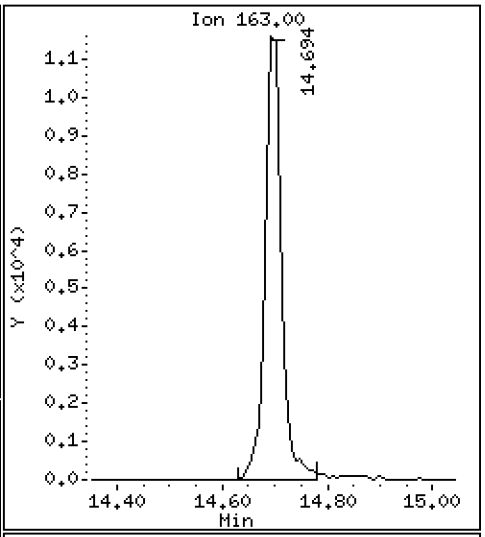
Column phase: ZB-5msi

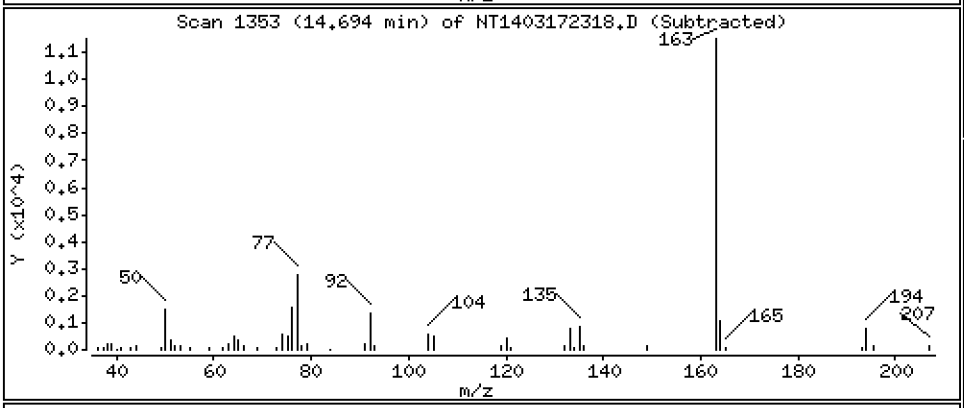
Column diameter: 0.25

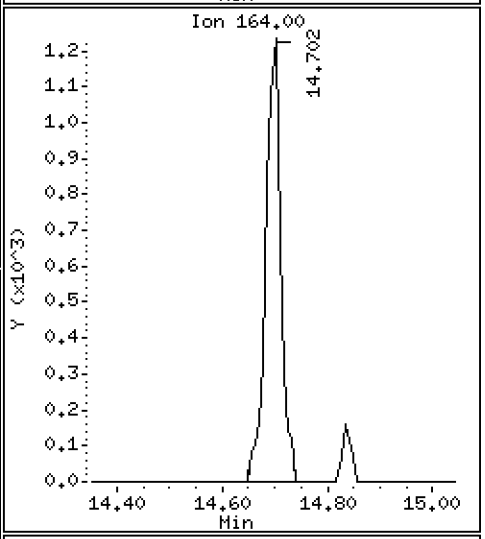
39 Dimethylphthalate

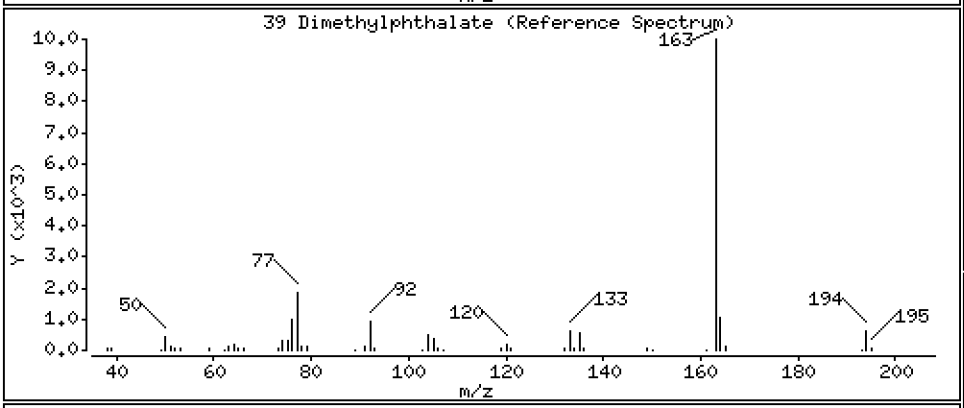
Concentration: 0.1902 ug/mL

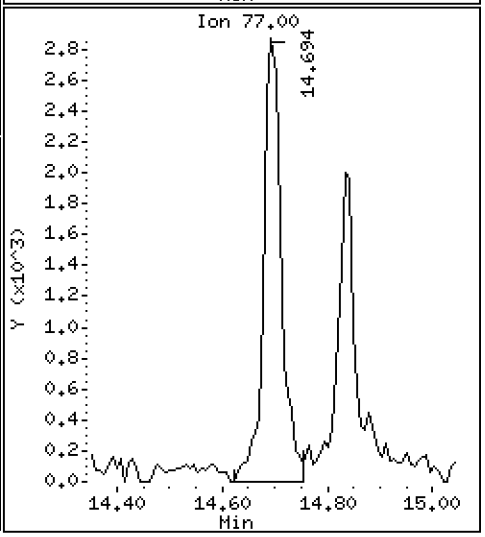


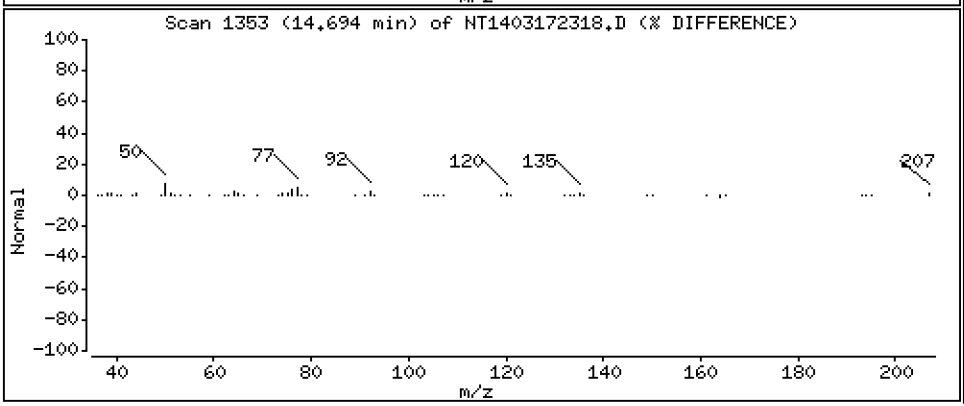












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

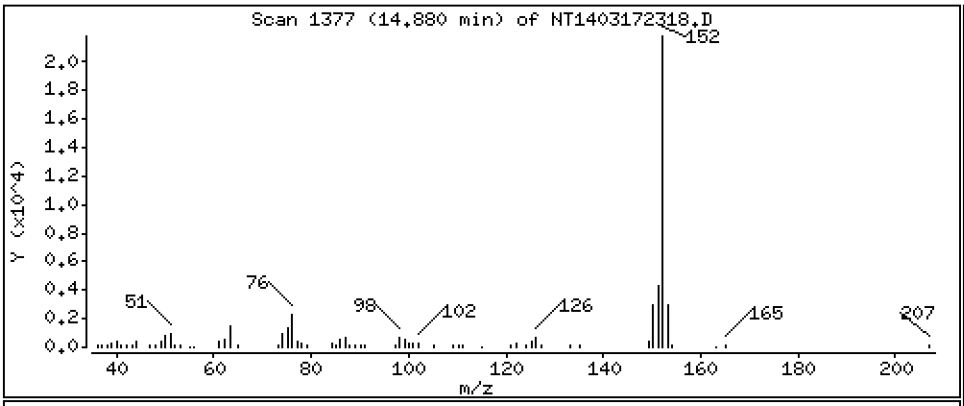
Operator: JGR

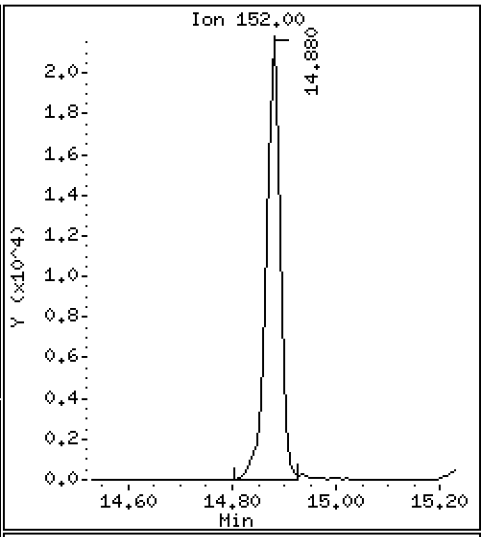
Column phase: ZB-5msi

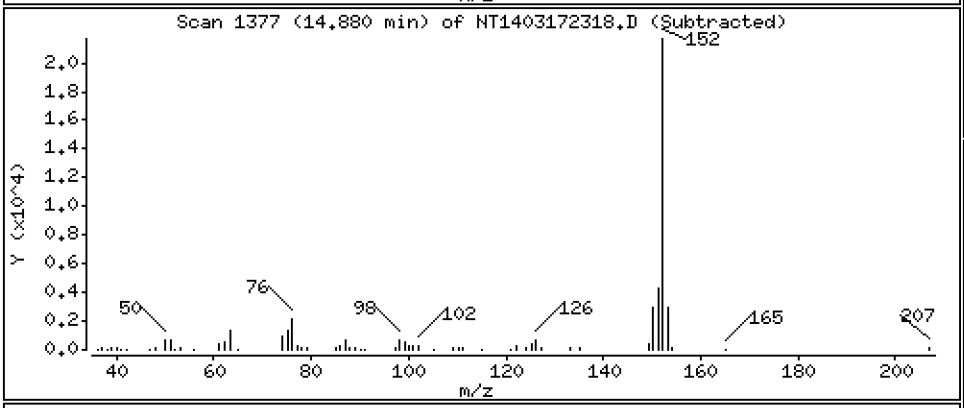
Column diameter: 0.25

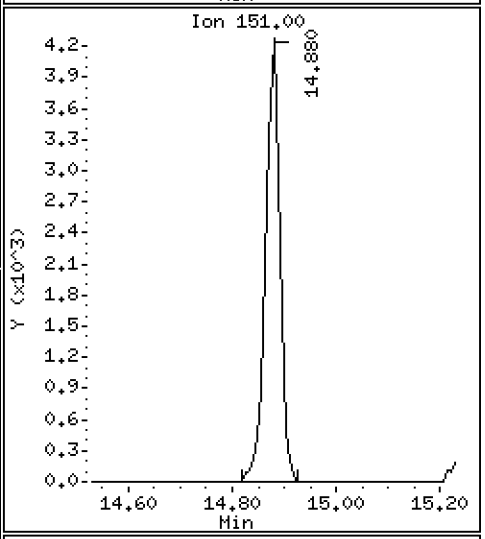
40 Acenaphthylene

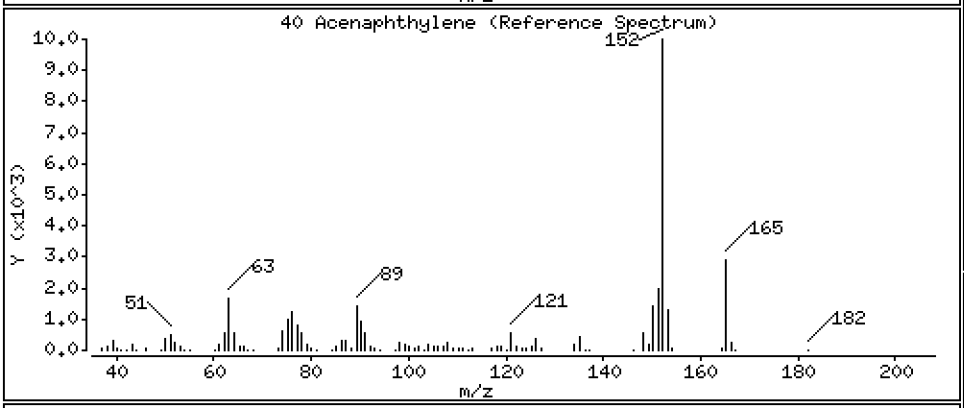
Concentration: 0.1922 ug/mL

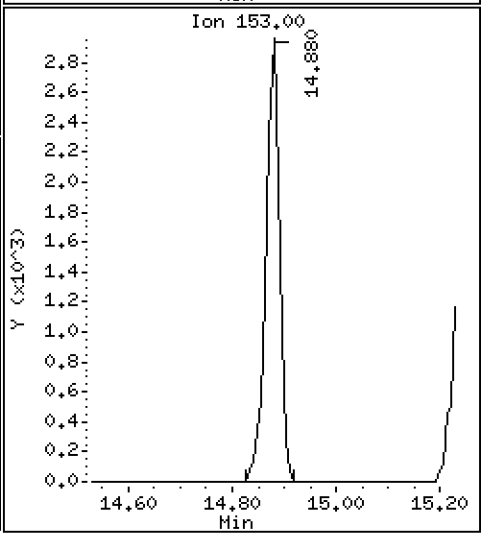


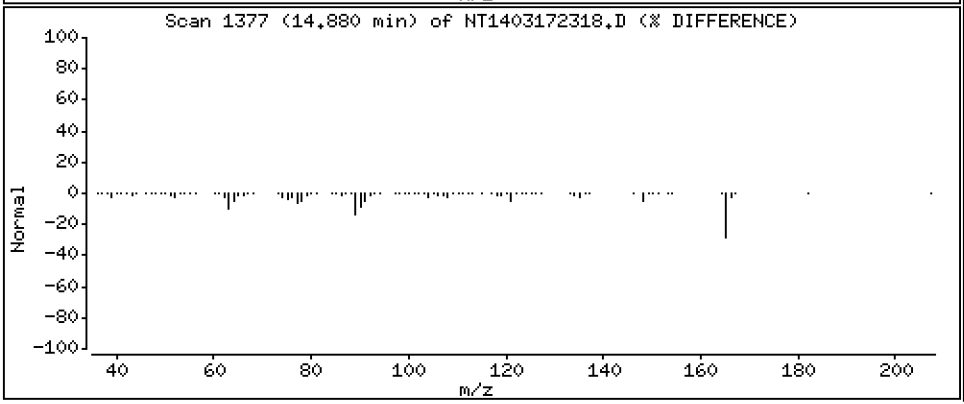












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

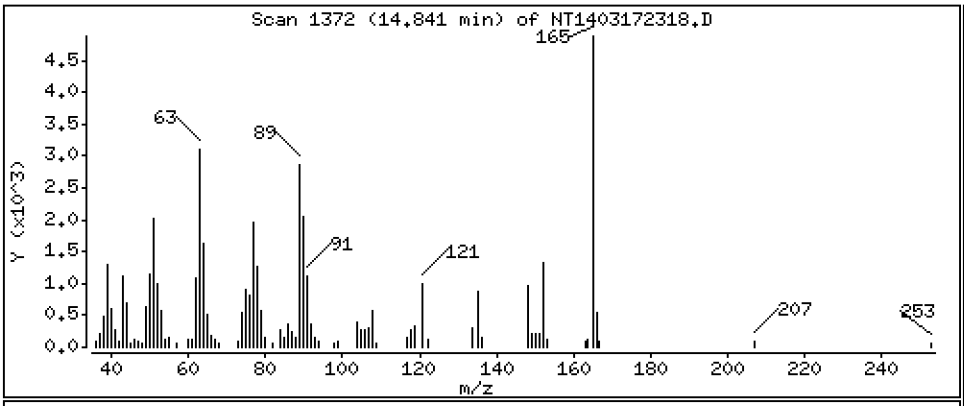
Operator: JGR

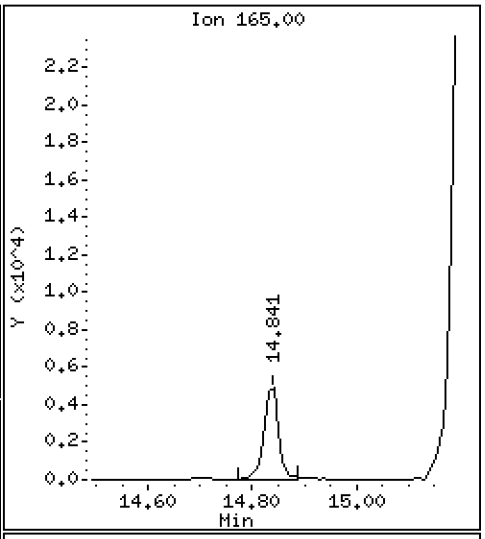
Column phase: ZB-5msi

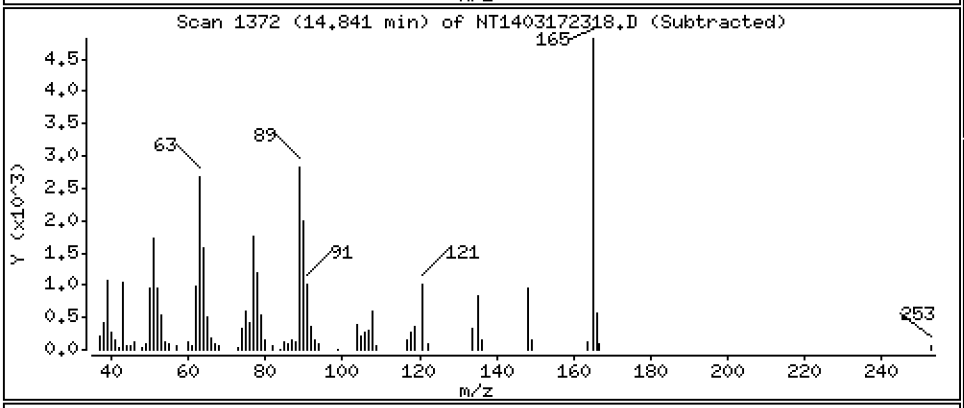
Column diameter: 0.25

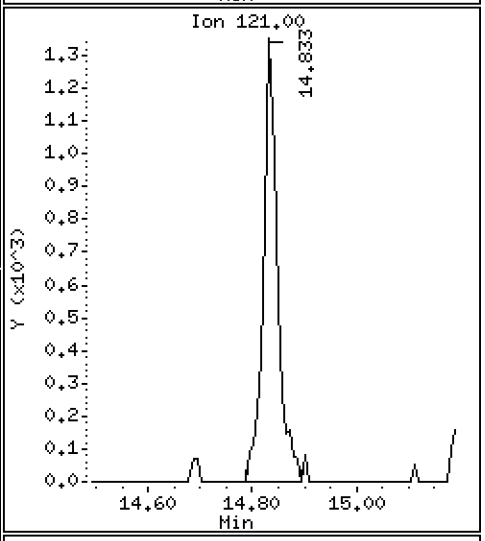
41 2,6-Dinitrotoluene

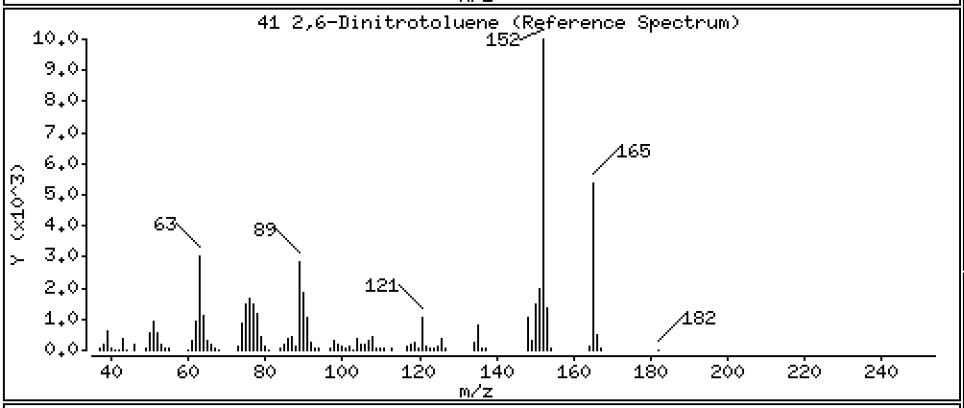
Concentration: 0.3118 ug/mL

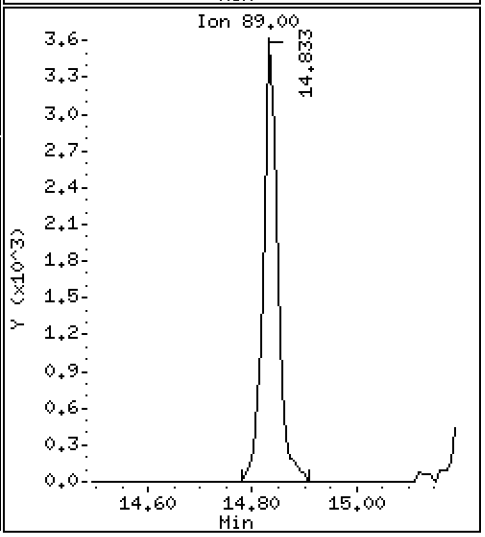


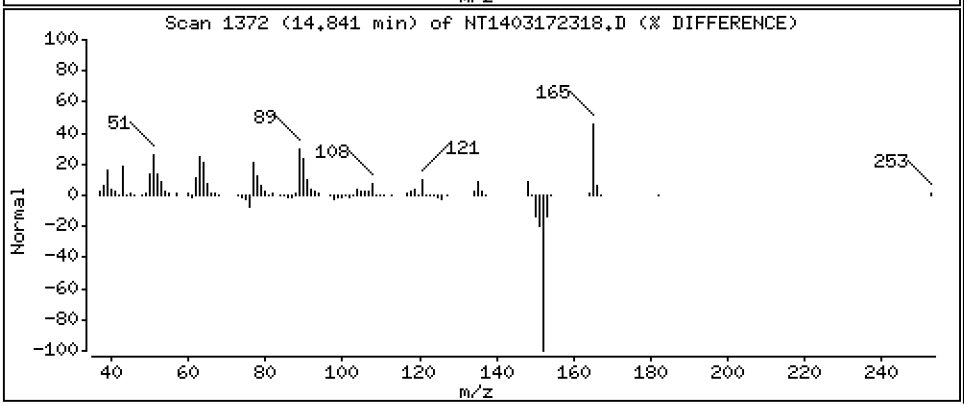












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

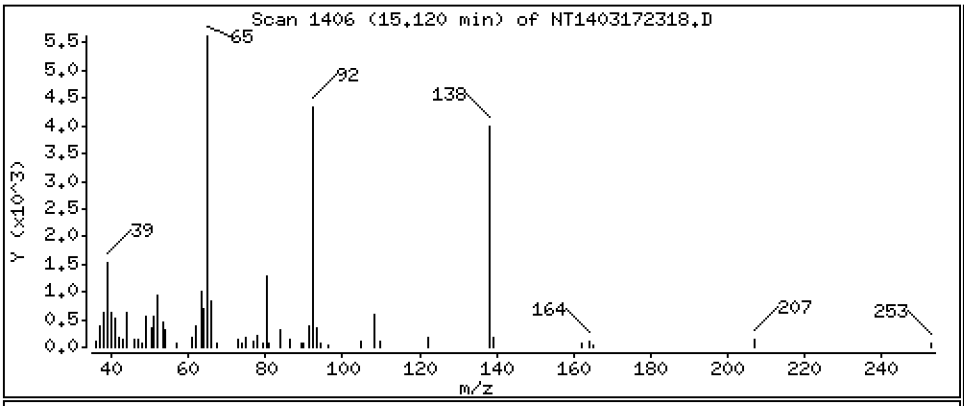
Operator: JGR

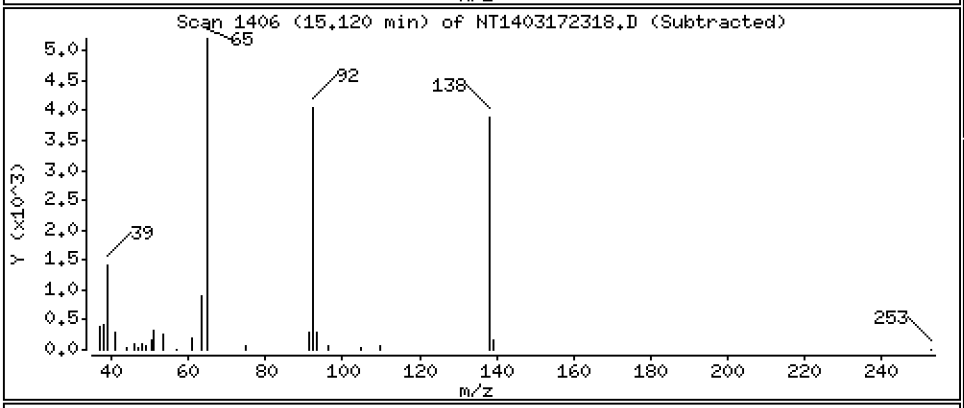
Column phase: ZB-5msi

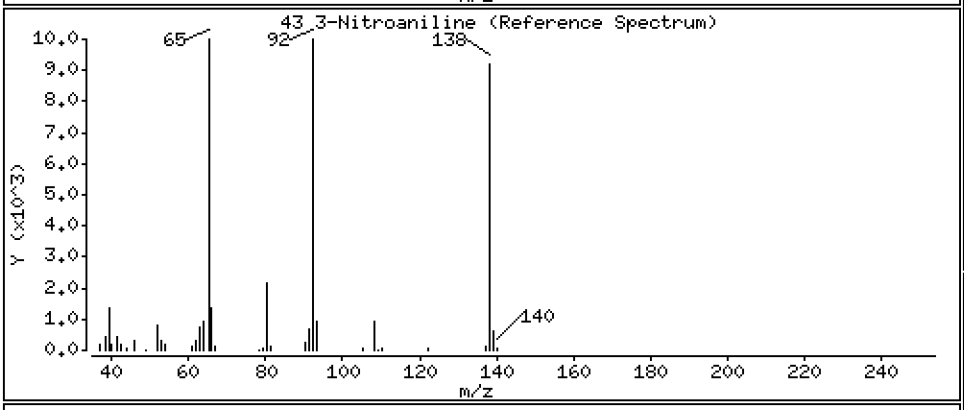
Column diameter: 0.25

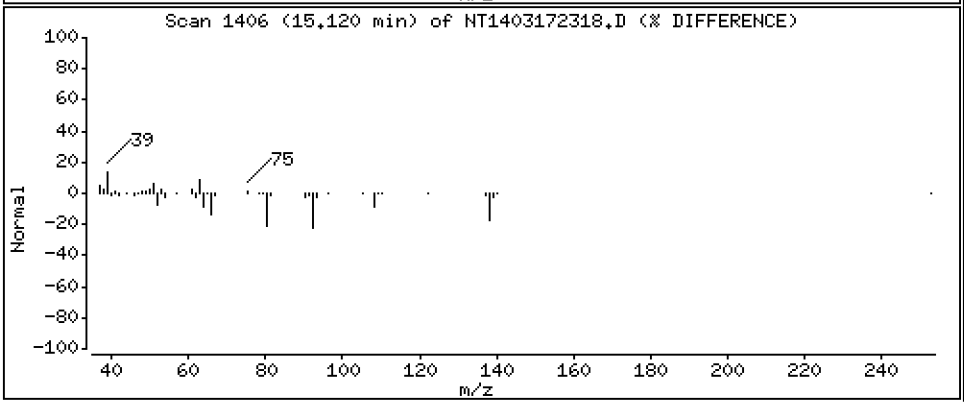
43 3-Nitroaniline

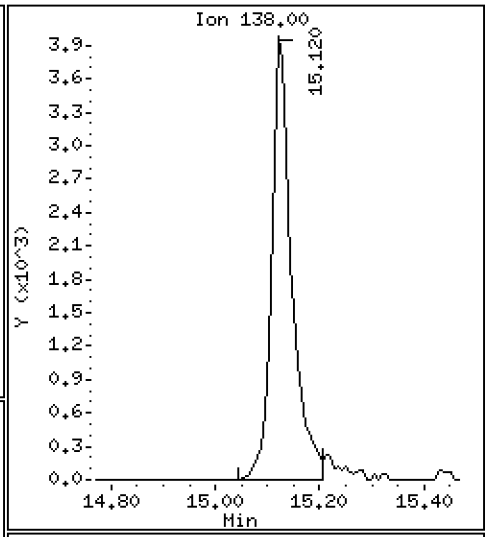
Concentration: 0.2816 ug/mL

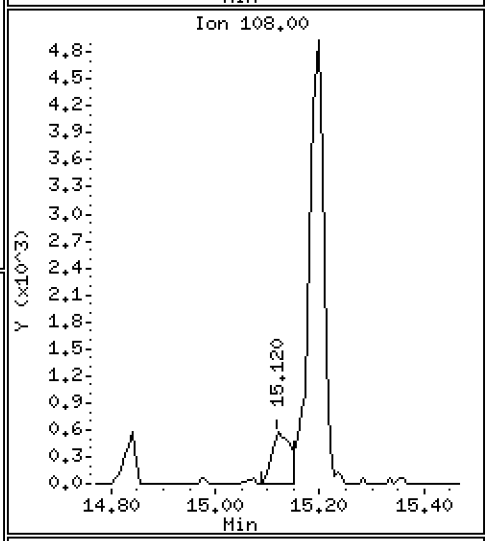


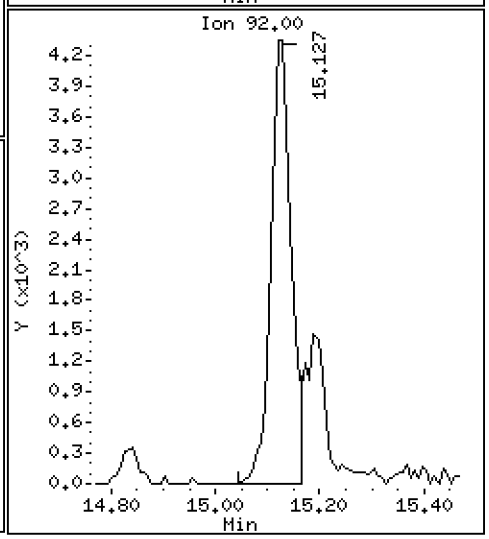












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

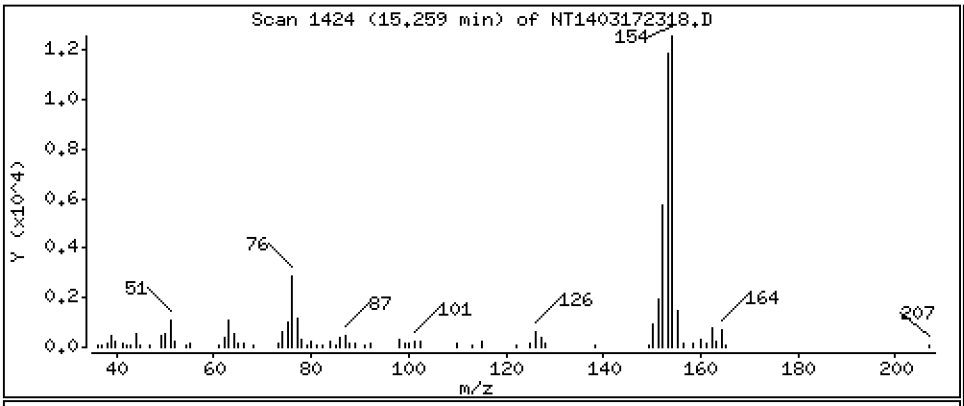
Operator: JGR

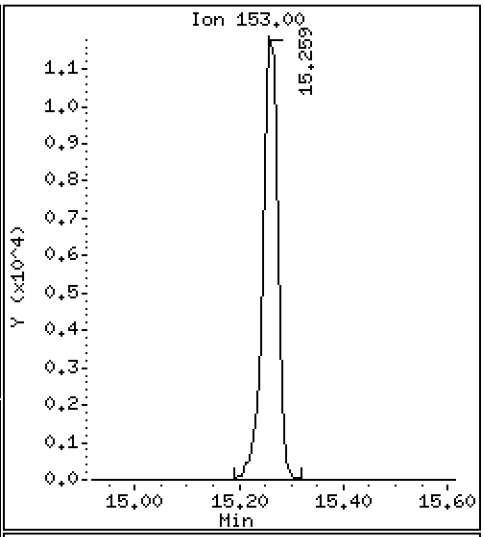
Column phase: ZB-5msi

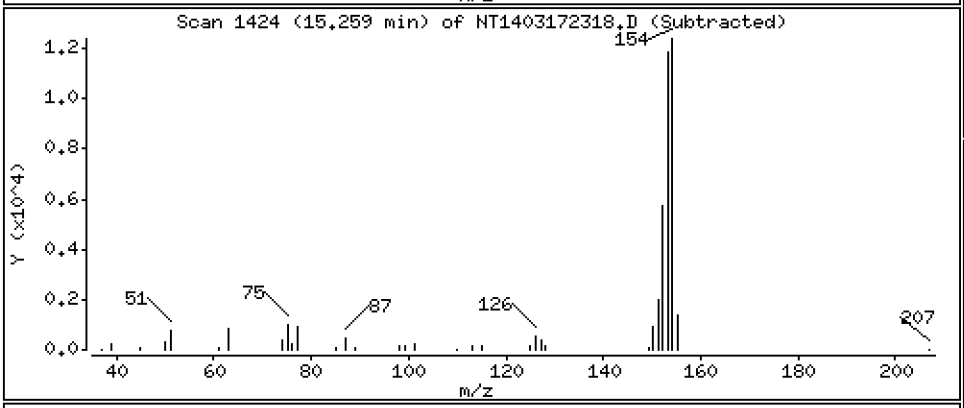
Column diameter: 0.25

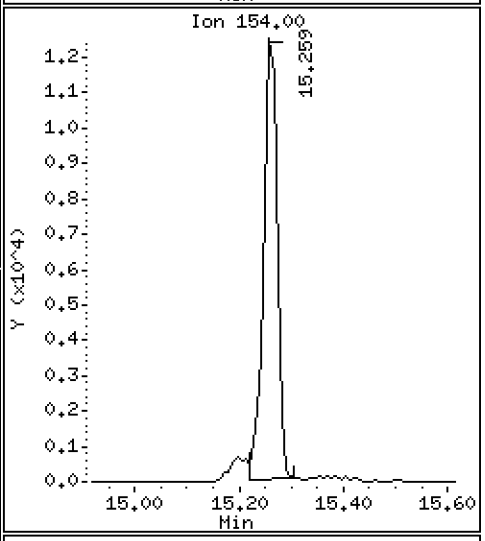
44 Acenaphthene

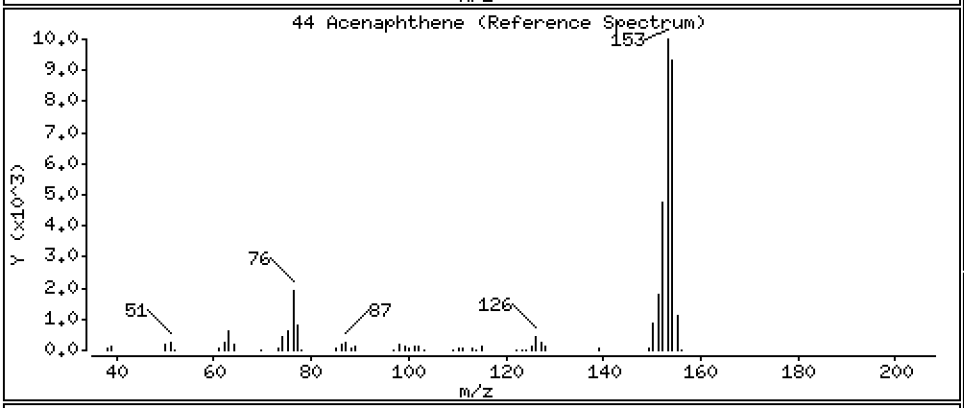
Concentration: 0.1939 ug/mL

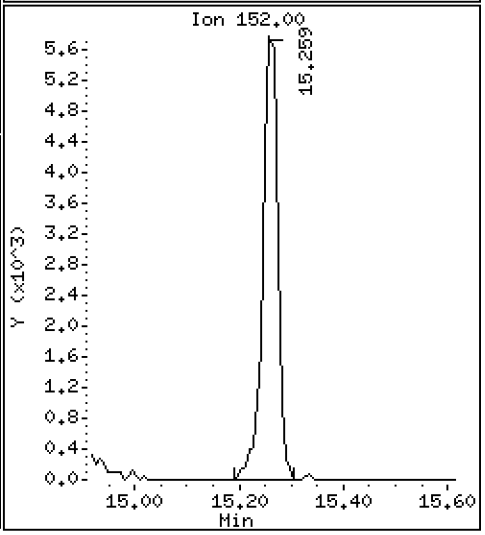


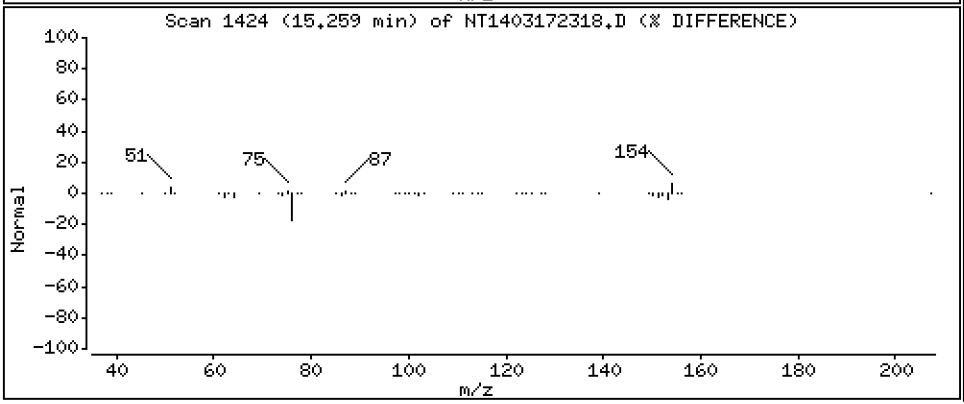












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

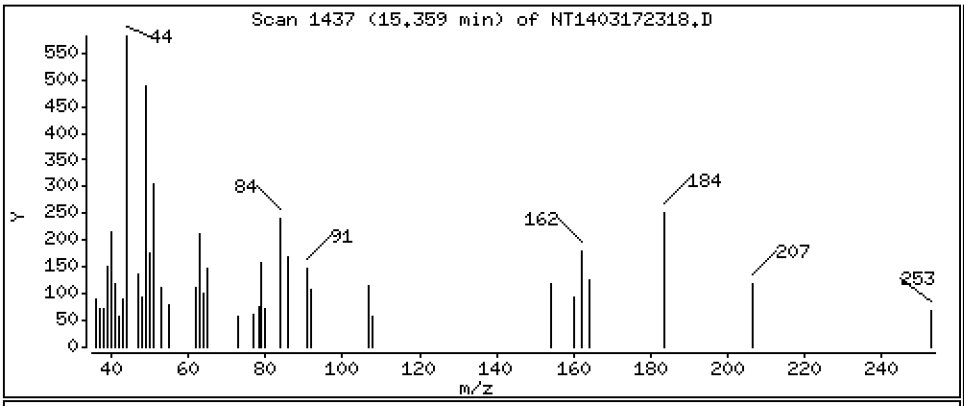
Operator: JGR

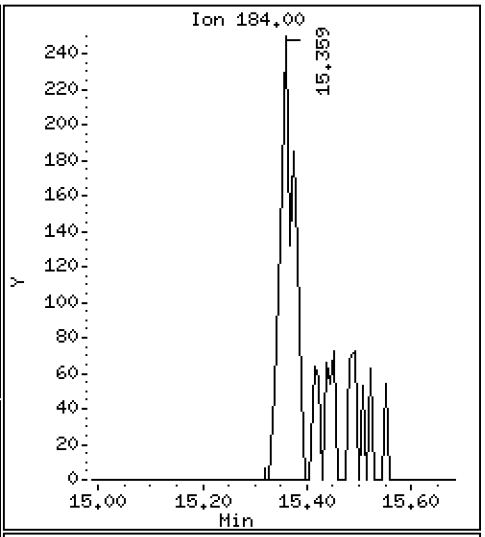
Column phase: ZB-5msi

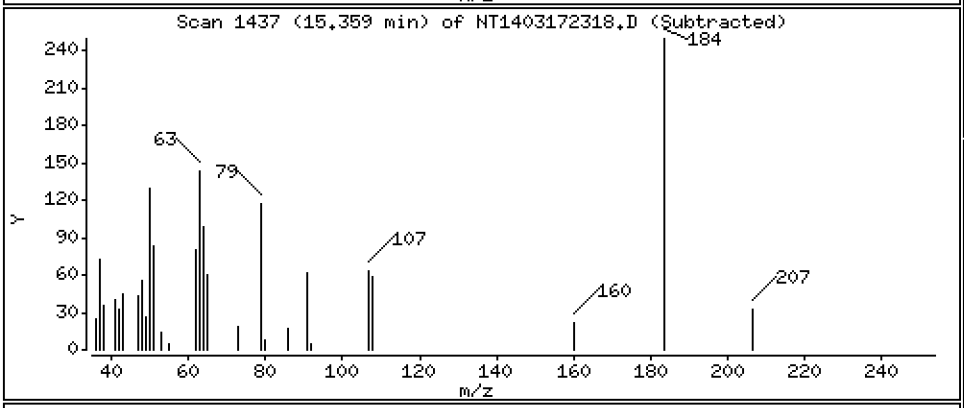
Column diameter: 0.25

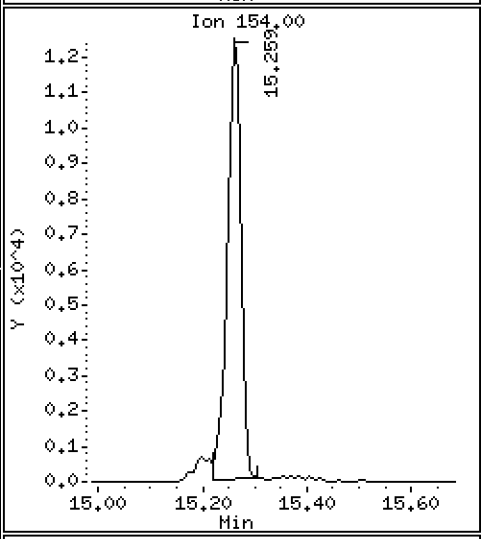
45 2,4-Dinitrophenol

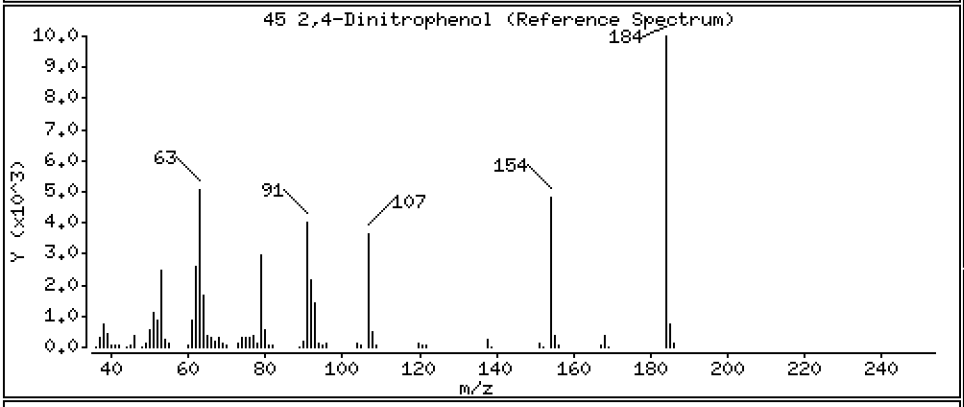
Concentration: 0.02168 ug/mL

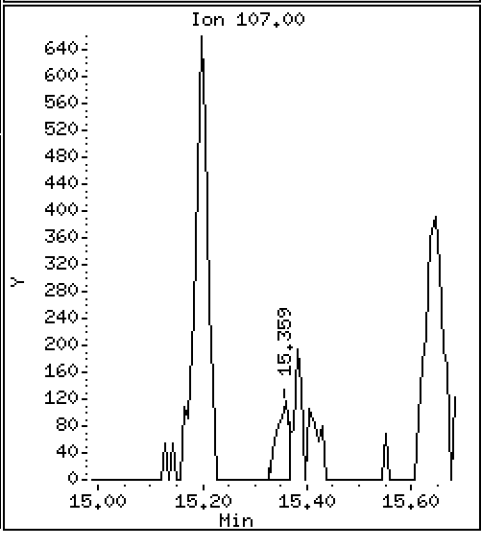


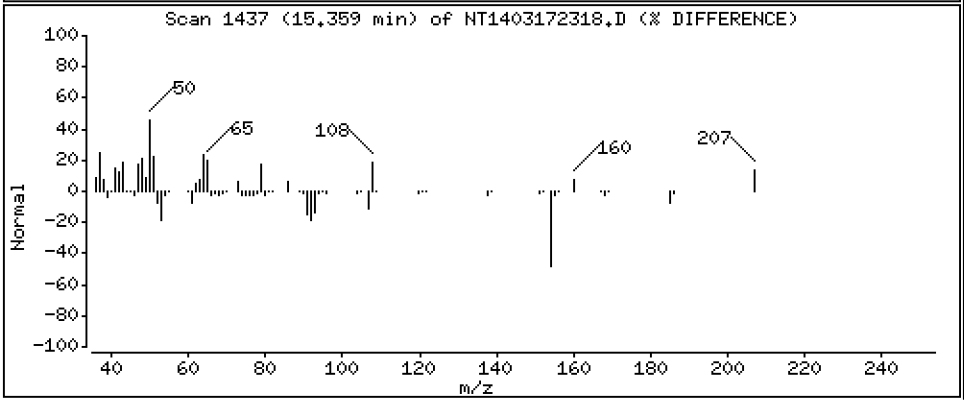












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

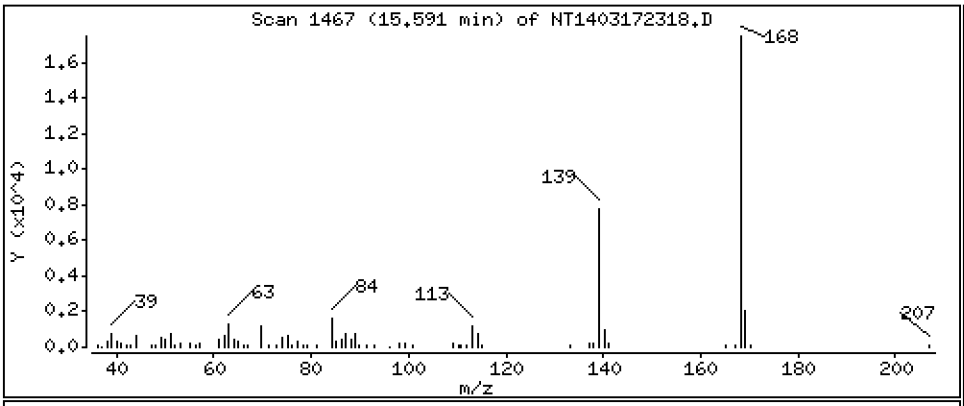
Operator: JGR

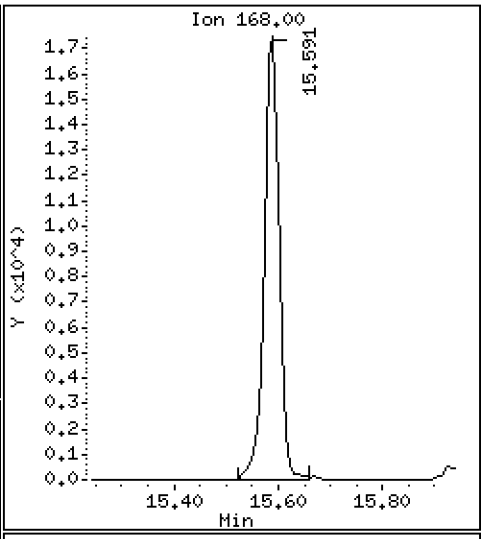
Column phase: ZB-5msi

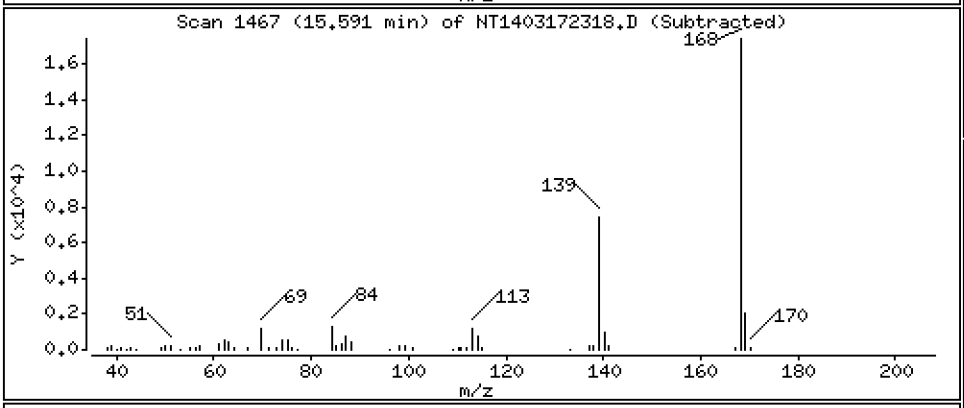
Column diameter: 0.25

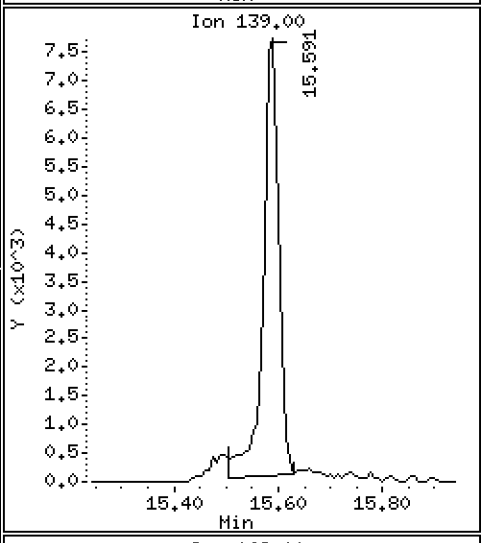
46 Dibenzofuran

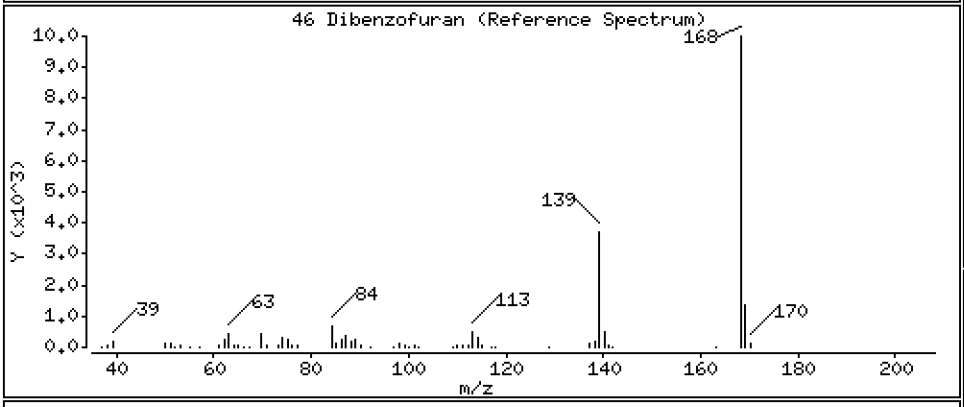
Concentration: 0.1998 ug/mL

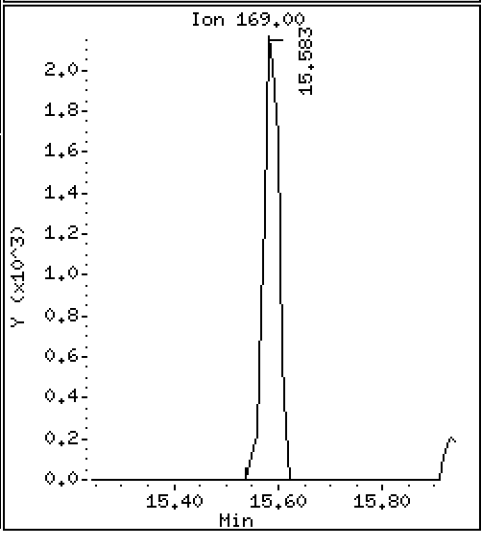


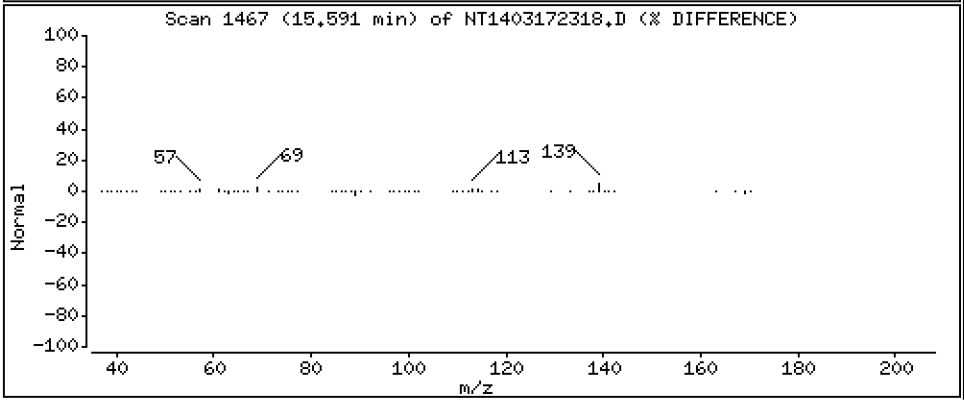












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

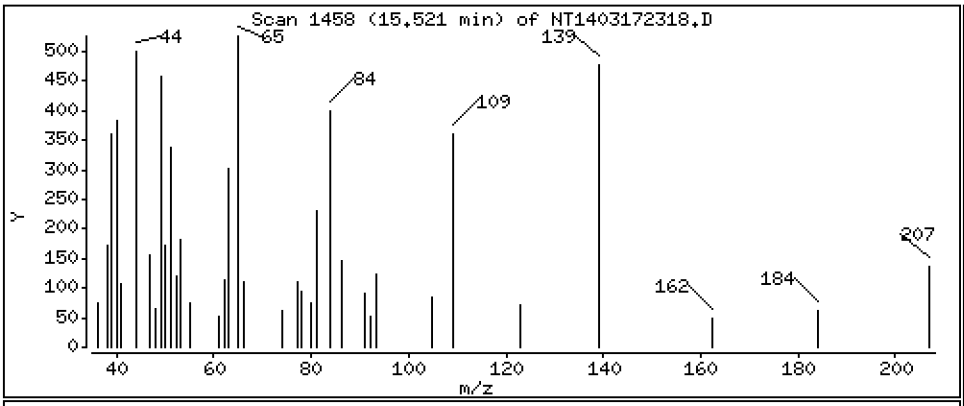
Operator: JGR

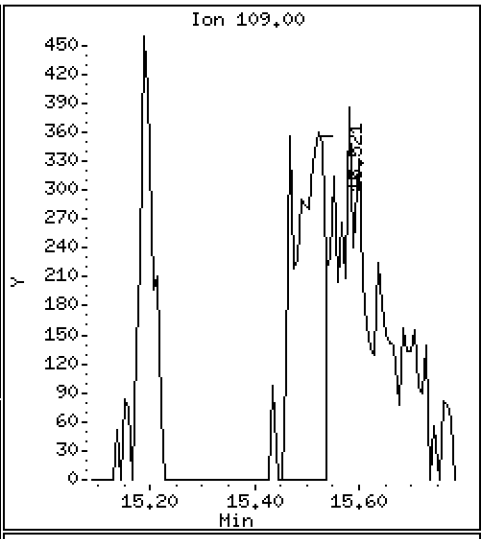
Column phase: ZB-5msi

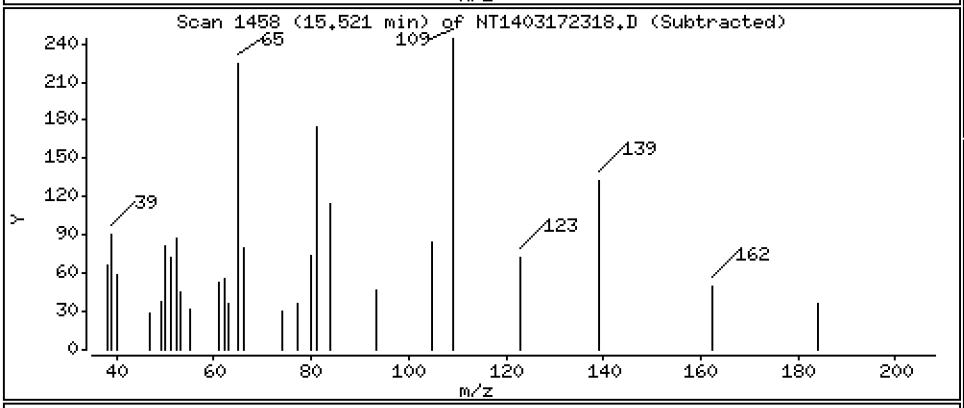
Column diameter: 0.25

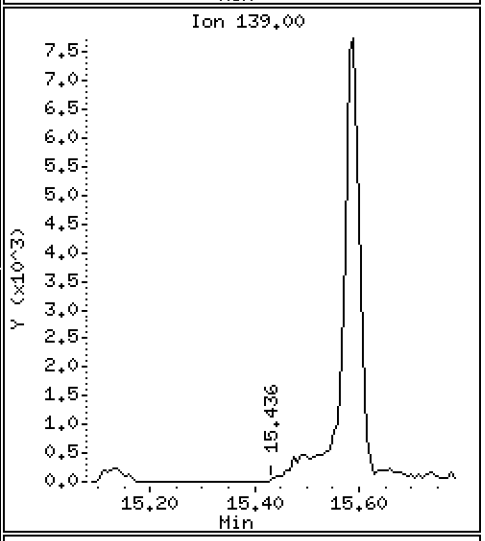
47 4-Nitrophenol

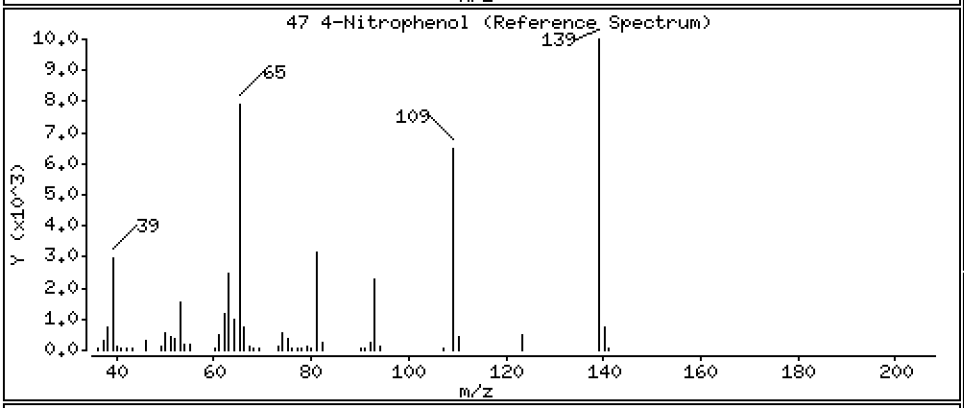
Concentration: 0.06483 ug/mL

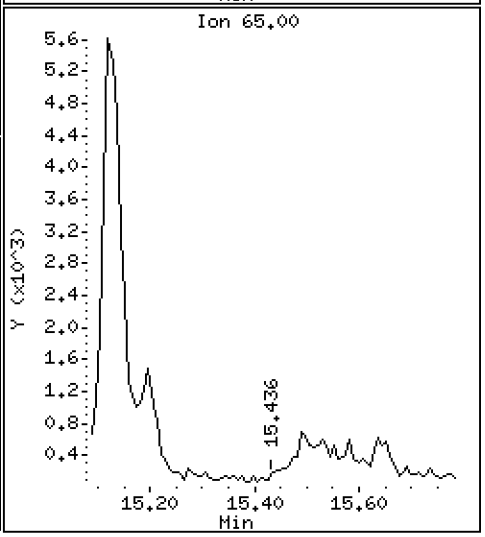


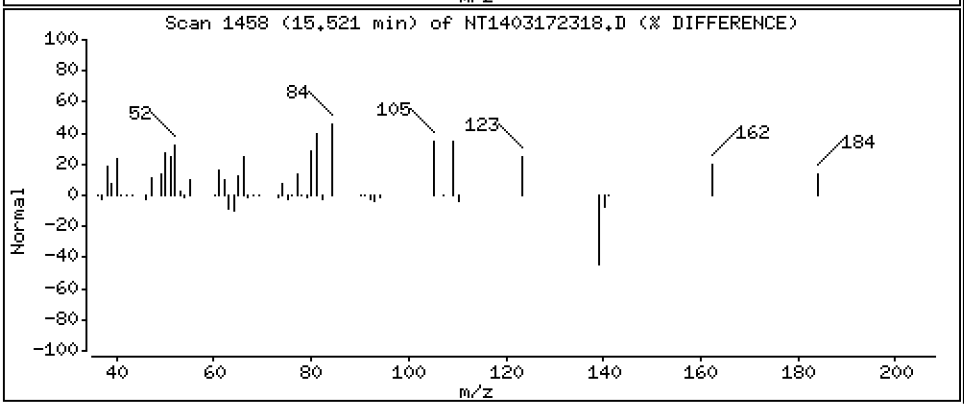












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

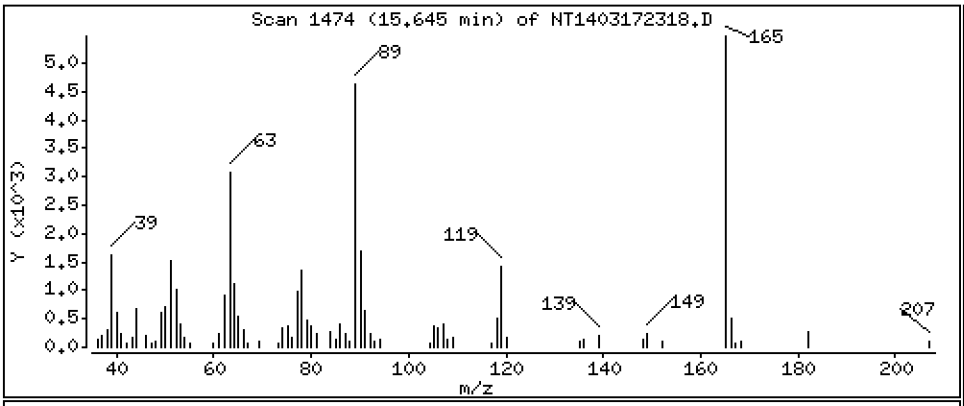
Operator: JGR

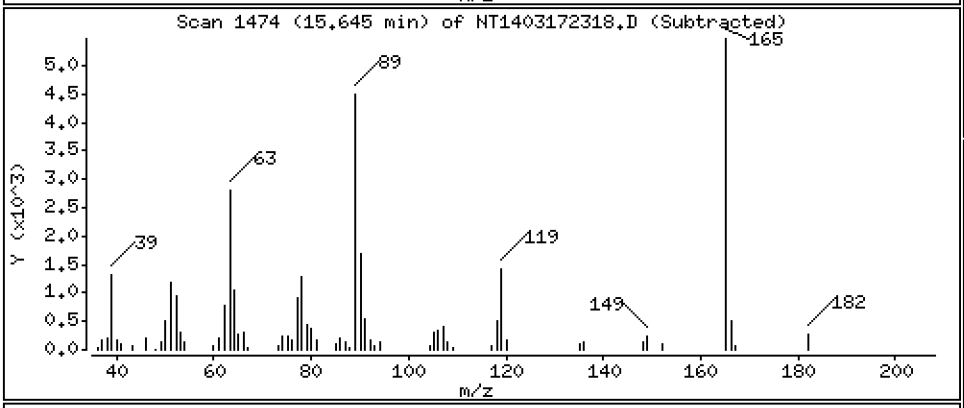
Column phase: ZB-5msi

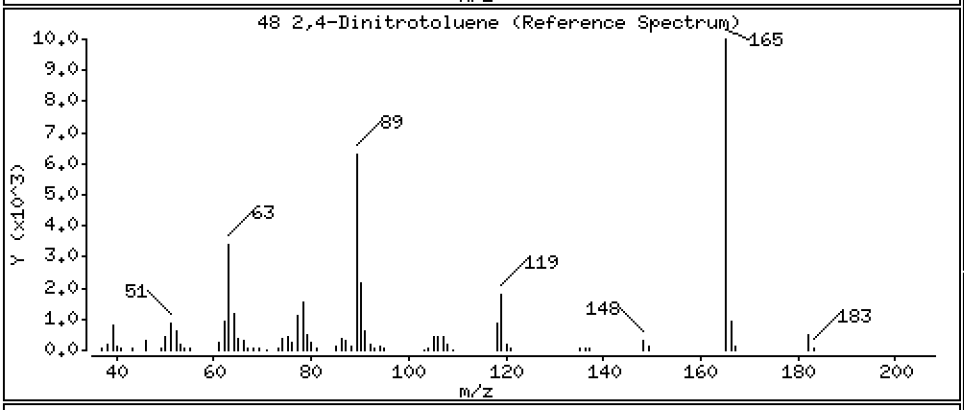
Column diameter: 0.25

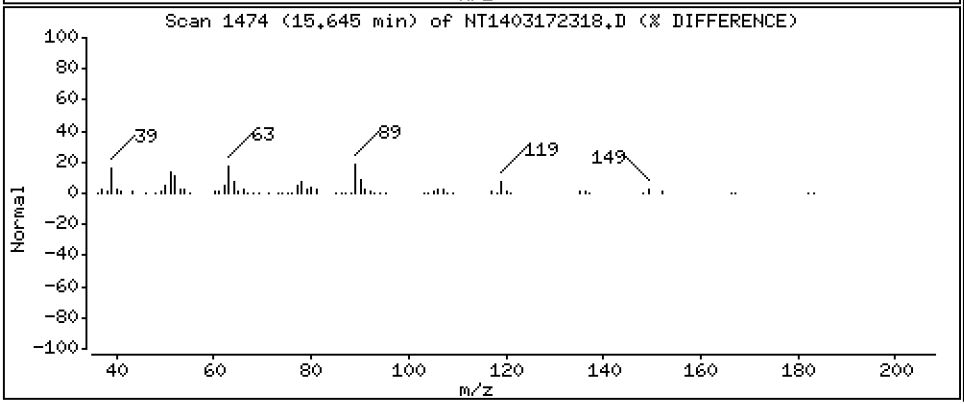
48 2,4-Dinitrotoluene

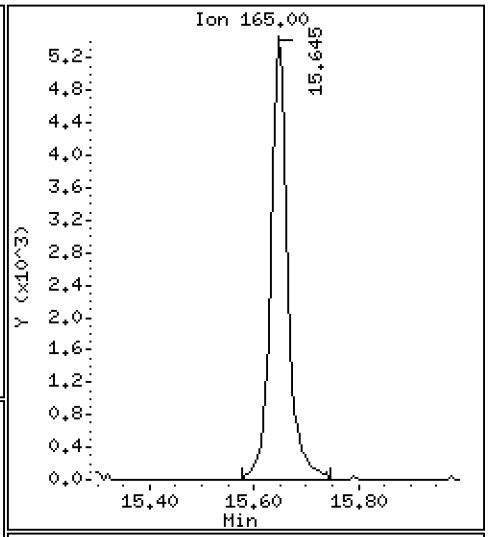
Concentration: 0.2845 ug/mL

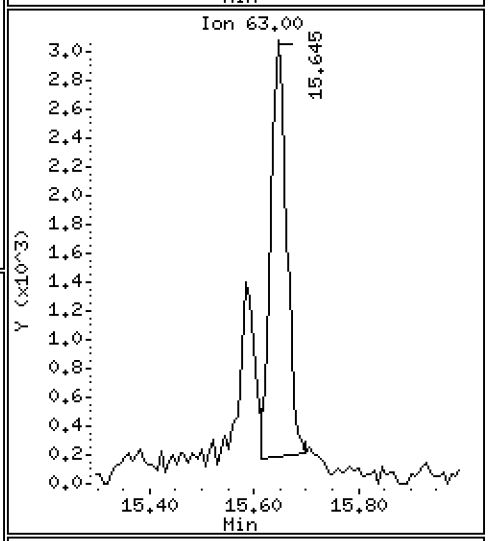


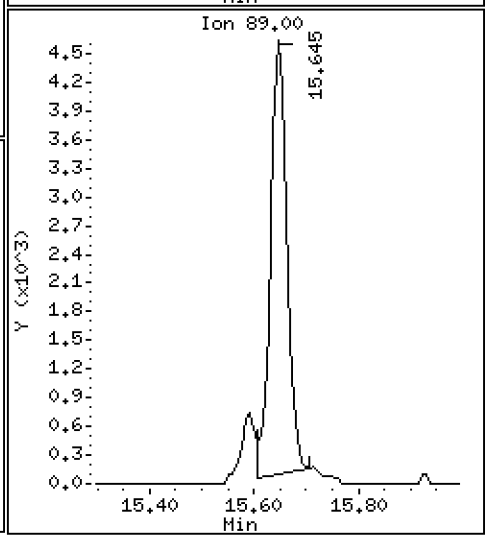












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

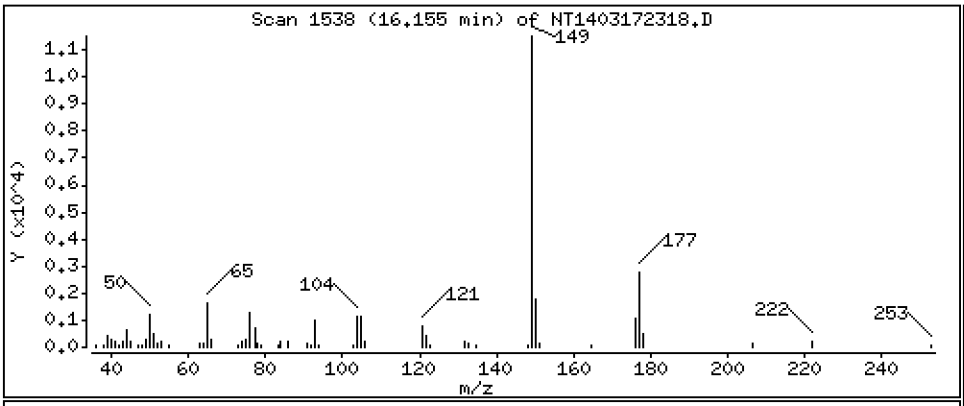
Operator: JGR

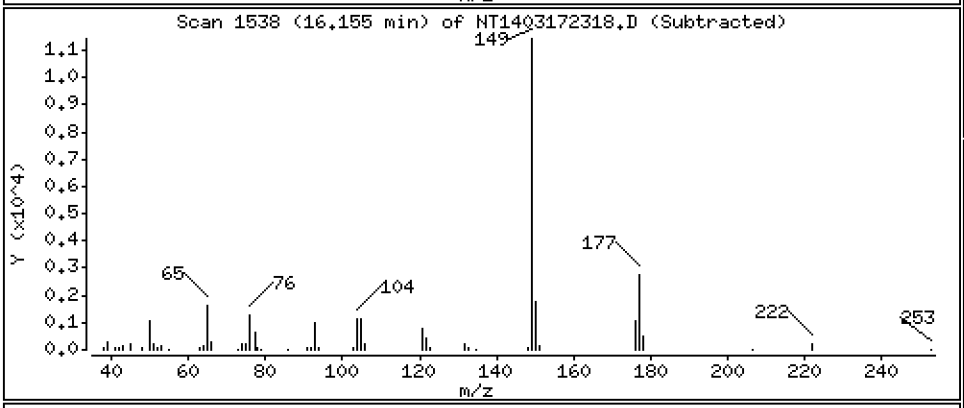
Column phase: ZB-5msi

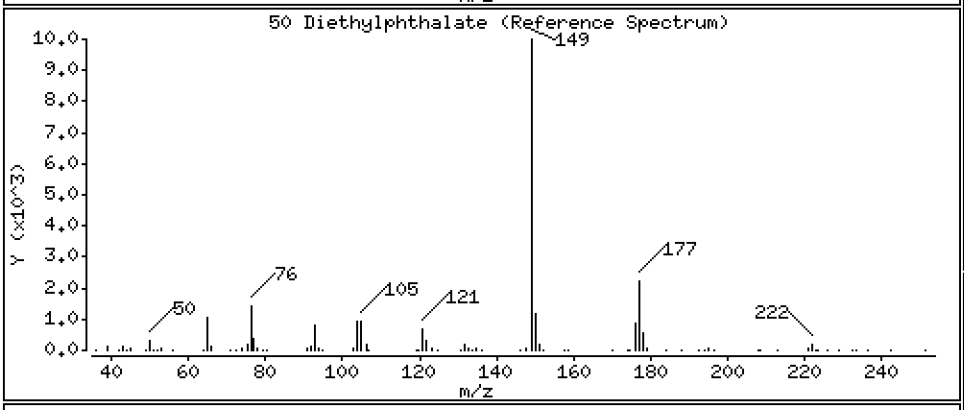
Column diameter: 0.25

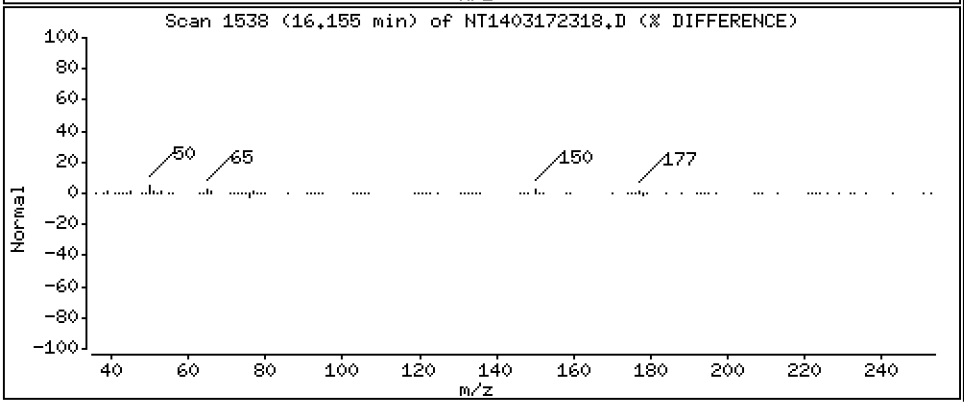
50 Diethylphthalate

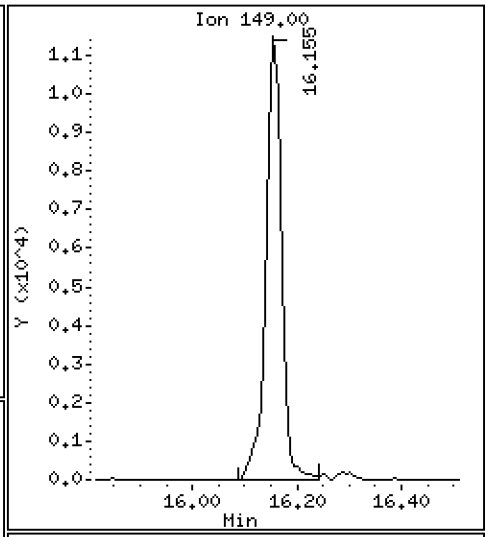
Concentration: 0.1917 ug/mL

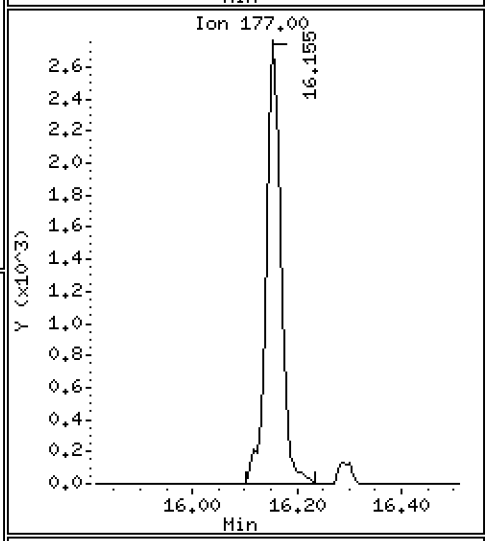


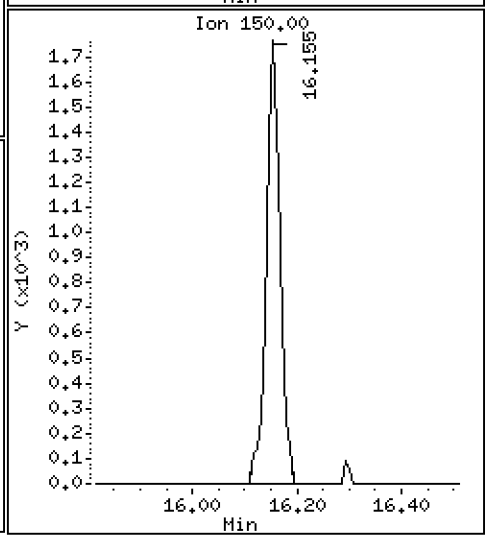












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

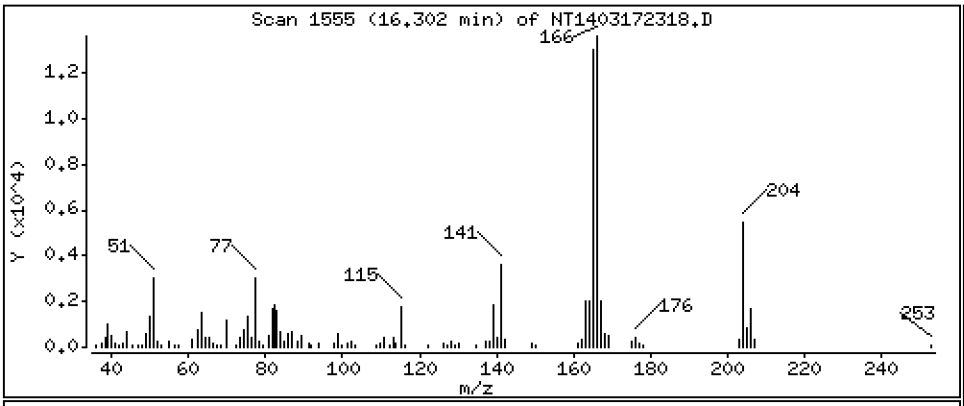
Operator: JGR

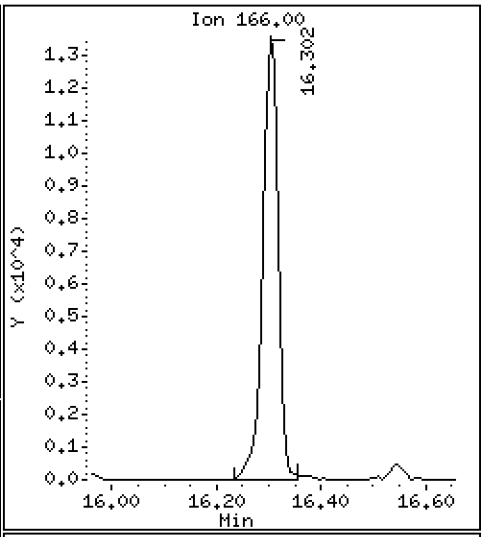
Column phase: ZB-5msi

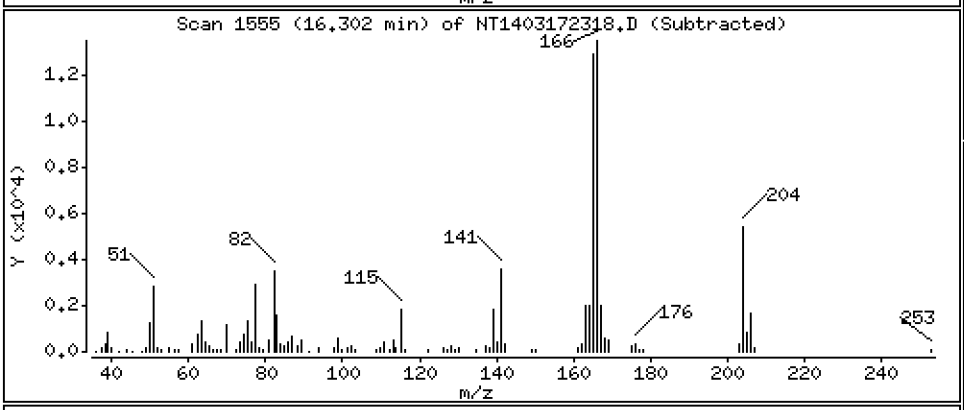
Column diameter: 0.25

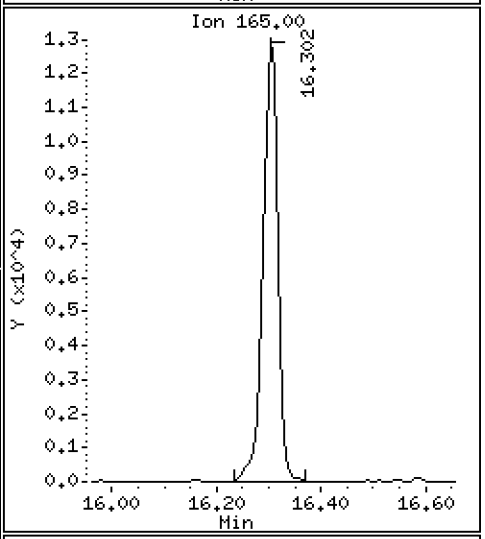
49 Fluorene

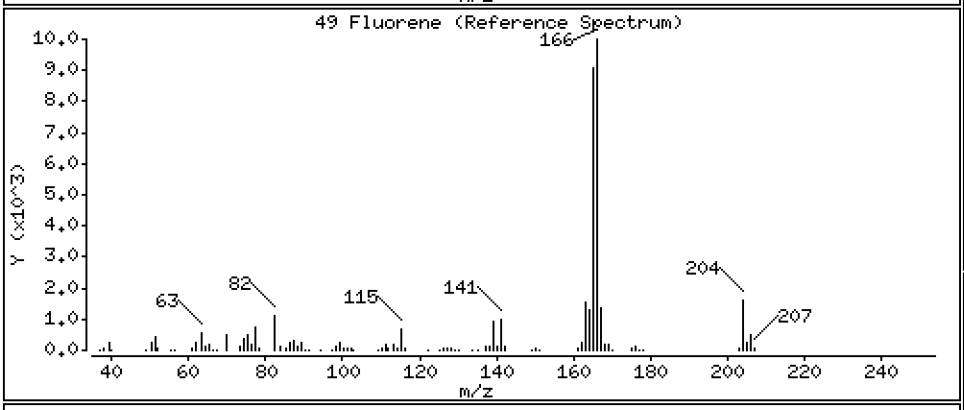
Concentration: 0.1696 ug/mL

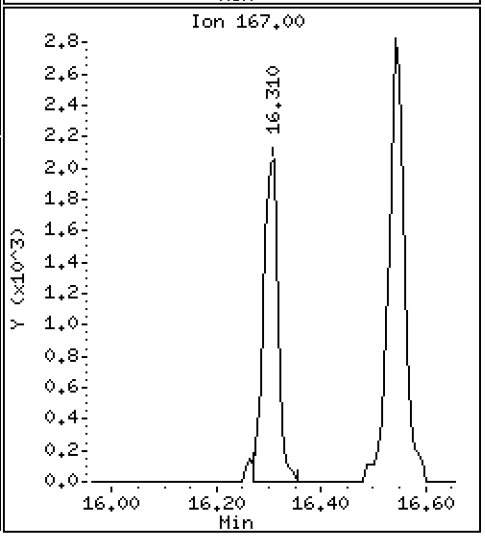


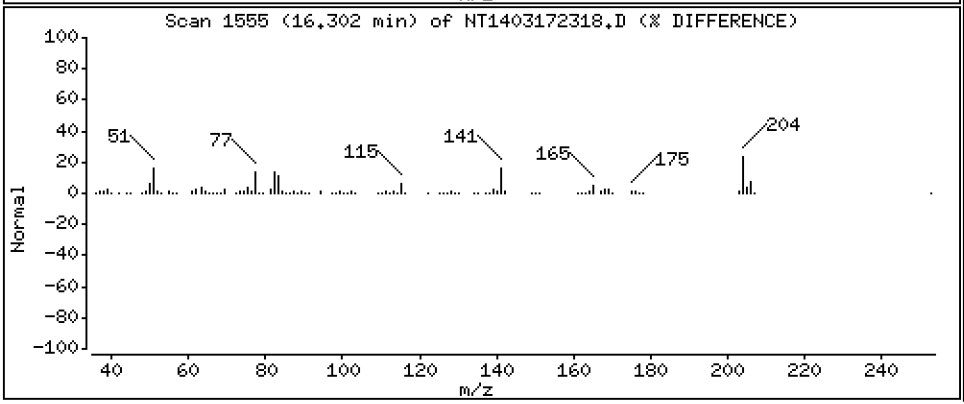












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

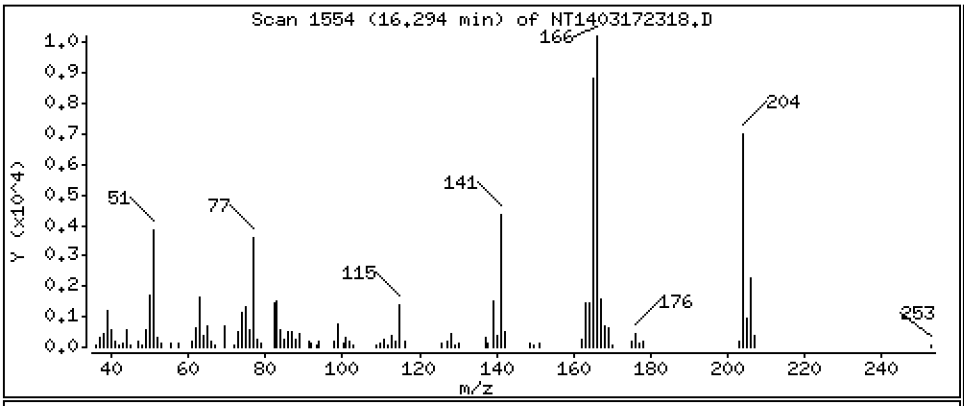
Operator: JGR

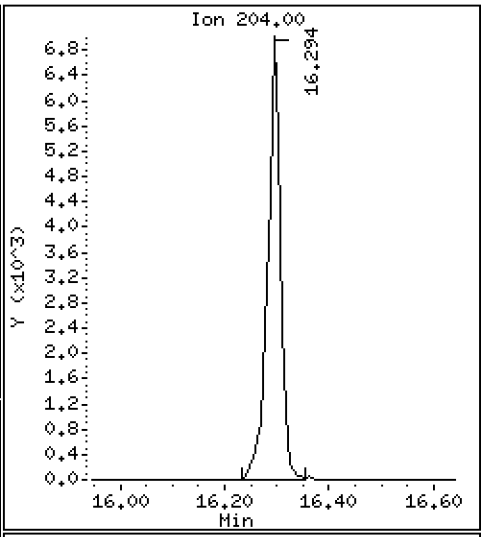
Column phase: ZB-5msi

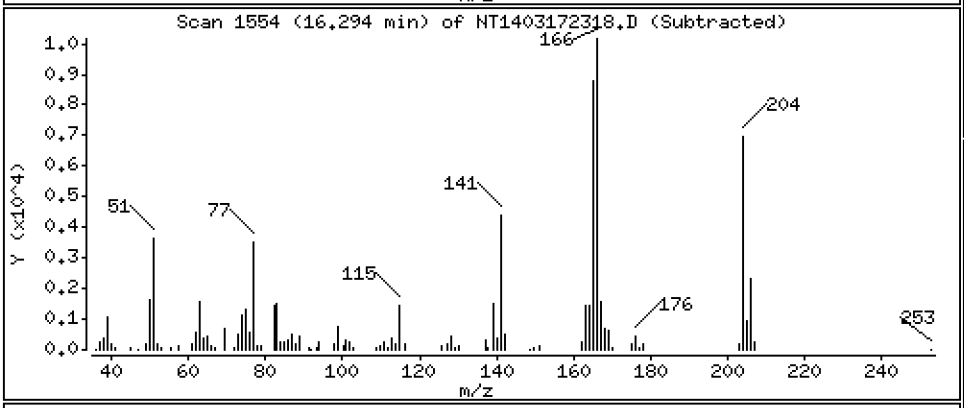
Column diameter: 0.25

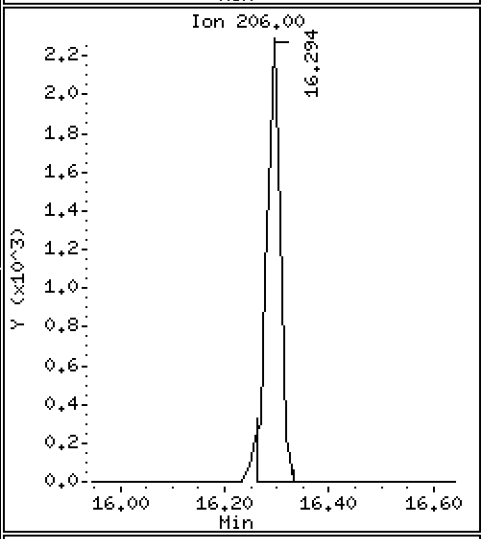
51 4-Chlorophenyl-phenylether

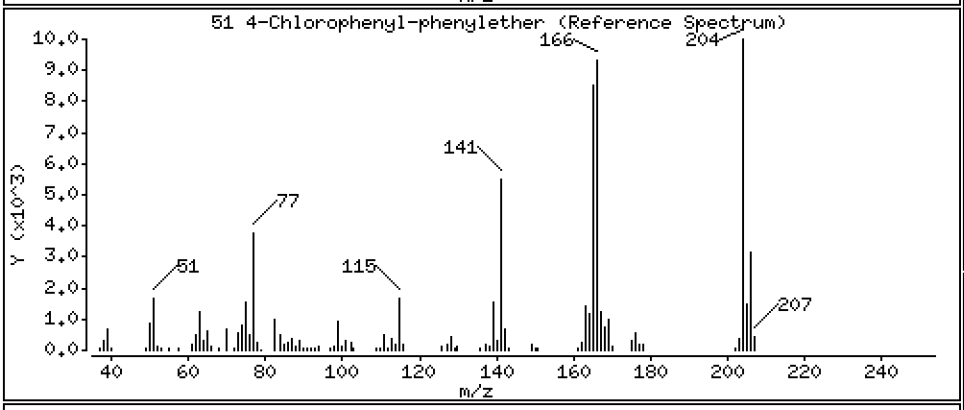
Concentration: 0.1733 ug/mL

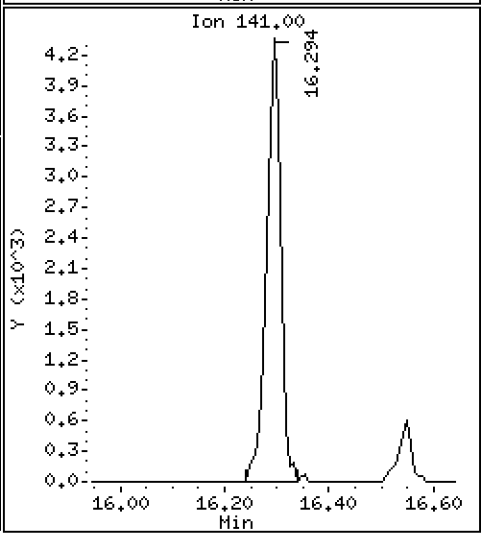


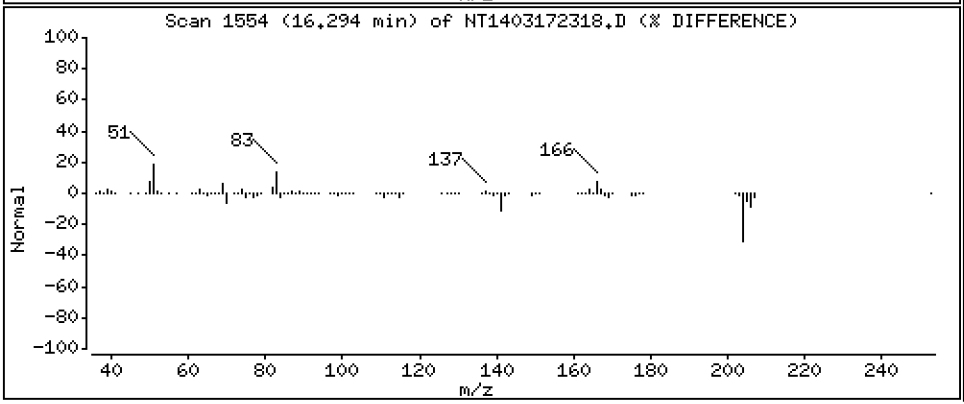












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

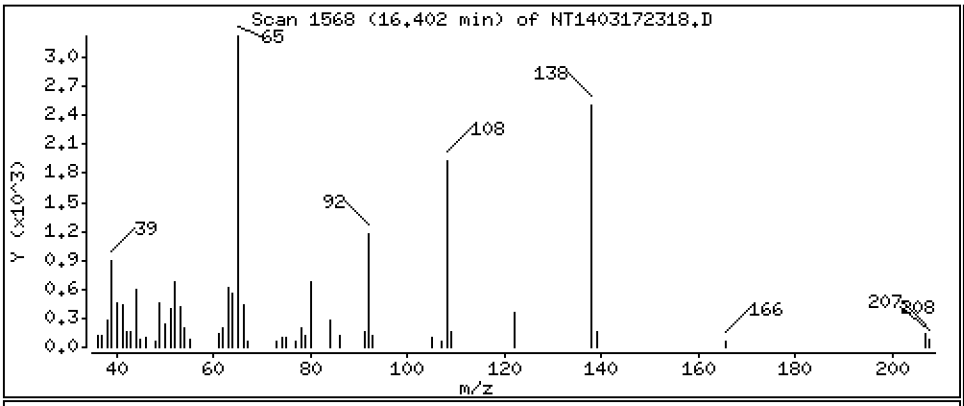
Operator: JGR

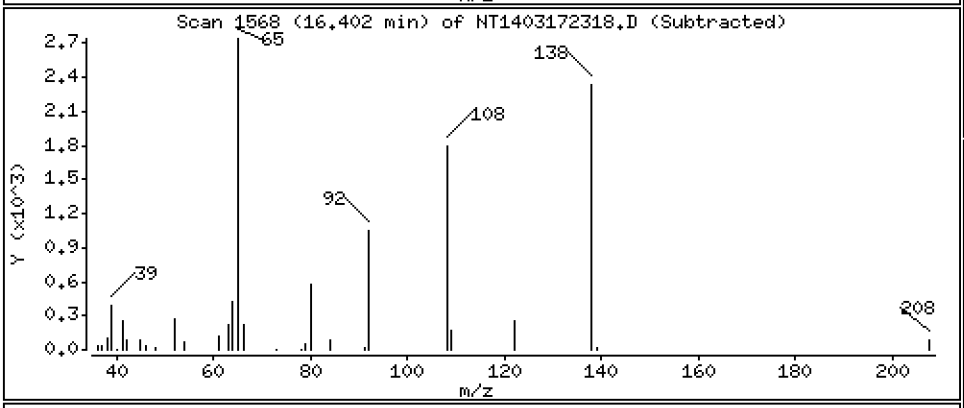
Column phase: ZB-5msi

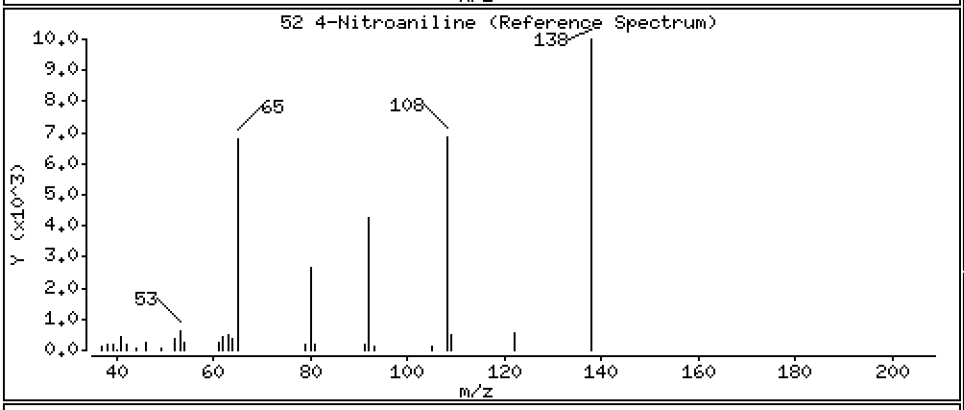
Column diameter: 0.25

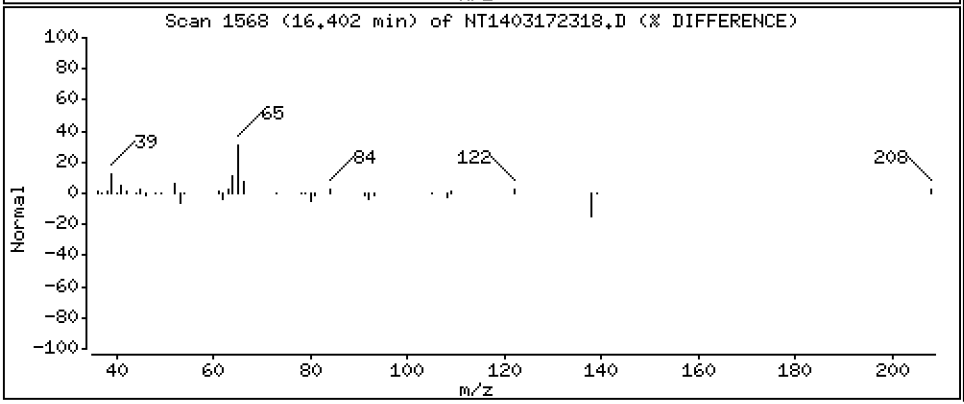
52 4-Nitroaniline

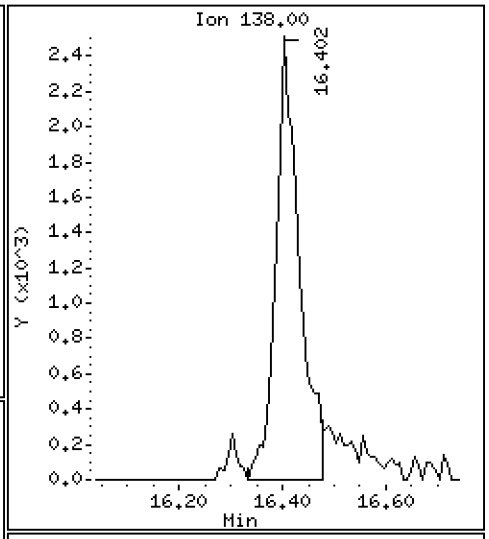
Concentration: 0.2262 ug/mL

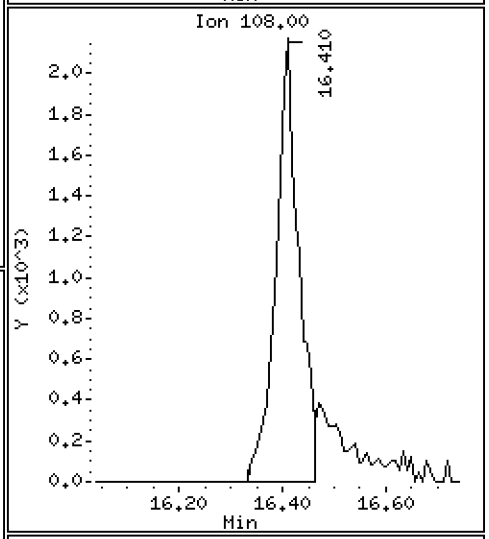


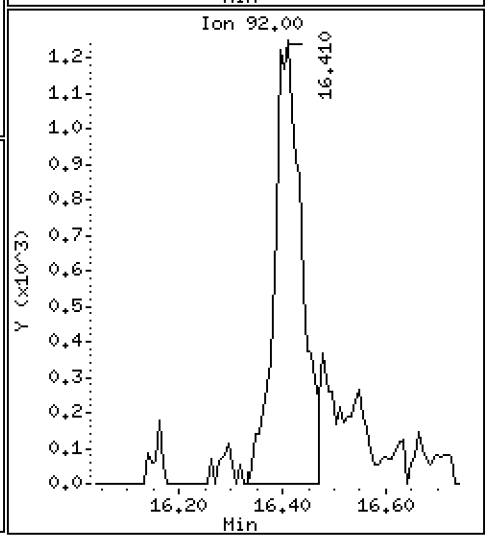












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

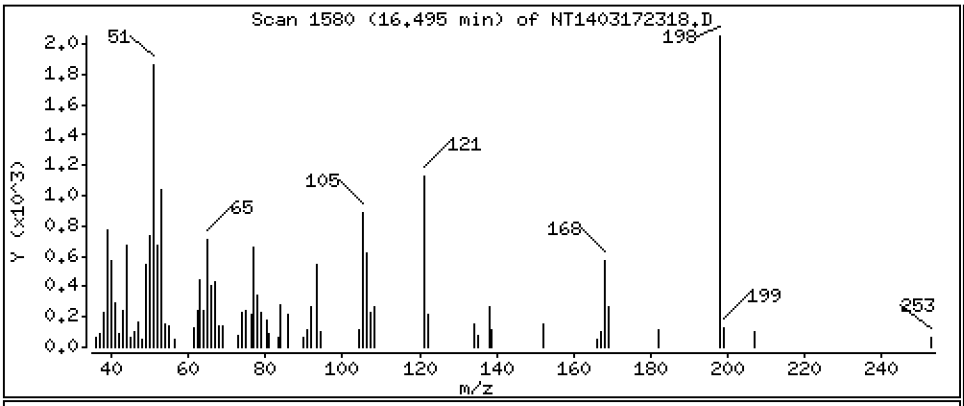
Operator: JGR

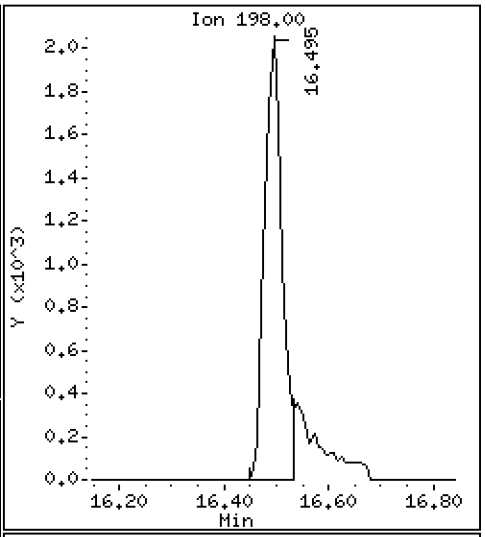
Column phase: ZB-5msi

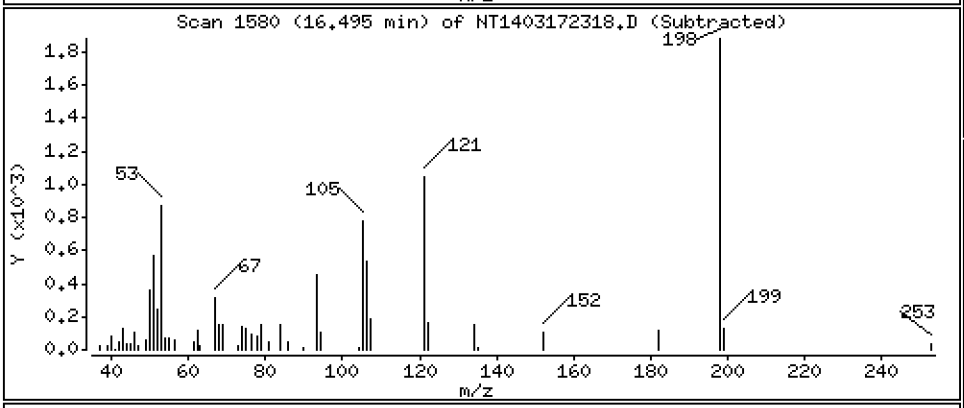
Column diameter: 0.25

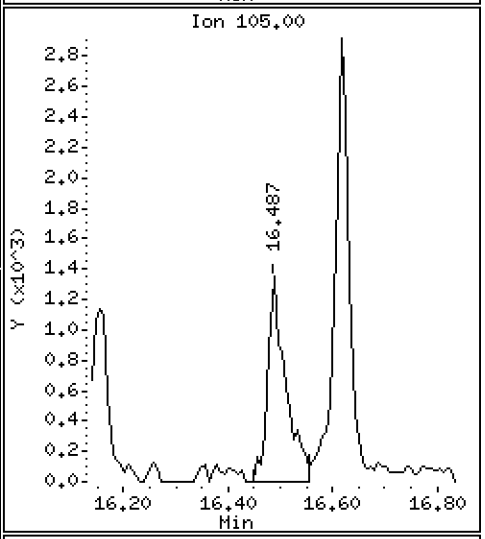
53 4,6-Dinitro-2-methylphenol

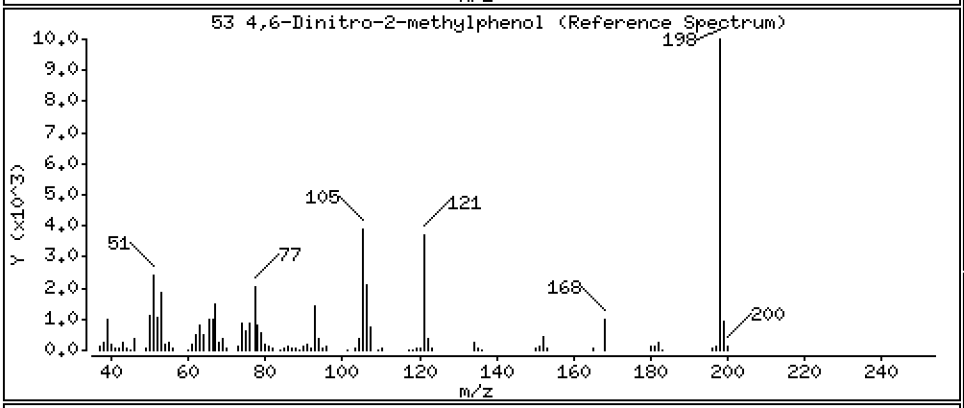
Concentration: 0.2002 ug/mL

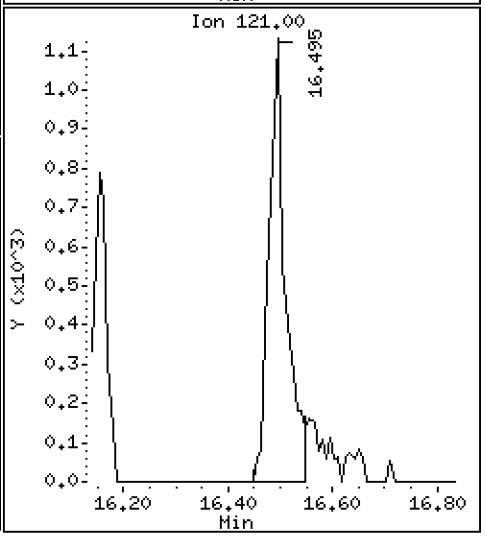


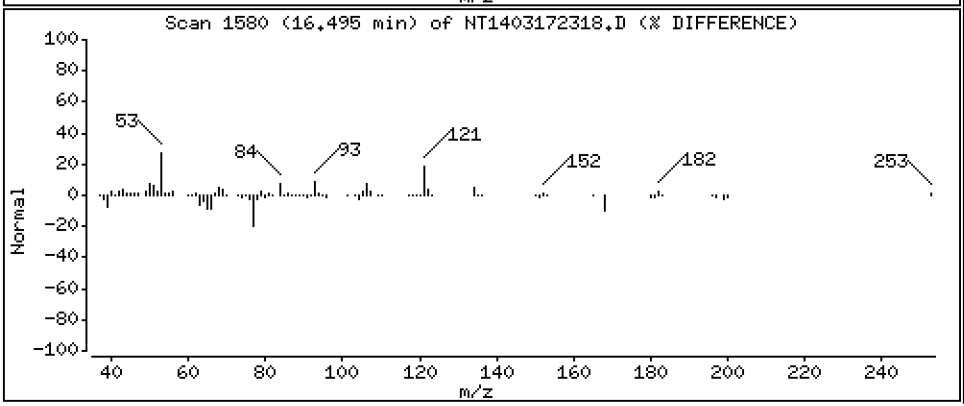












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

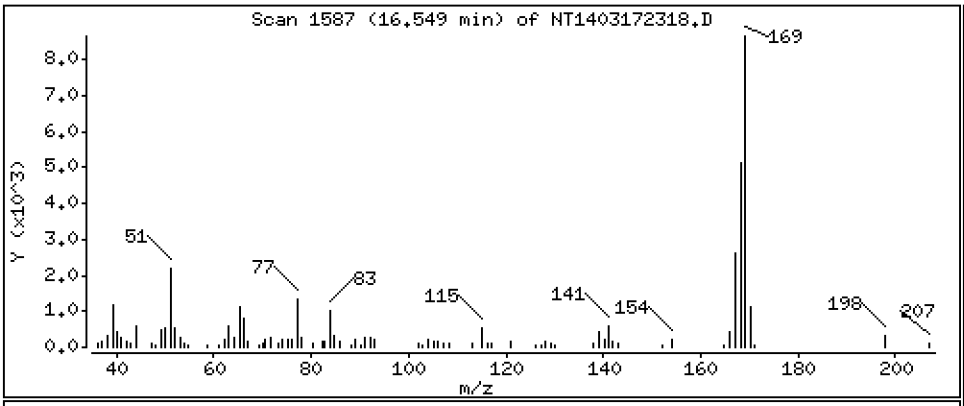
Operator: JGR

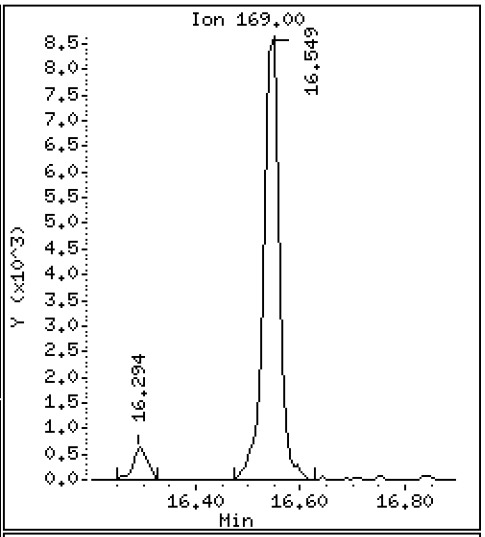
Column phase: ZB-5msi

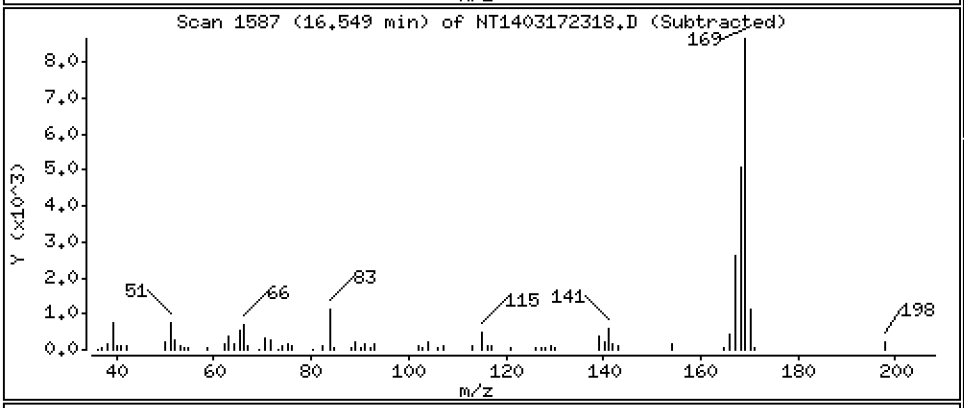
Column diameter: 0.25

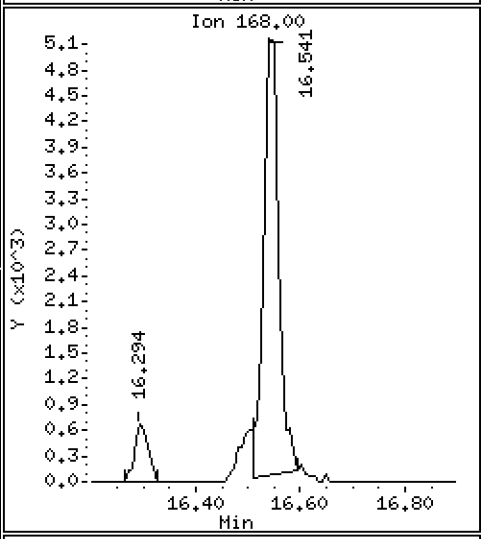
54 N-Nitrosodiphenylamine

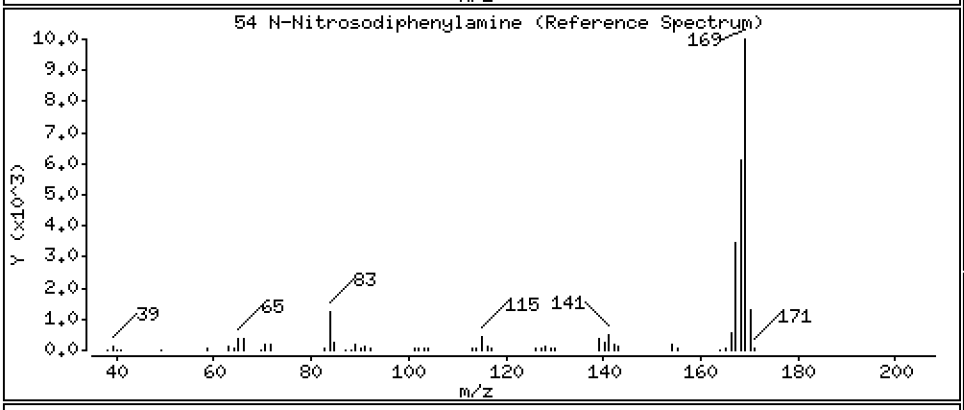
Concentration: 0.1901 ug/mL

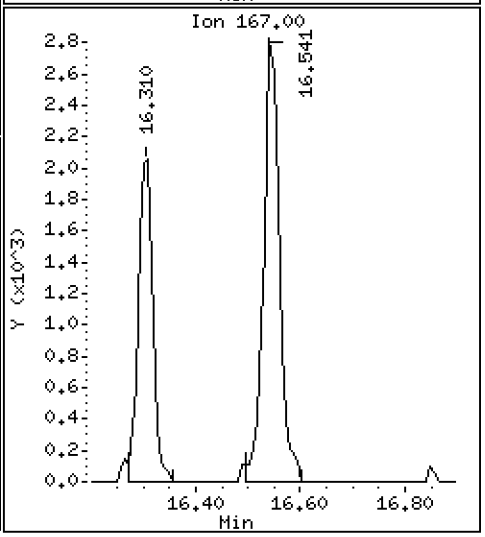


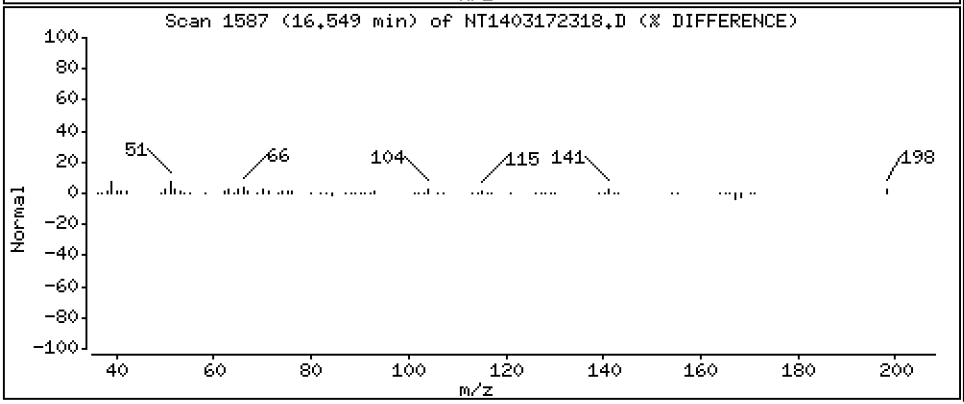












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

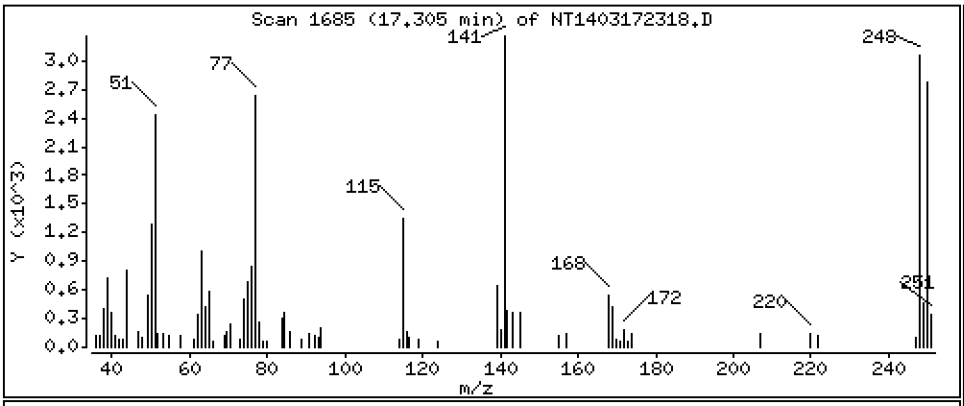
Operator: JGR

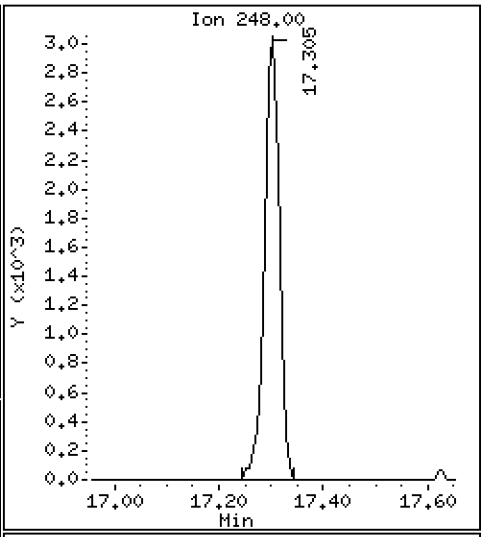
Column phase: ZB-5msi

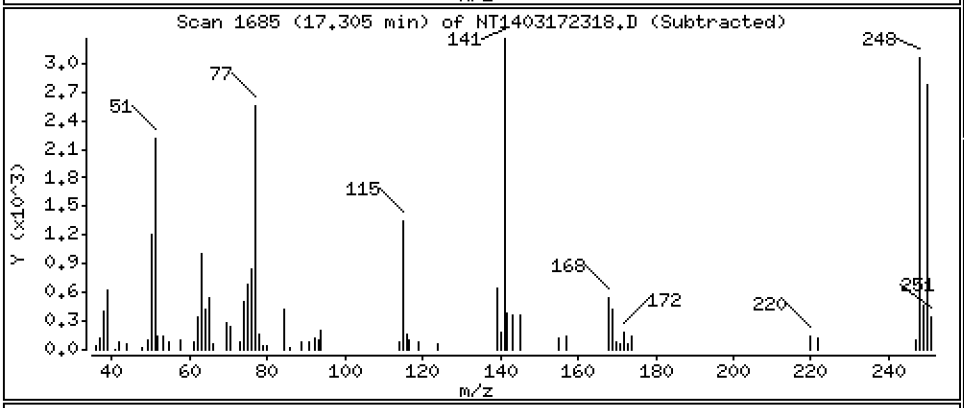
Column diameter: 0.25

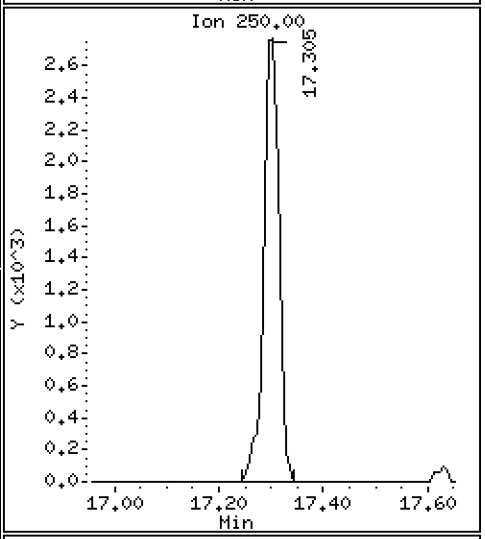
56 4-Bromophenyl-phenylether

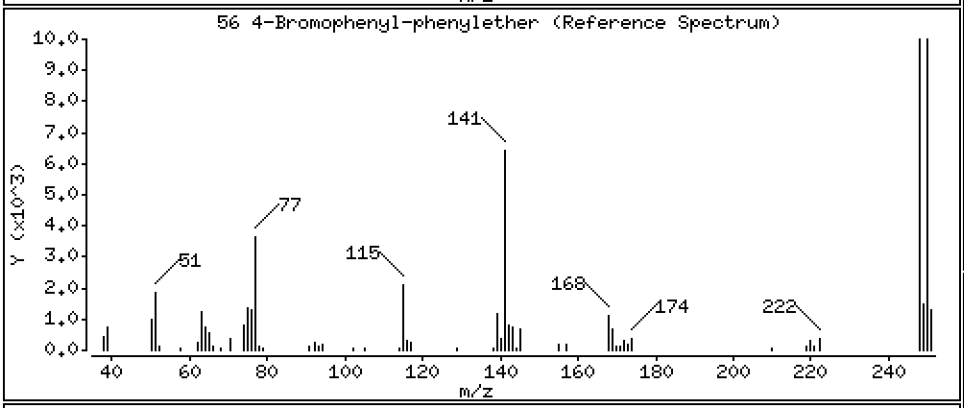
Concentration: 0.1868 ug/mL

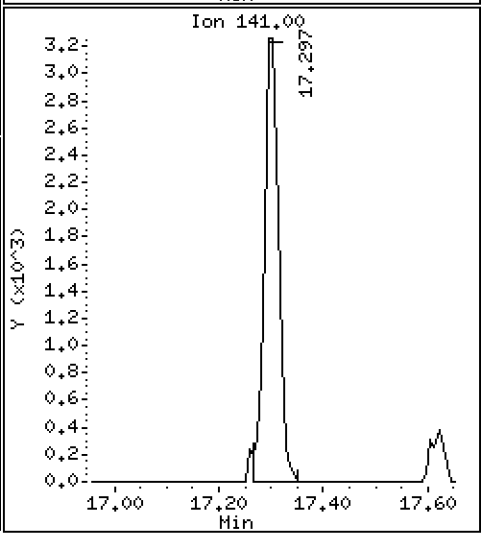


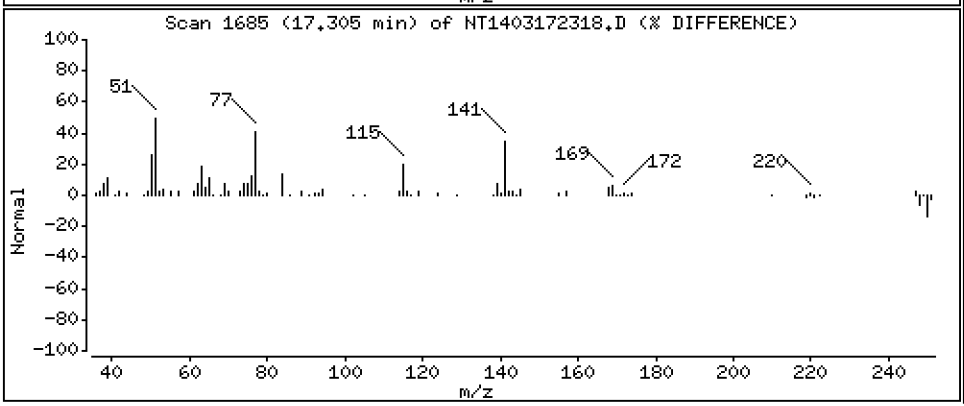












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

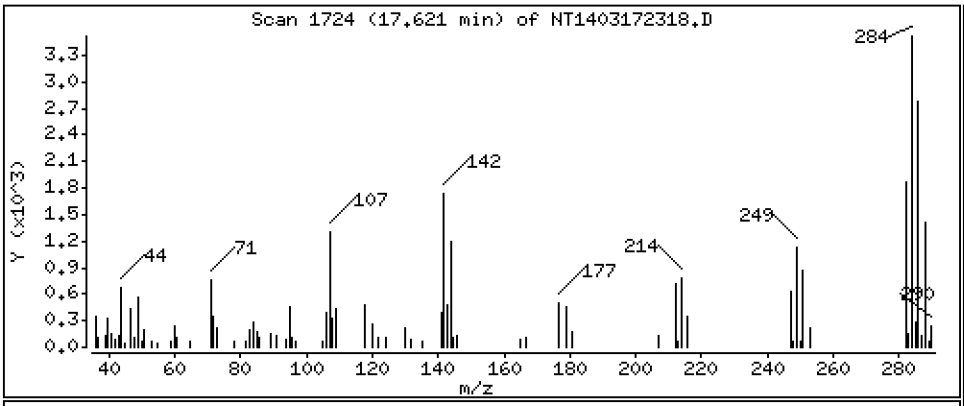
Operator: JGR

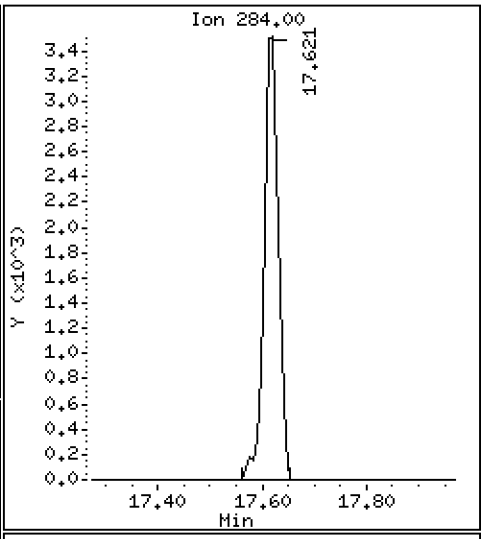
Column phase: ZB-5msi

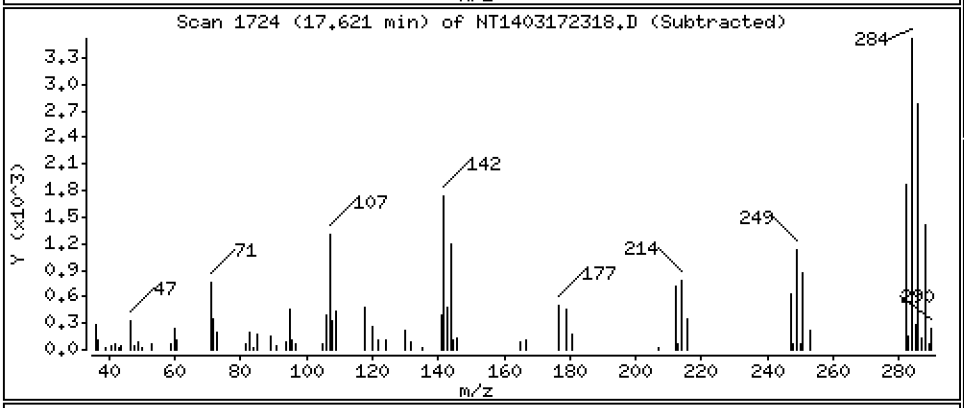
Column diameter: 0.25

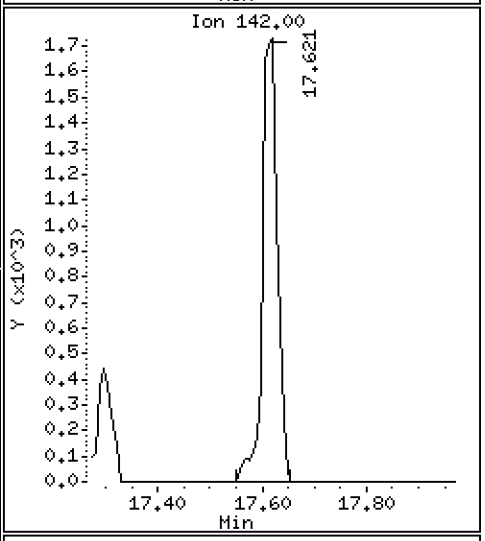
57 Hexachlorobenzene

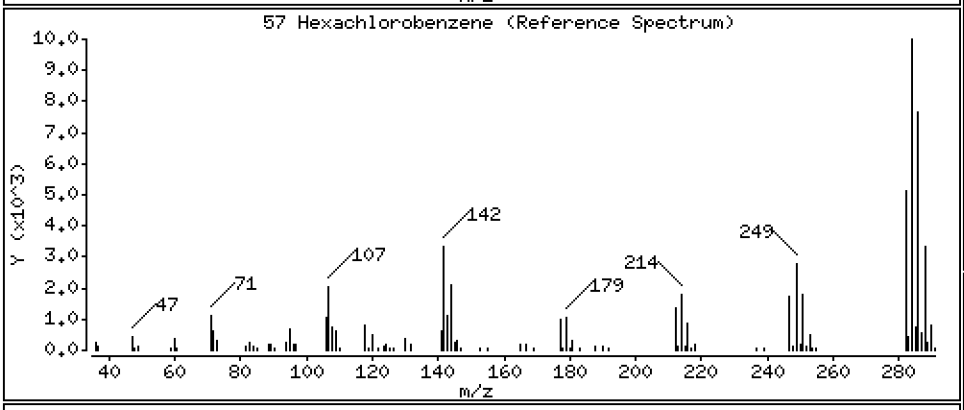
Concentration: 0.2040 ug/mL

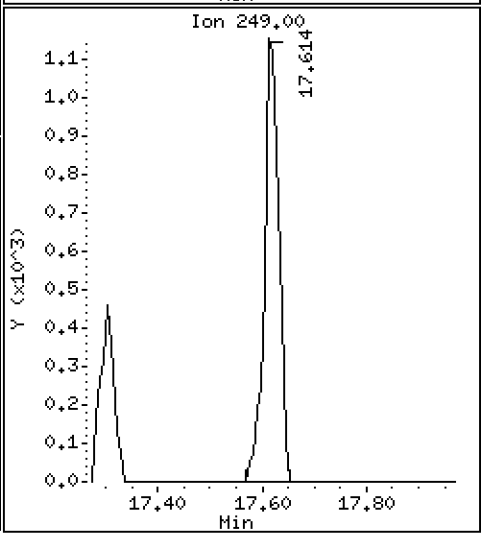


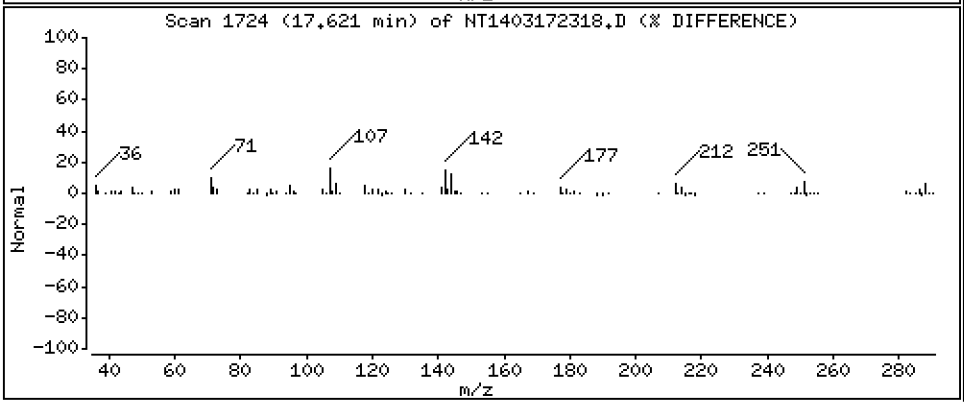












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

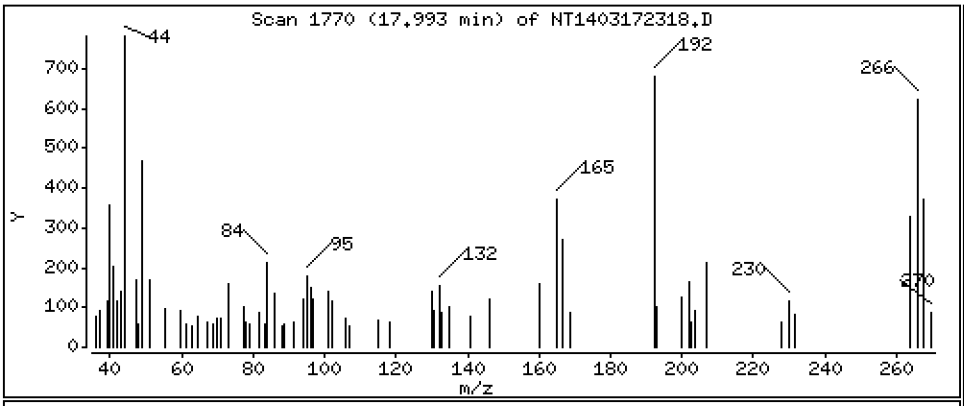
Operator: JGR

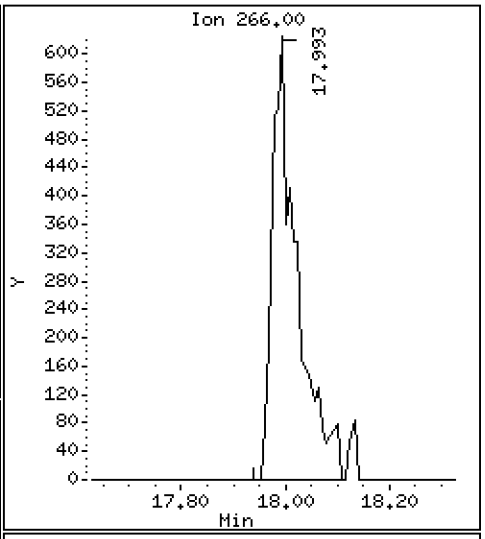
Column phase: ZB-5msi

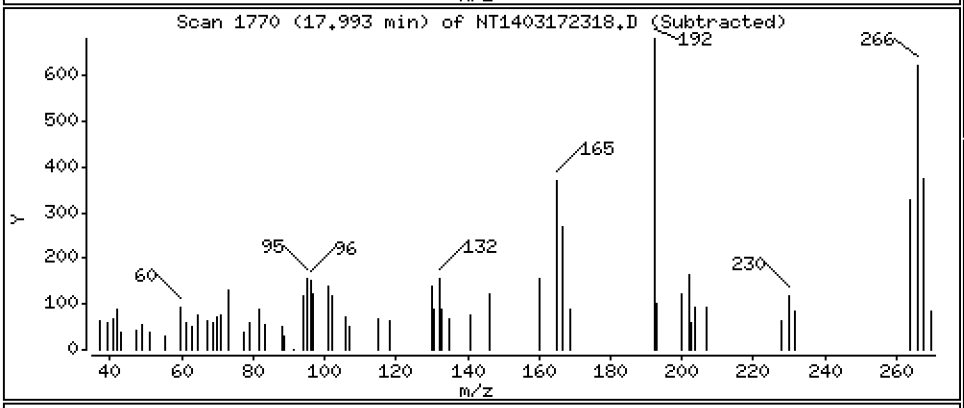
Column diameter: 0.25

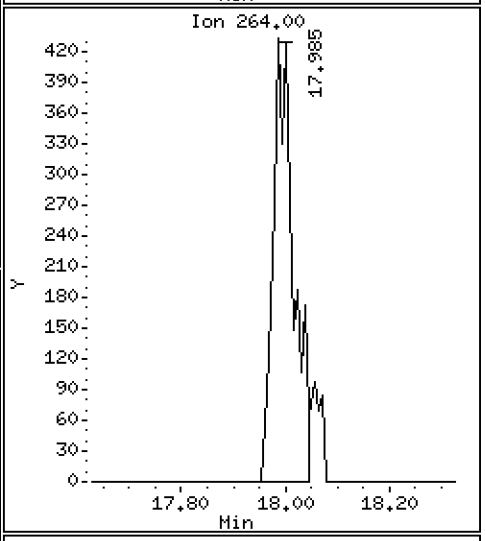
58 Pentachlorophenol

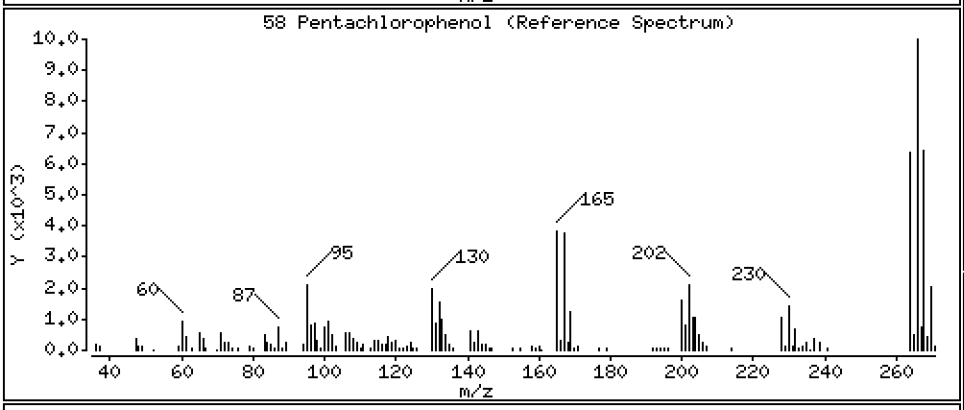
Concentration: 0.09107 ug/mL

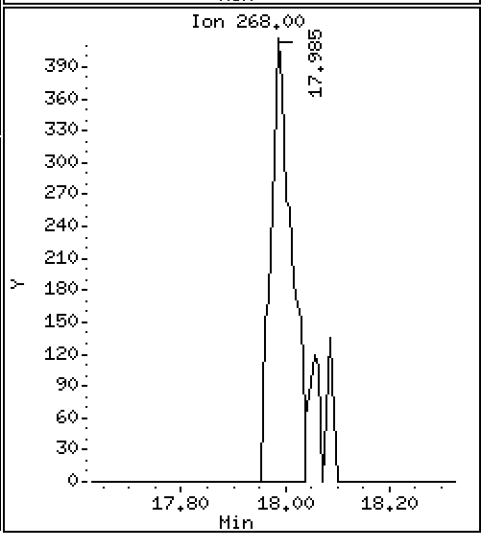


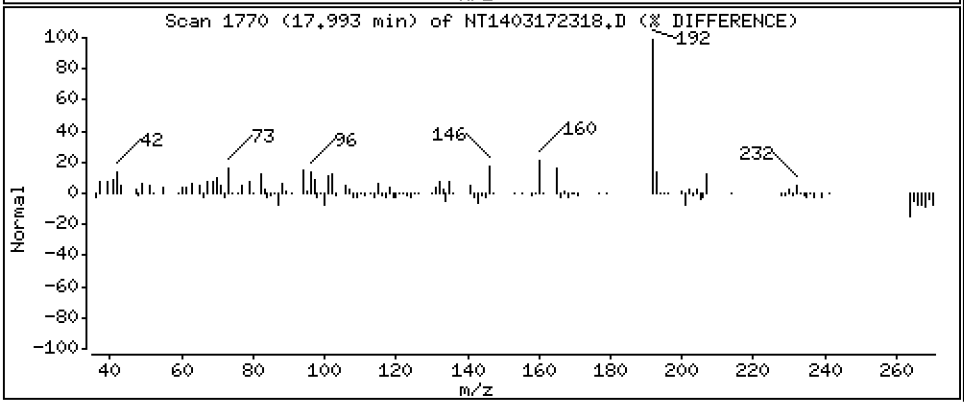












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

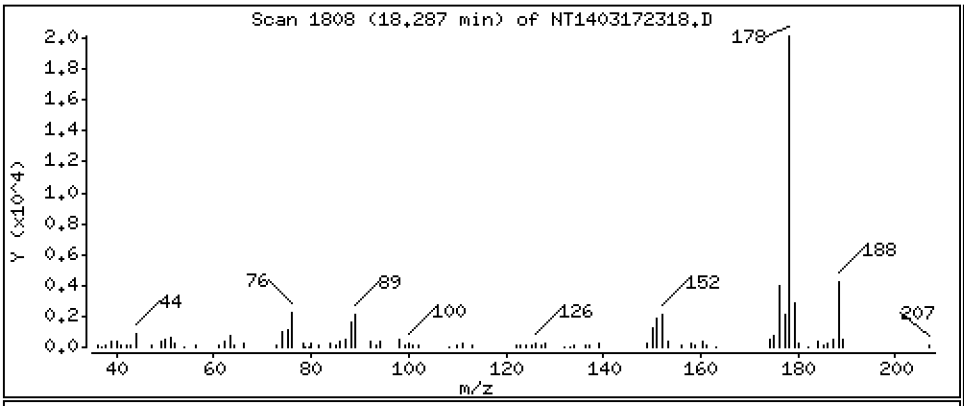
Operator: JGR

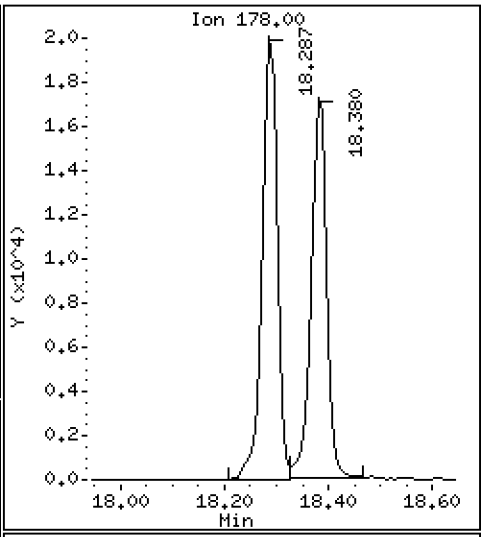
Column phase: ZB-5msi

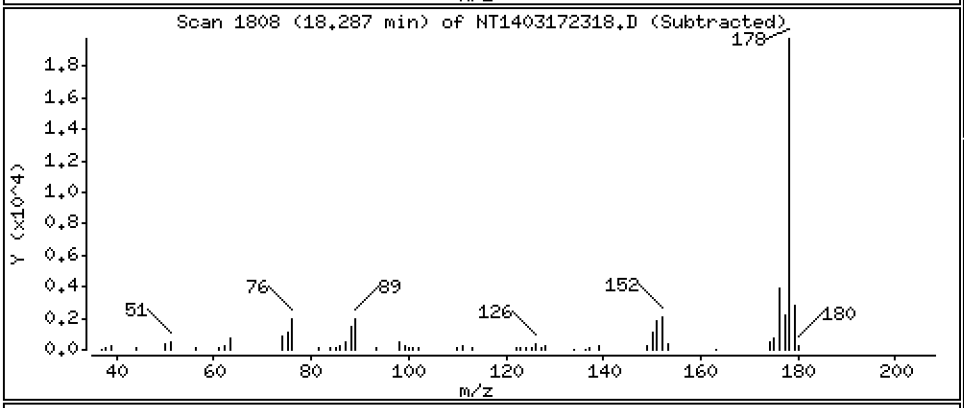
Column diameter: 0.25

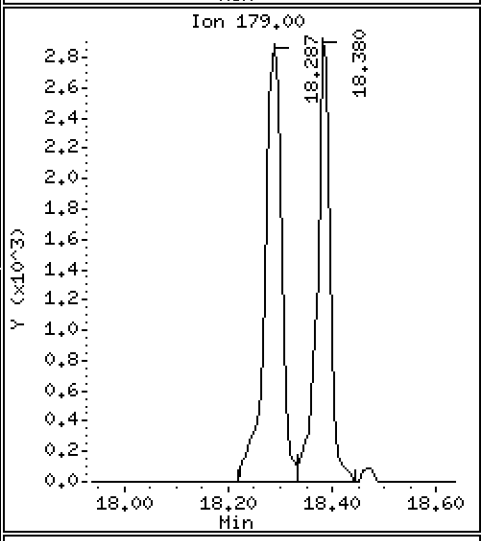
60 Phenanthrene

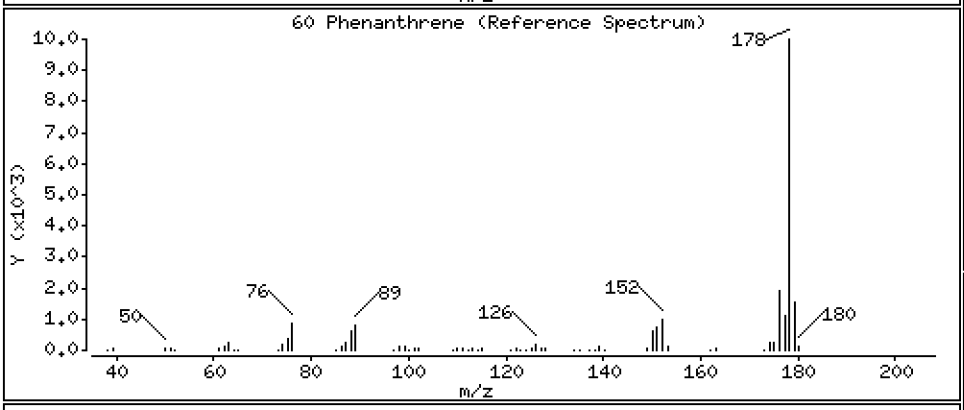
Concentration: 0.1994 ug/mL

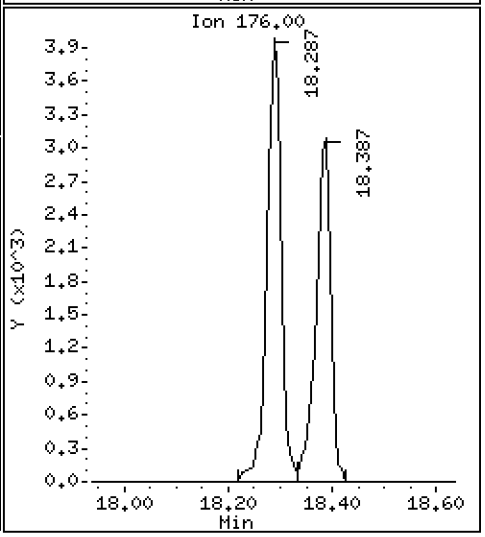


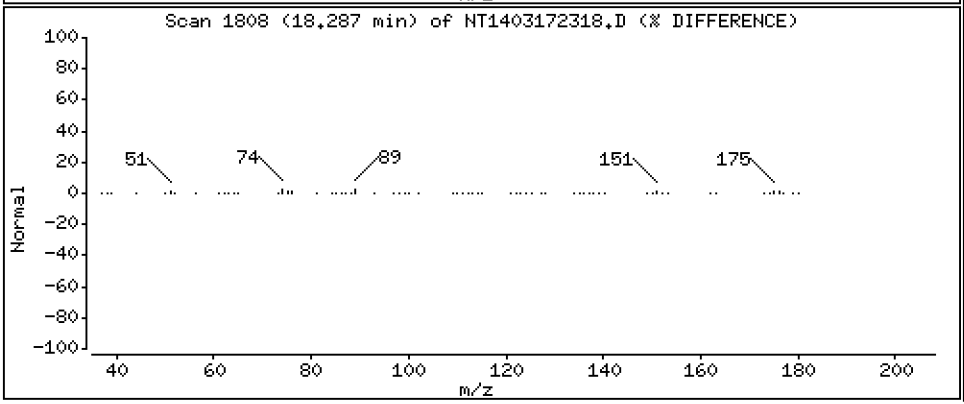












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

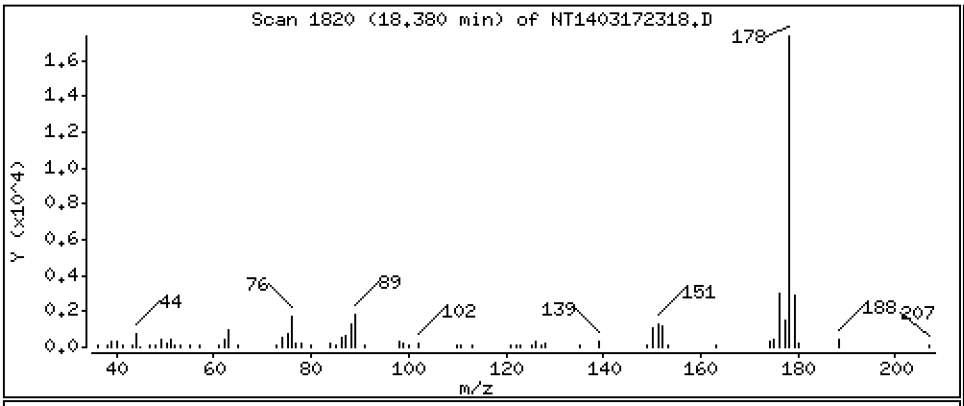
Operator: JGR

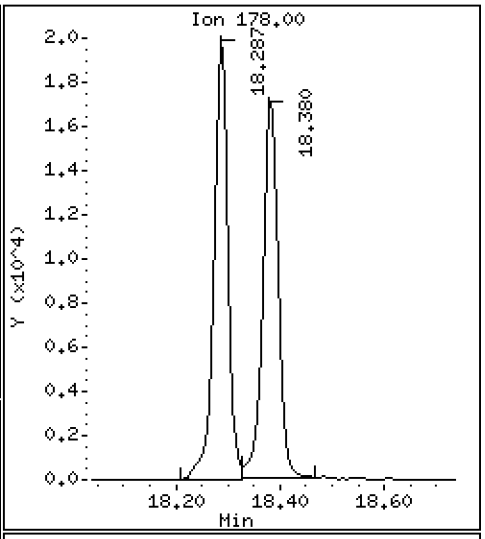
Column phase: ZB-5msi

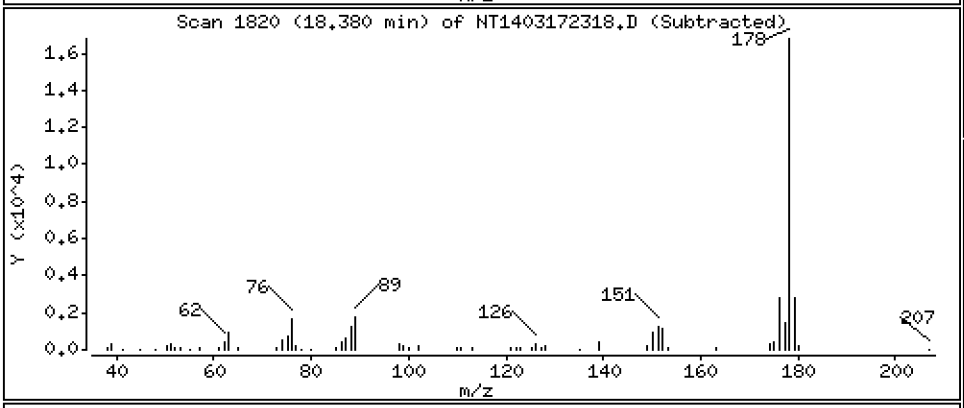
Column diameter: 0.25

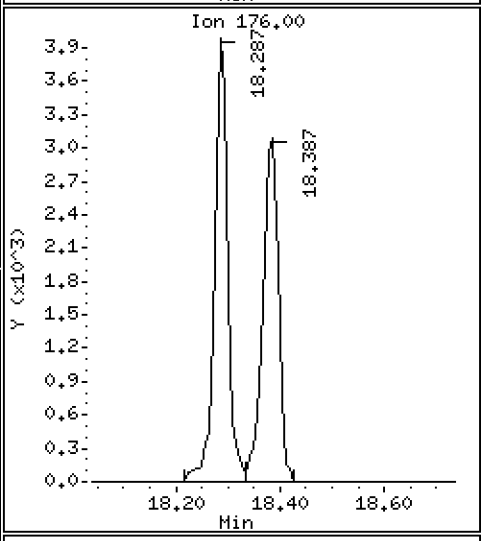
61 Anthracene

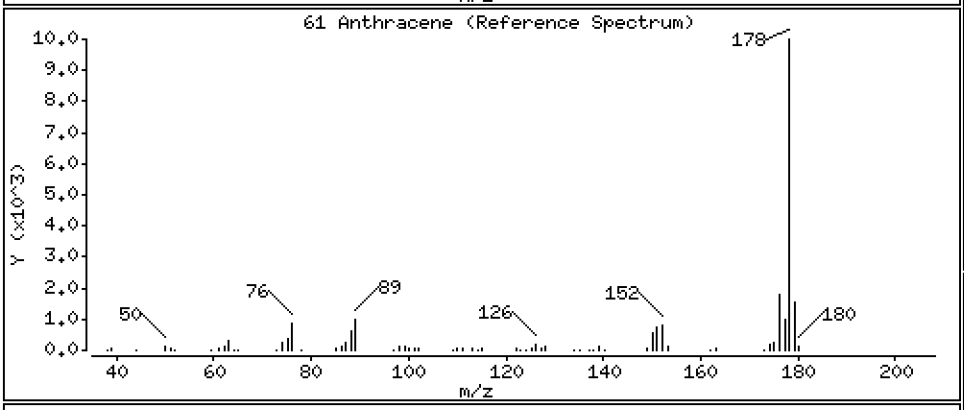
Concentration: 0.1833 ug/mL

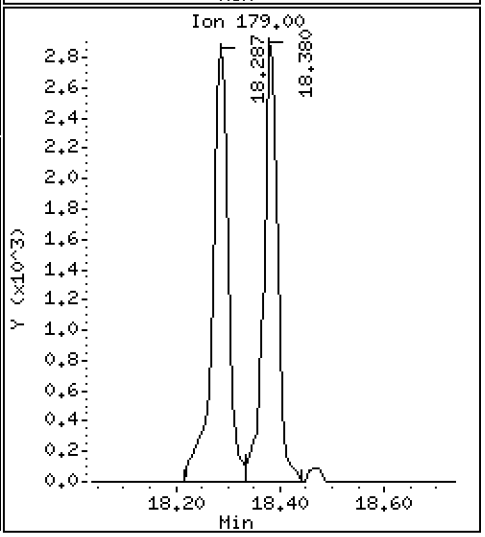


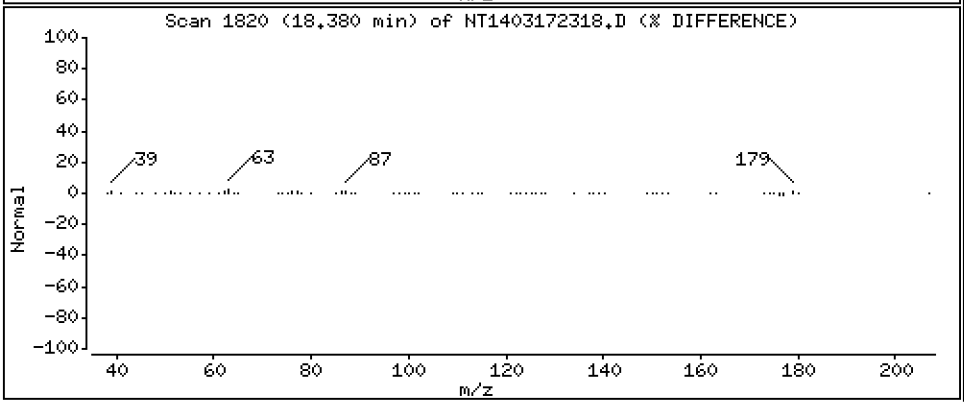












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

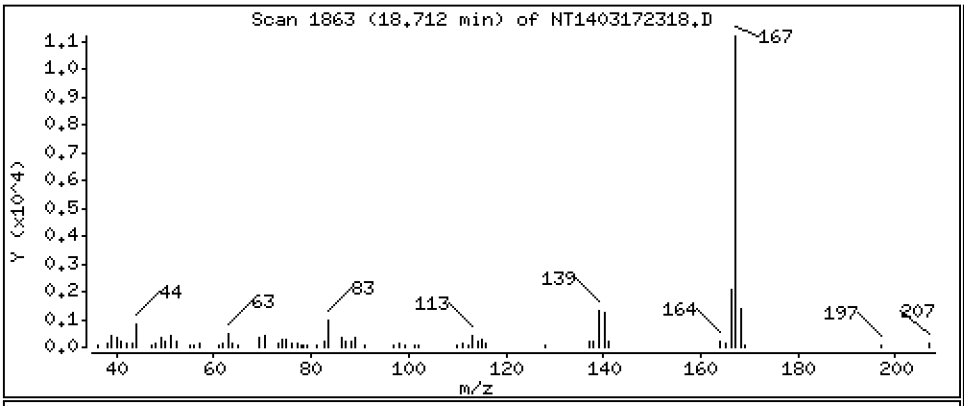
Operator: JGR

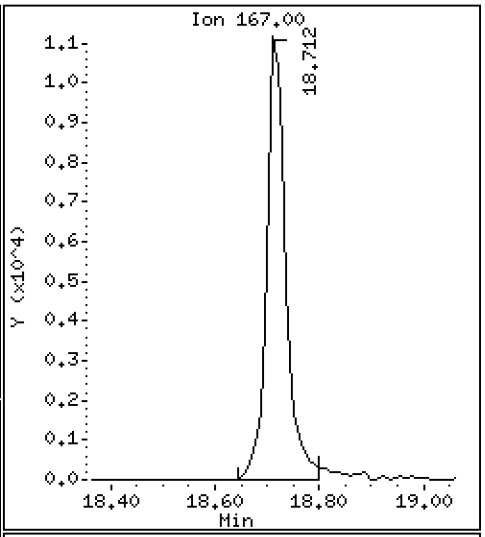
Column phase: ZB-5msi

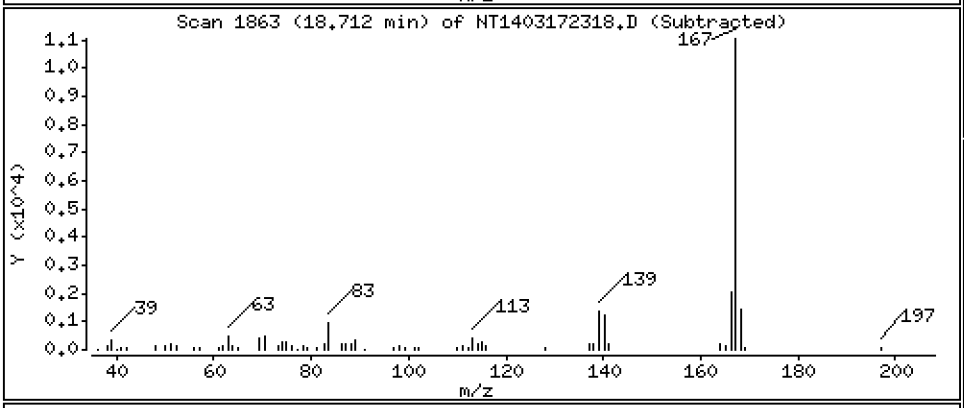
Column diameter: 0.25

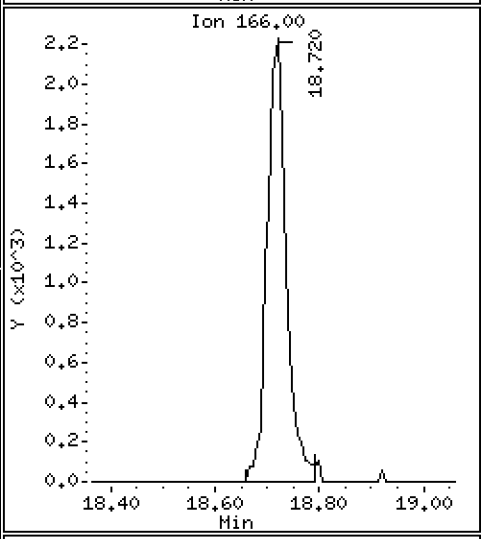
62 Carbazole

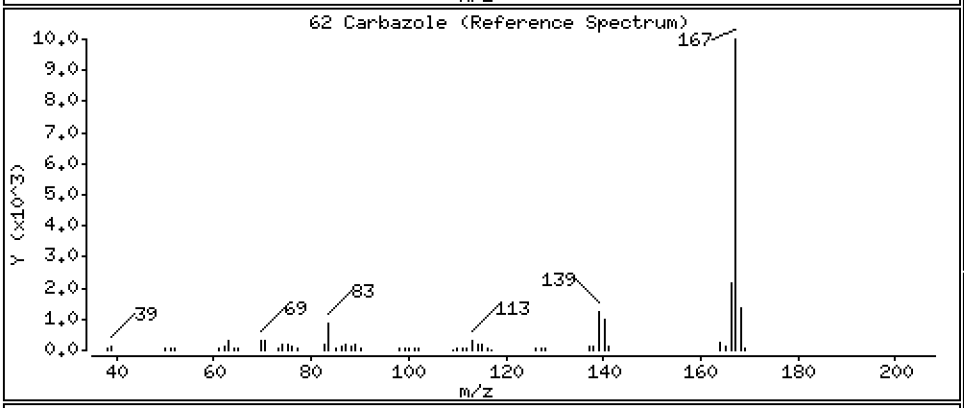
Concentration: 0.1654 ug/mL

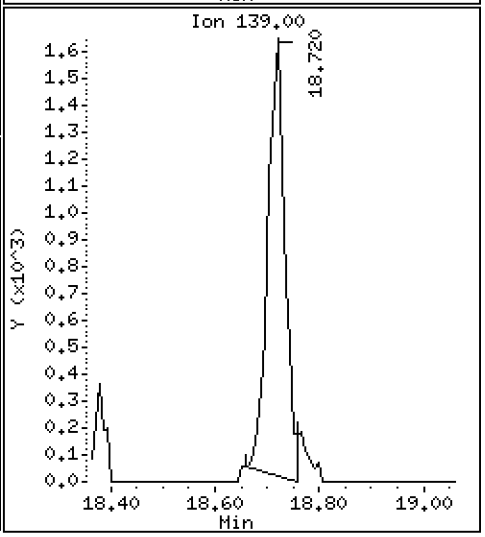


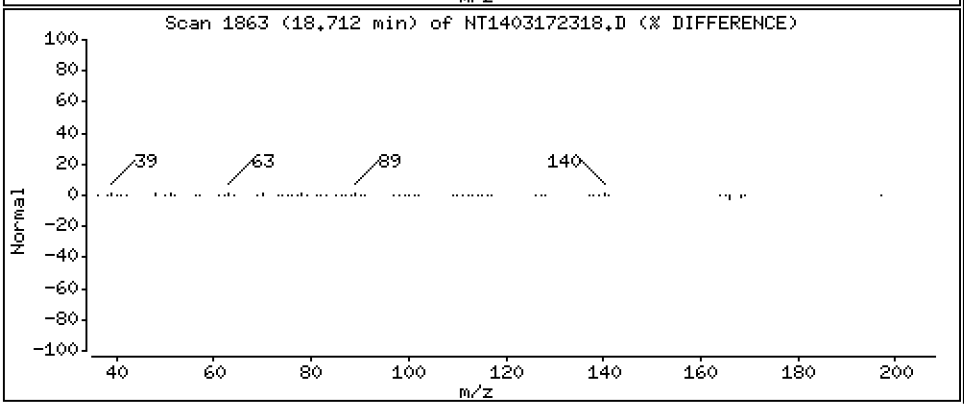












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

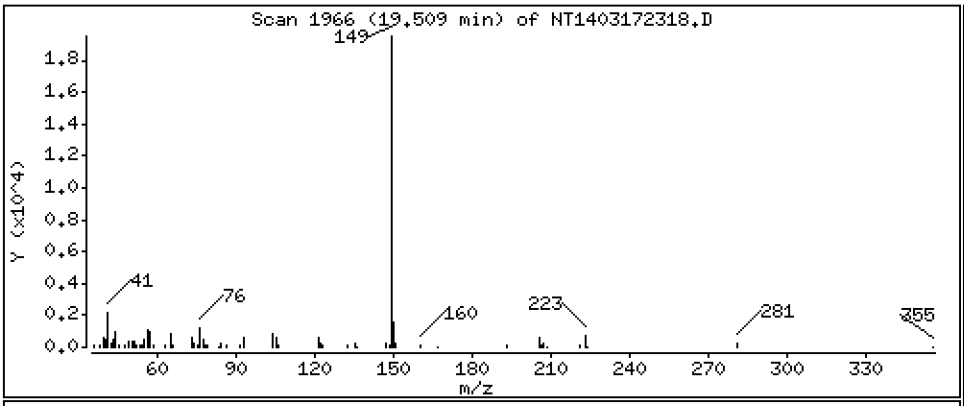
Operator: JGR

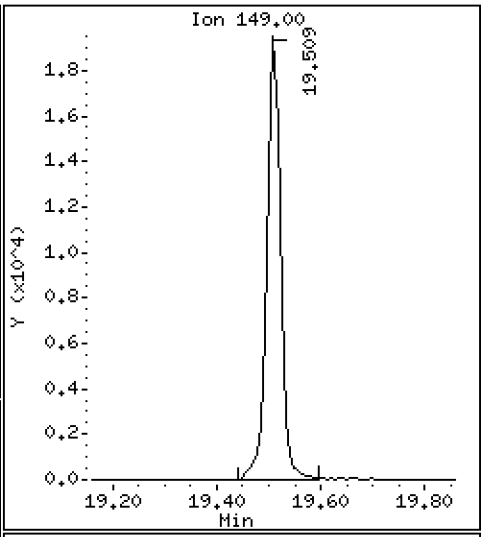
Column phase: ZB-5msi

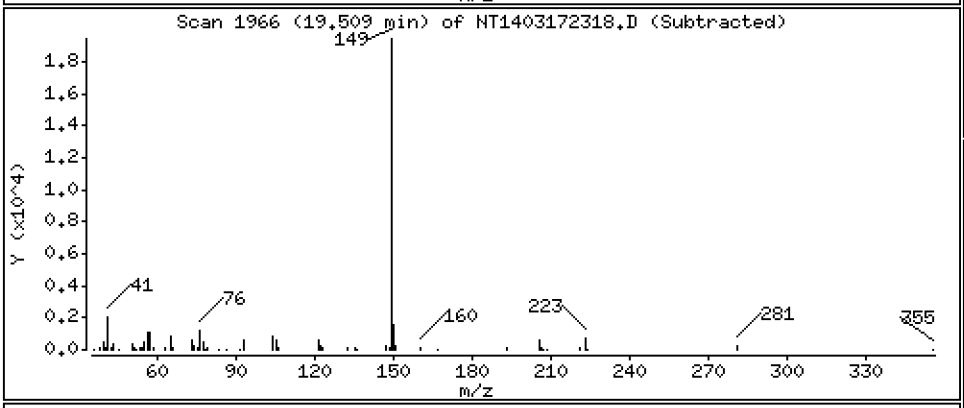
Column diameter: 0.25

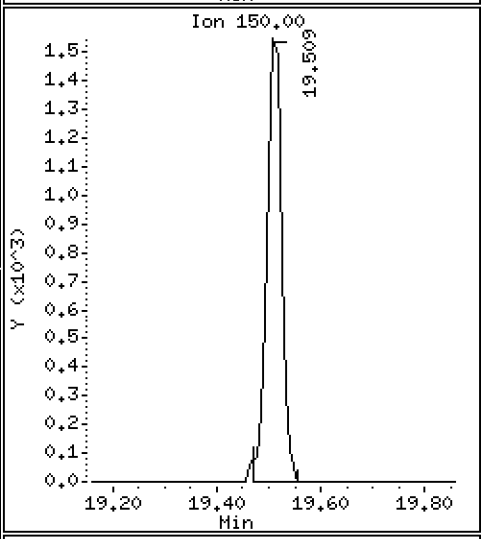
63 Di-n-butylphthalate

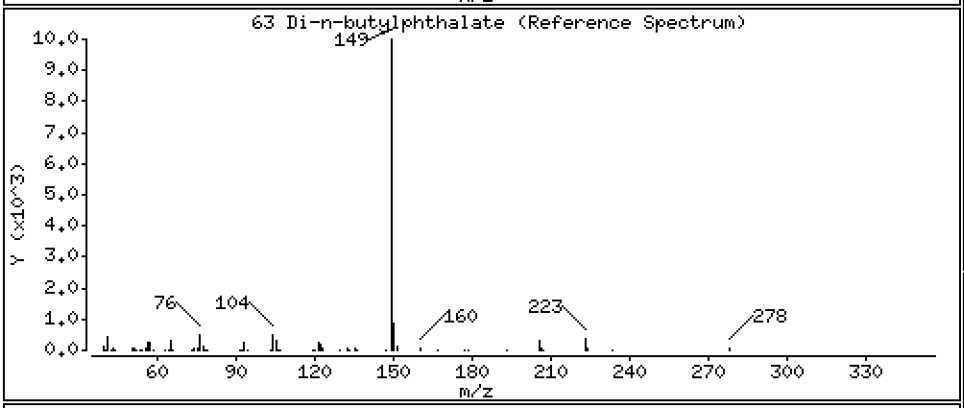
Concentration: 0.1620 ug/mL

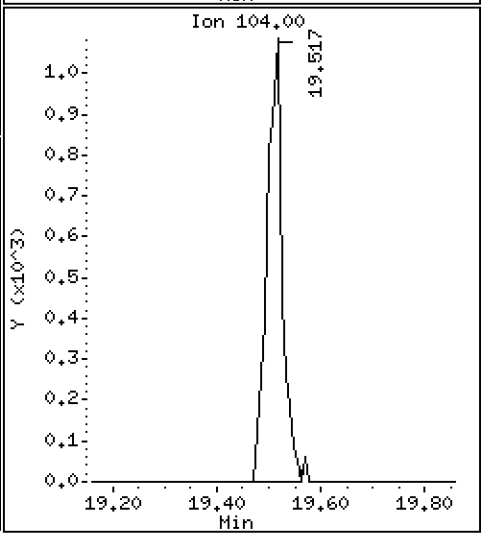


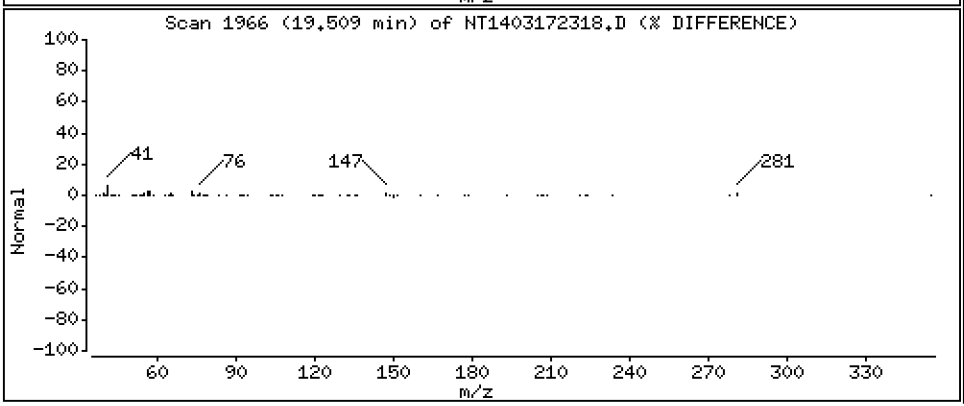












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

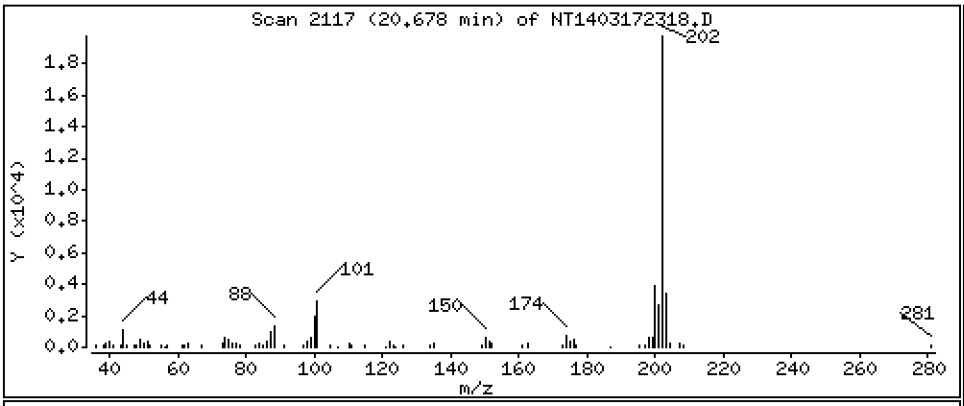
Operator: JGR

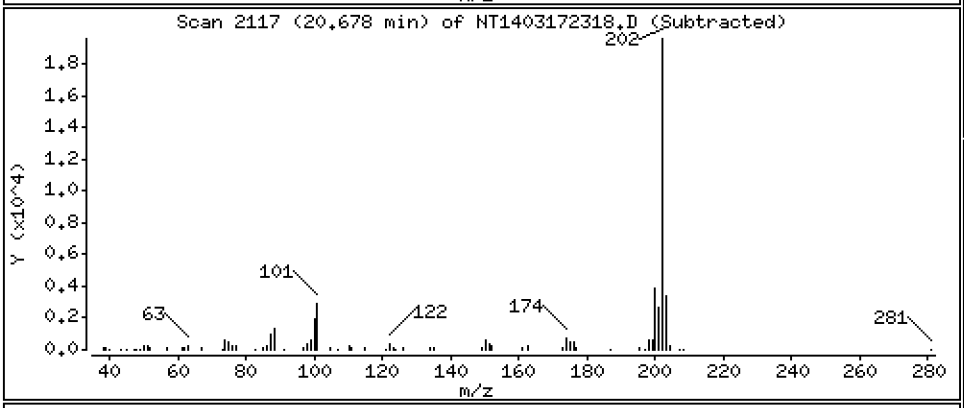
Column phase: ZB-5msi

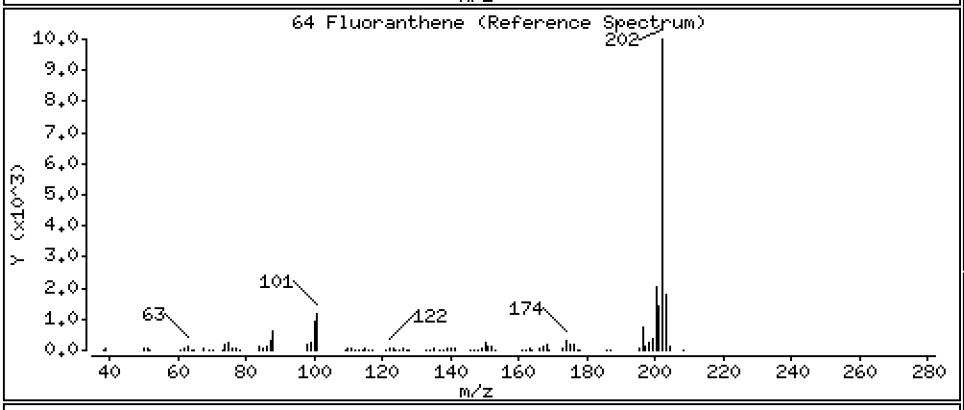
Column diameter: 0.25

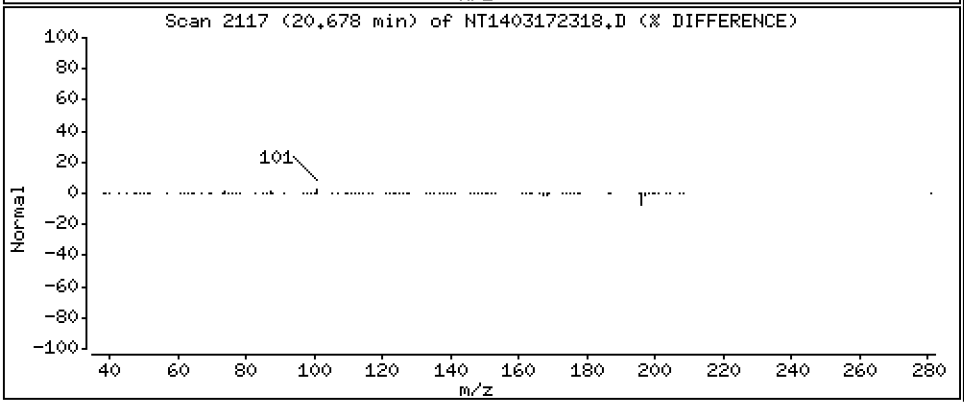
64 Fluoranthene

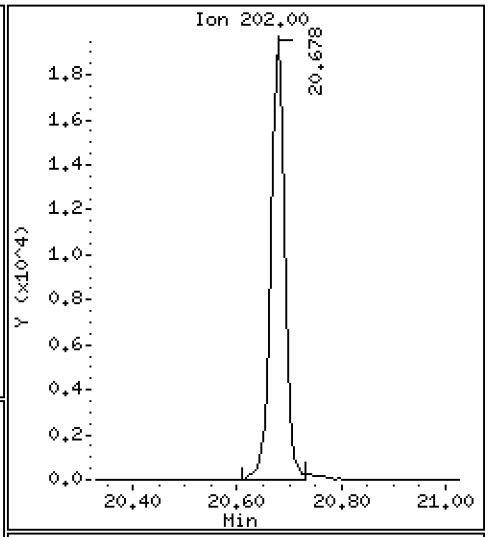
Concentration: 0.2242 ug/mL

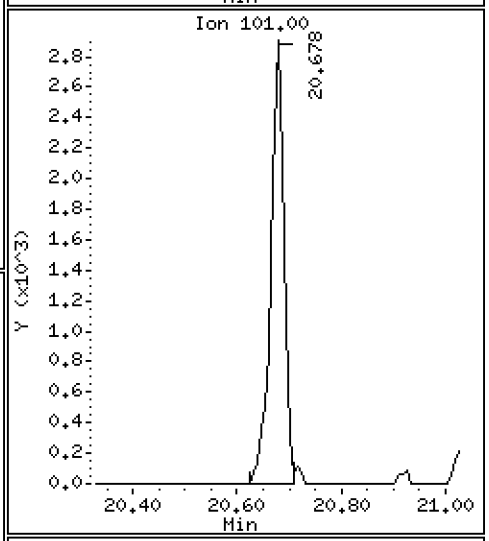


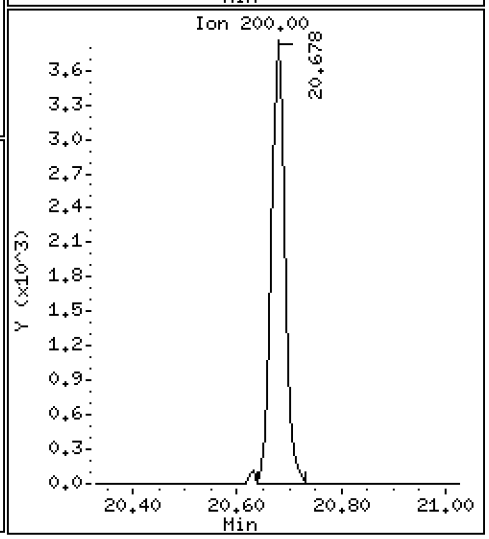












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

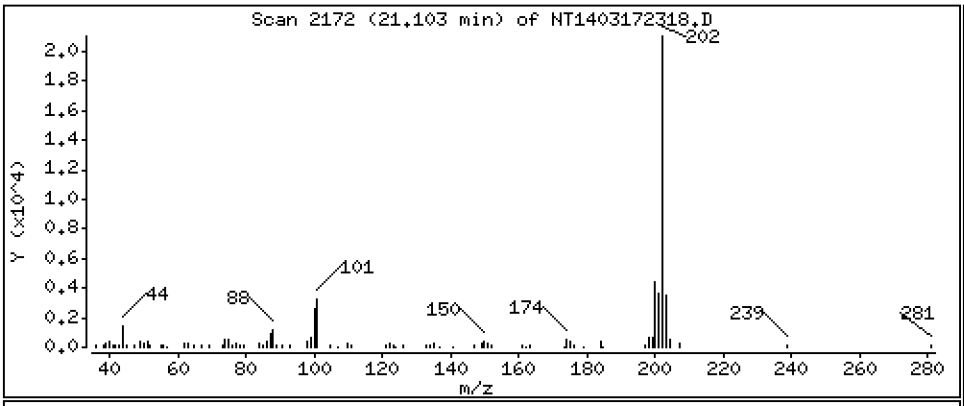
Operator: JGR

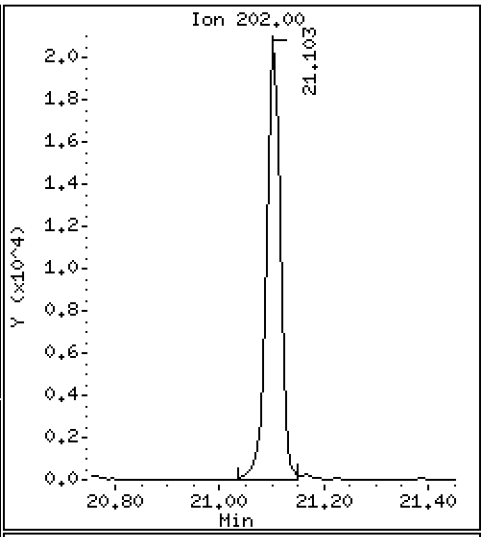
Column phase: ZB-5msi

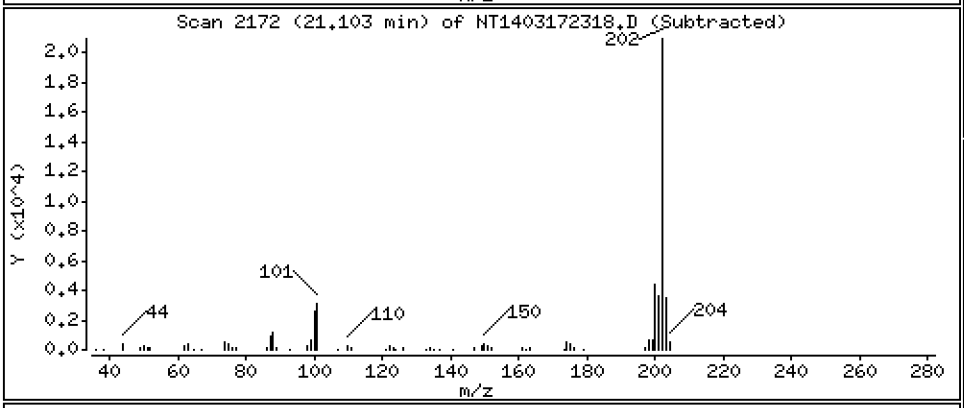
Column diameter: 0.25

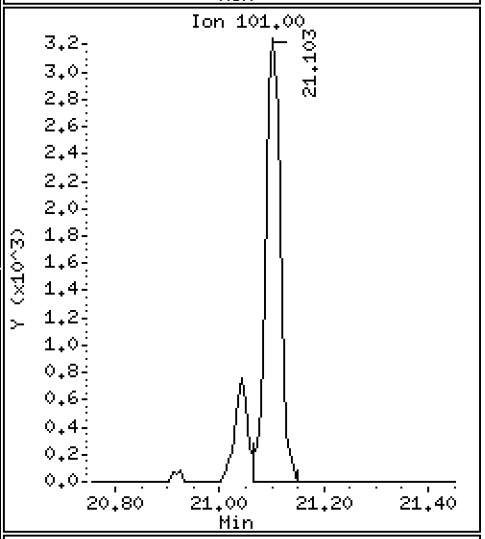
65 Pyrene

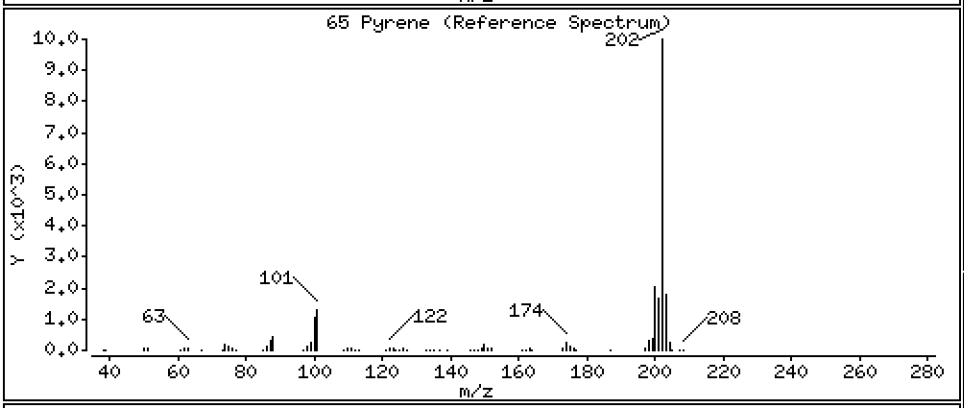
Concentration: 0.2306 ug/mL

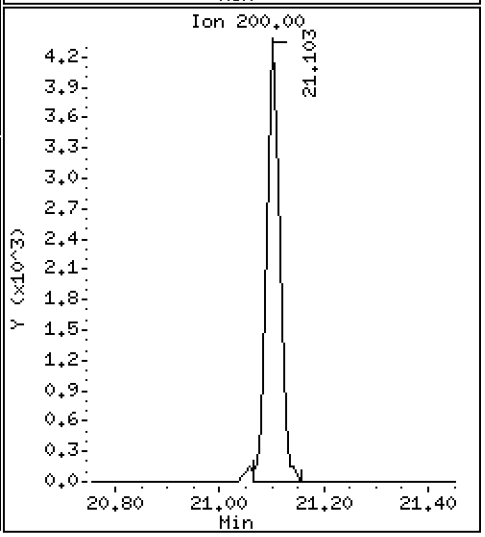


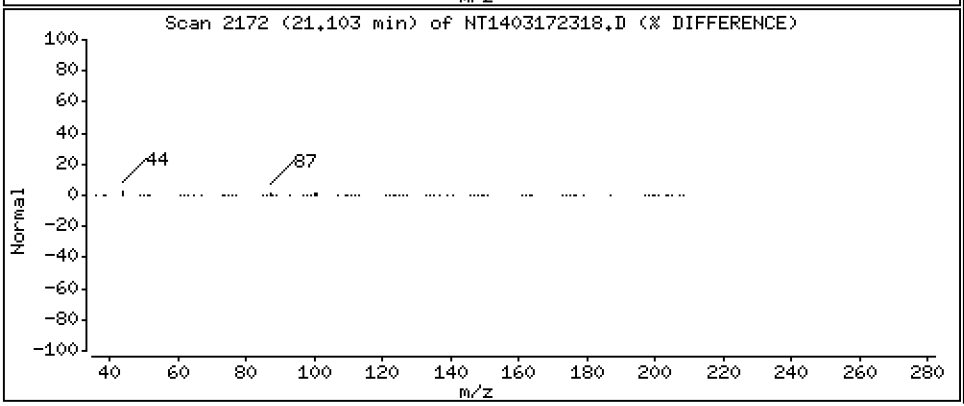












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

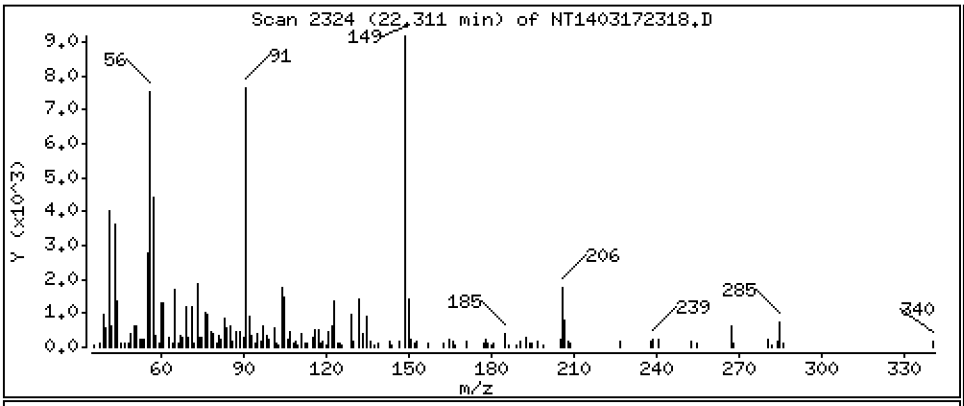
Operator: JGR

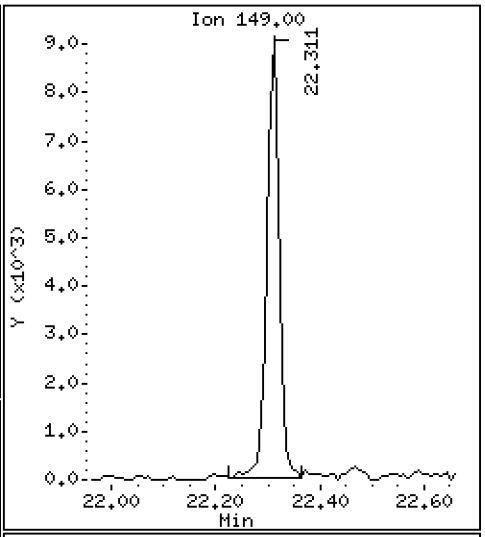
Column phase: ZB-5msi

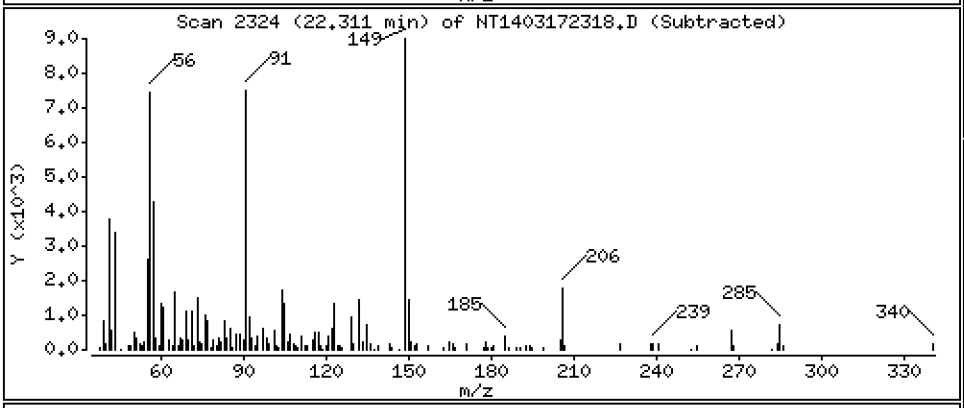
Column diameter: 0.25

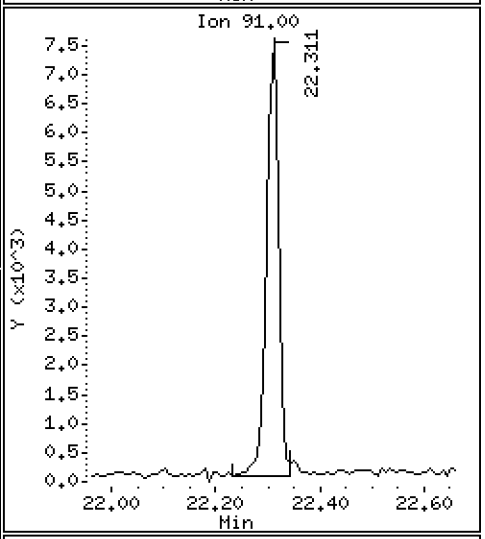
67 Butylbenzylphthalate

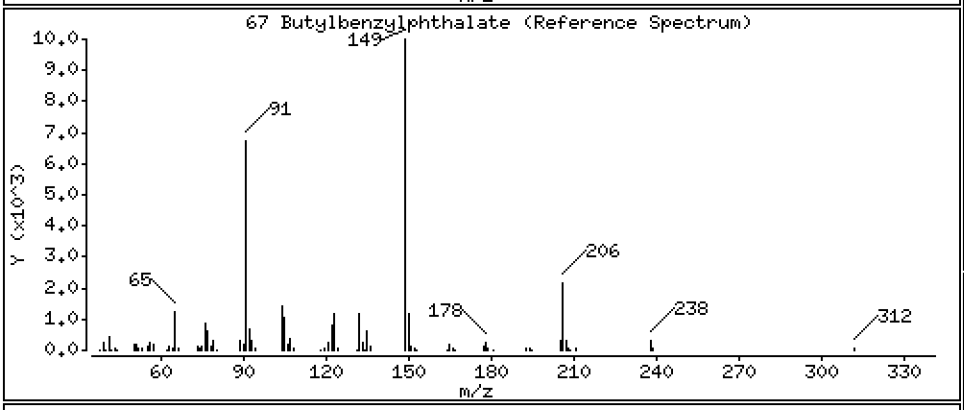
Concentration: 0.2018 ug/mL

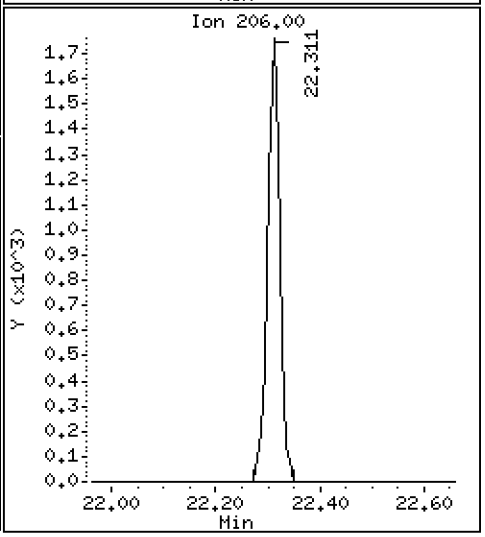


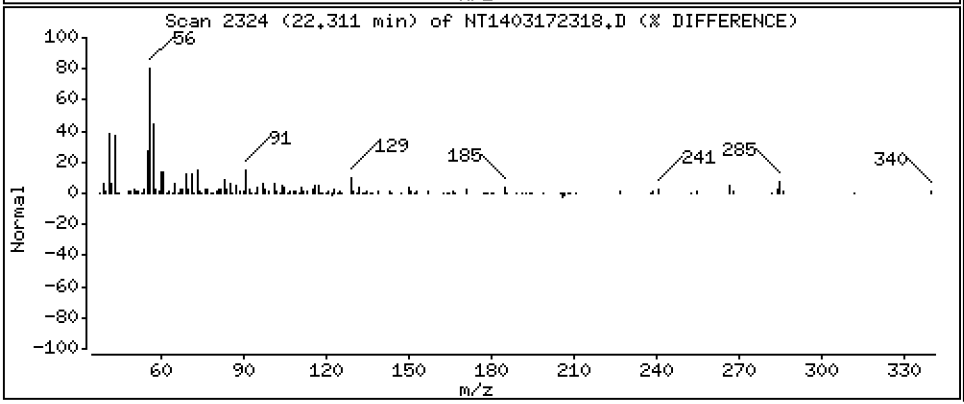












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

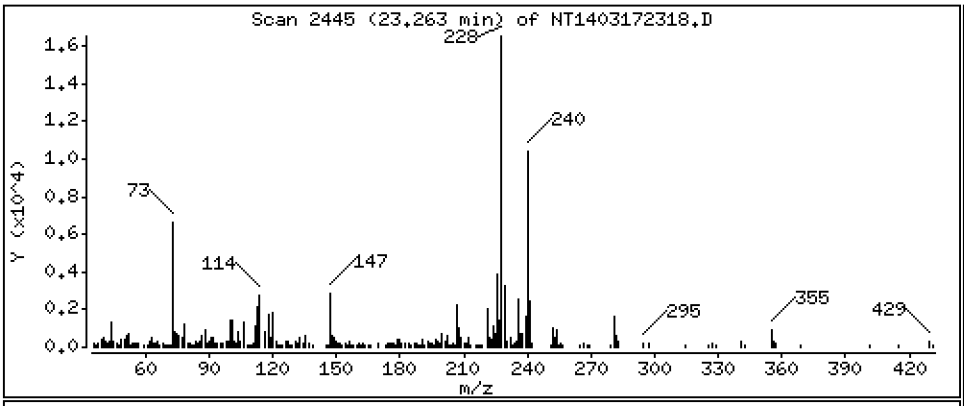
Operator: JGR

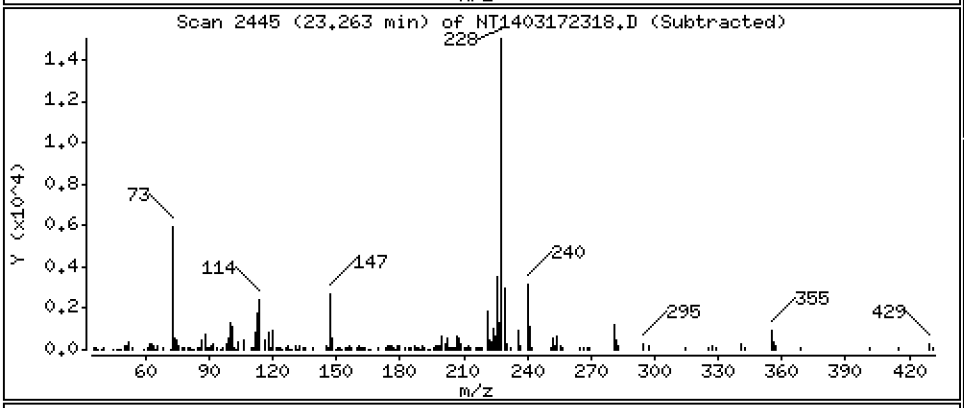
Column phase: ZB-5msi

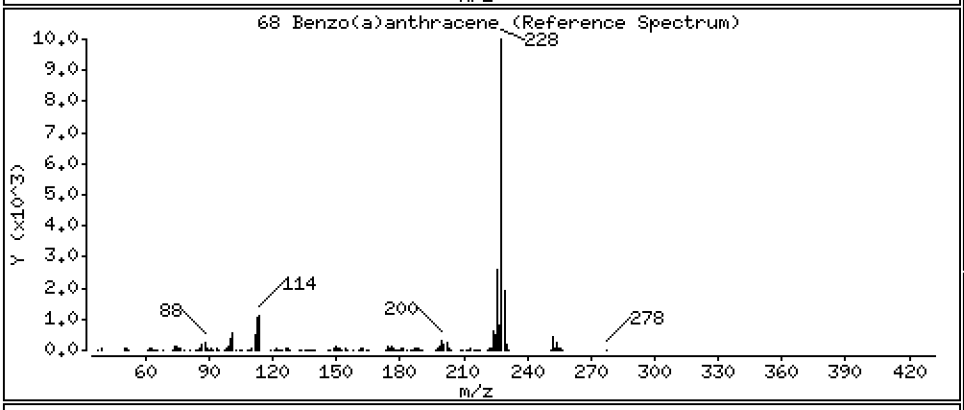
Column diameter: 0.25

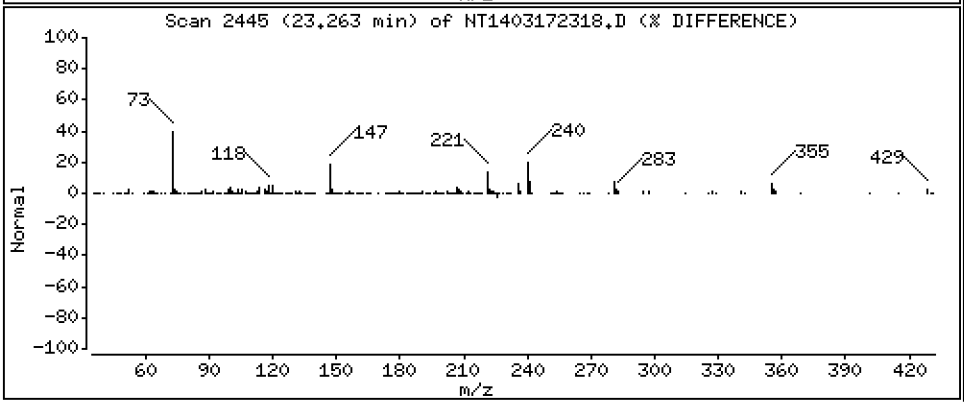
68 Benzo(a)anthracene

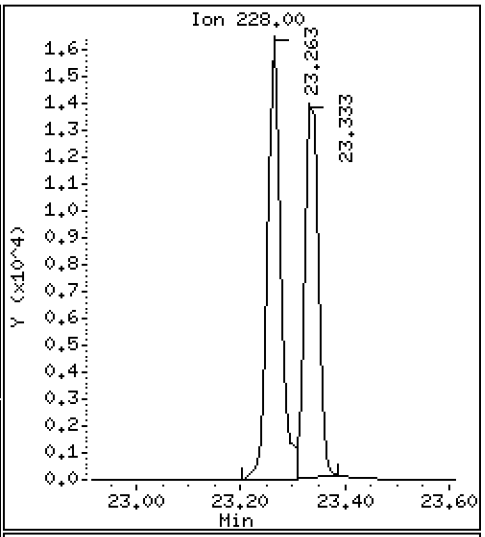
Concentration: 0.1986 ug/mL

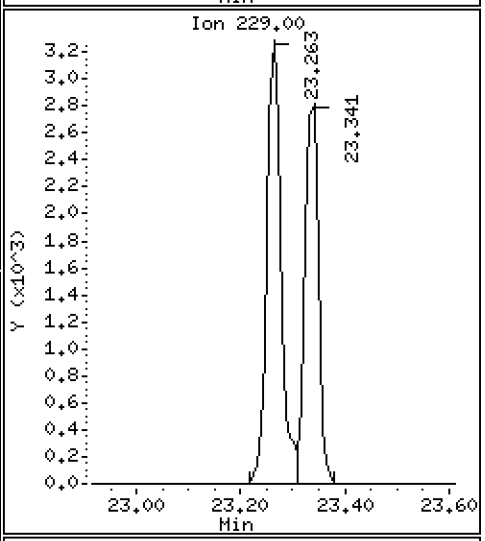


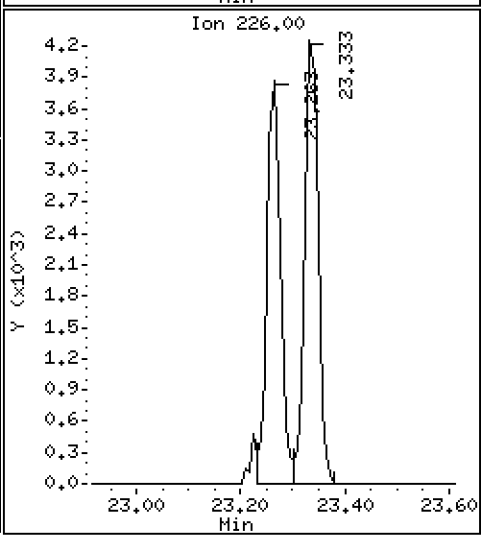












Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172318.D

Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

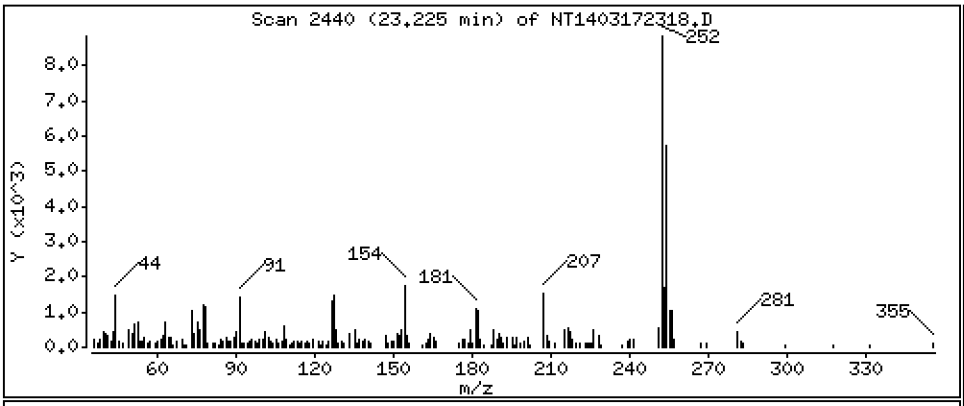
Operator: JGR

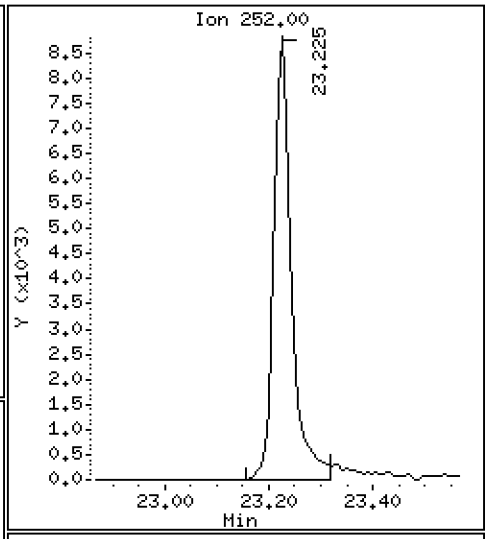
Column phase: ZB-5msi

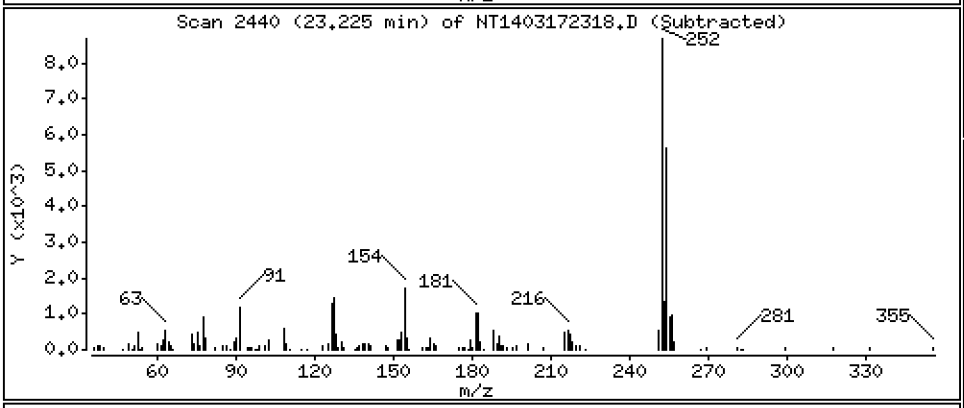
Column diameter: 0.25

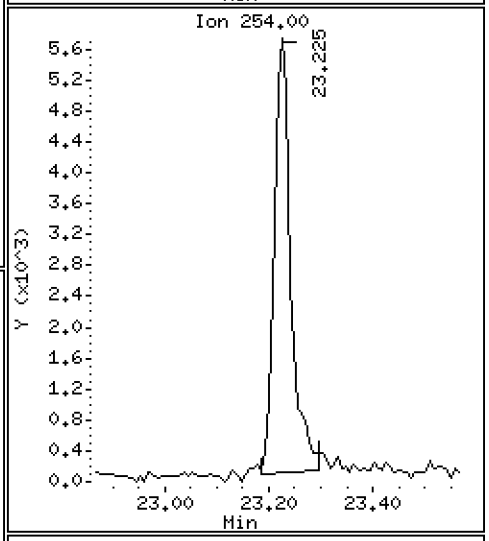
70 3,3'-Dichlorobenzidine

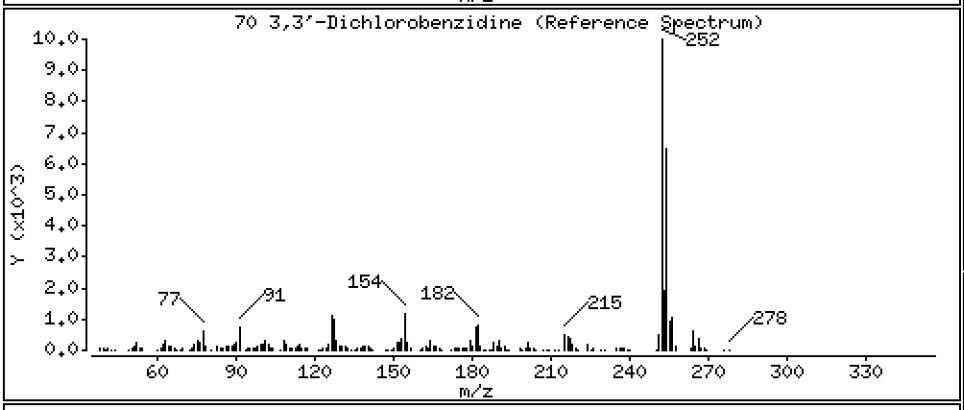
Concentration: 0.5100 ug/mL

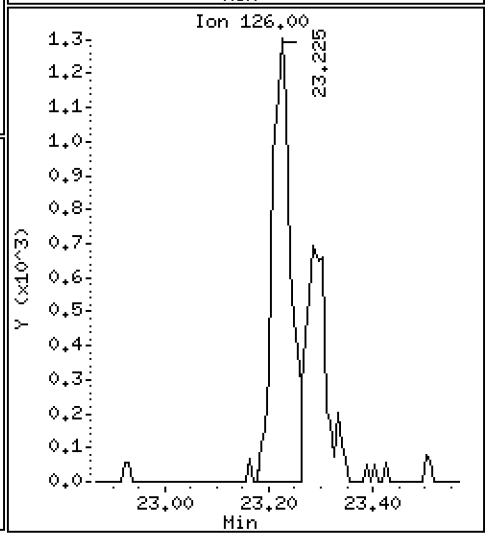


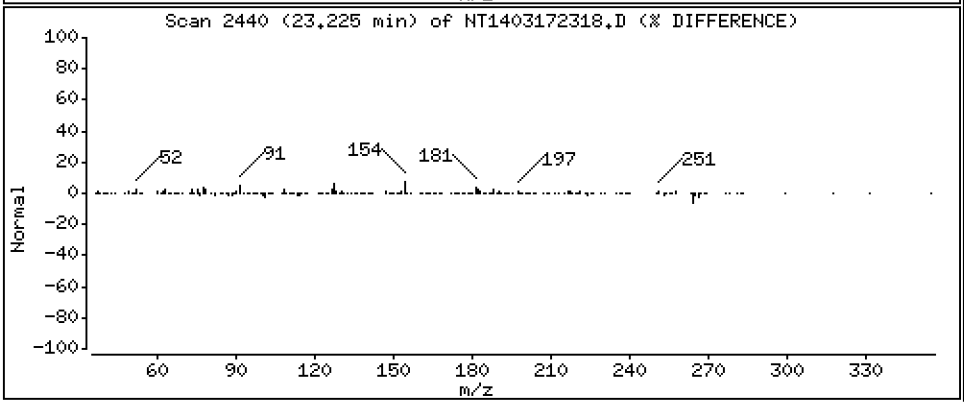












Date : 18-MAR-2023 00:43

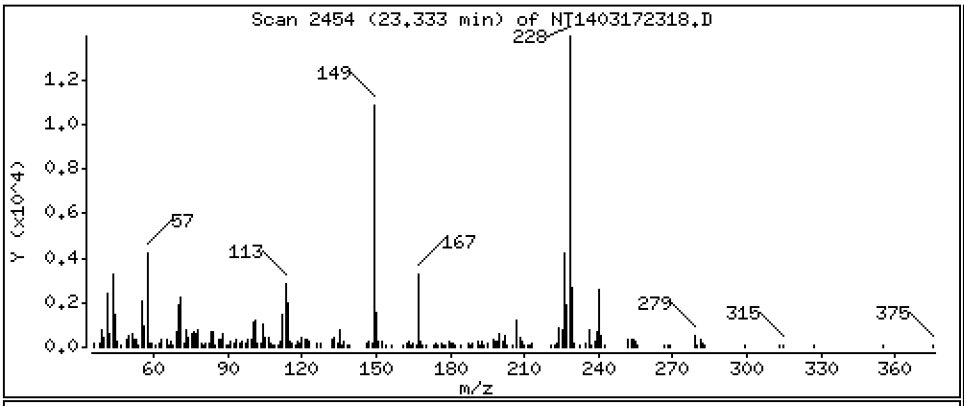
Client ID: Instrument: nt14.i

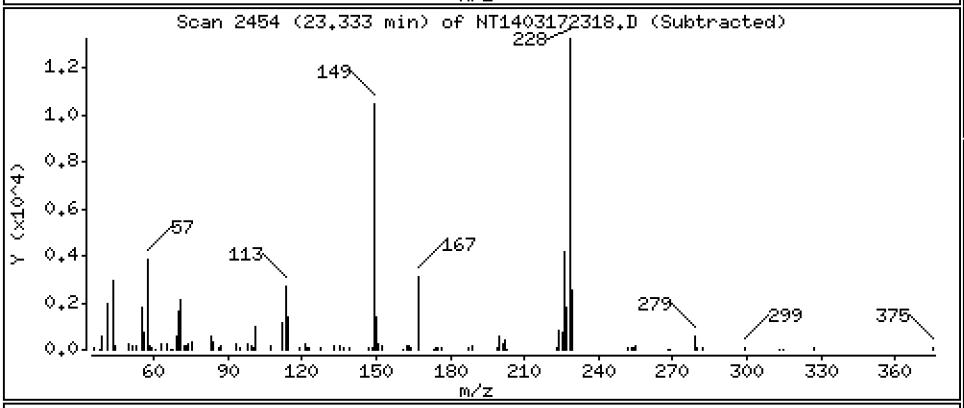
Sample Info: SLC0335-LCV2

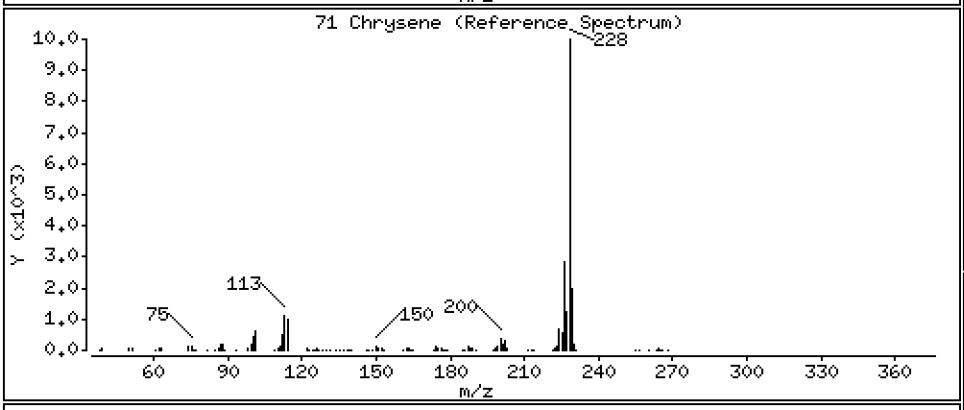
Operator: JGR

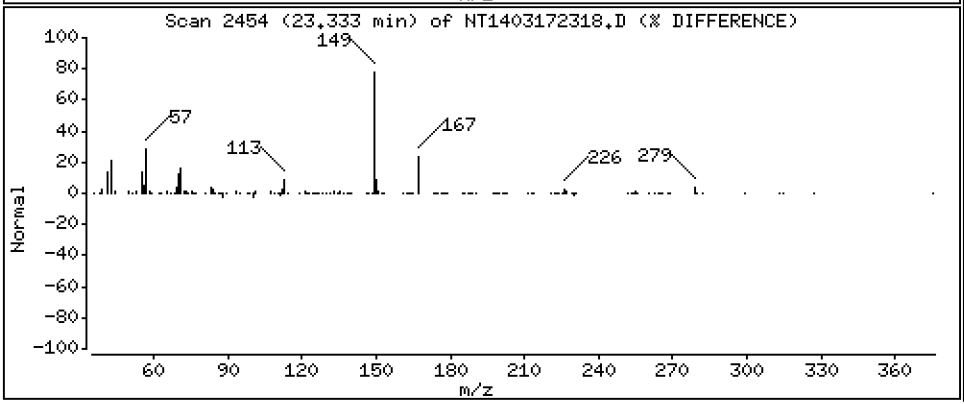
Column phase: ZB-5msi Column diameter: 0.25

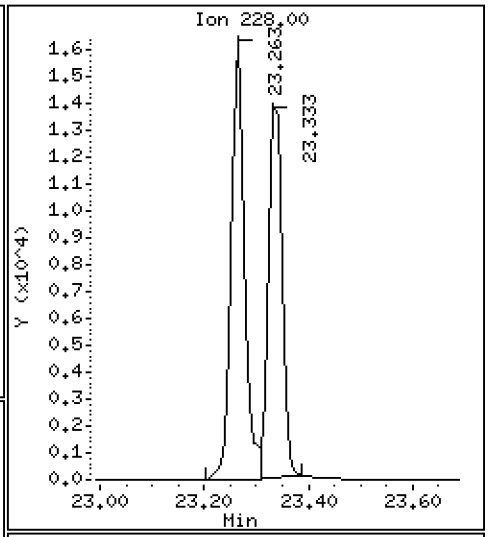
71 Chrysene Concentration: 0.1902 ug/mL

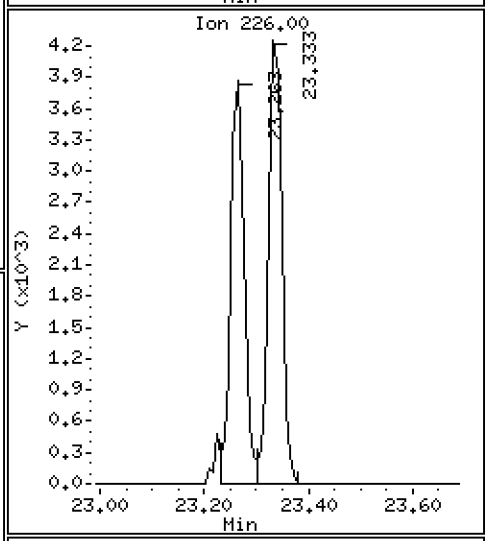


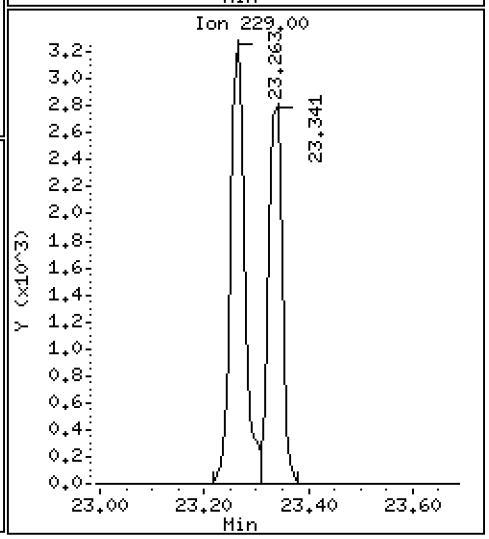












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

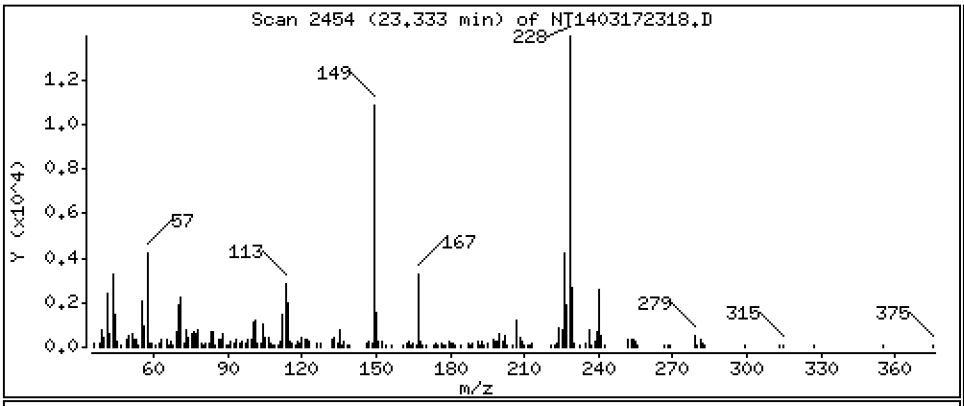
Operator: JGR

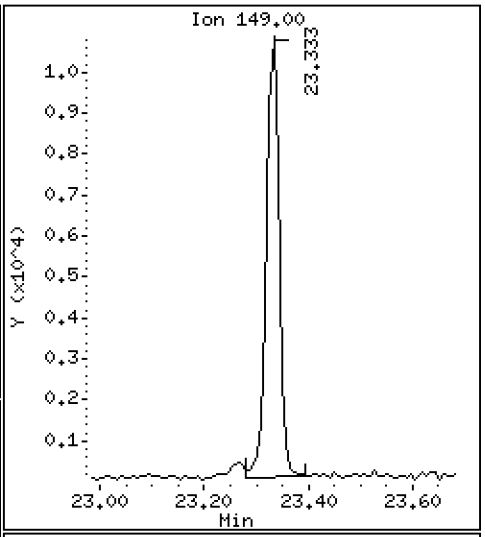
Column phase: ZB-5msi

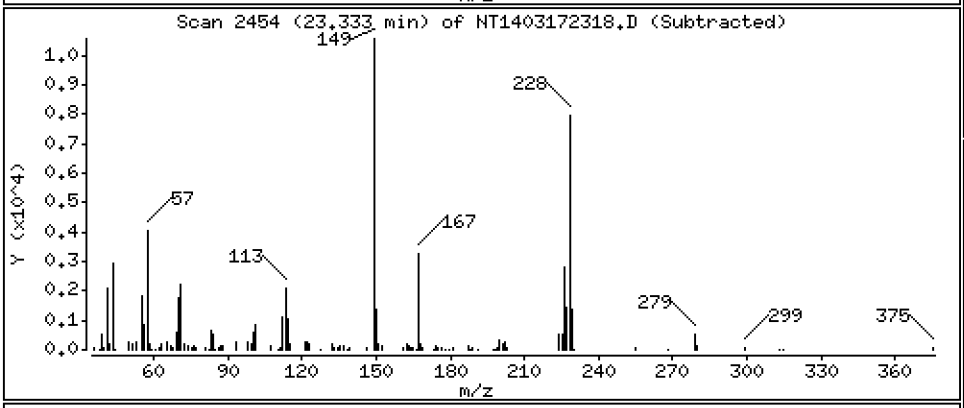
Column diameter: 0.25

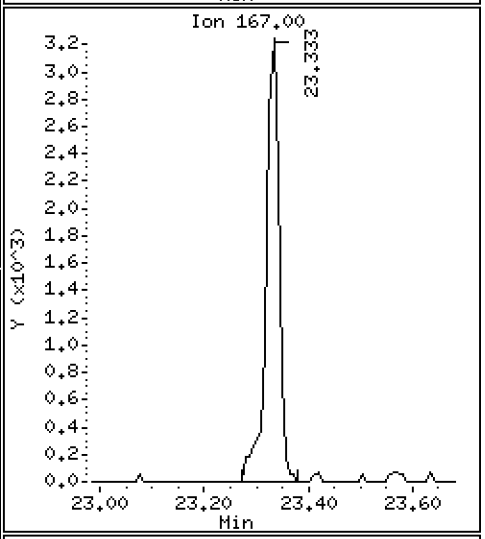
72 bis(2-Ethylhexyl)phthalate

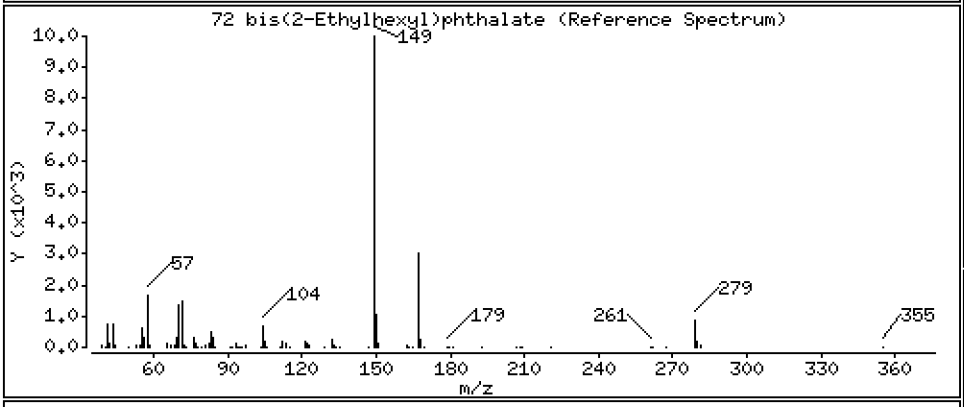
Concentration: 0.2051 ug/mL

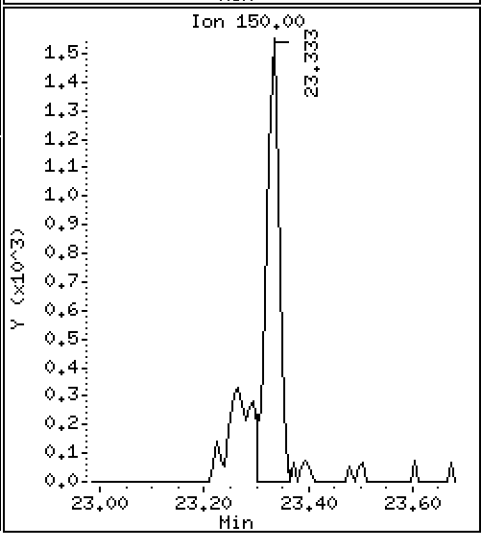


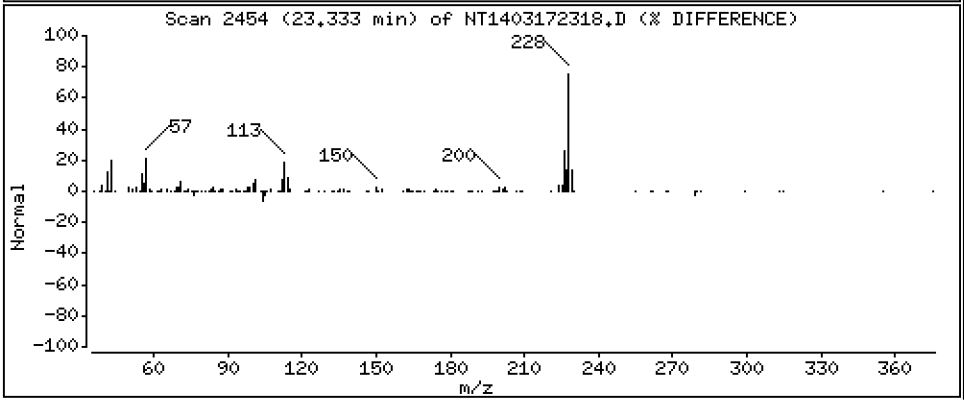












Date : 18-MAR-2023 00:43

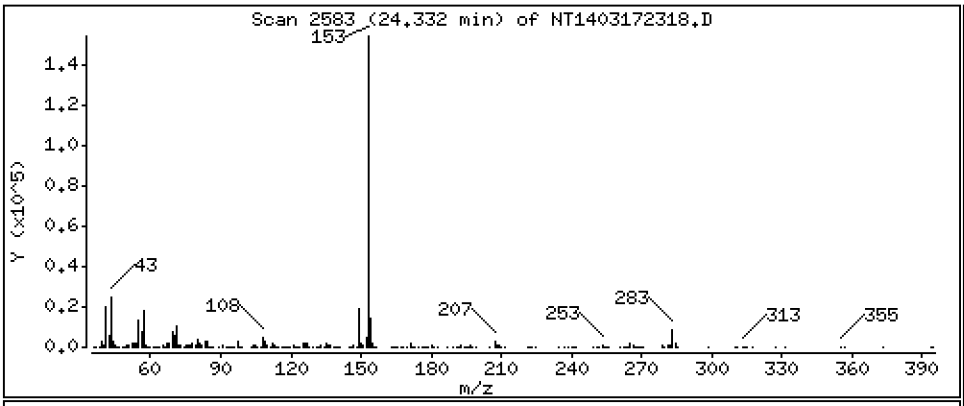
Client ID: Instrument: nt14.i

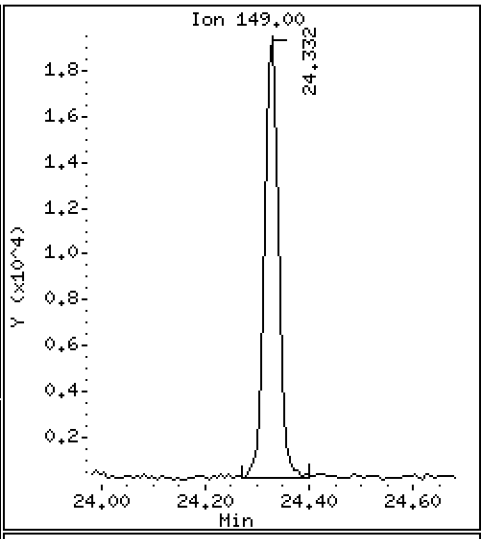
Sample Info: SLC0335-LCV2

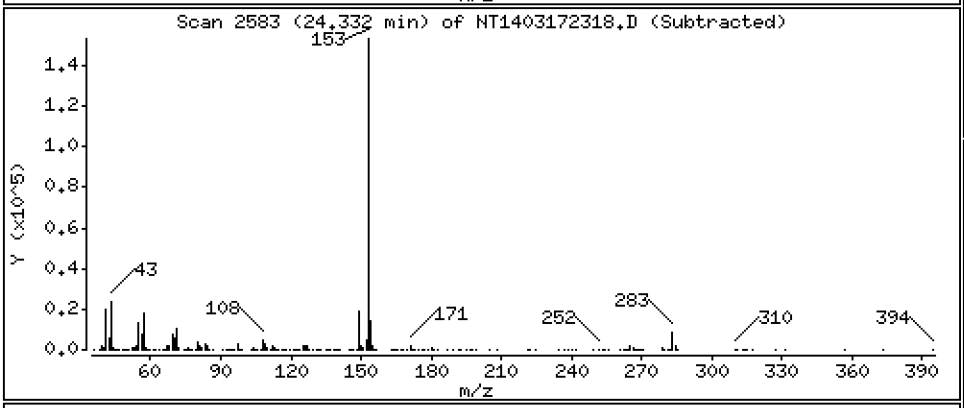
Operator: JGR

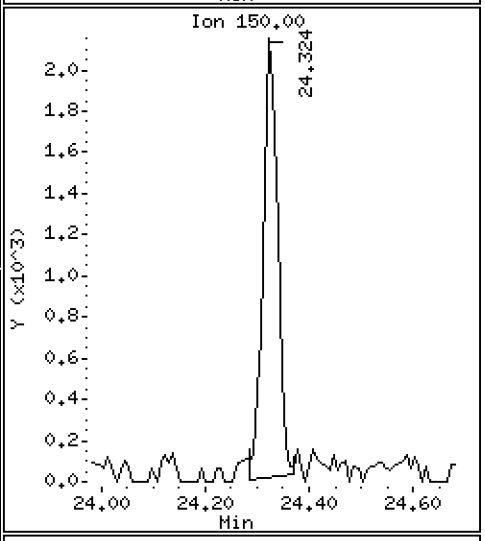
Column phase: ZB-5msi Column diameter: 0.25

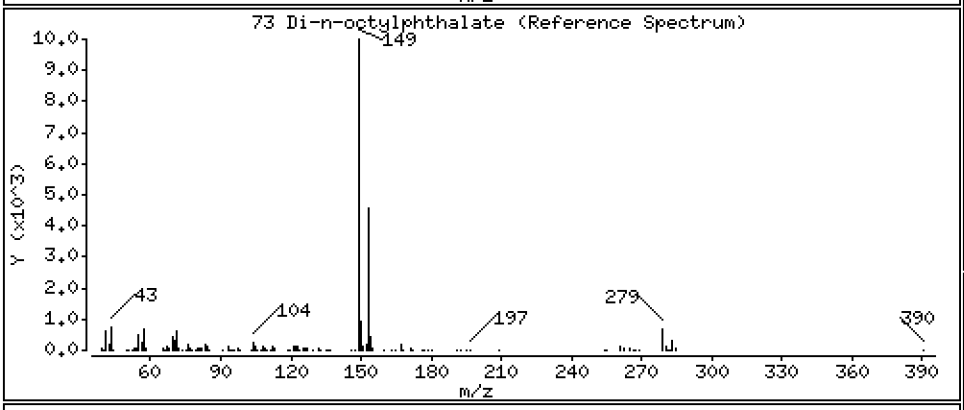
73 Di-n-octylphthalate Concentration: 0.2086 ug/mL

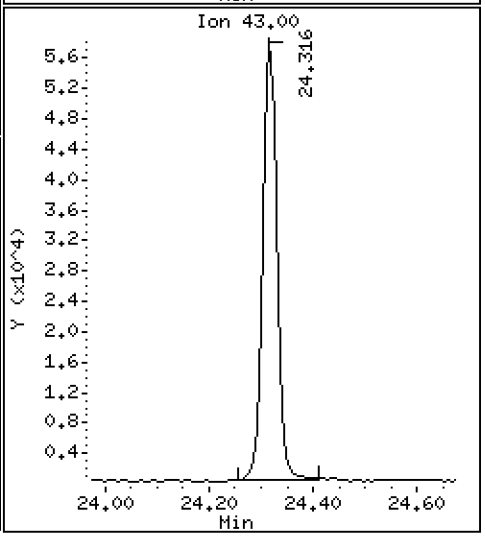


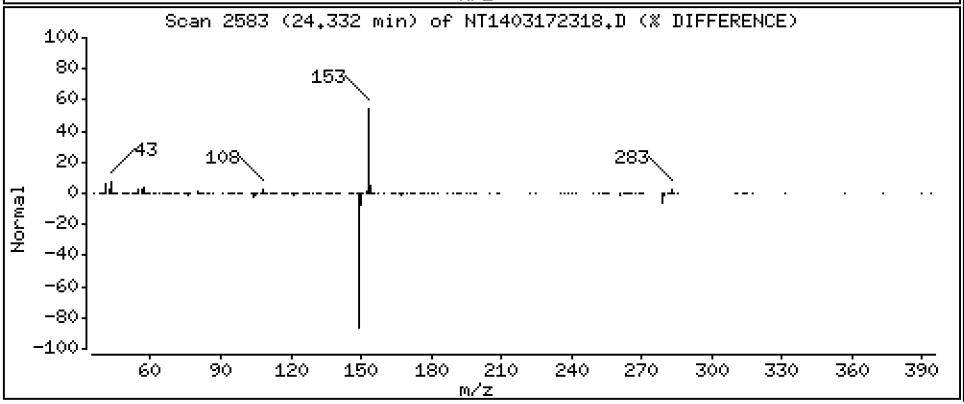












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

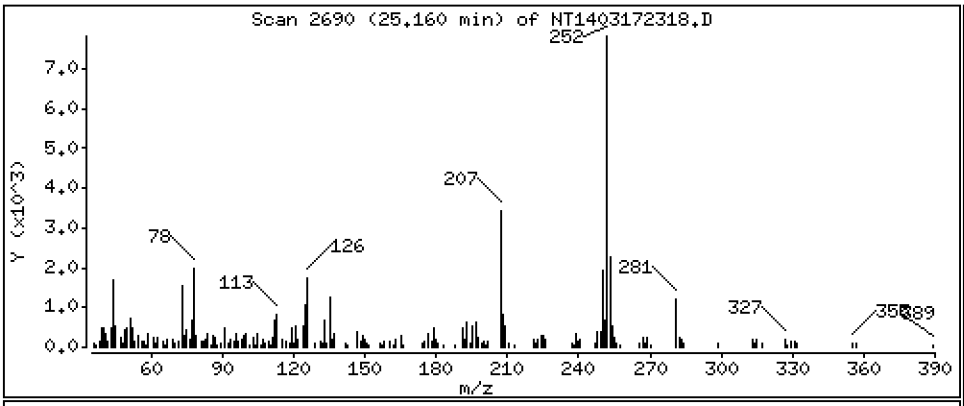
Operator: JGR

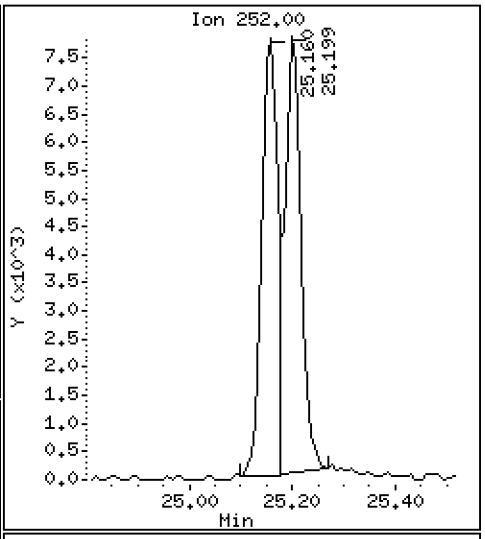
Column phase: ZB-5msi

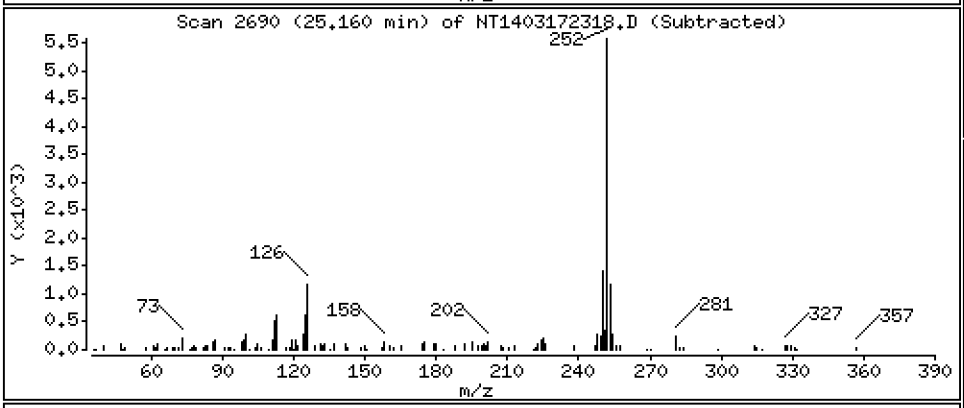
Column diameter: 0.25

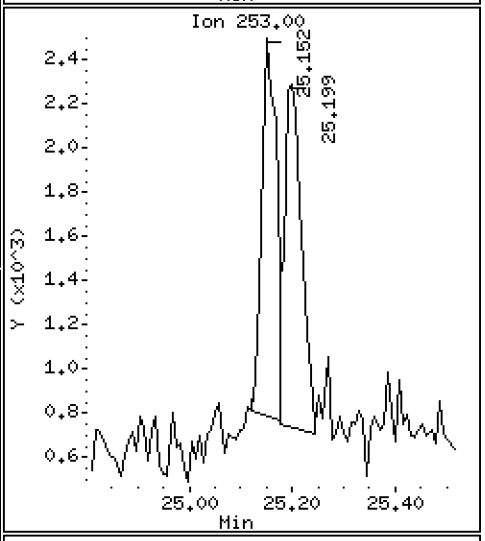
74 Benzo(b)fluoranthene

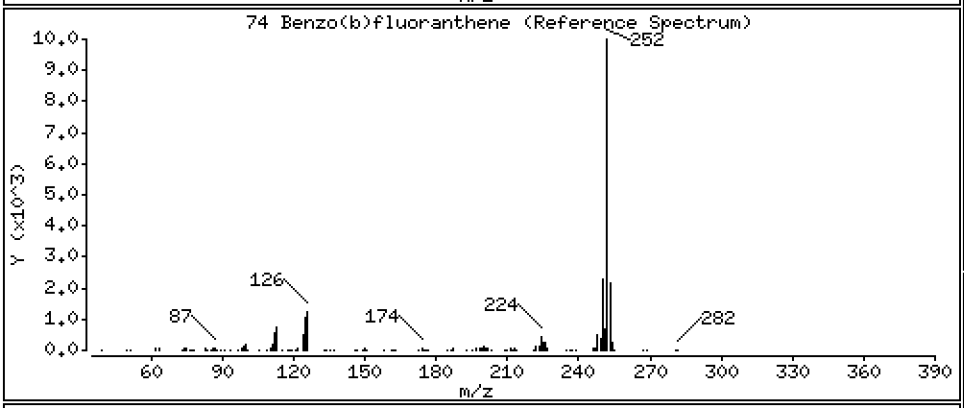
Concentration: 0.1871 ug/mL

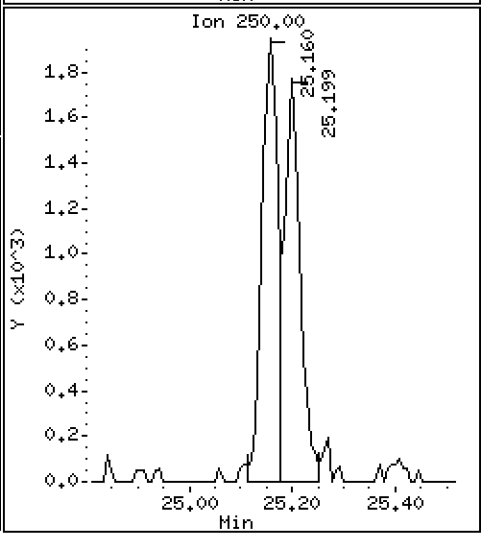


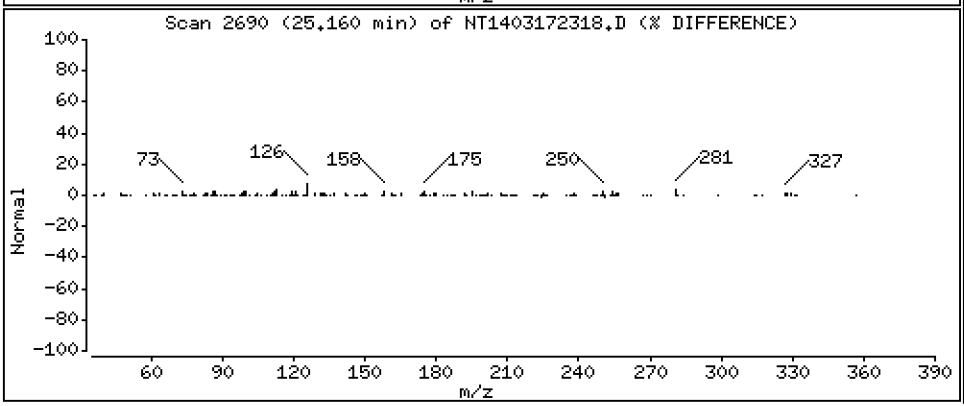












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

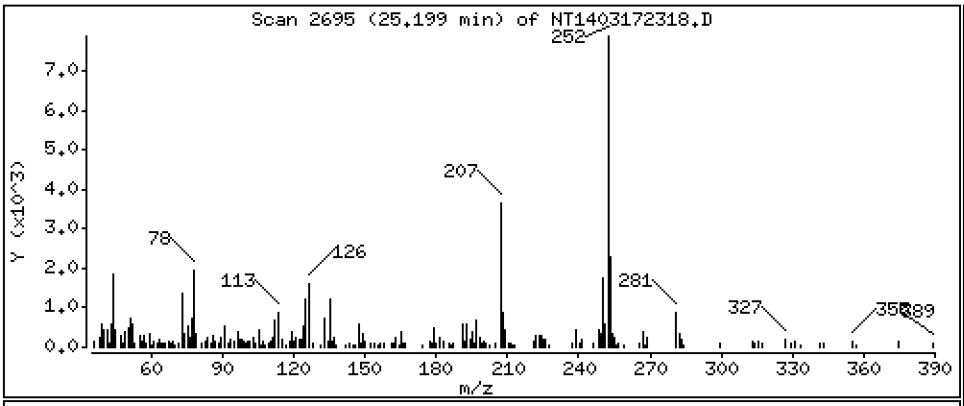
Operator: JGR

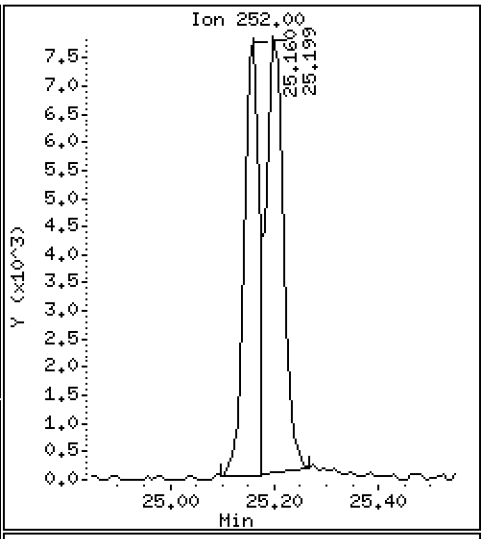
Column phase: ZB-5msi

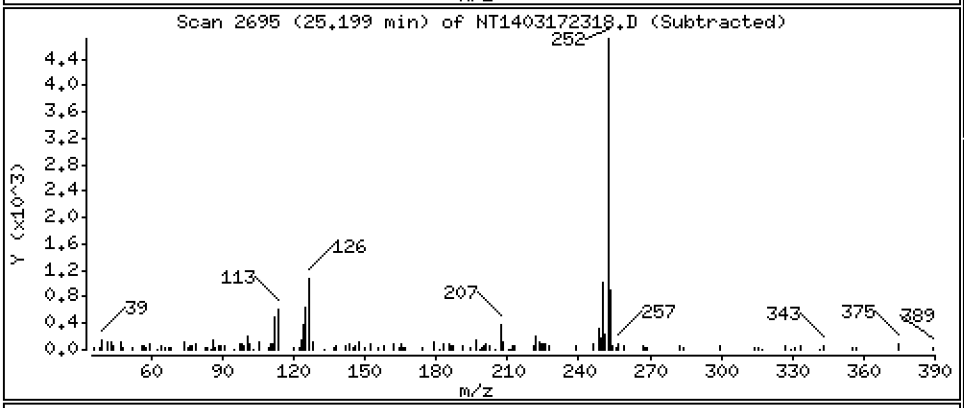
Column diameter: 0.25

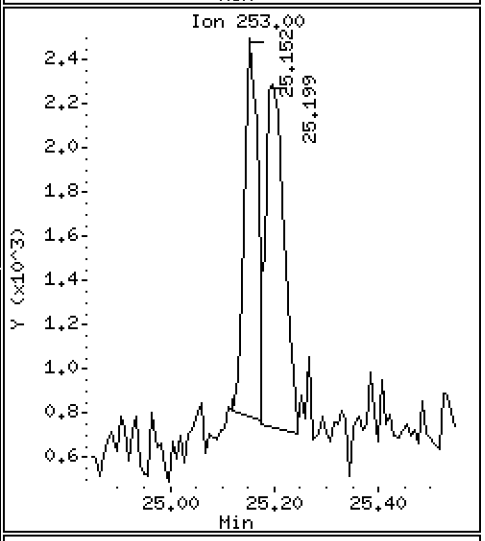
75 Benzo(k)fluoranthene

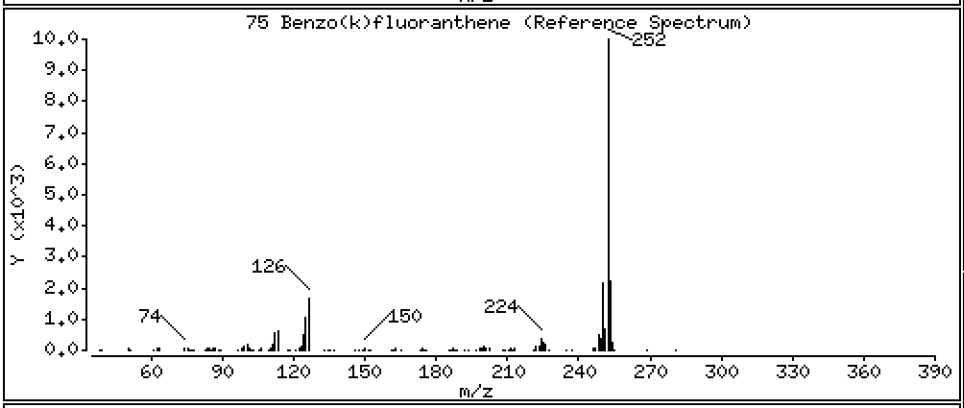
Concentration: 0.2162 ug/mL

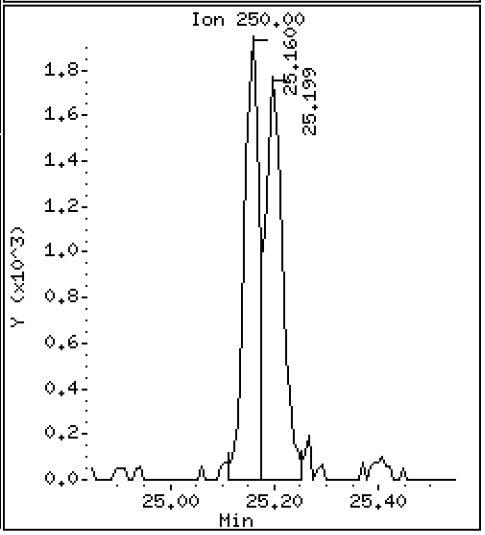


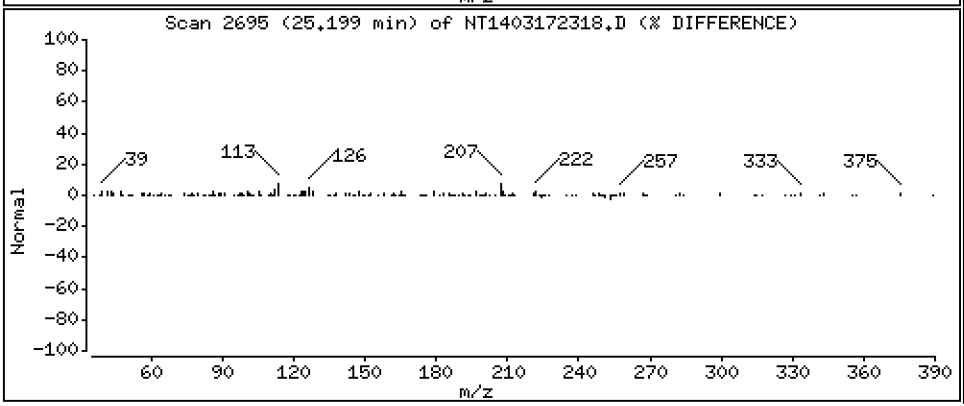












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

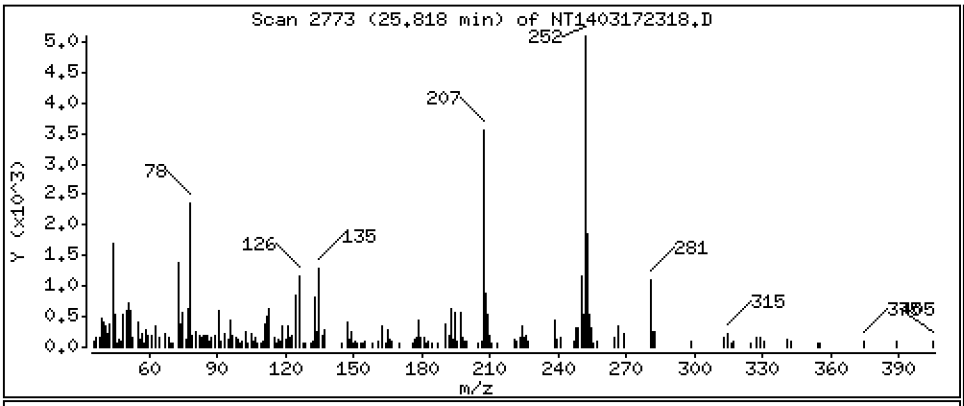
Operator: JGR

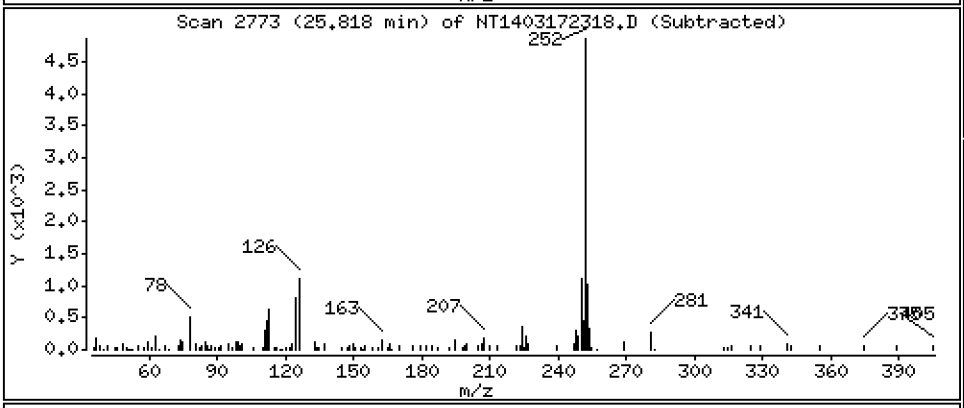
Column phase: ZB-5msi

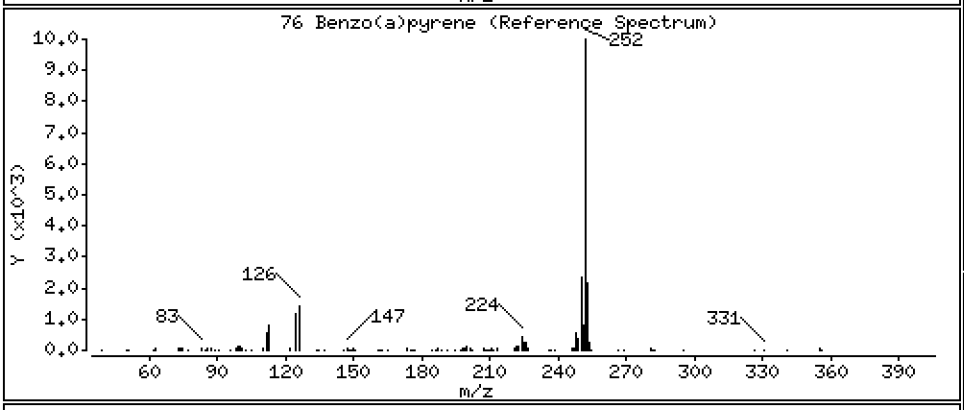
Column diameter: 0.25

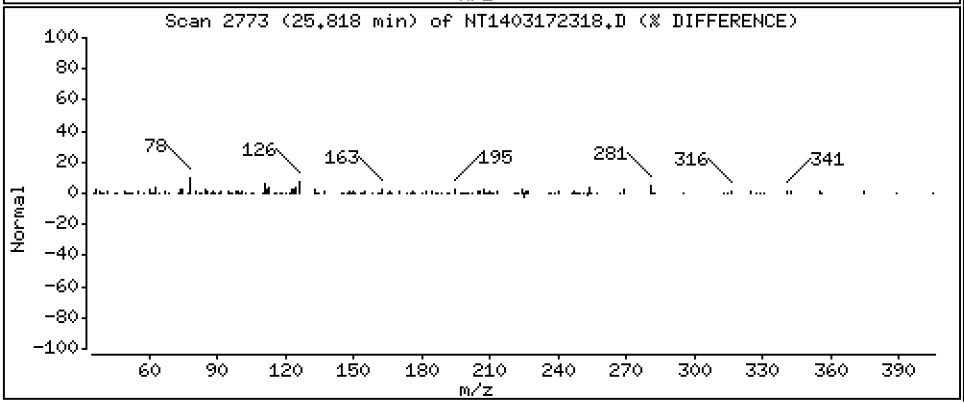
76 Benzo(a)pyrene

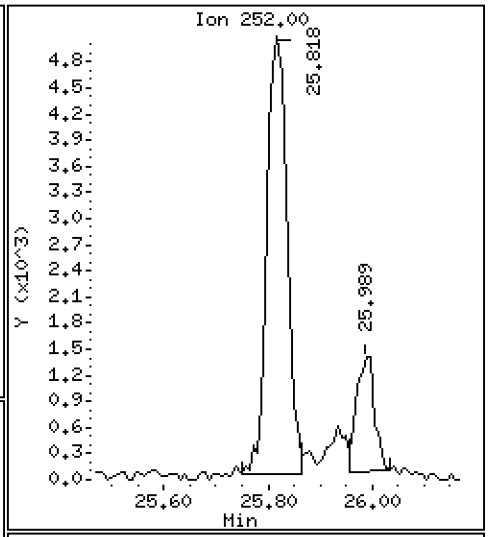
Concentration: 0.1794 ug/mL

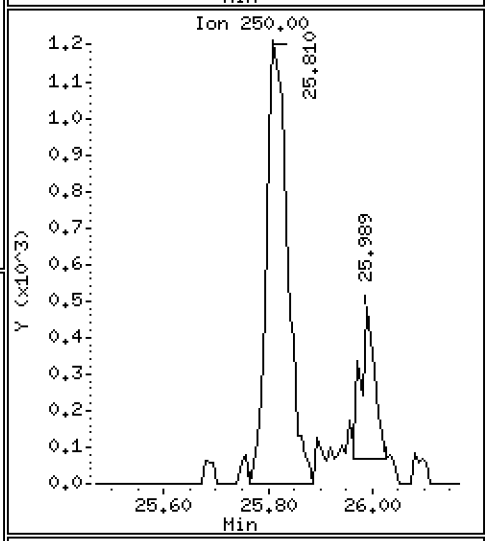


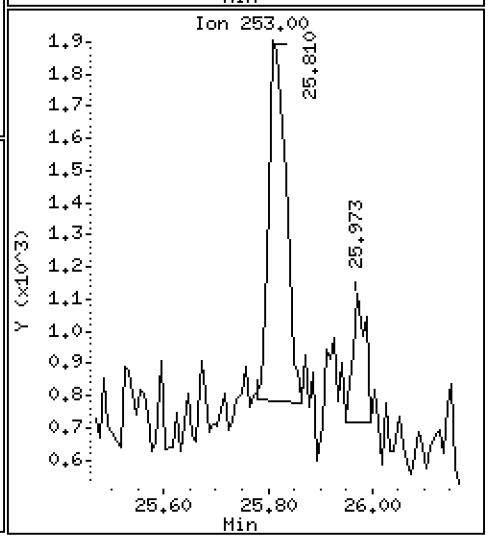












Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172318.D

Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

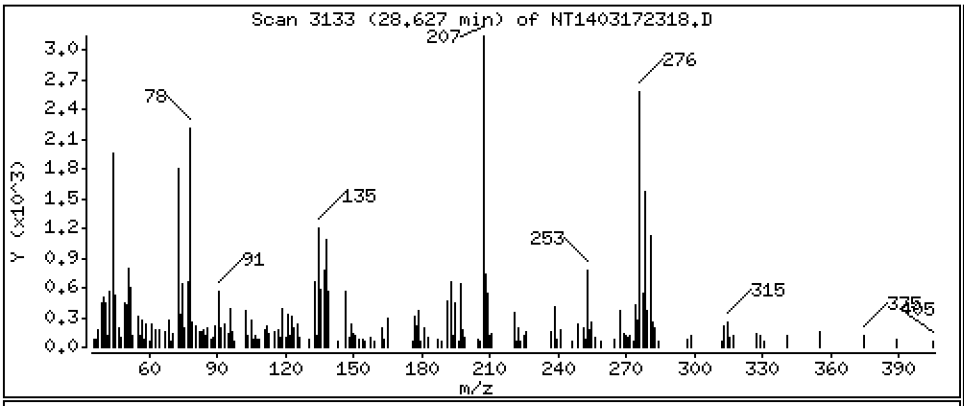
Operator: JGR

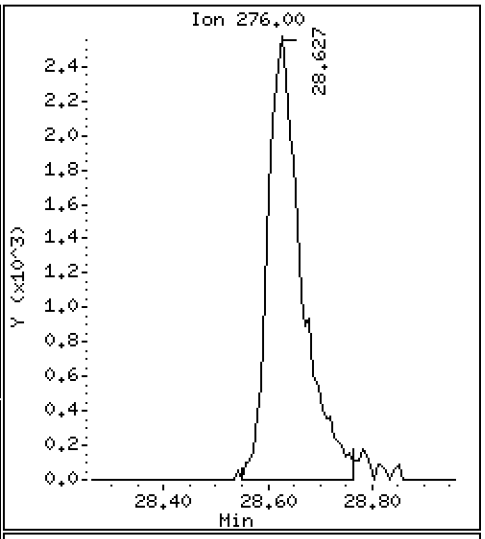
Column phase: ZB-5msi

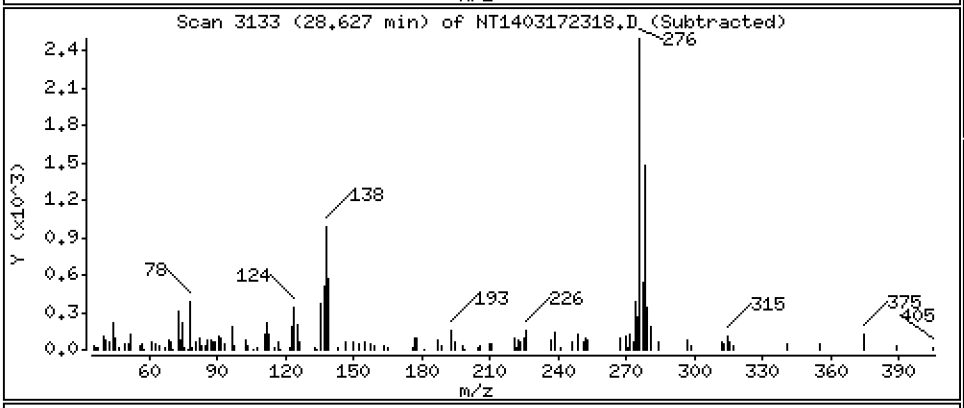
Column diameter: 0.25

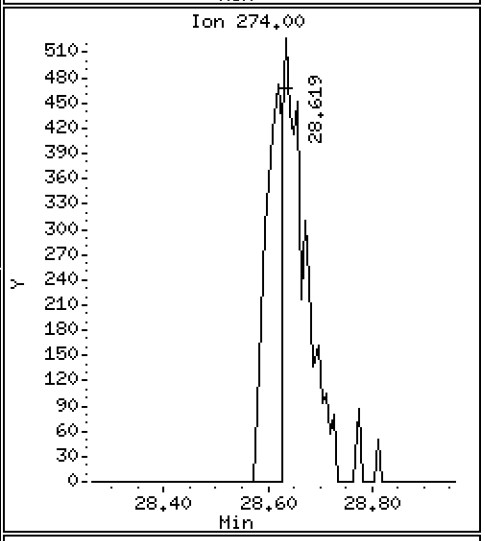
78 Indeno(1,2,3-cd)pyrene

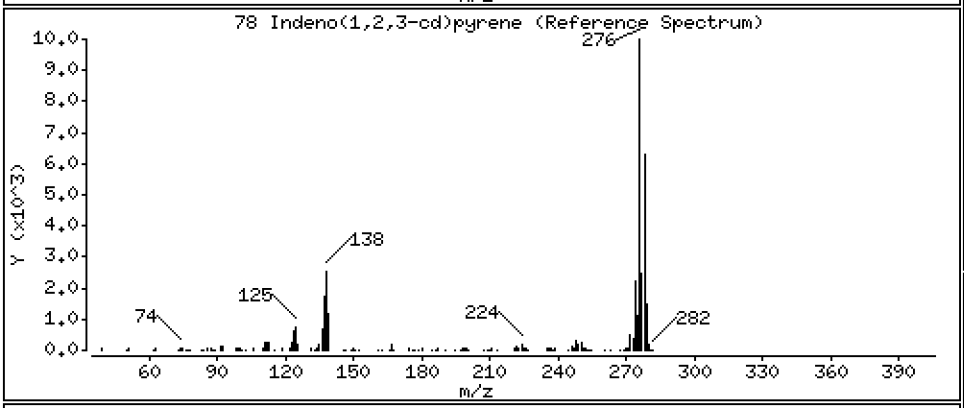
Concentration: 0.1449 ug/mL

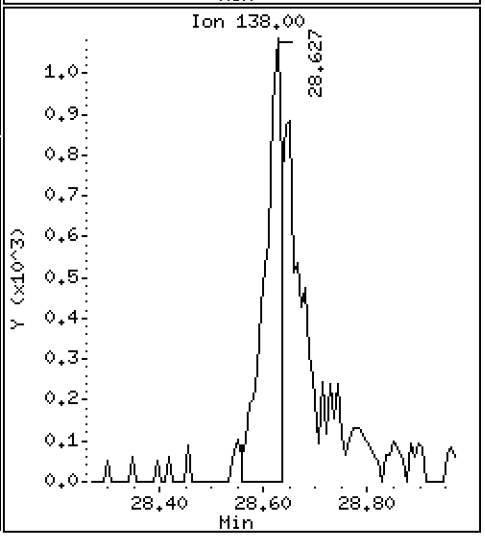


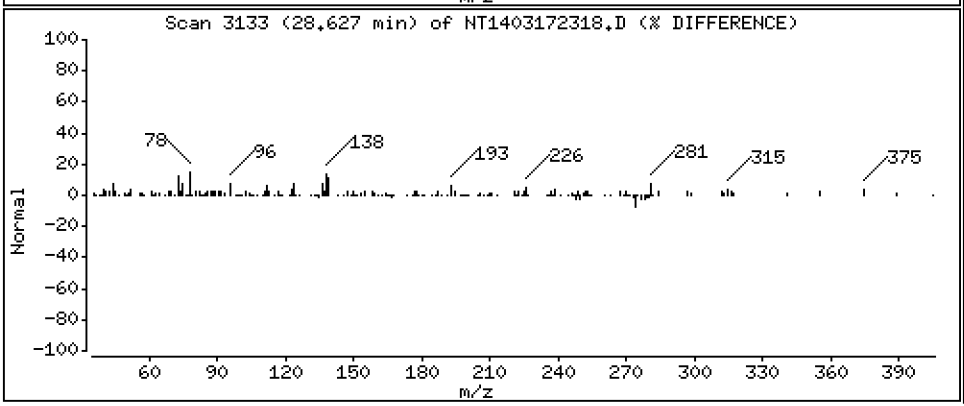












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

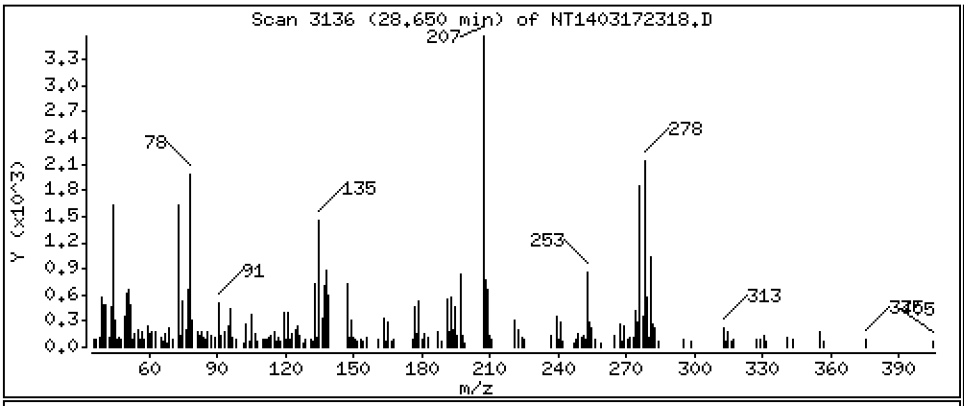
Operator: JGR

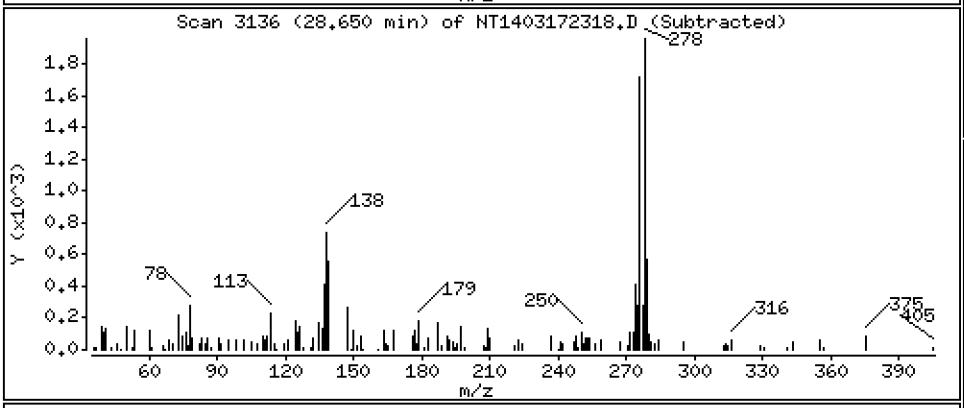
Column phase: ZB-5msi

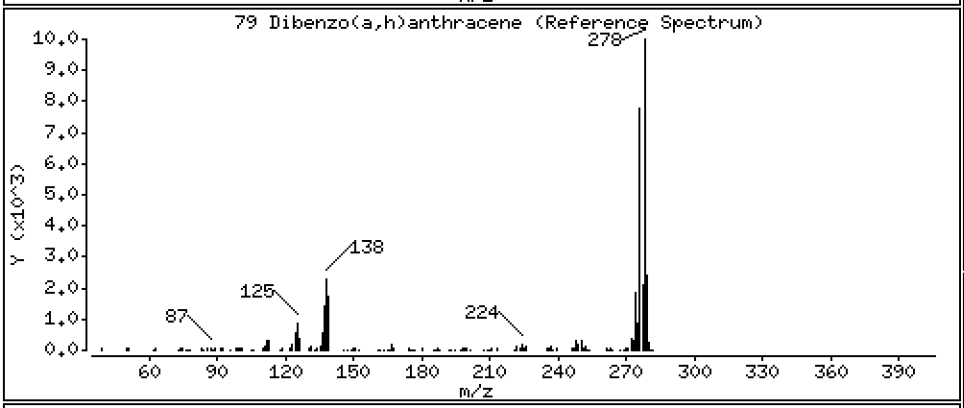
Column diameter: 0.25

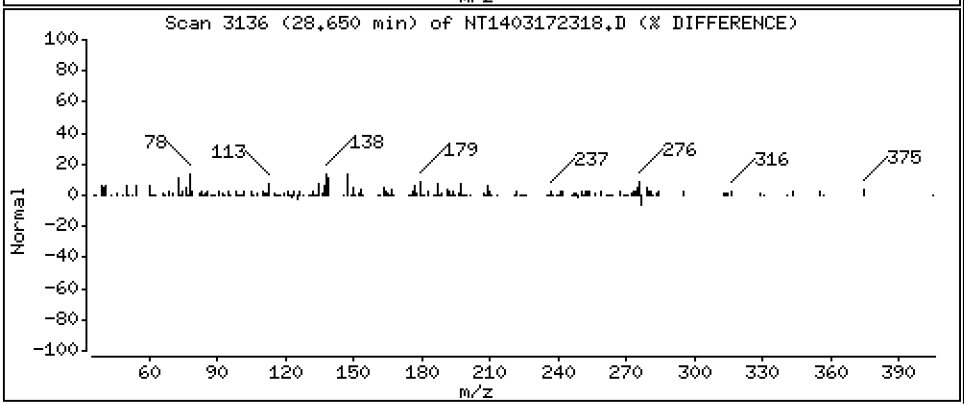
79 Dibenzo(a,h)anthracene

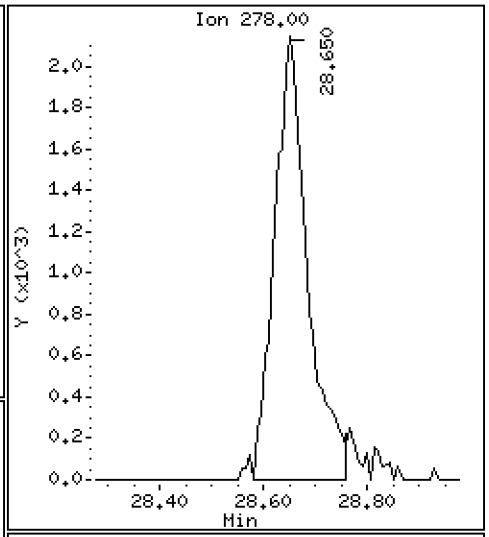
Concentration: 0.1409 ug/mL

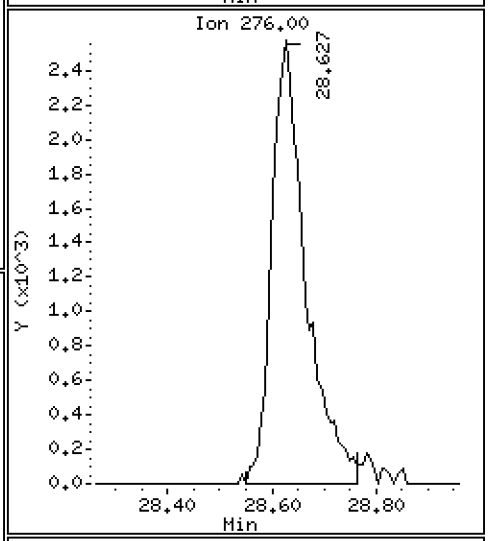


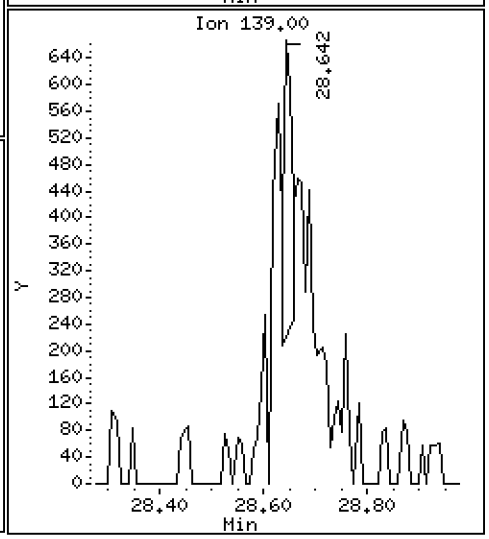












Date : 18-MAR-2023 00:43

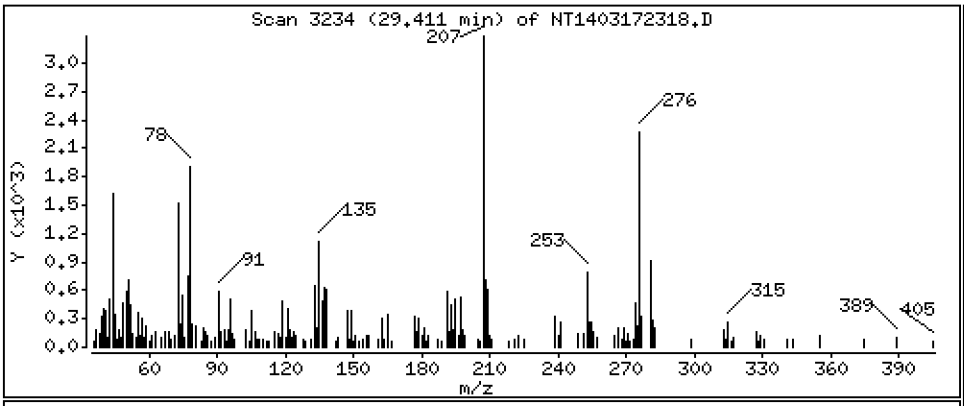
Client ID: Instrument: nt14.i

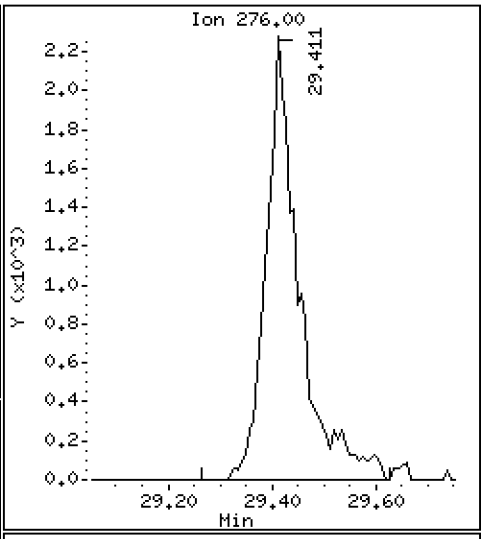
Sample Info: SLC0335-LCV2

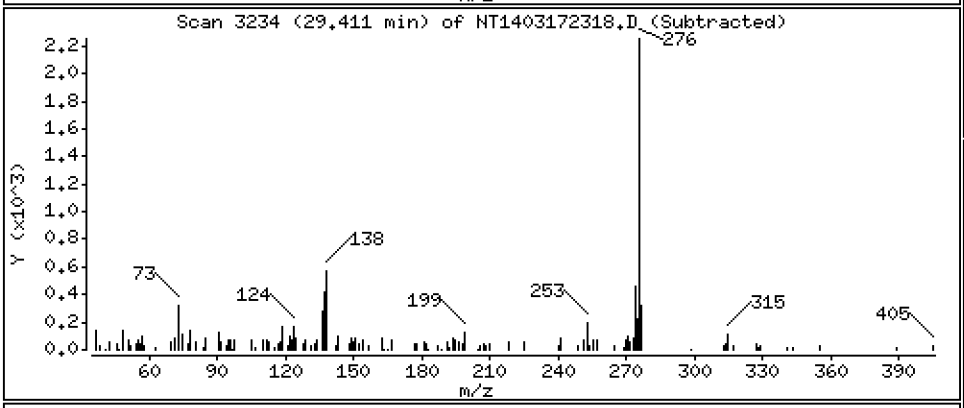
Operator: JGR

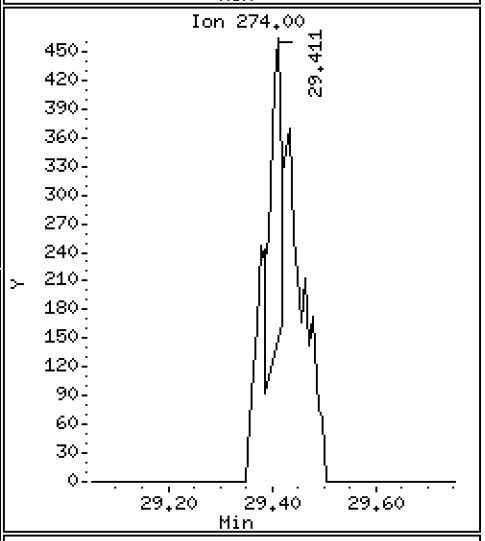
Column phase: ZB-5msi Column diameter: 0.25

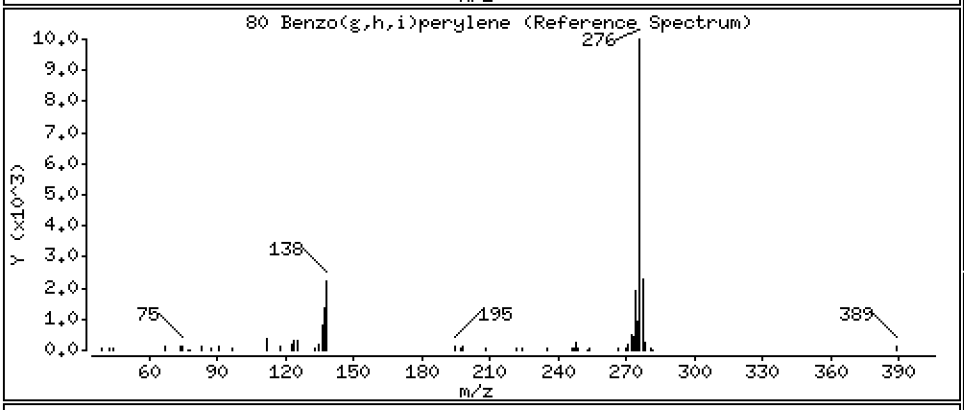
80 Benzo(g,h,i)perylene Concentration: 0.1521 ug/mL

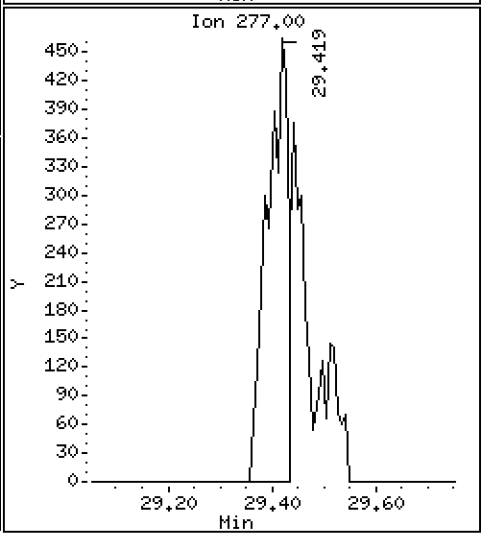


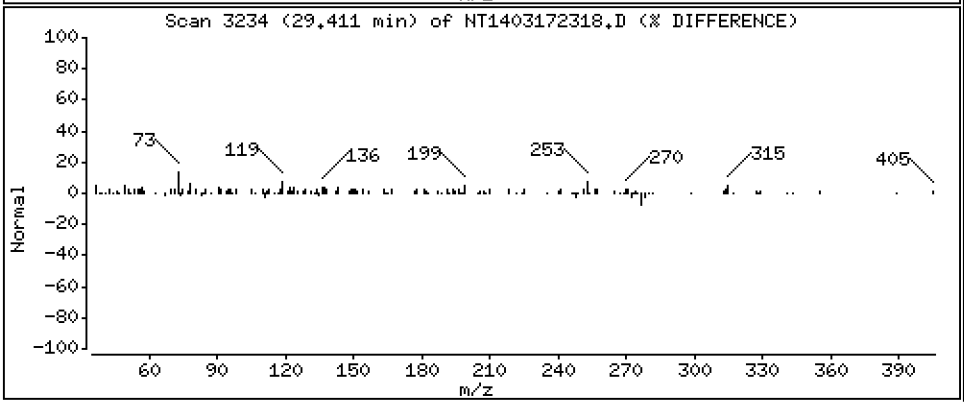












Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172318.D

Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

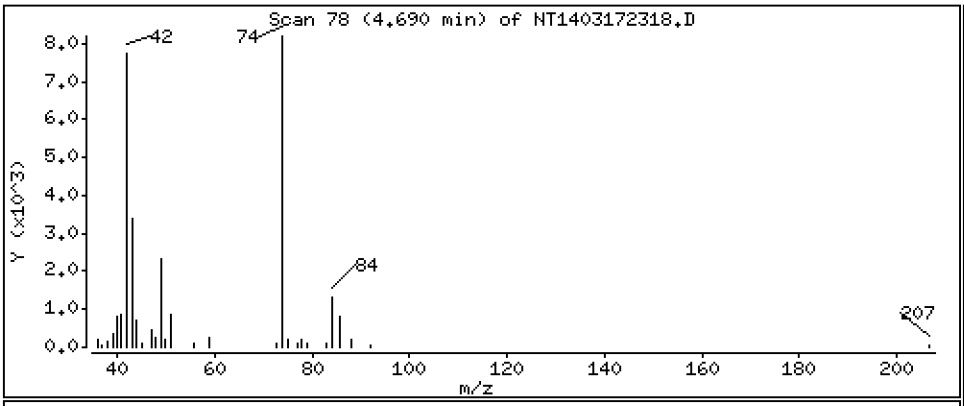
Operator: JGR

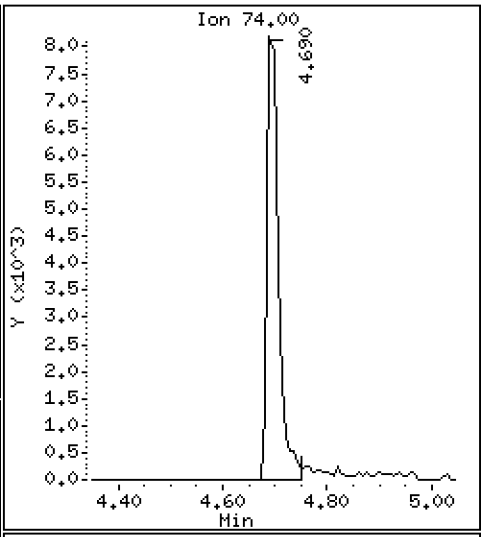
Column phase: ZB-5msi

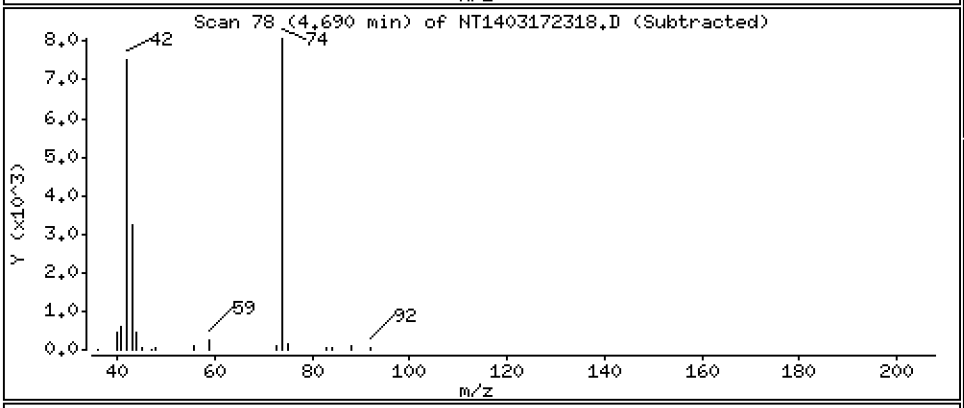
Column diameter: 0.25

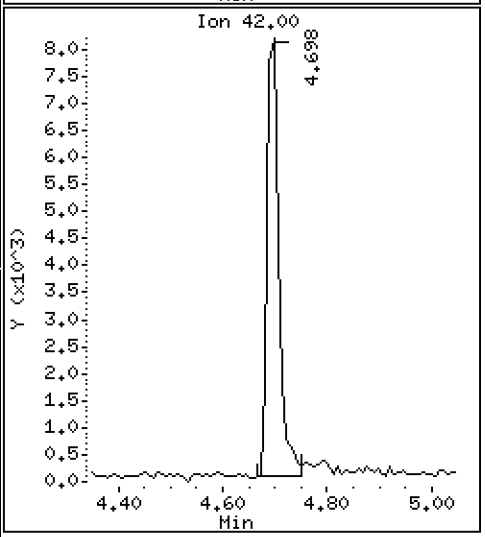
90 N-Nitrosodimethylamine

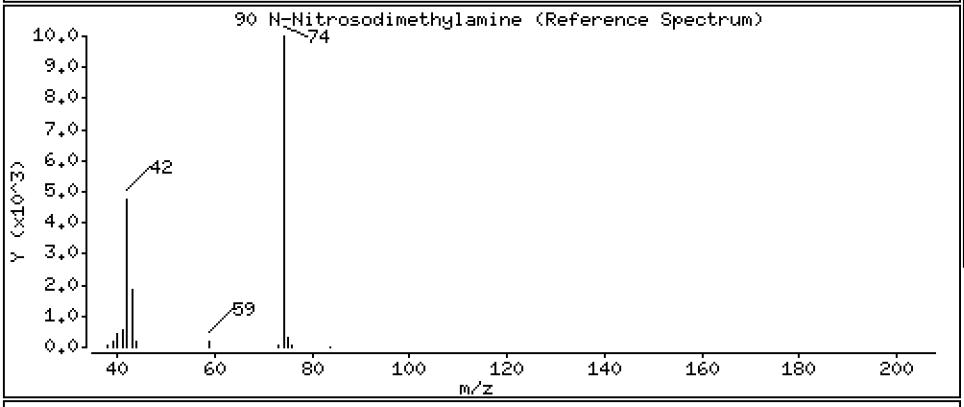
Concentration: 0.2681 ug/mL

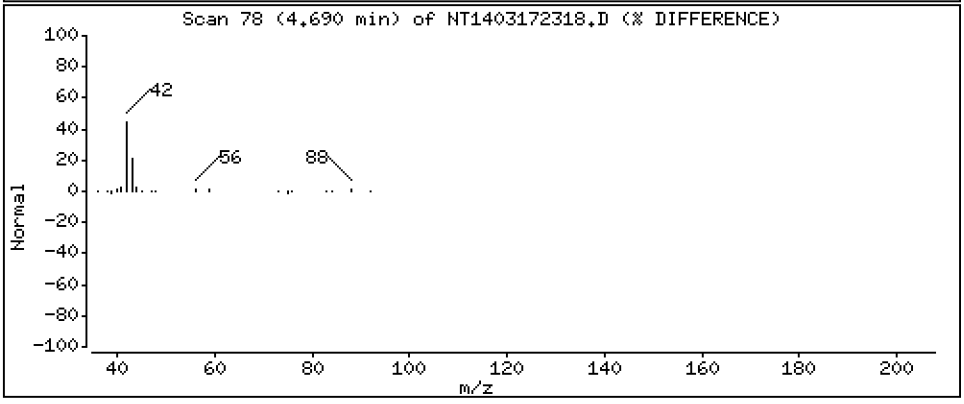












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

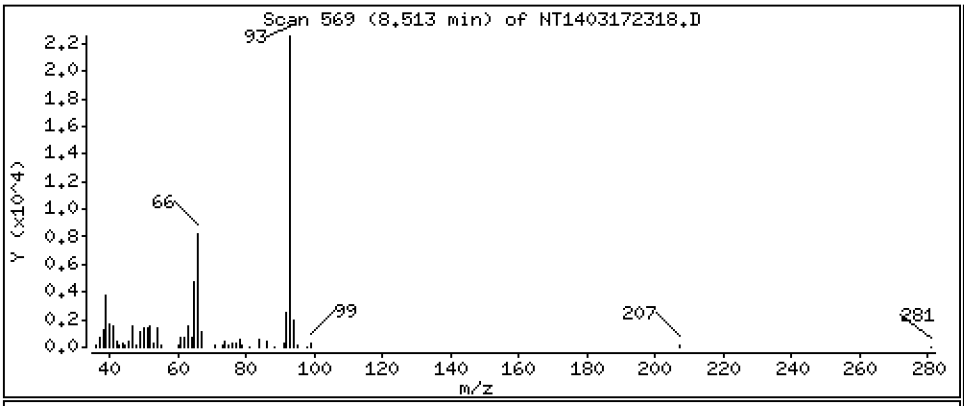
Operator: JGR

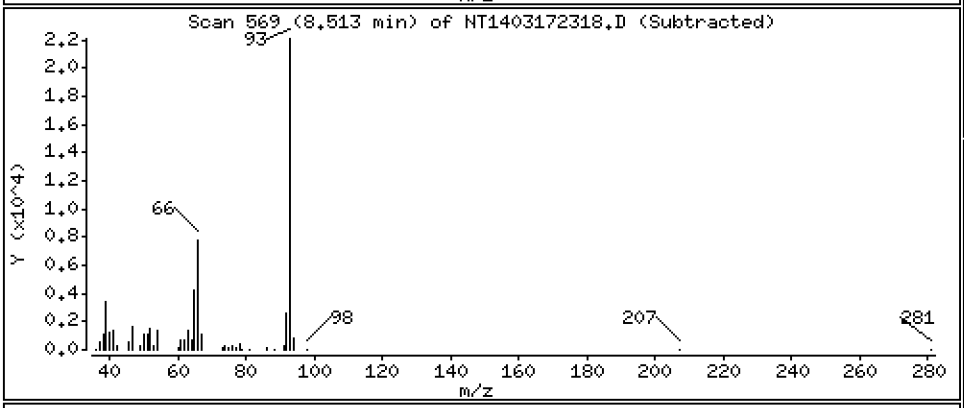
Column phase: ZB-5msi

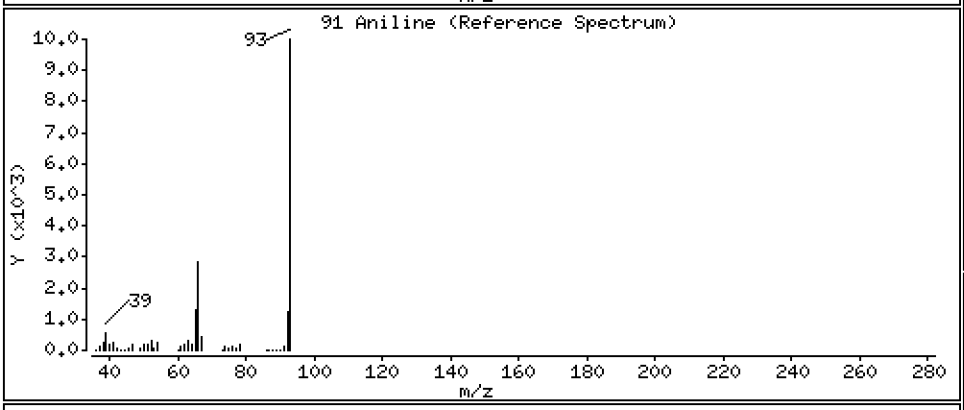
Column diameter: 0.25

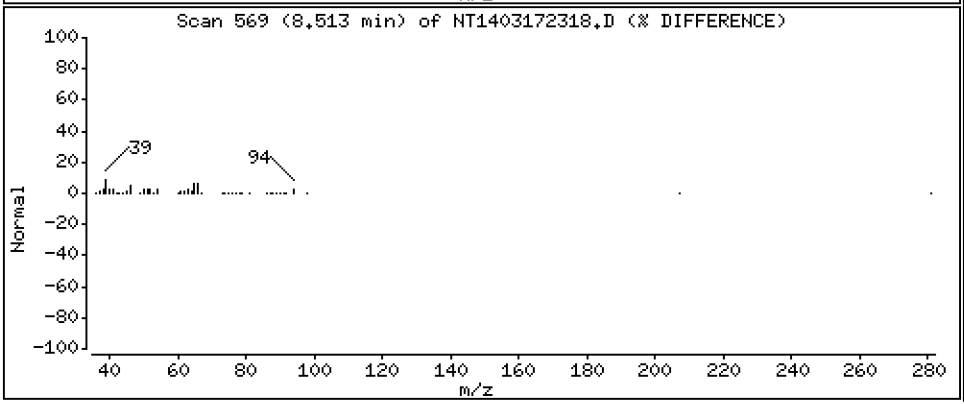
91 Aniline

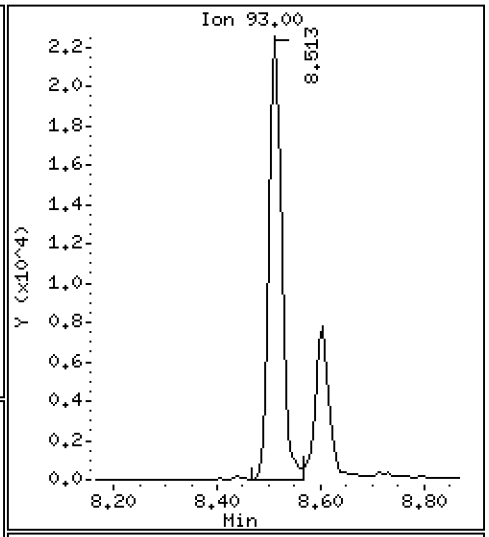
Concentration: 0.3747 ug/mL

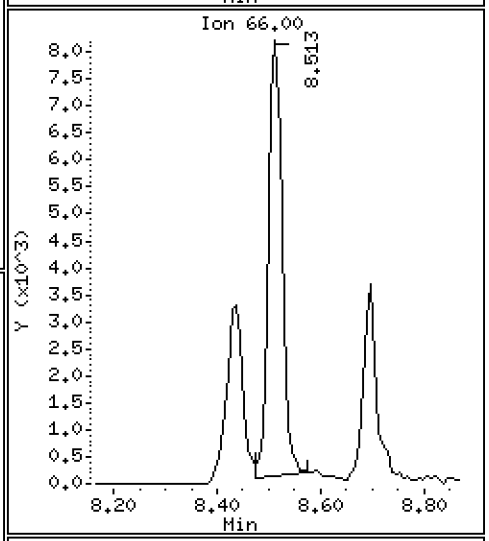


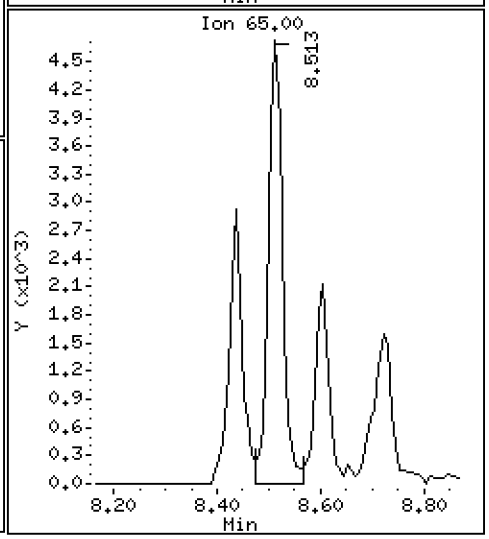












Date : 18-MAR-2023 00:43

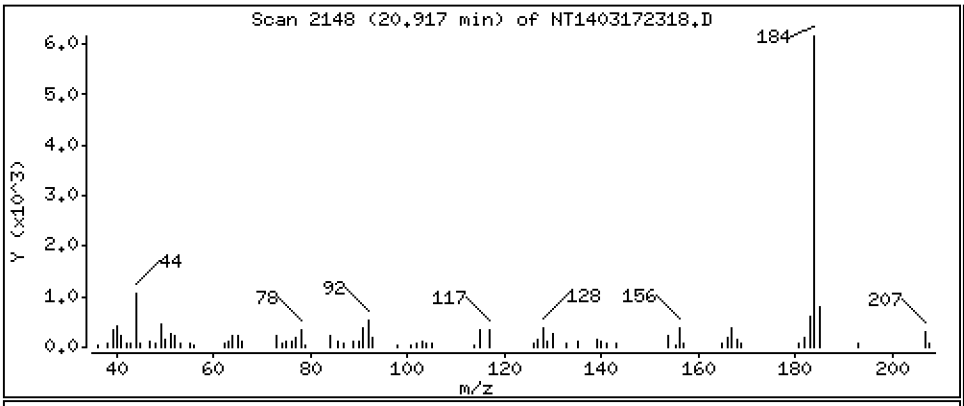
Client ID: Instrument: nt14.i

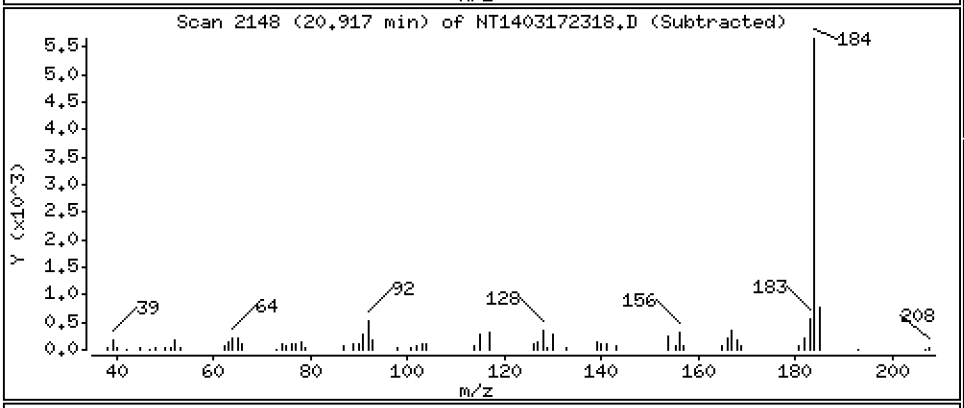
Sample Info: SLC0335-LCV2

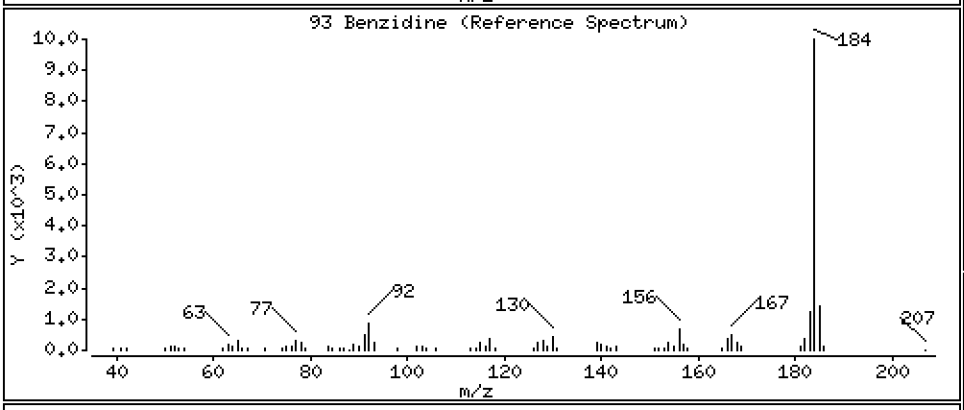
Operator: JGR

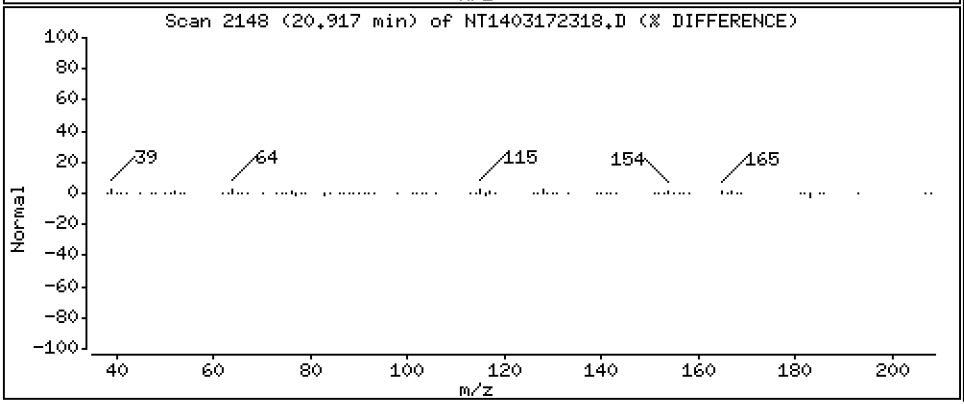
Column phase: ZB-5msi Column diameter: 0.25

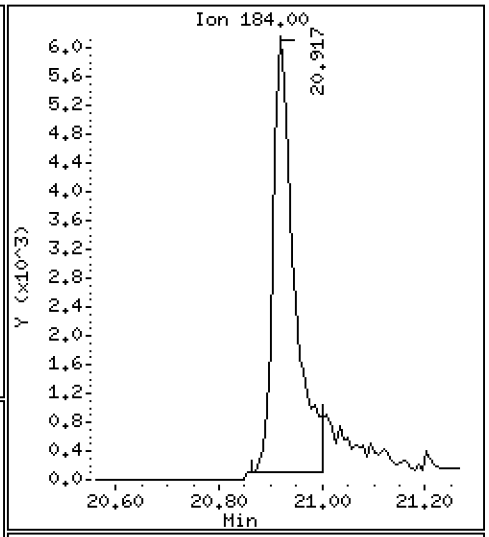
93 Benzidine Concentration: 0.2724 ug/mL

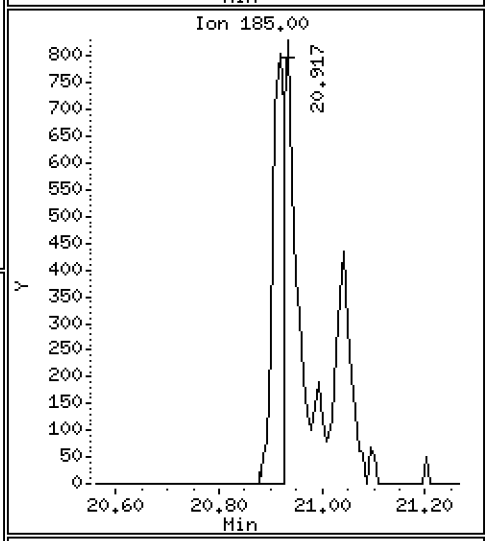


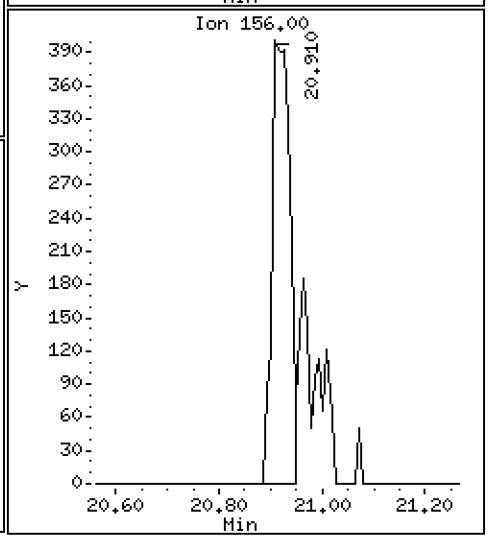












Data File: \\target\share\chem3\nt14.i\20230317.b\NT1403172318.D

Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

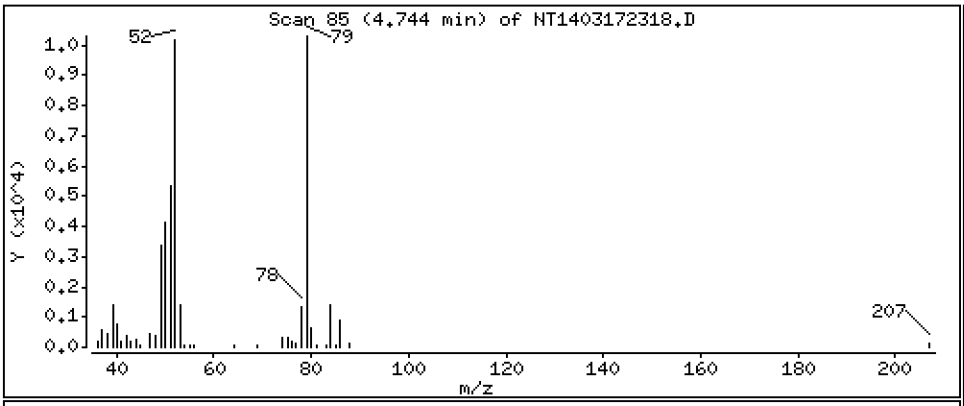
Operator: JGR

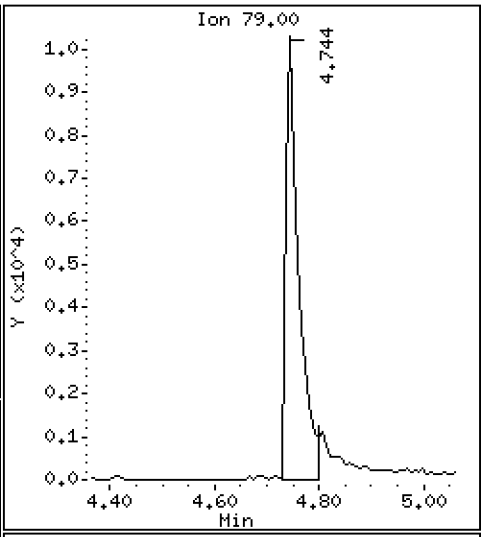
Column phase: ZB-5msi

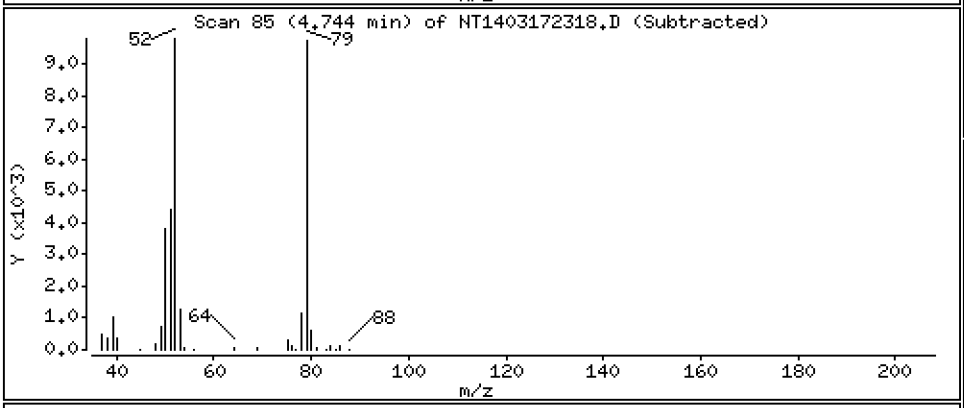
Column diameter: 0.25

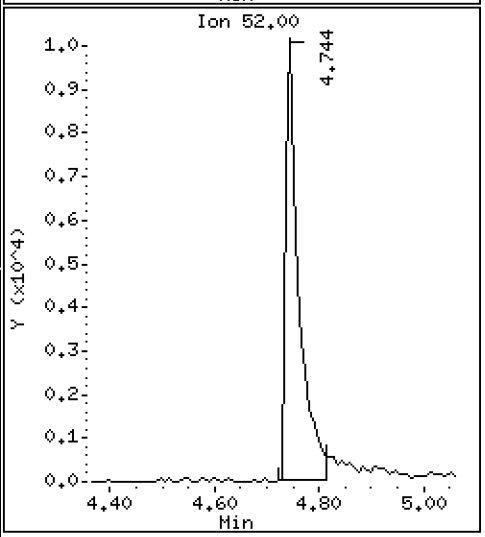
103 Pyridine

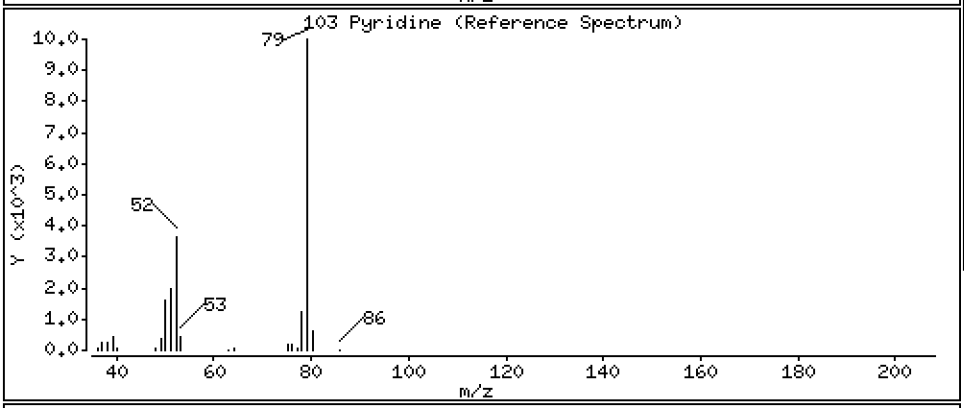
Concentration: 0.1356 ug/mL

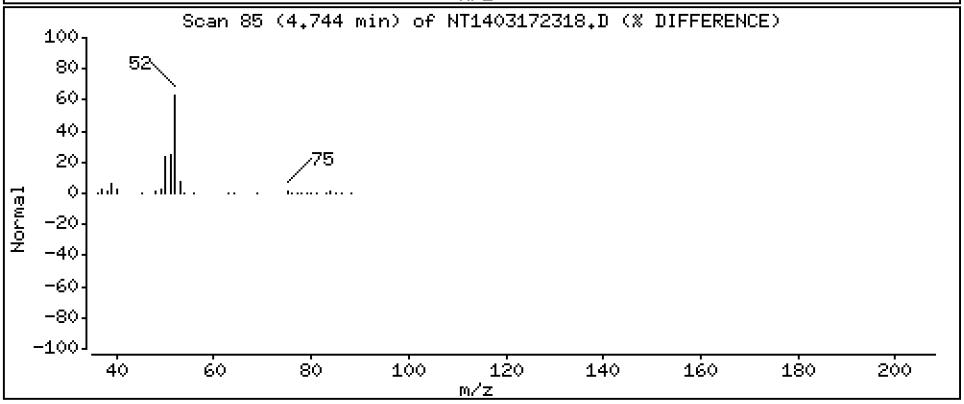












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

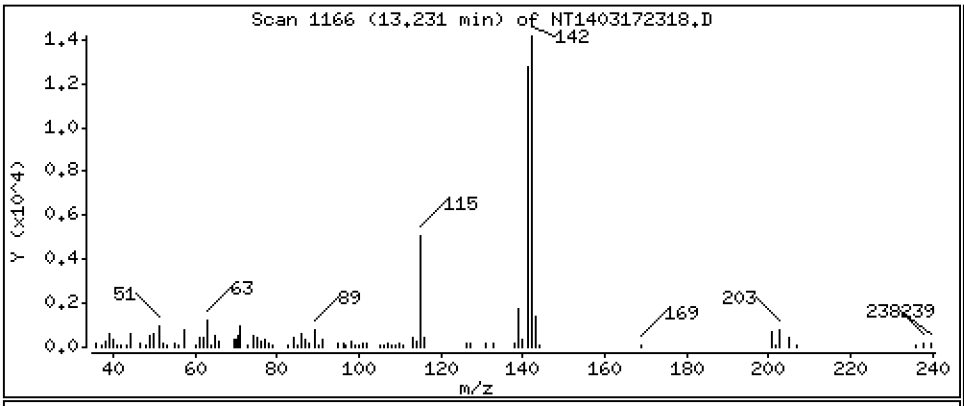
Operator: JGR

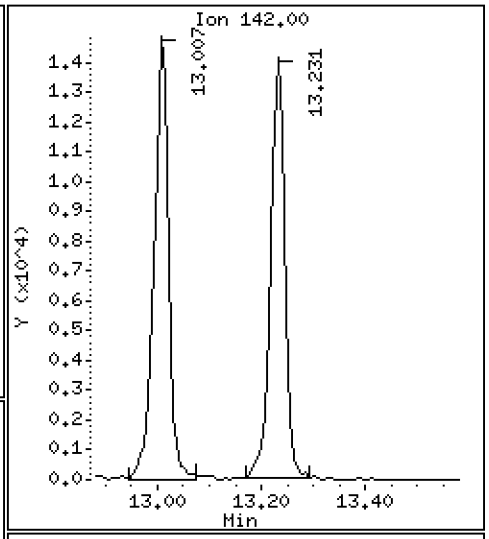
Column phase: ZB-5msi

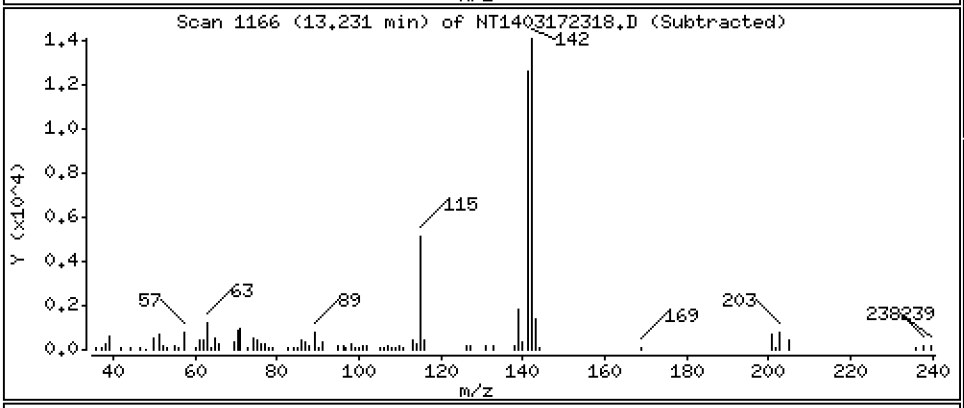
Column diameter: 0.25

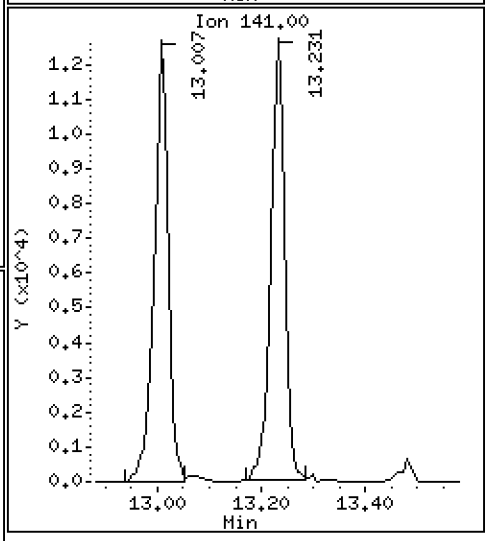
105 1-methylnaphthalene

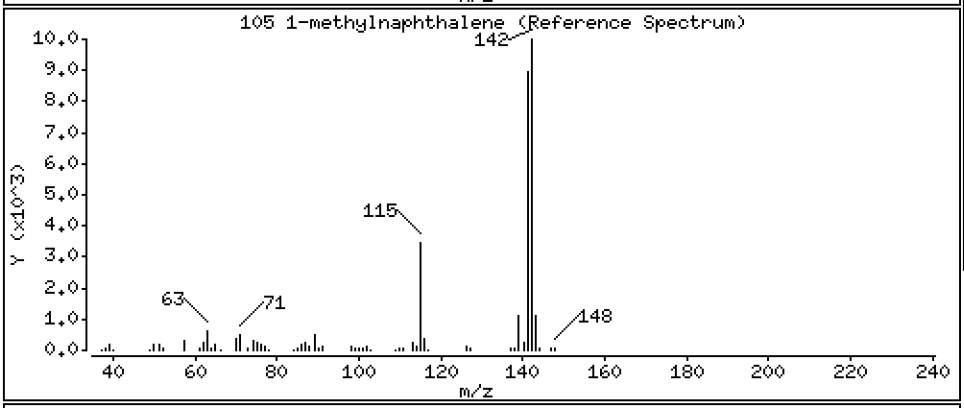
Concentration: 0.1940 ug/mL

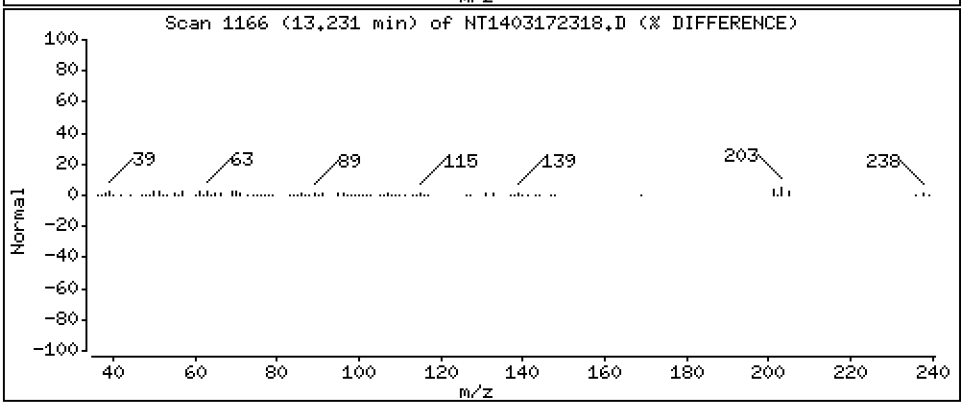












Date : 18-MAR-2023 00:43

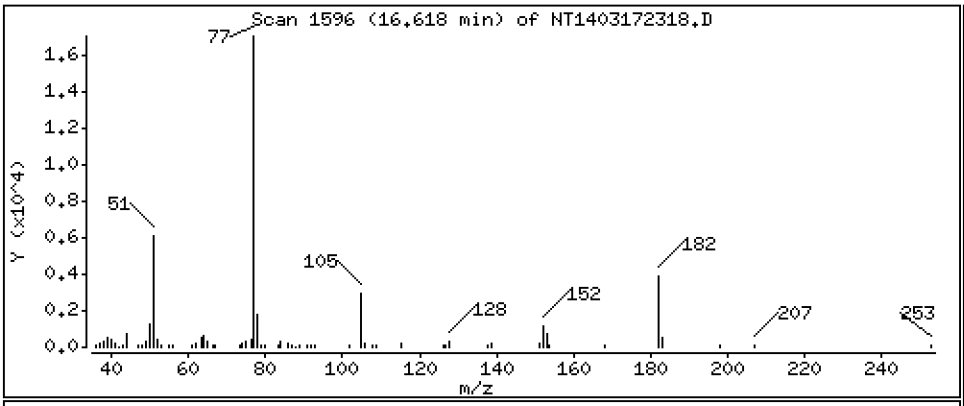
Client ID: Instrument: nt14.i

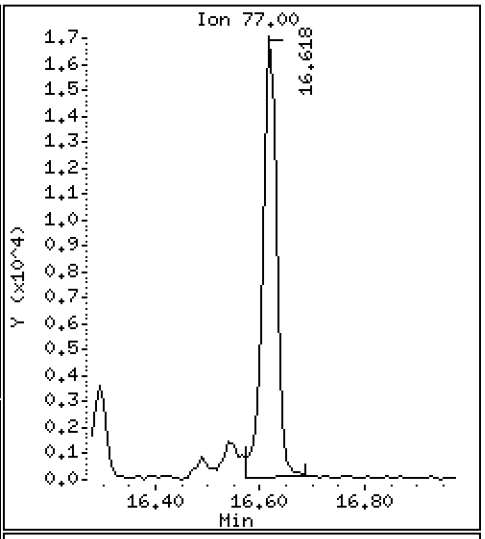
Sample Info: SLC0335-LCV2

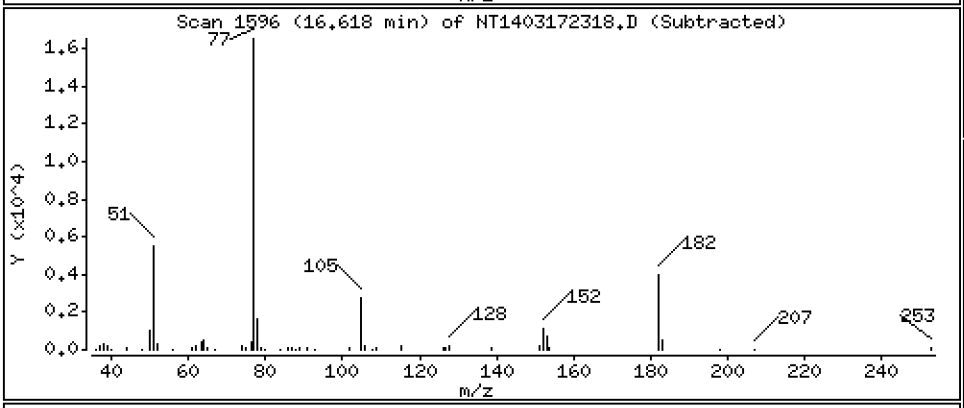
Operator: JGR

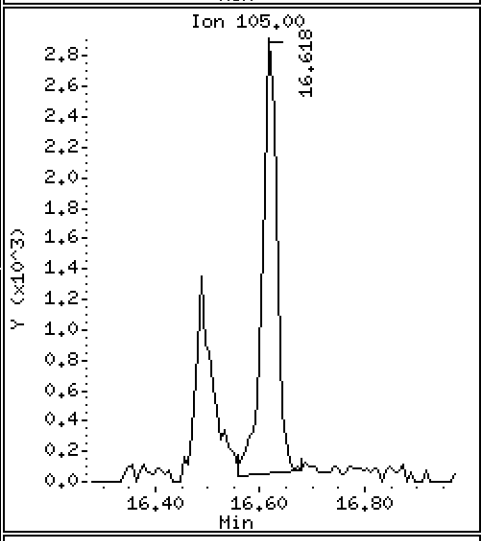
Column phase: ZB-5msi Column diameter: 0.25

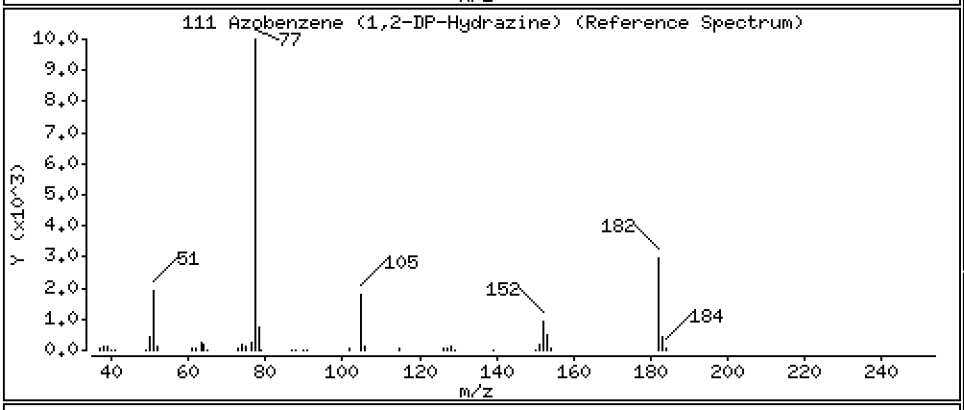
111 Azobenzene (1,2-DP-Hydrazine) Concentration: 0.1900 ug/mL

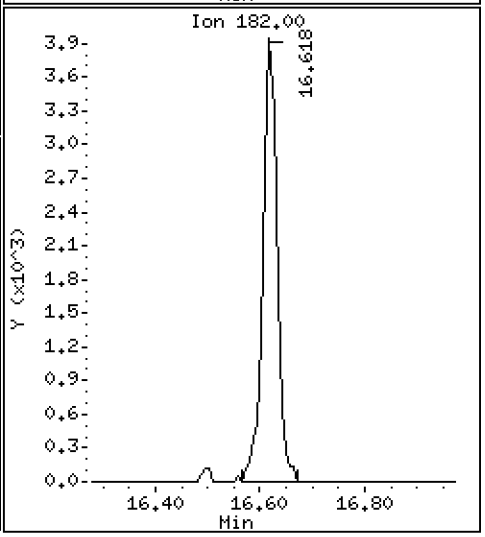


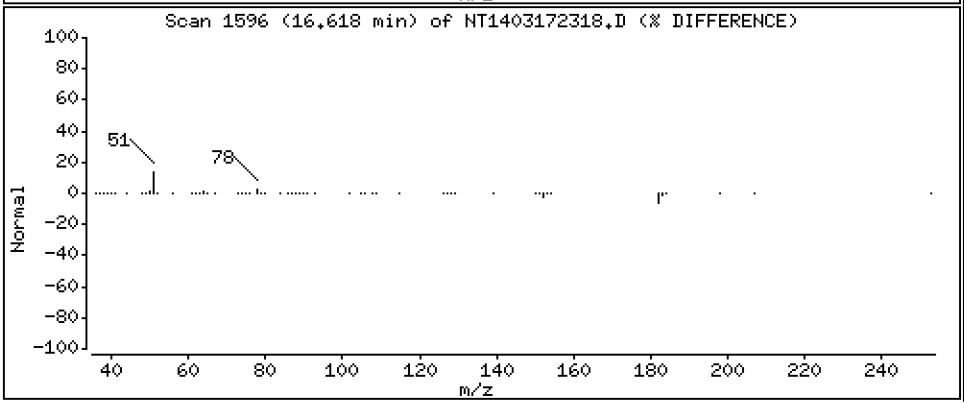












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

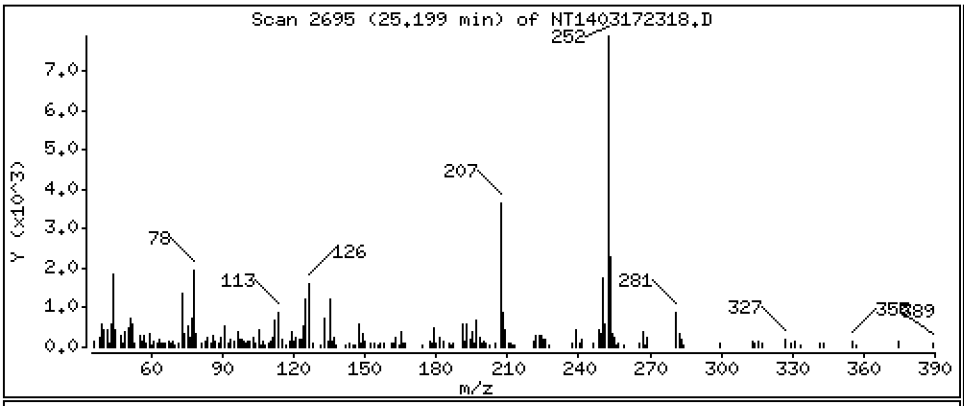
Operator: JGR

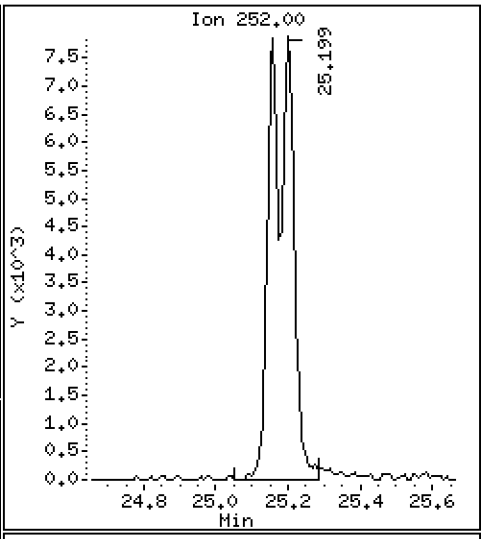
Column phase: ZB-5msi

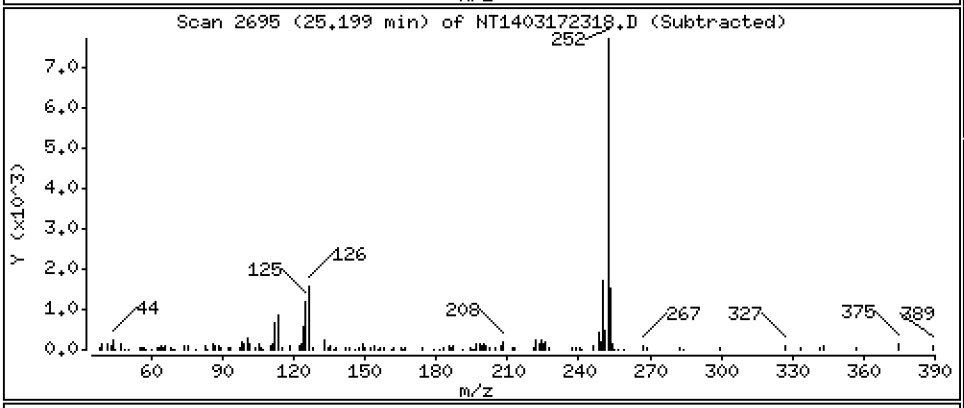
Column diameter: 0.25

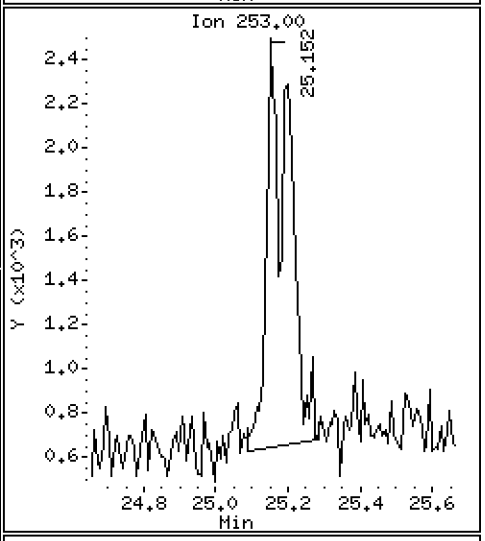
187 Total Benzofluoranthenes

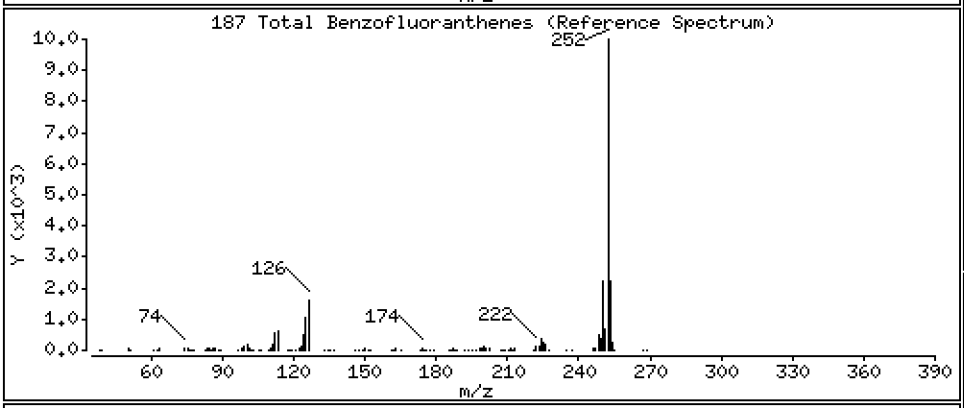
Concentration: 0.4172 ug/mL

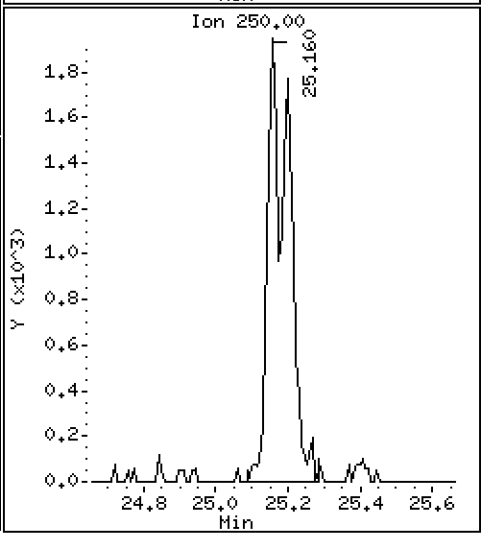


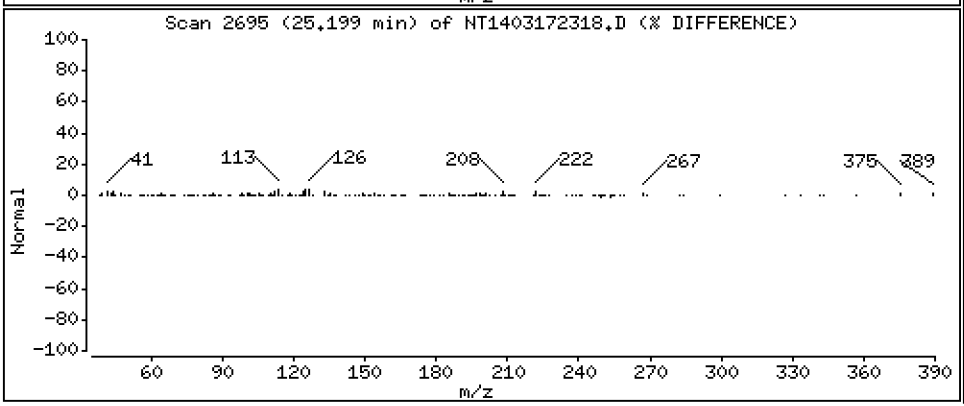












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0335-LCV2

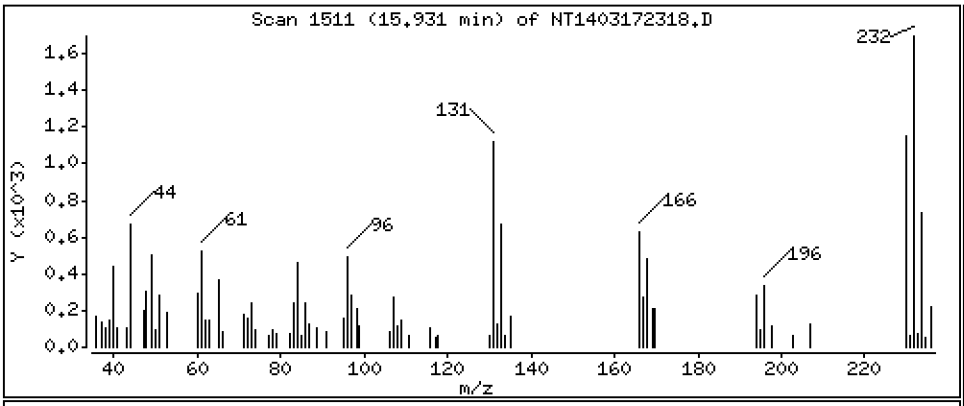
Operator: JGR

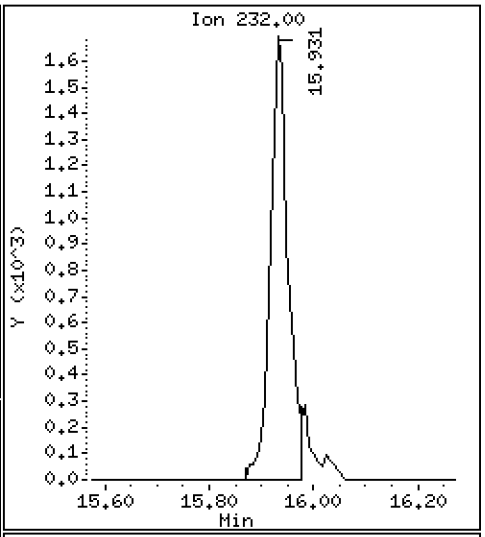
Column phase: ZB-5msi

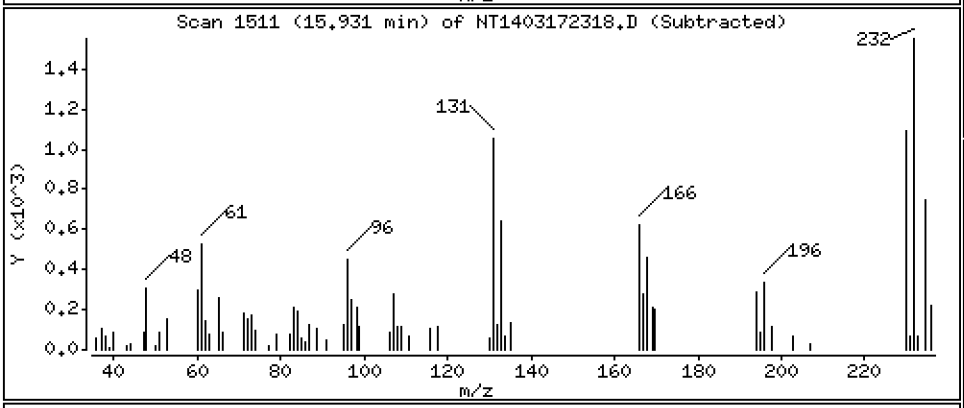
Column diameter: 0.25

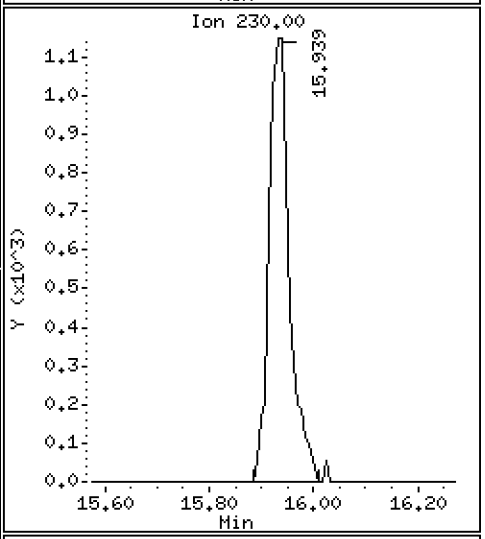
120 2,3,4,6-Tetrachlorophenol

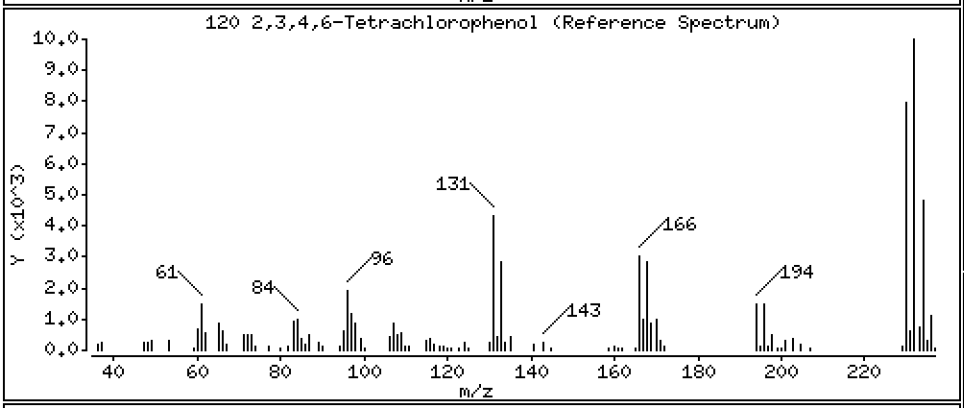
Concentration: 0.1003 ug/mL

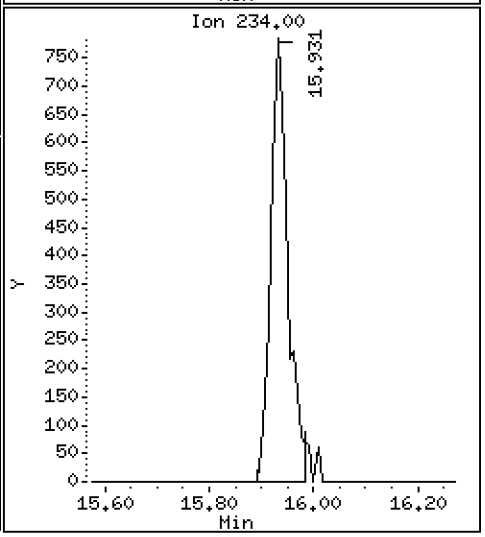


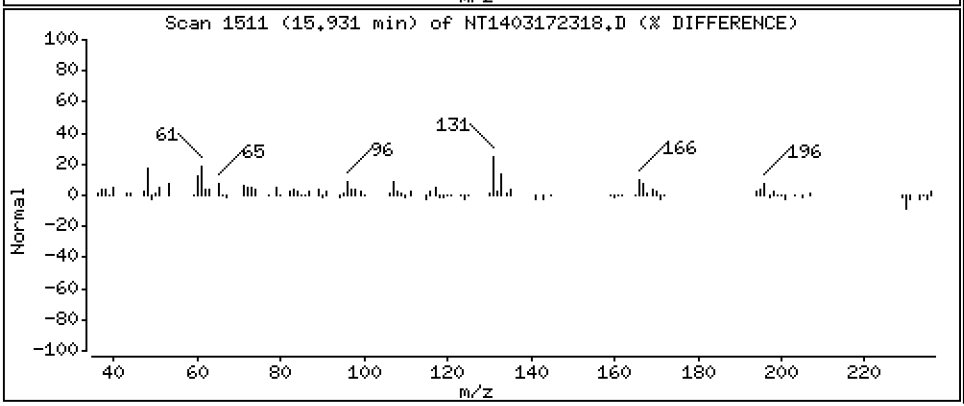












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230317.b\NT1403172318.D
Lab Smp Id: SLC0335-LCV2
Inj Date : 18-MAR-2023 00:43 MS Autotune Date: 11-MAR-2023 16:01
Operator : JGR Inst ID: nt14.i
Smp Info : SLC0335-LCV2
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230317.b\ABN.m
Meth Date : 22-Mar-2023 08:57 van Quant Type: ISTD
Cal Date : 15-MAR-2023 15:50 Cal File: NT1403152308.D
Als bottle: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)	
$	1 2-Fluorophenol	112	6.821	6.821	(1.000)	16043	0.23147	0.2315	
$	2 Phenol-d5	99	8.413	8.412	(1.000)	22436	0.24588	0.2459	
	3 Phenol	94	8.436	8.436	(1.000)	15686	0.16175	0.1618	
$	5 2-Chlorophenol-d4	132	8.698	8.698	(1.000)	19774	0.27487	0.2749	
	4 Bis(2-Chloroethyl)ether	93	8.606	8.606	(1.000)	12828	0.18370	0.1837	
	6 2-Chlorophenol	128	8.722	8.729	(1.000)	13975	0.18309	0.1831	
	7 1,3-Dichlorobenzene	146	9.000	9.000	(1.000)	16579	0.21457	0.2146	
*	8 1,4-Dichlorobenzene-d4	152	9.062	9.062	(1.000)	204038	4.00000		(M)
	9 1,4-Dichlorobenzene	146	9.093	9.093	(1.000)	15564	0.20914	0.2091	
$	10 1,2-Dichlorobenzene-d4	152	9.427	9.427	(1.000)	10767	0.22403	0.2240	
	12 1,2-Dichlorobenzene	146	9.450	9.450	(1.000)	15401	0.20937	0.2094	
	11 Benzyl alcohol	108	9.404	9.341	(1.038)	6056	0.13414	0.1341	(M)
	14 2,2'-oxybis(1-Chloropropane)	121	9.637	9.644	(1.063)	4687	0.21117	0.2112	(M)
	13 2-Methylphenol	108	9.559	9.559	(1.000)	11991	0.17489	0.1749	
	17 Hexachloroethane	117	10.048	10.048	(1.000)	6581	0.20677	0.2068	
	16 N-Nitroso-di-n-propylamine	70	9.893	9.900	(1.000)	9269	0.17171	0.1717	
	15 4-Methylphenol	108	9.831	9.830	(1.000)	12807	0.15776	0.1578	
$	18 Nitrobenzene-d5	82	10.164	10.164	(0.879)	15064	0.18345	0.1835	
	19 Nitrobenzene	77	10.195	10.203	(0.882)	14833	0.18557	0.1856	
	20 Isophorone	82	10.645	10.653	(0.921)	16359	0.14989	0.1499	
	21 2-Nitrophenol	139	10.832	10.831	(0.937)	5533	0.12260	0.1226	
	22 2,4-Dimethylphenol	107	10.886	10.886	(0.942)	25374	0.37115	0.3712	
	23 Bis(2-Chloroethoxy)methane	93	11.080	11.087	(0.958)	13647	0.18574	0.1857	
	24 Benzoic acid	105	Compound Not Detected.						
	25 2,4-Dichlorophenol	162	11.289	11.289	(0.977)	17112	0.31474	0.3147	
	26 1,2,4-Trichlorobenzene	180	11.475	11.482	(0.993)	13070	0.19555	0.1956	
*	27 Naphthalene-d8	136	11.560	11.567	(1.000)	775937	4.00000		
	28 Naphthalene	128	11.606	11.606	(1.004)	41862	0.20194	0.2019	
	29 4-Chloroaniline	127	11.737	11.737	(1.015)	28494	0.32835	0.3283	
	30 Hexachlorobutadiene	225	11.969	11.969	(1.035)	6307	0.20900	0.2090	
	31 4-Chloro-3-methylphenol	107	12.704	12.696	(1.099)	19456	0.29614	0.2961	
	32 2-Methylnaphthalene	142	13.006	13.006	(1.125)	28554	0.19751	0.1975	
	33 Hexachlorocyclopentadiene	237	13.478	13.478	(0.887)	5490	0.17179	0.1718	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
	34 2,4,6-Trichlorophenol	196	13.633	13.633	(0.897)	10802	0.27695	0.2769
	35 2,4,5-Trichlorophenol	196	13.710	13.702	(0.902)	11391	0.28027	0.2803
$	36 2-Fluorobiphenyl	172	13.795	13.795	(0.908)	29072	0.20879	0.2088
	37 2-Chloronaphthalene	162	14.004	14.004	(0.922)	23866	0.19998	0.2000
	38 2-Nitroaniline	65	14.268	14.267	(0.939)	14161	0.30730	0.3073
	39 Dimethylphthalate	163	14.693	14.701	(0.967)	24385	0.19020	0.1902
	40 Acenaphthylene	152	14.879	14.879	(0.979)	38524	0.19219	0.1922
	41 2,6-Dinitrotoluene	165	14.840	14.840	(0.977)	9236	0.31184	0.3118
*	42 Acenaphthene-d10	164	15.196	15.196	(1.000)	384479	4.00000	
	43 3-Nitroaniline	138	15.119	15.119	(0.995)	11505	0.28158	0.2816
	44 Acenaphthene	153	15.258	15.266	(1.004)	22698	0.19395	0.1939
	45 2,4-Dinitrophenol	184	15.359	15.335	(1.011)	497	0.02168	0.02168(M)
	46 Dibenzofuran	168	15.591	15.590	(1.026)	33382	0.19980	0.1998
	47 4-Nitrophenol	109	15.521	15.436	(1.021)	1402	0.06483	0.06483(M)
	48 2,4-Dinitrotoluene	165	15.645	15.645	(1.030)	11945	0.28452	0.2845
	50 Diethylphthalate	149	16.155	16.163	(1.063)	25406	0.19167	0.1917
	49 Fluorene	166	16.302	16.309	(1.073)	26861	0.16960	0.1696
	51 4-Chlorophenyl-phenylether	204	16.294	16.294	(1.072)	11780	0.17328	0.1733
	52 4-Nitroaniline	138	16.402	16.394	(1.079)	8037	0.22615	0.2262
	53 4,6-Dinitro-2-methylphenol	198	16.494	16.494	(0.904)	4699	0.20016	0.2002
	54 N-Nitrosodiphenylamine	169	16.548	16.548	(0.907)	17523	0.19011	0.1901
$	55 2,4,6-Tribromophenol	330	16.841	16.841	(1.108)	2788	0.19100	0.1910
	56 4-Bromophenyl-phenylether	248	17.304	17.304	(0.949)	5805	0.18680	0.1868
	57 Hexachlorobenzene	284	17.621	17.621	(0.966)	6690	0.20403	0.2040
	58 Pentachlorophenol	266	17.992	17.977	(0.986)	2057	0.09107	0.09107(M)
*	59 Phenanthrene-d10	188	18.240	18.240	(1.000)	678623	4.00000	
	60 Phenanthrene	178	18.286	18.294	(1.003)	38655	0.19936	0.1994
	61 Anthracene	178	18.379	18.387	(1.008)	34239	0.18329	0.1833
	62 Carbazole	167	18.712	18.712	(1.026)	27483	0.16536	0.1654
	63 Di-n-butylphthalate	149	19.509	19.509	(1.070)	34134	0.16203	0.1620
	64 Fluoranthene	202	20.677	20.677	(0.888)	34573	0.22419	0.2242
	65 Pyrene	202	21.103	21.103	(0.906)	36468	0.23059	0.2306
$	66 Terphenyl-d14	244	21.389	21.389	(0.918)	26055	0.24336	0.2434
	67 Butylbenzylphthalate	149	22.310	22.310	(0.958)	13984	0.20183	0.2018
	68 Benzo(a)anthracene	228	23.263	23.263	(0.999)	27759	0.19861	0.1986
*	69 Chrysene-d12	240	23.294	23.294	(1.000)	379052	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.224	23.216	(0.997)	20441	0.50999	0.5100
	71 Chrysene	228	23.332	23.340	(1.002)	24062	0.19022	0.1902
	72 bis(2-Ethylhexyl)phthalate	149	23.332	23.332	(0.960)	17448	0.20508	0.2051
*	134 Di-n-octylphthalate-d4	153	24.316	24.316	(1.000)	646291	4.00000	
	73 Di-n-octylphthalate	149	24.331	24.331	(1.001)	34651	0.20856	0.2086
	74 Benzo(b)fluoranthene	252	25.160	25.159	(0.970)	16214	0.18713	0.1871
	75 Benzo(k)fluoranthene	252	25.198	25.198	(0.972)	18568	0.21618	0.2162
	76 Benzo(a)pyrene	252	25.818	25.818	(0.996)	13291	0.17938	0.1794
*	77 Perylene-d12	264	25.934	25.934	(1.000)	245193	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	28.626	28.610	(1.104)	11686	0.14491	0.1449
	79 Dibenzo(a,h)anthracene	278	28.649	28.626	(1.105)	9576	0.14090	0.1409
	80 Benzo(g,h,i)perylene	276	29.411	29.403	(1.134)	10108	0.15209	0.1521(M)
	90 N-Nitrosodimethylamine	74	4.689	4.697	(1.000)	11768	0.26809	0.2681
	91 Aniline	93	8.513	8.513	(1.000)	36551	0.37474	0.3747
	93 Benzidine	184	20.917	20.909	(0.898)	16903	0.27237	0.2724
	103 Pyridine	79	4.743	4.712	(1.000)	18433	0.13560	0.1356
	105 1-methylnaphthalene	142	13.231	13.230	(1.145)	25403	0.19395	0.1940
	111 Azobenzene (1,2-DP-Hydrazine)	77	16.618	16.625	(1.094)	30076	0.19001	0.1900

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.198	25.159	(0.972)	34327	0.41716	0.4172
120 2,3,4,6-Tetrachlorophenol	232	15.931	15.923	(1.048)	3906	0.10028	0.1003

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1403172318.D
Lab Smp Id: SLC0335-LCV2
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt14.i\20230317.b\ABN.m
Misc Info:

Calibration Date: 17-MAR-2023
Calibration Time: 23:31
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	231017	115509	462034	204038	-11.68
27 Naphthalene-d8	843789	421895	1687578	775937	-8.04
42 Acenaphthene-d10	432455	216228	864910	384479	-11.09
59 Phenanthrene-d10	793780	396890	1587560	678623	-14.51
69 Chrysene-d12	411057	205529	822114	379052	-7.79
134 Di-n-octylphthala	799010	399505	1598020	646291	-19.11
77 Perylene-d12	254782	127391	509564	245193	-3.76

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.06	8.56	9.56	9.06	0.00
27 Naphthalene-d8	11.57	11.07	12.07	11.56	-0.07
42 Acenaphthene-d10	15.20	14.70	15.70	15.20	0.00
59 Phenanthrene-d10	18.24	17.74	18.74	18.24	0.00
69 Chrysene-d12	23.29	22.79	23.79	23.29	0.00
134 Di-n-octylphthala	24.32	23.82	24.82	24.32	0.00
77 Perylene-d12	25.93	25.43	26.43	25.93	0.00

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

REVIEW SUMMARY FOR FILE - NT1403172318.D

Lab ID: SLC0335-LCV2
nt14.i, ABN.m, 18-MAR-2023 00:43

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
1.038	1.000	0.0377	Benzyl alcohol
1.063	1.000	0.0634	2,2'-oxybis(1-Chloropropane)
1.021	1.016	0.0056	4-Nitrophenol

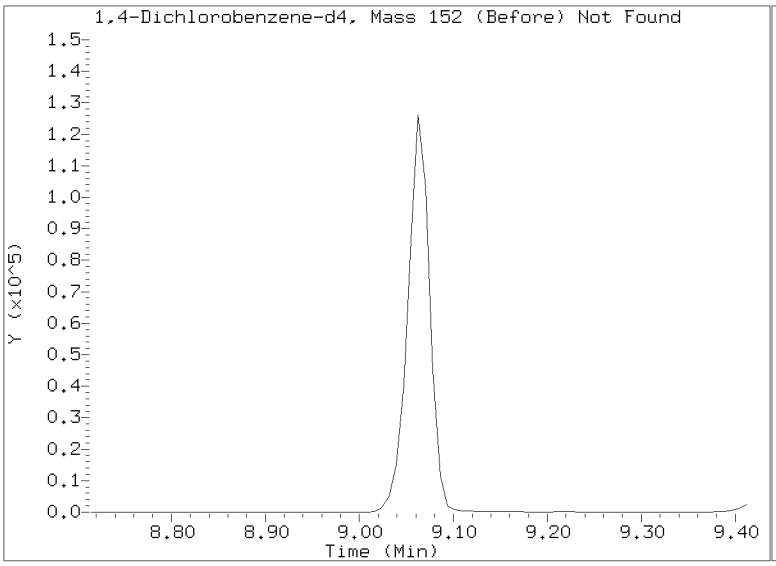
RRT check based on Ccal File: NT1403172316.D

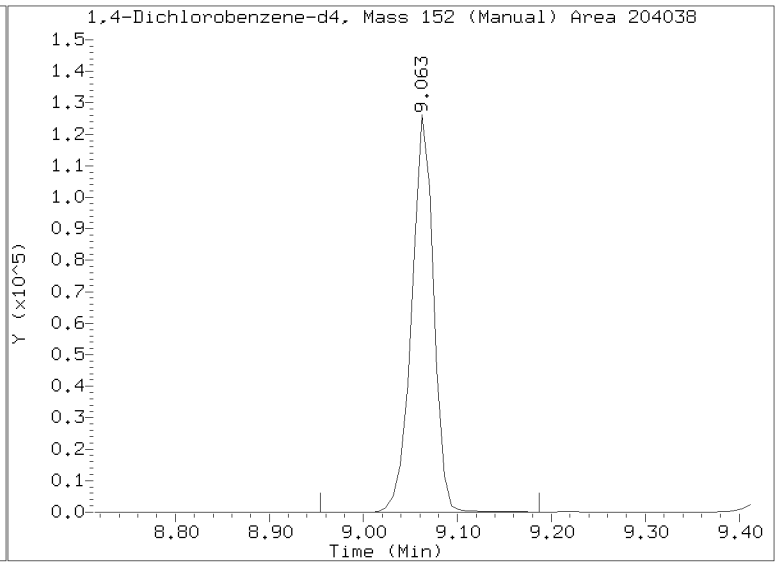
On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

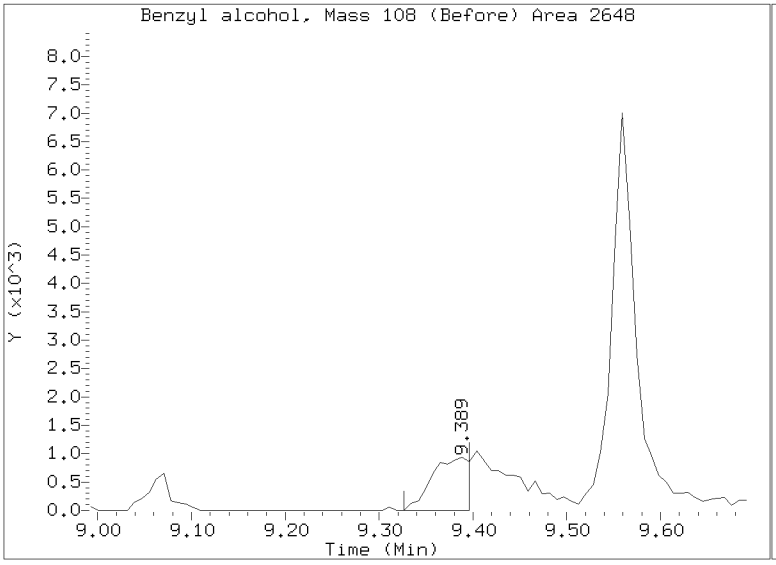
* Only compounds listed in the work order have been verified by the analyst *

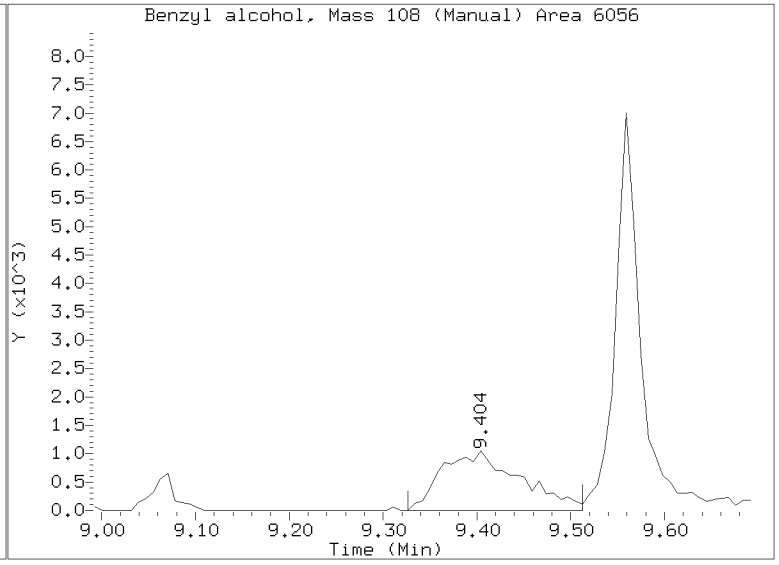
Quant Ion Manual Peak Adjustment Report

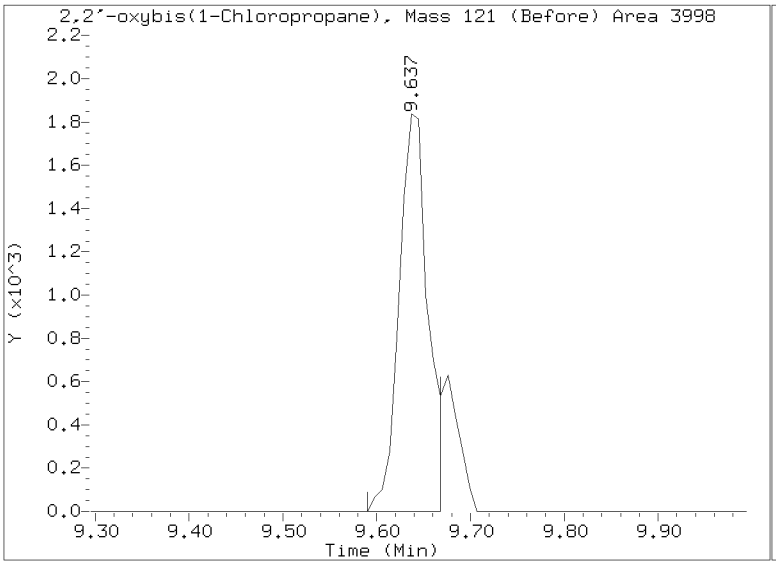
Datafile: //target/share/chem3/nt14.i/20230317.b/NT1403172318.D
Injection Date: 18-MAR-2023 00:43
Lab ID:SLC0335-LCV2 Client ID:
Report Date: 03/22/2023 09:49

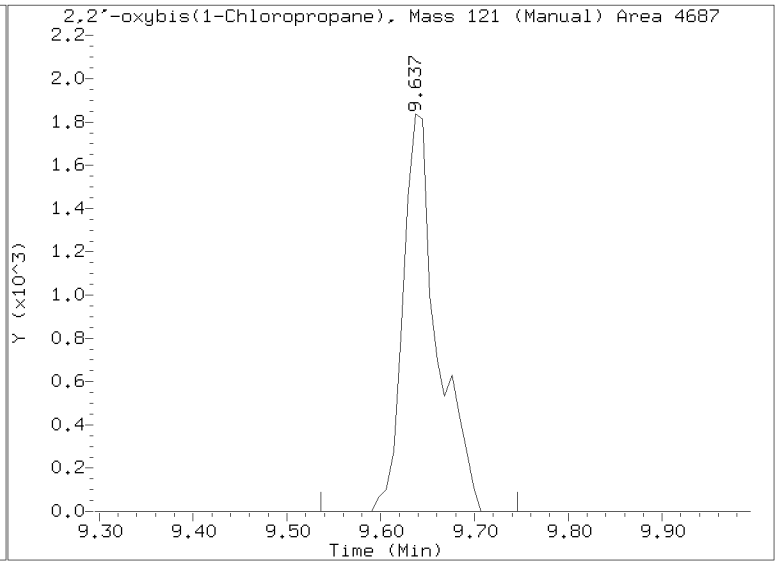






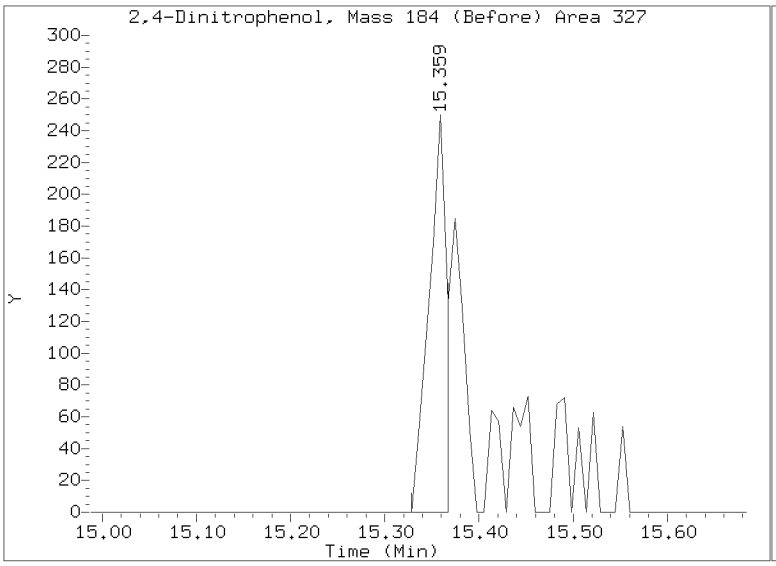


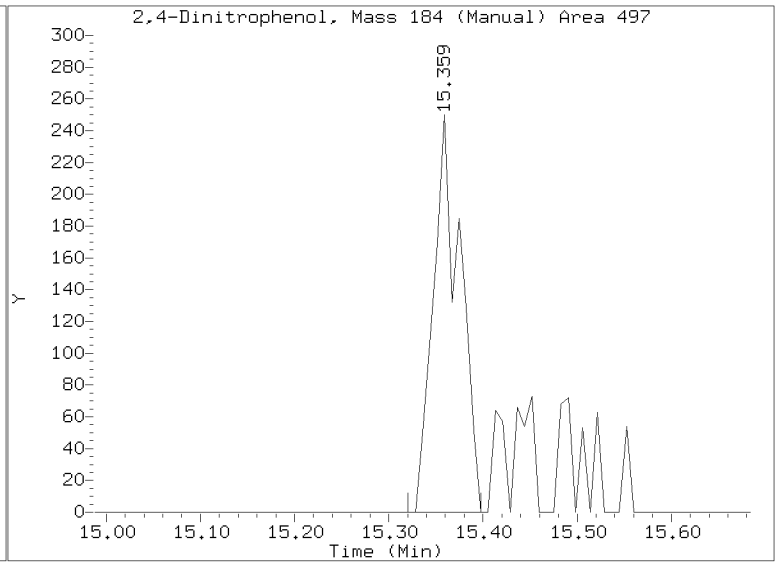


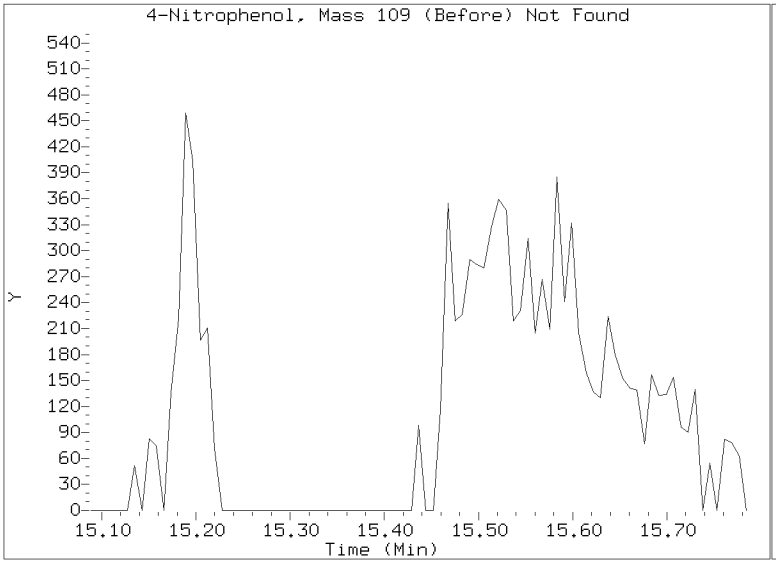


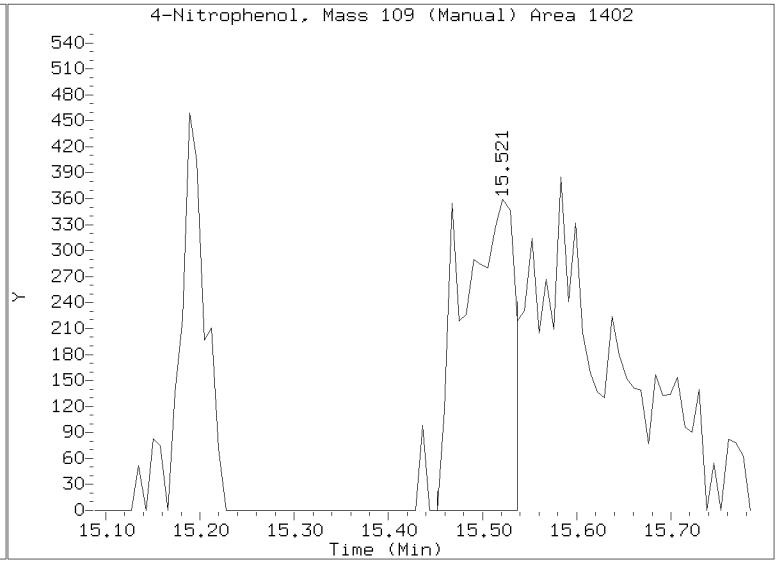
Quant Ion Manual Peak Adjustment Report

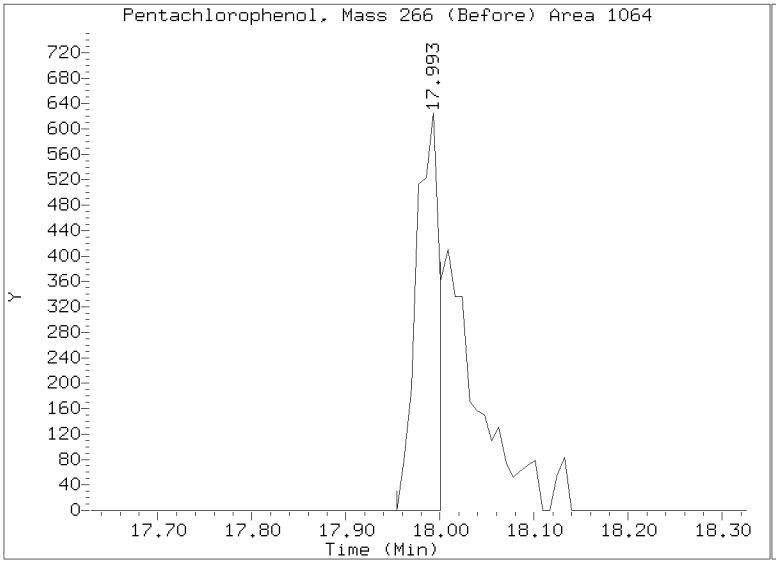
Datafile: //target/share/chem3/nt14.i/20230317.b/NT1403172318.D
Injection Date: 18-MAR-2023 00:43
Lab ID:SLC0335-LCV2 Client ID:
Report Date: 03/22/2023 09:49

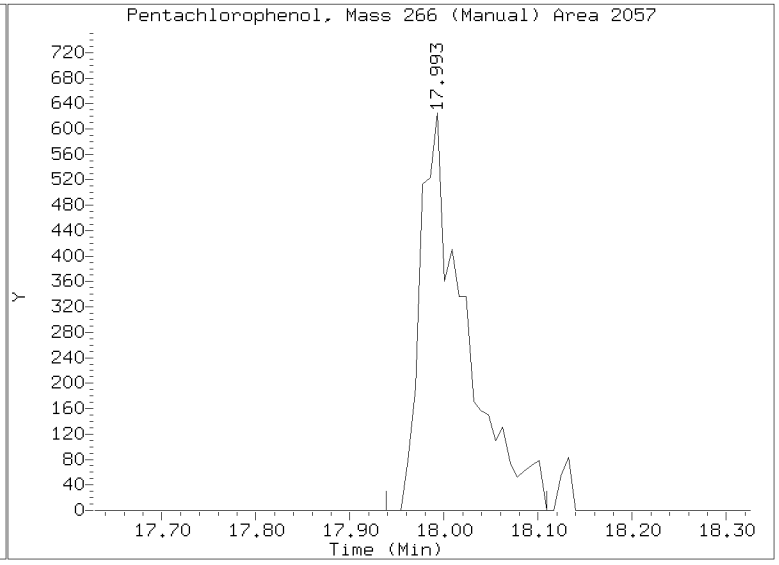












Quant Ion Manual Peak Adjustment Report

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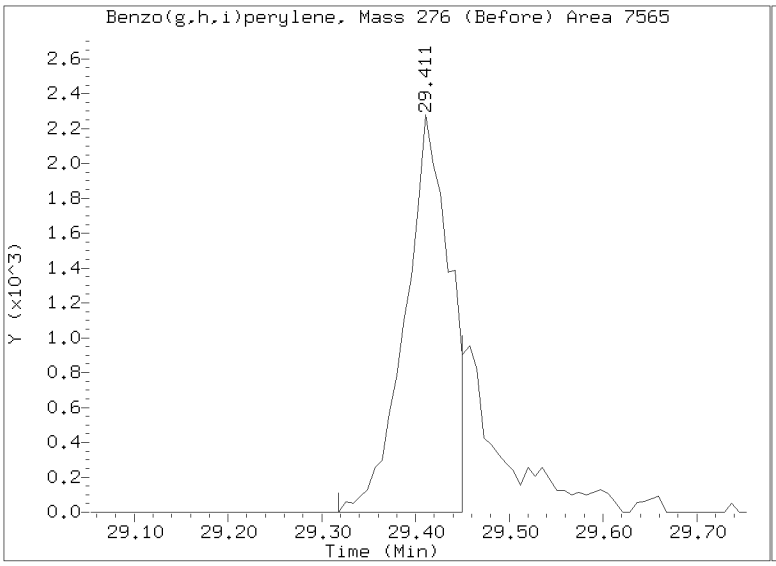
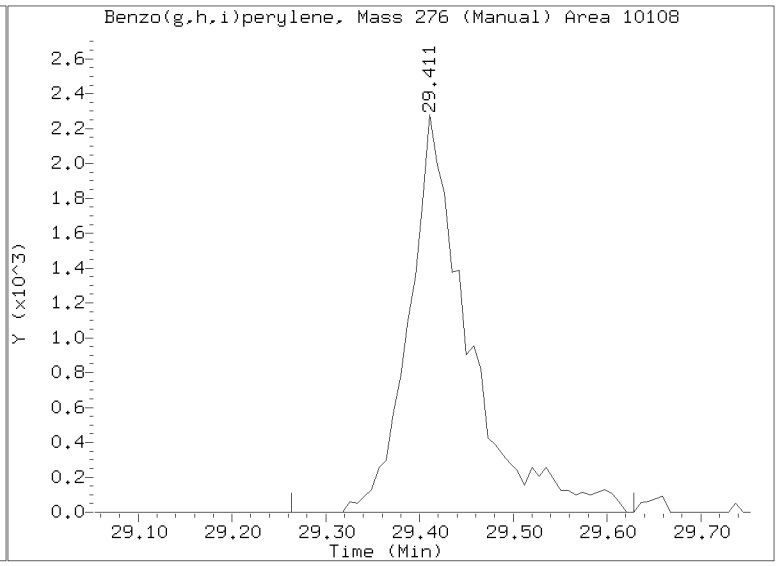
Injection Date: 18-MAR-2023 00:43
Lab ID:SLC0335-LCV2 Client ID:
Report Date: 03/22/2023 09:49





Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT14	Calibration:	GC00048
Lab File ID:	NT1403182331.D	Calibration Date:	03/15/2023
Sequence:	SLC0355	Injection Date:	03/19/23
Lab Sample ID:	SLC0355-CCV1	Injection Time:	11:04
Sequence Name:	Calibration Check		

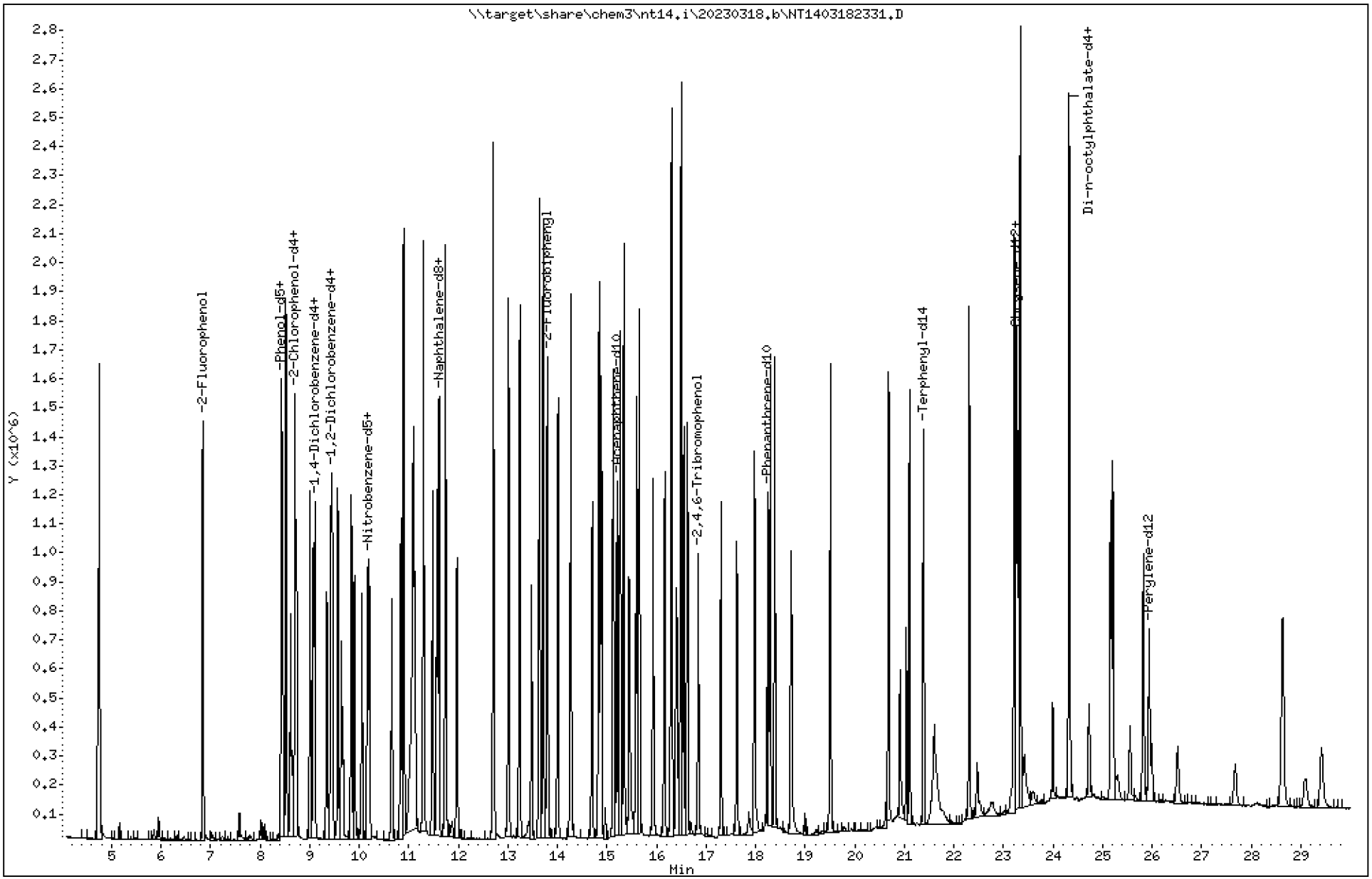
		CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Phenol	A	5.0000	4.7	1.9011440	1.7695660		-6.9	+/-50
4-Methylphenol	A	5.0000	4.4	1.5914380	1.4162900		-11.0	+/-50
Naphthalene	A	5.0000	4.9	1.0686200	1.0466850		-2.1	+/-50
2-Methylnaphthalene	A	5.0000	4.9	0.7452524	0.7337216		-1.5	+/-50
Acenaphthylene	A	5.0000	4.9	2.0854140	2.0372820		-2.3	+/-50
Dimethylphthalate	A	5.0000	4.9	1.3338450	1.3172800		-1.2	+/-50
Acenaphthene	A	5.0000	4.8	1.2175690	1.1772130		-3.3	+/-50
Dibenzofuran	A	5.0000	4.9	1.7382550	1.6992520		-2.2	+/-50
Fluorene	A	5.0000	4.7	1.6477120	1.5627290		-5.2	+/-50
Phenanthrene	A	5.0000	4.8	1.1428510	1.0896860		-4.7	+/-50
Anthracene	A	5.0000	5.0	1.1010610	1.0982380		-0.3	+/-50
Fluoranthene	A	5.0000	6.0	1.6273660	1.9475310		19.7	+/-50
Pyrene	A	5.0000	5.7	1.6688810	1.9101170		14.5	+/-50
Butylbenzylphthalate	A	5.0000	6.4	0.7311588	0.9384063		28.3	+/-50
Benzo(a)anthracene	A	5.0000	5.0	1.4748830	1.4620690		-0.9	+/-50
Chrysene	A	5.0000	5.1	1.3348290	1.3732190		2.9	+/-50
bis(2-Ethylhexyl)phthalate	A	5.0000	5.5	0.5265649	0.5781474		9.8	+/-50
Benzofluoranthenes, Total	A	10.000	10.1	1.3424190	1.3489460		0.6	+/-50
Benzo(a)pyrene	A	5.0000	5.1	1.2087150	1.2369200		2.3	+/-50
Indeno(1,2,3-cd)pyrene	A	5.0000	3.6	1.3155660	0.9463908		-28.1	+/-50
Dibenzo(a,h)anthracene	A	5.0000	3.9	1.1087420	0.8575581		-22.7	+/-50
Benzo(g,h,i)perylene	A	5.0000	2.9	1.0842080	0.6349836		-41.4	+/-50
2-Fluorophenol	A	7.5000	7.03	1.3587350	1.2742920		-6.2	+/-50
Phenol-d5	A	7.5000	7.17	1.7888720	1.7095500		-4.4	+/-50
2-Chlorophenol-d4	A	7.5000	7.49	1.4103050	1.4093630		-0.07	+/-50
1,2-Dichlorobenzene-d4	A	5.0000	4.99	0.9421955	0.9407396		-0.2	+/-50
Nitrobenzene-d5	A	5.0000	4.97	0.4233007	0.4203513		-0.7	+/-50
2-Fluorobiphenyl	A	5.0000	4.96	1.4485960	1.4377130		-0.8	+/-50
2,4,6-Tribromophenol	A	7.5000	7.57	0.1518639	0.1587002		0.9	+/-50
p-Terphenyl-d14	A	5.0000	5.76	1.1297810	1.3025530		15.3	+/-50

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20230318.b\NT1403182331.D
Date : 19-MAR-2023 11:04
Client ID:
Sample Info: SLC0355-CCV1

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



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Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

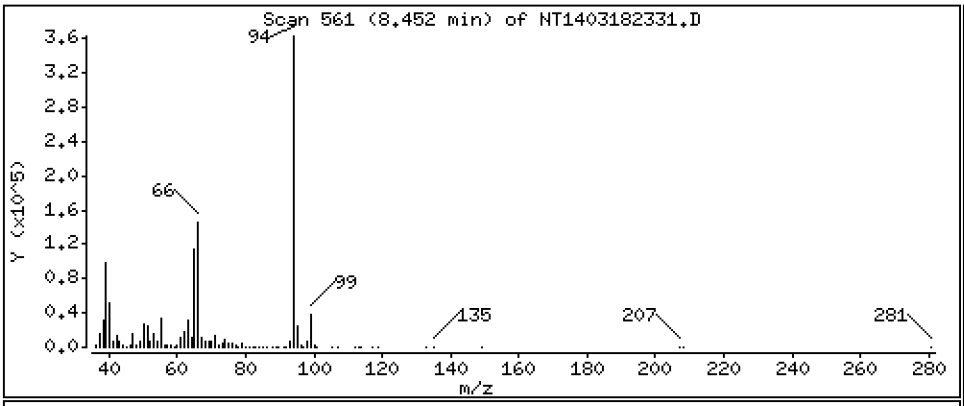
Operator: JGR

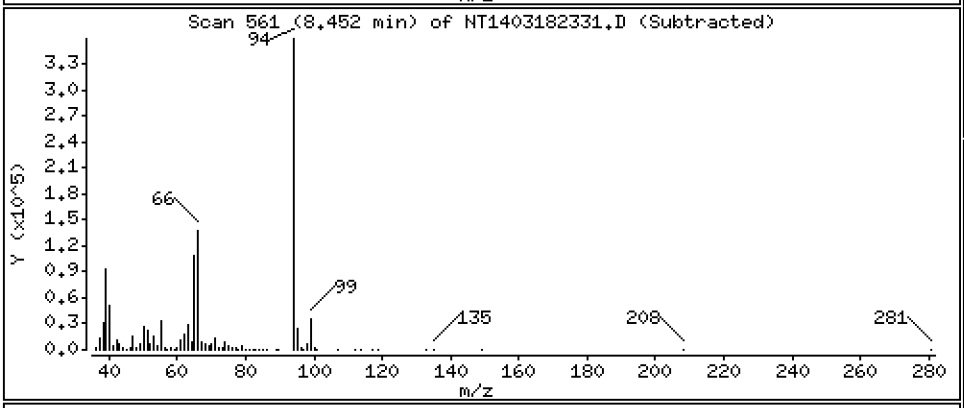
Column phase: ZB-5msi

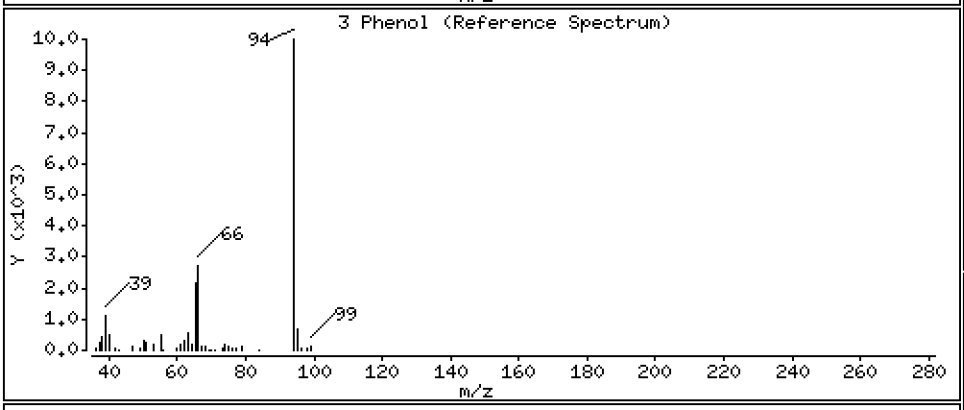
Column diameter: 0.25

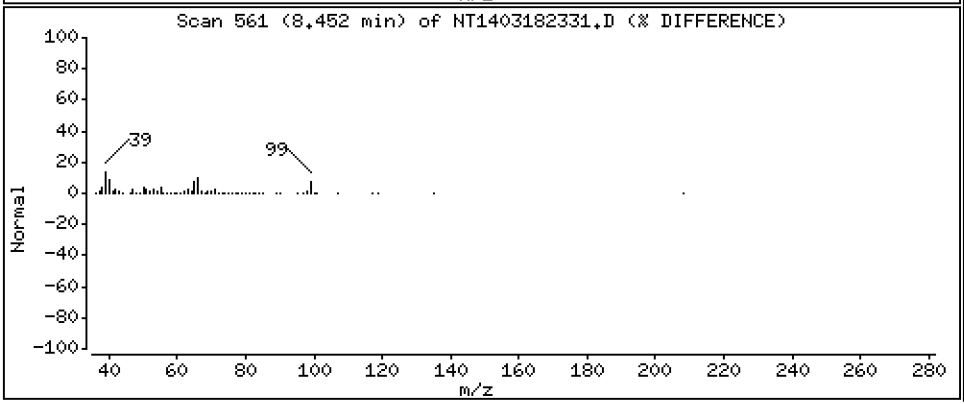
3 Phenol

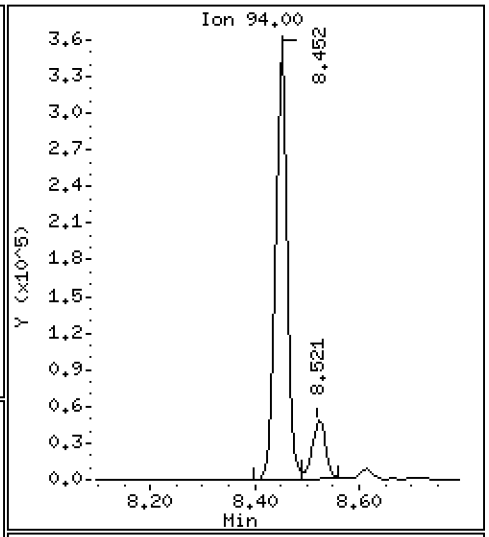
Concentration: 4.654 ug/mL

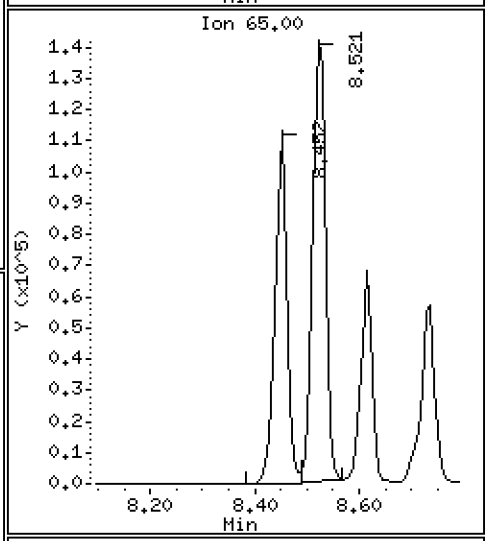


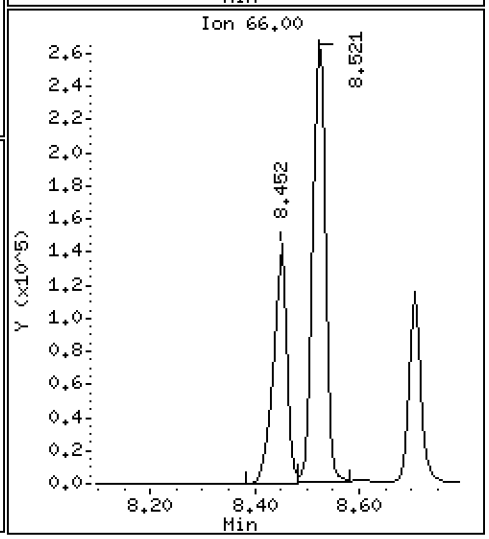












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Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

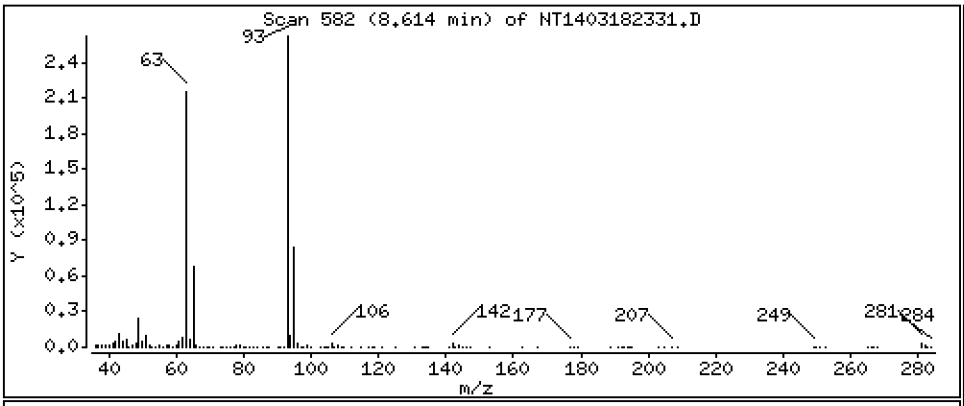
Operator: JGR

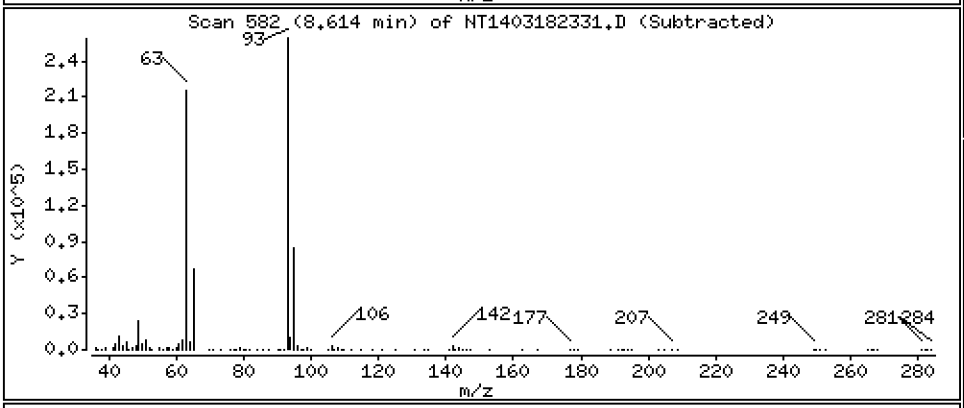
Column phase: ZB-5msi

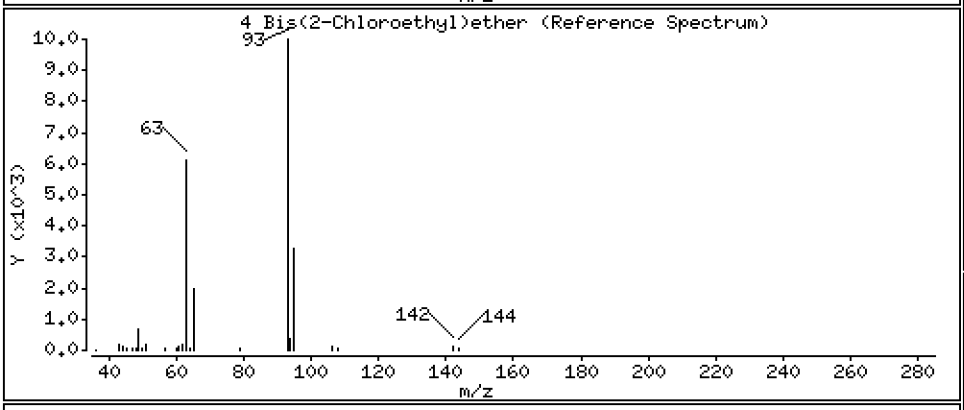
Column diameter: 0.25

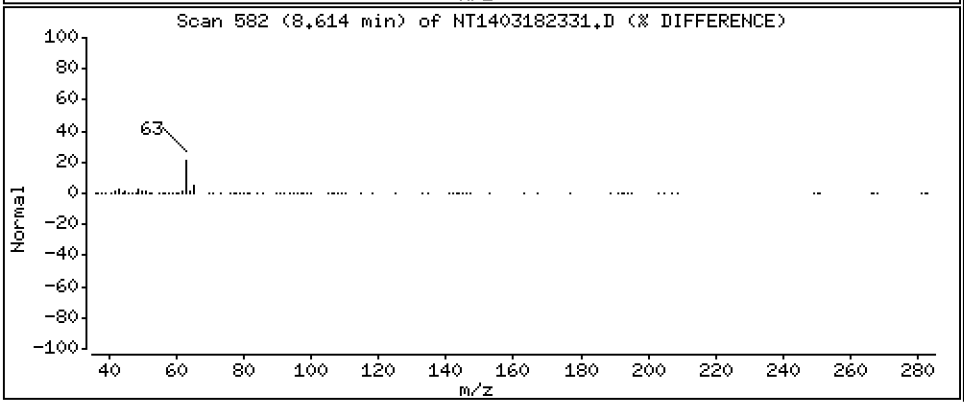
4 Bis(2-Chloroethyl)ether

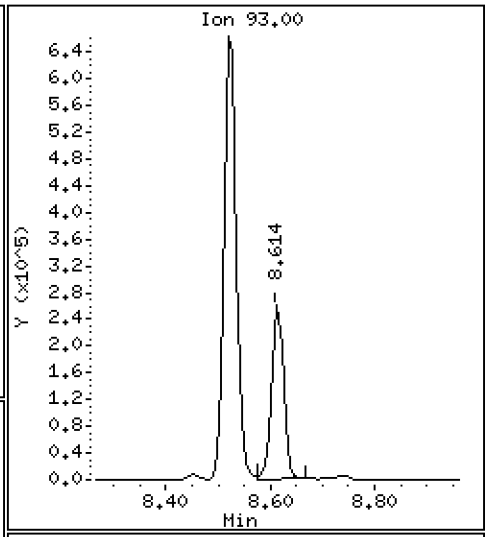
Concentration: 4.708 ug/mL

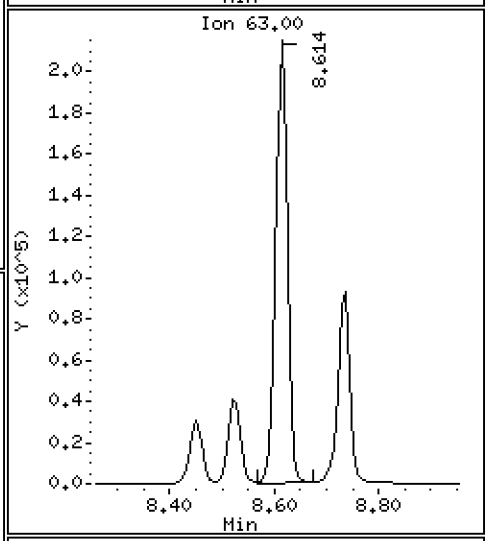


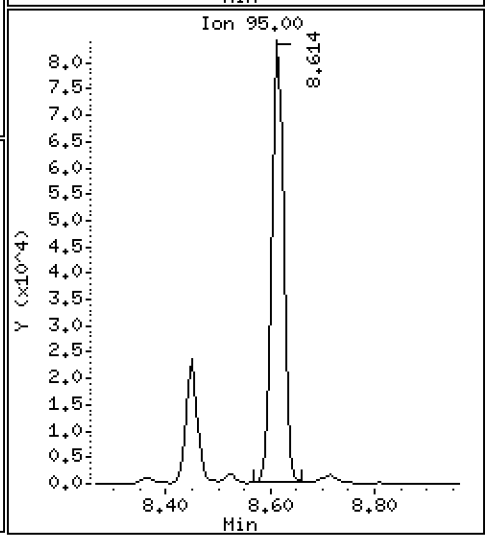












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Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

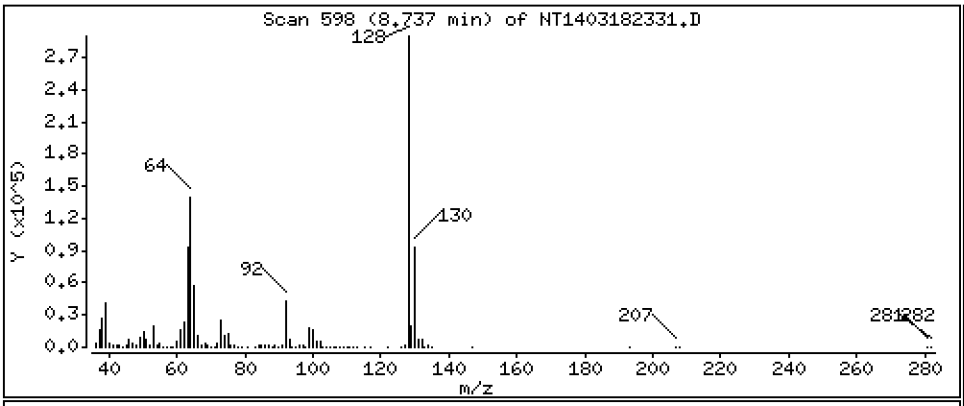
Operator: JGR

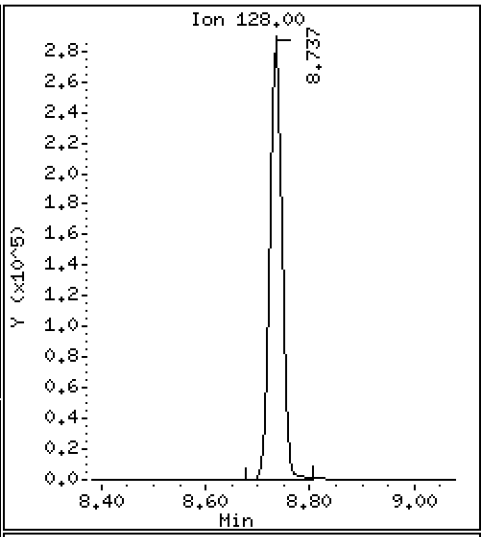
Column phase: ZB-5msi

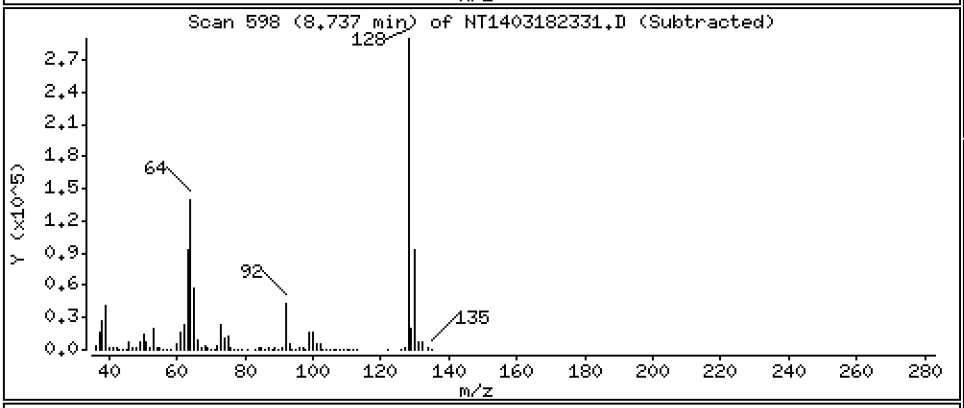
Column diameter: 0.25

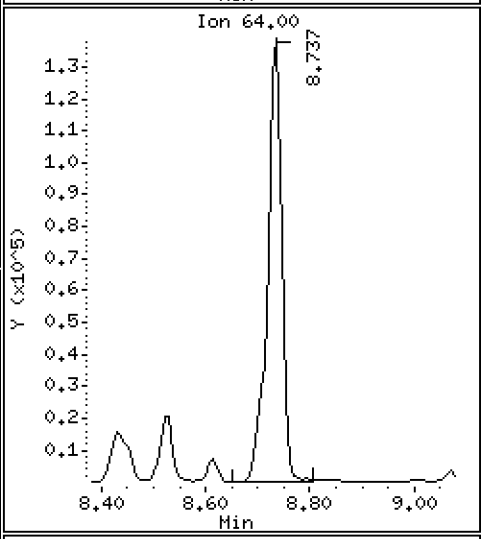
6 2-Chlorophenol

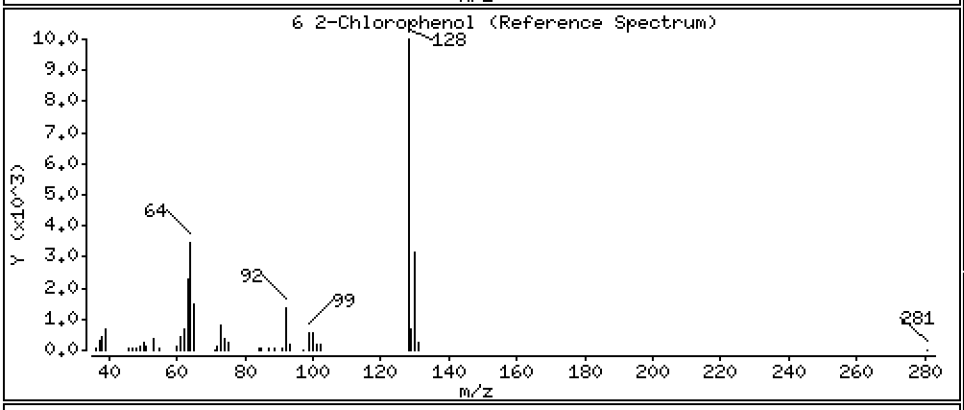
Concentration: 4.896 ug/mL

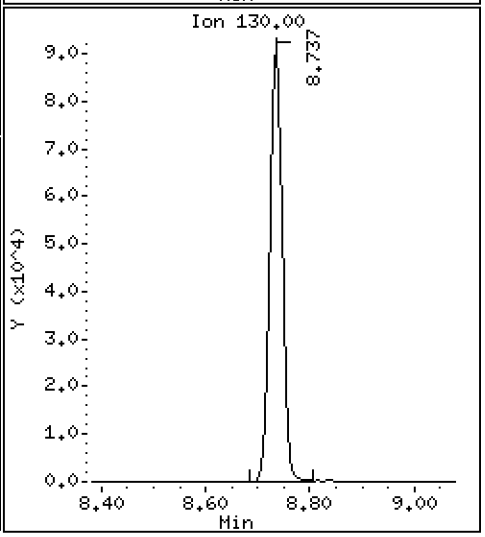


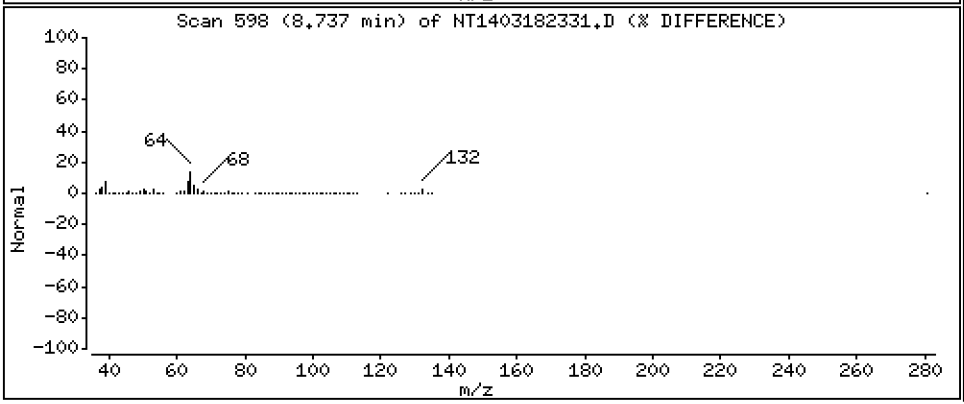












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Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

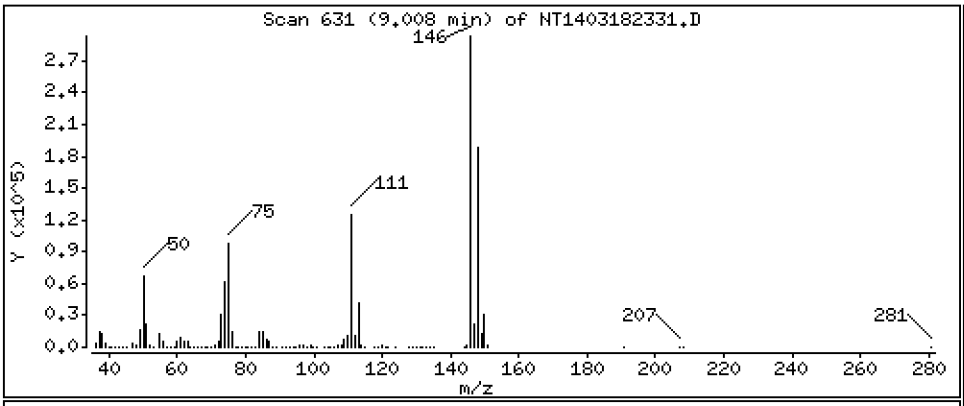
Operator: JGR

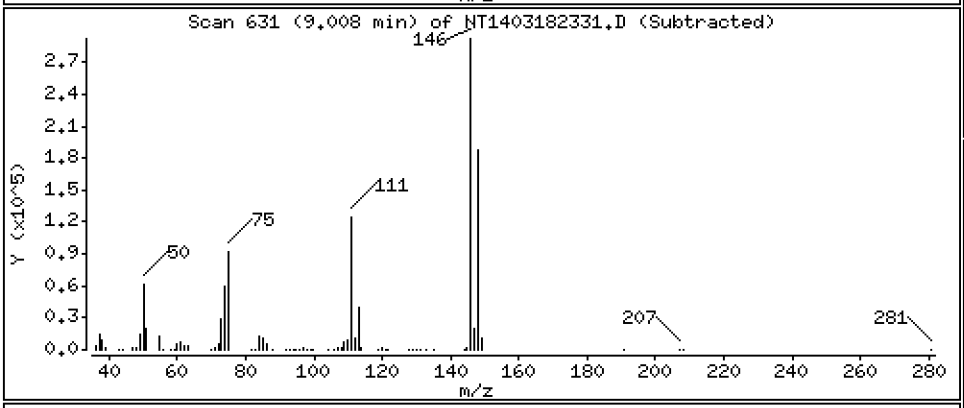
Column phase: ZB-5msi

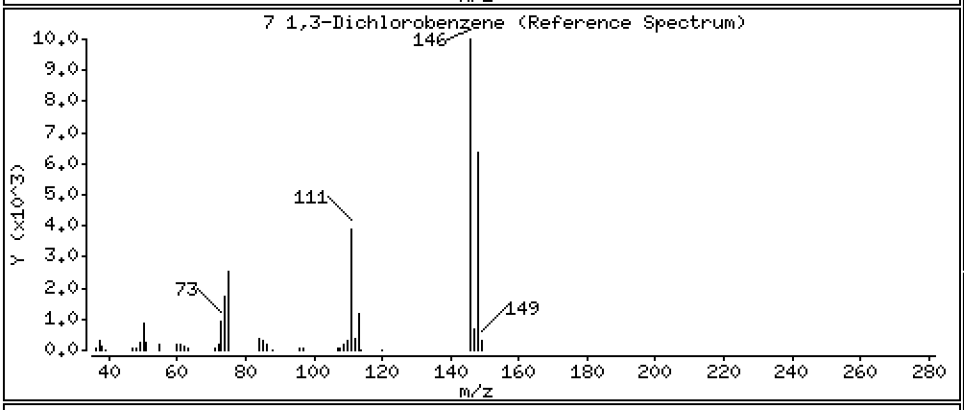
Column diameter: 0.25

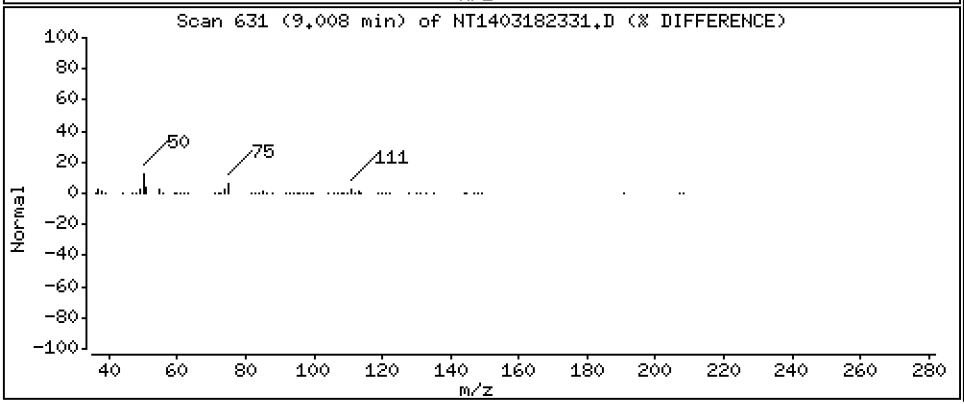
7 1,3-Dichlorobenzene

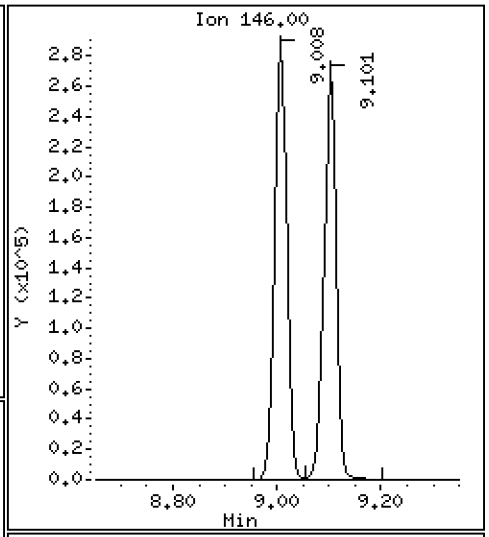
Concentration: 4.898 ug/mL

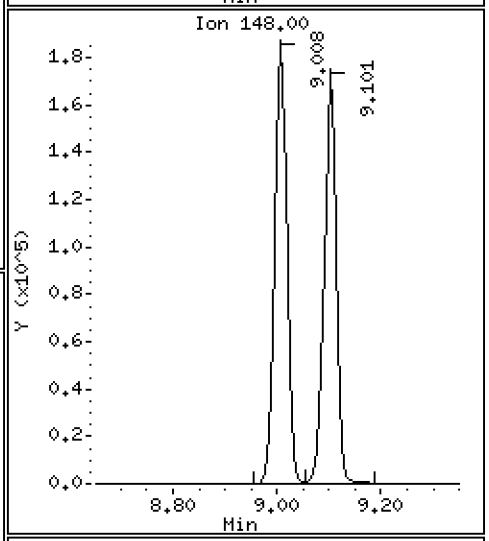


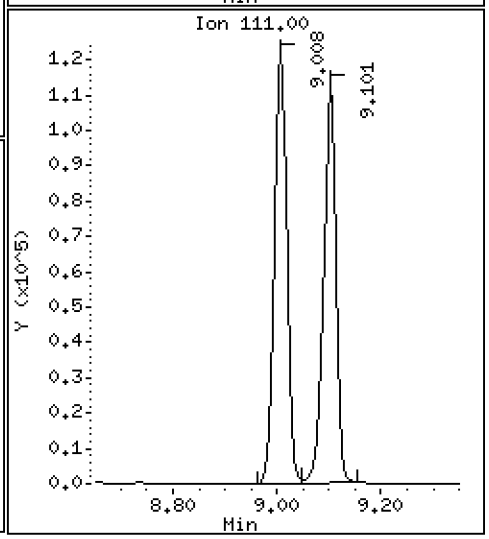












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Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

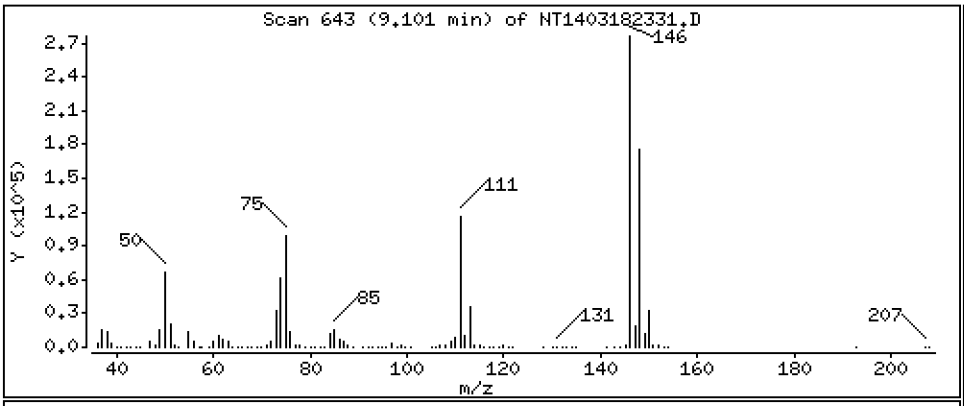
Operator: JGR

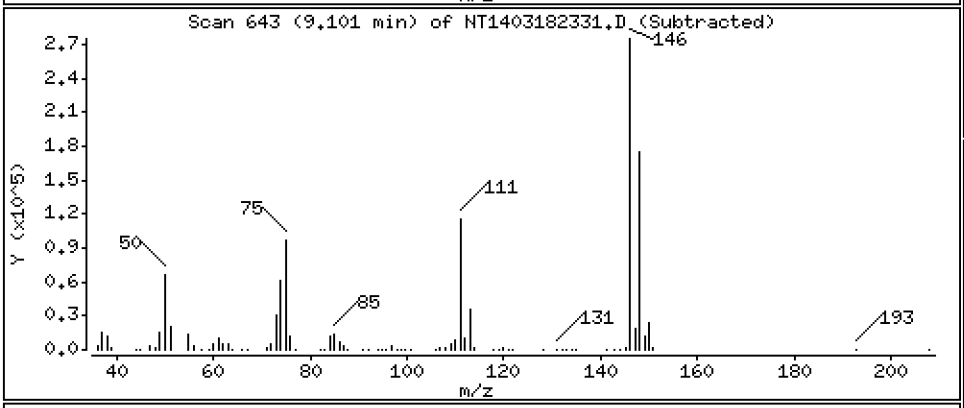
Column phase: ZB-5msi

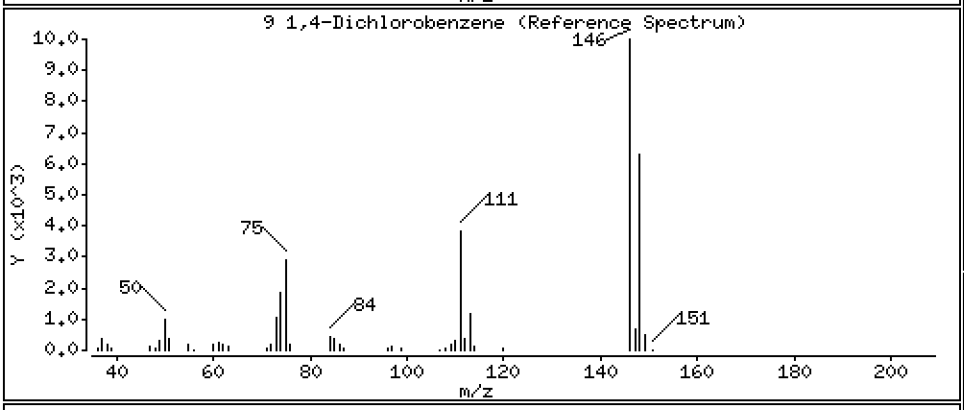
Column diameter: 0.25

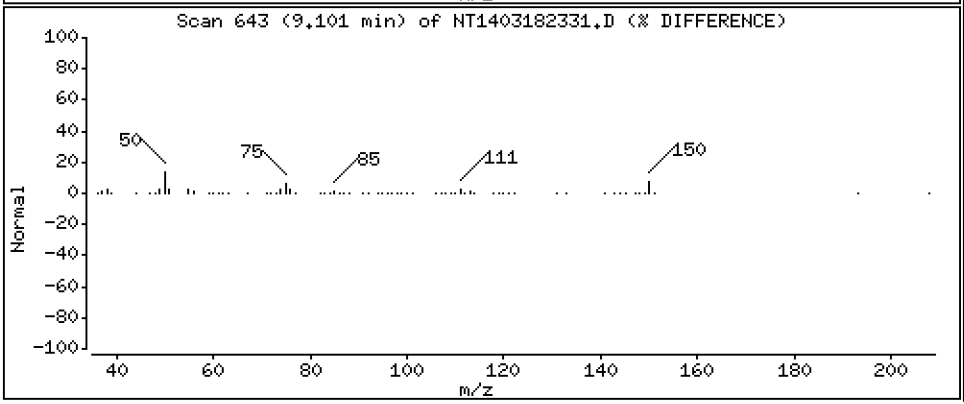
9 1,4-Dichlorobenzene

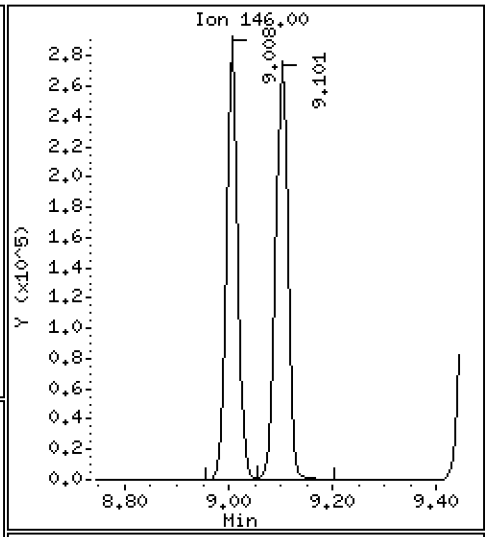
Concentration: 4.915 ug/mL

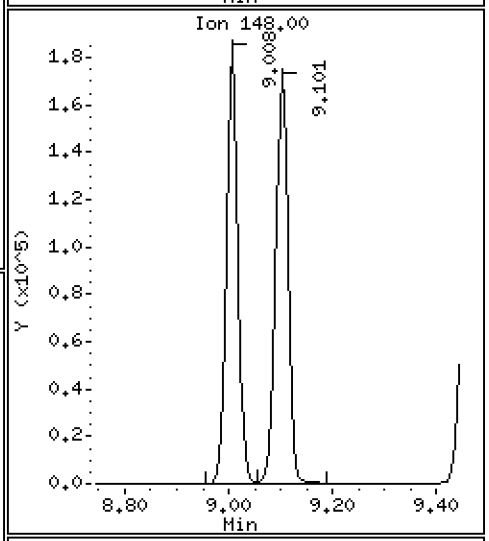


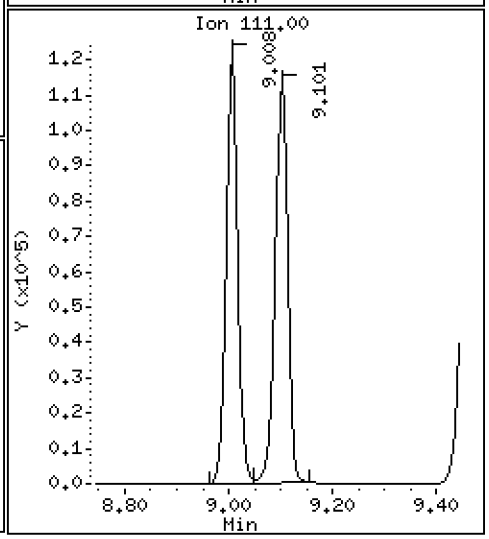












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Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

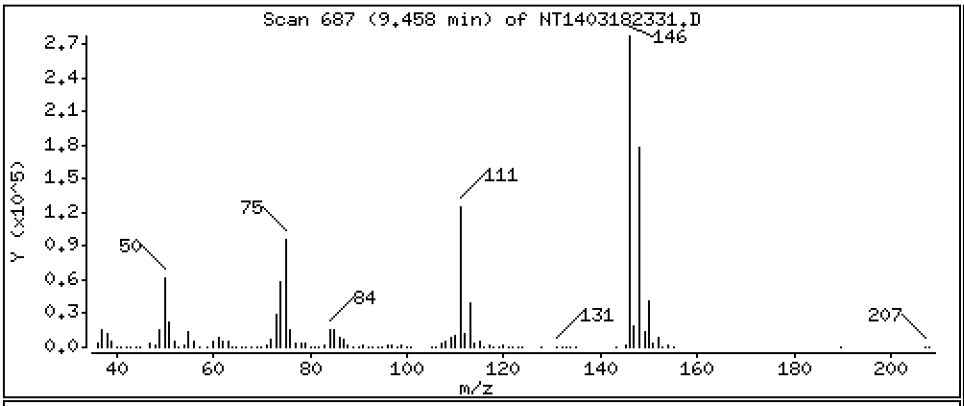
Operator: JGR

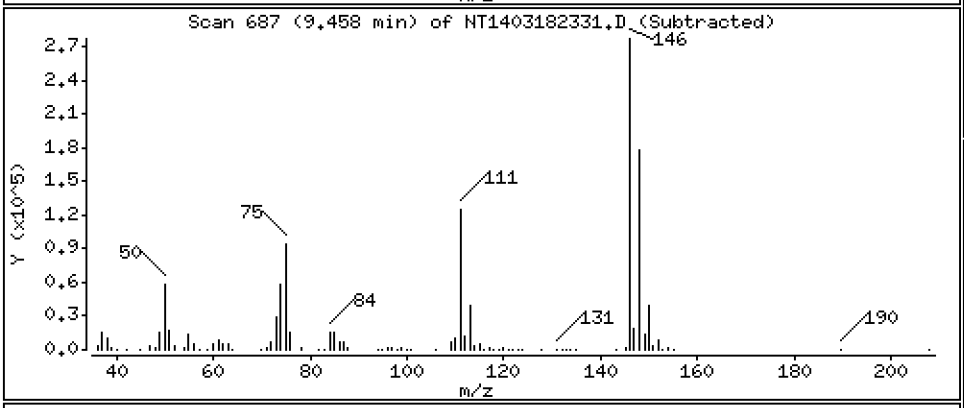
Column phase: ZB-5msi

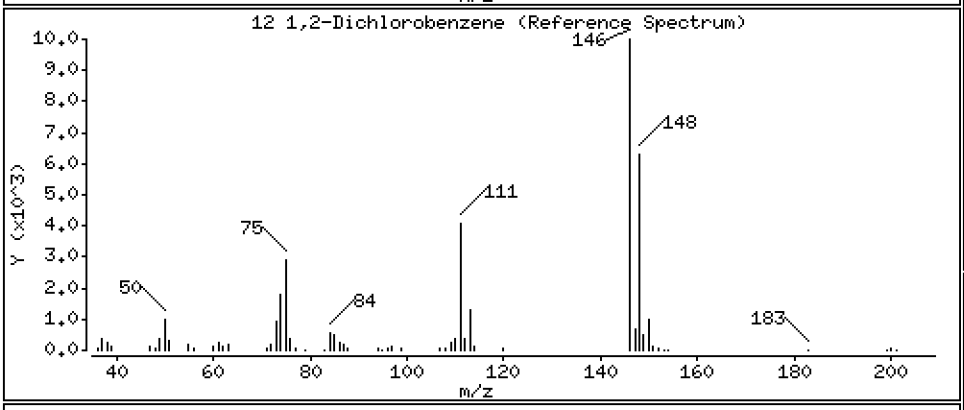
Column diameter: 0.25

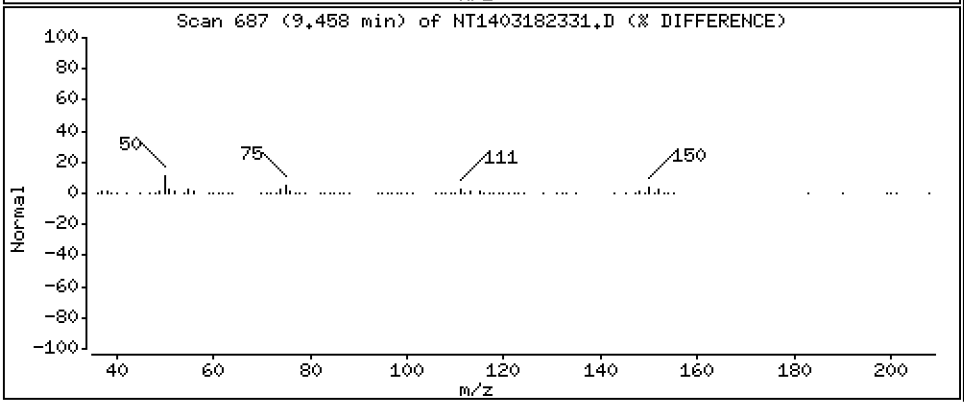
12 1,2-Dichlorobenzene

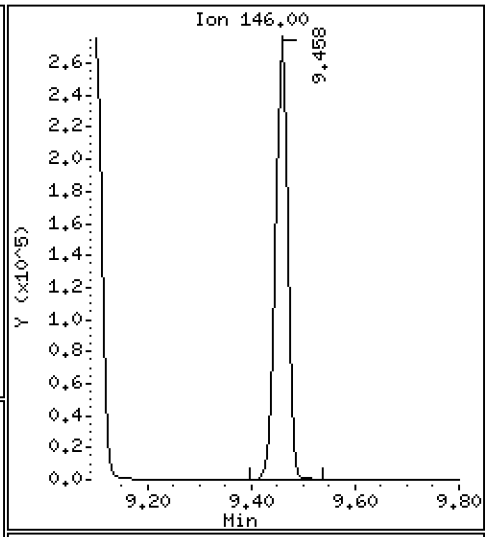
Concentration: 4.932 ug/mL

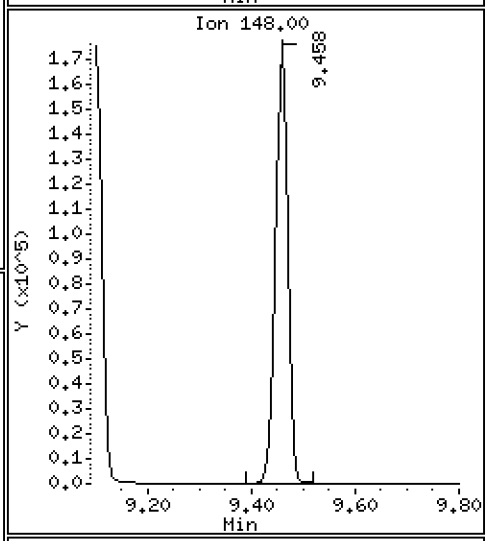


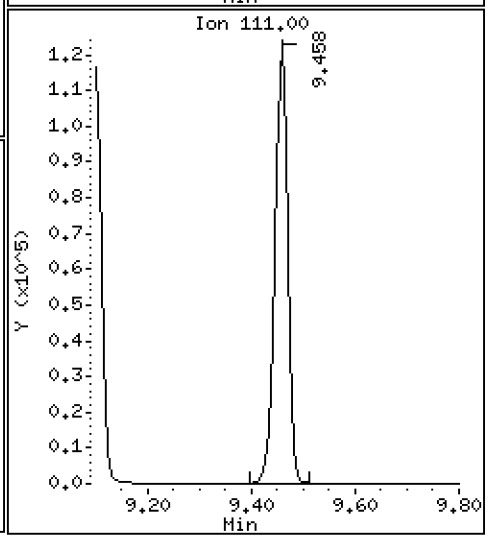












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Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

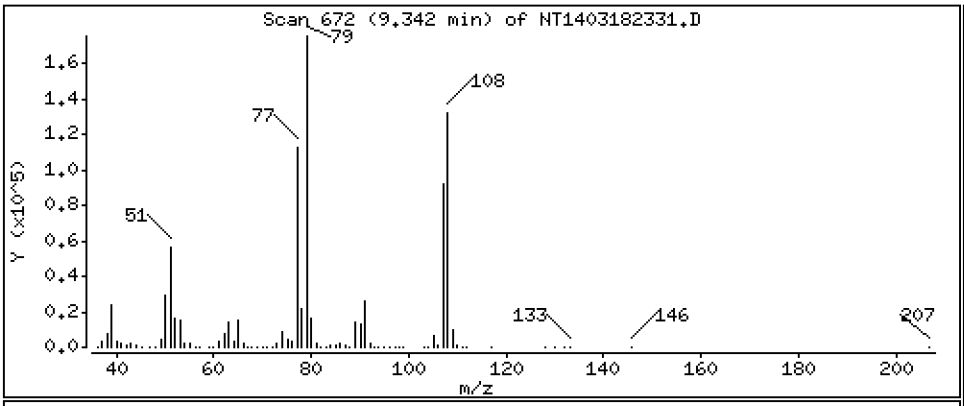
Operator: JGR

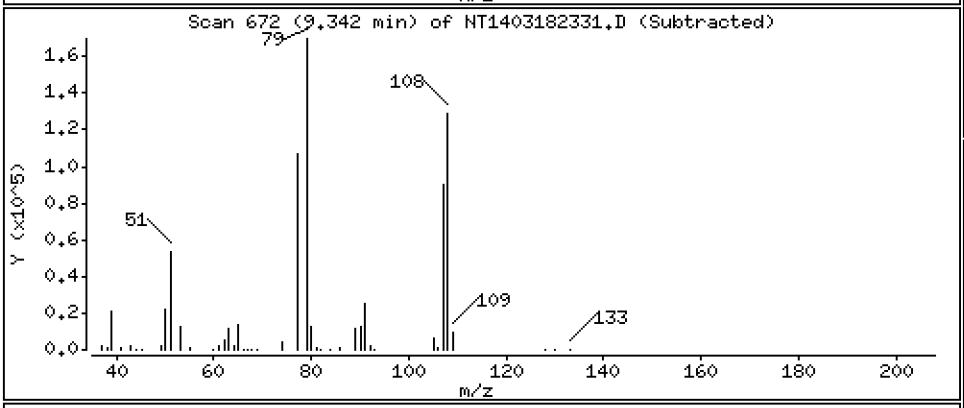
Column phase: ZB-5msi

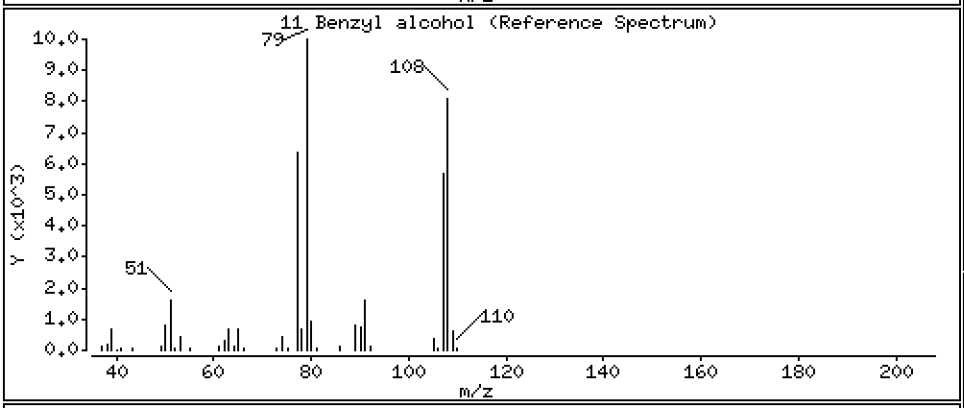
Column diameter: 0.25

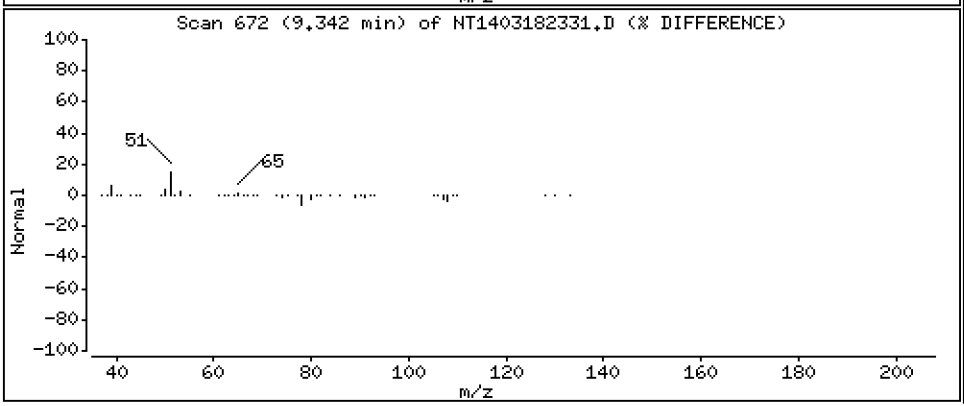
11 Benzyl alcohol

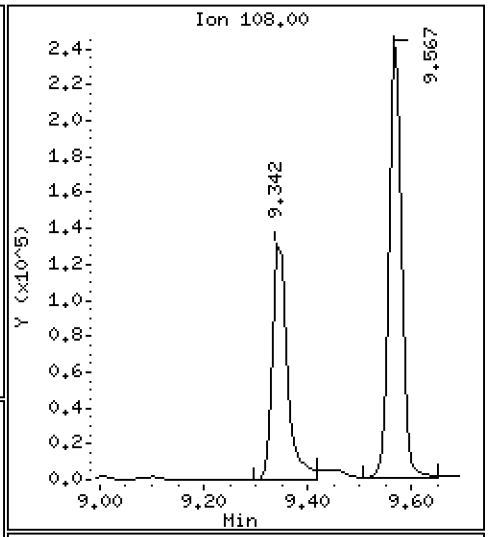
Concentration: 4.739 ug/mL

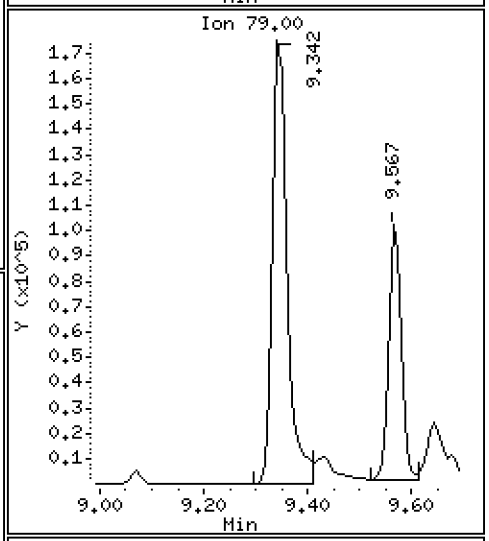


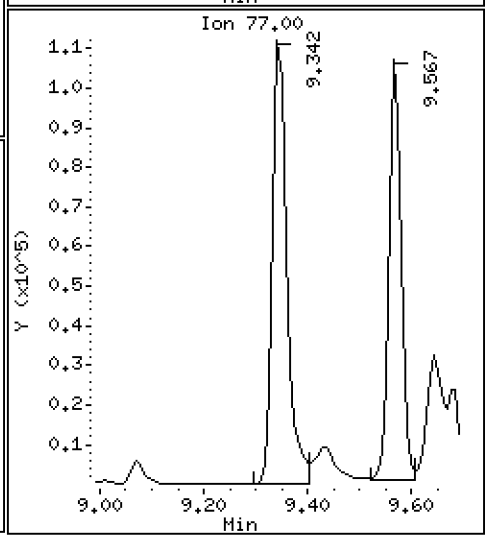












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Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

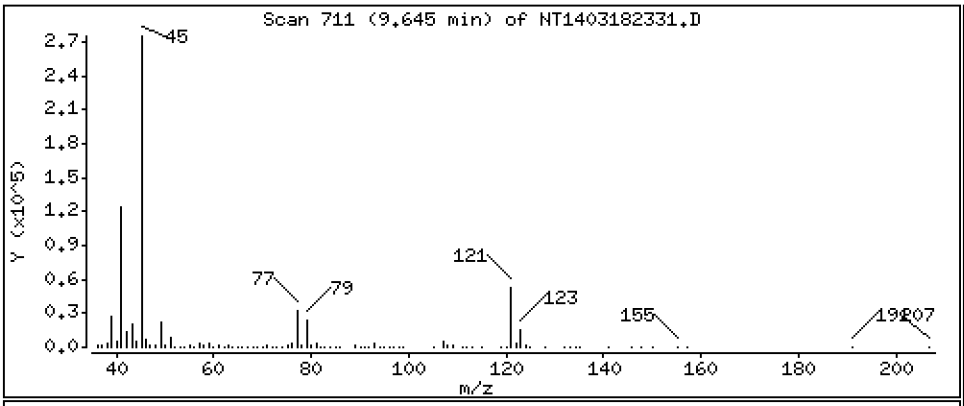
Operator: JGR

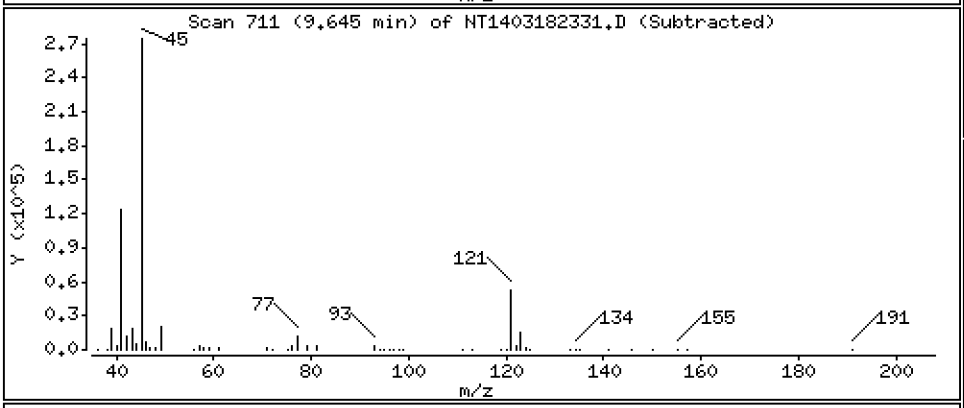
Column phase: ZB-5msi

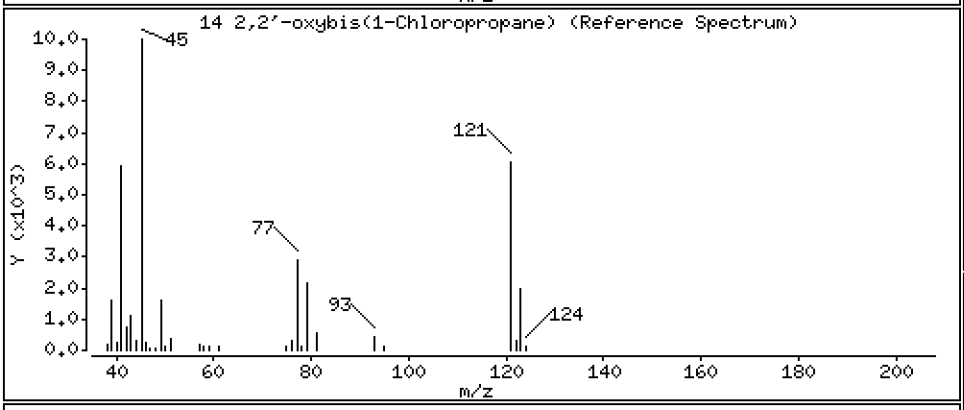
Column diameter: 0.25

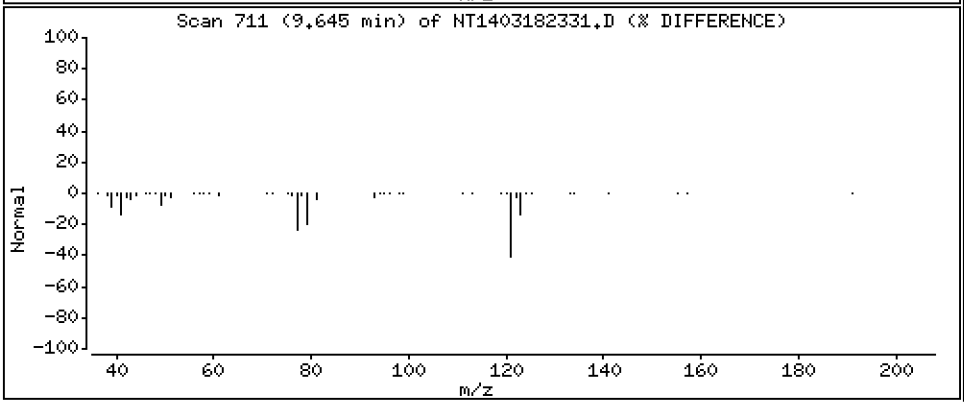
14 2,2'-oxybis(1-Chloropropane)

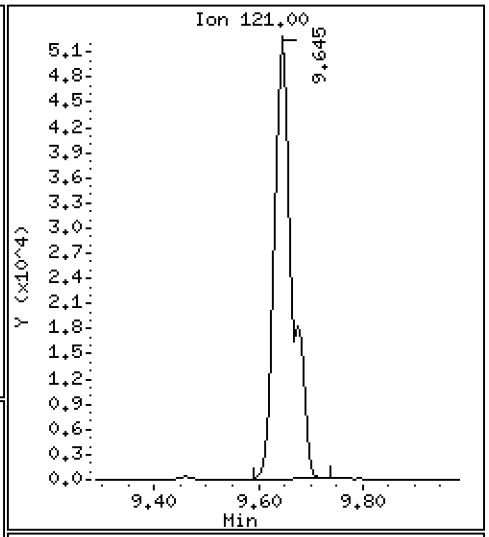
Concentration: 5.336 ug/mL

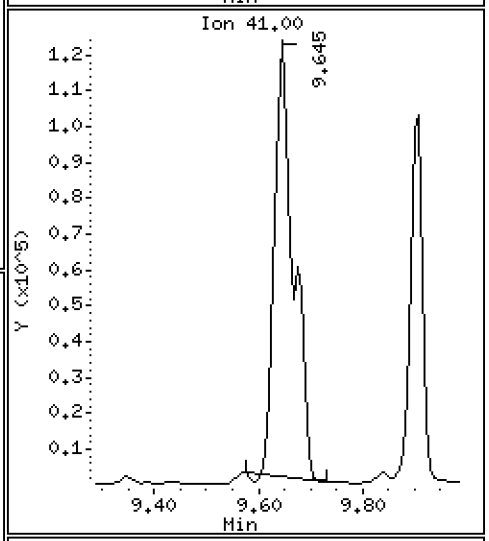


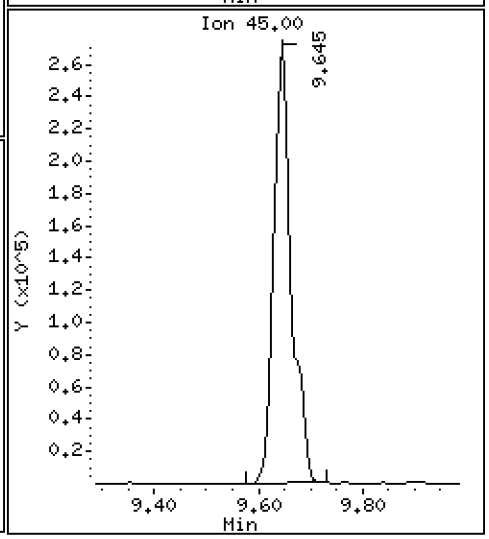












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Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

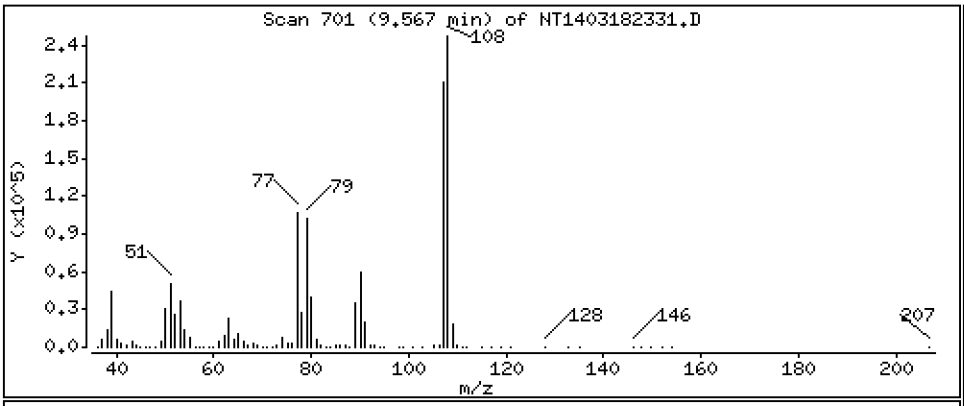
Operator: JGR

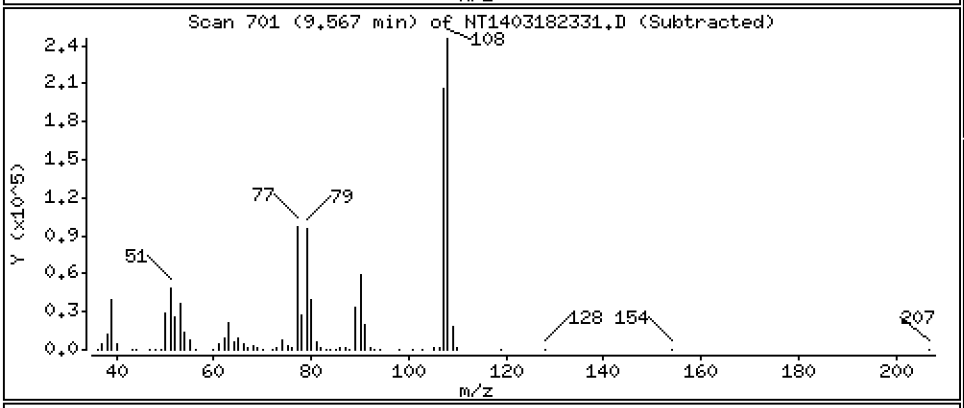
Column phase: ZB-5msi

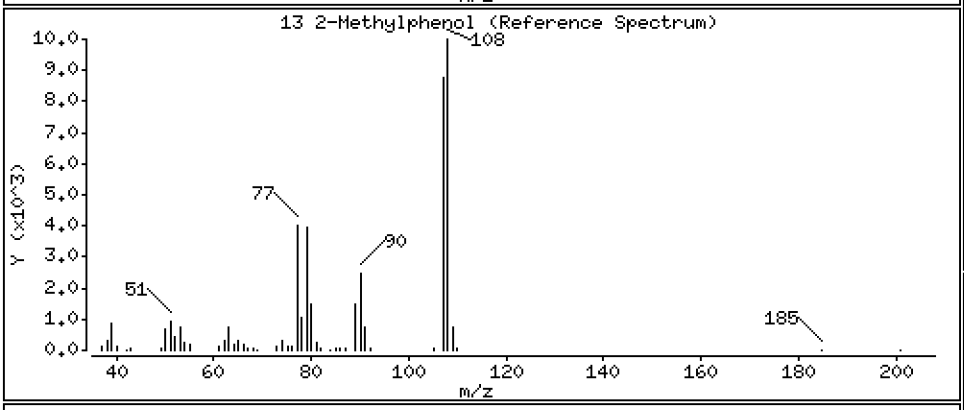
Column diameter: 0.25

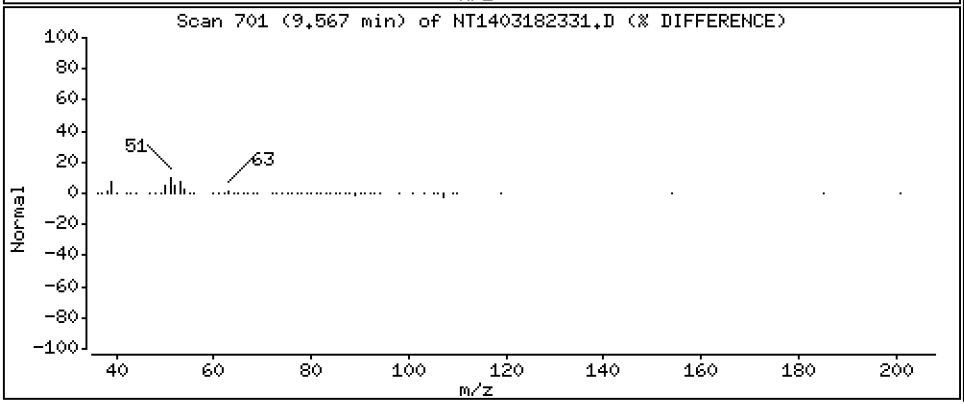
13 2-Methylphenol

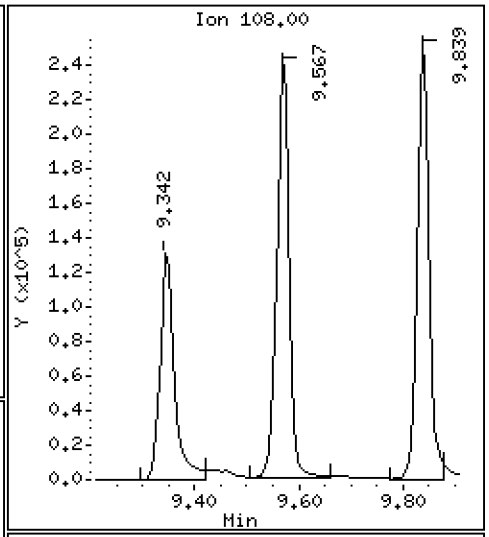
Concentration: 4.896 ug/mL

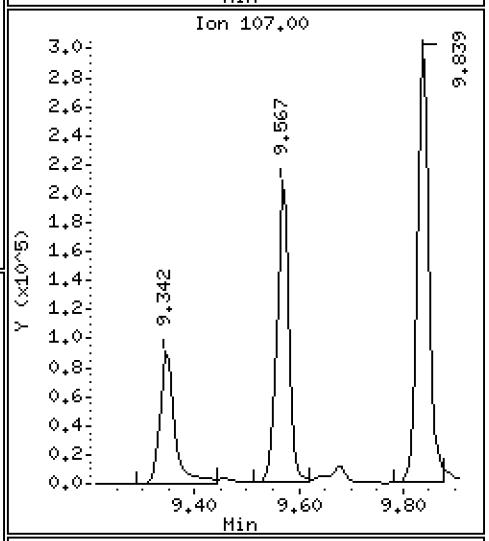


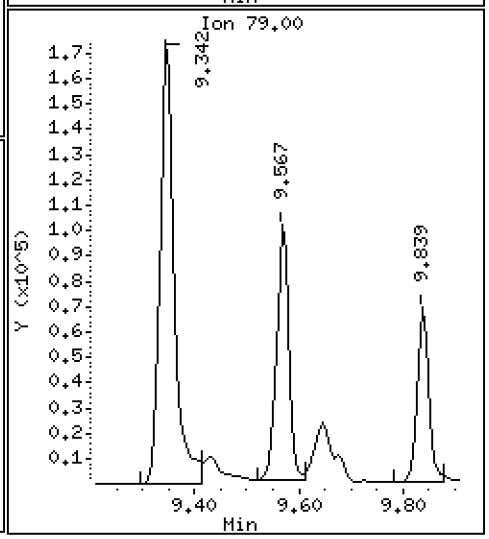












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Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

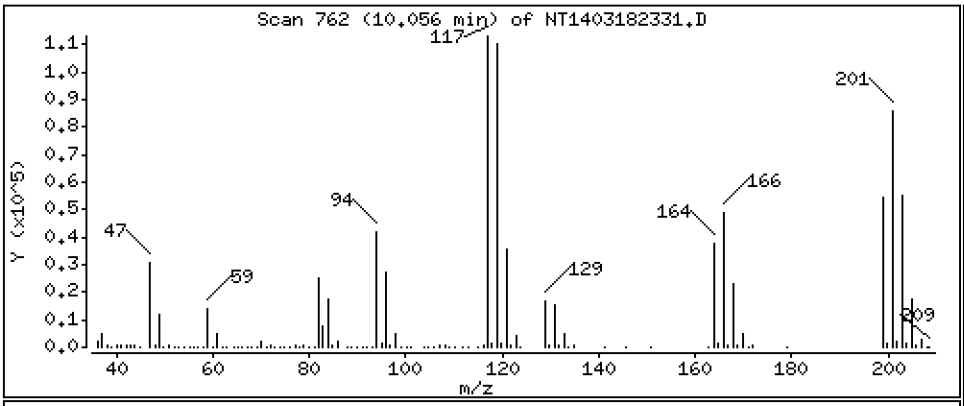
Operator: JGR

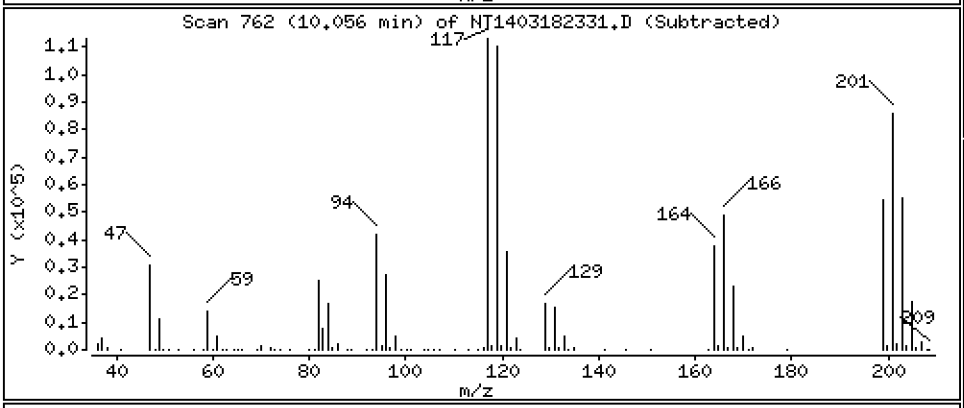
Column phase: ZB-5msi

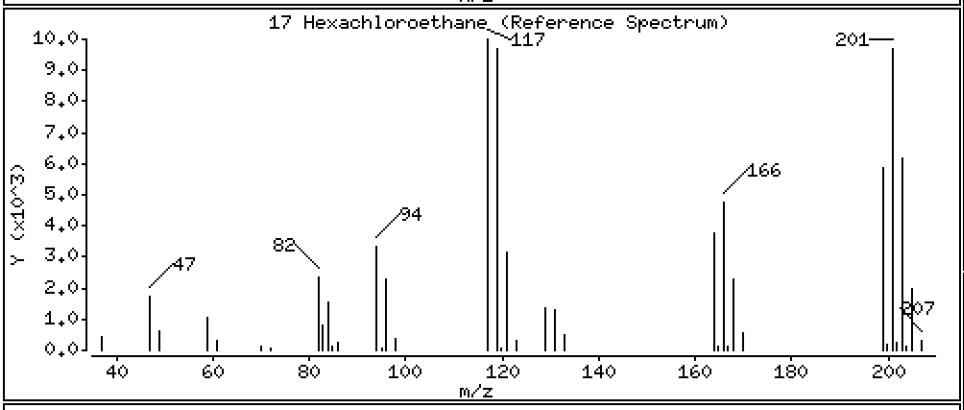
Column diameter: 0.25

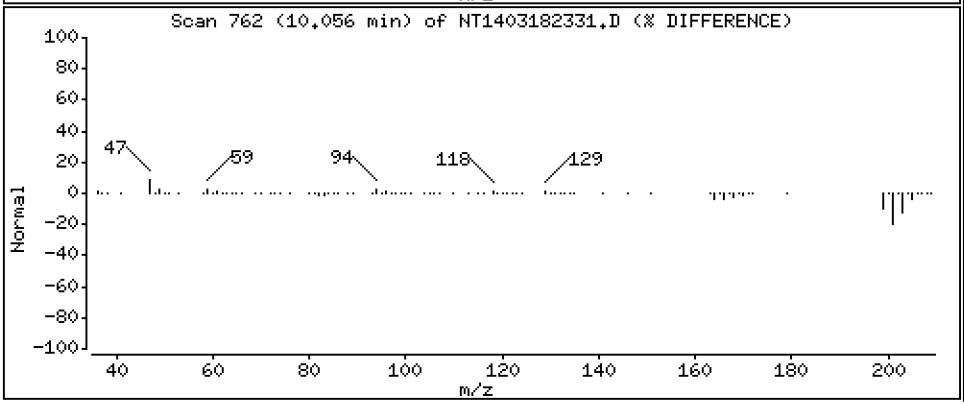
17 Hexachloroethane

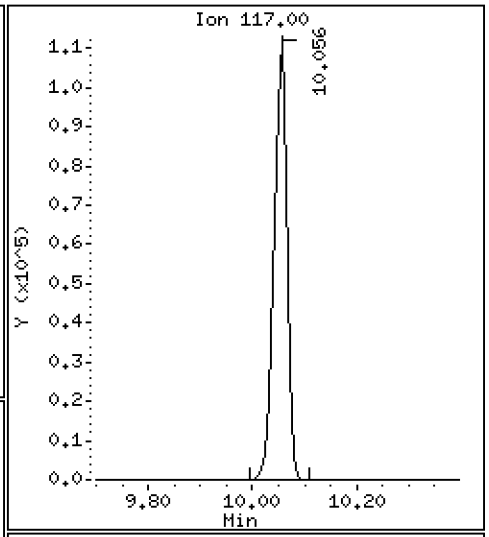
Concentration: 5.001 ug/mL

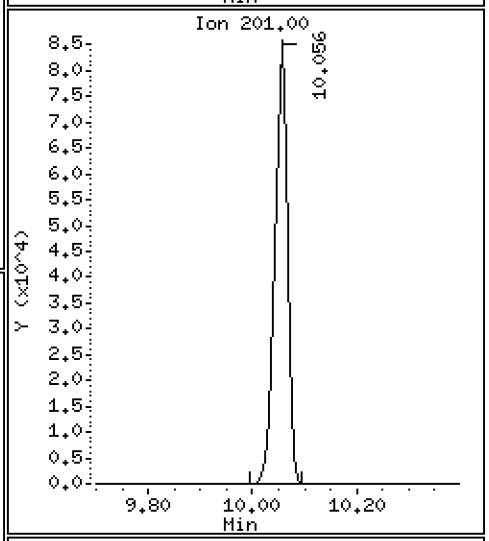


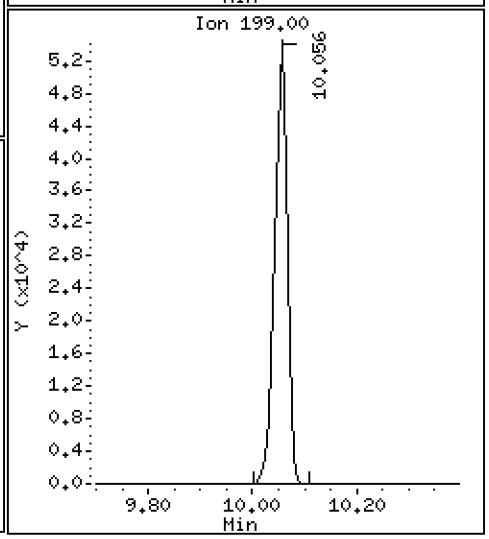












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Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

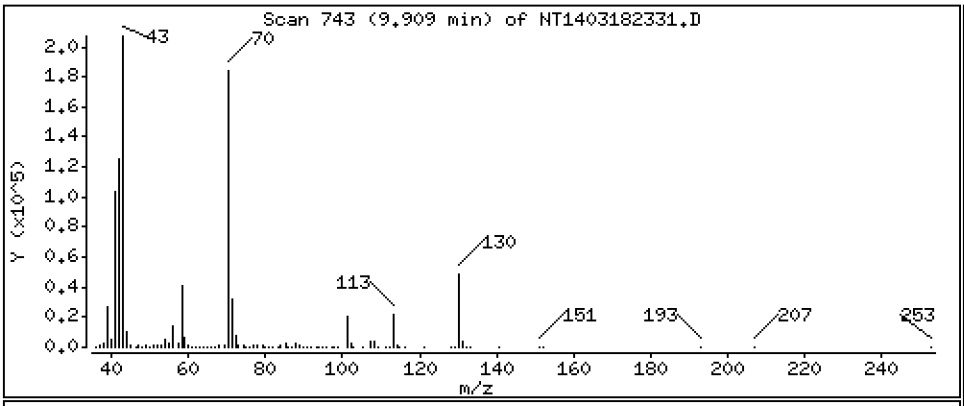
Operator: JGR

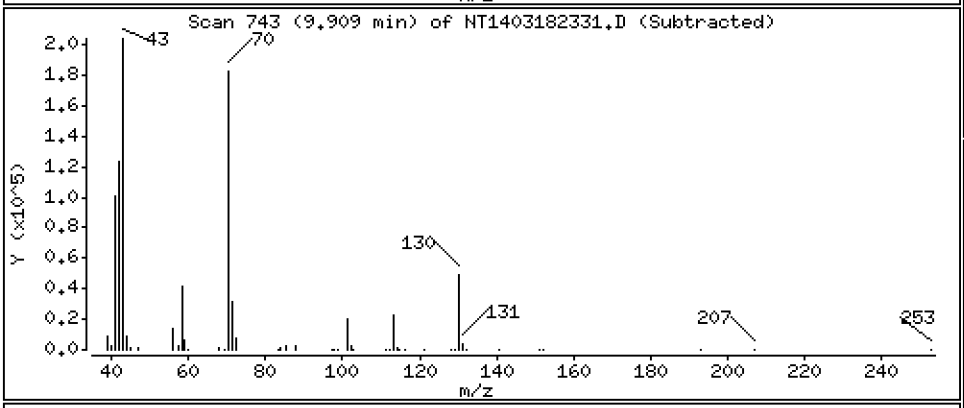
Column phase: ZB-5msi

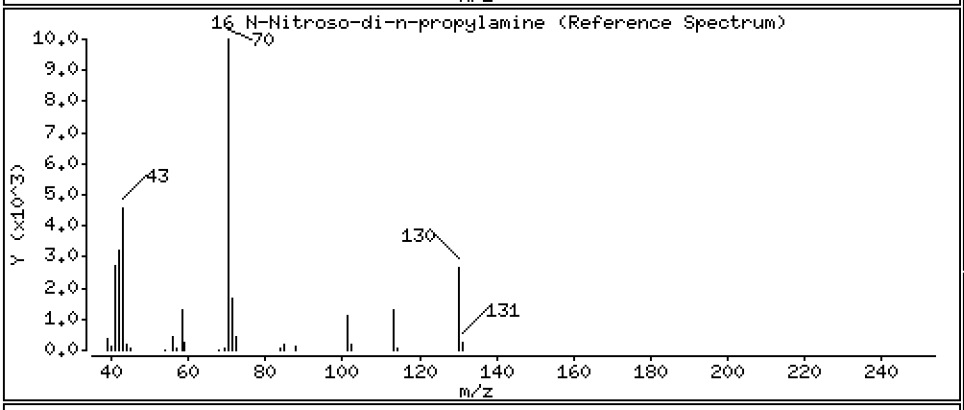
Column diameter: 0.25

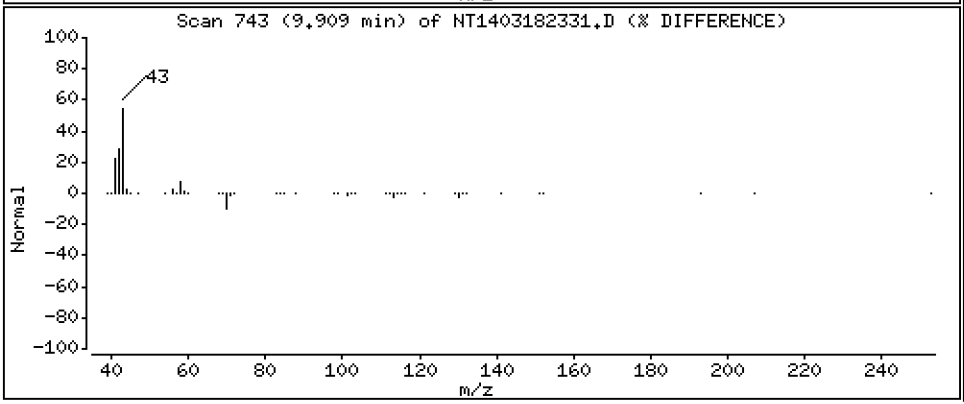
16 N-Nitroso-di-n-propylamine

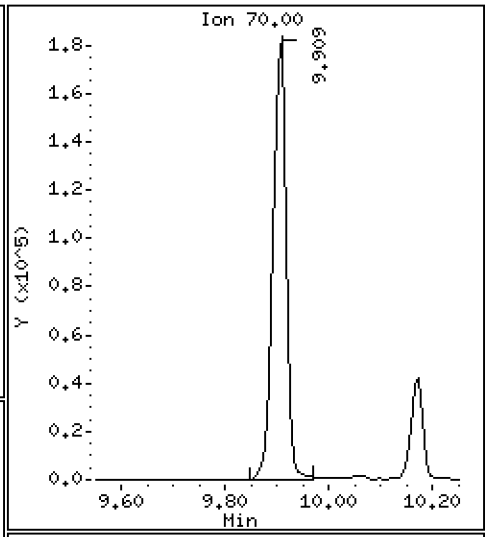
Concentration: 4.844 ug/mL

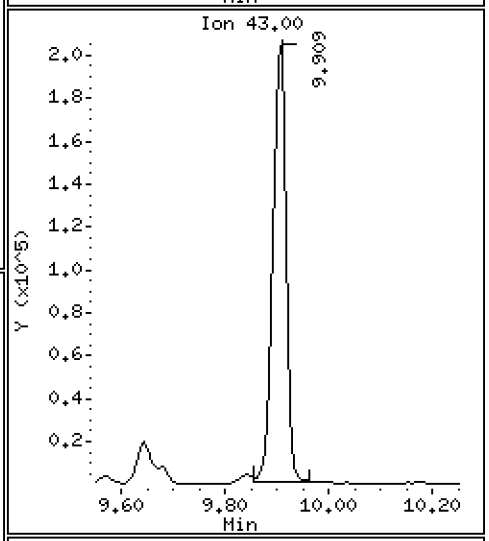


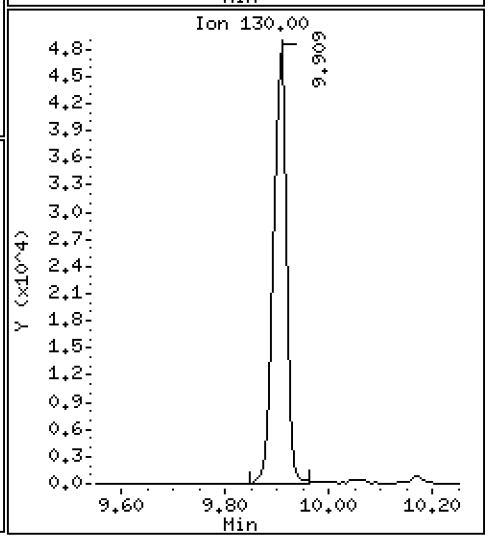












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Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

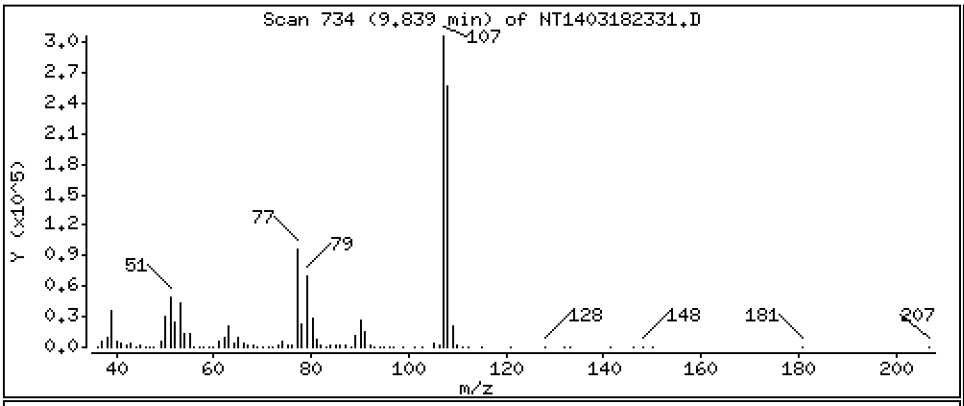
Operator: JGR

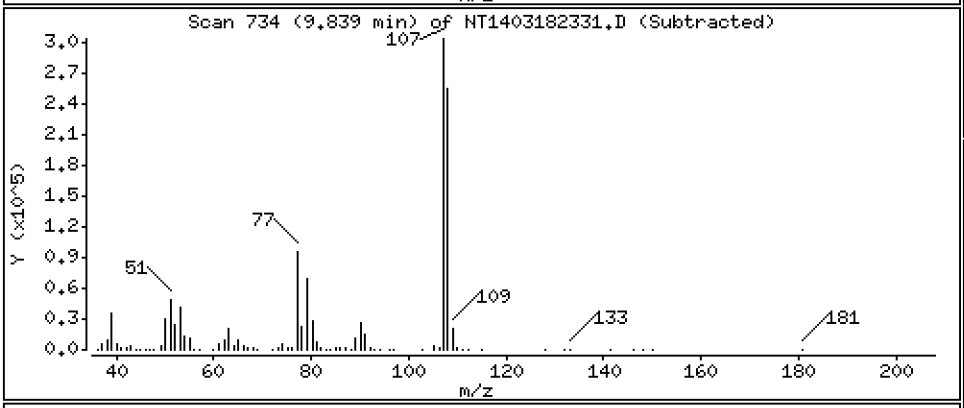
Column phase: ZB-5msi

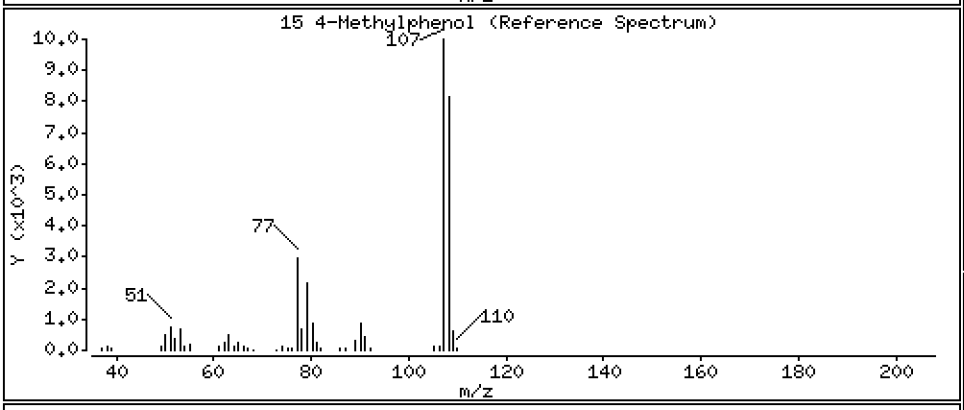
Column diameter: 0.25

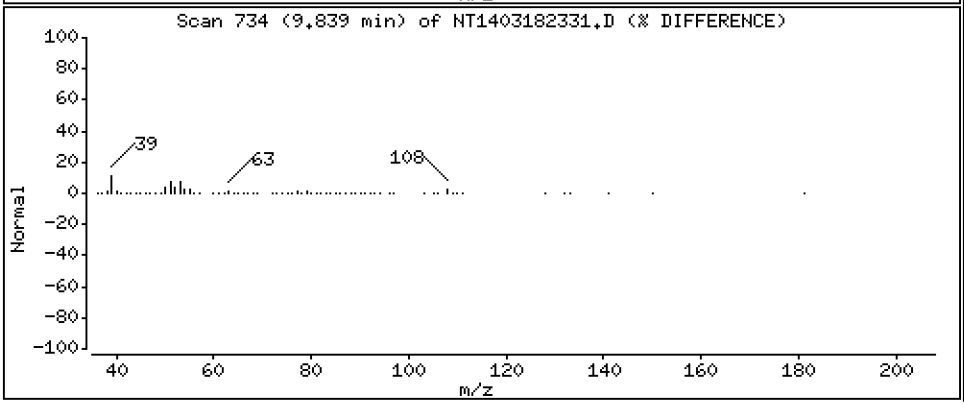
15 4-Methylphenol

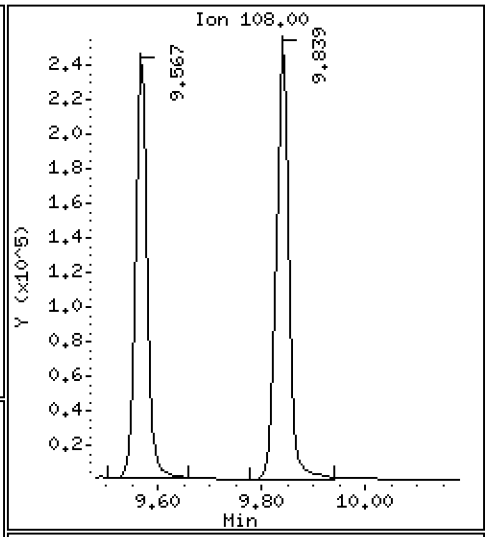
Concentration: 4.450 ug/mL

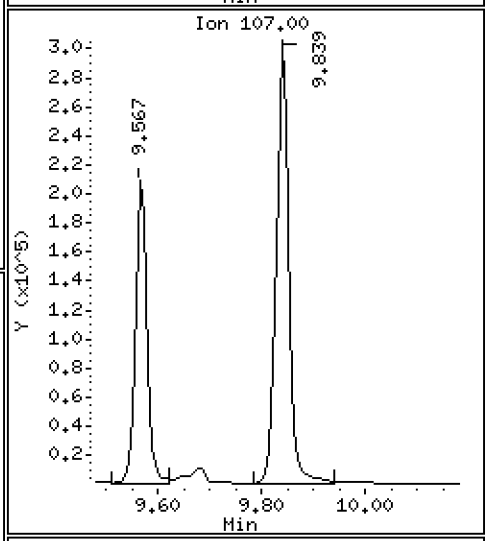


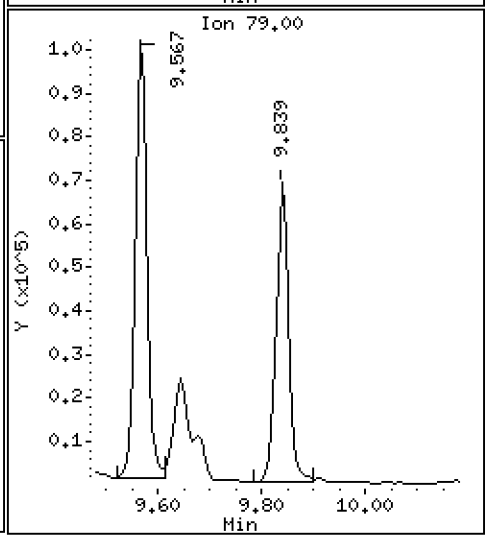












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Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

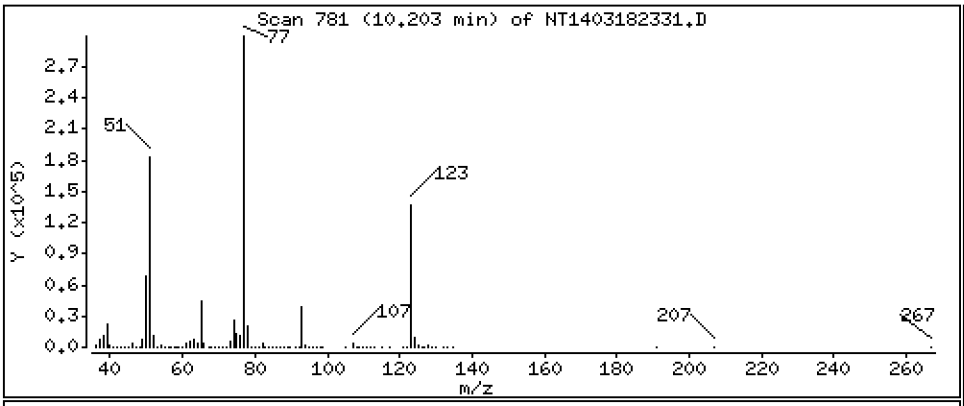
Operator: JGR

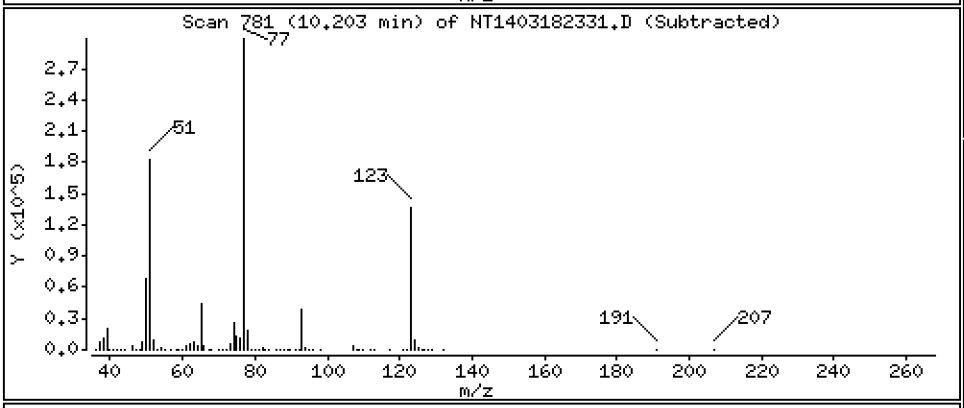
Column phase: ZB-5msi

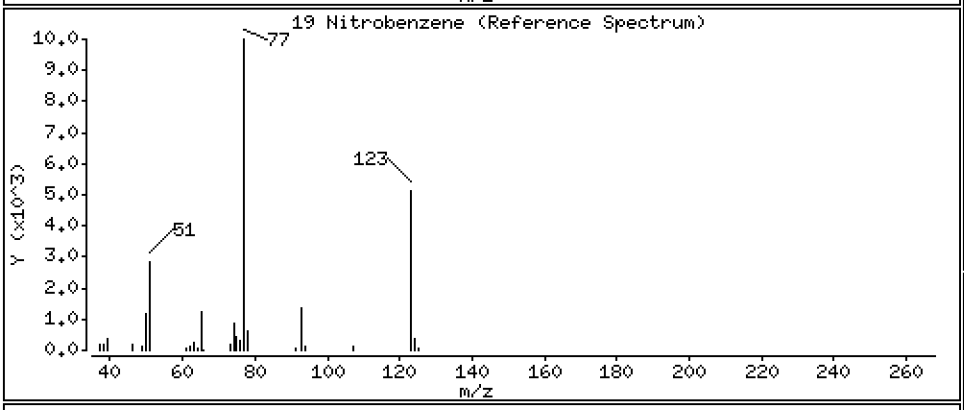
Column diameter: 0.25

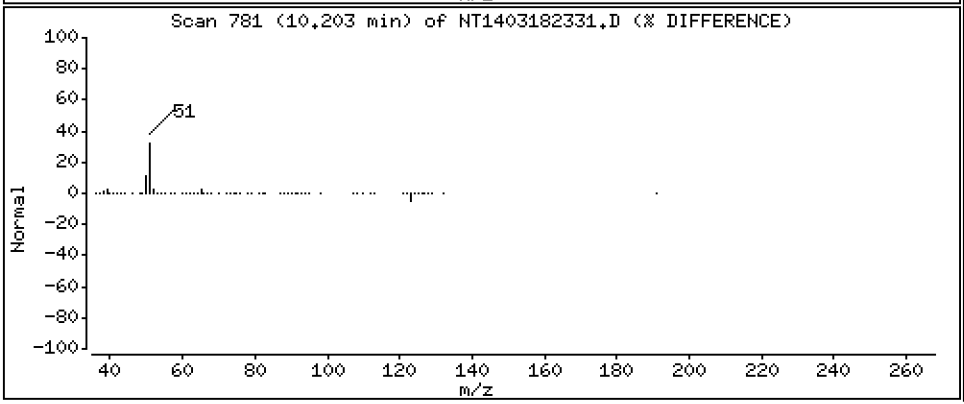
19 Nitrobenzene

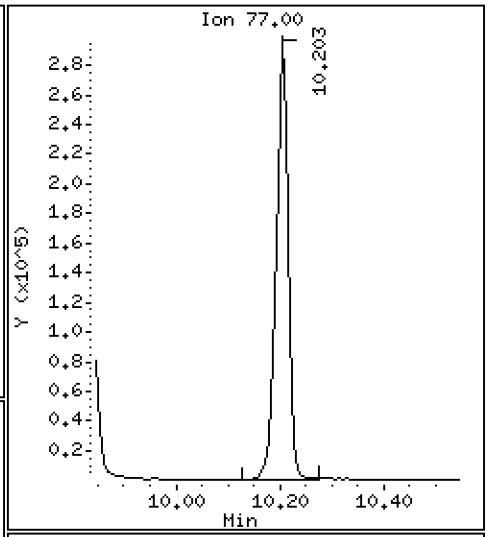
Concentration: 4.841 ug/mL

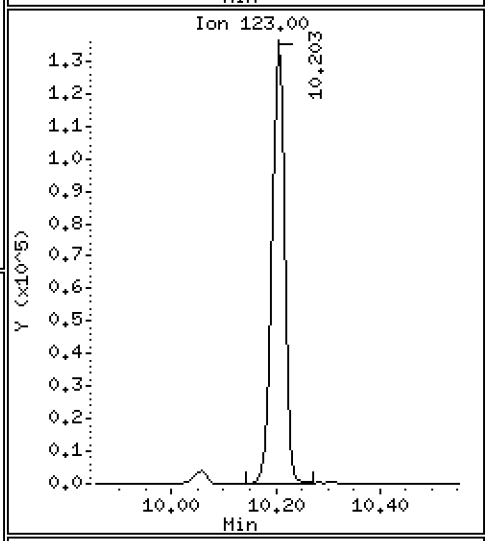


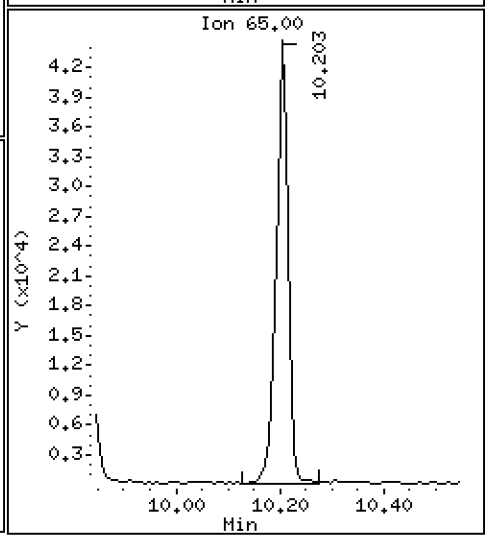












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Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

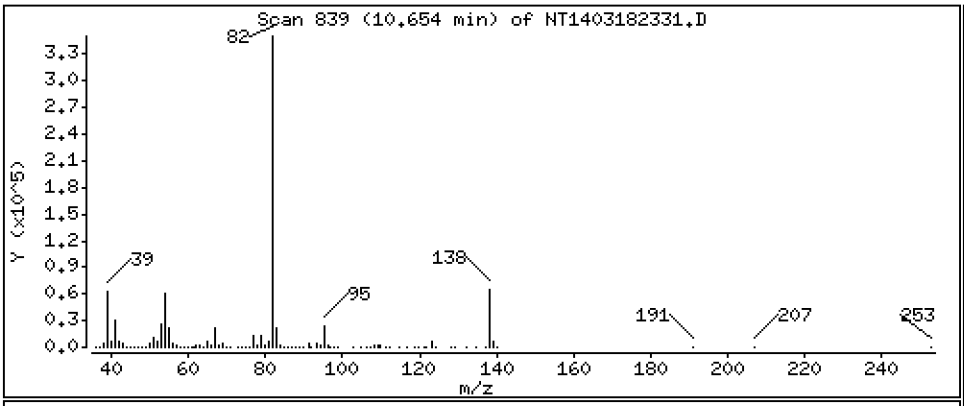
Operator: JGR

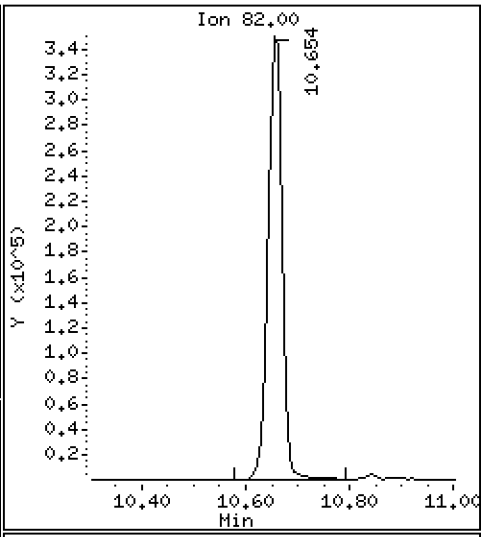
Column phase: ZB-5msi

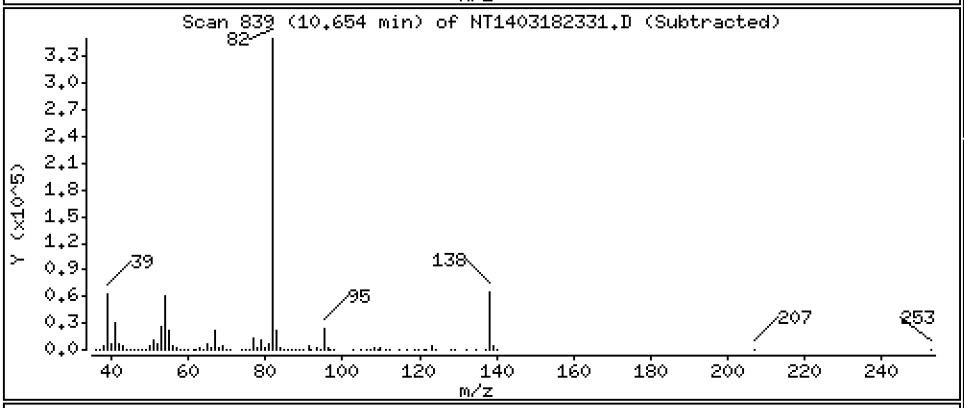
Column diameter: 0.25

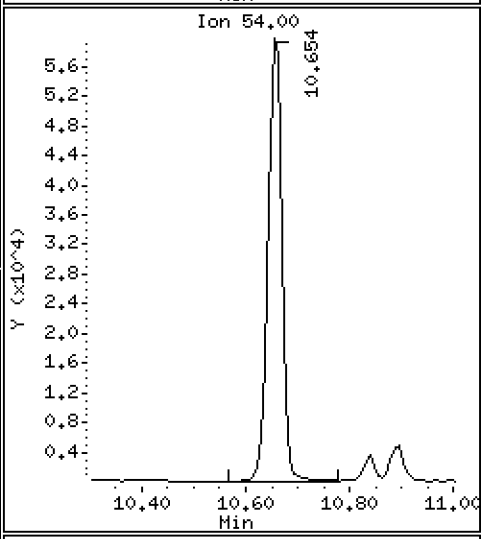
20 Isophorone

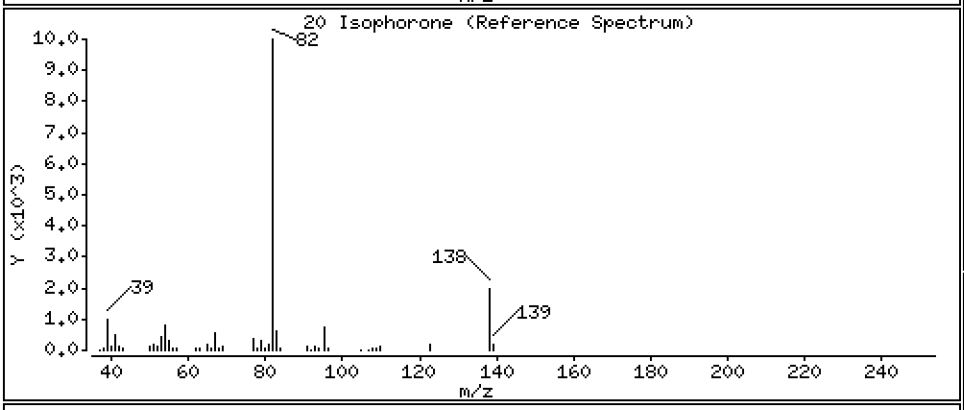
Concentration: 5.161 ug/mL

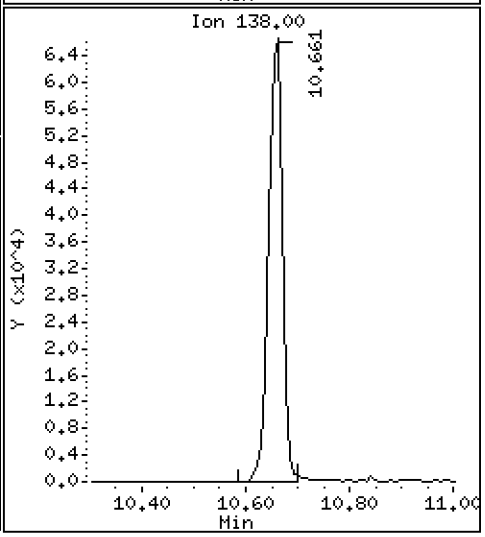


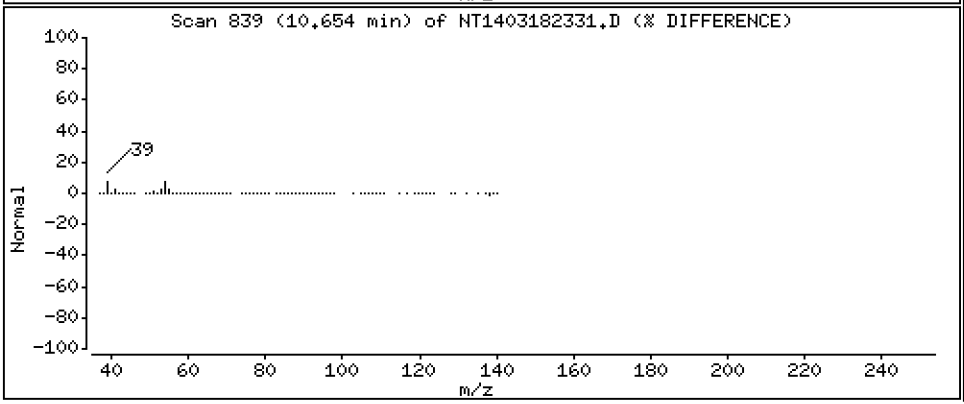












Date : 19-MAR-2023 11:04

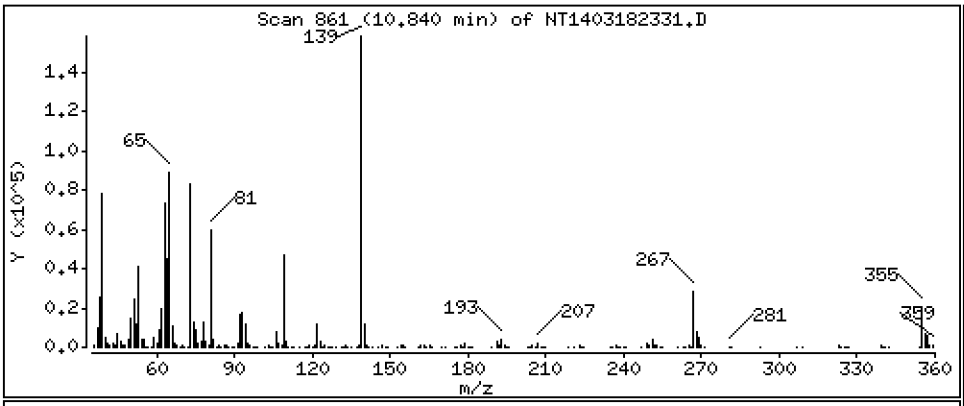
Client ID: Instrument: nt14.i

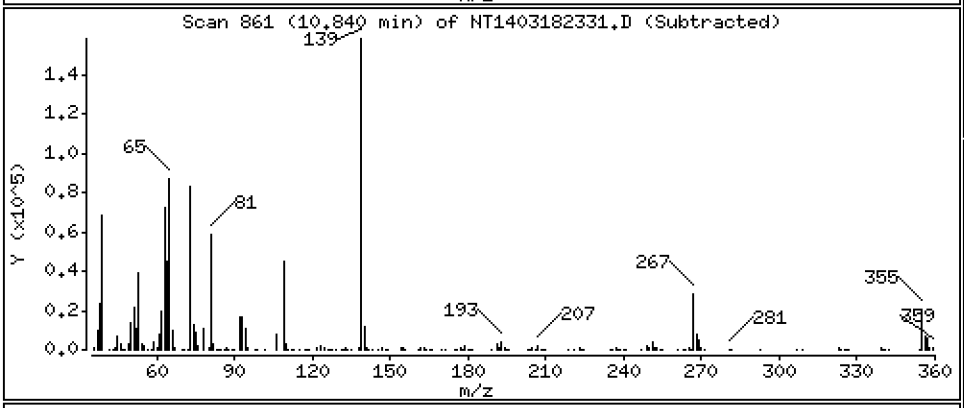
Sample Info: SLC0355-CCV1

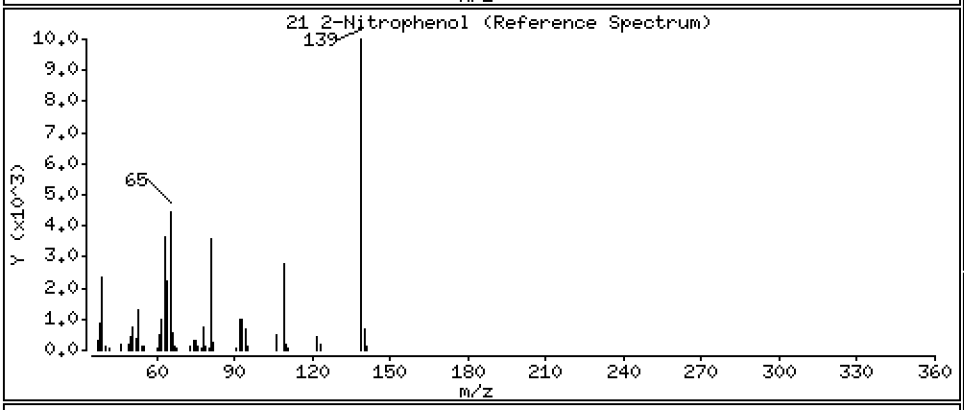
Operator: JGR

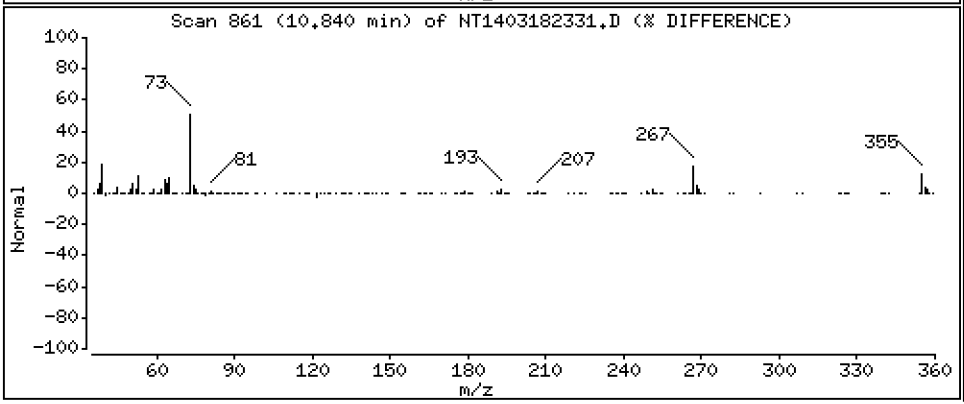
Column phase: ZB-5msi Column diameter: 0.25

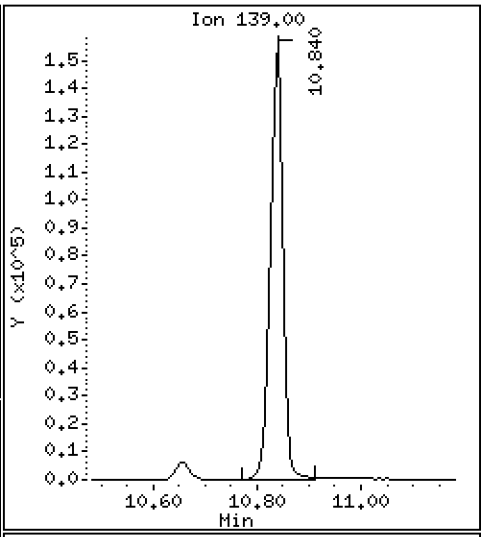
21 2-Nitrophenol Concentration: 4.531 ug/mL

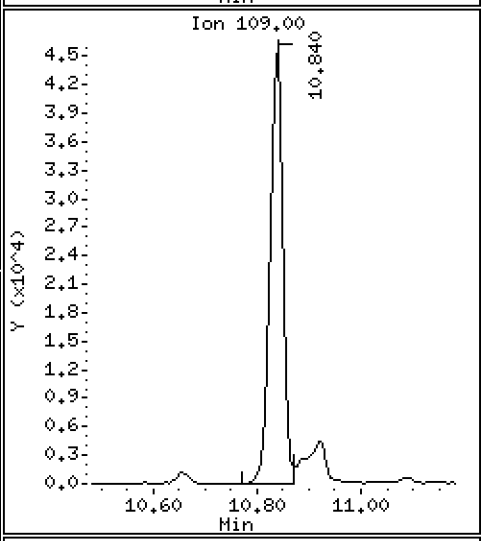


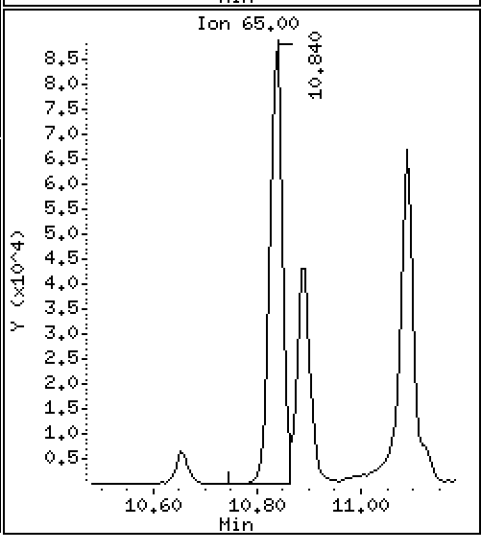












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Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

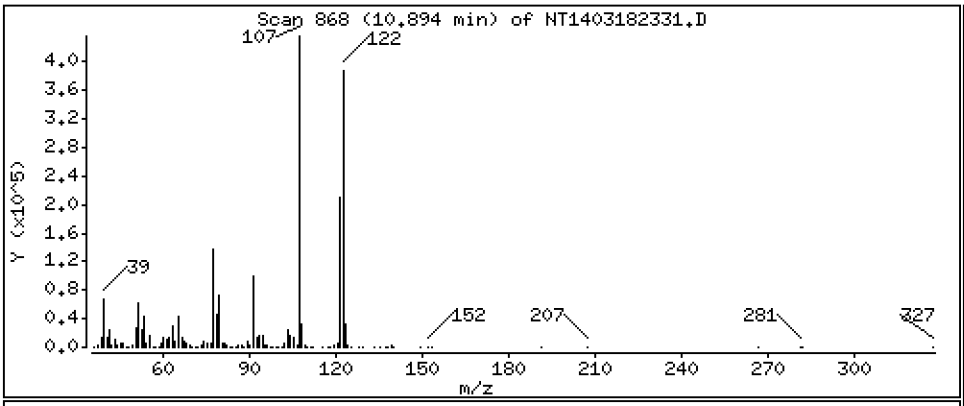
Operator: JGR

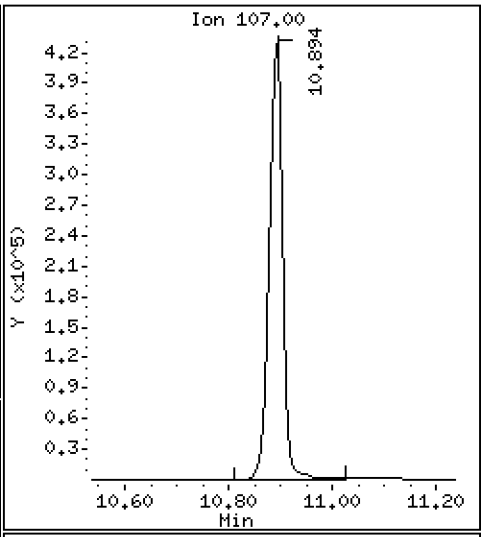
Column phase: ZB-5msi

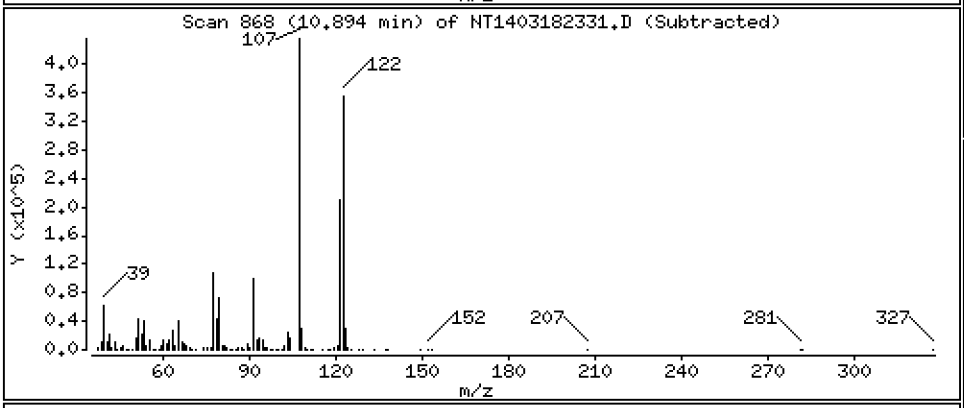
Column diameter: 0.25

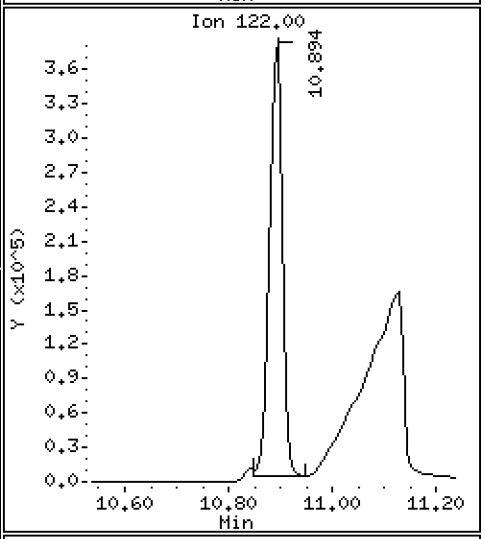
22 2,4-Dimethylphenol

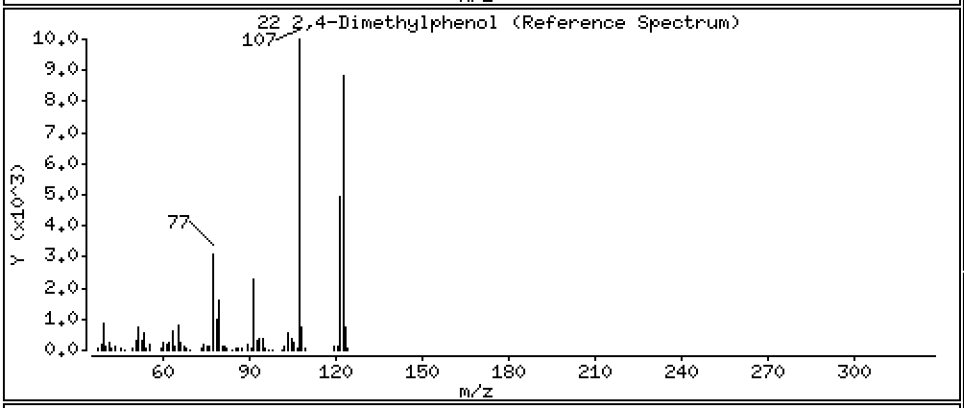
Concentration: 9.000 ug/mL

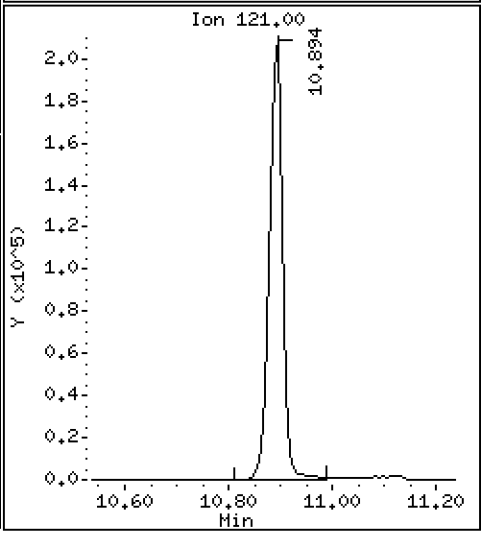


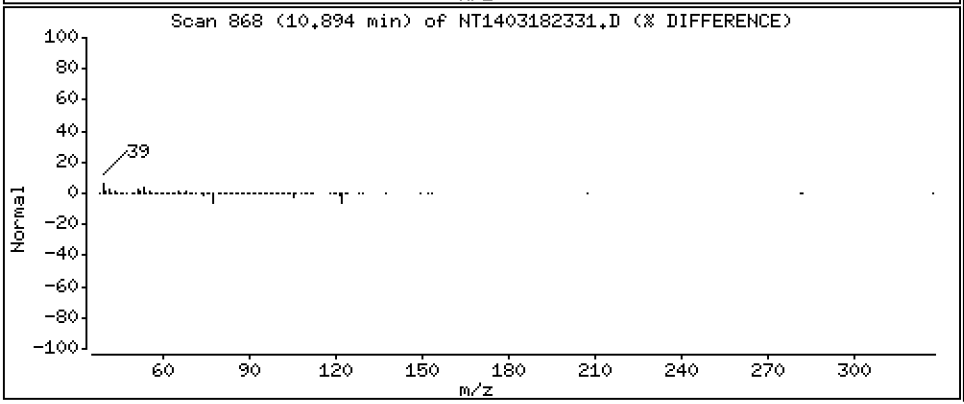












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Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

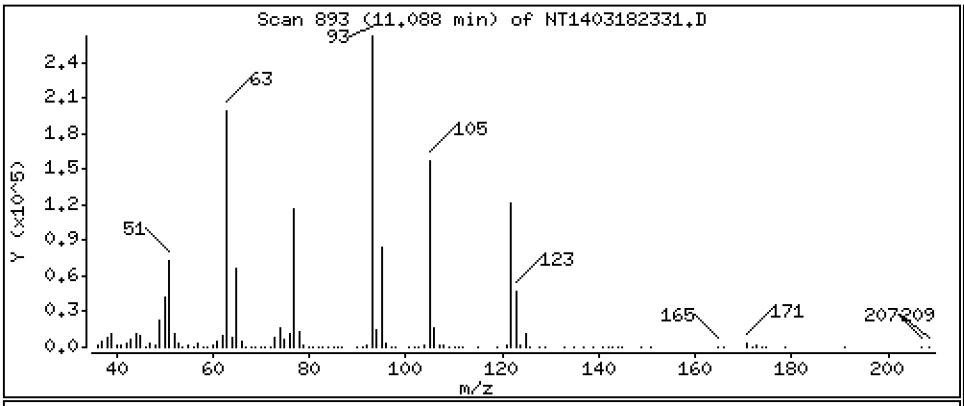
Operator: JGR

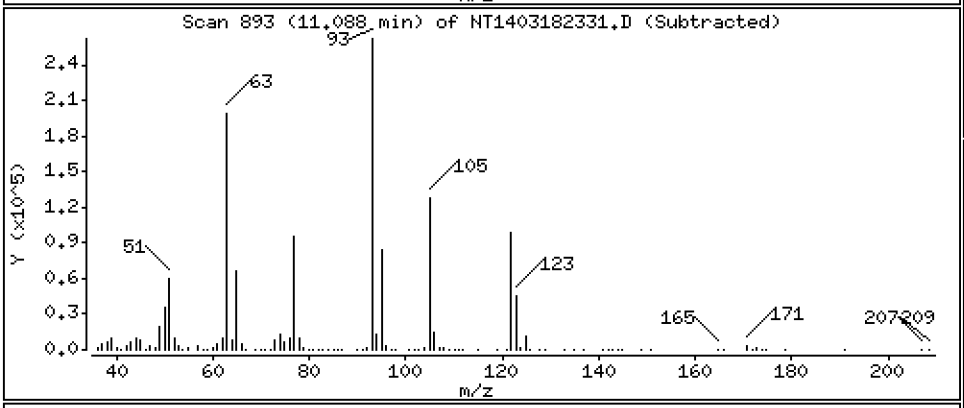
Column phase: ZB-5msi

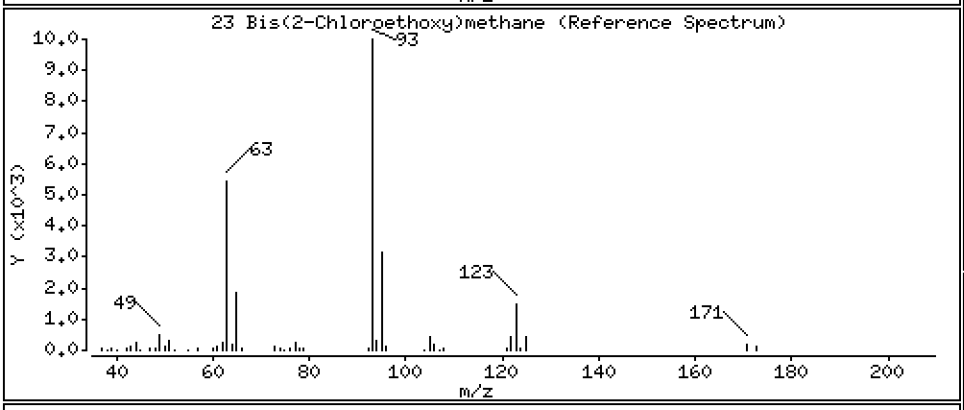
Column diameter: 0.25

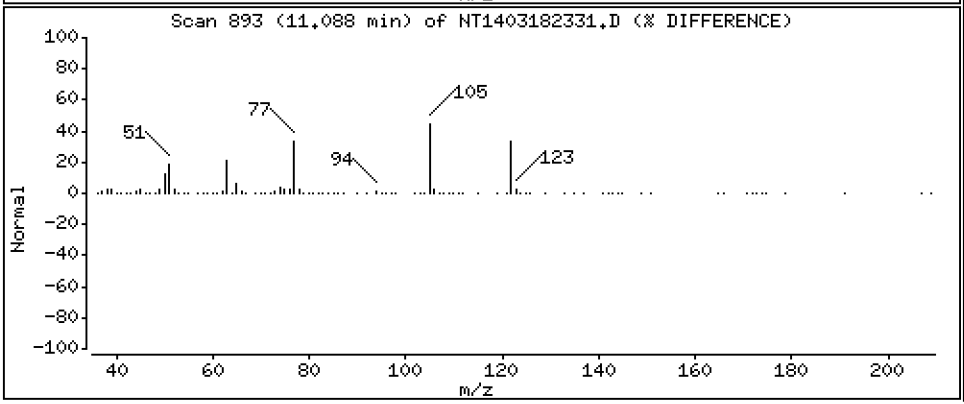
23 Bis(2-Chloroethoxy)methane

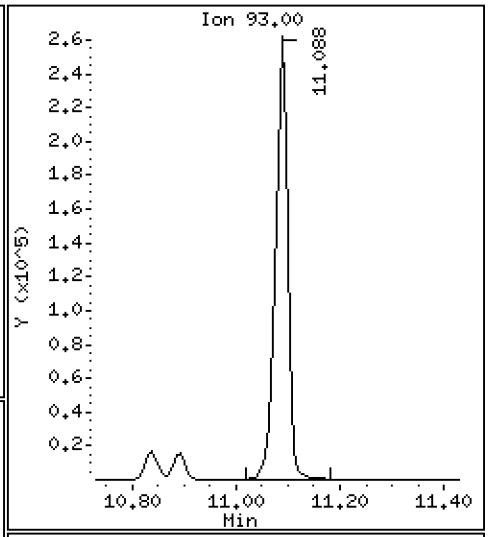
Concentration: 4.687 ug/mL

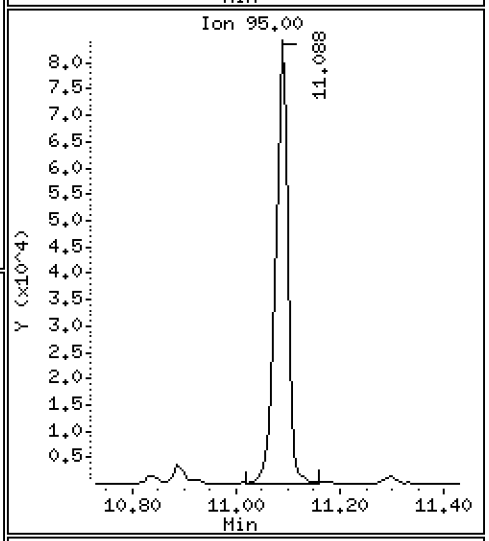


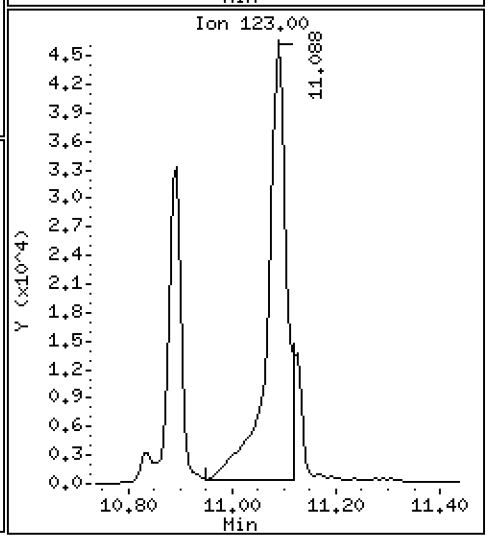












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Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

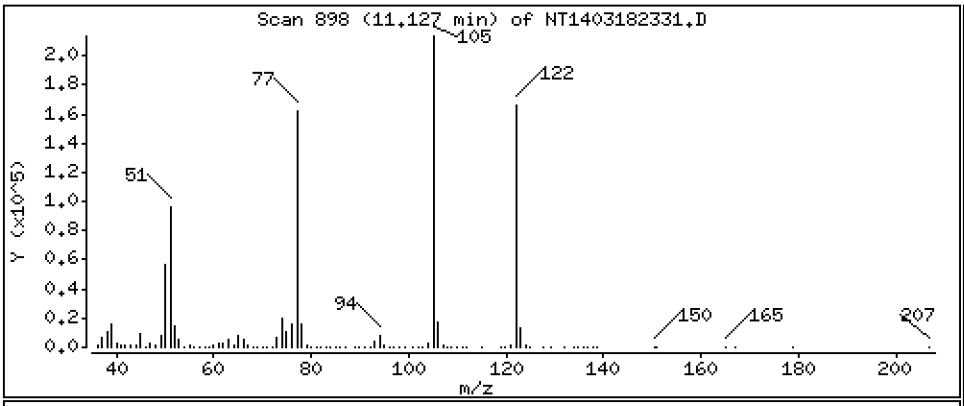
Operator: JGR

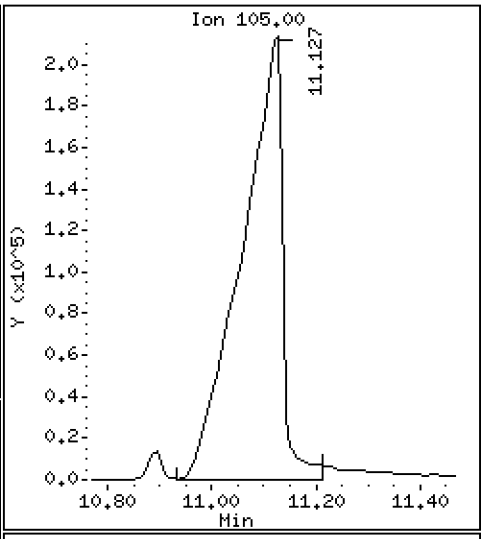
Column phase: ZB-5msi

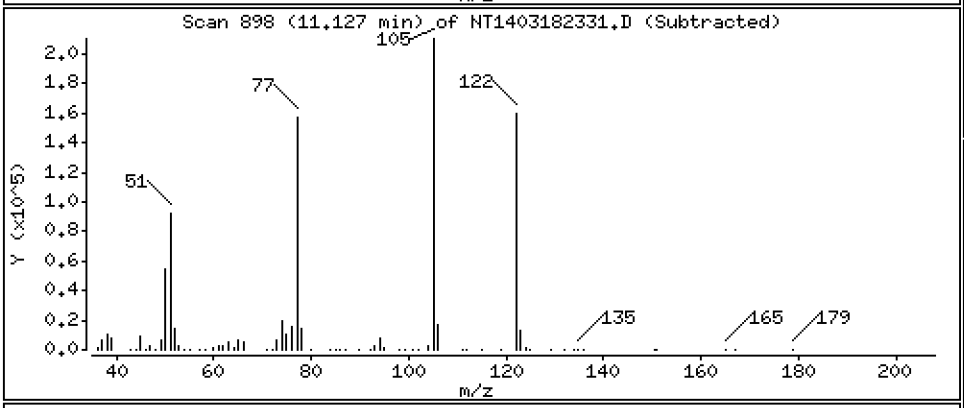
Column diameter: 0.25

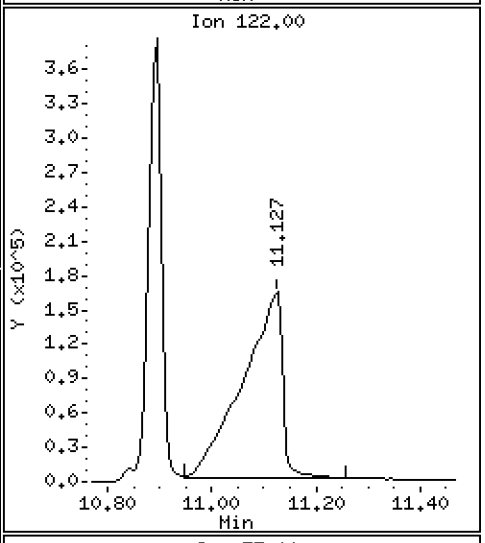
24 Benzoic acid

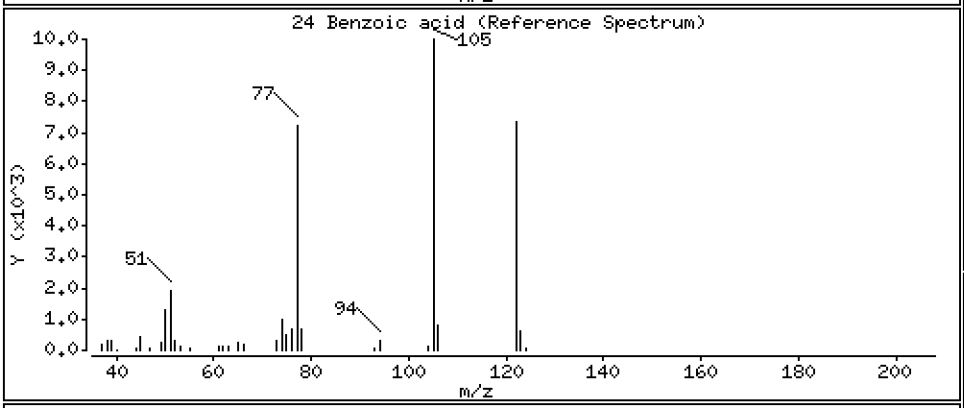
Concentration: 17.06 ug/mL

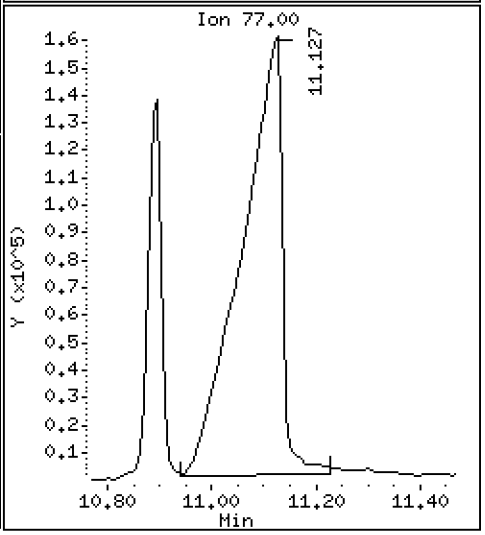


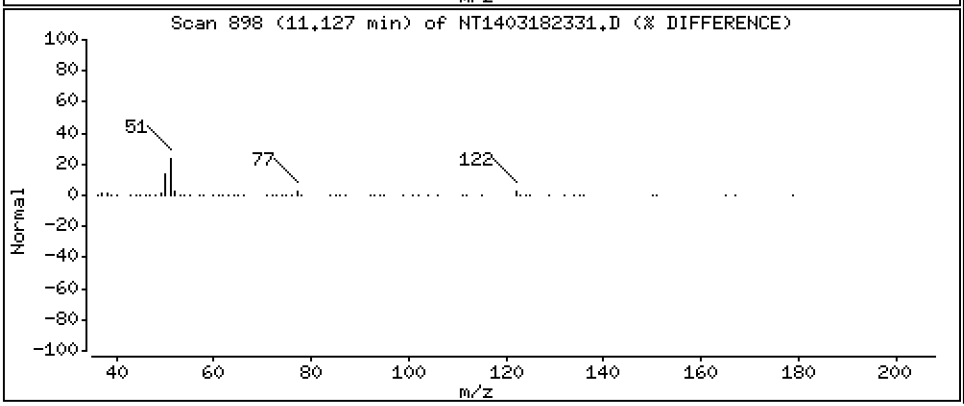












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Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

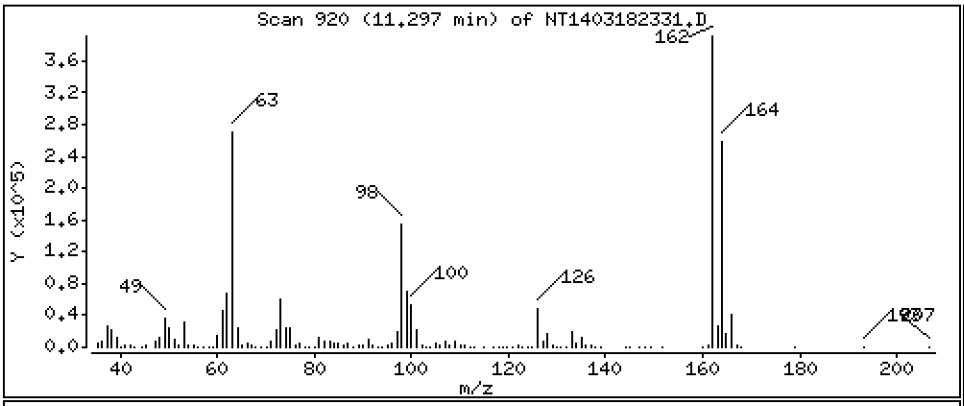
Operator: JGR

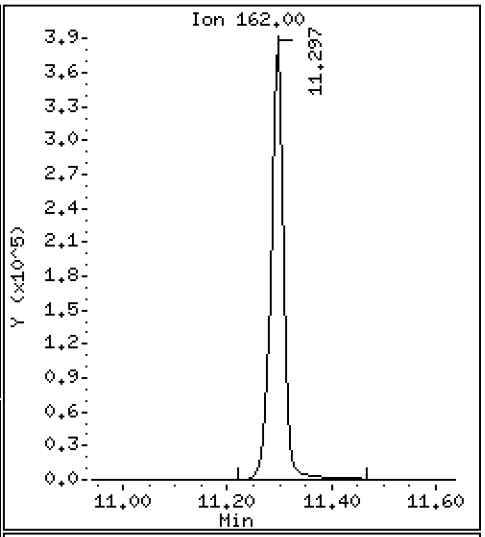
Column phase: ZB-5msi

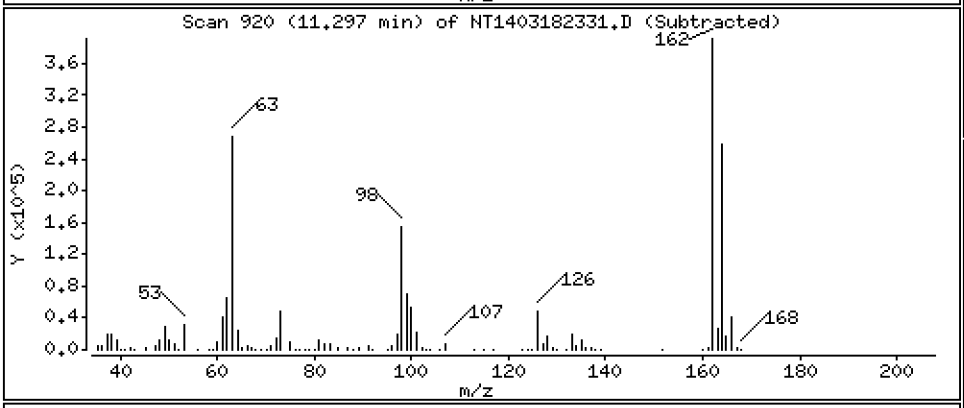
Column diameter: 0.25

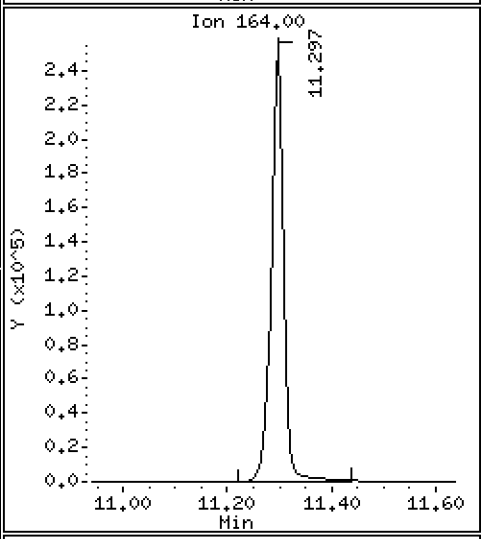
25 2,4-Dichlorophenol

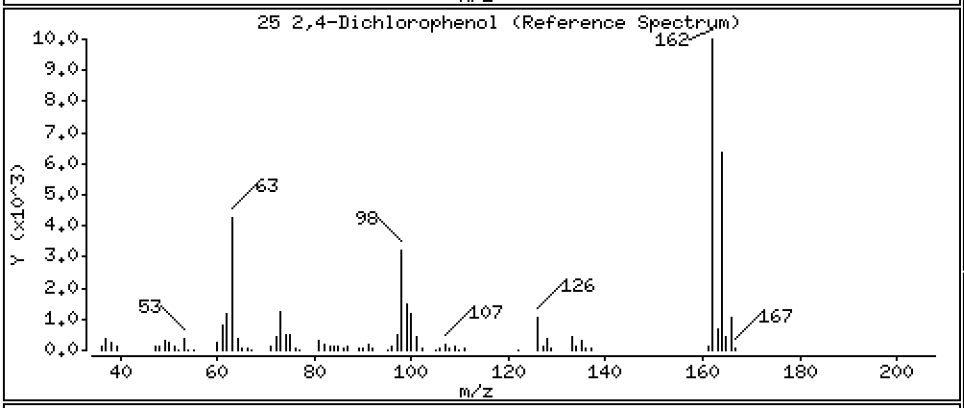
Concentration: 10.73 ug/mL

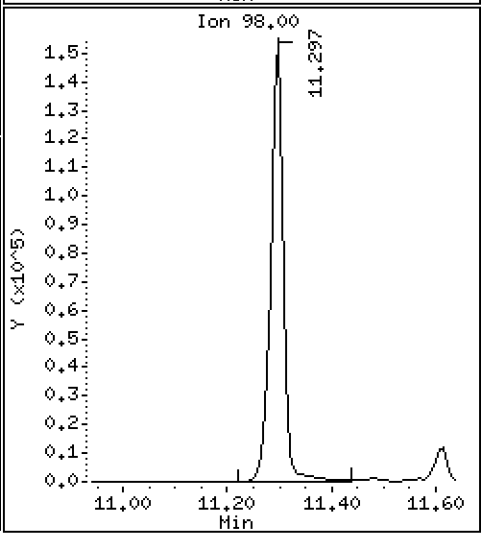


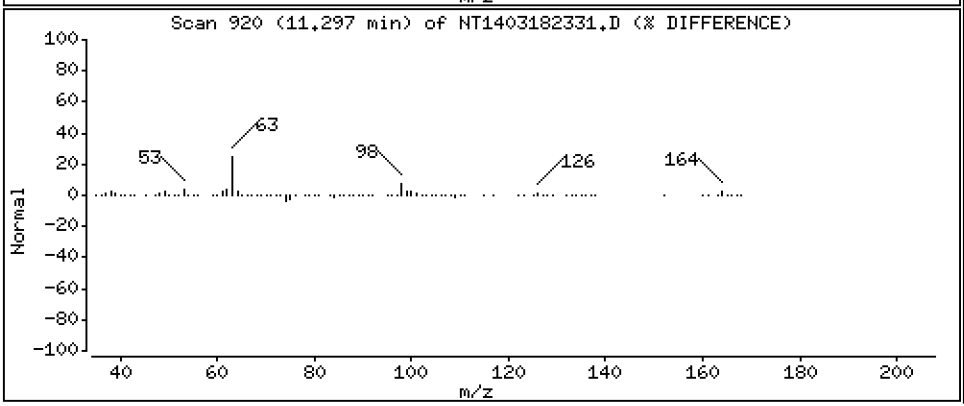












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Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

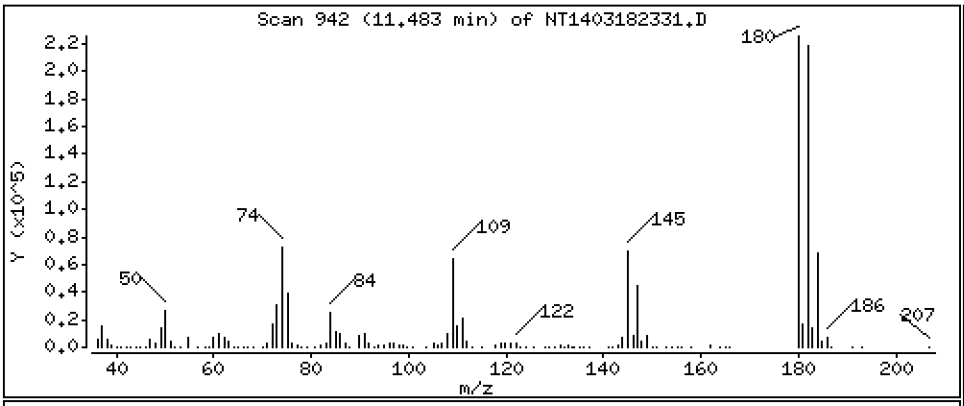
Operator: JGR

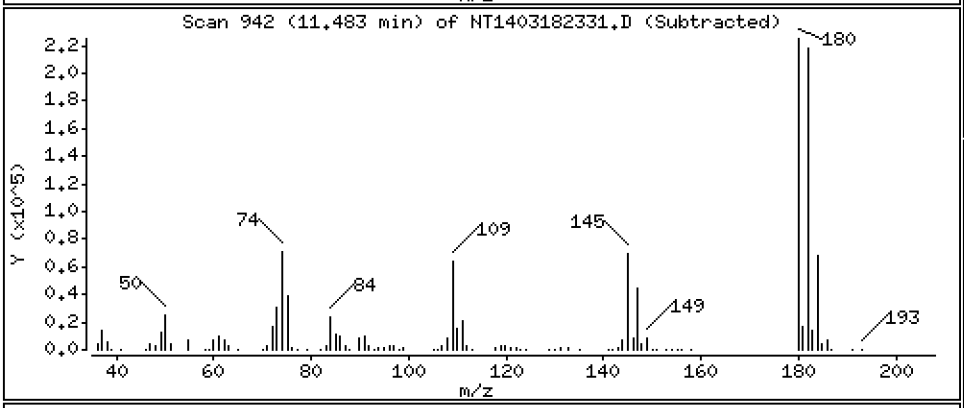
Column phase: ZB-5msi

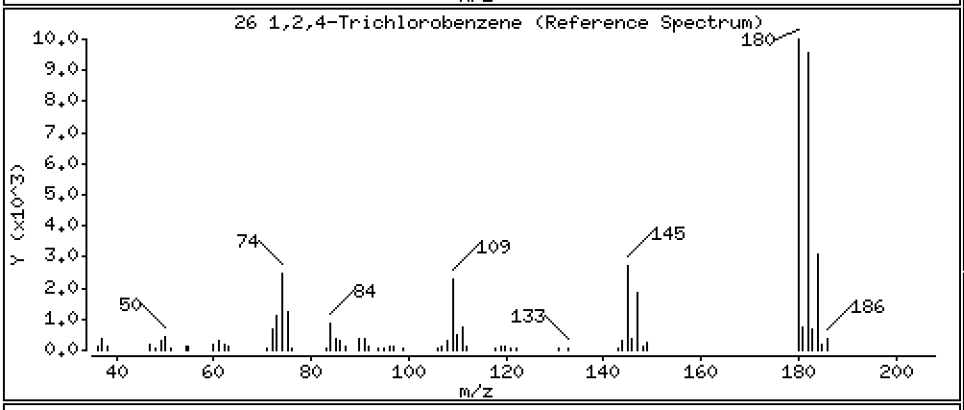
Column diameter: 0.25

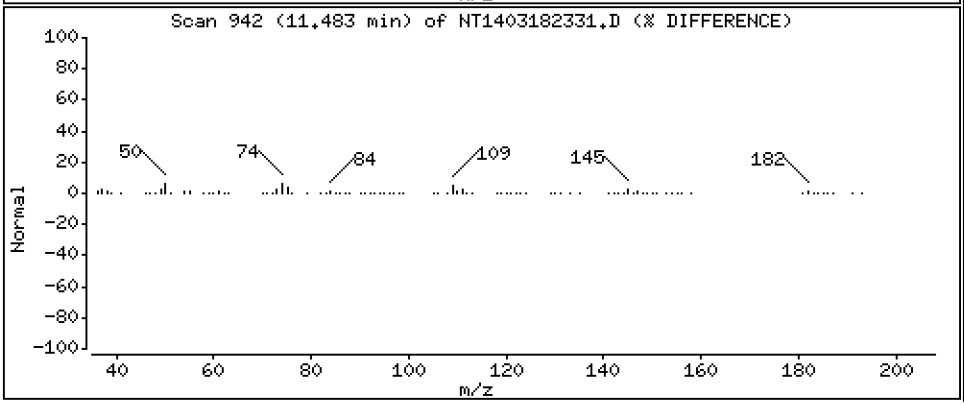
26 1,2,4-Trichlorobenzene

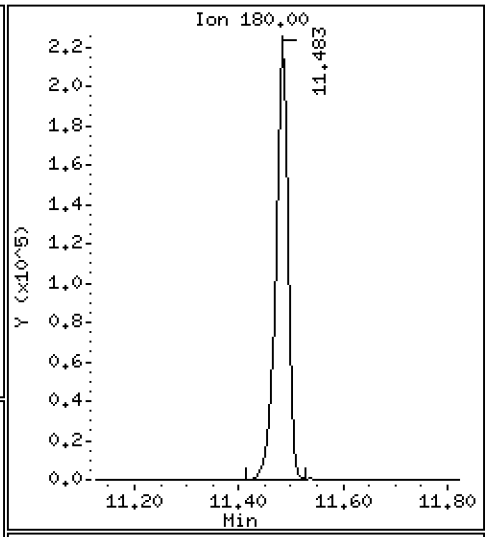
Concentration: 4.523 ug/mL

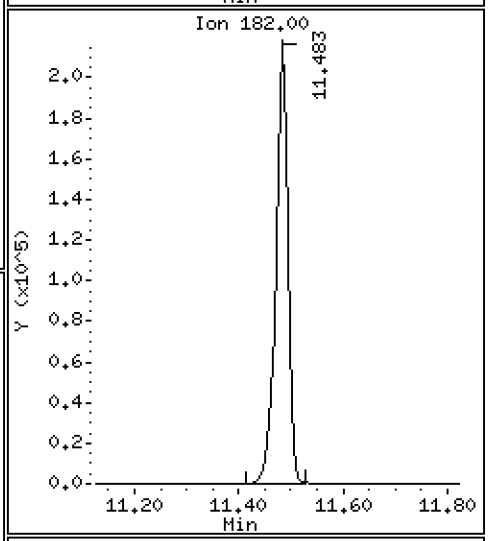


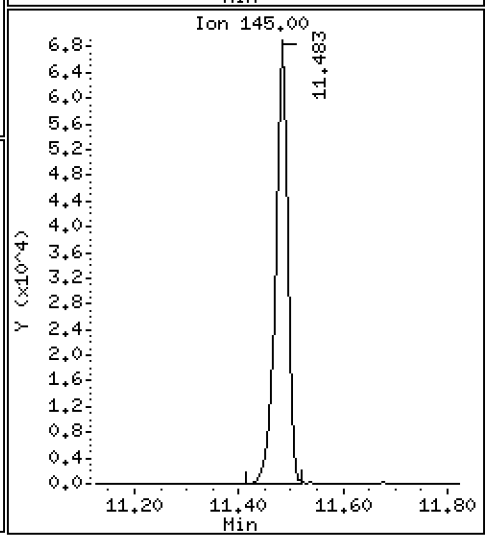












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Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

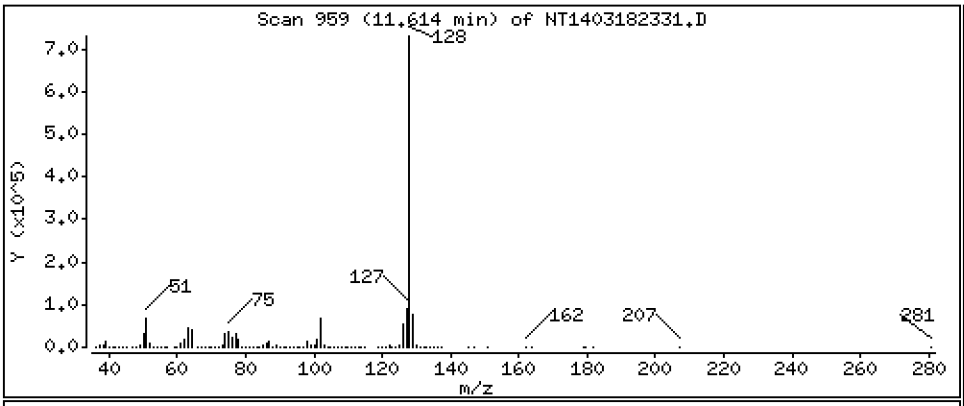
Operator: JGR

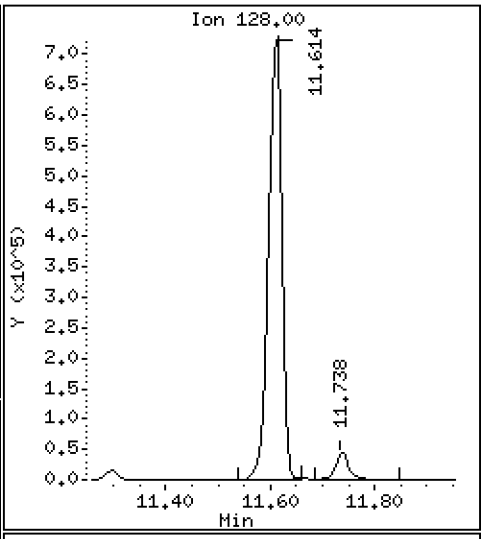
Column phase: ZB-5msi

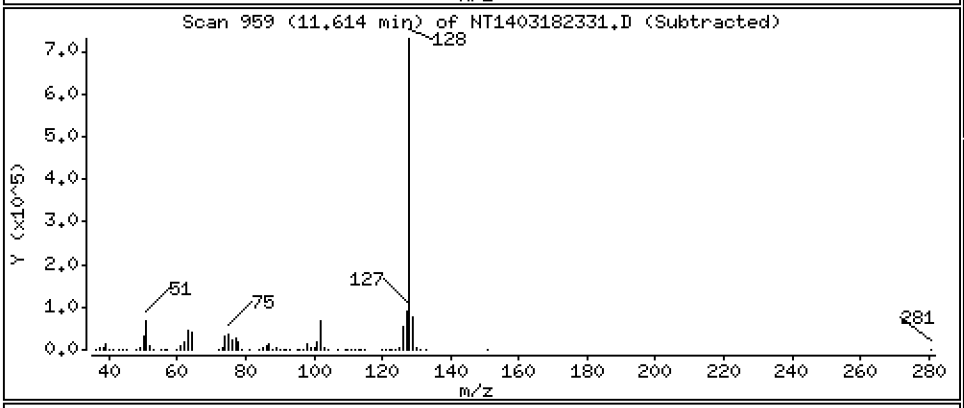
Column diameter: 0.25

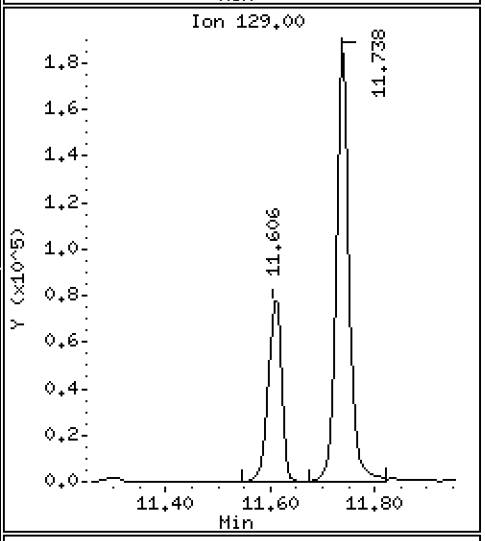
28 Naphthalene

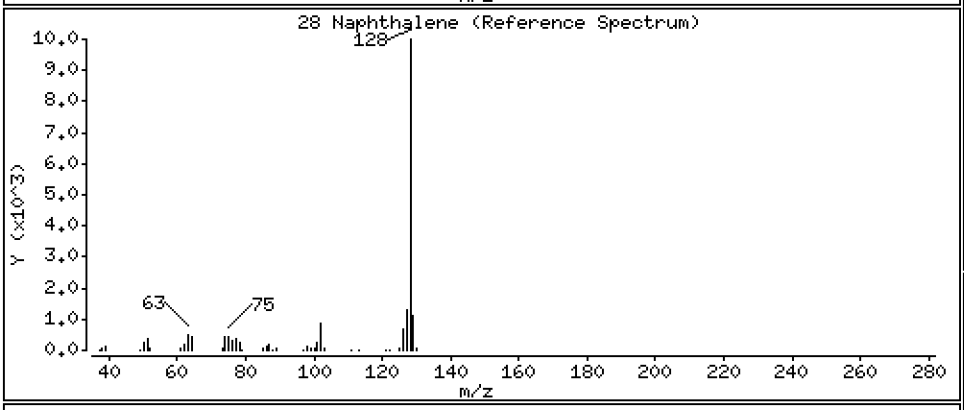
Concentration: 4.897 ug/mL

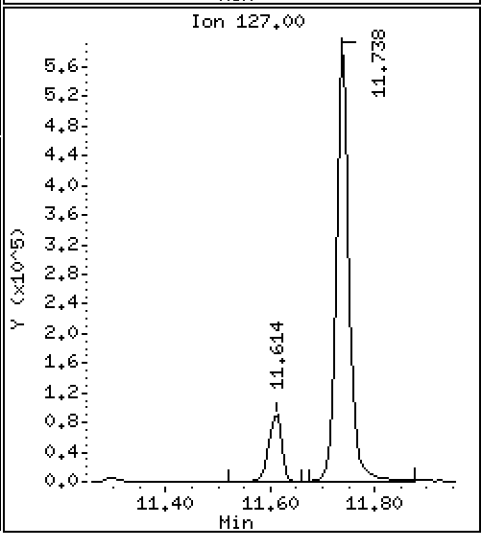


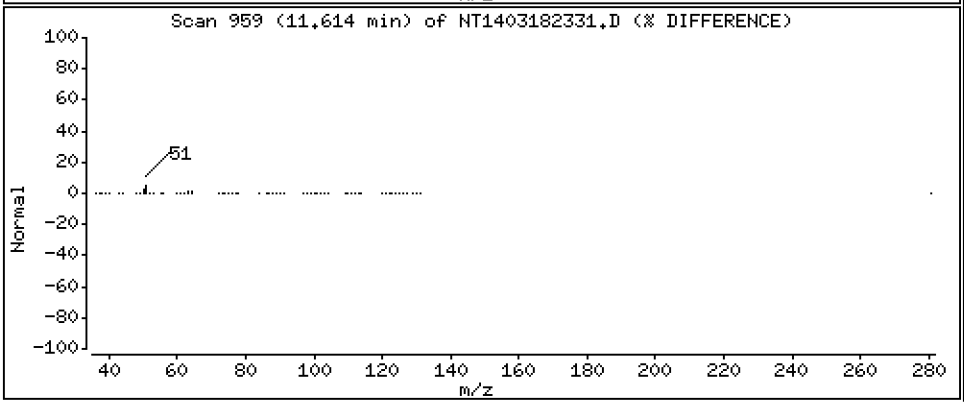












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Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

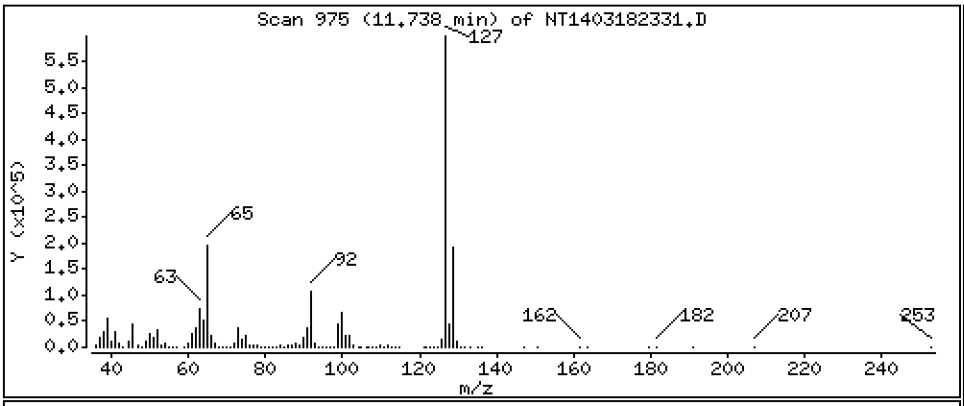
Operator: JGR

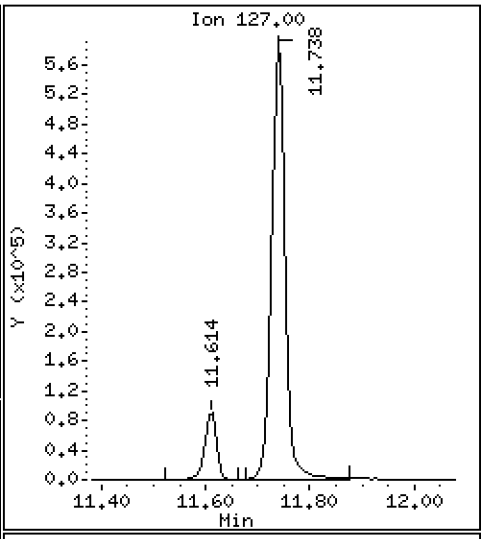
Column phase: ZB-5msi

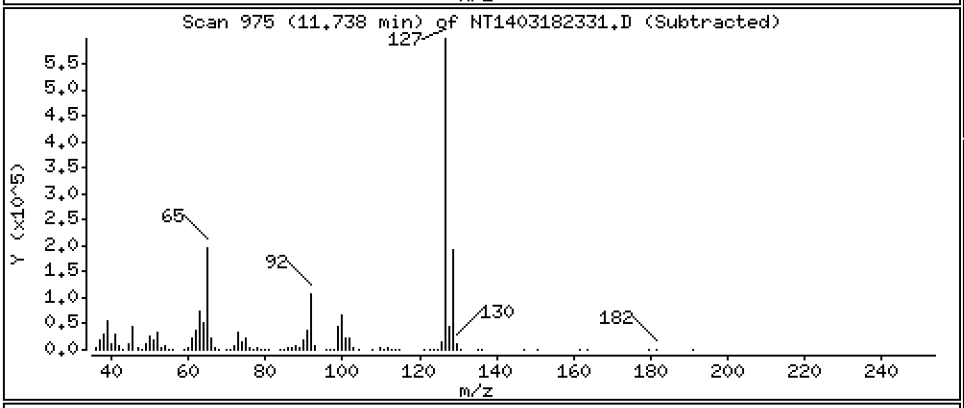
Column diameter: 0.25

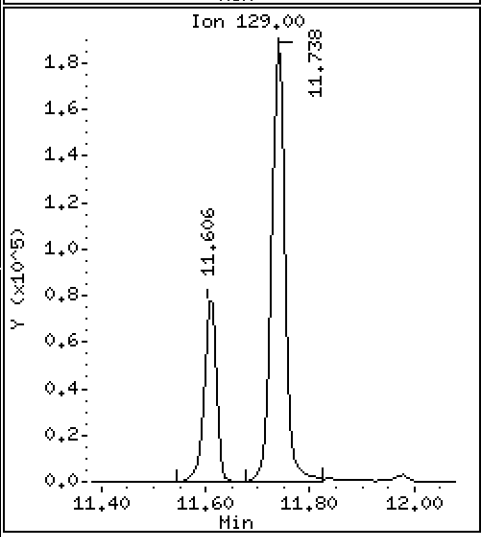
29 4-Chloroaniline

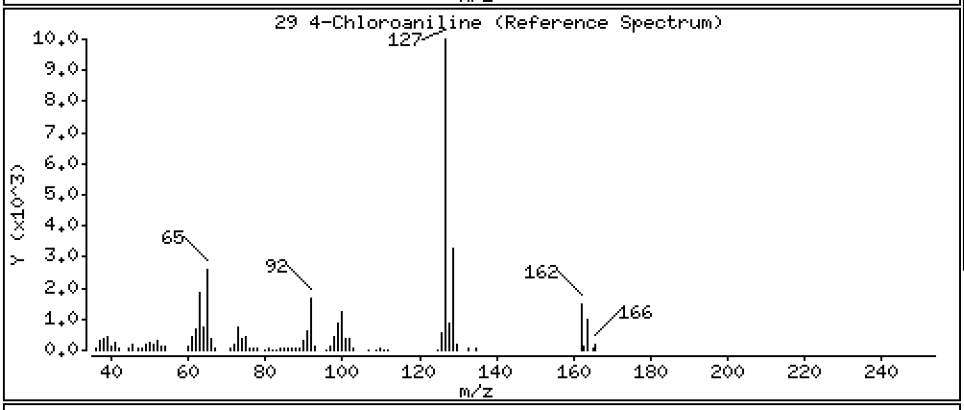
Concentration: 10.33 ug/mL

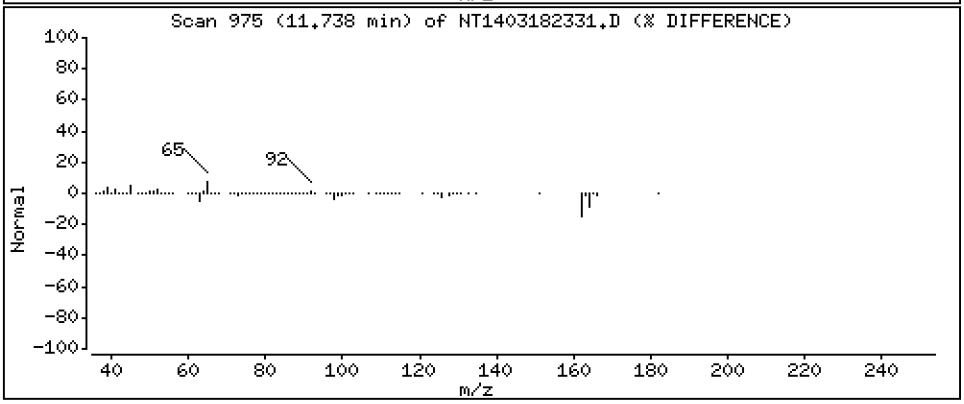












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Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

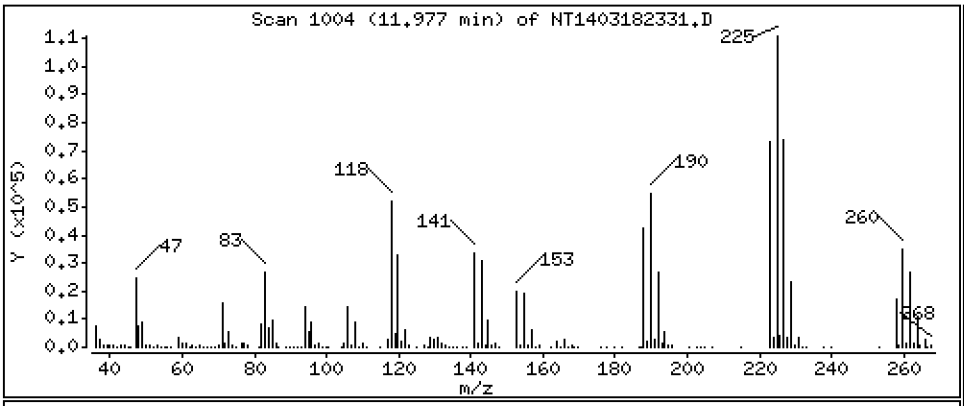
Operator: JGR

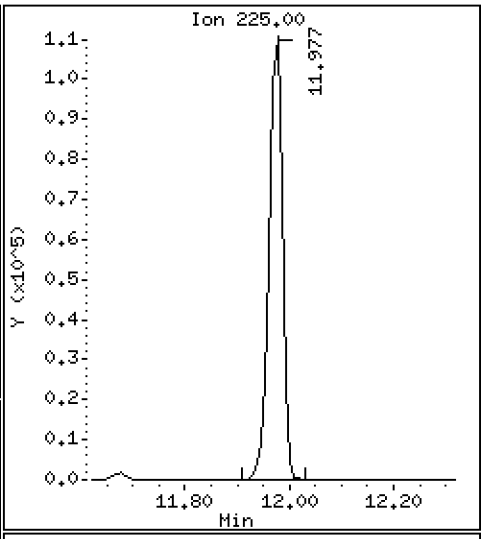
Column phase: ZB-5msi

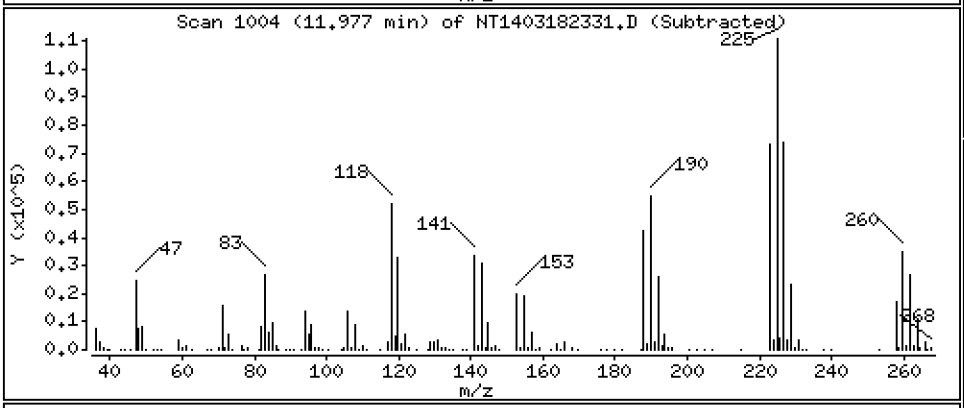
Column diameter: 0.25

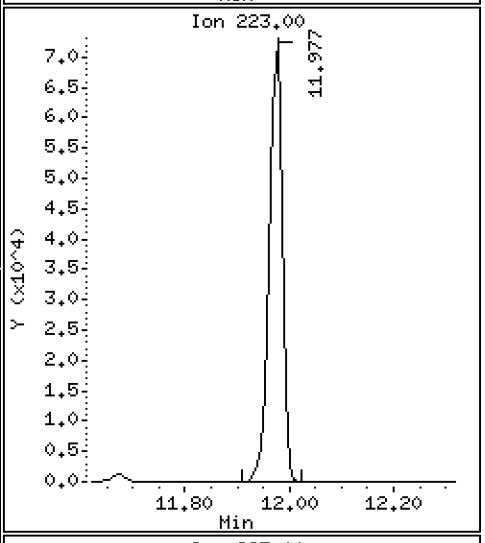
30 Hexachlorobutadiene

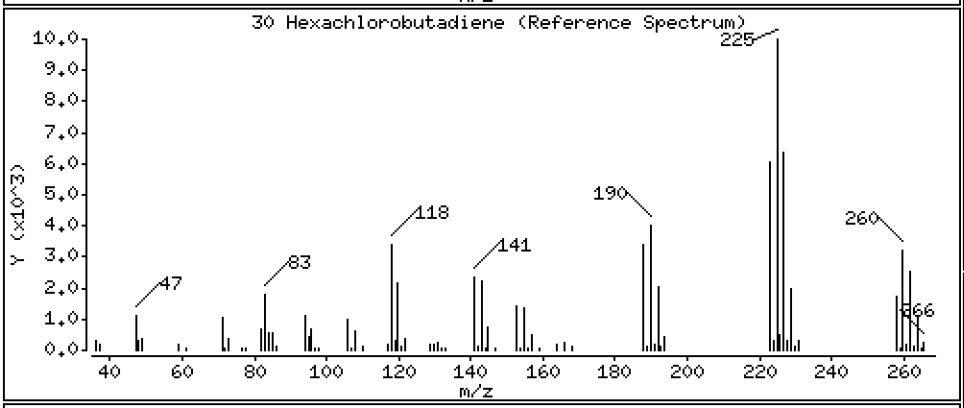
Concentration: 5.134 ug/mL

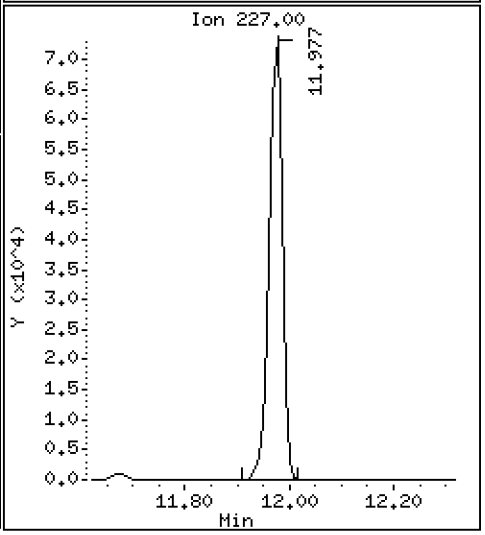


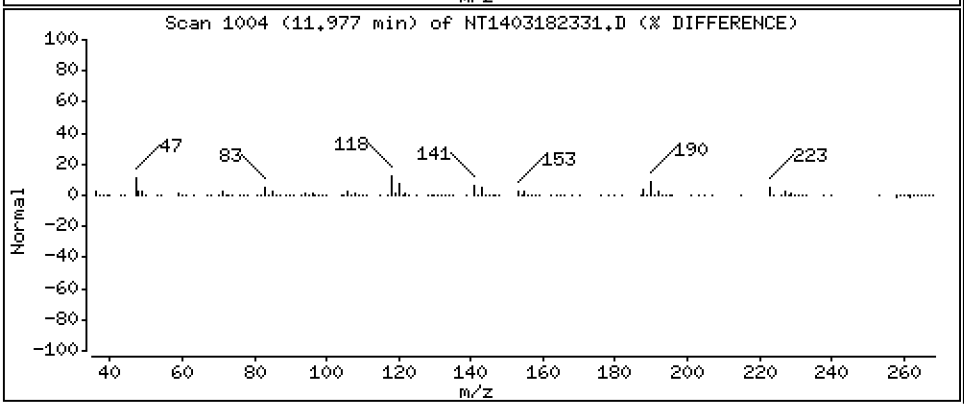












Data File: \\target\share\chem3\nt14.i\20230318.b\NT1403182331.D

Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

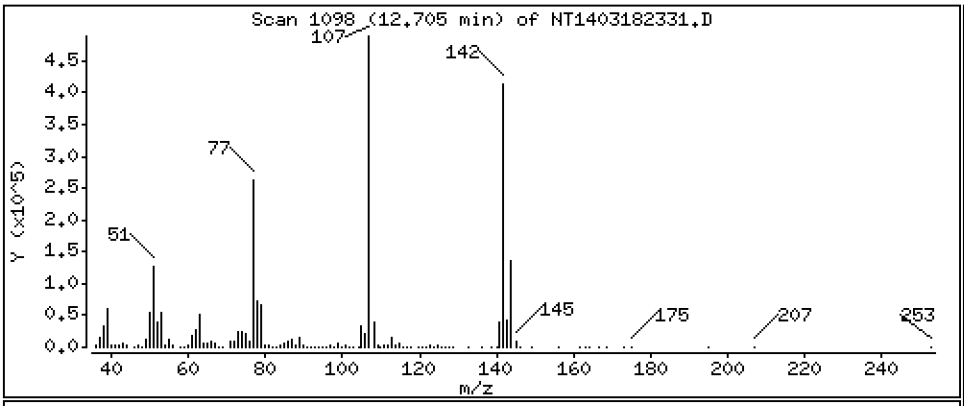
Operator: JGR

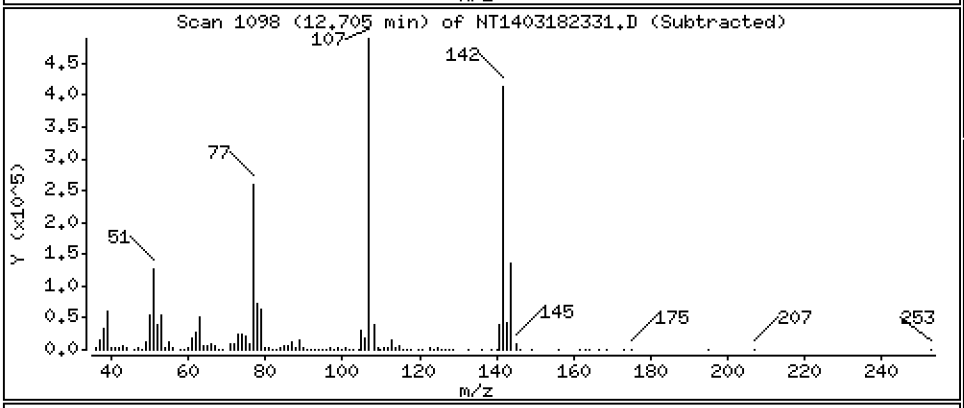
Column phase: ZB-5msi

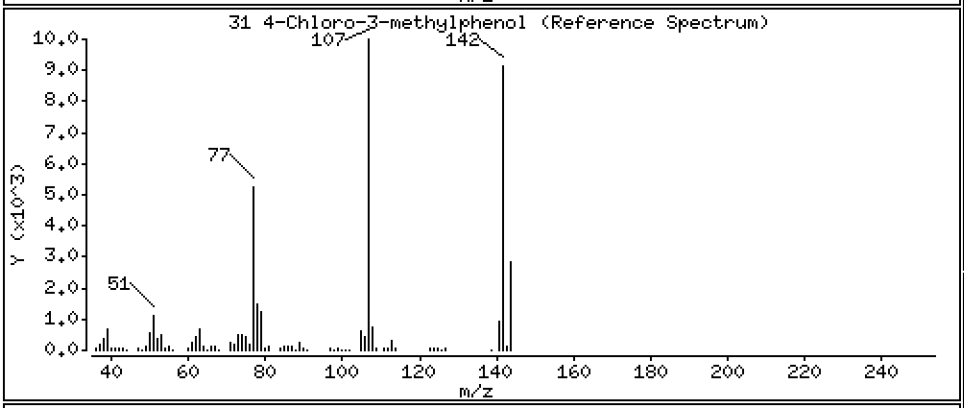
Column diameter: 0.25

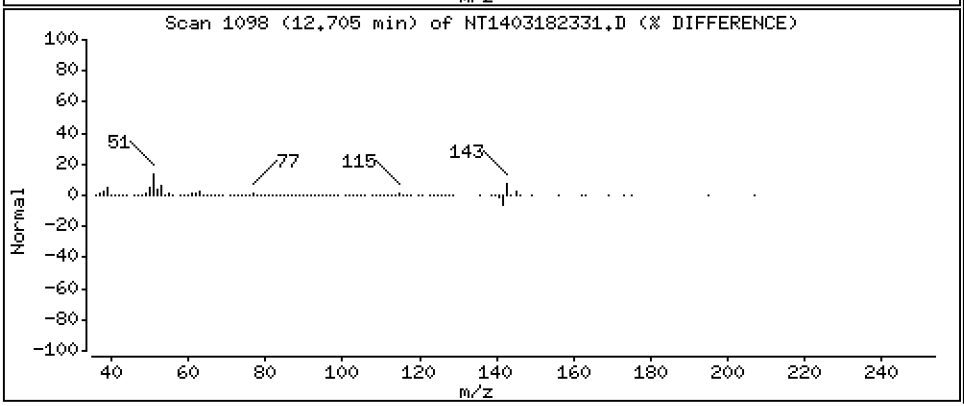
31 4-Chloro-3-methylphenol

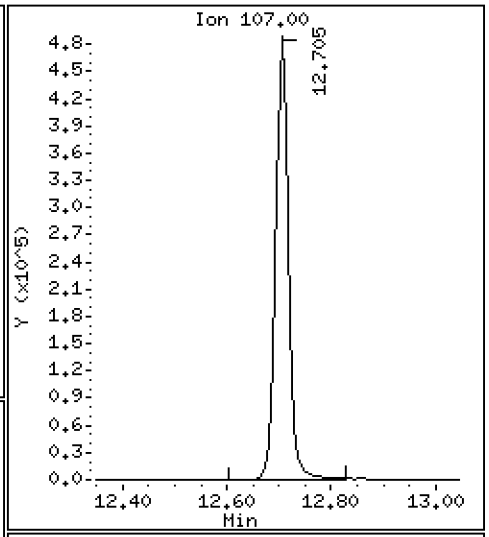
Concentration: 9.908 ug/mL

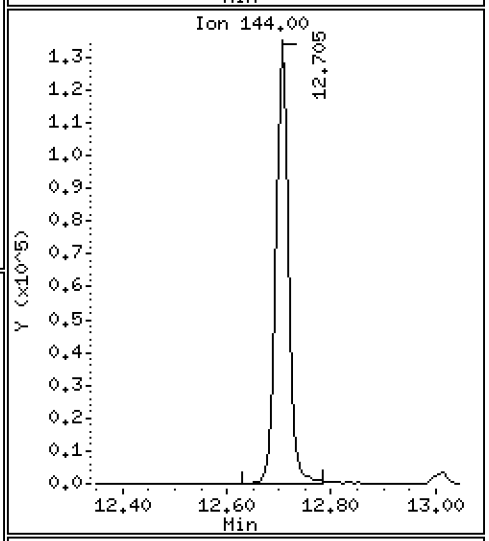


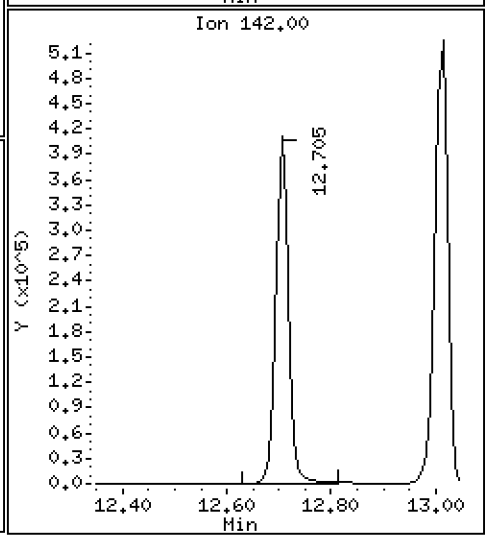












Date : 19-MAR-2023 11:04

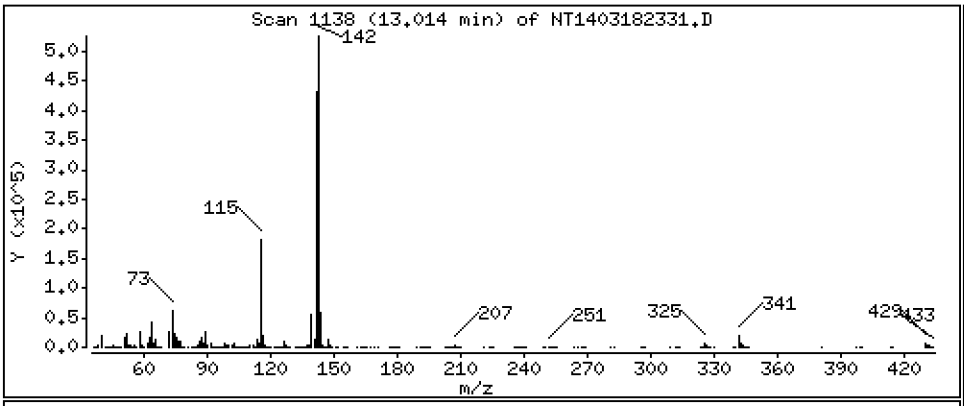
Client ID: Instrument: nt14.i

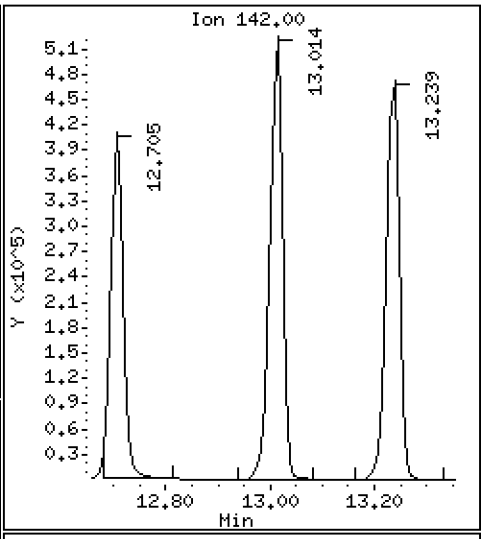
Sample Info: SLC0355-CCV1

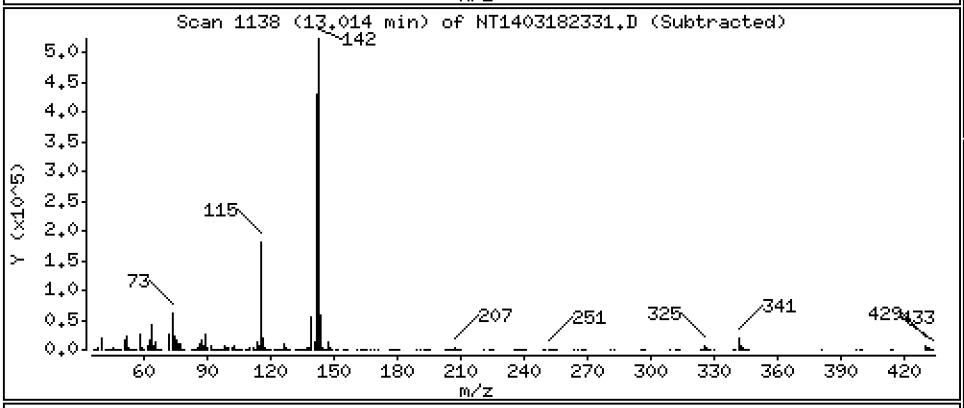
Operator: JGR

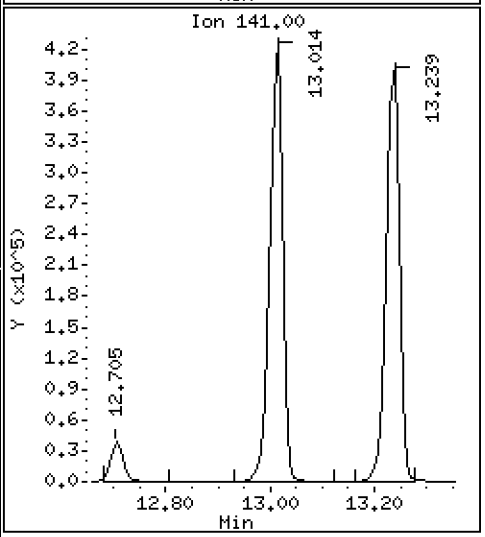
Column phase: ZB-5msi Column diameter: 0.25

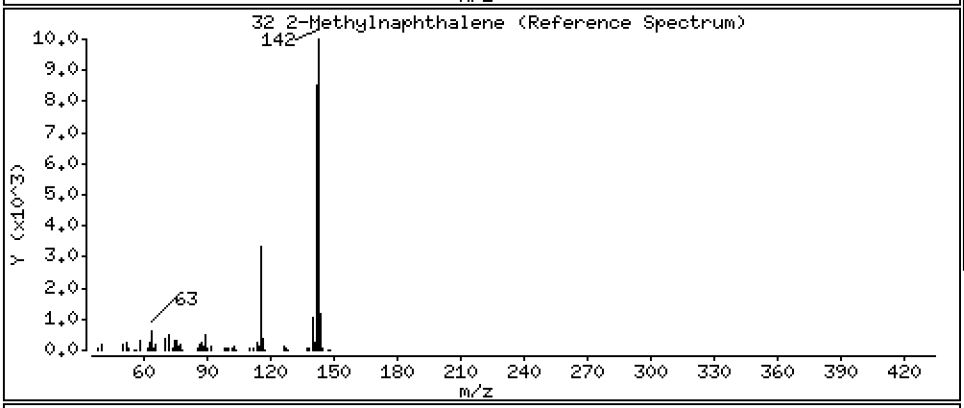
32 2-Methylnaphthalene Concentration: 4.923 ug/mL

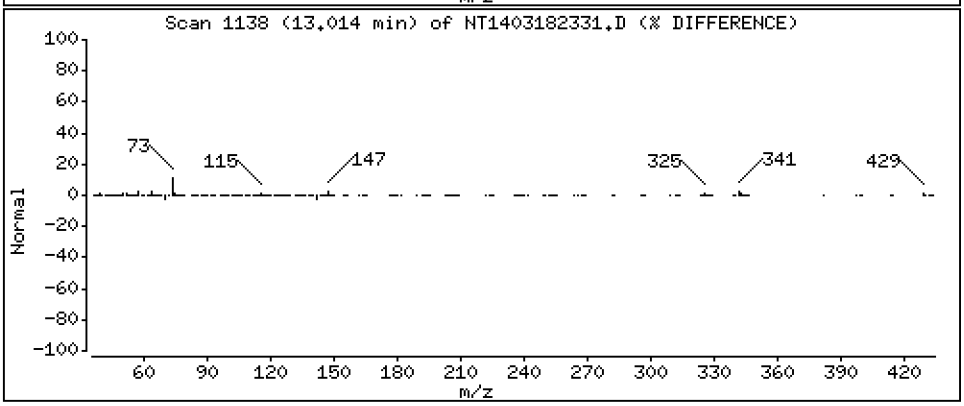












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Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

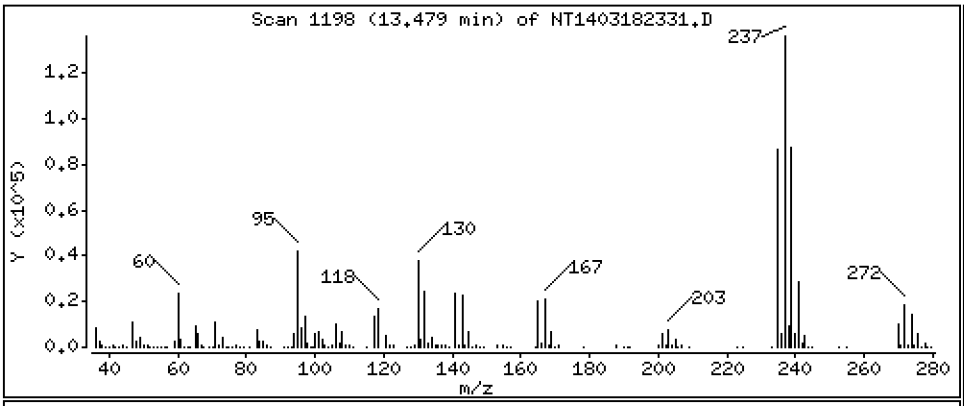
Operator: JGR

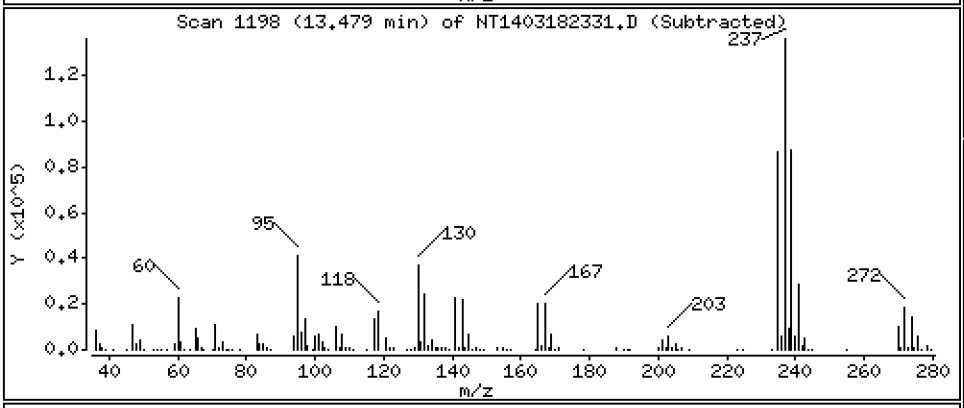
Column phase: ZB-5msi

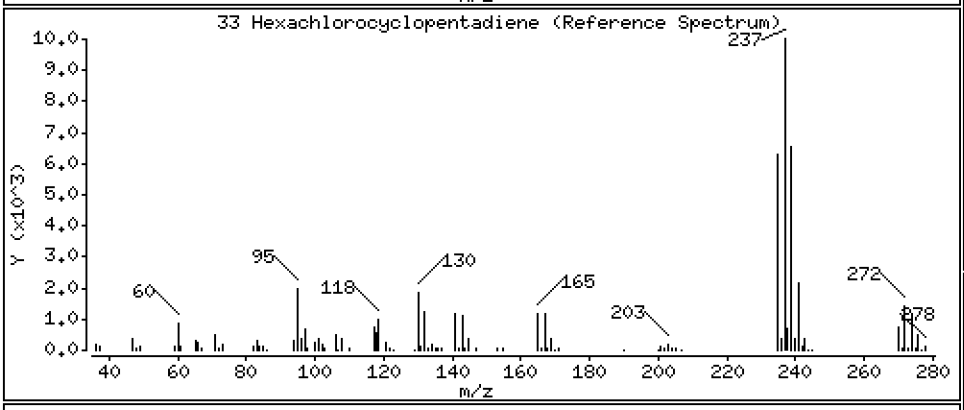
Column diameter: 0.25

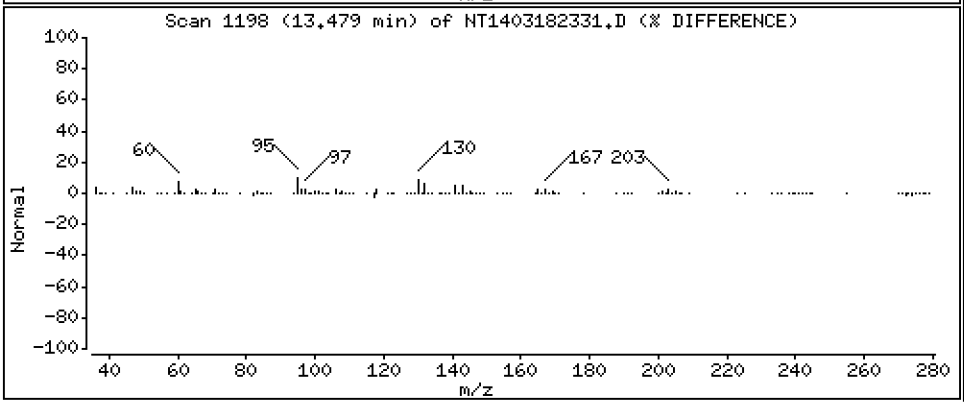
33 Hexachlorocyclopentadiene

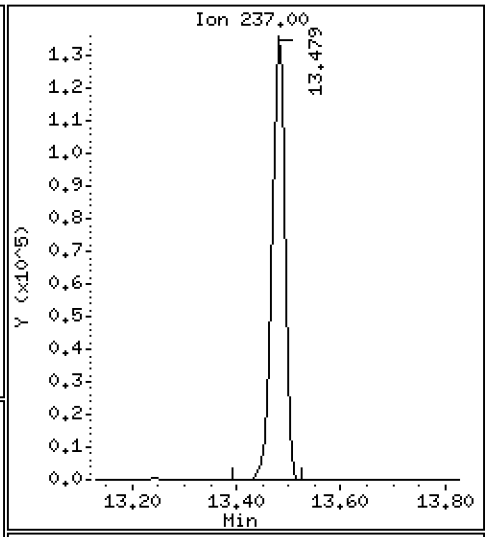
Concentration: 5.387 ug/mL

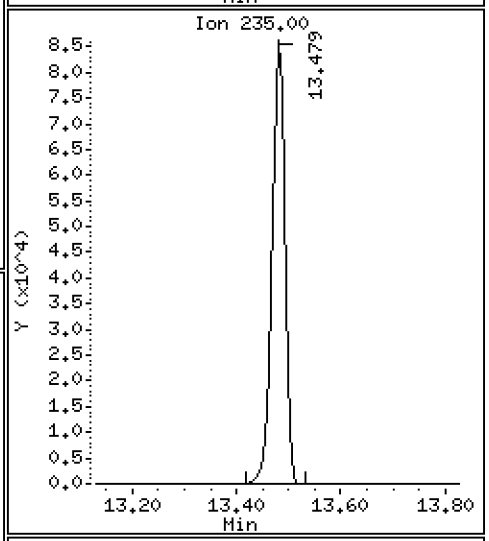


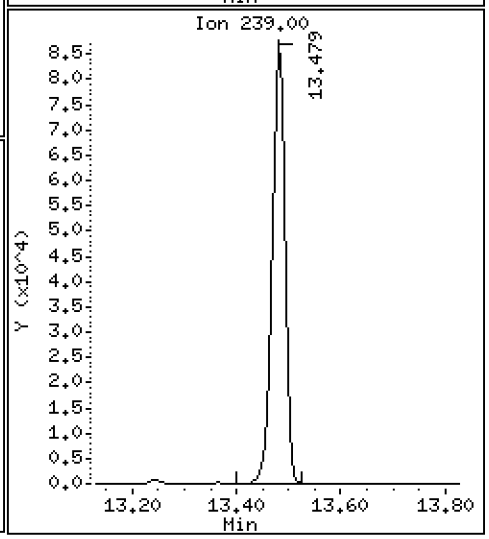












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Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

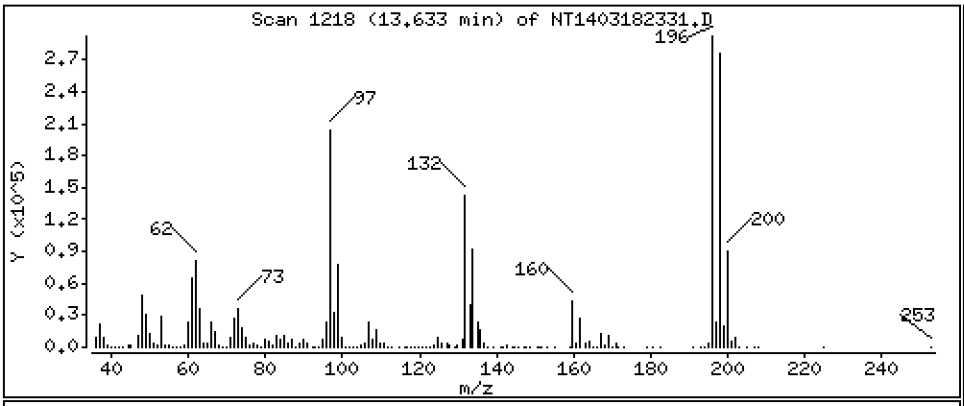
Operator: JGR

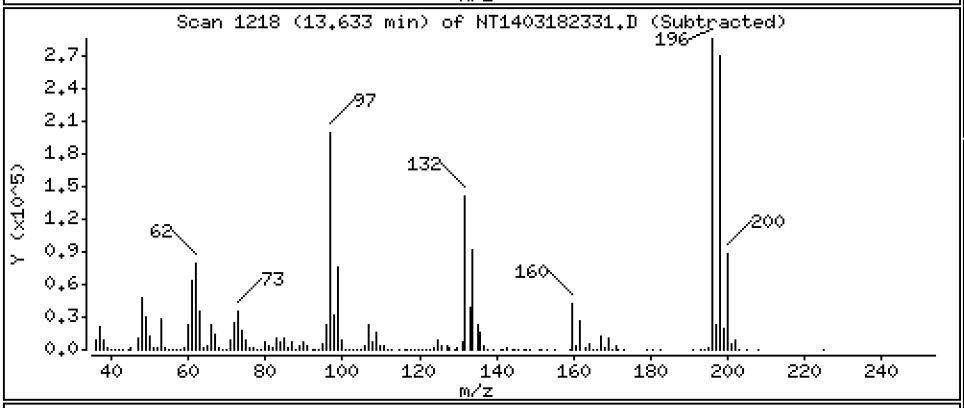
Column phase: ZB-5msi

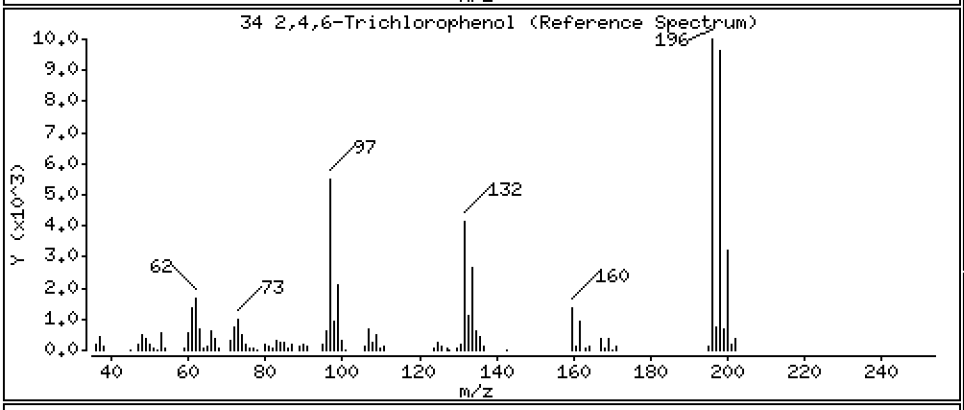
Column diameter: 0.25

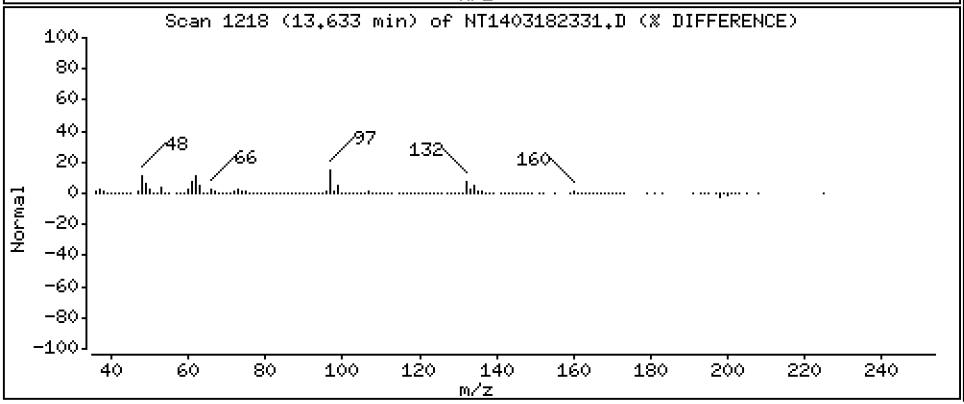
34 2,4,6-Trichlorophenol

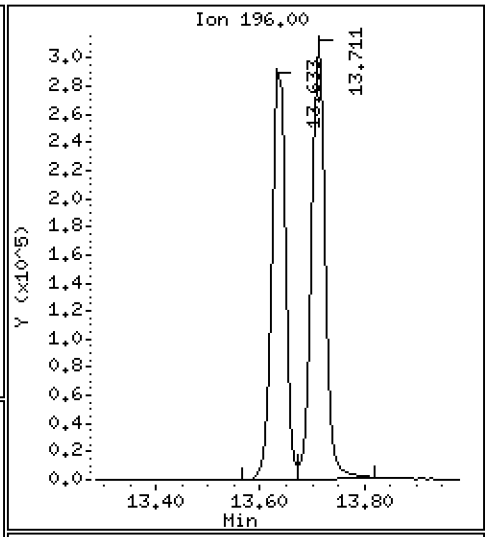
Concentration: 10.02 ug/mL

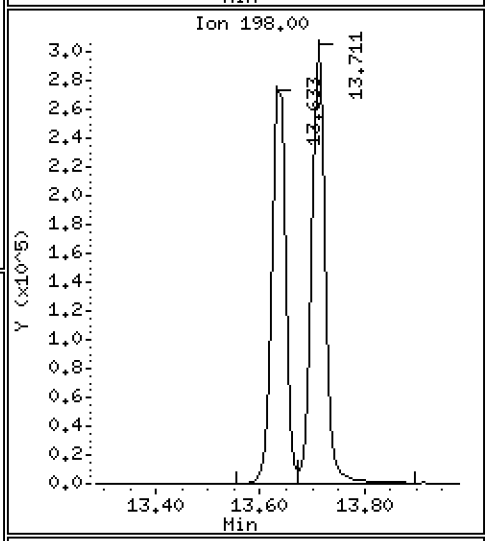


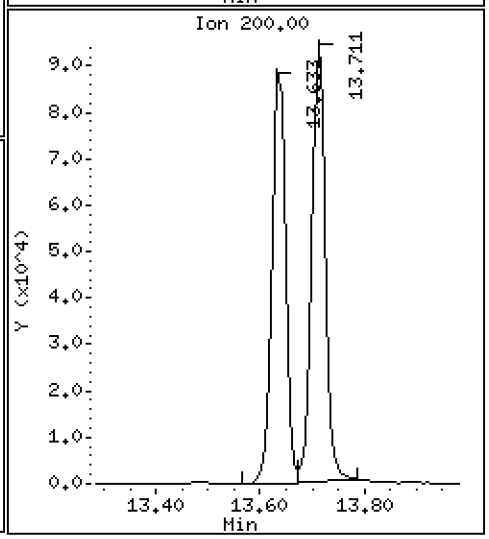












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Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

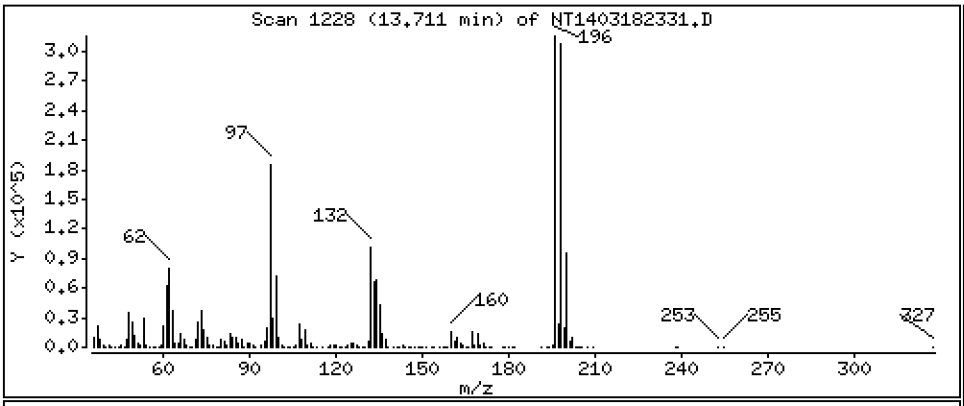
Operator: JGR

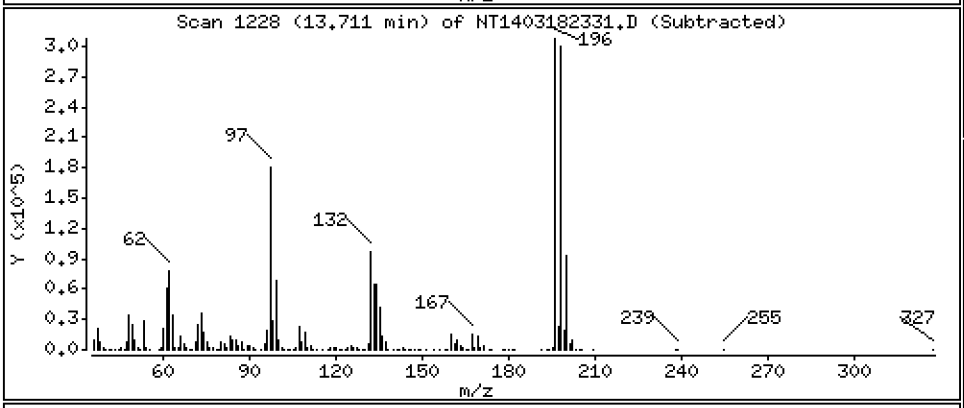
Column phase: ZB-5msi

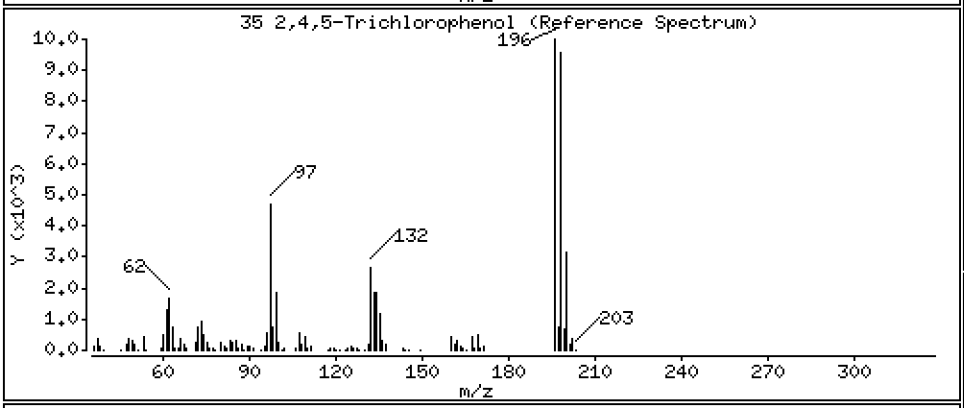
Column diameter: 0.25

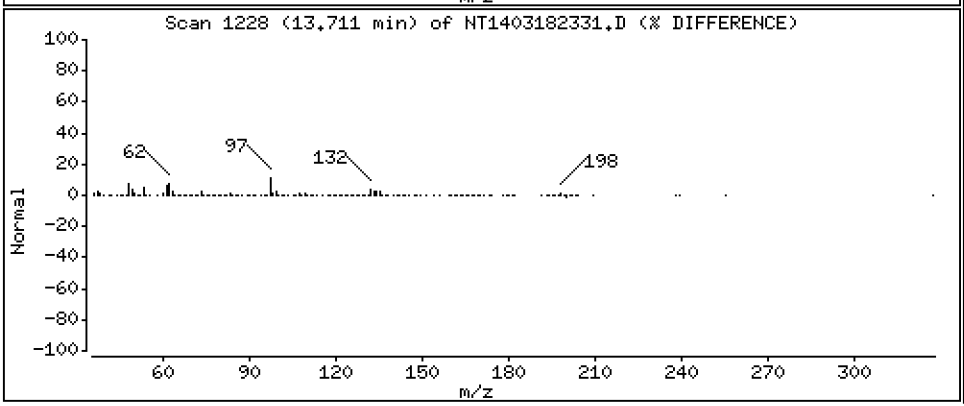
35 2,4,5-Trichlorophenol

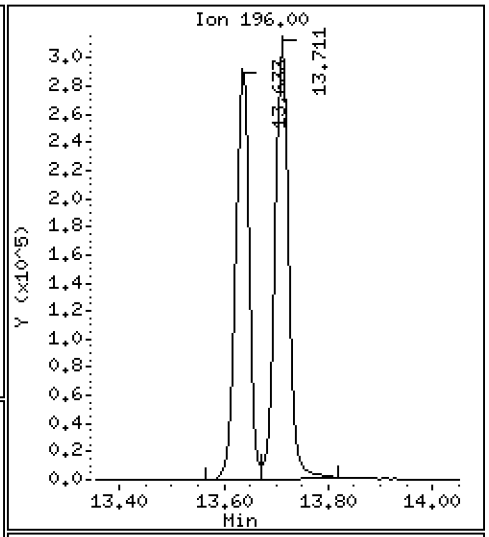
Concentration: 10.29 ug/mL

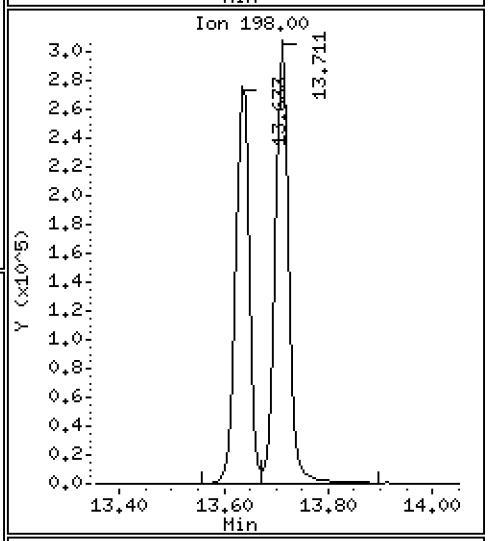


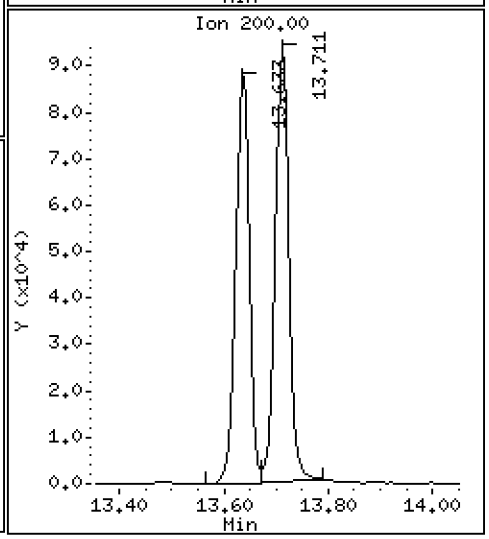












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Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

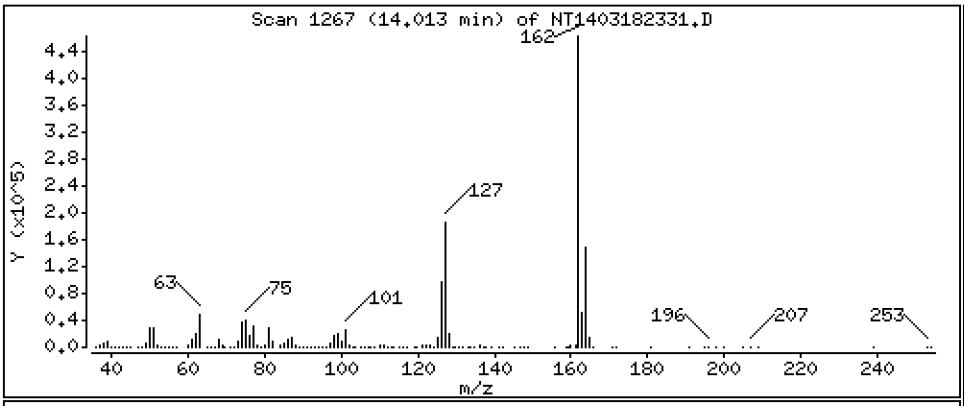
Operator: JGR

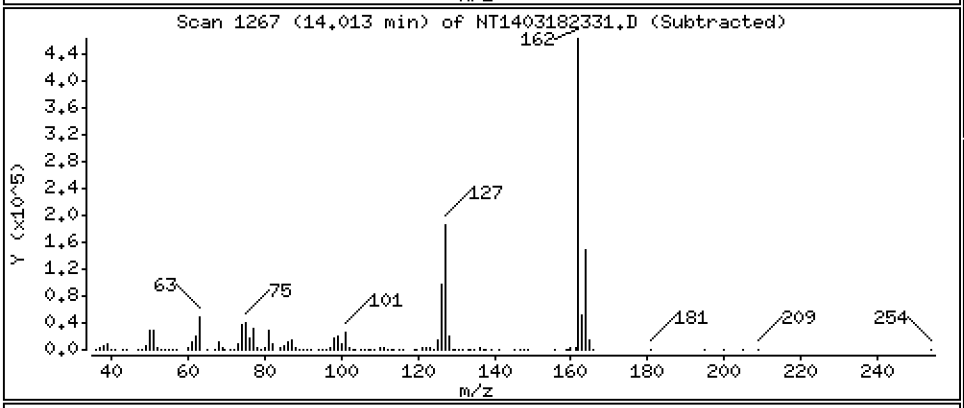
Column phase: ZB-5msi

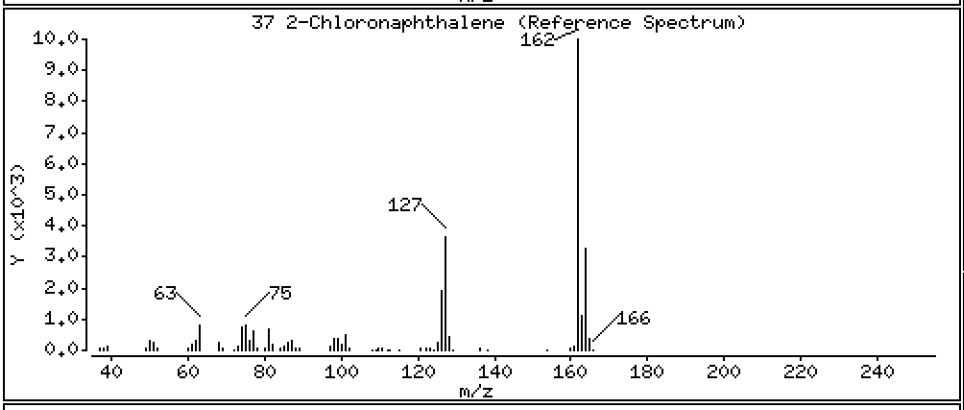
Column diameter: 0.25

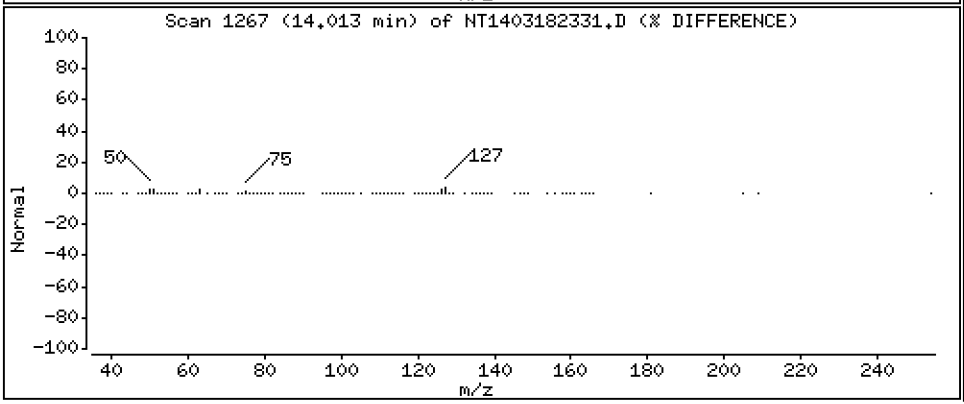
37 2-Chloronaphthalene

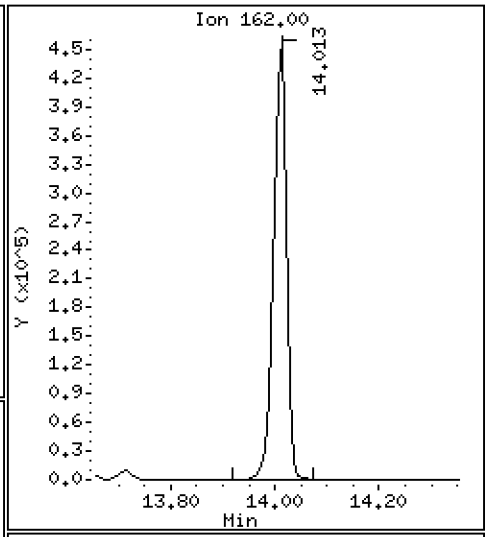
Concentration: 4.926 ug/mL

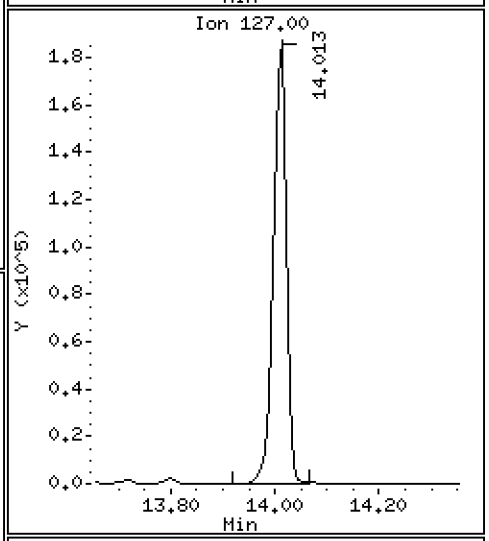


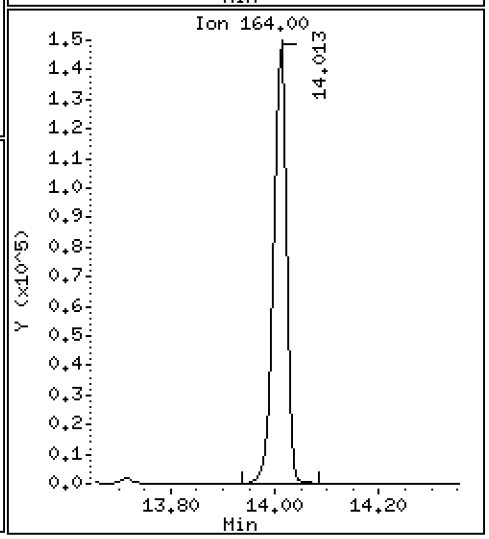












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Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

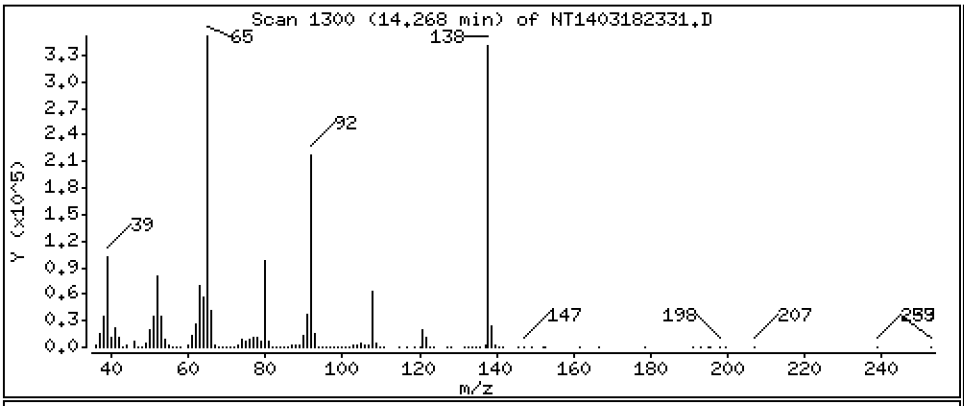
Operator: JGR

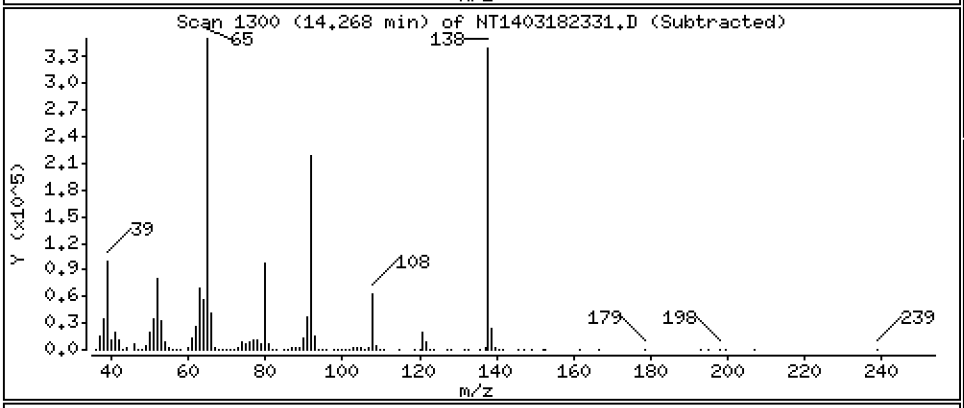
Column phase: ZB-5msi

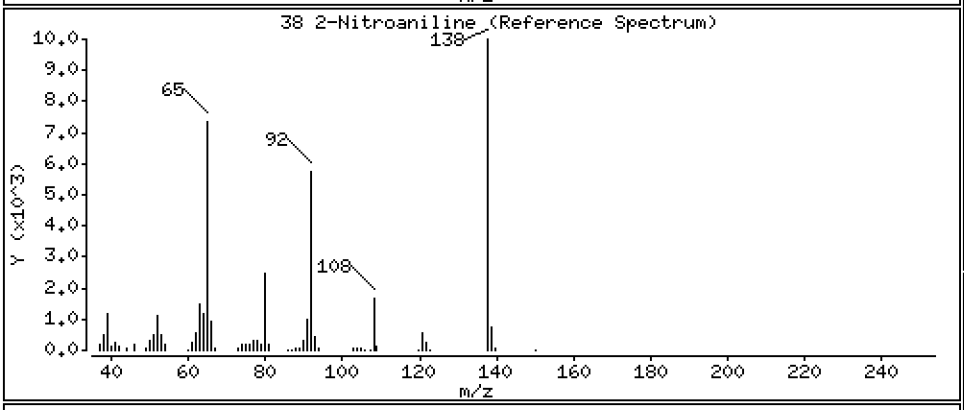
Column diameter: 0.25

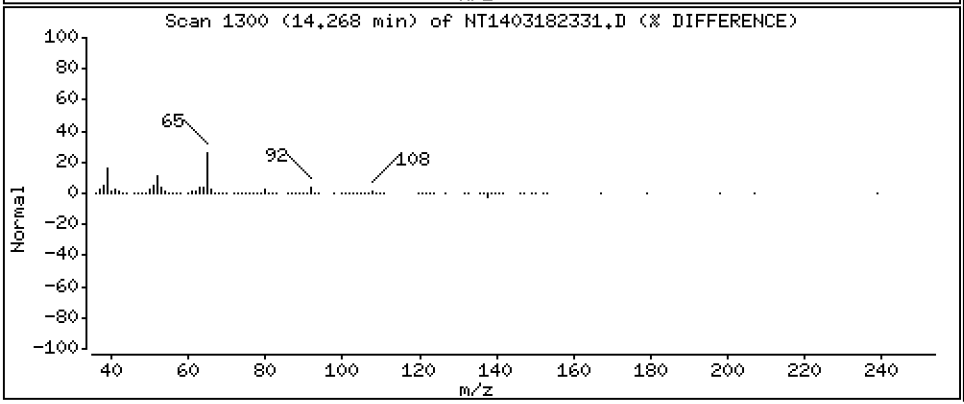
38 2-Nitroaniline

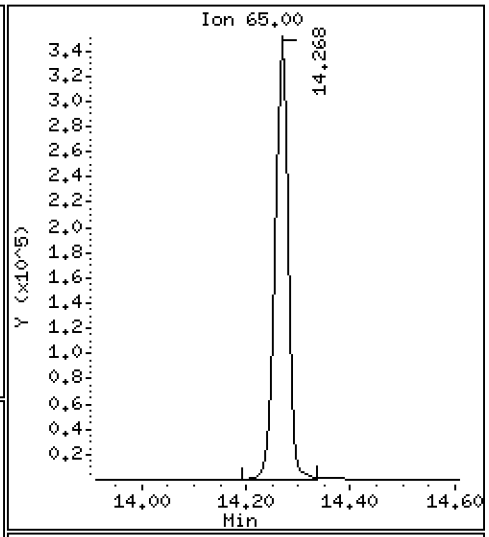
Concentration: 9.706 ug/mL

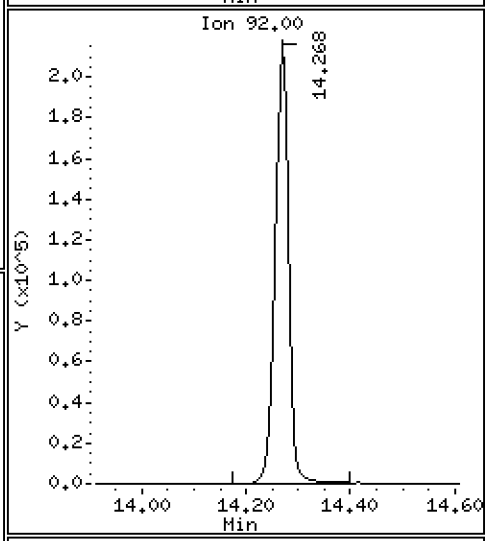


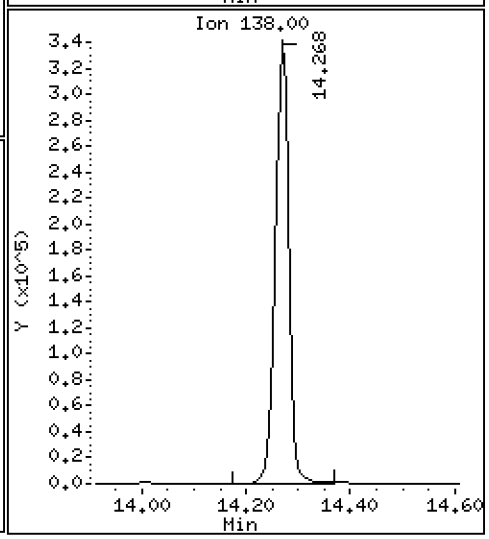












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Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

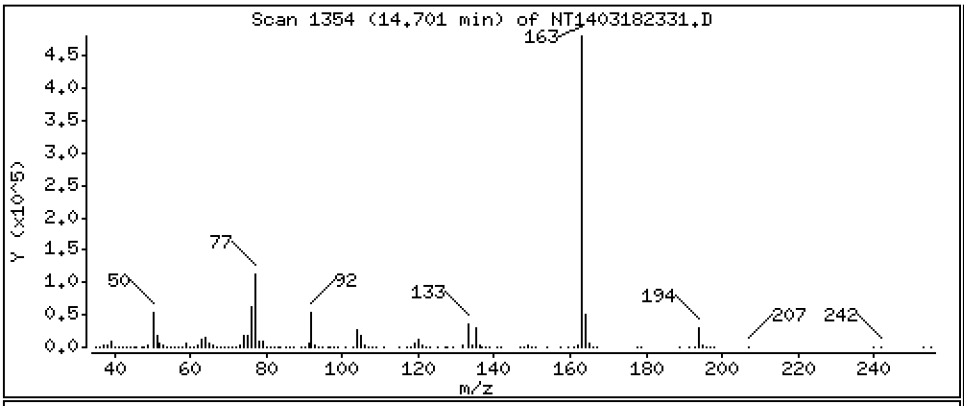
Operator: JGR

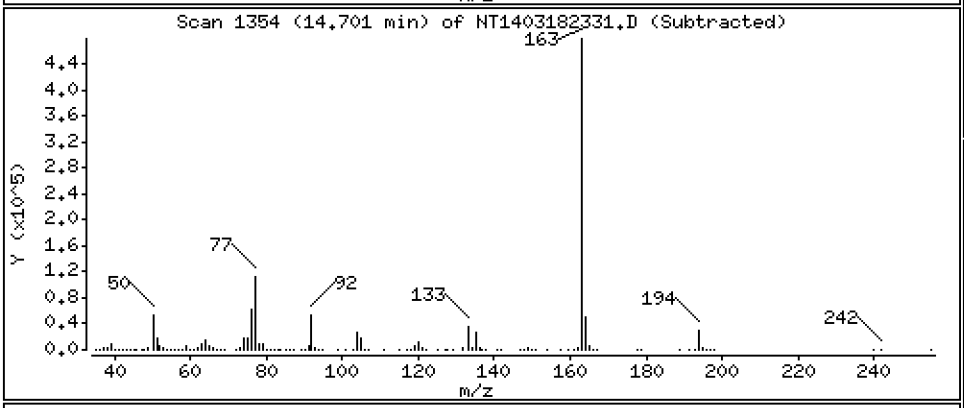
Column phase: ZB-5msi

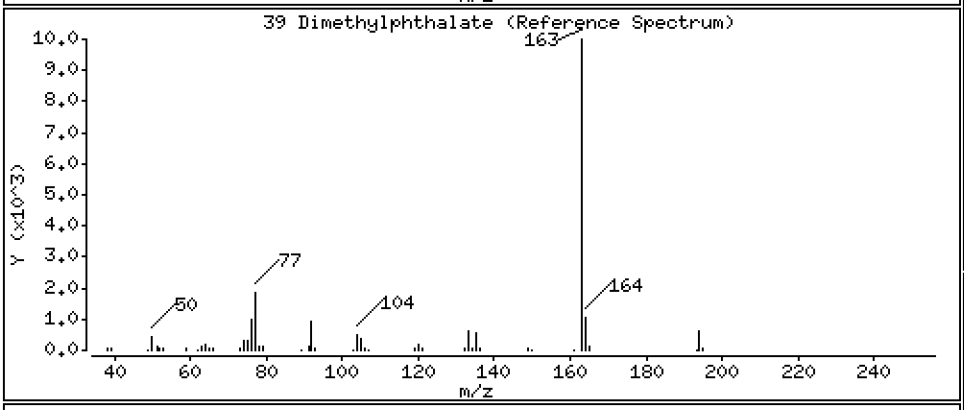
Column diameter: 0.25

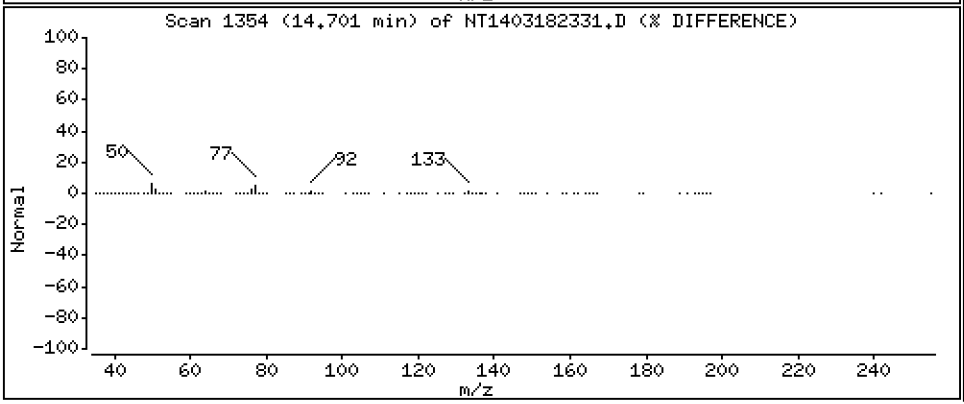
39 Dimethylphthalate

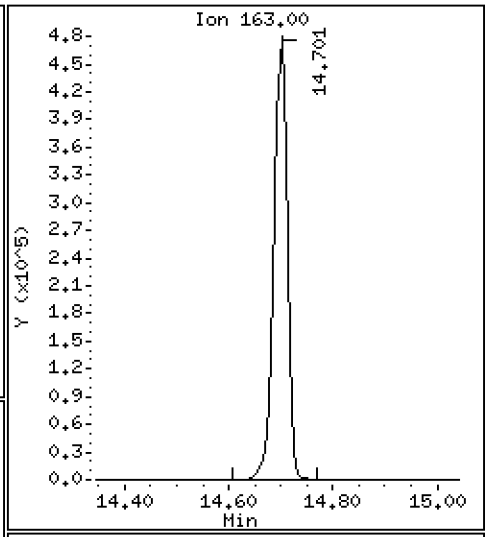
Concentration: 4.938 ug/mL

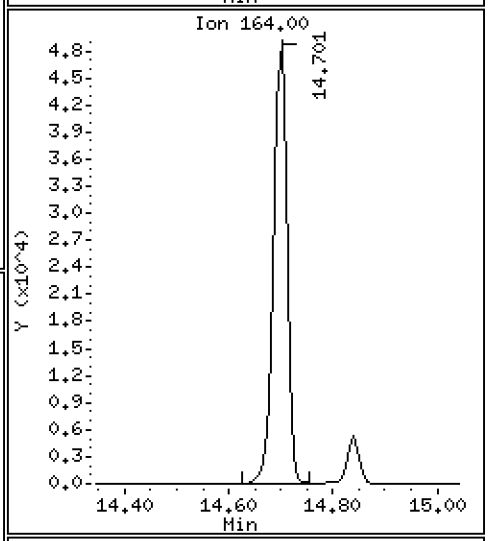


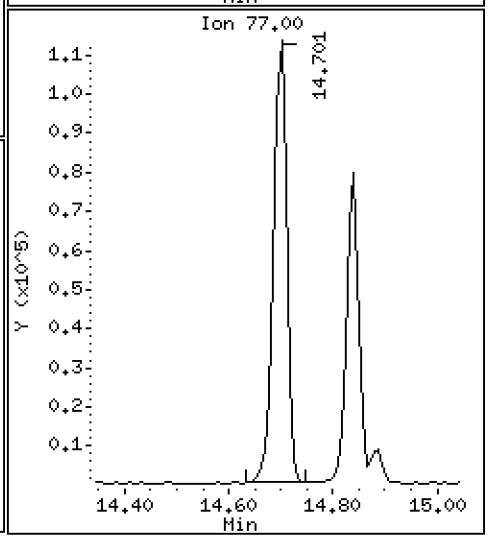












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Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

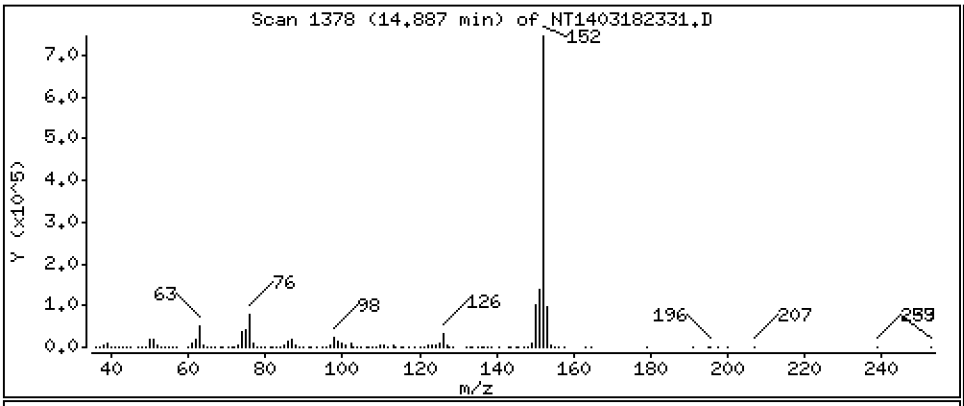
Operator: JGR

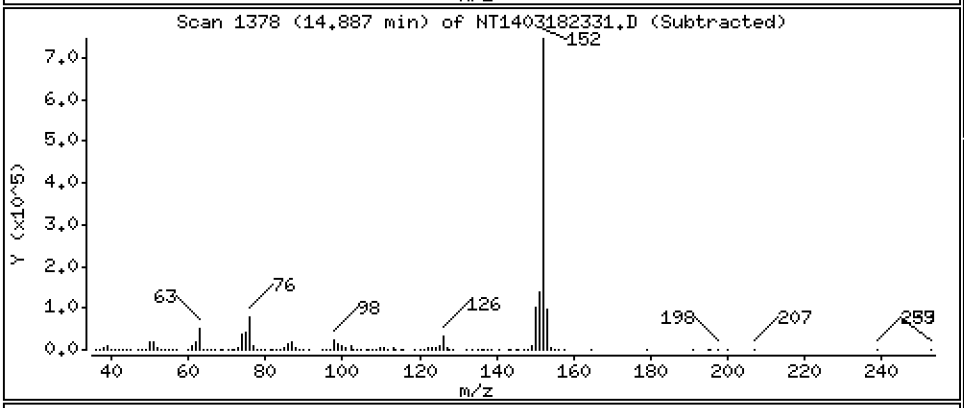
Column phase: ZB-5msi

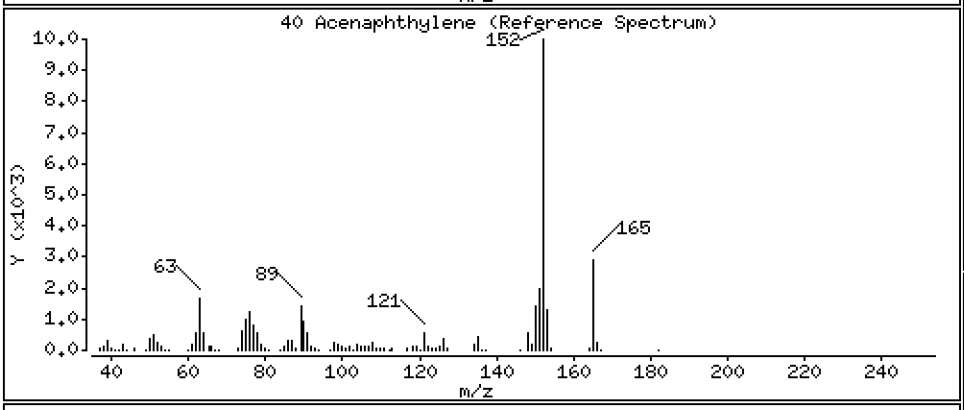
Column diameter: 0.25

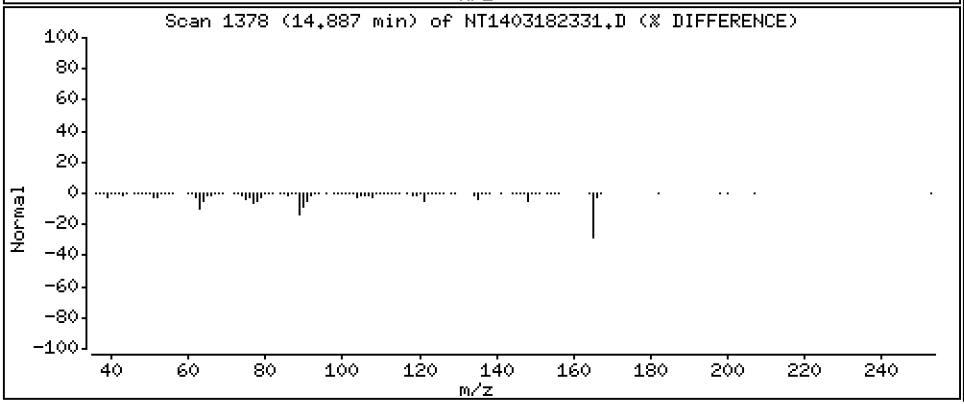
40 Acenaphthylene

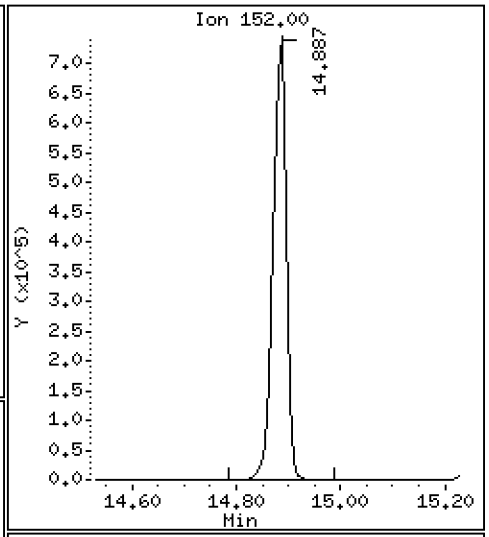
Concentration: 4.885 ug/mL

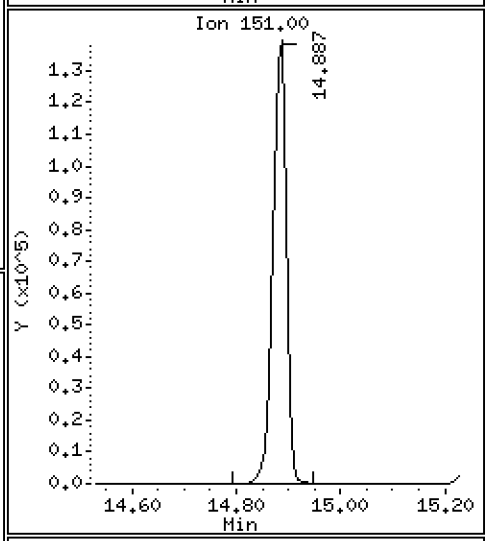


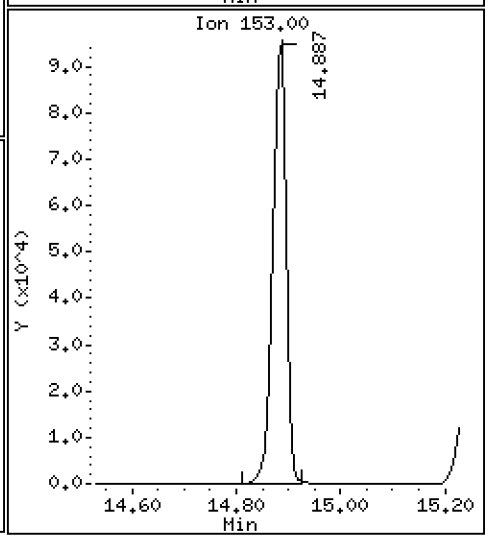












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Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

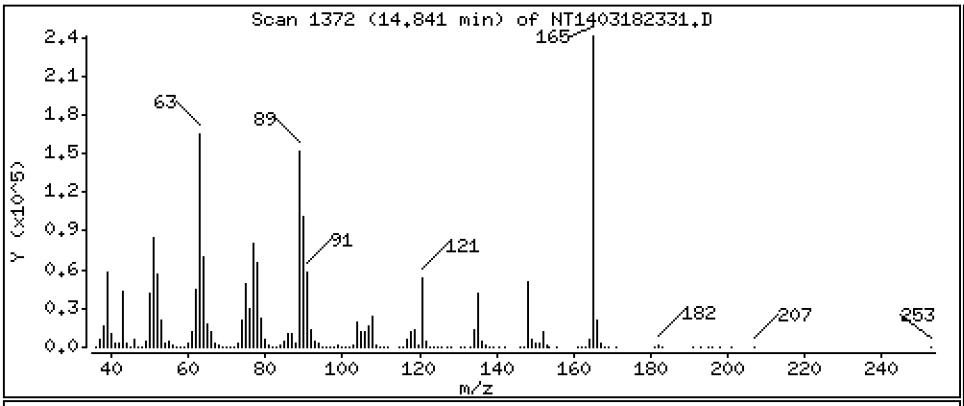
Operator: JGR

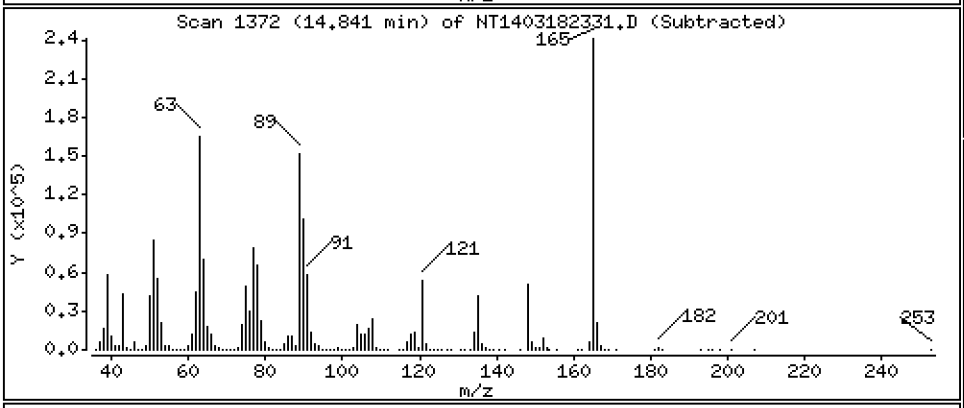
Column phase: ZB-5msi

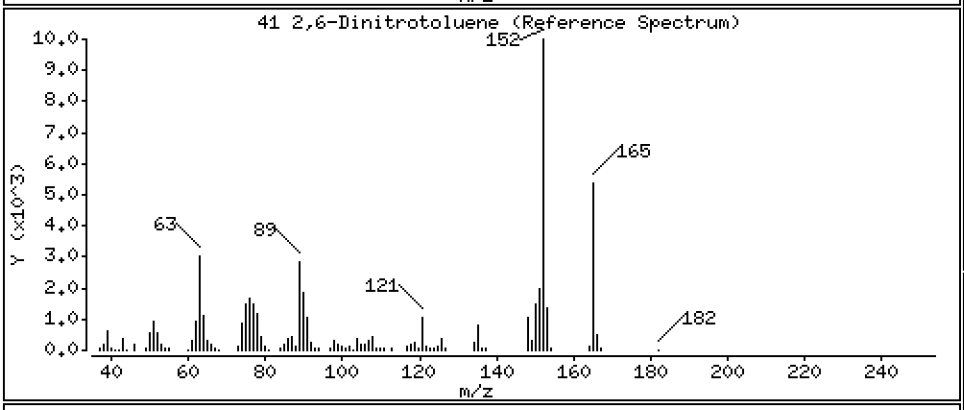
Column diameter: 0.25

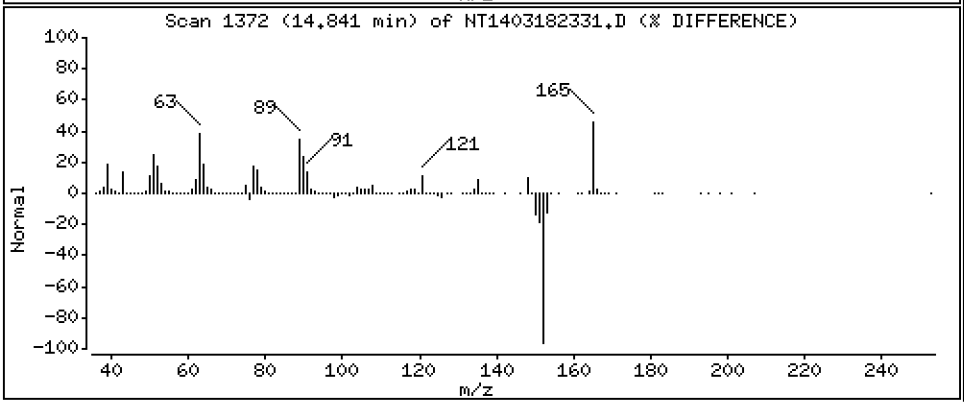
41 2,6-Dinitrotoluene

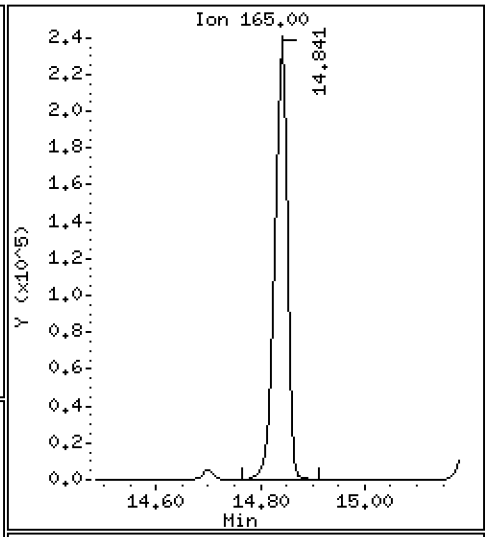
Concentration: 10.26 ug/mL

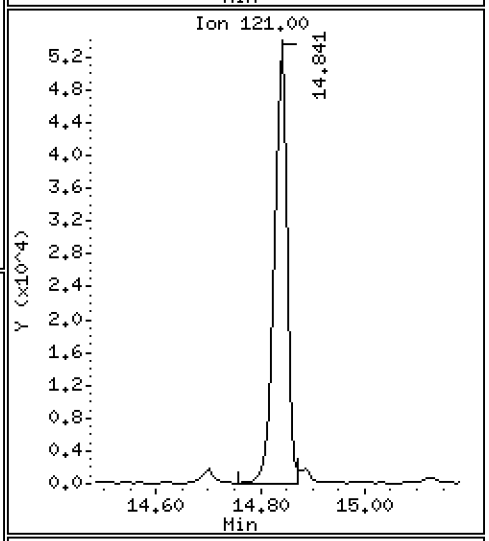


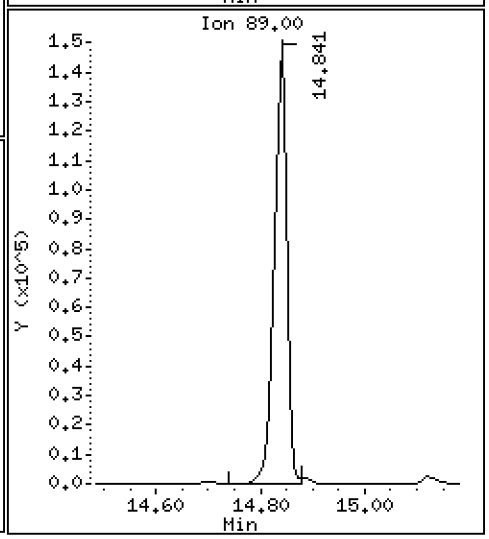












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Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

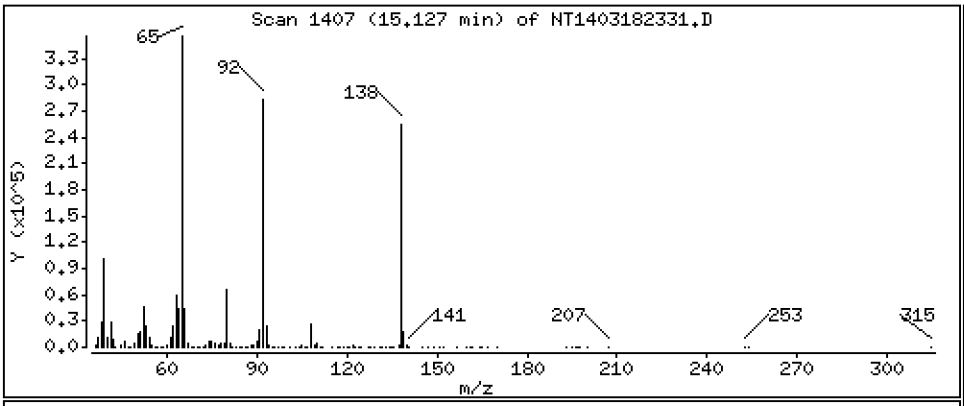
Operator: JGR

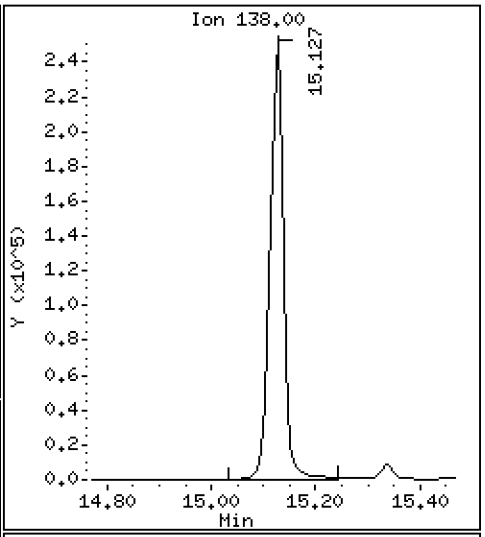
Column phase: ZB-5msi

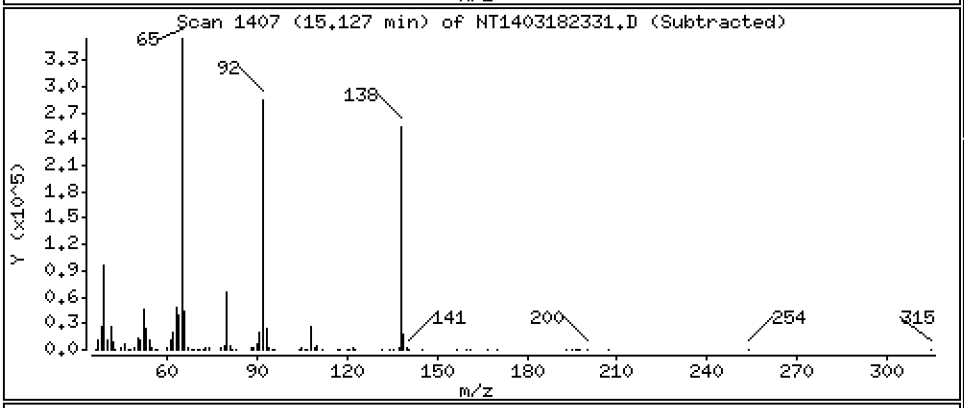
Column diameter: 0.25

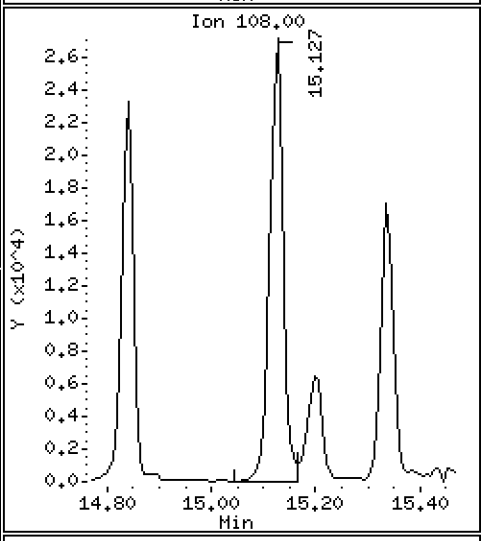
43 3-Nitroaniline

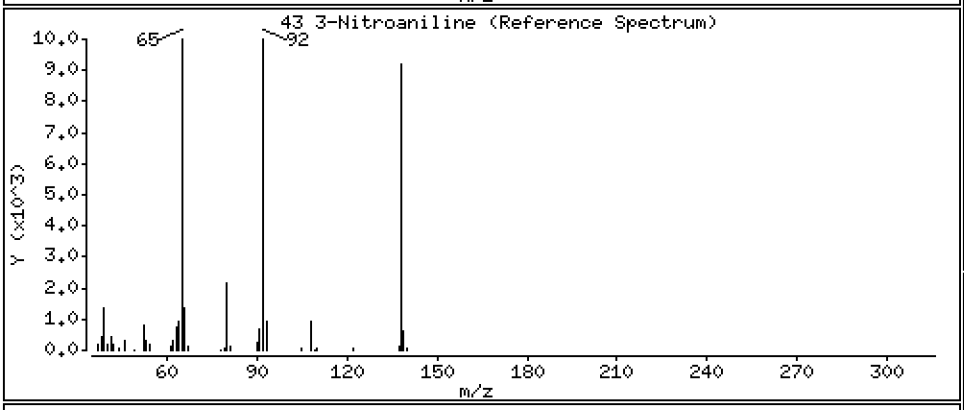
Concentration: 9.089 ug/mL

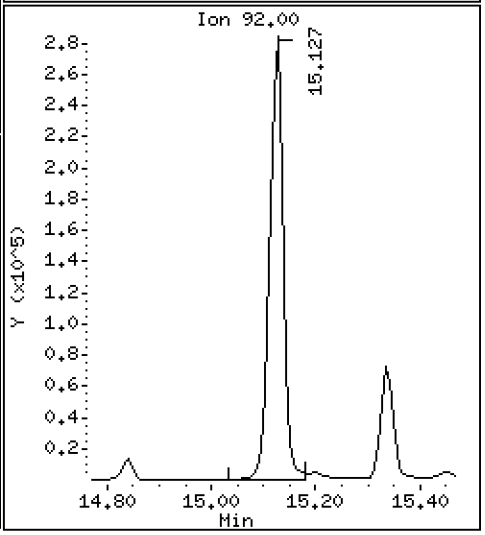


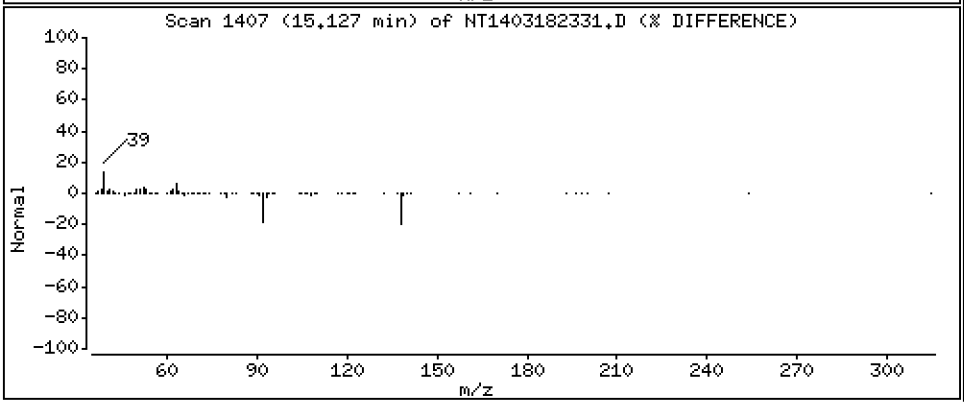












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Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

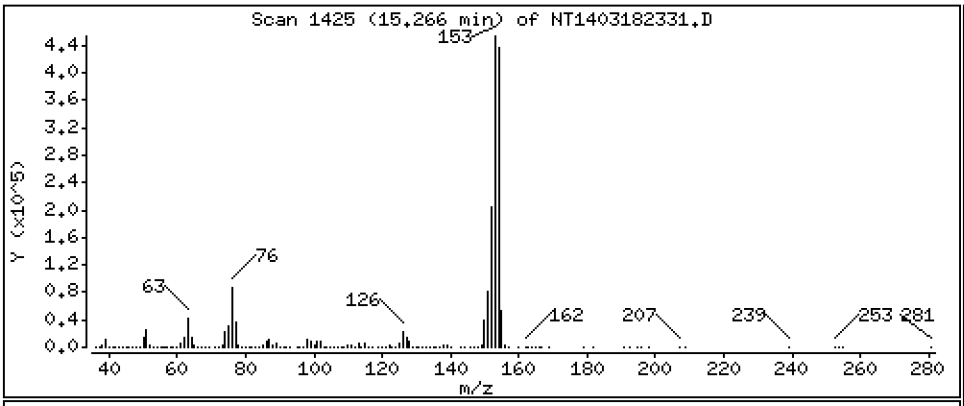
Operator: JGR

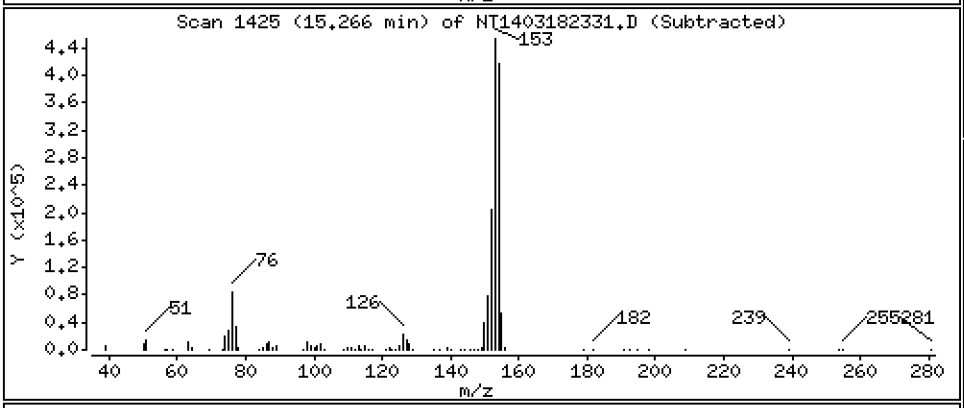
Column phase: ZB-5msi

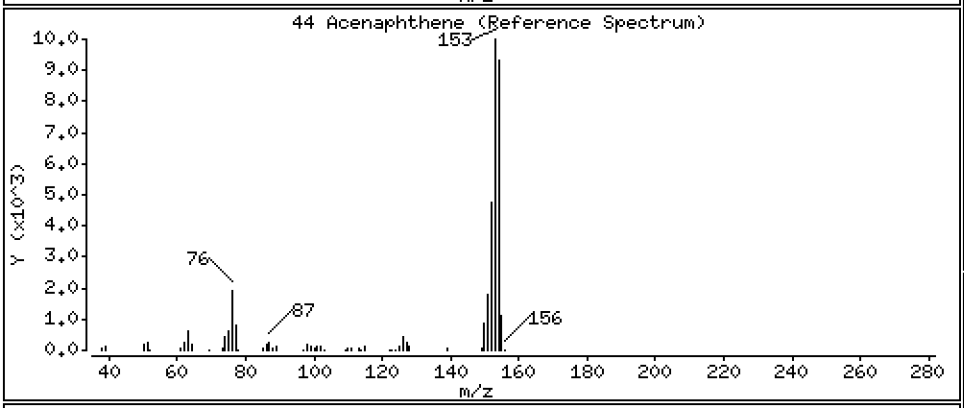
Column diameter: 0.25

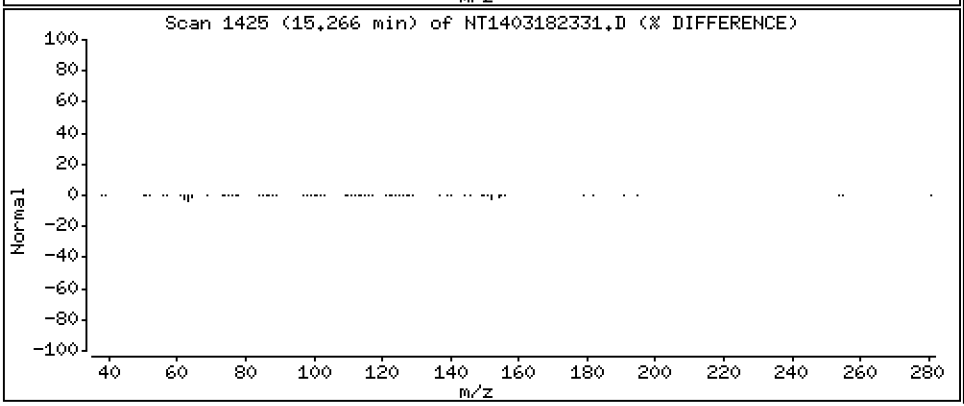
44 Acenaphthene

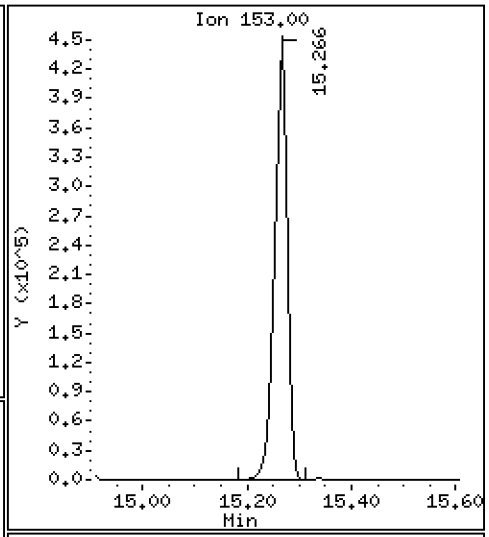
Concentration: 4.834 ug/mL

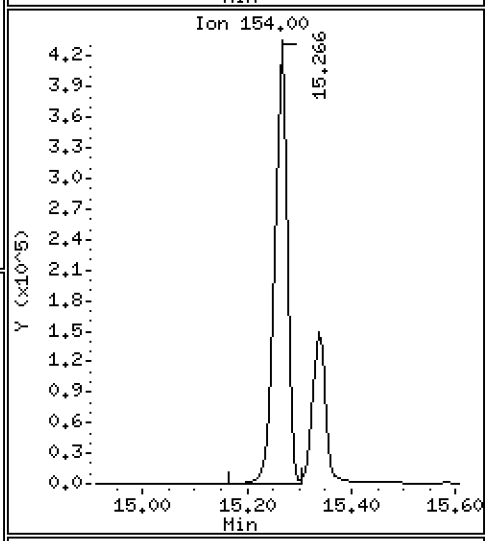


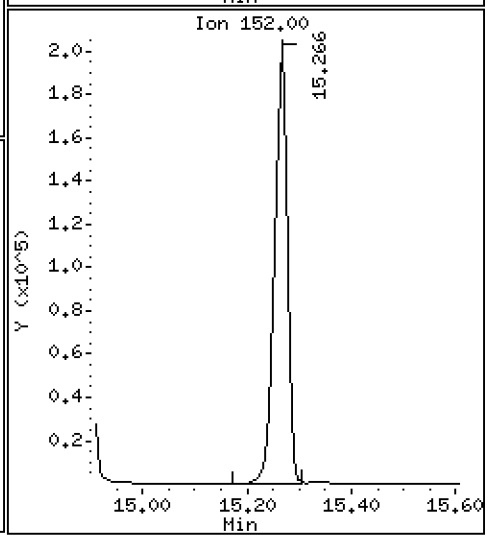












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Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

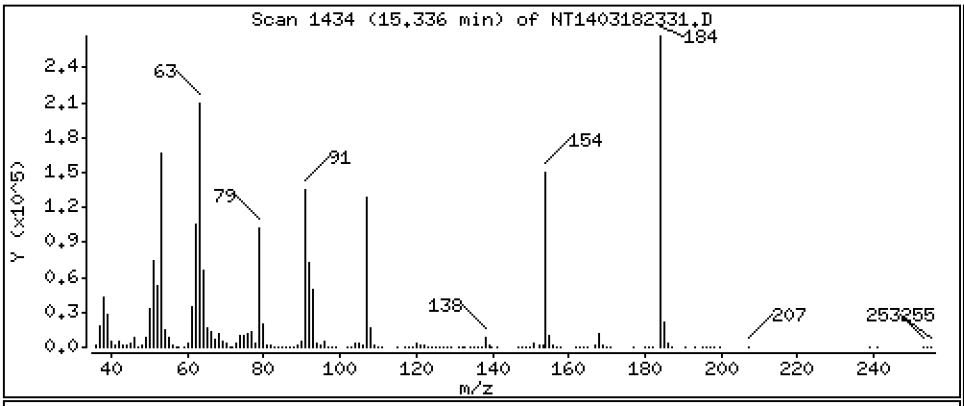
Operator: JGR

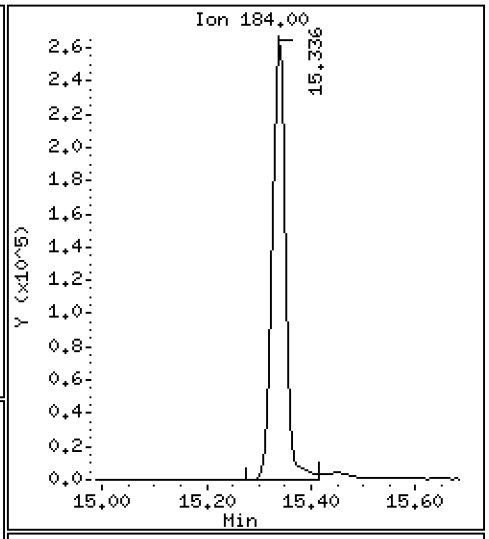
Column phase: ZB-5msi

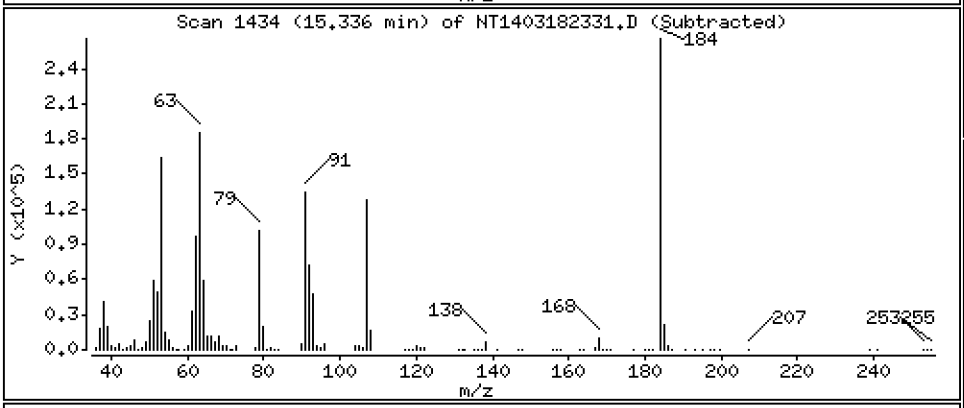
Column diameter: 0.25

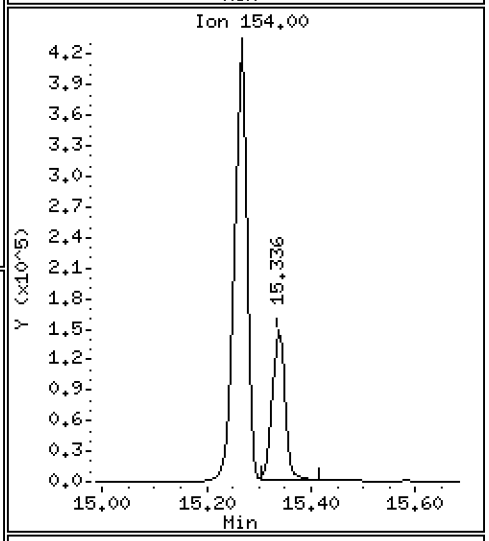
45 2,4-Dinitrophenol

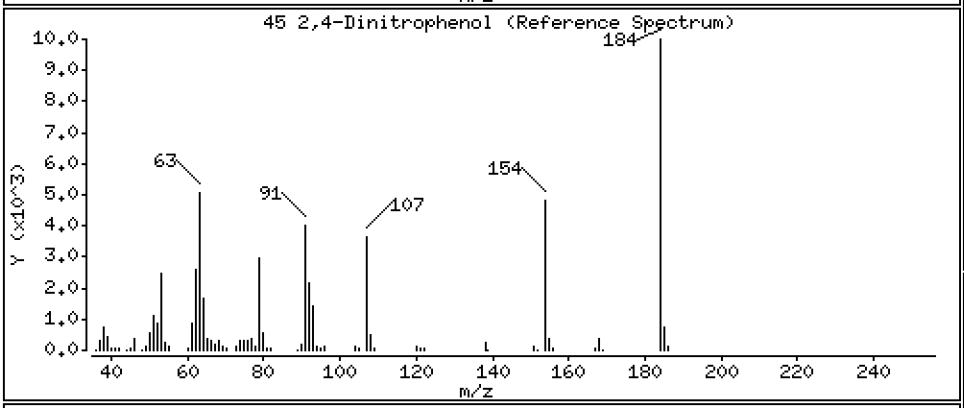
Concentration: 14.69 ug/mL

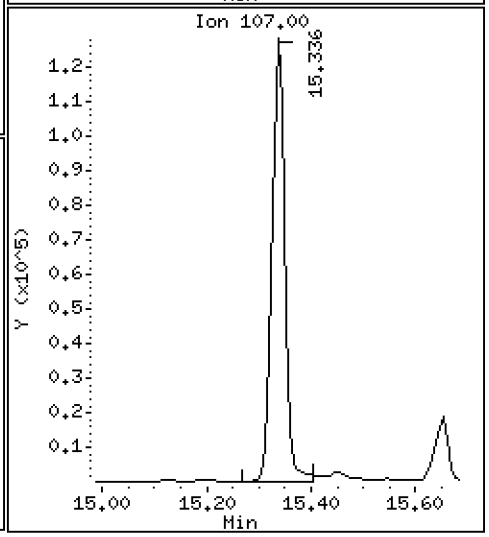


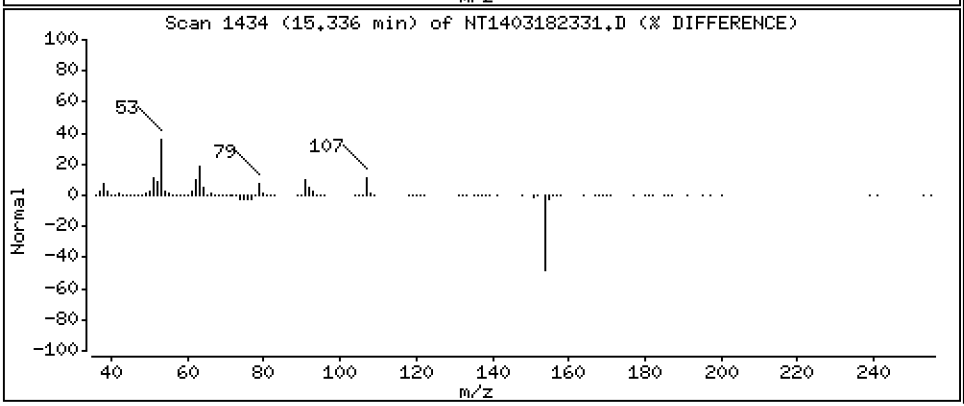












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Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

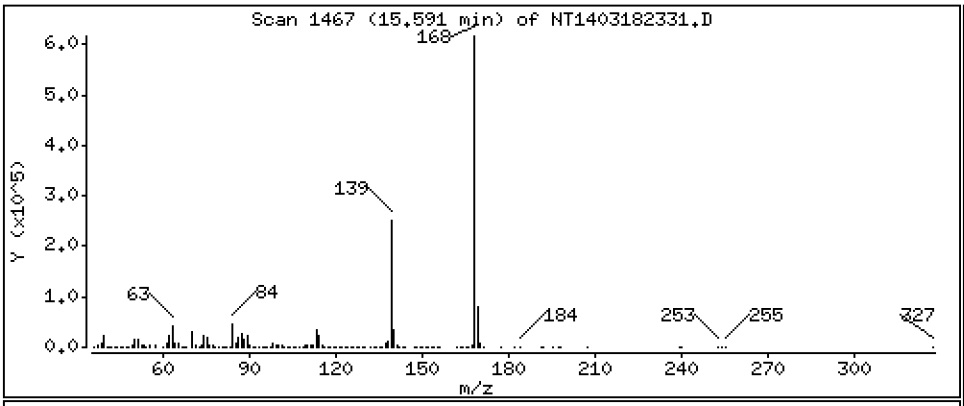
Operator: JGR

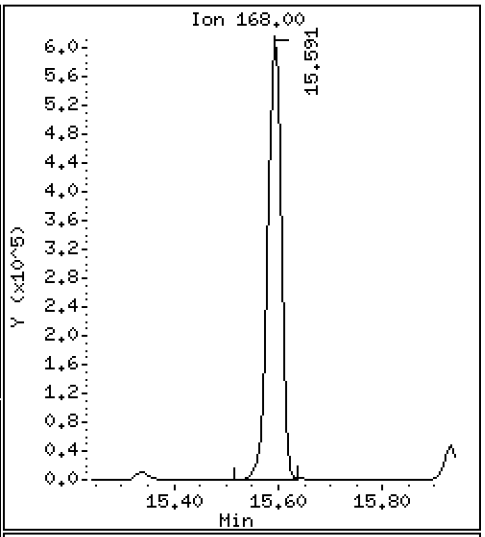
Column phase: ZB-5msi

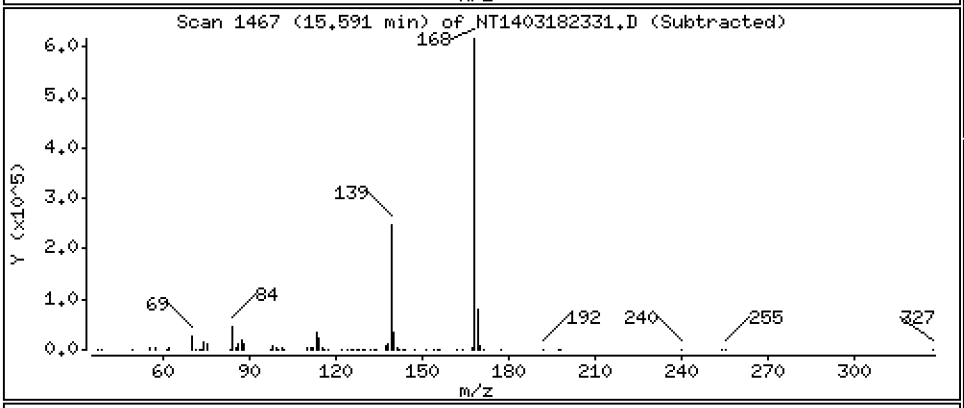
Column diameter: 0.25

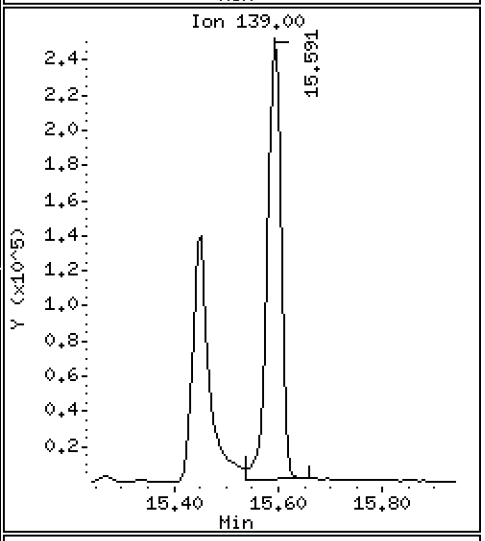
46 Dibenzofuran

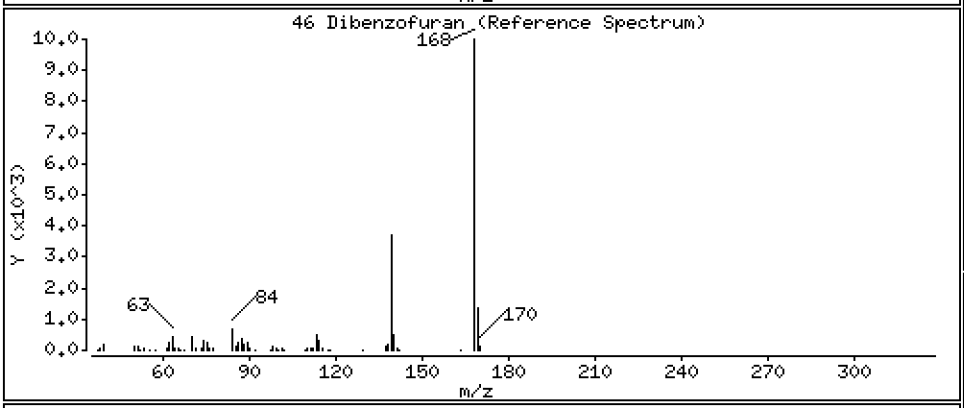
Concentration: 4.888 ug/mL

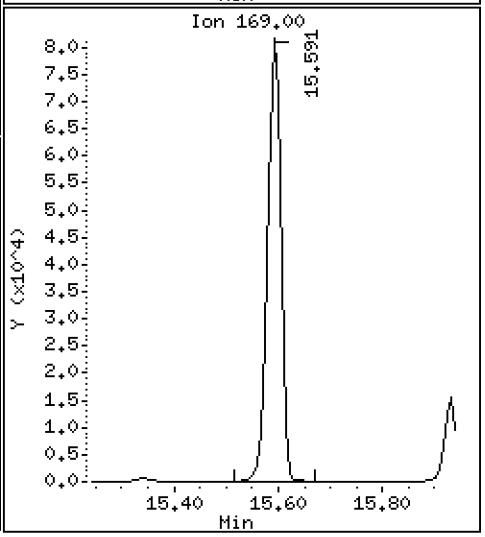


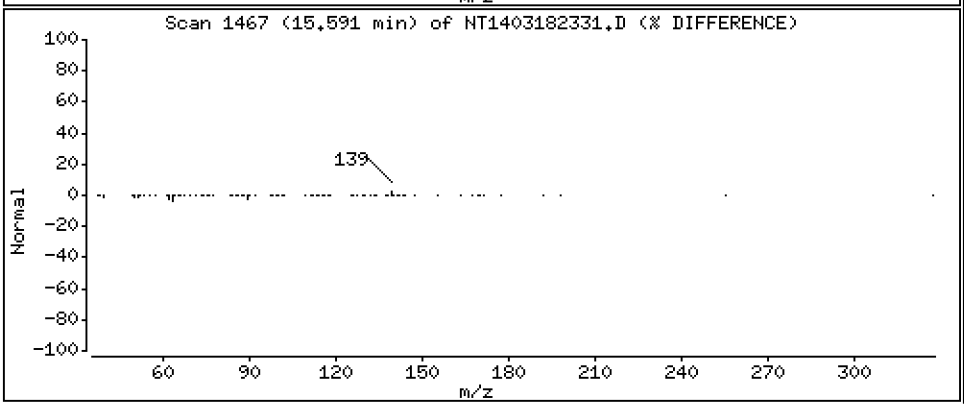












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Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

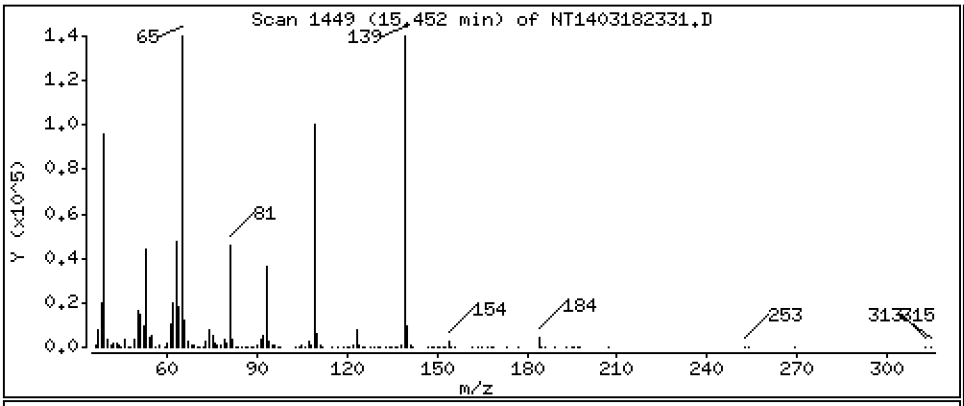
Operator: JGR

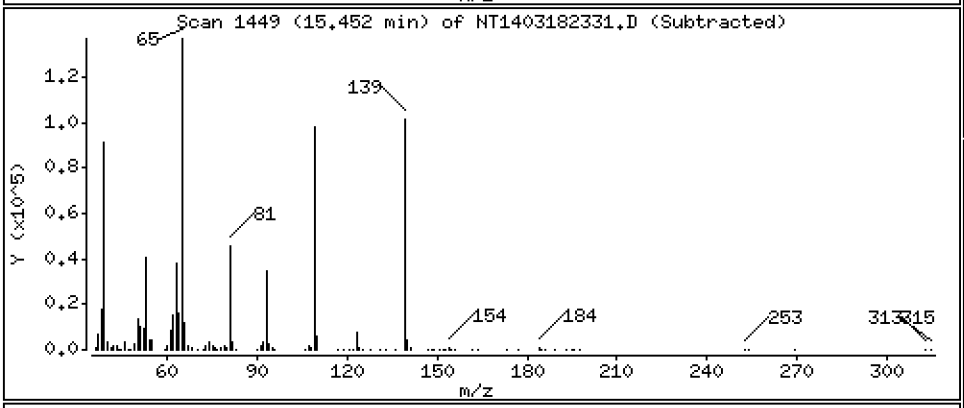
Column phase: ZB-5msi

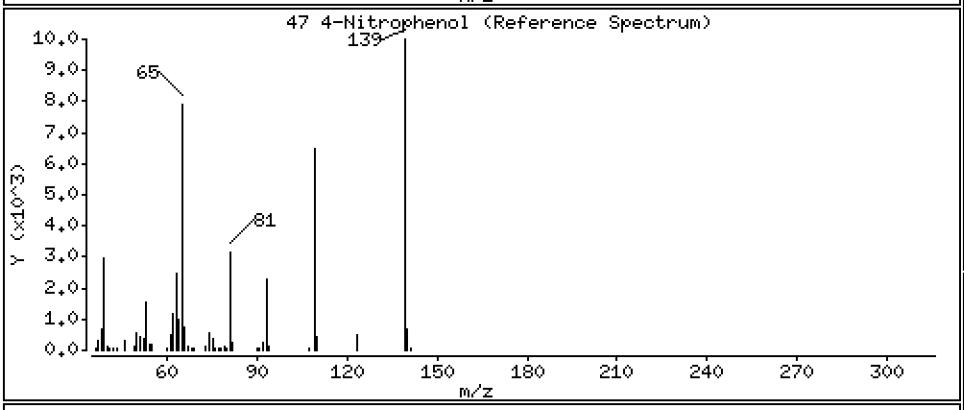
Column diameter: 0.25

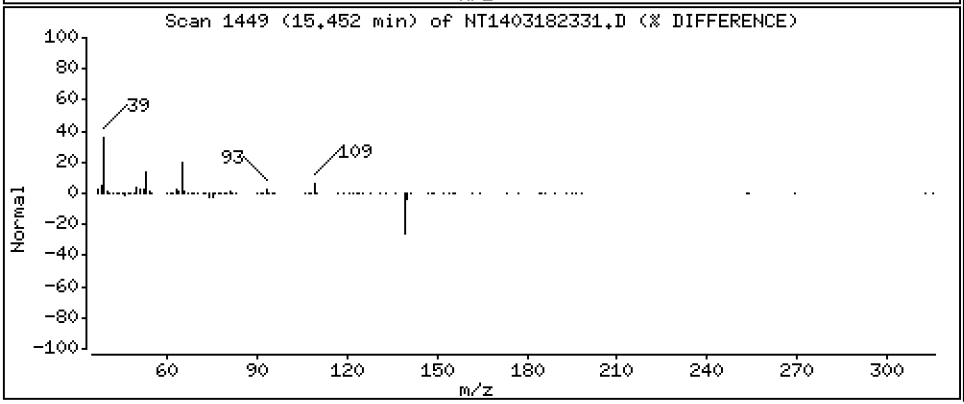
47 4-Nitrophenol

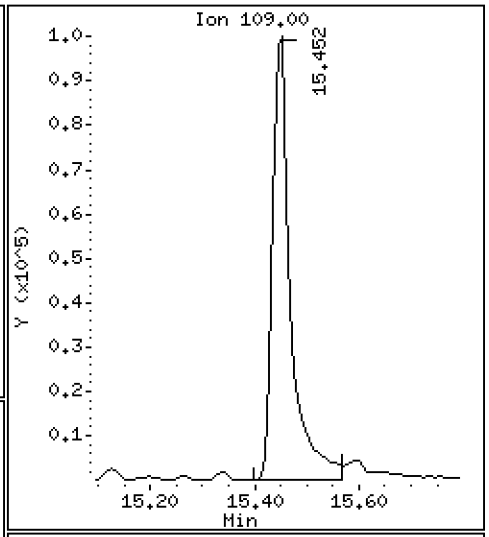
Concentration: 8.384 ug/mL

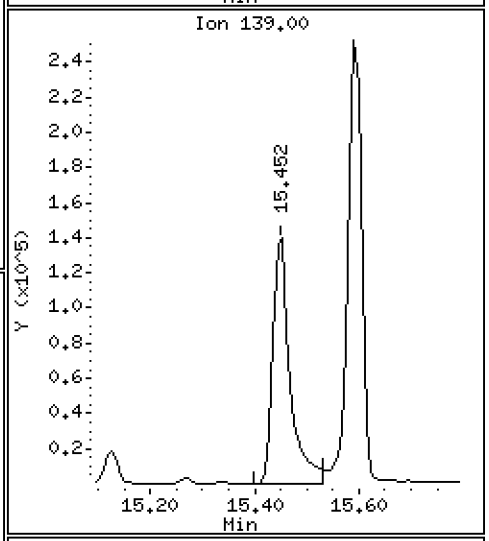


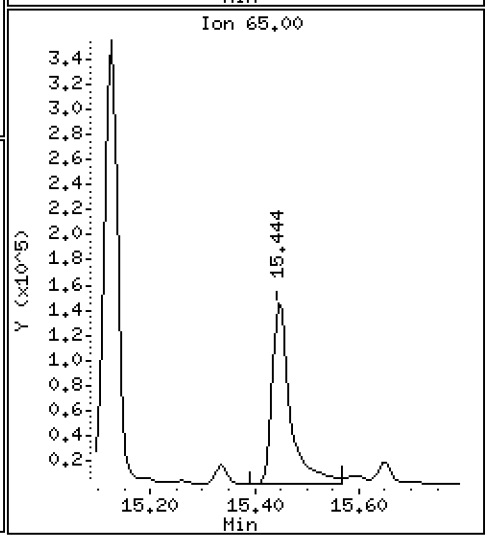












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Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

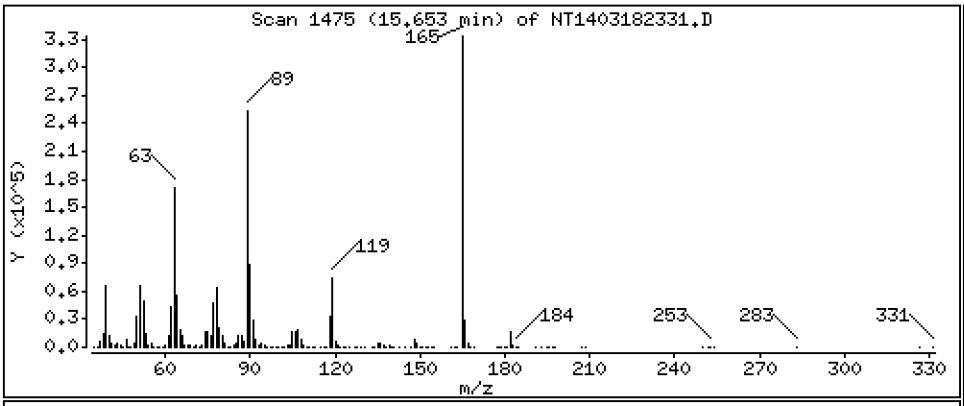
Operator: JGR

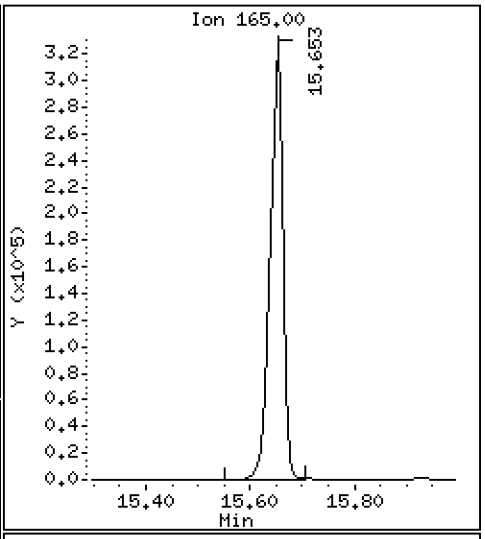
Column phase: ZB-5msi

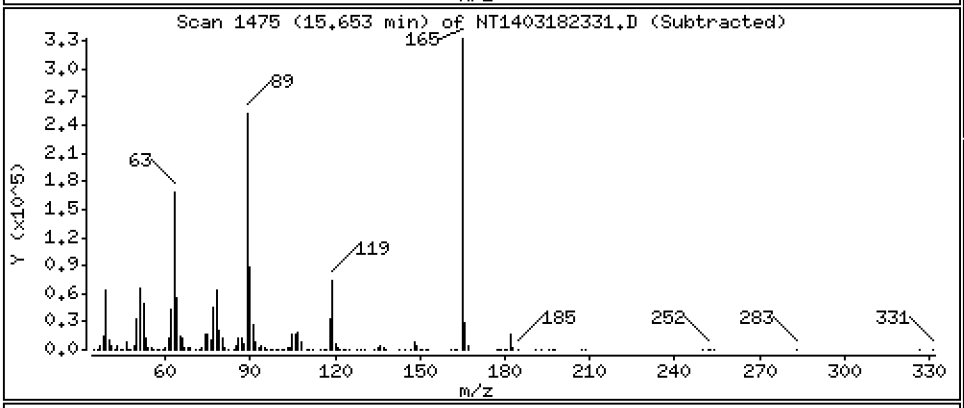
Column diameter: 0.25

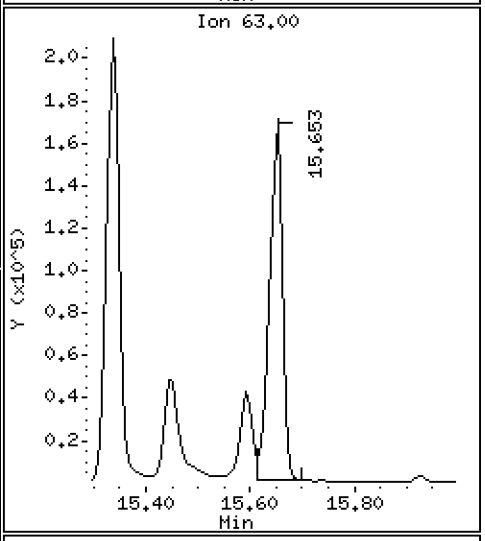
48 2,4-Dinitrotoluene

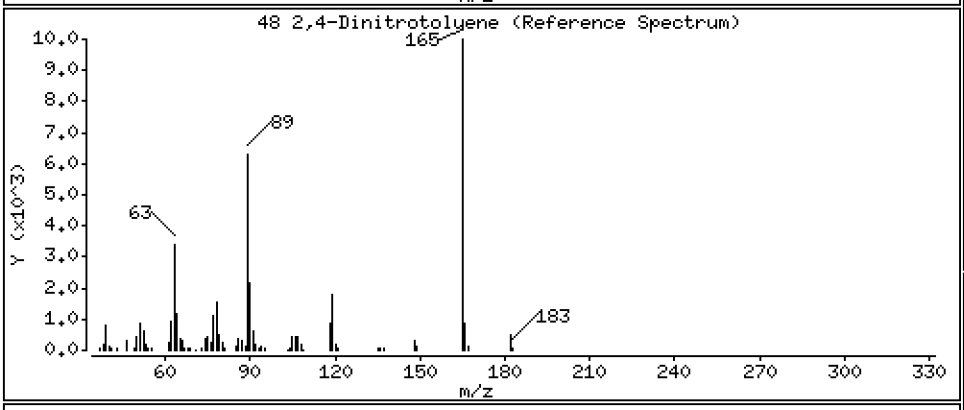
Concentration: 9.974 ug/mL

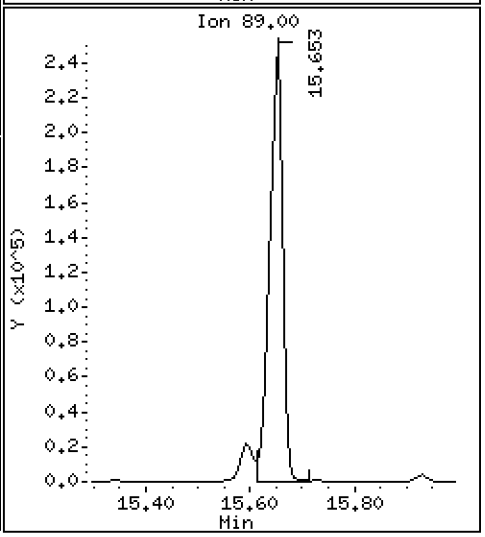


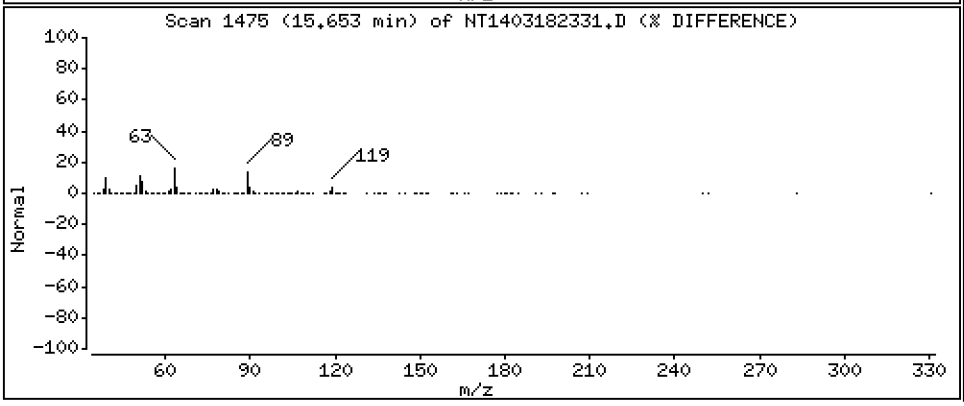












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Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

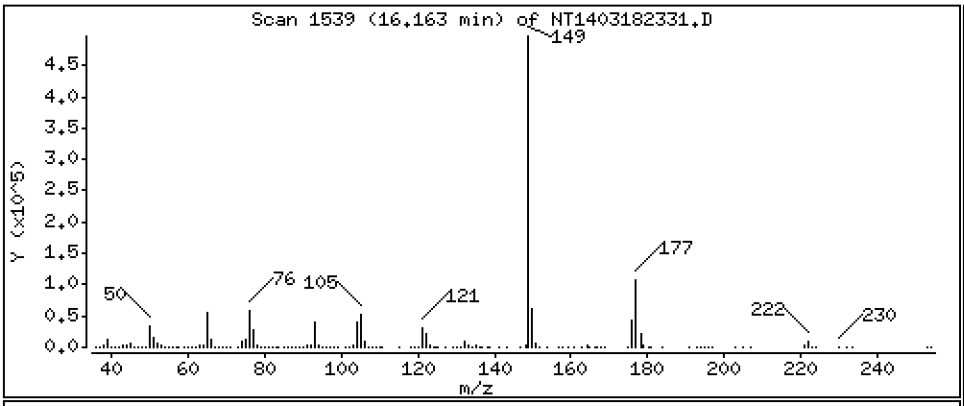
Operator: JGR

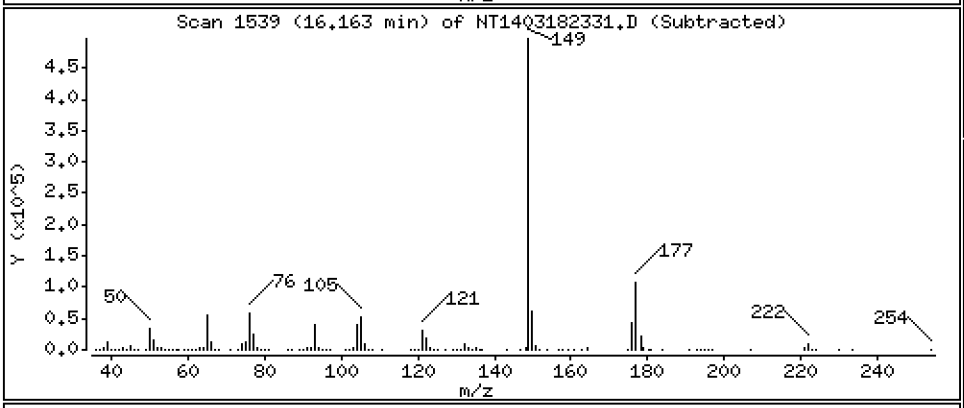
Column phase: ZB-5msi

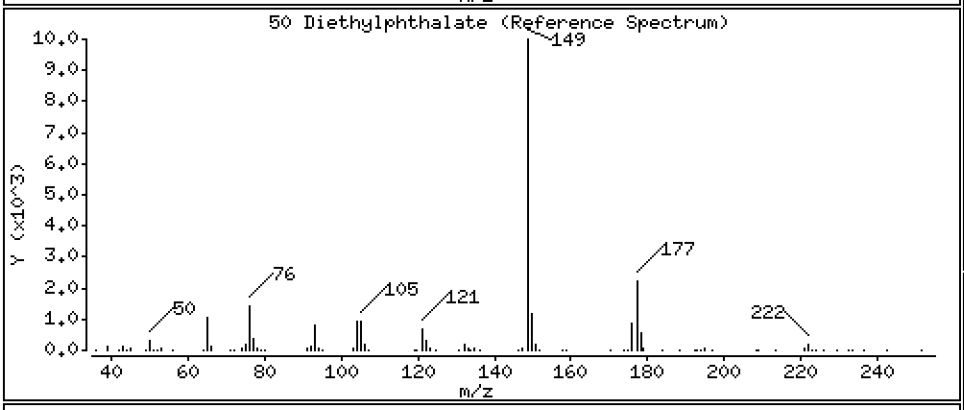
Column diameter: 0.25

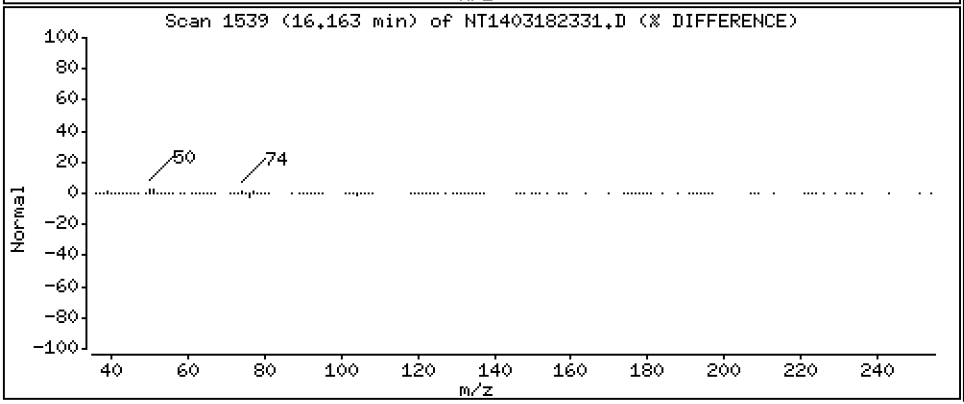
50 Diethylphthalate

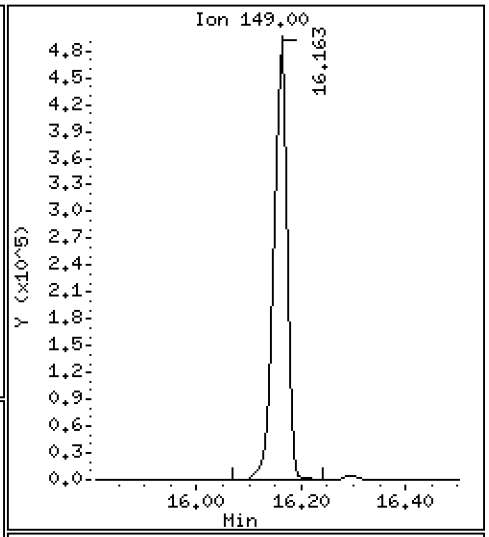
Concentration: 5.403 ug/mL

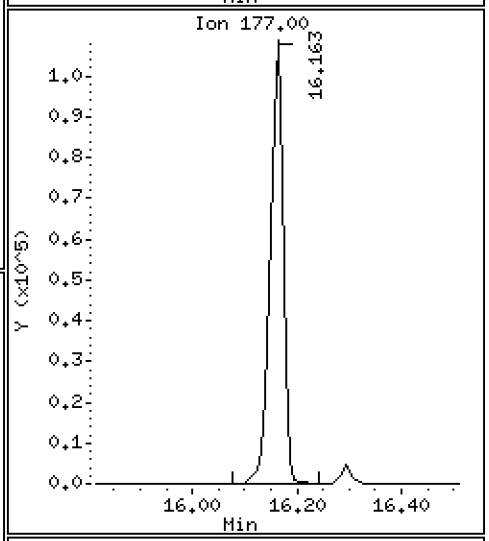


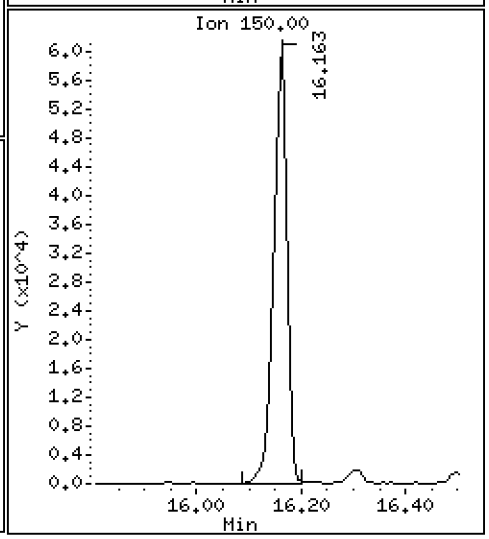












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Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

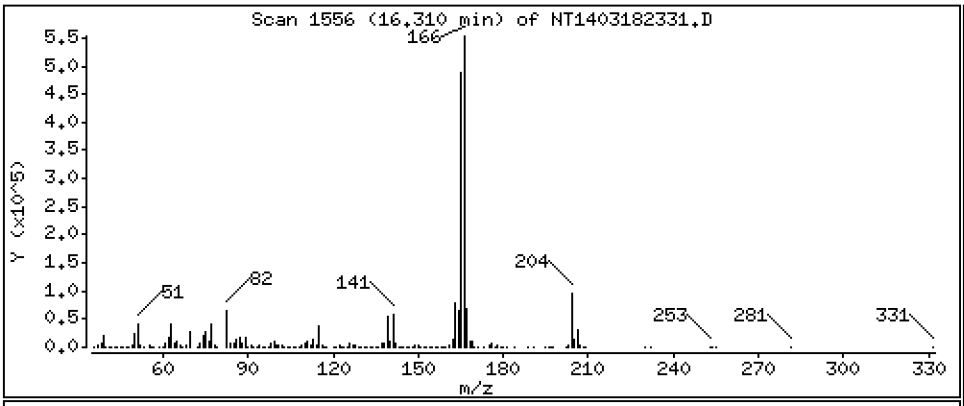
Operator: JGR

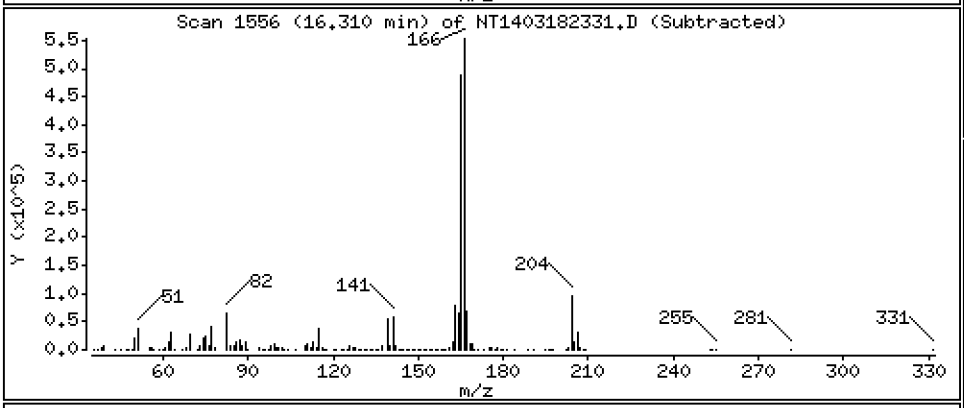
Column phase: ZB-5msi

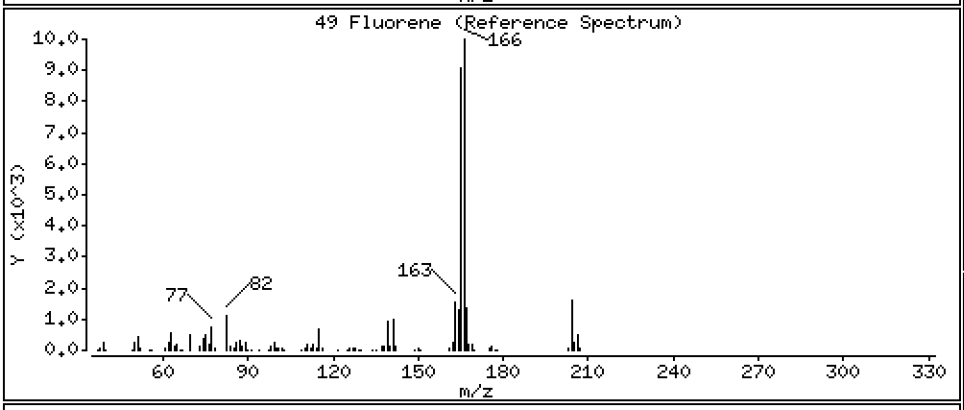
Column diameter: 0.25

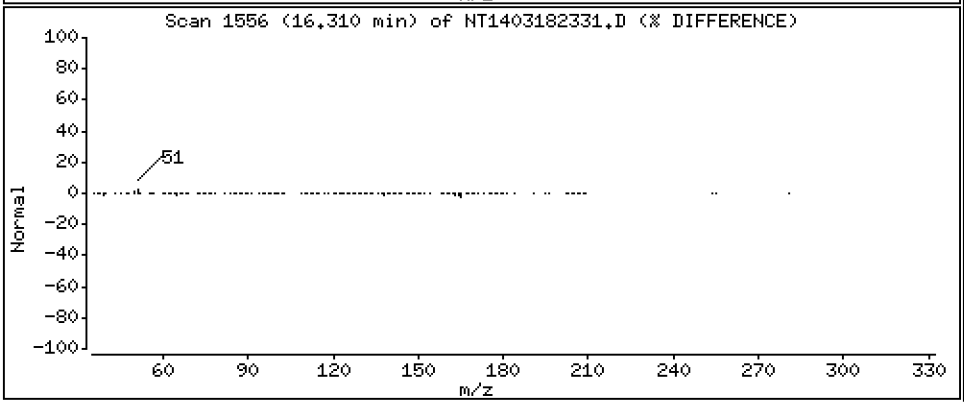
49 Fluorene

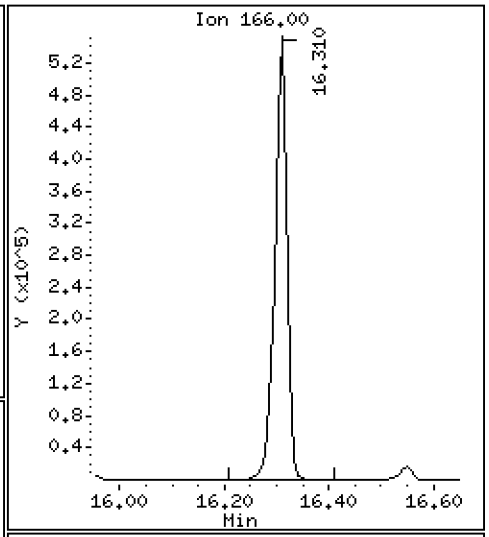
Concentration: 4.742 ug/mL

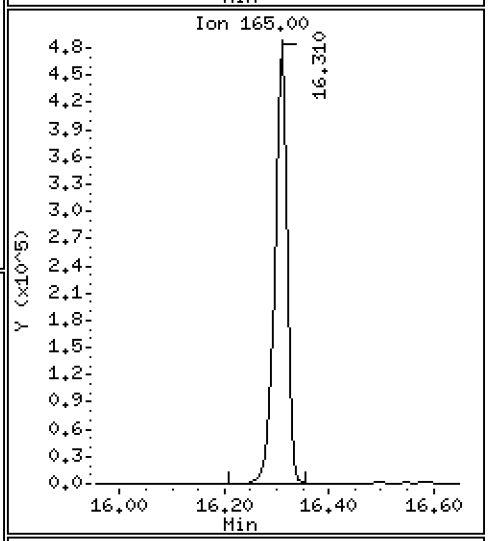


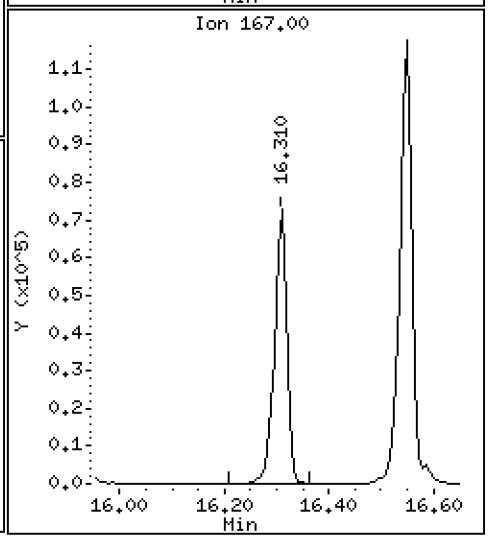












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Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

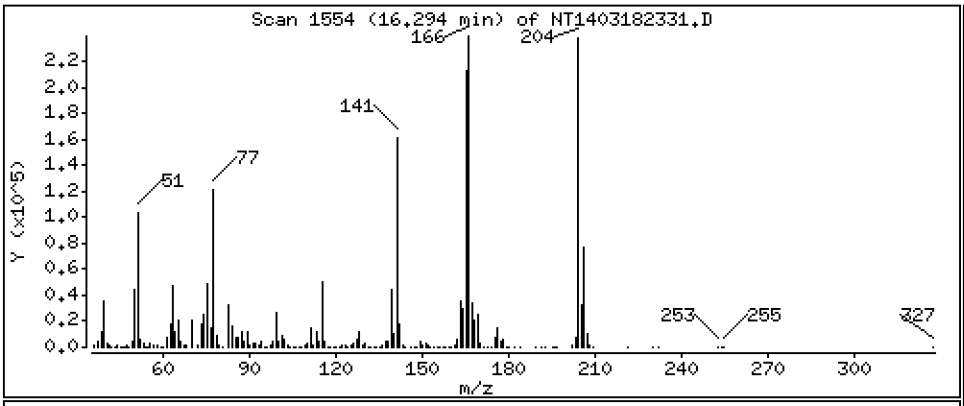
Operator: JGR

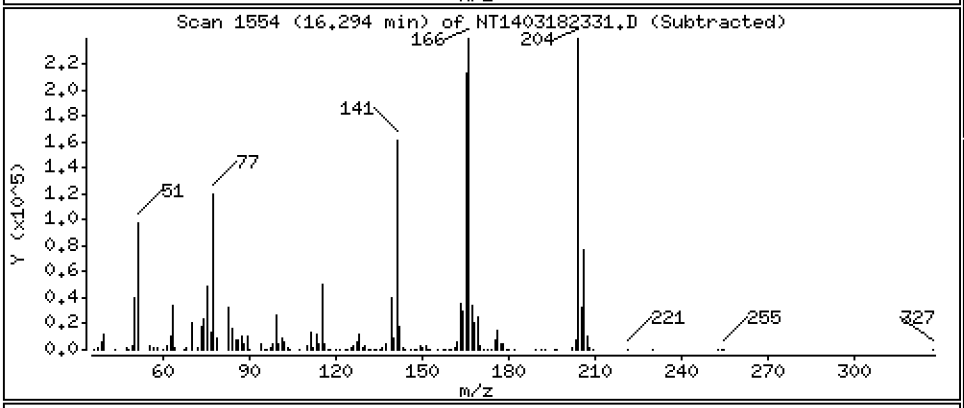
Column phase: ZB-5msi

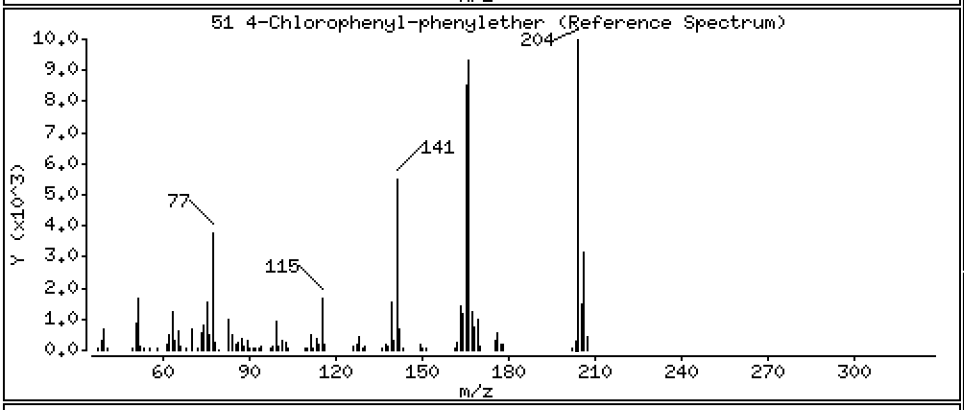
Column diameter: 0.25

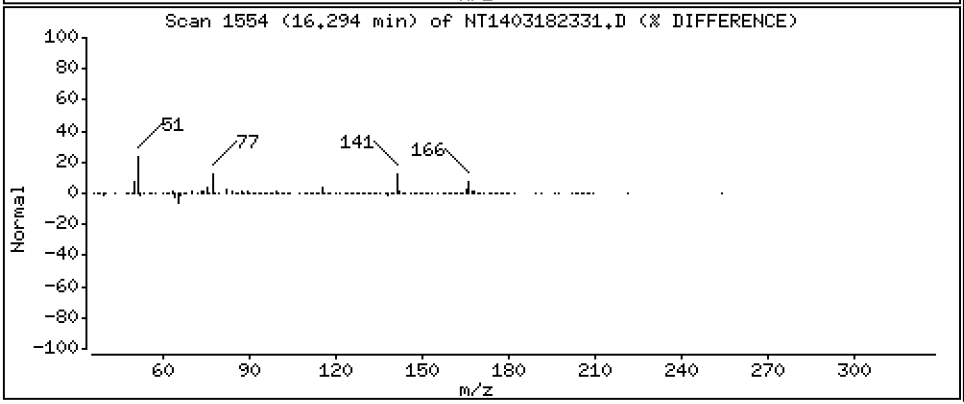
51 4-Chlorophenyl-phenylether

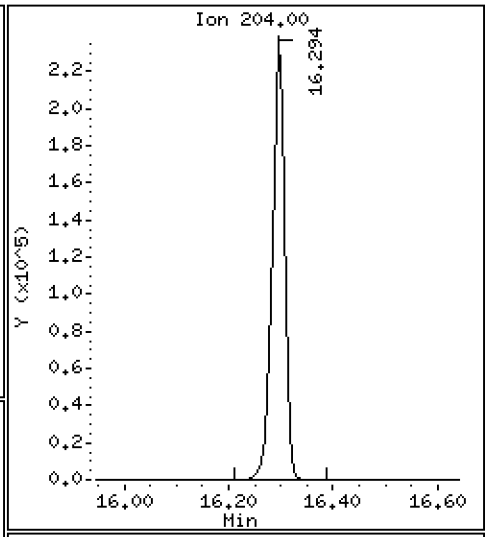
Concentration: 4.813 ug/mL

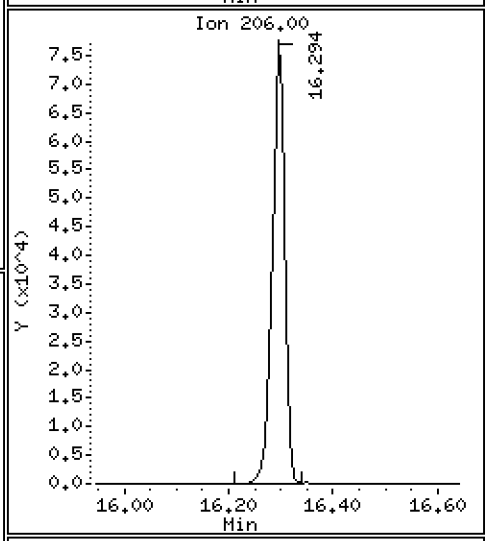


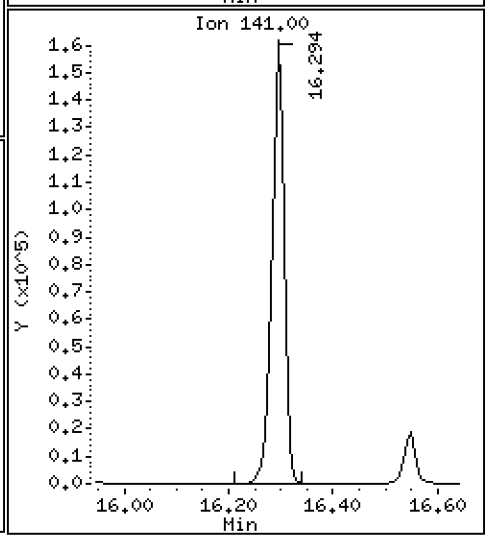












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Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

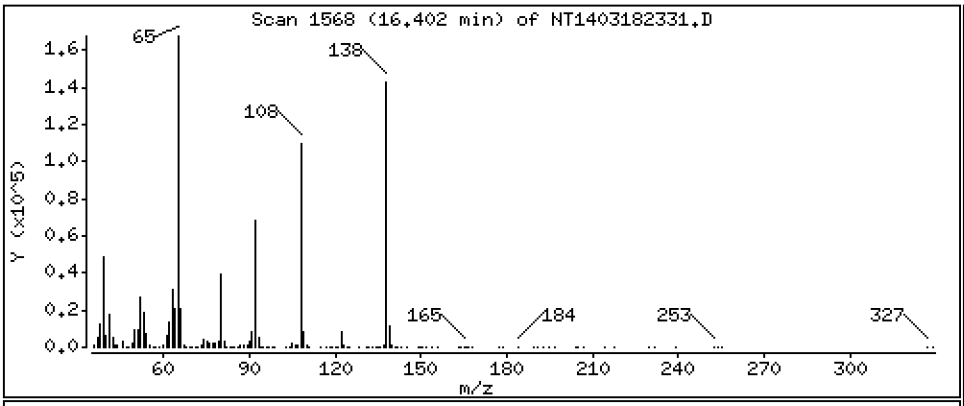
Operator: JGR

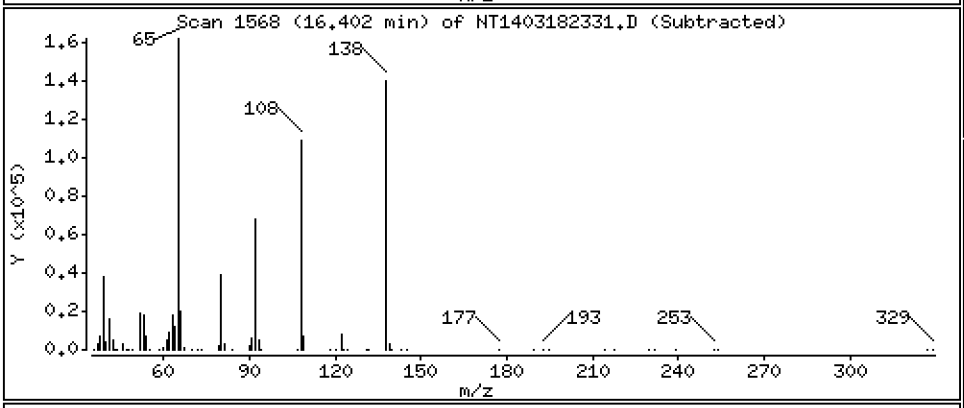
Column phase: ZB-5msi

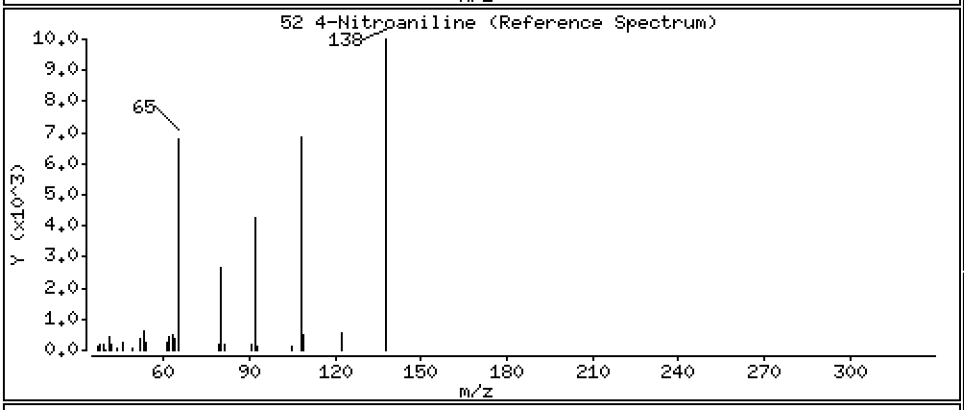
Column diameter: 0.25

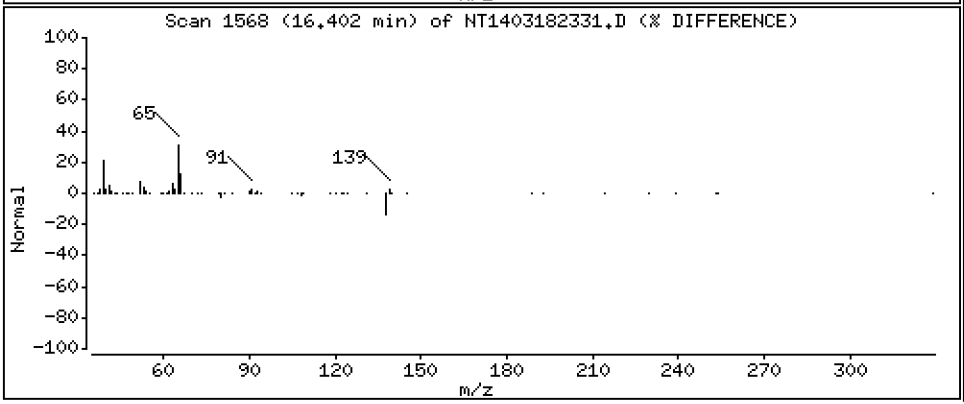
52 4-Nitroaniline

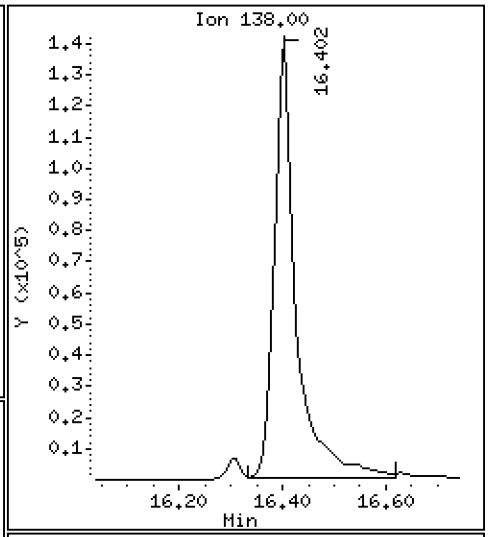
Concentration: 8.855 ug/mL

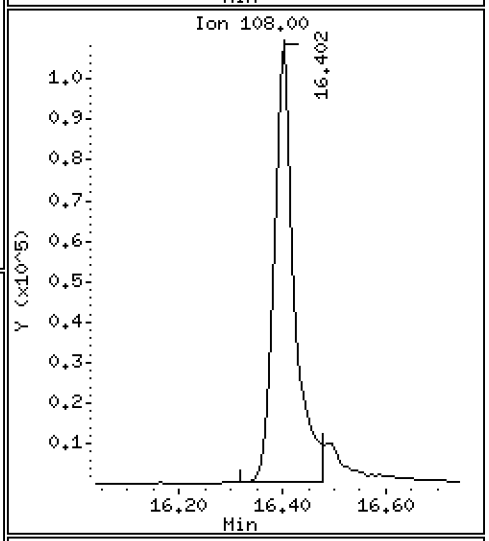


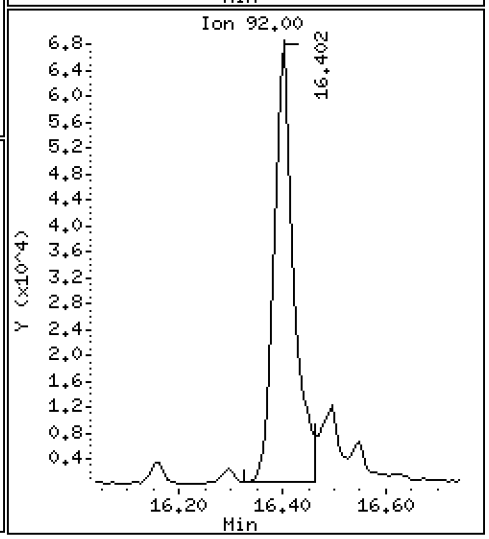












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Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

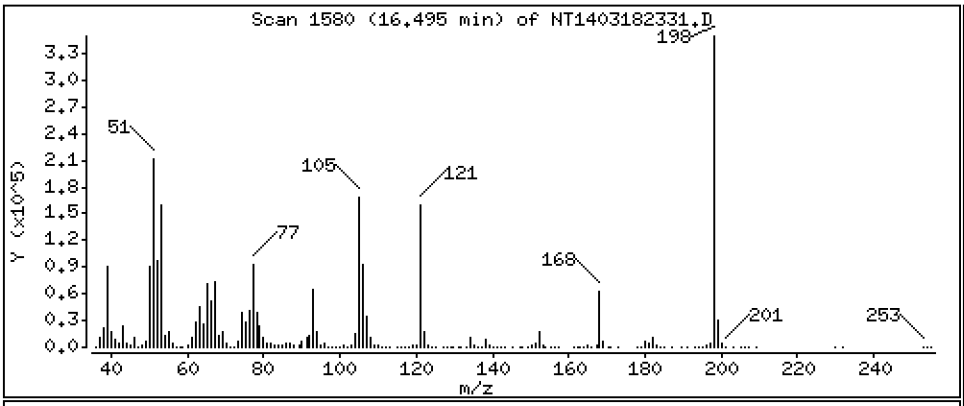
Operator: JGR

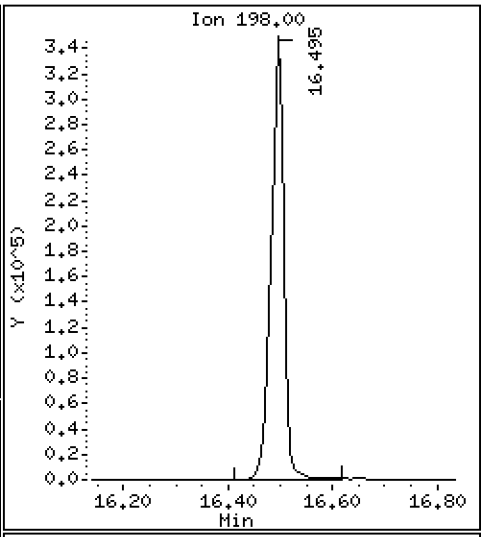
Column phase: ZB-5msi

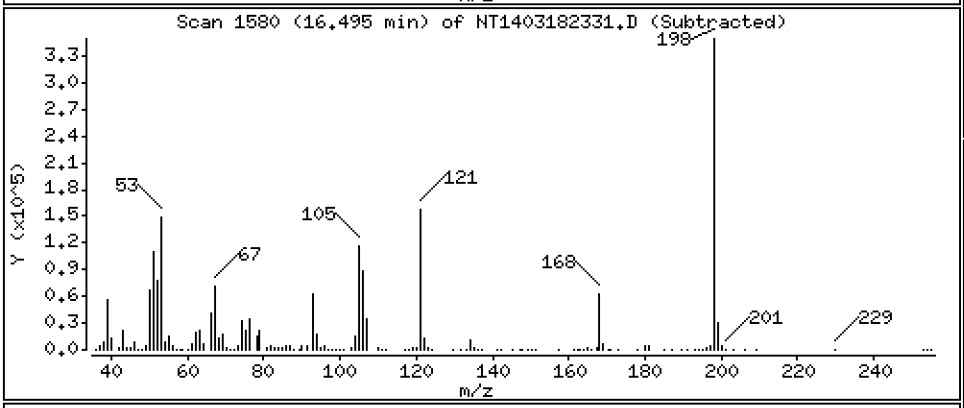
Column diameter: 0.25

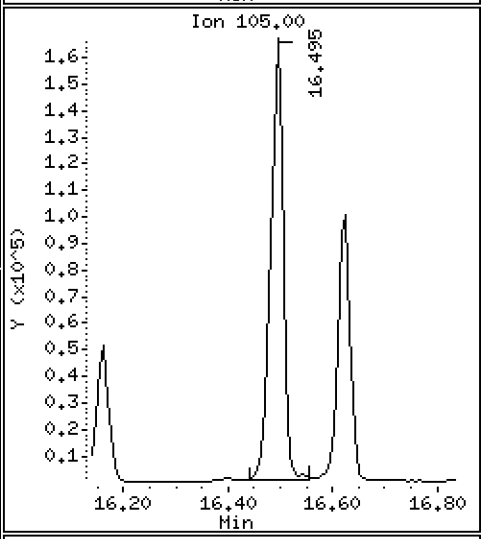
53 4,6-Dinitro-2-methylphenol

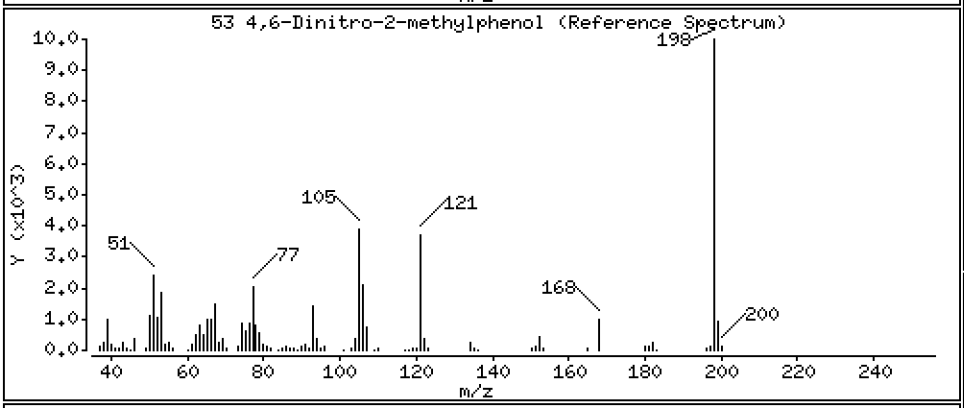
Concentration: 19.76 ug/mL

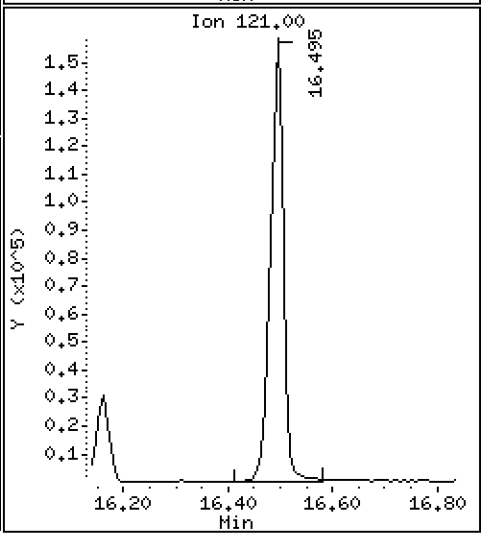


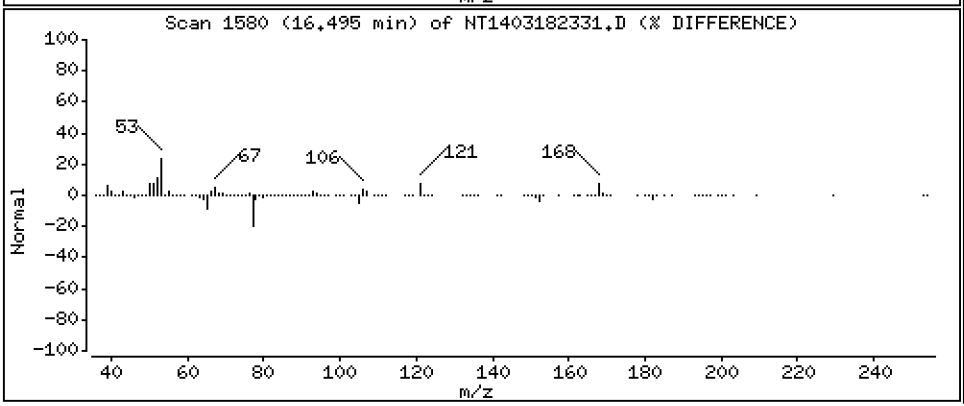












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Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

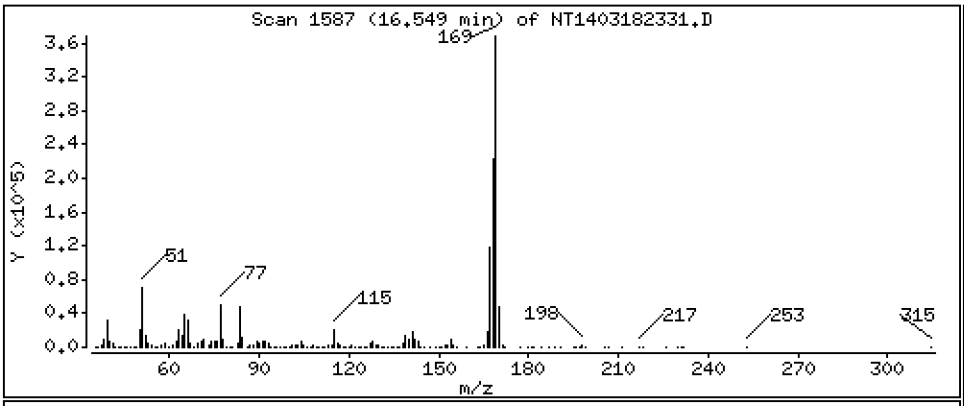
Operator: JGR

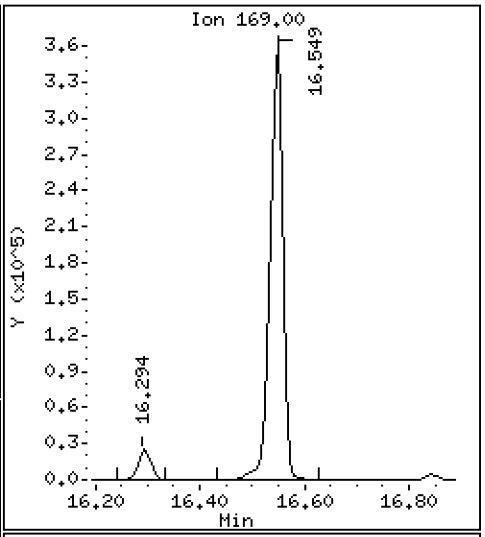
Column phase: ZB-5msi

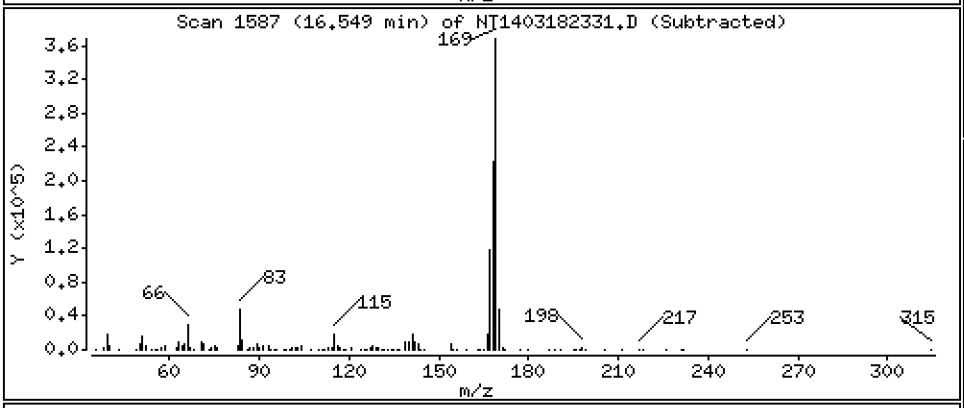
Column diameter: 0.25

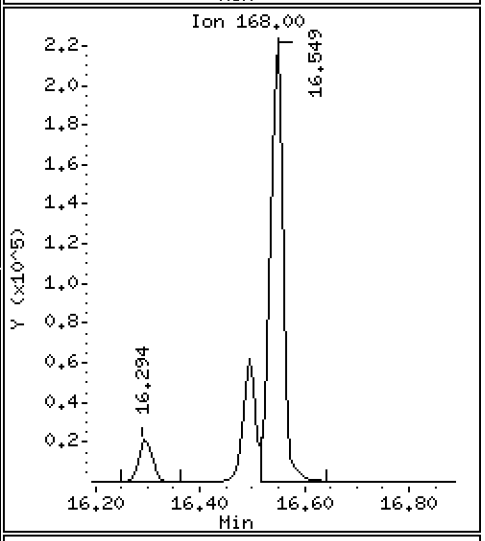
54 N-Nitrosodiphenylamine

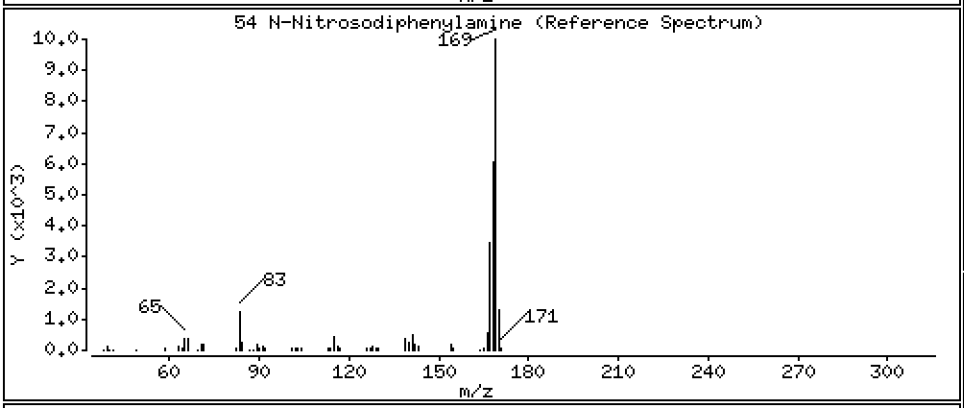
Concentration: 5.315 ug/mL

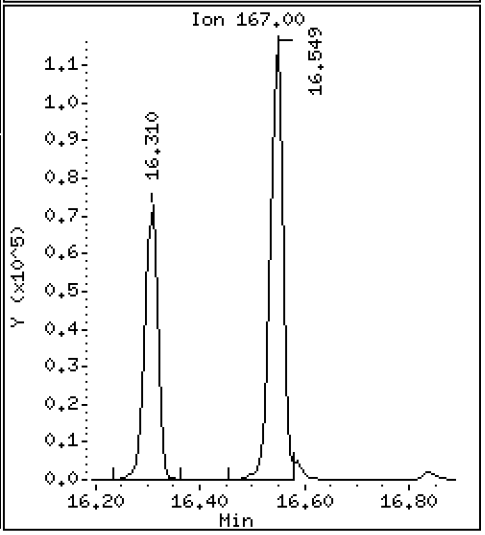


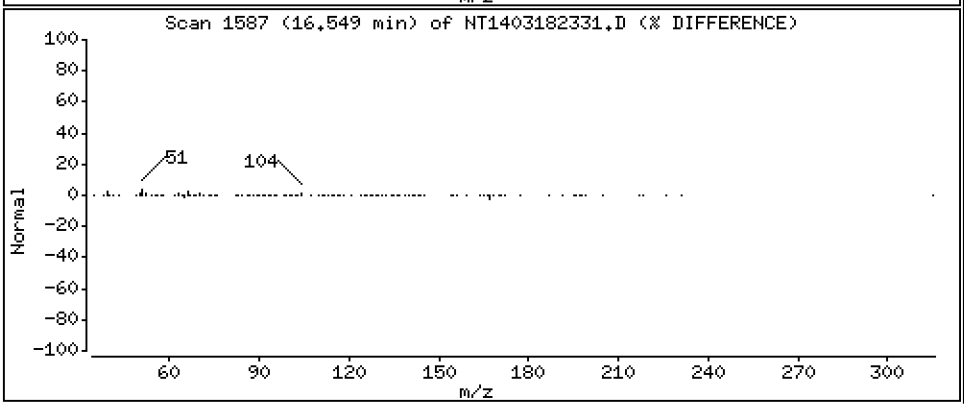












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Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

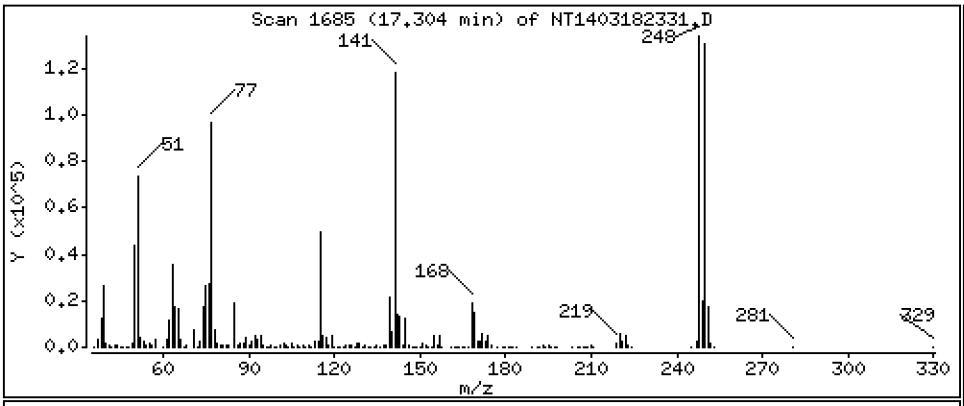
Operator: JGR

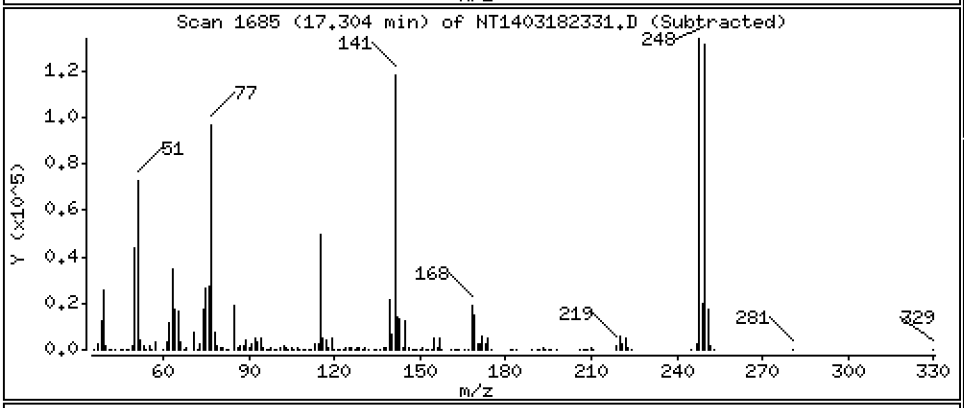
Column phase: ZB-5msi

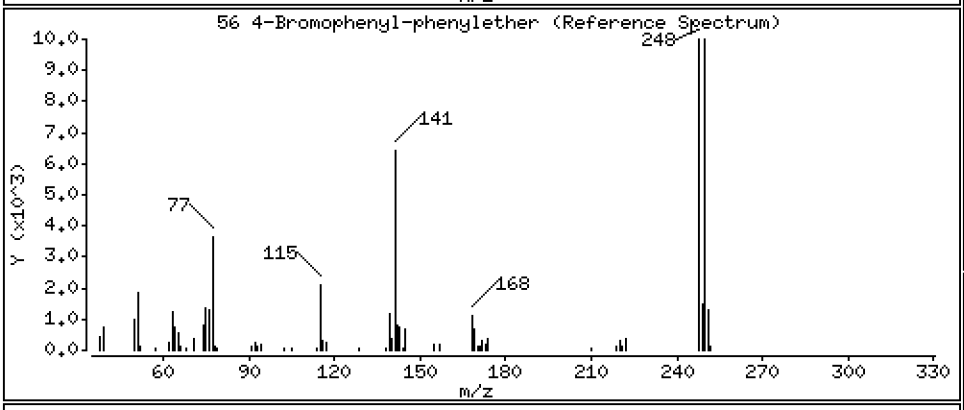
Column diameter: 0.25

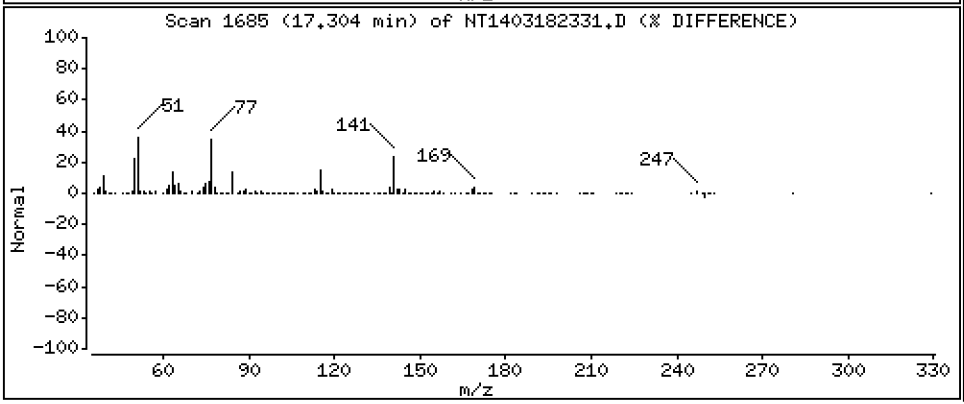
56 4-Bromophenyl-phenylether

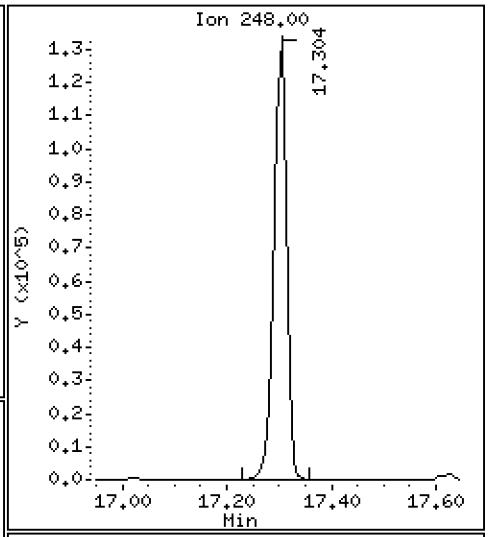
Concentration: 5.594 ug/mL

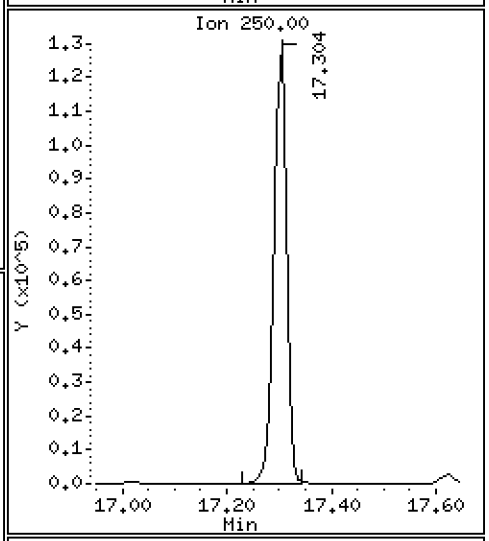


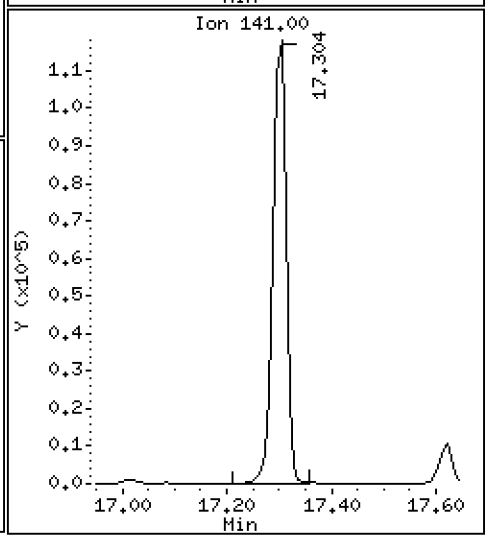












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Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

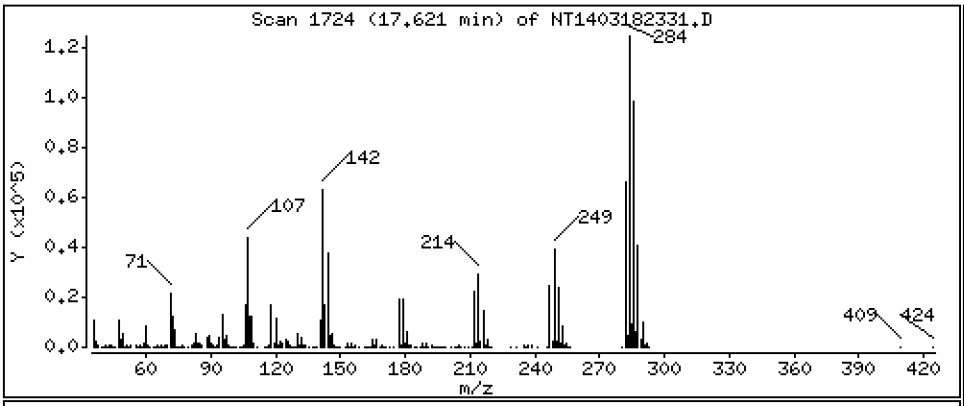
Operator: JGR

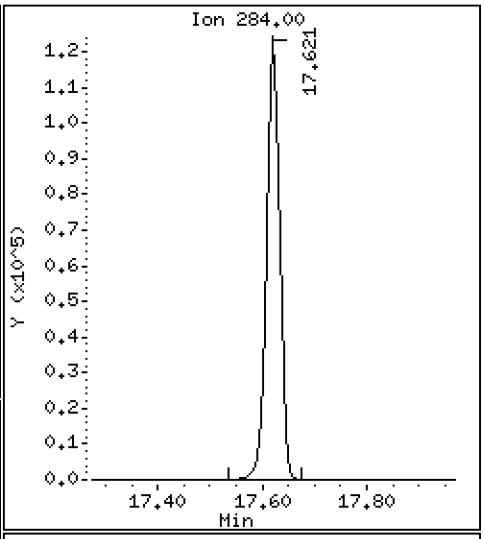
Column phase: ZB-5msi

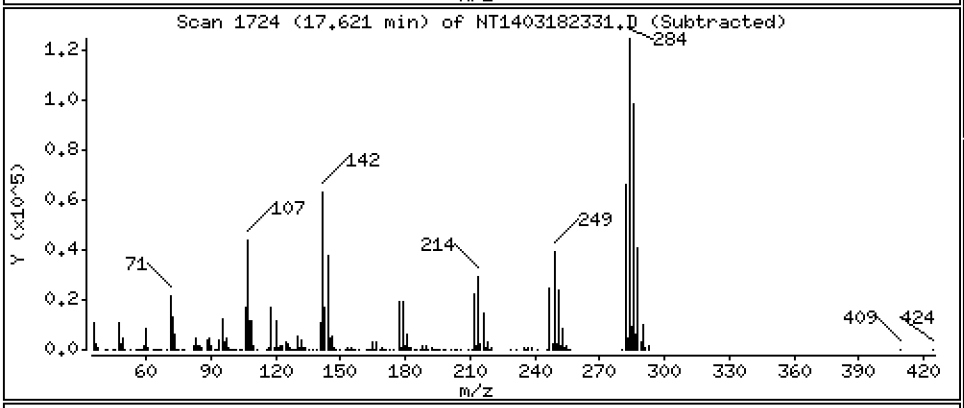
Column diameter: 0.25

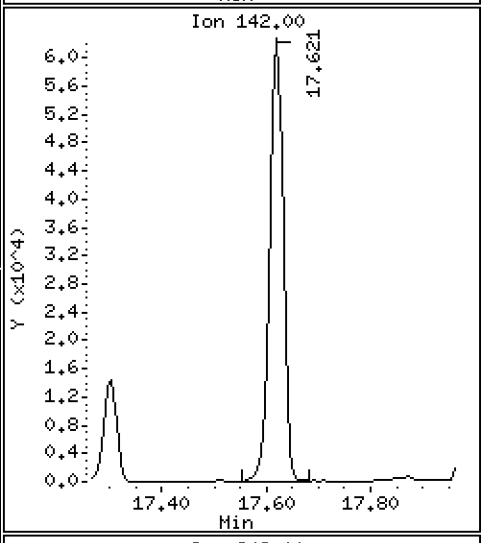
57 Hexachlorobenzene

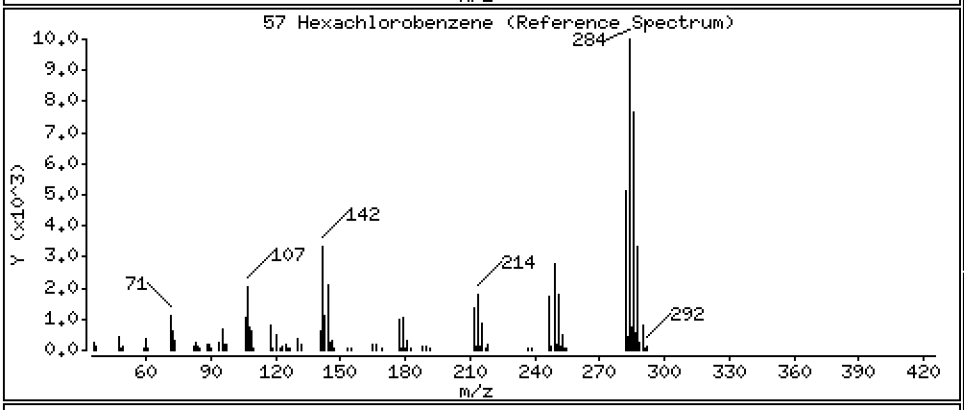
Concentration: 5.302 ug/mL

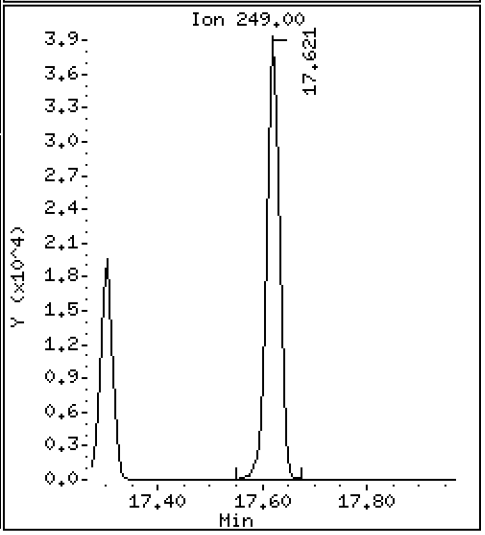


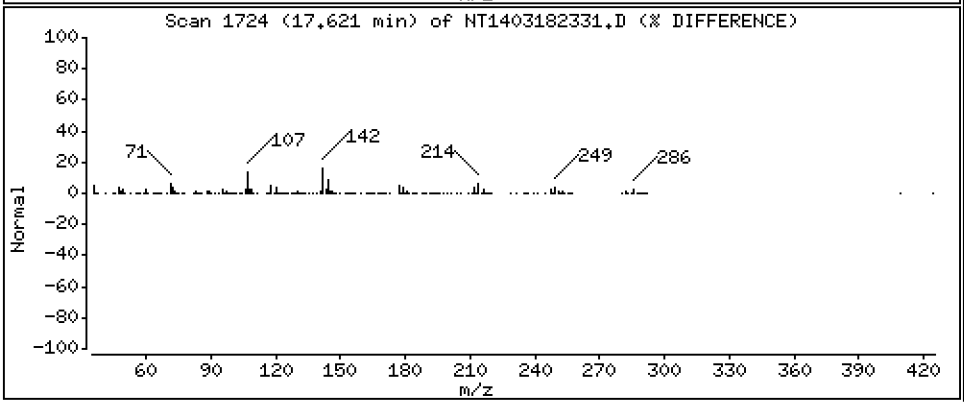












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Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

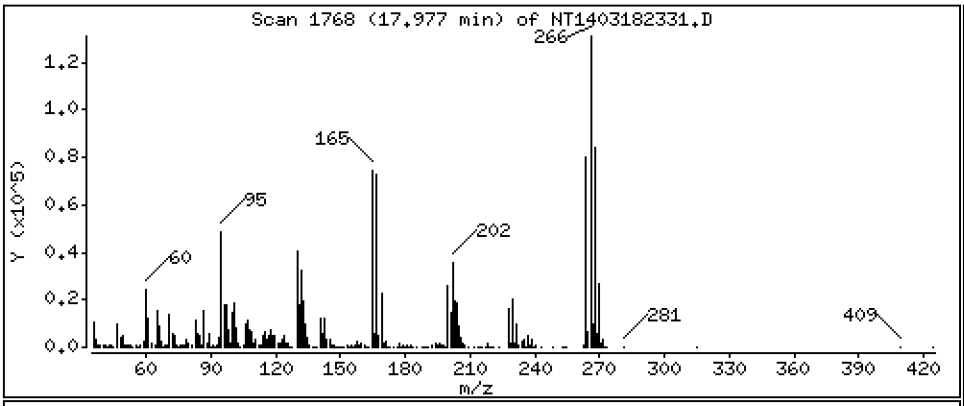
Operator: JGR

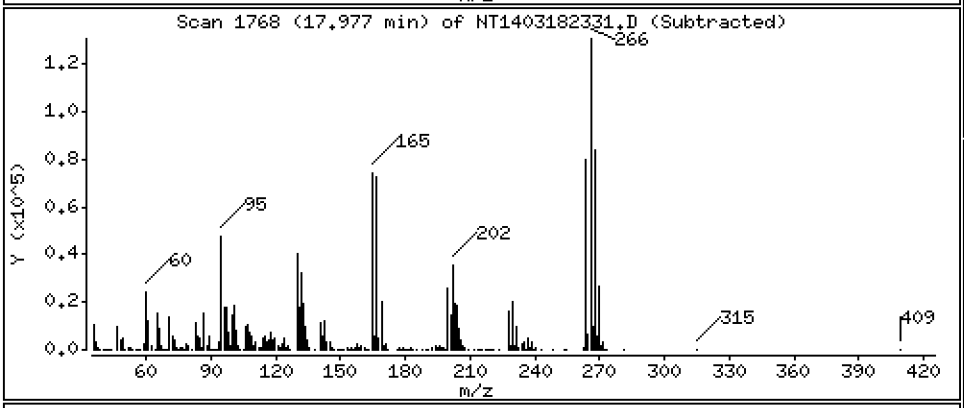
Column phase: ZB-5msi

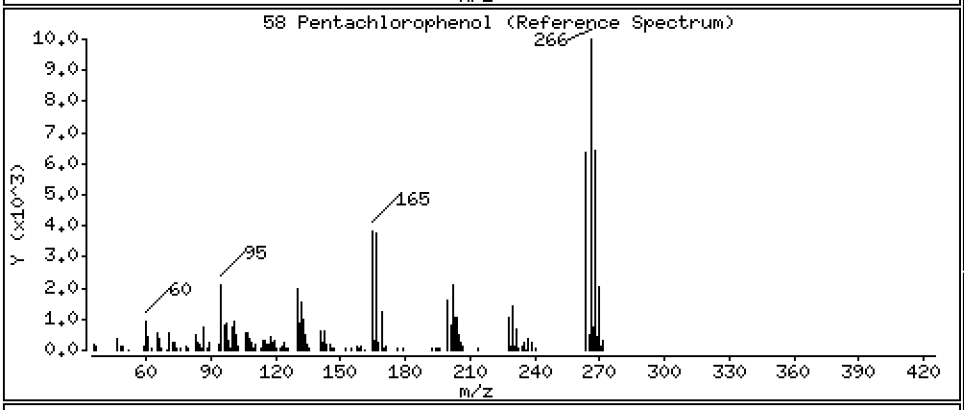
Column diameter: 0.25

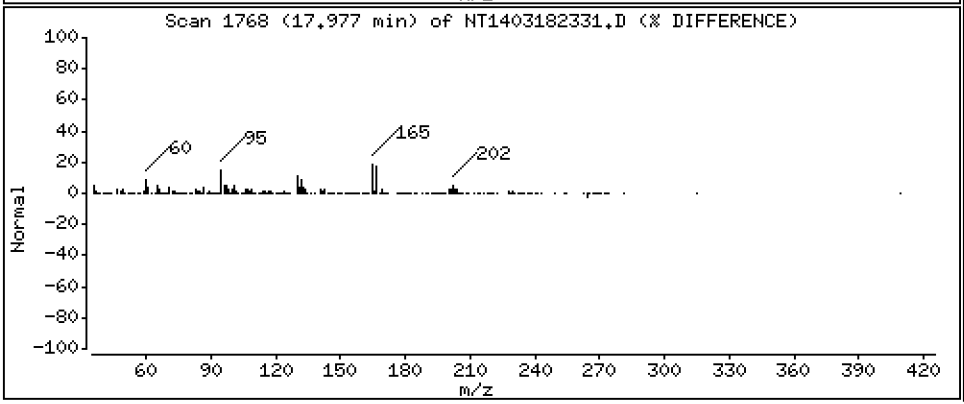
58 Pentachlorophenol

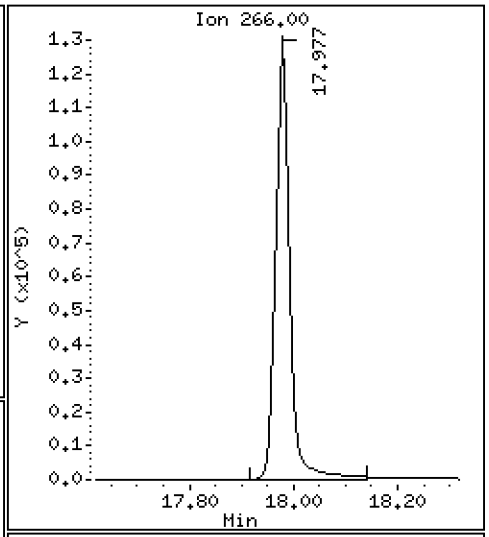
Concentration: 8.499 ug/mL

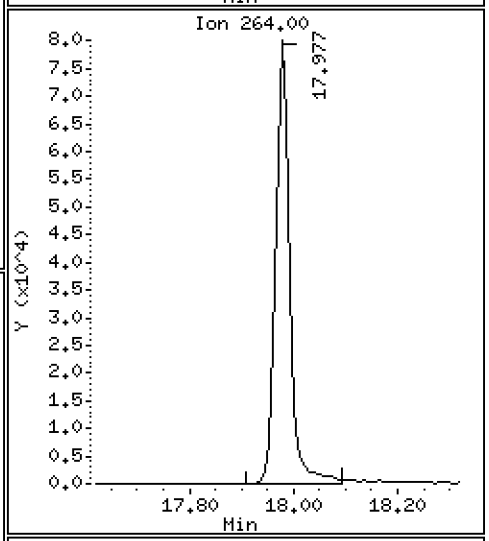


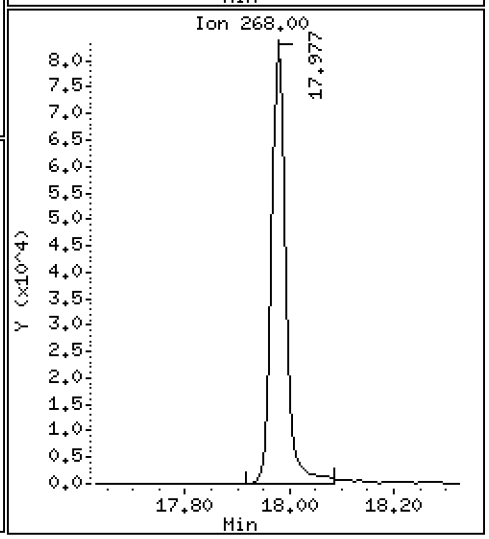












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Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

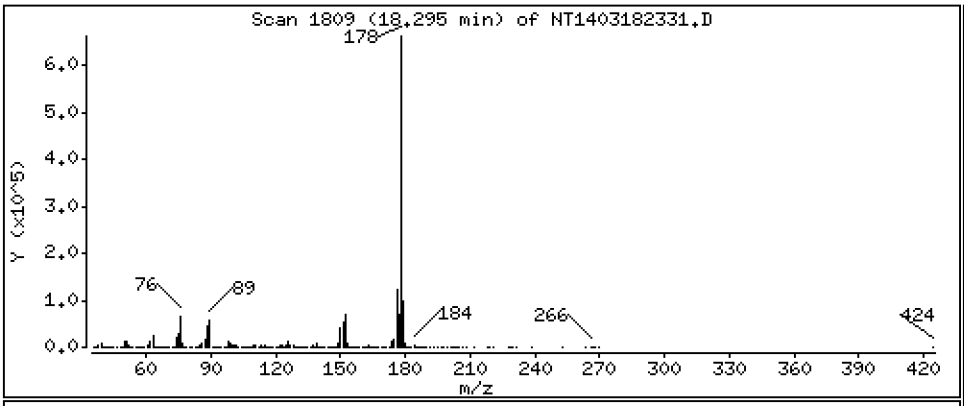
Operator: JGR

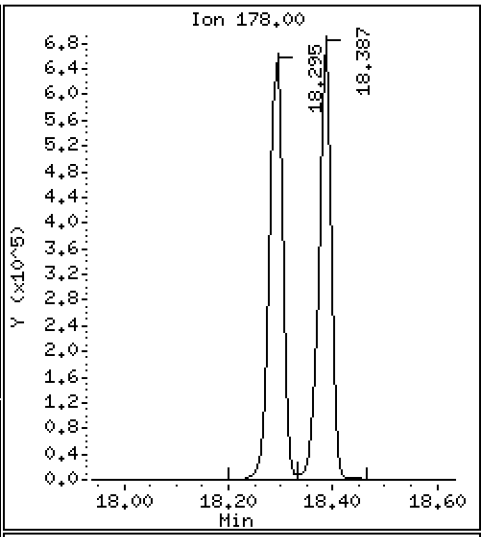
Column phase: ZB-5msi

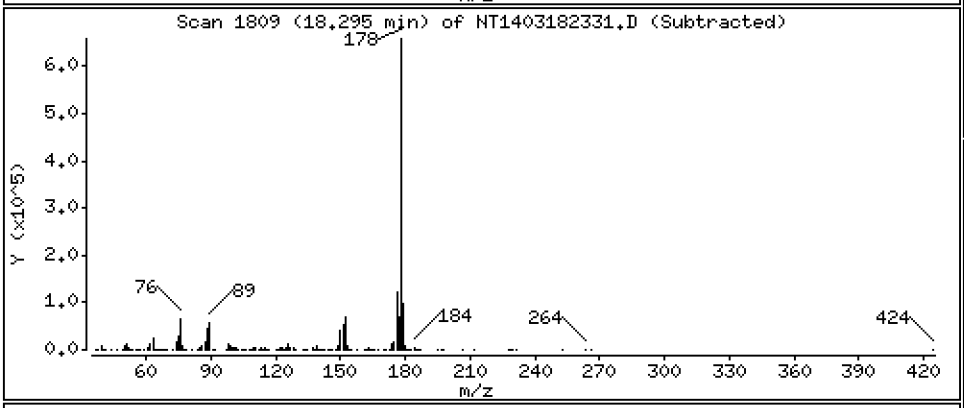
Column diameter: 0.25

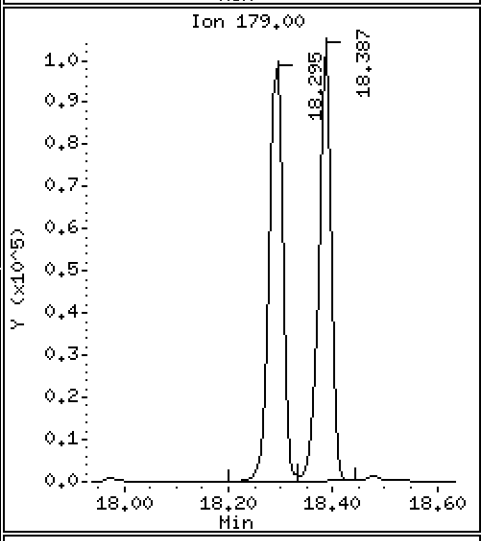
60 Phenanthrene

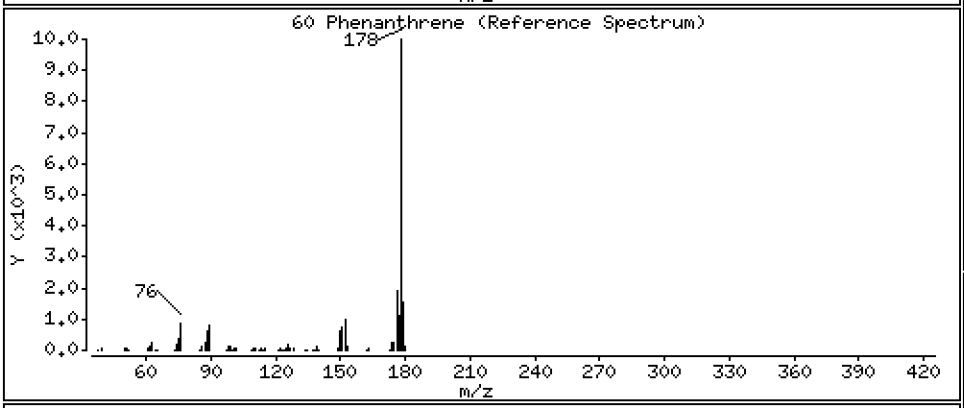
Concentration: 4.767 ug/mL

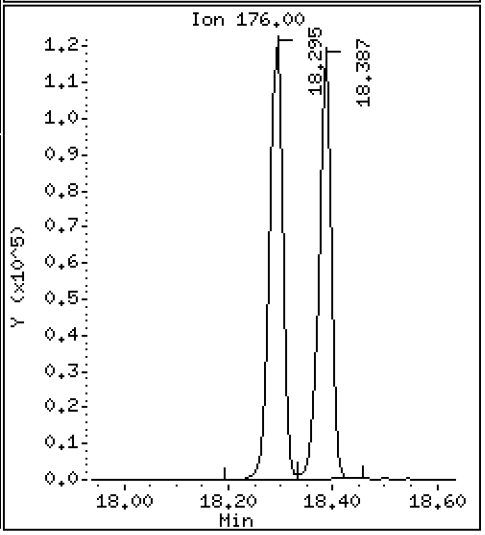


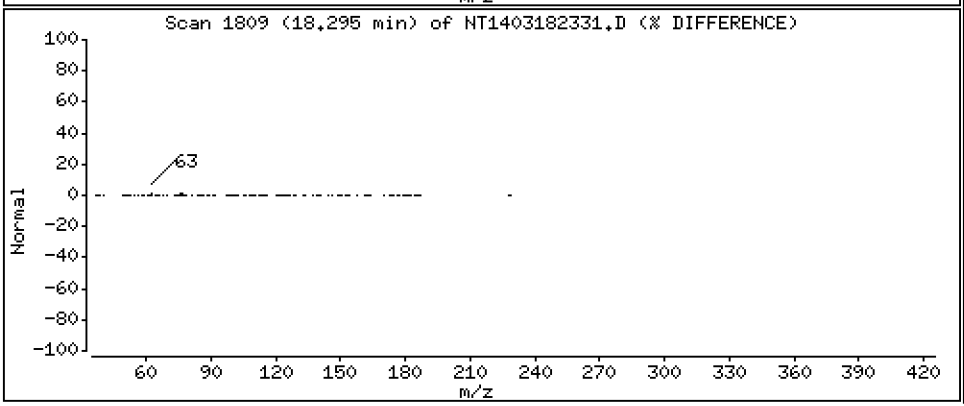












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Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

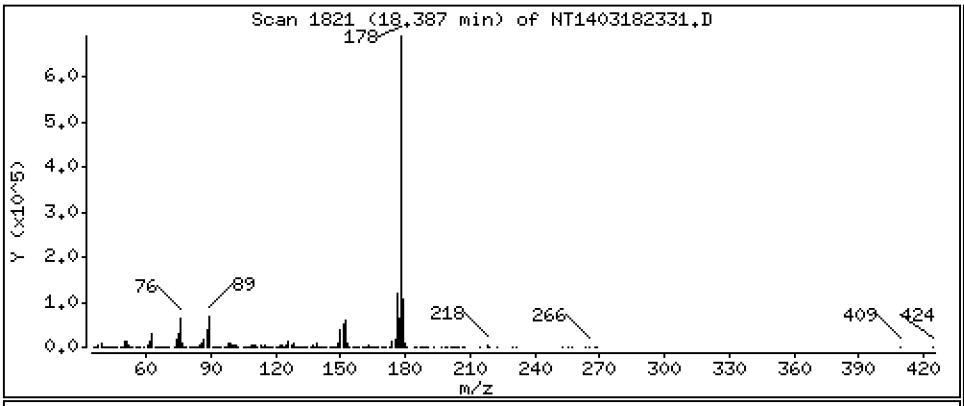
Operator: JGR

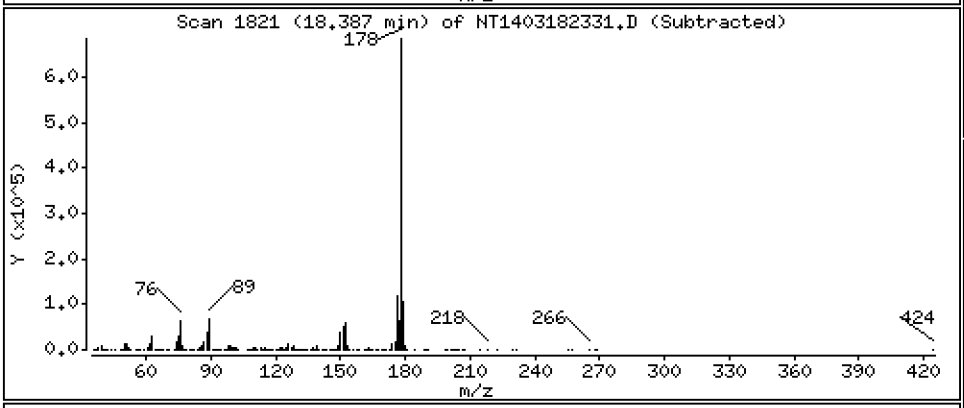
Column phase: ZB-5msi

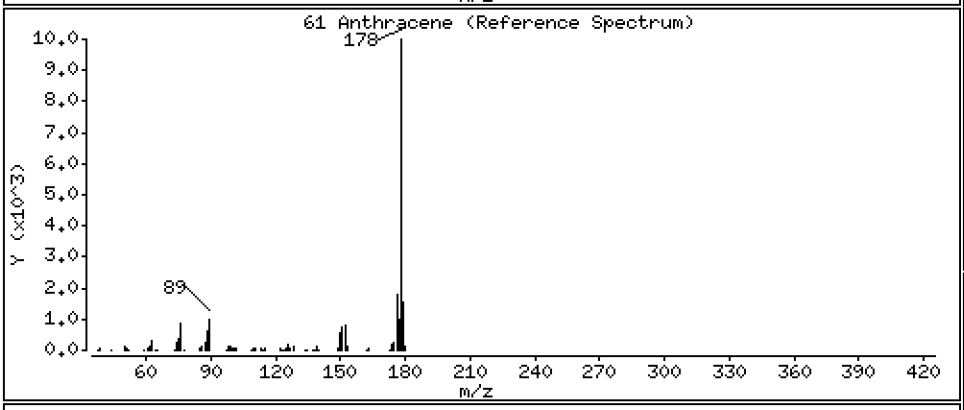
Column diameter: 0.25

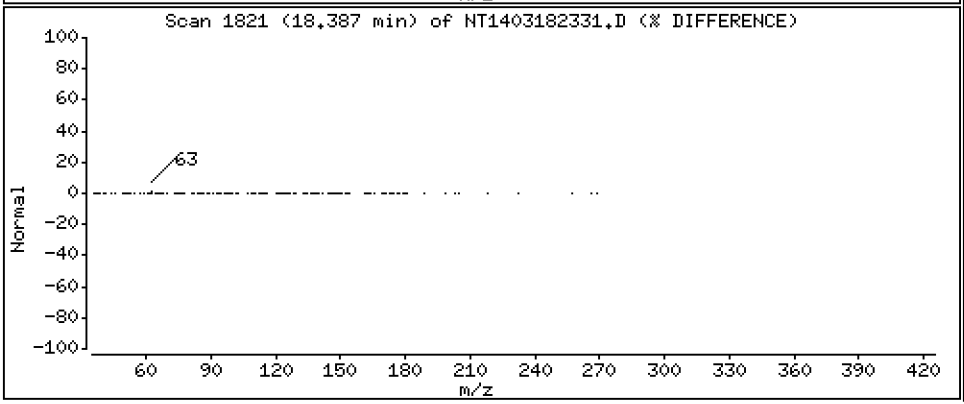
61 Anthracene

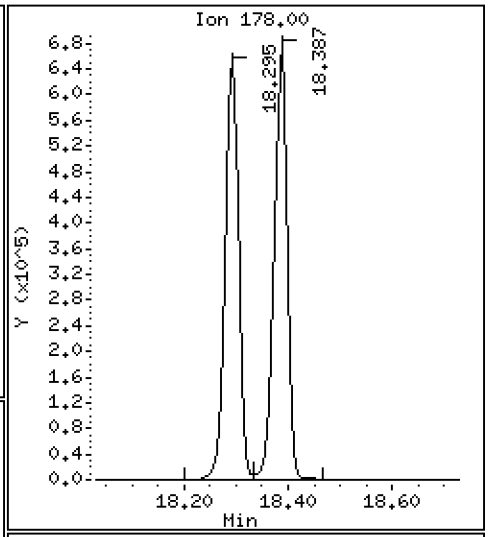
Concentration: 4.987 ug/mL

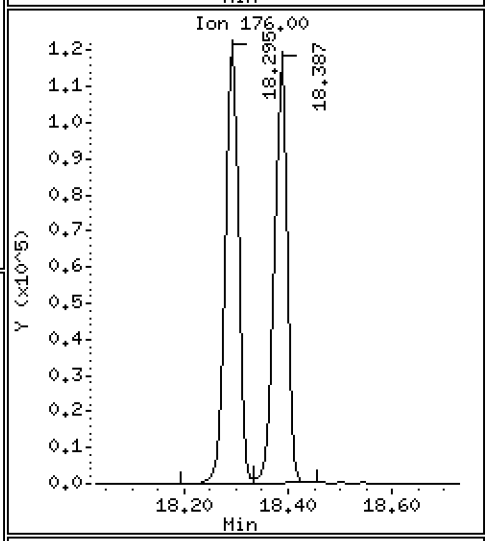


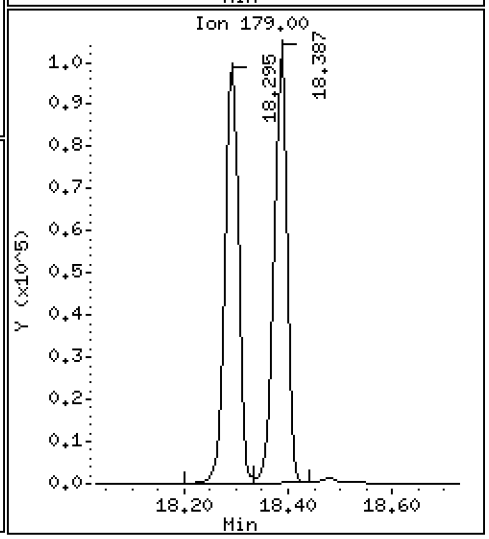












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Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

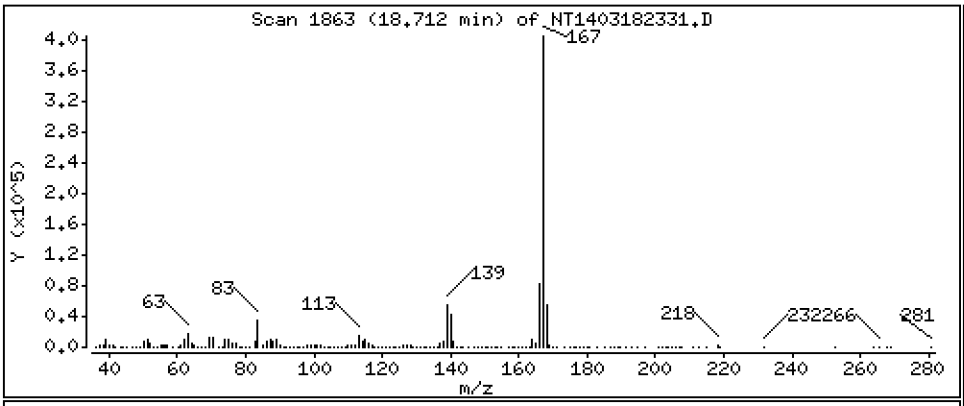
Operator: JGR

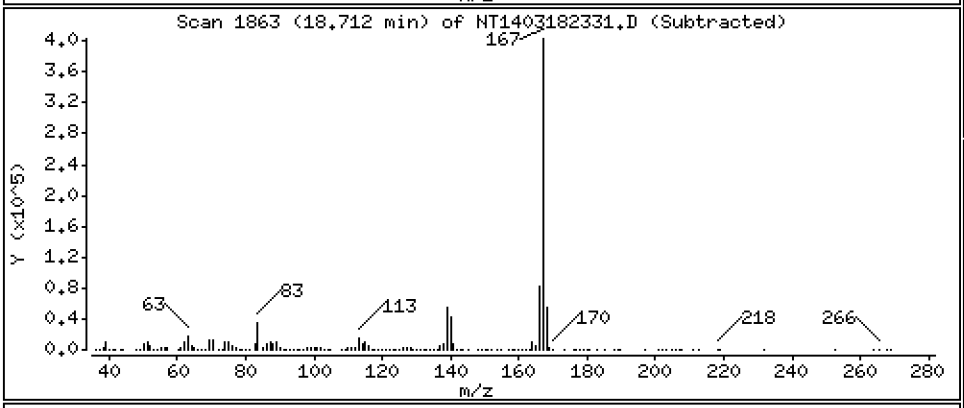
Column phase: ZB-5msi

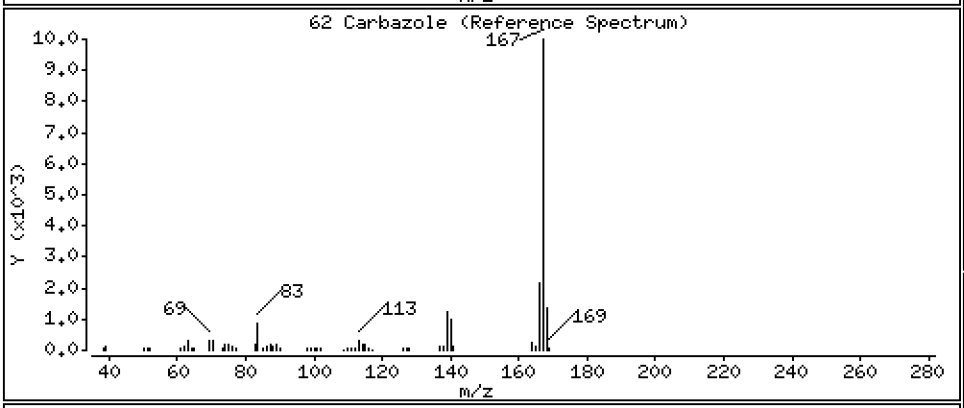
Column diameter: 0.25

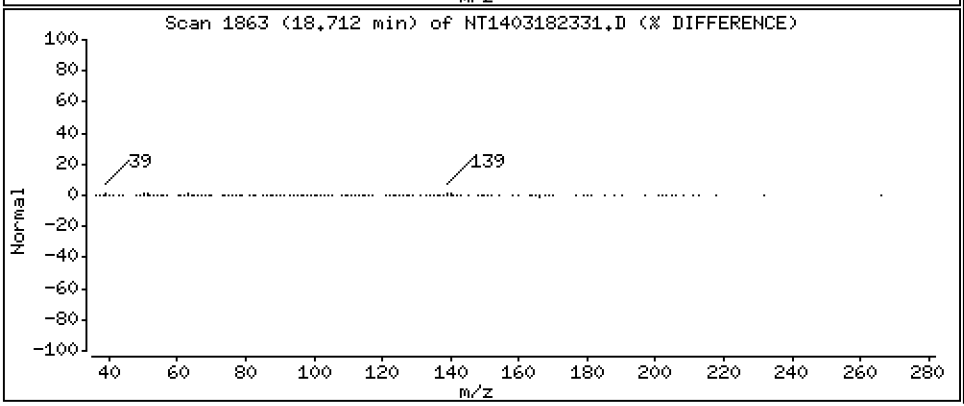
62 Carbazole

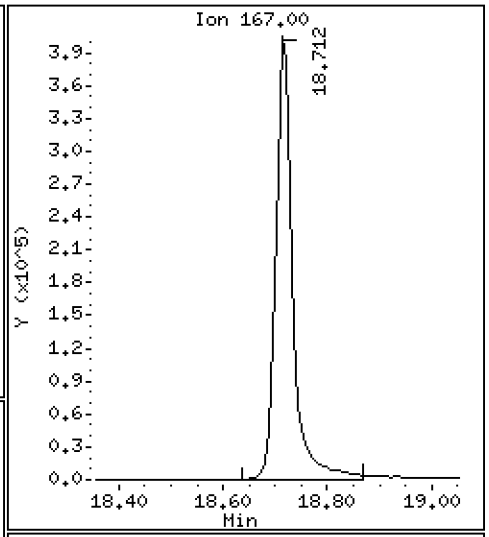
Concentration: 4.476 ug/mL

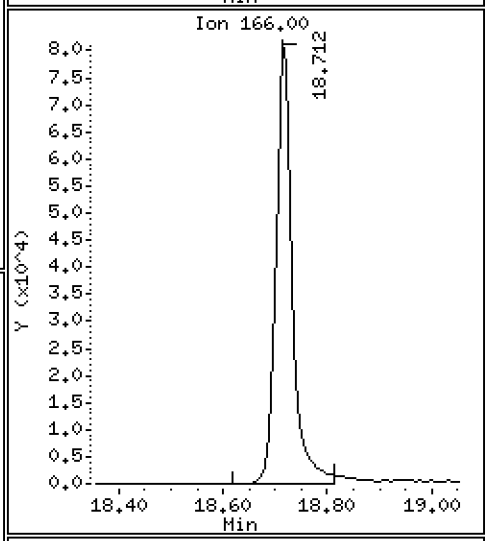


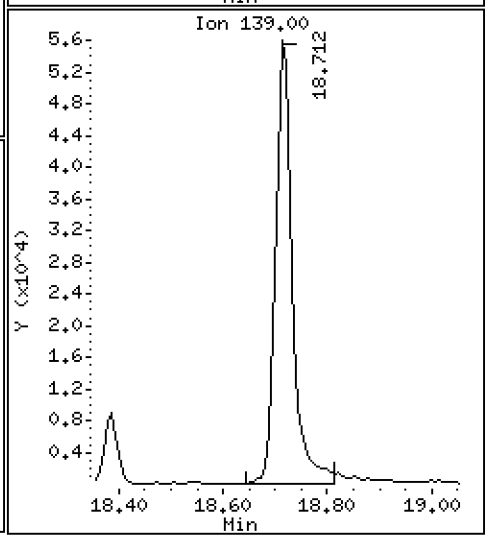












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Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

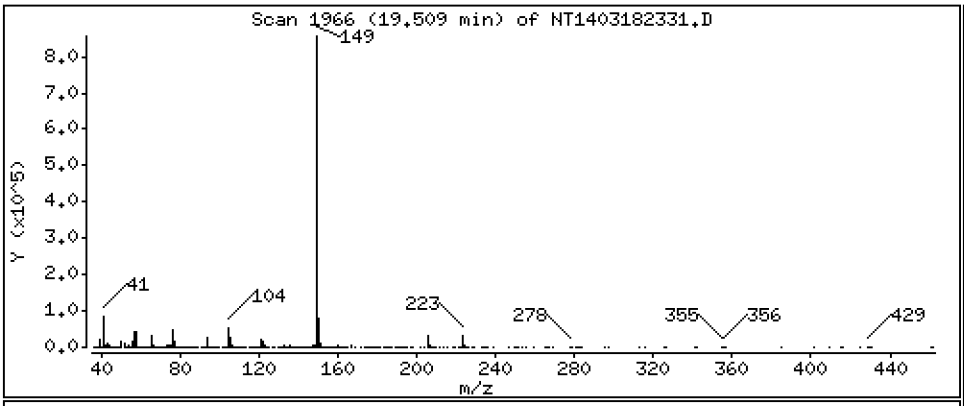
Operator: JGR

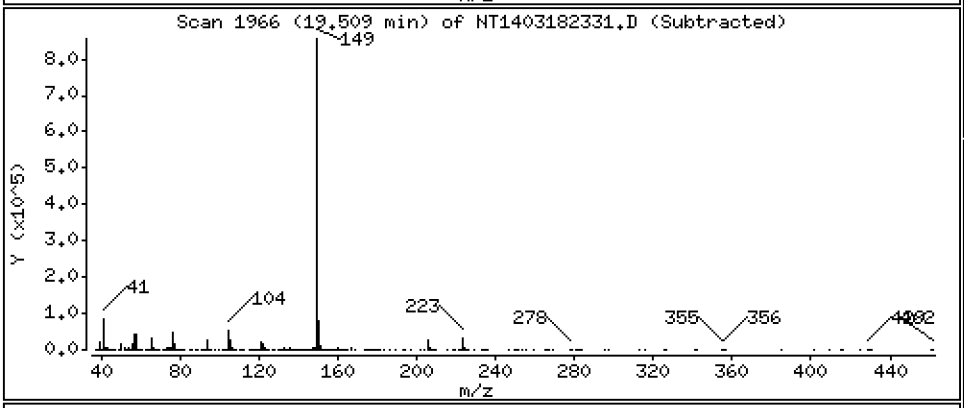
Column phase: ZB-5msi

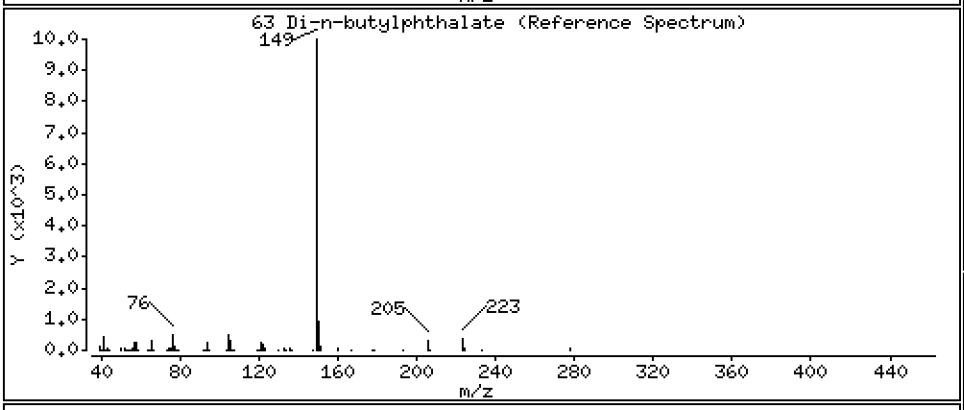
Column diameter: 0.25

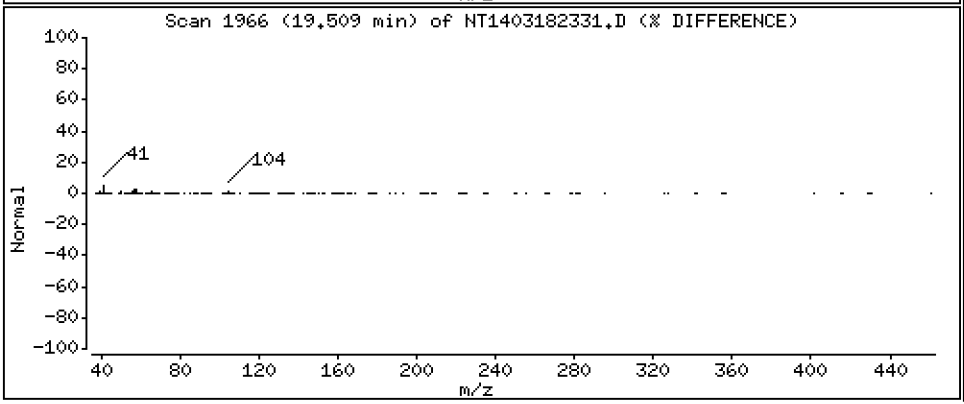
63 Di-n-butylphthalate

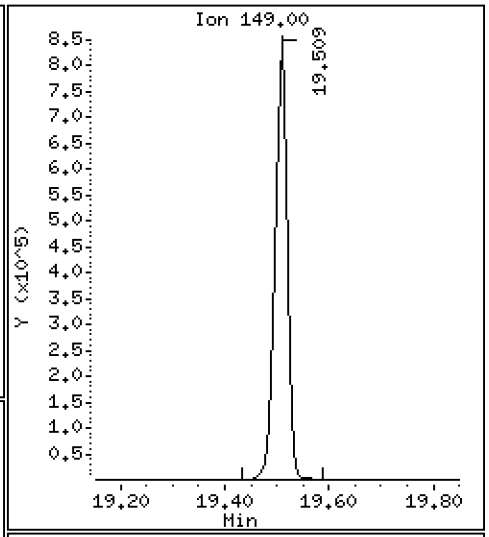
Concentration: 5.219 ug/mL

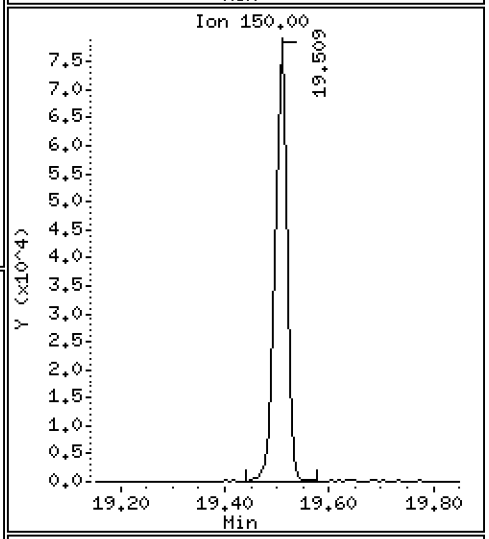


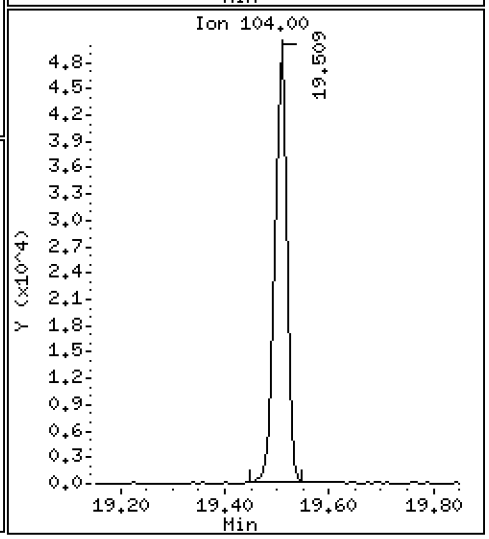












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Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

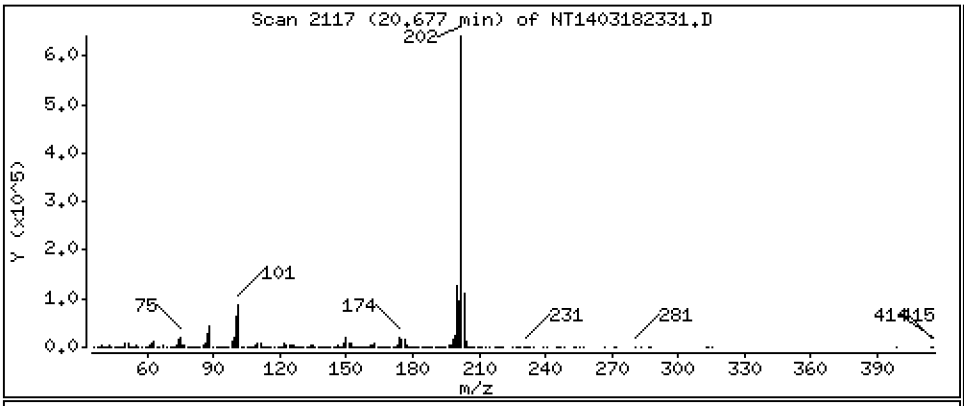
Operator: JGR

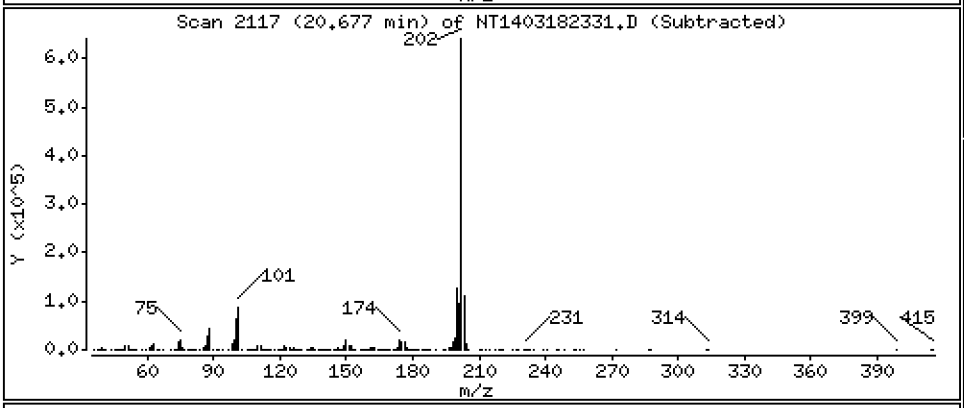
Column phase: ZB-5msi

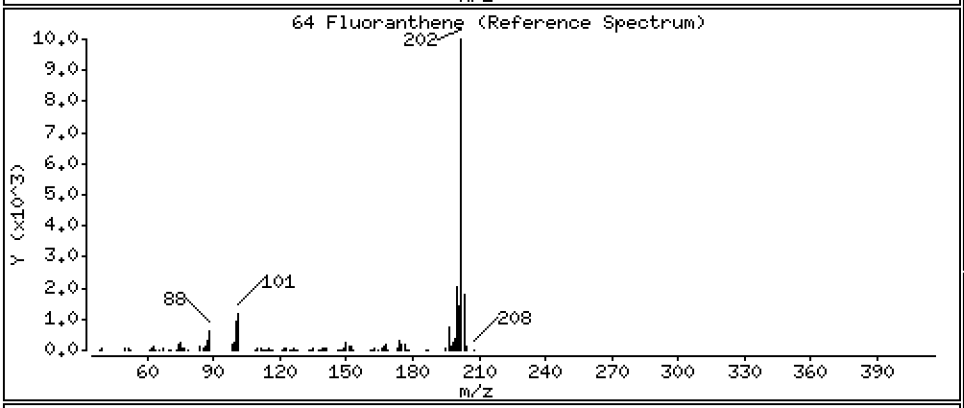
Column diameter: 0.25

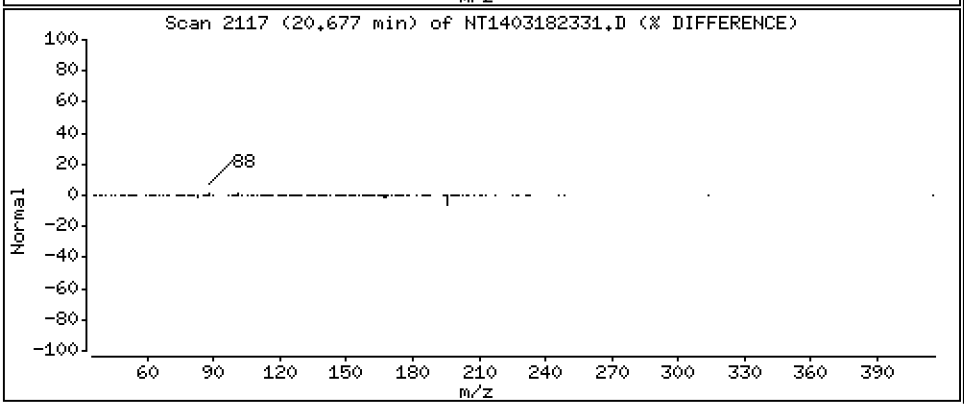
64 Fluoranthene

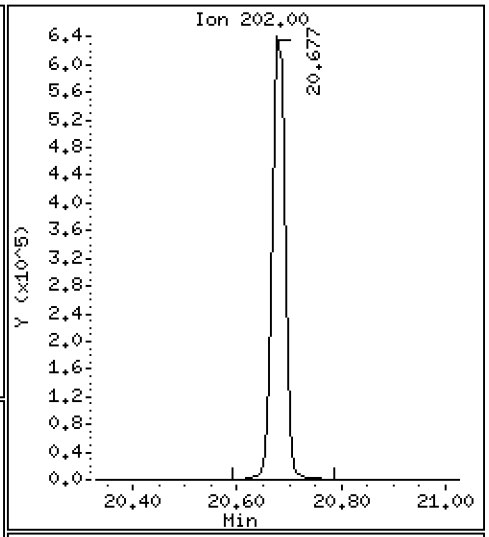
Concentration: 5.984 ug/mL

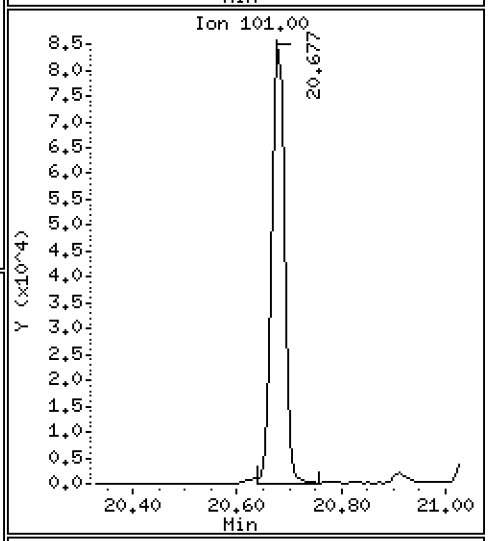


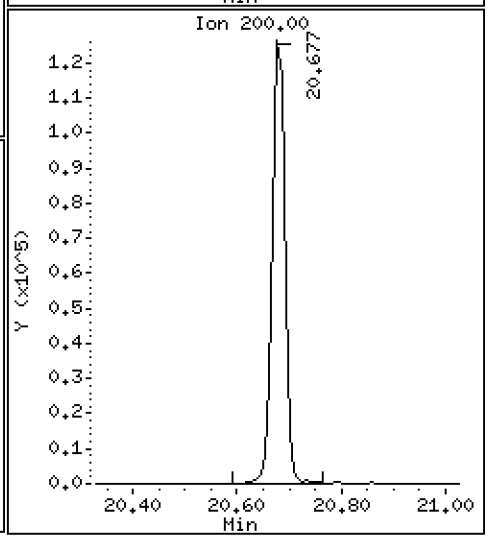












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Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

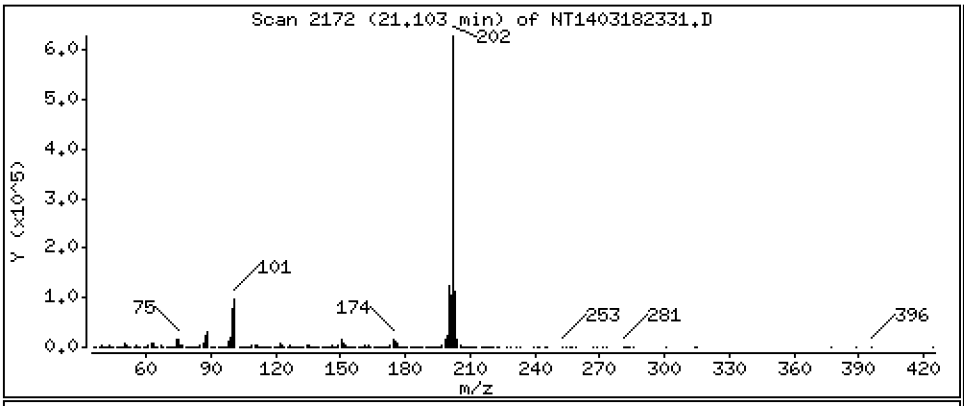
Operator: JGR

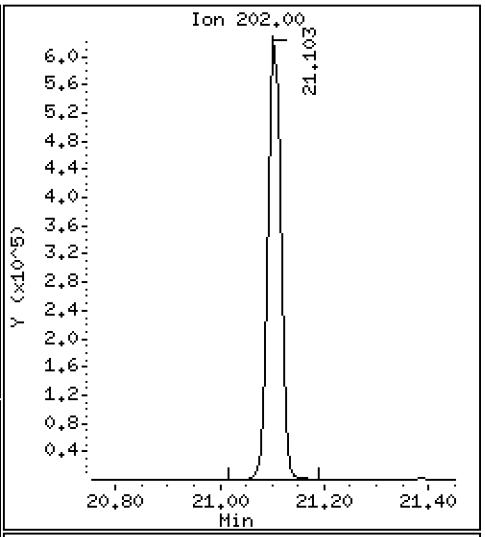
Column phase: ZB-5msi

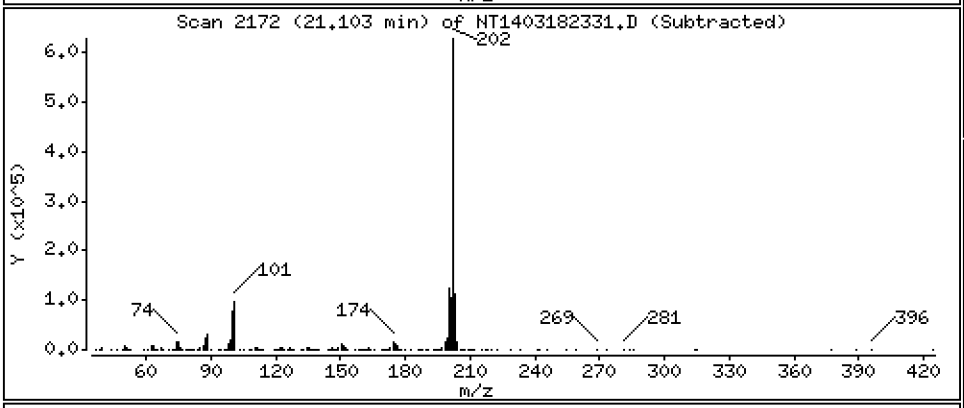
Column diameter: 0.25

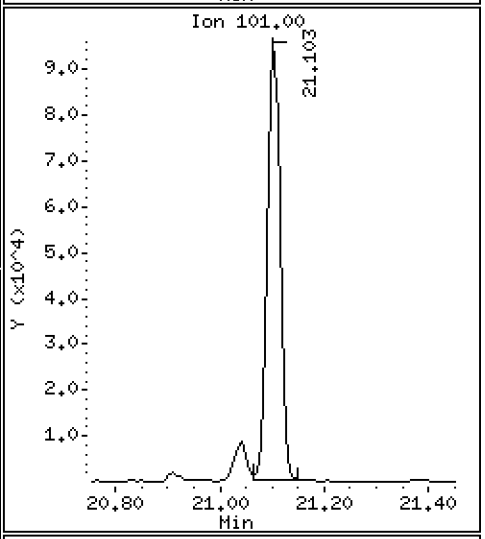
65 Pyrene

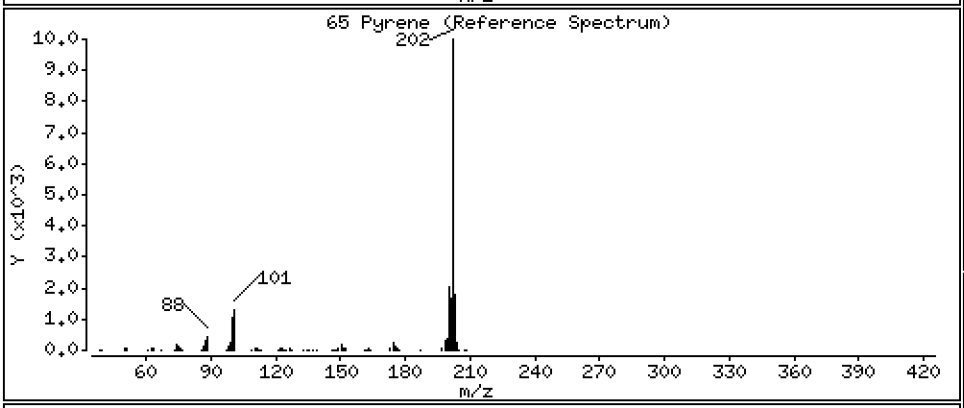
Concentration: 5.723 ug/mL

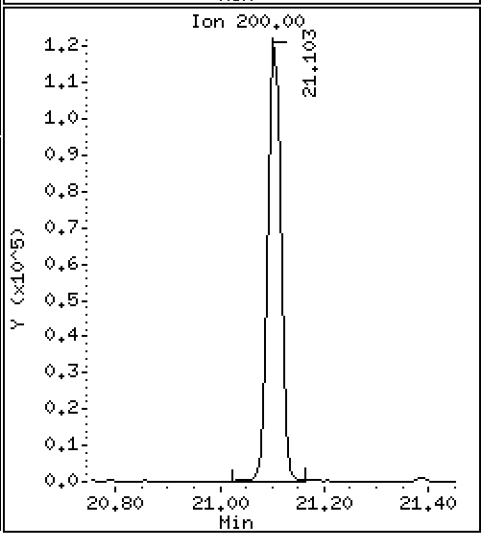


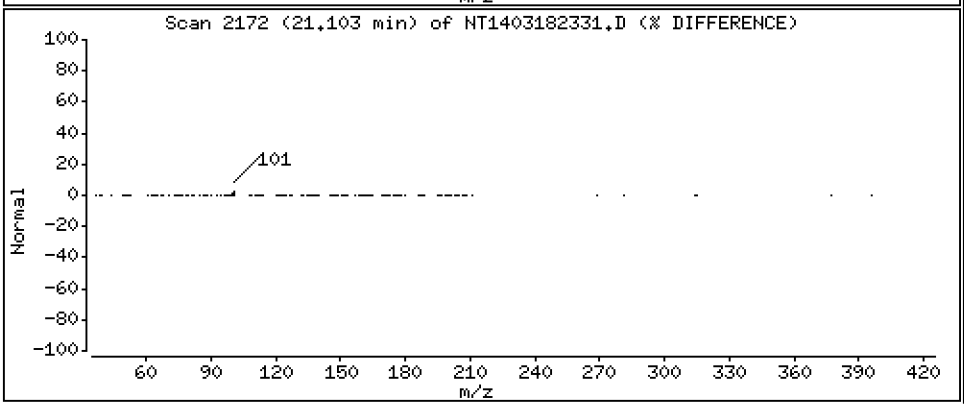












Date : 19-MAR-2023 11:04

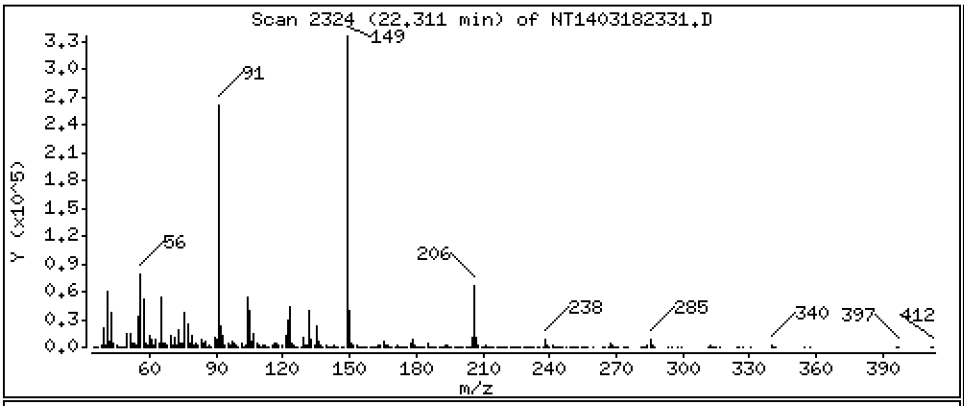
Client ID: Instrument: nt14.i

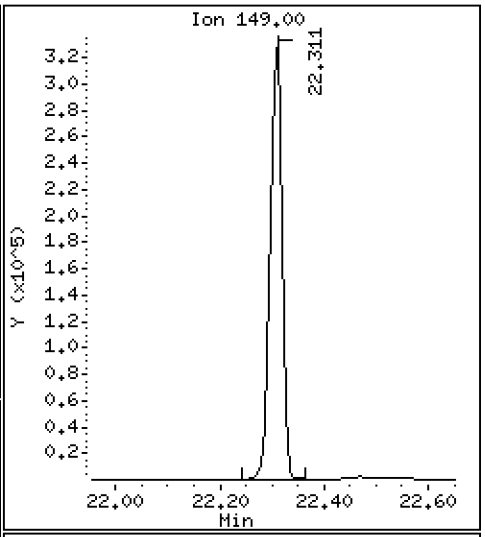
Sample Info: SLC0355-CCV1

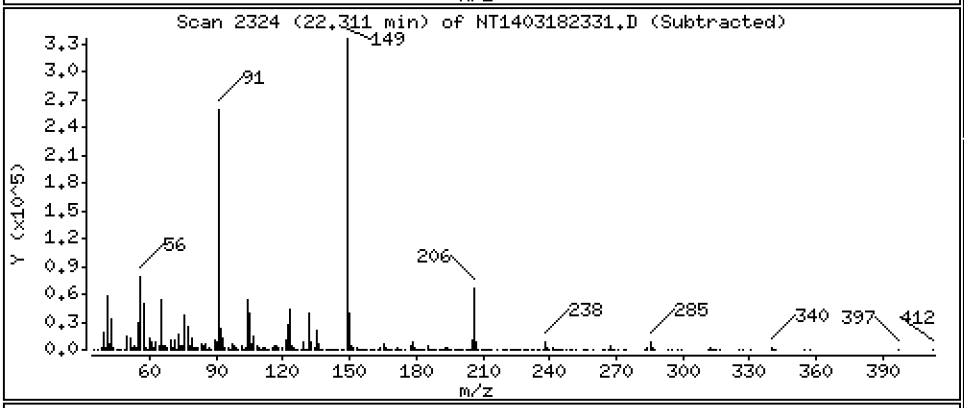
Operator: JGR

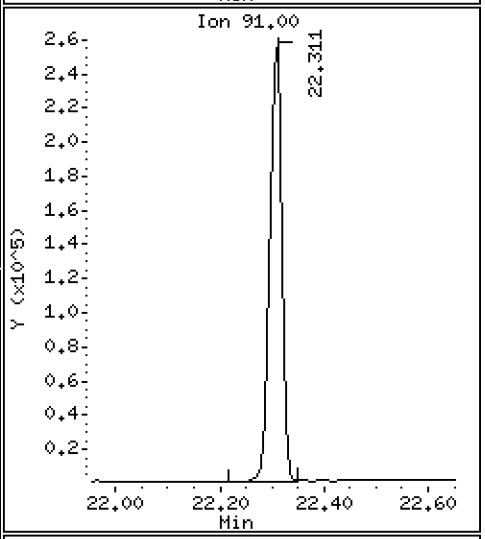
Column phase: ZB-5msi Column diameter: 0.25

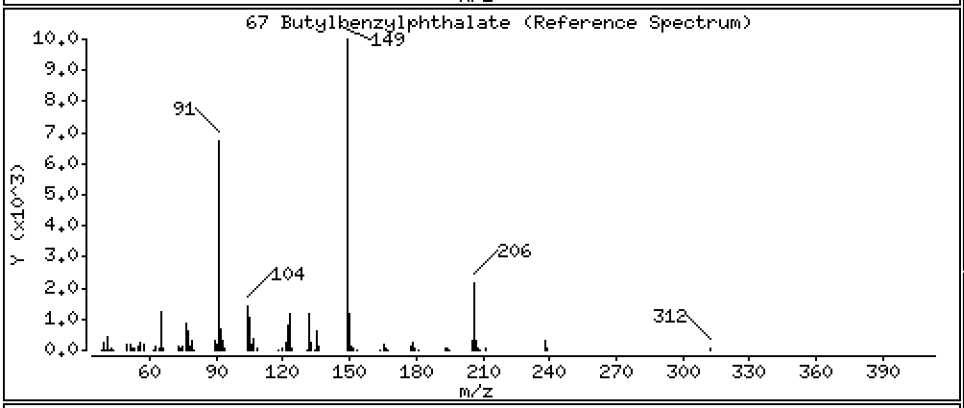
67 Butylbenzylphthalate Concentration: 6.417 ug/mL

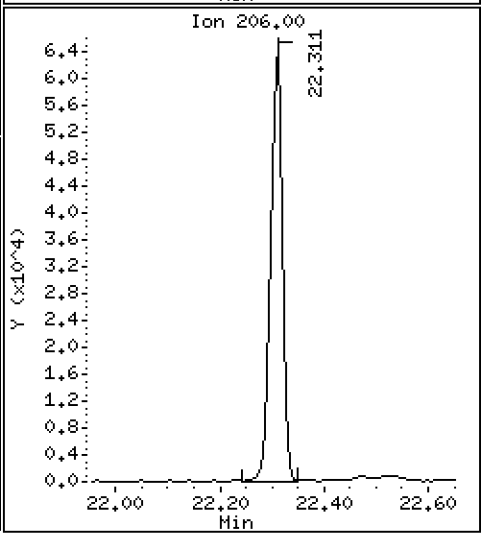


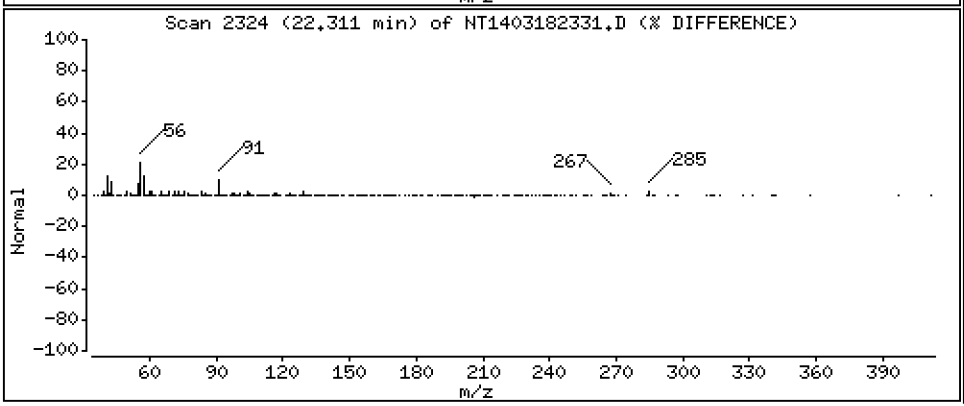












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Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

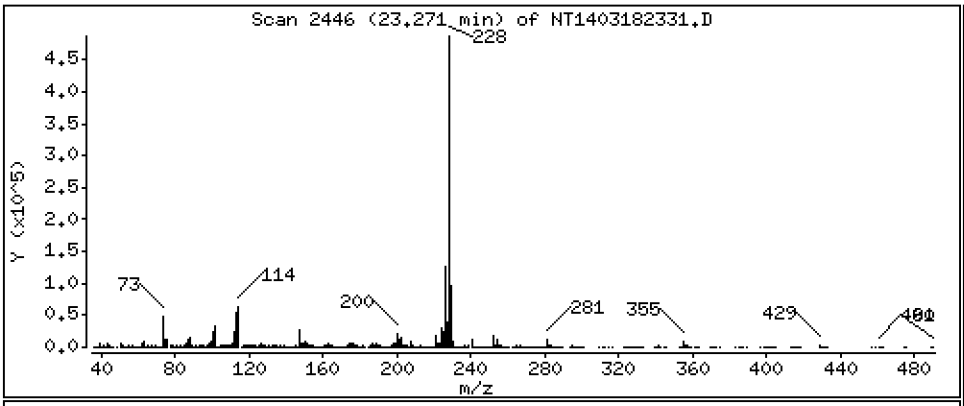
Operator: JGR

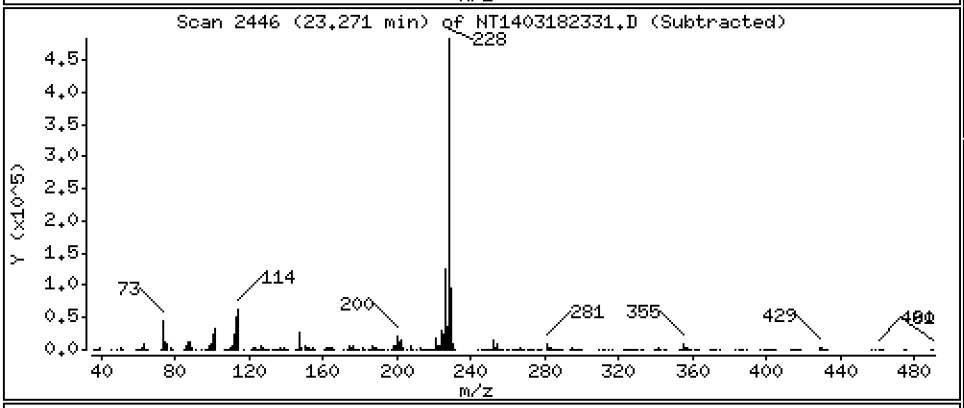
Column phase: ZB-5msi

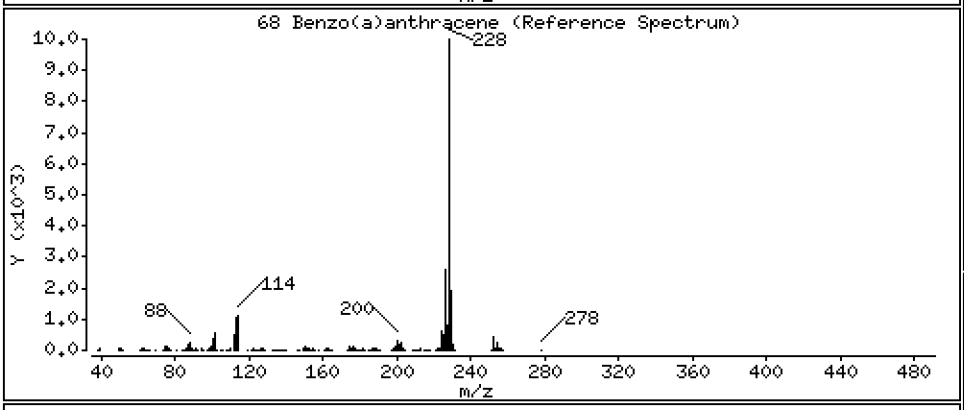
Column diameter: 0.25

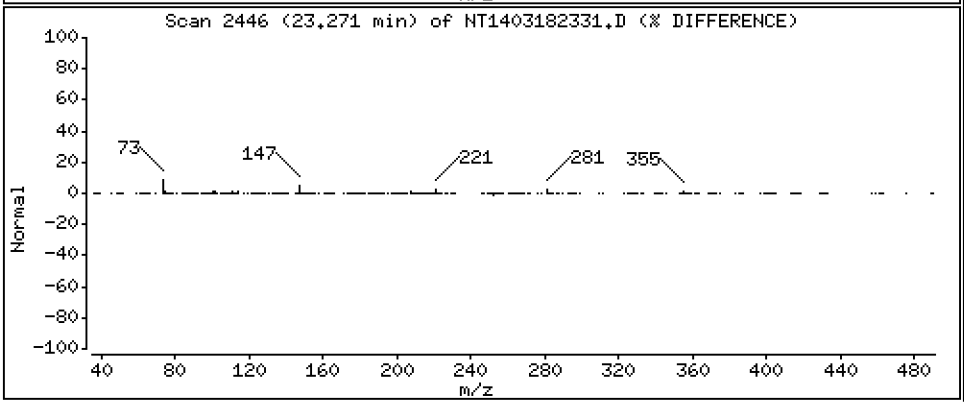
68 Benzo(a)anthracene

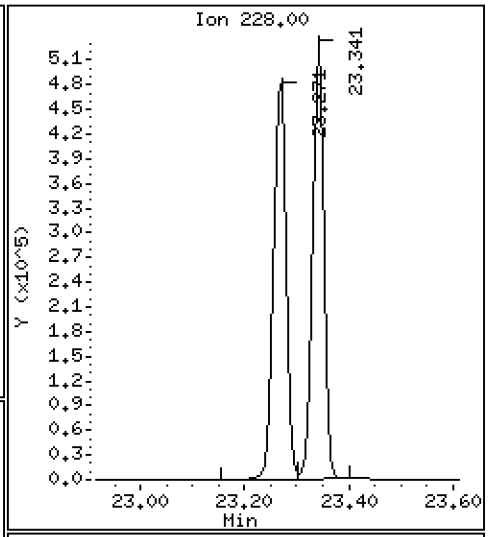
Concentration: 4.957 ug/mL

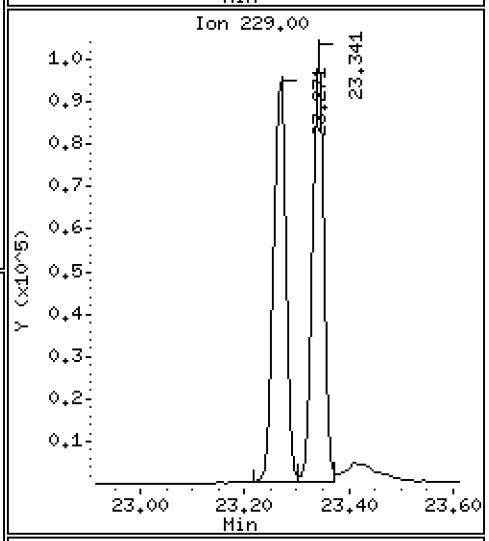


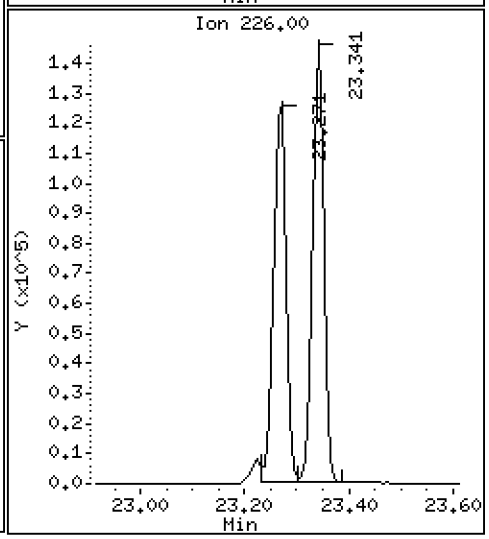












Date : 19-MAR-2023 11:04

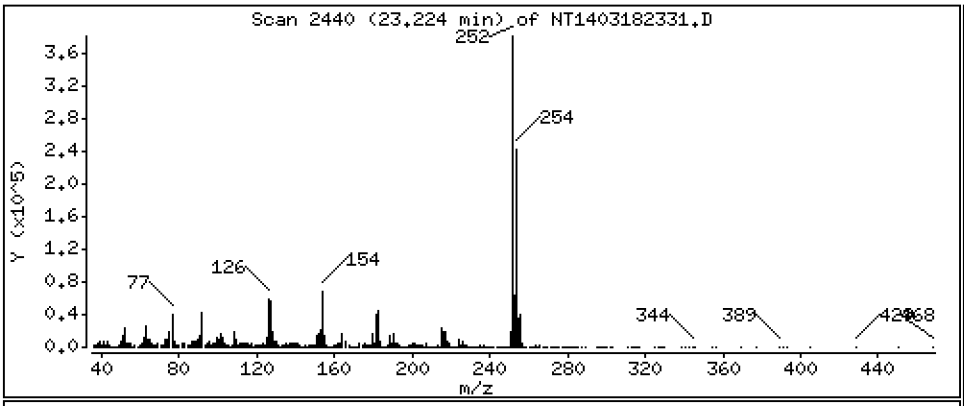
Client ID: Instrument: nt14.i

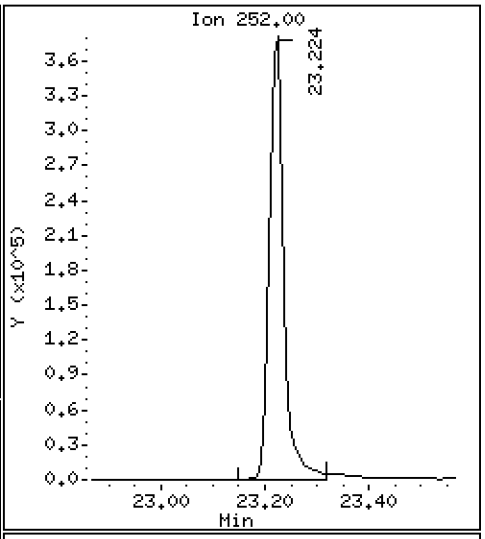
Sample Info: SLC0355-CCV1

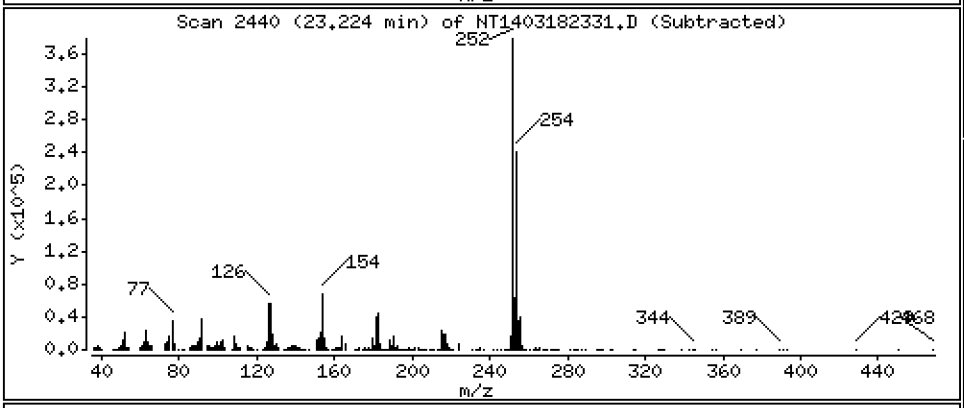
Operator: JGR

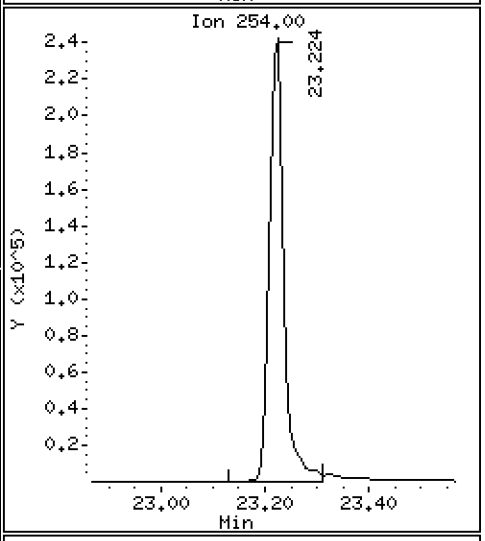
Column phase: ZB-5msi Column diameter: 0.25

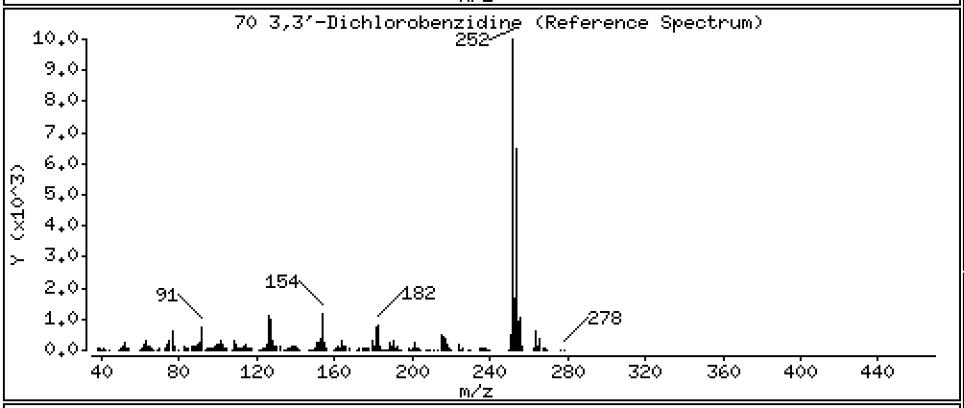
70 3,3'-Dichlorobenzidine Concentration: 14.99 ug/mL

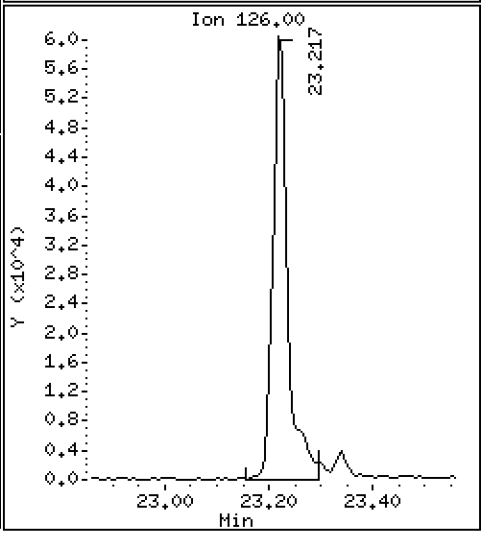


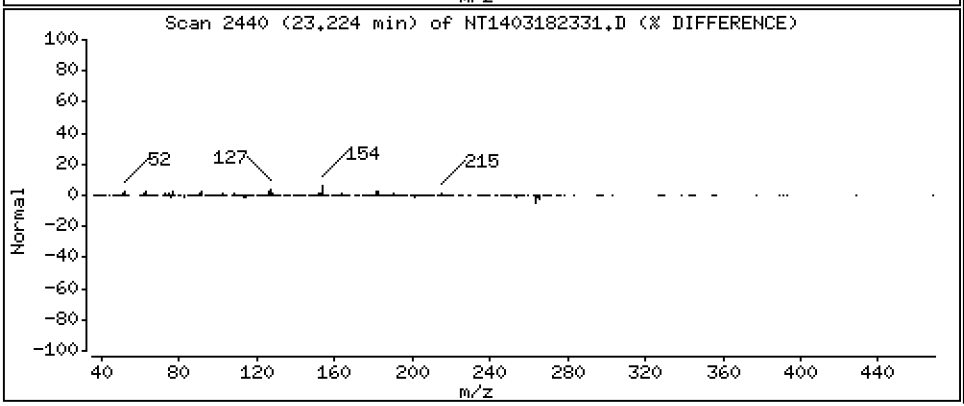












Date : 19-MAR-2023 11:04

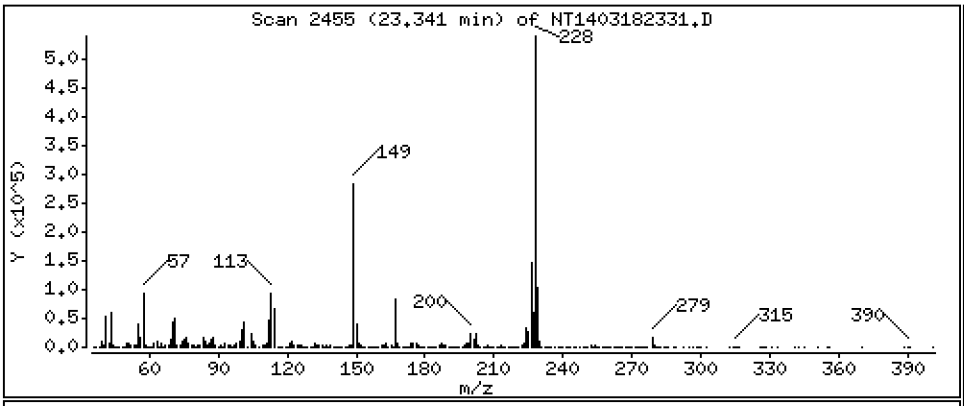
Client ID: Instrument: nt14.i

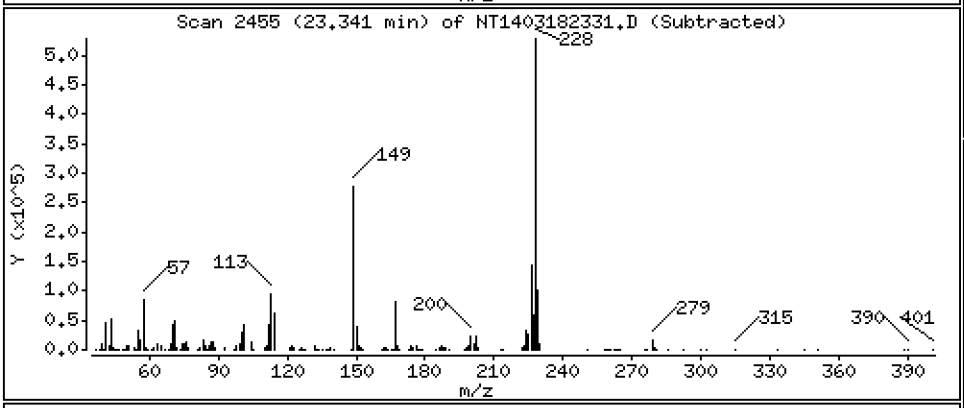
Sample Info: SLC0355-CCV1

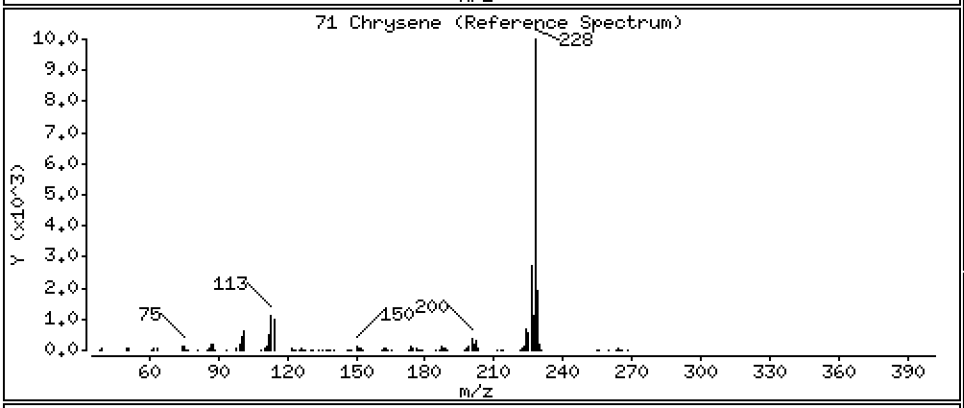
Operator: JGR

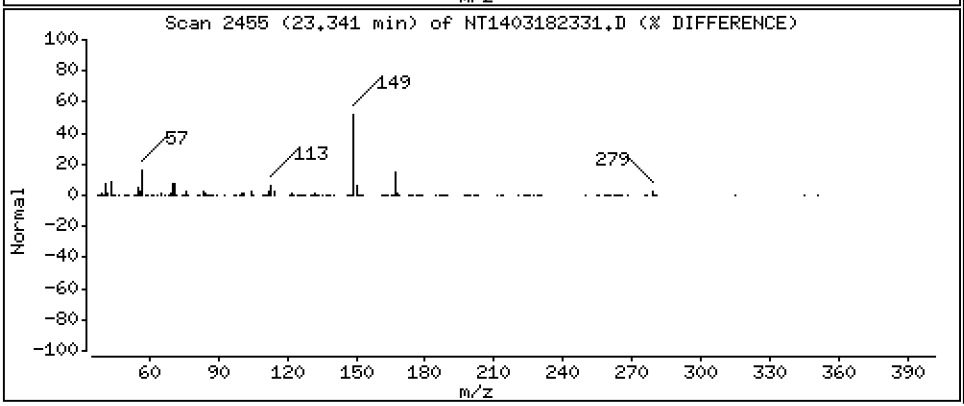
Column phase: ZB-5msi Column diameter: 0.25

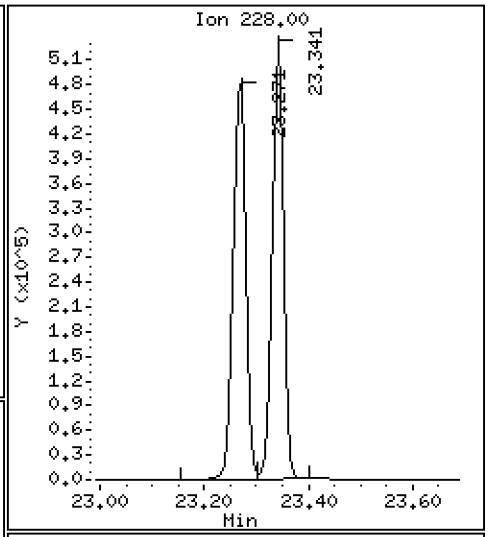
71 Chrysene Concentration: 5.144 ug/mL

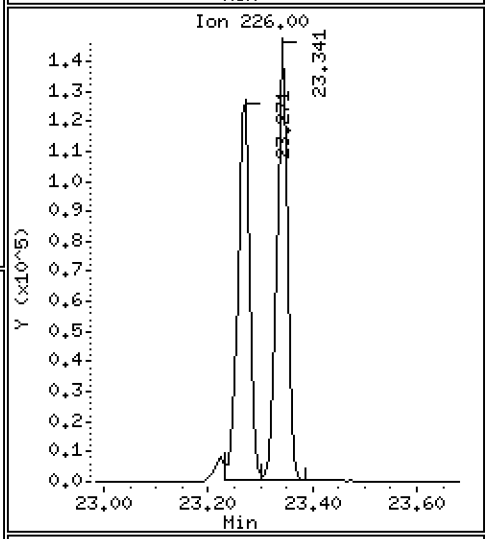


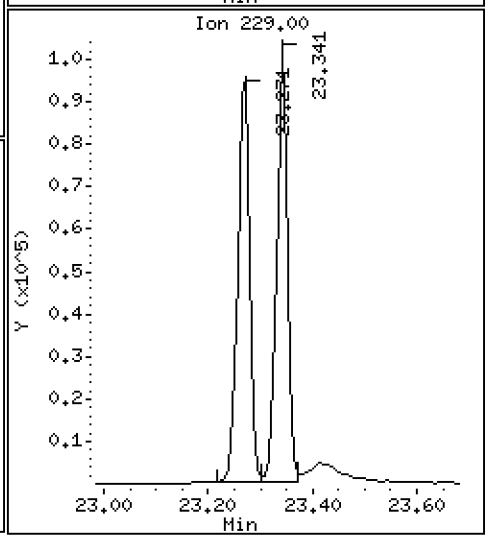












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Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

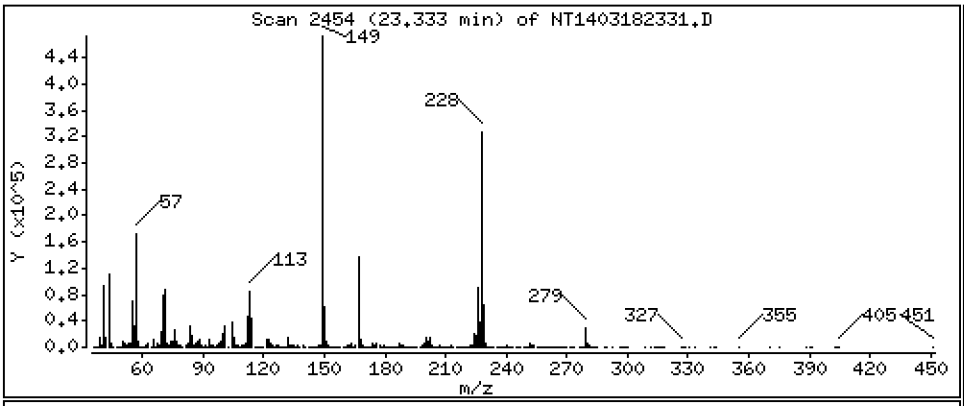
Operator: JGR

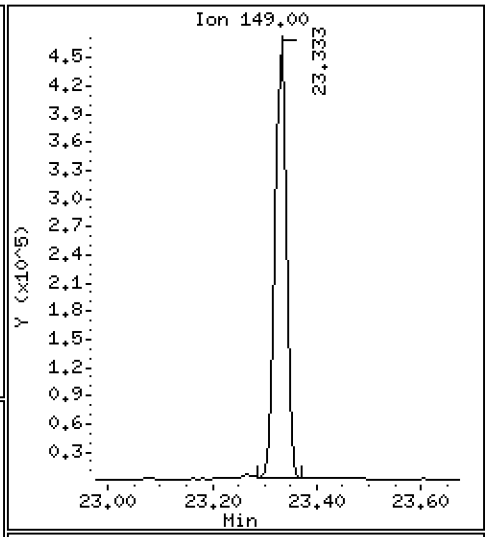
Column phase: ZB-5msi

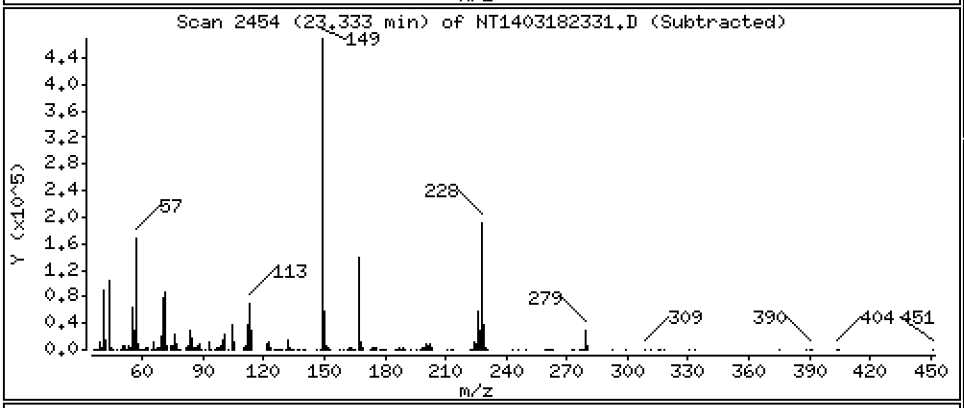
Column diameter: 0.25

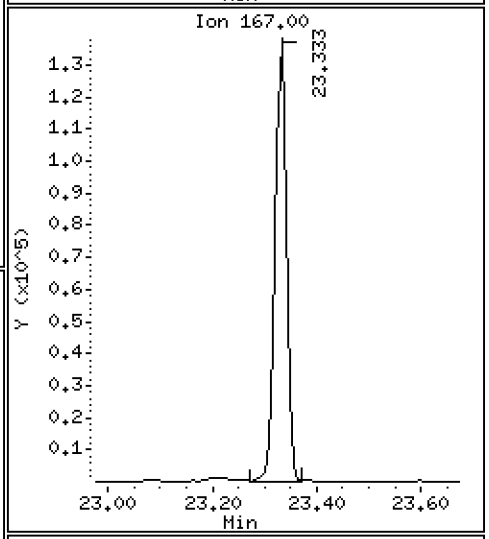
72 bis(2-Ethylhexyl)phthalate

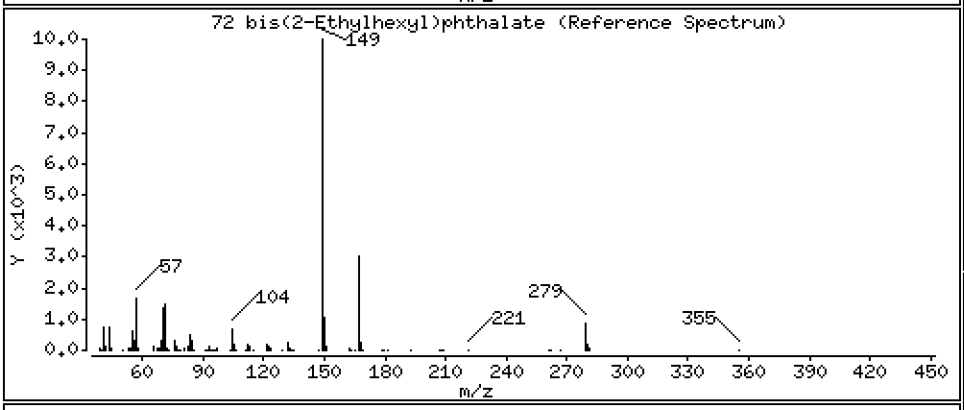
Concentration: 5.490 ug/mL

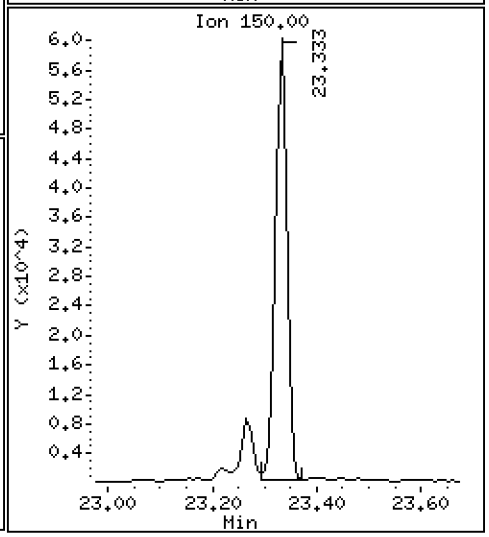


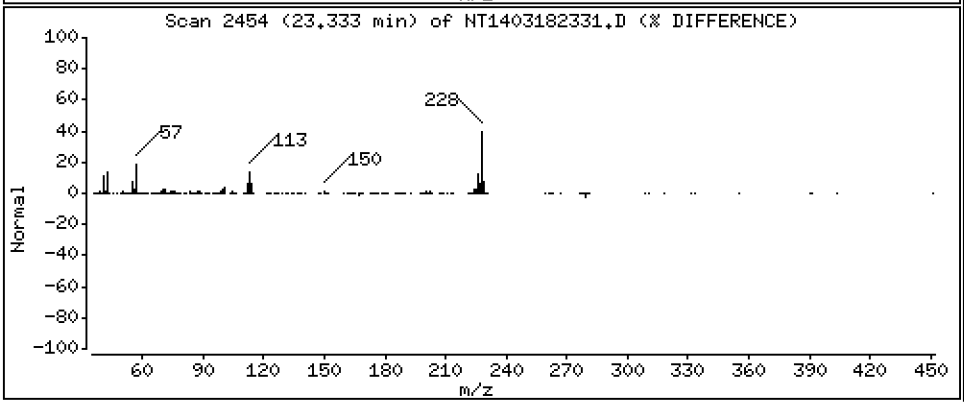












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Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

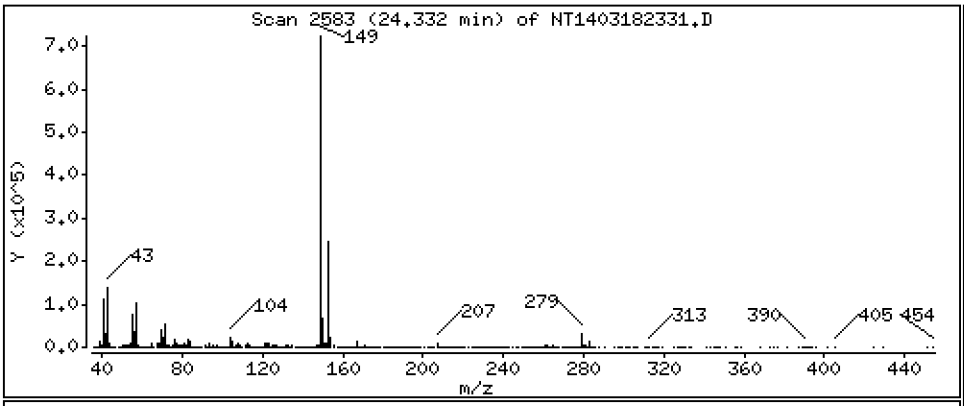
Operator: JGR

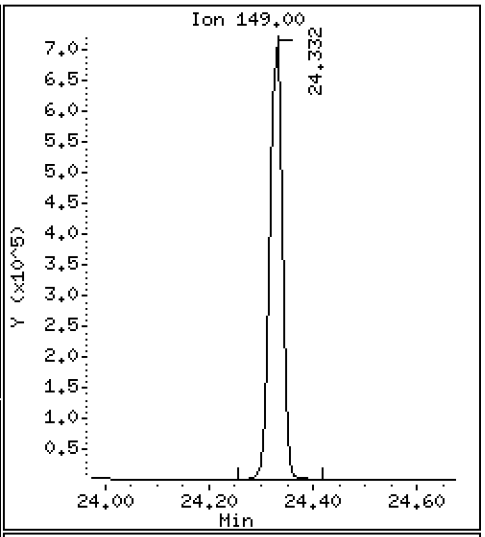
Column phase: ZB-5msi

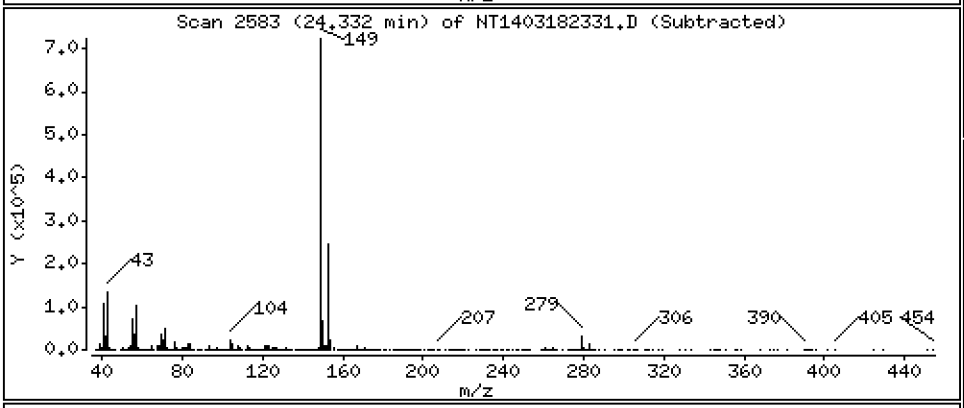
Column diameter: 0.25

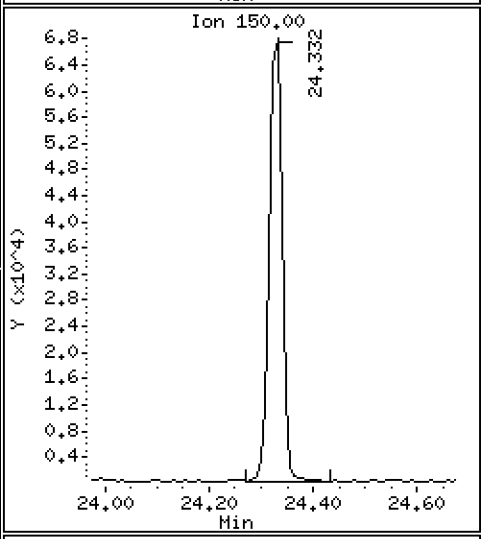
73 Di-n-octylphthalate

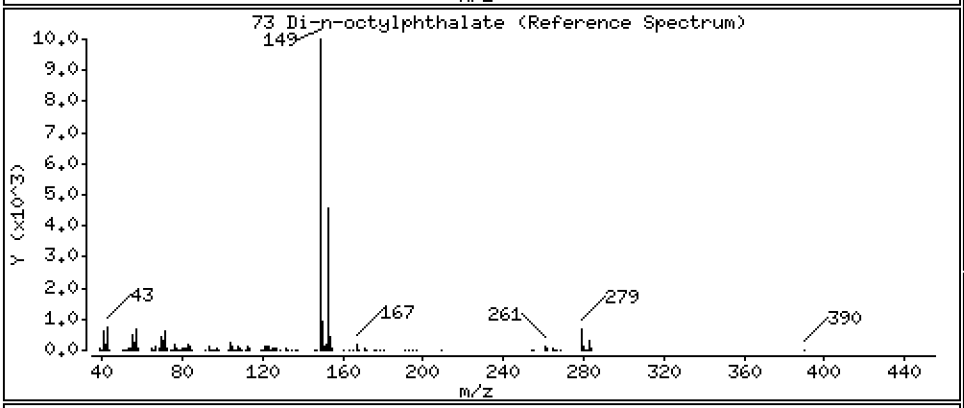
Concentration: 4.787 ug/mL

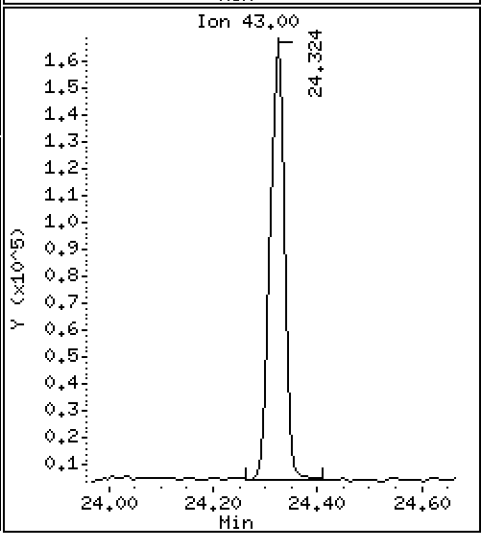


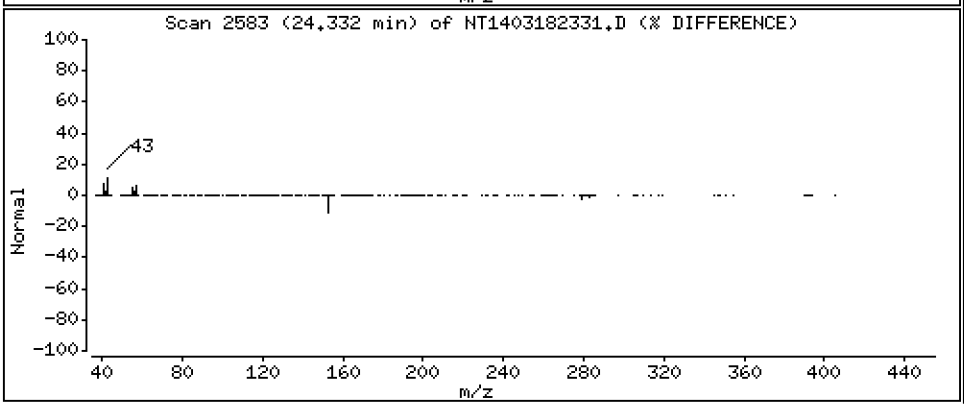












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Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

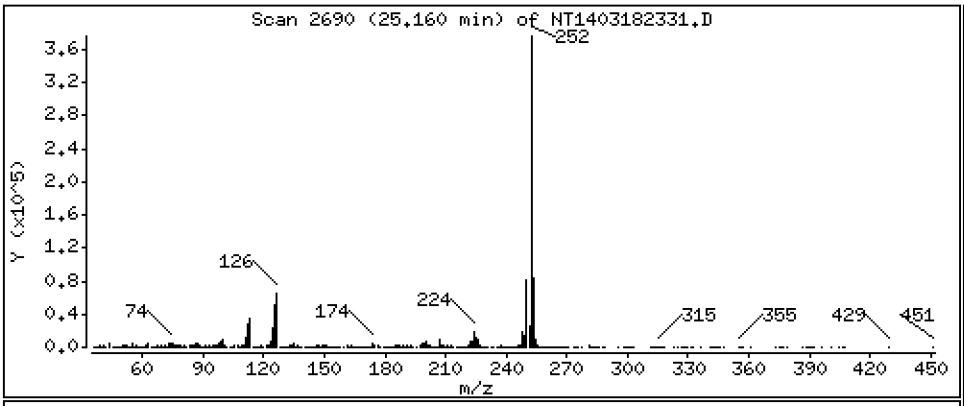
Operator: JGR

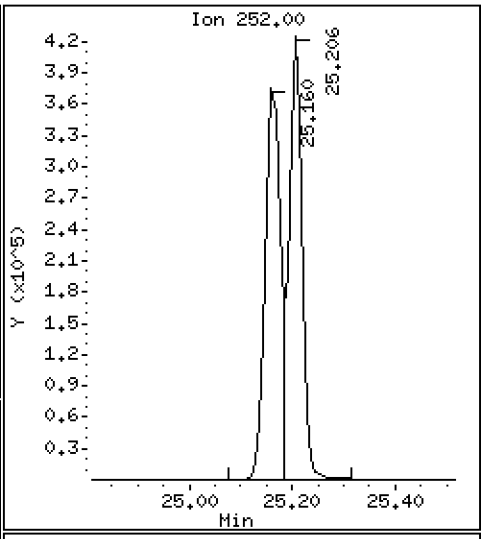
Column phase: ZB-5msi

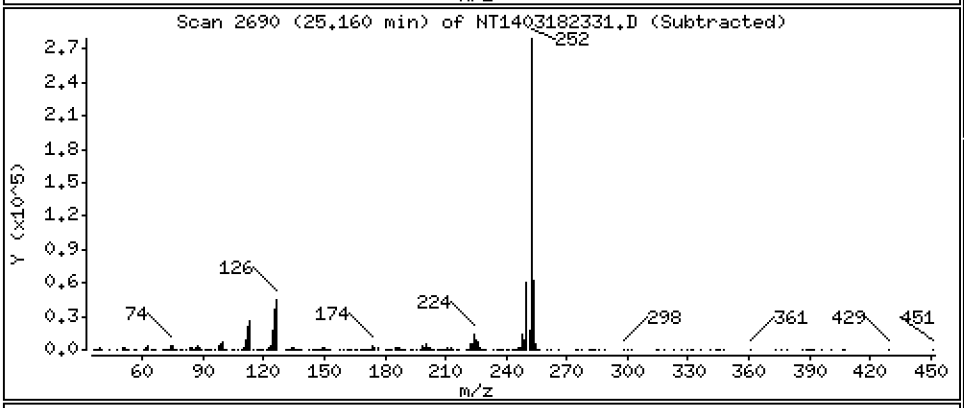
Column diameter: 0.25

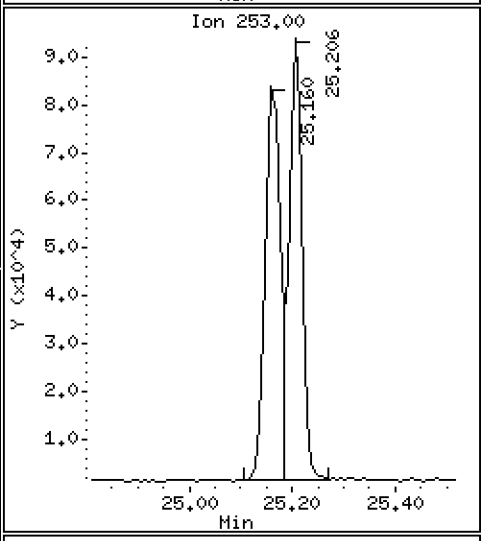
74 Benzo(b)fluoranthene

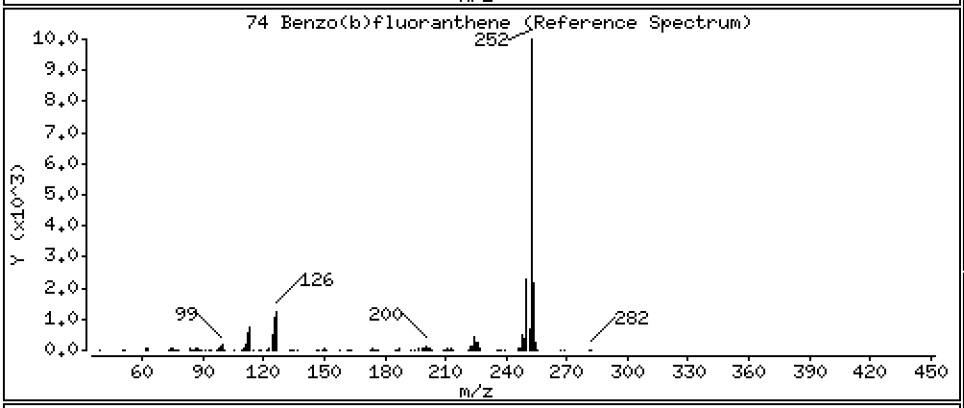
Concentration: 4.813 ug/mL

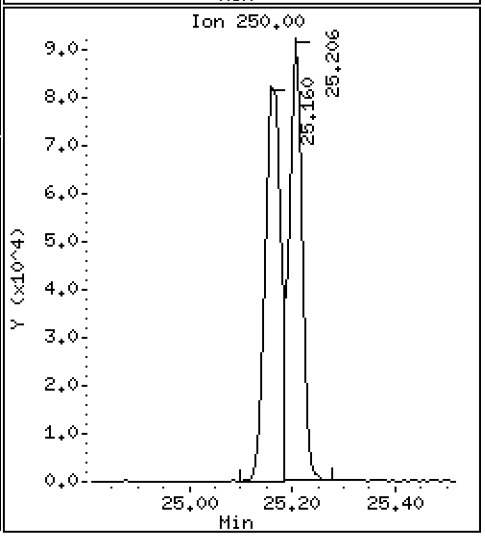


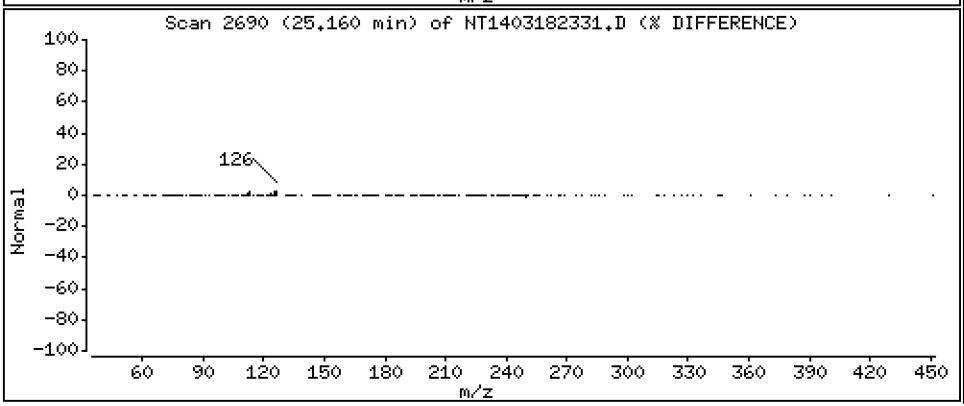












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Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

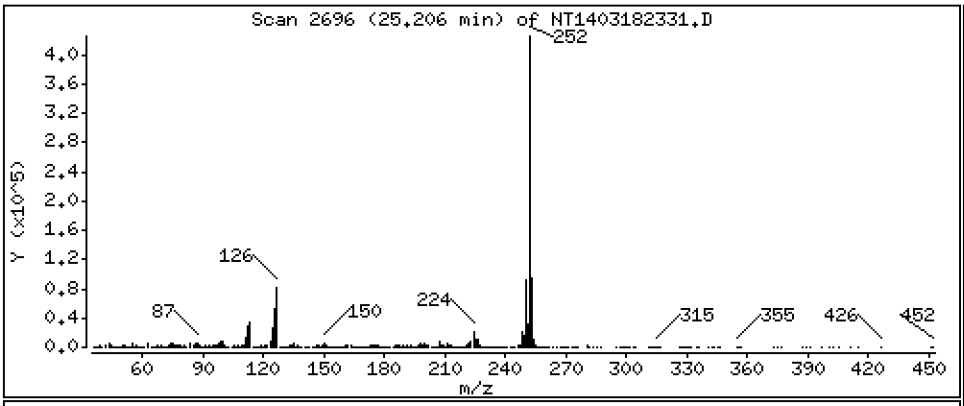
Operator: JGR

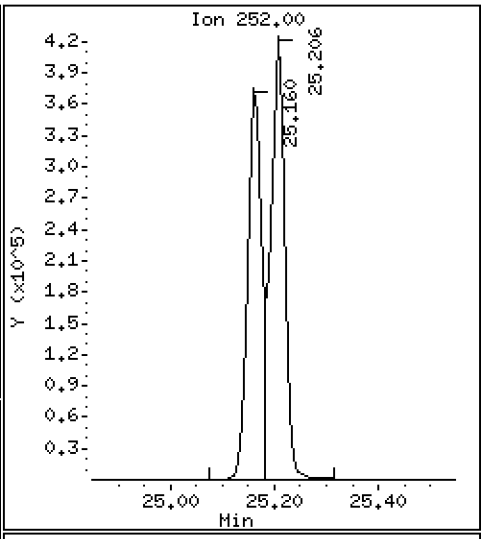
Column phase: ZB-5msi

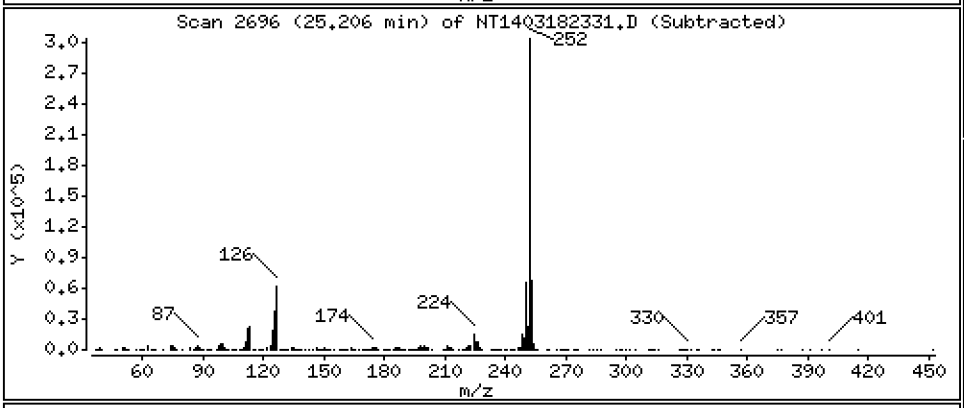
Column diameter: 0.25

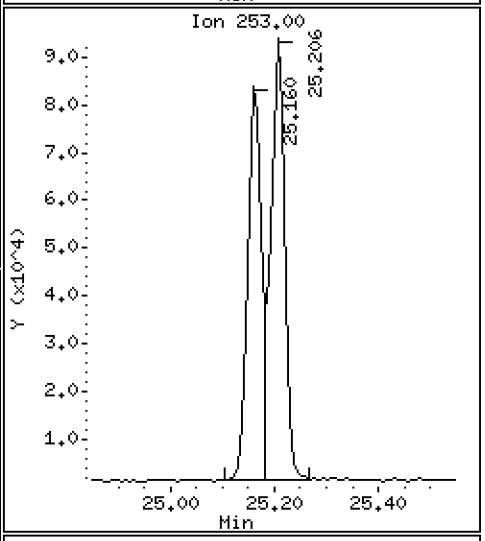
75 Benzo(k)fluoranthene

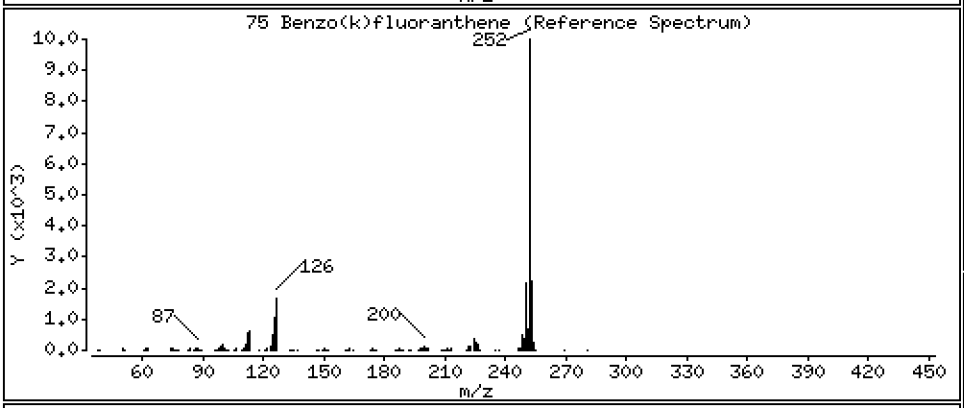
Concentration: 5.268 ug/mL

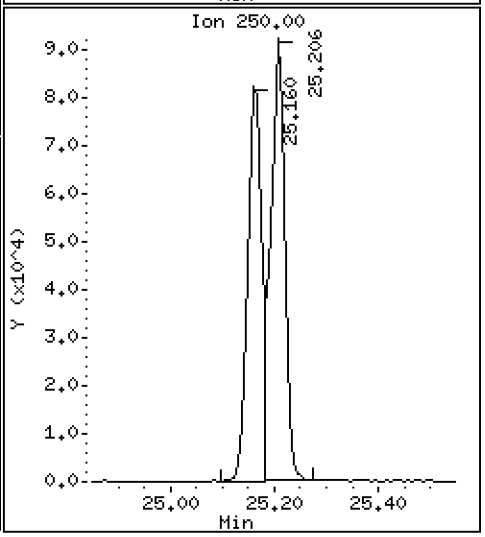


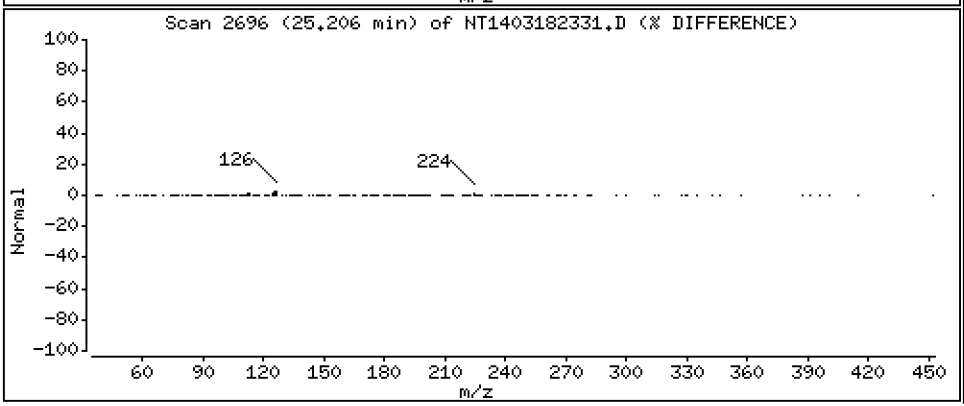












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Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

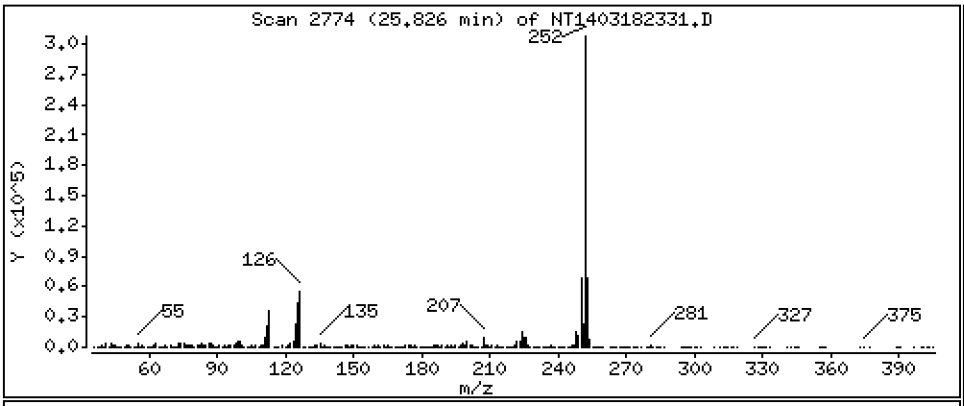
Operator: JGR

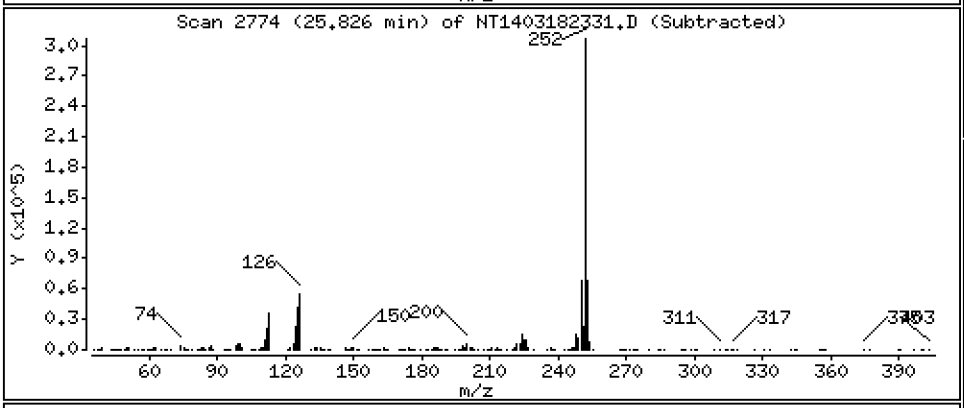
Column phase: ZB-5msi

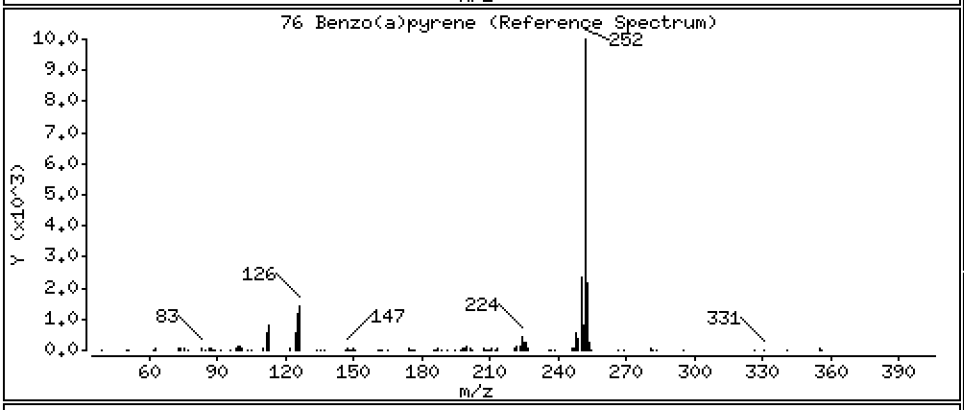
Column diameter: 0.25

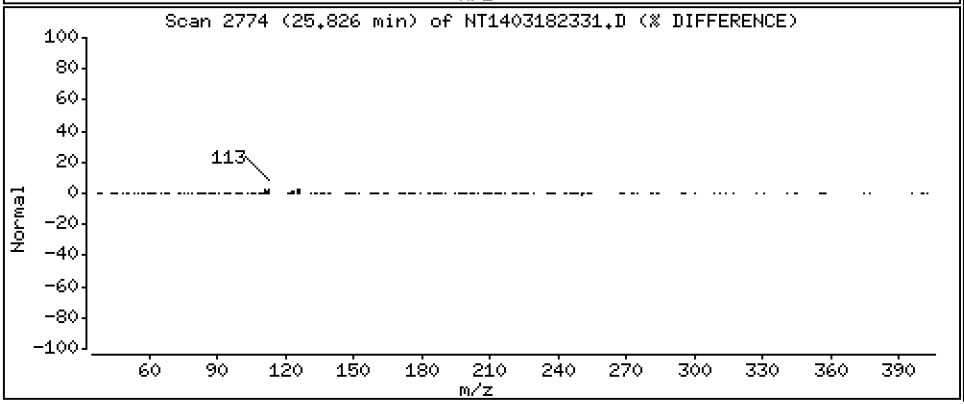
76 Benzo(a)pyrene

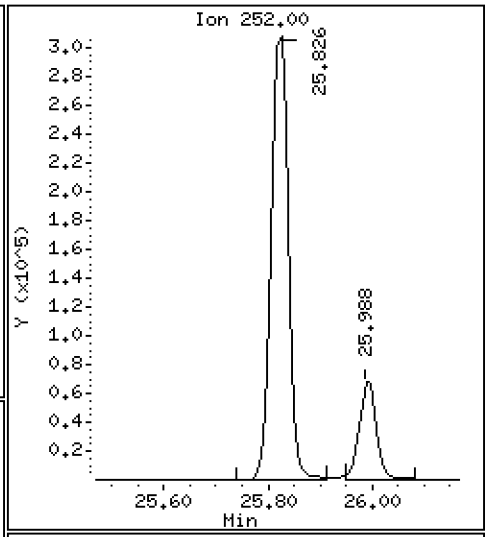
Concentration: 5.117 ug/mL

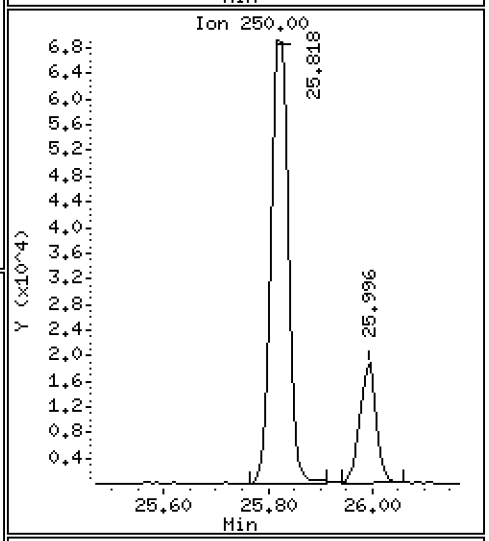


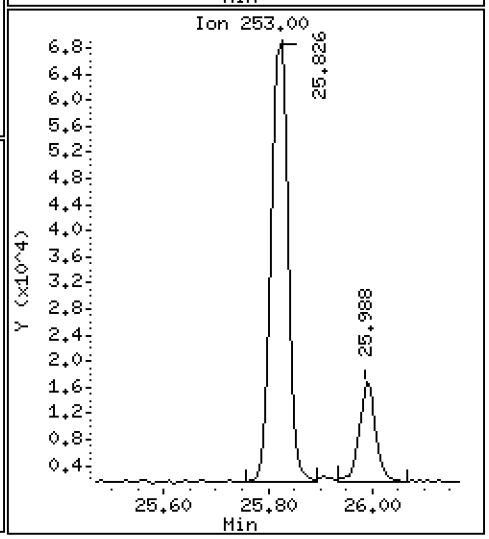












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Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

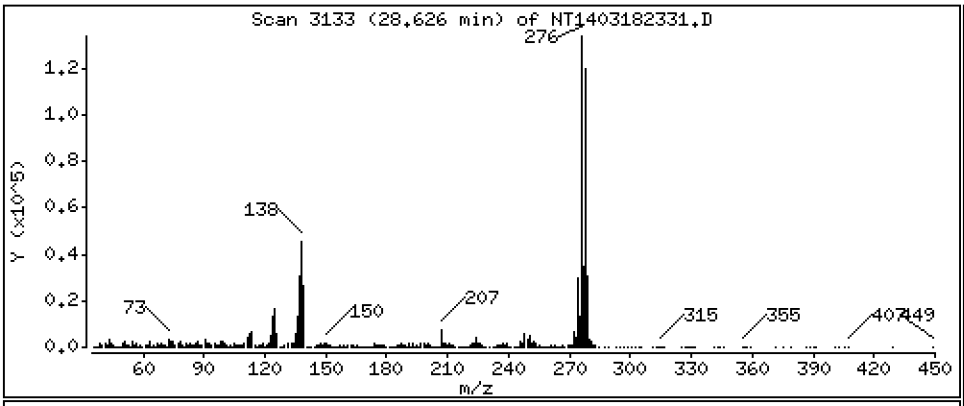
Operator: JGR

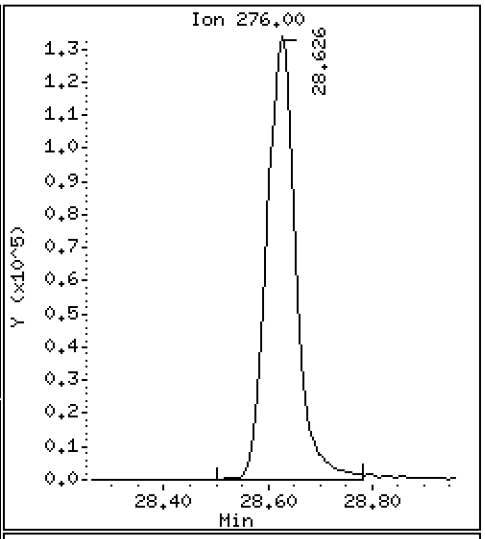
Column phase: ZB-5msi

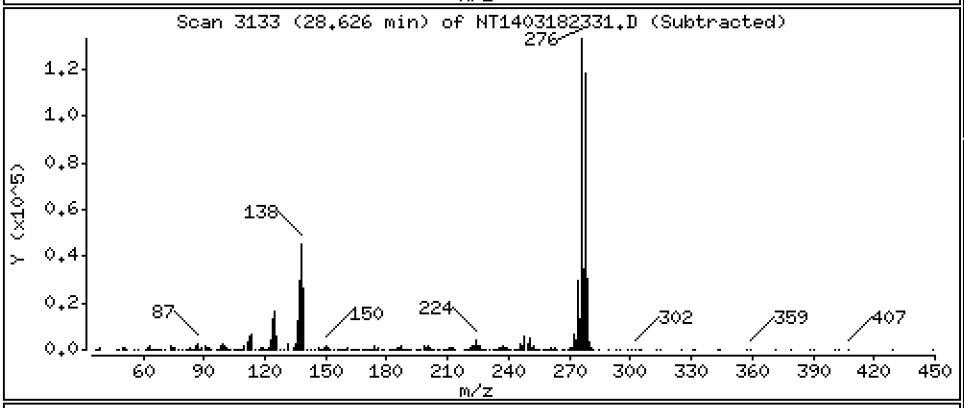
Column diameter: 0.25

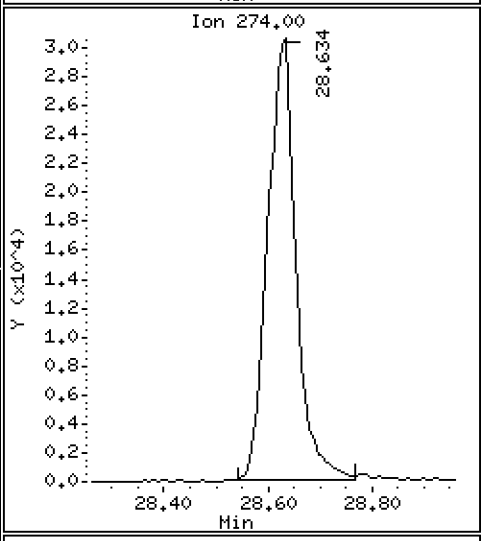
78 Indeno(1,2,3-cd)pyrene

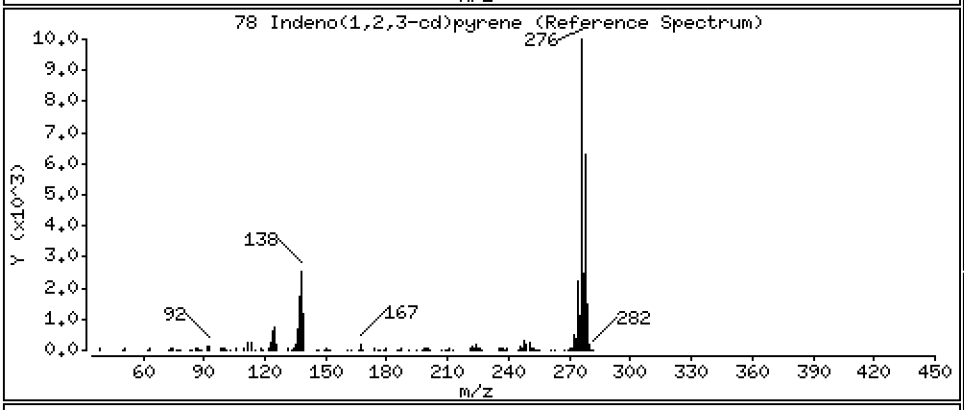
Concentration: 3.597 ug/mL

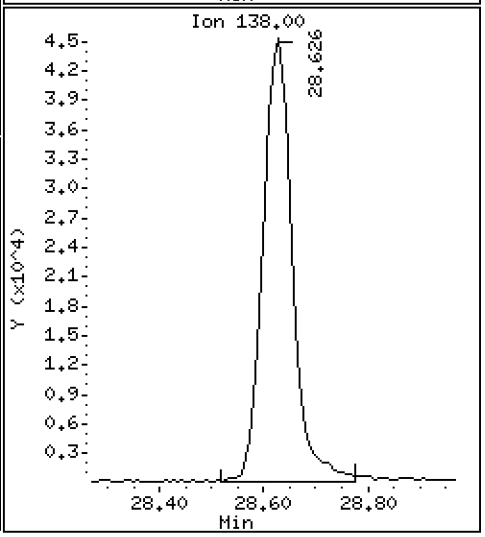


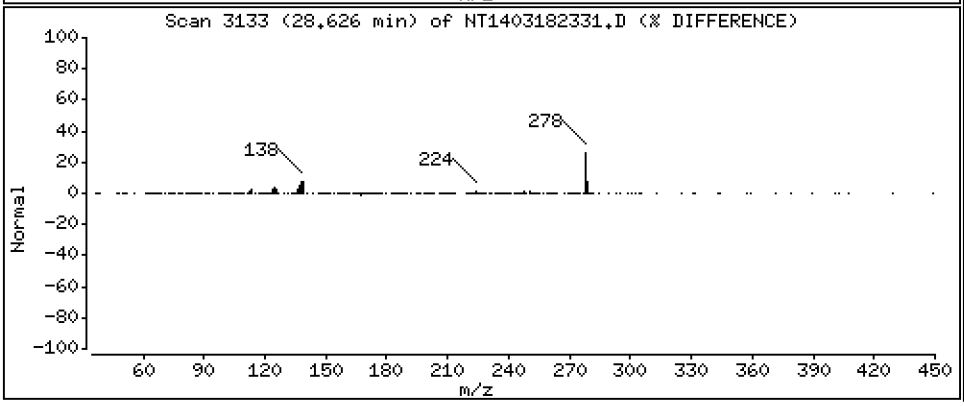












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Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

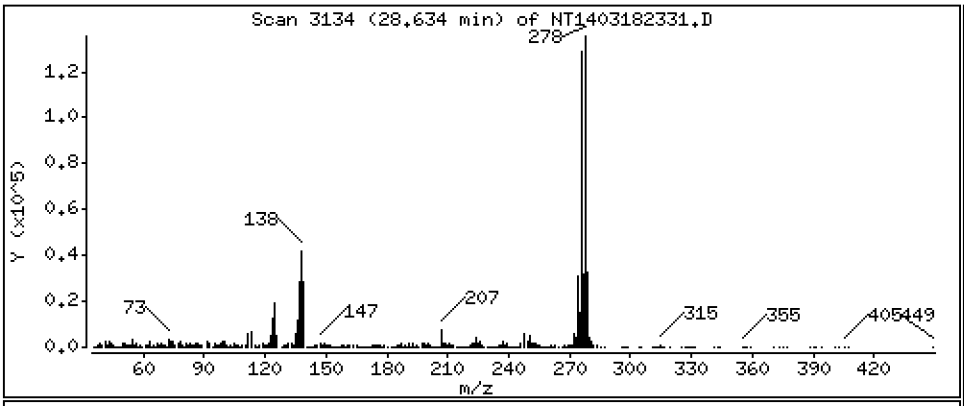
Operator: JGR

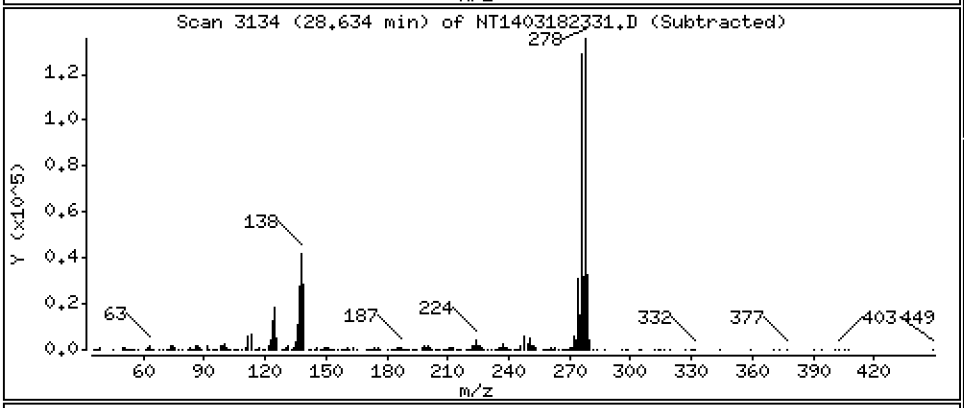
Column phase: ZB-5msi

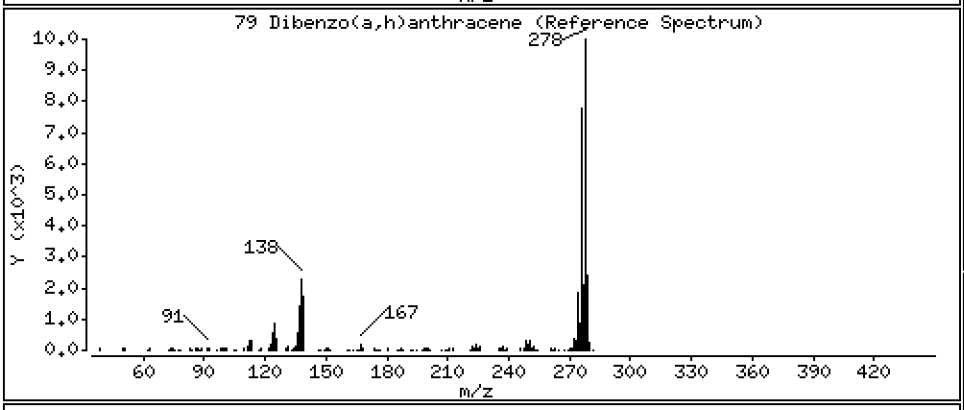
Column diameter: 0.25

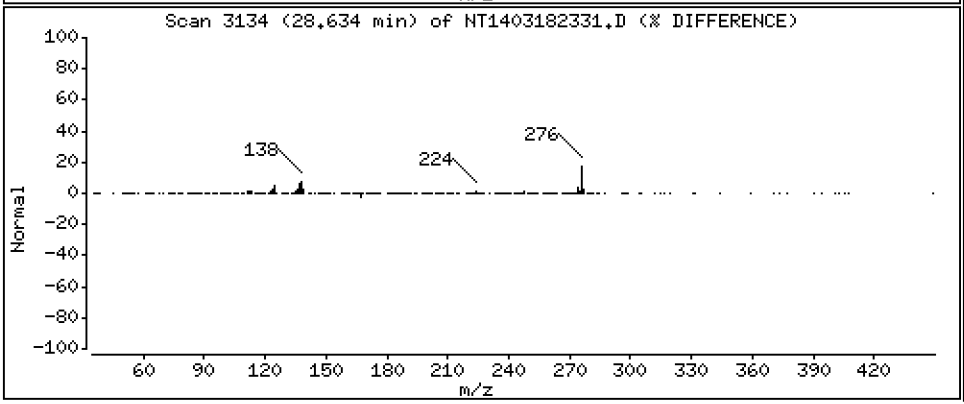
79 Dibenzo(a,h)anthracene

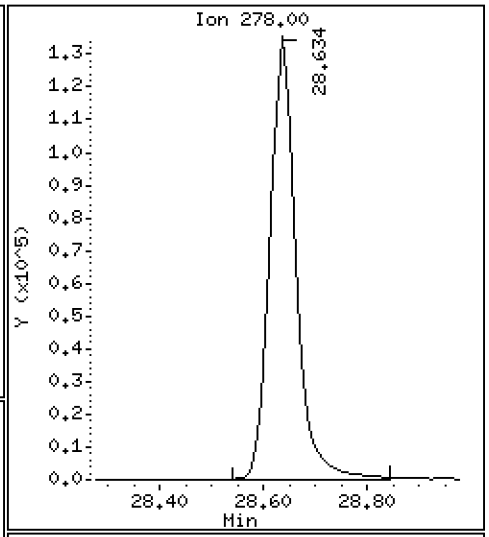
Concentration: 3.867 ug/mL

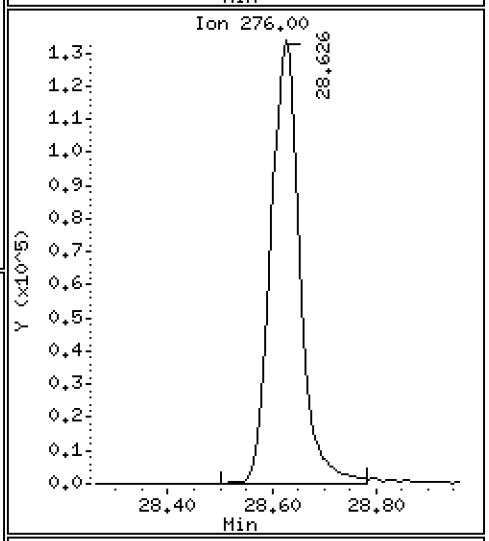


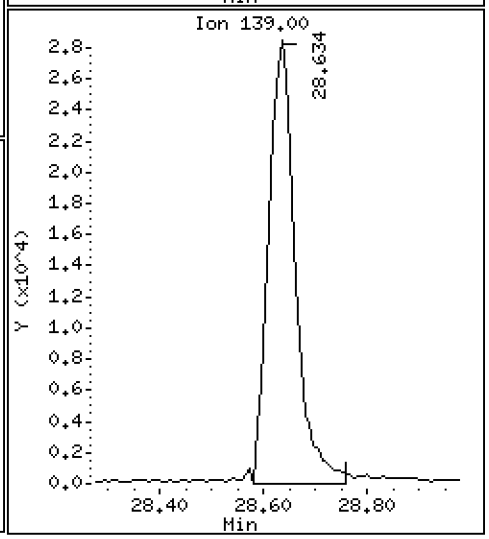












Date : 19-MAR-2023 11:04

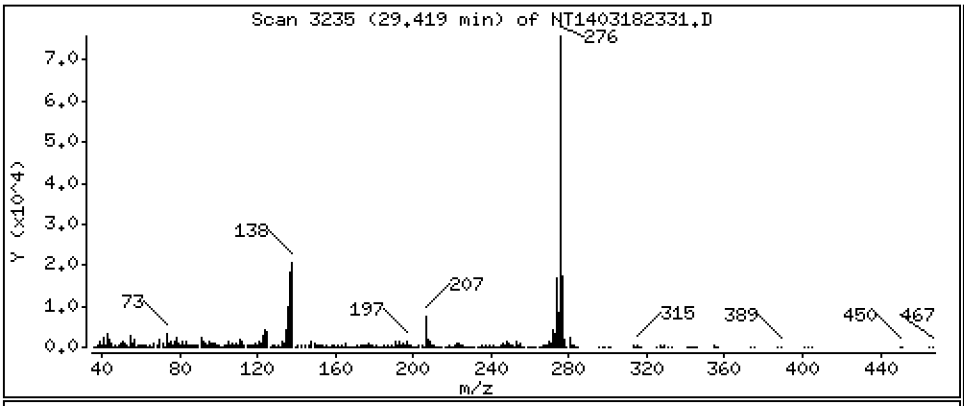
Client ID: Instrument: nt14.i

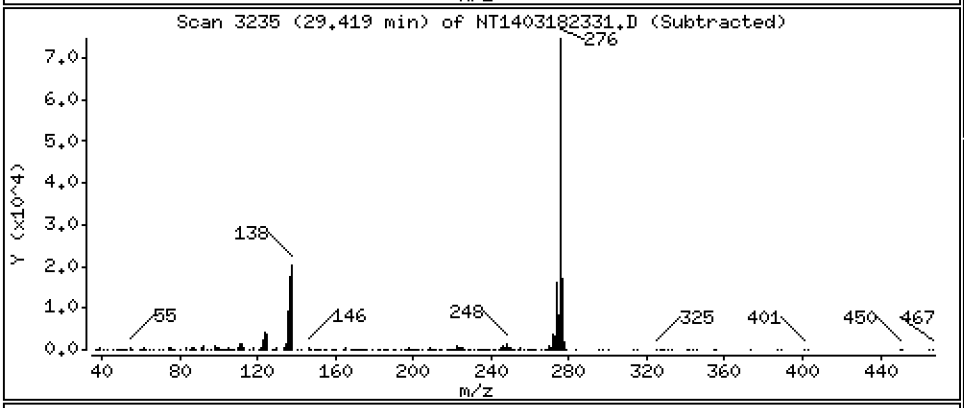
Sample Info: SLC0355-CCV1

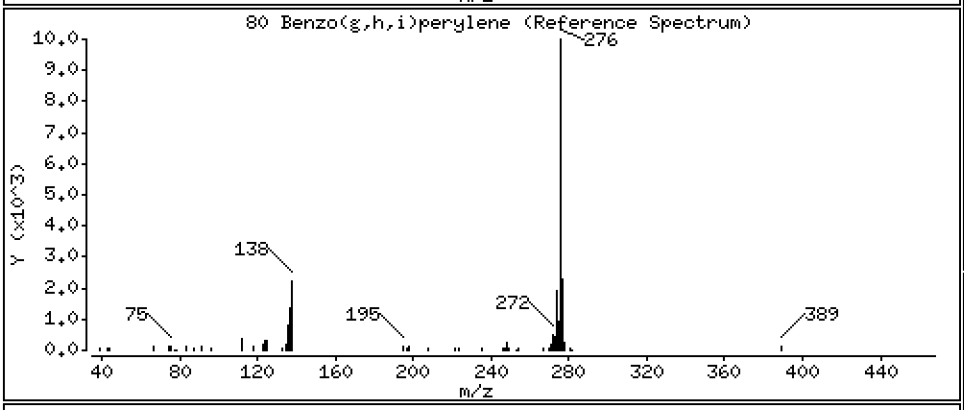
Operator: JGR

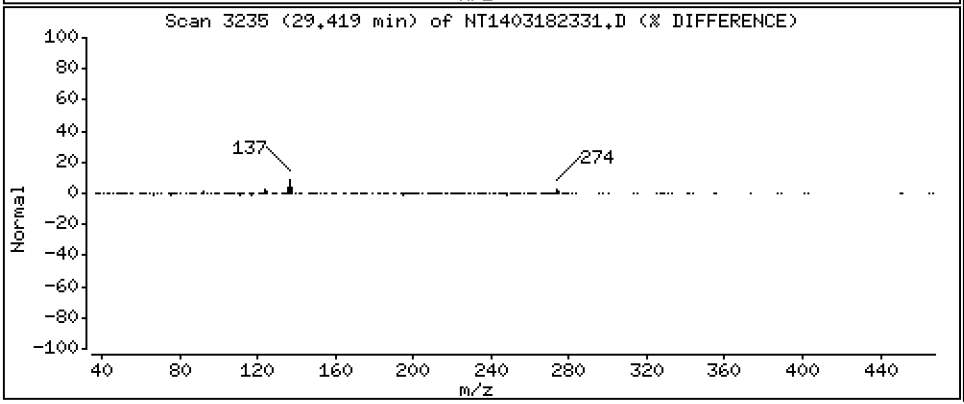
Column phase: ZB-5msi Column diameter: 0.25

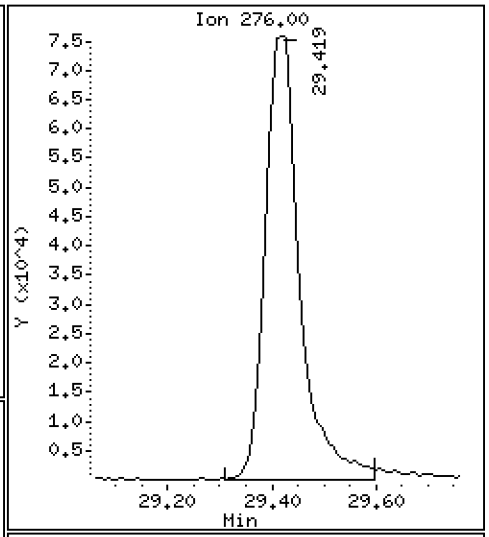
80 Benzo(g,h,i)perylene Concentration: 2.928 ug/mL

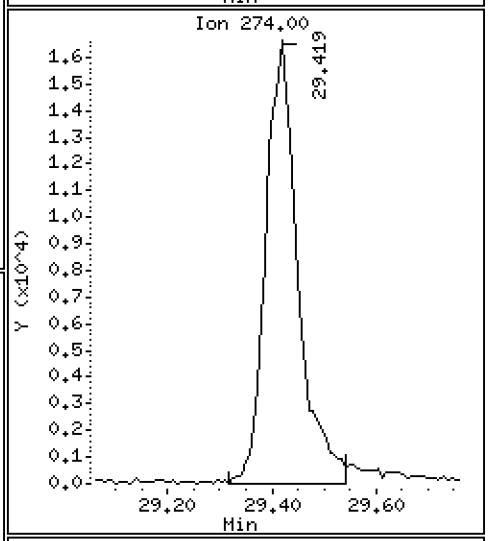


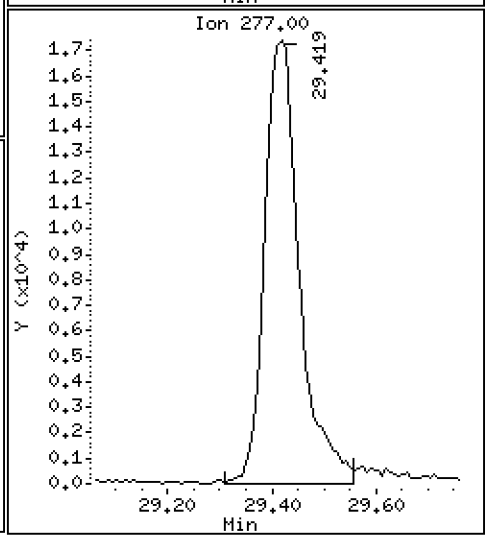












Date : 19-MAR-2023 11:04

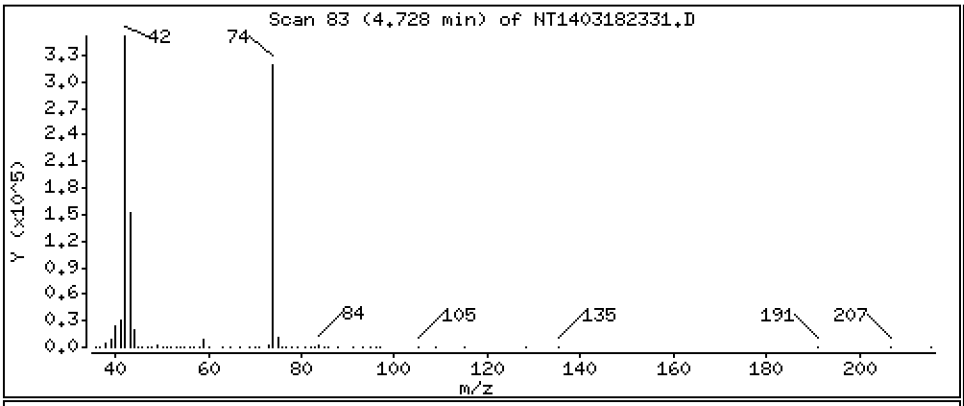
Client ID: Instrument: nt14.i

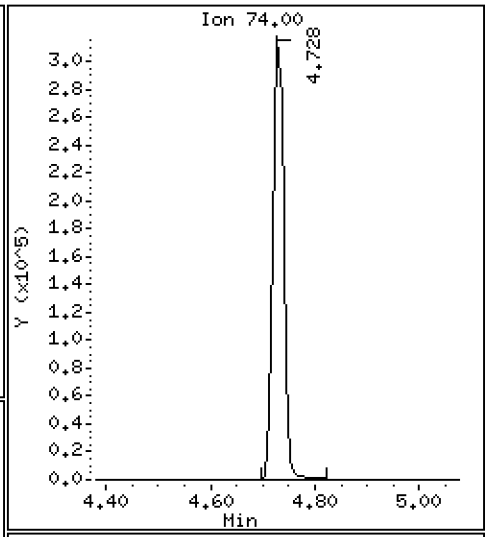
Sample Info: SLC0355-CCV1

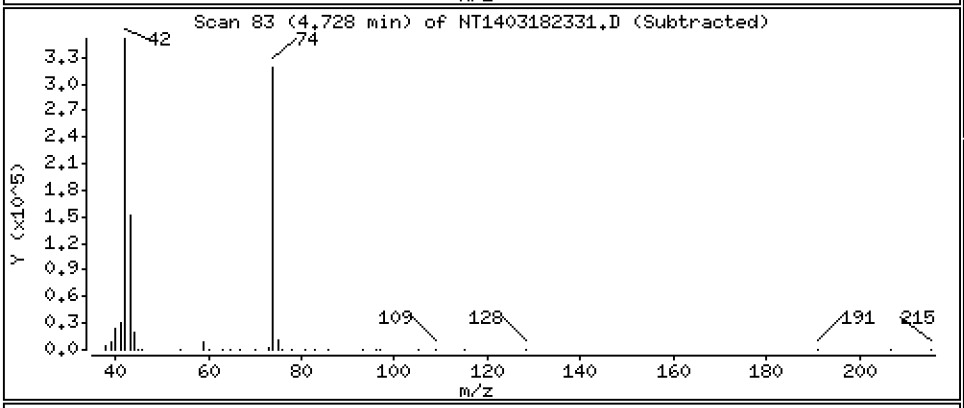
Operator: JGR

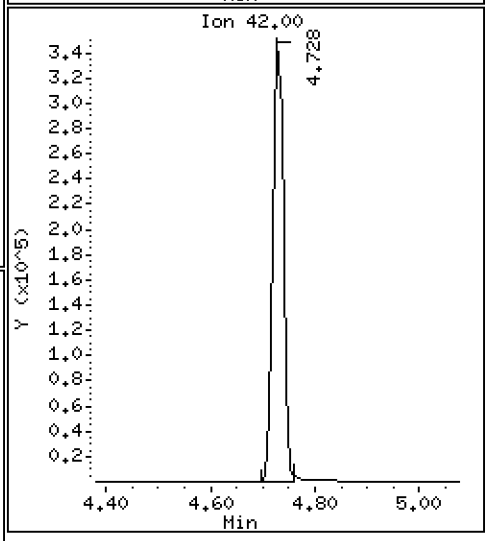
Column phase: ZB-5msi Column diameter: 0.25

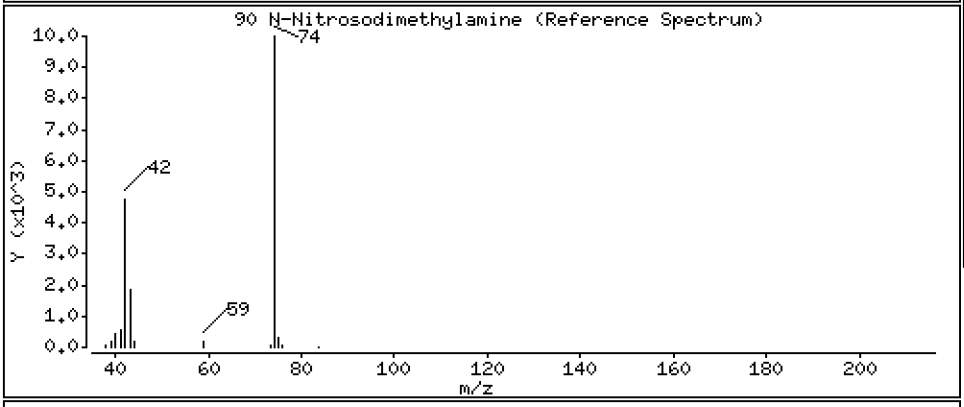
90 N-Nitrosodimethylamine Concentration: 8.241 ug/mL

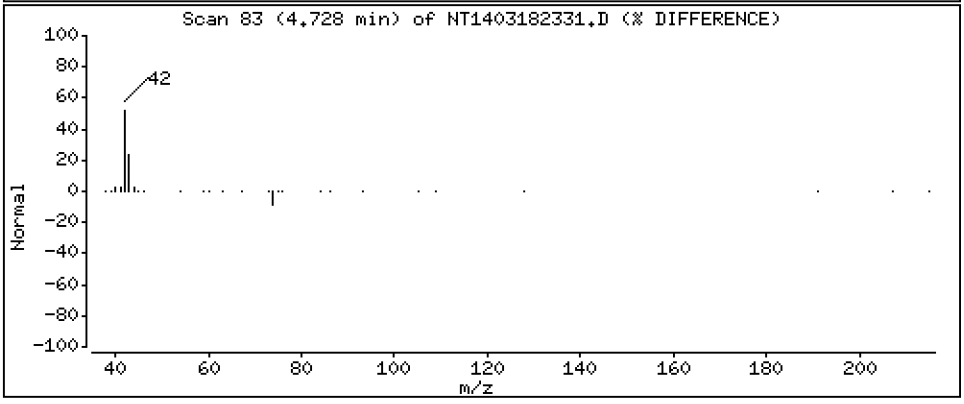












Data File: \\target\share\chem3\nt14.i\20230318.b\NT1403182331.D

Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

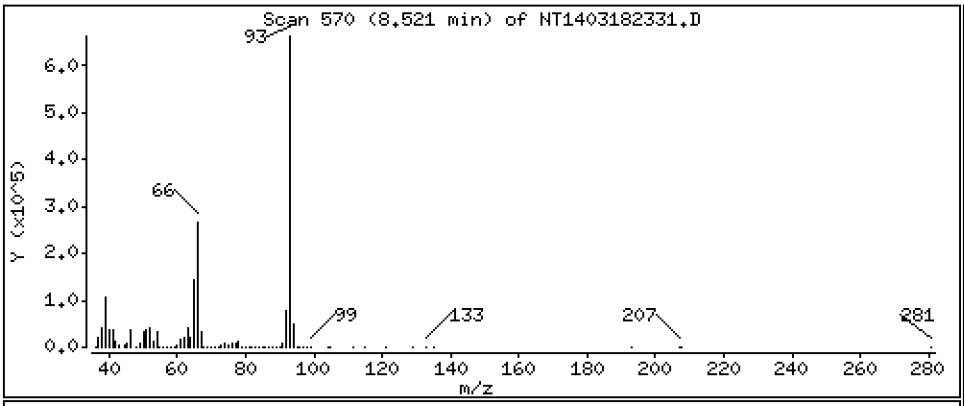
Operator: JGR

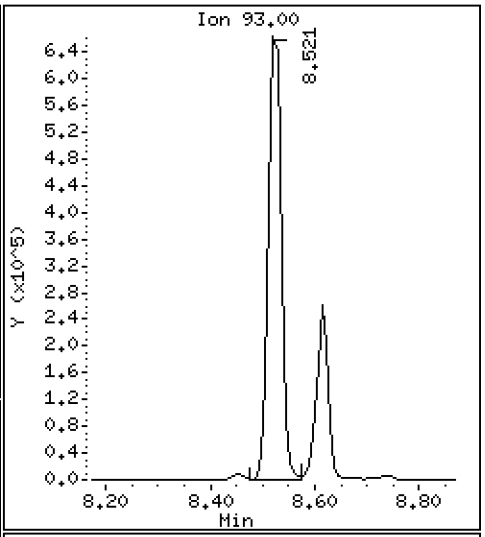
Column phase: ZB-5msi

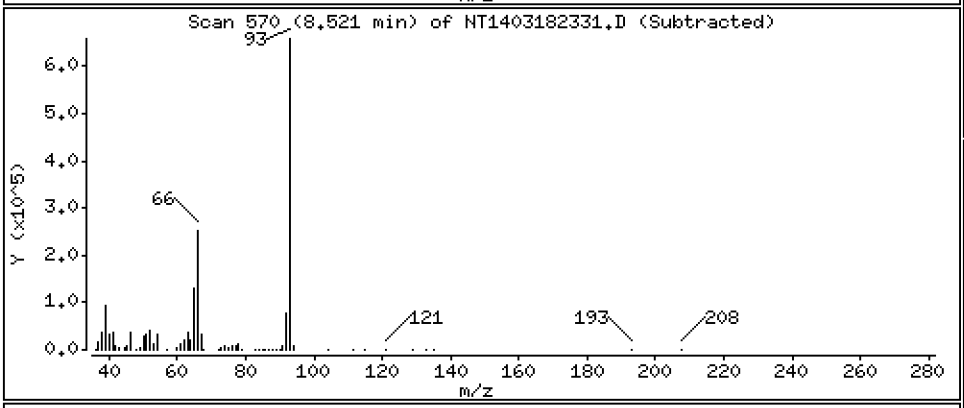
Column diameter: 0.25

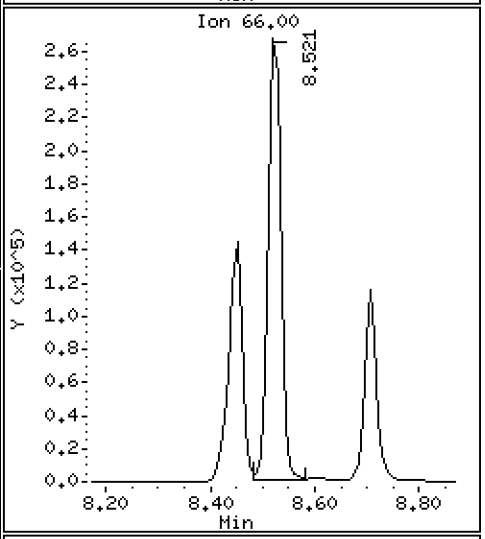
91 Aniline

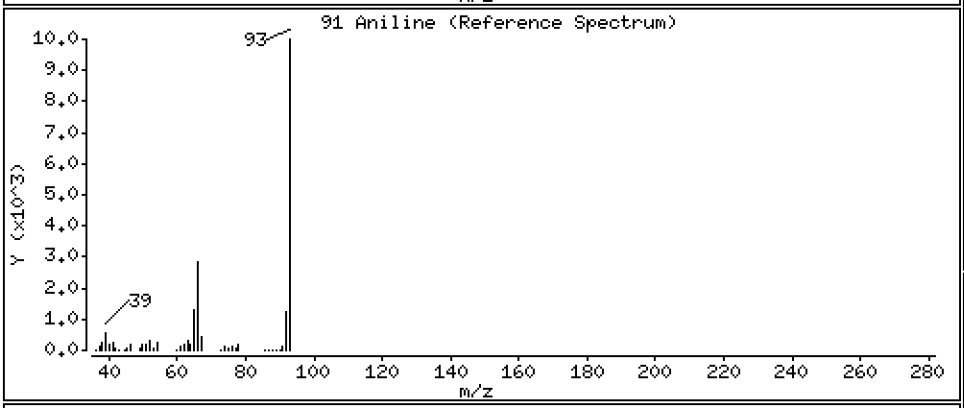
Concentration: 9.517 ug/mL

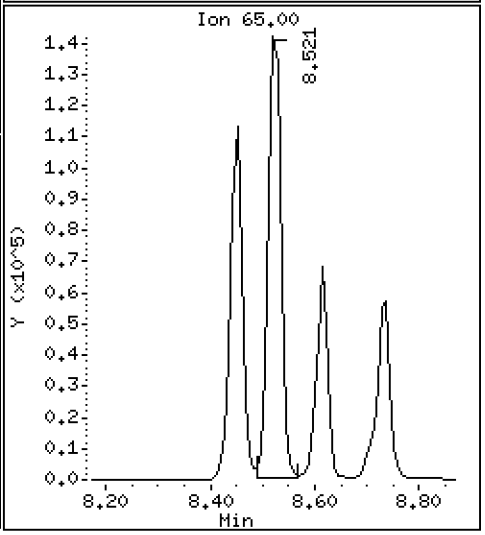


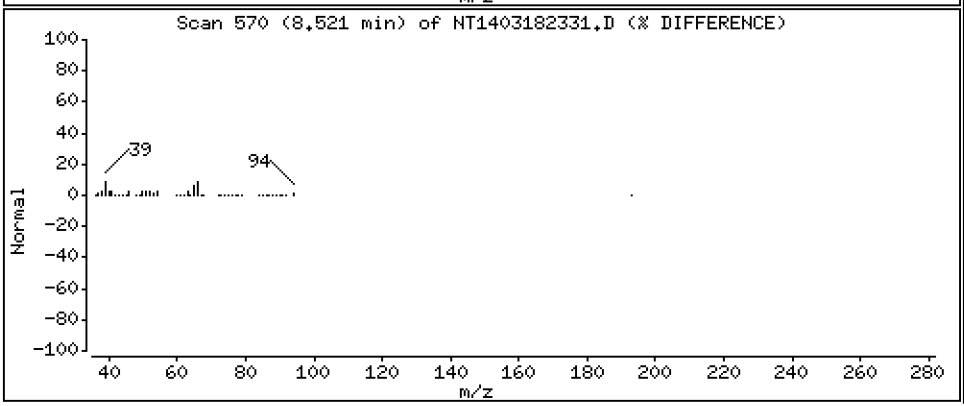












Data File: \\target\share\chem3\nt14.i\20230318.b\NT1403182331.D

Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

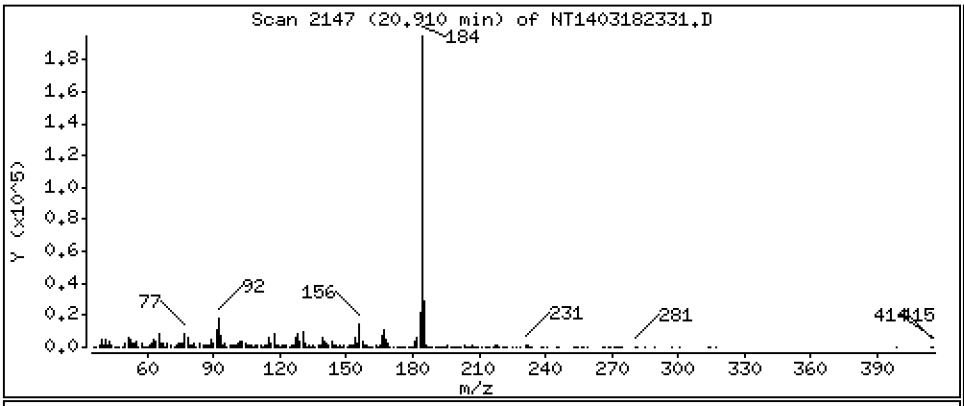
Operator: JGR

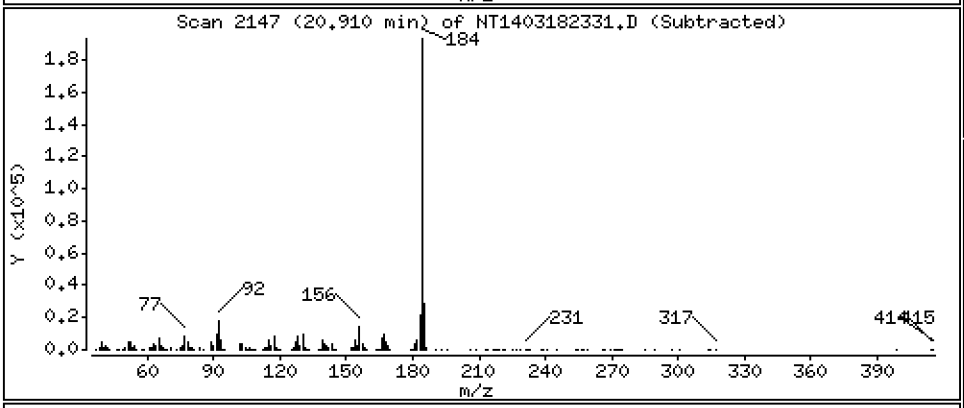
Column phase: ZB-5msi

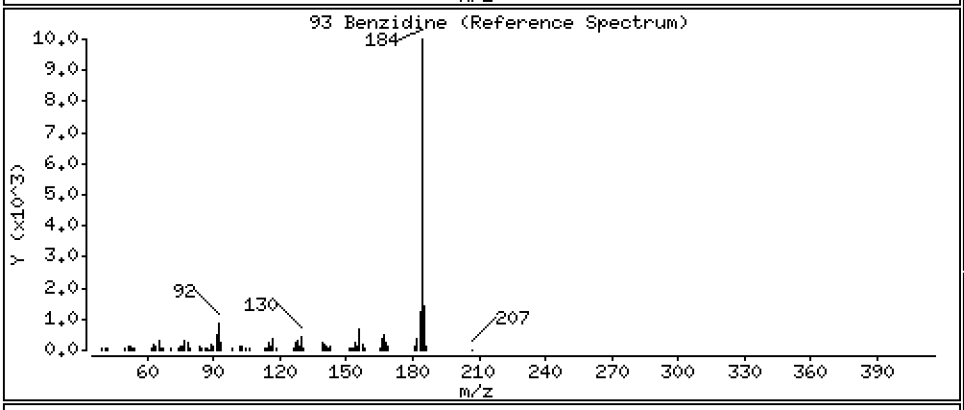
Column diameter: 0.25

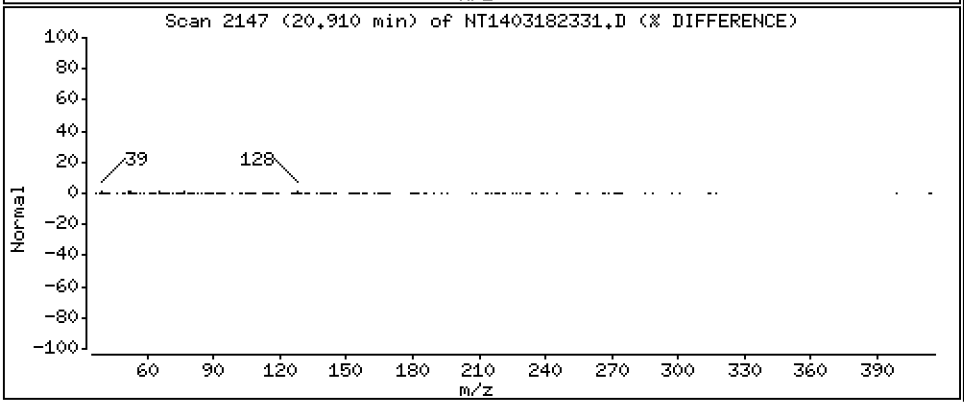
93 Benzidine

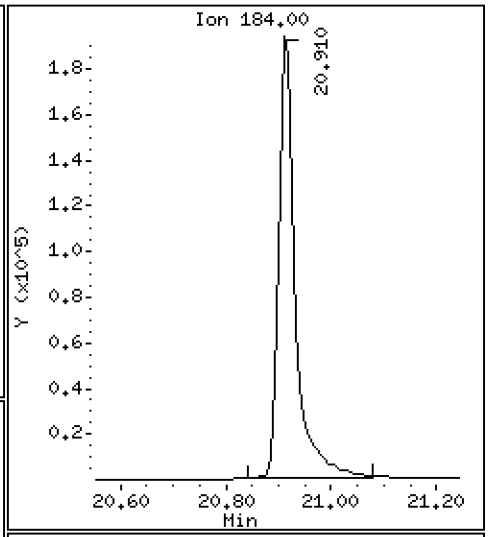
Concentration: 6.108 ug/mL

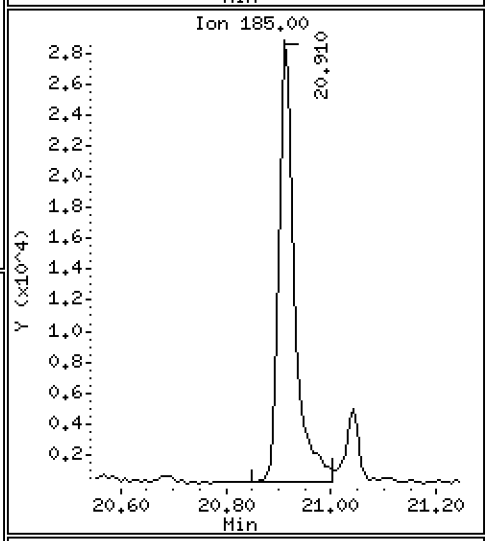


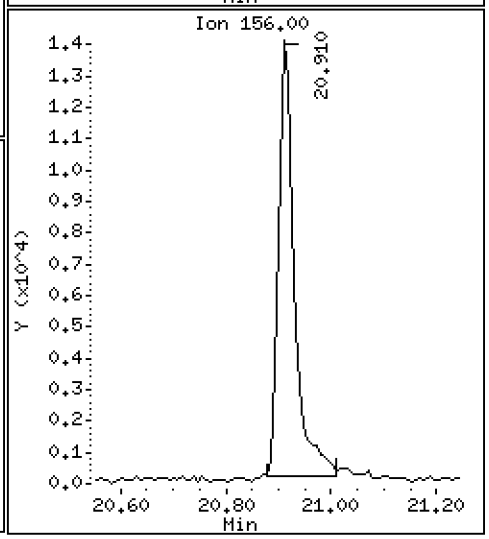












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Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

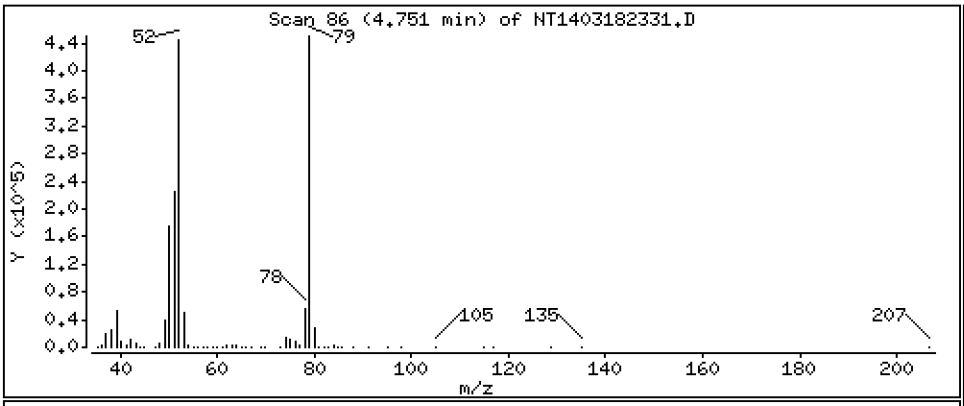
Operator: JGR

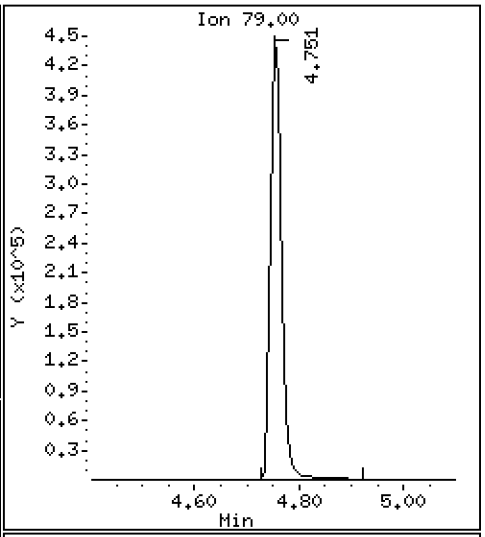
Column phase: ZB-5msi

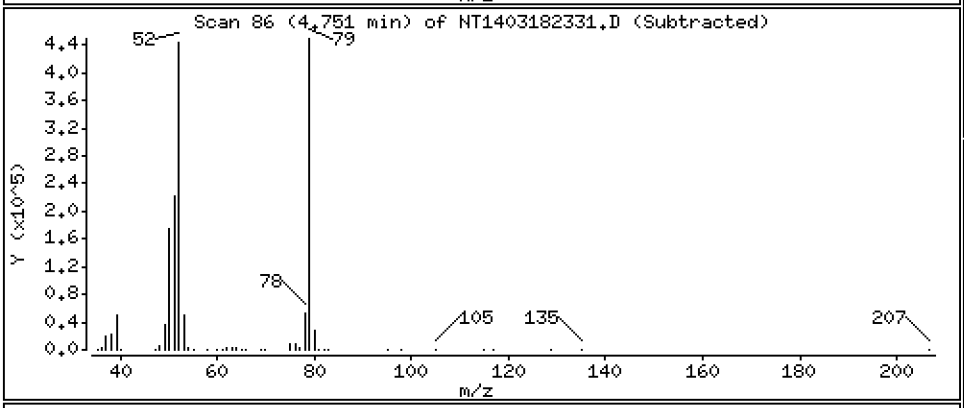
Column diameter: 0.25

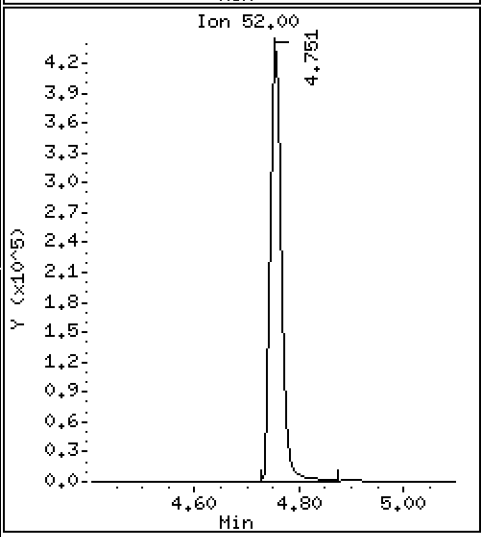
103 Pyridine

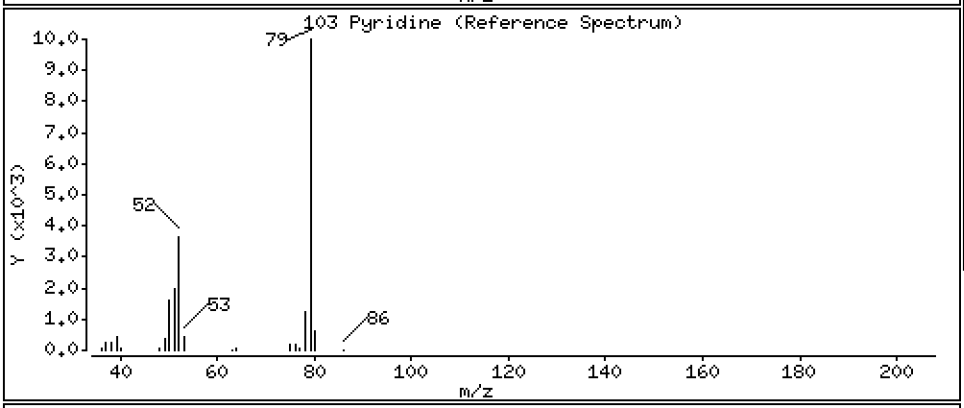
Concentration: 3.935 ug/mL

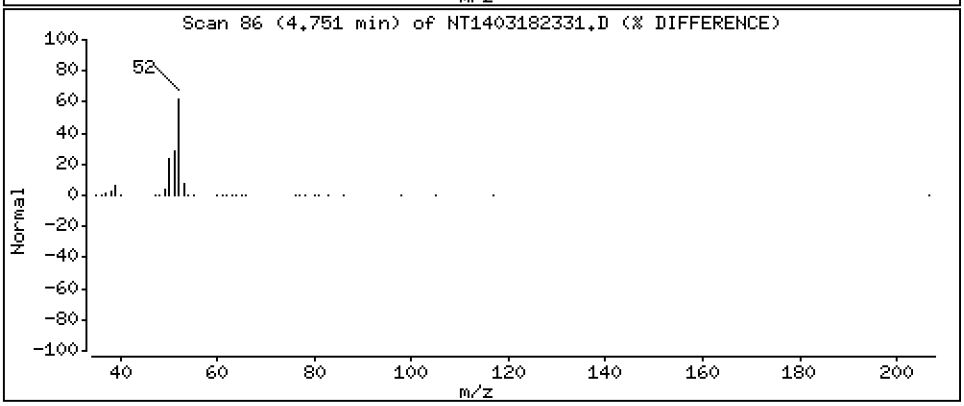












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Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

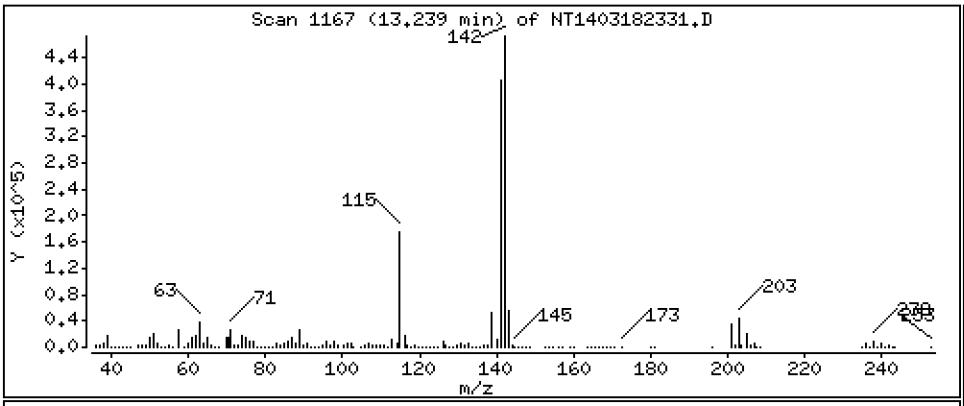
Operator: JGR

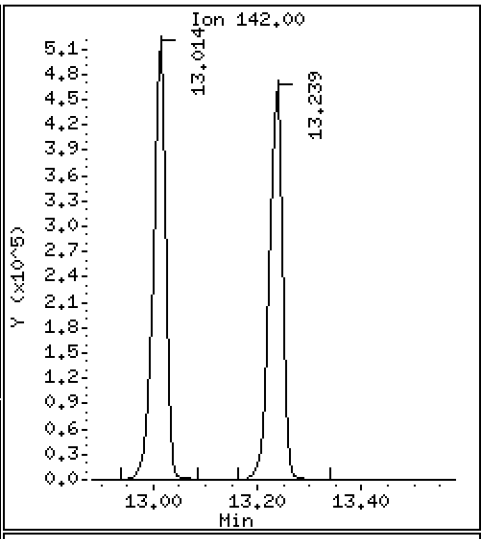
Column phase: ZB-5msi

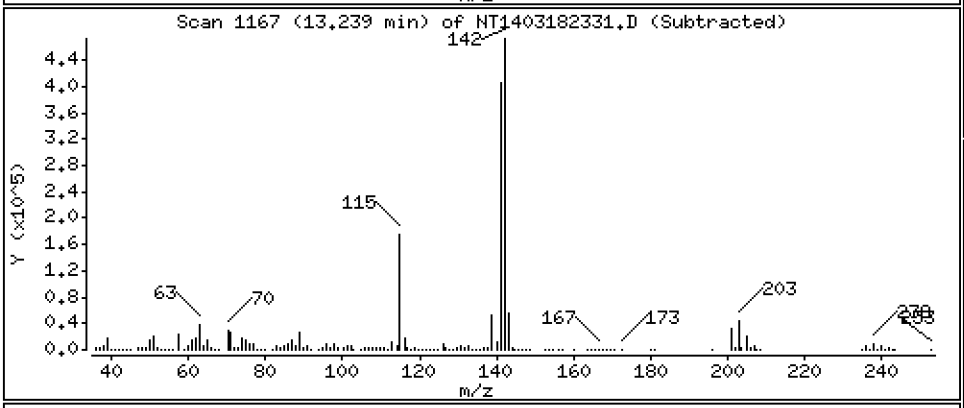
Column diameter: 0.25

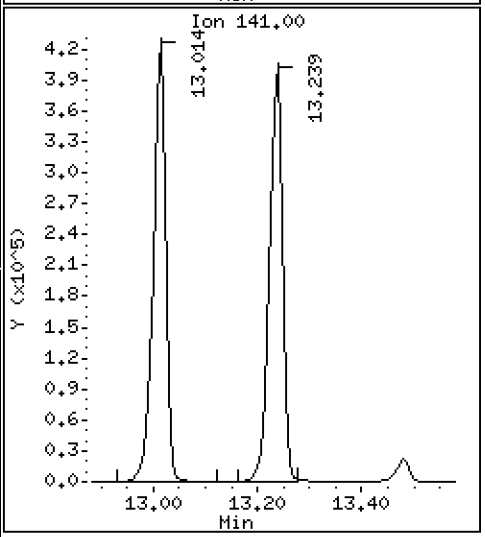
105 1-methylnaphthalene

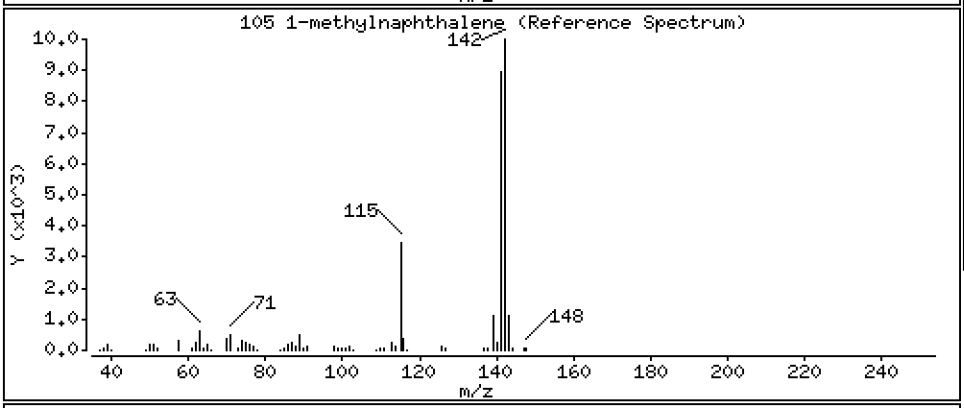
Concentration: 4.965 ug/mL

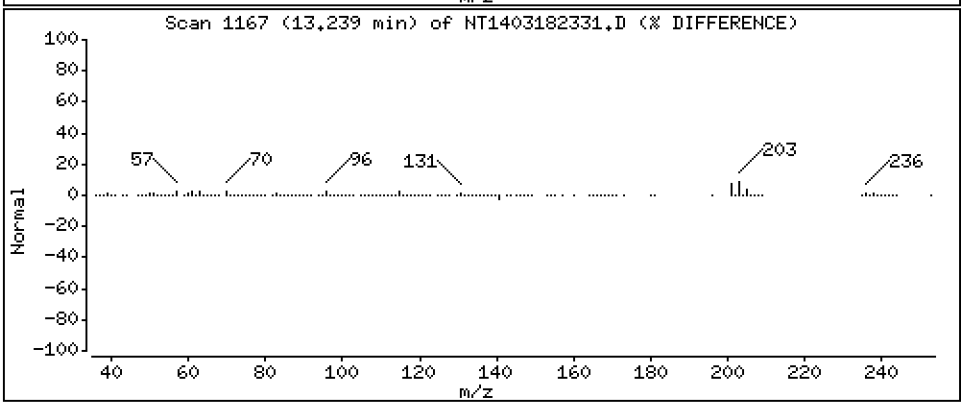












Data File: \\target\share\chem3\nt14.i\20230318.b\NT1403182331.D

Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

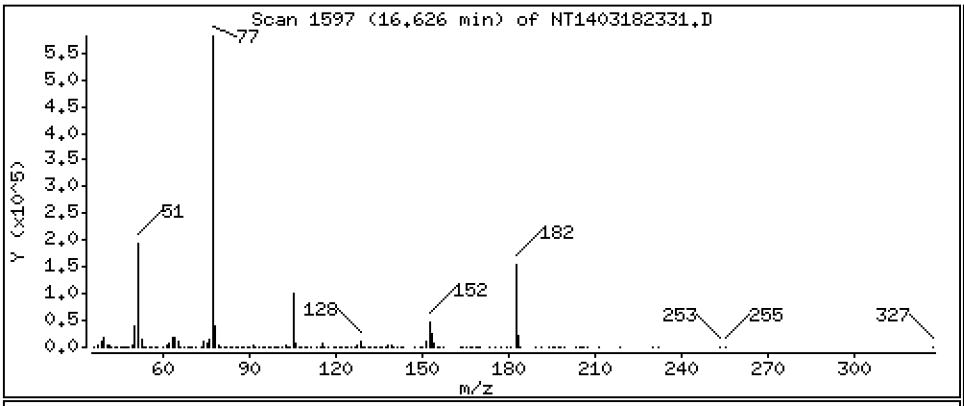
Operator: JGR

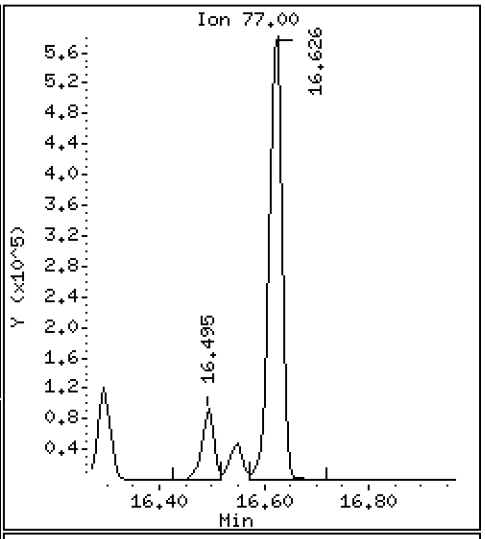
Column phase: ZB-5msi

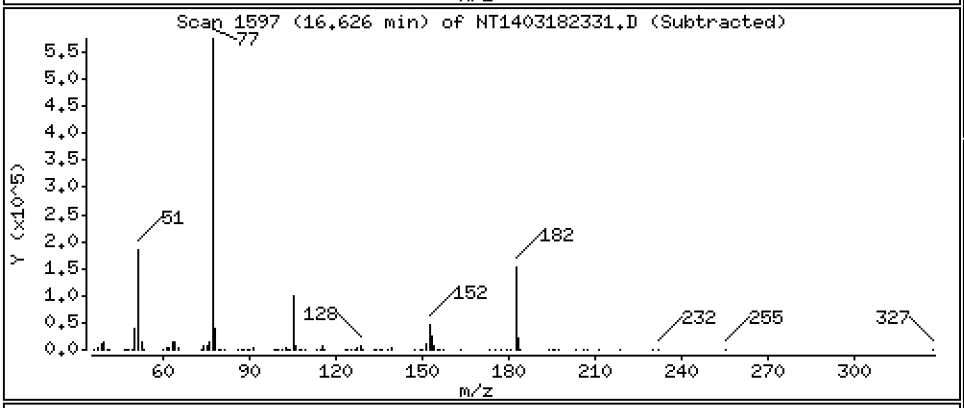
Column diameter: 0.25

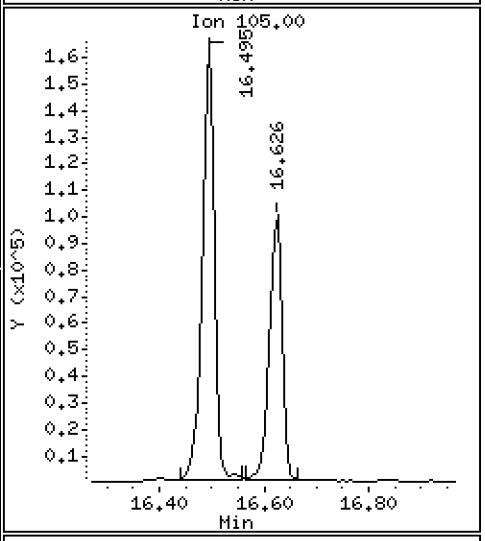
111 Azobenzene (1,2-DP-Hydrazine)

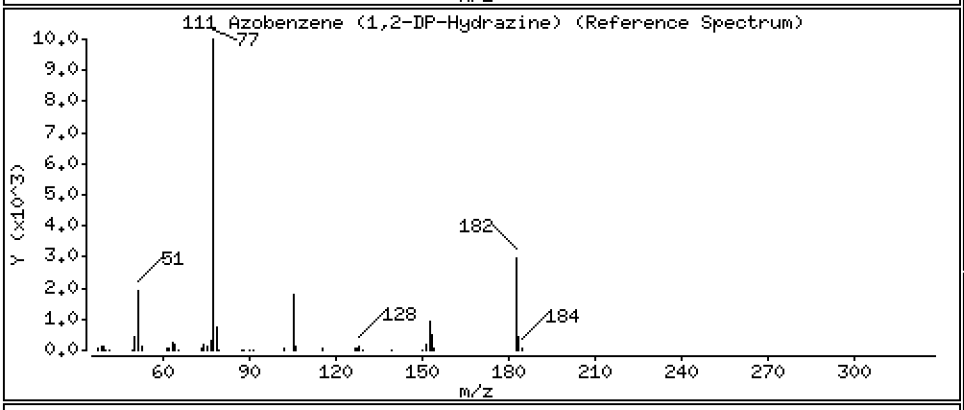
Concentration: 4.700 ug/mL

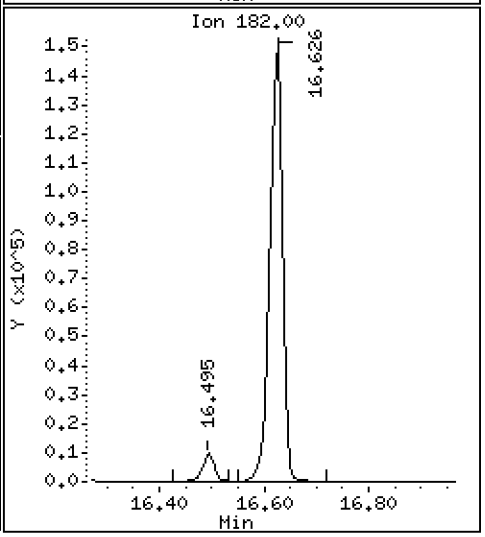


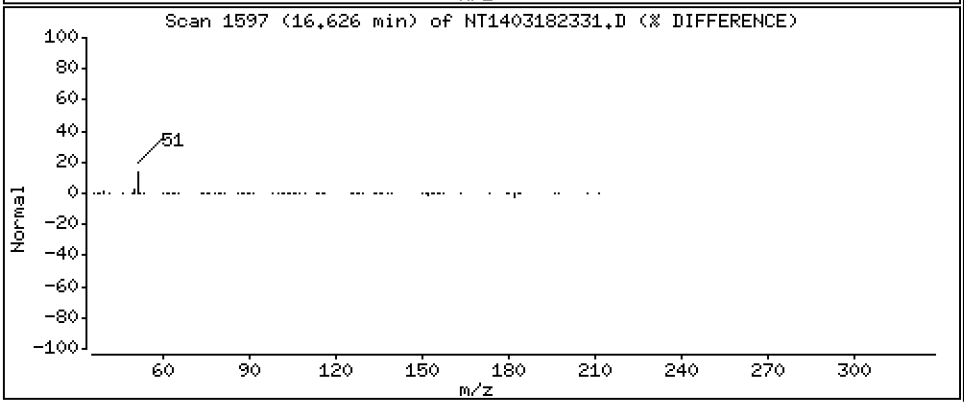












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Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

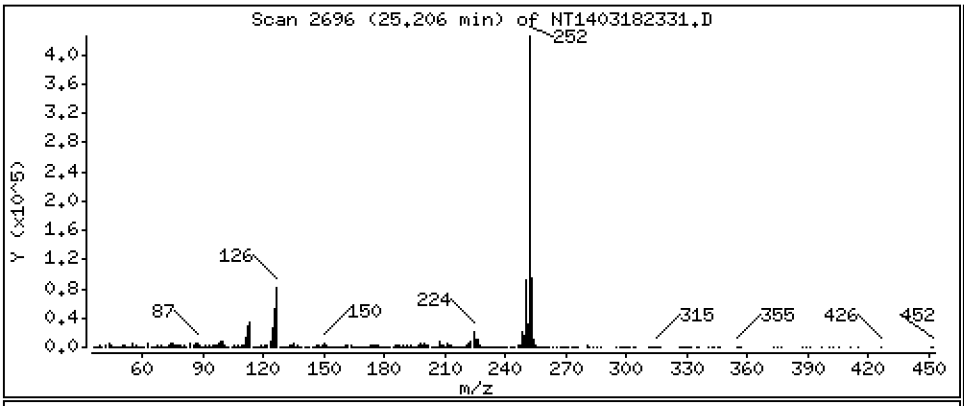
Operator: JGR

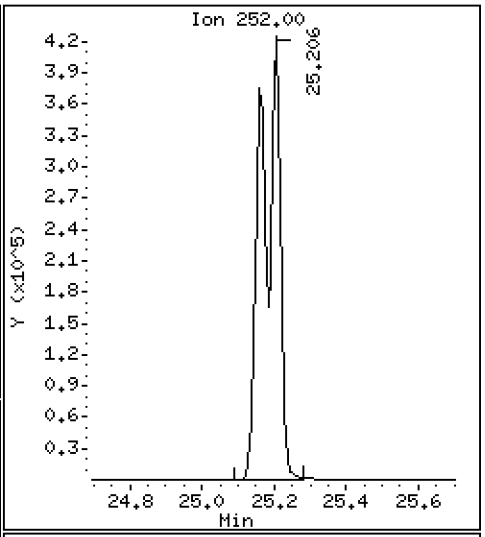
Column phase: ZB-5msi

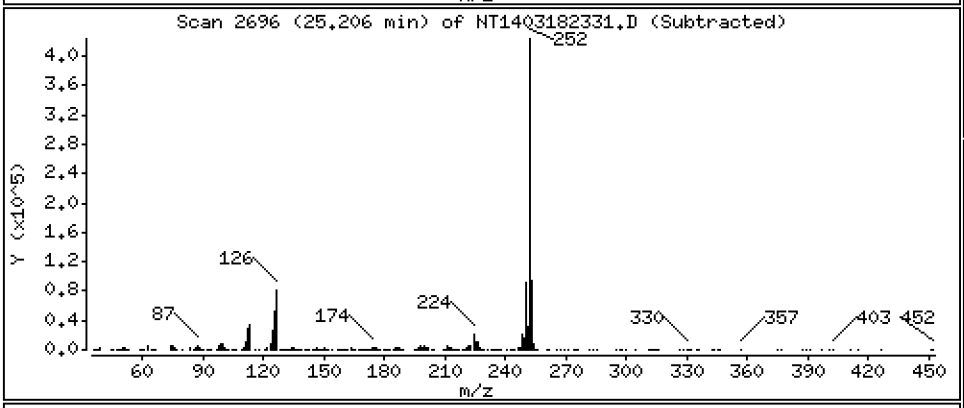
Column diameter: 0.25

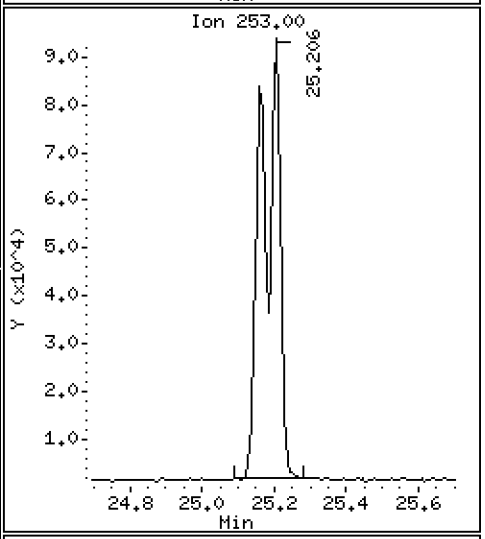
187 Total Benzofluoranthenes

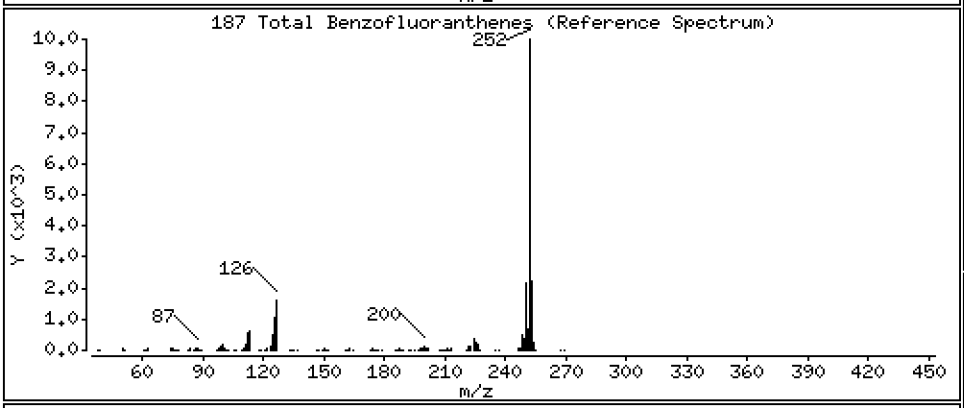
Concentration: 10.06 ug/mL

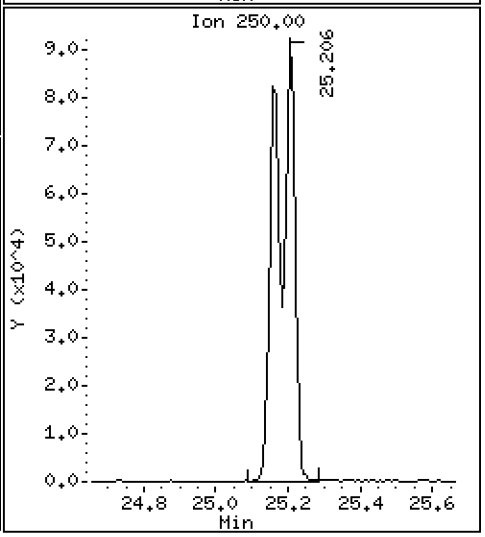


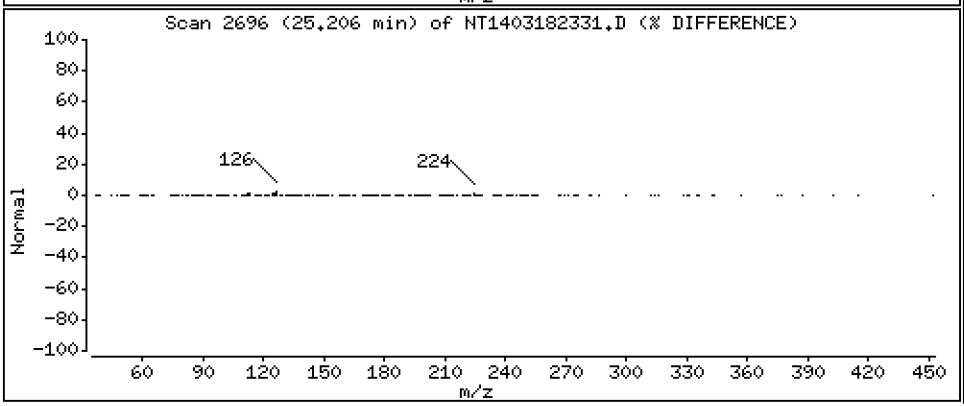












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Date : 19-MAR-2023 11:04

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-CCV1

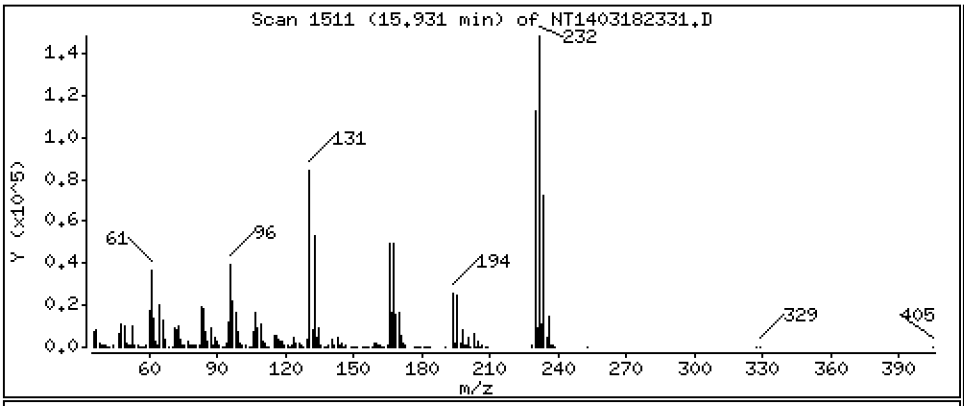
Operator: JGR

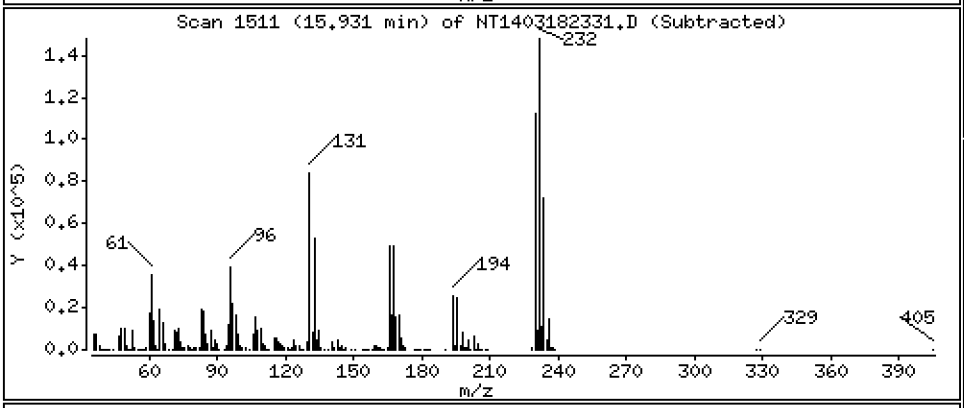
Column phase: ZB-5msi

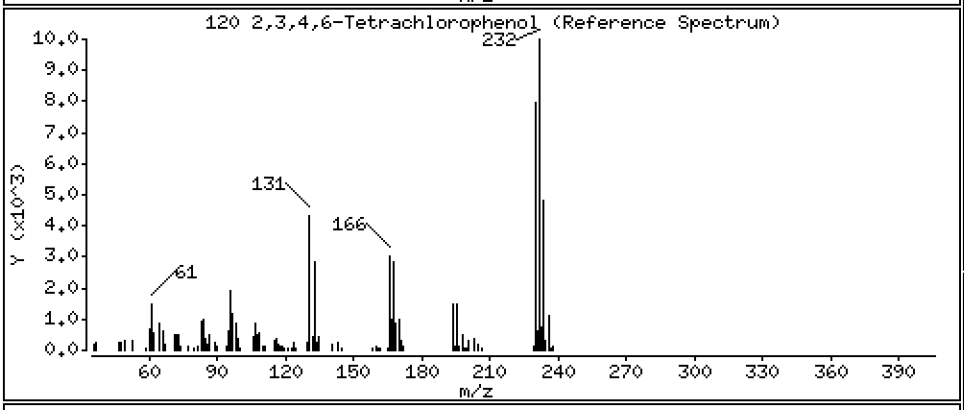
Column diameter: 0.25

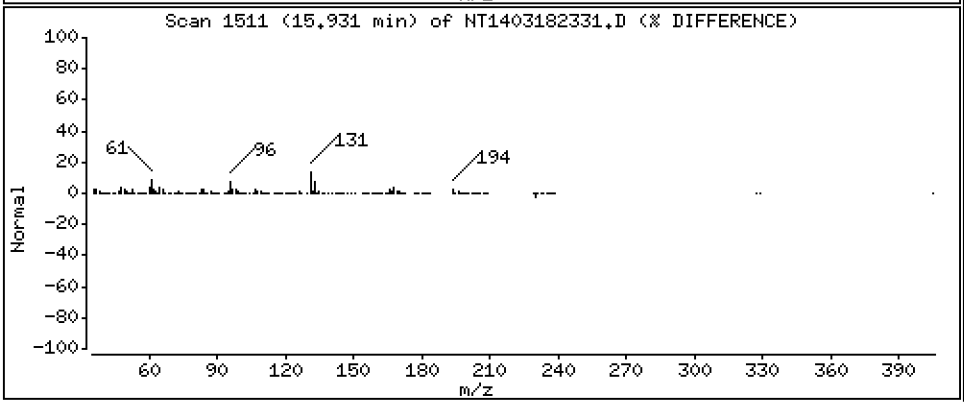
120 2,3,4,6-Tetrachlorophenol

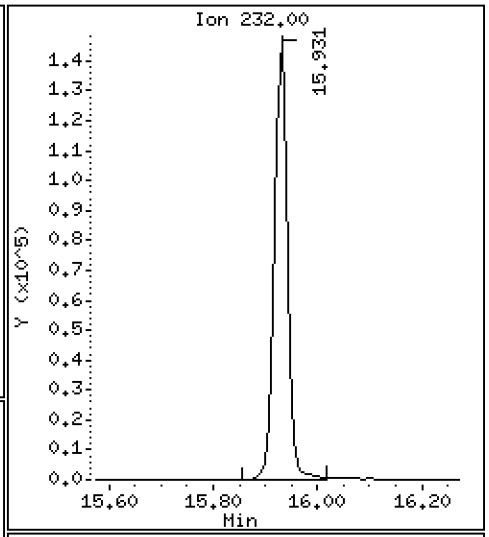
Concentration: 4.658 ug/mL

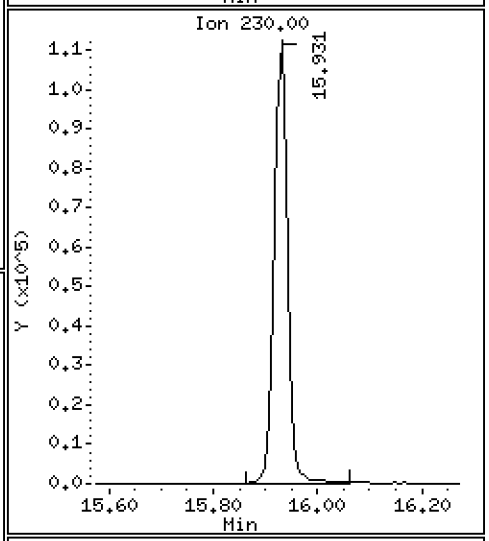


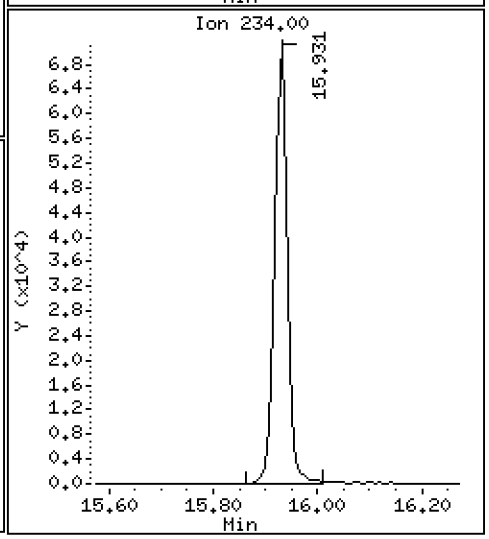












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230318.b\NT1403182331.D
Lab Smp Id: SLC0355-CCV1
Inj Date : 19-MAR-2023 11:04 MS Autotune Date: 11-MAR-2023 16:01
Operator : JGR Inst ID: nt14.i
Smp Info : SLC0355-CCV1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230318.b\ABN.m
Meth Date : 23-Mar-2023 08:01 van Quant Type: ISTD
Cal Date : 15-MAR-2023 15:50 Cal File: NT1403152308.D
Als bottle: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)	
$	1 2-Fluorophenol	112	6.844	6.837	(1.000)	573379	7.03389	7.034	
$	2 Phenol-d5	99	8.428	8.420	(1.000)	769227	7.16744	7.167	
	3 Phenol	94	8.451	8.444	(1.000)	530821	4.65395	4.654	
$	5 2-Chlorophenol-d4	132	8.706	8.698	(1.000)	634155	7.49499	7.495	
	4 Bis(2-Chloroethyl)ether	93	8.613	8.613	(1.000)	386692	4.70817	4.708	
	6 2-Chlorophenol	128	8.737	8.729	(1.000)	439561	4.89640	4.896	
	7 1,3-Dichlorobenzene	146	9.008	9.000	(1.000)	445072	4.89766	4.898	
*	8 1,4-Dichlorobenzene-d4	152	9.070	9.062	(1.000)	239978	4.00000	(M)	
	9 1,4-Dichlorobenzene	146	9.101	9.093	(1.000)	430157	4.91458	4.915	
$	10 1,2-Dichlorobenzene-d4	152	9.435	9.427	(1.000)	282196	4.99227	4.992	
	12 1,2-Dichlorobenzene	146	9.458	9.450	(1.000)	426709	4.93225	4.932	
	11 Benzyl alcohol	108	9.341	9.342	(1.000)	251618	4.73866	4.739	
	14 2,2'-oxybis(1-Chloropropane)	121	9.644	9.637	(1.063)	125273	5.33571	5.336	(M)
	13 2-Methylphenol	108	9.567	9.559	(1.000)	394829	4.89620	4.896	
	17 Hexachloroethane	117	10.056	10.048	(1.000)	187207	5.00092	5.001	
	16 N-Nitroso-di-n-propylamine	70	9.908	9.901	(1.000)	307515	4.84357	4.844	
	15 4-Methylphenol	108	9.838	9.831	(1.000)	424848	4.44972	4.450	
$	18 Nitrobenzene-d5	82	10.172	10.164	(0.879)	495859	4.96516	4.965	
	19 Nitrobenzene	77	10.203	10.195	(0.882)	470588	4.84080	4.841	
	20 Isophorone	82	10.653	10.653	(0.921)	685034	5.16098	5.161	
	21 2-Nitrophenol	139	10.839	10.832	(0.937)	253280	4.53094	4.531	
	22 2,4-Dimethylphenol	107	10.894	10.886	(0.942)	748286	8.99960	9.000	
	23 Bis(2-Chloroethoxy)methane	93	11.087	11.080	(0.959)	418844	4.68715	4.687	
	24 Benzoic acid	105	11.126	11.118	(0.962)	1149481	17.0555	17.06	
	25 2,4-Dichlorophenol	162	11.297	11.289	(0.977)	709308	10.7269	10.73	
	26 1,2,4-Trichlorobenzene	180	11.482	11.475	(0.993)	367646	4.52275	4.523	
*	27 Naphthalene-d8	136	11.567	11.560	(1.000)	943704	4.00000		
	28 Naphthalene	128	11.614	11.606	(1.004)	1234701	4.89737	4.897	
	29 4-Chloroaniline	127	11.737	11.730	(1.015)	1089760	10.3253	10.33	
	30 Hexachlorobutadiene	225	11.977	11.969	(1.035)	188412	5.13363	5.134	
	31 4-Chloro-3-methylphenol	107	12.704	12.697	(1.098)	791723	9.90835	9.908	
	32 2-Methylnaphthalene	142	13.014	13.006	(1.125)	865520	4.92264	4.923	
	33 Hexachlorocyclopentadiene	237	13.478	13.478	(0.887)	222489	5.38731	5.387	

			QUANT SIG					CONCENTRATIONS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
	34	2,4,6-Trichlorophenol	196	13.633	13.633	(0.897)	505014	10.0195	10.02
	35	2,4,5-Trichlorophenol	196	13.710	13.703	(0.902)	540500	10.2909	10.29
$	36	2-Fluorobiphenyl	172	13.795	13.796	(0.908)	892915	4.96244	4.962
	37	2-Chloronaphthalene	162	14.012	14.004	(0.922)	759643	4.92570	4.926
	38	2-Nitroaniline	65	14.267	14.260	(0.939)	577996	9.70602	9.706
	39	Dimethylphthalate	163	14.701	14.693	(0.967)	818118	4.93791	4.938
	40	Acenaphthylene	152	14.887	14.879	(0.980)	1265287	4.88460	4.885
	41	2,6-Dinitrotoluene	165	14.840	14.833	(0.977)	392587	10.2573	10.26
*	42	Acenaphthene-d10	164	15.196	15.196	(1.000)	496853	4.00000	
	43	3-Nitroaniline	138	15.127	15.119	(0.995)	479907	9.08891	9.089
	44	Acenaphthene	153	15.266	15.258	(1.005)	731127	4.83427	4.834
	45	2,4-Dinitrophenol	184	15.335	15.335	(1.009)	446187	14.6857	14.69
	46	Dibenzofuran	168	15.590	15.591	(1.026)	1055348	4.88781	4.888
	47	4-Nitrophenol	109	15.451	15.444	(1.017)	234313	8.38370	8.384
	48	2,4-Dinitrotoluene	165	15.652	15.645	(1.030)	541136	9.97402	9.974
	50	Diethylphthalate	149	16.163	16.155	(1.064)	925464	5.40270	5.403
	49	Fluorene	166	16.309	16.302	(1.073)	970558	4.74212	4.742
	51	4-Chlorophenyl-phenylether	204	16.294	16.294	(1.072)	422800	4.81251	4.813
	52	4-Nitroaniline	138	16.402	16.394	(1.079)	406661	8.85494	8.855
	53	4,6-Dinitro-2-methylphenol	198	16.494	16.487	(0.904)	580615	19.7642	19.76
	54	N-Nitrosodiphenylamine	169	16.548	16.541	(0.907)	596988	5.31549	5.315
$	55	2,4,6-Tribromophenol	330	16.841	16.841	(1.108)	147845	7.56827	7.568
	56	4-Bromophenyl-phenylether	248	17.304	17.296	(0.948)	211818	5.59403	5.594
	57	Hexachlorobenzene	284	17.621	17.621	(0.966)	211831	5.30195	5.302
	58	Pentachlorophenol	266	17.977	17.969	(0.985)	239557	8.49906	8.499
*	59	Phenanthrene-d10	188	18.248	18.240	(1.000)	826898	4.00000	
	60	Phenanthrene	178	18.294	18.286	(1.003)	1126324	4.76740	4.767
	61	Anthracene	178	18.387	18.379	(1.008)	1135164	4.98718	4.987
	62	Carbazole	167	18.712	18.704	(1.025)	906385	4.47563	4.476
	63	Di-n-butylphthalate	149	19.509	19.501	(1.069)	1339723	5.21903	5.219
	64	Fluoranthene	202	20.677	20.677	(0.888)	1045751	5.98369	5.984
	65	Pyrene	202	21.103	21.103	(0.906)	1025661	5.72275	5.723
$	66	Terphenyl-d14	244	21.389	21.381	(0.918)	699422	5.76463	5.765
	67	Butylbenzylphthalate	149	22.310	22.303	(0.958)	503889	6.41725	6.417
	68	Benzo(a)anthracene	228	23.270	23.263	(0.999)	785076	4.95656	4.957
*	69	Chrysene-d12	240	23.294	23.294	(1.000)	429570	4.00000	
	70	3,3'-Dichlorobenzidine	252	23.224	23.216	(0.997)	713079	14.9856	14.99
	71	Chrysene	228	23.340	23.340	(1.002)	737367	5.14380	5.144
	72	bis(2-Ethylhexyl)phthalate	149	23.332	23.325	(0.960)	660391	5.48980	5.490
*	134	Di-n-octylphthalate-d4	153	24.316	24.316	(1.000)	913803	4.00000	
	73	Di-n-octylphthalate	149	24.331	24.323	(1.001)	1124492	4.78691	4.787
	74	Benzo(b)fluoranthene	252	25.159	25.160	(0.970)	748575	4.81314	4.813
	75	Benzo(k)fluoranthene	252	25.206	25.198	(0.972)	812246	5.26838	5.268
	76	Benzo(a)pyrene	252	25.825	25.818	(0.996)	680501	5.11668	5.117
*	77	Perylene-d12	264	25.934	25.934	(1.000)	440126	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	28.626	28.611	(1.104)	520664	3.59689	3.597
	79	Dibenzo(a,h)anthracene	278	28.634	28.626	(1.104)	471792	3.86726	3.867
	80	Benzo(g,h,i)perylene	276	29.418	29.411	(1.134)	349341	2.92833	2.928
	90	N-Nitrosodimethylamine	74	4.728	4.728	(1.000)	425452	8.24064	8.241
	91	Aniline	93	8.521	8.521	(1.000)	1091750	9.51679	9.517
	93	Benzidine	184	20.909	20.902	(0.898)	429599	6.10826	6.108
	103	Pyridine	79	4.751	4.751	(1.000)	629154	3.93508	3.935
	105	1-methylnaphthalene	142	13.238	13.231	(1.144)	790880	4.96485	4.965
	111	Azobenzene (1,2-DP-Hydrazine)	77	16.625	16.618	(1.094)	961418	4.70013	4.700

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.206	25.198	(0.972)	1484265	10.0645	10.06
120 2,3,4,6-Tetrachlorophenol	232	15.931	15.923	(1.048)	240956	4.65809	4.658

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1403182331.D
Lab Smp Id: SLC0355-CCV1
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt14.i\20230318.b\ABN.m
Misc Info:

Calibration Date: 19-MAR-2023
Calibration Time: 03:16
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	237594	118797	475188	239978	1.00
27 Naphthalene-d8	944151	472076	1888302	943704	-0.05
42 Acenaphthene-d10	498100	249050	996200	496853	-0.25
59 Phenanthrene-d10	845417	422709	1690834	826898	-2.19
69 Chrysene-d12	410836	205418	821672	429570	4.56
134 Di-n-octylphthala	914780	457390	1829560	913803	-0.11
77 Perylene-d12	441517	220759	883034	440126	-0.32

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.06	8.56	9.56	9.07	0.08
27 Naphthalene-d8	11.56	11.06	12.06	11.57	0.07
42 Acenaphthene-d10	15.20	14.70	15.70	15.20	-0.00
59 Phenanthrene-d10	18.24	17.74	18.74	18.25	0.04
69 Chrysene-d12	23.29	22.79	23.79	23.29	-0.00
134 Di-n-octylphthala	24.32	23.82	24.82	24.32	-0.00
77 Perylene-d12	25.93	25.43	26.43	25.93	-0.00

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

REVIEW SUMMARY FOR FILE - NT1403182331.D

Lab ID: SLC0355-CCV1
nt14.i, ABN.m, 19-MAR-2023 11:04

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

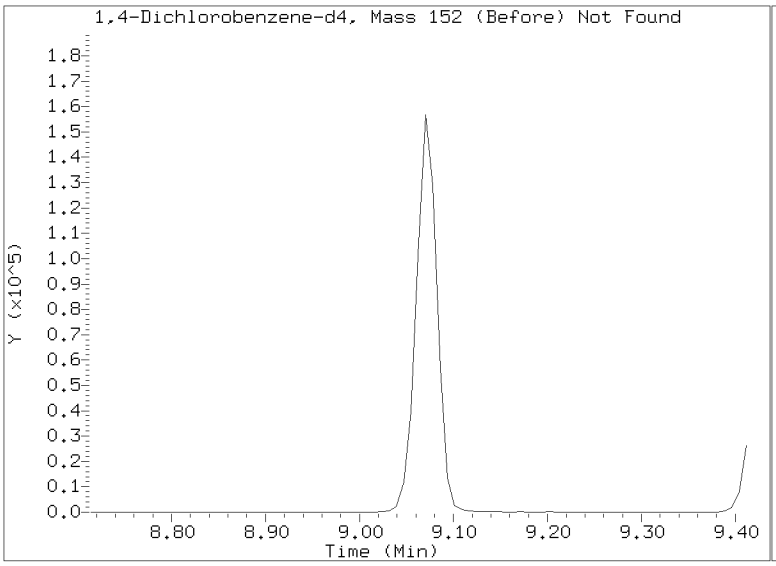
RRT check based on Ccal File: NT1403182318.D

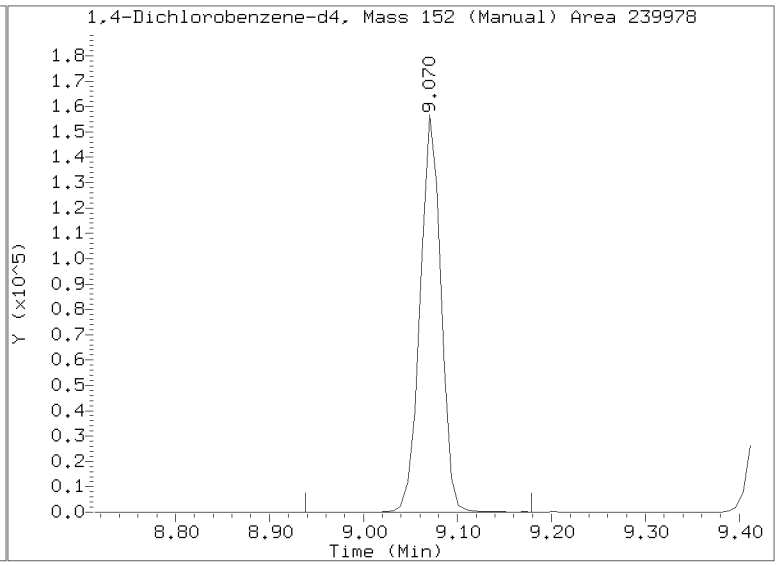
On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

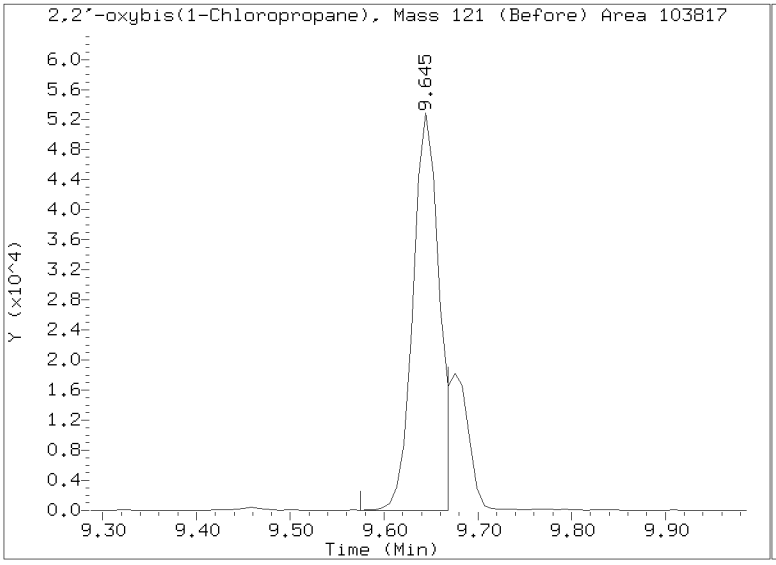
* Only compounds listed in the work order have been verified by the analyst *

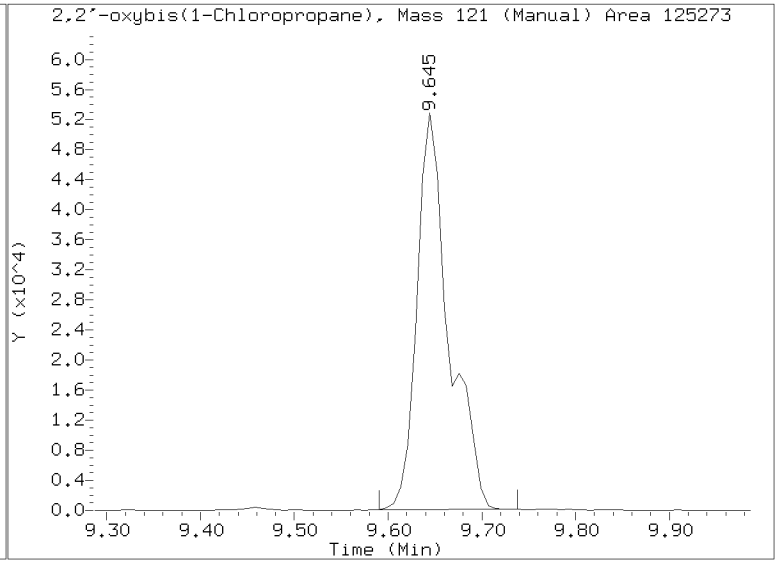
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230318.b/NT1403182331.D
Injection Date: 19-MAR-2023 11:04
Lab ID:SLC0355-CCV1 Client ID:
Report Date: 03/23/2023 08:03









Analytical Resources, LLC
Analytical Chemists and Consultants

LOW-CONCENTRATION CONTINUING CALIBRATION CHECK

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT14	Calibration:	GC00048
Lab File ID:	NT1403182320.D	Calibration Date:	03/15/2023
Sequence:	SLC0355	Injection Date:	03/19/23
Lab Sample ID:	SLC0355-LCV2	Injection Time:	04:28
Sequence Name:	ABN 0.2		

		CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Phenol	A	0.20000	0.2	1.9011440	1.6346640		-14.0	+/-50
4-Methylphenol	A	0.20000	0.1	1.5914380	1.1906820		-25.2	+/-50
Naphthalene	A	0.20000	0.2	1.0686200	1.1410650		6.8	+/-50
2-Methylnaphthalene	A	0.20000	0.2	0.7452524	0.7485335		0.4	+/-50
Acenaphthylene	A	0.20000	0.2	2.0854140	2.1513560		3.2	+/-50
Dimethylphthalate	A	0.20000	0.2	1.3338450	1.3865300		4.0	+/-50
Acenaphthene	A	0.20000	0.2	1.2175690	1.2357740		1.5	+/-50
Dibenzofuran	A	0.20000	0.2	1.7382550	1.7731100		2.0	+/-50
Fluorene	A	0.20000	0.2	1.6477120	1.6727700		1.5	+/-50
Phenanthrene	A	0.20000	0.2	1.1428510	1.1373620		-0.5	+/-50
Anthracene	A	0.20000	0.2	1.1010610	1.0311580		-6.4	+/-50
Fluoranthene	A	0.20000	0.2	1.6273660	2.0011510		23.0	+/-50
Pyrene	A	0.20000	0.2	1.6688810	2.0115850		20.5	+/-50
Butylbenzylphthalate	A	0.20000	0.3	0.7311588	0.9601461		31.3	+/-50
Benzo(a)anthracene	A	0.20000	0.2	1.4748830	1.5875010		7.6	+/-50
Chrysene	A	0.20000	0.2	1.3348290	1.3818910		3.5	+/-50
bis(2-Ethylhexyl)phthalate	A	0.20000	0.2	0.5265649	0.6014775		14.2	+/-50
Benzofluoranthenes, Total	A	0.40000	0.4	1.3424190	1.2899610		-3.8	+/-50
Benzo(a)pyrene	A	0.20000	0.2	1.2087150	1.2001850		-0.7	+/-50
Indeno(1,2,3-cd)pyrene	A	0.20000	0.2	1.3155660	1.1669810		-11.3	+/-50
Dibenzo(a,h)anthracene	A	0.20000	0.2	1.1087420	1.0666840		-3.8	+/-50
Benzo(g,h,i)perylene	A	0.20000	0.2	1.0842080	0.8480381		-21.8	+/-50
2-Fluorophenol	A	0.30000	0.276	1.3587350	1.2506810		-8.0	+/-50
Phenol-d5	A	0.30000	0.264	1.7888720	1.5714960		-12.2	+/-50
2-Chlorophenol-d4	A	0.30000	0.279	1.4103050	1.3126960		-6.9	+/-50
1,2-Dichlorobenzene-d4	A	0.20000	0.210	0.9421955	0.9896292		5.0	+/-50
Nitrobenzene-d5	A	0.20000	0.200	0.4233007	0.4225032		-0.2	+/-50
2-Fluorobiphenyl	A	0.20000	0.212	1.4485960	1.5371220		6.1	+/-50
2,4,6-Tribromophenol	A	0.30000	0.238	0.1518639	0.1248638		-20.6	+/-50
p-Terphenyl-d14	A	0.20000	0.247	1.1297810	1.3970010		23.7	+/-50

* Values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20230318.b\NT1403182320.D

Page 1

Date : 19-MAR-2023 04:28

Client ID:

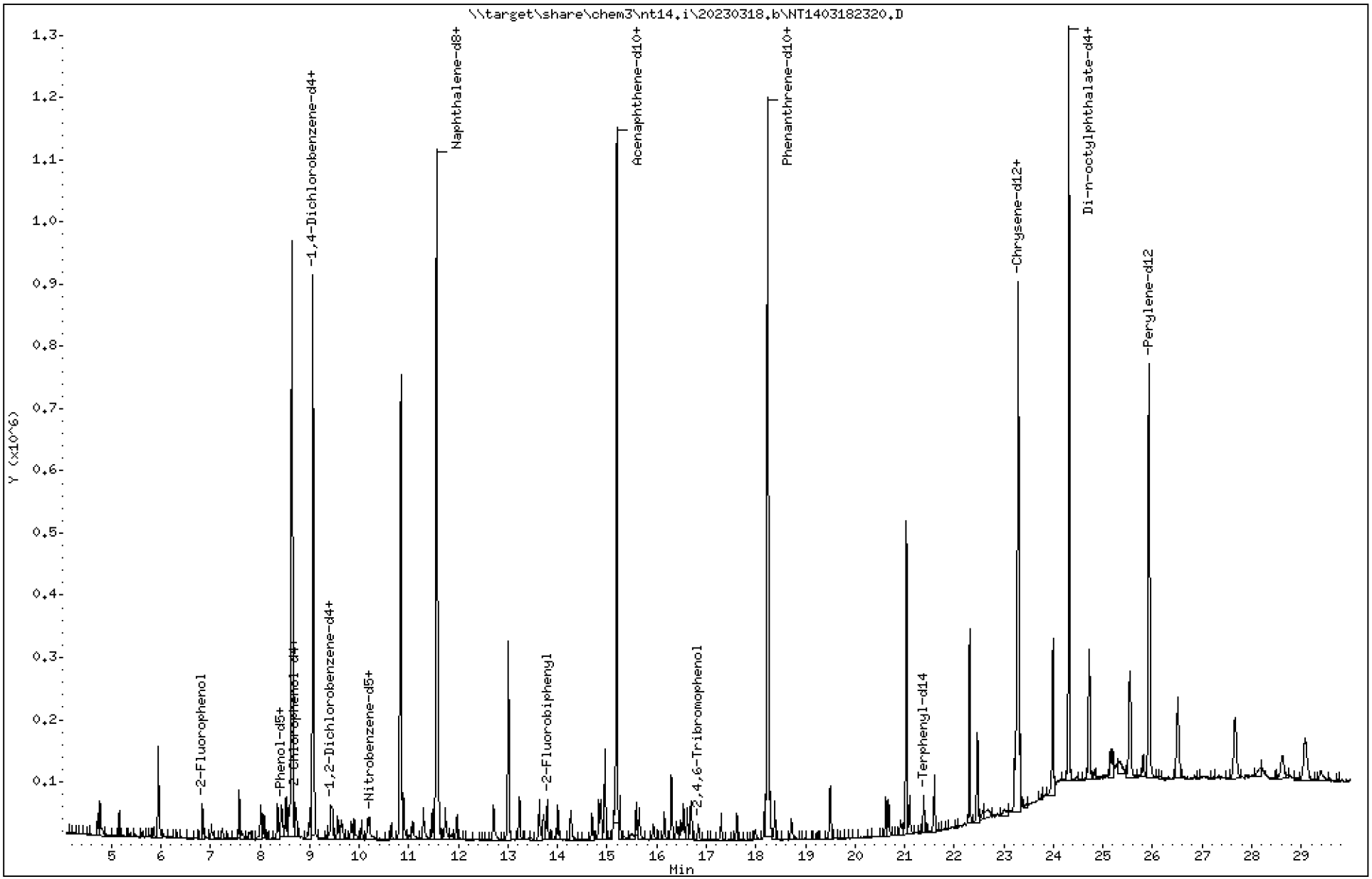
Instrument: nt14.i

Sample Info: SLC0355-LCV2

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

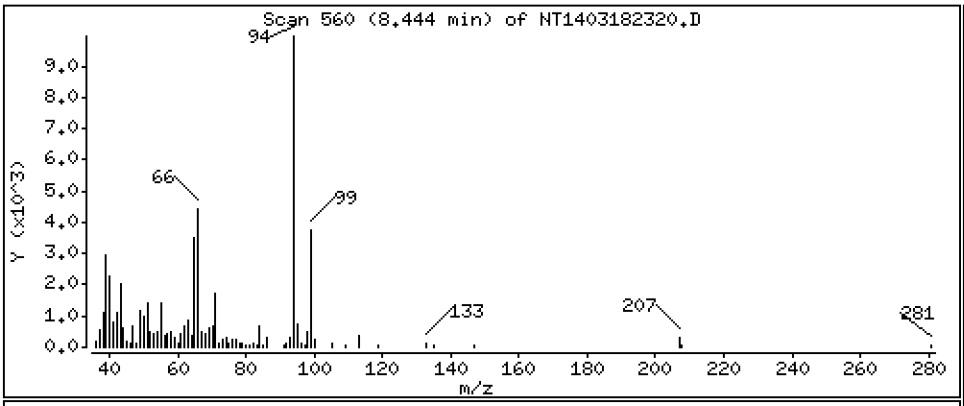
Operator: JGR

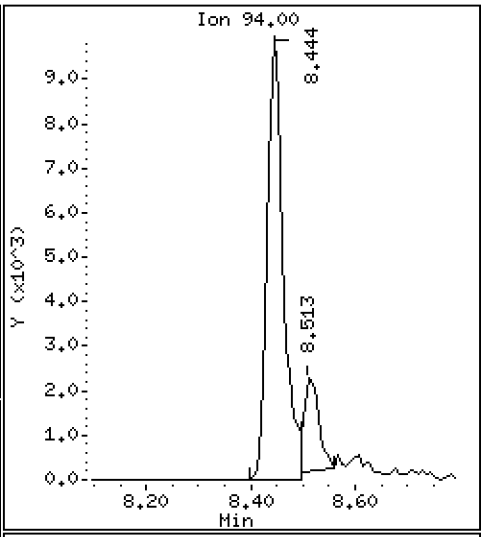
Column phase: ZB-5msi

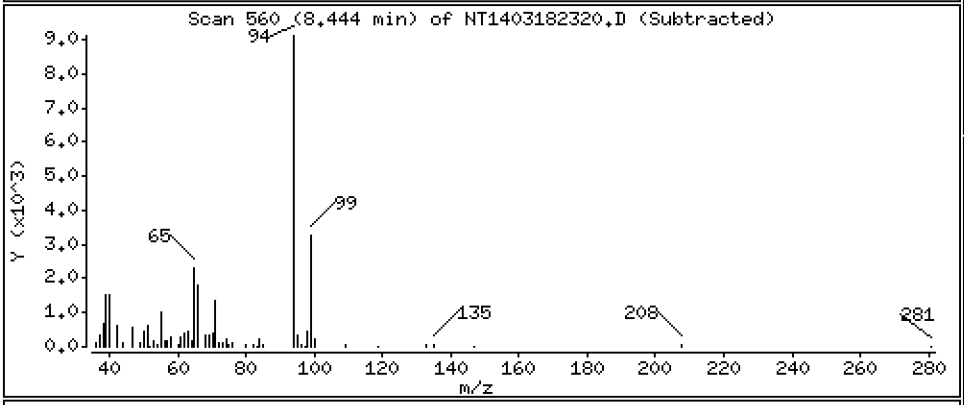
Column diameter: 0.25

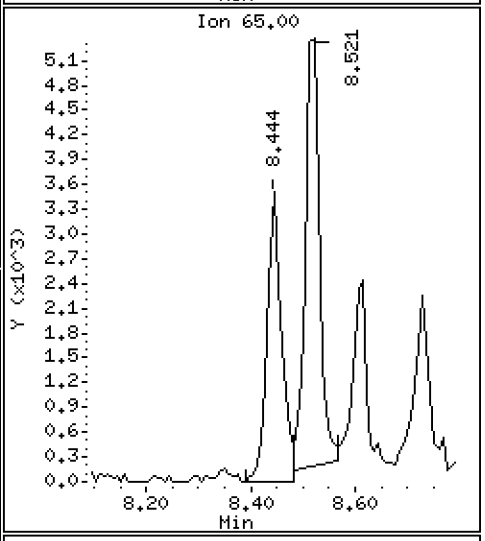
3 Phenol

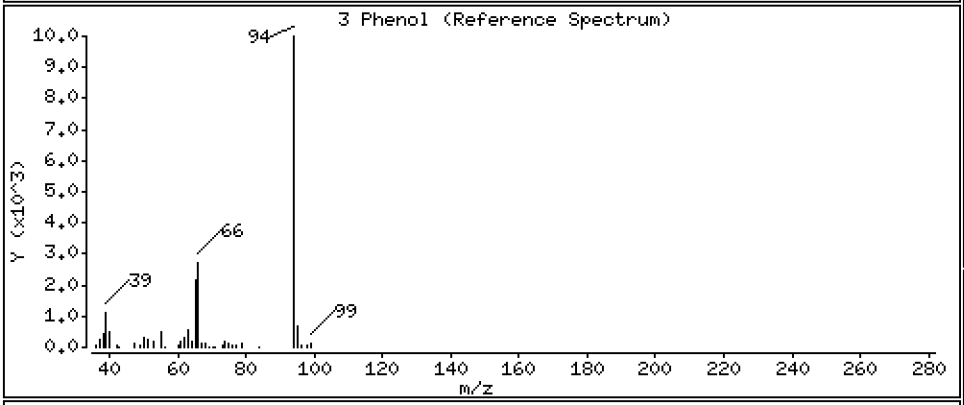
Concentration: 0.1720 ug/mL

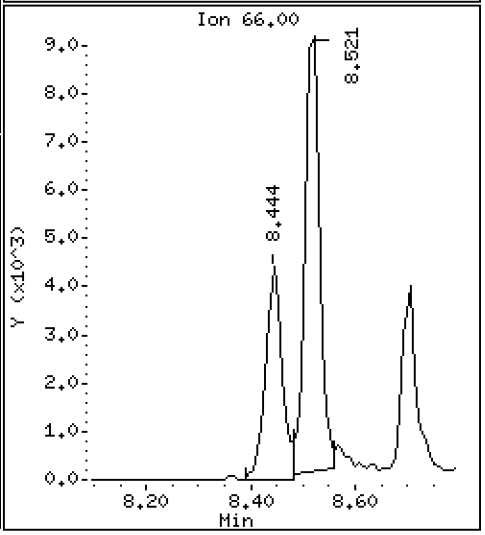


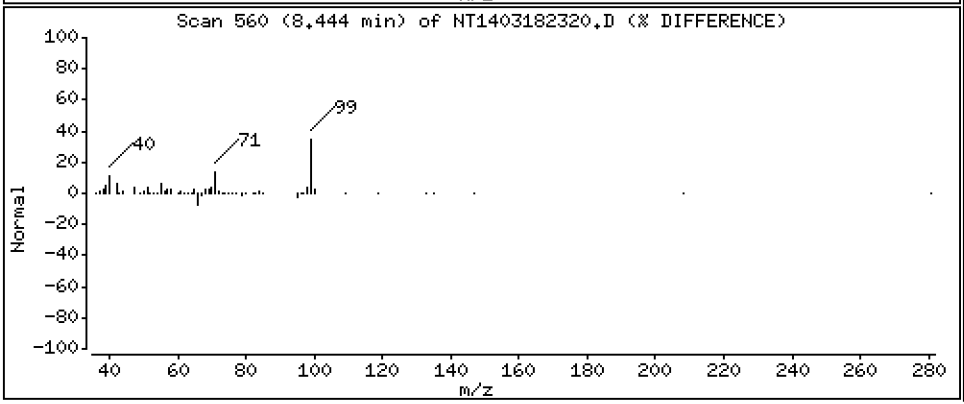












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

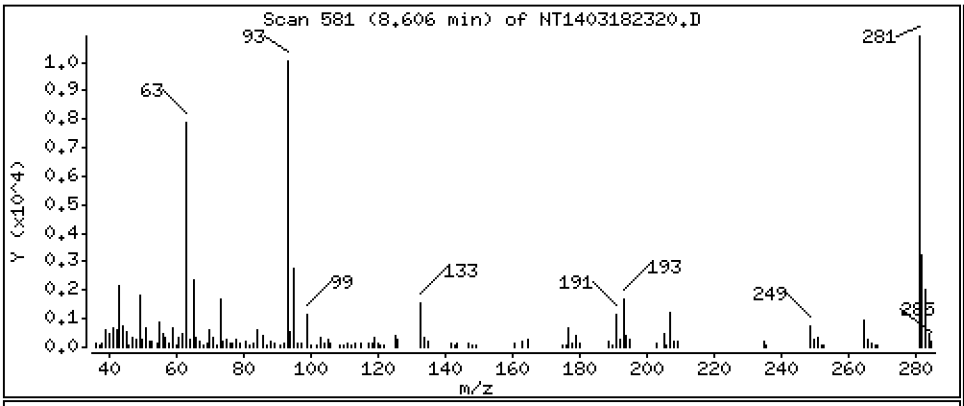
Operator: JGR

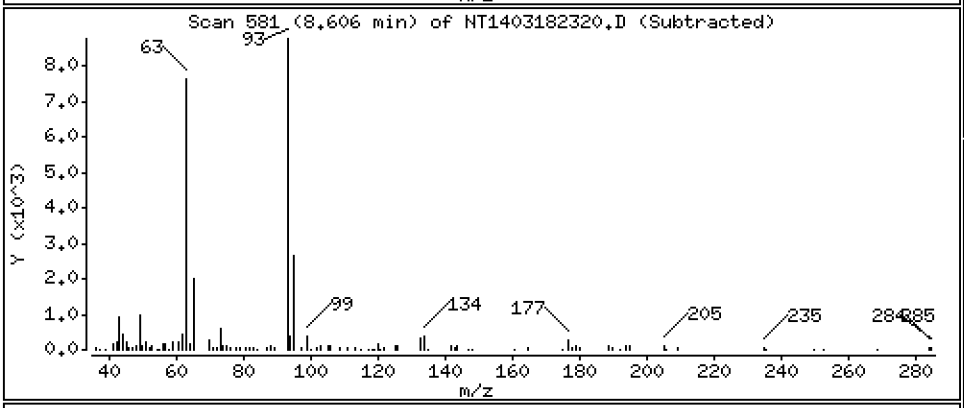
Column phase: ZB-5msi

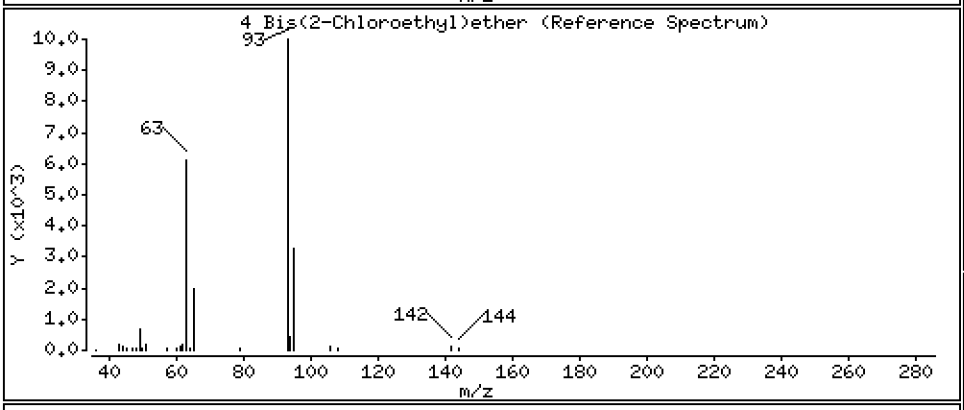
Column diameter: 0.25

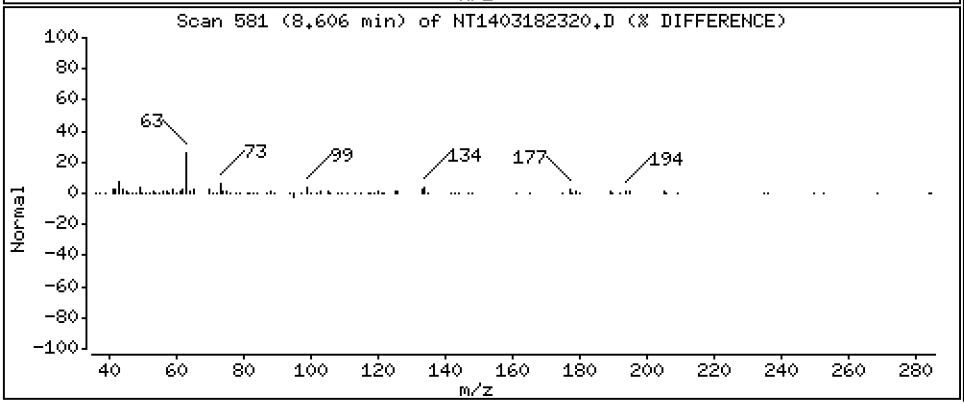
4 Bis(2-Chloroethyl)ether

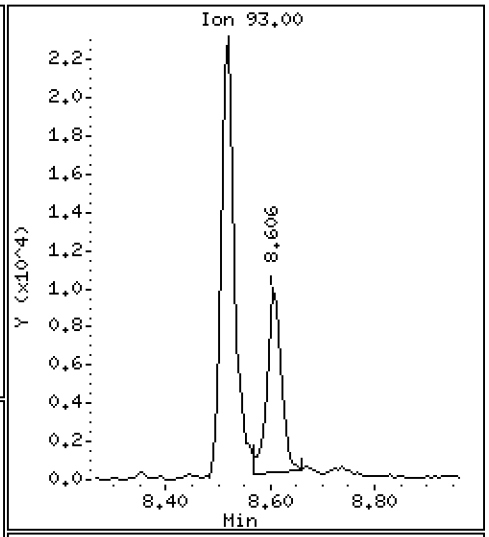
Concentration: 0.2035 ug/mL

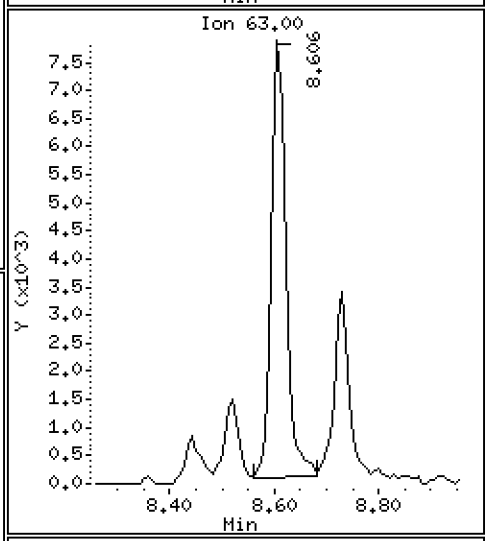


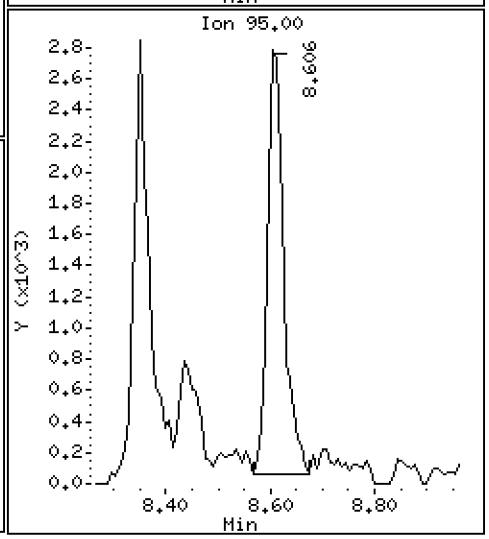












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

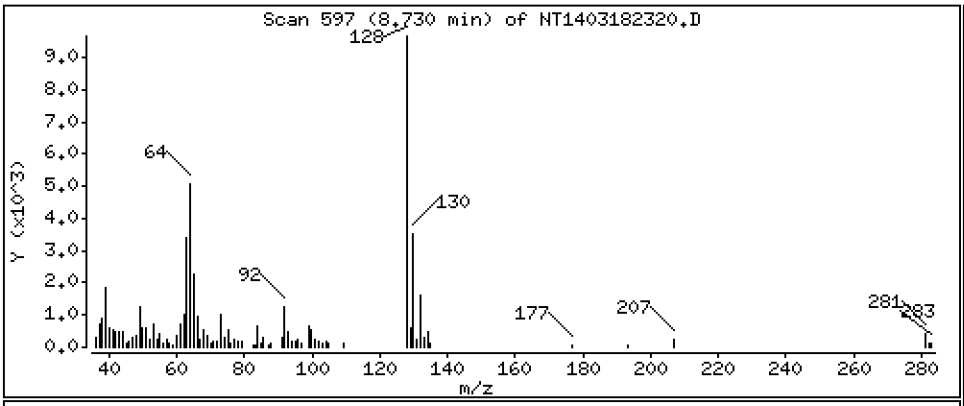
Operator: JGR

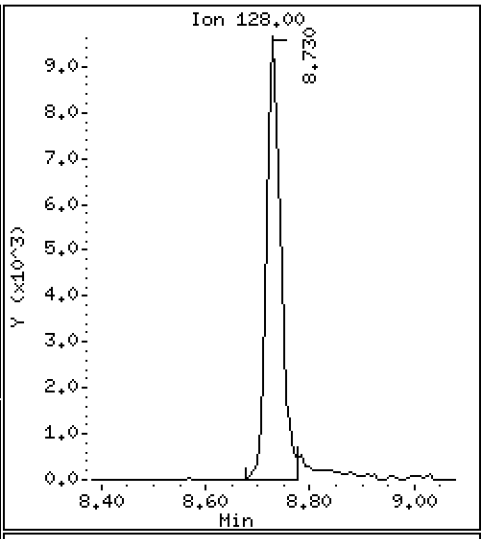
Column phase: ZB-5msi

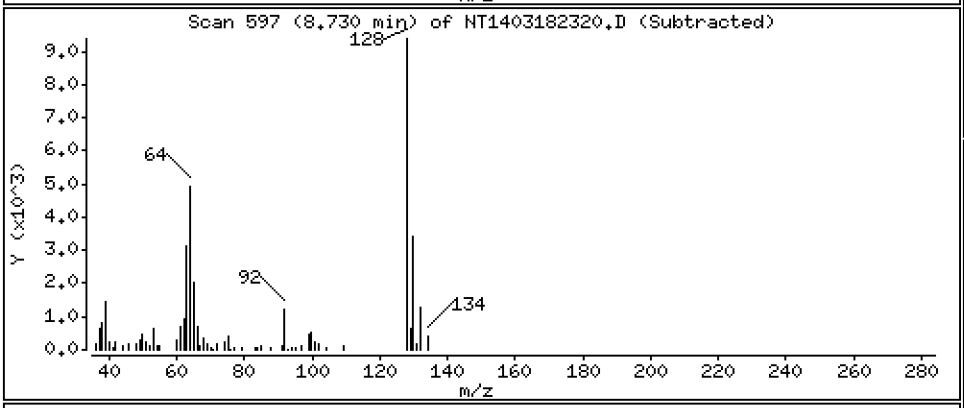
Column diameter: 0.25

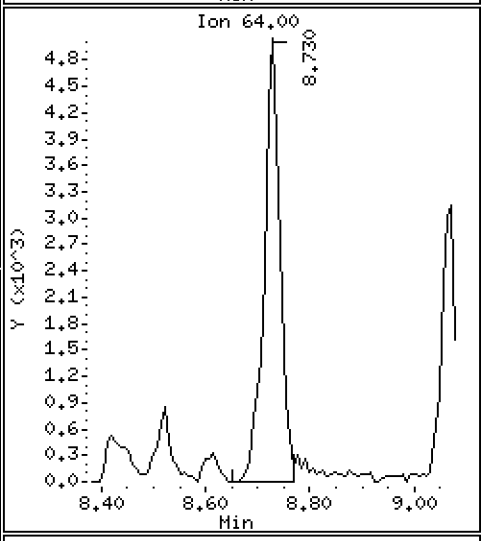
6 2-Chlorophenol

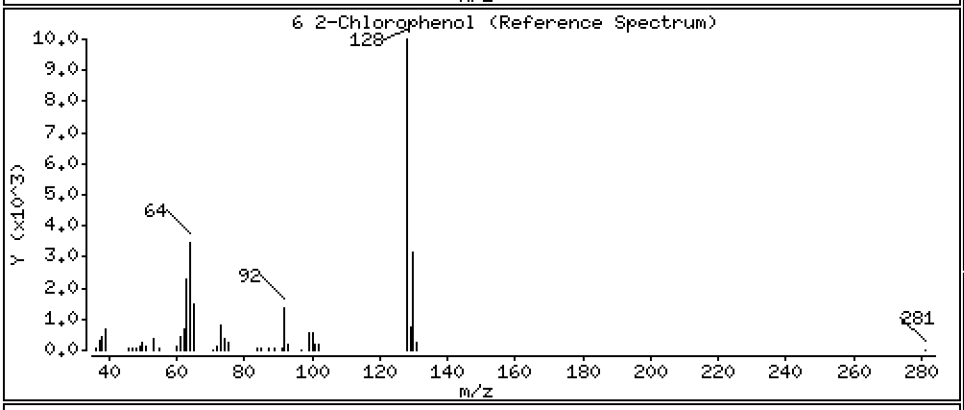
Concentration: 0.1894 ug/mL

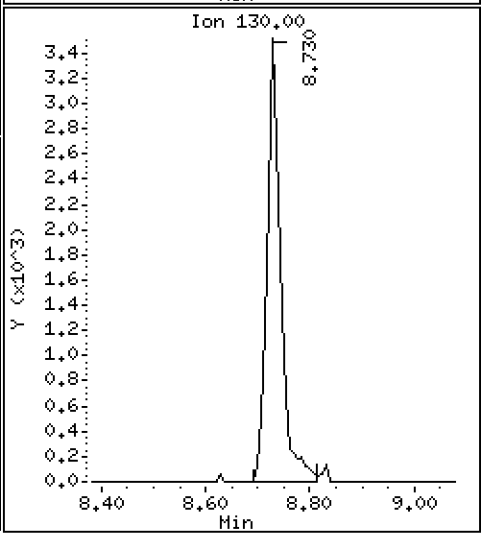


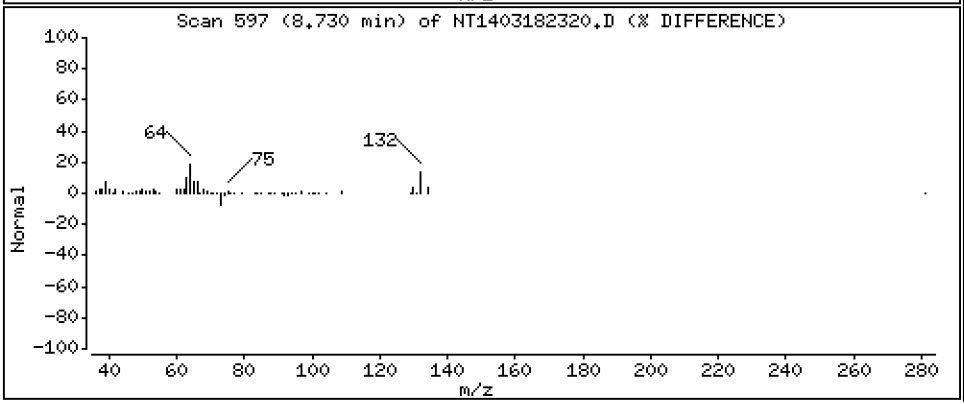












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

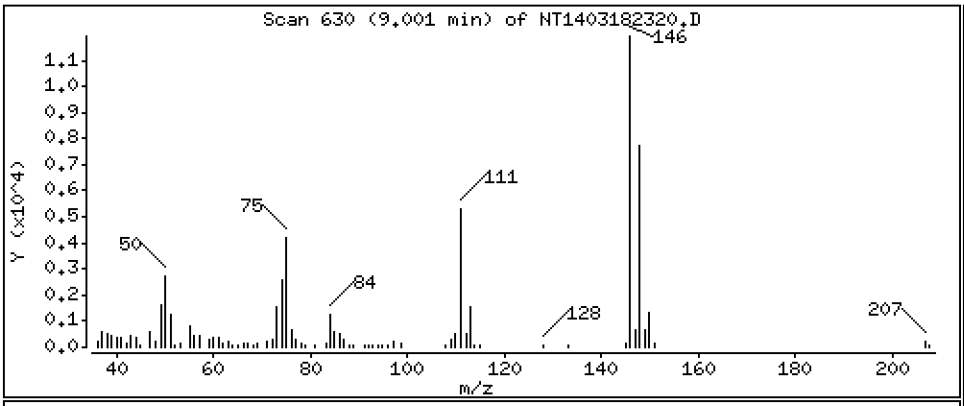
Operator: JGR

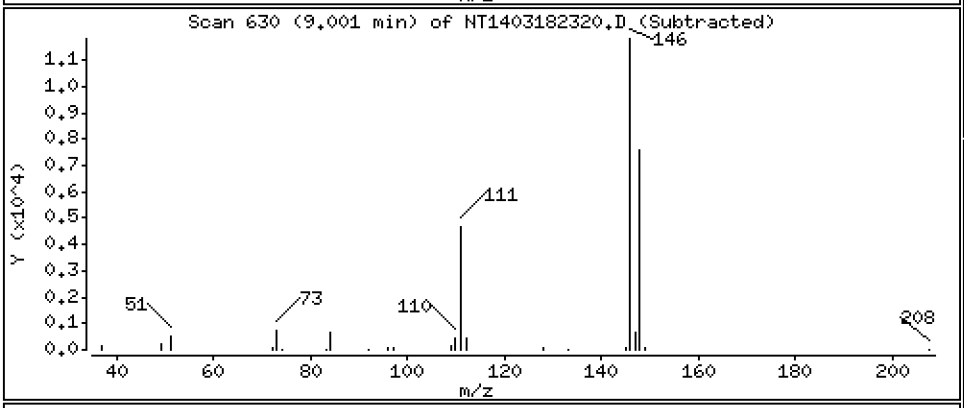
Column phase: ZB-5msi

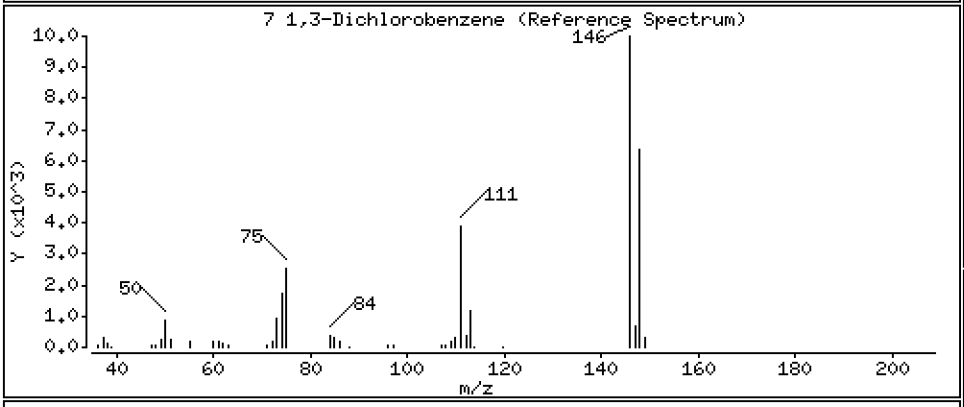
Column diameter: 0.25

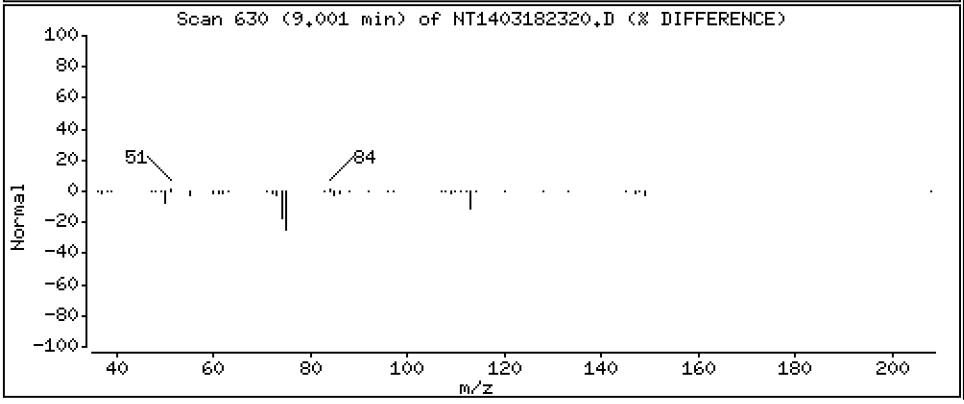
7 1,3-Dichlorobenzene

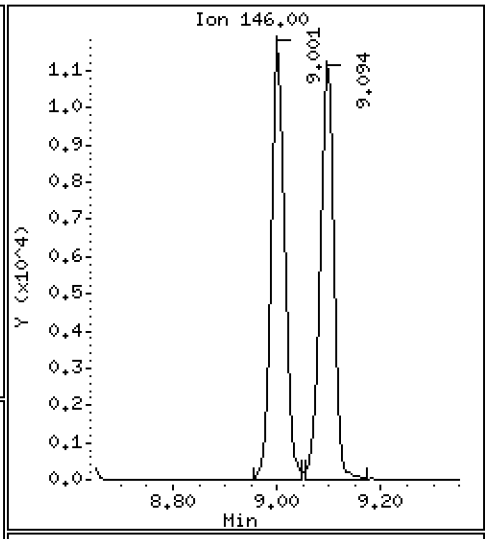
Concentration: 0.2138 ug/mL

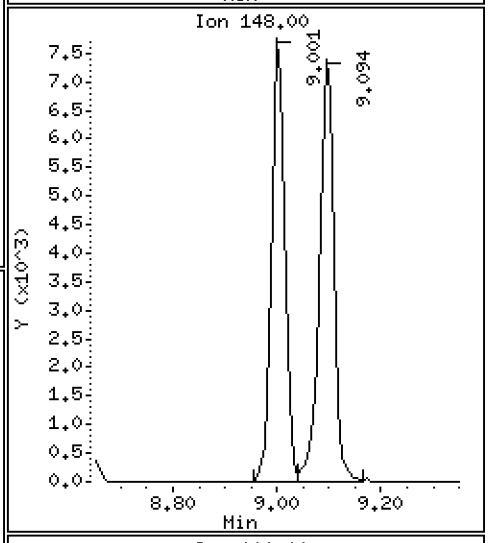


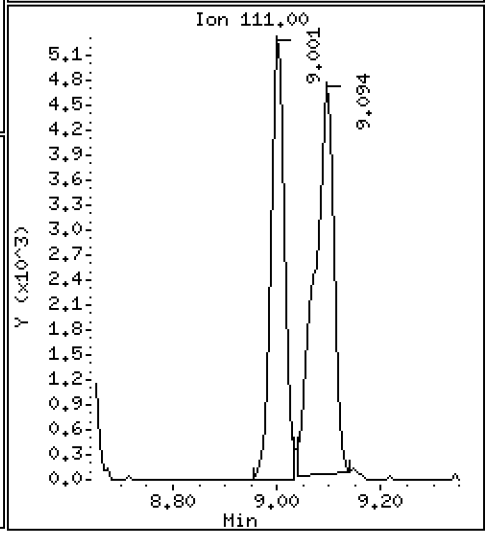












Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

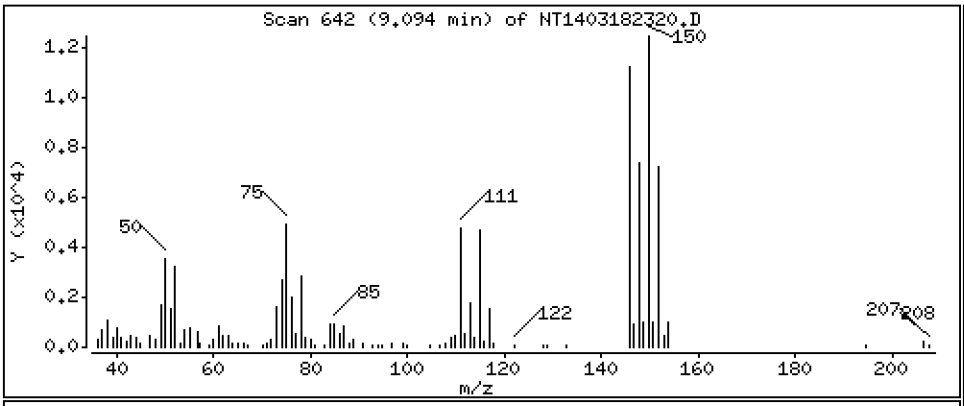
Operator: JGR

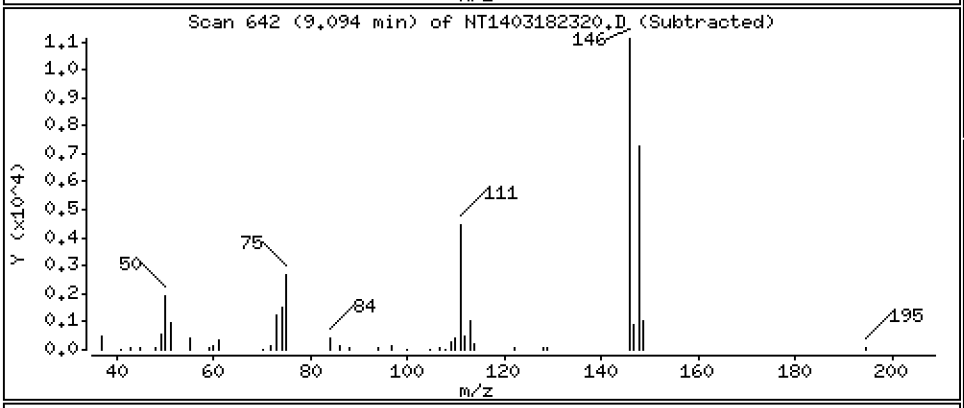
Column phase: ZB-5msi

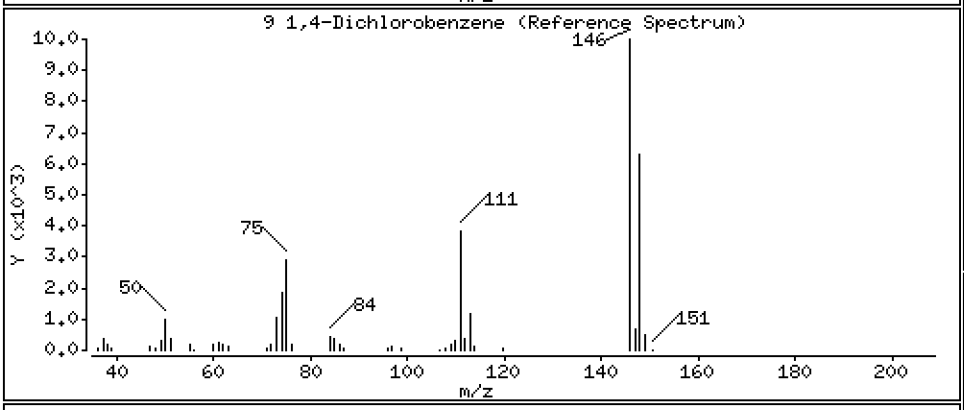
Column diameter: 0.25

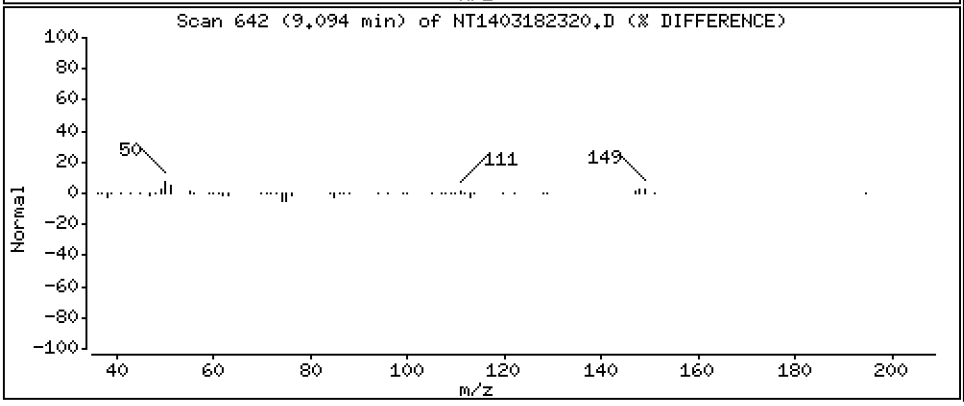
9 1,4-Dichlorobenzene

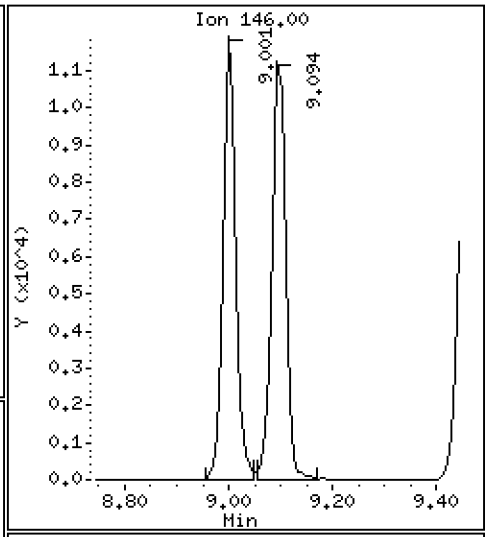
Concentration: 0.2120 ug/mL

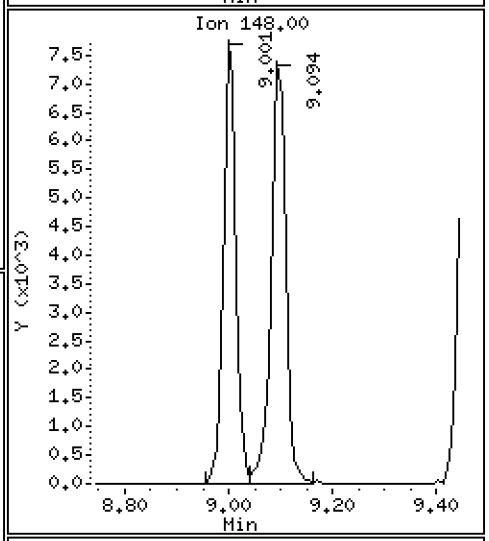


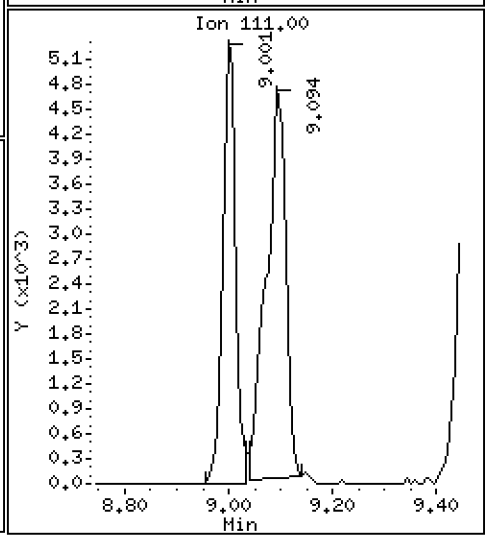












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

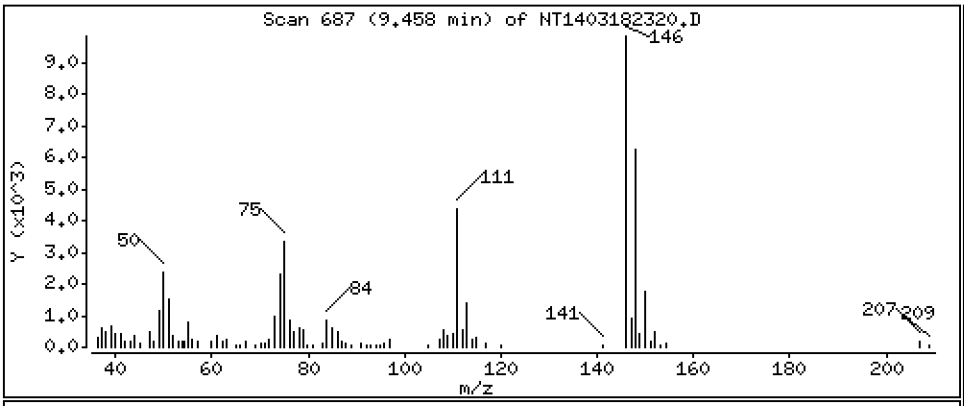
Operator: JGR

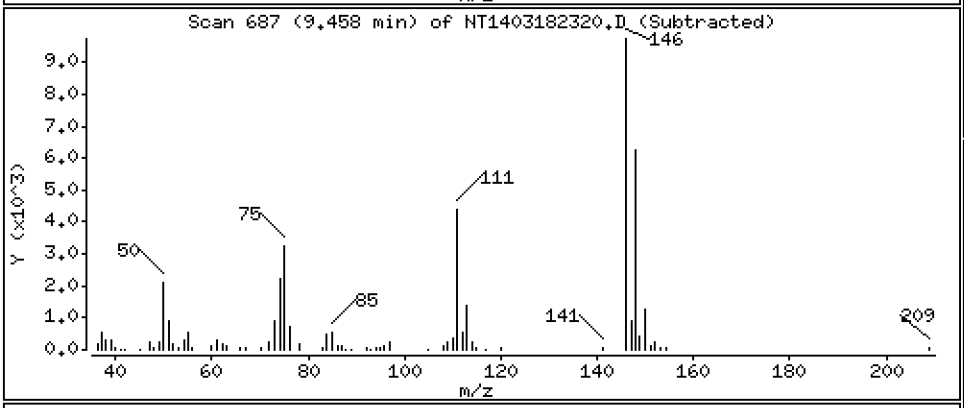
Column phase: ZB-5msi

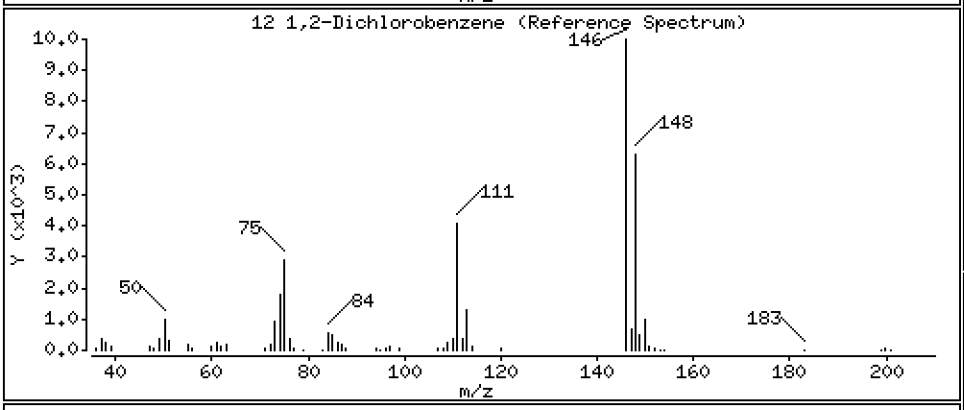
Column diameter: 0.25

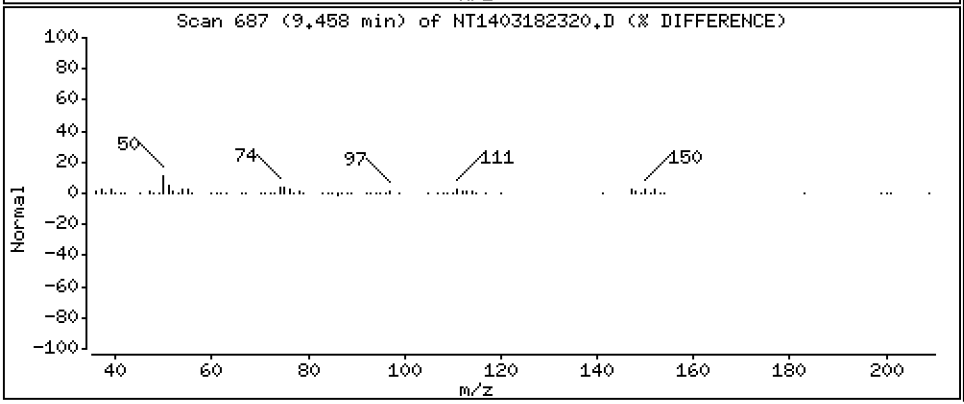
12 1,2-Dichlorobenzene

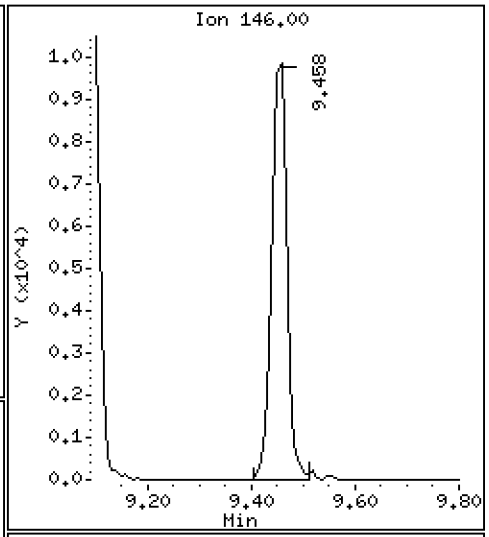
Concentration: 0.2105 ug/mL

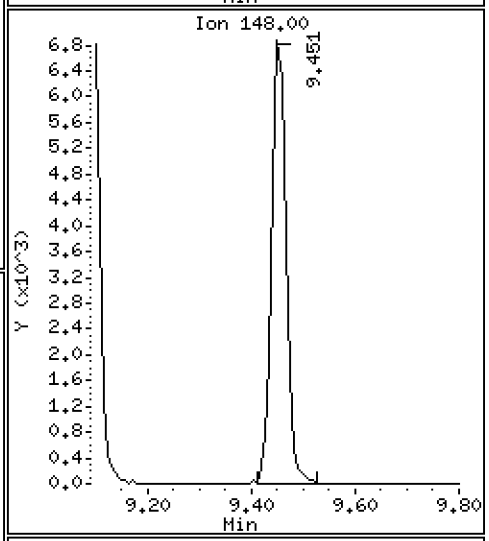


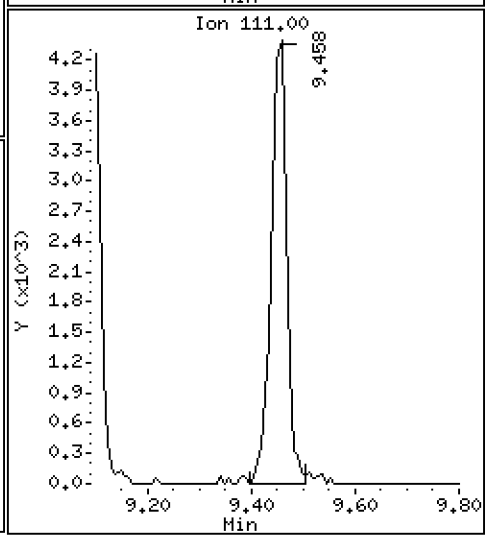












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

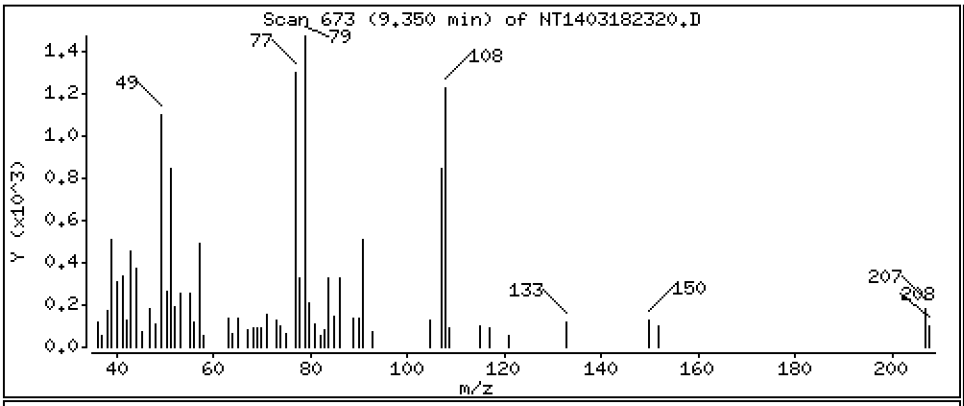
Operator: JGR

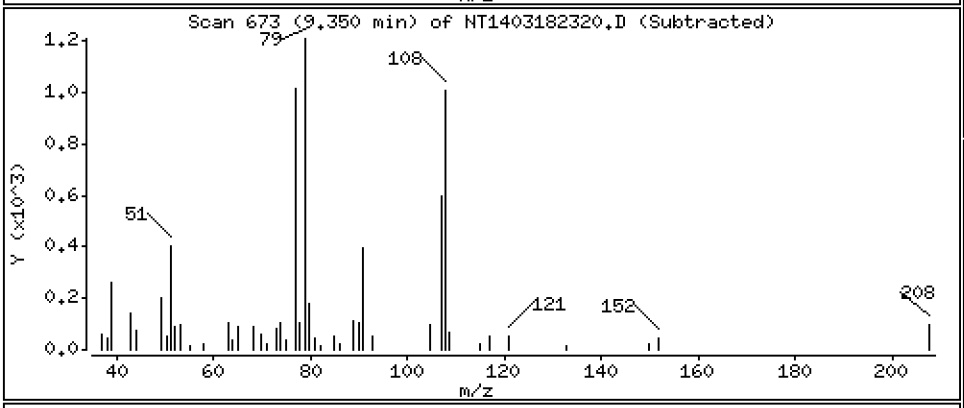
Column phase: ZB-5msi

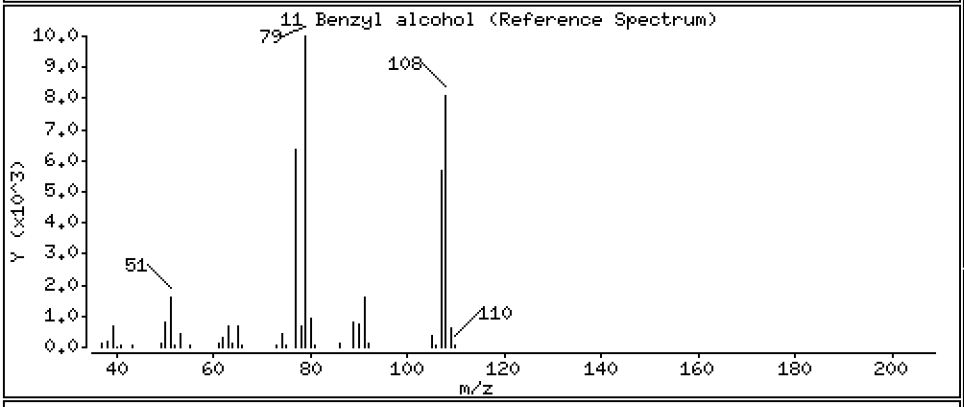
Column diameter: 0.25

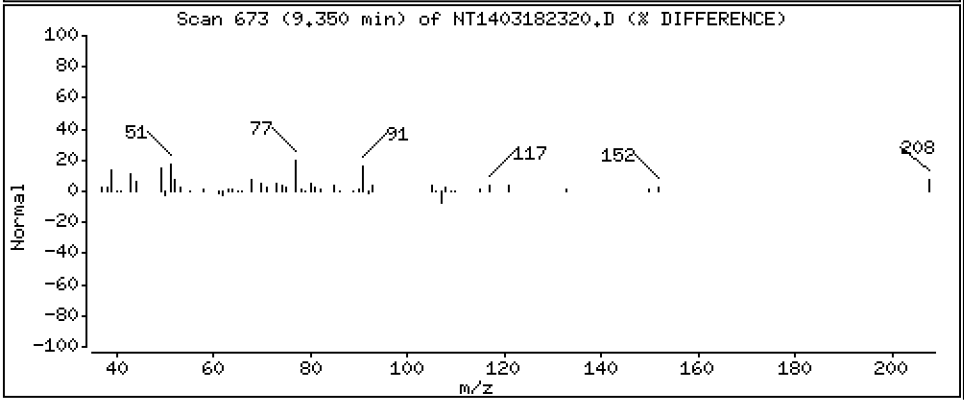
11 Benzyl alcohol

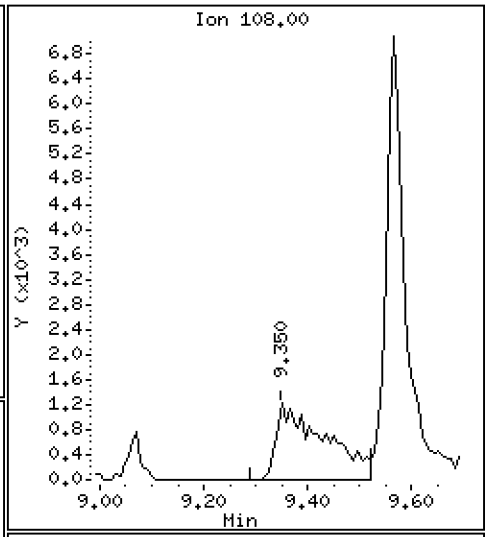
Concentration: 0.1385 ug/mL

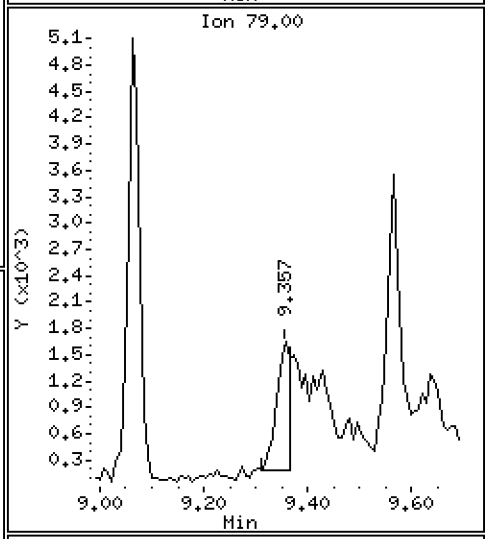


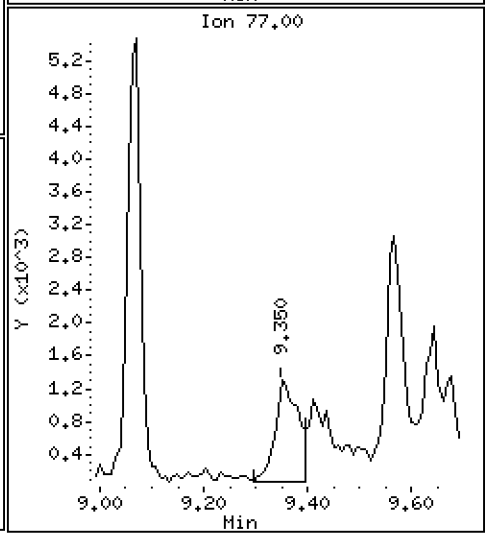












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

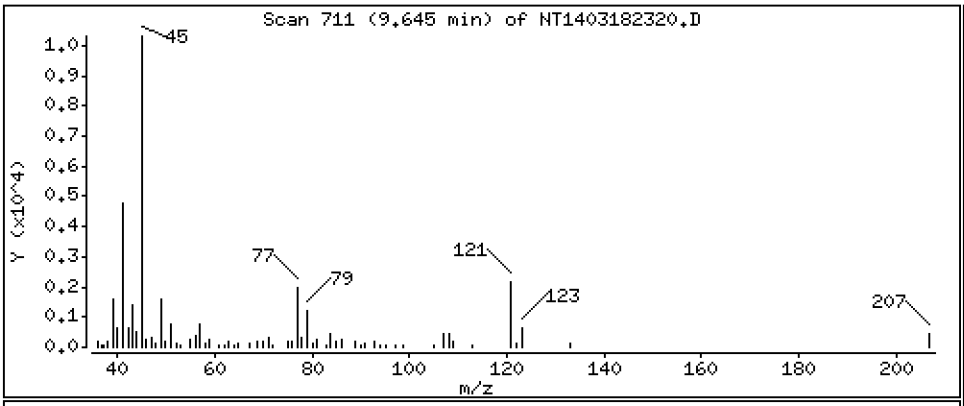
Operator: JGR

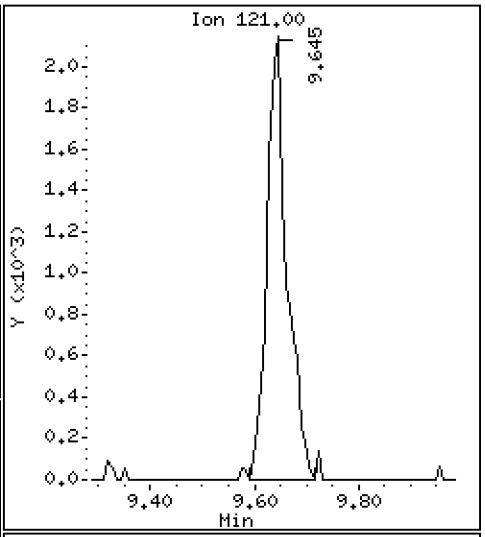
Column phase: ZB-5msi

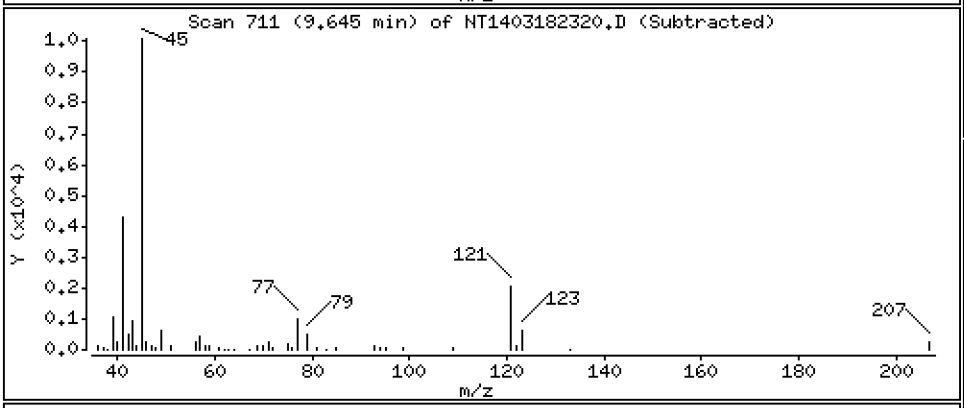
Column diameter: 0.25

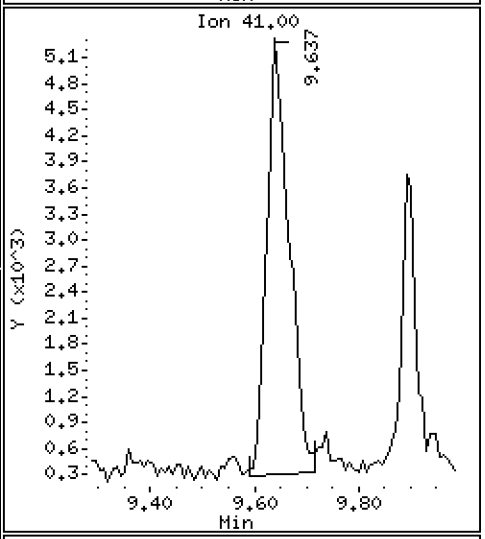
14 2,2'-oxybis(1-Chloropropane)

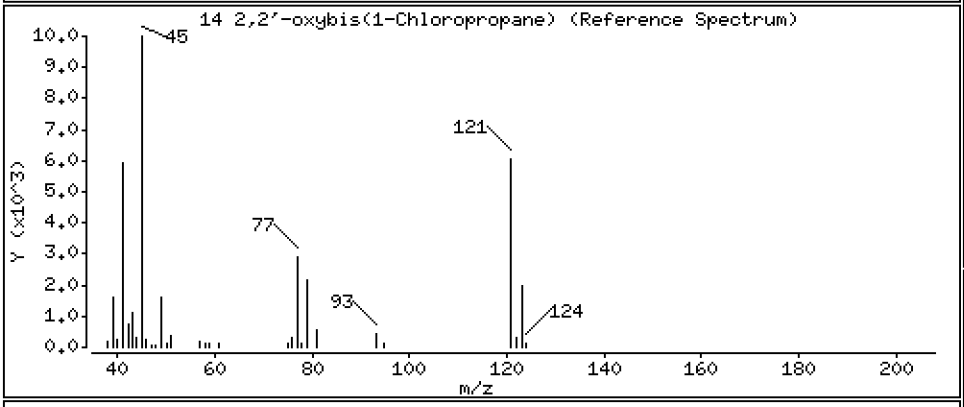
Concentration: 0.2283 ug/mL

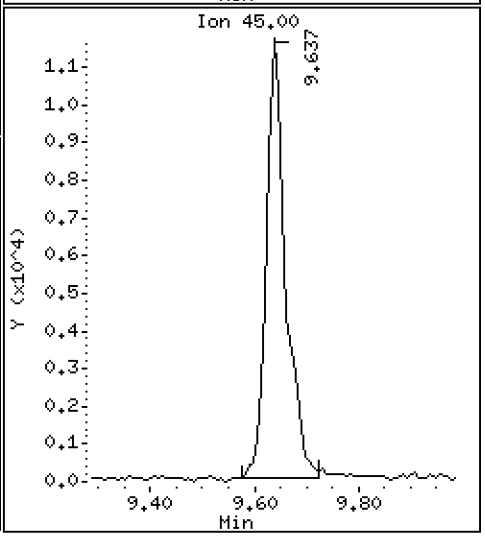


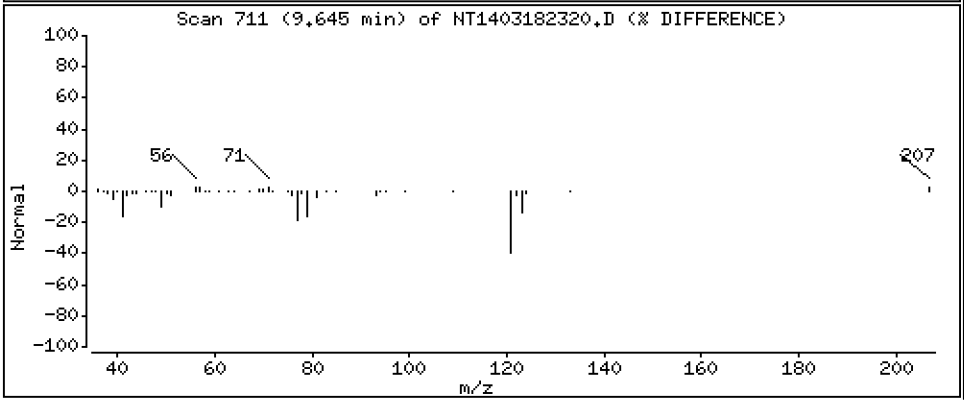












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

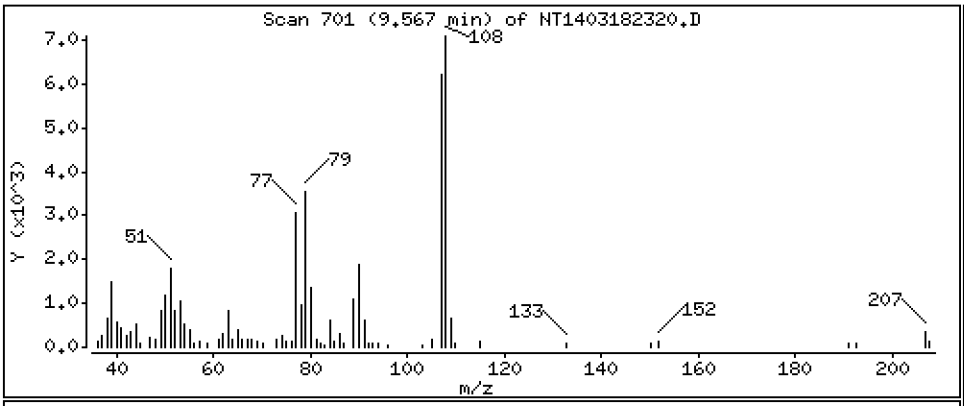
Operator: JGR

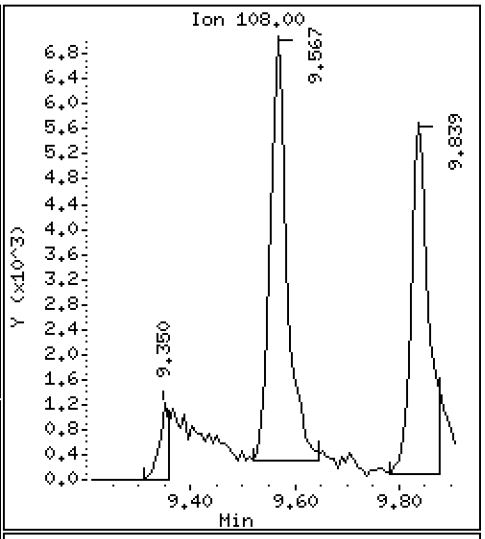
Column phase: ZB-5msi

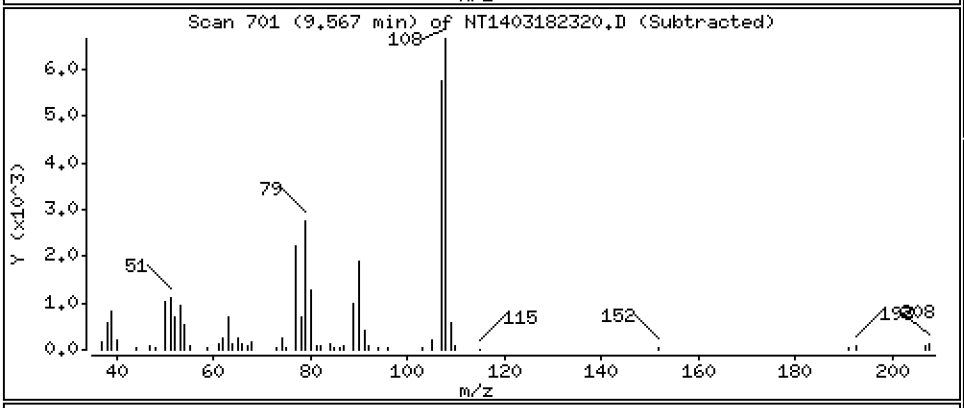
Column diameter: 0.25

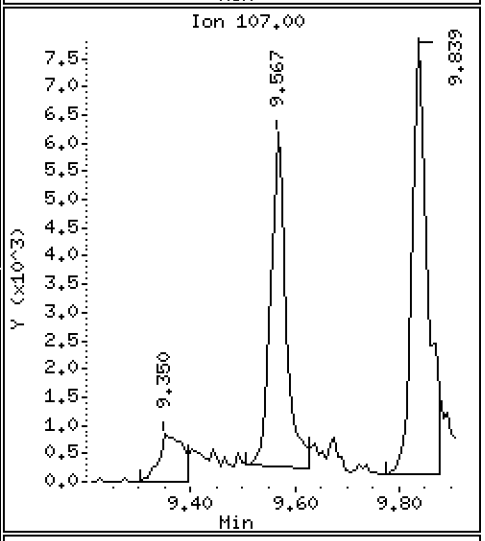
13 2-Methylphenol

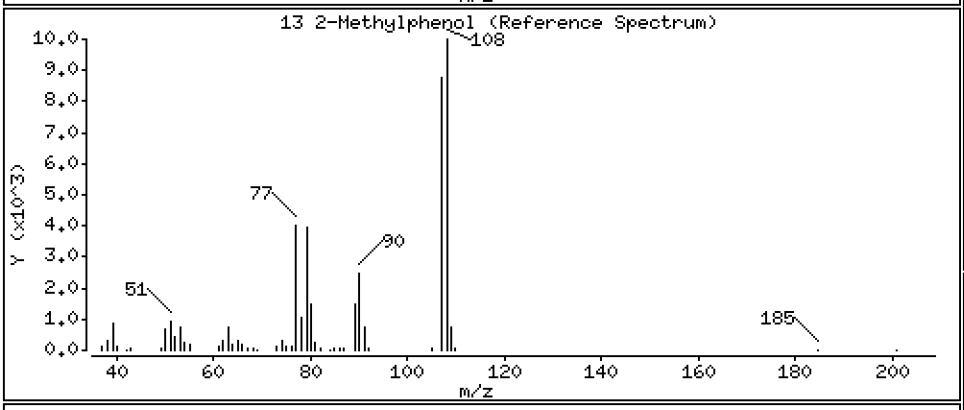
Concentration: 0.1763 ug/mL

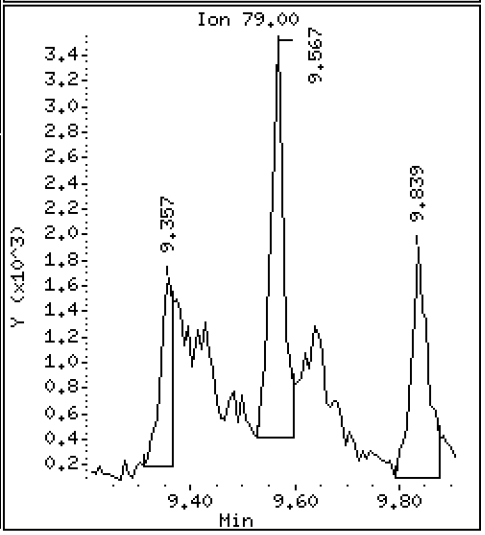


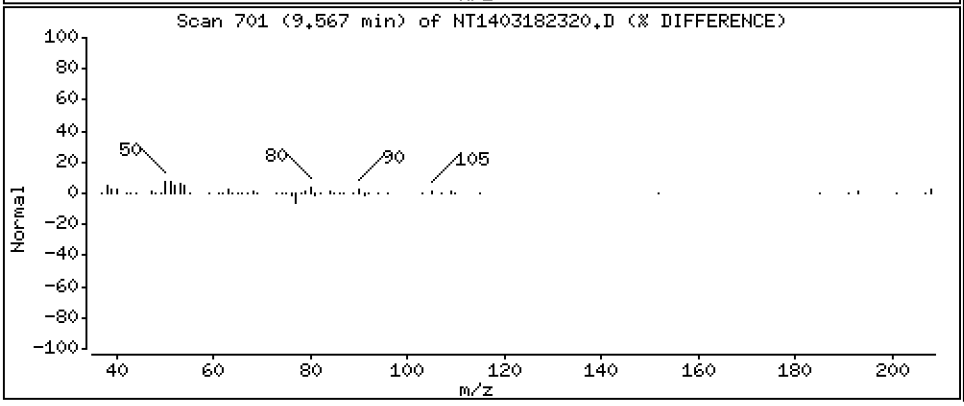












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

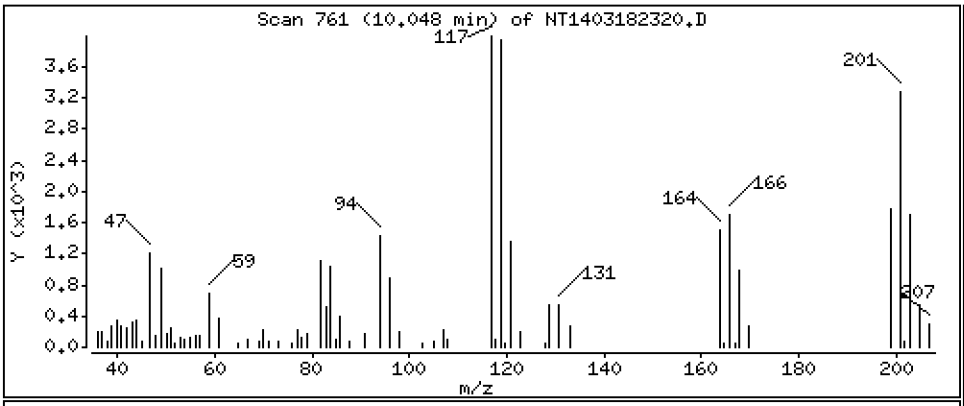
Operator: JGR

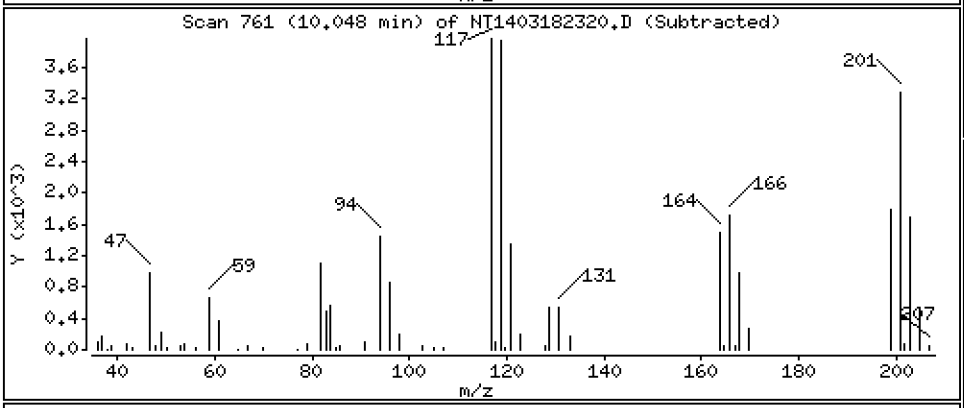
Column phase: ZB-5msi

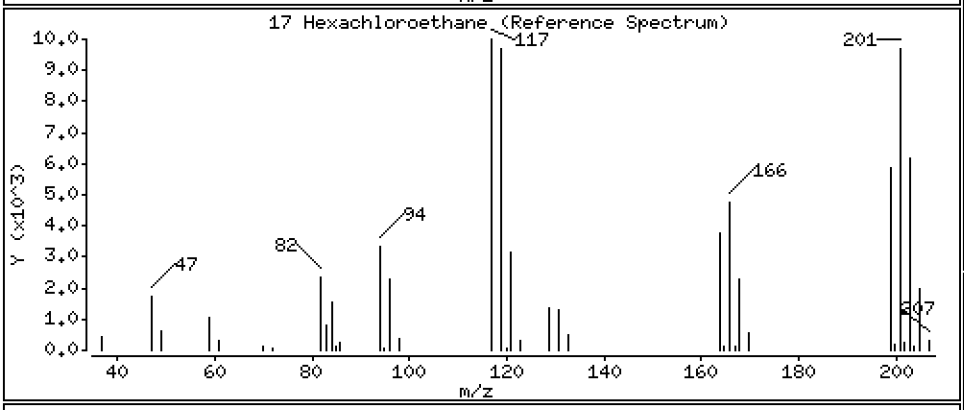
Column diameter: 0.25

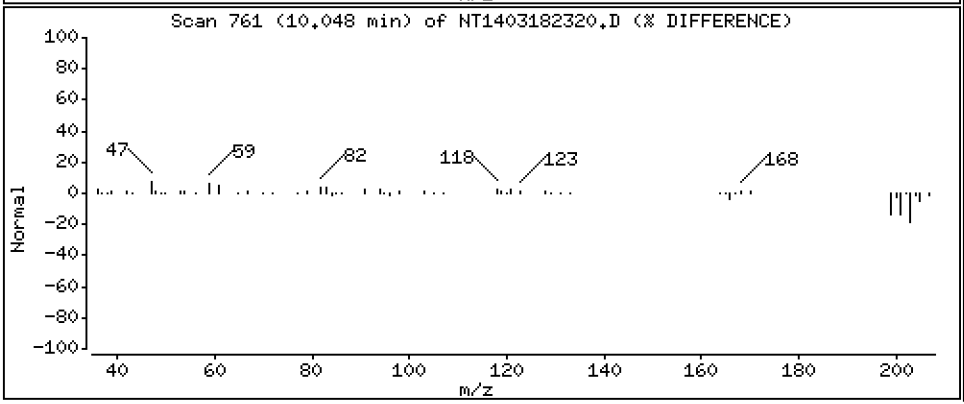
17 Hexachloroethane

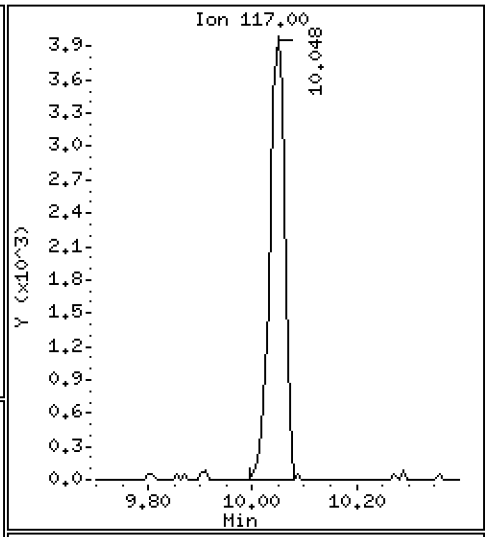
Concentration: 0.1935 ug/mL

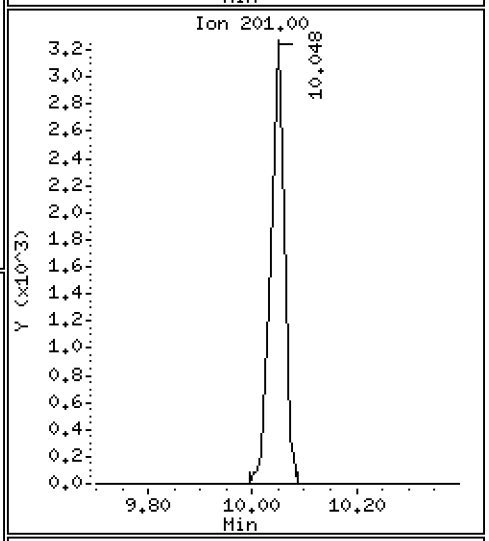


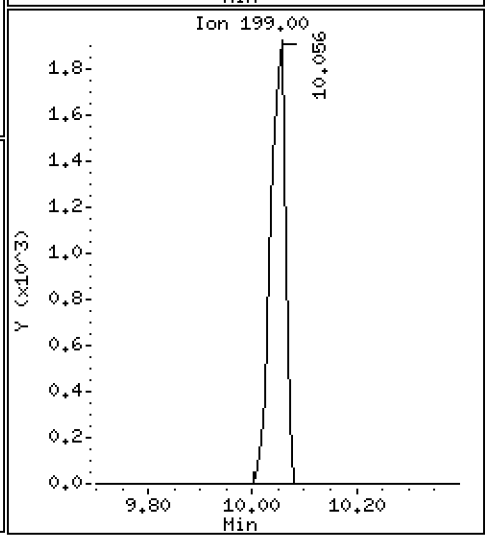












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

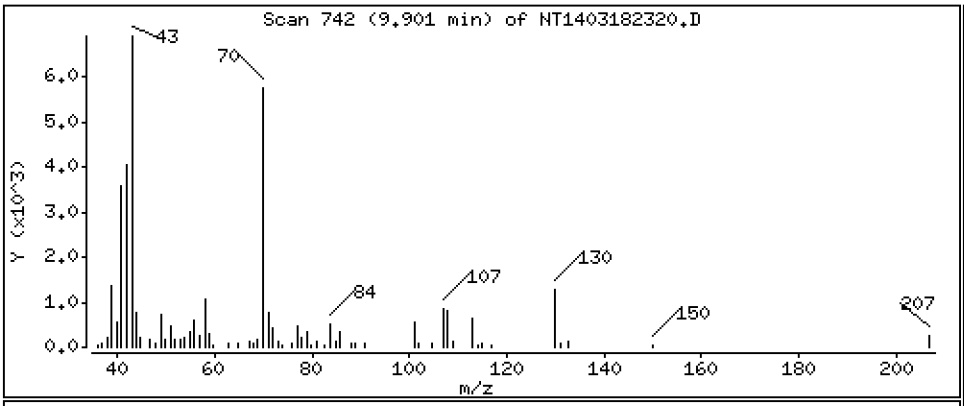
Operator: JGR

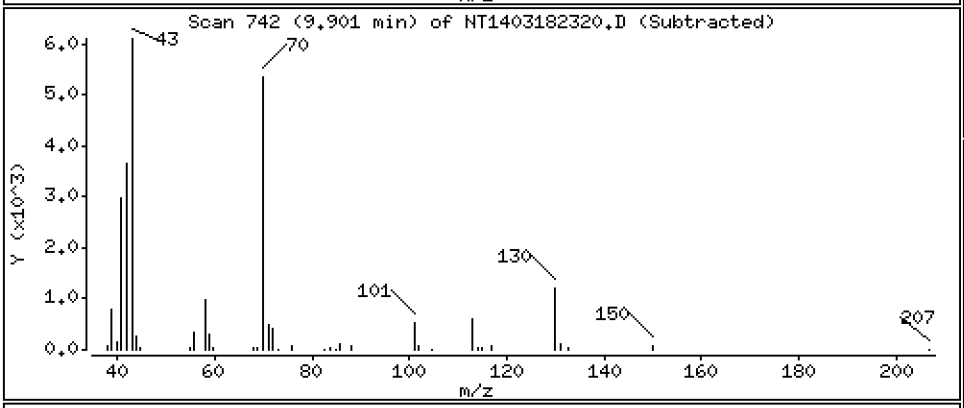
Column phase: ZB-5msi

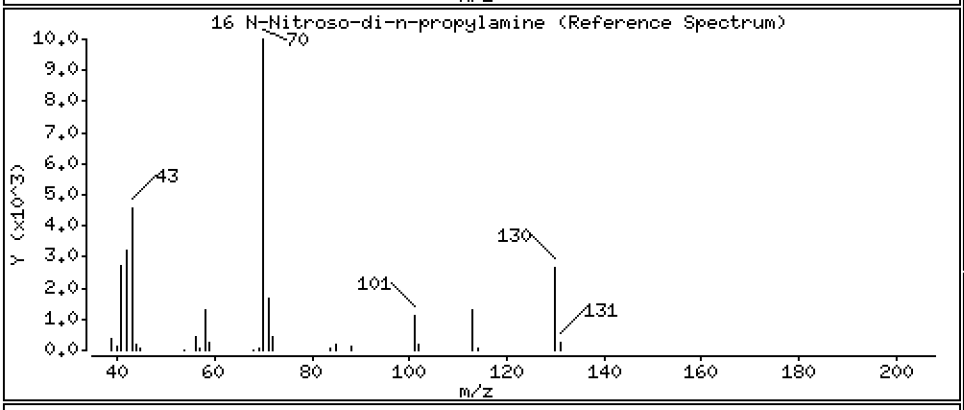
Column diameter: 0.25

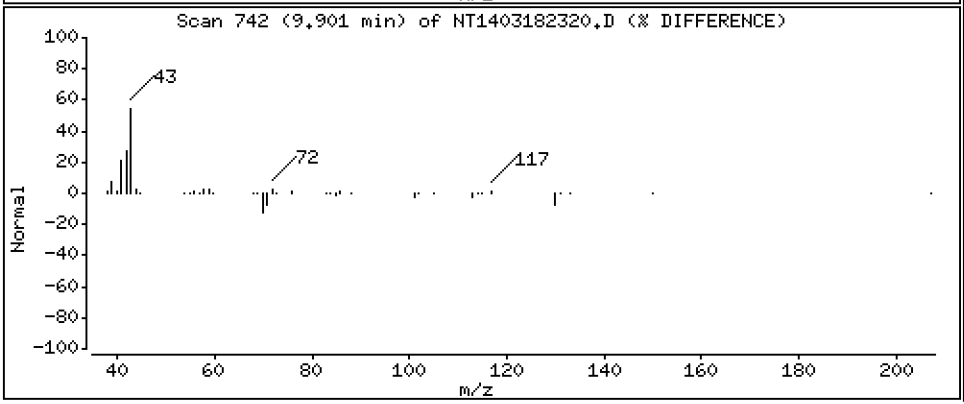
16 N-Nitroso-di-n-propylamine

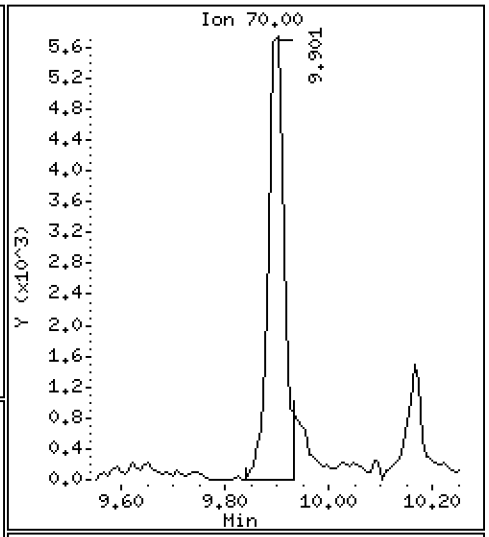
Concentration: 0.1756 ug/mL

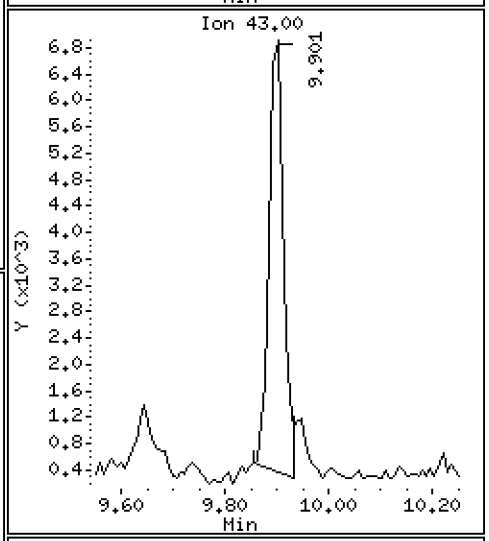


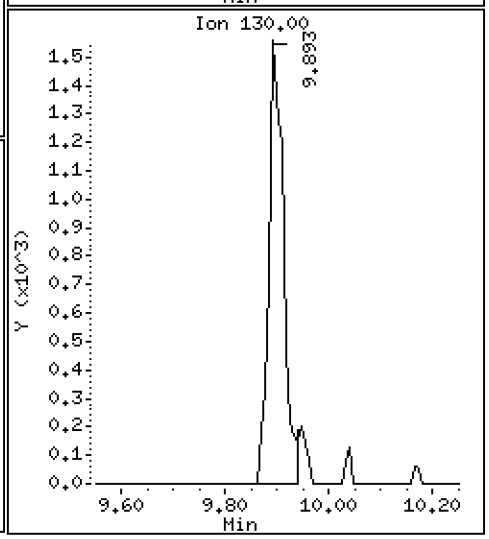












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

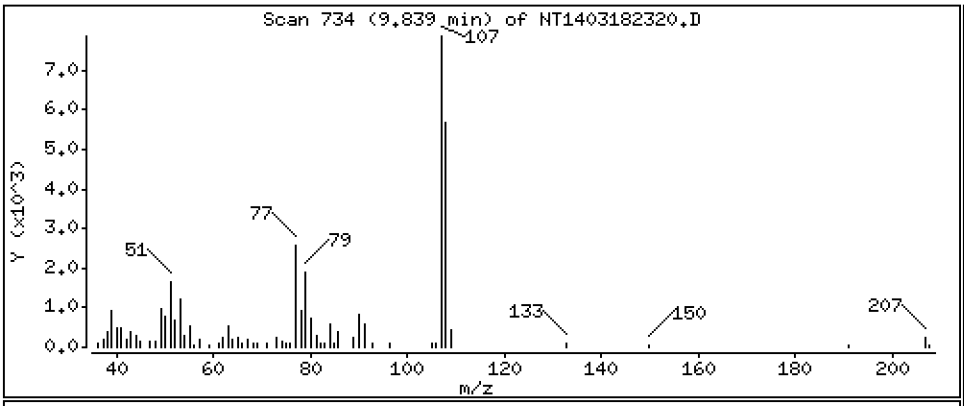
Operator: JGR

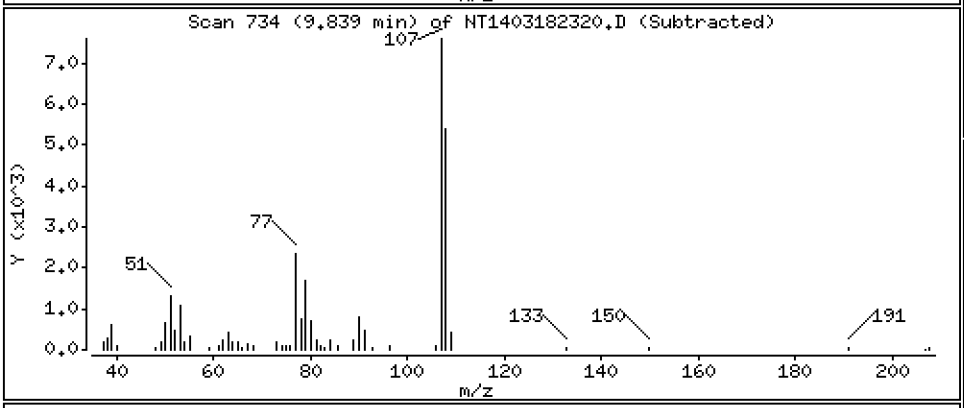
Column phase: ZB-5msi

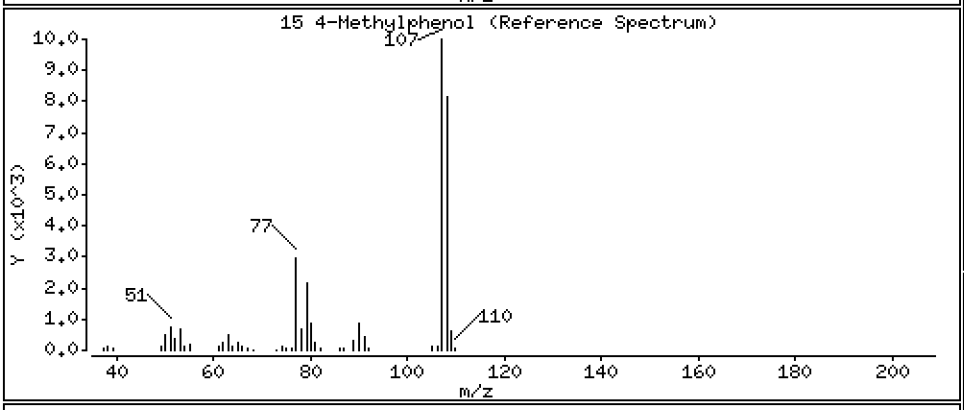
Column diameter: 0.25

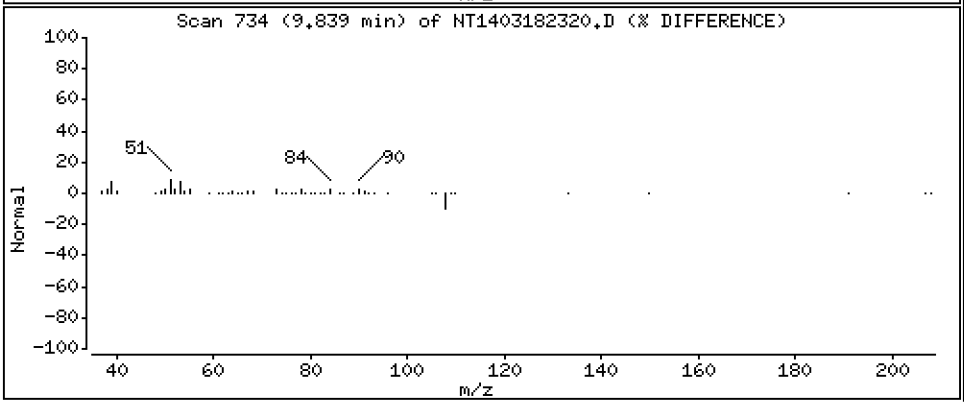
15 4-Methylphenol

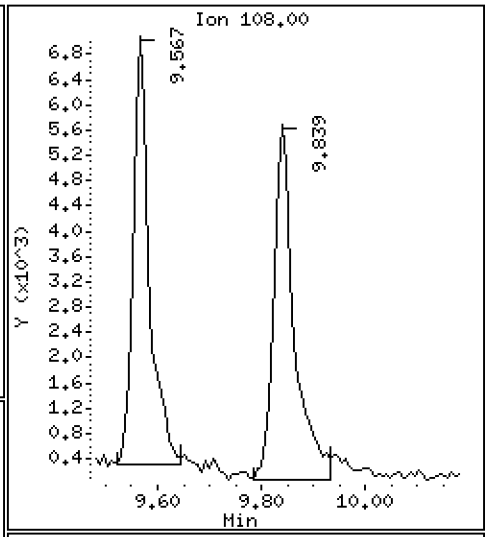
Concentration: 0.1496 ug/mL

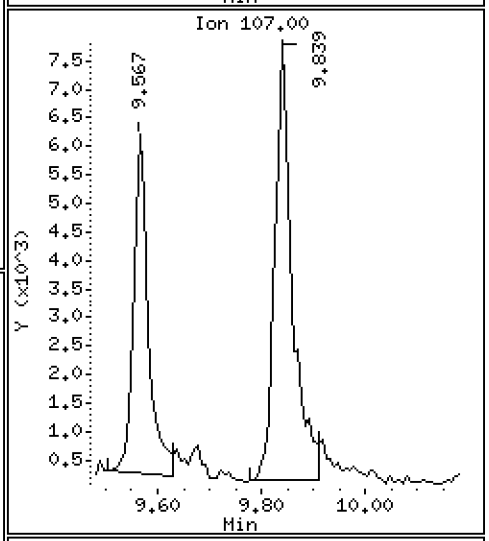


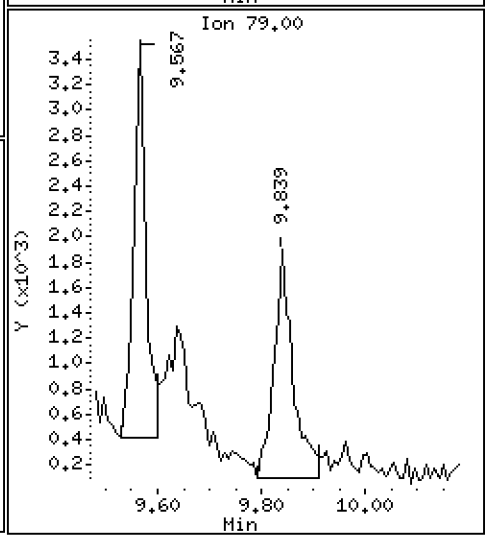












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

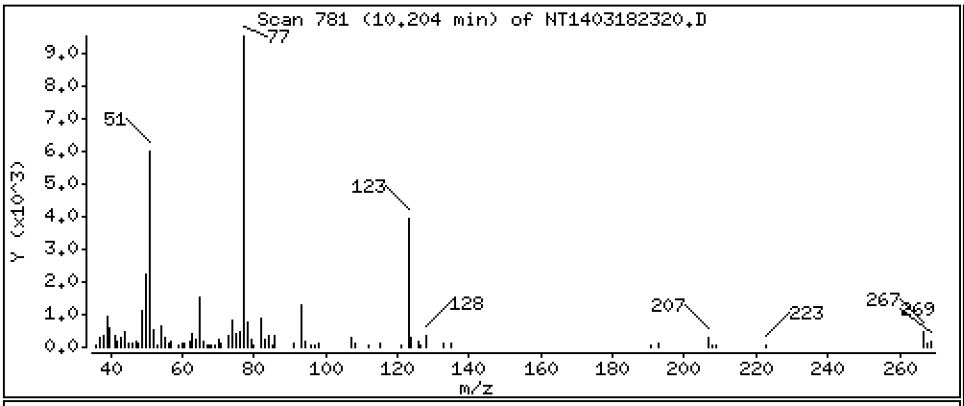
Operator: JGR

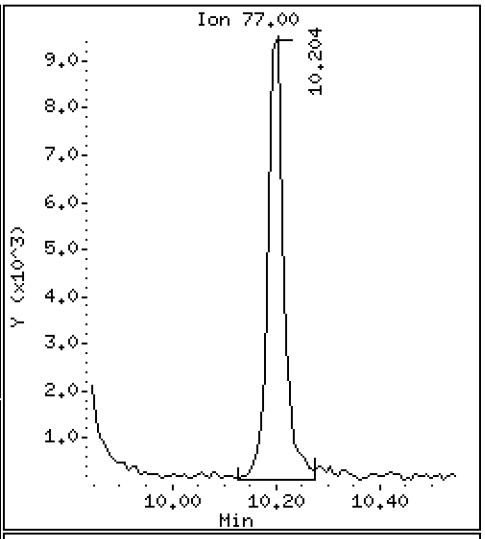
Column phase: ZB-5msi

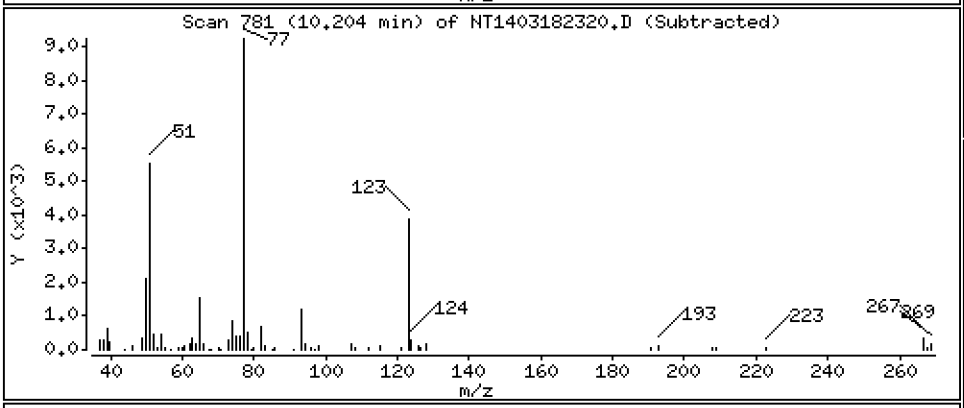
Column diameter: 0.25

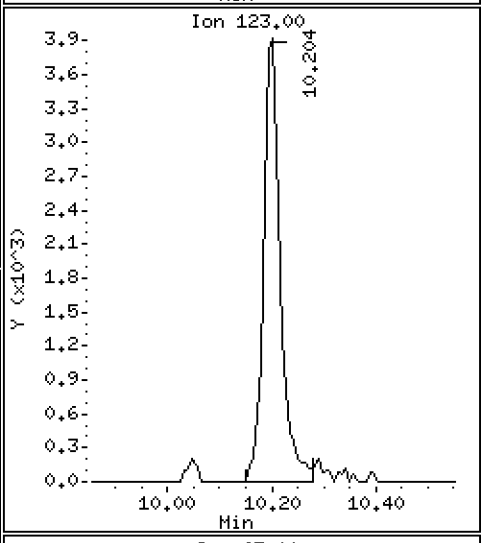
19 Nitrobenzene

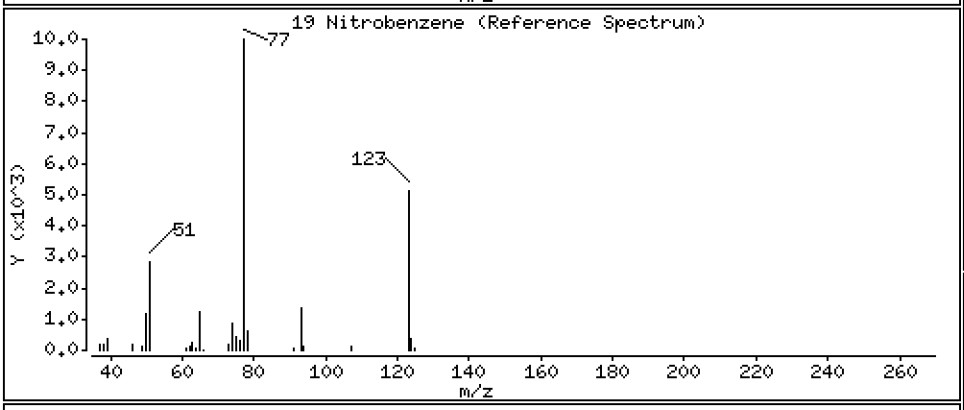
Concentration: 0.1949 ug/mL

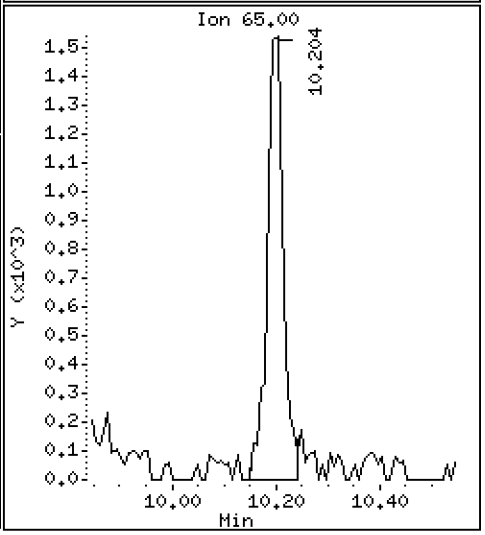


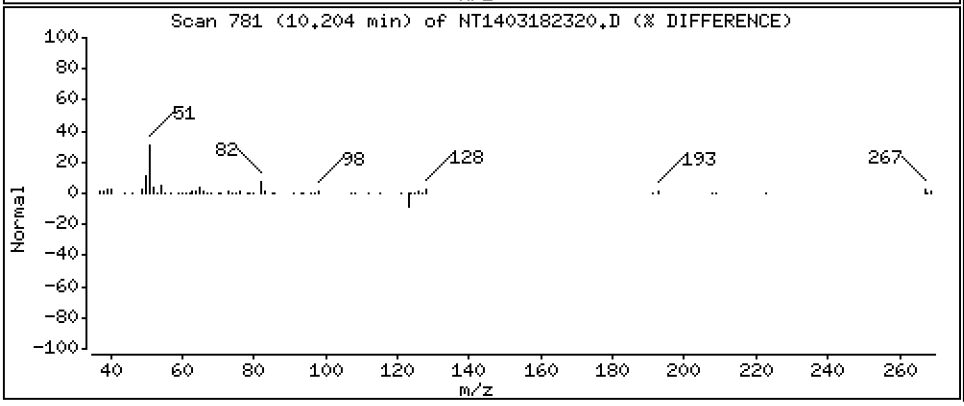












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

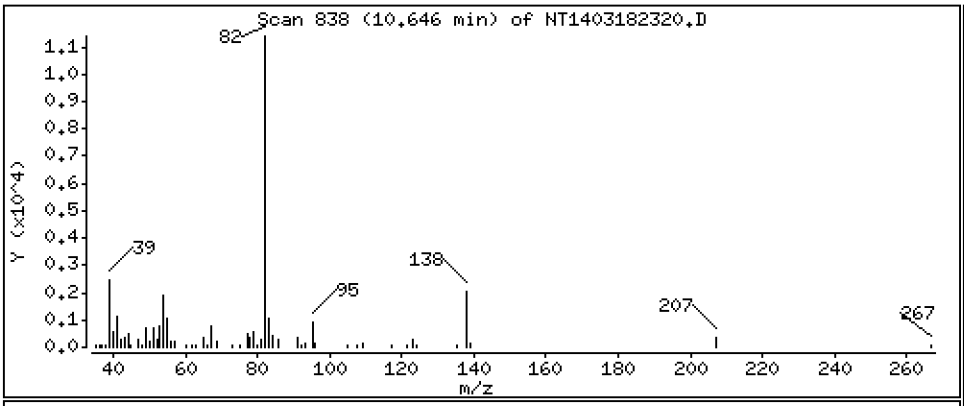
Operator: JGR

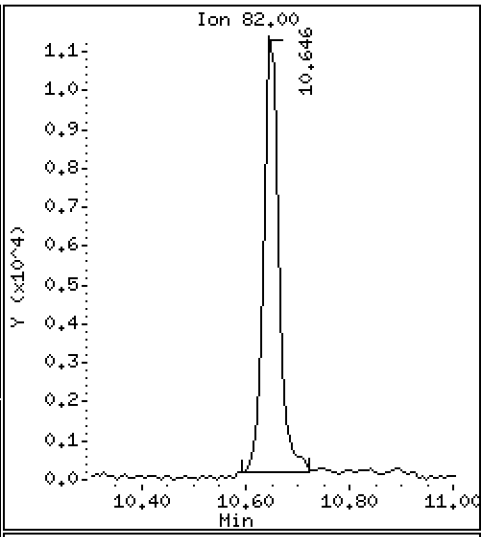
Column phase: ZB-5msi

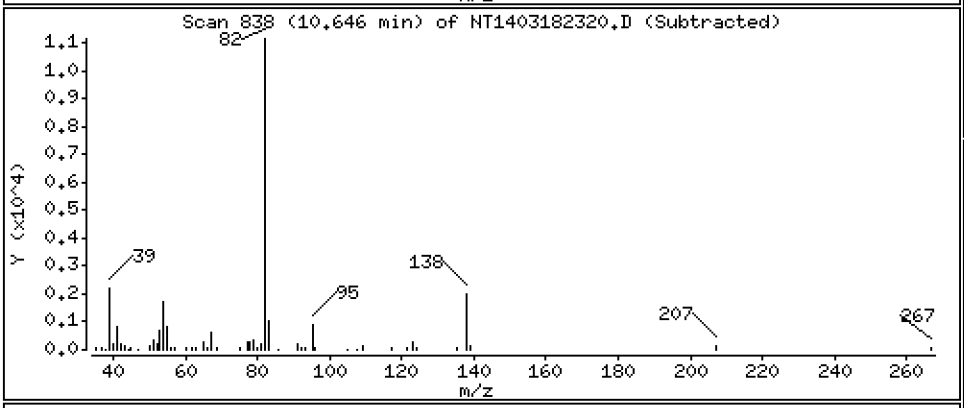
Column diameter: 0.25

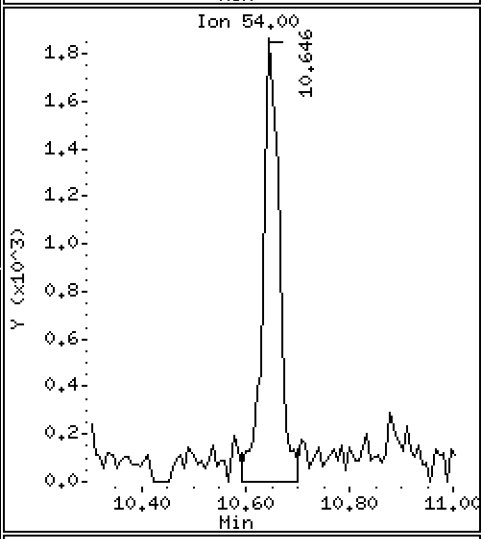
20 Isophorone

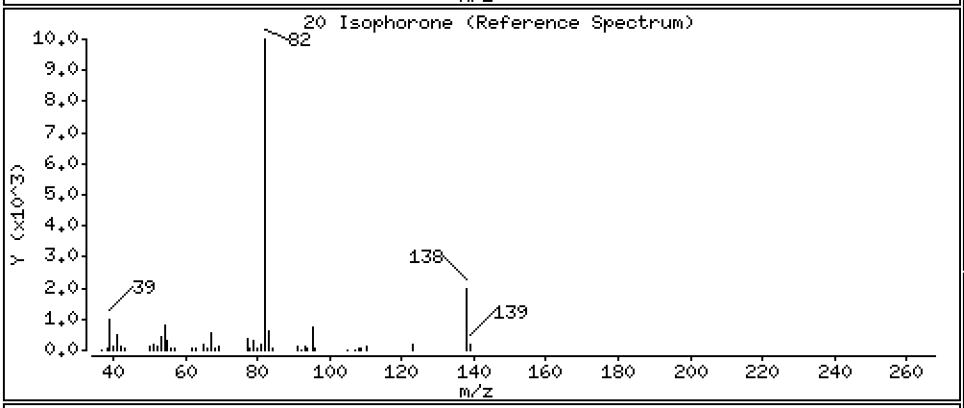
Concentration: 0.1613 ug/mL

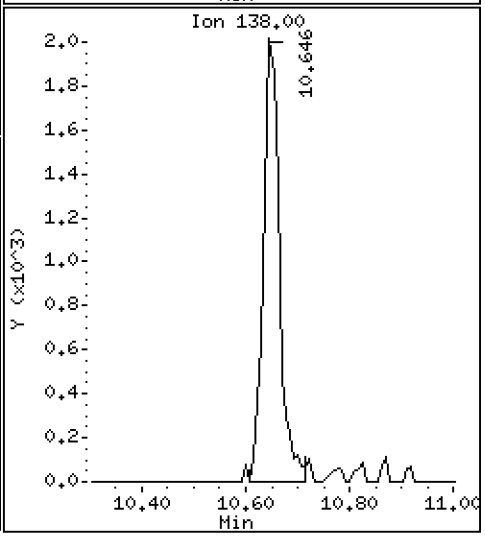


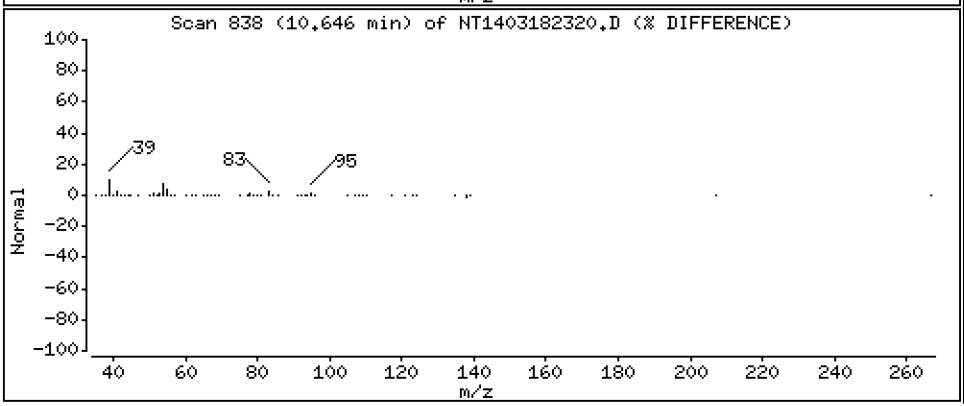












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

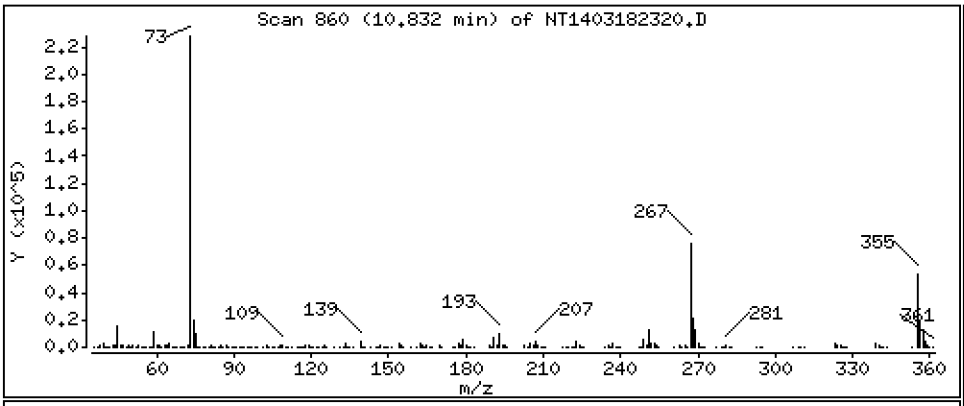
Operator: JGR

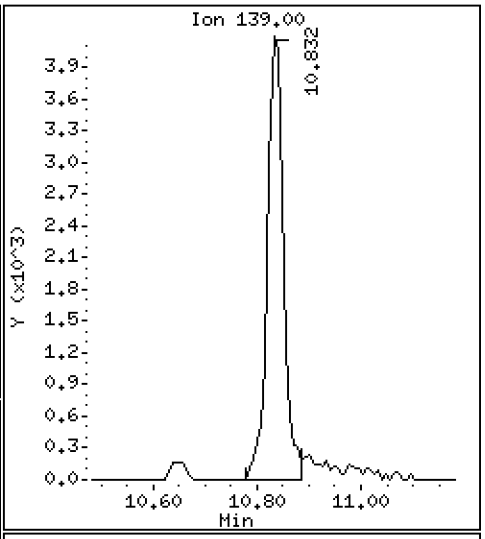
Column phase: ZB-5msi

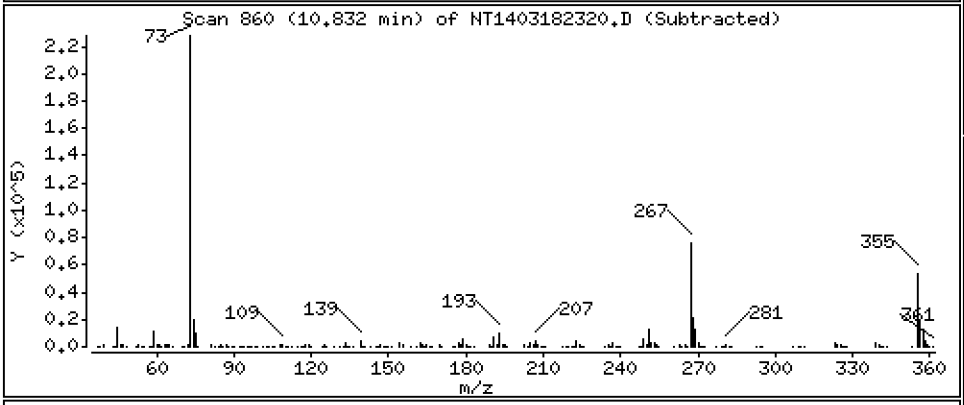
Column diameter: 0.25

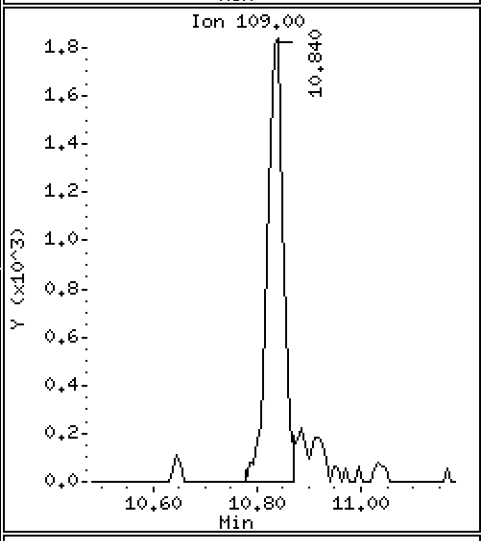
21 2-Nitrophenol

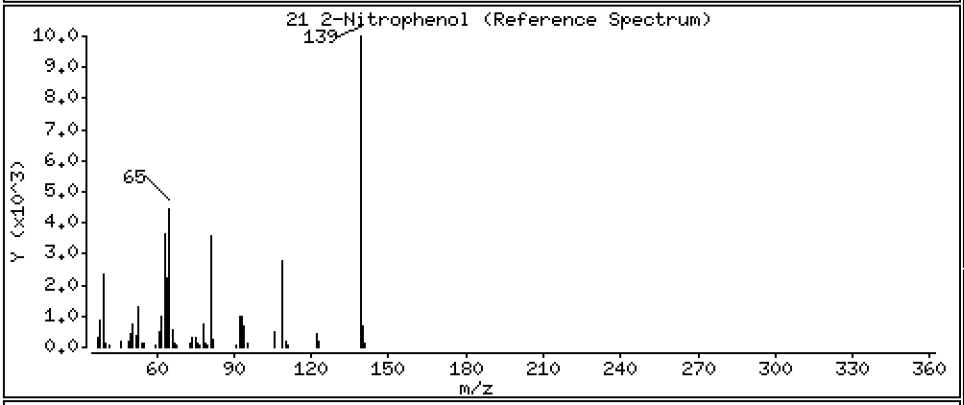
Concentration: 0.1562 ug/mL

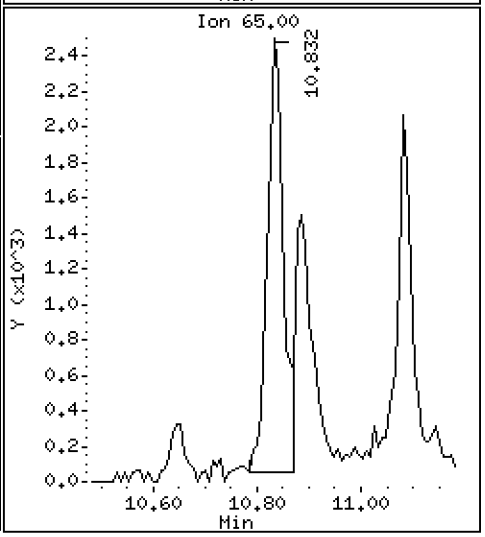


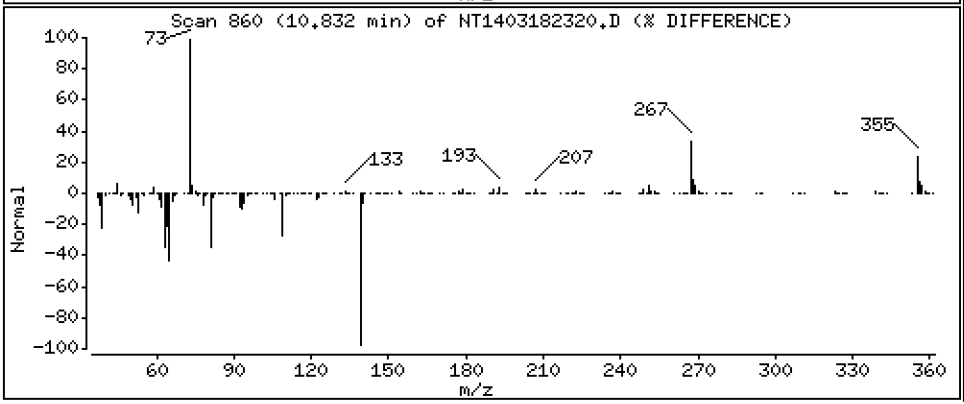












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

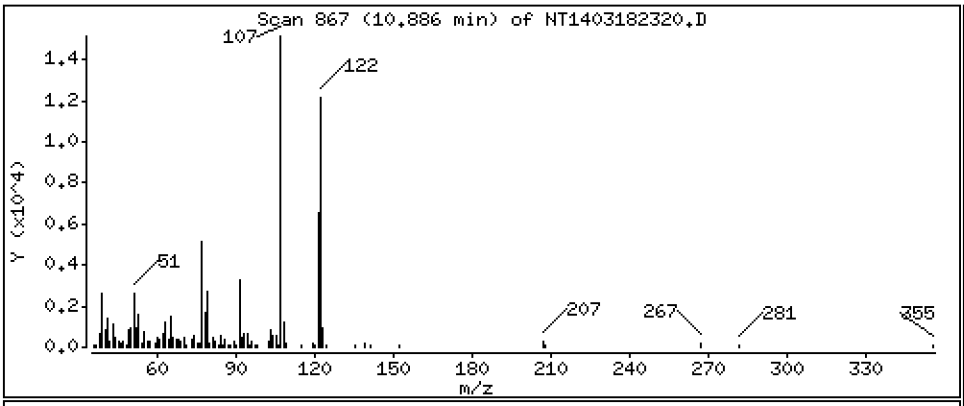
Operator: JGR

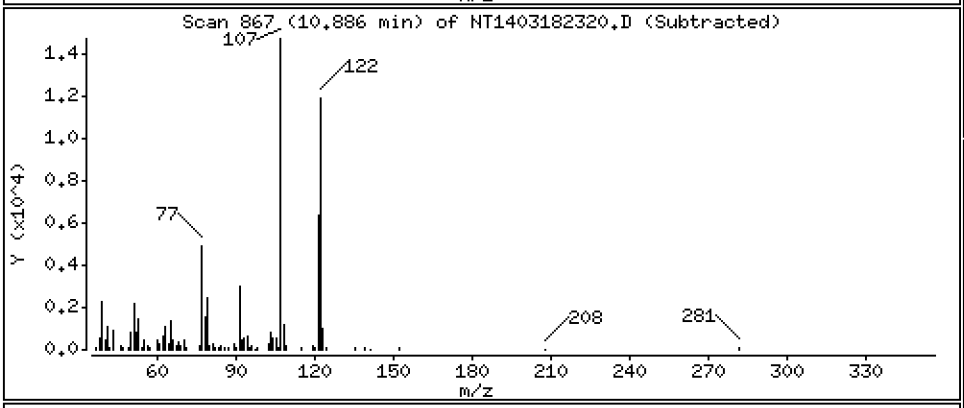
Column phase: ZB-5msi

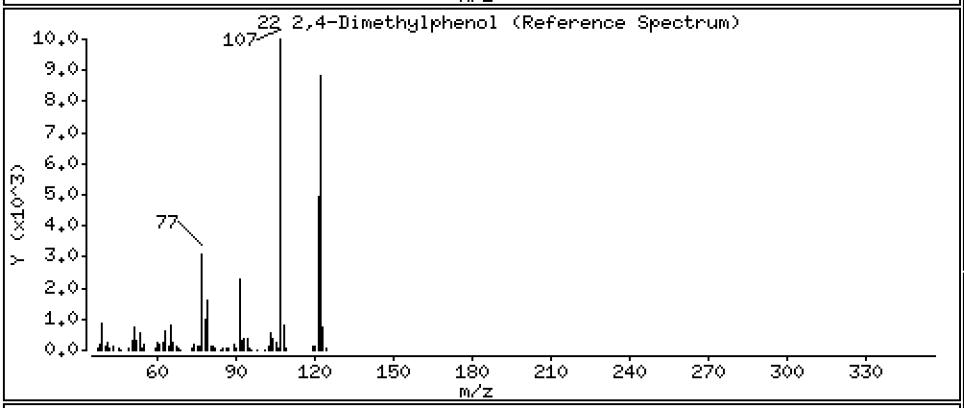
Column diameter: 0.25

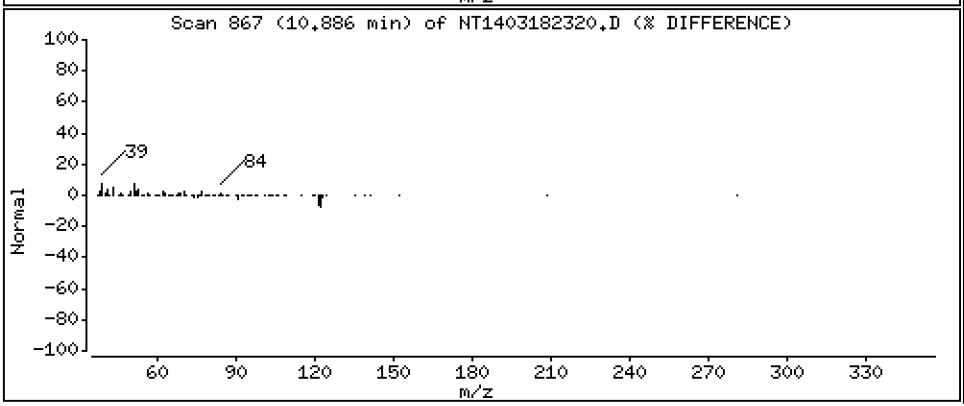
22 2,4-Dimethylphenol

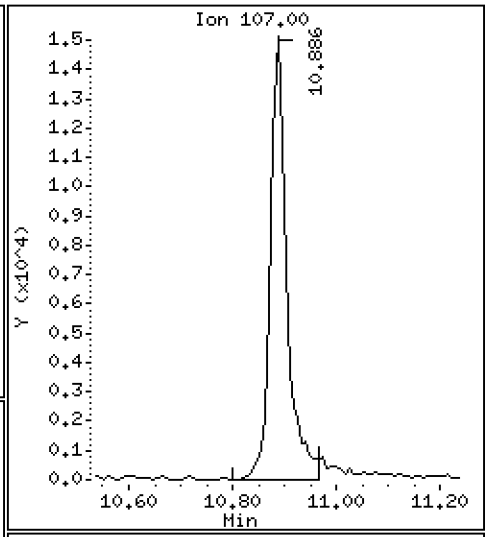
Concentration: 0.3789 ug/mL

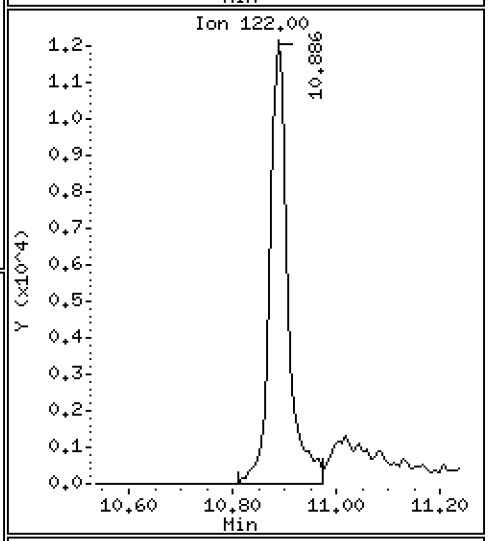


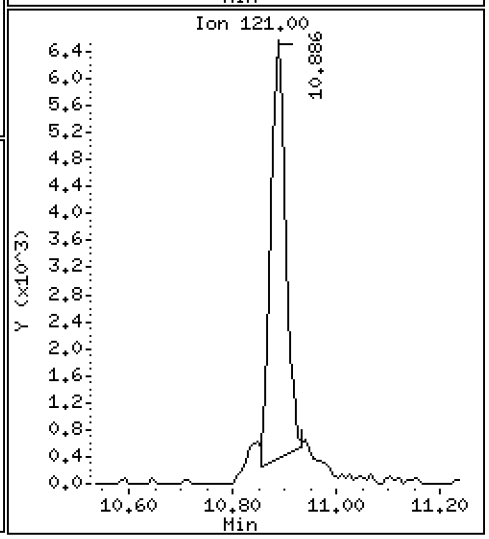












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

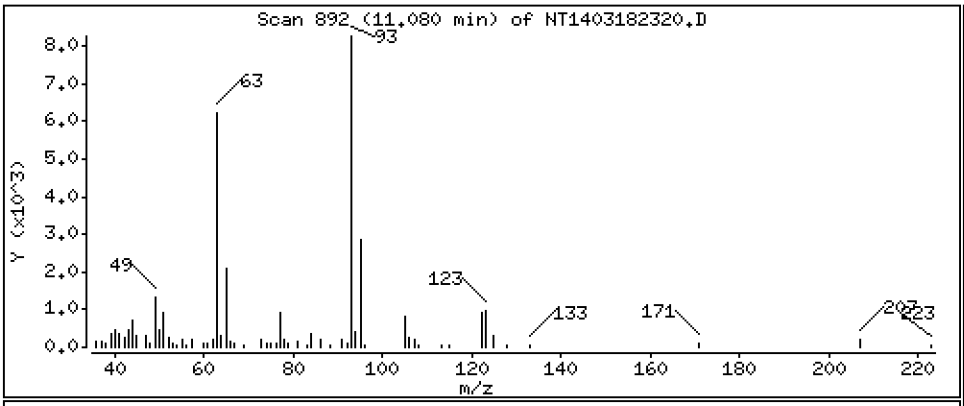
Operator: JGR

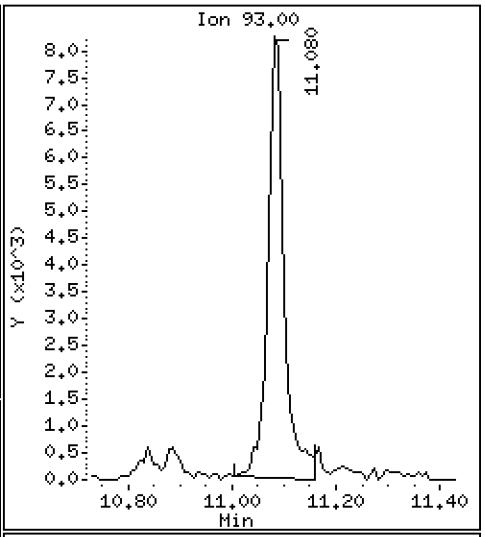
Column phase: ZB-5msi

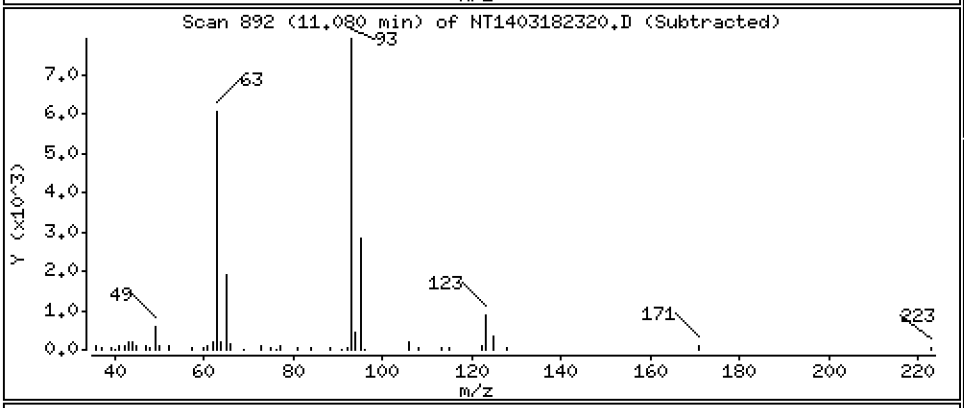
Column diameter: 0.25

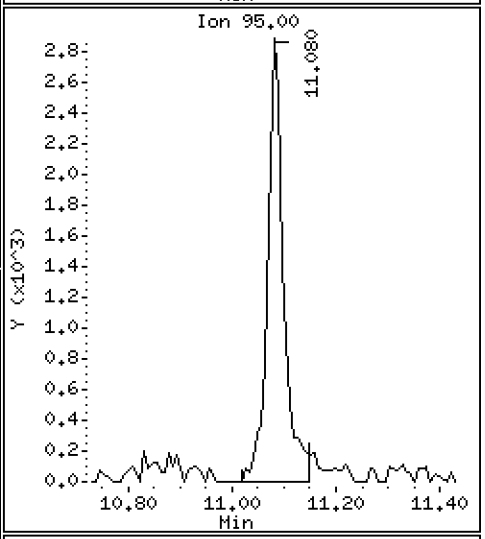
23 Bis(2-Chloroethoxy)methane

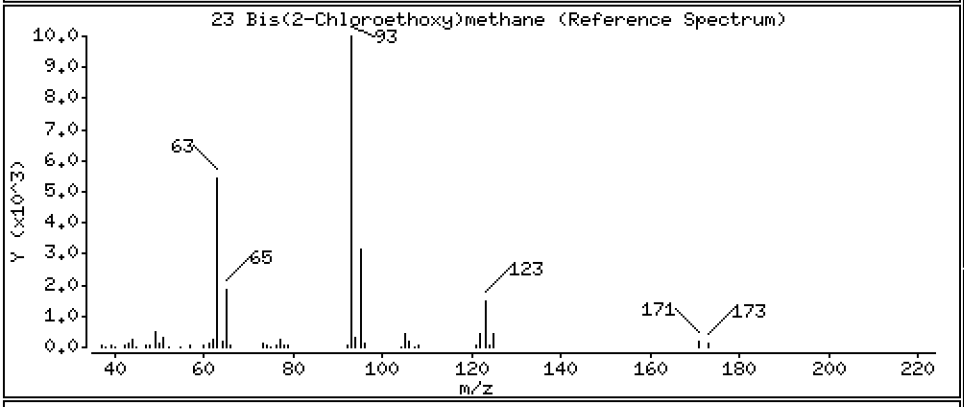
Concentration: 0.1909 ug/mL

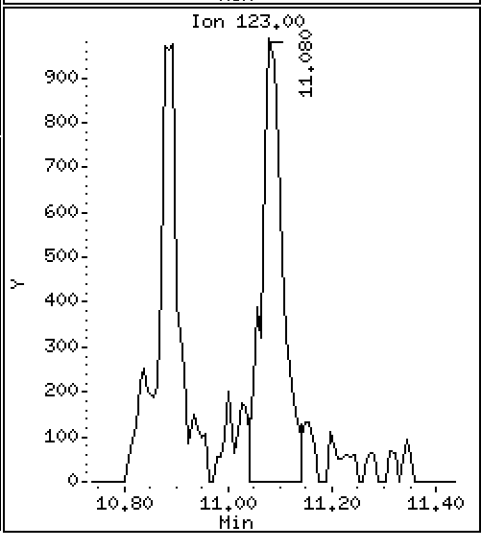


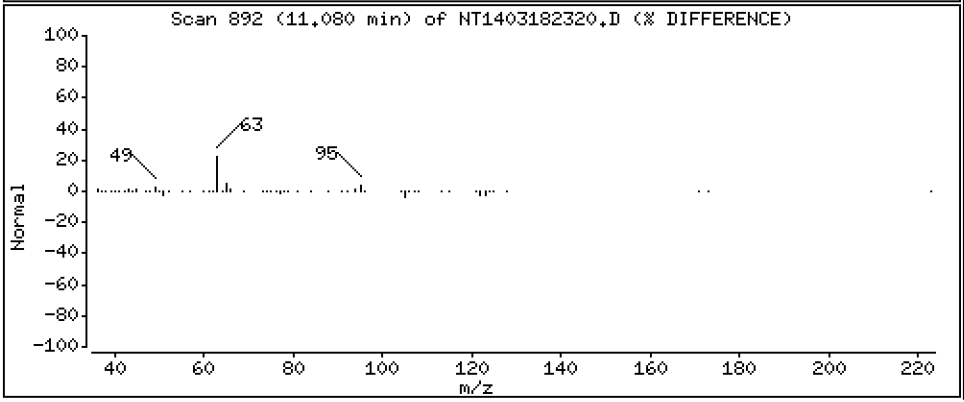












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

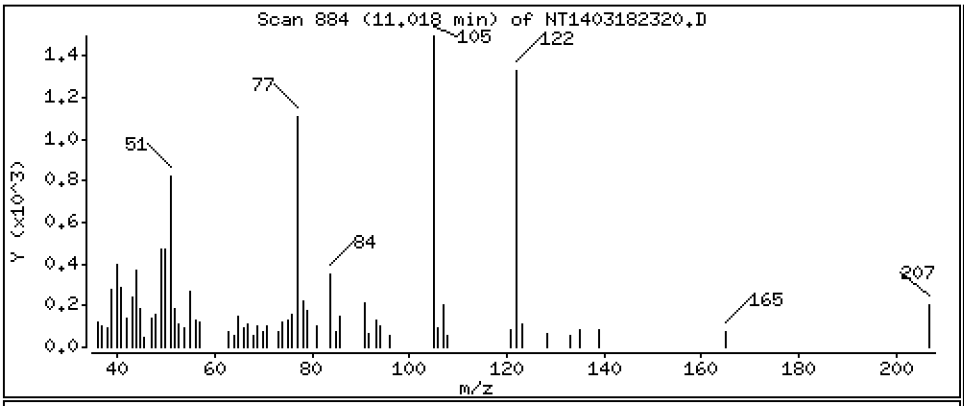
Operator: JGR

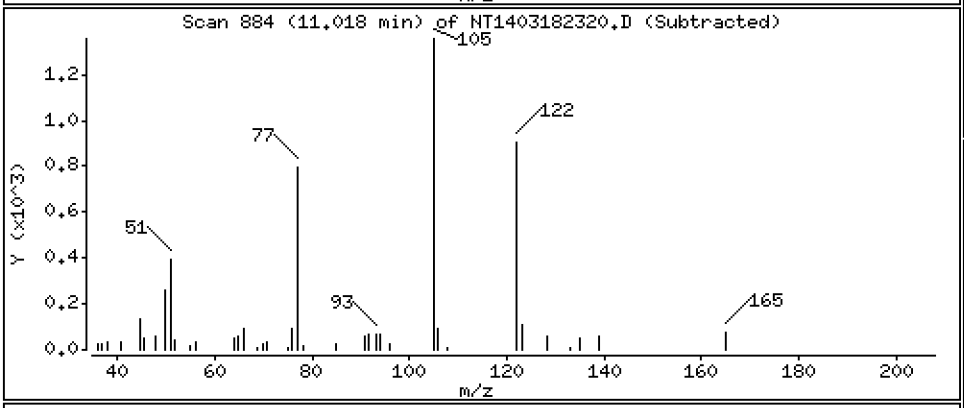
Column phase: ZB-5msi

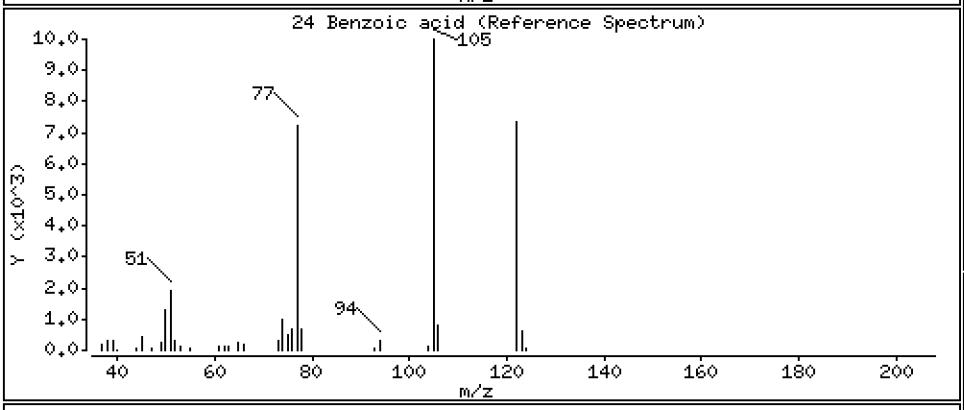
Column diameter: 0.25

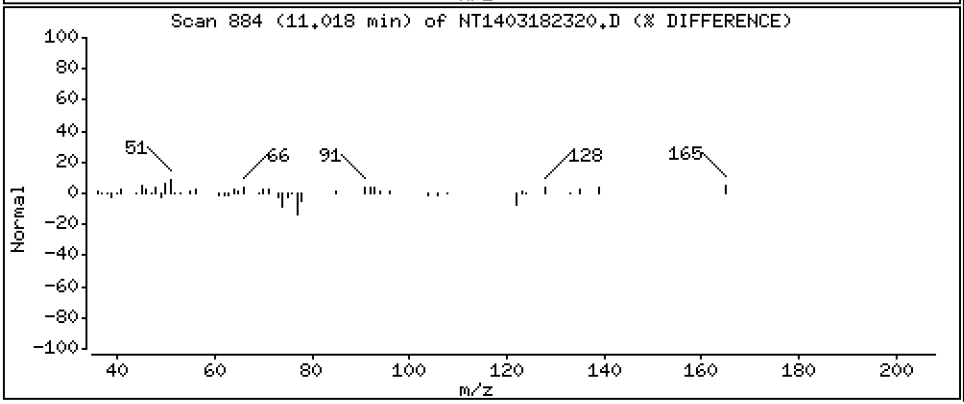
24 Benzoic acid

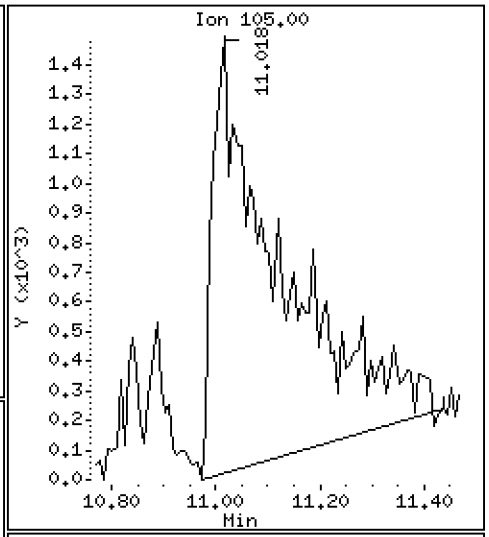
Concentration: 0.1958 ug/mL

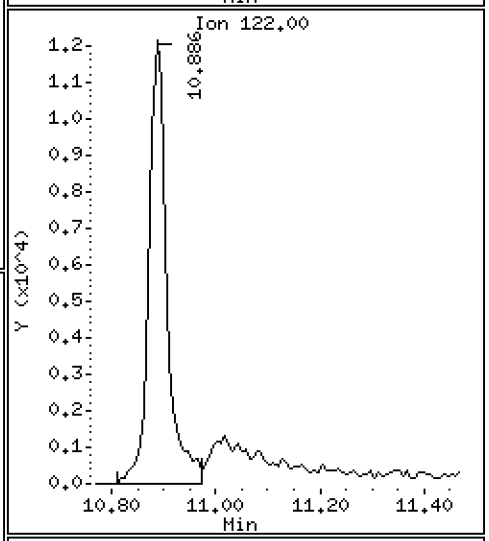


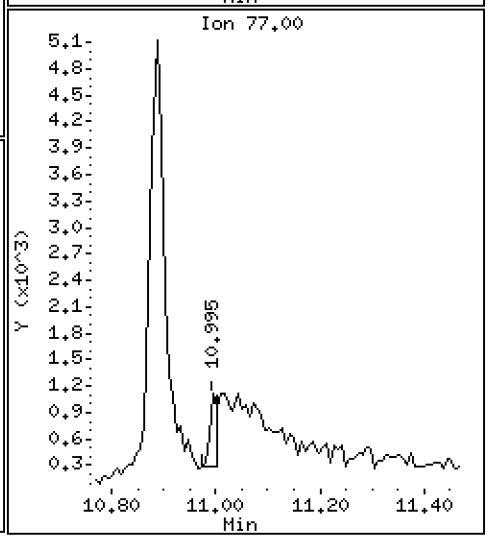












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

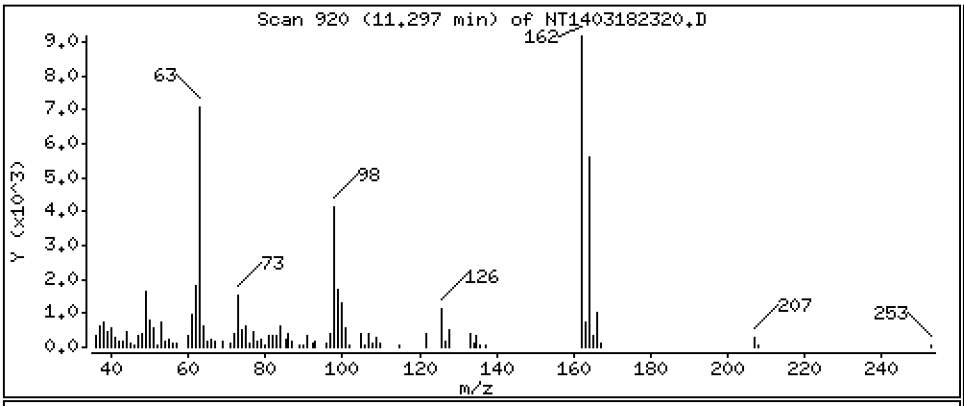
Operator: JGR

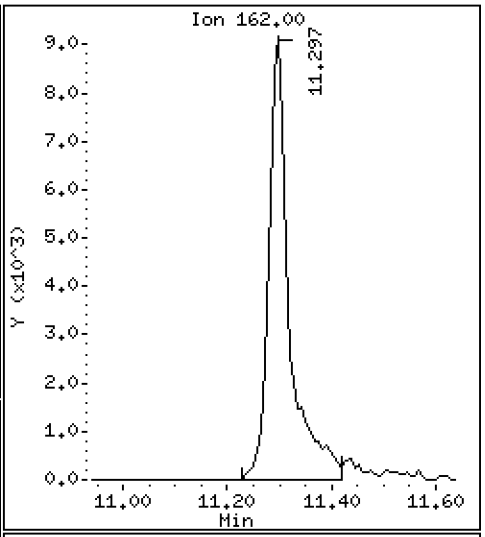
Column phase: ZB-5msi

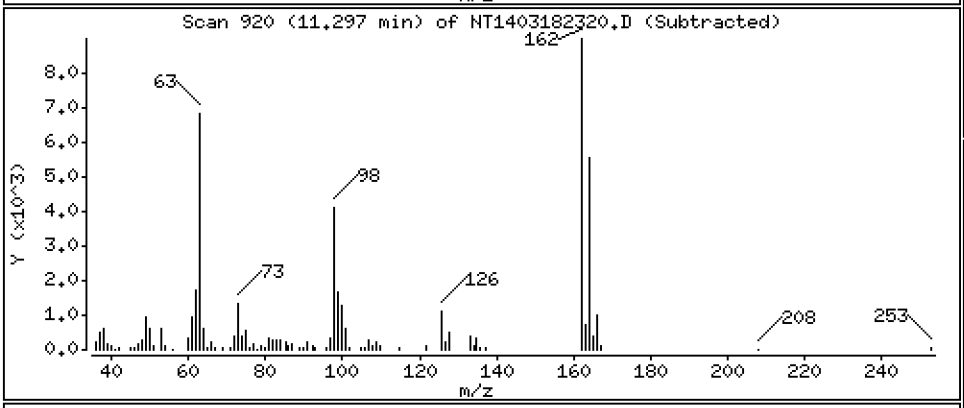
Column diameter: 0.25

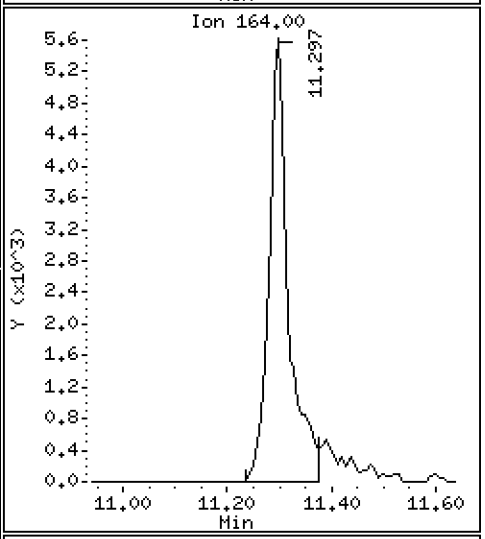
25 2,4-Dichlorophenol

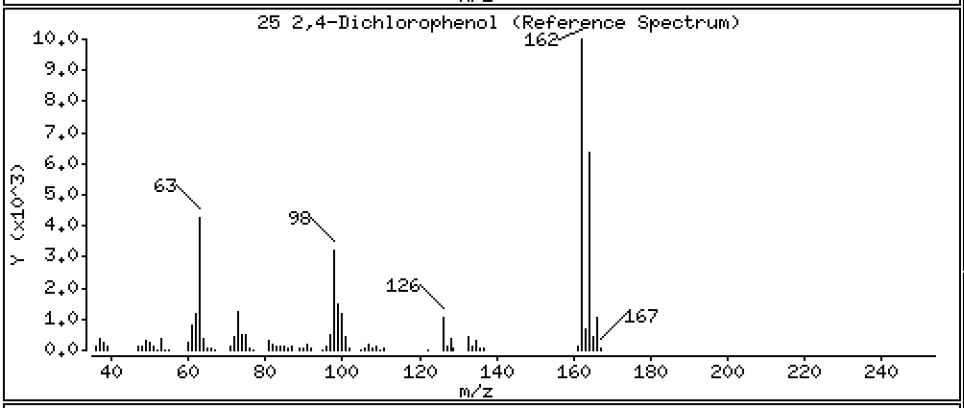
Concentration: 0.3983 ug/mL

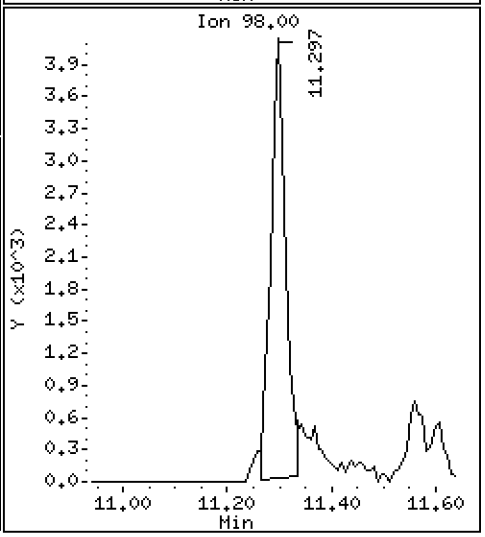


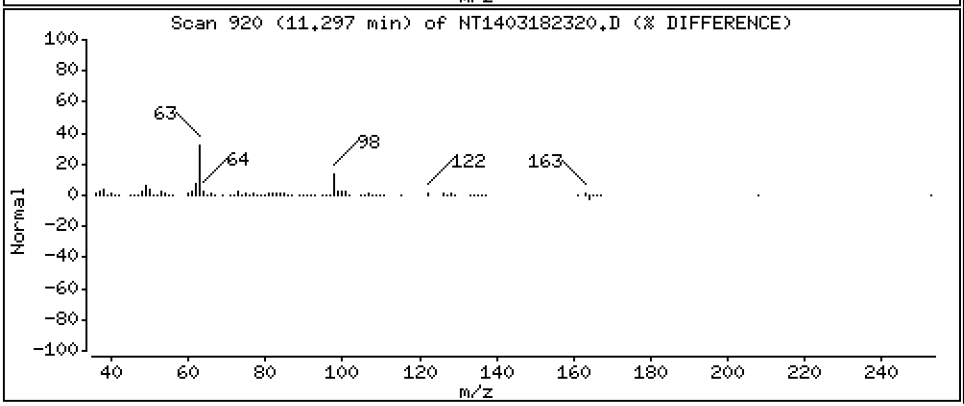












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

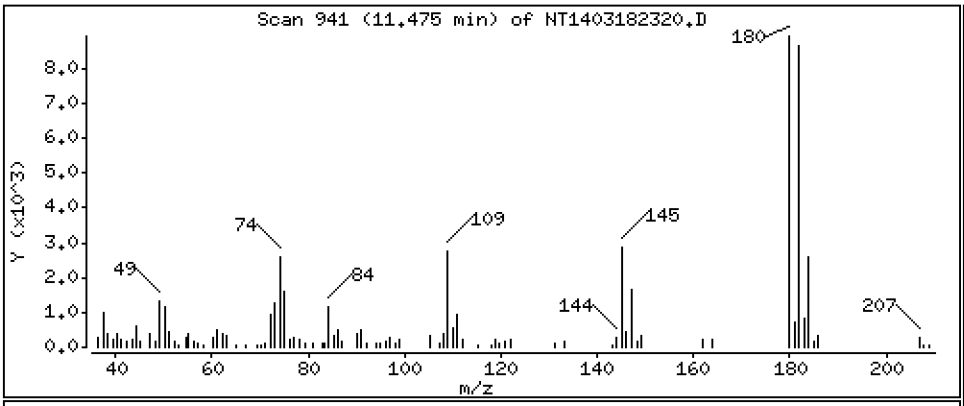
Operator: JGR

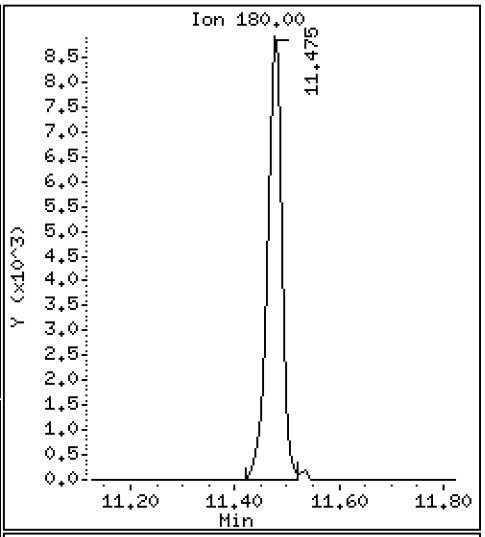
Column phase: ZB-5msi

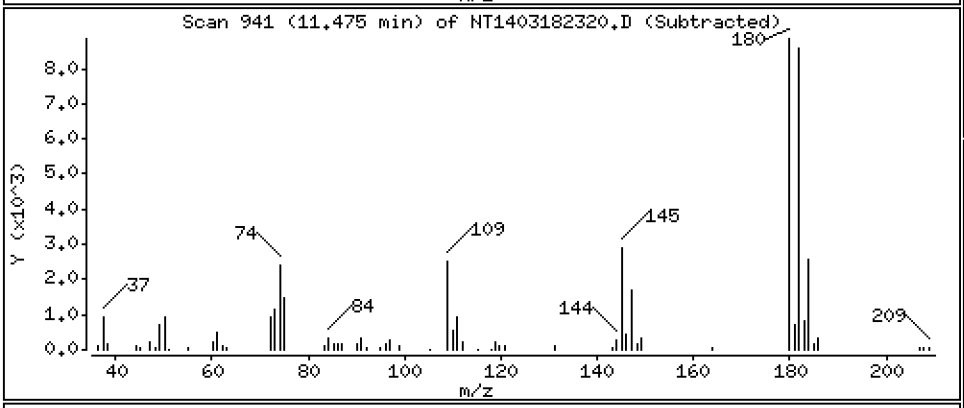
Column diameter: 0.25

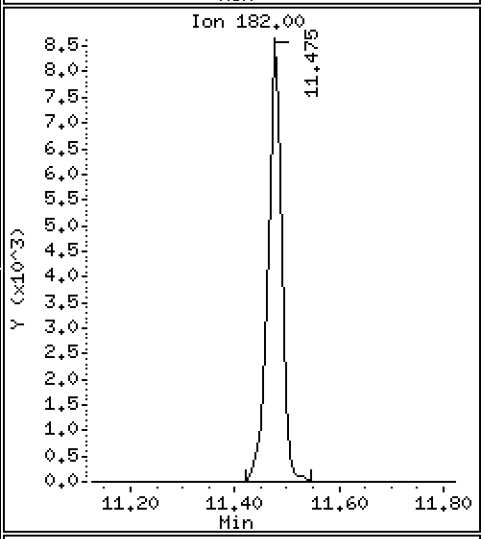
26 1,2,4-Trichlorobenzene

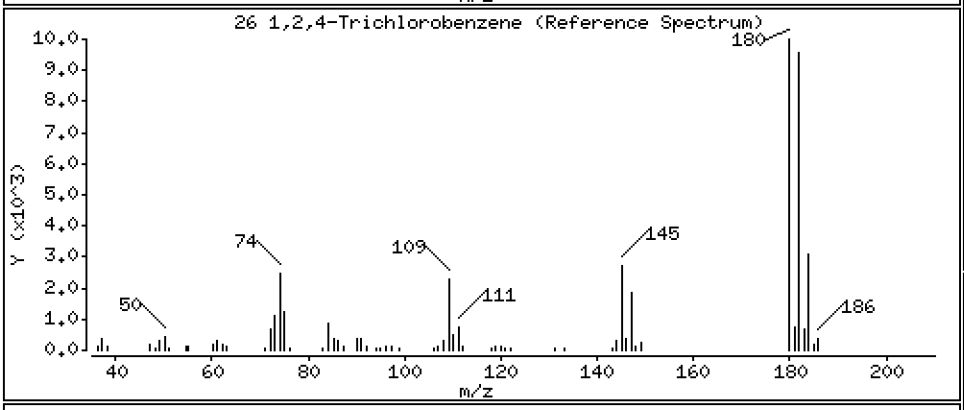
Concentration: 0.2039 ug/mL

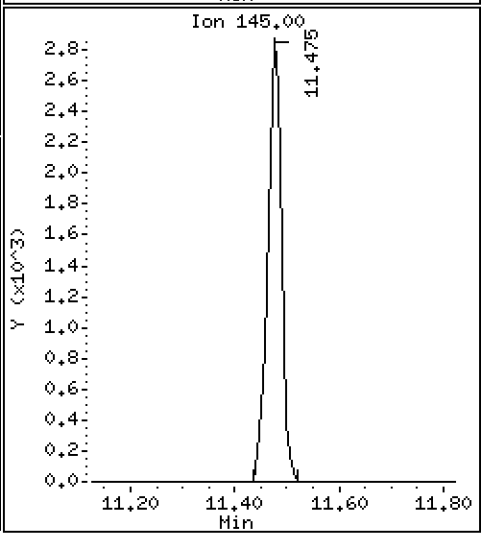


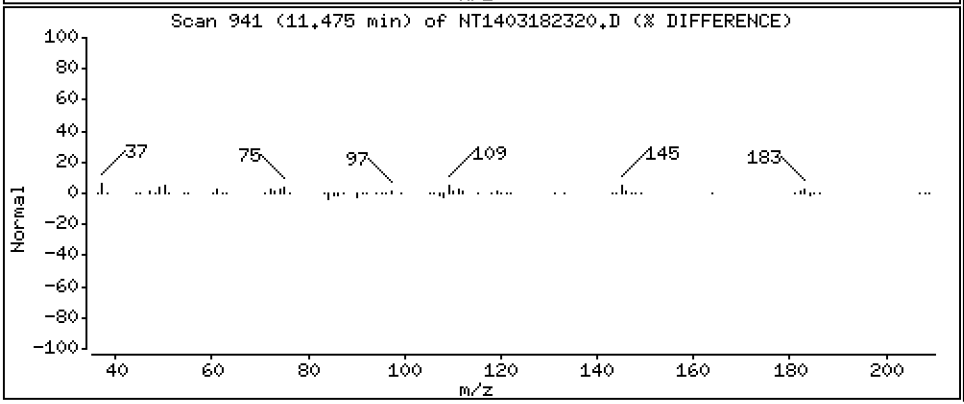












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

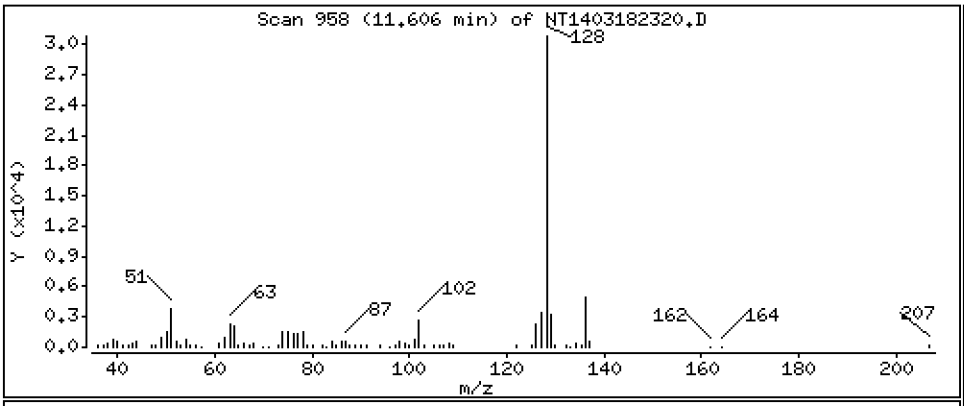
Operator: JGR

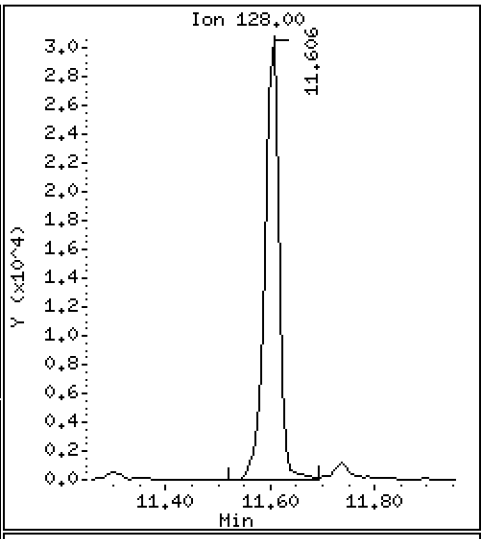
Column phase: ZB-5msi

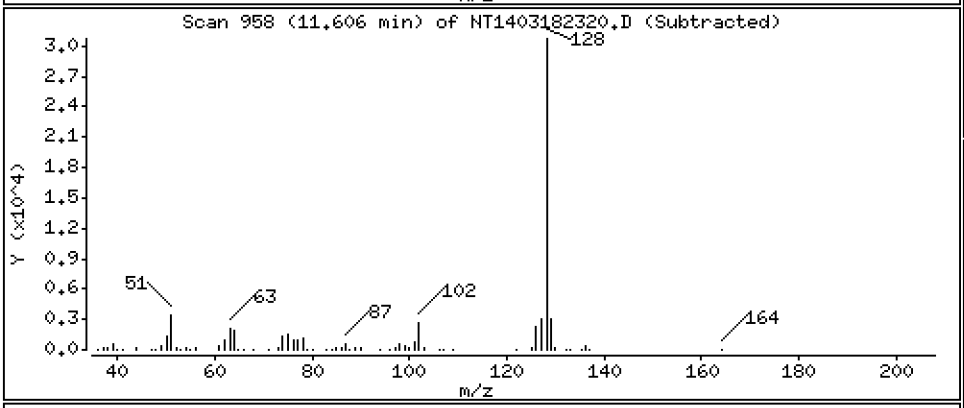
Column diameter: 0.25

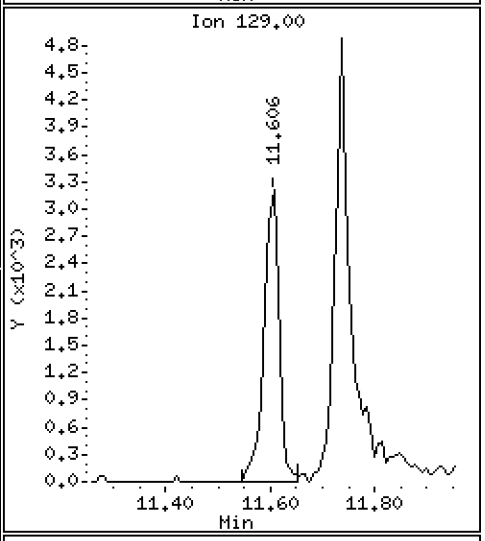
28 Naphthalene

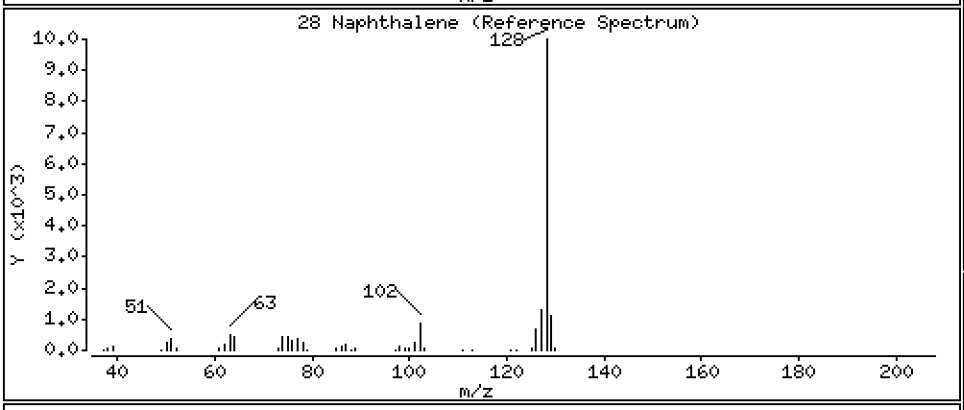
Concentration: 0.2136 ug/mL

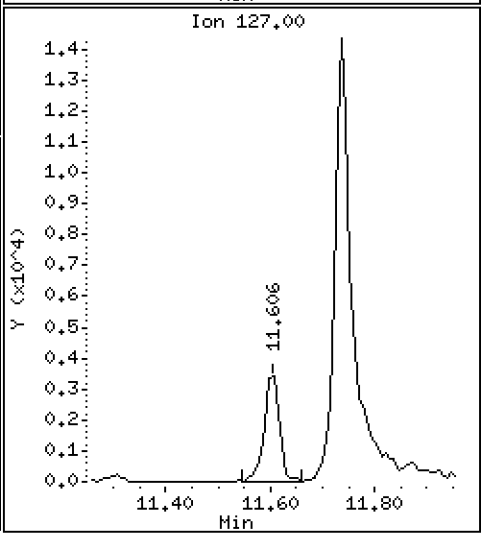


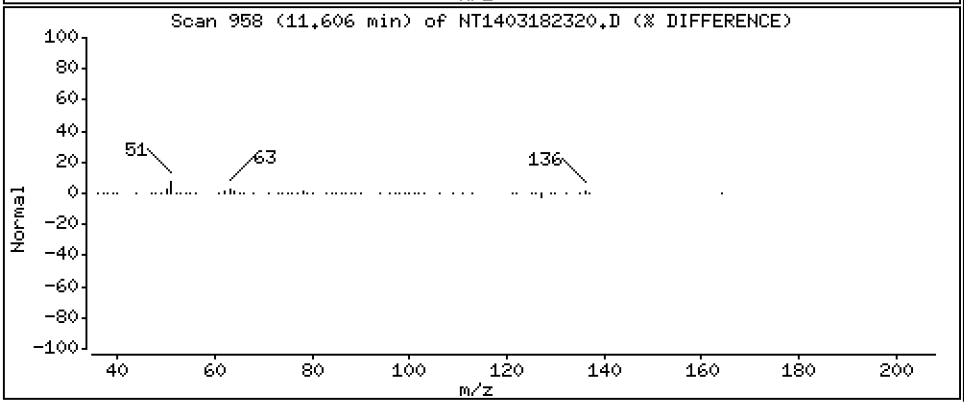












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

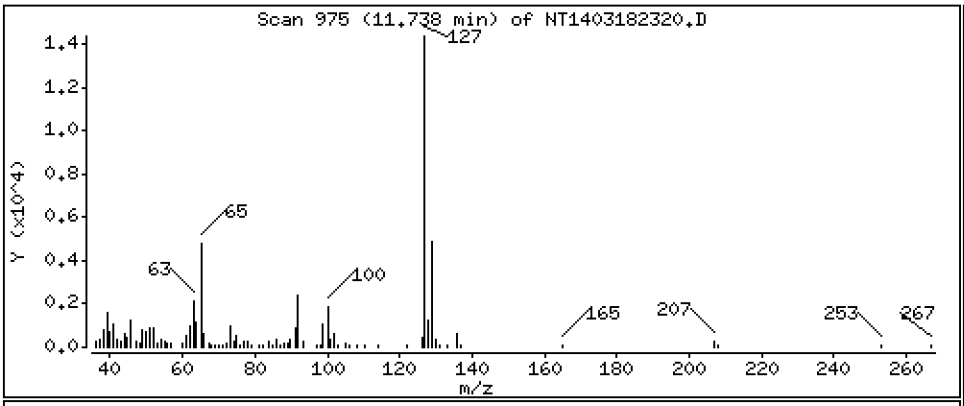
Operator: JGR

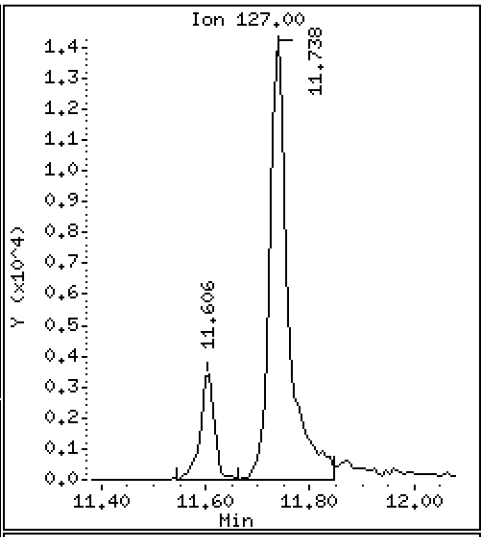
Column phase: ZB-5msi

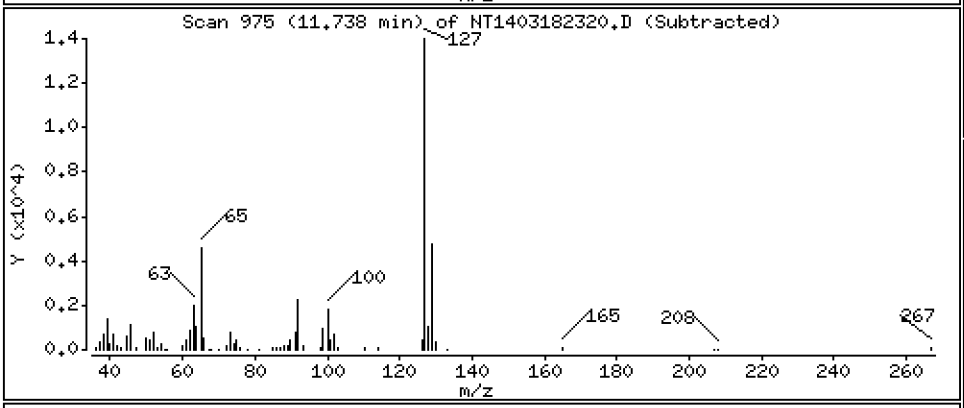
Column diameter: 0.25

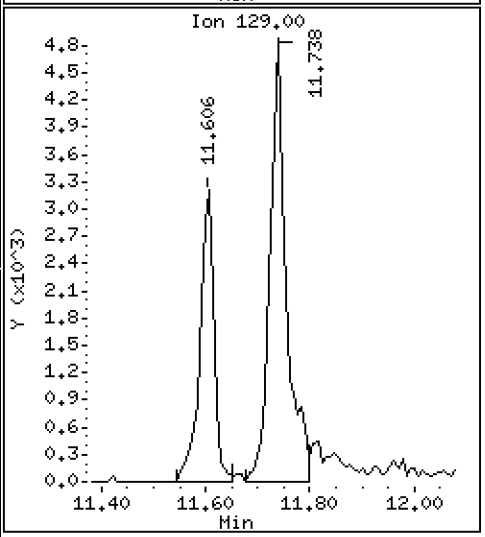
29 4-Chloroaniline

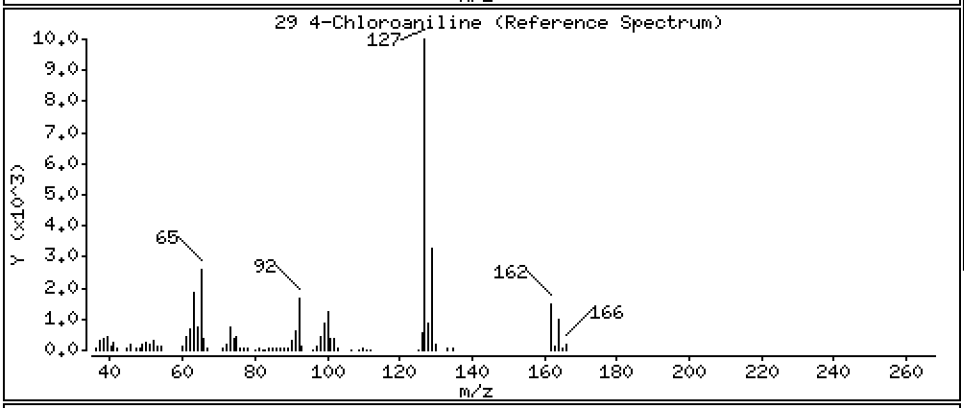
Concentration: 0.3212 ug/mL

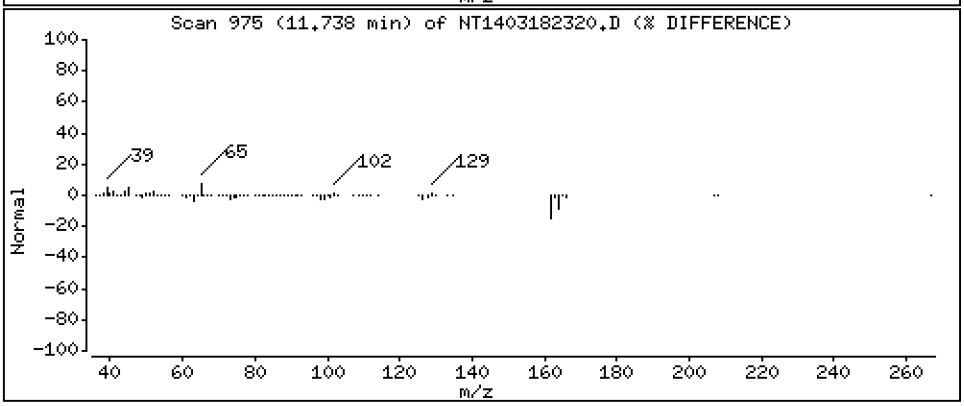












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

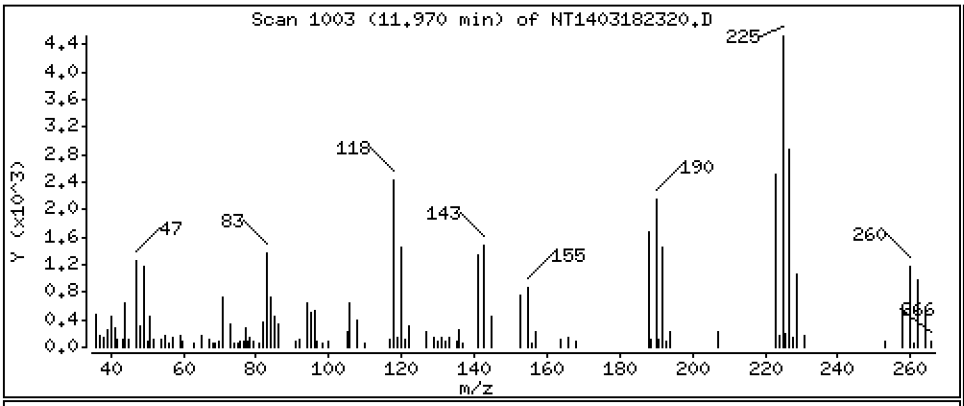
Operator: JGR

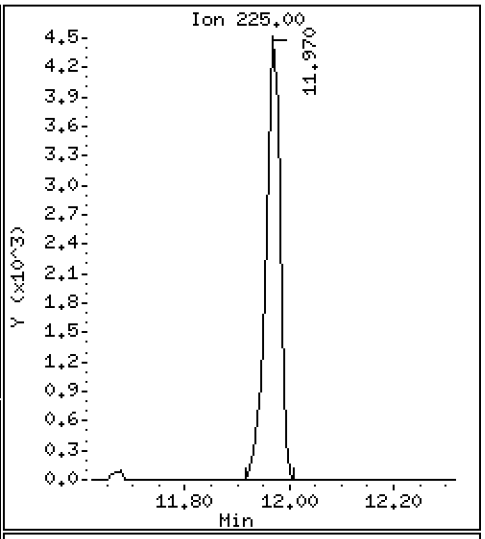
Column phase: ZB-5msi

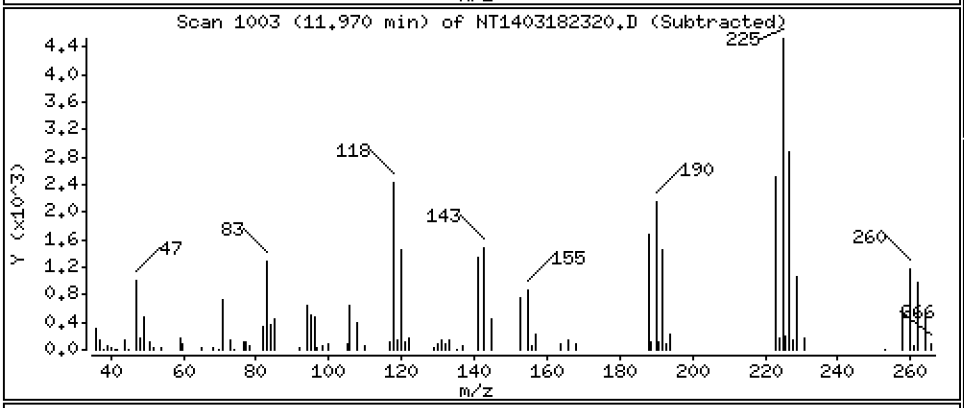
Column diameter: 0.25

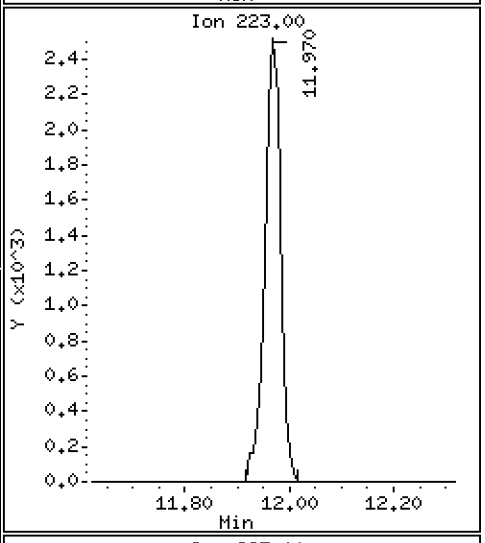
30 Hexachlorobutadiene

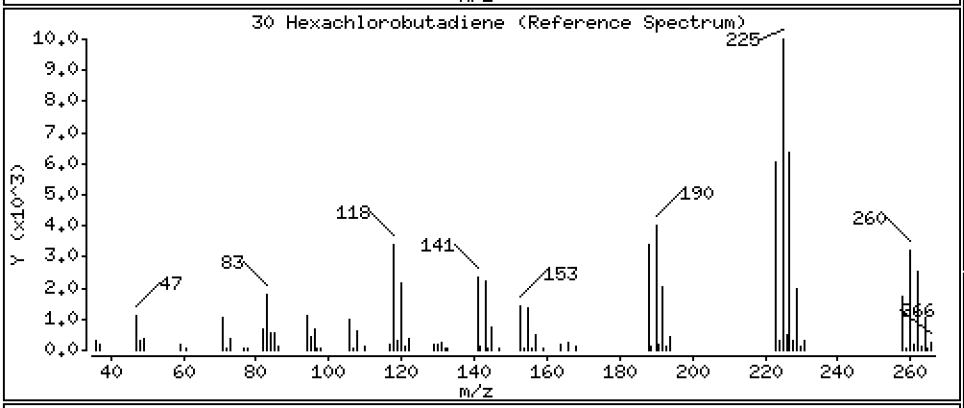
Concentration: 0.2176 ug/mL

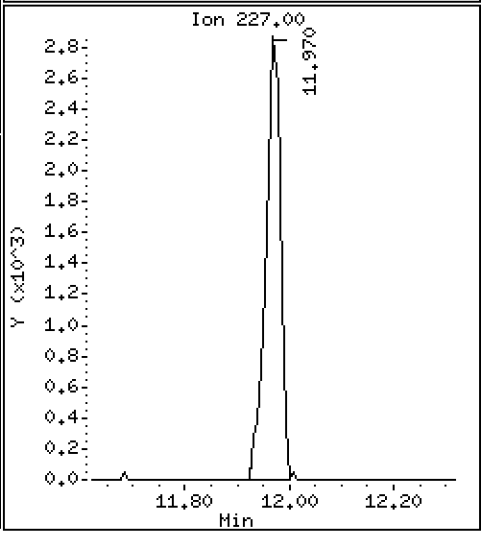


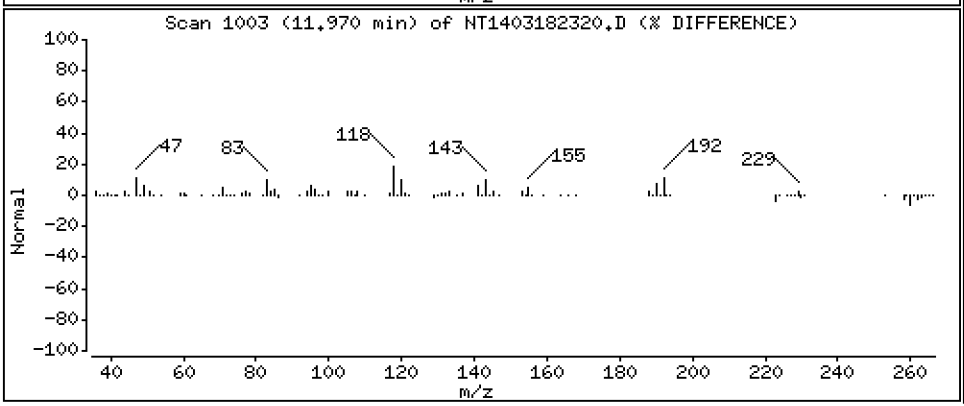












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

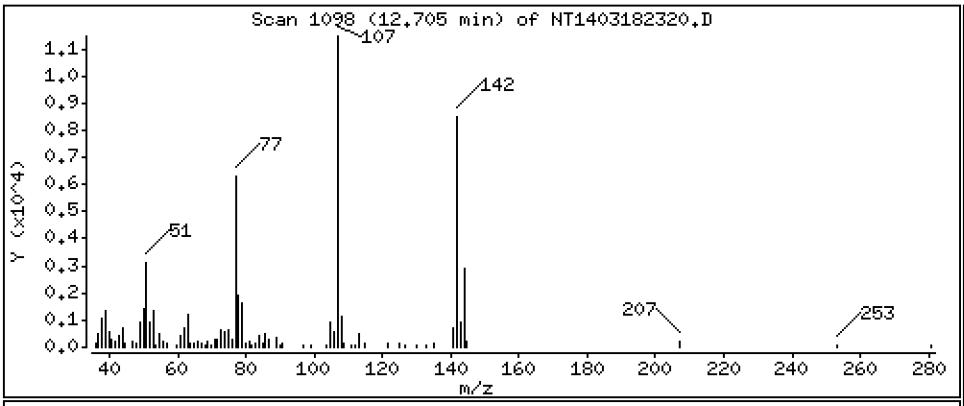
Operator: JGR

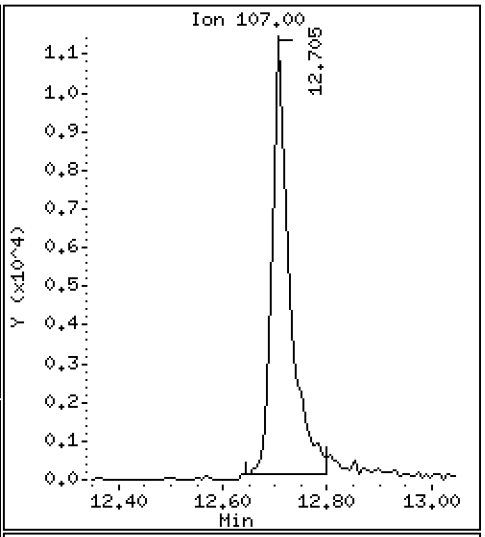
Column phase: ZB-5msi

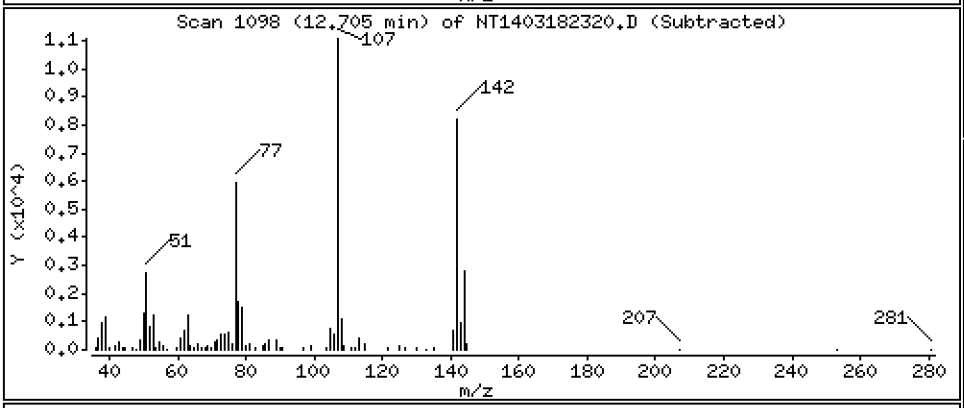
Column diameter: 0.25

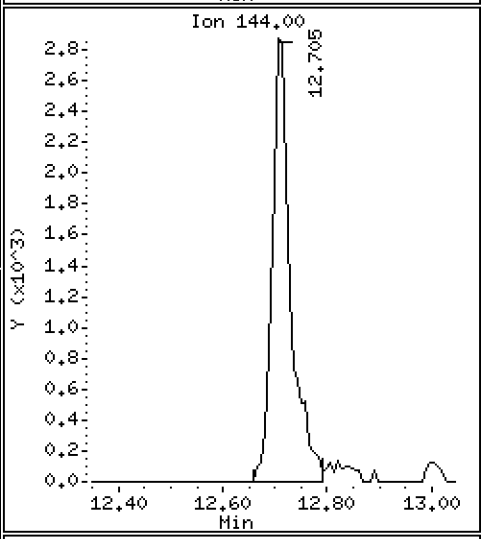
31 4-Chloro-3-methylphenol

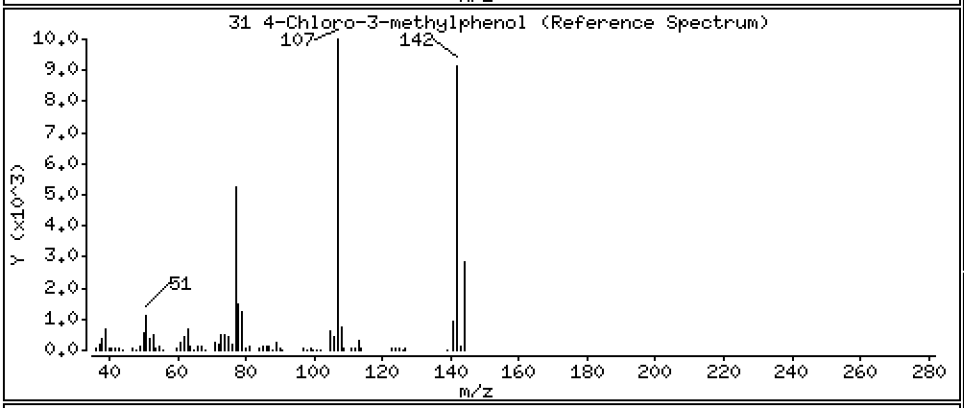
Concentration: 0.3256 ug/mL

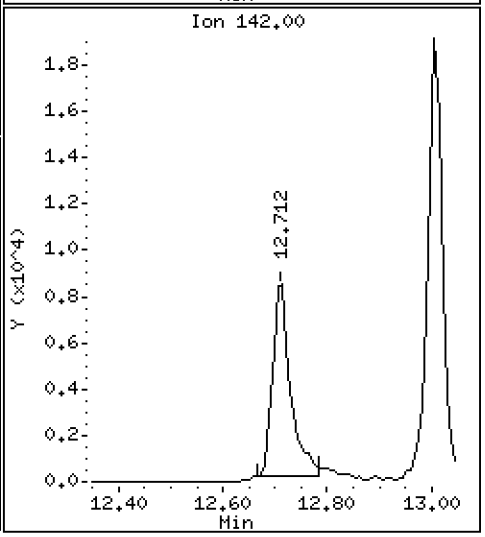


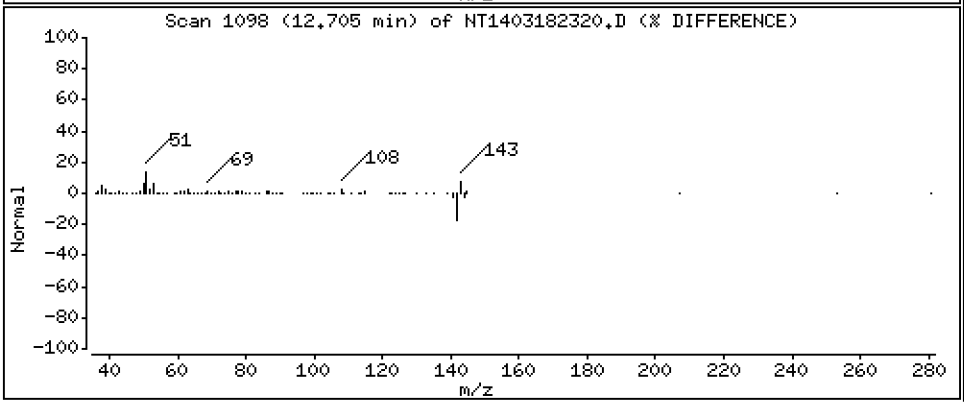












Date : 19-MAR-2023 04:28

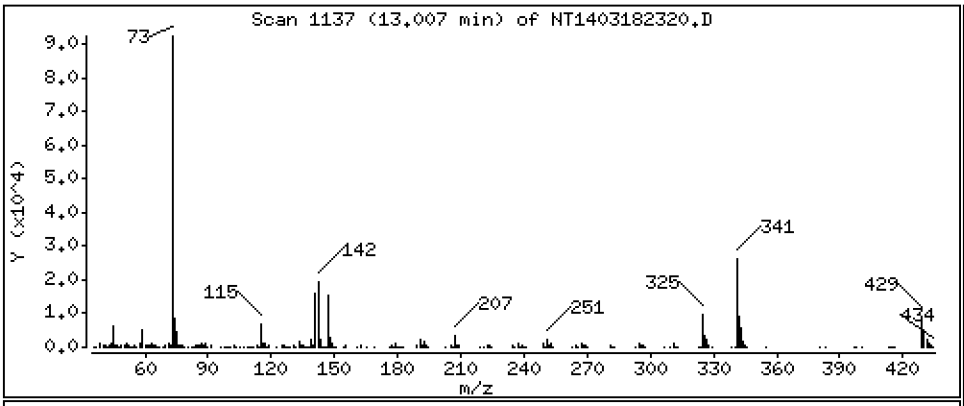
Client ID: Instrument: nt14.i

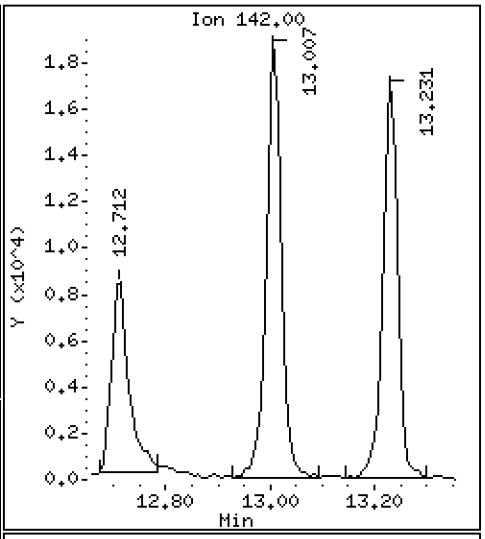
Sample Info: SLC0355-LCV2

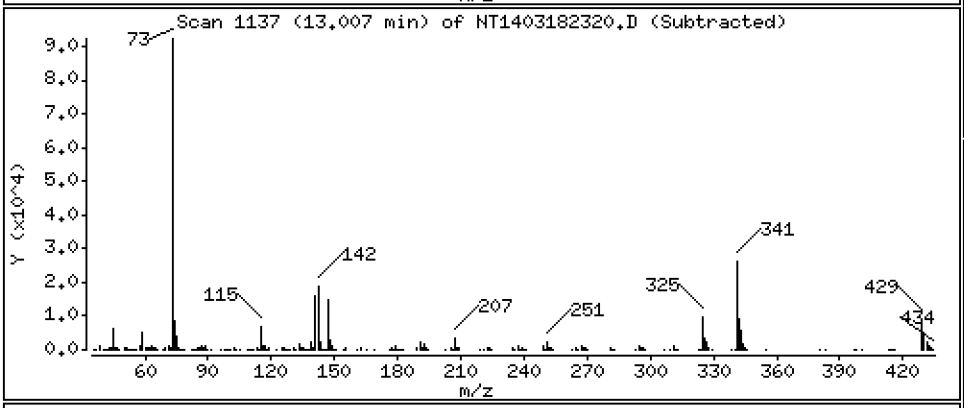
Operator: JGR

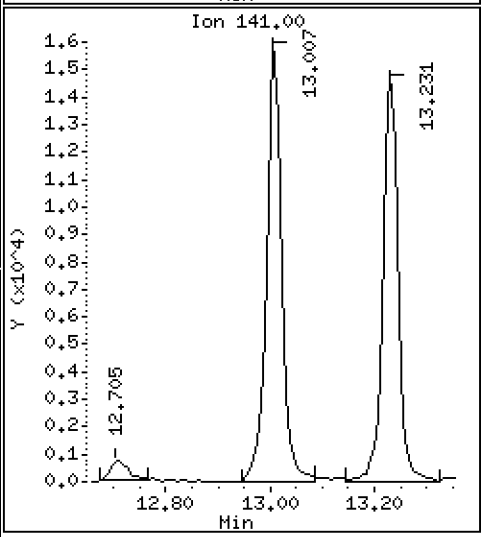
Column phase: ZB-5msi Column diameter: 0.25

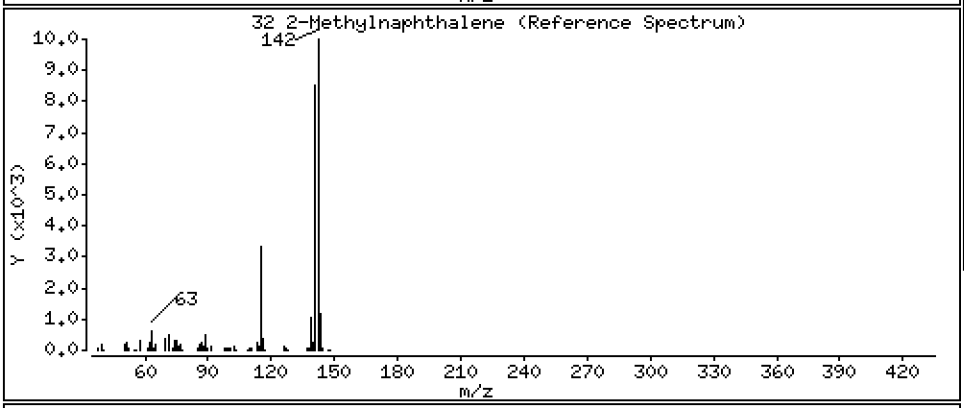
32 2-Methylnaphthalene Concentration: 0.2009 ug/mL

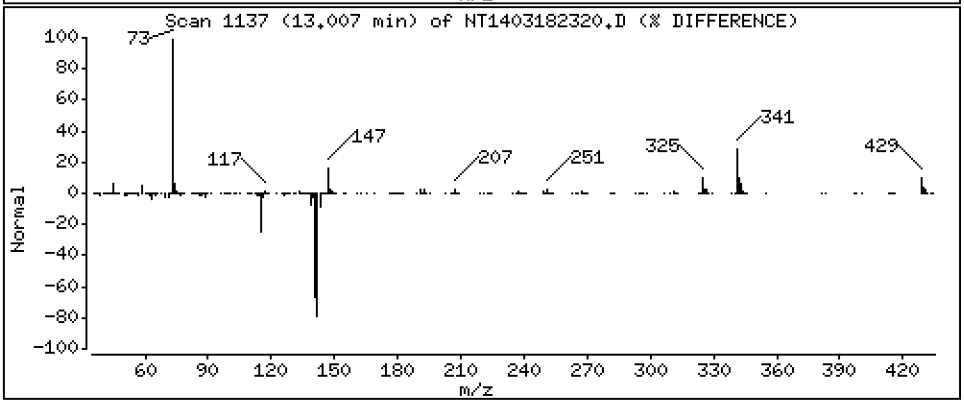












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

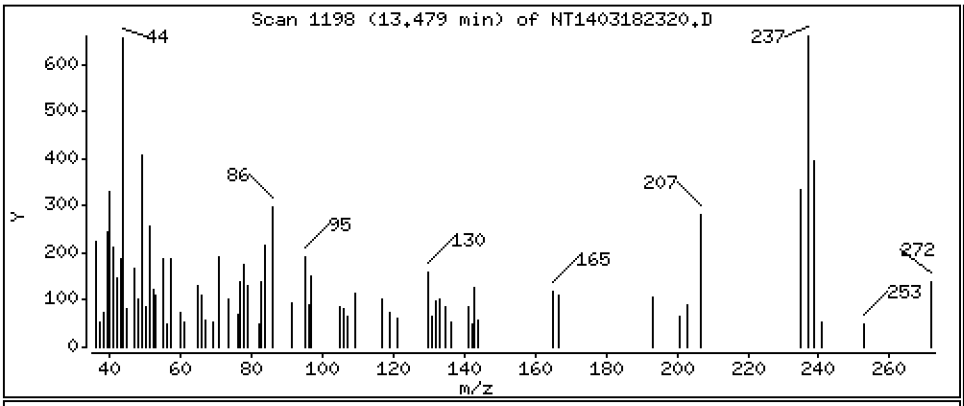
Operator: JGR

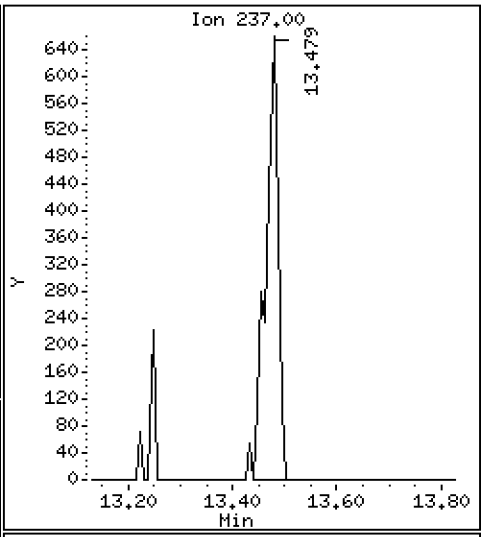
Column phase: ZB-5msi

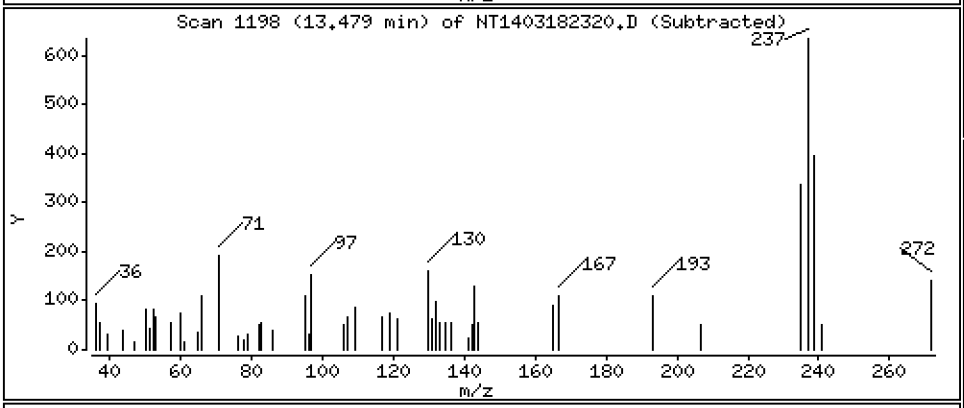
Column diameter: 0.25

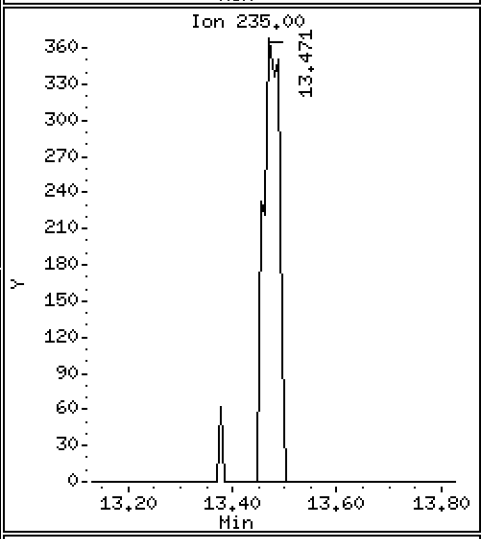
33 Hexachlorocyclopentadiene

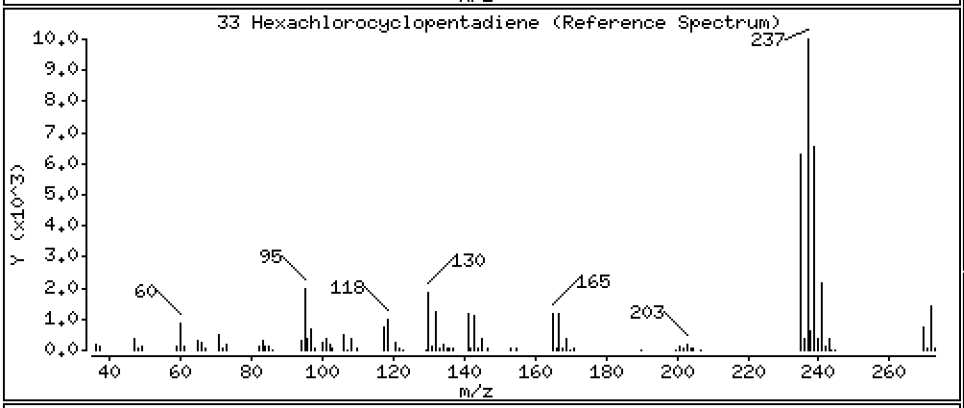
Concentration: 0.02526 ug/mL

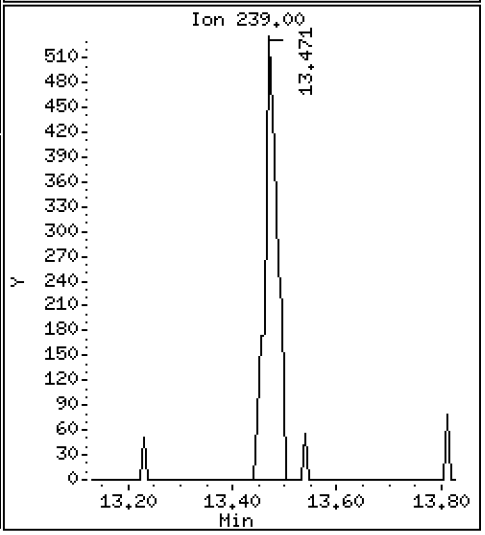


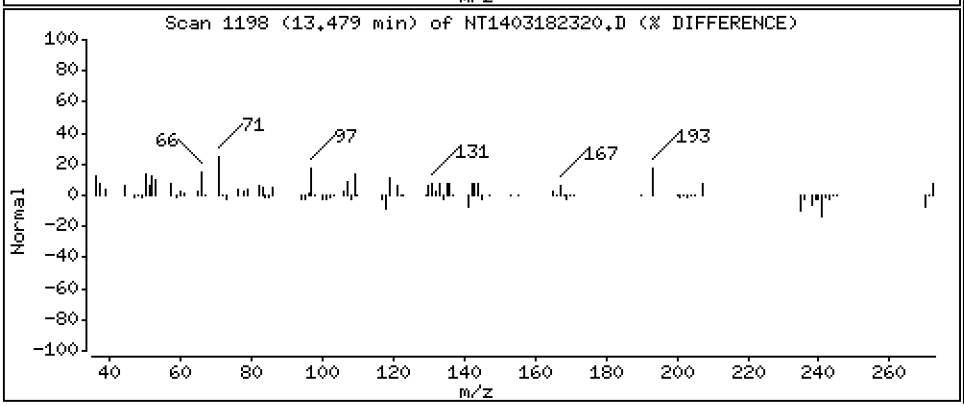












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

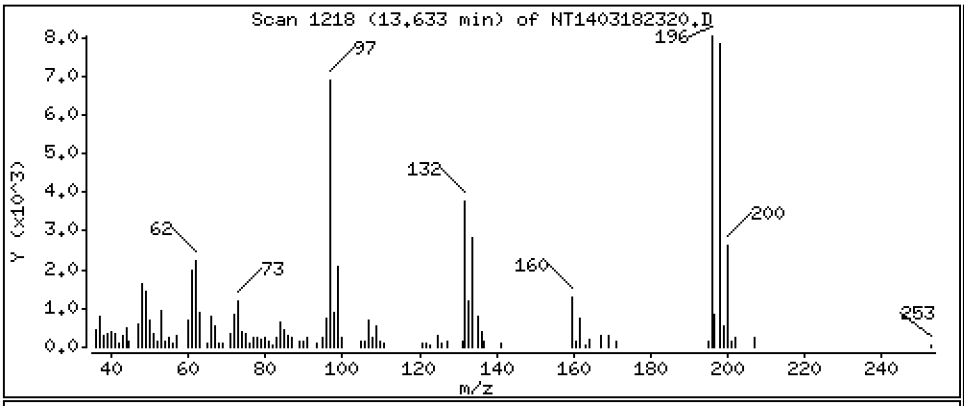
Operator: JGR

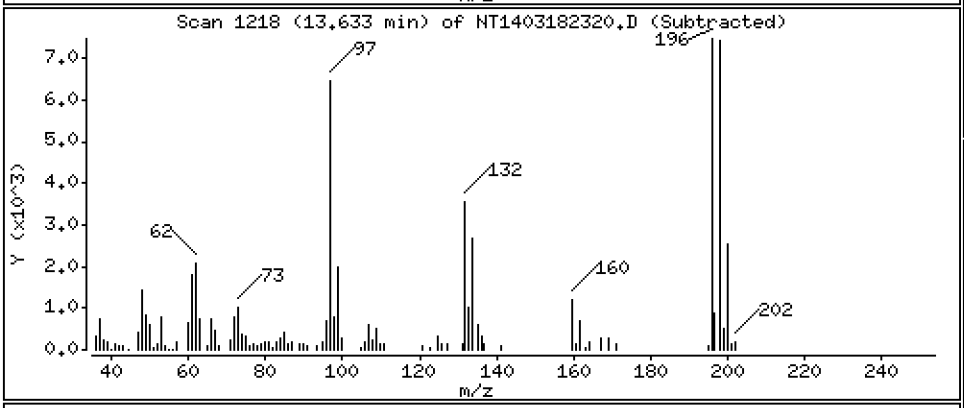
Column phase: ZB-5msi

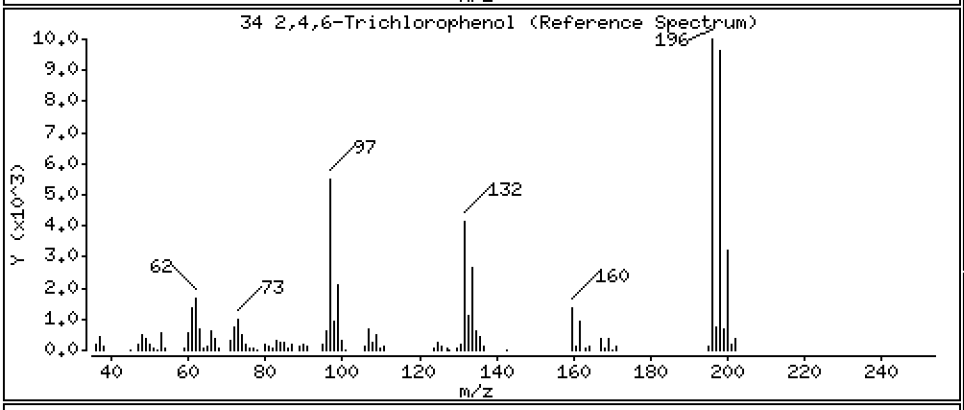
Column diameter: 0.25

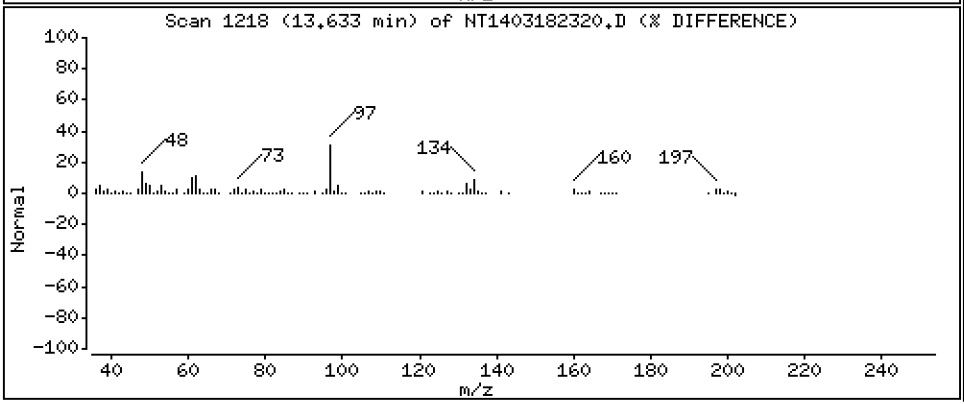
34 2,4,6-Trichlorophenol

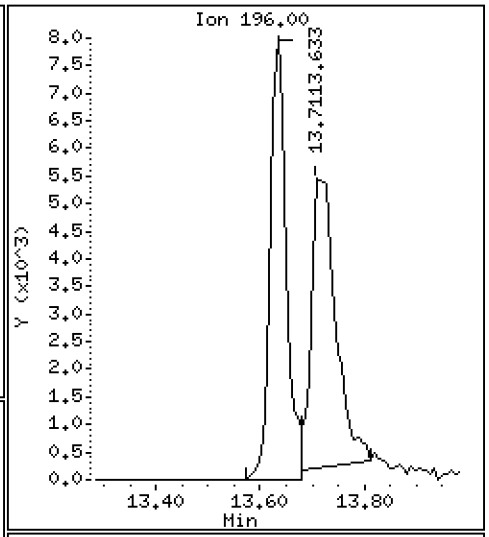
Concentration: 0.3390 ug/mL

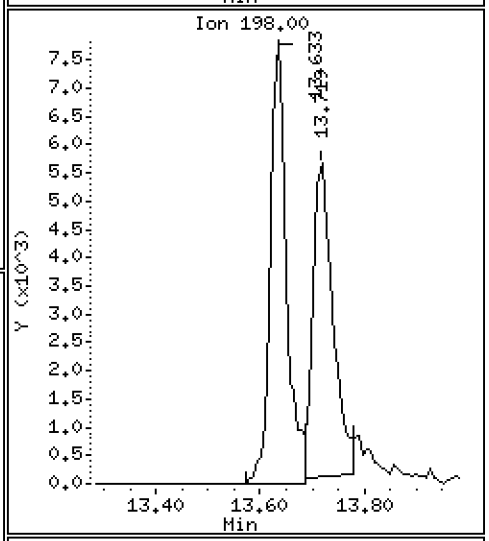


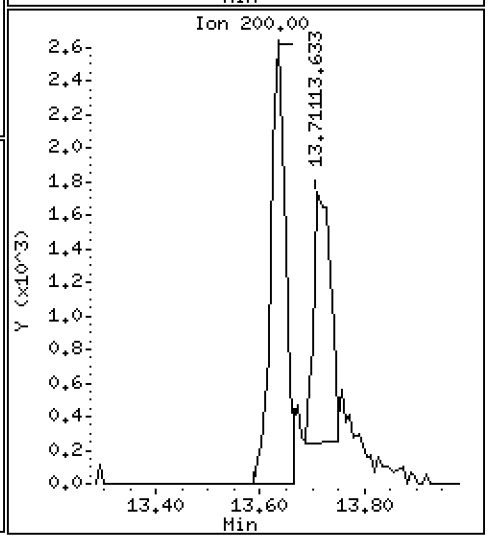












Data File: \\target\share\chem3\nt14.i\20230318.b\NT1403182320.D

Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

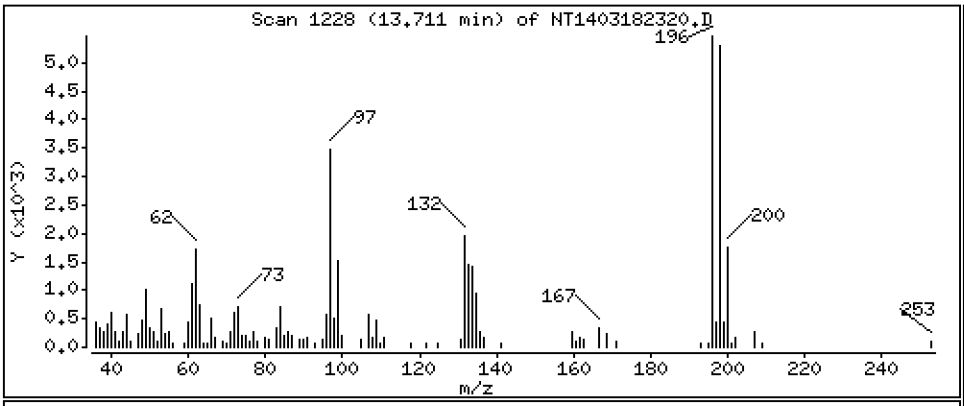
Operator: JGR

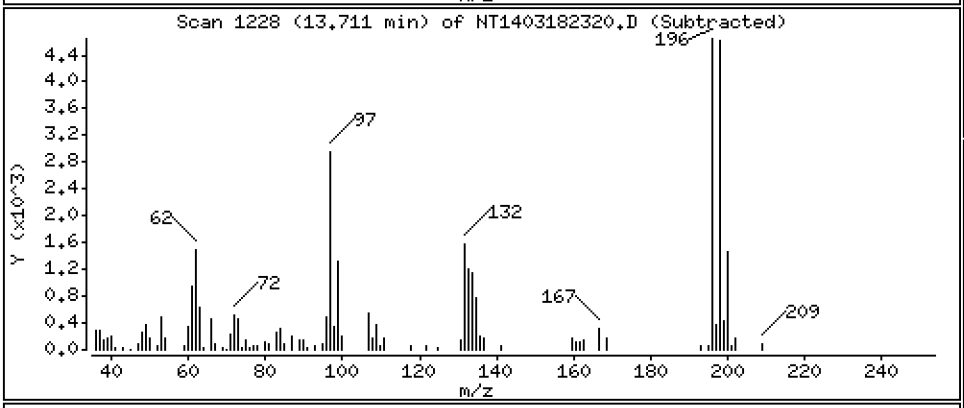
Column phase: ZB-5msi

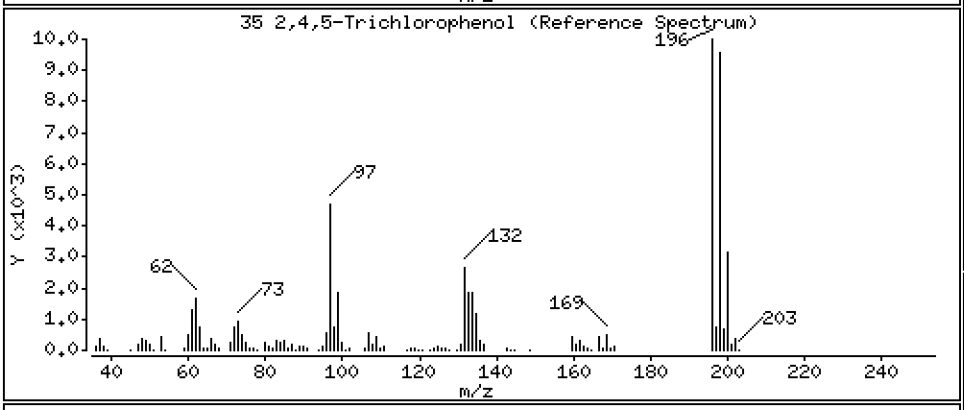
Column diameter: 0.25

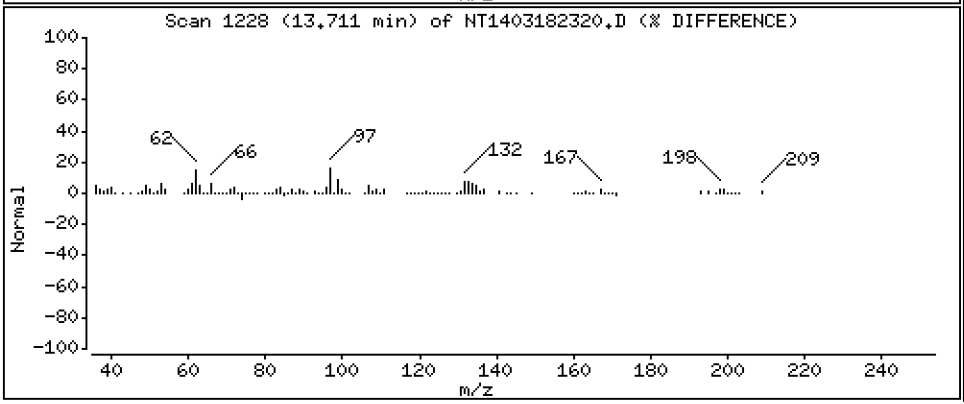
35 2,4,5-Trichlorophenol

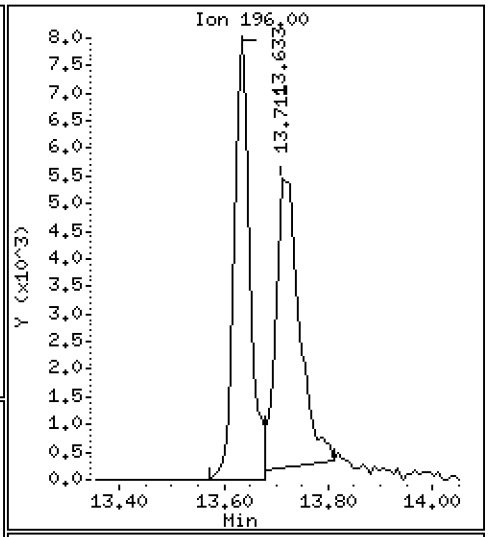
Concentration: 0.3283 ug/mL

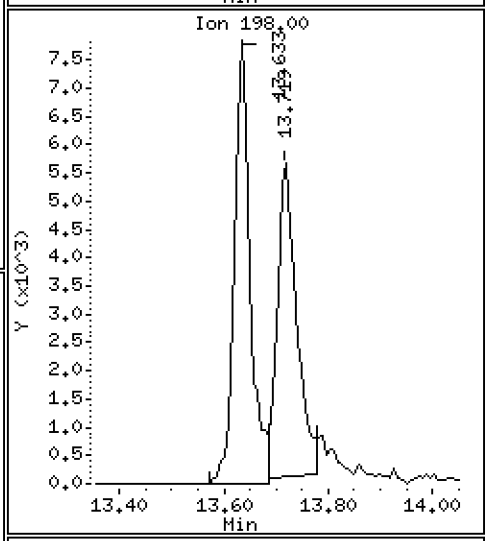


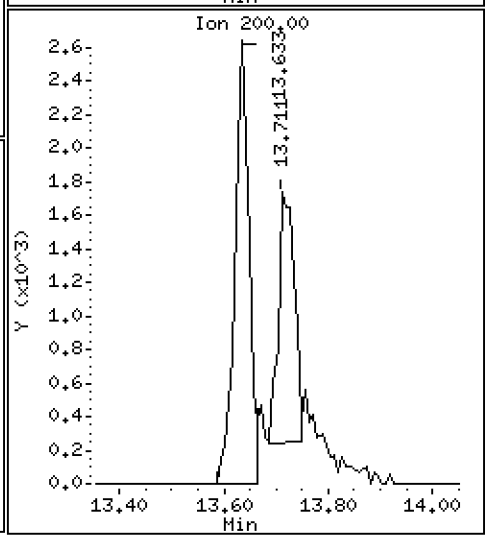












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

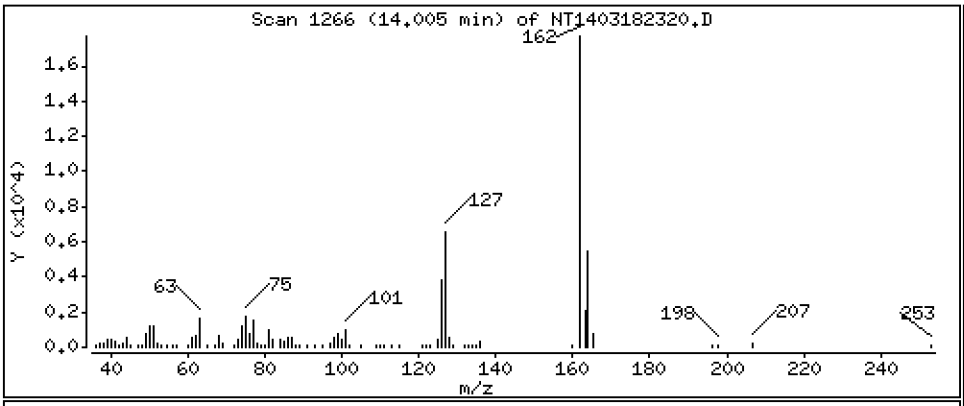
Operator: JGR

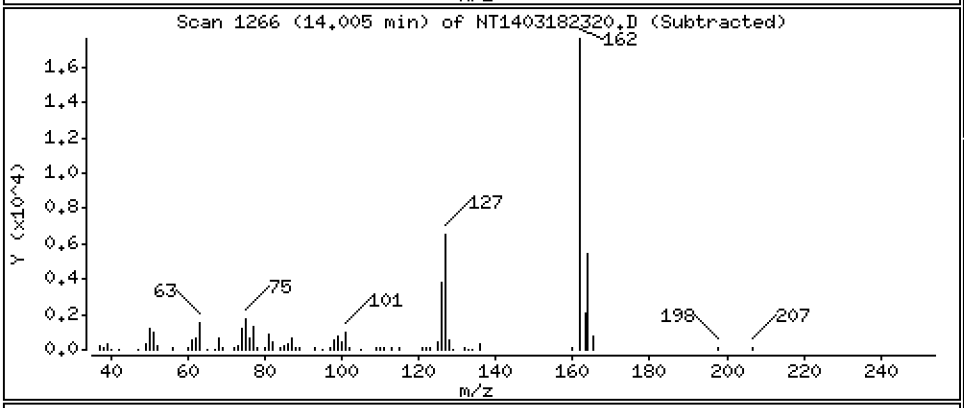
Column phase: ZB-5msi

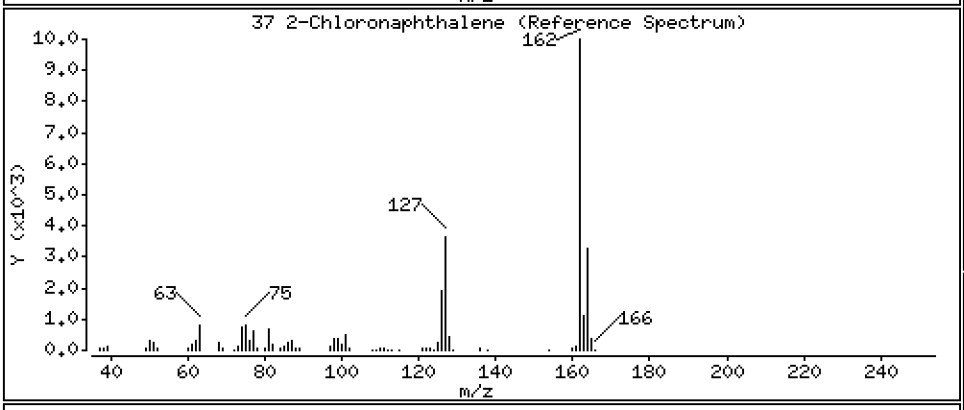
Column diameter: 0.25

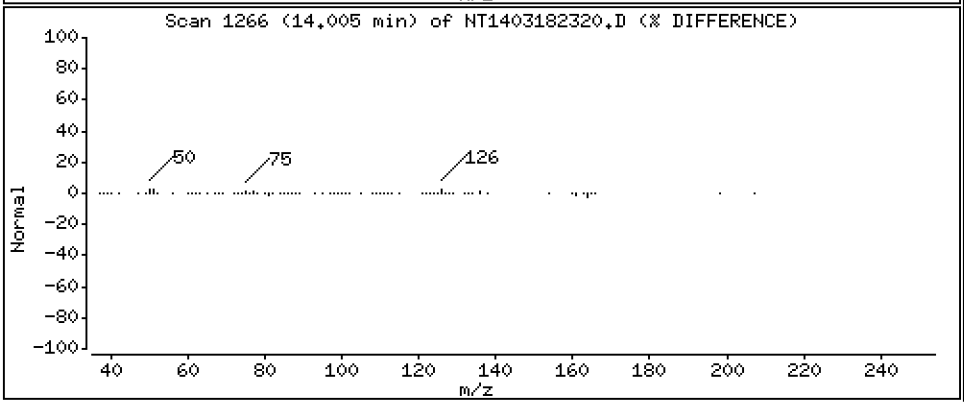
37 2-Chloronaphthalene

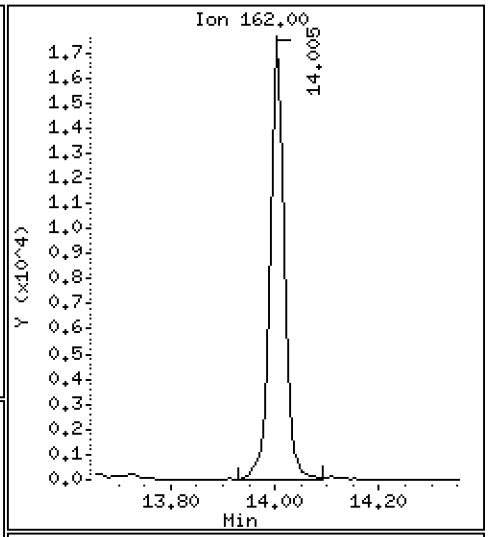
Concentration: 0.2094 ug/mL

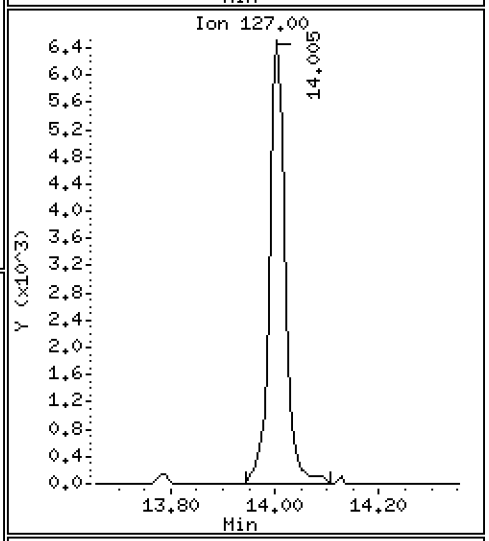


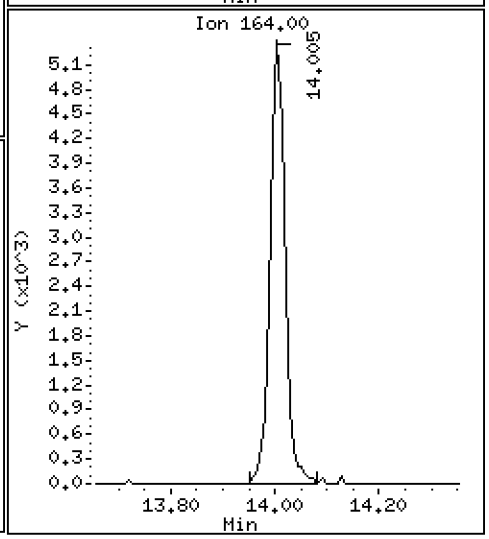












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

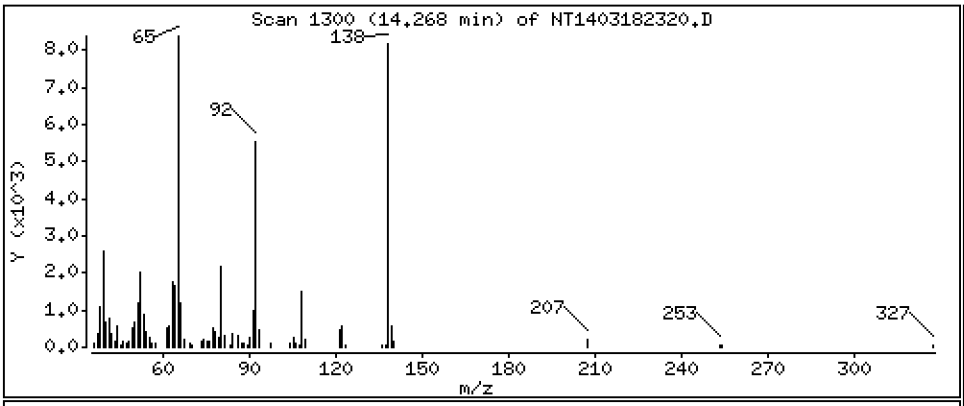
Operator: JGR

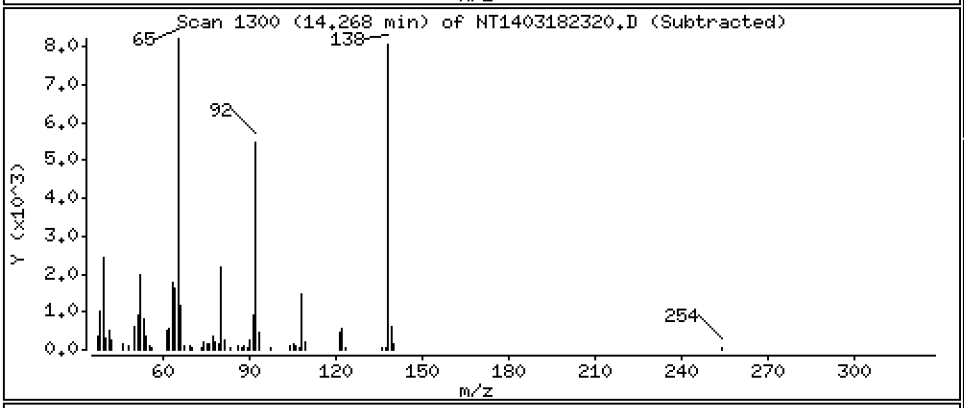
Column phase: ZB-5msi

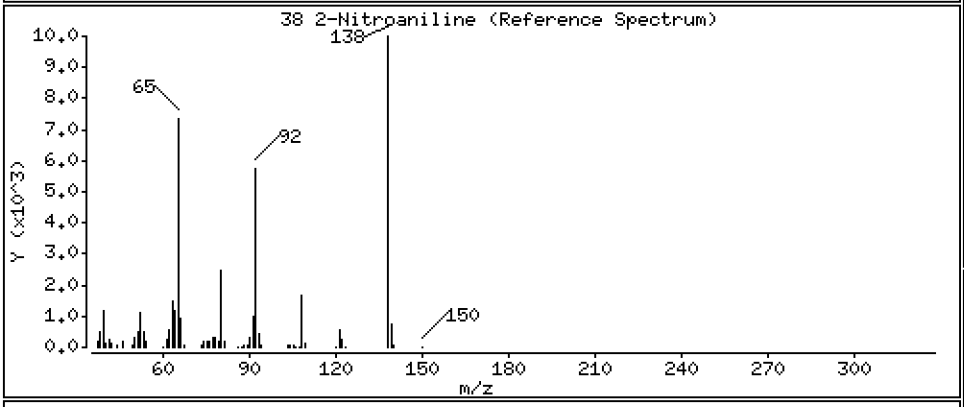
Column diameter: 0.25

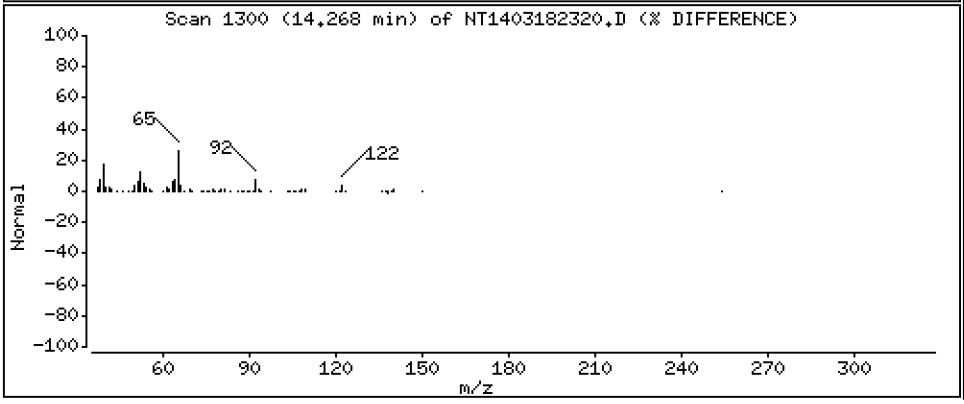
38 2-Nitroaniline

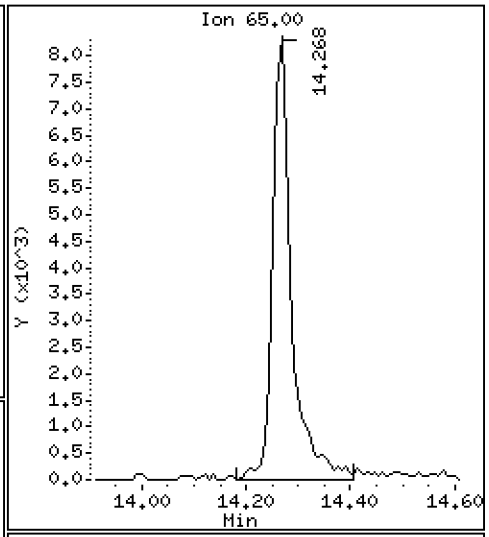
Concentration: 0.3533 ug/mL

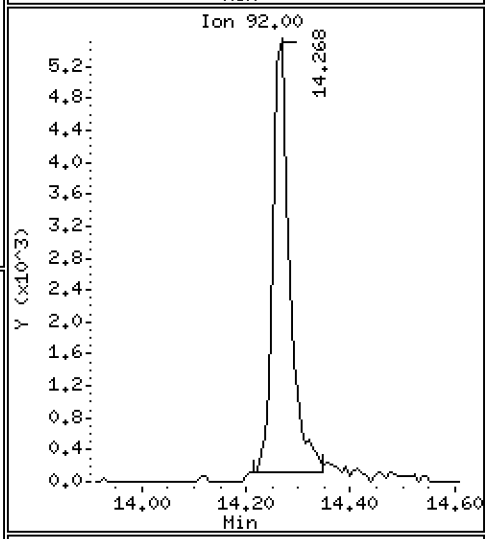


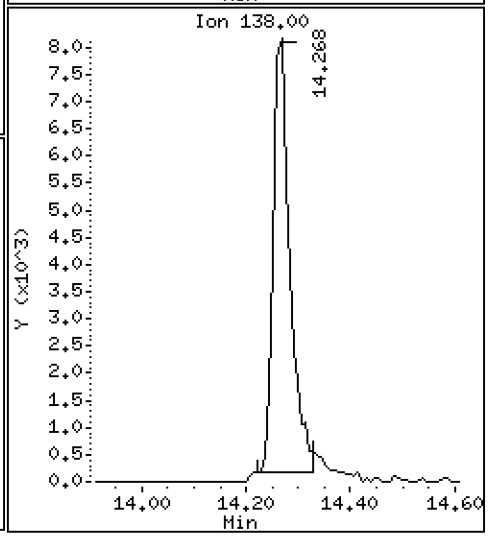












Date : 19-MAR-2023 04:28

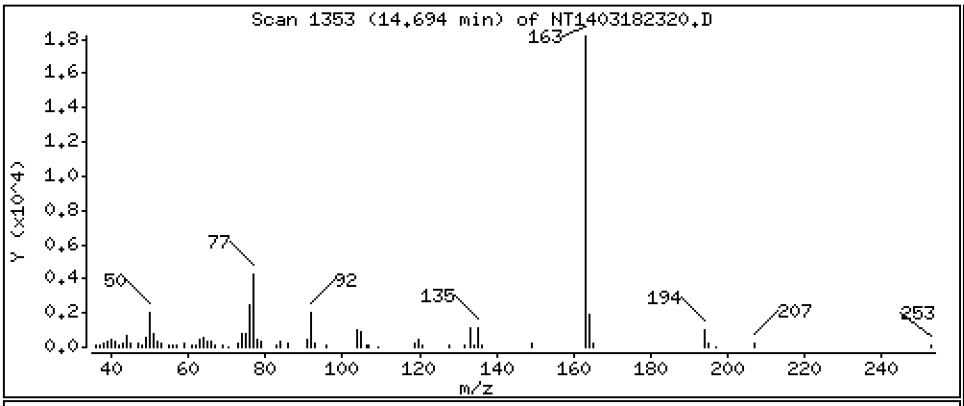
Client ID: Instrument: nt14.i

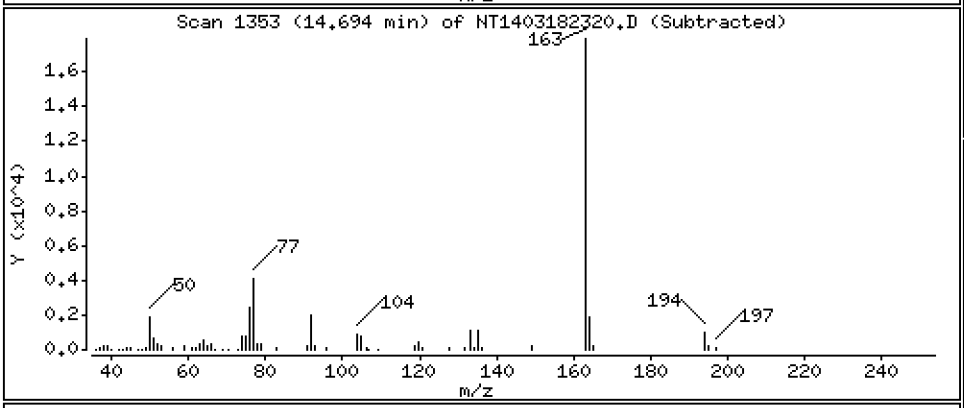
Sample Info: SLC0355-LCV2

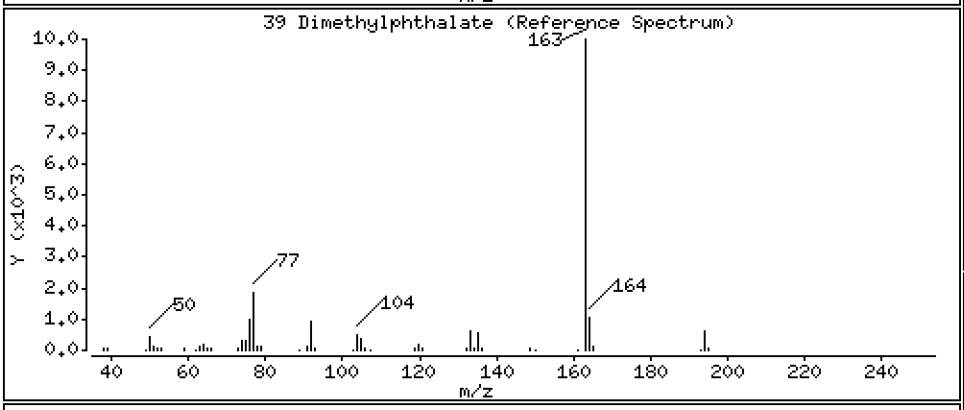
Operator: JGR

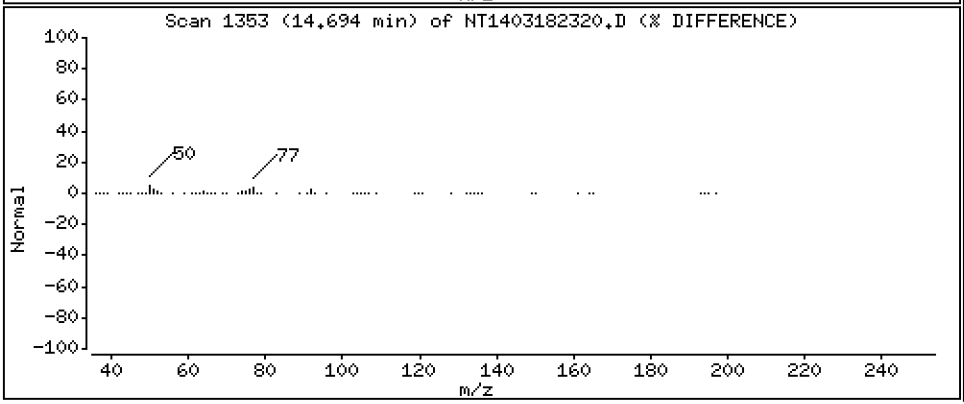
Column phase: ZB-5msi Column diameter: 0.25

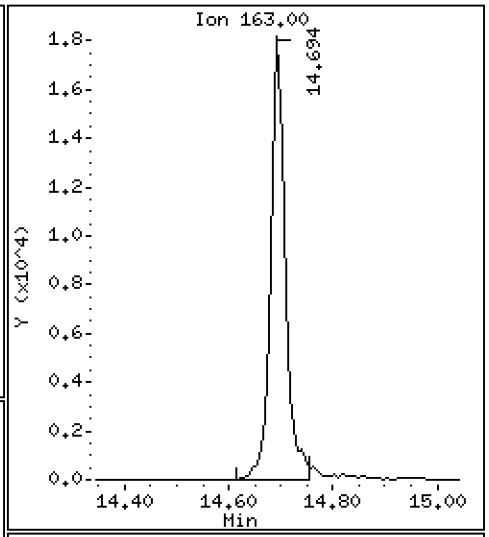
39 Dimethylphthalate Concentration: 0.2079 ug/mL

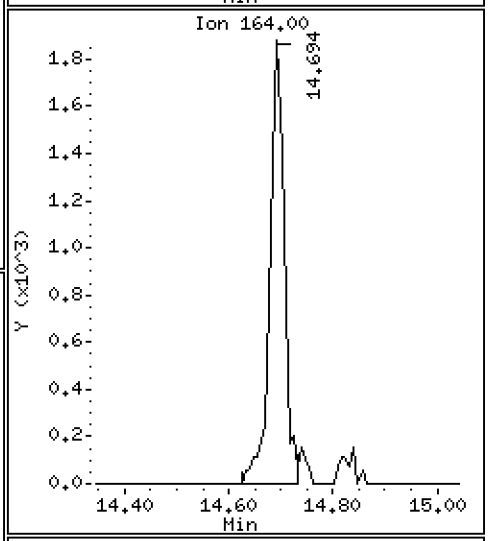


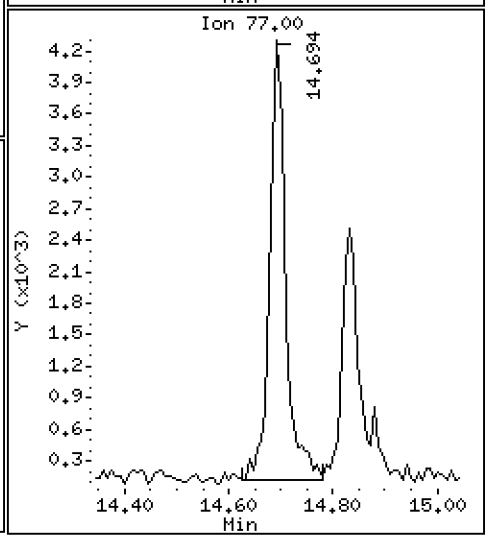












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

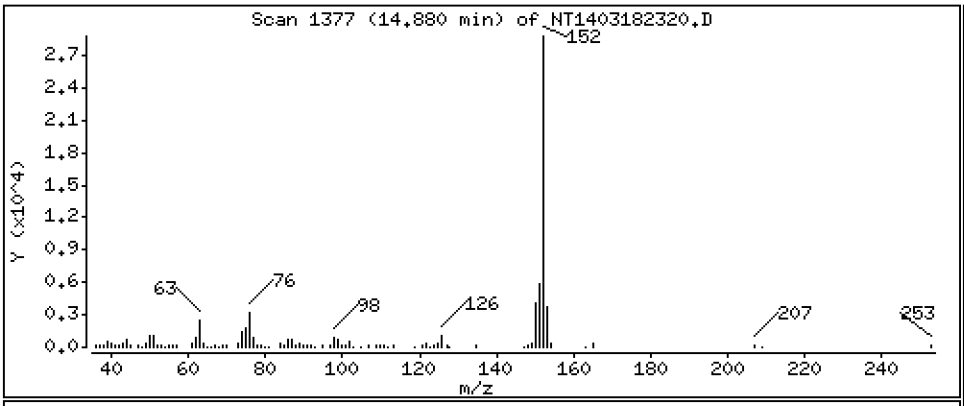
Operator: JGR

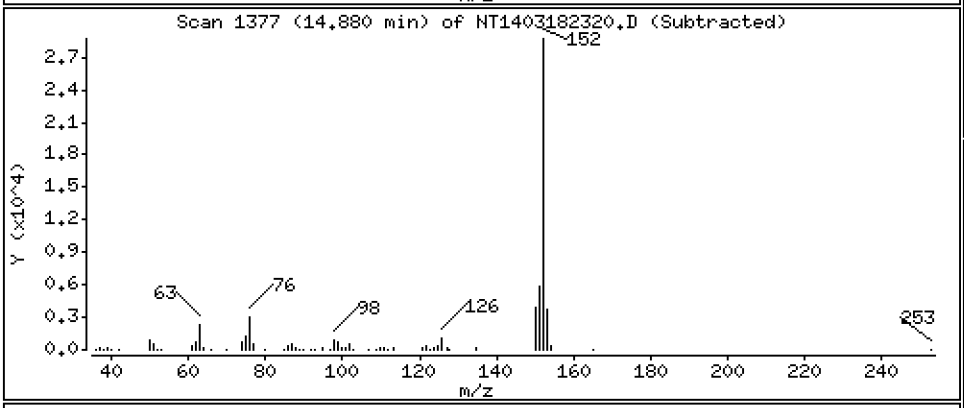
Column phase: ZB-5msi

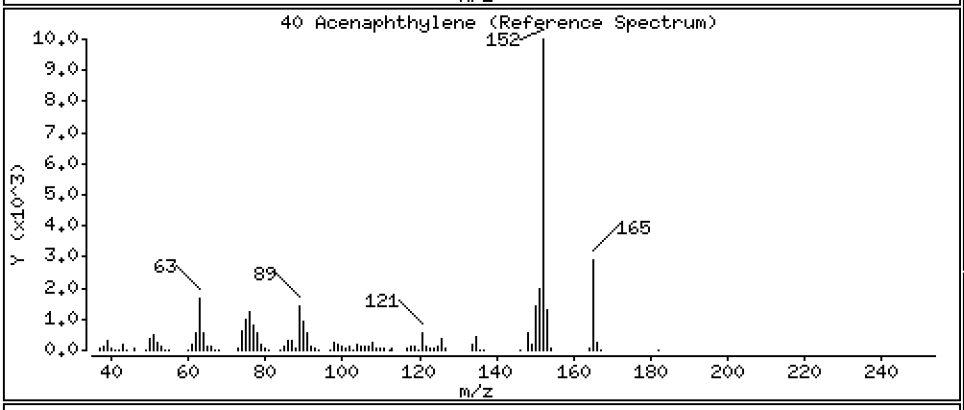
Column diameter: 0.25

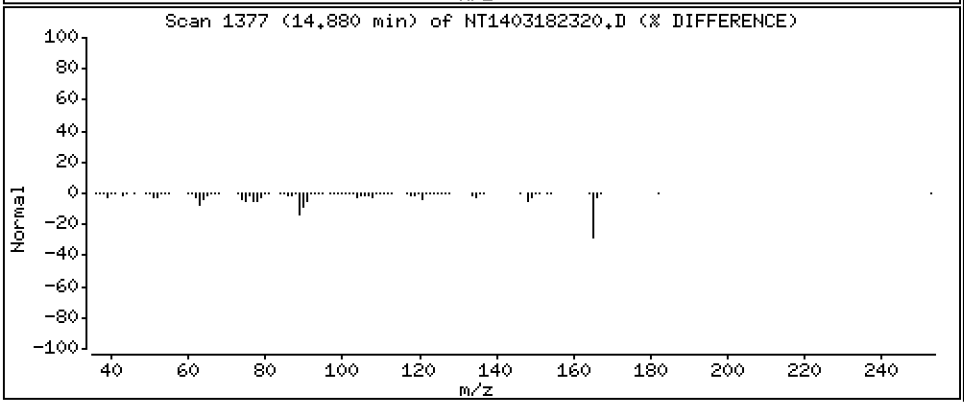
40 Acenaphthylene

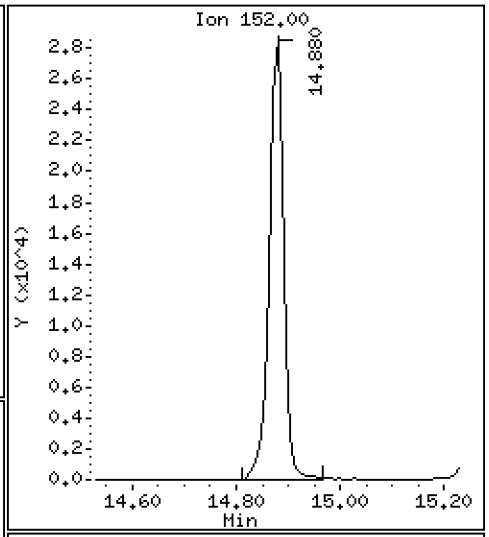
Concentration: 0.2063 ug/mL

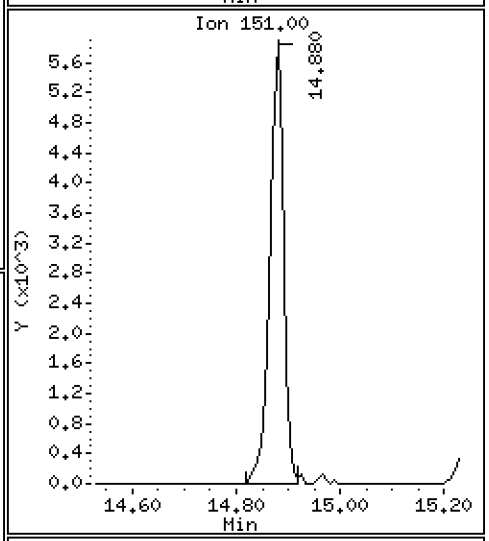


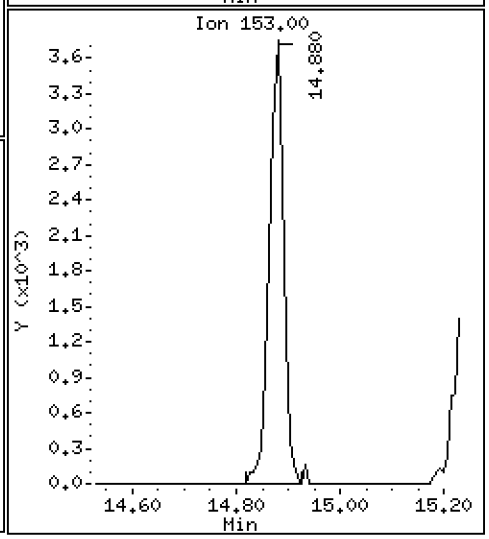












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

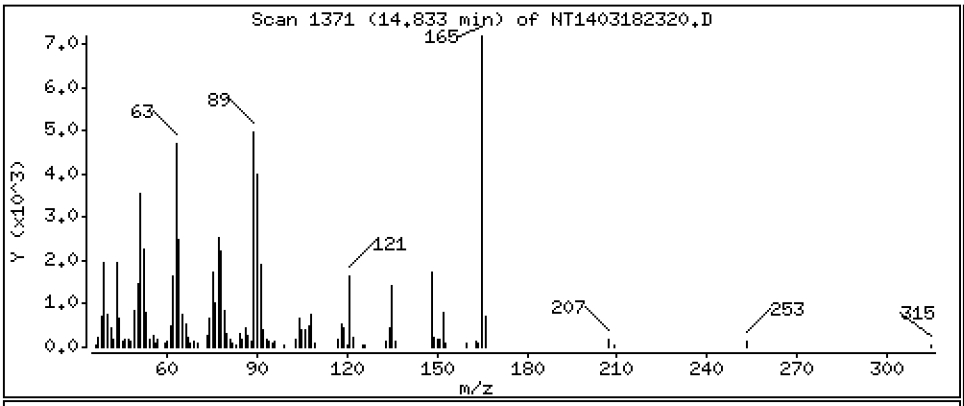
Operator: JGR

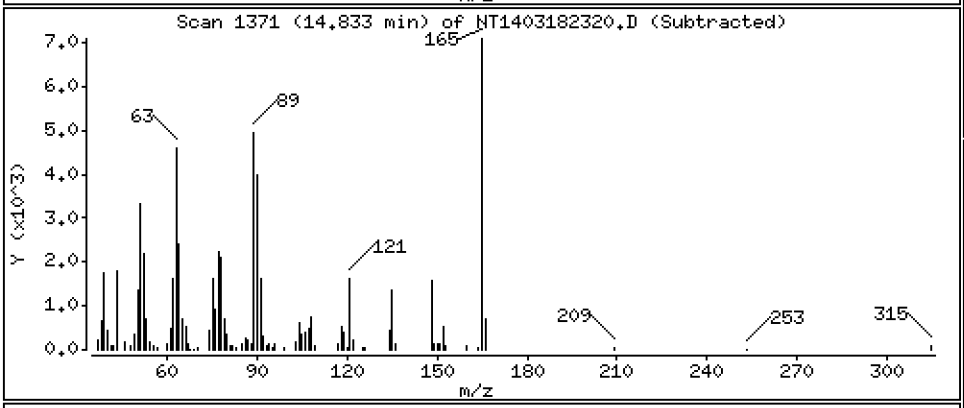
Column phase: ZB-5msi

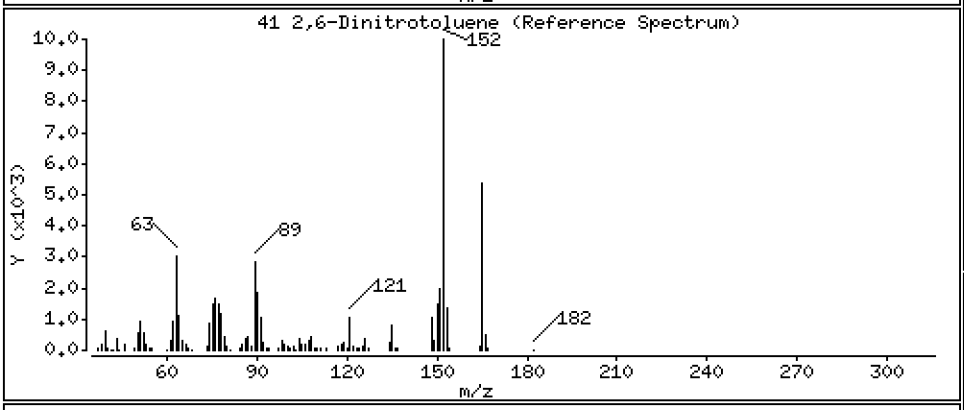
Column diameter: 0.25

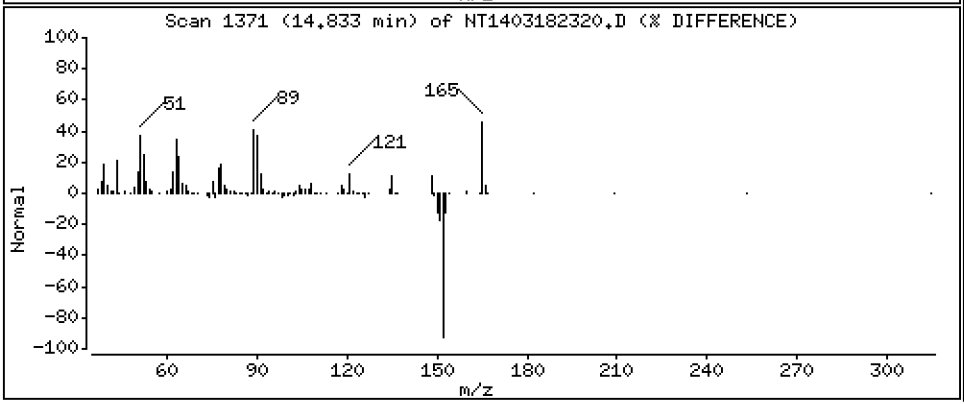
41 2,6-Dinitrotoluene

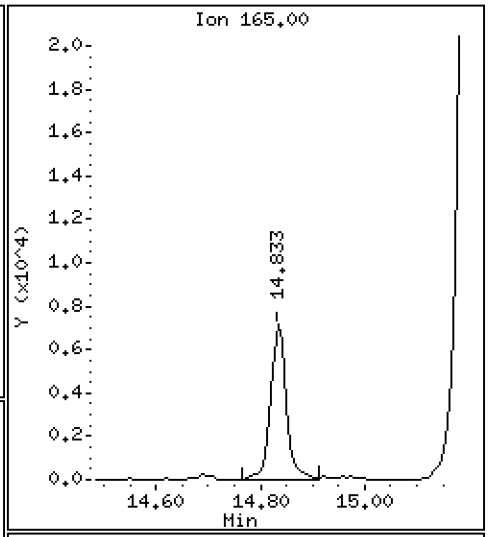
Concentration: 0.3859 ug/mL

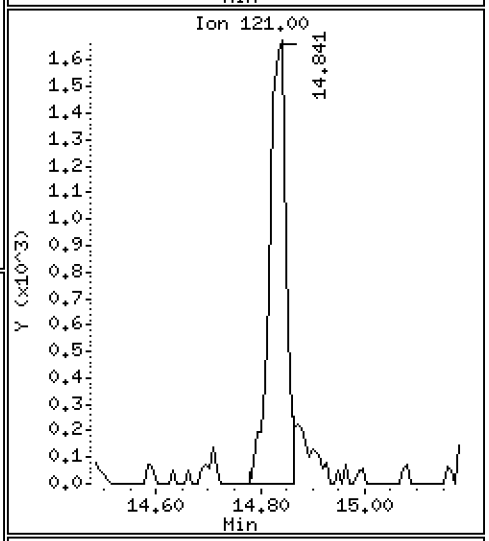


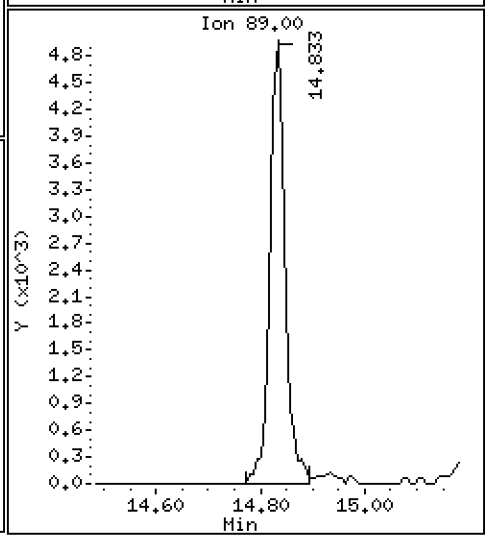












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

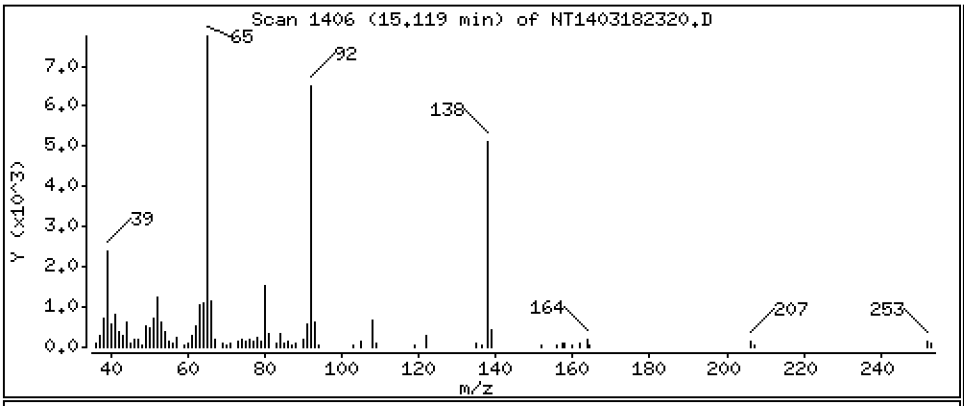
Operator: JGR

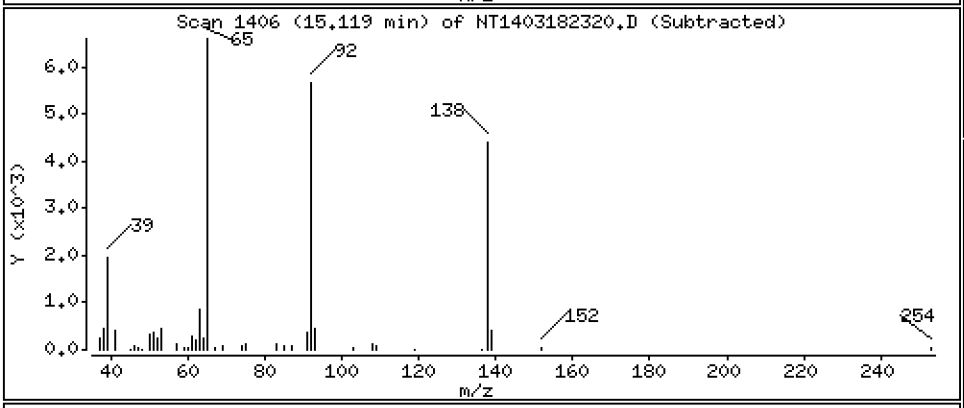
Column phase: ZB-5msi

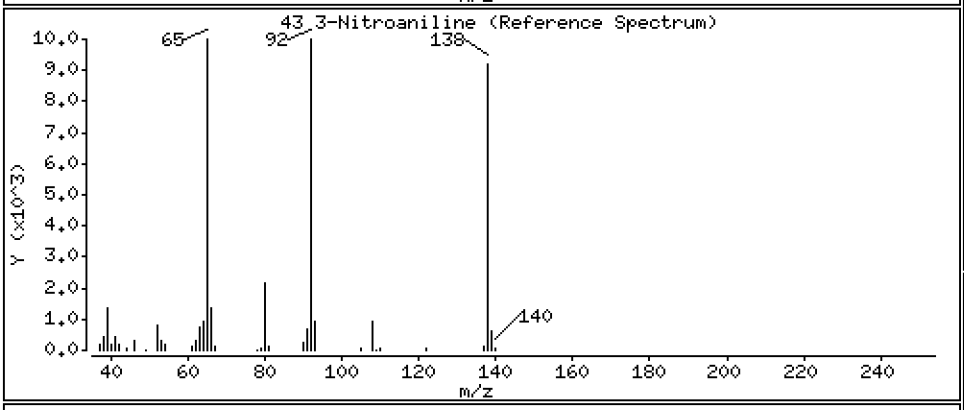
Column diameter: 0.25

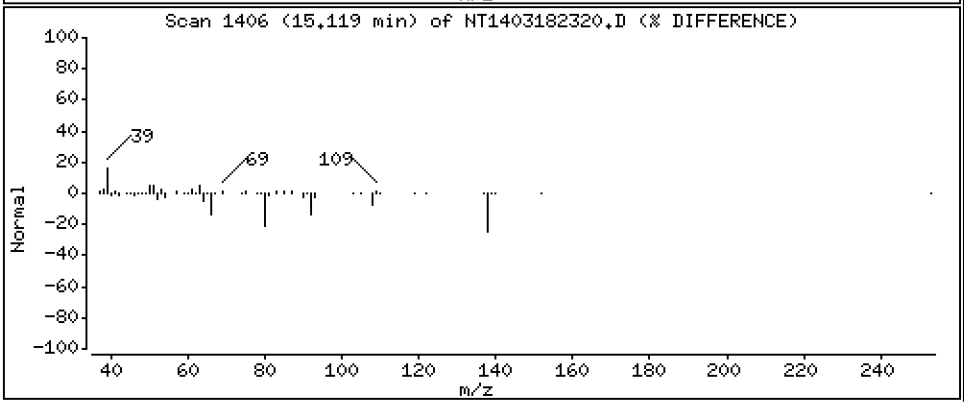
43 3-Nitroaniline

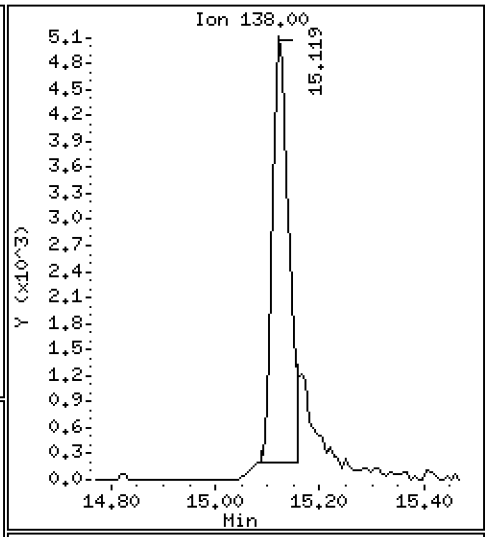
Concentration: 0.2002 ug/mL

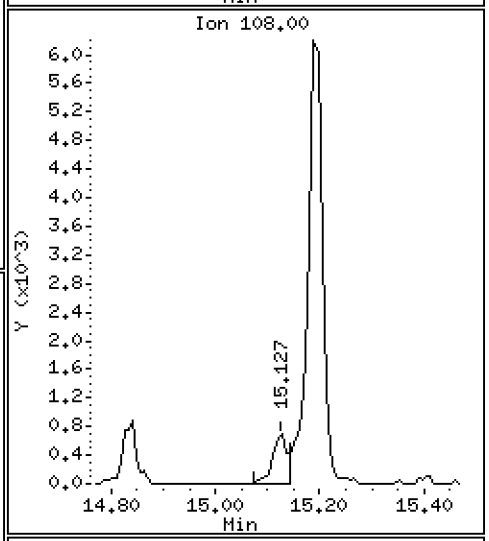


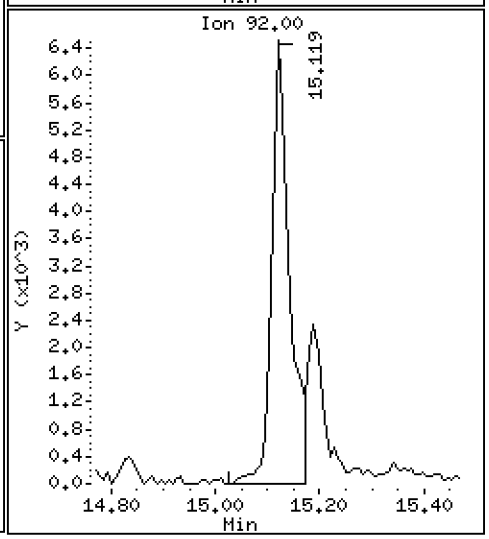












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

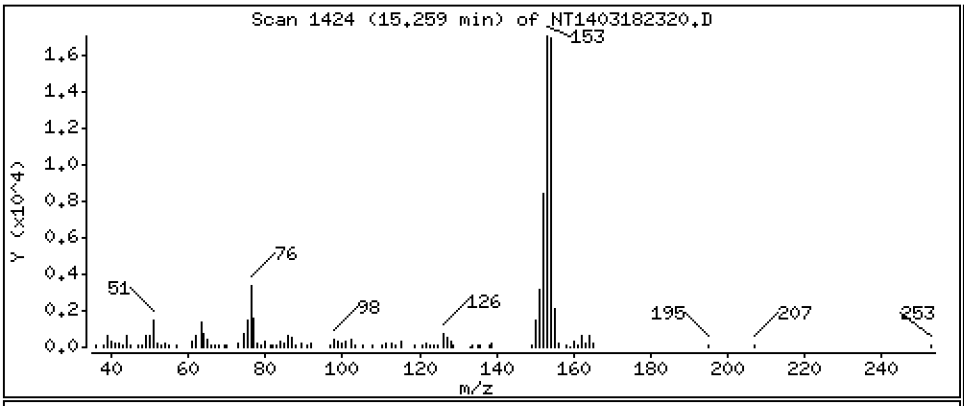
Operator: JGR

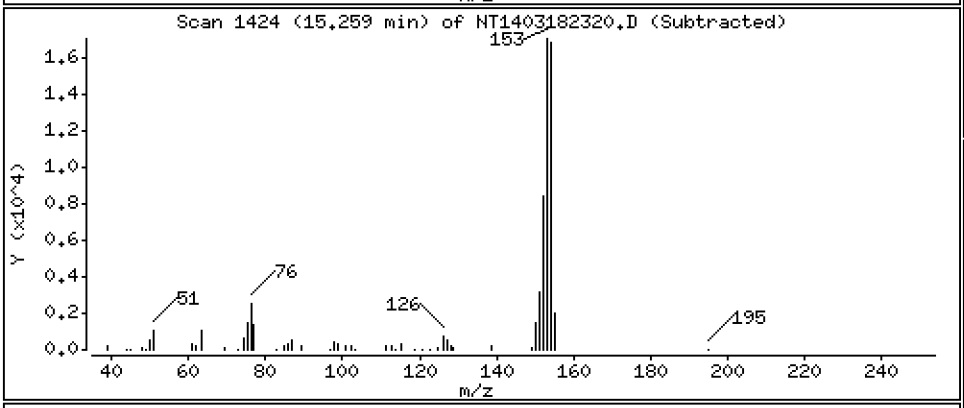
Column phase: ZB-5msi

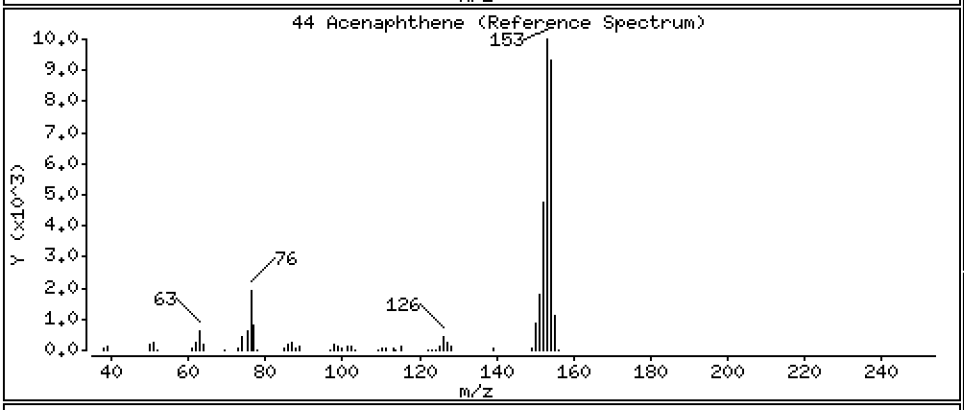
Column diameter: 0.25

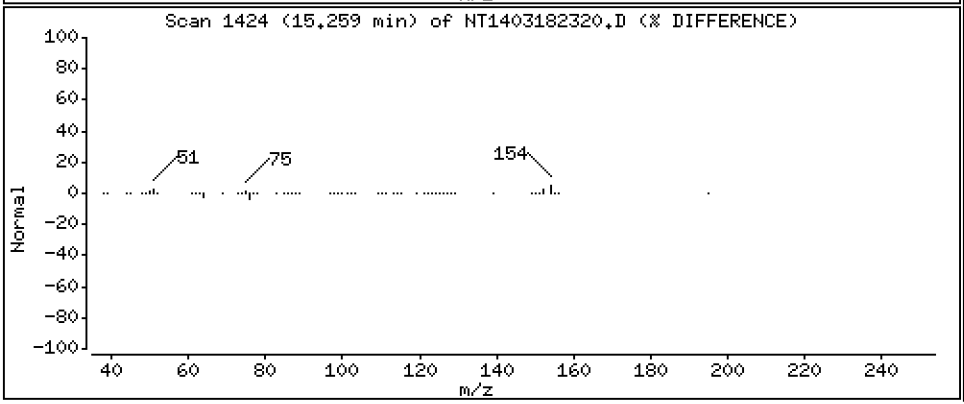
44 Acenaphthene

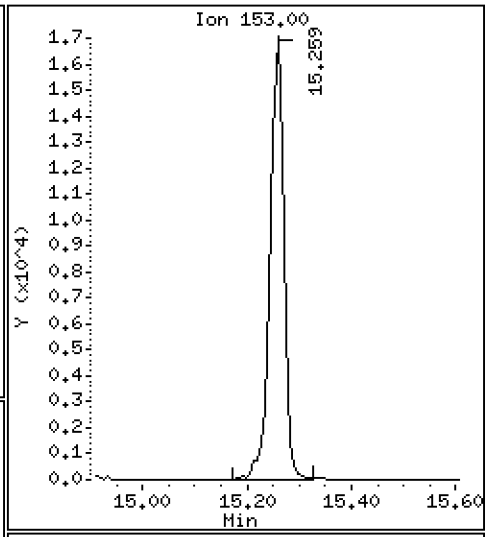
Concentration: 0.2030 ug/mL

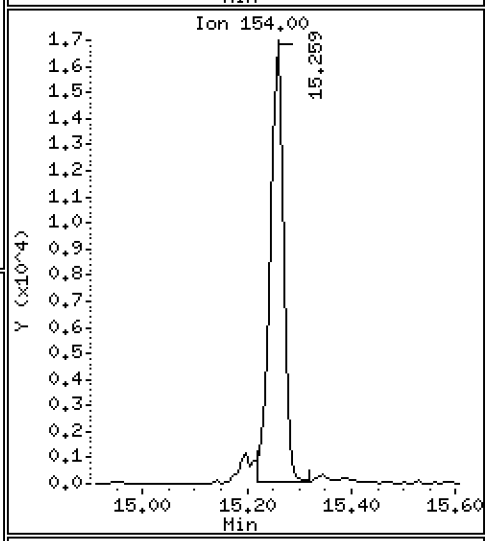


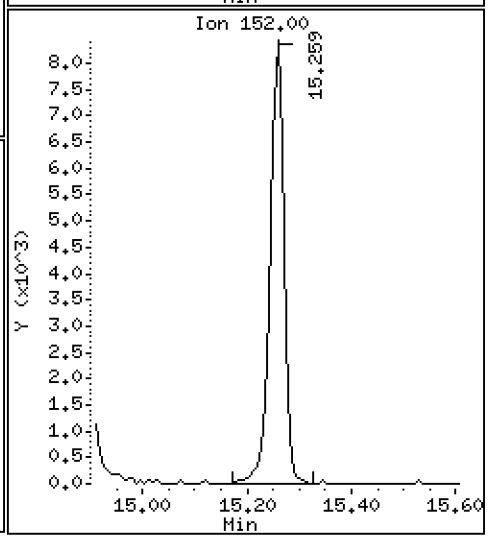












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

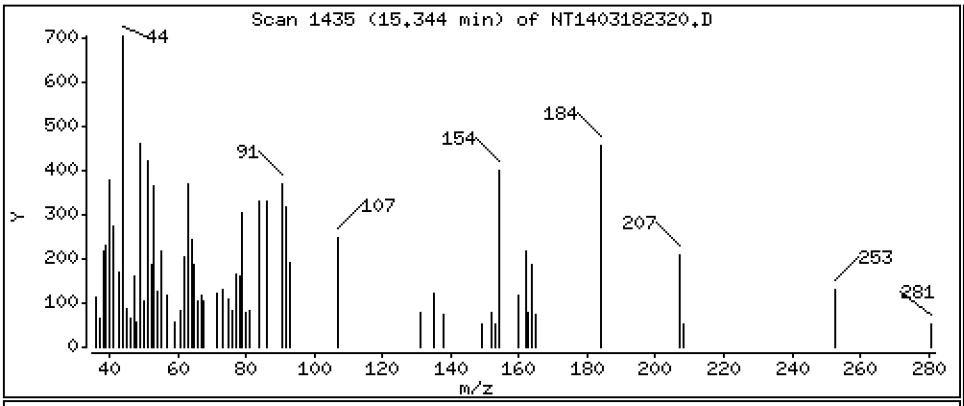
Operator: JGR

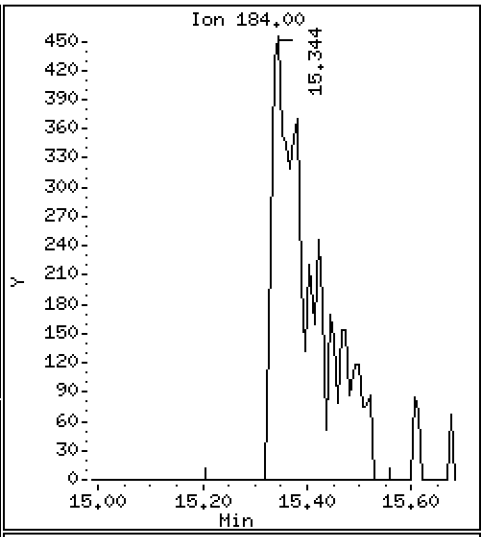
Column phase: ZB-5msi

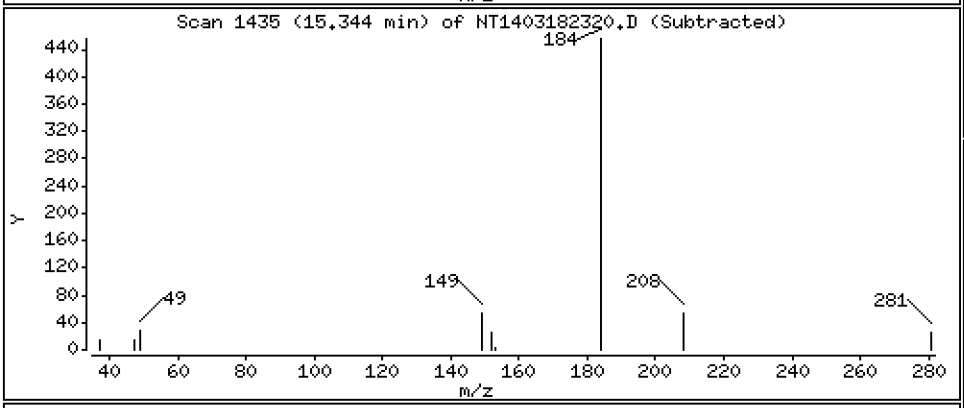
Column diameter: 0.25

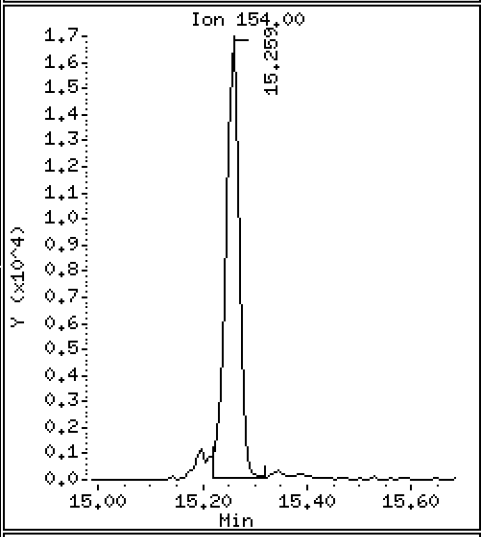
45 2,4-Dinitrophenol

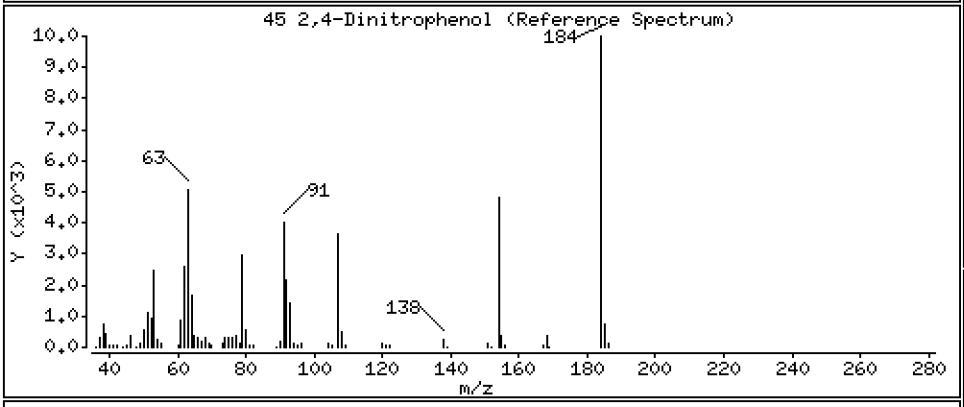
Concentration: 0.08347 ug/mL

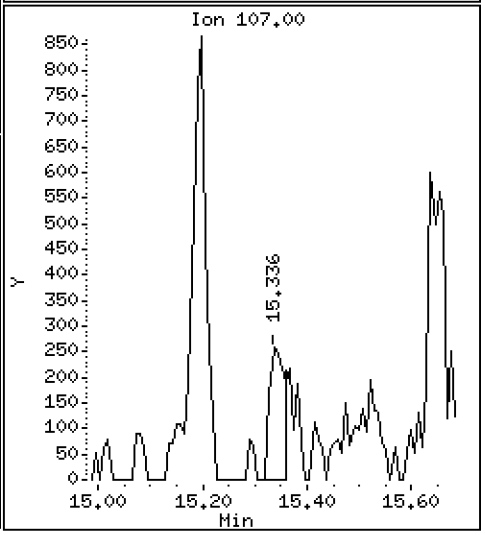


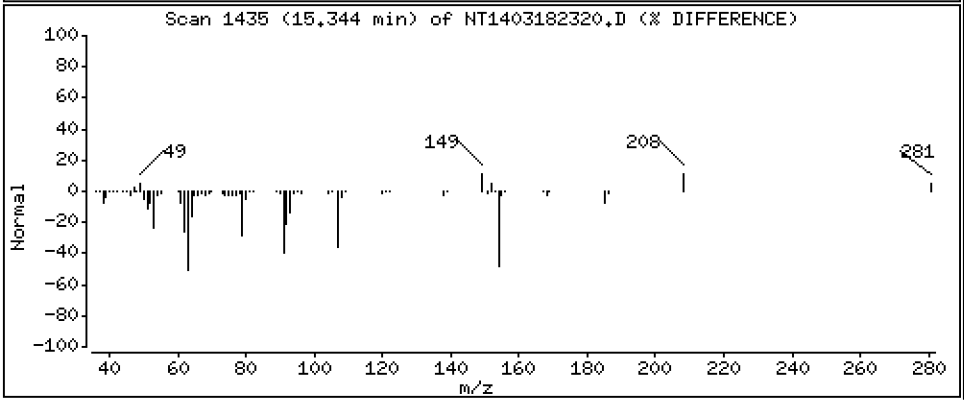












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

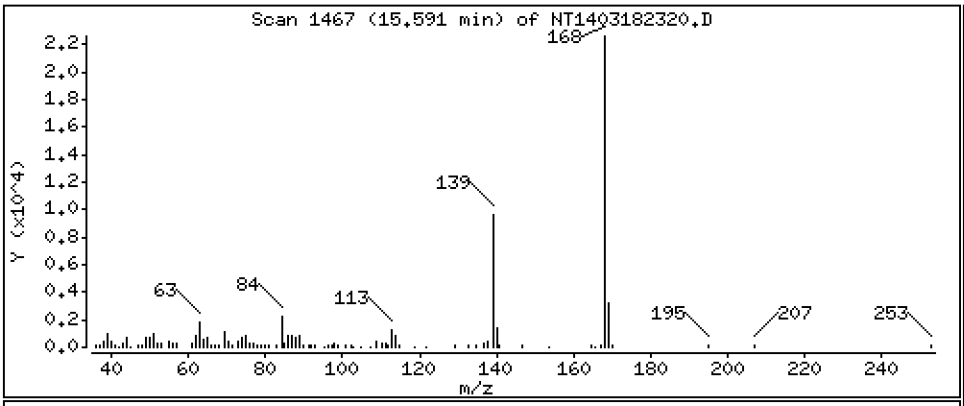
Operator: JGR

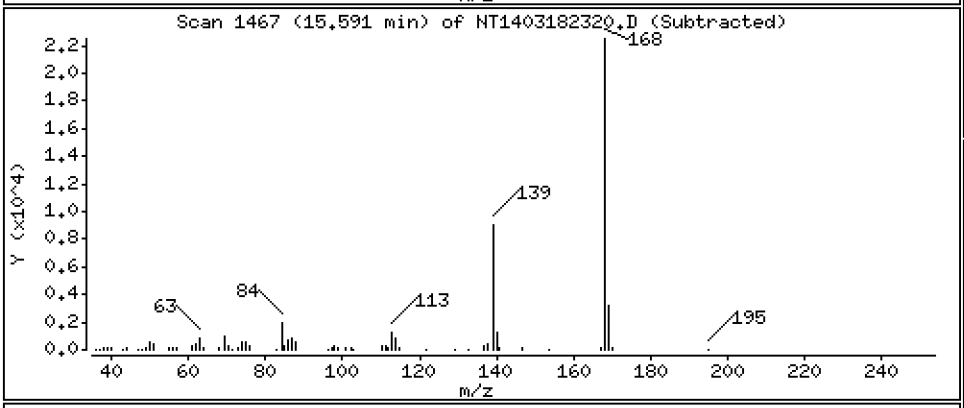
Column phase: ZB-5msi

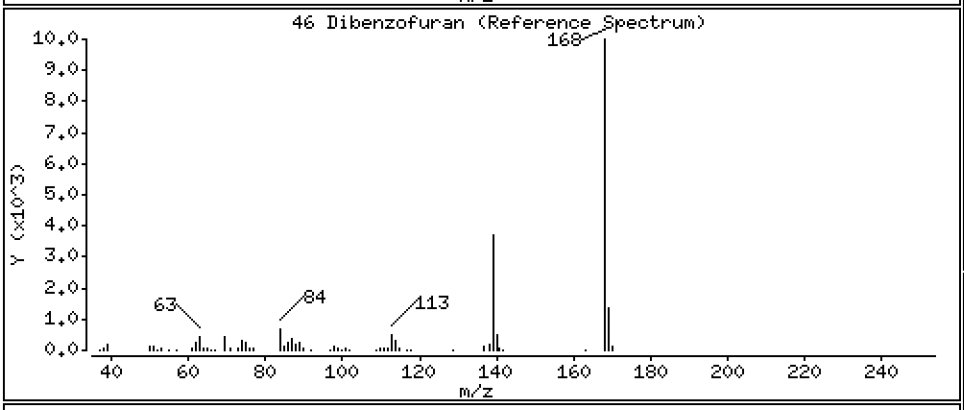
Column diameter: 0.25

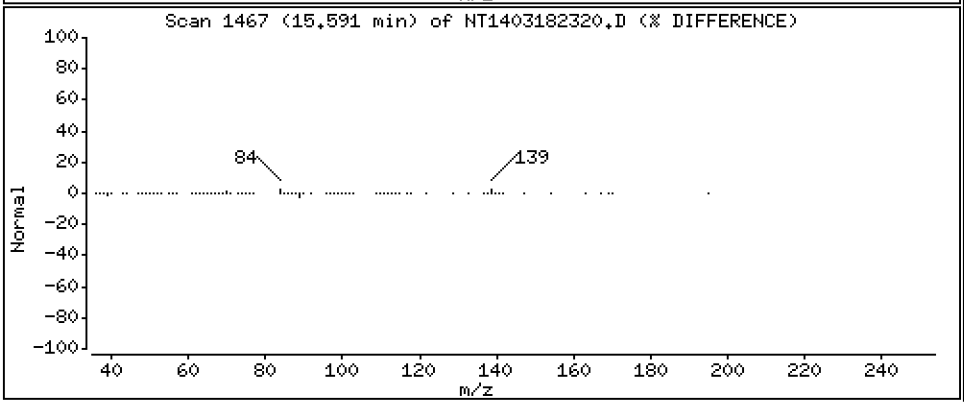
46 Dibenzofuran

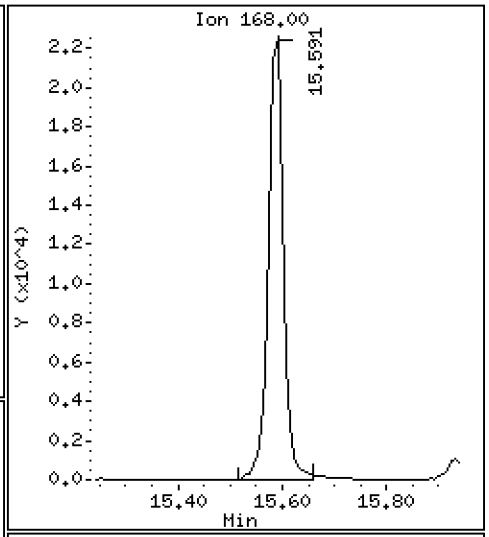
Concentration: 0.2040 ug/mL

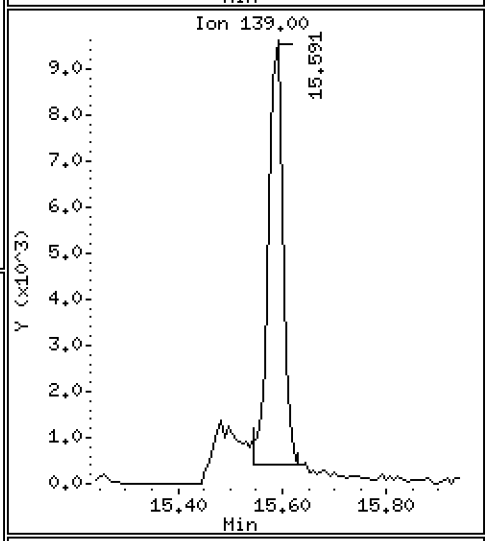


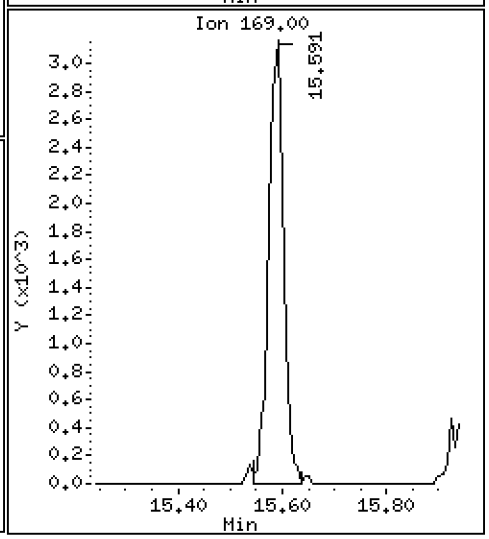












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

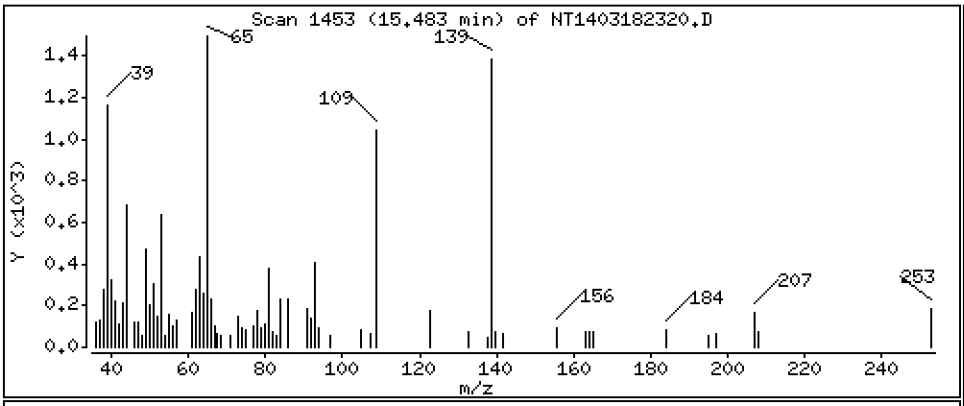
Operator: JGR

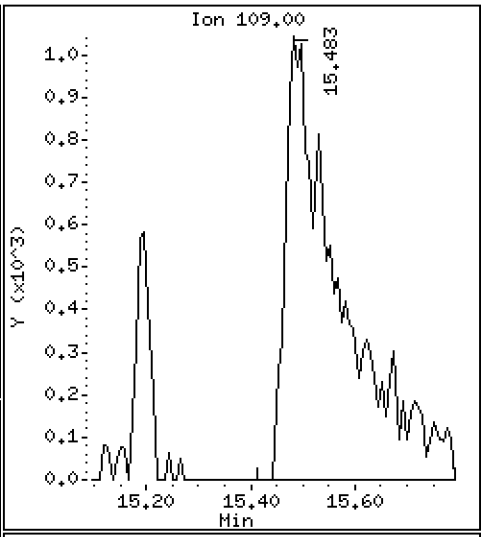
Column phase: ZB-5msi

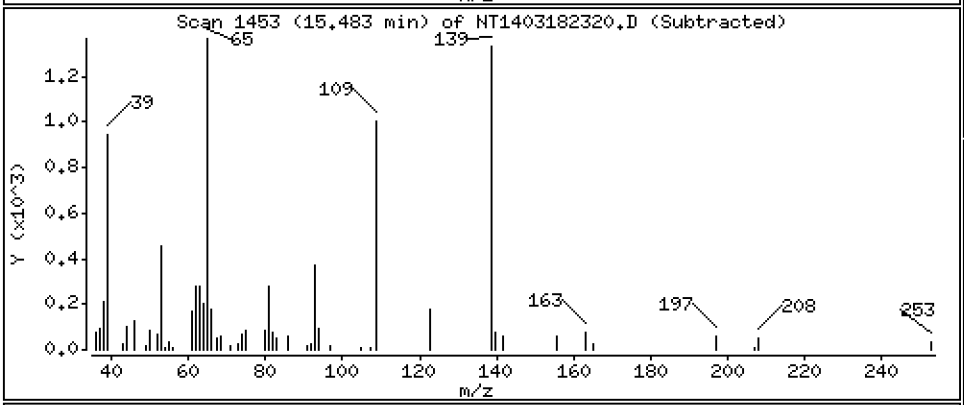
Column diameter: 0.25

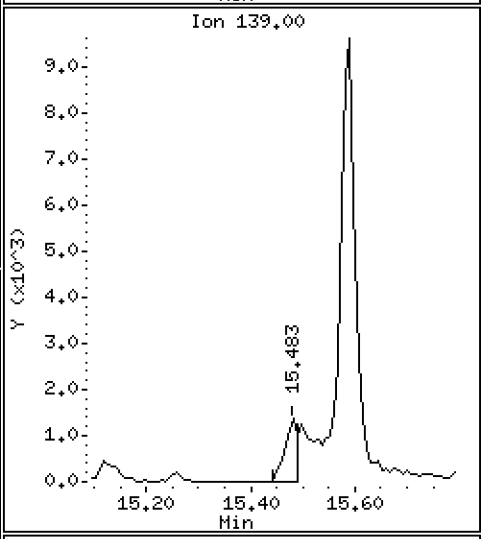
47 4-Nitrophenol

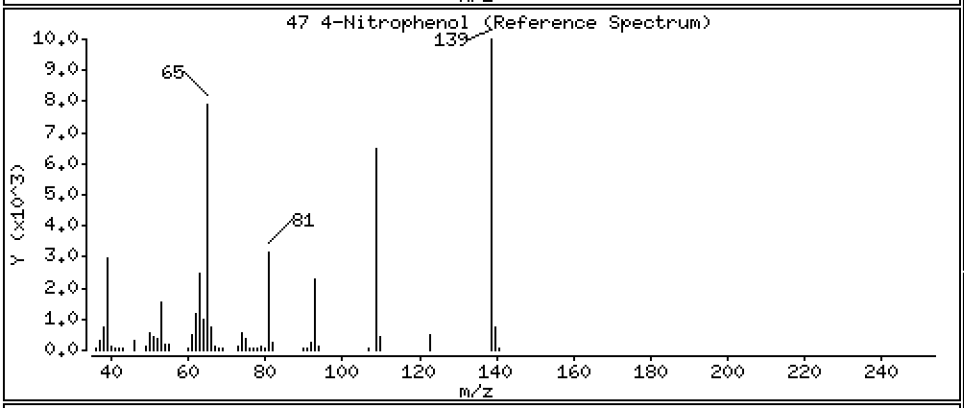
Concentration: 0.2784 ug/mL

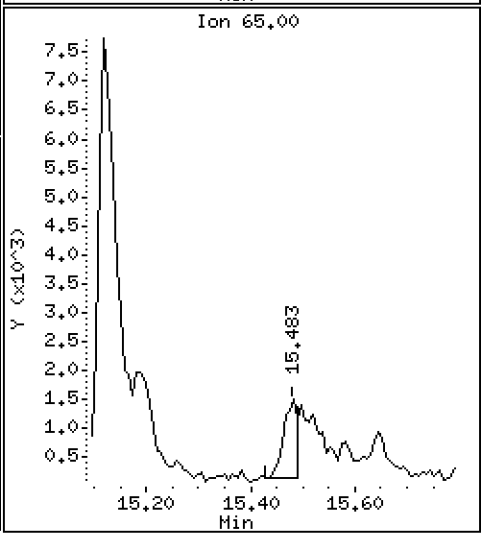


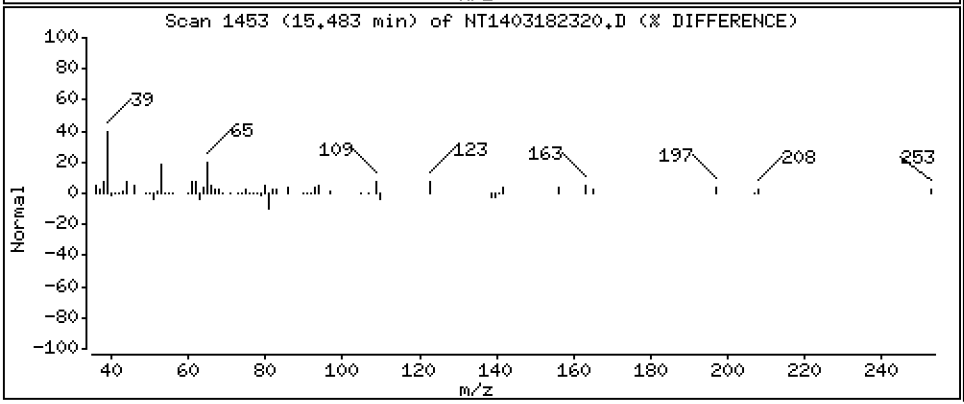












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

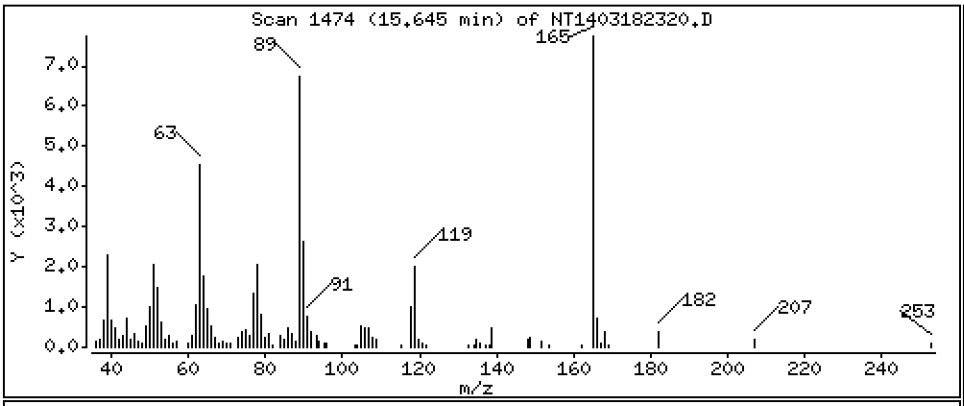
Operator: JGR

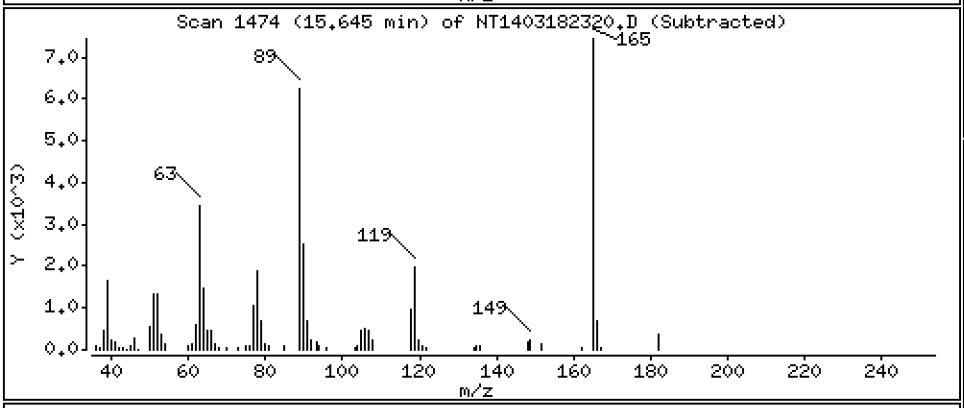
Column phase: ZB-5msi

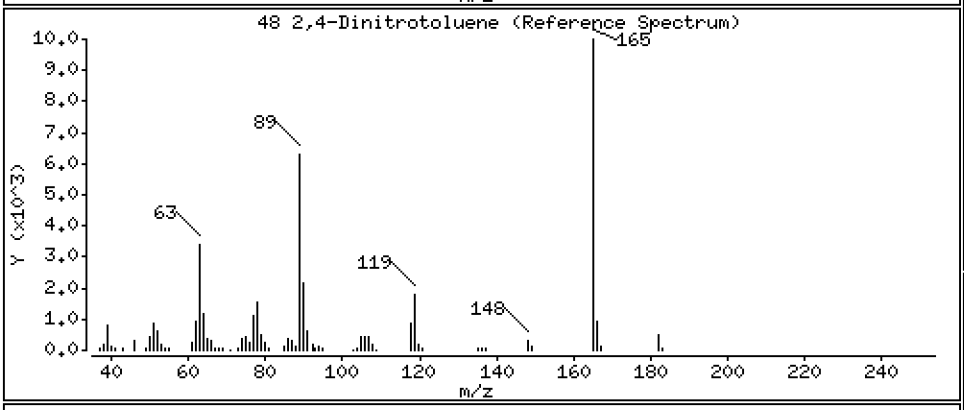
Column diameter: 0.25

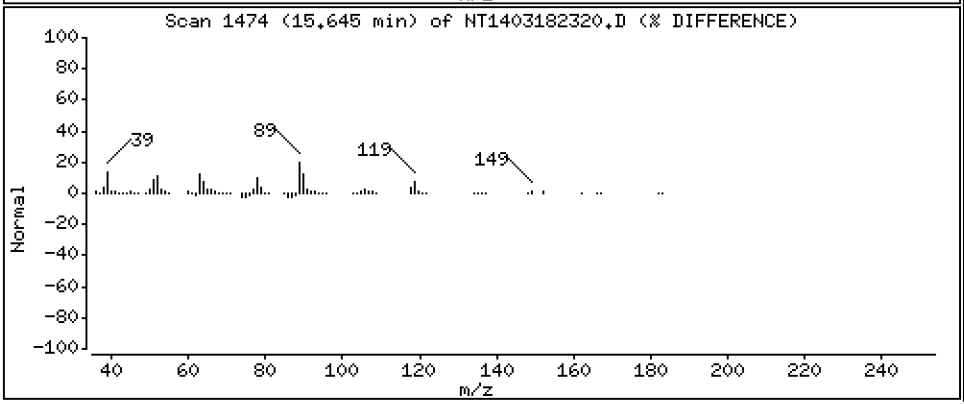
48 2,4-Dinitrotoluene

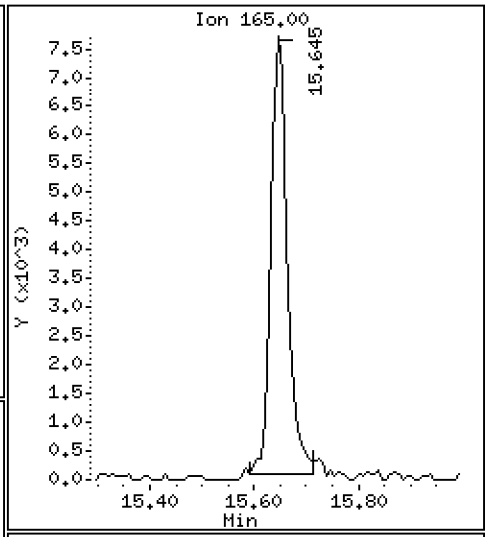
Concentration: 0.3045 ug/mL

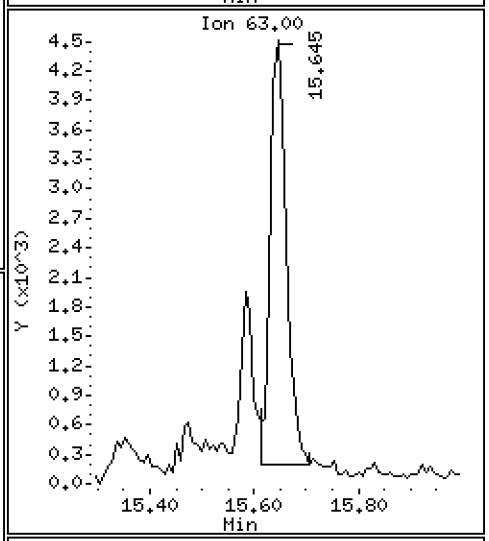


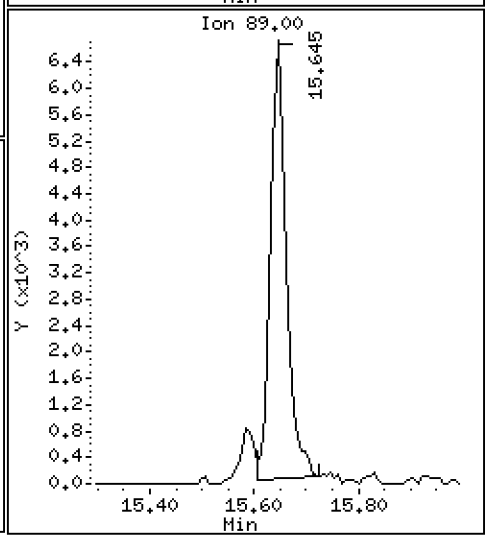












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

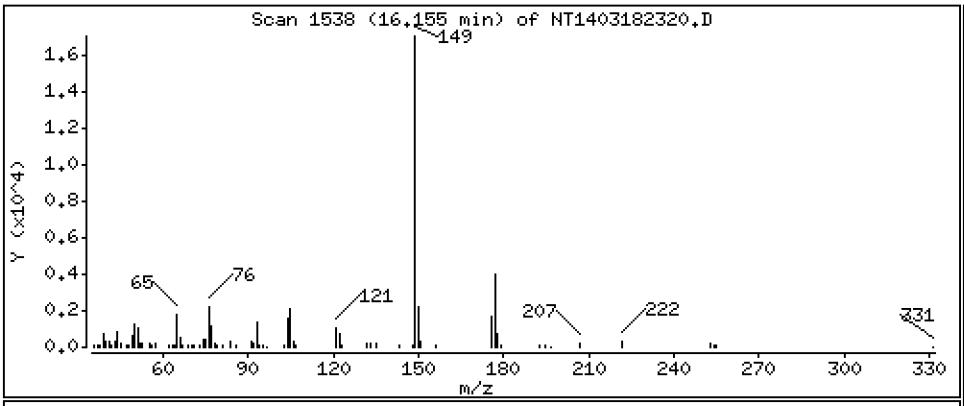
Operator: JGR

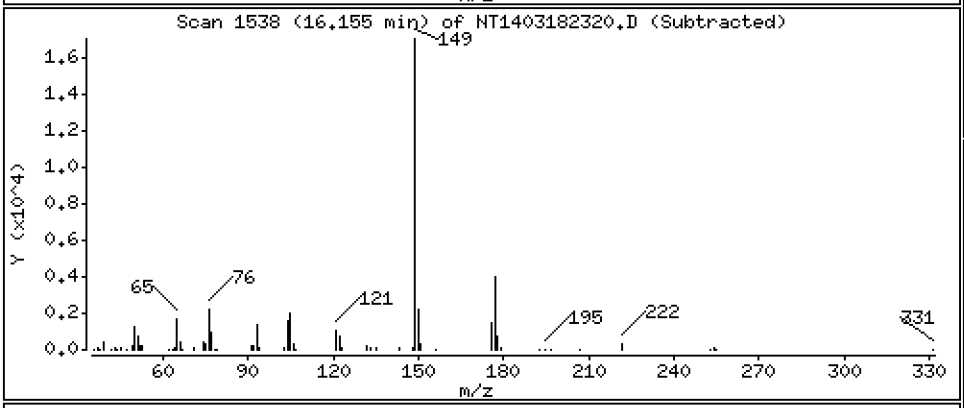
Column phase: ZB-5msi

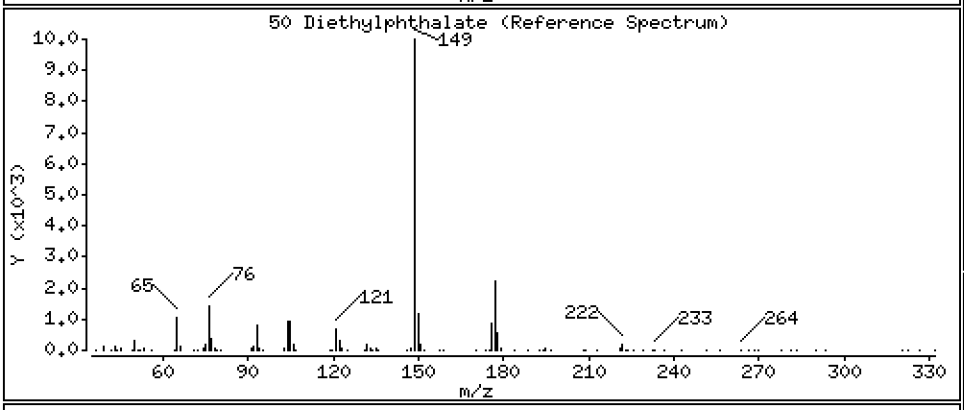
Column diameter: 0.25

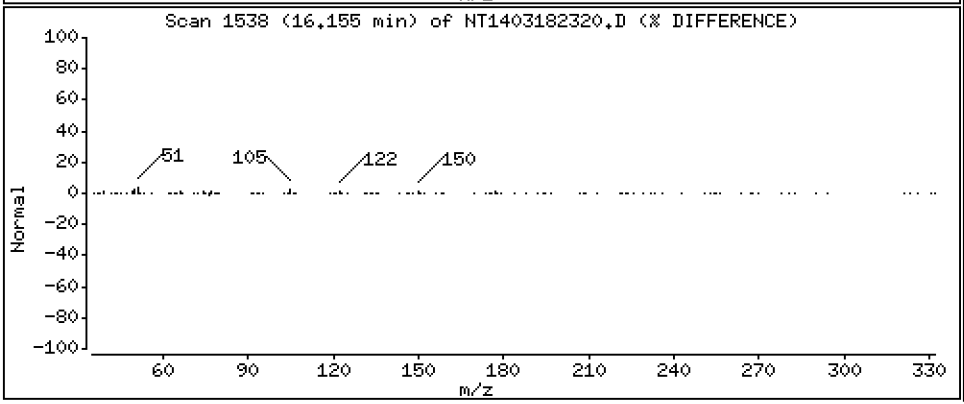
50 Diethylphthalate

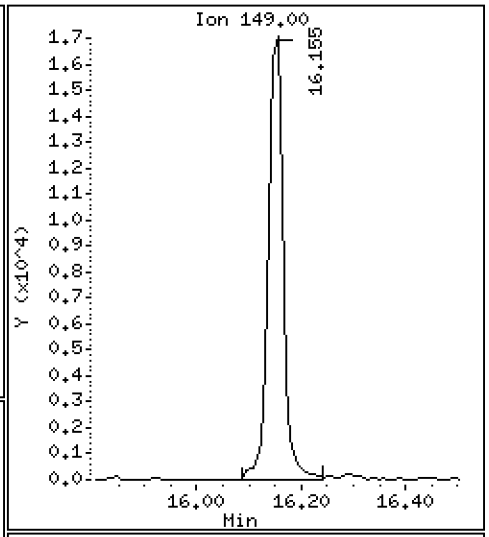
Concentration: 0.2157 ug/mL

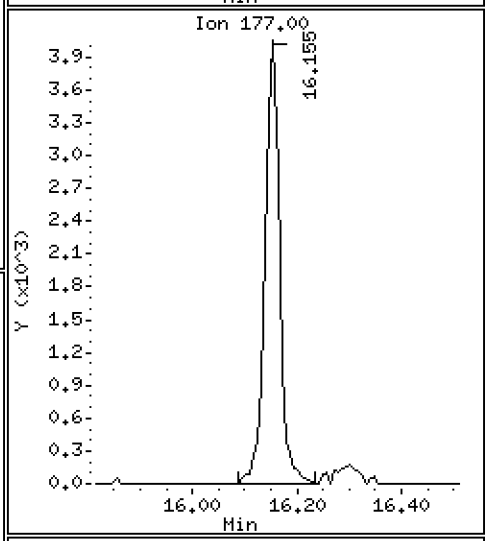


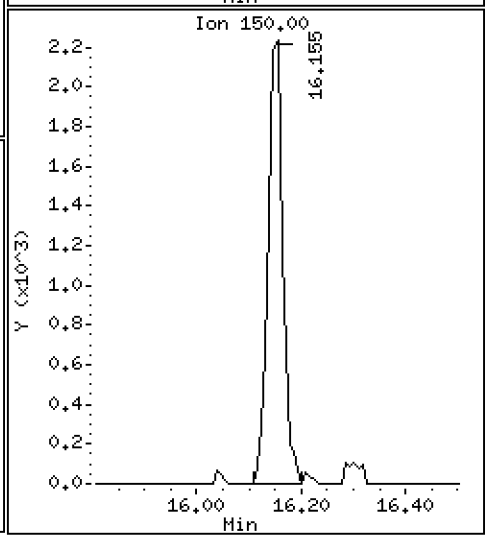












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

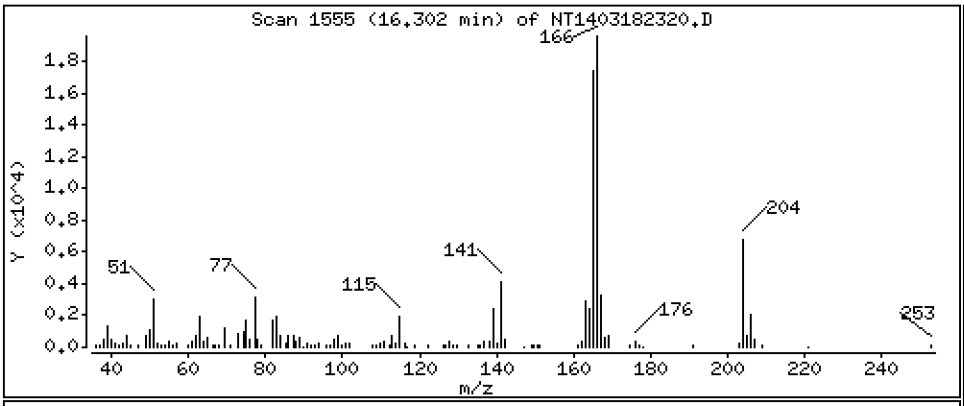
Operator: JGR

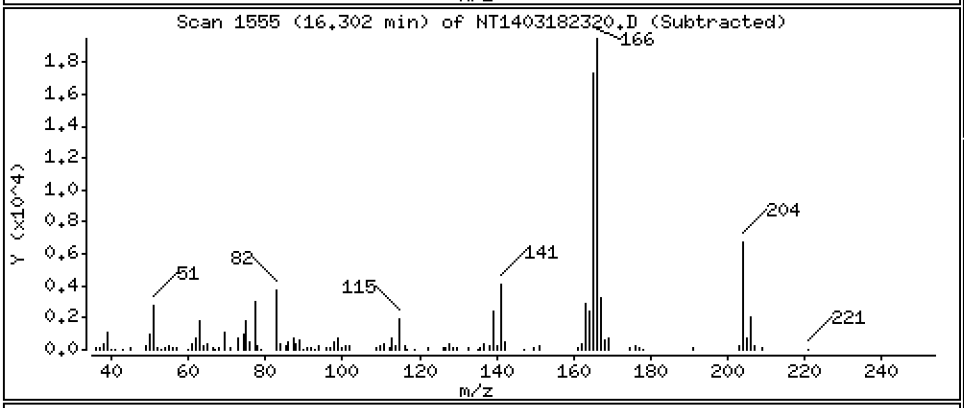
Column phase: ZB-5msi

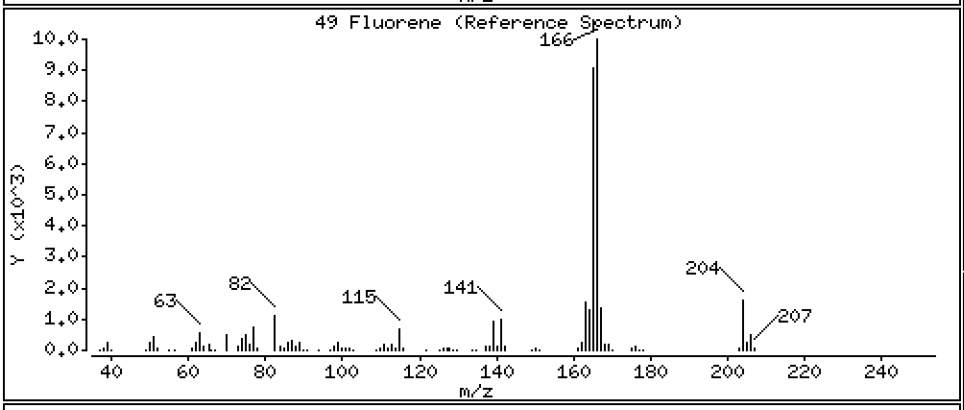
Column diameter: 0.25

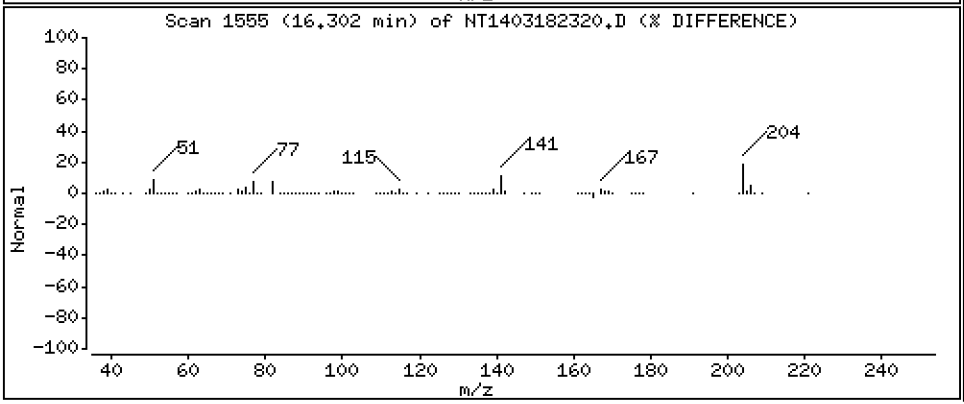
49 Fluorene

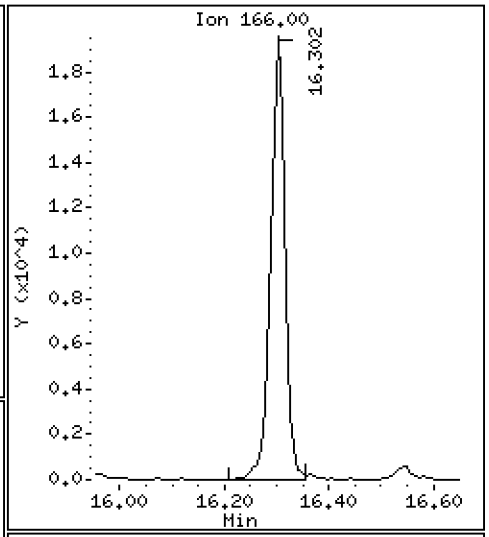
Concentration: 0.2030 ug/mL

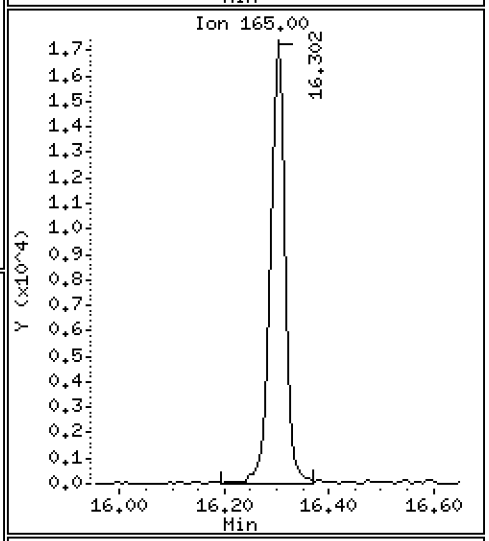


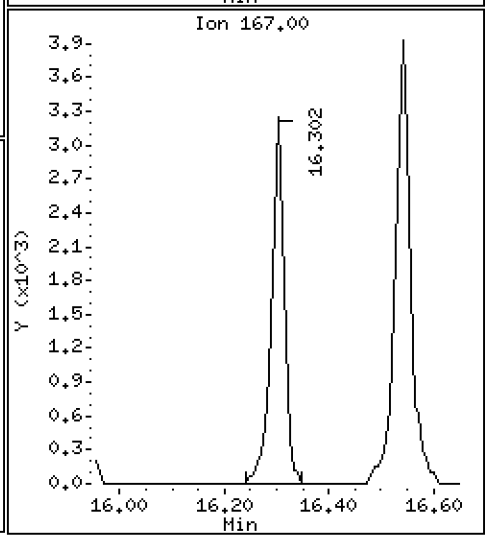












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

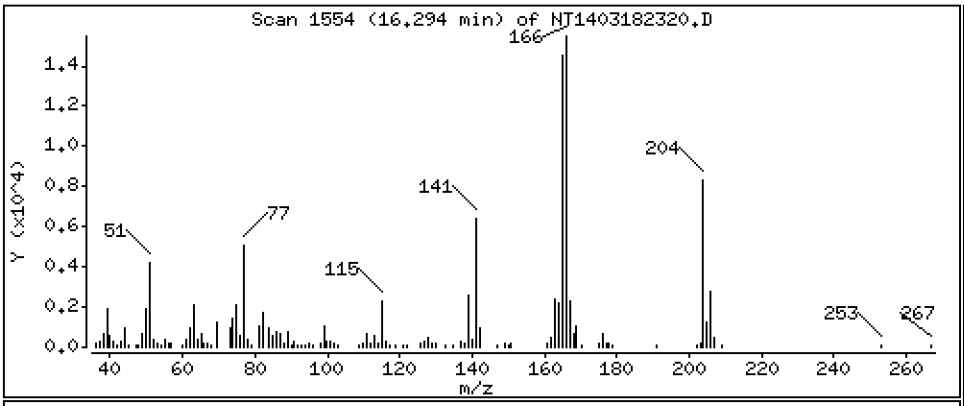
Operator: JGR

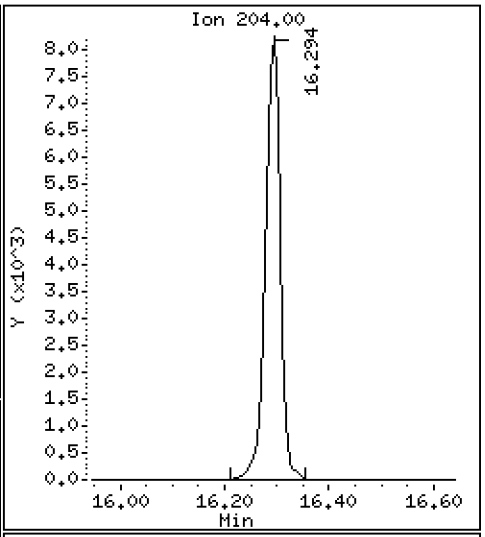
Column phase: ZB-5msi

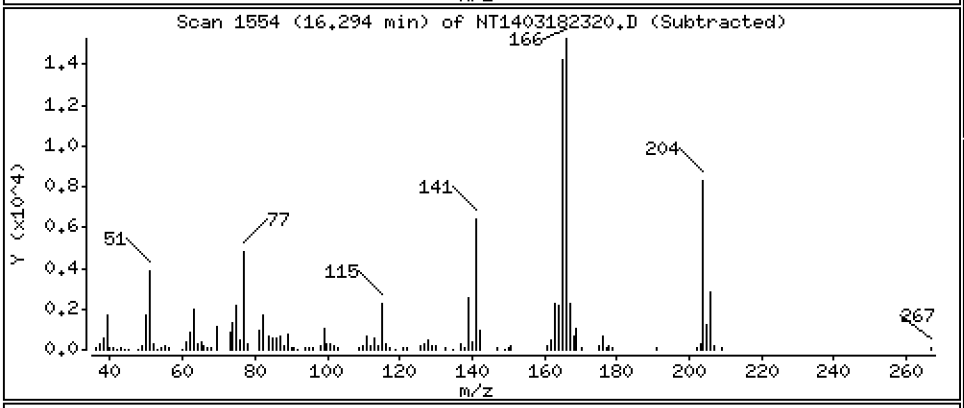
Column diameter: 0.25

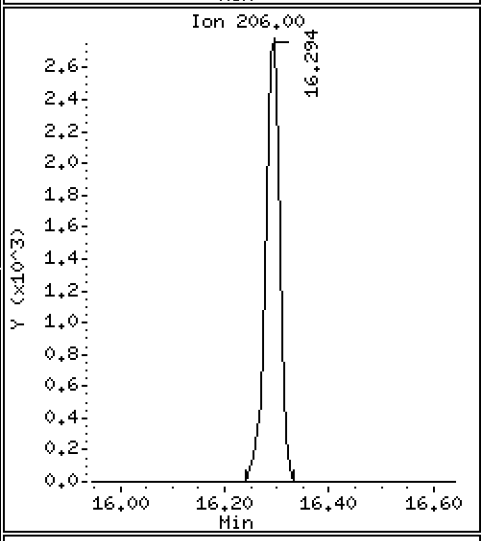
51 4-Chlorophenyl-phenylether

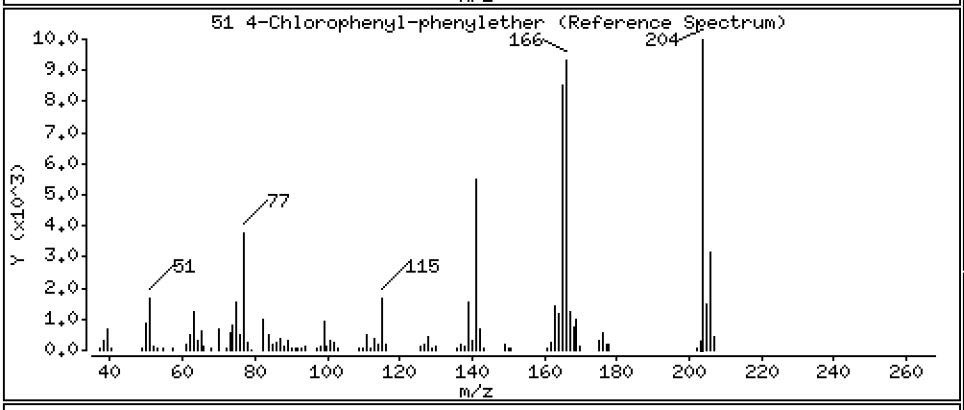
Concentration: 0.2061 ug/mL

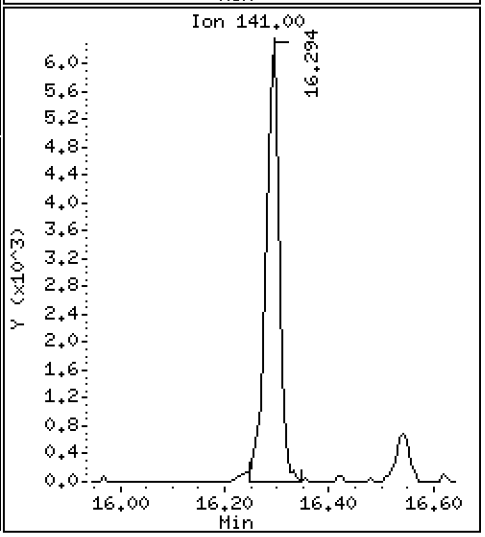


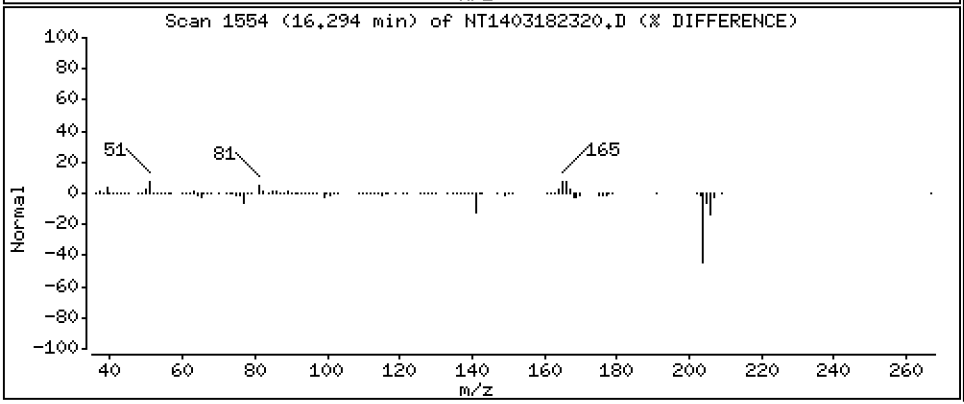












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

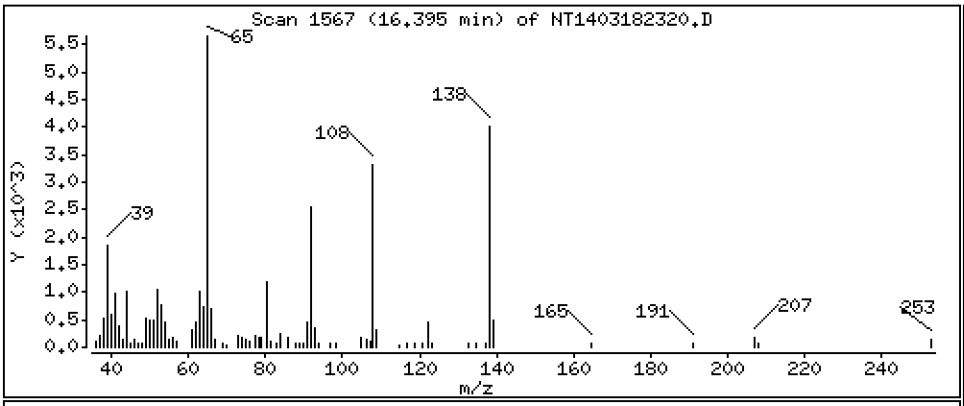
Operator: JGR

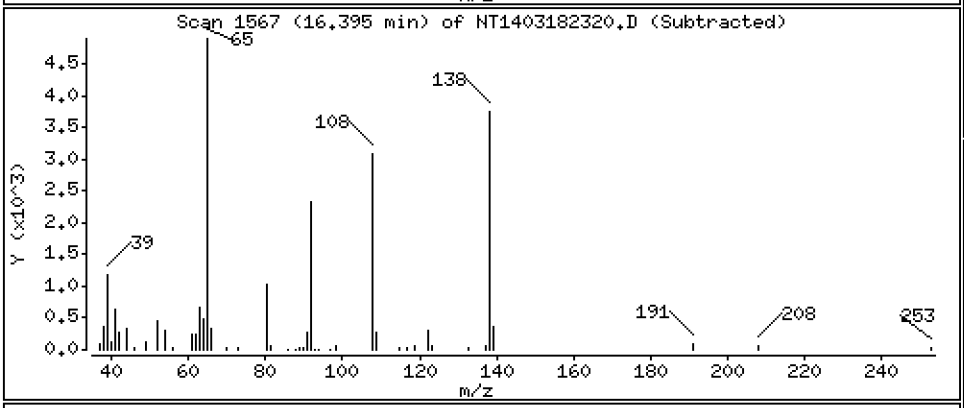
Column phase: ZB-5msi

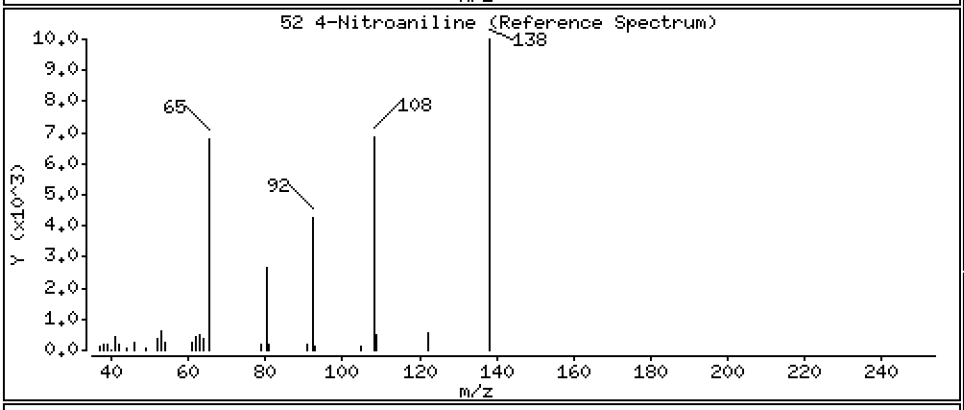
Column diameter: 0.25

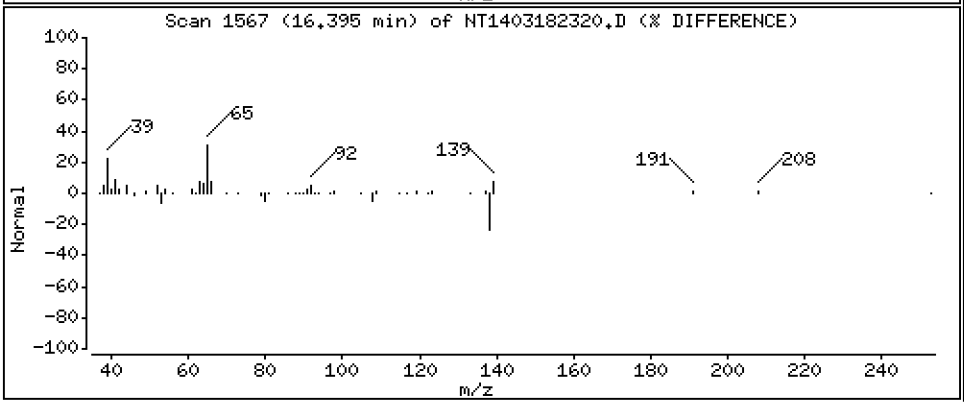
52 4-Nitroaniline

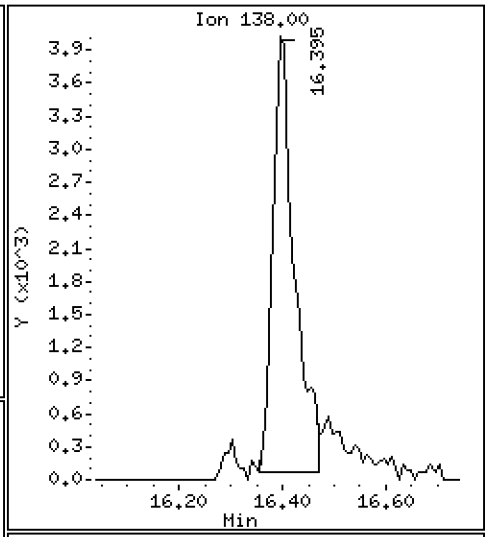
Concentration: 0.2532 ug/mL

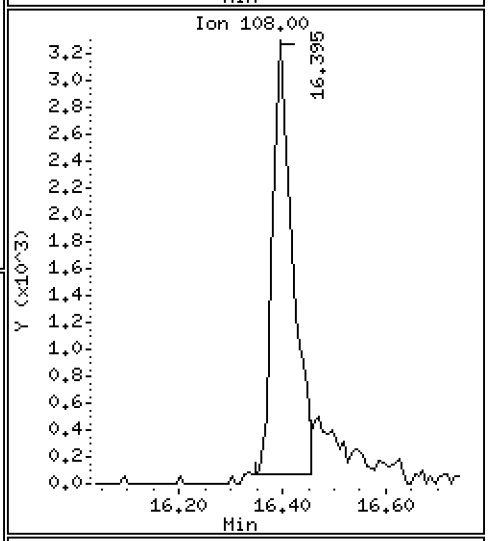


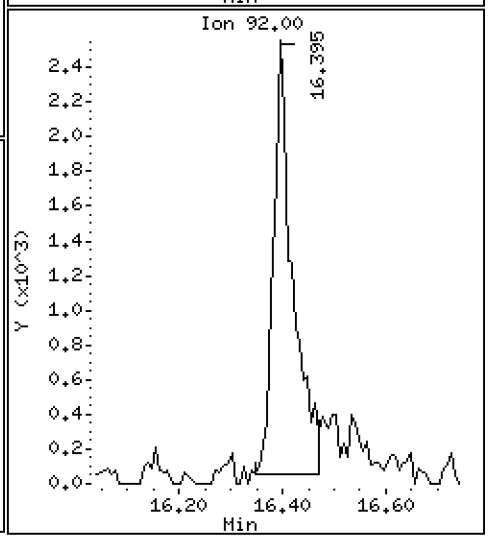












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

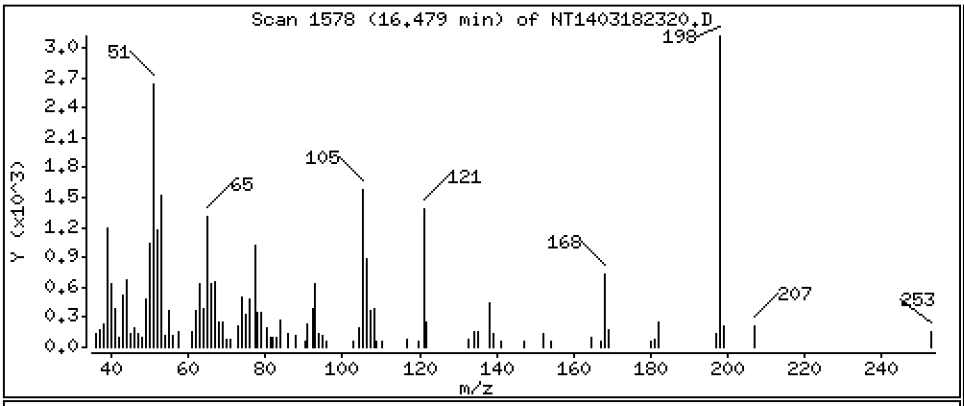
Operator: JGR

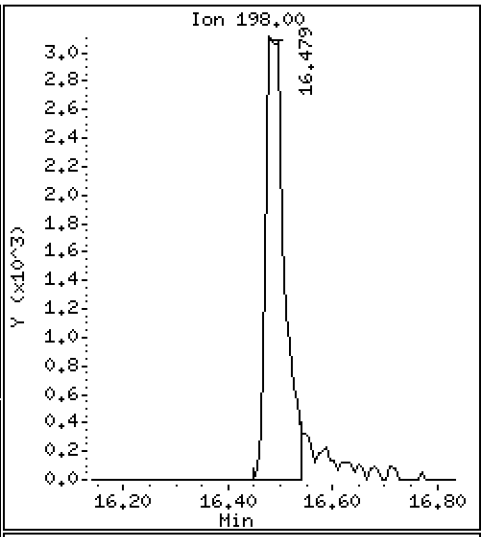
Column phase: ZB-5msi

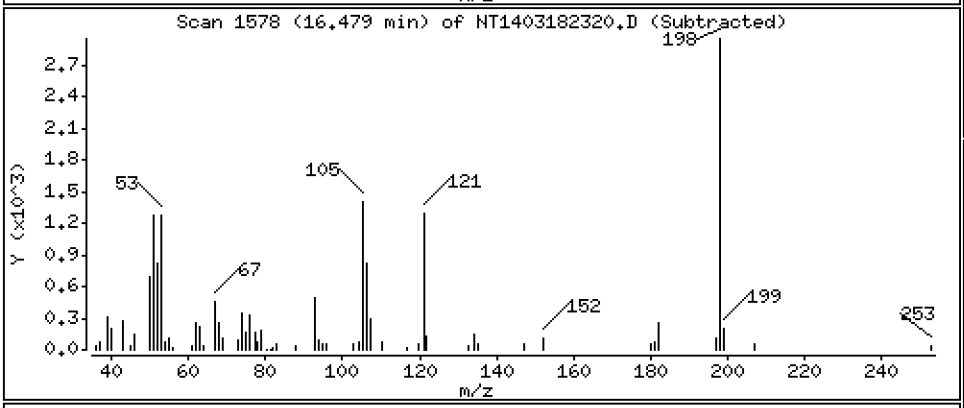
Column diameter: 0.25

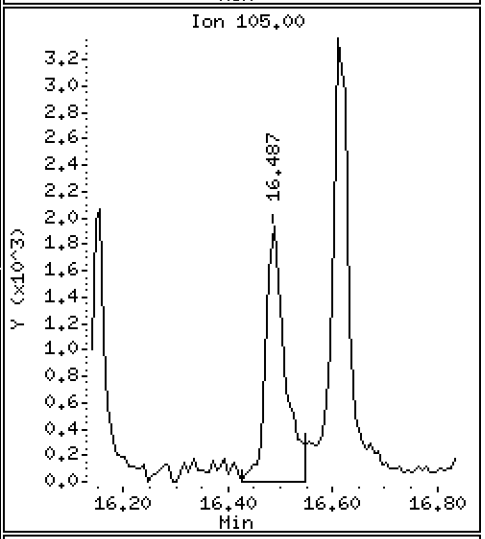
53 4,6-Dinitro-2-methylphenol

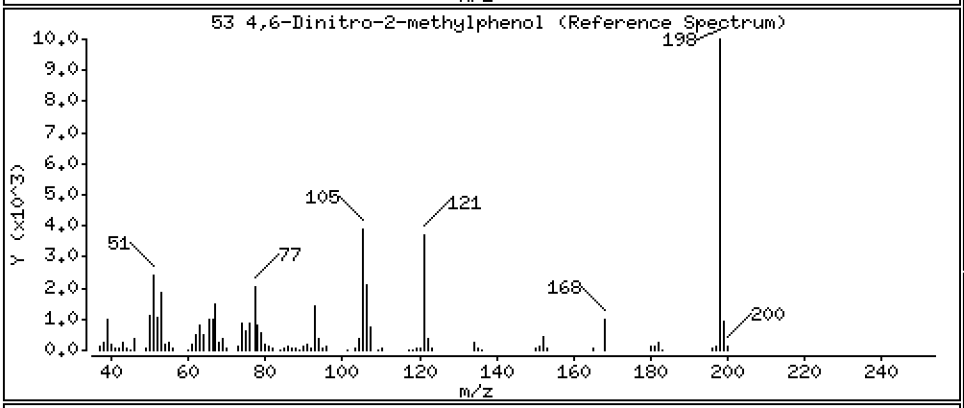
Concentration: 0.2578 ug/mL

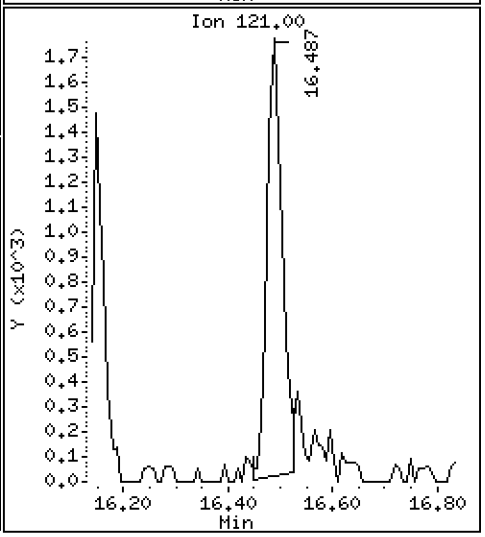


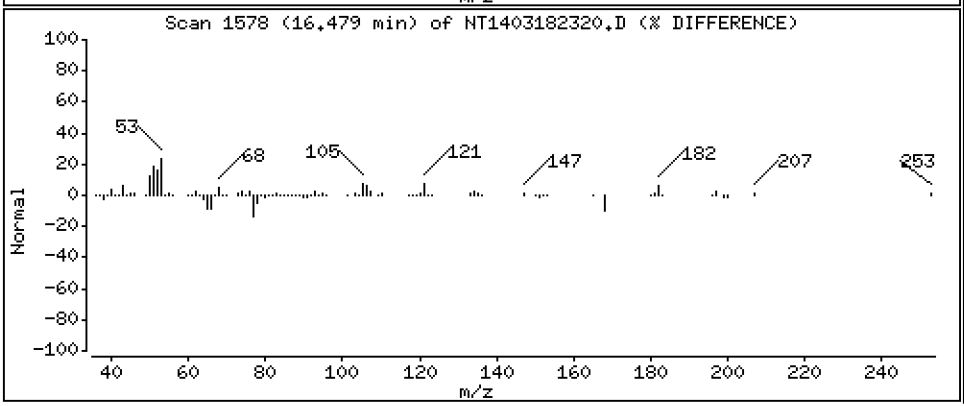












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

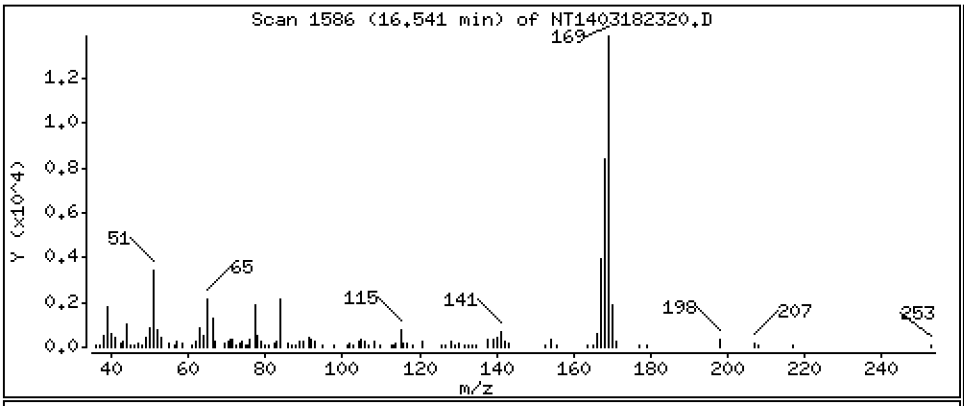
Operator: JGR

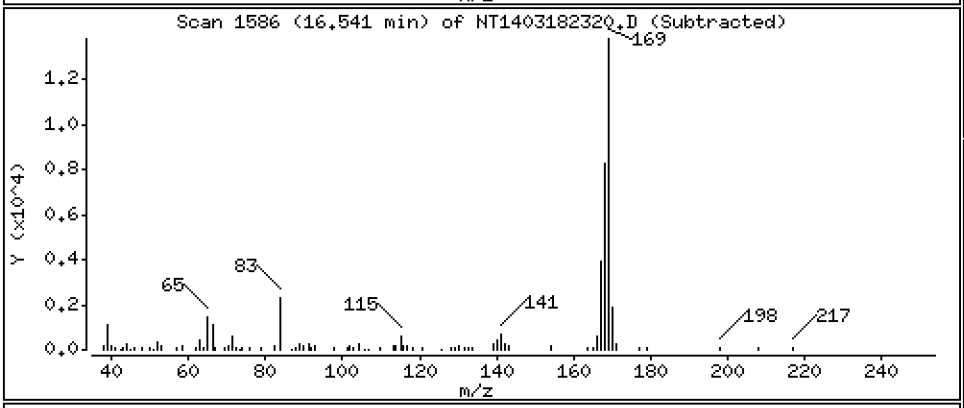
Column phase: ZB-5msi

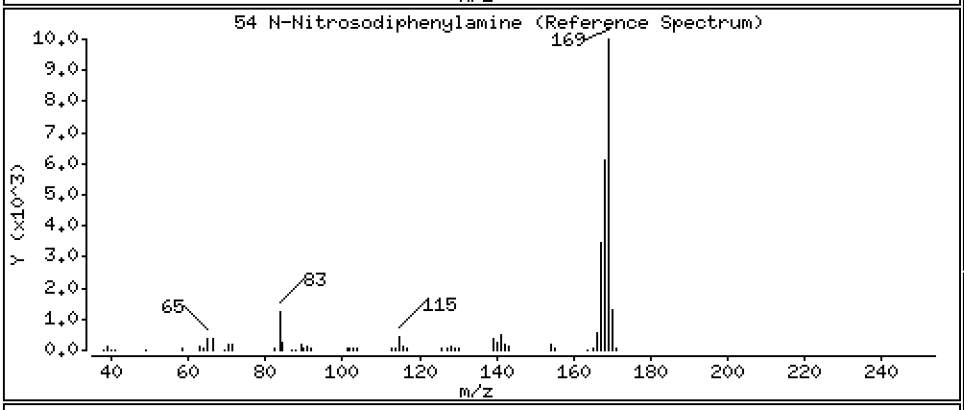
Column diameter: 0.25

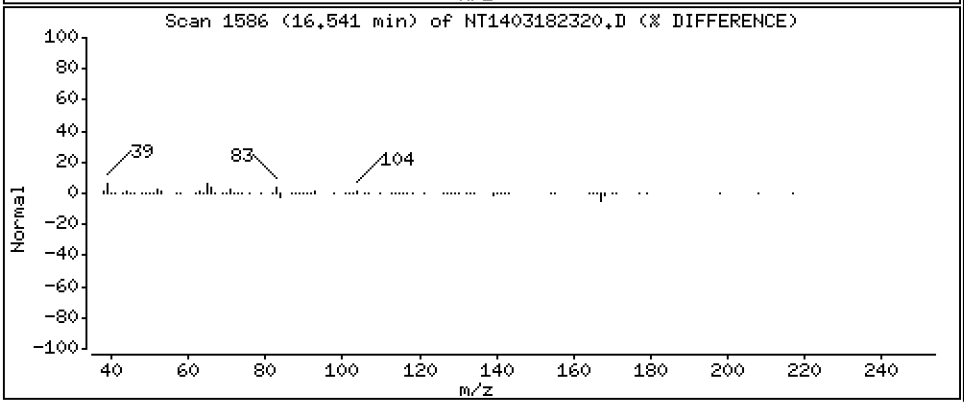
54 N-Nitrosodiphenylamine

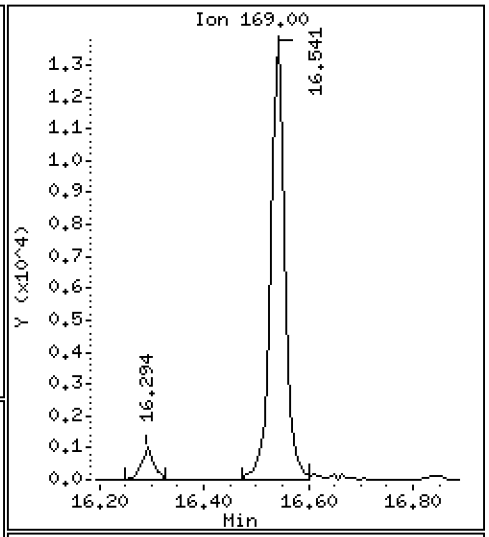
Concentration: 0.2130 ug/mL

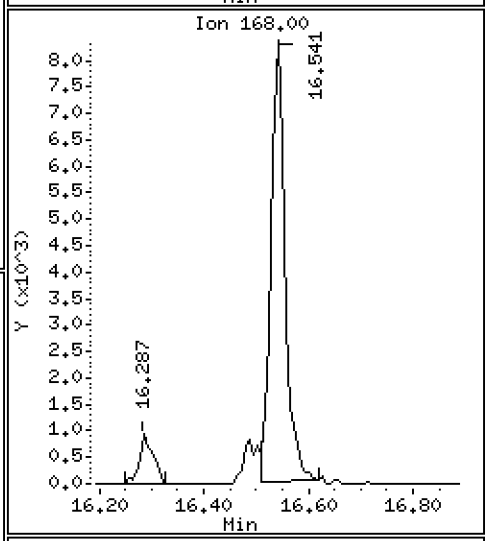


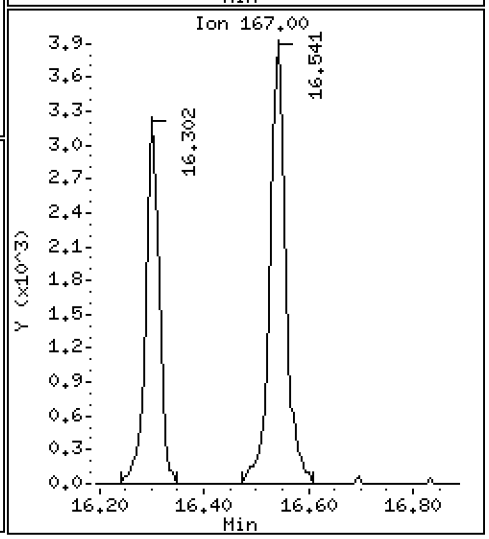












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

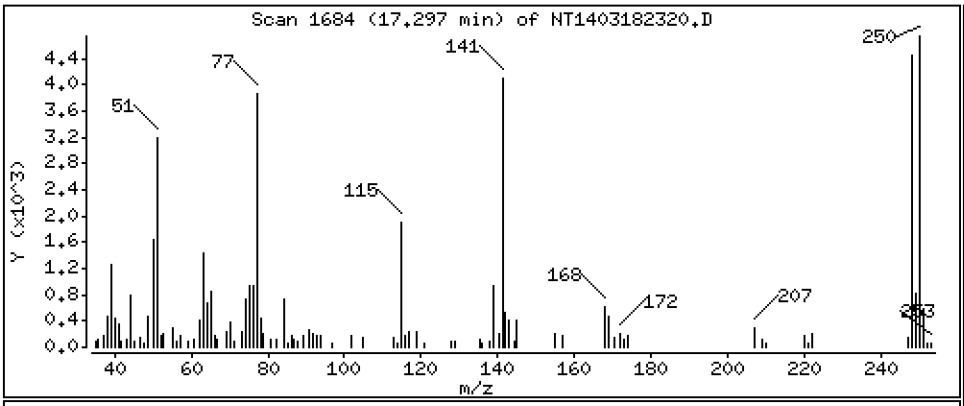
Operator: JGR

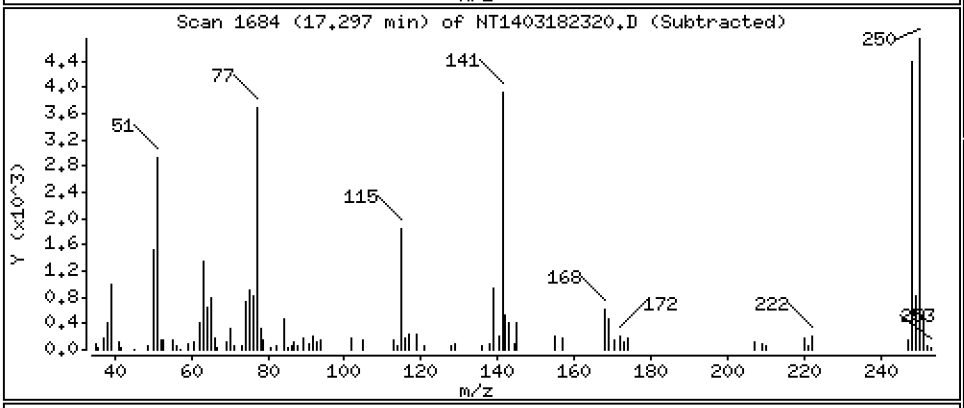
Column phase: ZB-5msi

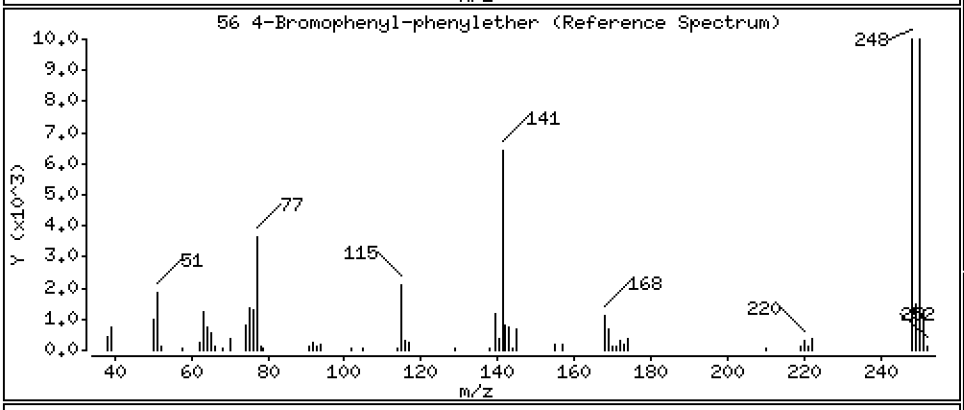
Column diameter: 0.25

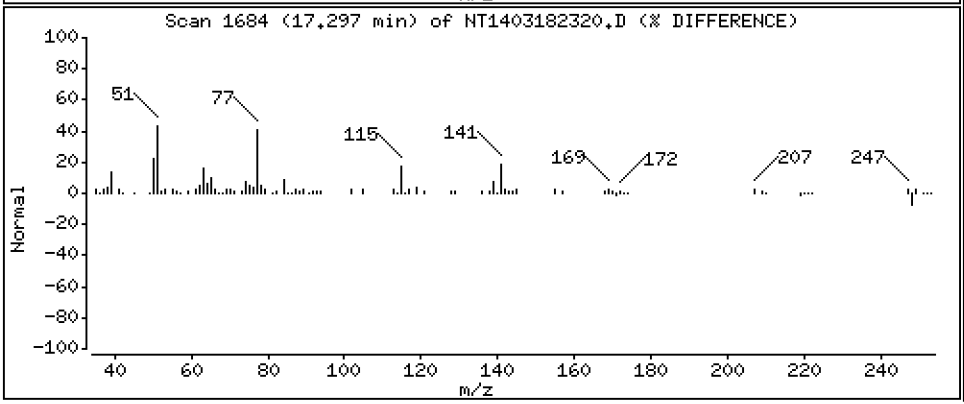
56 4-Bromophenyl-phenylether

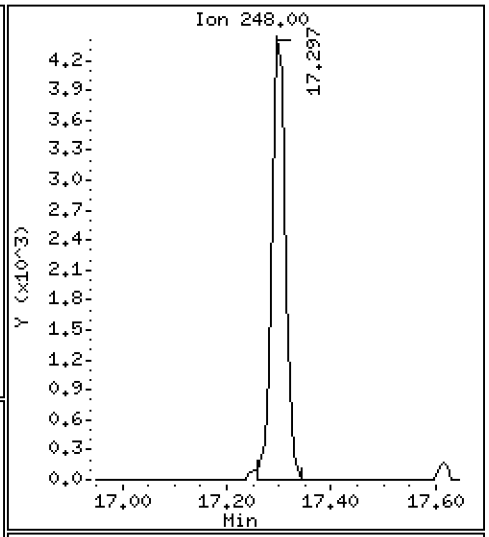
Concentration: 0.1930 ug/mL

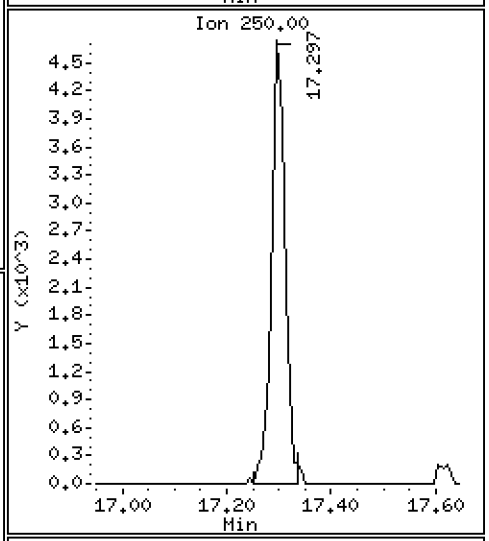


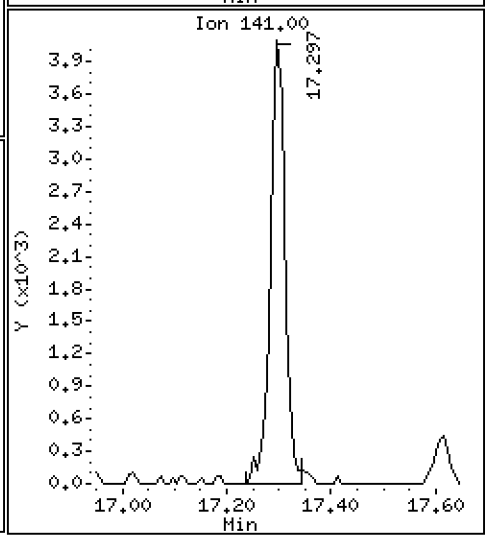












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

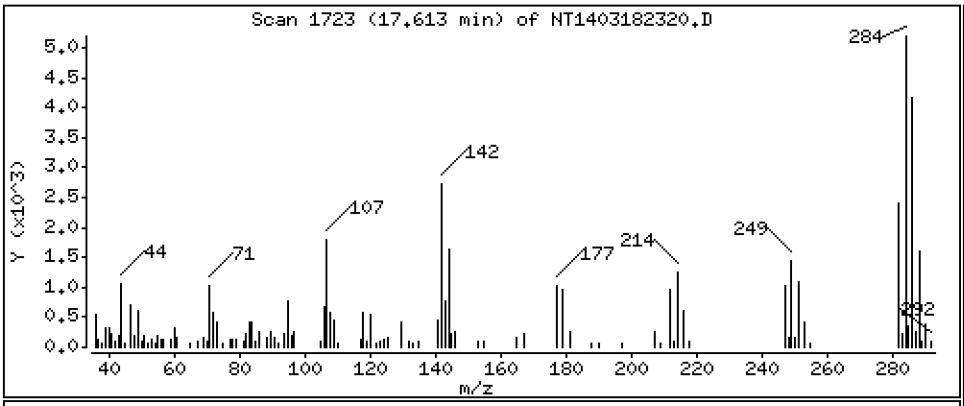
Operator: JGR

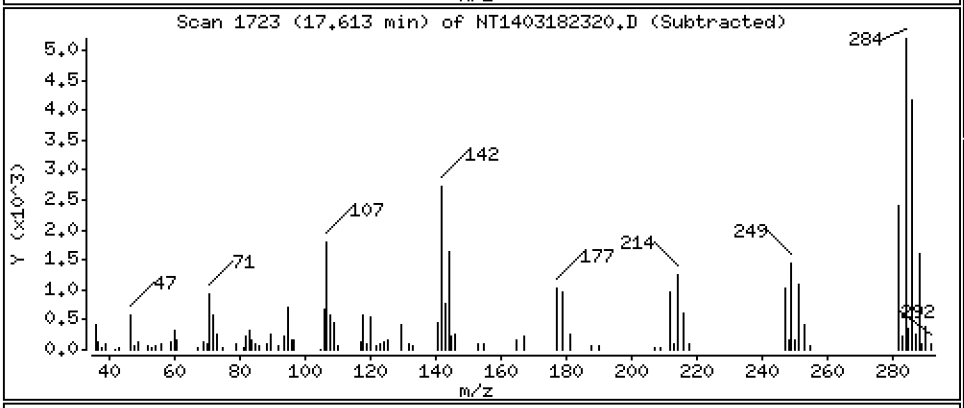
Column phase: ZB-5msi

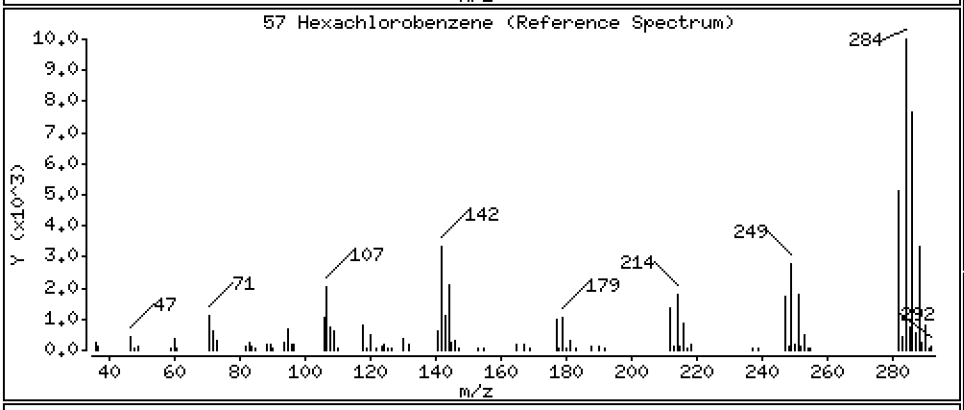
Column diameter: 0.25

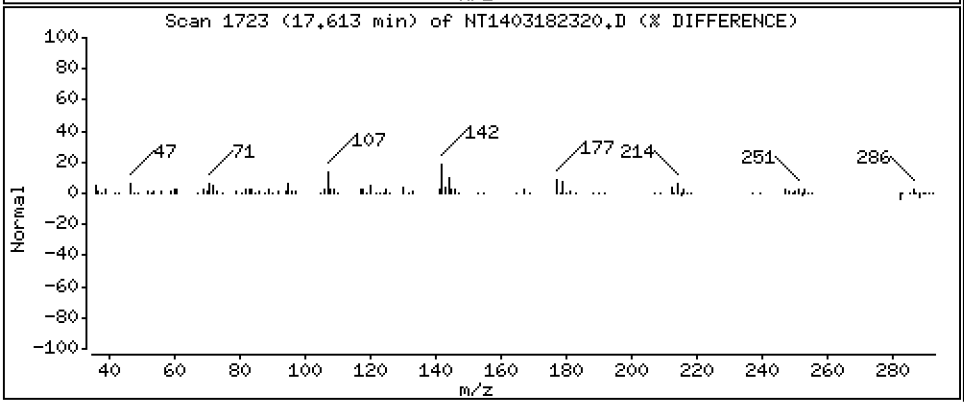
57 Hexachlorobenzene

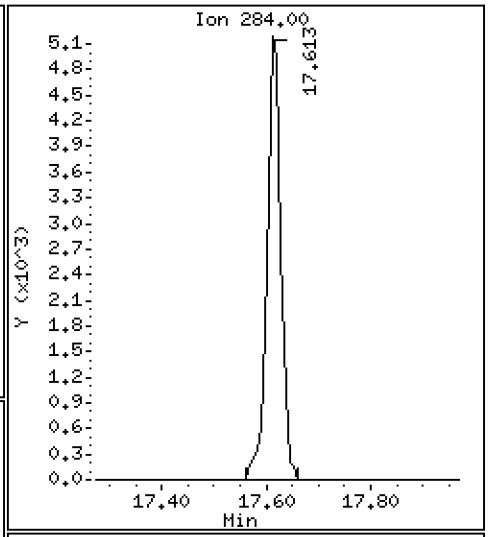
Concentration: 0.2326 ug/mL

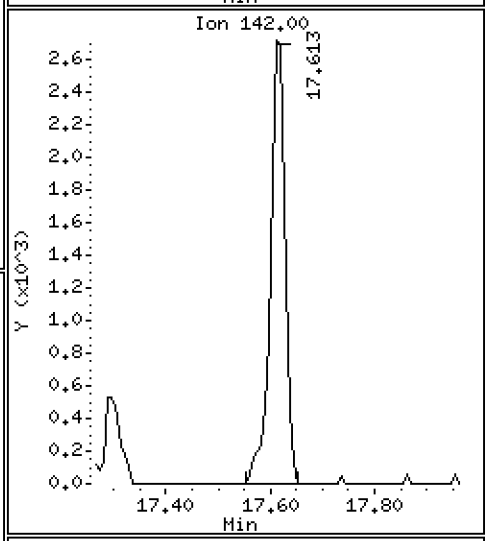


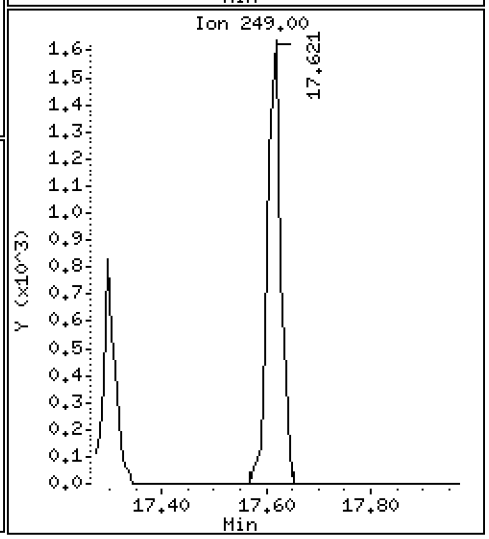












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

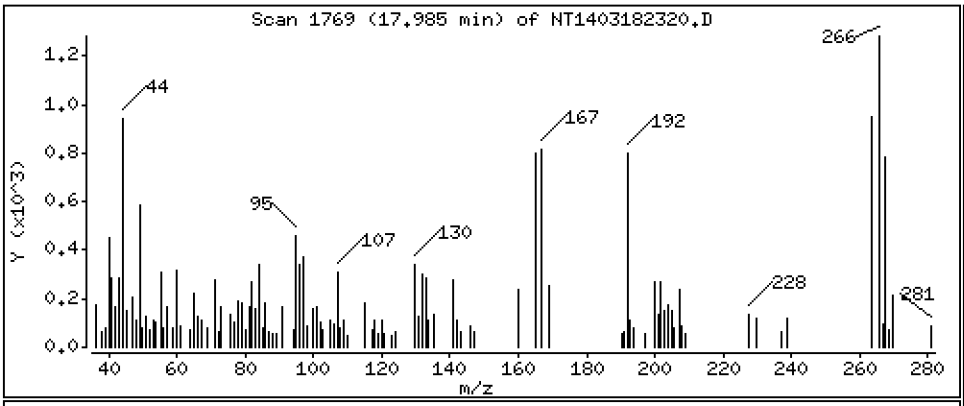
Operator: JGR

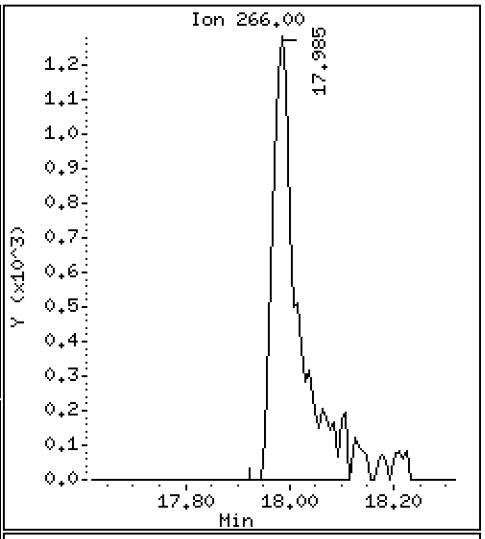
Column phase: ZB-5msi

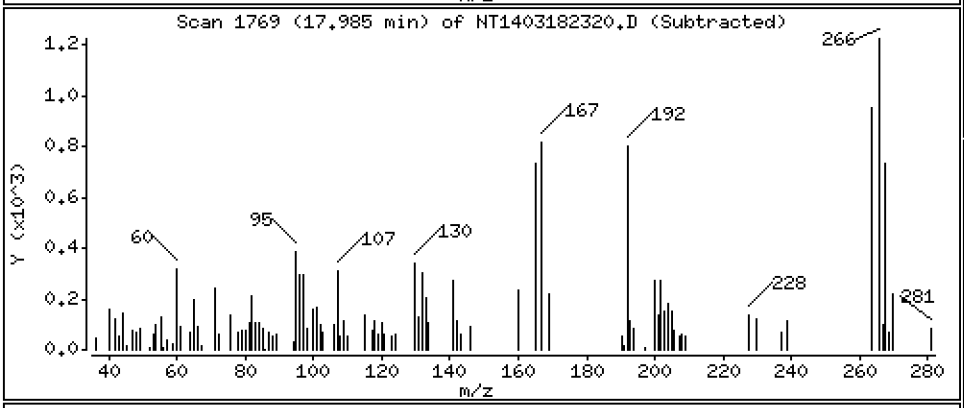
Column diameter: 0.25

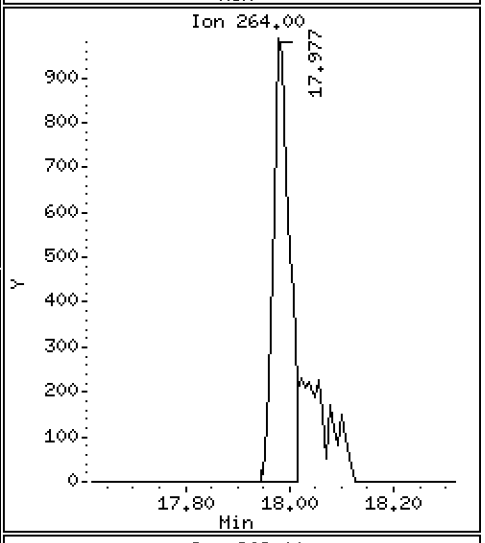
58 Pentachlorophenol

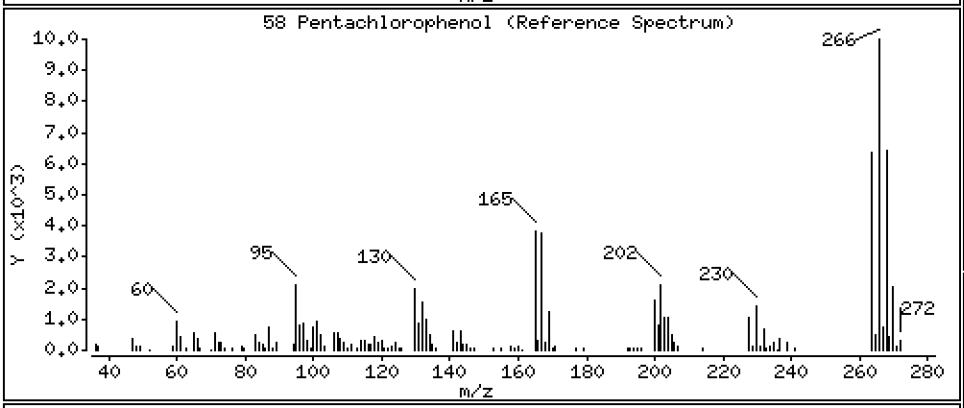
Concentration: 0.1516 ug/mL

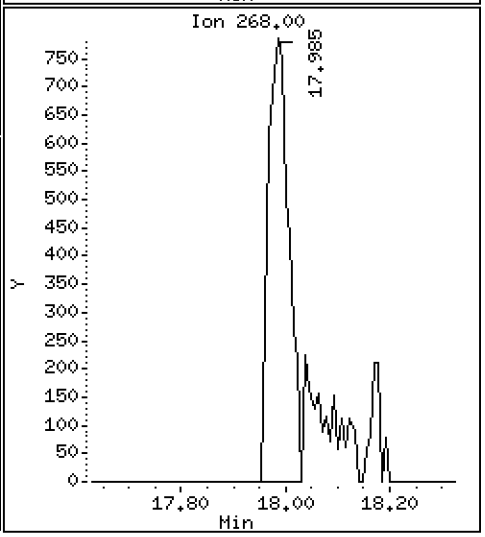


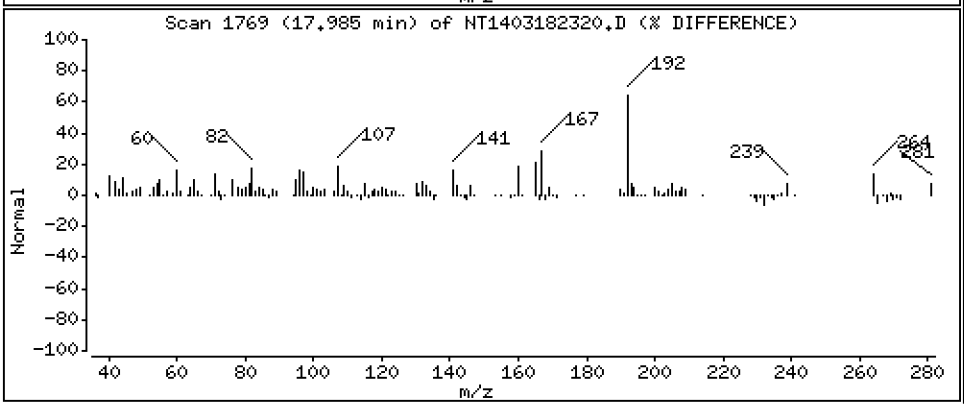












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

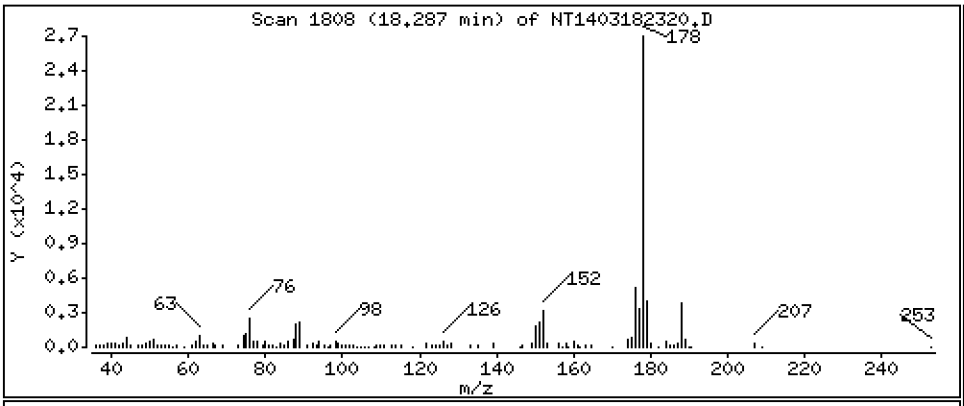
Operator: JGR

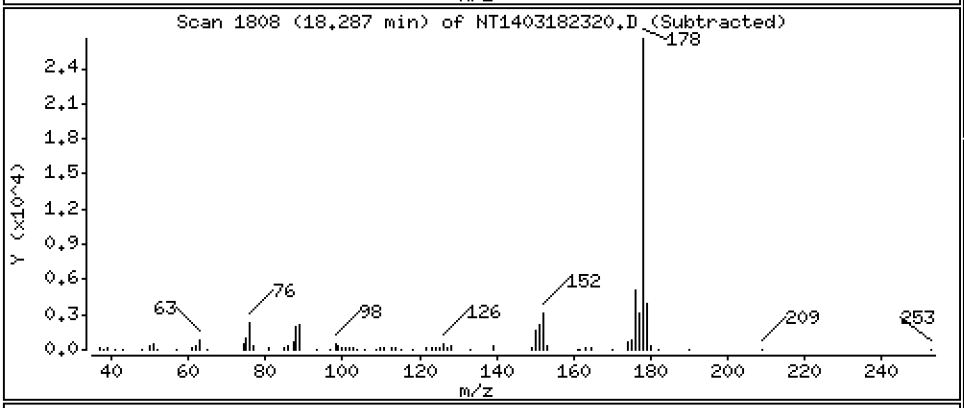
Column phase: ZB-5msi

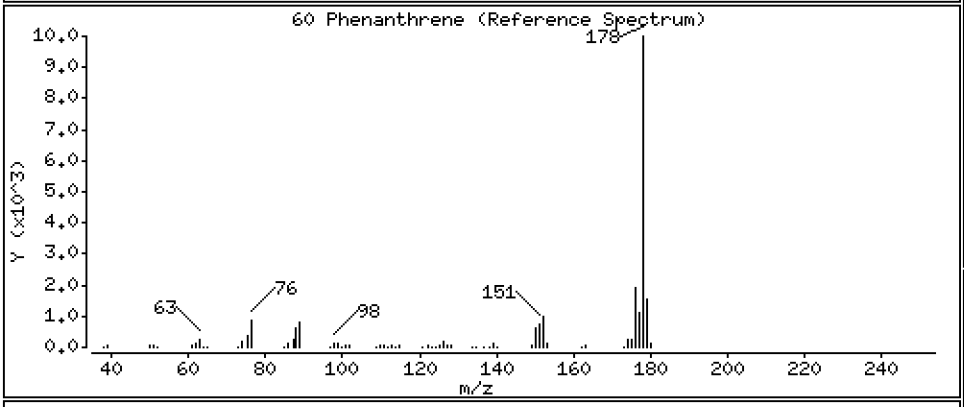
Column diameter: 0.25

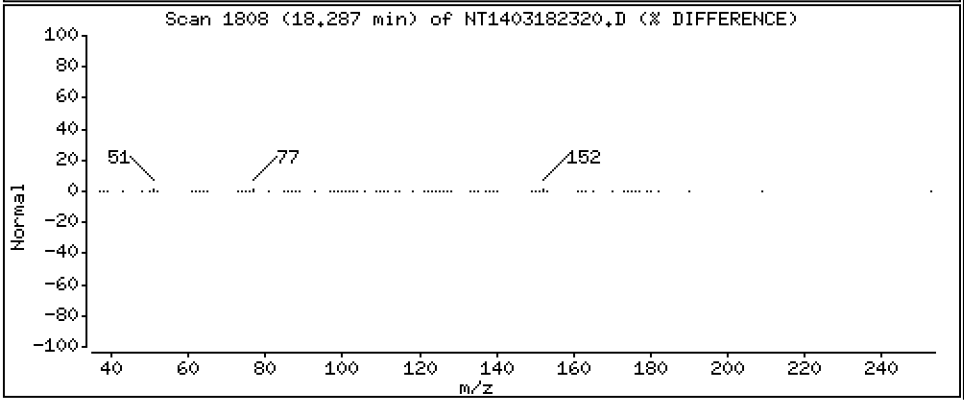
60 Phenanthrene

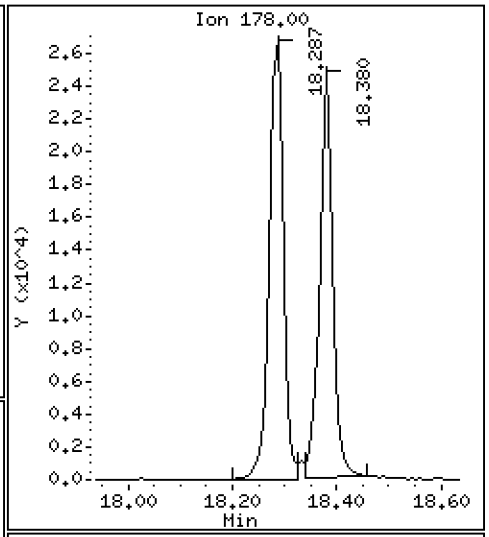
Concentration: 0.1990 ug/mL

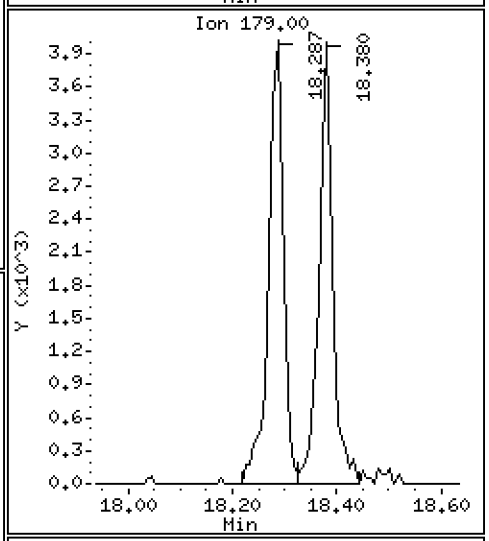


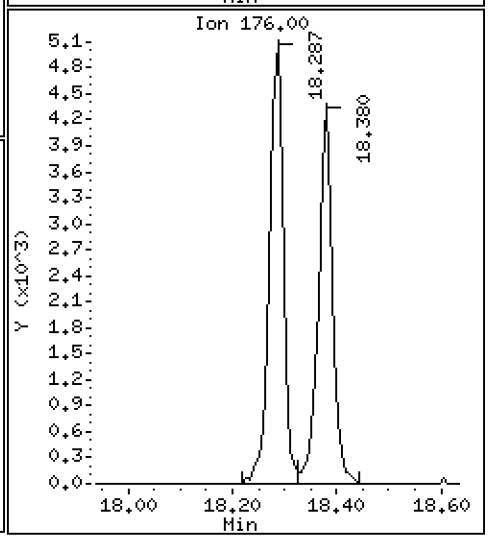












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

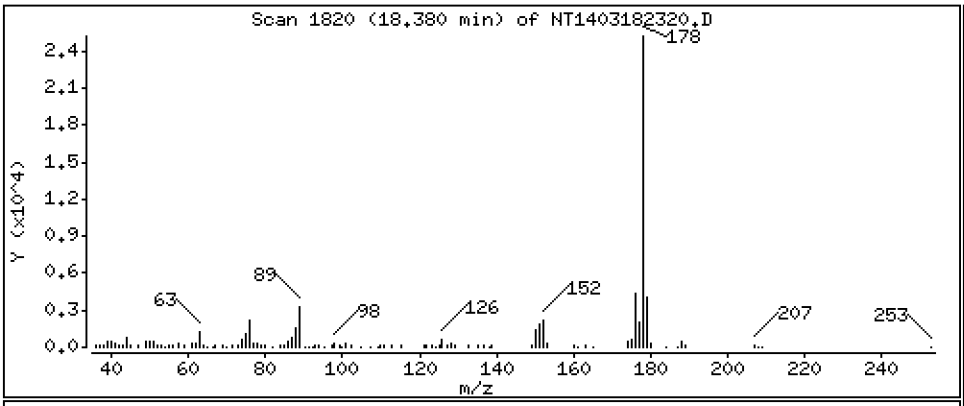
Operator: JGR

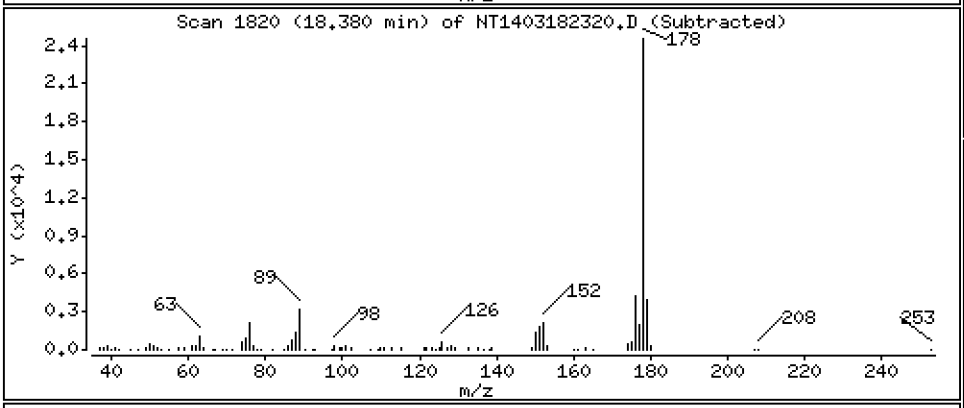
Column phase: ZB-5msi

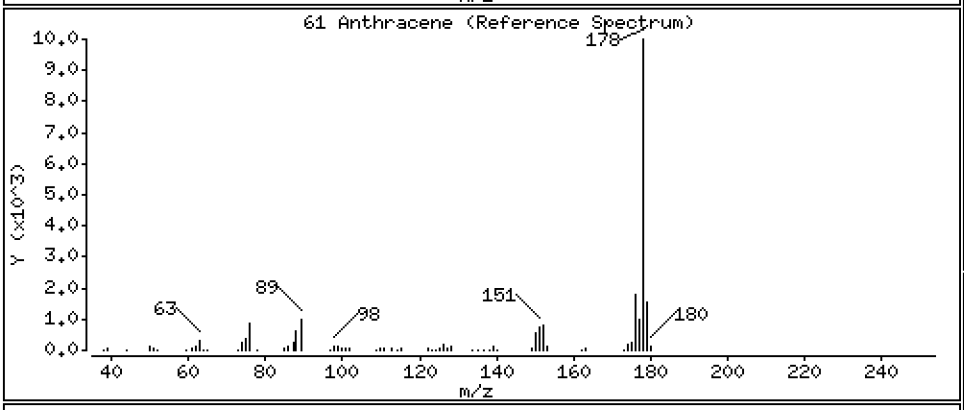
Column diameter: 0.25

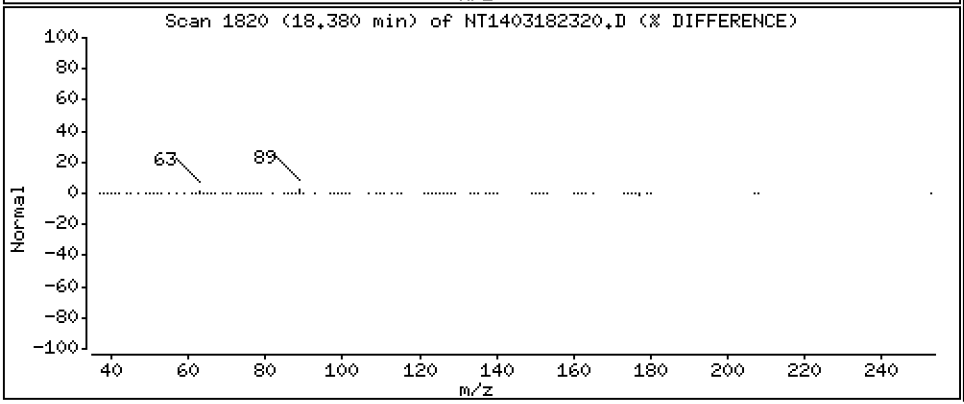
61 Anthracene

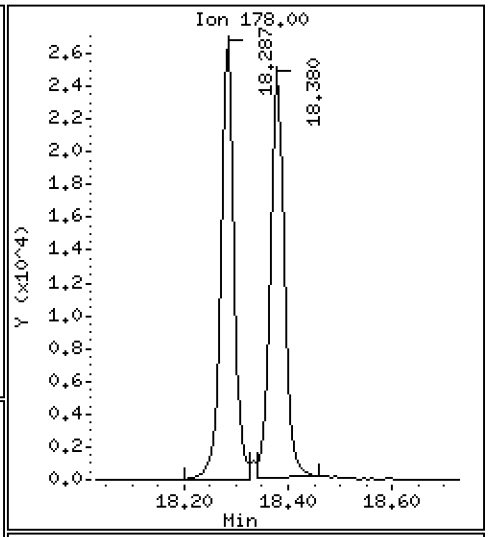
Concentration: 0.1873 ug/mL

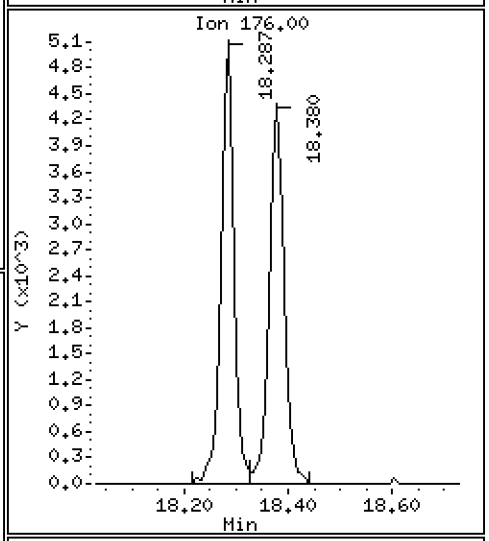


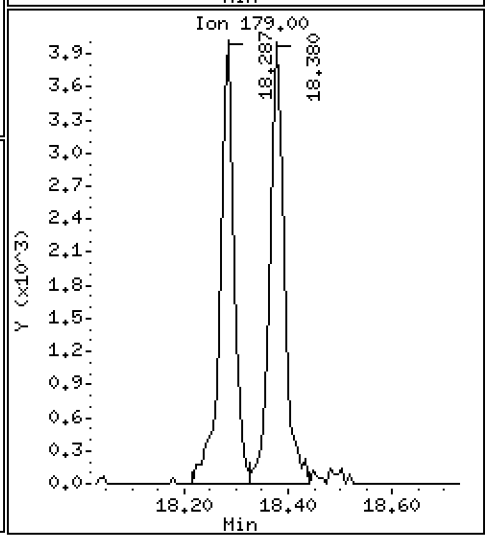












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

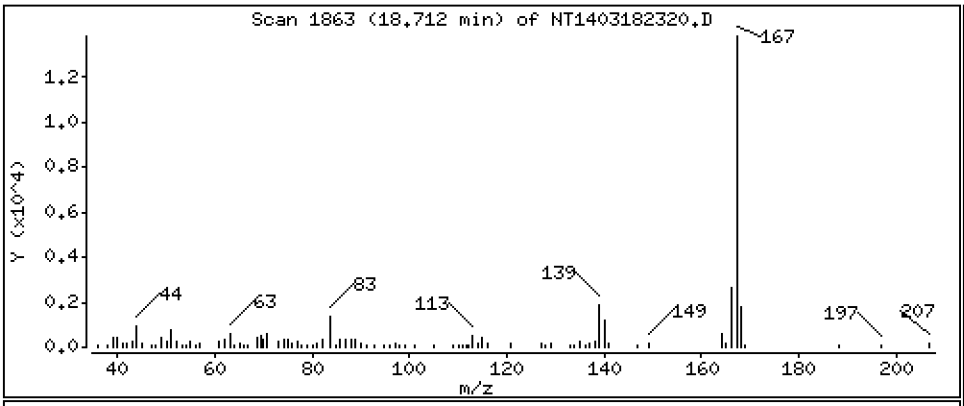
Operator: JGR

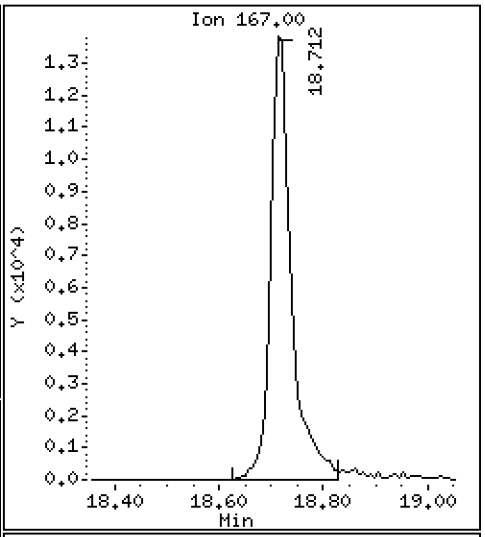
Column phase: ZB-5msi

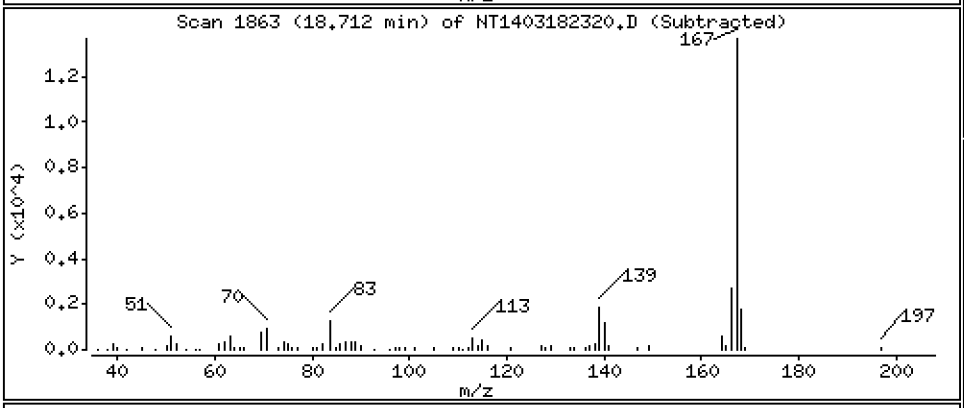
Column diameter: 0.25

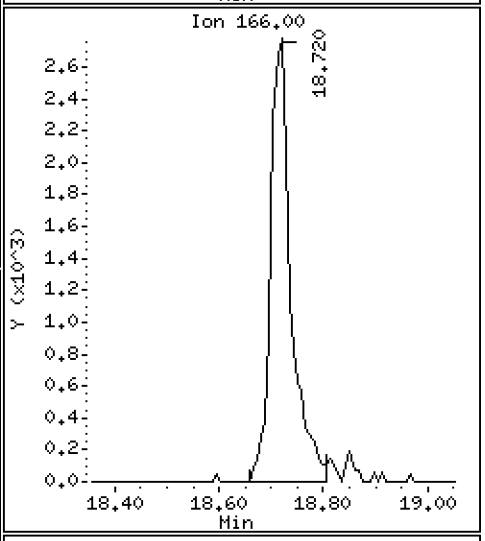
62 Carbazole

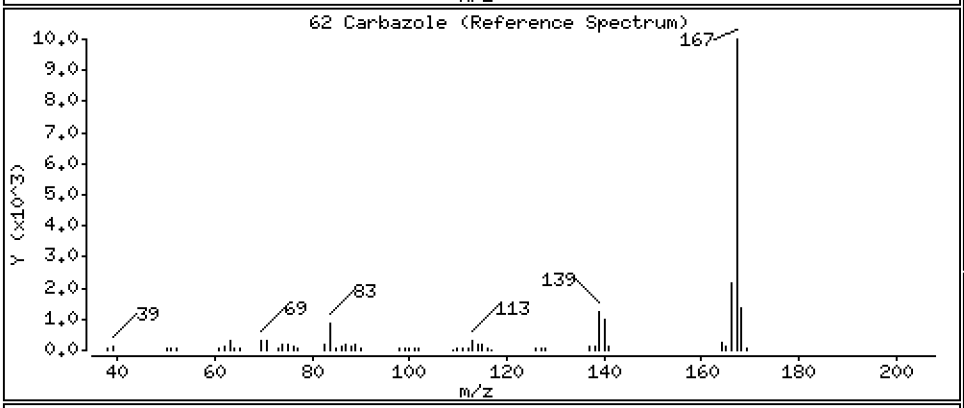
Concentration: 0.1801 ug/mL

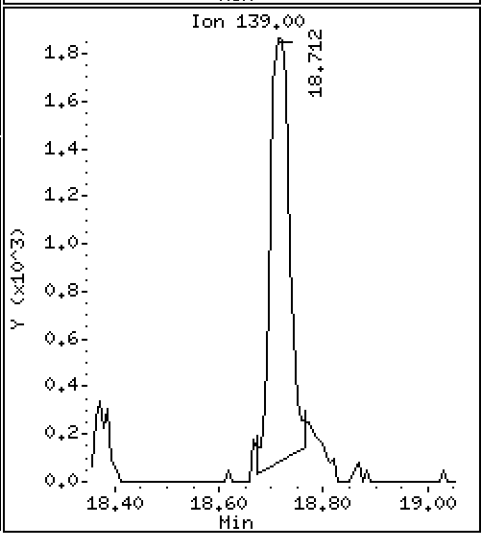


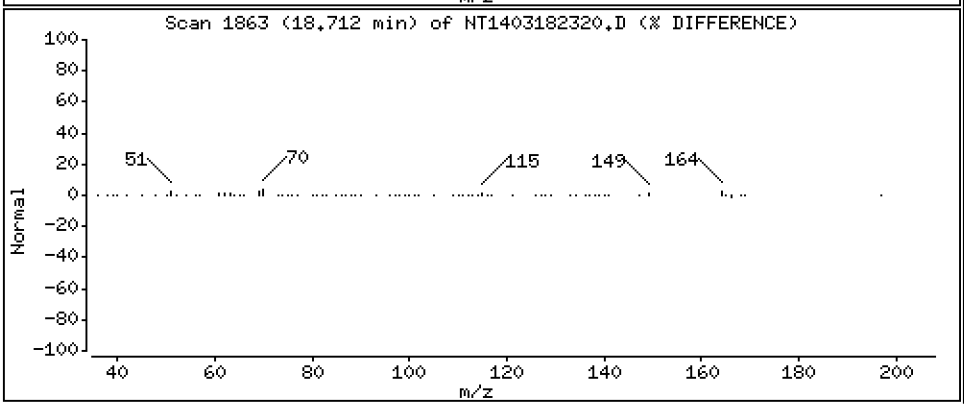












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

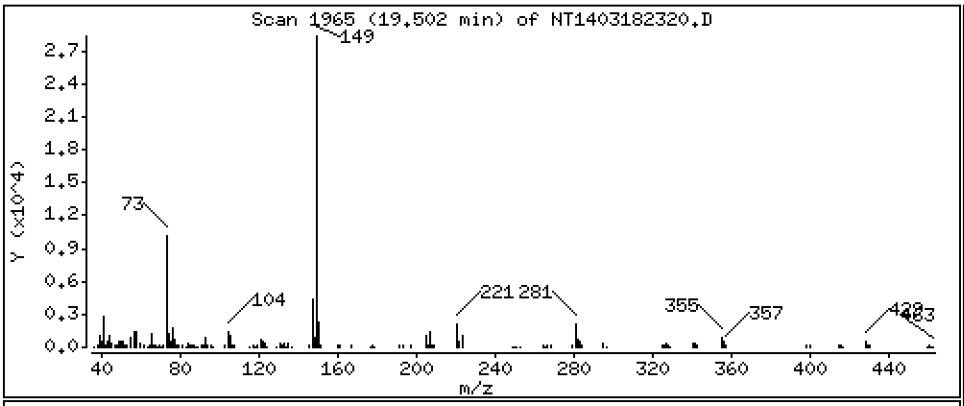
Operator: JGR

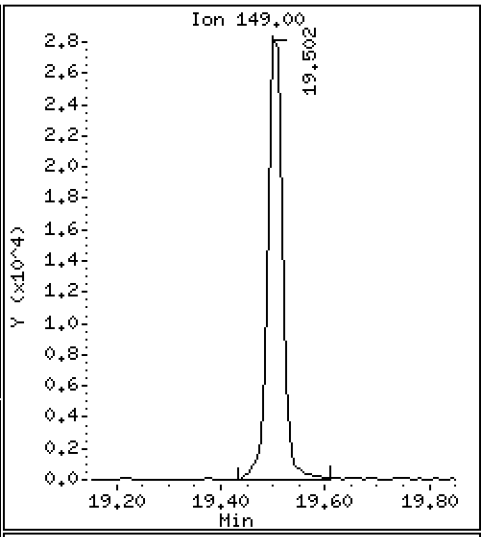
Column phase: ZB-5msi

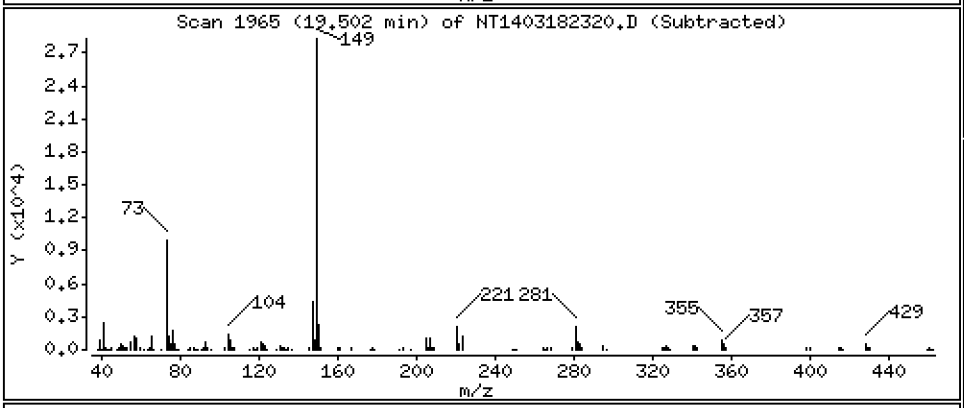
Column diameter: 0.25

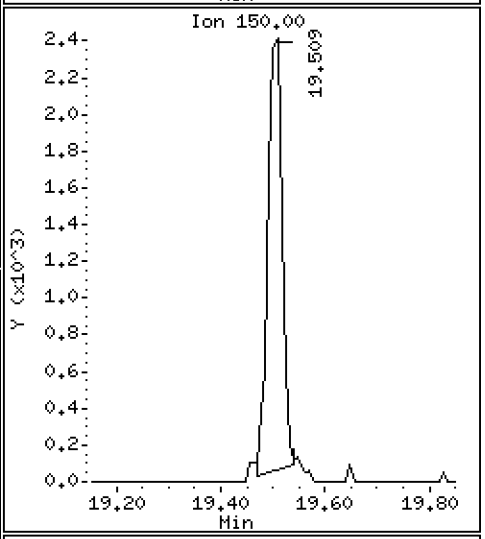
63 Di-n-butylphthalate

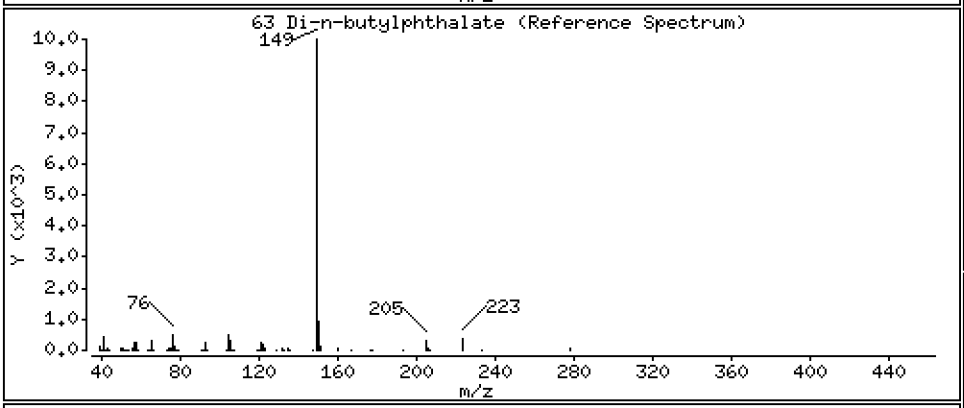
Concentration: 0.2032 ug/mL

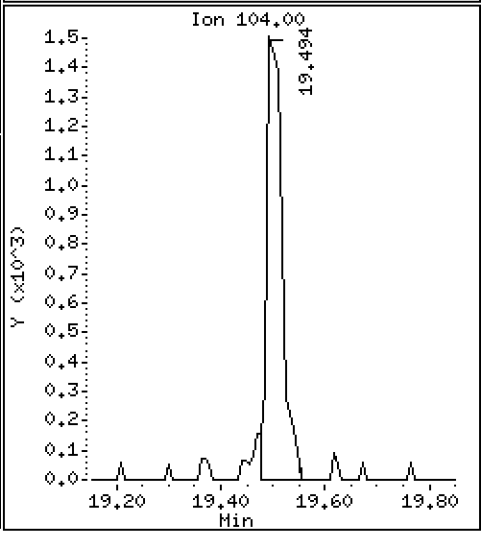


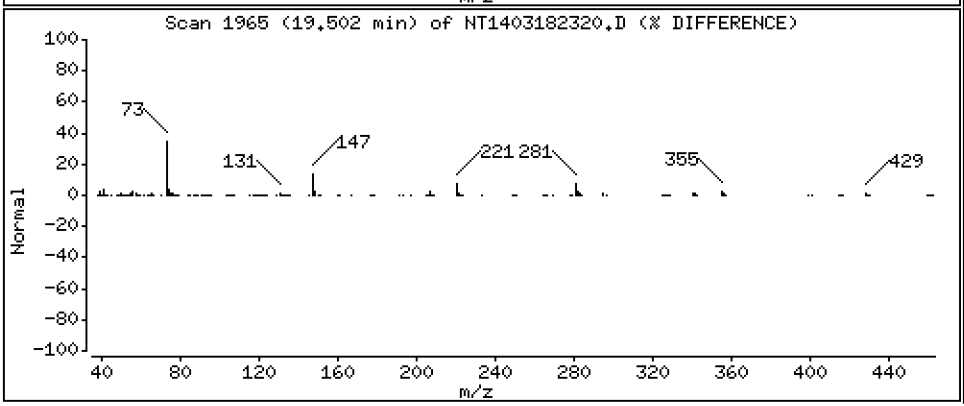












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

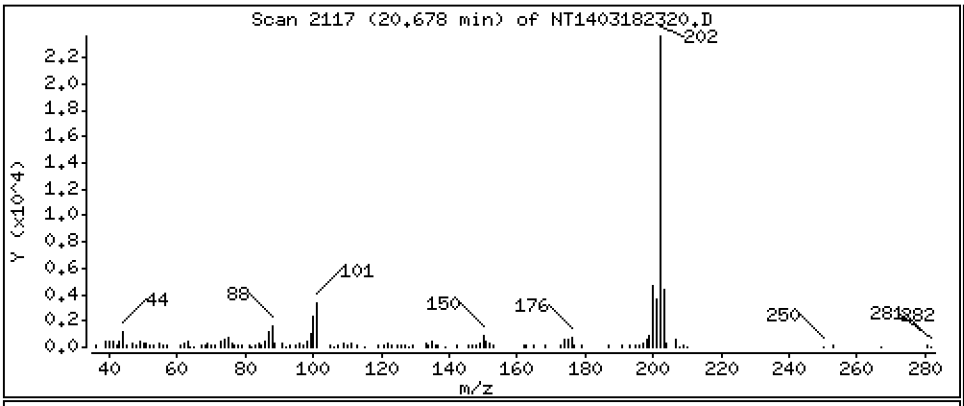
Operator: JGR

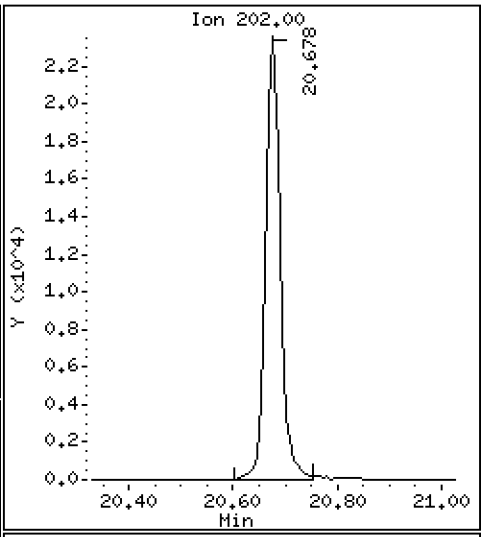
Column phase: ZB-5msi

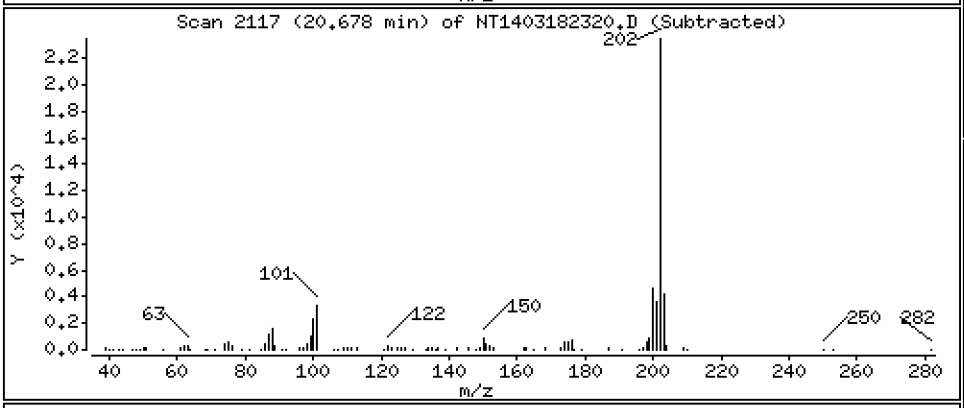
Column diameter: 0.25

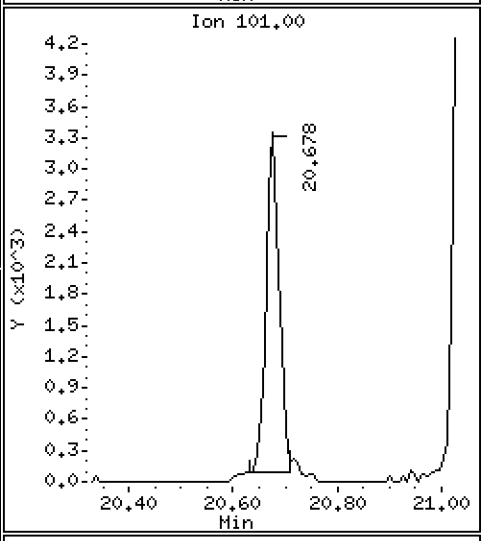
64 Fluoranthene

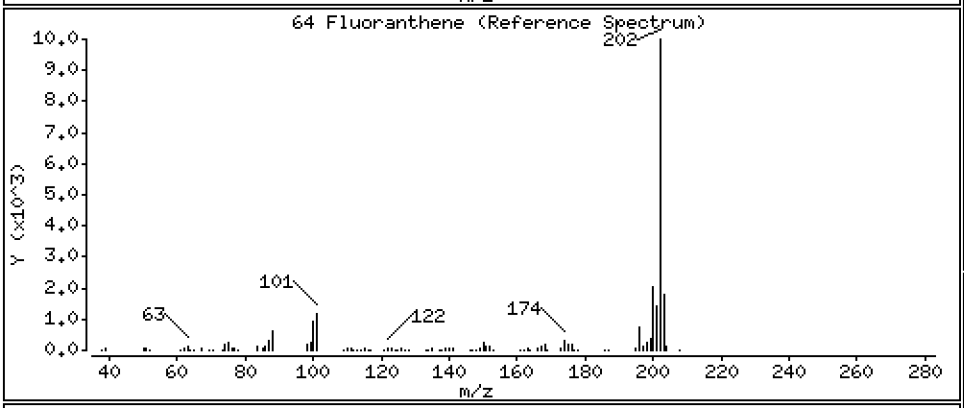
Concentration: 0.2459 ug/mL

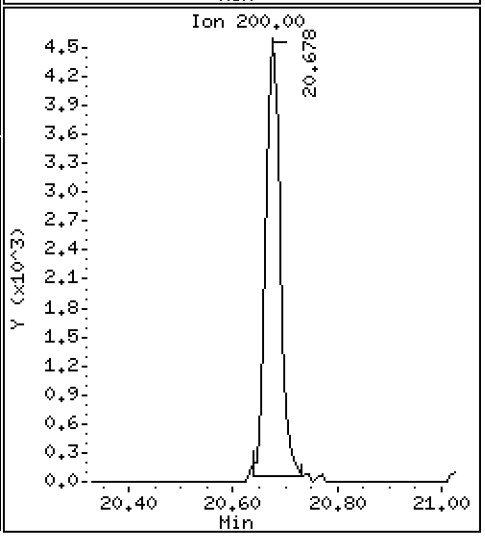


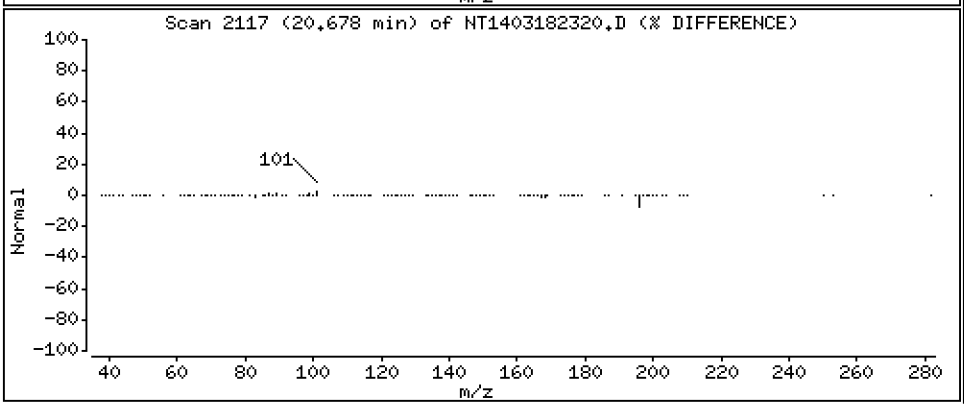












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

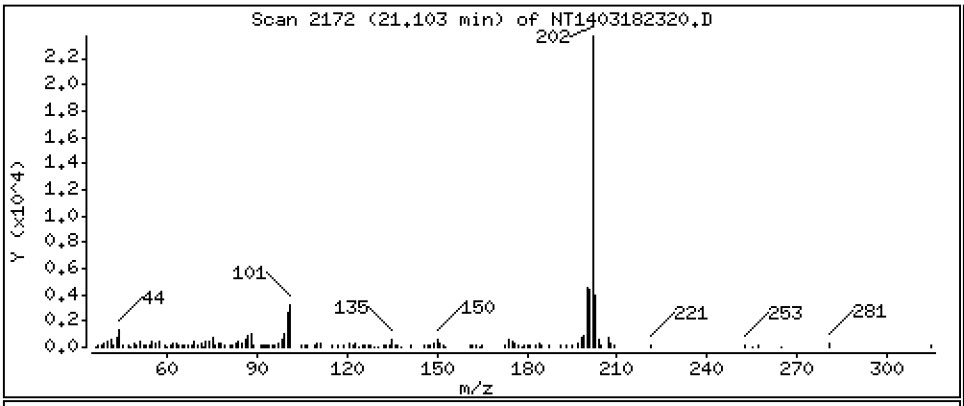
Operator: JGR

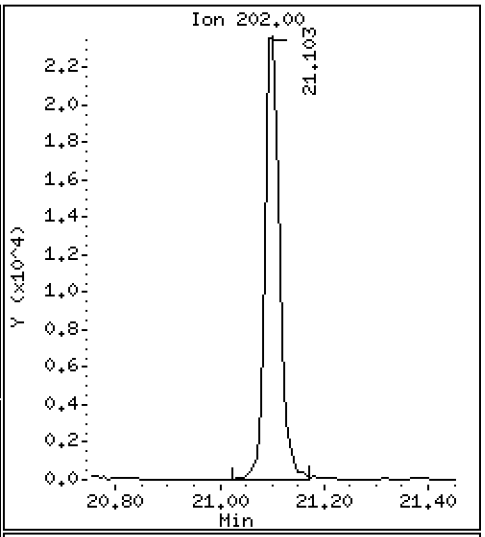
Column phase: ZB-5msi

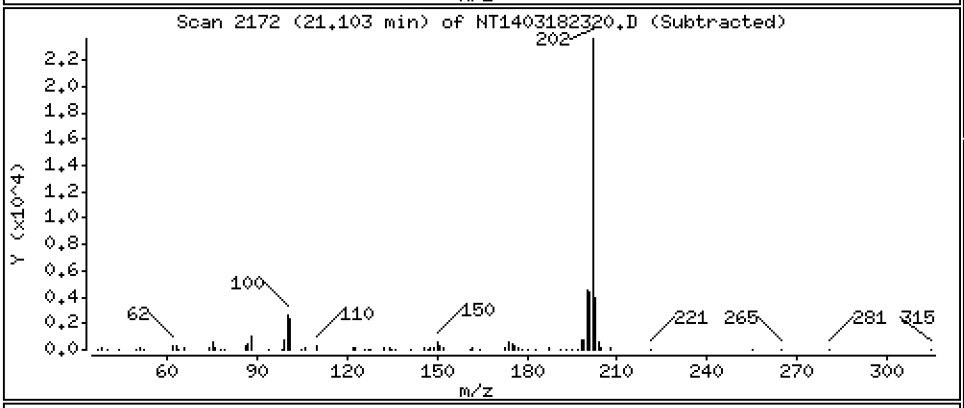
Column diameter: 0.25

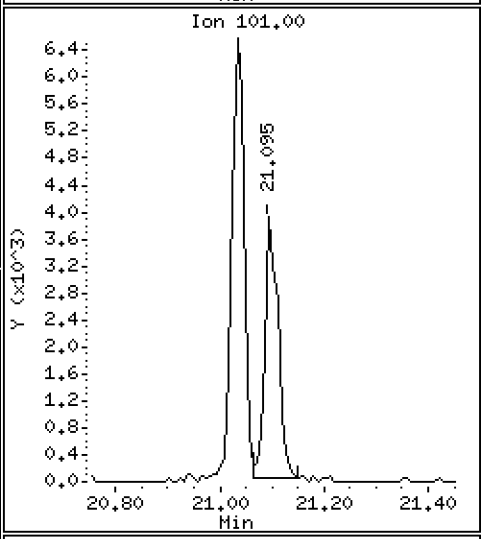
65 Pyrene

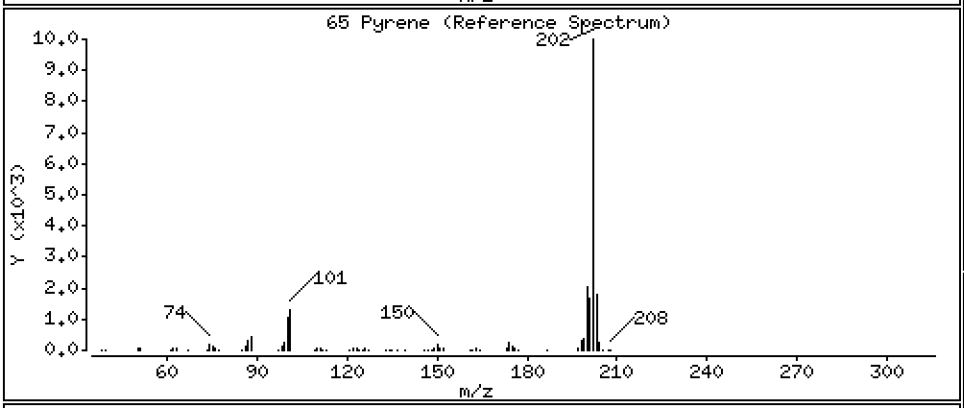
Concentration: 0.2411 ug/mL

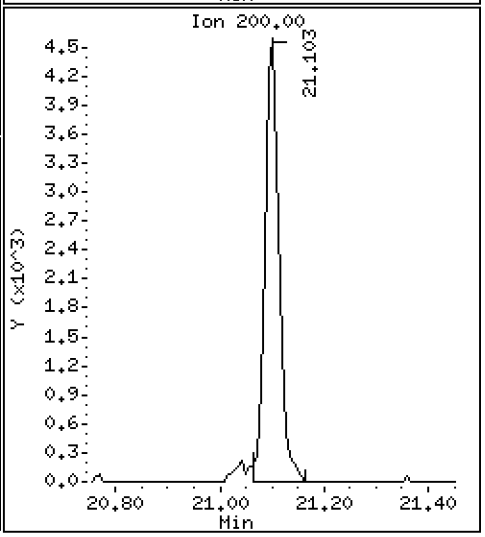


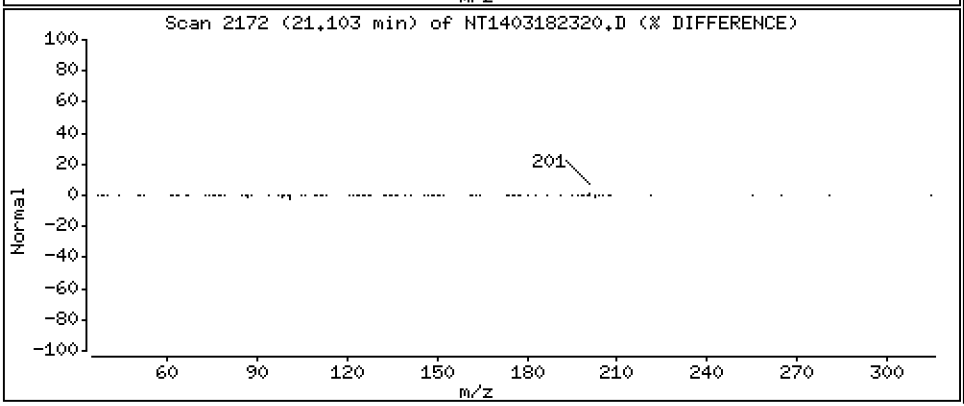












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

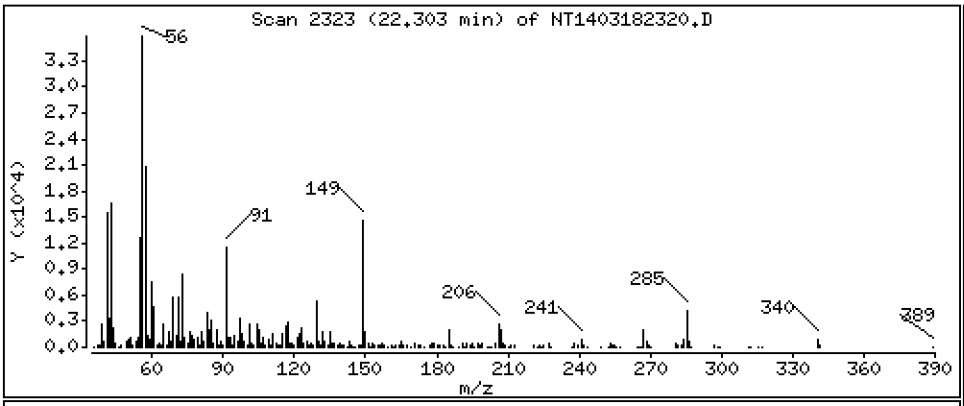
Operator: JGR

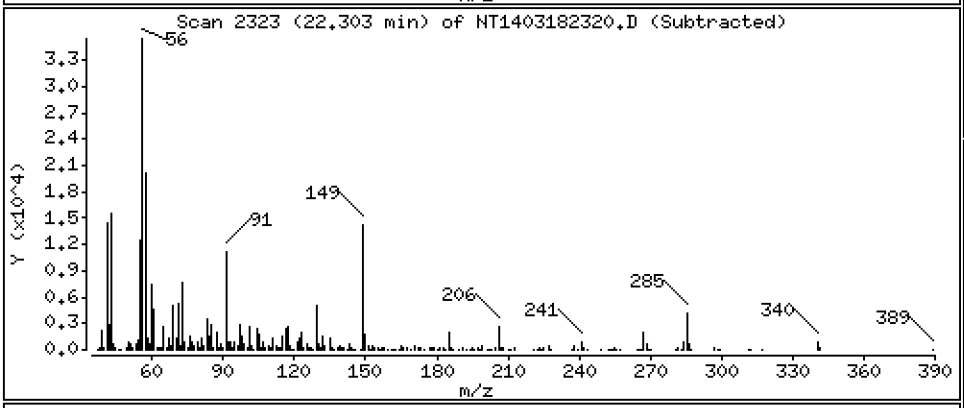
Column phase: ZB-5msi

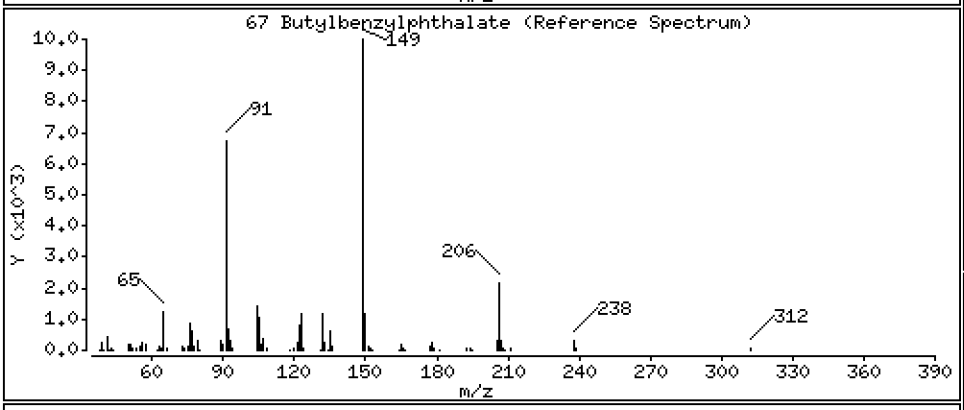
Column diameter: 0.25

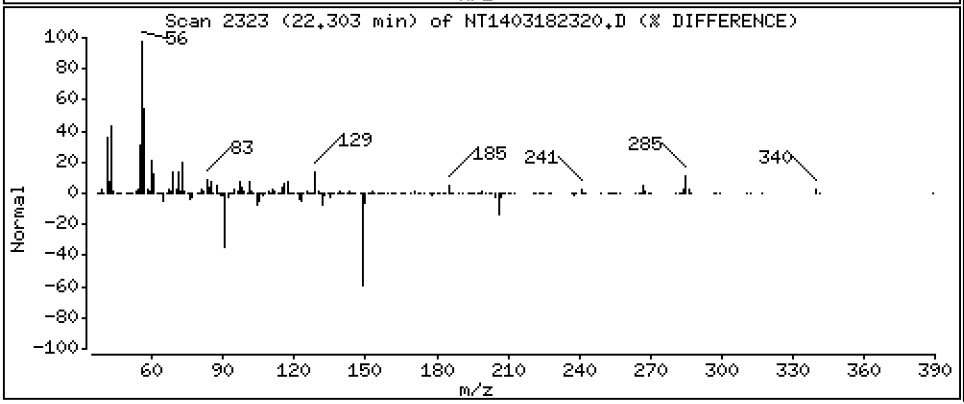
67 Butylbenzylphthalate

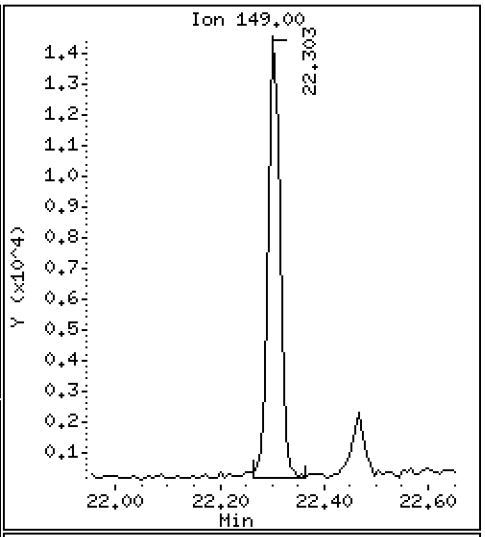
Concentration: 0.2626 ug/mL

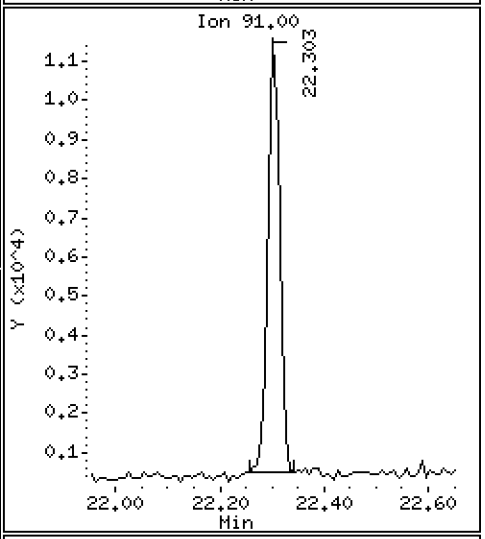


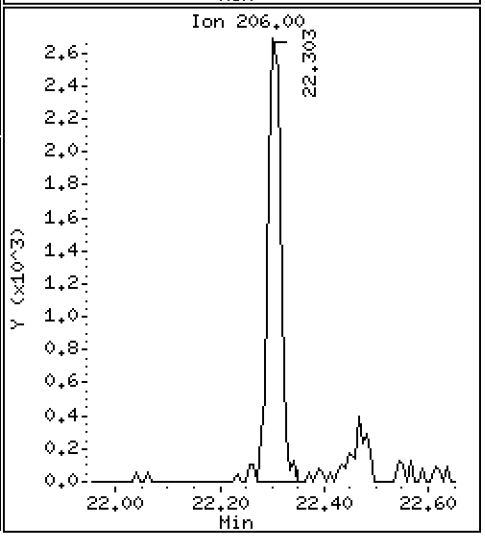












Data File: \\target\share\chem3\nt14.i\20230318.b\NT1403182320.D

Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

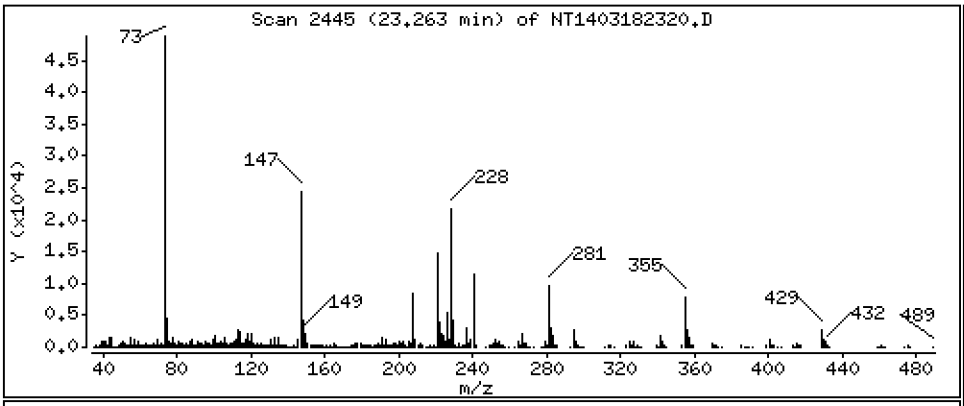
Operator: JGR

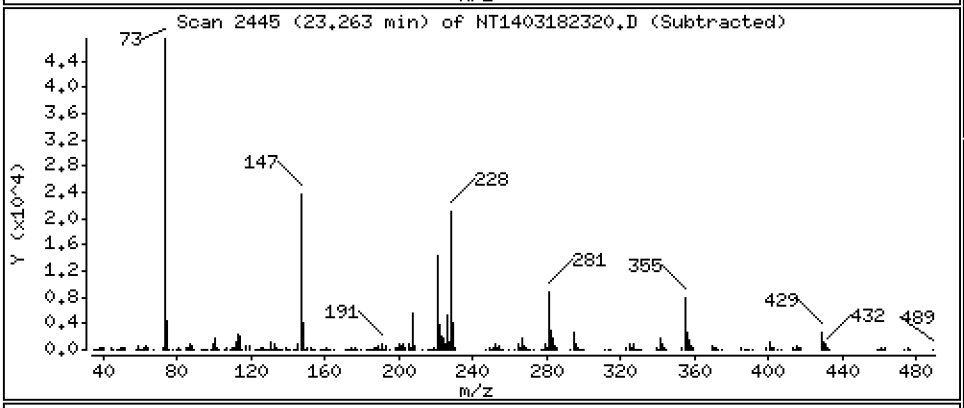
Column phase: ZB-5msi

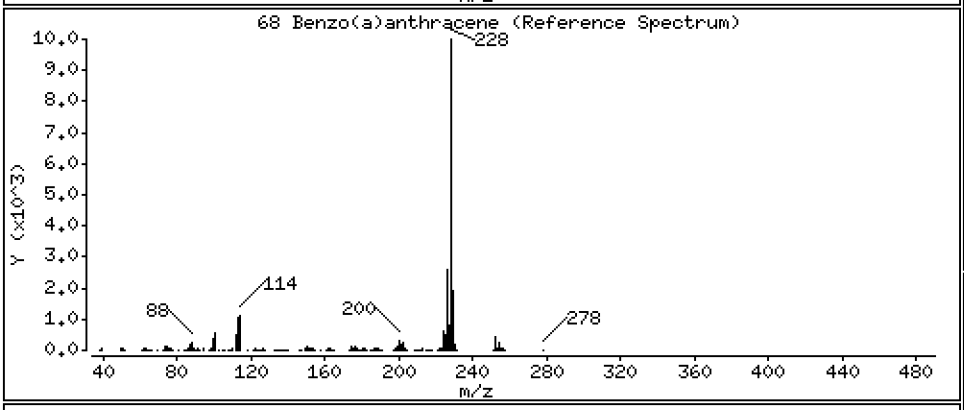
Column diameter: 0.25

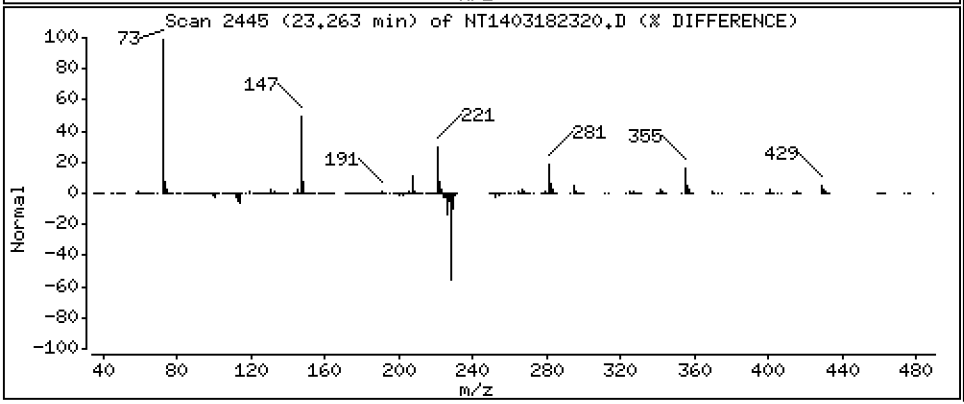
68 Benzo(a)anthracene

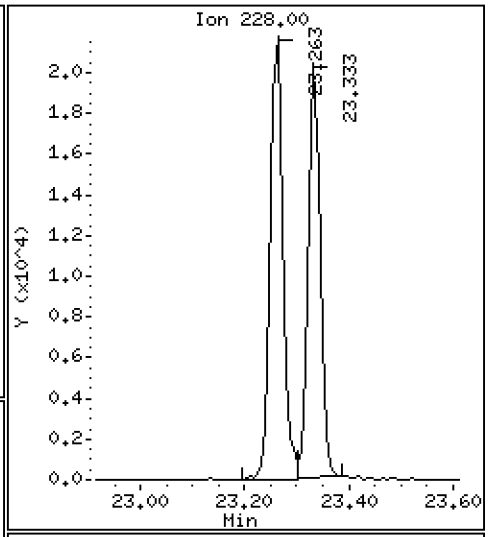
Concentration: 0.2153 ug/mL

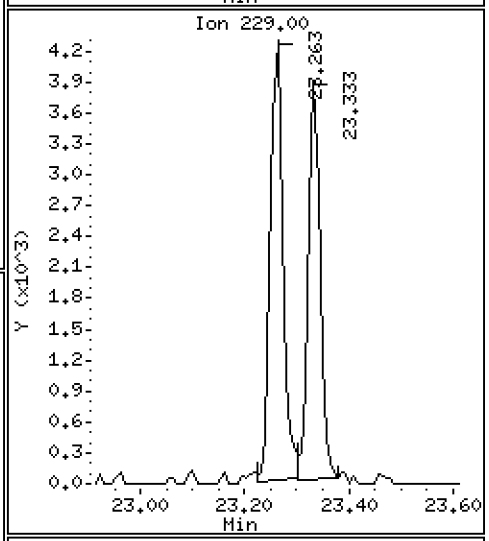


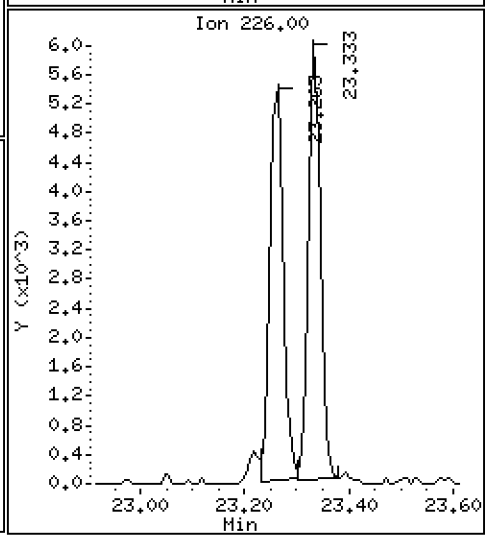












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

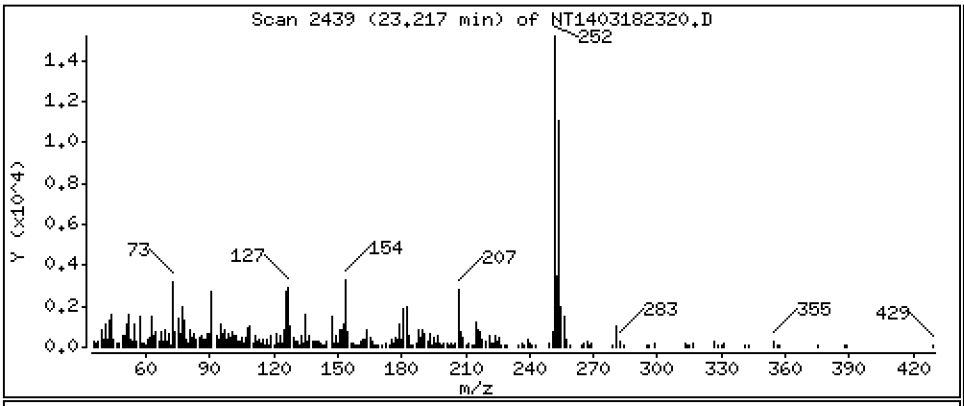
Operator: JGR

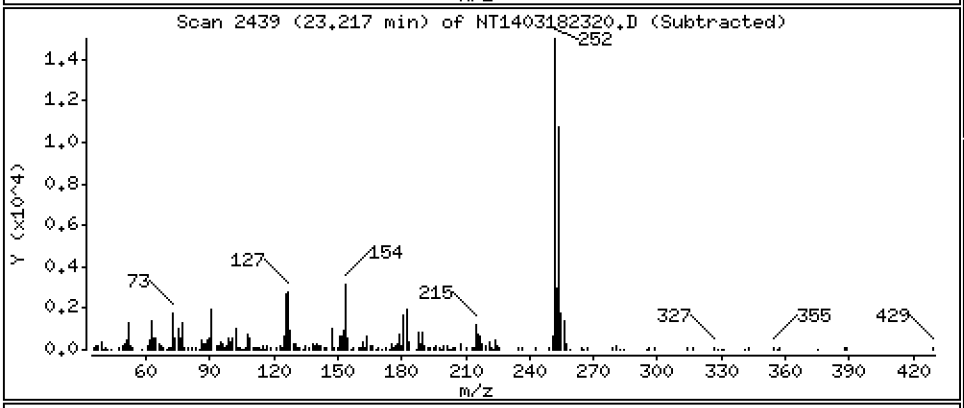
Column phase: ZB-5msi

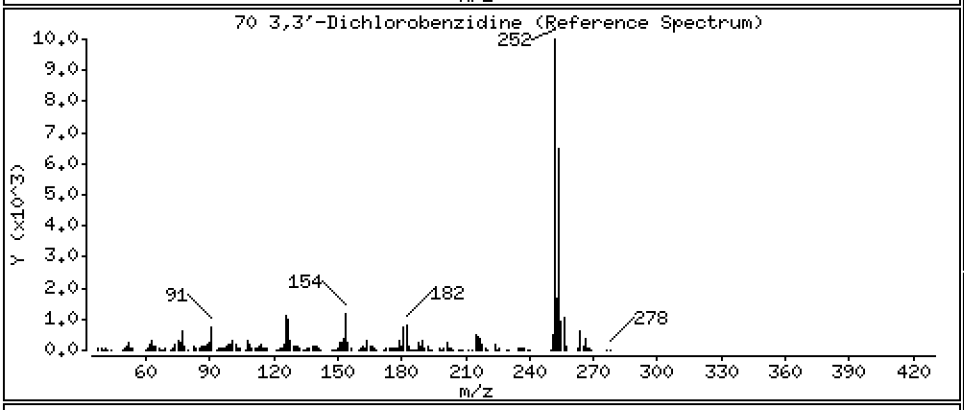
Column diameter: 0.25

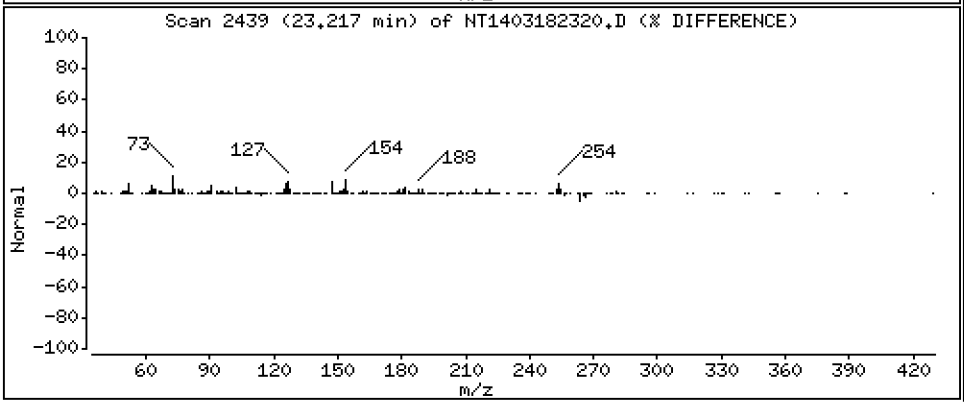
70 3,3'-Dichlorobenzidine

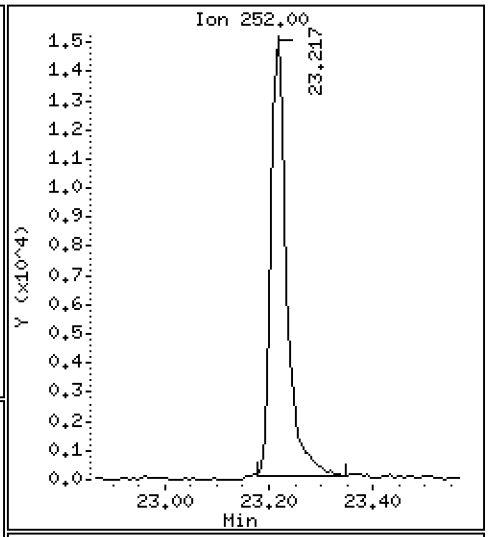
Concentration: 0.6487 ug/mL

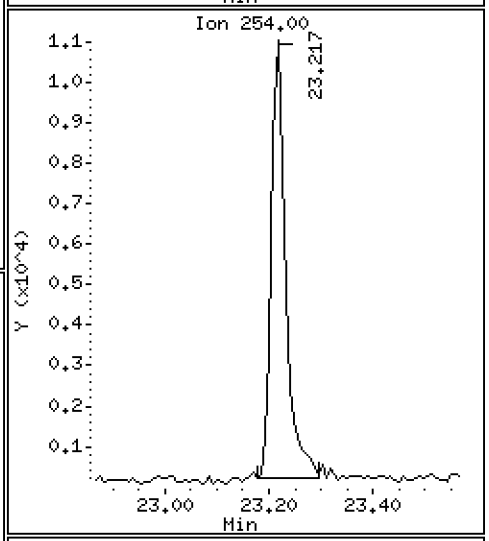


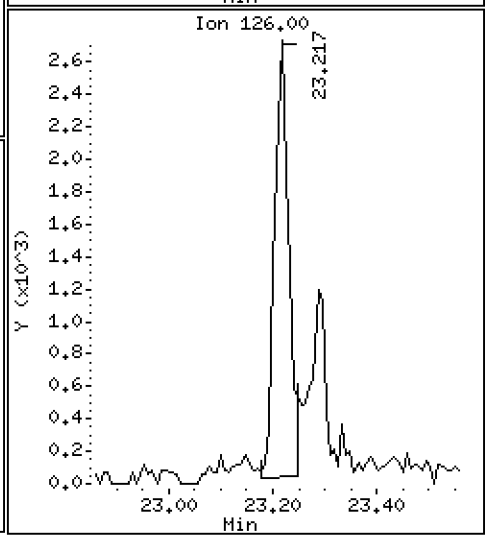












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

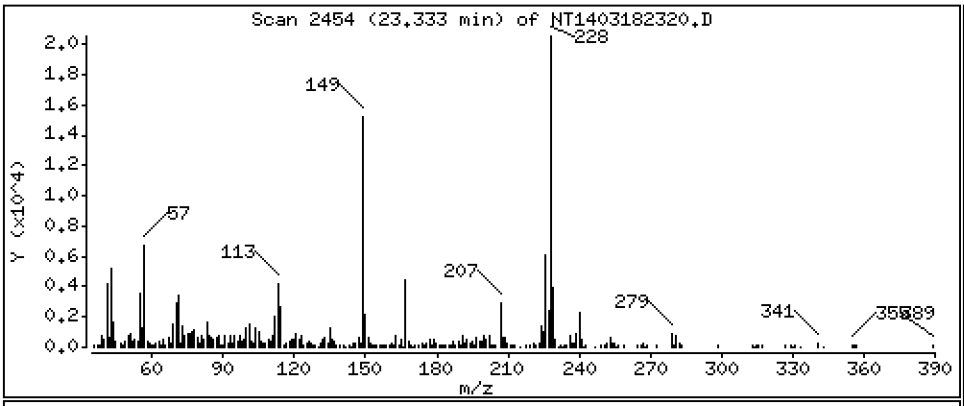
Operator: JGR

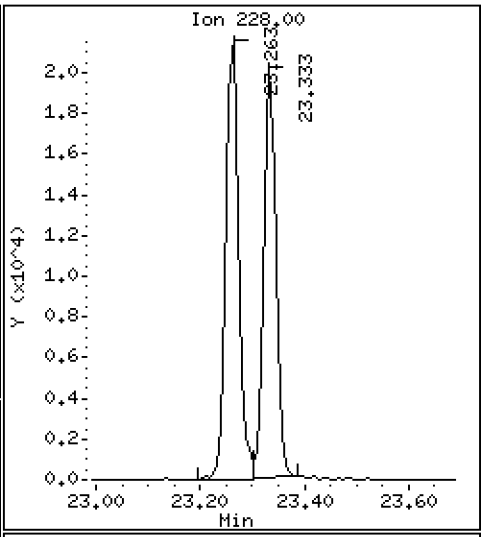
Column phase: ZB-5msi

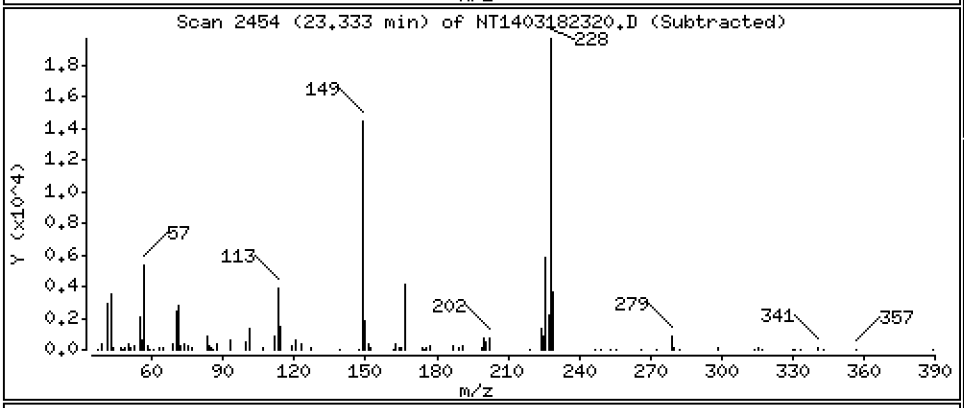
Column diameter: 0.25

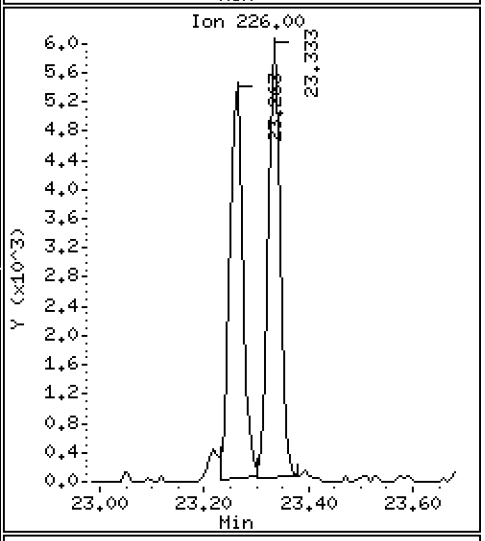
71 Chrysene

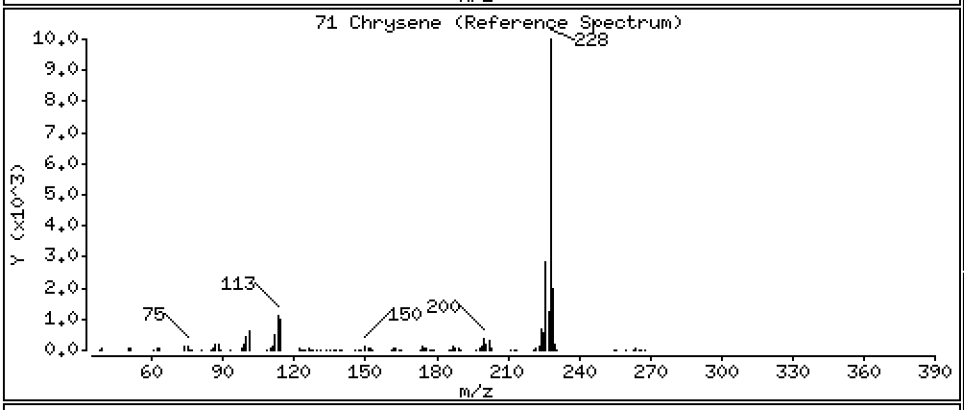
Concentration: 0.2071 ug/mL

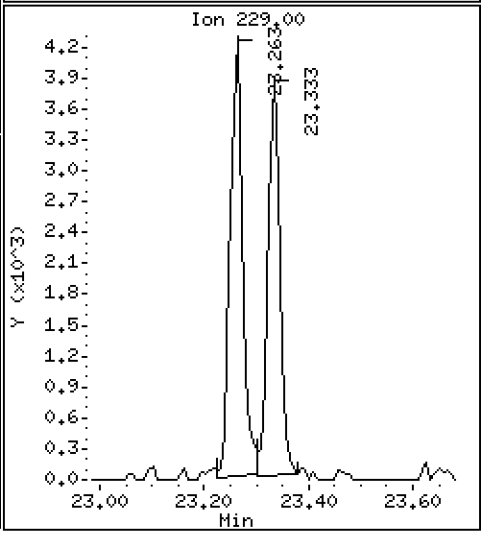


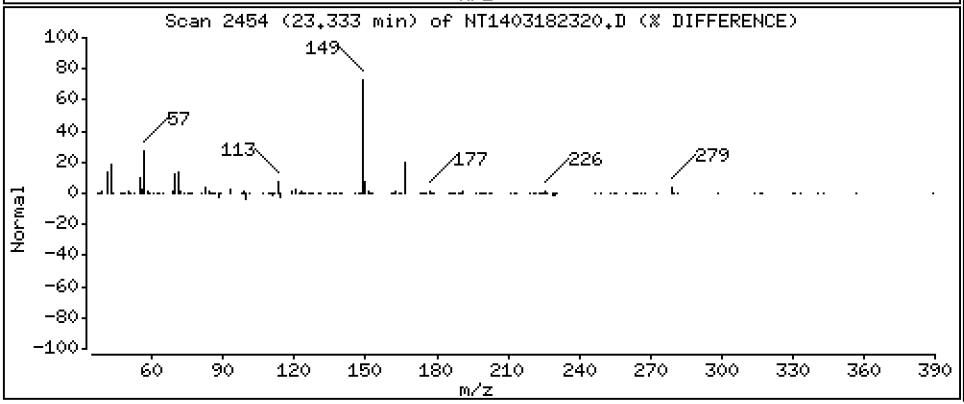












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

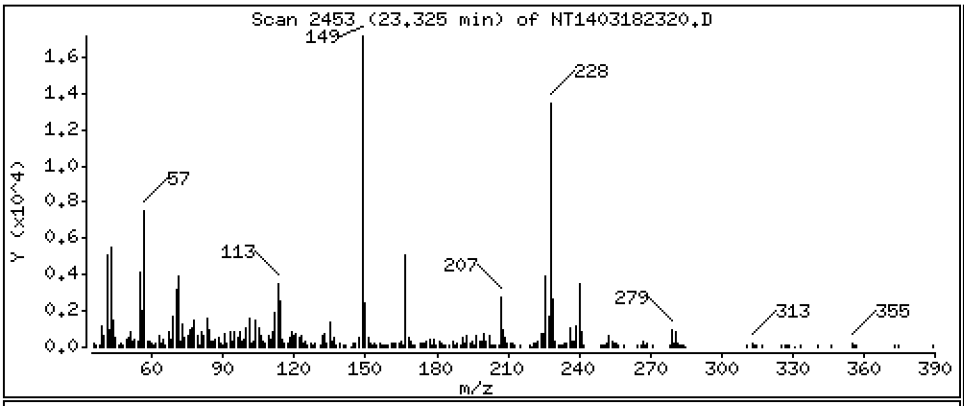
Operator: JGR

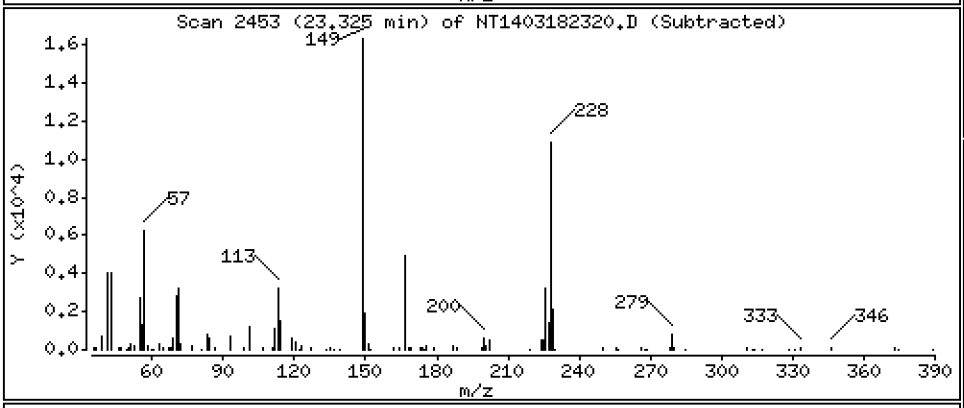
Column phase: ZB-5msi

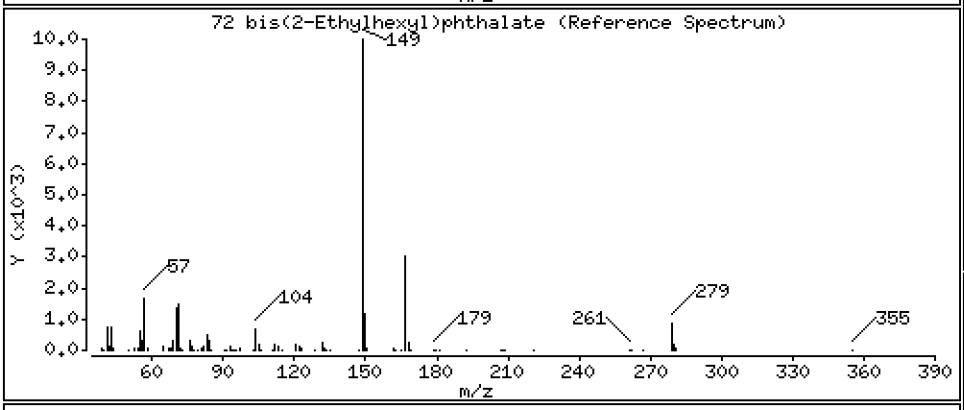
Column diameter: 0.25

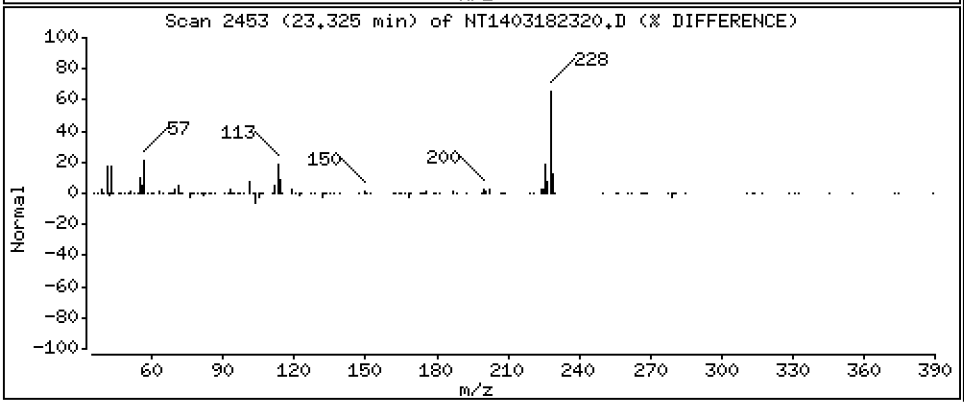
72 bis(2-Ethylhexyl)phthalate

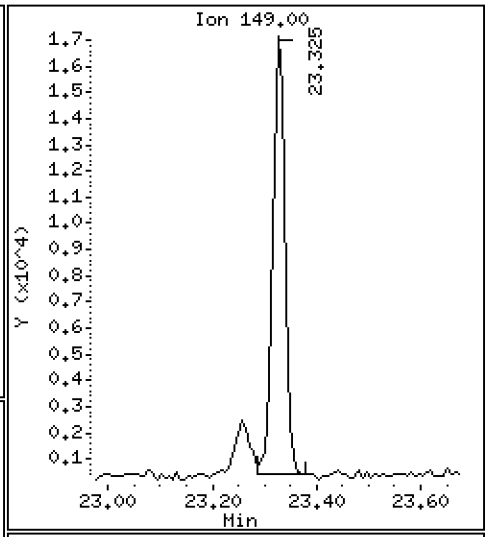
Concentration: 0.2285 ug/mL

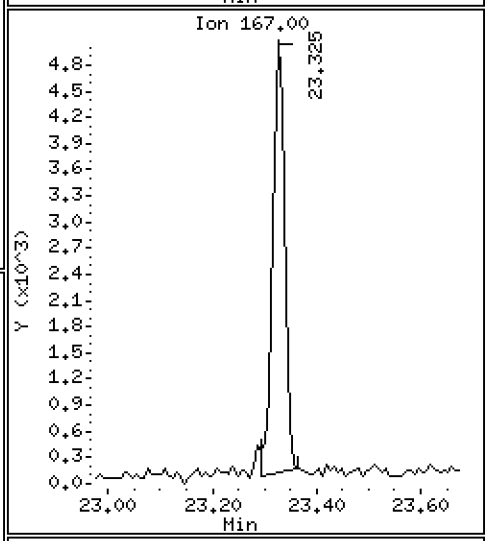


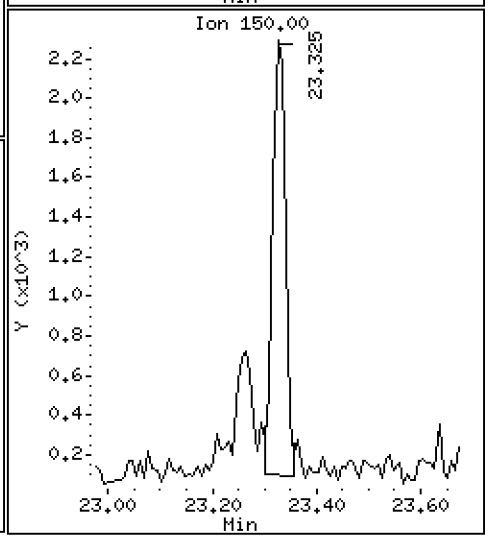












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

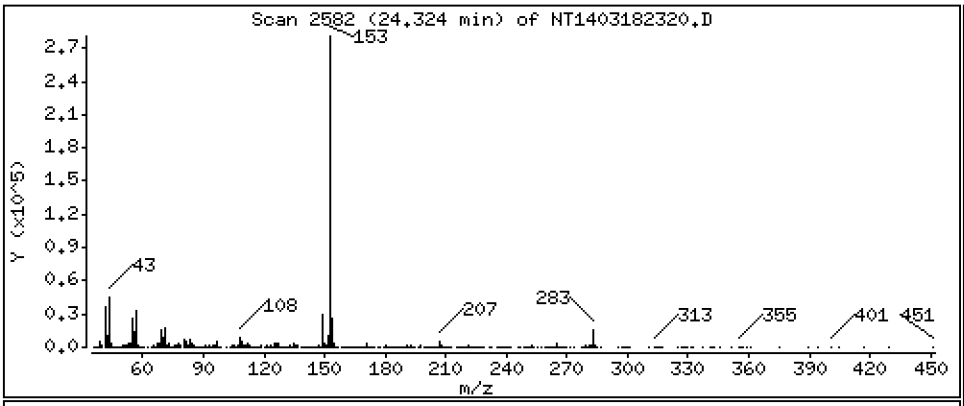
Operator: JGR

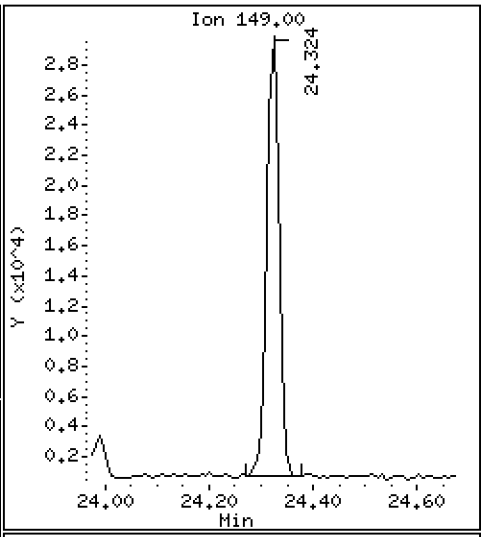
Column phase: ZB-5msi

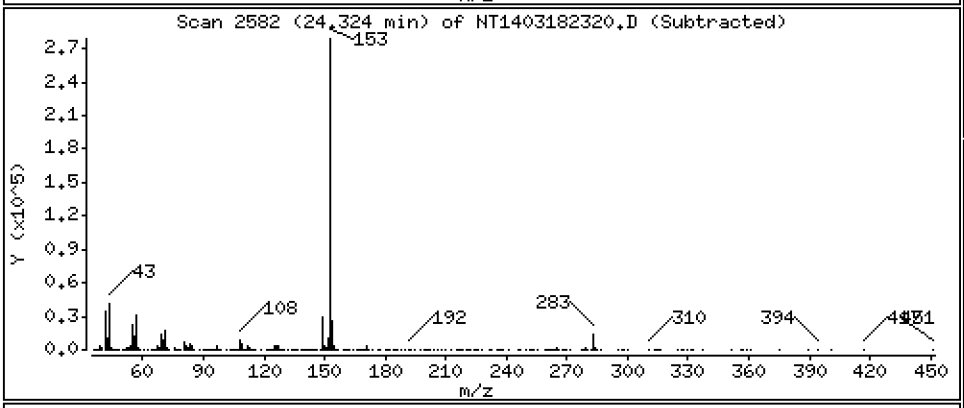
Column diameter: 0.25

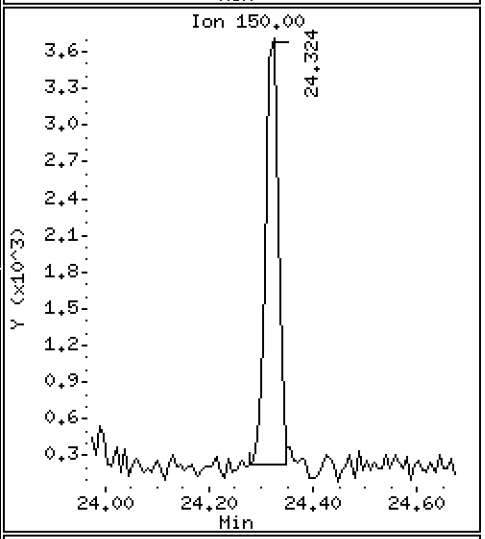
73 Di-n-octylphthalate

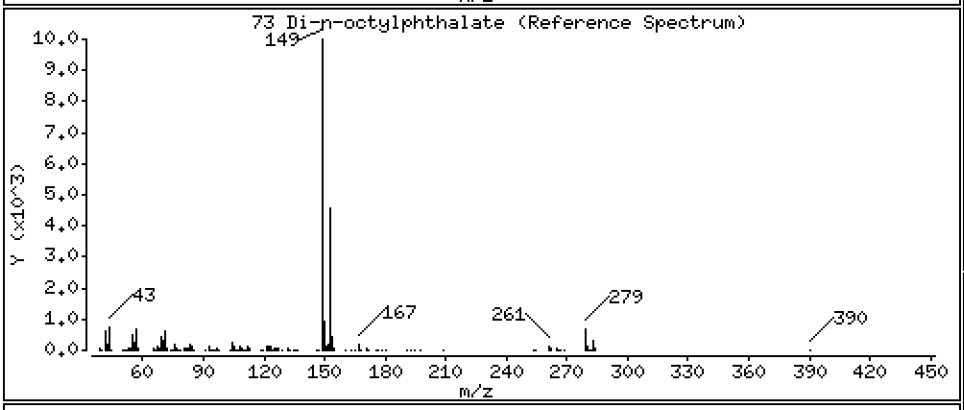
Concentration: 0.2058 ug/mL

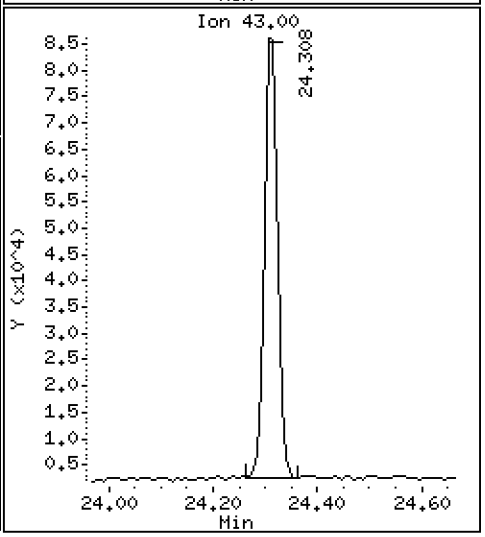


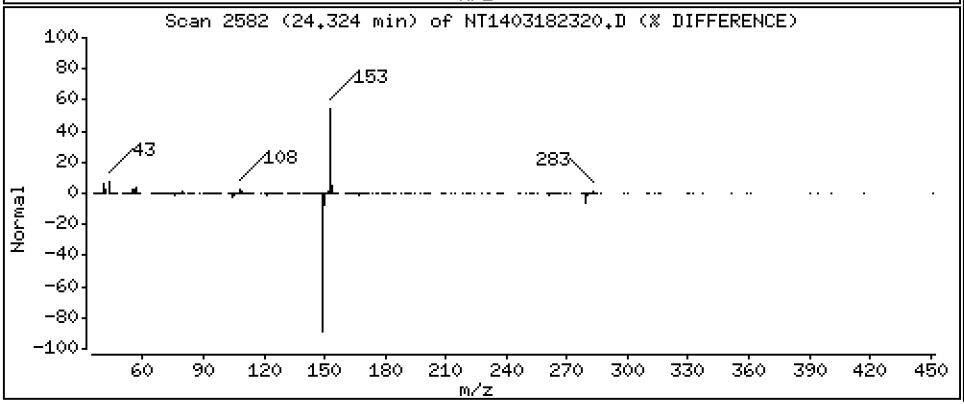












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

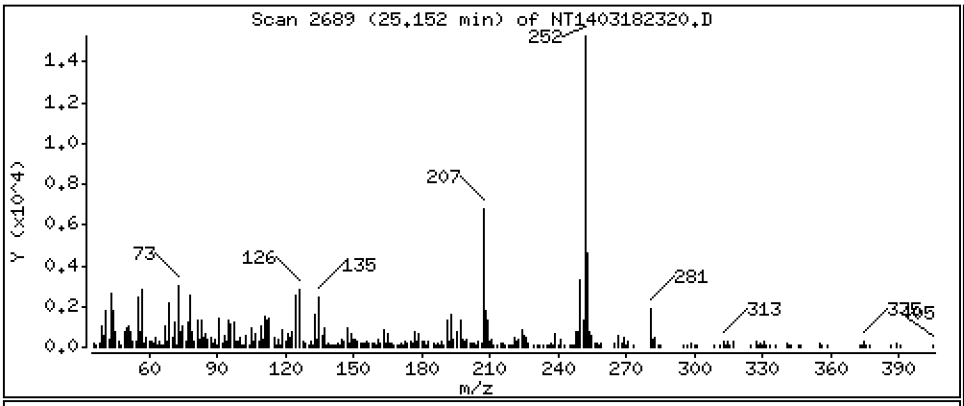
Operator: JGR

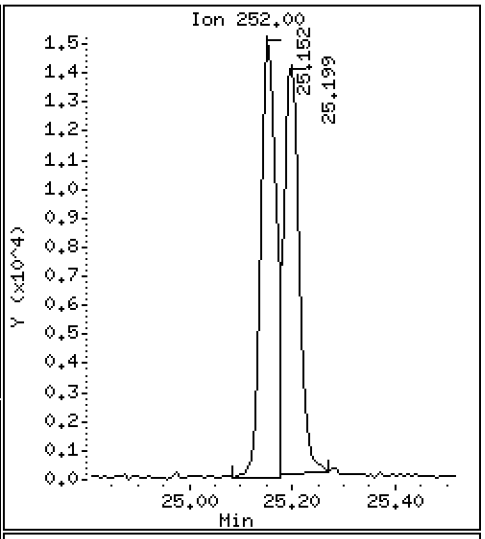
Column phase: ZB-5msi

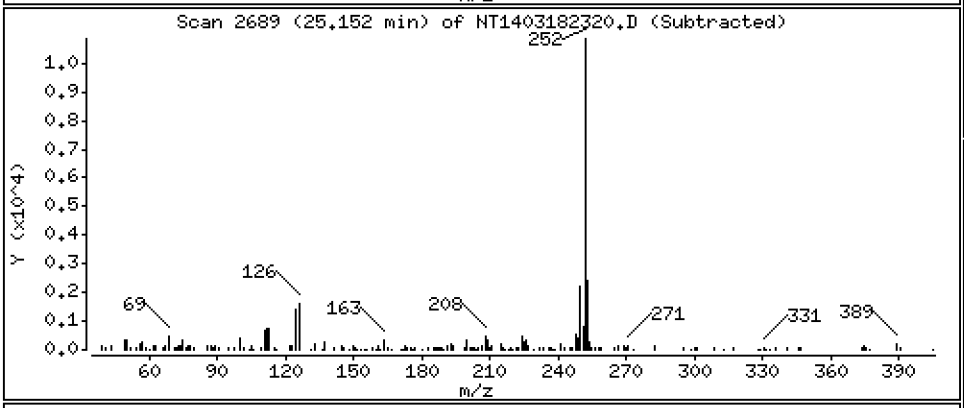
Column diameter: 0.25

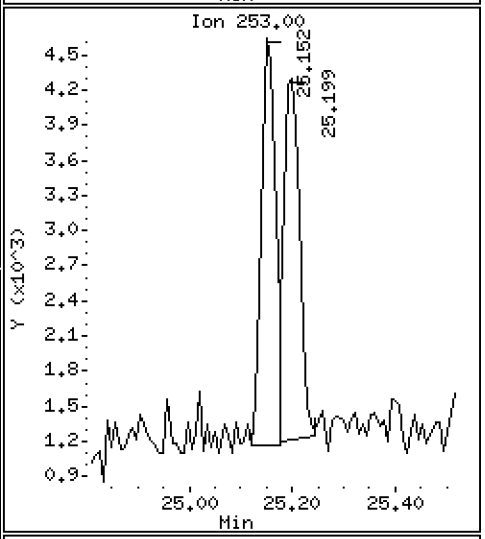
74 Benzo(b)fluoranthene

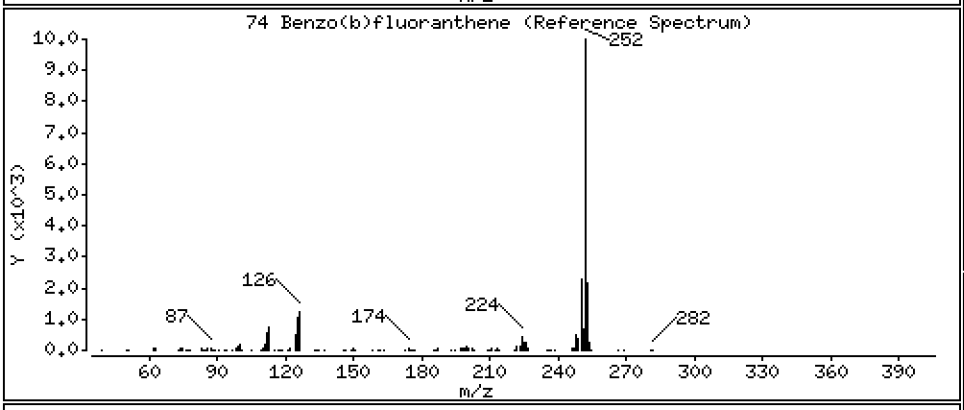
Concentration: 0.1855 ug/mL

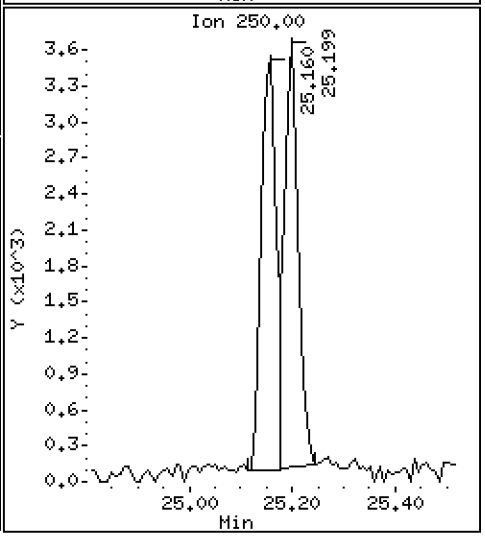


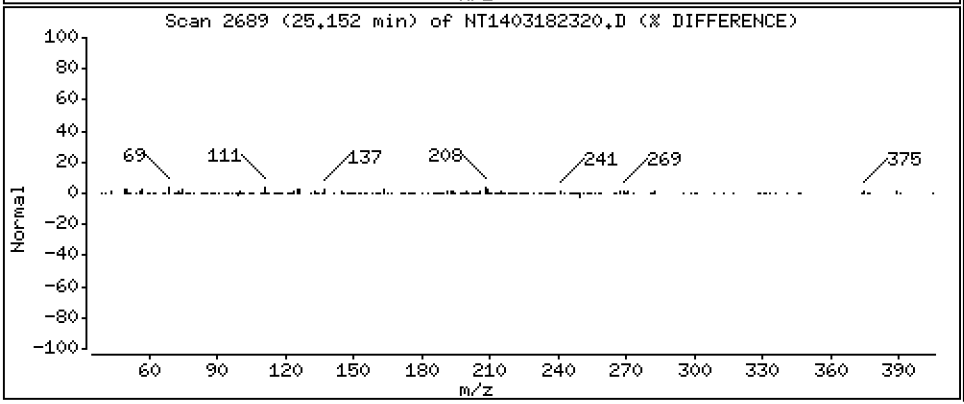












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

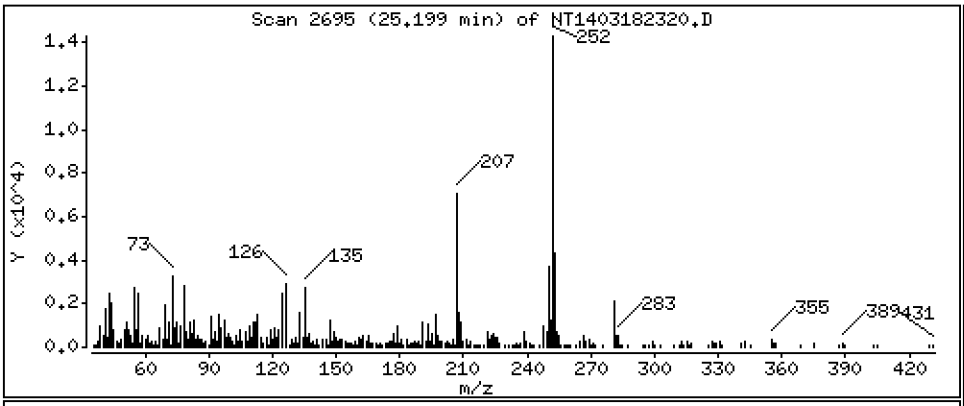
Operator: JGR

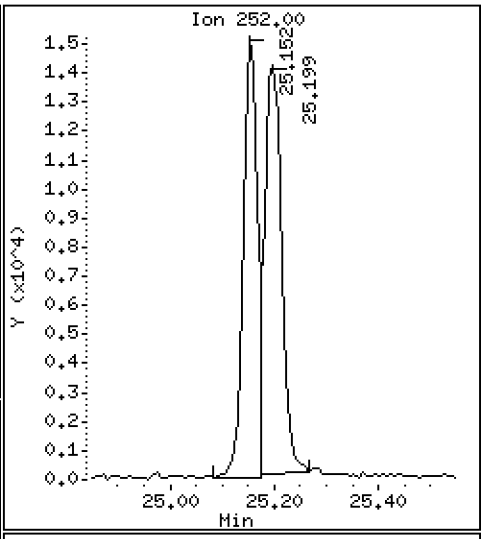
Column phase: ZB-5msi

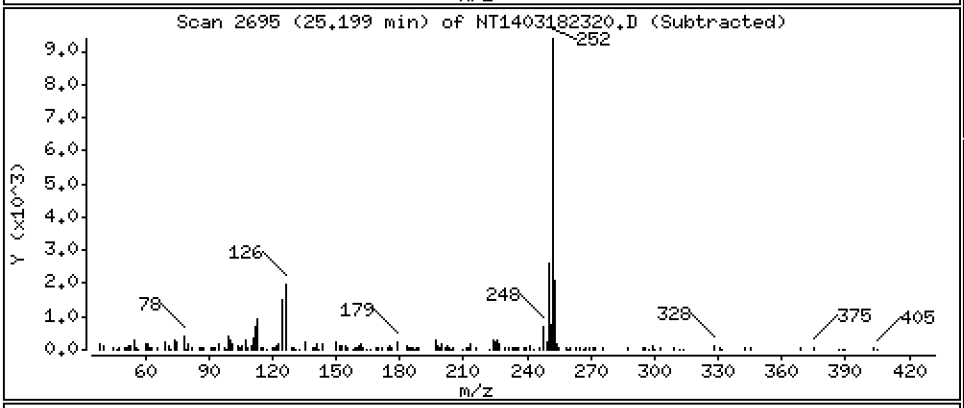
Column diameter: 0.25

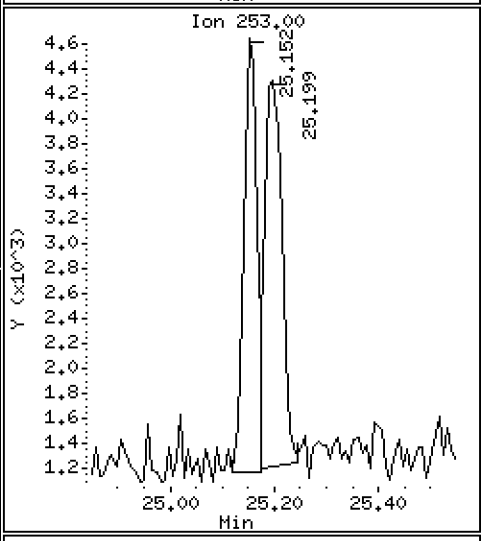
75 Benzo(k)fluoranthene

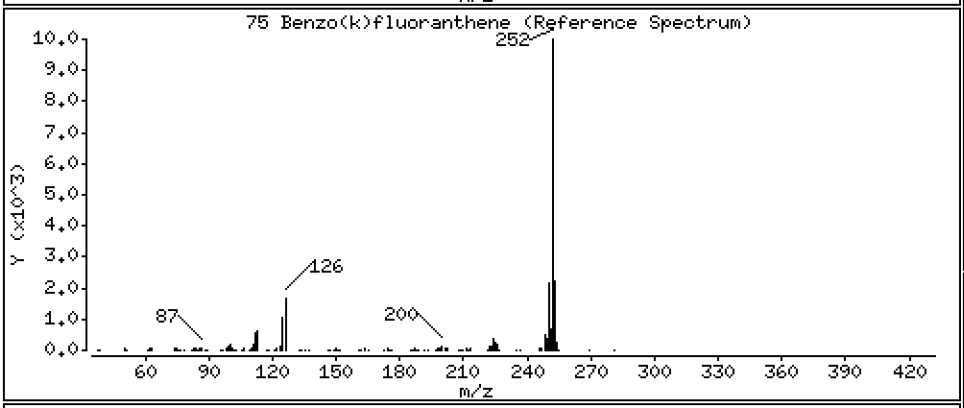
Concentration: 0.1949 ug/mL

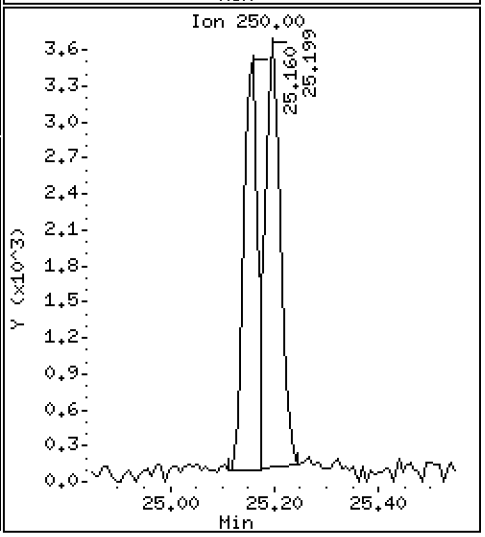


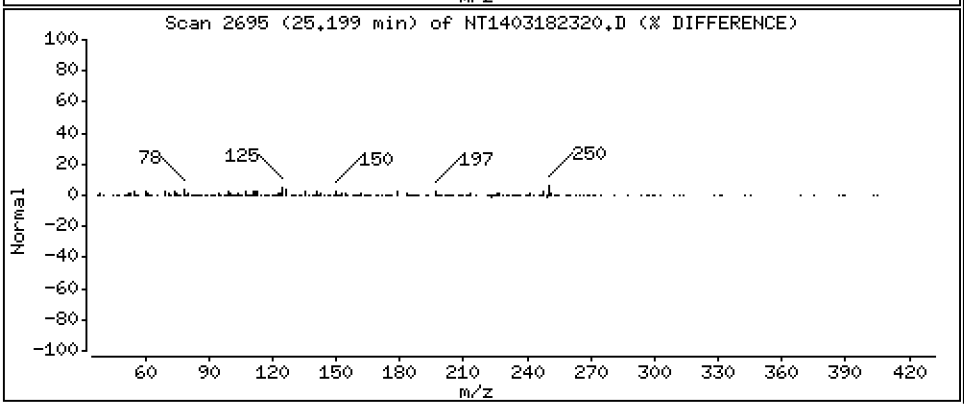












Data File: \\target\share\chem3\nt14.i\20230318.b\NT1403182320.D

Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

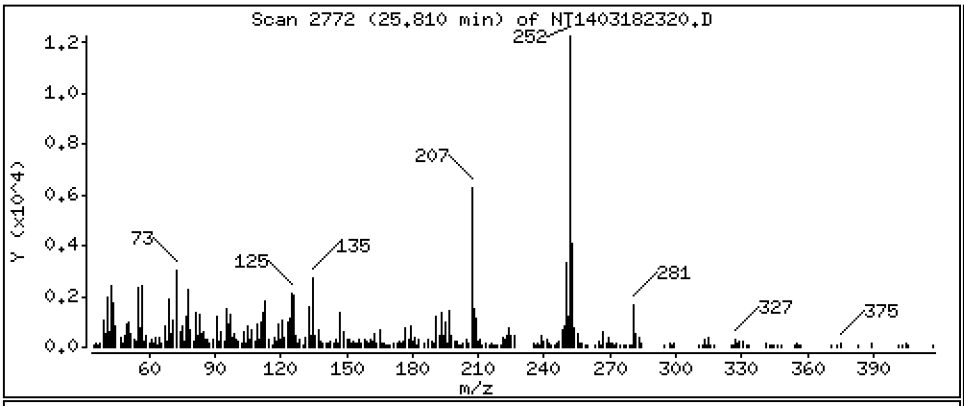
Operator: JGR

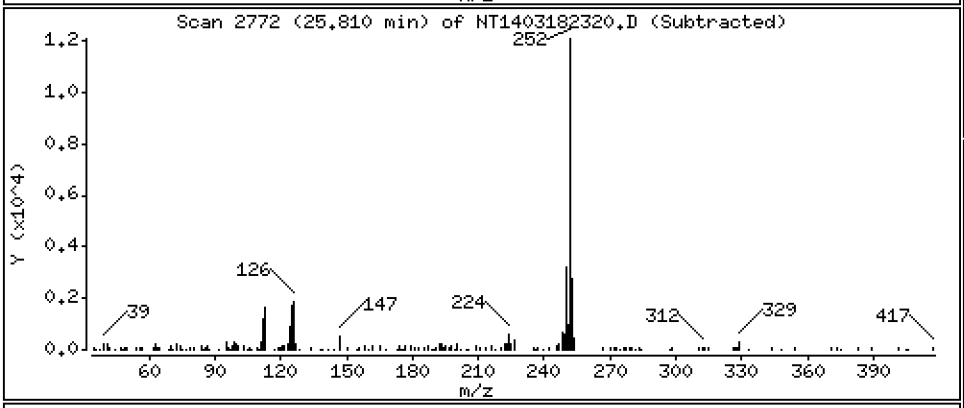
Column phase: ZB-5msi

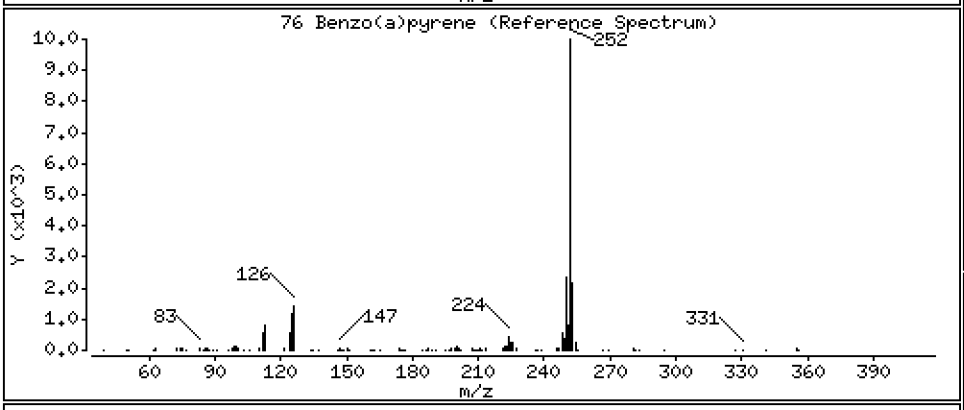
Column diameter: 0.25

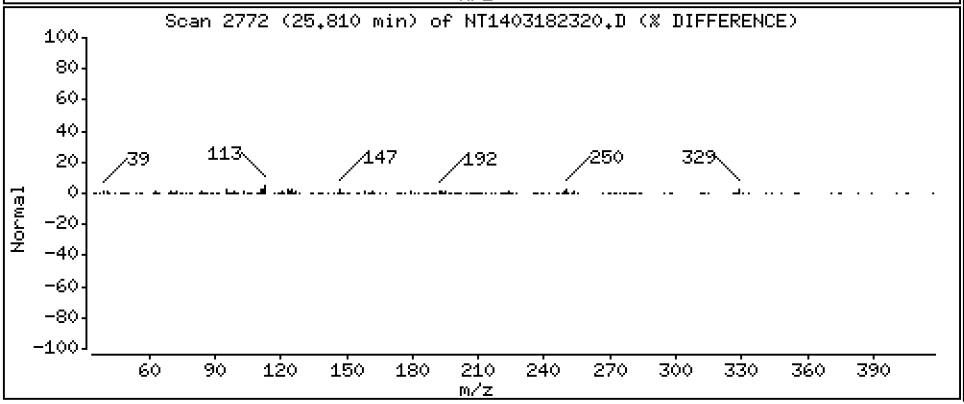
76 Benzo(a)pyrene

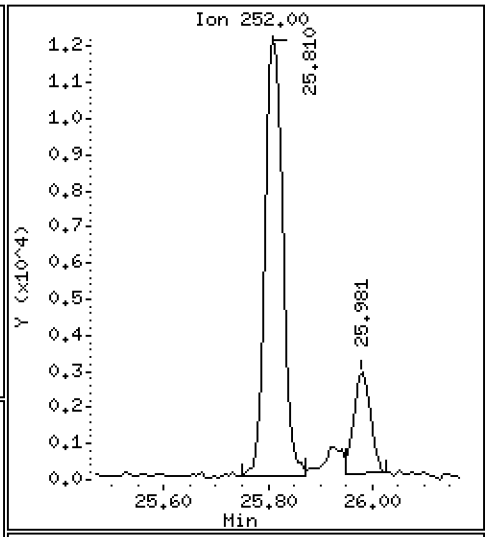
Concentration: 0.1986 ug/mL

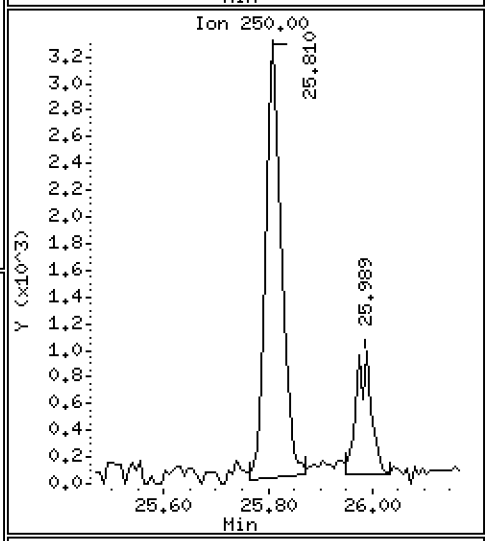


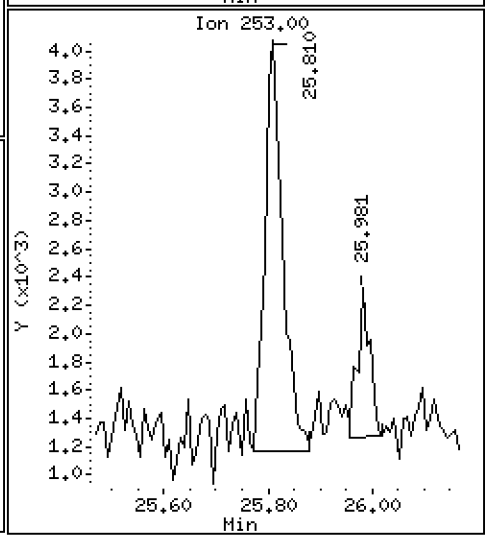












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

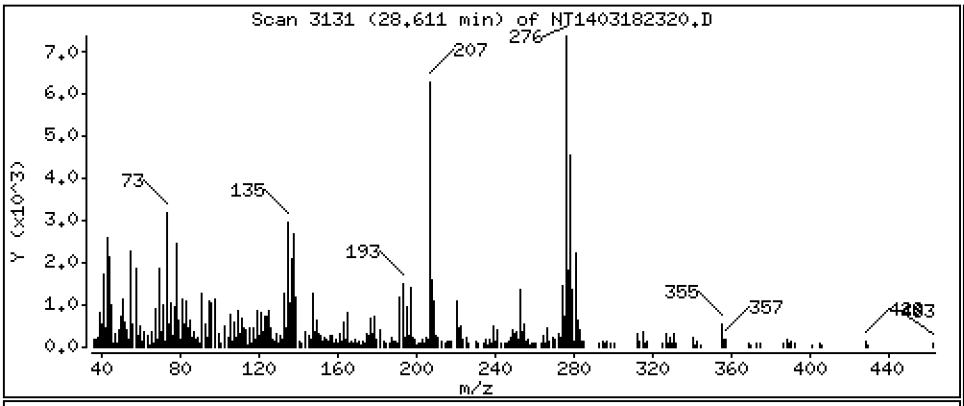
Operator: JGR

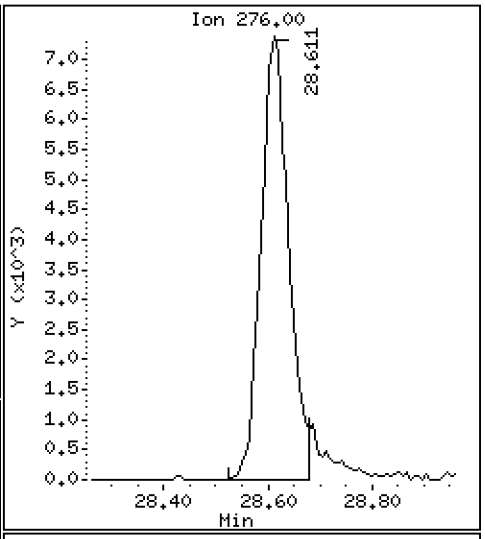
Column phase: ZB-5msi

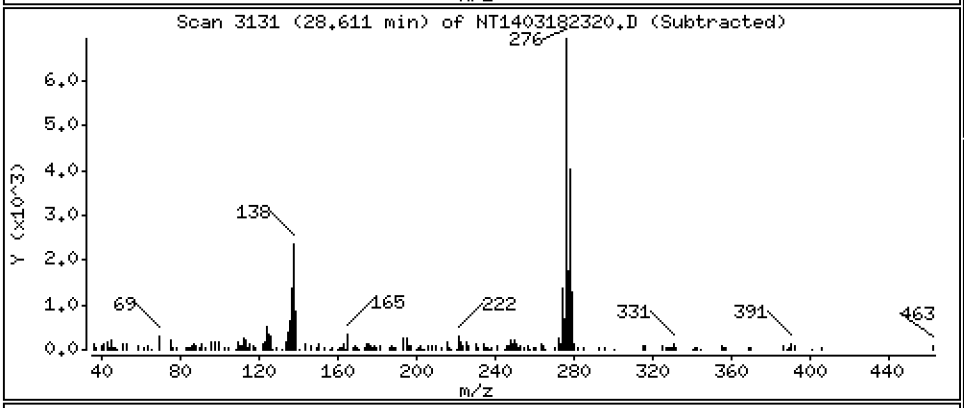
Column diameter: 0.25

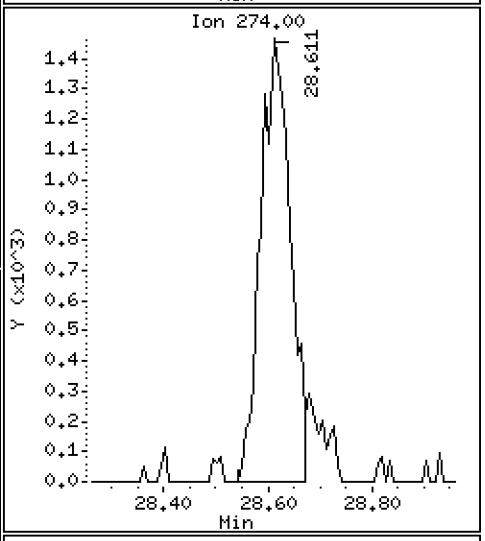
78 Indeno(1,2,3-cd)pyrene

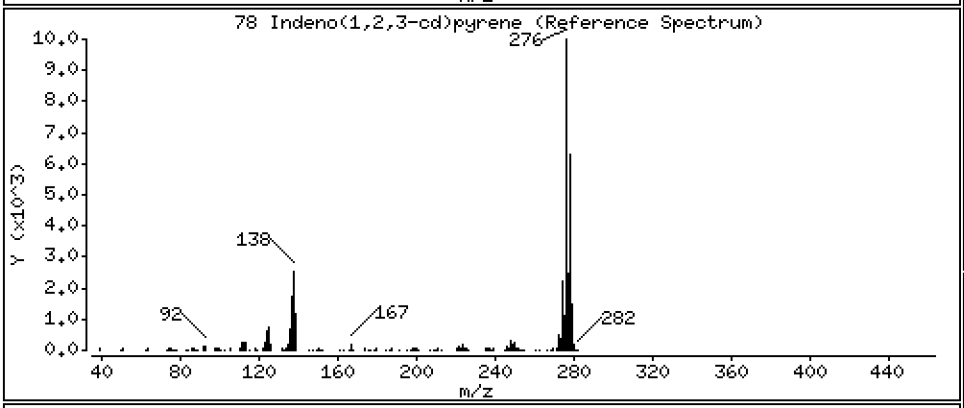
Concentration: 0.1774 ug/mL

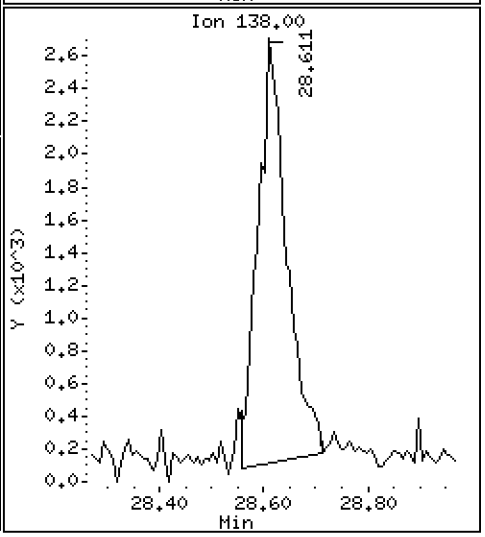


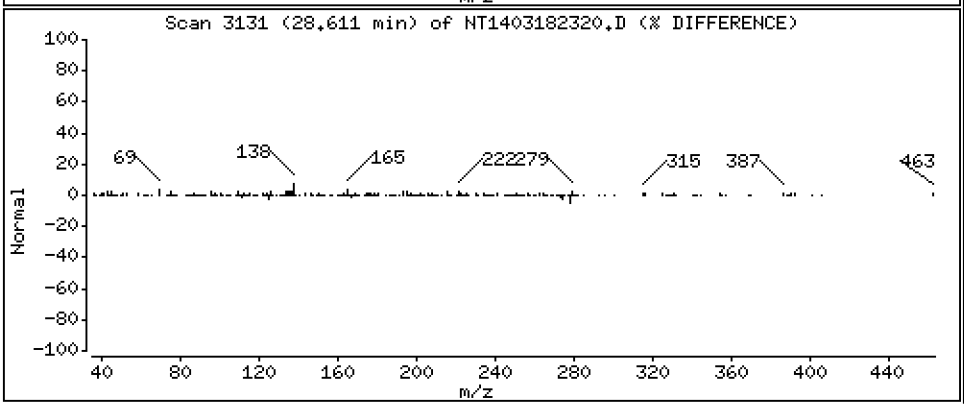












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

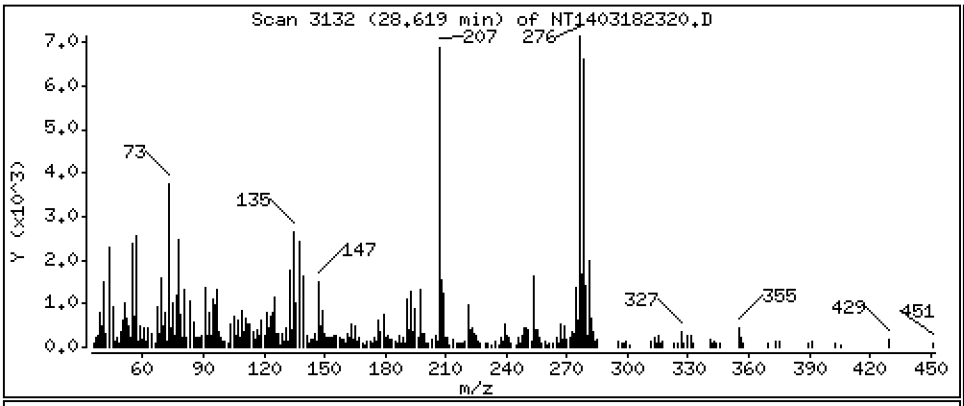
Operator: JGR

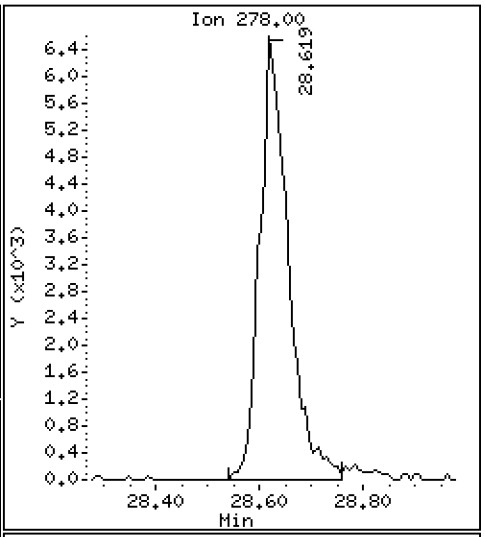
Column phase: ZB-5msi

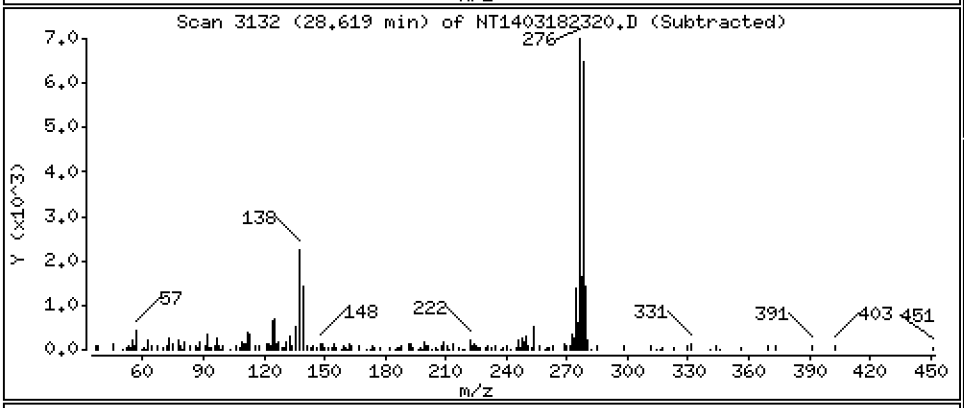
Column diameter: 0.25

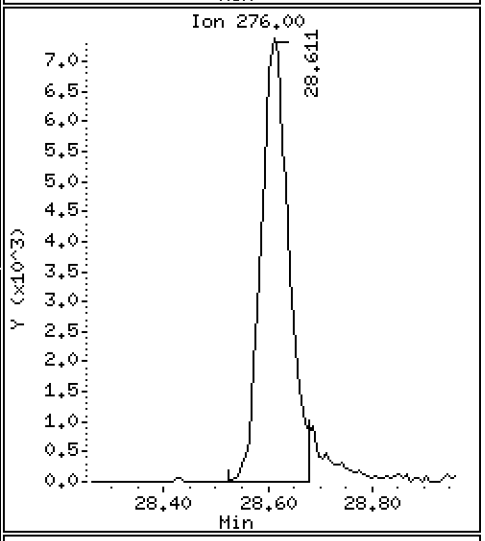
79 Dibenzo(a,h)anthracene

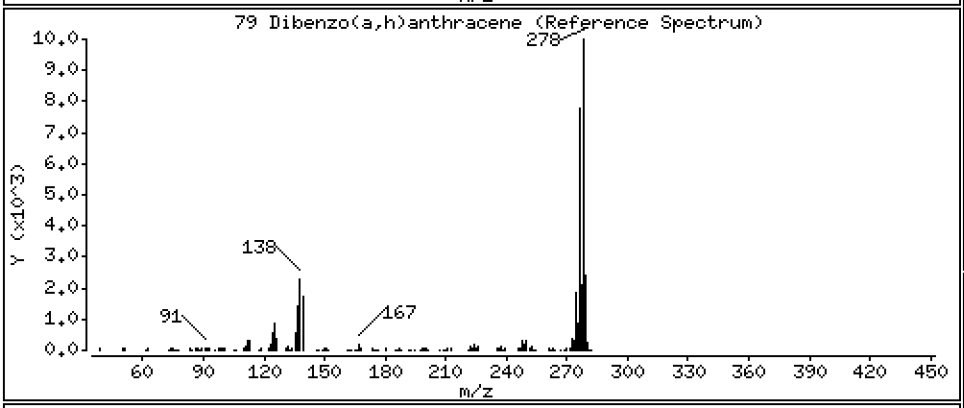
Concentration: 0.1924 ug/mL

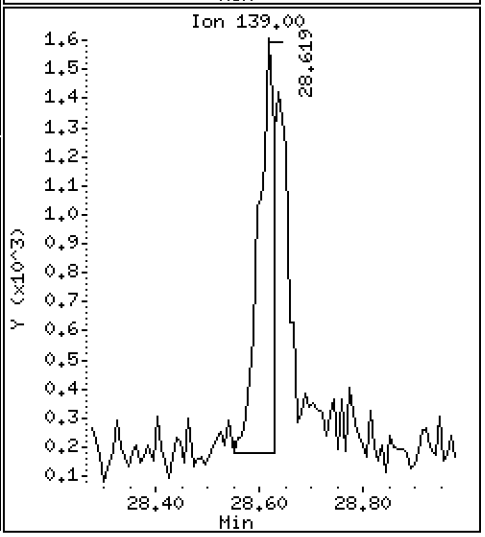


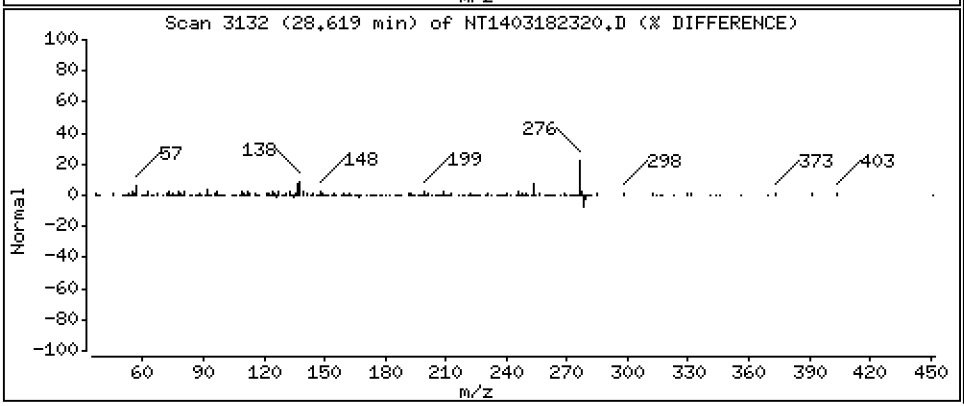












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

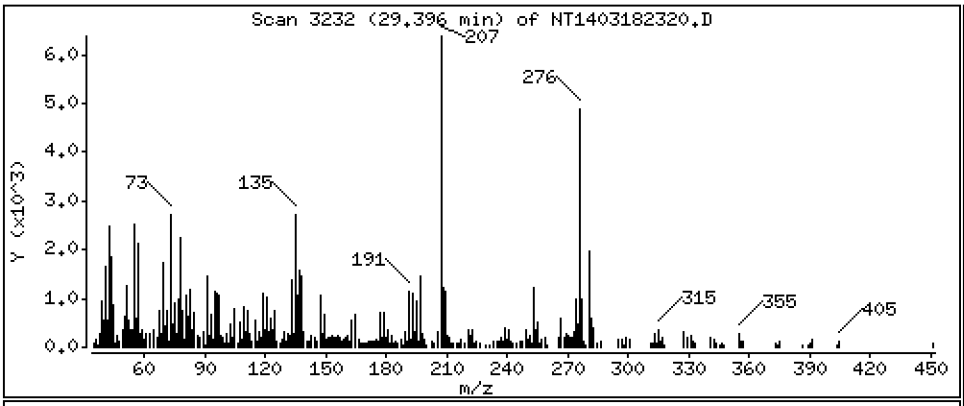
Operator: JGR

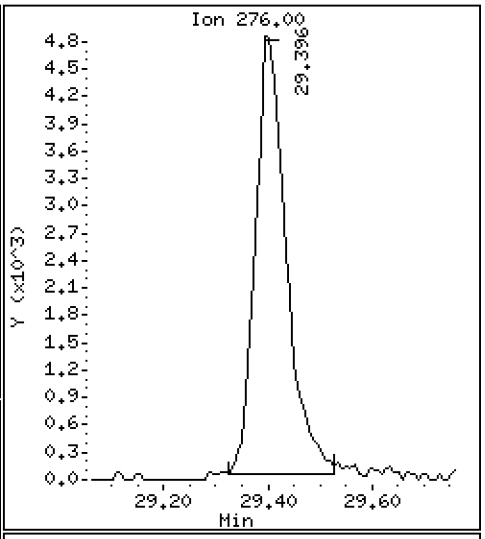
Column phase: ZB-5msi

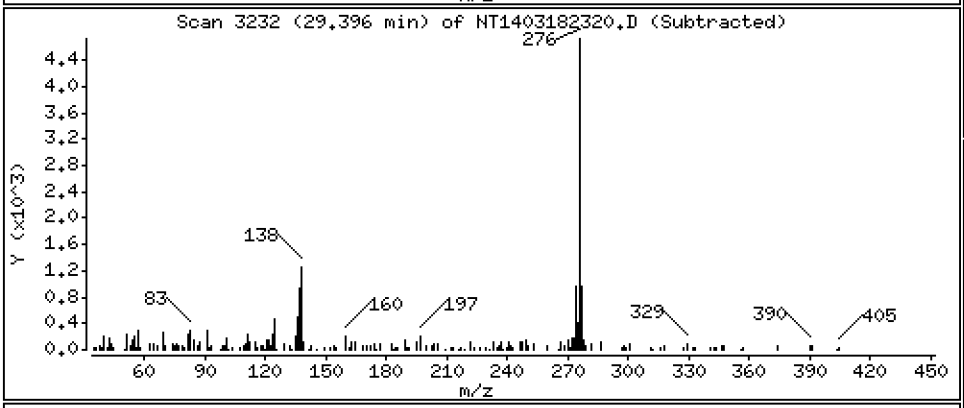
Column diameter: 0.25

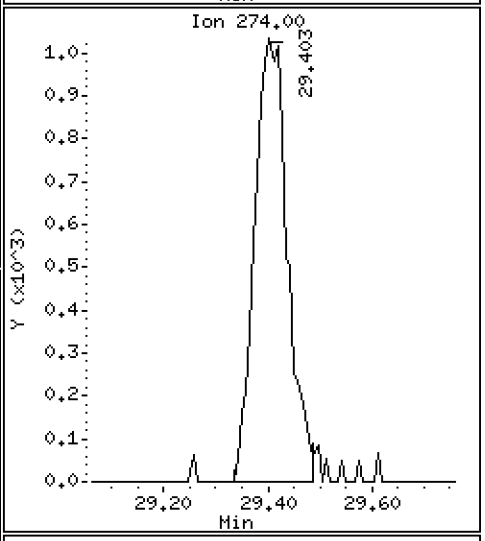
80 Benzo(g,h,i)perylene

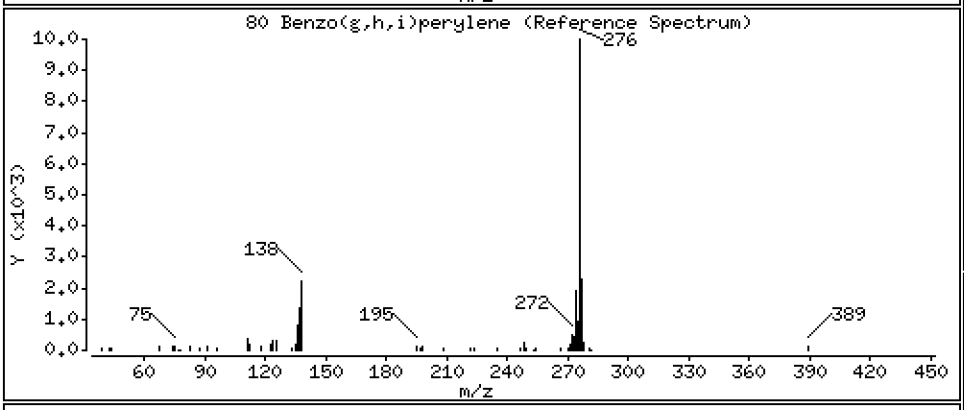
Concentration: 0.1564 ug/mL

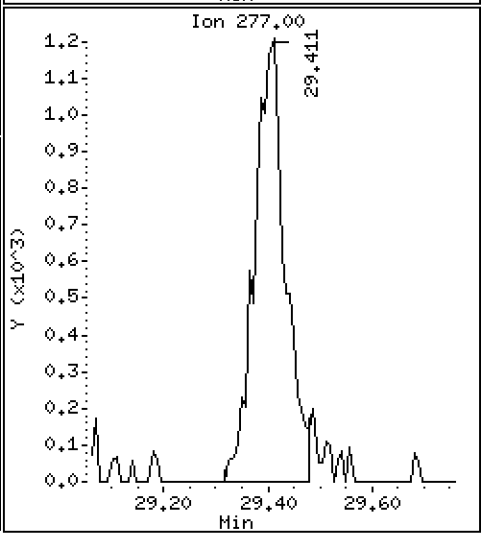


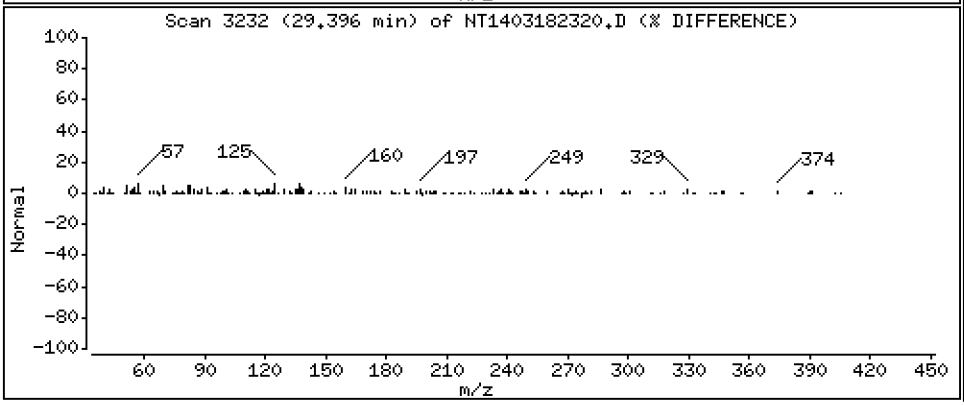












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

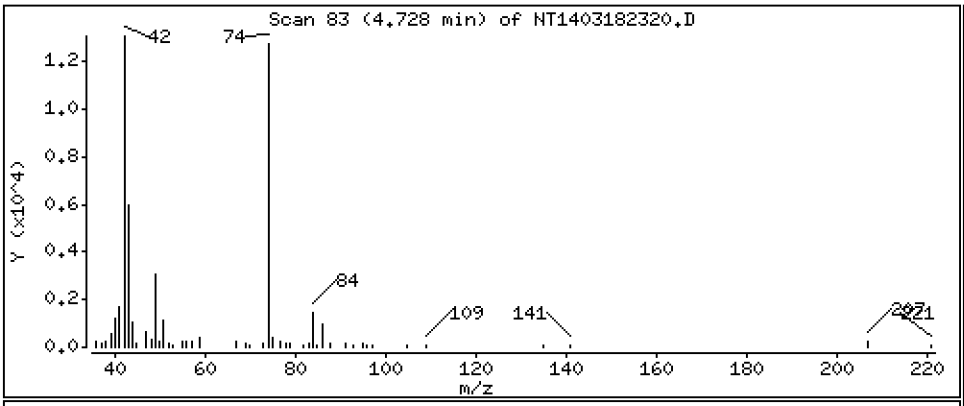
Operator: JGR

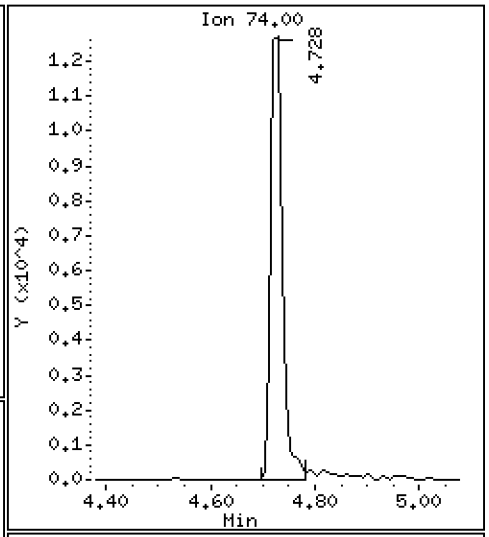
Column phase: ZB-5msi

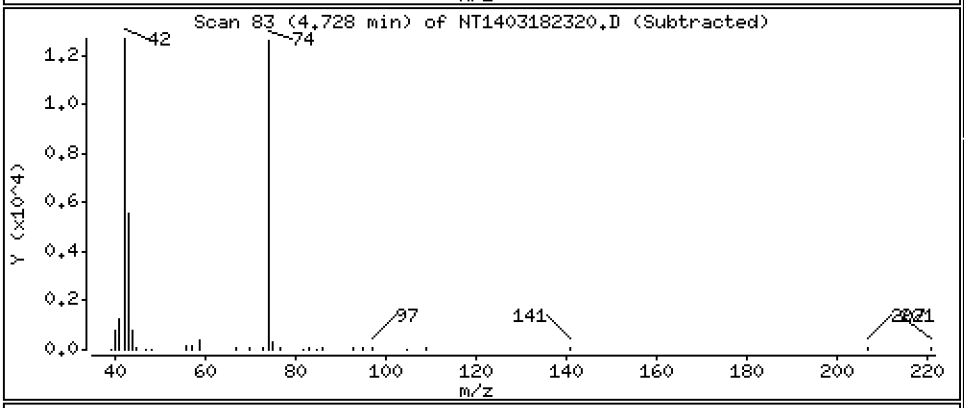
Column diameter: 0.25

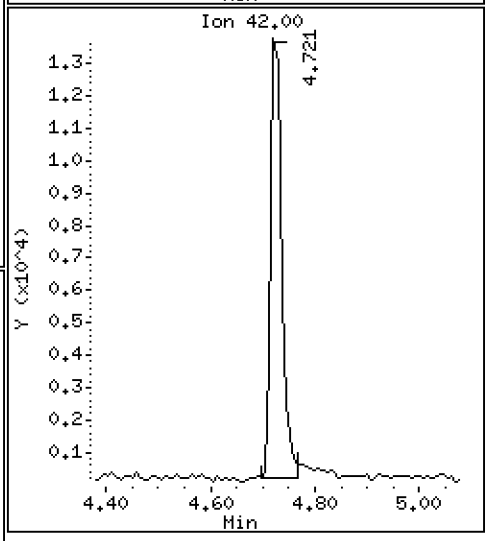
90 N-Nitrosodimethylamine

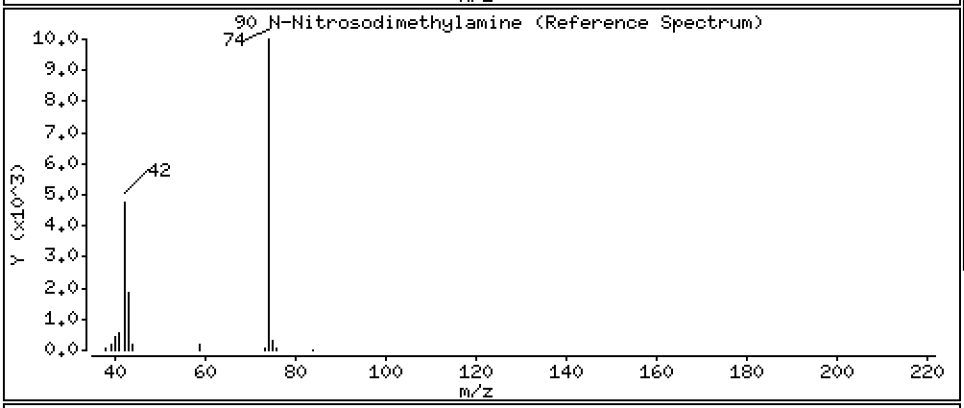
Concentration: 0.3433 ug/mL

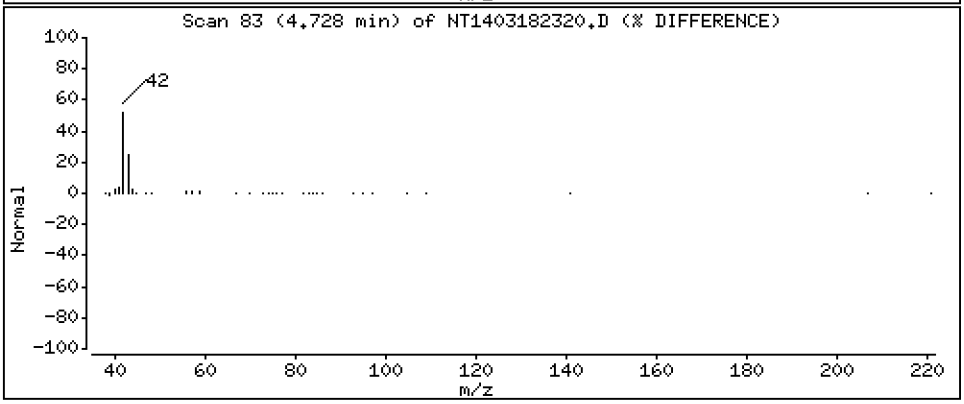












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

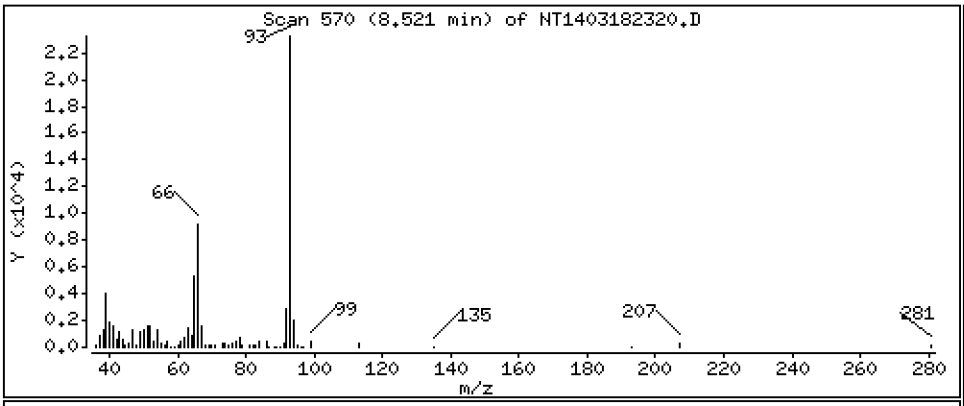
Operator: JGR

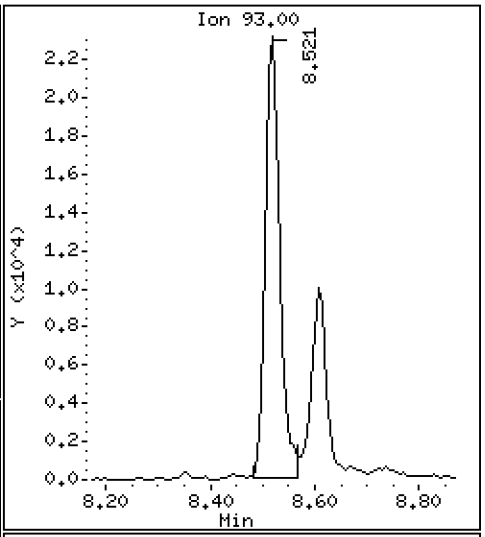
Column phase: ZB-5msi

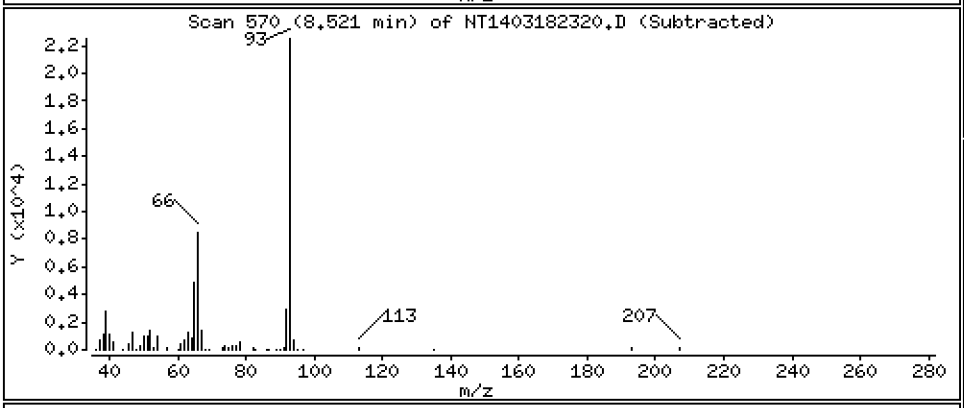
Column diameter: 0.25

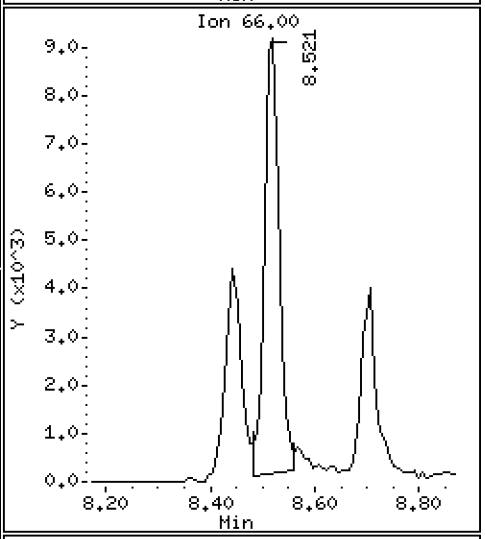
91 Aniline

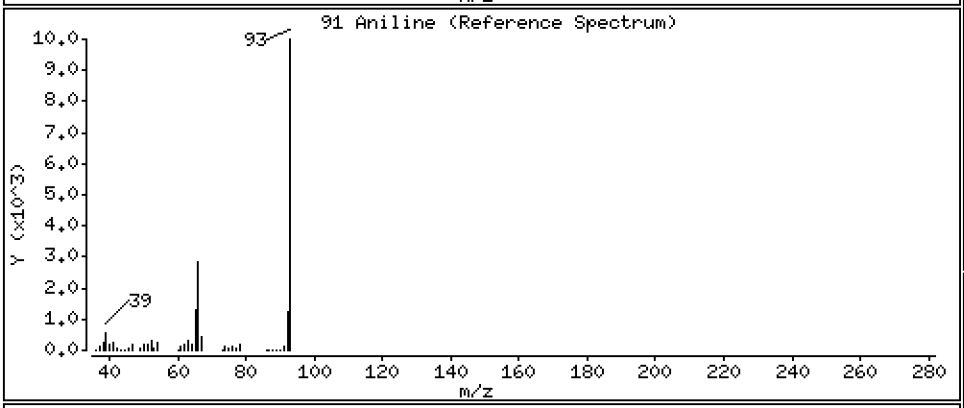
Concentration: 0.3486 ug/mL

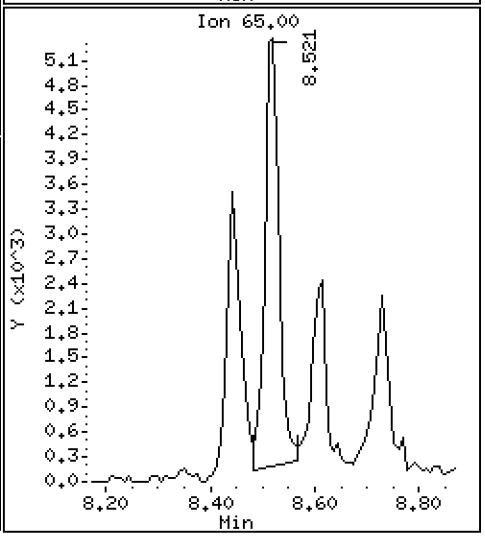


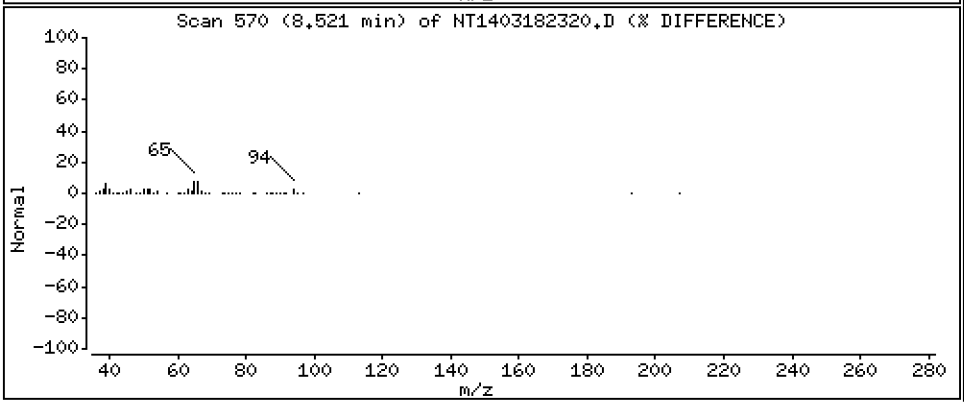












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

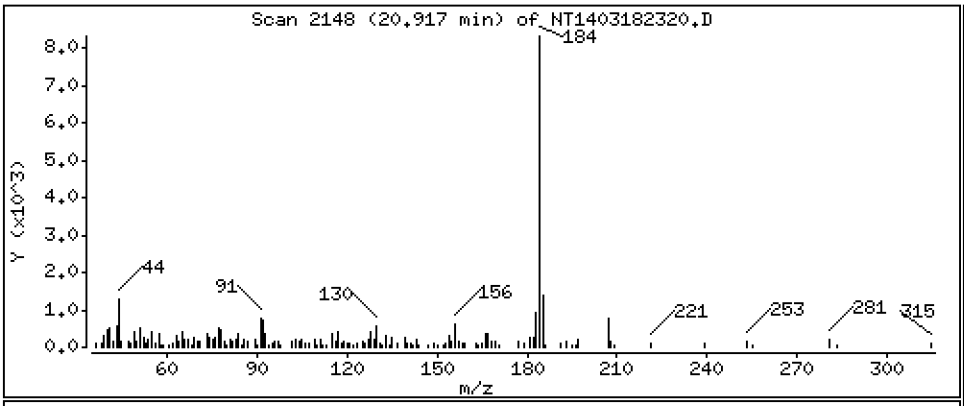
Operator: JGR

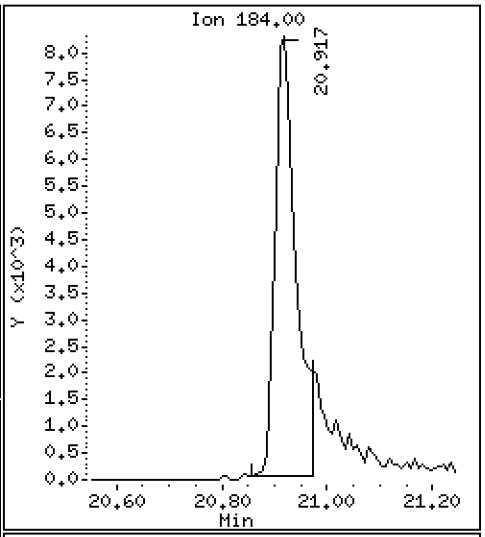
Column phase: ZB-5msi

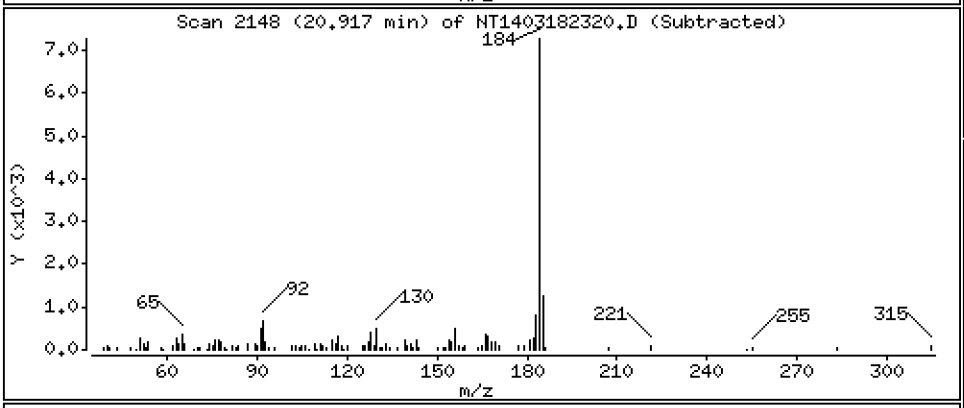
Column diameter: 0.25

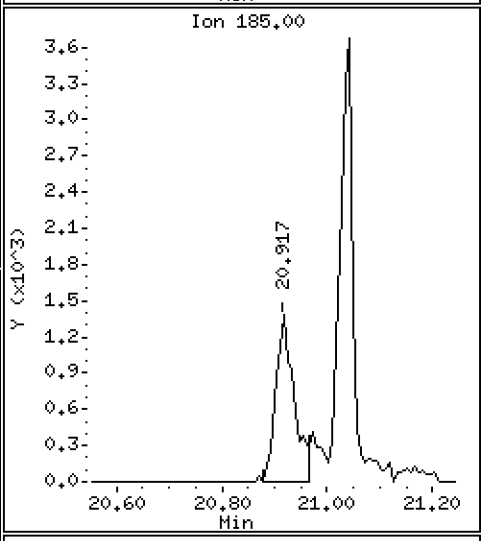
93 Benzidine

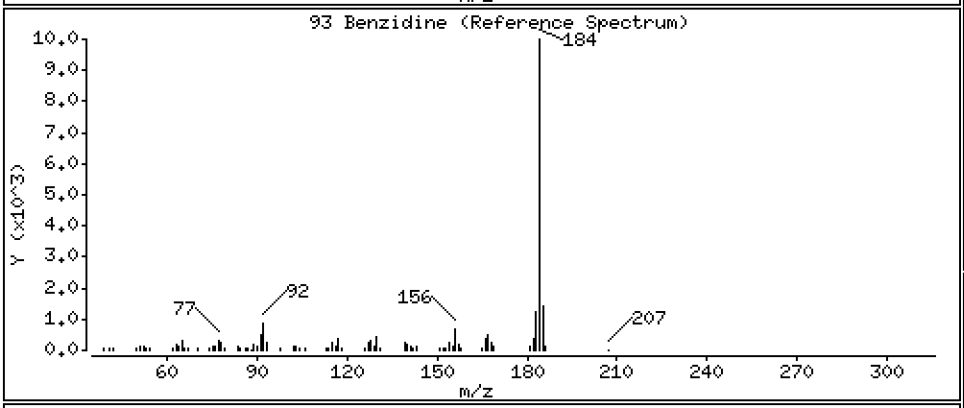
Concentration: 0.3153 ug/mL

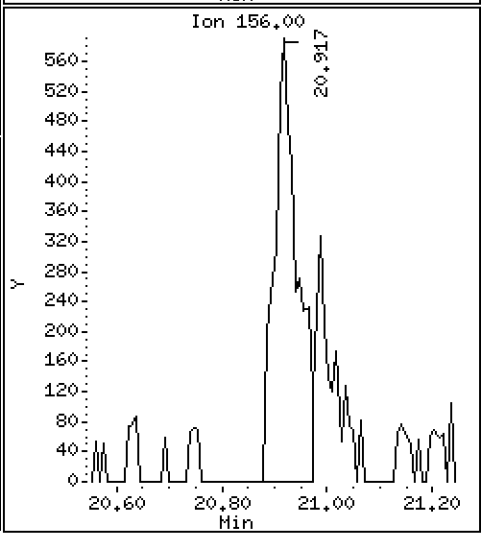


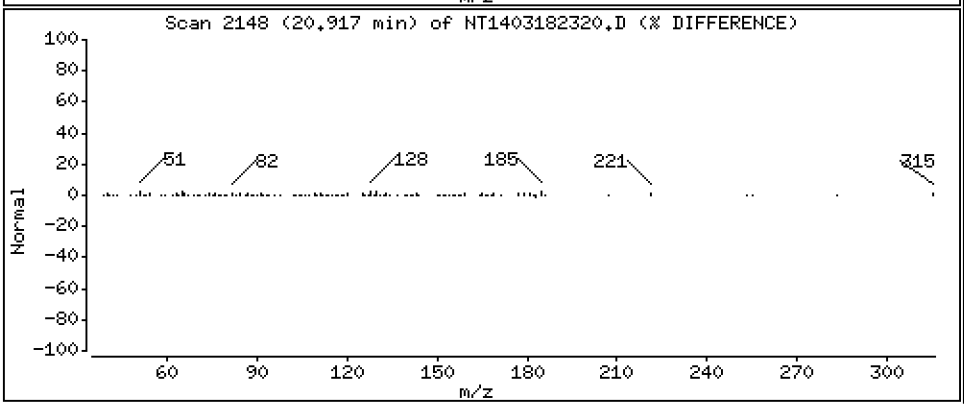












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

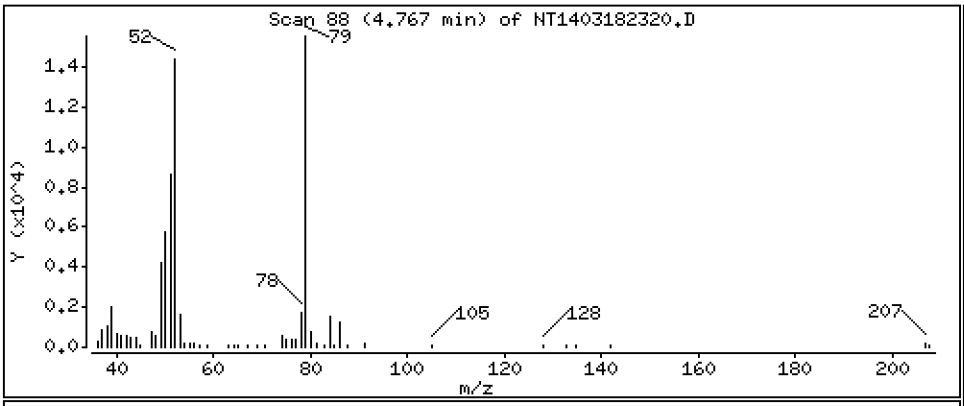
Operator: JGR

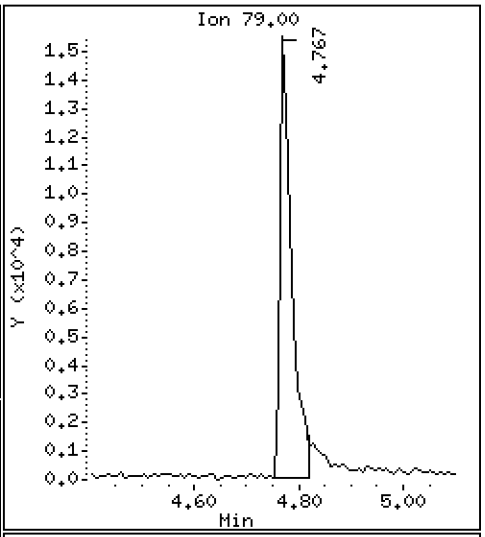
Column phase: ZB-5msi

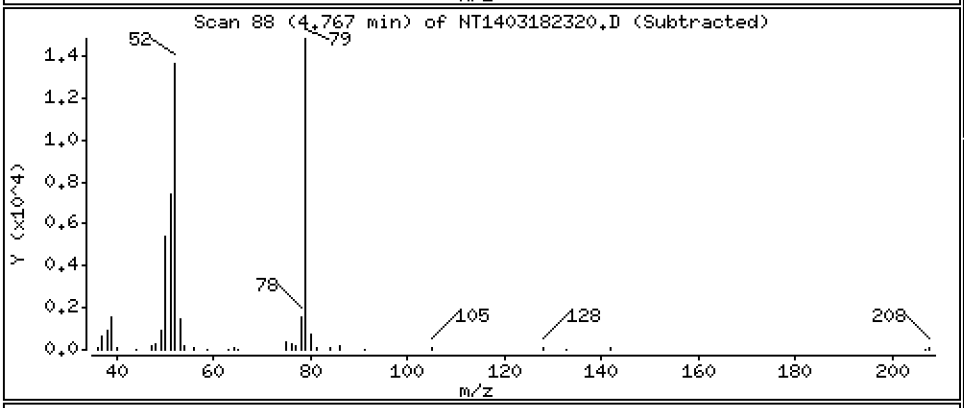
Column diameter: 0.25

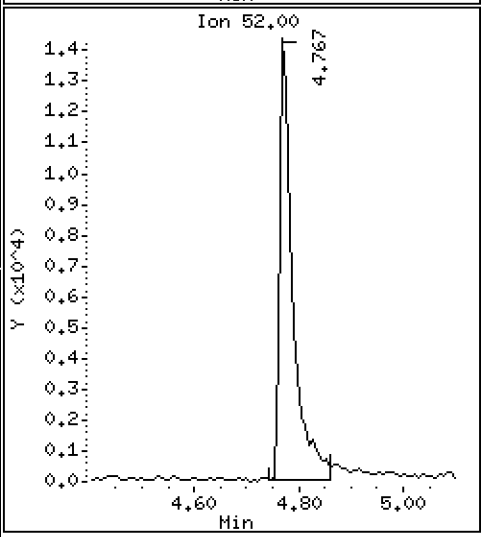
103 Pyridine

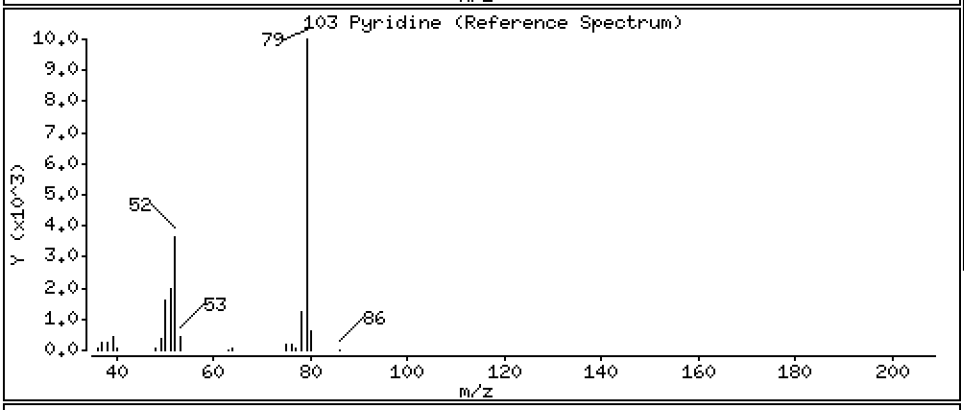
Concentration: 0.1486 ug/mL

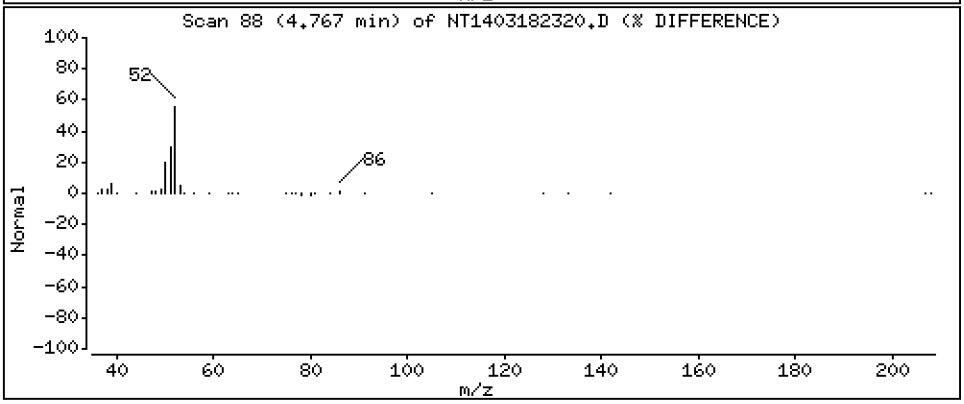












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

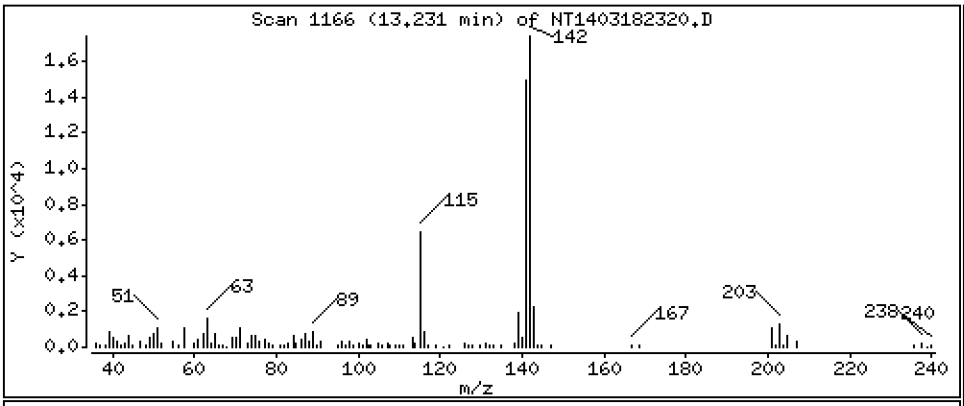
Operator: JGR

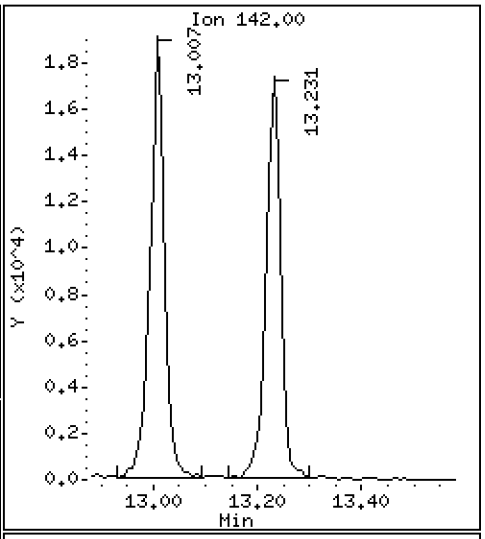
Column phase: ZB-5msi

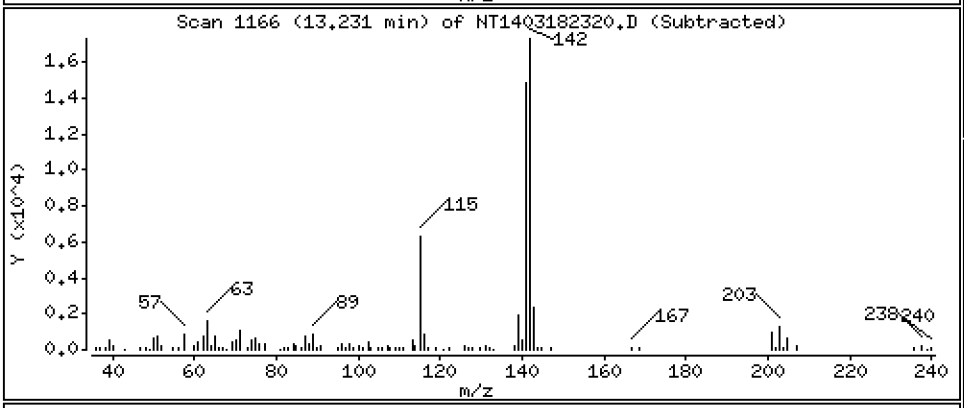
Column diameter: 0.25

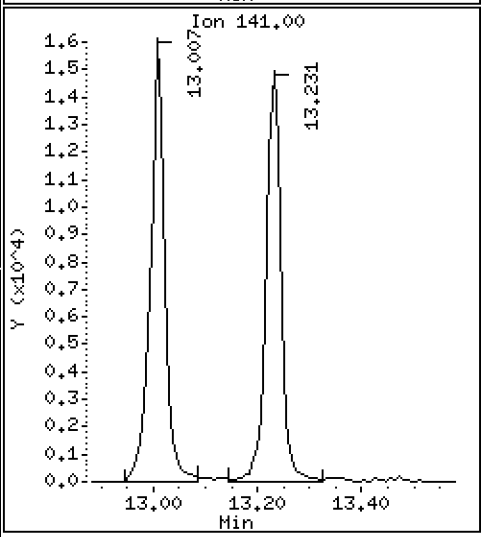
105 1-methylnaphthalene

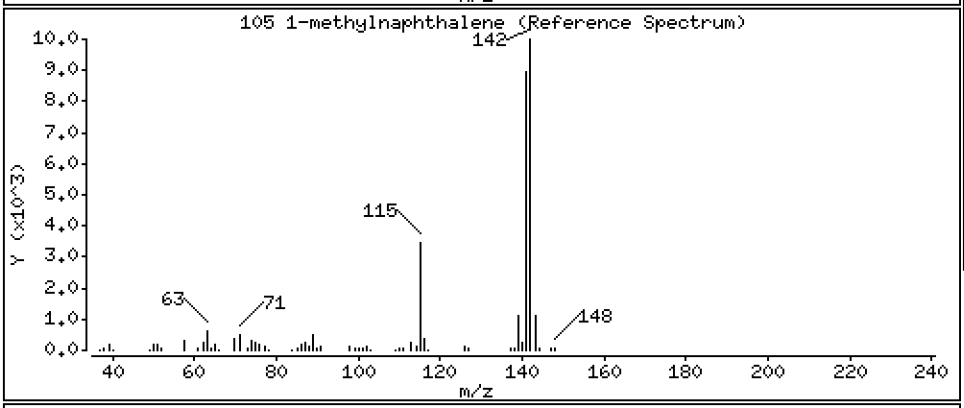
Concentration: 0.1988 ug/mL

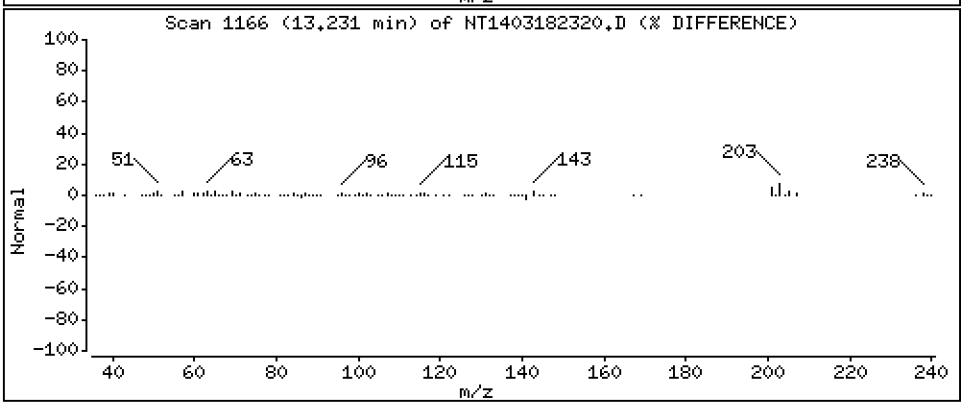












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

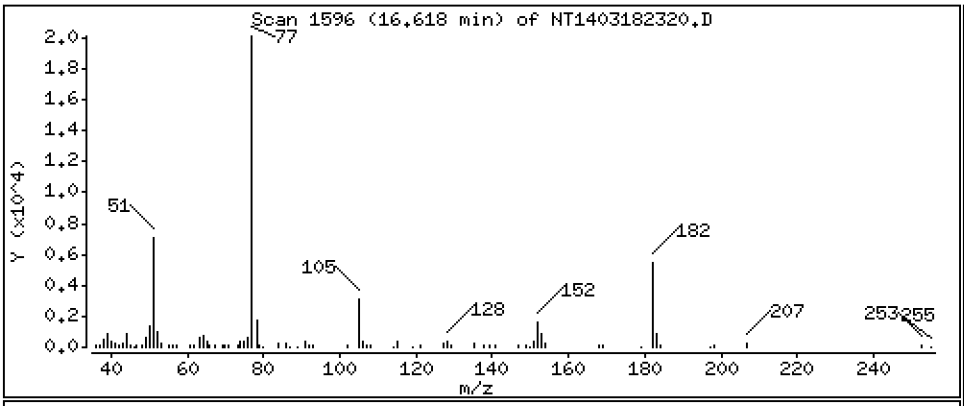
Operator: JGR

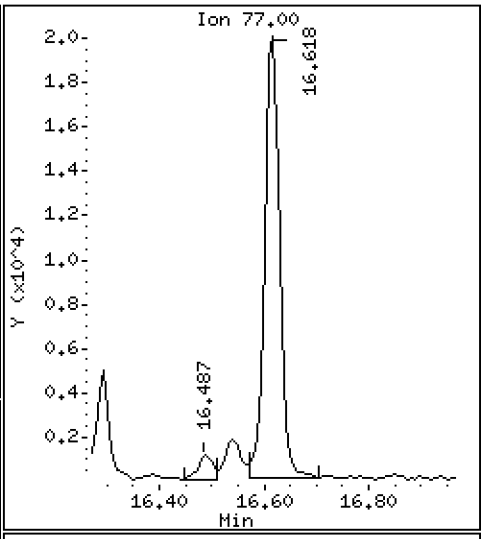
Column phase: ZB-5msi

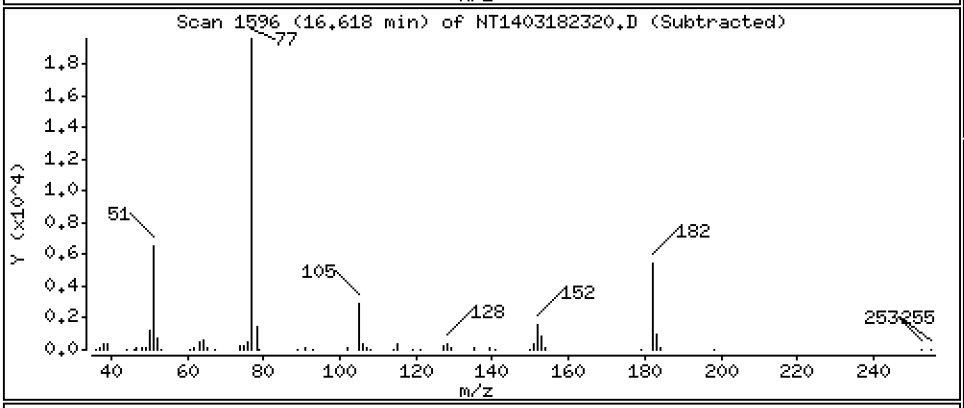
Column diameter: 0.25

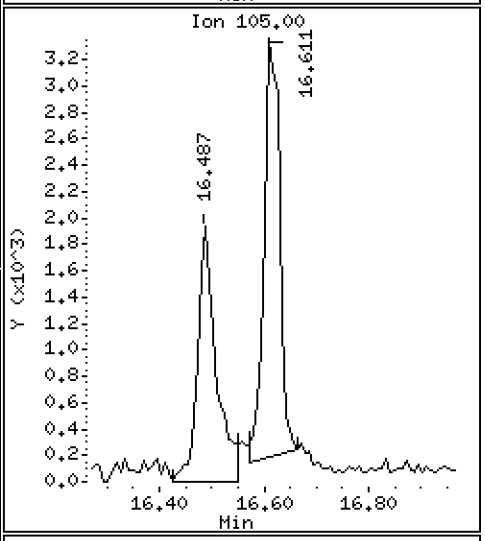
111 Azobenzene (1,2-DP-Hydrazine)

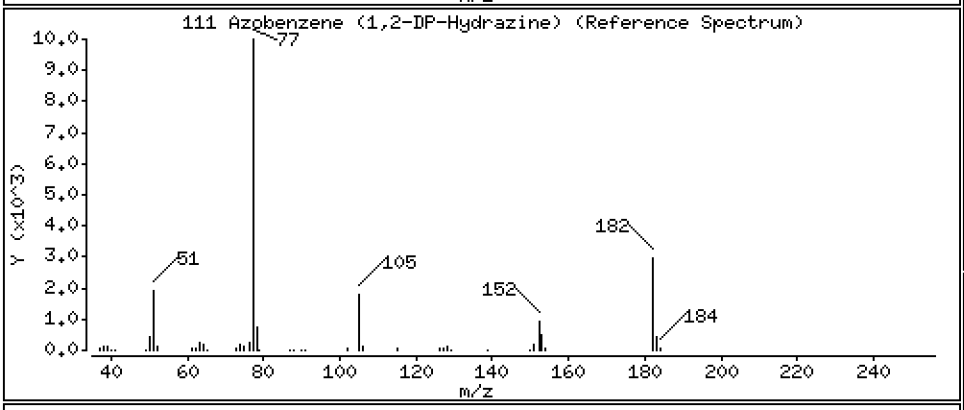
Concentration: 0.1904 ug/mL

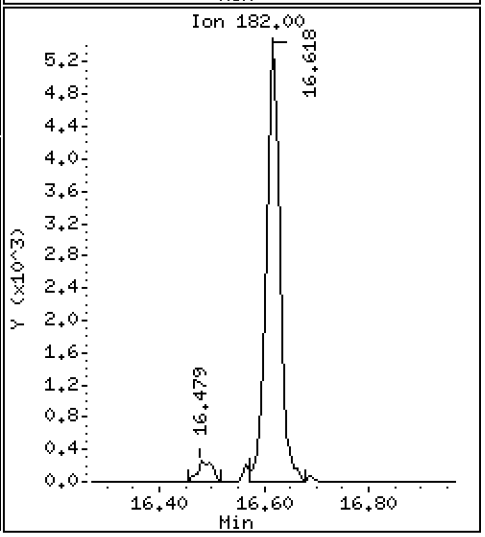


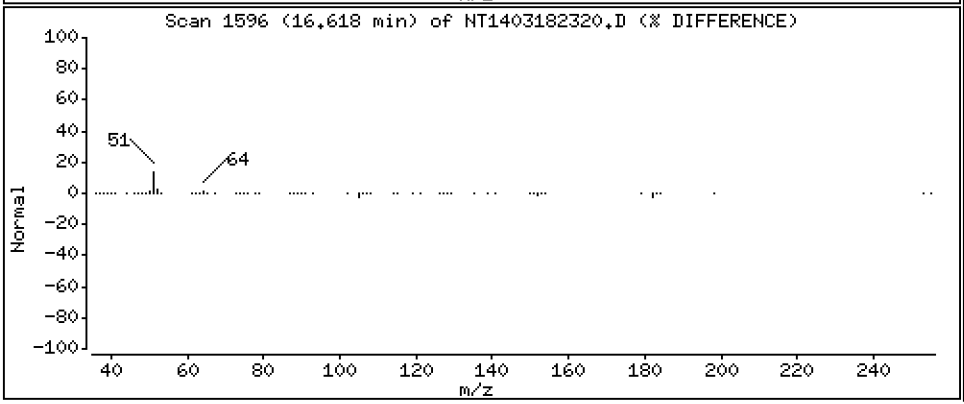












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

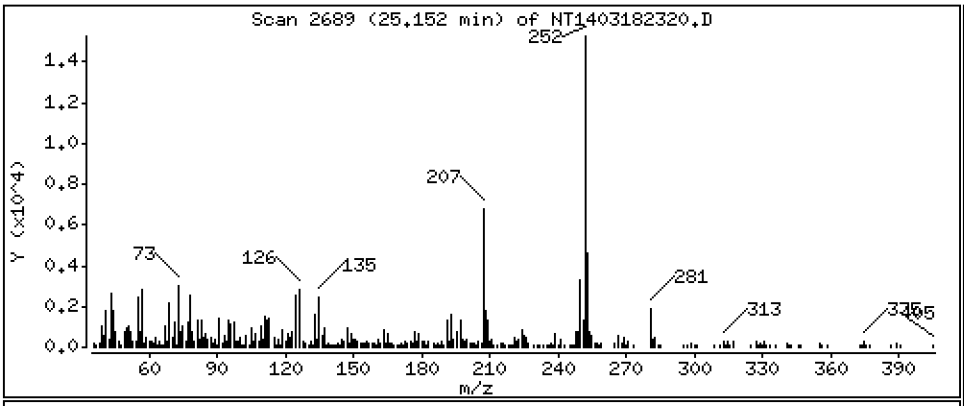
Operator: JGR

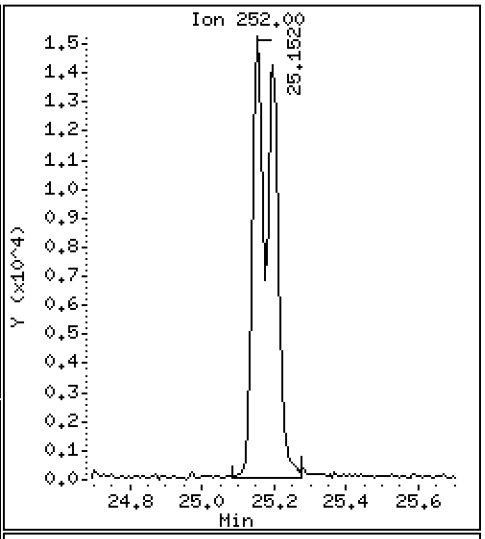
Column phase: ZB-5msi

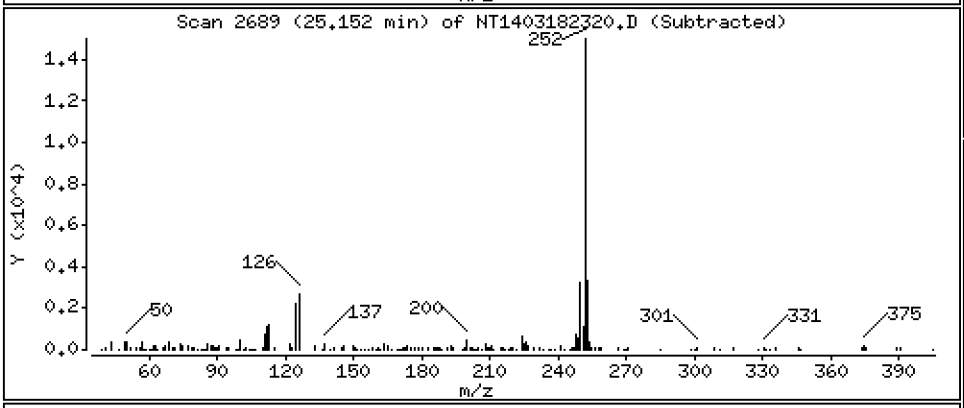
Column diameter: 0.25

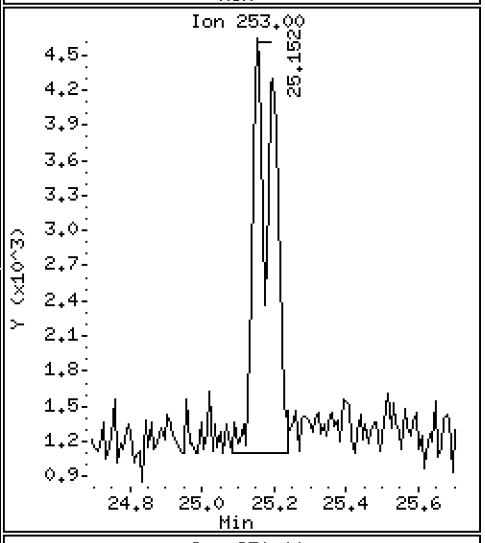
187 Total Benzofluoranthenes

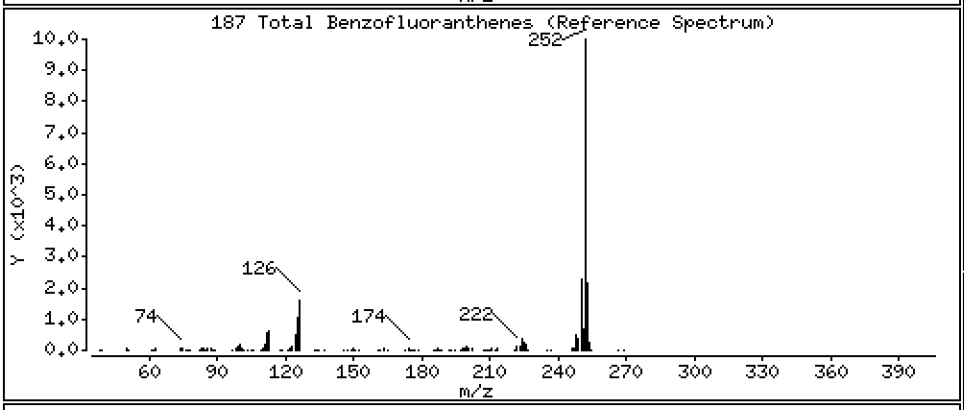
Concentration: 0.3850 ug/mL

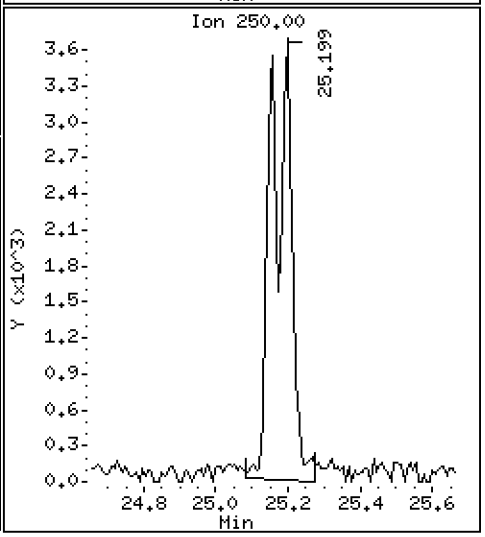


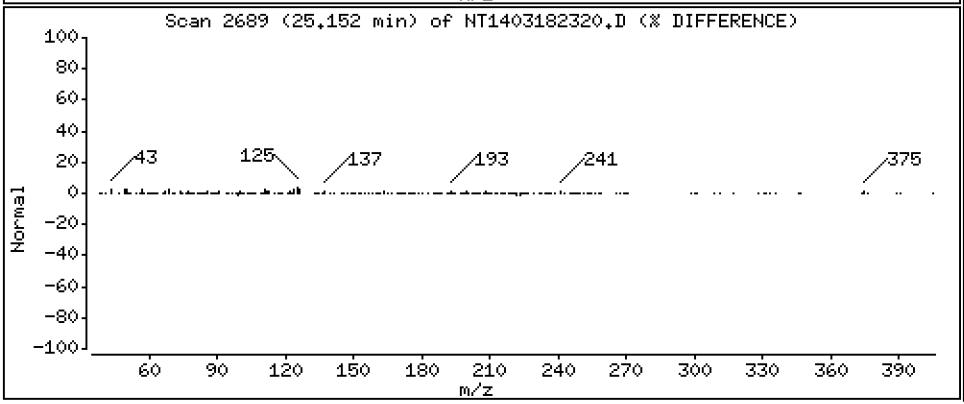












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Date : 19-MAR-2023 04:28

Client ID:

Instrument: nt14.i

Sample Info: SLC0355-LCV2

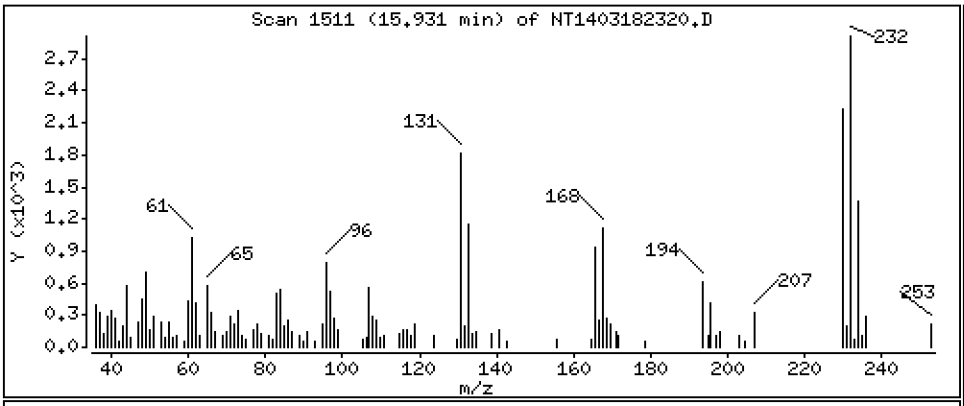
Operator: JGR

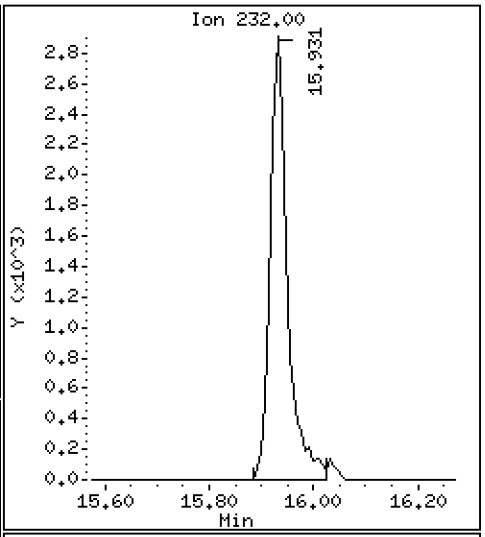
Column phase: ZB-5msi

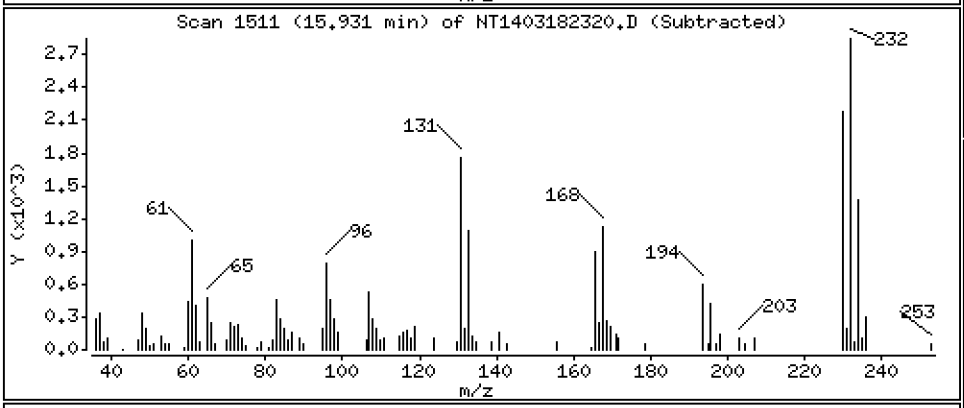
Column diameter: 0.25

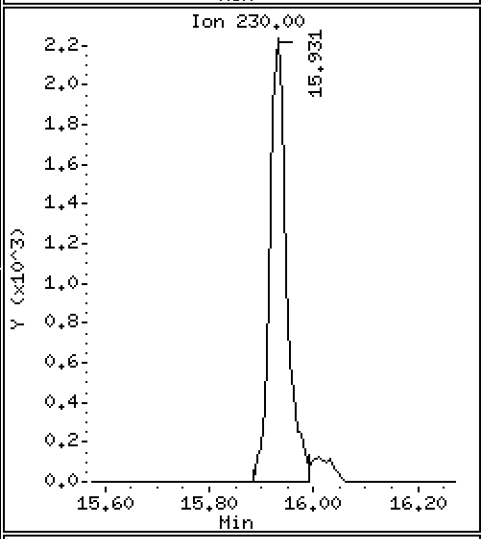
120 2,3,4,6-Tetrachlorophenol

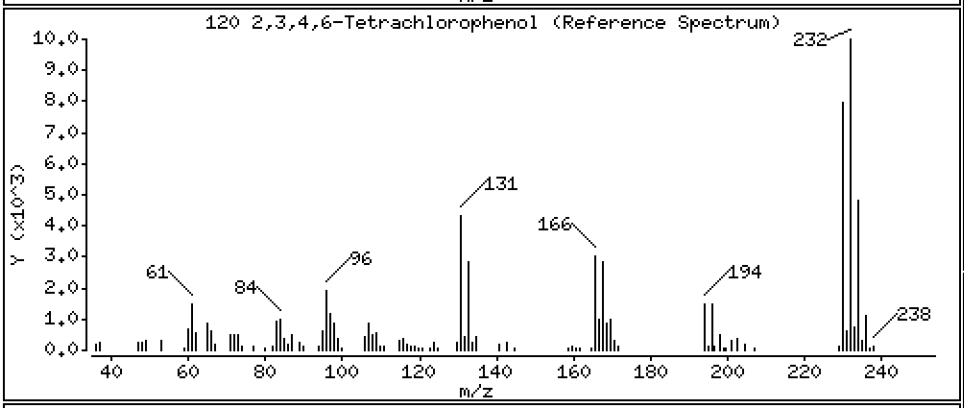
Concentration: 0.1312 ug/mL

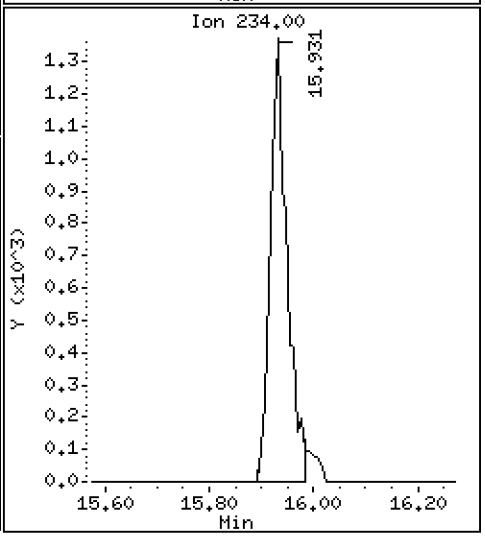


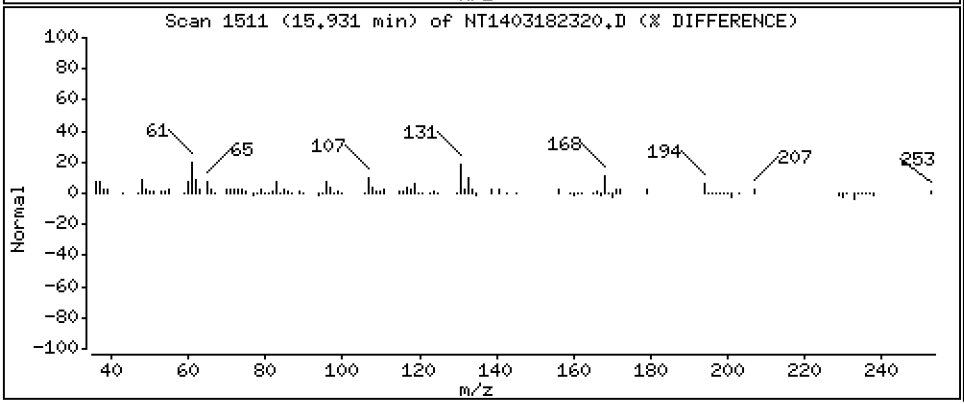












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt14.i\20230318.b\NT1403182320.D
Lab Smp Id: SLC0355-LCV2
Inj Date : 19-MAR-2023 04:28 MS Autotune Date: 11-MAR-2023 16:01
Operator : JGR Inst ID: nt14.i
Smp Info : SLC0355-LCV2
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt14.i\20230318.b\ABN.m
Meth Date : 23-Mar-2023 08:01 van Quant Type: ISTD
Cal Date : 15-MAR-2023 15:50 Cal File: NT1403152308.D
Als bottle: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.836	6.837	(1.000)	23878	0.27614	0.2761
$	2 Phenol-d5	99	8.420	8.420	(1.000)	30003	0.26355	0.2635
	3 Phenol	94	8.443	8.444	(1.000)	20806	0.17197	0.1720
$	5 2-Chlorophenol-d4	132	8.706	8.698	(1.000)	25062	0.27924	0.2792
	4 Bis(2-Chloroethyl)ether	93	8.606	8.613	(1.000)	17729	0.20349	0.2035
	6 2-Chlorophenol	128	8.729	8.729	(1.000)	18038	0.18942	0.1894
	7 1,3-Dichlorobenzene	146	9.000	9.000	(1.000)	20607	0.21377	0.2138
*	8 1,4-Dichlorobenzene-d4	152	9.070	9.062	(1.000)	254560	4.00000	(M)
	9 1,4-Dichlorobenzene	146	9.093	9.093	(1.000)	19687	0.21204	0.2120
$	10 1,2-Dichlorobenzene-d4	152	9.427	9.427	(1.000)	12596	0.21007	0.2101
	12 1,2-Dichlorobenzene	146	9.458	9.450	(1.000)	19314	0.21046	0.2105
	11 Benzyl alcohol	108	9.349	9.342	(1.031)	7800	0.13848	0.1385(M)
	14 2,2'-oxybis(1-Chloropropane)	121	9.644	9.637	(1.000)	5687	0.22835	0.2283
	13 2-Methylphenol	108	9.567	9.559	(1.000)	15079	0.17628	0.1763
	17 Hexachloroethane	117	10.048	10.048	(1.000)	7682	0.19346	0.1935
	16 N-Nitroso-di-n-propylamine	70	9.900	9.901	(1.000)	11827	0.17561	0.1756
	15 4-Methylphenol	108	9.838	9.831	(1.000)	15155	0.14964	0.1496
$	18 Nitrobenzene-d5	82	10.164	10.164	(0.879)	20426	0.19962	0.1996
	19 Nitrobenzene	77	10.203	10.195	(0.883)	19415	0.19492	0.1949
	20 Isophorone	82	10.645	10.653	(0.921)	21931	0.16126	0.1613
	21 2-Nitrophenol	139	10.832	10.832	(0.937)	8788	0.15625	0.1562
	22 2,4-Dimethylphenol	107	10.886	10.886	(0.942)	32276	0.37887	0.3789
	23 Bis(2-Chloroethoxy)methane	93	11.080	11.080	(0.958)	17477	0.19089	0.1909
	24 Benzoic acid	105	11.018	11.118	(0.953)	13412	0.19576	0.1958(M)
	25 2,4-Dichlorophenol	162	11.297	11.289	(0.977)	26984	0.39829	0.3983
	26 1,2,4-Trichlorobenzene	180	11.475	11.475	(0.993)	16986	0.20395	0.2039
*	27 Naphthalene-d8	136	11.560	11.560	(1.000)	966904	4.00000	
	28 Naphthalene	128	11.606	11.606	(1.004)	55165	0.21356	0.2136
	29 4-Chloroaniline	127	11.737	11.730	(1.015)	34733	0.32119	0.3212
	30 Hexachlorobutadiene	225	11.969	11.969	(1.035)	8181	0.21756	0.2176
	31 4-Chloro-3-methylphenol	107	12.704	12.697	(1.099)	26660	0.32564	0.3256
	32 2-Methylnaphthalene	142	13.006	13.006	(1.125)	36188	0.20088	0.2009
	33 Hexachlorocyclopentadiene	237	13.478	13.478	(0.887)	1023	0.02526	0.02526

		QUANT SIG					CONCENTRATIONS ON-COLUMN	CONCENTRATIONS FINAL
Compounds		MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
34	2,4,6-Trichlorophenol	196	13.633	13.633	(0.897)	16753	0.33900	0.3390
35	2,4,5-Trichlorophenol	196	13.710	13.703	(0.902)	16908	0.32834	0.3283
$ 36	2-Fluorobiphenyl	172	13.795	13.796	(0.908)	37440	0.21222	0.2122
37	2-Chloronaphthalene	162	14.004	14.004	(0.922)	31661	0.20939	0.2094
38	2-Nitroaniline	65	14.268	14.260	(0.939)	20628	0.35330	0.3533
39	Dimethylphthalate	163	14.693	14.693	(0.967)	33772	0.20790	0.2079
40	Acenaphthylene	152	14.879	14.879	(0.979)	52401	0.20632	0.2063
41	2,6-Dinitrotoluene	165	14.833	14.833	(0.976)	14481	0.38589	0.3859
* 42	Acenaphthene-d10	164	15.196	15.196	(1.000)	487144	4.00000	
43	3-Nitroaniline	138	15.119	15.119	(0.995)	10366	0.20023	0.2002
44	Acenaphthene	153	15.258	15.258	(1.004)	30100	0.20299	0.2030
45	2,4-Dinitrophenol	184	15.343	15.335	(1.010)	2425	0.08347	0.08347(M)
46	Dibenzofuran	168	15.590	15.591	(1.026)	43188	0.20401	0.2040
47	4-Nitrophenol	109	15.482	15.444	(1.019)	7628	0.27837	0.2784(M)
48	2,4-Dinitrotoluene	165	15.645	15.645	(1.030)	16198	0.30451	0.3045
50	Diethylphthalate	149	16.155	16.155	(1.063)	36219	0.21565	0.2157
49	Fluorene	166	16.302	16.302	(1.073)	40744	0.20304	0.2030
51	4-Chlorophenyl-phenylether	204	16.294	16.294	(1.072)	17751	0.20608	0.2061
52	4-Nitroaniline	138	16.394	16.394	(1.079)	11402	0.25322	0.2532
53	4,6-Dinitro-2-methylphenol	198	16.479	16.487	(0.903)	7625	0.25778	0.2578
54	N-Nitrosodiphenylamine	169	16.541	16.541	(0.907)	24729	0.21296	0.2130
$ 55	2,4,6-Tribromophenol	330	16.841	16.841	(1.108)	4562	0.23819	0.2382
56	4-Bromophenyl-phenylether	248	17.296	17.296	(0.948)	7556	0.19300	0.1930
57	Hexachlorobenzene	284	17.613	17.621	(0.966)	9608	0.23259	0.2326
58	Pentachlorophenol	266	17.985	17.969	(0.986)	4315	0.15161	0.1516(M)
* 59	Phenanthrene-d10	188	18.240	18.240	(1.000)	854961	4.00000	
60	Phenanthrene	178	18.286	18.286	(1.003)	48620	0.19904	0.1990
61	Anthracene	178	18.379	18.379	(1.008)	44080	0.18730	0.1873
62	Carbazole	167	18.712	18.704	(1.026)	37716	0.18012	0.1801
63	Di-n-butylphthalate	149	19.501	19.501	(1.069)	53926	0.20318	0.2032
64	Fluoranthene	202	20.677	20.677	(0.888)	44498	0.24594	0.2459
65	Pyrene	202	21.103	21.103	(0.906)	44730	0.24107	0.2411
$ 66	Terphenyl-d14	244	21.381	21.381	(0.918)	31064	0.24730	0.2473
67	Butylbenzylphthalate	149	22.303	22.303	(0.957)	21350	0.26264	0.2626
68	Benzo(a)anthracene	228	23.263	23.263	(0.999)	35300	0.21527	0.2153
* 69	Chrysene-d12	240	23.294	23.294	(1.000)	444724	4.00000	
70	3,3'-Dichlorobenzidine	252	23.216	23.216	(0.997)	30519	0.64872	0.6487
71	Chrysene	228	23.332	23.340	(1.002)	30728	0.20705	0.2071
72	bis(2-Ethylhexyl)phthalate	149	23.325	23.325	(0.959)	25814	0.22845	0.2285
* 134	Di-n-octylphthalate-d4	153	24.316	24.316	(1.000)	858353	4.00000	
73	Di-n-octylphthalate	149	24.323	24.323	(1.000)	45409	0.20579	0.2058
74	Benzo(b)fluoranthene	252	25.152	25.160	(0.970)	30713	0.18547	0.1855
75	Benzo(k)fluoranthene	252	25.198	25.198	(0.972)	31989	0.19487	0.1949
76	Benzo(a)pyrene	252	25.810	25.818	(0.996)	28121	0.19859	0.1986
* 77	Perylene-d12	264	25.926	25.934	(1.000)	468611	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.610	28.611	(1.104)	27343	0.17741	0.1774
79	Dibenzo(a,h)anthracene	278	28.618	28.626	(1.104)	24993	0.19241	0.1924
80	Benzo(g,h,i)perylene	276	29.395	29.411	(1.134)	19870	0.15643	0.1564
90	N-Nitrosodimethylamine	74	4.728	4.728	(1.000)	18801	0.34330	0.3433
91	Aniline	93	8.521	8.521	(1.000)	42418	0.34858	0.3486
93	Benzidine	184	20.917	20.902	(0.898)	22954	0.31525	0.3153
103	Pyridine	79	4.766	4.751	(1.000)	25203	0.14860	0.1486
105	1-methylnaphthalene	142	13.230	13.231	(1.145)	32446	0.19880	0.1988
111	Azobenzene (1,2-DP-Hydrazine)	77	16.618	16.618	(1.094)	38191	0.19043	0.1904

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.152	25.198	(0.970)	60449	0.38498	0.3850
120 2,3,4,6-Tetrachlorophenol	232	15.931	15.923	(1.048)	6474	0.13116	0.1312

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1403182320.D
Lab Smp Id: SLC0355-LCV2
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt14.i\20230318.b\ABN.m
Misc Info:

Calibration Date: 19-MAR-2023
Calibration Time: 03:16
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	237594	118797	475188	254560	7.14
27 Naphthalene-d8	944151	472076	1888302	966904	2.41
42 Acenaphthene-d10	498100	249050	996200	487144	-2.20
59 Phenanthrene-d10	845417	422709	1690834	854961	1.13
69 Chrysene-d12	410836	205418	821672	444724	8.25
134 Di-n-octylphthala	914780	457390	1829560	858353	-6.17
77 Perylene-d12	441517	220759	883034	468611	6.14

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.06	8.56	9.56	9.07	0.08
27 Naphthalene-d8	11.56	11.06	12.06	11.56	-0.00
42 Acenaphthene-d10	15.20	14.70	15.70	15.20	-0.00
59 Phenanthrene-d10	18.24	17.74	18.74	18.24	-0.00
69 Chrysene-d12	23.29	22.79	23.79	23.29	-0.00
134 Di-n-octylphthala	24.32	23.82	24.82	24.32	-0.00
77 Perylene-d12	25.93	25.43	26.43	25.93	-0.03

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

REVIEW SUMMARY FOR FILE - NT1403182320.D

Lab ID: SLC0355-LCV2
nt14.i, ABN.m, 19-MAR-2023 04:28

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
1.031	1.000	0.0308	Benzyl alcohol
1.000	1.063	-0.0634	2,2'-oxybis(1-Chloropropane)
0.953	0.962	-0.0087	Benzoic acid

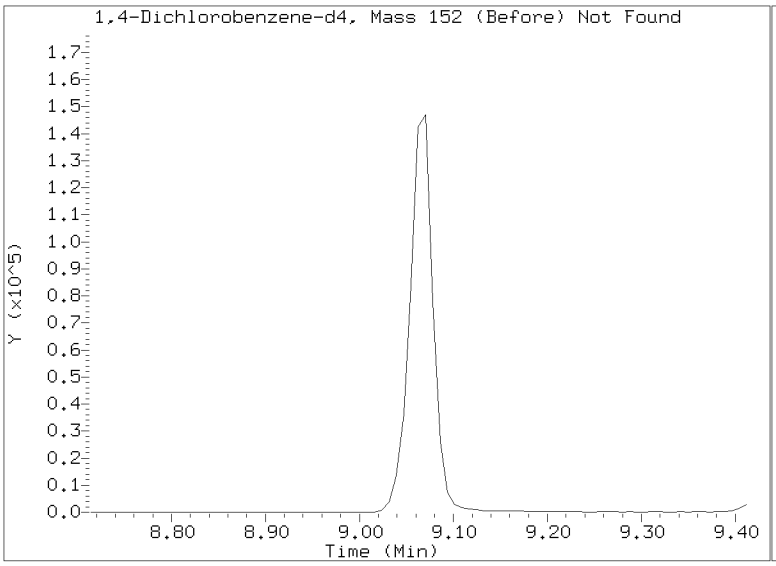
RRT check based on Ccal File: NT1403182318.D

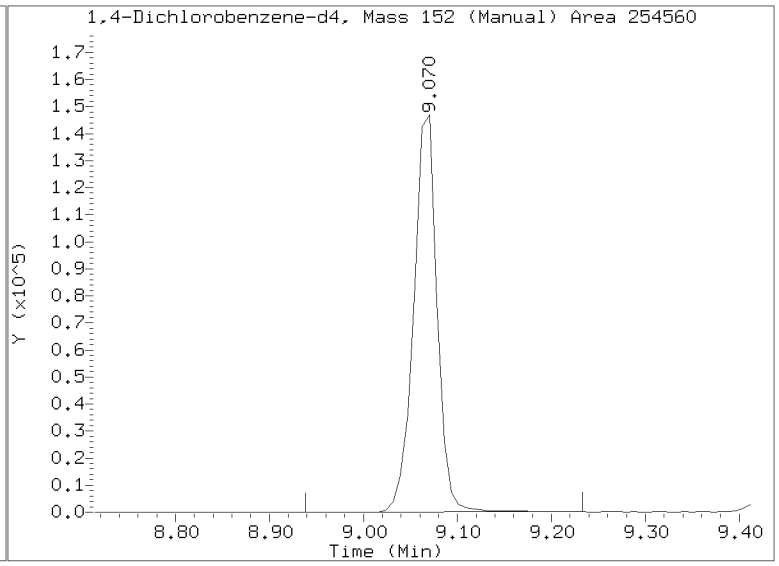
On Column LOD for nt14.i, ABN.m, ICAL.sub = 0.0000

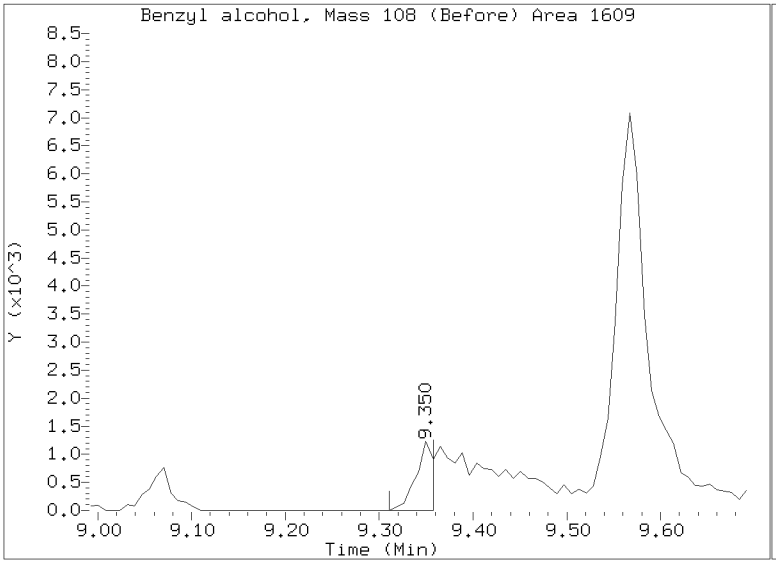
* Only compounds listed in the work order have been verified by the analyst *

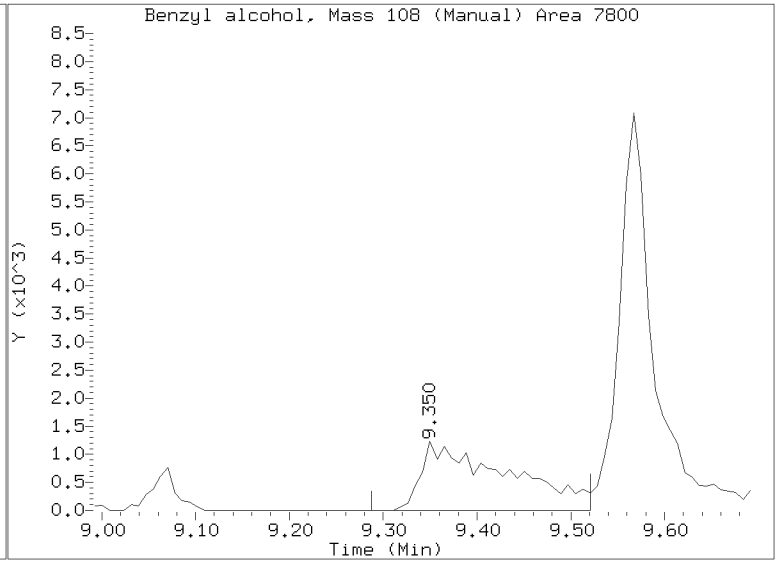
Quant Ion Manual Peak Adjustment Report

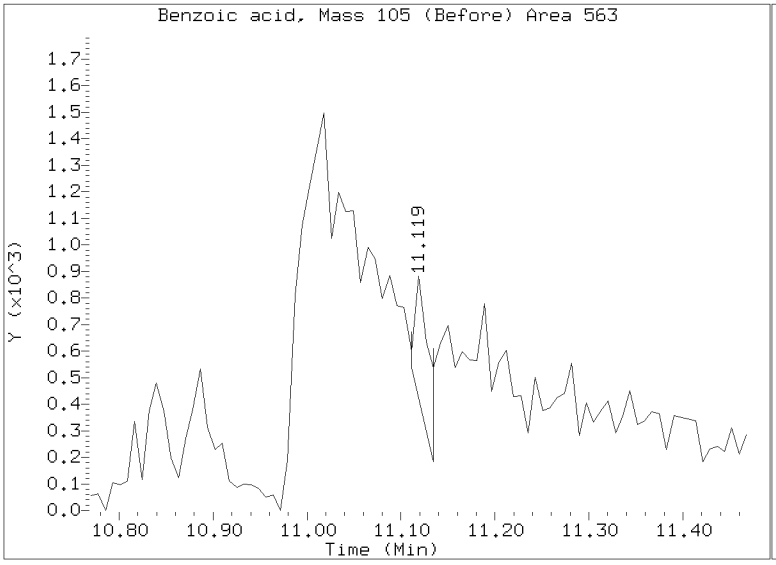
Datafile: //target/share/chem3/nt14.i/20230318.b/NT1403182320.D
Injection Date: 19-MAR-2023 04:28
Lab ID:SLC0355-LCV2 Client ID:
Report Date: 03/23/2023 08:01

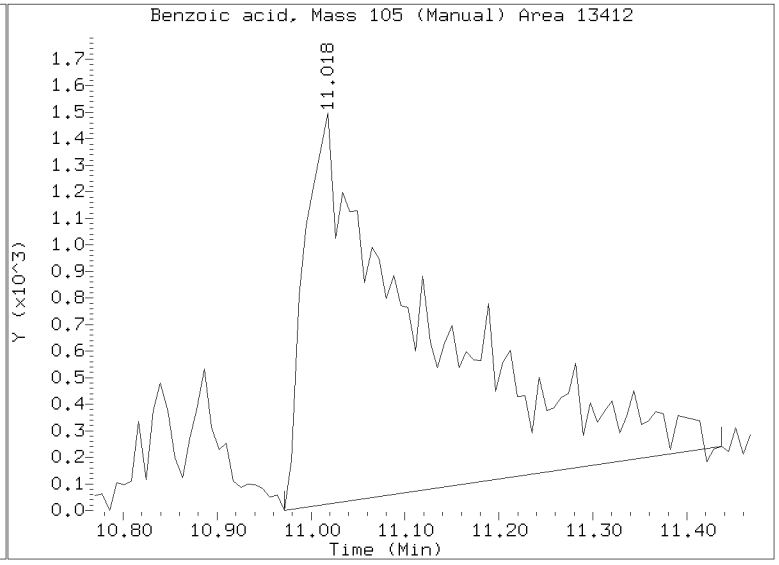












Quant Ion Manual Peak Adjustment Report

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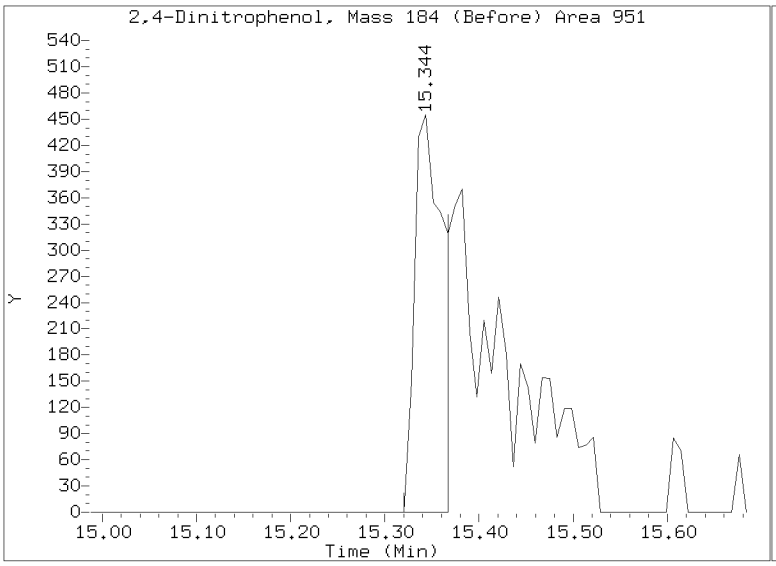
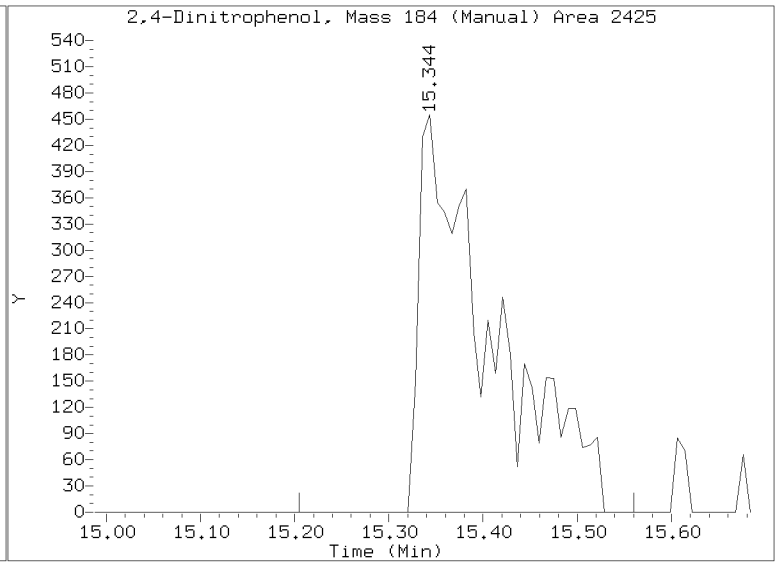
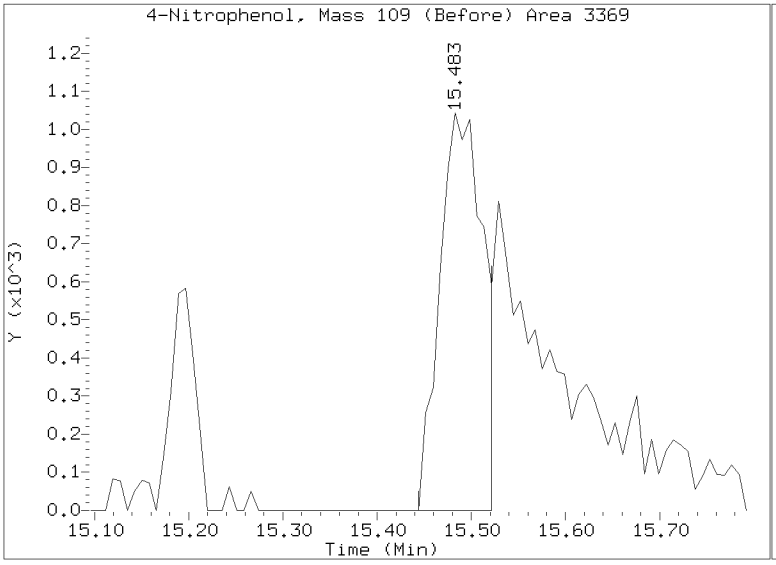
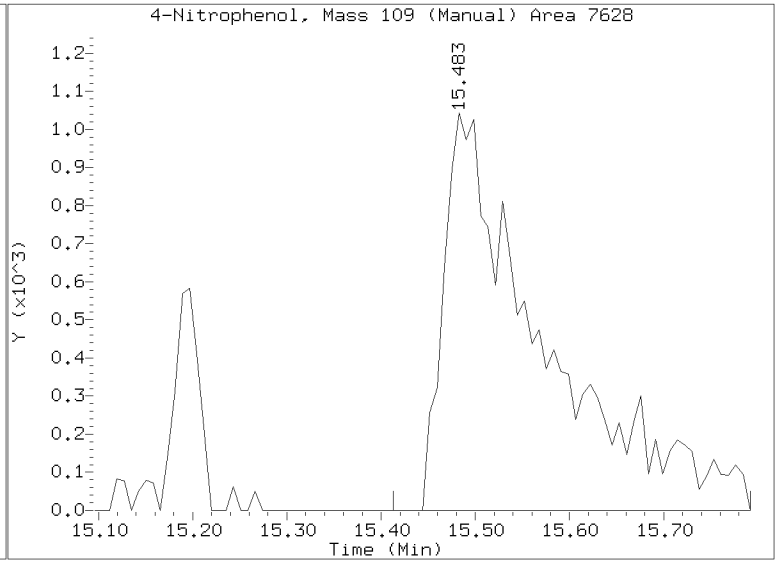
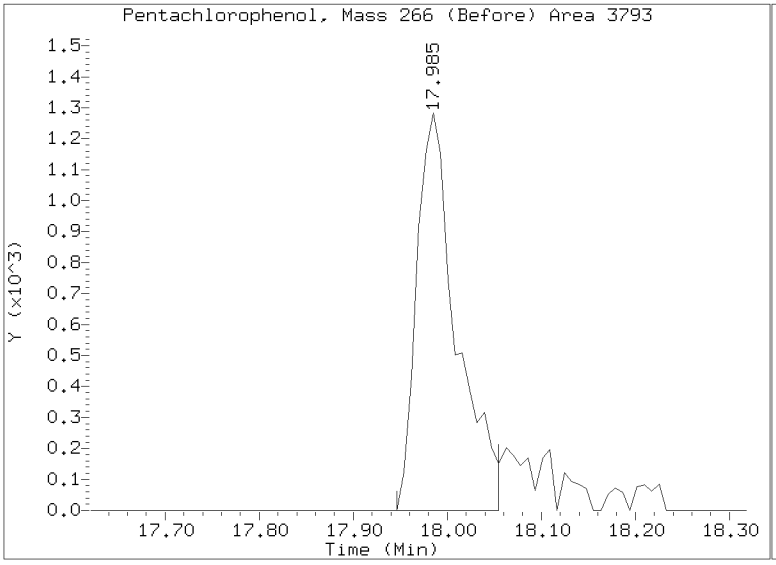
Injection Date: 19-MAR-2023 04:28
Lab ID:SLC0355-LCV2 Client ID:
Report Date: 03/23/2023 08:01

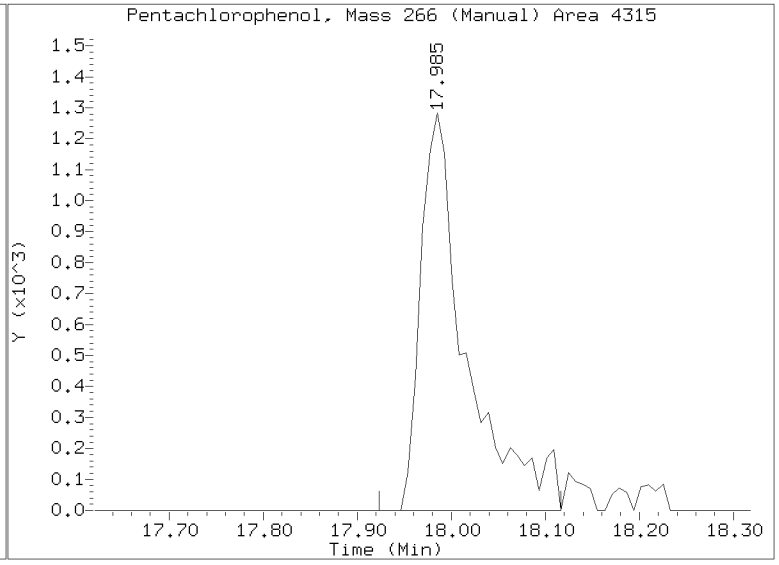












Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0160	Instrument:	NT14
		Calibration:	GC00048

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
MS Tune	SLC0160-TUN1	NT1403152301.D	NA	03/15/23 12:00
CAL 20	SLC0160-CAL7	NT1403152302.D	NA	03/15/23 12:13
CAL 10	SLC0160-CAL6	NT1403152303.D	NA	03/15/23 12:49
CAL 5	SLC0160-CAL5	NT1403152304.D	NA	03/15/23 13:26
CAL 2.5	SLC0160-CAL4	NT1403152305.D	NA	03/15/23 14:02
CAL 1.0	SLC0160-CAL3	NT1403152306.D	NA	03/15/23 14:38
CAL 0.5	SLC0160-CAL2	NT1403152307.D	NA	03/15/23 15:14
CAL 0.2	SLC0160-CAL1	NT1403152308.D	NA	03/15/23 15:50
SCV 5.0	SLC0160-SCV1	NT1403152311.D	NA	03/15/23 17:39
Initial Cal Blank	SLC0160-ICB1	NT1403152312.D	NA	03/15/23 18:15

Printed: 3/16/2023 3:24:17PM

ANALYSIS SEQUENCE

SLC0160

Instrument ID: NT14
Calibration ID: GC00048
MS EM Level: EV

GCMS Description: Agilent 7890A/5975C XL
GCMS Column ID: ZB-5MS

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	File ID	Analyst	Comments
SLC0160-TUN1	MS Tune	QC		1	K004775		03/15/2023 12:00	NT1403152301.D	JGR	
SLC0160-CAL5	CAL 5	QC		2	K011109	K010831	03/15/2023 13:26	NT1403152304.D	JGR	
SLC0160-CAL7	CAL 20	QC		3	K011111	K010831	03/15/2023 12:13	NT1403152302.D	JGR	
SLC0160-CAL1	CAL 0.2	QC		4	K011105	K010831	03/15/2023 15:50	NT1403152308.D	JGR	
SLC0160-CAL6	CAL 10	QC		5	K011110	K010831	03/15/2023 12:49	NT1403152303.D	JGR	
SLC0160-CAL2	CAL 0.5	QC		6	K011106	K010831	03/15/2023 15:14	NT1403152307.D	JGR	
SLC0160-CAL4	CAL 2.5	QC		7	K011108	K010831	03/15/2023 14:02	NT1403152305.D	JGR	
SLC0160-CAL3	CAL 1.0	QC		8	K011107	K010831	03/15/2023 14:38	NT1403152306.D	JGR	
SLC0160-ICB1	Initial Cal Blank	QC		9	K005156	K010831	03/15/2023 18:15	NT1403152312.D	JGR	
SLC0160-SCV1	SCV 5.0	QC		10	L002833	K010831	03/15/2023 17:39	NT1403152311.D	JGR	

Security Status Report

Date: 16-Mar-2023 15:26

NT1403152301.D	Data Locked	deenayd, 16-
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NT1403152308.D	Data Locked	deenayd, 16-
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NT1403152310.D	Data Locked	deenayd, 16-
NT1403152311.D	Data Locked	deenayd, 16-
NT1403152312.D	Data Locked	deenayd, 16-

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230315.b

ARI Job No.: SLC0 Method: DFTPP8270E.m Instrument: nt14.i Date: 15-MAR-2023

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1200	NT1403152301.D	SLC0160-TUN1		1	NO MANUAL INTEGRATION
1213	NT1403152302.D	SLC0160-CAL7		1	1,4-Dichlorobenzene-d4,
1249	NT1403152303.D	SLC0160-CAL6		1	1,4-Dichlorobenzene-d4,
1326	NT1403152304.D	SLC0160-CAL5		1	1,4-Dichlorobenzene-d4,
1402	NT1403152305.D	SLC0160-CAL4		1	1,4-Dichlorobenzene-d4,
1438	NT1403152306.D	SLC0160-CAL3		1	1,4-Dichlorobenzene-d4,
1514	NT1403152307.D	SLC0160-CAL2		1	1,4-Dichlorobenzene-d4,
1550	NT1403152308.D	SLC0160-CAL1		1	1,4-Dichlorobenzene-d4,
1626	NT1403152309.D	SLC0160-SIM2		1	NO MANUAL INTEGRATION
1703	NT1403152310.D	SLC0160-SIM1		1	NO MANUAL INTEGRATION
1739	NT1403152311.D	SLC0160-SCV1		1	1,4-Dichlorobenzene-d4,
1815	NT1403152312.D	SLC0160-ICB1		1	NO MANUAL INTEGRATION

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230315.b

	Time	Filename	LabID	ClientId	DF													
1	1213	NT1403152302.D	SLC0160-CAL7		1	9.07	167425	11.58	667689	15.21	359561	18.26	655798	23.31	488521	25.95	451011	24.33	951548
2	1249	NT1403152303.D	SLC0160-CAL6		1	9.07	180739	11.57	689021	15.20	362269	18.25	660604	23.30	480922	25.94	459466	24.32	940570
3	1326	NT1403152304.D	SLC0160-CAL5		1	9.07	194517	11.57	721321	15.20	379602	18.25	703194	23.30	504769	25.94	484073	24.32	978492
4	1402	NT1403152305.D	SLC0160-CAL4		1	9.07	192012	11.57	744883	15.20	388723	18.25	720279	23.29	512149	25.94	495048	24.32	952832
5	1438	NT1403152306.D	SLC0160-CAL3		1	9.07	203547	11.57	753702	15.20	389189	18.24	718213	23.29	516735	25.94	493304	24.32	933762
6	1514	NT1403152307.D	SLC0160-CAL2		1	9.07	214919	11.57	819372	15.20	418625	18.24	774369	23.29	554225	25.93	529322	24.32	988092
7	1550	NT1403152308.D	SLC0160-CAL1		1	9.06	203313	11.57	744014	15.20	379787	18.24	697726	23.29	506894	25.93	478496	24.32	862800
8	1739	NT1403152311.D	SLC0160-SCV1		1	9.07	197462	11.57	726125	15.20	382881	18.24	706616	23.30	504808	25.94	496785	24.32	988248
9	1815	NT1403152312.D	SLC0160-ICB1		1	9.06	193990	11.56	727843	15.20	367416	18.24	678407	23.29	476533	25.93	452165	24.32	799896

ANALYSIS SEQUENCE

SLC0160

Instrument ID: NT14
Calibration ID: GC00048
MS EM Level: 1847 EV

GCMS Description: Agilent 7890A/5975C XL
GCMS Column ID: L002738

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	File ID	Analyst	Comments
SLC0160-TUN1	MS Tune	QC		1	K004775		03/15/2023 12:00	NT1403152301.D	JGR	
SLC0160-CAL7	CAL 20	QC		2	K011111	K010831	03/15/2023 12:13	NT1403152302.D	JGR	
SLC0160-CAL6	CAL 10	QC		3	K011110	K010831	03/15/2023 12:49	NT1403152303.D	JGR	
SLC0160-CAL5	CAL 5	QC		4	K011109	K010831	03/15/2023 13:26	NT1403152304.D	JGR	
SLC0160-CAL4	CAL 2.5	QC		5	K011108	K010831	03/15/2023 14:02	NT1403152305.D	JGR	
SLC0160-CAL3	CAL 1.0	QC		6	K011107	K010831	03/15/2023 14:38	NT1403152306.D	JGR	
SLC0160-CAL2	CAL 0.5	QC		7	K011106	K010831	03/15/2023 15:14	NT1403152307.D	JGR	
SLC0160-CAL1	CAL 0.2	QC		8	K011105	K010831	03/15/2023 15:50	NT1403152308.D	JGR	
SLC0160-SCV1	SCV 5.0	QC		9	L002833	K010831	03/15/2023 17:39	NT1403152311.D	JGR	
SLC0160-ICB1	Initial Cal Blank	QC		10	K005156	K010831	03/15/2023 18:15	NT1403152312.D	JGR	

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230315.b

	Time	Filename	LabID	ClientId	DF																			
1	1200	NT1403152301.D	SLC0160-TUN1		1	|NO ISTDS FOUND||																		
2	1213	NT1403152302.D	SLC0160-CAL7		1	| 9.07	167425||	11.58	667689||	15.21	359561||	18.26	655798||	23.31	488521||	25.95	451011||	24.33	951548|				
3	1249	NT1403152303.D	SLC0160-CAL6		1	| 9.07	180739||	11.57	689021||	15.20	362269||	18.25	660604||	23.30	480922||	25.94	459466||	24.32	940570|				
4	1326	NT1403152304.D	SLC0160-CAL5		1	| 9.07	194517||	11.57	721321||	15.20	379602||	18.25	703194||	23.30	504769||	25.94	484073||	24.32	978492|				
5	1402	NT1403152305.D	SLC0160-CAL4		1	| 9.07	192012||	11.57	744883||	15.20	388723||	18.25	720279||	23.29	512149||	25.94	495048||	24.32	952832|				
6	1438	NT1403152306.D	SLC0160-CAL3		1	| 9.07	203547||	11.57	753702||	15.20	389189||	18.24	718213||	23.29	516735||	25.94	493304||	24.32	933762|				
7	1514	NT1403152307.D	SLC0160-CAL2		1	| 9.07	214919||	11.57	819372||	15.20	418625||	18.24	774369||	23.29	554225||	25.93	529322||	24.32	988092|				
8	1550	NT1403152308.D	SLC0160-CAL1		1	| 9.06	203313||	11.57	744014||	15.20	379787||	18.24	697726||	23.29	506894||	25.93	478496||	24.32	862800|				
9	1626	NT1403152309.D	SLC0160-SIM2		1	|23.29	249|																		
10	1703	NT1403152310.D	SLC0160-SIM1		1	|23.29	226|																		
11	1739	NT1403152311.D	SLC0160-SCV1		1	| 9.07	197462||	11.57	726125||	15.20	382881||	18.24	706616||	23.30	504808||	25.94	496785||	24.32	988248|				
12	1815	NT1403152312.D	SLC0160-ICB1		1	| 9.06	189234||	11.56	727843||	15.20	367416||	18.24	678407||	23.29	476533||	25.93	452165||	24.32	798655|				

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230315.b

Instrument: nt14.i Date: 15-MAR-2023

Time	Filename	LabID	DF	Manually Integrated Compounds
1200	NT1403152301.D	SLC0160-TUN1	1	NO MANUAL INTEGRATION
1213	NT1403152302.D	SLC0160-CAL7	1	1,4-Dichlorobenzene-d4, Benzoic acid, Total Benzofluoranthenes,
1249	NT1403152303.D	SLC0160-CAL6	1	1,4-Dichlorobenzene-d4, 2,2'-oxybis(1-Chloropropane), Benzoic acid, Total Benzofluoranthenes,
1326	NT1403152304.D	SLC0160-CAL5	1	1,4-Dichlorobenzene-d4, 2,2'-oxybis(1-Chloropropane), Total Benzofluoranthenes,
1402	NT1403152305.D	SLC0160-CAL4	1	1,4-Dichlorobenzene-d4, 2,2'-oxybis(1-Chloropropane), Total Benzofluoranthenes,
1438	NT1403152306.D	SLC0160-CAL3	1	1,4-Dichlorobenzene-d4, Total Benzofluoranthenes,
1514	NT1403152307.D	SLC0160-CAL2	1	1,4-Dichlorobenzene-d4, Benzoic acid, Total Benzofluoranthenes,
1550	NT1403152308.D	SLC0160-CAL1	1	1,4-Dichlorobenzene-d4, 2,2'-oxybis(1-Chloropropane), Benzoic acid, Total Benzofluoranthenes,
1626	NT1403152309.D	SLC0160-SIM2	1	NO MANUAL INTEGRATION
1703	NT1403152310.D	SLC0160-SIM1	1	NO MANUAL INTEGRATION
1739	NT1403152311.D	SLC0160-SCV1	1	1,4-Dichlorobenzene-d4,
1815	NT1403152312.D	SLC0160-ICB1	1	1,4-Dichlorobenzene-d4, Di-n-octylphthalate-d4,

Security Status Report

Date: 21-Mar-2023 13:13

NT1403152301.D	Data Locked	van, 21-Mar-2023 13:12
NT1403152302.D	Data Locked	van, 21-Mar-2023 13:12
NT1403152303.D	Data Locked	van, 21-Mar-2023 13:12
NT1403152304.D	Data Locked	van, 21-Mar-2023 13:12
NT1403152305.D	Data Locked	van, 21-Mar-2023 13:12
NT1403152306.D	Data Locked	van, 21-Mar-2023 13:12
NT1403152307.D	Data Locked	van, 21-Mar-2023 13:12
NT1403152308.D	Data Locked	van, 21-Mar-2023 13:12
NT1403152309.D	Data Locked	van, 21-Mar-2023 13:12
NT1403152310.D	Data Locked	van, 21-Mar-2023 13:12
NT1403152311.D	Data Locked	van, 21-Mar-2023 13:12
NT1403152312.D	Data Locked	van, 21-Mar-2023 13:12

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0335	Instrument:	NT14
		Calibration:	GC00048

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
MS Tune	SLC0335-TUN1	NT1403172301.D	NA	03/17/23 14:49
SICV1	SLC0335-ICV1	NT1403172302.D	NA	03/17/23 15:03
ABN 0.2	SLC0335-LCV1	NT1403172304.D	NA	03/17/23 16:16
ZZZZZ	23A0417-14	NT1403172306.D	Solid	03/17/23 17:28
ZZZZZ	23A0417-15	NT1403172307.D	Solid	03/17/23 18:05
ZZZZZ	BLB0026-MS1	NT1403172308.D	Solid	03/17/23 18:41
ZZZZZ	BLB0026-MSD1	NT1403172309.D	Solid	03/17/23 19:18
ZZZZZ	23B0261-16RE1	NT1403172310.D	Solid	03/17/23 19:54
ZZZZZ	23B0261-28RE1	NT1403172311.D	Solid	03/17/23 20:30
Blank	BLB0424-BLK1	NT1403172312.D	Solid	03/17/23 21:06
LCS	BLB0424-BS1	NT1403172313.D	Solid	03/17/23 21:42
LCS Dup	BLB0424-BSD1	NT1403172314.D	Solid	03/17/23 22:19
Reference	BLB0424-SRM1	NT1403172315.D	Solid	03/17/23 22:55
SSTD005	SLC0335-ICV2	NT1403172316.D	NA	03/17/23 23:31
ABN 0.2	SLC0335-LCV2	NT1403172318.D	NA	03/18/23 00:43
ZZZZZ	23A0099-04	NT1403172320.D	Solid	03/18/23 01:55
ZZZZZ	23B0229-02	NT1403172321.D	Solid	03/18/23 02:31
ZZZZZ	23B0229-03	NT1403172322.D	Solid	03/18/23 03:07
ZZZZZ	23B0229-04	NT1403172323.D	Solid	03/18/23 03:42
ZZZZZ	23B0229-05	NT1403172324.D	Solid	03/18/23 04:18
ZZZZZ	23B0229-06	NT1403172325.D	Solid	03/18/23 04:54
ZZZZZ	23B0229-08	NT1403172326.D	Solid	03/18/23 05:30
LDW23-SC1150B	23B0276-01	NT1403172327.D	Solid	03/18/23 06:06
LDW23-SC1150B	BLB0424-MS1	NT1403172328.D	Solid	03/18/23 06:42
LDW23-SC1150B	BLB0424-MSD1	NT1403172329.D	Solid	03/18/23 07:18
Calibration Check	SLC0335-CCV1	NT1403172330.D	NA	03/18/23 07:54

Analytical Resources, LLC
Analytical Chemists and Consultants

Printed: 3/22/2023 11:36:11AM

ANALYSIS SEQUENCE

SLC0335

Instrument ID: NT14
Calibration ID: GC00048
MS EM Level: 1906 EV

GCMS Description: Agilent 7890A/5975C XL
GCMS Column ID: L002738

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	File ID	Analyst	Comments
SLC0335-TUN1	MS Tune	QC		1	K004775		03/17/2023 14:49	NT1403172301.D	JGR	
SLC0335-ICV1	SICV1	QC		2	K011109	K010831	03/17/2023 15:03	NT1403172302.D	JGR	
SLC0335-LCV1	ABN 0.2	QC		3	K011105	K010831	03/17/2023 16:16	NT1403172304.D	JGR	
23A0417-14	LDW23-SS1074	(20ug/kg solid or 0.2ug/L l	A 03	4		K010831	03/17/2023 17:28	NT1403172306.D	JGR	
23A0417-15	LDW23-SS1073	(20ug/kg solid or 0.2ug/L l	A 03	5		K010831	03/17/2023 18:05	NT1403172307.D	JGR	
BLB0026-MS1	Matrix Spike	QC		6		K010831	03/17/2023 18:41	NT1403172308.D	JGR	
BLB0026-MSD1	Matrix Spike Dup	QC		7		K010831	03/17/2023 19:18	NT1403172309.D	JGR	
23B0261-16RE1	C-6	(20ug/kg solid or 0.2ug/L l	A 02	8		K010831	03/17/2023 19:54	NT1403172310.D	JGR	Added 3/22/2023 by VTS
23B0261-28RE1	C-10	(20ug/kg solid or 0.2ug/L l	A 02	9		K010831	03/17/2023 20:30	NT1403172311.D	JGR	Added 3/22/2023 by VTS
BLB0424-BLK1	Blank	QC		10		K010831	03/17/2023 21:06	NT1403172312.D	JGR	
BLB0424-BS1	LCS	QC		11		K010831	03/17/2023 21:42	NT1403172313.D	JGR	
BLB0424-BSD1	LCS Dup	QC		12		K010831	03/17/2023 22:19	NT1403172314.D	JGR	
BLB0424-SRM1	Reference	QC		13		K010831	03/17/2023 22:55	NT1403172315.D	JGR	
SLC0335-ICV2	SSTD005	QC		14	K011109	K010831	03/17/2023 23:31	NT1403172316.D	JGR	
SLC0335-LCV2	ABN 0.2	QC		15	K011105	K010831	03/18/2023 00:43	NT1403172318.D	JGR	
23A0099-04	LDW23-SC1186	(20ug/kg solid or 0.2ug/L l	A 05	16		K010831	03/18/2023 01:55	NT1403172320.D	JGR	
23B0229-02	LDW23-SS1236	(20ug/kg solid or 0.2ug/L l	A 03	17		K010831	03/18/2023 02:31	NT1403172321.D	JGR	
23B0229-03	LDW23-SS1237	(20ug/kg solid or 0.2ug/L l	A 03	18		K010831	03/18/2023 03:07	NT1403172322.D	JGR	
23B0229-04	LDW23-SS1150	(20ug/kg solid or 0.2ug/L l	A 03	19		K010831	03/18/2023 03:42	NT1403172323.D	JGR	
23B0229-05	LDW23-SS1008	(20ug/kg solid or 0.2ug/L l	A 03	20		K010831	03/18/2023 04:18	NT1403172324.D	JGR	
23B0229-06	LDW23-SC1008	(20ug/kg solid or 0.2ug/L l	A 03	21		K010831	03/18/2023 04:54	NT1403172325.D	JGR	
23B0229-08	LDW23-SC1013	(20ug/kg solid or 0.2ug/L l	A 03	22		K010831	03/18/2023 05:30	NT1403172326.D	JGR	

ANALYSIS SEQUENCE

SLC0335

Instrument ID: NT14
Calibration ID: GC00048
MS EM Level: 1906 EV

GCMS Description: Agilent 7890A/5975C XL
GCMS Column ID: L002738

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	File ID	Analyst	Comments
23B0276-01	LDW23-SC1150B	(20ug/kg solid or 0.2ug/L l	A 03	23		K010831	03/18/2023 06:06	NT1403172327.D	JGR	
BLB0424-MS1	Matrix Spike	QC		24		K010831	03/18/2023 06:42	NT1403172328.D	JGR	
BLB0424-MSD1	Matrix Spike Dup	QC		25		K010831	03/18/2023 07:18	NT1403172329.D	JGR	
SLC0335-CCV1	Calibration Check	QC		26	K011109	K010831	03/18/2023 07:54	NT1403172330.D	JGR	

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230317.b

	Time	Filename	LabID	ClientId	DF																			
1	1449	NT1403172301.D	SEQ-TUN1		1	|NO ISTDS FOUND|																		
2	1503	NT1403172302.D	SLC0335-ICV1		1	| 9.06	221219	|11.57	809500	|15.20	420689	|18.25	757520	|23.29	450500	|25.93	339914	|24.32	828388	|				
3	1539	NT1403172303.D	SEQ-ICVSIM		1	|11.57	735068	|15.20	378336	|18.24	687237	|23.29	402142	|25.93	292758	|24.32	648277	|						
4	1616	NT1403172304.D	SLC0335-LCV1		1	| 9.06	217316	|11.57	823606	|15.20	420838	|18.24	757941	|23.29	454867	|25.93	330470	|24.32	710040	|				
5	1652	NT1403172305.D	SEQ-SIM100		1	| 9.06	223497	|11.57	849546	|15.20	426820	|18.24	753846	|23.29	451675	|25.93	343734	|24.32	712111	|				
6	1728	NT1403172306.D	23A0417-14		1	| 9.07	184187	|11.57	707748	|15.20	346039	|18.25	646836	|23.30	244423	|25.94	174983	|24.32	479613	|				
7	1805	NT1403172307.D	23A0417-15		1	| 9.07	209962	|11.57	824615	|15.20	394932	|18.25	656122	|23.29	239629	|25.94	183746	|24.32	471146	|				
8	1841	NT1403172308.D	BLB0026-MS1		1	| 9.07	183729	|11.57	701565	|15.20	349689	|18.25	606450	|23.30	228953	|25.94	159534	|24.32	462601	|				
9	1918	NT1403172309.D	BLB0026-MSD1		1	| 9.07	186778	|11.57	725112	|15.20	367910	|18.25	690455	|23.30	294763	|25.94	197250	|24.32	589998	|				
10	1954	NT1403172310.D	23B0261-16RE1		20	| 9.06	229616	|11.57	893509	|15.20	448677	|18.24	761732	|23.29	380801	|25.93	275439	|24.32	785560	|				
11	2030	NT1403172311.D	23B0261-28RE1		4	| 9.06	219424	|11.57	869472	|15.20	437075	|18.25	789983	|23.29	394126	|25.93	270254	|24.32	804343	|				
12	2106	NT1403172312.D	BLB0424-BLK1		1	| 9.06	220626	|11.56	887622	|15.20	442658	|18.24	744696	|23.29	383188	|25.93	251086	|24.32	740264	|				
13	2142	NT1403172313.D	BLB0424-BS1		1	| 9.06	210794	|11.57	812894	|15.20	421466	|18.24	705582	|23.29	351965	|25.93	230171	|24.32	707847	|				
14	2219	NT1403172314.D	BLB0424-BSD1		1	| 9.06	217090	|11.57	838636	|15.20	430703	|18.24	719856	|23.29	357294	|25.93	233794	|24.32	706831	|				
15	2255	NT1403172315.D	BLB0424-SRM1		1	| 9.06	232565	|11.56	889784	|15.20	442664	|18.24	747605	|23.29	366287	|25.93	232583	|24.32	736461	|				
16	2331	NT1403172316.D	SLC0335-ICV2		1	| 9.06	231017	|11.57	843789	|15.20	432455	|18.24	793780	|23.29	411057	|25.93	254782	|24.32	799010	|				
17	0007	NT1403172317.D	SEQ-CCVSIM		1	|11.56	742187	|15.20	375705	|18.24	661037	|23.29	332529	|25.93	213350	|24.32	598672	|						
18	0043	NT1403172318.D	SLC0335-LCV2		1	| 9.06	204038	|11.56	775937	|15.20	384479	|18.24	678623	|23.29	379052	|25.93	245193	|24.32	646291	|				
19	0119	NT1403172319.D	SEQ-SIM100		1	|11.56	803931	|15.20	397913	|18.24	692470	|23.29	339837	|25.93	214097	|24.32	570553	|						
20	0155	NT1403172320.D	23A0099-04		1	| 9.06	216744	|11.56	842757	|15.20	401289	|18.25	703864	|23.30	238385	|25.94	171019	|24.32	455526	|				

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230317.b

	Time	Filename	LabID	ClientId	DF														
21	0231	NT1403172321.D	23B0229-02		1	9.06	210545	11.56	822847	15.20	384402	18.25	620504	23.29	207072	25.94	150614	24.32	411581
22	0307	NT1403172322.D	23B0229-03		1	9.06	213192	11.56	836044	15.20	410994	18.25	717073	23.30	227231	25.94	155623	24.32	465589
23	0342	NT1403172323.D	23B0229-04		1	9.06	223100	11.57	868361	15.20	418674	18.25	651987	23.30	202950	25.94	146928	24.32	410637
24	0418	NT1403172324.D	23B0229-05		1	9.06	207758	11.57	797455	15.20	382798	18.25	628064	23.30	197467	25.95	140459	24.32	394361
25	0454	NT1403172325.D	23B0229-06		1	9.06	203493	11.57	789039	15.20	384488	18.25	650423	23.30	200534	25.95	144200	24.32	411174
26	0530	NT1403172326.D	23B0229-08		1	9.07	214432	11.57	829944	15.20	403286	18.26	642247	23.30	184444	25.95	135619	24.32	377837
27	0606	NT1403172327.D	23B0276-01		1	9.07	216795	11.57	856195	15.20	420684	18.26	676256	23.30	191213	25.95	143085	24.32	412116
28	0642	NT1403172328.D	BLB0424-MS1		1	9.07	208566	11.57	823985	15.20	419326	18.26	693082	23.30	191184	25.95	145513	24.32	415588
29	0718	NT1403172329.D	BLB0424-MSD1		1	9.07	203782	11.57	795799	15.20	409102	18.26	739666	23.30	222079	25.95	153971	24.32	481674
30	0754	NT1403172330.D	SLC0335-CCV1		1	9.07	217562	11.57	844336	15.20	413736	18.25	640883	23.30	193927	25.94	141853	24.32	500053

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230317.b

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

Time	Filename	LabID	DF	Manually Integrated Compounds
1449	NT1403172301.D	SEQ-TUN1	1	NO MANUAL INTEGRATION
1503	NT1403172302.D	SLC0335-ICV1	1	1,4-Dichlorobenzene-d4,
1539	NT1403172303.D	SEQ-ICVSIM	1	NO MANUAL INTEGRATION
1616	NT1403172304.D	SLC0335-LCV1	1	1,4-Dichlorobenzene-d4, 2,2'-oxybis(1-Chloropropane), Benzoic acid,
1652	NT1403172305.D	SEQ-SIM100	1	1,4-Dichlorobenzene-d4,
1728	NT1403172306.D	23A0417-14	1	1,4-Dichlorobenzene-d4, Benzo(k)fluoranthene, Benzo(a)pyrene,
1805	NT1403172307.D	23A0417-15	1	1,4-Dichlorobenzene-d4, 2-Methylphenol, Benzoic acid, Fluoranthene, Benzo(k)fluoranthene,
1841	NT1403172308.D	BLB0026-MS1	1	1,4-Dichlorobenzene-d4,
1918	NT1403172309.D	BLB0026-MSD1	1	1,4-Dichlorobenzene-d4, bis(2-Ethylhexyl)phthalate,
1954	NT1403172310.D	23B0261-16RE1	20	1,4-Dichlorobenzene-d4, 4-Methylphenol, Anthracene, Benzo(k)fluoranthene, Indeno(1,2,3-cd)pyrene,
2030	NT1403172311.D	23B0261-28RE1	4	1,4-Dichlorobenzene-d4, Benzo(k)fluoranthene,
2106	NT1403172312.D	BLB0424-BLK1	1	1,4-Dichlorobenzene-d4,
2142	NT1403172313.D	BLB0424-BS1	1	1,4-Dichlorobenzene-d4,
2219	NT1403172314.D	BLB0424-BSD1	1	1,4-Dichlorobenzene-d4,
2255	NT1403172315.D	BLB0424-SRM1	1	1,4-Dichlorobenzene-d4,
2331	NT1403172316.D	SLC0335-ICV2	1	1,4-Dichlorobenzene-d4,
0007	NT1403172317.D	SEQ-CCVSIM	1	NO MANUAL INTEGRATION

Instrument: nt14.i Date: 18-MAR-2023

Time	Filename	LabID	DF	Manually Integrated Compounds
0043	NT1403172318.D	SLC0335-LCV2	1	1,4-Dichlorobenzene-d4, Benzyl alcohol, 2,2'-oxybis(1-Chloropropane), 2,4-Dinitrophenol, 4-Nitrophenol, Pentac Benzo(g,h,i)perylene,
0119	NT1403172319.D	SEQ-SIM100	1	NO MANUAL INTEGRATION
0155	NT1403172320.D	23A0099-04	1	1,4-Dichlorobenzene-d4, 2-Methylphenol, Anthracene,
0231	NT1403172321.D	23B0229-02	1	1,4-Dichlorobenzene-d4, Di-n-butylphthalate,
0307	NT1403172322.D	23B0229-03	1	1,4-Dichlorobenzene-d4,
0342	NT1403172323.D	23B0229-04	1	1,4-Dichlorobenzene-d4, Benzo(k)fluoranthene,
0418	NT1403172324.D	23B0229-05	1	1,4-Dichlorobenzene-d4, Benzyl alcohol, 4-Methylphenol, Di-n-octylphthalate, Benzo(k)fluoranthene,
0454	NT1403172325.D	23B0229-06	1	1,4-Dichlorobenzene-d4, 1,4-Dichlorobenzene, Dibenzo(a,h)anthracene,
0530	NT1403172326.D	23B0229-08	1	1,4-Dichlorobenzene-d4, 1,4-Dichlorobenzene, Benzo(k)fluoranthene,
0606	NT1403172327.D	23B0276-01	1	1,4-Dichlorobenzene-d4, 1,4-Dichlorobenzene, Benzyl alcohol, Benzoic acid, Dibenzo(a,h)anthracene,
0642	NT1403172328.D	BLB0424-MS1	1	1,4-Dichlorobenzene-d4, 4-Chloroaniline,
0718	NT1403172329.D	BLB0424-MSD1	1	1,4-Dichlorobenzene-d4, 4-Chloroaniline,
0754	NT1403172330.D	SLC0335-CCV1	1	1,4-Dichlorobenzene-d4, 2,2'-oxybis(1-Chloropropane),

Security Status Report

Date: 22-Mar-2023 11:37

NT1403172301.D	Data Locked	van, 22-Mar-2023 11:36
NT1403172302.D	Data Locked	van, 22-Mar-2023 11:36
NT1403172303.D	Data Locked	van, 22-Mar-2023 11:36
NT1403172304.D	Data Locked	van, 22-Mar-2023 11:36
NT1403172305.D	Data Locked	van, 22-Mar-2023 11:36
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NT1403172312.D	Data Locked	van, 22-Mar-2023 11:36
NT1403172313.D	Data Locked	van, 22-Mar-2023 11:36
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NT1403172316.D	Data Locked	van, 22-Mar-2023 11:36
NT1403172317.D	Data Locked	van, 22-Mar-2023 11:36
NT1403172318.D	Data Locked	van, 22-Mar-2023 11:36
NT1403172319.D	Data Locked	van, 22-Mar-2023 11:36
NT1403172320.D	Data Locked	van, 22-Mar-2023 11:36
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NT1403172324.D	Data Locked	van, 22-Mar-2023 11:36
NT1403172325.D	Data Locked	van, 22-Mar-2023 11:36
NT1403172326.D	Data Locked	van, 22-Mar-2023 11:36
NT1403172327.D	Data Locked	van, 22-Mar-2023 11:36
NT1403172328.D	Data Locked	van, 22-Mar-2023 11:36
NT1403172329.D	Data Locked	van, 22-Mar-2023 11:36
NT1403172330.D	Data Locked	van, 22-Mar-2023 11:36

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8270E

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLC0355
Instrument: NT14
Calibration: GC00048

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
MS Tune	SLC0355-TUN1	NT1403182301.D	NA	03/18/23 17:23
SICV1	SLC0355-ICV1	NT1403182302.D	NA	03/18/23 17:38
Blank	BLB0424-BLK3	NT1403182306.D	Solid	03/18/23 20:03
ZZZZZ	23A0099-04RE1	NT1403182308.D	Solid	03/18/23 21:15
ZZZZZ	23B0229-04RE1	NT1403182311.D	Solid	03/18/23 23:04
ZZZZZ	23B0229-05RE1	NT1403182312.D	Solid	03/18/23 23:40
ZZZZZ	23B0229-06RE1	NT1403182313.D	Solid	03/19/23 00:16
ZZZZZ	23B0229-08RE1	NT1403182314.D	Solid	03/19/23 00:52
SSTD005	SLC0355-ICV2	NT1403182318.D	NA	03/19/23 03:16
ABN 0.2	SLC0355-LCV2	NT1403182320.D	NA	03/19/23 04:28
ZZZZZ	BLB0669-BLK1	NT1403182322.D	Solid	03/19/23 05:40
ZZZZZ	BLB0669-BS1	NT1403182323.D	Solid	03/19/23 06:15
ZZZZZ	BLB0669-BSD1	NT1403182324.D	Solid	03/19/23 06:51
ZZZZZ	BLB0669-SRM1	NT1403182325.D	Solid	03/19/23 07:27
ZZZZZ	22K0306-01	NT1403182326.D	Solid	03/19/23 08:03
ZZZZZ	22K0306-02	NT1403182327.D	Solid	03/19/23 08:39
ZZZZZ	BLB0669-MS1	NT1403182328.D	Solid	03/19/23 09:15
ZZZZZ	BLB0669-MSD1	NT1403182329.D	Solid	03/19/23 09:51
ZZZZZ	22K0306-03	NT1403182330.D	Solid	03/19/23 10:27
Calibration Check	SLC0355-CCV1	NT1403182331.D	NA	03/19/23 11:04

ANALYSIS SEQUENCE

SLC0355

Instrument ID: NT14
Calibration ID: GC00048
MS EM Level: 1953 EV

GCMS Description: Agilent 7890A/5975C XL
GCMS Column ID: L002738

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	File ID	Analyst	Comments
SLC0355-TUN1	MS Tune	QC		1	K004775		03/18/2023 17:23	NT1403182301.D	JGR	
SLC0355-ICV1	SICV1	QC		2	K011109	K010831	03/18/2023 17:38	NT1403182302.D	JGR	
BLB0424-BLK3	Blank	QC		3		K010831	03/18/2023 20:03	NT1403182306.D	JGR	
23A0099-04RE1	LDW23-SC1186	(20ug/kg solid or 0.2ug/L l	A 05	4		K010831	03/18/2023 21:15	NT1403182308.D	JGR	Added 3/22/2023 by VTS
23B0229-04RE1	LDW23-SS1150	(20ug/kg solid or 0.2ug/L l	A 03	5		K010831	03/18/2023 23:04	NT1403182311.D	JGR	Added 3/22/2023 by VTS
23B0229-05RE1	LDW23-SS1008	(20ug/kg solid or 0.2ug/L l	A 03	6		K010831	03/18/2023 23:40	NT1403182312.D	JGR	Added 3/22/2023 by VTS
23B0229-06RE1	LDW23-SC1008	(20ug/kg solid or 0.2ug/L l	A 03	7		K010831	03/19/2023 00:16	NT1403182313.D	JGR	Added 3/22/2023 by VTS
23B0229-08RE1	LDW23-SC1013	(20ug/kg solid or 0.2ug/L l	A 03	8		K010831	03/19/2023 00:52	NT1403182314.D	JGR	Added 3/22/2023 by VTS
SLC0355-ICV2	SSTD005	QC		9	K011109	K010831	03/19/2023 03:16	NT1403182318.D	JGR	
SLC0355-LCV2	ABN 0.2	QC		10	K011105	K010831	03/19/2023 04:28	NT1403182320.D	JGR	
BLB0669-BLK1	Blank	QC		11		K010831	03/19/2023 05:40	NT1403182322.D	JGR	
BLB0669-BS1	LCS	QC		12		K010831	03/19/2023 06:15	NT1403182323.D	JGR	
BLB0669-BSD1	LCS Dup	QC		13		K010831	03/19/2023 06:51	NT1403182324.D	JGR	
BLB0669-SRM1	Reference	QC		14		K010831	03/19/2023 07:27	NT1403182325.D	JGR	
22K0306-01	OSDS-1-COMP	(20ug/kg solid or 0.2ug/L l	A 02	15		K010831	03/19/2023 08:03	NT1403182326.D	JGR	
22K0306-02	OSDS-2-COMP	(20ug/kg solid or 0.2ug/L l	A 02	16		K010831	03/19/2023 08:39	NT1403182327.D	JGR	
BLB0669-MS1	Matrix Spike	QC		17		K010831	03/19/2023 09:15	NT1403182328.D	JGR	
BLB0669-MSD1	Matrix Spike Dup	QC		18		K010831	03/19/2023 09:51	NT1403182329.D	JGR	
22K0306-03	OSDS-3-COMP	(20ug/kg solid or 0.2ug/L l	A 02	19		K010831	03/19/2023 10:27	NT1403182330.D	JGR	
SLC0355-CCV1	Calibration Check	QC		20	K011109	K010831	03/19/2023 11:04	NT1403182331.D	JGR	

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230318.b

	Time	Filename	LabID	ClientId	DF																
1	1723	NT1403182301.D	SEQ-TUN1		1	|NO ISTDS FOUND||															
2	1738	NT1403182302.D	SLC0355-ICV1		1	| 9.06	247621	||11.56	955275	||15.19	510589	||18.23	920812	||23.29	546688	||25.93	445520	||24.32	1067789	|
3	1814	NT1403182303.D	SEQ-ICVSIM		1	|11.56	1012949	||15.19	535724	||18.23	987923	||23.29	569065	||25.93	503465	||24.31	1064073	|			
4	1850	NT1403182304.D	SLC0355-LCV1		1	| 9.06	260824	||11.56	1008814	||15.19	521365	||18.23	967789	||23.29	567800	||25.93	480377	||24.31	987023	|
5	1927	NT1403182305.D	SEQ-LCV100		1	|11.56	980016	||15.19	498472	||18.23	874179	||23.29	515302	||25.92	439932	||24.31	885413	|			
6	2003	NT1403182306.D	BLB0424-BLK3		1	| 9.06	264303	||11.56	1057352	||15.19	539181	||18.23	935636	||23.29	591932	||25.92	463088	||24.31	1034580	|
7	2039	NT1403182307.D	BLB0026-MS1		4	|11.56	1063572	||15.19	555439	||18.23	1016707	||23.29	515540	||25.93	458816	||24.31	1059426	|			
8	2115	NT1403182308.D	23A0099-04RE1		4	| 9.06	304181	||11.56	1184722	||15.19	587646	||18.23	1069227	||23.29	498742	||25.93	529639	||24.32	1090465	|
9	2152	NT1403182309.D	23B0229-02RE1		4	| 9.06	308629	||11.56	1215142	||15.19	601442	||18.23	1035311	||23.29	474232	||25.93	504061	||24.31	1071991	|
10	2228	NT1403182310.D	23B0229-03RE1		4	| 9.06	309646	||11.56	1206945	||15.19	611036	||18.24	1041227	||23.29	469241	||25.93	509241	||24.32	1072375	|
11	2304	NT1403182311.D	23B0029-04RE1		4	| 9.06	304268	||11.56	1188710	||15.19	589954	||18.24	996660	||23.29	471870	||25.93	524412	||24.31	1071397	|
12	2340	NT1403182312.D	23B0229-05RE1		4	| 9.06	294135	||11.56	1143681	||15.19	561150	||18.24	917402	||23.29	469557	||25.93	529419	||24.32	1049117	|
13	0016	NT1403182313.D	23B0229-06RE1		4	| 9.06	305654	||11.56	1201889	||15.19	612542	||18.24	1063558	||23.29	480731	||25.93	542713	||24.32	1085158	|
14	0052	NT1403182314.D	23B0229-08RE1		4	| 9.06	309196	||11.56	1198501	||15.20	600645	||18.24	1046836	||23.29	488047	||25.93	565653	||24.32	1076657	|
15	0128	NT1403182315.D	23B0276-01RE1		4	| 9.06	302255	||11.56	1182255	||15.20	605007	||18.24	1049043	||23.29	469401	||25.93	545962	||24.32	1037753	|
16	0204	NT1403182316.D	BLB0424-MS1		4	| 9.06	293709	||11.56	1138427	||15.20	598474	||18.24	1082200	||23.29	469125	||25.93	547306	||24.32	1041943	|
17	0240	NT1403182317.D	BLB0424-MSD1		4	| 9.06	300023	||11.56	1187411	||15.20	613836	||18.24	1139635	||23.29	494783	||25.93	565981	||24.32	1087611	|
18	0316	NT1403182318.D	SLC0355-ICV2		1	| 9.06	237594	||11.56	944151	||15.20	498100	||18.24	845417	||23.29	410836	||25.93	441517	||24.32	914780	|
19	0352	NT1403182319.D	SEQ-CCVSIM		1	|11.56	1004246	||15.20	520315	||18.24	925285	||23.29	437364	||25.93	461180	||24.32	918440	|			
20	0428	NT1403182320.D	SLC0355-LCV2		1	| 9.07	254560	||11.56	966904	||15.20	487144	||18.24	854961	||23.29	444724	||25.93	468611	||24.32	858353	|

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230318.b

	Time	Filename	LabID	ClientId	DF																				
21	0504	NT1403182321.D	SEQ-LCV100		1	11.56	974792	15.20	482932	18.24	832018	23.29	427457	25.93	446531	24.32	821900								
22	0540	NT1403182322.D	BLB0669-BLK1		1	9.06	278614	11.56	1115566	15.19	569330	18.24	968661	23.29	542332	25.93	534543	24.32	1065089						
23	0615	NT1403182323.D	BLB0669-BS1		1	9.07	270713	11.57	1081756	15.20	575641	18.24	977160	23.29	543903	25.93	560951	24.32	1105437						
24	0651	NT1403182324.D	BLB0669-BSD1		1	9.07	278181	11.57	1112988	15.20	589240	18.24	995631	23.29	560097	25.93	565749	24.32	1141909						
25	0727	NT1403182325.D	BLB0669-SRM1		1	9.07	286011	11.57	1110329	15.20	558960	18.24	928158	23.29	517029	25.93	527909	24.32	1125666						
26	0803	NT1403182326.D	22K0306-01		1	9.07	285730	11.56	1122493	15.20	554763	18.24	916554	23.29	462502	25.93	520504	24.32	1015414						
27	0839	NT1403182327.D	22K0306-02		1	9.07	295146	11.57	1161524	15.20	566933	18.24	920358	23.29	457774	25.93	515667	24.32	1011252						
28	0915	NT1403182328.D	BLB0669-MS1		1	9.07	270938	11.57	1059223	15.20	533783	18.25	871292	23.29	457377	25.94	516678	24.32	992732						
29	0951	NT1403182329.D	BLB0669-MSD1		1	9.07	273839	11.57	1085227	15.20	553998	18.25	915974	23.29	460590	25.94	512052	24.32	1020752						
30	1027	NT1403182330.D	22K0306-03		1	9.07	305252	11.57	1133663	15.20	565753	18.25	911146	23.29	459367	25.93	500749	24.32	1012679						
31	1104	NT1403182331.D	SLC0355-CCV1		1	9.07	239978	11.57	943704	15.20	496853	18.25	826898	23.29	429570	25.93	440126	24.32	913803						

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230318.b

Instrument: nt14.i Date: 18-MAR-2023

Time	Filename	LabID	DF	Manually Integrated Compounds
1723	NT1403182301.D	SEQ-TUN1	1	NO MANUAL INTEGRATION
1738	NT1403182302.D	SLC0355-ICV1	1	1,4-Dichlorobenzene-d4, 2,2'-oxybis(1-Chloropropane),
1814	NT1403182303.D	SEQ-ICVSIM	1	NO MANUAL INTEGRATION
1850	NT1403182304.D	SLC0355-LCV1	1	1,4-Dichlorobenzene-d4, Benzyl alcohol, Benzoic acid, 2,4,5-Trichlorophenol, 4-Nitrophenol,
1927	NT1403182305.D	SEQ-LCV100	1	NO MANUAL INTEGRATION
2003	NT1403182306.D	BLB0424-BLK3	1	1,4-Dichlorobenzene-d4,
2039	NT1403182307.D	BLB0026-MS1	4	NO MANUAL INTEGRATION
2115	NT1403182308.D	23A0099-04RE1	4	1,4-Dichlorobenzene-d4, Benzoic acid,
2152	NT1403182309.D	23B0229-02RE1	4	1,4-Dichlorobenzene-d4, Benzyl alcohol, Benzoic acid, Benzo(k)fluoranthene,
2228	NT1403182310.D	23B0229-03RE1	4	1,4-Dichlorobenzene-d4, Benzoic acid, Benzo(k)fluoranthene,
2304	NT1403182311.D	23B0029-04RE1	4	1,4-Dichlorobenzene-d4, Benzoic acid, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene,
2340	NT1403182312.D	23B0229-05RE1	4	1,4-Dichlorobenzene-d4, Benzoic acid, Benzo(k)fluoranthene,
0016	NT1403182313.D	23B0229-06RE1	4	1,4-Dichlorobenzene-d4, Benzoic acid, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene,
0052	NT1403182314.D	23B0229-08RE1	4	1,4-Dichlorobenzene-d4, Benzoic acid, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene,
0128	NT1403182315.D	23B0276-01RE1	4	1,4-Dichlorobenzene-d4,
0204	NT1403182316.D	BLB0424-MS1	4	1,4-Dichlorobenzene-d4,
0240	NT1403182317.D	BLB0424-MSD1	4	1,4-Dichlorobenzene-d4,

Instrument: nt14.i Date: 19-MAR-2023

Time	Filename	LabID	DF	Manually Integrated Compounds
0316	NT1403182318.D	SLC0355-ICV2	1	1,4-Dichlorobenzene-d4, 2,2'-oxybis(1-Chloropropane),
0352	NT1403182319.D	SEQ-CCVSIM	1	NO MANUAL INTEGRATION
0428	NT1403182320.D	SLC0355-LCV2	1	1,4-Dichlorobenzene-d4, Benzyl alcohol, Benzoic acid, 2,4-Dinitrophenol, 4-Nitrophenol, Pentachlorophenol,
0504	NT1403182321.D	SEQ-LCV100	1	NO MANUAL INTEGRATION
0540	NT1403182322.D	BLB0669-BLK1	1	1,4-Dichlorobenzene-d4,
0615	NT1403182323.D	BLB0669-BS1	1	1,4-Dichlorobenzene-d4,
0651	NT1403182324.D	BLB0669-BSD1	1	1,4-Dichlorobenzene-d4,
0727	NT1403182325.D	BLB0669-SRM1	1	1,4-Dichlorobenzene-d4,
0803	NT1403182326.D	22K0306-01	1	1,4-Dichlorobenzene-d4, Benzyl alcohol, 2-Methylphenol, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene, Benzo(g, Total Benzofluoranthenes,
0839	NT1403182327.D	22K0306-02	1	1,4-Dichlorobenzene-d4, Benzo(a)anthracene, Chrysene, Benzo(k)fluoranthene,
0915	NT1403182328.D	BLB0669-MS1	1	1,4-Dichlorobenzene-d4, 4-Nitroaniline,
0951	NT1403182329.D	BLB0669-MSD1	1	1,4-Dichlorobenzene-d4, 4-Chloroaniline,
1027	NT1403182330.D	22K0306-03	1	1,4-Dichlorobenzene-d4, Benzo(a)anthracene, Chrysene, Benzo(k)fluoranthene, Benzo(a)pyrene,
1104	NT1403182331.D	SLC0355-CCV1	1	1,4-Dichlorobenzene-d4, 2,2'-oxybis(1-Chloropropane),

Security Status Report

Date: 23-Mar-2023 11:56

NT1403182301.D	Data Locked	van, 23-Mar-2023 11:56
NT1403182302.D	Data Locked	van, 23-Mar-2023 11:56
NT1403182303.D	Data Locked	van, 23-Mar-2023 11:56
NT1403182304.D	Data Locked	van, 23-Mar-2023 11:56
NT1403182305.D	Data Locked	van, 23-Mar-2023 11:56
NT1403182306.D	Data Locked	van, 23-Mar-2023 11:56
NT1403182307.D	Data Locked	van, 23-Mar-2023 11:56
NT1403182308.D	Data Locked	van, 23-Mar-2023 11:56
NT1403182309.D	Data Locked	van, 23-Mar-2023 11:56
NT1403182310.D	Data Locked	van, 23-Mar-2023 11:56
NT1403182311.D	Data Locked	van, 23-Mar-2023 11:56
NT1403182312.D	Data Locked	van, 23-Mar-2023 11:56
NT1403182313.D	Data Locked	van, 23-Mar-2023 11:56
NT1403182314.D	Data Locked	van, 23-Mar-2023 11:56
NT1403182315.D	Data Locked	van, 23-Mar-2023 11:56
NT1403182316.D	Data Locked	van, 23-Mar-2023 11:56
NT1403182317.D	Data Locked	van, 23-Mar-2023 11:56
NT1403182318.D	Data Locked	van, 23-Mar-2023 11:56
NT1403182319.D	Data Locked	van, 23-Mar-2023 11:56
NT1403182320.D	Data Locked	van, 23-Mar-2023 11:56
NT1403182321.D	Data Locked	van, 23-Mar-2023 11:56
NT1403182322.D	Data Locked	van, 23-Mar-2023 11:56
NT1403182323.D	Data Locked	van, 23-Mar-2023 11:56
NT1403182324.D	Data Locked	van, 23-Mar-2023 11:56
NT1403182325.D	Data Locked	van, 23-Mar-2023 11:56
NT1403182326.D	Data Locked	van, 23-Mar-2023 11:56
NT1403182327.D	Data Locked	van, 23-Mar-2023 11:56
NT1403182328.D	Data Locked	van, 23-Mar-2023 11:56
NT1403182329.D	Data Locked	van, 23-Mar-2023 11:56
NT1403182330.D	Data Locked	van, 23-Mar-2023 11:56
NT1403182331.D	Data Locked	van, 23-Mar-2023 11:56

SURROGATE RECOVERY AND RT SUMMARY
EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG/WO:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0160	Instrument:	NT14
Calibration:	GC00048	Calibration Date:	03/15/2023

Surrogate Compound	Spike Level ug/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SLC0160-ICB1 (Water)				Lab File ID: NT1403152312.D			Analyzed: 03/15/23 18:15	
2-Fluorophenol	7.5000	98.5	30 - 160	6.829	6.828857	0.0001	N/A	
Phenol-d5	7.5000	98.6	30 - 160	8.412	8.419	-0.0070	N/A	
2-Chlorophenol-d4	7.5000	101	30 - 160	8.698	8.701429	-0.0034	N/A	
1,2-Dichlorobenzene-d4	5.0000	99.9	30 - 160	9.427	9.430429	-0.0034	N/A	
Nitrobenzene-d5	5.0000	99.9	30 - 160	10.164	10.16743	-0.0034	N/A	
2-Fluorobiphenyl	5.0000	99.6	30 - 160	13.795	13.79871	-0.0037	N/A	
2,4,6-Tribromophenol	7.5000	92.2	30 - 160	16.833	16.84343	-0.0104	N/A	
p-Terphenyl-d14	5.0000	103	30 - 160	21.389	21.39014	-0.0011	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG/WO:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0335	Instrument:	NT14
Calibration:	GC00048	Calibration Date:	03/15/2023

Surrogate Compound	Spike Level ug/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SLC0335-ICV1 (Solid)			Lab File ID: NT1403172302.D			Analyzed: 03/17/23 15:03		
2-Fluorophenol	7.5000	97.7	80 - 120	6.821	6.828857	-0.0079	N/A	
Phenol-d5	7.5000	96.3	80 - 120	8.412	8.419	-0.0070	N/A	
2-Chlorophenol-d4	7.5000	97.2	80 - 120	8.698	8.701429	-0.0034	N/A	
1,2-Dichlorobenzene-d4	5.0000	97.0	80 - 120	9.426	9.430429	-0.0044	N/A	
Nitrobenzene-d5	5.0000	102	80 - 120	10.164	10.16743	-0.0034	N/A	
2-Fluorobiphenyl	5.0000	99.9	80 - 120	13.795	13.79871	-0.0037	N/A	
2,4,6-Tribromophenol	7.5000	98.9	80 - 120	16.841	16.84343	-0.0024	N/A	
p-Terphenyl-d14	5.0000	114	80 - 120	21.389	21.39014	-0.0011	N/A	
SLC0335-LCV1 (Solid)			Lab File ID: NT1403172304.D			Analyzed: 03/17/23 16:16		
2-Fluorophenol	0.30000	84.0	50 - 150	6.828	6.828857	-0.0009	N/A	
Phenol-d5	0.30000	84.3	50 - 150	8.412	8.419	-0.0070	N/A	
2-Chlorophenol-d4	0.30000	96.5	50 - 150	8.698	8.701429	-0.0034	N/A	
1,2-Dichlorobenzene-d4	0.20000	109	50 - 150	9.426	9.430429	-0.0044	N/A	
Nitrobenzene-d5	0.20000	90.9	50 - 150	10.164	10.16743	-0.0034	N/A	
2-Fluorobiphenyl	0.20000	103	50 - 150	13.795	13.79871	-0.0037	N/A	
2,4,6-Tribromophenol	0.30000	77.5	50 - 150	16.841	16.84343	-0.0024	N/A	
p-Terphenyl-d14	0.20000	113	50 - 150	21.389	21.39014	-0.0011	N/A	
BLB0424-BLK1 (Solid)			Lab File ID: NT1403172312.D			Analyzed: 03/17/23 21:06		
2-Fluorophenol	750.00	54.5	27 - 120	6.836	6.828857	0.0071	N/A	
Phenol-d5	750.00	60.3	29 - 120	8.412	8.419	-0.0070	N/A	
2-Chlorophenol-d4	750.00	67.3	31 - 120	8.698	8.701429	-0.0034	N/A	
1,2-Dichlorobenzene-d4	500.00	77.5	32 - 120	9.427	9.430429	-0.0034	N/A	
Nitrobenzene-d5	500.00	79.2	30 - 120	10.164	10.16743	-0.0034	N/A	
2-Fluorobiphenyl	500.00	80.6	35 - 120	13.795	13.79871	-0.0037	N/A	
2,4,6-Tribromophenol	750.00	45.9	24 - 134	16.841	16.84343	-0.0024	N/A	
p-Terphenyl-d14	500.00	114	37 - 120	21.389	21.39014	-0.0011	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8270E

Laboratory: Analytical Resources, LLC
SDG/WO: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLC0335
Instrument: NT14
Calibration: GC00048
Calibration Date: 03/15/2023

Surrogate Compound	Spike Level ug/kg wet	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
BLB0424-BS1 (Solid)			Lab File ID: NT1403172313.D			Analyzed: 03/17/23 21:42		
2-Fluorophenol	750.00	81.5	27 - 120	6.837	6.828857	0.0081	N/A	
Phenol-d5	750.00	79.2	29 - 120	8.413	8.419	-0.0060	N/A	
2-Chlorophenol-d4	750.00	86.4	31 - 120	8.698	8.701429	-0.0034	N/A	
1,2-Dichlorobenzene-d4	500.00	83.3	32 - 120	9.427	9.430429	-0.0034	N/A	
Nitrobenzene-d5	500.00	88.8	30 - 120	10.164	10.16743	-0.0034	N/A	
2-Fluorobiphenyl	500.00	87.2	35 - 120	13.795	13.79871	-0.0037	N/A	
2,4,6-Tribromophenol	750.00	95.6	24 - 134	16.841	16.84343	-0.0024	N/A	
p-Terphenyl-d14	500.00	128	37 - 120	21.389	21.39014	-0.0011	N/A	*
BLB0424-BSD1 (Solid)			Lab File ID: NT1403172314.D			Analyzed: 03/17/23 22:19		
2-Fluorophenol	750.00	80.7	27 - 120	6.837	6.828857	0.0081	N/A	
Phenol-d5	750.00	80.3	29 - 120	8.413	8.419	-0.0060	N/A	
2-Chlorophenol-d4	750.00	86.0	31 - 120	8.698	8.701429	-0.0034	N/A	
1,2-Dichlorobenzene-d4	500.00	81.4	32 - 120	9.427	9.430429	-0.0034	N/A	
Nitrobenzene-d5	500.00	87.9	30 - 120	10.164	10.16743	-0.0034	N/A	
2-Fluorobiphenyl	500.00	86.9	35 - 120	13.795	13.79871	-0.0037	N/A	
2,4,6-Tribromophenol	750.00	90.8	24 - 134	16.841	16.84343	-0.0024	N/A	
p-Terphenyl-d14	500.00	124	37 - 120	21.389	21.39014	-0.0011	N/A	*
BLB0424-SRM1 (Solid)			Lab File ID: NT1403172315.D			Analyzed: 03/17/23 22:55		
2-Fluorophenol	7500.0	75.6	27 - 120	6.836	6.828857	0.0071	N/A	
Phenol-d5	7500.0	73.9	29 - 120	8.413	8.419	-0.0060	N/A	
2-Chlorophenol-d4	7500.0	78.8	31 - 120	8.698	8.701429	-0.0034	N/A	
1,2-Dichlorobenzene-d4	5000.0	75.2	32 - 120	9.427	9.430429	-0.0034	N/A	
Nitrobenzene-d5	5000.0	80.8	30 - 120	10.164	10.16743	-0.0034	N/A	
2-Fluorobiphenyl	5000.0	83.3	35 - 120	13.795	13.79871	-0.0037	N/A	
2,4,6-Tribromophenol	7500.0	86.1	24 - 134	16.841	16.84343	-0.0024	N/A	
p-Terphenyl-d14	5000.0	110	37 - 120	21.389	21.39014	-0.0011	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG/WO:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0335	Instrument:	NT14
Calibration:	GC00048	Calibration Date:	03/15/2023

Surrogate Compound	Spike Level ug/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SLC0335-ICV2 (Solid)			Lab File ID: NT1403172316.D			Analyzed: 03/17/23 23:31		
2-Fluorophenol	7.5000	93.9	80 - 120	6.821	6.828857	-0.0079	N/A	
Phenol-d5	7.5000	94.5	80 - 120	8.412	8.419	-0.0070	N/A	
2-Chlorophenol-d4	7.5000	96.5	80 - 120	8.698	8.701429	-0.0034	N/A	
1,2-Dichlorobenzene-d4	5.0000	95.5	80 - 120	9.427	9.430429	-0.0034	N/A	
Nitrobenzene-d5	5.0000	102	80 - 120	10.164	10.16743	-0.0034	N/A	
2-Fluorobiphenyl	5.0000	100	80 - 120	13.795	13.79871	-0.0037	N/A	
2,4,6-Tribromophenol	7.5000	103	80 - 120	16.841	16.84343	-0.0024	N/A	
p-Terphenyl-d14	5.0000	125	80 - 120	21.389	21.39014	-0.0011	N/A	*
SLC0335-LCV2 (Solid)			Lab File ID: NT1403172318.D			Analyzed: 03/18/23 00:43		
2-Fluorophenol	0.30000	77.2	50 - 150	6.821	6.828857	-0.0079	N/A	
Phenol-d5	0.30000	82.0	50 - 150	8.413	8.419	-0.0060	N/A	
2-Chlorophenol-d4	0.30000	91.6	50 - 150	8.698	8.701429	-0.0034	N/A	
1,2-Dichlorobenzene-d4	0.20000	112	50 - 150	9.427	9.430429	-0.0034	N/A	
Nitrobenzene-d5	0.20000	91.7	50 - 150	10.164	10.16743	-0.0034	N/A	
2-Fluorobiphenyl	0.20000	104	50 - 150	13.795	13.79871	-0.0037	N/A	
2,4,6-Tribromophenol	0.30000	63.7	50 - 150	16.841	16.84343	-0.0024	N/A	
p-Terphenyl-d14	0.20000	122	50 - 150	21.389	21.39014	-0.0011	N/A	
23B0276-01 (Solid)			Lab File ID: NT1403172327.D			Analyzed: 03/18/23 06:06		
2-Fluorophenol	749.80	73.7	27 - 120	6.844	6.828857	0.0151	N/A	
Phenol-d5	749.80	73.7	29 - 120	8.42	8.419	0.0010	N/A	
2-Chlorophenol-d4	749.80	81.1	31 - 120	8.698	8.701429	-0.0034	N/A	
1,2-Dichlorobenzene-d4	499.87	76.7	32 - 120	9.427	9.430429	-0.0034	N/A	
Nitrobenzene-d5	499.87	81.0	30 - 120	10.164	10.16743	-0.0034	N/A	
2-Fluorobiphenyl	499.87	87.7	35 - 120	13.795	13.79871	-0.0037	N/A	
2,4,6-Tribromophenol	749.80	88.9	24 - 134	16.849	16.84343	0.0056	N/A	
p-Terphenyl-d14	499.87	146	37 - 120	21.397	21.39014	0.0069	N/A	*

SURROGATE RECOVERY AND RT SUMMARY
EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG/WO:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0335	Instrument:	NT14
Calibration:	GC00048	Calibration Date:	03/15/2023

Surrogate Compound	Spike Level ug/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
BLB0424-MS1 (Solid)			Lab File ID: NT1403172328.D			Analyzed: 03/18/23 06:42		
2-Fluorophenol	749.80	73.5	27 - 120	6.837	6.828857	0.0081	N/A	
Phenol-d5	749.80	75.2	29 - 120	8.428	8.419	0.0090	N/A	
2-Chlorophenol-d4	749.80	80.6	31 - 120	8.706	8.701429	0.0046	N/A	
1,2-Dichlorobenzene-d4	499.87	75.2	32 - 120	9.427	9.430429	-0.0034	N/A	
Nitrobenzene-d5	499.87	80.0	30 - 120	10.164	10.16743	-0.0034	N/A	
2-Fluorobiphenyl	499.87	85.6	35 - 120	13.803	13.79871	0.0043	N/A	
2,4,6-Tribromophenol	749.80	90.0	24 - 134	16.849	16.84343	0.0056	N/A	
p-Terphenyl-d14	499.87	145	37 - 120	21.397	21.39014	0.0069	N/A	*
BLB0424-MSD1 (Solid)			Lab File ID: NT1403172329.D			Analyzed: 03/18/23 07:18		
2-Fluorophenol	749.80	71.0	27 - 120	6.837	6.828857	0.0081	N/A	
Phenol-d5	749.80	72.0	29 - 120	8.428	8.419	0.0090	N/A	
2-Chlorophenol-d4	749.80	77.8	31 - 120	8.706	8.701429	0.0046	N/A	
1,2-Dichlorobenzene-d4	499.87	73.4	32 - 120	9.427	9.430429	-0.0034	N/A	
Nitrobenzene-d5	499.87	77.6	30 - 120	10.164	10.16743	-0.0034	N/A	
2-Fluorobiphenyl	499.87	81.9	35 - 120	13.796	13.79871	-0.0027	N/A	
2,4,6-Tribromophenol	749.80	92.0	24 - 134	16.849	16.84343	0.0056	N/A	
p-Terphenyl-d14	499.87	139	37 - 120	21.397	21.39014	0.0069	N/A	*
SLC0335-CCV1 (Solid)			Lab File ID: NT1403172330.D			Analyzed: 03/18/23 07:54		
2-Fluorophenol	7.5000	96.0	50 - 150	6.829	6.828857	0.0001	N/A	
Phenol-d5	7.5000	97.1	50 - 150	8.428	8.419	0.0090	N/A	
2-Chlorophenol-d4	7.5000	101	50 - 150	8.706	8.701429	0.0046	N/A	
1,2-Dichlorobenzene-d4	5.0000	103	50 - 150	9.434	9.430429	0.0036	N/A	
Nitrobenzene-d5	5.0000	102	50 - 150	10.164	10.16743	-0.0034	N/A	
2-Fluorobiphenyl	5.0000	104	50 - 150	13.803	13.79871	0.0043	N/A	
2,4,6-Tribromophenol	7.5000	94.9	50 - 150	16.849	16.84343	0.0056	N/A	
p-Terphenyl-d14	5.0000	165	50 - 150	21.389	21.39014	-0.0011	N/A	*

SURROGATE RECOVERY AND RT SUMMARY
EPA 8270E

Laboratory: Analytical Resources, LLC
SDG/WO: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLC0355
Instrument: NT14
Calibration: GC00048
Calibration Date: 03/15/2023

Surrogate Compound	Spike Level ug/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SLC0355-ICV1 (Solid)			Lab File ID: NT1403182302.D			Analyzed: 03/18/23 17:38		
2-Fluorophenol	7.5000	96.0	80 - 120	6.829	6.828857	0.0001	N/A	
Phenol-d5	7.5000	97.6	80 - 120	8.42	8.419	0.0010	N/A	
2-Chlorophenol-d4	7.5000	101	80 - 120	8.698	8.701429	-0.0034	N/A	
1,2-Dichlorobenzene-d4	5.0000	99.6	80 - 120	9.427	9.430429	-0.0034	N/A	
Nitrobenzene-d5	5.0000	101	80 - 120	10.156	10.16743	-0.0114	N/A	
2-Fluorobiphenyl	5.0000	98.8	80 - 120	13.787	13.79871	-0.0117	N/A	
2,4,6-Tribromophenol	7.5000	101	80 - 120	16.833	16.84343	-0.0104	N/A	
p-Terphenyl-d14	5.0000	112	80 - 120	21.381	21.39014	-0.0091	N/A	
BLB0424-BLK3 (Solid)			Lab File ID: NT1403182306.D			Analyzed: 03/18/23 20:03		
2-Fluorophenol	750.00	55.1	27 - 120	6.844	6.828857	0.0151	N/A	
Phenol-d5	750.00	60.4	29 - 120	8.412	8.419	-0.0070	N/A	
2-Chlorophenol-d4	750.00	66.7	31 - 120	8.698	8.701429	-0.0034	N/A	
1,2-Dichlorobenzene-d4	500.00	78.0	32 - 120	9.419	9.430429	-0.0114	N/A	
Nitrobenzene-d5	500.00	78.5	30 - 120	10.156	10.16743	-0.0114	N/A	
2-Fluorobiphenyl	500.00	80.2	35 - 120	13.788	13.79871	-0.0107	N/A	
2,4,6-Tribromophenol	750.00	46.9	24 - 134	16.834	16.84343	-0.0094	N/A	
p-Terphenyl-d14	500.00	98.1	37 - 120	21.381	21.39014	-0.0091	N/A	
SLC0355-ICV2 (Solid)			Lab File ID: NT1403182318.D			Analyzed: 03/19/23 03:16		
2-Fluorophenol	7.5000	95.1	80 - 120	6.837	6.828857	0.0081	N/A	
Phenol-d5	7.5000	98.8	80 - 120	8.42	8.419	0.0010	N/A	
2-Chlorophenol-d4	7.5000	101	80 - 120	8.698	8.701429	-0.0034	N/A	
1,2-Dichlorobenzene-d4	5.0000	101	80 - 120	9.427	9.430429	-0.0034	N/A	
Nitrobenzene-d5	5.0000	99.9	80 - 120	10.164	10.16743	-0.0034	N/A	
2-Fluorobiphenyl	5.0000	99.2	80 - 120	13.796	13.79871	-0.0027	N/A	
2,4,6-Tribromophenol	7.5000	101	80 - 120	16.841	16.84343	-0.0024	N/A	
p-Terphenyl-d14	5.0000	121	80 - 120	21.381	21.39014	-0.0091	N/A	*

SURROGATE RECOVERY AND RT SUMMARY
EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG/WO:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0355	Instrument:	NT14
Calibration:	GC00048	Calibration Date:	03/15/2023

Surrogate Compound	Spike Level ug/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SLC0355-LCV2 (Solid)			Lab File ID: NT1403182320.D				Analyzed: 03/19/23 04:28	
2-Fluorophenol	0.30000	92.0	50 - 150	6.836	6.828857	0.0071	N/A	
Phenol-d5	0.30000	87.9	50 - 150	8.42	8.419	0.0010	N/A	
2-Chlorophenol-d4	0.30000	93.1	50 - 150	8.706	8.701429	0.0046	N/A	
1,2-Dichlorobenzene-d4	0.20000	105	50 - 150	9.427	9.430429	-0.0034	N/A	
Nitrobenzene-d5	0.20000	99.8	50 - 150	10.164	10.16743	-0.0034	N/A	
2-Fluorobiphenyl	0.20000	106	50 - 150	13.795	13.79871	-0.0037	N/A	
2,4,6-Tribromophenol	0.30000	79.4	50 - 150	16.841	16.84343	-0.0024	N/A	
p-Terphenyl-d14	0.20000	124	50 - 150	21.381	21.39014	-0.0091	N/A	
SLC0355-CCV1 (Solid)			Lab File ID: NT1403182331.D				Analyzed: 03/19/23 11:04	
2-Fluorophenol	7.5000	93.8	50 - 150	6.844	6.828857	0.0151	N/A	
Phenol-d5	7.5000	95.6	50 - 150	8.428	8.419	0.0090	N/A	
2-Chlorophenol-d4	7.5000	99.9	50 - 150	8.706	8.701429	0.0046	N/A	
1,2-Dichlorobenzene-d4	5.0000	99.8	50 - 150	9.435	9.430429	0.0046	N/A	
Nitrobenzene-d5	5.0000	99.3	50 - 150	10.172	10.16743	0.0046	N/A	
2-Fluorobiphenyl	5.0000	99.2	50 - 150	13.795	13.79871	-0.0037	N/A	
2,4,6-Tribromophenol	7.5000	101	50 - 150	16.841	16.84343	-0.0024	N/A	
p-Terphenyl-d14	5.0000	115	50 - 150	21.389	21.39014	-0.0011	N/A	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0160	Instrument:	NT14
		Calibration:	GC00048

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Secondary Cal Check (SLC0160-SCV1)		(Water)		Lab File ID: NT1403152311.D				Analyzed: 03/15/23 17:39	
1,4-Dichlorobenzene-d4	197462	9.07	194517	9.07	102	50 - 200	0.000	+/-0.50	
Naphthalene-d8	726125	11.567	721321	11.567	101	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	382881	15.196	379602	15.204	101	50 - 200	-0.008	+/-0.50	
Phenanthrene-d10	706616	18.24	703194	18.248	100	50 - 200	-0.008	+/-0.50	
Chrysene-d12	504808	23.301	504769	23.302	100	50 - 200	-0.001	+/-0.50	
Di-n-Octylphthalate-d4	988248	24.323	978492	24.323	101	50 - 200	0.000	+/-0.50	
Perylene-d12	496785	25.941	484073	25.942	103	50 - 200	-0.001	+/-0.50	
Initial Cal Blank (SLC0160-ICB1)		(Water)		Lab File ID: NT1403152312.D				Analyzed: 03/15/23 18:15	
1,4-Dichlorobenzene-d4	189234	9.062	194517	9.07	97	50 - 200	-0.008	+/-0.50	
Naphthalene-d8	727843	11.559	721321	11.567	101	50 - 200	-0.008	+/-0.50	
Acenaphthene-d10	367416	15.196	379602	15.204	97	50 - 200	-0.008	+/-0.50	
Phenanthrene-d10	678407	18.24	703194	18.248	96	50 - 200	-0.008	+/-0.50	
Chrysene-d12	476533	23.293	504769	23.302	94	50 - 200	-0.009	+/-0.50	
Di-n-Octylphthalate-d4	798655	24.323	978492	24.323	82	50 - 200	0.000	+/-0.50	
Perylene-d12	452165	25.934	484073	25.942	93	50 - 200	-0.008	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0335	Instrument:	NT14
		Calibration:	GC00048

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (SLC0335-ICV1)		(Solid)	Lab File ID: NT1403172302.D				Analyzed: 03/17/23 15:03		
1,4-Dichlorobenzene-d4	221219	9.062	221219	9.062	100	50 - 200	0.000	+/-0.50	
Naphthalene-d8	809500	11.567	809500	11.567	100	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	420689	15.196	420689	15.196	100	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	757520	18.247	757520	18.247	100	50 - 200	0.000	+/-0.50	
Chrysene-d12	450500	23.293	450500	23.293	100	50 - 200	0.000	+/-0.50	
Di-n-Octylphthalate-d4	828388	24.323	828388	24.323	100	50 - 200	0.000	+/-0.50	
Perylene-d12	339914	25.933	339914	25.933	100	50 - 200	0.000	+/-0.50	
Low Cal Check (SLC0335-LCV1)		(Solid)	Lab File ID: NT1403172304.D				Analyzed: 03/17/23 16:16		
1,4-Dichlorobenzene-d4	217316	9.062	221219	9.062	98	50 - 200	0.000	+/-0.50	
Naphthalene-d8	823606	11.567	809500	11.567	102	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	420838	15.196	420689	15.196	100	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	757941	18.24	757520	18.247	100	50 - 200	-0.007	+/-0.50	
Chrysene-d12	454867	23.293	450500	23.293	101	50 - 200	0.000	+/-0.50	
Di-n-Octylphthalate-d4	710040	24.315	828388	24.323	86	50 - 200	-0.008	+/-0.50	
Perylene-d12	330470	25.933	339914	25.933	97	50 - 200	0.000	+/-0.50	
Blank (BLB0424-BLK1)		(Solid)	Lab File ID: NT1403172312.D				Analyzed: 03/17/23 21:06		
1,4-Dichlorobenzene-d4	220626	9.062	221219	9.062	100	50 - 200	0.000	+/-0.50	
Naphthalene-d8	887622	11.559	809500	11.567	110	50 - 200	-0.008	+/-0.50	
Acenaphthene-d10	442658	15.196	420689	15.196	105	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	744696	18.24	757520	18.247	98	50 - 200	-0.007	+/-0.50	
Chrysene-d12	383188	23.294	450500	23.293	85	50 - 200	0.001	+/-0.50	
Di-n-Octylphthalate-d4	740264	24.315	828388	24.323	89	50 - 200	-0.008	+/-0.50	
Perylene-d12	251086	25.934	339914	25.933	74	50 - 200	0.001	+/-0.50	
LCS (BLB0424-BS1)		(Solid)	Lab File ID: NT1403172313.D				Analyzed: 03/17/23 21:42		
1,4-Dichlorobenzene-d4	210794	9.062	221219	9.062	95	50 - 200	0.000	+/-0.50	
Naphthalene-d8	812894	11.567	809500	11.567	100	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	421466	15.196	420689	15.196	100	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	705582	18.24	757520	18.247	93	50 - 200	-0.007	+/-0.50	
Chrysene-d12	351965	23.294	450500	23.293	78	50 - 200	0.001	+/-0.50	
Di-n-Octylphthalate-d4	707847	24.316	828388	24.323	85	50 - 200	-0.007	+/-0.50	
Perylene-d12	230171	25.934	339914	25.933	68	50 - 200	0.001	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0335	Instrument:	NT14
		Calibration:	GC00048

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LCS Dup (BLB0424-BSD1)		(Solid)	Lab File ID: NT1403172314.D				Analyzed: 03/17/23 22:19		
1,4-Dichlorobenzene-d4	217090	9.062	221219	9.062	98	50 - 200	0.000	+/-0.50	
Naphthalene-d8	838636	11.567	809500	11.567	104	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	430703	15.196	420689	15.196	102	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	719856	18.24	757520	18.247	95	50 - 200	-0.007	+/-0.50	
Chrysene-d12	357294	23.294	450500	23.293	79	50 - 200	0.001	+/-0.50	
Di-n-Octylphthalate-d4	706831	24.316	828388	24.323	85	50 - 200	-0.007	+/-0.50	
Perylene-d12	233794	25.934	339914	25.933	69	50 - 200	0.001	+/-0.50	
Reference (BLB0424-SRM1)		(Solid)	Lab File ID: NT1403172315.D				Analyzed: 03/17/23 22:55		
1,4-Dichlorobenzene-d4	232565	9.062	221219	9.062	105	50 - 200	0.000	+/-0.50	
Naphthalene-d8	889784	11.56	809500	11.567	110	50 - 200	-0.007	+/-0.50	
Acenaphthene-d10	442664	15.196	420689	15.196	105	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	747605	18.24	757520	18.247	99	50 - 200	-0.007	+/-0.50	
Chrysene-d12	366287	23.294	450500	23.293	81	50 - 200	0.001	+/-0.50	
Di-n-Octylphthalate-d4	736461	24.316	828388	24.323	89	50 - 200	-0.007	+/-0.50	
Perylene-d12	232583	25.934	339914	25.933	68	50 - 200	0.001	+/-0.50	
Initial Cal Check (SLC0335-ICV2)		(Solid)	Lab File ID: NT1403172316.D				Analyzed: 03/17/23 23:31		
1,4-Dichlorobenzene-d4	231017	9.062	231017	9.062	100	50 - 200	0.000	+/-0.50	
Naphthalene-d8	843789	11.567	843789	11.567	100	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	432455	15.196	432455	15.196	100	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	793780	18.24	793780	18.24	100	50 - 200	0.000	+/-0.50	
Chrysene-d12	411057	23.294	411057	23.294	100	50 - 200	0.000	+/-0.50	
Di-n-Octylphthalate-d4	799010	24.316	799010	24.316	100	50 - 200	0.000	+/-0.50	
Perylene-d12	254782	25.934	254782	25.934	100	50 - 200	0.000	+/-0.50	
Low Cal Check (SLC0335-LCV2)		(Solid)	Lab File ID: NT1403172318.D				Analyzed: 03/18/23 00:43		
1,4-Dichlorobenzene-d4	204038	9.062	231017	9.062	88	50 - 200	0.000	+/-0.50	
Naphthalene-d8	775937	11.56	843789	11.567	92	50 - 200	-0.007	+/-0.50	
Acenaphthene-d10	384479	15.196	432455	15.196	89	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	678623	18.24	793780	18.24	85	50 - 200	0.000	+/-0.50	
Chrysene-d12	379052	23.294	411057	23.294	92	50 - 200	0.000	+/-0.50	
Di-n-Octylphthalate-d4	646291	24.316	799010	24.316	81	50 - 200	0.000	+/-0.50	
Perylene-d12	245193	25.934	254782	25.934	96	50 - 200	0.000	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0335	Instrument:	NT14
		Calibration:	GC00048

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LDW23-SC1150B (23B0276-01)		(Solid)		Lab File ID: NT1403172327.D				Analyzed: 03/18/23 06:06	
1,4-Dichlorobenzene-d4	216795	9.07	231017	9.062	94	50 - 200	0.008	+/-0.50	
Naphthalene-d8	856195	11.567	843789	11.567	101	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	420684	15.204	432455	15.196	97	50 - 200	0.008	+/-0.50	
Phenanthrene-d10	676256	18.255	793780	18.24	85	50 - 200	0.015	+/-0.50	
Chrysene-d12	191213	23.301	411057	23.294	47	50 - 200	0.007	+/-0.50	*
Di-n-Octylphthalate-d4	412116	24.323	799010	24.316	52	50 - 200	0.007	+/-0.50	
Perylene-d12	143085	25.949	254782	25.934	56	50 - 200	0.015	+/-0.50	
Matrix Spike (BLB0424-MS1)		(Solid)		Lab File ID: NT1403172328.D				Analyzed: 03/18/23 06:42	
1,4-Dichlorobenzene-d4	208566	9.07	231017	9.062	90	50 - 200	0.008	+/-0.50	
Naphthalene-d8	823985	11.567	843789	11.567	98	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	419326	15.204	432455	15.196	97	50 - 200	0.008	+/-0.50	
Phenanthrene-d10	693082	18.255	793780	18.24	87	50 - 200	0.015	+/-0.50	
Chrysene-d12	191184	23.301	411057	23.294	47	50 - 200	0.007	+/-0.50	*
Di-n-Octylphthalate-d4	415588	24.323	799010	24.316	52	50 - 200	0.007	+/-0.50	
Perylene-d12	145513	25.949	254782	25.934	57	50 - 200	0.015	+/-0.50	
Matrix Spike Dup (BLB0424-MSD1)		(Solid)		Lab File ID: NT1403172329.D				Analyzed: 03/18/23 07:18	
1,4-Dichlorobenzene-d4	203782	9.07	231017	9.062	88	50 - 200	0.008	+/-0.50	
Naphthalene-d8	795799	11.567	843789	11.567	94	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	409102	15.204	432455	15.196	95	50 - 200	0.008	+/-0.50	
Phenanthrene-d10	739666	18.256	793780	18.24	93	50 - 200	0.016	+/-0.50	
Chrysene-d12	222079	23.302	411057	23.294	54	50 - 200	0.008	+/-0.50	
Di-n-Octylphthalate-d4	481674	24.323	799010	24.316	60	50 - 200	0.007	+/-0.50	
Perylene-d12	153971	25.949	254782	25.934	60	50 - 200	0.015	+/-0.50	
Calibration Check (SLC0335-CCV1)		(Water)		Lab File ID: NT1403172330.D				Analyzed: 03/18/23 07:54	
1,4-Dichlorobenzene-d4	217562	9.07	231017	9.062	94	50 - 200	0.008	+/-0.50	
Naphthalene-d8	844336	11.567	843789	11.567	100	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	413736	15.204	432455	15.196	96	50 - 200	0.008	+/-0.50	
Phenanthrene-d10	640883	18.248	793780	18.24	81	50 - 200	0.008	+/-0.50	
Chrysene-d12	193927	23.301	411057	23.294	47	50 - 200	0.007	+/-0.50	*
Di-n-Octylphthalate-d4	500053	24.323	799010	24.316	63	50 - 200	0.007	+/-0.50	
Perylene-d12	141853	25.941	254782	25.934	56	50 - 200	0.007	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0355	Instrument:	NT14
		Calibration:	GC00048

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (SLC0355-ICV1)		(Solid)	Lab File ID: NT1403182302.D				Analyzed: 03/18/23 17:38		
1,4-Dichlorobenzene-d4	247621	9.062	247621	9.062	100	50 - 200	0.000	+/-0.50	
Naphthalene-d8	955275	11.559	955275	11.559	100	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	510589	15.188	510589	15.188	100	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	920812	18.232	920812	18.232	100	50 - 200	0.000	+/-0.50	
Chrysene-d12	546688	23.294	546688	23.294	100	50 - 200	0.000	+/-0.50	
Di-n-Octylphthalate-d4	1067789	24.315	1067789	24.315	100	50 - 200	0.000	+/-0.50	
Perylene-d12	445520	25.926	445520	25.926	100	50 - 200	0.000	+/-0.50	
Blank (BLB0424-BLK3)		(Solid)	Lab File ID: NT1403182306.D				Analyzed: 03/18/23 20:03		
1,4-Dichlorobenzene-d4	264303	9.062	247621	9.062	107	50 - 200	0.000	+/-0.50	
Naphthalene-d8	1057352	11.559	955275	11.559	111	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	539181	15.188	510589	15.188	106	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	935636	18.232	920812	18.232	102	50 - 200	0.000	+/-0.50	
Chrysene-d12	591932	23.286	546688	23.294	108	50 - 200	-0.008	+/-0.50	
Di-n-Octylphthalate-d4	1034580	24.308	1067789	24.315	97	50 - 200	-0.007	+/-0.50	
Perylene-d12	463088	25.918	445520	25.926	104	50 - 200	-0.008	+/-0.50	
Initial Cal Check (SLC0355-ICV2)		(Solid)	Lab File ID: NT1403182318.D				Analyzed: 03/19/23 03:16		
1,4-Dichlorobenzene-d4	237594	9.062	237594	9.062	100	50 - 200	0.000	+/-0.50	
Naphthalene-d8	944151	11.56	944151	11.56	100	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	498100	15.196	498100	15.196	100	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	845417	18.24	845417	18.24	100	50 - 200	0.000	+/-0.50	
Chrysene-d12	410836	23.294	410836	23.294	100	50 - 200	0.000	+/-0.50	
Di-n-Octylphthalate-d4	914780	24.316	914780	24.316	100	50 - 200	0.000	+/-0.50	
Perylene-d12	441517	25.934	441517	25.934	100	50 - 200	0.000	+/-0.50	
Low Cal Check (SLC0355-LCV2)		(Solid)	Lab File ID: NT1403182320.D				Analyzed: 03/19/23 04:28		
1,4-Dichlorobenzene-d4	254560	9.07	237594	9.062	107	50 - 200	0.008	+/-0.50	
Naphthalene-d8	966904	11.56	944151	11.56	102	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	487144	15.196	498100	15.196	98	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	854961	18.24	845417	18.24	101	50 - 200	0.000	+/-0.50	
Chrysene-d12	444724	23.294	410836	23.294	108	50 - 200	0.000	+/-0.50	
Di-n-Octylphthalate-d4	858353	24.316	914780	24.316	94	50 - 200	0.000	+/-0.50	
Perylene-d12	468611	25.926	441517	25.934	106	50 - 200	-0.008	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0355	Instrument:	NT14
		Calibration:	GC00048

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (SLC0355-CCV1)		(Water)		Lab File ID: NT1403182331.D				Analyzed: 03/19/23 11:04	
1,4-Dichlorobenzene-d4	239978	9.07	237594	9.062	101	50 - 200	0.008	+/-0.50	
Naphthalene-d8	943704	11.567	944151	11.56	100	50 - 200	0.007	+/-0.50	
Acenaphthene-d10	496853	15.196	498100	15.196	100	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	826898	18.248	845417	18.24	98	50 - 200	0.008	+/-0.50	
Chrysene-d12	429570	23.294	410836	23.294	105	50 - 200	0.000	+/-0.50	
Di-n-Octylphthalate-d4	913803	24.316	914780	24.316	100	50 - 200	0.000	+/-0.50	
Perylene-d12	440126	25.934	441517	25.934	100	50 - 200	0.000	+/-0.50	

HOLDING TIME SUMMARY

Analysis: EPA 8270E

Laboratory: Analytical Resources, LLC SDG: 23B0276

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

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
LDW23-SC1150B 23B0276-01	12/14/22 09:03	12/14/22 16:47	02/17/23 15:00	65	365	03/18/23 06:06	29	40	
Matrix Spike BLB0424-MS1	12/14/22 09:03	12/14/22 16:47	02/17/23 15:00	65	365	03/18/23 06:42	29	40	
Matrix Spike Dup BLB0424-MSD1	12/14/22 09:03	12/14/22 16:47	02/17/23 15:00	65	365	03/18/23 07:18	29	40	

* Indicates hold time exceedance.

METHOD DETECTION AND REPORTING LIMITS

EPA 8270E

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Instrument: NT14

Analyte	MDL	RL	Units
Phenol	4.4	20.0	ug/kg
4-Methylphenol	7.4	20.0	ug/kg
Naphthalene	4.2	20.0	ug/kg
2-Methylnaphthalene	4.5	20.0	ug/kg
Acenaphthylene	6.2	20.0	ug/kg
Dimethylphthalate	4.4	20.0	ug/kg
Acenaphthene	5.2	20.0	ug/kg
Dibenzofuran	14.1	20.0	ug/kg
Fluorene	14.6	20.0	ug/kg
Phenanthrene	8.7	20.0	ug/kg
Anthracene	7.2	20.0	ug/kg
Fluoranthene	6.1	20.0	ug/kg
Pyrene	5.7	20.0	ug/kg
Butylbenzylphthalate	9.4	20.0	ug/kg
Benzo(a)anthracene	6.0	20.0	ug/kg
Chrysene	6.1	20.0	ug/kg
bis(2-Ethylhexyl)phthalate	5.5	50.0	ug/kg
Benzofluoranthenes, Total	10.0	40.0	ug/kg
Benzo(a)pyrene	4.2	20.0	ug/kg
Indeno(1,2,3-cd)pyrene	14.7	20.0	ug/kg
Dibenzo(a,h)anthracene	17.2	20.0	ug/kg
Benzo(g,h,i)perylene	13.6	20.0	ug/kg

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B001941

Printed: 9/25/2013 1:45:31PM

Description:	SVOC 2,4-Dinitrophenol	Expires:	31-Dec-29
Standard Type:	Calibration Stan	Prepared:	25-Sep-13
Solvent:	NA	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	25-Sep-13 13:45 by JZ
Vendor:	SIGMA	Lot #:	65H5021
Vendor Catalog #:			

Comments

Neat, Purity @ 90-95%. (ARI#: 0466)

Analyte	CAS Number	Concentration	Units
2,4-Dinitrophenol	51-28-5	1000000	ug/mL

B001941
SVOA 2,4-Dinitrophenol
Expires 12/31/2029
Prepared By Jianqing Zhou 9/25/2013

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer:_____

Chemical: 2,4-Dinitrophenol

Manufacturer: Sigma

Product #: _____

Lot #: bFH 502 1

Purity: 90 ~ 94%

Analyst: _____

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B001945

Printed: 9/25/2013 3:23:22PM

Description:	SVOC Benzoic Acid	Expires:	31-Dec-29
Standard Type:	Calibration Stan	Prepared:	31-Dec-12
Solvent:	NA	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	25-Sep-13 15:23 by JZ
Vendor:	ACROS Organics	Lot #:	A0224339
Vendor Catalog #:			

Comments

Neat, Purity @ 98%.

Analyte	CAS Number	Concentration	Units
Benzoic acid	65-85-0	1000000	ug/mL

B001945
SVOC Benzoic Acid
Expires 12/31/2029
Prepared By Jianqing Zhou 12/31/2012

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer:_____

Chemical: Benzoic Acid

Manufacturer: Acros Organics

Product #: _____

Lot #: A0214339

Purity: 98%

Analyst: _____

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B001948

Printed: 9/25/2013 3:37:51PM

Description:	SVOC 4,6-Dinitro-2-Methylphenol	Expires:	31-Dec-29
Standard Type:	Calibration Stan	Prepared:	25-Sep-13
Solvent:	NA	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	25-Sep-13 15:37 by JZ
Vendor:	Chem Service	Lot #:	179-31A
Vendor Catalog #:			

Comments

Neat, Purity @ 99%. (ARI#: 009A)

Analyte	CAS Number	Concentration	Units
4,6-Dinitro-2-methylphenol	534-52-1	1000000	ug/mL

B001948
SVOA 4,6-Dinitro-2-Methylphenol
Expires 12/31/2029
Prepared By Jianqing Zhou 9/25/2013

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer: _____

Chemical: 4,6-Dinitro-2-Methylphenol

Manufacturer: Chem Service

Product #: _____

Lot #: 179-31A

Purity: 99%

Analyst: KB

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B002054

Printed: 10/4/2013 6:32:21PM

Description:	SVOA 1-Methylnaphthalene	Expires:	02-Apr-14
Standard Type:	Analyte Spike	Prepared:	13-Dec-12
Solvent:	NA	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	04-Oct-13 18:32 by JZ
Vendor:	Chem Service	Lot #:	62-5B
Vendor Catalog #:			

Comments

Neat, Purity @ 99%

Analyte	CAS Number	Concentration	Units
1-Methylnaphthalene	90-12-0	1000000	ug/mL

B002054
SVOA 1-Methylnaphthalene
Solvent / Lot: NA
Prep: 12/13/2012 by JZ
Exp: 12/31/2029
Location:

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer:_____

Chemical: 1-Methyl naphthalene

Manufacturer: Chem Service

Product #: 0787

Lot #: 67-53

Purity: 99%

Analyst: AZ

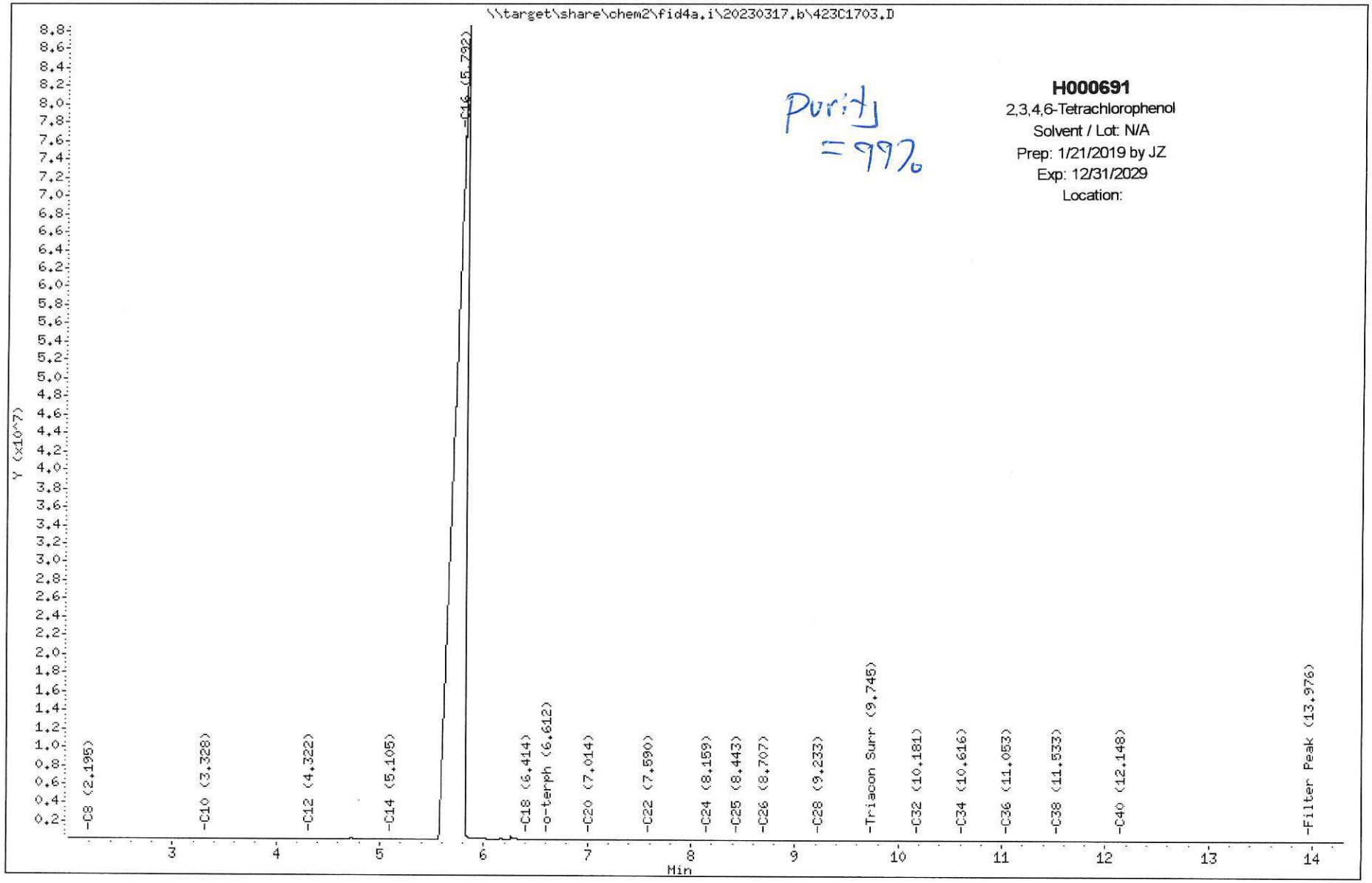
H000691

Page 1

Data File: \\target\share\chem2\fid4a.i\20230317.b\423C1703.D
Date : 17-MAR-2023 10:46
Client ID:
Sample Info: K007226

Instrument: fid4a.i
Operator: AA
Column diameter: 0.25

Column phase: RTX-1



Purity
=99%

H000691
2,3,4,6-Tetrachlorophenol
Solvent / Lot: N/A
Prep: 1/21/2019 by JZ
Exp: 12/31/2029
Location:

ARI Labs, Inc.

Data file : \\target\share\chem2\fid4a.i\20230317.b\423C1703.D
Lab Smp Id: K007226
Inj Date : 17-MAR-2023 10:46
Operator : AA Inst ID: fid4a.i
Smp Info : K007226
Misc Info :
Comment   :
Method   : \\target\share\chem2\fid4a.i\20230317.b\FID4TPH.m
Meth Date : 17-Mar-2023 16:58 alfonso Quant Type: AREA%
Cal Date : 18-AUG-2022 11:51 Cal File: 422H1803.D
Als bottle: 10
Dil Factor: 1.00000
Integrator: Falcon+ Compound Sublist: tph.sub
Target Version: 4.14
Processing Host: ALFONSO-201901

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
2.043	81395	55677	0.684	0.012	1 Toluene
2.074	68503	39991	0.584	0.010	
2.104	85451	37158	0.435	0.012	
2.146	59381	25207	0.424	0.008	
2.181	11414	22862	2.003	0.001	
2.195	34939	23199	0.664	0.005	2 C8
2.218	8679	21808	2.513	0.001	
2.224	21070	21832	1.036	0.003	
2.243	45086	20191	0.448	0.006	
2.286	3130	15677	5.009	0.000	
2.291	12615	15880	1.259	0.001	
2.313	20979	15888	0.757	0.003	
2.333	7621	15373	2.017	0.001	
2.348	31874	17112	0.537	0.004	
2.373	4619	13267	2.872	0.000	
2.380	12003	13446	1.120	0.001	
2.393	10327	13347	1.292	0.001	
2.408	9963	12697	1.274	0.001	
2.446	24366	11882	0.488	0.003	
2.498	24898	10214	0.410	0.003	
2.557	1592	6395	4.017	0.000	
2.570	4427	6384	1.442	0.000	
2.583	4275	6215	1.454	0.000	
2.595	1208	6068	5.024	0.000	
2.602	3076	6230	2.025	0.000	
2.607	1560	6270	4.019	0.000	
2.631	17195	8933	0.520	0.002	
2.654	17386	7637	0.439	0.002	
2.703	4531	5468	1.207	0.000	
2.717	9156	5741	0.627	0.001	
2.740	3955	5045	1.275	0.000	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
2.768	1029	4134	4.017	0.000	
2.771	830	4189	5.050	0.000	
2.778	1924	4438	2.307	0.000	
2.784	5498	4564	0.830	0.000	
2.846	25970	8400	0.323	0.003	
2.880	939	3165	3.370	0.000	
2.884	1885	3183	1.688	0.000	
2.901	4805	3504	0.729	0.000	
2.938	581	1990	3.423	0.000	
2.944	1450	2016	1.390	0.000	
2.955	449	1816	4.043	0.000	
2.967	1234	2009	1.629	0.000	
2.982	712	2087	2.931	0.000	
2.988	1000	2338	2.337	0.000	
3.001	3475	3541	1.019	0.000	
3.018	3528	3705	1.050	0.000	
3.033	983	2521	2.564	0.000	
3.038	1297	2686	2.070	0.000	
3.044	2547	2541	0.997	0.000	
3.069	389	1330	3.418	0.000	
3.078	728	1545	2.123	0.000	
3.085	1244	1637	1.316	0.000	
3.098	1115	1624	1.457	0.000	
3.108	926	1475	1.593	0.000	
3.119	239	1202	5.036	0.000	
3.125	540	1251	2.315	0.000	
3.133	409	1219	2.978	0.000	
3.144	2600	1886	0.725	0.000	
3.165	620	1604	2.588	0.000	
3.173	554	1647	2.972	0.000	
3.192	2423	2273	0.938	0.000	
3.197	582	2418	4.158	0.000	
3.204	1161	2723	2.346	0.000	
3.208	825	2777	3.364	0.000	
3.228	4472	3391	0.758	0.000	
3.246	1586	2676	1.688	0.000	
3.279	1194	2070	1.734	0.000	
3.293	854	1951	2.285	0.000	
3.298	595	2029	3.408	0.000	
3.315	2640	2597	0.984	0.000	
3.320	1015	2542	2.504	0.000	
3.328	1549	2593	1.674	0.000	3 C10
3.338	1314	2533	1.928	0.000	
3.350	523	2159	4.130	0.000	
3.358	1776	2105	1.185	0.000	
3.371	356	1797	5.043	0.000	
3.378	914	1880	2.057	0.000	
3.383	380	1927	5.068	0.000	
3.387	595	2023	3.399	0.000	
3.395	1390	2270	1.633	0.000	
3.405	1490	1994	1.338	0.000	
3.423	690	1601	2.321	0.000	
3.435	821	1554	1.894	0.000	
3.441	387	1583	4.087	0.000	
3.444	401	1625	4.051	0.000	
3.448	403	1636	4.060	0.000	
3.455	1216	1700	1.398	0.000	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
3.478	235	1185	5.047	0.000	
3.482	412	1229	2.986	0.000	
3.488	695	1177	1.694	0.000	
3.501	239	969	4.063	0.000	
3.509	914	1149	1.258	0.000	
3.520	1078	1069	0.992	0.000	
3.540	301	927	3.079	0.000	
3.556	406	849	2.089	0.000	
3.567	370	873	2.359	0.000	
3.572	178	939	5.270	0.000	
3.578	591	1171	1.981	0.000	
3.591	869	1353	1.556	0.000	
3.596	741	1352	1.826	0.000	
3.606	471	1401	2.976	0.000	
3.613	548	1411	2.577	0.000	
3.618	433	1521	3.511	0.000	
3.625	710	1635	2.303	0.000	
3.630	910	1667	1.832	0.000	
3.652	661	1562	2.362	0.000	
3.670	462	1214	2.627	0.000	
3.686	1036	1453	1.403	0.000	
3.690	829	1374	1.658	0.000	
3.702	531	1191	2.241	0.000	
3.712	452	1355	3.001	0.000	
3.716	820	1423	1.736	0.000	
3.736	2685	2093	0.780	0.000	
3.752	689	2030	2.946	0.000	
3.760	4109	2349	0.572	0.000	
3.805	3183	2036	0.640	0.000	
3.823	496	1686	3.401	0.000	
3.835	1641	2314	1.410	0.000	
3.859	9243	4616	0.499	0.001	
3.897	851	1745	2.051	0.000	
3.904	503	1721	3.419	0.000	
3.927	3866	3293	0.852	0.000	
3.941	5520	3558	0.645	0.000	
3.980	573	1715	2.991	0.000	
3.992	1027	1794	1.748	0.000	
3.995	1494	1860	1.245	0.000	
4.010	887	1639	1.847	0.000	
4.021	663	1724	2.602	0.000	
4.026	1380	1776	1.287	0.000	
4.045	306	1546	5.059	0.000	
4.053	1001	1758	1.757	0.000	
4.061	1137	1804	1.586	0.000	
4.072	779	1773	2.275	0.000	
4.080	989	1896	1.917	0.000	
4.087	561	1905	3.396	0.000	
4.098	1956	2156	1.103	0.000	
4.106	1168	2044	1.750	0.000	
4.127	1049	1627	1.551	0.000	
4.142	587	1545	2.633	0.000	
4.148	1155	1572	1.361	0.000	
4.173	3682	2398	0.651	0.000	
4.189	1023	1738	1.700	0.000	
4.204	549	1627	2.961	0.000	
4.213	628	1658	2.641	0.000	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
4.221	1039	1830	1.761	0.000	
4.227	447	1814	4.058	0.000	
4.248	2703	2638	0.976	0.000	
4.256	1387	2945	2.123	0.000	
4.260	743	2988	4.022	0.000	
4.265	912	3081	3.378	0.000	
4.268	779	3140	4.031	0.000	
4.275	1736	3217	1.853	0.000	
4.289	2688	3495	1.300	0.000	
4.295	3466	3448	0.995	0.000	
4.322	1054	2680	2.543	0.000	4 C12
4.330	1686	2627	1.558	0.000	
4.358	1066	1974	1.852	0.000	
4.378	434	1758	4.054	0.000	
4.384	1324	1879	1.419	0.000	
4.403	860	1608	1.869	0.000	
4.414	457	1567	3.431	0.000	
4.421	1117	1675	1.499	0.000	
4.433	910	1538	1.690	0.000	
4.439	865	1534	1.774	0.000	
4.449	764	1302	1.705	0.000	
4.471	433	1123	2.593	0.000	
4.476	734	1135	1.546	0.000	
4.490	385	1005	2.610	0.000	
4.498	555	1186	2.137	0.000	
4.502	695	1166	1.677	0.000	
4.518	587	949	1.618	0.000	
4.526	316	925	2.924	0.000	
4.533	560	989	1.765	0.000	
4.543	469	1001	2.135	0.000	
4.548	222	916	4.130	0.000	
4.553	188	980	5.207	0.000	
4.558	255	1038	4.076	0.000	
4.568	652	1157	1.775	0.000	
4.573	338	1151	3.409	0.000	
4.580	487	1283	2.636	0.000	
4.596	3801	1950	0.513	0.000	
4.631	531	1429	2.692	0.000	
4.663	4548	3737	0.822	0.000	
4.667	2815	3822	1.358	0.000	
4.679	2199	3760	1.710	0.000	
4.688	1068	3585	3.356	0.000	
4.694	2166	3742	1.727	0.000	
4.723	372603	172476	0.463	0.055	
4.894	47034	21828	0.464	0.006	
4.956	80510	28154	0.350	0.011	
4.999	54273	16950	0.312	0.008	
5.068	1137	5713	5.027	0.000	
5.072	8415	5792	0.688	0.001	
5.105	4203	4316	1.027	0.000	5 C14
5.146	660	2685	4.070	0.000	
5.153	2524	2649	1.050	0.000	
5.170	1076	2437	2.265	0.000	
5.174	2371	2438	1.028	0.000	
5.201	1013	2011	1.986	0.000	
5.210	2064	2332	1.130	0.000	
5.224	1083	2304	2.127	0.000	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
5.228	2027	2354	1.162	0.000	
5.276	4673	2682	0.574	0.000	
5.322	195	844	4.328	0.000	
5.331	977	1203	1.231	0.000	
5.356	490	993	2.027	0.000	
5.361	814	1044	1.283	0.000	
5.382	115	387	3.351	0.000	
5.399	619	960	1.551	0.000	
5.406	402	1035	2.576	0.000	
5.410	378	1122	2.968	0.000	
5.423	1663	1555	0.935	0.000	
5.452	5951	5020	0.844	0.000	
5.501	290	797	2.753	0.000	
5.523	2317	2472	1.067	0.000	
5.538	5946	6823	1.147	0.000	
5.792	501855376	76456669	0.152	74.449	6 C16
5.807	79757019	82319946	1.032	11.775	
5.823	77929961	88539160	1.136	11.505	
5.962	75333	84828	1.126	0.011	
5.986	474748	124326	0.262	0.070	
6.070	17103	57180	3.343	0.002	
6.074	120761	57565	0.477	0.017	
6.113	90233	47140	0.522	0.013	
6.165	407438	218439	0.536	0.060	
6.263	944101	374166	0.396	0.139	
6.414	114839	39498	0.344	0.016	7 C18
6.464	53190	31177	0.586	0.007	
6.523	31509	25870	0.821	0.004	
6.551	4785	23963	5.008	0.000	
6.559	51194	25409	0.496	0.007	
6.590	21354	21666	1.015	0.003	
6.612	35061	21127	0.603	0.005	$ 8 o-terph
6.638	17712	19934	1.125	0.002	
6.672	22159	19651	0.887	0.003	
6.683	26846	19268	0.718	0.003	
6.708	5413	18142	3.351	0.000	
6.713	24941	18247	0.732	0.003	
6.747	50657	18478	0.365	0.007	
6.795	23973	17444	0.728	0.003	
6.814	28457	17895	0.629	0.004	
6.837	10746	15445	1.437	0.001	
6.871	29974	21406	0.714	0.004	
6.874	4287	21471	5.009	0.000	
6.882	20520	21675	1.056	0.003	
6.944	32864	17445	0.531	0.004	
6.978	9138	15347	1.679	0.001	
7.014	4130	13830	3.348	0.000	9 C20
7.025	12567	14083	1.121	0.001	
7.038	4952	14274	2.882	0.000	
7.044	6508	14578	2.240	0.000	
7.050	25344	14736	0.581	0.003	
7.099	5531	12365	2.236	0.000	
7.108	16440	12371	0.752	0.002	
7.129	9415	11275	1.198	0.001	
7.175	3589	10327	2.878	0.000	
7.182	7285	10474	1.438	0.001	
7.212	11252	10002	0.889	0.001	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
7.227	5193	9506	1.830	0.000	
7.237	5172	9476	1.832	0.000	
7.247	4652	9357	2.011	0.000	
7.254	3258	9369	2.875	0.000	
7.259	7003	9455	1.350	0.001	
7.272	5540	9252	1.670	0.000	
7.283	4511	9087	2.014	0.000	
7.296	5828	9031	1.550	0.000	
7.308	4850	8866	1.828	0.000	
7.318	3111	9014	2.897	0.000	
7.324	3191	9168	2.873	0.000	
7.328	2775	9325	3.360	0.000	
7.339	6190	9713	1.569	0.000	
7.344	2920	9761	3.343	0.000	
7.350	17091	9874	0.578	0.002	
7.379	7217	8616	1.194	0.001	
7.395	5430	8408	1.548	0.000	
7.404	2492	8342	3.348	0.000	
7.409	1666	8354	5.014	0.000	
7.415	2955	8500	2.877	0.000	
7.423	3887	8782	2.259	0.000	
7.465	28160	14253	0.506	0.004	
7.471	6466	14499	2.242	0.000	
7.480	6649	15111	2.273	0.000	
7.484	26595	15197	0.571	0.003	
7.514	13964	13621	0.975	0.002	
7.539	8118	12614	1.554	0.001	
7.553	10540	12495	1.185	0.001	
7.584	2820	11307	4.010	0.000	
7.590	4522	11429	2.527	0.000	10 C22
7.620	16634	10435	0.627	0.002	
7.653	6793	9783	1.440	0.001	
7.663	8606	9666	1.123	0.001	
7.675	2827	9464	3.347	0.000	
7.683	9373	9620	1.026	0.001	
7.699	3657	9205	2.517	0.000	
7.708	5071	9290	1.832	0.000	
7.713	10483	9274	0.885	0.001	
7.735	10686	9257	0.866	0.001	
7.752	4732	8664	1.831	0.000	
7.765	5624	8765	1.558	0.000	
7.773	5614	8686	1.547	0.000	
7.784	3375	8506	2.520	0.000	
7.793	2118	8517	4.021	0.000	
7.799	10086	8544	0.847	0.001	
7.817	7761	8325	1.073	0.001	
7.833	2415	8088	3.350	0.000	
7.838	2838	8160	2.875	0.000	
7.844	3649	8173	2.240	0.000	
7.858	2009	8069	4.017	0.000	
7.864	4482	8197	1.829	0.000	
7.871	3688	8223	2.230	0.000	
7.879	4875	8269	1.696	0.000	
7.889	2009	8061	4.013	0.000	
7.897	4080	8308	2.036	0.000	
7.916	17828	10103	0.567	0.002	
7.935	4052	9086	2.242	0.000	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
7.940	2229	8948	4.015	0.000	
7.945	5765	8973	1.556	0.000	
7.954	6458	8765	1.357	0.000	
7.976	2099	8428	4.016	0.000	
7.984	10213	8807	0.862	0.001	
7.999	4897	8282	1.691	0.000	
8.013	8782	8112	0.924	0.001	
8.028	5860	7858	1.341	0.000	
8.040	3929	7871	2.003	0.000	
8.054	9161	8146	0.889	0.001	
8.067	2701	7766	2.876	0.000	
8.074	3069	7702	2.510	0.000	
8.081	2694	7742	2.874	0.000	
8.088	2705	7793	2.881	0.000	
8.095	5842	7832	1.341	0.000	
8.104	5419	7841	1.447	0.000	
8.119	5740	7735	1.348	0.000	
8.134	4986	7768	1.558	0.000	
8.141	5893	8009	1.359	0.000	
8.159	9098	8027	0.882	0.001	11 C24
8.174	3156	7971	2.526	0.000	
8.185	2376	7967	3.353	0.000	
8.190	4739	7937	1.675	0.000	
8.202	5181	8028	1.549	0.000	
8.212	1994	8027	4.025	0.000	
8.223	6137	8270	1.348	0.000	
8.236	6864	8171	1.190	0.001	
8.248	2383	7986	3.351	0.000	
8.253	2405	8059	3.351	0.000	
8.259	5294	8207	1.550	0.000	
8.268	2866	8235	2.874	0.000	
8.280	6583	8312	1.263	0.000	
8.289	4538	8296	1.828	0.000	
8.295	2060	8300	4.029	0.000	
8.300	2063	8291	4.020	0.000	
8.313	7062	8400	1.189	0.001	
8.318	1667	8375	5.023	0.000	
8.332	11362	9100	0.801	0.001	
8.343	4357	8741	2.006	0.000	
8.358	1267	8458	6.676	0.000	
8.363	2991	8621	2.882	0.000	
8.371	3980	8983	2.257	0.000	
8.379	6330	9083	1.435	0.000	
8.385	3111	8963	2.881	0.000	
8.393	6706	9050	1.349	0.000	
8.404	4903	8943	1.824	0.000	
8.417	8437	8972	1.063	0.001	
8.438	7166	9103	1.270	0.001	
8.443	3211	9227	2.873	0.000	12 C25
8.450	3688	9295	2.521	0.000	
8.455	2313	9276	4.010	0.000	
8.475	30054	13714	0.456	0.004	
8.504	5760	9733	1.690	0.000	
8.519	2799	9376	3.350	0.000	
8.529	4766	9710	2.037	0.000	
8.537	4875	9815	2.013	0.000	
8.543	8411	9973	1.186	0.001	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
8.555	2969	9916	3.340	0.000	
8.560	3974	9987	2.513	0.000	
8.568	2483	9997	4.026	0.000	
8.572	5007	10043	2.006	0.000	
8.591	14074	10725	0.762	0.002	
8.602	2648	10665	4.028	0.000	
8.606	2159	10862	5.032	0.000	
8.609	2183	10952	5.017	0.000	
8.633	7361	10561	1.435	0.001	
8.647	6774	10495	1.549	0.001	
8.658	2596	10420	4.014	0.000	
8.663	4723	10573	2.239	0.000	
8.669	3156	10589	3.355	0.000	
8.687	15405	11334	0.736	0.002	
8.699	6103	11158	1.828	0.000	
8.707	2223	11136	5.009	0.000	13 C26
8.730	28697	12536	0.437	0.004	
8.754	8658	11553	1.334	0.001	
8.763	2896	11612	4.010	0.000	
8.780	15029	12352	0.822	0.002	
8.788	1833	12243	6.680	0.000	
8.798	11854	12679	1.070	0.001	
8.806	1873	12509	6.677	0.000	
8.809	3133	12565	4.011	0.000	
8.813	2506	12550	5.008	0.000	
8.819	7588	12757	1.681	0.001	
8.829	4418	12679	2.870	0.000	
8.835	6988	12762	1.826	0.001	
8.848	13711	13258	0.967	0.002	
8.872	26625	13656	0.513	0.003	
8.894	4575	13127	2.869	0.000	
8.898	2631	13188	5.013	0.000	
8.902	5918	13262	2.241	0.000	
8.914	8577	13313	1.552	0.001	
8.922	4011	13433	3.349	0.000	
8.926	4724	13546	2.867	0.000	
8.933	6787	13651	2.011	0.001	
8.946	9614	13923	1.448	0.001	
8.951	6274	14004	2.232	0.000	
8.960	5592	14036	2.510	0.000	
8.966	3513	14090	4.011	0.000	
8.969	2829	14171	5.009	0.000	
8.973	4976	14233	2.860	0.000	
8.980	4289	14365	3.350	0.000	
8.996	27708	16441	0.593	0.004	
9.013	8129	14847	1.827	0.001	
9.025	8129	14840	1.826	0.001	
9.036	7503	15229	2.030	0.001	
9.040	4559	15225	3.340	0.000	
9.057	14920	16251	1.089	0.002	
9.067	9915	16831	1.698	0.001	
9.076	8535	17331	2.031	0.001	
9.081	5250	17596	3.352	0.000	
9.084	10558	17675	1.674	0.001	
9.095	4386	17601	4.013	0.000	
9.111	30564	19262	0.630	0.004	
9.128	8346	18722	2.243	0.001	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
9.139	15095	18986	1.258	0.002	
9.149	6655	19050	2.862	0.000	
9.158	23240	19719	0.848	0.003	
9.171	1903	19042	10.005	0.000	
9.175	4773	19156	4.013	0.000	
9.187	23630	19927	0.843	0.003	
9.199	4925	19763	4.013	0.000	
9.208	14115	20394	1.445	0.002	
9.219	12303	20691	1.682	0.001	
9.226	7266	20831	2.867	0.001	
9.233	15622	21000	1.344	0.002	14 C28
9.247	9280	20714	2.232	0.001	
9.262	45057	27849	0.618	0.006	
9.281	22651	23200	1.024	0.003	
9.304	13489	22820	1.692	0.001	
9.307	18038	22862	1.267	0.002	
9.328	8656	21778	2.516	0.001	
9.334	8635	21650	2.507	0.001	
9.343	16240	21738	1.339	0.002	
9.354	5409	21709	4.013	0.000	
9.367	16481	22234	1.349	0.002	
9.370	6683	22346	3.344	0.000	
9.382	14775	23166	1.568	0.002	
9.390	11679	23531	2.015	0.001	
9.394	12888	23584	1.830	0.001	
9.408	18752	23645	1.261	0.002	
9.416	4675	23396	5.004	0.000	
9.428	25138	24392	0.970	0.003	
9.438	20233	24095	1.191	0.002	
9.468	67429	26696	0.396	0.009	
9.496	8413	24122	2.867	0.001	
9.507	12049	24259	2.013	0.001	
9.527	36362	25771	0.709	0.005	
9.538	12891	25911	2.010	0.001	
9.543	6452	25853	4.007	0.000	
9.551	10420	26202	2.515	0.001	
9.557	29750	26593	0.894	0.004	
9.574	6252	25071	4.010	0.000	
9.593	29143	27655	0.949	0.004	
9.599	40783	27905	0.684	0.006	
9.620	13159	26364	2.004	0.001	
9.632	17259	26799	1.553	0.002	
9.640	13210	26592	2.013	0.001	
9.664	35362	28170	0.797	0.005	
9.672	27890	28134	1.009	0.004	
9.696	26737	28634	1.071	0.003	
9.711	53475	30848	0.577	0.007	
9.745	33266	29504	0.887	0.004	$ 15 Triacon Surr
9.752	7348	29501	4.015	0.001	
9.756	20542	29565	1.439	0.003	
9.768	7255	29059	4.005	0.001	
9.773	7275	29173	4.010	0.001	
9.785	31543	30611	0.970	0.004	
9.803	46804	32832	0.701	0.006	
9.821	10456	30060	2.875	0.001	
9.833	30772	31156	1.012	0.004	
9.860	77784	33514	0.431	0.011	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
9.881	12779	32069	2.510	0.001	
9.892	14531	32668	2.248	0.002	
9.896	8201	32902	4.012	0.001	
9.908	23357	33882	1.451	0.003	
9.912	27050	34095	1.260	0.003	
9.939	14585	32570	2.233	0.002	
9.951	23032	33095	1.437	0.003	
9.956	11596	33292	2.871	0.001	
9.966	16544	33271	2.011	0.002	
9.971	11660	33391	2.864	0.001	
9.975	10051	33617	3.345	0.001	
9.983	15209	33983	2.234	0.002	
9.988	15177	33830	2.229	0.002	
9.996	10128	33907	3.348	0.001	
10.018	43348	35629	0.822	0.006	
10.021	7133	35693	5.004	0.001	
10.025	8960	35988	4.016	0.001	
10.034	42064	36944	0.878	0.006	
10.063	65447	38699	0.591	0.009	
10.077	7375	36906	5.004	0.001	
10.083	16743	37428	2.235	0.002	
10.095	34467	38665	1.122	0.005	
10.118	90921	40621	0.447	0.013	
10.151	37738	38047	1.008	0.005	
10.158	11383	38037	3.342	0.001	
10.168	36074	38274	1.061	0.005	
10.181	15072	37809	2.509	0.002	16 C32
10.185	5655	37746	6.675	0.000	
10.198	43905	38471	0.876	0.006	
10.208	24771	38177	1.541	0.003	
10.218	19031	38113	2.003	0.002	
10.228	13353	38279	2.867	0.001	
10.237	21225	38826	1.829	0.003	
10.243	30946	38929	1.258	0.004	
10.266	43064	39733	0.923	0.006	
10.275	11912	39784	3.340	0.001	
10.278	19932	39886	2.001	0.002	
10.293	46366	40725	0.878	0.006	
10.318	46465	41024	0.883	0.006	
10.328	24720	41353	1.673	0.003	
10.334	10308	41278	4.005	0.001	
10.343	29100	41866	1.439	0.004	
10.354	22822	41695	1.827	0.003	
10.360	16568	41490	2.504	0.002	
10.376	31388	42321	1.348	0.004	
10.384	36478	43119	1.182	0.005	
10.393	21427	43144	2.014	0.003	
10.416	82339	44731	0.543	0.012	
10.434	23173	42257	1.824	0.003	
10.455	42801	43684	1.021	0.006	
10.459	19648	44004	2.240	0.002	
10.469	19632	43883	2.235	0.002	
10.492	56113	45807	0.816	0.008	
10.497	20626	45915	2.226	0.003	
10.503	27439	45837	1.671	0.004	
10.513	31833	45842	1.440	0.004	
10.523	6773	45190	6.672	0.001	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
10.529	22697	45513	2.005	0.003	
10.543	39087	46432	1.188	0.005	
10.552	16284	46719	2.869	0.002	
10.558	18796	47158	2.509	0.002	
10.576	69878	48769	0.698	0.010	
10.586	12085	48384	4.004	0.001	
10.592	21757	48469	2.228	0.003	
10.609	46960	50482	1.075	0.006	
10.616	40486	50812	1.255	0.005	17 C34
10.628	52392	50284	0.960	0.007	
10.665	99744	52644	0.528	0.014	
10.680	20832	52264	2.509	0.003	
10.699	126137	55939	0.443	0.018	
10.723	18258	52316	2.865	0.002	
10.733	65550	52928	0.807	0.009	
10.751	49102	51903	1.057	0.007	
10.765	10288	51490	5.005	0.001	
10.777	73220	52877	0.722	0.010	
10.791	15621	52150	3.338	0.002	
10.799	46819	52190	1.115	0.006	
10.817	52000	52328	1.006	0.007	
10.828	13014	52167	4.008	0.001	
10.833	18275	52280	2.861	0.002	
10.838	67284	52271	0.777	0.009	
10.860	15395	51401	3.339	0.002	
10.867	15366	51252	3.335	0.002	
10.874	25712	51608	2.007	0.003	
10.885	59363	52064	0.877	0.008	
10.901	33199	51247	1.544	0.004	
10.911	35859	51446	1.435	0.005	
10.925	15150	50526	3.335	0.002	
10.936	27761	50508	1.819	0.004	
10.954	40634	51235	1.261	0.005	
10.958	17973	51428	2.861	0.002	
10.982	101216	54997	0.543	0.014	
10.999	80380	54264	0.675	0.011	
11.022	15822	52869	3.342	0.002	
11.029	23878	53171	2.227	0.003	
11.032	23908	53219	2.226	0.003	
11.044	39793	53228	1.338	0.005	
11.053	13218	52959	4.007	0.001	19 C36
11.057	26491	53088	2.004	0.003	
11.069	47933	53454	1.115	0.007	
11.079	78088	52997	0.679	0.011	
11.132	4853	48537	10.002	0.000	
11.138	21933	48845	2.227	0.003	
11.148	46678	49317	1.057	0.006	
11.158	12248	49060	4.006	0.001	
11.164	14711	49102	3.338	0.002	
11.179	64473	49939	0.775	0.009	
11.192	19751	49439	2.503	0.002	
11.197	14848	49541	3.337	0.002	
11.202	17336	49566	2.859	0.002	
11.206	12400	49639	4.003	0.001	
11.212	56808	49881	0.878	0.008	
11.230	26830	48794	1.819	0.003	
11.263	19014	47590	2.503	0.002	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
11.267	11927	47790	4.007	0.001	
11.285	66432	50042	0.753	0.009	
11.308	17214	49235	2.860	0.002	
11.312	19684	49285	2.504	0.002	
11.322	19740	49570	2.511	0.002	
11.331	27467	50208	1.828	0.004	
11.334	12565	50301	4.003	0.001	
11.338	17617	50367	2.859	0.002	
11.356	50450	50688	1.005	0.007	
11.383	31641	48774	1.541	0.004	
11.392	14562	48589	3.337	0.002	
11.398	14566	48593	3.336	0.002	
11.405	21947	48858	2.226	0.003	
11.418	36961	49602	1.342	0.005	
11.428	52174	49838	0.955	0.007	
11.438	46900	49605	1.058	0.006	
11.456	66003	49218	0.746	0.009	
11.481	84312	48818	0.579	0.012	
11.518	39837	46996	1.180	0.005	
11.533	55836	46822	0.839	0.008	20 C38
11.560	30101	46465	1.544	0.004	
11.568	20916	46512	2.224	0.003	
11.573	11637	46596	4.004	0.001	
11.579	23274	46598	2.002	0.003	
11.586	13953	46531	3.335	0.002	
11.591	9318	46631	5.004	0.001	
11.623	97892	48831	0.499	0.014	
11.631	17107	48984	2.863	0.002	
11.638	22090	49260	2.230	0.003	
11.642	32050	49351	1.540	0.004	
11.669	95446	50981	0.534	0.014	
11.685	95822	49865	0.520	0.014	
11.788	8918	44609	5.002	0.001	
11.791	35704	44768	1.254	0.005	
11.804	11082	44350	4.002	0.001	
11.813	22172	44403	2.003	0.003	
11.823	19993	44543	2.228	0.002	
11.829	13395	44754	3.341	0.001	
11.837	20184	44981	2.228	0.002	
11.852	26933	44942	1.669	0.003	
11.866	36041	45224	1.255	0.005	
11.877	15835	45355	2.864	0.002	
11.883	18222	45726	2.509	0.002	
11.889	15985	45741	2.861	0.002	
11.896	20679	46117	2.230	0.003	
11.905	23259	46896	2.016	0.003	
11.929	70146	49826	0.710	0.010	
11.936	52288	50085	0.958	0.007	
11.951	14787	49369	3.339	0.002	
11.957	17313	49595	2.865	0.002	
11.961	32199	49647	1.542	0.004	
11.971	19578	49063	2.506	0.002	
11.980	34244	49065	1.433	0.005	
12.019	96987	51133	0.527	0.014	
12.025	48685	51499	1.058	0.007	
12.053	38386	51386	1.339	0.005	
12.062	38575	51549	1.336	0.005	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
12.070	17923	51300	2.862	0.002	
12.078	45780	51141	1.117	0.006	
12.105	31495	48817	1.550	0.004	
12.118	85510	48295	0.565	0.012	
12.148	55474	46657	0.841	0.008	21 C40
12.172	34299	45899	1.338	0.005	
12.181	18286	45754	2.502	0.002	
12.188	20565	45727	2.223	0.003	
12.198	29701	45787	1.542	0.004	
12.212	11377	45530	4.002	0.001	
12.218	29576	45566	1.541	0.004	
12.237	41054	45750	1.114	0.006	
12.243	13695	45701	3.337	0.002	
12.253	27528	46122	1.675	0.004	
12.260	16149	46201	2.861	0.002	
12.272	32473	46571	1.434	0.004	
12.347	231342	54259	0.235	0.034	
12.355	96470	54322	0.563	0.014	
12.383	13155	52687	4.005	0.001	
12.389	52817	52930	1.002	0.007	
12.434	117936	55204	0.468	0.017	
12.440	19323	55283	2.861	0.002	
12.448	22049	55156	2.502	0.003	
12.460	127044	56114	0.442	0.018	
12.500	63536	55700	0.877	0.009	
12.519	44746	56237	1.257	0.006	
12.523	16928	56556	3.341	0.002	
12.528	14154	56666	4.003	0.002	
12.532	14154	56644	4.002	0.002	
12.538	25607	57089	2.229	0.003	
12.543	31284	57010	1.822	0.004	
12.560	76588	57084	0.745	0.011	
12.574	22463	56167	2.500	0.003	
12.583	192414	56305	0.293	0.028	
12.668	201456	54098	0.269	0.029	
12.722	63529	49368	0.777	0.009	
12.744	14574	48683	3.340	0.002	
12.757	68233	49046	0.719	0.010	
12.777	29106	48653	1.672	0.004	
12.802	69072	49884	0.722	0.010	
12.805	19947	49915	2.502	0.002	
12.813	12457	49907	4.006	0.001	
12.826	42860	50672	1.182	0.006	
12.830	15192	50711	3.338	0.002	
12.835	63121	50727	0.804	0.009	
12.856	30109	50299	1.671	0.004	
12.871	12459	49875	4.003	0.001	
12.876	24950	49913	2.001	0.003	
12.883	12458	49860	4.002	0.001	
12.892	24999	50091	2.004	0.003	
12.904	37682	50442	1.339	0.005	
12.918	60965	51059	0.838	0.009	
12.929	15268	50972	3.338	0.002	
12.950	101236	52476	0.518	0.014	
12.991	32619	50285	1.542	0.004	
13.030	23826	47690	2.002	0.003	
13.047	49429	47410	0.959	0.007	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
13.072	11668	46709	4.003	0.001	
13.077	14056	46964	3.341	0.002	
13.083	21201	47214	2.227	0.003	
13.092	45034	47490	1.055	0.006	
13.103	33139	47401	1.430	0.004	
13.119	58622	47300	0.807	0.008	
13.136	61979	46406	0.749	0.009	
13.163	36232	45399	1.253	0.005	
13.172	13552	45219	3.337	0.002	
13.178	13550	45211	3.337	0.002	
13.183	13581	45318	3.337	0.002	
13.188	15867	45365	2.859	0.002	
13.193	11350	45433	4.003	0.001	
13.206	54879	45909	0.837	0.008	
13.233	74220	46899	0.632	0.010	
13.246	18724	46923	2.506	0.002	
13.250	14089	47028	3.338	0.002	
13.254	9392	46999	5.004	0.001	
13.261	35241	47103	1.337	0.005	
13.270	21093	46884	2.223	0.003	
13.278	16404	46889	2.858	0.002	
13.284	28108	46937	1.670	0.004	
13.309	27777	46575	1.677	0.004	
13.313	11643	46617	4.004	0.001	
13.323	30391	46938	1.544	0.004	
13.337	49696	47554	0.957	0.007	
13.345	11906	47686	4.005	0.001	
13.352	21499	47921	2.229	0.003	
13.358	14416	48133	3.339	0.002	
13.366	24163	48487	2.007	0.003	
13.391	108474	49842	0.459	0.016	
13.411	39818	49922	1.254	0.005	
13.421	140245	49882	0.356	0.020	
13.468	75433	46221	0.613	0.011	
13.519	59701	44435	0.744	0.008	
13.538	26345	44021	1.671	0.003	
13.553	17475	43727	2.502	0.002	
13.559	19699	43828	2.225	0.002	
13.566	15324	43832	2.860	0.002	
13.574	28519	43956	1.541	0.004	
13.585	21950	43943	2.002	0.003	
13.595	26497	44341	1.673	0.003	
13.603	22230	44574	2.005	0.003	
13.608	11135	44585	4.004	0.001	
13.633	100703	46371	0.460	0.014	
13.650	25255	45974	1.820	0.003	
13.663	20511	45675	2.227	0.003	
13.670	15945	45584	2.859	0.002	
13.677	40973	45642	1.114	0.006	
13.688	4544	45448	10.002	0.000	
13.693	29520	45508	1.542	0.004	
13.718	24720	44995	1.820	0.003	
13.727	11216	44890	4.002	0.001	
13.735	29185	45025	1.543	0.004	
13.752	17874	44782	2.505	0.002	
13.767	35874	45020	1.255	0.005	
13.775	36036	45104	1.252	0.005	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
13.785	11226	44939	4.003	0.001	
13.790	47016	44953	0.956	0.006	
13.813	11118	44516	4.004	0.001	
13.818	37641	44507	1.182	0.005	
13.832	15424	44192	2.865	0.002	
13.838	17564	43967	2.503	0.002	
13.844	26339	43892	1.666	0.003	
13.855	30567	43821	1.434	0.004	
13.865	23854	43526	1.825	0.003	
13.882	28266	43639	1.544	0.004	
13.886	30418	43629	1.434	0.004	
13.901	34702	43472	1.253	0.005	
13.920	48162	44005	0.914	0.007	
13.928	17577	43956	2.501	0.002	
13.941	15410	44084	2.861	0.002	
13.946	11045	44251	4.006	0.001	
13.949	24369	44341	1.820	0.003	
13.959	22103	44264	2.003	0.003	
13.967	22088	44195	2.001	0.003	
13.976	33207	44336	1.335	0.004	18 Filter Peak
13.998	24195	44018	1.819	0.003	
14.007	15335	43888	2.862	0.002	
14.014	17519	43863	2.504	0.002	
14.019	54335	43870	0.807	0.008	
14.046	10722	42915	4.003	0.001	
14.052	19305	42955	2.225	0.002	
14.058	8568	42864	5.003	0.001	
14.067	38739	43159	1.114	0.005	
14.077	15012	42931	2.860	0.002	
14.083	25753	42977	1.669	0.003	
14.102	25682	42913	1.671	0.003	
14.108	19267	42865	2.225	0.002	
14.116	12834	42815	3.336	0.001	
14.126	25874	43369	1.676	0.003	
14.133	56339	43595	0.774	0.008	
14.161	32503	43582	1.341	0.004	
14.165	10909	43696	4.006	0.001	
14.170	15313	43822	2.862	0.002	
14.175	10960	43911	4.007	0.001	
14.178	13176	43945	3.335	0.001	
14.183	19785	43976	2.223	0.002	
14.191	8796	44018	5.005	0.001	
14.197	17636	44177	2.505	0.002	
14.208	28815	44459	1.543	0.004	
14.219	8873	44379	5.002	0.001	
14.223	13318	44445	3.337	0.001	
14.229	28860	44456	1.540	0.004	
14.247	15436	44194	2.863	0.002	
14.260	37147	43758	1.178	0.005	
14.274	45685	43705	0.957	0.006	
	677340272	268782821		100.000	

Total unknown % area = 25.478

Supelco®

www.sigmaaldrich.com

Certificate of Composition - Analytical Standard

BASE STOCK

Product no.: 22523051
Lot no.: LRAC9813
Expiry Date: May 2023
Manufacturing Date: May 2021
Storage: Refrigerate
Solvent/Matrix: Dichloromethane
Certificate version: LRAC9813.01 *(Note: Certificates may be updated due to the availability of new data. Check our website at: www.sigma-aldrich.com for the most current version.)*

J005199
SVOA-ABN BASE STOCK-200-800ug/ml
Expires 5/31/2023
Prepared By Jianqing Zhou 5/18/2021

Analyte	*Assigned Value*	*Units*	*Raw Material Purity,%*	*Raw Material Lot*
3,3'-DICHLOROBENZIDINE CAS# 91-94-1	802	µg/mL	99.9	LC27068
2,4-DINITROTOLUENE CAS# 121-14-2	802	µg/mL	97.8	LB46632
2,6-DINITROTOLUENE CAS# 606-20-2	801	µg/mL	99.9	LB79891
HEXACHLOROCYCLOPENTADIENE CAS# 77-47-4	802	µg/mL	96.0	LB95525
N-NITROSODIMETHYLAMINE CAS# 62-75-9	801	µg/mL	95.0	2019-030598 5
PERYLENE CAS# 198-55-0	201	µg/mL	99.6	04101PG
ANILINE CAS# 62-53-3	803	µg/mL	100.0	10126MG
4-CHLOROANILINE CAS# 106-47-8	803	µg/mL	100.0	MKBZ6909V
2-NITROANILINE CAS# 88-74-4	802	µg/mL	99.9	LC05068
3-NITROANILINE CAS# 99-09-2	802	µg/mL	99.9	LC09264
4-NITROANILINE CAS# 100-01-6	802	µg/mL	99.9	LC11400
PYRIDINE (LOW WATER) CAS# 110-86-1	802	µg/mL	100.0	SHBJ9218

Measurement method: Where applicable, the assigned value is based on a purity determination by mass balance and gravimetrically prepared value.

Intended use: Intended for R&D and Analytical Use only. Not for drug, household or other uses.

Packaging: 1 mL in amber ampule

Instructions for handling and correct use: Use on the as is basis. The internal pressure of the container may be slightly different from the atmospheric pressure at the user`s location. Open slowly and carefully to avoid dispersion of the material.

Sigma-Aldrich RTC, 2931 Soldier Springs Rd. Laramie, WY 82070, USA;
Tel. 1 307-742-5452; Fax 1 855-831-9211; www.sigmaaldrich.com
Sigma-Aldrich RTC is a subsidiary of Merck KGaA, Darmstadt, Germany.

Health and safety information: All chemical reference materials should be considered potentially hazardous and should be used only by qualified laboratory personnel. Please refer to the Safety Data Sheet for detailed information about the nature of any hazard and appropriate precautions to be taken.

Certificate issue date: 12-May-2021

Andy Ommen - QC Manager

Mark Pooler - QA Supervisor

Certificate of analysis revision history:

Certificate version	Date	Reason for version
LRAC9813.01	12-May-2021	Original Release Date

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Disclaimer: The purchaser is required to determine the suitability of this product for any particular application. Sigma-Aldrich RTC makes no warranty of any kind, express or implied, other than its products meet all quality control standards set by Sigma-Aldrich RTC. We do not guarantee that the product can be used for any particular application.

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Certificate of Composition - Analytical Standard

ACID STOC"

Product no.: 22523046
Lot no.: LRAC9812
Expiry Date: May 2023
Manufacturing Date: May 2021
Storage: Refrigerate
Solvent/Matrix: Dichloromethane
Certificate version: LRAC9812.01 *(Note: Certificates may be updated due to the availability of new data. Check our website at: www.sigma-aldrich.com for the most current version.)*

J005200
SVOA-ABN ACID STOCK-200-800ug/ml
Solvent / Lot: DCM
Prep: 5/18/2021 by JZ
Exp: 5/31/2023
Location:

JZ 5/18/21

Analyte	*Assigned Value*	*Units*	*Raw Material Purity,%*	*Raw Material Lot*
2,4-DIMETHYLPHENOL CAS# 105-67-9	802	µg/mL	99.9	LB88935
2,4-DICHLOROPHENOL CAS# 120-83-2	802	µg/mL	100.0	BCBZ6787
2,4,5-TRICHLOROPHENOL CAS# 95-95-4	802	µg/mL	99.9	JS00008
2,4-DINITROPHENOL CAS# 51-28-5	1806	µg/mL	75.9	MKBP5833V
2,4,6-TRICHLOROPHENOL CAS# 88-06-2	803	µg/mL	98.7	LB82983
4-CHLORO-3-METHYLPHENOL CAS# 59-50-7	801	µg/mL	99.9	JS00013
4-NITROPHENOL CAS# 100-02-7	801	µg/mL	99.9	LC10889
2-METHYL-4,6-DINITROPHENOL CAS# 534-52-1	1804	µg/mL	99.7	LC18338
PENTACHLOROPHENOL CAS# 87-86-5	803	µg/mL	98.7	MKCK8156
BENZOIC ACID CAS# 65-85-0	1805	µg/mL	99.9	LC16514

Measurement method: Where applicable, the assigned value is based on a purity determination by mass balance and gravimetrically prepared value.

Intended use: Intended for R&D and Analytical Use only. Not for drug, household or other uses.

Packaging: 1 mL in amber ampule

Instructions for handling and correct use: Use on the as is basis. The internal pressure of the container may be slightly different from the atmospheric pressure at the user`s location. Open slowly and carefully to avoid dispersion of the material.

Health and safety information: All chemical reference materials should be considered potentially hazardous and should be used only by qualified laboratory personnel. Please refer to the Safety Data Sheet for detailed information about the nature of any hazard and appropriate precautions to be taken.

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Sigma-Aldrich RTC is a subsidiary of Merck KGaA, Darmstadt, Germany.

Agilent

Certificate of Analysis

J008074

SVOA PAH STD 2000ug/ml
Expires 6/30/2023
Prepared By Joshua Rains 8/5/2021

Product Name: PAH Standard

Product Number: US-106N-1

Lot Number: 0006540449

Lot Issue Date: 11-Jun-2020

Expiration Date: 30-Jun-2023

Description:

This analytical reference material (RM) was manufactured and verified in accordance with an ISO 9001 registered quality system, and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	Concentration ± Uncertainty
acenaphthene	000083-32-9	RM10879	2008 ± 10 µg/mL
acenaphthylene	000208-96-8	RM10891	2003 ± 10 µg/mL
anthracene	000120-12-7	RM14212	2006 ± 10 µg/mL
benz[a]anthracene	000056-55-3	RM16072	2006 ± 10 µg/mL
benzo[b]fluoranthene	000205-99-2	RM14571	2005 ± 10 µg/mL
benzo[k]fluoranthene	000207-08-9	RM14321	2009 ± 10 µg/mL
benzo[ghi]perylene	000191-24-2	RM15761	2008 ± 10 µg/mL
benzo[a]pyrene	000050-32-8	RM12669	2009 ± 10 µg/mL
chrysene	000218-01-9	RM12260	2009 ± 10 µg/mL
dibenz[a,h]anthracene	000053-70-3	RM06786	2009 ± 10 µg/mL
fluoranthene	000206-44-0	RM12277	2004 ± 10 µg/mL
fluorene	000086-73-7	RM09441	2009 ± 10 µg/mL
indeno[1,2,3-cd]pyrene	000193-39-5	RM14192	2009 ± 10 µg/mL
naphthalene	000091-20-3	NT00970	2008 ± 10 µg/mL
phenanthrene	000085-01-8	RM10495	2009 ± 10 µg/mL
pyrene	000129-00-0	RM03479	2008 ± 10 µg/mL

Matrix: methylene chloride/benzene (1:1)

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

ISO 17034 Cert No.
AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026

www.agilent.com/quality/

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY

ISO 17025 Cert
No. AT-1937

Certificate of Analysis

Product Number: US-106N-1 **Lot Number:** 0006540449

Storage Conditions: Store at Room Temperature (15° to 30°C).

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This RM was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Intended Use:
This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Hazards:
Refer to the Safety Data Sheet on www.agilent.com for information regarding this RM.

Expiration of Certification:
The certification of this RM is valid until the expiration date specified above, provided the RM is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the RM is damaged, contaminated, or otherwise modified.

Maintenance of Certification:
If substantive changes are noted that affect the certification before the expiration of this certificate, Agilent will notify the purchaser.

Sample lot approver:

Monica Bourgeois
QMS Representative

ISO 17034 Cert No.
AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026
Page: 2 of 2

www.agilent.com/quality/

ISO 17025 Cert
No. AT-1937

Certificate of Analysis

Produced by Phenova
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Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101244
Description: Benzidines Standard
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Methylene Chloride

Lot Number: CL16062
Certification Date: November 19, 2020
Expiration Date: November 30, 2030

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Benzidine	92-87-5	2000	± 2.740%
3,3'-Dichlorobenzidine	91-94-1	2000	± 3.229%

J008310
Benzidines std @2000ug/ml
Expires 11/30/2030
Prepared By Van Spohn 8/12/2021

ACCREDITED
Reference Material Producer
Certicate No. 2427.02

Phenova is an accredited ISO/IEC 17034 Reference Material Producer and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ACCREDITED
Chemical Testing Laboratory
Certicate No. 2427.03

IL64691018_us

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1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO 17034[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

   Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
[3] ISO 17034 – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

Certificate of Analysis

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Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101246
Description: Benzoic Acid
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Methylene Chloride

Lot Number: CL16693
Certification Date: May 6, 2021
Expiration Date: April 30, 2031

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Benzoic acid	65-85-0	2000	± 4.383%

K3238

ACCREDITED
Reference Material Producer
Certicate No. 2427.02

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Chemical Testing Laboratory
Certicate No. 2427.03

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1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO 17034[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 25 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
[3] ISO 17034 – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

Certificate of Analysis

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Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ▪ Tel: 303-940-0033 ▪ Fax: 303-940-0043 ▪ info@phenova.com
Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101443
Description: Aniline
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Methylene Chloride

Lot Number: CL17696
Certification Date: December 14, 2021
Expiration Date: December 31, 2029

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aniline	62-53-3	1000	± 0.760%

K 3239

ACCREDITED
Reference Material Producer
Certicate No. 2427.02

phenova Certified Reference Materials | A Phenomenex Company

Phenova is an accredited ISO/IEC 17034 Reference Material Producer and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ACCREDITED
Chemical Testing Laboratory
Certicate No. 2427.03

IL64691018_us

Certificate of Analysis

Produced by Phenova
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Access your Safety Data Sheets and digital Certificates at www.phenova.com/documents.

1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO 17034[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
[3] ISO 17034 – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

Certificate of Analysis

BNAs - Sandy Loam 1

Certified Reference Material

Description

Product ID CRM143-50G
Lot **LRAC8918**
Expiration Date January 2024
Manufacturing Date January 2021
Storage Conditions Refrigerate
Solvent/Matrix SOIL

Certified Values

Analyte	*Units*	*Certified Value* [1,4]
1,2,4-Trichlorobenzene	µg/Kg	1477 ± 181
1,3-Dichlorobenzene (m-Dichlorobenzene)	µg/Kg	1625 ± 292
1-Chloronaphthalene	µg/Kg	2809 ± 84
2,3-Dimethylphenol	µg/Kg	4552 ± 137
2,4,5-Trichlorophenol	µg/Kg	3438 ± 245
2,4,6-Trichlorophenol	µg/Kg	2194 ± 251
2,4-Dichlorophenol	µg/Kg	6991 ± 394
2,4-Dimethylphenol	µg/Kg	6357 ± 879
2,4-Dinitrophenol	µg/Kg	2922 ± 523
2,4-Dinitrotoluene (2,4-DNT)	µg/Kg	3318 ± 442
2,6-Dichlorophenol	µg/Kg	4578 ± 874
2,6-Dimethylphenol	µg/Kg	7582 ± 228
2-Chloronaphthalene	µg/Kg	2223 ± 168
2-Chlorophenol	µg/Kg	1678 ± 202
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	µg/Kg	5148 ± 685
2-Methylphenol (o-Cresol)	µg/Kg	6004 ± 573
2-Nitrophenol	µg/Kg	6456 ± 383
3,4-Dimethylphenol	µg/Kg	7185 ± 216
3+4-Methylphenol (m+p-Cresol)	µg/Kg	8033 ± 1613
4-Bromophenyl phenyl ether (BDE-3)	µg/Kg	7169 ± 310
4-Chloro-3-methylphenol	µg/Kg	2071 ± 110
4-Chlorophenyl phenylether	µg/Kg	2052 ± 113
4-Methylphenol (p-Cresol)	µg/Kg	6617 ± 1371
4-Nitrophenol	µg/Kg	6812 ± 595
Acenaphthene	µg/Kg	5489 ± 380

Description

Lot **LRAC8918**
Expiration Date January 2024
Manufacturing Date January 2021
Storage Conditions Refrigerate
Solvent/Matrix SOIL

Acenaphthylene	µg/Kg	1948 ± 240
Anthracene	µg/Kg	2866 ± 237
Benzo(a)anthracene	µg/Kg	5751 ± 552
Benzo(a)pyrene	µg/Kg	5902 ± 612
Benzo(b)fluoranthene	µg/Kg	3010 ± 409
Benzo(b+k)fluoranthene	µg/Kg	6534 ± 196
Benzo(g,h,i)perylene	µg/Kg	1380 ± 136
Benzo(k)fluoranthene	µg/Kg	2215 ± 237
Butyl benzyl phthalate	µg/Kg	3511 ± 384
Carbazole	µg/Kg	5412 ± 407
Chrysene	µg/Kg	1477 ± 72
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	µg/Kg	2905 ± 321
Dibenzo(a,h)anthracene	µg/Kg	3420 ± 302
Dibenzofuran	µg/Kg	6130 ± 253
Dimethyl phthalate	µg/Kg	4537 ± 250
Di-n-butyl phthalate	µg/Kg	1721 ± 154
Di-n-octyl phthalate	µg/Kg	2744 ± 288
Fluoranthene	µg/Kg	2497 ± 222
Fluorene	µg/Kg	3724 ± 222
Hexachlorobutadiene	µg/Kg	1877 ± 245
Indeno(1,2,3-cd) pyrene	µg/Kg	3914 ± 409
Isophorone	µg/Kg	1615 ± 170
Naphthalene	µg/Kg	4458 ± 480
Nitrobenzene	µg/Kg	3539 ± 266
n-Nitrosodimethylamine	µg/Kg	1580 ± 402
n-Nitrosodiphenylamine	µg/Kg	2854 ± 379
Pentachlorophenol	µg/Kg	3411 ± 358
Phenanthrene	µg/Kg	5052 ± 385
Phenol	µg/Kg	2660 ± 184
Pyrene	µg/Kg	2964 ± 256
Pyridine	µg/Kg	1008 ± 30

Informational Values

Certificate of Analysis

BNAs - Sandy Loam 1

Certified Reference Material

Description

Product ID CRM143-50G
Lot **LRAC8918**
Expiration Date January 2024
Manufacturing Date January 2021
Storage Conditions Refrigerate
Solvent/Matrix SOIL

Analyte	*Units*	*Suggested Acceptance Windows*	*Standard Deviation*
1,2,4-Trichlorobenzene	µg/Kg	148 to 2853	459
1,3-Dichlorobenzene (m-Dichlorobenzene)	µg/Kg	163 to 3440	605
1-Chloronaphthalene	µg/Kg	1123 to 4494	562
2,3-Dimethylphenol	µg/Kg	1821 to 7284	910
2,4,5-Trichlorophenol	µg/Kg	1003 to 5872	811
2,4,6-Trichlorophenol	µg/Kg	640 to 3748	518
2,4-Dichlorophenol	µg/Kg	2391 to 11591	1533
2,4-Dimethylphenol	µg/Kg	0.00 to 13959	2534
2,4-Dinitrophenol	µg/Kg	1169 to 4675	584
2,4-Dinitrotoluene (2,4-DNT)	µg/Kg	1248 to 5388	690
2,6-Dichlorophenol	µg/Kg	1831 to 7324	916
2,6-Dimethylphenol	µg/Kg	3033 to 12132	1516
2-Chloronaphthalene	µg/Kg	748 to 3699	492
2-Chlorophenol	µg/Kg	415 to 2942	421
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	µg/Kg	0.00 to 10347	1733
2-Methylphenol (o-Cresol)	µg/Kg	1306 to 10702	1566
2-Nitrophenol	µg/Kg	1534 to 11379	1641
3,4-Dimethylphenol	µg/Kg	2874 to 11495	1437
3+4-Methylphenol (m+p-Cresol)	µg/Kg	4054 to 16218	2027
4-Bromophenyl phenyl ether (BDE-3)	µg/Kg	2901 to 11437	1423
4-Chloro-3-methylphenol	µg/Kg	677 to 3464	464
4-Chlorophenyl phenylether	µg/Kg	756 to 3348	432
4-Methylphenol (p-Cresol)	µg/Kg	2647 to 10587	1323
4-Nitrophenol	µg/Kg	681 to 14762	2650
Acenaphthene	µg/Kg	2243 to 8736	1082
Acenaphthylene	µg/Kg	712 to 3183	412
Anthracene	µg/Kg	1218 to 4515	550
Benzo(a)anthracene	µg/Kg	2806 to 8696	982
Benzo(a)pyrene	µg/Kg	2512 to 9292	1130
Benzo(b)fluoranthene	µg/Kg	1197 to 4822	604
Benzo(b+k)fluoranthene	µg/Kg	2614 to 10454	1307

Description

Lot **LRAC8918**
Expiration Date January 2024
Manufacturing Date January 2021
Storage Conditions Refrigerate
Solvent/Matrix SOIL

Benzo(g,h,i)perylene	µg/Kg	489 to 2271	297
Benzo(k)fluoranthene	µg/Kg	892 to 3537	441
Butyl benzyl phthalate	µg/Kg	1255 to 5766	752
Carbazole	µg/Kg	2032 to 8792	1127
Chrysene	µg/Kg	669 to 2284	269
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	µg/Kg	765 to 5045	713
Dibenzo(a,h)anthracene	µg/Kg	1257 to 5583	721
Dibenzofuran	µg/Kg	2766 to 9493	1121
Dimethyl phthalate	µg/Kg	1842 to 7231	898
Di-n-butyl phthalate	µg/Kg	495 to 2947	409
Di-n-octyl phthalate	µg/Kg	690 to 4798	685
Fluoranthene	µg/Kg	984 to 4009	504
Fluorene	µg/Kg	1638 to 5810	695
Hexachlorobutadiene	µg/Kg	425 to 3329	484
Indeno(1,2,3-cd) pyrene	µg/Kg	870 to 6957	1015
Isophorone	µg/Kg	437 to 2792	392
Naphthalene	µg/Kg	1131 to 7784	1109
Nitrobenzene	µg/Kg	1024 to 6054	838
n-Nitrosodimethylamine	µg/Kg	632 to 2528	316
n-Nitrosodiphenylamine	µg/Kg	1142 to 4567	571
Pentachlorophenol	µg/Kg	341 to 7037	1209
Phenanthrene	µg/Kg	2307 to 7798	915
Phenol	µg/Kg	681 to 4639	660
Pyrene	µg/Kg	1118 to 4810	615
Pyridine	µg/Kg	403 to 1613	202

Additional Information:

DESCRIPTION

The organic sample is a soil containing extractable BNAs for analysis by 8100, 8270, 8310 or equivalent methods.

This product consist of a 5 vials each containing 10g of soil for analysis of PAHs. Each vial is identical and has been tested how homogeneity. Only one vial is need for test the remaining vials are to be used for multiple methods or routine testing.

The soil has been sterilized to minimize degradation of the sample.

The sample has been sized to 100 mesh.

Required storage condition is 4ºC.

The sample has been intentionally prepared with an apparent headspace.

STORAGE

The sample should be stored at 4ºC. It has been determined to be stable for the duration of the expiration date.

After sub-sampling replace cap securely and store remaining sample at 4ºC.

The shelf life of the product was determined by historic stability of similar CRM's. The expiration date may be extended based on stock and popularity upon successful stability testing by a 17025 accredited laboratory.

Certificate of Analysis

BNAs - Sandy Loam 1

Certified Reference Material

Description

Product ID	CRM143-50G
Lot	**LRAC8918**
Expiration Date	January 2024
Manufacturing Date	January 2021
Storage Conditions	Refrigerate
Solvent/Matrix	SOIL

Stability and shelf life after opening must be determined by the user, taking into account sampling frequency/volume and all local conditions.

SAMPLE PREPARATION

Extract the complete contents of a single vial. Transfer entire contents of one vial to extraction vessel. Rinse vial and cap with extraction solvent.

Assume a 10g sample size for all calculations.

Note: Sample extracts and calibration solutions should be in the same solvent.

Report all results on a wet weight basis, do not correct for moisture.

NOTE: For method 8100 and using a packed column gas chromatographic method or cannot adequately resolve the following may coelute in four pairs of compounds: anthracene and phenanthrene; chrysene and benzo(a)anthracene; benzo(b)fluoranthene and benzo(k)fluoranthene; and dibenzo(a,h)anthracene and indeno(1,2,3-cd)pyrene.

SCOPE AND APPLICATION

The BNAs in Soil Certified Reference Material (CRM) consists of 5 10mL VOA vials, with a Teflon lined closures containing approximately 10 grams of soil, fortified with BNAs. Being a natural matrix waste sample the analyst is challenged by the same preparation problems, analytical interferences, etc. as is typical for similar matrices received by the laboratory for analysis.

Description

Lot	**LRAC8918**
Expiration Date	January 2024
Manufacturing Date	January 2021
Storage Conditions	Refrigerate
Solvent/Matrix	SOIL

1 **Metrological traceability:** Traceable to the SI and higher order standards from NIST through an unbroken chain of comparisons. The balance used to weigh raw materials is accurate to +/-0.0001 g and calibrated regularly using mass standards traceable to NIST. All dilutions were performed gravimetrically. Additionally, individual analytes are traceable to NIST SRMs where available and specified above.
4 Ucrm - Uncertainty values in this document are expressed as Expanded Uncertainty (Ucrm) corresponding to the 95% confidence interval. Ucrm is derived from the combined standard uncertainty multiplied by the coverage factor k, which is obtained from a *t*-distribution and degrees of freedom. K=2 unless specified. The components of combined standard uncertainty include the uncertainties due to characterization, homogeneity, long term stability, and short term stability (transport). The components due to stability are generally considered to be negligible unless otherwise indicated by stability studies. The mathematical representation of the Ucrm calculation is as follows:

$$u_{CRM} = \sqrt{u_{char}^2 + u_{\text{hom } ogeneity}^2 + u_{stability}^2}$$

***k*:** Coverage factor derived from a t-distribution table, based on the degrees of freedom of the data set. Assume 2.0 for a **Confidence interval = 95%**

6 Analytical Value- For QC verification of the certified value only- not to be used in calculations. Represents the analytical data obtained by comparison to a standard as analyzed by the method described in the CoA or another acceptable method. The result may differ from the certified value and UCRM based on method uncertainty as well as the uncertainty associated with the standard used for comparison.

Traceability: The standard was manufactured under an ISO/IEC 17025:2017 certified quality system. The balance used to weigh raw materials is accurate to +/- 0.0001g and calibrated regularly using mass standards traceable to NIST. All dilutions were preformed gravimetrically. Additionally, individual analytes are traceable to NIST SRMs where available and specified above.

Homogeneity: Homogeneity was assessed in accordance with ISO 17034:2016. Completed units were sampled using a random stratified sampling protocol. The results of chemical analysis were then compared using a one-way analysis of variance approach as described by TNI EL-V3-2009 Appendix A.2. See Instructions for minimum sub-sample size.

Expiration is at end of month given on certificate and label.

MSDS reports for components comprising greater than 1.0% of the solution or 0.1% for components known to be carcinogens are available upon request.

THIS PRODUCT WAS DESIGNED, PRODUCED AND VERIFIED FOR ACCURACY AND STABILITY IN ACCORDANCE WITH **ISO/IEC 17025:2017 (ANAB Cert AT-1467)** and **ISO 17034:2016 (ANAB Cert AR-1470).**

Andy Ommen - QC Manager

Mark Pooler - QA Supervisor

Certification Date	January 05, 2021
Version	0-152021

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Certificate of Analysis

Phenova Certified Reference Materials are sold by Phenomenex.
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Access your MSDS and digital C of A at **www.phenomenex.com/mysupport. Re-order at www.phenomenex.com/standards**

Certified Reference Material

This product is included in Phenova's ISO/IEC 17025 and ISO Guide 34 Scopes of Accreditation

Catalog No.:	AL0-101291	**Lot Number:**	CL11000
Description:	GC/MS Tuning Mix	**Certification Date:**	May 9, 2014
Storage:	4 °C	**Expiration Date:**	December 31, 2023
Provided As:	1 mL in 2 mL Ampoule in Methylene chloride	**Revision Date:**	August 5, 2015

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty (%)
Benzidine	92-87-5	1000	± 0.208%
Decafluorotriphenylphosphine (DFTPP)	5074-71-5	1000	± 0.057%
4,4'-DDT	50-29-3	1000	± 0.056%
Pentachlorophenol	87-86-5	1000	± 0.061%

K003891
GC/MS Tune solution-1000ug/ml
Solvent / Lot: CL11000
Prep: 4/22/2022 by VS
Exp: 12/31/2023
Location:

ACCREDITED
Reference Material Producer
Certificate No. 2427.02

phenova® Certified Reference Materials

Manufactured by Phenova, Inc.
Phenova's testing and calibration results are internationally recognized through the ILAC MRA. Phenova is an accredited ISO Guide 34 Reference Material Provider and ISO/IEC 17025 accredited Chemical Testing Laboratory.

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Chemical Testing Laboratory
Certificate No. 2427.03

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Reference Materials Producer
Cert #2495.01

Certificate of Analysis

Chemical Testing
Cert #2495.02

Catalog Number: ECS-A-030 **Lot No.** AA210126005

Description: Base/Neutrals Mix 1

Matrix: Methylene Chloride

Manufactured Date: 1-26-2021

Expiration Date: 1-26-2024

This **SPEXOrganics**® Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality control standard for organic chromatography instrumentation such as GC, GC-MS, LC, and LC-MS. It can be employed in USEPA, ASTM and other methods relevant to the certified properties listed below.

Certified Compounds:

Compound	CAS #	Labeled	Purity	Certified†	Uncertainty
1,2,4-Trichlorobenzene	120-82-1	2000 µg/mL	99%	2010 µg/mL	± 50 µg/mL
1,2-Dichlorobenzene	95-50-1	2000 µg/mL	99%	2002 µg/mL	± 50 µg/mL
1,3-Dichlorobenzene	541-73-1	2000 µg/mL	98%	2021 µg/mL	± 51 µg/mL
1,4-Dichlorobenzene	106-46-7	2000 µg/mL	99%	2012 µg/mL	± 50 µg/mL
2,4-Dinitrotoluene	121-14-2	2000 µg/mL	97%	2006 µg/mL	± 50 µg/mL
2,6-Dinitrotoluene	606-20-2	2000 µg/mL	99.6%	2012 µg/mL	± 50 µg/mL
2-Chloronaphthalene	91-58-7	2000 µg/mL	98%	2004 µg/mL	± 50 µg/mL
4-Bromodiphenyl ether	101-55-3	2000 µg/mL	99%	2022 µg/mL	± 51 µg/mL
4-Chlorophenyl-phenyl ether	7005-72-3	2000 µg/mL	98%	2001 µg/mL	± 50 µg/mL
Azobenzene	103-33-3	2000 µg/mL	98%	2001 µg/mL	± 50 µg/mL
Bis(2-chloro-1-methylethyl) ether	108-60-1	2000 µg/mL	98.9%	2010 µg/mL	± 50 µg/mL
bis(2-Chloroethoxy)methane	111-91-1	2000 µg/mL	97%	2001 µg/mL	± 50 µg/mL
bis(2-Chloroethyl)ether	111-44-4	2000 µg/mL	99%	2002 µg/mL	± 50 µg/mL
Bis(2-Ethylhexyl)phthalate	117-81-7	2000 µg/mL	99%	2003 µg/mL	± 50 µg/mL
Butylbenzyl phthalate	85-68-7	2000 µg/mL	98%	2000 µg/mL	± 50 µg/mL
Carbazole	86-74-8	2000 µg/mL	95%	2009 µg/mL	± 50 µg/mL
Di-n-butyl phthalate	84-74-2	2000 µg/mL	99%	2020 µg/mL	± 50 µg/mL
Di-n-octyl phthalate	117-84-0	2000 µg/mL	98%	2000 µg/mL	± 50 µg/mL
Diethyl phthalate	84-66-2	2000 µg/mL	99.5%	2002 µg/mL	± 50 µg/mL
Dimethyl phthalate	131-11-3	2000 µg/mL	99%	2006 µg/mL	± 50 µg/mL
Hexachlorobenzene	118-74-1	2000 µg/mL	99%	2003 µg/mL	± 50 µg/mL
Hexachlorobutadiene	87-68-3	2000 µg/mL	97%	2003 µg/mL	± 50 µg/mL
Hexachlorocyclopentadiene	77-47-4	2000 µg/mL	99%	2003 µg/mL	± 50 µg/mL
Hexachloroethane	67-72-1	2000 µg/mL	98%	2003 µg/mL	± 50 µg/mL
Isophorone	78-59-1	2000 µg/mL	97%	2003 µg/mL	± 50 µg/mL
N-Nitrosodi-n-propylamine	621-64-7	2000 µg/mL	98%	2000 µg/mL	± 50 µg/mL
N-Nitrosodiphenylamine	86-30-6	2000 µg/mL	97%	2001 µg/mL	± 50 µg/mL
Nitrobenzene	98-95-3	2000 µg/mL	99%	2001 µg/mL	± 50 µg/mL
Pyridine	110-86-1	2000 µg/mL	99%	2004 µg/mL	± 50 µg/mL
N-Nitrosodimethylamine	62-75-9	2000 µg/mL	97%	2000 µg/mL	± 50 µg/mL

Certificate of Reference Material

Catalog Number: ECS-A-030 **Lot No.** AA210126005

Description: Base/Neutrals Mix 1

Matrix: Methylene Chloride

Manufactured Date: 1-26-2021

Expiration Date: 1-26-2024

Final Solution Verification:

Final solution integrity verified by Gas Chromatography/Mass Spectrometry. The mass spectrum of each compound was confirmed against the NIST mass spectral database.

† Certified concentration based on gravimetric weights and corrected for the purity of the compound(s) used to prepare the standard. Analytical balance calibration is verified daily with C1 weight set #23-190006 which is registered with Atlantic Scale, and traceable to NIST and NJ Division of Weights and Measures.

This CRM is guaranteed stable and accurate to within the uncertainty listed for the certified value. This includes uncertainty components due to preparation, homogeneity, short term and long term stability. During the stated period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution. For further information, contact the Sales Support Department at crmsales@spexcsp.com.

Date of Certification: 1-26-2021 Certifying Officer: Shannon Mora

Report of Certification

Catalog Number: ECS-A-030 **Lot No.** AA210126005

Description: Base/Neutrals Mix 1

Matrix: Methylene Chloride

Manufactured Date: 1-26-2021

Expiration Date: 1-26-2024

This Certified Reference Material (CRM) has been prepared and certified under an ISO 9001:2008, ISO 17025:2005, and ISO Guide 34:2009 Quality System consistent with the following standards:

- ISO 9001:2008: Quality management systems - Requirements - Certified by UL-DQS
- ISO 17025:2005: General Requirements for the Competence of Testing and Calibration Laboratories - Accredited by A2LA
- ISO Guide 34:2009: General Requirements for the Competence of Reference Material Producers - Accredited by A2LA
- ISO Guide 31:2000: Reference Materials - Contents of Certificates and Labels
- ISO Guide 35:2006: Reference Materials - General and statistical principals for certification
- Guide to the Expression of Uncertainty in Measurement 1997
- EURACHEM/CITAC Guide: Qualifying Uncertainty in Analytical Measurements - Second Edition
- ASTM Guide D6362-98
- NIST Technical Note 1297
- ILAC-G12-2000: Guidelines for the requirements for the competence of reference material producers
- ISO/REMCO N280

Storage Requirements:

To ensure the stability of the product once it arrives in your laboratory , please store this product in a refrigerator (2°C to 8°C). Note: Shipping conditions may differ from storage conditions. The EXPIRATION DATE is calculated from the MANUFACTURED DATE using our stability data and is applicable only if the product is unopened and stored under the prescribed conditions.

Instructions for Use:

Let material come to room temperature before use. Check for precipitate and if necessary sonicate for one minute. If compounds do not dissolve after one minute then sonicate further until the product is dissolved. A clear appearance is acceptable. The minimum recommended amount that should be removed from this vial is 5 µL with a 25µL gas tight syringe. All solutions should be thoroughly mixed, by shaking, prior to use. All surfaces that come in contact with the solution must be thoroughly cleaned prior to use. Dilutions should be performed only with Class A volumetric glassware.

Material Source:

All analytes and matrix materials are obtained and verified by SPEX CertiPrep from pre-qualified vendors as per ISO guidelines. Vendor identifications are proprietary, however sources of all materials used in the preparation and testing of SPEX CertiPrep CRMs are tracked and documented. For assistance, please contact sales support at crmsales@spexcsp.com.

Method of Preparation:

Clean laboratory procedures and techniques have been used throughout the preparation. All materials, equipment, and analytical instrumentation have been qualified prior to use. The highest purity solvents and Class A / calibrated volumetrics have been been used in all preparations.

Homogeneity:

The homogeneity of this CRM has been confirmed by procedures consistent with ISO 17025:2005, ISO Guide 34:2009, and ASTM D6362-98 Appendix X2. Random, replicate samples of the final, packaged material have been analyzed to prove homogeneity in accordance with our internal procedure 4300-HOMOGEN-1A. This is consistent with the intended use of this CRM. The Degree of Homogeneity, as expressed as maximum between-bottle variation, is 1.2%

Statistical Estimator and Confidence Limits:

The Certified value 'X' as listed on the reverse of this document is at the 95% level of confidence and can be expressed as:

- $X = x \pm U$ where X=certified value, U=expanded uncertainty, x=property value
- $U = ku_c$ where k=2 is the coverage factor at the 95% confidence level
- u_c = combined standard uncertainty obtained by combining the individual compound standard uncertainty components u_i, where $u_c = \sqrt{\sum u_i^2}$

Legal Notice:

SPEX CertiPrep Certified Reference Materials are not for any cosmetic, drug, or household application and are to be used only by qualified individuals who are trained in appropriate procedures. No claims against SPEX CertiPrep of any kind whatsoever, whether based on breech of warranty, alleged negligence, or otherwise, with respect to this Reference Material shall be greater than the purchase price. In no event shall SPEX CertiPrep be liable for any loss of profits or any incidental, special, or consequential damages.

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ACCREDITED
Reference Materials Producer
Cert #2495.01

ECS

Certificate of Analysis

ilac-MRA ACCREDITED
Chemical Testing
Cert #2495.02

Catalog Number: ECS-A-030 **Lot No.** AA210126005

Description: Base/Neutrals Mix 1

Matrix: Methylene Chloride

Manufactured Date: 1-26-2021

Expiration Date: 1-26-2024

This **SPEXOrganics®** Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality control standard for organic chromatography instrumentation such as GC, GC-MS, LC, and LC-MS. It can be employed in USEPA, ASTM and other methods relevant to the certified properties listed below.

Certified Compounds:

Compound	CAS #	Labeled	Purity	Certified†	Uncertainty
1,2,4-Trichlorobenzene	120-82-1	2000 µg/mL	99%	2010 µg/mL	± 50 µg/mL
1,2-Dichlorobenzene	95-50-1	2000 µg/mL	99%	2002 µg/mL	± 50 µg/mL
1,3-Dichlorobenzene	541-73-1	2000 µg/mL	98%	2021 µg/mL	± 51 µg/mL
1,4-Dichlorobenzene	106-46-7	2000 µg/mL	99%	2012 µg/mL	± 50 µg/mL
2,4-Dinitrotoluene	121-14-2	2000 µg/mL	97%	2006 µg/mL	± 50 µg/mL
2,6-Dinitrotoluene	606-20-2	2000 µg/mL	99.6%	2012 µg/mL	± 50 µg/mL
2-Chloronaphthalene	91-58-7	2000 µg/mL	98%	2004 µg/mL	± 50 µg/mL
4-Bromodiphenyl ether	101-55-3	2000 µg/mL	99%	2022 µg/mL	± 51 µg/mL
4-Chlorophenyl-phenyl ether	7005-72-3	2000 µg/mL	98%	2001 µg/mL	± 50 µg/mL
Azobenzene	103-33-3	2000 µg/mL	98%	2001 µg/mL	± 50 µg/mL
Bis(2-chloro-1-methylethyl) ether	108-60-1	2000 µg/mL	98.9%	2010 µg/mL	± 50 µg/mL
bis(2-Chloroethoxy)methane	111-91-1	2000 µg/mL	97%	2001 µg/mL	± 50 µg/mL
bis(2-Chloroethyl)ether	111-44-4	2000 µg/mL	99%	2002 µg/mL	± 50 µg/mL
Bis(2-Ethylhexyl)phthalate	117-81-7	2000 µg/mL	99%	2003 µg/mL	± 50 µg/mL
Butylbenzyl phthalate	85-68-7	2000 µg/mL	98%	2000 µg/mL	± 50 µg/mL
Carbazole	86-74-8	2000 µg/mL	95%	2009 µg/mL	± 50 µg/mL
Di-n-butyl phthalate	84-74-2	2000 µg/mL	99%	2020 µg/mL	± 50 µg/mL
Di-n-octyl phthalate	117-84-0	2000 µg/mL	98%	2000 µg/mL	± 50 µg/mL
Diethyl phthalate	84-66-2	2000 µg/mL	99.5%	2002 µg/mL	± 50 µg/mL
Dimethyl phthalate	131-11-3	2000 µg/mL	99%	2006 µg/mL	± 50 µg/mL
Hexachlorobenzene	118-74-1	2000 µg/mL	99%	2003 µg/mL	± 50 µg/mL
Hexachlorobutadiene	87-68-3	2000 µg/mL	97%	2003 µg/mL	± 50 µg/mL
Hexachlorocyclopentadiene	77-47-4	2000 µg/mL	99%	2003 µg/mL	± 50 µg/mL
Hexachloroethane	67-72-1	2000 µg/mL	98%	2003 µg/mL	± 50 µg/mL
Isophorone	78-59-1	2000 µg/mL	97%	2003 µg/mL	± 50 µg/mL
N-Nitrosodi-n-propylamine	621-64-7	2000 µg/mL	98%	2000 µg/mL	± 50 µg/mL
N-Nitrosodiphenylamine	86-30-6	2000 µg/mL	97%	2001 µg/mL	± 50 µg/mL
Nitrobenzene	98-95-3	2000 µg/mL	99%	2001 µg/mL	± 50 µg/mL
Pyridine	110-86-1	2000 µg/mL	99%	2004 µg/mL	± 50 µg/mL
N-Nitrosodimethylamine	62-75-9	2000 µg/mL	97%	2000 µg/mL	± 50 µg/mL

K004542

Certificate of Reference Material

Catalog Number: ECS-A-030 **Lot No.** AA210126005

Description: Base/Neutrals Mix 1

Matrix: Methylene Chloride

Manufactured Date: 1-26-2021

Expiration Date: 1-26-2024

Final Solution Verification:

Final solution integrity verified by Gas Chromatography/Mass Spectrometry. The mass spectrum of each compound was confirmed against the NIST mass spectral database.

† Certified concentration based on gravimetric weights and corrected for the purity of the compound(s) used to prepare the standard. Analytical balance calibration is verified daily with C1 weight set #23-190006 which is registered with Atlantic Scale, and traceable to NIST and NJ Division of Weights and Measures.

This CRM is guaranteed stable and accurate to within the uncertainty listed for the certified value. This includes uncertainty components due to preparation, homogeneity, short term and long term stability. During the stated period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution. For further information, contact the Sales Support Department at crmsales@spexcsp.com.

Date of Certification: 1-26-2021 Certifying Officer: Shannon Nave

Report of Certification

Catalog Number: ECS-A-030 **Lot No.** AA210126005

Description: Base/Neutrals Mix 1

Matrix: Methylene Chloride

Manufactured Date: 1-26-2021

Expiration Date: 1-26-2024

This Certified Reference Material (CRM) has been prepared and certified under an ISO 9001:2008, ISO 17025:2005, and ISO Guide 34:2009 Quality System consistent with the following standards:

- ISO 9001:2008: Quality management systems - Requirements - Certified by UL-DQS
- ISO 17025:2005: General Requirements for the Competence of Testing and Calibration Laboratories - Accredited by A2LA
- ISO Guide 34:2009: General Requirements for the Competence of Reference Material Producers - Accredited by A2LA
- ISO Guide 31:2000: Reference Materials - Contents of Certificates and Labels
- ISO Guide 35:2006: Reference Materials - General and statistical principals for certification
- Guide to the Expression of Uncertainty in Measurement 1997
- EURACHEM/CITAC Guide: Qualifying Uncertainty in Analytical Measurements - Second Edition
- ASTM Guide D6362-98
- NIST Technical Note 1297
- ILAC-G12-2000: Guidelines for the requirements for the competence of reference material producers
- ISO/REMCO N280

Storage Requirements:

To ensure the stability of the product once it arrives in your laboratory, please store this product in a refrigerator (2°C to 8°C). Note: Shipping conditions may differ from storage conditions. The EXPIRATION DATE is calculated from the MANUFACTURED DATE using our stability data and is applicable only if the product is unopened and stored under the prescribed conditions.

Instructions for Use:

Let material come to room temperature before use. Check for precipitate and if necessary sonicate for one minute. If compounds do not dissolve after one minute then sonicate further until the product is dissolved. A clear appearance is acceptable. The minimum recommended amount that should be removed from this vial is 5µL with a 25µL gas tight syringe. All solutions should be thoroughly mixed, by shaking, prior to use. All surfaces that come in contact with the solution must be thoroughly cleaned prior to use. Dilutions should be performed only with Class A volumetric glassware.

Material Source:

All analytes and matrix materials are obtained and verified by SPEX CertiPrep from pre-qualified vendors as per ISO guidelines. Vendor identifications are proprietary, however sources of all materials used in the preparation and testing of SPEX CertiPrep CRMs are tracked and documented. For assistance, please contact sales support at crmsales@spexcsp.com.

Method of Preparation:

Clean laboratory procedures and techniques have been used throughout the preparation. All materials, equipment, and analytical instrumentation have been qualified prior to use. The highest purity solvents and Class A / calibrated volumetrics have been been used in all preparations.

Homogeneity:

The homogeneity of this CRM has been confirmed by procedures consistent with ISO 17025:2005, ISO Guide 34:2009, and ASTM D6362-98 Appendix X2. Random, replicate samples of the final, packaged material have been analyzed to prove homogeneity in accordance with our internal procedure 4300-HOMOGEN-1A. This is consistent with the intended use of this CRM. The Degree of Homogeneity, as expressed as maximum between-bottle variation, is 1.2%

Statistical Estimator and Confidence Limits:

The Certified value 'X' as listed on the reverse of this document is at the 95% level of confidence and can be expressed as:

- $X = x \pm U$ where X=certified value, U=expanded uncertainty, x=property value
- $U = ku_c$ where k=2 is the coverage factor at the 95% confidence level
- u_c = combined standard uncertainty obtained by combining the individual compound standard uncertainty components u_i where $u_c = \sqrt{\sum u_i^2}$

Legal Notice:

SPEX CertiPrep Certified Reference Materials are not for any cosmetic, drug, or household application and are to be used only by qualified individuals who are trained in appropriate procedures. No claims against SPEX CertiPrep of any kind whatsoever, whether based on breech of warranty, alleged negligence, or otherwise, with respect to this Reference Material shall be greater than the purchase price. In no event shall SPEX CertiPrep be liable for any loss of profits or any incidental, special, or consequential damages.

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Certificate of Analysis

Product Name: Toxic Substances Standard

Product Number: US-104N-1 **Lot Issue Date:** 02-Jul-2021

Lot Number: 0006620643 **Expiration Date:** 31-Jul-2023

Description:
This analytical reference material (RM) was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	Concentration ± Uncertainty
aniline	000062-53-3	RM12853	2005 ± 10 µg/mL
benzyl alcohol	000100-51-6	RM10547	2004 ± 10 µg/mL
4-chloroaniline	000106-47-8	RM01886	2002 ± 10 µg/mL
dibenzofuran	000132-64-9	RM02077	2002 ± 10 µg/mL
2-methylnaphthalene	000091-57-6	RM01258	2006 ± 10 µg/mL
2-nitroaniline	000088-74-4	RM02402	2003 ± 10 µg/mL
3-nitroaniline	000099-09-2	RM02424	2003 ± 10 µg/mL
4-nitroaniline	000100-01-6	RM02425	2003 ± 10 µg/mL

Matrix: methylene chloride (dichloromethane)

Storage Conditions: Store at Room Temperature (15° to 30°C).

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This RM was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Intended Use:
This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

K004544
toxic sub mix#2
Solvent / Lot: methylene chloride
Prep: 5/11/2022 by JZ
Exp: 7/31/2023
Location:

05/11/22

ANAB ACCREDITED ISO17034 REFERENCE MATERIAL PRODUCER
ISO 17034 Cert No. AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026

www.agilent.com/quality/
CSD-QA-015.1

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ISO 17025 Cert No. AT-1937

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31493 **Lot No.:** A0181243

Description : CLP 04.1 BNA Surrogate Mix

CLP 04.1 BNA Surrogate Mix 1000-1500 µg/mL, Methylene Chloride, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : October 31, 2025 **Storage:** 10°C or colder

Handling: Sonicate prior to use. **Ship:** Ambient

05/11/22

K004545
CLP 04.1 BNA SURR MIX
Solvent / Lot: AO175316
Prep: 5/11/2022 by JZ
Exp: 10/20/2025
Location:

Elution Order	Compound	Gr (weig					
1	2-Fluorophenol **CAS #** 367-12-4 (Lot STBJ2508) **Purity** 99%	1,50				µg/mL	Stressed
				+/-	53.3632	µg/mL	Stressed
2	Phenol-d6 **CAS #** 13127-88-3 (Lot PR-31262) **Purity** 99%	1,506.0	µg/mL	+/-	8.9452	µg/mL	Gravimetric
				+/-	43.9882	µg/mL	Unstressed
				+/-	53.3632	µg/mL	Stressed
3	2-Chlorophenol-d4 **CAS #** 93951-73-6 (Lot PR-30568) **Purity** 99%	1,510.0	µg/mL	+/-	8.9689	µg/mL	Gravimetric
				+/-	44.1050	µg/mL	Unstressed
				+/-	53.5049	µg/mL	Stressed
4	1,2-Dichlorobenzene-d4 **CAS #** 2199-69-1 (Lot PR-32542/022621DB1 **Purity** 99%	1,004.0	µg/mL	+/-	5.9635	µg/mL	Gravimetric
				+/-	29.3255	µg/mL	Unstressed
				+/-	35.5754	µg/mL	Stressed
5	Nitrobenzene-d5 **CAS #** 4165-60-0 (Lot PR-29940A) **Purity** 99%	1,008.0	µg/mL	+/-	5.9872	µg/mL	Gravimetric
				+/-	29.4423	µg/mL	Unstressed
				+/-	35.7172	µg/mL	Stressed
6	2-Fluorobiphenyl **CAS #** 321-60-8 (Lot 19169) **Purity** 99%	1,006.0	µg/mL	+/-	5.9753	µg/mL	Gravimetric
				+/-	29.3839	µg/mL	Unstressed
				+/-	35.6463	µg/mL	Stressed
7	2,4,6-Tribromophenol **CAS #** 118-79-6 (Lot MKCJ7664) **Purity** 99%	1,506.0	µg/mL	+/-	8.9452	µg/mL	Gravimetric
				+/-	43.9882	µg/mL	Unstressed
				+/-	53.3632	µg/mL	Stressed

Certificate of Analysis

phenova Certified Reference Materials | A Phenomenex Company

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ▪ Tel: 303-940-0033 ▪ Fax: 303-940-0043 ▪ info@phenova.com
Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101246
Description: Benzoic Acid
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Methylene Chloride

Lot Number: CL17953
Certification Date: January 31, 2022
Expiration Date: January 31, 2032

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Benzoic acid	65-85-0	2000	± 2.714%

K004603
Benzoic Acid @2000ug/ml
Solvent / Lot: N/A
Prep: 5/13/2022 by JZ
Exp: 1/31/2032
Location: GC

5/13/22

ACCREDITED
Reference Material Producer
Certicate No. 2427.02

phenova Certified Reference Materials | A Phenomenex Company

Phenova is an accredited ISO/IEC 17034 Reference Material Producer and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ACCREDITED
Chemical Testing Laboratory
Certicate No. 2427.03

IL64691018 us

Certificate of Analysis

phenova Certified Reference Materials | A Phenomenex Company

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6390 Joyce Drive STE 100, Golden, CO 80403 USA ▪ Tel: 303-940-0033 ▪ Fax: 303-940-0043 ▪ info@phenova.com
Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101244
Description: Benzidines Standard
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Methylene Chloride

Lot Number: CL17662
Certification Date: December 2, 2021
Expiration Date: November 30, 2031

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Benzidine	92-87-5	2000	± 0.211%
3,3'-Dichlorobenzidine	91-94-1	2000	± 1.305%

K004604
Benzidines std @2000ug/ml
Solvent / Lot: MeCl2
Prep: 5/13/2022 by JZ
Exp: 11/30/2031
Location: GC

5/13/22

ACCREDITED
Reference Material Producer
Certicate No. 2427.02

phenova Certified Reference Materials | A Phenomenex Company

Phenova is an accredited ISO/IEC 17034 Reference Material Producer and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ACCREDITED
Chemical Testing Laboratory
Certicate No. 2427.03

IL64691018_us

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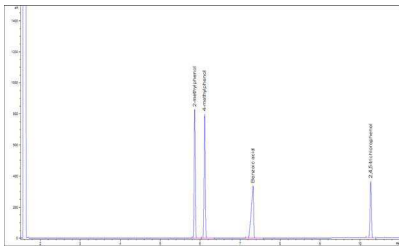
Certificate of Analysis - Certified Reference Material

EPA TCL Hazardous Substances Mix 1

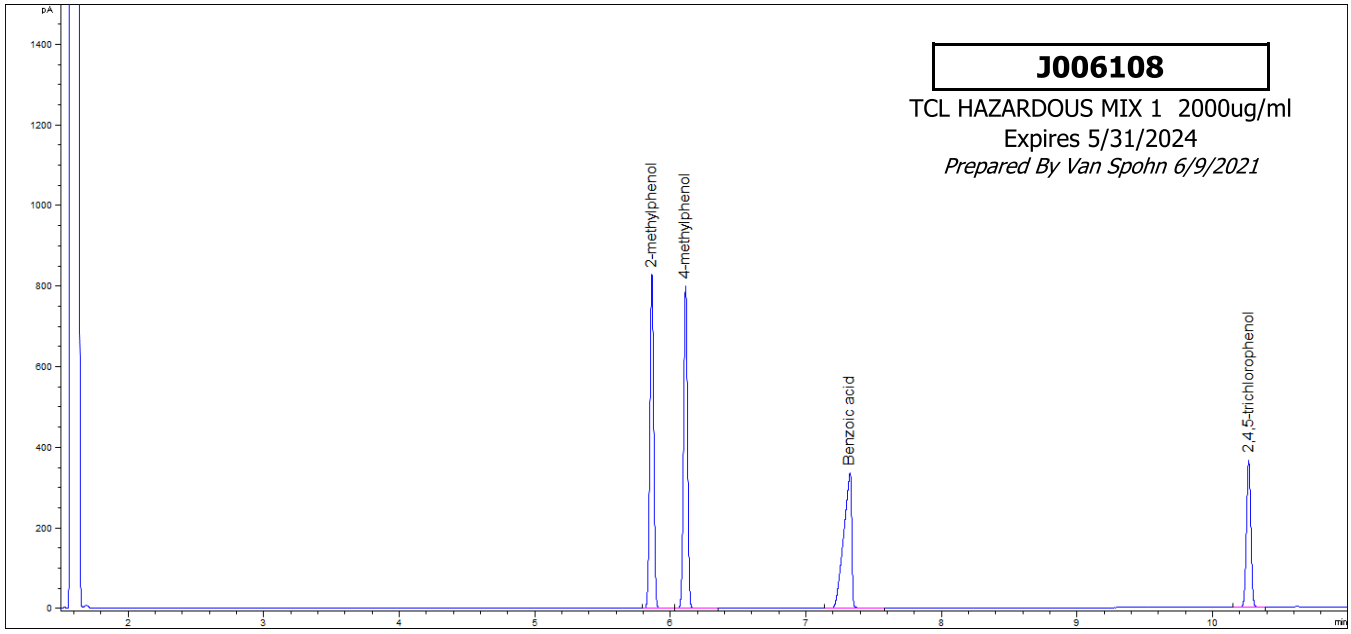
Product no.: 48907
Lot no.: LRAC9610
Expiry Date: May 2024
Manufacturing Date: May 2021
Storage: Refrigerate
Solvent/Matrix: DICHLOROMETHANE
Certificate version: LRAC9610.01 *(Note: Certificates may be updated due to the availability of new data. Check our website at: www.sigma-aldrich.com for the most current version.)*



Certified Values:

Analyte	*Certified Value*	*Units*	*Raw Material Purity,%*	*Elution order*	*Raw Material Lot*
2-METHYLPHENOL CAS# 95-48-7	2004 ± 9	µg/mL	99.0	1	G1735A
4-METHYLPHENOL CAS# 106-44-5	2004 ± 13	µg/mL	98.9	2	06921MG
BENZOIC ACID CAS# 65-85-0	2012 ± 6	µg/mL	99.9	3	LC16514
2,4,5-TRICHLOROPHENOL CAS# 95-95-4	2003 ± 6	µg/mL	99.9	4	JS00008

Informational Values:



Additional Information:
Analytical Method Parameters:
Column: Equity-5, 30 m × 0.53 mm I.D., 1.5 µm film thickness (Column #98)
Carrier Gas: H2, Flow: 4.5 mL/min
Inlet Temperature: 170 °C, Injection Volume: 1 µL
Injection Mode: Split, Split Ratio: 20:1

Sigma-Aldrich RTC, 2931 Soldier Springs Rd. Laramie, WY 82070, USA;
Tel. 1 307-742-5452; Fax 1 855-831-9211; www.sigmaaldrich.com
Sigma-Aldrich RTC is a subsidiary of Merck KGaA, Darmstadt, Germany.

Temperature Program: 80 °C @ 10 °C/min to 190 °C (Hold 5 min)
Detector: FID
Detector Temperature: 310 °C

Metrological traceability: Traceable to the SI and higher order standards from NIST through an unbroken chain of comparisons. The balance used to weigh raw materials is accurate to +/-0.0001 g and calibrated regularly using mass standards traceable to NIST. All dilutions were performed gravimetrically. Additionally, individual analytes are traceable to NIST SRMs where available and specified above.

Measurement method: Where applicable, the assigned value is based on a purity determination by mass balance and gravimetrically prepared value.

Intended use: Intended for R&D and Analytical Use only. Not for drug, household or other uses.

Packaging: 1 mL in amber ampule

Instructions for handling and correct use: Use on the as is basis. The internal pressure of the container may be slightly different from the atmospheric pressure at the user`s location. Open slowly and carefully to avoid dispersion of the material.

Health and safety information: All chemical reference materials should be considered potentially hazardous and should be used only by qualified laboratory personnel. Please refer to the Safety Data Sheet for detailed information about the nature of any hazard and appropriate precautions to be taken.

Accreditation: Sigma-Aldrich RTC is accredited by the US accreditation authority ANAB as a registered reference material producer AR-1470 in accordance with ISO 17034.

Certificate issue date: 20-May-2021

Andy Ommen - QC Manager

Mark Pooler - QA Supervisor

Details on metrological traceability: This standard has been gravimetrically prepared using balances that have been fully qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error. Fill volume to predetermined specifications is gravimetrically verified throughout the dispensing process using qualified and calibrated balances. Further traceability to a corresponding Primary Standard may be achieved through a direct comparison assay. Where a Primary Standard is available, the assay value will be included in the specified section of the COA.

Associated uncertainty: Ucrm - Uncertainty values in this document are expressed as Expanded Uncertainty (Ucrm) corresponding to the 95% confidence interval. Ucrm is derived from the combined standard uncertainty multiplied by the coverage factor k, which is obtained from a *t*-distribution and degrees of freedom. The components of combined standard uncertainty include the uncertainties due to characterization, homogeneity, long term stability, and short term stability (transport). The components due to stability are generally considered to be negligible unless otherwise indicated by stability studies. The mathematical representation of the Ucrm calculation is as follows:

$$u_{CRM} = \sqrt{u_{char}^2 + u_{\text{hom}\ ogeneity}^2 + u_{stability}^2}$$

Homogeneity assessment: Homogeneity was assessed in accordance with ISO Guide 35. Completed units were sampled using a random stratified sampling protocol. The results of chemical analysis were then compared by Single Factor Analysis of Variance (ANOVA). The uncertainty due to homogeneity was derived from the ANOVA. Heterogeneity was not detected under the conditions of the ANOVA.

Stability assessment: Significance of the stability assessment will be demonstrated if the analytical result of the study and the range of values represented by the Expanded Uncertainty do not overlap the result of the original assay and the range of its values represented by the Expanded Uncertainty. The method employed will usually be the same method used to characterize the assay value in the initial

Certificate of analysis revision history:

Certificate version	Date	Reason for version
LRAC9610.01	20-May-2021	Original Release Date

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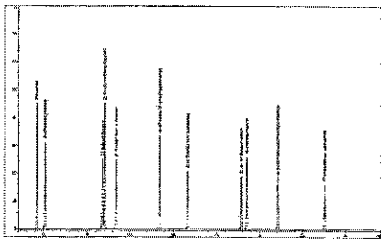
Supelco®

www.sigmaaldrich.com

Certificate of Analysis - Certified Reference Material

EPA TCL Phenols Mix

Product no.: 48904
Lot no.: LRAD0139
Expiry Date: July 2024
Manufacturing Date: July 2021
Storage: REFRIGERATE
Solvent/Matrix: DICHLOROMETHANE
Certificate version: LRAD0139.01 *(Note: Certificates may be updated due to the availability of new data. Check our website at: www.sigma-aldrich.com for the most current version.)*



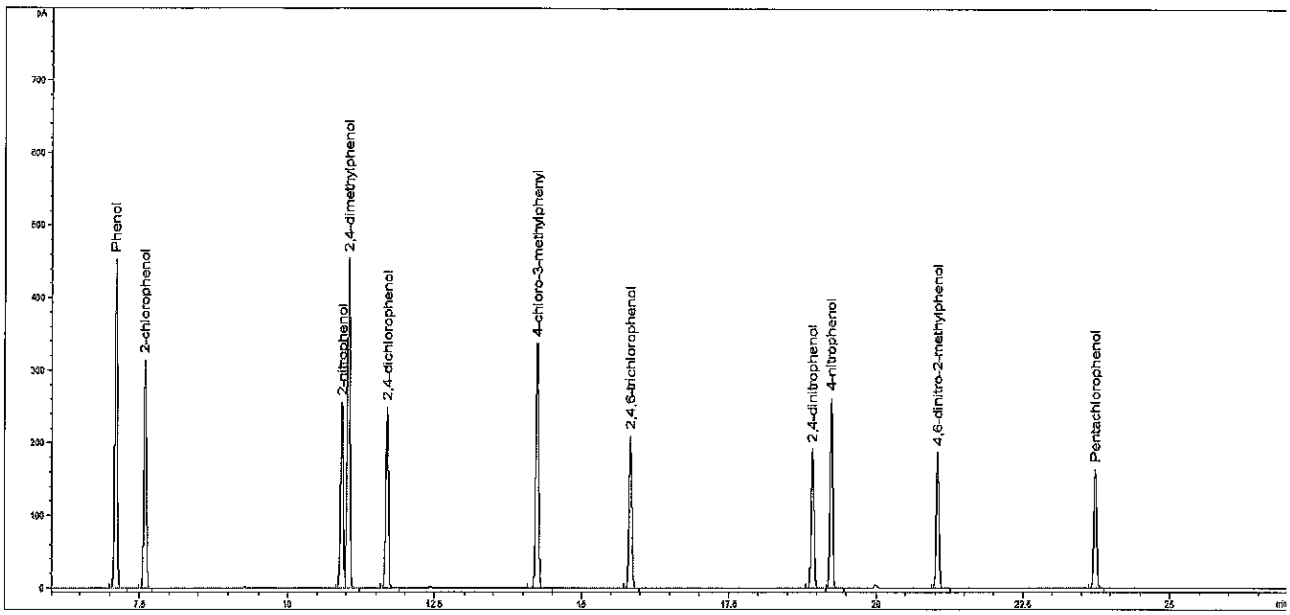
Certified Values:

Analyte	*Certified Value*	*Units*	*Raw Material Purity,%*	*Raw Material Lot*
2-CHLOROPHENOL CAS# 95-57-8	2001 ± 25	µg/mL	99.9	STBG3033V
2-NITROPHENOL CAS# 88-75-5	1999 ± 18	µg/mL	99.3	15905BB
2,4-DIMETHYLPHENOL CAS# 105-67-9	2000 ± 14	µg/mL	99.2	05421CO
2,4-DICHLOROPHENOL CAS# 120-83-2	2000 ± 17	µg/mL	99.5	03221TN
4-CHLORO-3-METHYLPHENOL CAS# 59-50-7	2000 ± 5	µg/mL	99.9	JS00013
2,4,6-TRICHLOROPHENOL CAS# 88-06-2	2002 ± 5	µg/mL	99.5	04212PS
2,4-DINITROPHENOL CAS# 51-28-5	2000 ± 28	µg/mL	66.9	STBJ5751
4-NITROPHENOL CAS# 100-02-7	2000 ± 33	µg/mL	99.0	04628LT
2-METHYL-4,6-DINITROPHENOL CAS# 534-52-1	2000 ± 27	µg/mL	99.7	LC18338
PENTACHLOROPHENOL CAS# 87-86-5	1999 ± 25	µg/mL	97.9	MKCD2150

ASSAY Method

J013597
TCL Phenols Mix 2000ug/ml
Solvent / Lot: LRAD0139
Prep: 12/30/2021 by VS
Exp: 7/31/2024
Location:

Sigma-Aldrich RTC, 2931 Soldier Springs Rd. Laramie, WY 82070, USA;
Tel. 1 307-742-5452; Fax 1 855-831-9211; www.sigmaaldrich.com
Sigma-Aldrich RTC is a subsidiary of Merck KGaA, Darmstadt, Germany.



METHOD: GC (Bellefonte Method)

Column: SPB-5, 30 m × 0.53 mm I.D., 1.5 µm film thickness
Carrier Gas: H_2 Flow Rate: 4.5 mL/min
Inlet Temperature: 200 °C Injection Volume: 1.0 µL
Injection Mode: 25:1
Temperature Program: 80 °C (Hold 2 min) @ 6 °C/min to 260 °C (Hold 5 min)
Detector: FID Temperature: 310 °C

Elution details:

EO	RT(MIN)	ANALYTE
1	7.095	Phenol
2	7.585	2-chlorophenol
3	10.925	2-nitrophenol
4	11.037	2,4-dimethylphenol
5	11.696	2,4-dichlorphenol
6	14.242	4-chloro-3-m3thylphenol
7	15.842	2,4,6-trichlorophenol
8	18.93	2,4-dinitrophenol
9	19.25	4-nitrophenol
10	21.05	4,6-dinitro-2-methylphenol
11	23.752	Pentachlorophenol

Metrological traceability: Traceable to the SI and higher order standards from NIST through an unbroken chain of comparisons. The balance used to weigh raw materials is accurate to +/-0.0001 g and calibrated regularly using mass standards traceable to NIST. All dilutions were performed gravimetrically. Additionally, individual analytes are traceable to NIST SRMs where available and specified above.

Measurement method: Where applicable, the assigned value is based on a purity determination by mass balance and gravimetrically prepared value.

Intended use: Intended for R&D and Analytical Use only. Not for drug, household or other uses.

Packaging: 1 mL in amber ampule

Instructions for handling and correct use: Use on the as is basis. The internal pressure of the container may be slightly different from the atmospheric pressure at the user`s location. Open slowly and carefully to avoid dispersion of the material.

Health and safety information: All chemical reference materials should be considered potentially hazardous and should be used only by qualified laboratory personnel. Please refer to the Safety Data Sheet for detailed information about the nature of any hazard and appropriate precautions to be taken.

Accreditation: Sigma-Aldrich RTC is accredited by the US accreditation authority ANAB as a registered reference material producer AR-1470 in accordance with ISO 17034.

Certificate issue date: 12-Jul-2021

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Andy Ommen - QC Manager

Mark Pooler - QA Supervisor

Details on metrological traceability: This standard has been gravimetrically prepared using balances that have been fully qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error. Fill volume to predetermined specifications is gravimetrically verified throughout the dispensing process using qualified and calibrated balances. Further traceability to a corresponding Primary Standard may be achieved through a direct comparison assay. Where a Primary Standard is available, the assay value will be included in the specified section of the COA.

Associated uncertainty: Ucrm - Uncertainty values in this document are expressed as Expanded Uncertainty (Ucrm) corresponding to the 95% confidence interval. Ucrm is derived from the combined standard uncertainty multiplied by the coverage factor k, which is obtained from a *t*-distribution and degrees of freedom. The components of combined standard uncertainty include the uncertainties due to characterization, homogeneity, long term stability, and short term stability (transport). The components due to stability are generally considered to be negligible unless otherwise indicated by stability studies. The mathematical representation of the Ucrm calculation is as follows:

$$u_{CRM} = \sqrt{u_{char}^2 + u_{hom\ ogeneity}^2 + u_{stability}^2}$$

Homogeneity assessment: Homogeneity was assessed in accordance with ISO Guide 35. Completed units were sampled using a random stratified sampling protocol. The results of chemical analysis were then compared by Single Factor Analysis of Variance (ANOVA). The uncertainty due to homogeneity was derived from the ANOVA. Heterogeneity was not detected under the conditions of the ANOVA.

Stability assessment: Significance of the stability assessment will be demonstrated if the analytical result of the study and the range of values represented by the Expanded Uncertainty do not overlap the result of the original assay and the range of its values represented by the Expanded Uncertainty. The method employed will usually be the same method used to characterize the assay value in the initial

Certificate of analysis revision history:

Certificate version	Date	Reason for version
LRAD0139.01	12-Jul-2021	Original Release Date

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Certificate of Analysis

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ■ Tel: 303-940-0033 ■ Fax: 303-940-0043 ■ info@phenova.com
Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101444
Description: 8270 Calibration Standard
Storage: -18 °C
Provided As: 1 mL in 2 mL Ampoule in MeCl2/Methanol (97:3)

Lot Number: CL18355
Certification Date: July 25, 2022
Expiration Date: August 31, 2023

K007995
SVOA-8270 LCS MIX 1000ug/ml
Solvent / Lot: N/A
Prep: 8/29/2022 by JZ
Exp: 8/31/2023
Location: FREEZER 44

Aaron Dukes, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Acenaphthene	83-32-9	1000	± 0.300%
Acenaphthylene	208-96-8	1000	± 0.225%
Anthracene	120-12-7	1000	± 6.858%
Azobenzene	103-33-3	1000	± 0.224%
Benzo(a)anthracene	56-55-3	1000	± 0.247%
Benzo(a)pyrene	50-32-8	1000	± 0.270%
Benzo(b)fluoranthene	205-99-2	1000	± 0.635%
Benzo(k)fluoranthene	207-08-9	1000	± 0.682%
Benzo(g,h,i)perylene	191-24-2	1000	± 0.272%
Benzyl alcohol	100-51-6	1000	± 0.231%
Benzyl butyl phthalate	85-68-7	1000	± 0.480%
bis(2-Chloroethoxy)methane	111-91-1	1000	± 0.479%
bis(2-Chloroethyl) ether	111-44-4	1000	± 0.479%
bis(2-Chloroisopropyl) ether	108-60-1	1000	± 0.550%
bis(2-Ethylhexyl) adipate	103-23-1	1000	± 0.479%
bis(2-Ethylhexyl) phthalate	117-81-7	1000	± 0.479%
4-Bromophenyl phenyl ether	101-55-3	1000	± 0.479%
Carbazole	86-74-8	1000	± 0.146%

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Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101444
Lot Number: CL18355
Description: 8270 Calibration Standard
Certification Date: July 25, 2022
Storage: -18 °C
Expiration Date: August 31, 2023
Provided As: 1 mL in 2 mL Ampoule in MeCl2/Methanol (97:3)

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
4-Chloroaniline	106-47-8	1000	± 0.300%
4-Chloro-3-methylphenol	59-50-7	1000	± 0.545%
2-Chloronaphthalene	91-58-7	1000	± 0.224%
2-Chlorophenol	95-57-8	1000	± 0.507%
4-Chlorophenyl phenyl ether	7005-72-3	1000	± 0.479%
Chrysene	218-01-9	1000	± 0.145%
Dibenz(a,h)anthracene	53-70-3	1000	± 1.058%
Dibenzofuran	132-64-9	1000	± 0.302%
Di-n-butyl phthalate	84-74-2	1000	± 0.518%
1,2-Dichlorobenzene	95-50-1	1000	± 0.247%
1,3-Dichlorobenzene	541-73-1	1000	± 0.225%
1,4-Dichlorobenzene	106-46-7	1000	± 0.224%
2,4-Dichlorophenol	120-83-2	1000	± 0.545%
Diethyl phthalate	84-66-2	1000	± 0.518%
2,4-Dimethylphenol	105-67-9	1000	± 0.507%
Dimethyl phthalate	131-11-3	1000	± 0.518%
1,2-Dinitrobenzene	528-29-0	1000	± 0.361%
1,3-Dinitrobenzene	99-65-0	1000	± 0.300%
1,4-Dinitrobenzene	100-25-4	1000	± 0.242%
2,4-Dinitrophenol	51-28-5	1000	± 0.545%
2,4-Dinitrotoluene	121-14-2	1000	± 1.128%

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Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101444
Lot Number: CL18355
Description: 8270 Calibration Standard
Certification Date: July 25, 2022
Storage: -18 °C
Expiration Date: August 31, 2023
Provided As: 1 mL in 2 mL Ampoule in MeCl2/Methanol (97:3)

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
2,6-Dinitrotoluene	606-20-2	1000	± 0.224%
Di-n-octyl phthalate	117-84-0	1000	± 0.486%
Fluoranthene	206-44-0	1000	± 0.224%
Fluorene	86-73-7	1000	± 0.224%
Hexachlorobenzene	118-74-1	1000	± 0.152%
Hexachlorobutadiene	87-68-3	1000	± 0.746%
Hexachlorocyclopentadiene	77-47-4	1000	± 0.153%
Hexachloroethane	67-72-1	1000	± 0.300%
Indeno(1,2,3-cd)pyrene	193-39-5	1000	± 0.883%
Isophorone	78-59-1	1000	± 0.145%
2-Methyl-4,6-dinitrophenol	534-52-1	1000	± 0.508%
1-Methylnaphthalene	90-12-0	1000	± 0.479%
2-Methylnaphthalene	91-57-6	1000	± 0.487%
2-Methylphenol	95-48-7	1000	± 0.545%
3-Methylphenol	108-39-4	500	± 0.279%
4-Methylphenol	106-44-5	500	± 0.399%
Naphthalene	91-20-3	1000	± 0.226%
2-Nitroaniline	88-74-4	1000	± 0.224%
3-Nitroaniline	99-09-2	1000	± 0.235%
4-Nitroaniline	100-01-6	1000	± 0.300%
Nitrobenzene	98-95-3	1000	± 0.300%

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Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101444
Lot Number: CL18355
Description: 8270 Calibration Standard
Certification Date: July 25, 2022
Storage: -18 °C
Expiration Date: August 31, 2023
Provided As: 1 mL in 2 mL Ampoule in MeCl2/Methanol (97:3)

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
2-Nitrophenol	88-75-5	1000	± 0.514%
4-Nitrophenol	100-02-7	1000	± 0.519%
N-Nitrosodimethylamine	62-75-9	1000	± 0.503%
N-Nitrosodiphenylamine	86-30-6	1000	± 0.476%
N-Nitrosodi-n-propylamine	621-64-7	1000	± 0.461%
Pentachlorophenol	87-86-5	1000	± 0.202%
Phenanthrene	85-01-8	1000	± 0.145%
Phenol	108-95-2	1000	± 0.545%
Pyrene	129-00-0	1000	± 0.147%
Pyridine	110-86-1	1000	± 0.503%
2,3,4,6-Tetrachlorophenol	58-90-2	1000	± 0.247%
2,3,5,6-Tetrachlorophenol	935-95-5	1000	± 0.247%
1,2,4-Trichlorobenzene	120-82-1	1000	± 0.224%
2,4,5-Trichlorophenol	95-95-4	1000	± 0.507%
2,4,6-Trichlorophenol	88-06-2	1000	± 0.509%

Notes: The proper chemical name for Bis(2-Chloroiospropyl) ether is 2,2'-oxybis(1-chloropropane). The analytical uncertainty contribution to the expanded uncertainty for 3 and 4-Methylphenol is measured as the total of the two analytes. N-Nitrosodiphenylamine presents as Diphenylamine at 854 µg/mL.

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Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO 17034[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

   Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
[3] ISO 17034 – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

Supelco®

www.sigmaaldrich.com

Certificate of Composition - Analytical Standard

BASE STOCK

Product no.: 22523051
Lot no.: LRAD2751
Expiry Date: June 2024
Manufacturing Date: June 2022
Storage: REFRIGERATE
Solvent/Matrix: DICHLOROMETHANE
Certificate version: LRAD2751.01 (*Note: Certificates may be updated due to the availability of new data. Check our website at:* www.sigma-aldrich.com *for the most current version.)*

Analyte	*Assigned Value*	*Units*	*Raw Material Purity,%*	*Raw Material Lot*
3,3'-DICHLOROBENZIDINE, 100MG, NEAT CAS# 91-94-1	799	µg/mL	99.8	LRAD2376
2,4-DINITROTOLUENE CAS# 121-14-2	801	µg/mL	97.8	LB46632
2,6-DINITROTOLUENE CAS# 606-20-2	800	µg/mL	99.2	11231AN
HEXACHLOROCYCLOPENTADIENE CAS# 77-47-4	800	µg/mL	96.0	LB95525
N-NITROSODIMETHYLAMINE CAS# 62-75-9	800	µg/mL	95.0	2019-030598 5
PERYLENE CAS# 198-55-0	200	µg/mL	99.6	04101PG
ANILINE CAS# 62-53-3	800	µg/mL	99.9	LA41596
4-CHLOROANILINE CAS# 106-47-8	800	µg/mL	100.0	MKBZ6909V
2-NITROANILINE CAS# 88-74-4	799	µg/mL	99.9	07411KN
3-NITROANILINE CAS# 99-09-2	800	µg/mL	99.9	LC09264
4-NITROANILINE CAS# 100-01-6	800	µg/mL	99.9	15609AA
PYRIDINE (LOW WATER) CAS# 110-86-1	800	µg/mL	100.0	SHBJ9218

Measurement method: Where applicable, the assigned value is based on a purity determination by mass balance and gravimetrically prepared value.

Intended use: Intended for R&D and Analytical Use only. Not for drug, household or other uses.

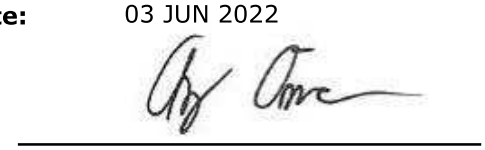
Packaging: 1 mL in amber ampule

Instructions for handling and correct use: Use on the as is basis. The internal pressure of the container may be slightly different from the atmospheric pressure at the user`s location. Open slowly and carefully to avoid dispersion of the material.

Sigma-Aldrich RTC, 2931 Soldier Springs Rd. Laramie, WY 82070, USA;
Tel. 1 307-742-5452; Fax 1 855-831-9211; www.sigmaaldrich.com
Sigma-Aldrich RTC is a subsidiary of Merck KGaA, Darmstadt, Germany.

Health and safety information: All chemical reference materials should be considered potentially hazardous and should be used only by qualified laboratory personnel. Please refer to the Safety Data Sheet for detailed information about the nature of any hazard and appropriate precautions to be taken.

Certificate issue date: 03 JUN 2022



Andy Ommen - QC Manager

Scott Stetler - QA Manager

Certificate of analysis revision history:

Certificate version	Date	Reason for version
LRAD2751.01	03 JUN 2022	Original Release Date

Disclaimer: The purchaser is required to determine the suitability of this product for any particular application. Sigma-Aldrich RTC makes no warranty of any kind, express or implied, other than its products meet all quality control standards set by Sigma-Aldrich RTC. We do not guarantee that the product can be used for any particular application.

Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-SC1150B

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E-SIM

SIM SVOC Organics (Dual scan list)

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23B0276-01 A	SDG:	23B0276
Sampled:	12/14/22 09:03	Prepared:	02/17/23 15:00	File ID:	NT1403172327S.D
% Solids:	63.63	Preparation:	EPA 3546 (Microwave)	Analyzed:	03/18/23 06:06
Batch:	BLB0424	Sequence:	SLC0376	Initial/Final:	15.72 g Wet / 1 mL
Instrument:	NT14	Column:	ZB-5MS	Calibration:	GC00050

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
106-46-7	1,4-Dichlorobenzene	1	2.4	J	0.6	5.0
95-50-1	1,2-Dichlorobenzene	1	0.9	J	0.7	5.0
100-51-6	Benzyl Alcohol	1	28.5		2.5	20.0
65-85-0	Benzoic acid	1	51.6	J	13.4	100
105-67-9	2,4-Dimethylphenol	1	20.0	U	2.2	20.0
120-82-1	1,2,4-Trichlorobenzene	1	5.0	U	2.7	5.0
86-30-6	N-Nitrosodiphenylamine	1	5.0	U	1.3	5.0
87-86-5	Pentachlorophenol	1	20.0	U	2.1	20.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	749.80	528	70.5	27 - 120	
p-Terphenyl-d14	499.87	830	166	37 - 120	*,Q

Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT14031723278.D

Date : 18-MAR-2023 06:06

Client ID:

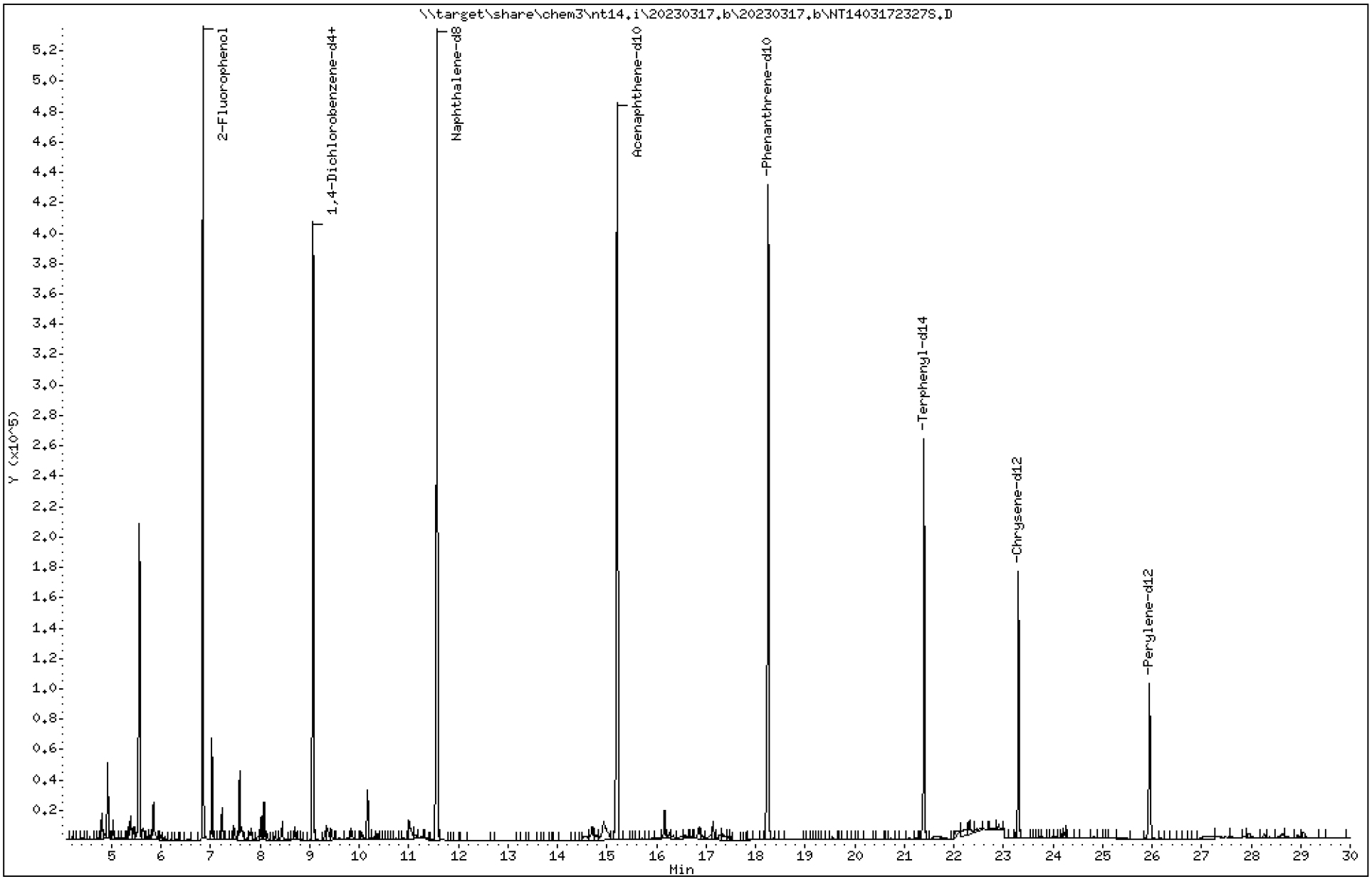
Sample Info: 23B0276-01

Instrument: nt14.i

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172327S.D

Date : 18-MAR-2023 06:06

Client ID:

Instrument: nt14.i

Sample Info: 23B0276-01

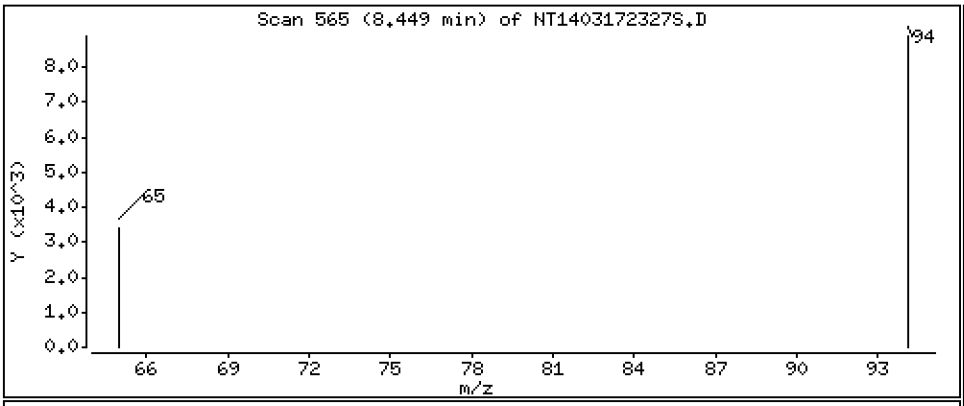
Operator: JGR

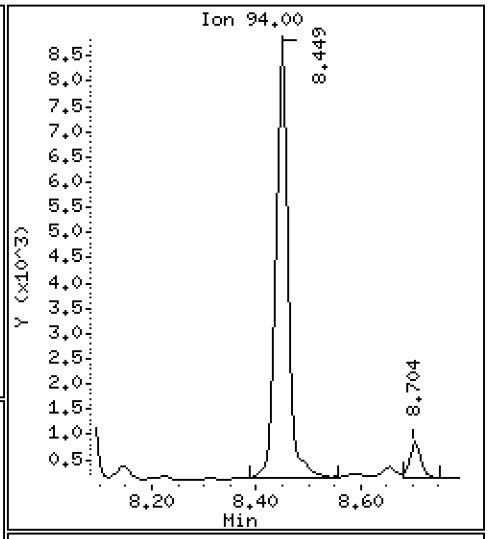
Column phase: ZB-5msi

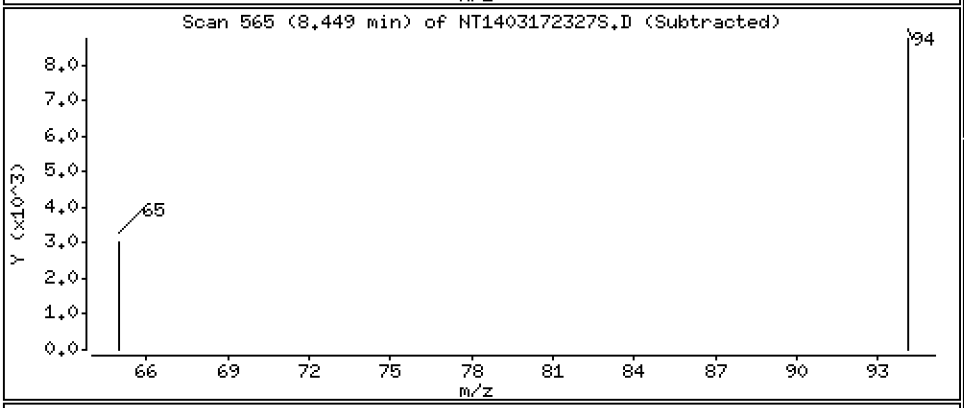
Column diameter: 0.25

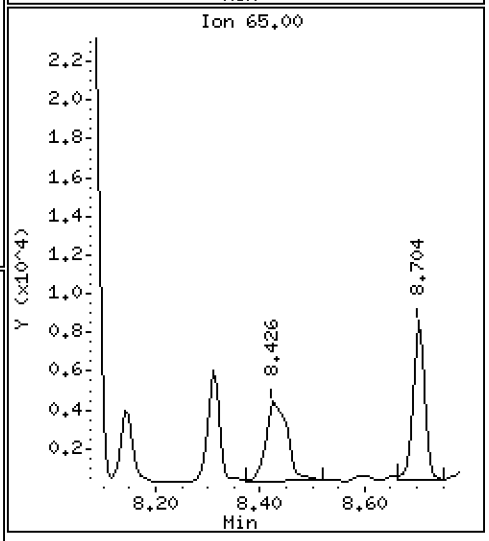
3 Phenol

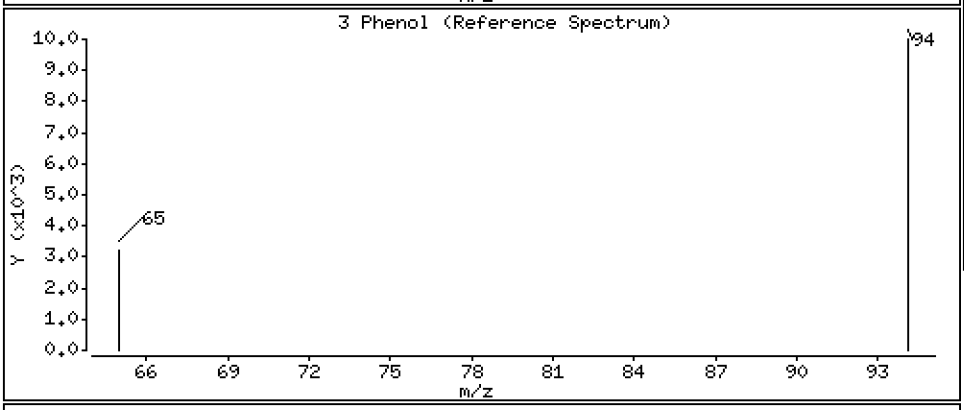
Concentration: 0.1186 ug/mL

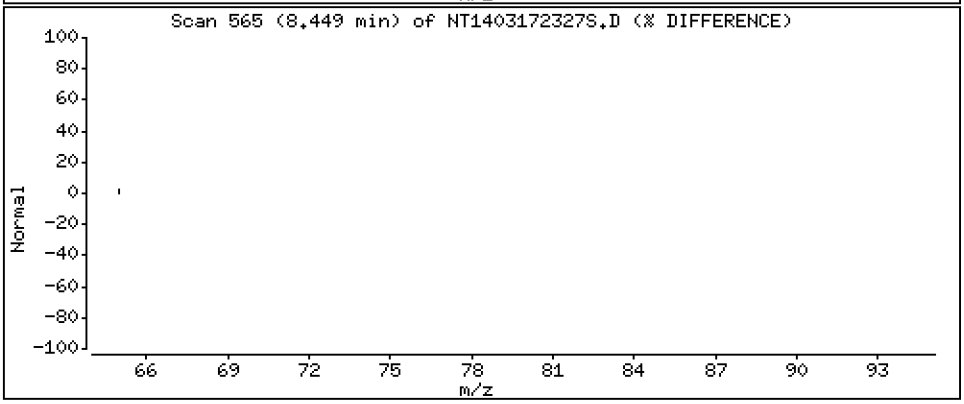












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172327S.D

Date : 18-MAR-2023 06:06

Client ID:

Instrument: nt14.i

Sample Info: 23B0276-01

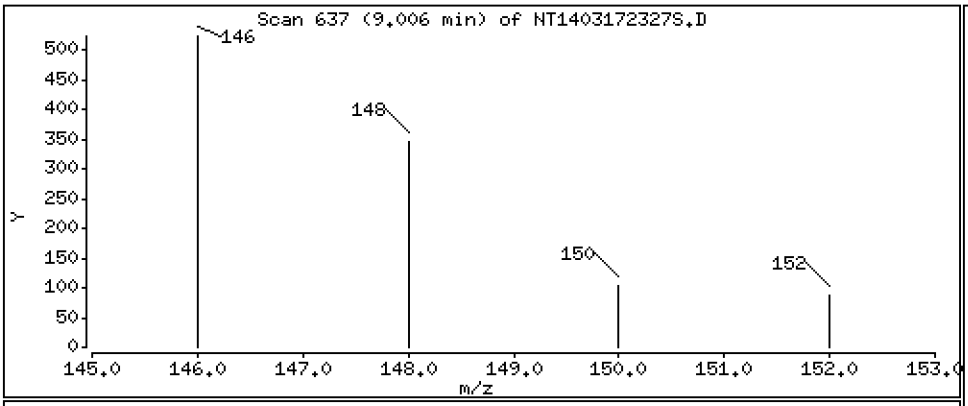
Operator: JGR

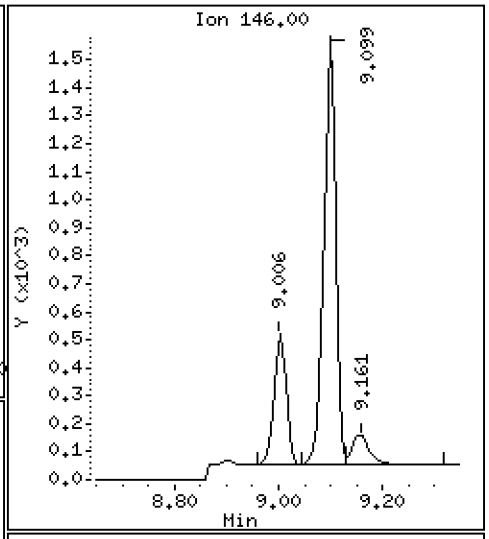
Column phase: ZB-5msi

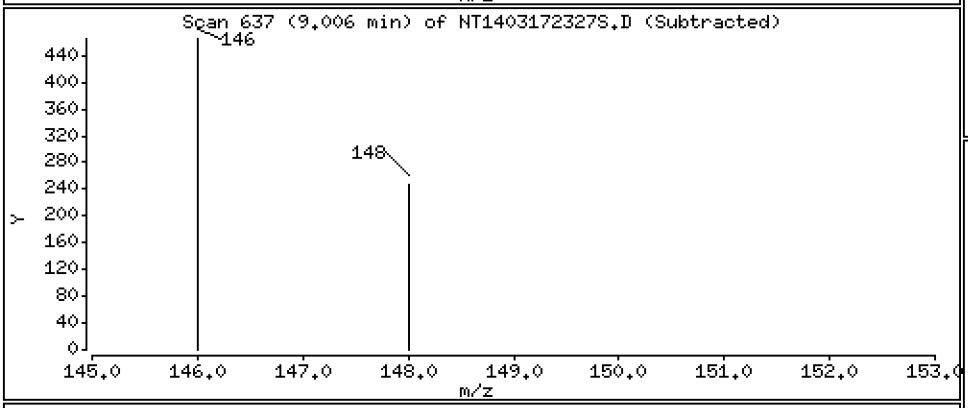
Column diameter: 0.25

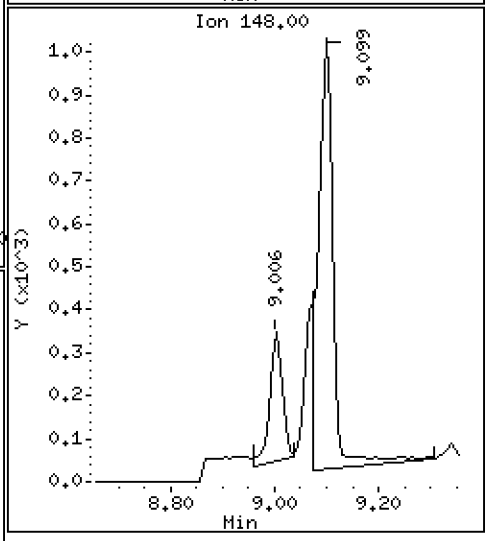
7 1,3-Dichlorobenzene

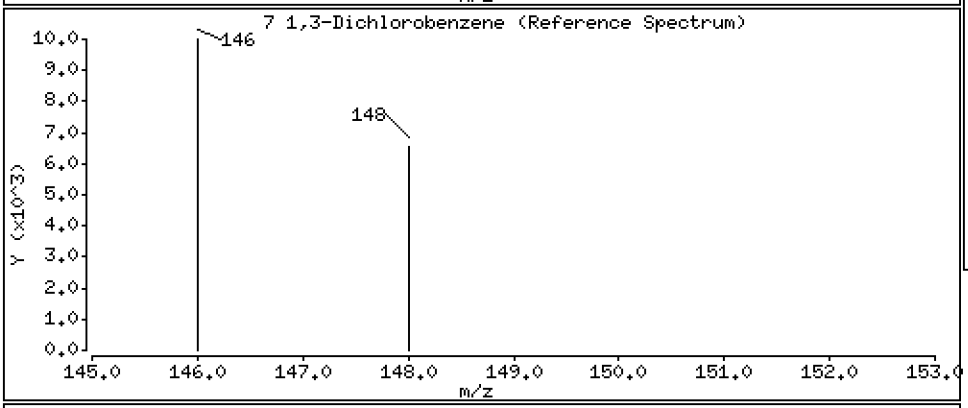
Concentration: 0.007181 ug/mL

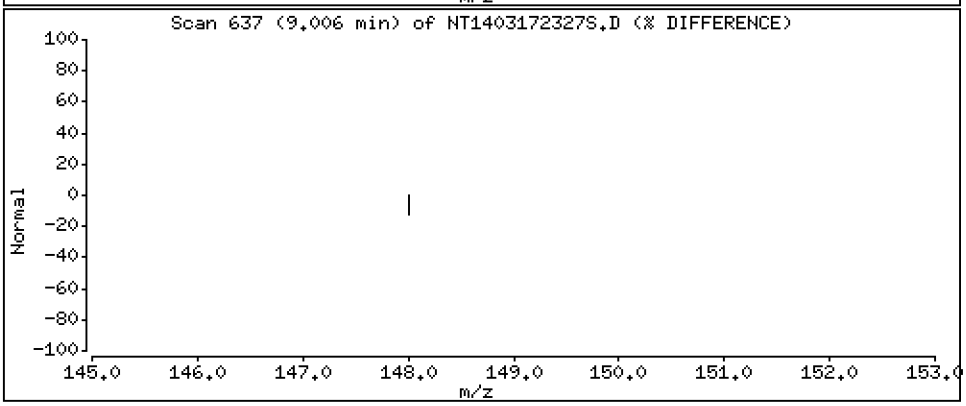












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172327S.D

Date : 18-MAR-2023 06:06

Client ID:

Instrument: nt14.i

Sample Info: 23B0276-01

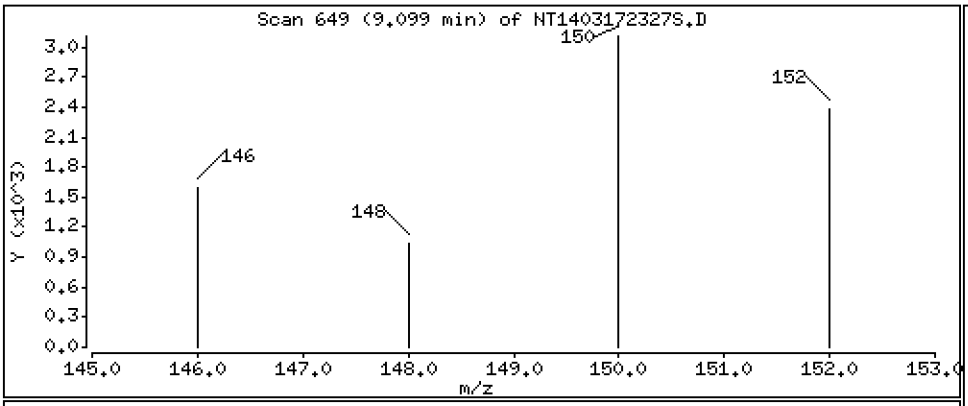
Operator: JGR

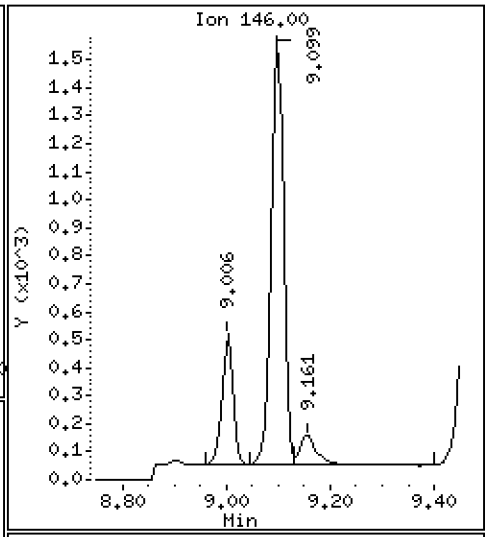
Column phase: ZB-5msi

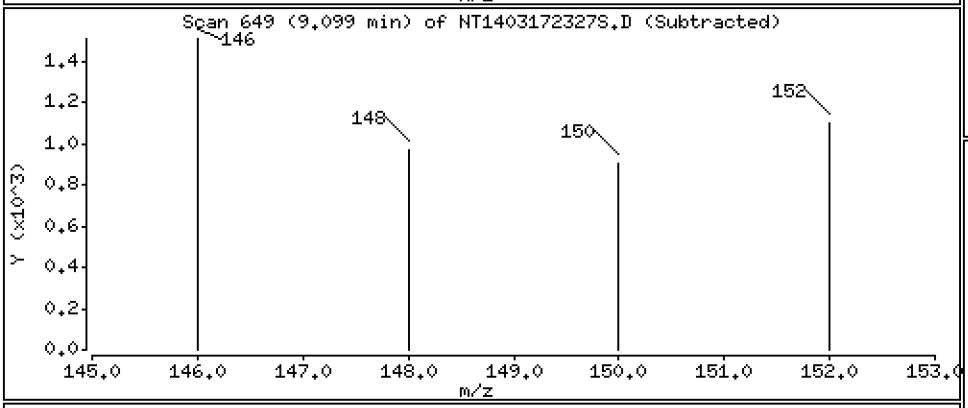
Column diameter: 0.25

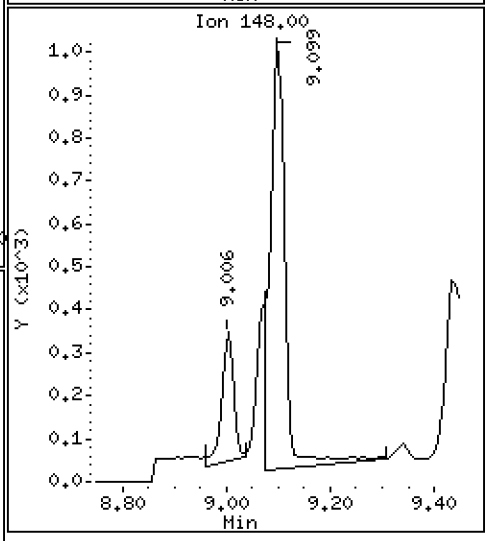
9 1,4-Dichlorobenzene

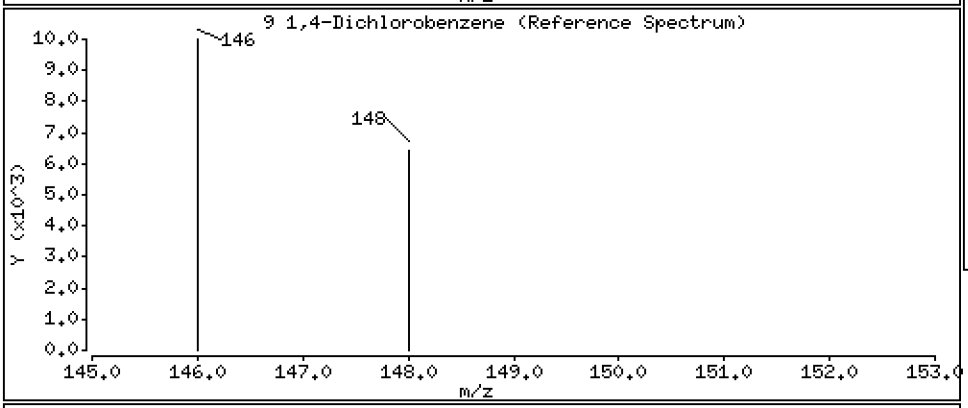
Concentration: 0.02433 ug/mL

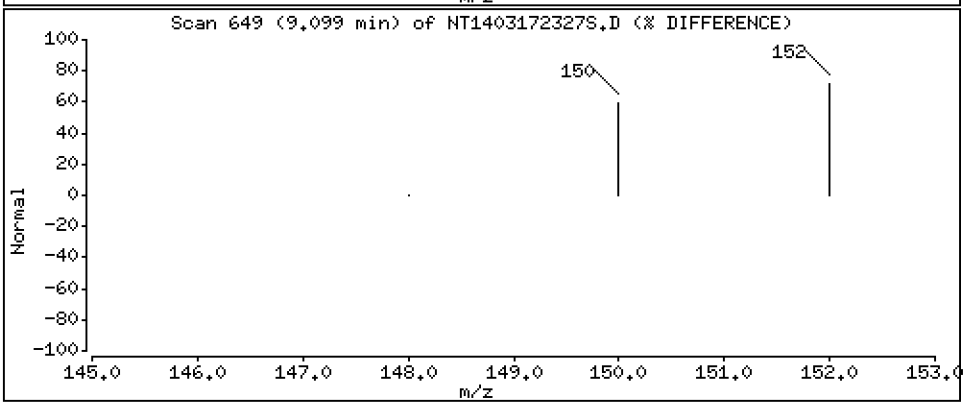












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT14031723275.D

Date : 18-MAR-2023 06:06

Client ID:

Instrument: nt14.i

Sample Info: 23B0276-01

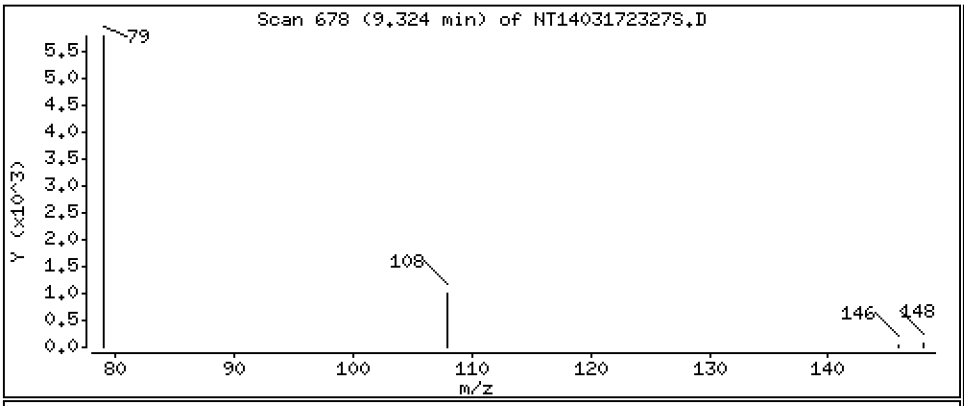
Operator: JGR

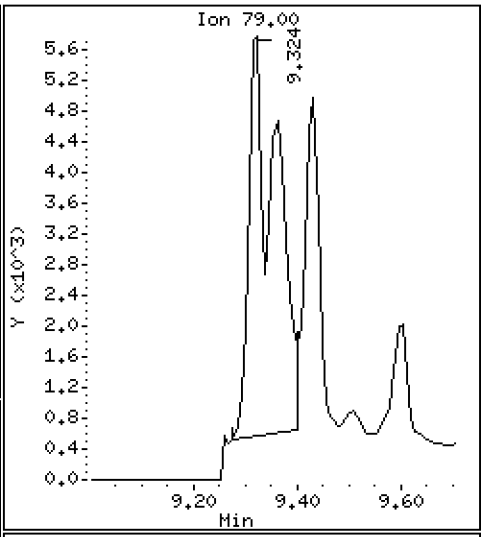
Column phase: ZB-5msi

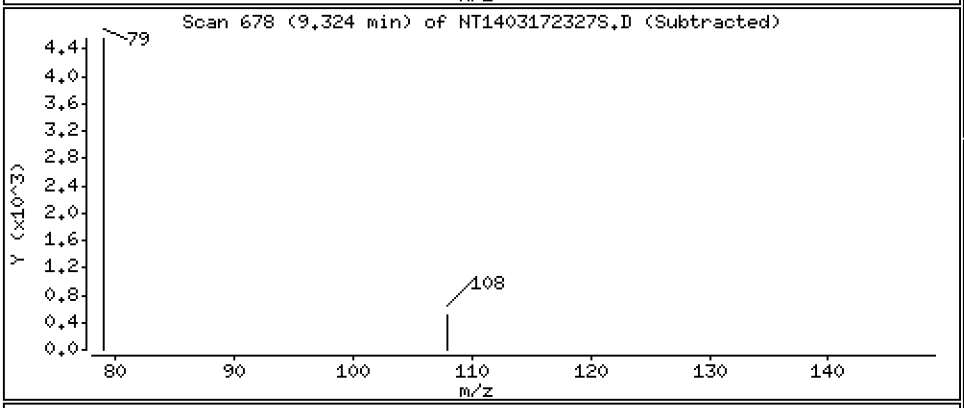
Column diameter: 0.25

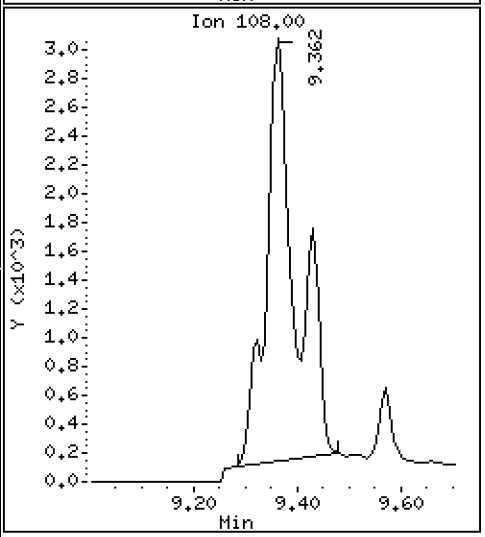
11 Benzyl alcohol

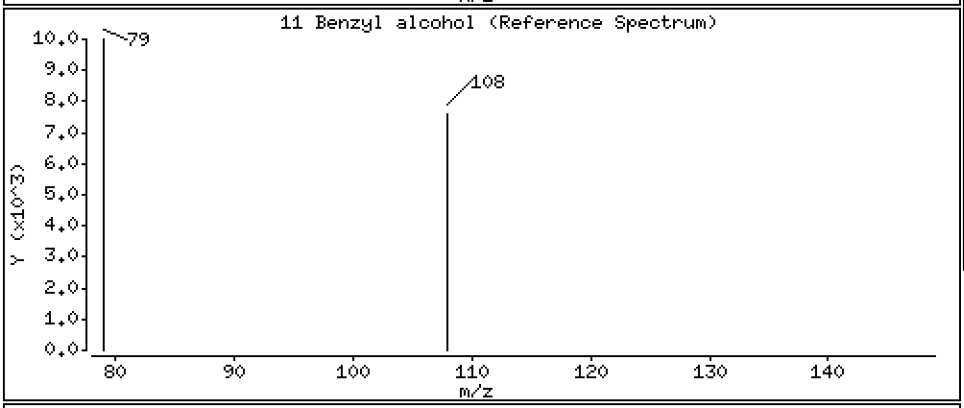
Concentration: 0.2846 ug/mL

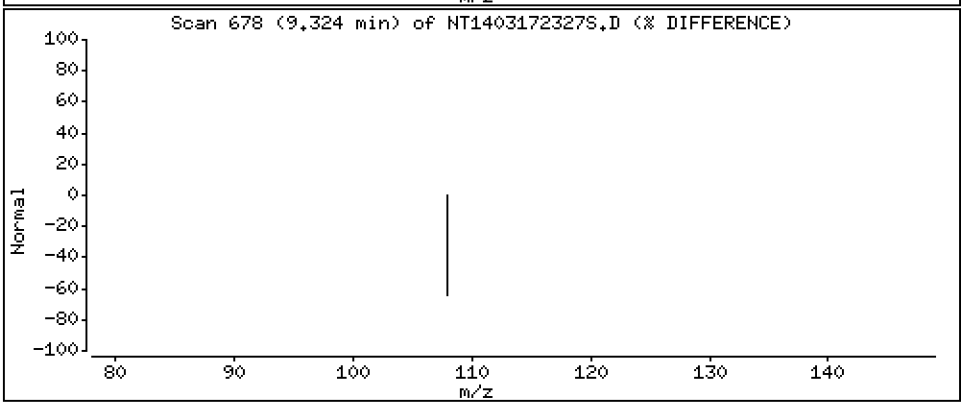












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172327S.D

Date : 18-MAR-2023 06:06

Client ID:

Instrument: nt14.i

Sample Info: 23B0276-01

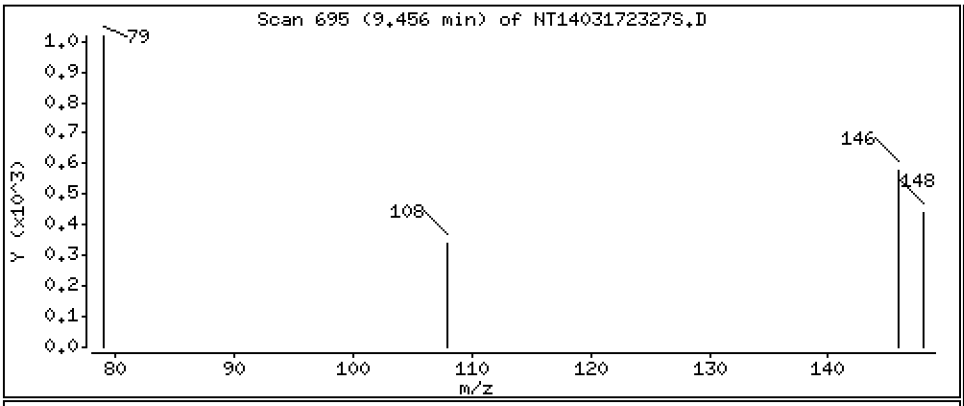
Operator: JGR

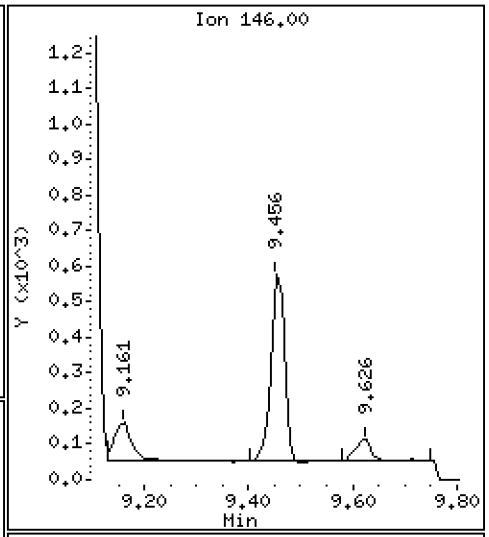
Column phase: ZB-5msi

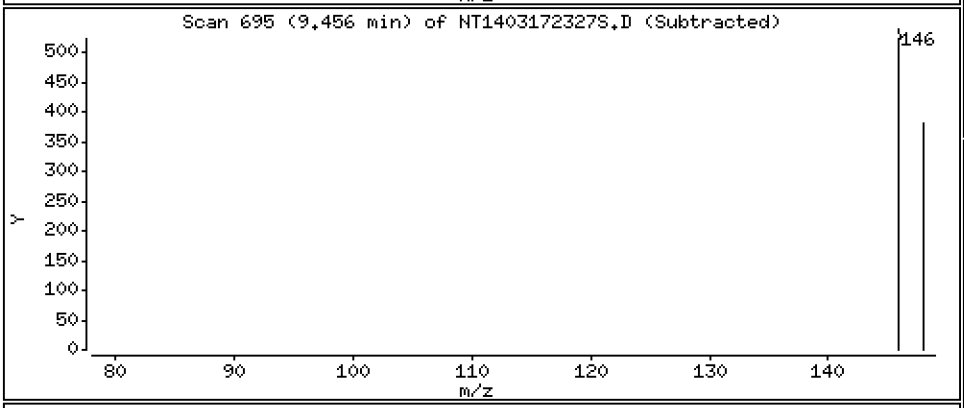
Column diameter: 0.25

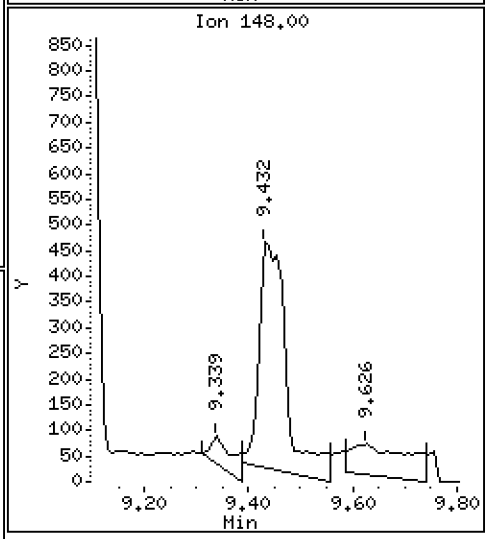
12 1,2-Dichlorobenzene

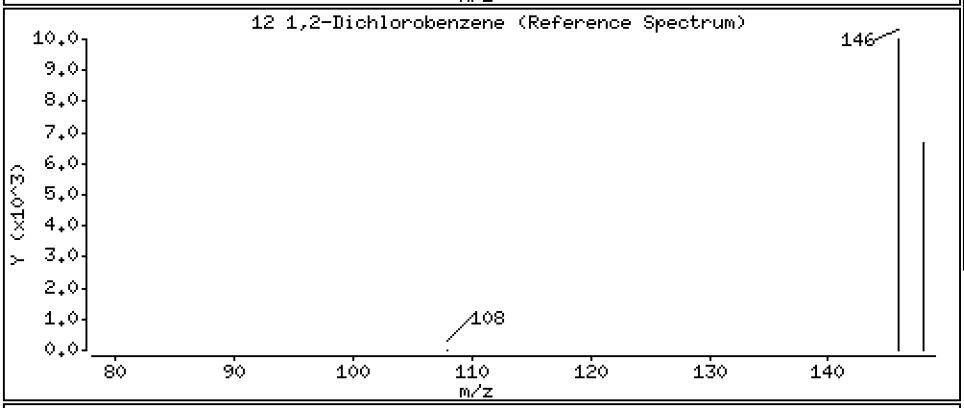
Concentration: 0.009309 ug/mL

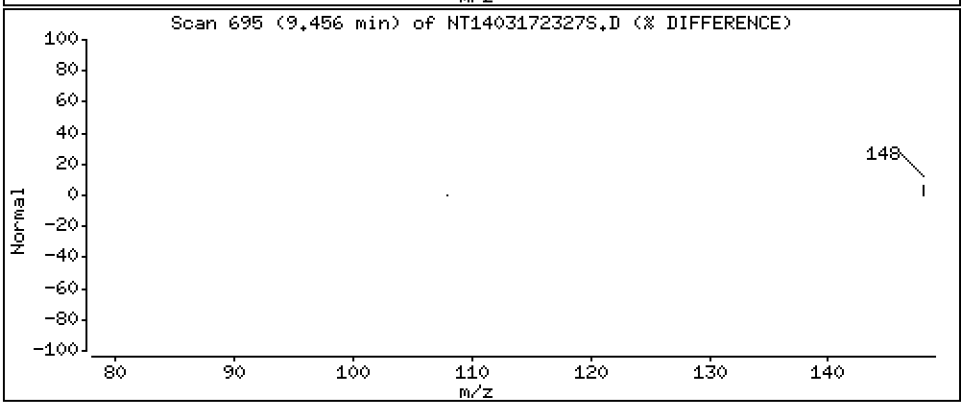












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Date : 18-MAR-2023 06:06

Client ID:

Instrument: nt14.i

Sample Info: 23B0276-01

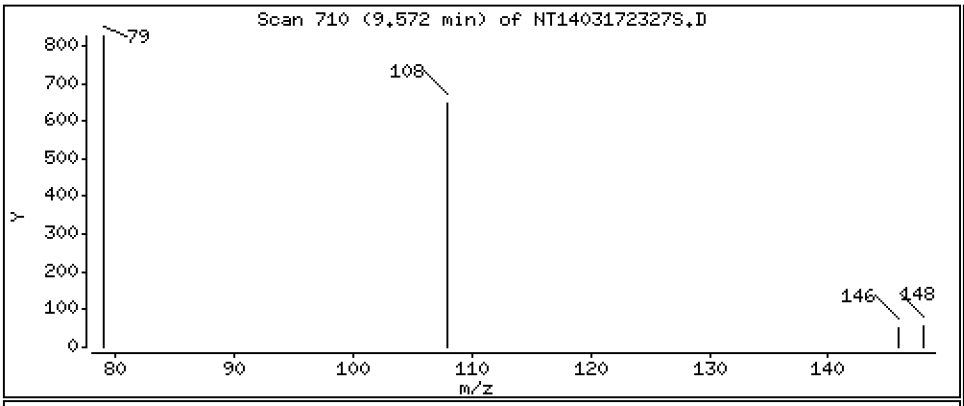
Operator: JGR

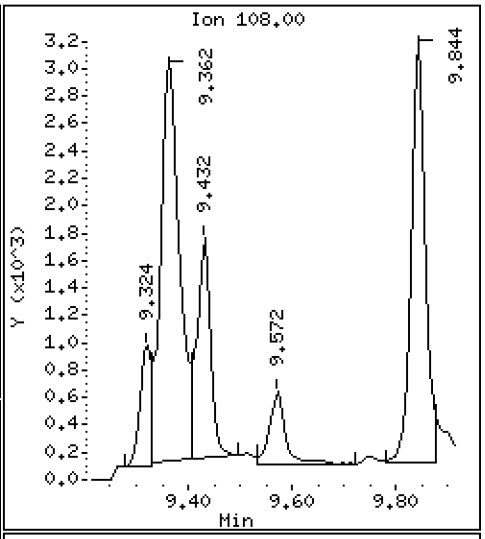
Column phase: ZB-5msi

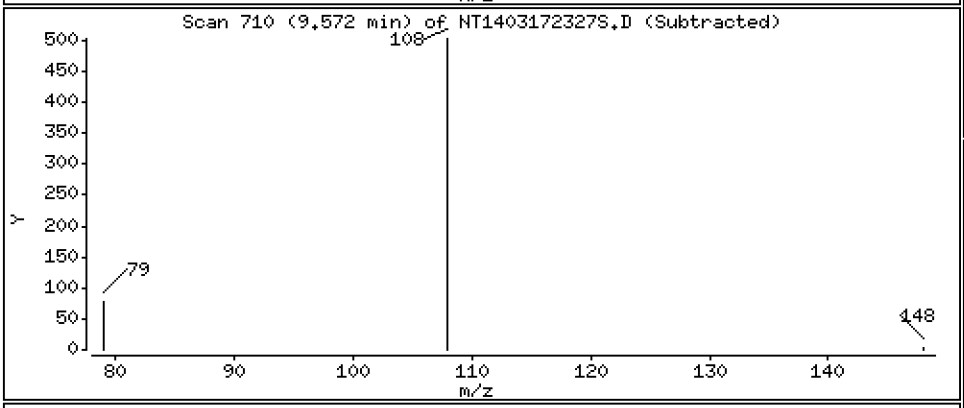
Column diameter: 0.25

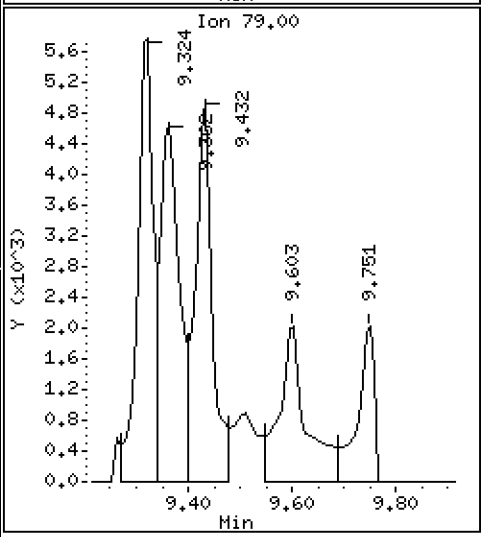
13 2-Methylphenol

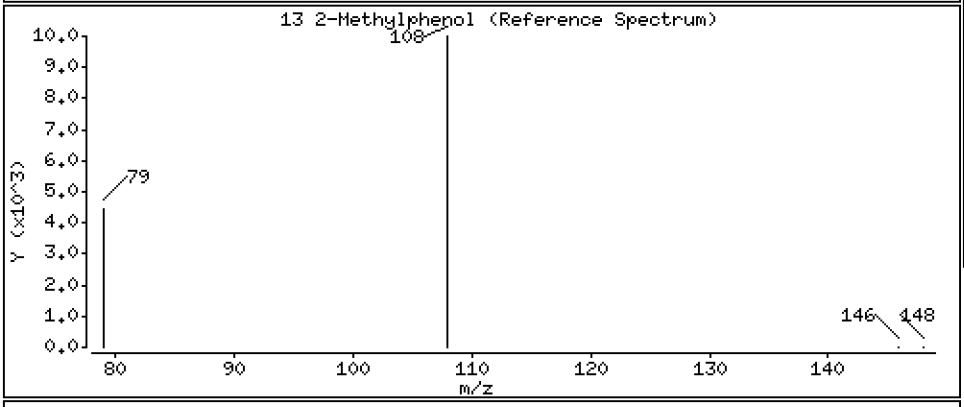
Concentration: 0.01363 ug/mL

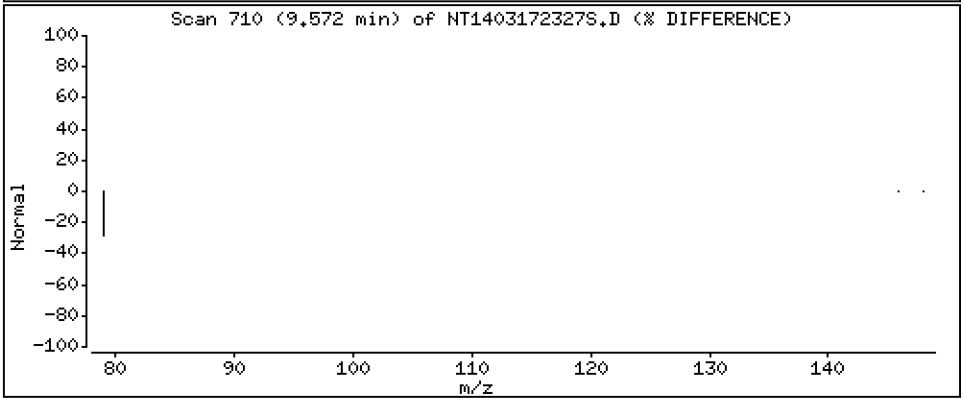












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172327S.D

Date : 18-MAR-2023 06:06

Client ID:

Instrument: nt14.i

Sample Info: 23B0276-01

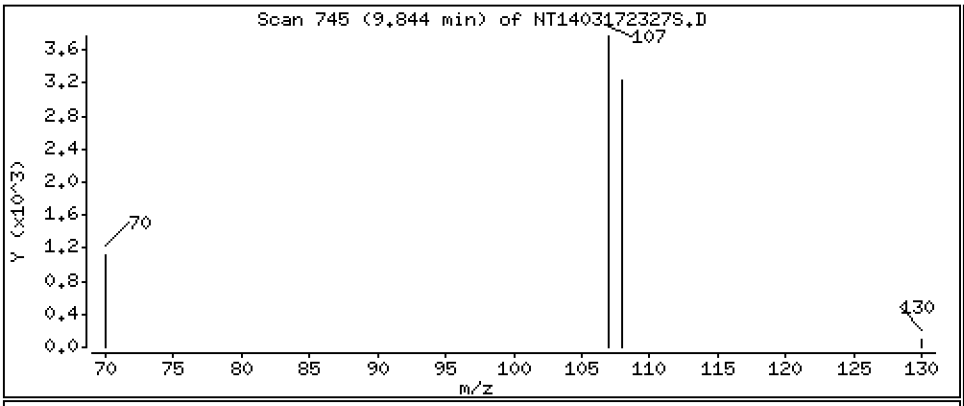
Operator: JGR

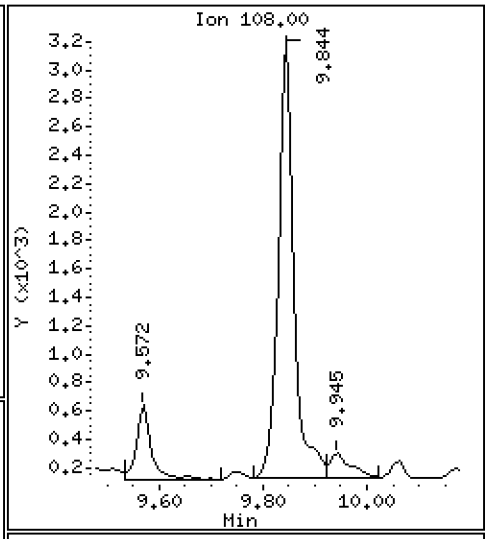
Column phase: ZB-5msi

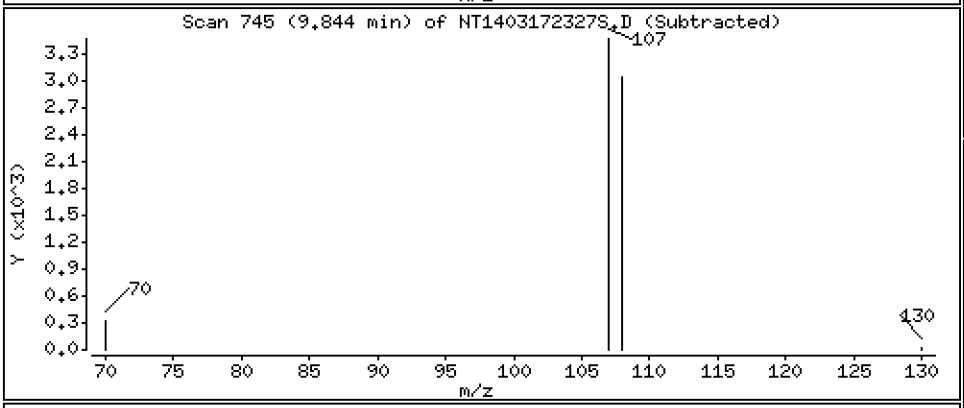
Column diameter: 0.25

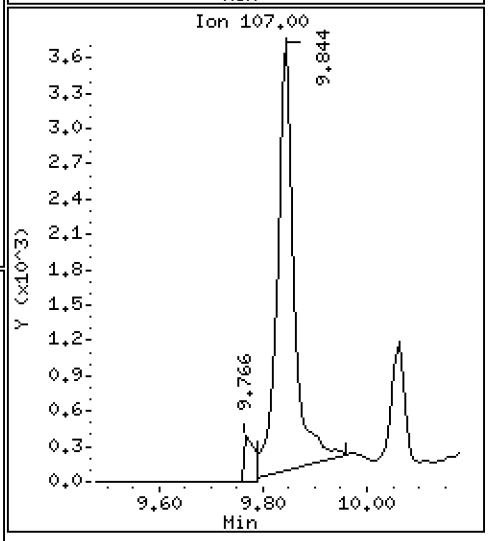
15 4-Methylphenol

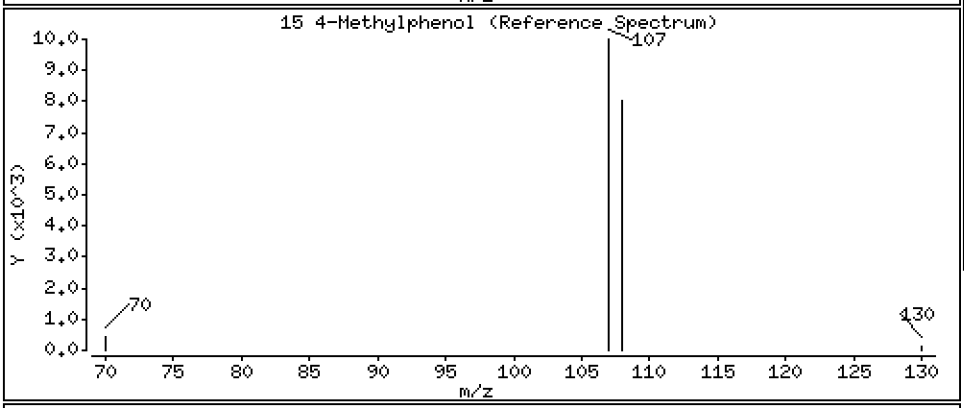
Concentration: 0.07555 ug/mL

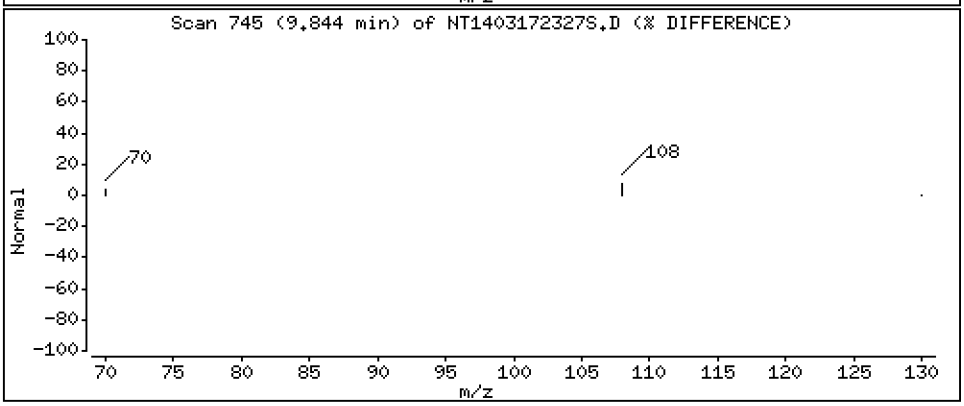












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT14031723275.D

Date : 18-MAR-2023 06:06

Client ID:

Instrument: nt14.i

Sample Info: 23B0276-01

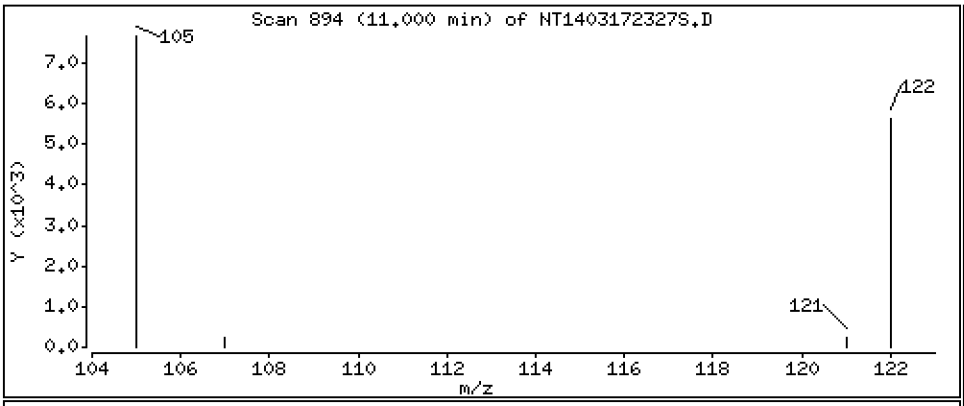
Operator: JGR

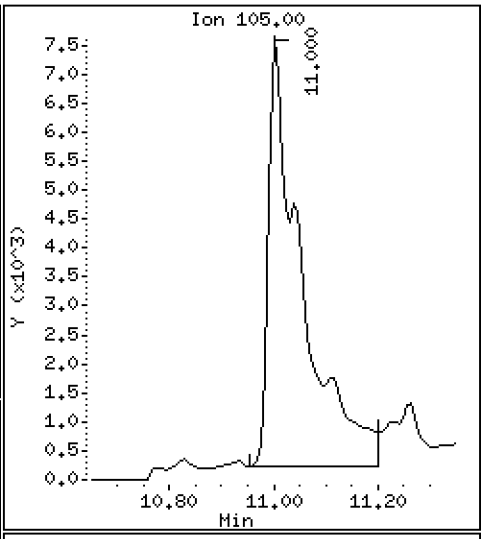
Column phase: ZB-5msi

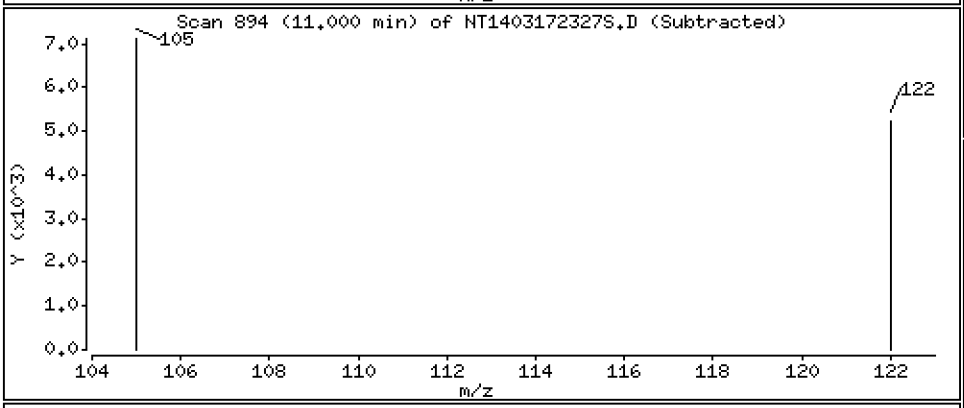
Column diameter: 0.25

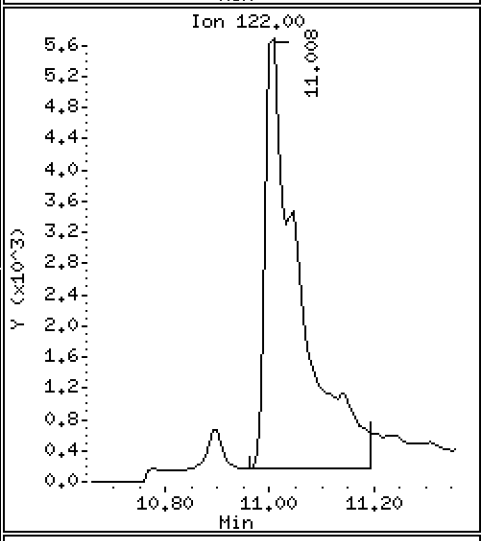
24 Benzoic acid

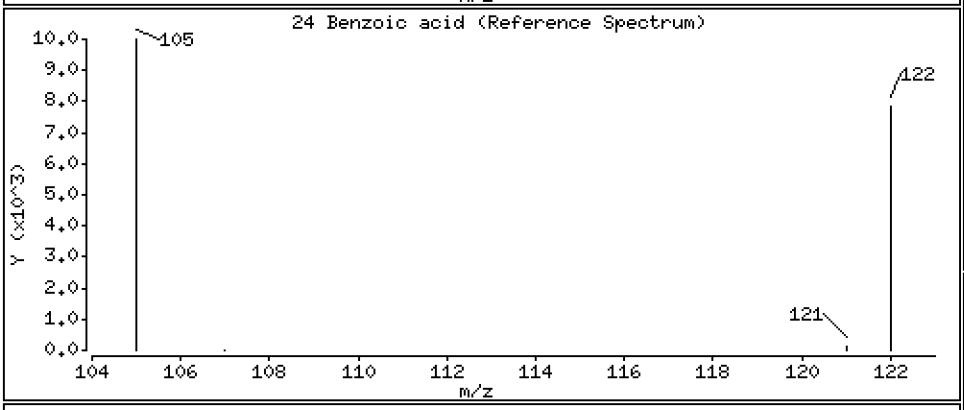
Concentration: 0.5165 ug/mL

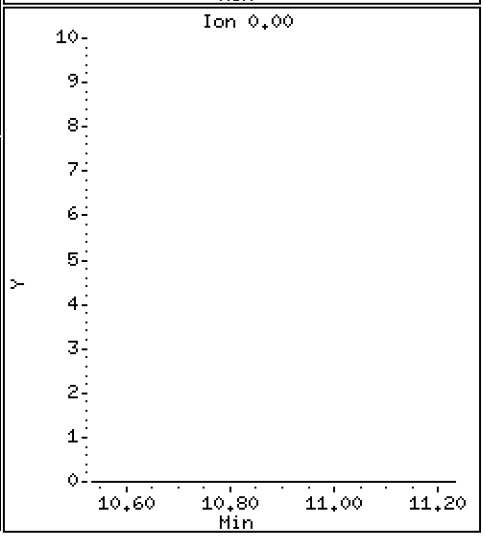


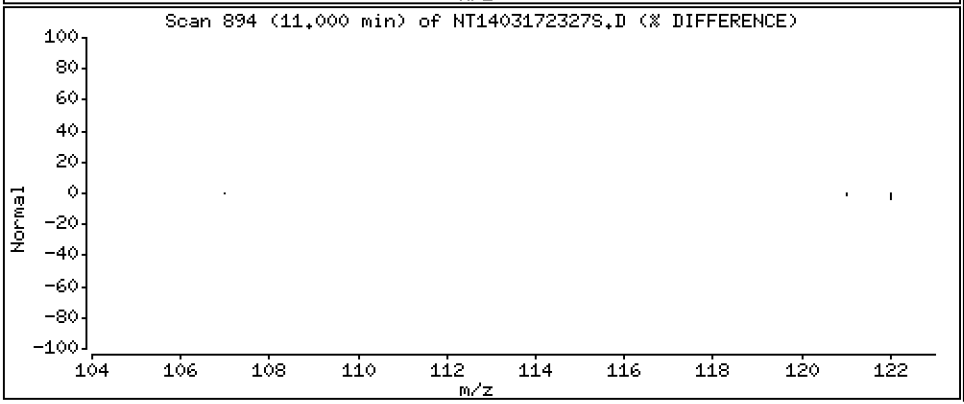












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT14031723275.D

Date : 18-MAR-2023 06:06

Client ID:

Instrument: nt14.i

Sample Info: 23B0276-01

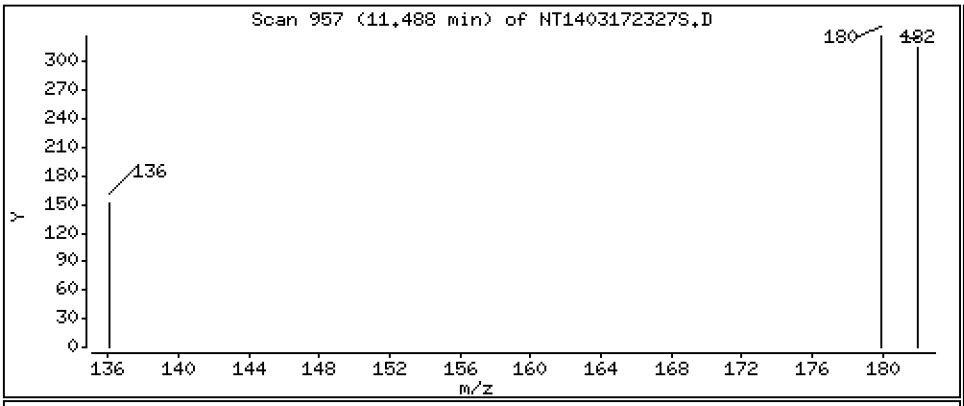
Operator: JGR

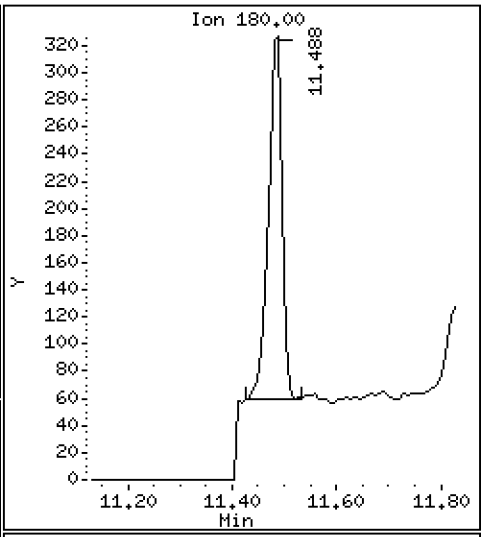
Column phase: ZB-5msi

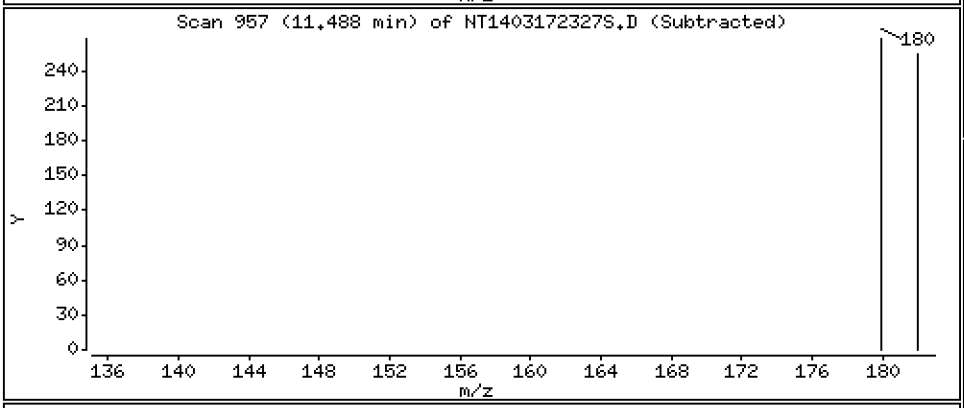
Column diameter: 0.25

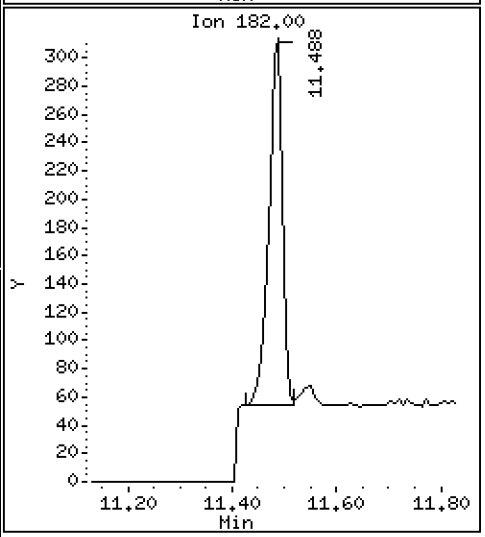
26 1,2,4-Trichlorobenzene

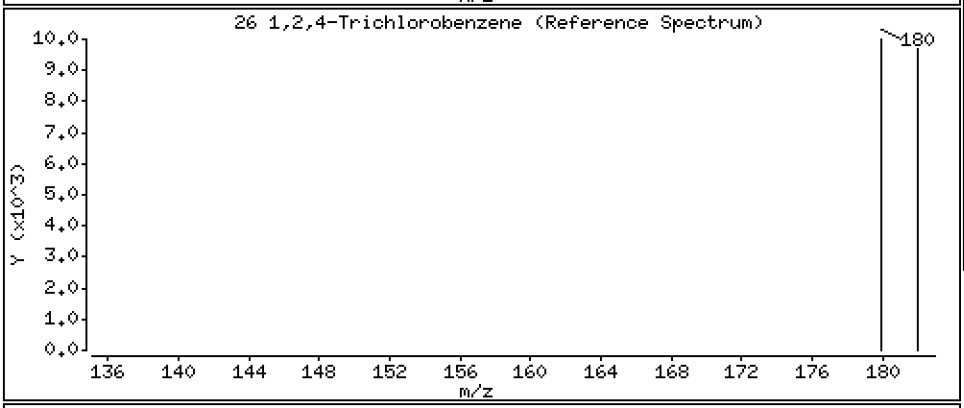
Concentration: 0.005949 ug/mL

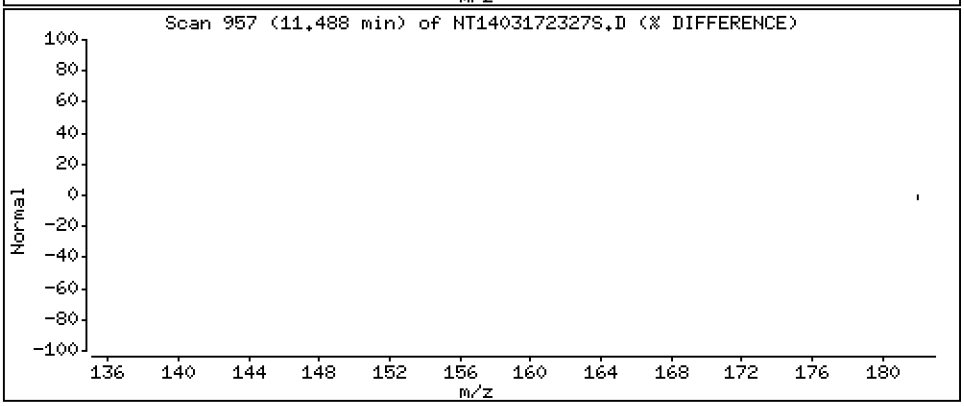












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172327S.D

Date : 18-MAR-2023 06:06

Client ID:

Instrument: nt14.i

Sample Info: 23B0276-01

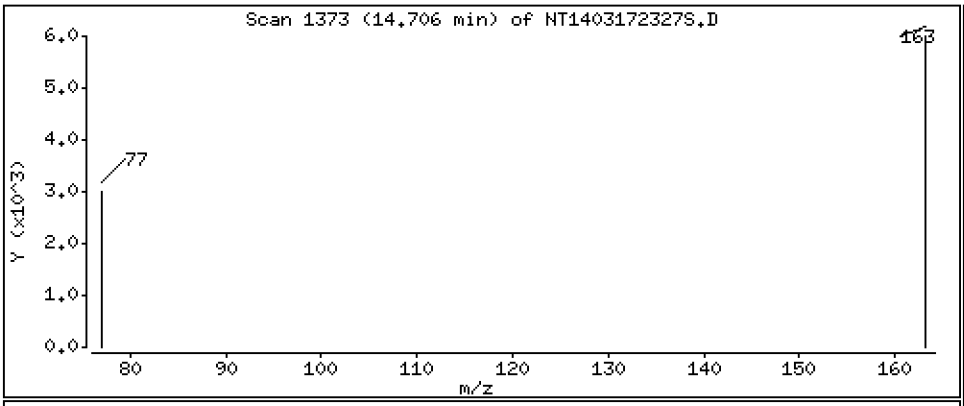
Operator: JGR

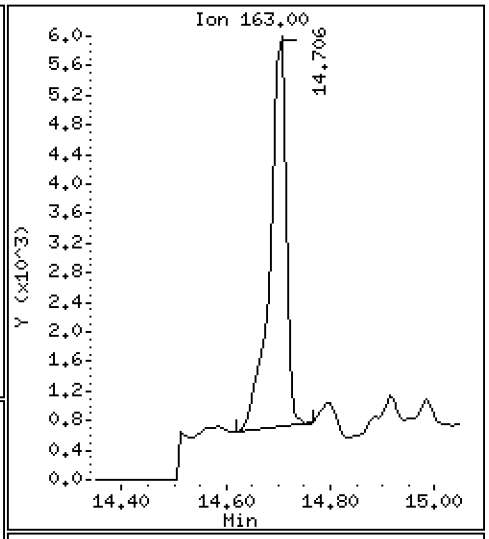
Column phase: ZB-5msi

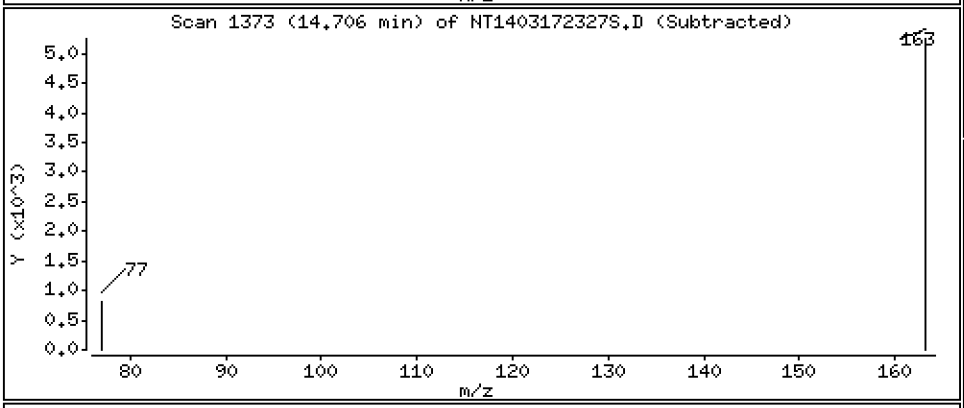
Column diameter: 0.25

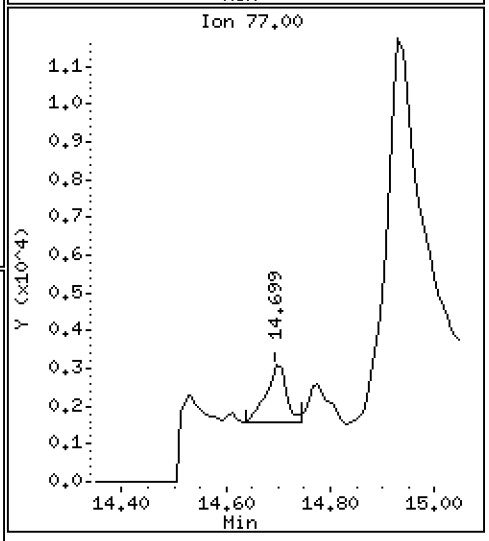
39 Dimethylphthalate

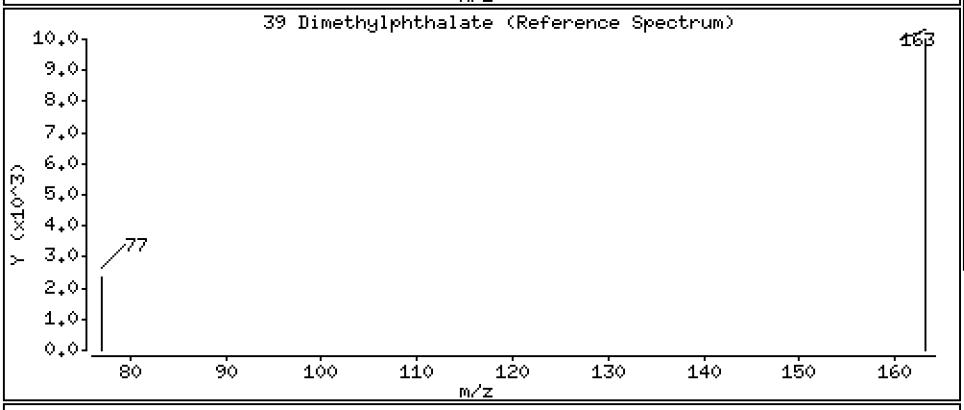
Concentration: 0.07314 ug/mL

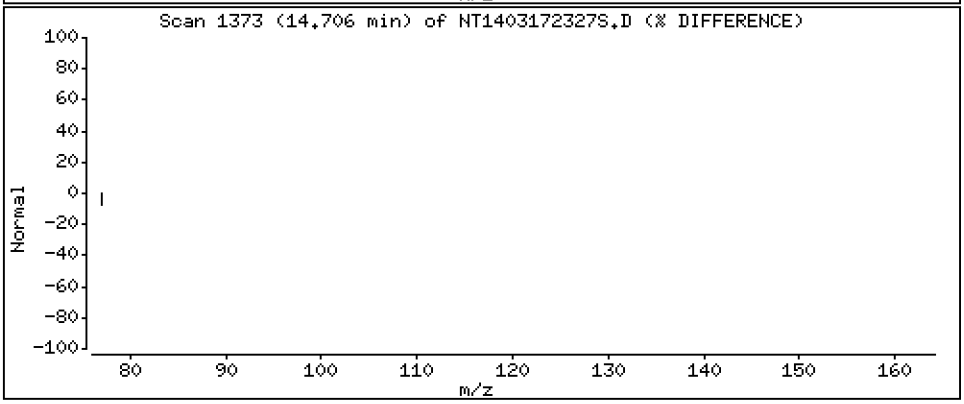












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172327S.D

Date : 18-MAR-2023 06:06

Client ID:

Instrument: nt14.i

Sample Info: 23B0276-01

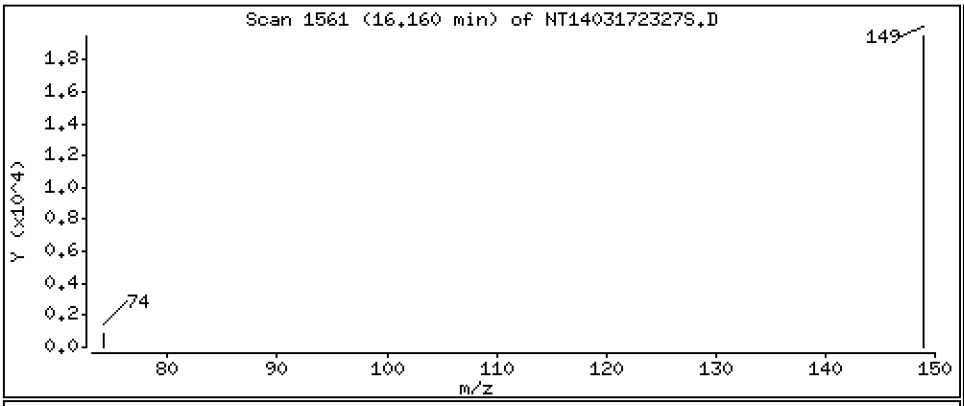
Operator: JGR

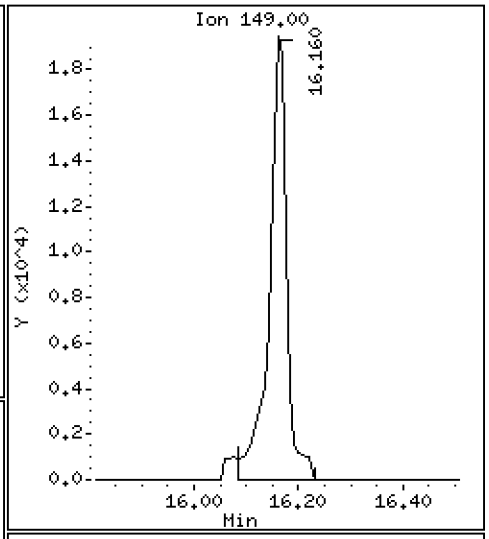
Column phase: ZB-5msi

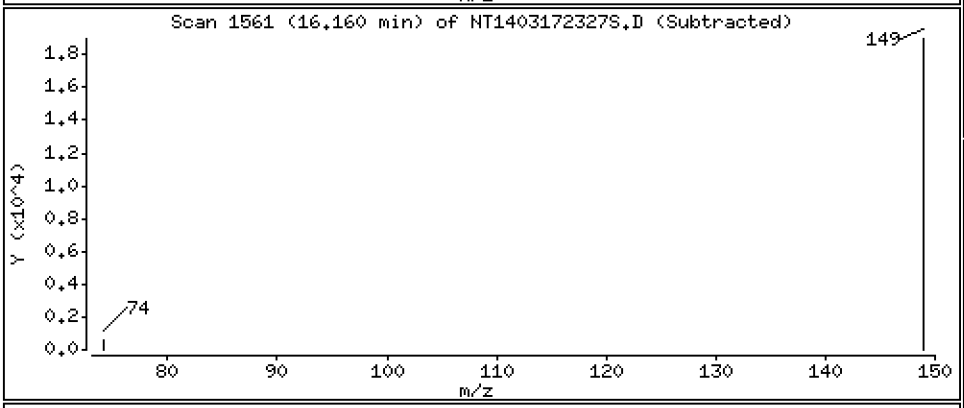
Column diameter: 0.25

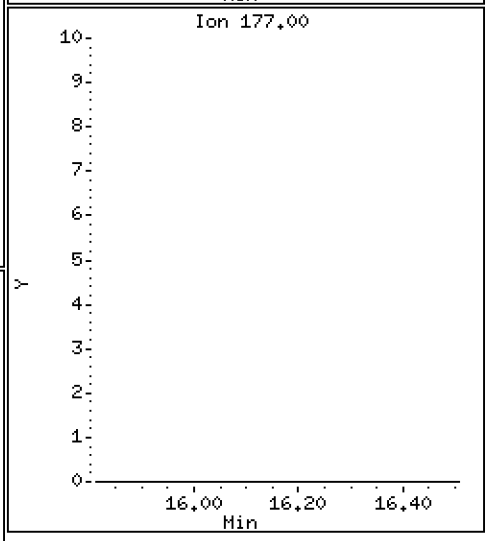
50 Diethylphthalate

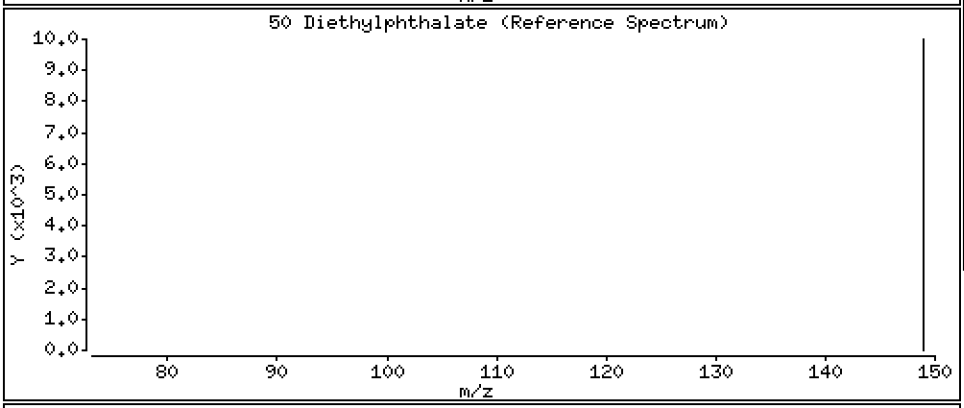
Concentration: 0.2775 ug/mL

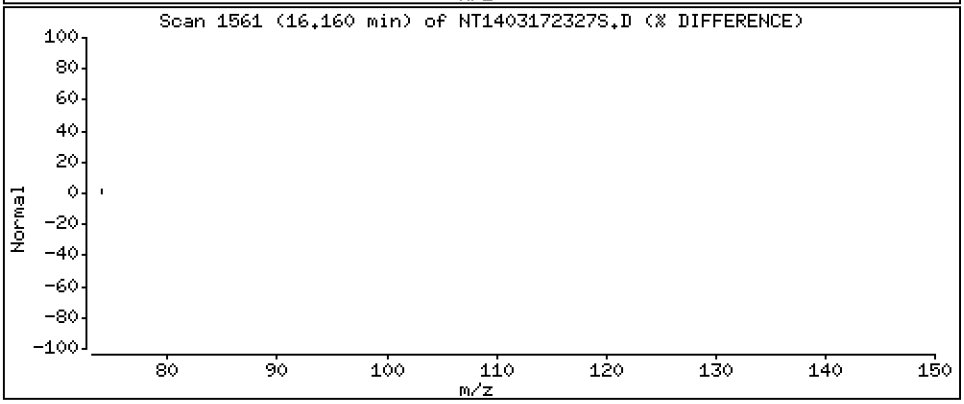












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Date : 18-MAR-2023 06:06

Client ID:

Instrument: nt14.i

Sample Info: 23B0276-01

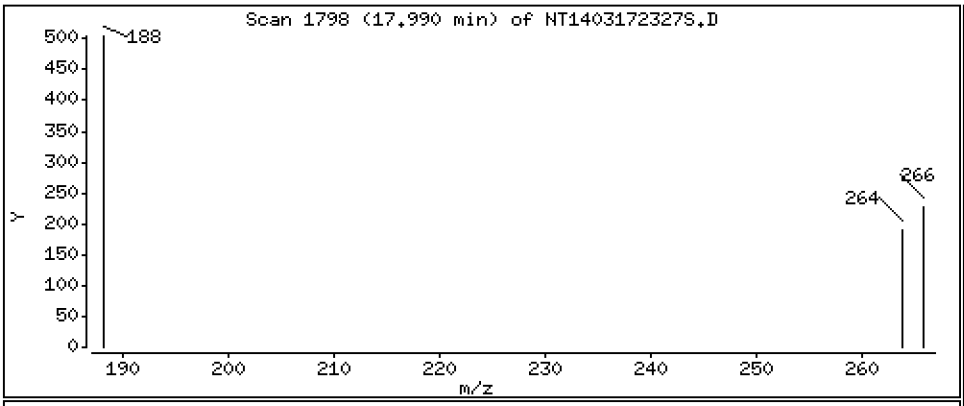
Operator: JGR

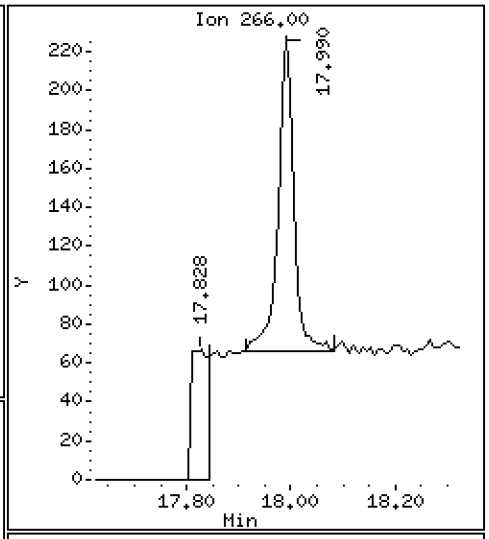
Column phase: ZB-5msi

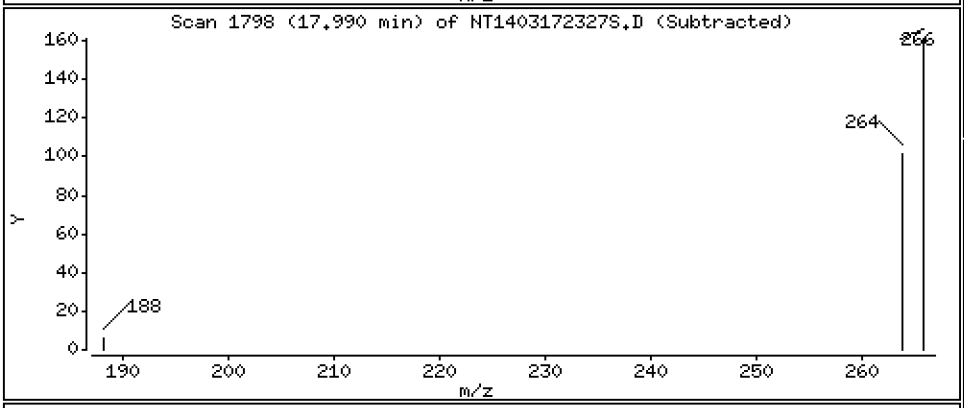
Column diameter: 0.25

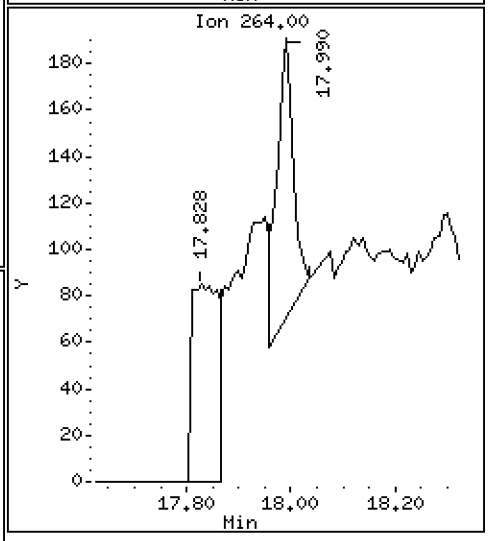
58 Pentachlorophenol

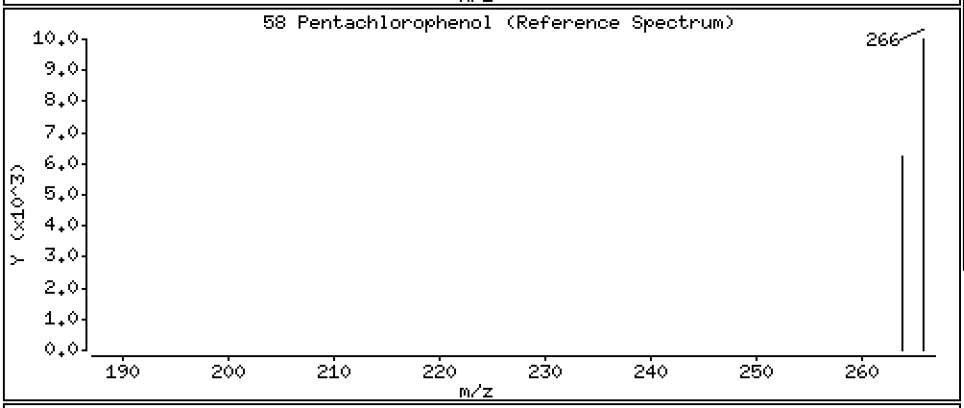
Concentration: 0.01248 ug/mL

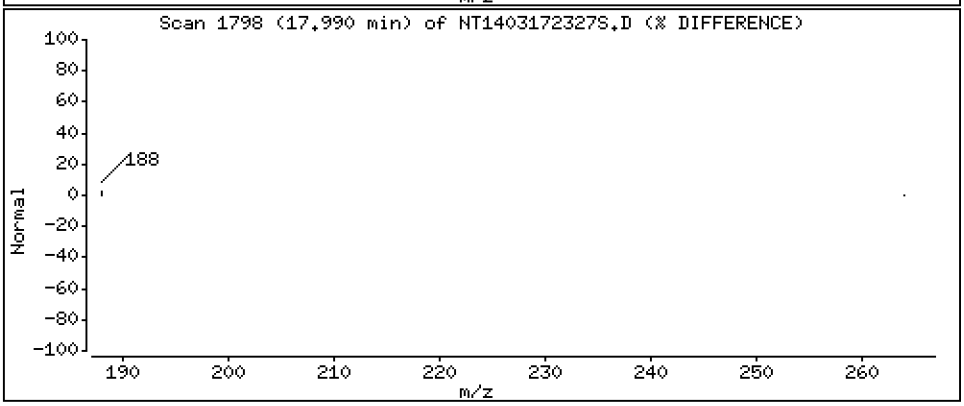












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Date : 18-MAR-2023 06:06

Client ID:

Instrument: nt14.i

Sample Info: 23B0276-01

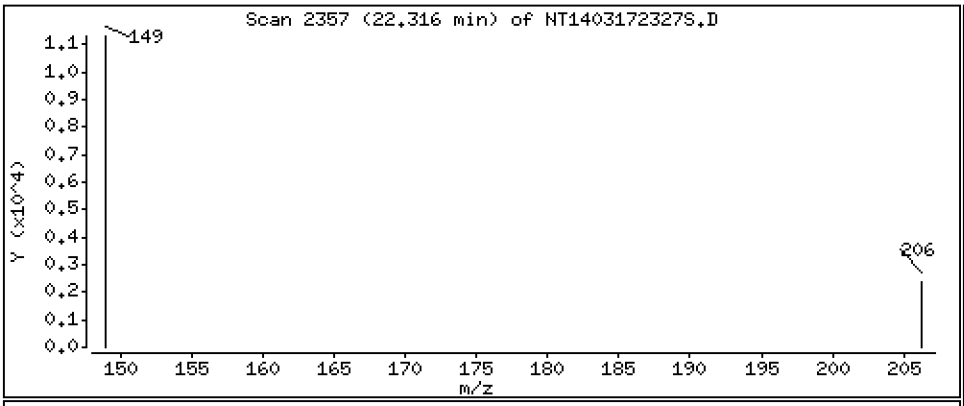
Operator: JGR

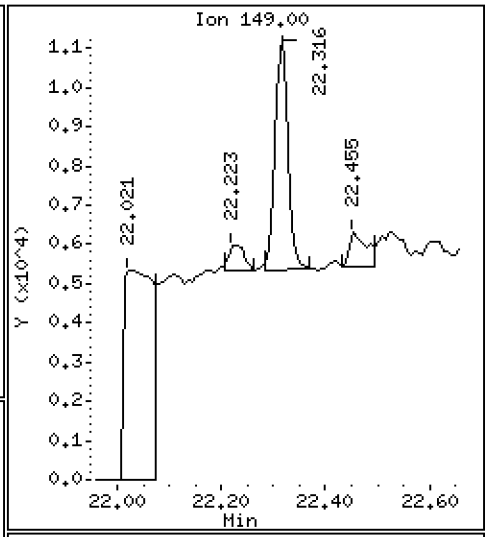
Column phase: ZB-5msi

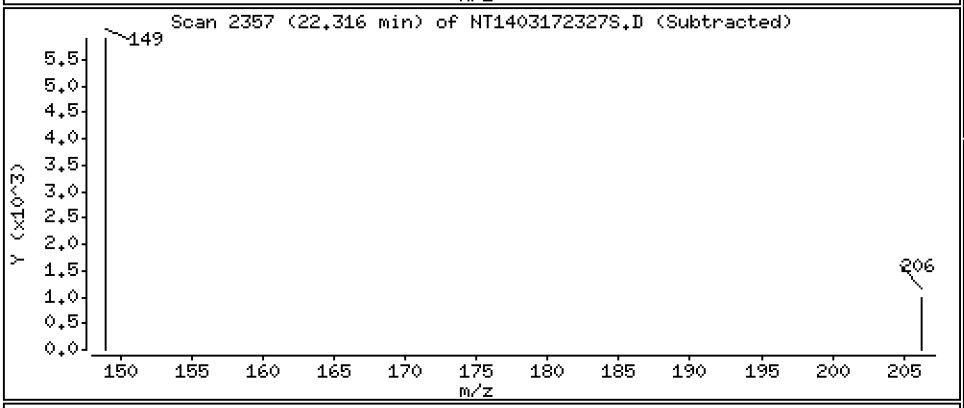
Column diameter: 0.25

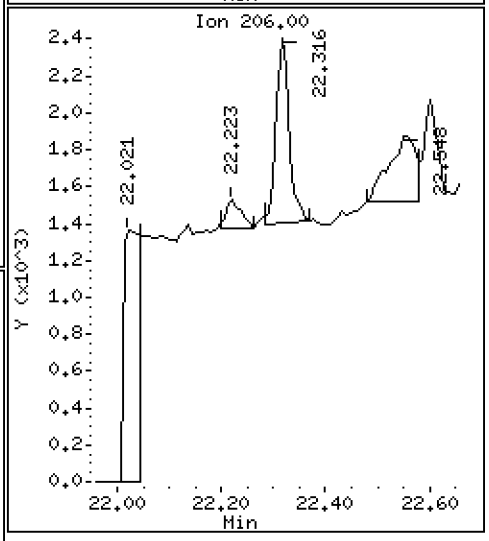
67 Butylbenzylphthalate

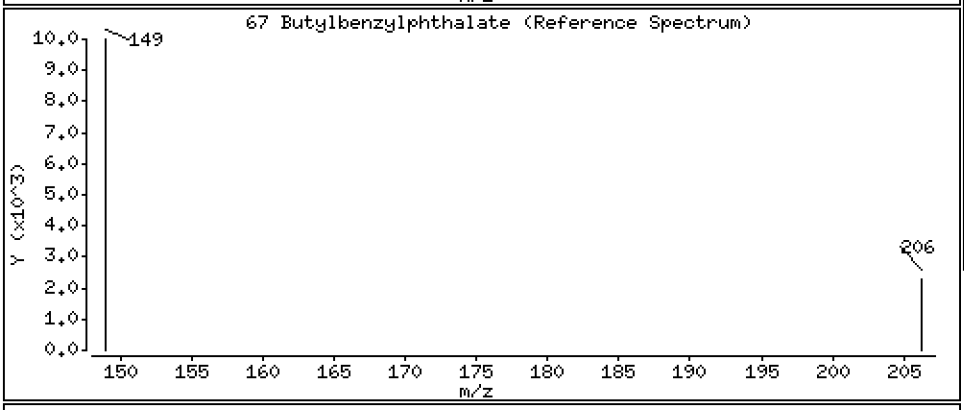
Concentration: 0.2237 ug/mL

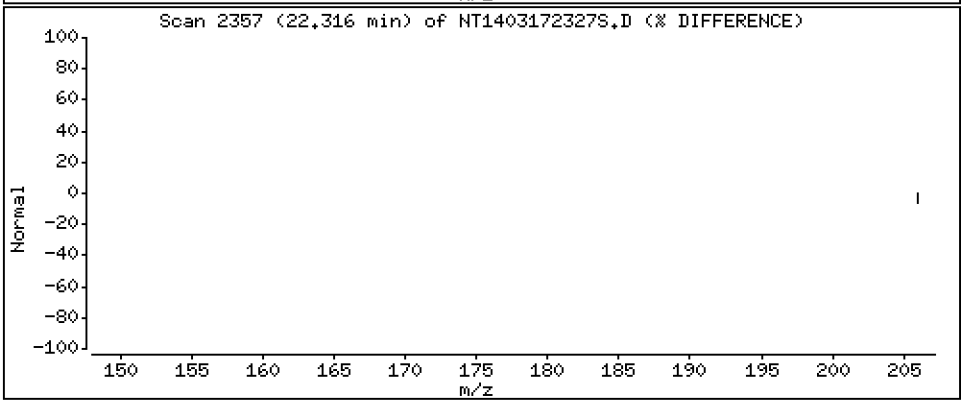












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172327S.D

Date : 18-MAR-2023 06:06

Client ID:

Instrument: nt14.i

Sample Info: 23B0276-01

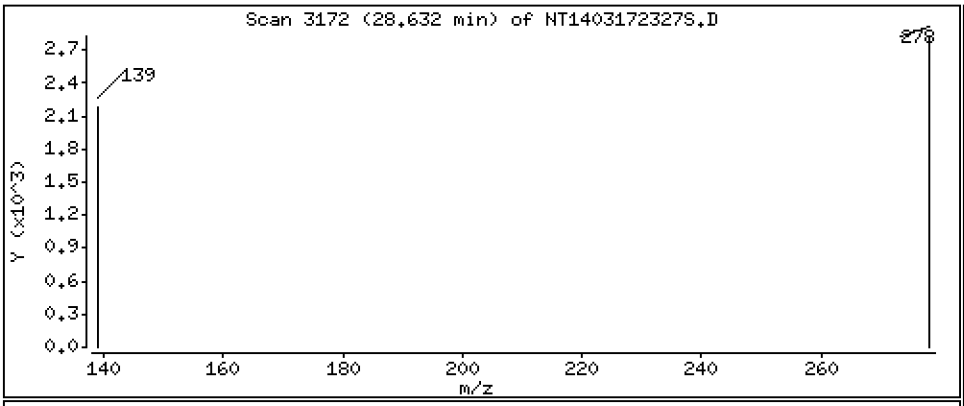
Operator: JGR

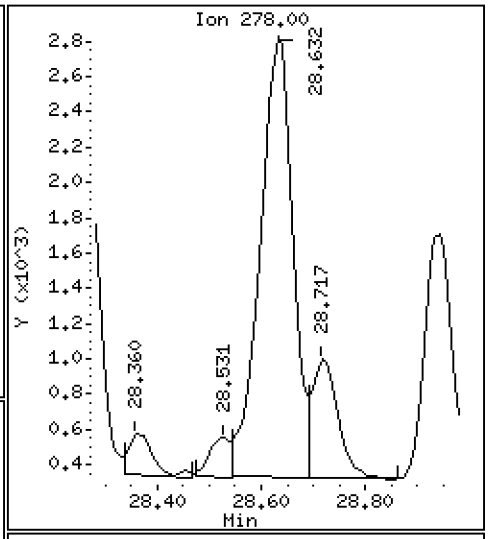
Column phase: ZB-5msi

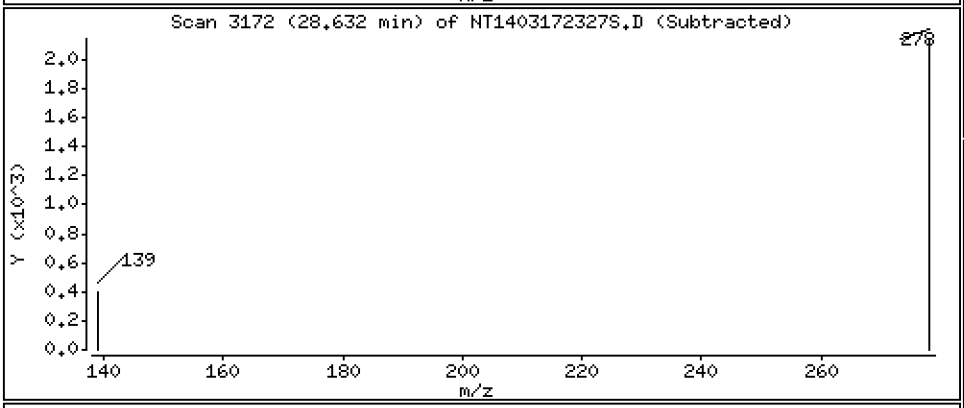
Column diameter: 0.25

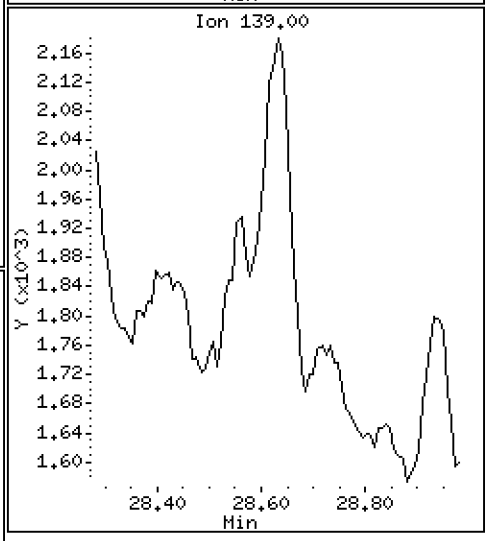
79 Dibenzo(a,h)anthracene

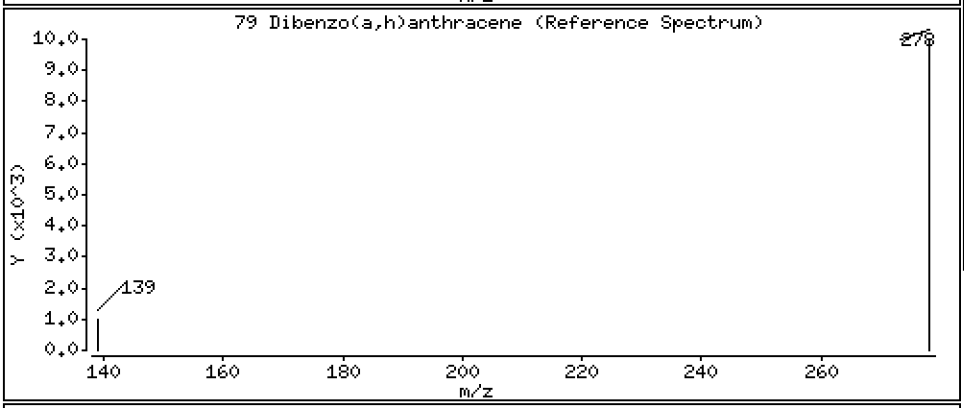
Concentration: 0.2329 ug/mL

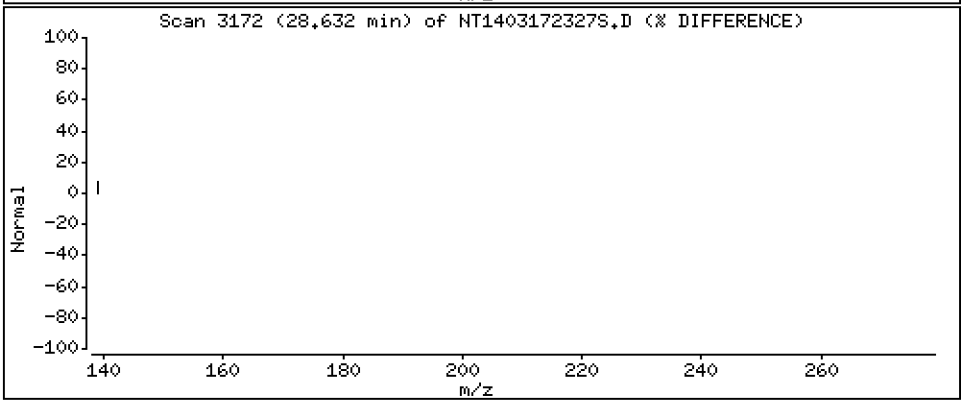












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172327S.D
Lab Smp Id: 23B0276-01
Inj Date : 18-MAR-2023 06:06 MS Autotune Date: 11-MAR-2023 16:01
Operator : JGR Inst ID: nt14.i
Smp Info : 23B0276-01
Misc Info :
Comment :
Method : \\target\share\chem3\nt14.i\20230317.b\20230317.b\SIMABN2.m
Meth Date : 23-Mar-2023 16:55 van Quant Type: ISTD
Cal Date : 15-MAR-2023 15:50 Cal File: NT1403152308.D
Als bottle: 23
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

			QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1	2-Fluorophenol	112	6.841	6.826	(0.755)	450932	5.28505	5.285(R)
	3	Phenol	94	8.448	8.441	(0.932)	13918	0.11862	0.1186
	7	1,3-Dichlorobenzene	146	9.005	8.997	(0.993)	721	0.00718	0.007181
*	8	1,4-Dichlorobenzene-d4	152	9.067	9.067	(1.000)	251363	4.00000	
	9	1,4-Dichlorobenzene	146	9.098	9.098	(1.003)	2364	0.02433	0.02433
	11	Benzyl alcohol	79	9.323	9.354	(1.028)	19574	0.28462	0.2846(MH)
	12	1,2-Dichlorobenzene	146	9.455	9.455	(1.043)	881	0.00931	0.009309
	13	2-Methylphenol	108	9.572	9.564	(1.056)	1105	0.01363	0.01363
	15	4-Methylphenol	108	9.843	9.828	(1.086)	6469	0.07555	0.07555
	16	N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	22	2,4-Dimethylphenol	107	Compound Not Detected.					
	24	Benzoic acid	105	10.999	10.999	(0.950)	32622	0.51647	0.5165
	26	1,2,4-Trichlorobenzene	180	11.487	11.480	(0.993)	486	0.00595	0.005949
*	27	Naphthalene-d8	136	11.572	11.565	(1.000)	969521	4.00000	
	30	Hexachlorobutadiene	225	Compound Not Detected.					
	39	Dimethylphthalate	163	14.706	14.698	(0.967)	10860	0.07314	0.07314(M)
*	42	Acenaphthene-d10	162	15.201	15.201	(1.000)	434752	4.00000	
	50	Diethylphthalate	149	16.160	16.160	(1.063)	43867	0.27751	0.2775
	54	N-Nitrosodiphenylamine	169	Compound Not Detected.					
	57	Hexachlorobenzene	284	Compound Not Detected.					
	58	Pentachlorophenol	266	17.990	17.974	(0.986)	343	0.01248	0.01248
*	59	Phenanthrene-d10	188	18.253	18.245	(1.000)	783103	4.00000	
$	66	Terphenyl-d14	244	21.402	21.386	(0.918)	346408	8.29792	8.298(R)
	67	Butylbenzylphthalate	149	22.315	22.308	(0.957)	9465	0.22370	0.2237
*	69	Chrysene-d12	240	23.306	23.291	(1.000)	242155	4.00000	
*	77	Perylene-d12	264	25.947	25.931	(1.000)	186352	4.00000	
	79	Dibenzo(a,h)anthracene	278	28.631	28.631	(1.103)	11002	0.23289	0.2329
	90	N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

QC Flag Legend

H - Operator selected an alternate compound hit.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1403172327S.D
Lab Smp Id: 23B0276-01
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\SIMABN2.m
Misc Info:

Calibration Date: 18-MAR-2023
Calibration Time: 00:07
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	225221	112611	450442	251363	11.61
27 Naphthalene-d8	830434	415217	1660868	969521	16.75
42 Acenaphthene-d10	389907	194954	779814	434752	11.50
59 Phenanthrene-d10	763679	381840	1527358	783103	2.54
69 Chrysene-d12	415791	207896	831582	242155	-41.76
77 Perylene-d12	274872	137436	549744	186352	-32.20

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.07	8.57	9.57	9.07	-0.00
27 Naphthalene-d8	11.57	11.07	12.07	11.57	0.07
42 Acenaphthene-d10	15.20	14.70	15.70	15.20	-0.00
59 Phenanthrene-d10	18.25	17.75	18.75	18.25	0.04
69 Chrysene-d12	23.29	22.79	23.79	23.31	0.07
77 Perylene-d12	25.93	25.43	26.43	25.95	0.06

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

REVIEW SUMMARY FOR FILE - NT1403172327S.D

Lab ID: 23B0276-01
nt14.i, 20230317.b\20230317.b\SIMABN2.m,   18-MAR-2023 06:06

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

RRT check based on Ccal File: 20230317.b/NT1403172317S.D

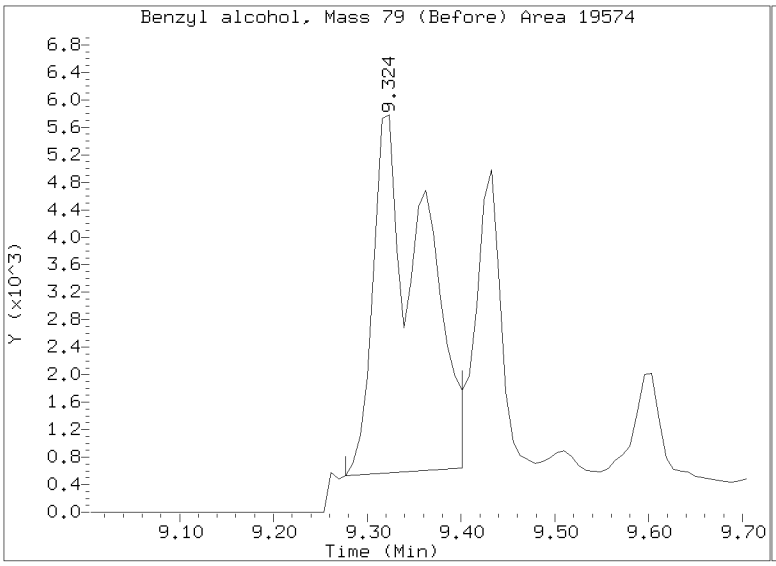
On Column LOD for nt14.i, 20230317.b\SIMABN2.m, PSDDA.sub = 0.0000

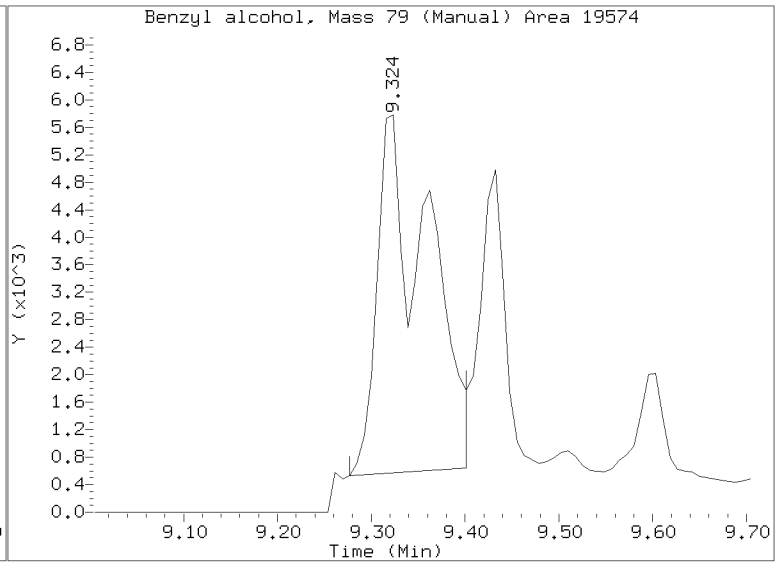
Exception: 1,2,4-Trichlorobenzene 0.0010

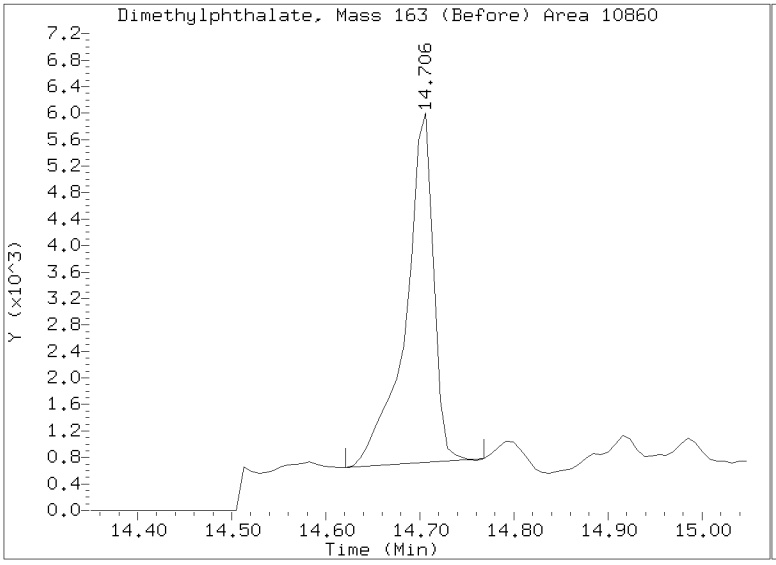
* Only compounds listed in the work order have been verified by the analyst *

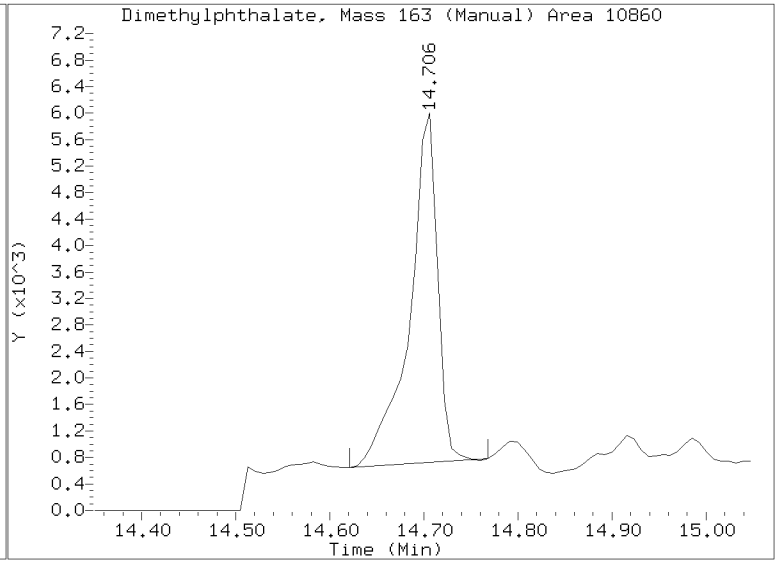
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230317.b/20230317.b/NT1403172327S.D
Injection Date: 18-MAR-2023 06:06
Lab ID:23B0276-01 Client ID:
Report Date: 03/23/2023 16:56









PREPARATION BATCH SUMMARY

EPA 8270E-SIM

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Batch: BLB0424 Batch Matrix: Solid
Preparation: EPA 3546 (Microwave)

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SC1150B	23B0276-01	NT1403172327S.D	02/17/23 15:00	
Blank	BLB0424-BLK2	NT1403172312S.D	02/17/23 15:00	
LCS	BLB0424-BS2	NT1403172313S.D	02/17/23 15:00	
LCS Dup	BLB0424-BSD2	NT1403172314S.D	02/17/23 15:00	
LDW23-SC1150B	BLB0424-MS2	NT1403172328S.D	02/17/23 15:00	
LDW23-SC1150B	BLB0424-MSD2	NT1403172329S.D	02/17/23 15:00	
Reference	BLB0424-SRM2	NT1403172315S.D	02/17/23 15:00	

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLB0424

Prepared using: EPA 3546 (Microwave)

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

Matrix: Solid Date Prepared: 2/17/23 Balance ID: B139298002 Set Up By: CTO 2/16/23

WO Comments

23A0099: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)
23B0229: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM H002055, SIM RM H010158, PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)
23B0276: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM H002055, SIM RM H010158, PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H>Please push this to front of LDW line of samples

The following standards may be missing from this batch!

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

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

Lab Number & Container	% Solids	Initial (g) Target Dry: 10 (Wet) Actual	(REQ) GPC C/U (1:1) 1 (2) 3	Water Wash 1mL	Final Effective Vol (mL)	Vol (mL) to Lab	Extraction Comments
23A0099-04 A	54.8	(18.26) 18.71	(1:1)	1mL	1	0.5	From BLA0288 by CTO on 16-Feb-2023
23B0229-02 A	56.0	(17.86) 17.89	(1:1)	1mL	1	0.5	
23B0229-03 A	54.8	(18.25) 18.45	(1:1)	1mL	1	0.5	
23B0229-04 A	52.2	(19.17) 19.43	(1:1)	1mL	1	0.5	
23B0229-05 A	44.9	(22.26) 22.74	(1:1)	1mL	1	0.5	
23B0229-06 A	48.6	(20.57) 20.78	(1:1)	1mL	1	0.5	
23B0229-08 A	49.7	(20.13) 20.78	(1:1)	1mL	1	0.5	
23B0276-01 A	63.6	(15.72) 15.72	(1:1)	1mL	1	0.5	

Batch QC

Lab Number	% Solids	Initial (g) Target Dry: 10 (Wet) Actual	(REQ) GPC C/U (1:1) 1 (2) 3	Water Wash 1mL	Final Effective Vol (mL)	Vol (mL) to Lab	Extraction Comments
BLB0424-BLK1	100.0	(10.00) 10.00	(1:1)	1mL	1	0.5	Use 5g Neutral Sodium Sulfate for Blanks
BLB0424-BS1	100.0	(10.00) 10.00	(1:1)	1mL	1	0.5	Use 5g Neutral Sodium Sulfate for Blanks
BLB0424-BSD1	100.0	(10.00) 10.00	(1:1)	1mL	1	0.5	Use 5g Neutral Sodium Sulfate for Blanks
BLB0424-MS1	63.6	(15.72) 15.72	(1:1)	1mL	1	0.5	Use 23B0276-01
BLB0424-MSD1	63.6	(15.72) 15.72	(1:1)	1mL	1	0.5	Use 23B0276-01
BLB0424-SRM1	100.0	~~(10.00)~~ (1.00) 1.00	(1:1)	1mL	1	0.5	Use K003477

+1g DI WATER

UR 2/17/23
Client ID verified By Date

NRS 2/20/23
Preparation Reviewed By Date

2/17/23 15:00
Extraction Date and Time

Printed: 2/16/2023 11:49:00AM

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLB0424

Prepared using: EPA 3546 (Microwave)

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

WO Comments

23A0099: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)
23B0229: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM H002055, SIM RM H010158, PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)
23B0276: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM H002055, SIM RM H010158, PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H>Please push this to front of LDW line of samples

Prep Steps	Reagents Used		Surrogates & Spike Standards Used

Microwave
0 (1) 2 3
CT UR 2117
Analyst/Date

Station/Reagent	Standard ID
Microwave Analyst: UR/CT Date: 2/17/23	
Anhydrous Sodium Sulfate	L000285
1:1 Methylene Chloride/Acetone	L001416
Methylene Chloride	L000808
Pre-Deactivated Glass Wool	L000252

Type	Vial ID / Standard ID	Vol uL	Analyst	Witness
Surrogate 100/150µg/mL	A K010466 Exp Date: 8/1/23	50µL	CT	
Full List Spike (Freezer) 100µg/mL	7 K011369 (V) Exp Date: K011297 8/31/23	50µL	CT	
Base Spike 200µg/mL	56 K011369 (V) Exp Date: K003759 4/19/23	50µL	CT	
Acid Spike 100/200µg/mL	38 K011369 (V) Exp Date: K003760 4/19/23	50µL	CT	

Pre-GPC KD
100°C
Exchange to Hexane
(add 10 mL to KD)
0 2 4 (5) 6
NRB 2/18/23
Analyst/Date

Pre GPC KD Analyst: NRB Date: 2/18/23	
Pre-Deactivated Glass Wool	N/A
Anhydrous Sodium Sulfate	L000980
Methylene Chloride	L005941
Hexane	L000899

TurboVap
Pre GPC
1 2 3 (4) 5
TWC 2/18/23
Analyst/Date

GPC Filter Prep Analyst: TWC Date: 2/18/23 TWC	
Methylene Chloride	L005941
GPC Filter	

Post GPC KD
80-85°C
0 (2) 4 5 (6)
LO 2-20
Analyst/Date

GPC Analyst: TWC Date: 2/18/23	
Methylene Chloride	L005941
GPC Calibration File	CLB0132-GPC2

TurboVap
1 2 3 (4) 5
NRB 2/20/23
Analyst/Date

Post GPC KD Analyst: LO Date: 2-20-23	
Methylene Chloride	L005941

Water Wash
NRB 2/20/23
Analyst/Date

Vialing Analyst: NRB Date: 2/20/23	
Methylene Chloride	L005941

MANUALLY ENTER EXPIRATION DATES!

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

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

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLB0424

Prepared using: EPA 3546 (Microwave)

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

WO Comments

23A0099: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)
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<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)
23B0276: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM H002055, SIM RM H010158, PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H>Please push this to front of LDW line of samples

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

Printed: 2/16/2023 11:49:00AM

3036F

Extraction Parameter: SVOA Extraction Batch: BLB0424

Total Solids Batch: BLB0338 Work Order(s): 23B0261, 276

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☒ No Anomalies (standard soil/wet sediment/sand/gravel)= Φ1, 04, 07, 14, 13, 16, 19, 22, 276=Φ1	YP Φ2/14/23
☒ Standing Water Decanted (Not shared)= 23B0261 Φ1, Φ4, Φ7, 10, 13, 16, 19, 22, 25, 28, 31, 34	MP Φ2/14/23
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☒ Oily, obvious fuel/sulfur odors= 276 Φ1.	MP Φ2/14/23
☐ Received in 32oz jar(s)=Homogenized in Pyrex dish=	
☐ Previously Frozen =	
☒ Other (Details)= shell pieces = 10 of 25, 28, 31, 34.	MP Φ2/14/23
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
☐ Received in 1.0L Bottle(s)=No Bottle Rinse=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	
☒ Share Samples Y / N	YP Φ2/14/23
☒ Multiple Jars Y / N	MP Φ2/14/23
☐ Sample Pre-Screens indicate analyte activity=	
☐ Sample weights/volumes reduced based on Pre-Screen=	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

Extraction Parameter: SVOA Extraction Batch: BLB0424

Total Solids Batch: BLB0340 Work Order(s): 23B0229 01-08

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☒ No Anomalies (standard soil/wet sediment/sand/gravel)= 01-08	VR 2/15/23
☒ Standing Water Decanted (Not shared)= 01-08	VR 2/15/23
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Received in 32oz jar(s)=Homogenized in Pyrex dish=	
☒ Previously Frozen = 01-08	VR 2/15/23
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
☐ Received in 1.0L Bottle(s)=No Bottle Rinse=	
☒ Other Notes/Comments= (Note problems, concerns, corrective actions).	
- lost 5% when transferring to KD 229 08	AKB 2/18/23
☒ Share Samples Y / (N)	VR 2/15/23
☒ Multiple Jars Y / (N)	VR 2/15/23
☐ Sample Pre-Screens indicate analyte activity=	
☐ Sample weights/volumes reduced based on Pre-Screen=	

BLA0424/BLB0429 23A0099/23B0229/276/263/278 SVOC

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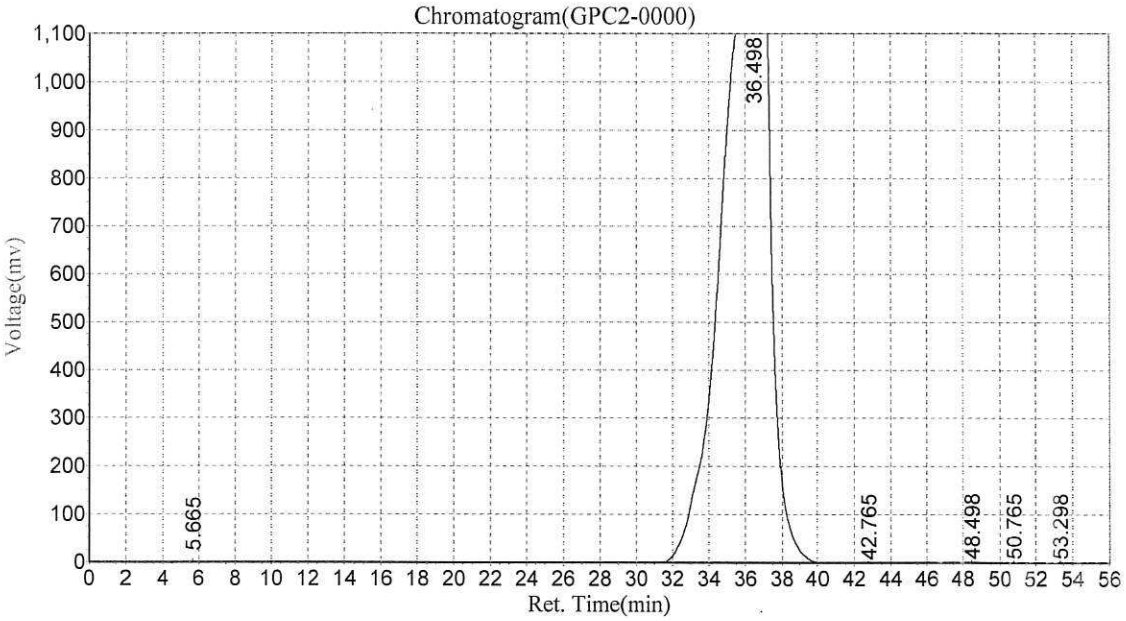
Analyst£°TWC
Date/Time2023-02-18,2:39:33 PM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		5.665	1631.788	107198.344	0.0444
2		36.498	1230302.750	240853856.000	99.7231
3		42.765	2088.653	154681.250	0.0640
4		48.498	1457.462	110338.313	0.0457
5		50.765	2106.192	187223.906	0.0775
6		53.298	1412.538	109227.227	0.0452
Total			1238999.383	241522525.039	100.000

Ingredient Table

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

BLA0424/BLB0429 23A0099/23B0229/276/263/278 SVOC

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Analyst£°TWC
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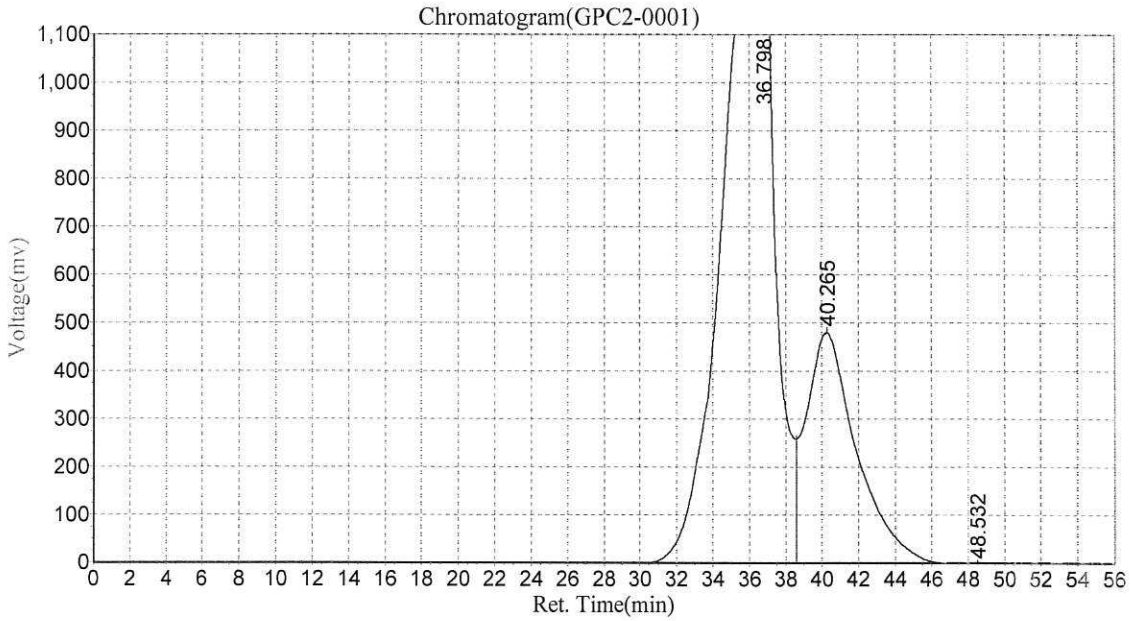

Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		36.798	1253720.750	266495296.000	73.7152
2		40.265	484494.875	94906336.000	26.2520
3		48.532	1706.172	118466.180	0.0328
Total			1739921.797	361520098.180	100.000

Ingredient Table

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

BLA0424/BLB0429 23A0099/23B0229/276/263/278 SVOC

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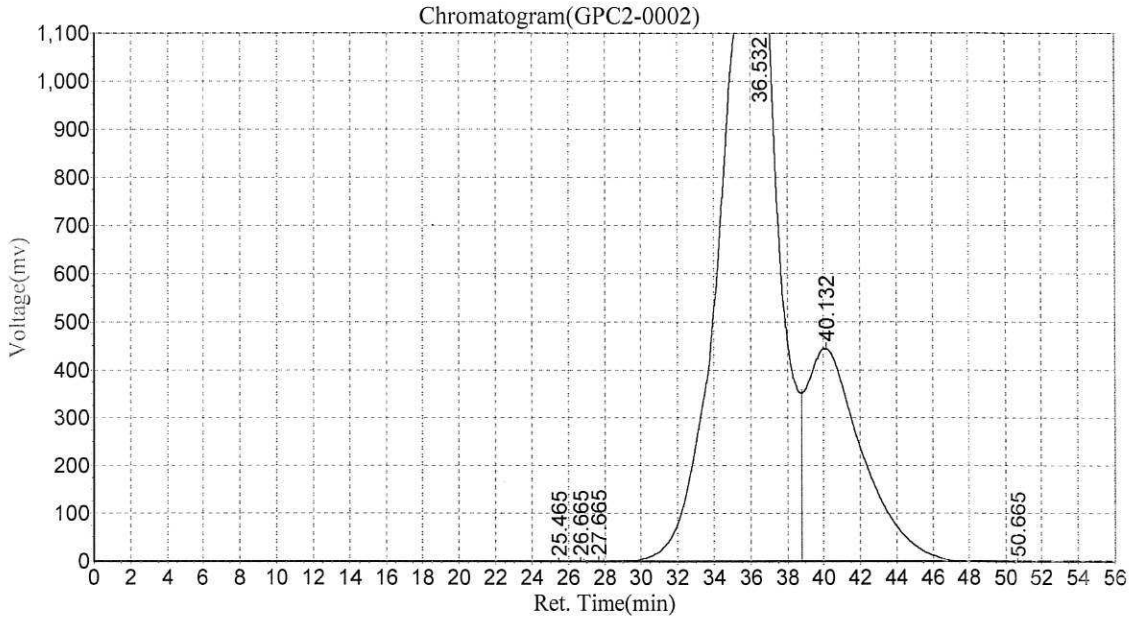
Analyst£ºTWC
Date/Time2023-02-18,4:34:59 PM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		25.465	2937.737	160704.563	0.0408
2		26.665	4304.507	230034.438	0.0584
3		27.665	5633.149	315938.625	0.0802
4		36.532	1254572.500	294632704.000	74.7901
5		40.132	451142.813	98411416.000	24.9809
6		50.665	2140.918	195131.297	0.0495
Total			1720731.624	393945928.922	100.000

Ingredient Table

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

BLA0424/BLB0429 23A0099/23B0229/276/263/278 SVOC

Date:2023-02-18,5:32:42 PM
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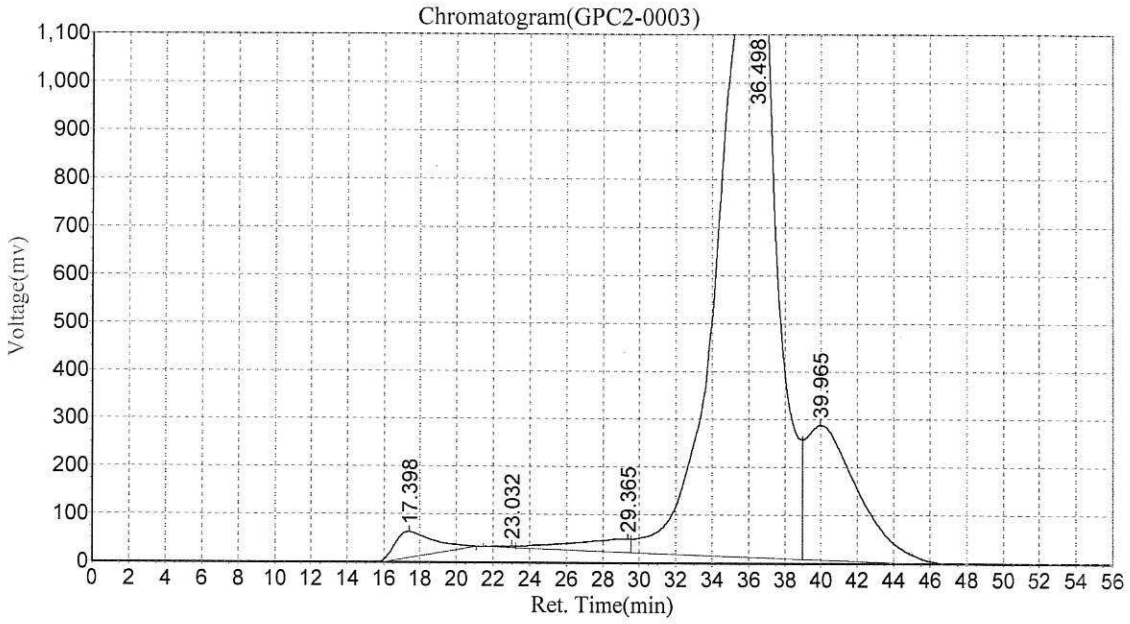
Method File:E:\GPC2_InHouse.mtd

Analyst£°TWC
Date/Time2023-02-18,5:32:43 PM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		17.398	53985.484	7958088.000	2.2576
2		23.032	3286.524	187231.641	0.0531
3		29.365	27916.904	5955562.500	1.6895
4		36.498	1211286.375	281602848.000	79.8879
5		39.965	281303.063	56793604.000	16.1118
Total			1577778.350	352497334.141	100.000

Ingredient Table

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

BLA0424/BLB0429 23A0099/23B0229/276/263/278 SVOC

Date:2023-02-18,6:30:23 PM
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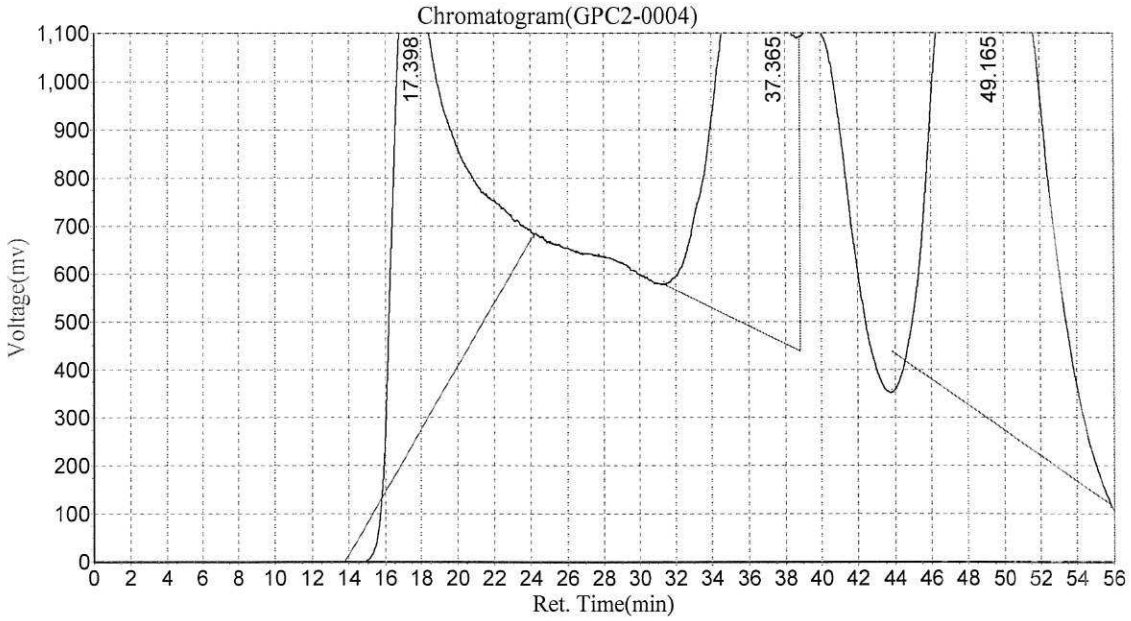
Method File:E:\GPC2_InHouse.mtd

Analyst£ºTWC
Date/Time2023-02-18,6:30:24 PM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		17.398	1016836.250	225737472.000	25.5168
2		37.365	783191.938	222387792.000	25.1382
3		49.165	1003920.063	436537216.000	49.3451
Total			2803948.250	884662480.000	100.000

Ingredient Table

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

BLA0424/BLB0429 23A0099/23B0229/276/263/278 SVOC

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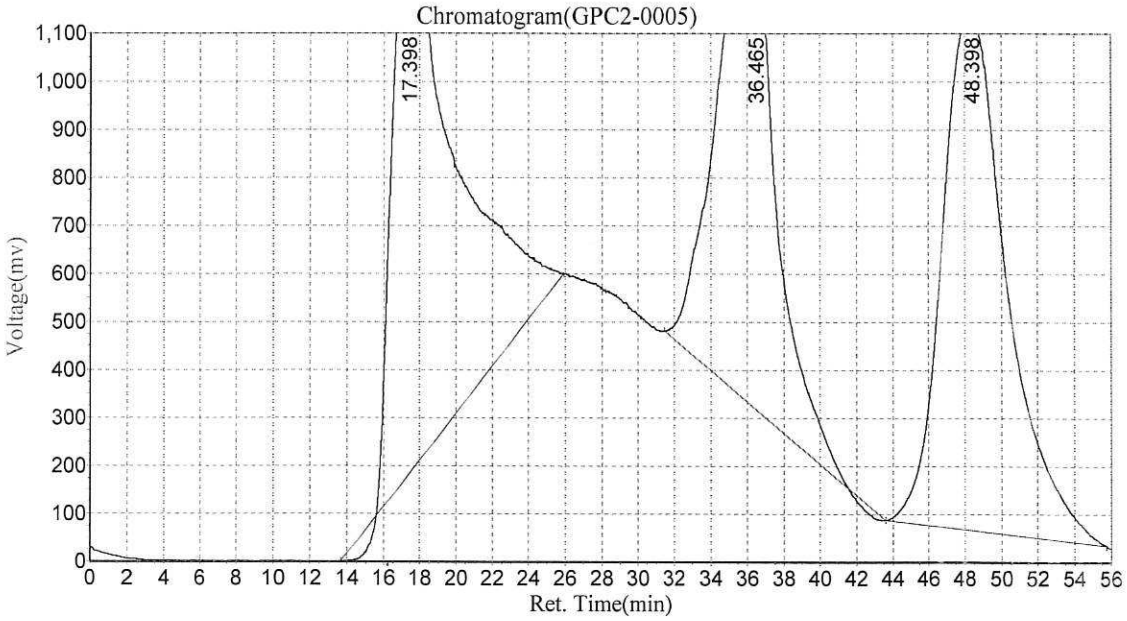

Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		17.398	1071547.750	277728192.000	36.1965
2		36.465	929063.625	223717056.000	29.1572
3		48.398	1069004.500	265834128.000	34.6463
Total			3069615.875	767279376.000	100.000

Ingredient Table

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

BLA0424/BLB0429 23A0099/23B0229/276/263/278 SVOC

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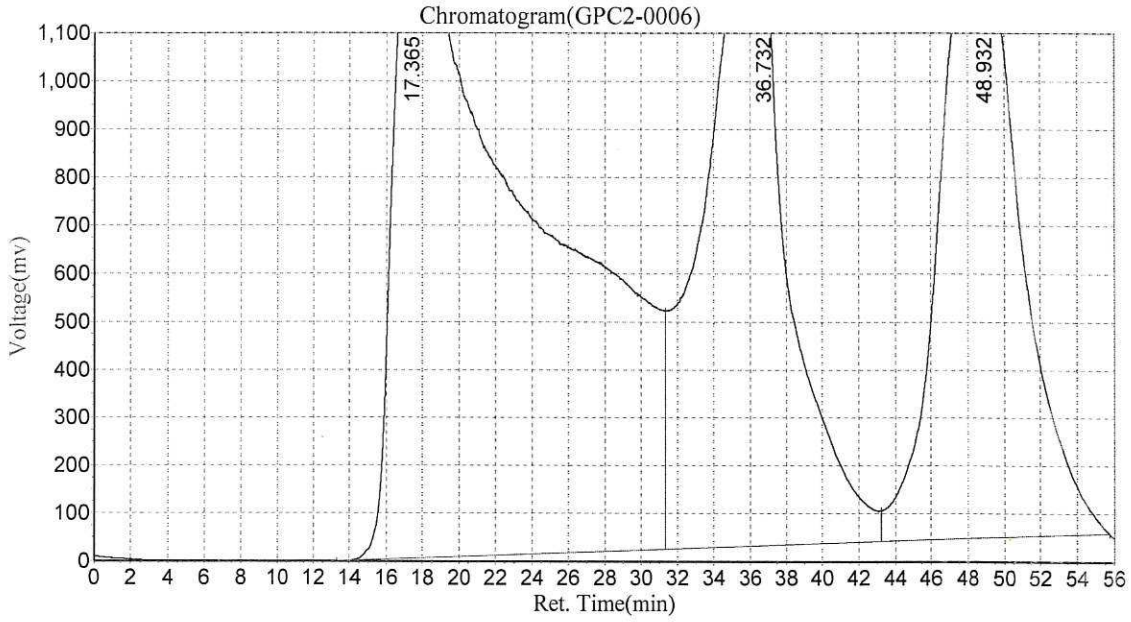

Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		17.365	1248008.875	738091264.000	47.7380
2		36.732	1214440.000	424203680.000	27.4365
3		48.932	1192651.500	383834848.000	24.8255
Total			3655100.375	1546129792.000	100.000

Ingredient Table

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

BLA0424/BLB0429 23A0099/23B0229/276/263/278 SVOC

Date:2023-02-18,9:23:35 PM
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Method File:E:\GPC2_InHouse.mtd

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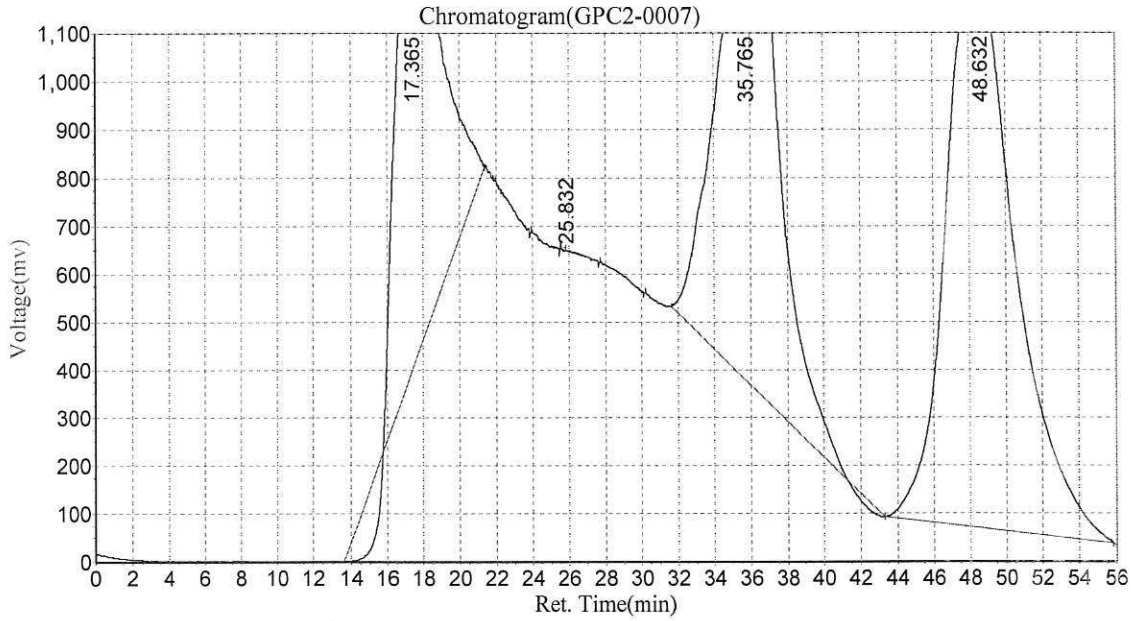

Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		17.365	857413.500	153276576.000	22.1687
2		25.832	1384.370	176419.594	0.0255
3		35.765	869755.750	231706384.000	33.5122
4		48.632	1129357.875	306249568.000	44.2936
Total			2857911.495	691408947.594	100.000

Ingredient Table

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

BLA0424/BLB0429 23A0099/23B0229/276/263/278 SVOC

Date:2023-02-18,10:21:16 PM
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Method File:E:\GPC2_InHouse.mtd

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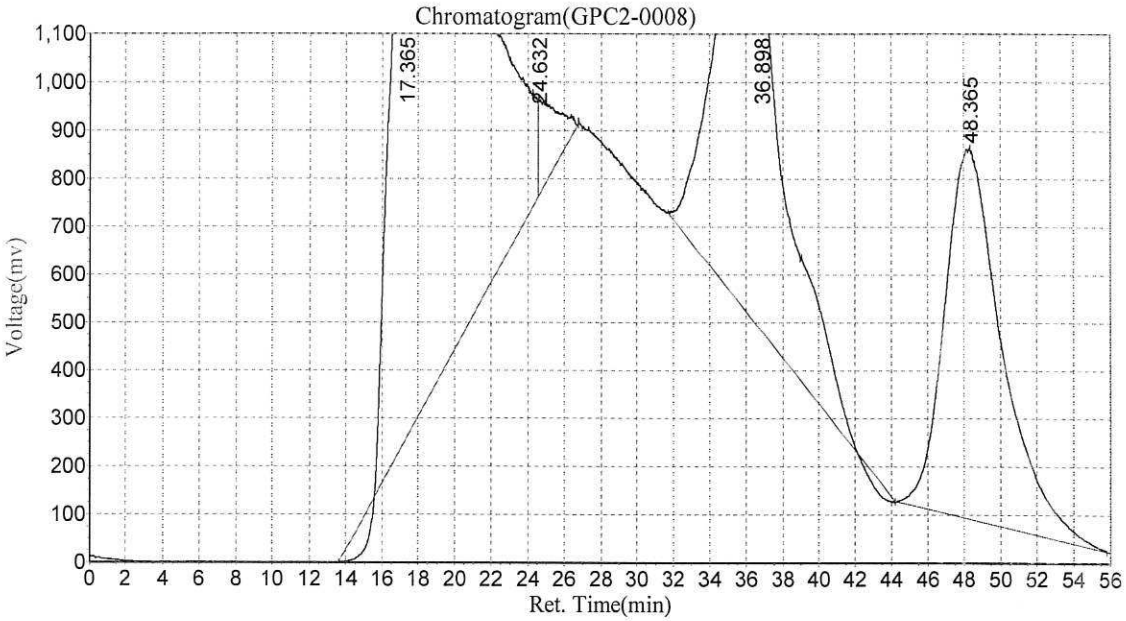

Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		17.365	994261.438	351921824.000	47.0272
2		24.632	200525.750	13799422.000	1.8440
3		36.898	769164.750	213070368.000	28.4725
4		48.365	768088.563	169545696.000	22.6563
Total			2732040.500	748337310.000	100.000

Ingredient Table

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

BLA0424/BLB0429 23A0099/23B0229/276/263/278 SVOC

Date:2023-02-18,11:19:04 PM
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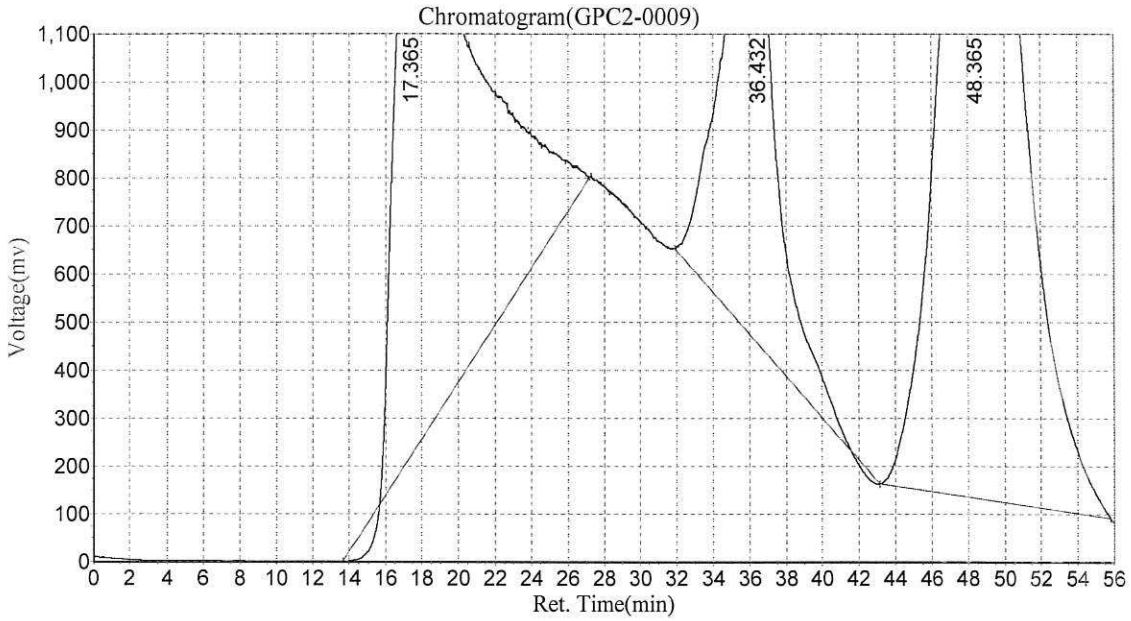
Analyst£°TWC
Date/Time2023-02-18,11:19:05 PM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		17.365	1033673.438	358779936.000	36.5983
2		36.432	791781.375	188223424.000	19.2002
3		48.365	1114773.125	433315712.000	44.2015
Total			2940227.938	980319072.000	100.000

Ingredient Table

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

BLA0424/BLB0429 23A0099/23B0229/276/263/278 SVOC

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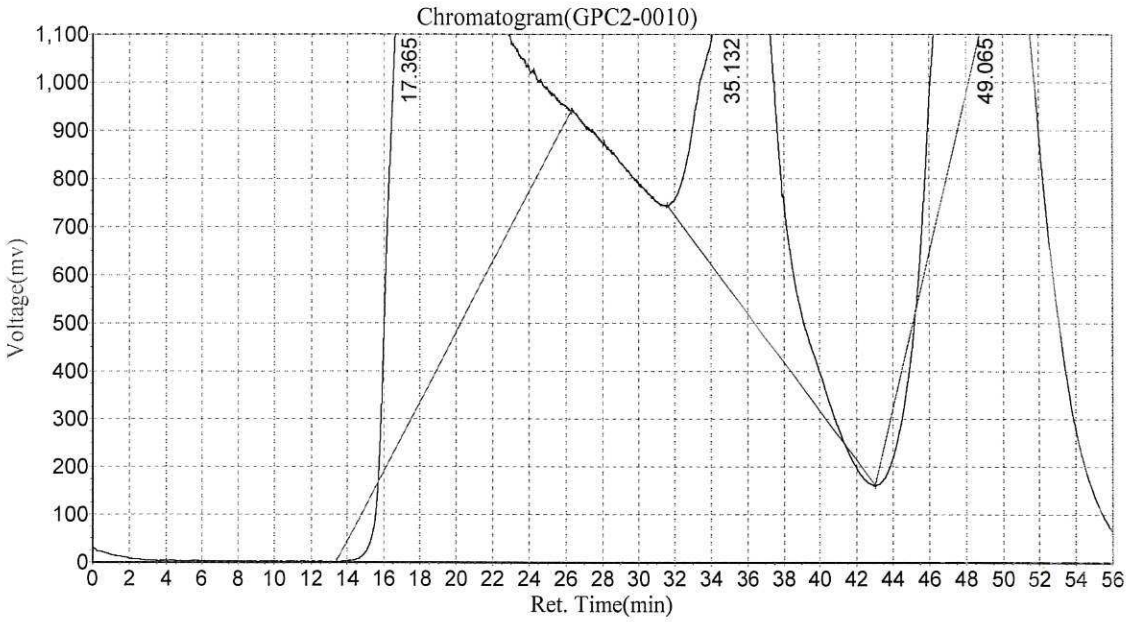

Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		17.365	965013.063	341510112.000	56.3145
2		35.132	683606.250	205736944.000	33.9257
3		49.065	109773.992	59186188.000	9.7597
Total			1758393.305	606433244.000	100.000

Ingredient Table

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

BLA0424/BLB0429 23A0099/23B0229/276/263/278 SVOC

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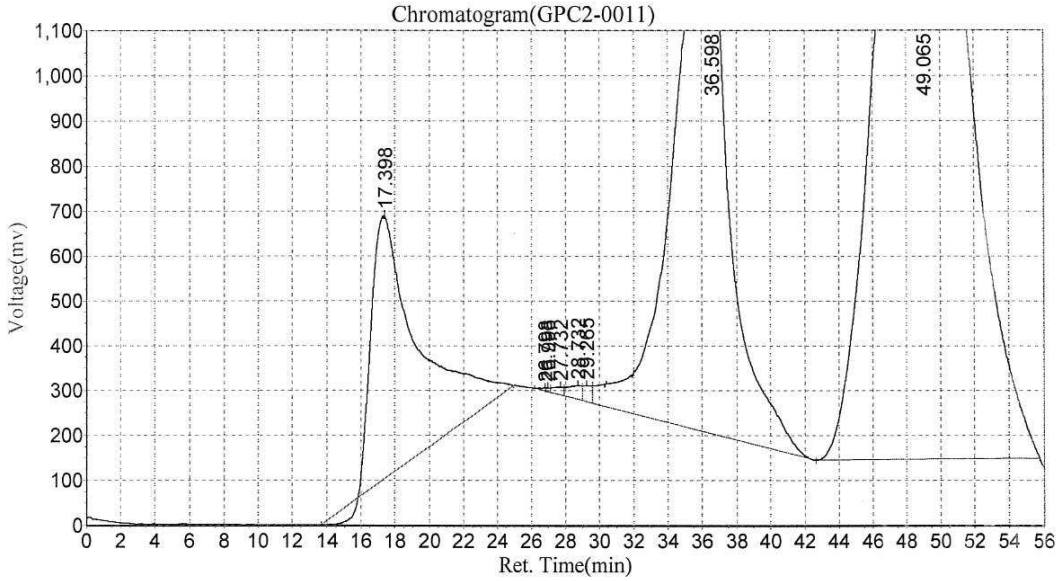

Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		17.398	585885.438	109560784.000	12.7080
2		26.798	6820.461	147395.281	0.0171
3		26.998	8978.615	139675.344	0.0162
4		27.732	17683.846	729162.625	0.0846
5		28.732	31140.615	1715067.375	0.1989
6		29.265	36273.691	1307129.250	0.1516
7		36.598	1034882.000	256462240.000	29.7471
8		49.065	1100757.625	492080384.000	57.0765
Total			2822422.292	862141837.875	100.000

Ingredient Table

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

BLA0424/BLB0429 23A0099/23B0229/276/263/278 SVOC

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Method File:E:\GPC2_InHouse.mtd

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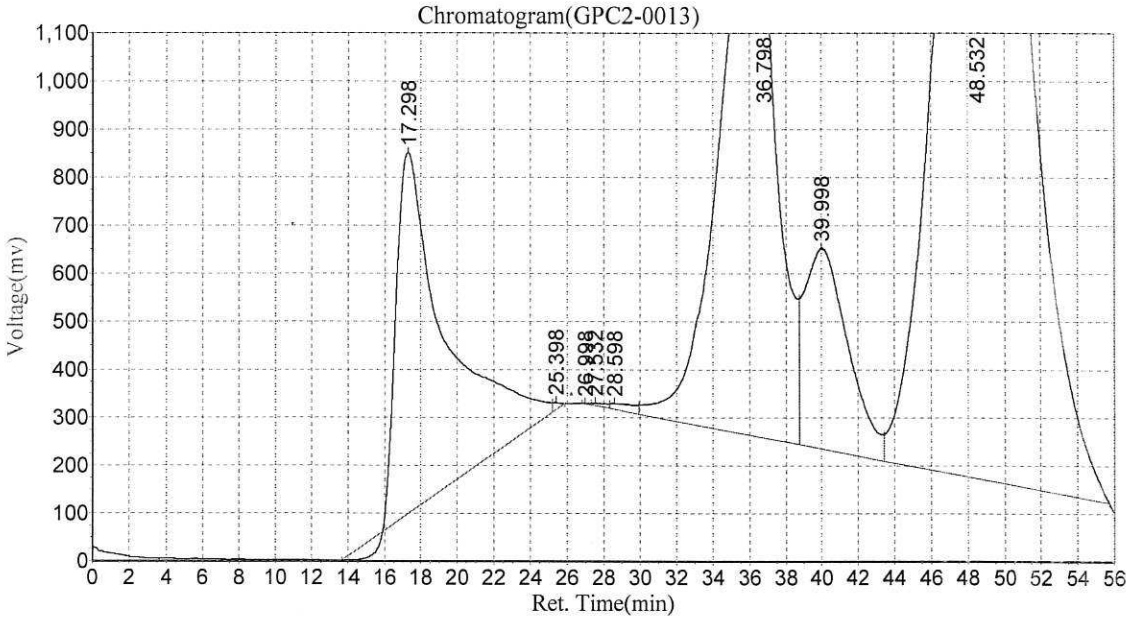
Date/Time2023-02-19,3:09:59 AM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		17.298	751568.625	142783888.000	15.4520
2		25.398	14418.507	396625.563	0.0429
3		26.998	5714.335	188218.094	0.0204
4		27.532	9444.761	654233.875	0.0708
5		28.598	16321.611	1752119.750	0.1896
6		36.798	991074.875	236902912.000	25.6374
7		39.998	416866.469	70516224.000	7.6312
8		48.532	1076129.250	470856704.000	50.9557
Total			3281538.433	924050925.281	100.000

Ingredient Table

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

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I

METHOD BLANK DATA SHEET

EPA 8270E-SIM

Blank

Laboratory:	Analytical Resources, LLC			SDG:	23B0276
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Solid	Laboratory ID:	BLB0424-BLK2	File ID:	NT1403172312S.D
Sampled:	N/A	Prepared:	02/17/23 15:00	Analyzed:	03/17/23 21:06
Solids:		Preparation:	EPA 3546 (Microwave)	Initial/Final:	10 g / 1 mL
Batch:	BLB0424	Sequence:	SLC0376	Calibration:	GC00050
Instrument:	NT14	Column:	ZB-5MS		

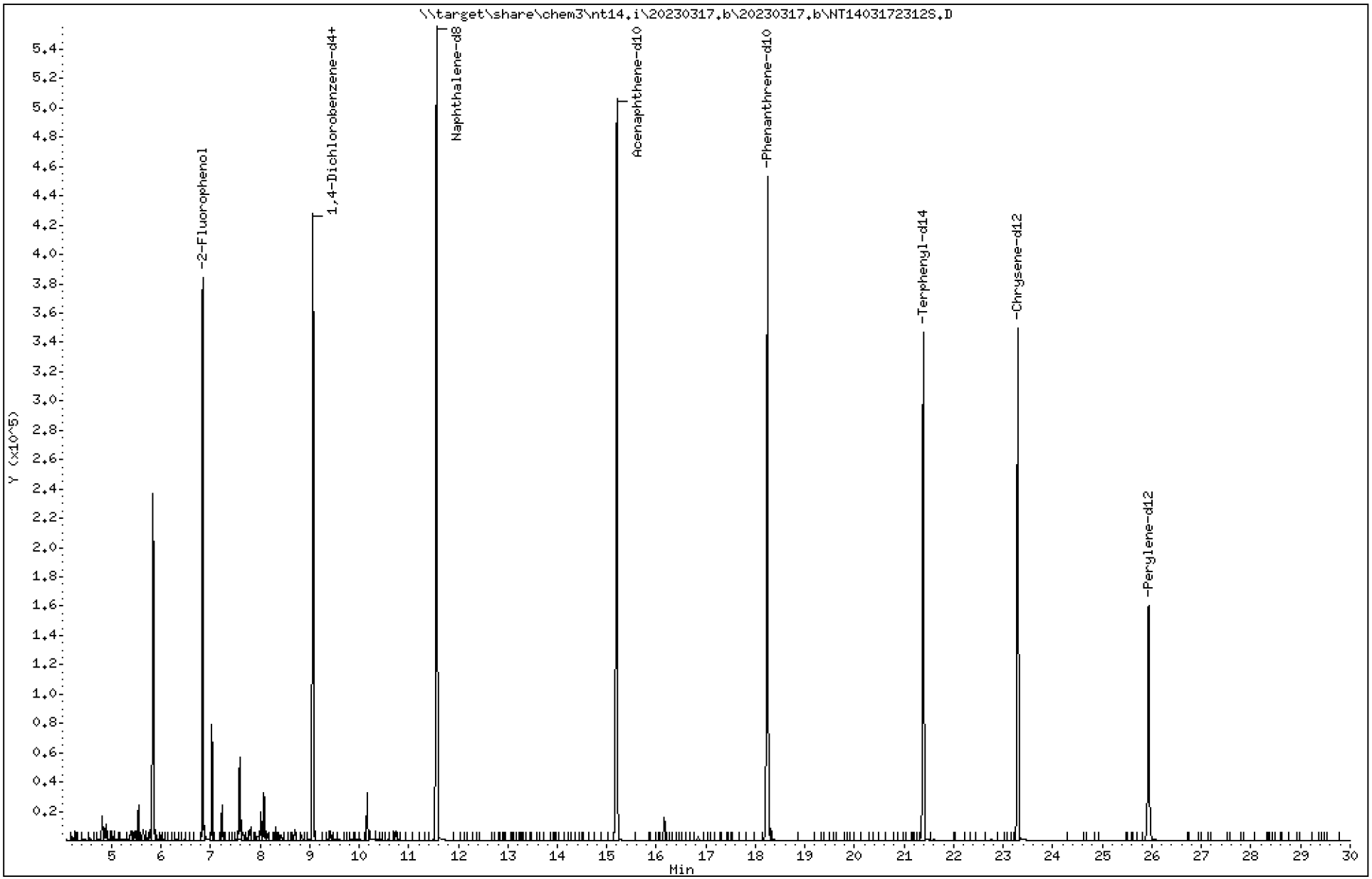
CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg wet)	Q	DL	RL
106-46-7	1,4-Dichlorobenzene	1	0.8	J	0.6	5.0
95-50-1	1,2-Dichlorobenzene	1	5.0	U	0.7	5.0
100-51-6	Benzyl Alcohol	1	20.0	U	2.5	20.0
65-85-0	Benzoic acid	1	100	U	13.4	100
105-67-9	2,4-Dimethylphenol	1	20.0	U	2.2	20.0
120-82-1	1,2,4-Trichlorobenzene	1	5.0	U	2.7	5.0
86-30-6	N-Nitrosodiphenylamine	1	5.0	U	1.3	5.0
87-86-5	Pentachlorophenol	1	20.0	U	2.1	20.0

SURROGATES	ADDED: (ug/kg wet)	FOUND: (ug/kg wet)	% REC	QC LIMITS	Q
2-Fluorophenol	750.00	389	51.9	27 - 120	
p-Terphenyl-d14	500.00	598	120	37 - 120	Q

Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT14031723128.D
Date : 17-MAR-2023 21:06
Client ID:
Sample Info: BLB0424-BLK2

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

Column phase: ZB-5msi



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Date : 17-MAR-2023 21:06

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BLK2

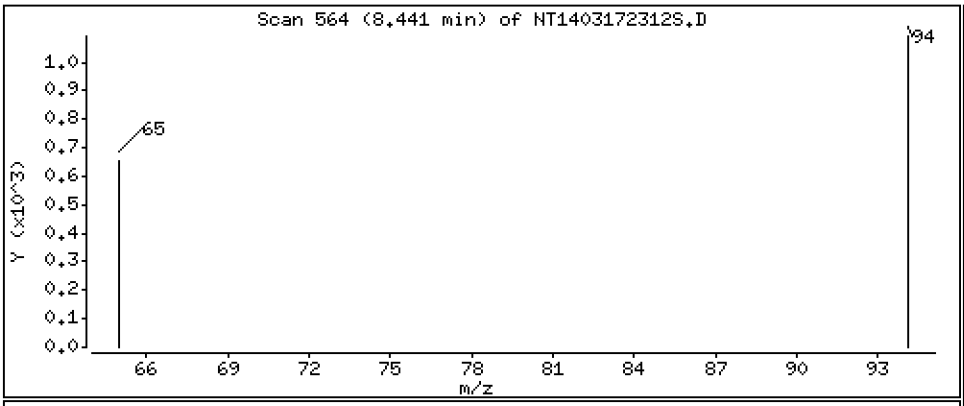
Operator: JGR

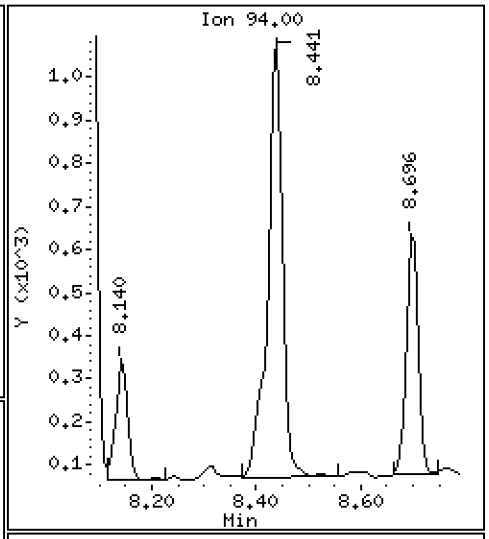
Column phase: ZB-5msi

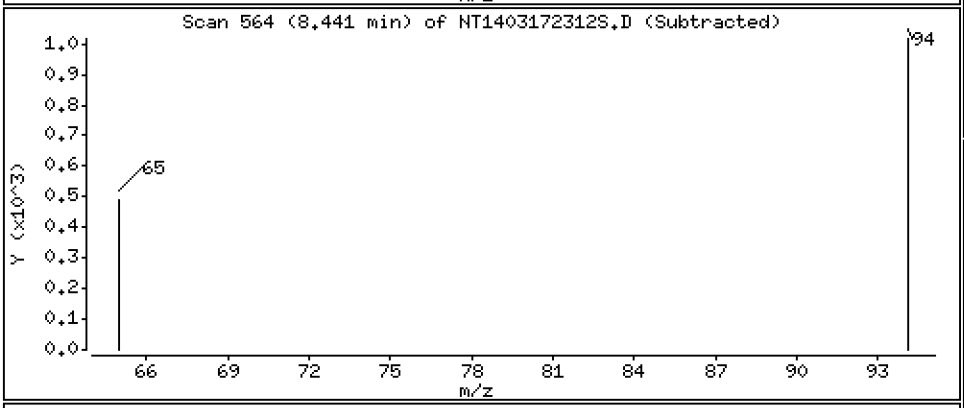
Column diameter: 0.25

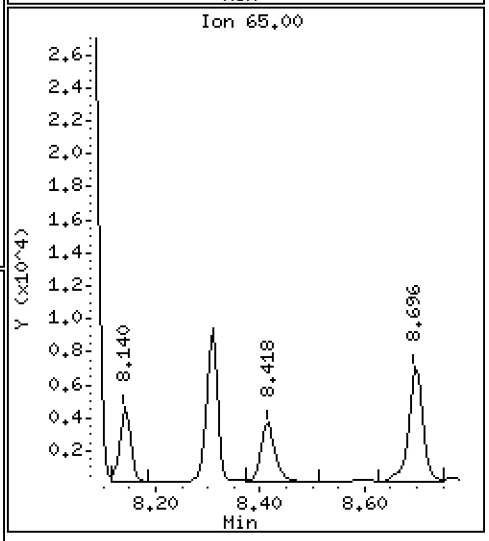
3 Phenol

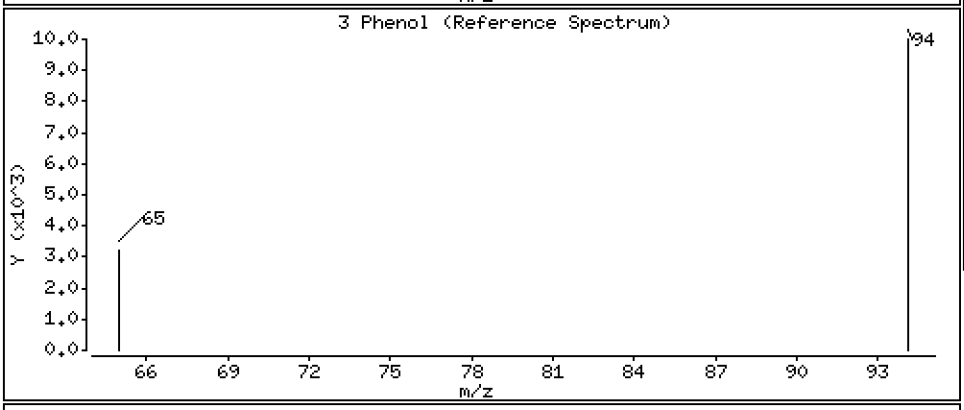
Concentration: 0.01603 ug/mL

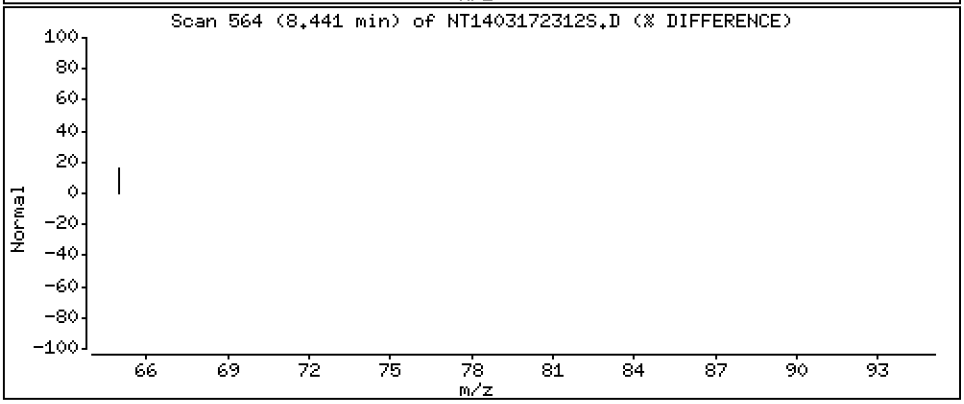












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Date : 17-MAR-2023 21:06

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BLK2

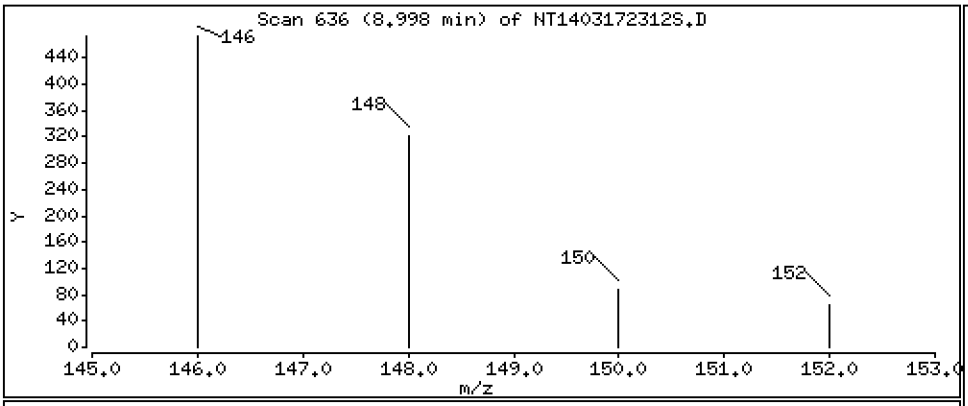
Operator: JGR

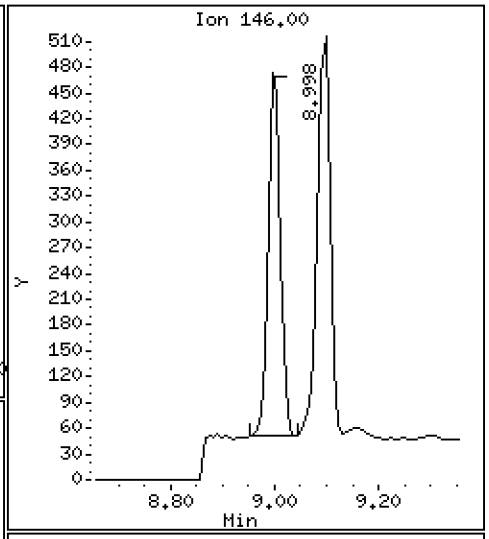
Column phase: ZB-5msi

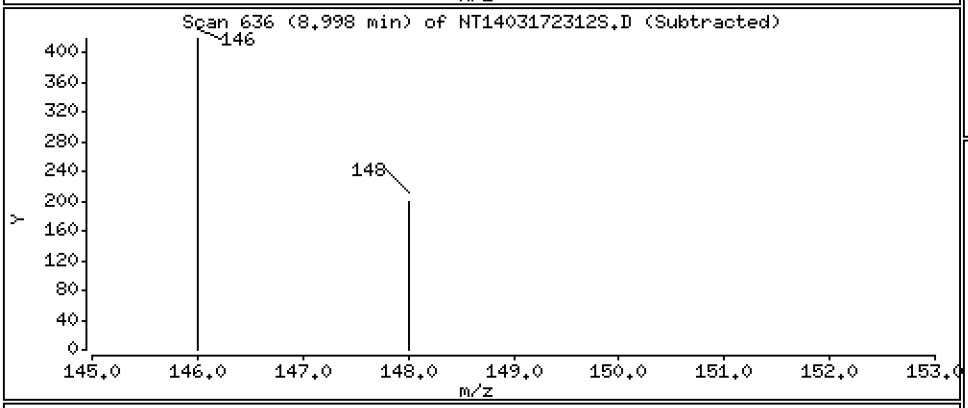
Column diameter: 0.25

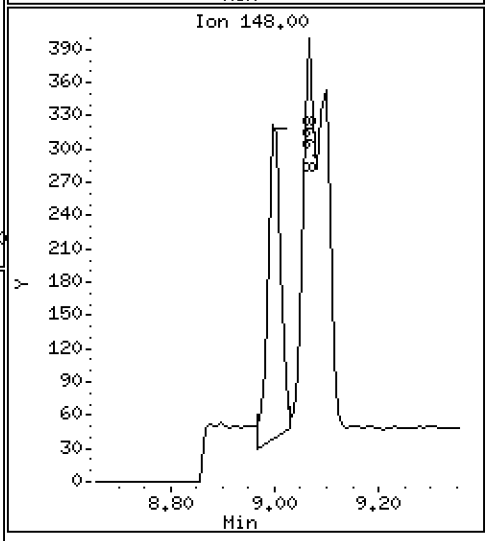
7 1,3-Dichlorobenzene

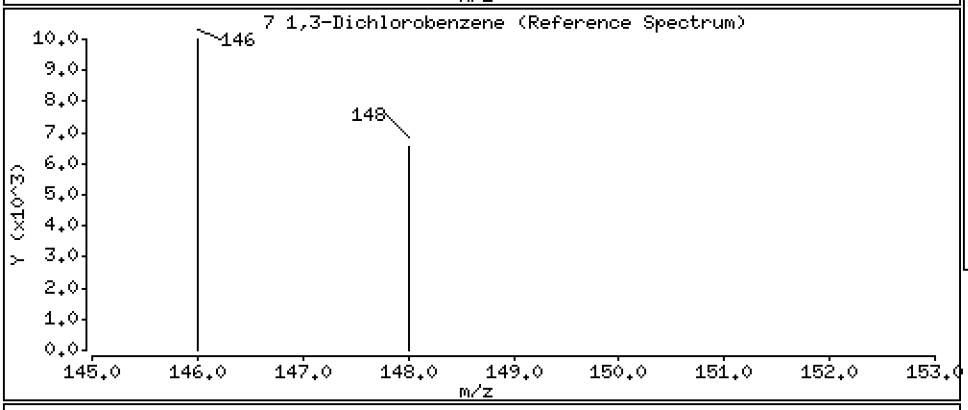
Concentration: 0.006640 ug/mL

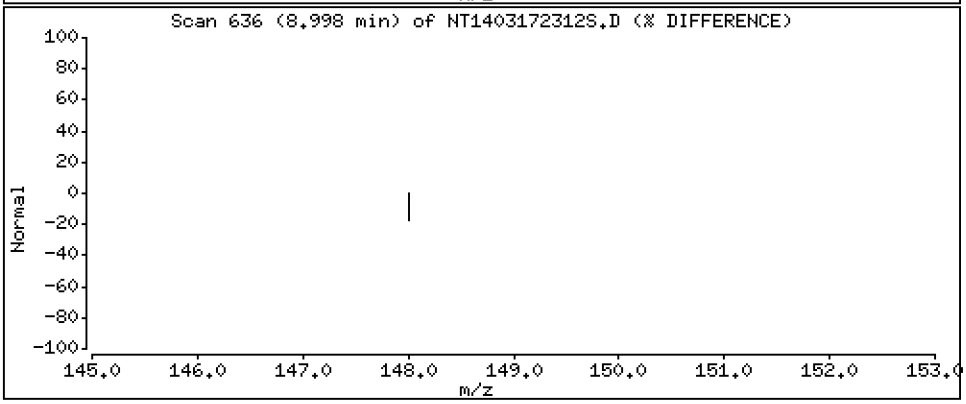












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT14031723125.D

Date : 17-MAR-2023 21:06

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BLK2

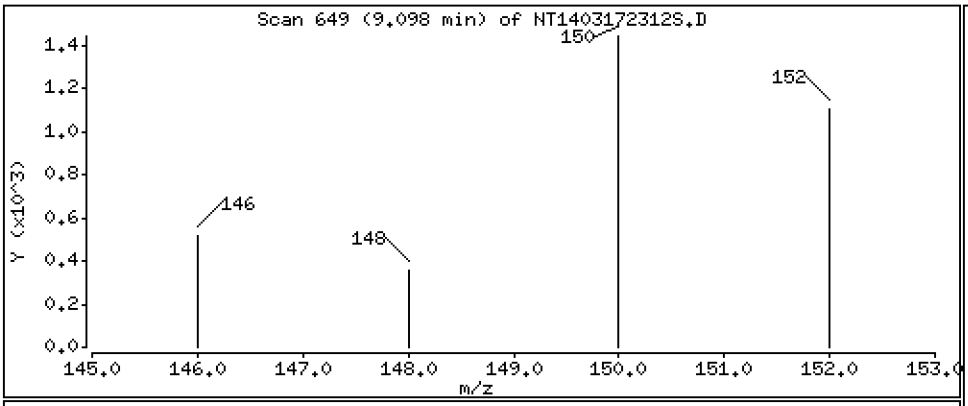
Operator: JGR

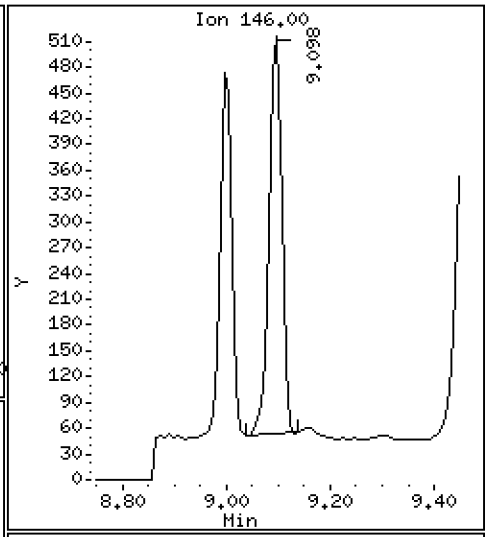
Column phase: ZB-5msi

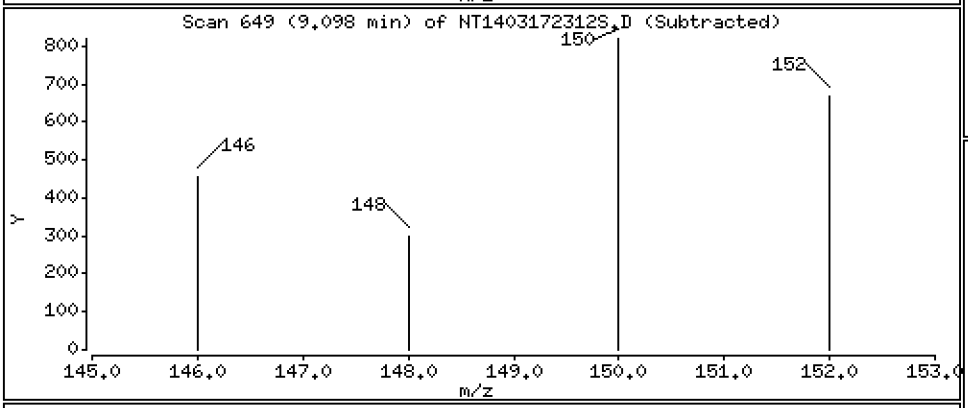
Column diameter: 0.25

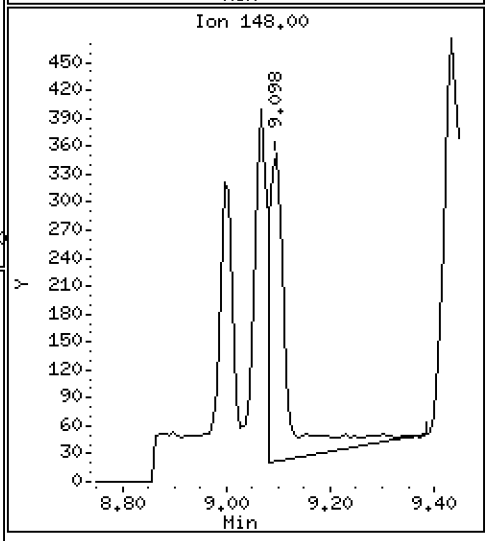
9 1,4-Dichlorobenzene

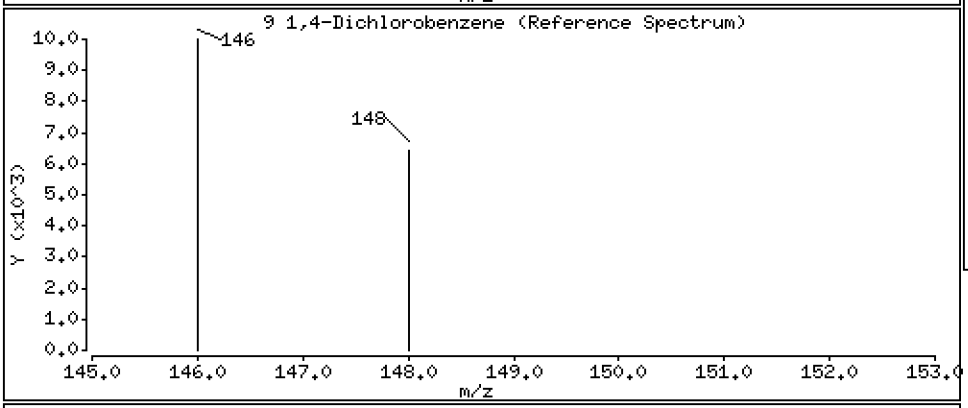
Concentration: 0.007579 ug/mL

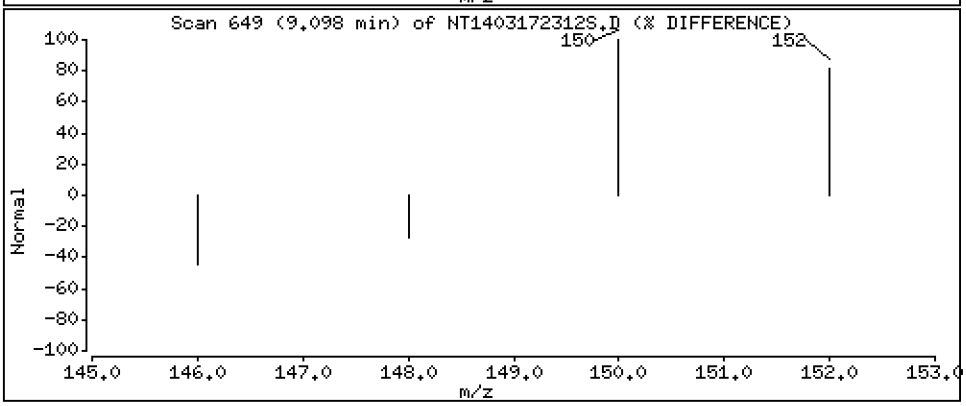












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT14031723125.D

Date : 17-MAR-2023 21:06

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BLK2

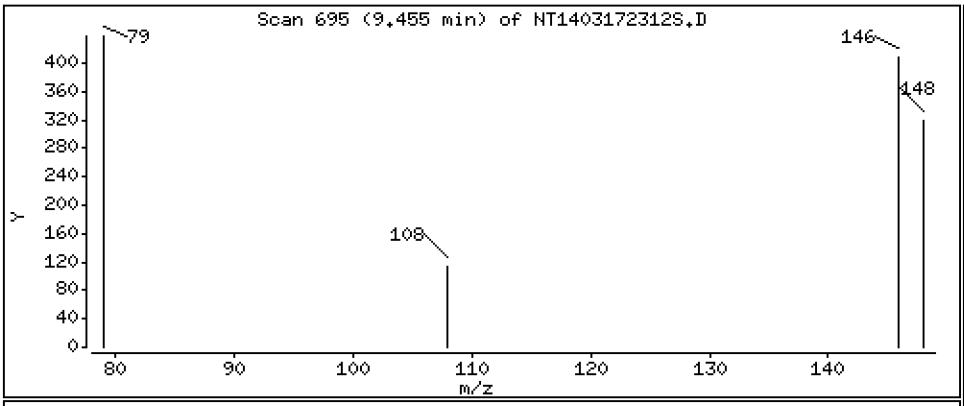
Operator: JGR

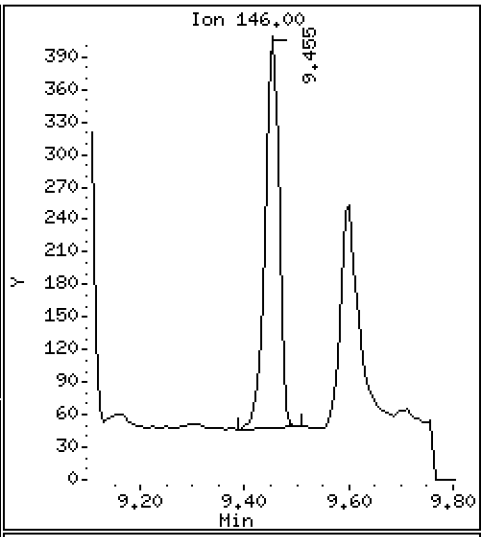
Column phase: ZB-5msi

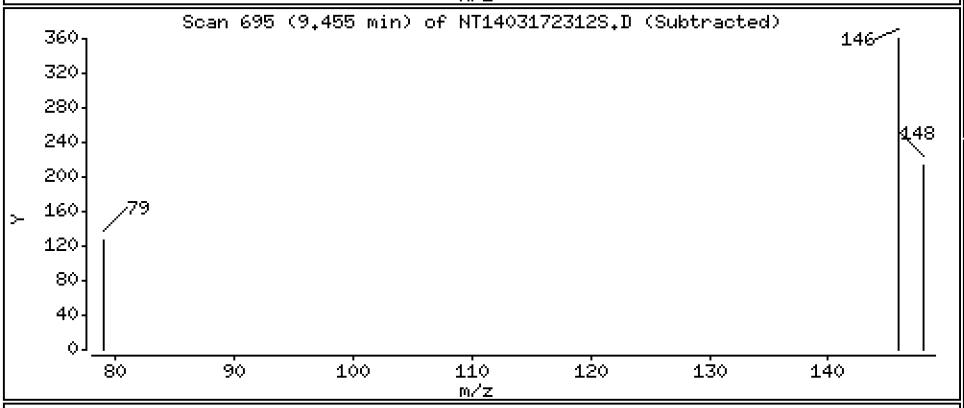
Column diameter: 0.25

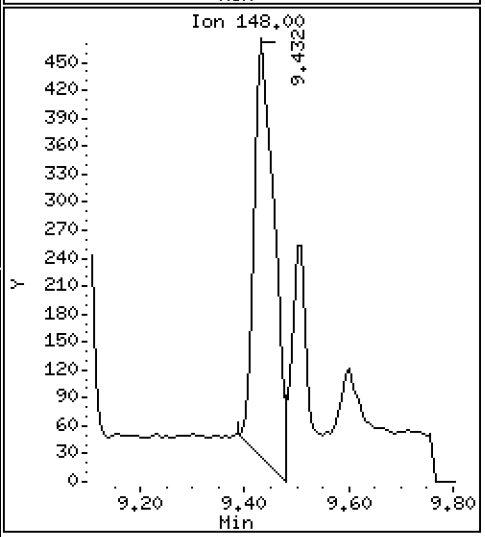
12 1,2-Dichlorobenzene

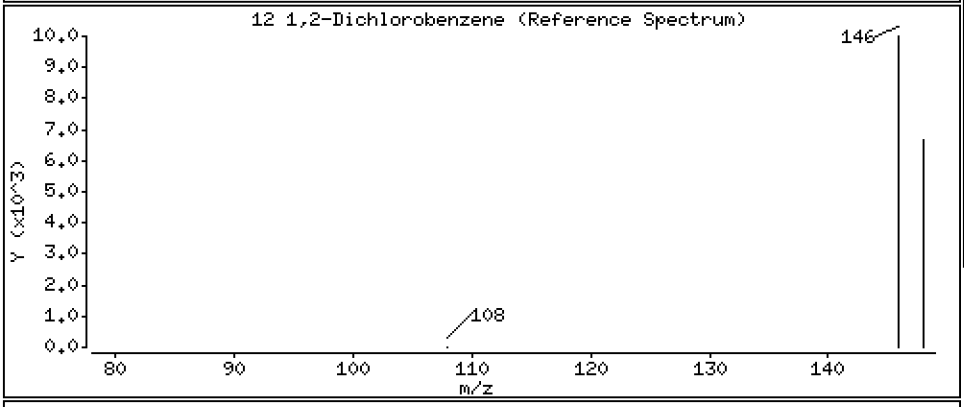
Concentration: 0.006630 ug/mL

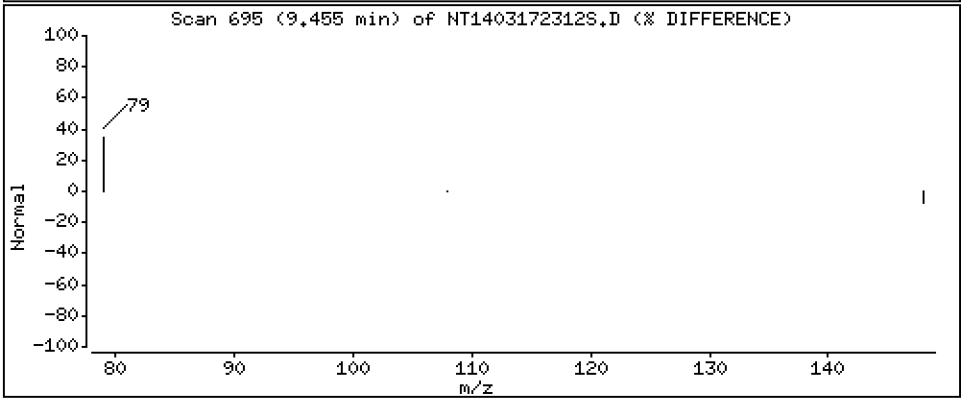












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT14031723125.D

Date : 17-MAR-2023 21:06

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BLK2

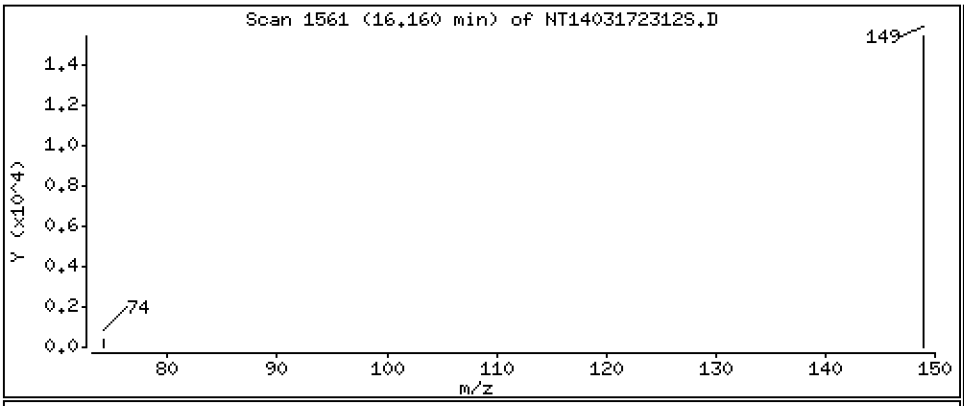
Operator: JGR

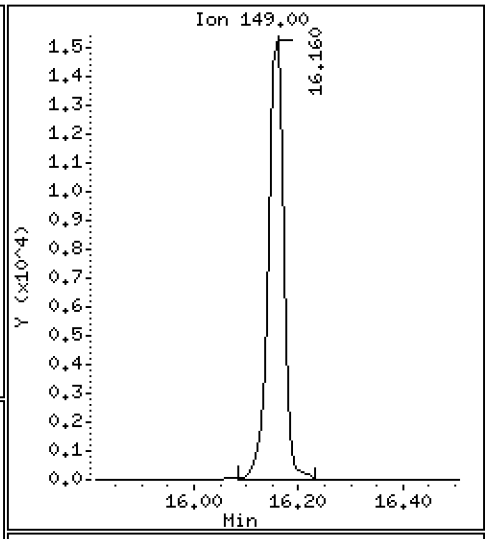
Column phase: ZB-5msi

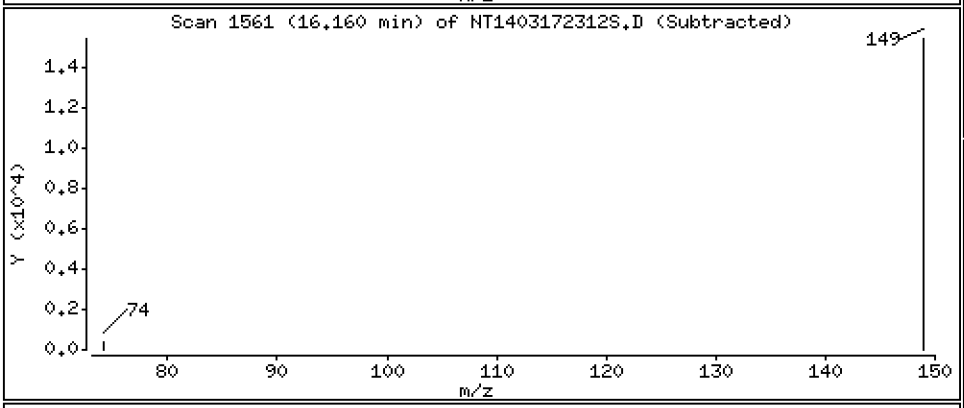
Column diameter: 0.25

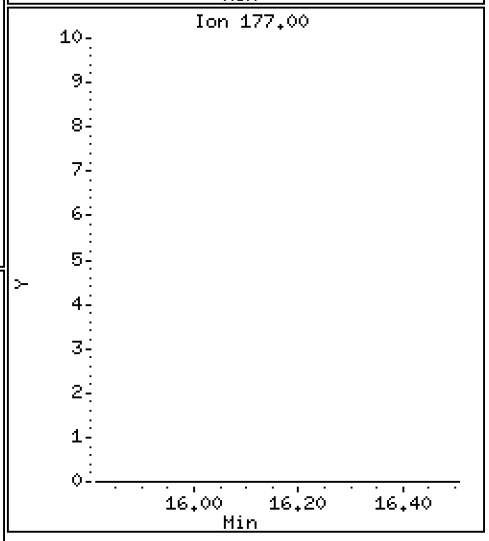
50 Diethylphthalate

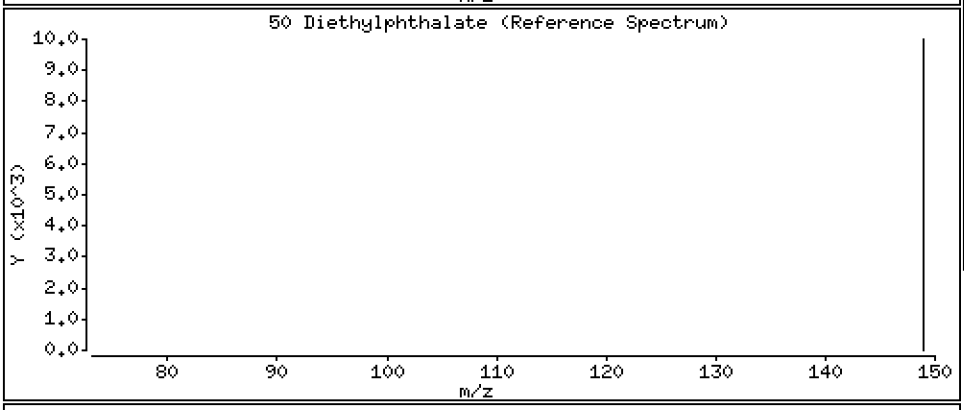
Concentration: 0.1827 ug/mL

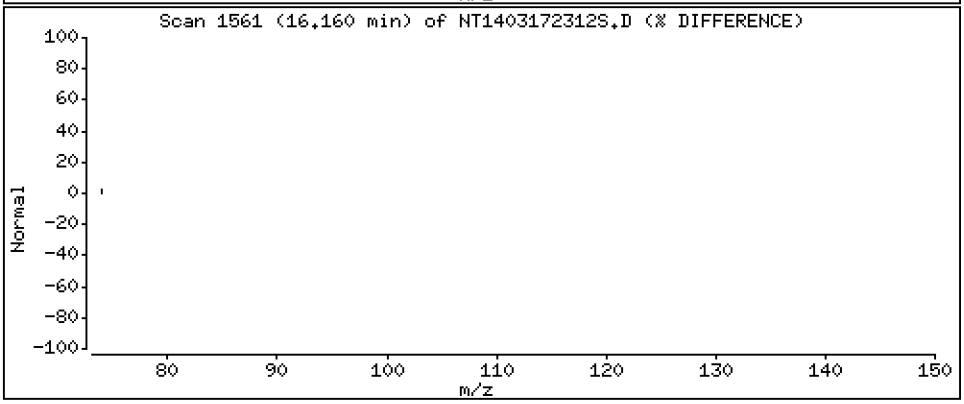












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172312S.D
Lab Smp Id: BLB0424-BLK2
Inj Date : 17-MAR-2023 21:06 MS Autotune Date: 11-MAR-2023 16:01
Operator : JGR Inst ID: nt14.i
Smp Info : BLB0424-BLK2
Misc Info :
Comment :
Method : \\target\share\chem3\nt14.i\20230317.b\20230317.b\SIMABN2.m
Meth Date : 23-Mar-2023 16:53 van Quant Type: ISTD
Cal Date : 15-MAR-2023 15:50 Cal File: NT1403152308.D
Als bottle: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$ 1	2-Fluorophenol	112	6.841	6.826	(0.755)	338293	3.89291	3.893(R)
3	Phenol	94	8.441	8.440	(0.931)	1916	0.01603	0.01603
7	1,3-Dichlorobenzene	146	8.997	9.005	(0.992)	679	0.00664	0.006640(M)
* 8	1,4-Dichlorobenzene-d4	152	9.067	9.067	(1.000)	256011	4.00000	
9	1,4-Dichlorobenzene	146	9.098	9.098	(1.003)	750	0.00758	0.007579(M)
11	Benzyl alcohol	79	Compound Not Detected.					
12	1,2-Dichlorobenzene	146	9.455	9.455	(1.043)	639	0.00663	0.006630(M)
13	2-Methylphenol	108	Compound Not Detected.					
15	4-Methylphenol	108	Compound Not Detected.					
16	N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
22	2,4-Dimethylphenol	107	Compound Not Detected.					
24	Benzoic acid	105	Compound Not Detected.					
26	1,2,4-Trichlorobenzene	180	Compound Not Detected.					
* 27	Naphthalene-d8	136	11.564	11.564	(1.000)	992862	4.00000	
30	Hexachlorobutadiene	225	Compound Not Detected.					
39	Dimethylphthalate	163	Compound Not Detected.					
* 42	Acenaphthene-d10	162	15.201	15.201	(1.000)	455611	4.00000	
50	Diethylphthalate	149	16.160	16.160	(1.063)	30262	0.18268	0.1827
54	N-Nitrosodiphenylamine	169	Compound Not Detected.					
57	Hexachlorobenzene	284	Compound Not Detected.					
58	Pentachlorophenol	266	Compound Not Detected.					
* 59	Phenanthrene-d10	188	18.245	18.245	(1.000)	866949	4.00000	
$ 66	Terphenyl-d14	244	21.386	21.386	(0.918)	494059	5.97984	5.980(R)
67	Butylbenzylphthalate	149	Compound Not Detected.					
* 69	Chrysene-d12	240	23.299	23.298	(1.000)	479252	4.00000	
* 77	Perylene-d12	264	25.939	25.938	(1.000)	323704	4.00000	
79	Dibenzo(a,h)anthracene	278	Compound Not Detected.					
90	N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1403172312S.D
Lab Smp Id: BLB0424-BLK2
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\SIMABN2.m
Misc Info:

Calibration Date: 17-MAR-2023
Calibration Time: 15:39
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	224436	112218	448872	256011	14.07
27 Naphthalene-d8	825617	412809	1651234	992862	20.26
42 Acenaphthene-d10	392947	196474	785894	455611	15.95
59 Phenanthrene-d10	789887	394944	1579774	866949	9.76
69 Chrysene-d12	494007	247004	988014	479252	-2.99
77 Perylene-d12	375441	187721	750882	323704	-13.78

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.07	8.57	9.57	9.07	0.00
27 Naphthalene-d8	11.56	11.06	12.06	11.56	0.00
42 Acenaphthene-d10	15.20	14.70	15.70	15.20	0.00
59 Phenanthrene-d10	18.25	17.75	18.75	18.25	0.00
69 Chrysene-d12	23.30	22.80	23.80	23.30	0.00
77 Perylene-d12	25.94	25.44	26.44	25.94	0.00

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

REVIEW SUMMARY FOR FILE - NT1403172312S.D

Lab ID: BLB0424-BLK2
nt14.i, 20230317.b\20230317.b\SIMABN2.m,   17-MAR-2023 21:06

RT	CO-ELUTION COMPOUNDS
NO CO-ELUTIONS	

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
NONE			

RRT check based on Ccal File: 20230317.b/NT1403172303S.D

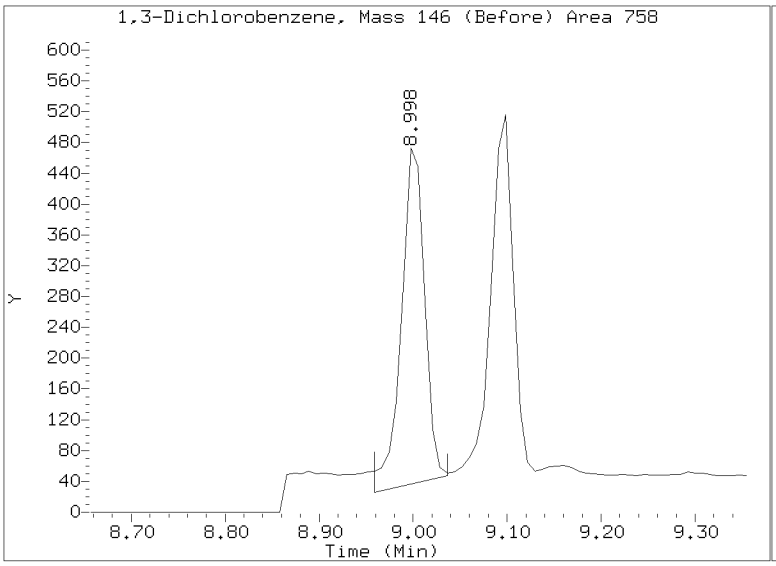
On Column LOD for nt14.i, 20230317.b\SIMABN2.m, PSDDA.sub = 0.0000

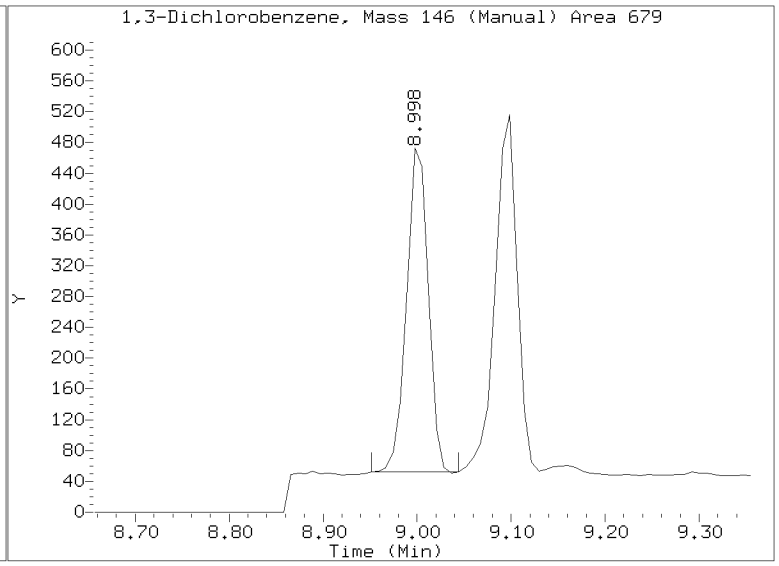
Exception: 1,2,4-Trichlorobenzene 0.0010

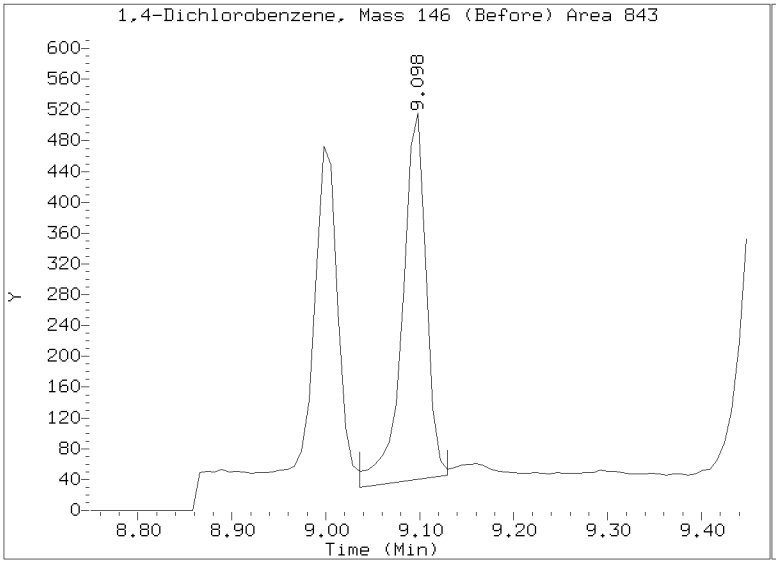
* Only compounds listed in the work order have been verified by the analyst *

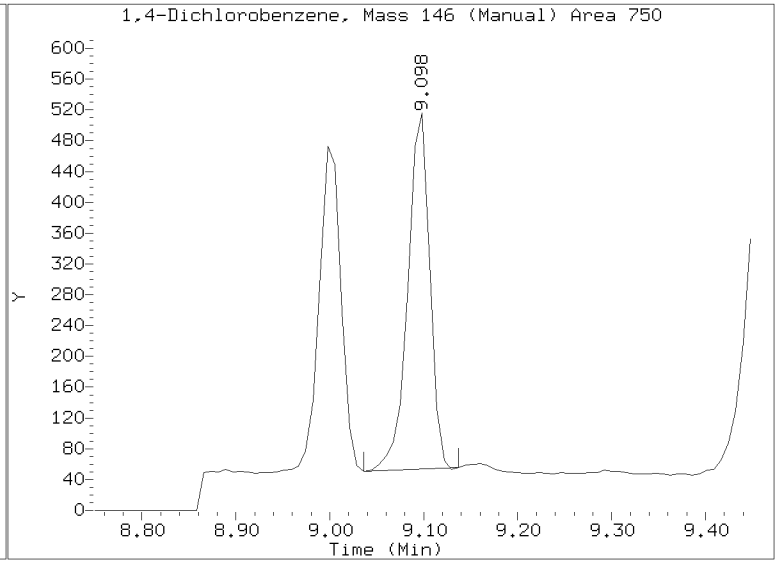
Quant Ion Manual Peak Adjustment Report

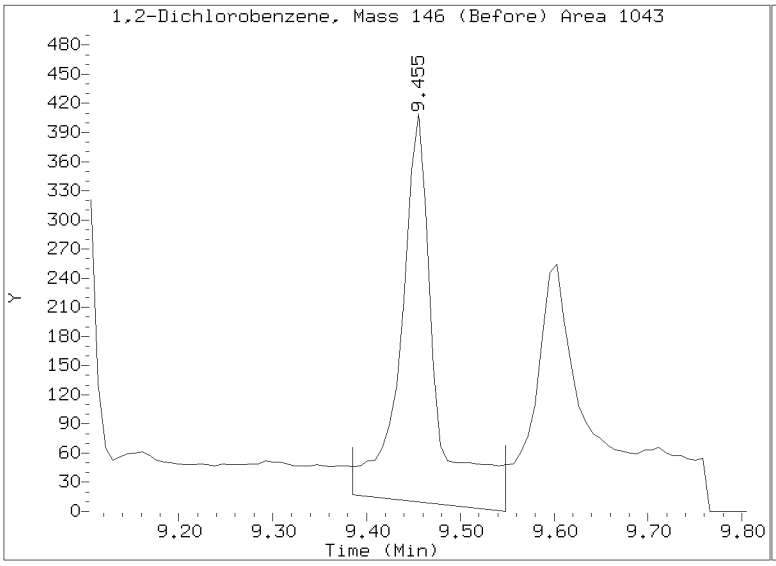
Datafile: //target/share/chem3/nt14.i/20230317.b/20230317.b/NT1403172312S.D
Injection Date: 17-MAR-2023 21:06
Lab ID:BLB0424-BLK2 Client ID:
Report Date: 03/23/2023 16:54

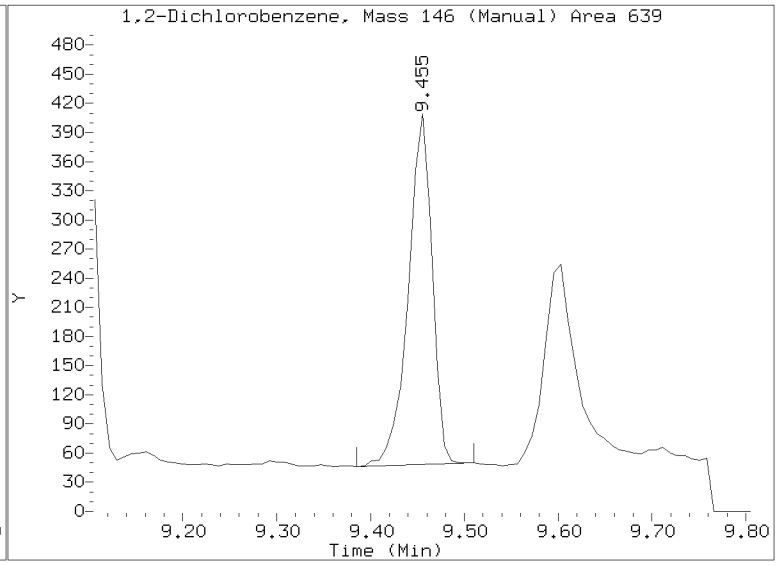












LCS / LCS DUPLICATE RECOVERY

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	03/17/23 21:42
Batch:	BLB0424	Laboratory ID:	BLB0424-BS2
Preparation:	EPA 3546 (Microwave)	Sequence Name:	LCS
Initial/Final:	10 g / 1 mL		

COMPOUND	SPIKE ADDED (ug/kg wet)	LCS CONCENTRATION (ug/kg wet)	Q	LCS % REC. #	QC LIMITS REC.
1,4-Dichlorobenzene	500	378		75.6	36 - 120
1,2-Dichlorobenzene	500	385		77.0	36 - 120
Benzyl Alcohol	500	418		83.6	25 - 123
Benzoic acid	2300	2230	Q	97.0	10 - 160
2,4-Dimethylphenol	1300	807		62.1	10 - 120
1,2,4-Trichlorobenzene	500	390		78.1	35 - 120
N-Nitrosodiphenylamine	500	420		84.0	27 - 120
Pentachlorophenol	1300	1440	Q	111	26 - 120

* Indicates values outside of QC limits

COMPOUND	SPIKE ADDED (ug/kg wet)	LCSD CONCENTRATION (ug/kg wet)	Q	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,4-Dichlorobenzene	500	392		78.5	3.74	30	36 - 120
1,2-Dichlorobenzene	500	398		79.5	3.27	30	36 - 120
Benzyl Alcohol	500	437		87.5	4.58	30	25 - 123
Benzoic acid	2300	2410	Q	105	7.90	30	10 - 160
2,4-Dimethylphenol	1300	355	*	27.3	77.9 *	30	10 - 120
1,2,4-Trichlorobenzene	500	403		80.7	3.30	30	35 - 120
N-Nitrosodiphenylamine	500	418		83.6	0.430	30	27 - 120
Pentachlorophenol	1300	1520	Q	117	5.16	30	26 - 120

* Indicates values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT14031723135.D

Date : 17-MAR-2023 21:42

Client ID:

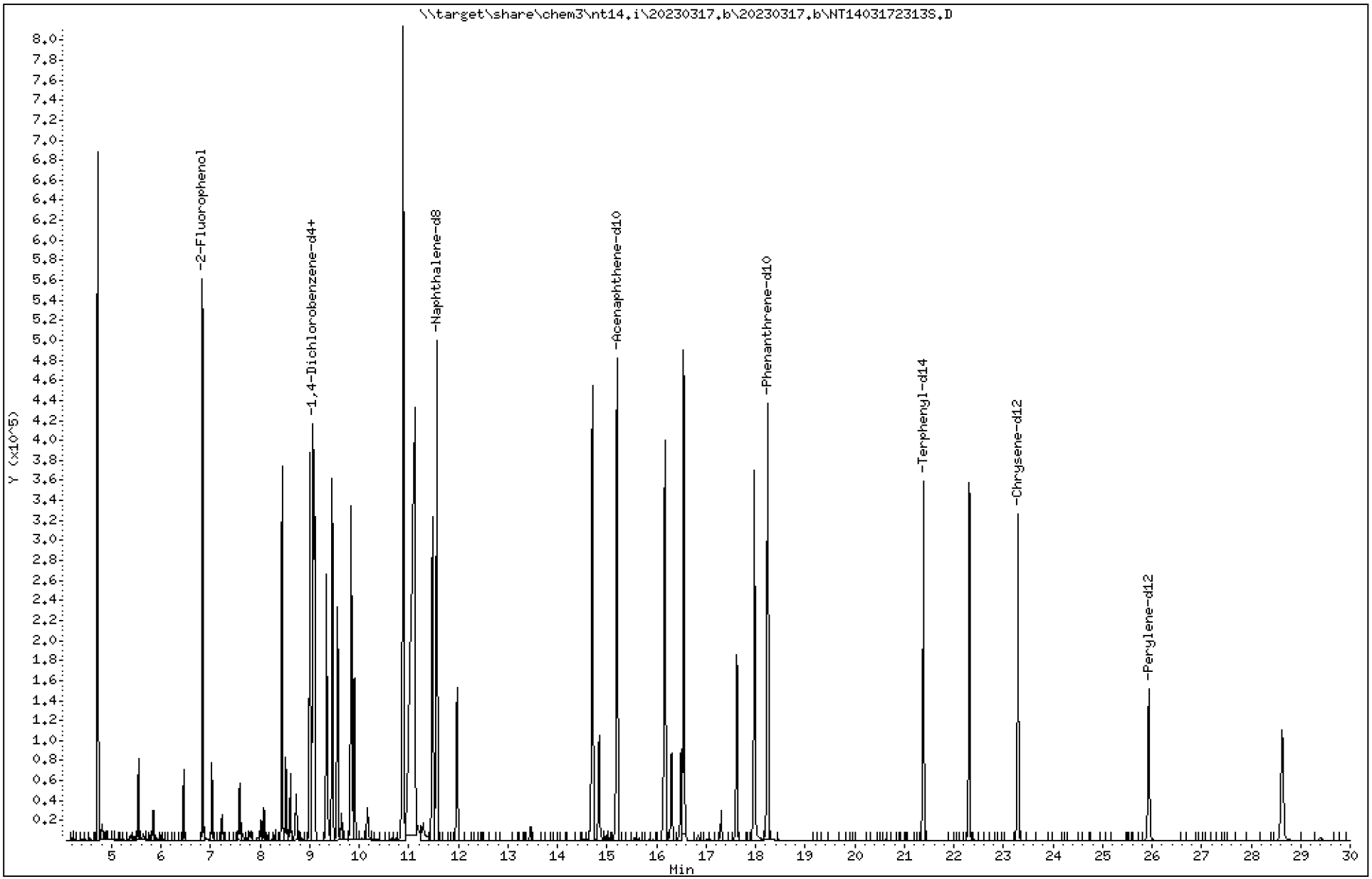
Instrument: nt14.i

Sample Info: BLB0424-BS2

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS2

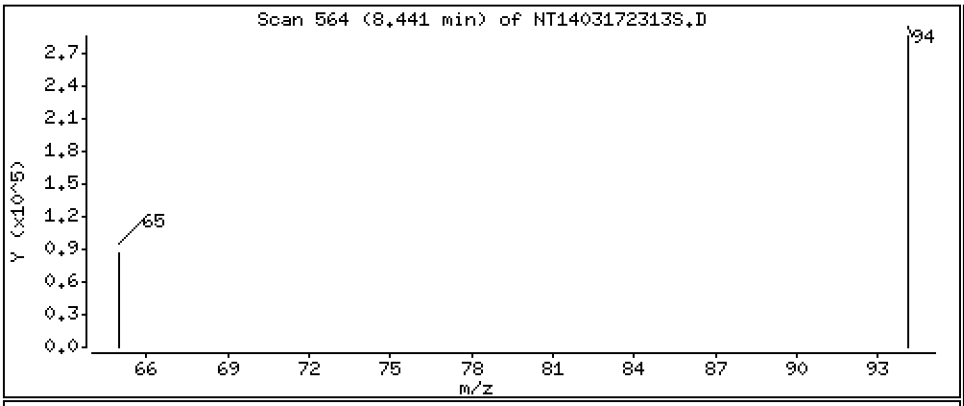
Operator: JGR

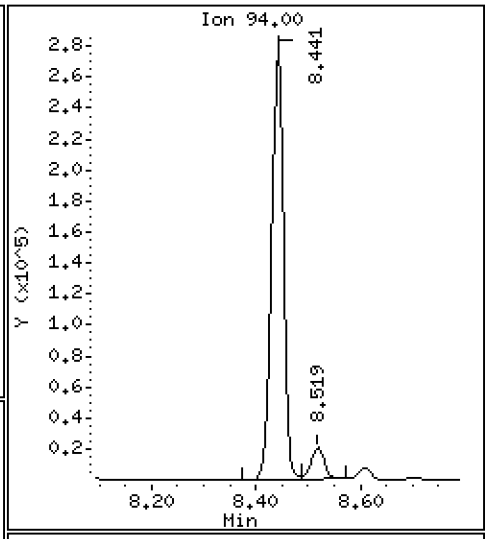
Column phase: ZB-5msi

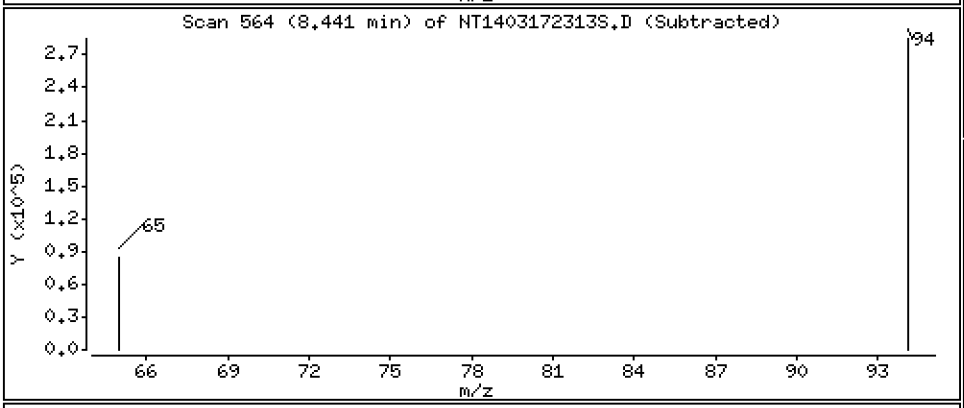
Column diameter: 0.25

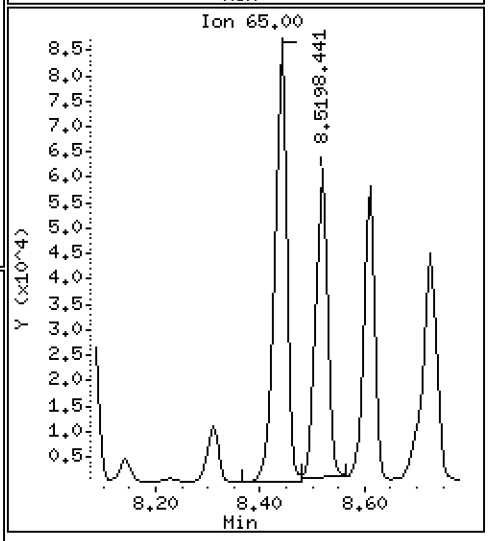
3 Phenol

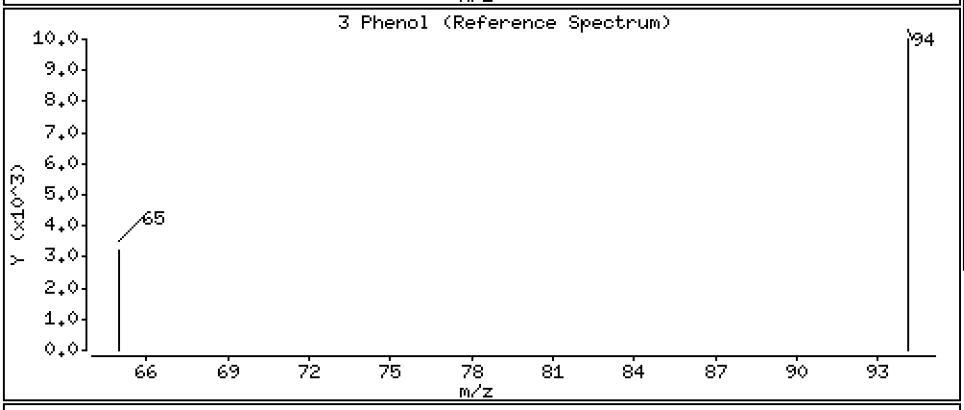
Concentration: 3.655 ug/mL

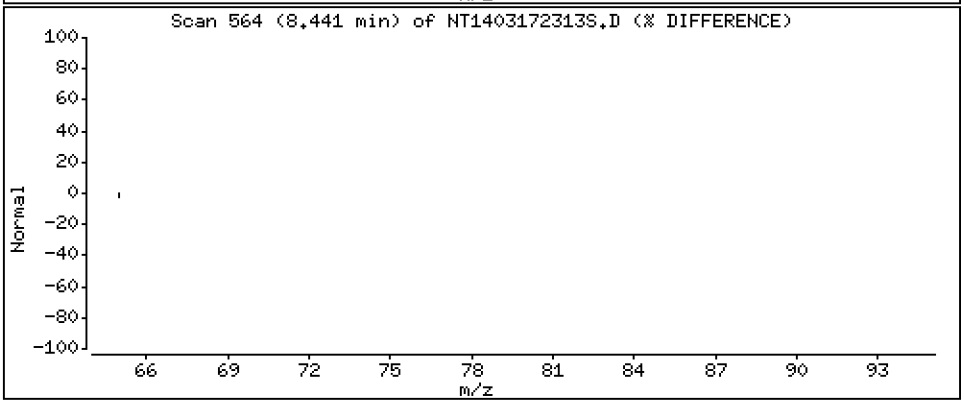












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172313S.D

Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS2

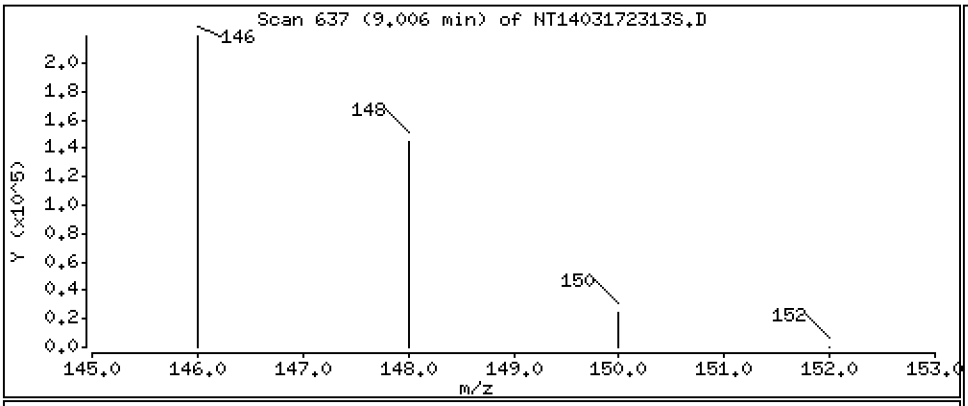
Operator: JGR

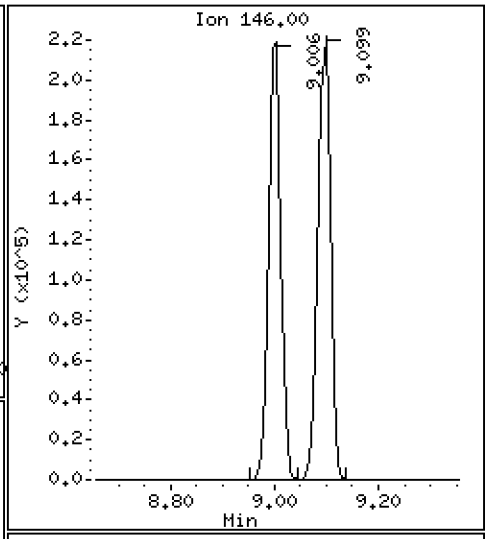
Column phase: ZB-5msi

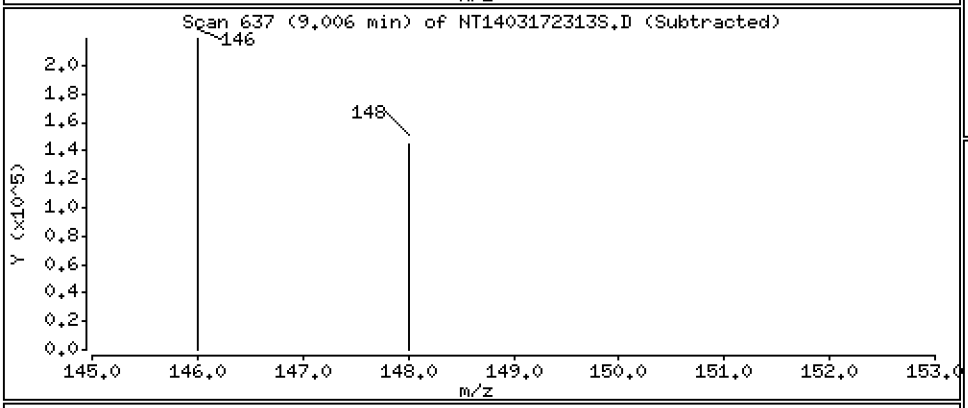
Column diameter: 0.25

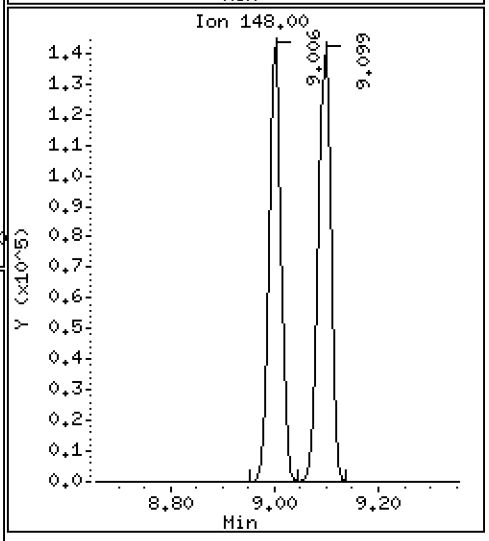
7 1,3-Dichlorobenzene

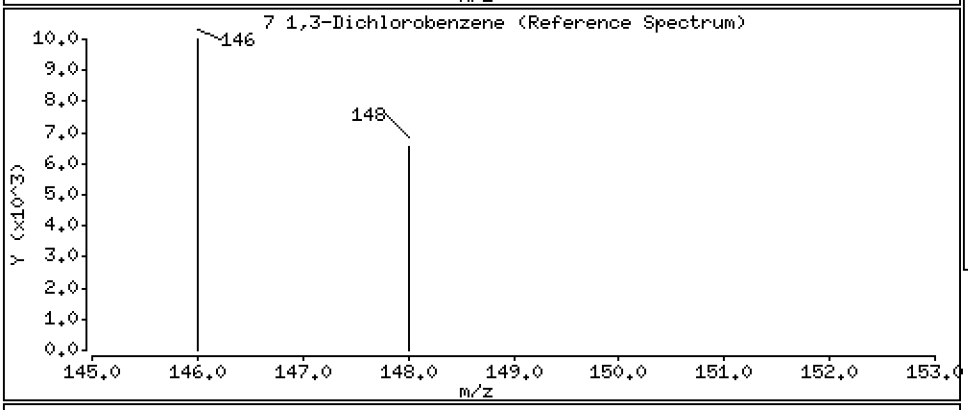
Concentration: 3.705 ug/mL

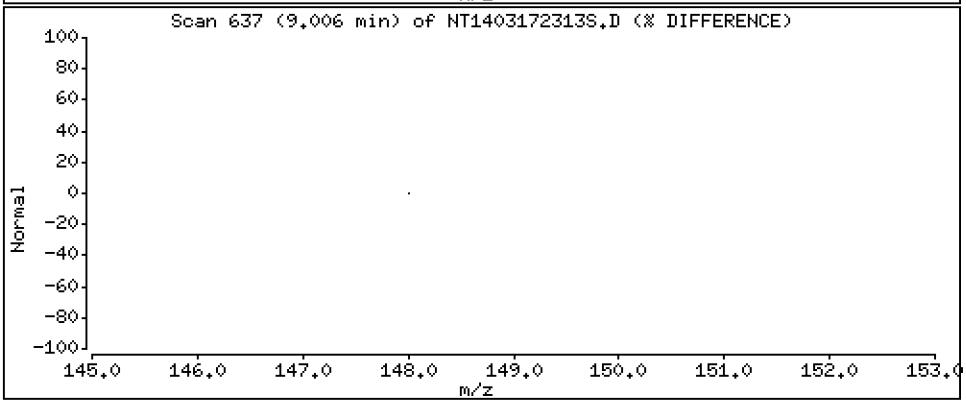












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172313S.D

Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS2

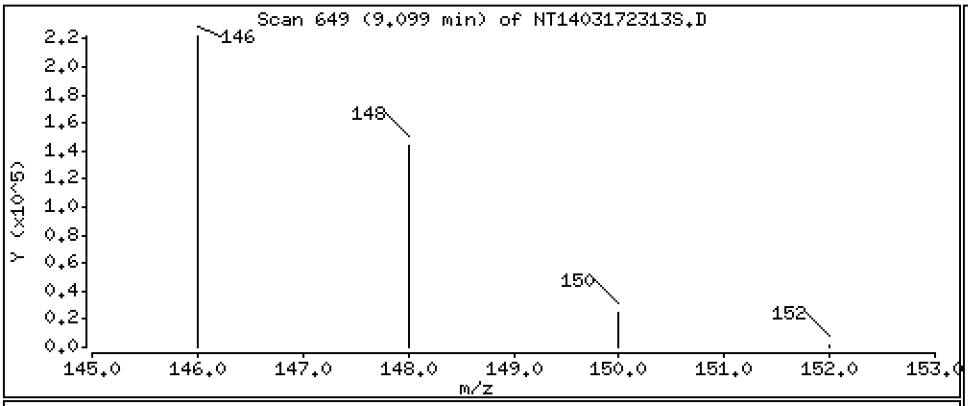
Operator: JGR

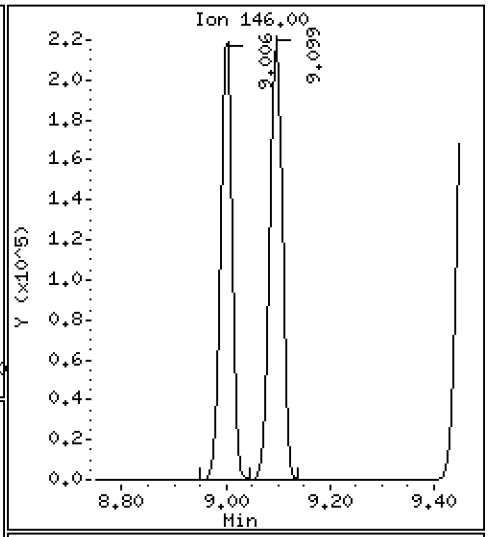
Column phase: ZB-5msi

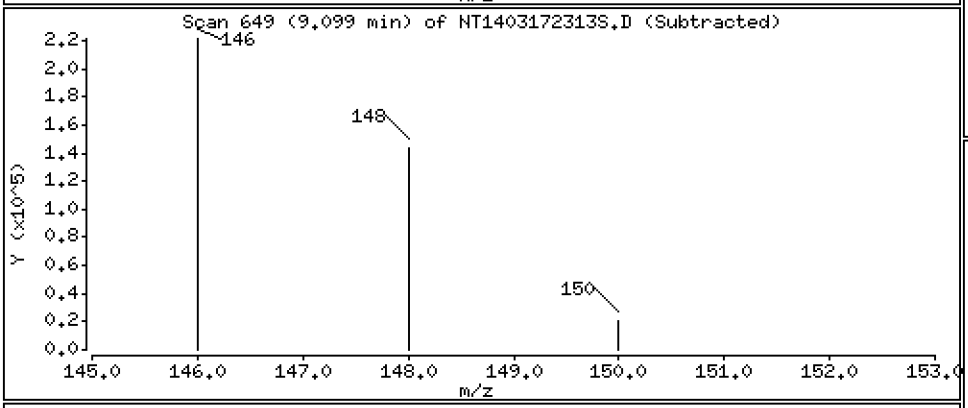
Column diameter: 0.25

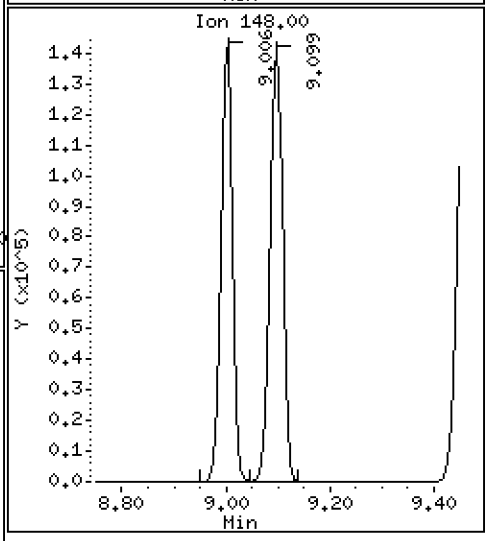
9 1,4-Dichlorobenzene

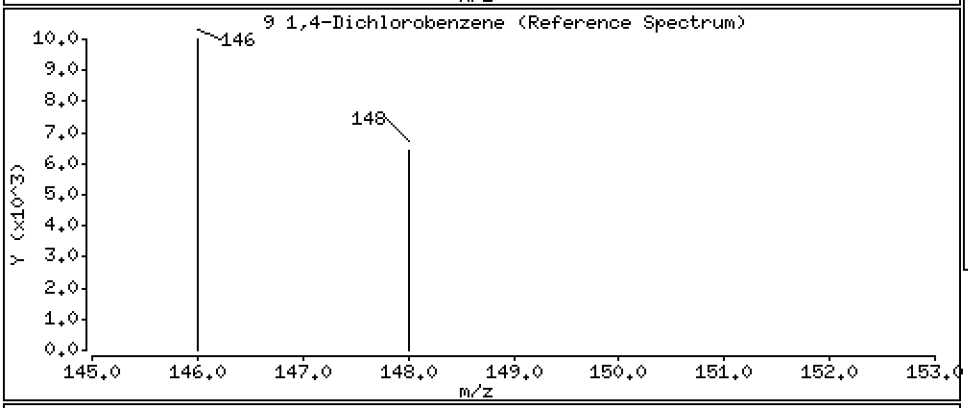
Concentration: 3.779 ug/mL

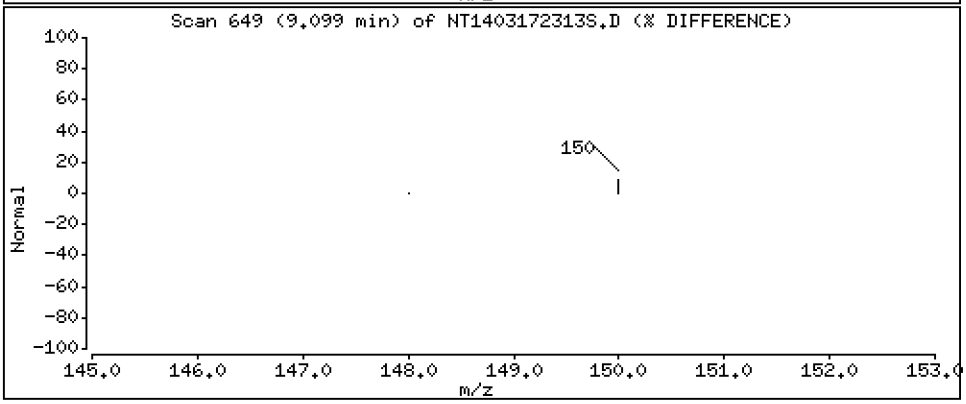












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172313S.D

Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS2

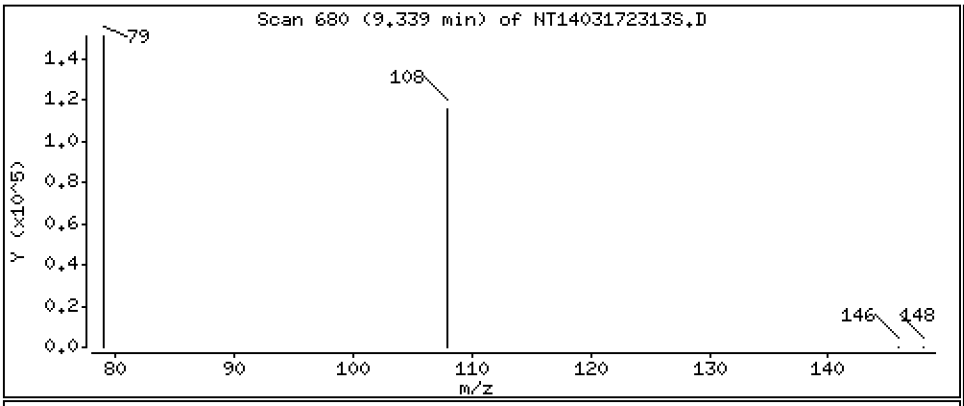
Operator: JGR

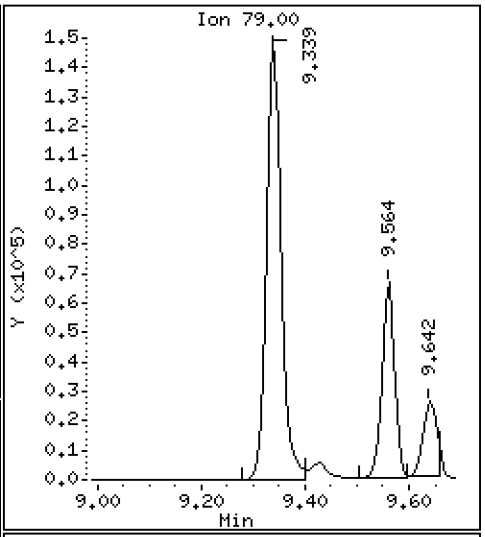
Column phase: ZB-5msi

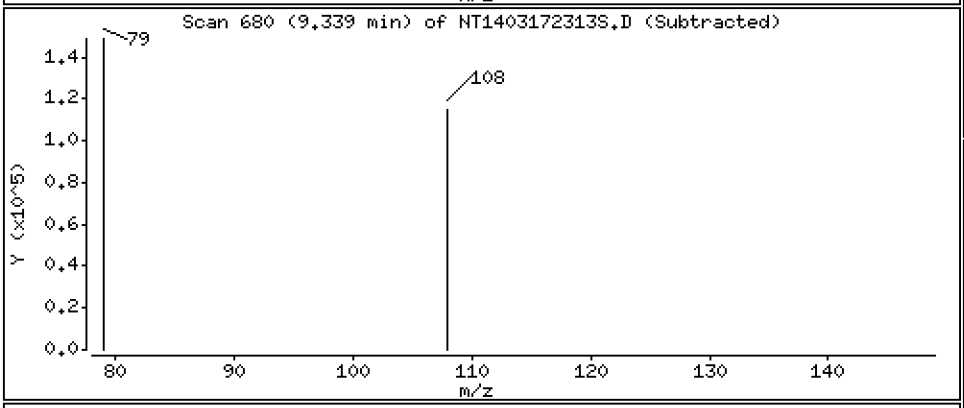
Column diameter: 0.25

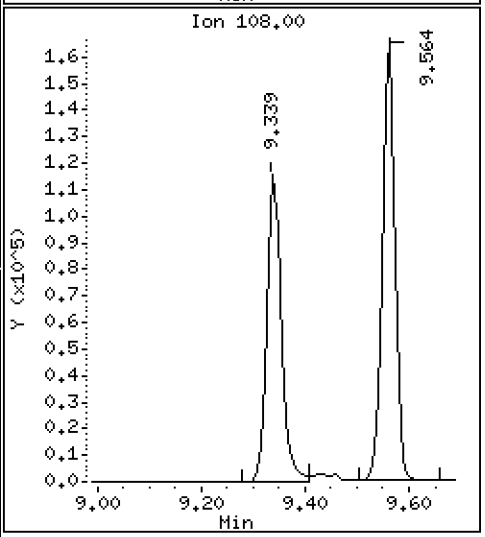
11 Benzyl alcohol

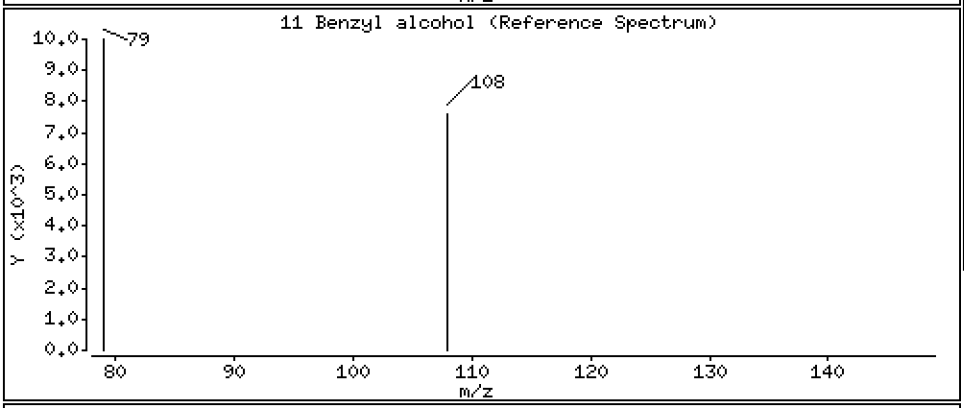
Concentration: 4.179 ug/mL

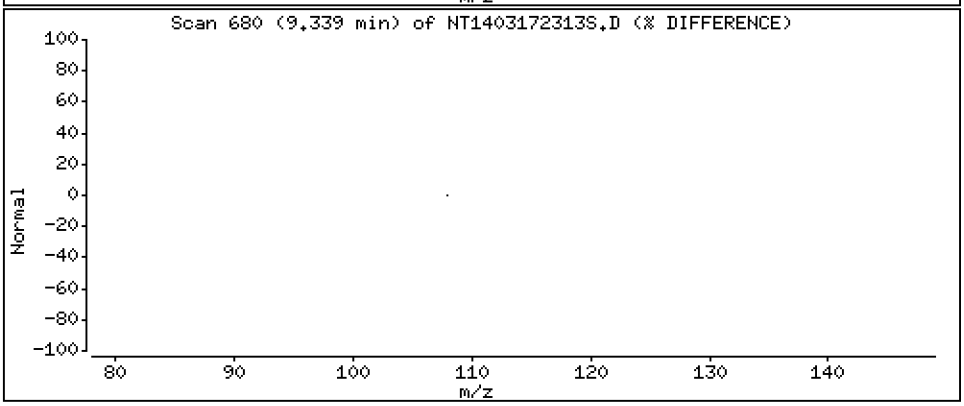












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172313S.D

Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS2

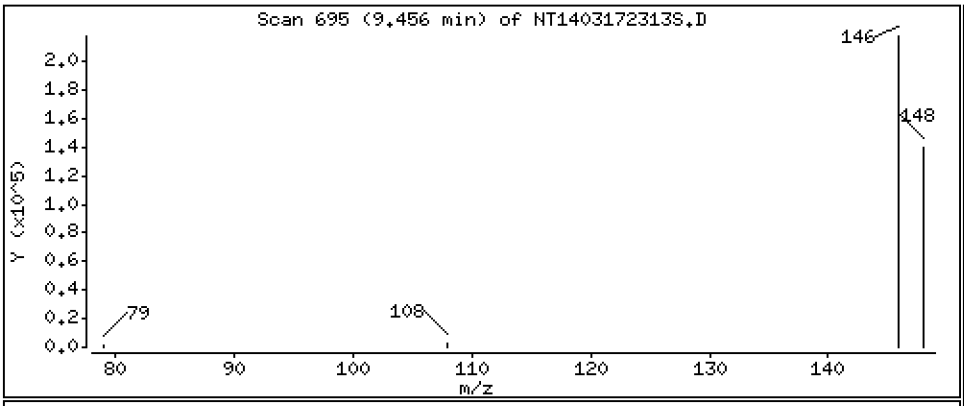
Operator: JGR

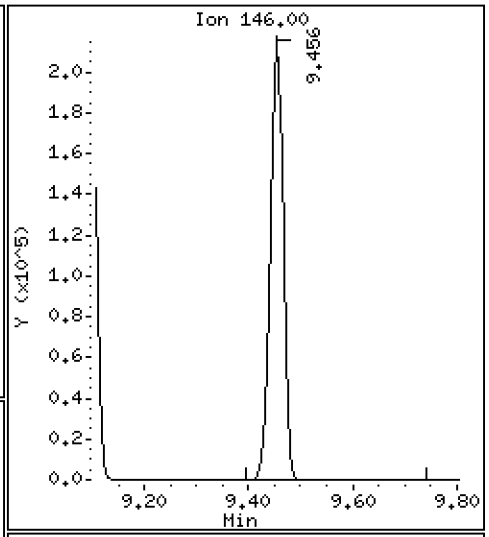
Column phase: ZB-5msi

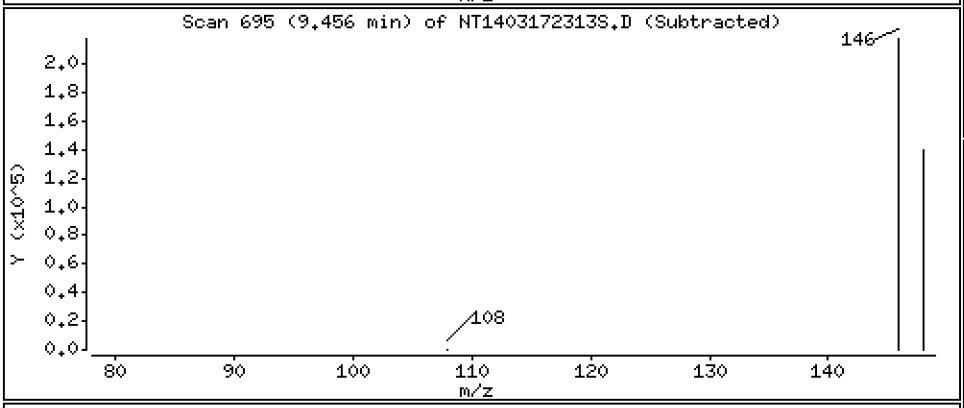
Column diameter: 0.25

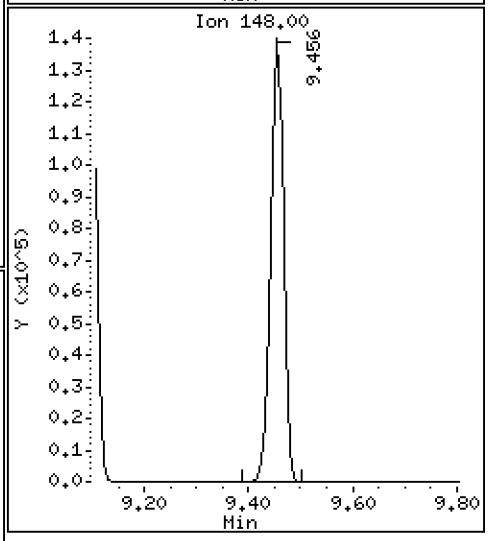
12 1,2-Dichlorobenzene

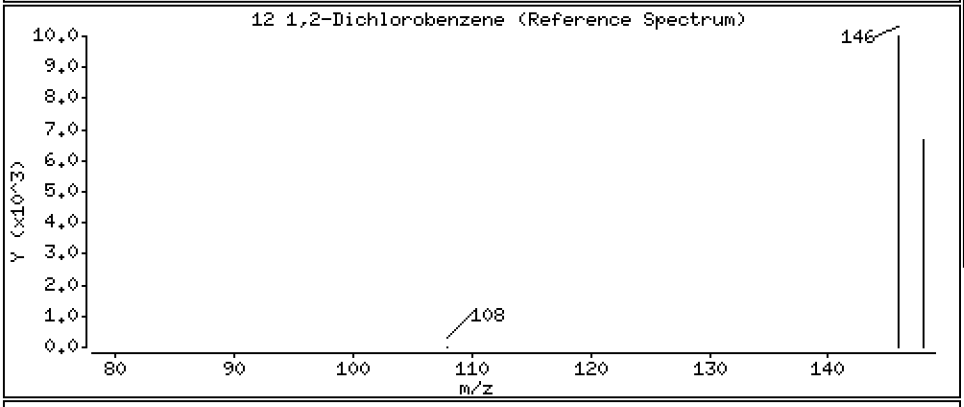
Concentration: 3.849 ug/mL

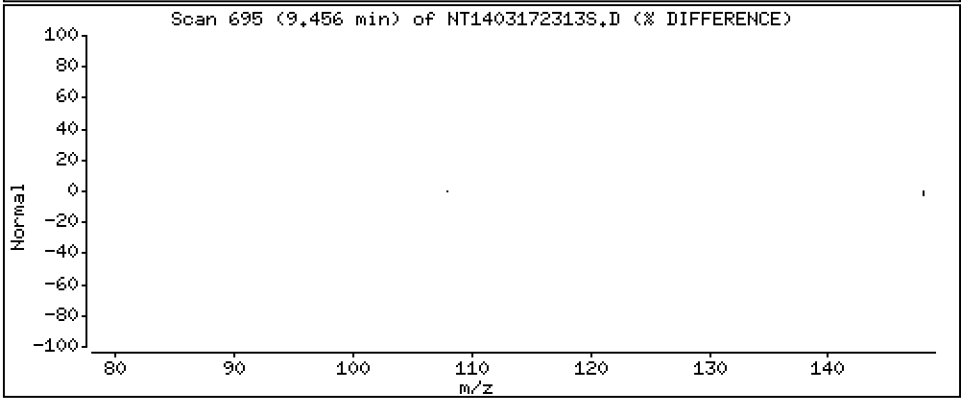












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172313S.D

Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS2

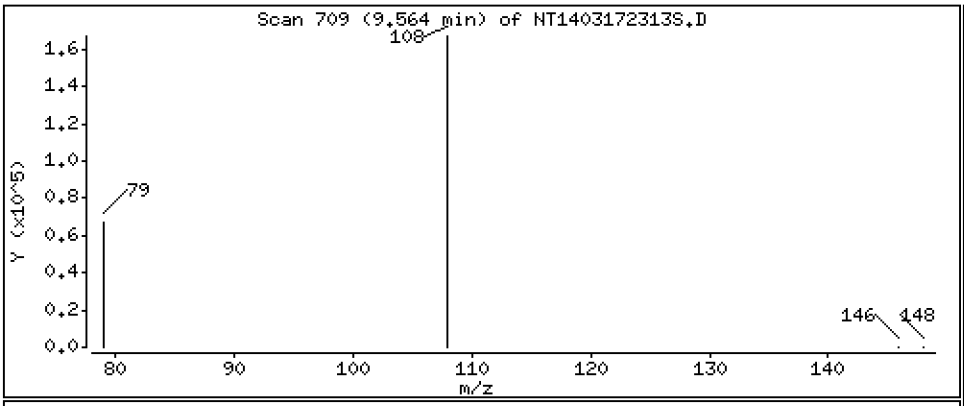
Operator: JGR

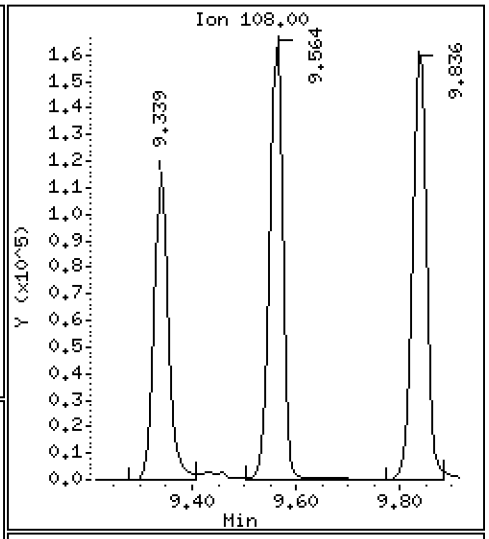
Column phase: ZB-5msi

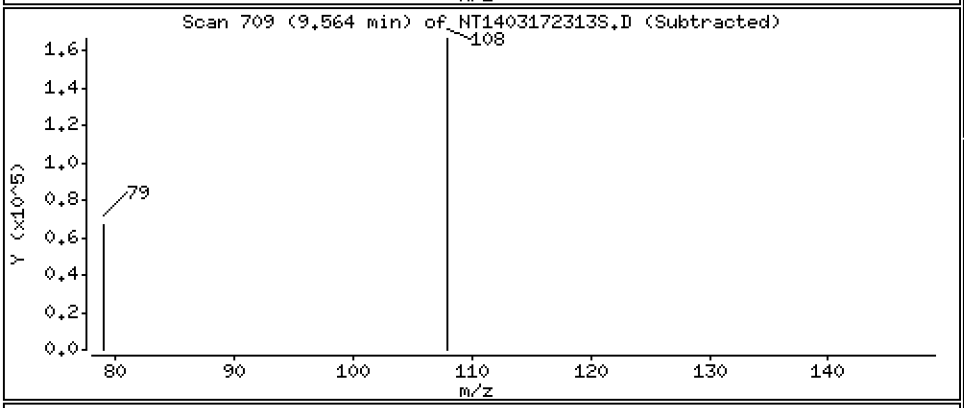
Column diameter: 0.25

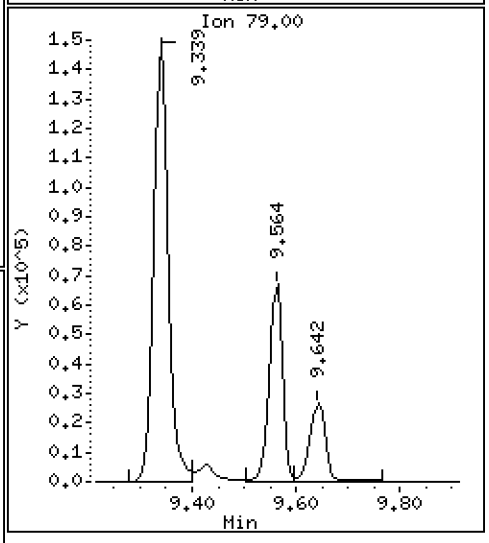
13 2-Methylphenol

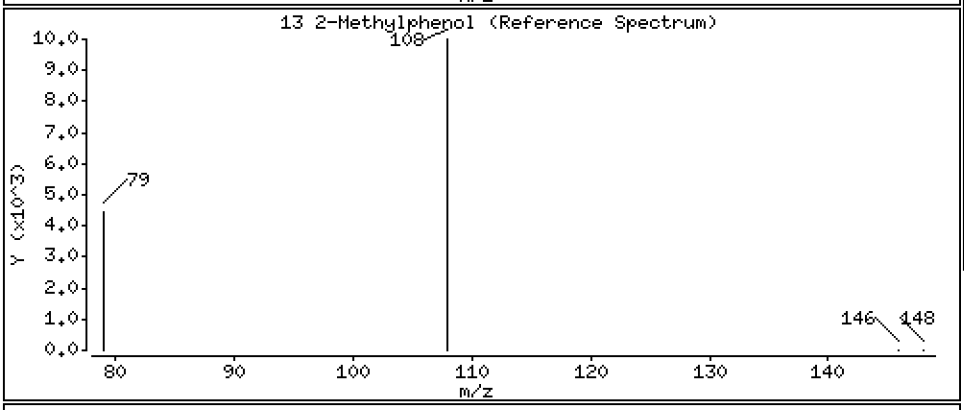
Concentration: 3.545 ug/mL

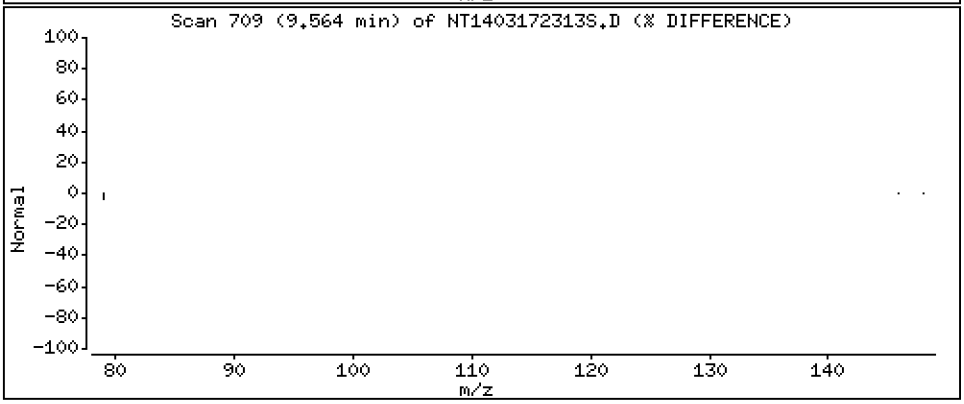












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172313S.D

Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS2

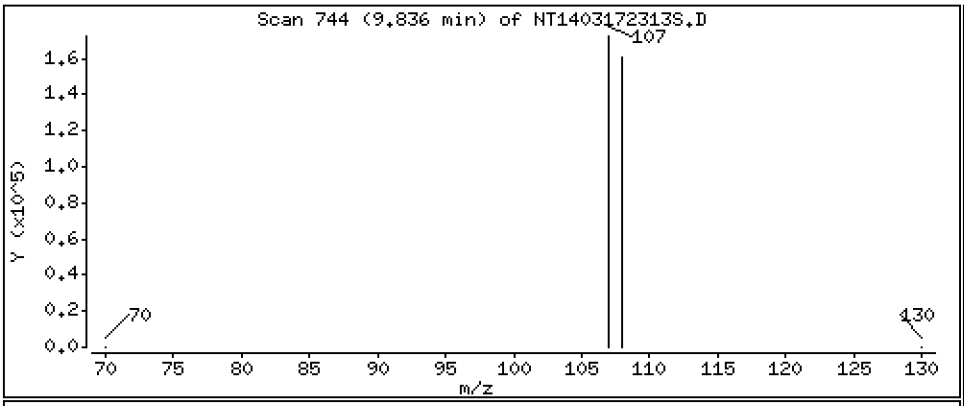
Operator: JGR

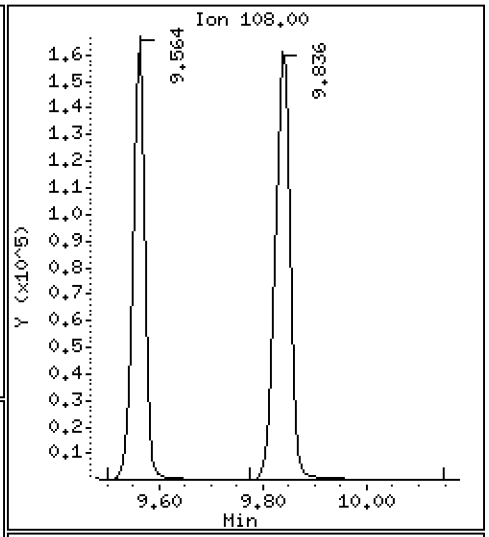
Column phase: ZB-5msi

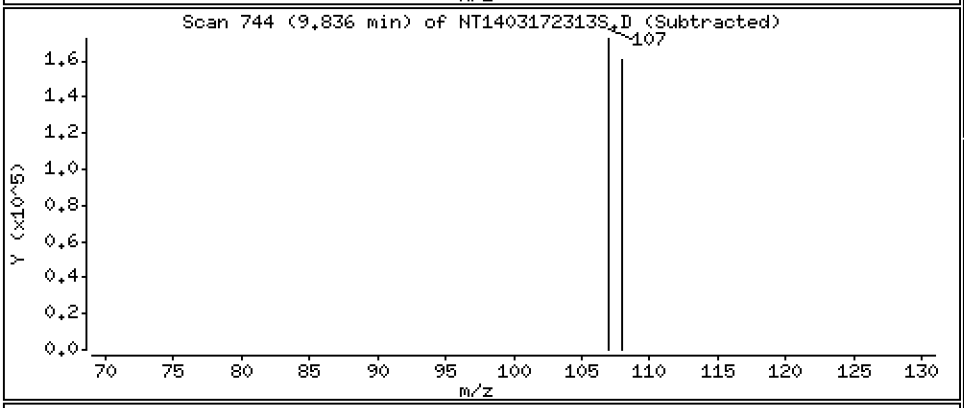
Column diameter: 0.25

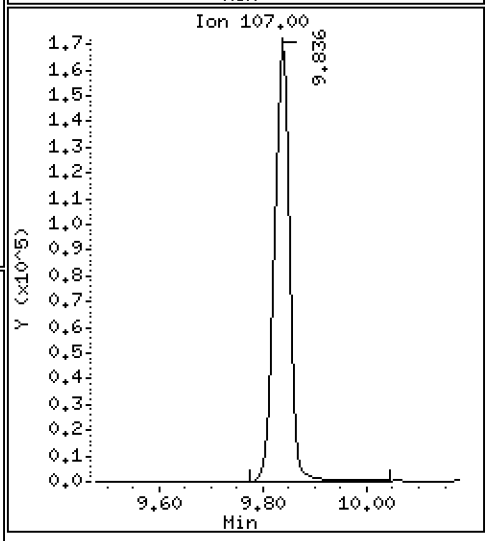
15 4-Methylphenol

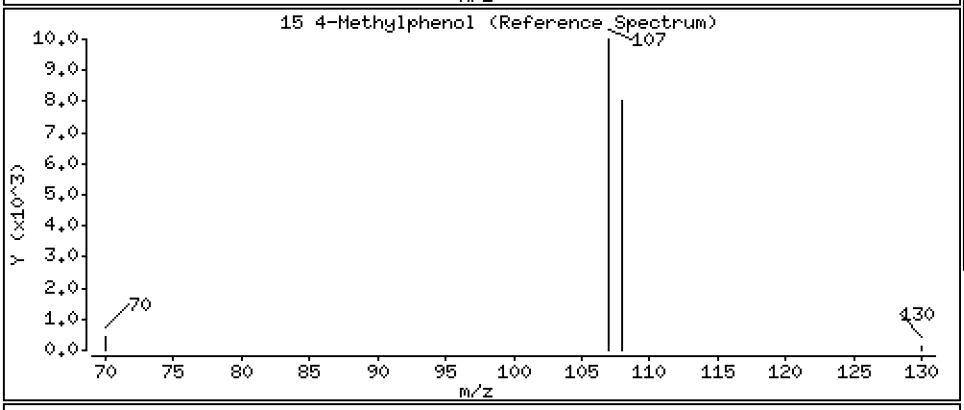
Concentration: 3.915 ug/mL

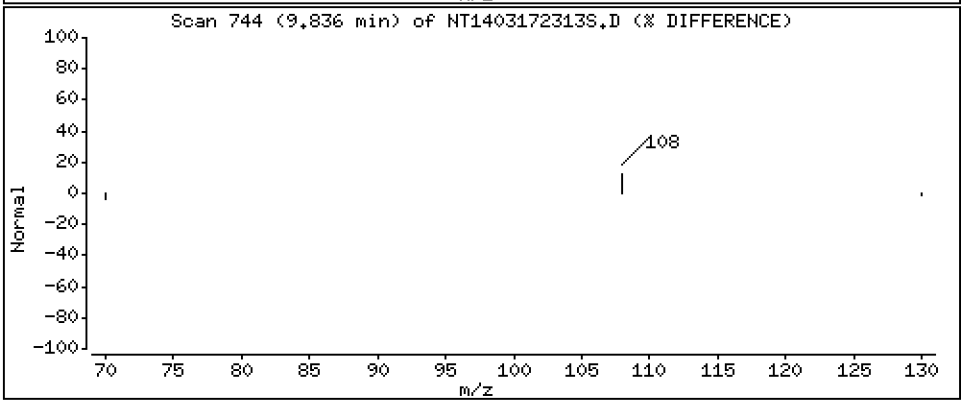












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172313S.D

Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS2

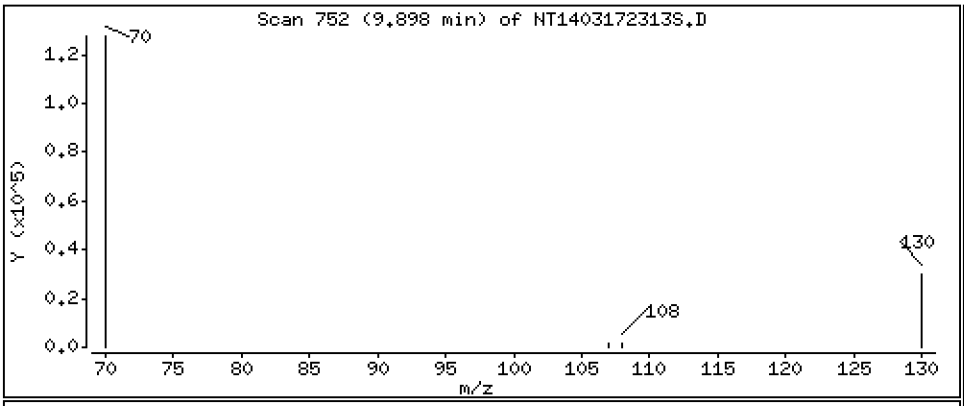
Operator: JGR

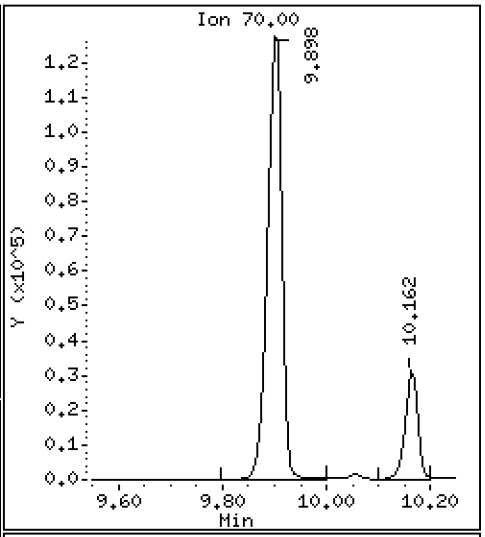
Column phase: ZB-5msi

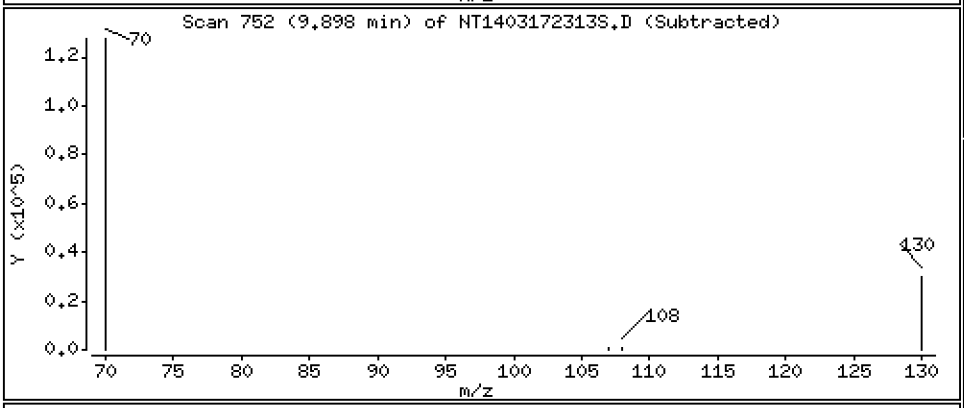
Column diameter: 0.25

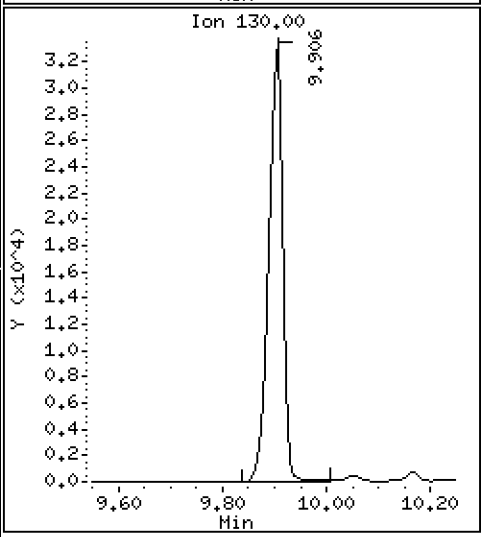
16 N-Nitroso-di-n-propylamine

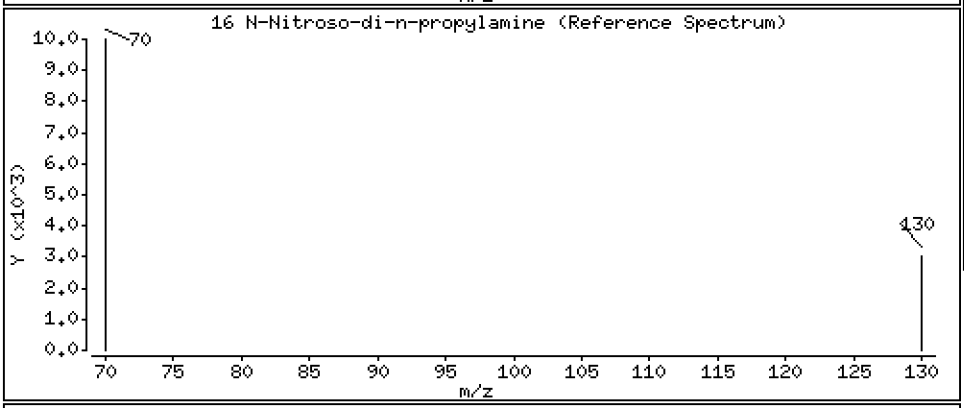
Concentration: 4.044 ug/mL

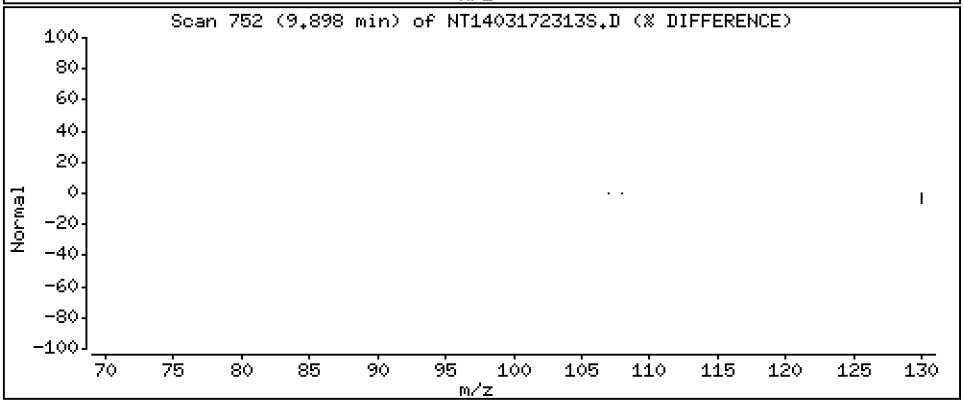












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT14031723135.D

Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS2

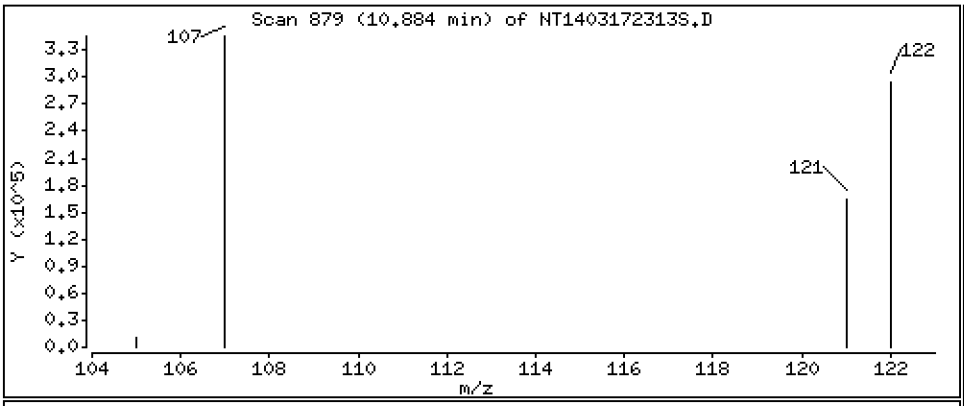
Operator: JGR

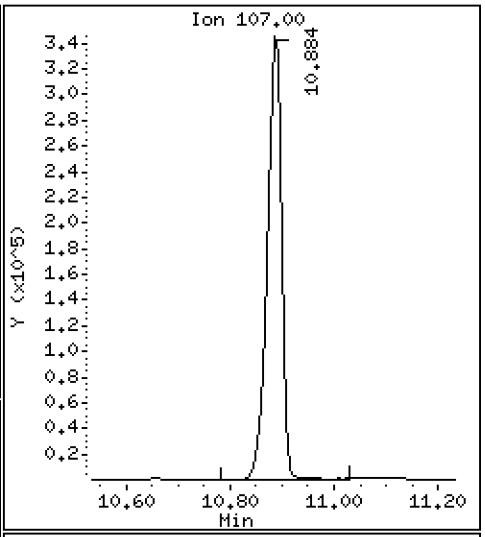
Column phase: ZB-5msi

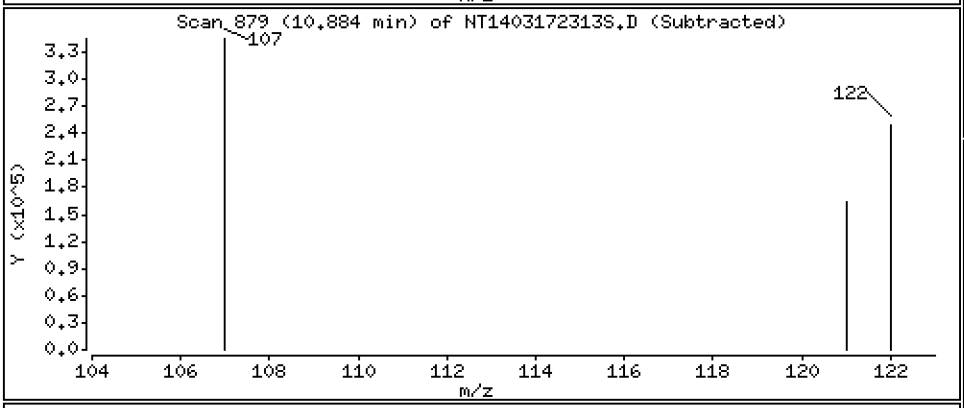
Column diameter: 0.25

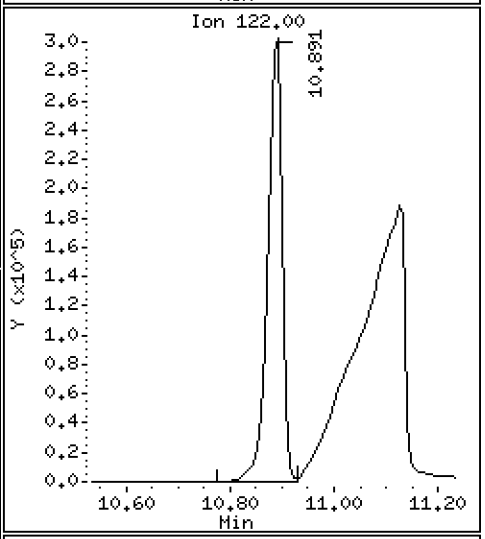
22 2,4-Dimethylphenol

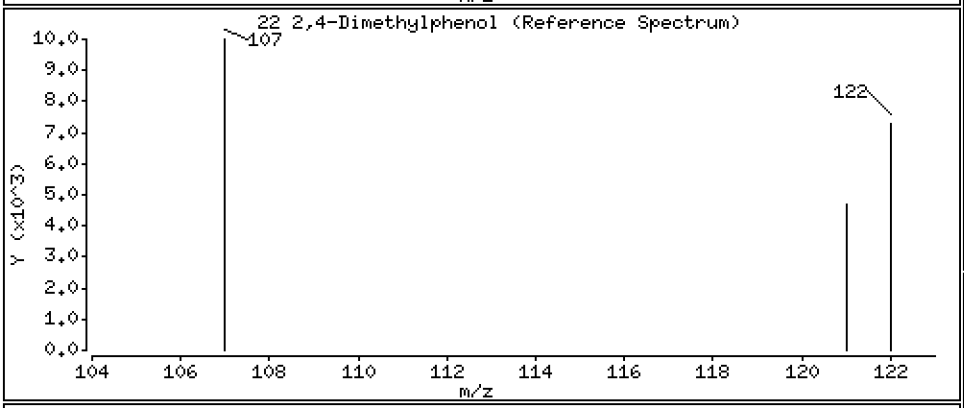
Concentration: 8.070 ug/mL

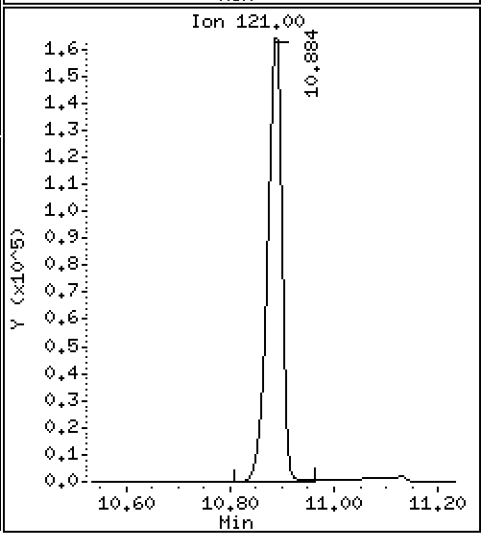


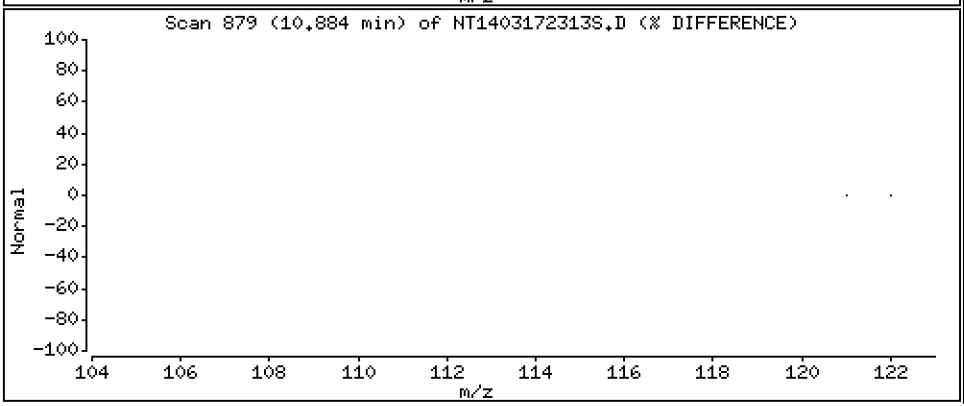












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT14031723135.D

Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS2

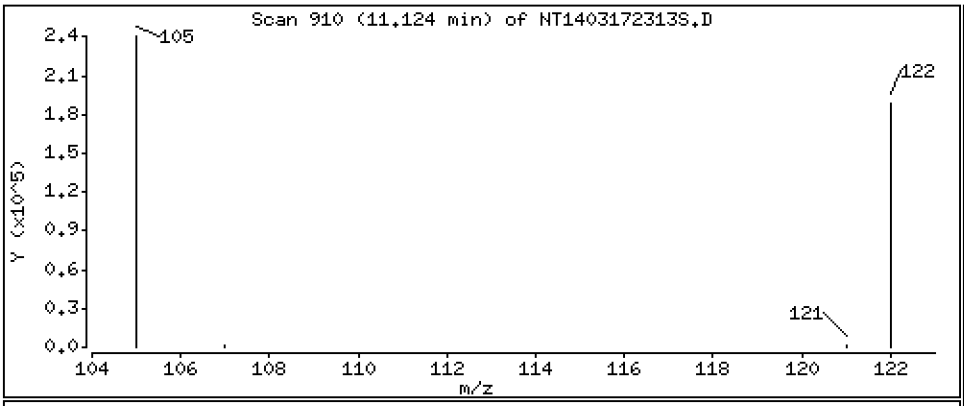
Operator: JGR

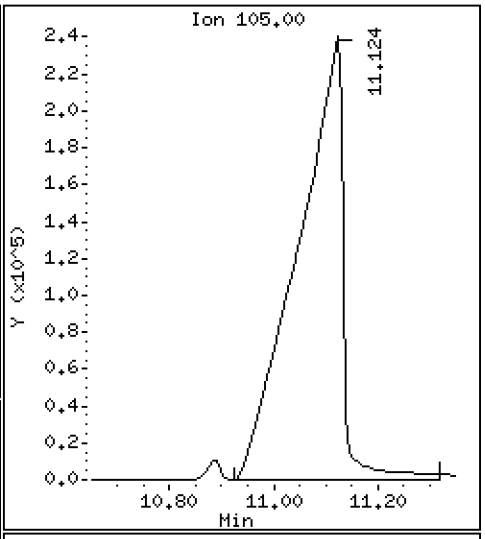
Column phase: ZB-5msi

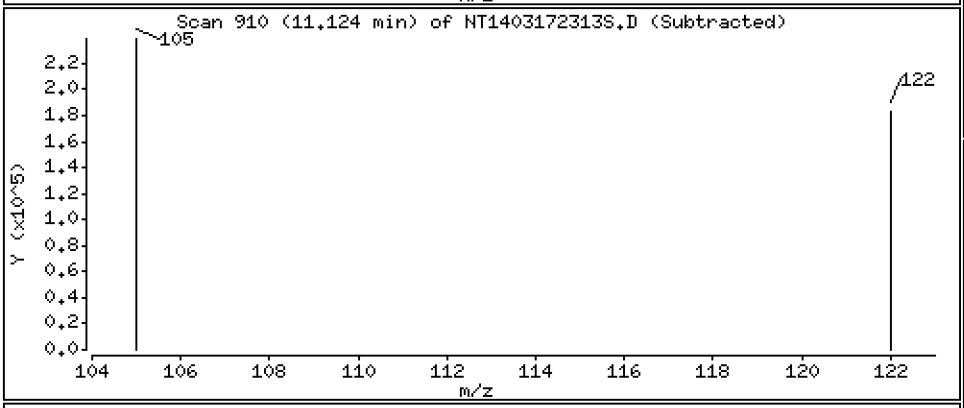
Column diameter: 0.25

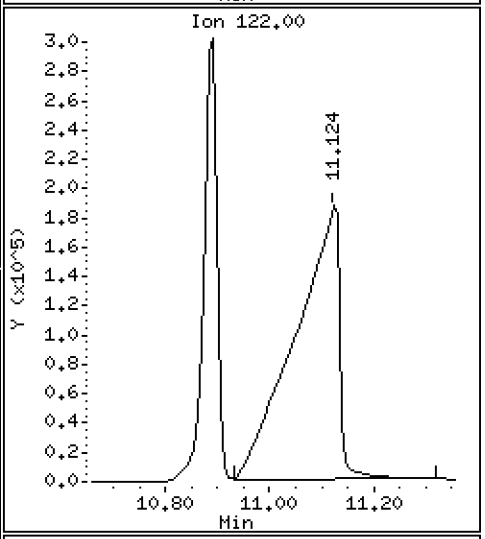
24 Benzoic acid

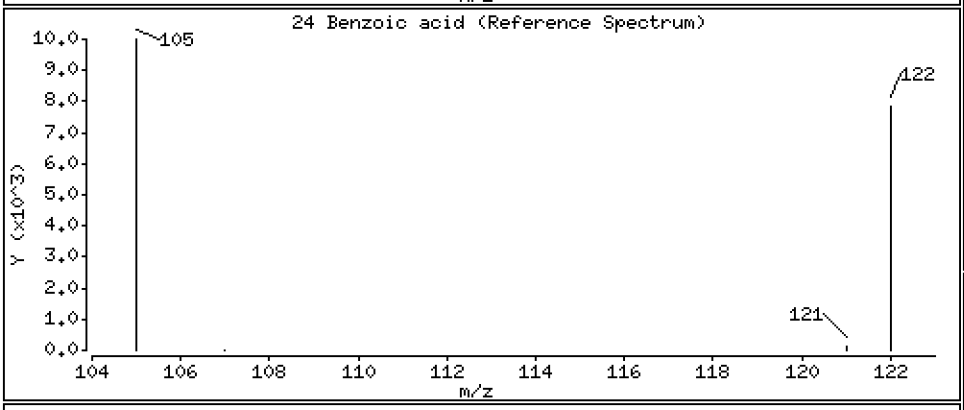
Concentration: 22.31 ug/mL

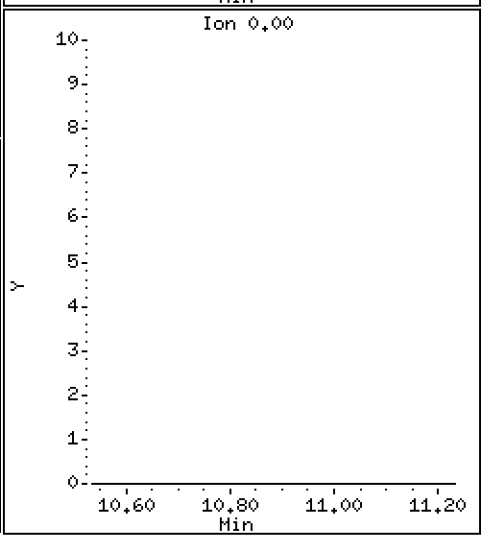


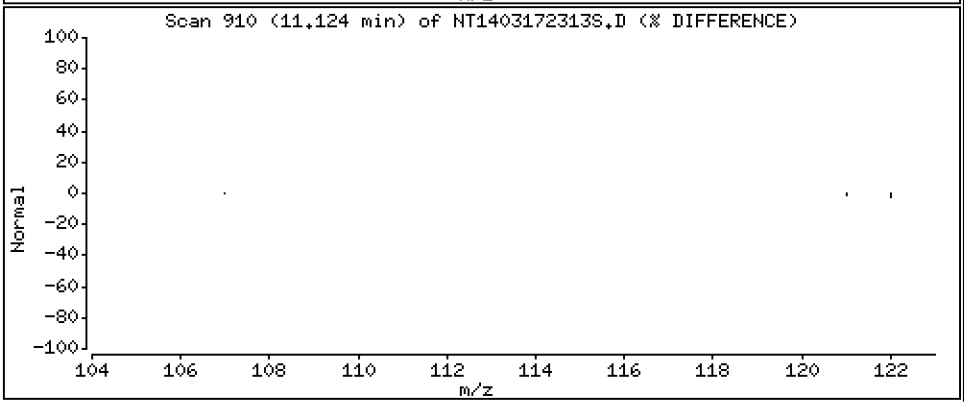












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS2

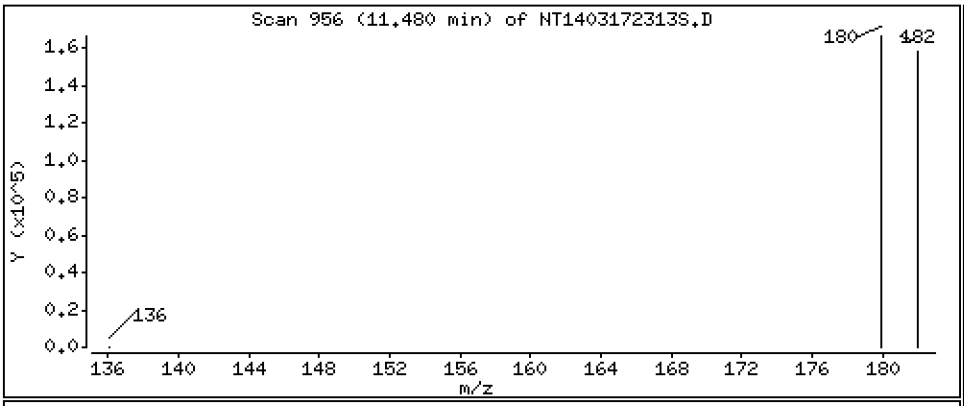
Operator: JGR

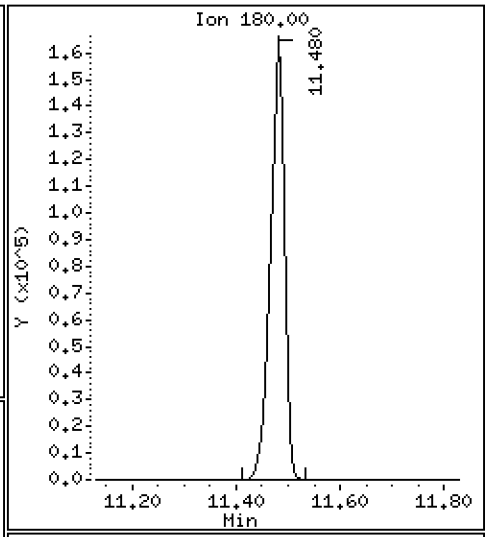
Column phase: ZB-5msi

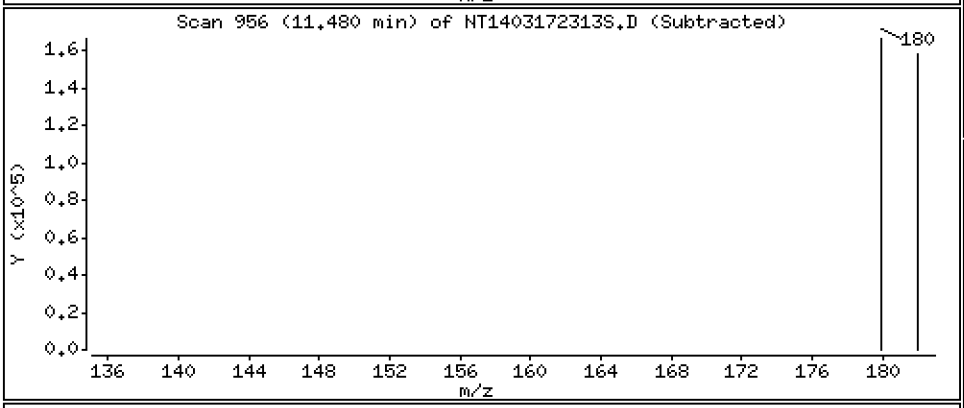
Column diameter: 0.25

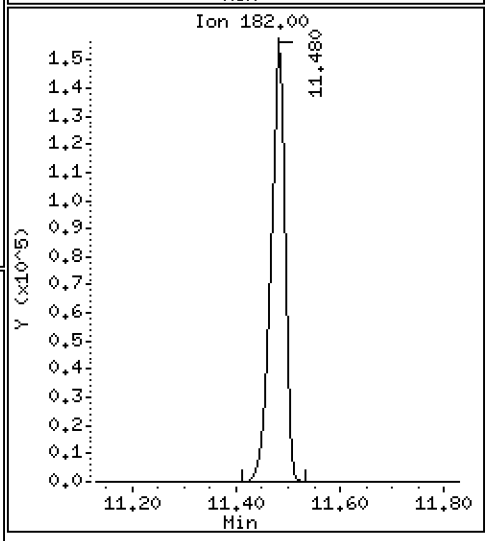
26 1,2,4-Trichlorobenzene

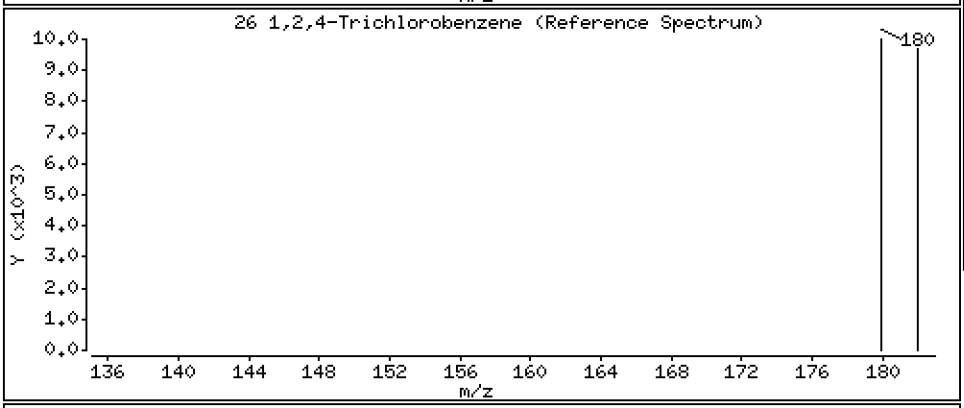
Concentration: 3.903 ug/mL

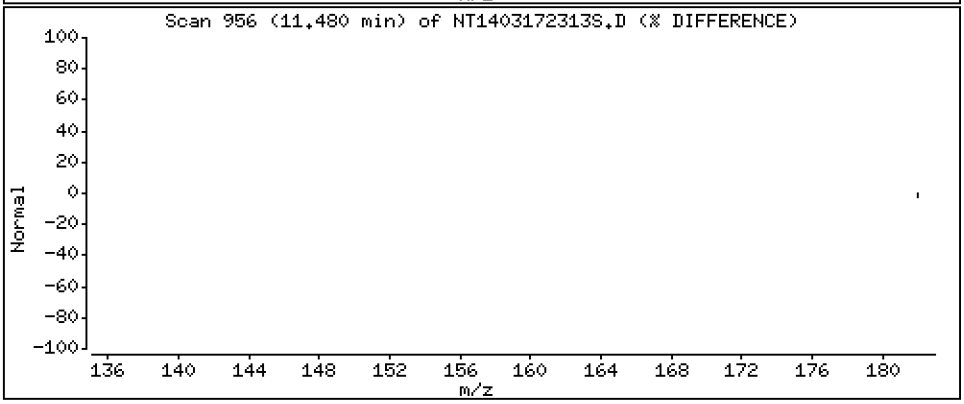












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172313S.D

Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS2

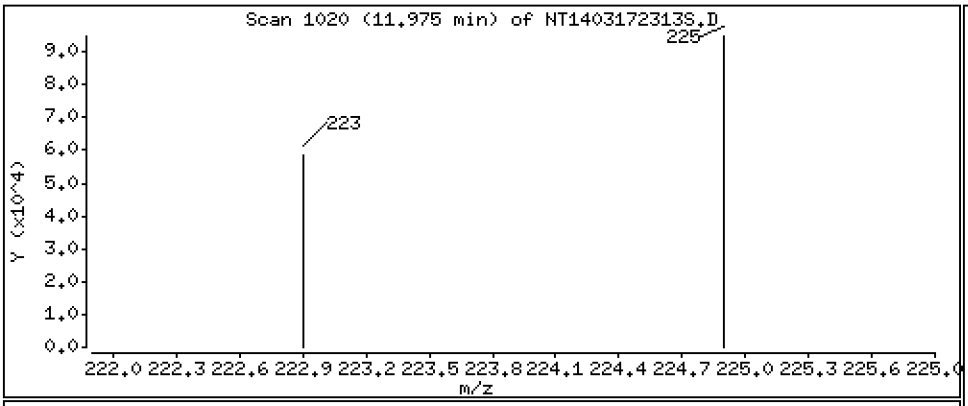
Operator: JGR

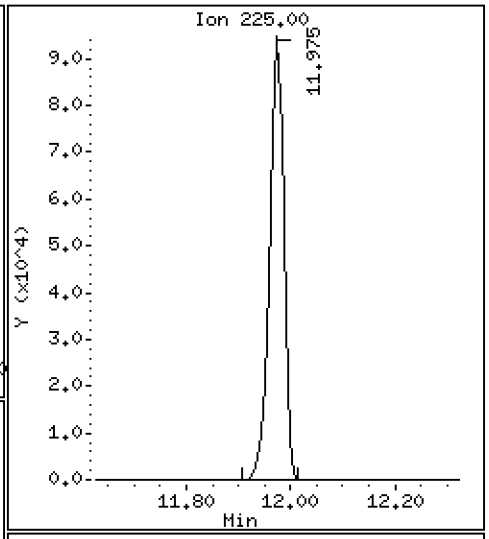
Column phase: ZB-5msi

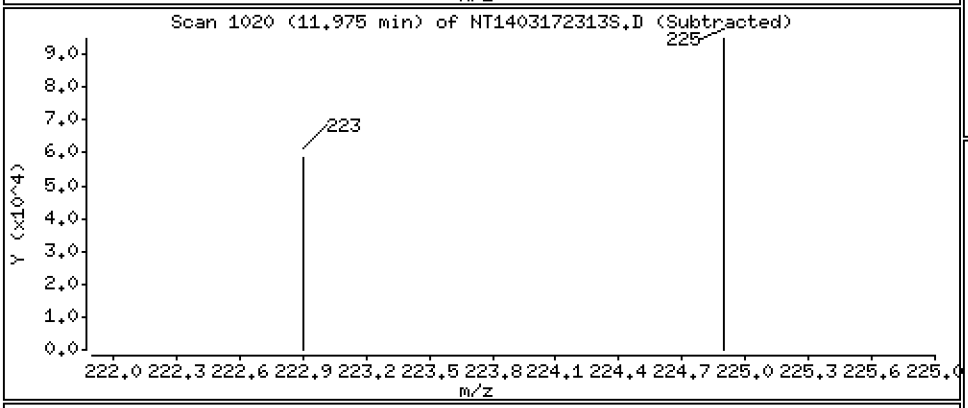
Column diameter: 0.25

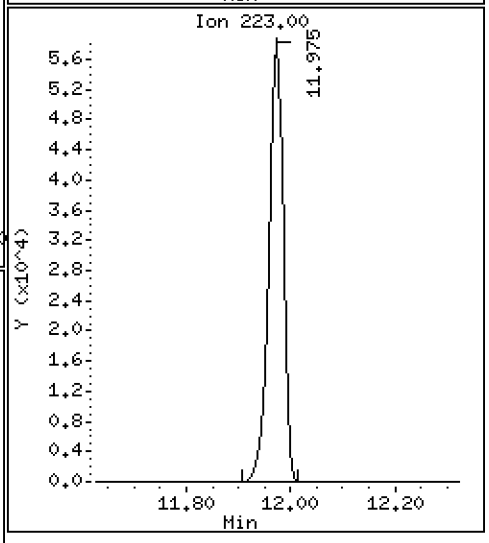
30 Hexachlorobutadiene

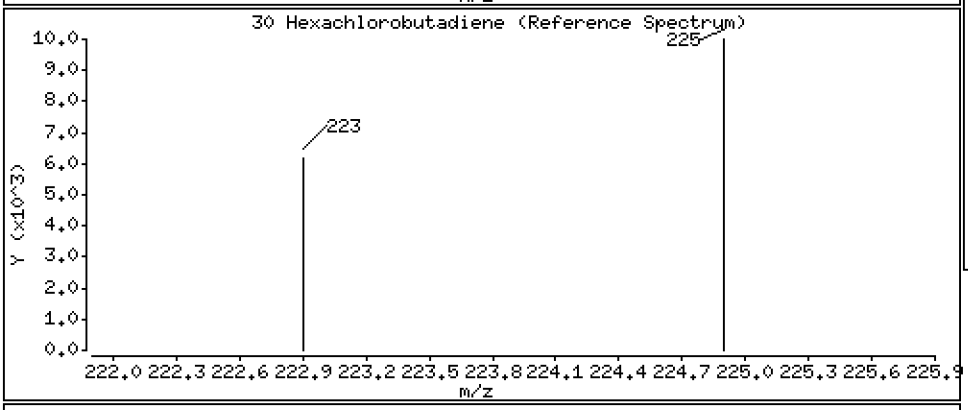
Concentration: 4.371 ug/mL

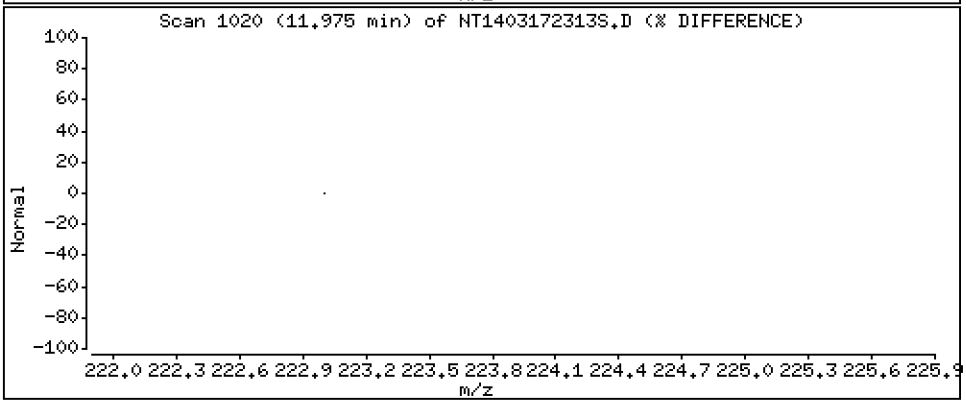












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172313S.D

Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS2

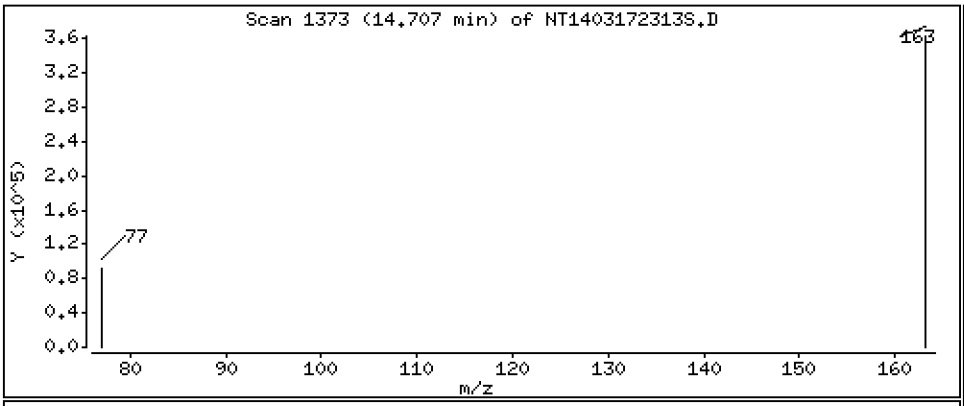
Operator: JGR

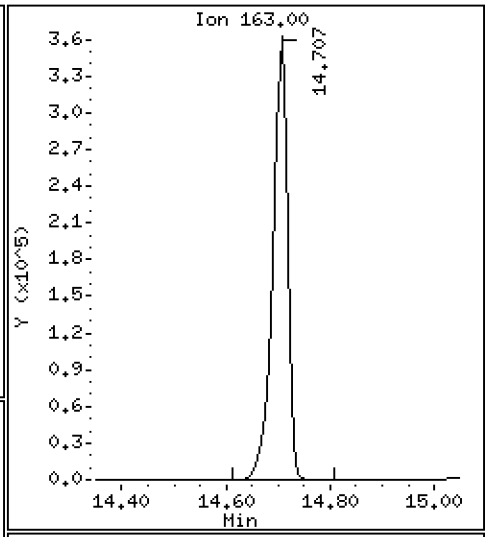
Column phase: ZB-5msi

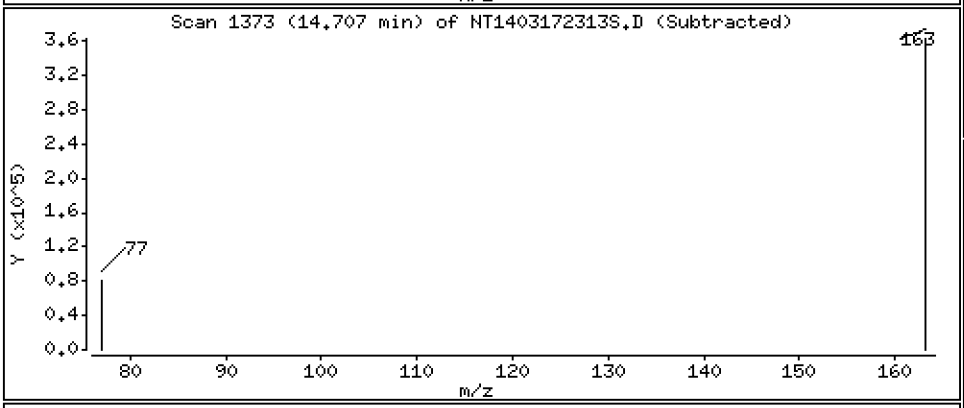
Column diameter: 0.25

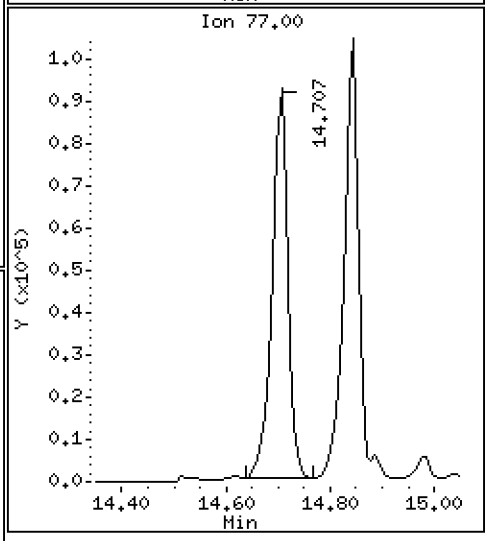
39 Dimethylphthalate

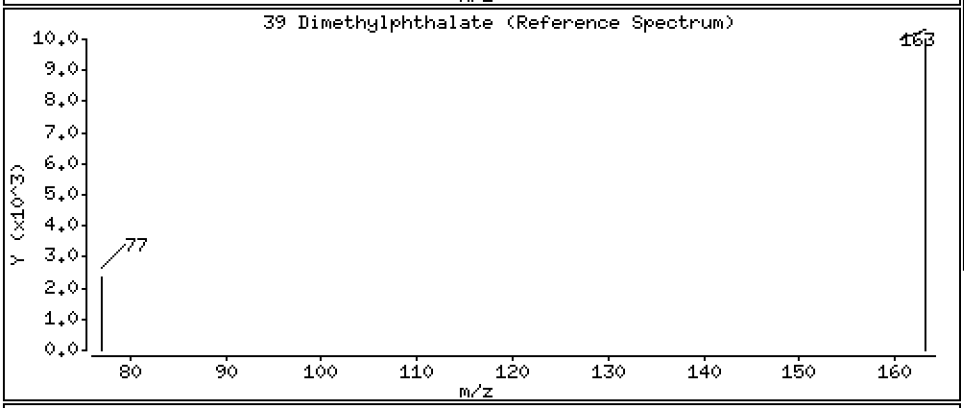
Concentration: 4.621 ug/mL

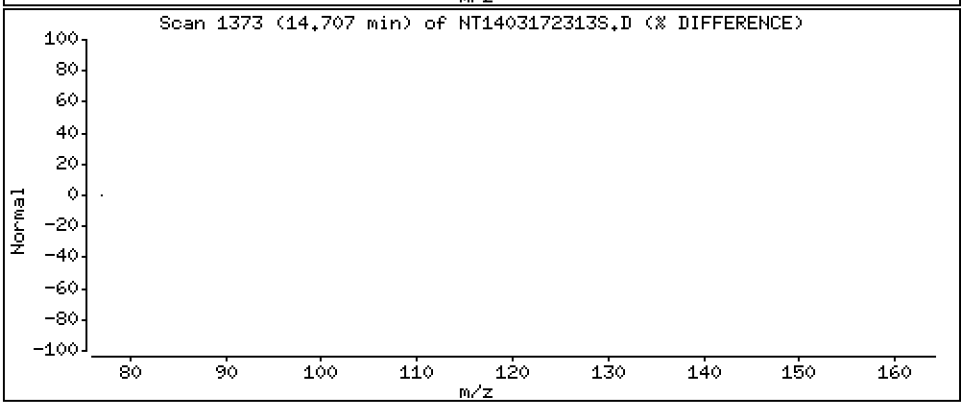












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS2

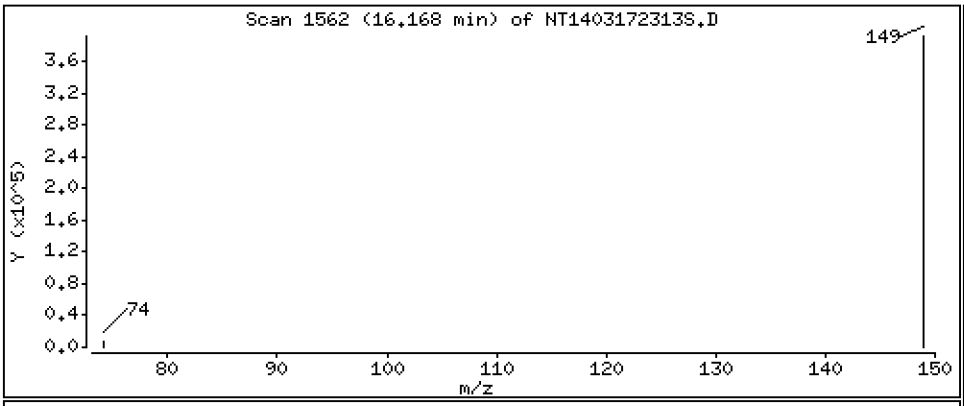
Operator: JGR

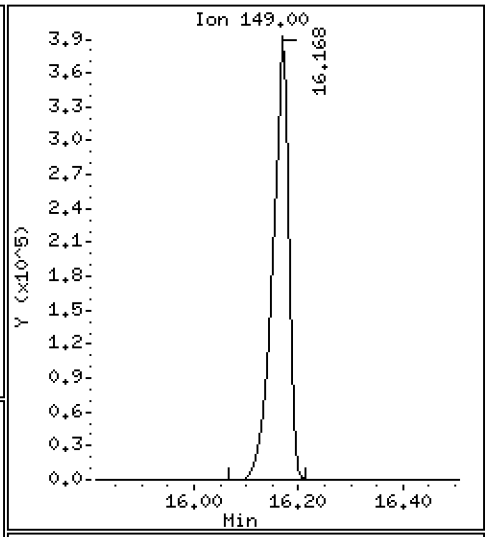
Column phase: ZB-5msi

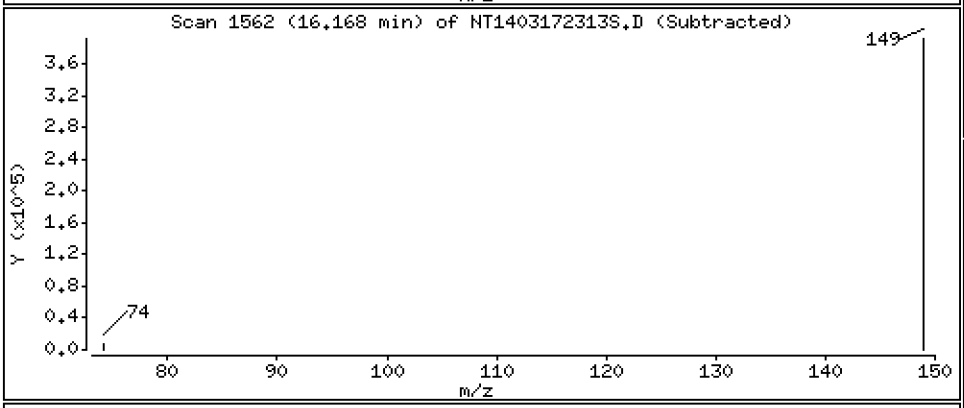
Column diameter: 0.25

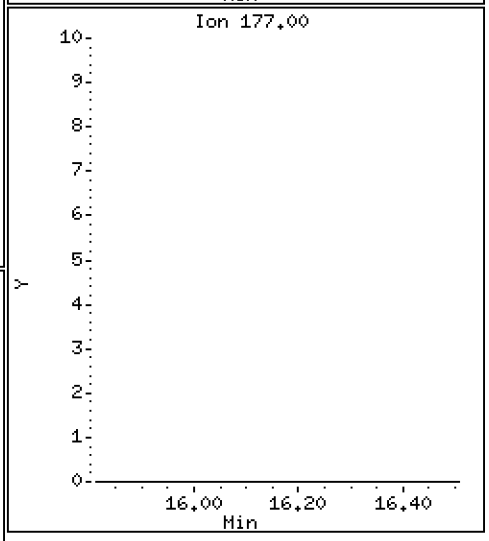
50 Diethylphthalate

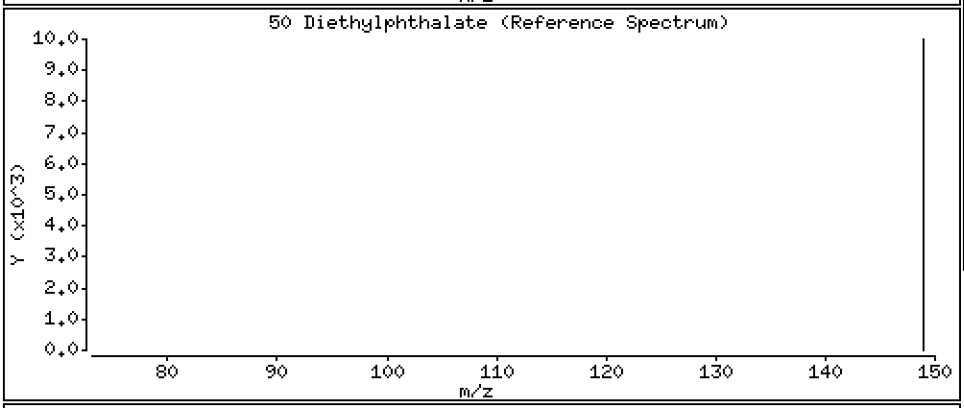
Concentration: 5.223 ug/mL

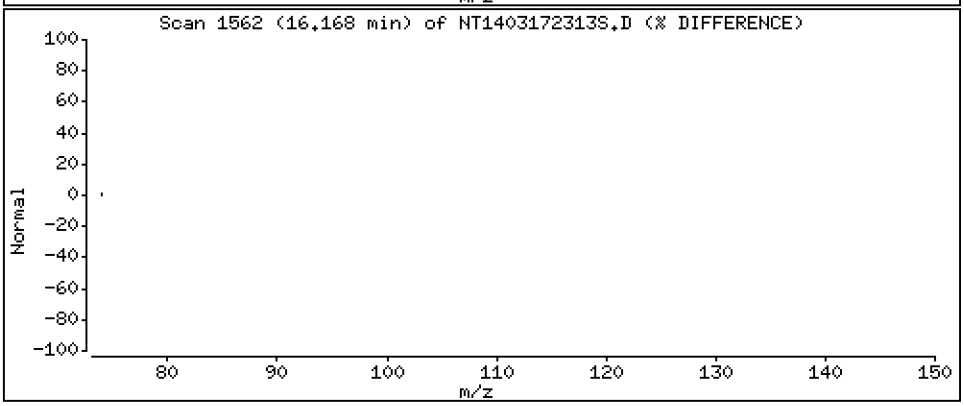












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS2

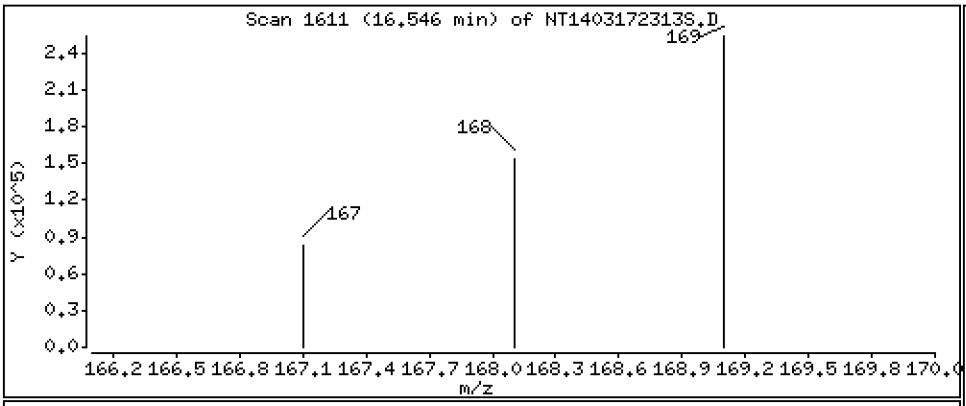
Operator: JGR

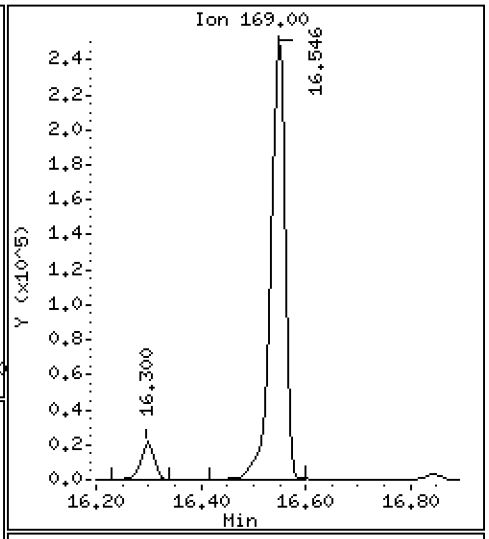
Column phase: ZB-5msi

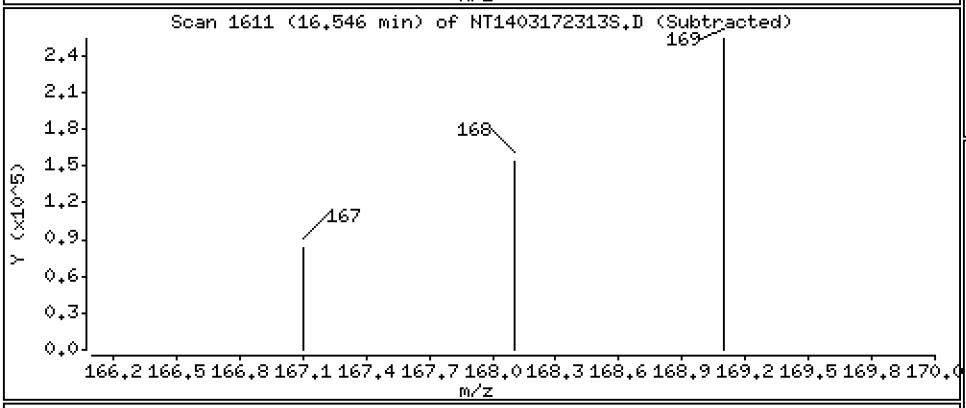
Column diameter: 0.25

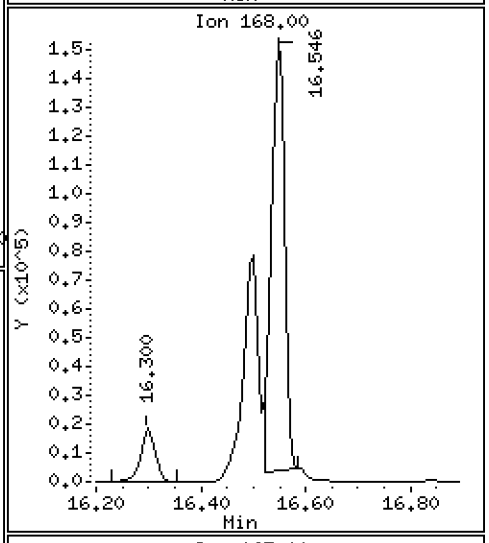
54 N-Nitrosodiphenylamine

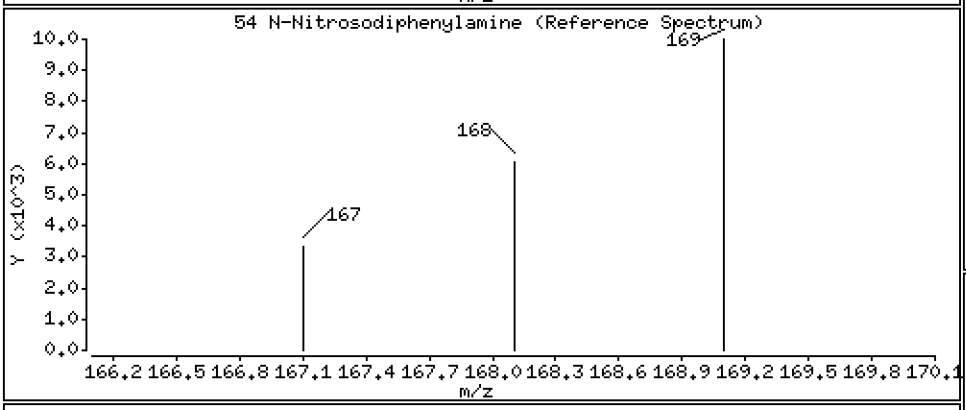
Concentration: 4.198 ug/mL

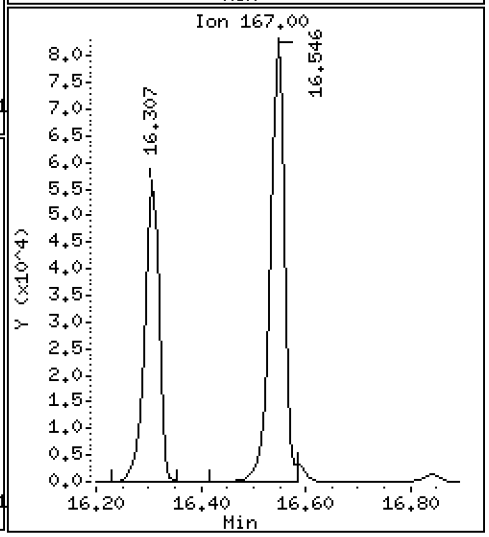


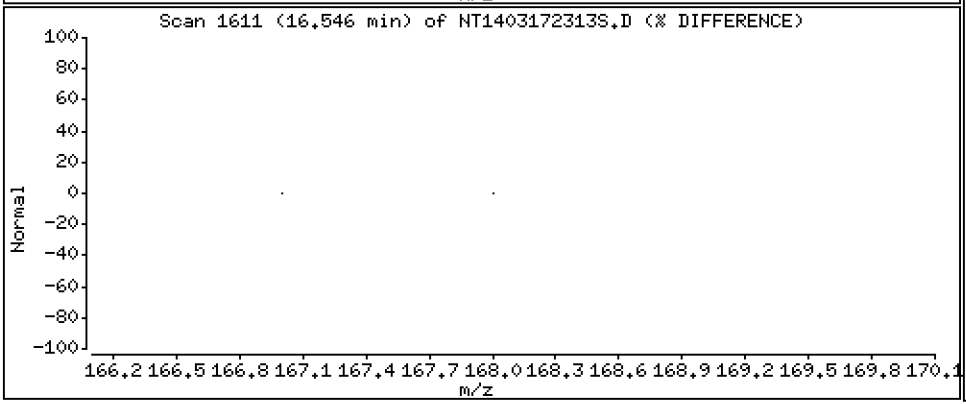












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS2

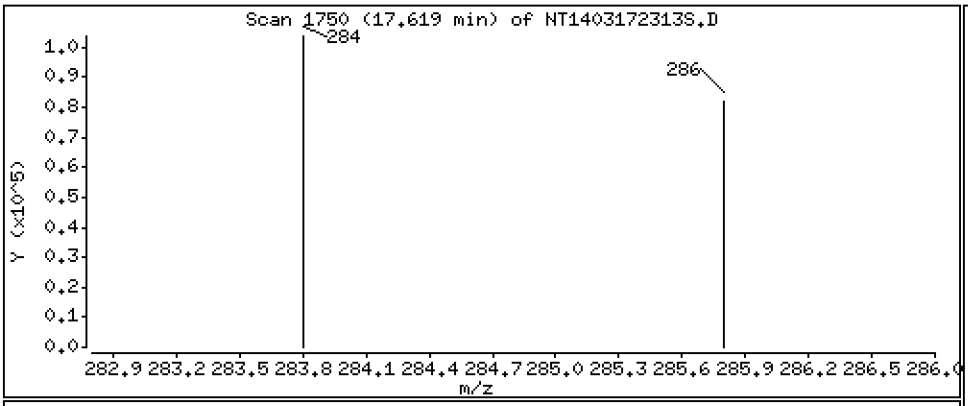
Operator: JGR

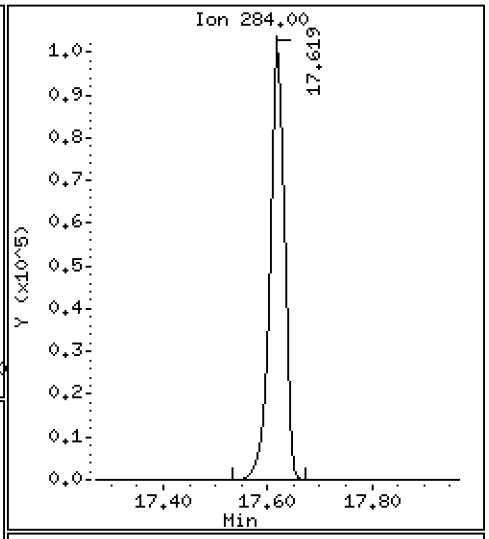
Column phase: ZB-5msi

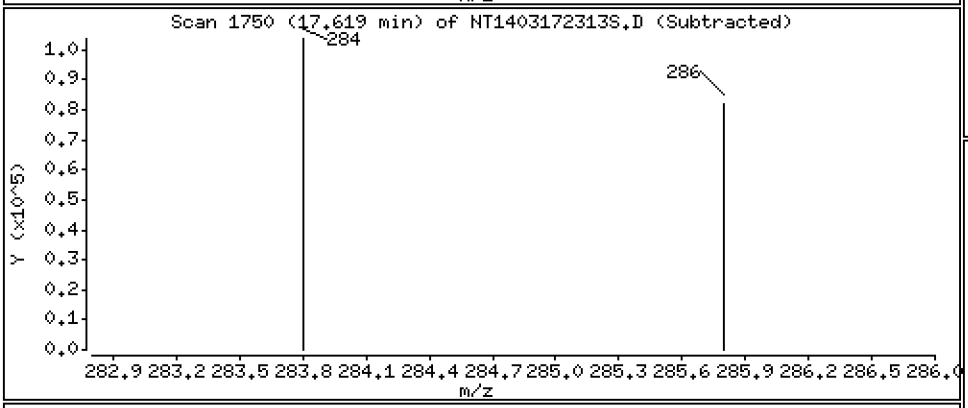
Column diameter: 0.25

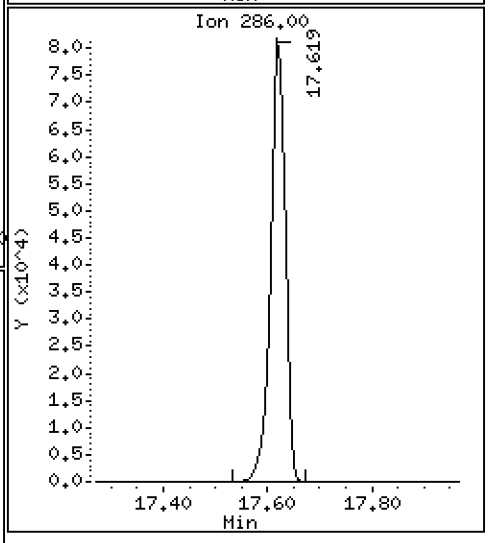
57 Hexachlorobenzene

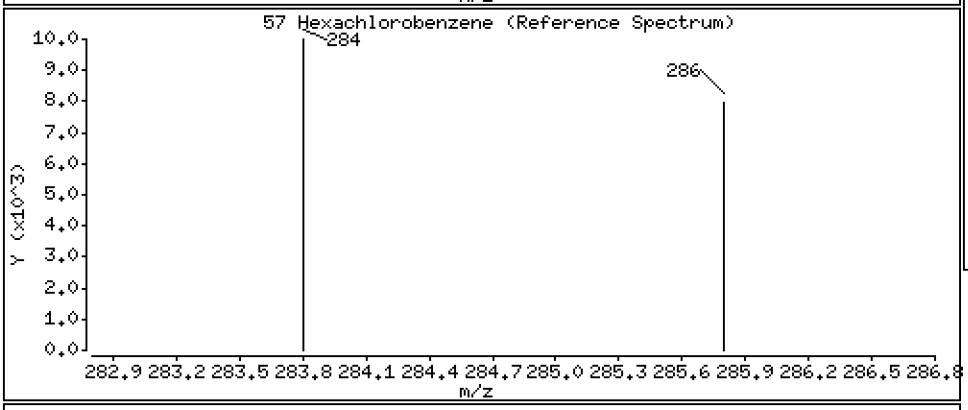
Concentration: 4.510 ug/mL

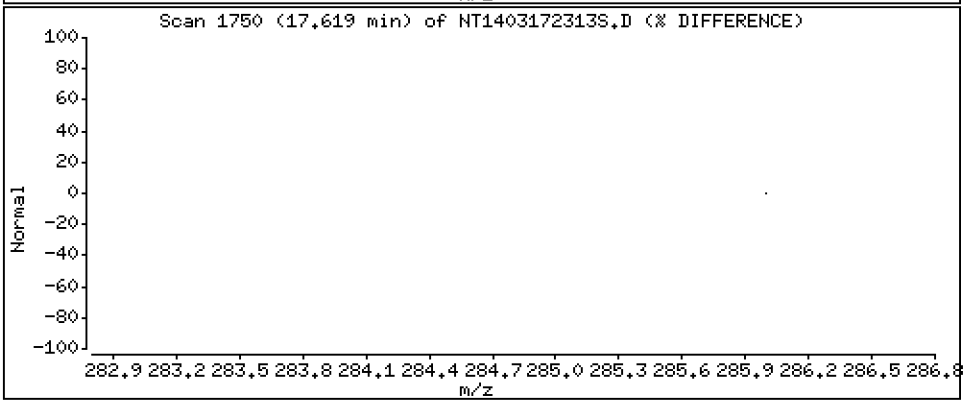












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172313S.D

Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS2

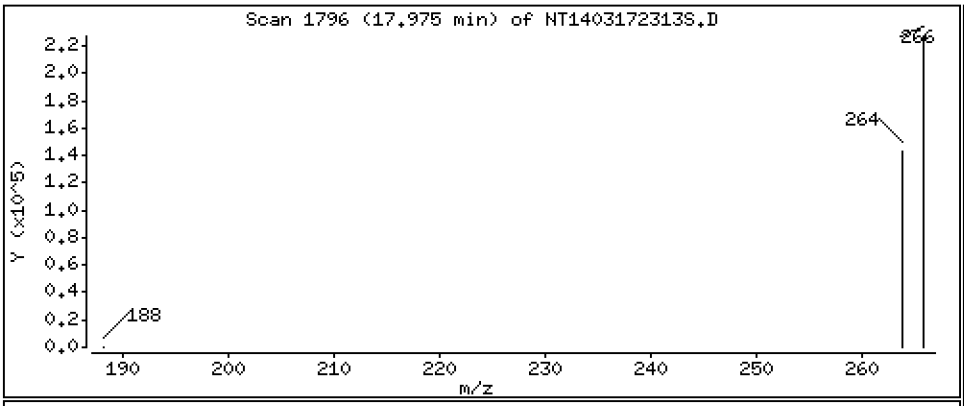
Operator: JGR

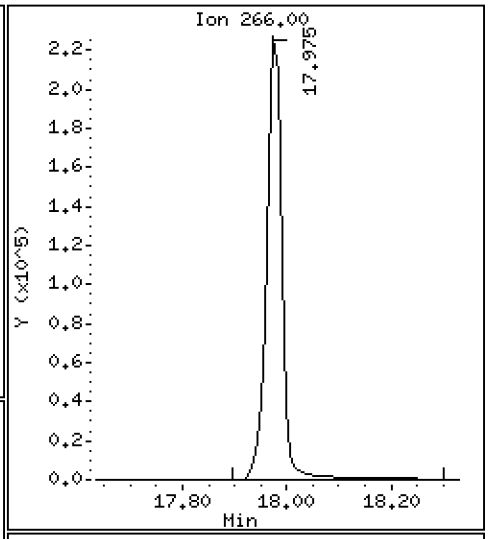
Column phase: ZB-5msi

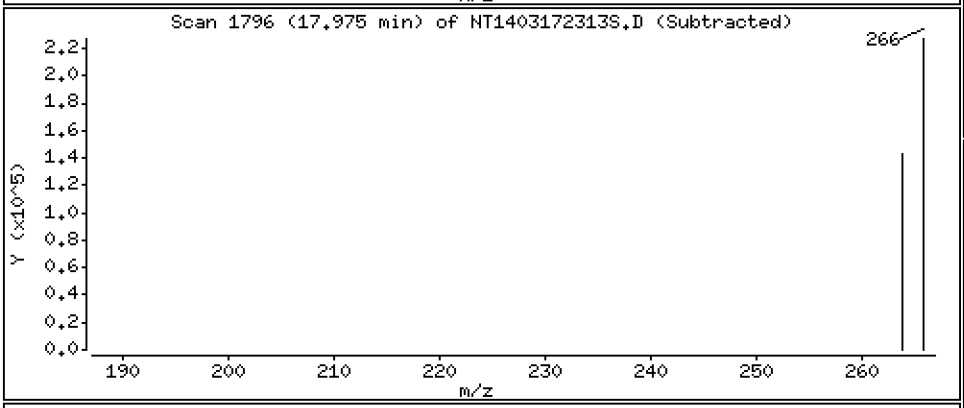
Column diameter: 0.25

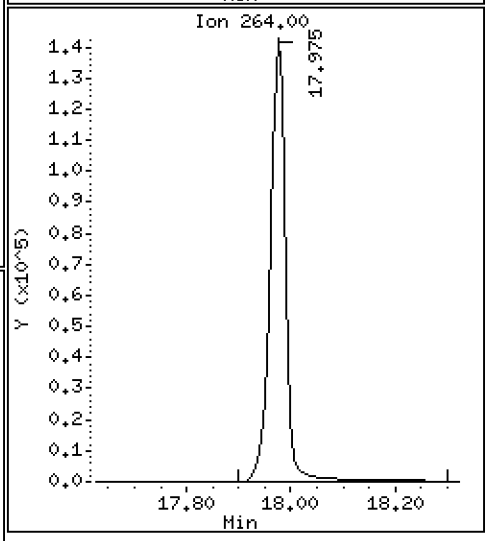
58 Pentachlorophenol

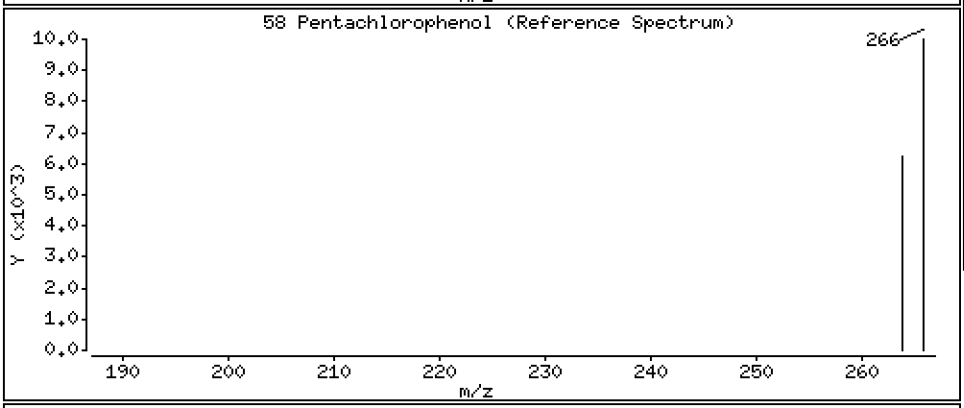
Concentration: 14.40 ug/mL

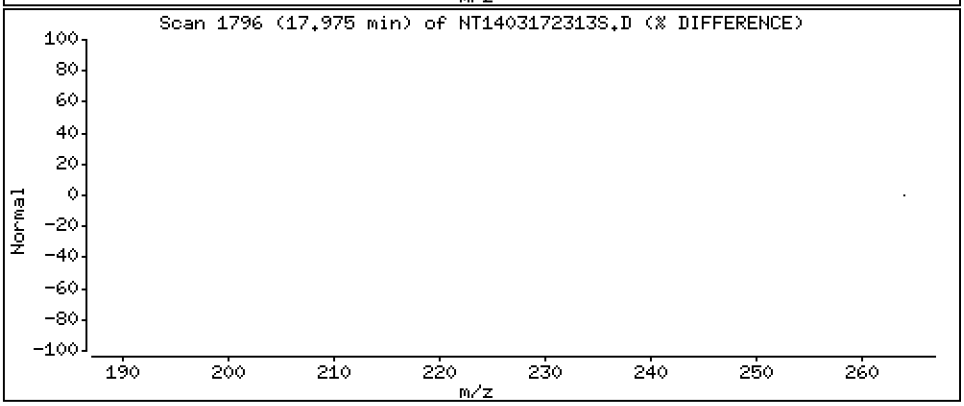












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172313S.D

Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS2

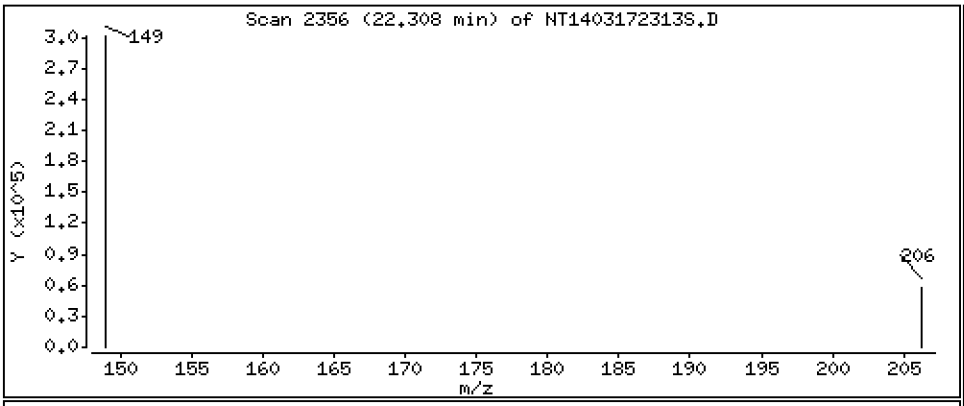
Operator: JGR

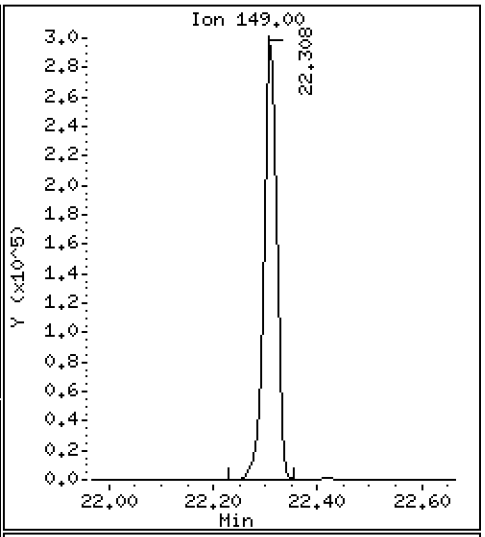
Column phase: ZB-5msi

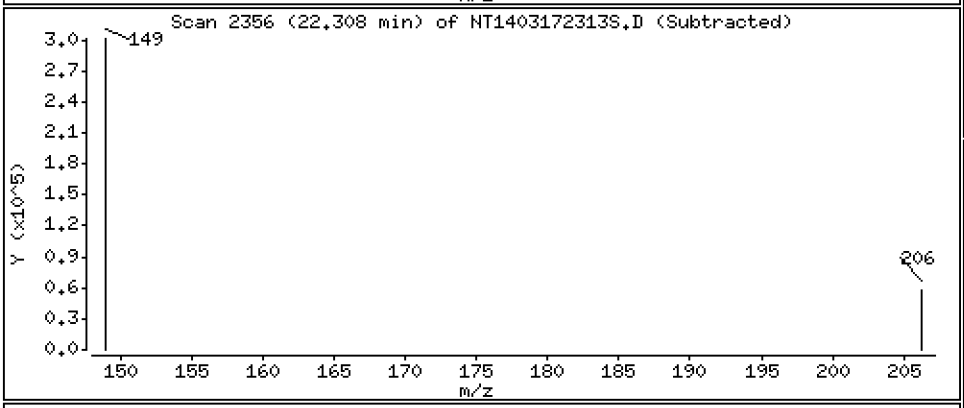
Column diameter: 0.25

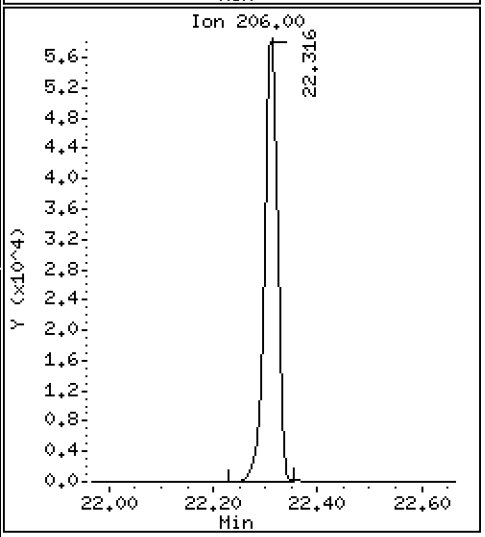
67 Butylbenzylphthalate

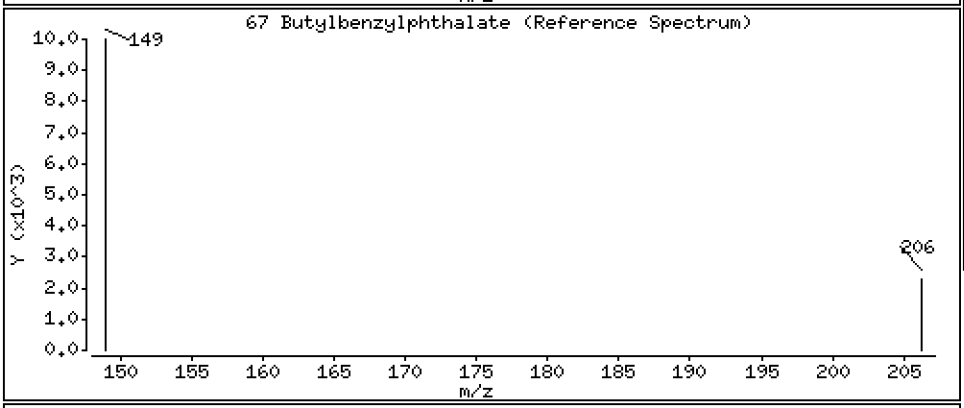
Concentration: 6.321 ug/mL

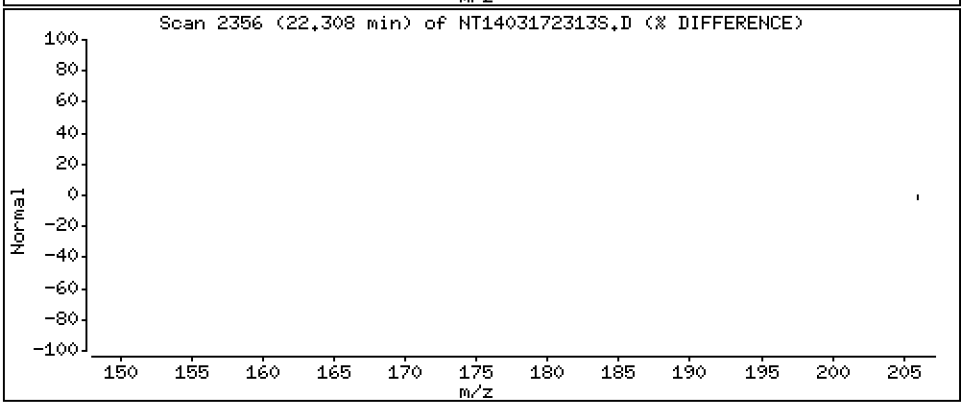












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Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS2

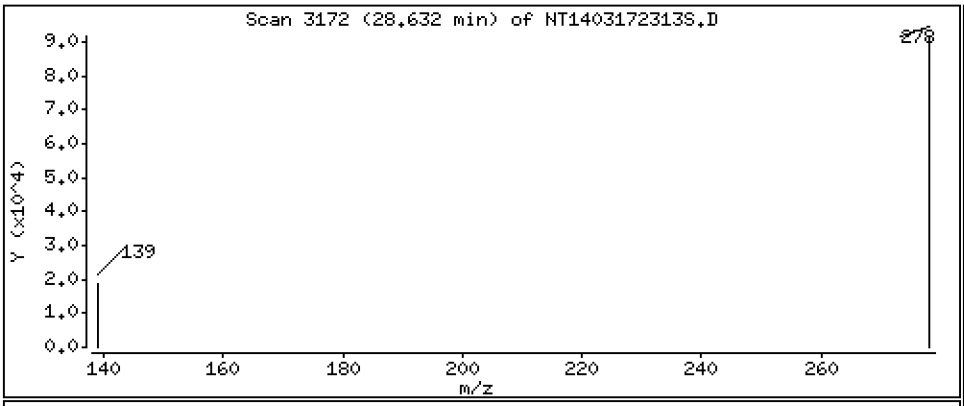
Operator: JGR

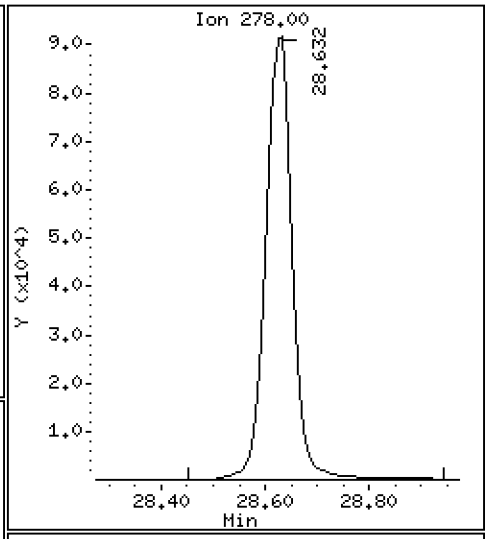
Column phase: ZB-5msi

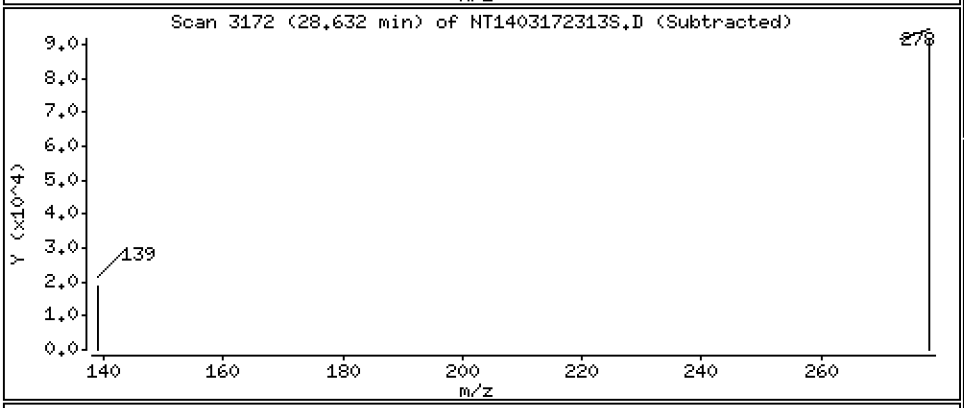
Column diameter: 0.25

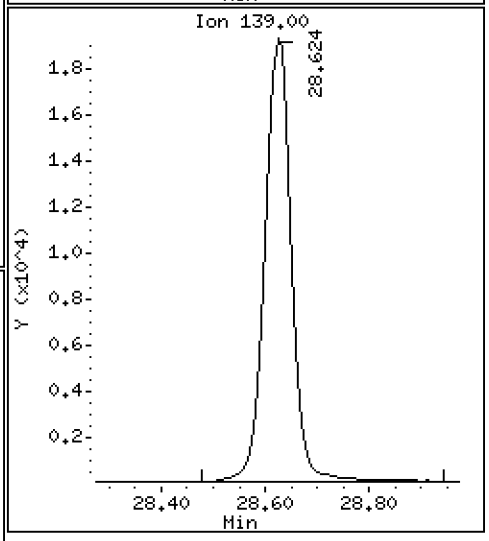
79 Dibenzo(a,h)anthracene

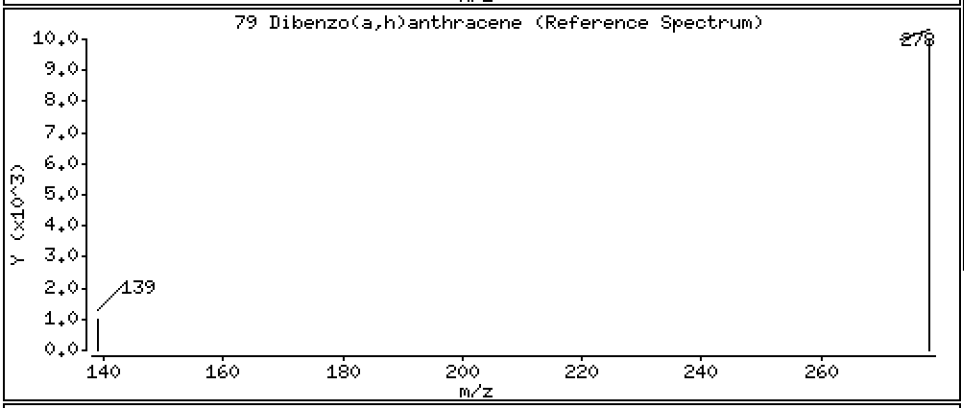
Concentration: 4.317 ug/mL

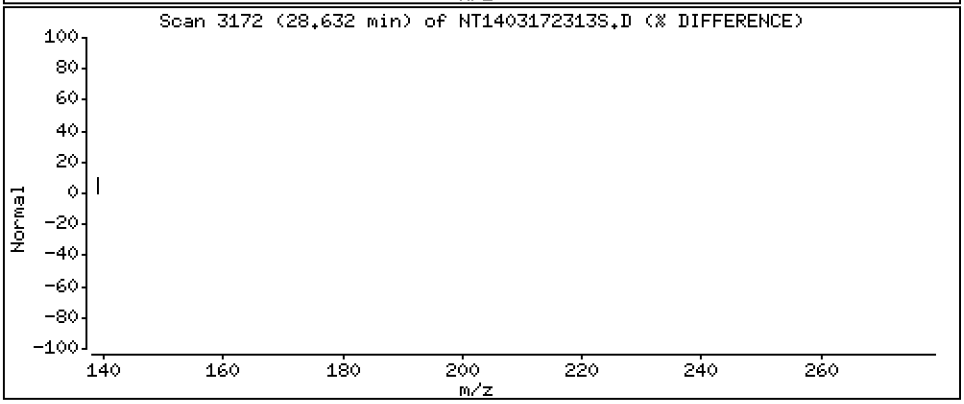












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172313S.D

Date : 17-MAR-2023 21:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BS2

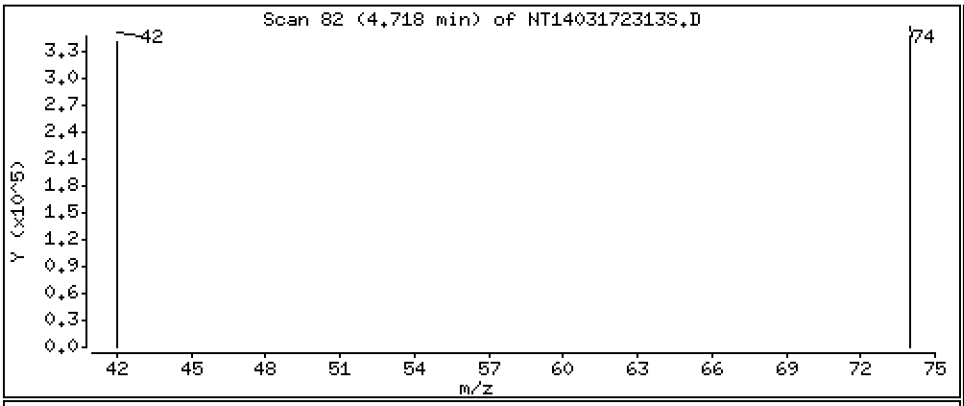
Operator: JGR

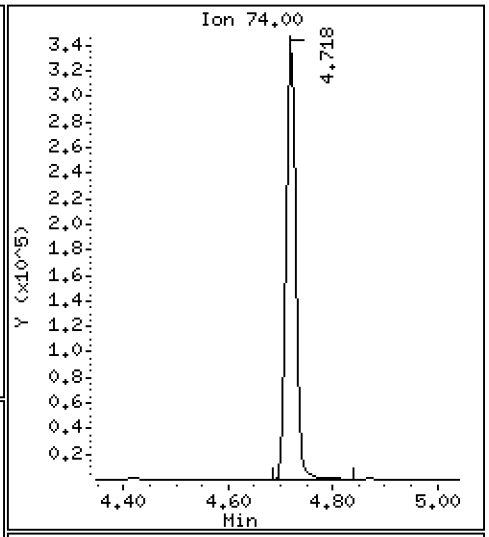
Column phase: ZB-5msi

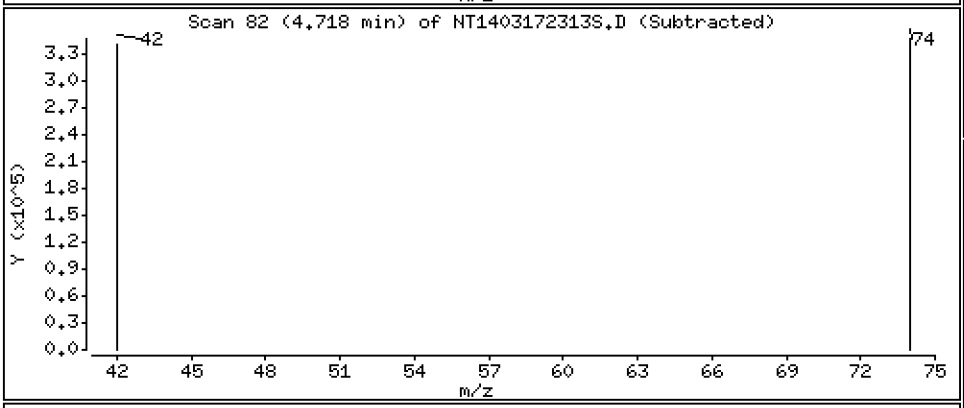
Column diameter: 0.25

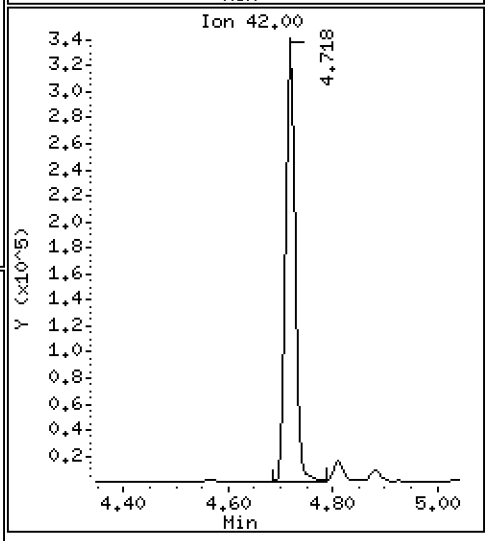
90 N-Nitrosodimethylamine

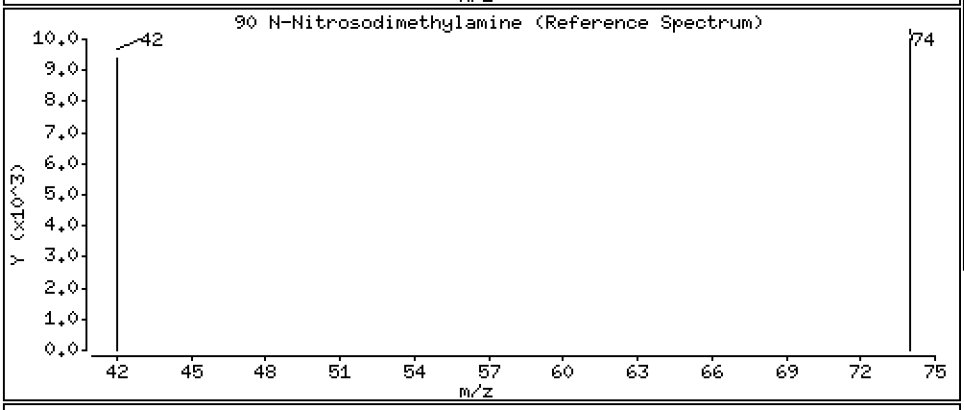
Concentration: 9.320 ug/mL

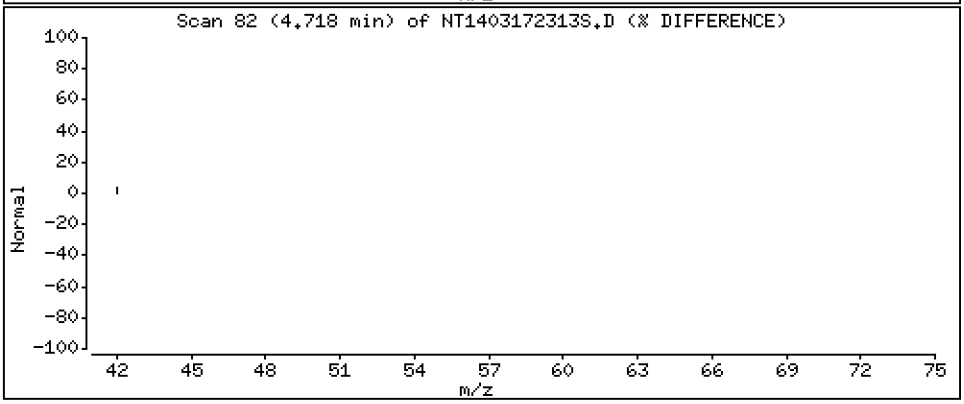












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172313S.D
Lab Smp Id: BLB0424-BS2
Inj Date : 17-MAR-2023 21:42 MS Autotune Date: 11-MAR-2023 16:01
Operator : JGR Inst ID: nt14.i
Smp Info : BLB0424-BS2
Misc Info :
Comment :
Method : \\target\share\chem3\nt14.i\20230317.b\20230317.b\SIMABN2.m
Meth Date : 23-Mar-2023 16:53 van Quant Type: ISTD
Cal Date : 15-MAR-2023 15:50 Cal File: NT1403152308.D
Als bottle: 13
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

			QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1	2-Fluorophenol	112	6.834	6.826	(0.754)	486270	5.90847	5.908(R)
	3	Phenol	94	8.441	8.440	(0.931)	413673	3.65512	3.655
	7	1,3-Dichlorobenzene	146	9.005	9.005	(0.993)	358803	3.70472	3.705
*	8	1,4-Dichlorobenzene-d4	152	9.067	9.067	(1.000)	242461	4.00000	
	9	1,4-Dichlorobenzene	146	9.098	9.098	(1.003)	354155	3.77894	3.779
	11	Benzyl alcohol	79	9.339	9.338	(1.030)	277212	4.17884	4.179
	12	1,2-Dichlorobenzene	146	9.455	9.455	(1.043)	351317	3.84858	3.849
	13	2-Methylphenol	108	9.564	9.563	(1.055)	277167	3.54524	3.545
	15	4-Methylphenol	108	9.836	9.827	(1.085)	323324	3.91468	3.915
	16	N-Nitroso-di-n-propylamine	70	9.898	9.897	(1.092)	236161	4.04421	4.044
	22	2,4-Dimethylphenol	107	10.883	10.883	(0.941)	633726	8.06977	8.070
	24	Benzoic acid	105	11.123	10.999	(0.962)	1465332	22.3141	22.31
	26	1,2,4-Trichlorobenzene	180	11.480	11.479	(0.993)	300387	3.90271	3.903
*	27	Naphthalene-d8	136	11.565	11.564	(1.000)	913509	4.00000	
	30	Hexachlorobutadiene	225	11.974	11.974	(1.035)	170270	4.37137	4.371
	39	Dimethylphthalate	163	14.706	14.698	(0.967)	679707	4.62110	4.621
*	42	Acenaphthene-d10	162	15.201	15.201	(1.000)	430694	4.00000	
	50	Diethylphthalate	149	16.168	16.160	(1.064)	817931	5.22317	5.223
	54	N-Nitrosodiphenylamine	169	16.546	16.545	(0.907)	465481	4.19800	4.198
	57	Hexachlorobenzene	284	17.618	17.618	(0.966)	192106	4.50986	4.510
	58	Pentachlorophenol	266	17.974	17.982	(0.985)	445586	14.3981	14.40
*	59	Phenanthrene-d10	188	18.245	18.245	(1.000)	818351	4.00000	
$	66	Terphenyl-d14	244	21.386	21.386	(0.918)	512059	6.72298	6.723(R)
	67	Butylbenzylphthalate	149	22.308	22.315	(0.957)	491027	6.32135	6.321
*	69	Chrysene-d12	240	23.299	23.298	(1.000)	441807	4.00000	
*	77	Perylene-d12	264	25.931	25.938	(1.000)	296844	4.00000	
	79	Dibenzo(a,h)anthracene	278	28.631	28.623	(1.104)	324850	4.31685	4.317
	90	N-Nitrosodimethylamine	74	4.717	4.694	(0.520)	468623	9.32050	9.320

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1403172313S.D
Lab Smp Id: BLB0424-BS2
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\SIMABN2.m
Misc Info:

Calibration Date: 17-MAR-2023
Calibration Time: 15:39
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	224436	112218	448872	242461	8.03
27 Naphthalene-d8	825617	412809	1651234	913509	10.65
42 Acenaphthene-d10	392947	196474	785894	430694	9.61
59 Phenanthrene-d10	789887	394944	1579774	818351	3.60
69 Chrysene-d12	494007	247004	988014	441807	-10.57
77 Perylene-d12	375441	187721	750882	296844	-20.93

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.07	8.57	9.57	9.07	0.00
27 Naphthalene-d8	11.56	11.06	12.06	11.57	0.00
42 Acenaphthene-d10	15.20	14.70	15.70	15.20	0.00
59 Phenanthrene-d10	18.25	17.75	18.75	18.25	0.00
69 Chrysene-d12	23.30	22.80	23.80	23.30	0.00
77 Perylene-d12	25.94	25.44	26.44	25.93	-0.03

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

REVIEW SUMMARY FOR FILE - NT1403172313S.D

Lab ID: BLB0424-BS2
nt14.i, 20230317.b\20230317.b\SIMABN2.m,   17-MAR-2023 21:42

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.962	0.951	0.0107	Benzoic acid

RRT check based on Ccal File: 20230317.b/NT1403172303S.D

On Column LOD for nt14.i, 20230317.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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

Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT14031723145.D

Date : 17-MAR-2023 22:19

Client ID:

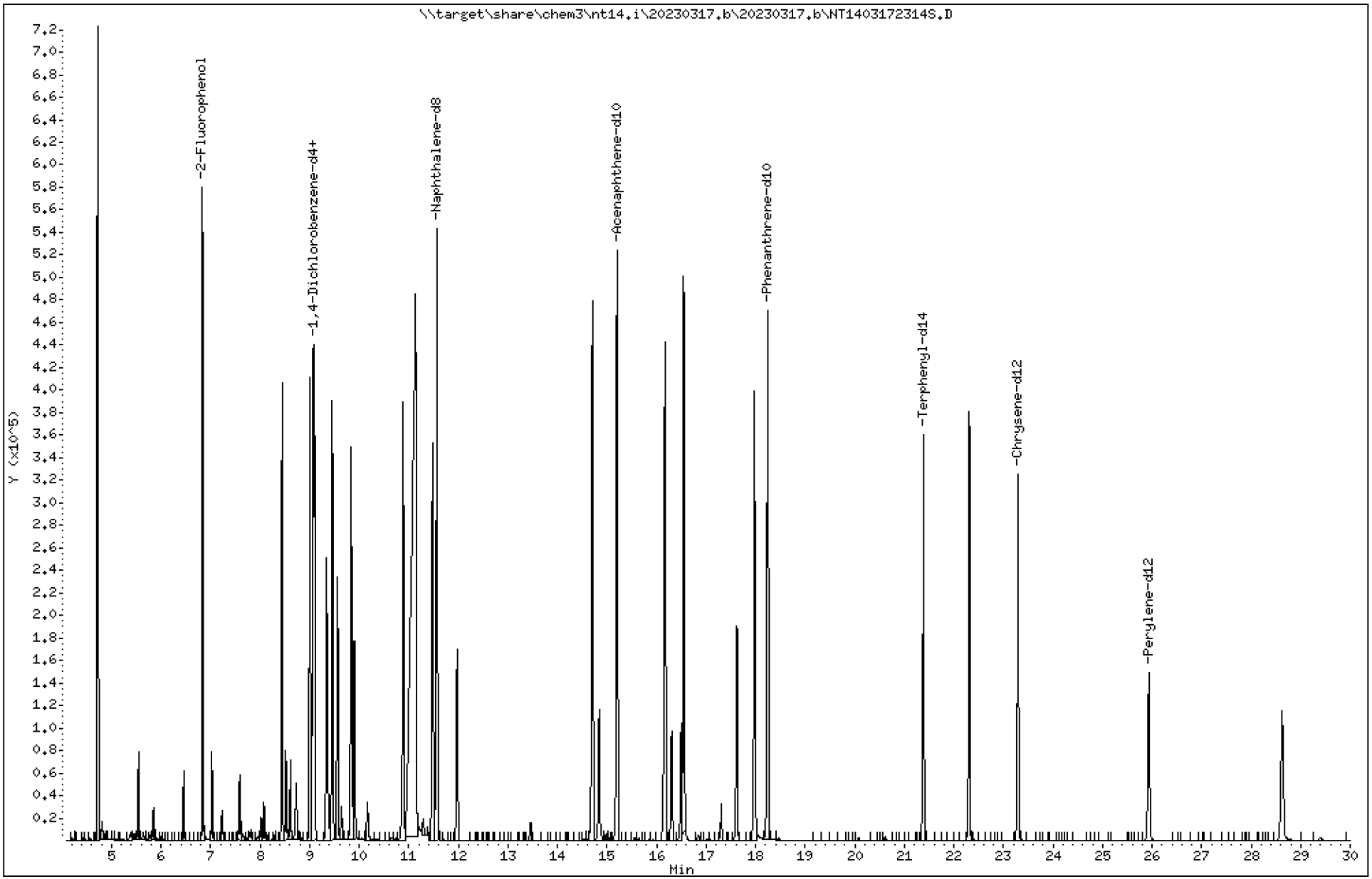
Instrument: nt14.i

Sample Info: BLB0424-BSD2

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172314S.D

Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD2

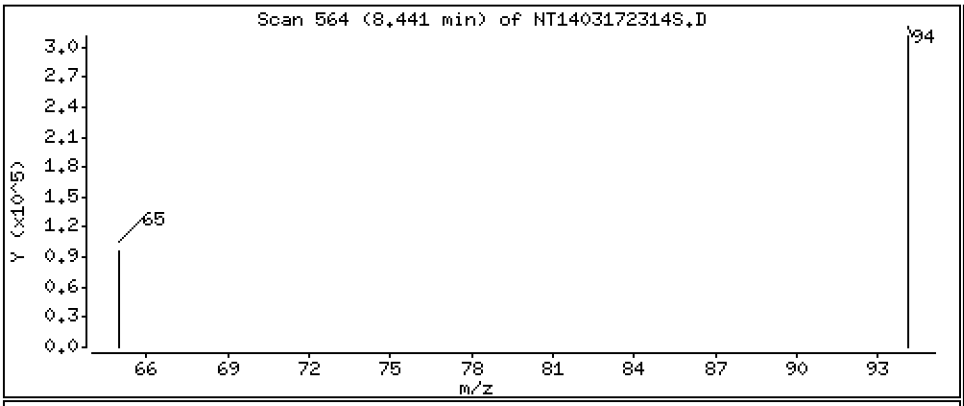
Operator: JGR

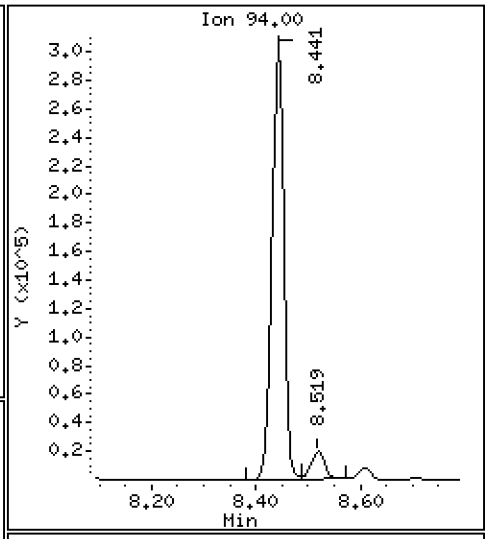
Column phase: ZB-5msi

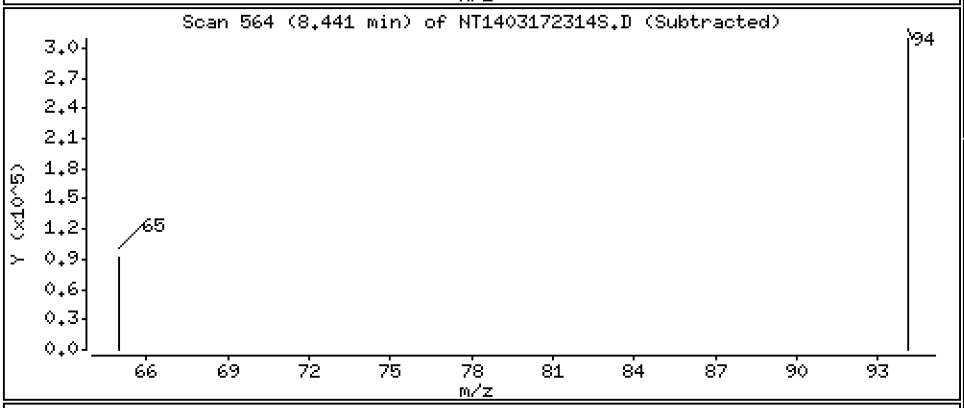
Column diameter: 0.25

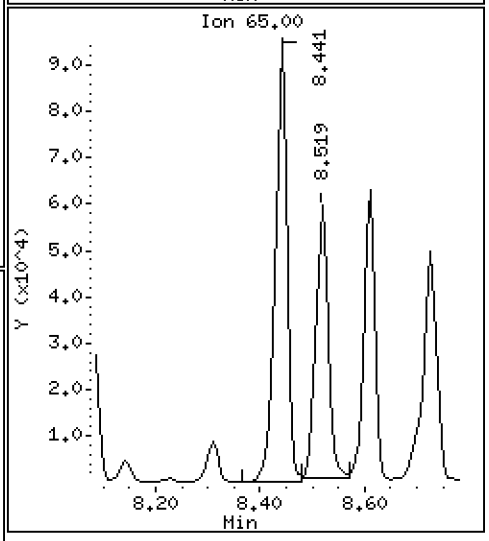
3 Phenol

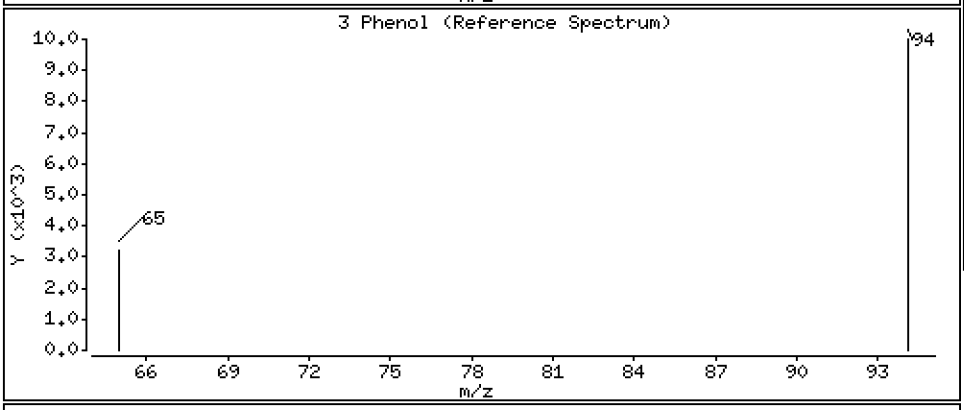
Concentration: 3.882 ug/mL

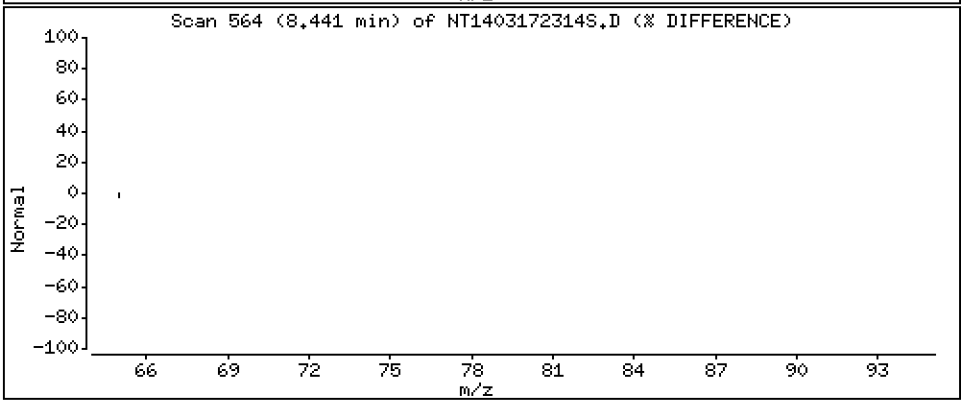












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172314S.D

Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD2

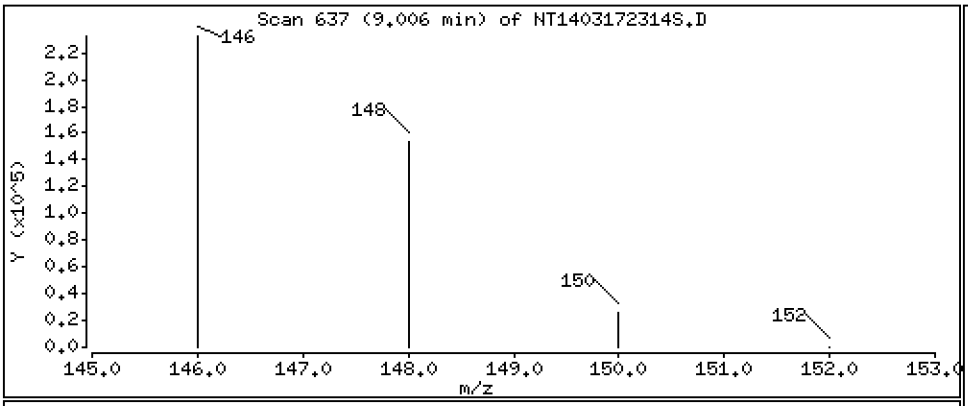
Operator: JGR

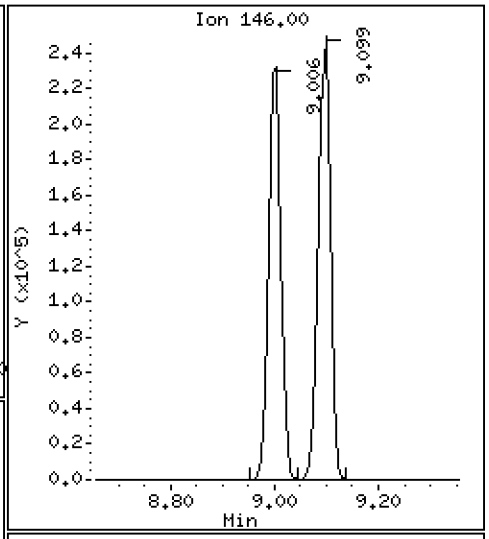
Column phase: ZB-5msi

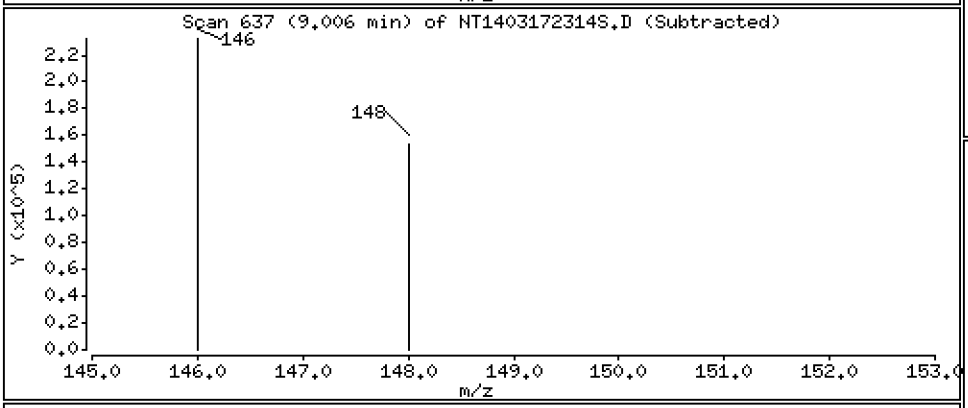
Column diameter: 0.25

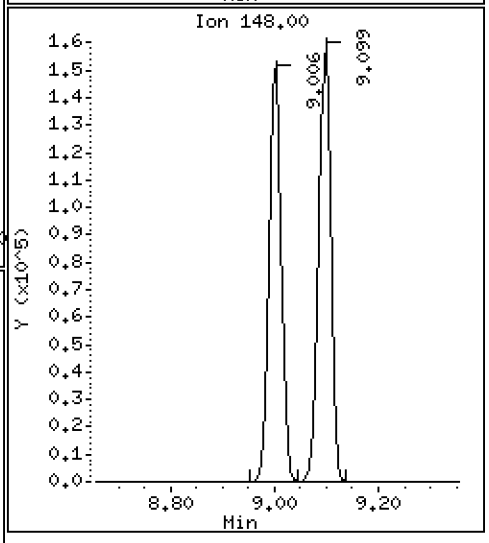
7 1,3-Dichlorobenzene

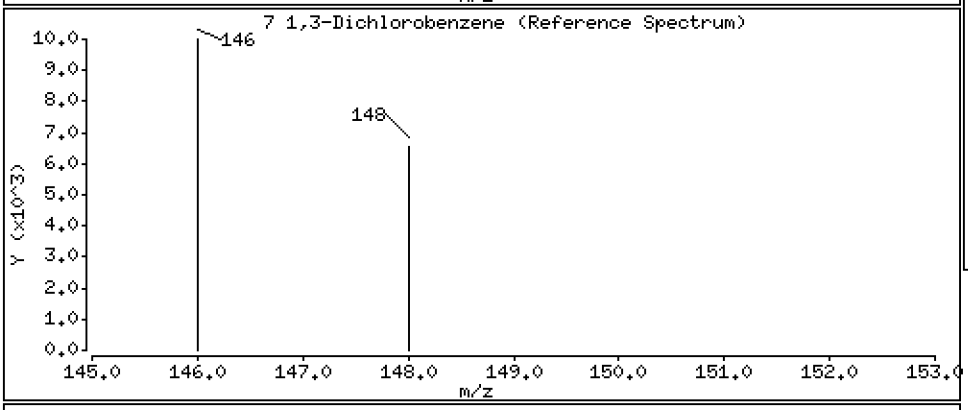
Concentration: 3.847 ug/mL

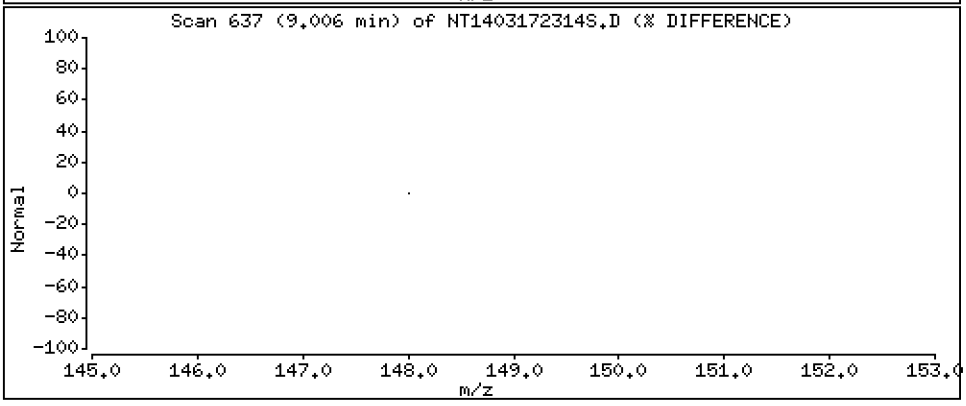












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172314S.D

Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD2

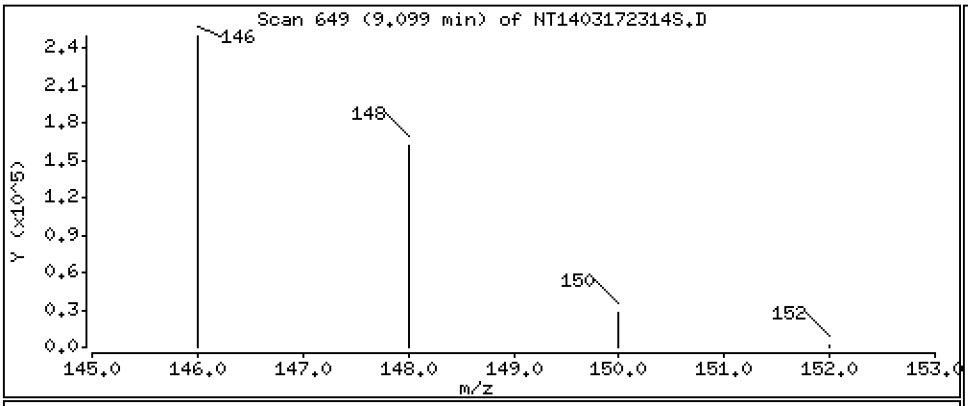
Operator: JGR

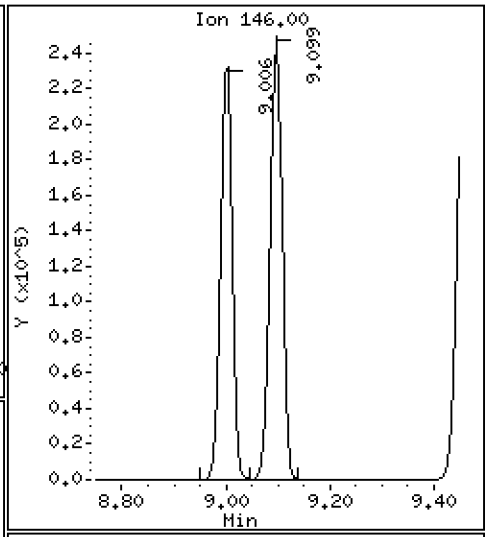
Column phase: ZB-5msi

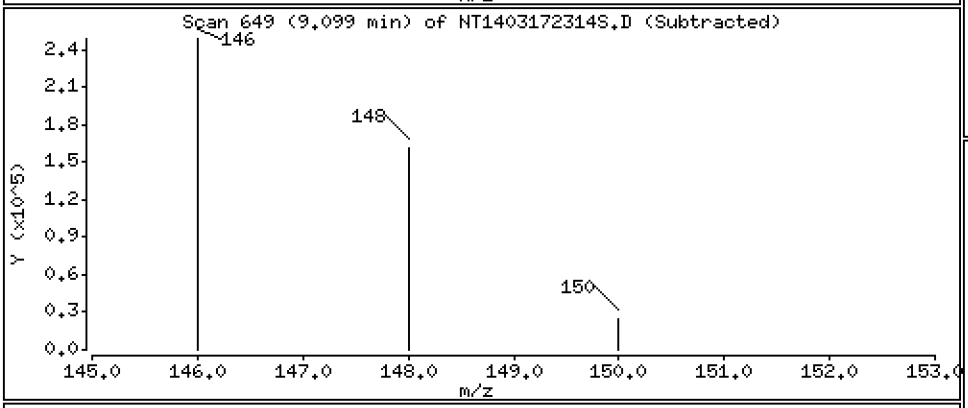
Column diameter: 0.25

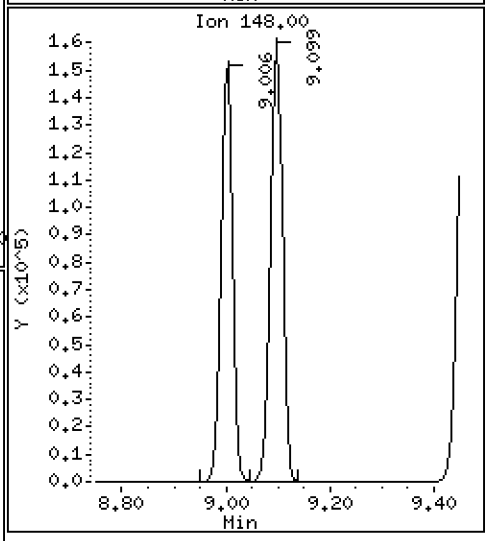
9 1,4-Dichlorobenzene

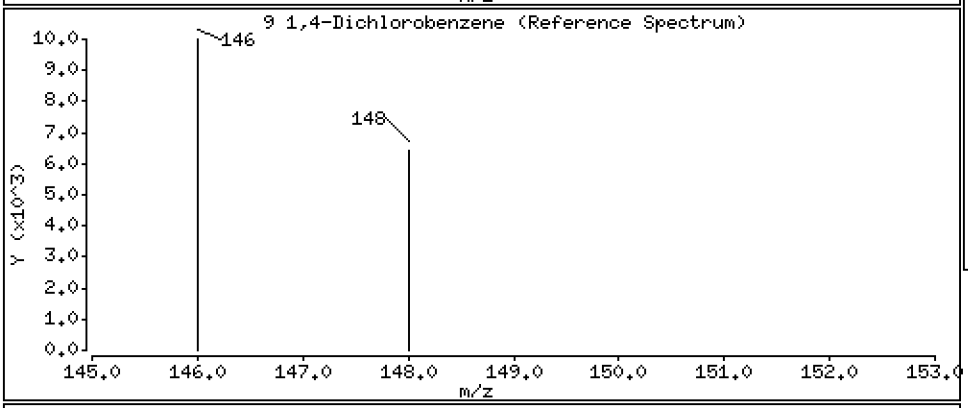
Concentration: 3.923 ug/mL

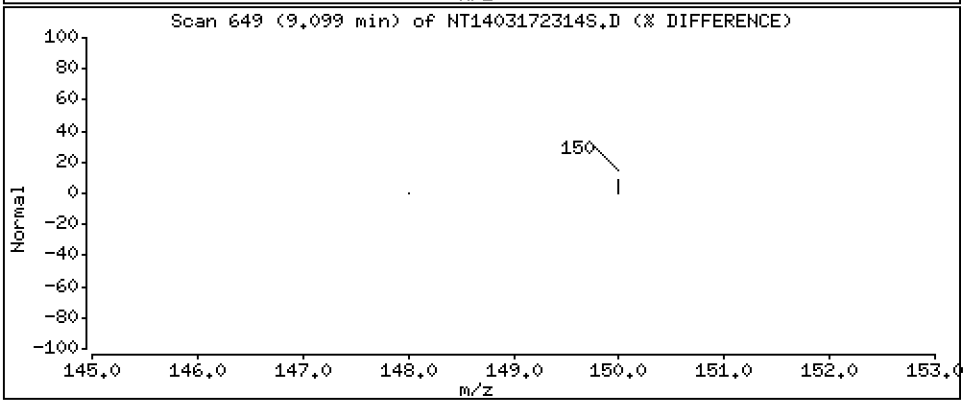












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172314S.D

Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD2

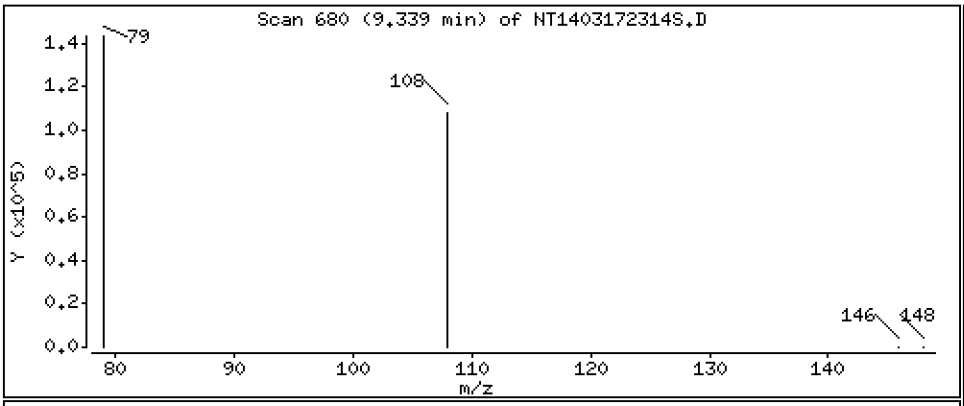
Operator: JGR

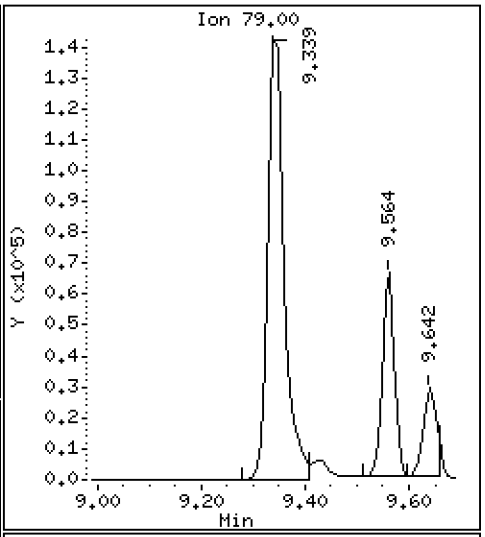
Column phase: ZB-5msi

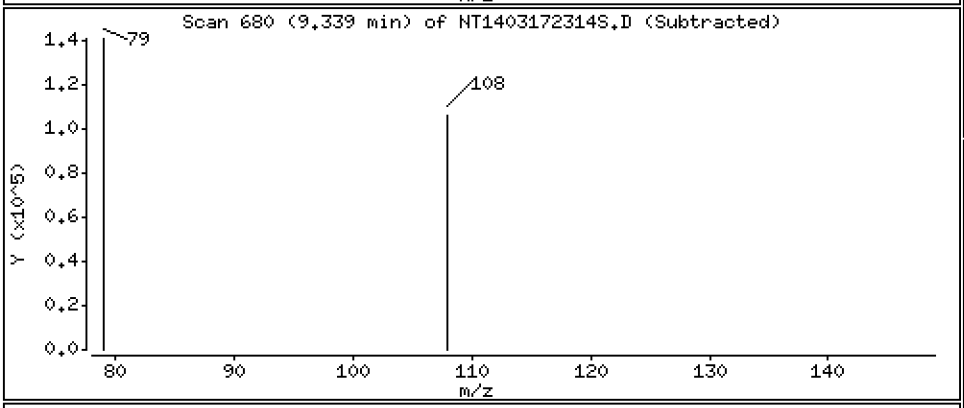
Column diameter: 0.25

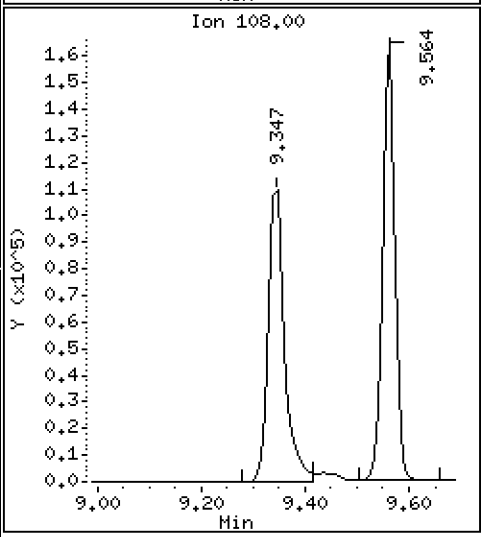
11 Benzyl alcohol

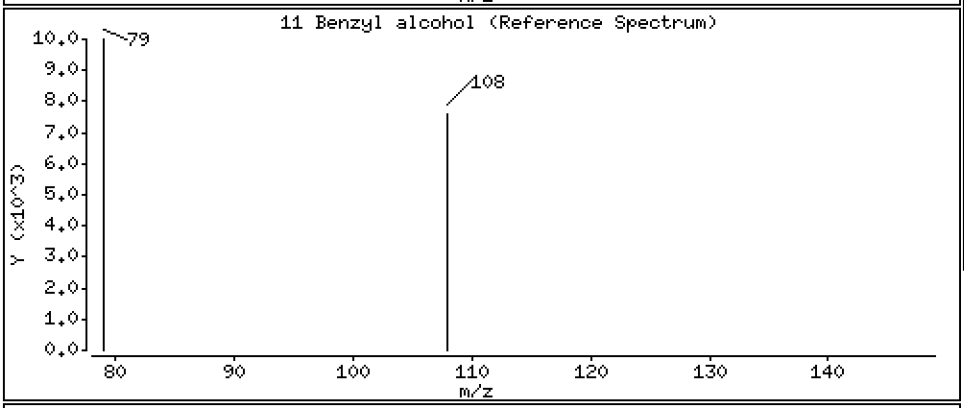
Concentration: 4.375 ug/mL

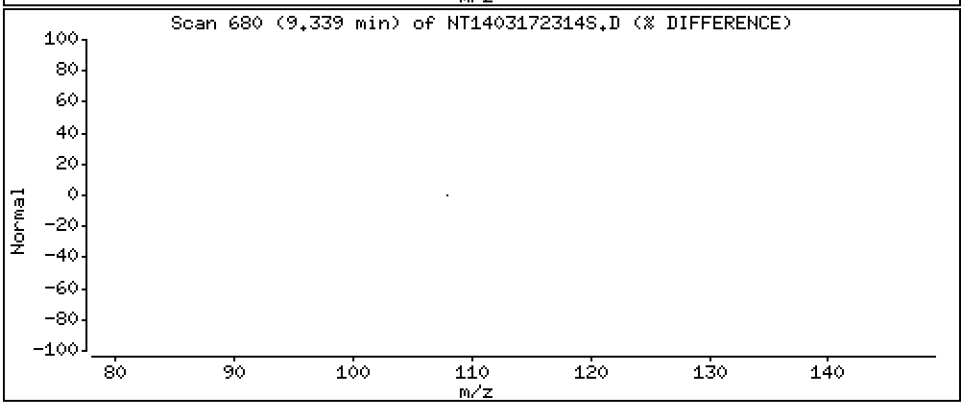












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172314S.D

Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD2

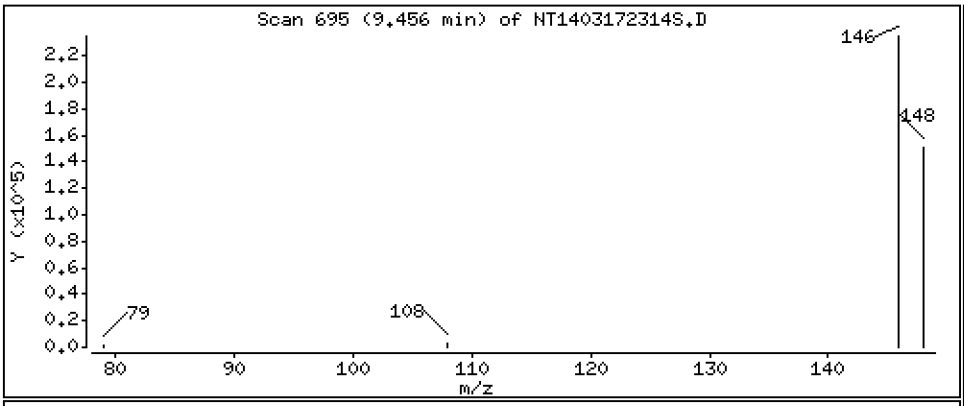
Operator: JGR

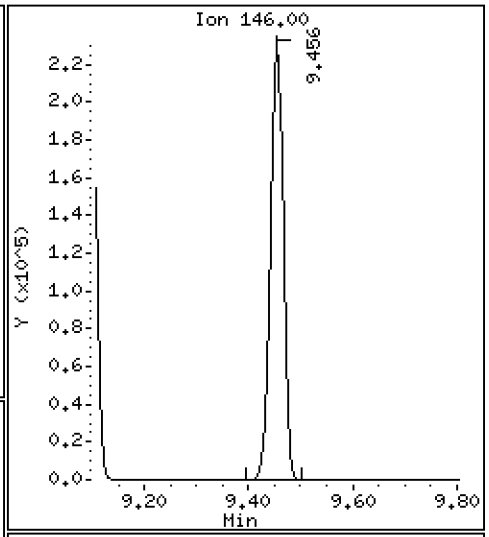
Column phase: ZB-5msi

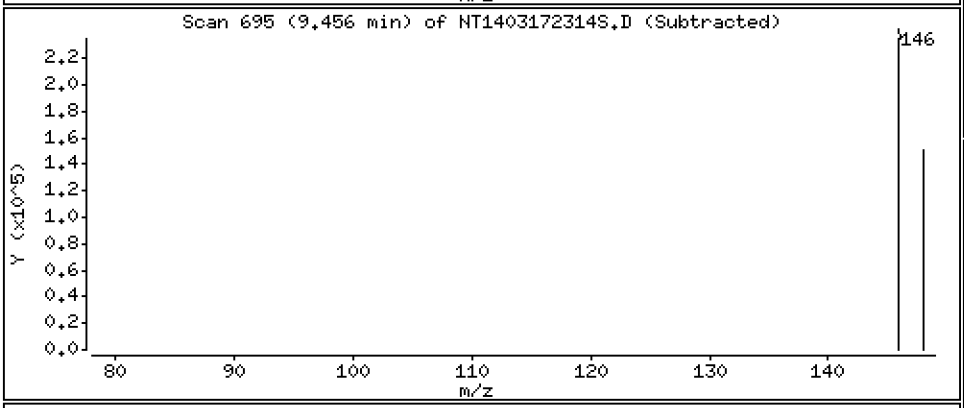
Column diameter: 0.25

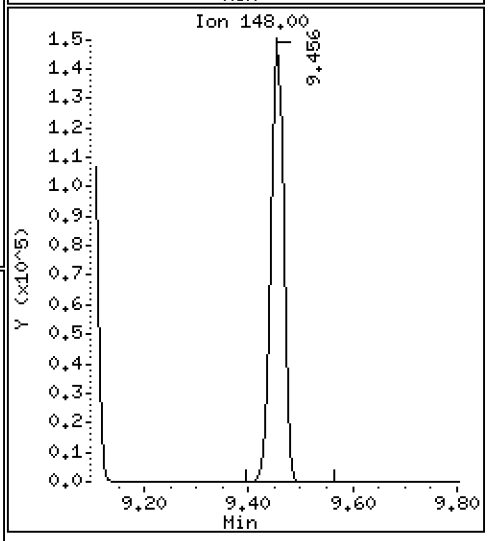
12 1,2-Dichlorobenzene

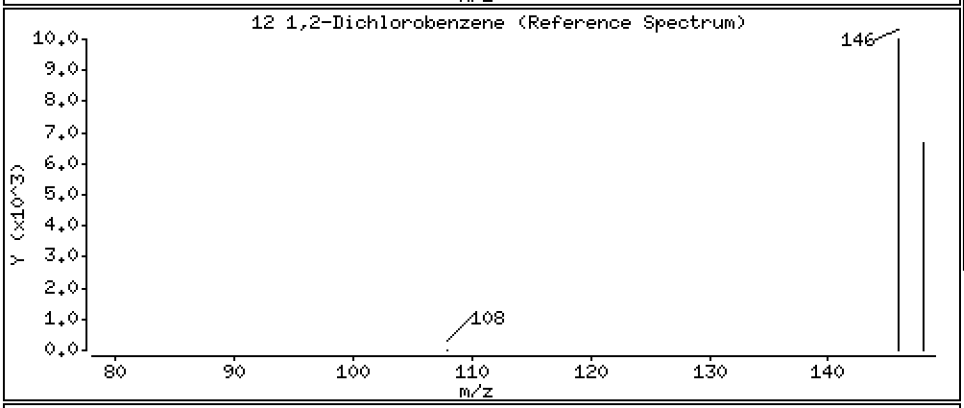
Concentration: 3.976 ug/mL

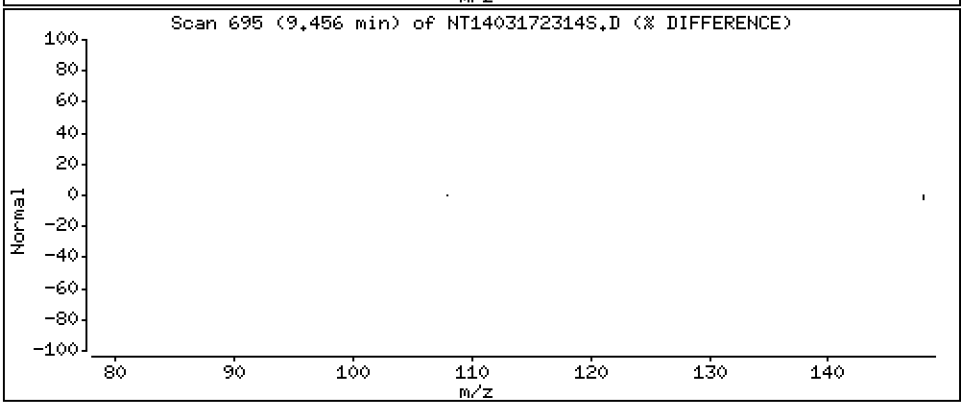












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172314S.D

Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD2

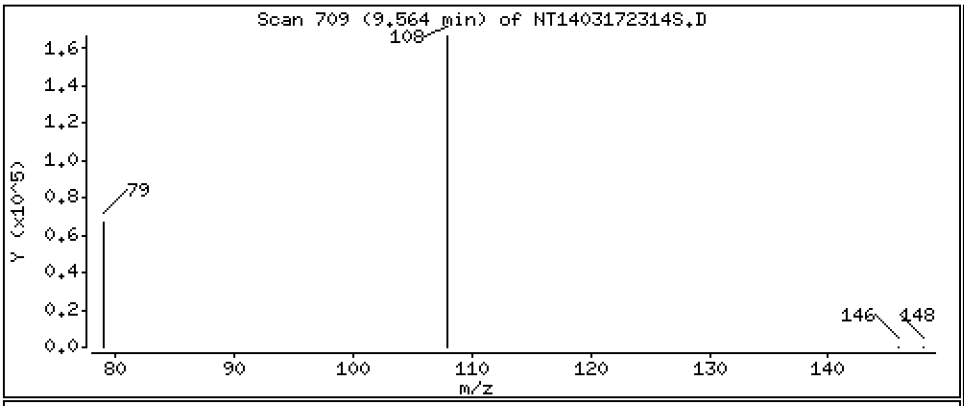
Operator: JGR

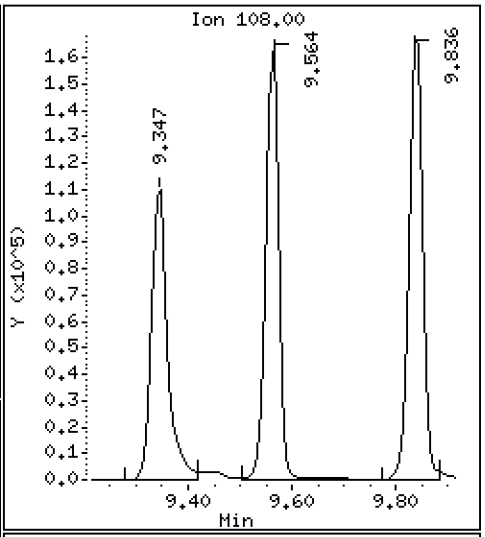
Column phase: ZB-5msi

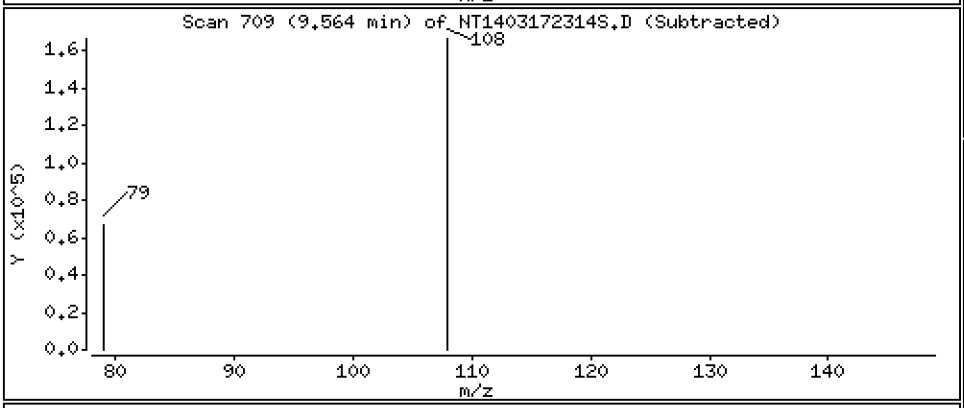
Column diameter: 0.25

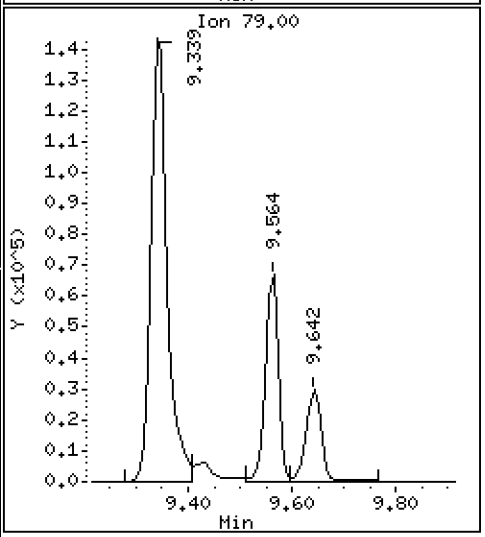
13 2-Methylphenol

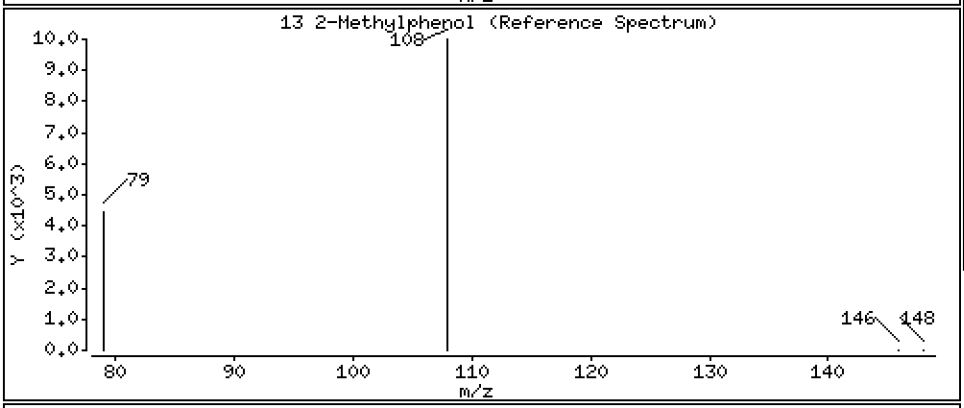
Concentration: 3.319 ug/mL

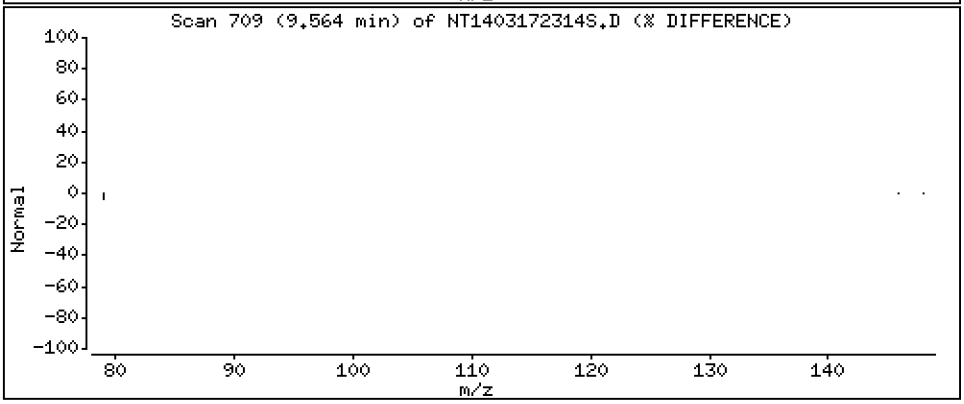












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172314S.D

Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD2

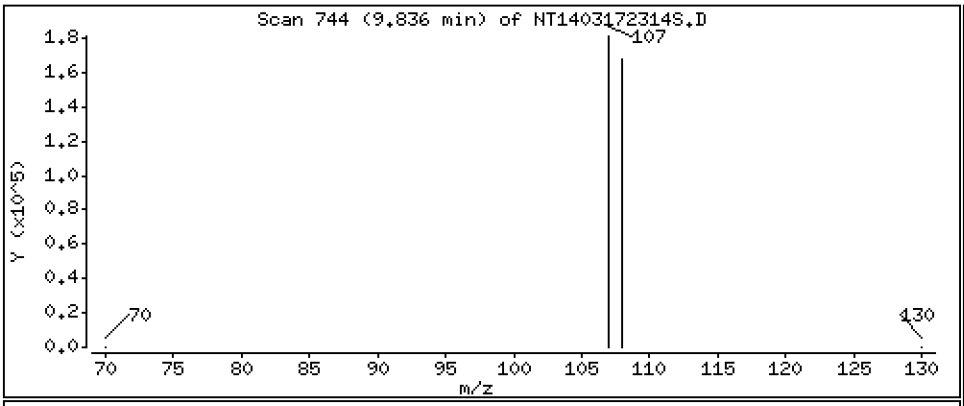
Operator: JGR

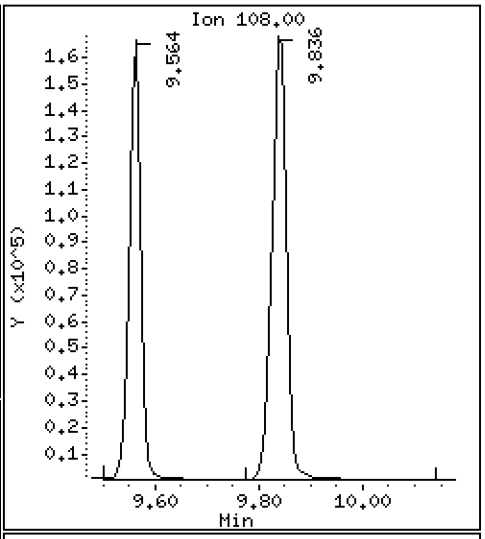
Column phase: ZB-5msi

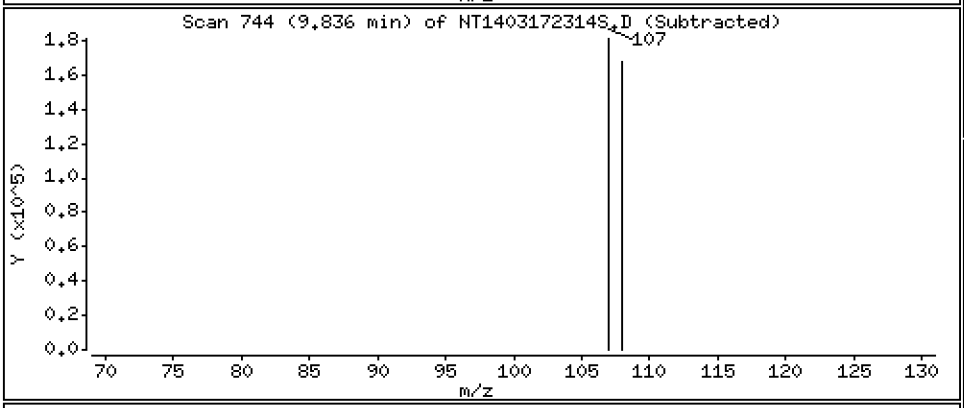
Column diameter: 0.25

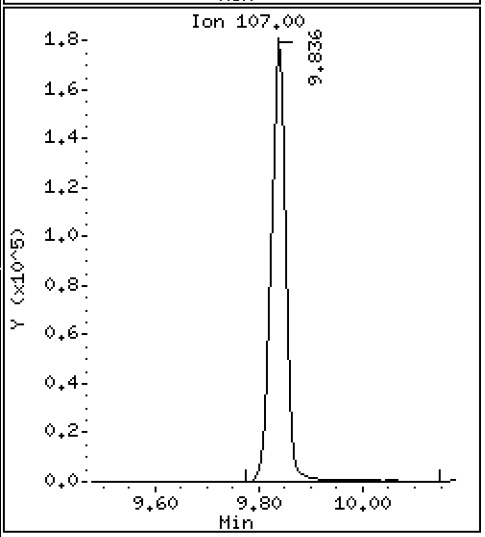
15 4-Methylphenol

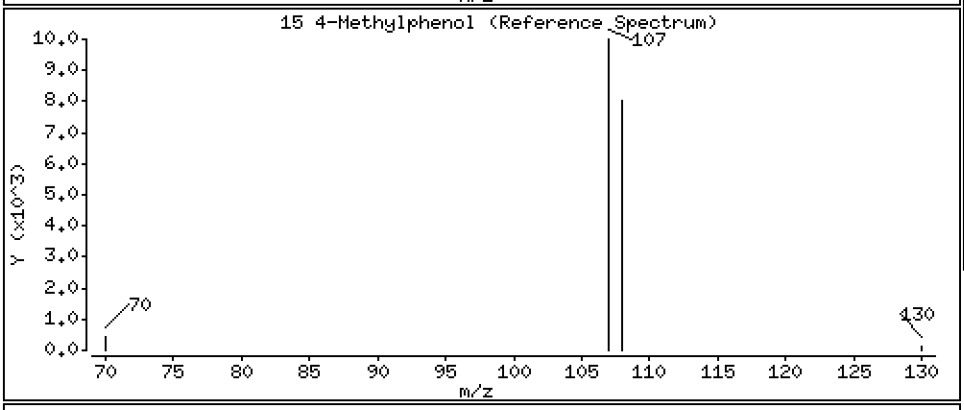
Concentration: 3.857 ug/mL

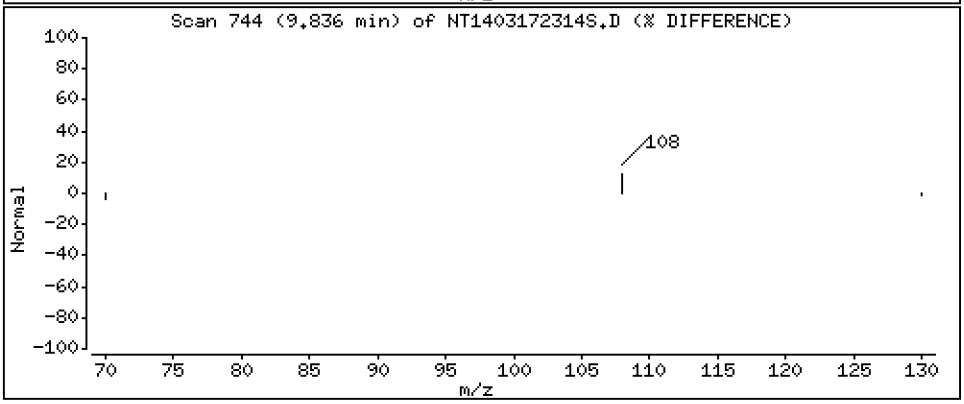












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172314S.D

Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD2

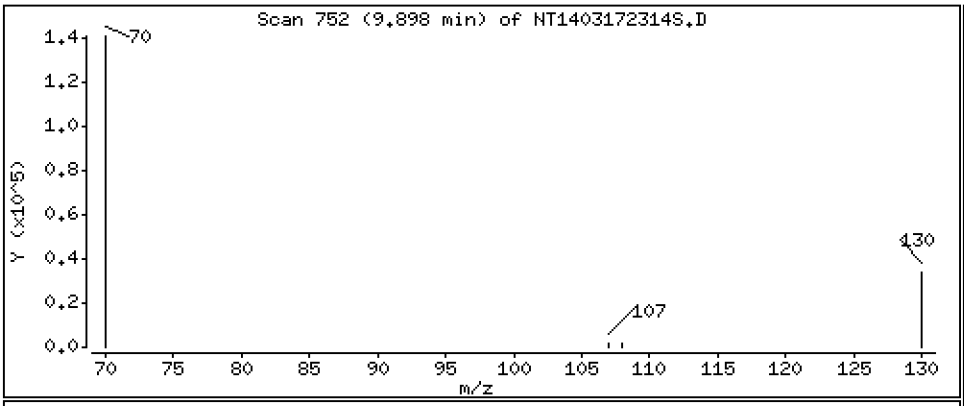
Operator: JGR

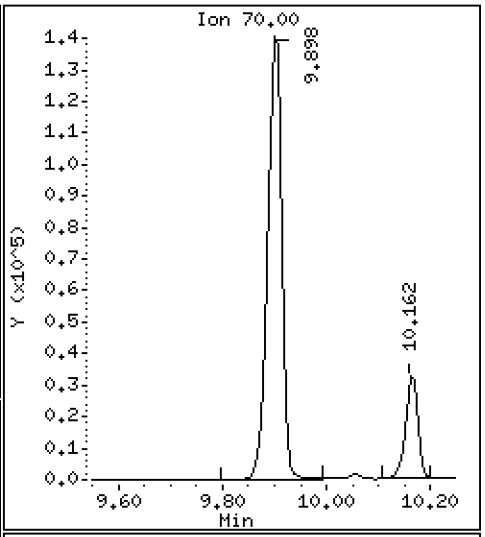
Column phase: ZB-5msi

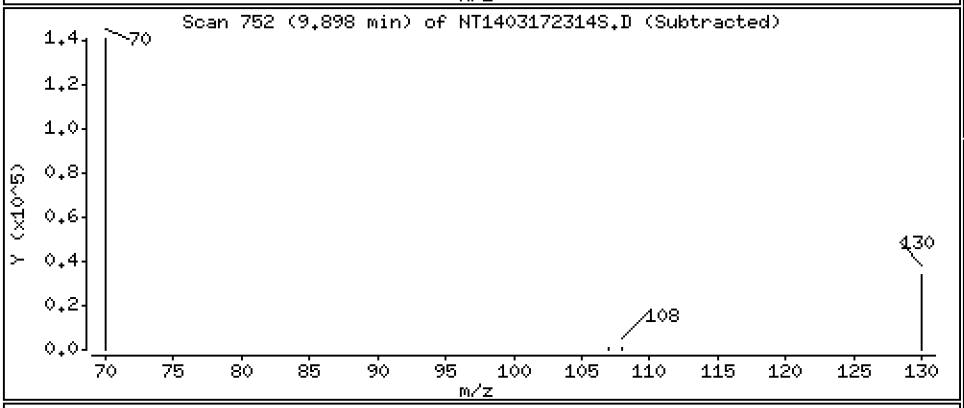
Column diameter: 0.25

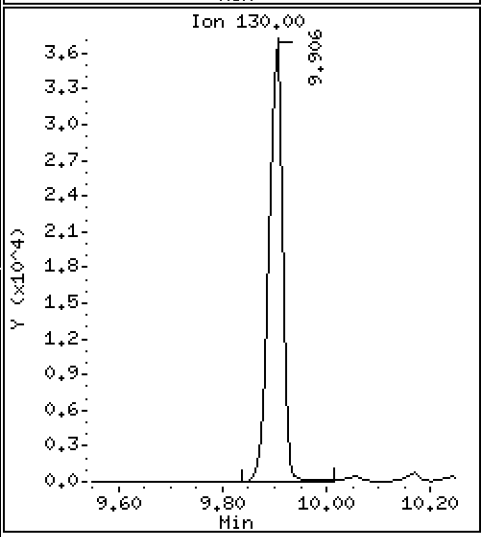
16 N-Nitroso-di-n-propylamine

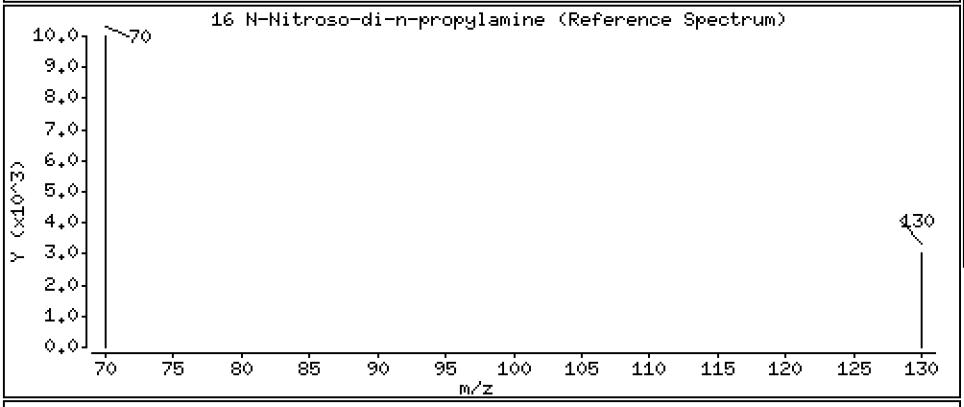
Concentration: 4.228 ug/mL

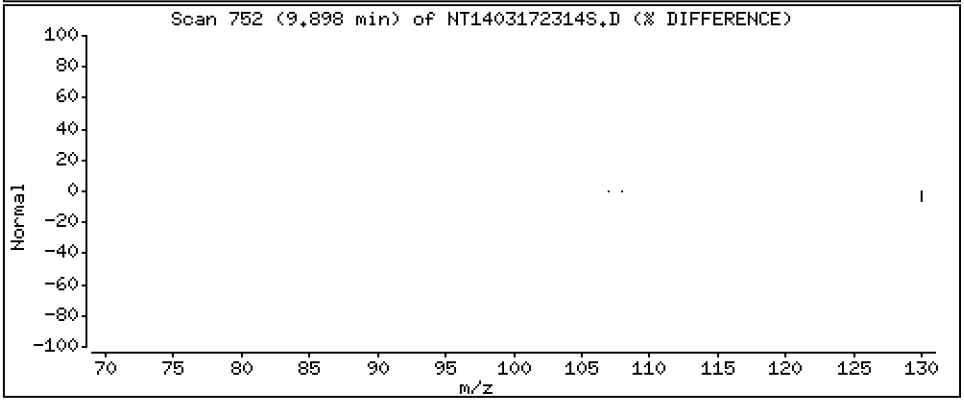












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT14031723145.D

Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD2

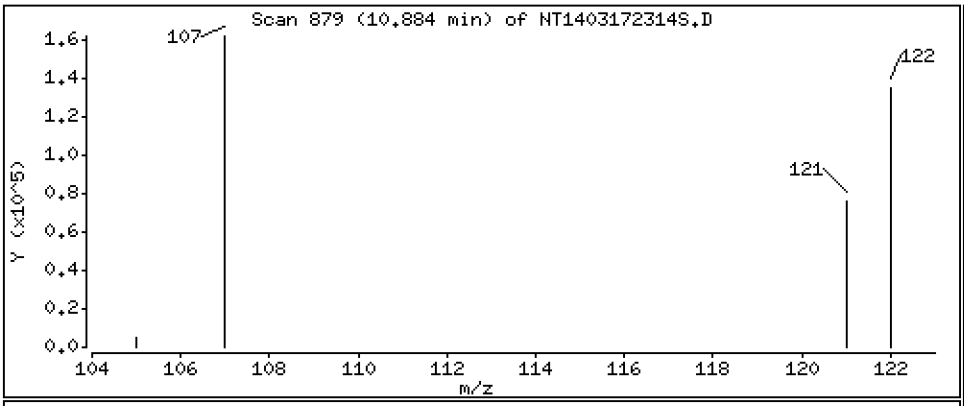
Operator: JGR

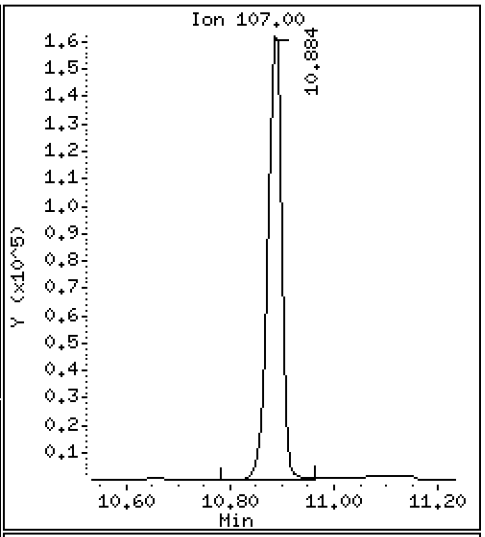
Column phase: ZB-5msi

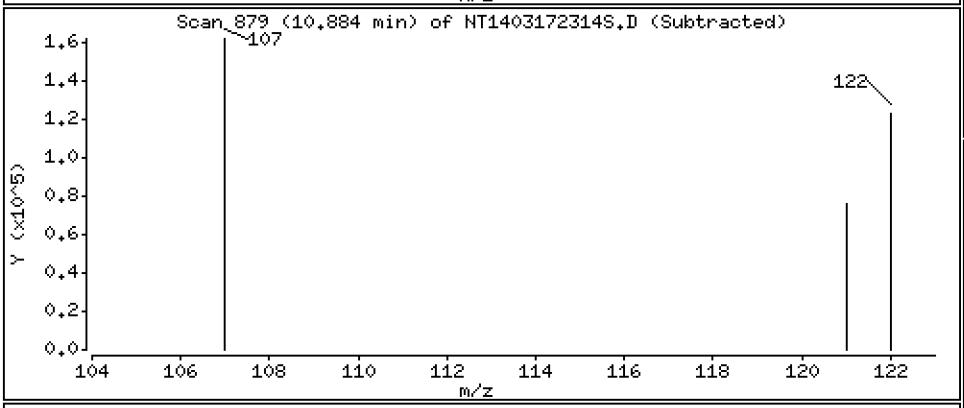
Column diameter: 0.25

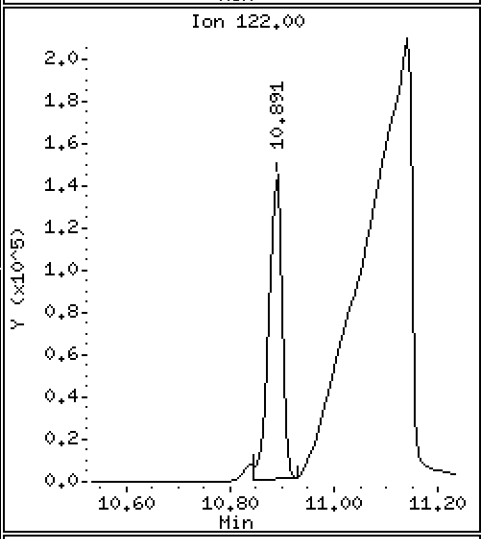
22 2,4-Dimethylphenol

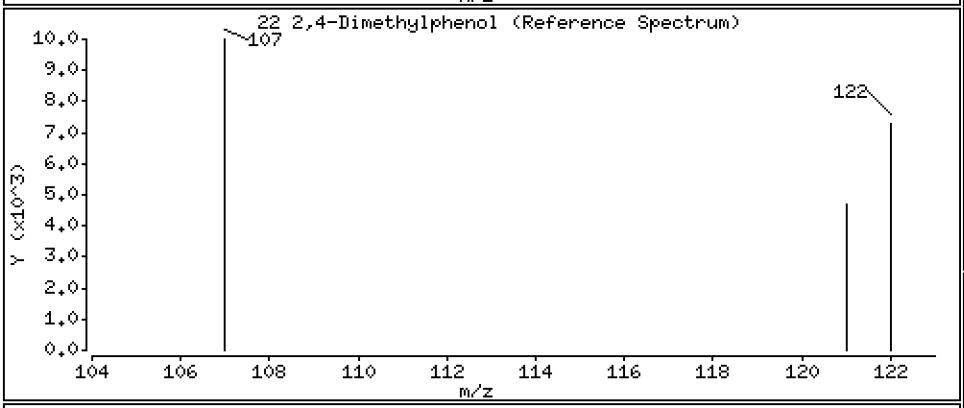
Concentration: 3.546 ug/mL

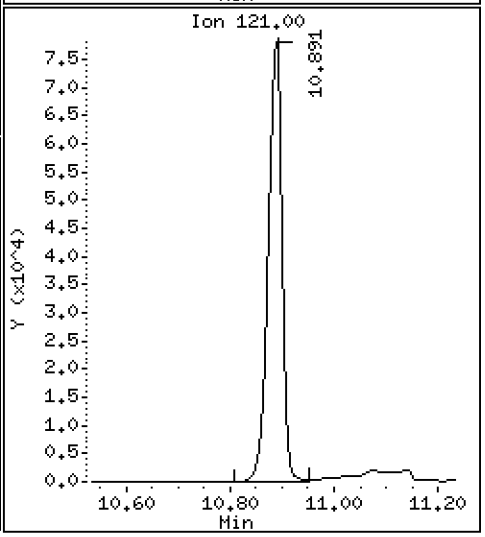


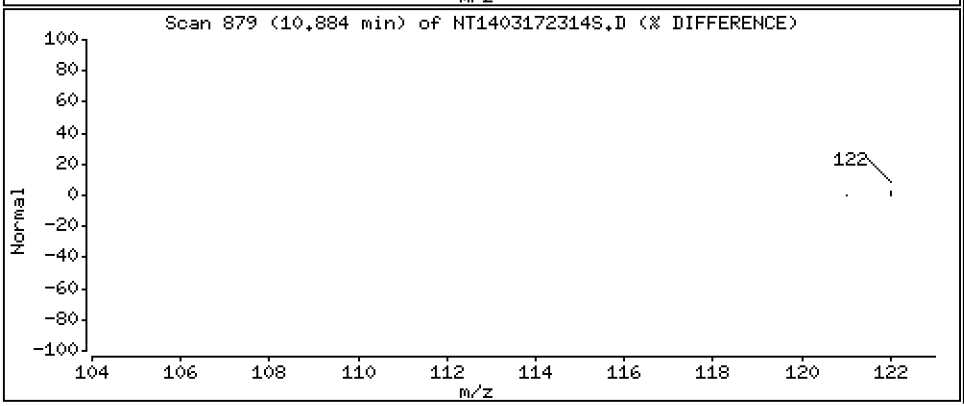












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT14031723145.D

Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD2

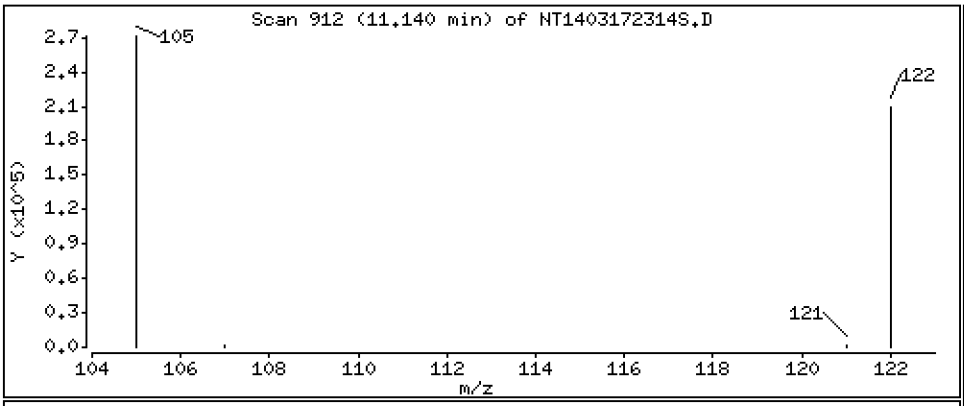
Operator: JGR

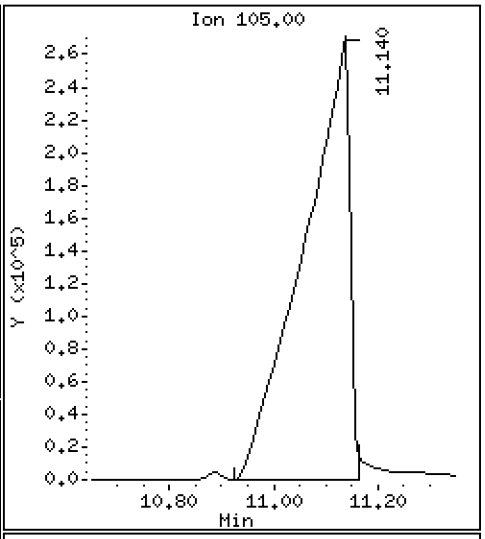
Column phase: ZB-5msi

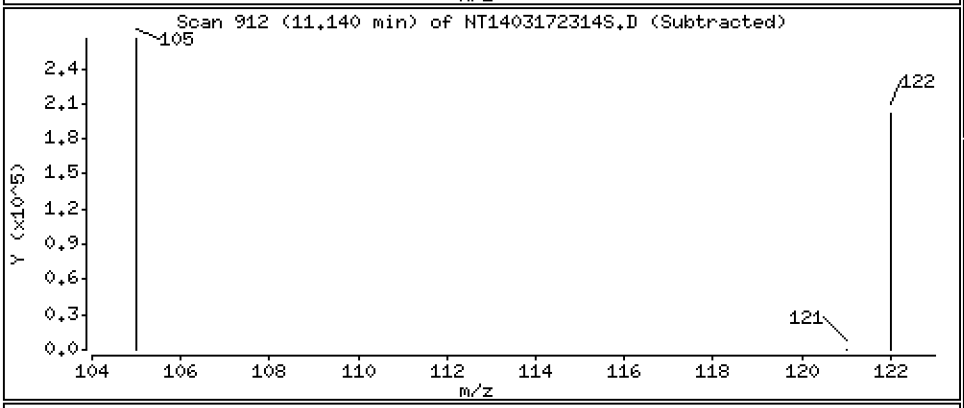
Column diameter: 0.25

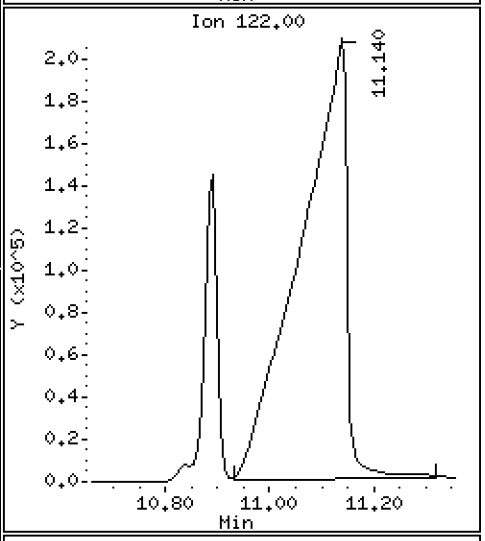
24 Benzoic acid

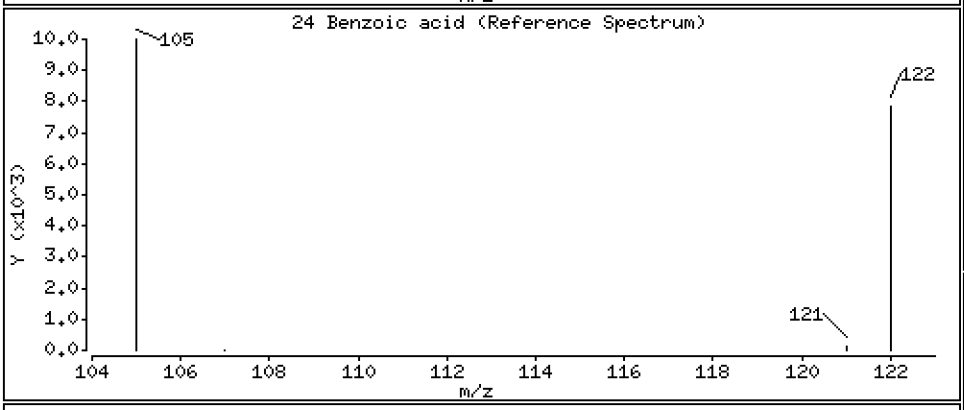
Concentration: 24.15 ug/mL

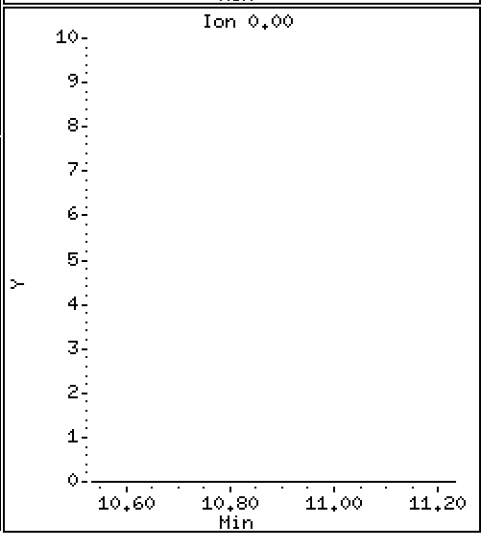


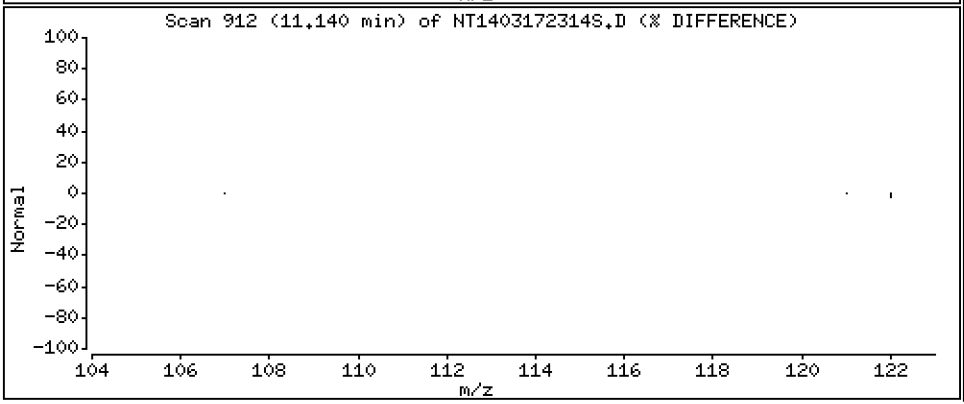












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT14031723145.D

Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD2

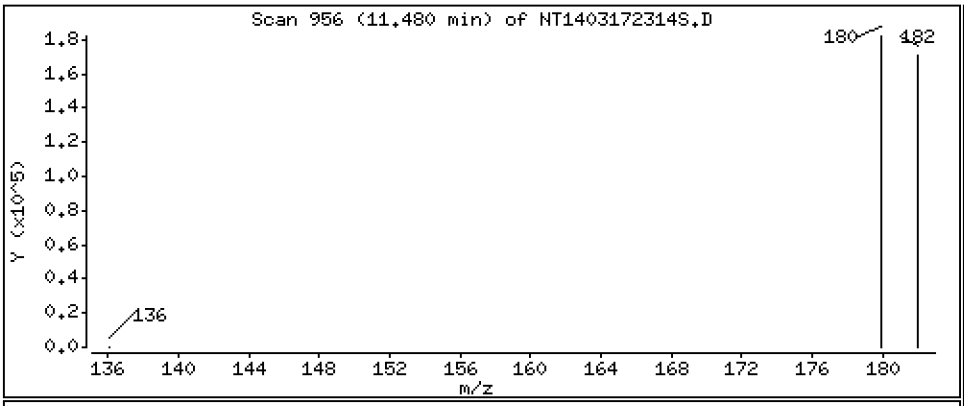
Operator: JGR

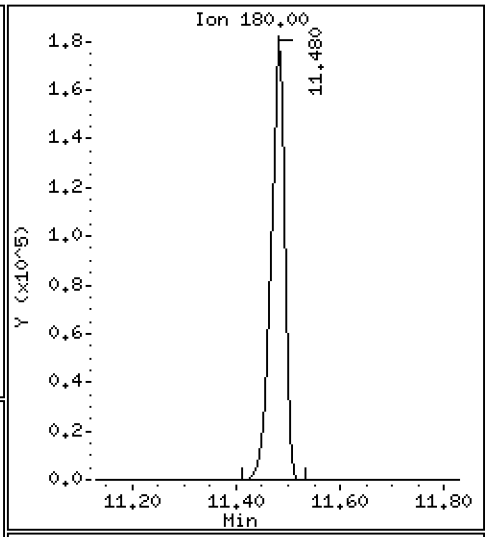
Column phase: ZB-5msi

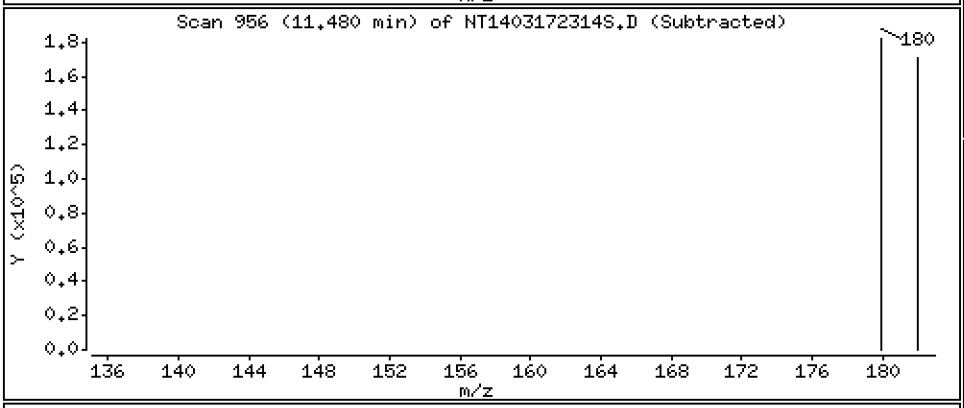
Column diameter: 0.25

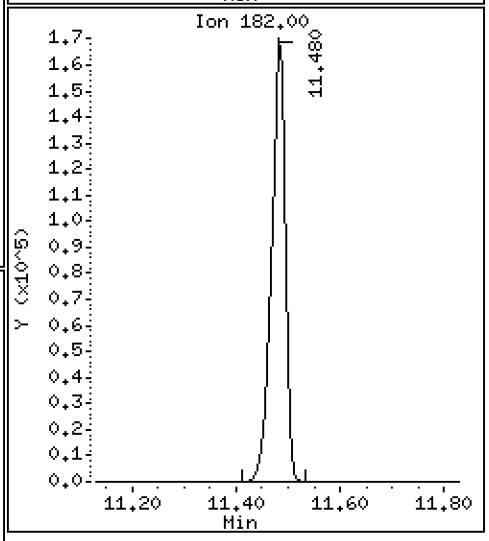
26 1,2,4-Trichlorobenzene

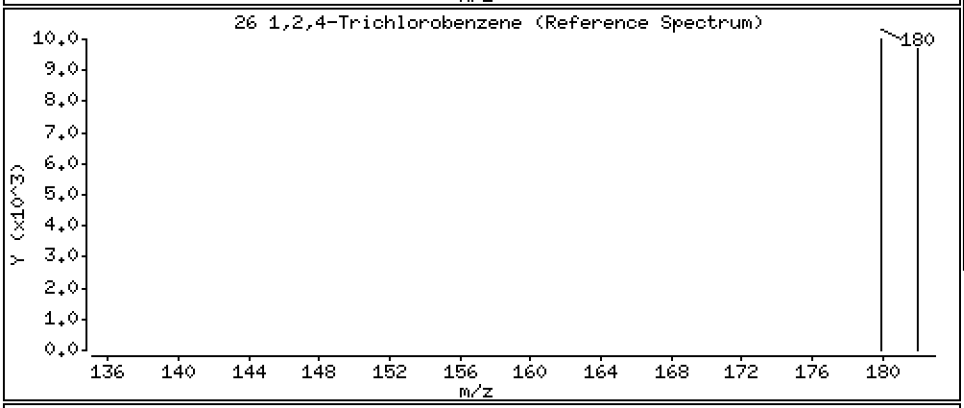
Concentration: 4.034 ug/mL

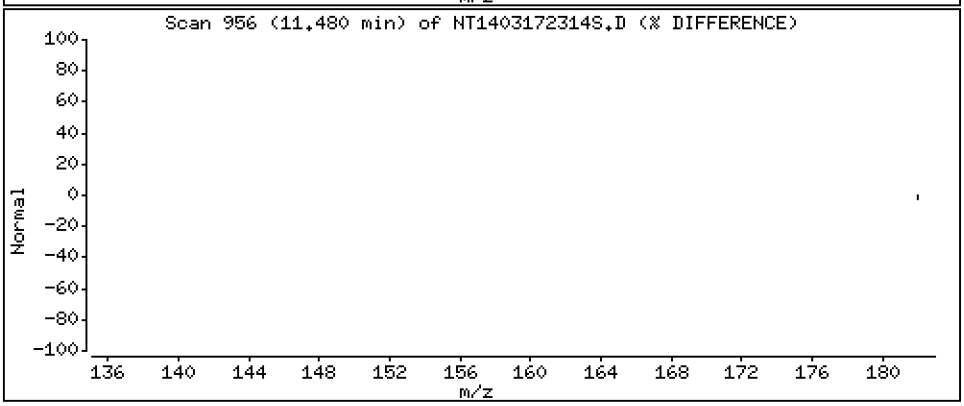












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172314S.D

Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD2

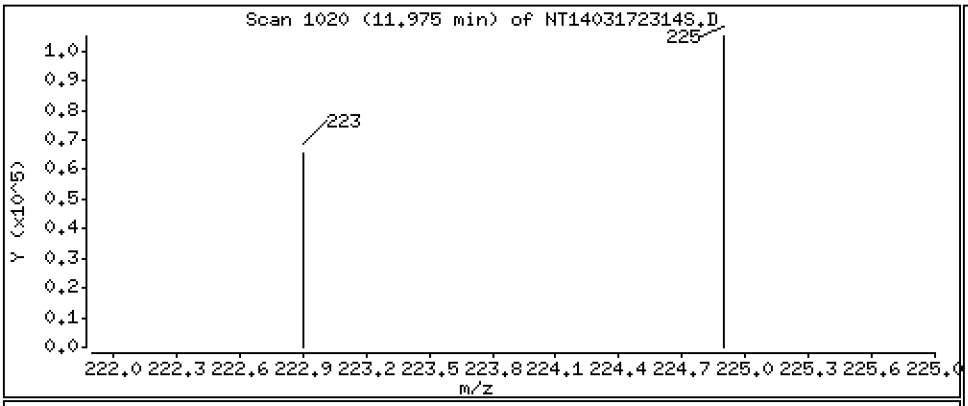
Operator: JGR

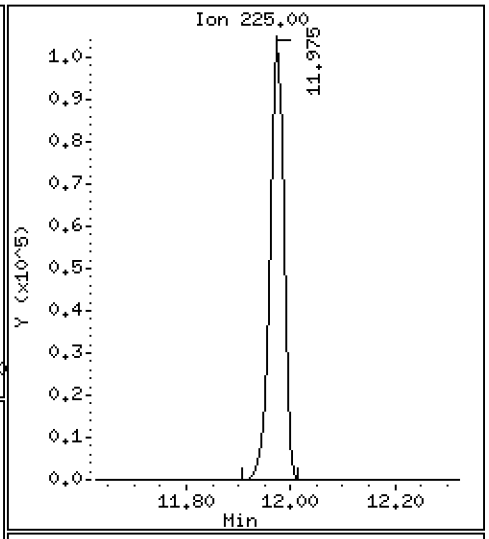
Column phase: ZB-5msi

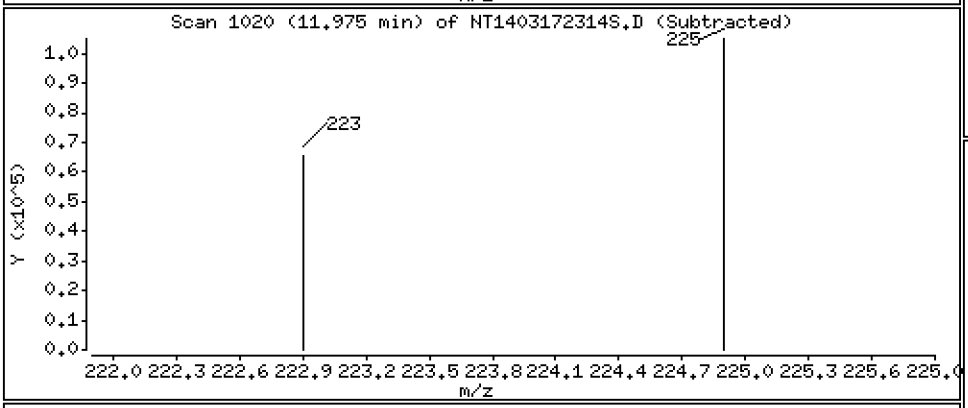
Column diameter: 0.25

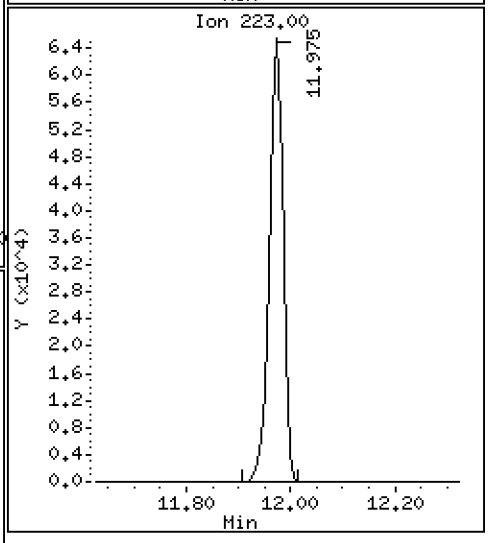
30 Hexachlorobutadiene

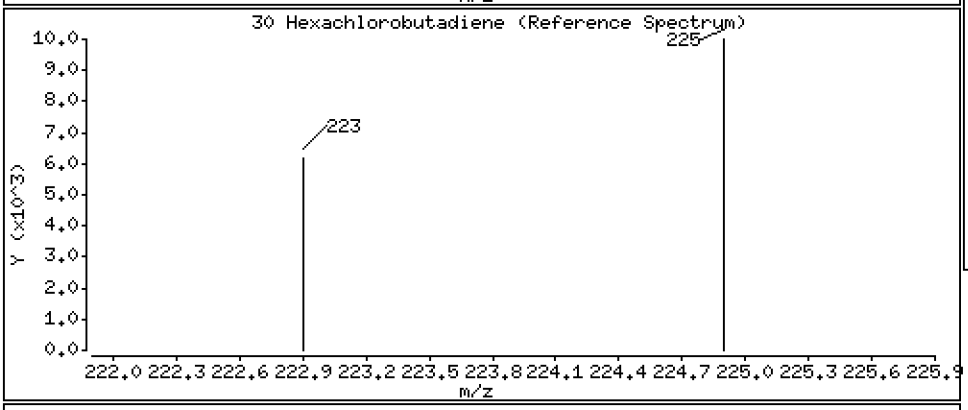
Concentration: 4.491 ug/mL

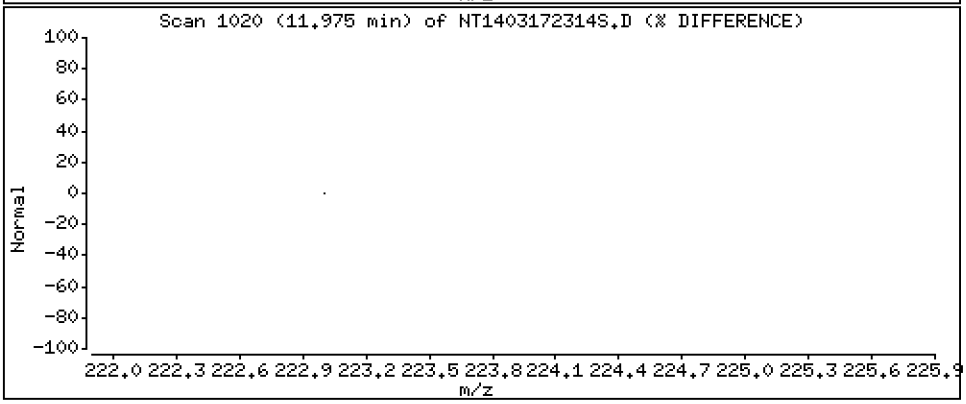












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172314S.D

Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD2

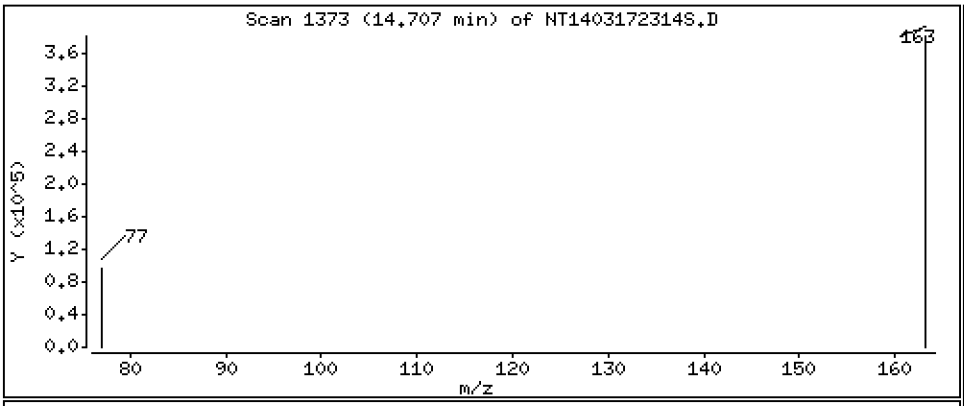
Operator: JGR

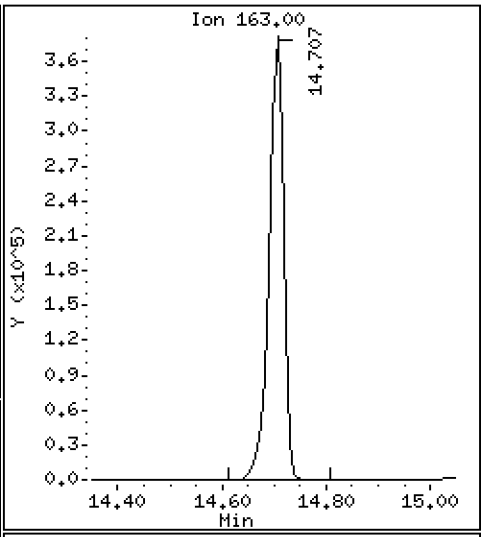
Column phase: ZB-5msi

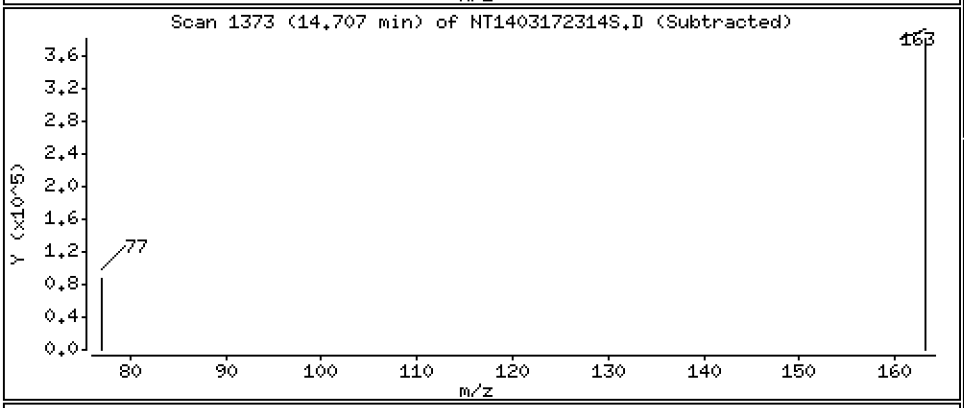
Column diameter: 0.25

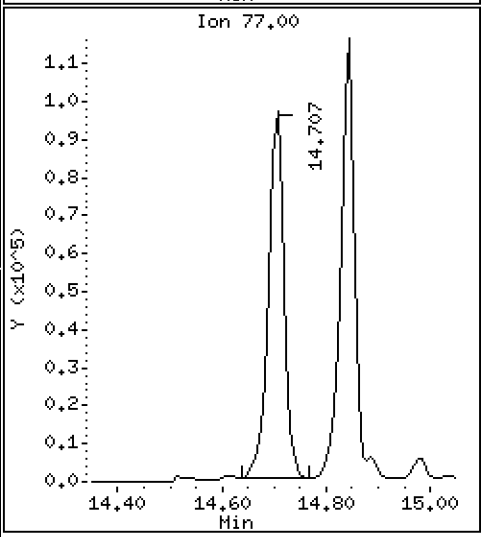
39 Dimethylphthalate

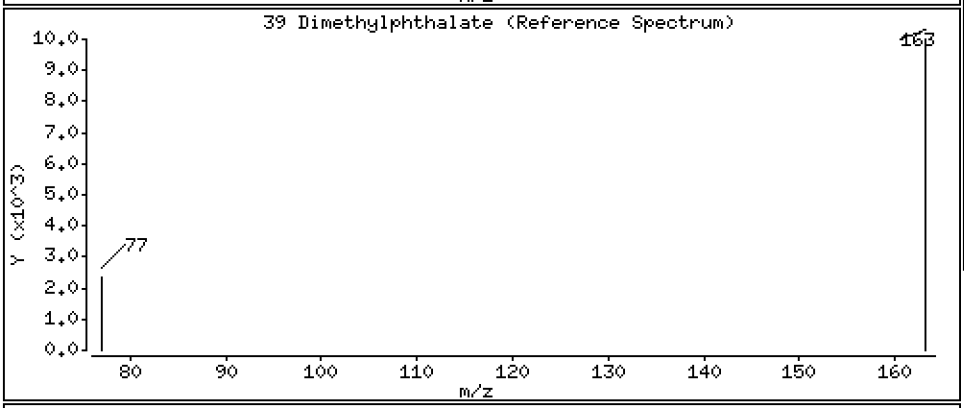
Concentration: 4.740 ug/mL

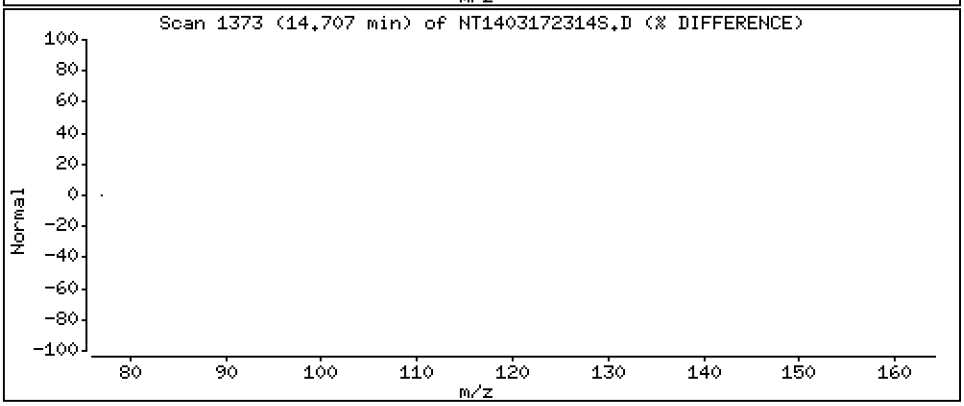












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172314S.D

Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD2

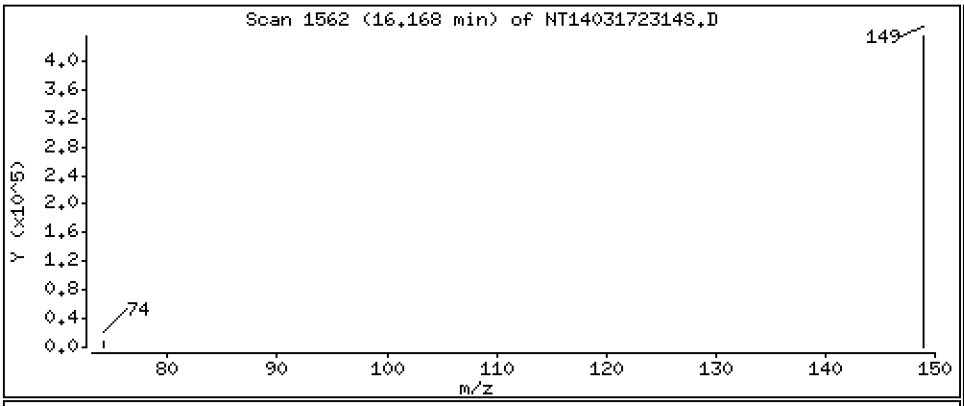
Operator: JGR

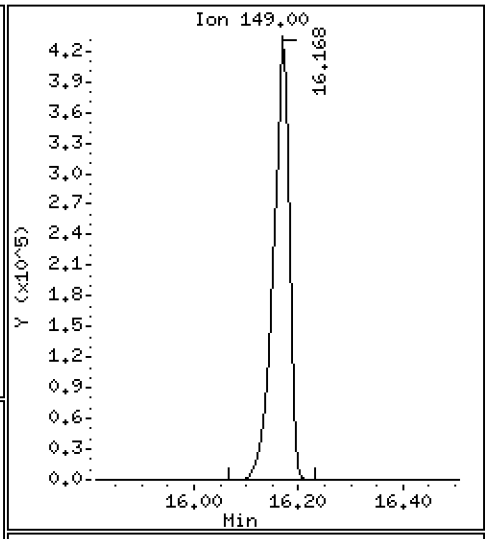
Column phase: ZB-5msi

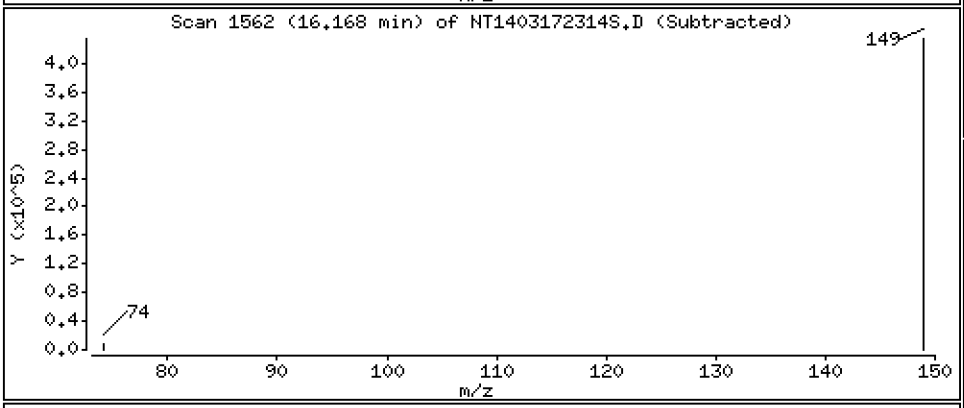
Column diameter: 0.25

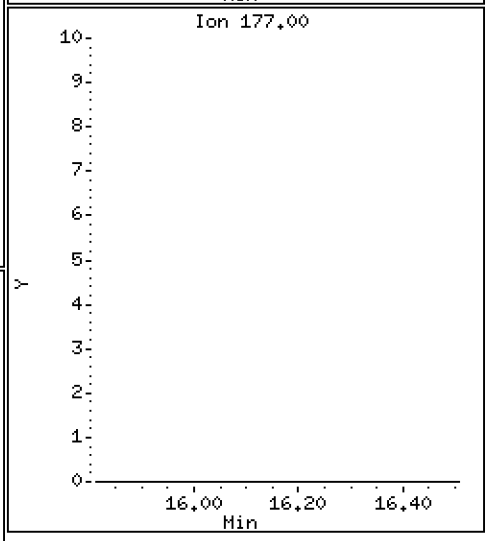
50 Diethylphthalate

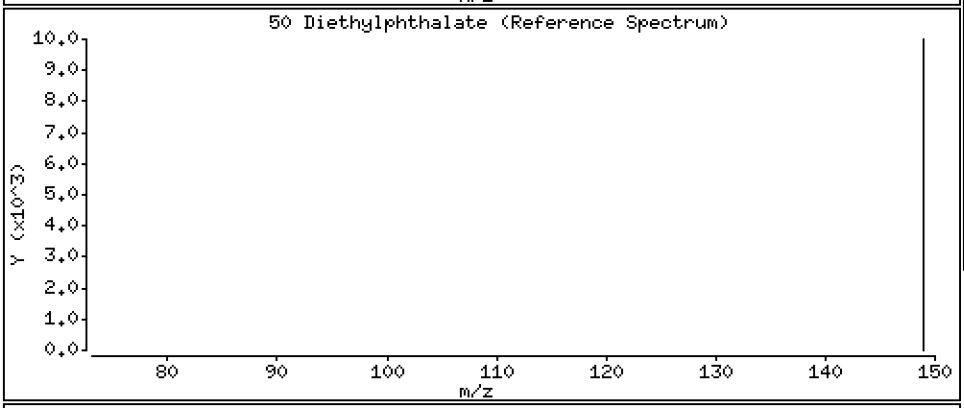
Concentration: 5.670 ug/mL

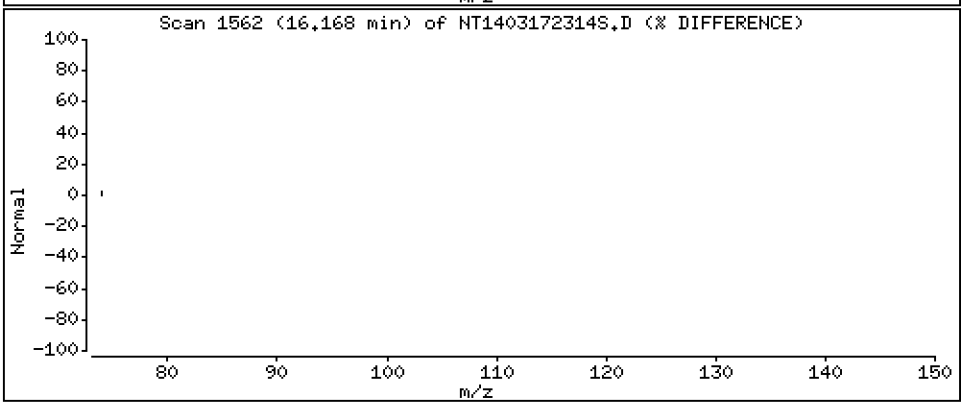












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172314S.D

Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD2

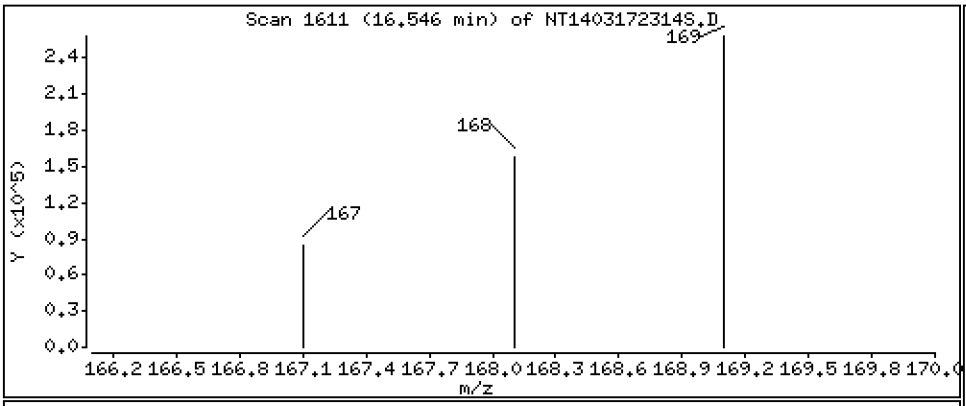
Operator: JGR

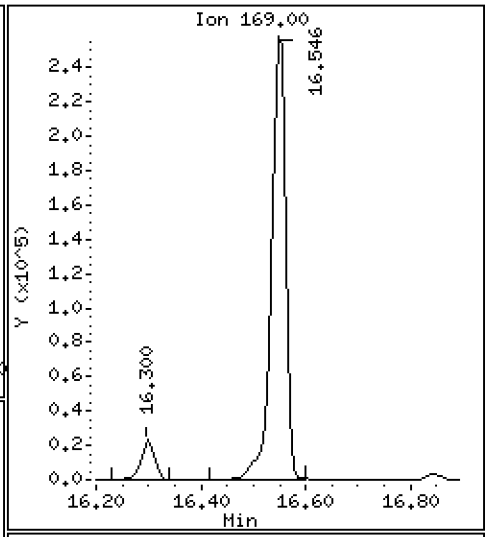
Column phase: ZB-5msi

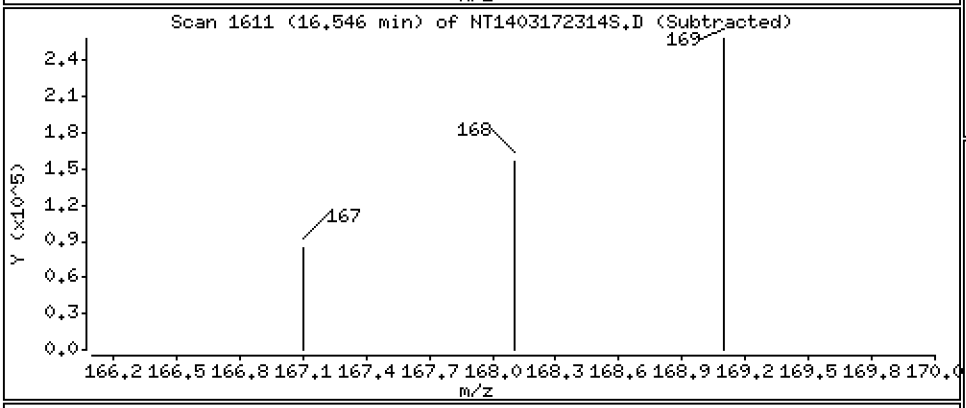
Column diameter: 0.25

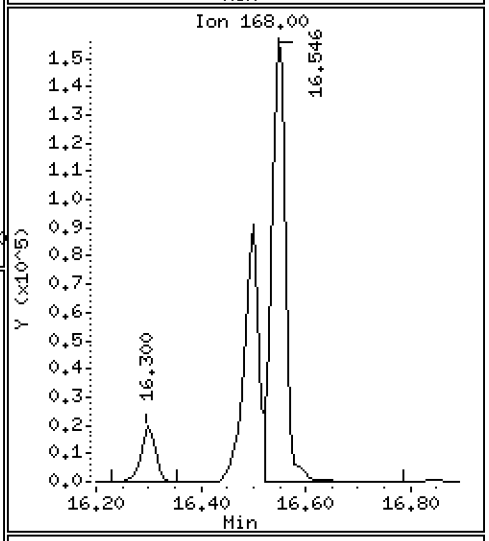
54 N-Nitrosodiphenylamine

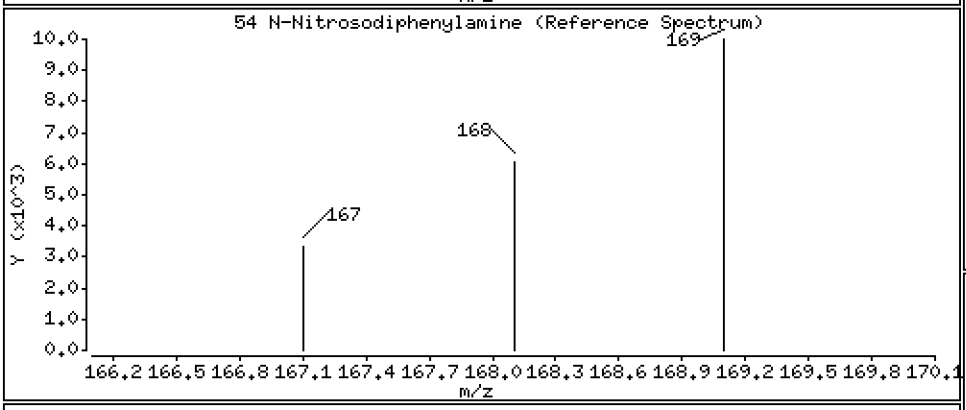
Concentration: 4.180 ug/mL

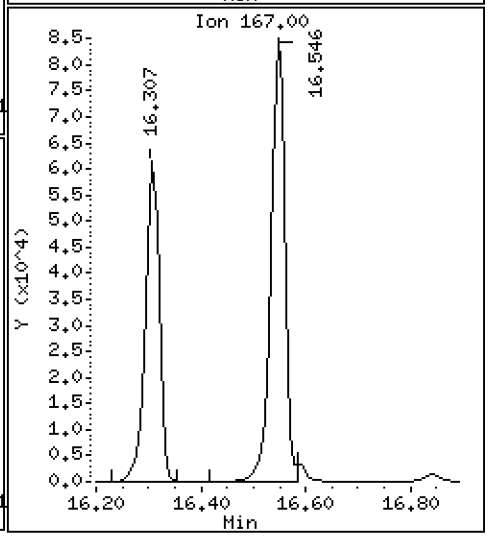


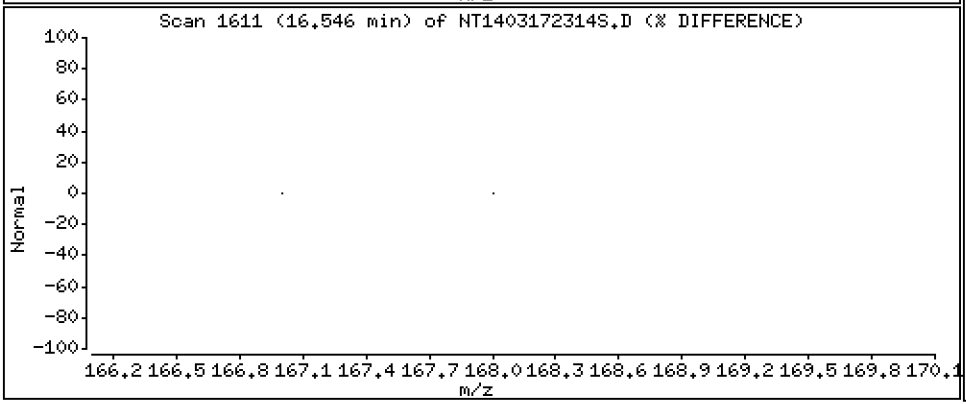












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Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD2

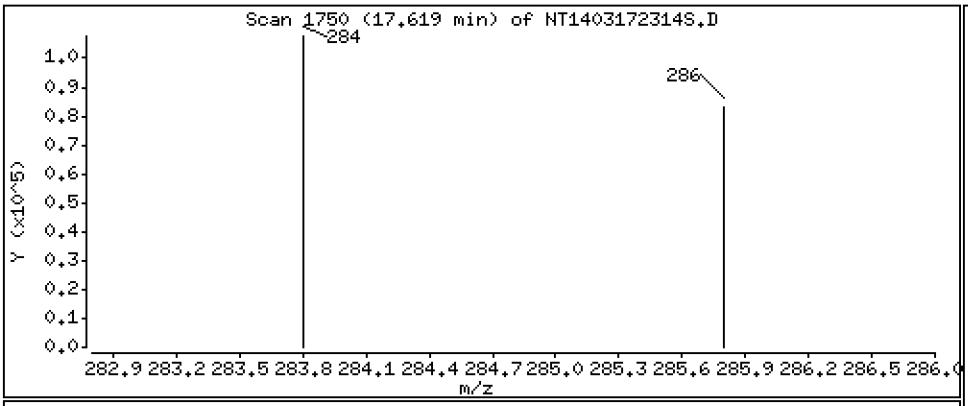
Operator: JGR

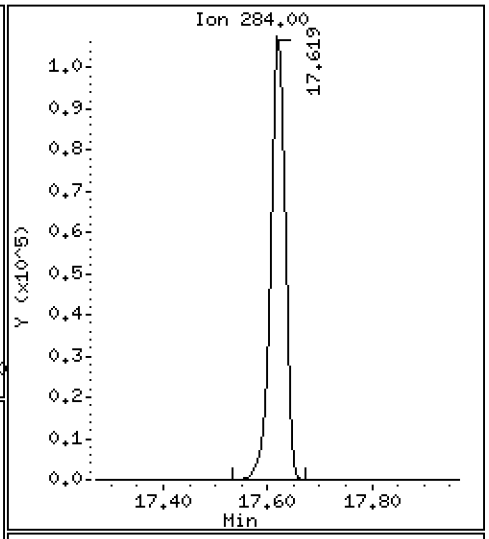
Column phase: ZB-5msi

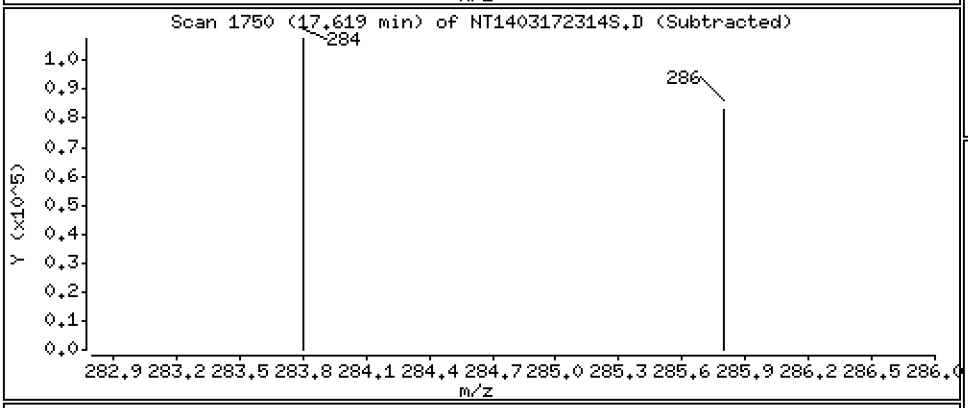
Column diameter: 0.25

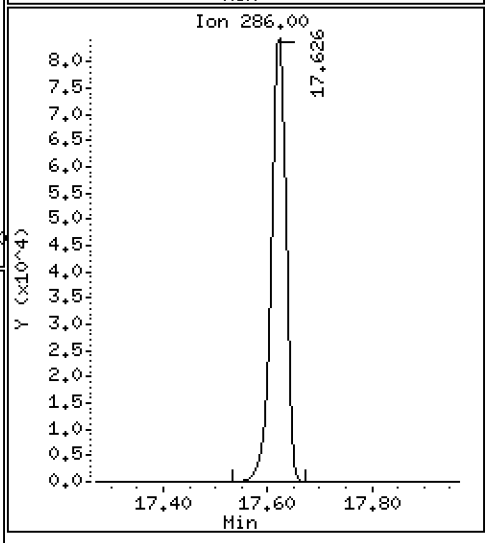
57 Hexachlorobenzene

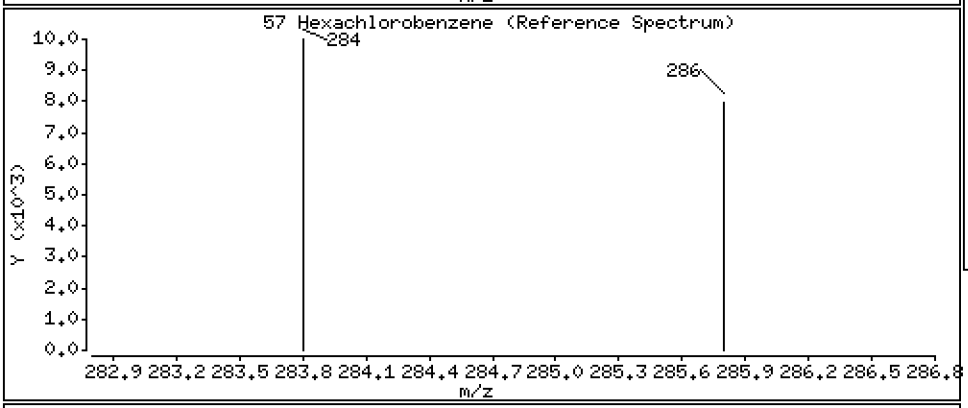
Concentration: 4.654 ug/mL

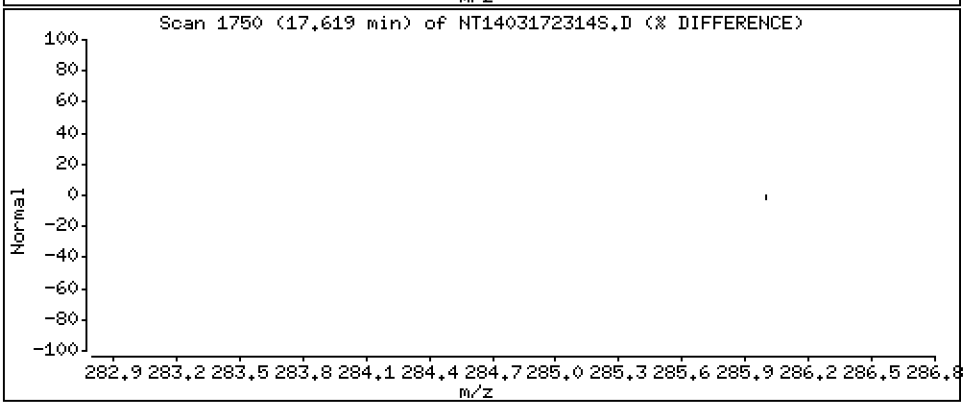












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172314S.D

Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD2

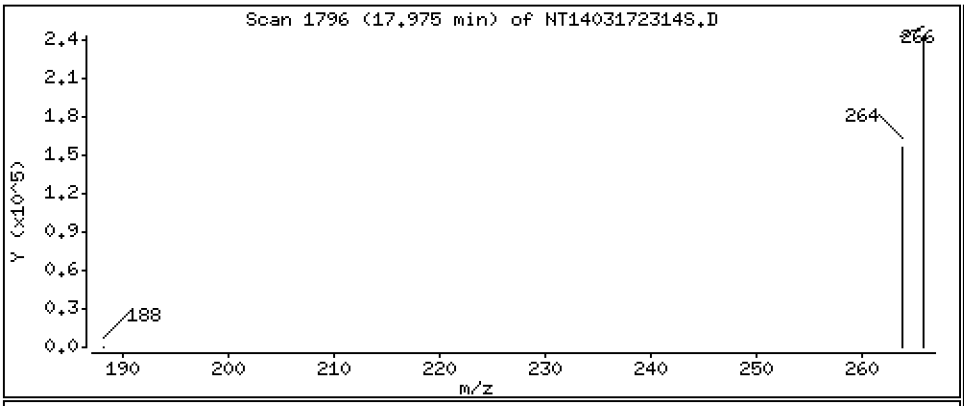
Operator: JGR

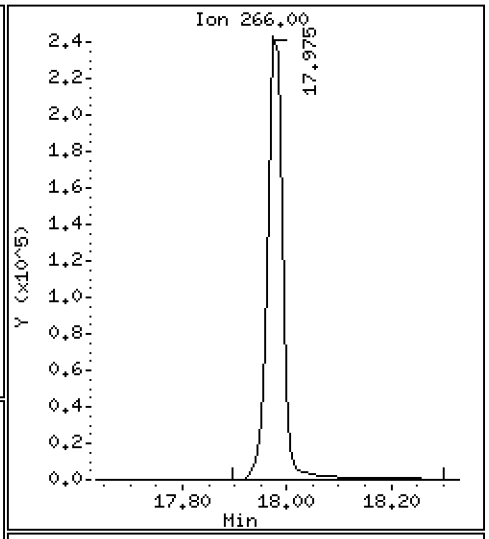
Column phase: ZB-5msi

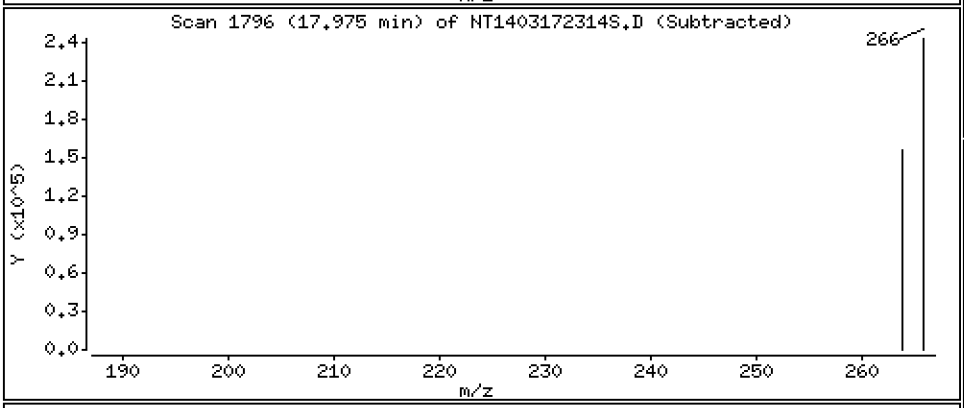
Column diameter: 0.25

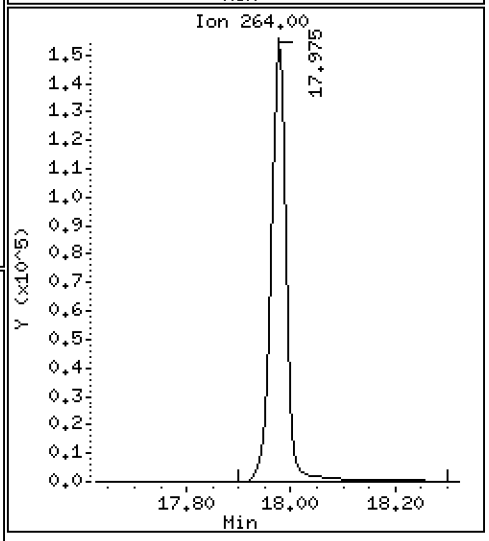
58 Pentachlorophenol

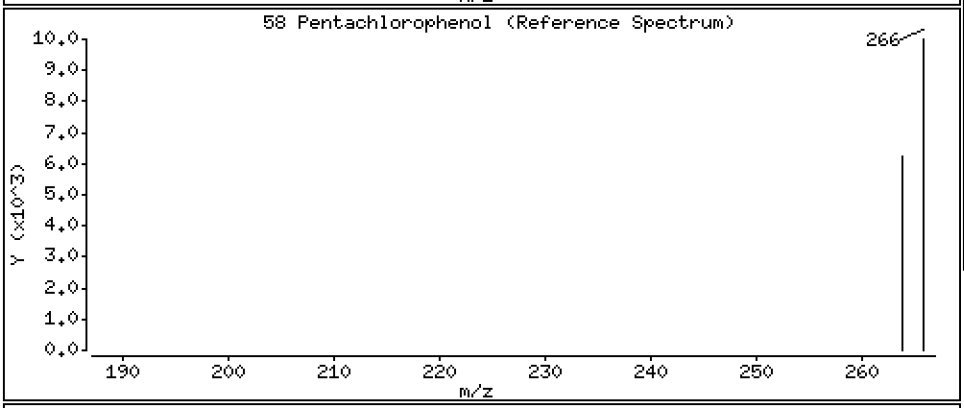
Concentration: 15.16 ug/mL

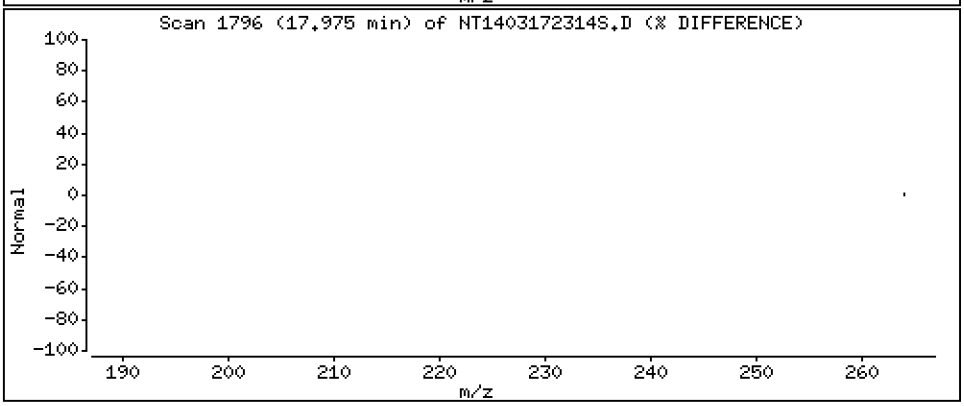












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172314S.D

Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD2

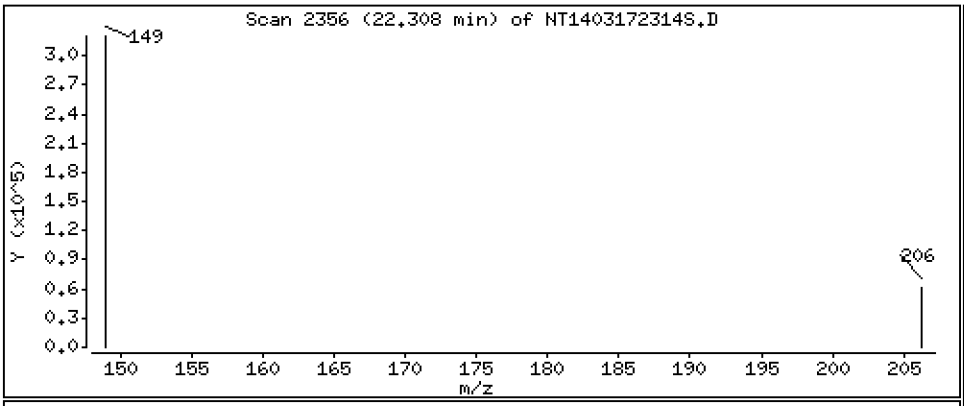
Operator: JGR

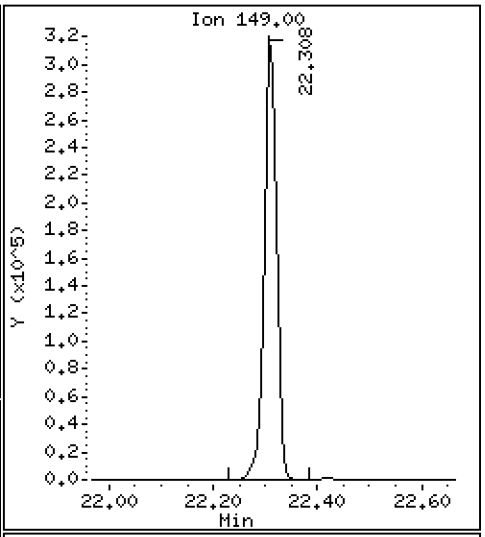
Column phase: ZB-5msi

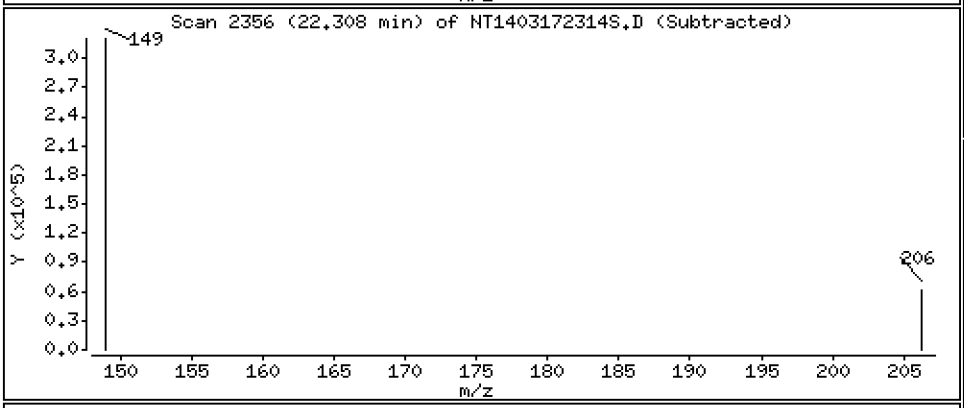
Column diameter: 0.25

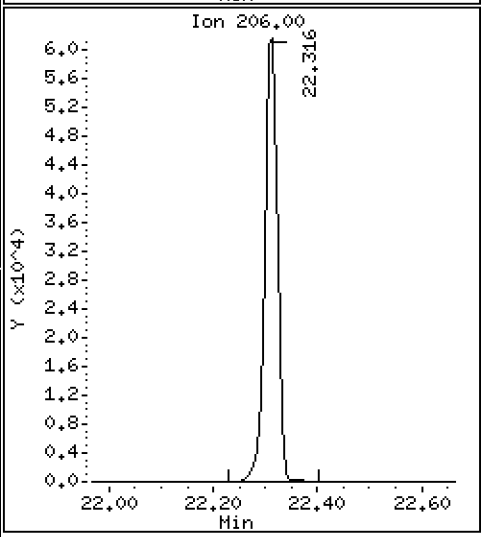
67 Butylbenzylphthalate

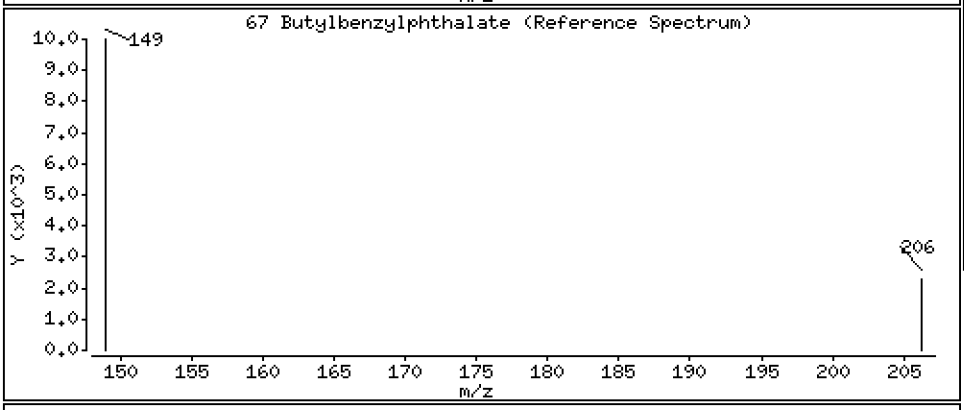
Concentration: 6.390 ug/mL

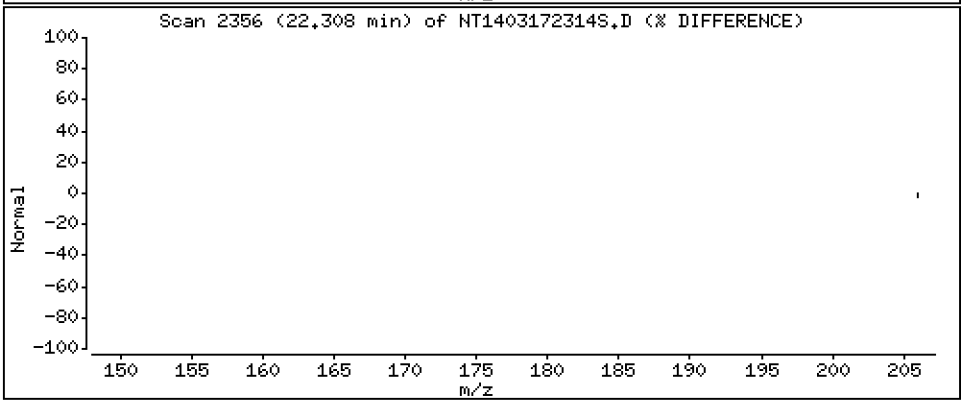












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172314S.D

Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD2

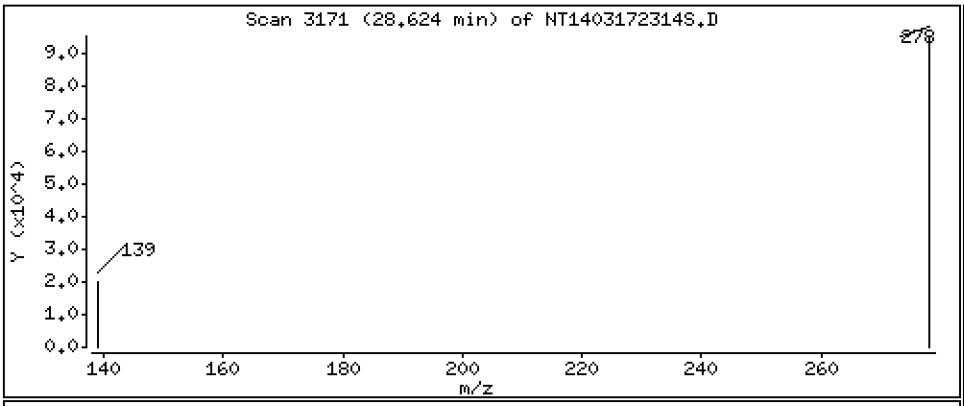
Operator: JGR

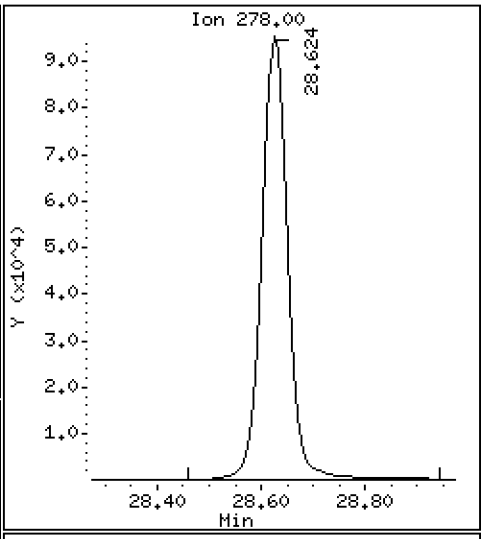
Column phase: ZB-5msi

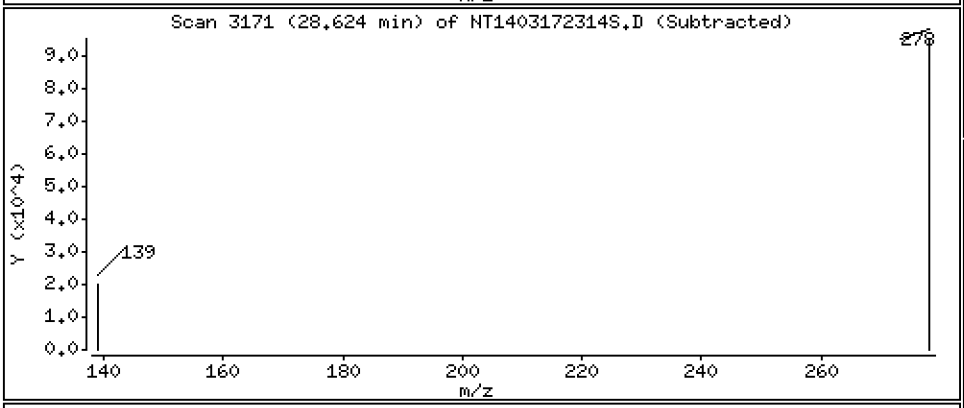
Column diameter: 0.25

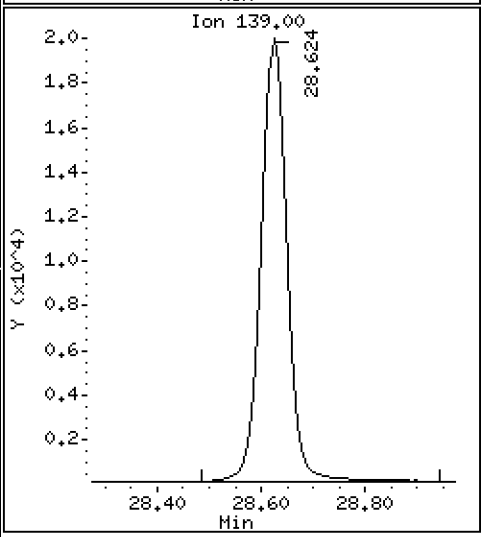
79 Dibenzo(a,h)anthracene

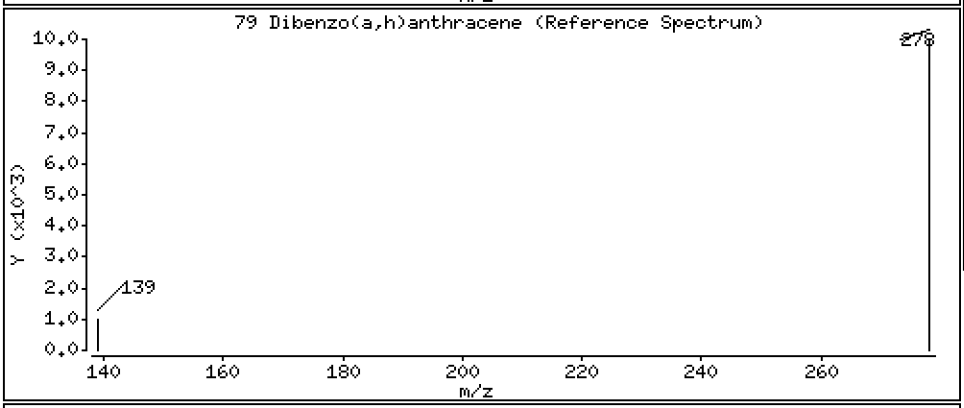
Concentration: 4.357 ug/mL

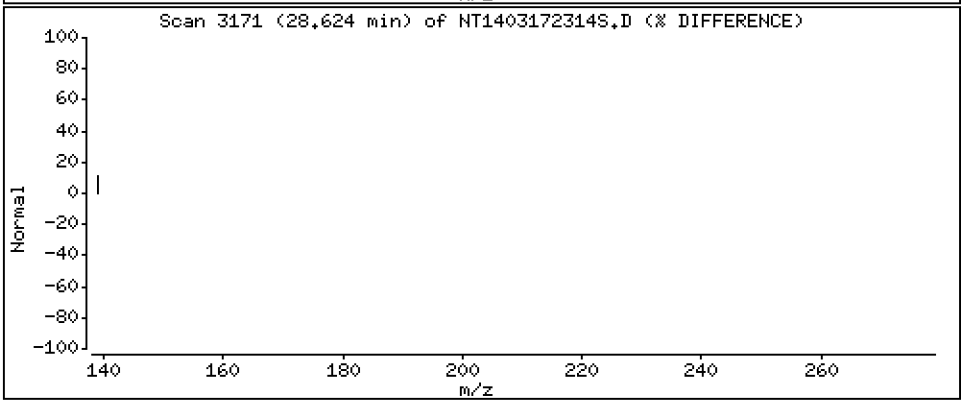












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT14031723145.D

Date : 17-MAR-2023 22:19

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-BSD2

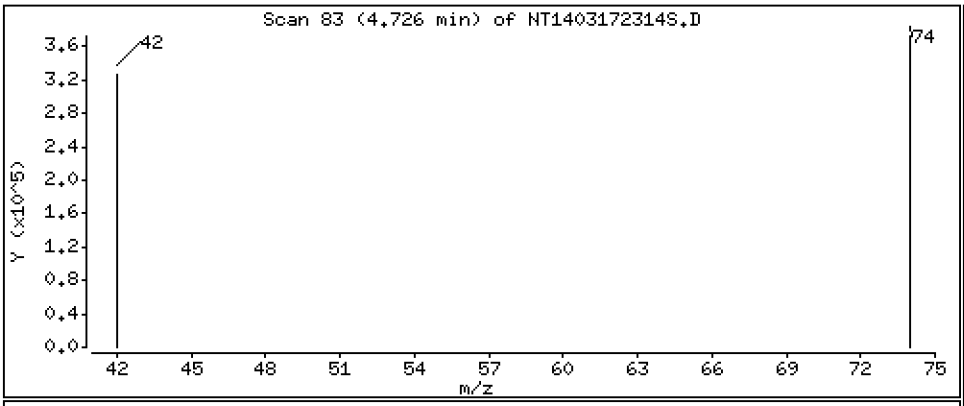
Operator: JGR

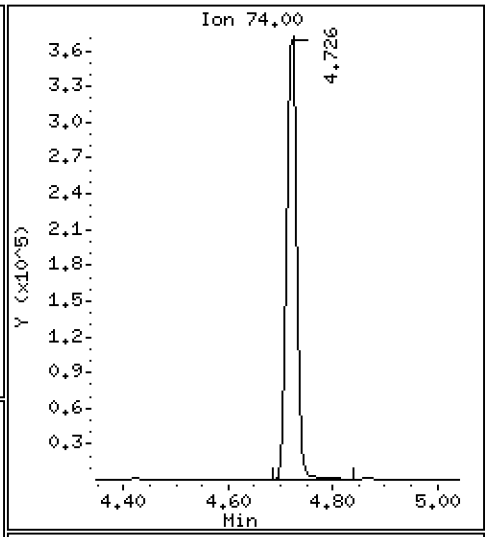
Column phase: ZB-5msi

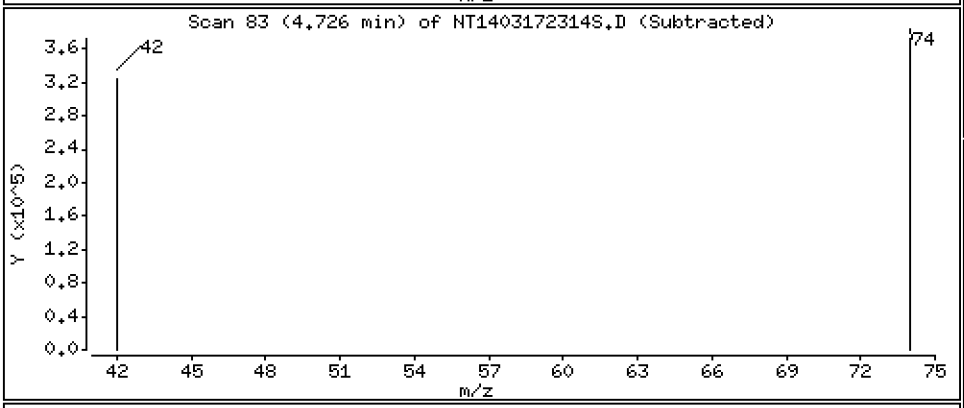
Column diameter: 0.25

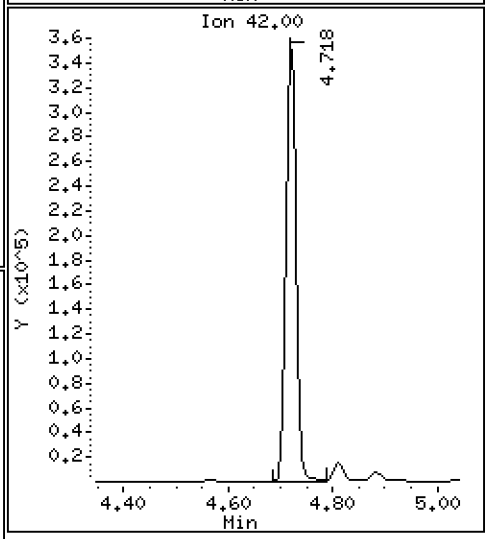
90 N-Nitrosodimethylamine

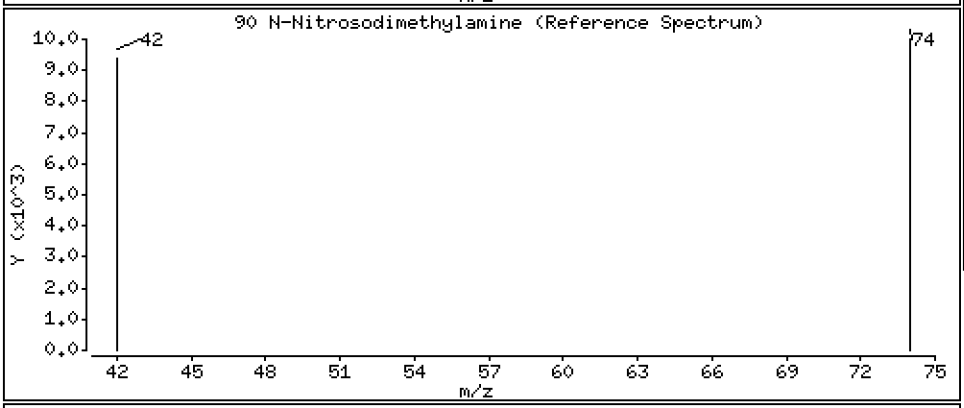
Concentration: 10.22 ug/mL

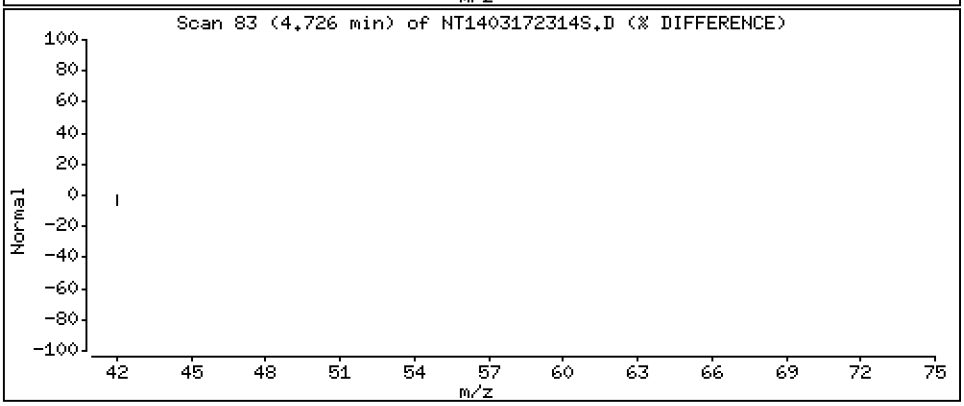












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172314S.D
Lab Smp Id: BLB0424-BSD2
Inj Date : 17-MAR-2023 22:19 MS Autotune Date: 11-MAR-2023 16:01
Operator : JGR Inst ID: nt14.i
Smp Info : BLB0424-BSD2
Misc Info :
Comment :
Method : \\target\share\chem3\nt14.i\20230317.b\20230317.b\SIMABN2.m
Meth Date : 23-Mar-2023 16:53 van Quant Type: ISTD
Cal Date : 15-MAR-2023 15:50 Cal File: NT1403152308.D
Als bottle: 14
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

			QUANT SIG					CONCENTRATIONS ON-COLUMN	FINAL
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
$	1	2-Fluorophenol	112	6.834	6.826	(0.754)	493236	5.81727	5.817(R)
	3	Phenol	94	8.441	8.440	(0.931)	452687	3.88249	3.882
	7	1,3-Dichlorobenzene	146	9.005	9.005	(0.993)	383856	3.84711	3.847
*	8	1,4-Dichlorobenzene-d4	152	9.067	9.067	(1.000)	249790	4.00000	
	9	1,4-Dichlorobenzene	146	9.098	9.098	(1.003)	378769	3.92299	3.923
	11	Benzyl alcohol	79	9.339	9.338	(1.030)	298964	4.37452	4.375
	12	1,2-Dichlorobenzene	146	9.455	9.455	(1.043)	373961	3.97644	3.976
	13	2-Methylphenol	108	9.564	9.563	(1.055)	267348	3.31931	3.319
	15	4-Methylphenol	108	9.836	9.827	(1.085)	328148	3.85651	3.857
	16	N-Nitroso-di-n-propylamine	70	9.898	9.897	(1.092)	254381	4.22841	4.228
	22	2,4-Dimethylphenol	107	10.883	10.883	(0.941)	288768	3.54623	3.546
	24	Benzoic acid	105	11.139	10.999	(0.963)	1660609	24.1482	24.15
	26	1,2,4-Trichlorobenzene	180	11.480	11.479	(0.993)	321930	4.03371	4.034
*	27	Naphthalene-d8	136	11.565	11.564	(1.000)	947229	4.00000	
	30	Hexachlorobutadiene	225	11.974	11.974	(1.035)	181380	4.49083	4.491
	39	Dimethylphthalate	163	14.706	14.698	(0.967)	710975	4.74034	4.740
*	42	Acenaphthene-d10	162	15.201	15.201	(1.000)	439174	4.00000	
	50	Diethylphthalate	149	16.168	16.160	(1.064)	905392	5.67004	5.670
	54	N-Nitrosodiphenylamine	169	16.546	16.545	(0.907)	471416	4.18000	4.180
	57	Hexachlorobenzene	284	17.618	17.618	(0.966)	201644	4.65414	4.654
	58	Pentachlorophenol	266	17.974	17.982	(0.985)	479354	15.1607	15.16
*	59	Phenanthrene-d10	188	18.245	18.245	(1.000)	832353	4.00000	
$	66	Terphenyl-d14	244	21.386	21.386	(0.918)	493797	6.41272	6.413(R)
	67	Butylbenzylphthalate	149	22.308	22.315	(0.957)	501881	6.39038	6.390
*	69	Chrysene-d12	240	23.299	23.298	(1.000)	446664	4.00000	
*	77	Perylene-d12	264	25.939	25.938	(1.000)	299018	4.00000	
	79	Dibenzo(a,h)anthracene	278	28.623	28.623	(1.103)	330305	4.35743	4.357
	90	N-Nitrosodimethylamine	74	4.725	4.694	(0.521)	529461	10.2215	10.22

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1403172314S.D
Lab Smp Id: BLB0424-BSD2
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\SIMABN2.m
Misc Info:

Calibration Date: 17-MAR-2023
Calibration Time: 15:39
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	224436	112218	448872	249790	11.30
27 Naphthalene-d8	825617	412809	1651234	947229	14.73
42 Acenaphthene-d10	392947	196474	785894	439174	11.76
59 Phenanthrene-d10	789887	394944	1579774	832353	5.38
69 Chrysene-d12	494007	247004	988014	446664	-9.58
77 Perylene-d12	375441	187721	750882	299018	-20.36

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.07	8.57	9.57	9.07	0.00
27 Naphthalene-d8	11.56	11.06	12.06	11.57	0.00
42 Acenaphthene-d10	15.20	14.70	15.70	15.20	0.00
59 Phenanthrene-d10	18.25	17.75	18.75	18.25	0.00
69 Chrysene-d12	23.30	22.80	23.80	23.30	0.00
77 Perylene-d12	25.94	25.44	26.44	25.94	0.00

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

REVIEW SUMMARY FOR FILE - NT1403172314S.D

Lab ID: BLB0424-BSD2
nt14.i, 20230317.b\20230317.b\SIMABN2.m,   17-MAR-2023 22:19

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.963	0.951	0.0121	Benzoic acid

RRT check based on Ccal File: 20230317.b/NT1403172303S.D

On Column LOD for nt14.i, 20230317.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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

MS / MS DUPLICATE RECOVERY
EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	03/18/23 06:42
Batch:	BLB0424	Laboratory ID:	BLB0424-MS2
Preparation:	EPA 3546 (Microwave)	Sequence Name:	Matrix Spike
Initial/Final:	15.72 g / 1 mL	Source Sample:	LDW23-SC1150B

COMPOUND	SPIKE ADDED (ug/kg dry)	SAMPLE CONCENTRATION (ug/kg dry)	Q	MS CONCENTRATION (ug/kg dry)	Q	MS % REC. #	QC LIMITS REC.
1,4-Dichlorobenzene	500	2.4	J	343		68.2	36 - 120
1,2-Dichlorobenzene	500	0.9	J	351		70.1	36 - 120
Benzyl Alcohol	500	28.5		419		78.1	25 - 123
Benzoic acid	2300	51.6	J	1340	Q	56.1	10 - 160
2,4-Dimethylphenol	1300	ND	U	1110		85.5	10 - 120
1,2,4-Trichlorobenzene	500	ND	U	364		72.7	35 - 120
N-Nitrosodiphenylamine	500	ND	U	454		90.9	27 - 120
Pentachlorophenol	1300	ND	U	1340	Q	103	26 - 120

* Values outside of QC limits

MS / MS DUPLICATE RECOVERY
EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	03/18/23 07:18
Batch:	BLB0424	Laboratory ID:	BLB0424-MSD2
Preparation:	EPA 3546 (Microwave)	Sequence Name:	Matrix Spike Dup
Initial/Final:	15.72 g / 1 mL	Source Sample:	LDW23-SC1150B

COMPOUND	SPIKE ADDED (ug/kg dry)	MSD CONCENTRATION (ug/kg dry)	Q	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,4-Dichlorobenzene	500	335		66.6	2.34	30	36 - 120
1,2-Dichlorobenzene	500	341		68.1	2.93	30	36 - 120
Benzyl Alcohol	500	402		74.6	4.17	30	25 - 123
Benzoic acid	2300	1360	Q	56.8	1.06	30	10 - 160
2,4-Dimethylphenol	1300	1030		78.9	8.07	30	10 - 120
1,2,4-Trichlorobenzene	500	356		71.2	2.10	30	35 - 120
N-Nitrosodiphenylamine	500	404		80.8	11.7	30	27 - 120
Pentachlorophenol	1300	1350	Q	104	0.260	30	26 - 120

* Values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT14031723285.D

Date : 18-MAR-2023 06:42

Client ID:

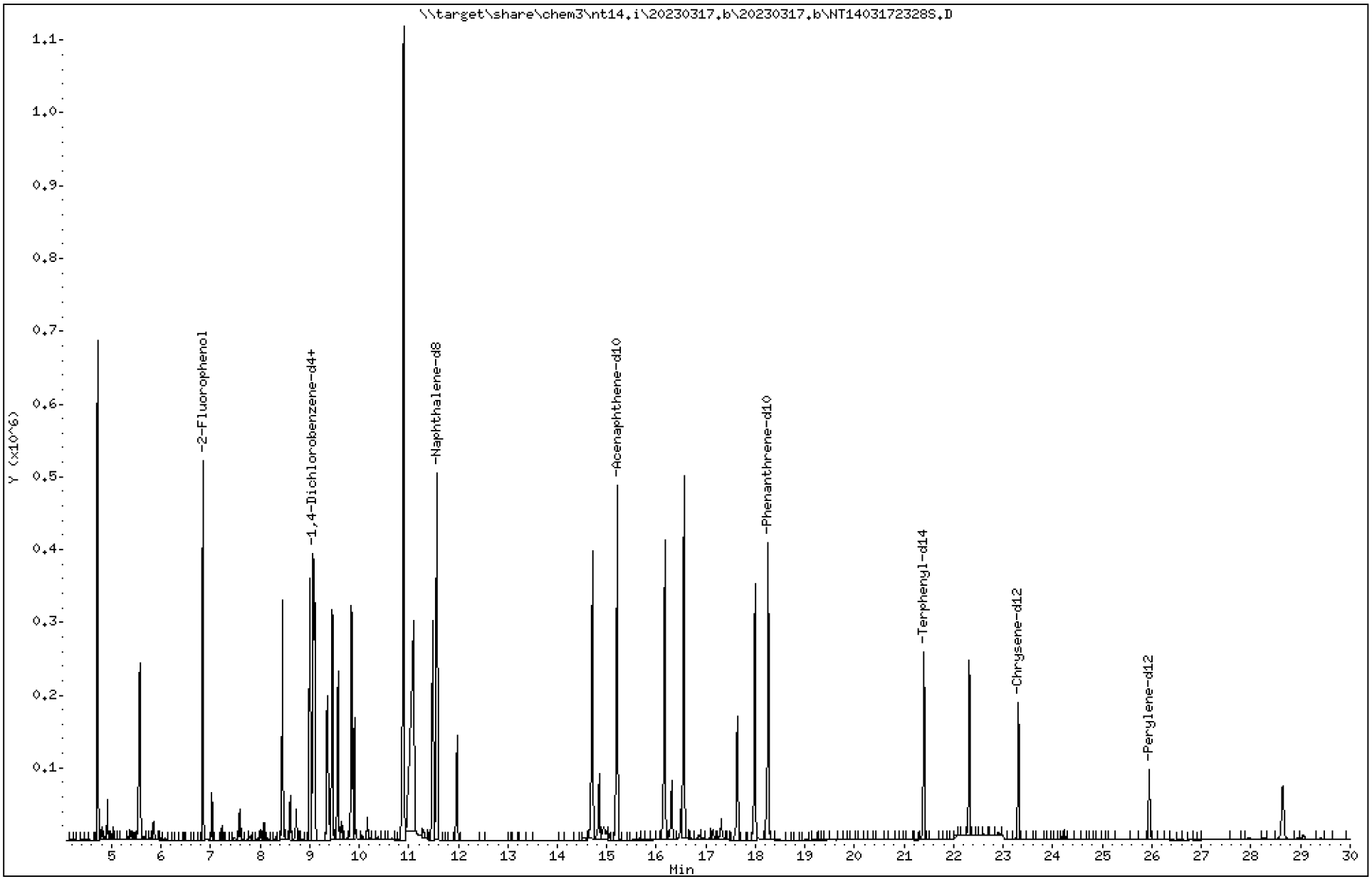
Instrument: nt14.i

Sample Info: BLB0424-MS2

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT14031723285.D

Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS2

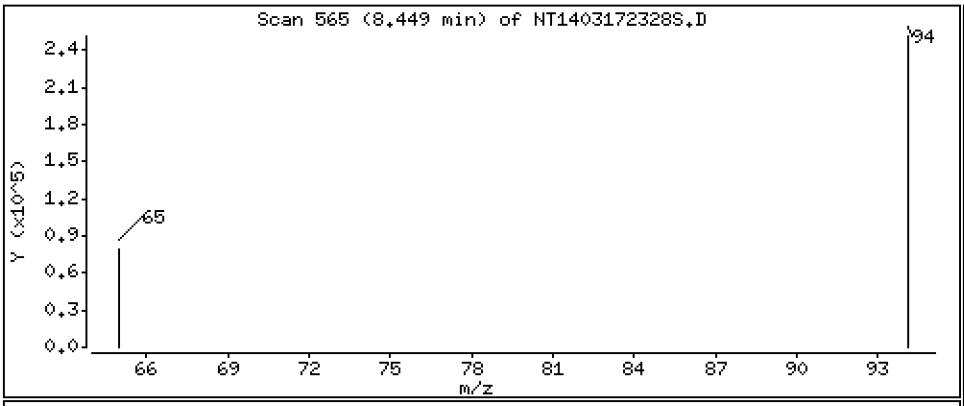
Operator: JGR

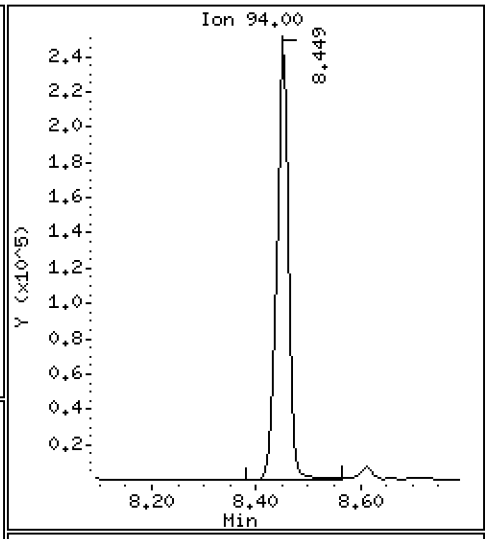
Column phase: ZB-5msi

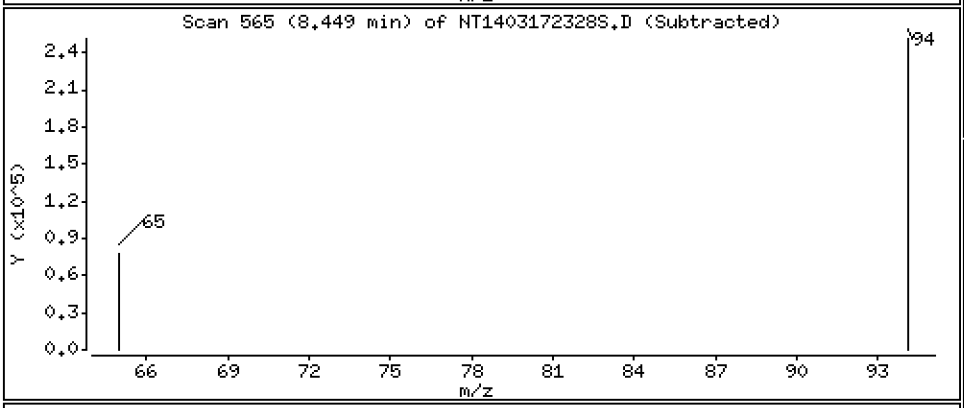
Column diameter: 0.25

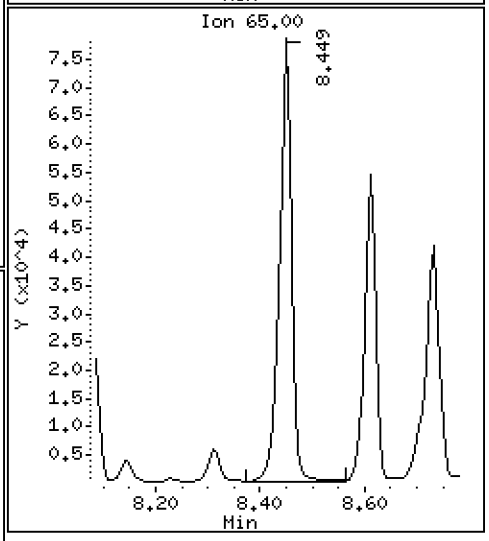
3 Phenol

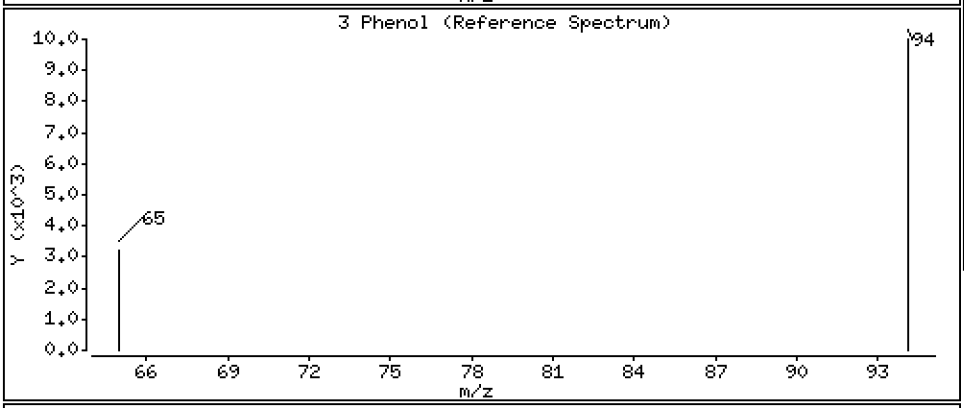
Concentration: 3.392 ug/mL

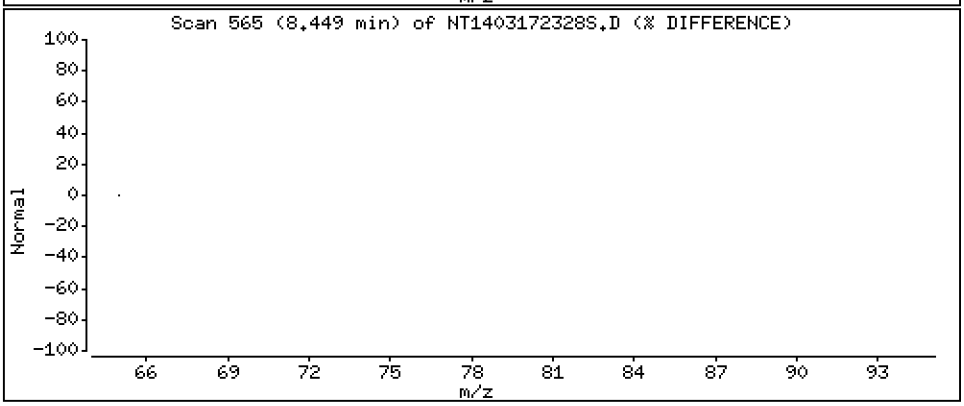












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172328S.D

Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS2

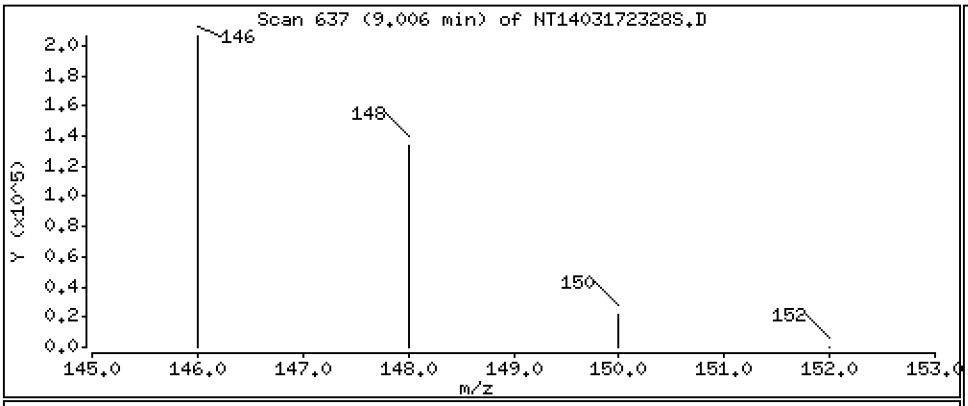
Operator: JGR

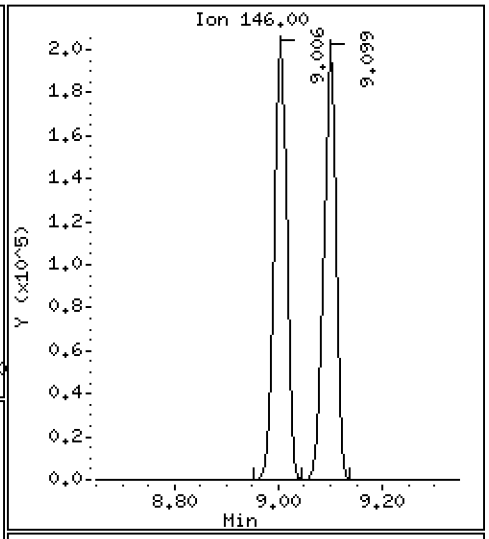
Column phase: ZB-5msi

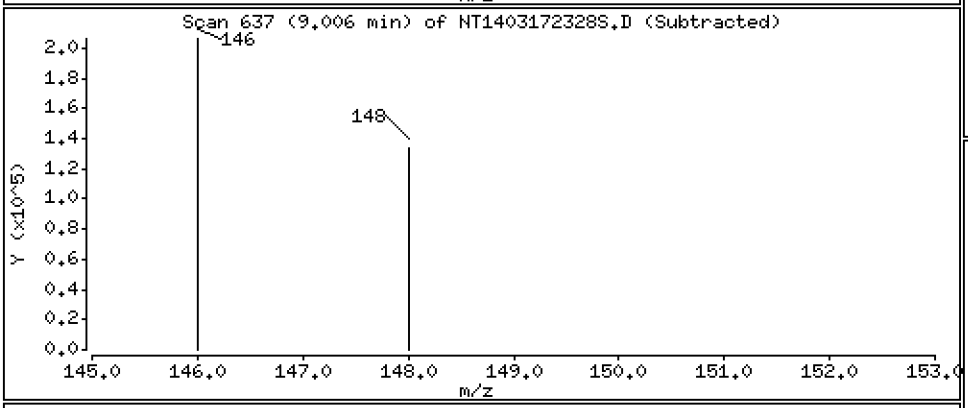
Column diameter: 0.25

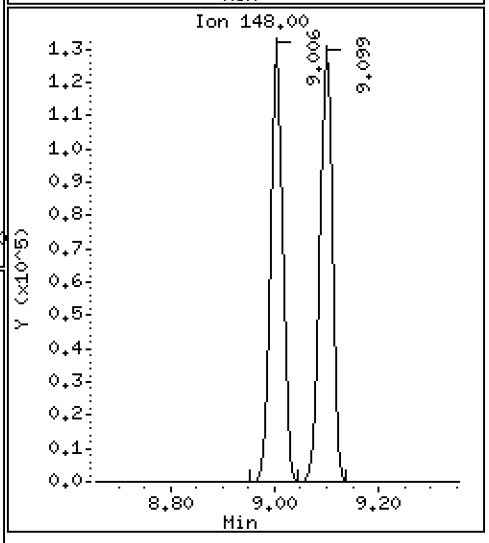
7 1,3-Dichlorobenzene

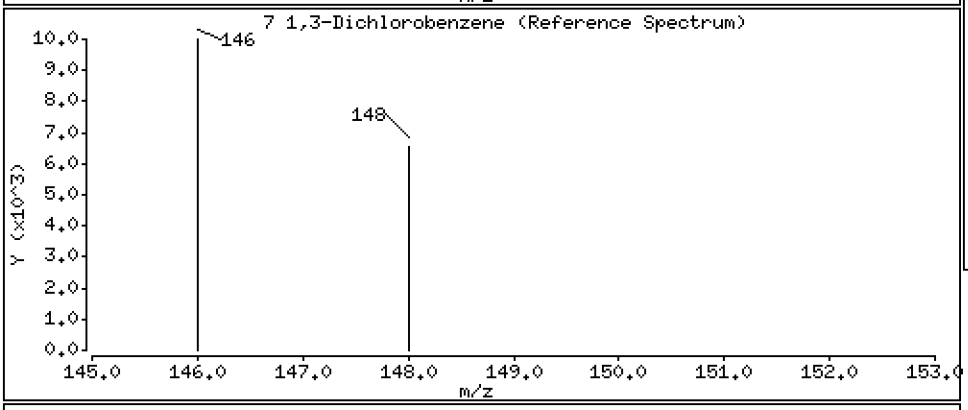
Concentration: 3.356 ug/mL

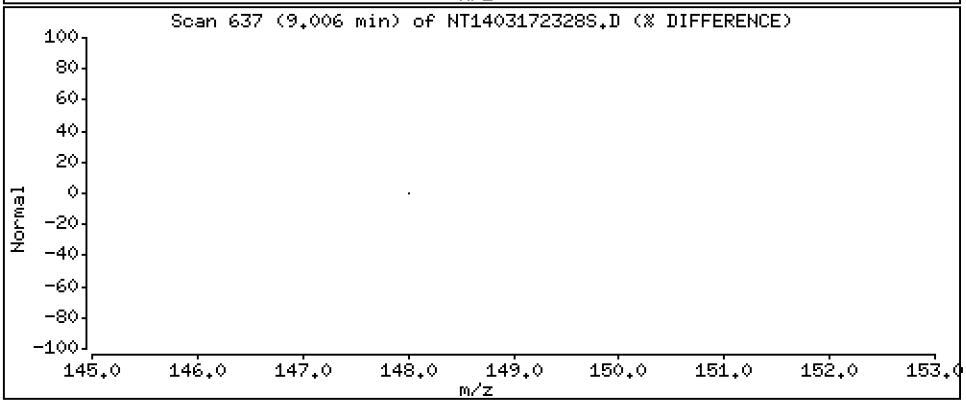












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172328S.D

Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS2

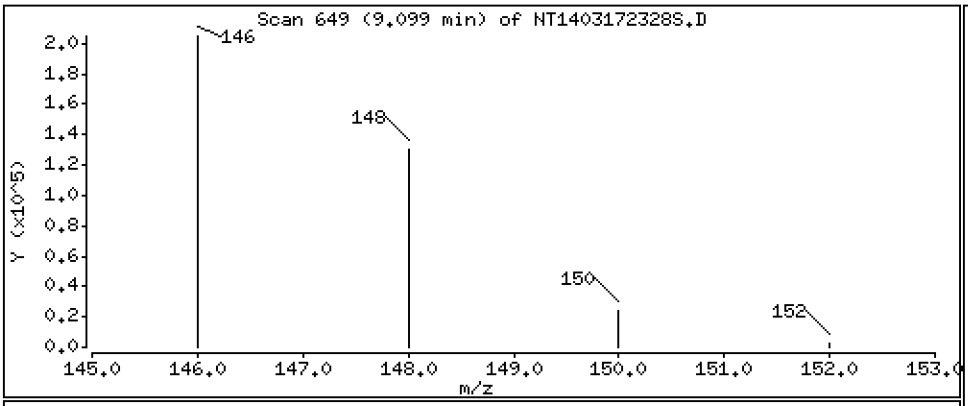
Operator: JGR

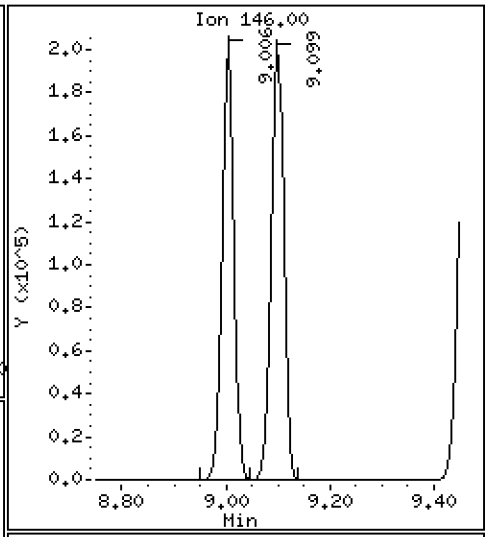
Column phase: ZB-5msi

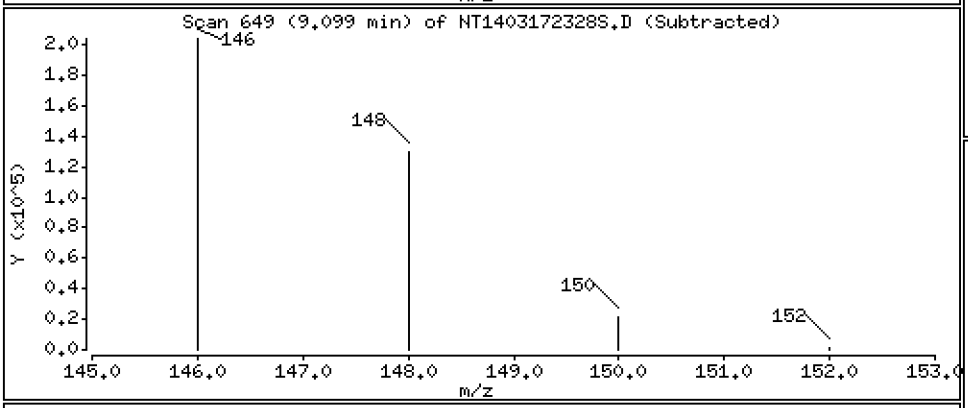
Column diameter: 0.25

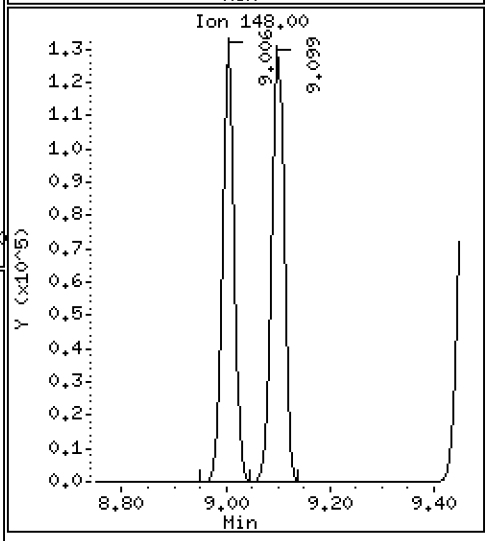
9 1,4-Dichlorobenzene

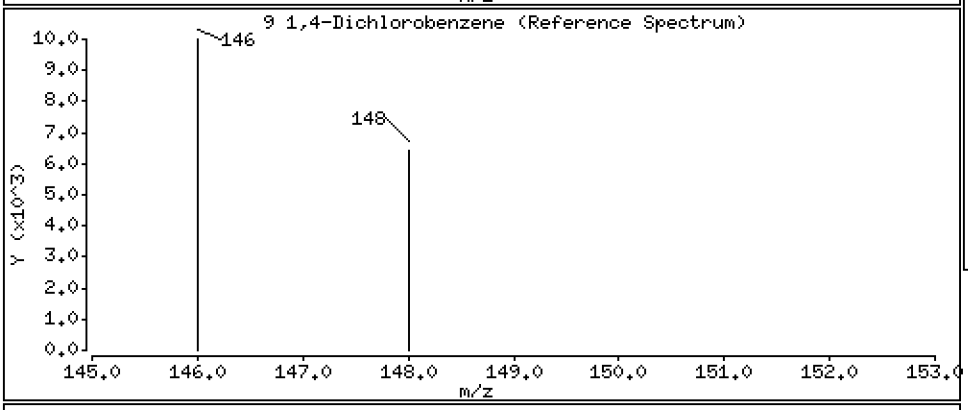
Concentration: 3.433 ug/mL

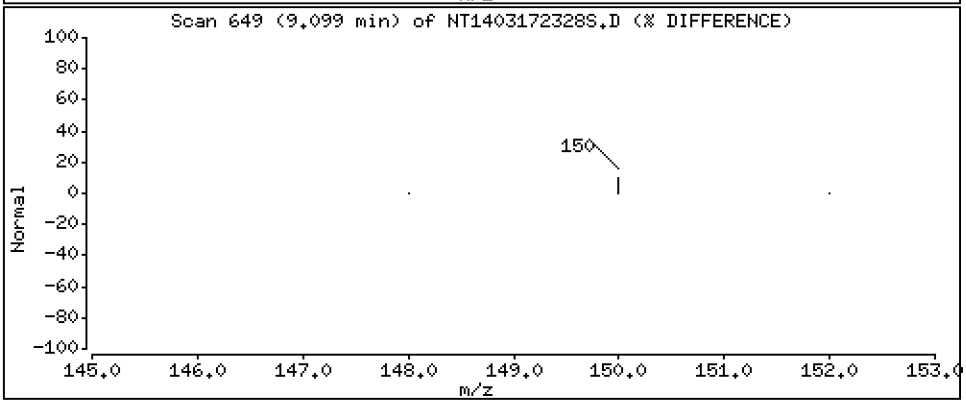












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT14031723285.D

Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS2

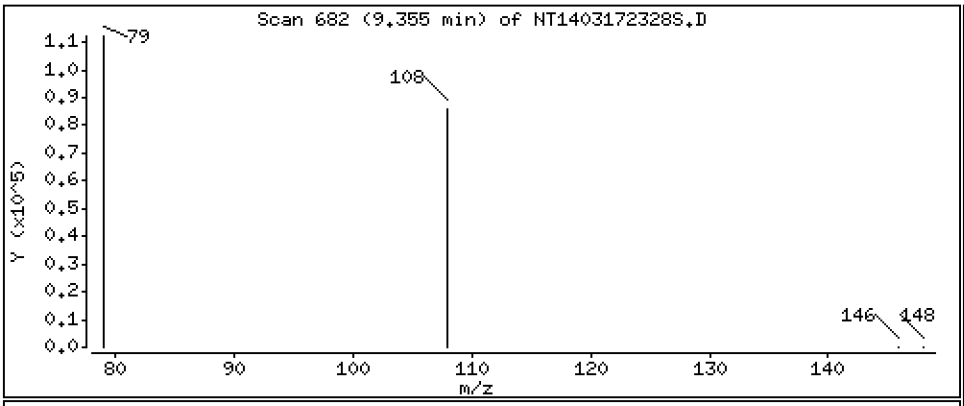
Operator: JGR

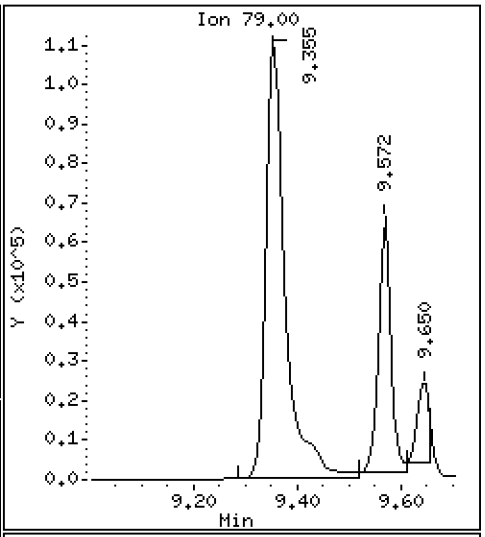
Column phase: ZB-5msi

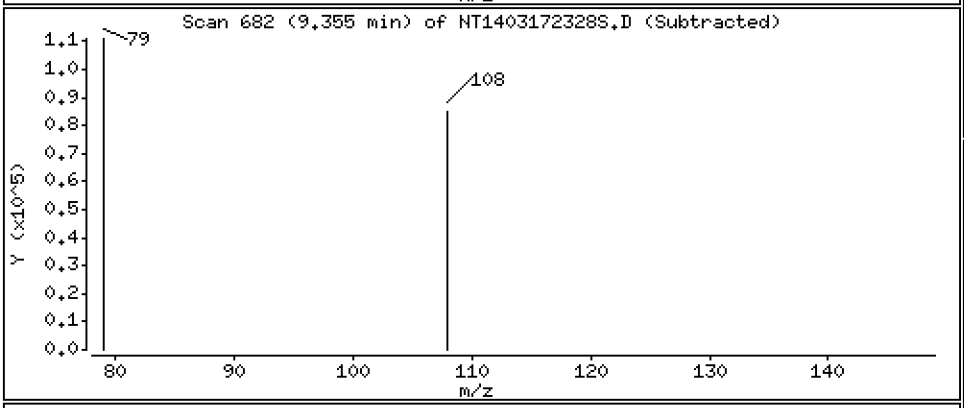
Column diameter: 0.25

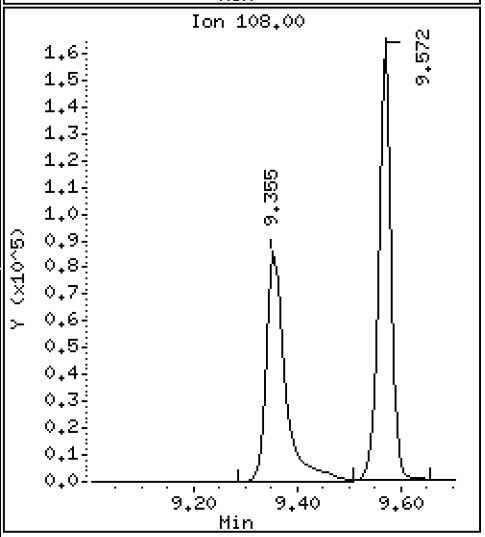
11 Benzyl alcohol

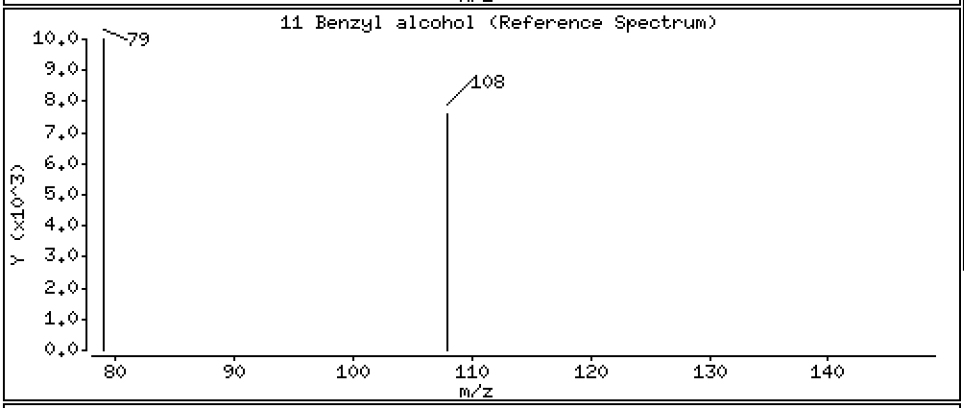
Concentration: 4.188 ug/mL

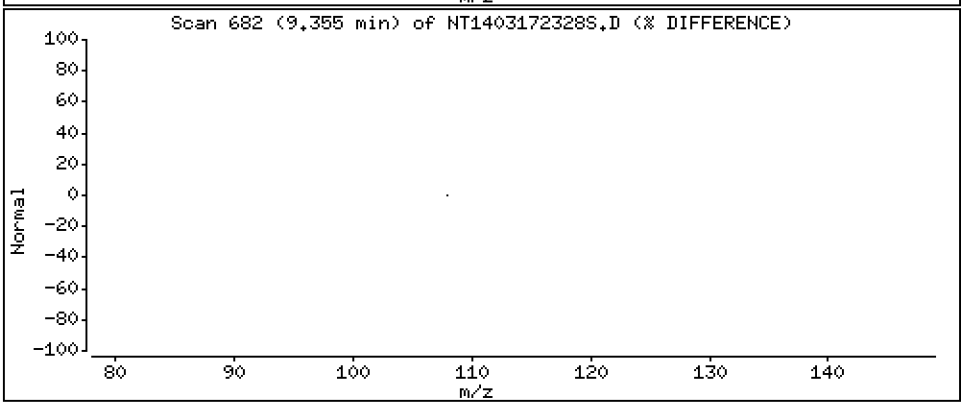












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS2

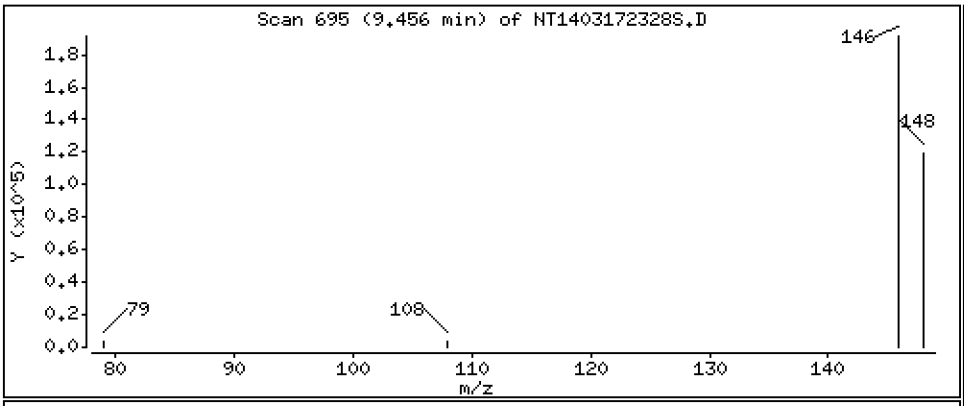
Operator: JGR

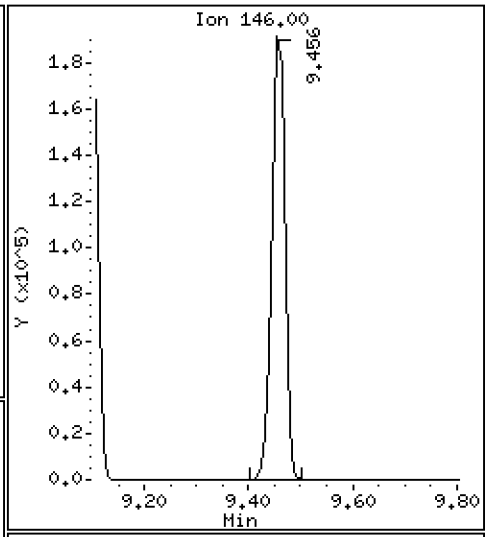
Column phase: ZB-5msi

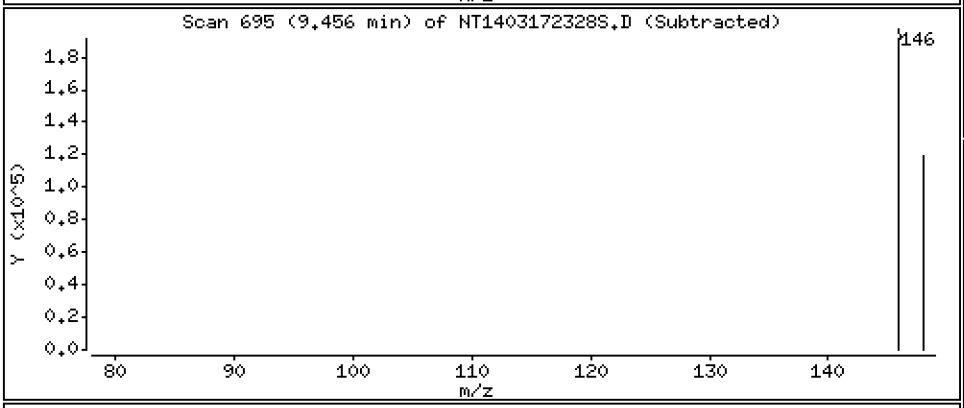
Column diameter: 0.25

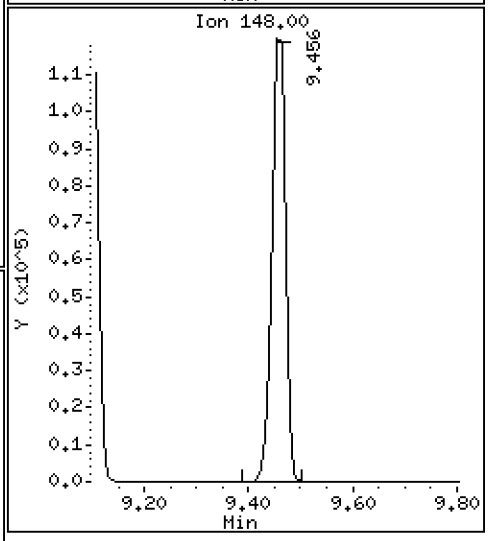
12 1,2-Dichlorobenzene

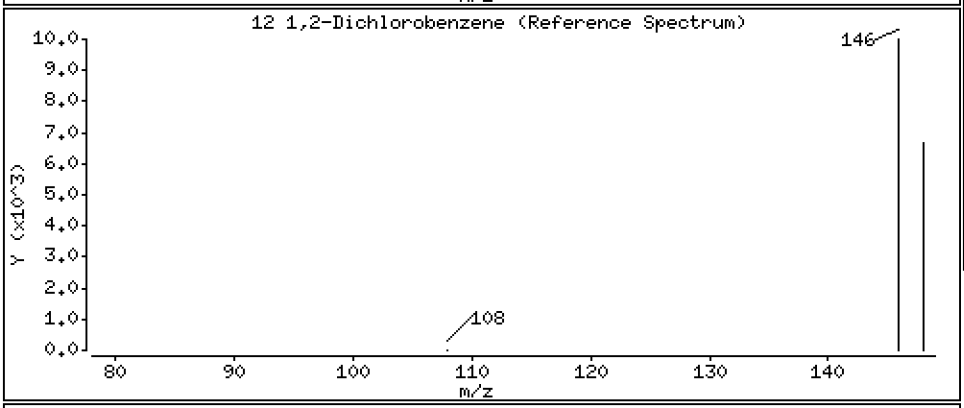
Concentration: 3.513 ug/mL

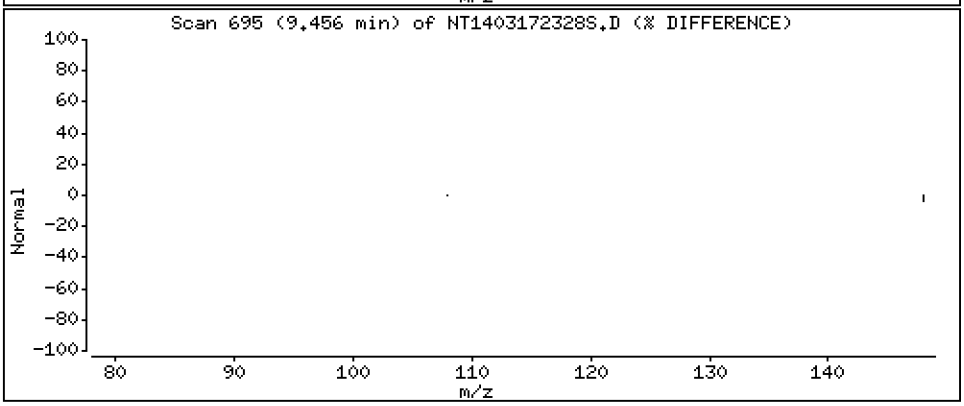












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS2

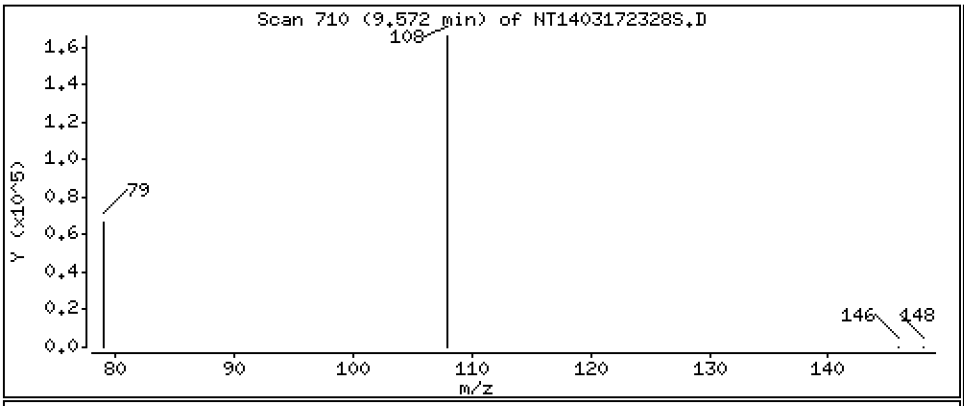
Operator: JGR

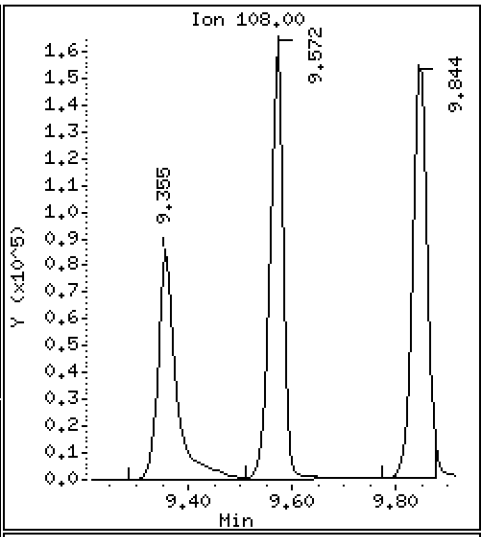
Column phase: ZB-5msi

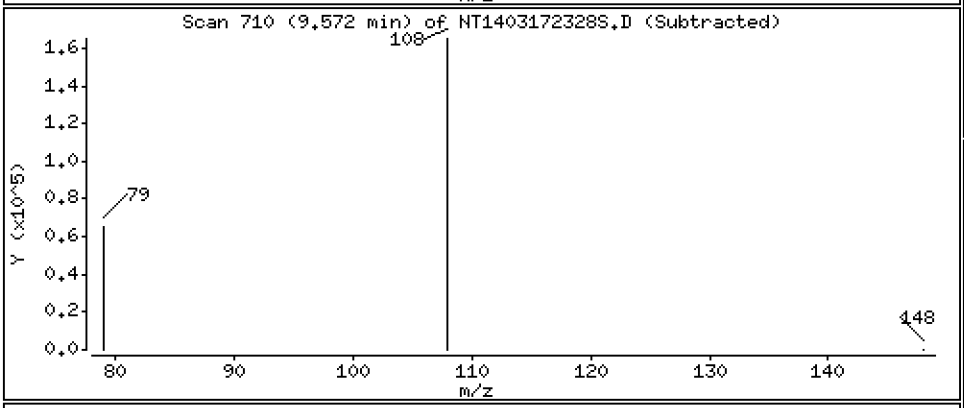
Column diameter: 0.25

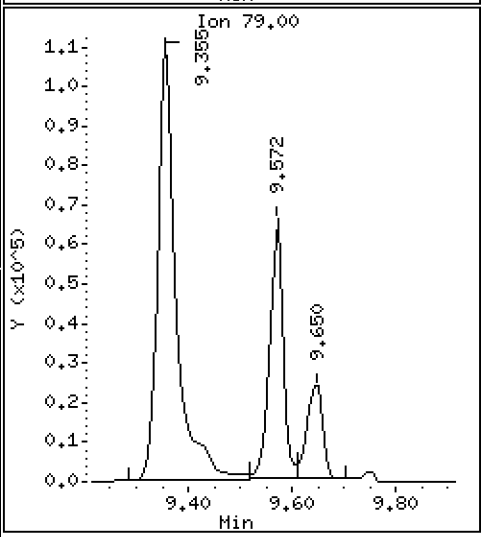
13 2-Methylphenol

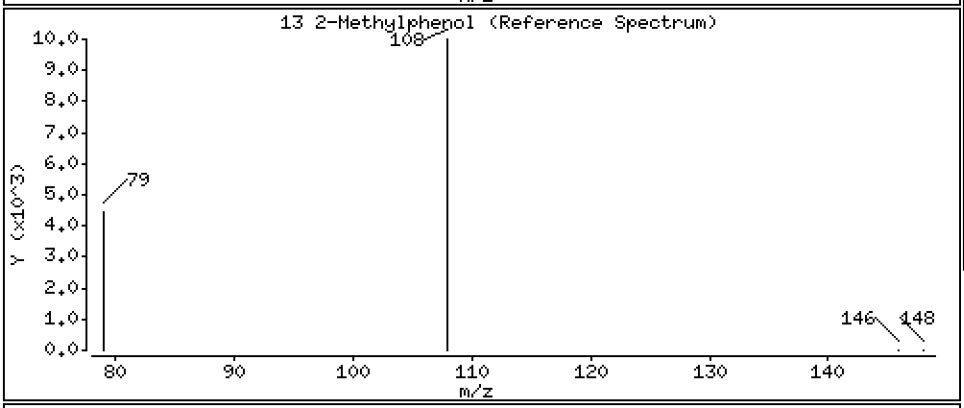
Concentration: 3.585 ug/mL

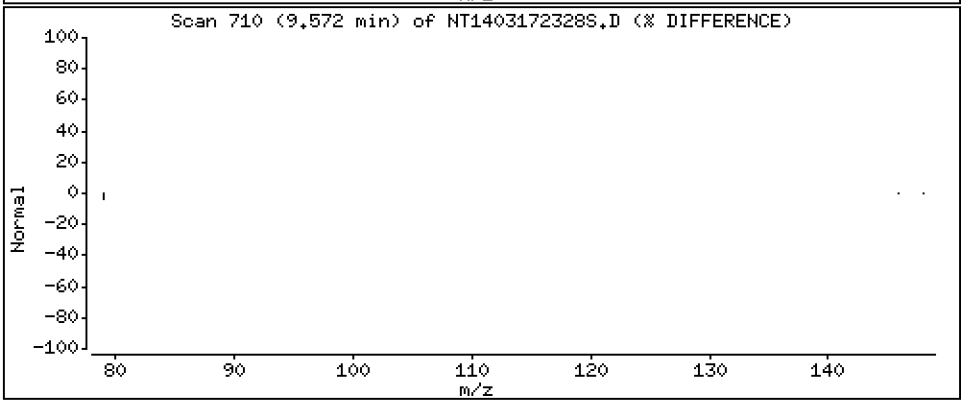












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172328S.D

Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS2

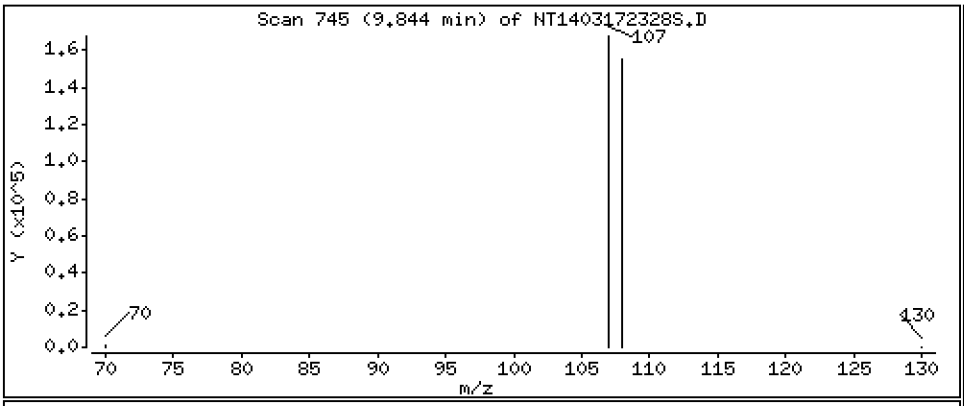
Operator: JGR

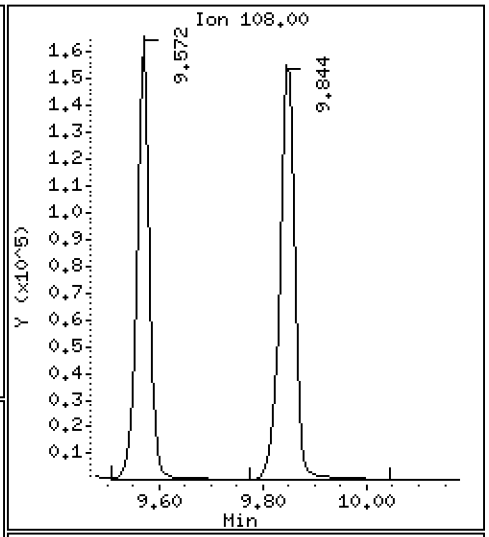
Column phase: ZB-5msi

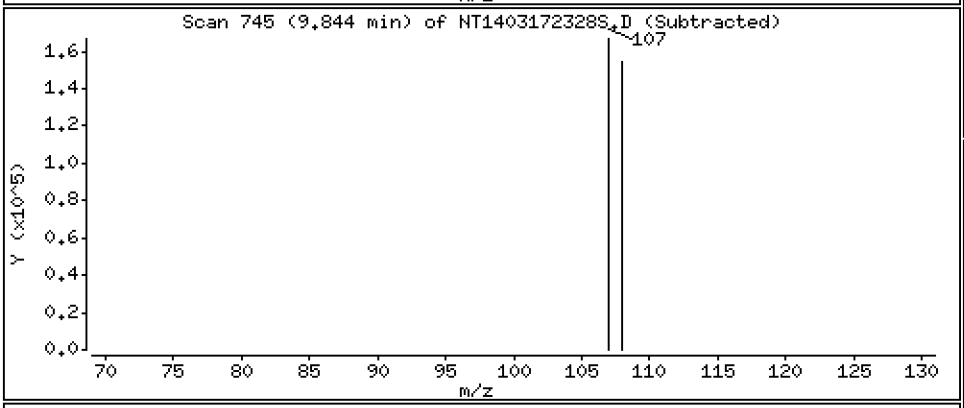
Column diameter: 0.25

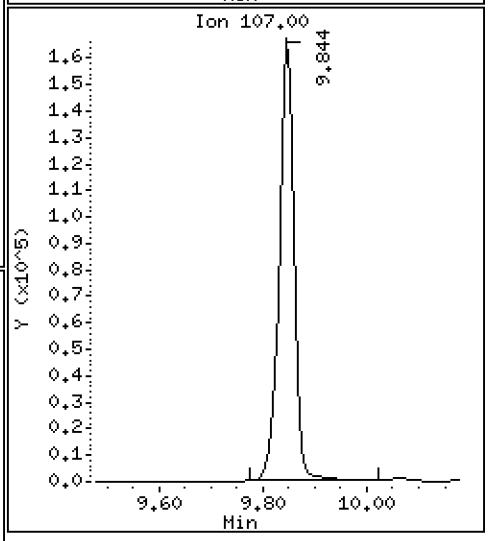
15 4-Methylphenol

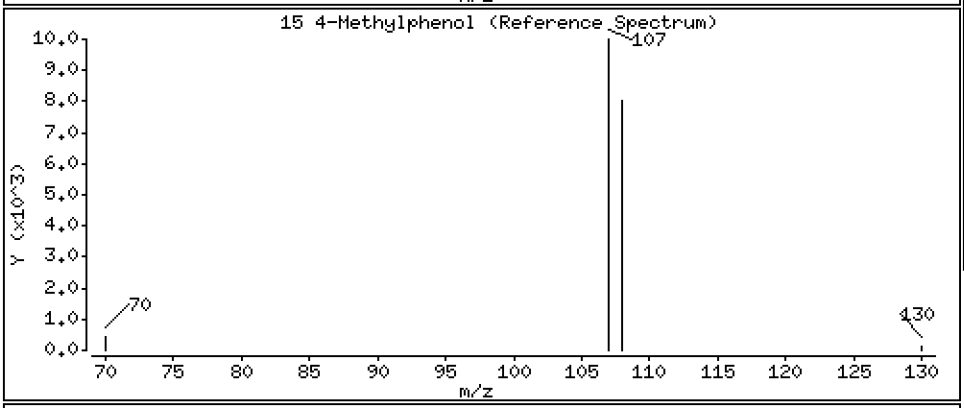
Concentration: 3.886 ug/mL

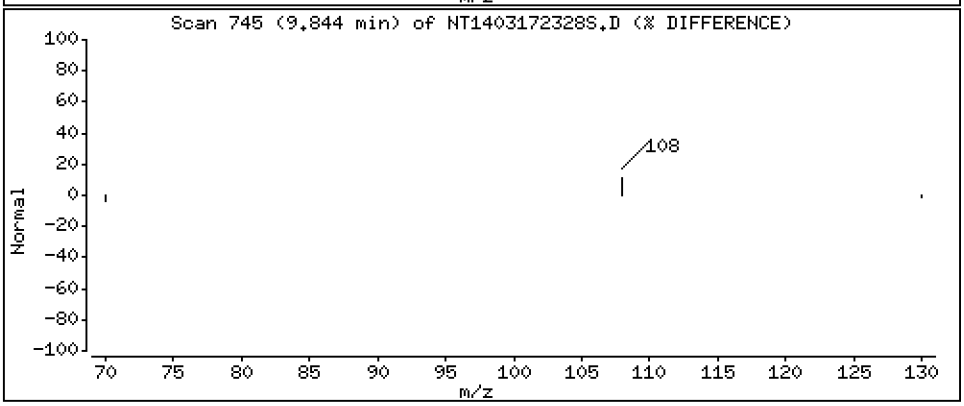












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS2

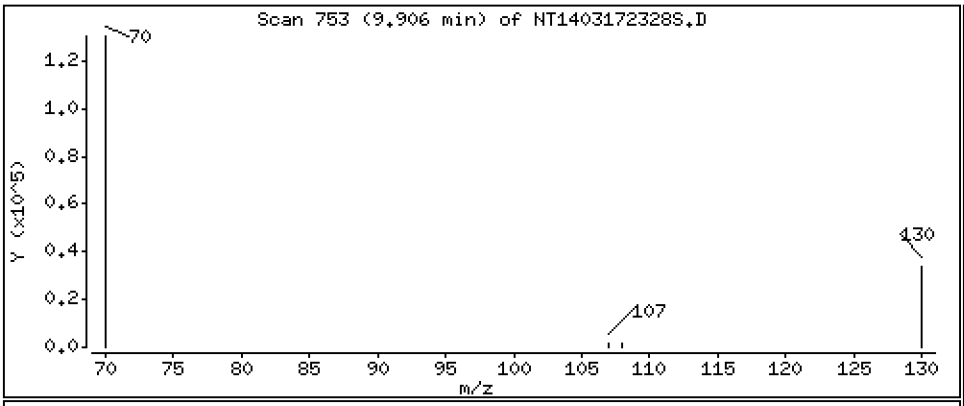
Operator: JGR

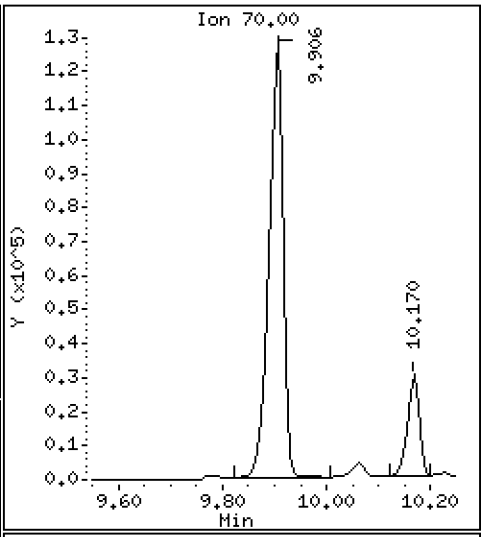
Column phase: ZB-5msi

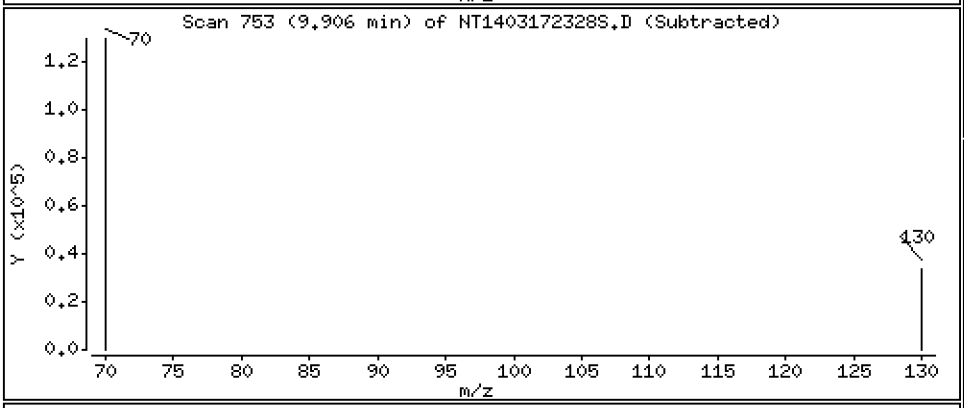
Column diameter: 0.25

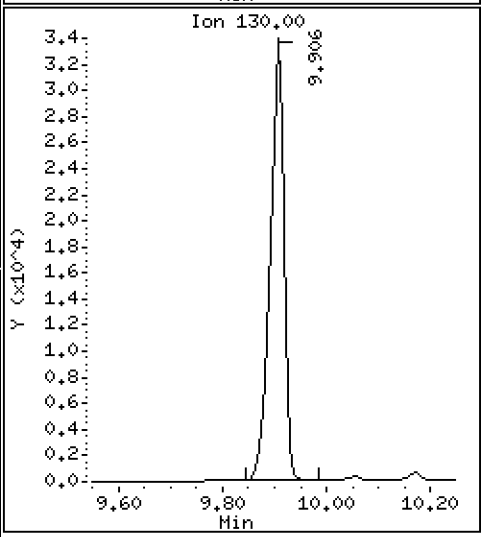
16 N-Nitroso-di-n-propylamine

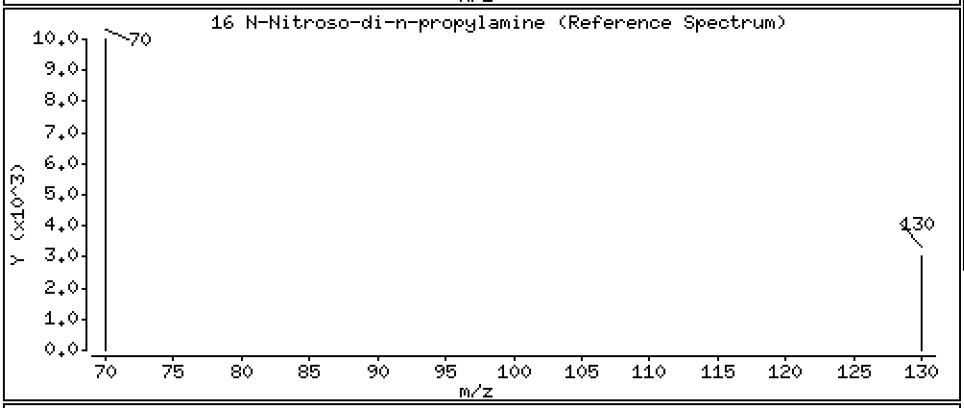
Concentration: 4.039 ug/mL

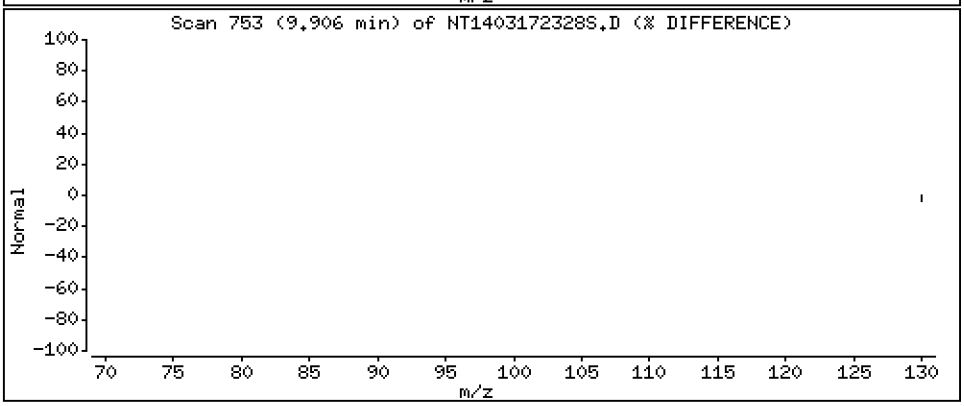












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS2

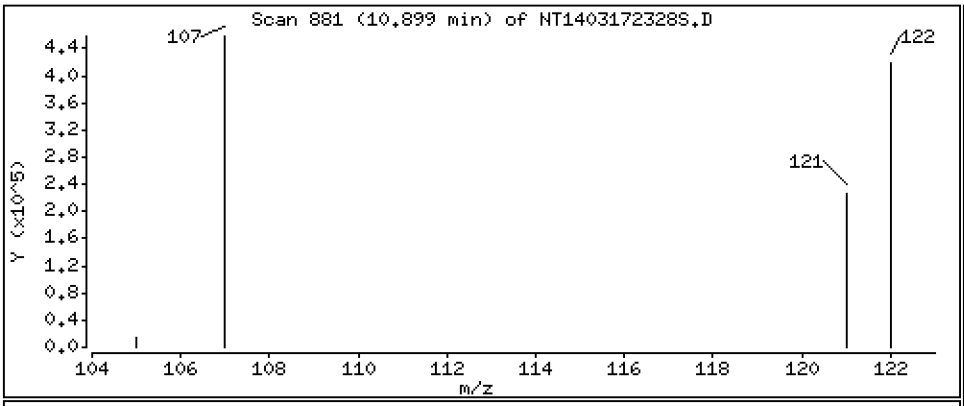
Operator: JGR

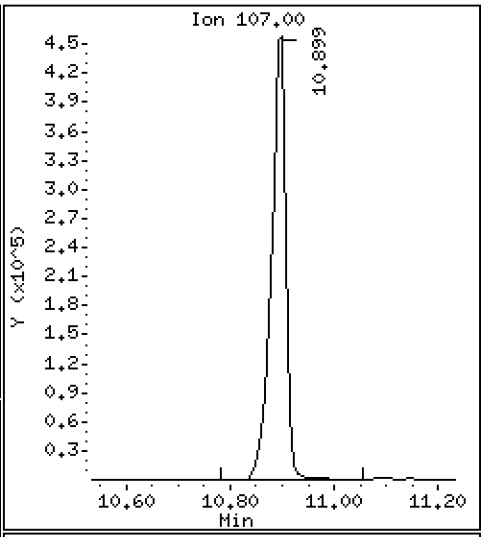
Column phase: ZB-5msi

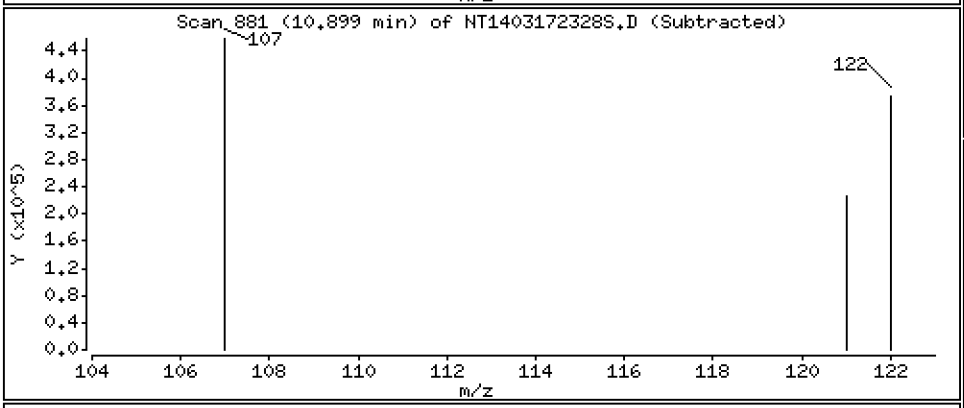
Column diameter: 0.25

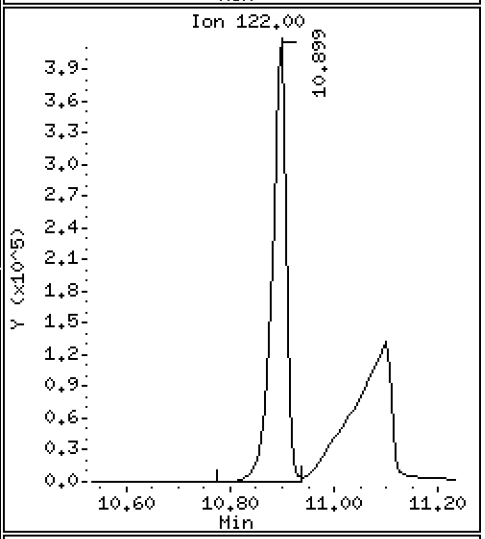
22 2,4-Dimethylphenol

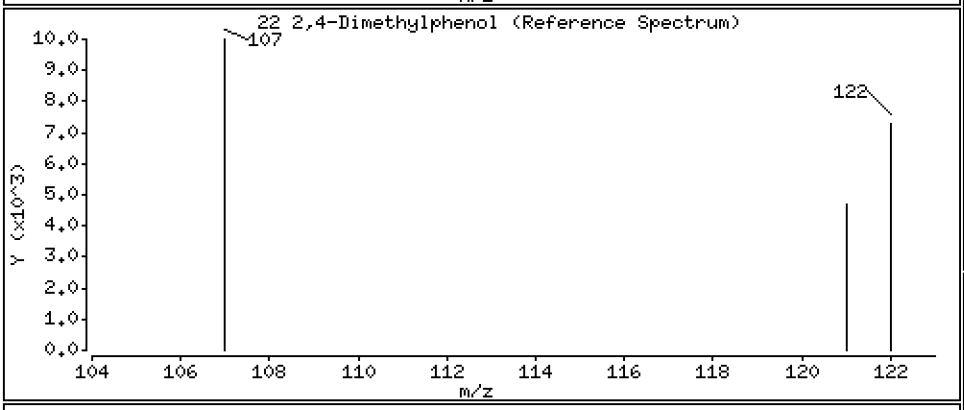
Concentration: 11.12 ug/mL

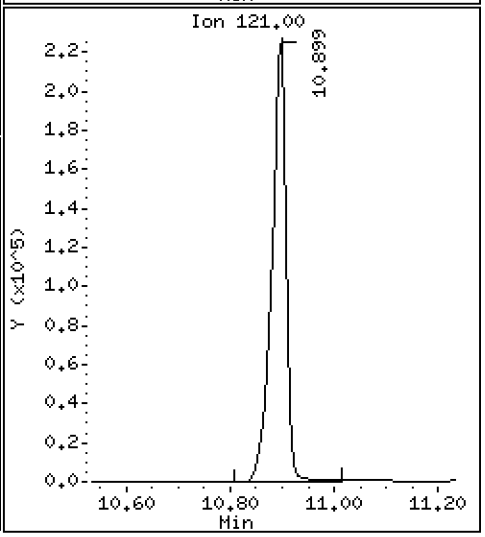


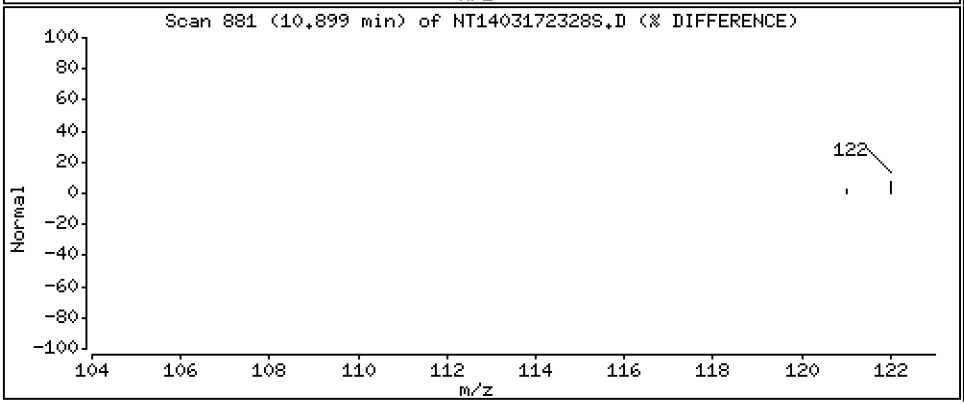












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS2

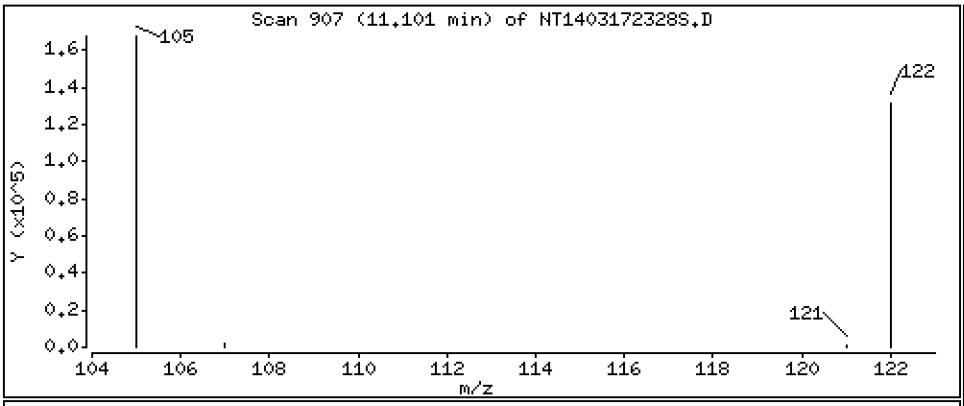
Operator: JGR

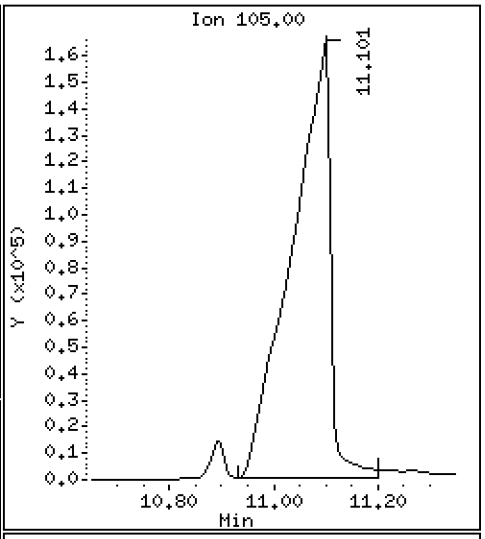
Column phase: ZB-5msi

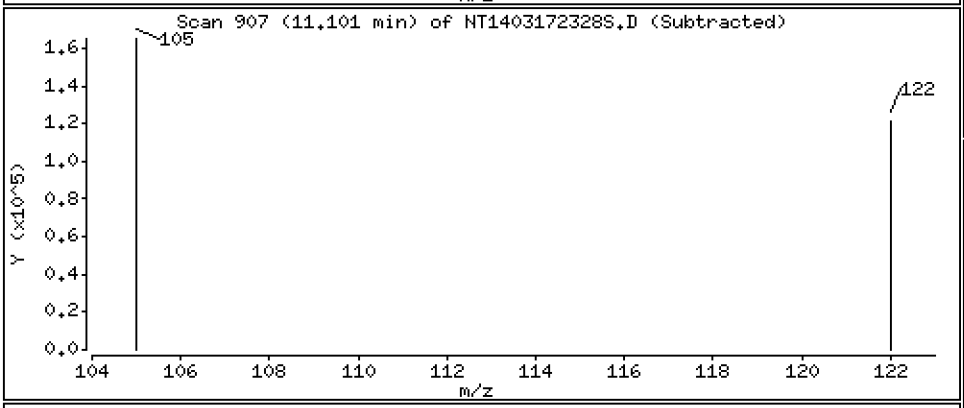
Column diameter: 0.25

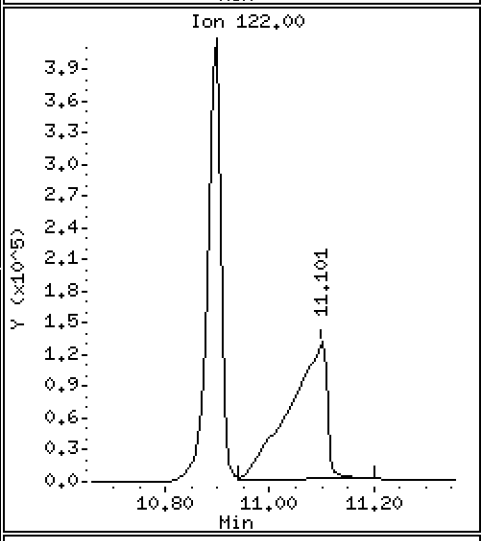
24 Benzoic acid

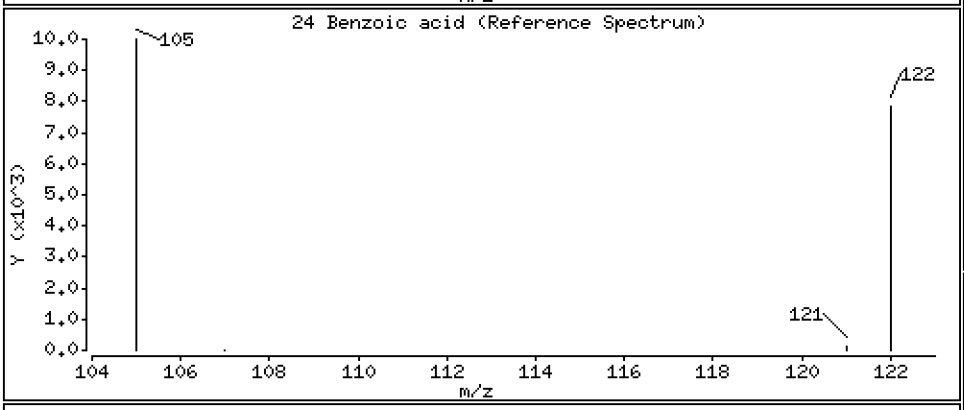
Concentration: 13.43 ug/mL

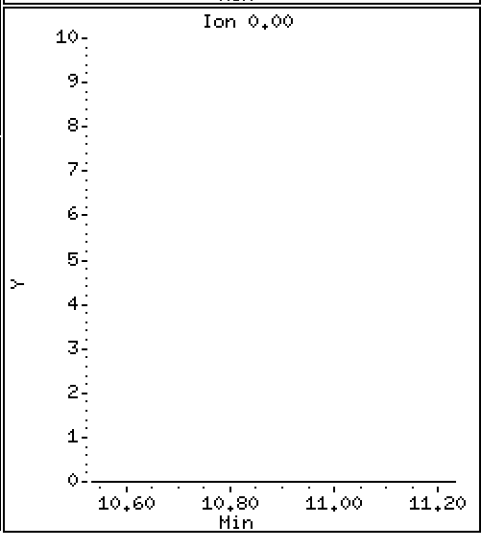


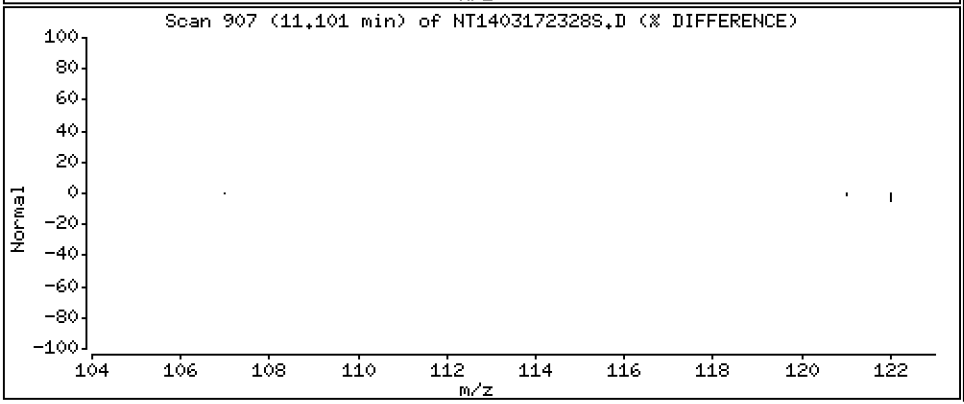












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT14031723285.D

Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS2

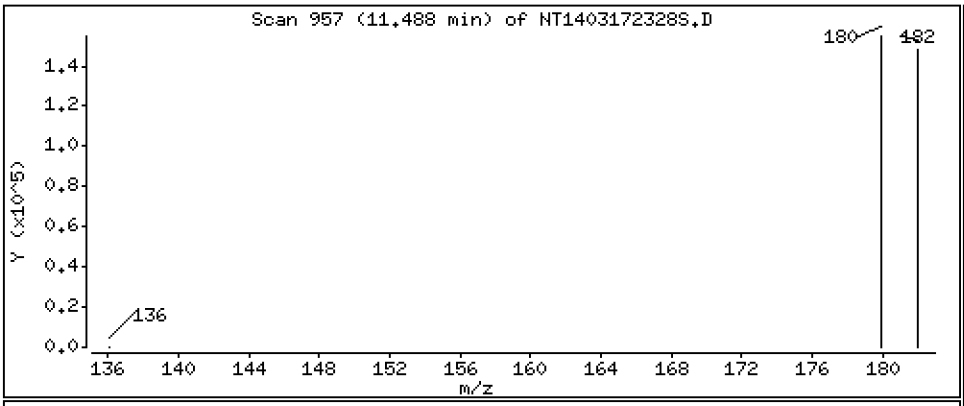
Operator: JGR

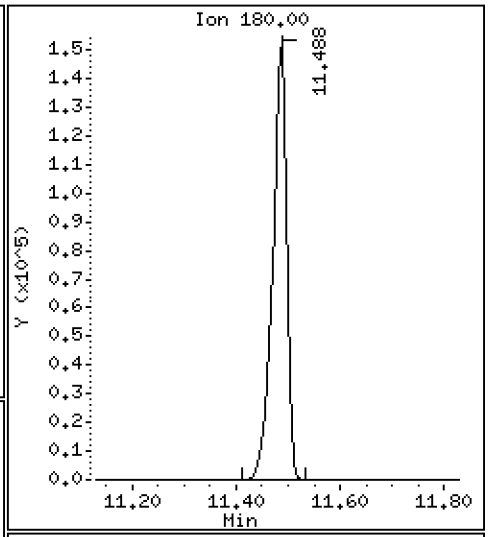
Column phase: ZB-5msi

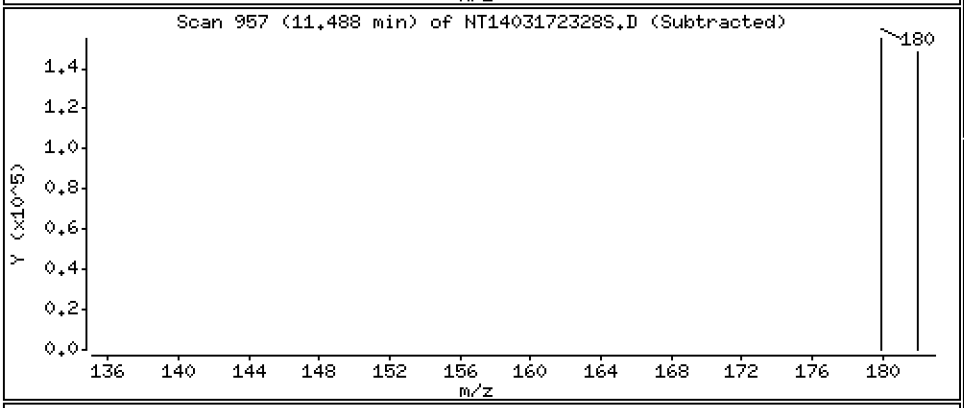
Column diameter: 0.25

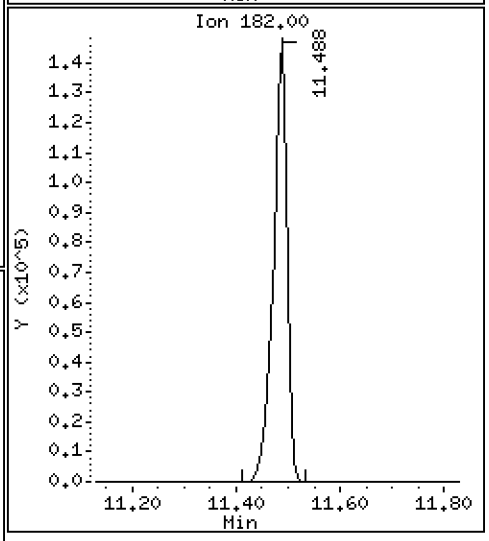
26 1,2,4-Trichlorobenzene

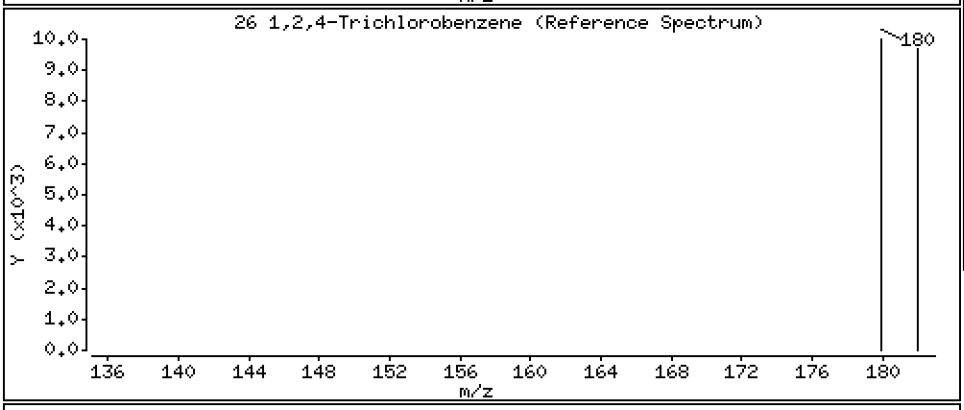
Concentration: 3.637 ug/mL

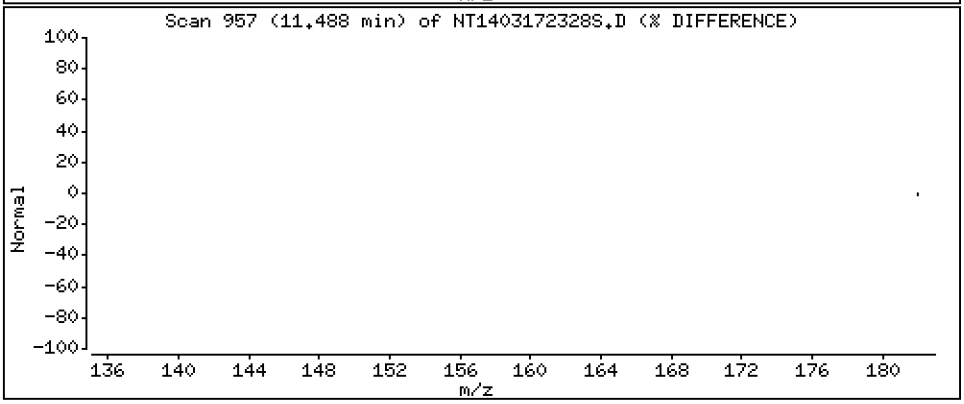












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS2

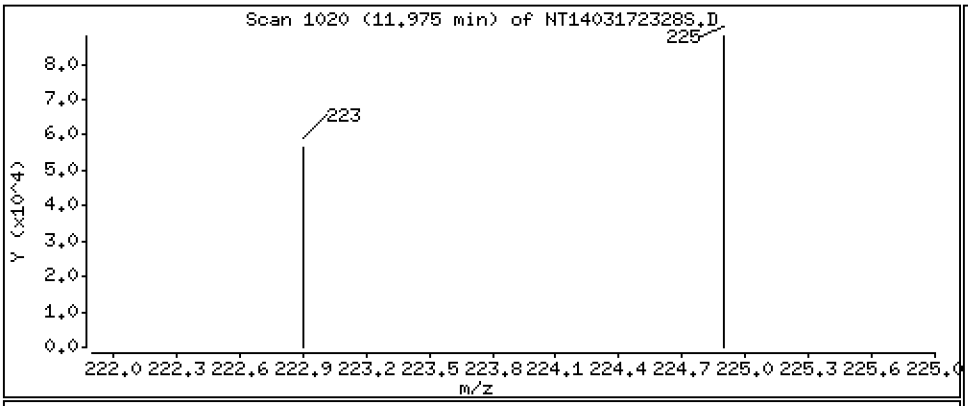
Operator: JGR

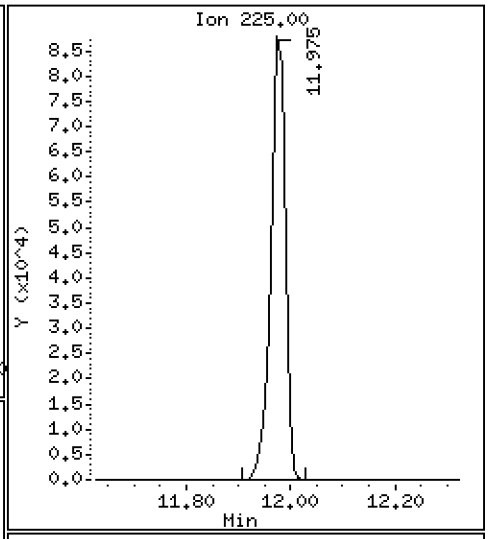
Column phase: ZB-5msi

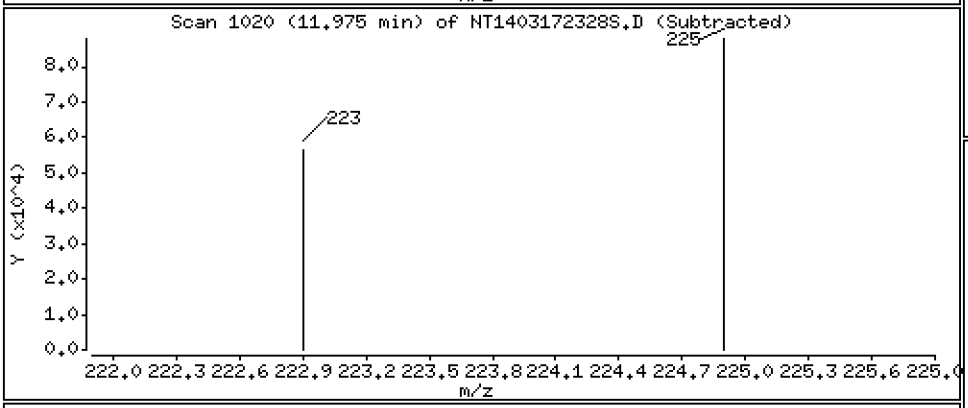
Column diameter: 0.25

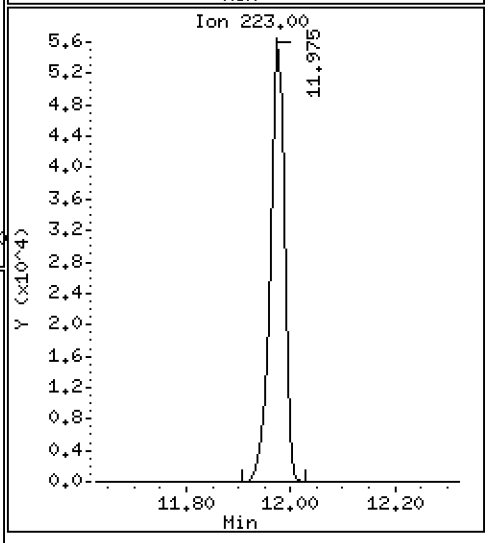
30 Hexachlorobutadiene

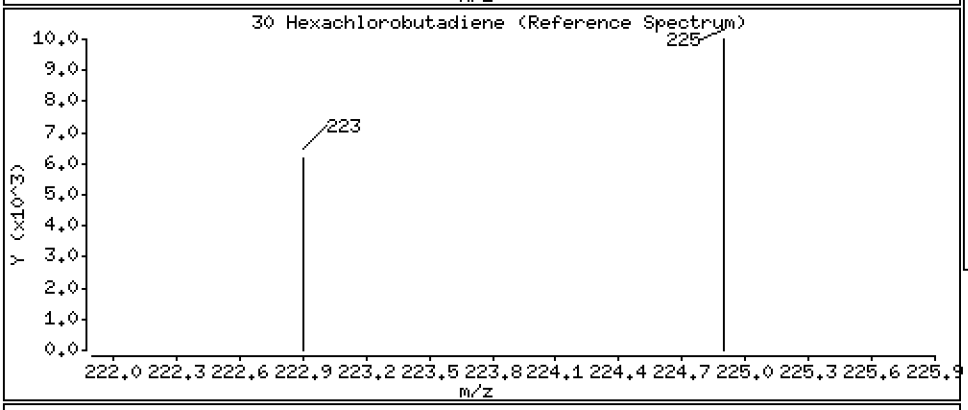
Concentration: 4.078 ug/mL

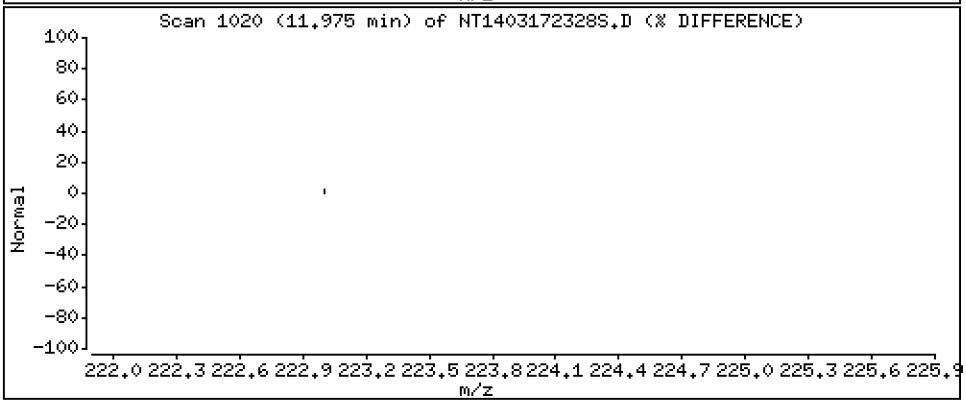












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS2

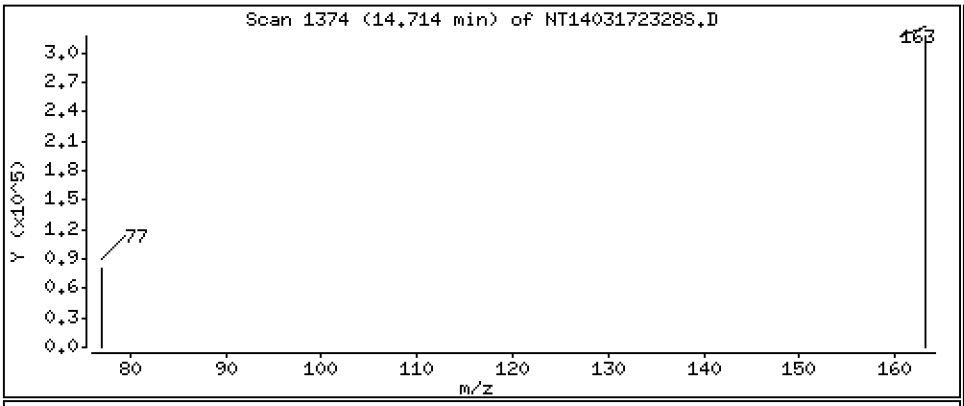
Operator: JGR

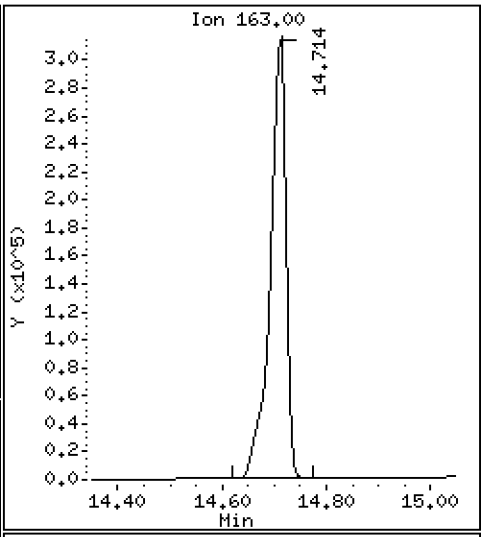
Column phase: ZB-5msi

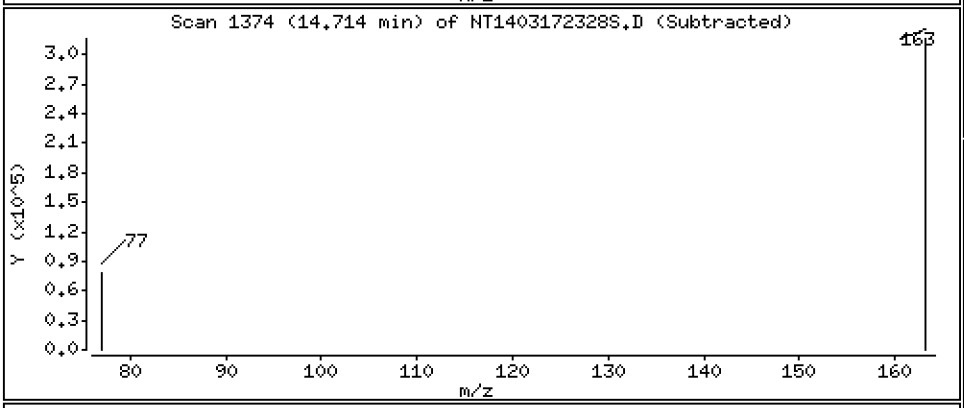
Column diameter: 0.25

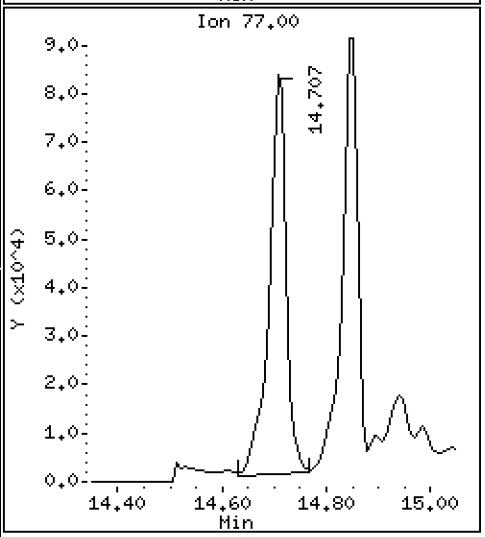
39 Dimethylphthalate

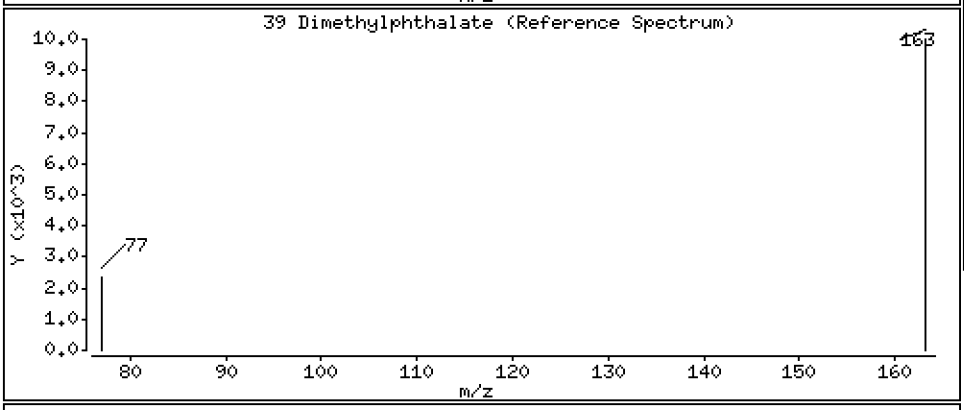
Concentration: 4.361 ug/mL

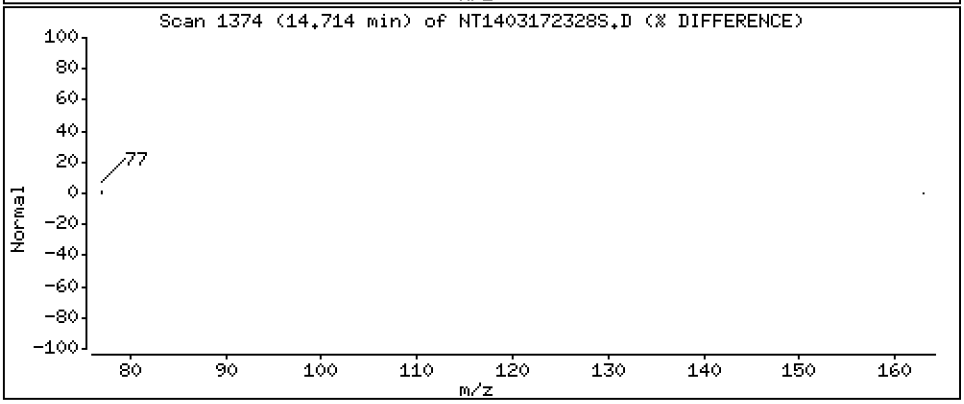












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172328S.D

Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS2

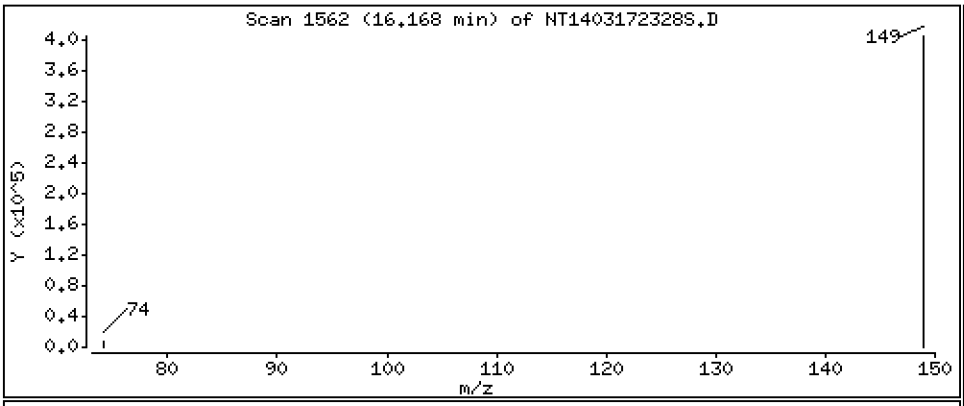
Operator: JGR

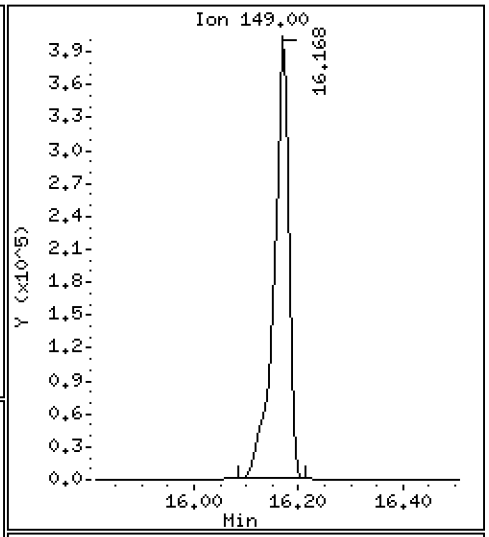
Column phase: ZB-5msi

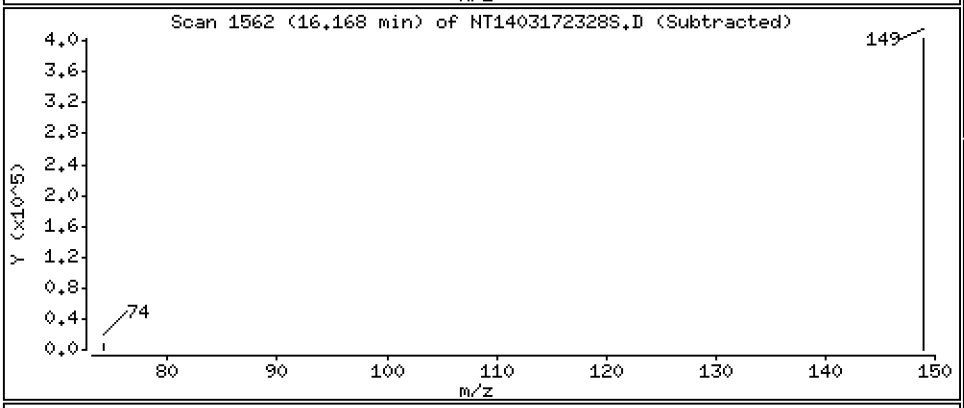
Column diameter: 0.25

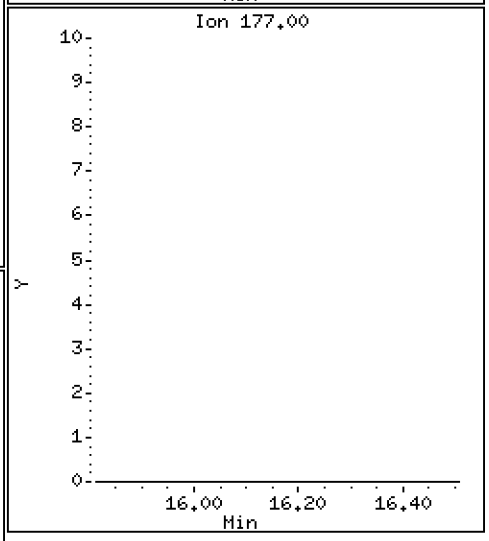
50 Diethylphthalate

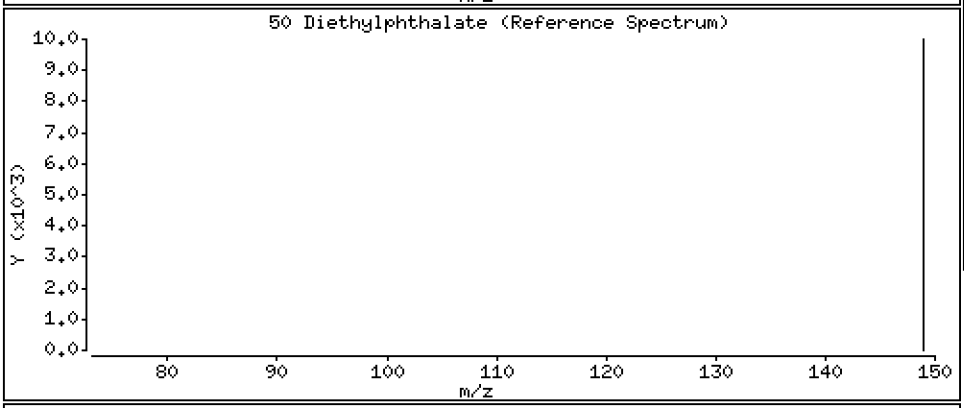
Concentration: 5.016 ug/mL

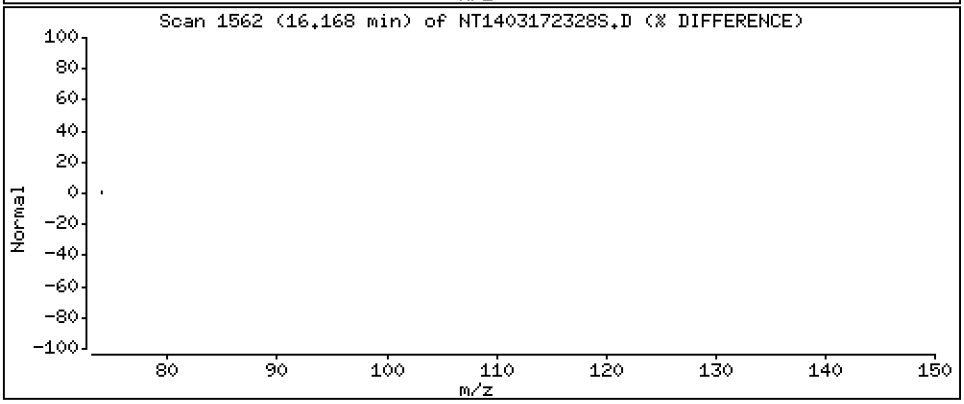












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS2

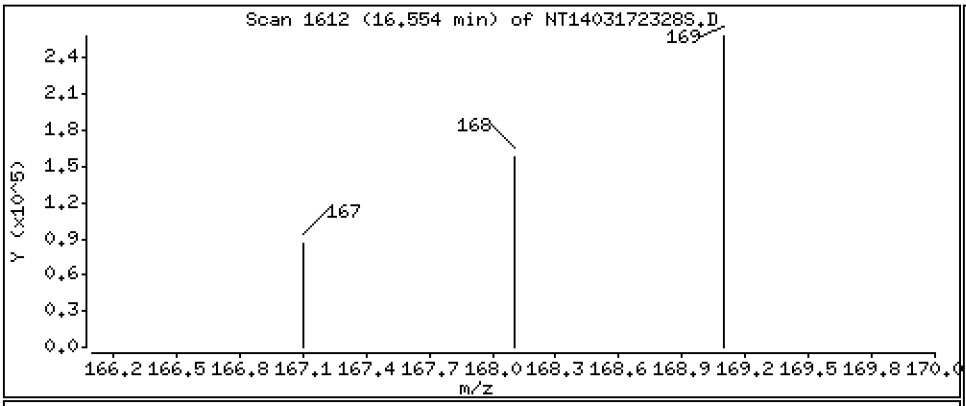
Operator: JGR

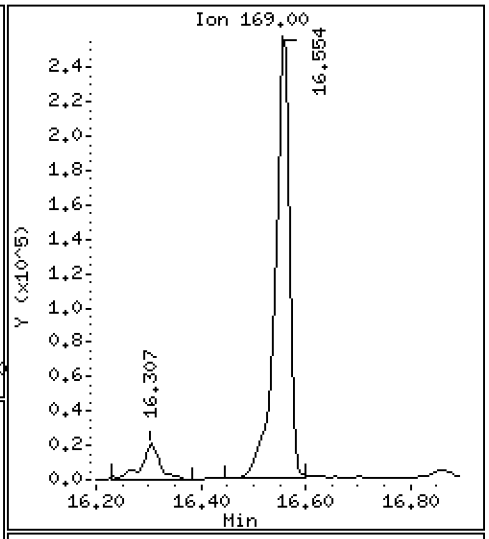
Column phase: ZB-5msi

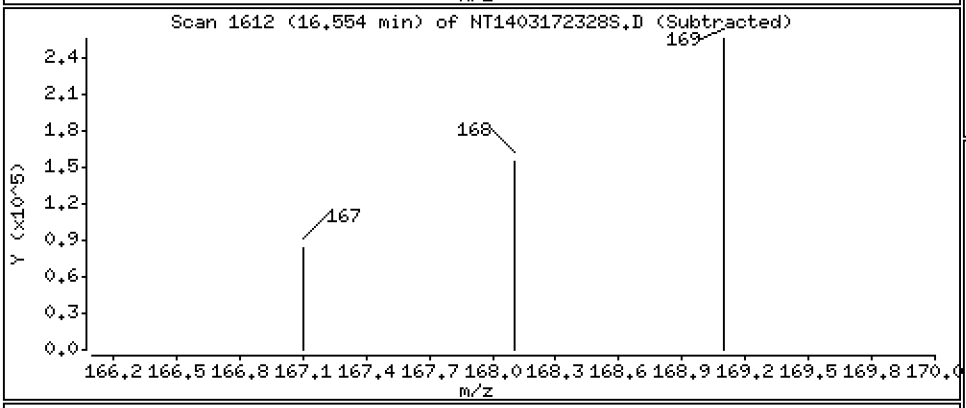
Column diameter: 0.25

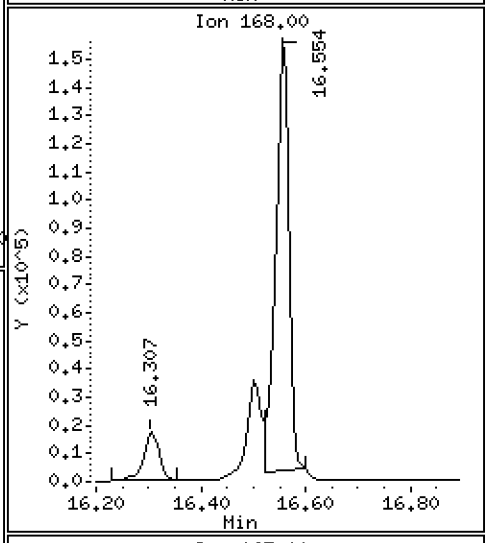
54 N-Nitrosodiphenylamine

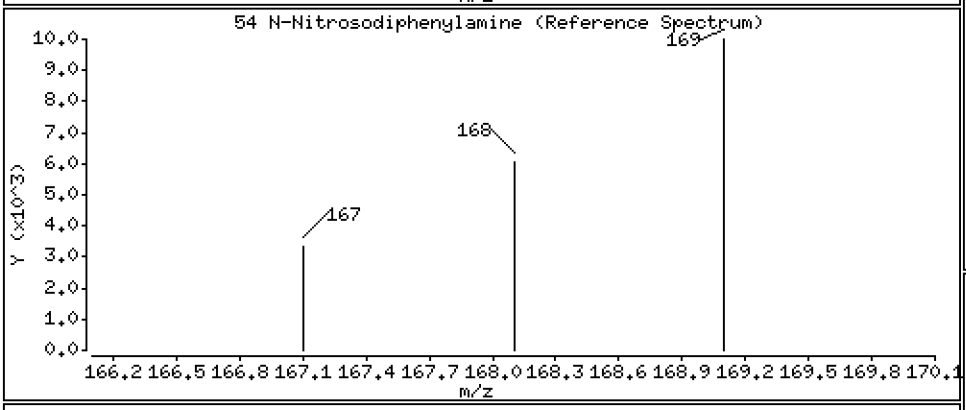
Concentration: 4.544 ug/mL

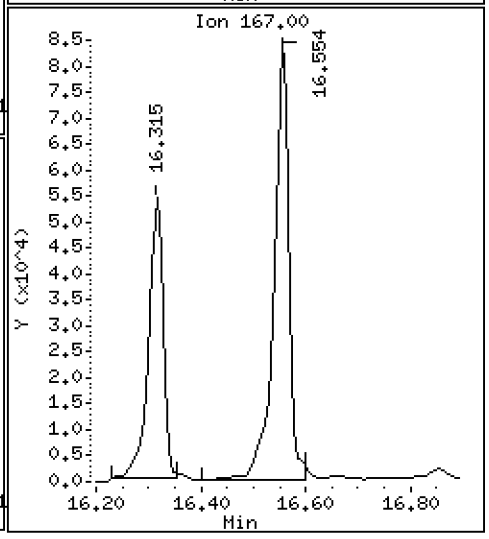


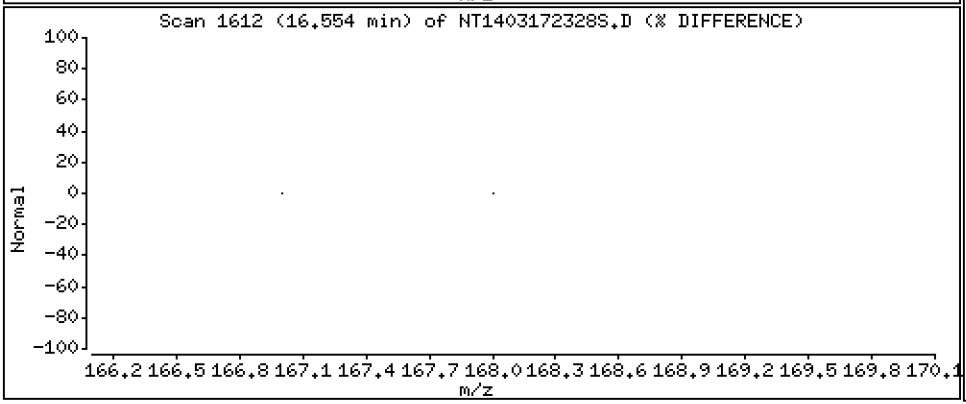












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS2

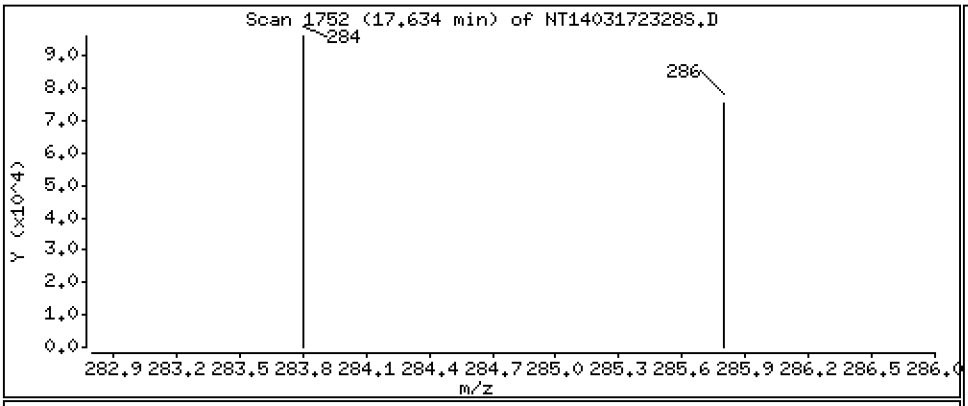
Operator: JGR

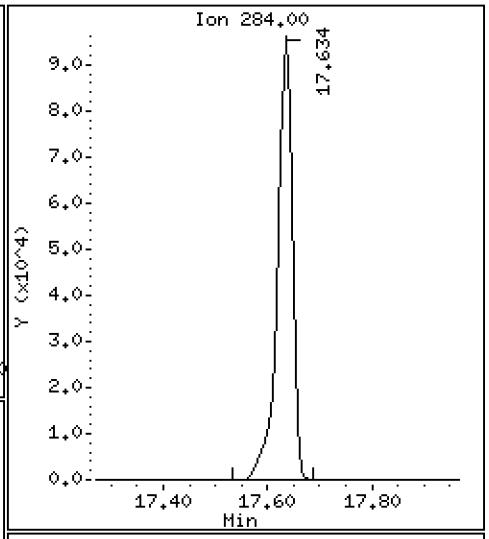
Column phase: ZB-5msi

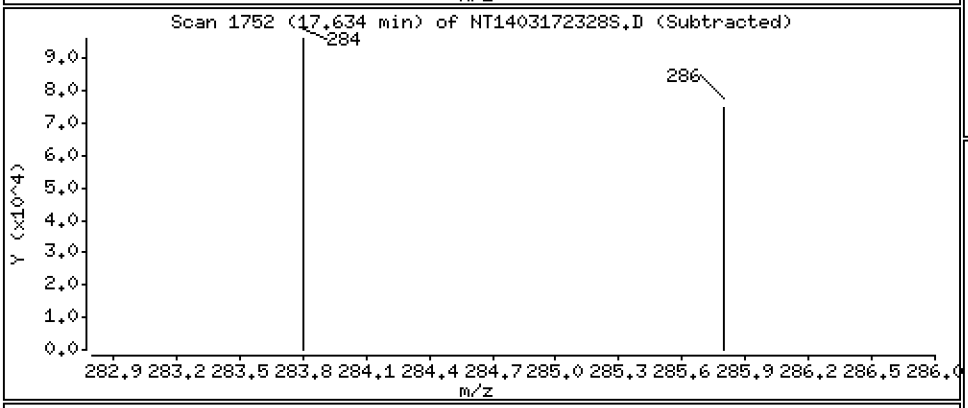
Column diameter: 0.25

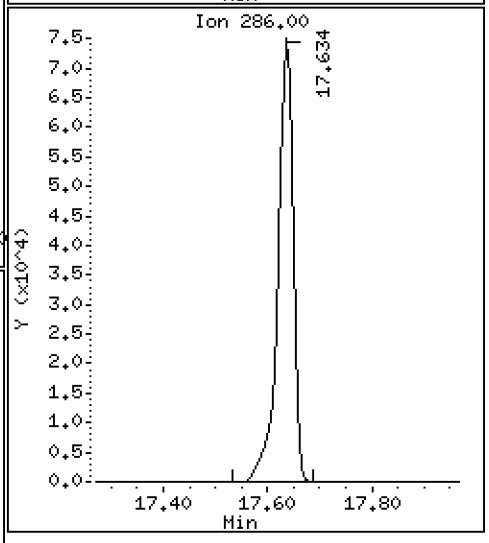
57 Hexachlorobenzene

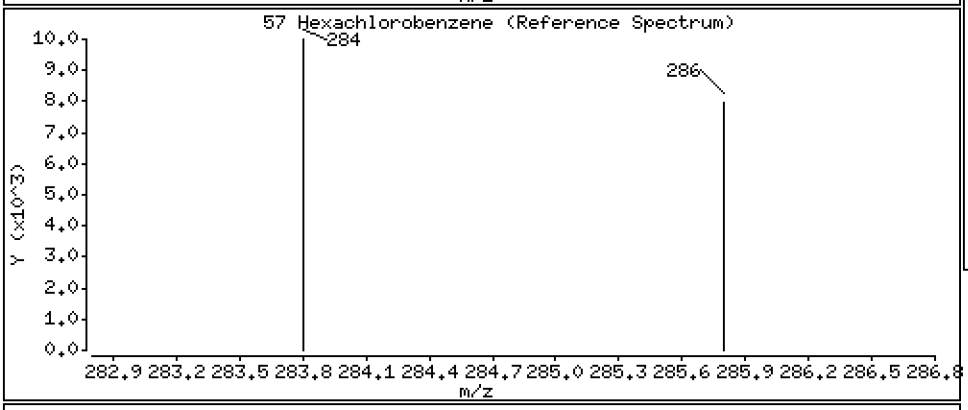
Concentration: 4.432 ug/mL

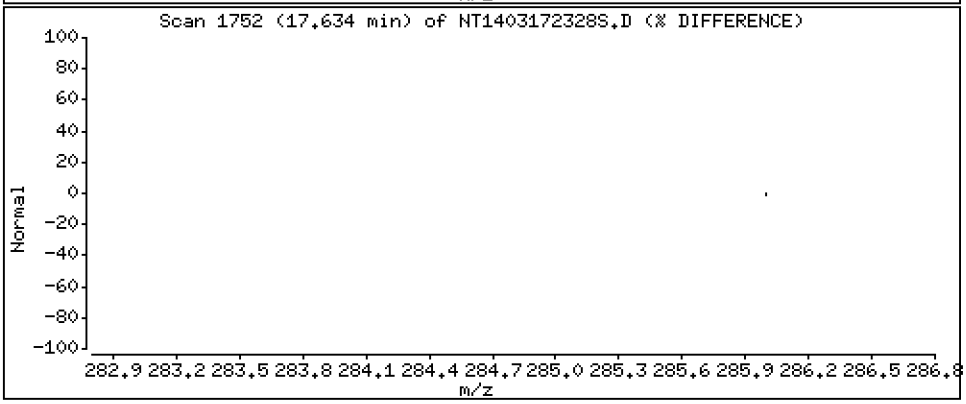












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Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS2

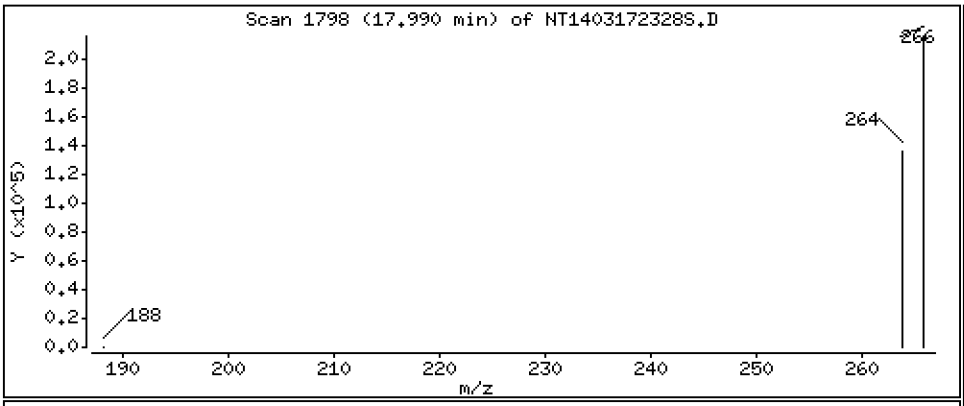
Operator: JGR

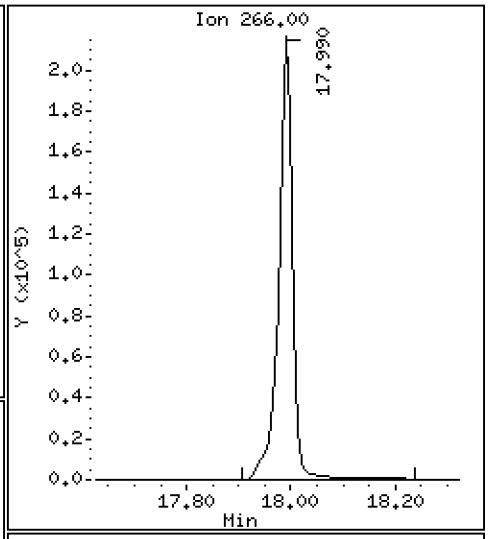
Column phase: ZB-5msi

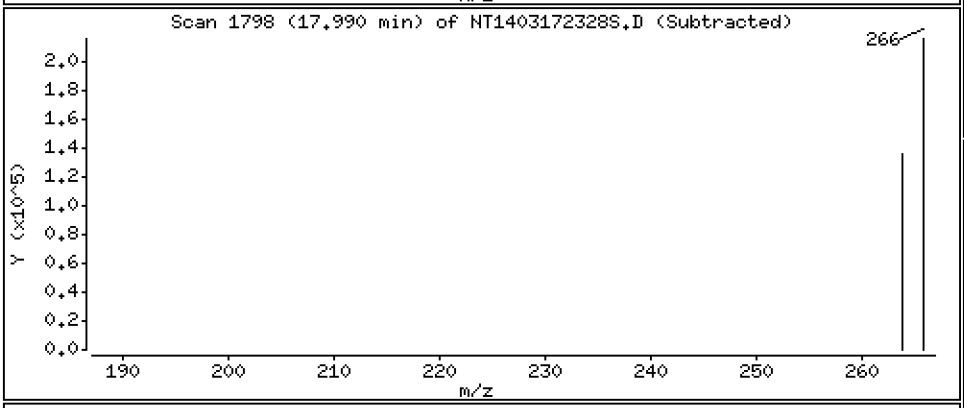
Column diameter: 0.25

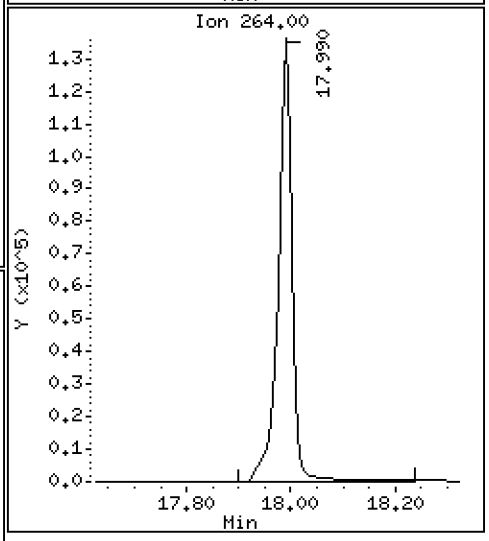
58 Pentachlorophenol

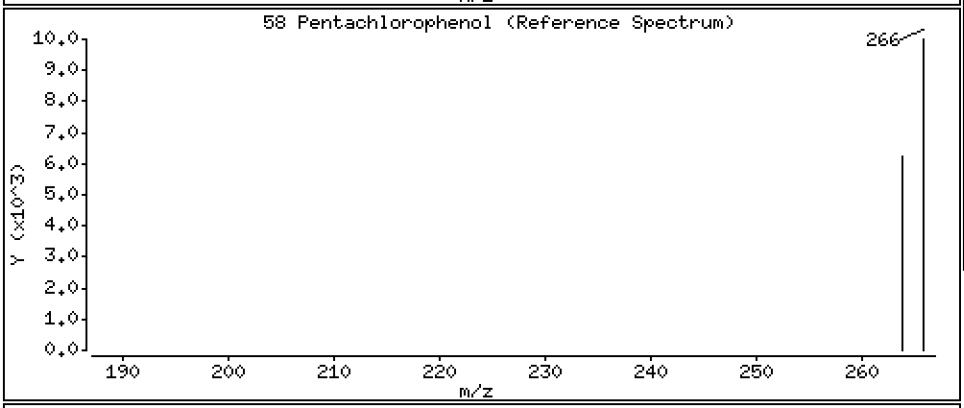
Concentration: 13.45 ug/mL

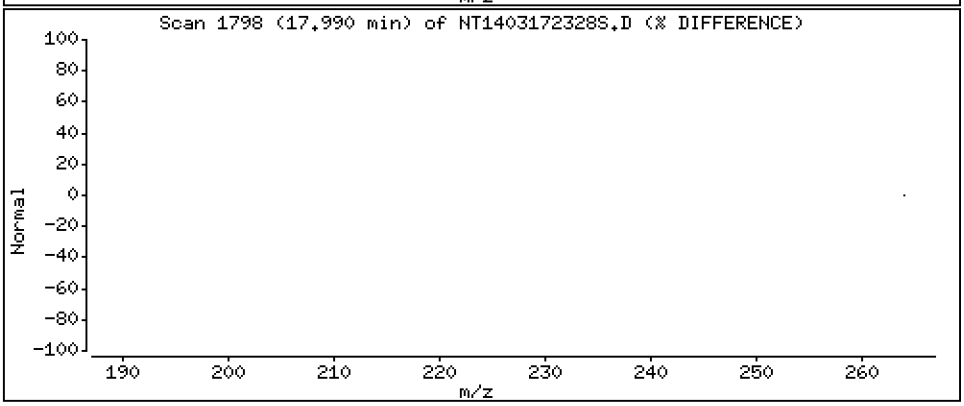












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172328S.D

Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS2

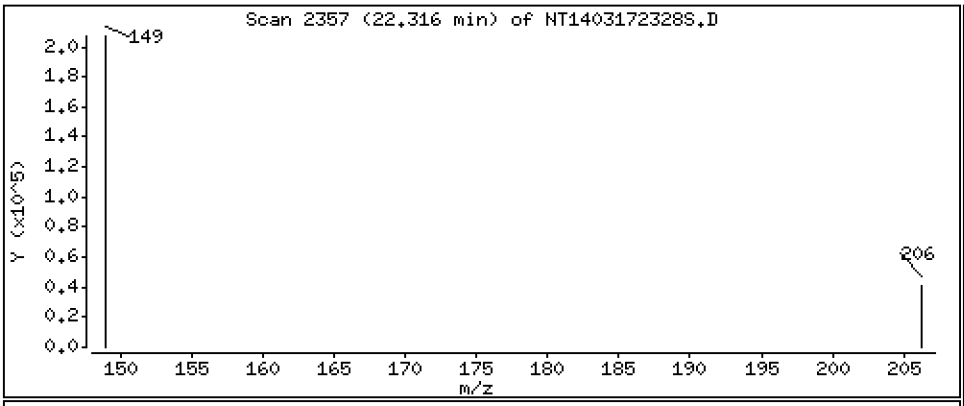
Operator: JGR

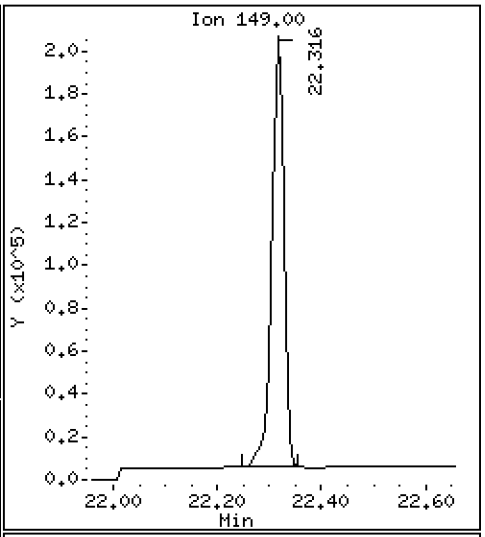
Column phase: ZB-5msi

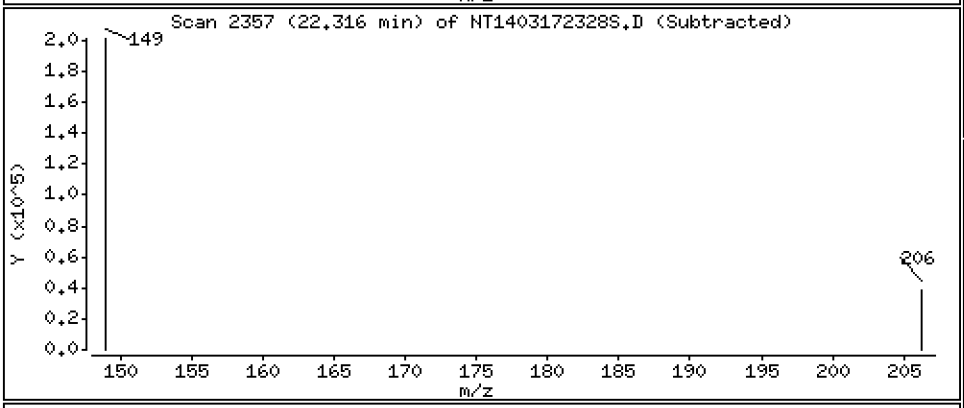
Column diameter: 0.25

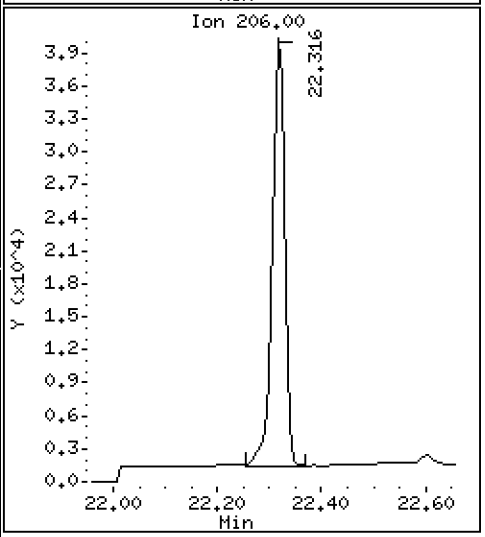
67 Butylbenzylphthalate

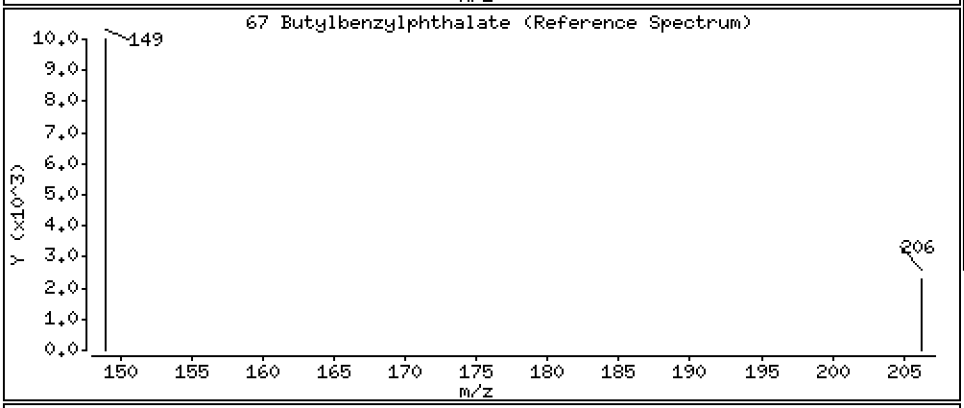
Concentration: 7.229 ug/mL

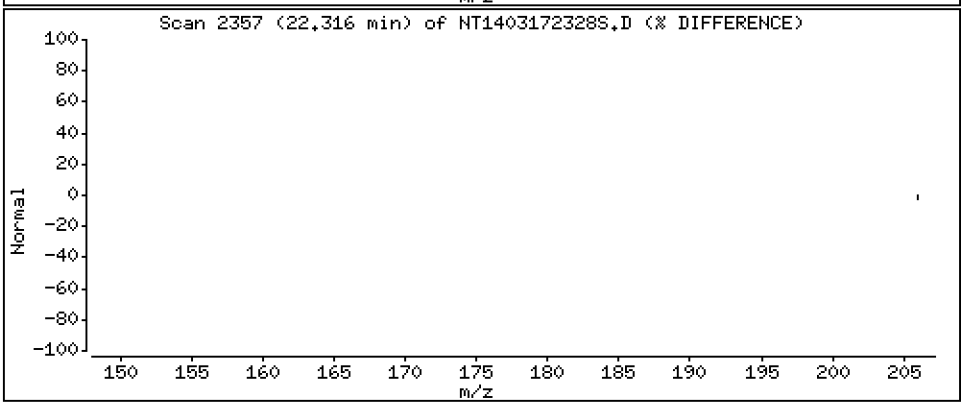












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172328S.D

Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS2

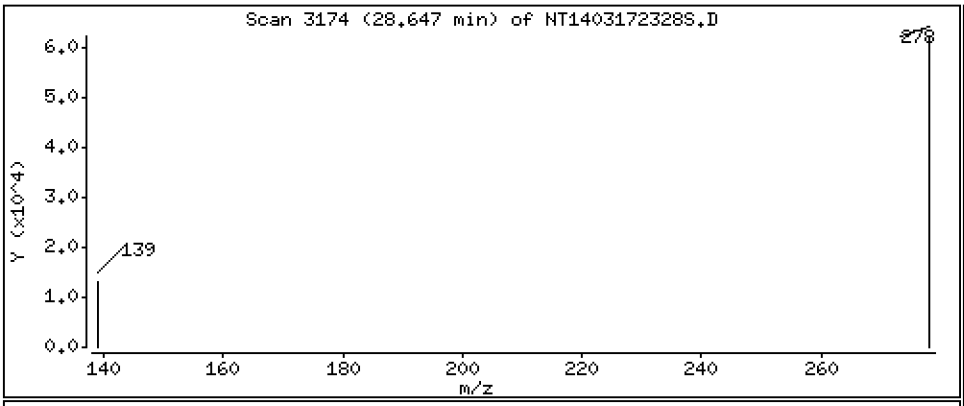
Operator: JGR

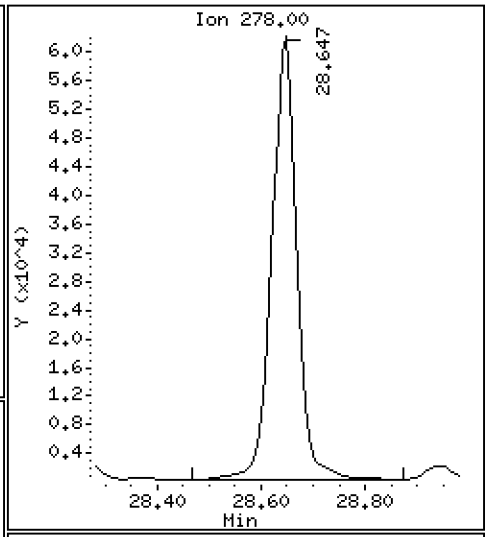
Column phase: ZB-5msi

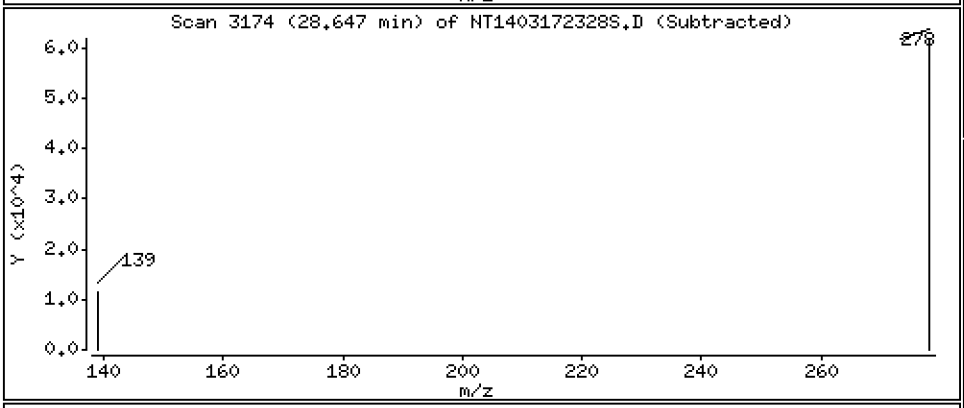
Column diameter: 0.25

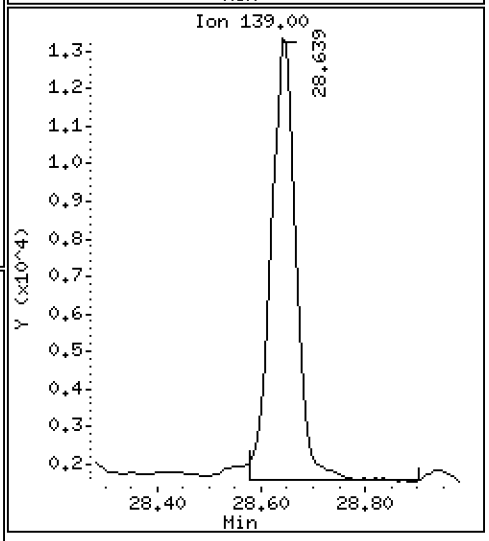
79 Dibenzo(a,h)anthracene

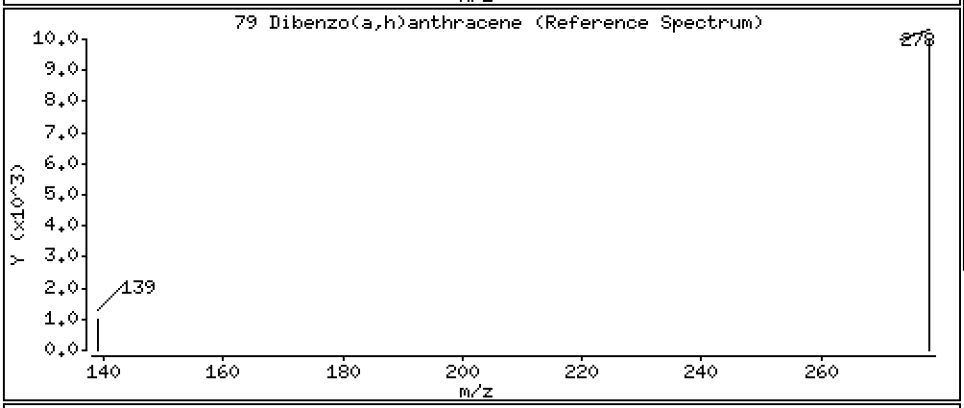
Concentration: 4.454 ug/mL

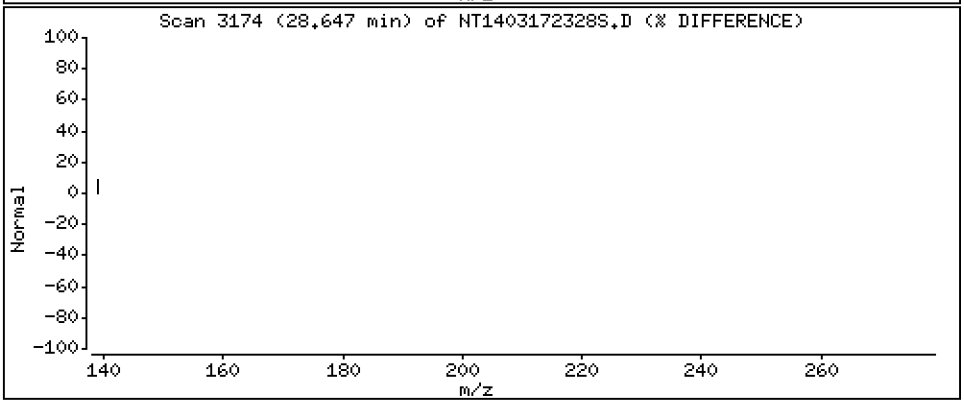












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT14031723285.D

Date : 18-MAR-2023 06:42

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MS2

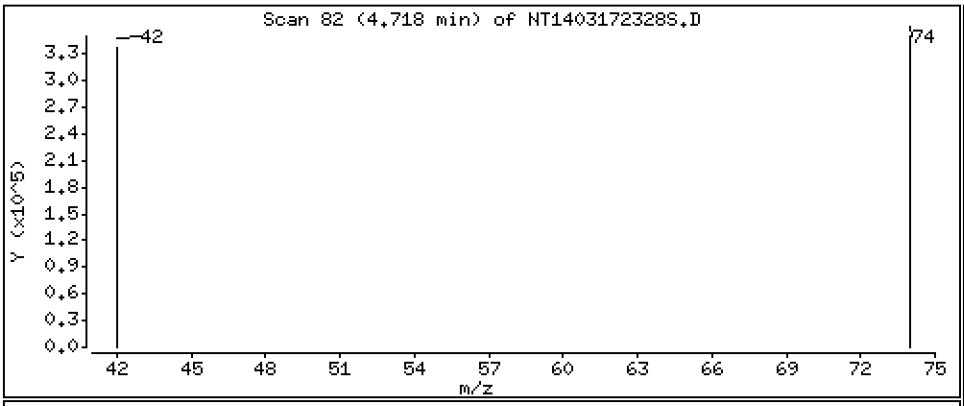
Operator: JGR

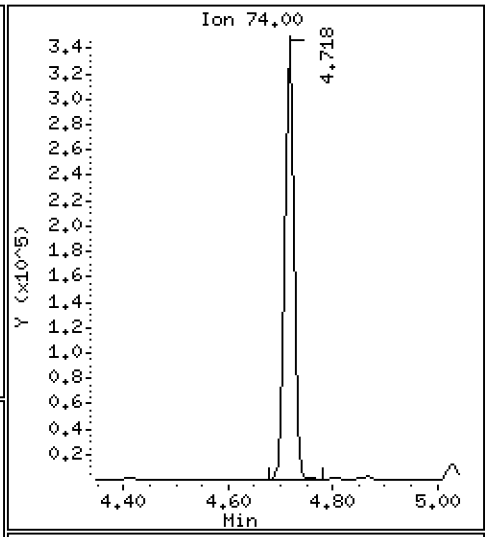
Column phase: ZB-5msi

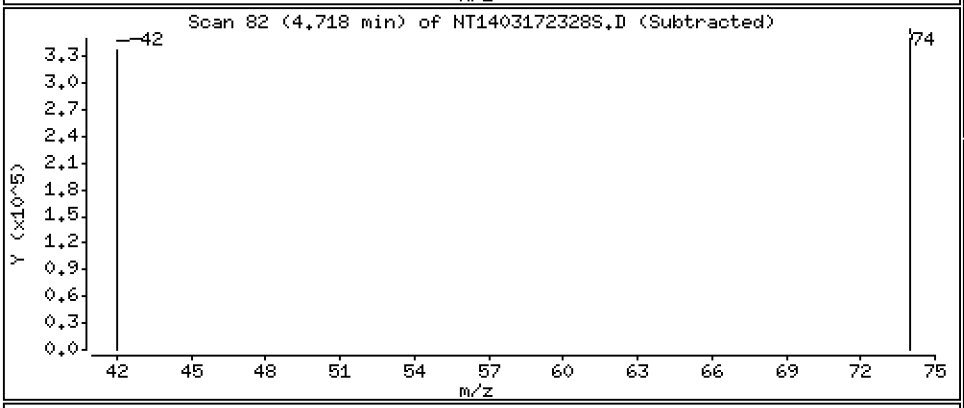
Column diameter: 0.25

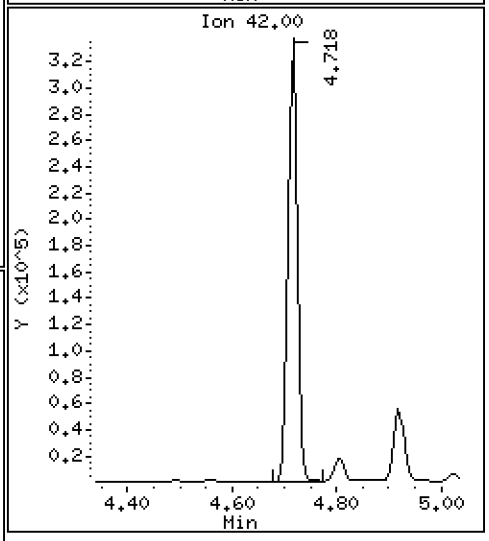
90 N-Nitrosodimethylamine

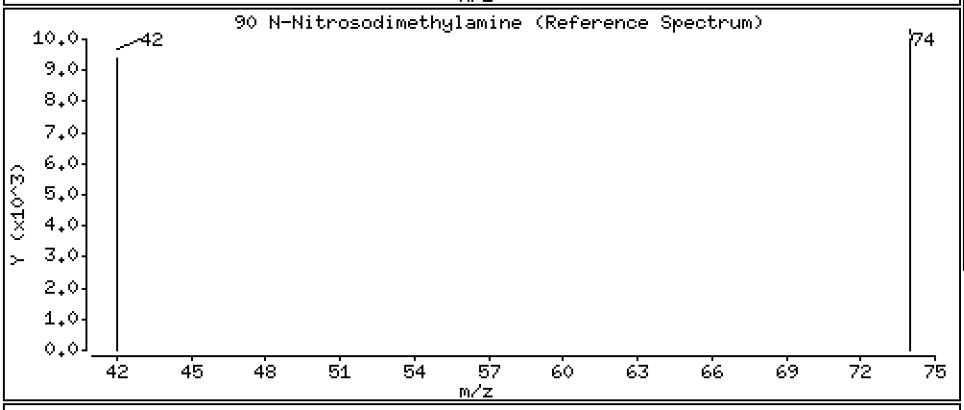
Concentration: 8.916 ug/mL

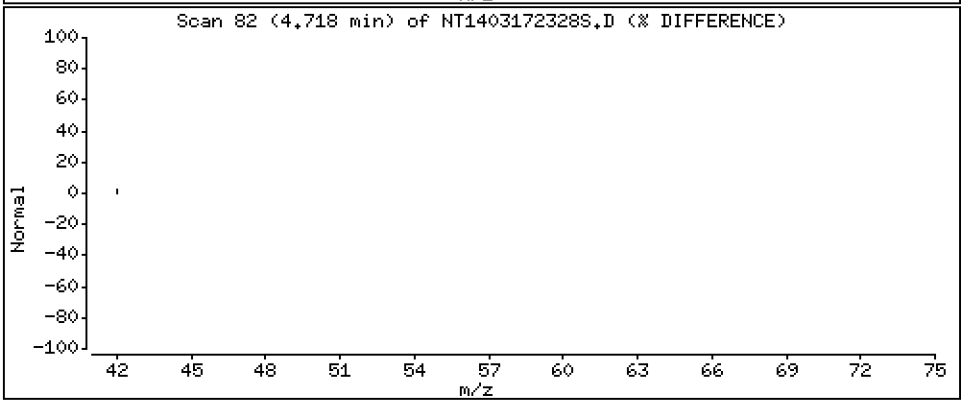












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172328S.D
Lab Smp Id: BLB0424-MS2
Inj Date : 18-MAR-2023 06:42 MS Autotune Date: 11-MAR-2023 16:01
Operator : JGR Inst ID: nt14.i
Smp Info : BLB0424-MS2
Misc Info :
Comment :
Method : \\target\share\chem3\nt14.i\20230317.b\20230317.b\SIMABN2.m
Meth Date : 23-Mar-2023 16:55 van Quant Type: ISTD
Cal Date : 15-MAR-2023 15:50 Cal File: NT1403152308.D
Als bottle: 24
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.842	6.826	(0.755)	438610	5.36095	5.361(R)
	3 Phenol	94	8.448	8.441	(0.932)	381593	3.39165	3.392
	7 1,3-Dichlorobenzene	146	9.005	8.997	(0.993)	323134	3.35620	3.356
*	8 1,4-Dichlorobenzene-d4	152	9.067	9.067	(1.000)	241033	4.00000	
	9 1,4-Dichlorobenzene	146	9.098	9.098	(1.003)	319816	3.43275	3.433
	11 Benzyl alcohol	79	9.354	9.354	(1.032)	276154	4.18756	4.188
	12 1,2-Dichlorobenzene	146	9.455	9.455	(1.043)	318824	3.51332	3.513
	13 2-Methylphenol	108	9.572	9.564	(1.056)	278618	3.58491	3.585
	15 4-Methylphenol	108	9.843	9.828	(1.086)	319084	3.88623	3.886
	16 N-Nitroso-di-n-propylamine	70	9.905	9.898	(1.092)	234443	4.03857	4.039
	22 2,4-Dimethylphenol	107	10.899	10.883	(0.942)	884678	11.1160	11.12
	24 Benzoic acid	105	11.100	10.999	(0.959)	855504	13.4305	13.43
	26 1,2,4-Trichlorobenzene	180	11.487	11.480	(0.993)	283701	3.63706	3.637
*	27 Naphthalene-d8	136	11.572	11.565	(1.000)	925783	4.00000	
	30 Hexachlorobutadiene	225	11.974	11.974	(1.035)	160961	4.07759	4.078
	39 Dimethylphthalate	163	14.714	14.698	(0.967)	644159	4.36138	4.361
*	42 Acenaphthene-d10	162	15.209	15.201	(1.000)	432475	4.00000	
	50 Diethylphthalate	149	16.168	16.160	(1.063)	788716	5.01586	5.016
	54 N-Nitrosodiphenylamine	169	16.553	16.546	(0.907)	489521	4.54397	4.544
	57 Hexachlorobenzene	284	17.634	17.618	(0.966)	183439	4.43238	4.432
	58 Pentachlorophenol	266	17.990	17.974	(0.986)	402235	13.4510	13.45
*	59 Phenanthrene-d10	188	18.253	18.245	(1.000)	795089	4.00000	
$	66 Terphenyl-d14	244	21.402	21.386	(0.918)	343770	8.28788	8.288(R)
	67 Butylbenzylphthalate	149	22.315	22.308	(0.957)	306104	7.22938	7.229
*	69 Chrysene-d12	240	23.307	23.291	(1.000)	240602	4.00000	
*	77 Perylene-d12	264	25.954	25.931	(1.000)	183923	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.647	28.631	(1.104)	207676	4.45413	4.454
	90 N-Nitrosodimethylamine	74	4.717	4.694	(0.520)	445629	8.91567	8.916

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1403172328S.D
Lab Smp Id: BLB0424-MS2
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\SIMABN2.m
Misc Info:

Calibration Date: 18-MAR-2023
Calibration Time: 00:07
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	225221	112611	450442	241033	7.02
27 Naphthalene-d8	830434	415217	1660868	925783	11.48
42 Acenaphthene-d10	389907	194954	779814	432475	10.92
59 Phenanthrene-d10	763679	381840	1527358	795089	4.11
69 Chrysene-d12	415791	207896	831582	240602	-42.13
77 Perylene-d12	274872	137436	549744	183923	-33.09

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.07	8.57	9.57	9.07	0.00
27 Naphthalene-d8	11.57	11.07	12.07	11.57	0.07
42 Acenaphthene-d10	15.20	14.70	15.70	15.21	0.05
59 Phenanthrene-d10	18.25	17.75	18.75	18.25	0.04
69 Chrysene-d12	23.29	22.79	23.79	23.31	0.07
77 Perylene-d12	25.93	25.43	26.43	25.95	0.09

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

REVIEW SUMMARY FOR FILE - NT1403172328S.D

Lab ID: BLB0424-MS2
nt14.i, 20230317.b\20230317.b\SIMABN2.m,   18-MAR-2023 06:42

RT	CO-ELUTION COMPOUNDS
NO CO-ELUTIONS	

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.959	0.951	0.0081	Benzoic acid

RRT check based on Ccal File: 20230317.b/NT1403172317S.D

On Column LOD for nt14.i, 20230317.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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

Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT14031723298.D

Date : 18-MAR-2023 07:18

Client ID:

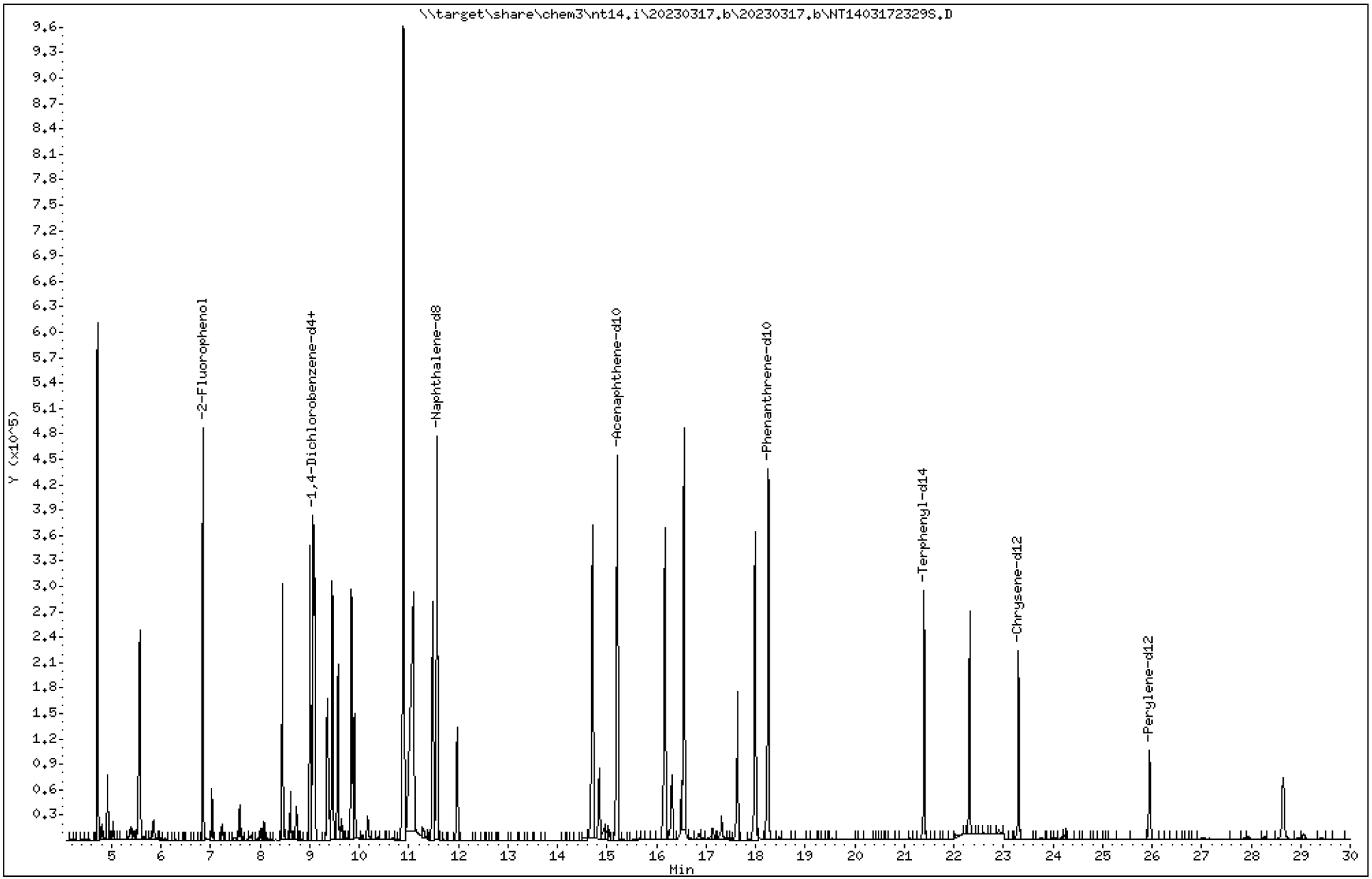
Instrument: nt14.i

Sample Info: BLB0424-MSD2

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT14031723295.D

Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD2

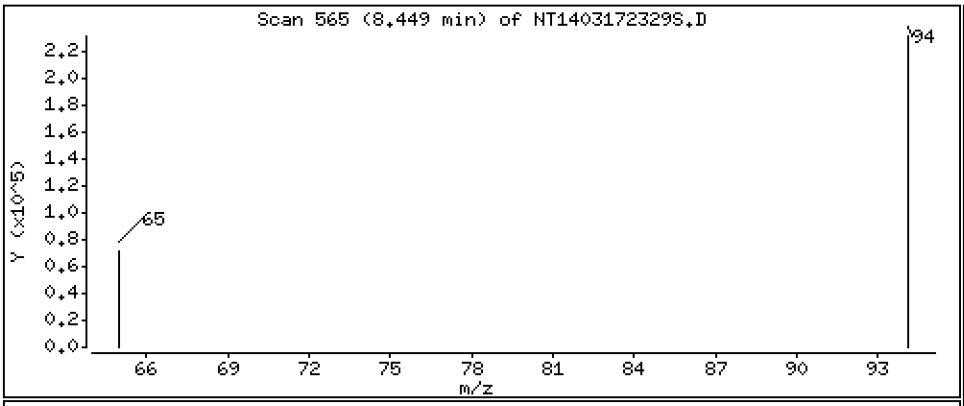
Operator: JGR

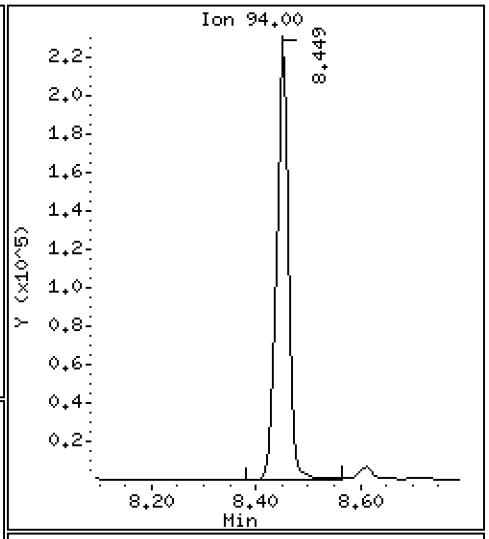
Column phase: ZB-5msi

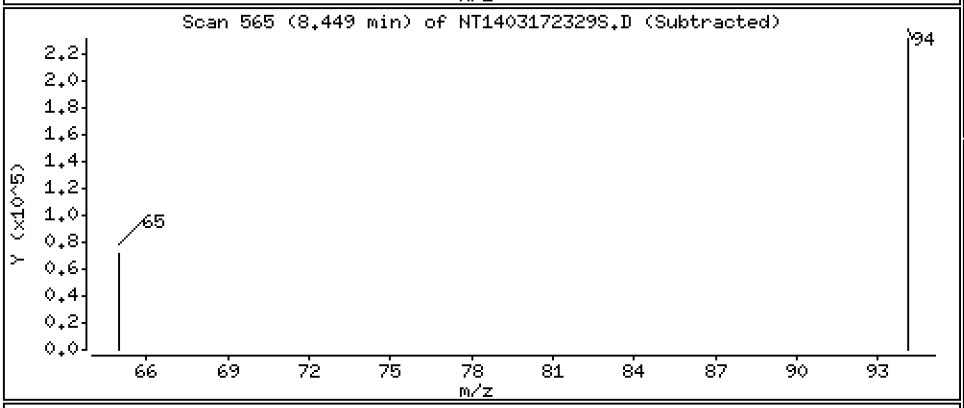
Column diameter: 0.25

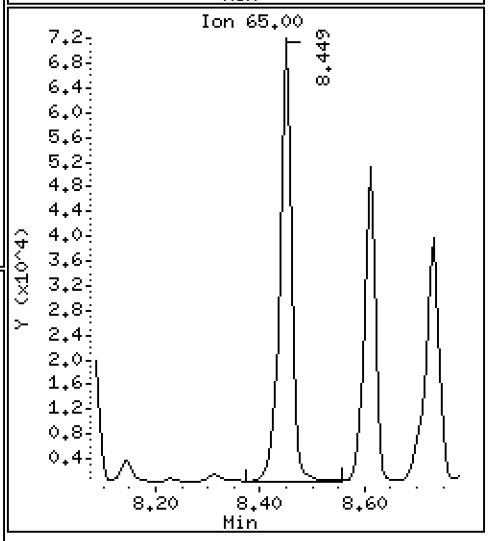
3 Phenol

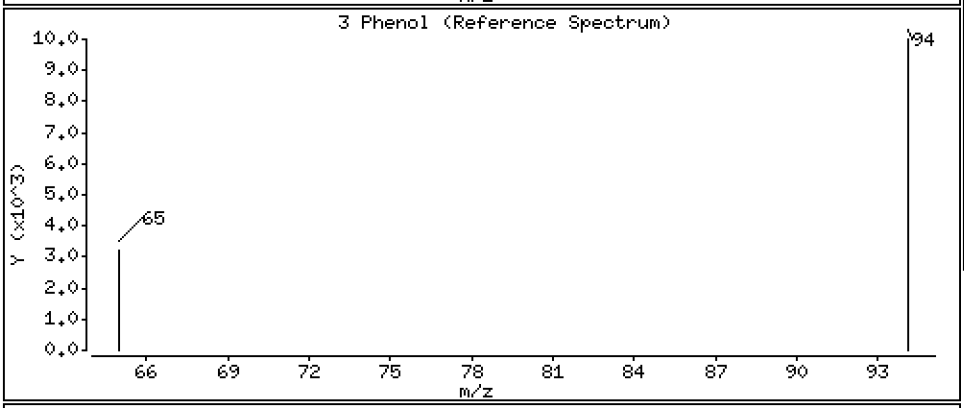
Concentration: 3.256 ug/mL

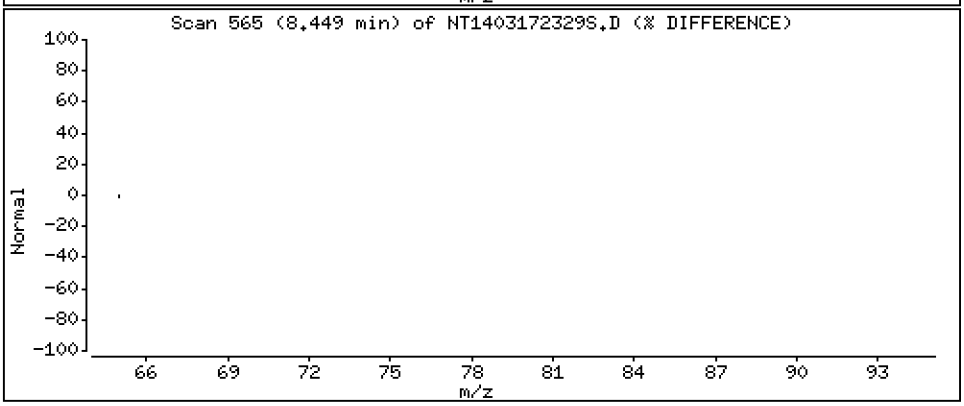












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT14031723295.D

Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD2

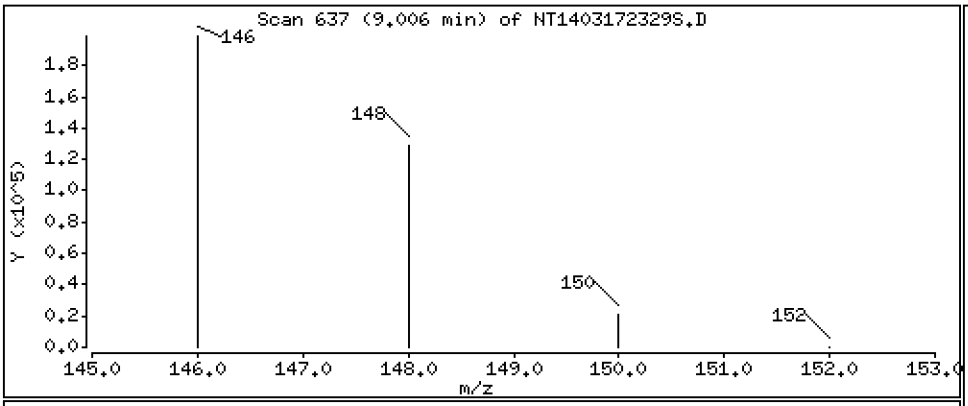
Operator: JGR

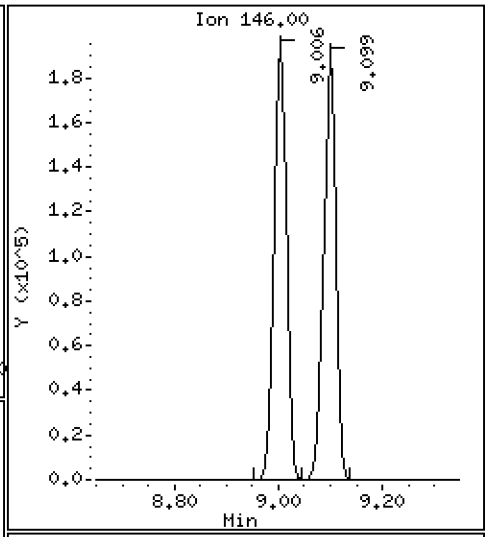
Column phase: ZB-5msi

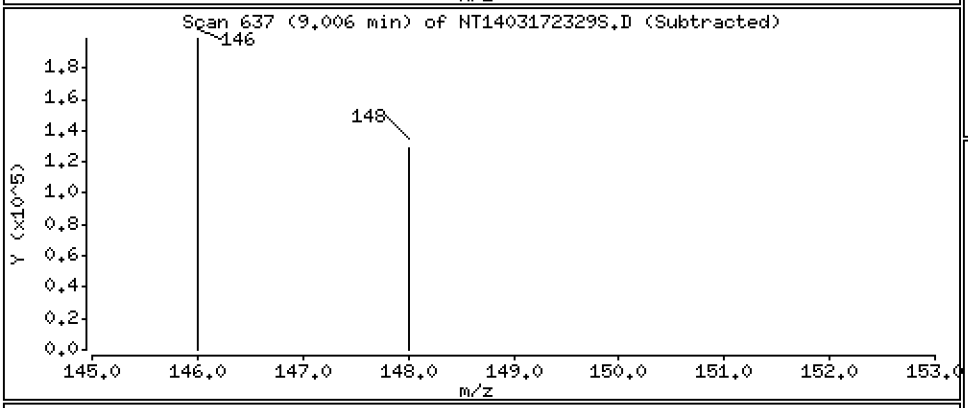
Column diameter: 0.25

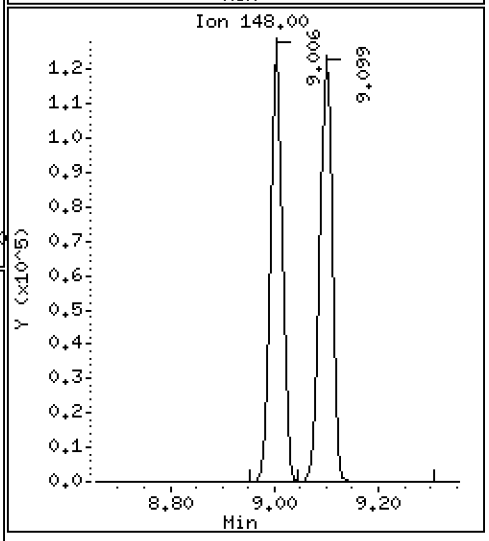
7 1,3-Dichlorobenzene

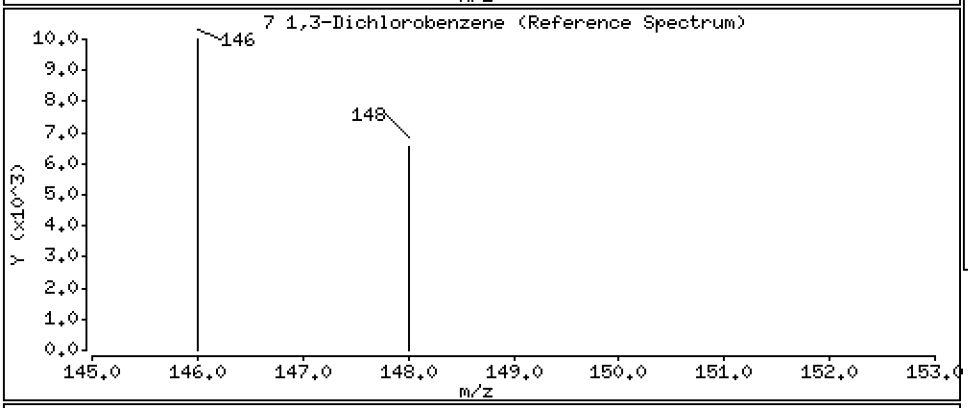
Concentration: 3.290 ug/mL

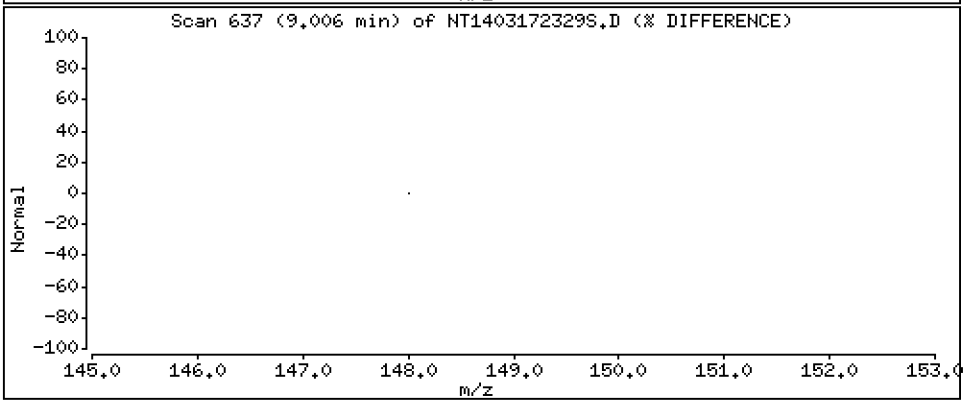












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT14031723295.D

Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD2

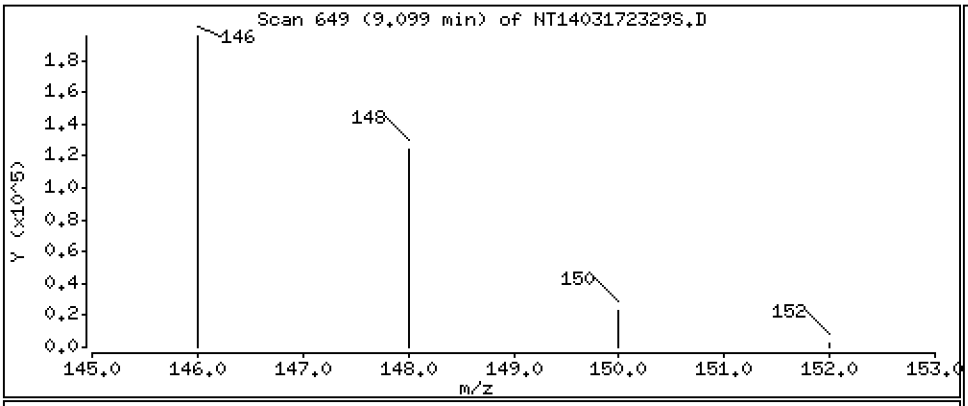
Operator: JGR

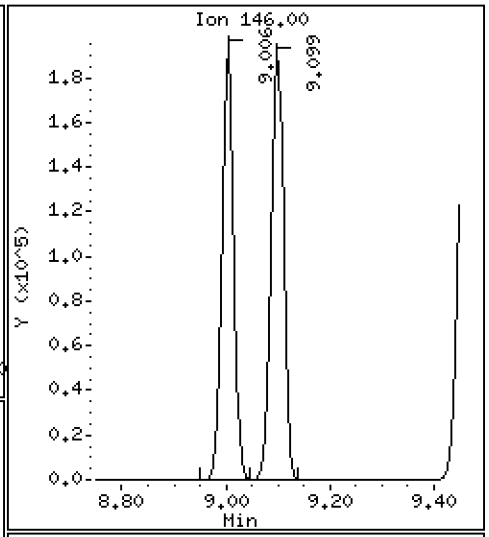
Column phase: ZB-5msi

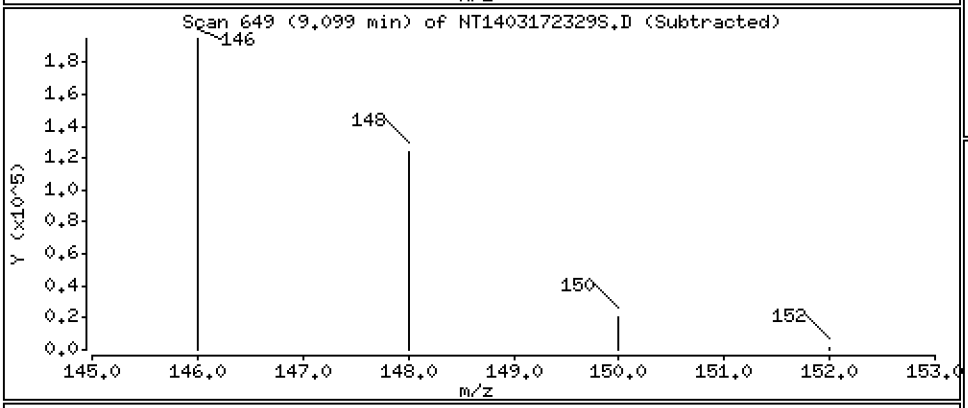
Column diameter: 0.25

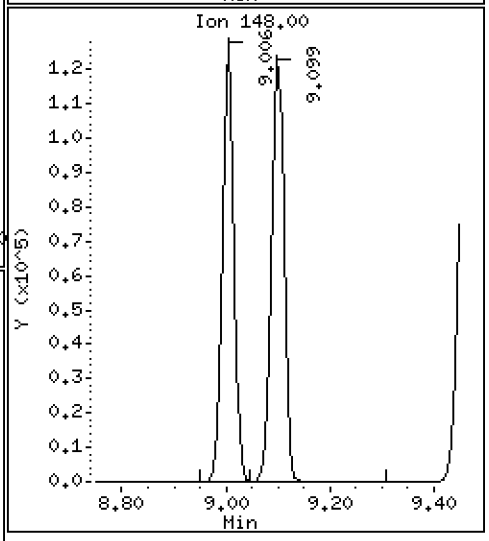
9 1,4-Dichlorobenzene

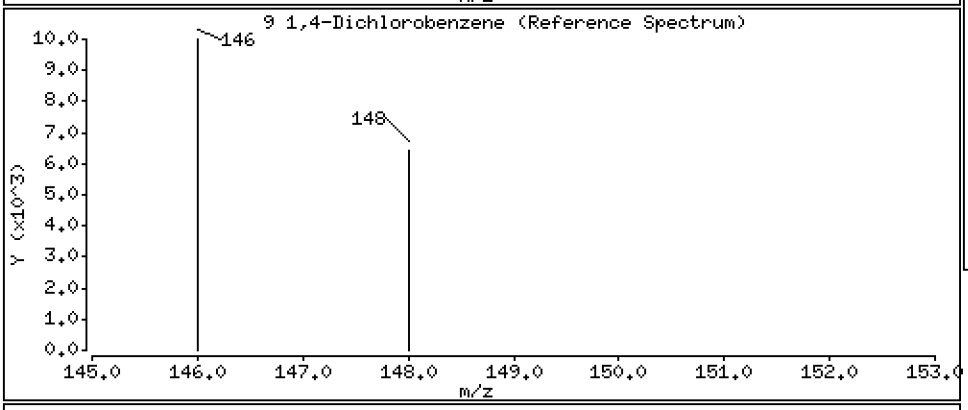
Concentration: 3.353 ug/mL

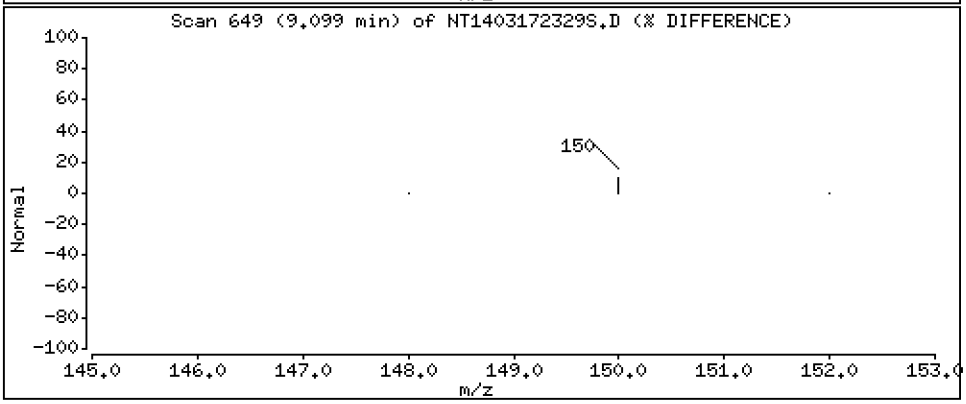












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT14031723295.D

Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD2

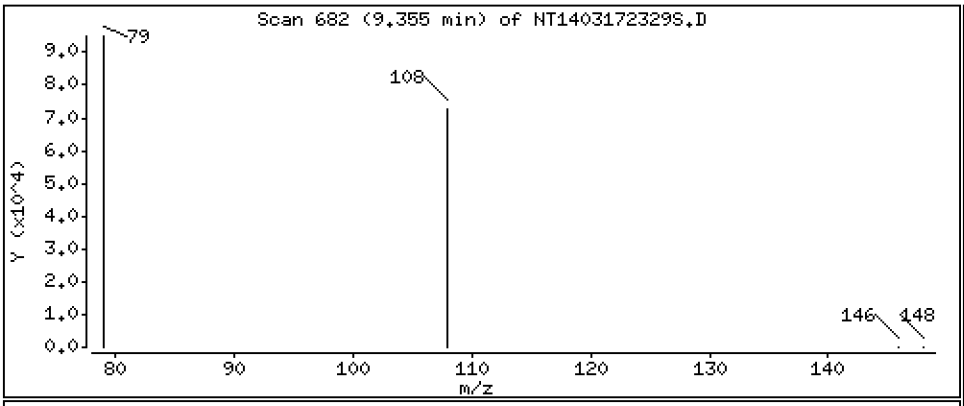
Operator: JGR

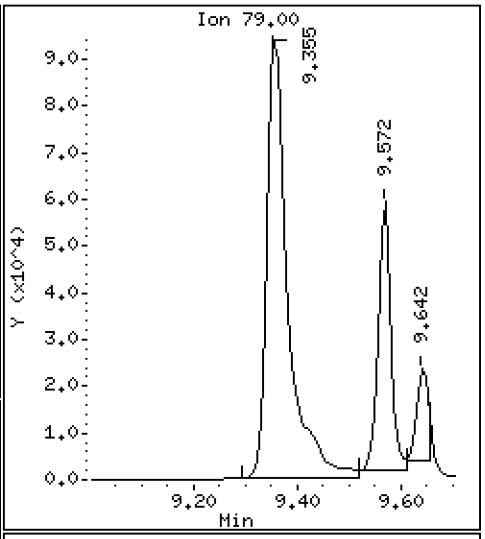
Column phase: ZB-5msi

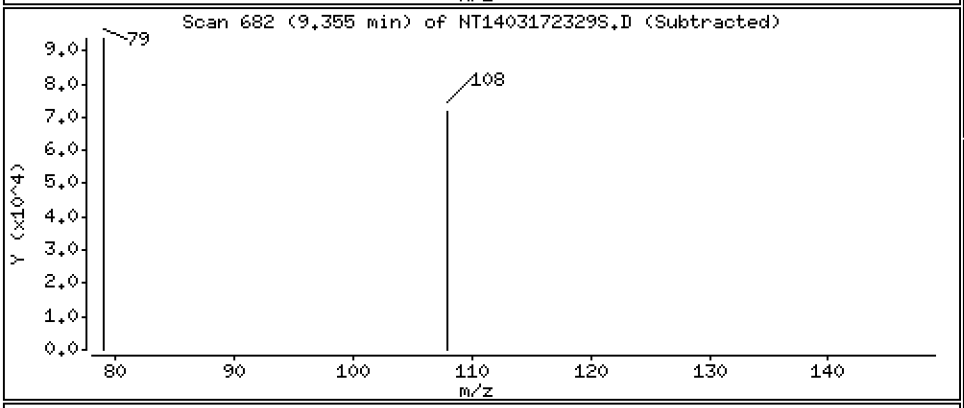
Column diameter: 0.25

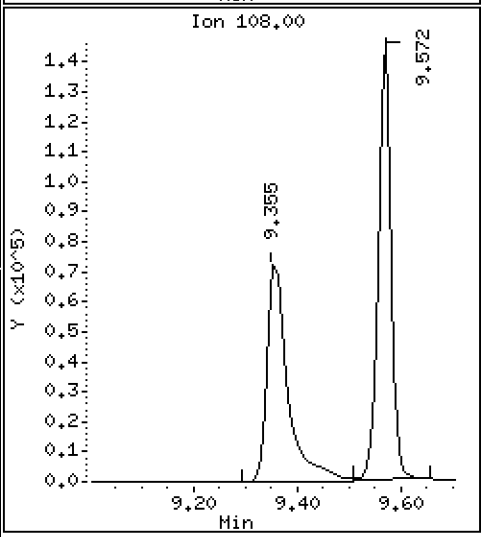
11 Benzyl alcohol

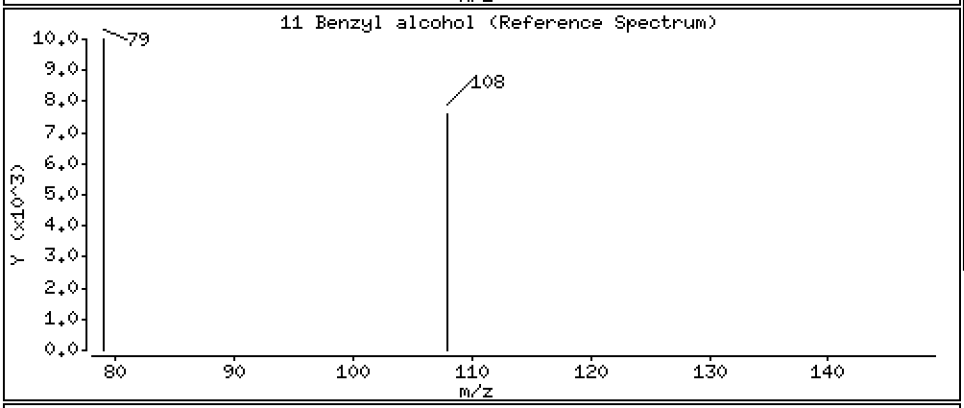
Concentration: 4.016 ug/mL

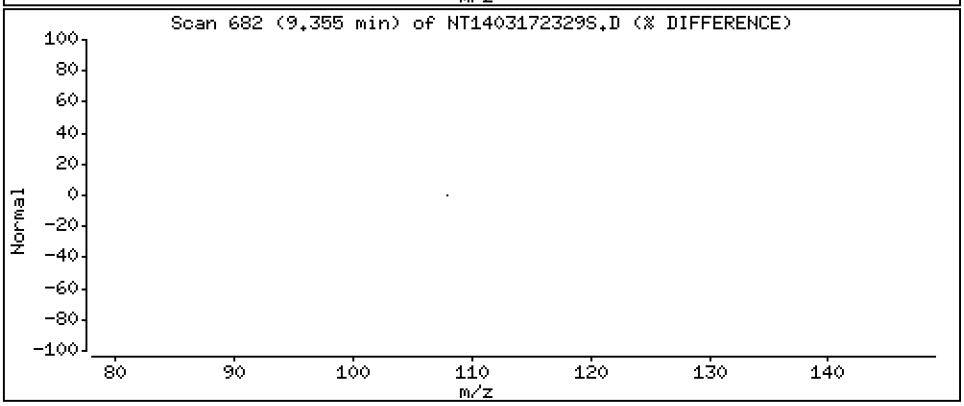












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT14031723295.D

Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD2

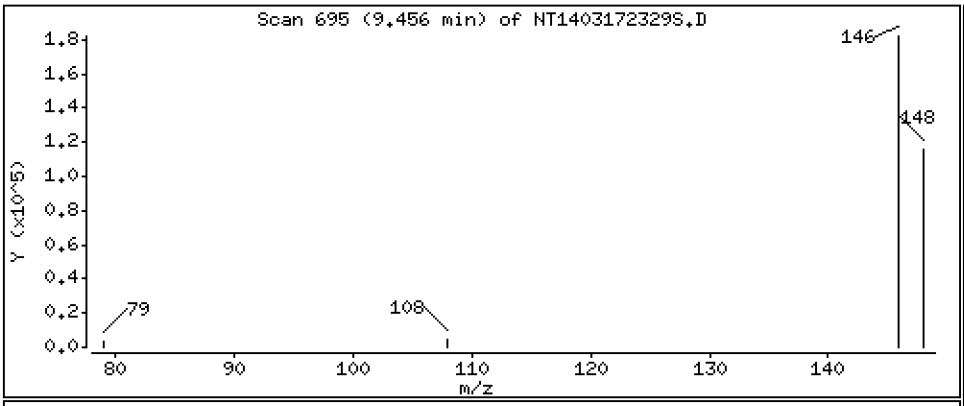
Operator: JGR

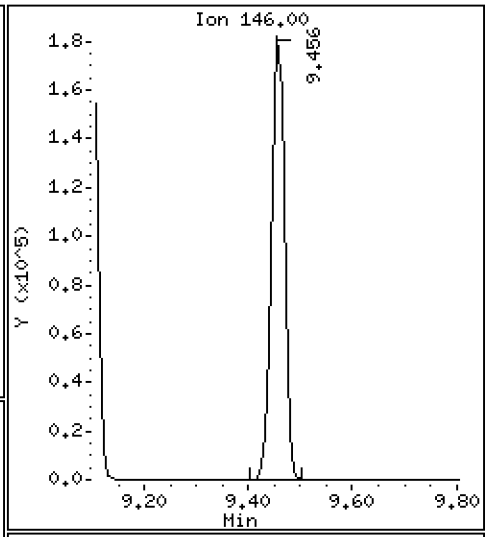
Column phase: ZB-5msi

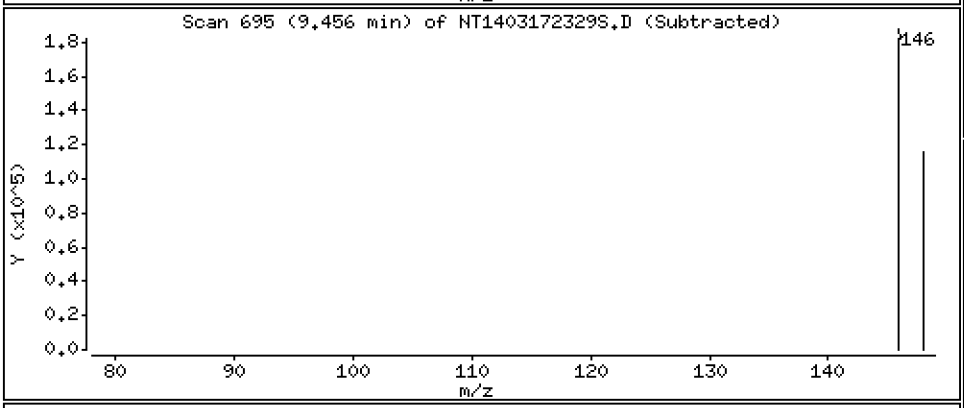
Column diameter: 0.25

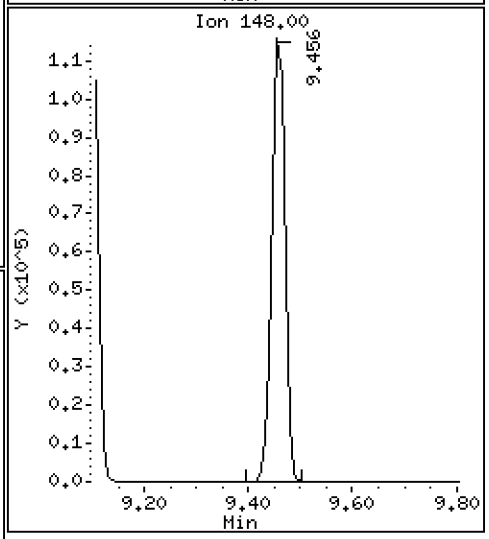
12 1,2-Dichlorobenzene

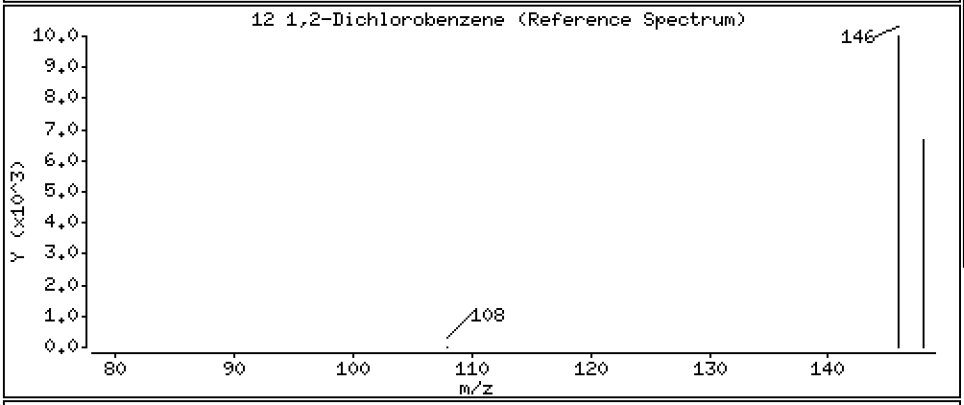
Concentration: 3.412 ug/mL

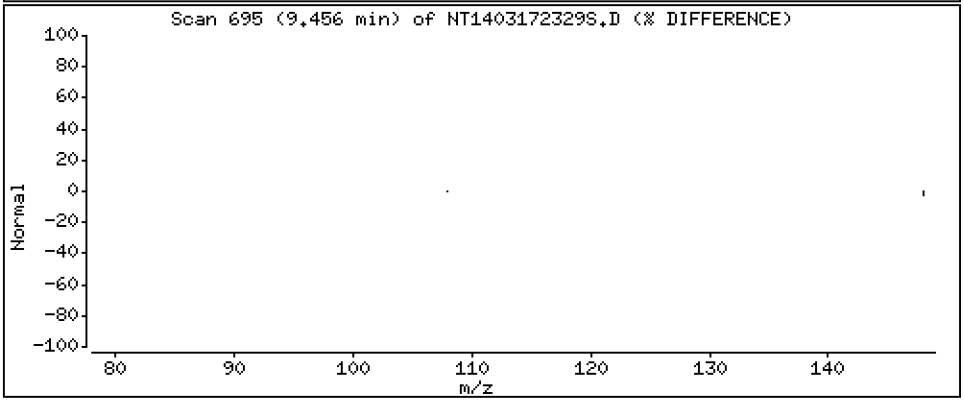












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT14031723295.D

Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD2

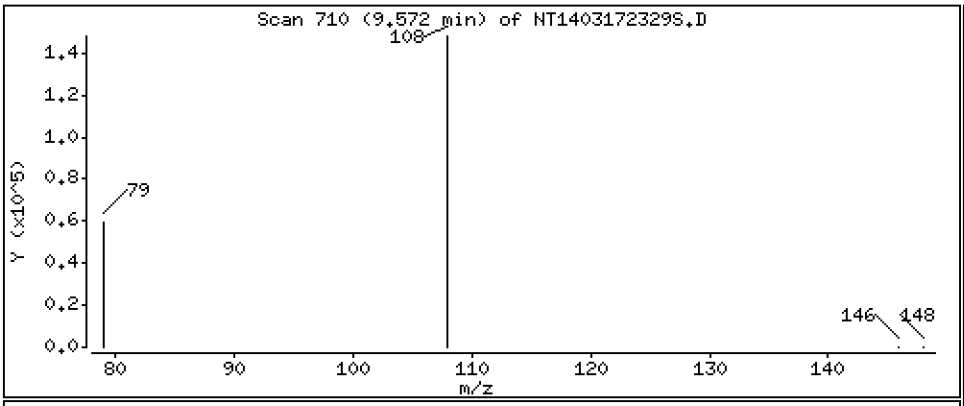
Operator: JGR

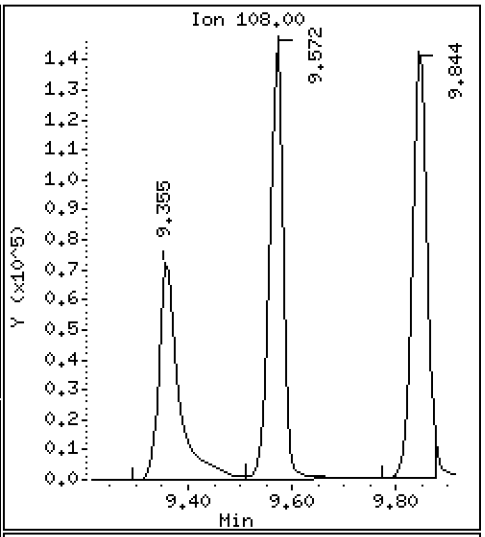
Column phase: ZB-5msi

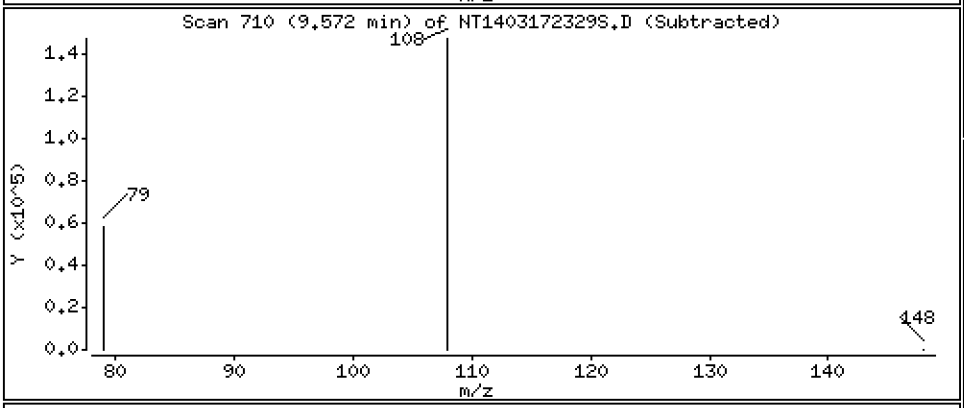
Column diameter: 0.25

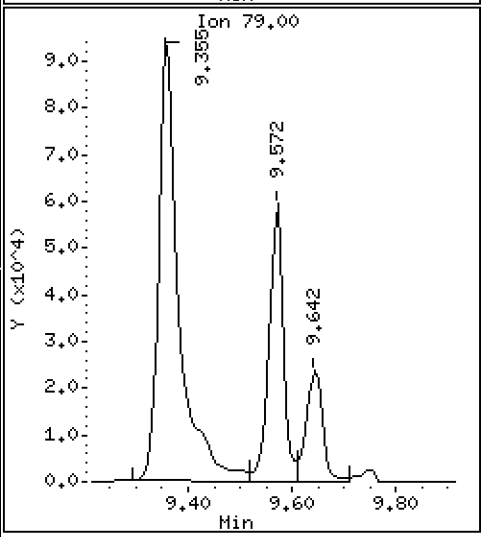
13 2-Methylphenol

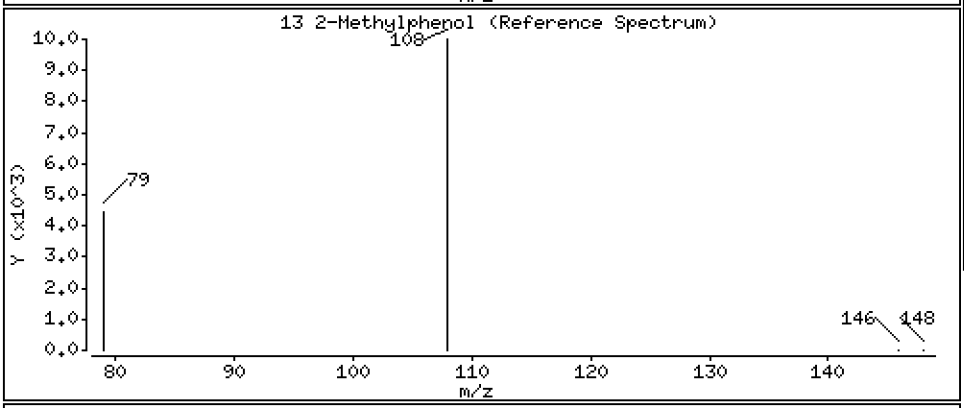
Concentration: 3.428 ug/mL

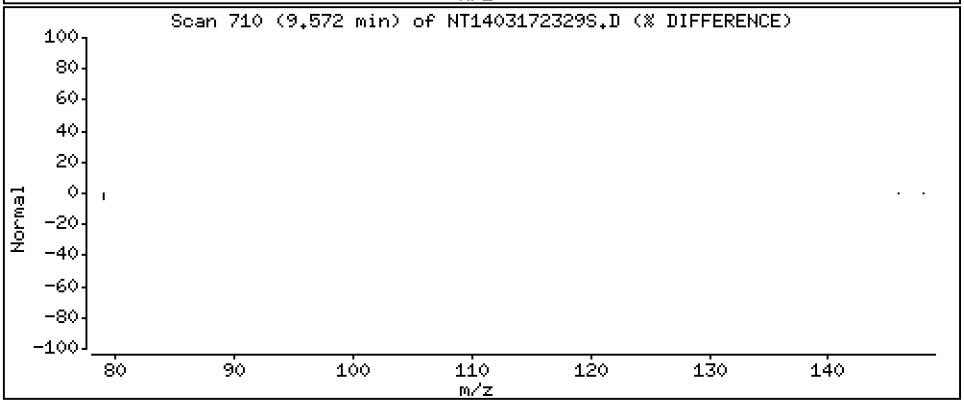












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT14031723295.D

Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD2

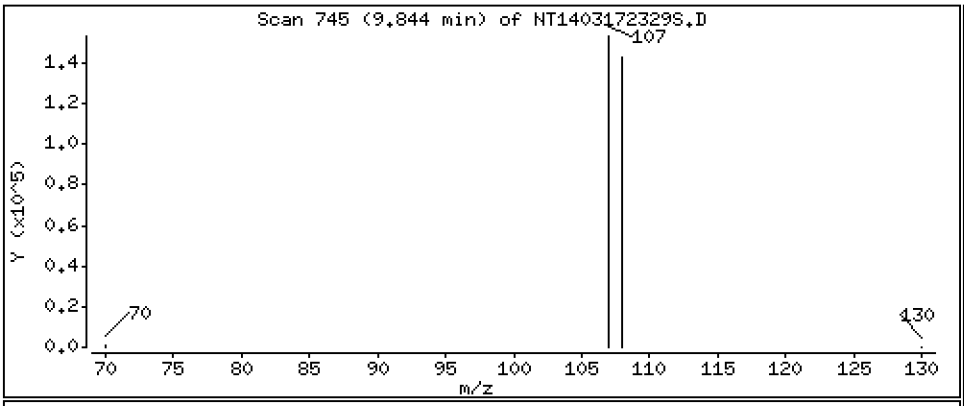
Operator: JGR

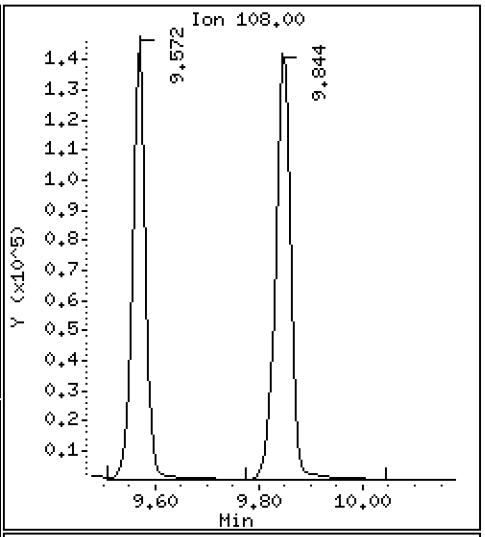
Column phase: ZB-5msi

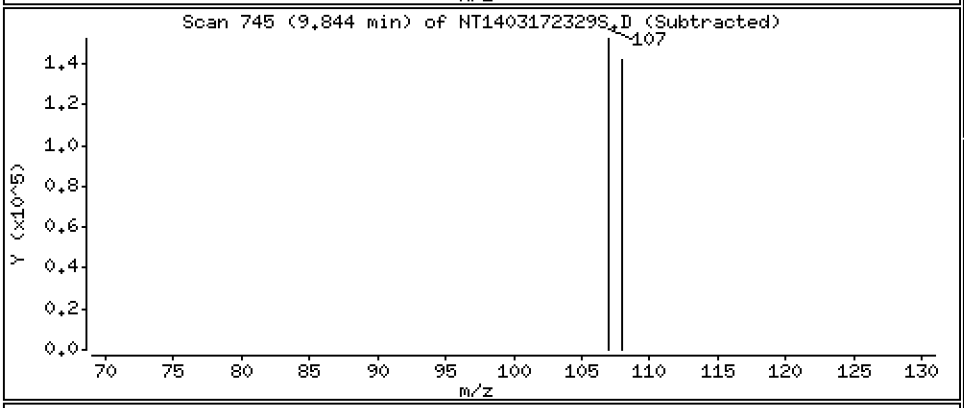
Column diameter: 0.25

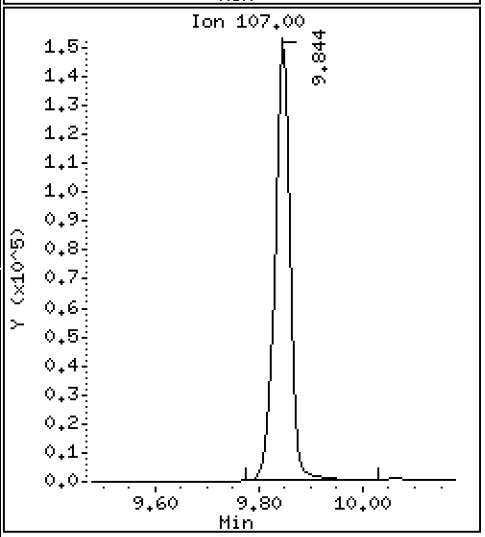
15 4-Methylphenol

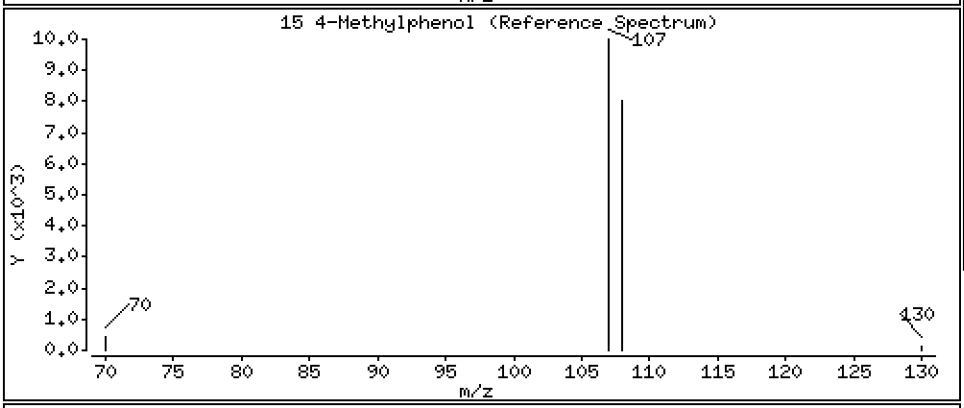
Concentration: 3.727 ug/mL

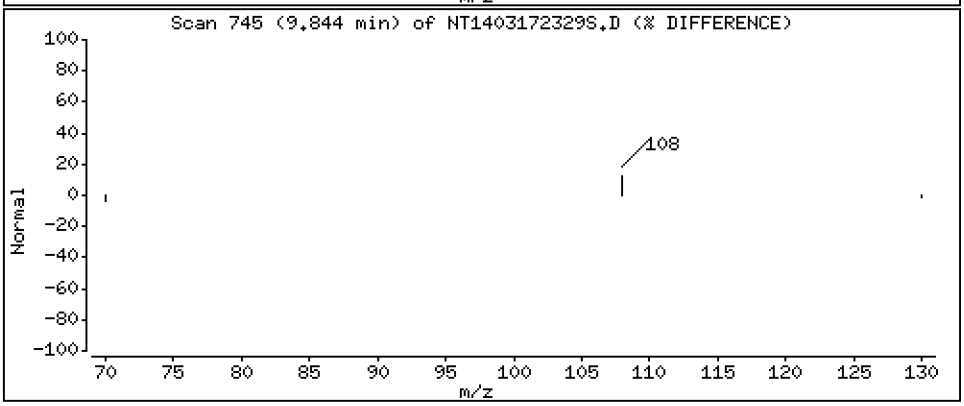












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172329S.D

Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD2

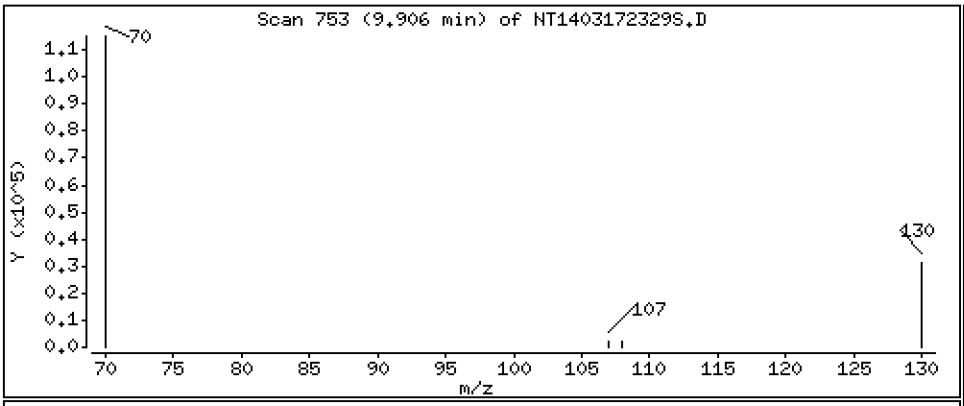
Operator: JGR

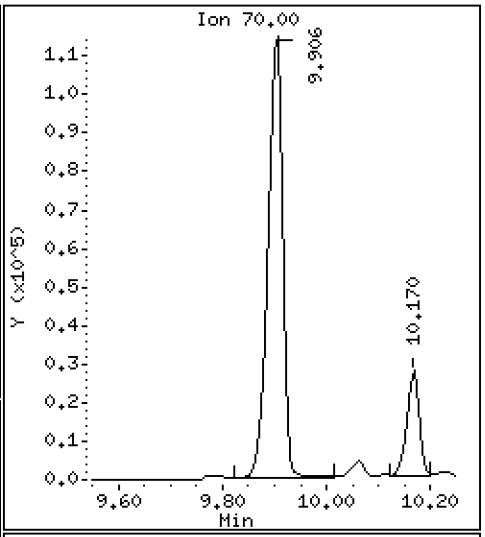
Column phase: ZB-5msi

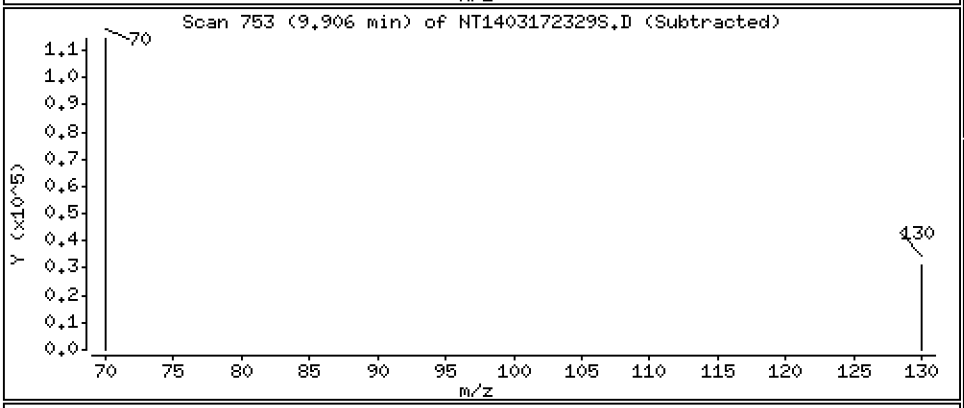
Column diameter: 0.25

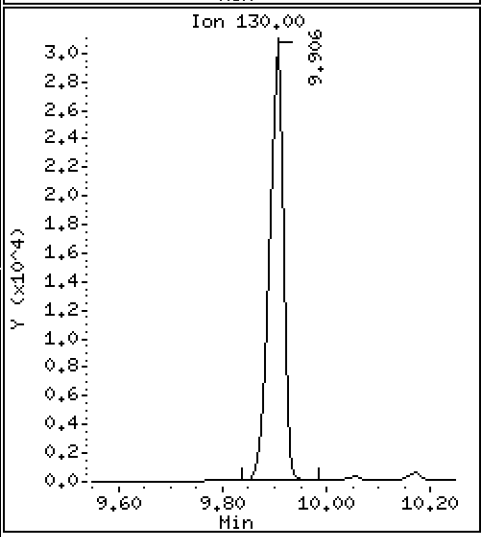
16 N-Nitroso-di-n-propylamine

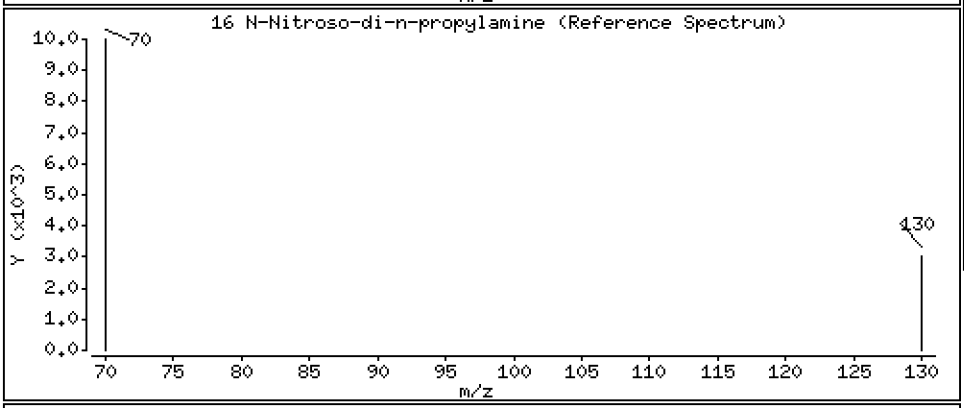
Concentration: 3.854 ug/mL

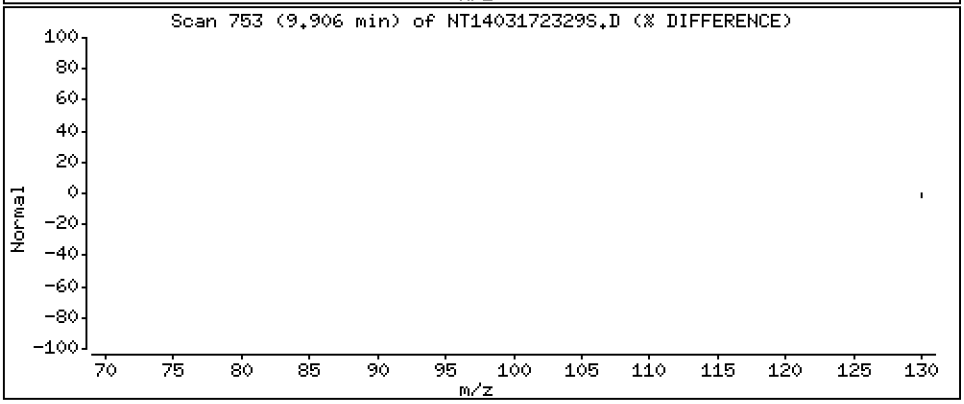












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT14031723295.D

Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD2

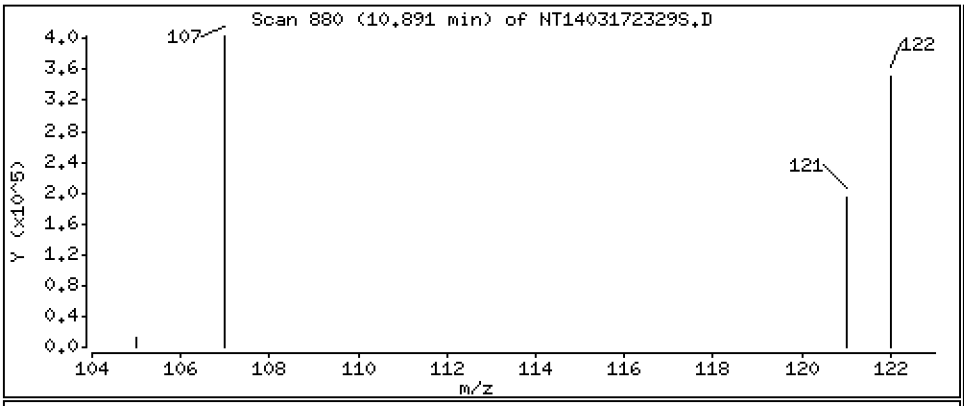
Operator: JGR

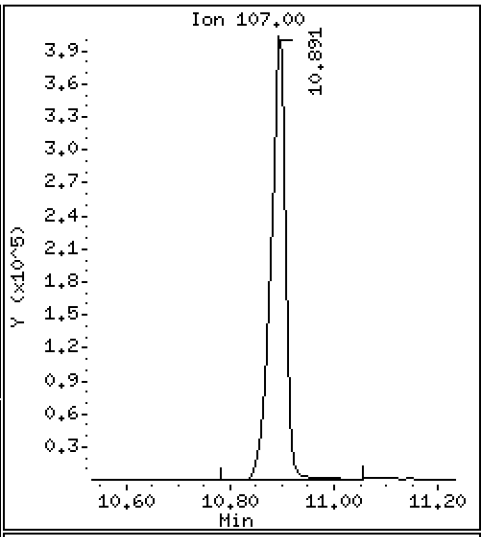
Column phase: ZB-5msi

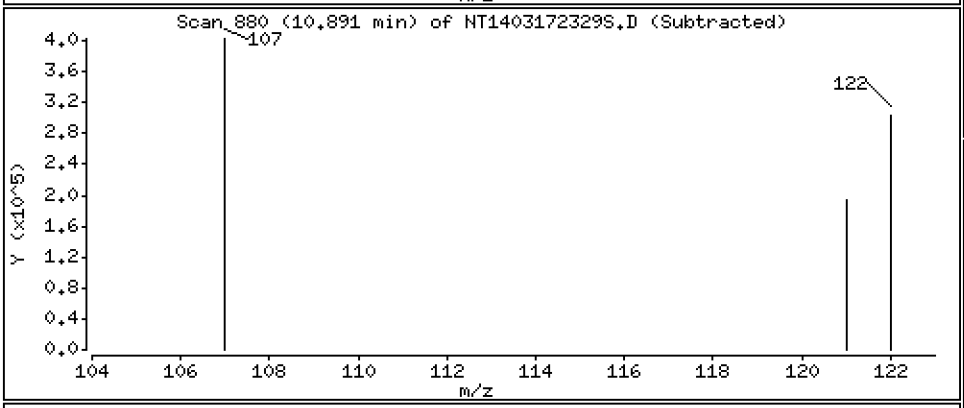
Column diameter: 0.25

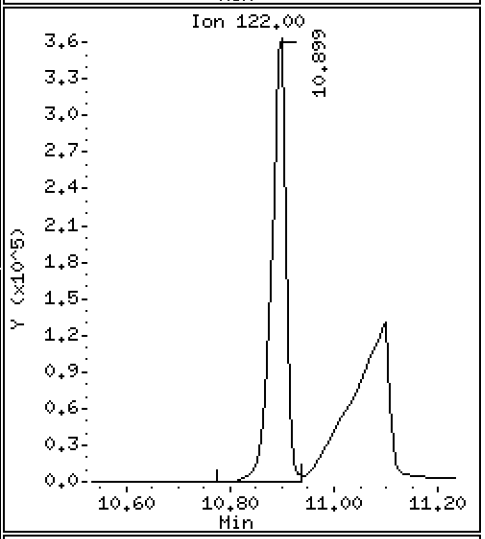
22 2,4-Dimethylphenol

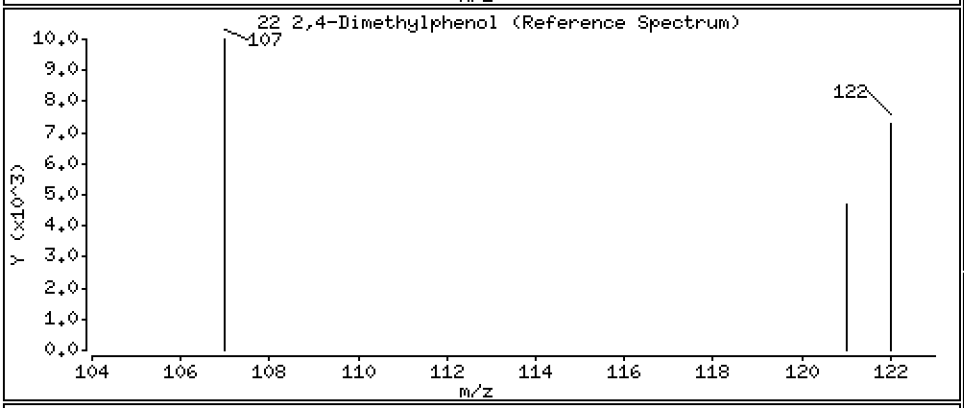
Concentration: 10.25 ug/mL

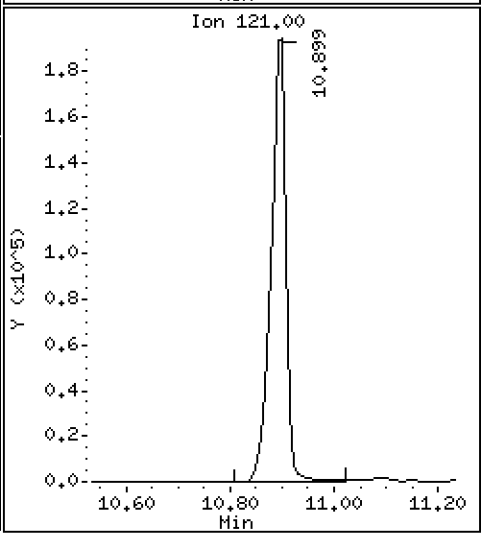


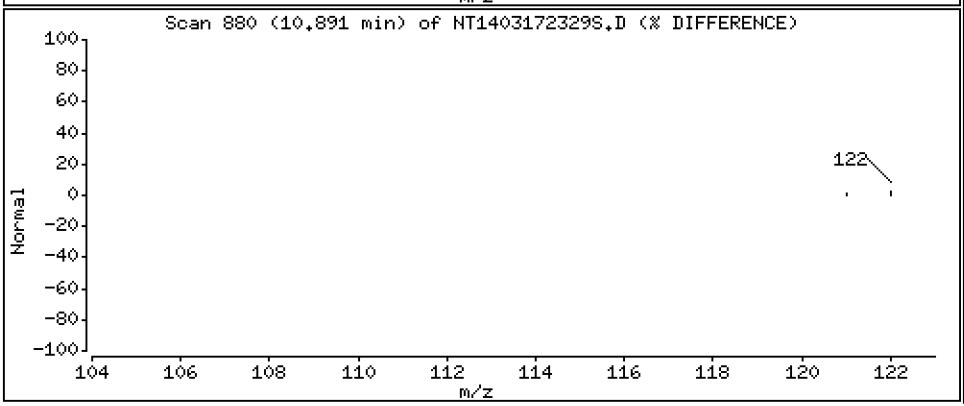












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Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD2

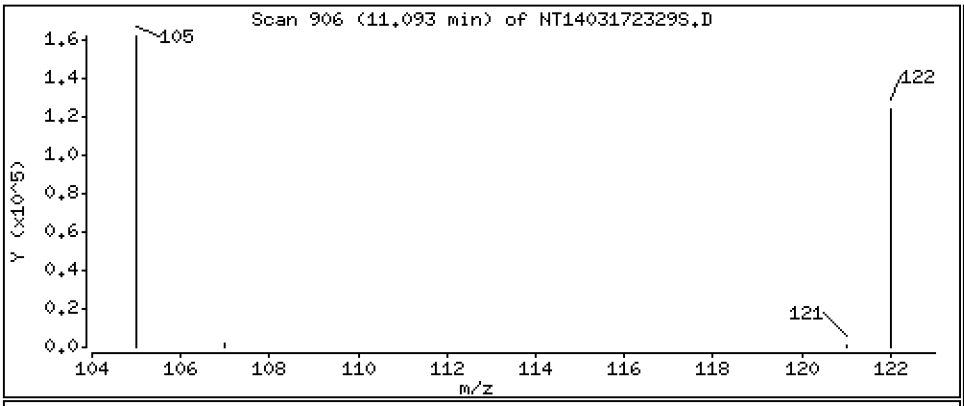
Operator: JGR

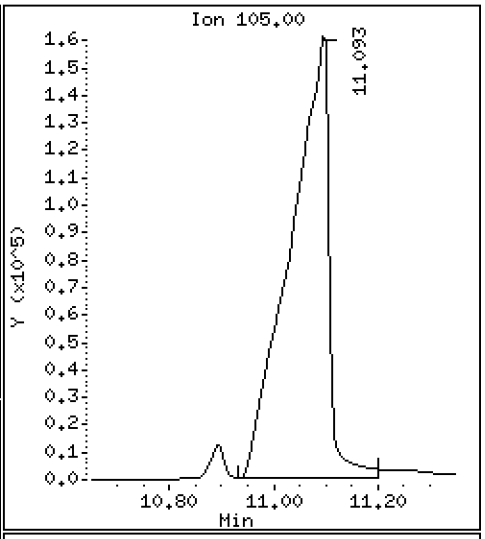
Column phase: ZB-5msi

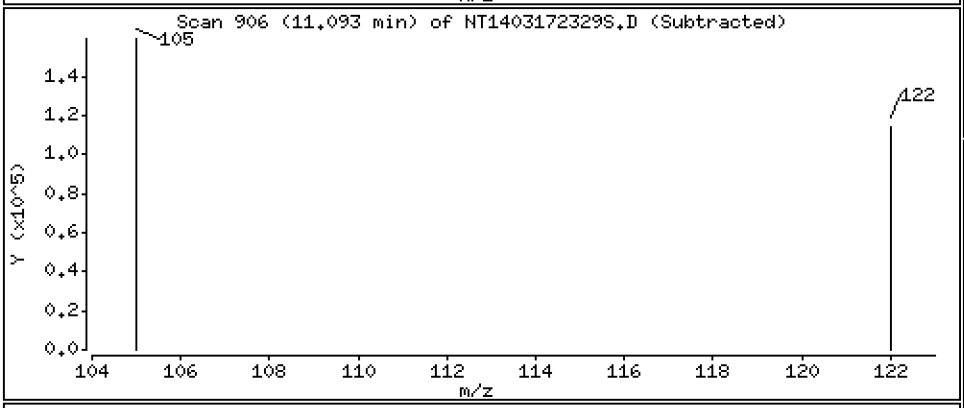
Column diameter: 0.25

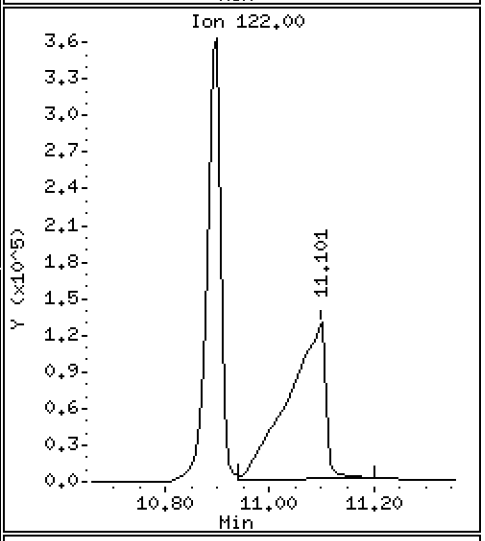
24 Benzoic acid

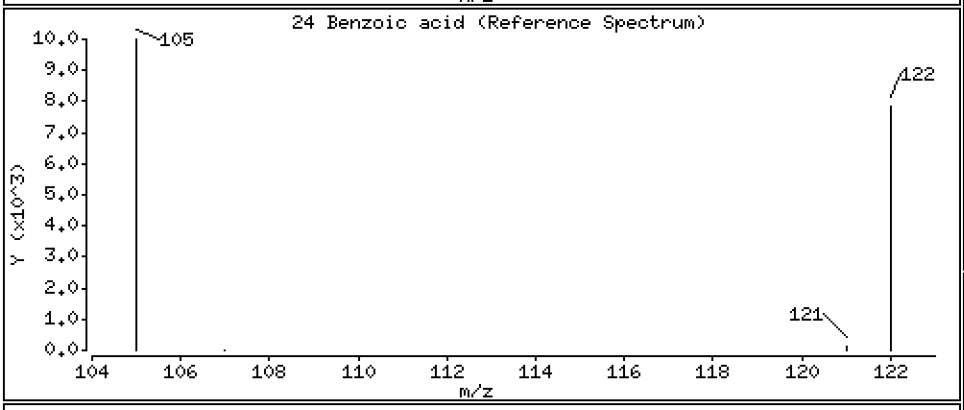
Concentration: 13.57 ug/mL

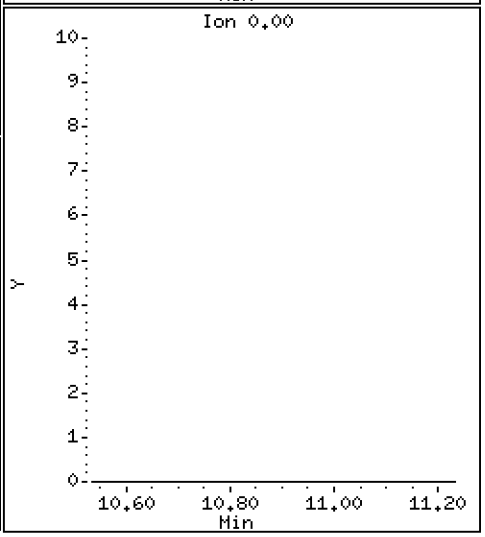


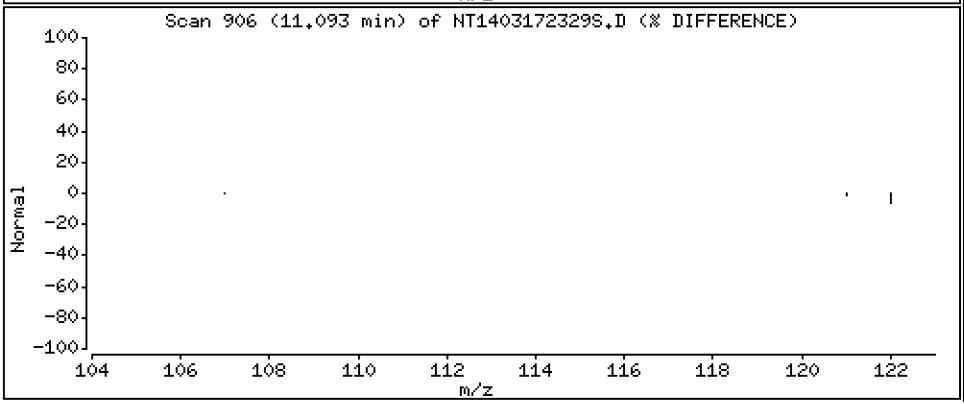












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT14031723295.D

Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD2

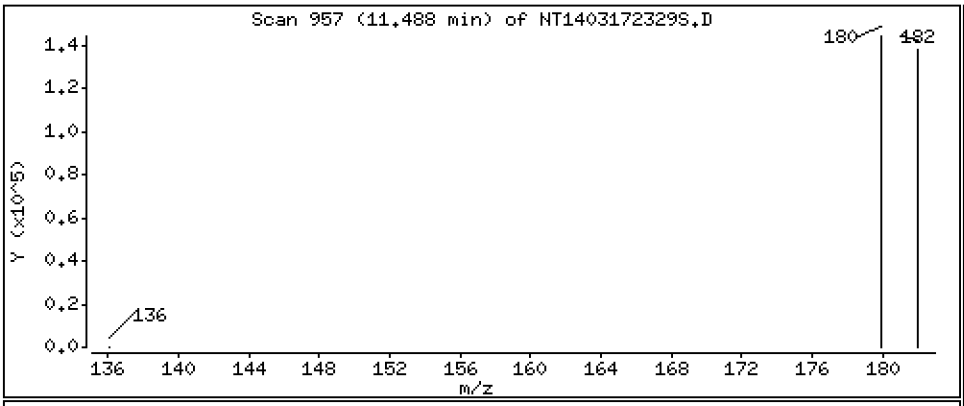
Operator: JGR

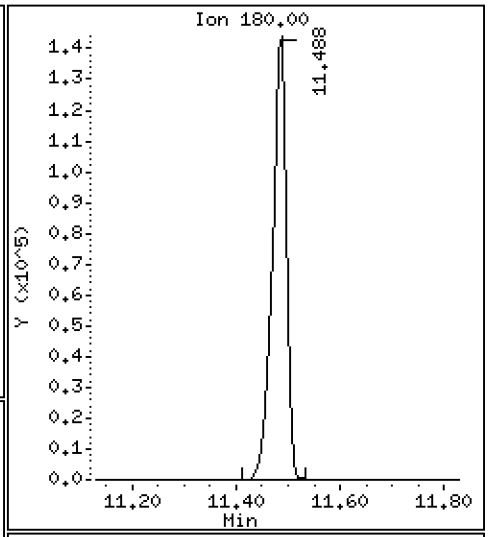
Column phase: ZB-5msi

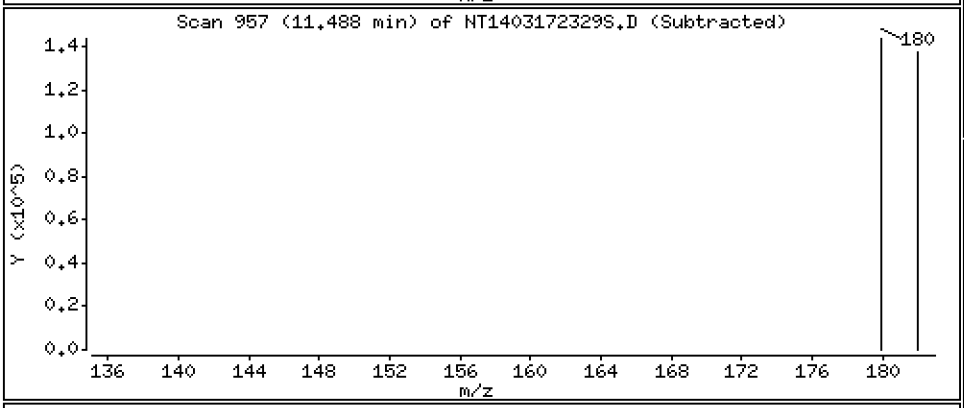
Column diameter: 0.25

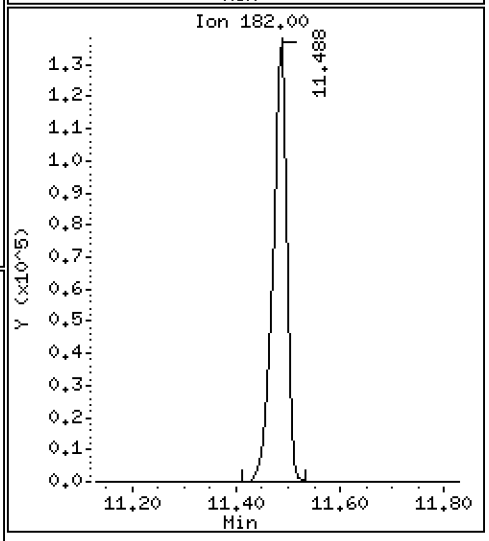
26 1,2,4-Trichlorobenzene

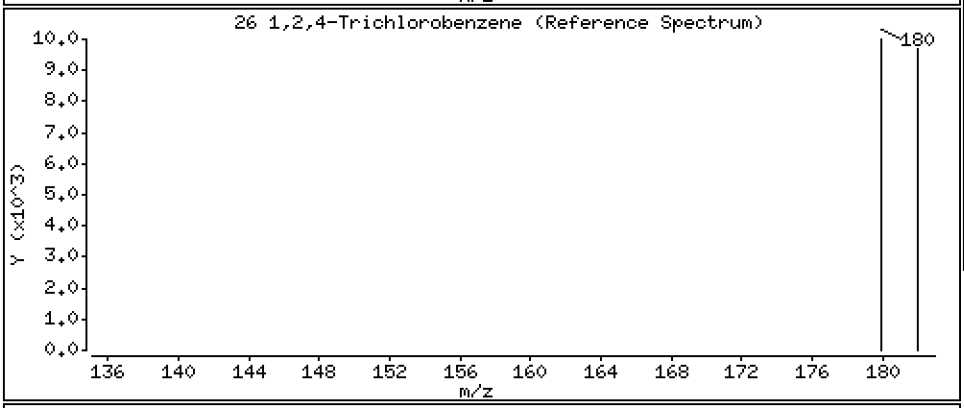
Concentration: 3.562 ug/mL

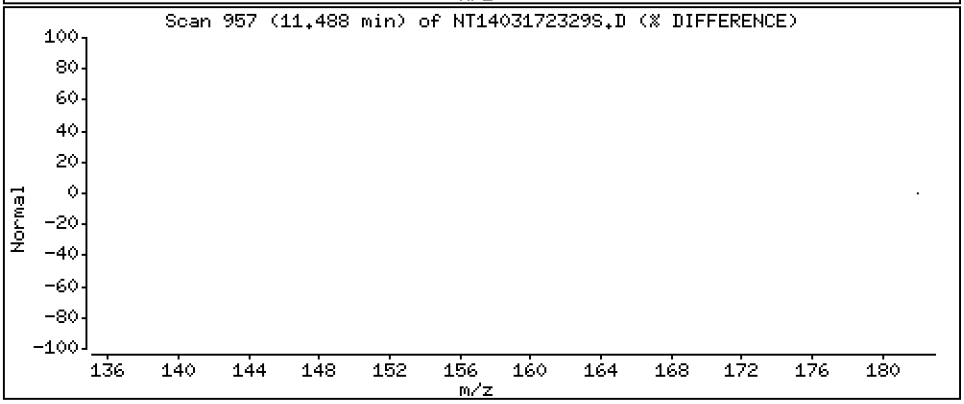












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Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD2

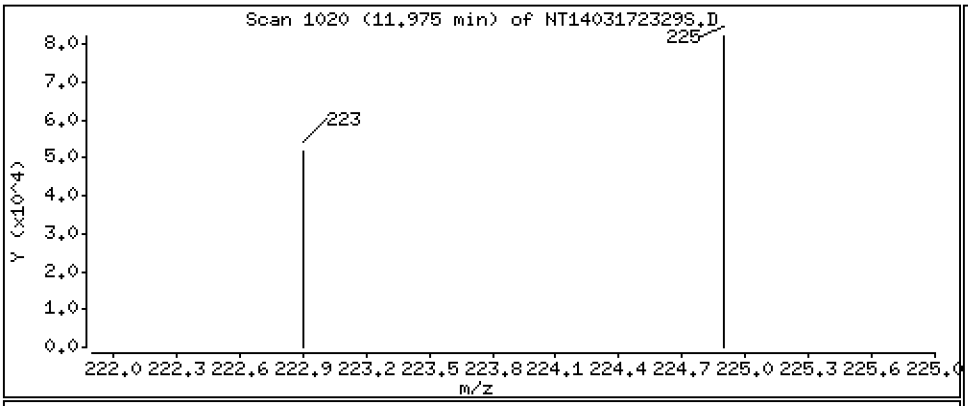
Operator: JGR

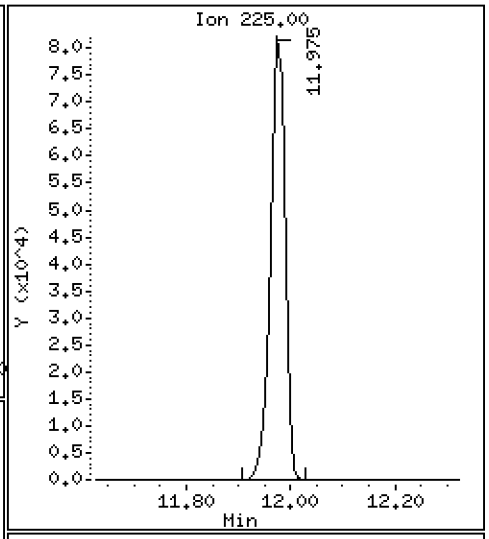
Column phase: ZB-5msi

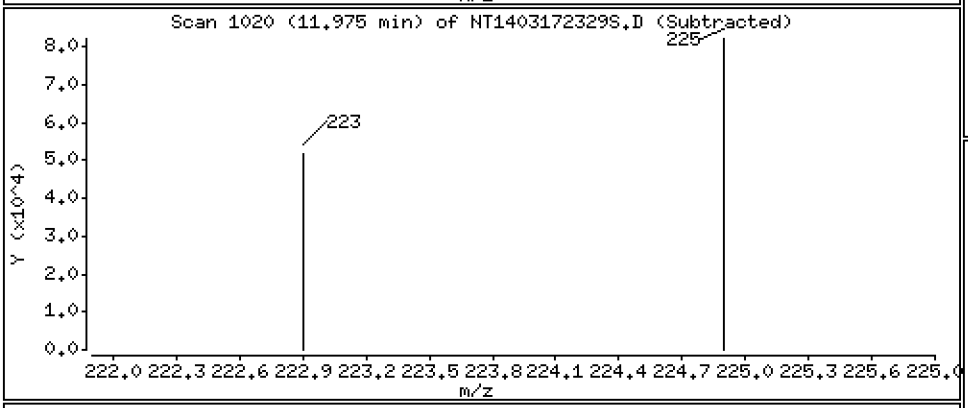
Column diameter: 0.25

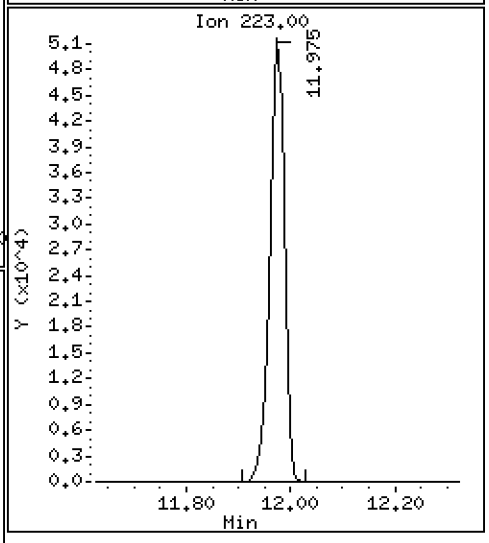
30 Hexachlorobutadiene

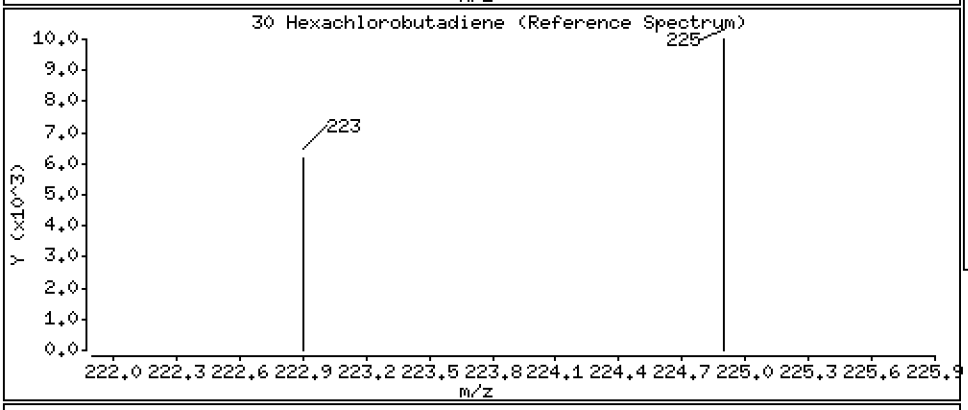
Concentration: 3.996 ug/mL

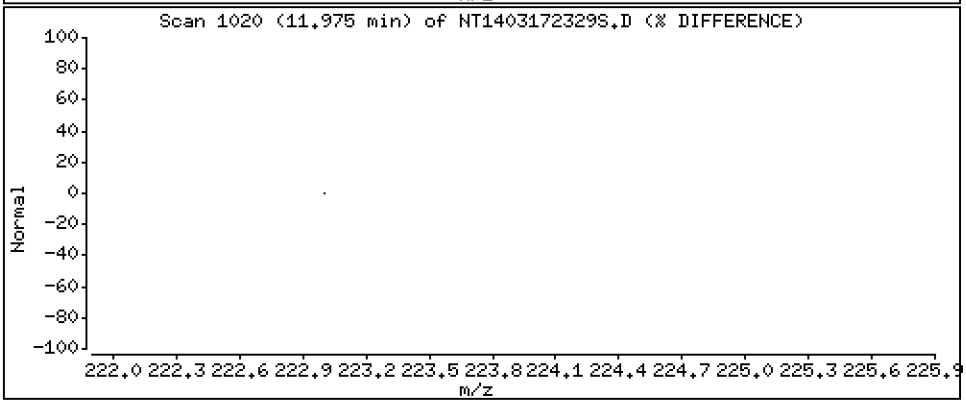












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Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD2

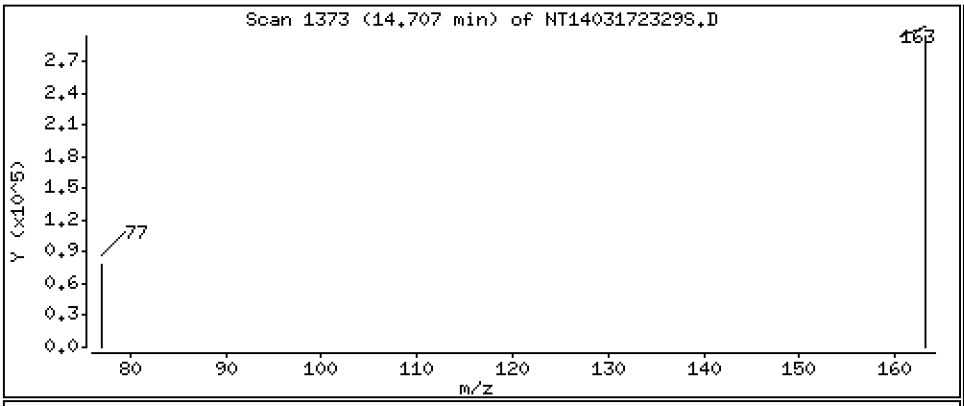
Operator: JGR

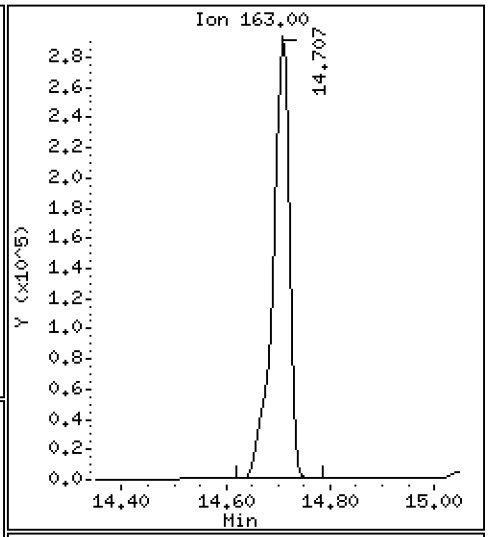
Column phase: ZB-5msi

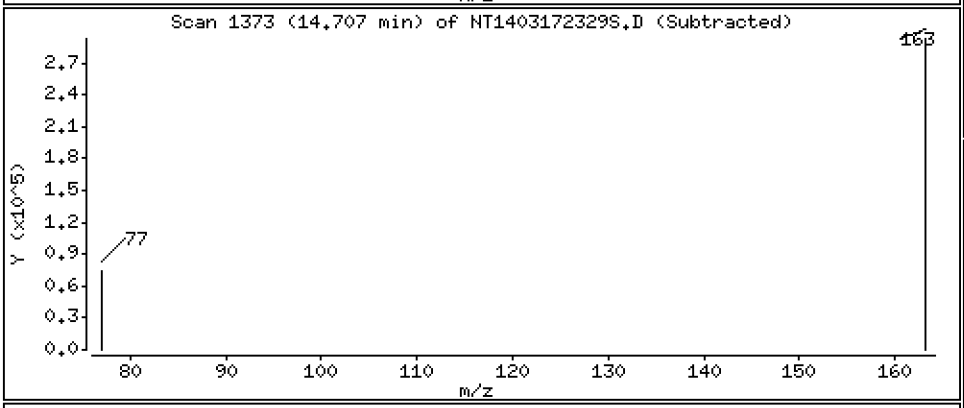
Column diameter: 0.25

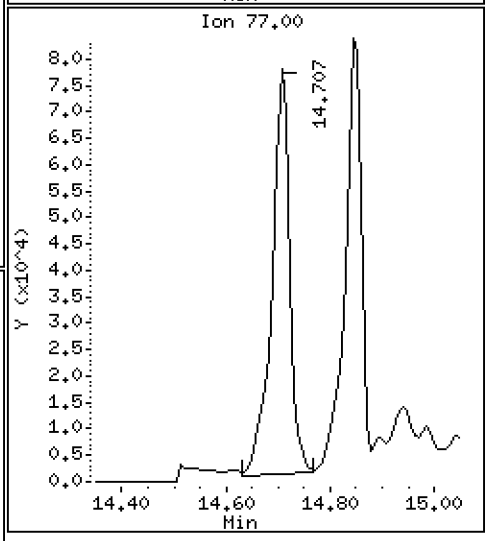
39 Dimethylphthalate

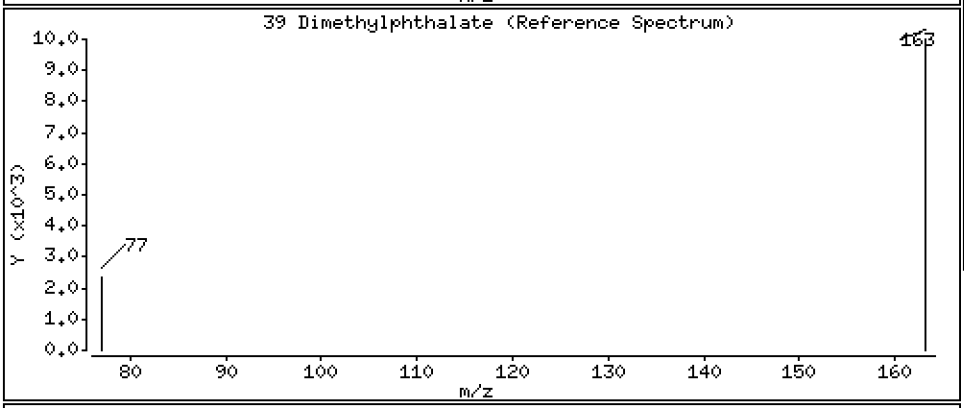
Concentration: 4.326 ug/mL

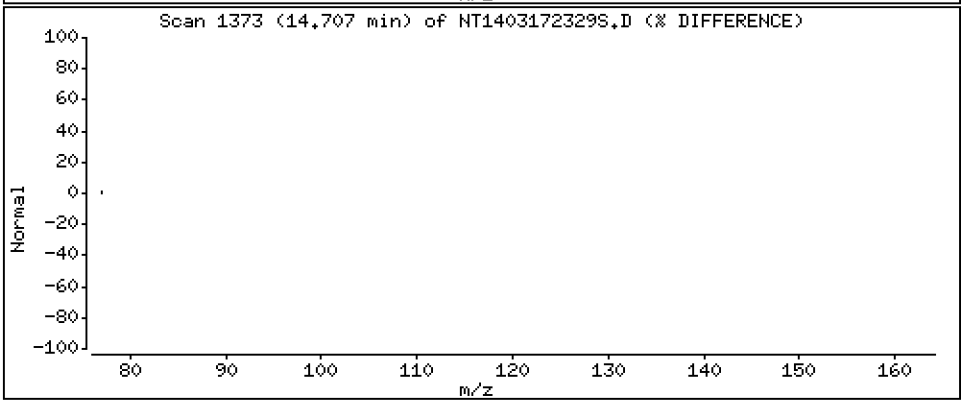












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172329S.D

Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD2

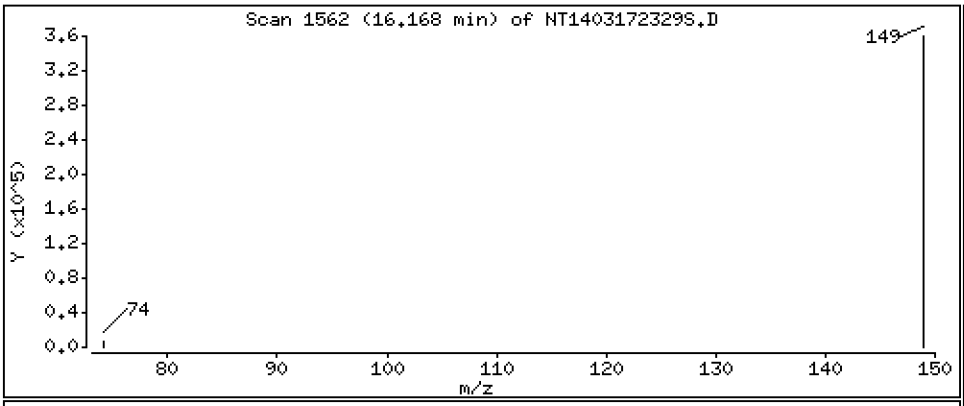
Operator: JGR

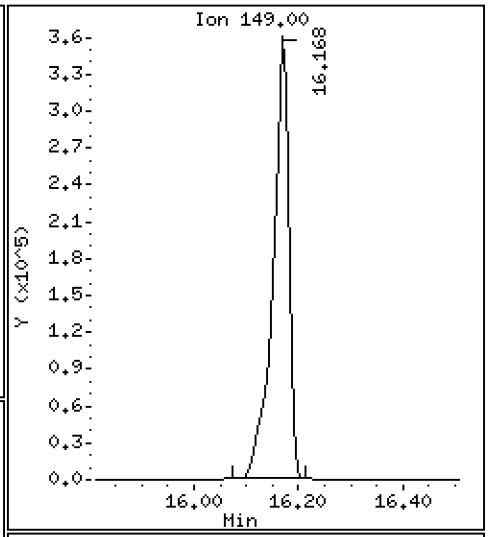
Column phase: ZB-5msi

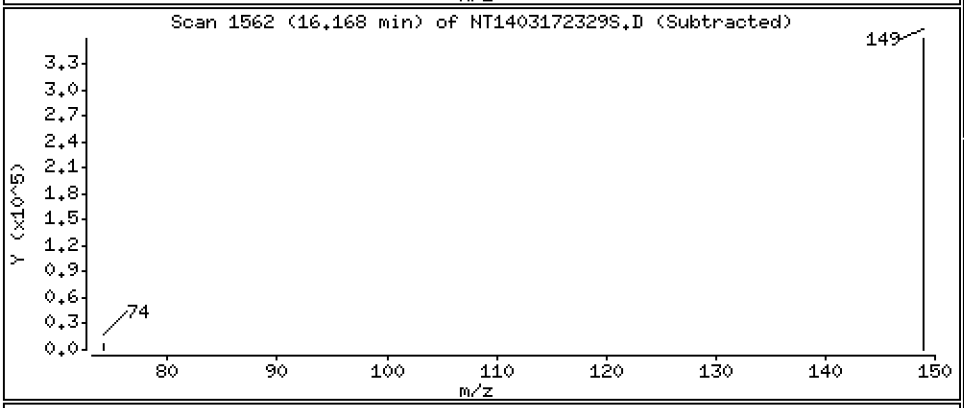
Column diameter: 0.25

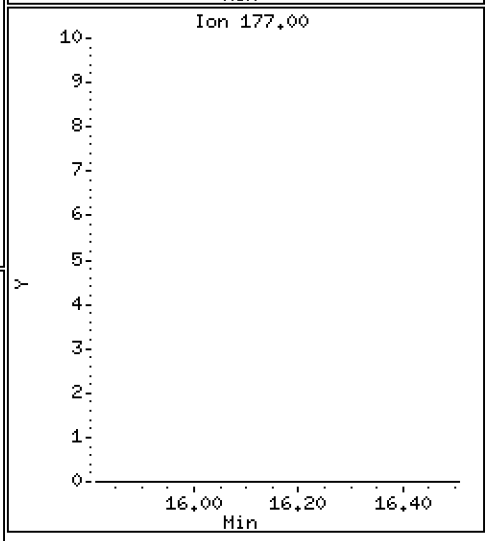
50 Diethylphthalate

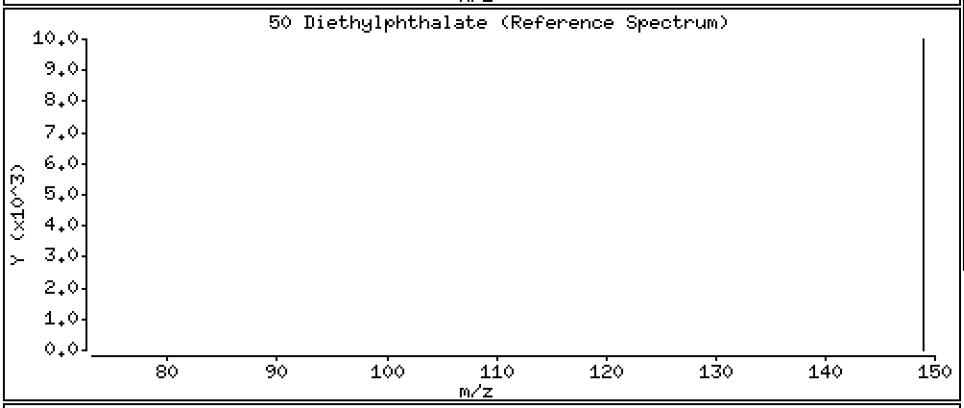
Concentration: 4.870 ug/mL

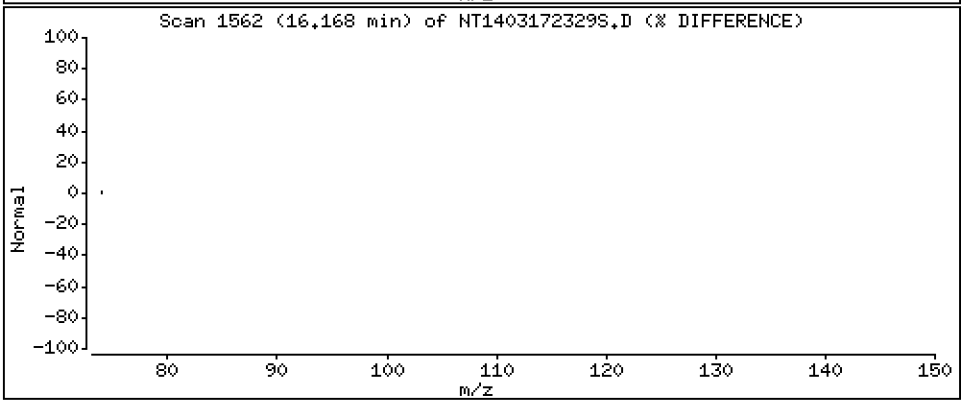












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT14031723295.D

Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD2

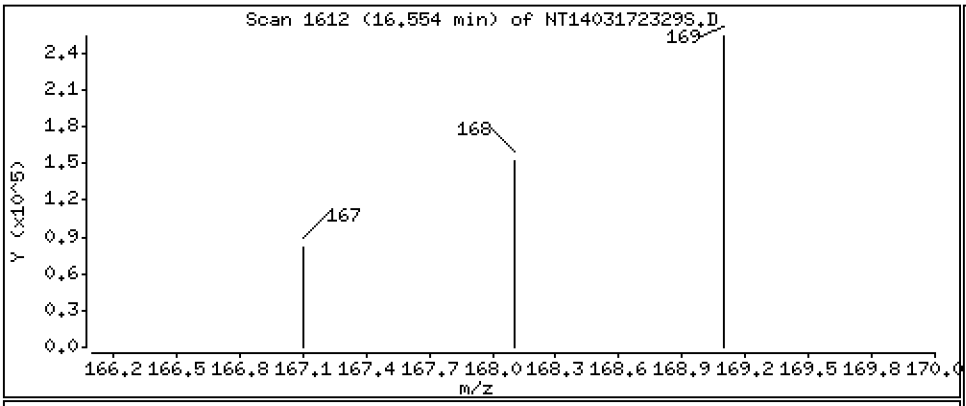
Operator: JGR

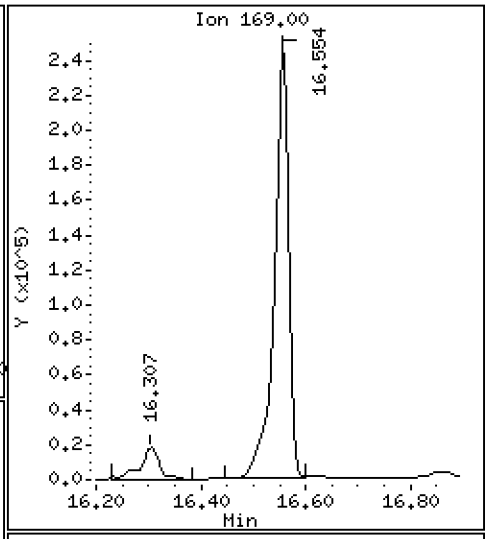
Column phase: ZB-5msi

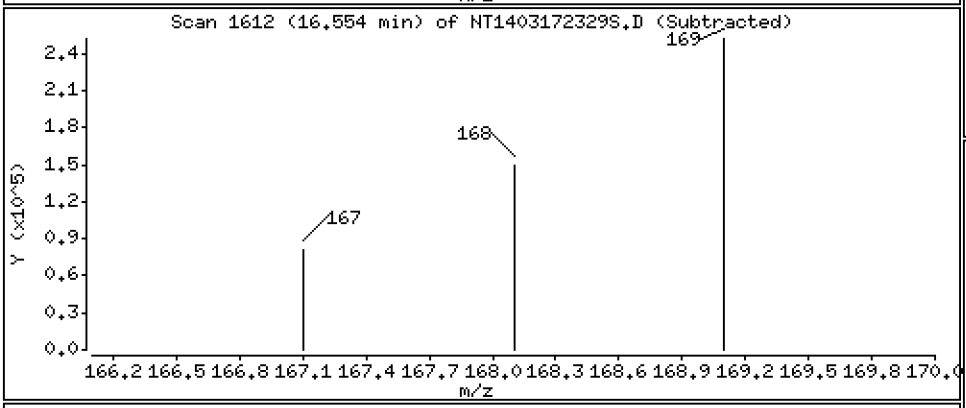
Column diameter: 0.25

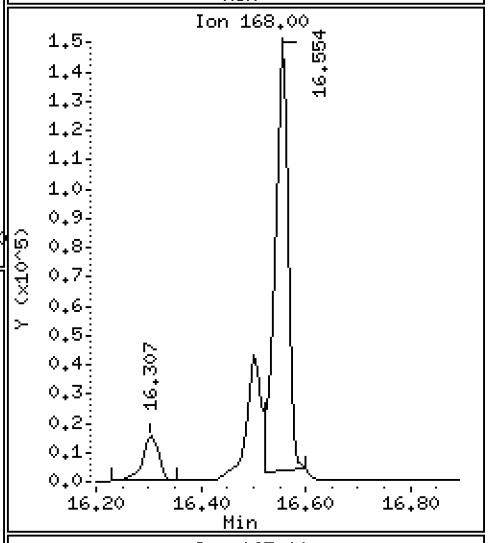
54 N-Nitrosodiphenylamine

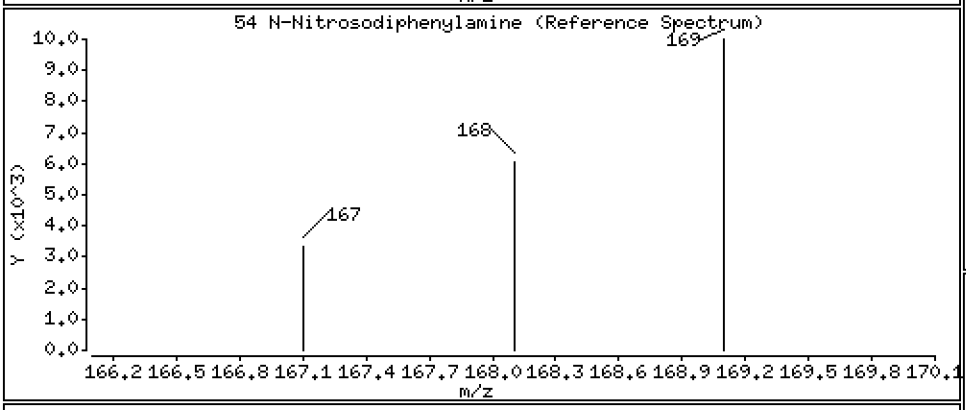
Concentration: 4.041 ug/mL

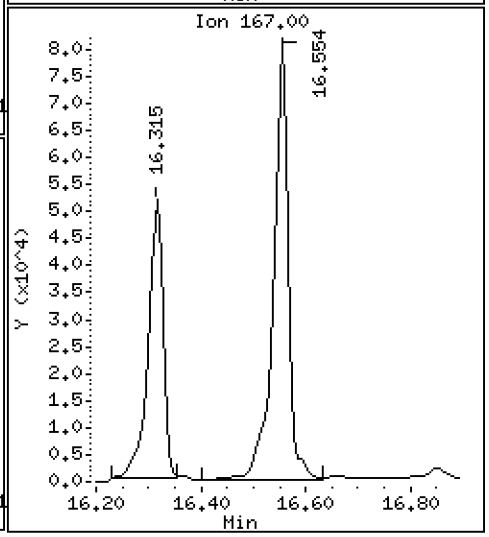


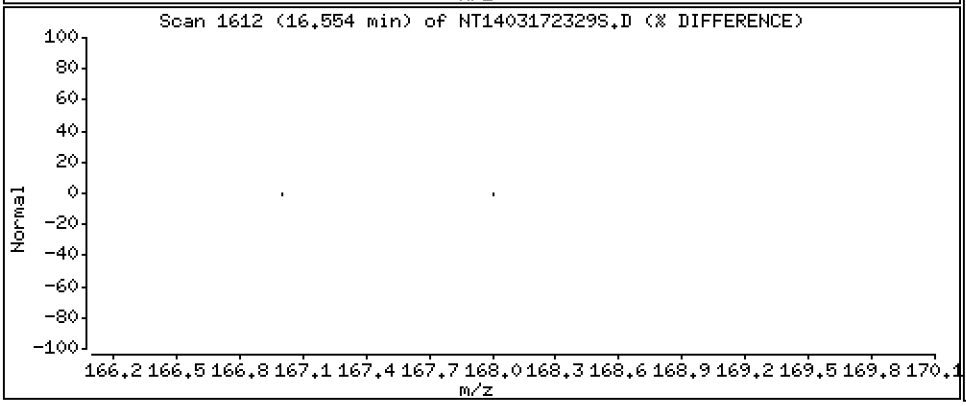












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Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD2

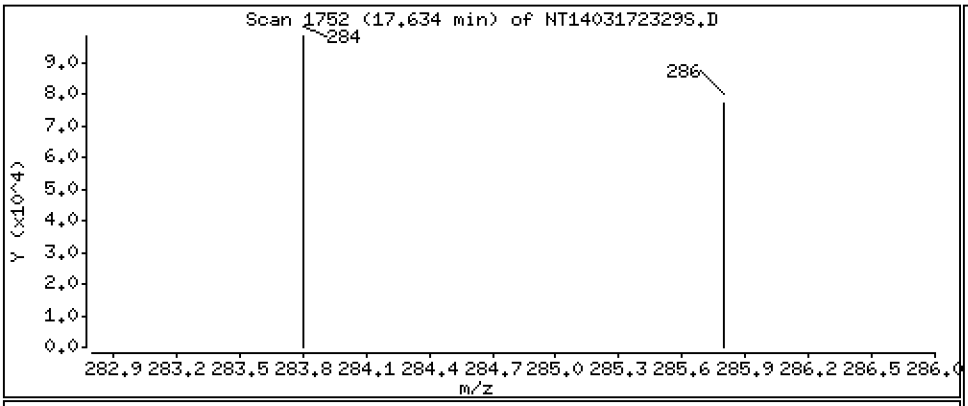
Operator: JGR

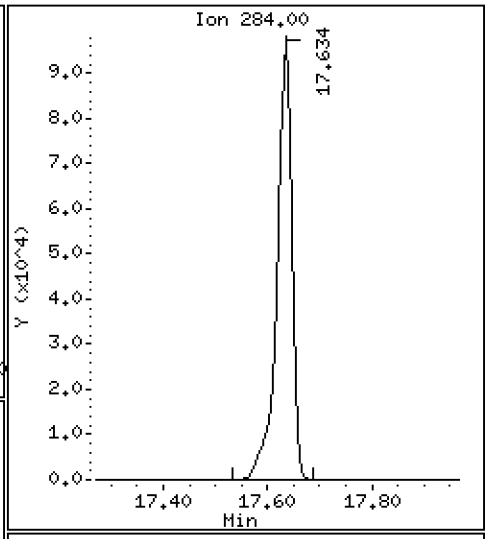
Column phase: ZB-5msi

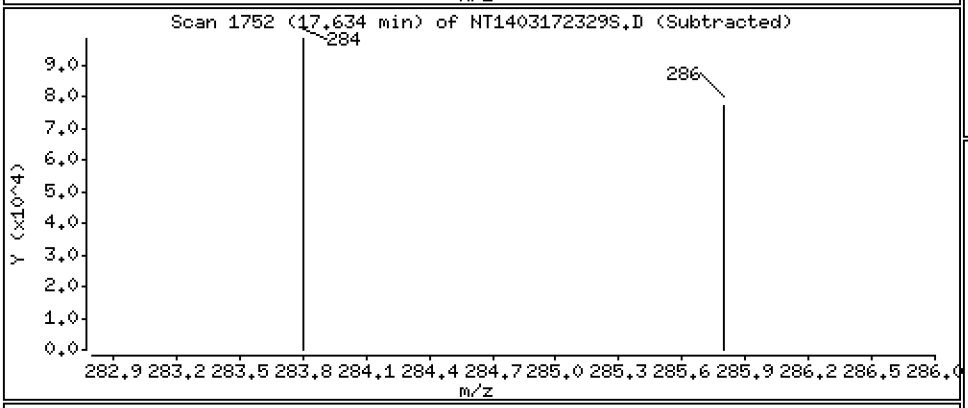
Column diameter: 0.25

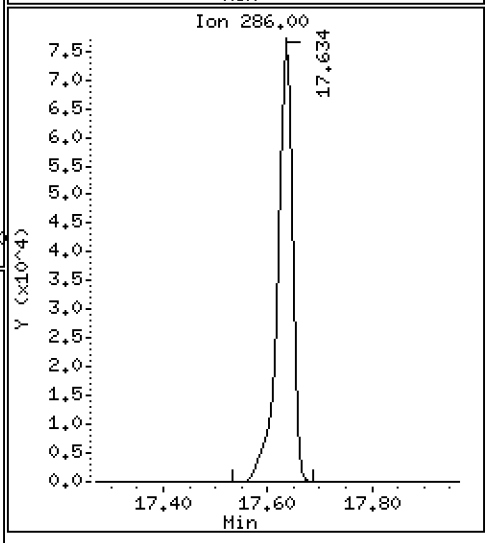
57 Hexachlorobenzene

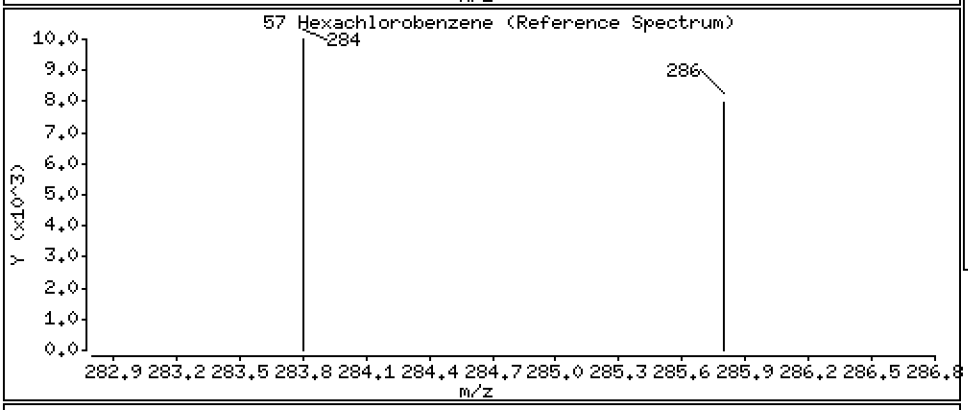
Concentration: 4.152 ug/mL

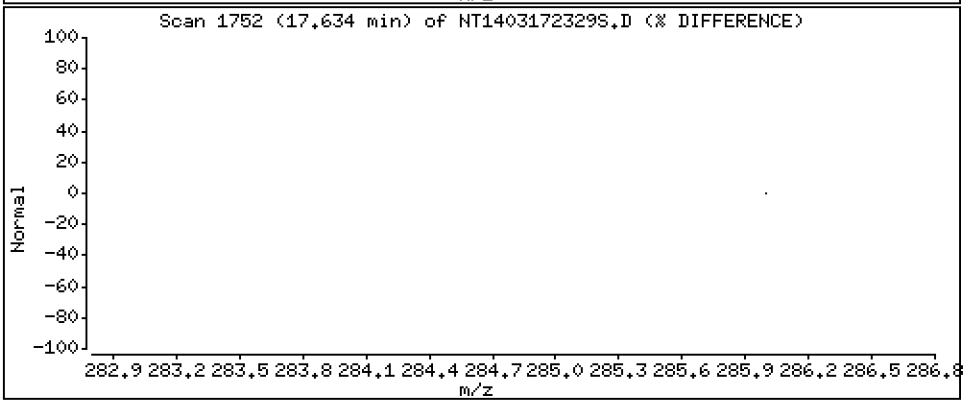












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172329S.D

Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD2

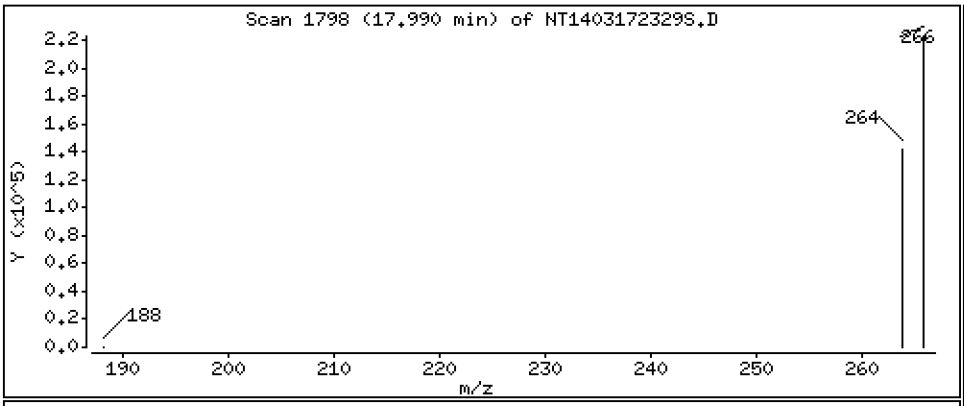
Operator: JGR

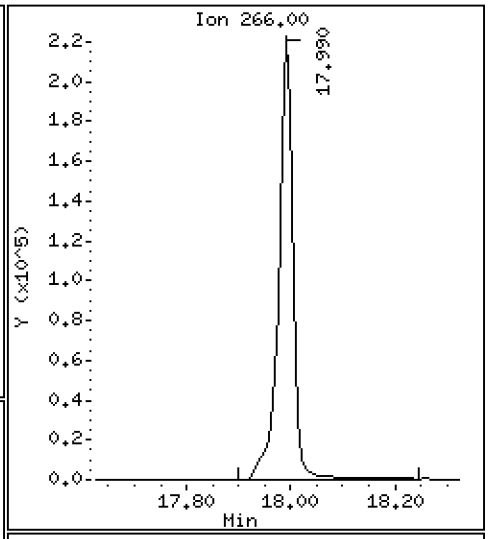
Column phase: ZB-5msi

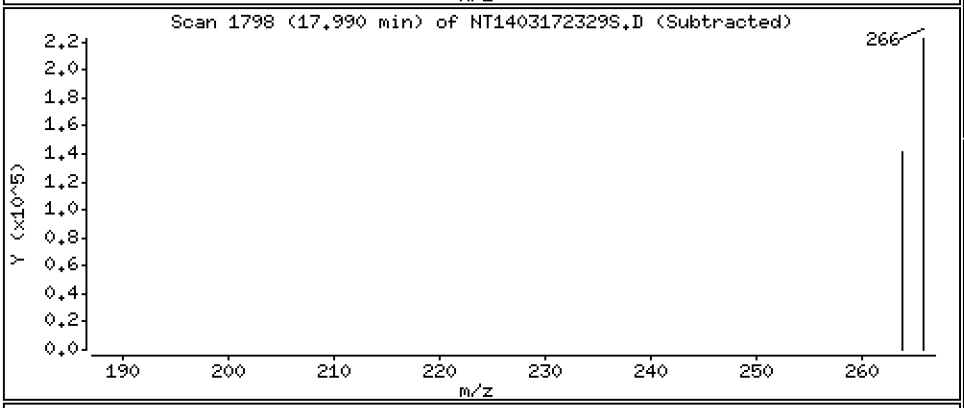
Column diameter: 0.25

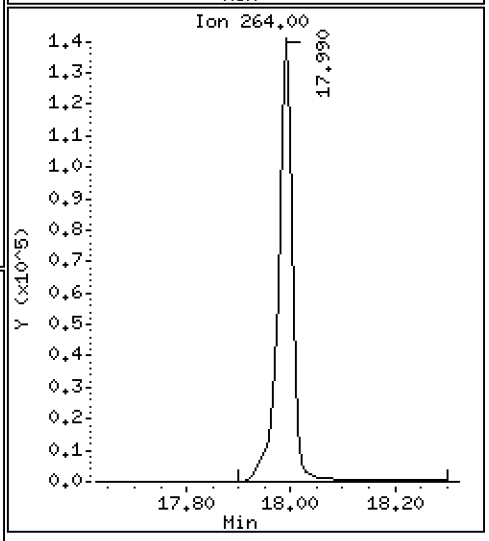
58 Pentachlorophenol

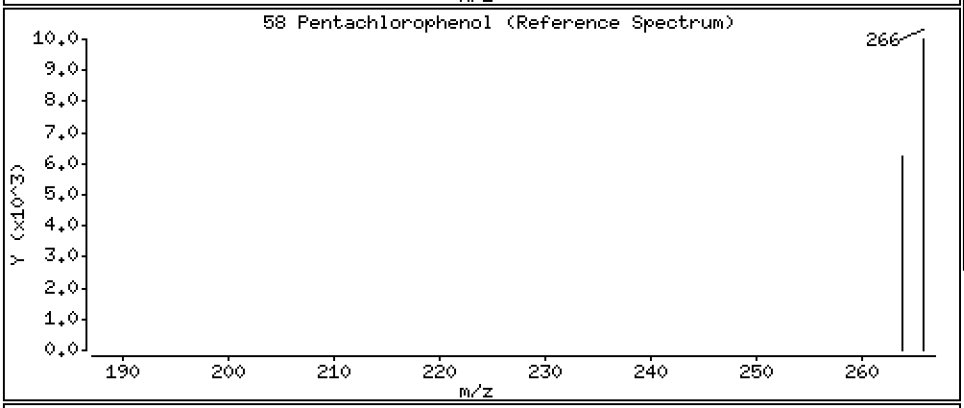
Concentration: 13.49 ug/mL

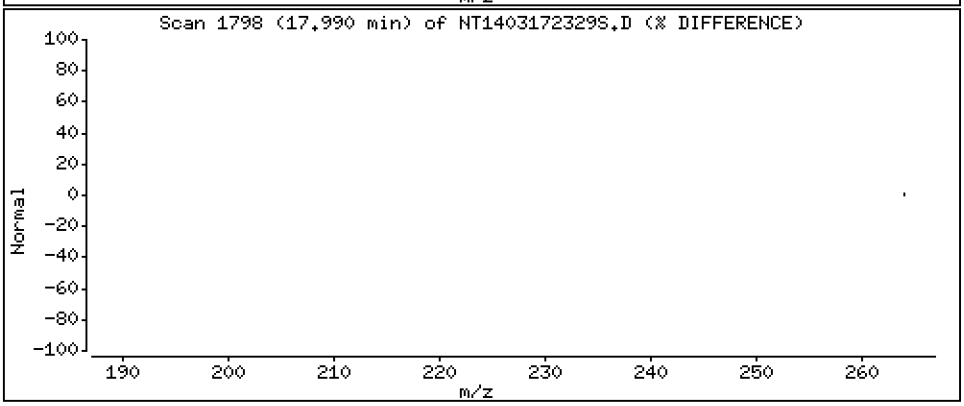












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172329S.D

Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD2

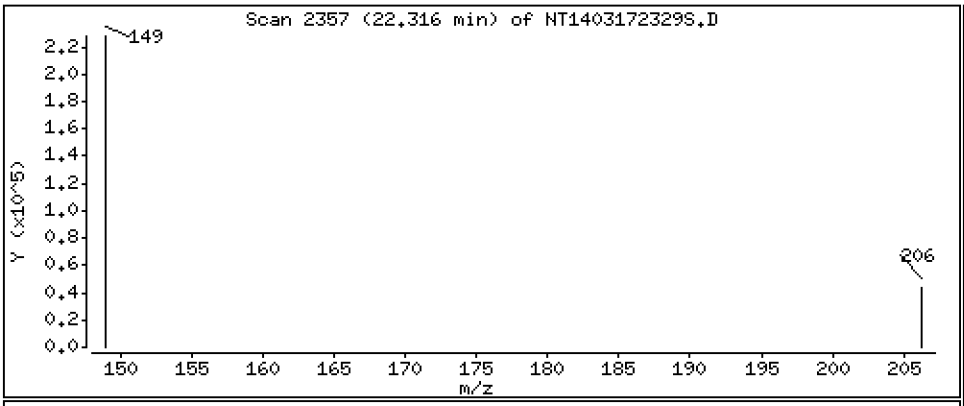
Operator: JGR

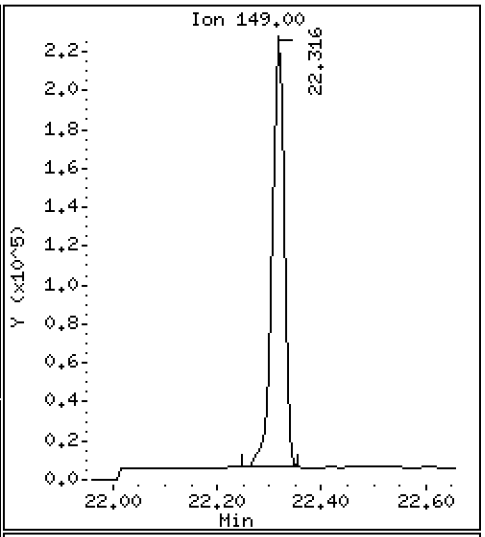
Column phase: ZB-5msi

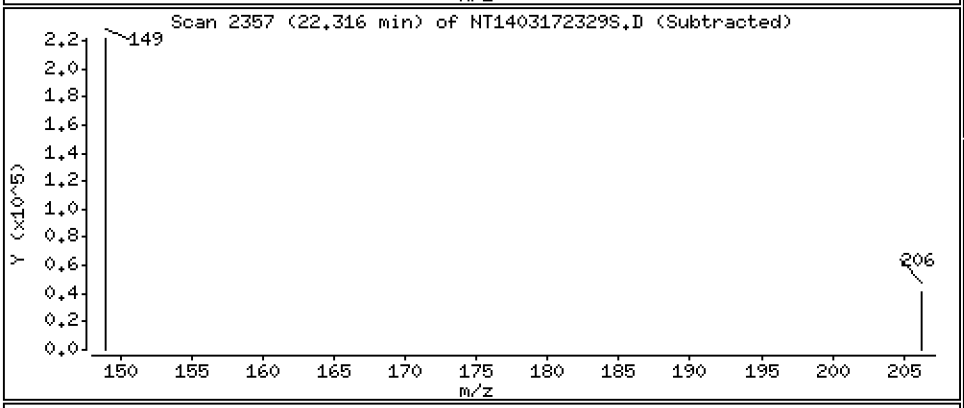
Column diameter: 0.25

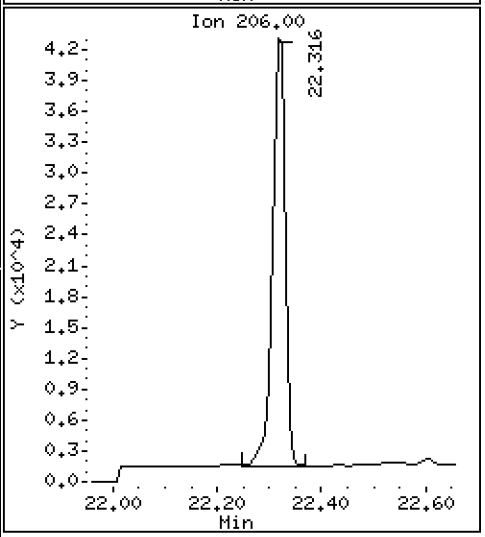
67 Butylbenzylphthalate

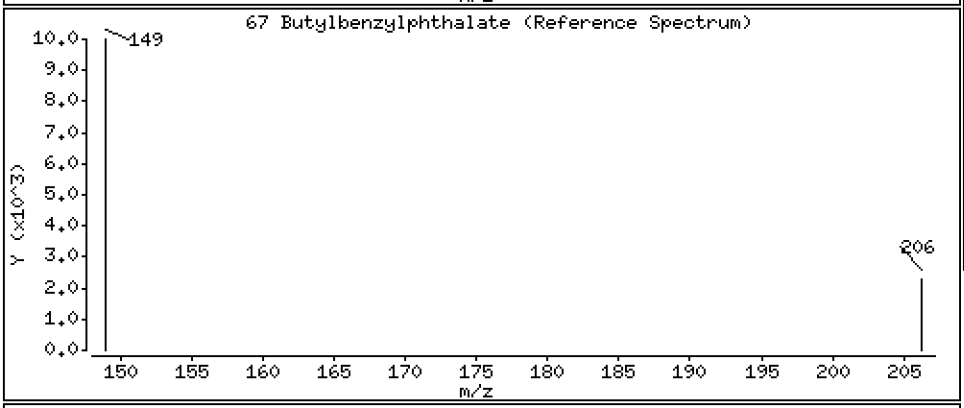
Concentration: 6.969 ug/mL

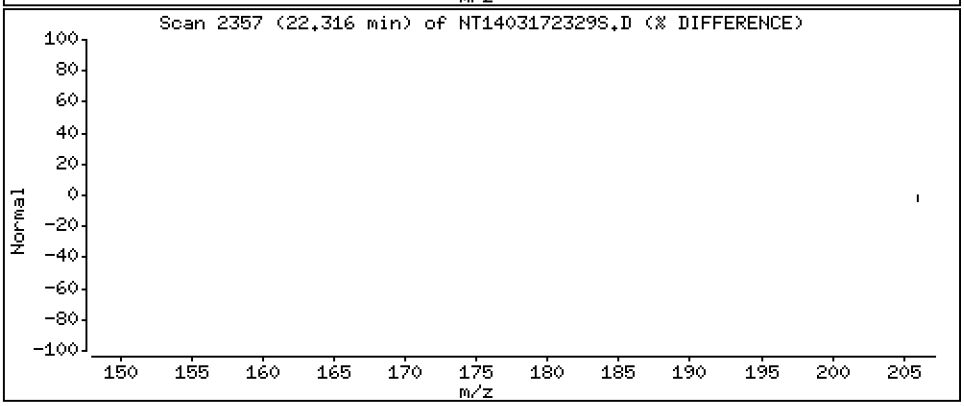












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172329S.D

Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD2

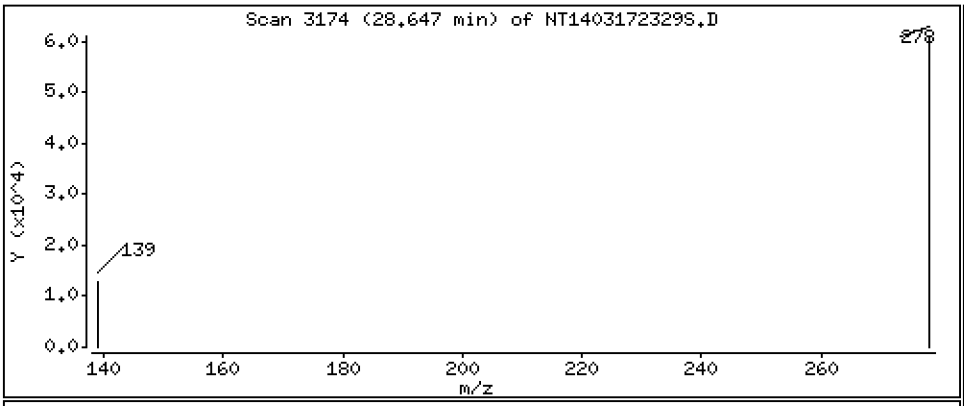
Operator: JGR

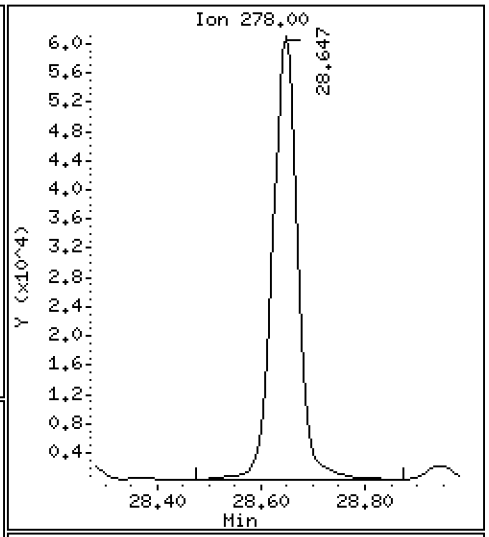
Column phase: ZB-5msi

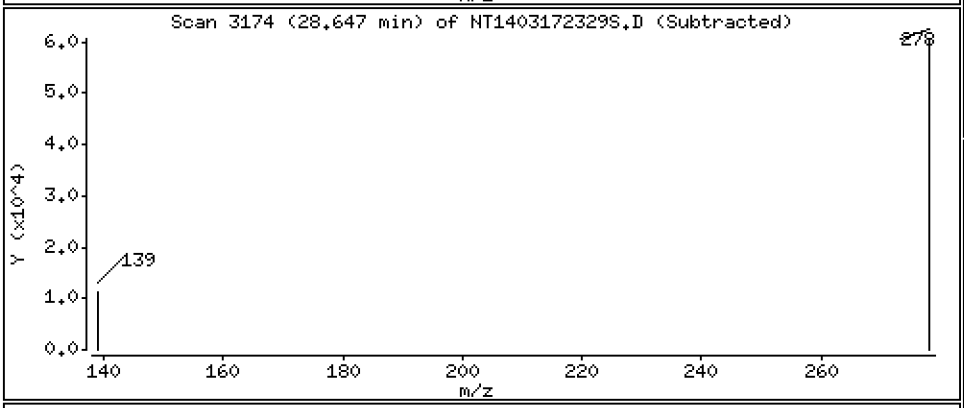
Column diameter: 0.25

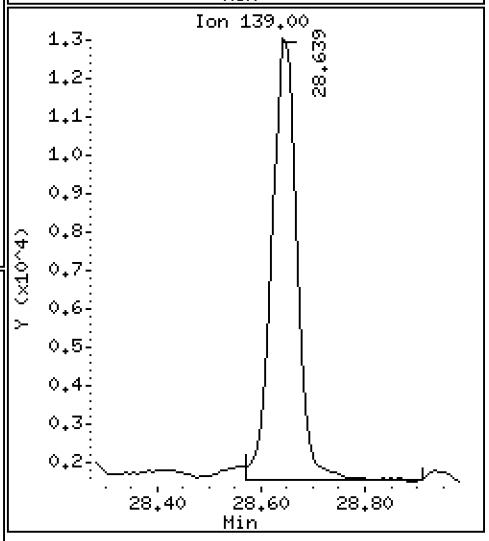
79 Dibenzo(a,h)anthracene

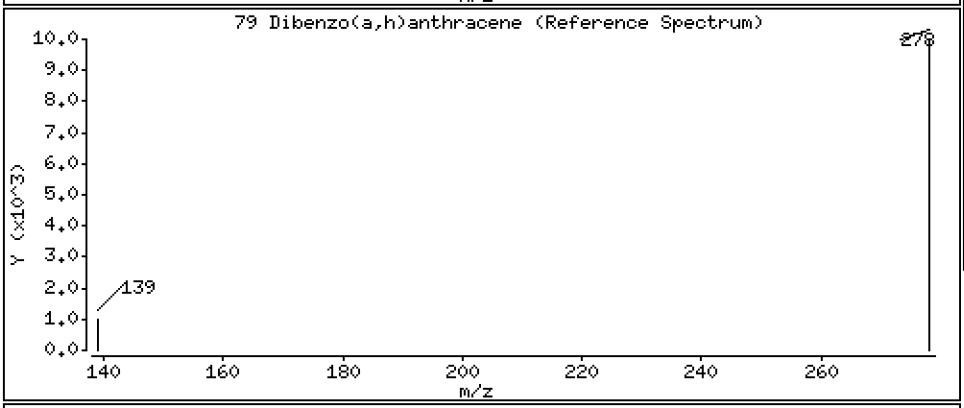
Concentration: 4.154 ug/mL

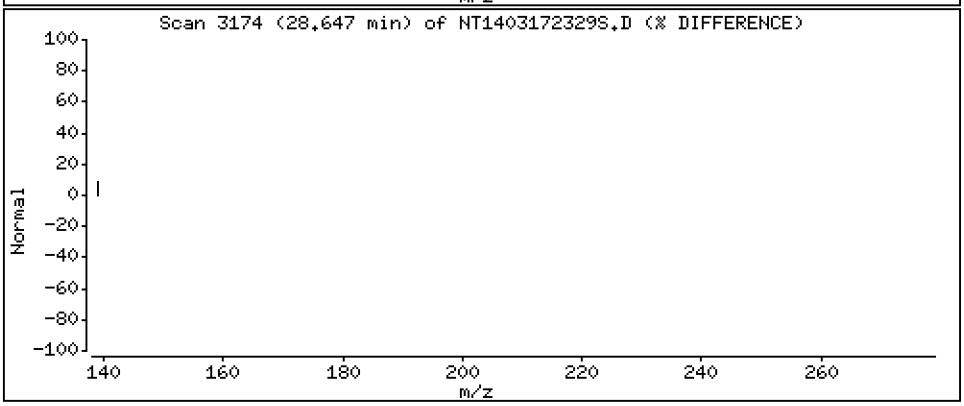












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT14031723295.D

Date : 18-MAR-2023 07:18

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-MSD2

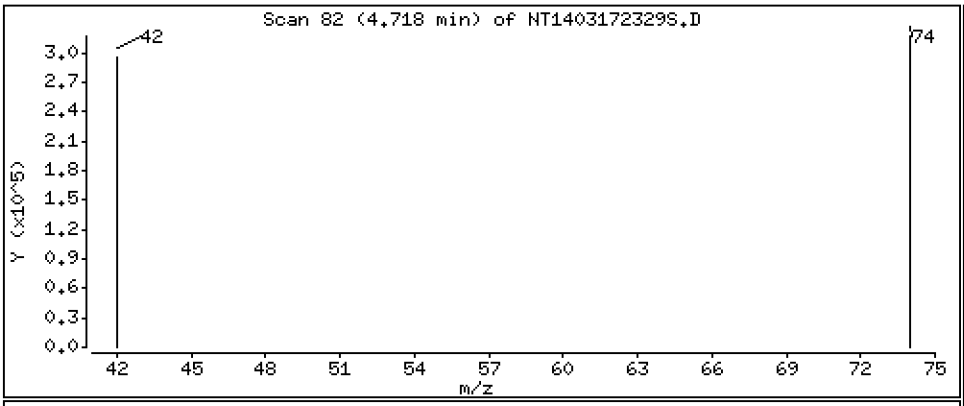
Operator: JGR

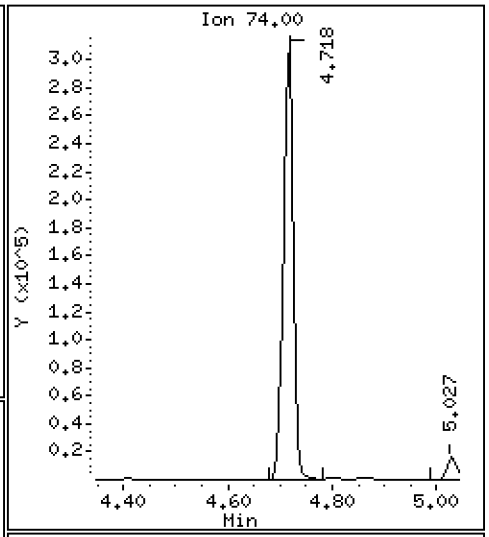
Column phase: ZB-5msi

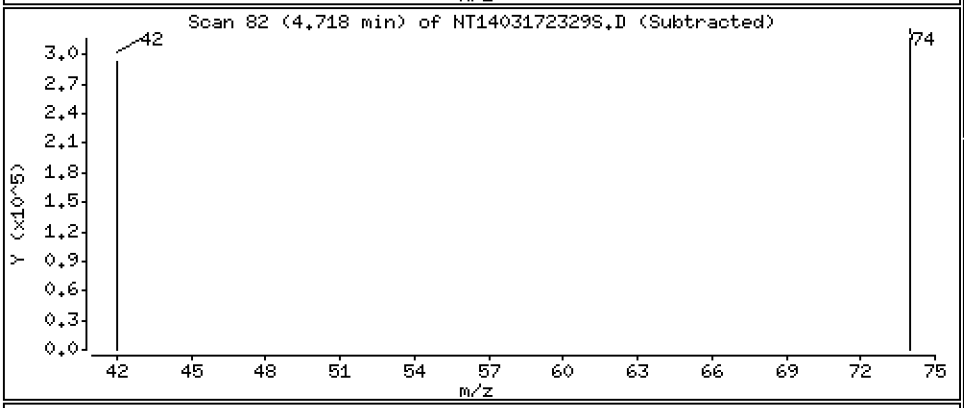
Column diameter: 0.25

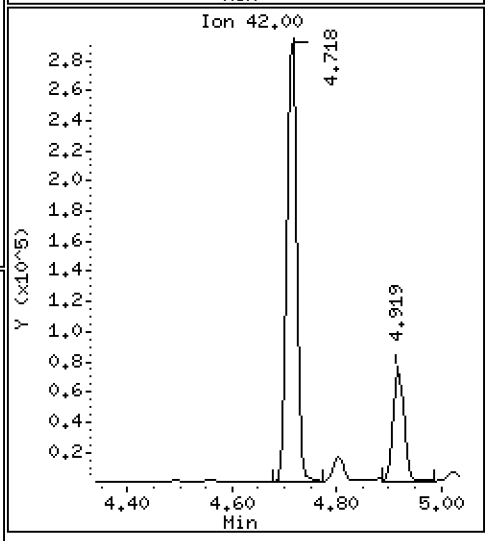
90 N-Nitrosodimethylamine

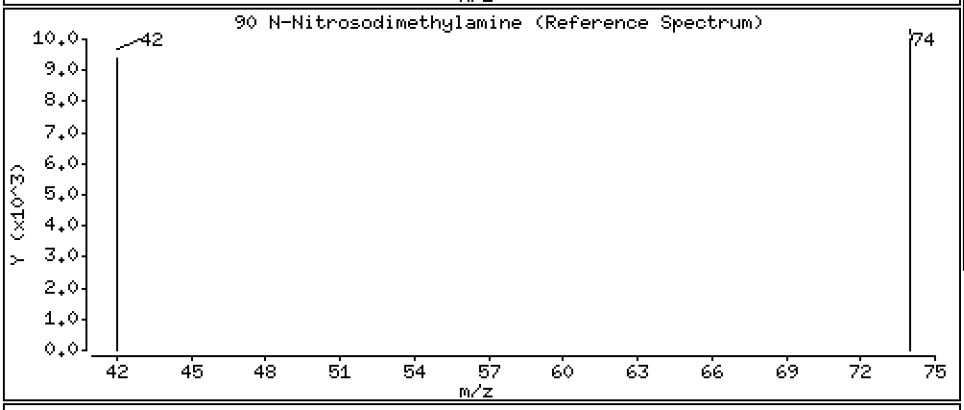
Concentration: 8.576 ug/mL

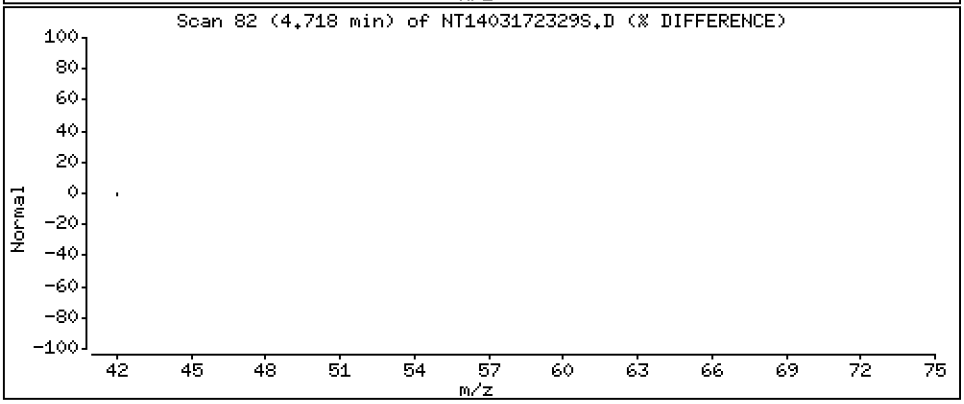












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172329S.D
Lab Smp Id: BLB0424-MSD2
Inj Date : 18-MAR-2023 07:18 MS Autotune Date: 11-MAR-2023 16:01
Operator : JGR Inst ID: nt14.i
Smp Info : BLB0424-MSD2
Misc Info :
Comment :
Method : \\target\share\chem3\nt14.i\20230317.b\20230317.b\SIMABN2.m
Meth Date : 23-Mar-2023 16:55 van Quant Type: ISTD
Cal Date : 15-MAR-2023 15:50 Cal File: NT1403152308.D
Als bottle: 25
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

			QUANT SIG					CONCENTRATIONS ON-COLUMN	FINAL
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
$	1	2-Fluorophenol	112	6.842	6.826	(0.755)	412139	5.19542	5.195(R)
	3	Phenol	94	8.449	8.441	(0.932)	355135	3.25550	3.256
	7	1,3-Dichlorobenzene	146	9.005	8.997	(0.993)	307142	3.29017	3.290
*	8	1,4-Dichlorobenzene-d4	152	9.067	9.067	(1.000)	233702	4.00000	
	9	1,4-Dichlorobenzene	146	9.098	9.098	(1.003)	302917	3.35335	3.353
	11	Benzyl alcohol	79	9.354	9.354	(1.032)	256816	4.01648	4.016
	12	1,2-Dichlorobenzene	146	9.455	9.455	(1.043)	300207	3.41194	3.412
	13	2-Methylphenol	108	9.572	9.564	(1.056)	258339	3.42825	3.428
	15	4-Methylphenol	108	9.843	9.828	(1.086)	296682	3.72674	3.727
	16	N-Nitroso-di-n-propylamine	70	9.906	9.898	(1.092)	216918	3.85390	3.854
	22	2,4-Dimethylphenol	107	10.891	10.883	(0.941)	787039	10.2539	10.25
	24	Benzoic acid	105	11.093	10.999	(0.959)	834419	13.5737	13.57
	26	1,2,4-Trichlorobenzene	180	11.488	11.480	(0.993)	267934	3.56161	3.562
*	27	Naphthalene-d8	136	11.573	11.565	(1.000)	892852	4.00000	
	30	Hexachlorobutadiene	225	11.974	11.974	(1.035)	152147	3.99646	3.996
	39	Dimethylphthalate	163	14.706	14.698	(0.967)	626222	4.32641	4.326
*	42	Acenaphthene-d10	162	15.209	15.201	(1.000)	423831	4.00000	
	50	Diethylphthalate	149	16.168	16.160	(1.063)	750479	4.87003	4.870
	54	N-Nitrosodiphenylamine	169	16.554	16.546	(0.907)	465007	4.04065	4.041
	57	Hexachlorobenzene	284	17.634	17.618	(0.966)	183541	4.15151	4.152
	58	Pentachlorophenol	266	17.990	17.974	(0.986)	430893	13.4860	13.49
*	59	Phenanthrene-d10	188	18.253	18.245	(1.000)	849353	4.00000	
$	66	Terphenyl-d14	244	21.402	21.386	(0.918)	383289	8.07897	8.079(R)
	67	Butylbenzylphthalate	149	22.315	22.308	(0.957)	337401	6.96866	6.969
*	69	Chrysene-d12	240	23.307	23.291	(1.000)	275198	4.00000	
*	77	Perylene-d12	264	25.954	25.931	(1.000)	195079	4.00000	
	79	Dibenzo(a,h)anthracene	278	28.647	28.631	(1.104)	205451	4.15442	4.154
	90	N-Nitrosodimethylamine	74	4.718	4.694	(0.520)	415612	8.57596	8.576

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1403172329S.D
Lab Smp Id: BLB0424-MSD2
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\SIMABN2.m
Misc Info:

Calibration Date: 18-MAR-2023
Calibration Time: 00:07
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	225221	112611	450442	233702	3.77
27 Naphthalene-d8	830434	415217	1660868	892852	7.52
42 Acenaphthene-d10	389907	194954	779814	423831	8.70
59 Phenanthrene-d10	763679	381840	1527358	849353	11.22
69 Chrysene-d12	415791	207896	831582	275198	-33.81
77 Perylene-d12	274872	137436	549744	195079	-29.03

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.07	8.57	9.57	9.07	0.00
27 Naphthalene-d8	11.57	11.07	12.07	11.57	0.07
42 Acenaphthene-d10	15.20	14.70	15.70	15.21	0.05
59 Phenanthrene-d10	18.25	17.75	18.75	18.25	0.04
69 Chrysene-d12	23.29	22.79	23.79	23.31	0.07
77 Perylene-d12	25.93	25.43	26.43	25.95	0.09

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

REVIEW SUMMARY FOR FILE - NT1403172329S.D

Lab ID: BLB0424-MSD2
nt14.i, 20230317.b\20230317.b\SIMABN2.m,   18-MAR-2023 07:18

RT	CO-ELUTION COMPOUNDS
NO CO-ELUTIONS	

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.959	0.951	0.0074	Benzoic acid

RRT check based on Ccal File: 20230317.b/NT1403172317S.D

On Column LOD for nt14.i, 20230317.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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

Analytical Resources, LLC
Analytical Chemists and Consultants

STANDARD REFERENCE MATERIAL RECOVERY

EPA 8270E-SIM

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Laboratory ID: BLB0424-SRM2
Batch: BLB0424
Initial/Final: 1 g / 1 mL
Preparation: EPA 3546 (Microwave)
Analyzed: 03/17/2023 22:55
Standard ID: K003477
Expires: 01/31/2024
Standard Lot#: CRM 143 (LRAC8918)
Description: CRM 143 BNAs - Sandy Loam

ANALYTE	TRUE (ug/kg wet)	FOUND (ug/kg wet)	MDL	MRL	Q	SRM % REC.	QC LIMITS REC.
2,4-Dimethylphenol	6357.0	3730	21.7	200		58.7	0 - 220
1,2,4-Trichlorobenzene	1477.0	675	26.8	50.0		45.7	10 - 193
N-Nitrosodiphenylamine	2854.0	2910	13.1	50.0		102	40 - 160
Pentachlorophenol	3411.0	3110	21.3	200	Q	91.2	10 - 206

* Values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT14031723158.D

Date : 17-MAR-2023 22:55

Client ID:

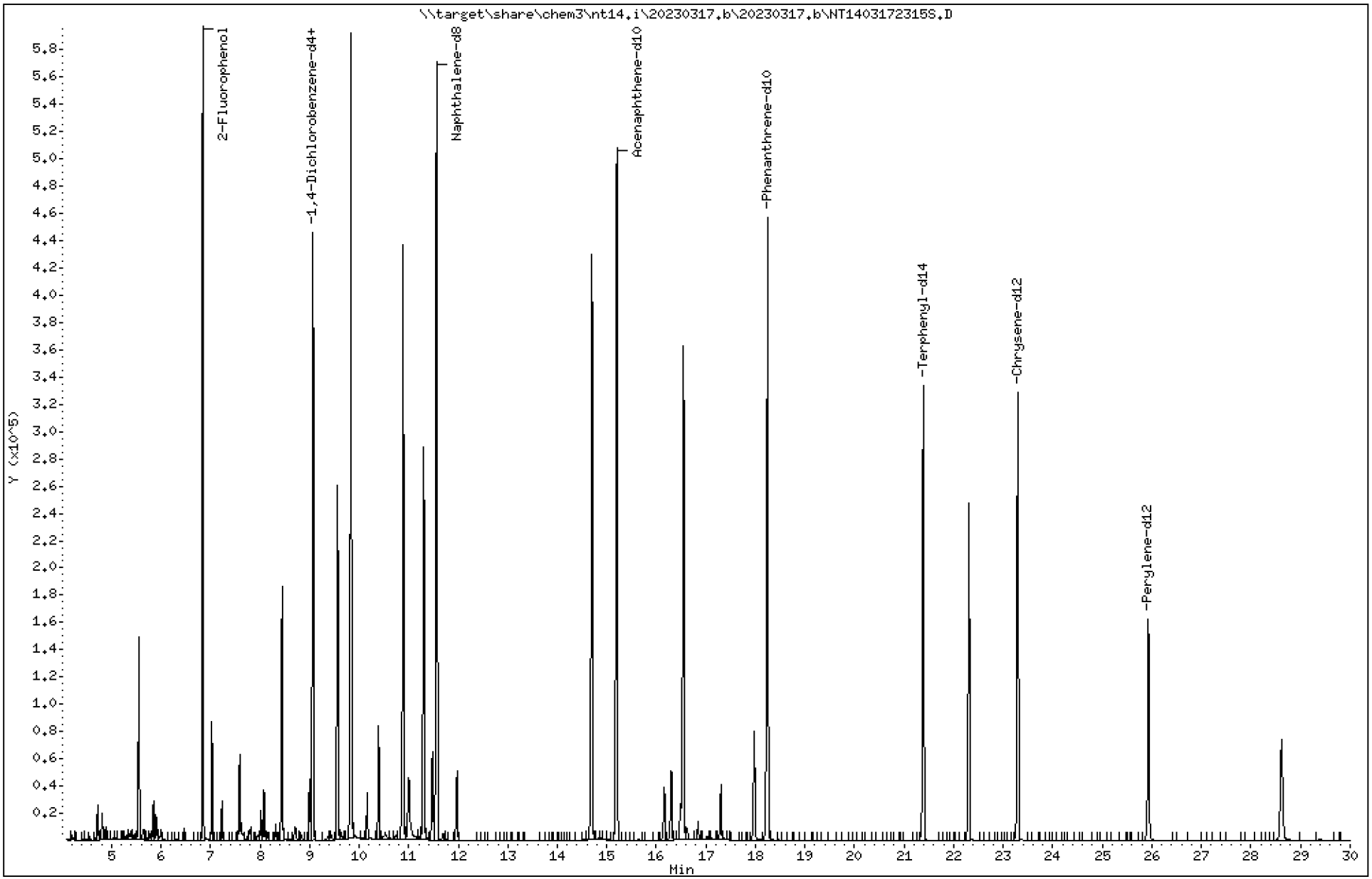
Instrument: nt14.i

Sample Info: BLB0424-SRM2

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT14031723155S.D

Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM2

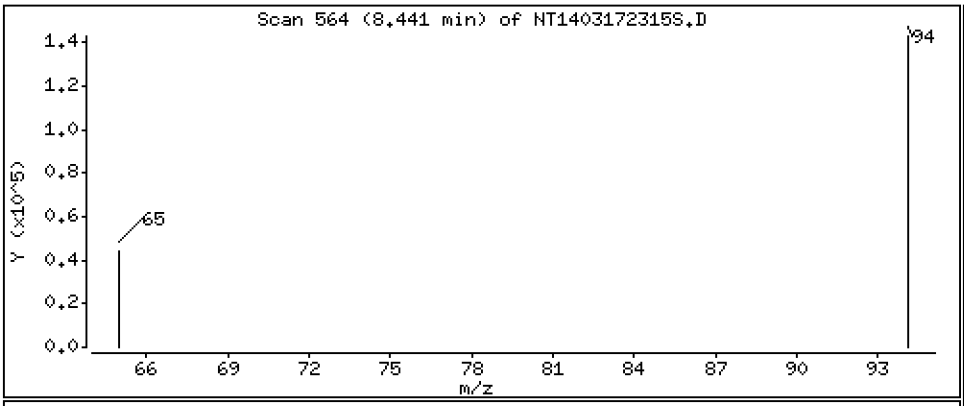
Operator: JGR

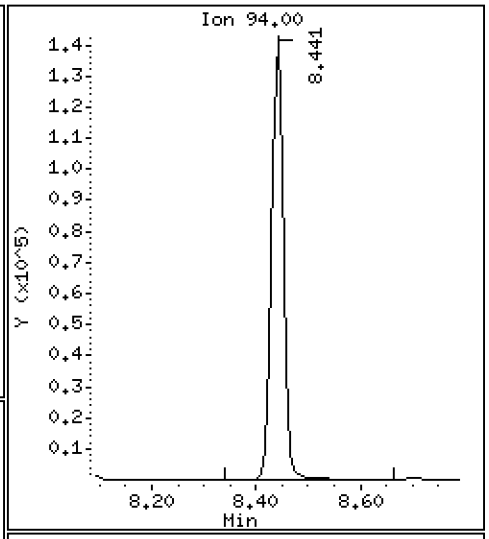
Column phase: ZB-5msi

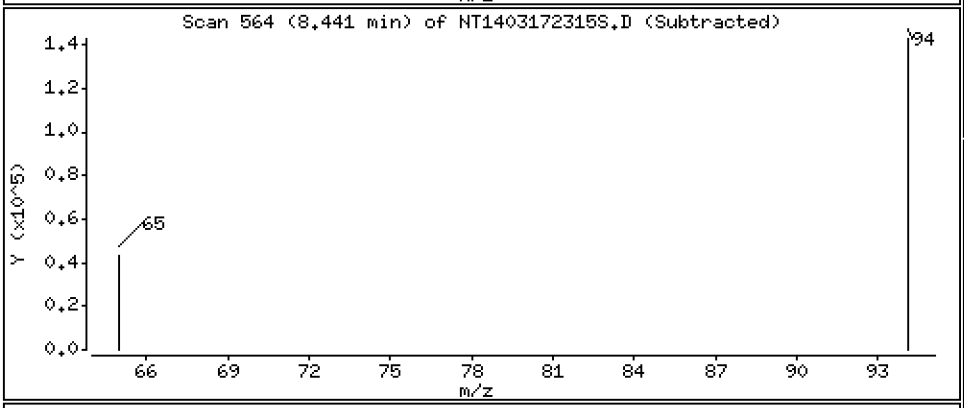
Column diameter: 0.25

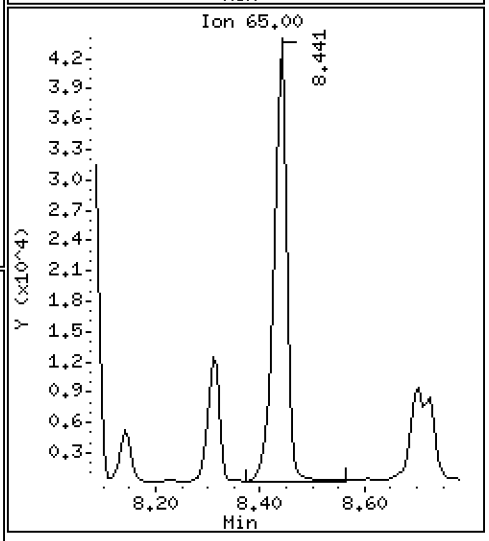
3 Phenol

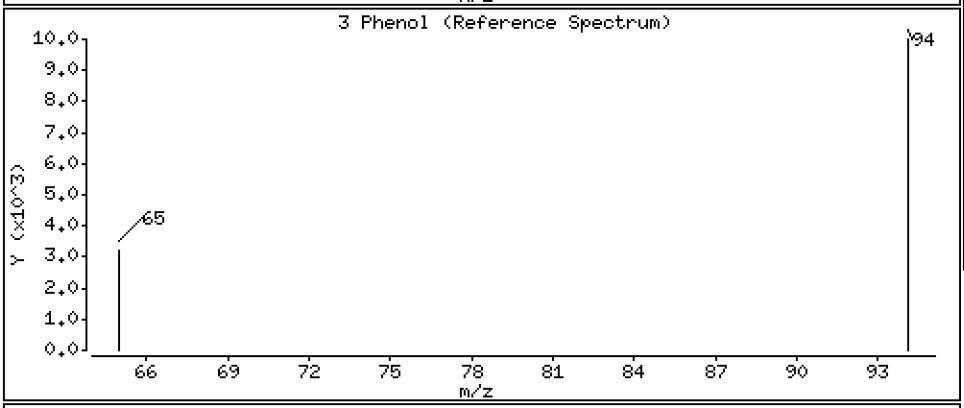
Concentration: 1.689 ug/mL

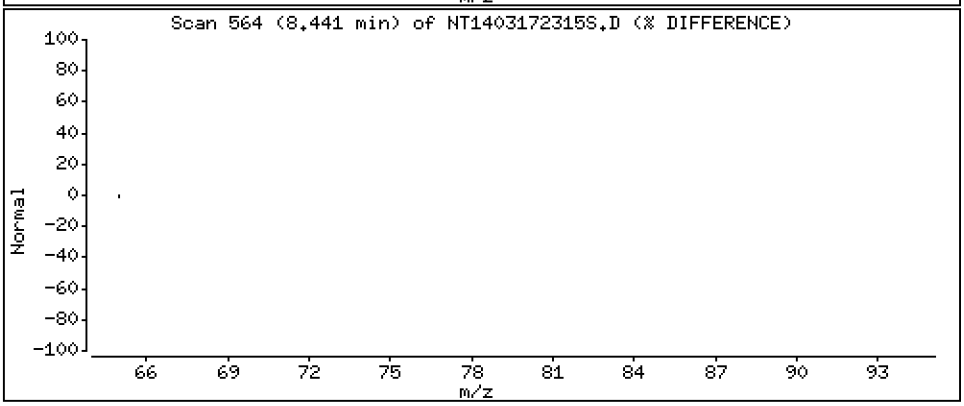












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172315S.D

Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM2

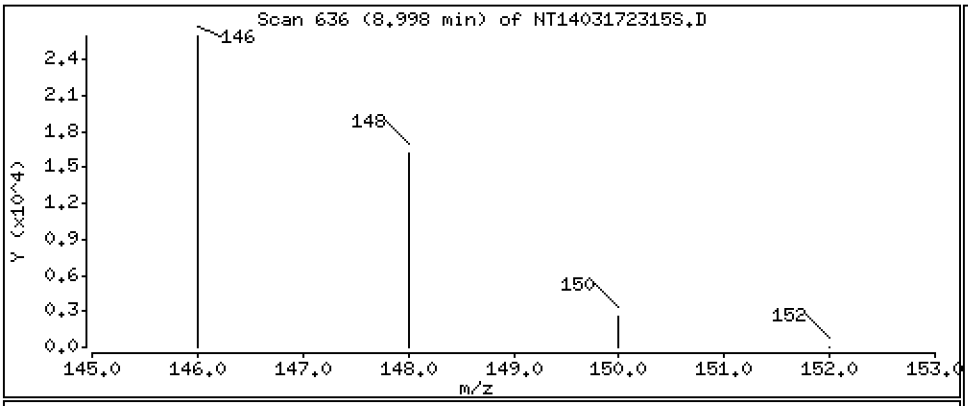
Operator: JGR

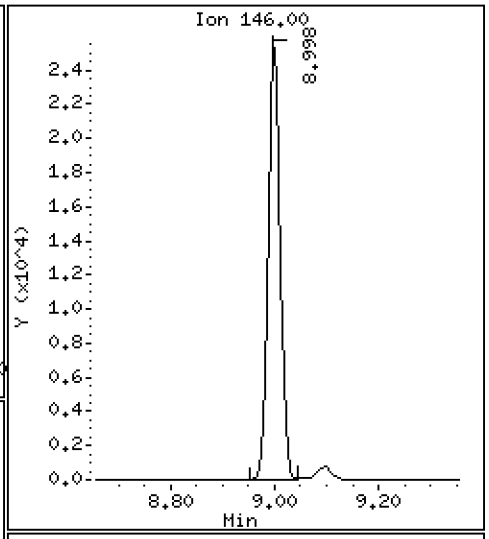
Column phase: ZB-5msi

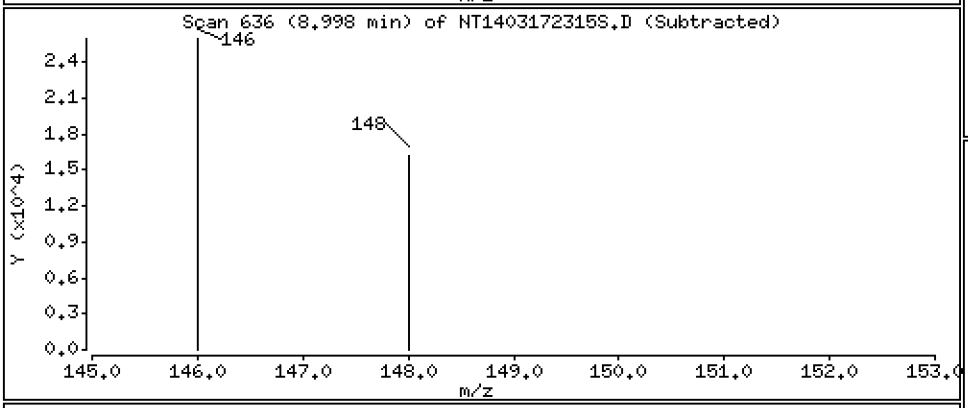
Column diameter: 0.25

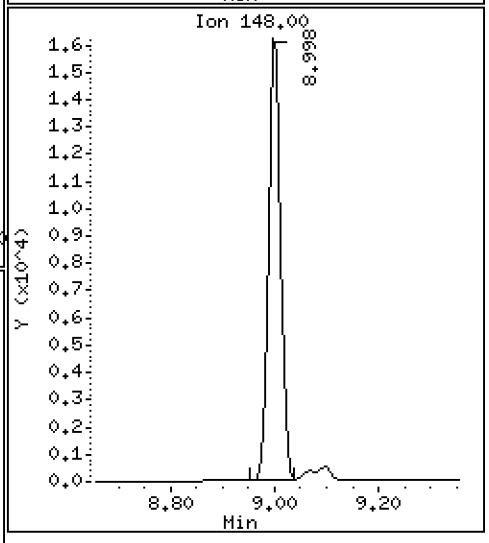
7 1,3-Dichlorobenzene

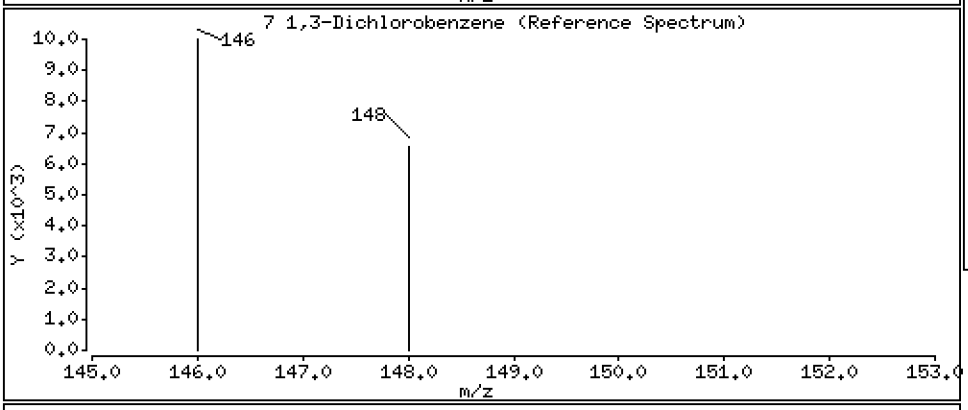
Concentration: 0.3823 ug/mL

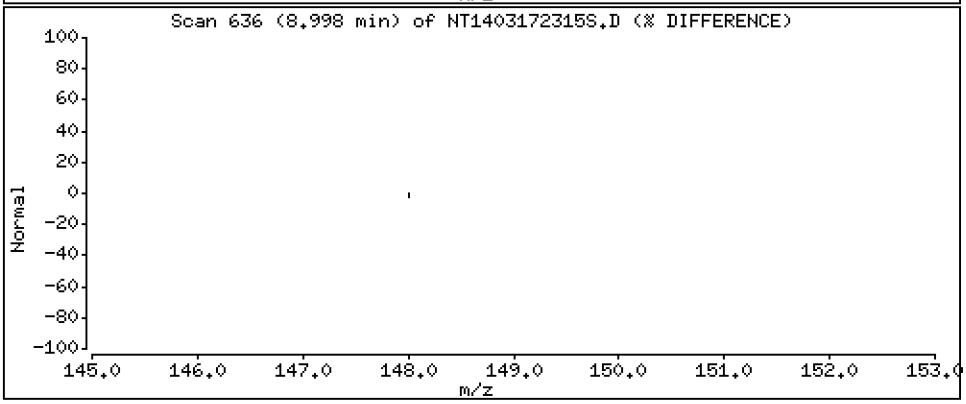












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT14031723155.D

Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM2

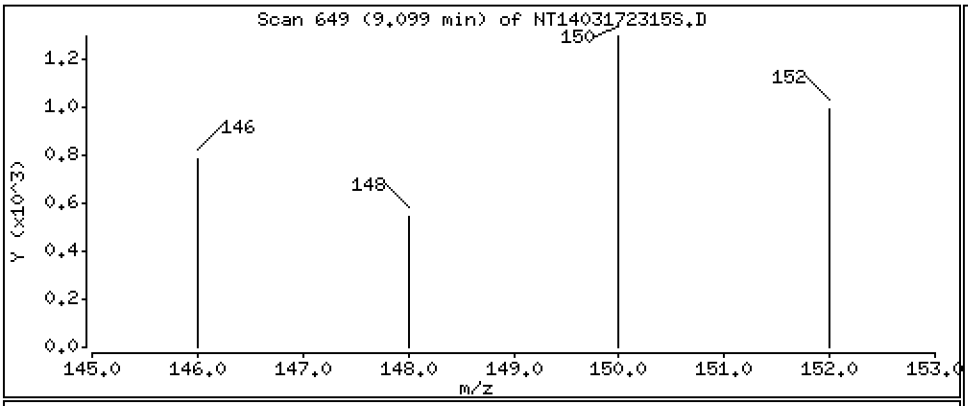
Operator: JGR

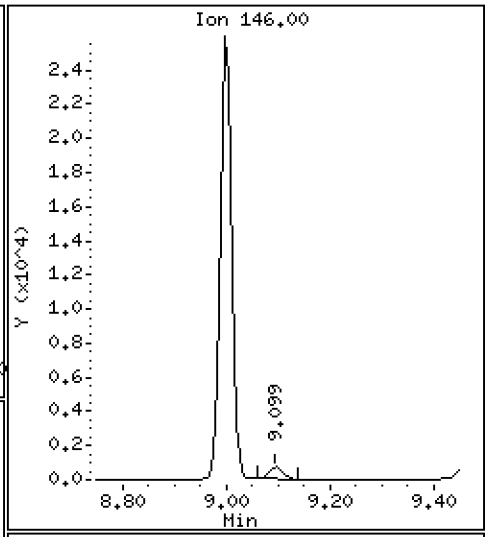
Column phase: ZB-5msi

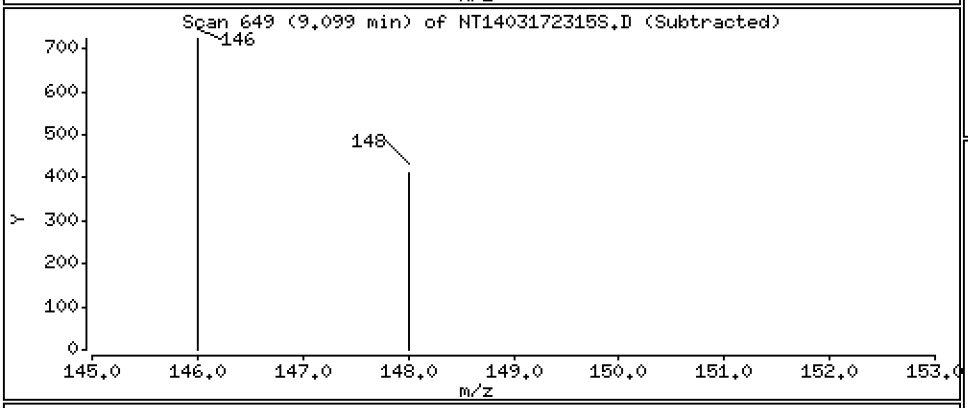
Column diameter: 0.25

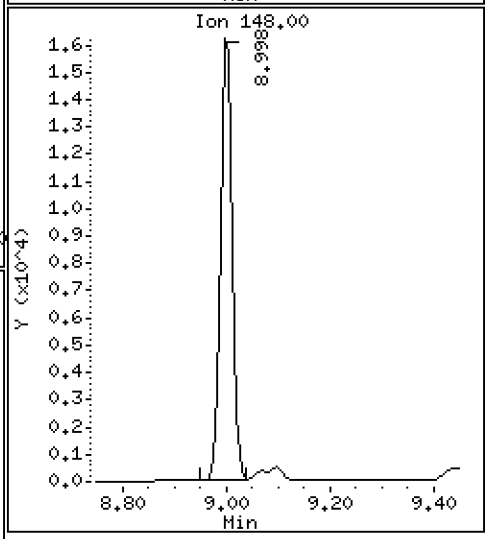
9 1,4-Dichlorobenzene

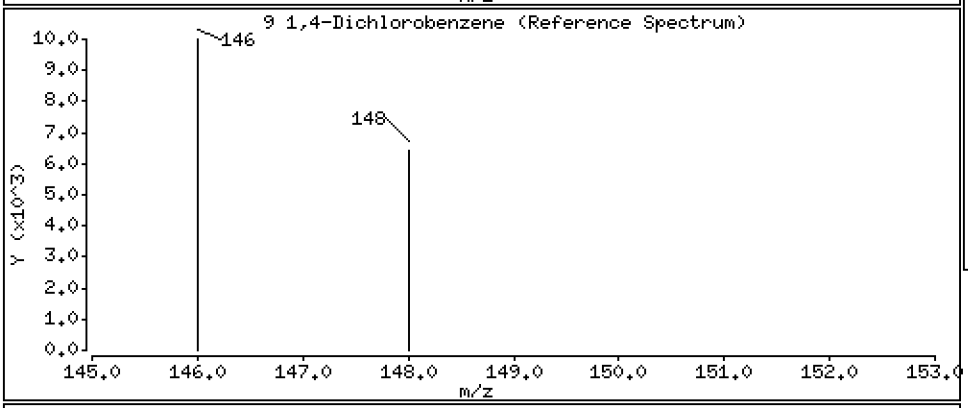
Concentration: 0.01062 ug/mL

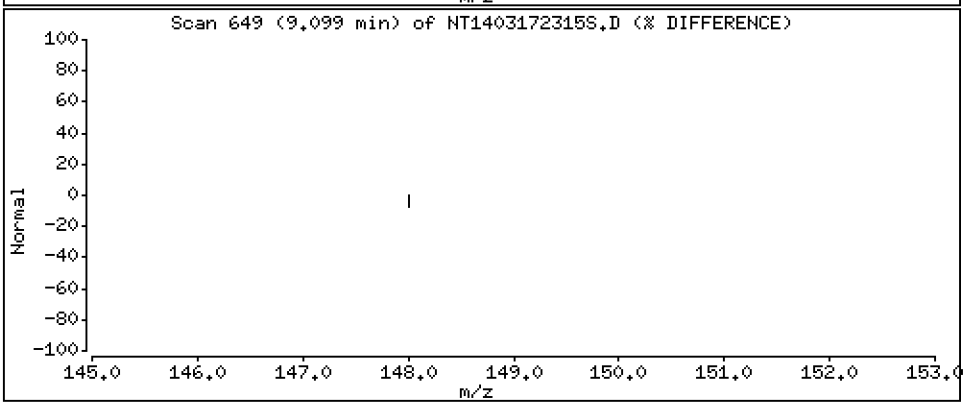












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT14031723155S.D

Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM2

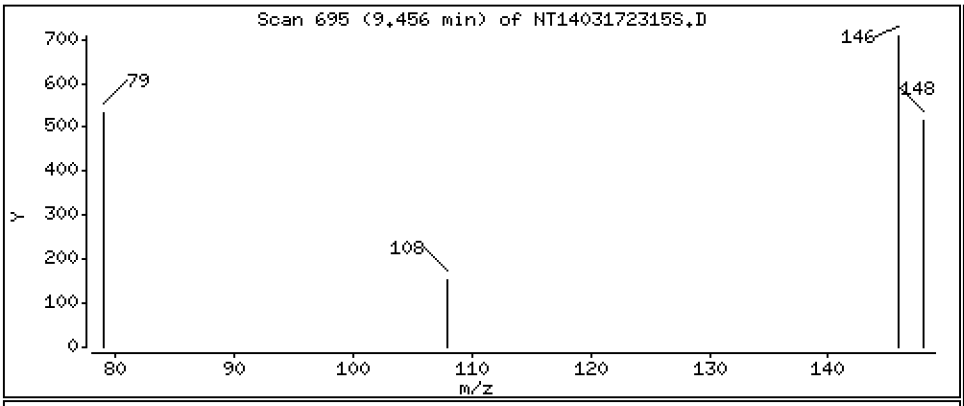
Operator: JGR

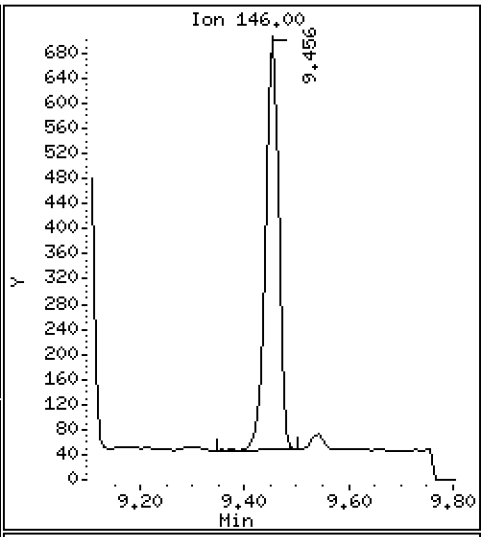
Column phase: ZB-5msi

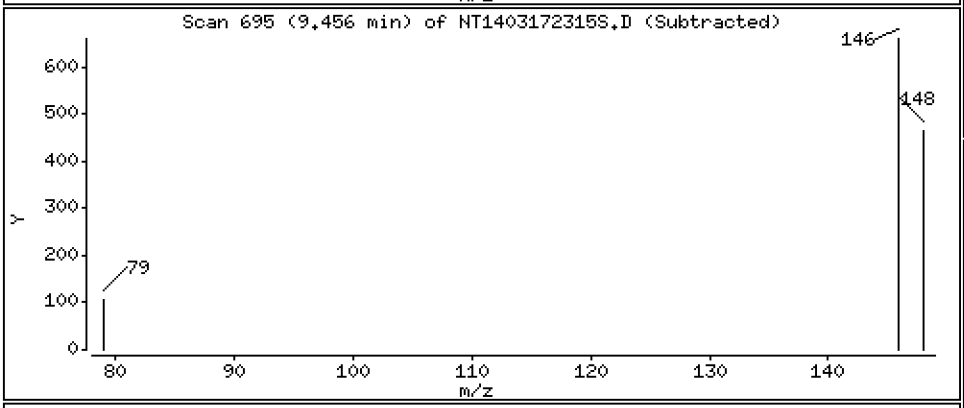
Column diameter: 0.25

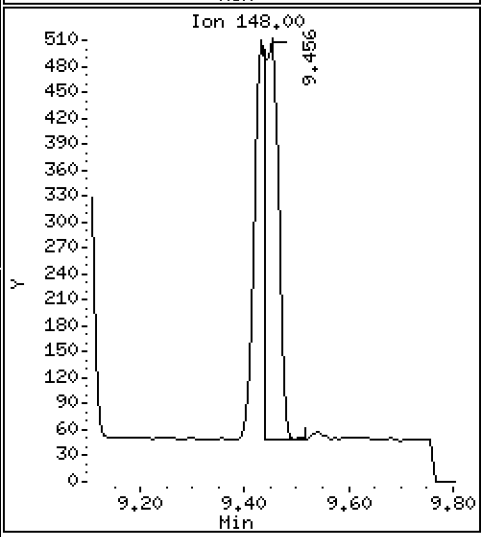
12 1,2-Dichlorobenzene

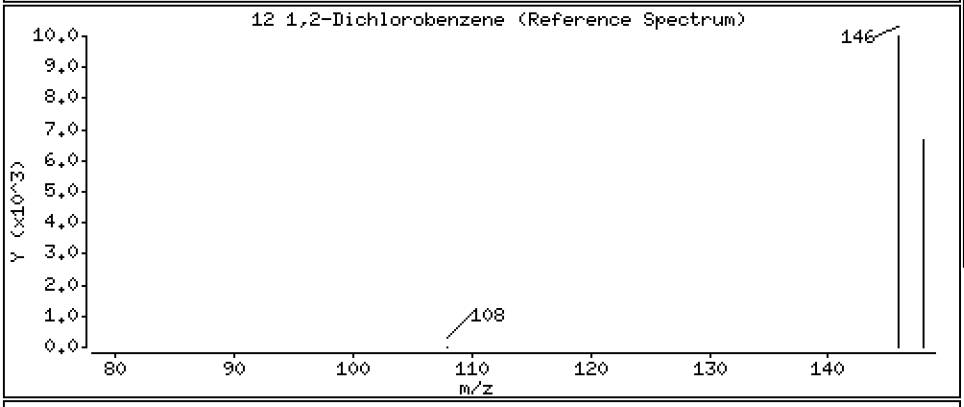
Concentration: 0.01079 ug/mL

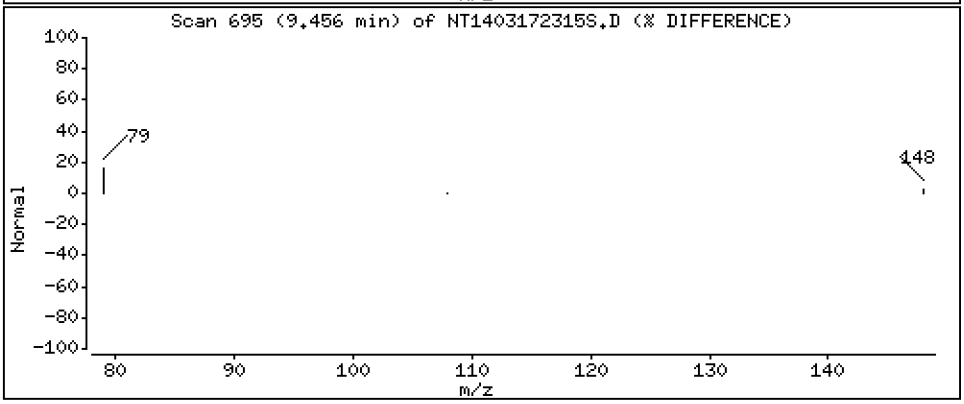












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Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM2

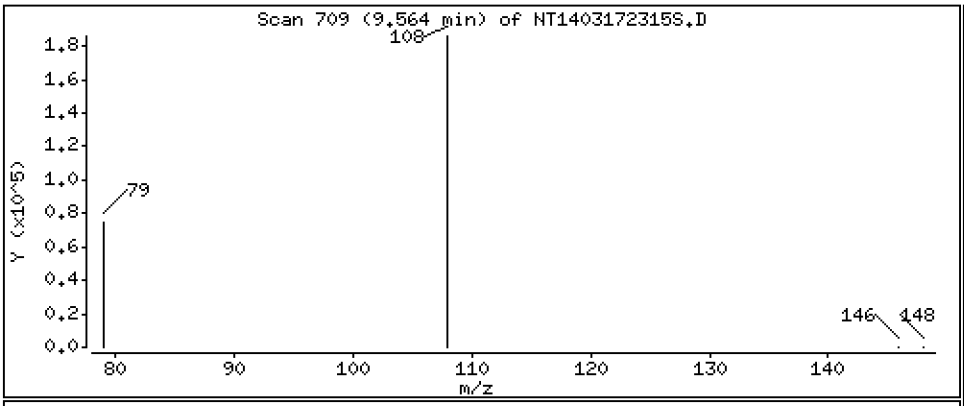
Operator: JGR

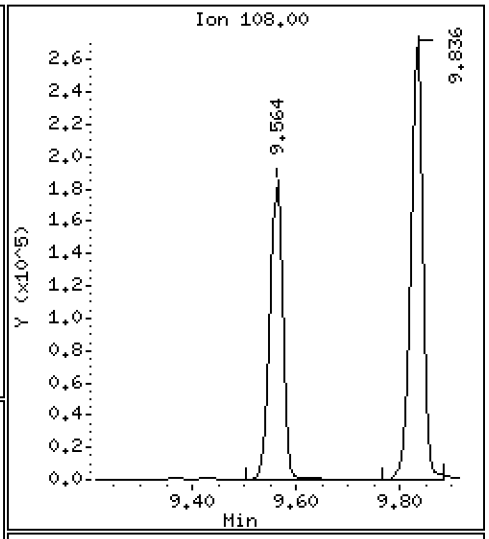
Column phase: ZB-5msi

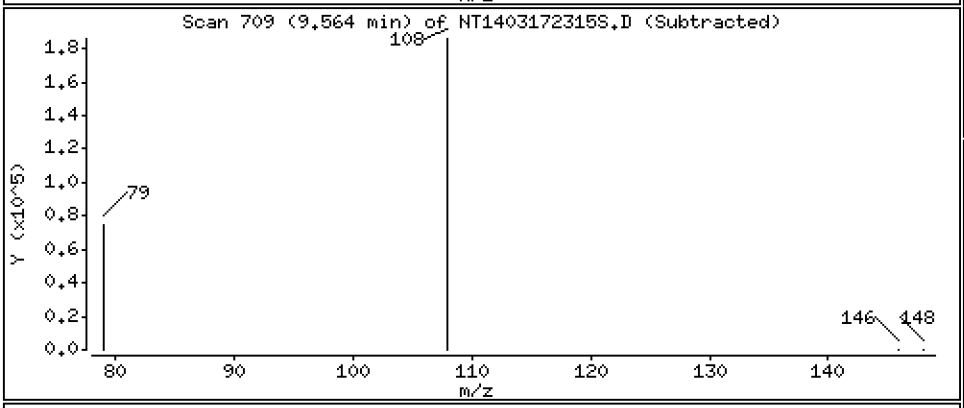
Column diameter: 0.25

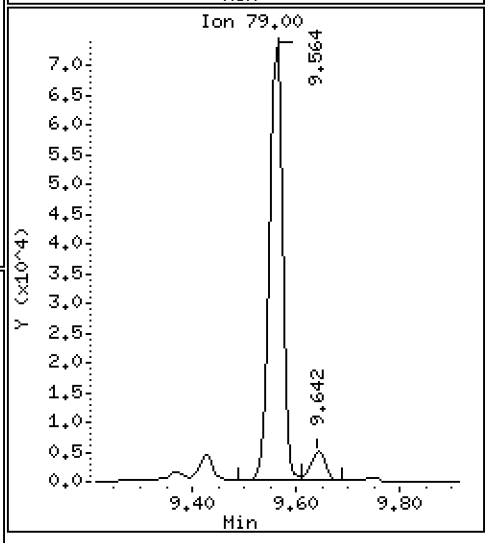
13 2-Methylphenol

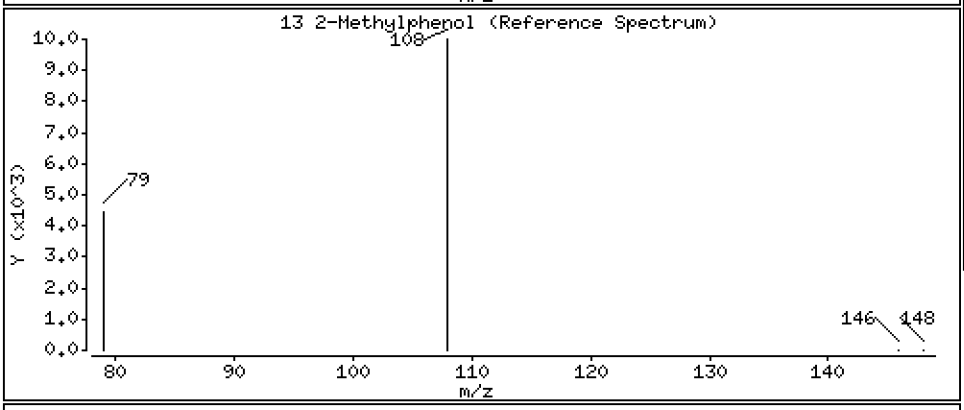
Concentration: 3.525 ug/mL

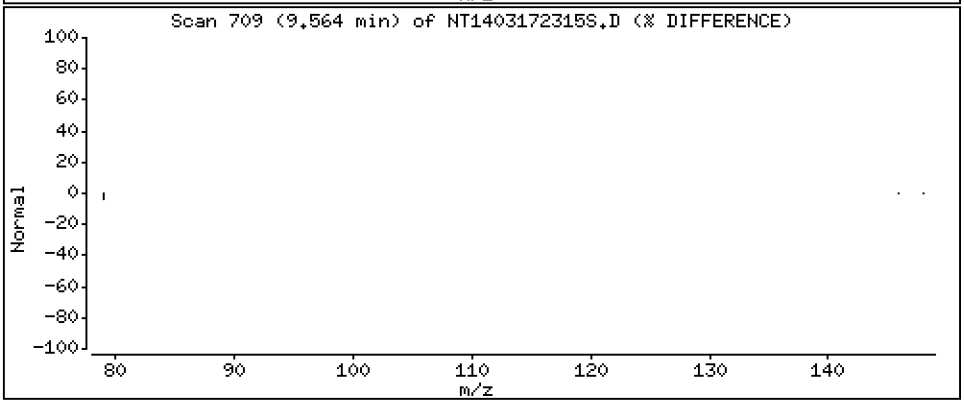












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Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM2

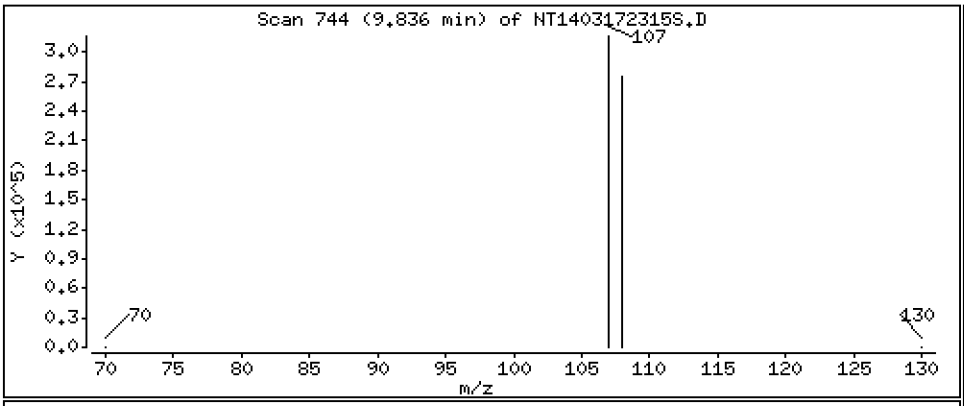
Operator: JGR

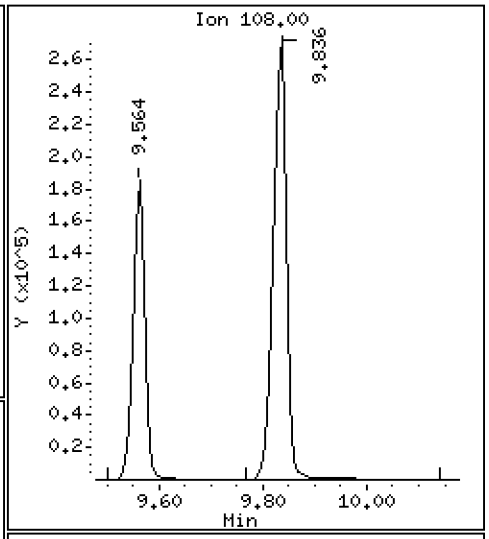
Column phase: ZB-5msi

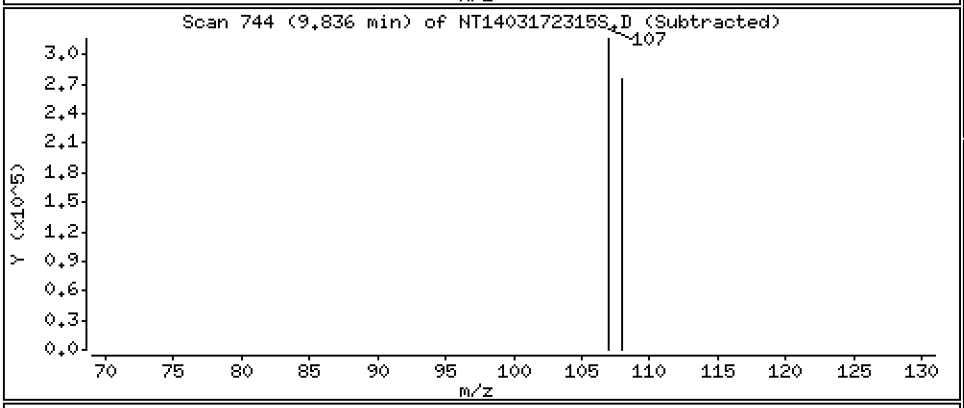
Column diameter: 0.25

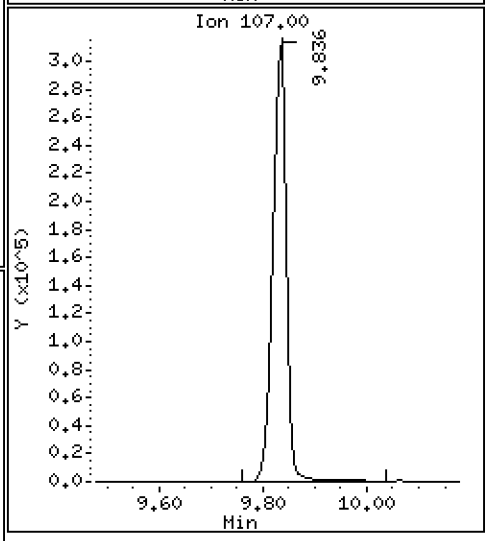
15 4-Methylphenol

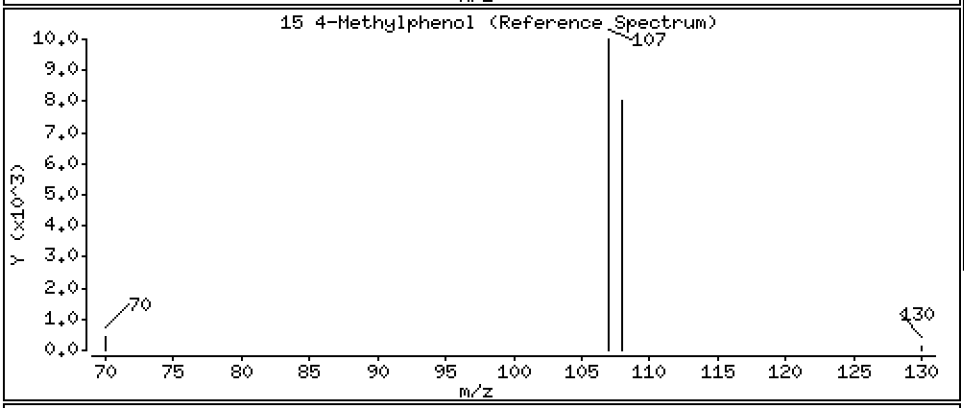
Concentration: 5.104 ug/mL

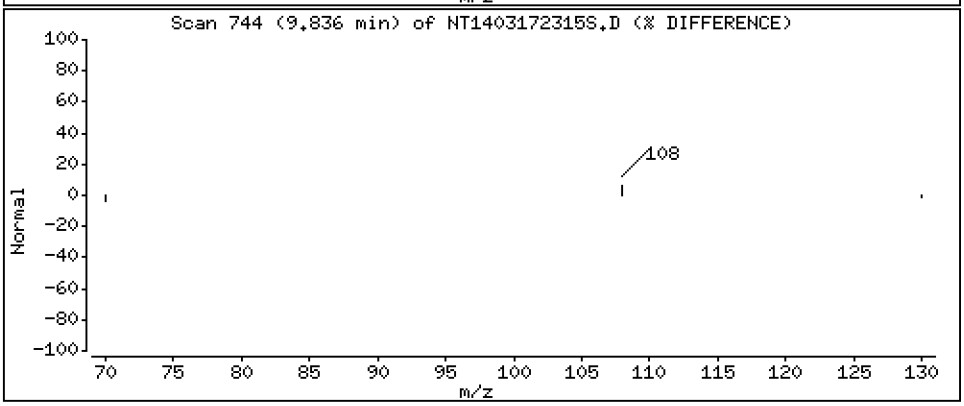












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Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM2

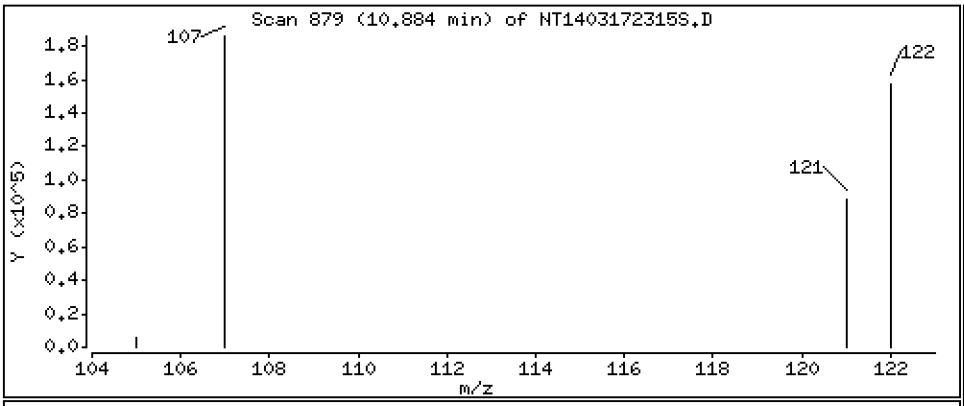
Operator: JGR

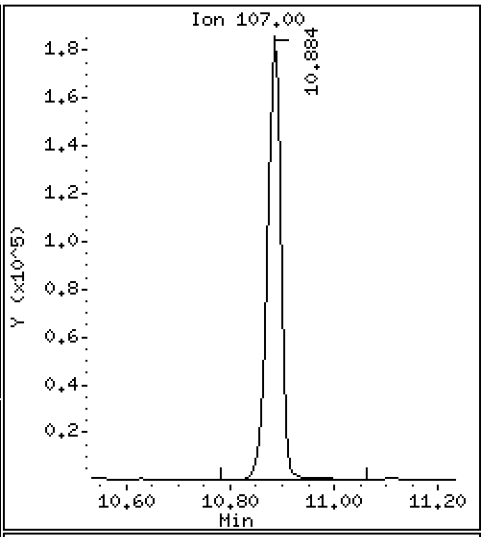
Column phase: ZB-5msi

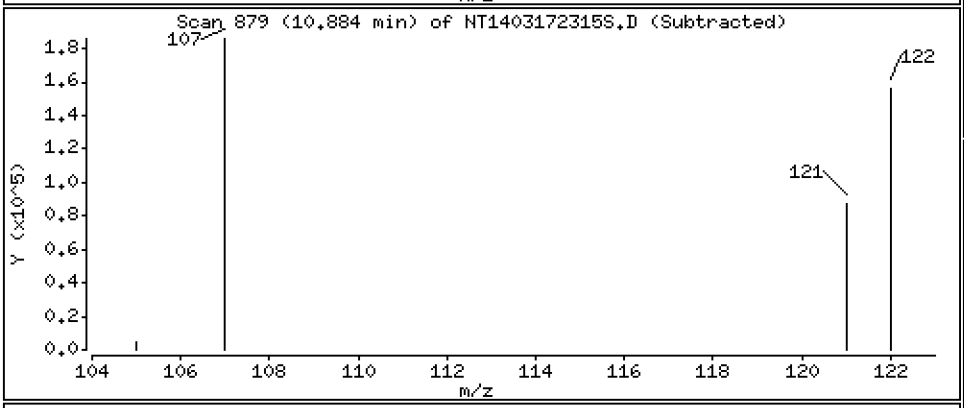
Column diameter: 0.25

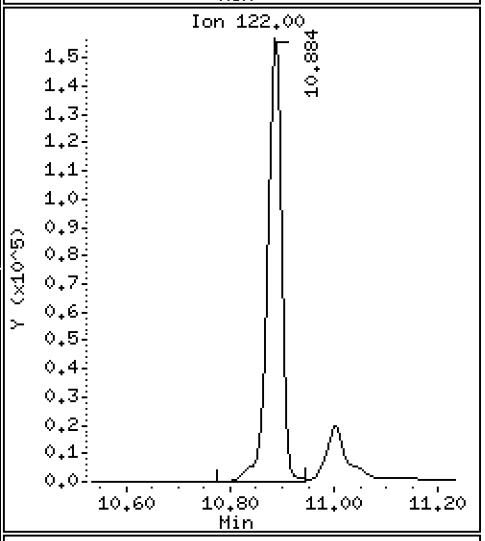
22 2,4-Dimethylphenol

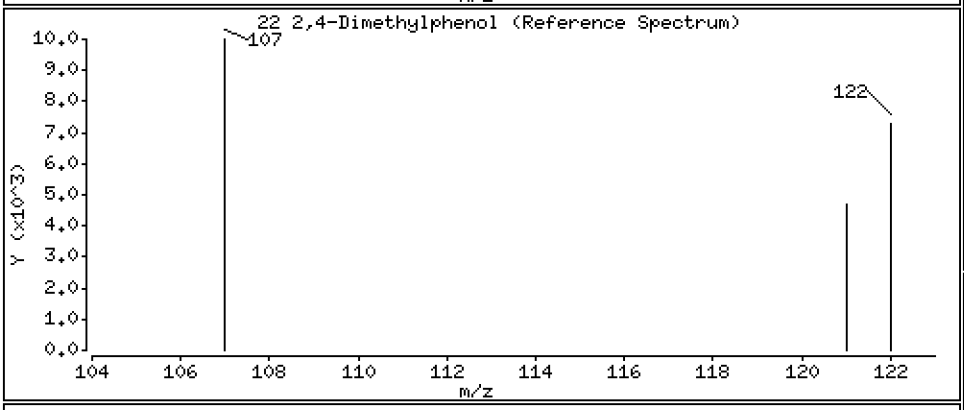
Concentration: 3.731 ug/mL

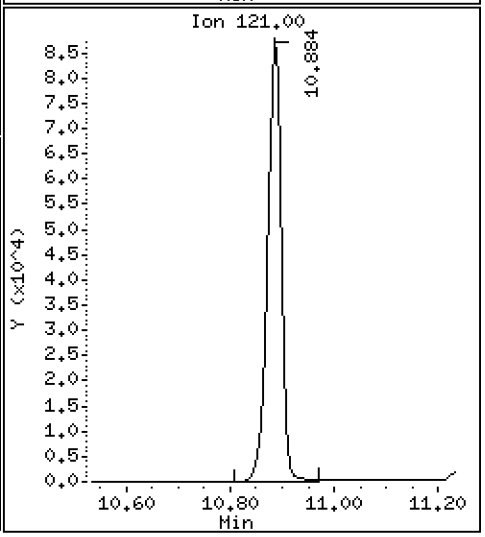


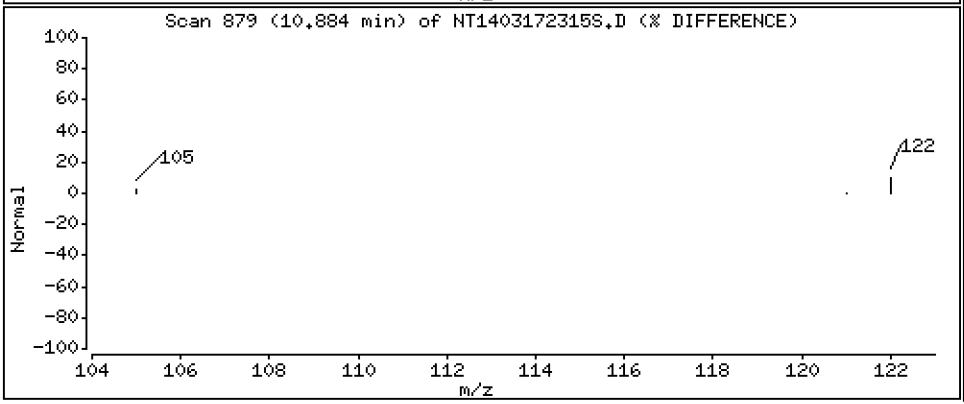












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Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM2

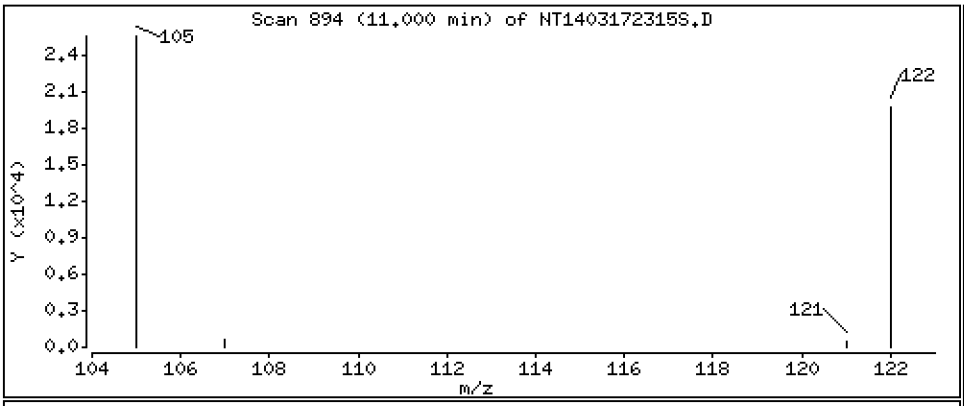
Operator: JGR

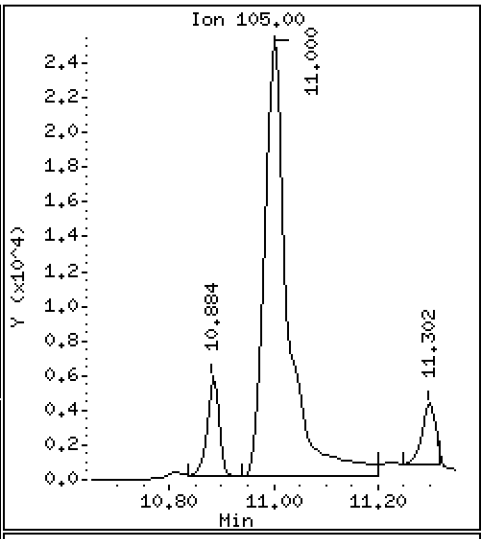
Column phase: ZB-5msi

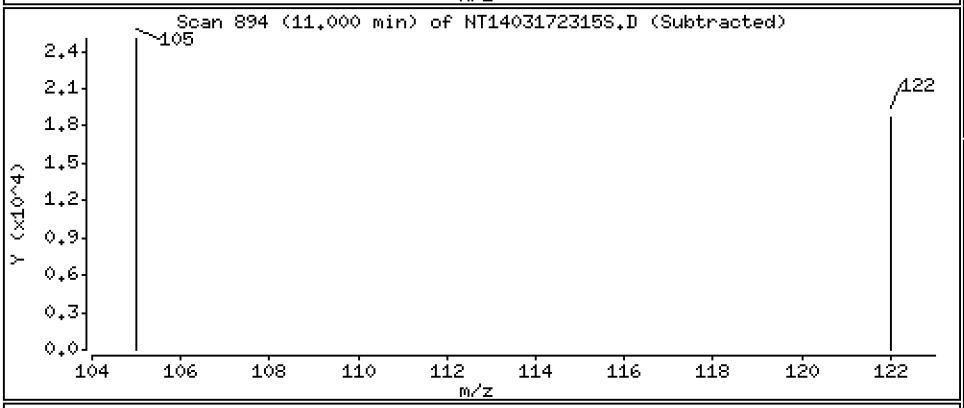
Column diameter: 0.25

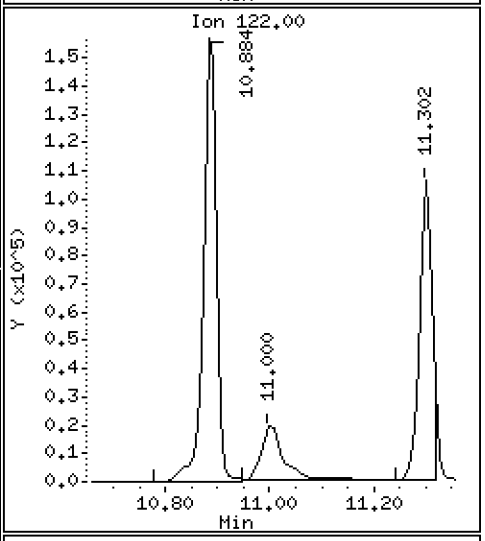
24 Benzoic acid

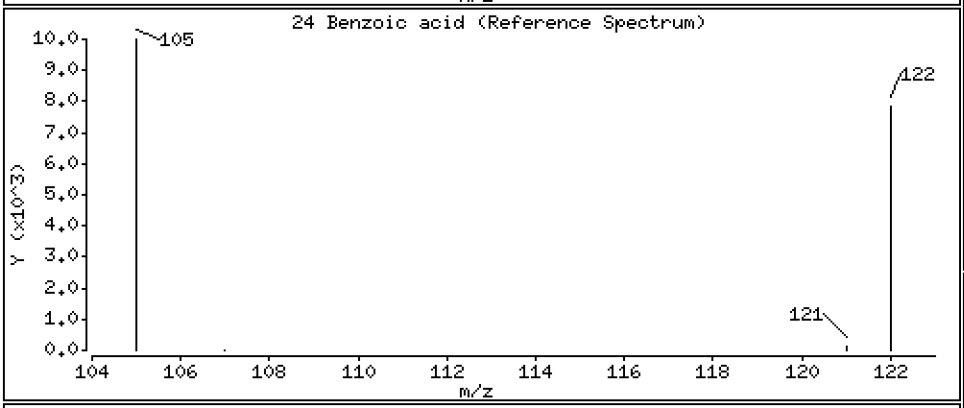
Concentration: 1.201 ug/mL

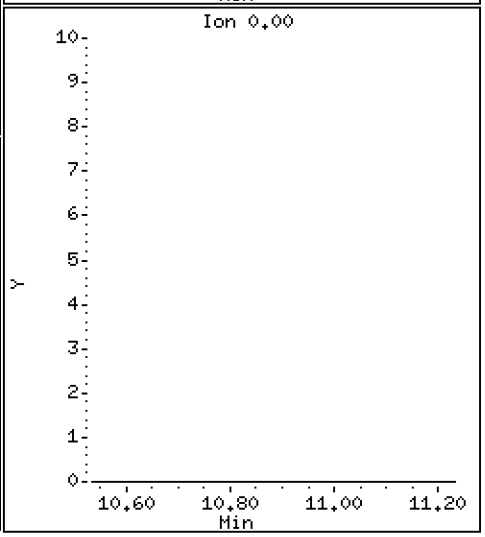


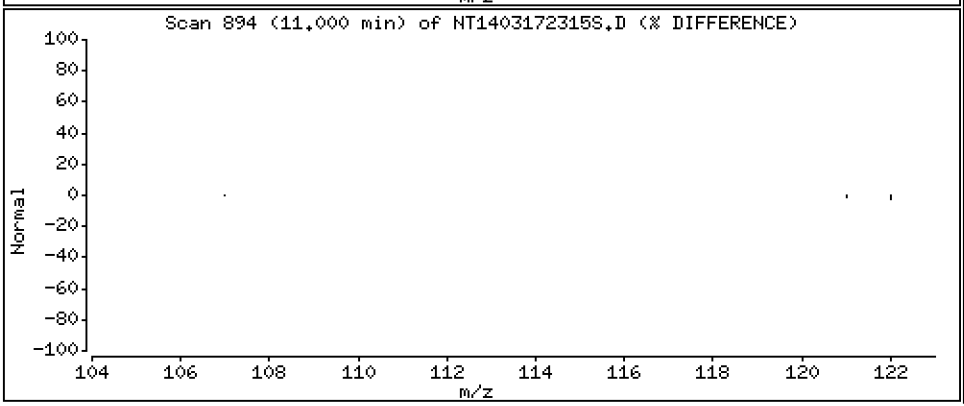












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Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM2

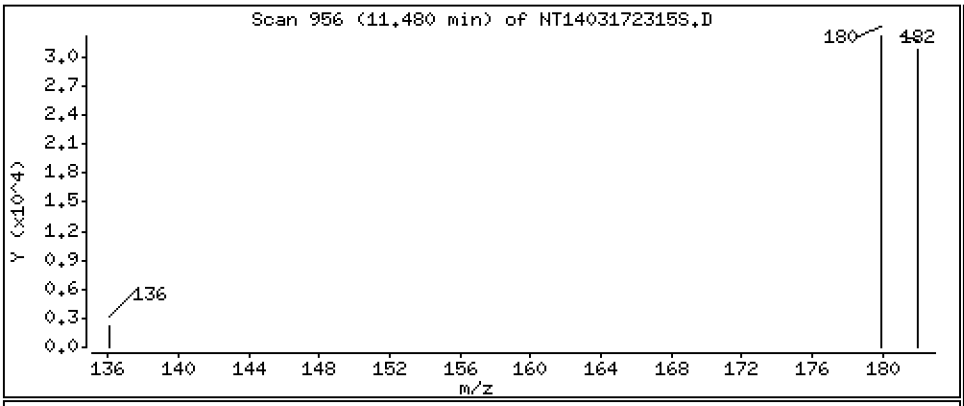
Operator: JGR

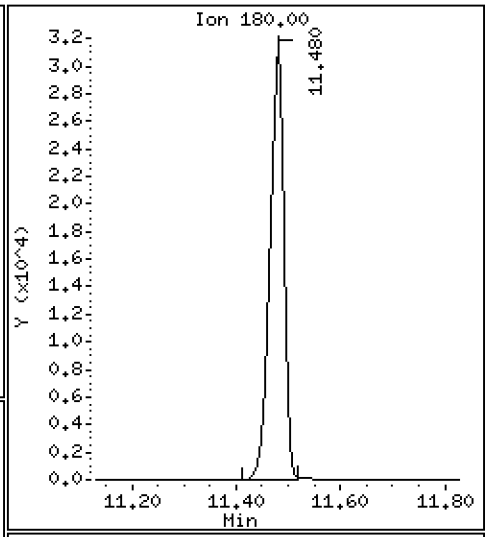
Column phase: ZB-5msi

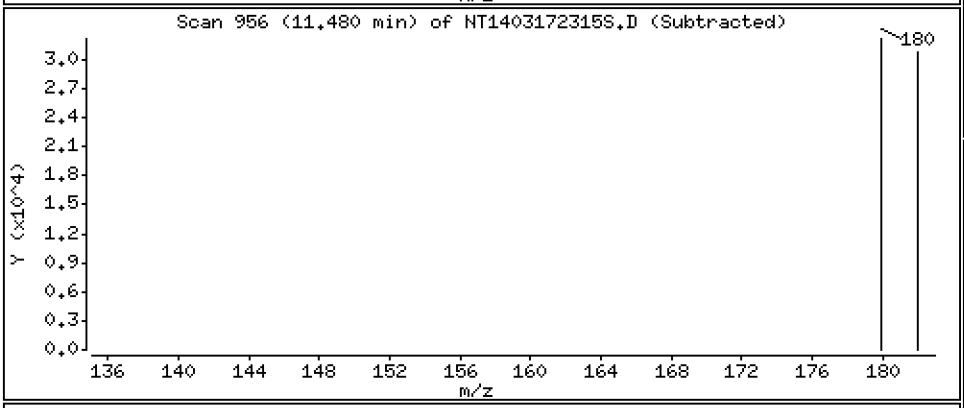
Column diameter: 0.25

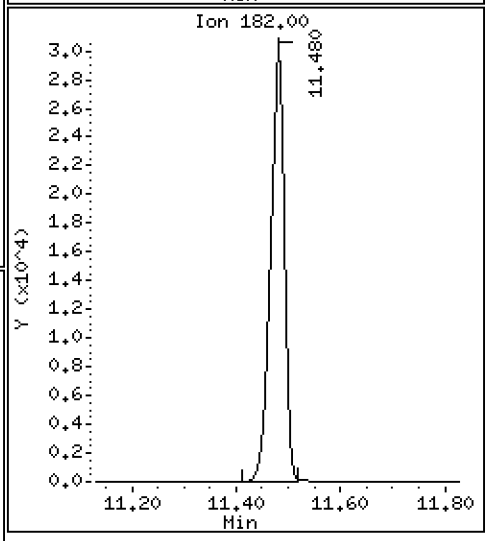
26 1,2,4-Trichlorobenzene

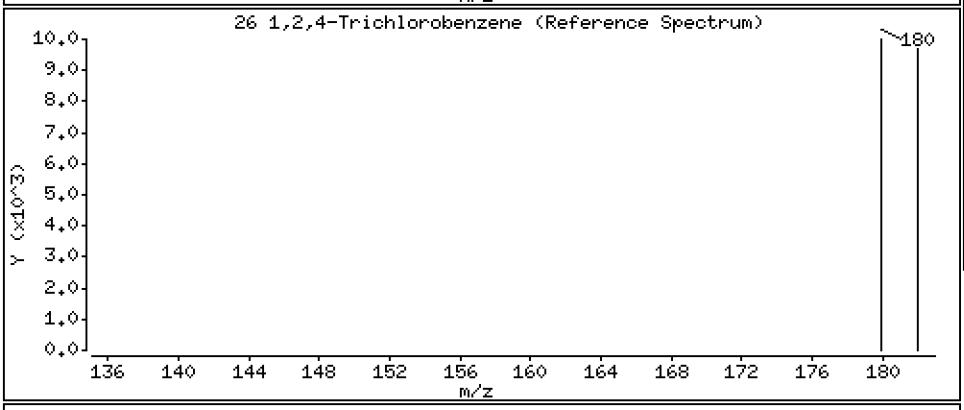
Concentration: 0.6755 ug/mL

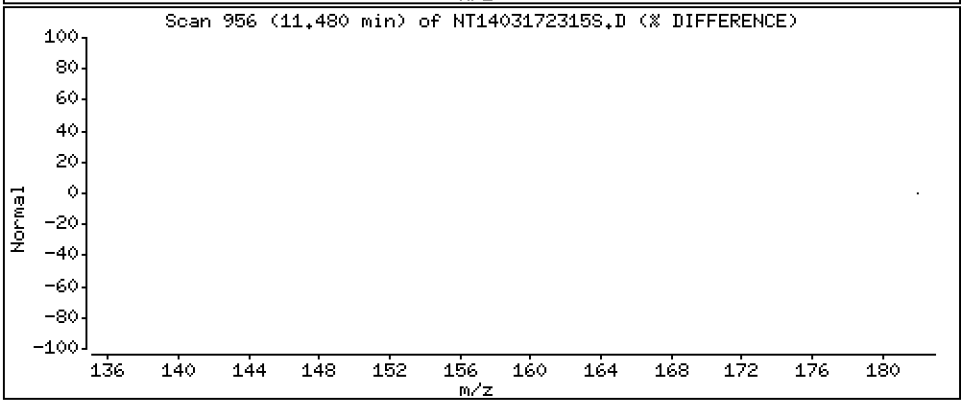












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Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM2

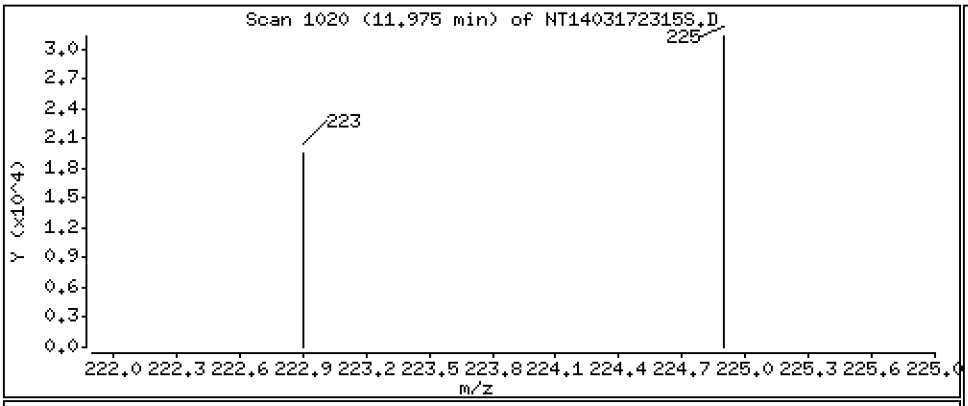
Operator: JGR

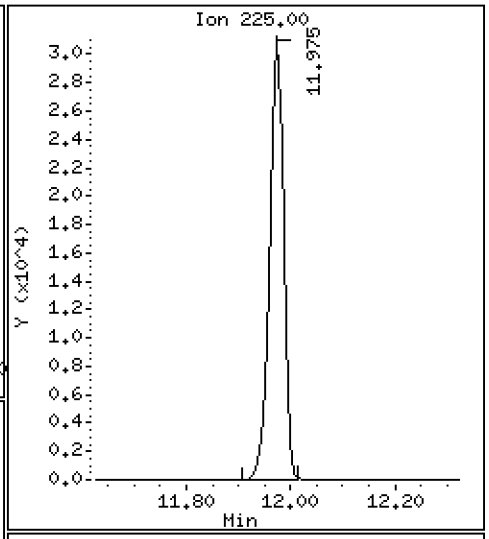
Column phase: ZB-5msi

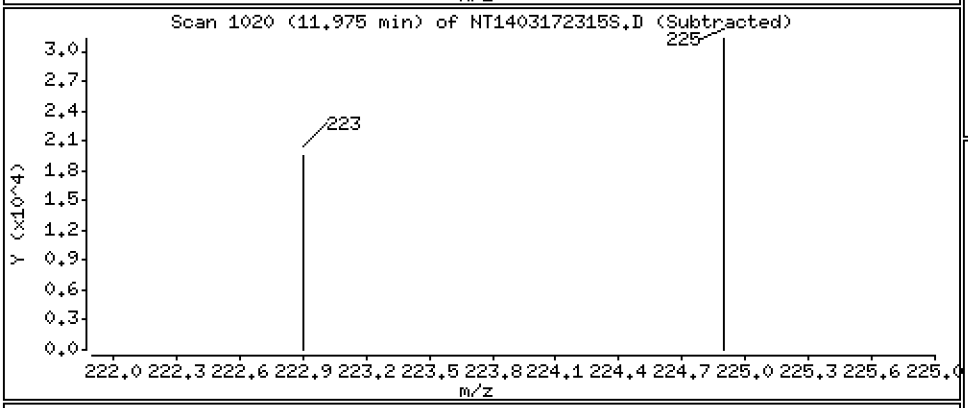
Column diameter: 0.25

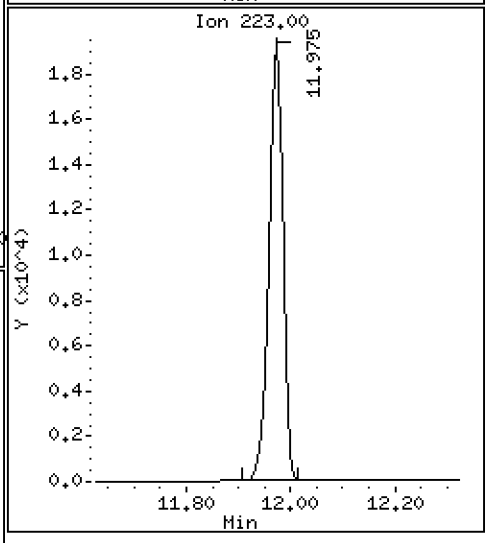
30 Hexachlorobutadiene

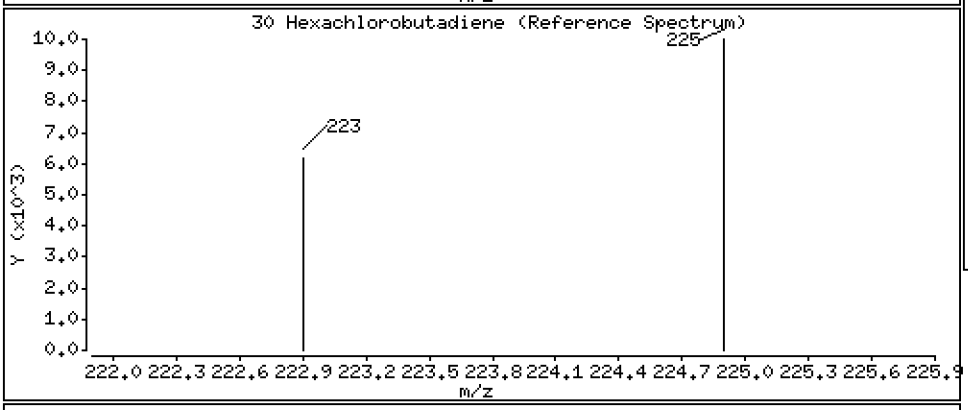
Concentration: 1.288 ug/mL

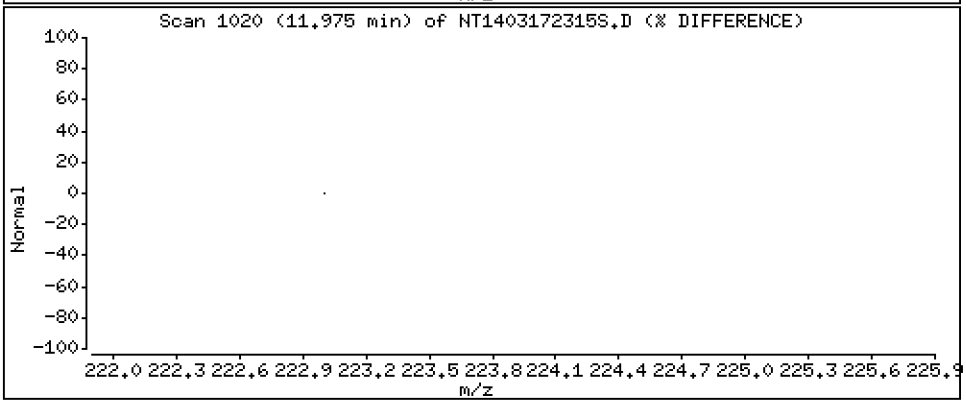












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Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM2

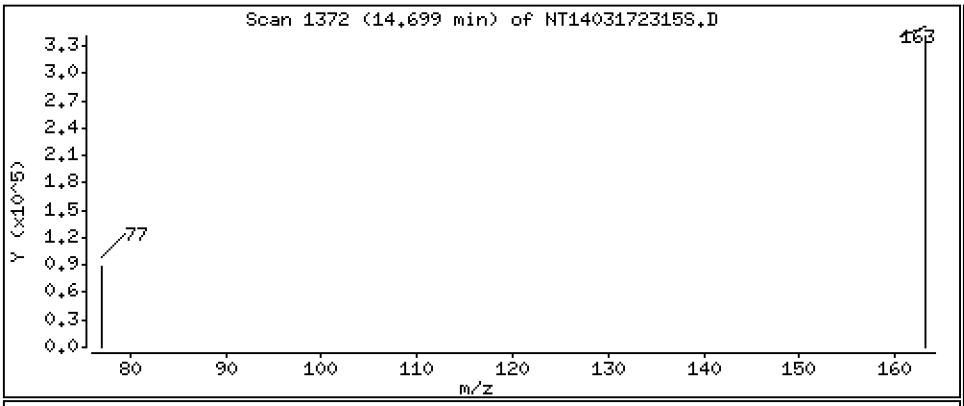
Operator: JGR

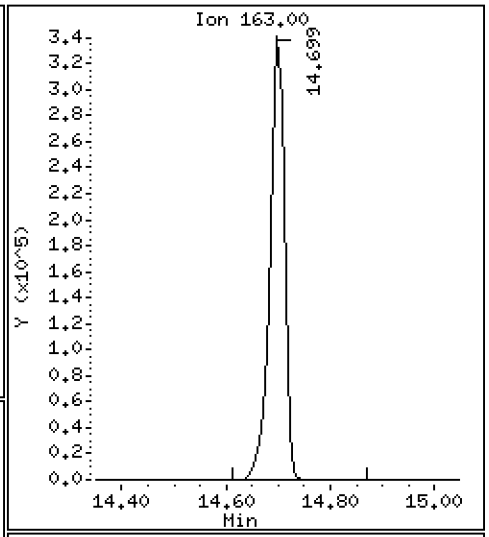
Column phase: ZB-5msi

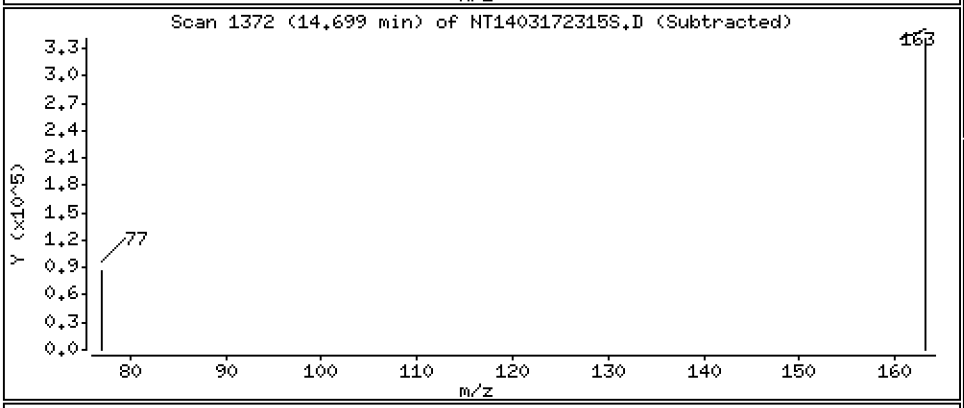
Column diameter: 0.25

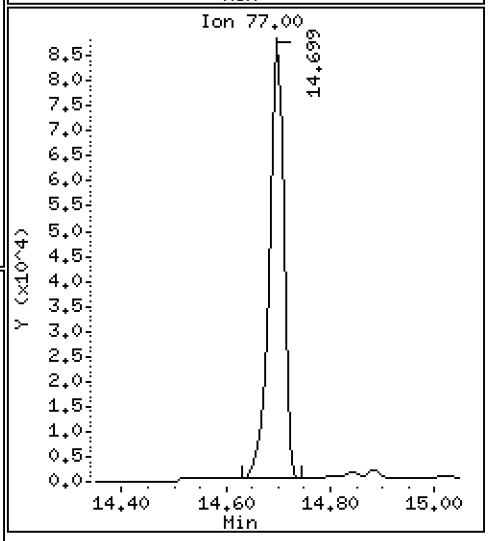
39 Dimethylphthalate

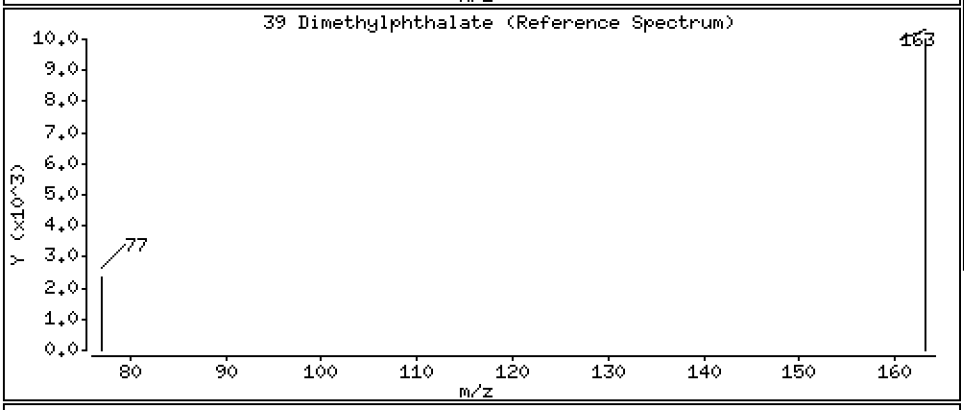
Concentration: 4.022 ug/mL

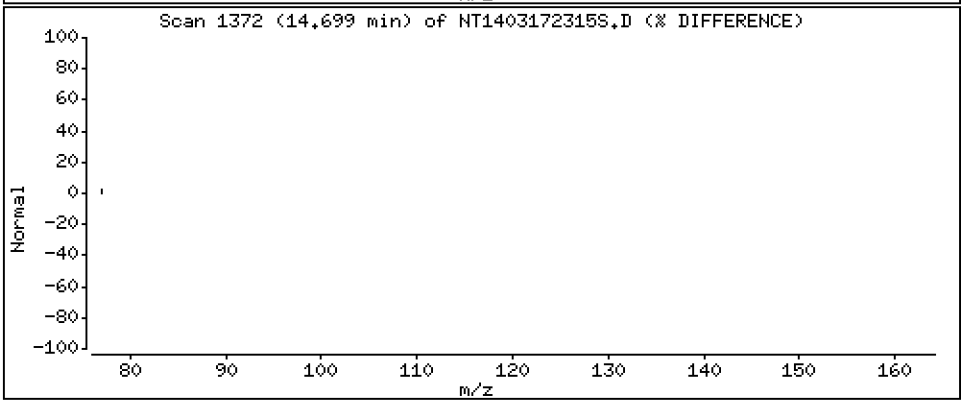












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Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM2

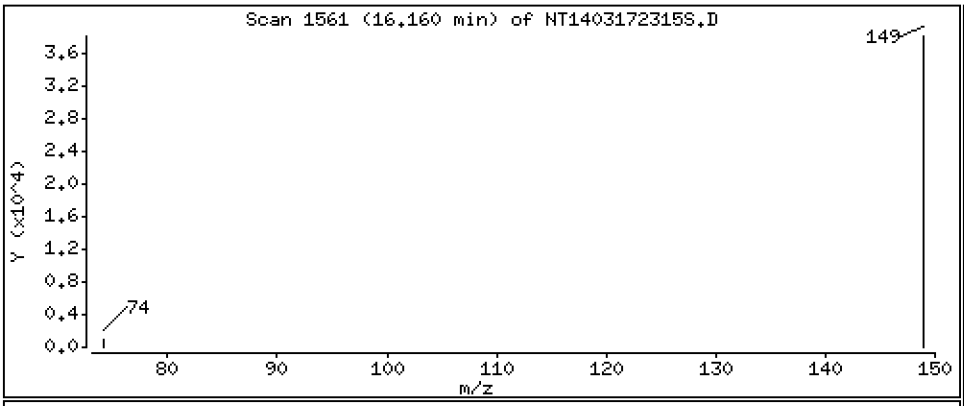
Operator: JGR

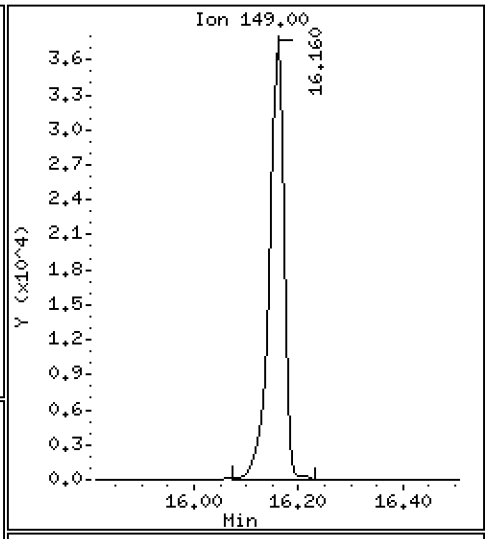
Column phase: ZB-5msi

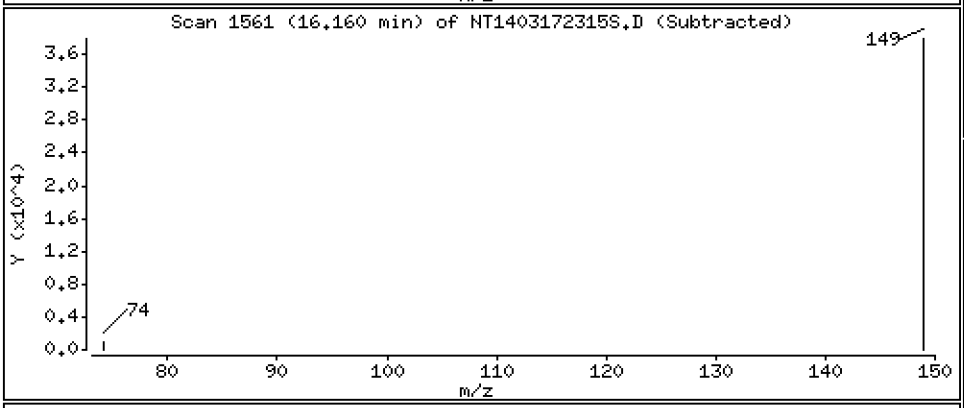
Column diameter: 0.25

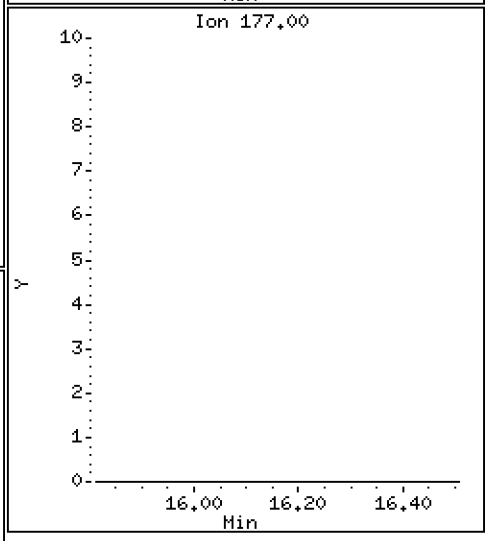
50 Diethylphthalate

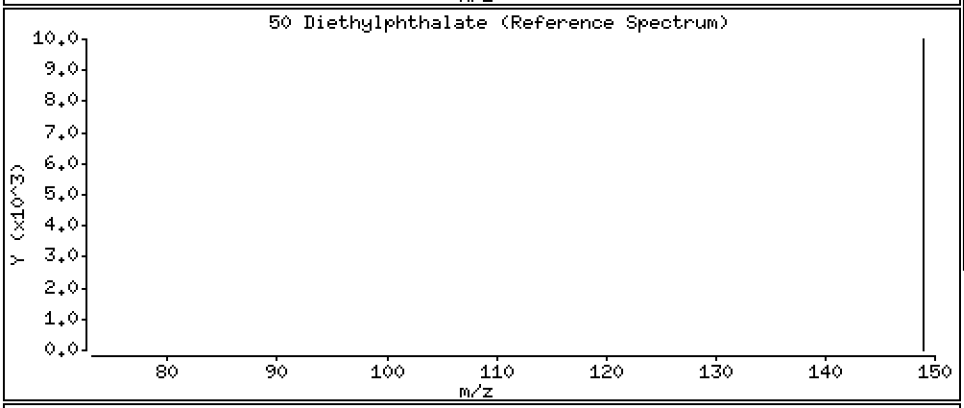
Concentration: 0.4262 ug/mL

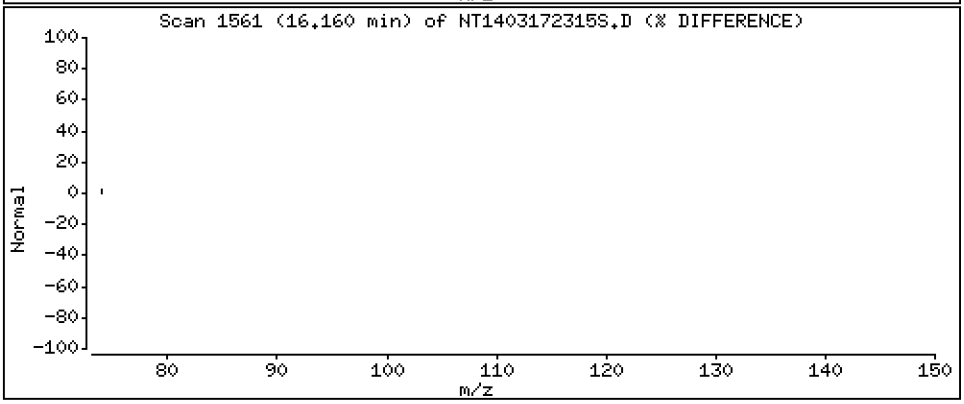












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Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM2

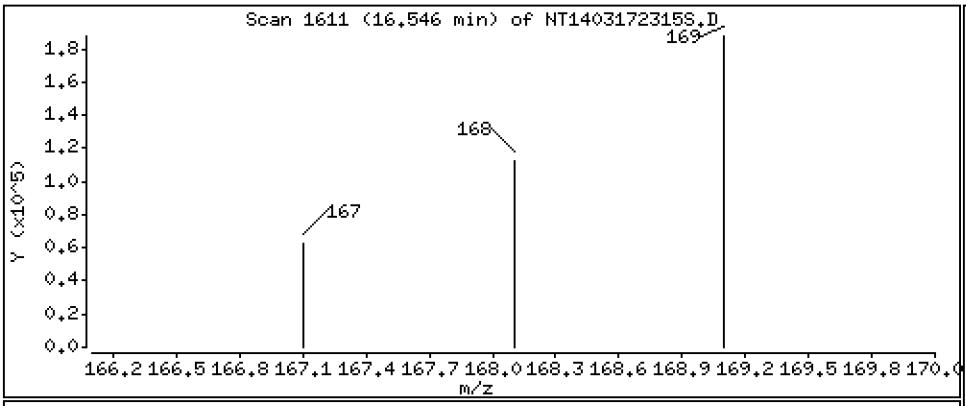
Operator: JGR

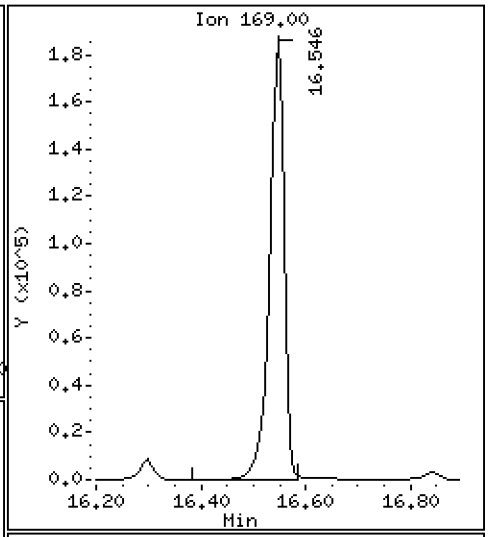
Column phase: ZB-5msi

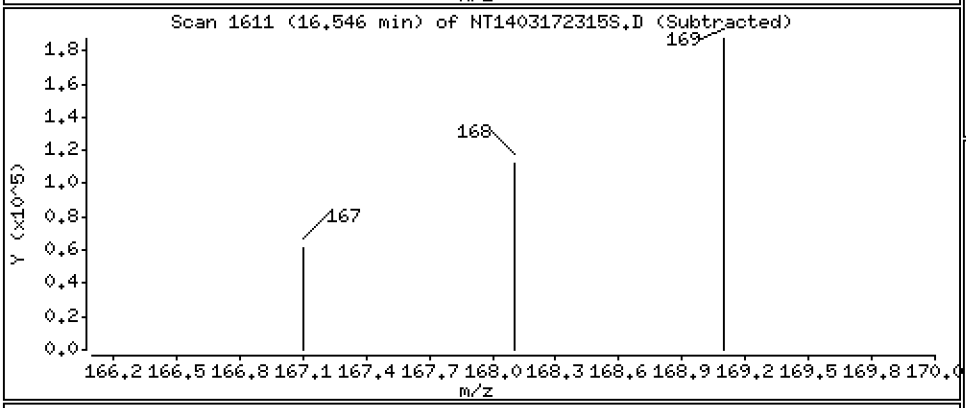
Column diameter: 0.25

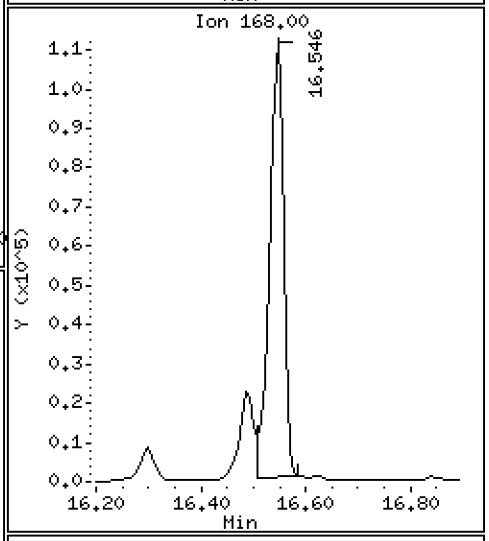
54 N-Nitrosodiphenylamine

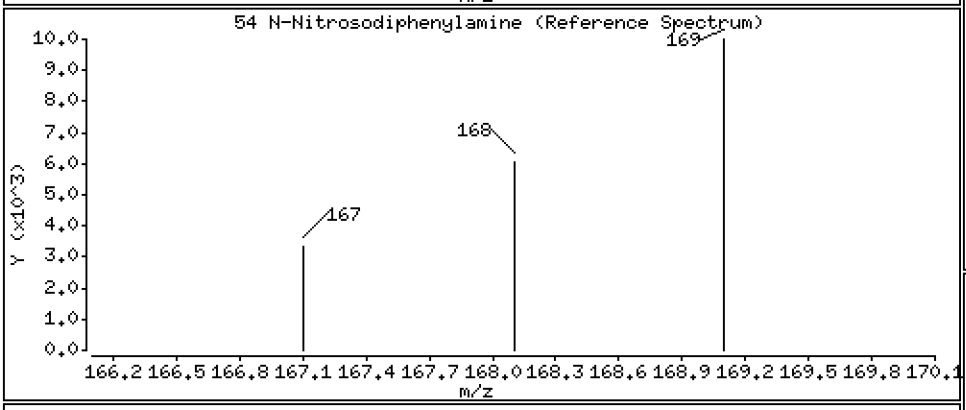
Concentration: 2.909 ug/mL

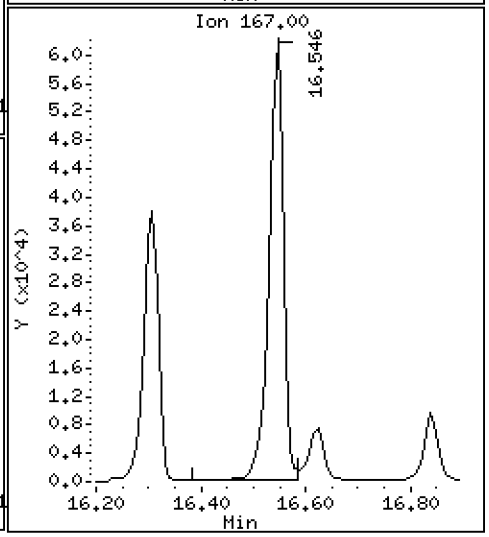


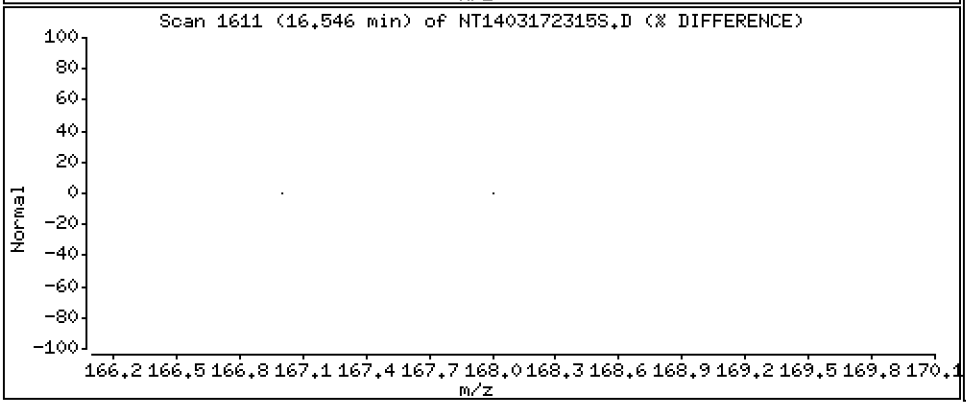












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Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM2

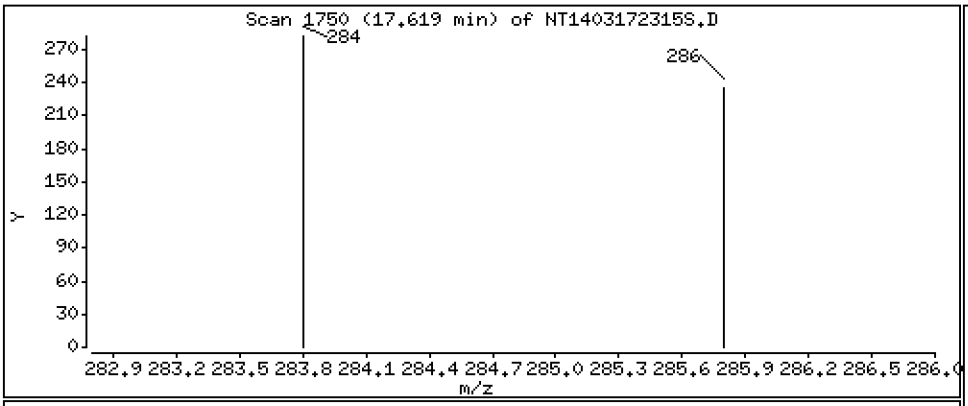
Operator: JGR

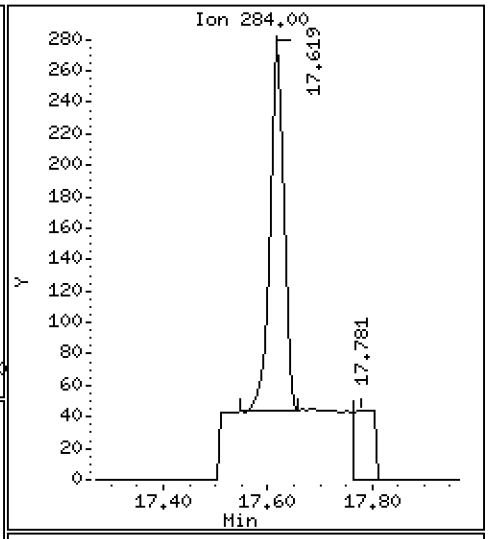
Column phase: ZB-5msi

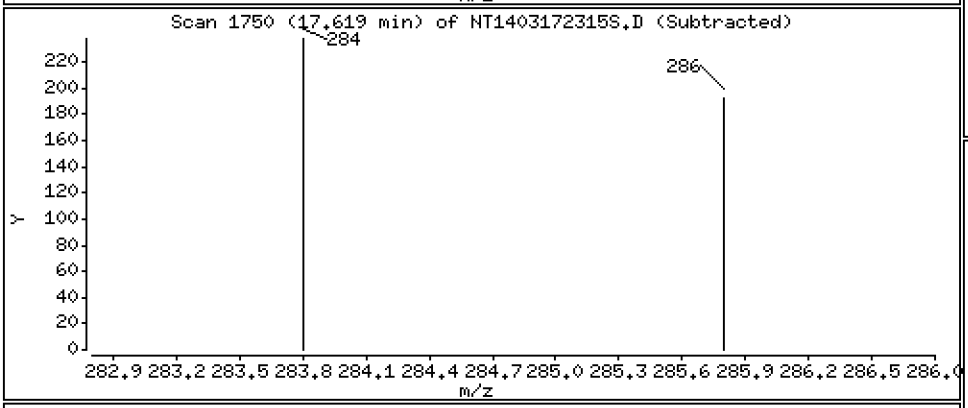
Column diameter: 0.25

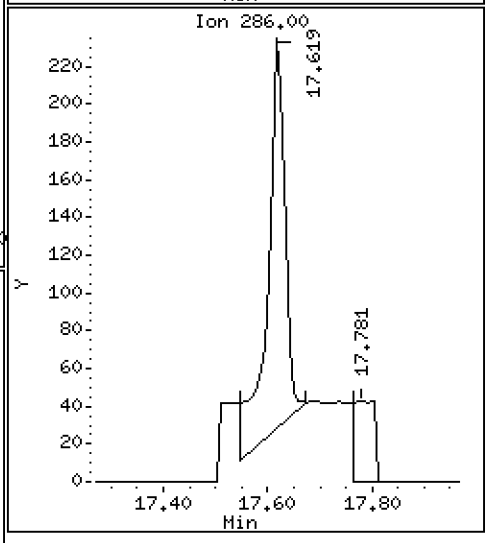
57 Hexachlorobenzene

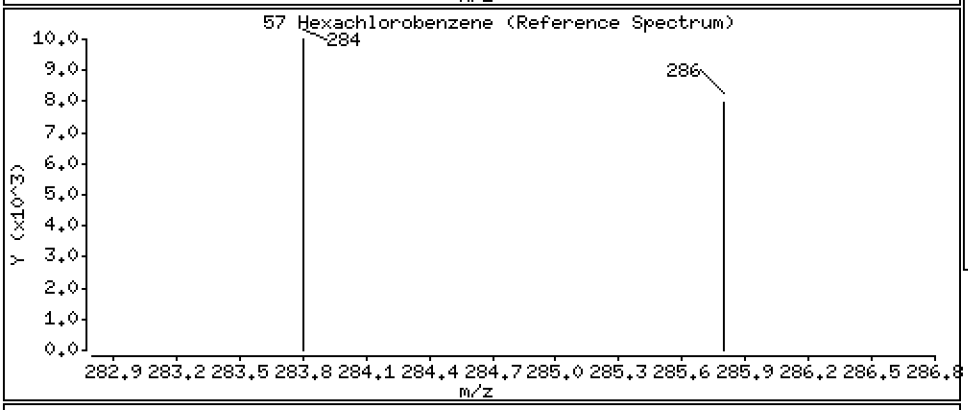
Concentration: 0.009246 ug/mL

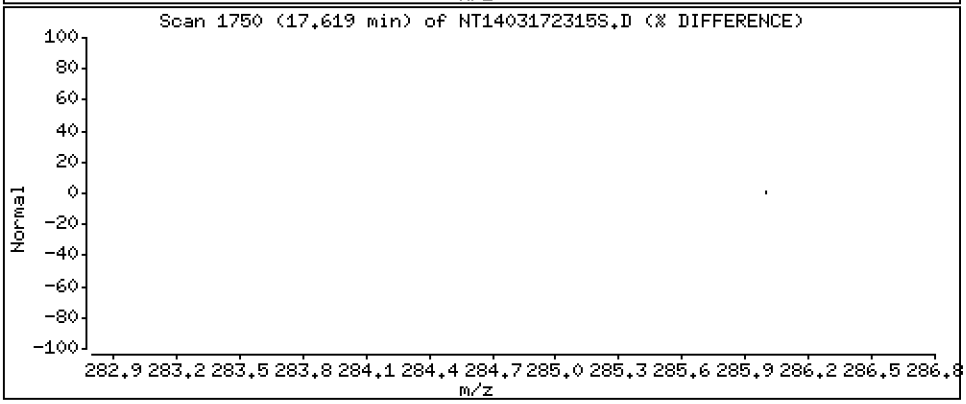












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Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM2

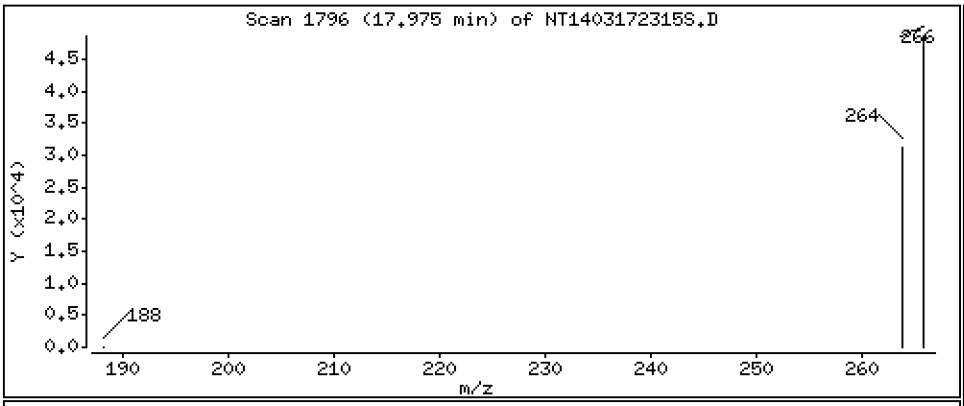
Operator: JGR

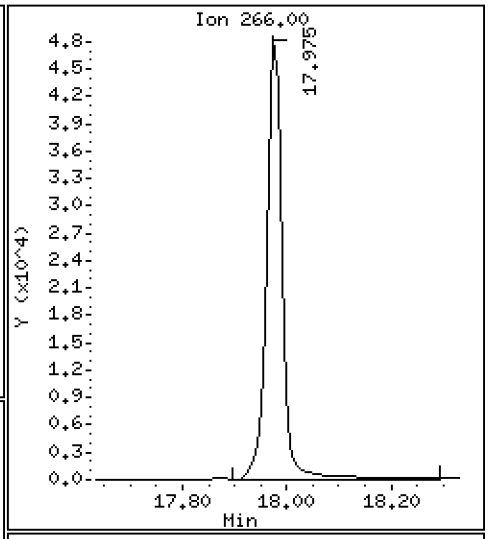
Column phase: ZB-5msi

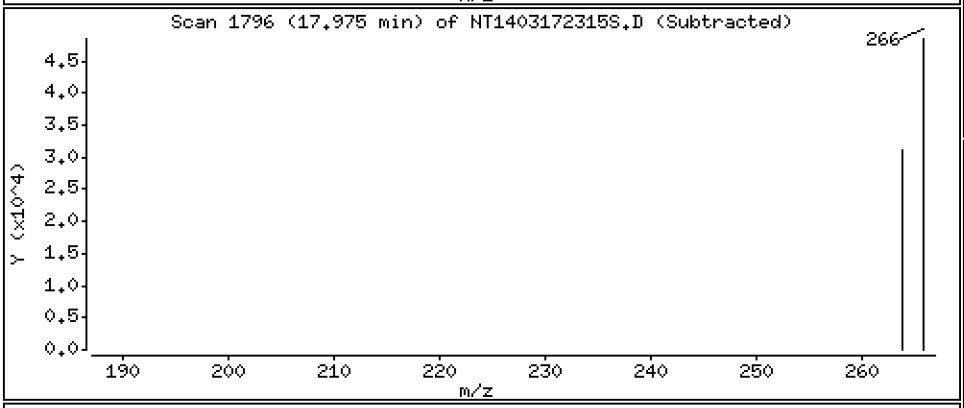
Column diameter: 0.25

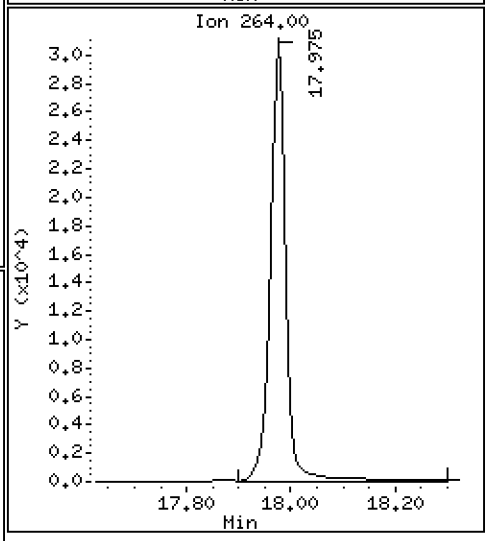
58 Pentachlorophenol

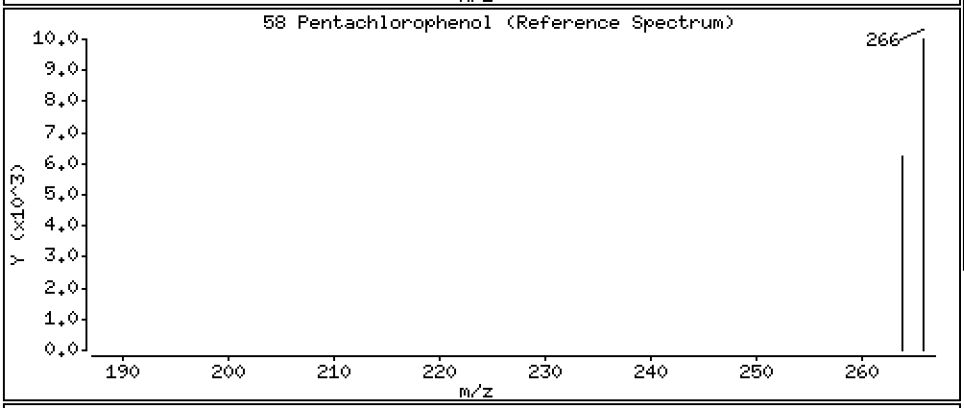
Concentration: 3.109 ug/mL

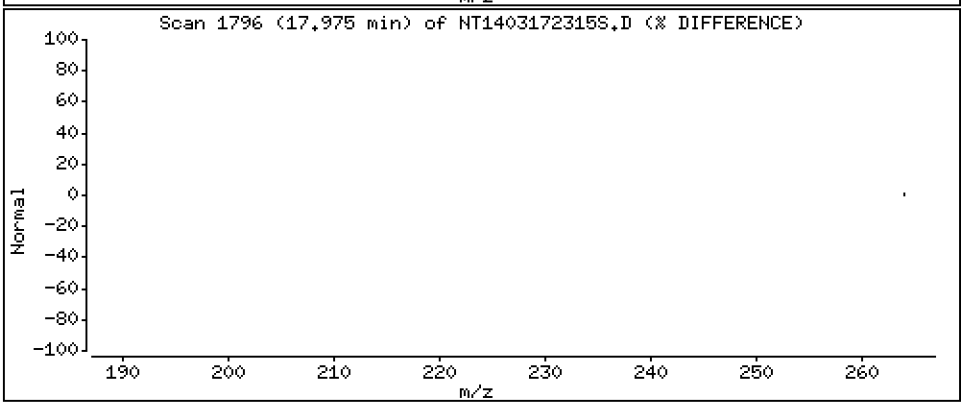












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Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM2

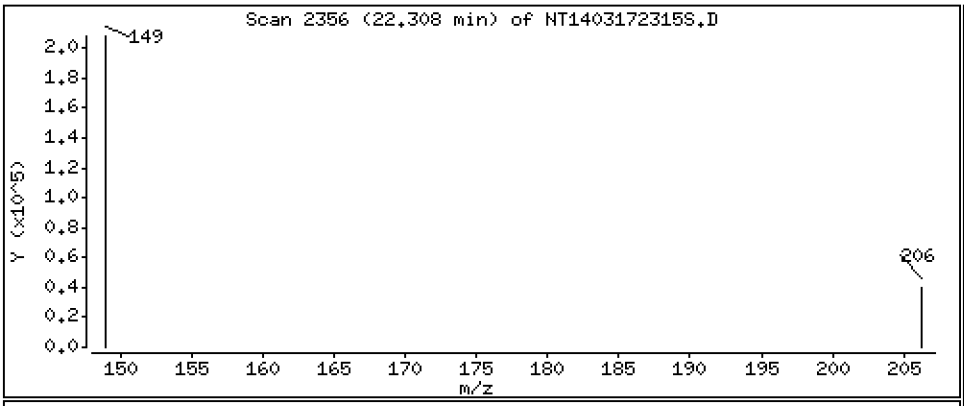
Operator: JGR

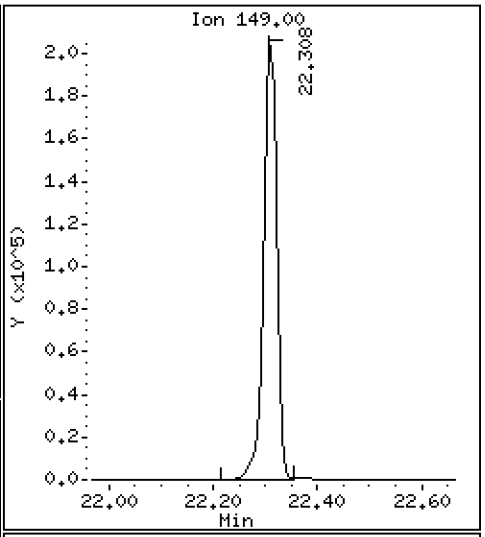
Column phase: ZB-5msi

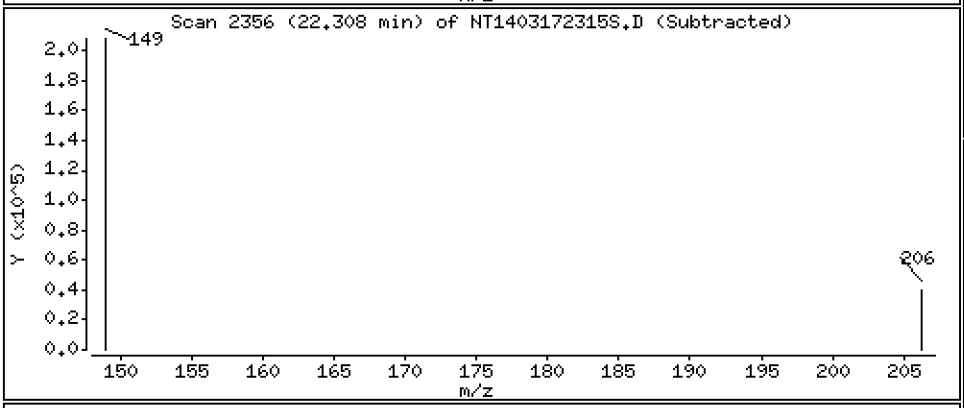
Column diameter: 0.25

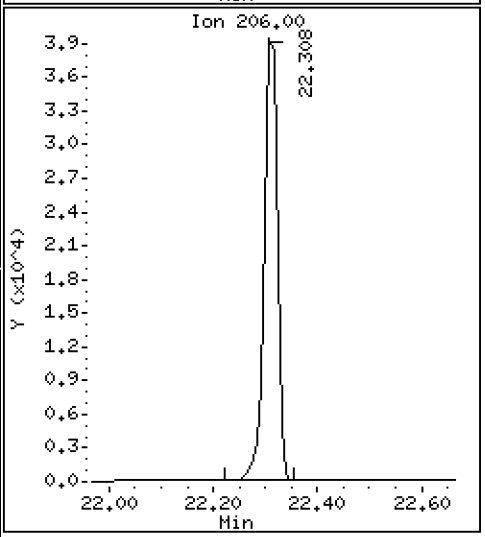
67 Butylbenzylphthalate

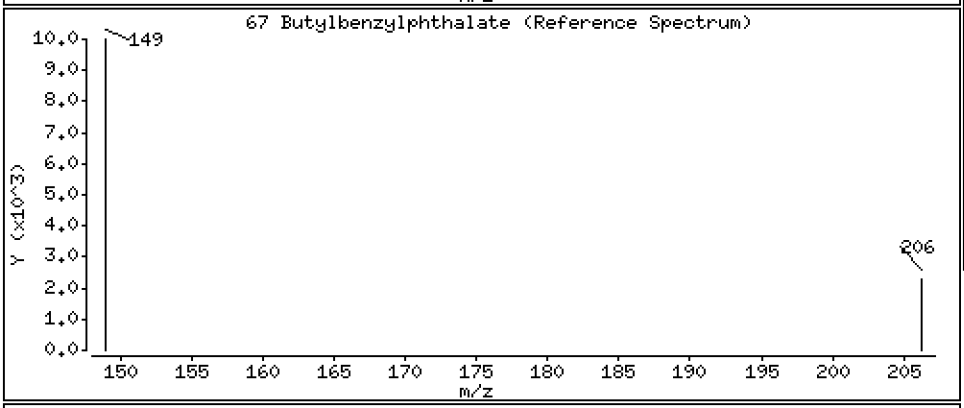
Concentration: 4.195 ug/mL

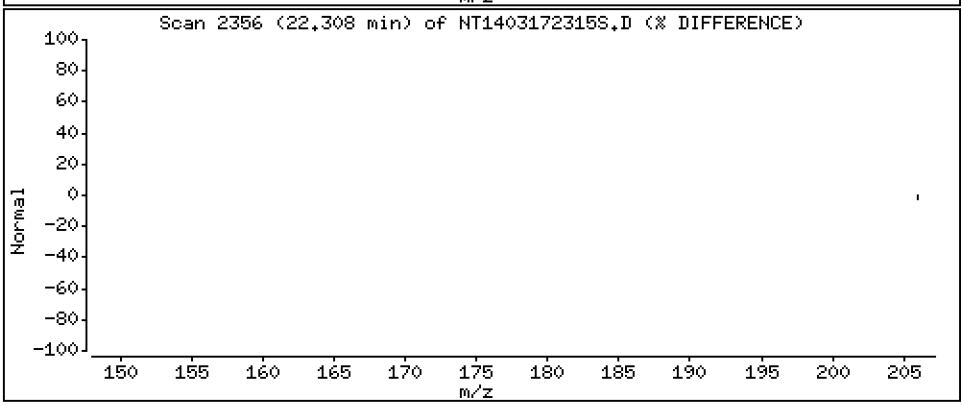












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Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM2

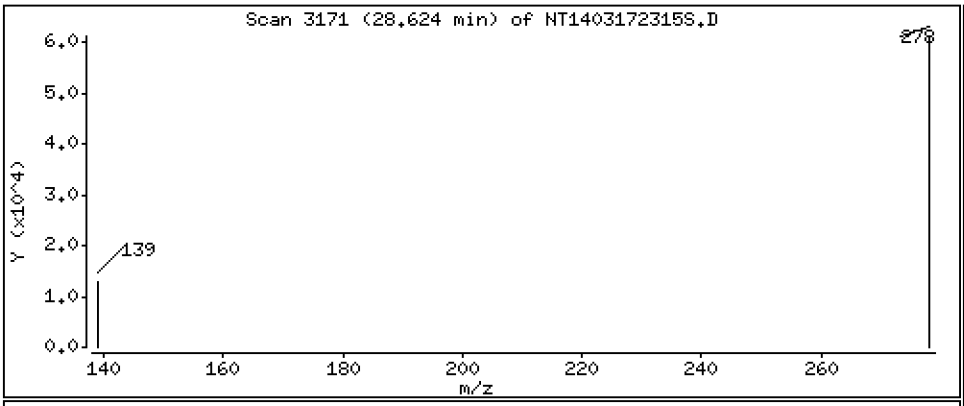
Operator: JGR

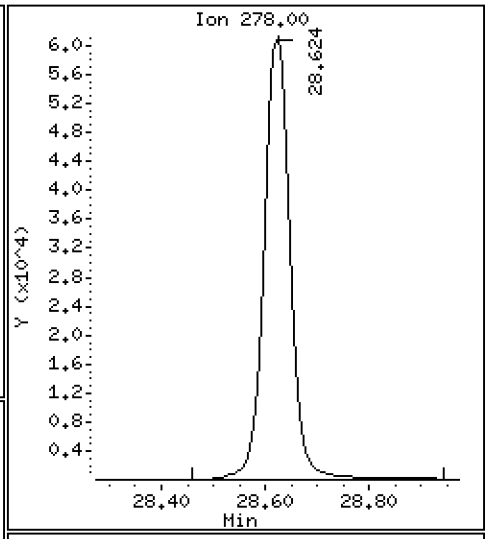
Column phase: ZB-5msi

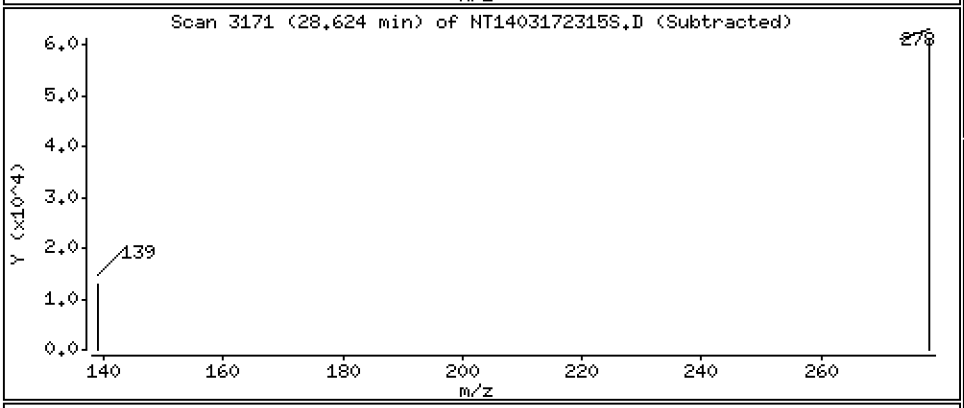
Column diameter: 0.25

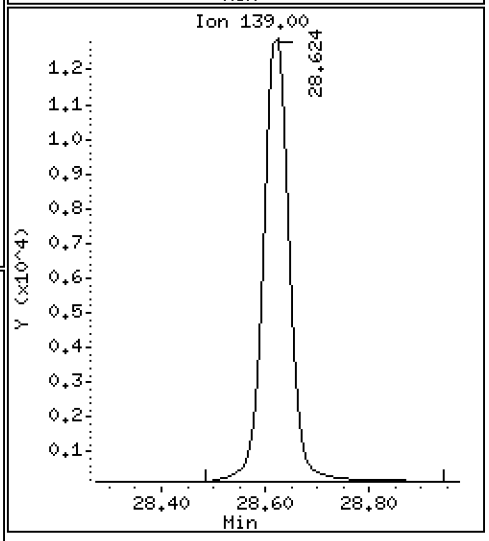
79 Dibenzo(a,h)anthracene

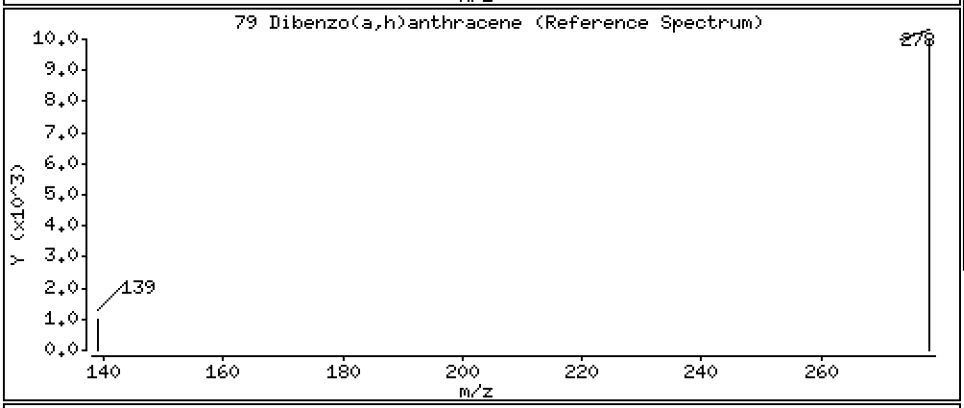
Concentration: 2.786 ug/mL

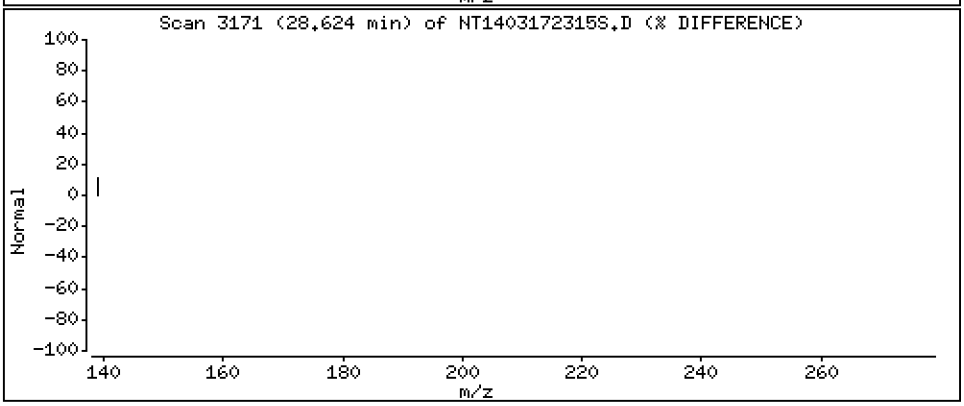












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Date : 17-MAR-2023 22:55

Client ID:

Instrument: nt14.i

Sample Info: BLB0424-SRM2

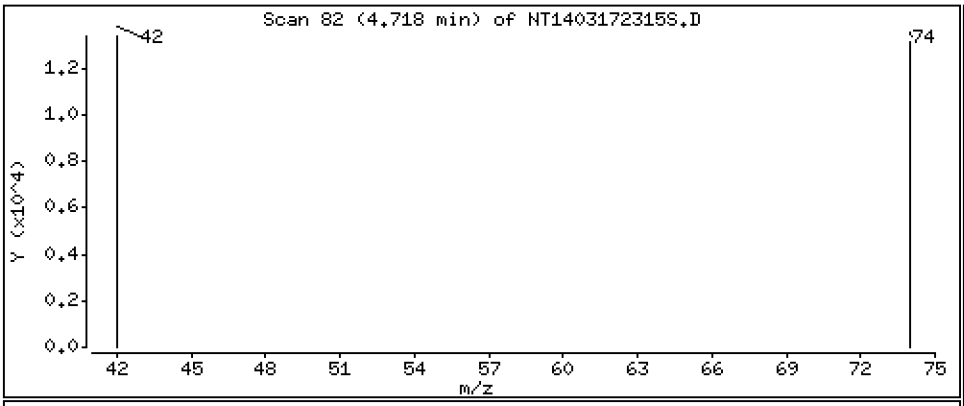
Operator: JGR

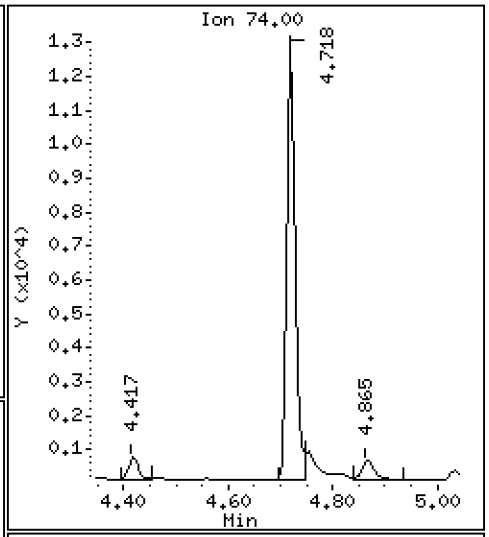
Column phase: ZB-5msi

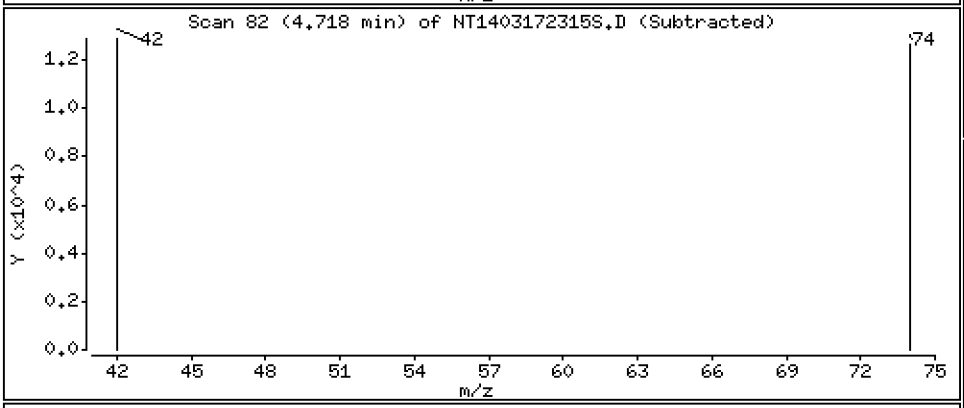
Column diameter: 0.25

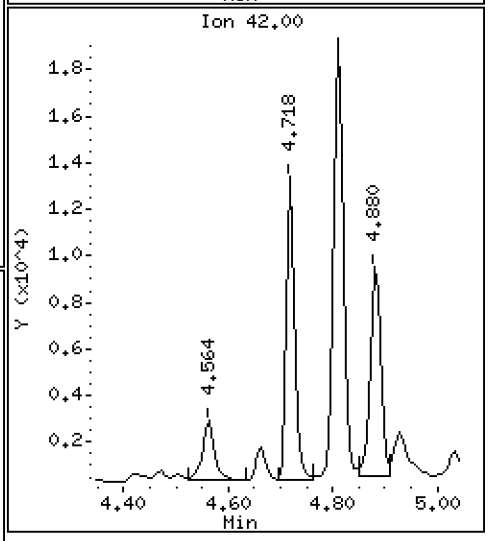
90 N-Nitrosodimethylamine

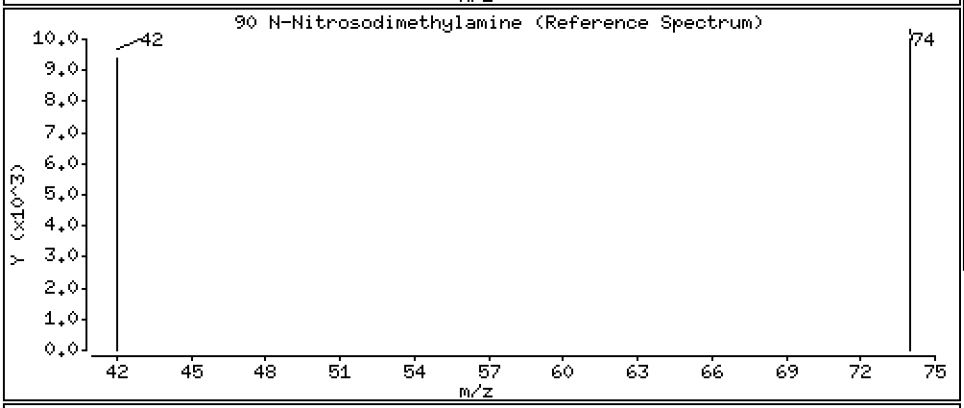
Concentration: 0.2751 ug/mL

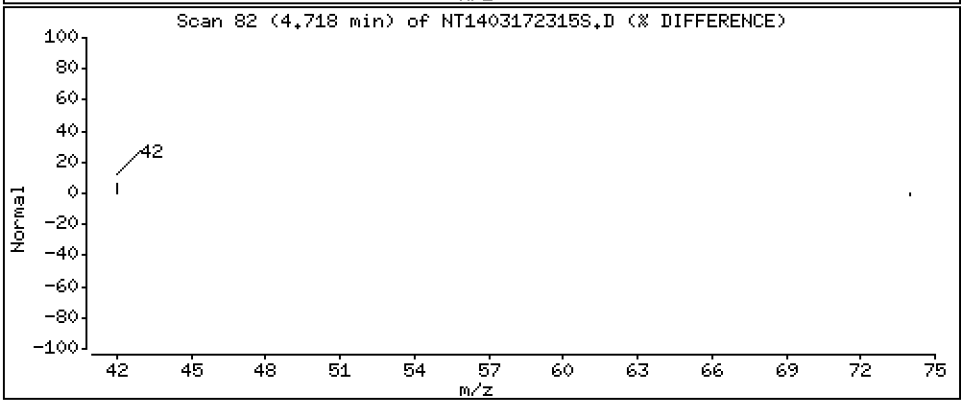












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172315S.D
Lab Smp Id: BLB0424-SRM2
Inj Date : 17-MAR-2023 22:55 MS Autotune Date: 11-MAR-2023 16:01
Operator : JGR Inst ID: nt14.i
Smp Info : BLB0424-SRM2
Misc Info :
Comment :
Method : \\target\share\chem3\nt14.i\20230317.b\20230317.b\SIMABN2.m
Meth Date : 23-Mar-2023 16:53 van Quant Type: ISTD
Cal Date : 15-MAR-2023 15:50 Cal File: NT1403152308.D
Als bottle: 15
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.842	6.826	(0.755)	495710	5.45186	5.452(R)
	3 Phenol	94	8.441	8.440	(0.931)	211184	1.68898	1.689
	7 1,3-Dichlorobenzene	146	8.997	9.005	(0.992)	40902	0.38226	0.3823
*	8 1,4-Dichlorobenzene-d4	152	9.067	9.067	(1.000)	267869	4.00000	
	9 1,4-Dichlorobenzene	146	9.098	9.098	(1.003)	1100	0.01062	0.01062(M)
	11 Benzyl alcohol	79	Compound Not Detected.					
	12 1,2-Dichlorobenzene	146	9.455	9.455	(1.043)	1088	0.01079	0.01079(M)
	13 2-Methylphenol	108	9.564	9.563	(1.055)	304438	3.52470	3.525
	15 4-Methylphenol	108	9.836	9.827	(1.085)	465773	5.10448	5.104
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	10.883	10.883	(0.941)	319219	3.73083	3.731
	24 Benzoic acid	105	10.999	10.999	(0.951)	78085	1.20100	1.201
	26 1,2,4-Trichlorobenzene	180	11.480	11.479	(0.993)	56645	0.67547	0.6755
*	27 Naphthalene-d8	136	11.565	11.564	(1.000)	995304	4.00000	
	30 Hexachlorobutadiene	225	11.974	11.974	(1.035)	54658	1.28792	1.288
	39 Dimethylphthalate	163	14.698	14.698	(0.967)	629064	4.02185	4.022
*	42 Acenaphthene-d10	162	15.201	15.201	(1.000)	457995	4.00000	
	50 Diethylphthalate	149	16.160	16.160	(1.063)	70965	0.42616	0.4262
	54 N-Nitrosodiphenylamine	169	16.546	16.545	(0.907)	341550	2.90928	2.909
	57 Hexachlorobenzene	284	17.618	17.618	(0.966)	417	0.00925	0.009246
	58 Pentachlorophenol	266	17.974	17.982	(0.985)	95960	3.10913	3.109
*	59 Phenanthrene-d10	188	18.245	18.245	(1.000)	866459	4.00000	
$	66 Terphenyl-d14	244	21.386	21.386	(0.918)	468619	5.95220	5.952(R)
	67 Butylbenzylphthalate	149	22.308	22.315	(0.957)	336084	4.19483	4.195
*	69 Chrysene-d12	240	23.299	23.298	(1.000)	456685	4.00000	
*	77 Perylene-d12	264	25.931	25.938	(1.000)	299254	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.623	28.623	(1.104)	211359	2.78608	2.786
	90 N-Nitrosodimethylamine	74	4.717	4.694	(0.520)	15282	0.27512	0.2751

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1403172315S.D
Lab Smp Id: BLB0424-SRM2
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\SIMABN2.m
Misc Info:

Calibration Date: 17-MAR-2023
Calibration Time: 15:39
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	224436	112218	448872	267869	19.35
27 Naphthalene-d8	825617	412809	1651234	995304	20.55
42 Acenaphthene-d10	392947	196474	785894	457995	16.55
59 Phenanthrene-d10	789887	394944	1579774	866459	9.69
69 Chrysene-d12	494007	247004	988014	456685	-7.55
77 Perylene-d12	375441	187721	750882	299254	-20.29

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.07	8.57	9.57	9.07	0.00
27 Naphthalene-d8	11.56	11.06	12.06	11.57	0.00
42 Acenaphthene-d10	15.20	14.70	15.70	15.20	0.00
59 Phenanthrene-d10	18.25	17.75	18.75	18.25	0.00
69 Chrysene-d12	23.30	22.80	23.80	23.30	0.00
77 Perylene-d12	25.94	25.44	26.44	25.93	-0.03

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

REVIEW SUMMARY FOR FILE - NT1403172315S.D

Lab ID: BLB0424-SRM2
nt14.i, 20230317.b\20230317.b\SIMABN2.m,   17-MAR-2023 22:55

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

RRT check based on Ccal File: 20230317.b/NT1403172303S.D

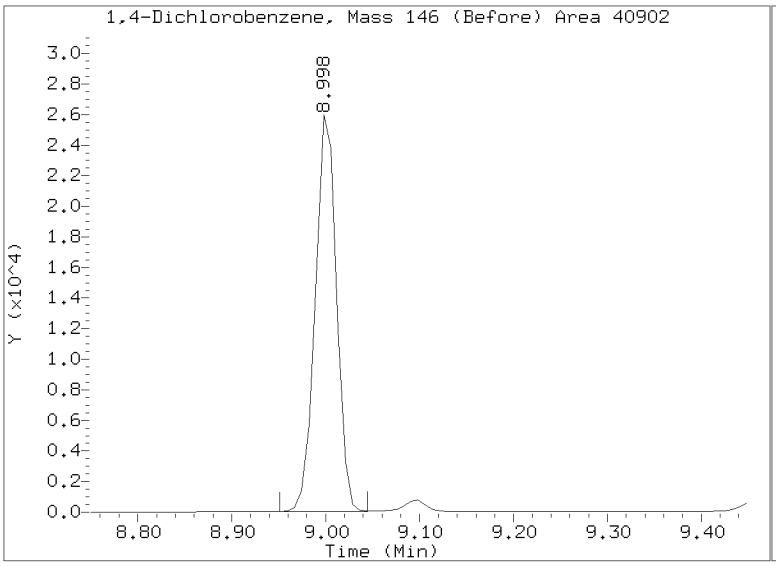
On Column LOD for nt14.i, 20230317.b\SIMABN2.m, PSDDA.sub = 0.0000

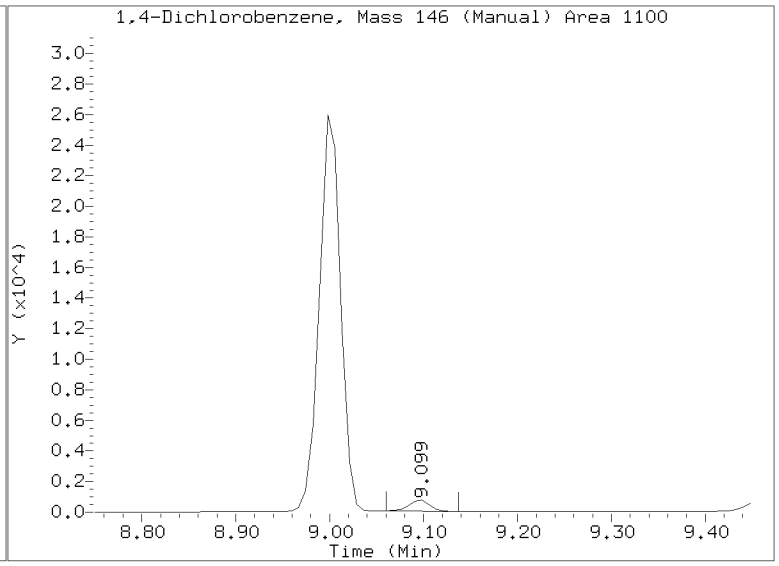
Exception: 1,2,4-Trichlorobenzene 0.0010

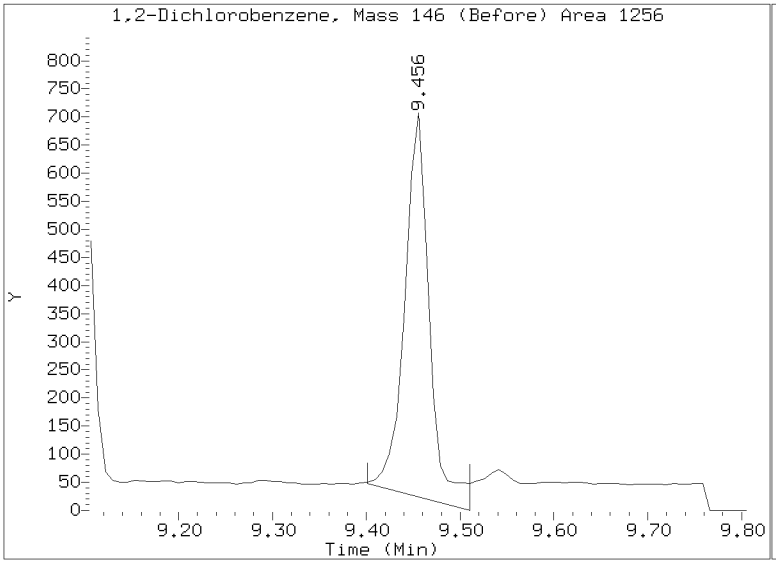
* Only compounds listed in the work order have been verified by the analyst *

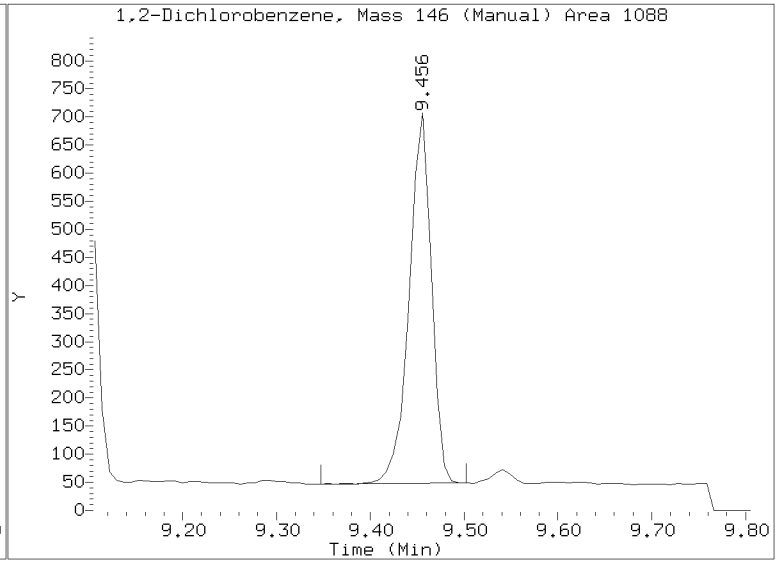
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230317.b/20230317.b/NT1403172315S.D
Injection Date: 17-MAR-2023 22:55
Lab ID:BLB0424-SRM2 Client ID:
Report Date: 03/23/2023 16:55









Analytical Resources, LLC
Analytical Chemists and Consultants

MASS SPECTROMETER
INSTRUMENT PERFORMANCE CHECK
EPA 8270E-SIM

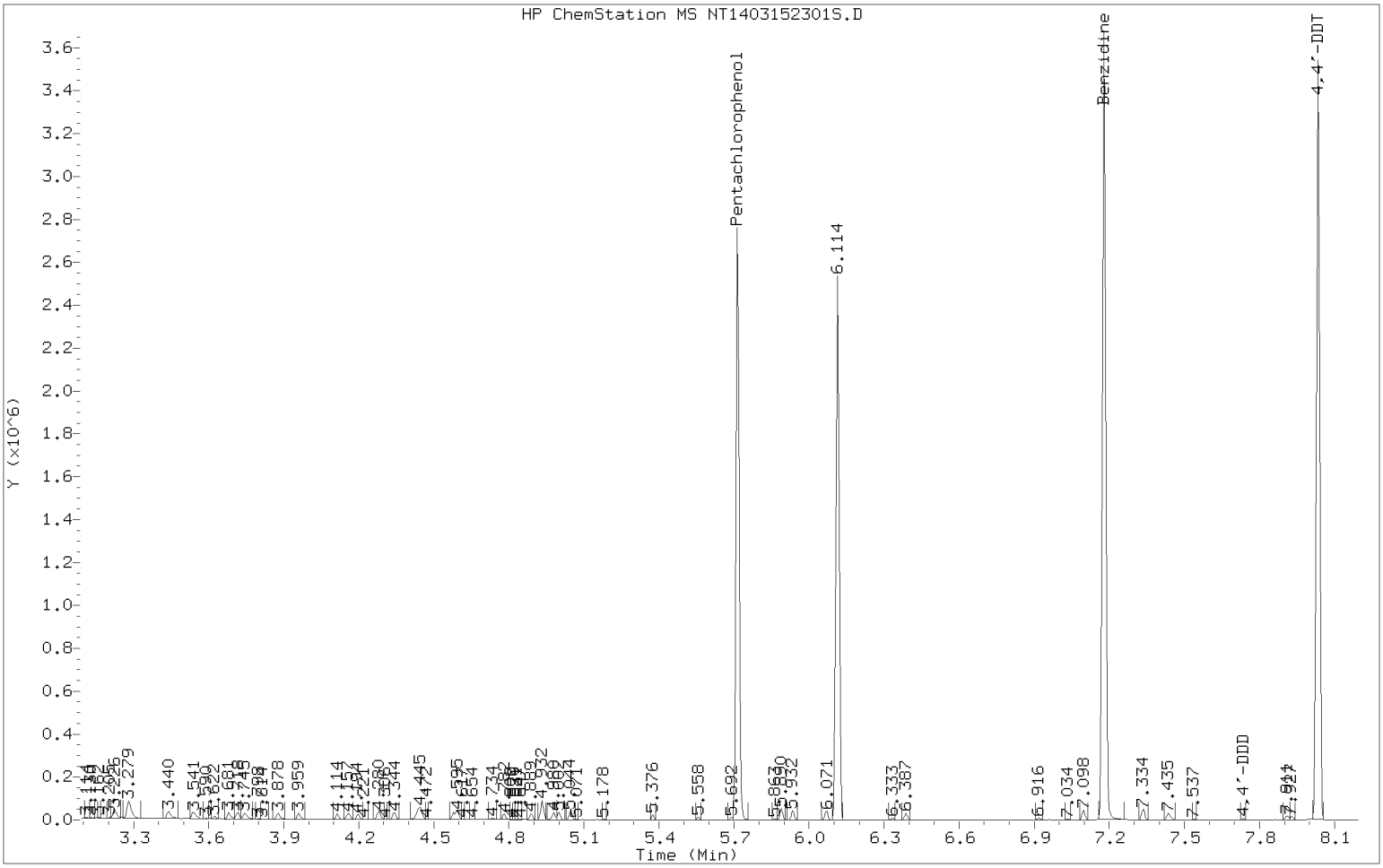
Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Lab File ID:	NT1403152301S.D	Injection Date:	03/15/23
Instrument ID:	NT14	Injection Time:	12:00
Sequence:	SLC0242	Lab Sample ID:	SLC0242-TUN1

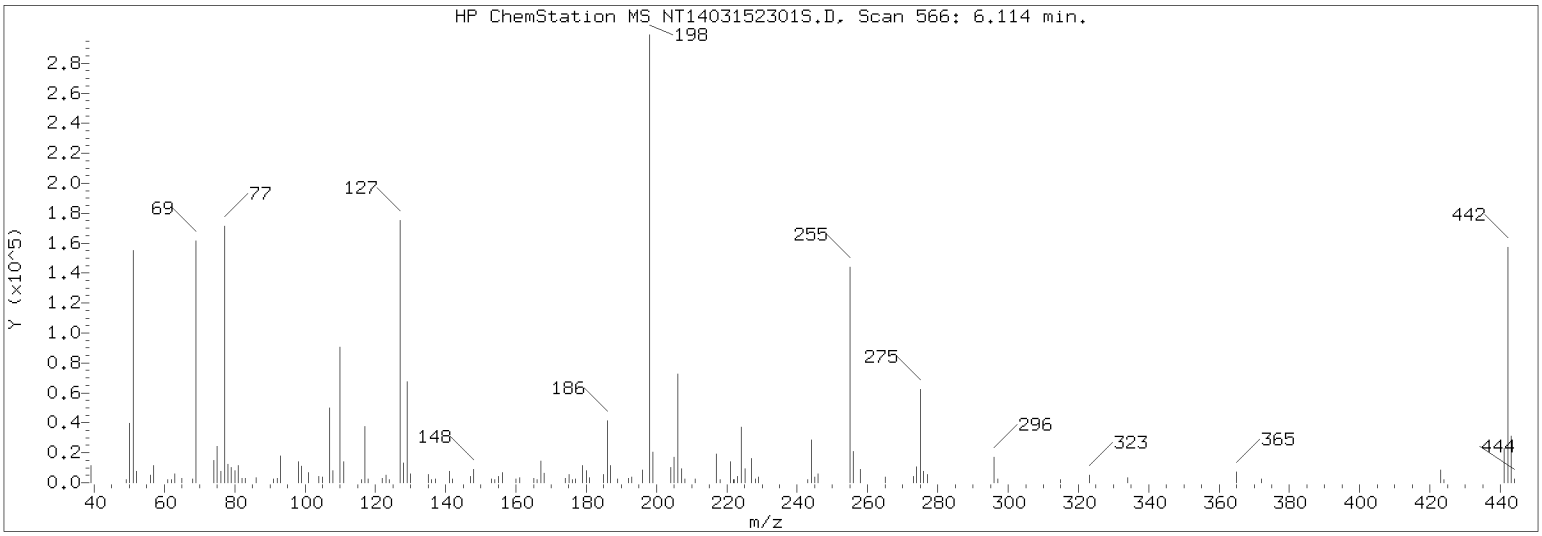
m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
68	Less than 2% of 69	0.674	PASS
69	Less than 100% of 198	53.4	PASS
70	Less than 2% of 69	0	PASS
197	Less than 2% of 198	0	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.72	PASS
365	1 - 100% of 198	2.71	PASS
441	Less than 150% of 443	72.2	PASS
442	1 - 200% of 198	58.3	PASS
443	15 - 24% of 442	19.2	PASS
4,4'-DDD	Less than 20% of 4,4'-DDT		
4,4'-DDE	Less than 20% of 4,4'-DDT		
4,4'-DDT	Less than 200% of		

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
MS Tune	SLC0242-TUN1	NT1403152301S.D	03/15/2023	12:00
Cal Standard	SLC0242-CAL8	NT1403152303S.D	03/15/2023	12:49
Cal Standard	SLC0242-CAL7	NT1403152304S.D	03/15/2023	13:26
Cal Standard	SLC0242-CAL6	NT1403152305S.D	03/15/2023	14:02
Cal Standard	SLC0242-CAL5	NT1403152306S.D	03/15/2023	14:38
Cal Standard	SLC0242-CAL4	NT1403152307S.D	03/15/2023	15:14
Cal Standard	SLC0242-CAL3	NT1403152308S.D	03/15/2023	15:50
Cal Standard	SLC0242-CAL2	NT1403152309S.D	03/15/2023	16:26
Cal Standard	SLC0242-CAL1	NT1403152310S.D	03/15/2023	17:03
Secondary Cal Check	SLC0242-SCV1	NT1403152311S.D	03/15/2023	17:39
Initial Cal Blank	SLC0242-ICB1	NT1403152312S.D	03/15/2023	18:15

DFTPP TAILING FACTOR AND BREAKDOWN GRAPHIC REPORT

Datafile Analyzed: /20230315.b/20230315.b/NT1403152301S.D/NT1403152301S.D
Method Used: \20230315.b\20230315.b\DFTPP8270E.m Inst: nt14
Injection Date: 15-MAR-2023 12:00 Operator: JGR
Sample Info: SLC0242-TUN1 SLC0242-TUN1
Report Date: 03/22/2023 12:12





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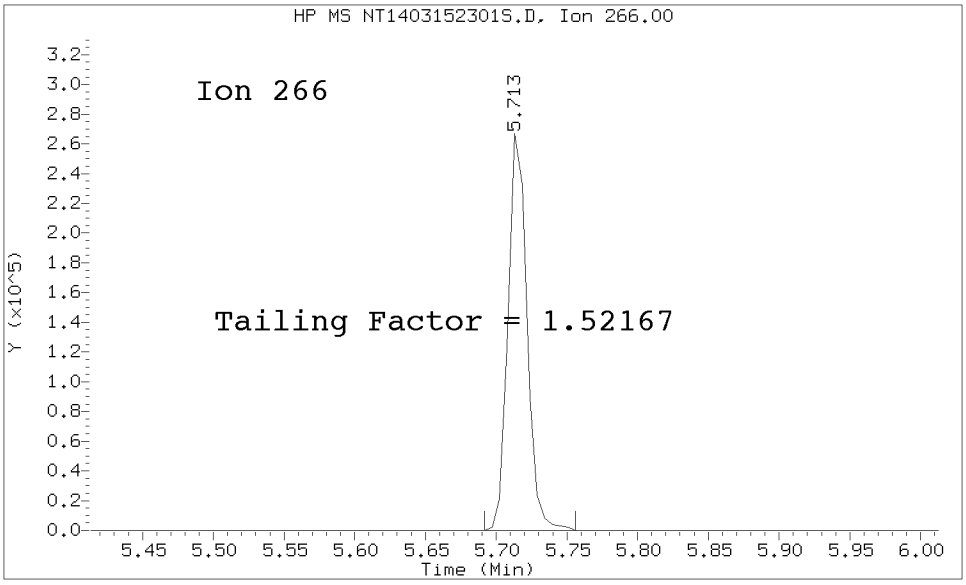
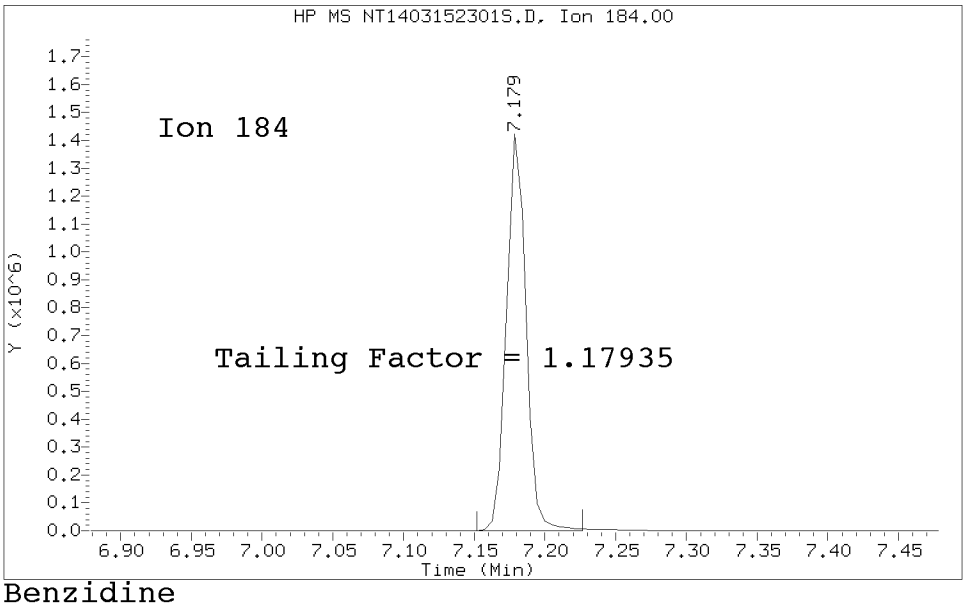
Method Used: \20230315.b\20230315.b\DFTPP8270E.m\sw846ddt.m Inst: nt14
Injection Date: 15-MAR-2023 12:00 Operator: JGR
Sample Info: SLC0160-TUN1
Report Date: 03/22/2023 12:12



Pentachlorophenol
==========
Exp. RT = 5.681
Found RT = 5.713

Tail Factor = 1.522 Maximum Allowed = 2.0



Benzidine
==========
Exp. RT = 7.146
Found RT = 7.179

Tail Factor = 1.179 Maximum Allowed = 2.0

8270 TAILING FACTOR/BREAKDOWN SUMMARY RESULTS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test
Pentachlorophenol	1.5216693	2.000	PASS
Benzidine	1.1793548	2.000	PASS

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	570011			N/A
4,4-DDE	0	0.0	20.0	PASS
4,4-DDD	2915	0.5	20.0	PASS
4,4-DDD + DDE	2915	0.5	20.0	PASS

Tuning Sample, nt14.i/20230315.b/20230315.b/NT1403152301S.D, *** PASSED ***

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
68	Less than 2.00% of mass 69	0.36 (0.67)
69	Mass 69 relative abundance	53.44
70	Less than 2.00% of mass 69	0.00 (0.00)
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.72
365	1.00 - 100.00% of mass 198	2.71
441	Less than 150.00% of mass 443	8.08 (72.22)
442	Less than 200.00% of mass 198	58.28
443	15.00 - 24.00% of mass 442	11.19 (19.20)

Data File: NT1403152301S.D
Spectrum: Avg. Scans 565-567 (6.11), Background Scan 560
Location of Maximum: 198.00
Number of points: 121

m/z	Y	m/z	Y	m/z	Y	m/z	Y
39.00	9069	105.00	2863	168.00	5614	228.00	794
49.00	671	107.00	39032	174.00	2579	229.00	2862
50.00	30976	108.00	6346	175.00	4842	243.00	696
51.00	125768	110.00	71896	176.00	720	244.00	22688
52.00	6453	111.00	11106	177.00	2298	245.00	3011
56.00	4179	116.00	757	179.00	9119	246.00	4609
57.00	8934	117.00	29992	180.00	6294	255.00	114968
61.00	717	118.00	874	181.00	2818	256.00	16984
62.00	680	122.00	2529	185.00	4402	258.00	7242
63.00	4715	123.00	4032	186.00	32272	265.00	2218
65.00	1773	124.00	773	187.00	9241	273.00	3465
68.00	849	127.00	138368	189.00	1636	274.00	8836
69.00	126008	128.00	10413	192.00	2615	275.00	49816
74.00	11539	129.00	53960	193.00	3054	276.00	6361
75.00	19136	130.00	4541	196.00	6505	277.00	4187
76.00	6049	135.00	4342	198.00	235776	296.00	14150
77.00	134016	136.00	766	199.00	15852	297.00	810
78.00	9331	137.00	800	204.00	8038	315.00	707
79.00	8099	141.00	6361	205.00	13686	323.00	4245
80.00	6487	142.00	869	206.00	57704	334.00	2072
81.00	9538	147.00	3337	207.00	7569	365.00	6386
82.00	1806	148.00	7192	208.00	1530	372.00	1786
83.00	1759	153.00	830	211.00	1585	423.00	7390
86.00	2890	154.00	714	217.00	15135	424.00	1369
91.00	1612	155.00	3489	218.00	723	441.00	19048
92.00	1761	156.00	5350	221.00	10741	442.00	137408
93.00	14267	160.00	806	222.00	1546	443.00	26376
98.00	10738	161.00	2807	223.00	3284	444.00	1928
99.00	8546	165.00	1720	224.00	30088		
101.00	5073	166.00	753	225.00	7730		
104.00	3305	167.00	9750	227.00	12951		

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GC00050	Instrument:	NT14
Calibration Date:	03/15/2023	Column (1):	ZB-5MS

Calibration Comments: 8270E SIM Dual SCAN ICAL

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RRF	Conc	**RRF**	Conc	RRF	Conc	RRF	Conc	**RRF**	Conc	**RRF**
1,4-Dichlorobenzene	0.05	1.800835	0.1	1.606899	0.2	1.58946	0.5	1.490529	1	1.530549	2.5	1.42723
1,2-Dichlorobenzene	0.05	1.639381	0.1	1.570394	0.2	1.564925	0.5	1.470085	1	1.504008	2.5	1.415024
Benzyl Alcohol					0.2	0.9892346	0.5	1.033319	1	1.119457	2.5	1.10552
Benzoic acid	0.2	1.493164E-02	0.4	3.155742E-02	0.8	7.595256E-02	2	0.1679705	4	0.2404936	10	0.2706196
2,4-Dimethylphenol	0.1	0.328019	0.2	0.3431435	0.4	0.3553447	1	0.355034	2	0.3655859	5	0.3396291
1,2,4-Trichlorobenzene	0.05	0.387841	0.1	0.3651319	0.2	0.3499598	0.5	0.327545	1	0.3328415	2.5	0.3111387
N-Nitrosodiphenylamine	0.05	0.5004329	0.1	0.523182	0.2	0.5557836	0.5	0.5562821	1	0.579356	2.5	0.5390842
Pentachlorophenol	0.1	5.070694E-02	0.2	6.320046E-02	0.4	8.637945E-02	1	0.110743	2	0.1332021	5	0.1404612
2-Fluorophenol	0.075	1.484432	0.15	1.363771	0.3	1.322891	0.75	1.322239	1.5	1.397138	3.75	1.325771
p-Terphenyl-d14	0.05	0.7606202	0.1	0.6993271	0.2	0.670321	0.5	0.6723224	1	0.7201413	2.5	0.6755183

INITIAL CALIBRATION DATA

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GC00050	Instrument:	NT14
Calibration Date:	03/15/2023	Column (1):	ZB-5MS

Calibration Comments: 8270E SIM Dual SCAN ICAL

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
1,4-Dichlorobenzene	5	1.446684	10	1.476733								
1,2-Dichlorobenzene	5	1.43364	10	1.450316								
Benzyl Alcohol	5	1.149721	10	1.169115								
Benzoic acid	20	0.2871317	40	0.3213461								
2,4-Dimethylphenol	10	0.3369217	20	0.3272378								
1,2,4-Trichlorobenzene	5	0.3110433	10	0.3106966								
N-Nitrosodiphenylamine	5	0.5363527	10	0.5453358								
Pentachlorophenol	10	0.1499898	20	0.1563192								
2-Fluorophenol	7.5	1.32519	15	1.320584								
p-Terphenyl-d14	5	0.6678868	10	0.6505114								

INITIAL CALIBRATION DATA

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GC00050	Instrument:	NT14
Calibration Date:	03/15/2023	Column (1):	ZB-5MS

Calibration Comments: 8270E SIM Dual SCAN ICAL

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
1,4-Dichlorobenzene	1.546115	7.8			RSD (15)	
1,2-Dichlorobenzene	1.505972	5.2			RSD (15)	
Benzyl Alcohol	1.094394	6.4			RSD (15)	
Benzoic acid	0.1762504	69.0		0.9992	QCOD (0.99)	
2,4-Dimethylphenol	0.3438645	4.0			RSD (15)	
1,2,4-Trichlorobenzene	0.3370247	8.5			RSD (15)	
N-Nitrosodiphenylamine	0.5419762	4.4			RSD (15)	
Pentachlorophenol	0.1113753	36.3		0.9996	QCOD (0.99)	
2-Fluorophenol	1.357752	4.3			RSD (15)	
p-Terphenyl-d14	0.6895811	5.2			RSD (15)	

ANALYSIS SEQUENCE

SLC0242

Instrument ID: NT14
Calibration ID: GC00050
MS EM Level: 1847 EV

GCMS Description: Agilent 7890A/5975C XL
GCMS Column ID: L002738

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	File ID	Analyst	Comments
SLC0242-TUN1	MS Tune	QC		1	L002618		03/15/2023 12:00	NT1403152301S.D	JGR	
SLC0242-CAL8	ABN 10.0	QC		2	K011110	K010831	03/15/2023 12:49	NT1403152303S.D	JGR	
SLC0242-CAL7	ABN 5.0	QC		3	K011109	K010831	03/15/2023 13:26	NT1403152304S.D	JGR	
SLC0242-CAL6	ABN 2.5	QC		4	K011108	K010831	03/15/2023 14:02	NT1403152305S.D	JGR	
SLC0242-CAL5	ABN 1.0	QC		5	K011107	K010831	03/15/2023 14:38	NT1403152306S.D	JGR	
SLC0242-CAL4	ABN 0.5	QC		6	K011106	K010831	03/15/2023 15:14	NT1403152307S.D	JGR	
SLC0242-CAL3	ABN 0.2	QC		7	K011105	K010831	03/15/2023 15:50	NT1403152308S.D	JGR	
SLC0242-CAL2	ABN 0.1	QC		8	L002877	K010831	03/15/2023 16:26	NT1403152309S.D	JGR	
SLC0242-CAL1	ABN 0.05	QC		9	L002878	K010831	03/15/2023 17:03	NT1403152310S.D	JGR	
SLC0242-SCV1	SCV 5.0	QC		10	K010066	K010831	03/15/2023 17:39	NT1403152311S.D	JGR	
SLC0242-ICB1	Initial Cal Blank	QC		11	K005156	K010831	03/15/2023 18:15	NT1403152312S.D	JGR	

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230315.b\20230315.b

	Time	Filename	LabID	ClientId	DF											
1	1200	NT1403152301S.D	SLC0242-TUN1		1	|NO ISTDS FOUND||										
2	1213	NT1403152302S.D	SLC0242-CAL9		1	9.08	193189||11.58	746194||15.22	372879||18.25	755327||23.31	598001||25.95	566994|				
3	1249	NT1403152303S.D	SLC0242-CAL8		1	9.08	199100||11.57	763281||15.21	374468||18.25	756122||23.31	588196||25.95	568824|				
4	1326	NT1403152304S.D	SLC0242-CAL7		1	9.08	210618||11.57	802273||15.20	393217||18.25	796801||23.30	615139||25.94	604825|				
5	1402	NT1403152305S.D	SLC0242-CAL6		1	9.08	220094||11.57	828379||15.20	403583||18.25	810171||23.30	624805||25.94	615084|				
6	1438	NT1403152306S.D	SLC0242-CAL5		1	9.08	223201||11.56	832937||15.20	403175||18.25	814822||23.30	625755||25.94	614085|				
7	1514	NT1403152307S.D	SLC0242-CAL4		1	9.07	244579||11.57	905671||15.20	432686||18.25	872507||23.30	672118||25.94	660787|				
8	1550	NT1403152308S.D	SLC0242-CAL3		1	9.07	224982||11.57	833810||15.20	394134||18.25	791855||23.30	613885||25.94	596641|				
9	1626	NT1403152309S.D	SLC0242-CAL2		1	9.07	226822||11.57	834986||15.20	395938||18.25	787336||23.30	609729||25.94	588547|				
10	1703	NT1403152310S.D	SLC0242-CAL1		1	9.07	225451||11.56	838488||15.20	392849||18.25	771492||23.30	602035||25.94	580071|				
11	1739	NT1403152311S.D	SLC0242-SCV1		1	9.07	214548||11.57	807045||15.20	400955||18.25	801298||23.30	624454||25.94	623001|				
12	1815	NT1403152312S.D	SLC0242-ICB1		1	9.07	212376||11.56	811708||15.19	379238||18.25	759480||23.30	583854||25.94	563750|				

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230315.b\20230315.b

ARI Job No.: SLC0 Method: DFTPP8270E.m Instrument: nt14.i Date: 15-MAR-2023

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1200	NT1403152301S.D	SLC0242-TUN1		1	NO MANUAL INTEGRATION
1213	NT1403152302S.D	SLC0242-CAL9		1	NO MANUAL INTEGRATION
1249	NT1403152303S.D	SLC0242-CAL8		1	NO MANUAL INTEGRATION
1326	NT1403152304S.D	SLC0242-CAL7		1	NO MANUAL INTEGRATION
1402	NT1403152305S.D	SLC0242-CAL6		1	NO MANUAL INTEGRATION
1438	NT1403152306S.D	SLC0242-CAL5		1	NO MANUAL INTEGRATION
1514	NT1403152307S.D	SLC0242-CAL4		1	NO MANUAL INTEGRATION
1550	NT1403152308S.D	SLC0242-CAL3		1	NO MANUAL INTEGRATION
1626	NT1403152309S.D	SLC0242-CAL2		1	NO MANUAL INTEGRATION
1703	NT1403152310S.D	SLC0242-CAL1		1	NO MANUAL INTEGRATION
1739	NT1403152311S.D	SLC0242-SCV1		1	NO MANUAL INTEGRATION
1815	NT1403152312S.D	SLC0242-ICB1		1	NO MANUAL INTEGRATION

Security Status Report

Date: 16-Mar-2023 15:20

NT1403152301S.D	Data Locked	deenayd, 16-Mar-2023 15:20
NT1403152302S.D	Data Locked	deenayd, 16-Mar-2023 15:20
NT1403152303S.D	Data Locked	deenayd, 16-Mar-2023 15:20
NT1403152304S.D	Data Locked	deenayd, 16-Mar-2023 15:20
NT1403152305S.D	Data Locked	deenayd, 16-Mar-2023 15:20
NT1403152306S.D	Data Locked	deenayd, 16-Mar-2023 15:20
NT1403152307S.D	Data Locked	deenayd, 16-Mar-2023 15:20
NT1403152308S.D	Data Locked	deenayd, 16-Mar-2023 15:20
NT1403152309S.D	Data Locked	deenayd, 16-Mar-2023 15:20
NT1403152310S.D	Data Locked	deenayd, 16-Mar-2023 15:20
NT1403152311S.D	Data Locked	deenayd, 16-Mar-2023 15:20
NT1403152312S.D	Data Locked	deenayd, 16-Mar-2023 15:20

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 30-DEC-2022 08:06
End Cal Date : 15-MAR-2023 17:03
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt14.i\20230315.b\20230315.b\SIMABN2.m
Last Edit : 20-Mar-2023 09:22 deenayd

Calibration File Names:
Level 1: \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT1403152308.D
Level 2: \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT1403152307.D
Level 3: \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT1403152306.D
Level 4: \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT1403152305.D
Level 5: \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT1403152304.D
Level 6: \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT1403152303.D
Level 7: \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT1403152302.D
Level 8: \\target\share\chem3\nt14.i\20230228.b\20230228.b\NT1423022803.D

Compound	0.0500000 Level 1 / 5.0000 Level 7	0.1000000 Level 2 / 10.0000 Level 8	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
138 Chlorobenzilate	+++++ / +++++	+++++ / +++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000
139 Isodrin	+++++ / +++++	+++++ / +++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000
140 Diallate A	+++++ / +++++	+++++ / +++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000

ARI Labs, Inc.

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Last Edit : 20-Mar-2023 09:22 deenayd

Compound	0.0500000 Level 1	0.1000000 Level 2	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7	10.0000 Level 8									
141 Diallate B	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
142 1,2-Dibromo-3-Chloropropane	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
135 2,3,5,6-Tetrachlorophenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
136 2,3,4,5-tetrachlorophenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
137 NewCpnd_131	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
133 Butylatedhydroxytoluene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
132 3,6-Dimethylphenanthrene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000

ARI Labs, Inc.

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Last Edit : 20-Mar-2023 09:22 deenayd

Compound	0.0500000 Level 1	0.1000000 Level 2	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7	10.0000 Level 8									
131 1-Methylphenanthrene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
146 Benzo(j)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
130 Dibenzothiophene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
129 1-Methylfluorene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
128 N-Hexadecane	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
127 2-Isopropylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
126 N-Tetradecane	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000

ARI Labs, Inc.

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Last Edit : 20-Mar-2023 09:22 deenayd

Compound	0.0500000 Level 1	0.1000000 Level 2	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7	10.0000 Level 8									
144 alpha-Terpineol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
125 Safrole	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
124 3,4-Dimethylphenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
123 Acetophenone	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
122 Furfuraldehyde	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
143 1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
121 Quinoline	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000

ARI Labs, Inc.

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Last Edit : 20-Mar-2023 09:22 deenayd

Compound	0.0500000 Level 1	0.1000000 Level 2	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7	10.0000 Level 8									
120 2,3,4,6-Tetrachlorophenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
119 7,12-Dimethylbenz(a)anthracen	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
118 Triphenyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
117 Butyl Diphenyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
116 Dibutyl Phenyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
115 Tributyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
114 Beta-Pinene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000

ARI Labs, Inc.

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Integrator : HP RTE
Method file : \\target\share\chem3\nt14.i\20230315.b\20230315.b\SIMABN2.m
Last Edit : 20-Mar-2023 09:22 deenayd

Compound	0.0500000 Level 1	0.1000000 Level 2	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7	10.0000 Level 8									
113 Diphenyl Oxide	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
112 Biphenyl	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
111 Azobenzene (1,2-DP-Hydrazine)	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
110 Tetrachloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
109 3,4,5-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
108 4,5,6-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
107 4,5-Dichloro-2-Methoxyphenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000

ARI Labs, Inc.

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Method file : \\target\share\chem3\nt14.i\20230315.b\20230315.b\SIMABN2.m
Last Edit : 20-Mar-2023 09:22 deenayd

Compound	0.0500000 Level 1	0.1000000 Level 2	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7	10.0000 Level 8									
106 Guaiacol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
105 1-methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
3 Phenol	1.80403	1.83298	1.89375	1.86642	1.94990	1.84326					
	1.86471	1.88194					AVRG		1.86712		2.35237
4 Bis(2-Chloroethyl)ether	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
6 2-Chlorophenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
7 1,3-Dichlorobenzene	1.77422	1.66915	1.65498	1.55523	1.59752	1.50328					
	1.50392	1.52399					AVRG		1.59779		6.00742
9 1,4-Dichlorobenzene	1.80083	1.60690	1.58946	1.49053	1.53055	1.42723					
	1.44668	1.47673					AVRG		1.54611		7.83122

ARI Labs, Inc.

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Integrator : HP RTE
Method file : \\target\share\chem3\nt14.i\20230315.b\20230315.b\SIMABN2.m
Last Edit : 20-Mar-2023 09:22 deenayd

Compound	0.0500000 Level 1	0.1000000 Level 2	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7	10.0000 Level 8									
11 Benzyl alcohol	+++++	+++++	0.98923	1.03332	1.11946	1.10552					
	1.14972	1.16912					AVRG		1.09439		6.35498
12 1,2-Dichlorobenzene	1.63938	1.57039	1.56493	1.47009	1.50401	1.41502					
	1.43364	1.45032					AVRG		1.50597		5.22347
13 2-Methylphenol	1.22386	1.24944	1.29406	1.27174	1.33080	1.29151					
	1.31320	1.34362					AVRG		1.28978		3.13567
14 2,2'-oxybis(1-Chloropropane)	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
15 4-Methylphenol	1.23237	1.27148	1.33824	1.36345	1.44055	1.39181					
	1.42639	1.43629					AVRG		1.36257		5.70398
16 N-Nitroso-di-n-propylamine	0.99853	0.90503	0.94390	0.94998	1.00139	0.95822					
	0.96668	0.98323					AVRG		0.96337		3.30047
17 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000

ARI Labs, Inc.

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Last Edit : 20-Mar-2023 09:22 deenayd

Compound	0.0500000 Level 1 / 5.0000 Level 7	0.1000000 Level 2 / 10.0000 Level 8	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
19 Nitrobenzene	*****	*****	*****	*****	*****	*****					
	*****	*****					AVRG		0.000e+000		0.000e+000
20 Isophorone	*****	*****	*****	*****	*****	*****					
	*****	*****					AVRG		0.000e+000		0.000e+000
21 2-Nitrophenol	*****	*****	*****	*****	*****	*****					
	*****	*****					AVRG		0.000e+000		0.000e+000
22 2,4-Dimethylphenol	0.32802	0.34314	0.35534	0.35503	0.36559	0.33963					
	0.33692	0.32724					AVRG		0.34386		3.99734
23 Bis(2-Chloroethoxy)methane	*****	*****	*****	*****	*****	*****					
	*****	*****					AVRG		0.000e+000		0.000e+000
24 Benzoic acid	*****	*****	12666	76063	200316	560439					
	1151790	2452774					QUAD	0.000e+000	3.84509	-0.22902	0.99971
25 2,4-Dichlorophenol	*****	*****	*****	*****	*****	*****					
	*****	*****					AVRG		0.000e+000		0.000e+000

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Compound	0.0500000 Level 1 / 5.0000 Level 7	0.1000000 Level 2 / 10.0000 Level 8	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
26 1,2,4-Trichlorobenzene	0.38784	0.36513	0.34996	0.32754	0.33284	0.31114					
	0.31104	0.31070					AVRG		0.33702		8.45600
28 Naphthalene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
29 4-Chloroaniline	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
30 Hexachlorobutadiene	0.17947	0.17624	0.17440	0.16687	0.17058	0.16318					
	0.16533	0.16838					AVRG		0.17056		3.33540
31 4-Chloro-3-methylphenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
32 2-Methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
33 Hexachlorocyclopentadiene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 30-DEC-2022 08:06
End Cal Date : 15-MAR-2023 17:03
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt14.i\20230315.b\20230315.b\SIMABN2.m
Last Edit : 20-Mar-2023 09:22 deenayd

Compound	0.0500000 Level 1	0.1000000 Level 2	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7	10.0000 Level 8									
34 2,4,6-Trichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
35 2,4,5-Trichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
37 2-Chloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
38 2-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
39 Dimethylphthalate	1.41551	1.33475	1.37806	1.37141	1.42379	1.33971					
	1.34195	1.32325					AVRG		1.36605		2.77217
40 Acenaphthylene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
41 2,6-Dinitrotoluene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000

ARI Labs, Inc.

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Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt14.i\20230315.b\20230315.b\SIMABN2.m
Last Edit : 20-Mar-2023 09:22 deenayd

Compound	0.0500000 Level 1	0.1000000 Level 2	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7	10.0000 Level 8									
43 3-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
44 Acenaphthene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
45 2,4-Dinitrophenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
46 Dibenzofuran	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
47 4-Nitrophenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
48 2,4-Dinitrotoluene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
49 Fluorene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 30-DEC-2022 08:06
End Cal Date : 15-MAR-2023 17:03
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt14.i\20230315.b\20230315.b\SIMABN2.m
Last Edit : 20-Mar-2023 09:22 deenayd

Compound	0.0500000 Level 1	0.1000000 Level 2	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7	10.0000 Level 8									
50 Diethylphthalate	+++++	+++++	1.42444	1.43206	1.52217	1.43943					
	1.45720	1.45091					AVRG		1.45437		2.42775
51 4-Chlorophenyl-phenylether	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
52 4-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
53 4,6-Dinitro-2-methylphenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
54 N-Nitrosodiphenylamine	0.50043	0.52318	0.55578	0.55628	0.57936	0.53908					
	0.53635	0.54534					AVRG		0.54198		4.36791
56 4-Bromophenyl-phenylether	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
57 Hexachlorobenzene	0.21921	0.21160	0.22065	0.20576	0.20820	0.19714					
	0.19989	0.20322					AVRG		0.20821		4.09875

ARI Labs, Inc.

INITIAL CALIBRATION DATA

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Integrator : HP RTE
Method file : \\target\share\chem3\nt14.i\20230315.b\20230315.b\SIMABN2.m
Last Edit : 20-Mar-2023 09:22 deenayd

Compound	0.0500000 Level 1	0.1000000 Level 2	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7	10.0000 Level 8									
58 Pentachlorophenol	+++++	2488	6840	24156	54268	142247					
	298780	590982					QUAD	0.000e+000	7.12244	-0.93967	0.99983
60 Phenanthrene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
61 Anthracene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
62 Carbazole	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
63 Di-n-butylphthalate	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
64 Fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
65 Pyrene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000

ARI Labs, Inc.

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Target Version : 4.14
Integrator : HP RTE
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Last Edit : 20-Mar-2023 09:22 deenayd

Compound	0.0500000 Level 1 / 5.0000 Level 7	0.1000000 Level 2 / 10.0000 Level 8	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
67 Butylbenzylphthalate	3175	7477	17499	51154	110003	270783					
	543386	1037644					QUAD	0.000e+000	1.43111	-0.00826	0.99995
68 Benzo(a)anthracene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
70 3,3'-Dichlorobenzidine	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
71 Chrysene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
72 bis(2-Ethylhexyl)phthalate	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
73 Di-n-octylphthalate	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
74 Benzo(b)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000

ARI Labs, Inc.

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Integrator : HP RTE
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Last Edit : 20-Mar-2023 09:22 deenayd

Compound	0.0500000 Level 1	0.1000000 Level 2	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7	10.0000 Level 8									
75 Benzo(k)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
76 Benzo(a)pyrene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
78 Indeno(1,2,3-cd)pyrene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
79 Dibenzo(a,h)anthracene	0.84996	0.89916	0.96752	1.00635	1.09182	1.06653					
	1.09822	1.13261					AVRG		1.01402		10.02175
80 Benzo(g,h,i)perylene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
90 N-Nitrosodimethylamine	0.83513	0.83502	0.85029	0.83348	0.86639	0.81357					
	0.80944	0.79248					AVRG		0.82947		2.84461
91 Aniline	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000

ARI Labs, Inc.

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Compound	0.0500000 Level 1	0.1000000 Level 2	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7	10.0000 Level 8									
92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
93 Benzidine	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
98 Retene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
99 Perylene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
100 3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000

ARI Labs, Inc.

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Last Edit : 20-Mar-2023 09:22 deenayd

Compound	0.0500000 Level 1	0.1000000 Level 2	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7	10.0000 Level 8									
101 Cholesterol	#####	#####	#####	#####	#####	#####					
	#####	#####					AVRG		0.000e+000		0.000e+000
102 beta-Sitosterol	#####	#####	#####	#####	#####	#####					
	#####	#####					AVRG		0.000e+000		0.000e+000
103 Pyridine	#####	#####	#####	#####	#####	#####					
	#####	#####					AVRG		0.000e+000		0.000e+000
$ 1 2-Fluorophenol	1.48443	1.36377	1.32289	1.32224	1.39714	1.32577					
	1.32519	1.32058					AVRG		1.35775		4.27434
$ 145 d8-1,4-Dioxane	#####	#####	#####	#####	#####	#####					
	#####	#####					AVRG		0.000e+000		0.000e+000
$ 2 Phenol-d5	#####	#####	#####	#####	#####	#####					
	#####	#####					AVRG		0.000e+000		0.000e+000
$ 5 2-Chlorophenol-d4	#####	#####	#####	#####	#####	#####					
	#####	#####					AVRG		0.000e+000		0.000e+000

ARI Labs, Inc.

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Method file : \\target\share\chem3\nt14.i\20230315.b\20230315.b\SIMABN2.m
Last Edit : 20-Mar-2023 09:22 deenayd

Compound	0.0500000 Level 1	0.1000000 Level 2	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	5.0000 Level 7	10.0000 Level 8										
$ 10 1,2-Dichlorobenzene-d4	80.00000	40.00000	20.00000	8.00000	4.00000	1.60000						
	0.80000	+++++					AVRG		22.05714		132	<-
$ 18 Nitrobenzene-d5	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++					AVRG		0.000e+000		0.000e+000	
$ 36 2-Fluorobiphenyl	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++					AVRG		0.000e+000		0.000e+000	
$ 55 2,4,6-Tribromophenol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++					AVRG		0.000e+000		0.000e+000	
$ 66 Terphenyl-d14	0.76062	0.69933	0.67032	0.67232	0.72014	0.67552						
	0.66789	0.65051					AVRG		0.68958		5.18219	
$ 85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++					AVRG		0.000e+000		0.000e+000	
$ 86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++					AVRG		0.000e+000		0.000e+000	

ARI Labs, Inc.

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Last Edit : 20-Mar-2023 09:22 deenayd

Compound	0.0500000 Level 1	0.1000000 Level 2	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7	10.0000 Level 8									
$ 87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
$ 88 Dibenz(a,h)anthracene-d14	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
$ 89 Diphenyl-d10	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
$ 95 D10-1-methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000

ARI Labs, Inc.

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Last Edit : 20-Mar-2023 09:22 deenayd

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

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\SIMABN2.m
Batch File: \\target\share\chem3\nt14.i\20230315.b\20230315.b
Inst ID: nt14.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08
FILENAME:	NT1403152303S	NT1403152304S	NT1403152305S	NT1403152306S	NT1403152307S	NT1403152308S	NT1403152309S	NT1403152310S
INJ.DATE:	15-MAR-2023	15-MAR-2023	15-MAR-2023	15-MAR-2023	15-MAR-2023	15-MAR-2023	15-MAR-2023	15-MAR-2023
INJ.TIME:	12:49	13:26	14:02	14:38	15:14	15:50	16:26	17:03

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
$ 1 2-Fluorophenol	6.834	6.827	6.827	6.826	6.827	6.826	6.834	6.826	6.834	6.334-7.334	6.828	0.004
138 Chlorobenzilate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	33.580	33.080-34.080	+++++	+++++
139 Isodrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	30.873	30.373-31.373	+++++	+++++
140 Diallate A	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	31.300	30.800-31.800	+++++	+++++
141 Diallate B	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	31.300	30.800-31.800	+++++	+++++
142 1,2-Dibromo-3-Chloropr	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.496	14.996-15.996	+++++	+++++
135 2,3,5,6-Tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.428	19.928-20.928	+++++	+++++
136 2,3,4,5-tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.471	19.971-20.971	+++++	+++++
137 NewCpnd_131	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.828	7.328-8.328	+++++	+++++
* 134 Di-n-octylphthalate-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	23.768	23.268-24.268	+++++	+++++
133 Butylatedhydroxytoluen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.190	13.690-14.690	+++++	+++++
132 3,6-Dimethylphenanthre	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	31.262	30.762-31.762	+++++	+++++
131 1-Methylphenanthrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	29.954	29.454-30.454	+++++	+++++
146 Benzo(j)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	23.752	23.252-24.252	+++++	+++++
130 Dibenzothiophene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	27.717	27.217-28.217	+++++	+++++
129 1-Methylfluorene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.566	20.066-21.066	+++++	+++++
128 N-Hexadecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.796	19.296-20.296	+++++	+++++

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

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\SIMABN2.m
Batch File: \\target\share\chem3\nt14.i\20230315.b\20230315.b
Inst ID: nt14.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
127 2-Isopropylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	23.349	22.849-23.849	+++++	+++++
126 N-Tetradecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	22.474	21.974-22.974	+++++	+++++
144 alpha-Terpineol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.191	10.691-11.691	+++++	+++++
125 Safrole	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.779	17.279-18.279	+++++	+++++
124 3,4-Dimethylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.310	15.810-16.810	+++++	+++++
123 Acetophenone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.707	17.207-18.207	+++++	+++++
122 Furfuraldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.921	8.421-9.421	+++++	+++++
143 1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.736	3.236-4.236	+++++	+++++
$ 145 d8-1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.914	2.414-3.414	+++++	+++++
121 Quinoline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.148	19.648-20.648	+++++	+++++
120 2,3,4,6-Tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.588	15.088-16.088	+++++	+++++
119 7,12-Dimethylbenz(a)an	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	38.587	38.087-39.087	+++++	+++++
118 Triphenyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.382	19.882-20.882	+++++	+++++
117 Butyl Diphenyl Phospha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.734	18.234-19.234	+++++	+++++
116 Dibutyl Phenyl Phospha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.987	16.487-17.487	+++++	+++++
115 Tributyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.204	14.704-15.704	+++++	+++++
114 Beta-Pinene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.540	14.040-15.040	+++++	+++++
113 Diphenyl Oxide	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.586	21.086-22.086	+++++	+++++
112 Biphenyl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.692	17.192-18.192	+++++	+++++
111 Azobenzene (1,2-DP-Hyd	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.268	15.768-16.768	+++++	+++++
110 Tetrachloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.055	17.555-18.555	+++++	+++++
109 3,4,5-Trichloroguaiaco	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.228	16.728-17.728	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\SIMABN2.m
Batch File: \\target\share\chem3\nt14.i\20230315.b\20230315.b
Inst ID: nt14.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
108	4,5,6-Trichloroguaiaco	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.517	16.017-17.017	+++++	+++++
107	4,5-Dichloro-2-Methoxy	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.803	14.303-15.303	+++++	+++++
106	Guaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.843	11.343-12.343	+++++	+++++
105	1-methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.927	12.427-13.427	+++++	+++++
$ 2	Phenol-d5	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.235	7.735-8.735	+++++	+++++
3	Phenol	8.449	8.441	8.441	8.433	8.434	8.433	8.433	8.433	8.449	7.949-8.949	8.437	0.006
4	Bis(2-Chloroethyl)ethe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.397	7.897-8.897	+++++	+++++
$ 5	2-Chlorophenol-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.490	7.990-8.990	+++++	+++++
6	2-Chlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.521	8.021-9.021	+++++	+++++
7	1,3-Dichlorobenzene	9.006	9.006	9.006	9.005	9.006	9.006	9.006	9.005	9.006	8.506-9.506	9.006	0.000
* 8	1,4-Dichlorobenzene-d4	9.075	9.076	9.075	9.075	9.068	9.068	9.068	9.067	9.075	8.575-9.575	9.071	0.004
9	1,4-Dichlorobenzene	9.106	9.099	9.099	9.098	9.099	9.099	9.099	9.098	9.106	8.606-9.606	9.100	0.003
$ 10	1,2-Dichlorobenzene-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.068	8.568-9.568	+++++	+++++
11	Benzyl alcohol	9.347	9.339	9.339	9.339	9.339	9.339	9.339	9.339	9.347	8.847-9.847	9.340	0.003
12	1,2-Dichlorobenzene	9.463	9.464	9.456	9.455	9.456	9.456	9.456	9.456	9.463	8.963-9.963	9.458	0.004
13	2-Methylphenol	9.564	9.565	9.564	9.556	9.557	9.557	9.557	9.556	9.564	9.064-10.064	9.559	0.004
14	2,2'-oxybis(1-Chloropr	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.413	8.913-9.913	+++++	+++++
15	4-Methylphenol	9.844	9.836	9.828	9.828	9.828	9.828	9.828	9.828	9.844	9.344-10.344	9.831	0.006
16	N-Nitroso-di-n-propyla	9.921	9.906	9.906	9.898	9.898	9.898	9.898	9.898	9.921	9.421-10.421	9.903	0.008
17	Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.809	9.309-10.309	+++++	+++++
$ 18	Nitrobenzene-d5	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.917	9.417-10.417	+++++	+++++
19	Nitrobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.948	9.448-10.448	+++++	+++++
20	Isophorone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.399	9.899-10.899	+++++	+++++
21	2-Nitrophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.575	10.075-11.075	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\SIMABN2.m
Batch File: \\target\share\chem3\nt14.i\20230315.b\20230315.b
Inst ID: nt14.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	22 2,4-Dimethylphenol	10.891	10.891	10.884	10.883	10.884	10.884	10.884	10.883	10.891	10.391-11.391	10.885	0.004
	23 Bis(2-Chloroethoxy)met	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.830	10.330-11.330	+++++	+++++
	24 Benzoic acid	11.201	11.124	11.070	11.015	10.992	10.969	10.977	10.883	11.201	10.701-11.701	11.029	0.100
	25 2,4-Dichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.033	10.533-11.533	+++++	+++++
	26 1,2,4-Trichlorobenzene	11.488	11.488	11.480	11.480	11.480	11.480	11.480	11.480	11.488	10.988-11.988	11.482	0.004
*	27 Naphthalene-d8	11.573	11.573	11.565	11.565	11.565	11.565	11.565	11.565	11.573	11.073-12.073	11.567	0.004
	28 Naphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.326	10.826-11.826	+++++	+++++
	29 4-Chloroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.457	10.957-11.957	+++++	+++++
	30 Hexachlorobutadiene	11.982	11.975	11.975	11.974	11.975	11.975	11.974	11.974	11.982	11.482-12.482	11.975	0.003
	31 4-Chloro-3-methylpheno	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.432	11.932-12.932	+++++	+++++
	32 2-Methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.710	12.210-13.210	+++++	+++++
	33 Hexachlorocyclopentadi	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.182	12.682-13.682	+++++	+++++
	34 2,4,6-Trichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.330	12.830-13.830	+++++	+++++
	35 2,4,5-Trichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.415	12.915-13.915	+++++	+++++
$	36 2-Fluorobiphenyl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.484	12.984-13.984	+++++	+++++
	37 2-Chloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.686	13.186-14.186	+++++	+++++
	38 2-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.941	13.441-14.441	+++++	+++++
	39 Dimethylphthalate	14.714	14.707	14.706	14.698	14.699	14.699	14.699	14.699	14.714	14.214-15.214	14.703	0.006
	40 Acenaphthylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.545	14.045-15.045	+++++	+++++
	41 2,6-Dinitrotoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.506	14.006-15.006	+++++	+++++
*	42 Acenaphthene-d10	15.210	15.202	15.202	15.202	15.202	15.202	15.202	15.202	15.210	14.710-15.710	15.203	0.003
	43 3-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.785	14.285-15.285	+++++	+++++
	44 Acenaphthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.924	14.424-15.424	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\SIMABN2.m
Batch File: \\target\share\chem3\nt14.i\20230315.b\20230315.b
Inst ID: nt14.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	45 2,4-Dinitrophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.001	14.501-15.501	+++++	+++++
	46 Dibenzofuran	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.621	15.121-16.121	+++++	+++++
	47 4-Nitrophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.171	14.671-15.671	+++++	+++++
	48 2,4-Dinitrotoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.302	14.802-15.802	+++++	+++++
	49 Fluorene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.952	15.452-16.452	+++++	+++++
	50 Diethylphthalate	16.184	16.168	16.168	16.160	16.161	16.160	16.160	16.160	16.184	15.684-16.684	16.165	0.008
	51 4-Chlorophenyl-phenyle	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.952	15.452-16.452	+++++	+++++
	52 4-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.037	15.537-16.537	+++++	+++++
	53 4,6-Dinitro-2-methylph	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.145	15.645-16.645	+++++	+++++
	54 N-Nitrosodiphenylamine	16.562	16.554	16.546	16.546	16.546	16.546	16.546	16.546	16.562	16.062-17.062	16.549	0.006
$	55 2,4,6-Tribromophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.477	15.977-16.977	+++++	+++++
	56 4-Bromophenyl-phenylet	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.939	16.439-17.439	+++++	+++++
	57 Hexachlorobenzene	17.626	17.626	17.626	17.618	17.619	17.618	17.618	17.618	17.626	17.126-18.126	17.621	0.004
	58 Pentachlorophenol	17.982	17.975	17.975	17.974	17.975	17.975	17.975	17.982	17.982	17.482-18.482	17.977	0.004
*	59 Phenanthrene-d10	18.253	18.246	18.245	18.245	18.246	18.245	18.245	18.245	18.253	17.753-18.753	18.246	0.003
	60 Phenanthrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.899	17.399-18.399	+++++	+++++
	61 Anthracene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.991	17.491-18.491	+++++	+++++
	62 Carbazole	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.324	17.824-18.824	+++++	+++++
	63 Di-n-butylphthalate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.152	18.652-19.652	+++++	+++++
	64 Fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.289	19.789-20.789	+++++	+++++
	65 Pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.715	20.215-21.215	+++++	+++++
$	66 Terphenyl-d14	21.394	21.395	21.387	21.386	21.387	21.387	21.387	21.387	21.394	20.894-21.894	21.389	0.004
	67 Butylbenzylphthalate	22.316	22.316	22.316	22.316	22.316	22.316	22.316	22.316	22.316	21.816-22.816	22.316	0.000
	68 Benzo(a)anthracene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	22.875	22.375-23.375	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\SIMABN2.m
Batch File: \\target\share\chem3\nt14.i\20230315.b\20230315.b
Inst ID: nt14.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
*	69 Chrysene-d12	23.307	23.299	23.299	23.299	23.299	23.299	23.299	23.299	23.307	22.807-23.807	23.300	0.003
	70 3,3'-Dichlorobenzidine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	22.844	22.344-23.344	+++++	+++++
	71 Chrysene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	22.952	22.452-23.452	+++++	+++++
	72 bis(2-Ethylhexyl)phtha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	22.997	22.497-23.497	+++++	+++++
	73 Di-n-octylphthalate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	23.990	23.490-24.490	+++++	+++++
	74 Benzo(b)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	24.687	24.187-25.187	+++++	+++++
	75 Benzo(k)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	24.725	24.225-25.225	+++++	+++++
	76 Benzo(a)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	25.283	24.783-25.783	+++++	+++++
*	77 Perylene-d12	25.947	25.940	25.939	25.939	25.940	25.939	25.939	25.939	25.947	25.447-26.447	25.940	0.003
	78 Indeno(1,2,3-cd)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	27.794	27.294-28.294	+++++	+++++
	79 Dibenzo(a,h)anthracene	28.663	28.639	28.632	28.624	28.624	28.624	28.624	28.624	28.663	28.163-29.163	28.632	0.014
	80 Benzo(g,h,i)perylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	28.494	27.994-28.994	+++++	+++++
$	85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.238	16.738-17.738	+++++	+++++
$	86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	29.316	28.816-29.816	+++++	+++++
$	87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.007	25.507-26.507	+++++	+++++
$	88 Dibenz(a,h)anthracene-	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	44.609	44.109-45.109	+++++	+++++
$	89 Diphenyl-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.085	15.585-16.585	+++++	+++++
	90 N-Nitrosodimethylamine	4.741	4.726	4.726	4.718	4.718	4.726	4.726	4.733	4.741	4.241-5.241	4.727	0.008
	91 Aniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.305	7.805-8.805	+++++	+++++
	92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.615	21.115-22.115	+++++	+++++
	93 Benzidine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.529	20.029-21.029	+++++	+++++
$	95 D10-1-methylnaphthalen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.686	17.186-18.186	+++++	+++++
	96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.540	14.040-15.040	+++++	+++++
	97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.957	26.457-27.457	+++++	+++++

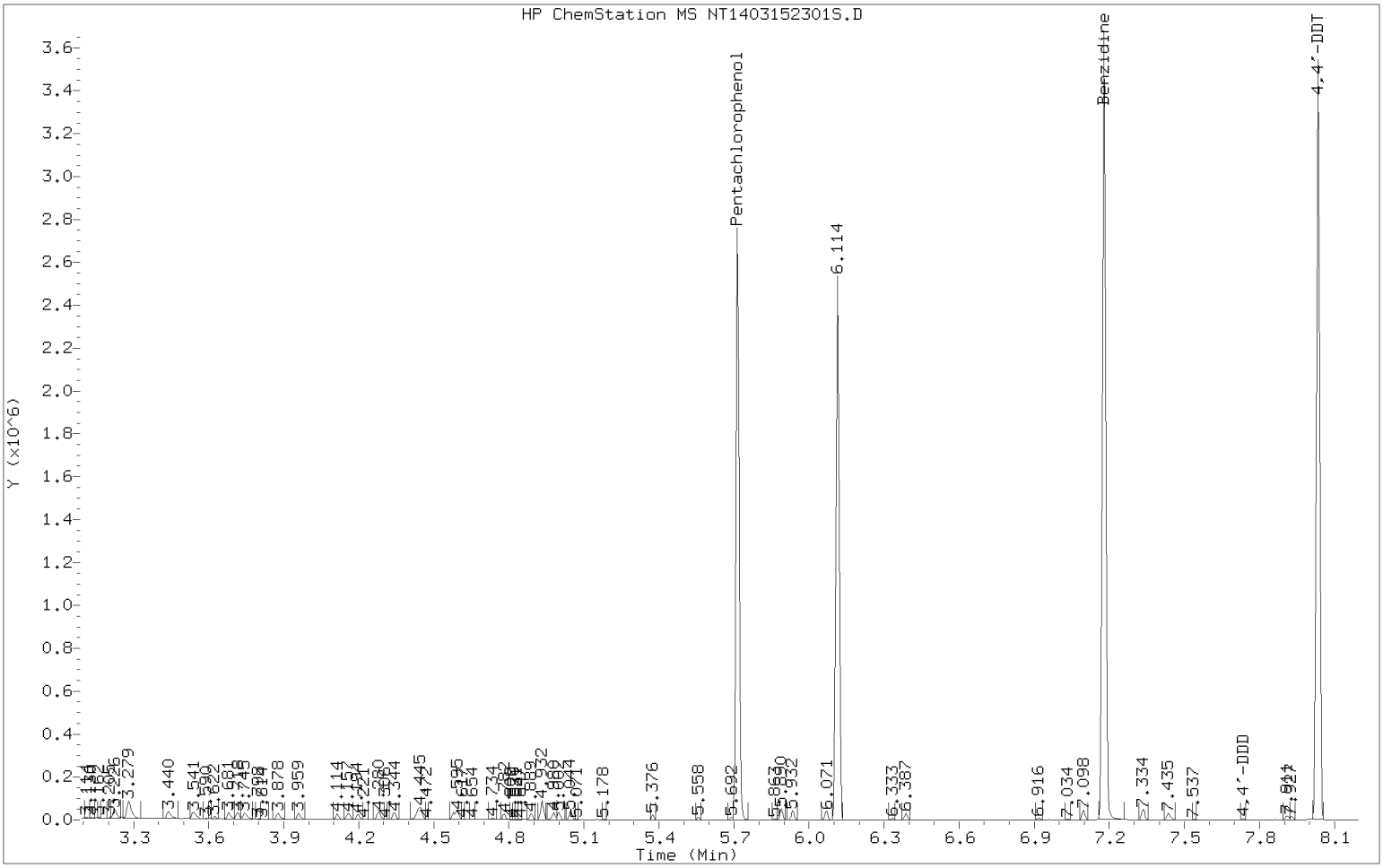
ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

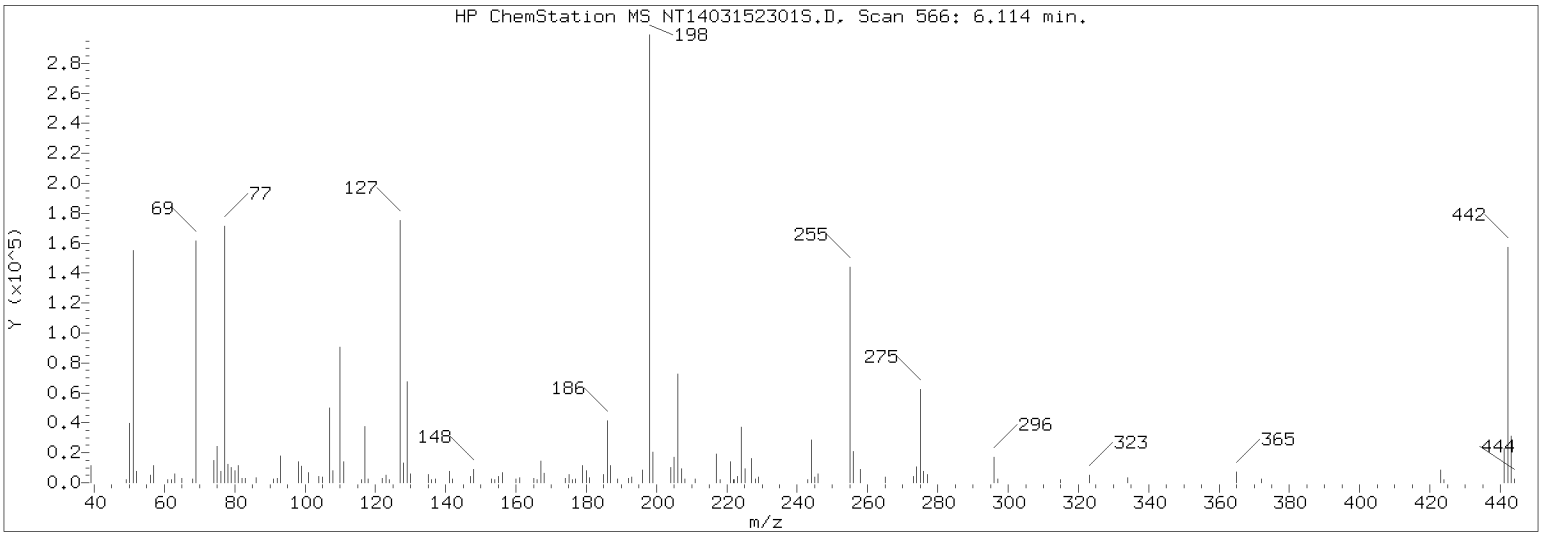
Method File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\SIMABN2.m
Batch File: \\target\share\chem3\nt14.i\20230315.b\20230315.b
Inst ID: nt14.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
98 Retene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.609	19.109-20.109	+++++	+++++
99 Perylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	25.438	24.938-25.938	+++++	+++++
100 3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.384	25.884-26.884	+++++	+++++
101 Cholesterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	43.881	43.381-44.381	+++++	+++++
102 beta-Sitosterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	45.573	45.073-46.073	+++++	+++++
103 Pyridine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.535	4.035-5.035	+++++	+++++

DFTPP TAILING FACTOR AND BREAKDOWN GRAPHIC REPORT

Datafile Analyzed: /20230315.b/20230315.b/NT1403152301S.D/NT1403152301S.D
Method Used: \20230315.b\20230315.b\DFTPP8270E.m Inst: nt14
Injection Date: 15-MAR-2023 12:00 Operator: JGR
Sample Info: SLC0242-TUN1 SLC0242-TUN1
Report Date: 03/22/2023 12:12





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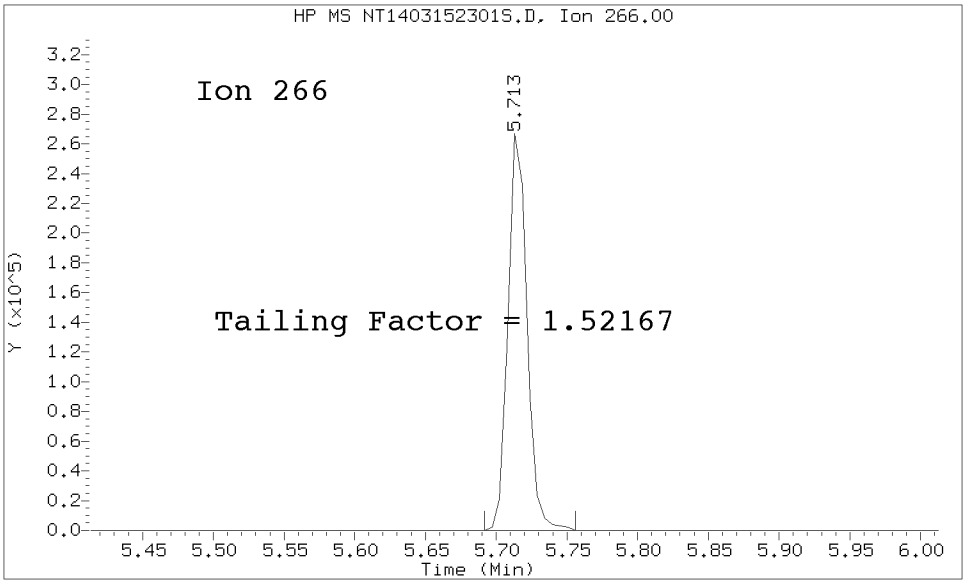
Method Used: \20230315.b\20230315.b\DFTPP8270E.m\sw846ddt.m Inst: nt14
Injection Date: 15-MAR-2023 12:00   Operator: JGR
Sample Info: SLC0160-TUN1
Report Date: 03/22/2023 12:12



Pentachlorophenol
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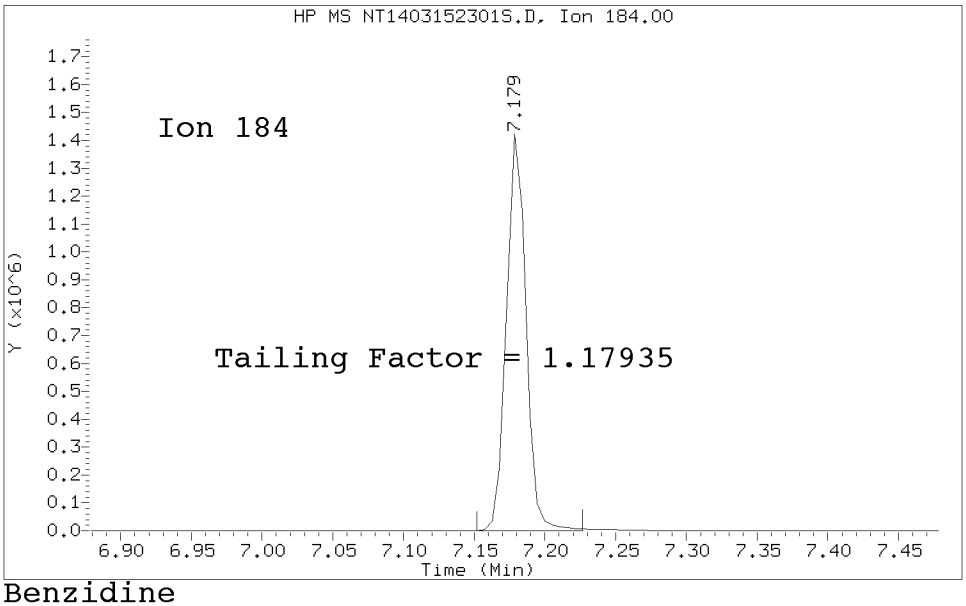
 Exp. RT =   5.681
Found RT =   5.713

Tail Factor = 1.522   Maximum Allowed = 2.0



Benzidine
=========
 Exp. RT =   7.146
Found RT =   7.179

Tail Factor = 1.179 Maximum Allowed = 2.0

8270 TAILING FACTOR/BREAKDOWN SUMMARY RESULTS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test
Pentachlorophenol	1.5216693	2.000	PASS
Benzidine	1.1793548	2.000	PASS

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	570011			N/A
4,4-DDE	0	0.0	20.0	PASS
4,4-DDD	2915	0.5	20.0	PASS
4,4-DDD + DDE	2915	0.5	20.0	PASS

Tuning Sample, nt14.i/20230315.b/20230315.b/NT1403152301S.D, *** PASSED ***

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
68	Less than 2.00% of mass 69	0.36 (0.67)
69	Mass 69 relative abundance	53.44
70	Less than 2.00% of mass 69	0.00 (0.00)
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.72
365	1.00 - 100.00% of mass 198	2.71
441	Less than 150.00% of mass 443	8.08 (72.22)
442	Less than 200.00% of mass 198	58.28
443	15.00 - 24.00% of mass 442	11.19 (19.20)

Data File: NT1403152301S.D
Spectrum: Avg. Scans 565-567 (6.11), Background Scan 560
Location of Maximum: 198.00
Number of points: 121

m/z	Y	m/z	Y	m/z	Y	m/z	Y
39.00	9069	105.00	2863	168.00	5614	228.00	794
49.00	671	107.00	39032	174.00	2579	229.00	2862
50.00	30976	108.00	6346	175.00	4842	243.00	696
51.00	125768	110.00	71896	176.00	720	244.00	22688
52.00	6453	111.00	11106	177.00	2298	245.00	3011
56.00	4179	116.00	757	179.00	9119	246.00	4609
57.00	8934	117.00	29992	180.00	6294	255.00	114968
61.00	717	118.00	874	181.00	2818	256.00	16984
62.00	680	122.00	2529	185.00	4402	258.00	7242
63.00	4715	123.00	4032	186.00	32272	265.00	2218
65.00	1773	124.00	773	187.00	9241	273.00	3465
68.00	849	127.00	138368	189.00	1636	274.00	8836
69.00	126008	128.00	10413	192.00	2615	275.00	49816
74.00	11539	129.00	53960	193.00	3054	276.00	6361
75.00	19136	130.00	4541	196.00	6505	277.00	4187
76.00	6049	135.00	4342	198.00	235776	296.00	14150
77.00	134016	136.00	766	199.00	15852	297.00	810
78.00	9331	137.00	800	204.00	8038	315.00	707
79.00	8099	141.00	6361	205.00	13686	323.00	4245
80.00	6487	142.00	869	206.00	57704	334.00	2072
81.00	9538	147.00	3337	207.00	7569	365.00	6386
82.00	1806	148.00	7192	208.00	1530	372.00	1786
83.00	1759	153.00	830	211.00	1585	423.00	7390
86.00	2890	154.00	714	217.00	15135	424.00	1369
91.00	1612	155.00	3489	218.00	723	441.00	19048
92.00	1761	156.00	5350	221.00	10741	442.00	137408
93.00	14267	160.00	806	222.00	1546	443.00	26376
98.00	10738	161.00	2807	223.00	3284	444.00	1928
99.00	8546	165.00	1720	224.00	30088		
101.00	5073	166.00	753	225.00	7730		
104.00	3305	167.00	9750	227.00	12951		

Data File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT14031523115.D

Date : 15-MAR-2023 17:39

Client ID:

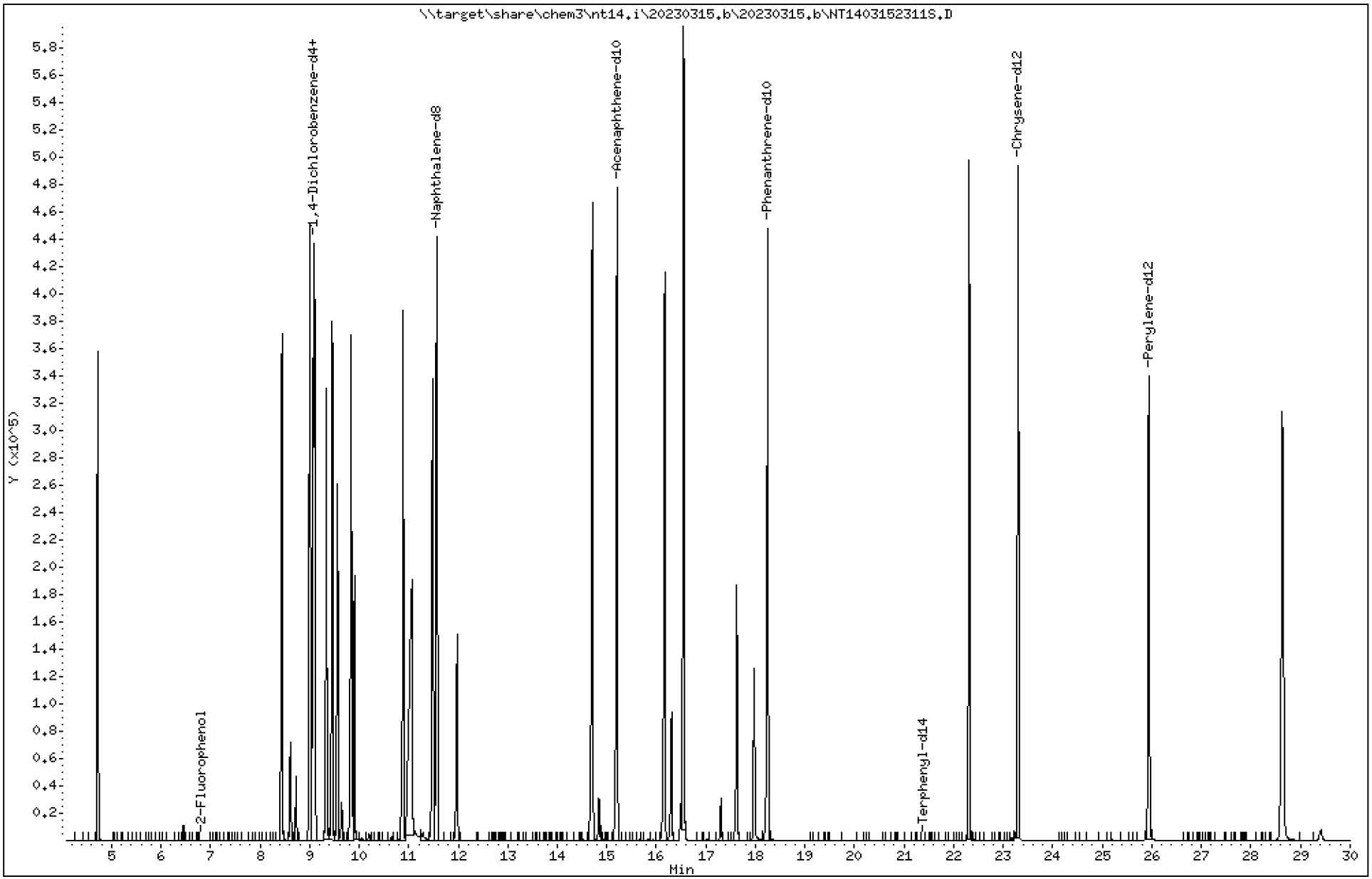
Instrument: nt14.i

Sample Info: SLC0242-SCV1

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

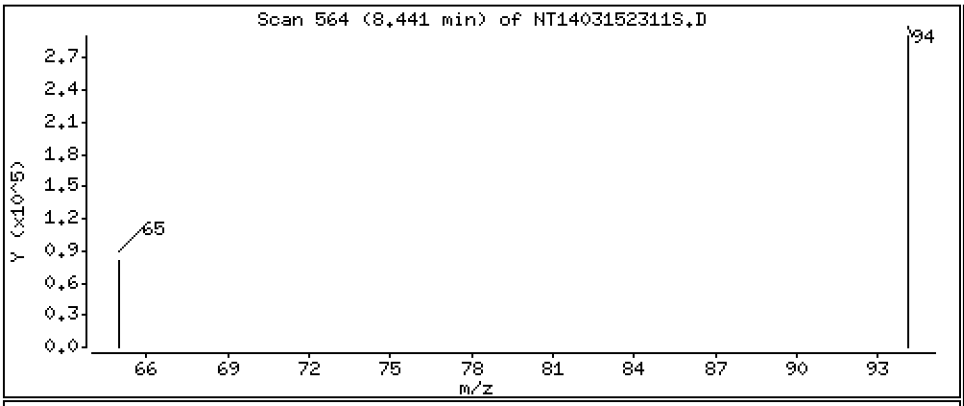
Operator: JGR

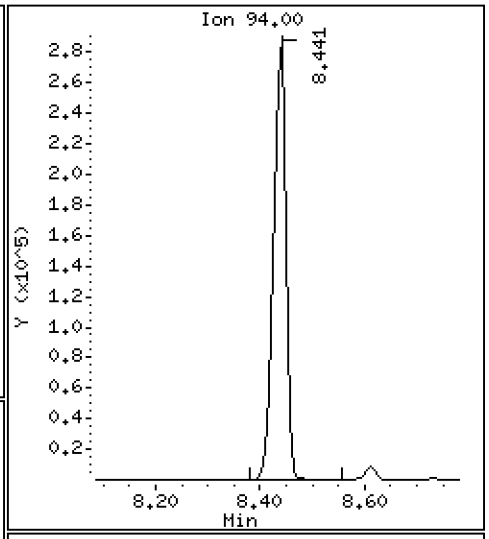
Column phase: ZB-5msi

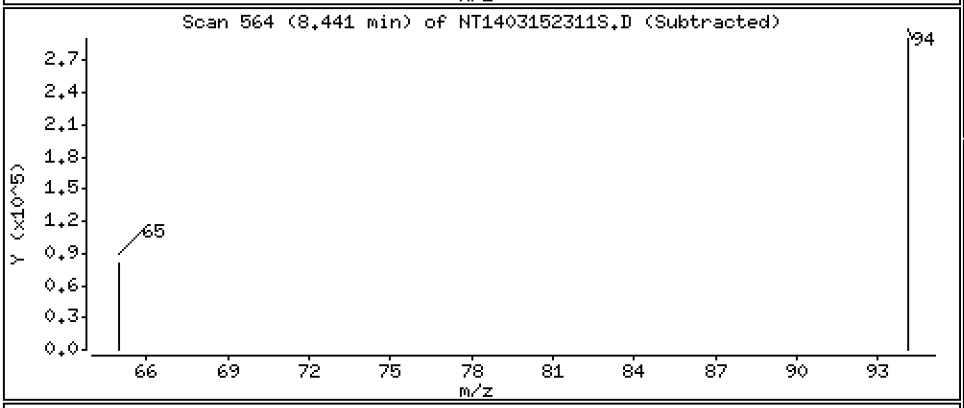
Column diameter: 0.25

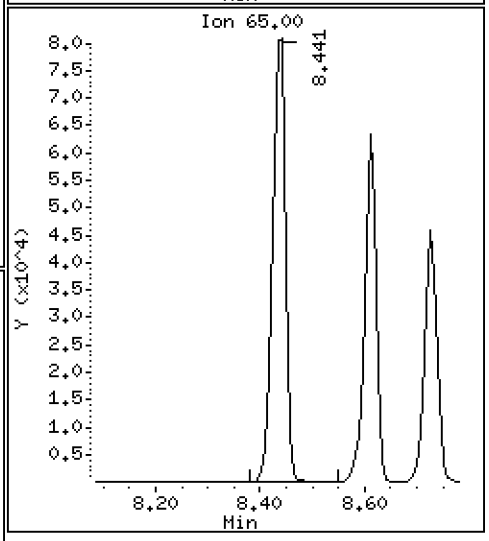
3 Phenol

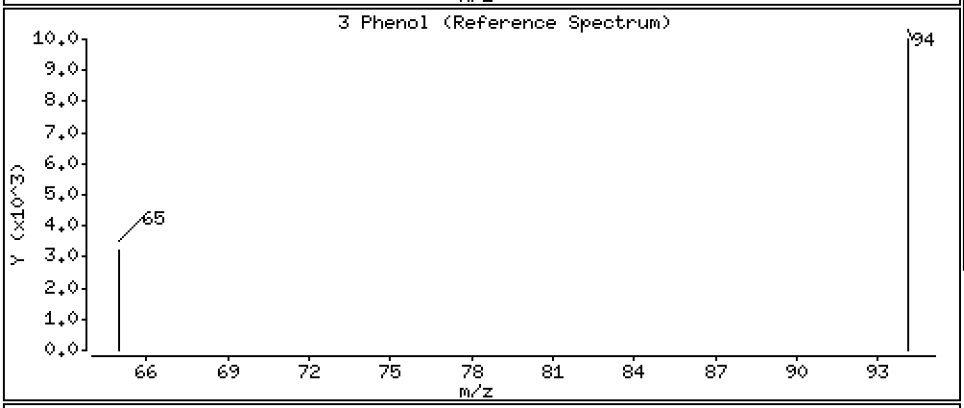
Concentration: 4.542 ug/mL

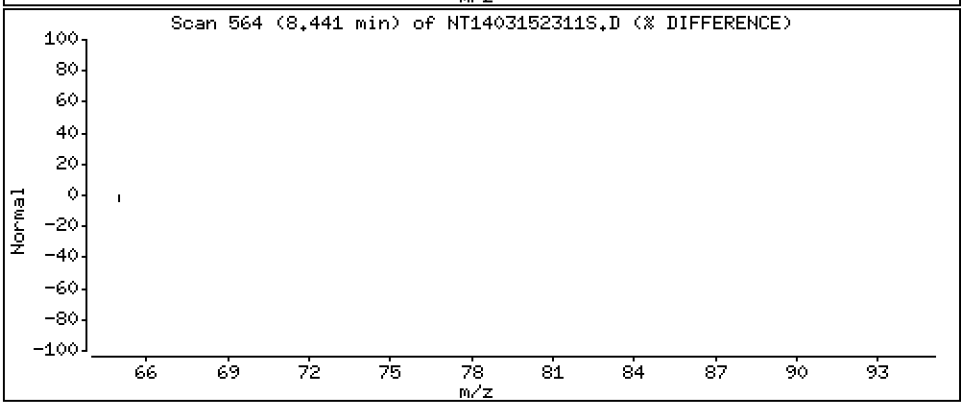












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

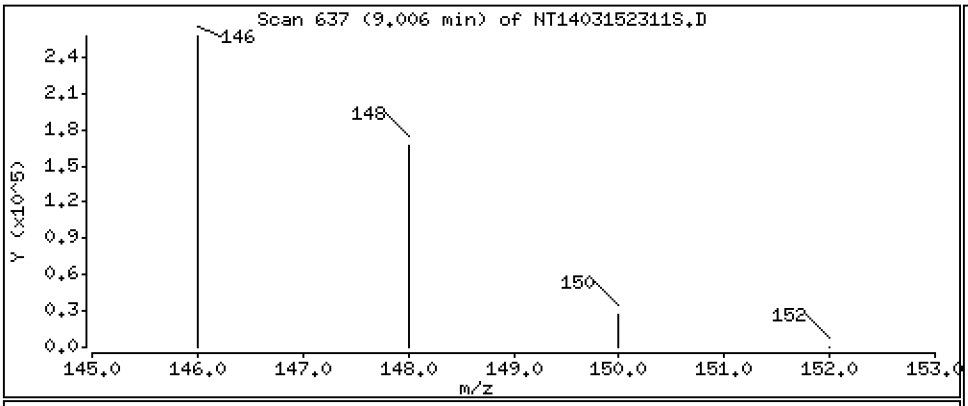
Operator: JGR

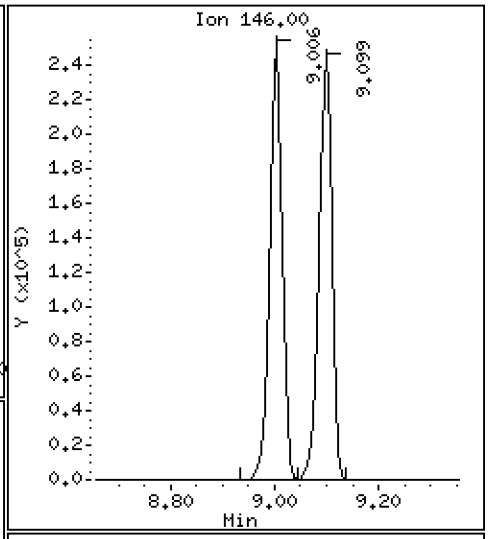
Column phase: ZB-5msi

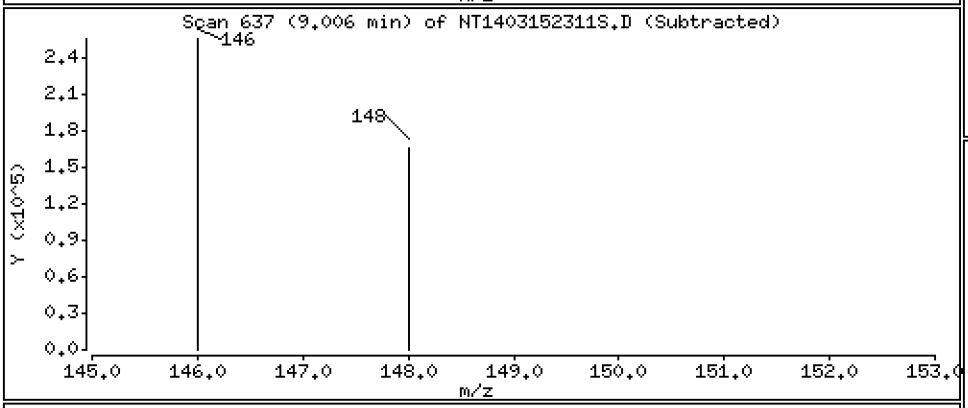
Column diameter: 0.25

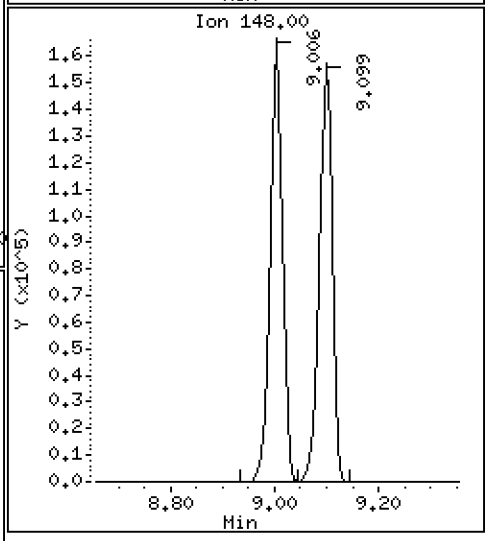
7 1,3-Dichlorobenzene

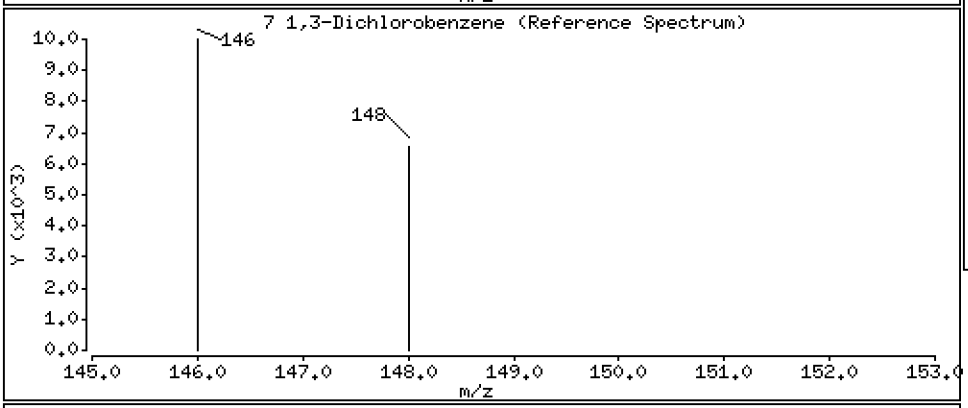
Concentration: 4.839 ug/mL

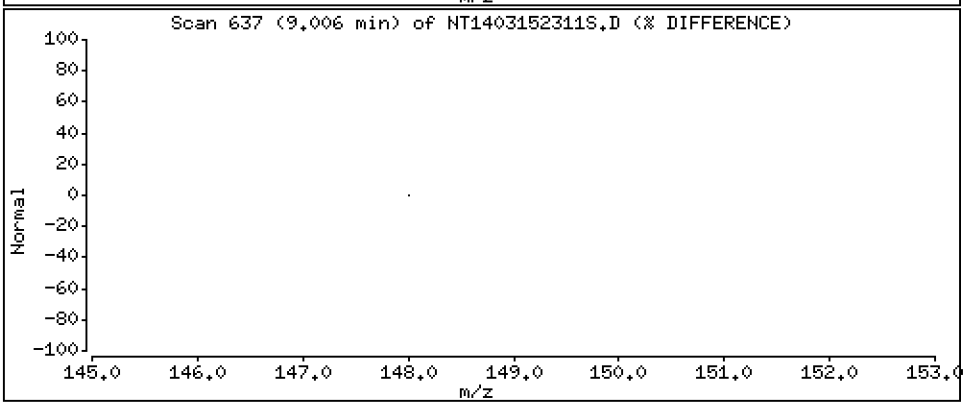












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

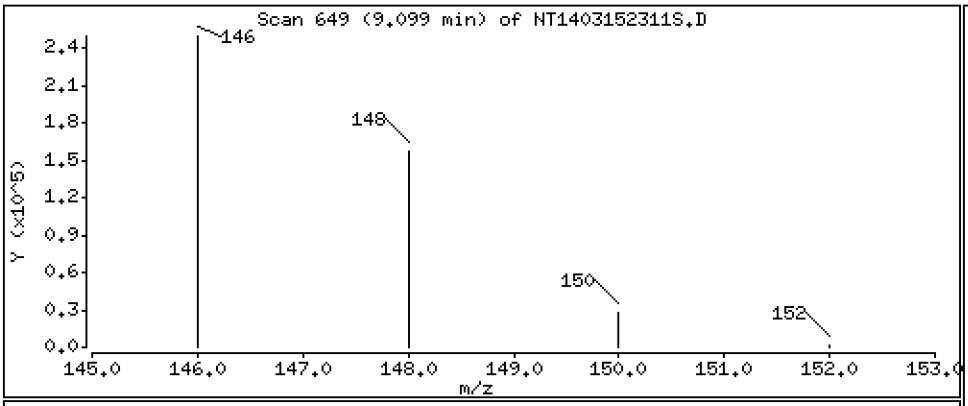
Operator: JGR

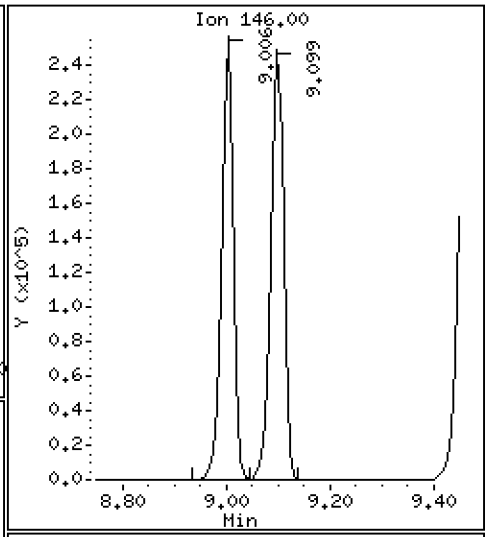
Column phase: ZB-5msi

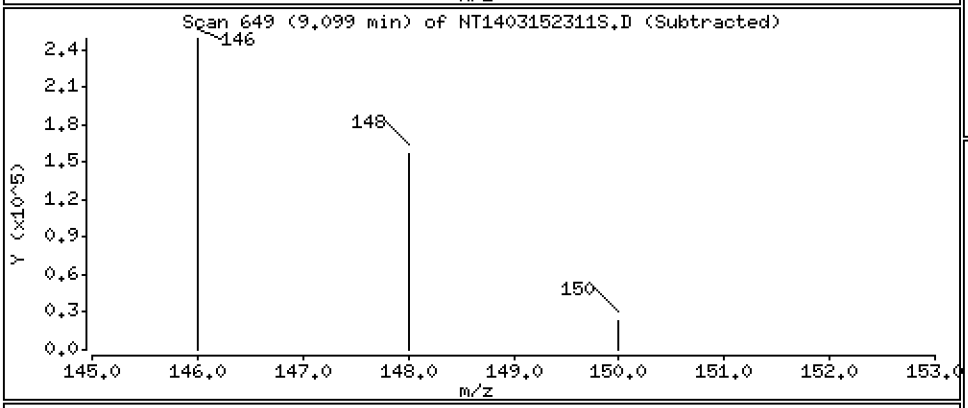
Column diameter: 0.25

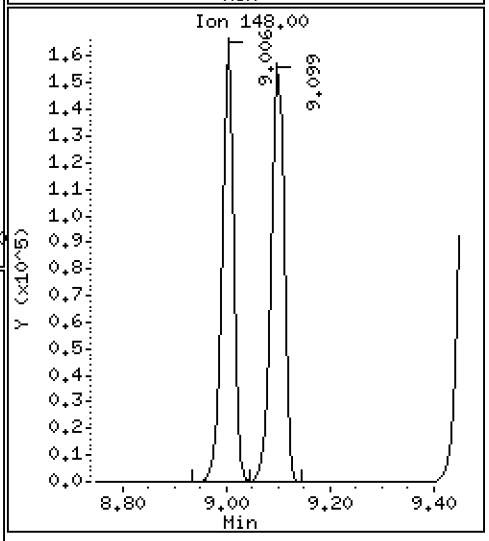
9 1,4-Dichlorobenzene

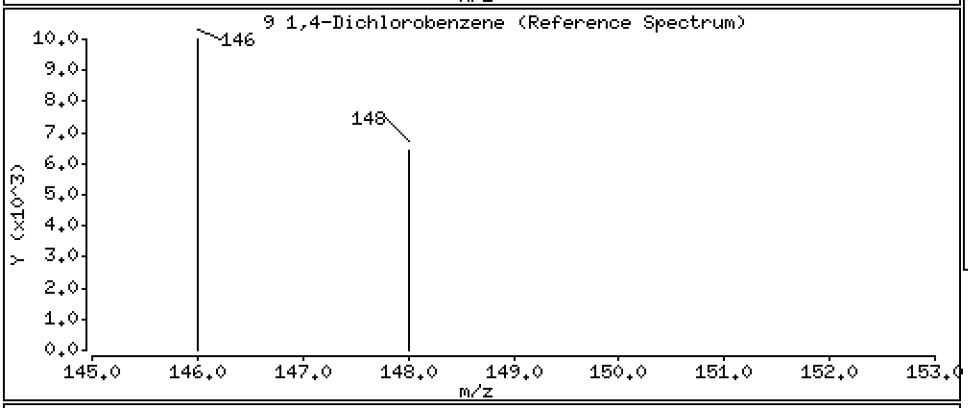
Concentration: 4.848 ug/mL

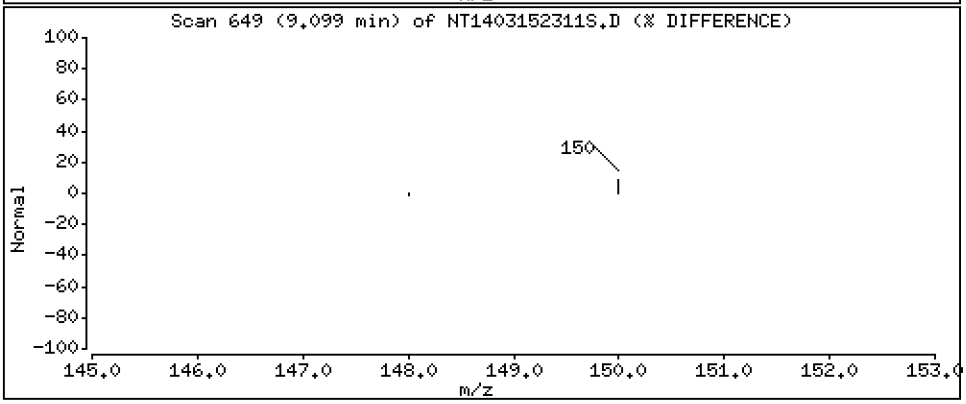












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

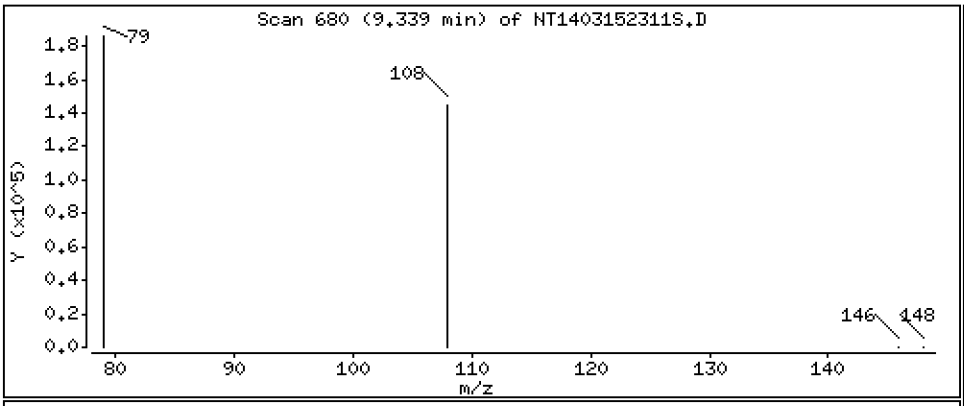
Operator: JGR

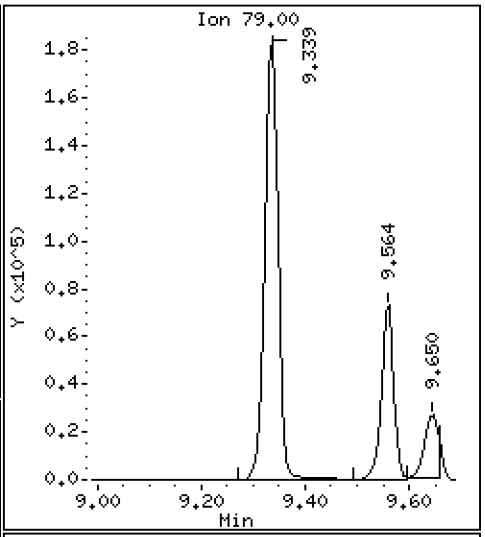
Column phase: ZB-5msi

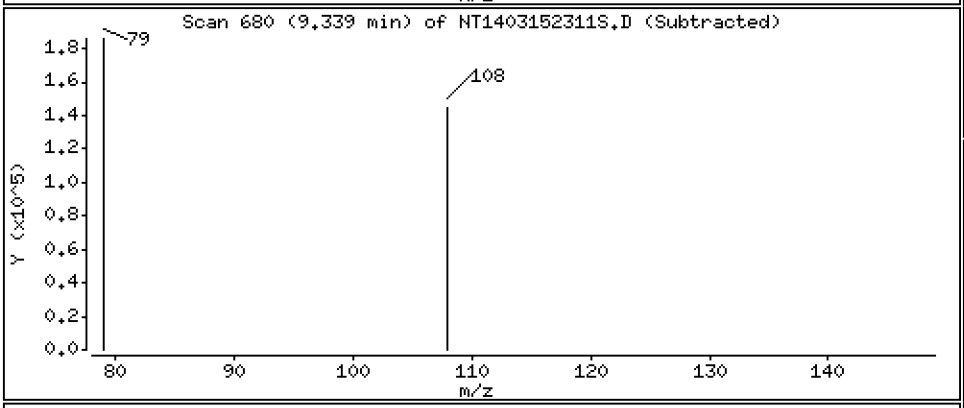
Column diameter: 0.25

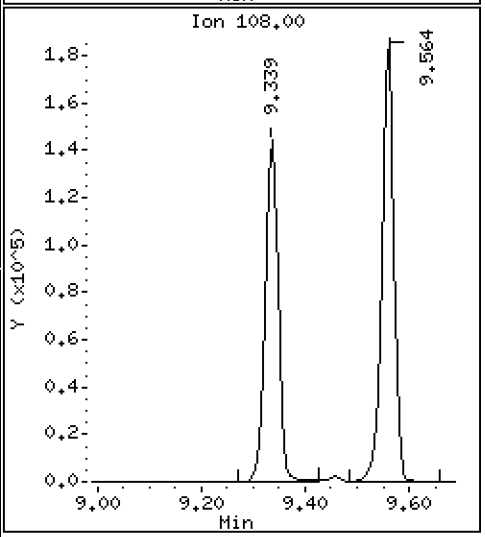
11 Benzyl alcohol

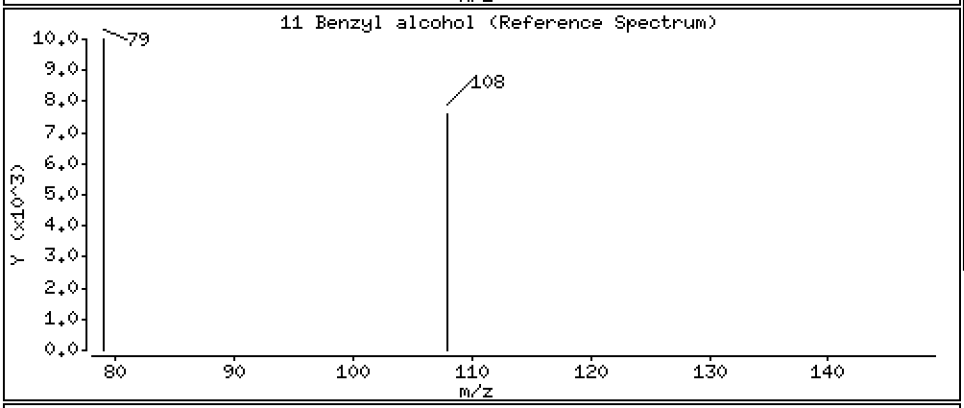
Concentration: 5.343 ug/mL

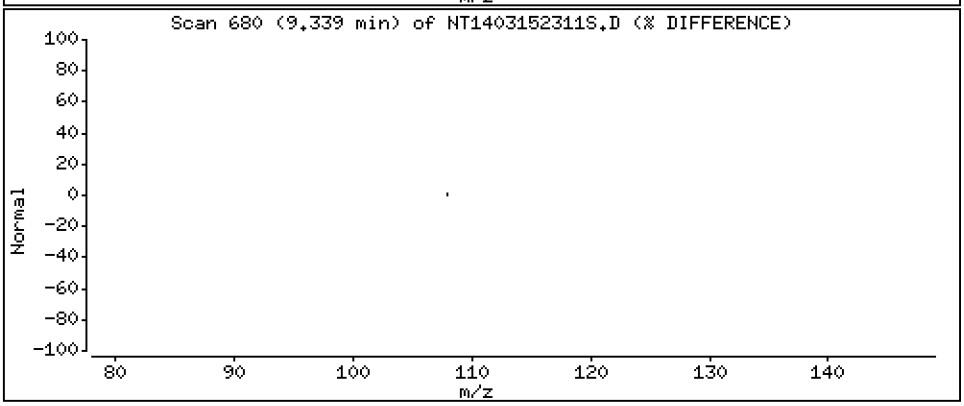












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

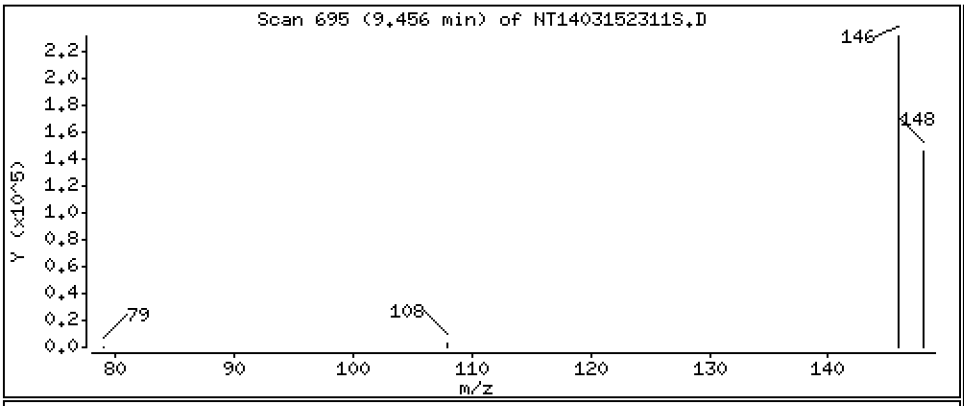
Operator: JGR

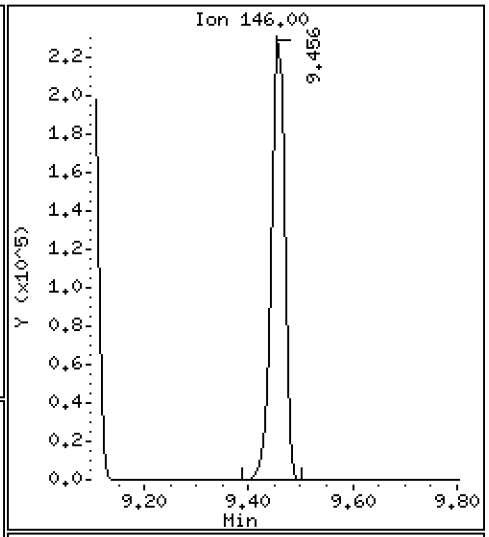
Column phase: ZB-5msi

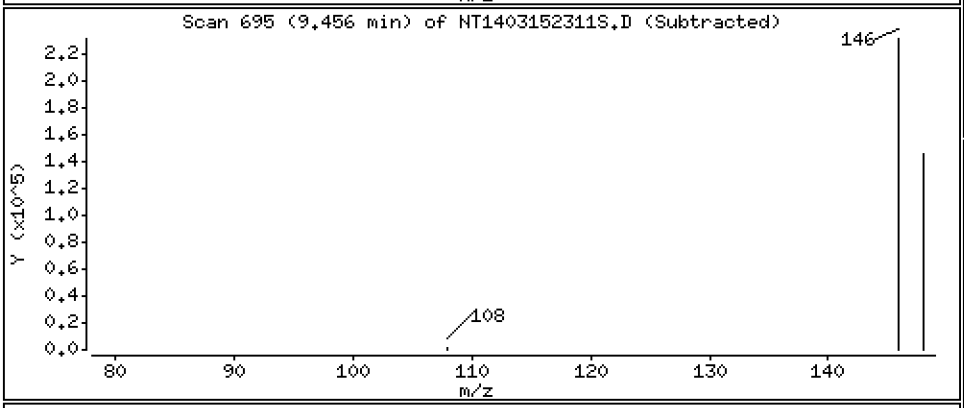
Column diameter: 0.25

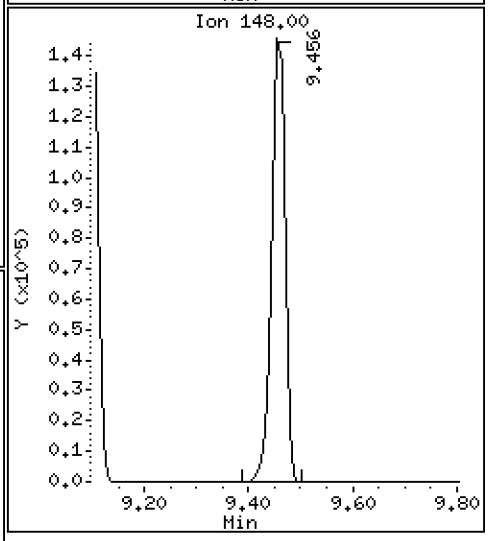
12 1,2-Dichlorobenzene

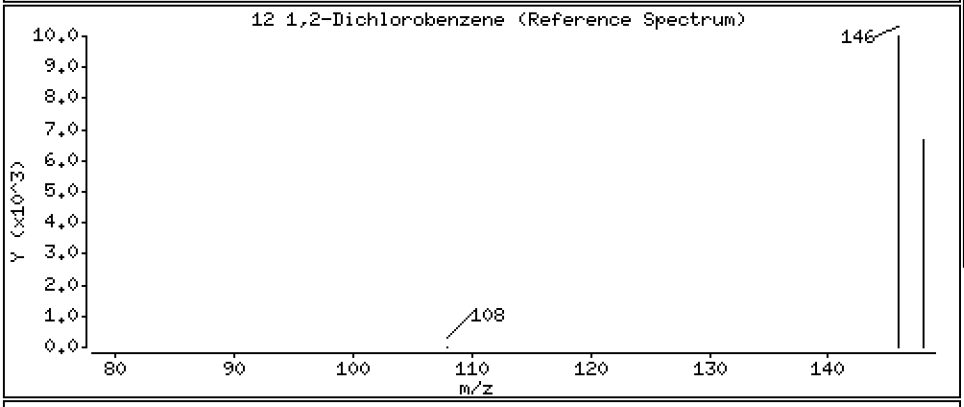
Concentration: 4.822 ug/mL

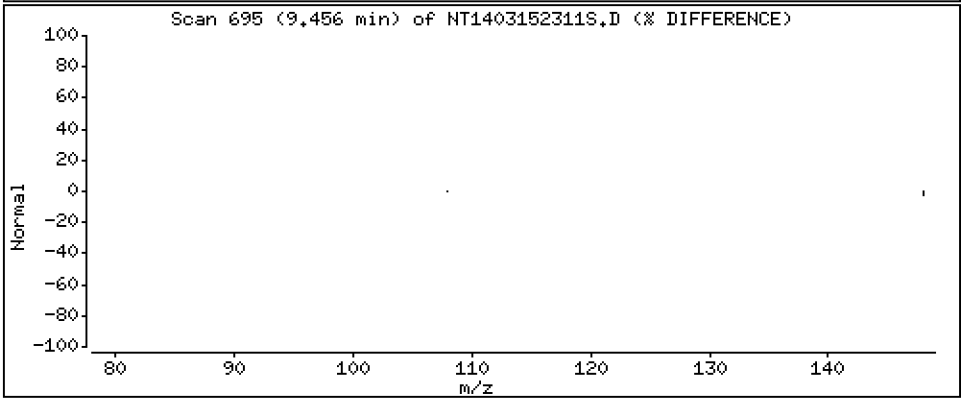












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

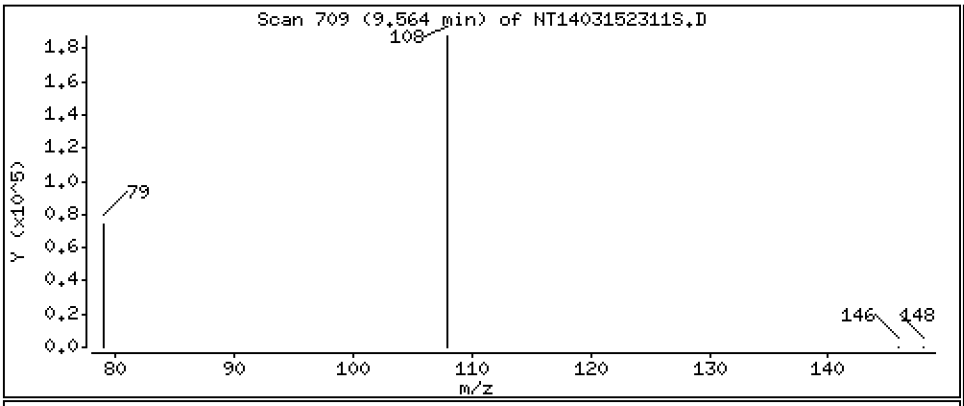
Operator: JGR

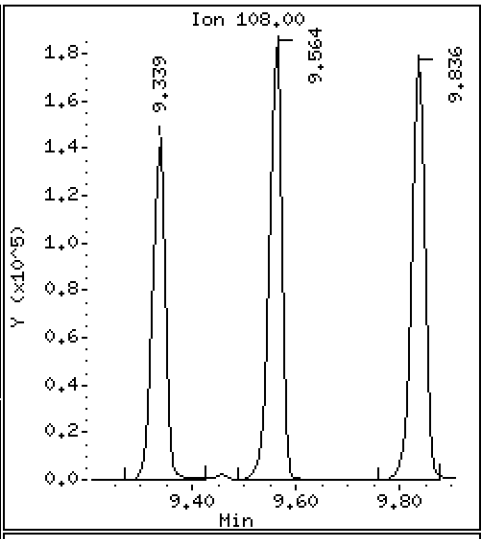
Column phase: ZB-5msi

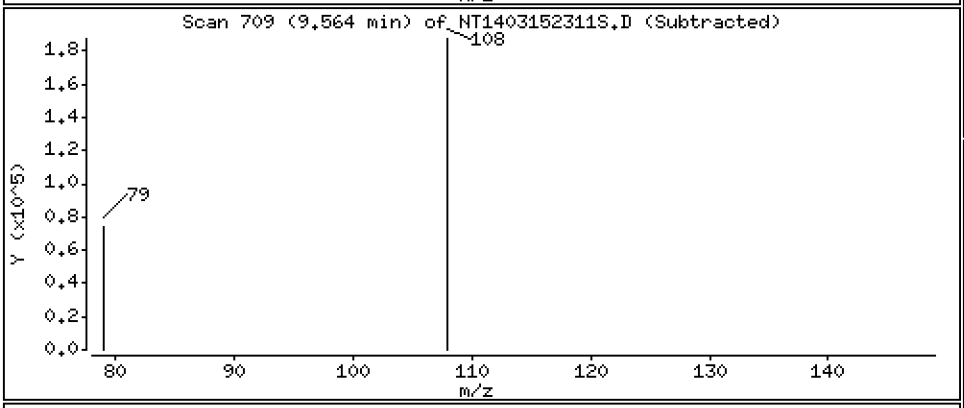
Column diameter: 0.25

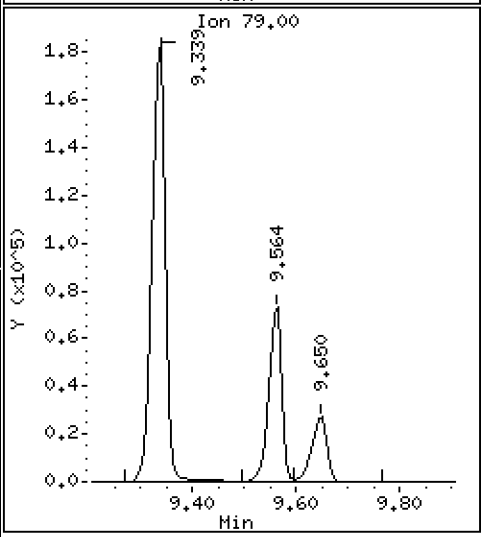
13 2-Methylphenol

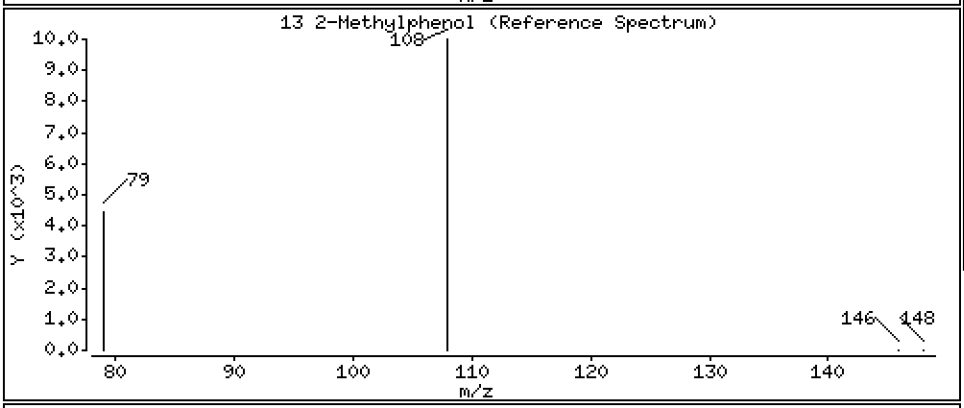
Concentration: 4.288 ug/mL

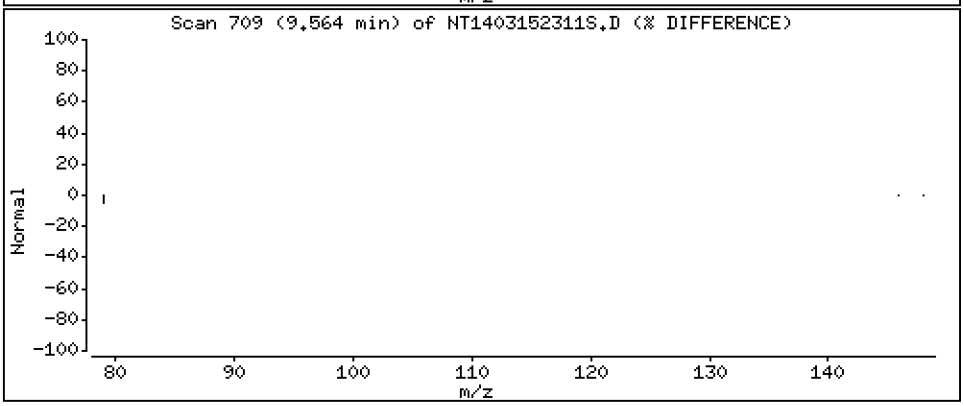












Data File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT1403152311S.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

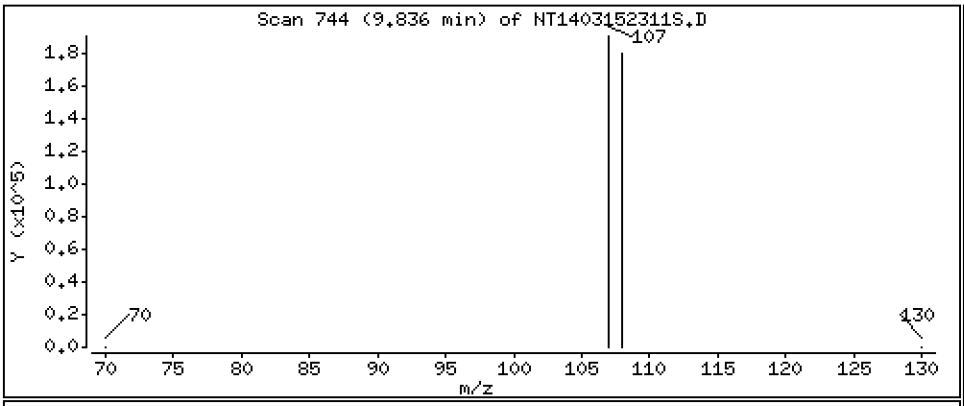
Operator: JGR

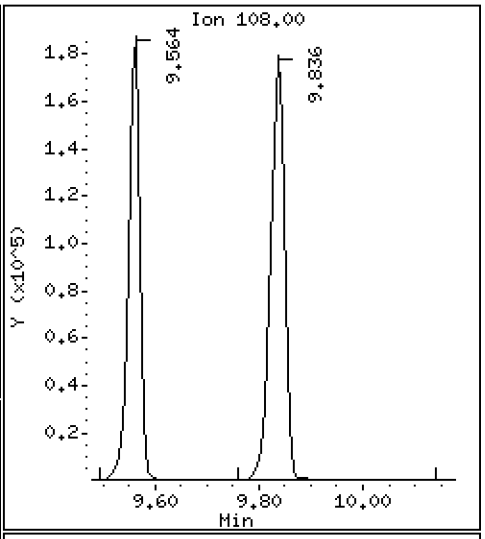
Column phase: ZB-5msi

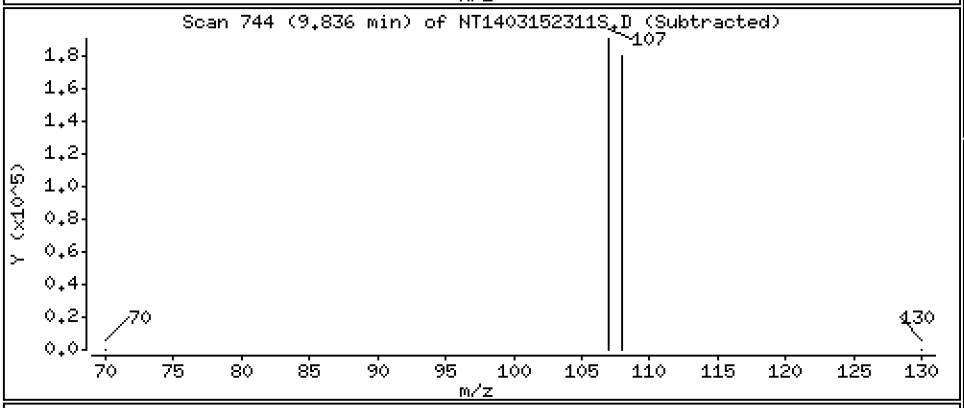
Column diameter: 0.25

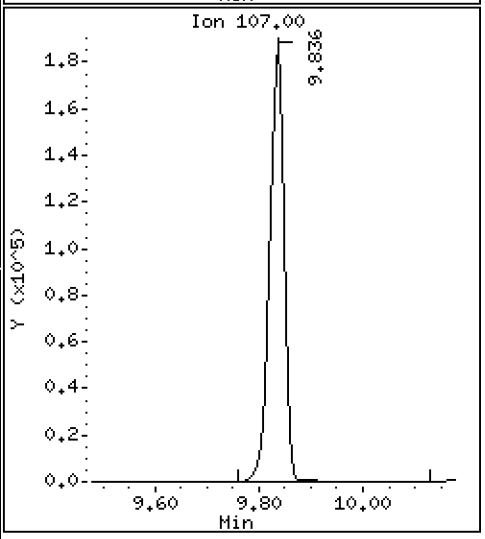
15 4-Methylphenol

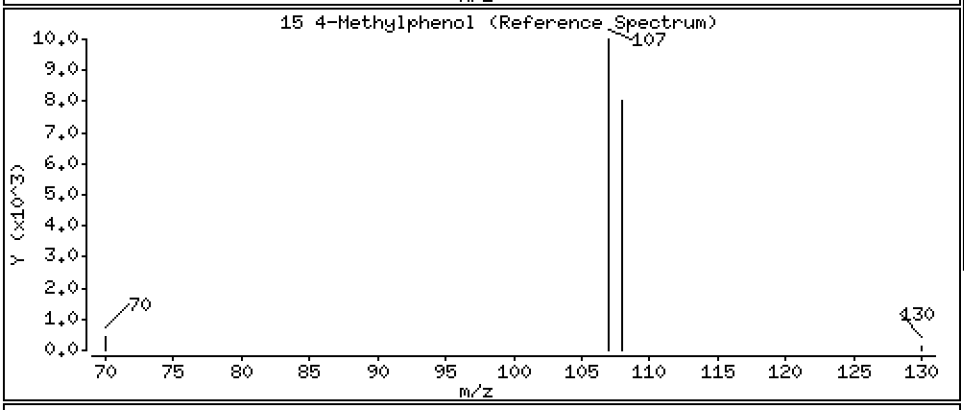
Concentration: 4.539 ug/mL

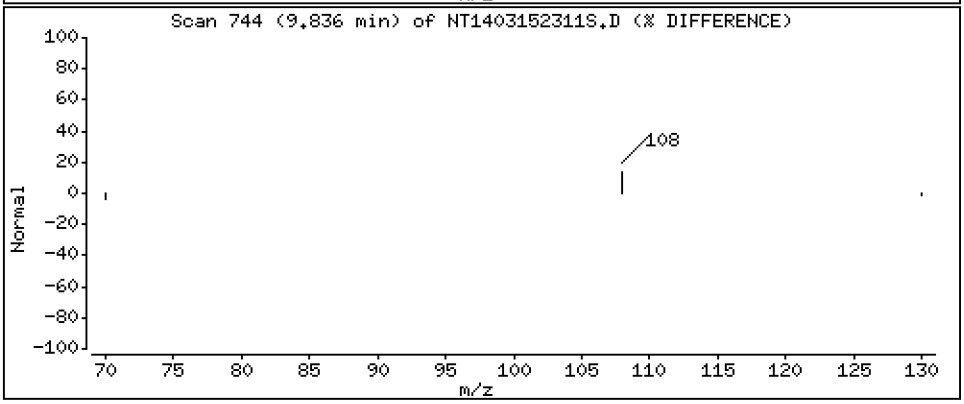












Data File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT1403152311S.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

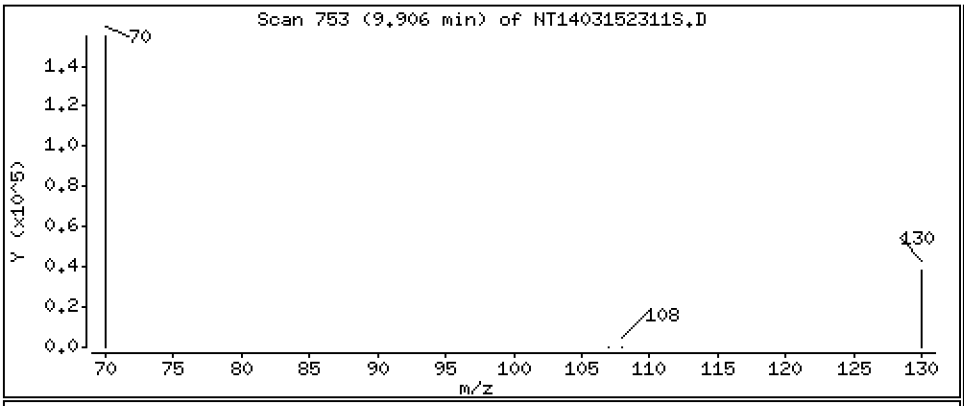
Operator: JGR

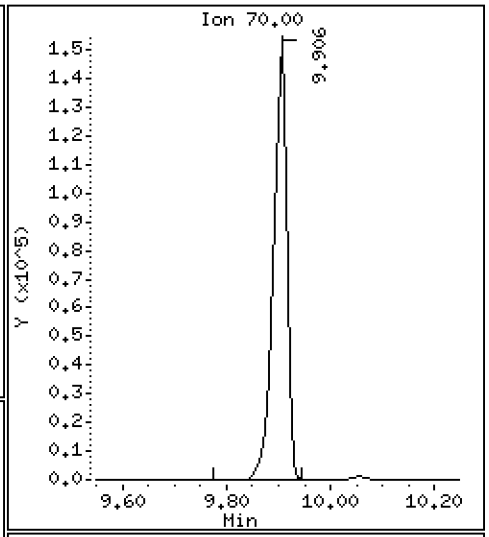
Column phase: ZB-5msi

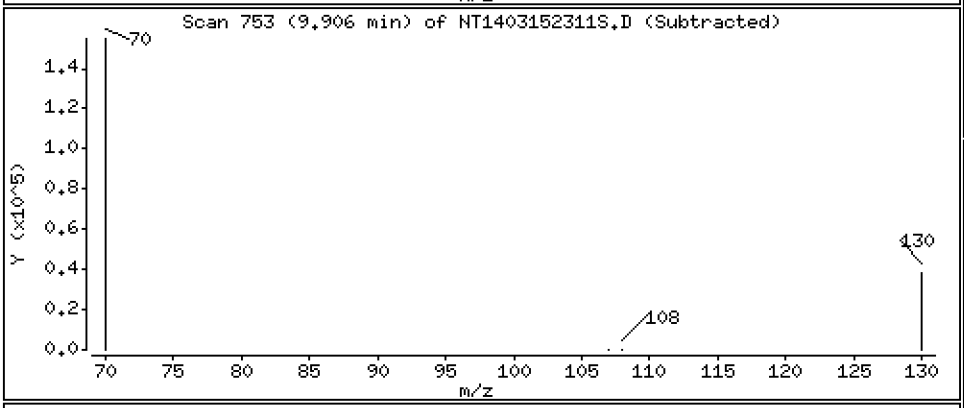
Column diameter: 0.25

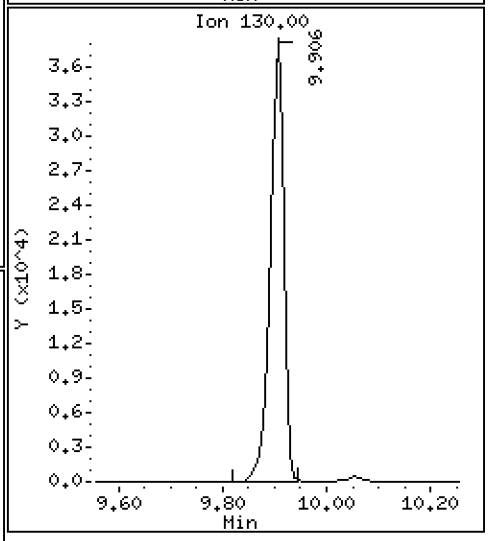
16 N-Nitroso-di-n-propylamine

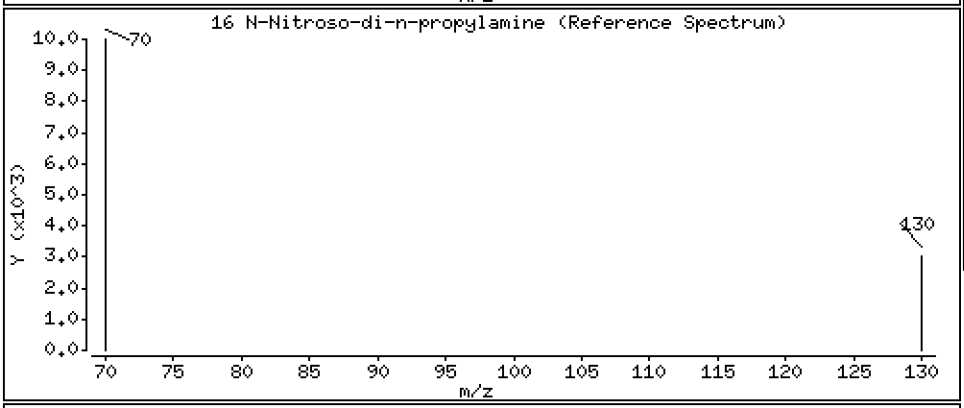
Concentration: 5.137 ug/mL

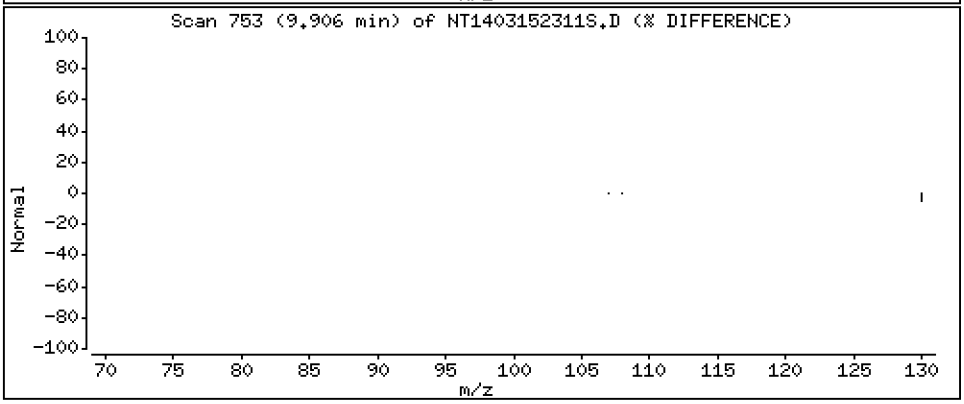












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

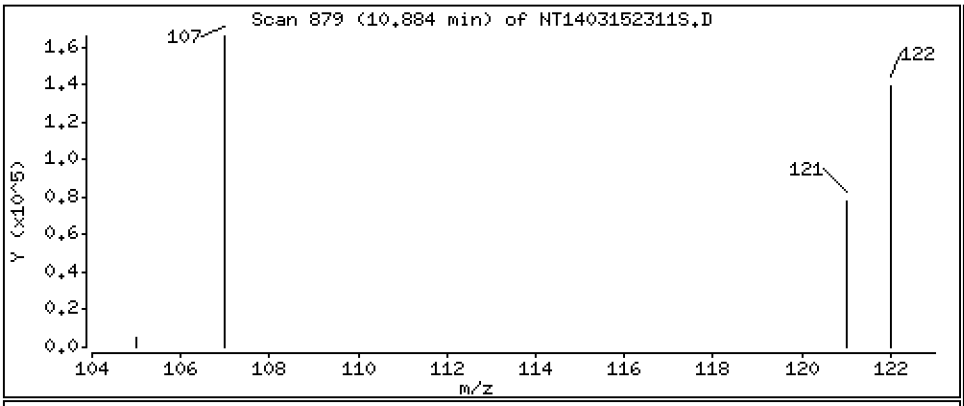
Operator: JGR

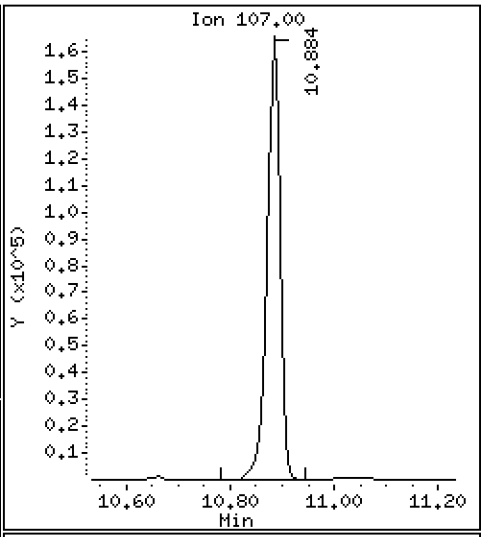
Column phase: ZB-5msi

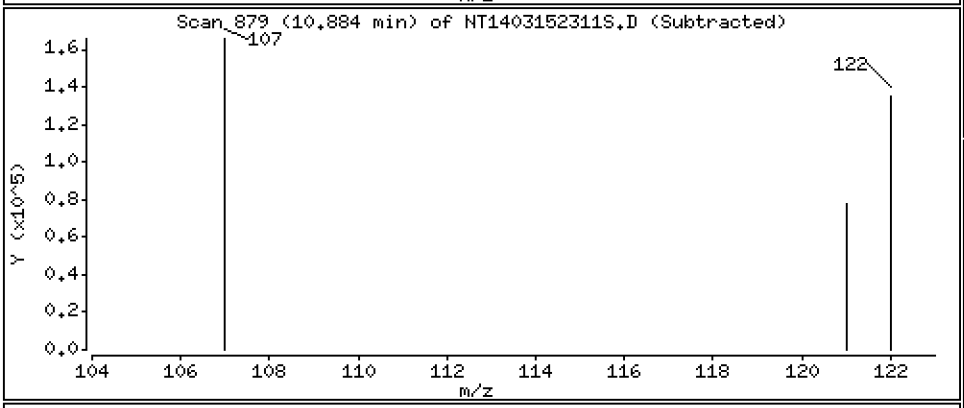
Column diameter: 0.25

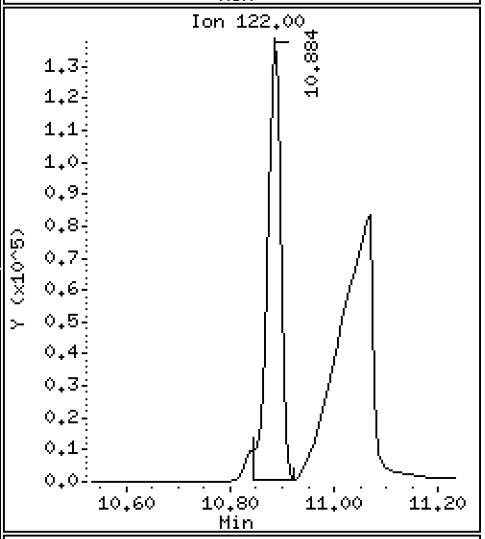
22 2,4-Dimethylphenol

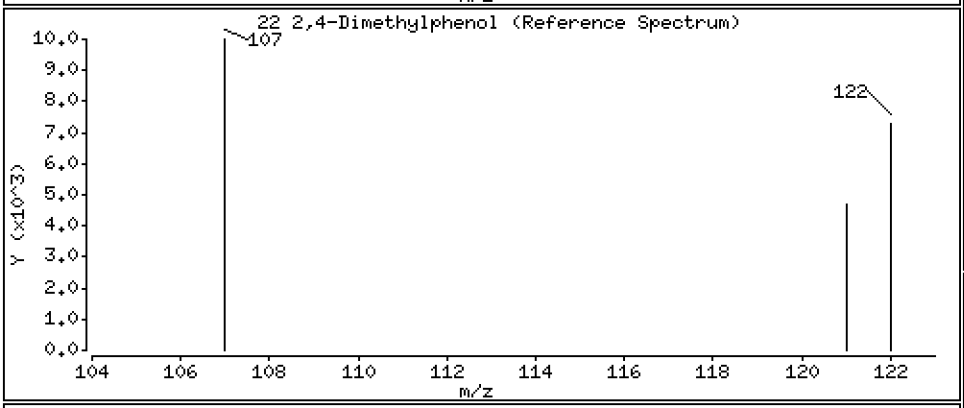
Concentration: 3.934 ug/mL

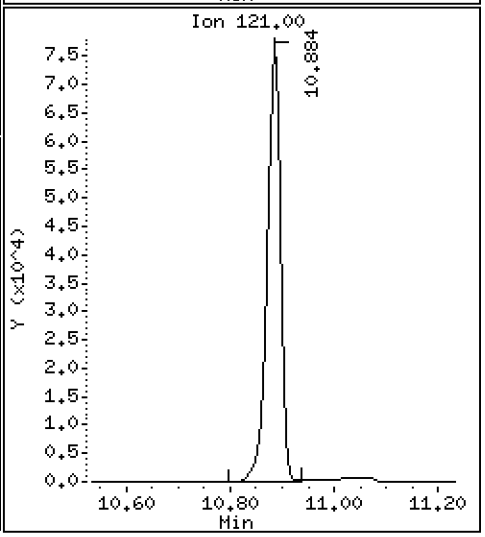


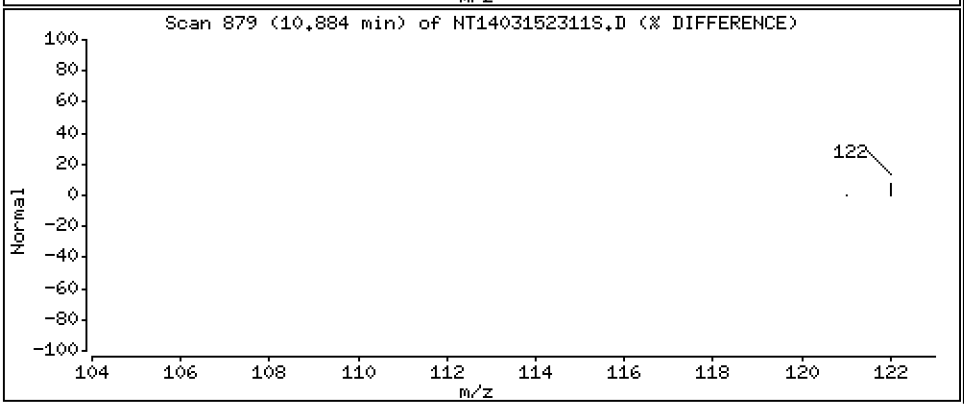












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

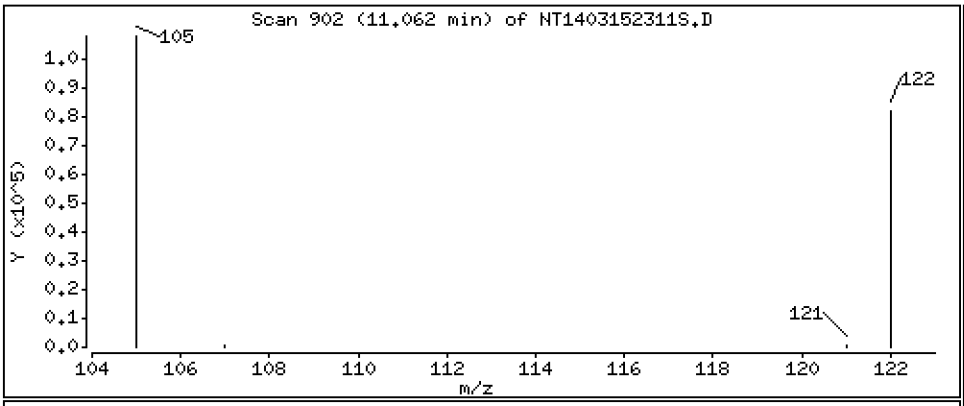
Operator: JGR

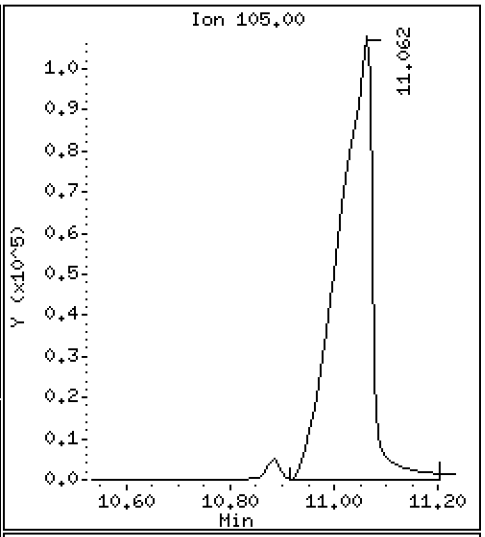
Column phase: ZB-5msi

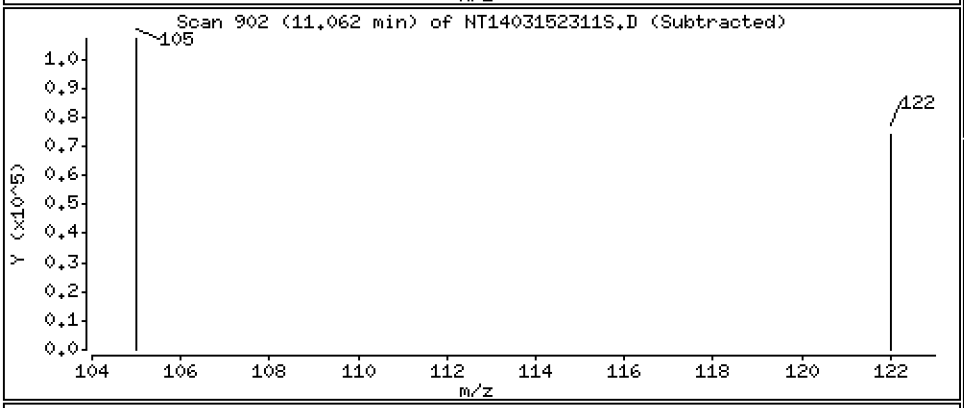
Column diameter: 0.25

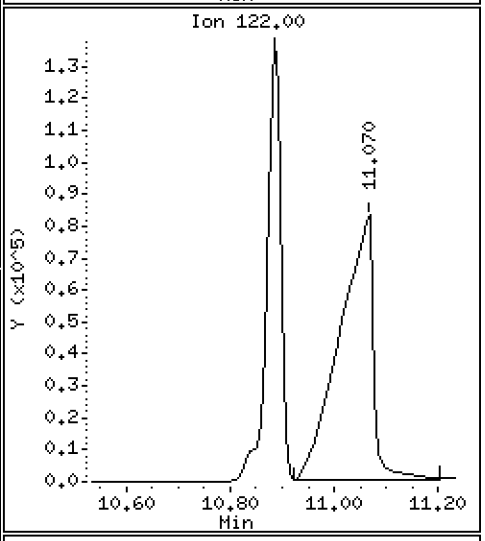
24 Benzoic acid

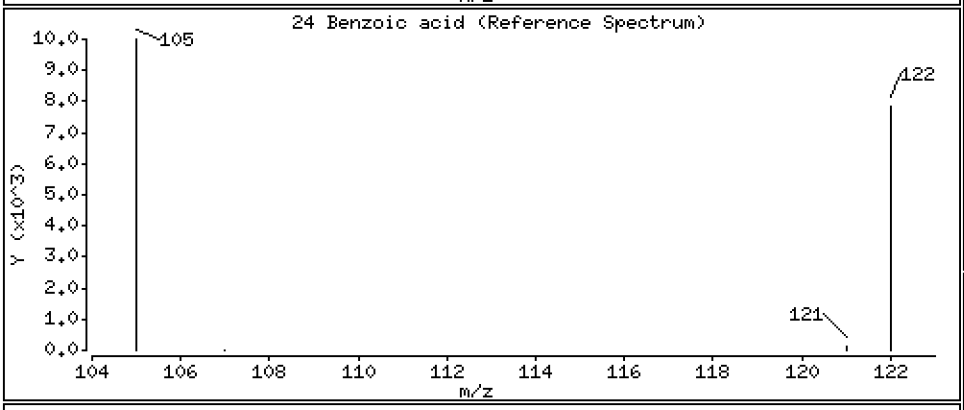
Concentration: 9.081 ug/mL

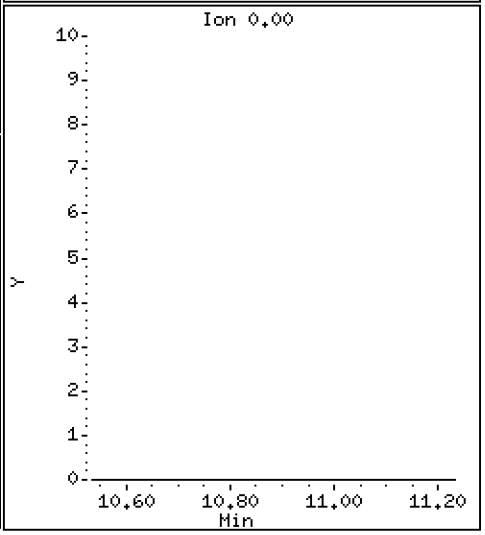


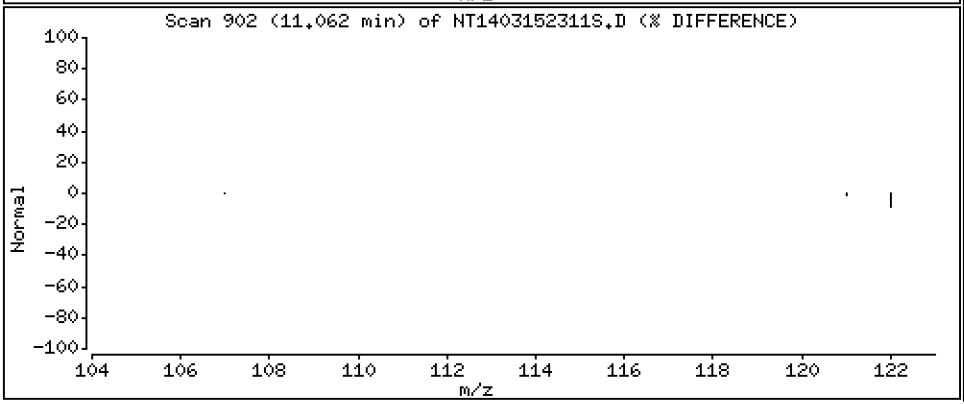












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

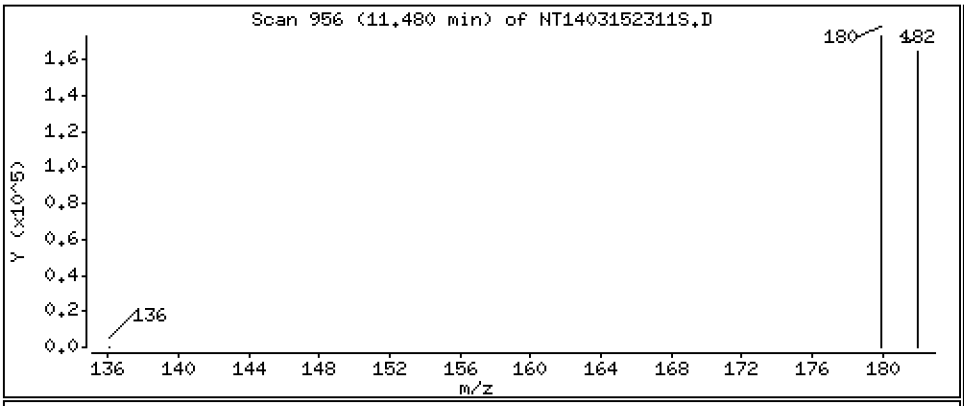
Operator: JGR

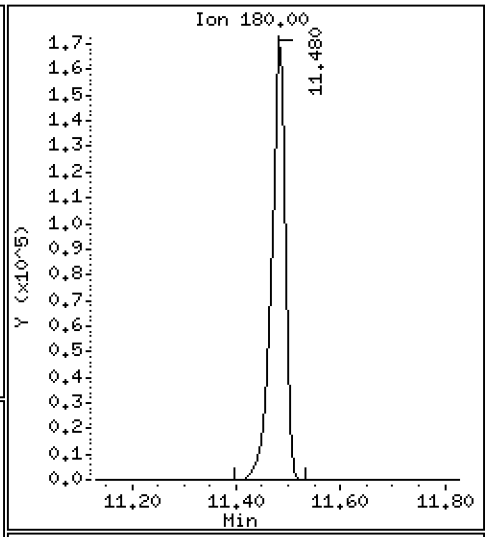
Column phase: ZB-5msi

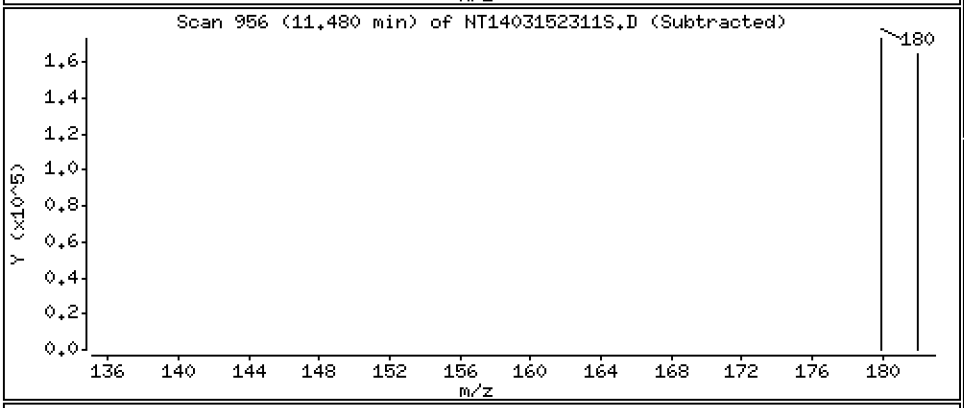
Column diameter: 0.25

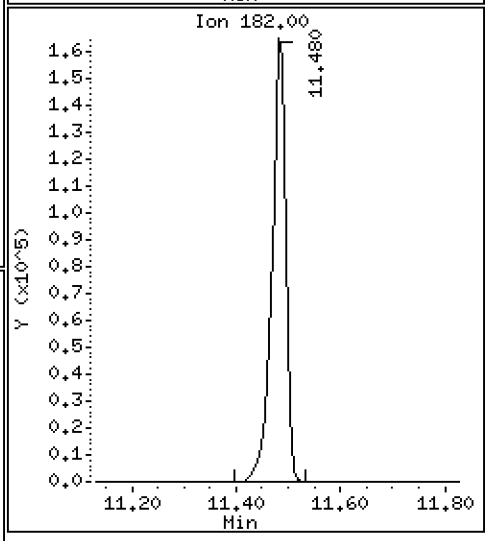
26 1,2,4-Trichlorobenzene

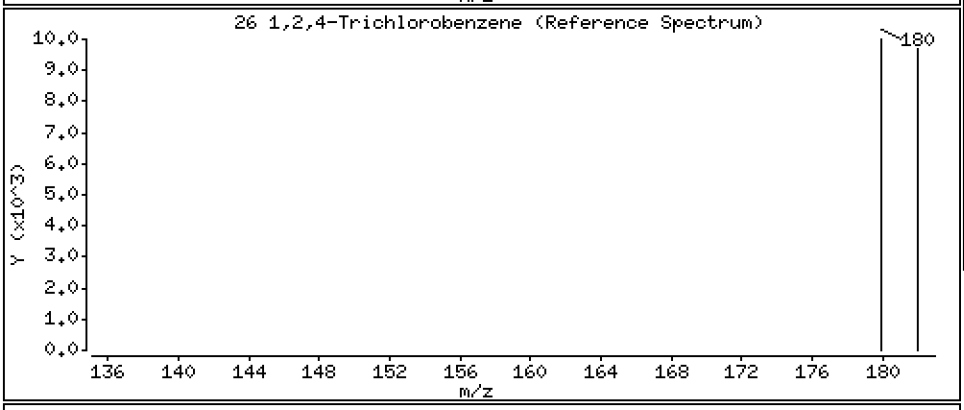
Concentration: 4.574 ug/mL

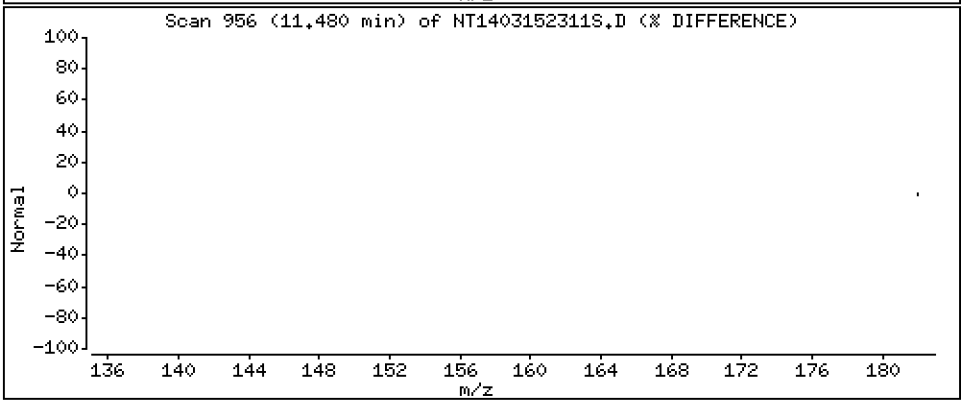












Data File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT1403152311S.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

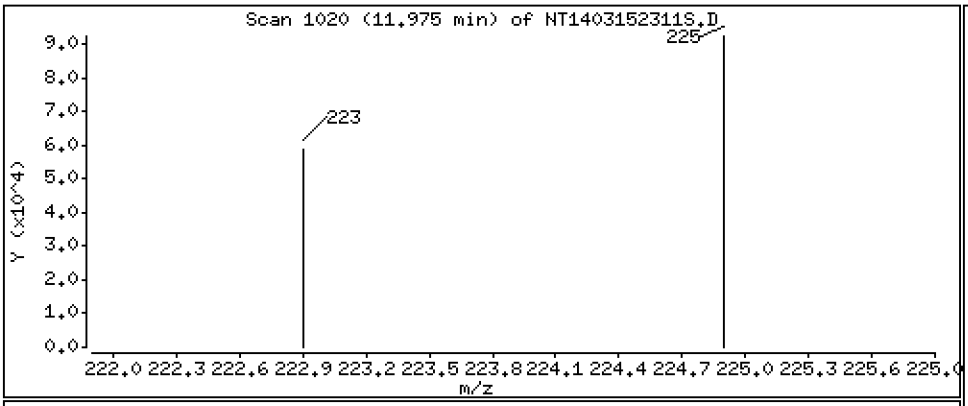
Operator: JGR

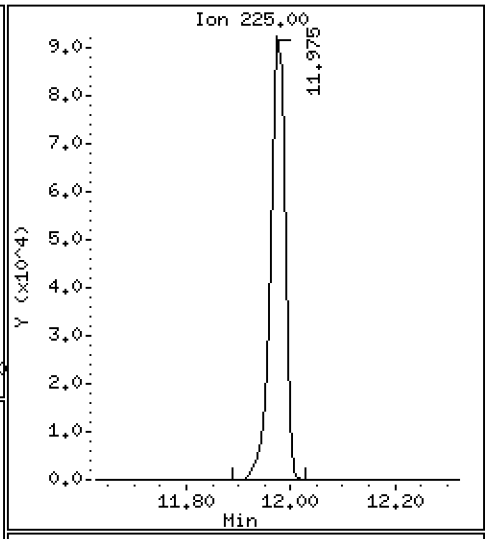
Column phase: ZB-5msi

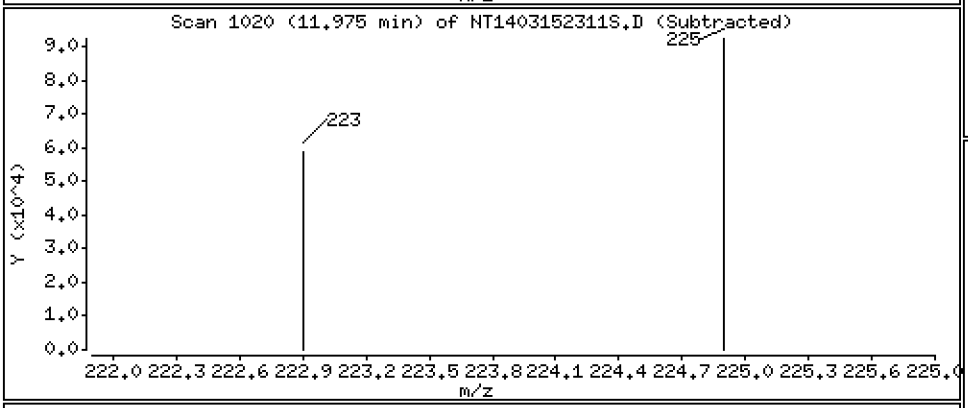
Column diameter: 0.25

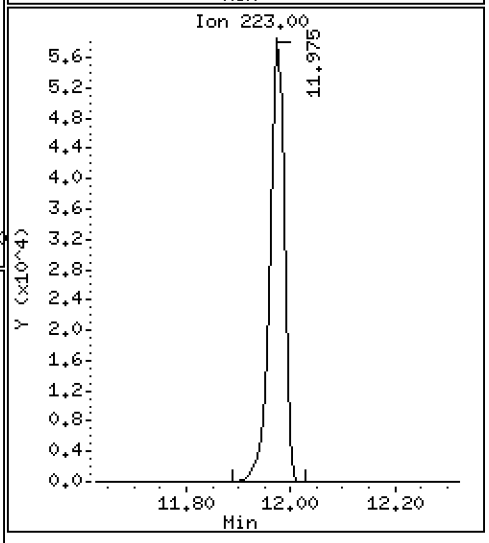
30 Hexachlorobutadiene

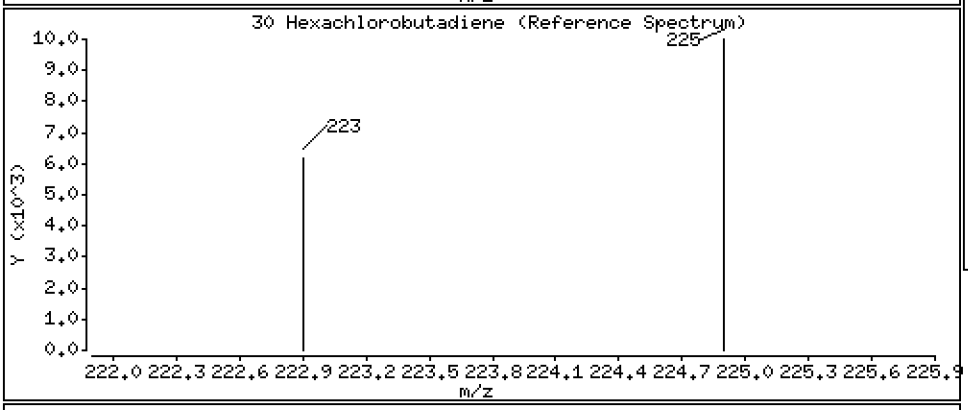
Concentration: 4.973 ug/mL

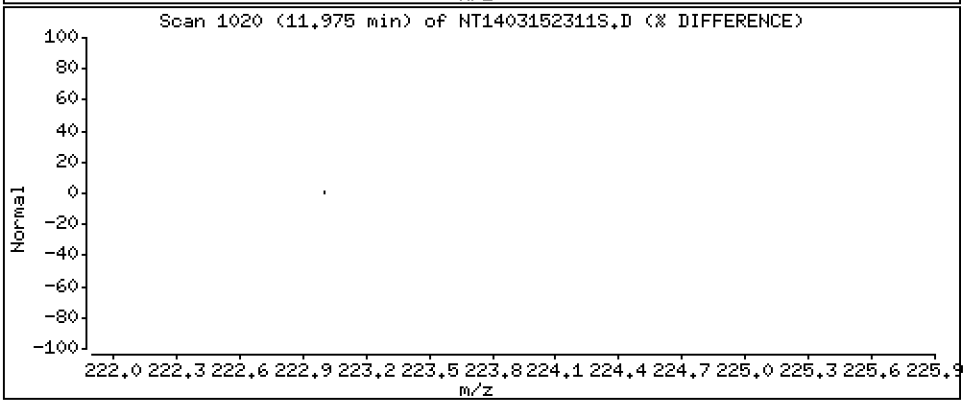












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

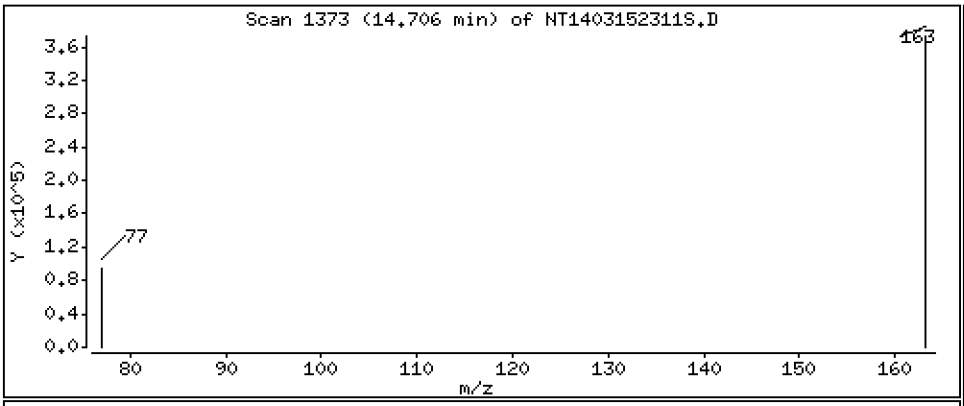
Operator: JGR

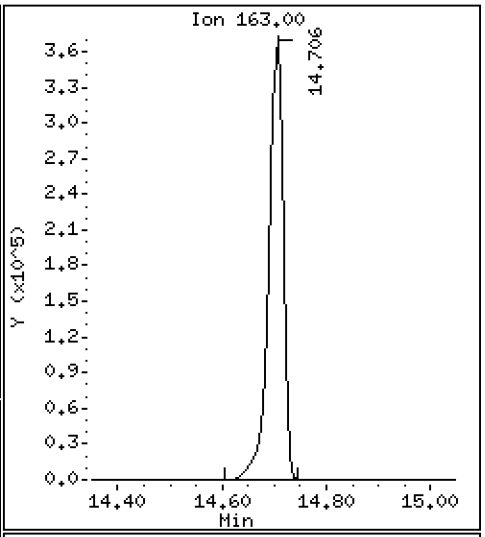
Column phase: ZB-5msi

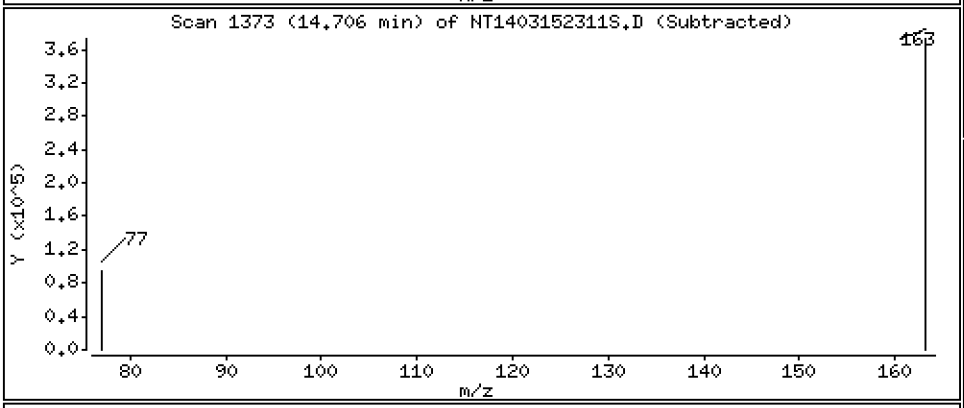
Column diameter: 0.25

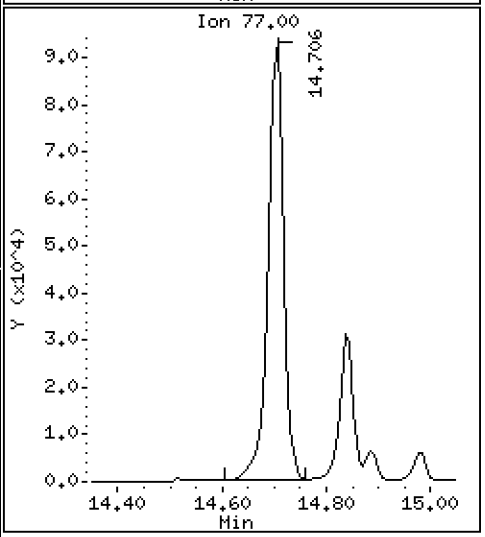
39 Dimethylphthalate

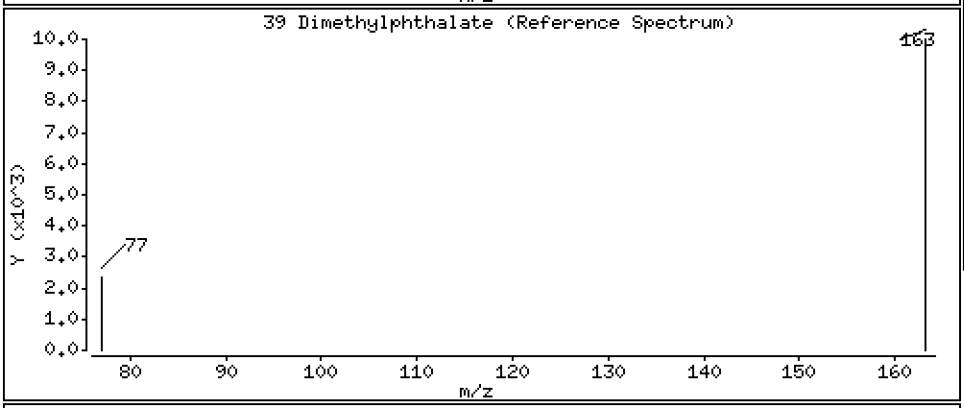
Concentration: 4.995 ug/mL

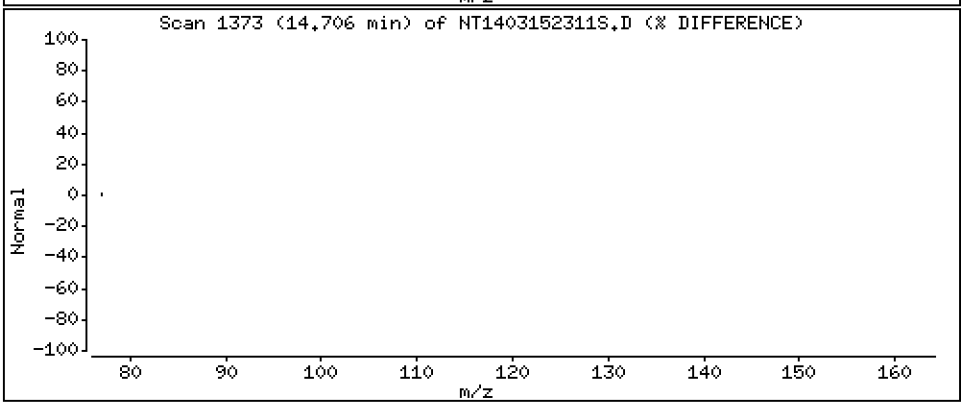












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

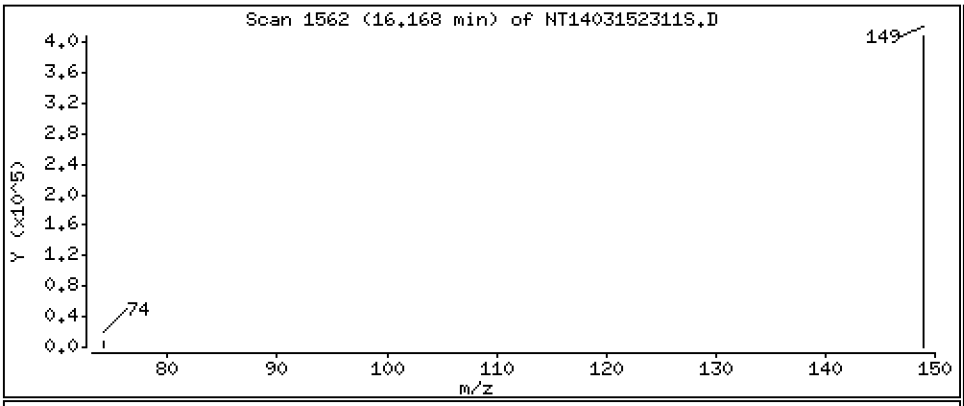
Operator: JGR

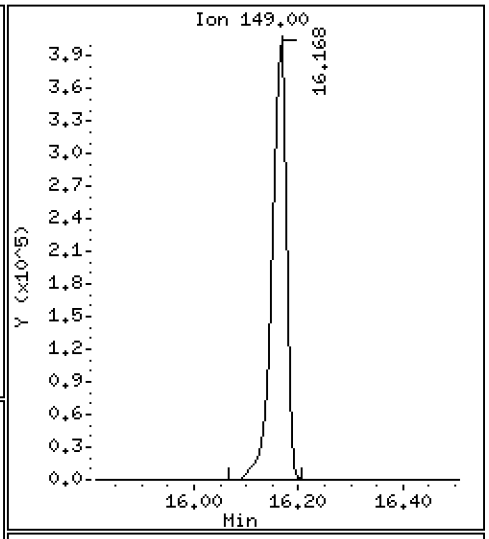
Column phase: ZB-5msi

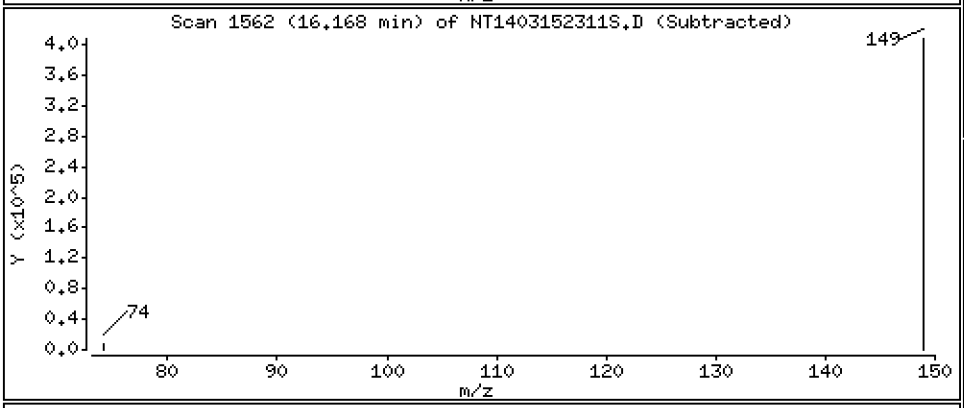
Column diameter: 0.25

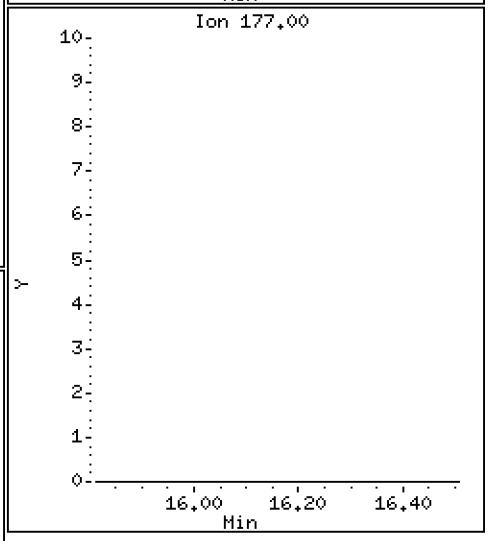
50 Diethylphthalate

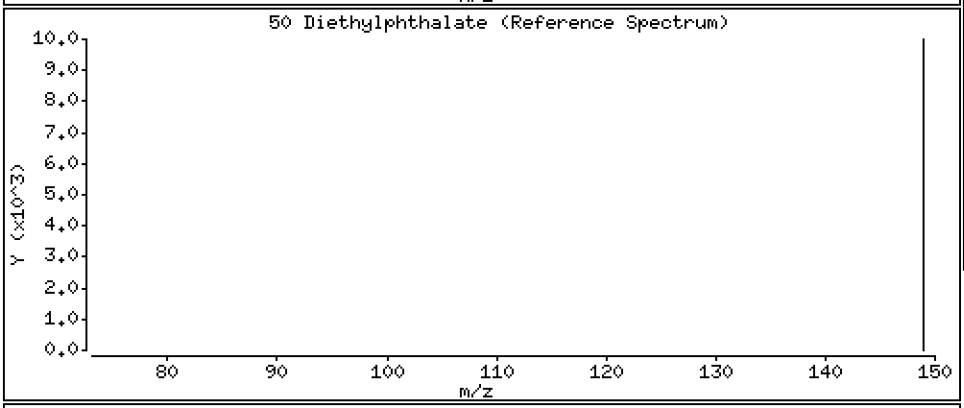
Concentration: 5.174 ug/mL

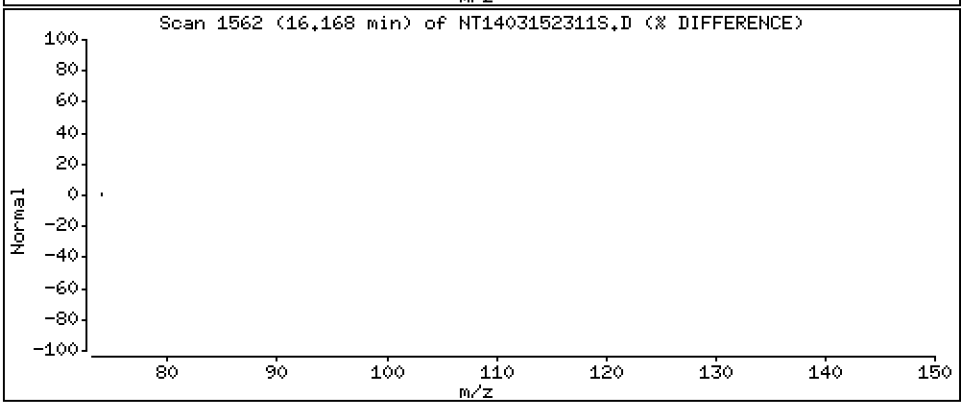












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

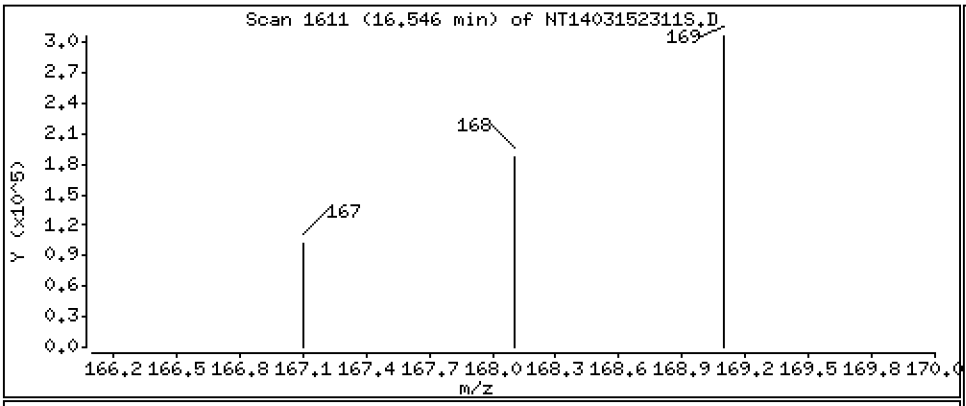
Operator: JGR

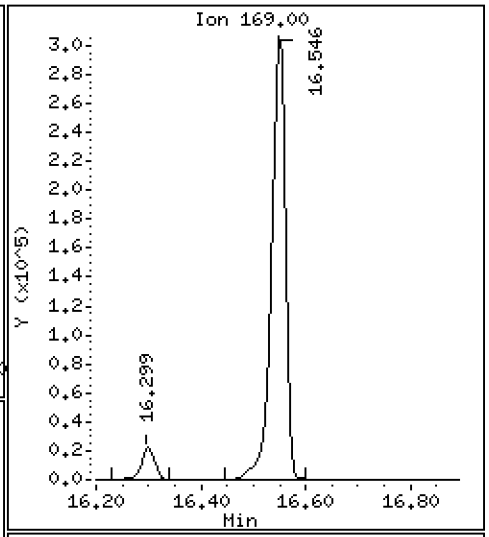
Column phase: ZB-5msi

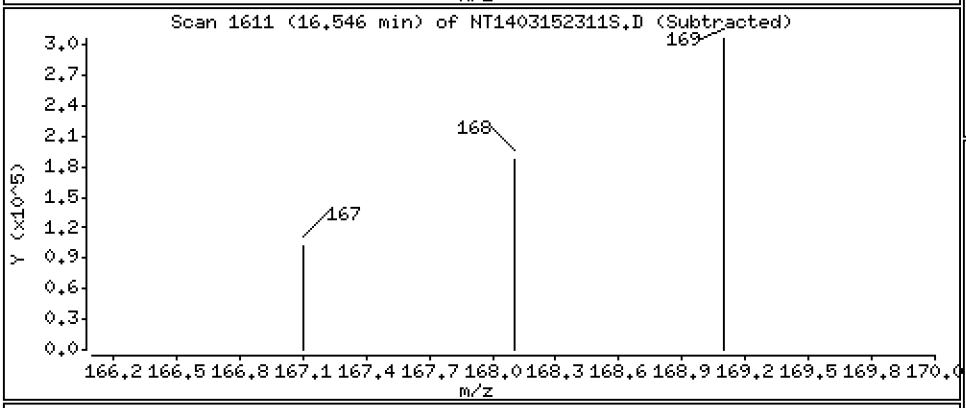
Column diameter: 0.25

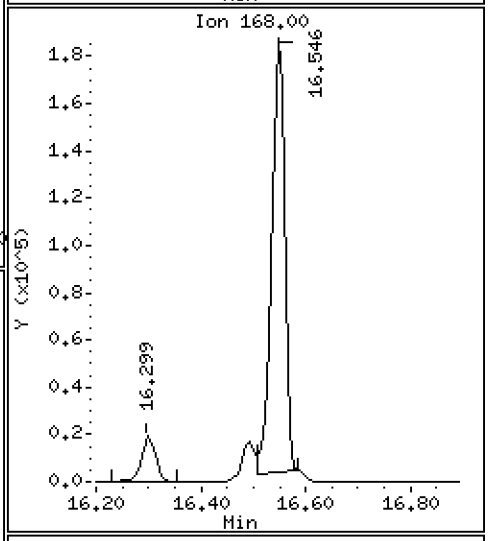
54 N-Nitrosodiphenylamine

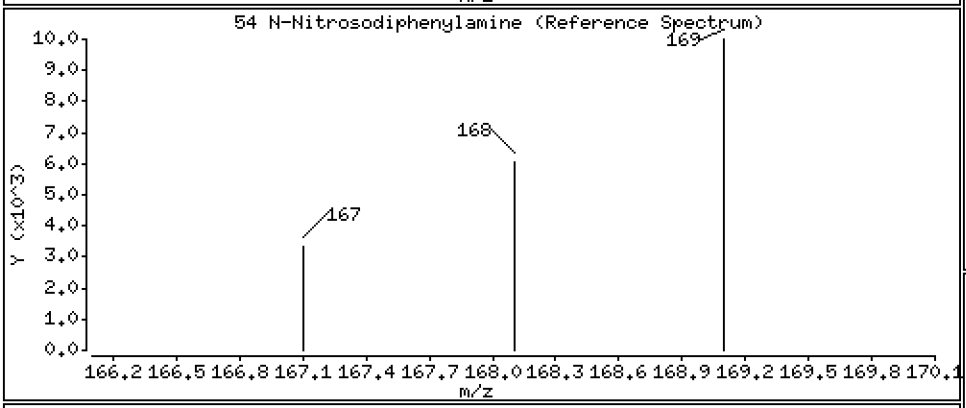
Concentration: 5.019 ug/mL

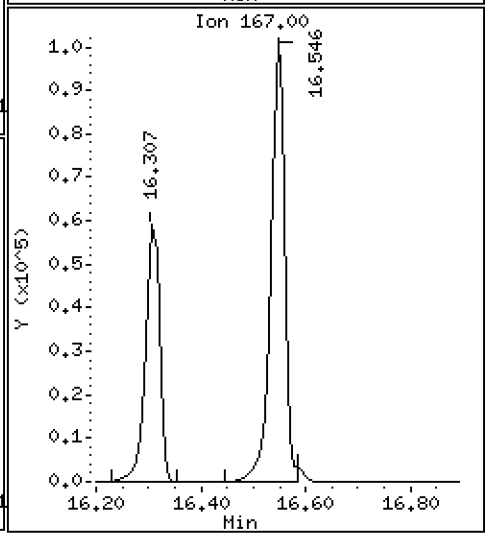


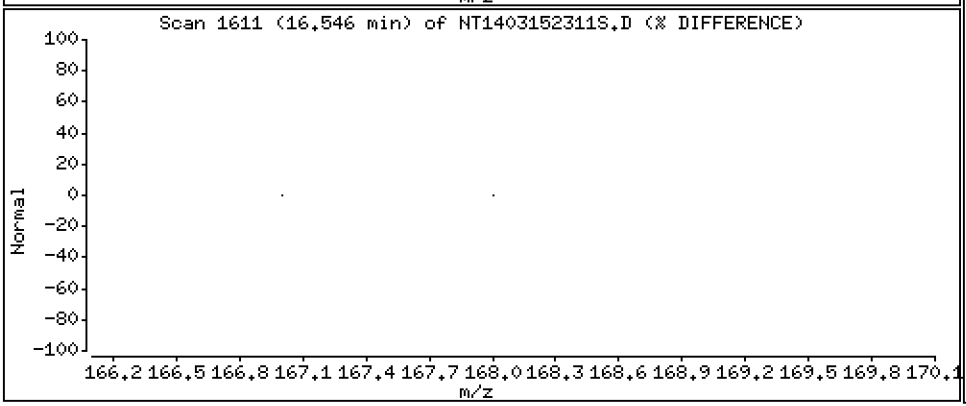












Data File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT1403152311S.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

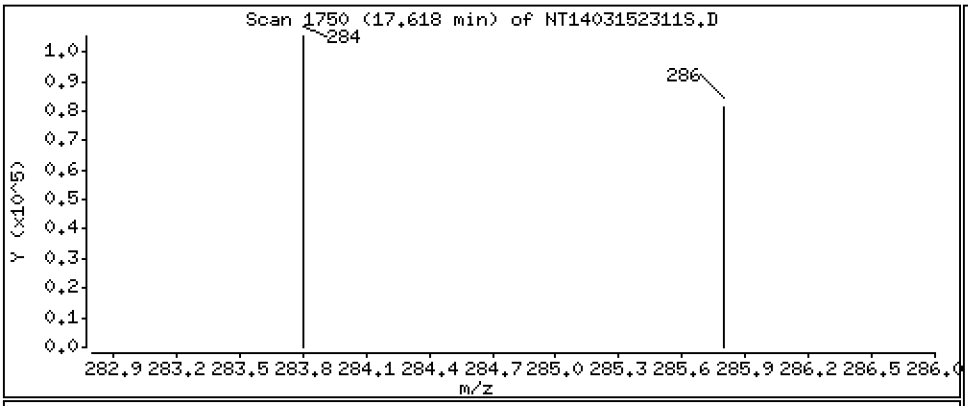
Operator: JGR

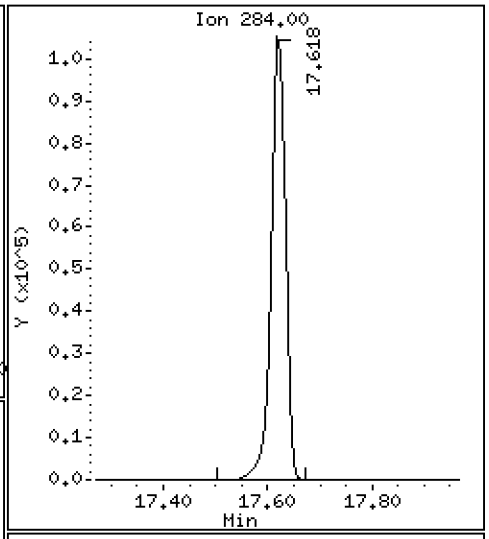
Column phase: ZB-5msi

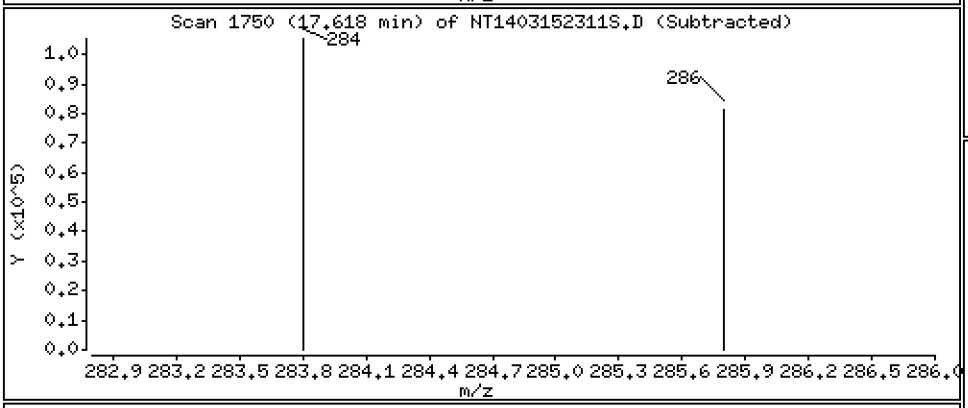
Column diameter: 0.25

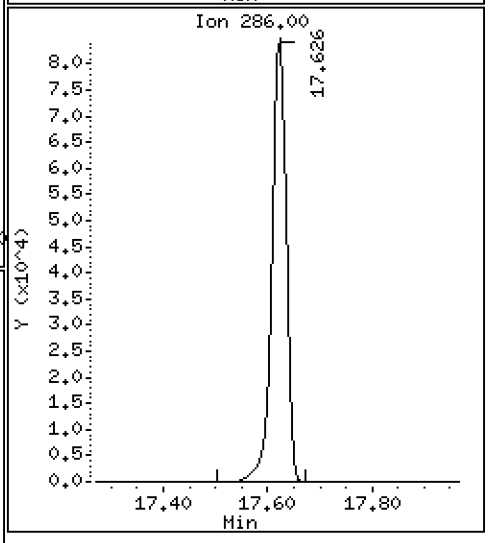
57 Hexachlorobenzene

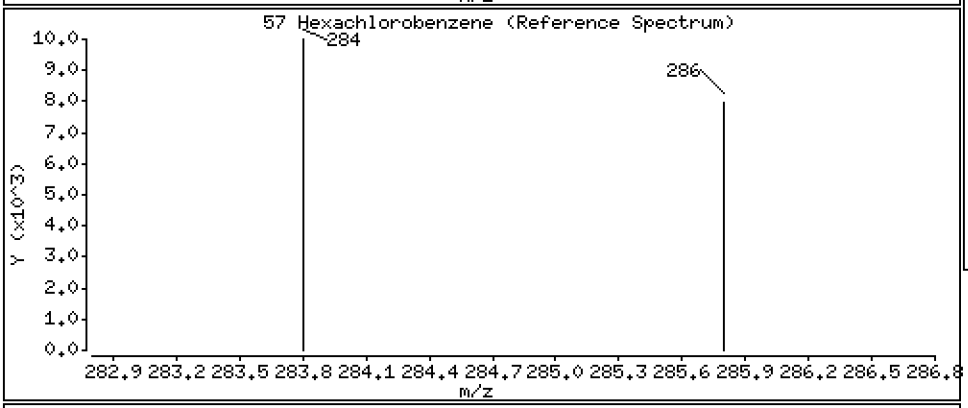
Concentration: 4.693 ug/mL

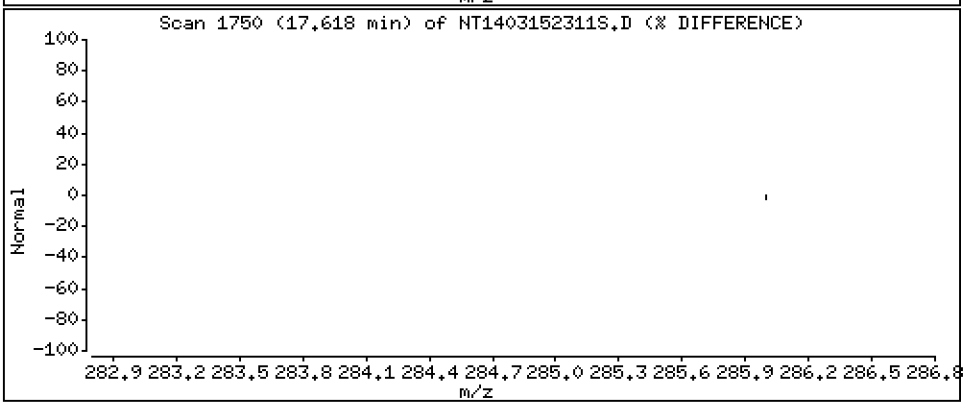












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

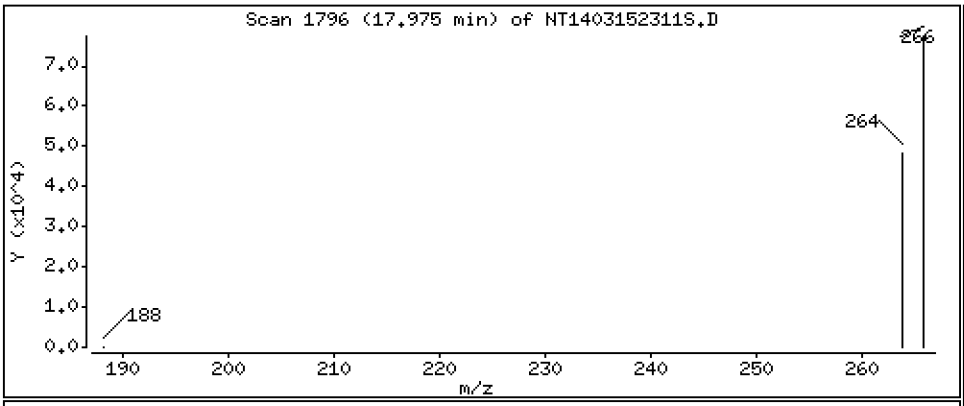
Operator: JGR

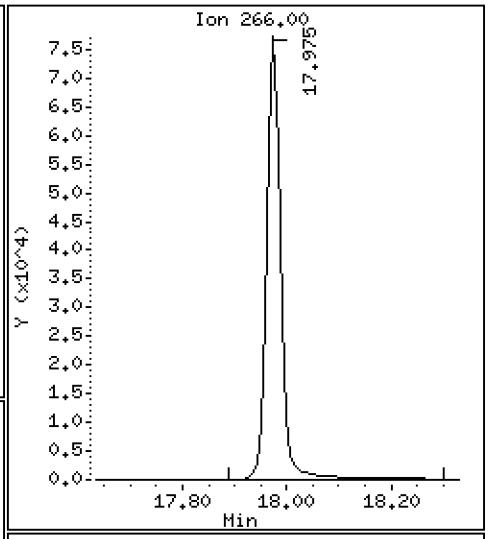
Column phase: ZB-5msi

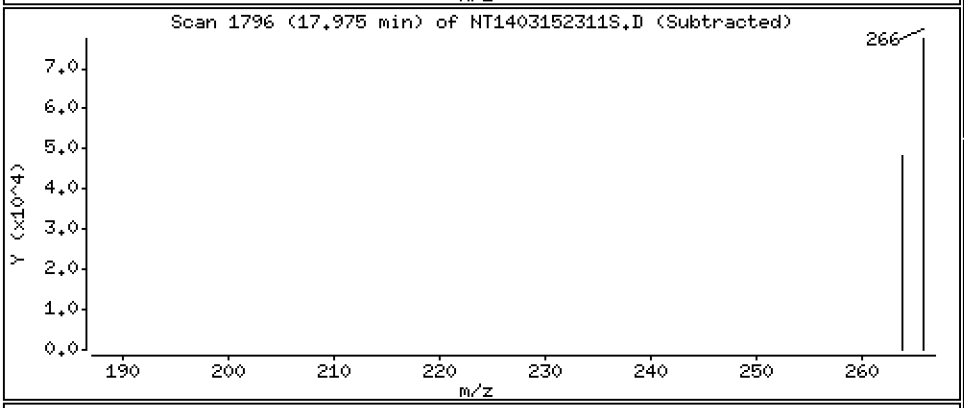
Column diameter: 0.25

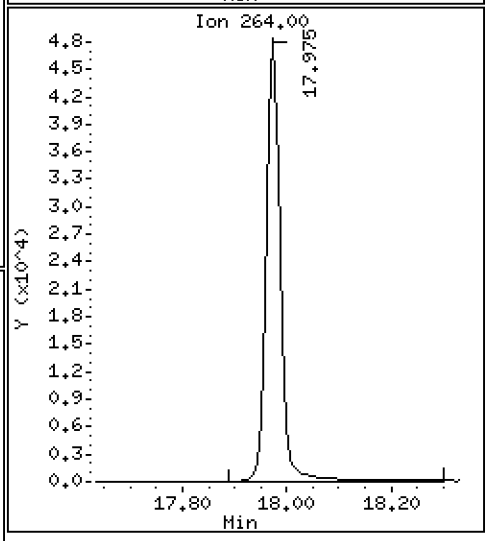
58 Pentachlorophenol

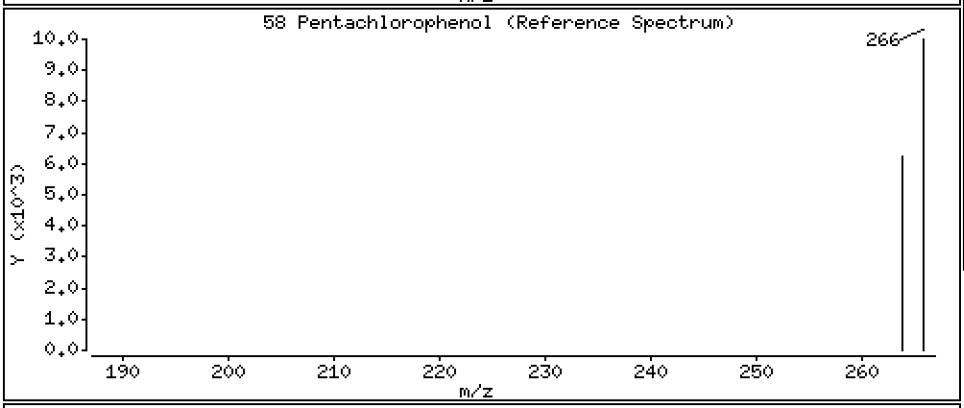
Concentration: 4.800 ug/mL

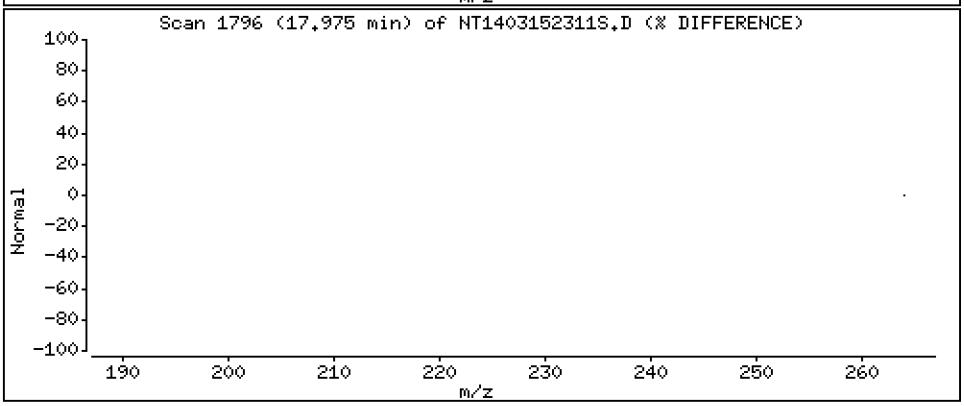












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

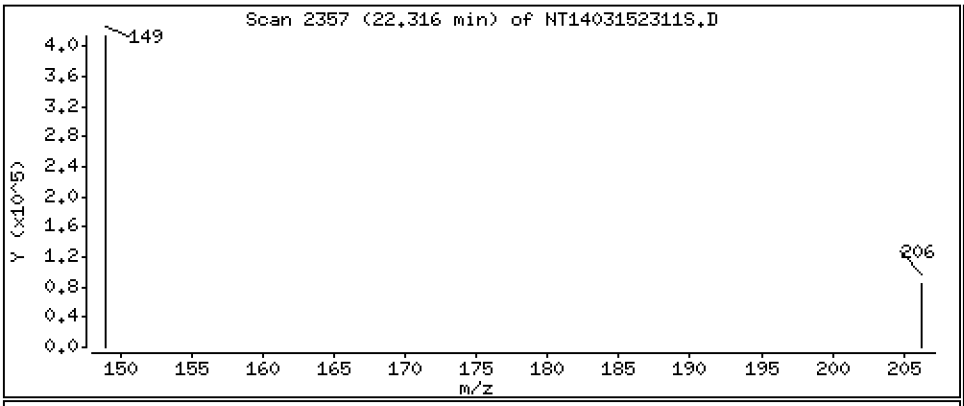
Operator: JGR

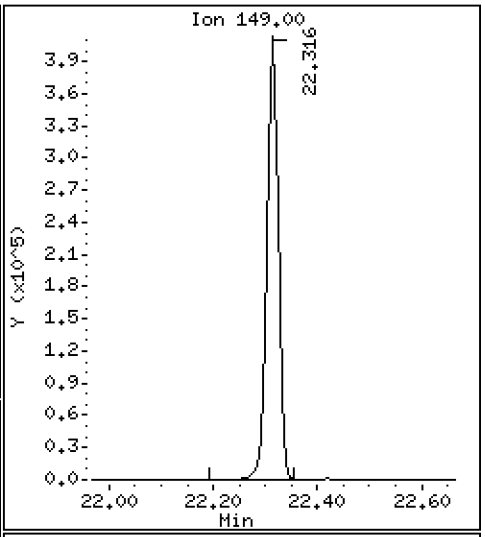
Column phase: ZB-5msi

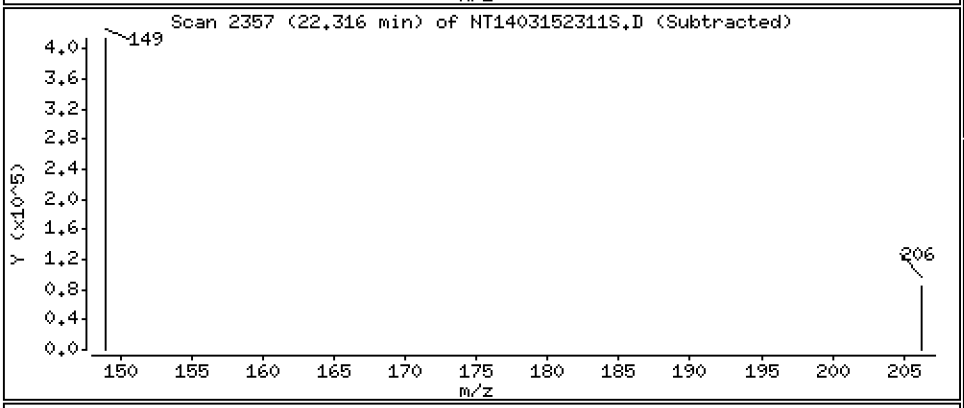
Column diameter: 0.25

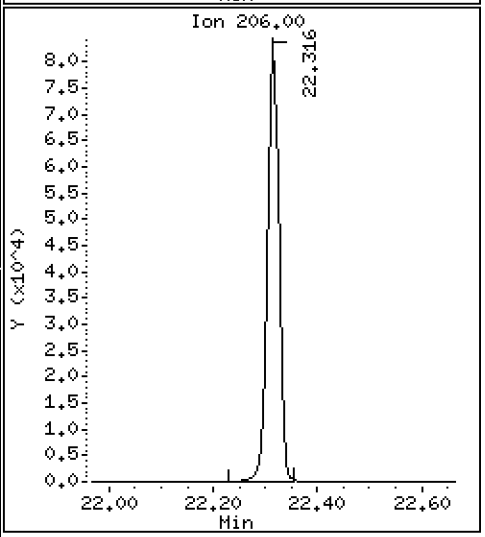
67 Butylbenzylphthalate

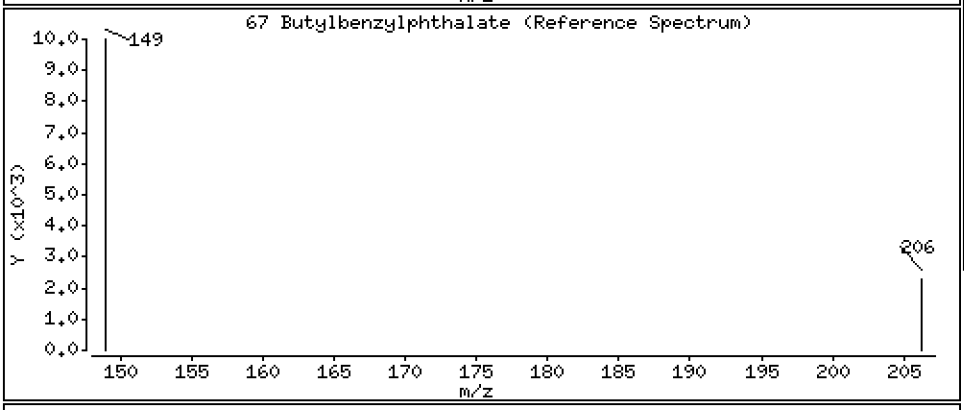
Concentration: 5.366 ug/mL

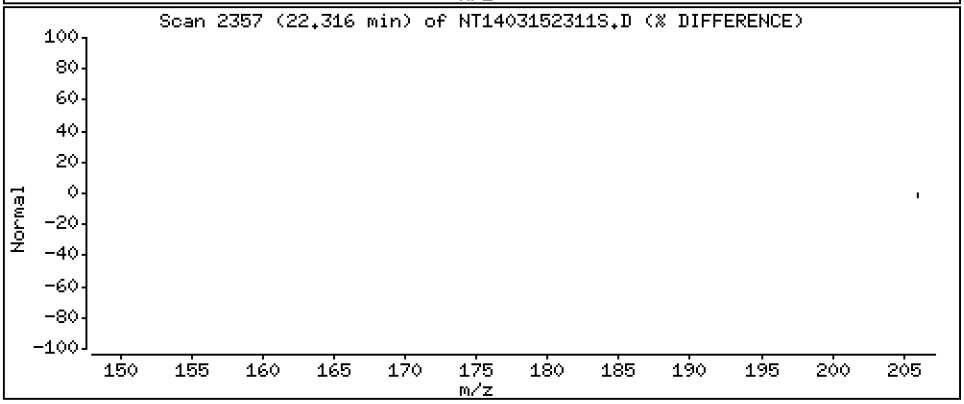












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

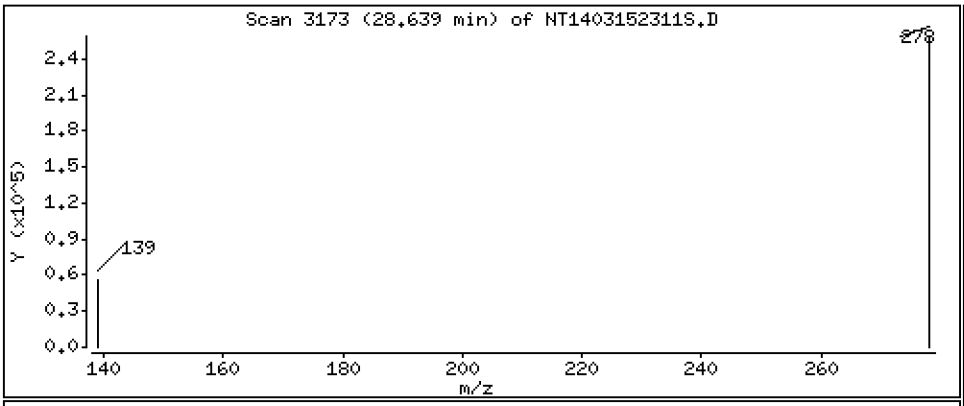
Operator: JGR

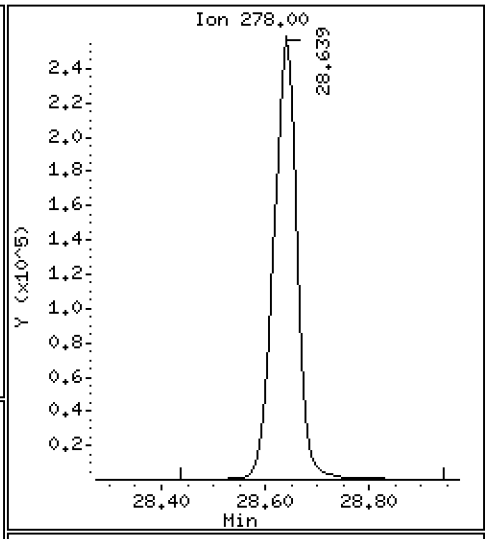
Column phase: ZB-5msi

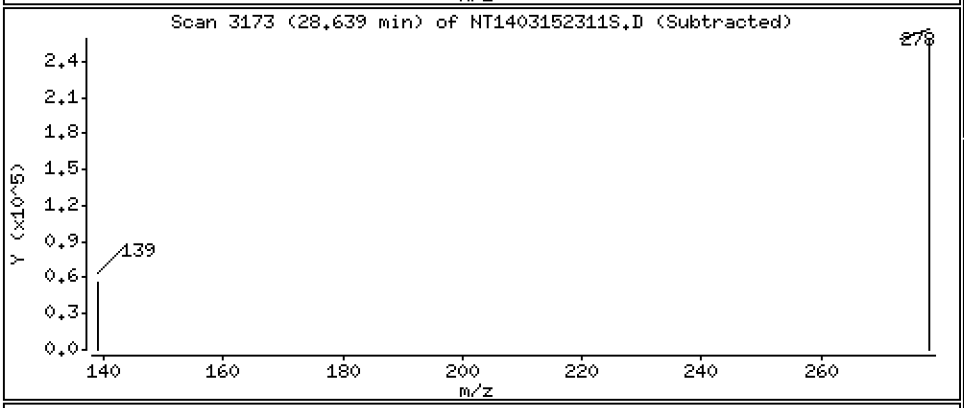
Column diameter: 0.25

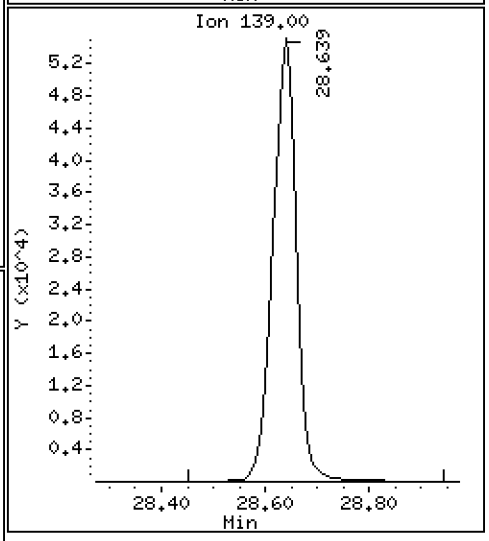
79 Dibenzo(a,h)anthracene

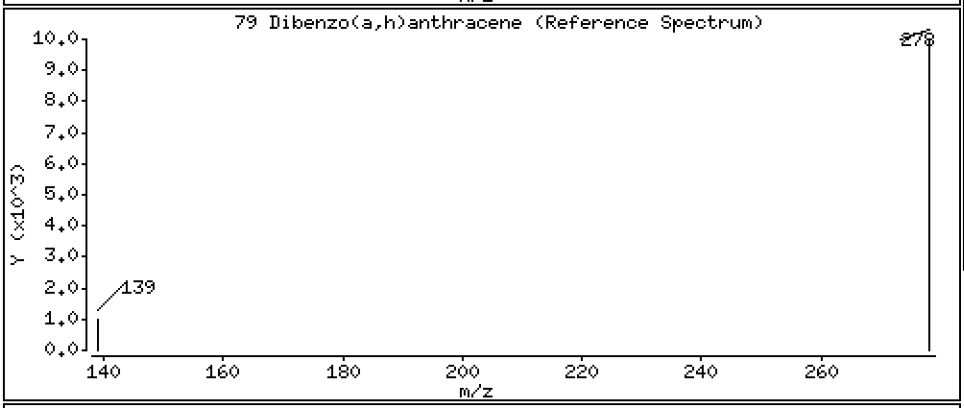
Concentration: 5.166 ug/mL

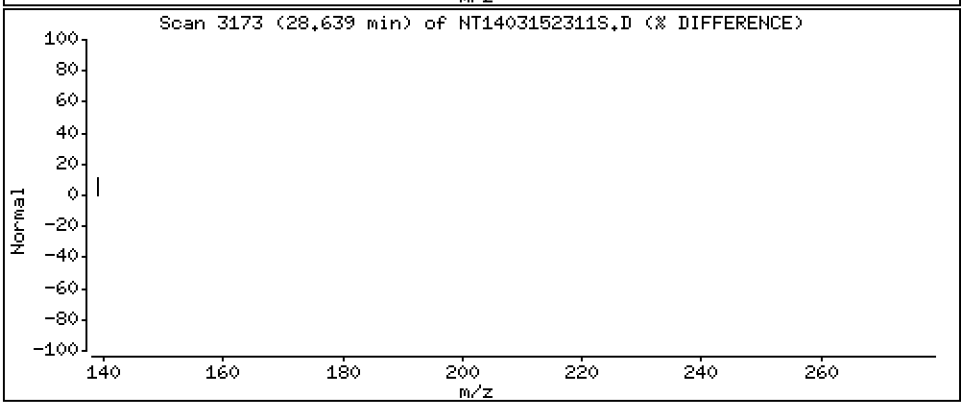












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

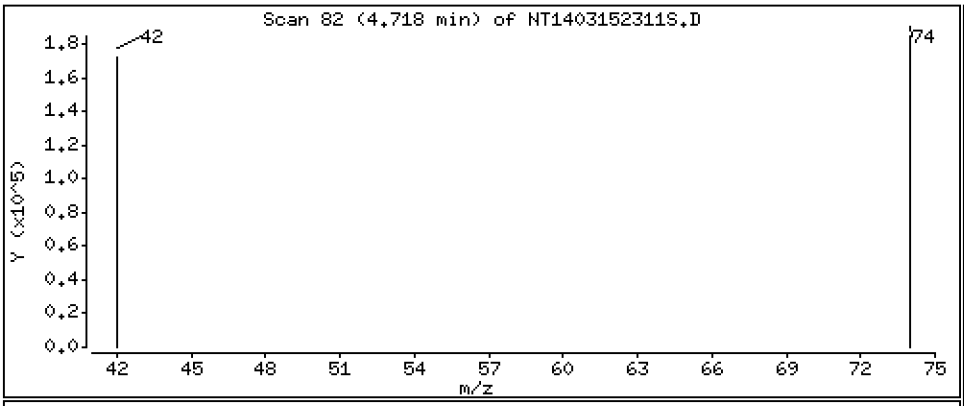
Operator: JGR

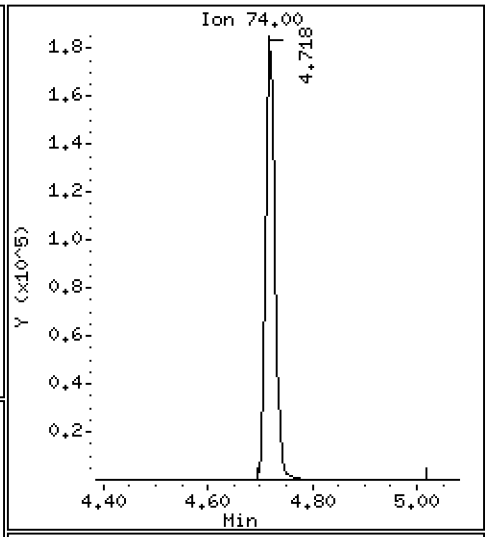
Column phase: ZB-5msi

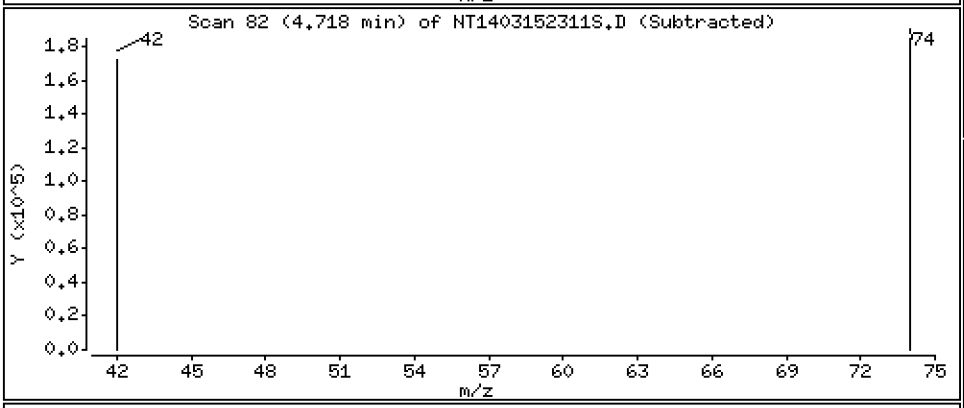
Column diameter: 0.25

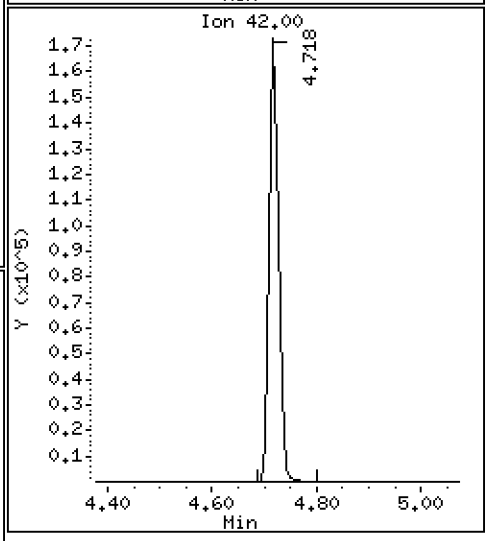
90 N-Nitrosodimethylamine

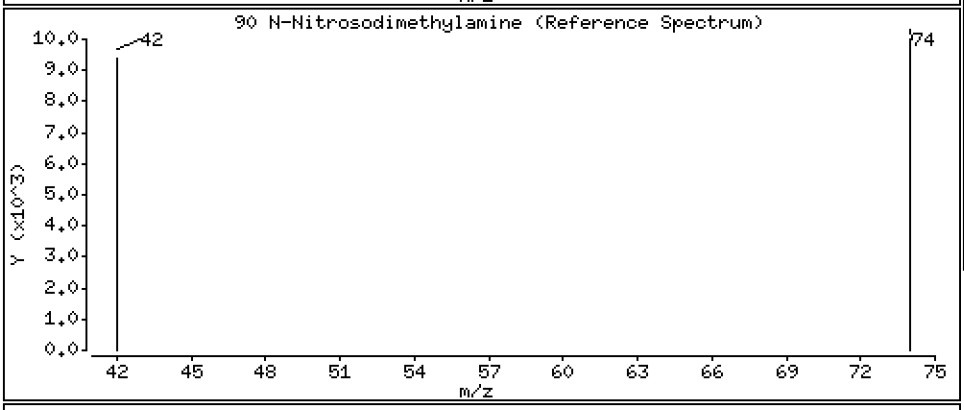
Concentration: 5.261 ug/mL

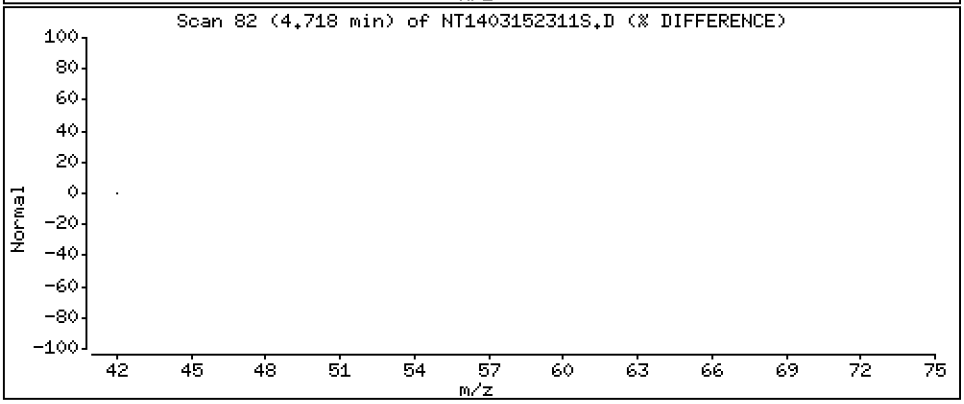












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT1403152311S.D
Lab Smp Id: SLC0242-SCV1
Inj Date : 15-MAR-2023 17:39 MS Autotune Date: 11-MAR-2023 16:01
Operator : JGR Inst ID: nt14.i
Smp Info : SLC0242-SCV1
Misc Info :
Comment :
Method : \\target\share\chem3\nt14.i\20230315.b\20230315.b\SIMABN2.m
Meth Date : 16-Mar-2023 15:17 deenayd Quant Type: ISTD
Cal Date : 15-MAR-2023 15:50 Cal File: NT1403152308.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: DEENAY-201905

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.834	6.826	(0.754)	131	0.00180	0.001799(R)
	3 Phenol	94	8.441	8.433	(0.931)	454904	4.54237	4.542
	7 1,3-Dichlorobenzene	146	9.005	9.005	(0.993)	414667	4.83856	4.839
*	8 1,4-Dichlorobenzene-d4	152	9.067	9.067	(1.000)	214548	4.00000	
	9 1,4-Dichlorobenzene	146	9.098	9.098	(1.003)	402045	4.84807	4.848
	11 Benzyl alcohol	79	9.339	9.339	(1.030)	313629	5.34291	5.343
	12 1,2-Dichlorobenzene	146	9.455	9.455	(1.043)	389531	4.82237	4.822
	13 2-Methylphenol	108	9.564	9.556	(1.055)	296655	4.28818	4.288
	15 4-Methylphenol	108	9.836	9.828	(1.085)	331703	4.53863	4.539
	16 N-Nitroso-di-n-propylamine	70	9.905	9.898	(1.092)	265440	5.13699	5.137
	22 2,4-Dimethylphenol	107	10.883	10.883	(0.941)	272931	3.93394	3.934
	24 Benzoic acid	105	11.061	10.883	(0.956)	494569	9.08128	9.081
	26 1,2,4-Trichlorobenzene	180	11.480	11.480	(0.993)	311017	4.57388	4.574
*	27 Naphthalene-d8	136	11.565	11.564	(1.000)	807045	4.00000	
	30 Hexachlorobutadiene	225	11.974	11.974	(1.035)	171122	4.97279	4.973
	39 Dimethylphthalate	163	14.706	14.698	(0.967)	683967	4.99496	4.995
*	42 Acenaphthene-d10	162	15.201	15.201	(1.000)	400955	4.00000	
	50 Diethylphthalate	149	16.168	16.160	(1.064)	754333	5.17432	5.174
	54 N-Nitrosodiphenylamine	169	16.546	16.546	(0.907)	544923	5.01904	5.019
	57 Hexachlorobenzene	284	17.618	17.618	(0.966)	195732	4.69277	4.693
	58 Pentachlorophenol	266	17.974	17.982	(0.985)	138145	4.79996	4.800
*	59 Phenanthrene-d10	188	18.245	18.245	(1.000)	801298	4.00000	
$	66 Terphenyl-d14	244	21.386	21.386	(0.918)	546	0.00507	0.005072(R)
	67 Butylbenzylphthalate	149	22.315	22.315	(0.958)	588546	5.36591	5.366
*	69 Chrysene-d12	240	23.299	23.299	(1.000)	624454	4.00000	
*	77 Perylene-d12	264	25.939	25.939	(1.000)	623001	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.639	28.623	(1.104)	815876	5.16593	5.166
	90 N-Nitrosodimethylamine	74	4.717	4.733	(0.520)	234083	5.26142	5.261

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1403152311S.D
Lab Smp Id: SLC0242-SCV1
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\SIMABN2.m
Misc Info:

Calibration Date: 15-MAR-2023
Calibration Time: 14:38
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	223201	111601	446402	214548	-3.88
27 Naphthalene-d8	832937	416469	1665874	807045	-3.11
42 Acenaphthene-d10	403175	201588	806350	400955	-0.55
59 Phenanthrene-d10	814822	407411	1629644	801298	-1.66
69 Chrysene-d12	625755	312878	1251510	624454	-0.21
77 Perylene-d12	614085	307043	1228170	623001	1.45

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.08	8.58	9.58	9.07	-0.08
27 Naphthalene-d8	11.56	11.06	12.06	11.57	0.00
42 Acenaphthene-d10	15.20	14.70	15.70	15.20	0.00
59 Phenanthrene-d10	18.25	17.75	18.75	18.25	0.00
69 Chrysene-d12	23.30	22.80	23.80	23.30	0.00
77 Perylene-d12	25.94	25.44	26.44	25.94	0.00

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

REVIEW SUMMARY FOR FILE - NT1403152311S.D

Lab ID: SLC0242-SCV1
nt14.i, 20230315.b\20230315.b\SIMABN2.m,   15-MAR-2023 17:39

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

Data File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT14031523128.D

Date : 15-MAR-2023 18:15

Client ID:

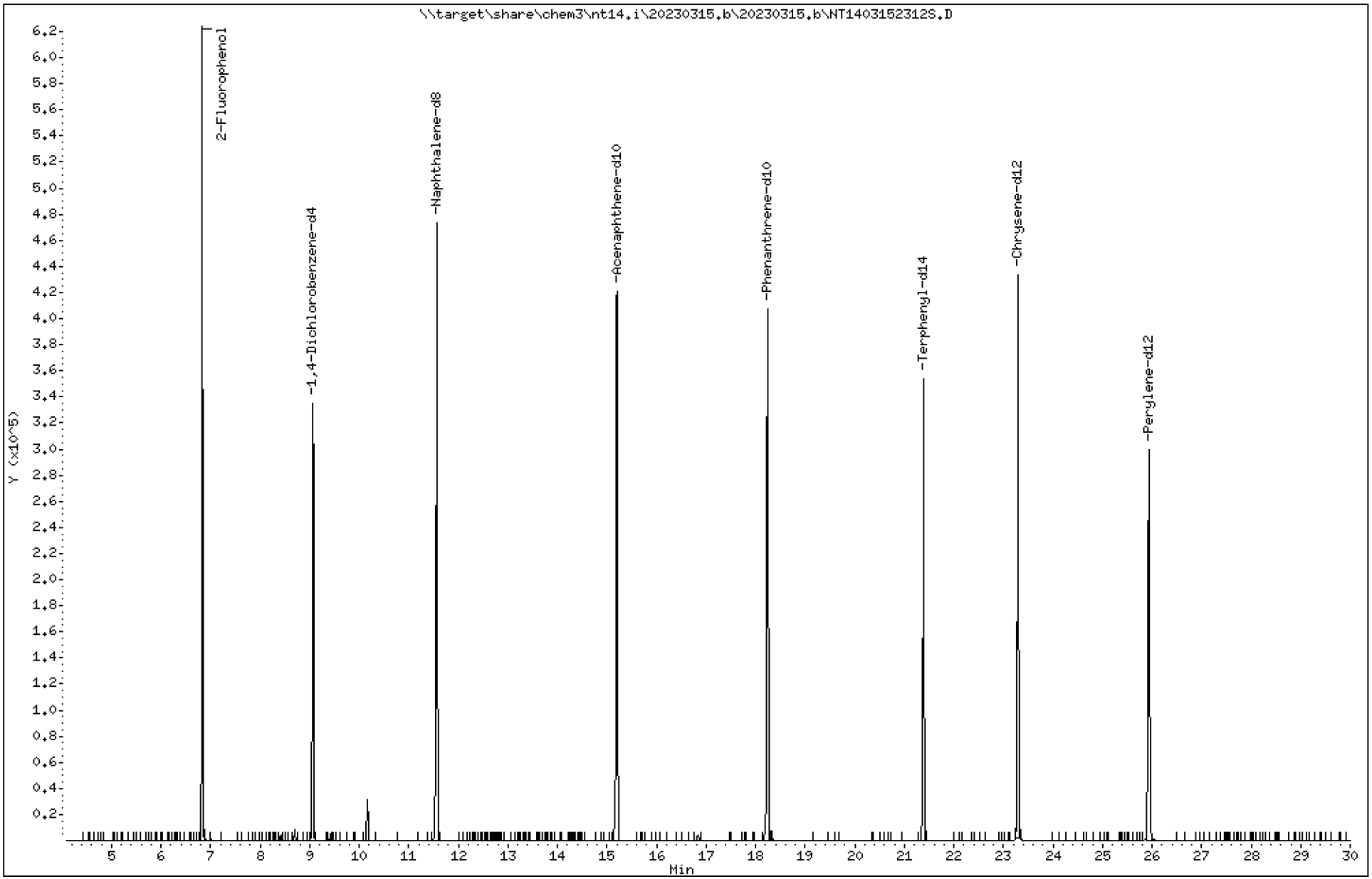
Sample Info: SLC0242-ICB1

Column phase: ZB-5msi

Instrument: nt14.i

Operator: JGR

Column diameter: 0.25



Data File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT1403152312S.D

Date : 15-MAR-2023 18:15

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-ICB1

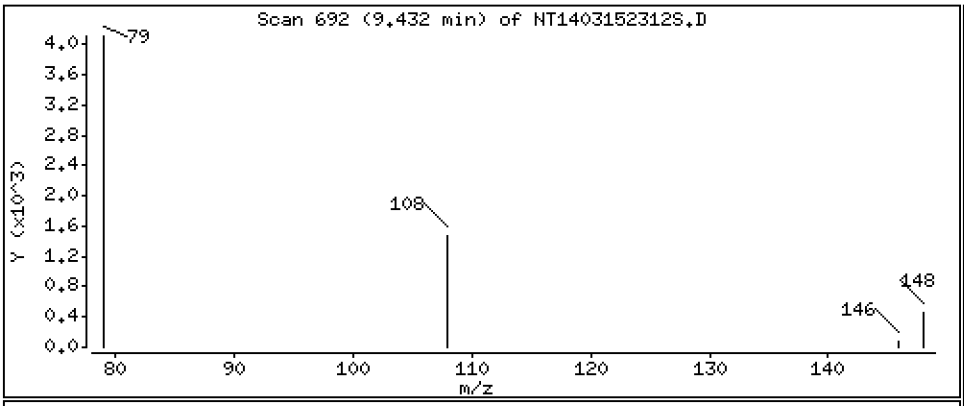
Operator: JGR

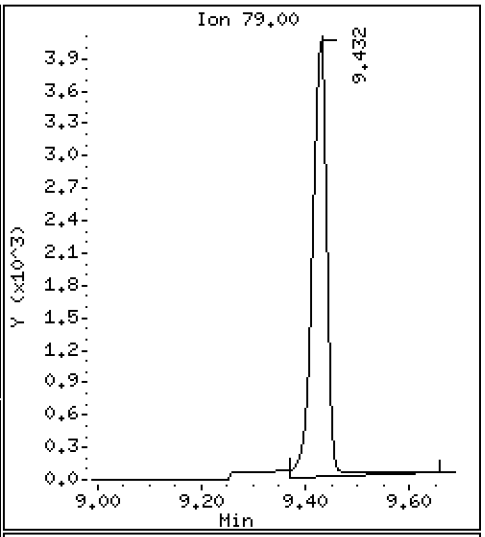
Column phase: ZB-5msi

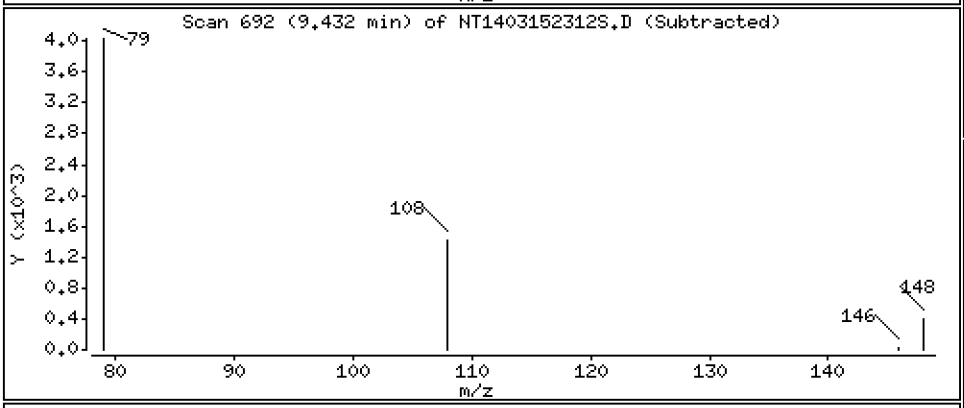
Column diameter: 0.25

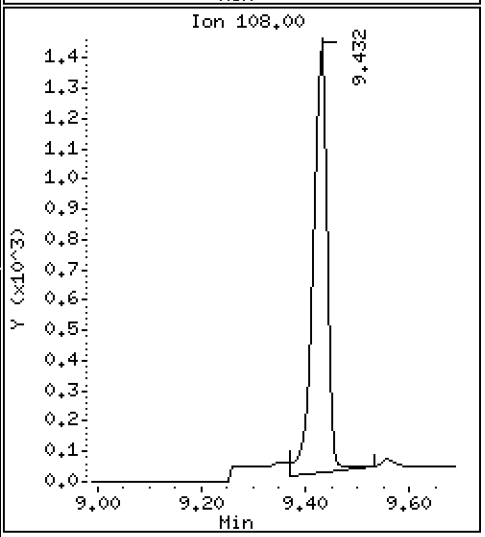
11 Benzyl alcohol

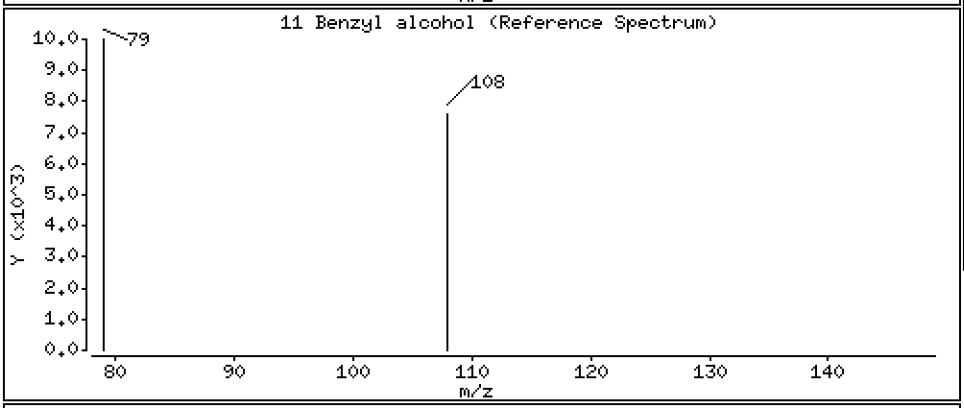
Concentration: 0.1313 ug/mL

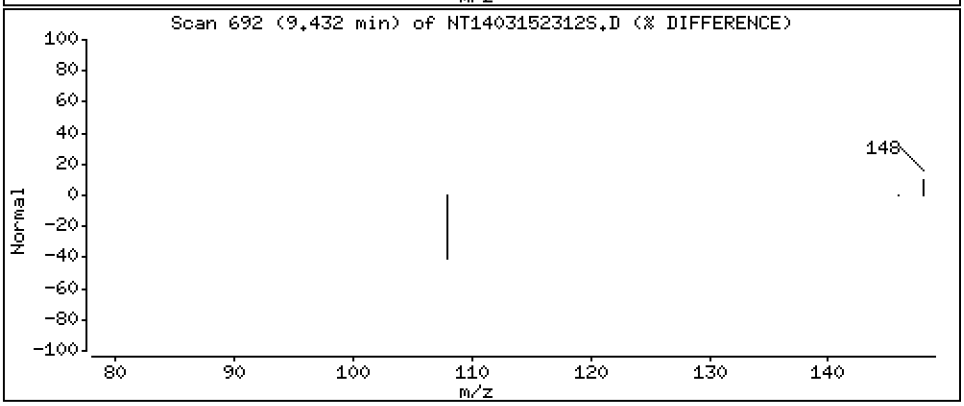












Data File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT14031523125.D

Date : 15-MAR-2023 18:15

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-ICB1

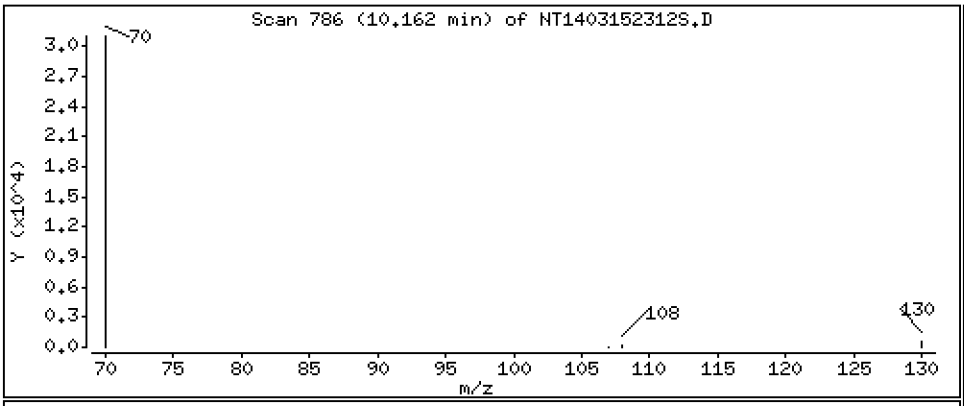
Operator: JGR

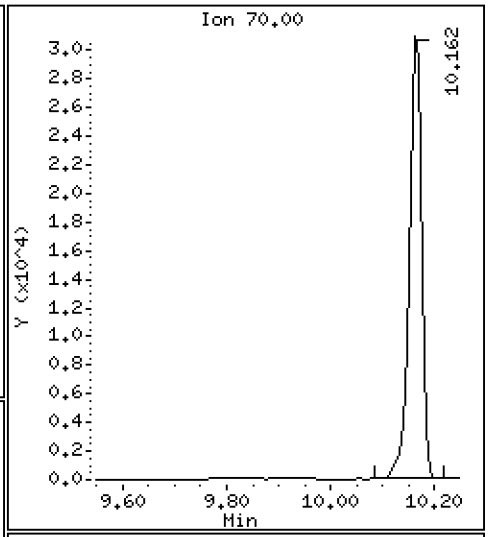
Column phase: ZB-5msi

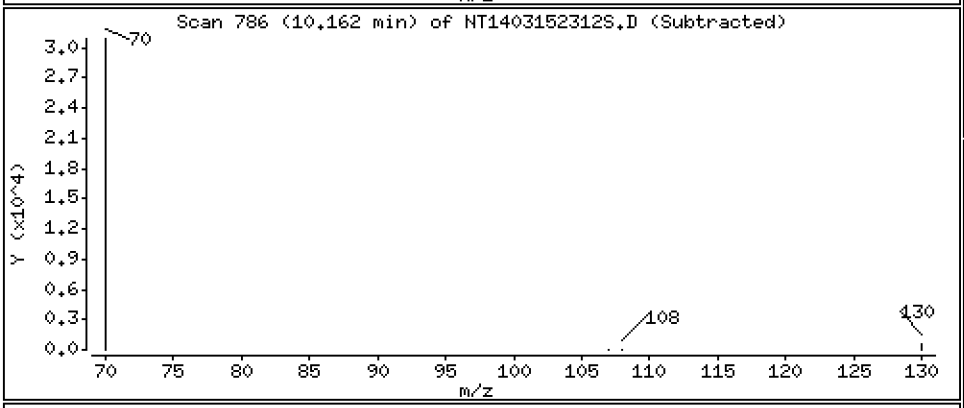
Column diameter: 0.25

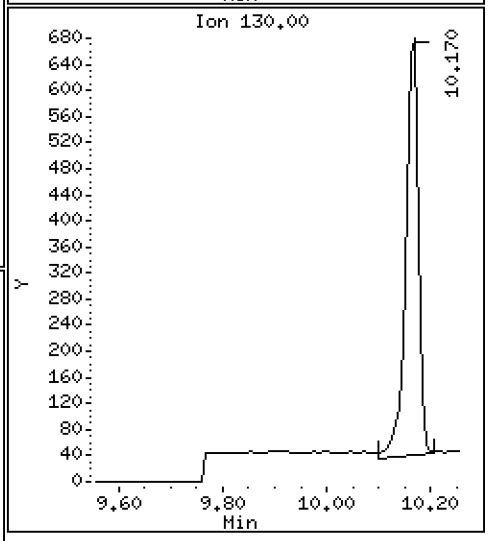
16 N-Nitroso-di-n-propylamine

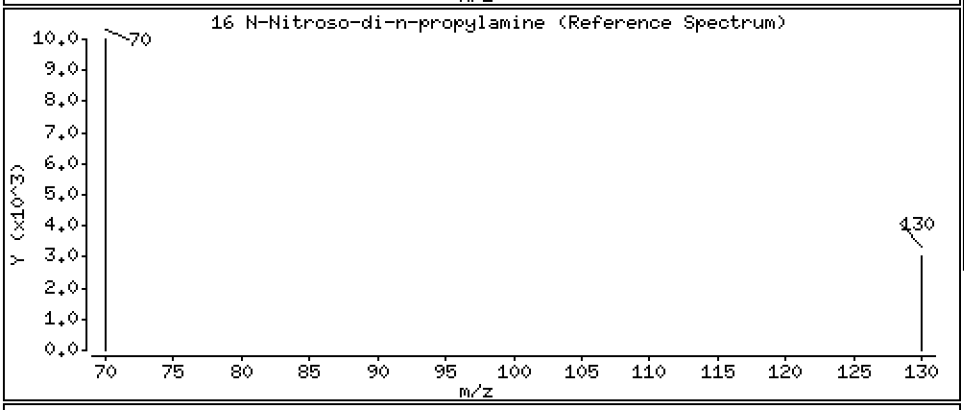
Concentration: 1.046 ug/mL

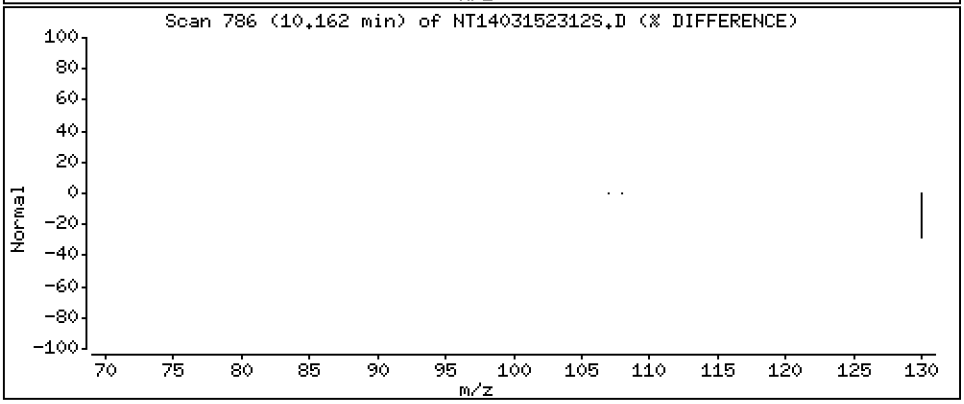












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT1403152312S.D
Lab Smp Id: SLC0242-ICB1
Inj Date : 15-MAR-2023 18:15 MS Autotune Date: 11-MAR-2023 16:01
Operator : JGR Inst ID: nt14.i
Smp Info : SLC0242-ICB1
Misc Info :
Comment :
Method : \\target\share\chem3\nt14.i\20230315.b\20230315.b\SIMABN2.m
Meth Date : 16-Mar-2023 15:17 deenayd Quant Type: ISTD
Cal Date : 15-MAR-2023 15:50 Cal File: NT1403152308.D
Als bottle: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: DEENAY-201905

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.826	6.826	(0.753)	516989	7.17159	7.172(R)
	3 Phenol	94	Compound Not Detected.					
	7 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8 1,4-Dichlorobenzene-d4	152	9.067	9.067	(1.000)	212376	4.00000	
	9 1,4-Dichlorobenzene	146	Compound Not Detected.					
	11 Benzyl alcohol	79	9.432	9.339	(1.040)	7629	0.13130	0.1313
	12 1,2-Dichlorobenzene	146	Compound Not Detected.					
	13 2-Methylphenol	108	Compound Not Detected.					
	15 4-Methylphenol	108	Compound Not Detected.					
	16 N-Nitroso-di-n-propylamine	70	10.161	9.898	(1.121)	53500	1.04596	1.046
	22 2,4-Dimethylphenol	107	Compound Not Detected.					
	24 Benzoic acid	105	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	11.564	11.564	(1.000)	811708	4.00000	
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	39 Dimethylphthalate	163	Compound Not Detected.					
*	42 Acenaphthene-d10	162	15.193	15.201	(1.000)	379238	4.00000	
	50 Diethylphthalate	149	Compound Not Detected.					
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	18.245	18.245	(1.000)	759480	4.00000	
$	66 Terphenyl-d14	244	21.386	21.386	(0.918)	489288	4.86110	4.861(R)
	67 Butylbenzylphthalate	149	Compound Not Detected.					
*	69 Chrysene-d12	240	23.299	23.299	(1.000)	583854	4.00000	
*	77 Perylene-d12	264	25.939	25.939	(1.000)	563750	4.00000	
	79 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1403152312S.D
Lab Smp Id: SLC0242-ICB1
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\SIMABN2.m
Misc Info:

Calibration Date: 15-MAR-2023
Calibration Time: 14:38
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	223201	111601	446402	212376	-4.85
27 Naphthalene-d8	832937	416469	1665874	811708	-2.55
42 Acenaphthene-d10	403175	201588	806350	379238	-5.94
59 Phenanthrene-d10	814822	407411	1629644	759480	-6.79
69 Chrysene-d12	625755	312878	1251510	583854	-6.70
77 Perylene-d12	614085	307043	1228170	563750	-8.20

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.08	8.58	9.58	9.07	-0.09
27 Naphthalene-d8	11.56	11.06	12.06	11.56	0.00
42 Acenaphthene-d10	15.20	14.70	15.70	15.19	-0.05
59 Phenanthrene-d10	18.25	17.75	18.75	18.25	0.00
69 Chrysene-d12	23.30	22.80	23.80	23.30	0.00
77 Perylene-d12	25.94	25.44	26.44	25.94	0.00

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

REVIEW SUMMARY FOR FILE - NT1403152312S.D

Lab ID: SLC0242-ICB1
nt14.i, 20230315.b\20230315.b\SIMABN2.m,   15-MAR-2023 18:15

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

Data File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT14031523105.D

Date : 15-MAR-2023 17:03

Client ID:

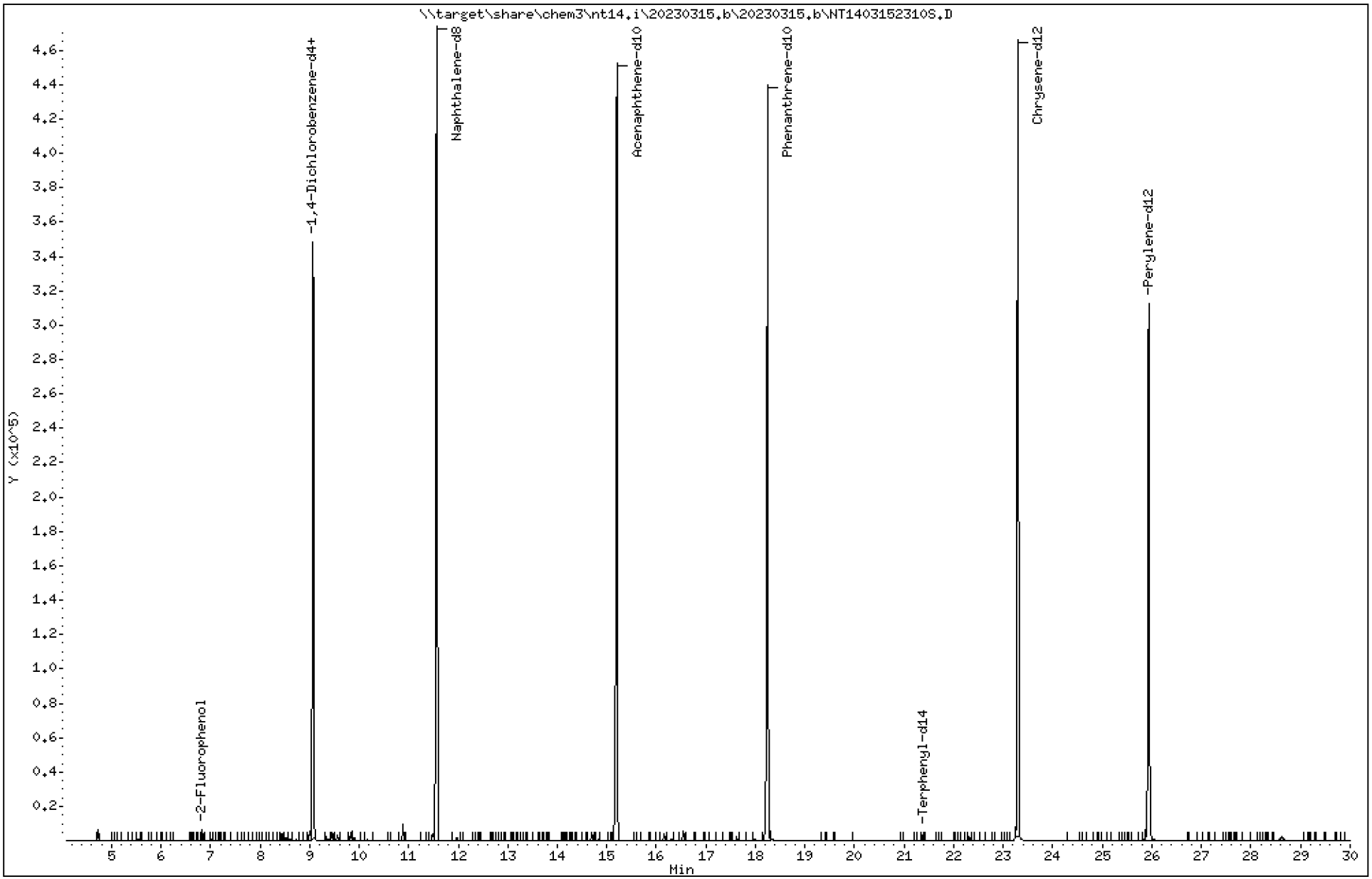
Sample Info: SLC0242-CAL1

Column phase: ZB-5msi

Instrument: nt14.i

Operator: JGR

Column diameter: 0.25



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT1403152310S.D
Lab Smp Id: SLC0242-CAL1
Inj Date : 15-MAR-2023 17:03 MS Autotune Date: 11-MAR-2023 16:01
Operator : JGR Inst ID: nt14.i
Smp Info : SLC0242-CAL1
Misc Info :
Comment :
Method : \\target\share\chem3\nt14.i\20230315.b\20230315.b\SIMABN2.m
Meth Date : 16-Mar-2023 15:17 deenayd Quant Type: ISTD
Cal Date : 15-MAR-2023 15:50 Cal File: NT1403152308.D
Als bottle: 10 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: DEENAY-201905

			QUANT SIG					AMOUNTS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1	2-Fluorophenol	112	6.826	6.826	(0.753)	6275	0.07500	0.08200
	3	Phenol	94	8.433	8.433	(0.930)	5084	0.05000	0.04831
	7	1,3-Dichlorobenzene	146	9.005	9.005	(0.993)	5000	0.05000	0.05552
*	8	1,4-Dichlorobenzene-d4	152	9.067	9.067	(1.000)	225451	4.00000	
	9	1,4-Dichlorobenzene	146	9.098	9.098	(1.003)	5075	0.05000	0.05824
	11	Benzyl alcohol	79	9.339	9.339	(1.030)	2403	0.05000	0.03896
	12	1,2-Dichlorobenzene	146	9.455	9.455	(1.043)	4620	0.05000	0.05443
	13	2-Methylphenol	108	9.556	9.556	(1.054)	3449	0.05000	0.04744
	15	4-Methylphenol	108	9.828	9.828	(1.084)	3473	0.05000	0.04522
	16	N-Nitroso-di-n-propylamine	70	9.898	9.898	(1.092)	2814	0.05000	0.05182
	22	2,4-Dimethylphenol	107	10.883	10.883	(0.941)	6876	0.10000	0.09539
	24	Benzoic acid	105	10.883	10.883	(0.941)	626	0.20000	0.01148
	26	1,2,4-Trichlorobenzene	180	11.480	11.480	(0.993)	4065	0.05000	0.05754
*	27	Naphthalene-d8	136	11.564	11.564	(1.000)	838488	4.00000	
	30	Hexachlorobutadiene	225	11.974	11.974	(1.035)	1881	0.05000	0.05261
	39	Dimethylphthalate	163	14.698	14.698	(0.967)	6951	0.05000	0.05181
*	42	Acenaphthene-d10	162	15.201	15.201	(1.000)	392849	4.00000	
	50	Diethylphthalate	149	16.160	16.160	(1.063)	6226	0.05000	0.04359
	54	N-Nitrosodiphenylamine	169	16.546	16.546	(0.907)	4826	0.05000	0.04617
	57	Hexachlorobenzene	284	17.618	17.618	(0.966)	2114	0.05000	0.05264
	58	Pentachlorophenol	266	17.982	17.982	(0.986)	978	0.10000	0.03611
*	59	Phenanthrene-d10	188	18.245	18.245	(1.000)	771492	4.00000	
$	66	Terphenyl-d14	244	21.386	21.386	(0.918)	5724	0.05000	0.05515
	67	Butylbenzylphthalate	149	22.315	22.315	(0.958)	3175	0.05000	0.03019
*	69	Chrysene-d12	240	23.299	23.299	(1.000)	602035	4.00000	
*	77	Perylene-d12	264	25.939	25.939	(1.000)	580071	4.00000	
	79	Dibenzo(a,h)anthracene	278	28.623	28.623	(1.103)	6163	0.05000	0.04191
	90	N-Nitrosodimethylamine	74	4.733	4.733	(0.522)	4707	0.10000	0.1007

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1403152310S.D
Lab Smp Id: SLC0242-CAL1
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\SIMABN2.m
Misc Info:

Calibration Date: 15-MAR-2023
Calibration Time: 14:38
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	223201	111601	446402	225451	1.01
27 Naphthalene-d8	832937	416469	1665874	838488	0.67
42 Acenaphthene-d10	403175	201588	806350	392849	-2.56
59 Phenanthrene-d10	814822	407411	1629644	771492	-5.32
69 Chrysene-d12	625755	312878	1251510	602035	-3.79
77 Perylene-d12	614085	307043	1228170	580071	-5.54

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.08	8.58	9.58	9.07	-0.08
27 Naphthalene-d8	11.56	11.06	12.06	11.56	0.00
42 Acenaphthene-d10	15.20	14.70	15.70	15.20	0.00
59 Phenanthrene-d10	18.25	17.75	18.75	18.25	0.00
69 Chrysene-d12	23.30	22.80	23.80	23.30	0.00
77 Perylene-d12	25.94	25.44	26.44	25.94	0.00

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

REVIEW SUMMARY FOR FILE - NT1403152310S.D

Lab ID: SLC0242-CAL1
nt14.i, 20230315.b\20230315.b\SIMABN2.m,   15-MAR-2023 17:03

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

Data File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT14031523095.D

Page 1

Date : 15-MAR-2023 16:26

Client ID:

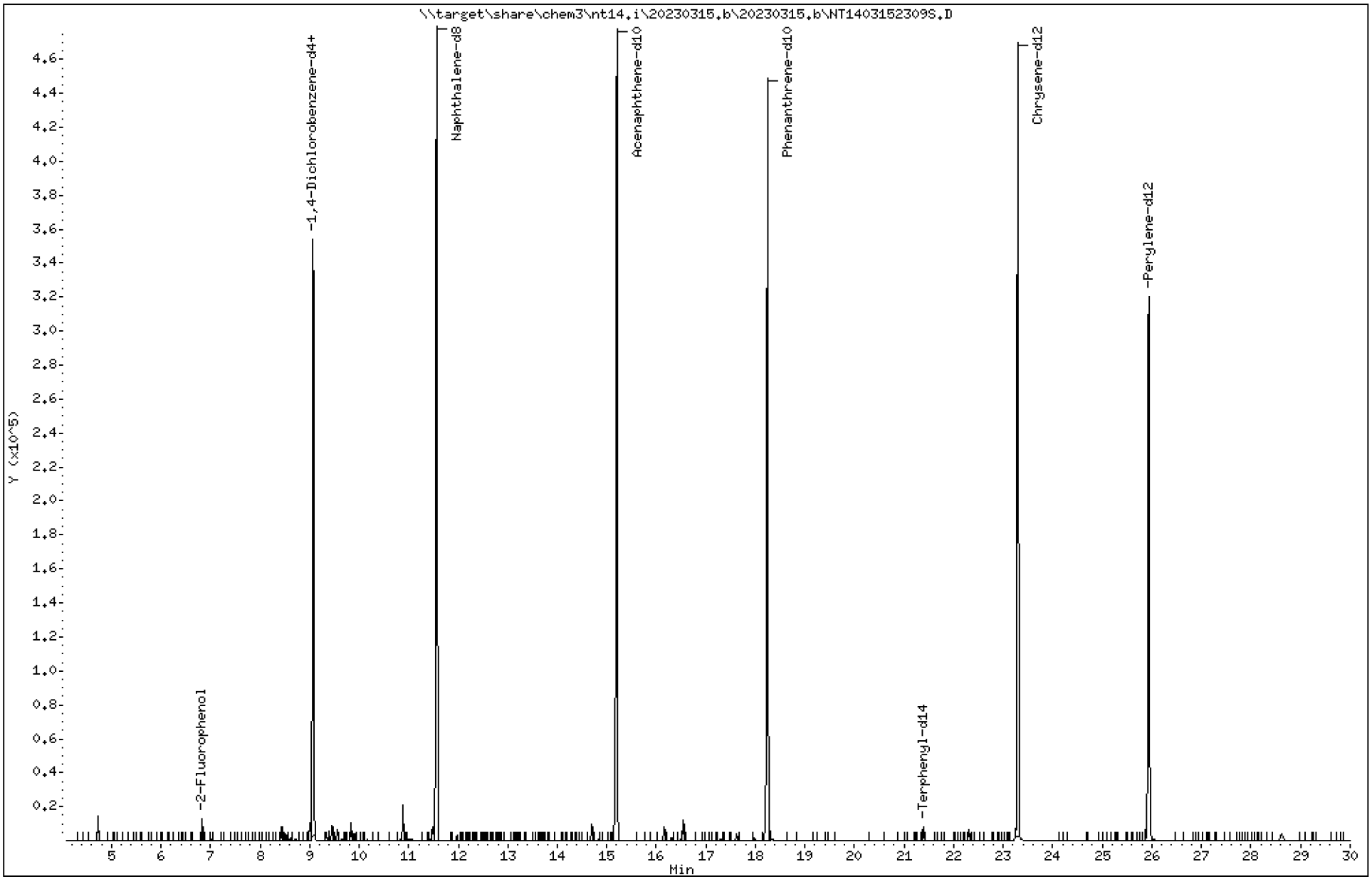
Instrument: nt14.i

Sample Info: SLC0242-CAL2

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT1403152309S.D
Lab Smp Id: SLC0242-CAL2
Inj Date : 15-MAR-2023 16:26 MS Autotune Date: 11-MAR-2023 16:01
Operator : JGR Inst ID: nt14.i
Smp Info : SLC0242-CAL2
Misc Info :
Comment :
Method : \\target\share\chem3\nt14.i\20230315.b\20230315.b\SIMABN2.m
Meth Date : 16-Mar-2023 15:17 deenayd Quant Type: ISTD
Cal Date : 15-MAR-2023 15:14 Cal File: NT1403152307.D
Als bottle: 9 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: DEENAY-201905

			QUANT SIG					AMOUNTS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1	2-Fluorophenol	112	6.834	6.834	(0.754)	11600	0.15000	0.1507
	3	Phenol	94	8.433	8.433	(0.930)	10394	0.10000	0.09817
	7	1,3-Dichlorobenzene	146	9.005	9.005	(0.993)	9465	0.10000	0.1045
*	8	1,4-Dichlorobenzene-d4	152	9.067	9.067	(1.000)	226822	4.00000	
	9	1,4-Dichlorobenzene	146	9.098	9.098	(1.003)	9112	0.10000	0.1039
	11	Benzyl alcohol	79	9.339	9.339	(1.030)	5289	0.10000	0.08523
	12	1,2-Dichlorobenzene	146	9.455	9.455	(1.043)	8905	0.10000	0.1043
	13	2-Methylphenol	108	9.556	9.556	(1.054)	7085	0.10000	0.09687
	15	4-Methylphenol	108	9.828	9.828	(1.084)	7210	0.10000	0.09331
	16	N-Nitroso-di-n-propylamine	70	9.898	9.898	(1.092)	5132	0.10000	0.09394
	22	2,4-Dimethylphenol	107	10.883	10.883	(0.941)	14326	0.20000	0.1996
	24	Benzoic acid	105	10.976	10.976	(0.949)	2635	0.40000	0.04853
	26	1,2,4-Trichlorobenzene	180	11.480	11.480	(0.993)	7622	0.10000	0.1083
*	27	Naphthalene-d8	136	11.565	11.565	(1.000)	834986	4.00000	
	30	Hexachlorobutadiene	225	11.974	11.974	(1.035)	3679	0.10000	0.1033
	39	Dimethylphthalate	163	14.698	14.698	(0.967)	13212	0.10000	0.09771
*	42	Acenaphthene-d10	162	15.201	15.201	(1.000)	395938	4.00000	
	50	Diethylphthalate	149	16.160	16.160	(1.063)	13538	0.10000	0.09404
	54	N-Nitrosodiphenylamine	169	16.546	16.546	(0.907)	10298	0.10000	0.09653
	57	Hexachlorobenzene	284	17.618	17.618	(0.966)	4165	0.10000	0.1016
	58	Pentachlorophenol	266	17.974	17.974	(0.985)	2488	0.20000	0.08999
*	59	Phenanthrene-d10	188	18.245	18.245	(1.000)	787336	4.00000	
$	66	Terphenyl-d14	244	21.386	21.386	(0.918)	10660	0.10000	0.1014
	67	Butylbenzylphthalate	149	22.315	22.315	(0.958)	7477	0.10000	0.07019
*	69	Chrysene-d12	240	23.299	23.299	(1.000)	609729	4.00000	
*	77	Perylene-d12	264	25.939	25.939	(1.000)	588547	4.00000	
	79	Dibenzo(a,h)anthracene	278	28.623	28.623	(1.103)	13230	0.10000	0.08867
	90	N-Nitrosodimethylamine	74	4.725	4.725	(0.521)	9470	0.20000	0.2013

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1403152309S.D
Lab Smp Id: SLC0242-CAL2
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\SIMABN2.m
Misc Info:

Calibration Date: 15-MAR-2023
Calibration Time: 14:38
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	223201	111601	446402	226822	1.62
27 Naphthalene-d8	832937	416469	1665874	834986	0.25
42 Acenaphthene-d10	403175	201588	806350	395938	-1.80
59 Phenanthrene-d10	814822	407411	1629644	787336	-3.37
69 Chrysene-d12	625755	312878	1251510	609729	-2.56
77 Perylene-d12	614085	307043	1228170	588547	-4.16

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.08	8.58	9.58	9.07	-0.08
27 Naphthalene-d8	11.56	11.06	12.06	11.57	0.00
42 Acenaphthene-d10	15.20	14.70	15.70	15.20	0.00
59 Phenanthrene-d10	18.25	17.75	18.75	18.25	0.00
69 Chrysene-d12	23.30	22.80	23.80	23.30	0.00
77 Perylene-d12	25.94	25.44	26.44	25.94	0.00

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

REVIEW SUMMARY FOR FILE - NT1403152309S.D

Lab ID: SLC0242-CAL2
nt14.i, 20230315.b\20230315.b\SIMABN2.m,   15-MAR-2023 16:26

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

Data File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT14031523085.D

Date : 15-MAR-2023 15:50

Client ID:

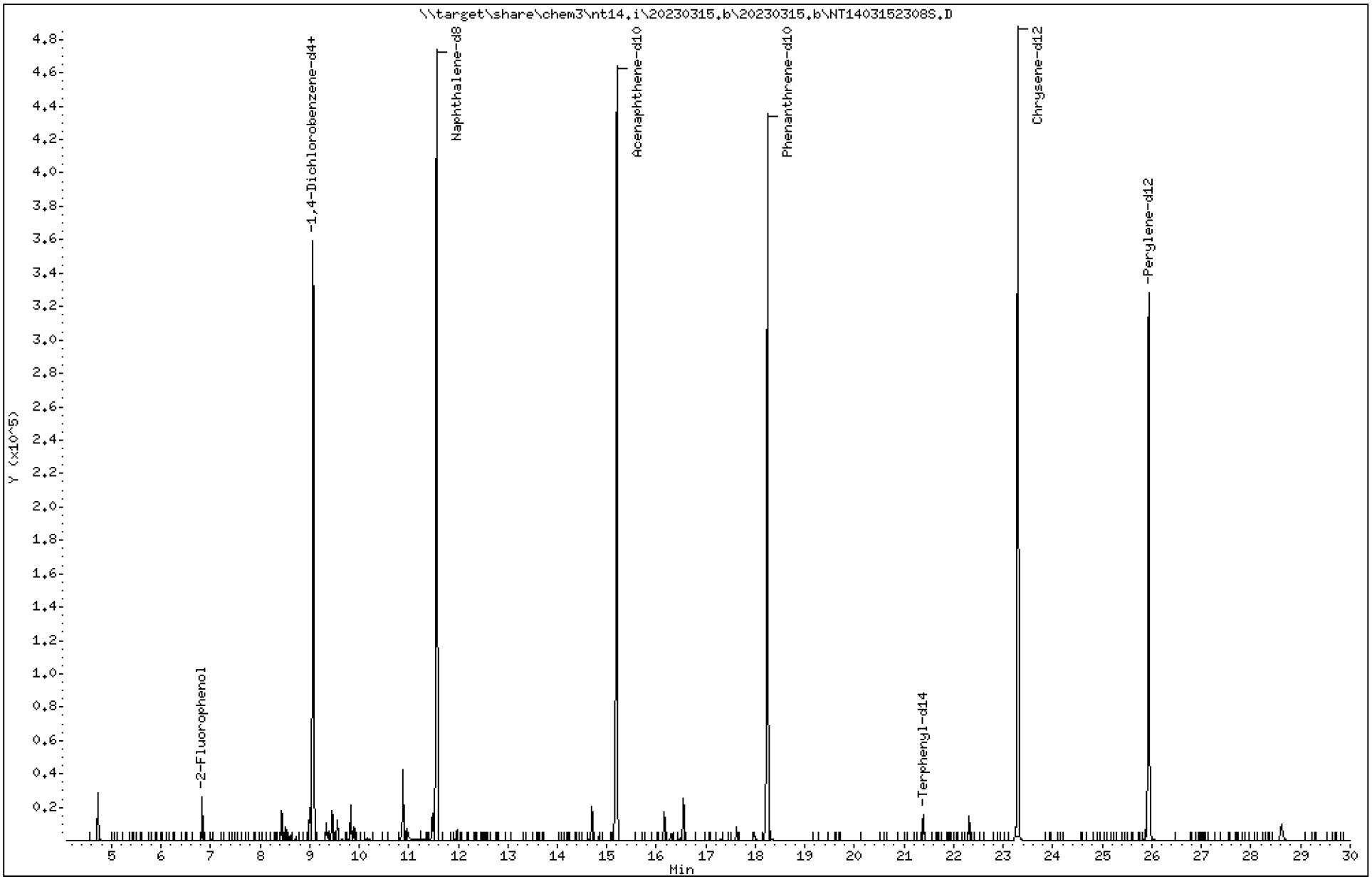
Instrument: nt14.i

Sample Info: SLC0242-CAL3

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT1403152308S.D
Lab Smp Id: SLC0242-CAL3
Inj Date : 15-MAR-2023 15:50 MS Autotune Date: 11-MAR-2023 16:01
Operator : JGR Inst ID: nt14.i
Smp Info : SLC0242-CAL3
Misc Info :
Comment :
Method : \\target\share\chem3\nt14.i\20230315.b\20230315.b\SIMABN2.m
Meth Date : 16-Mar-2023 15:17 deenayd Quant Type: ISTD
Cal Date : 15-MAR-2023 14:38 Cal File: NT1403152306.D
Als bottle: 8 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: DEENAY-201905

			QUANT SIG					AMOUNTS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1	2-Fluorophenol	112	6.826	6.826	(0.753)	22322	0.30000	0.2923
	3	Phenol	94	8.433	8.433	(0.930)	21303	0.20000	0.2029
	7	1,3-Dichlorobenzene	146	9.005	9.005	(0.993)	18617	0.20000	0.2072
*	8	1,4-Dichlorobenzene-d4	152	9.067	9.067	(1.000)	224982	4.00000	
	9	1,4-Dichlorobenzene	146	9.098	9.098	(1.003)	17880	0.20000	0.2056
	11	Benzyl alcohol	79	9.339	9.339	(1.030)	11128	0.20000	0.1808
	12	1,2-Dichlorobenzene	146	9.455	9.455	(1.043)	17604	0.20000	0.2078
	13	2-Methylphenol	108	9.556	9.556	(1.054)	14557	0.20000	0.2007
	15	4-Methylphenol	108	9.828	9.828	(1.084)	15054	0.20000	0.1964
	16	N-Nitroso-di-n-propylamine	70	9.898	9.898	(1.092)	10618	0.20000	0.1960
	22	2,4-Dimethylphenol	107	10.883	10.883	(0.941)	29629	0.40000	0.4134
	24	Benzoic acid	105	10.968	10.968	(0.948)	12666	0.80000	0.2334
	26	1,2,4-Trichlorobenzene	180	11.480	11.480	(0.993)	14590	0.20000	0.2077
*	27	Naphthalene-d8	136	11.565	11.565	(1.000)	833810	4.00000	
	30	Hexachlorobutadiene	225	11.974	11.974	(1.035)	7271	0.20000	0.2045
	39	Dimethylphthalate	163	14.698	14.698	(0.967)	27157	0.20000	0.2018
*	42	Acenaphthene-d10	162	15.201	15.201	(1.000)	394134	4.00000	
	50	Diethylphthalate	149	16.160	16.160	(1.063)	28071	0.20000	0.1959
	54	N-Nitrosodiphenylamine	169	16.546	16.546	(0.907)	22005	0.20000	0.2051
	57	Hexachlorobenzene	284	17.618	17.618	(0.966)	8736	0.20000	0.2119
	58	Pentachlorophenol	266	17.974	17.974	(0.985)	6840	0.40000	0.2458
*	59	Phenanthrene-d10	188	18.245	18.245	(1.000)	791855	4.00000	
$	66	Terphenyl-d14	244	21.386	21.386	(0.918)	20575	0.20000	0.1944
	67	Butylbenzylphthalate	149	22.315	22.315	(0.958)	17499	0.20000	0.1631
*	69	Chrysene-d12	240	23.299	23.299	(1.000)	613885	4.00000	
*	77	Perylene-d12	264	25.939	25.939	(1.000)	596641	4.00000	
	79	Dibenzo(a,h)anthracene	278	28.623	28.623	(1.103)	28863	0.20000	0.1908
	90	N-Nitrosodimethylamine	74	4.725	4.725	(0.521)	19130	0.40000	0.4100

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1403152308S.D
Lab Smp Id: SLC0242-CAL3
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\SIMABN2.m
Misc Info:

Calibration Date: 15-MAR-2023
Calibration Time: 14:38
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	223201	111601	446402	224982	0.80
27 Naphthalene-d8	832937	416469	1665874	833810	0.10
42 Acenaphthene-d10	403175	201588	806350	394134	-2.24
59 Phenanthrene-d10	814822	407411	1629644	791855	-2.82
69 Chrysene-d12	625755	312878	1251510	613885	-1.90
77 Perylene-d12	614085	307043	1228170	596641	-2.84

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.08	8.58	9.58	9.07	-0.08
27 Naphthalene-d8	11.56	11.06	12.06	11.57	0.00
42 Acenaphthene-d10	15.20	14.70	15.70	15.20	0.00
59 Phenanthrene-d10	18.25	17.75	18.75	18.25	0.00
69 Chrysene-d12	23.30	22.80	23.80	23.30	0.00
77 Perylene-d12	25.94	25.44	26.44	25.94	0.00

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

REVIEW SUMMARY FOR FILE - NT1403152308S.D

Lab ID: SLC0242-CAL3
nt14.i, 20230315.b\20230315.b\SIMABN2.m,   15-MAR-2023 15:50

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

Data File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT14031523075.D

Date : 15-MAR-2023 15:14

Client ID:

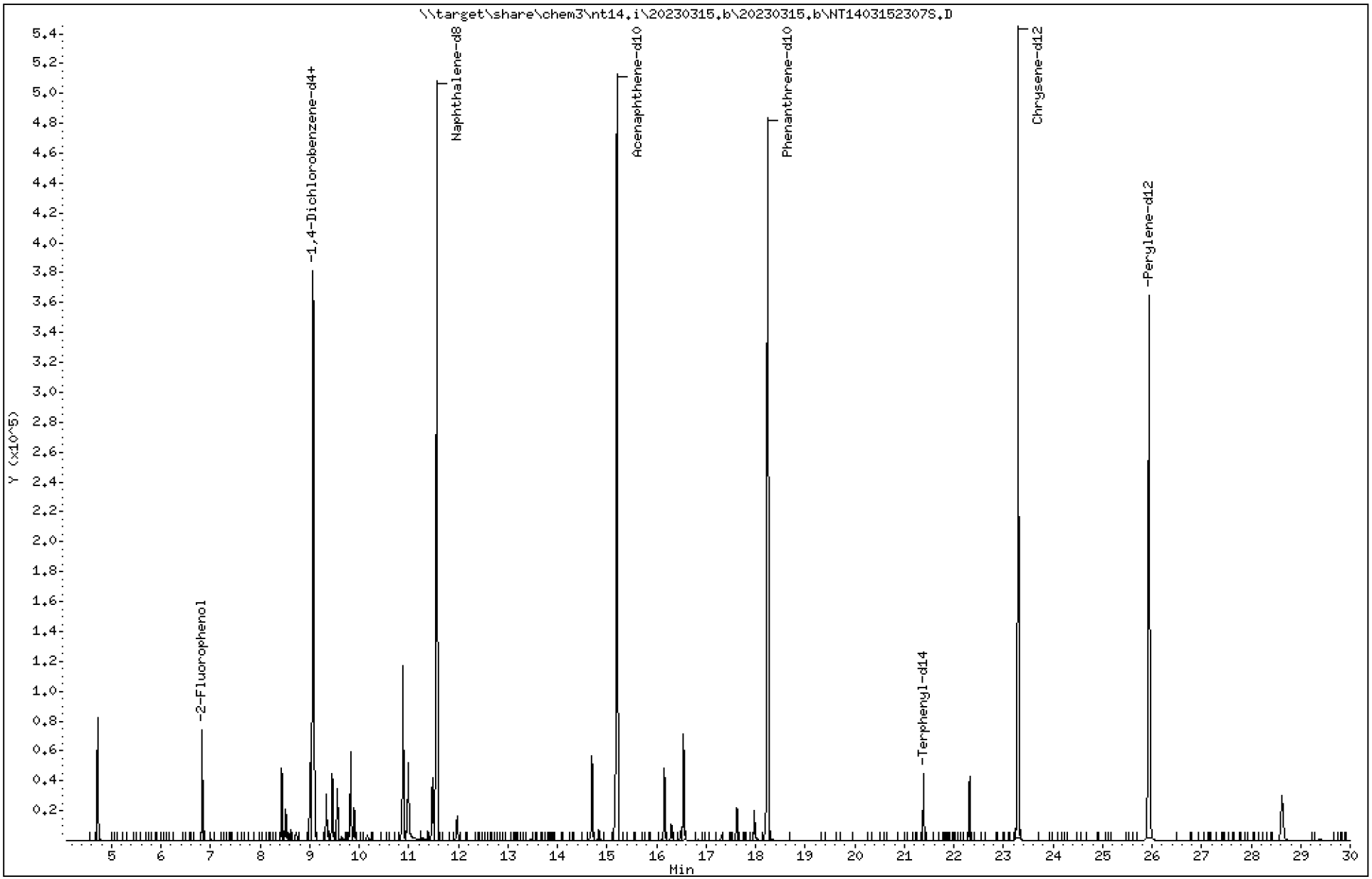
Sample Info: SLC0242-CAL4

Instrument: nt14.i

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT1403152307S.D
Lab Smp Id: SLC0242-CAL4
Inj Date : 15-MAR-2023 15:14 MS Autotune Date: 11-MAR-2023 16:01
Operator : JGR Inst ID: nt14.i
Smp Info : SLC0242-CAL4
Misc Info :
Comment :
Method : \\target\share\chem3\nt14.i\20230315.b\20230315.b\SIMABN2.m
Meth Date : 16-Mar-2023 15:17 deenayd Quant Type: ISTD
Cal Date : 15-MAR-2023 14:02 Cal File: NT1403152305.D
Als bottle: 7 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: DEENAY-201905

			QUANT SIG					AMOUNTS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1	2-Fluorophenol	112	6.826	6.826	(0.753)	60636	0.75000	0.7304
	3	Phenol	94	8.433	8.433	(0.930)	57061	0.50000	0.4998
	7	1,3-Dichlorobenzene	146	9.005	9.005	(0.993)	47547	0.50000	0.4867
*	8	1,4-Dichlorobenzene-d4	152	9.067	9.067	(1.000)	244579	4.00000	
	9	1,4-Dichlorobenzene	146	9.098	9.098	(1.003)	45569	0.50000	0.4820
	11	Benzyl alcohol	79	9.339	9.339	(1.030)	31591	0.50000	0.4721
	12	1,2-Dichlorobenzene	146	9.455	9.455	(1.043)	44944	0.50000	0.4881
	13	2-Methylphenol	108	9.556	9.556	(1.054)	38880	0.50000	0.4930
	15	4-Methylphenol	108	9.828	9.828	(1.084)	41684	0.50000	0.5003
	16	N-Nitroso-di-n-propylamine	70	9.898	9.898	(1.092)	29043	0.50000	0.4930
	22	2,4-Dimethylphenol	107	10.883	10.883	(0.941)	80386	1.00000	1.032
	24	Benzoic acid	105	10.992	10.992	(0.950)	76063	2.00000	1.285
	26	1,2,4-Trichlorobenzene	180	11.480	11.480	(0.993)	37081	0.50000	0.4859
*	27	Naphthalene-d8	136	11.565	11.565	(1.000)	905671	4.00000	
	30	Hexachlorobutadiene	225	11.974	11.974	(1.035)	18891	0.50000	0.4892
	39	Dimethylphthalate	163	14.698	14.698	(0.967)	74174	0.50000	0.5020
*	42	Acenaphthene-d10	162	15.201	15.201	(1.000)	432686	4.00000	
	50	Diethylphthalate	149	16.160	16.160	(1.063)	77454	0.50000	0.4923
	54	N-Nitrosodiphenylamine	169	16.546	16.546	(0.907)	60670	0.50000	0.5132
	57	Hexachlorobenzene	284	17.618	17.618	(0.966)	22441	0.50000	0.4941
	58	Pentachlorophenol	266	17.974	17.974	(0.985)	24156	1.00000	0.7859
*	59	Phenanthrene-d10	188	18.245	18.245	(1.000)	872507	4.00000	
$	66	Terphenyl-d14	244	21.386	21.386	(0.918)	56485	0.50000	0.4875
	67	Butylbenzylphthalate	149	22.315	22.315	(0.958)	51154	0.50000	0.4355
*	69	Chrysene-d12	240	23.299	23.299	(1.000)	672118	4.00000	
*	77	Perylene-d12	264	25.939	25.939	(1.000)	660787	4.00000	
	79	Dibenzo(a,h)anthracene	278	28.623	28.623	(1.103)	83123	0.50000	0.4962
	90	N-Nitrosodimethylamine	74	4.718	4.718	(0.520)	50963	1.00000	1.005

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1403152307S.D
Lab Smp Id: SLC0242-CAL4
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\SIMABN2.m
Misc Info:

Calibration Date: 15-MAR-2023
Calibration Time: 14:38
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	223201	111601	446402	244579	9.58
27 Naphthalene-d8	832937	416469	1665874	905671	8.73
42 Acenaphthene-d10	403175	201588	806350	432686	7.32
59 Phenanthrene-d10	814822	407411	1629644	872507	7.08
69 Chrysene-d12	625755	312878	1251510	672118	7.41
77 Perylene-d12	614085	307043	1228170	660787	7.61

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.08	8.58	9.58	9.07	-0.08
27 Naphthalene-d8	11.56	11.06	12.06	11.57	0.00
42 Acenaphthene-d10	15.20	14.70	15.70	15.20	0.00
59 Phenanthrene-d10	18.25	17.75	18.75	18.25	0.00
69 Chrysene-d12	23.30	22.80	23.80	23.30	0.00
77 Perylene-d12	25.94	25.44	26.44	25.94	0.00

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

REVIEW SUMMARY FOR FILE - NT1403152307S.D

Lab ID: SLC0242-CAL4
nt14.i, 20230315.b\20230315.b\SIMABN2.m,   15-MAR-2023 15:14

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

Data File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT14031523065.D

Date : 15-MAR-2023 14:38

Client ID:

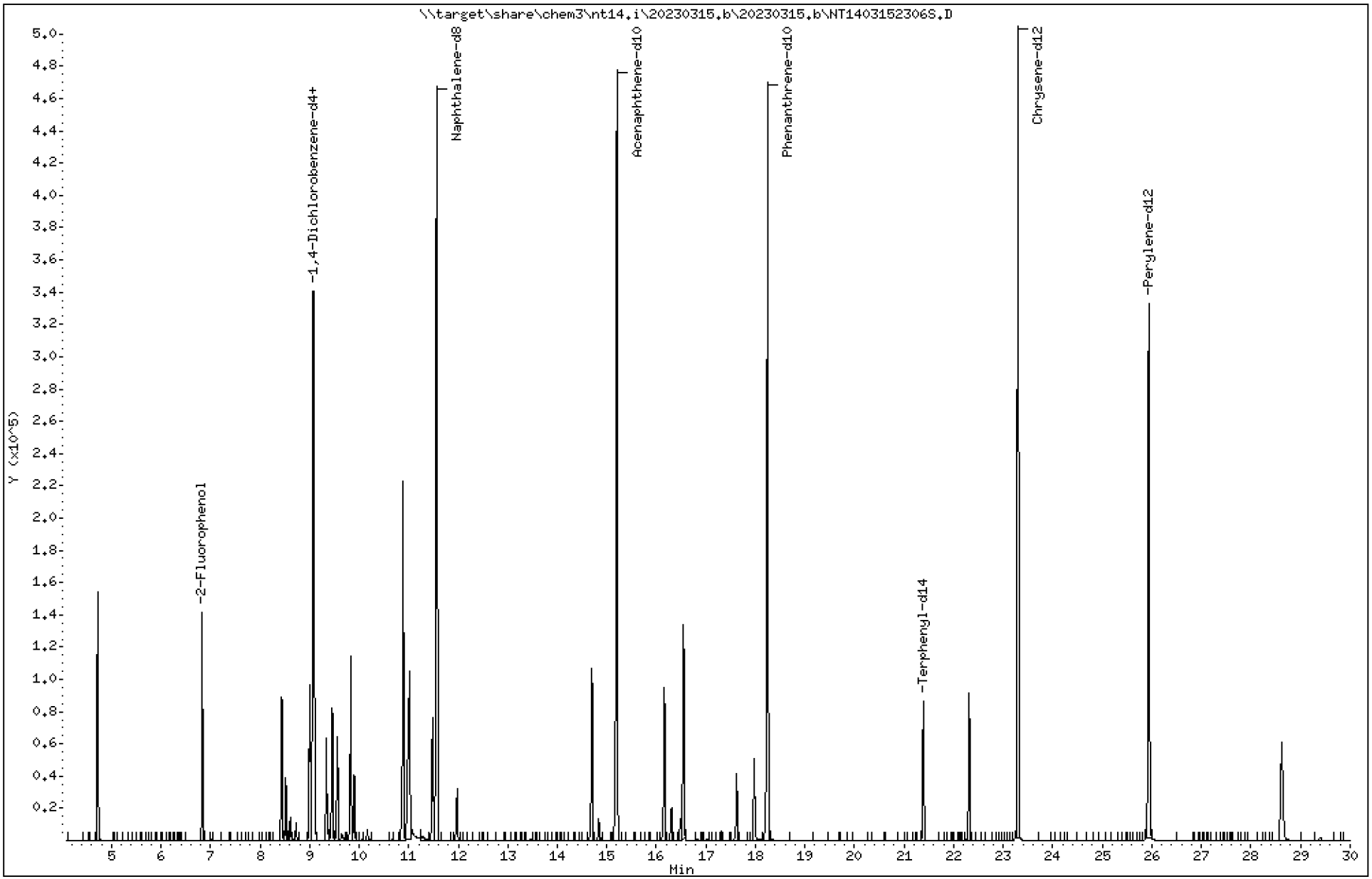
Instrument: nt14.i

Sample Info: SLC0242-CAL5

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT1403152306S.D
Lab Smp Id: SLC0242-CAL5
Inj Date : 15-MAR-2023 14:38 MS Autotune Date: 11-MAR-2023 16:01
Operator : JGR Inst ID: nt14.i
Smp Info : SLC0242-CAL5
Misc Info :
Comment :
Method : \\target\share\chem3\nt14.i\20230315.b\20230315.b\SIMABN2.m
Meth Date : 16-Mar-2023 15:17 deenayd Quant Type: ISTD
Cal Date : 15-MAR-2023 13:26 Cal File: NT1403152304.D
Als bottle: 6 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: DEENAY-201905

			QUANT SIG					AMOUNTS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1	2-Fluorophenol	112	6.826	6.826	(0.752)	116941	1.50000	1.544
	3	Phenol	94	8.433	8.433	(0.929)	108805	1.00000	1.044
	7	1,3-Dichlorobenzene	146	9.005	9.005	(0.992)	89142	1.00000	0.9998
*	8	1,4-Dichlorobenzene-d4	152	9.075	9.075	(1.000)	223201	4.00000	
	9	1,4-Dichlorobenzene	146	9.098	9.098	(1.003)	85405	1.00000	0.9899
	11	Benzyl alcohol	79	9.338	9.338	(1.029)	62466	1.00000	1.023
	12	1,2-Dichlorobenzene	146	9.455	9.455	(1.042)	83924	1.00000	0.9987
	13	2-Methylphenol	108	9.556	9.556	(1.053)	74259	1.00000	1.032
	15	4-Methylphenol	108	9.828	9.828	(1.083)	80383	1.00000	1.057
	16	N-Nitroso-di-n-propylamine	70	9.897	9.897	(1.091)	55878	1.00000	1.039
	22	2,4-Dimethylphenol	107	10.883	10.883	(0.941)	152255	2.00000	2.126
	24	Benzoic acid	105	11.015	11.015	(0.952)	200316	4.00000	3.646
	26	1,2,4-Trichlorobenzene	180	11.479	11.479	(0.993)	69309	1.00000	0.9876
*	27	Naphthalene-d8	136	11.564	11.564	(1.000)	832937	4.00000	
	30	Hexachlorobutadiene	225	11.974	11.974	(1.035)	35520	1.00000	1.000
	39	Dimethylphthalate	163	14.698	14.698	(0.967)	143509	1.00000	1.042
*	42	Acenaphthene-d10	162	15.201	15.201	(1.000)	403175	4.00000	
	50	Diethylphthalate	149	16.160	16.160	(1.063)	153425	1.00000	1.047
	54	N-Nitrosodiphenylamine	169	16.545	16.545	(0.907)	118018	1.00000	1.069
	57	Hexachlorobenzene	284	17.618	17.618	(0.966)	42411	1.00000	0.9999
	58	Pentachlorophenol	266	17.974	17.974	(0.985)	54268	2.00000	1.881
*	59	Phenanthrene-d10	188	18.245	18.245	(1.000)	814822	4.00000	
$	66	Terphenyl-d14	244	21.386	21.386	(0.918)	112658	1.00000	1.044
	67	Butylbenzylphthalate	149	22.315	22.315	(0.958)	110003	1.00000	1.005
*	69	Chrysene-d12	240	23.298	23.298	(1.000)	625755	4.00000	
*	77	Perylene-d12	264	25.939	25.939	(1.000)	614085	4.00000	
	79	Dibenzo(a,h)anthracene	278	28.623	28.623	(1.103)	167617	1.00000	1.077
	90	N-Nitrosodimethylamine	74	4.717	4.717	(0.520)	96689	2.00000	2.089

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1403152306S.D
Lab Smp Id: SLC0242-CAL5
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\SIMABN2.m
Misc Info:

Calibration Date: 15-MAR-2023
Calibration Time: 14:38
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	223201	111601	446402	223201	0.00
27 Naphthalene-d8	832937	416469	1665874	832937	0.00
42 Acenaphthene-d10	403175	201588	806350	403175	0.00
59 Phenanthrene-d10	814822	407411	1629644	814822	0.00
69 Chrysene-d12	625755	312878	1251510	625755	0.00
77 Perylene-d12	614085	307043	1228170	614085	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.08	8.58	9.58	9.08	0.00
27 Naphthalene-d8	11.56	11.06	12.06	11.56	0.00
42 Acenaphthene-d10	15.20	14.70	15.70	15.20	0.00
59 Phenanthrene-d10	18.25	17.75	18.75	18.25	0.00
69 Chrysene-d12	23.30	22.80	23.80	23.30	0.00
77 Perylene-d12	25.94	25.44	26.44	25.94	0.00

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

REVIEW SUMMARY FOR FILE - NT1403152306S.D

Lab ID: SLC0242-CAL5
nt14.i, 20230315.b\20230315.b\SIMABN2.m,   15-MAR-2023 14:38

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

RRT check based on Ccal File: 20230315.b/NT1403152306S.D

On Column LOD for nt14.i, 20230315.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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

Data File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT14031523058.D

Date : 15-MAR-2023 14:02

Client ID:

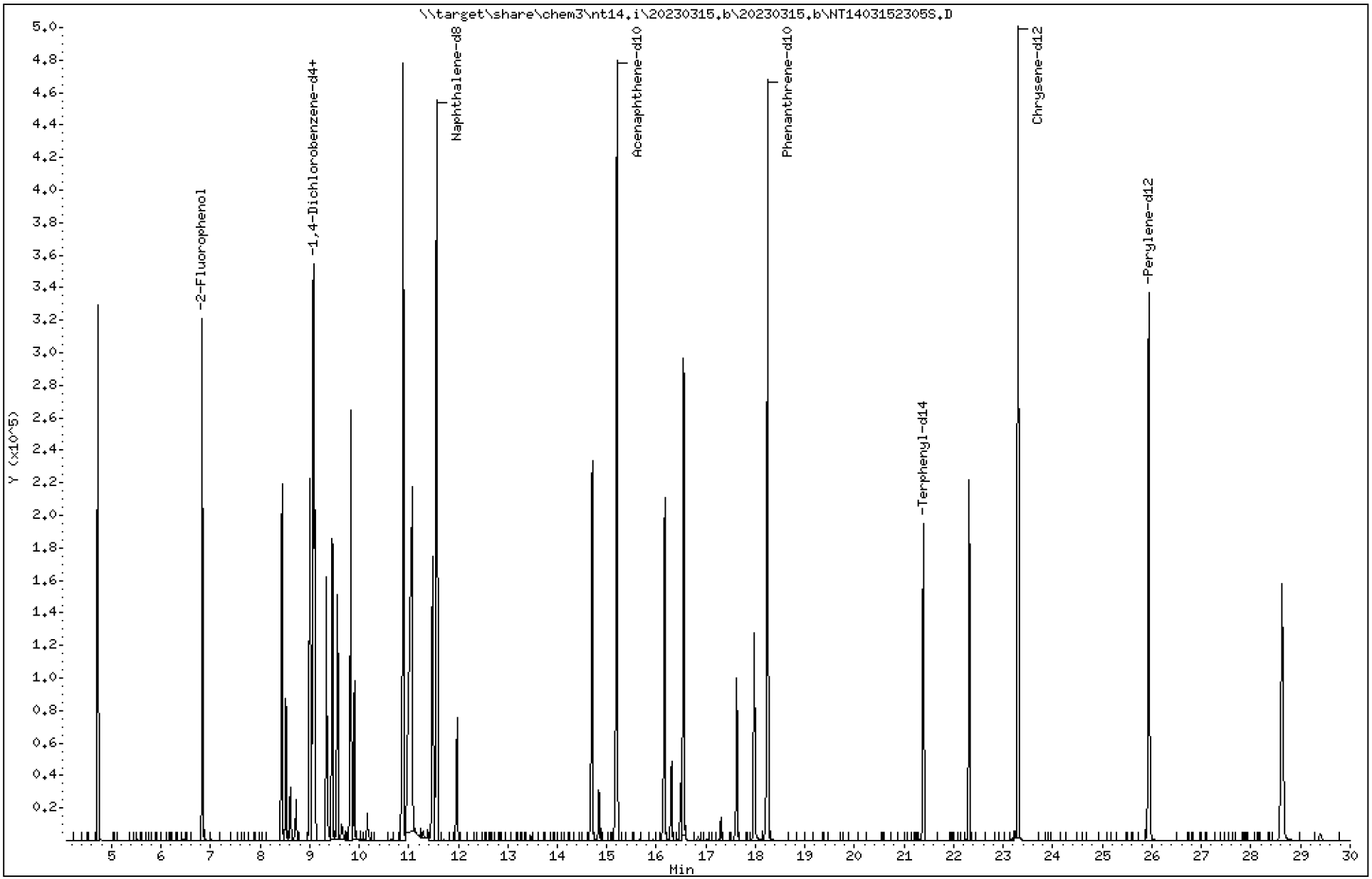
Instrument: nt14.i

Sample Info: SLC0242-CAL6

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT1403152305S.D
Lab Smp Id: SLC0242-CAL6
Inj Date : 15-MAR-2023 14:02 MS Autotune Date: 11-MAR-2023 16:01
Operator : JGR Inst ID: nt14.i
Smp Info : SLC0242-CAL6
Misc Info :
Comment :
Method : \\target\share\chem3\nt14.i\20230315.b\20230315.b\SIMABN2.m
Meth Date : 16-Mar-2023 15:17 deenayd Quant Type: ISTD
Cal Date : 15-MAR-2023 12:49 Cal File: NT1403152303.D
Als bottle: 5 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: DEENAY-201905

			QUANT SIG					AMOUNTS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1	2-Fluorophenol	112	6.826	6.826	(0.752)	273557	3.75000	3.662
	3	Phenol	94	8.441	8.441	(0.930)	253556	2.50000	2.468
	7	1,3-Dichlorobenzene	146	9.005	9.005	(0.992)	206789	2.50000	2.352
*	8	1,4-Dichlorobenzene-d4	152	9.075	9.075	(1.000)	220094	4.00000	
	9	1,4-Dichlorobenzene	146	9.098	9.098	(1.003)	196328	2.50000	2.308
	11	Benzyl alcohol	79	9.339	9.339	(1.029)	152074	2.50000	2.525
	12	1,2-Dichlorobenzene	146	9.455	9.455	(1.042)	194649	2.50000	2.349
	13	2-Methylphenol	108	9.564	9.564	(1.054)	177658	2.50000	2.503
	15	4-Methylphenol	108	9.828	9.828	(1.083)	191456	2.50000	2.554
	16	N-Nitroso-di-n-propylamine	70	9.905	9.905	(1.092)	131811	2.50000	2.487
	22	2,4-Dimethylphenol	107	10.883	10.883	(0.941)	351677	5.00000	4.938
	24	Benzoic acid	105	11.069	11.069	(0.957)	560439	10.0000	9.986
	26	1,2,4-Trichlorobenzene	180	11.480	11.480	(0.993)	161088	2.50000	2.308
*	27	Naphthalene-d8	136	11.565	11.565	(1.000)	828379	4.00000	
	30	Hexachlorobutadiene	225	11.974	11.974	(1.035)	84486	2.50000	2.392
	39	Dimethylphthalate	163	14.706	14.706	(0.967)	337928	2.50000	2.452
*	42	Acenaphthene-d10	162	15.201	15.201	(1.000)	403583	4.00000	
	50	Diethylphthalate	149	16.168	16.168	(1.064)	363080	2.50000	2.474
	54	N-Nitrosodiphenylamine	169	16.546	16.546	(0.907)	272969	2.50000	2.487
	57	Hexachlorobenzene	284	17.626	17.626	(0.966)	99825	2.50000	2.367
	58	Pentachlorophenol	266	17.974	17.974	(0.985)	142247	5.00000	4.886
*	59	Phenanthrene-d10	188	18.245	18.245	(1.000)	810171	4.00000	
$	66	Terphenyl-d14	244	21.386	21.386	(0.918)	263792	2.50000	2.449
	67	Butylbenzylphthalate	149	22.315	22.315	(0.958)	270783	2.50000	2.475
*	69	Chrysene-d12	240	23.299	23.299	(1.000)	624805	4.00000	
*	77	Perylene-d12	264	25.939	25.939	(1.000)	615084	4.00000	
	79	Dibenzo(a,h)anthracene	278	28.631	28.631	(1.104)	410004	2.50000	2.629
	90	N-Nitrosodimethylamine	74	4.725	4.725	(0.521)	223827	5.00000	4.904

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1403152305S.D
Lab Smp Id: SLC0242-CAL6
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\SIMABN2.m
Misc Info:

Calibration Date: 15-MAR-2023
Calibration Time: 14:38
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	223201	111601	446402	220094	-1.39
27 Naphthalene-d8	832937	416469	1665874	828379	-0.55
42 Acenaphthene-d10	403175	201588	806350	403583	0.10
59 Phenanthrene-d10	814822	407411	1629644	810171	-0.57
69 Chrysene-d12	625755	312878	1251510	624805	-0.15
77 Perylene-d12	614085	307043	1228170	615084	0.16

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.08	8.58	9.58	9.08	0.00
27 Naphthalene-d8	11.56	11.06	12.06	11.57	0.00
42 Acenaphthene-d10	15.20	14.70	15.70	15.20	0.00
59 Phenanthrene-d10	18.25	17.75	18.75	18.25	0.00
69 Chrysene-d12	23.30	22.80	23.80	23.30	0.00
77 Perylene-d12	25.94	25.44	26.44	25.94	0.00

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

REVIEW SUMMARY FOR FILE - NT1403152305S.D

Lab ID: SLC0242-CAL6
nt14.i, 20230315.b\20230315.b\SIMABN2.m,   15-MAR-2023 14:02

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

Data File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT14031523048.D

Date : 15-MAR-2023 13:26

Client ID:

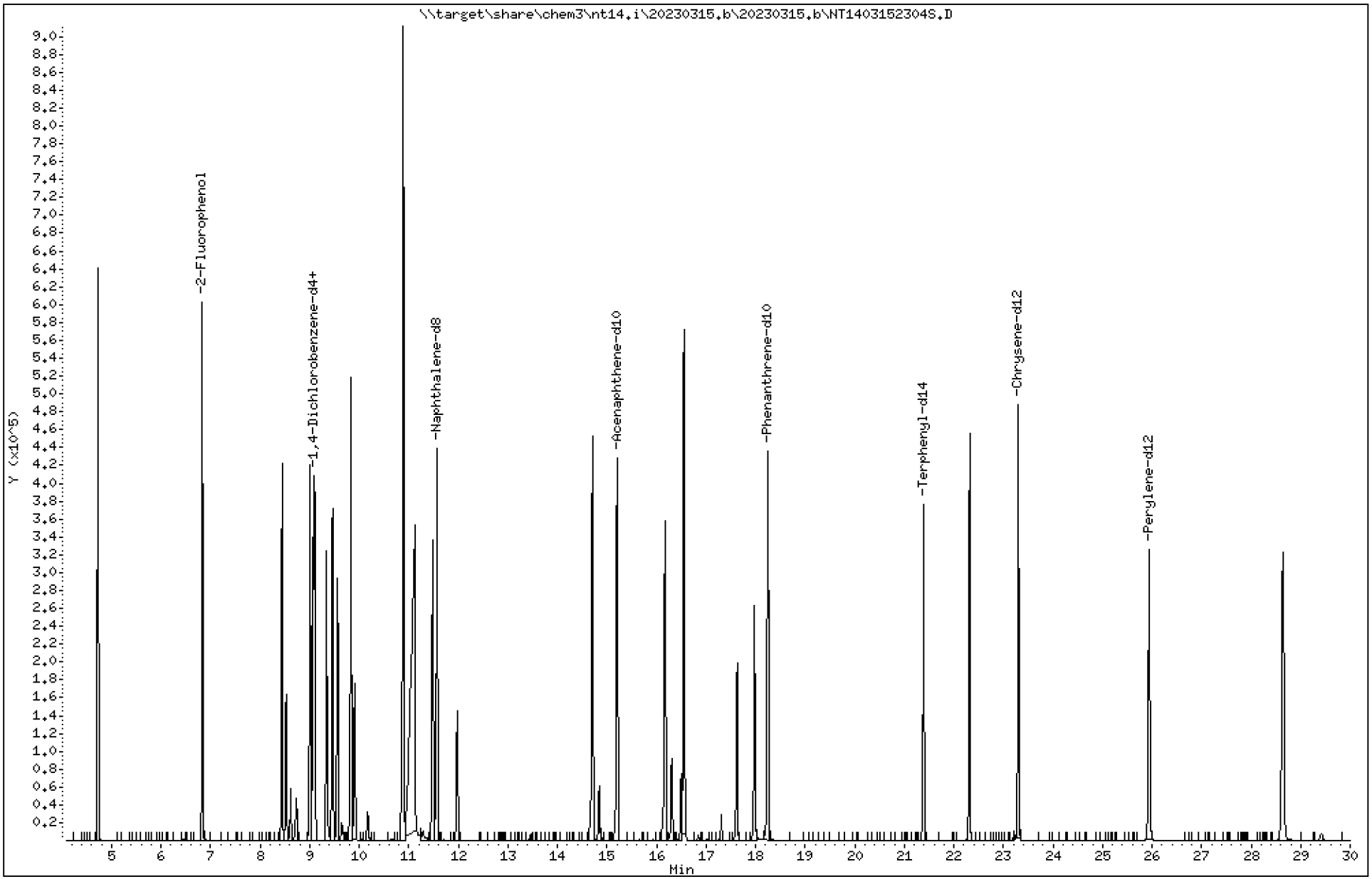
Sample Info: SLC0242-CAL7

Instrument: nt14.i

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT1403152304S.D
Lab Smp Id: SLC0242-CAL7
Inj Date : 15-MAR-2023 13:26 MS Autotune Date: 11-MAR-2023 16:01
Operator : JGR Inst ID: nt14.i
Smp Info : SLC0242-CAL7
Misc Info :
Comment :
Method : \\target\share\chem3\nt14.i\20230315.b\20230315.b\SIMABN2.m
Meth Date : 16-Mar-2023 15:17 deenayd Quant Type: ISTD
Cal Date : 15-MAR-2023 12:13 Cal File: NT1403152302.D
Als bottle: 4 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: DEENAY-201905

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.826	6.826	(0.752)	523329	7.50000	7.320
	3 Phenol	94	8.441	8.441	(0.930)	490926	5.00000	4.994
	7 1,3-Dichlorobenzene	146	9.005	9.005	(0.992)	395940	5.00000	4.706
*	8 1,4-Dichlorobenzene-d4	152	9.075	9.075	(1.000)	210618	4.00000	
	9 1,4-Dichlorobenzene	146	9.098	9.098	(1.003)	380872	5.00000	4.678
	11 Benzyl alcohol	79	9.339	9.339	(1.029)	302690	5.00000	5.253
	12 1,2-Dichlorobenzene	146	9.463	9.463	(1.043)	377438	5.00000	4.760
	13 2-Methylphenol	108	9.564	9.564	(1.054)	345729	5.00000	5.091
	15 4-Methylphenol	108	9.836	9.836	(1.084)	375528	5.00000	5.234
	16 N-Nitroso-di-n-propylamine	70	9.906	9.906	(1.092)	254500	5.00000	5.017
	22 2,4-Dimethylphenol	107	10.891	10.891	(0.941)	675758	10.0000	9.798
	24 Benzoic acid	105	11.124	11.124	(0.961)	1151790	20.0000	20.19
	26 1,2,4-Trichlorobenzene	180	11.488	11.488	(0.993)	311927	5.00000	4.615
*	27 Naphthalene-d8	136	11.573	11.573	(1.000)	802273	4.00000	
	30 Hexachlorobutadiene	225	11.974	11.974	(1.035)	165800	5.00000	4.847
	39 Dimethylphthalate	163	14.706	14.706	(0.967)	659596	5.00000	4.912
*	42 Acenaphthene-d10	162	15.201	15.201	(1.000)	393217	4.00000	
	50 Diethylphthalate	149	16.168	16.168	(1.064)	716243	5.00000	5.010
	54 N-Nitrosodiphenylamine	169	16.554	16.554	(0.907)	534208	5.00000	4.948
	57 Hexachlorobenzene	284	17.626	17.626	(0.966)	199090	5.00000	4.800
	58 Pentachlorophenol	266	17.974	17.974	(0.985)	298780	10.0000	10.15
*	59 Phenanthrene-d10	188	18.245	18.245	(1.000)	796801	4.00000	
$	66 Terphenyl-d14	244	21.394	21.394	(0.918)	513554	5.00000	4.843
	67 Butylbenzylphthalate	149	22.315	22.315	(0.958)	543386	5.00000	5.031
*	69 Chrysene-d12	240	23.299	23.299	(1.000)	615139	4.00000	
*	77 Perylene-d12	264	25.939	25.939	(1.000)	604825	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.639	28.639	(1.104)	830285	5.00000	5.415
	90 N-Nitrosodimethylamine	74	4.725	4.725	(0.521)	426208	10.0000	9.759

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1403152304S.D
Lab Smp Id: SLC0242-CAL7
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\SIMABN2.m
Misc Info:

Calibration Date: 15-MAR-2023
Calibration Time: 14:38
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	223201	111601	446402	210618	-5.64
27 Naphthalene-d8	832937	416469	1665874	802273	-3.68
42 Acenaphthene-d10	403175	201588	806350	393217	-2.47
59 Phenanthrene-d10	814822	407411	1629644	796801	-2.21
69 Chrysene-d12	625755	312878	1251510	615139	-1.70
77 Perylene-d12	614085	307043	1228170	604825	-1.51

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.08	8.58	9.58	9.08	0.00
27 Naphthalene-d8	11.56	11.06	12.06	11.57	0.07
42 Acenaphthene-d10	15.20	14.70	15.70	15.20	0.00
59 Phenanthrene-d10	18.25	17.75	18.75	18.25	0.00
69 Chrysene-d12	23.30	22.80	23.80	23.30	0.00
77 Perylene-d12	25.94	25.44	26.44	25.94	0.00

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

REVIEW SUMMARY FOR FILE - NT1403152304S.D

Lab ID: SLC0242-CAL7
nt14.i, 20230315.b\20230315.b\SIMABN2.m,   15-MAR-2023 13:26

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

Data File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT14031523033.D

Page 1

Date : 15-MAR-2023 12:49

Client ID:

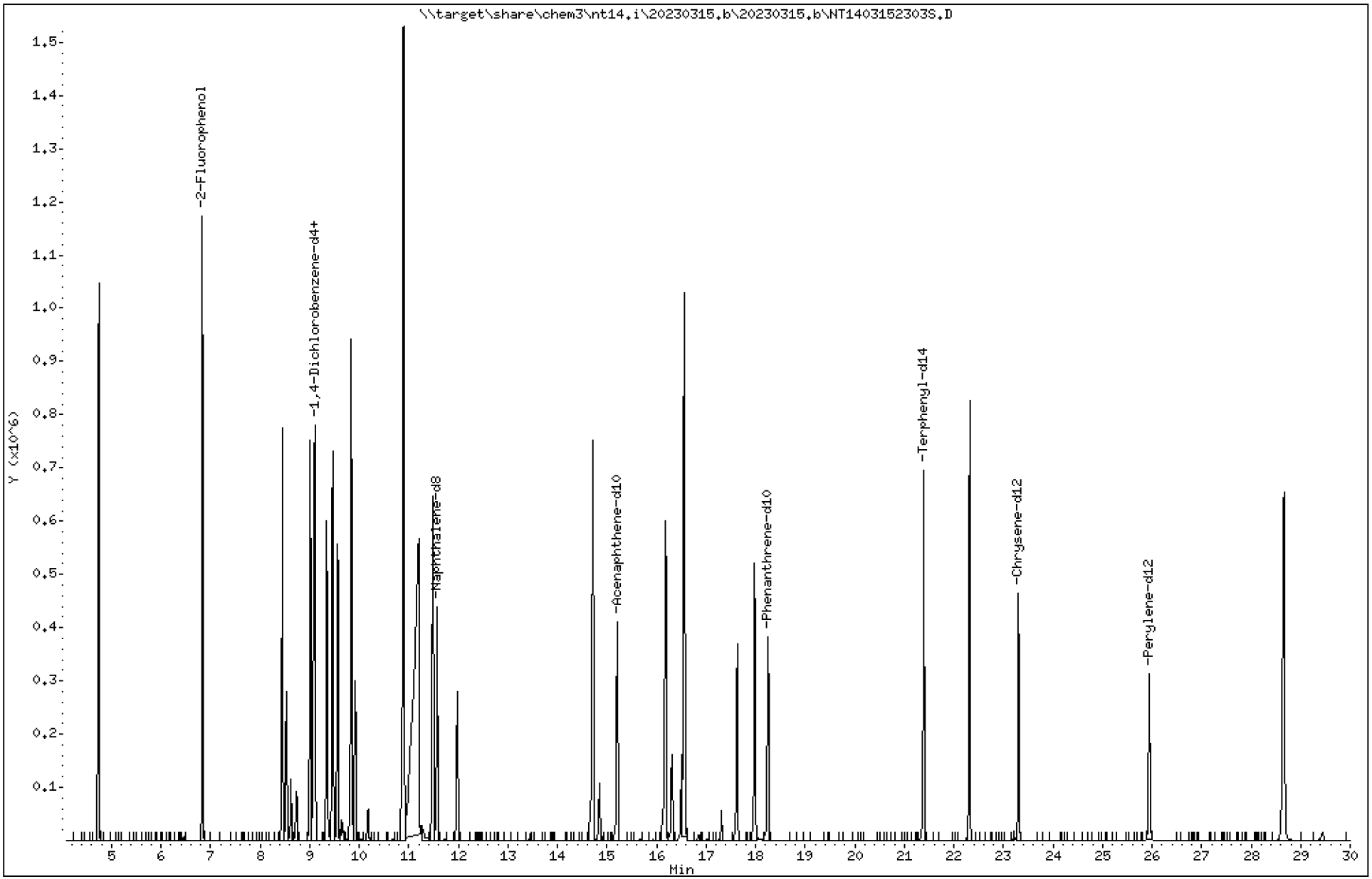
Instrument: nt14.i

Sample Info: SLC0242-CAL8

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT1403152303S.D
Lab Smp Id: SLC0242-CAL8
Inj Date : 15-MAR-2023 12:49 MS Autotune Date: 11-MAR-2023 16:01
Operator : JGR Inst ID: nt14.i
Smp Info : SLC0242-CAL8
Misc Info :
Comment :
Method : \\target\share\chem3\nt14.i\20230315.b\20230315.b\SIMABN2.m
Meth Date : 16-Mar-2023 15:17 deenayd Quant Type: ISTD
Cal Date : 28-FEB-2023 12:15 Cal File: NT1423022803.D
Als bottle: 3 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: DEENAY-201905

			QUANT SIG					AMOUNTS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1	2-Fluorophenol	112	6.834	6.834	(0.753)	985981	15.0000	14.59
	3	Phenol	94	8.448	8.448	(0.931)	936738	10.0000	10.08
	7	1,3-Dichlorobenzene	146	9.005	9.005	(0.992)	758568	10.0000	9.538
*	8	1,4-Dichlorobenzene-d4	152	9.075	9.075	(1.000)	199100	4.00000	
	9	1,4-Dichlorobenzene	146	9.106	9.106	(1.003)	735044	10.0000	9.551
	11	Benzyl alcohol	79	9.346	9.346	(1.030)	581927	10.0000	10.68
	12	1,2-Dichlorobenzene	146	9.463	9.463	(1.043)	721895	10.0000	9.630
	13	2-Methylphenol	108	9.564	9.564	(1.054)	668785	10.0000	10.42
	15	4-Methylphenol	108	9.843	9.843	(1.085)	714914	10.0000	10.54
	16	N-Nitroso-di-n-propylamine	70	9.921	9.921	(1.093)	489405	10.0000	10.21
	22	2,4-Dimethylphenol	107	10.891	10.891	(0.941)	1248872	20.0000	19.03
	24	Benzoic acid	105	11.201	11.201	(0.968)	2452774	40.0000	39.96
	26	1,2,4-Trichlorobenzene	180	11.487	11.487	(0.993)	592872	10.0000	9.219
*	27	Naphthalene-d8	136	11.572	11.572	(1.000)	763281	4.00000	
	30	Hexachlorobutadiene	225	11.982	11.982	(1.035)	321302	10.0000	9.872
	39	Dimethylphthalate	163	14.714	14.714	(0.967)	1238786	10.0000	9.687
*	42	Acenaphthene-d10	162	15.209	15.209	(1.000)	374468	4.00000	
	50	Diethylphthalate	149	16.183	16.183	(1.064)	1358298	10.0000	9.976
	54	N-Nitrosodiphenylamine	169	16.561	16.561	(0.907)	1030851	10.0000	10.06
	57	Hexachlorobenzene	284	17.626	17.626	(0.966)	384146	10.0000	9.760
	58	Pentachlorophenol	266	17.982	17.982	(0.985)	590982	20.0000	19.97
*	59	Phenanthrene-d10	188	18.253	18.253	(1.000)	756122	4.00000	
$	66	Terphenyl-d14	244	21.394	21.394	(0.918)	956751	10.0000	9.433
	67	Butylbenzylphthalate	149	22.315	22.315	(0.957)	1037644	10.0000	9.994
*	69	Chrysene-d12	240	23.307	23.307	(1.000)	588307	4.00000	
*	77	Perylene-d12	264	25.947	25.947	(1.000)	568829	4.00000	
	79	Dibenzo(a,h)anthracene	278	28.662	28.662	(1.105)	1610657	10.0000	11.17
	90	N-Nitrosodimethylamine	74	4.741	4.741	(0.522)	788915	20.0000	19.11

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1403152303S.D
Lab Smp Id: SLC0242-CAL8
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\SIMABN2.m
Misc Info:

Calibration Date: 15-MAR-2023
Calibration Time: 14:38
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	223201	111601	446402	199100	-10.80
27 Naphthalene-d8	832937	416469	1665874	763281	-8.36
42 Acenaphthene-d10	403175	201588	806350	374468	-7.12
59 Phenanthrene-d10	814822	407411	1629644	756122	-7.20
69 Chrysene-d12	625755	312878	1251510	588307	-5.98
77 Perylene-d12	614085	307043	1228170	568829	-7.37

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.08	8.58	9.58	9.08	0.00
27 Naphthalene-d8	11.56	11.06	12.06	11.57	0.07
42 Acenaphthene-d10	15.20	14.70	15.70	15.21	0.05
59 Phenanthrene-d10	18.25	17.75	18.75	18.25	0.04
69 Chrysene-d12	23.30	22.80	23.80	23.31	0.03
77 Perylene-d12	25.94	25.44	26.44	25.95	0.03

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

REVIEW SUMMARY FOR FILE - NT1403152303S.D

Lab ID: SLC0242-CAL8
nt14.i, 20230315.b\20230315.b\SIMABN2.m,   15-MAR-2023 12:49

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8270E-SIM

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GC00050
Laboratory ID: SLC0242-SCV1
Sequence: SLC0242
Sequence Name: SCV 5.0
Standard ID: K010066

ANALYTE	EXPECTED (ug/mL)	FOUND (ug/mL)	% DRIFT	QC LIMIT
1,4-Dichlorobenzene	5.0000	4.8	-3.0	20.00
1,2-Dichlorobenzene	5.0000	4.8	-3.6	20.00
Benzyl Alcohol	5.0000	5.3	6.9	20.00
Benzoic acid	10.000	9.1	-9.2	20.00
2,4-Dimethylphenol	5.0000	3.9	-21.3	20.00
1,2,4-Trichlorobenzene	5.0000	4.6	-8.5	20.00
N-Nitrosodiphenylamine	5.0000	5.0	0.4	20.00
Pentachlorophenol	5.0000	4.8	-4.0	20.00
2-Fluorophenol	7.5000	0.00180	-100	
p-Terphenyl-d14	5.0000	0.00507	-99.9	

* Indicates values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT14031523115.D

Date : 15-MAR-2023 17:39

Client ID:

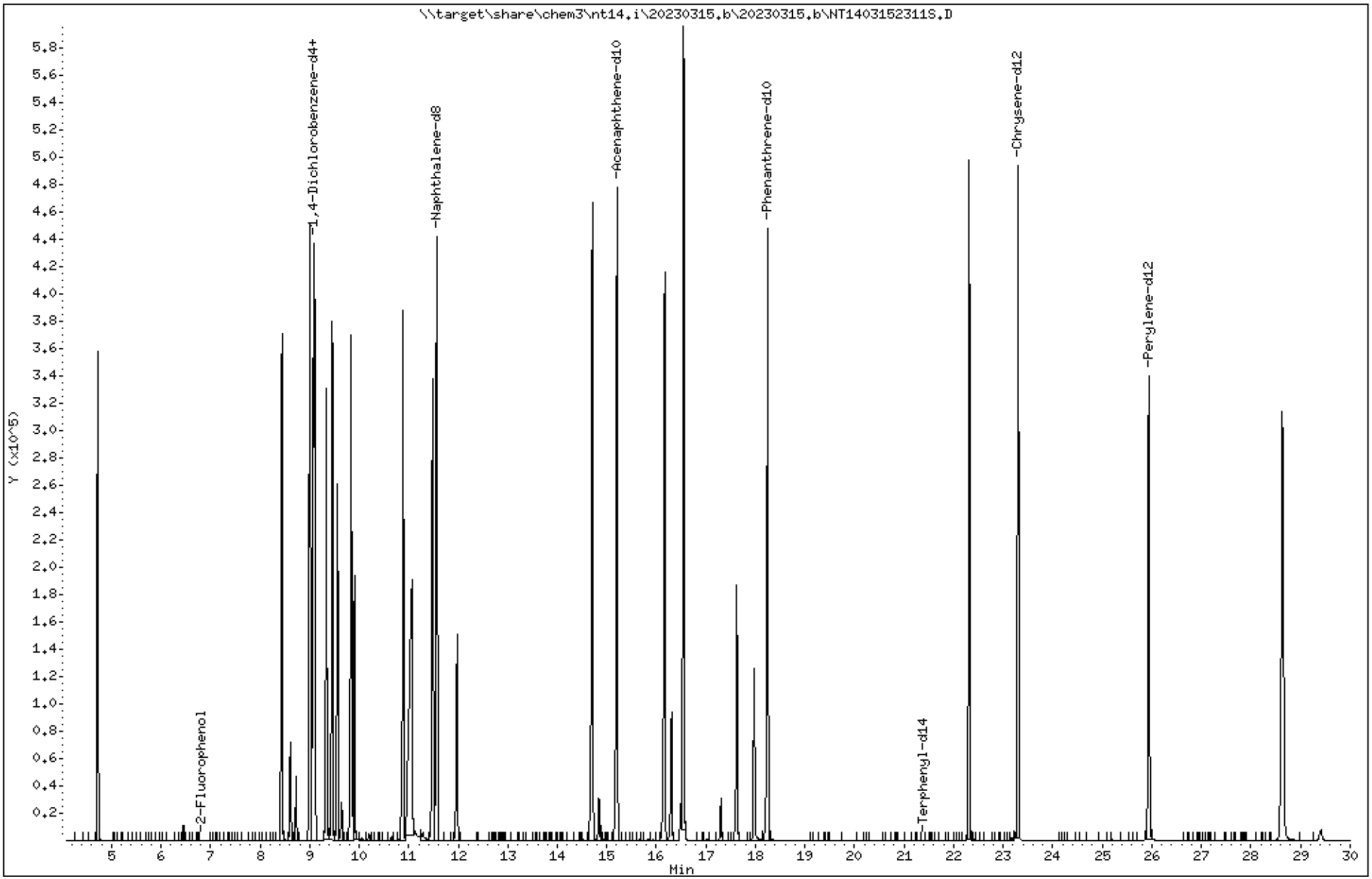
Sample Info: SLC0242-SCV1

Instrument: nt14.i

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

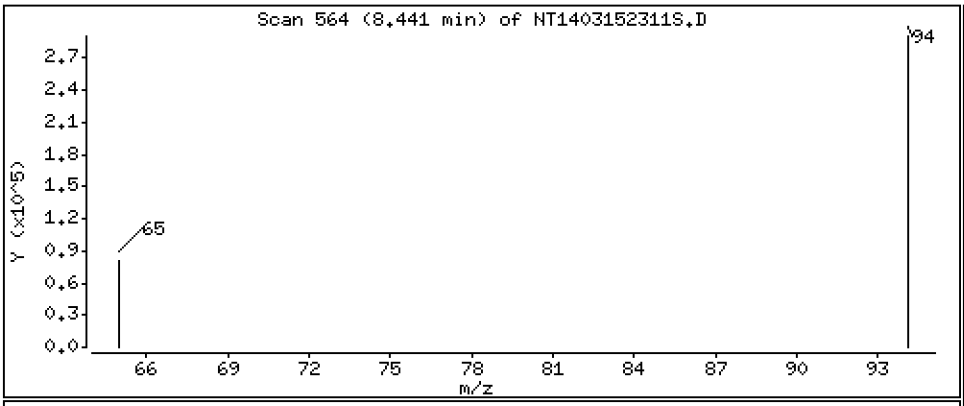
Operator: JGR

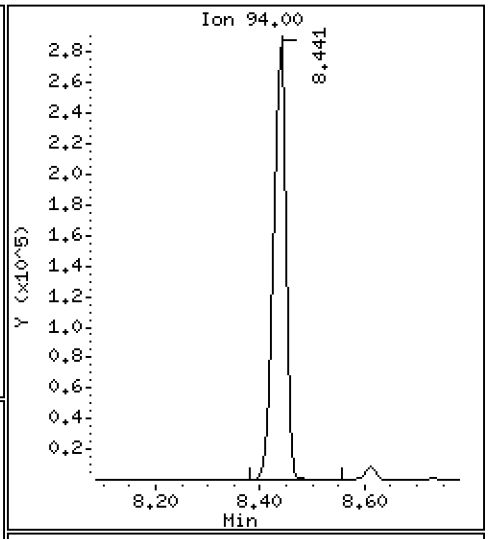
Column phase: ZB-5msi

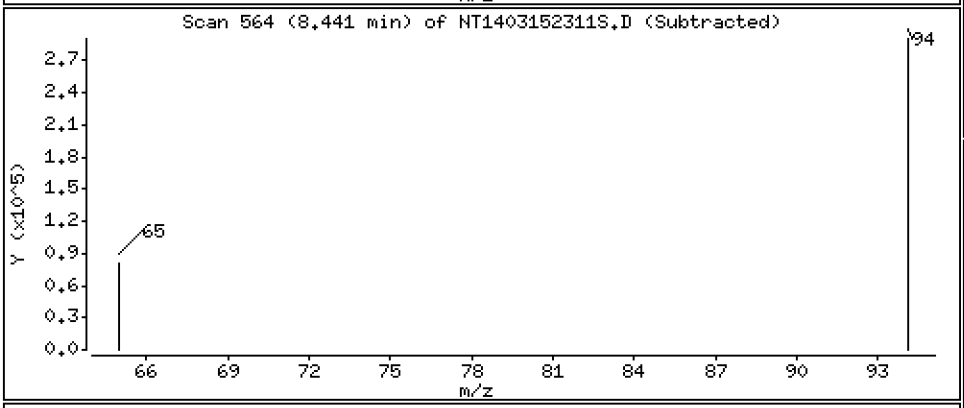
Column diameter: 0.25

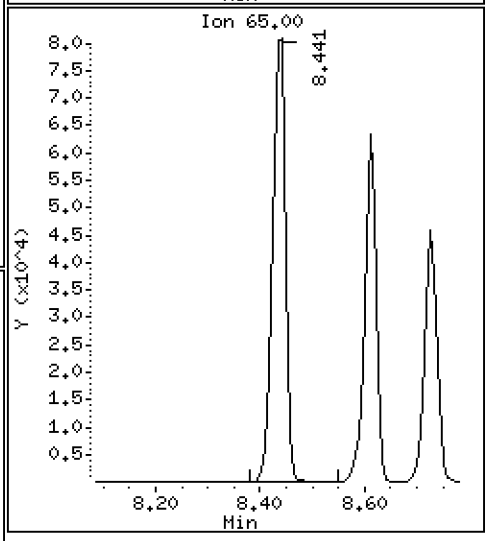
3 Phenol

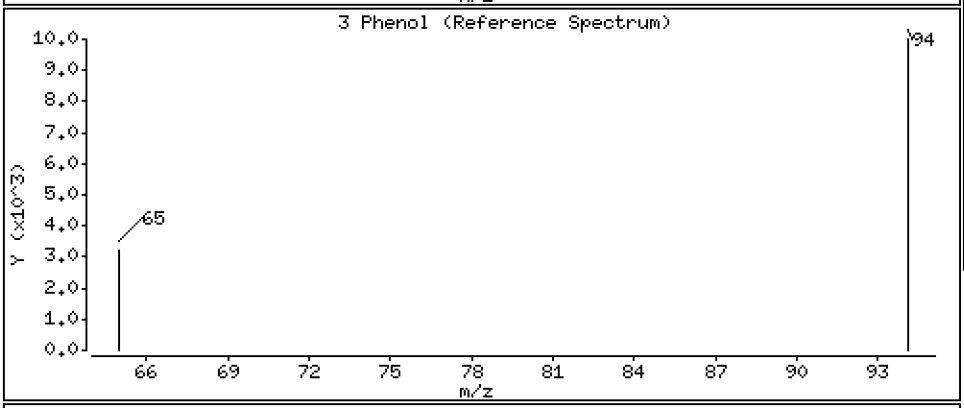
Concentration: 4.542 ug/mL

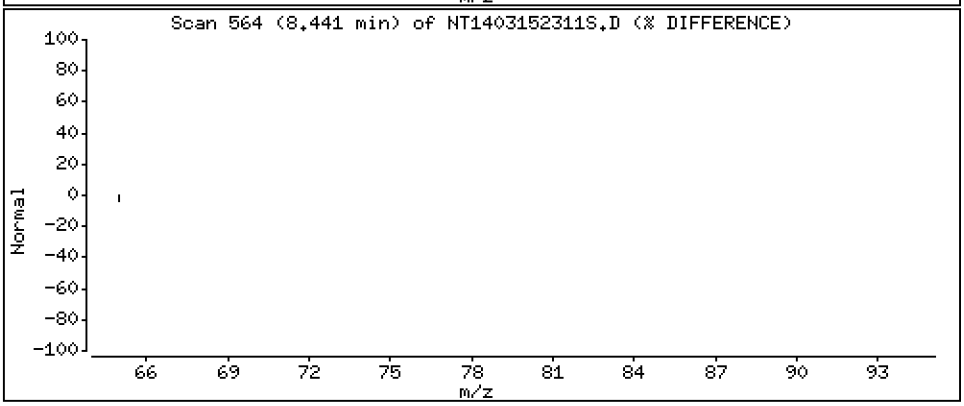












Data File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT1403152311S.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

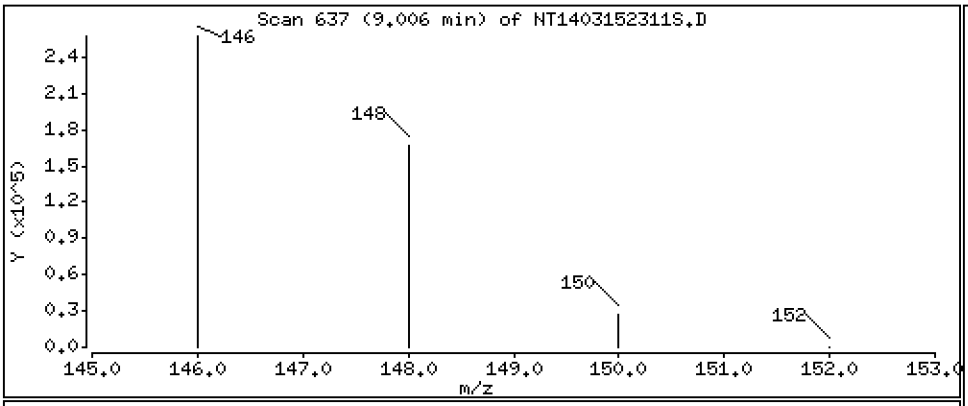
Operator: JGR

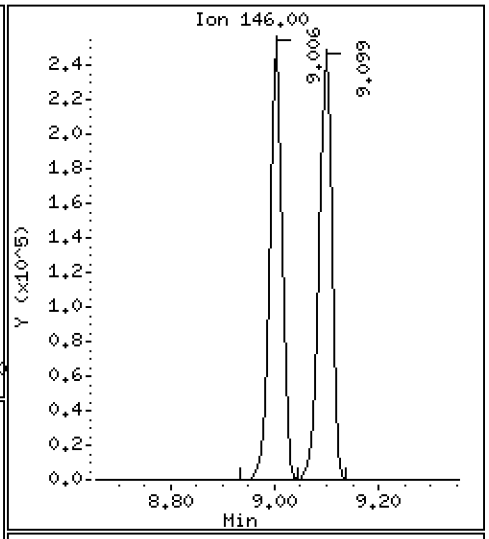
Column phase: ZB-5msi

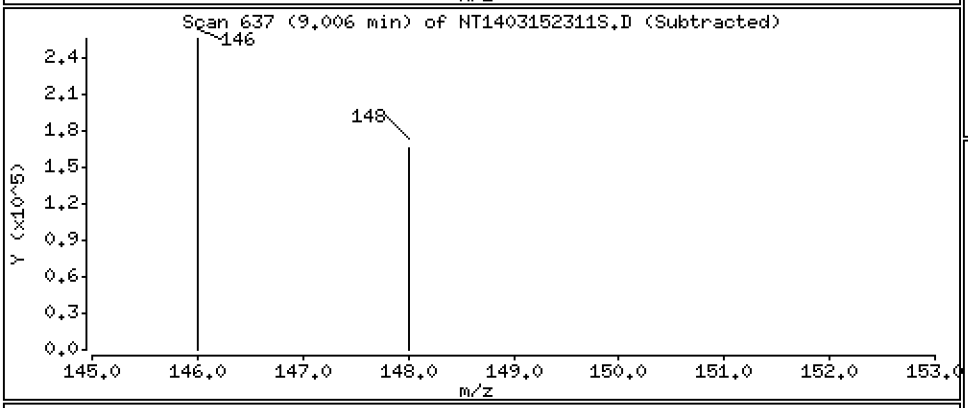
Column diameter: 0.25

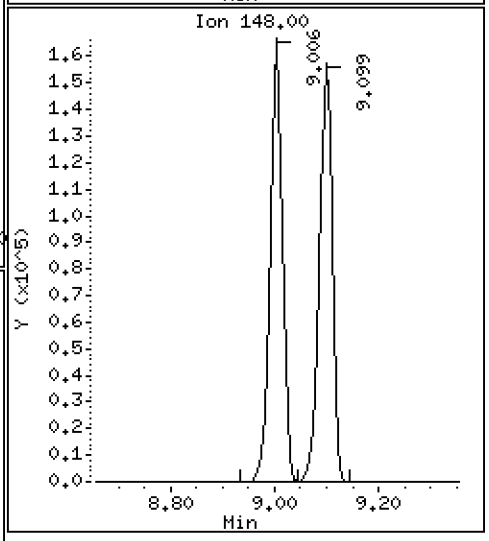
7 1,3-Dichlorobenzene

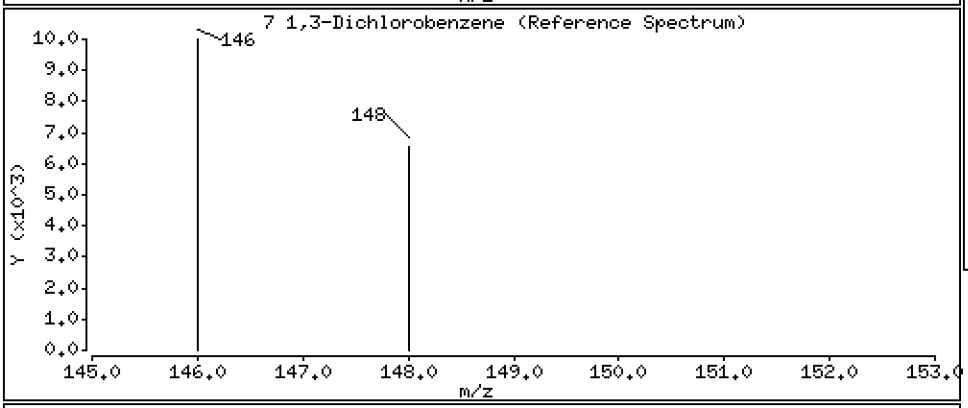
Concentration: 4.839 ug/mL

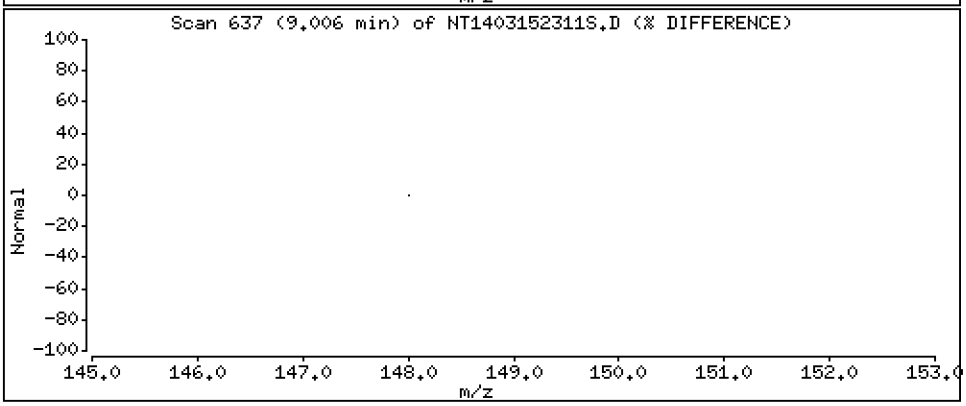












Data File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT1403152311S.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

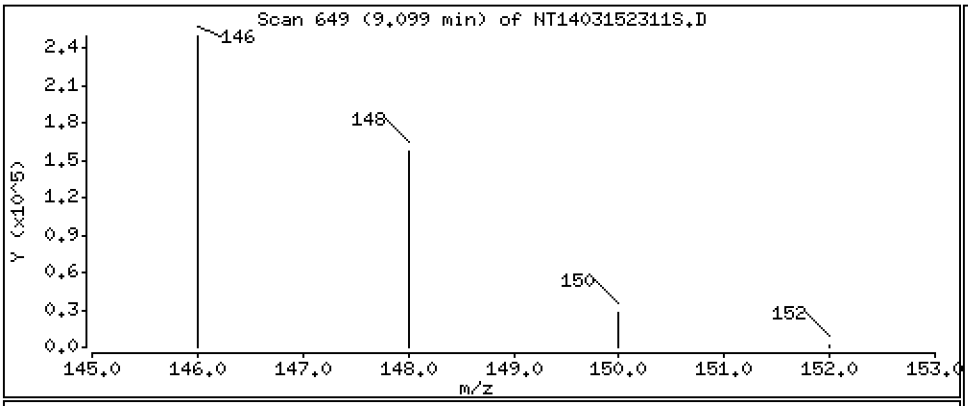
Operator: JGR

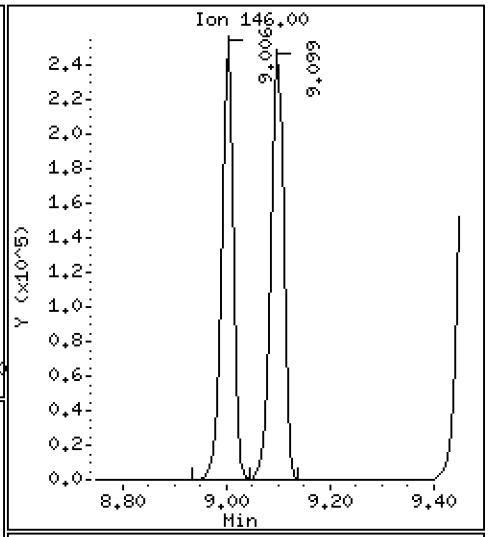
Column phase: ZB-5msi

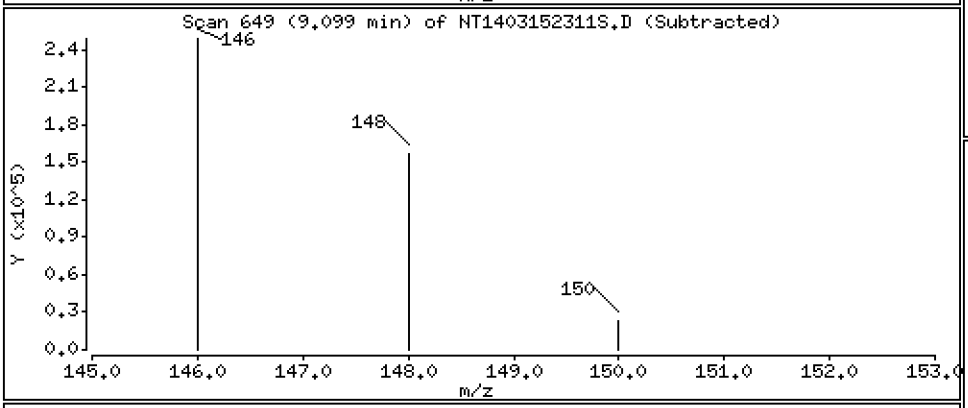
Column diameter: 0.25

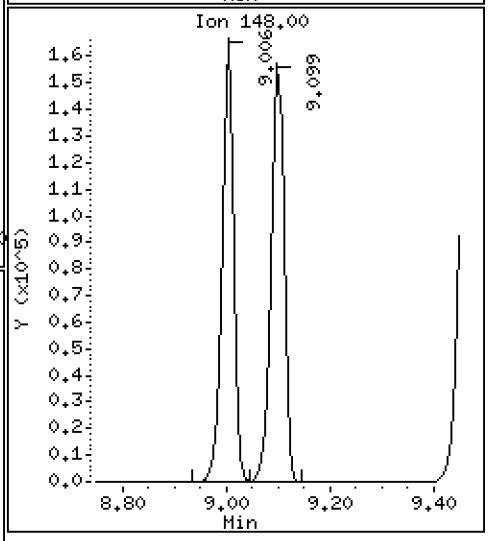
9 1,4-Dichlorobenzene

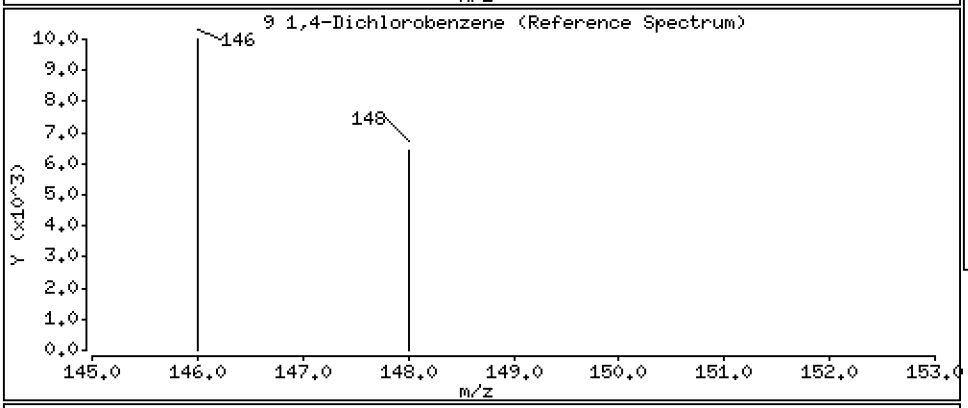
Concentration: 4.848 ug/mL

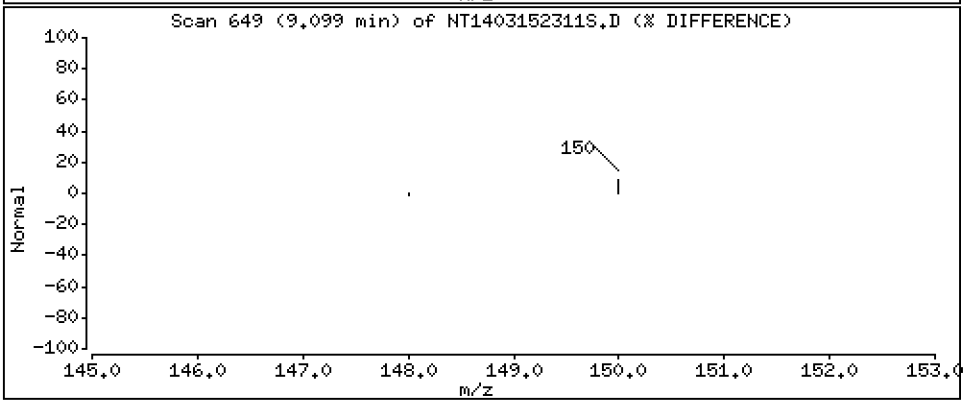












Data File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT1403152311S.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

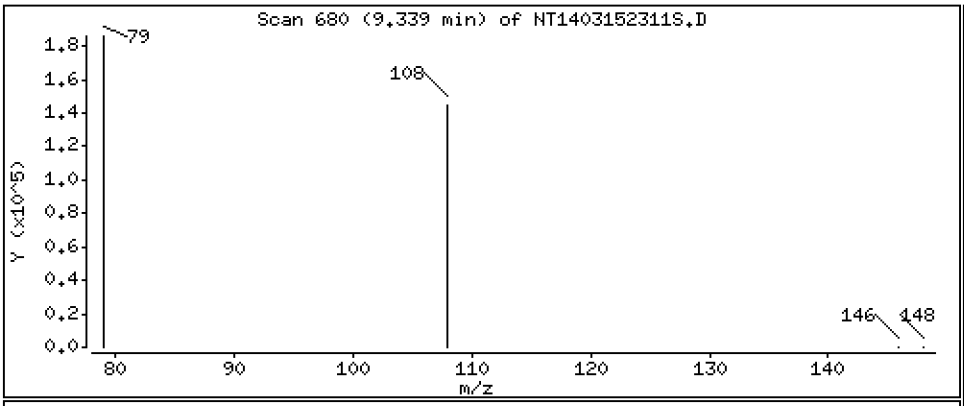
Operator: JGR

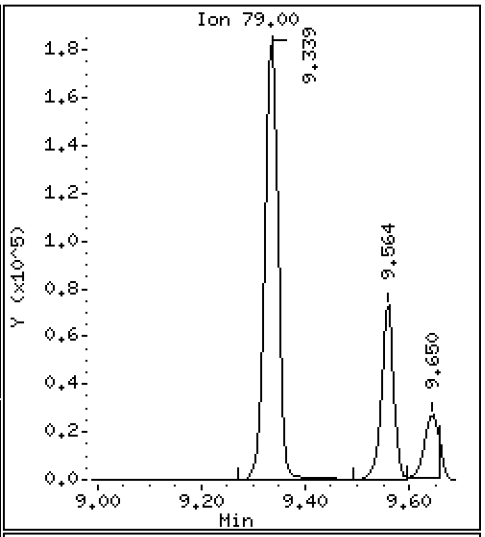
Column phase: ZB-5msi

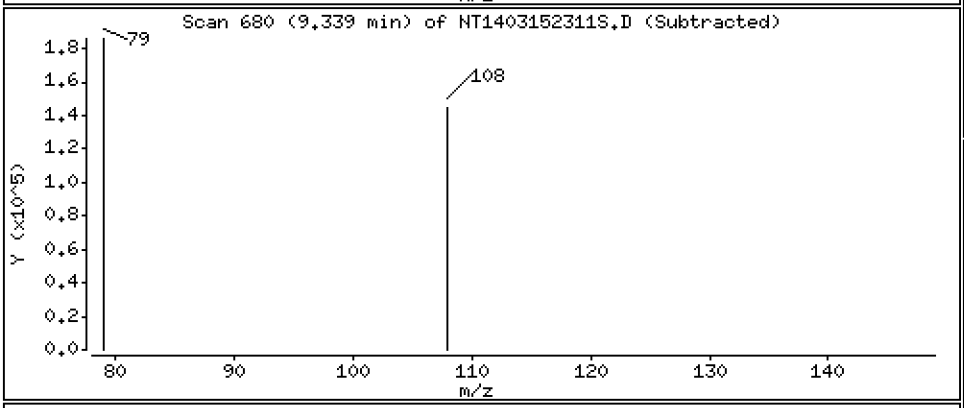
Column diameter: 0.25

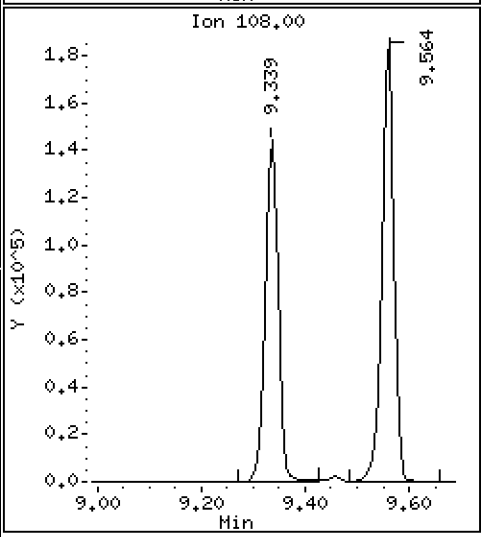
11 Benzyl alcohol

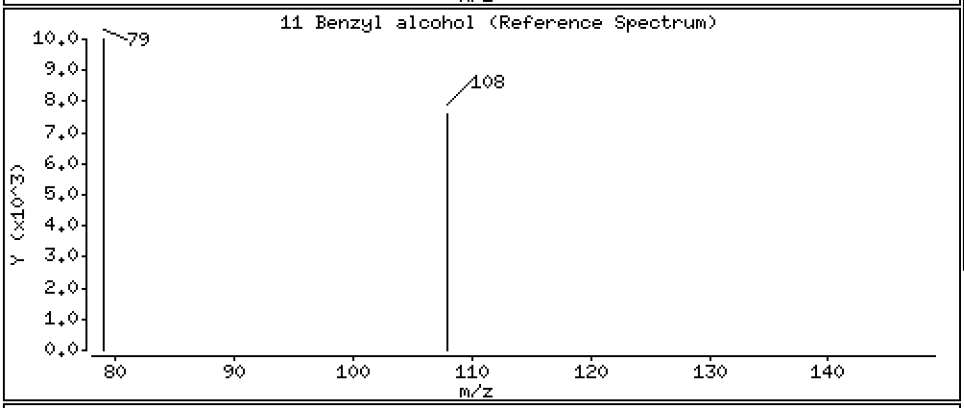
Concentration: 5.343 ug/mL

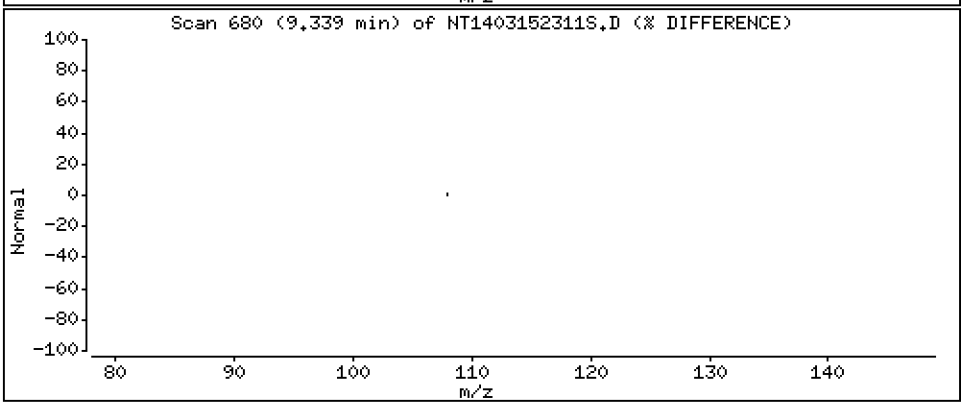












Data File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT1403152311S.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

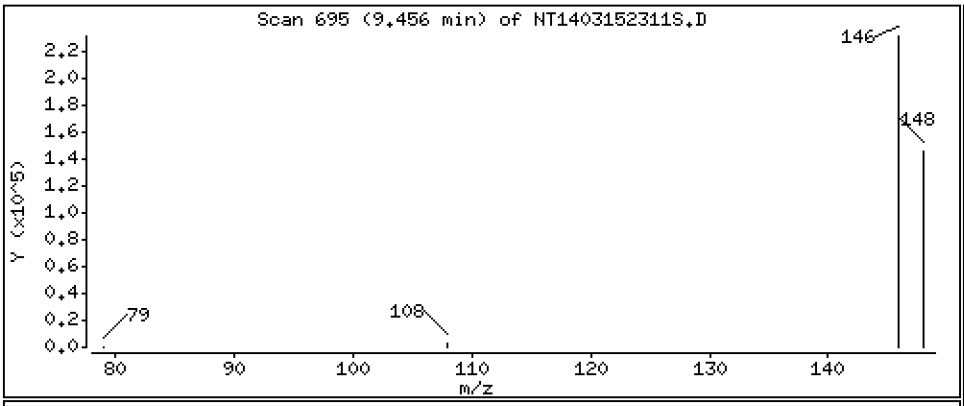
Operator: JGR

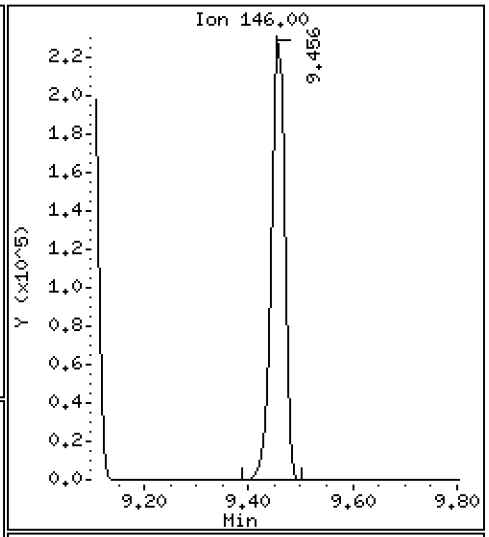
Column phase: ZB-5msi

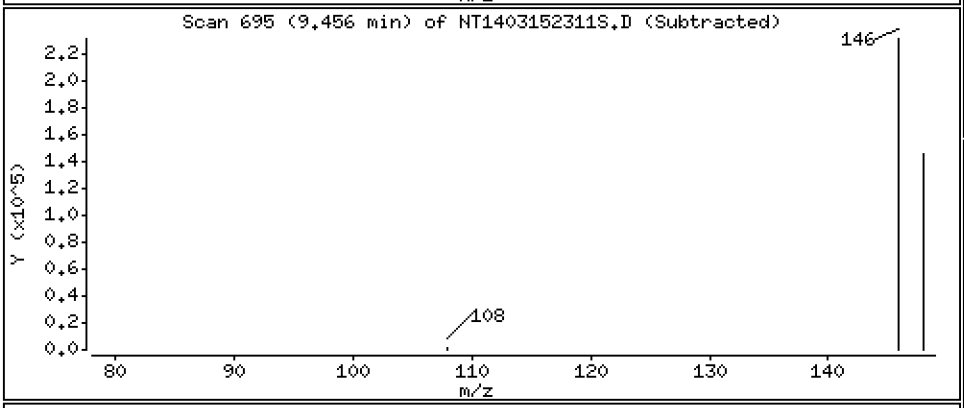
Column diameter: 0.25

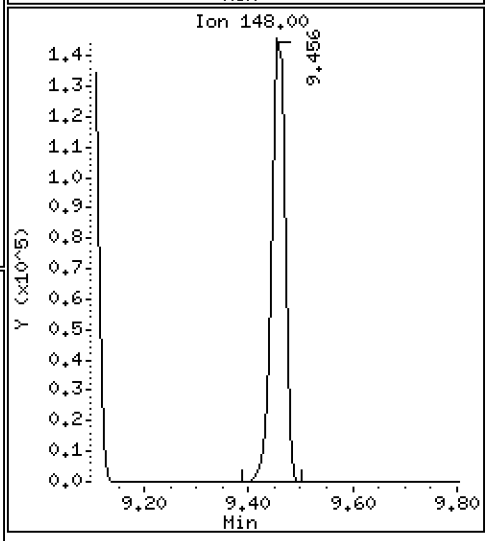
12 1,2-Dichlorobenzene

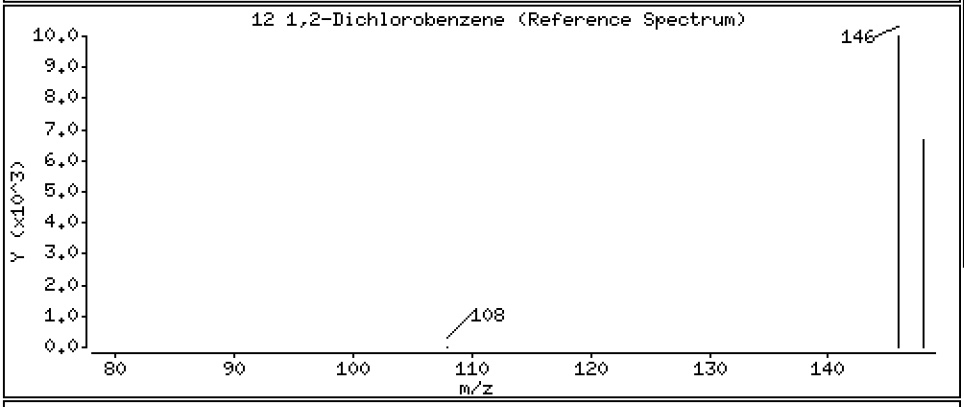
Concentration: 4.822 ug/mL

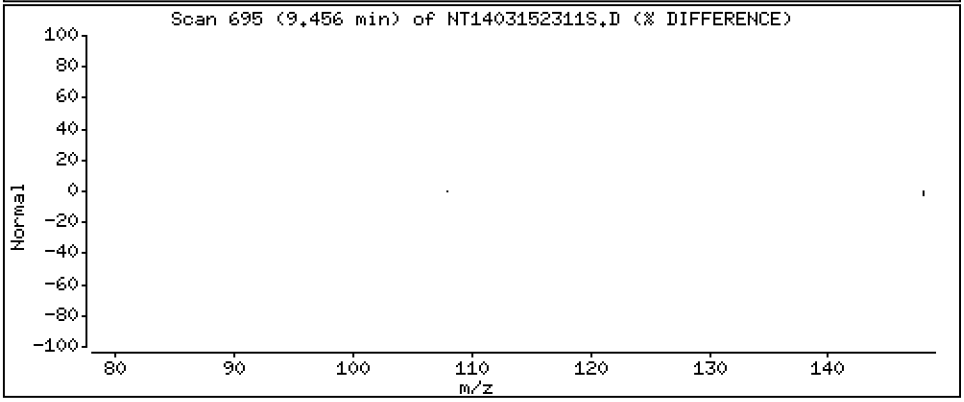












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

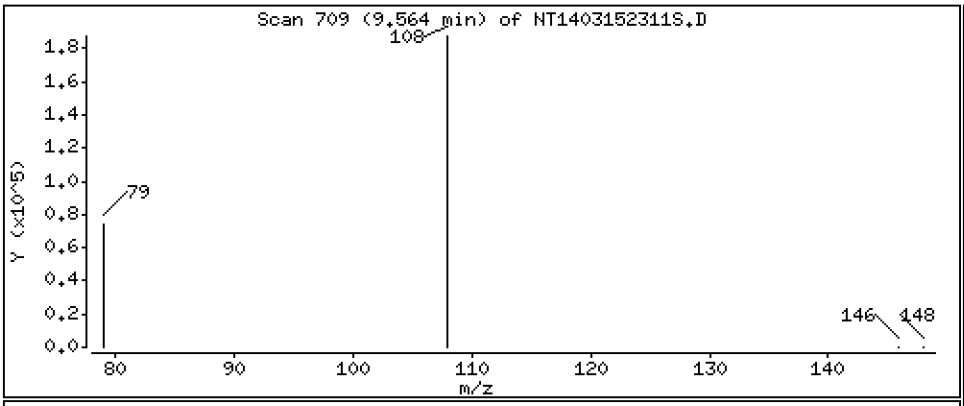
Operator: JGR

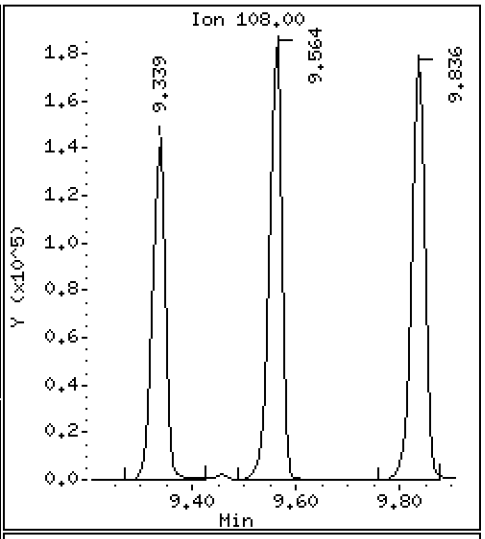
Column phase: ZB-5msi

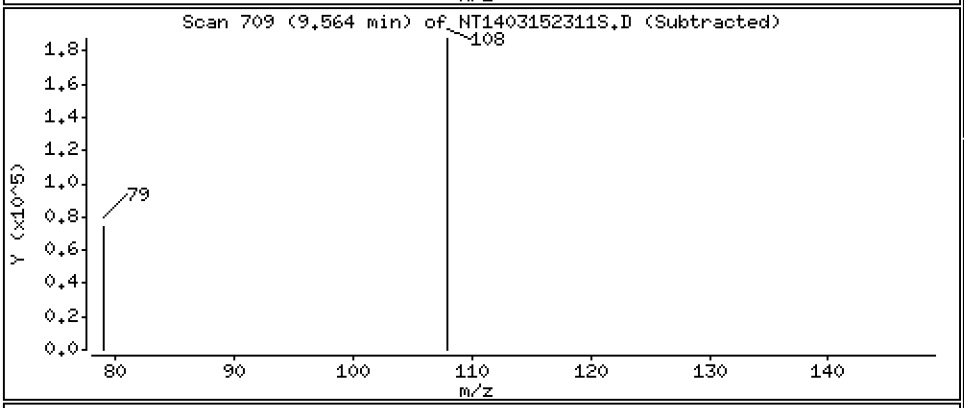
Column diameter: 0.25

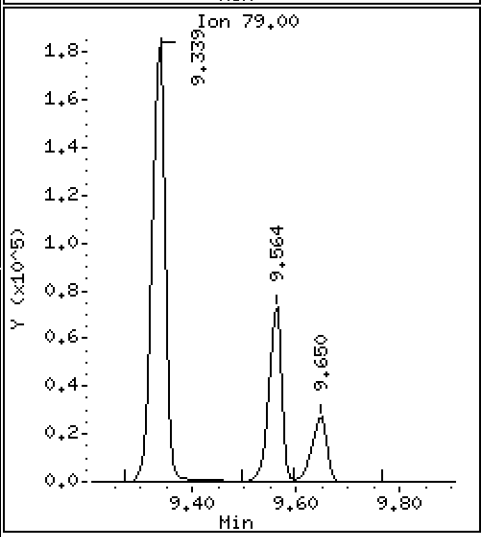
13 2-Methylphenol

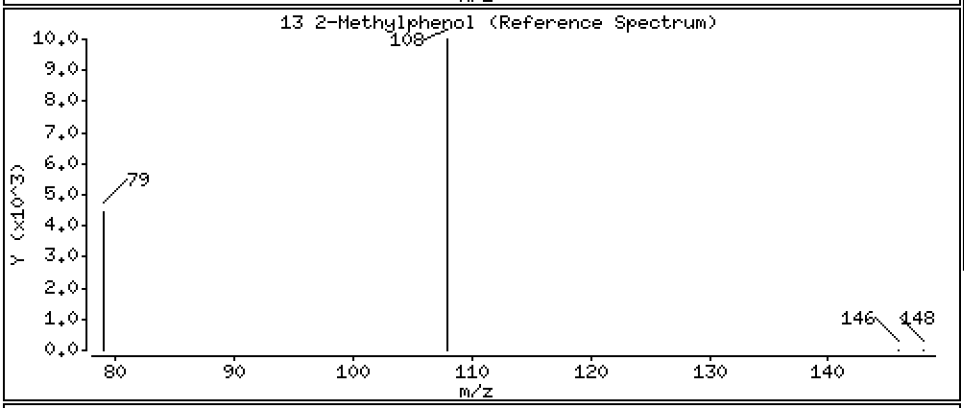
Concentration: 4.288 ug/mL

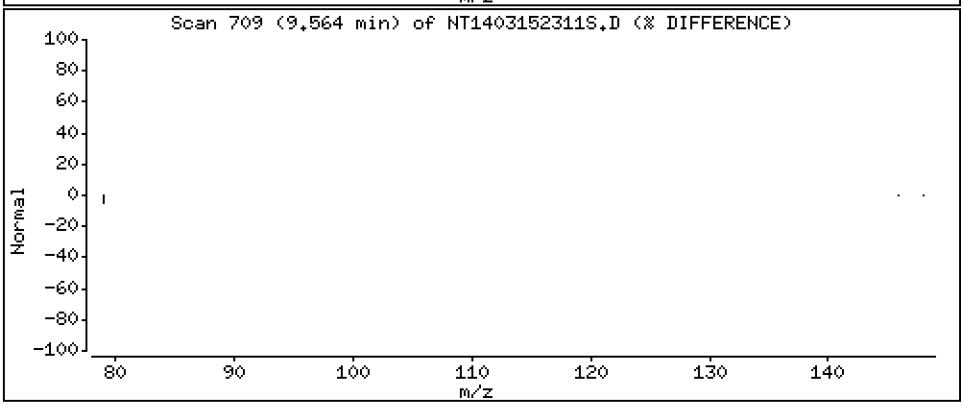












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

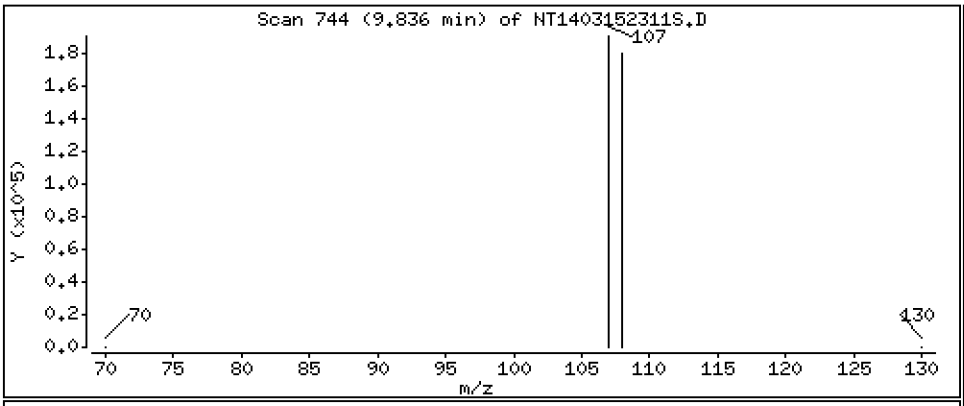
Operator: JGR

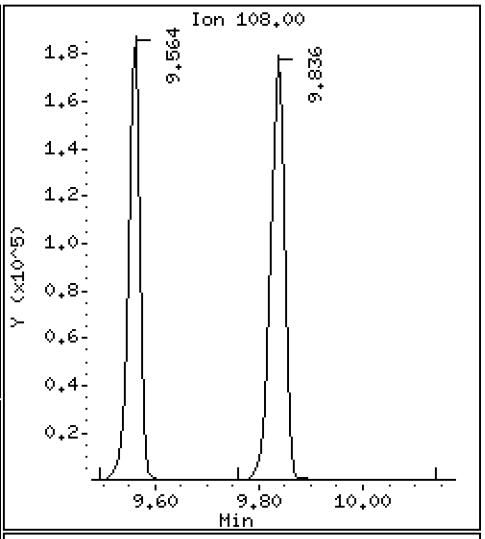
Column phase: ZB-5msi

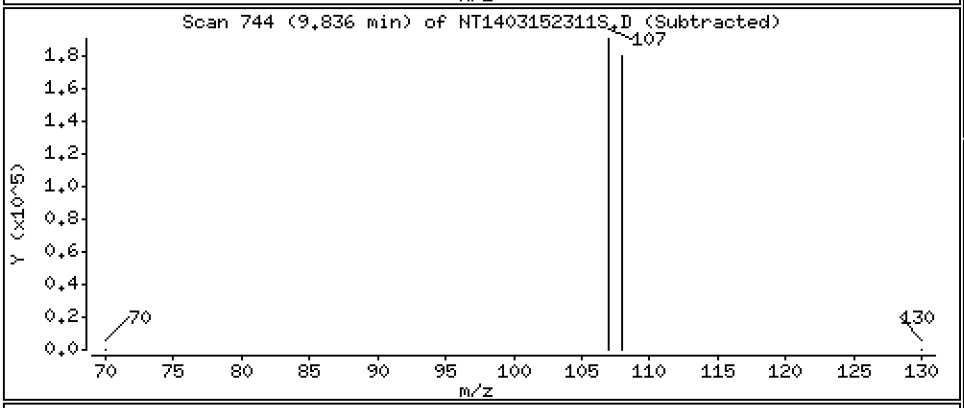
Column diameter: 0.25

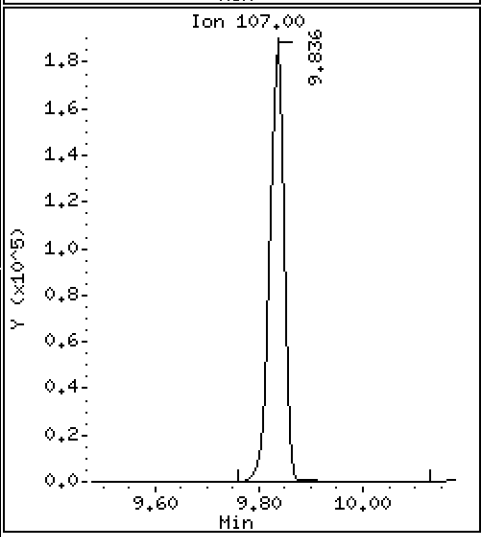
15 4-Methylphenol

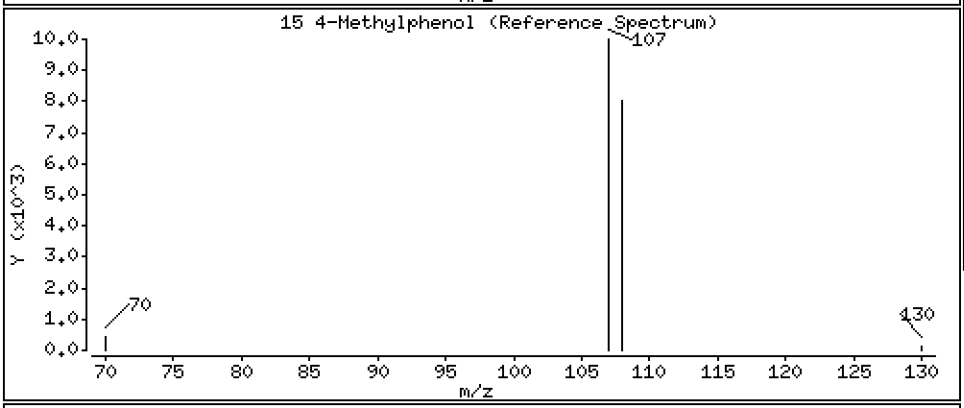
Concentration: 4.539 ug/mL

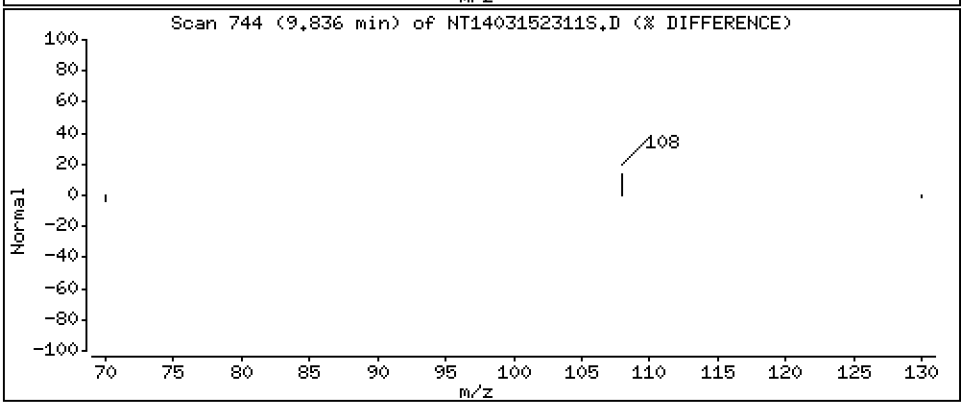












Data File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT1403152311S.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

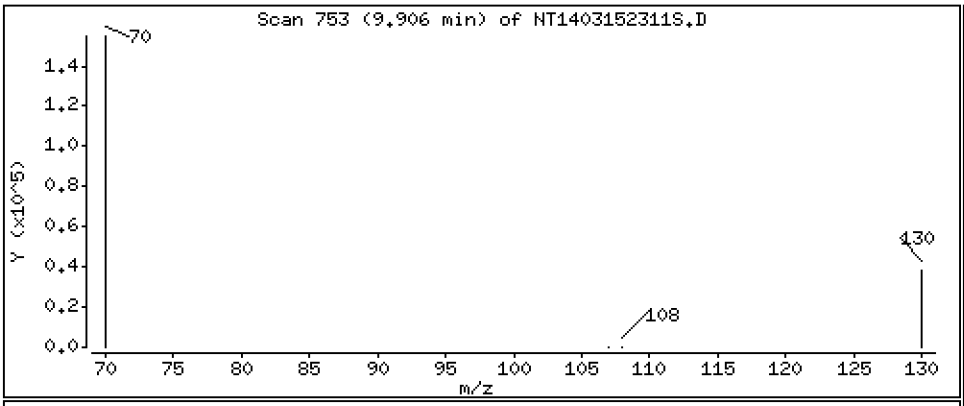
Operator: JGR

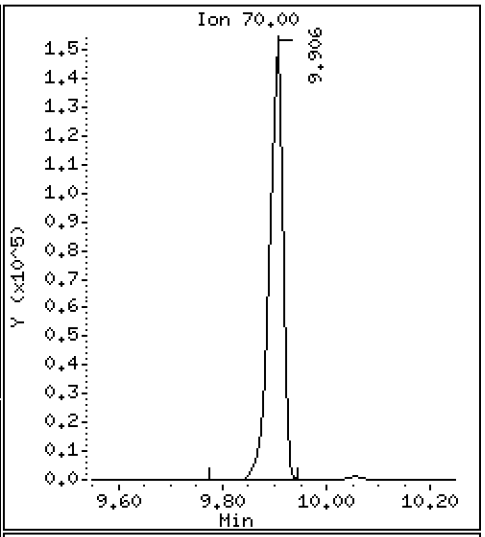
Column phase: ZB-5msi

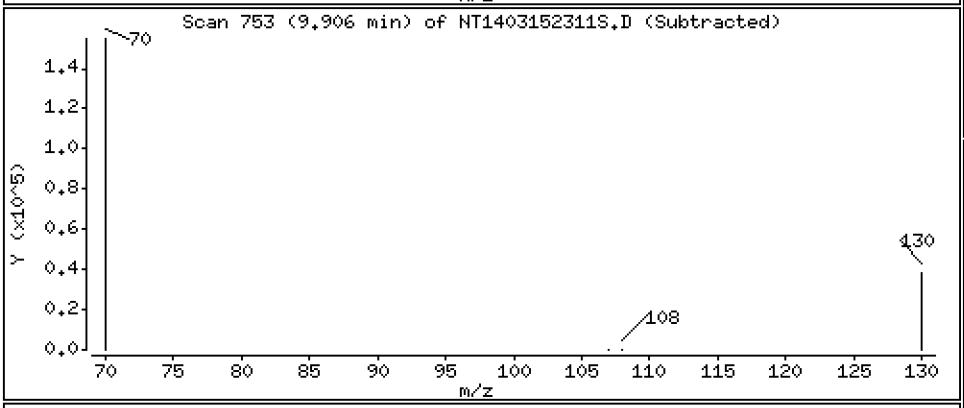
Column diameter: 0.25

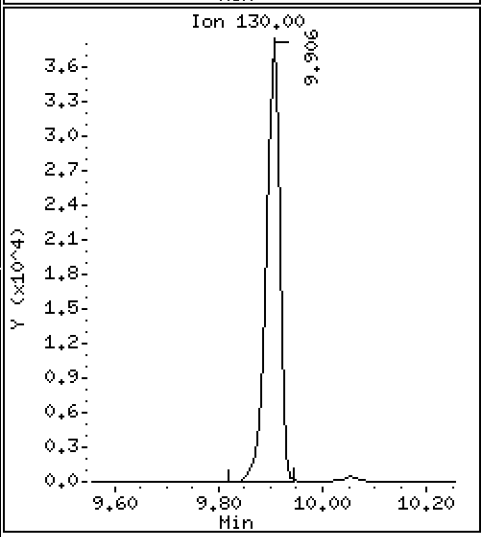
16 N-Nitroso-di-n-propylamine

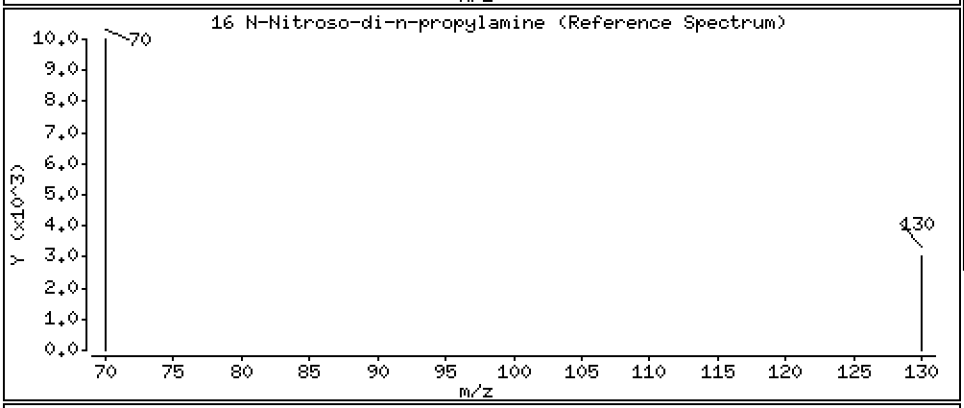
Concentration: 5.137 ug/mL

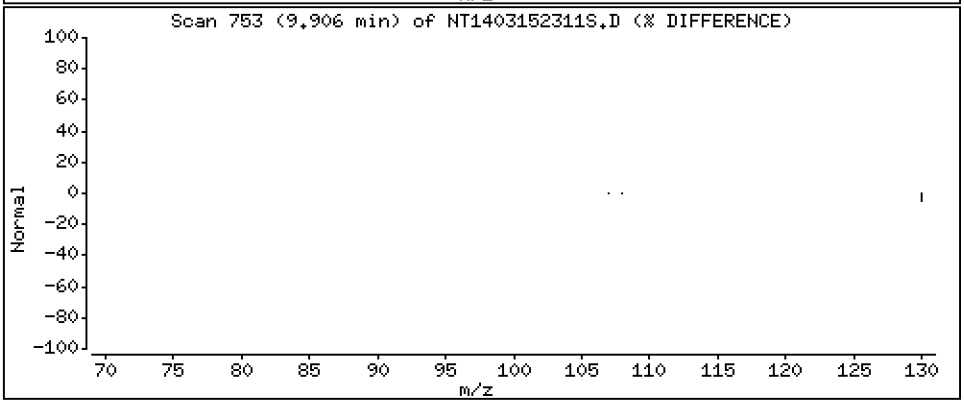












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

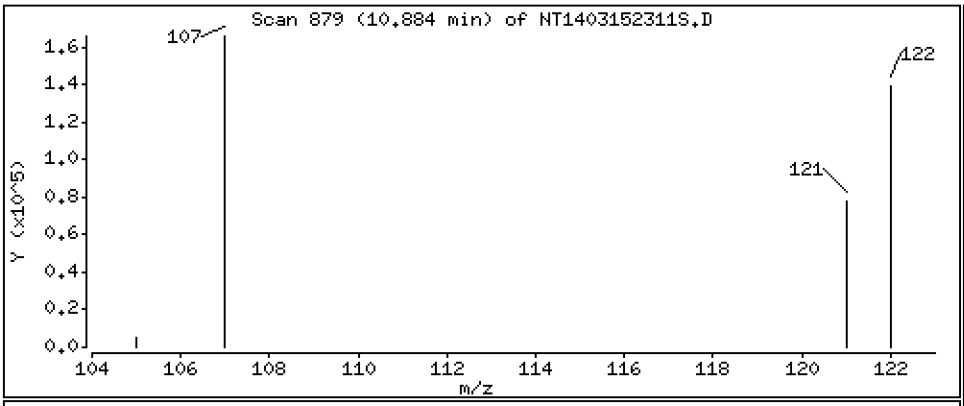
Operator: JGR

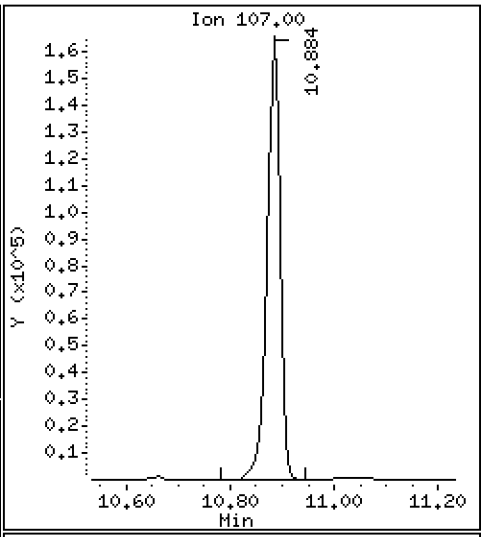
Column phase: ZB-5msi

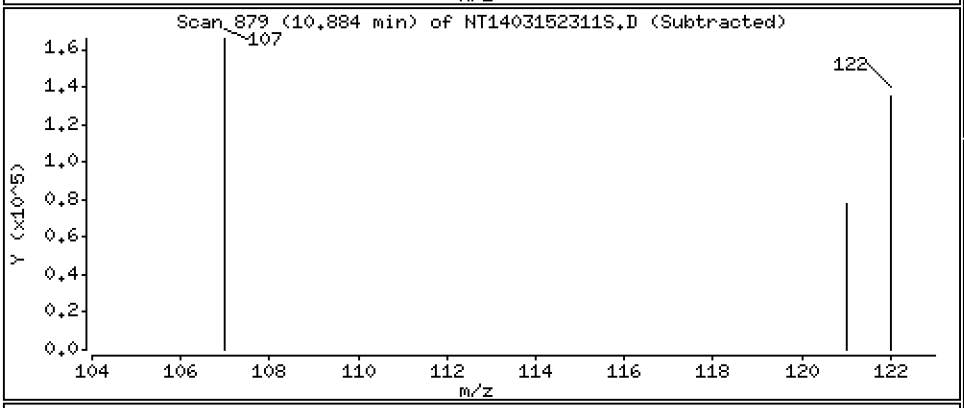
Column diameter: 0.25

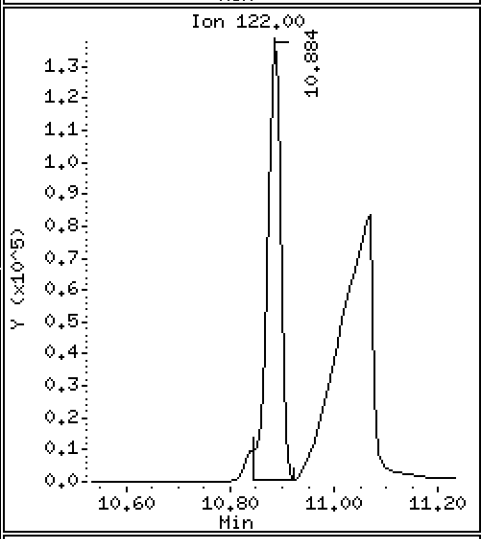
22 2,4-Dimethylphenol

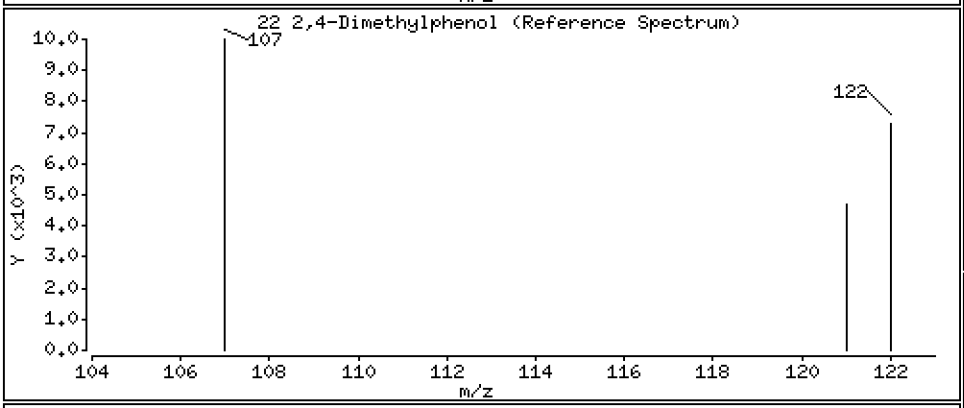
Concentration: 3.934 ug/mL

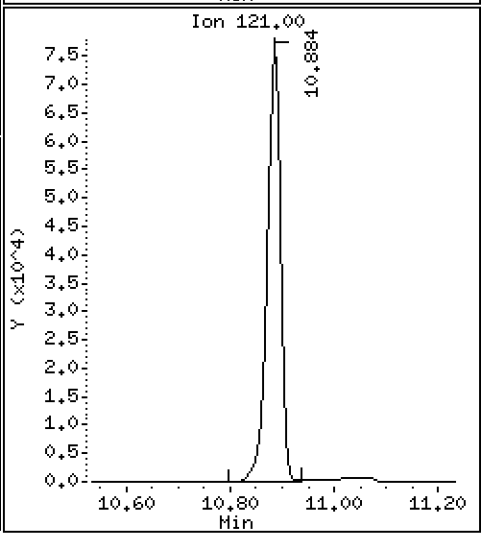


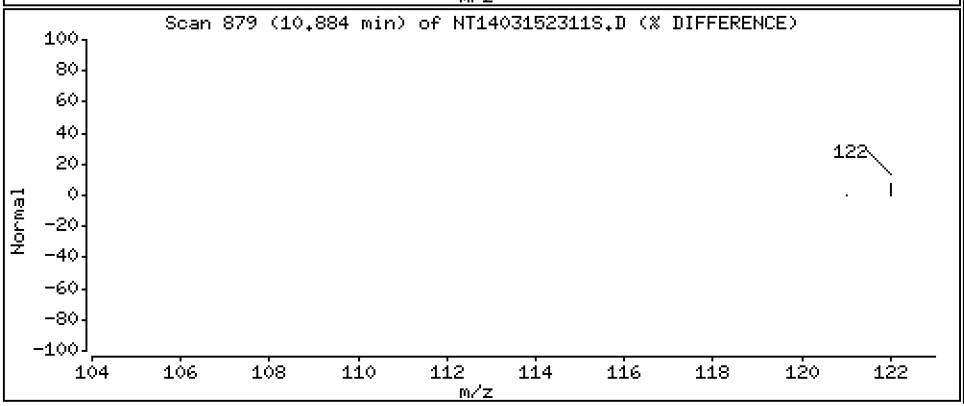












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

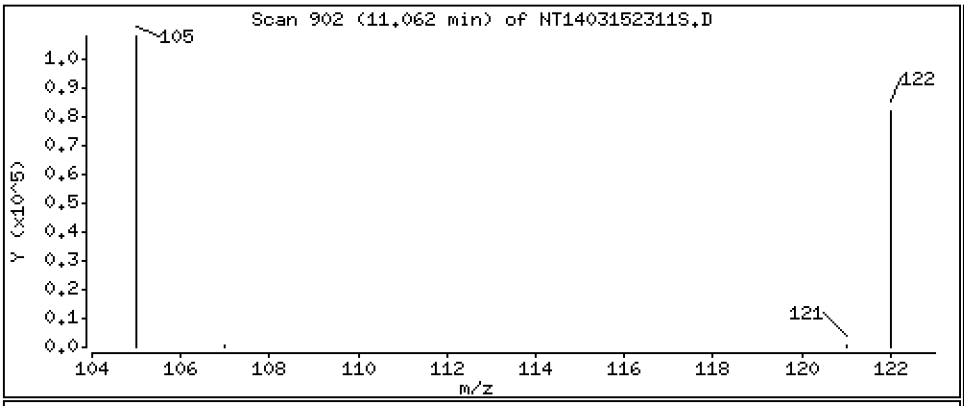
Operator: JGR

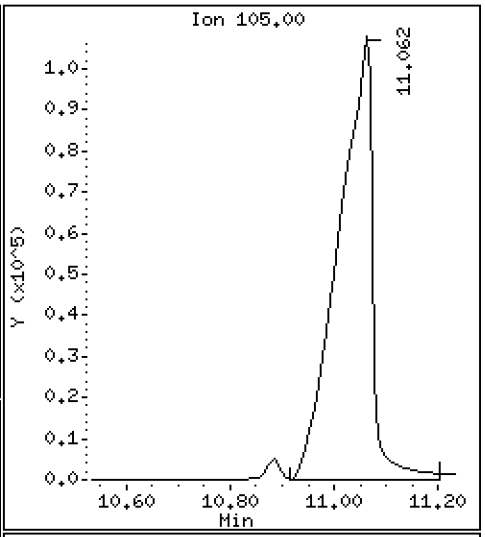
Column phase: ZB-5msi

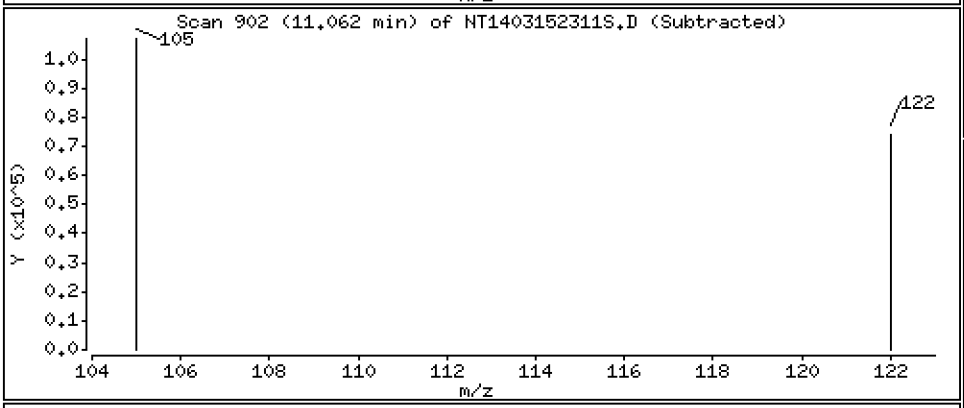
Column diameter: 0.25

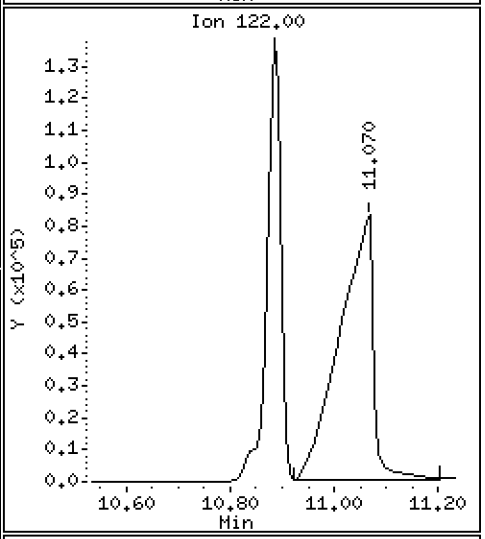
24 Benzoic acid

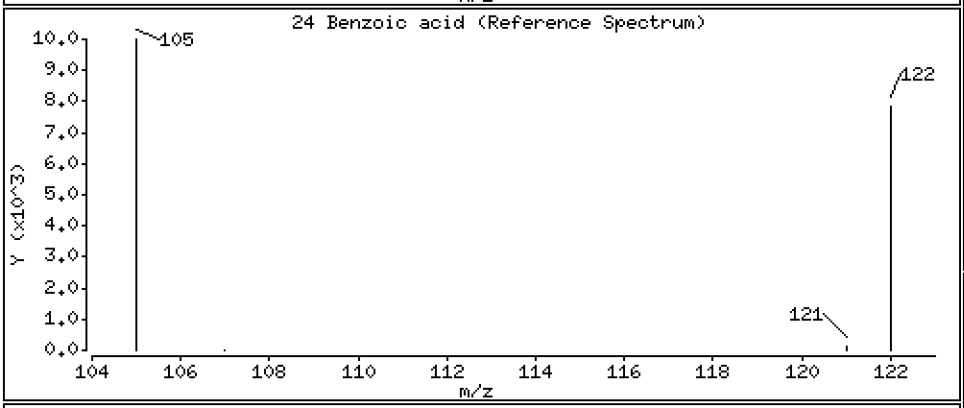
Concentration: 9.081 ug/mL

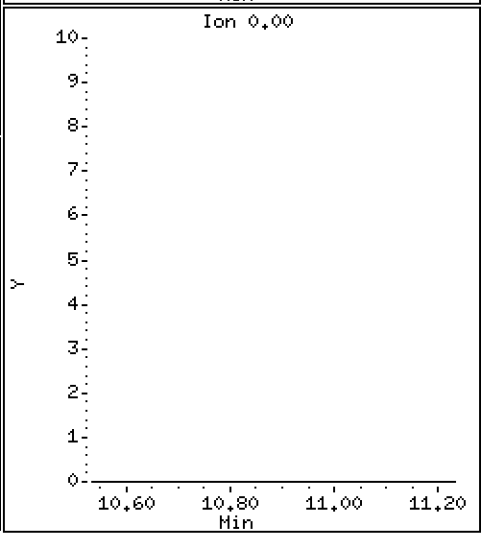


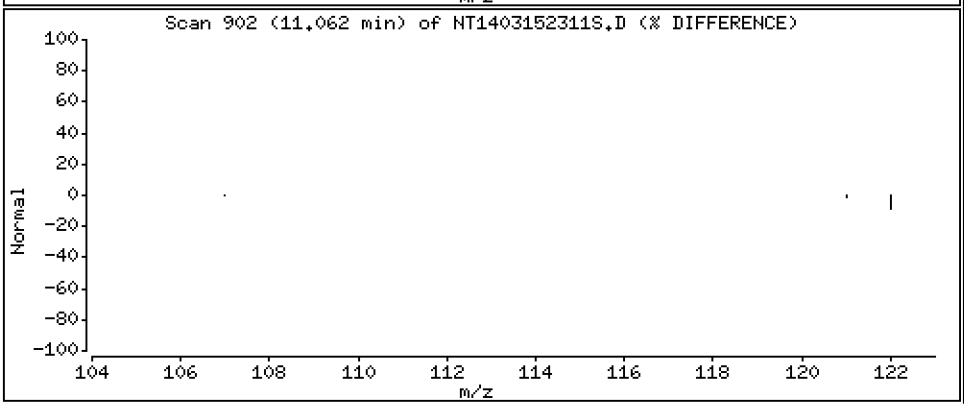












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

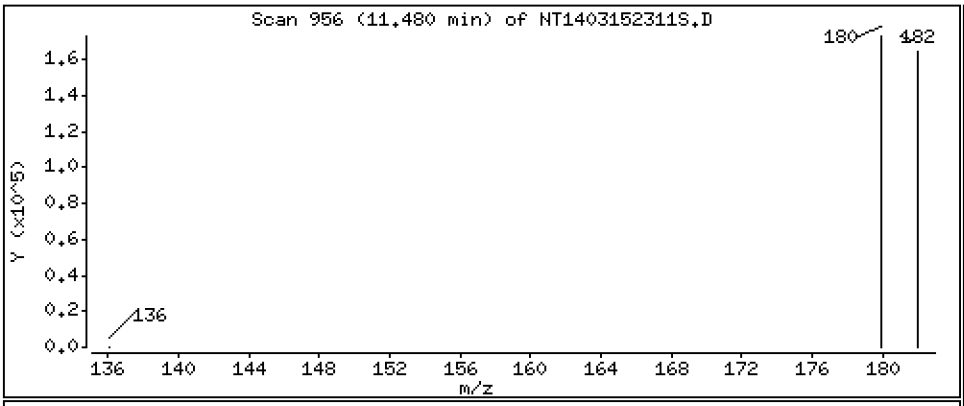
Operator: JGR

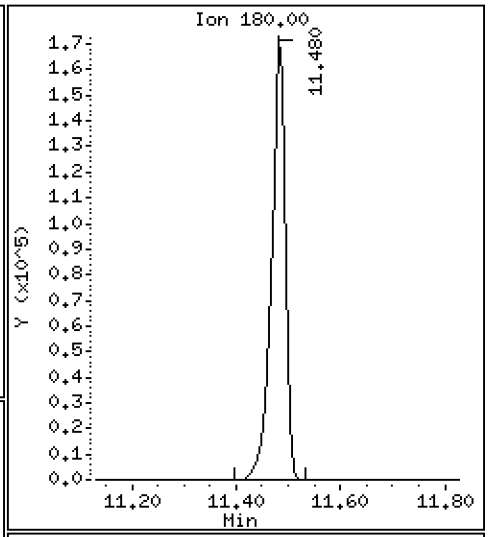
Column phase: ZB-5msi

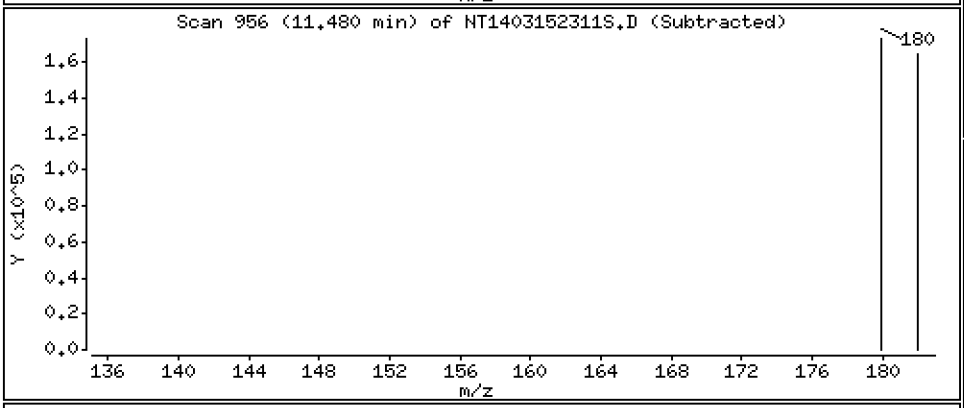
Column diameter: 0.25

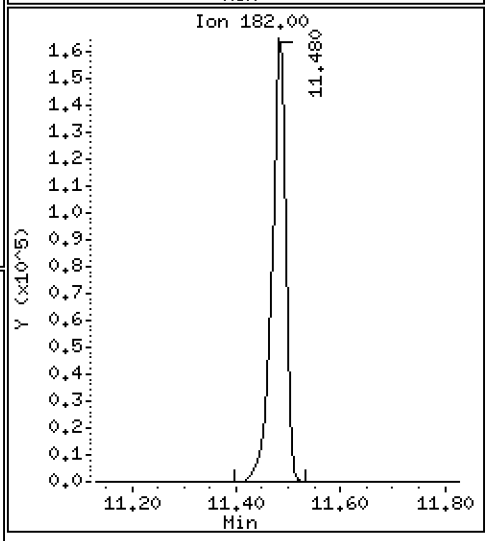
26 1,2,4-Trichlorobenzene

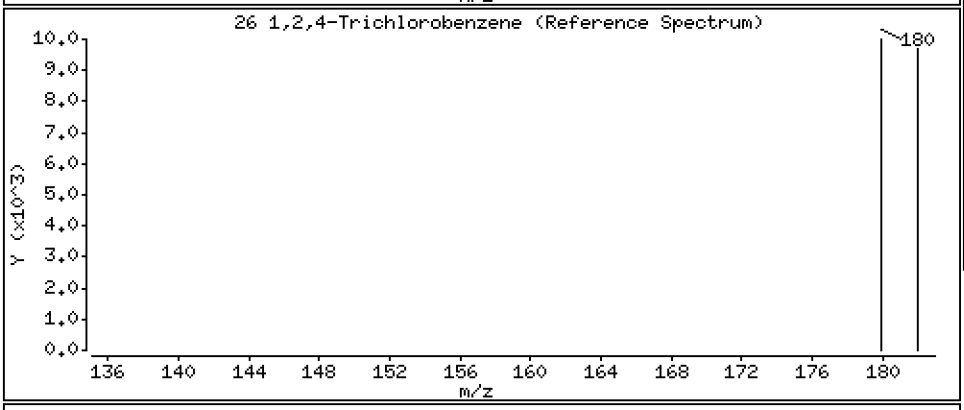
Concentration: 4.574 ug/mL

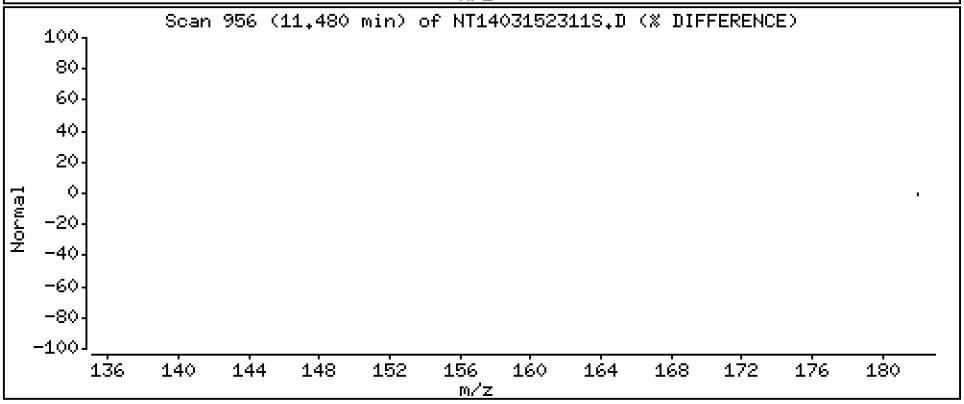












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

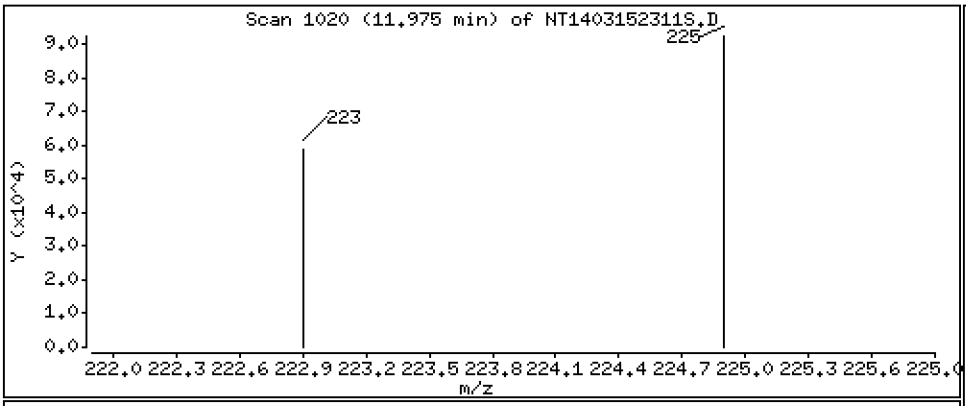
Operator: JGR

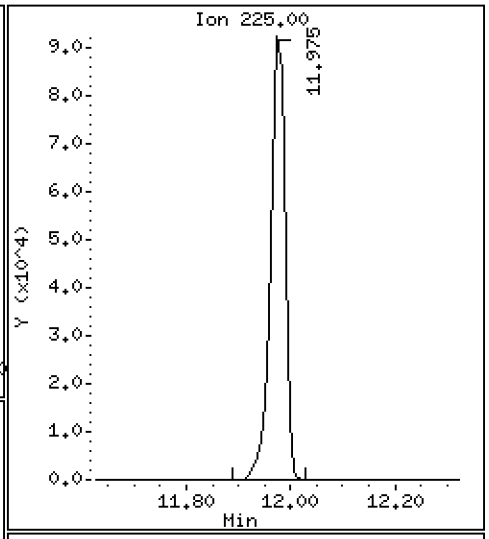
Column phase: ZB-5msi

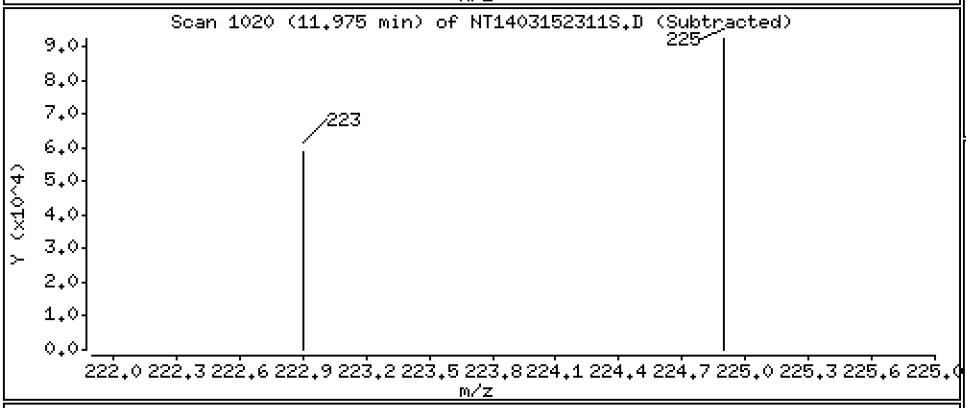
Column diameter: 0.25

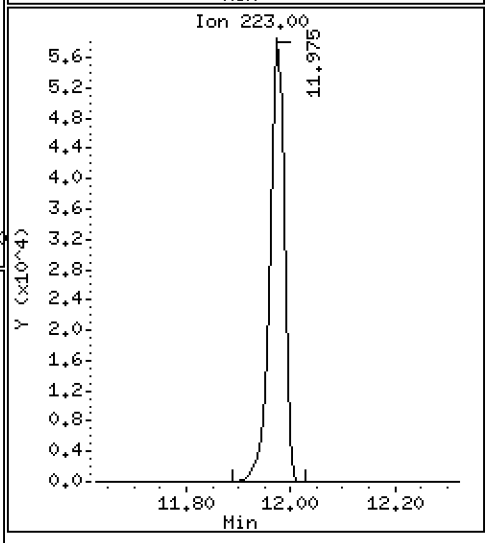
30 Hexachlorobutadiene

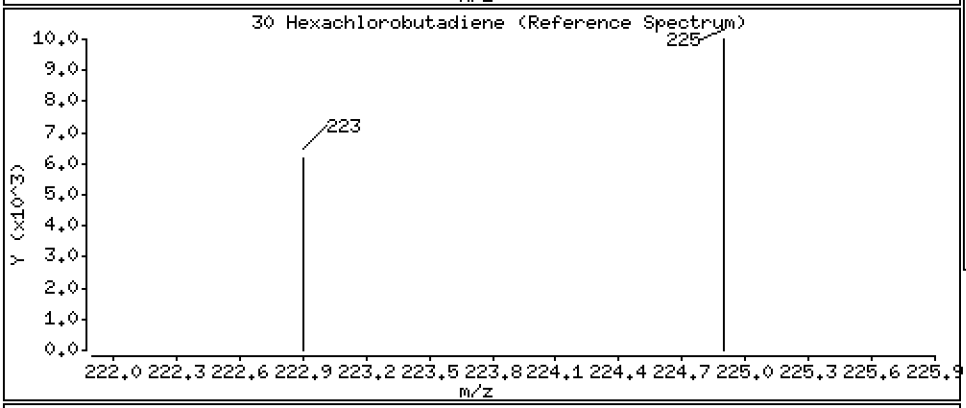
Concentration: 4.973 ug/mL

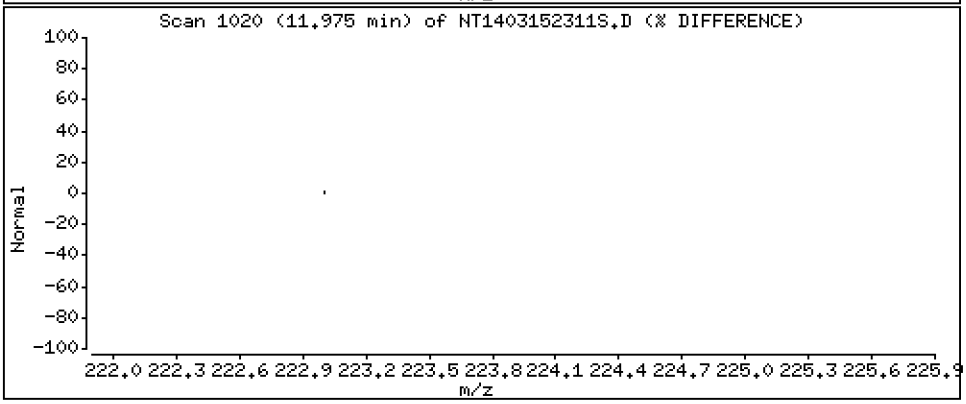












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

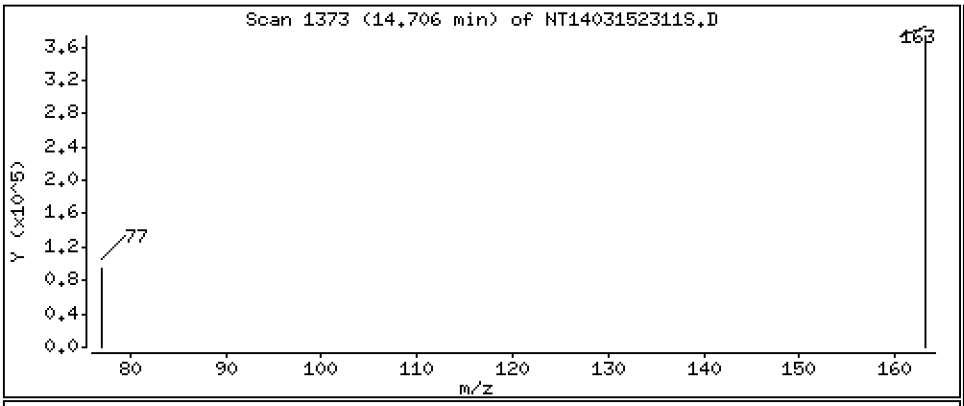
Operator: JGR

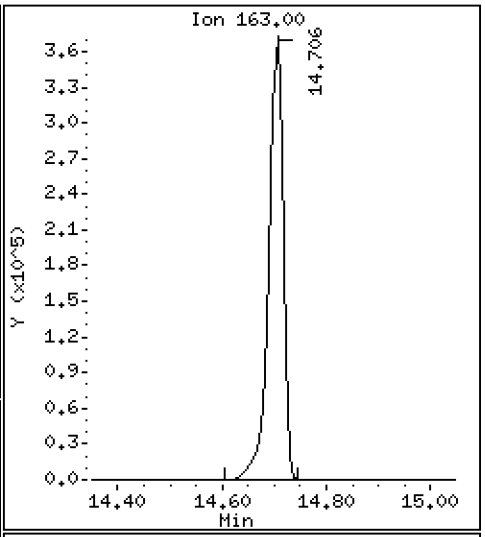
Column phase: ZB-5msi

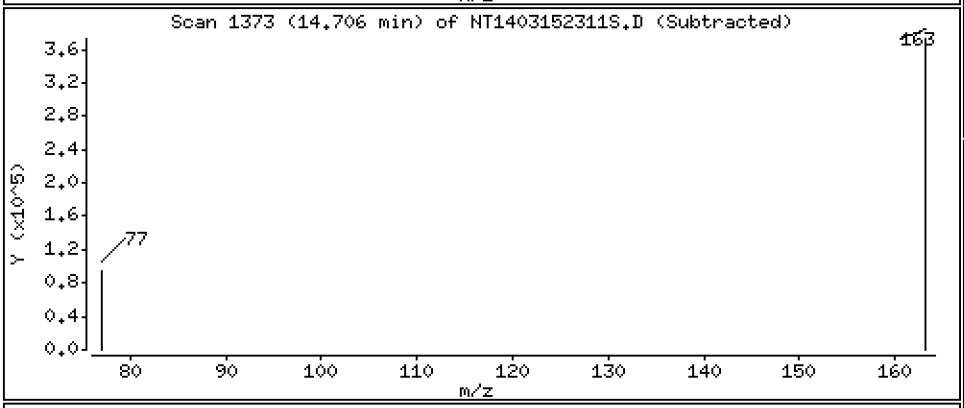
Column diameter: 0.25

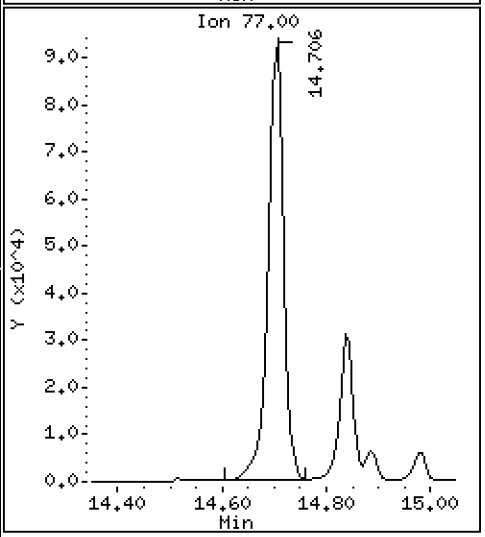
39 Dimethylphthalate

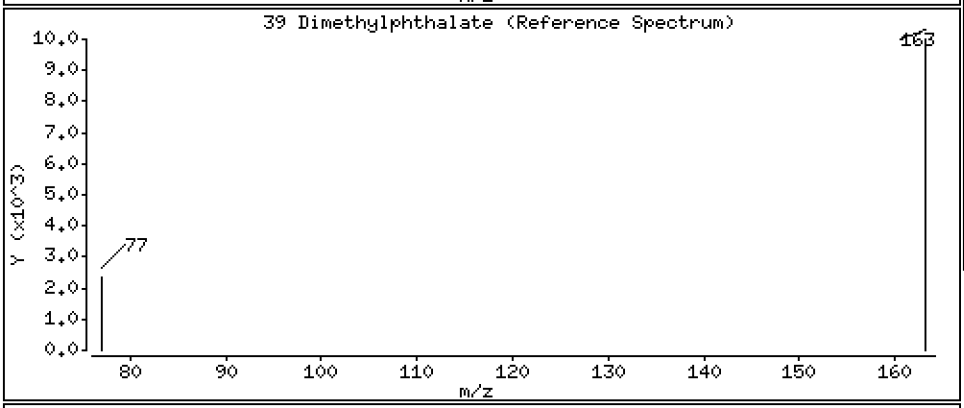
Concentration: 4.995 ug/mL

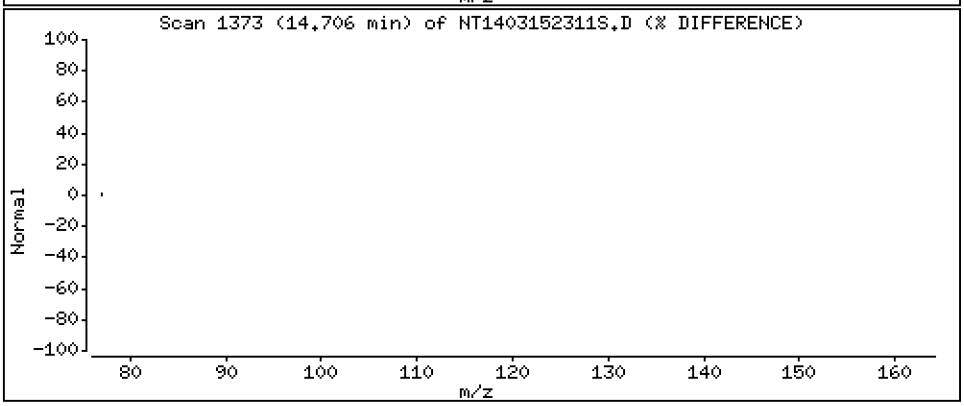












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

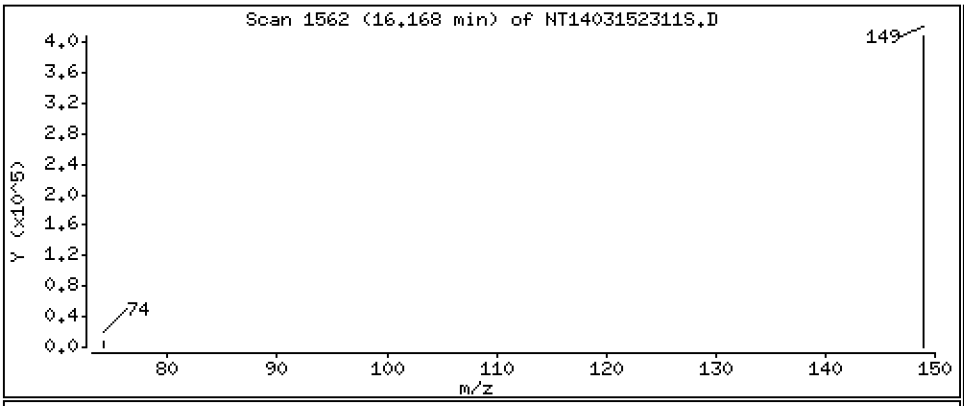
Operator: JGR

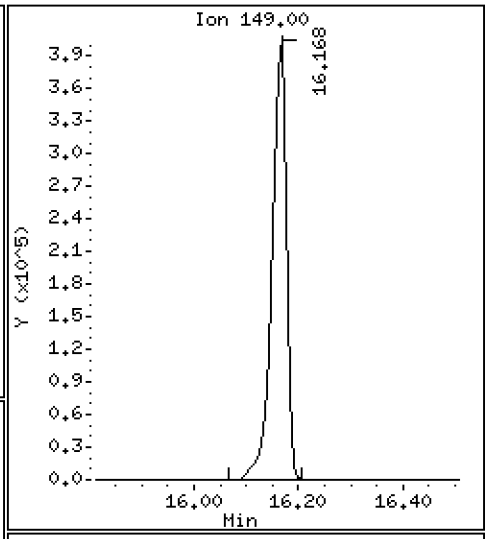
Column phase: ZB-5msi

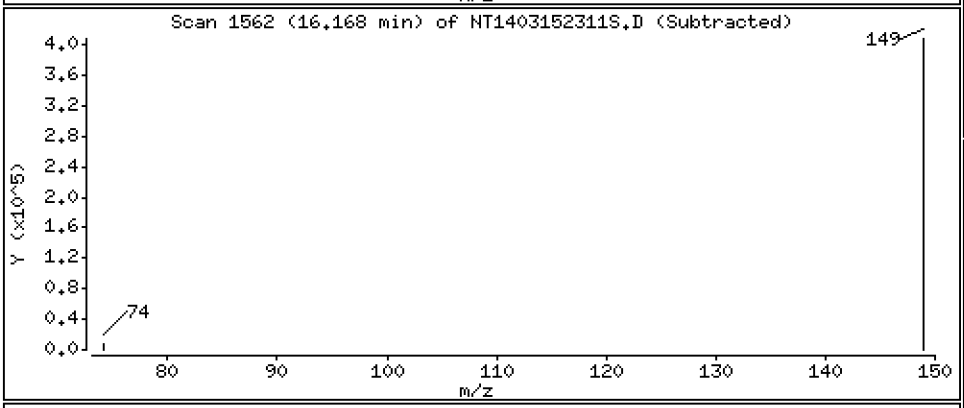
Column diameter: 0.25

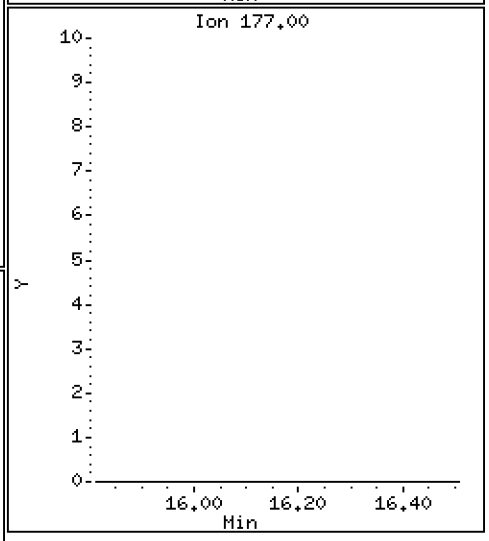
50 Diethylphthalate

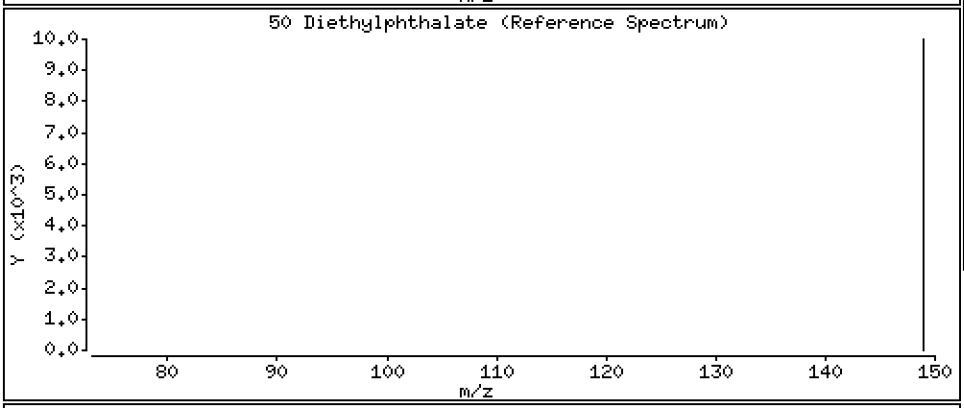
Concentration: 5.174 ug/mL

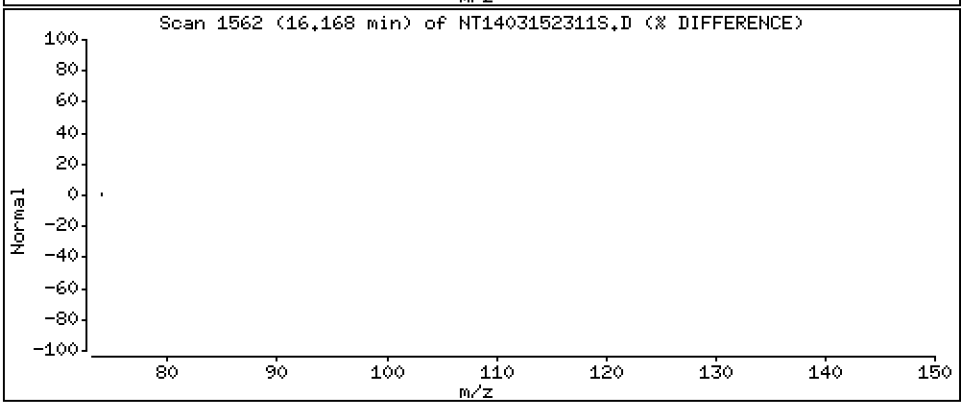












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

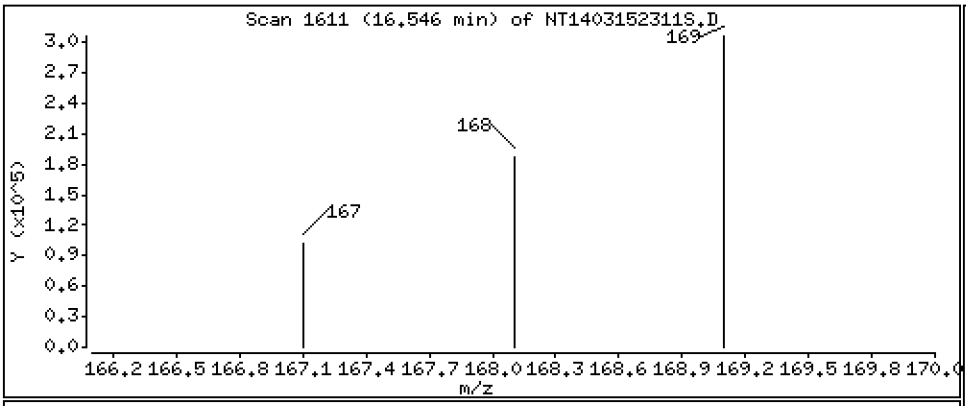
Operator: JGR

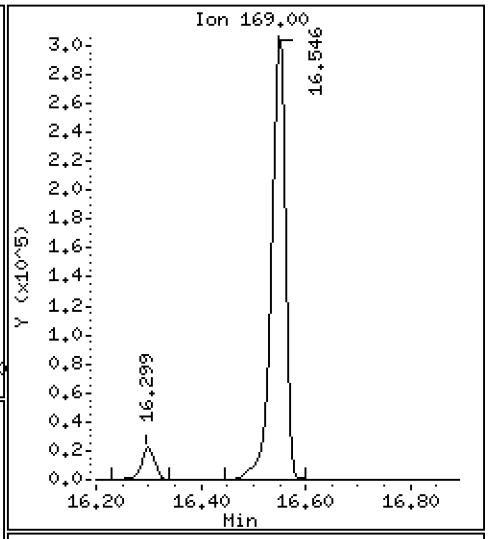
Column phase: ZB-5msi

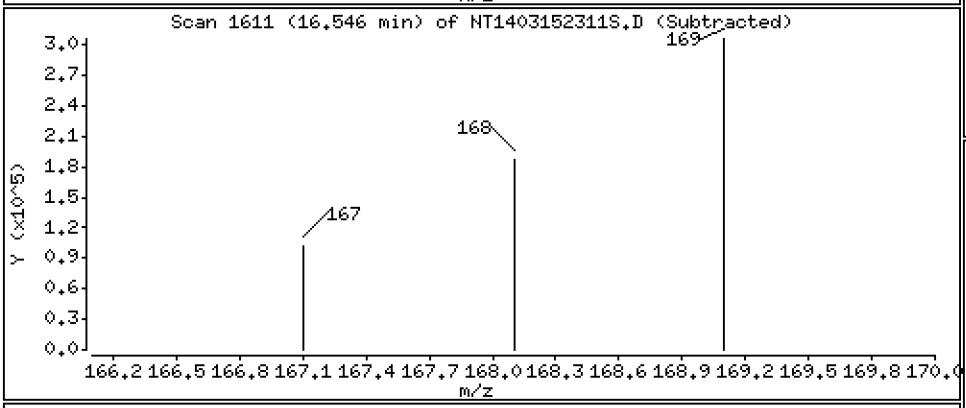
Column diameter: 0.25

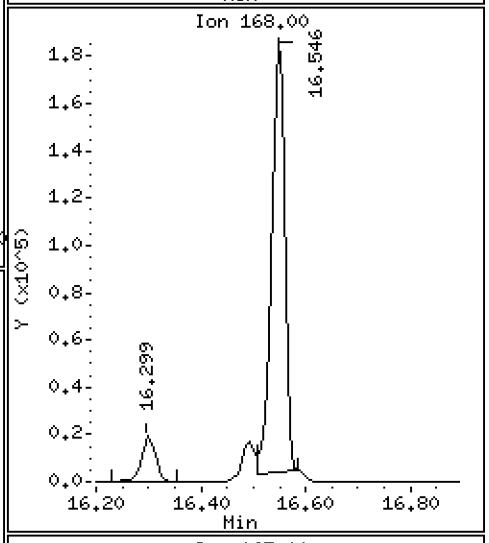
54 N-Nitrosodiphenylamine

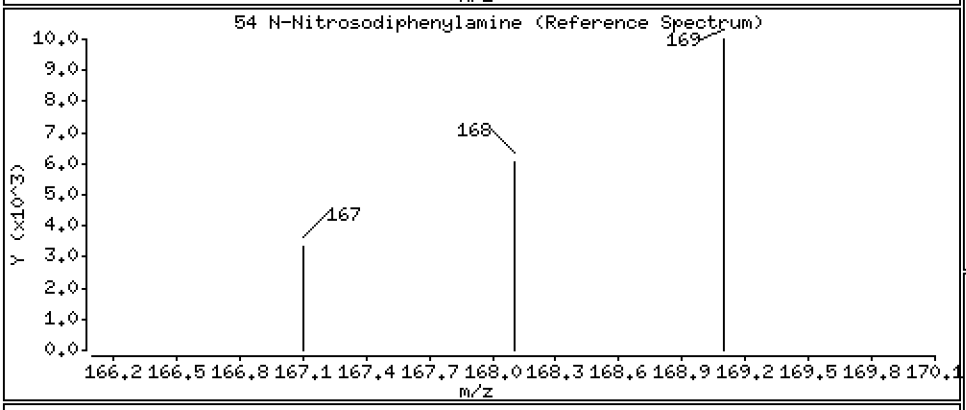
Concentration: 5.019 ug/mL

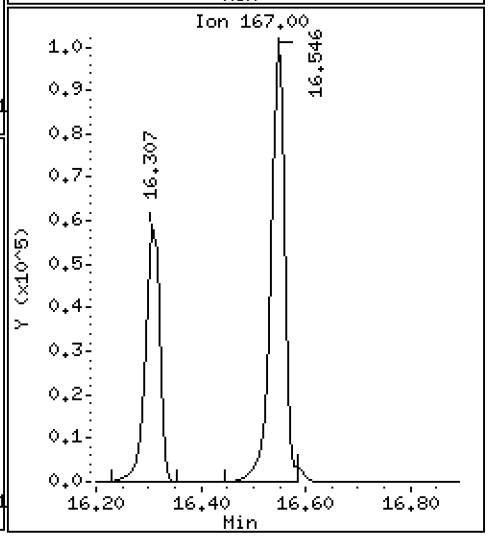


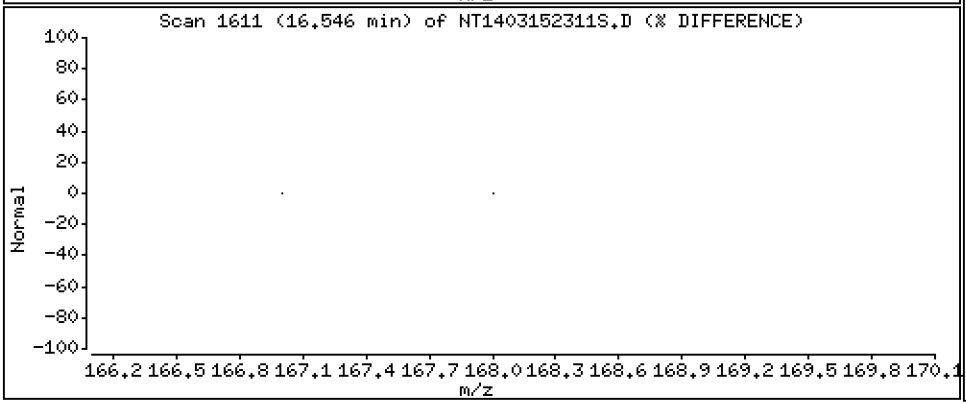












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

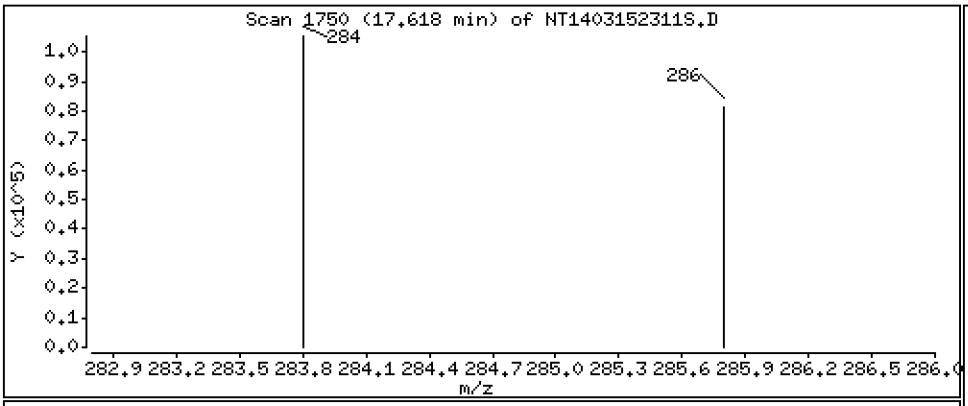
Operator: JGR

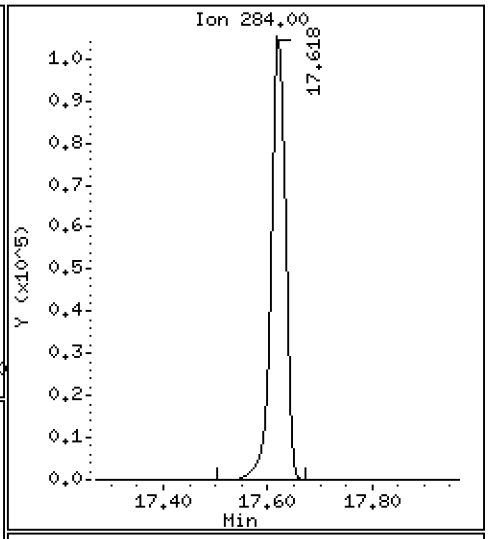
Column phase: ZB-5msi

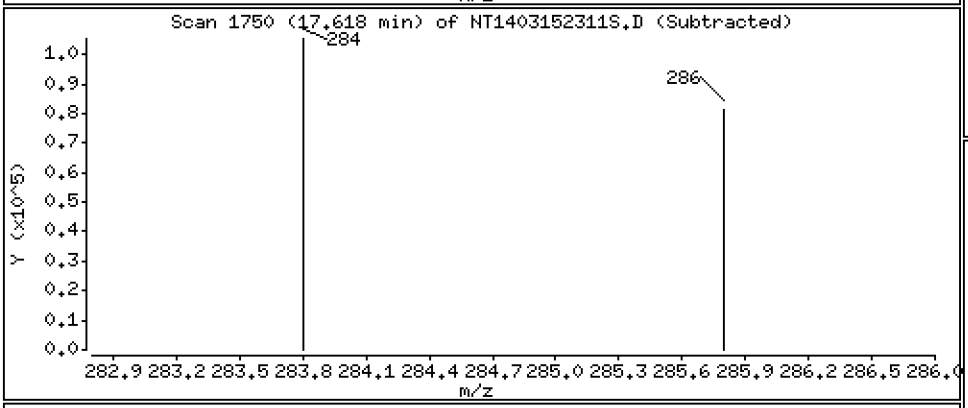
Column diameter: 0.25

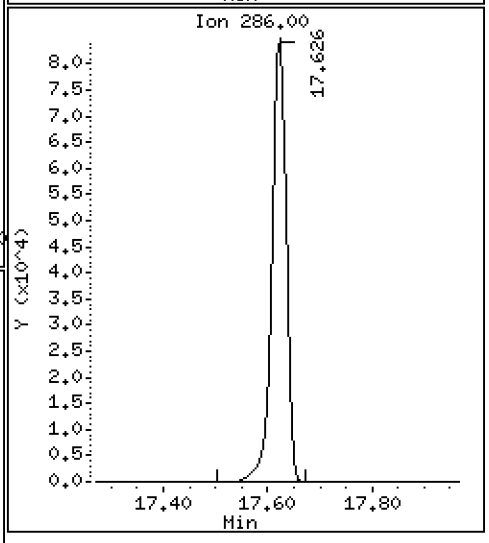
57 Hexachlorobenzene

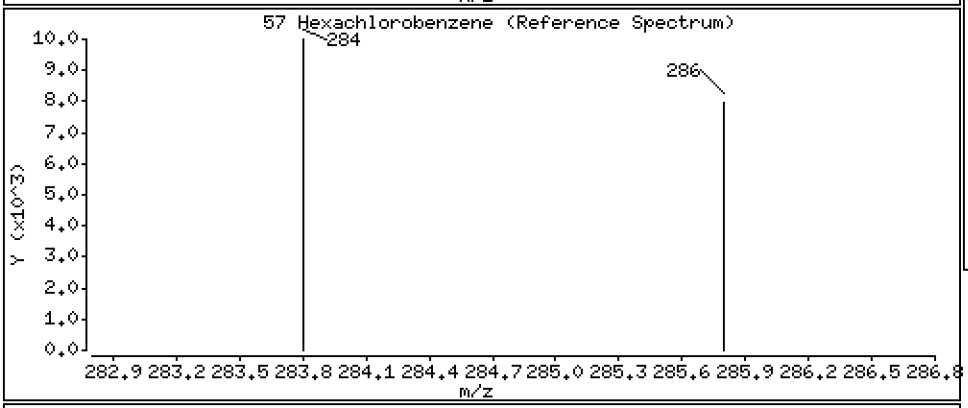
Concentration: 4.693 ug/mL

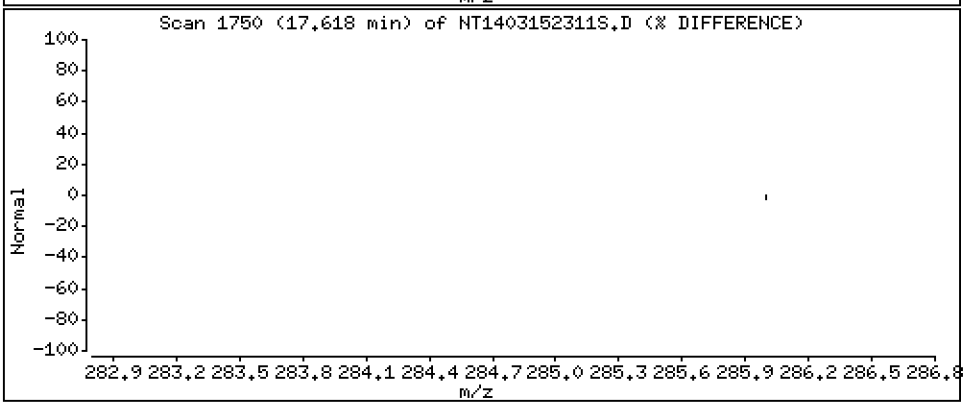












Data File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT1403152311S.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

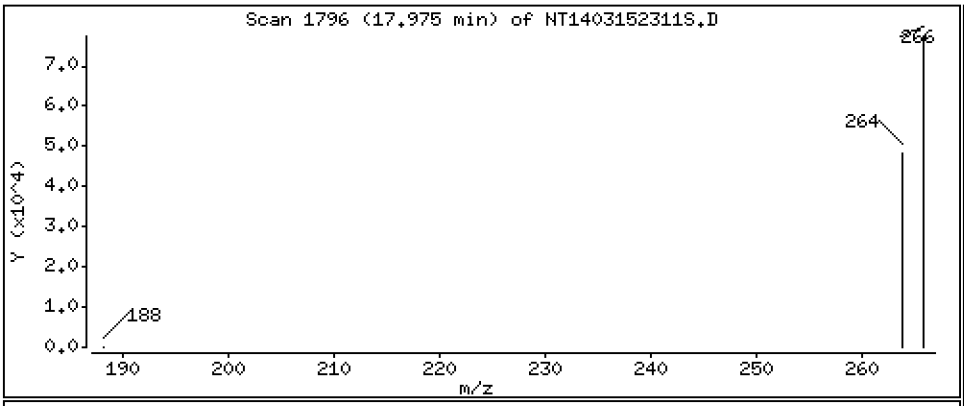
Operator: JGR

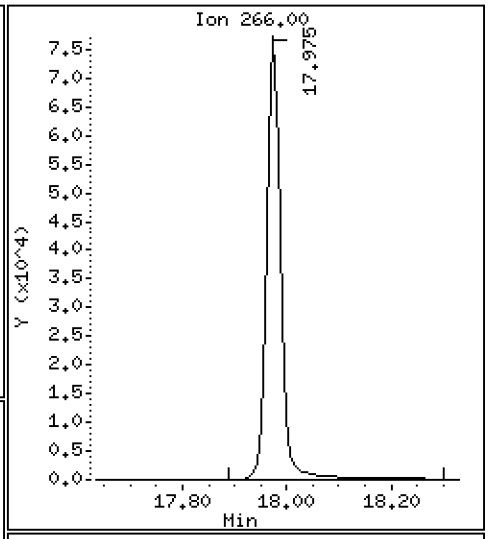
Column phase: ZB-5msi

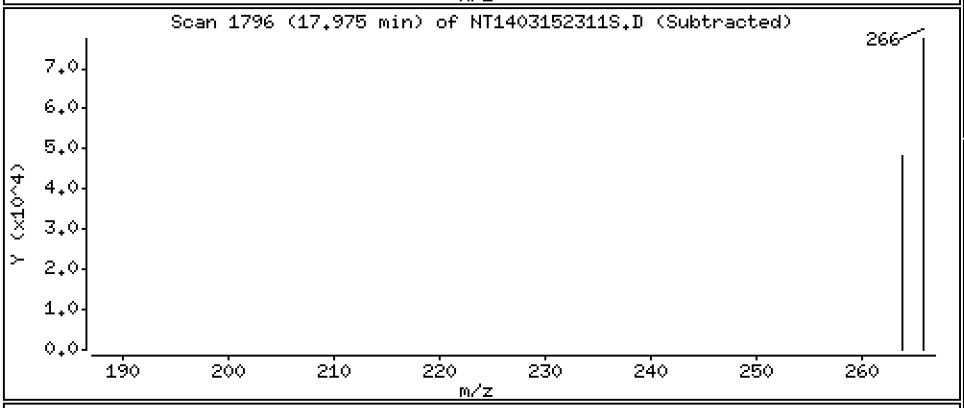
Column diameter: 0.25

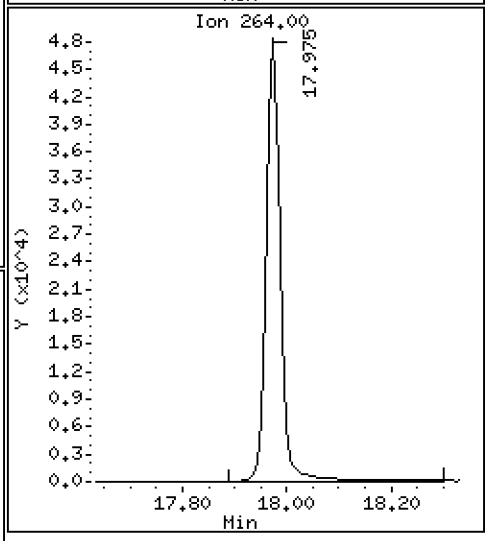
58 Pentachlorophenol

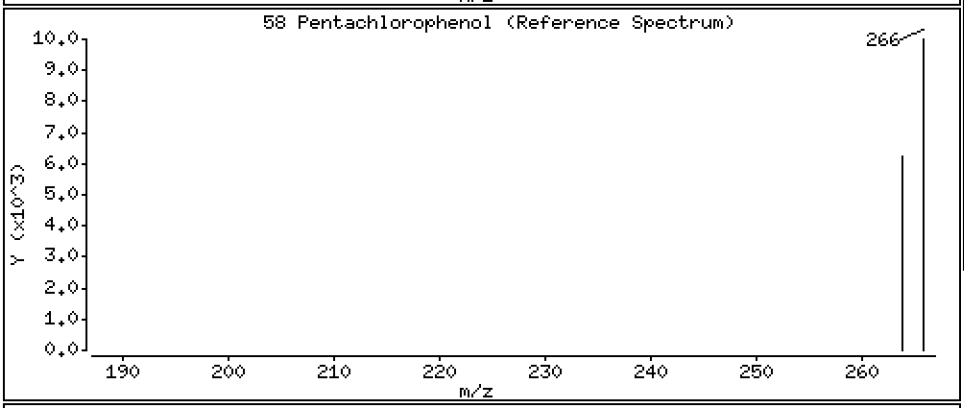
Concentration: 4.800 ug/mL

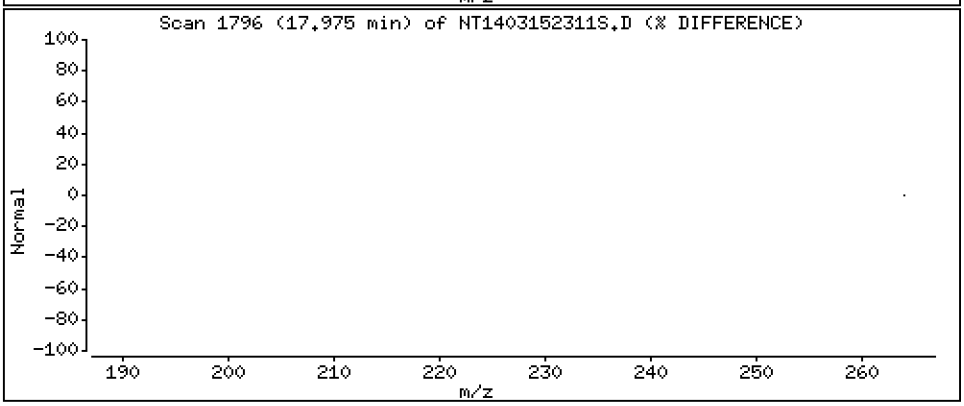












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

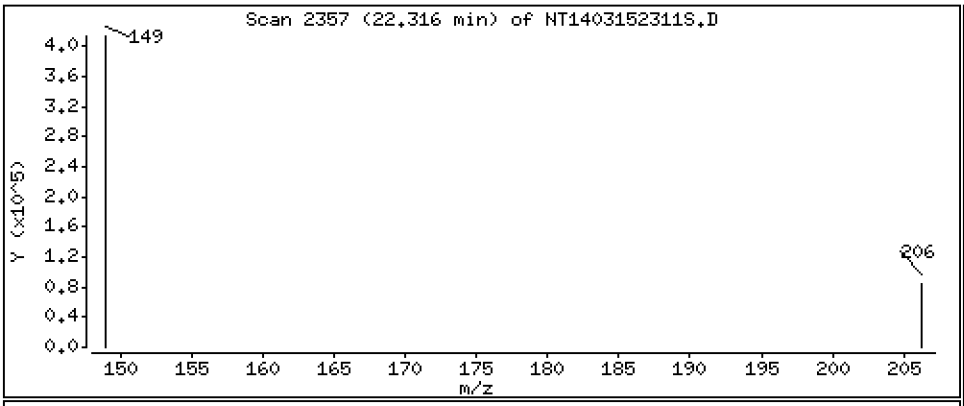
Operator: JGR

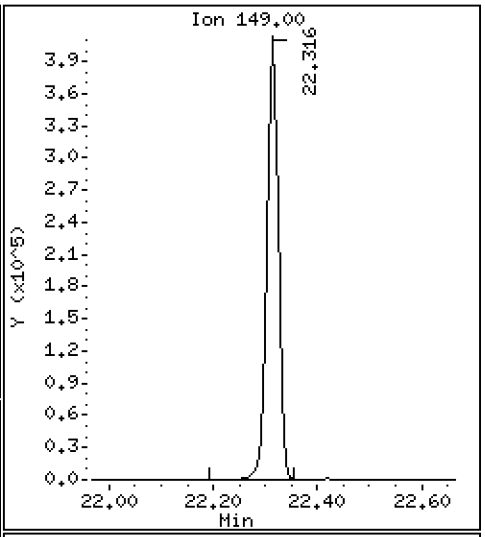
Column phase: ZB-5msi

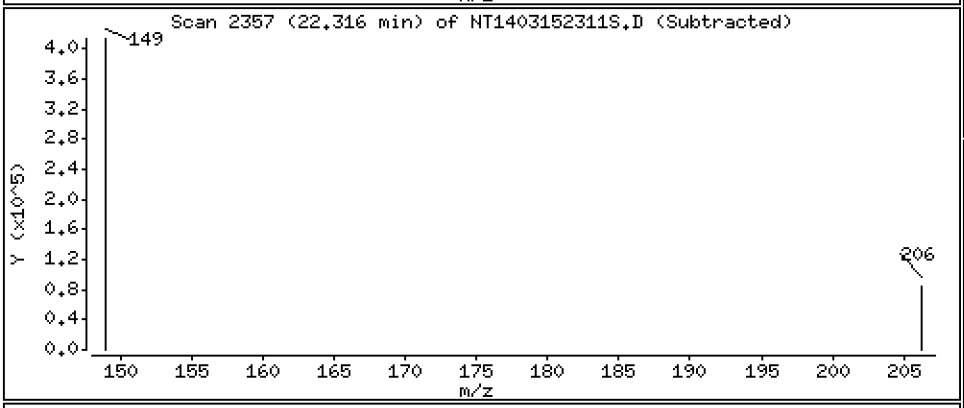
Column diameter: 0.25

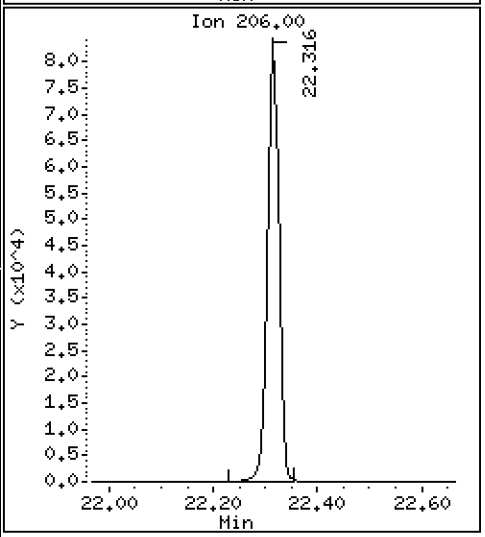
67 Butylbenzylphthalate

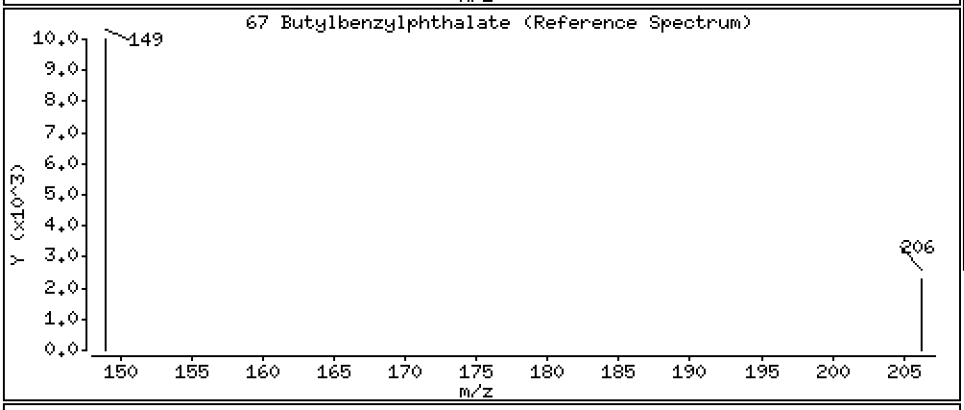
Concentration: 5.366 ug/mL

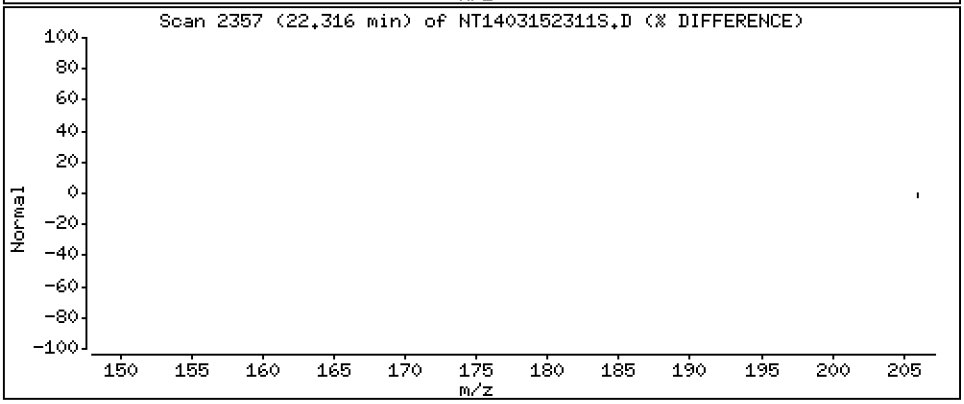












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

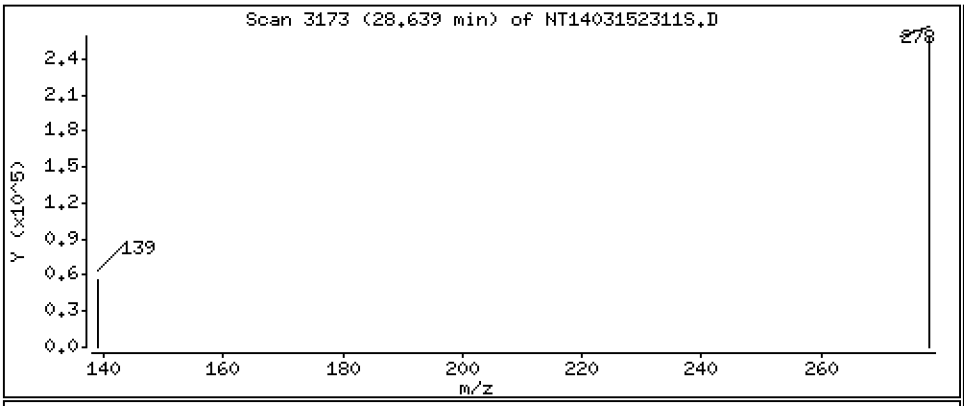
Operator: JGR

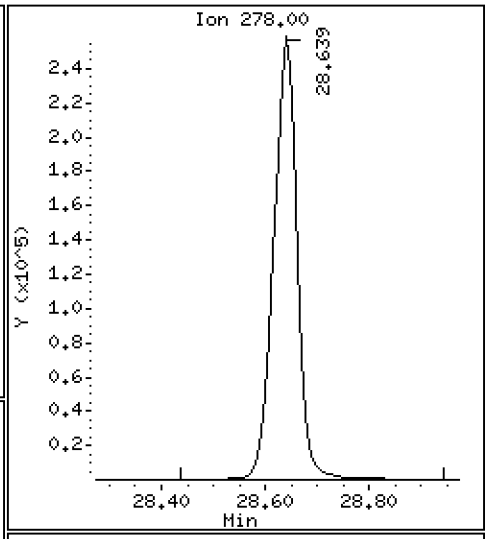
Column phase: ZB-5msi

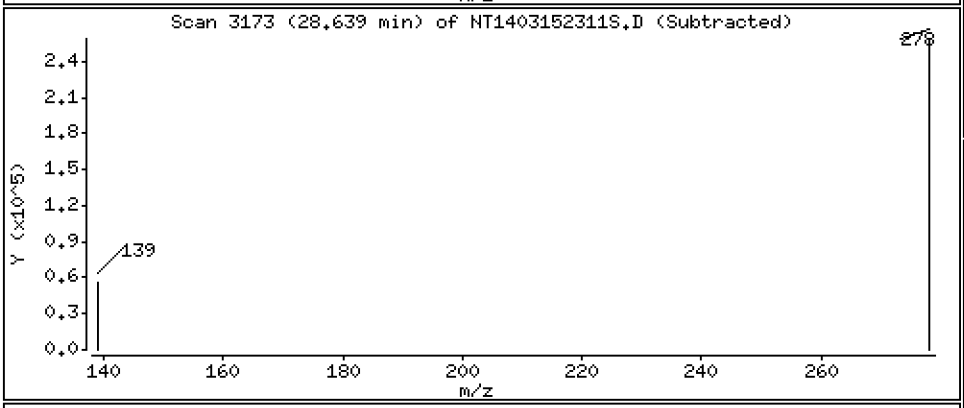
Column diameter: 0.25

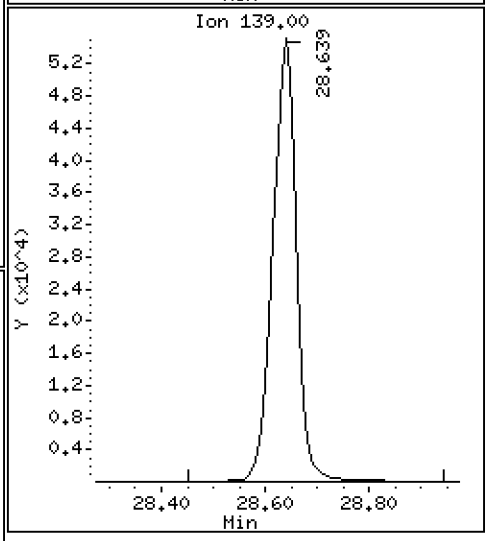
79 Dibenzo(a,h)anthracene

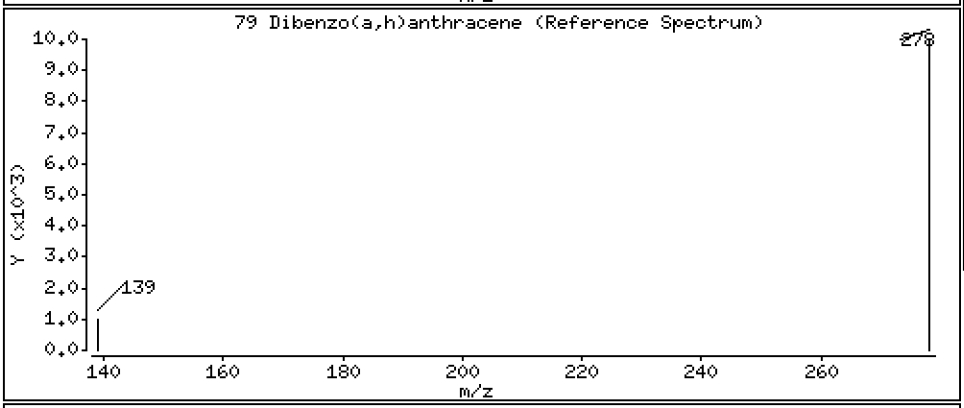
Concentration: 5.166 ug/mL

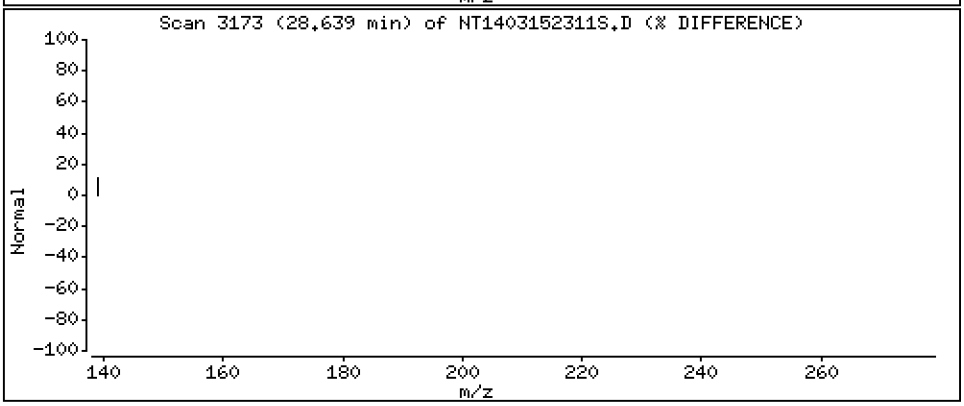












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

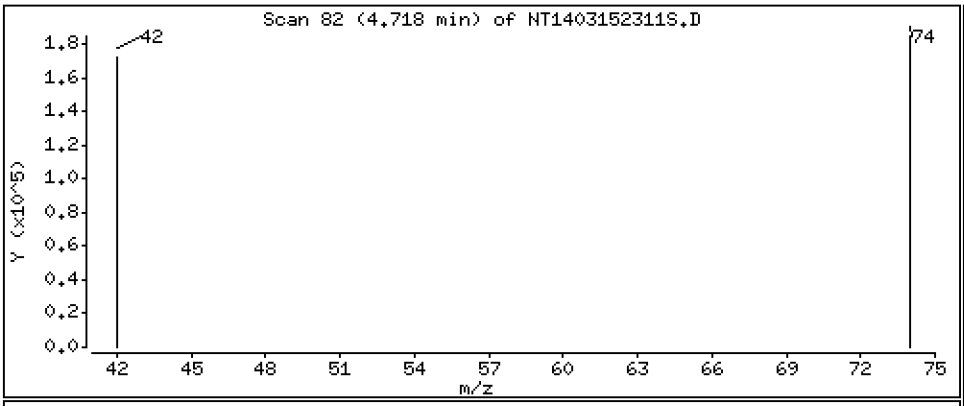
Operator: JGR

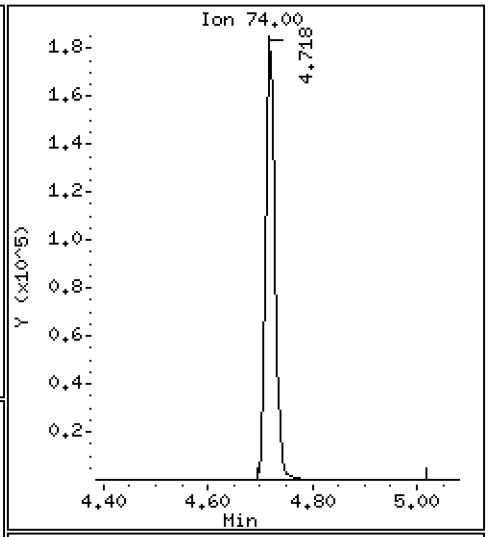
Column phase: ZB-5msi

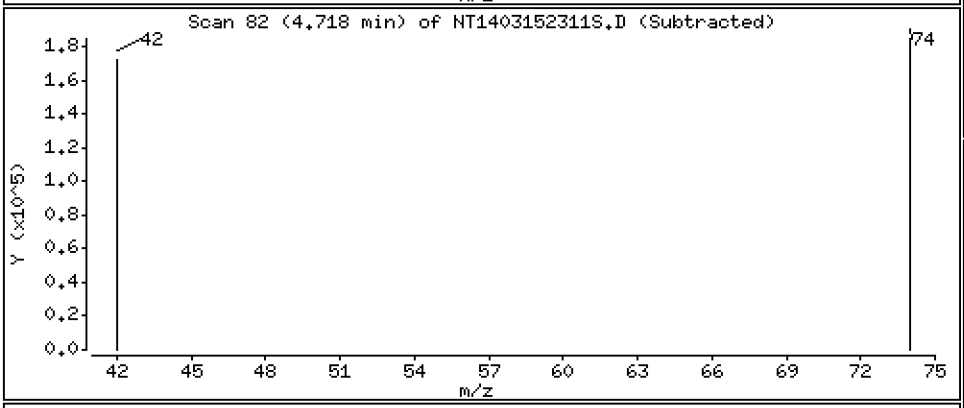
Column diameter: 0.25

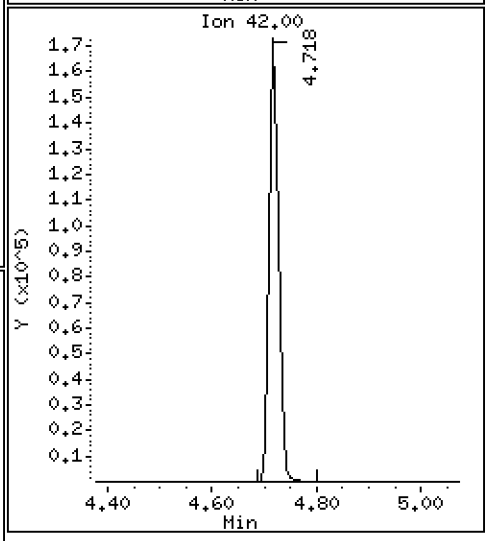
90 N-Nitrosodimethylamine

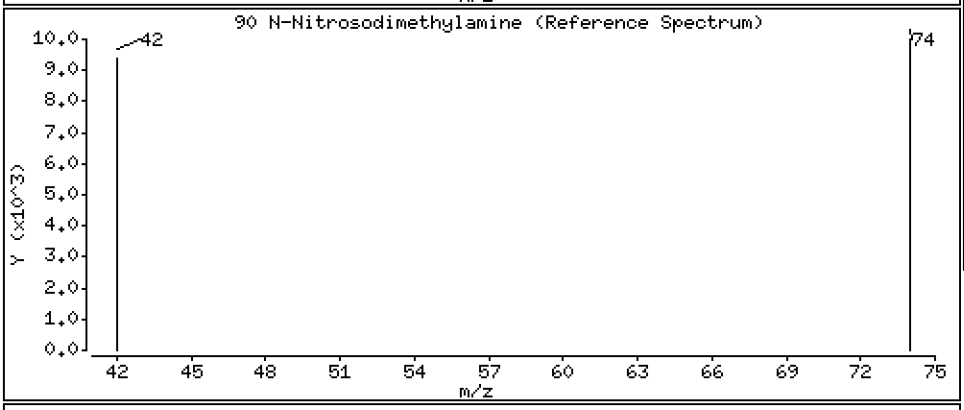
Concentration: 5.261 ug/mL

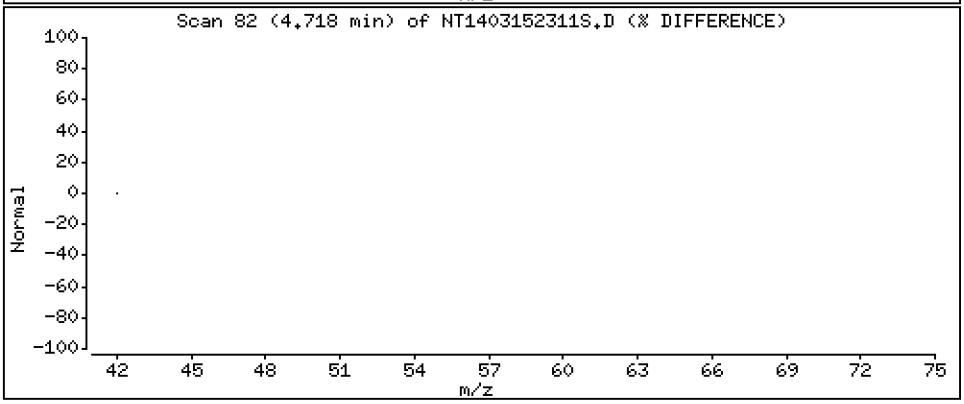












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT1403152311S.D
Lab Smp Id: SLC0242-SCV1
Inj Date : 15-MAR-2023 17:39 MS Autotune Date: 11-MAR-2023 16:01
Operator : JGR Inst ID: nt14.i
Smp Info : SLC0242-SCV1
Misc Info :
Comment :
Method : \\target\share\chem3\nt14.i\20230315.b\20230315.b\SIMABN2.m
Meth Date : 16-Mar-2023 15:17 deenayd Quant Type: ISTD
Cal Date : 15-MAR-2023 15:50 Cal File: NT1403152308.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: DEENAY-201905

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.834	6.826	(0.754)	131	0.00180	0.001799(R)
	3 Phenol	94	8.441	8.433	(0.931)	454904	4.54237	4.542
	7 1,3-Dichlorobenzene	146	9.005	9.005	(0.993)	414667	4.83856	4.839
*	8 1,4-Dichlorobenzene-d4	152	9.067	9.067	(1.000)	214548	4.00000	
	9 1,4-Dichlorobenzene	146	9.098	9.098	(1.003)	402045	4.84807	4.848
	11 Benzyl alcohol	79	9.339	9.339	(1.030)	313629	5.34291	5.343
	12 1,2-Dichlorobenzene	146	9.455	9.455	(1.043)	389531	4.82237	4.822
	13 2-Methylphenol	108	9.564	9.556	(1.055)	296655	4.28818	4.288
	15 4-Methylphenol	108	9.836	9.828	(1.085)	331703	4.53863	4.539
	16 N-Nitroso-di-n-propylamine	70	9.905	9.898	(1.092)	265440	5.13699	5.137
	22 2,4-Dimethylphenol	107	10.883	10.883	(0.941)	272931	3.93394	3.934
	24 Benzoic acid	105	11.061	10.883	(0.956)	494569	9.08128	9.081
	26 1,2,4-Trichlorobenzene	180	11.480	11.480	(0.993)	311017	4.57388	4.574
*	27 Naphthalene-d8	136	11.565	11.564	(1.000)	807045	4.00000	
	30 Hexachlorobutadiene	225	11.974	11.974	(1.035)	171122	4.97279	4.973
	39 Dimethylphthalate	163	14.706	14.698	(0.967)	683967	4.99496	4.995
*	42 Acenaphthene-d10	162	15.201	15.201	(1.000)	400955	4.00000	
	50 Diethylphthalate	149	16.168	16.160	(1.064)	754333	5.17432	5.174
	54 N-Nitrosodiphenylamine	169	16.546	16.546	(0.907)	544923	5.01904	5.019
	57 Hexachlorobenzene	284	17.618	17.618	(0.966)	195732	4.69277	4.693
	58 Pentachlorophenol	266	17.974	17.982	(0.985)	138145	4.79996	4.800
*	59 Phenanthrene-d10	188	18.245	18.245	(1.000)	801298	4.00000	
$	66 Terphenyl-d14	244	21.386	21.386	(0.918)	546	0.00507	0.005072(R)
	67 Butylbenzylphthalate	149	22.315	22.315	(0.958)	588546	5.36591	5.366
*	69 Chrysene-d12	240	23.299	23.299	(1.000)	624454	4.00000	
*	77 Perylene-d12	264	25.939	25.939	(1.000)	623001	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.639	28.623	(1.104)	815876	5.16593	5.166
	90 N-Nitrosodimethylamine	74	4.717	4.733	(0.520)	234083	5.26142	5.261

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1403152311S.D
Lab Smp Id: SLC0242-SCV1
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\SIMABN2.m
Misc Info:

Calibration Date: 15-MAR-2023
Calibration Time: 14:38
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	223201	111601	446402	214548	-3.88
27 Naphthalene-d8	832937	416469	1665874	807045	-3.11
42 Acenaphthene-d10	403175	201588	806350	400955	-0.55
59 Phenanthrene-d10	814822	407411	1629644	801298	-1.66
69 Chrysene-d12	625755	312878	1251510	624454	-0.21
77 Perylene-d12	614085	307043	1228170	623001	1.45

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.08	8.58	9.58	9.07	-0.08
27 Naphthalene-d8	11.56	11.06	12.06	11.57	0.00
42 Acenaphthene-d10	15.20	14.70	15.70	15.20	0.00
59 Phenanthrene-d10	18.25	17.75	18.75	18.25	0.00
69 Chrysene-d12	23.30	22.80	23.80	23.30	0.00
77 Perylene-d12	25.94	25.44	26.44	25.94	0.00

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

REVIEW SUMMARY FOR FILE - NT1403152311S.D

Lab ID: SLC0242-SCV1
nt14.i, 20230315.b\20230315.b\SIMABN2.m,   15-MAR-2023 17:39

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8270E-SIM

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GC00050
Laboratory ID: SLC0242-SCV1
Sequence: SLC0242
Standard ID: K010066

ANALYTE	EXPECTED (ug/mL)	FOUND (ug/mL)	% DRIFT	QC LIMIT
1,4-Dichlorobenzene	5.0000	4.8	-3.0	20.00
1,2-Dichlorobenzene	5.0000	4.8	-3.6	20.00
Benzyl Alcohol	5.0000	5.3	6.9	20.00
Benzoic acid	10.000	9.1	-9.2	20.00
2,4-Dimethylphenol	5.0000	3.9	-21.3	20.00
1,2,4-Trichlorobenzene	5.0000	4.6	-8.5	20.00
N-Nitrosodiphenylamine	5.0000	5.0	0.4	20.00
Pentachlorophenol	5.0000	4.8	-4.0	20.00
2-Fluorophenol	7.5000	0.00180	-100	
p-Terphenyl-d14	5.0000	0.00507	-99.9	

* Values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT14031523115.D

Date : 15-MAR-2023 17:39

Client ID:

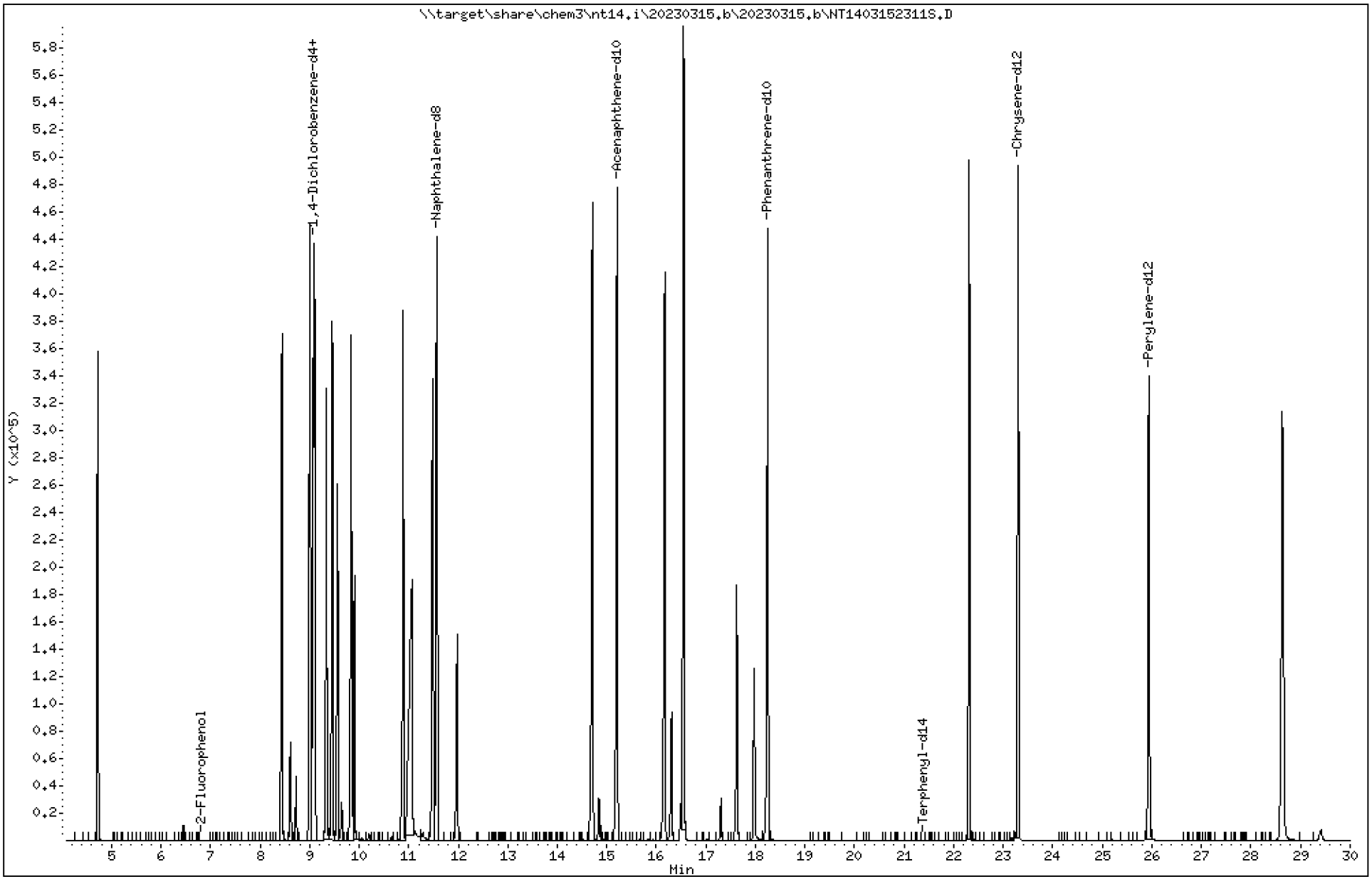
Sample Info: SLC0242-SCV1

Instrument: nt14.i

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

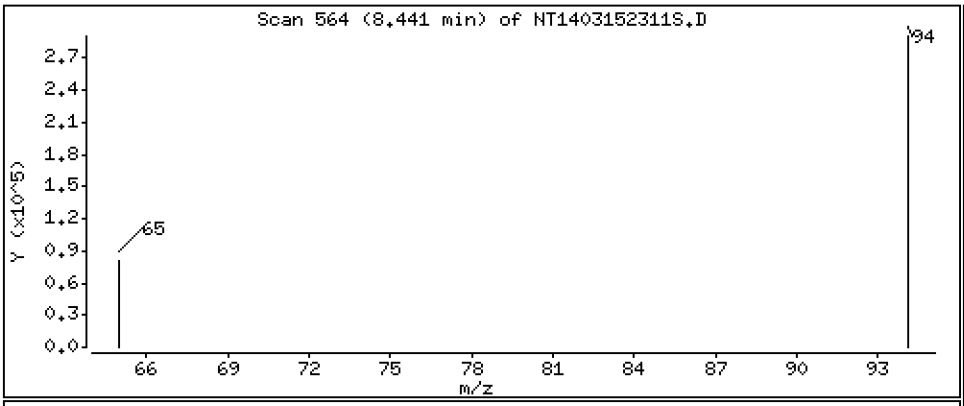
Operator: JGR

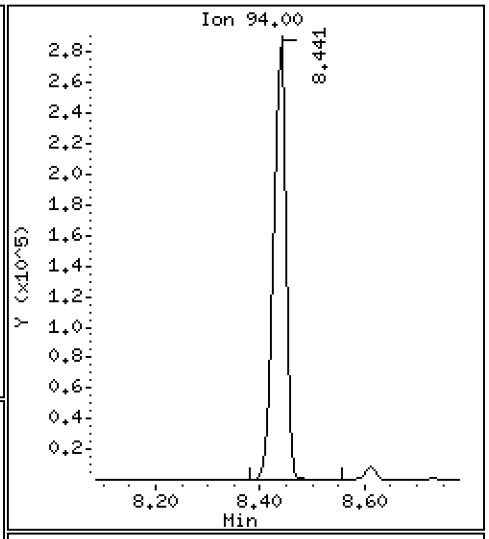
Column phase: ZB-5msi

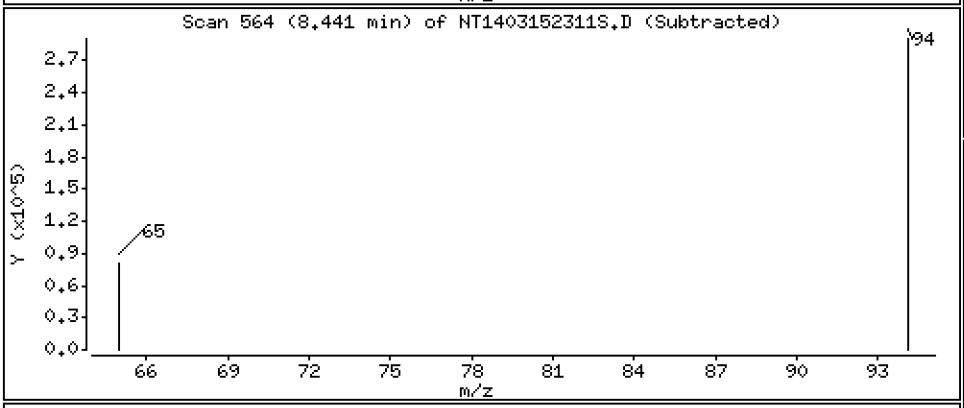
Column diameter: 0.25

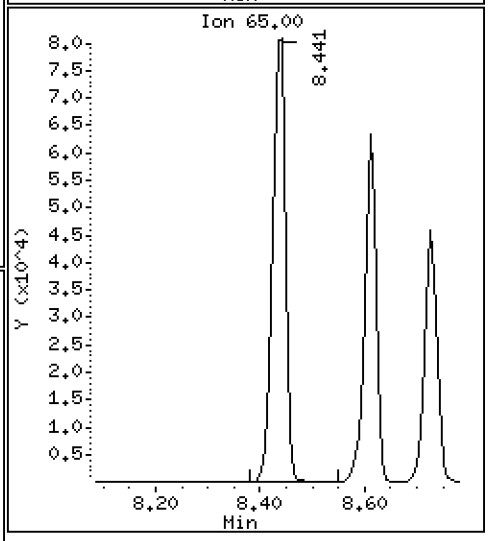
3 Phenol

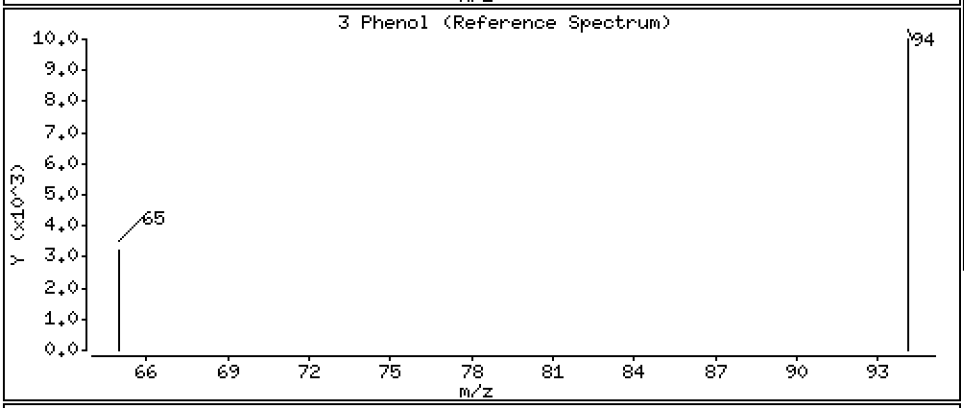
Concentration: 4.542 ug/mL

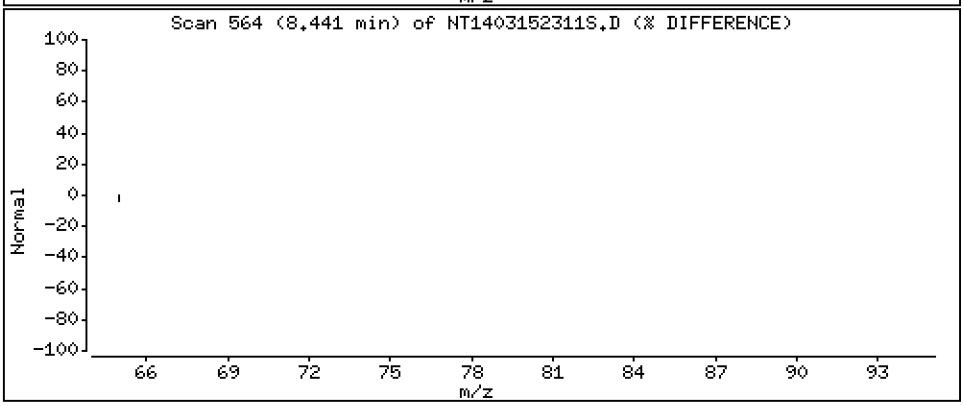












Data File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT1403152311S.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

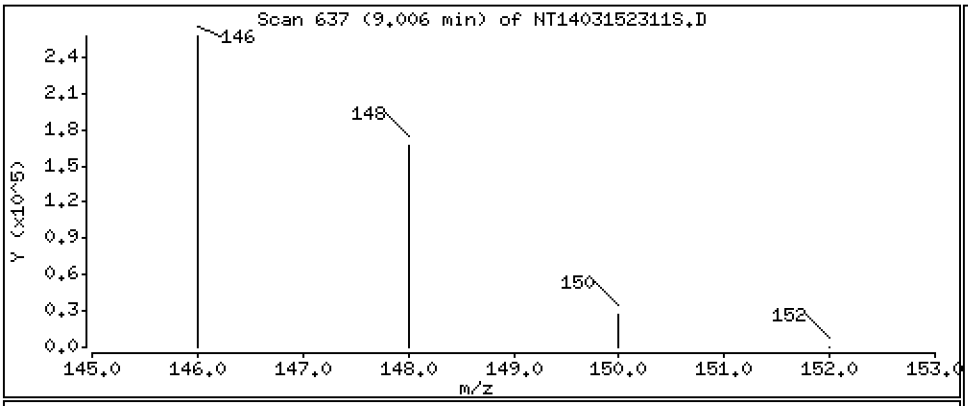
Operator: JGR

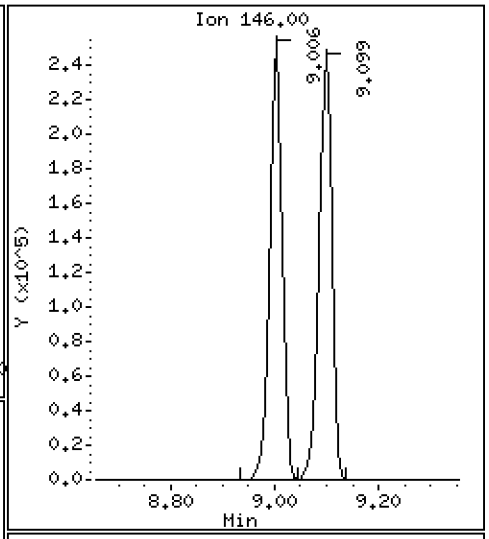
Column phase: ZB-5msi

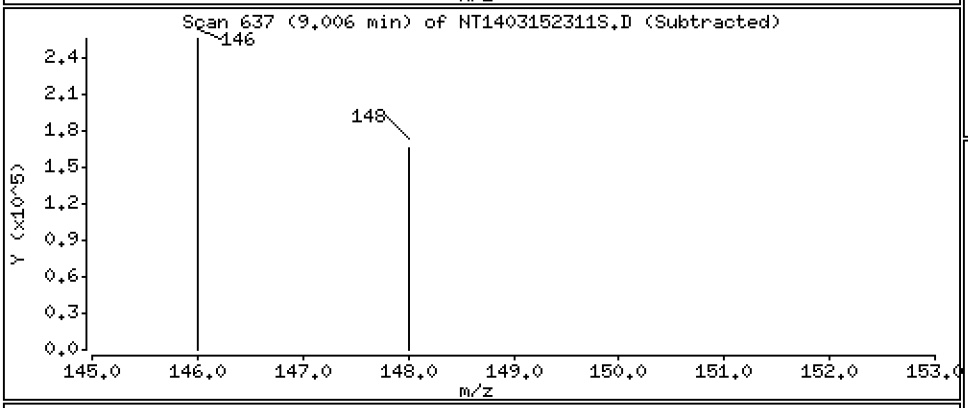
Column diameter: 0.25

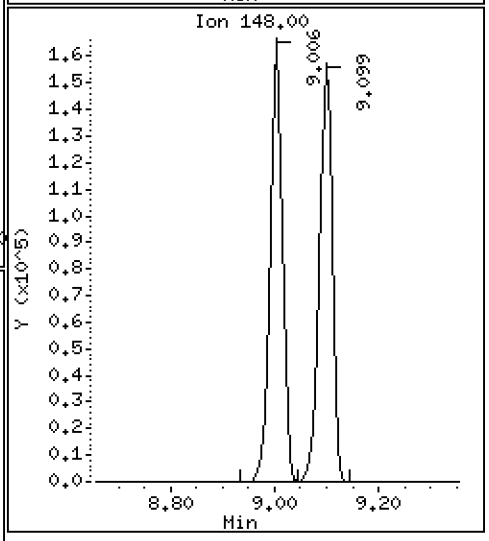
7 1,3-Dichlorobenzene

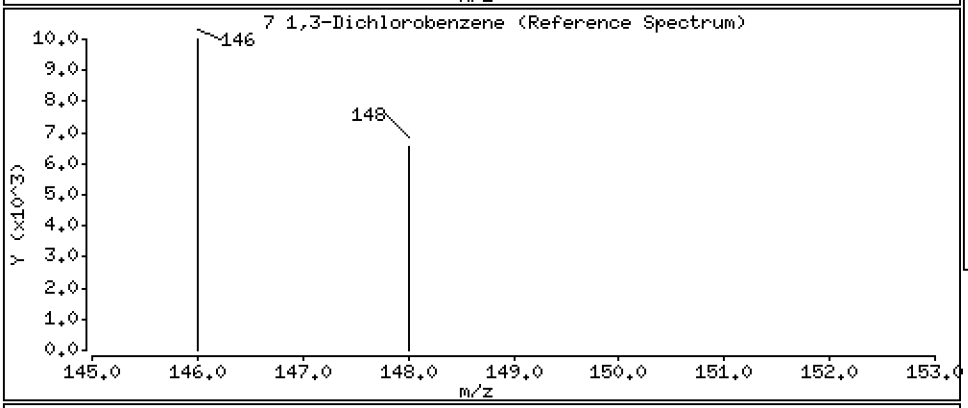
Concentration: 4.839 ug/mL

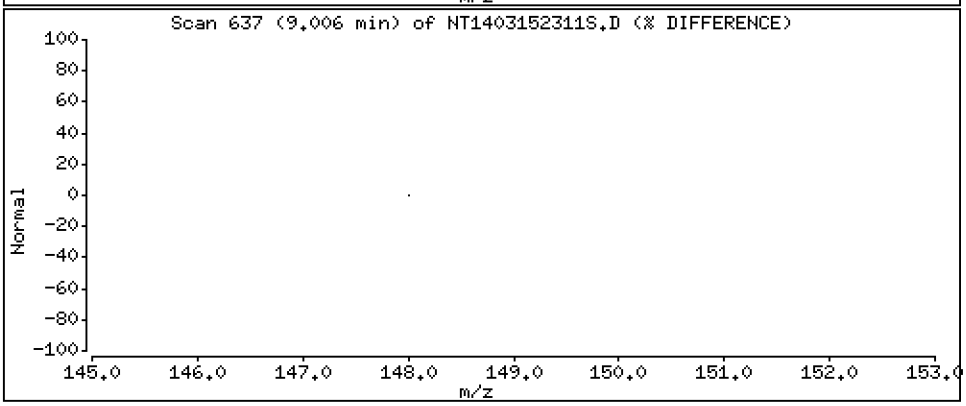












Data File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT1403152311S.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

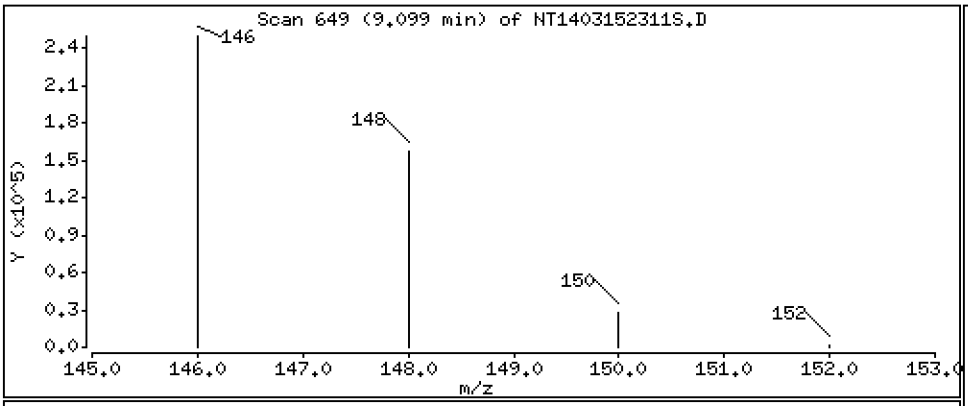
Operator: JGR

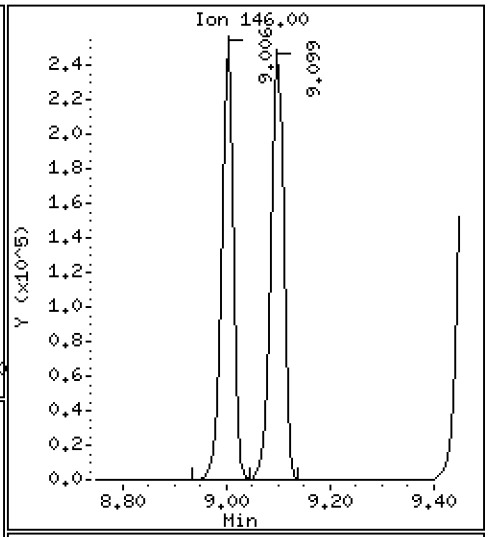
Column phase: ZB-5msi

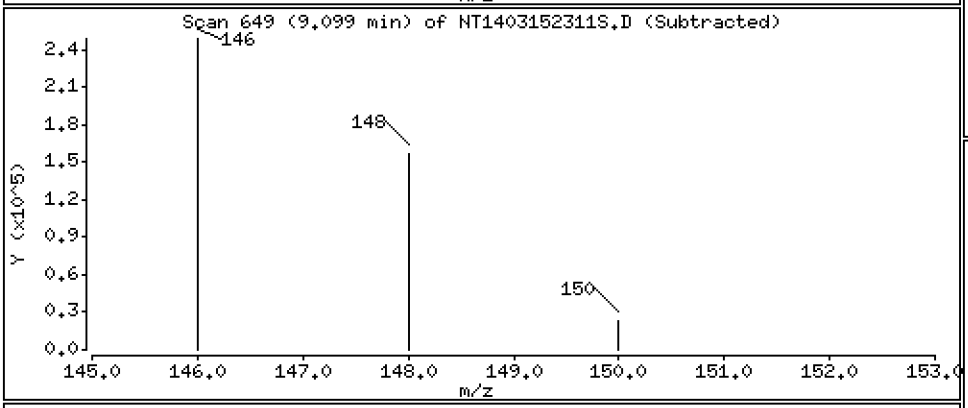
Column diameter: 0.25

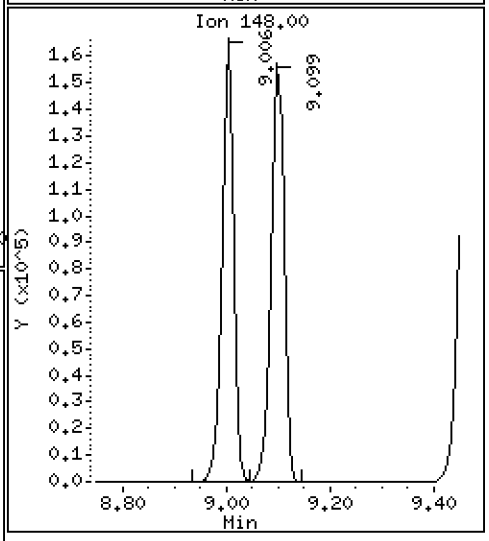
9 1,4-Dichlorobenzene

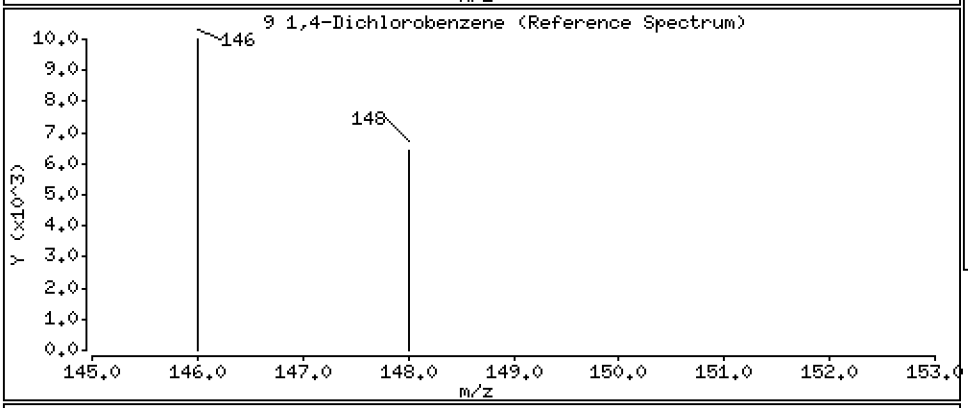
Concentration: 4.848 ug/mL

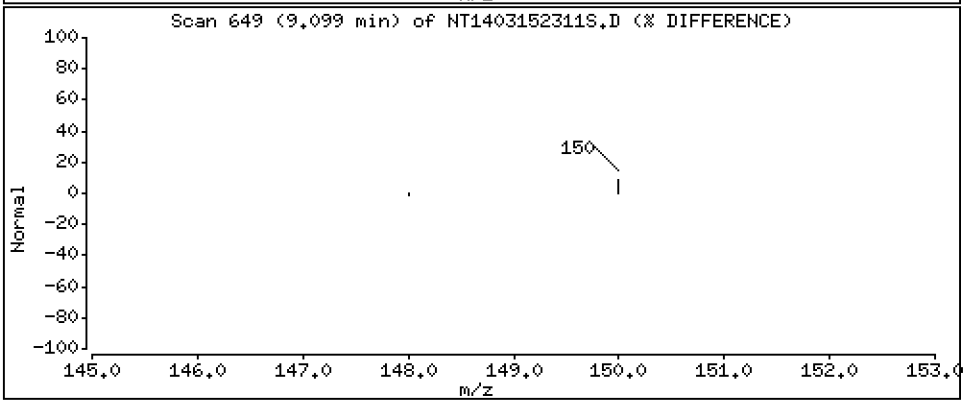












Data File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT1403152311S.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

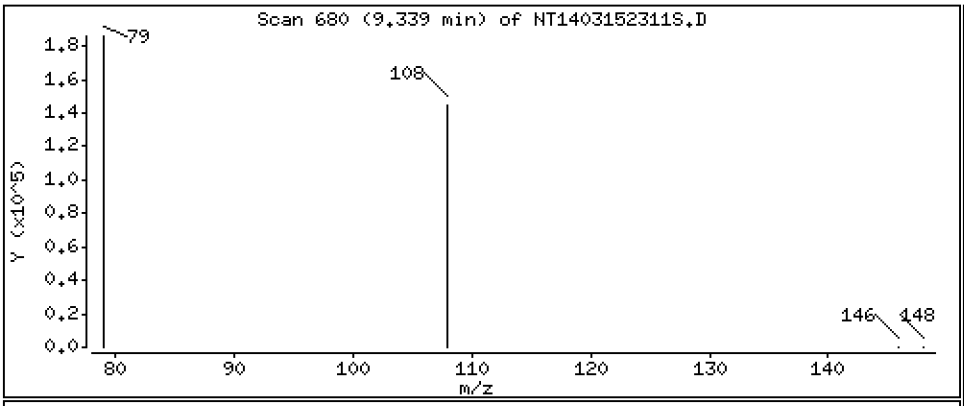
Operator: JGR

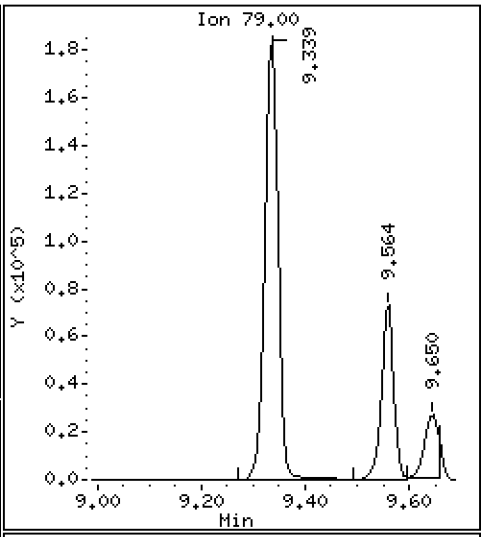
Column phase: ZB-5msi

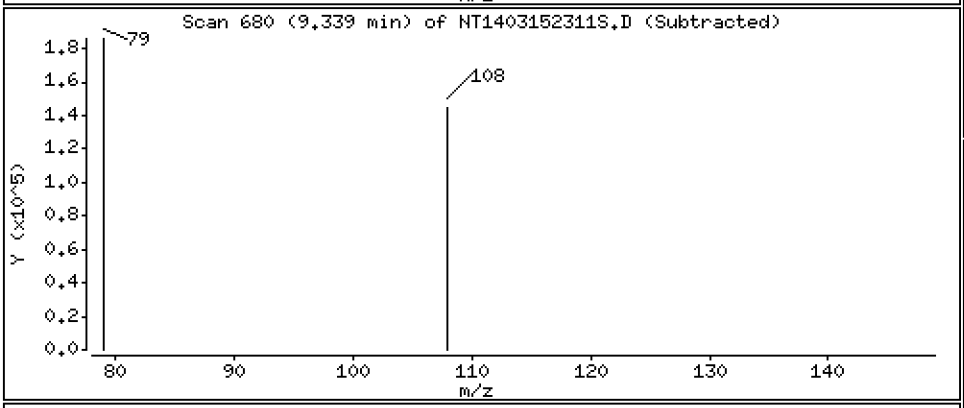
Column diameter: 0.25

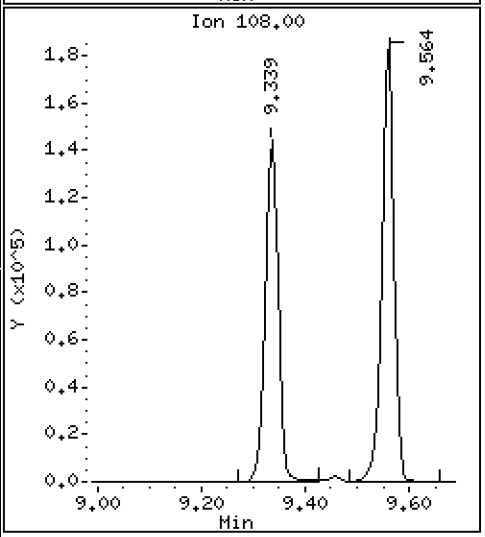
11 Benzyl alcohol

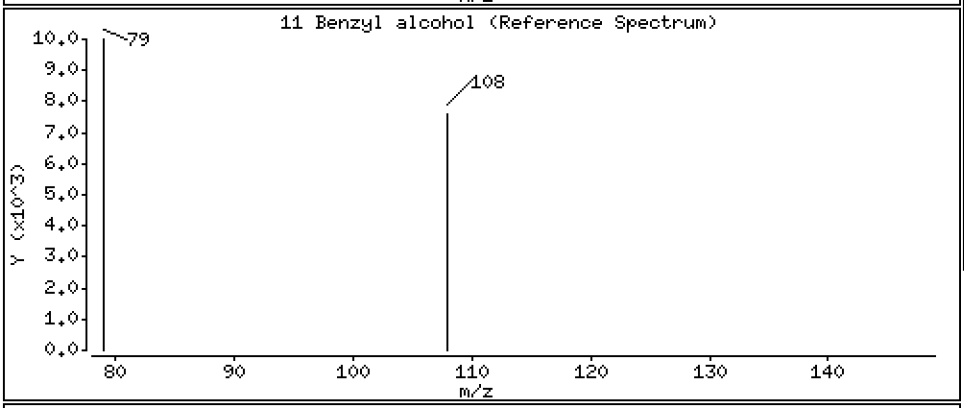
Concentration: 5.343 ug/mL

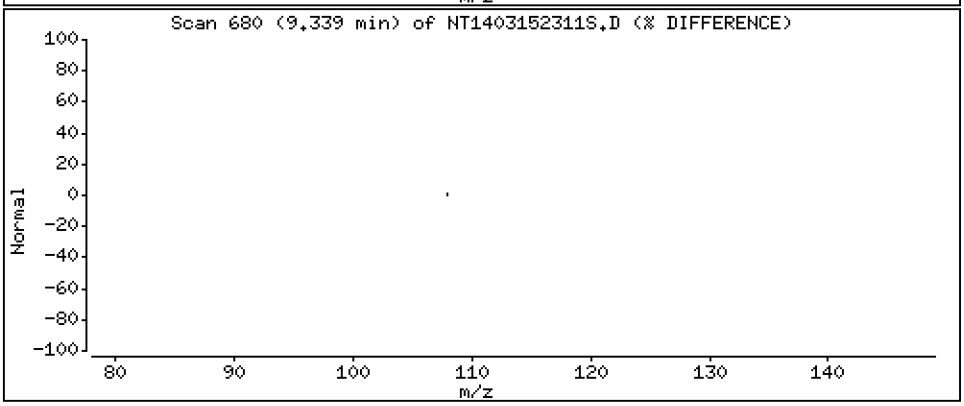












Data File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT1403152311S.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

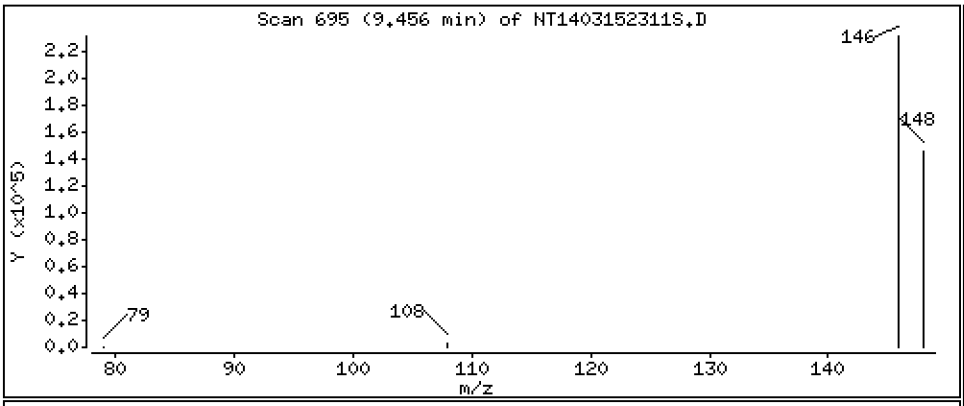
Operator: JGR

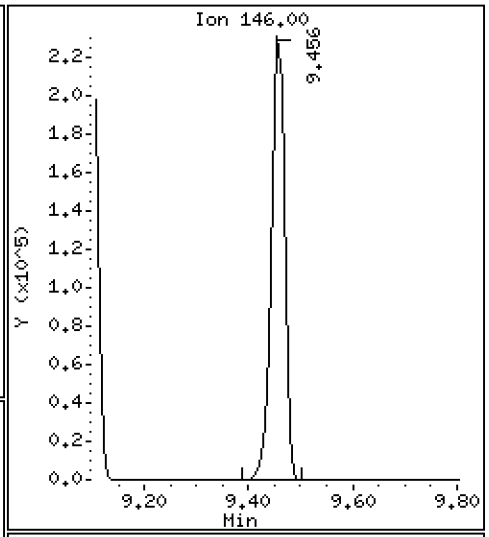
Column phase: ZB-5msi

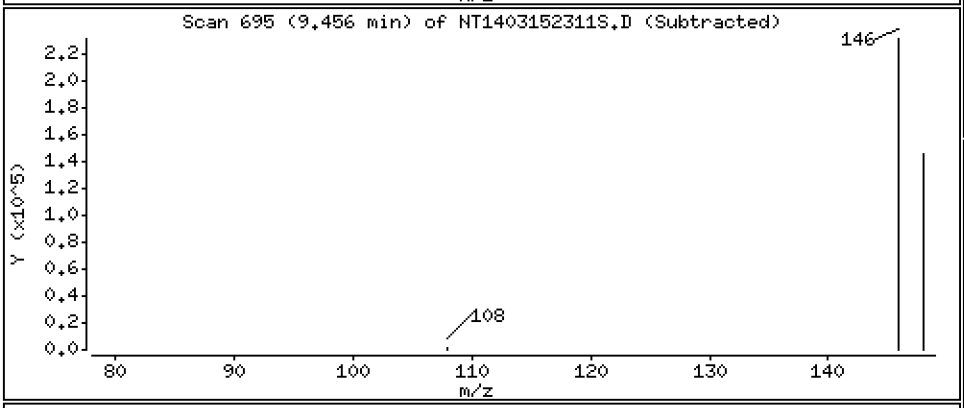
Column diameter: 0.25

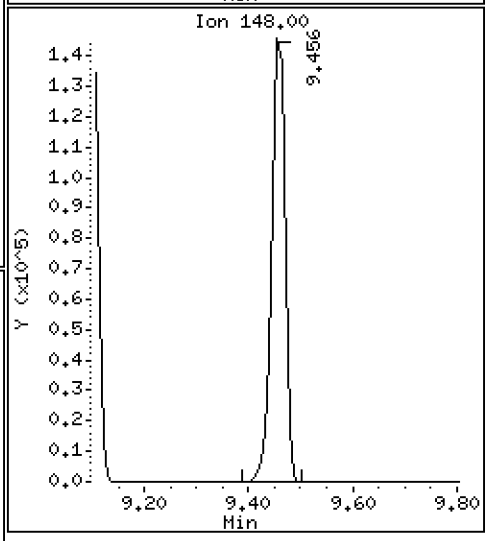
12 1,2-Dichlorobenzene

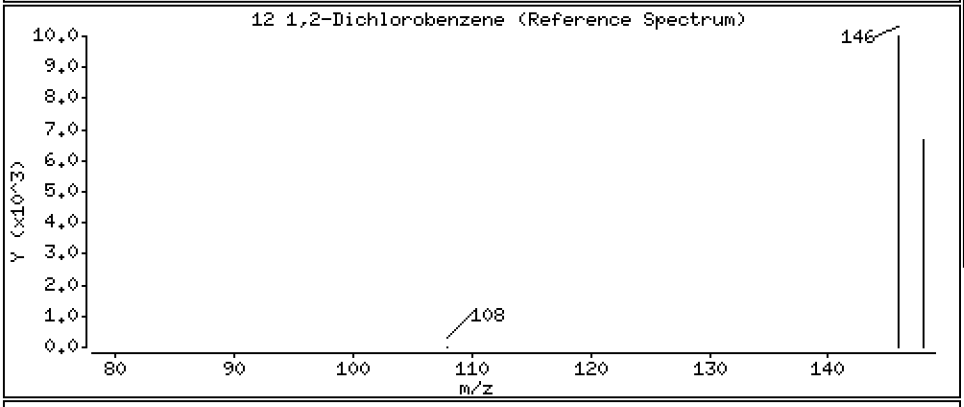
Concentration: 4.822 ug/mL

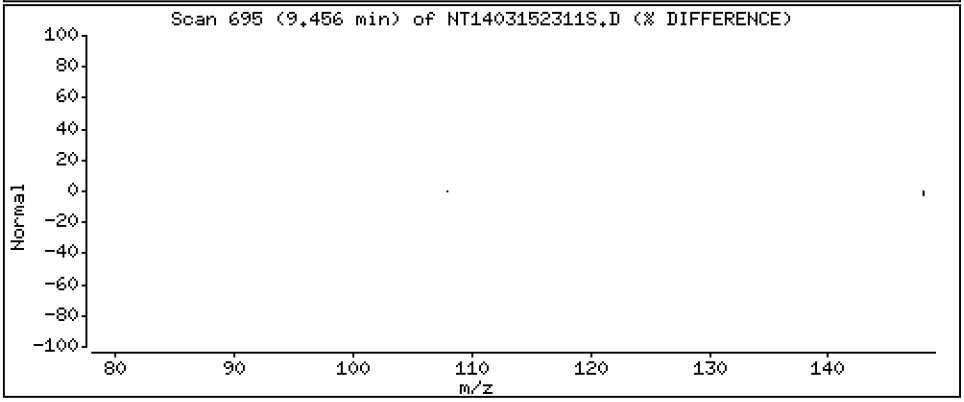












Data File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT1403152311S.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

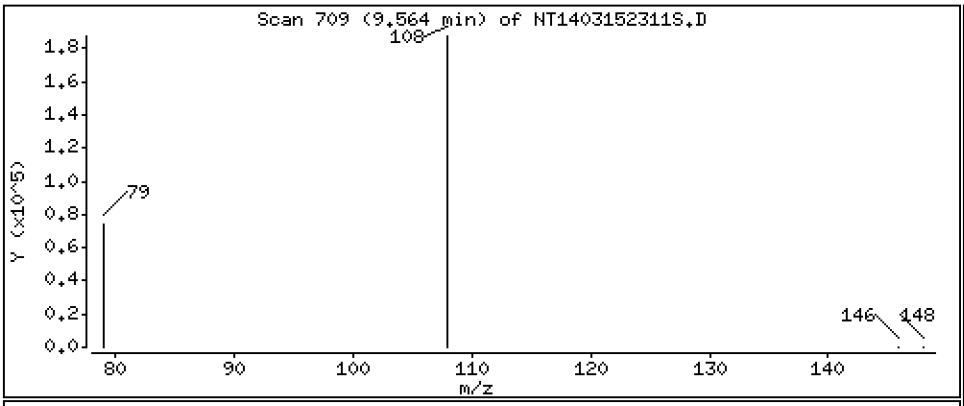
Operator: JGR

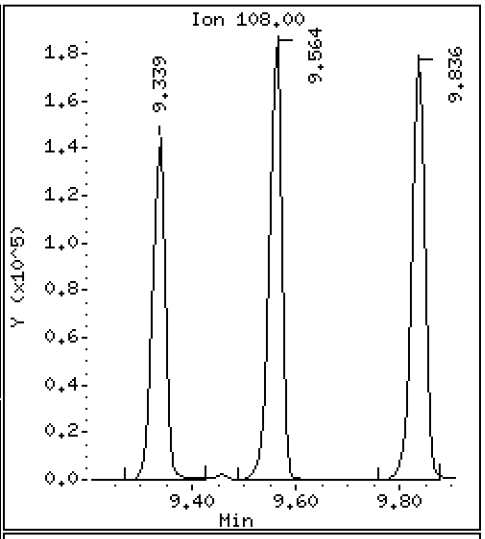
Column phase: ZB-5msi

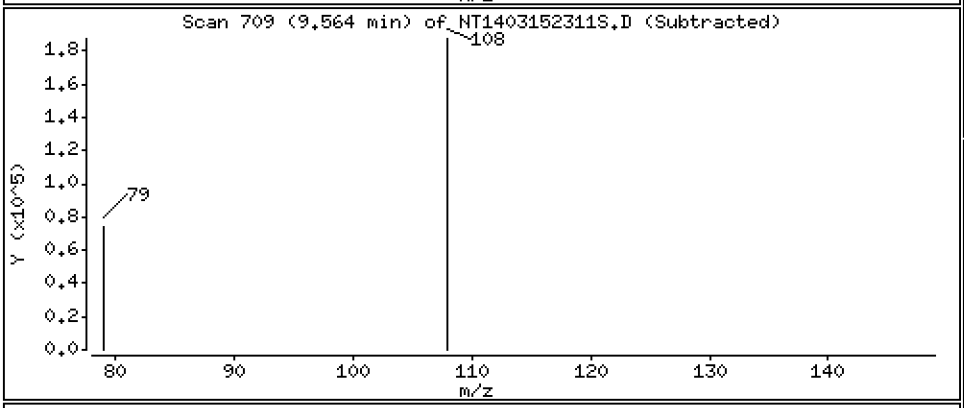
Column diameter: 0.25

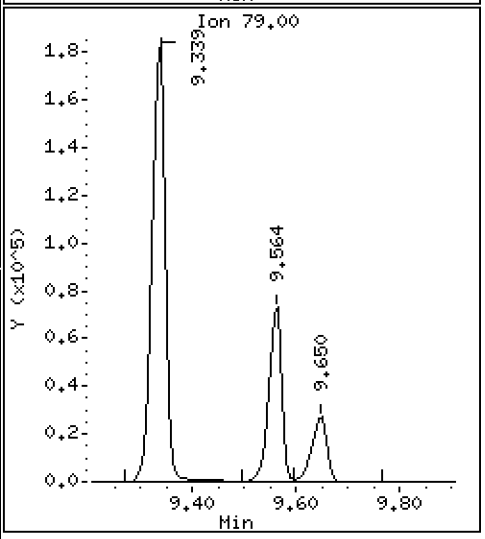
13 2-Methylphenol

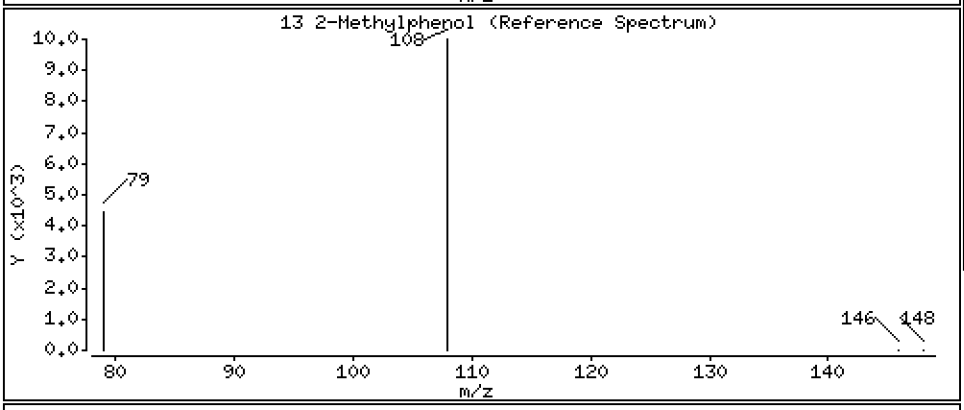
Concentration: 4.288 ug/mL

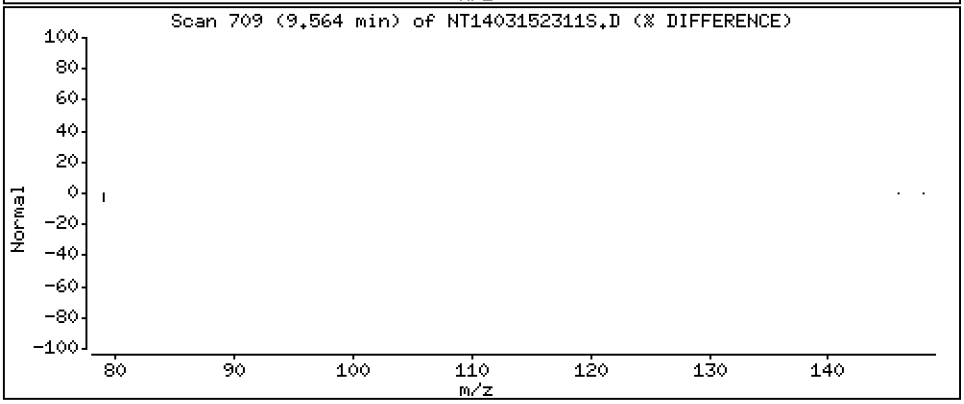












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

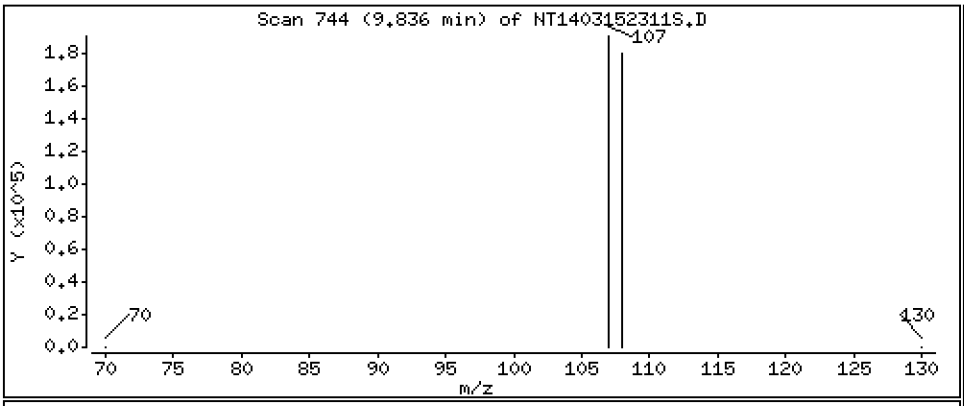
Operator: JGR

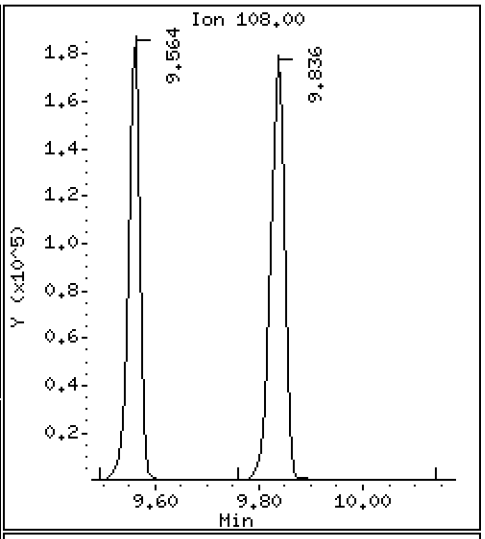
Column phase: ZB-5msi

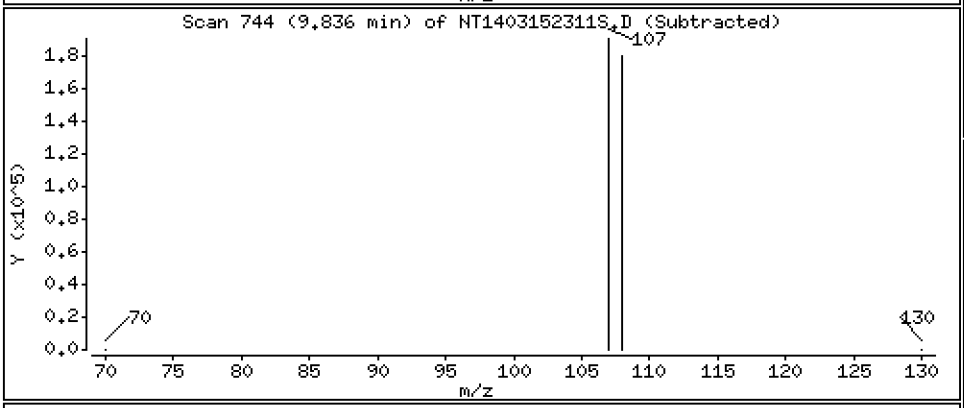
Column diameter: 0.25

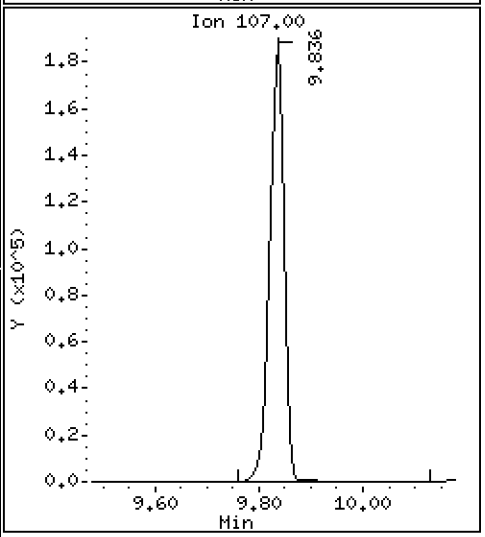
15 4-Methylphenol

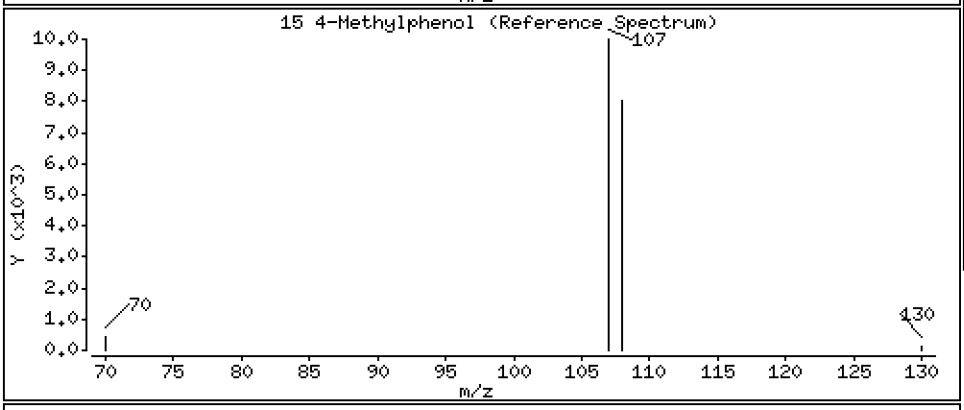
Concentration: 4.539 ug/mL

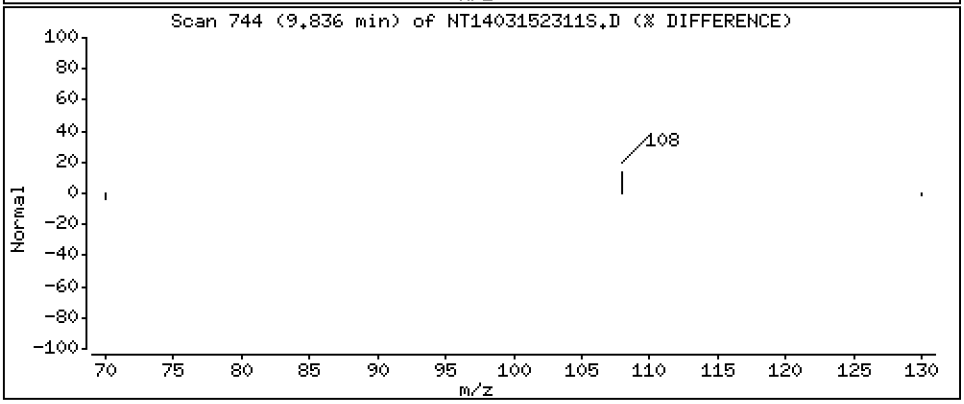












Data File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT1403152311S.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

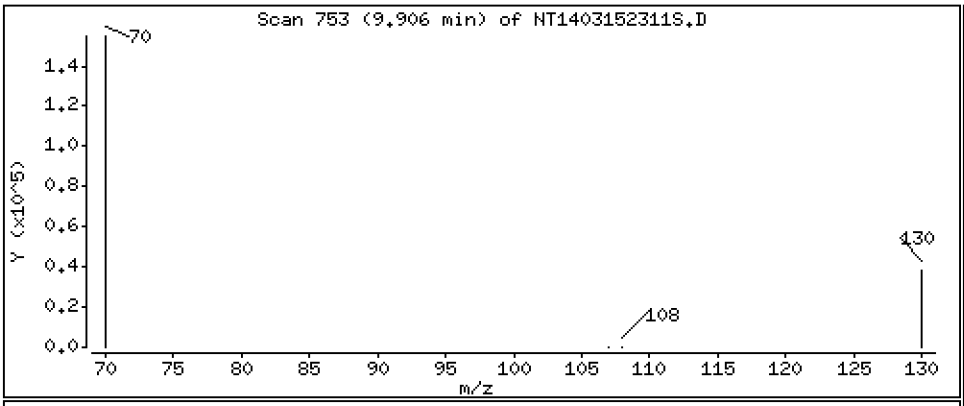
Operator: JGR

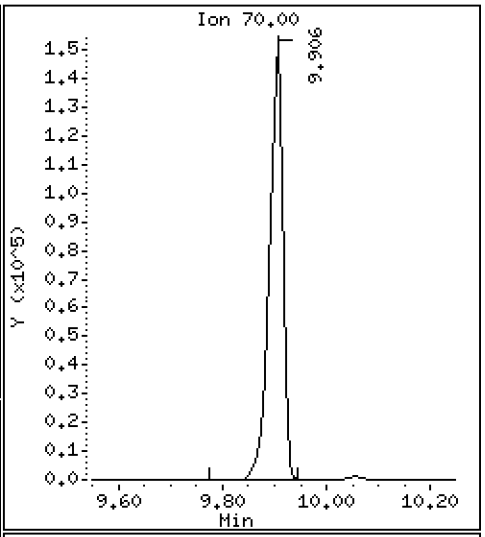
Column phase: ZB-5msi

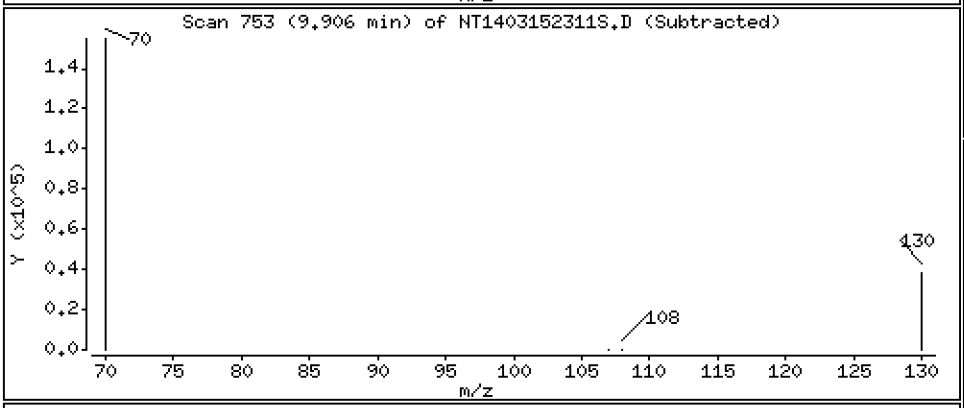
Column diameter: 0.25

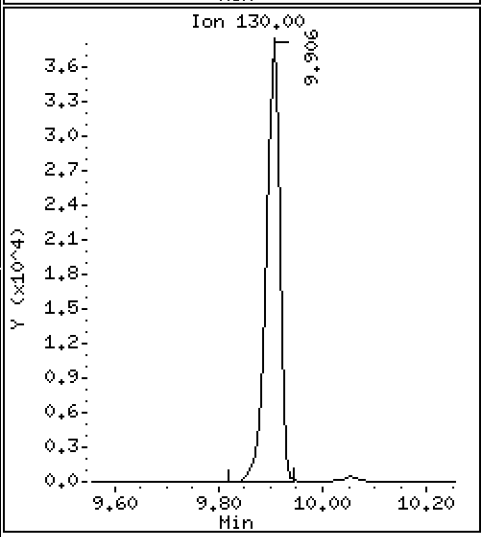
16 N-Nitroso-di-n-propylamine

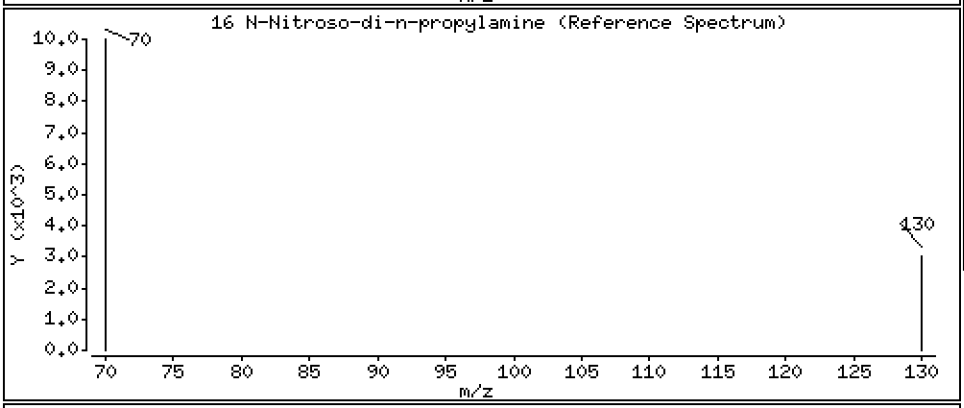
Concentration: 5.137 ug/mL

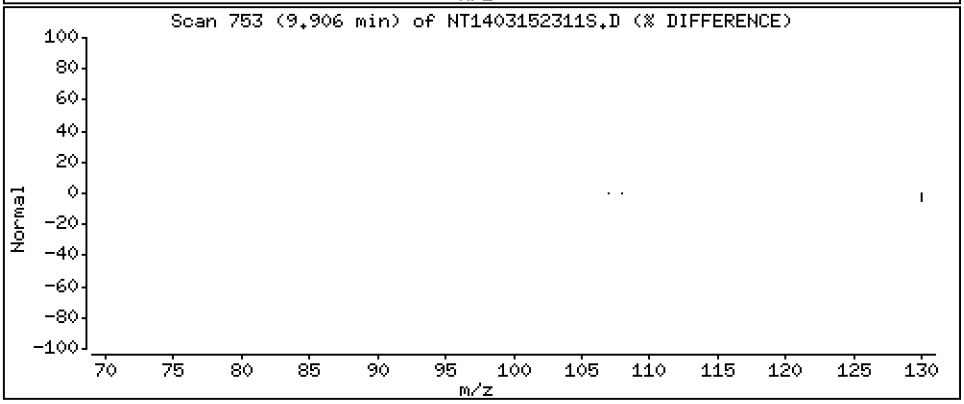












Data File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT14031523115.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

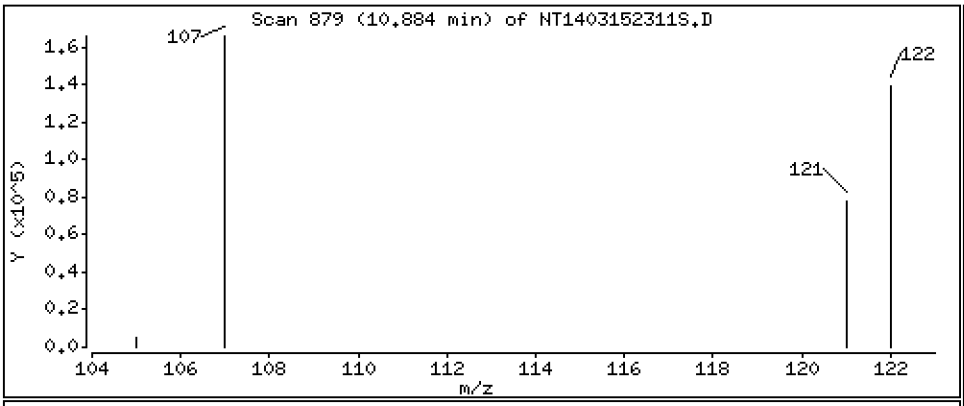
Operator: JGR

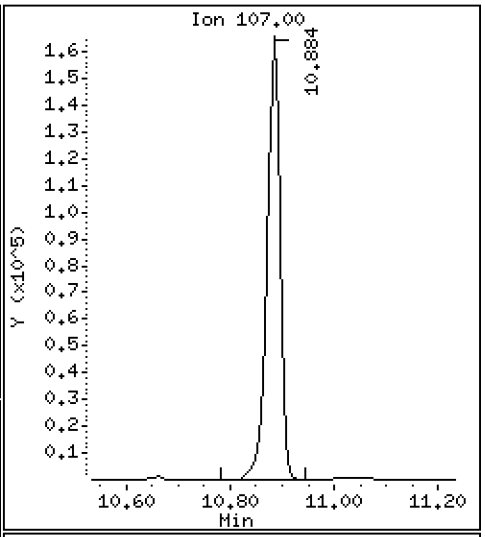
Column phase: ZB-5msi

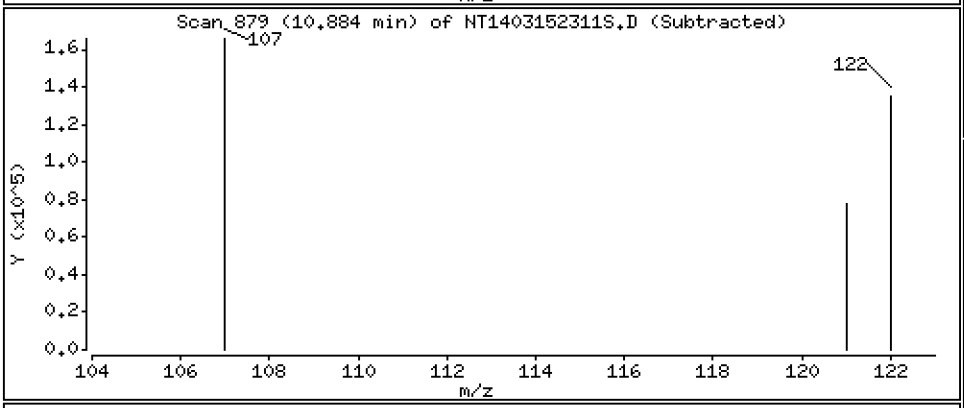
Column diameter: 0.25

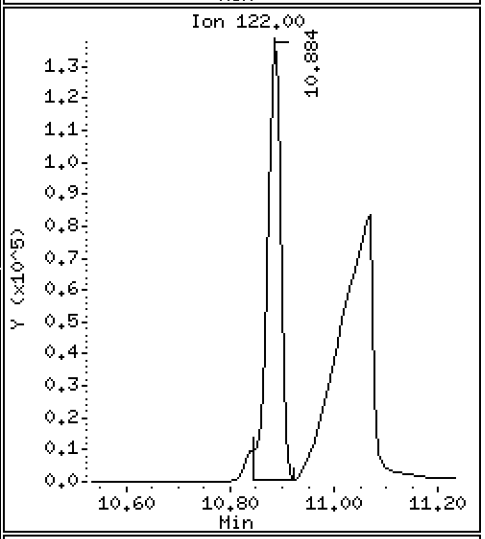
22 2,4-Dimethylphenol

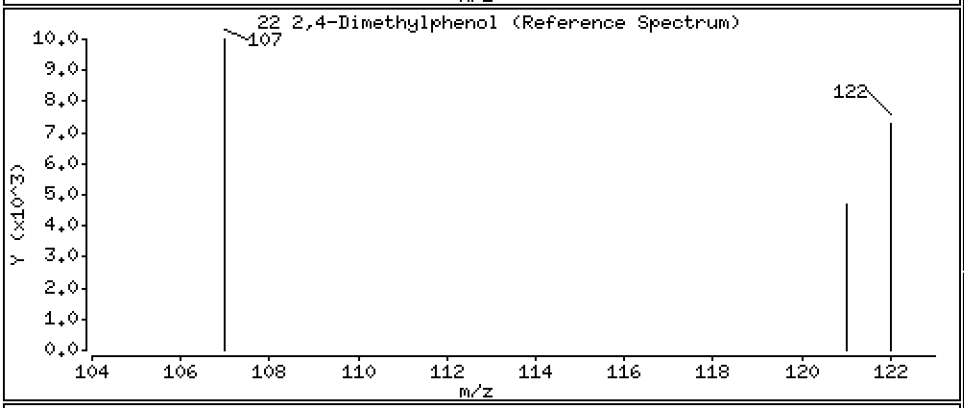
Concentration: 3.934 ug/mL

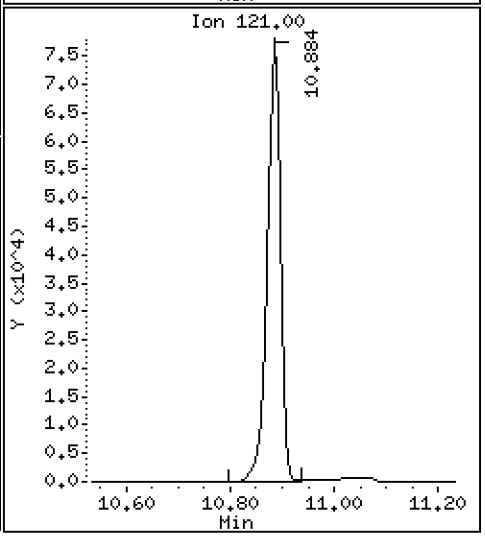


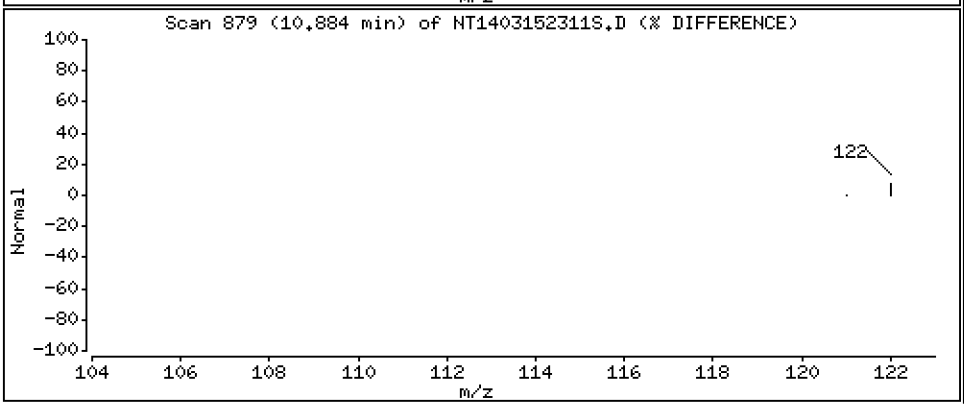












Date : 15-MAR-2023 17:39

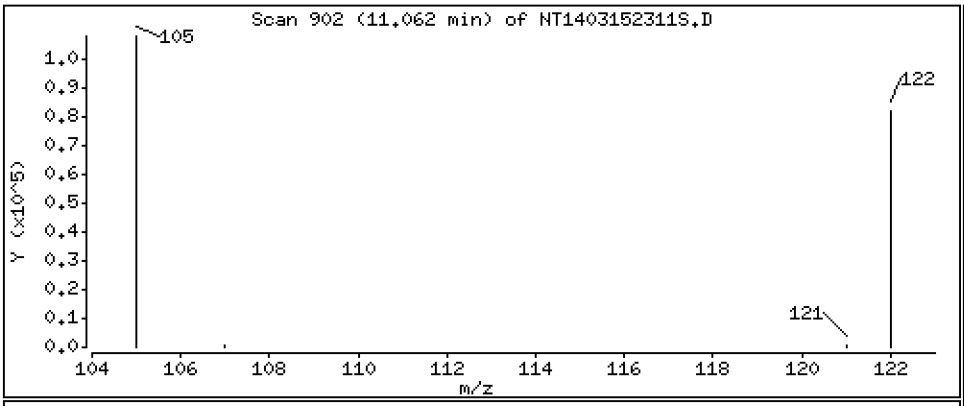
Client ID: Instrument: nt14.i

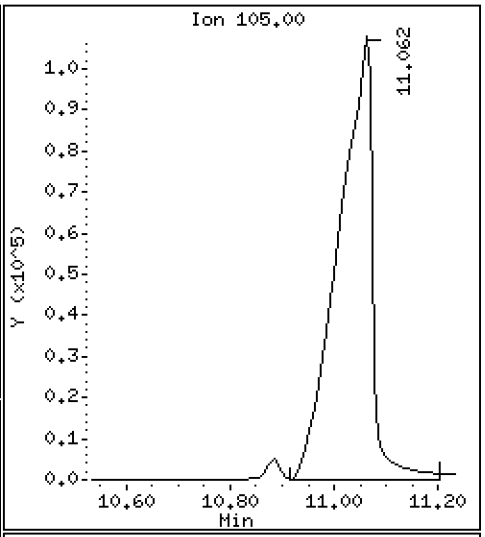
Sample Info: SLC0242-SCV1

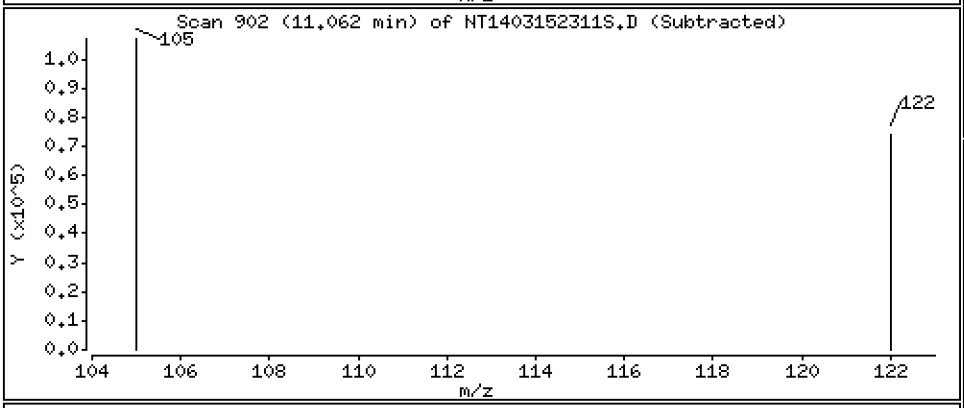
Operator: JGR

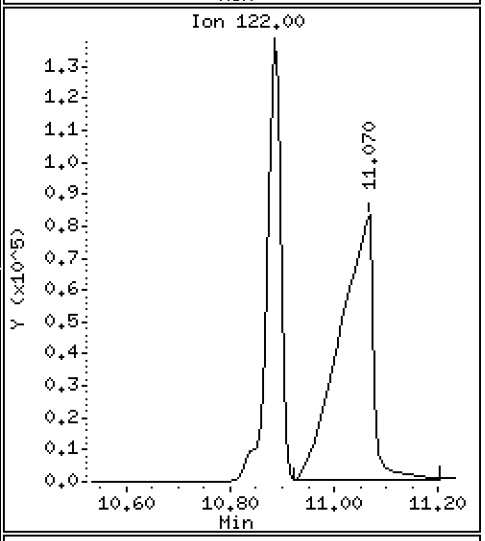
Column phase: ZB-5msi Column diameter: 0.25

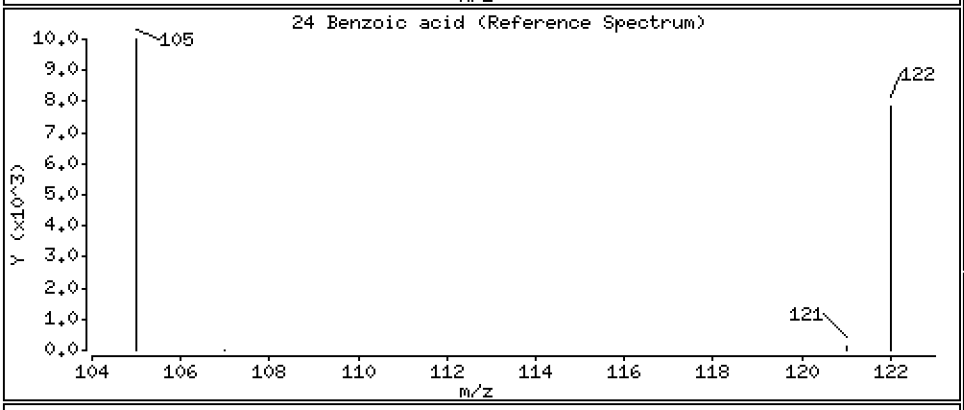
24 Benzoic acid Concentration: 9.081 ug/mL

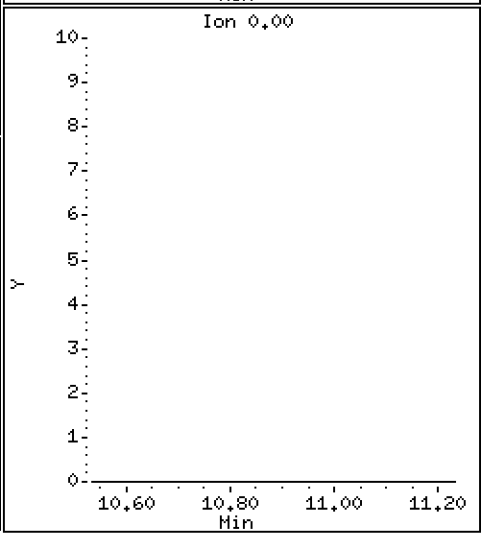


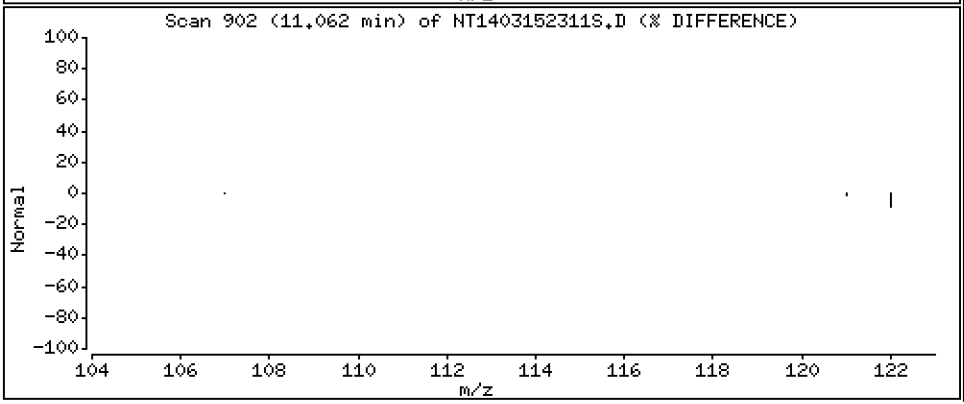












Data File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT1403152311S.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

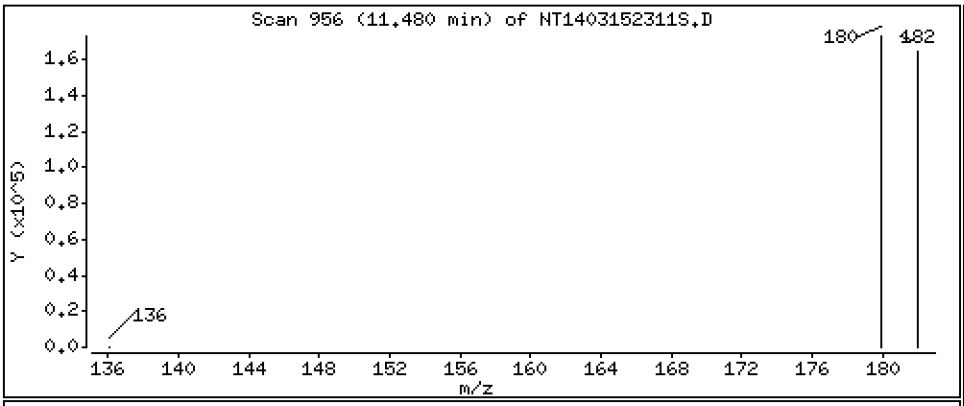
Operator: JGR

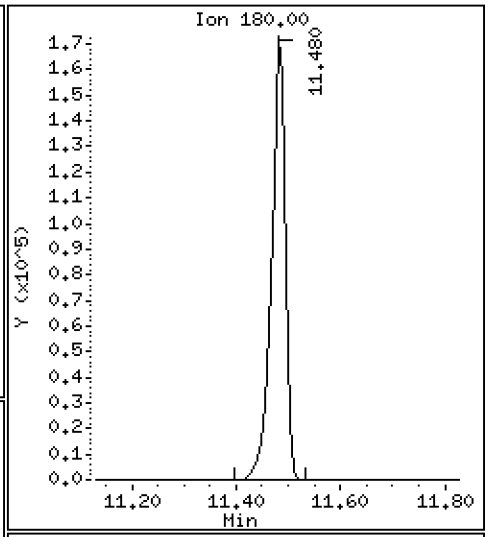
Column phase: ZB-5msi

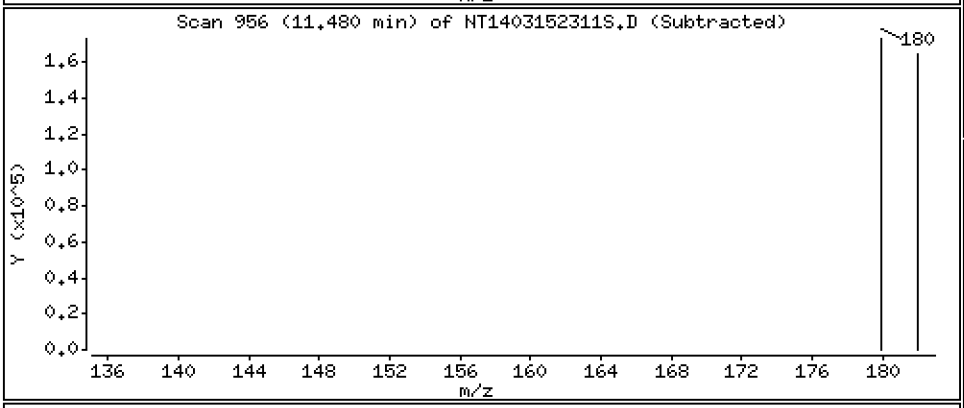
Column diameter: 0.25

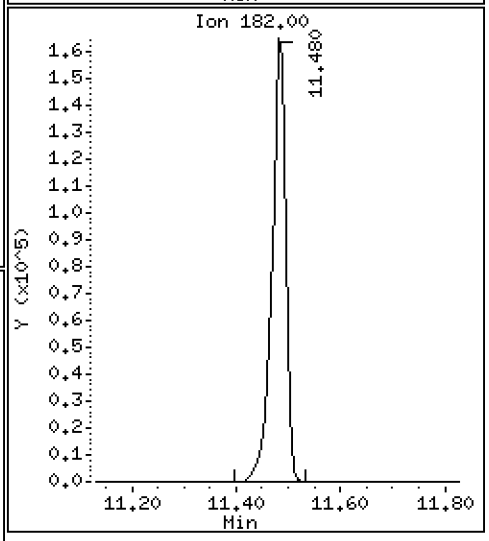
26 1,2,4-Trichlorobenzene

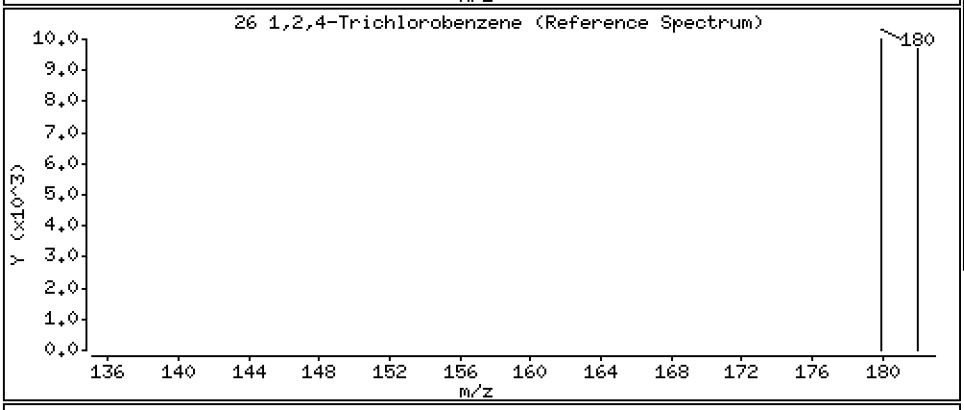
Concentration: 4.574 ug/mL

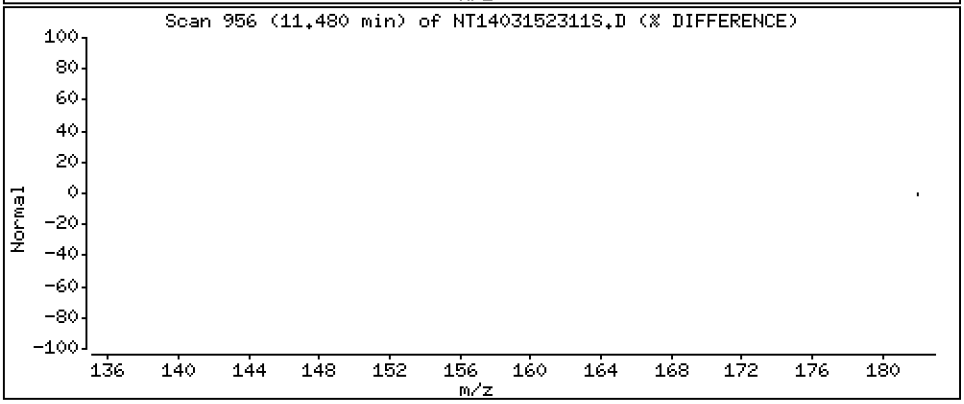












Data File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT1403152311S.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

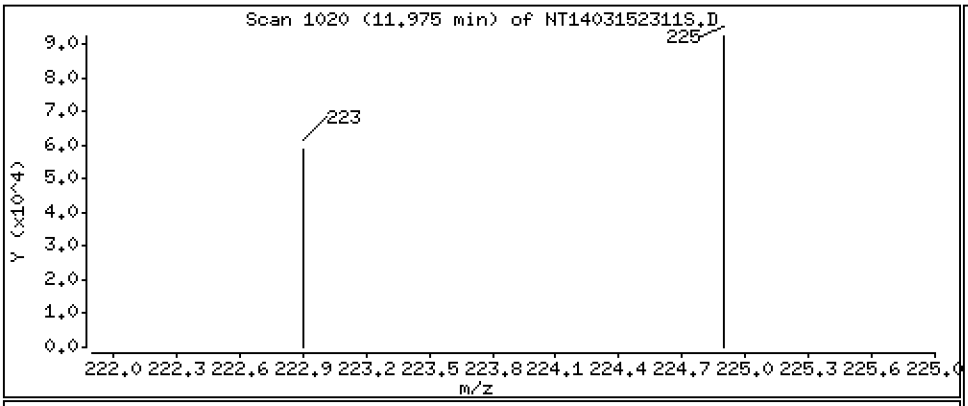
Operator: JGR

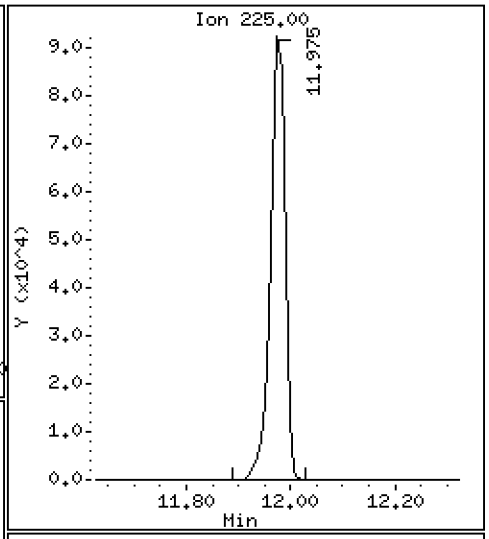
Column phase: ZB-5msi

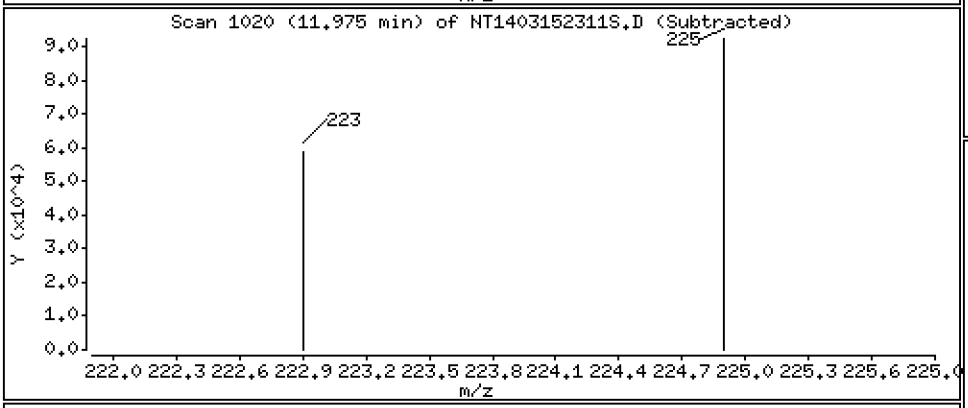
Column diameter: 0.25

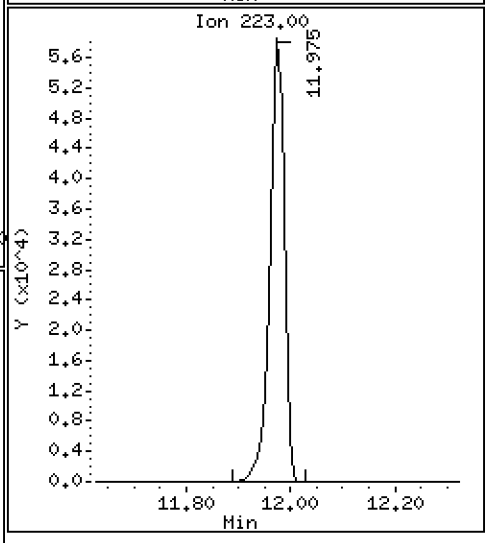
30 Hexachlorobutadiene

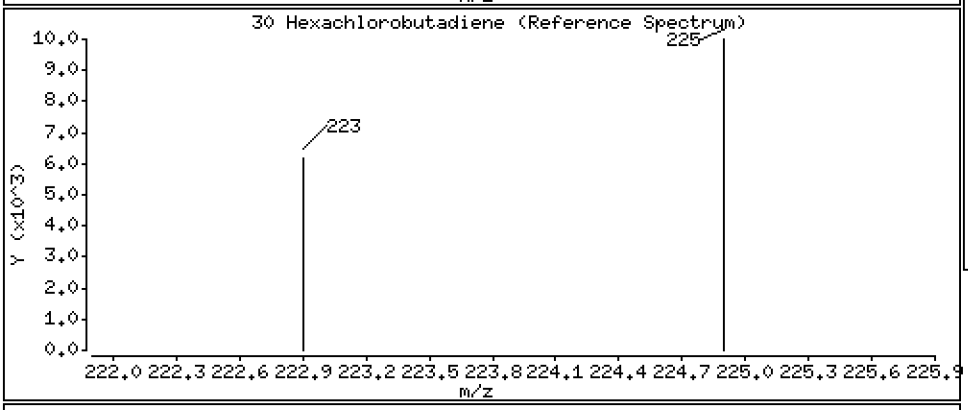
Concentration: 4.973 ug/mL

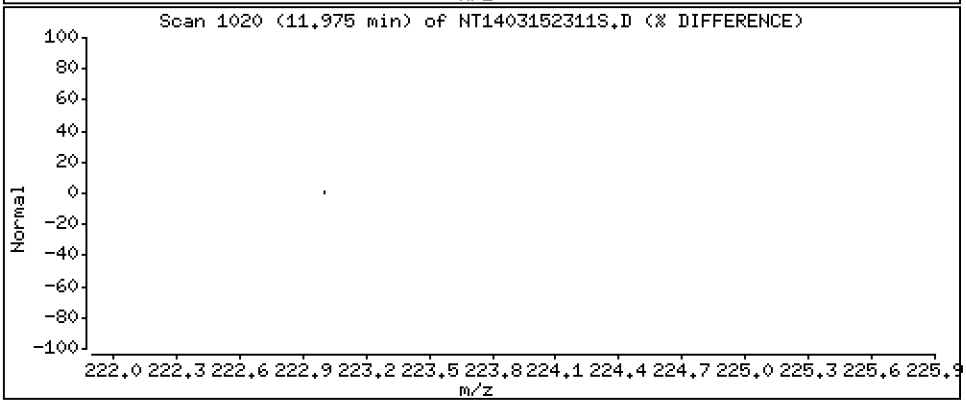












Data File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT1403152311S.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

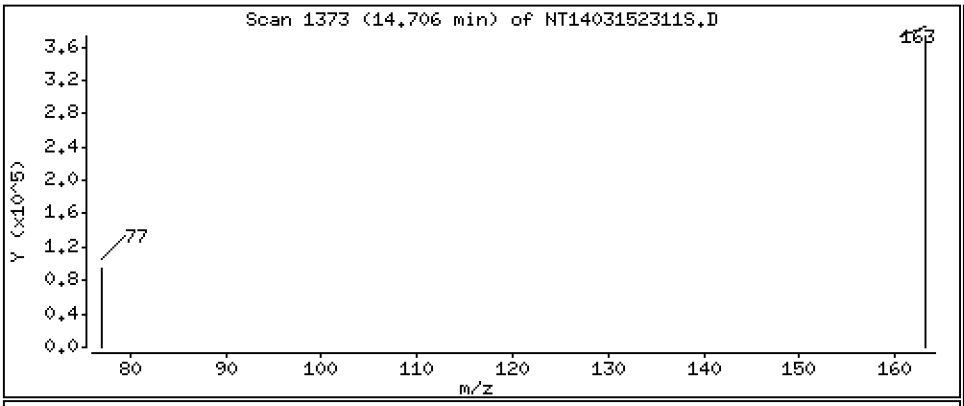
Operator: JGR

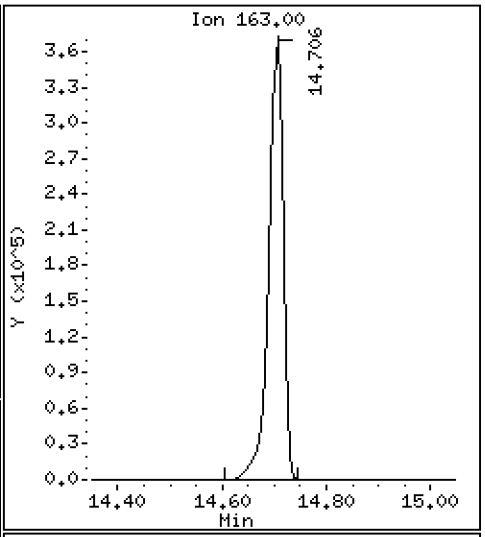
Column phase: ZB-5msi

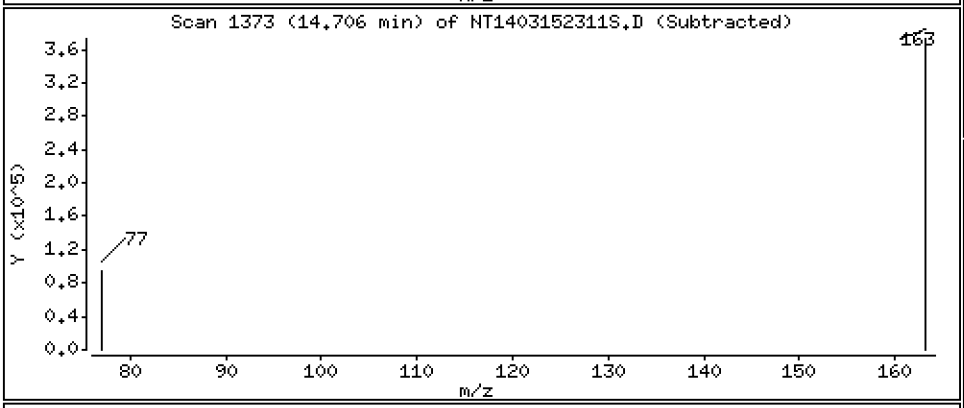
Column diameter: 0.25

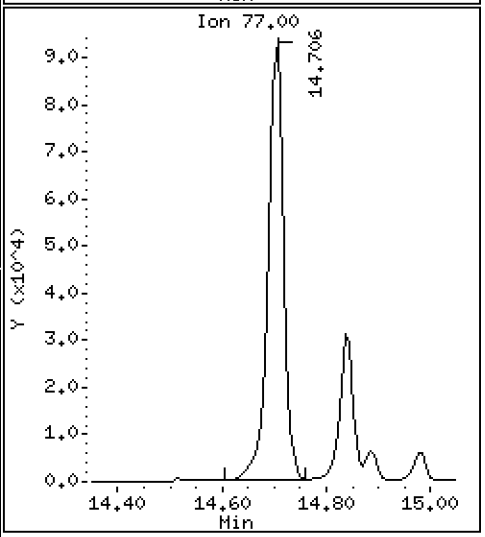
39 Dimethylphthalate

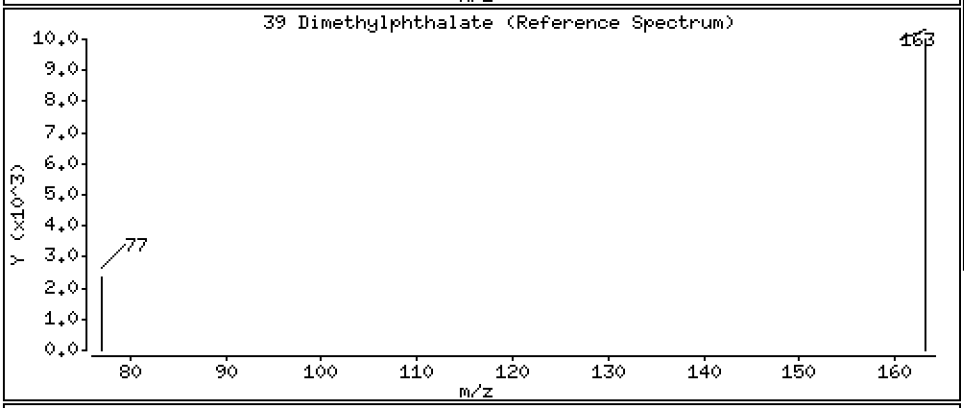
Concentration: 4.995 ug/mL

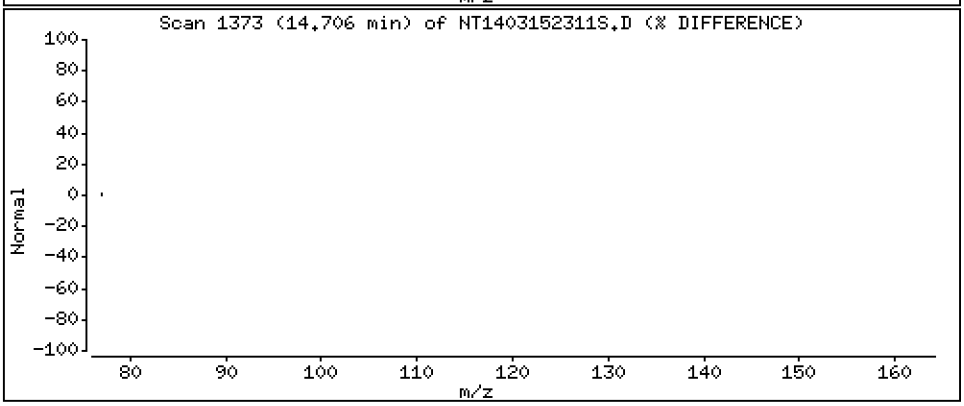












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

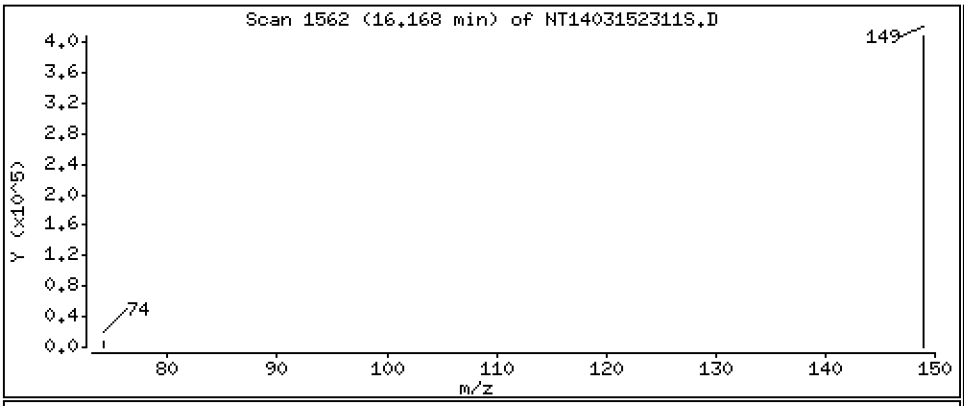
Operator: JGR

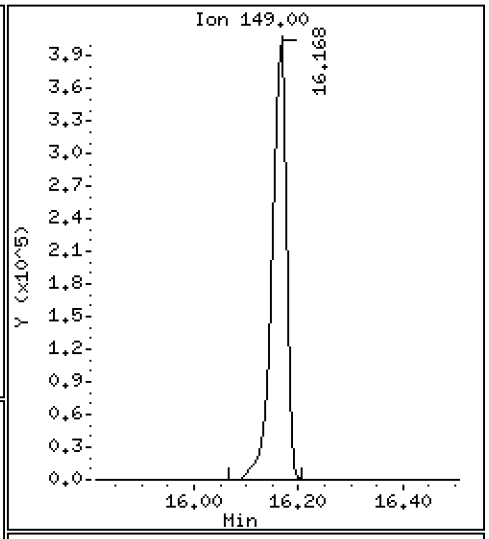
Column phase: ZB-5msi

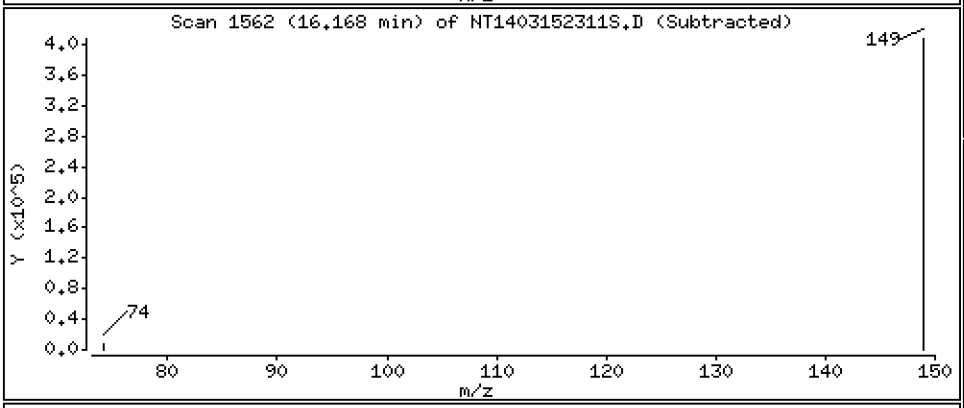
Column diameter: 0.25

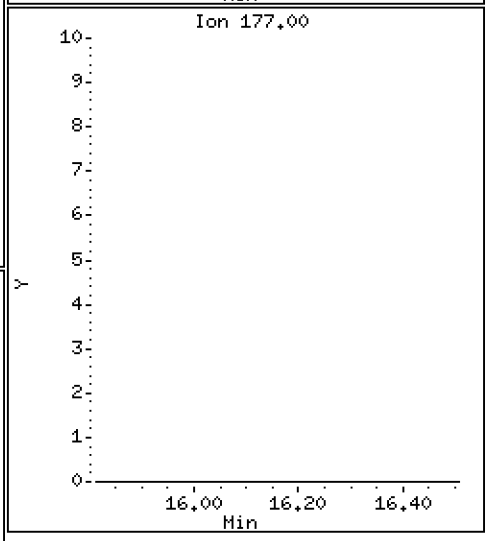
50 Diethylphthalate

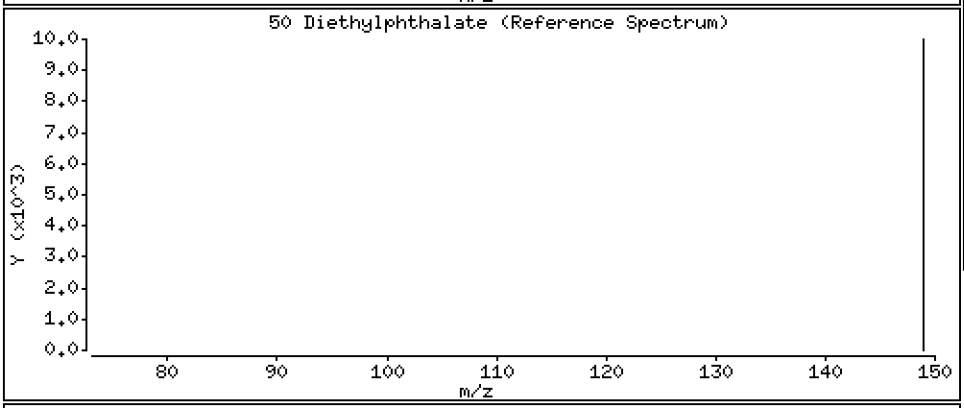
Concentration: 5.174 ug/mL

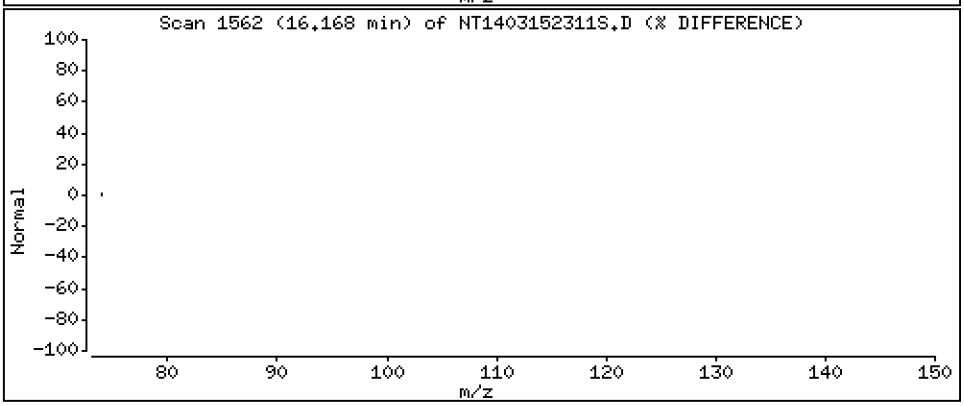












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

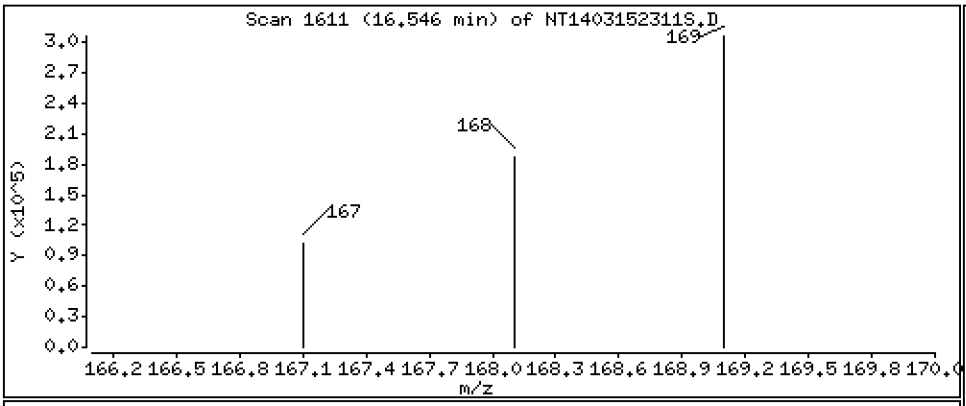
Operator: JGR

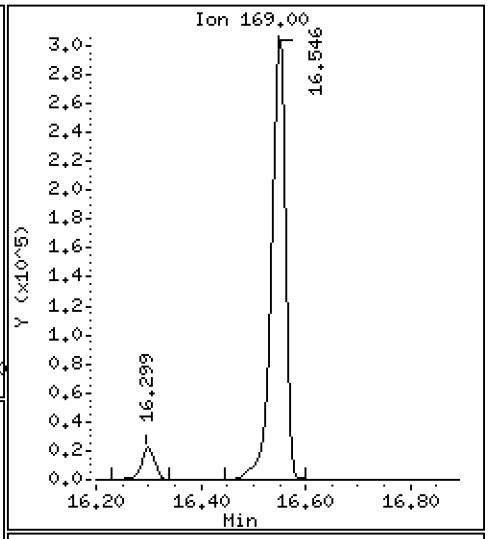
Column phase: ZB-5msi

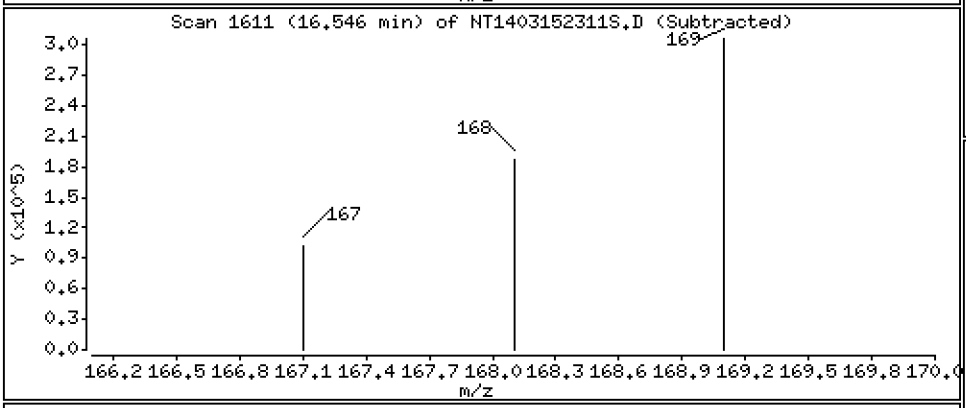
Column diameter: 0.25

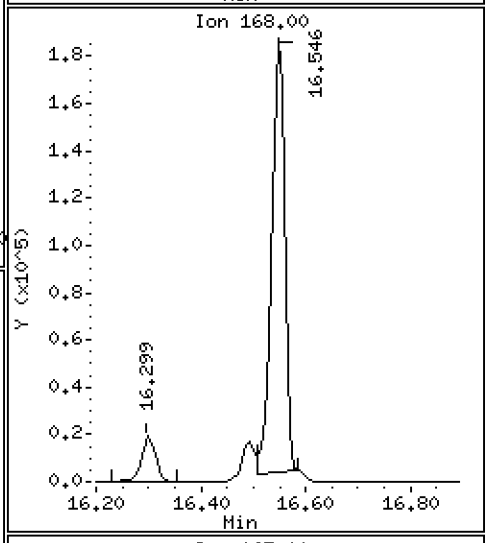
54 N-Nitrosodiphenylamine

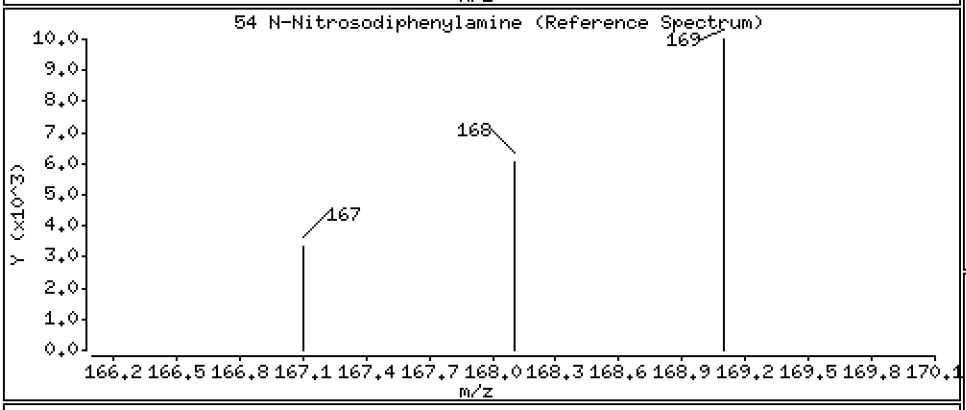
Concentration: 5.019 ug/mL

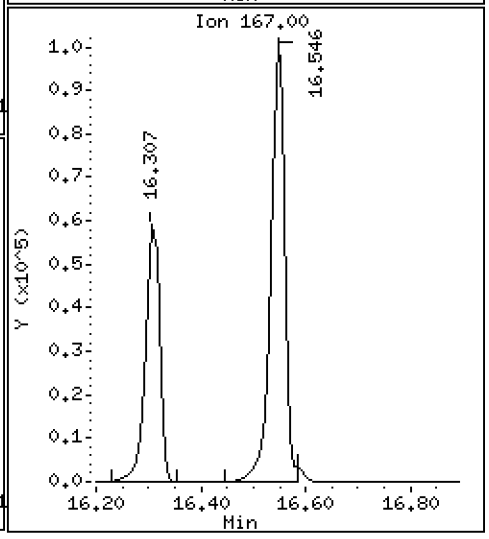


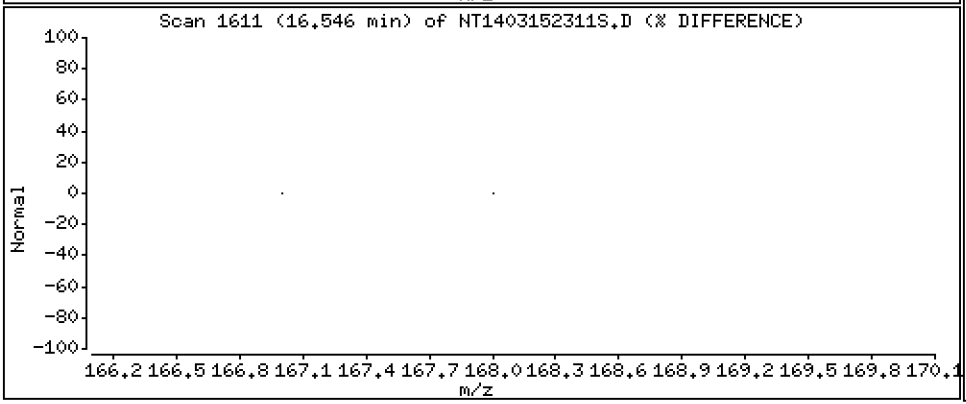












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

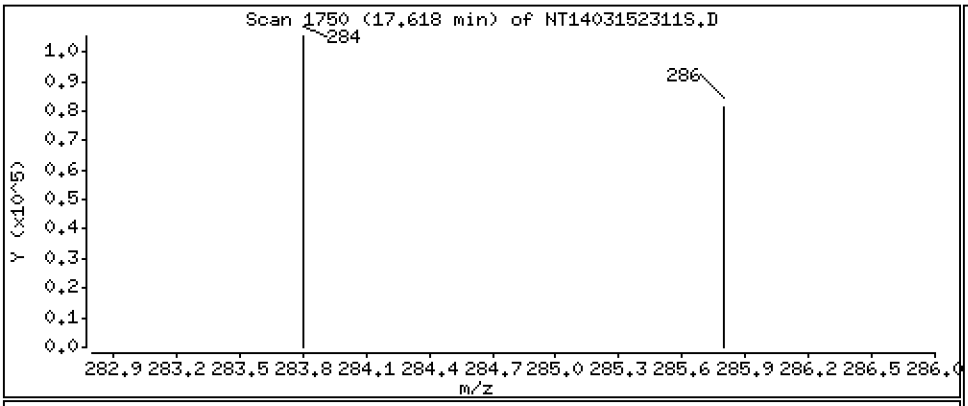
Operator: JGR

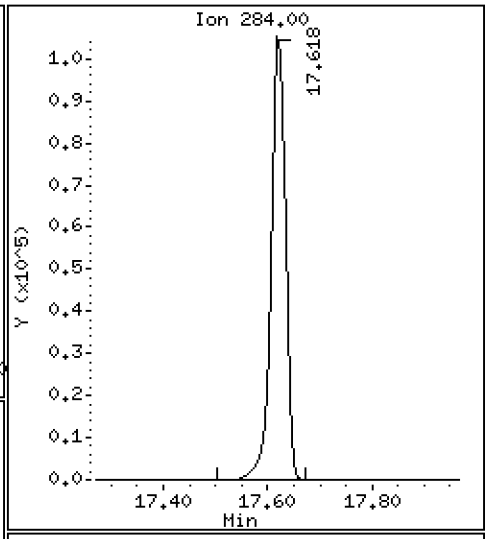
Column phase: ZB-5msi

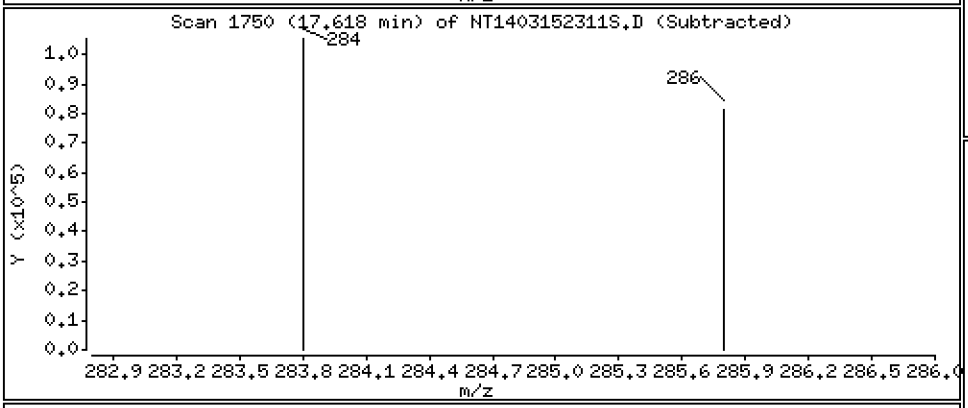
Column diameter: 0.25

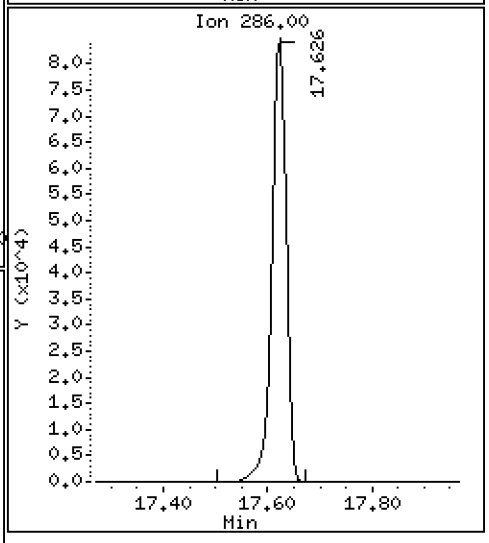
57 Hexachlorobenzene

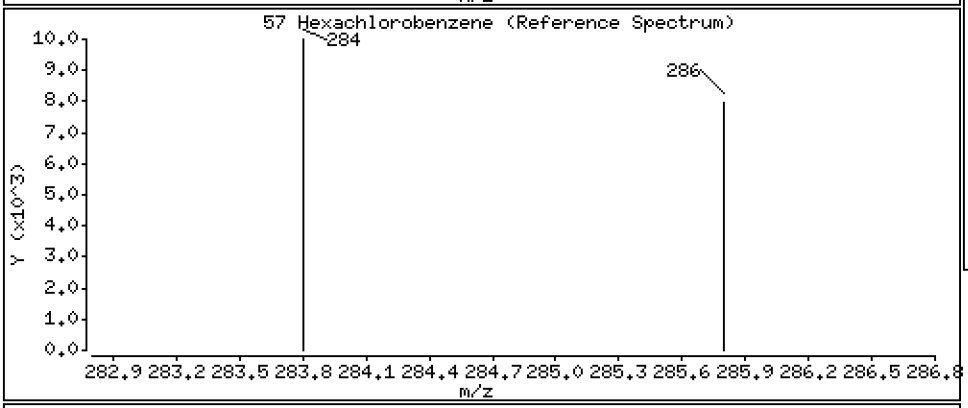
Concentration: 4.693 ug/mL

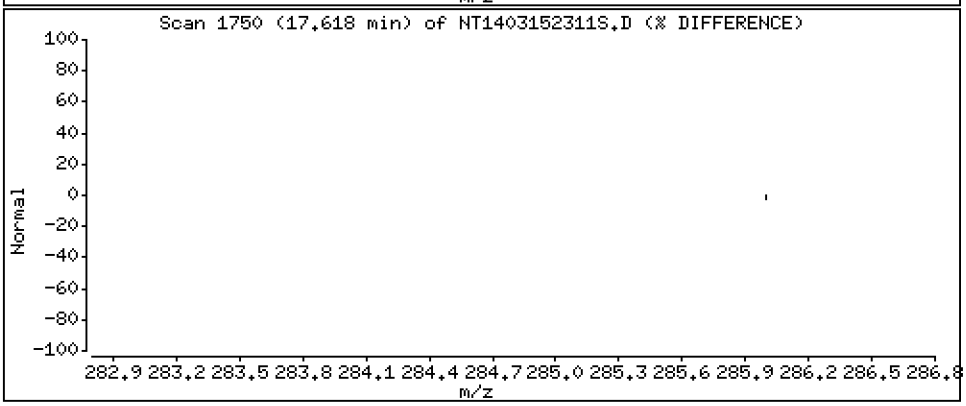












Data File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT1403152311S.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

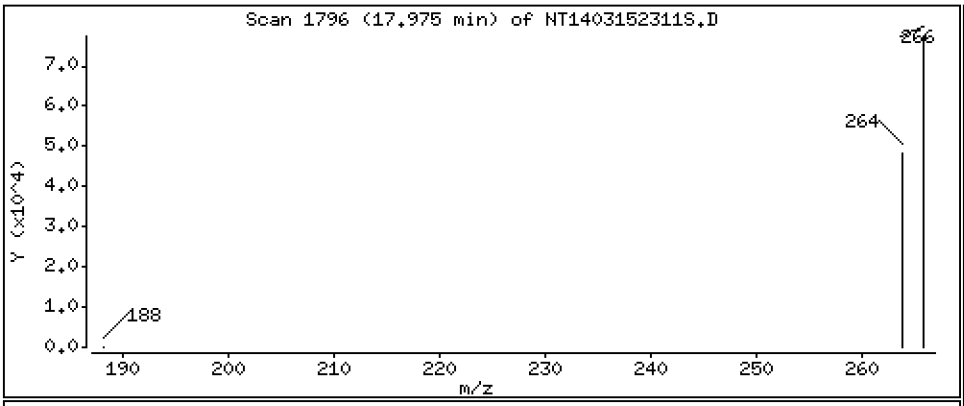
Operator: JGR

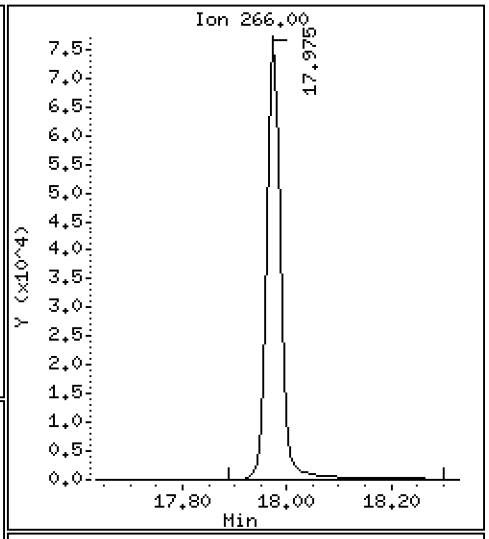
Column phase: ZB-5msi

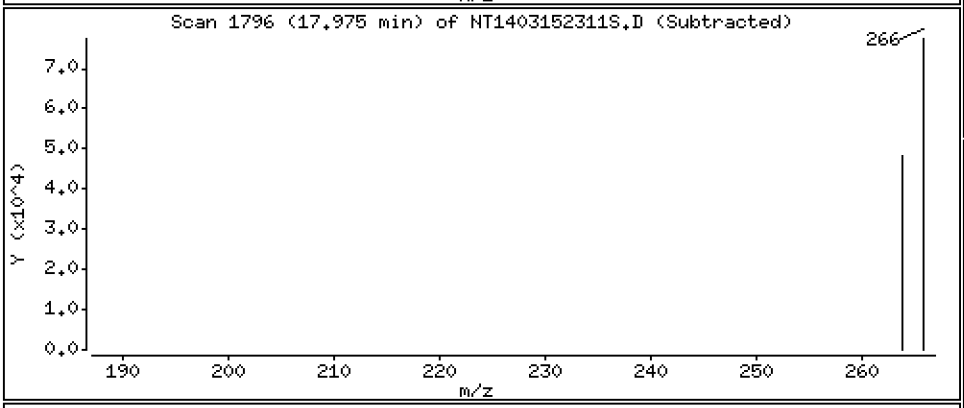
Column diameter: 0.25

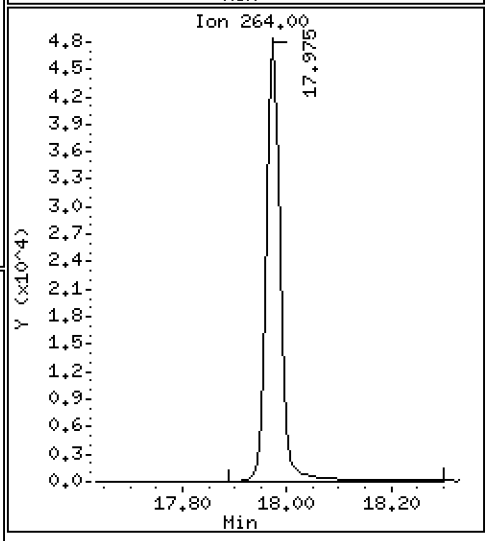
58 Pentachlorophenol

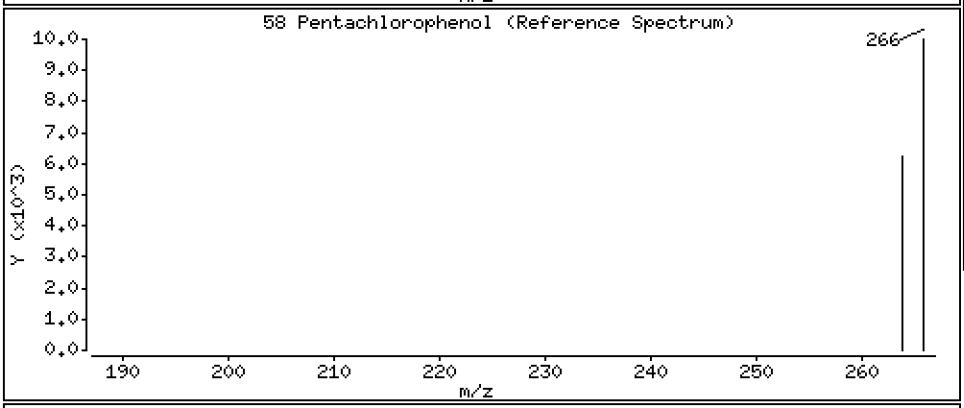
Concentration: 4.800 ug/mL

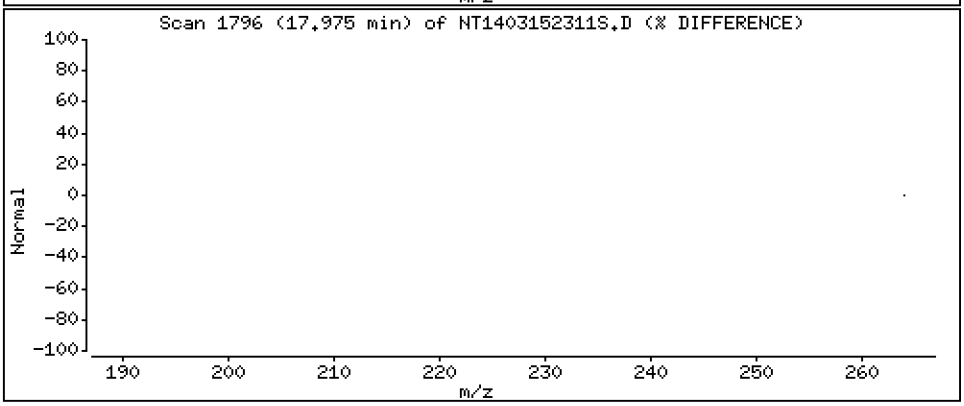












Data File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT1403152311S.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

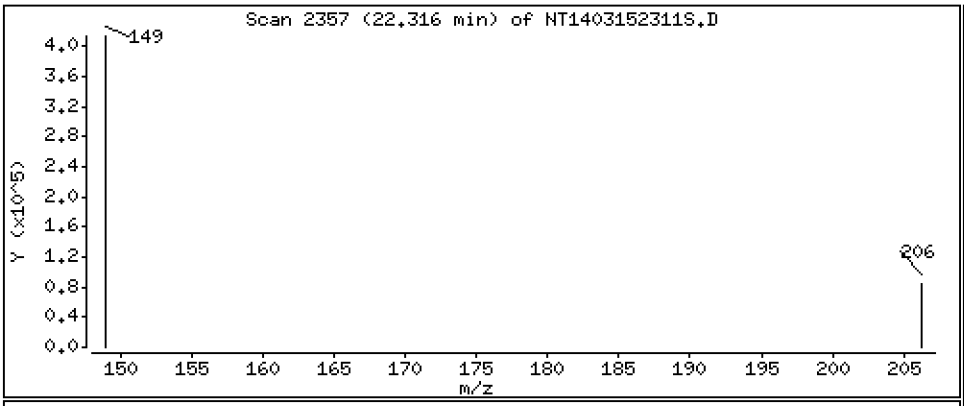
Operator: JGR

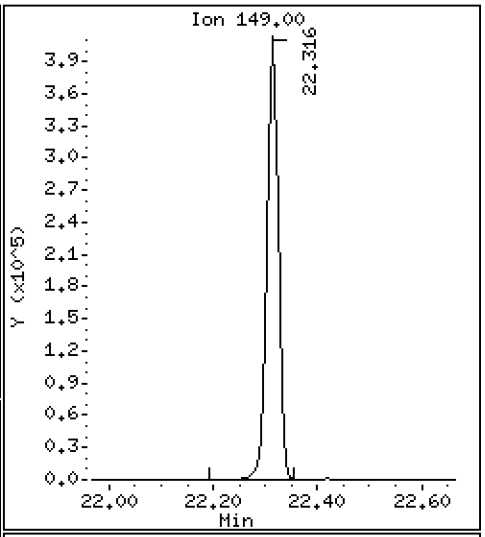
Column phase: ZB-5msi

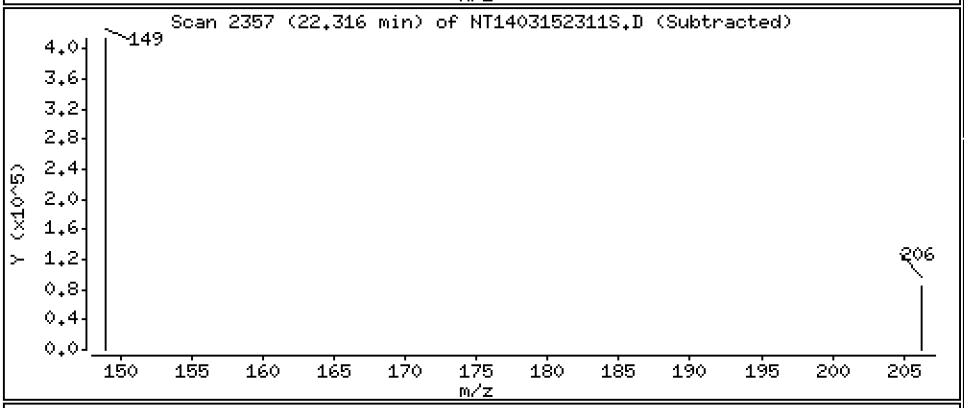
Column diameter: 0.25

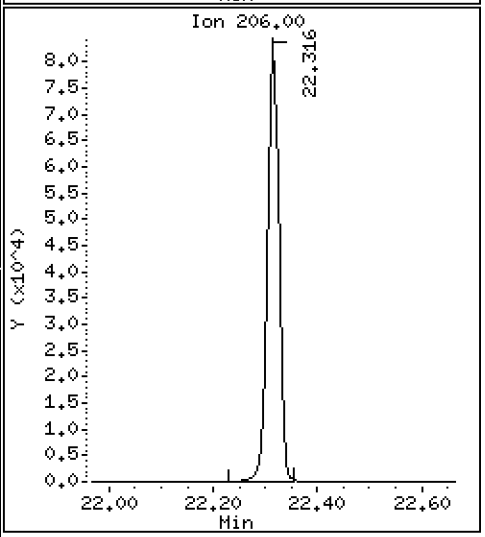
67 Butylbenzylphthalate

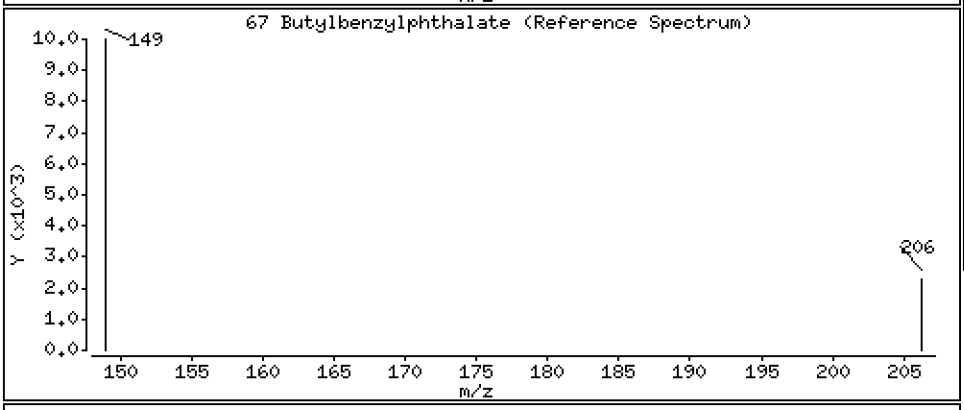
Concentration: 5.366 ug/mL

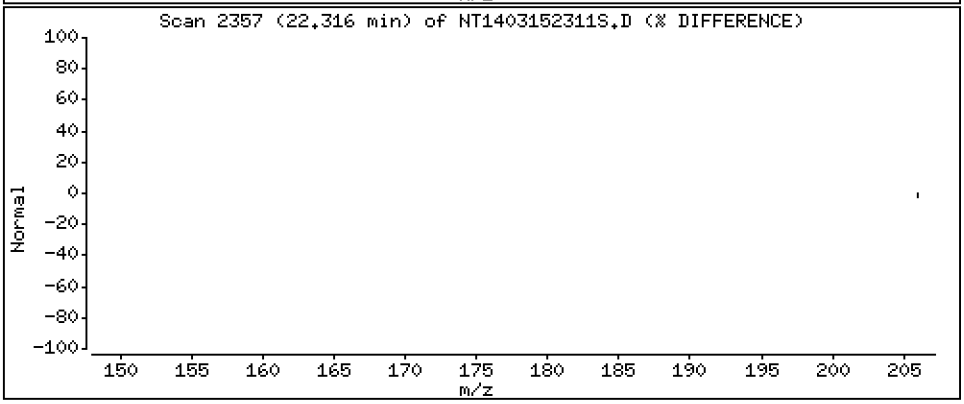












Data File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT1403152311S.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

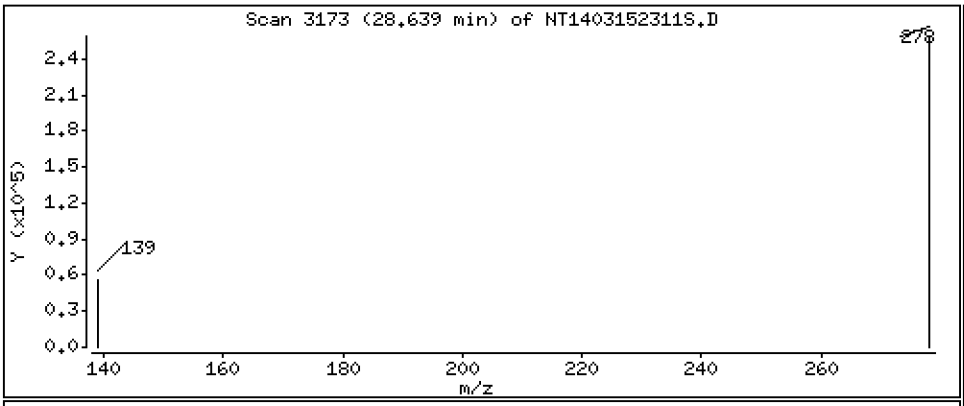
Operator: JGR

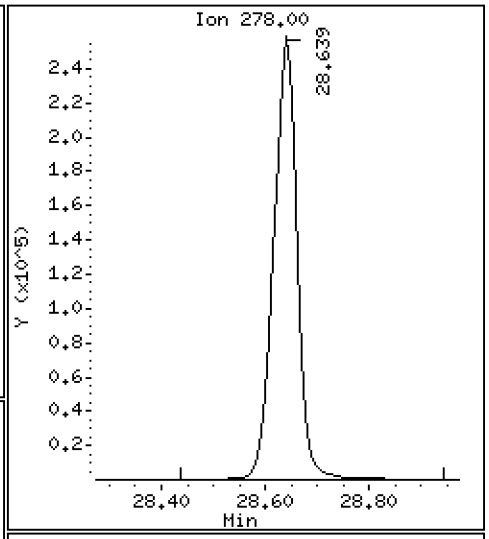
Column phase: ZB-5msi

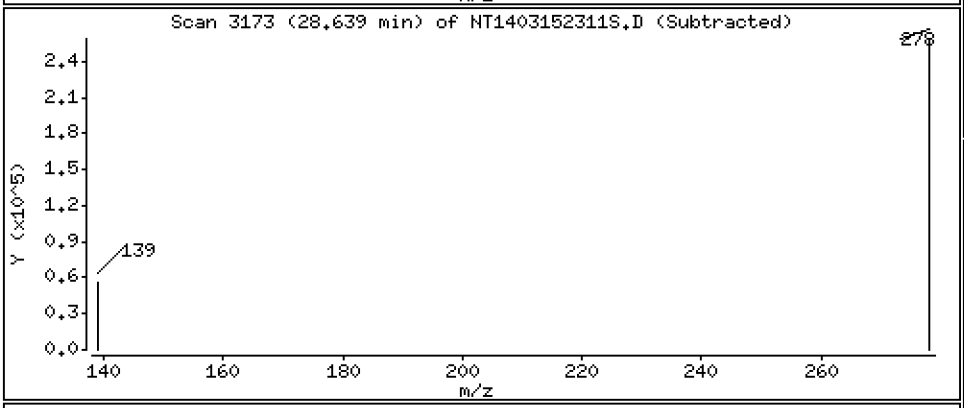
Column diameter: 0.25

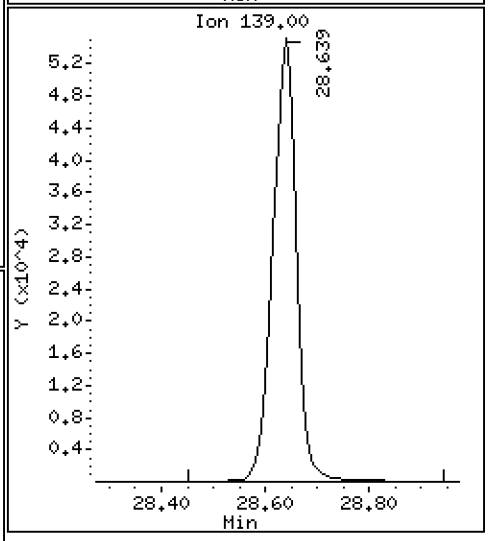
79 Dibenzo(a,h)anthracene

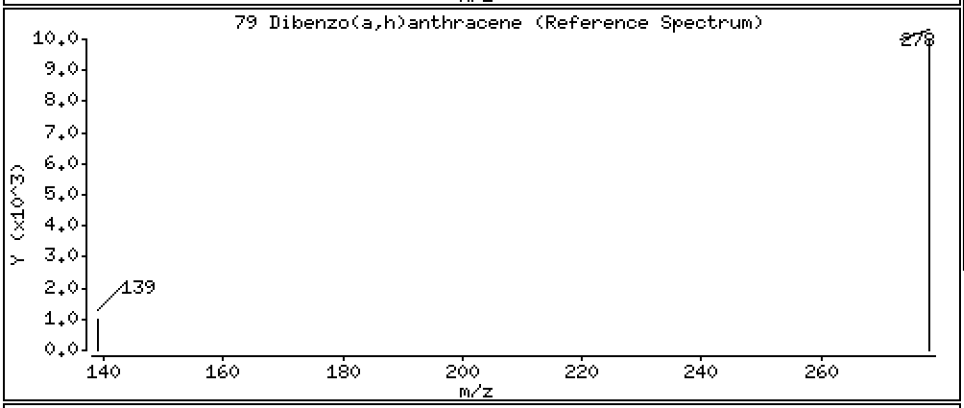
Concentration: 5.166 ug/mL

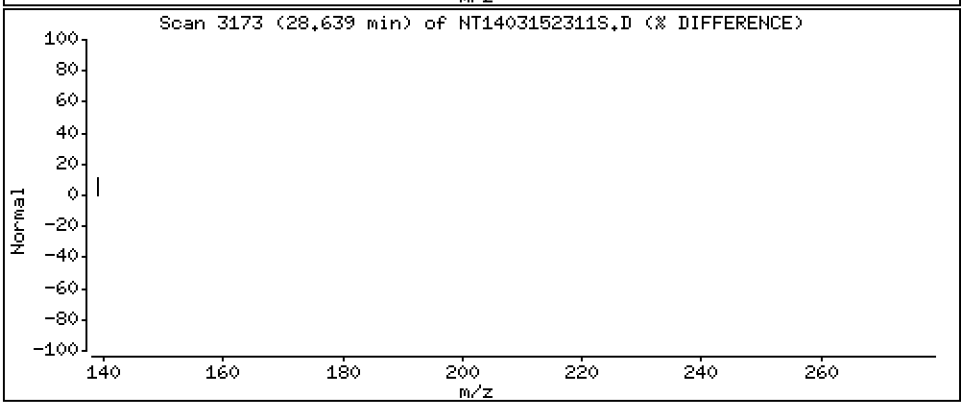












Data File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT1403152311S.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

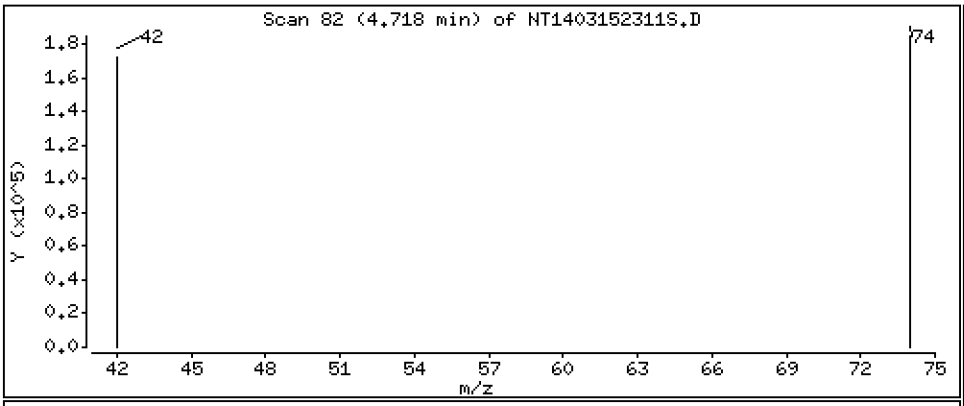
Operator: JGR

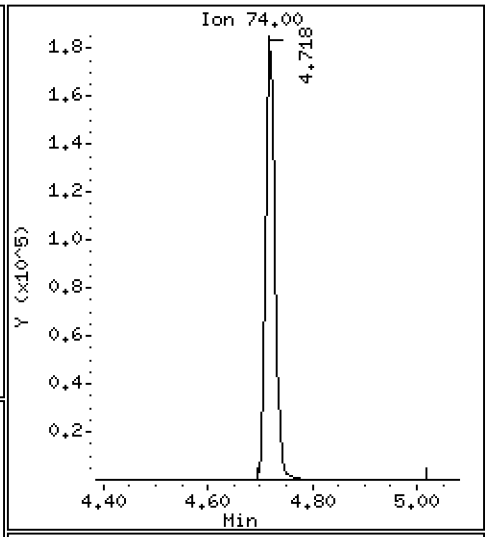
Column phase: ZB-5msi

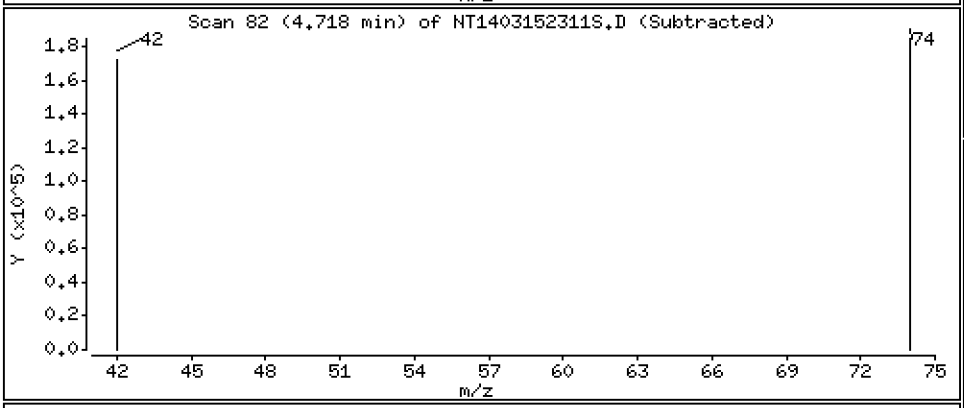
Column diameter: 0.25

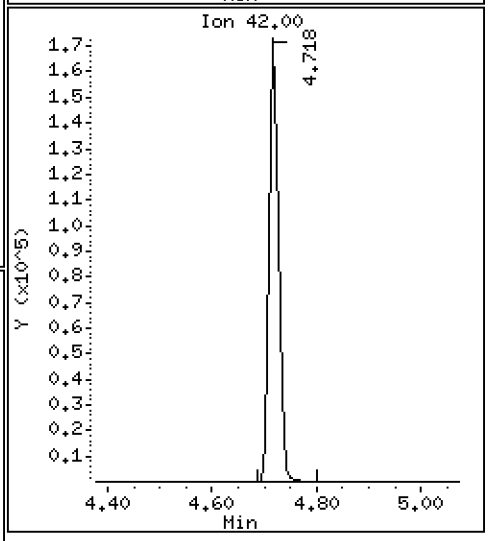
90 N-Nitrosodimethylamine

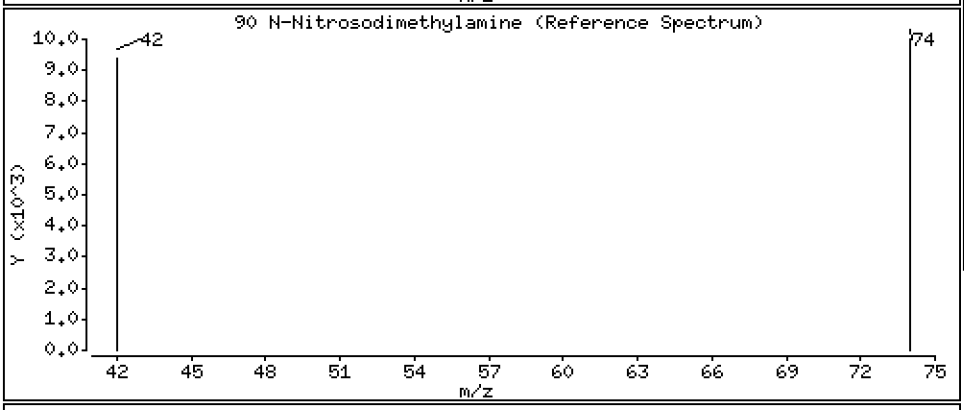
Concentration: 5.261 ug/mL

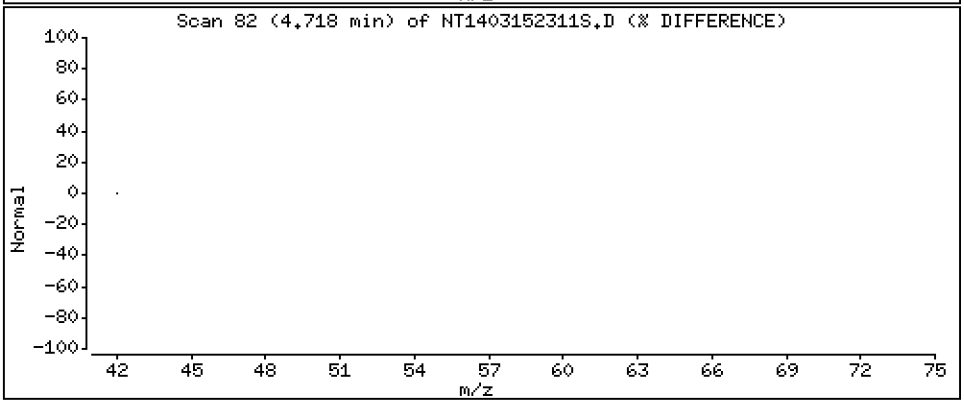












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT1403152311S.D
Lab Smp Id: SLC0242-SCV1
Inj Date : 15-MAR-2023 17:39 MS Autotune Date: 11-MAR-2023 16:01
Operator : JGR Inst ID: nt14.i
Smp Info : SLC0242-SCV1
Misc Info :
Comment :
Method : \\target\share\chem3\nt14.i\20230315.b\20230315.b\SIMABN2.m
Meth Date : 16-Mar-2023 15:17 deenayd Quant Type: ISTD
Cal Date : 15-MAR-2023 15:50 Cal File: NT1403152308.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: DEENAY-201905

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.834	6.826	(0.754)	131	0.00180	0.001799(R)
	3 Phenol	94	8.441	8.433	(0.931)	454904	4.54237	4.542
	7 1,3-Dichlorobenzene	146	9.005	9.005	(0.993)	414667	4.83856	4.839
*	8 1,4-Dichlorobenzene-d4	152	9.067	9.067	(1.000)	214548	4.00000	
	9 1,4-Dichlorobenzene	146	9.098	9.098	(1.003)	402045	4.84807	4.848
	11 Benzyl alcohol	79	9.339	9.339	(1.030)	313629	5.34291	5.343
	12 1,2-Dichlorobenzene	146	9.455	9.455	(1.043)	389531	4.82237	4.822
	13 2-Methylphenol	108	9.564	9.556	(1.055)	296655	4.28818	4.288
	15 4-Methylphenol	108	9.836	9.828	(1.085)	331703	4.53863	4.539
	16 N-Nitroso-di-n-propylamine	70	9.905	9.898	(1.092)	265440	5.13699	5.137
	22 2,4-Dimethylphenol	107	10.883	10.883	(0.941)	272931	3.93394	3.934
	24 Benzoic acid	105	11.061	10.883	(0.956)	494569	9.08128	9.081
	26 1,2,4-Trichlorobenzene	180	11.480	11.480	(0.993)	311017	4.57388	4.574
*	27 Naphthalene-d8	136	11.565	11.564	(1.000)	807045	4.00000	
	30 Hexachlorobutadiene	225	11.974	11.974	(1.035)	171122	4.97279	4.973
	39 Dimethylphthalate	163	14.706	14.698	(0.967)	683967	4.99496	4.995
*	42 Acenaphthene-d10	162	15.201	15.201	(1.000)	400955	4.00000	
	50 Diethylphthalate	149	16.168	16.160	(1.064)	754333	5.17432	5.174
	54 N-Nitrosodiphenylamine	169	16.546	16.546	(0.907)	544923	5.01904	5.019
	57 Hexachlorobenzene	284	17.618	17.618	(0.966)	195732	4.69277	4.693
	58 Pentachlorophenol	266	17.974	17.982	(0.985)	138145	4.79996	4.800
*	59 Phenanthrene-d10	188	18.245	18.245	(1.000)	801298	4.00000	
$	66 Terphenyl-d14	244	21.386	21.386	(0.918)	546	0.00507	0.005072(R)
	67 Butylbenzylphthalate	149	22.315	22.315	(0.958)	588546	5.36591	5.366
*	69 Chrysene-d12	240	23.299	23.299	(1.000)	624454	4.00000	
*	77 Perylene-d12	264	25.939	25.939	(1.000)	623001	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.639	28.623	(1.104)	815876	5.16593	5.166
	90 N-Nitrosodimethylamine	74	4.717	4.733	(0.520)	234083	5.26142	5.261

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1403152311S.D
Lab Smp Id: SLC0242-SCV1
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\SIMABN2.m
Misc Info:

Calibration Date: 15-MAR-2023
Calibration Time: 14:38
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	223201	111601	446402	214548	-3.88
27 Naphthalene-d8	832937	416469	1665874	807045	-3.11
42 Acenaphthene-d10	403175	201588	806350	400955	-0.55
59 Phenanthrene-d10	814822	407411	1629644	801298	-1.66
69 Chrysene-d12	625755	312878	1251510	624454	-0.21
77 Perylene-d12	614085	307043	1228170	623001	1.45

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.08	8.58	9.58	9.07	-0.08
27 Naphthalene-d8	11.56	11.06	12.06	11.57	0.00
42 Acenaphthene-d10	15.20	14.70	15.70	15.20	0.00
59 Phenanthrene-d10	18.25	17.75	18.75	18.25	0.00
69 Chrysene-d12	23.30	22.80	23.80	23.30	0.00
77 Perylene-d12	25.94	25.44	26.44	25.94	0.00

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

REVIEW SUMMARY FOR FILE - NT1403152311S.D

Lab ID: SLC0242-SCV1
nt14.i, 20230315.b\20230315.b\SIMABN2.m,   15-MAR-2023 17:39

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT14	Calibration:	GC00050
Lab File ID:	NT1403172303S.D	Calibration Date:	03/15/2023
Sequence:	SLC0376	Injection Date:	03/17/23
Lab Sample ID:	SLC0376-ICV1	Injection Time:	15:39
Sequence Name:	Initial Cal Check		

		CONC. (ug/mL)		RESPONSE FACTOR			% DRIFT/DIFF		
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT	
1,4-Dichlorobenzene	A	1.0000	1.0	1.5461150	1.5354220		-0.7	+/-20	
1,2-Dichlorobenzene	A	1.0000	1.0	1.5059720	1.5060330		0.0	+/-20	
Benzyl Alcohol	A	1.0000	0.9	1.0943940	1.0193020		-6.9	+/-20	
Benzoic acid	A	4.0000	2.3	0.1762504	0.1506837		-42.6	+/-20	*
2,4-Dimethylphenol	A	2.0000	2.1	0.3438645	0.3527495		2.6	+/-20	
1,2,4-Trichlorobenzene	A	1.0000	1.0	0.3370247	0.3402352		1.0	+/-20	
N-Nitrosodiphenylamine	A	1.0000	1.0	0.5419762	0.5569556		2.8	+/-20	
Pentachlorophenol	A	2.0000	1.4	0.1113753	0.1003637		-29.0	+/-20	*
2-Fluorophenol	A	1.5000	1.42	1.3577520	1.2839290		-5.5	+/-20	
p-Terphenyl-d14	A	1.0000	1.23	0.6895811	0.8473240		22.9	+/-20	*
1,4-Dichlorobenzene-d4	A	4.0000	4.0	55463.9700	1.0000		0.0		
Naphthalene-d8	A	4.0000	4.0	207494.5000	1.0000		0.0		
Acenaphthene-d10	A	4.0000	4.0	99689.0600	1.0000		0.0		
Phenanthrene-d10	A	4.0000	4.0	200034.6000	1.0000		0.0		
Chrysene-d12	A	4.0000	4.0	154742.9000	1.0000		0.0		
Perylene-d12	A	4.0000	4.0	150902.2000	1.0000		0.0		

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT14031723038.D

Date : 17-MAR-2023 15:39

Client ID:

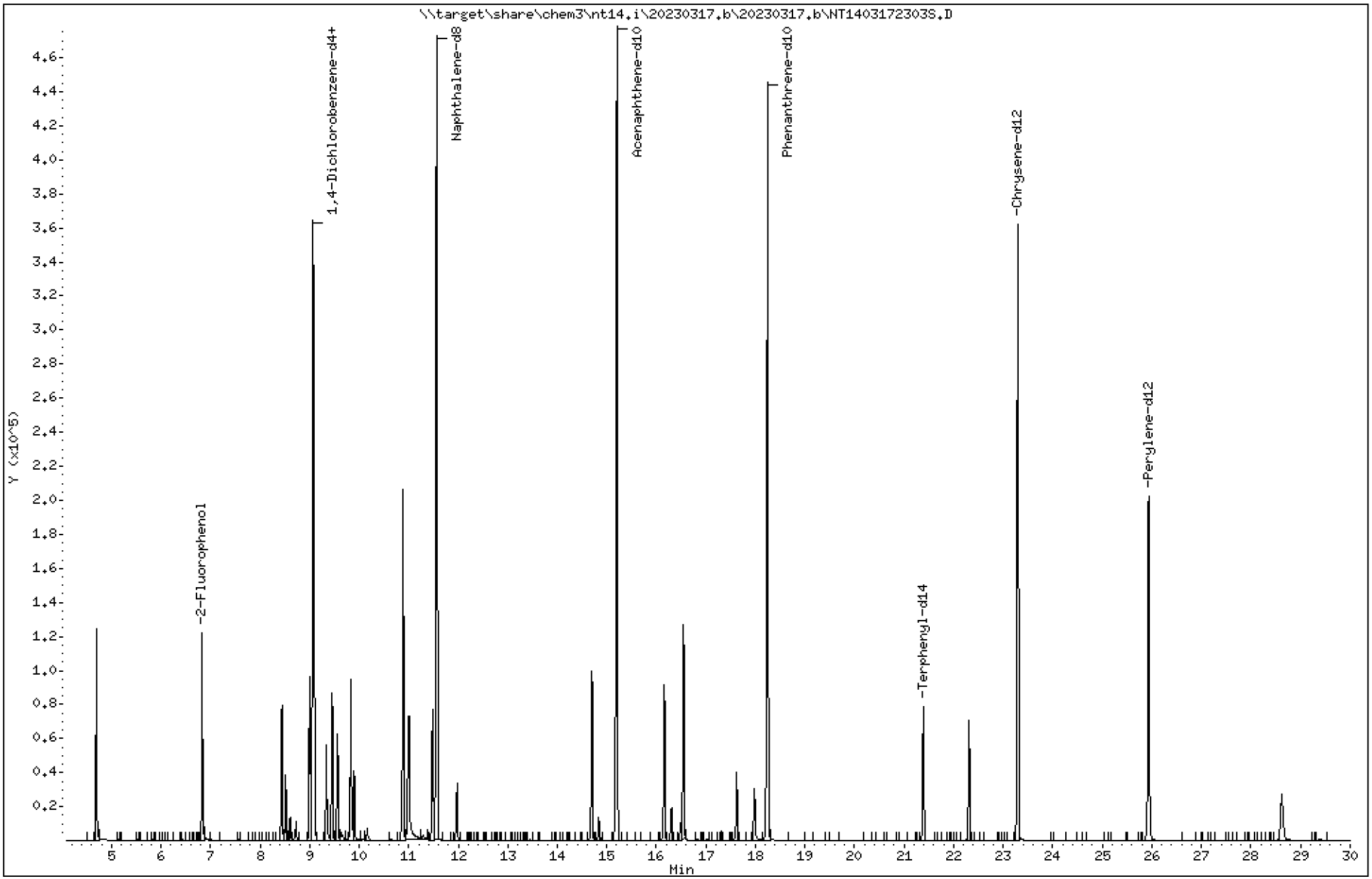
Instrument: nt14.i

Sample Info: SLC0376-ICV1

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172303S.D
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Inj Date : 17-MAR-2023 15:39 MS Autotune Date: 11-MAR-2023 16:01
Operator : JGR Inst ID: nt14.i
Smp Info : SLC0376-ICV1
Misc Info :
Comment :
Method : \\target\share\chem3\nt14.i\20230317.b\20230317.b\SIMABN2.m
Meth Date : 23-Mar-2023 16:53 van Quant Type: ISTD
Cal Date : 15-MAR-2023 15:50 Cal File: NT1403152308.D
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

			QUANT SIG					AMOUNTS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1	2-Fluorophenol	112	6.826	6.826	(0.753)	108060	1.50000	1.418
	3	Phenol	94	8.440	8.440	(0.931)	98880	1.00000	0.9438
	7	1,3-Dichlorobenzene	146	9.005	9.005	(0.993)	89204	1.00000	0.9950
*	8	1,4-Dichlorobenzene-d4	152	9.067	9.067	(1.000)	224436	4.00000	
	9	1,4-Dichlorobenzene	146	9.098	9.098	(1.003)	86151	1.00000	0.9931
	11	Benzyl alcohol	79	9.338	9.338	(1.030)	57192	1.00000	0.9314
	12	1,2-Dichlorobenzene	146	9.455	9.455	(1.043)	84502	1.00000	1.000
	13	2-Methylphenol	108	9.563	9.563	(1.055)	72439	1.00000	1.001
	15	4-Methylphenol	108	9.827	9.827	(1.084)	75926	1.00000	0.9931
	16	N-Nitroso-di-n-propylamine	70	9.897	9.897	(1.092)	53222	1.00000	0.9846
	22	2,4-Dimethylphenol	107	10.883	10.883	(0.941)	145618	2.00000	2.052
	24	Benzoic acid	105	10.999	10.999	(0.951)	124407	4.00000	2.297
	26	1,2,4-Trichlorobenzene	180	11.479	11.479	(0.993)	70226	1.00000	1.010
*	27	Naphthalene-d8	136	11.564	11.564	(1.000)	825617	4.00000	
	30	Hexachlorobutadiene	225	11.974	11.974	(1.035)	37029	1.00000	1.052
	39	Dimethylphthalate	163	14.698	14.698	(0.967)	134715	1.00000	1.004
*	42	Acenaphthene-d10	162	15.201	15.201	(1.000)	392947	4.00000	
	50	Diethylphthalate	149	16.160	16.160	(1.063)	146320	1.00000	1.024
	54	N-Nitrosodiphenylamine	169	16.545	16.545	(0.907)	109983	1.00000	1.028
	57	Hexachlorobenzene	284	17.618	17.618	(0.966)	41009	1.00000	0.9974
	58	Pentachlorophenol	266	17.982	17.982	(0.986)	39638	2.00000	1.420
*	59	Phenanthrene-d10	188	18.245	18.245	(1.000)	789887	4.00000	
$	66	Terphenyl-d14	244	21.386	21.386	(0.918)	104646	1.00000	1.229
	67	Butylbenzylphthalate	149	22.315	22.315	(0.958)	90488	1.00000	1.047
*	69	Chrysene-d12	240	23.298	23.298	(1.000)	494007	4.00000	
*	77	Perylene-d12	264	25.938	25.938	(1.000)	375441	4.00000	
	79	Dibenzo(a,h)anthracene	278	28.623	28.623	(1.103)	84334	1.00000	0.8861
	90	N-Nitrosodimethylamine	74	4.694	4.694	(0.518)	82758	2.00000	1.778

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1403172303S.D
Lab Smp Id: SLC0376-ICV1
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\SIMABN2.m
Misc Info:

Calibration Date: 18-MAR-2023
Calibration Time: 00:07
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	225221	112611	450442	224436	-0.35
27 Naphthalene-d8	830434	415217	1660868	825617	-0.58
42 Acenaphthene-d10	389907	194954	779814	392947	0.78
59 Phenanthrene-d10	763679	381840	1527358	789887	3.43
69 Chrysene-d12	415791	207896	831582	494007	18.81
77 Perylene-d12	274872	137436	549744	375441	36.59

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.07	8.57	9.57	9.07	-0.00
27 Naphthalene-d8	11.57	11.07	12.07	11.56	-0.00
42 Acenaphthene-d10	15.20	14.70	15.70	15.20	-0.00
59 Phenanthrene-d10	18.25	17.75	18.75	18.25	-0.00
69 Chrysene-d12	23.29	22.79	23.79	23.30	0.03
77 Perylene-d12	25.93	25.43	26.43	25.94	0.03

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

REVIEW SUMMARY FOR FILE - NT1403172303S.D

Lab ID: SLC0376-ICV1
nt14.i, 20230317.b\20230317.b\SIMABN2.m,   17-MAR-2023 15:39

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

No RRT check. Ccal file.

On Column LOD for nt14.i, 20230317.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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

Q-FLAG SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230317.b\20230317.b

Instrument: nt14.i Date: 17-MAR-2023 Method: 20230317.b\SIMABN2.m

INITIAL CAL: 30-DEC-2022

Compound	%RSD or R^2
NO Q-FLAGS	

ICV CAL: NT1403172303S.D 17-MAR-2023 15:39

Compound	%D
Benzoic acid	-42.6
Pentachlorophenol	-29.0
Terphenyl-d14	22.9

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT14	Calibration:	GC00050
Lab File ID:	NT1403172317S.D	Calibration Date:	03/15/2023
Sequence:	SLC0376	Injection Date:	03/18/23
Lab Sample ID:	SLC0376-ICV2	Injection Time:	00:07
Sequence Name:	ABN 1		

		CONC. (ug/mL)		RESPONSE FACTOR			% DRIFT/DIFF		
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT	
1,4-Dichlorobenzene	A	1.0000	1.0	1.5461150	1.5365		-0.6	+/-20	
1,2-Dichlorobenzene	A	1.0000	1.0	1.5059720	1.5117240		0.4	+/-20	
Benzyl Alcohol	A	1.0000	0.9	1.0943940	0.9947918		-9.1	+/-20	
Benzoic acid	A	4.0000	2.0	0.1762504	0.1303475		-50.3	+/-20	*
2,4-Dimethylphenol	A	2.0000	2.1	0.3438645	0.3532538		2.8	+/-20	
1,2,4-Trichlorobenzene	A	1.0000	1.0	0.3370247	0.3429580		1.8	+/-20	
N-Nitrosodiphenylamine	A	1.0000	1.1	0.5419762	0.5709048		5.3	+/-20	
Pentachlorophenol	A	2.0000	1.2	0.1113753	0.0862142		-39.0	+/-20	*
2-Fluorophenol	A	1.5000	1.40	1.3577520	1.2636830		-6.9	+/-20	
p-Terphenyl-d14	A	1.0000	1.34	0.6895811	0.9244164		34.1	+/-20	*
1,4-Dichlorobenzene-d4	A	4.0000	4.0	55463.9700	1.0000		0.0		
Naphthalene-d8	A	4.0000	4.0	207494.5000	1.0000		0.0		
Acenaphthene-d10	A	4.0000	4.0	99689.0600	1.0000		0.0		
Phenanthrene-d10	A	4.0000	4.0	200034.6000	1.0000		0.0		
Chrysene-d12	A	4.0000	4.0	154742.9000	1.0000		0.0		
Perylene-d12	A	4.0000	4.0	150902.2000	1.0000		0.0		*

* Values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT14031723178.D

Date : 18-MAR-2023 00:07

Client ID:

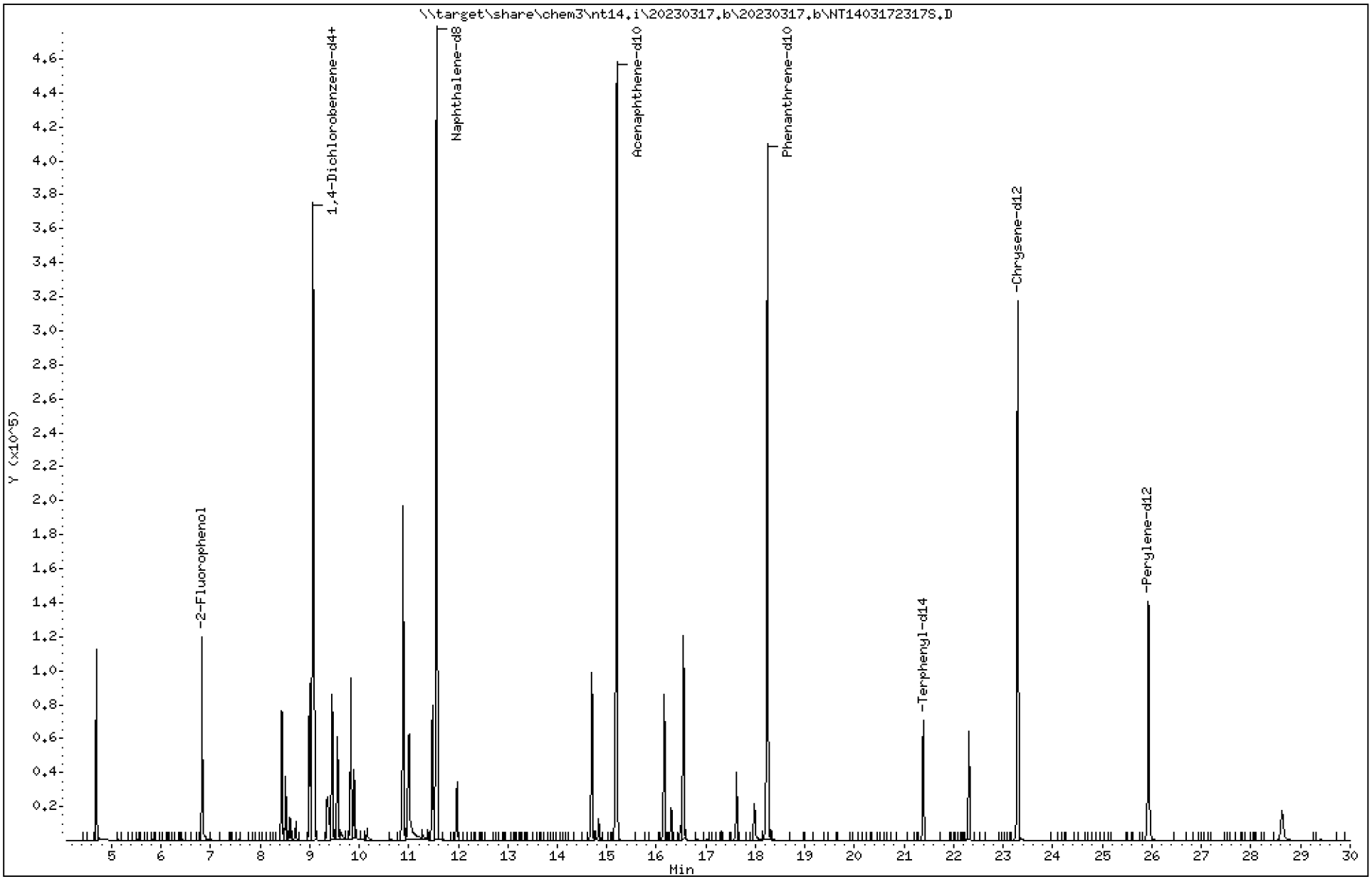
Instrument: nt14.i

Sample Info: SLC0376-ICV2

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172317S.D
Lab Smp Id: SLC0376-ICV2
Inj Date : 18-MAR-2023 00:07 MS Autotune Date: 11-MAR-2023 16:01
Operator : JGR Inst ID: nt14.i
Smp Info : SLC0376-ICV2
Misc Info :
Comment :
Method : \\target\share\chem3\nt14.i\20230317.b\20230317.b\SIMABN2.m
Meth Date : 23-Mar-2023 16:55 van Quant Type: ISTD
Cal Date : 15-MAR-2023 15:50 Cal File: NT1403152308.D
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

			QUANT SIG					AMOUNTS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1	2-Fluorophenol	112	6.826	6.826	(0.753)	106728	1.50000	1.396
	3	Phenol	94	8.441	8.441	(0.931)	98291	1.00000	0.9350
	7	1,3-Dichlorobenzene	146	8.997	8.997	(0.992)	90207	1.00000	1.003
*	8	1,4-Dichlorobenzene-d4	152	9.067	9.067	(1.000)	225221	4.00000	
	9	1,4-Dichlorobenzene	146	9.098	9.098	(1.003)	86513	1.00000	0.9938
	11	Benzyl alcohol	79	9.354	9.354	(1.032)	56012	1.00000	0.9090
	12	1,2-Dichlorobenzene	146	9.455	9.455	(1.043)	85118	1.00000	1.004
	13	2-Methylphenol	108	9.564	9.564	(1.055)	74154	1.00000	1.021
	15	4-Methylphenol	108	9.828	9.828	(1.084)	76567	1.00000	0.9980
	16	N-Nitroso-di-n-propylamine	70	9.898	9.898	(1.092)	54058	1.00000	0.9966
	22	2,4-Dimethylphenol	107	10.883	10.883	(0.941)	146677	2.00000	2.055
	24	Benzoic acid	105	10.999	10.999	(0.951)	108245	4.00000	1.989
	26	1,2,4-Trichlorobenzene	180	11.480	11.480	(0.993)	71201	1.00000	1.018
*	27	Naphthalene-d8	136	11.565	11.565	(1.000)	830434	4.00000	
	30	Hexachlorobutadiene	225	11.974	11.974	(1.035)	37211	1.00000	1.051
	39	Dimethylphthalate	163	14.698	14.698	(0.967)	133947	1.00000	1.006
*	42	Acenaphthene-d10	162	15.201	15.201	(1.000)	389907	4.00000	
	50	Diethylphthalate	149	16.160	16.160	(1.063)	144165	1.00000	1.017
	54	N-Nitrosodiphenylamine	169	16.546	16.546	(0.907)	108997	1.00000	1.053
	57	Hexachlorobenzene	284	17.618	17.618	(0.966)	40155	1.00000	1.010
	58	Pentachlorophenol	266	17.974	17.974	(0.985)	32920	2.00000	1.221
*	59	Phenanthrene-d10	188	18.245	18.245	(1.000)	763679	4.00000	
$	66	Terphenyl-d14	244	21.386	21.386	(0.918)	96091	1.00000	1.341
	67	Butylbenzylphthalate	149	22.308	22.308	(0.958)	85732	1.00000	1.179
*	69	Chrysene-d12	240	23.291	23.291	(1.000)	415791	4.00000	
*	77	Perylene-d12	264	25.931	25.931	(1.000)	274872	4.00000	
	79	Dibenzo(a,h)anthracene	278	28.631	28.631	(1.104)	60128	1.00000	0.8629
	90	N-Nitrosodimethylamine	74	4.694	4.694	(0.518)	81002	2.00000	1.734

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1403172317S.D
Lab Smp Id: SLC0376-ICV2
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\SIMABN2.m
Misc Info:

Calibration Date: 17-MAR-2023
Calibration Time: 15:39
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	224436	112218	448872	225221	0.35
27 Naphthalene-d8	825617	412809	1651234	830434	0.58
42 Acenaphthene-d10	392947	196474	785894	389907	-0.77
59 Phenanthrene-d10	789887	394944	1579774	763679	-3.32
69 Chrysene-d12	494007	247004	988014	415791	-15.83
77 Perylene-d12	375441	187721	750882	274872	-26.79

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.07	8.57	9.57	9.07	0.00
27 Naphthalene-d8	11.56	11.06	12.06	11.57	0.00
42 Acenaphthene-d10	15.20	14.70	15.70	15.20	0.00
59 Phenanthrene-d10	18.25	17.75	18.75	18.25	0.00
69 Chrysene-d12	23.30	22.80	23.80	23.29	-0.03
77 Perylene-d12	25.94	25.44	26.44	25.93	-0.03

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

REVIEW SUMMARY FOR FILE - NT1403172317S.D

Lab ID: SLC0376-ICV2
nt14.i, 20230317.b\20230317.b\SIMABN2.m,   18-MAR-2023 00:07

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

No RRT check. Ccal file.

On Column LOD for nt14.i, 20230317.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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

Q-FLAG SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230317.b\20230317.b

Instrument: nt14.i Date: 18-MAR-2023 Method: 20230317.b\SIMABN2.m

INITIAL CAL: 30-DEC-2022

Compound	%RSD or R^2
NO Q-FLAGS	

ICV CAL: NT1403172317S.D 18-MAR-2023 00:07

Compound	%D
Benzoic acid	-50.3
Pentachlorophenol	-38.9
Terphenyl-d14	34.1

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT14	Calibration:	GC00050
Lab File ID:	NT1403152311S.D	Calibration Date:	03/15/2023
Sequence:	SLC0242	Injection Date:	03/15/23
Lab Sample ID:	SLC0242-SCV1	Injection Time:	17:39
Sequence Name:	SCV 5.0		

		CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
1,4-Dichlorobenzene	A	5.0000	4.8	1.5461150	1.4991330		-3.0	+/-20
1,2-Dichlorobenzene	A	5.0000	4.8	1.5059720	1.4524710		-3.6	+/-20
Benzyl Alcohol	A	5.0000	5.3	1.0943940	1.1694500		6.9	+/-20
Benzoic acid	A	10.000	9.1	0.1762504	0.2451259		-9.2	+/-20
2,4-Dimethylphenol	A	5.0000	3.9	0.3438645	0.2705485		-21.3	+/-20
1,2,4-Trichlorobenzene	A	5.0000	4.6	0.3370247	0.3083020		-8.5	+/-20
N-Nitrosodiphenylamine	A	5.0000	5.0	0.5419762	0.5440403		0.4	+/-20
Pentachlorophenol	A	5.0000	4.8	0.1113753	0.1379212		-4.0	+/-20
2-Fluorophenol	A	7.5000	0.00180	1.3577520	0.0003256		-100	
p-Terphenyl-d14	A	5.0000	0.00507	0.6895811	0.0006995		-99.9	

* Values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT14031523115.D

Date : 15-MAR-2023 17:39

Client ID:

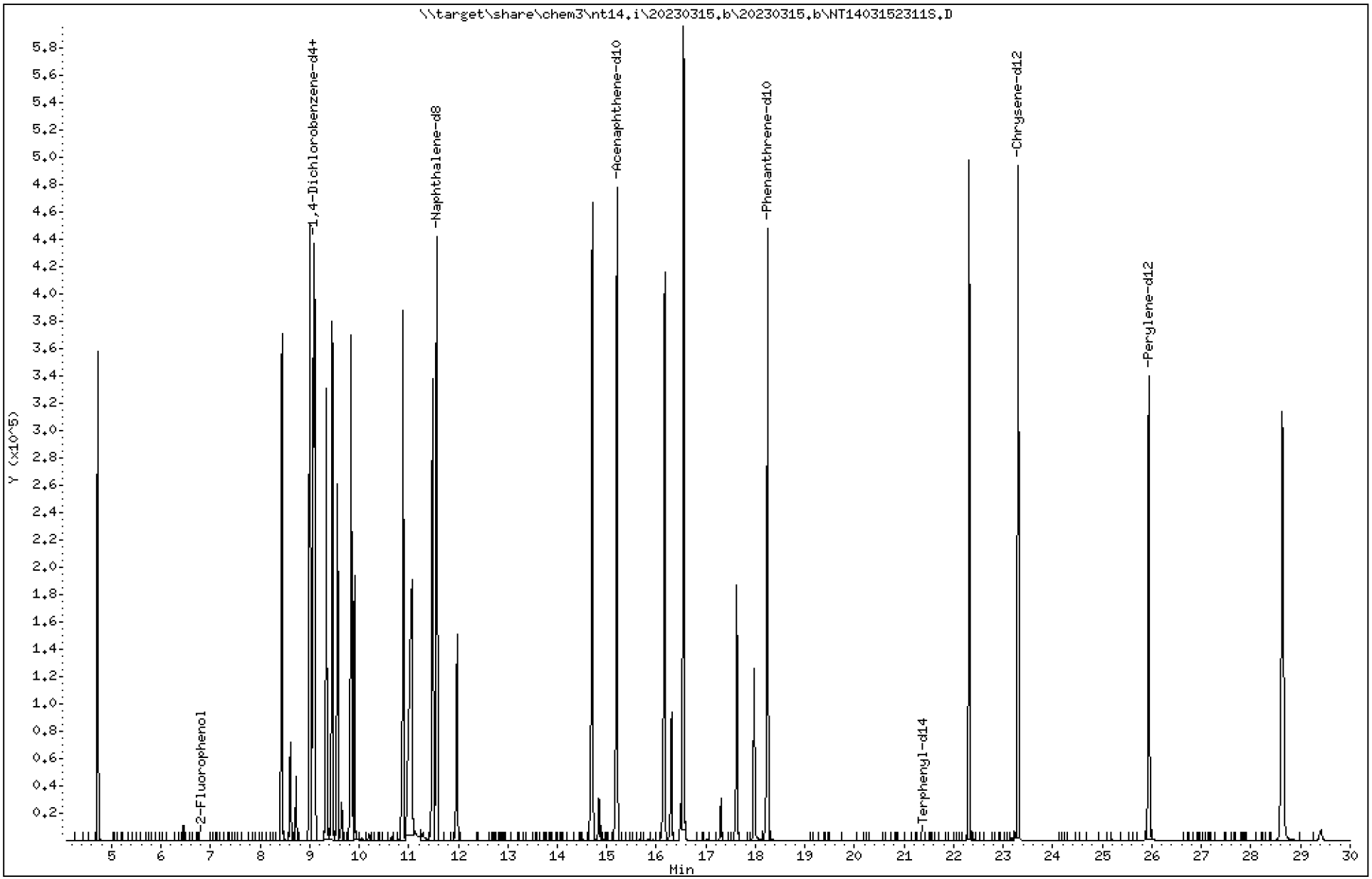
Sample Info: SLC0242-SCV1

Column phase: ZB-5msi

Instrument: nt14.i

Operator: JGR

Column diameter: 0.25



Data File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT1403152311S.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

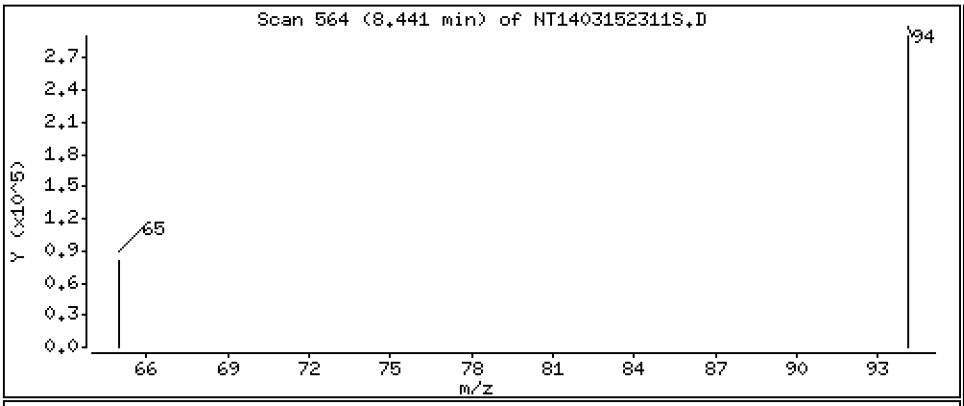
Operator: JGR

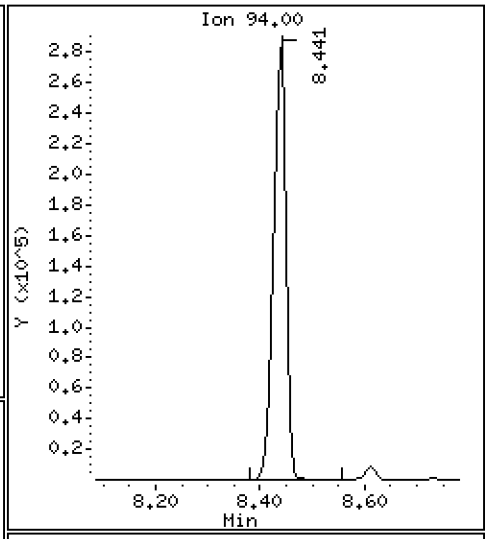
Column phase: ZB-5msi

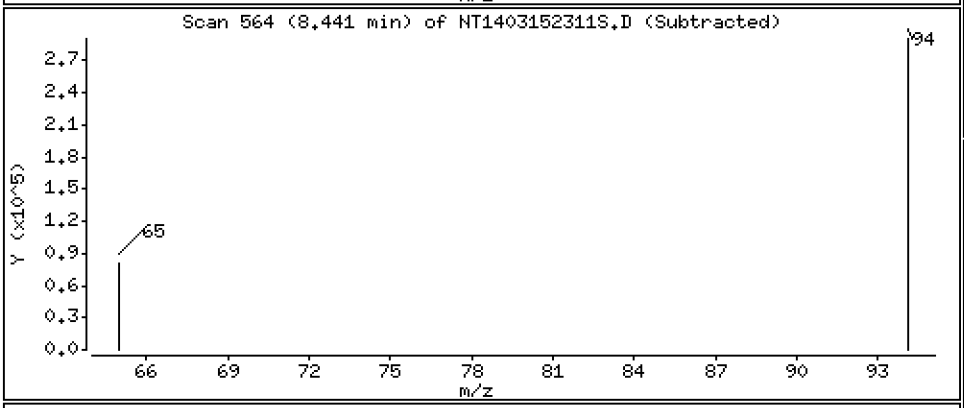
Column diameter: 0.25

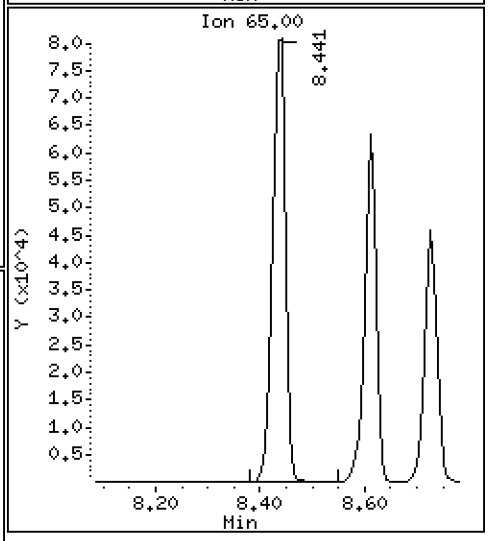
3 Phenol

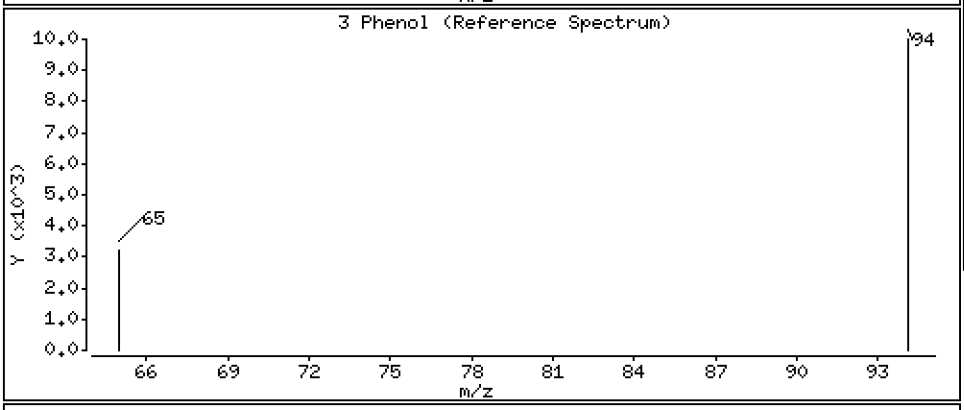
Concentration: 4.542 ug/mL

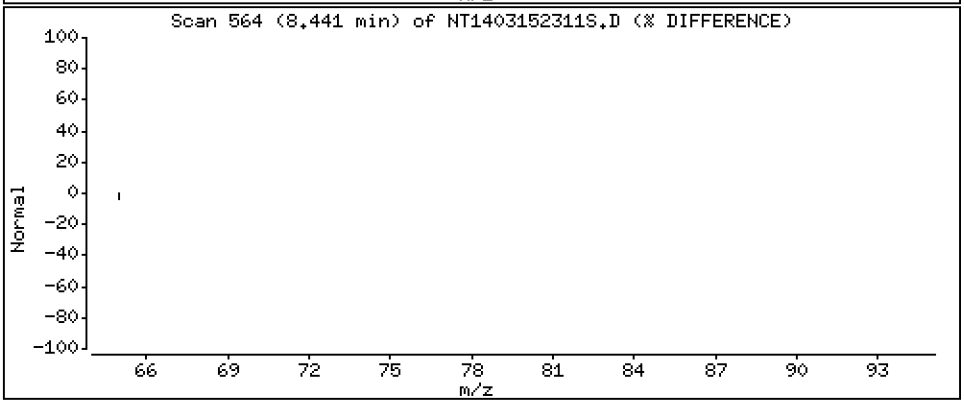












Data File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT1403152311S.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

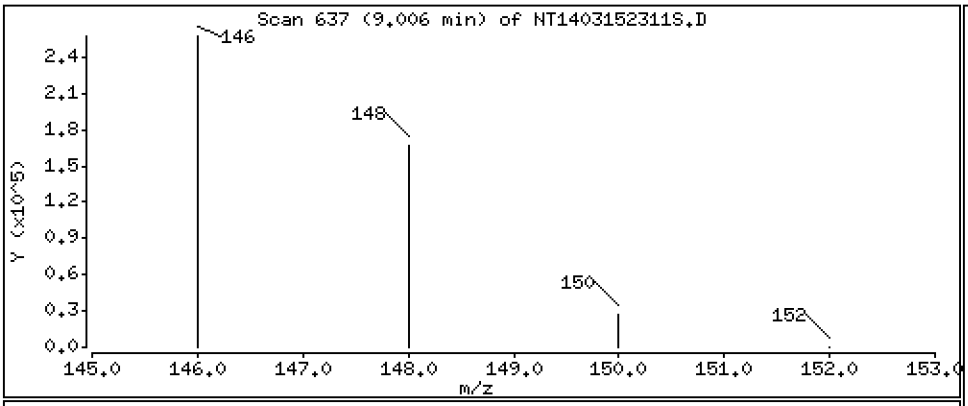
Operator: JGR

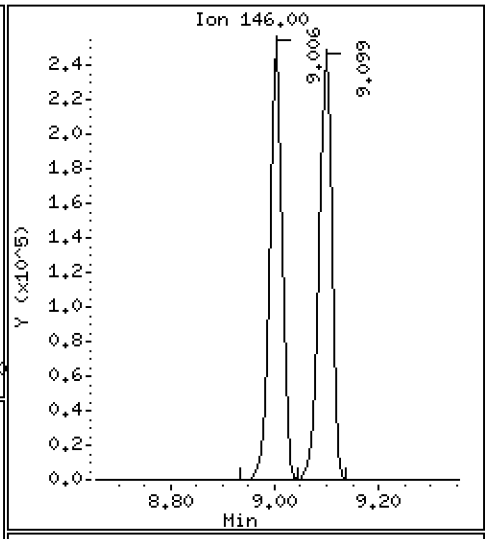
Column phase: ZB-5msi

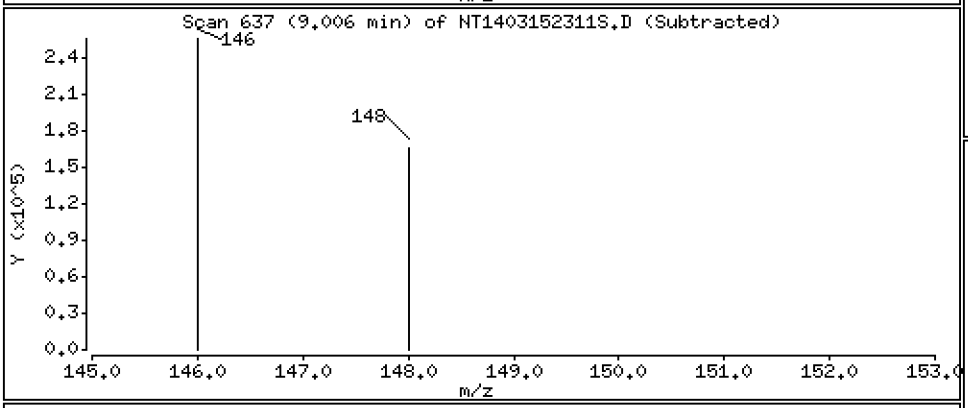
Column diameter: 0.25

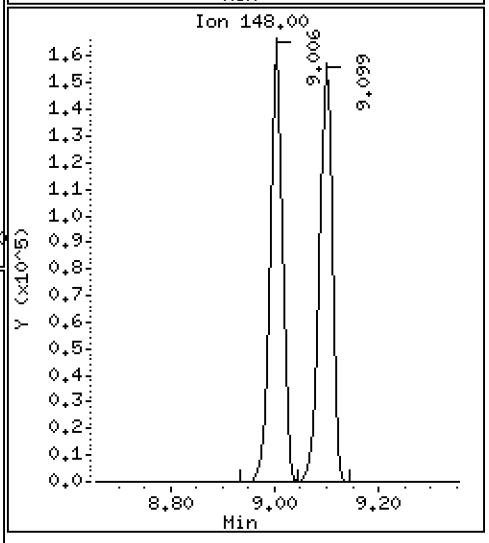
7 1,3-Dichlorobenzene

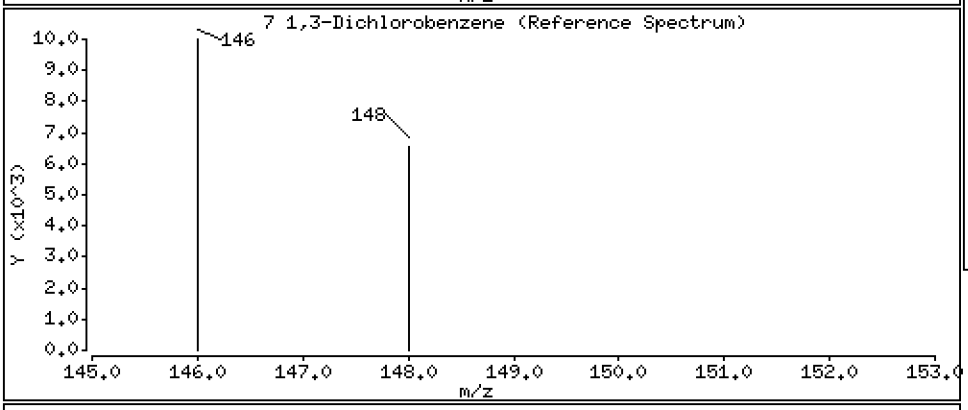
Concentration: 4.839 ug/mL

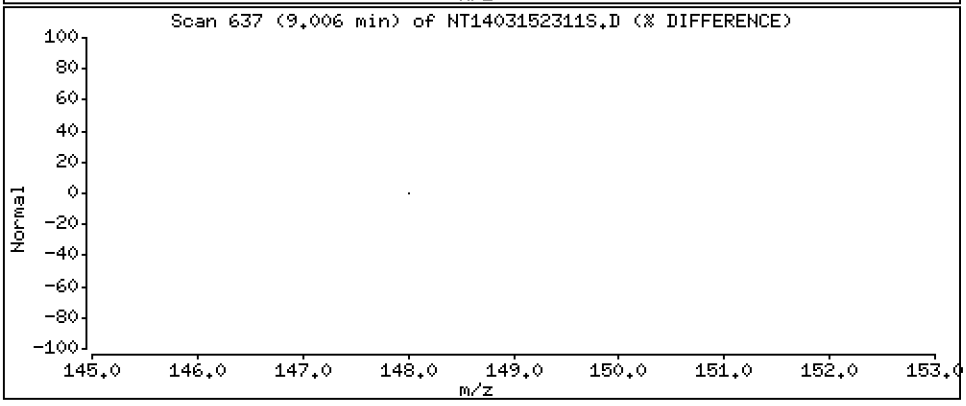












Data File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT1403152311S.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

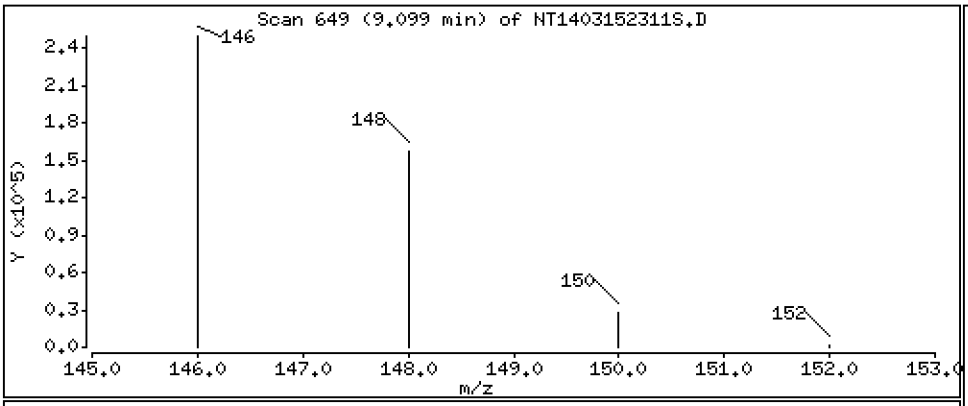
Operator: JGR

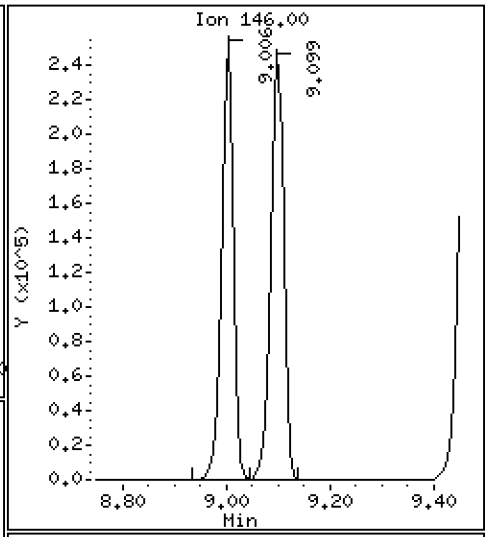
Column phase: ZB-5msi

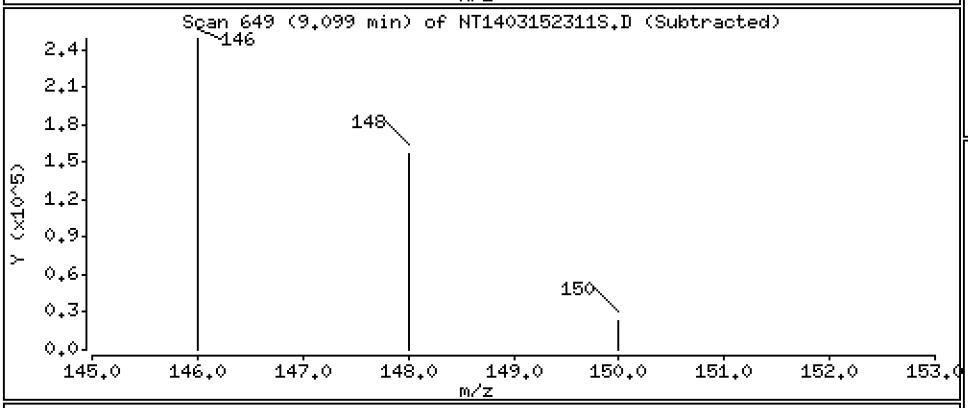
Column diameter: 0.25

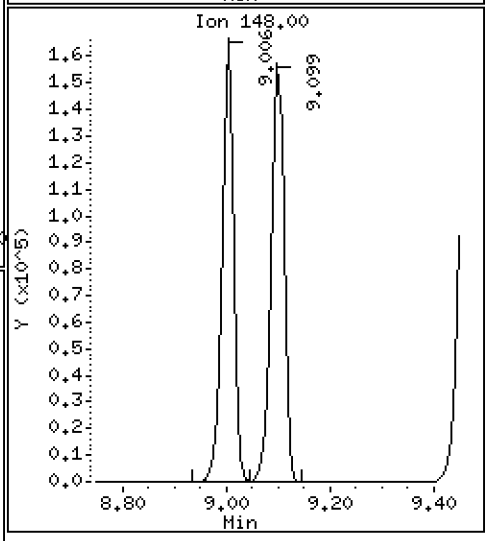
9 1,4-Dichlorobenzene

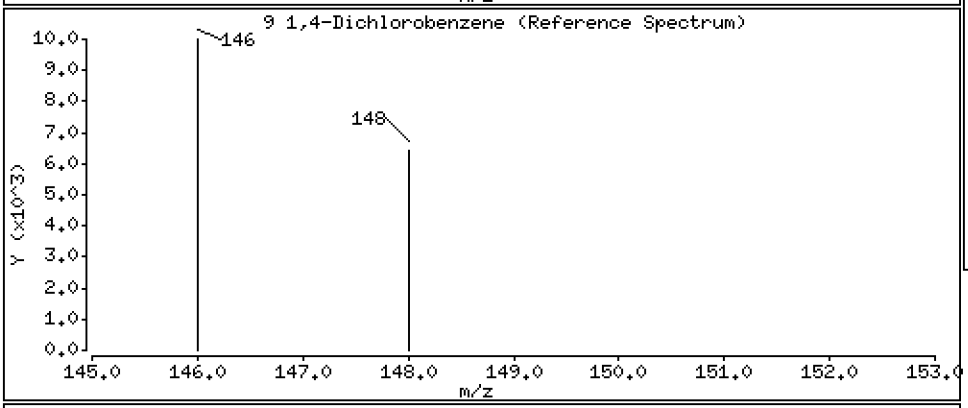
Concentration: 4.848 ug/mL

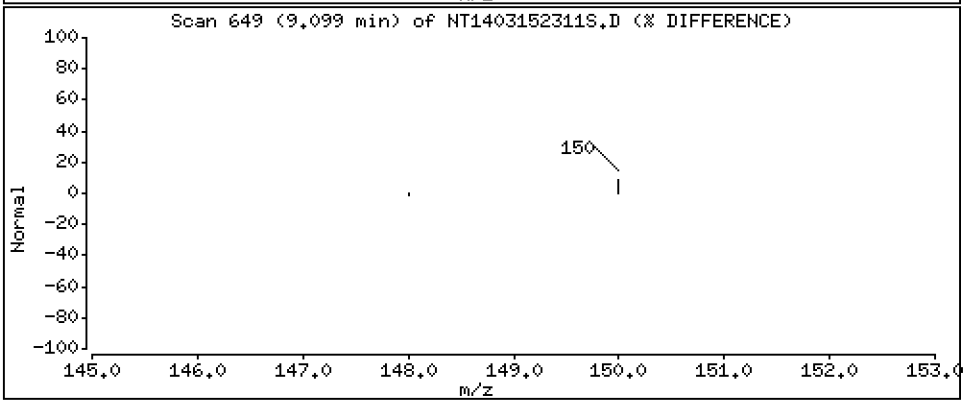












Data File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT1403152311S.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

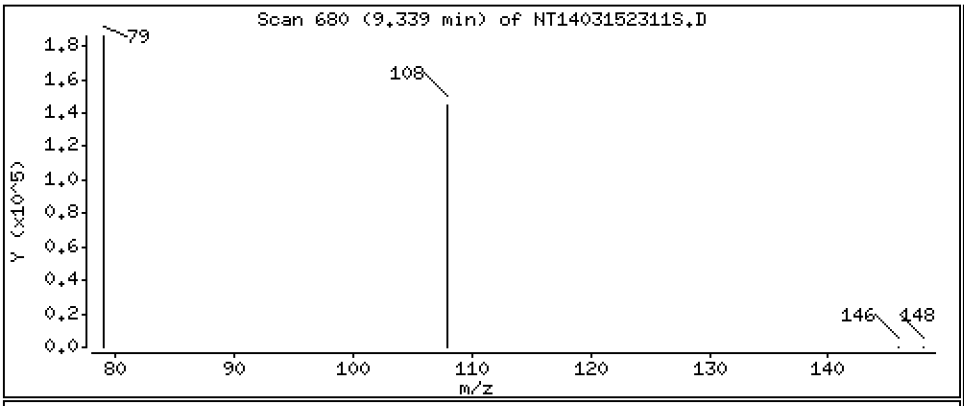
Operator: JGR

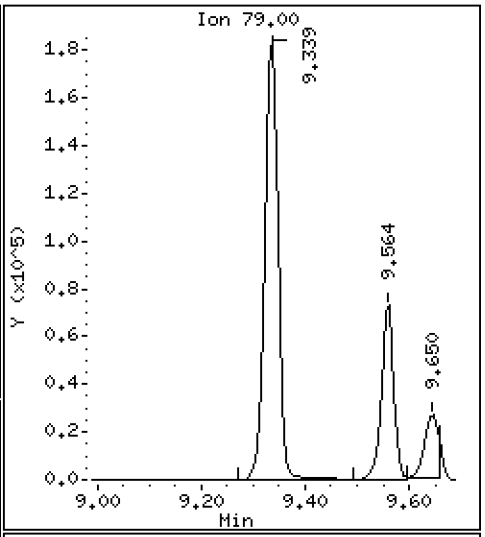
Column phase: ZB-5msi

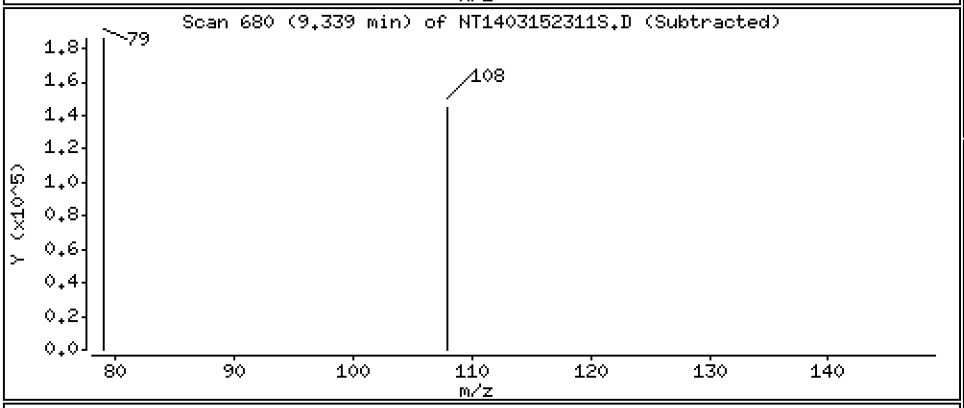
Column diameter: 0.25

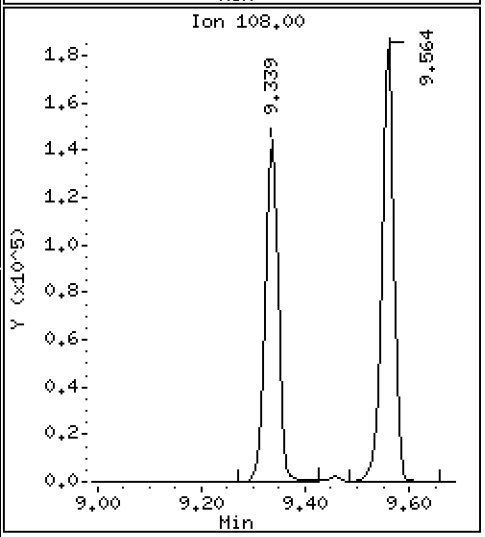
11 Benzyl alcohol

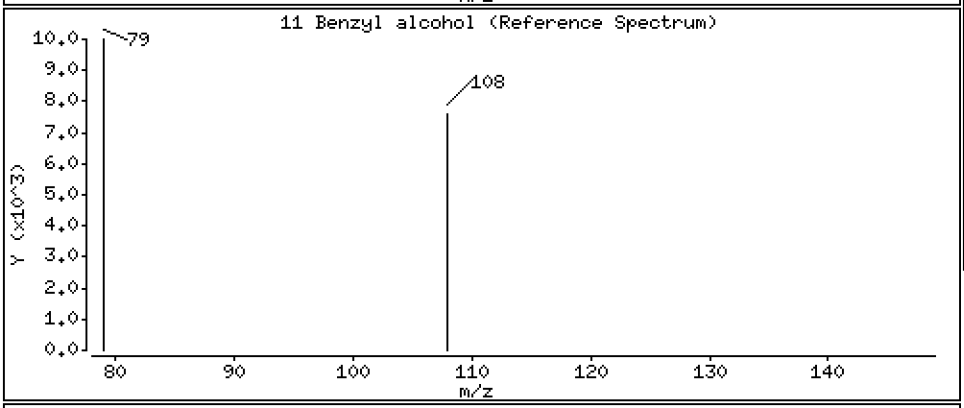
Concentration: 5.343 ug/mL

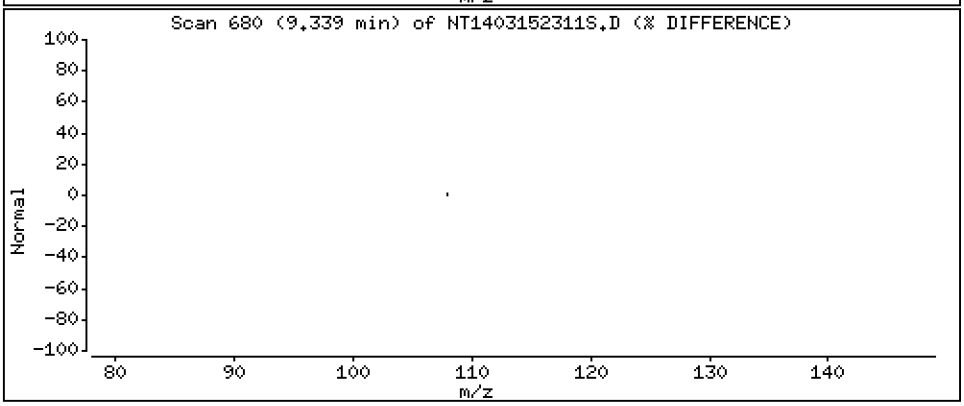












Data File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT1403152311S.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

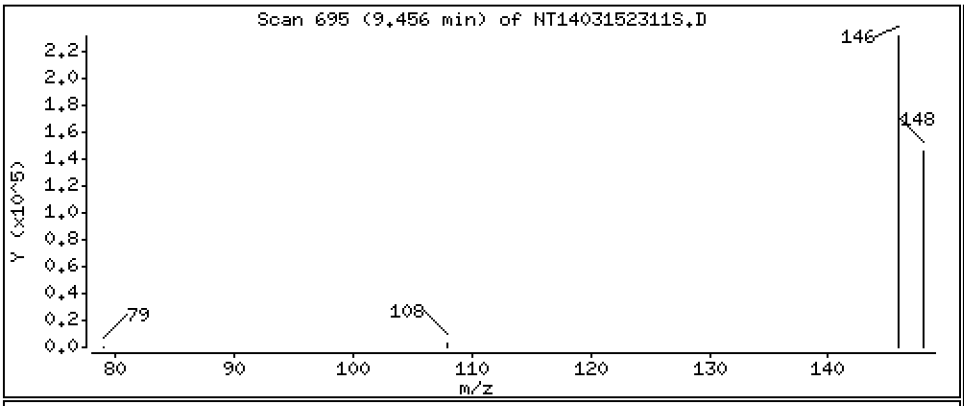
Operator: JGR

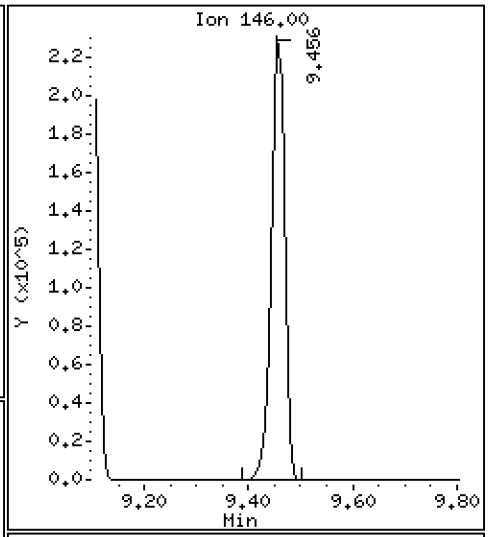
Column phase: ZB-5msi

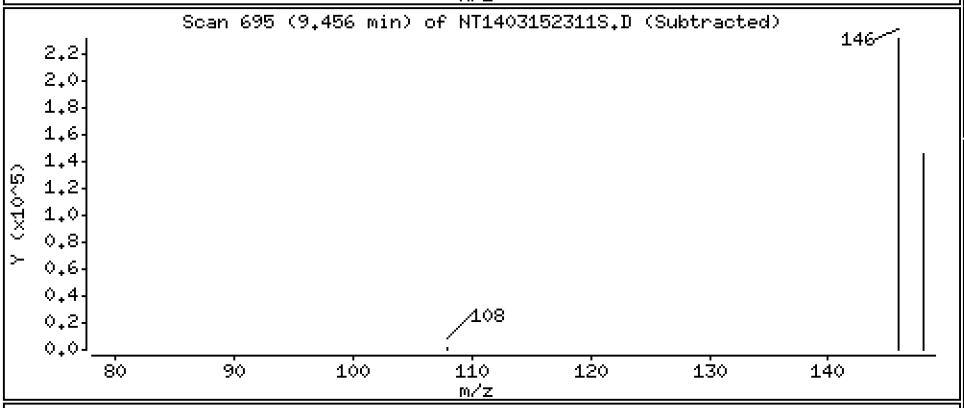
Column diameter: 0.25

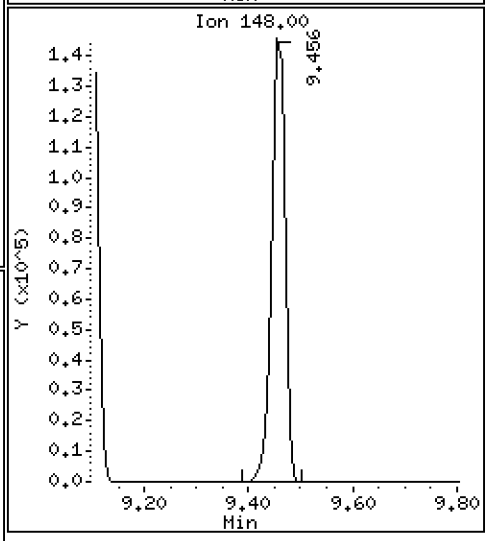
12 1,2-Dichlorobenzene

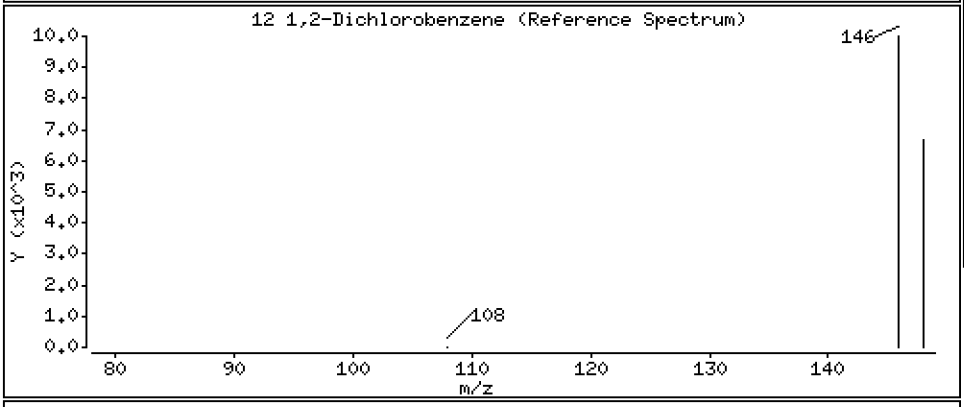
Concentration: 4.822 ug/mL

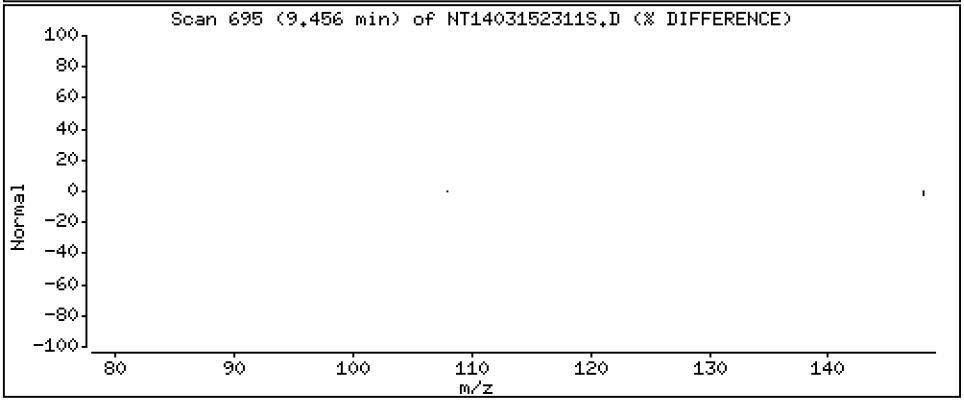












Data File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT1403152311S.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

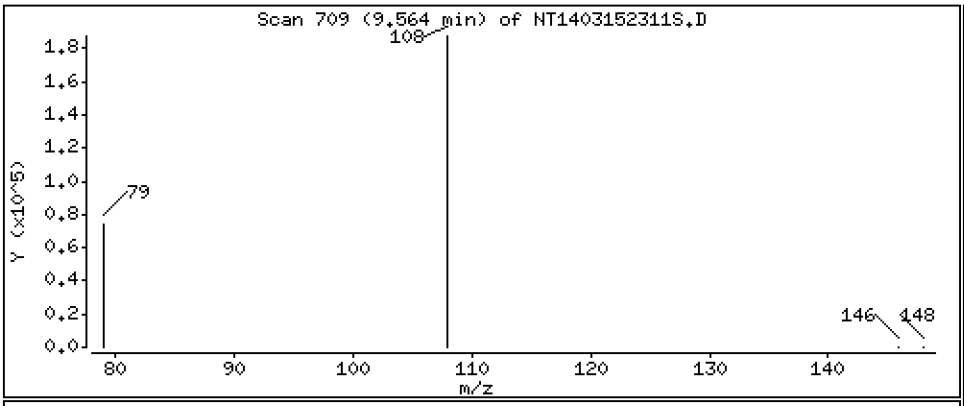
Operator: JGR

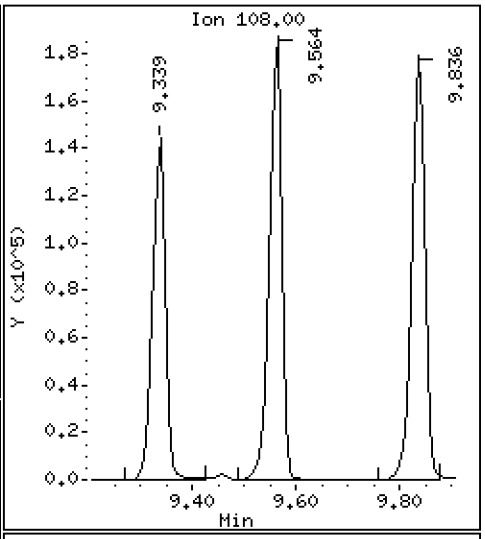
Column phase: ZB-5msi

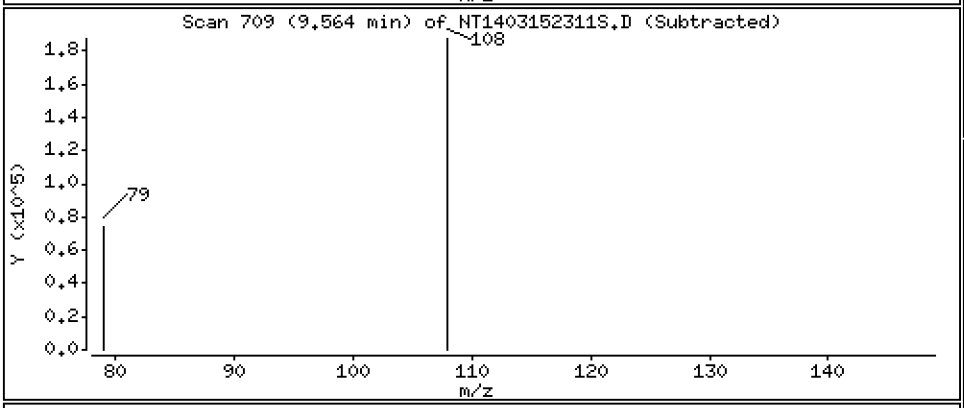
Column diameter: 0.25

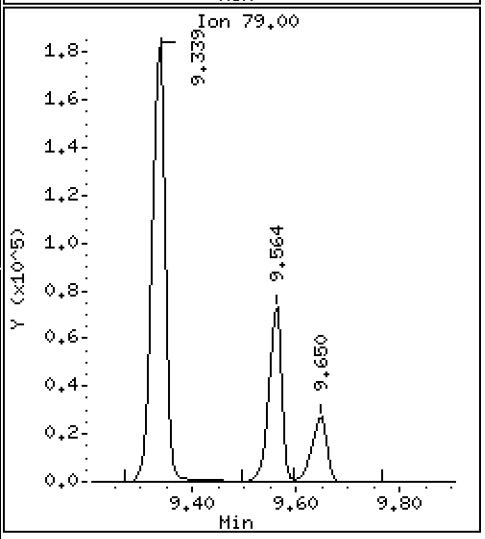
13 2-Methylphenol

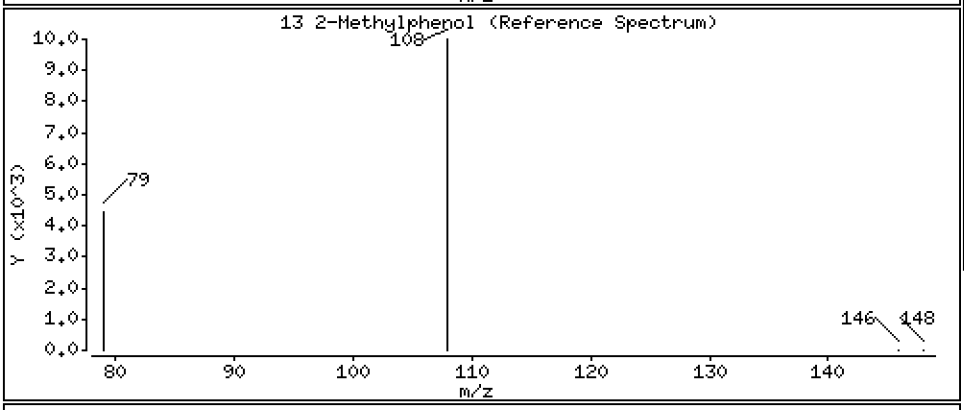
Concentration: 4.288 ug/mL

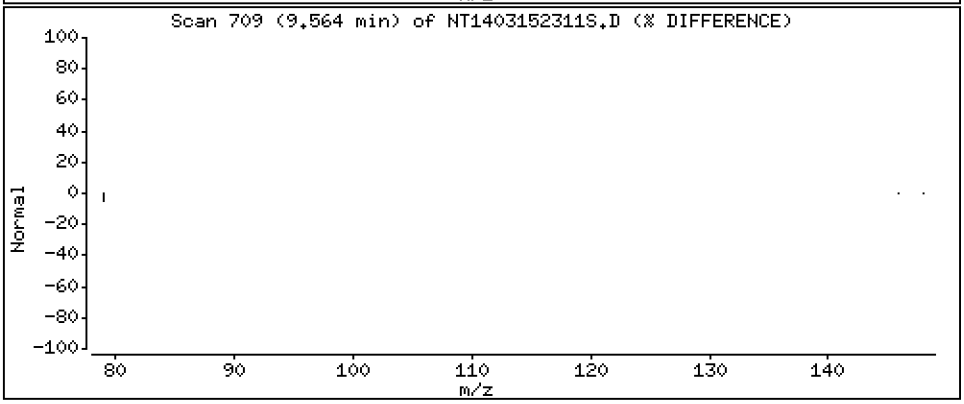












Data File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT1403152311S.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

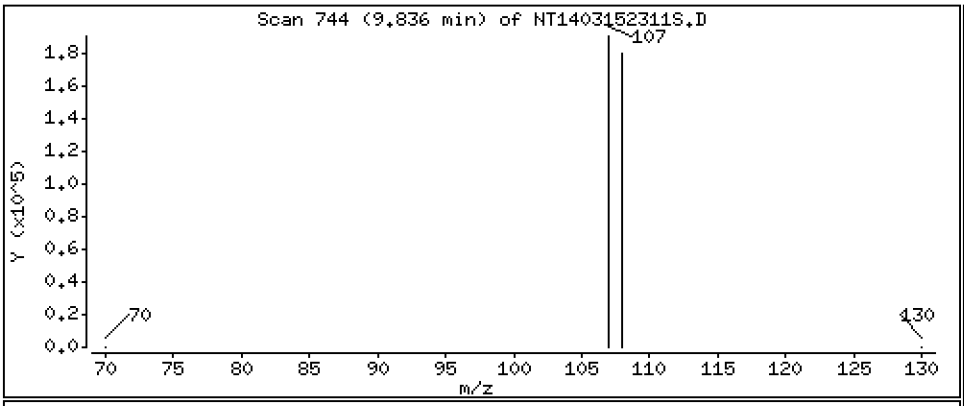
Operator: JGR

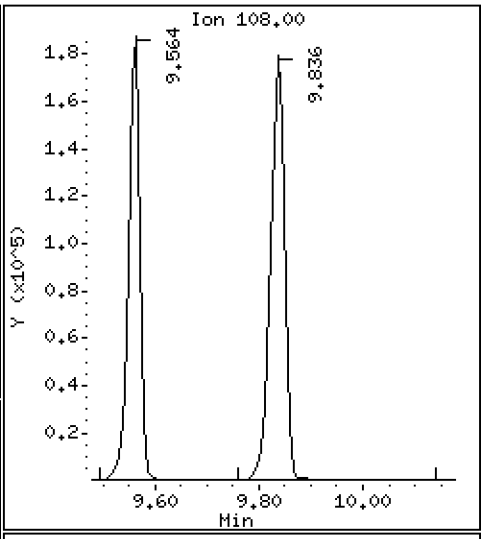
Column phase: ZB-5msi

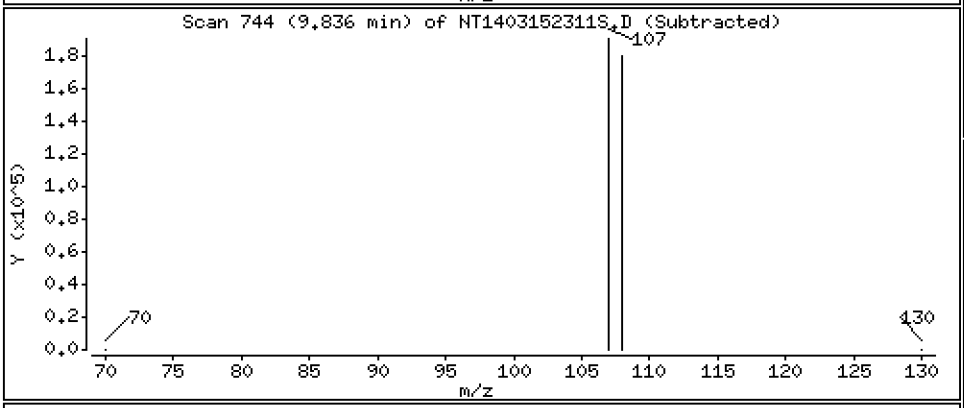
Column diameter: 0.25

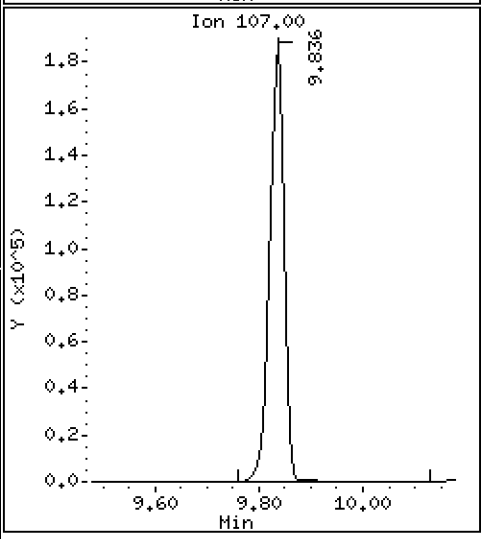
15 4-Methylphenol

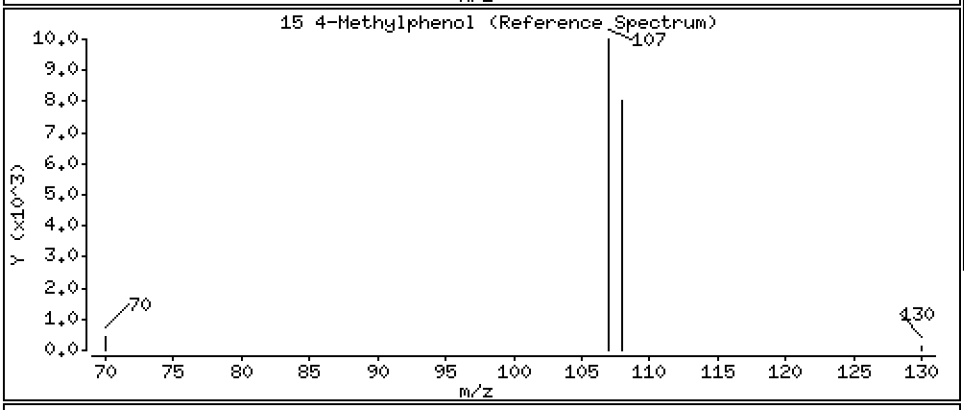
Concentration: 4.539 ug/mL

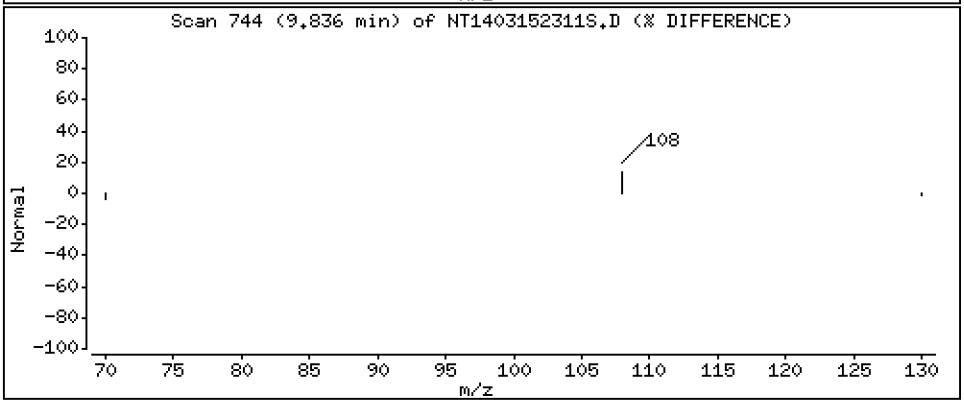












Data File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT1403152311S.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

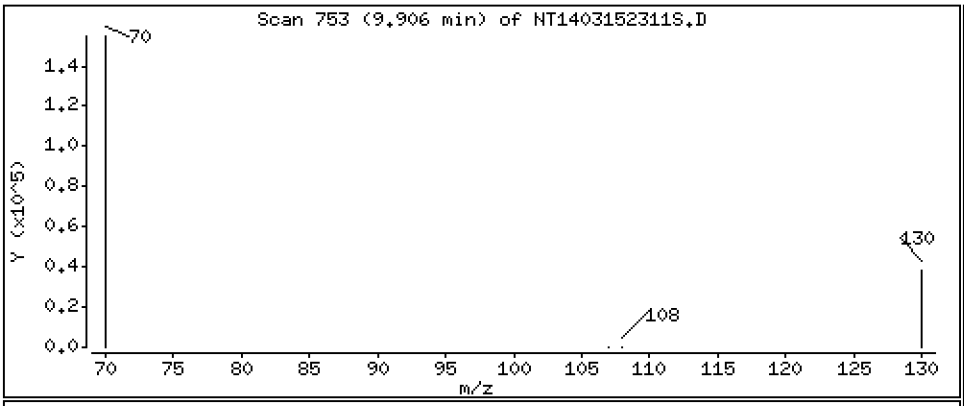
Operator: JGR

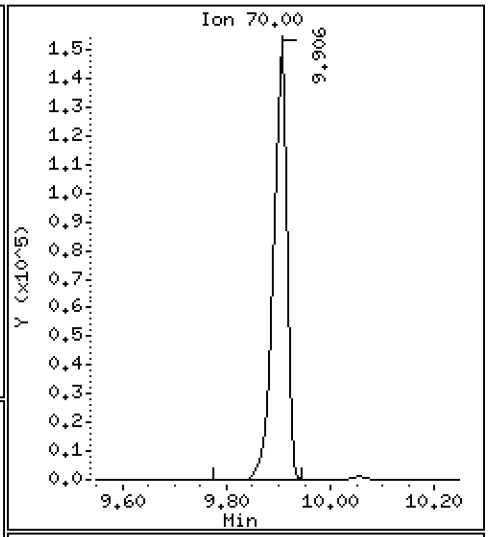
Column phase: ZB-5msi

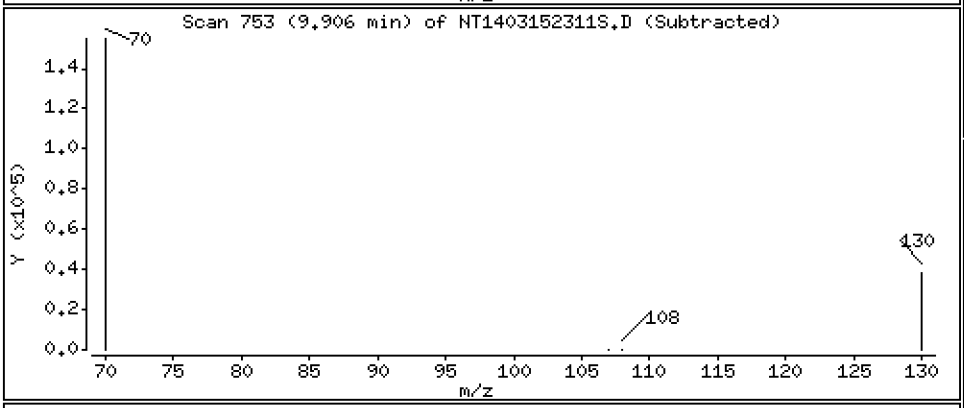
Column diameter: 0.25

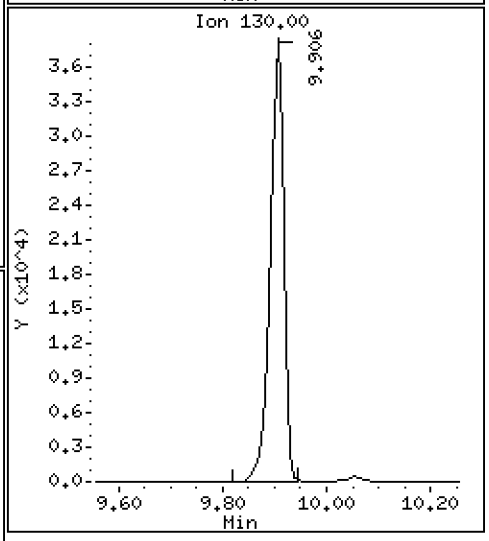
16 N-Nitroso-di-n-propylamine

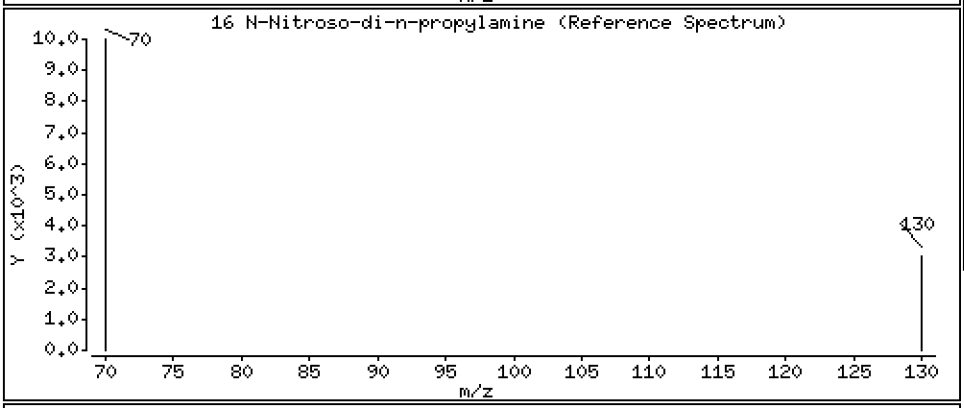
Concentration: 5.137 ug/mL

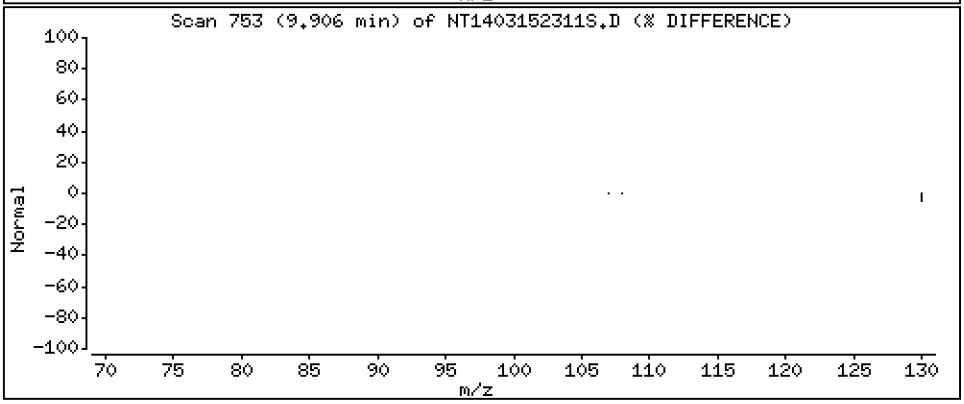












Data File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT14031523115.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

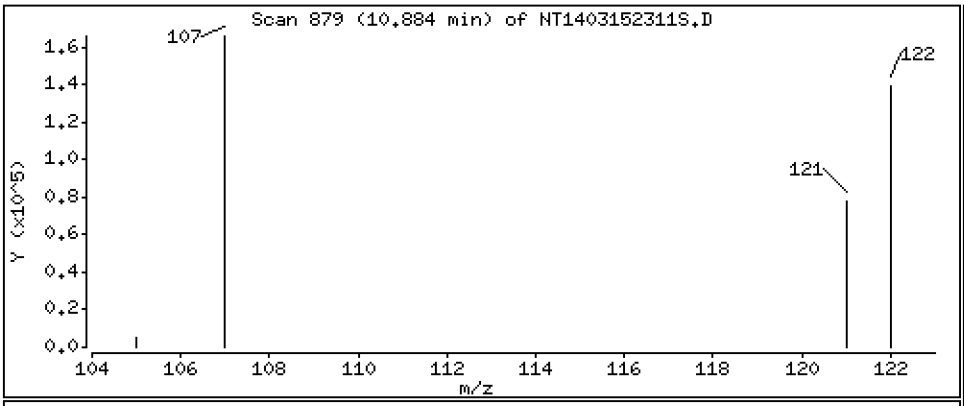
Operator: JGR

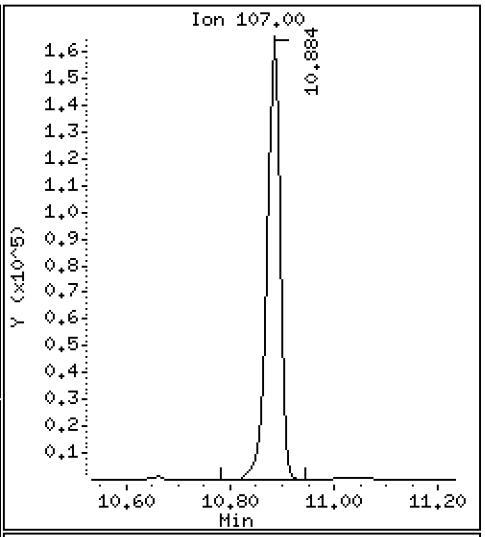
Column phase: ZB-5msi

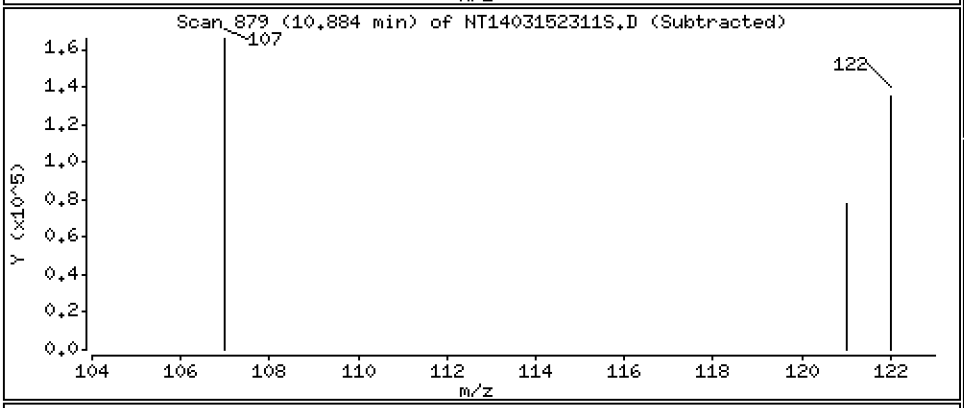
Column diameter: 0.25

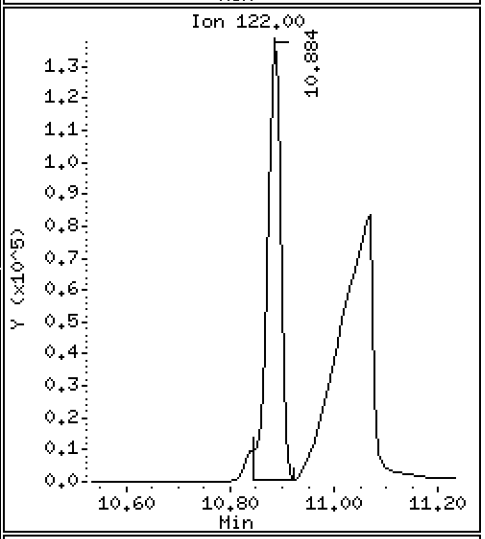
22 2,4-Dimethylphenol

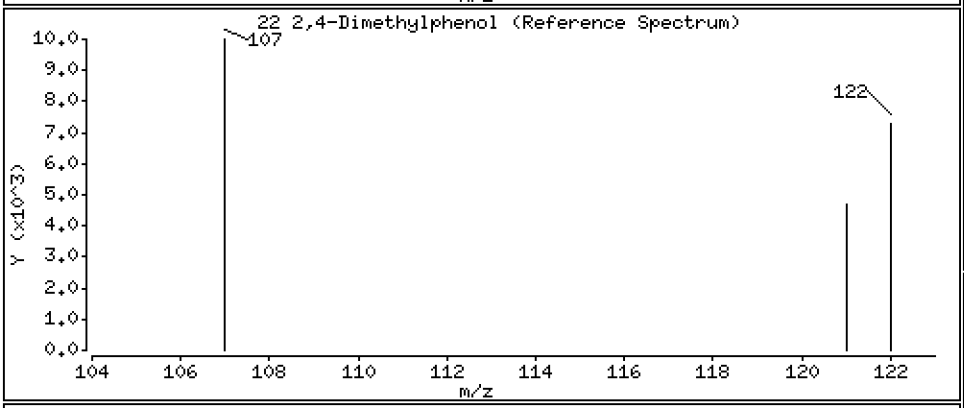
Concentration: 3.934 ug/mL

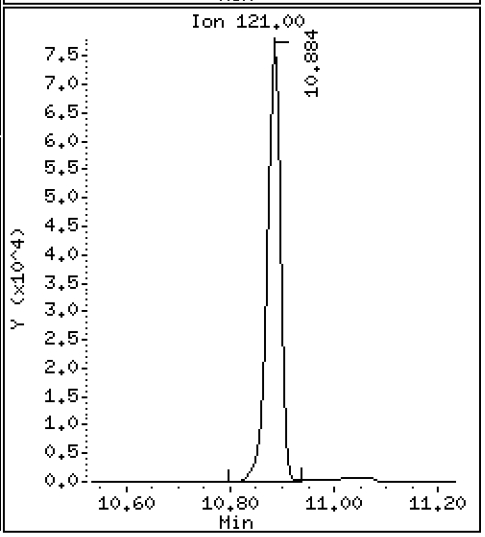


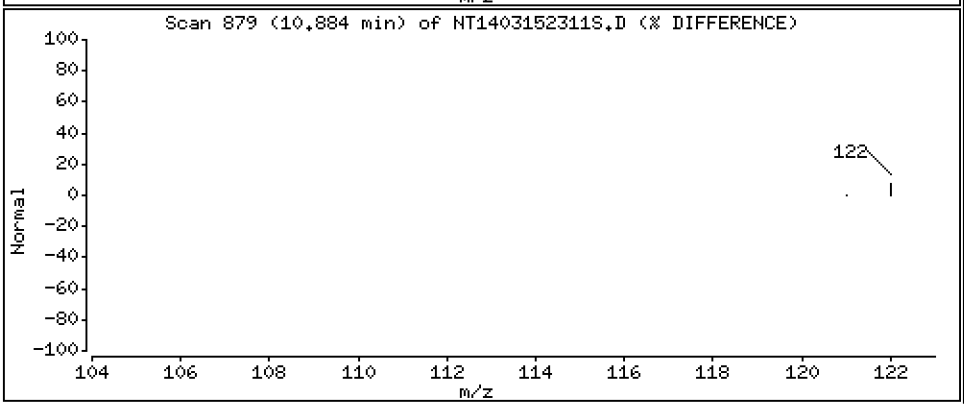












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

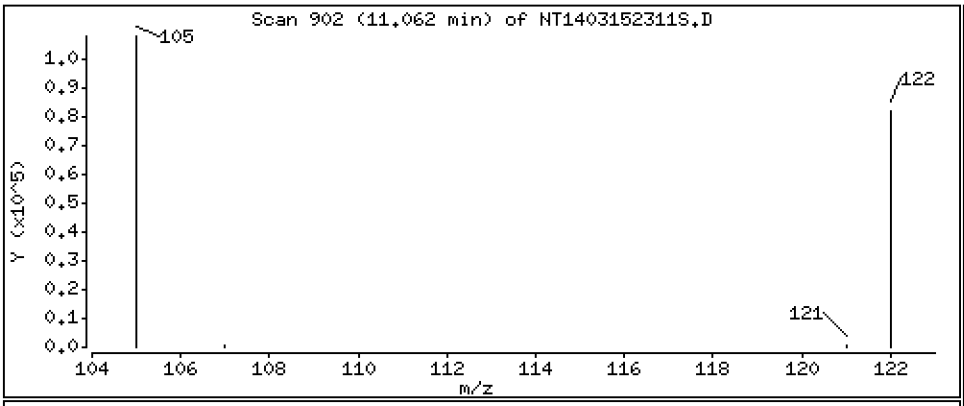
Operator: JGR

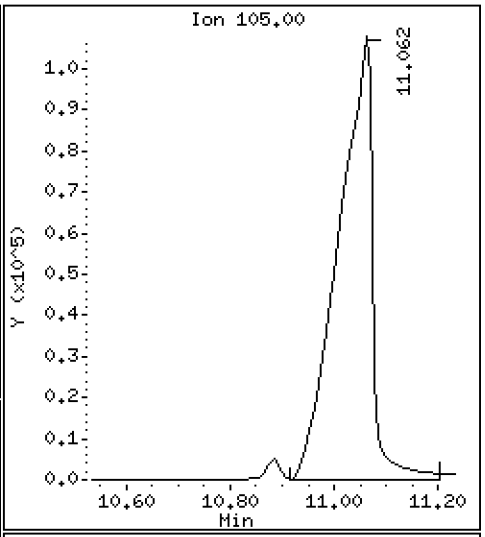
Column phase: ZB-5msi

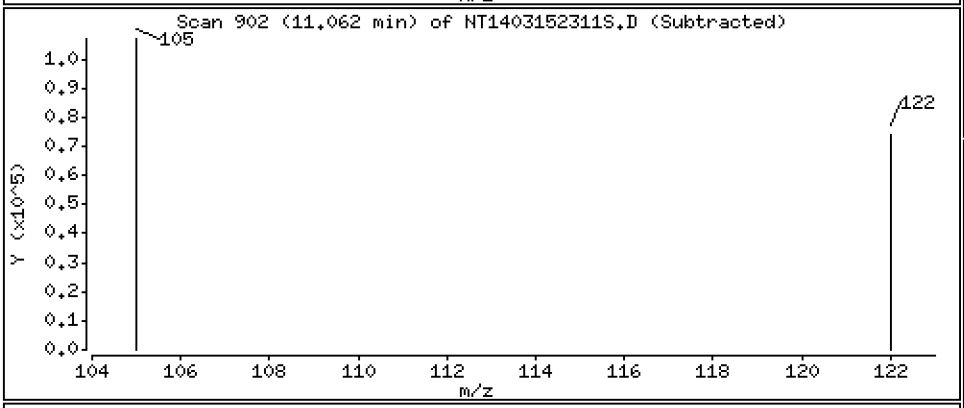
Column diameter: 0.25

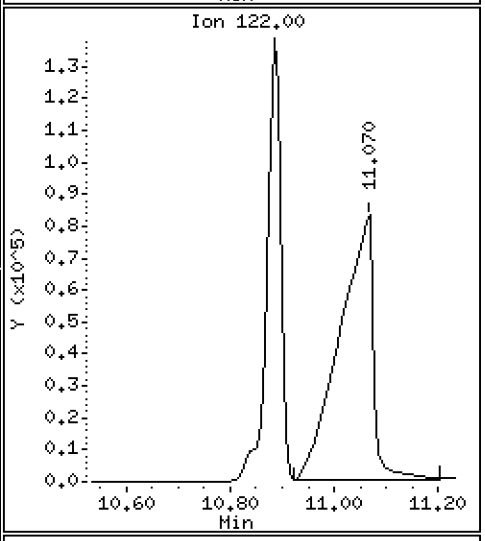
24 Benzoic acid

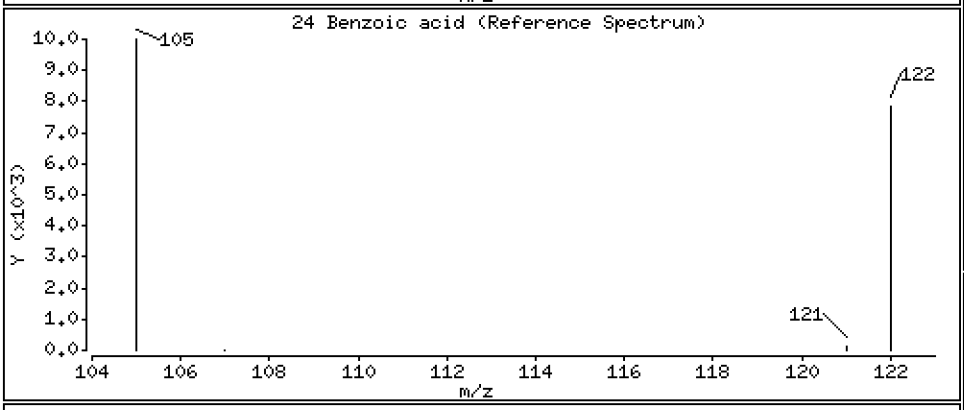
Concentration: 9.081 ug/mL

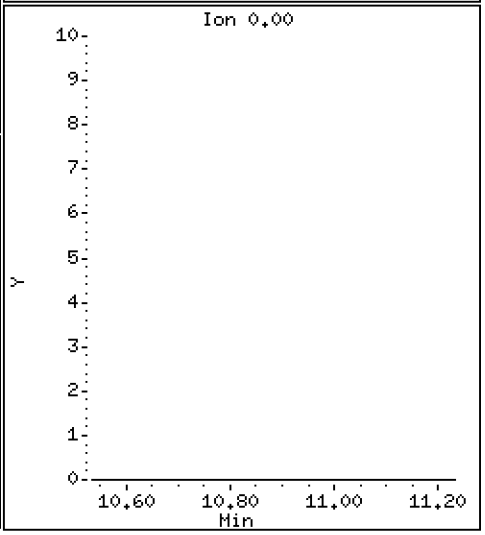


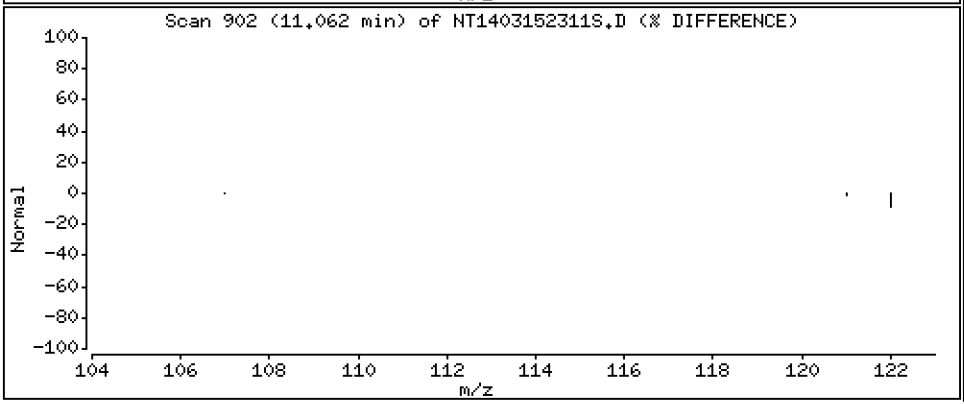












Data File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT1403152311S.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

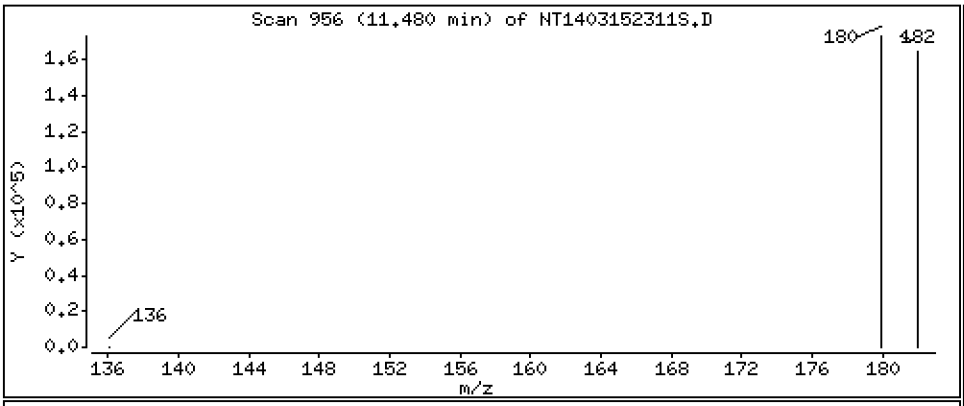
Operator: JGR

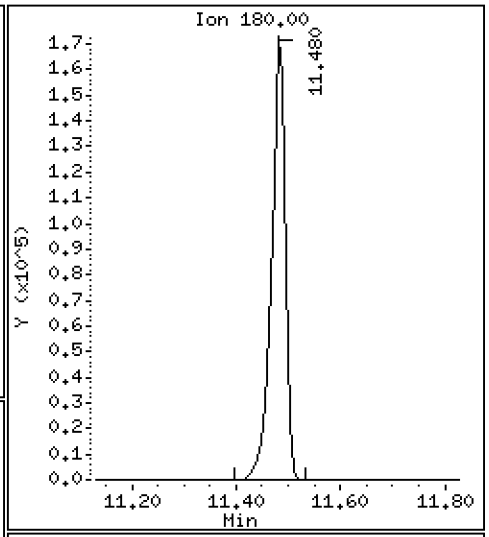
Column phase: ZB-5msi

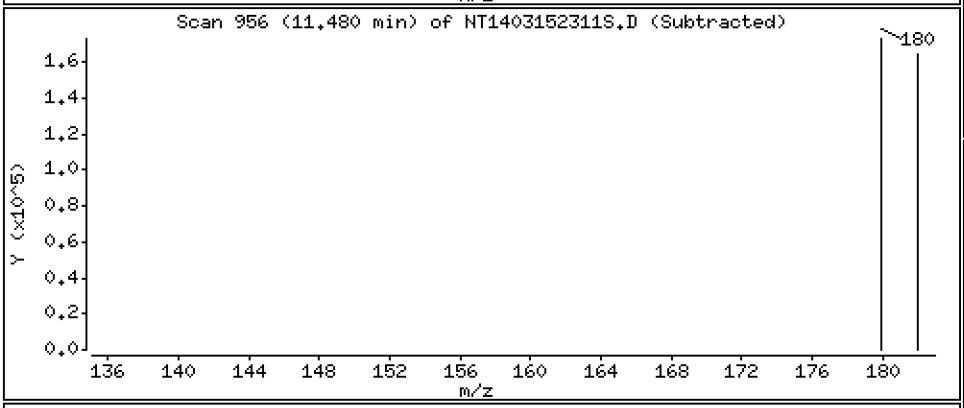
Column diameter: 0.25

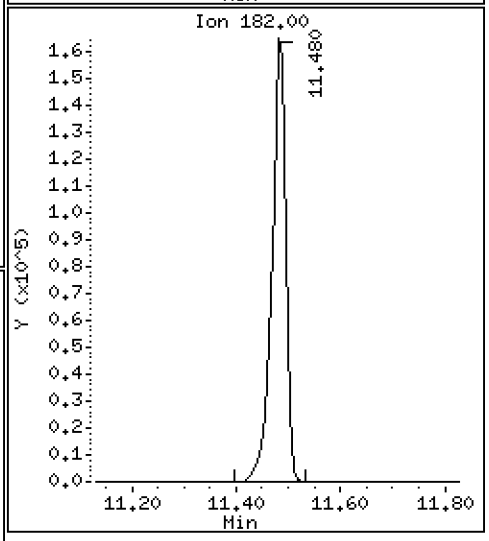
26 1,2,4-Trichlorobenzene

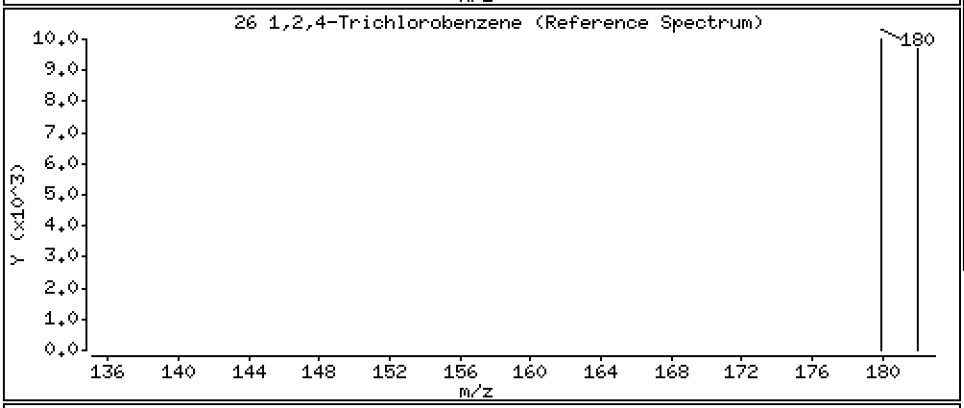
Concentration: 4.574 ug/mL

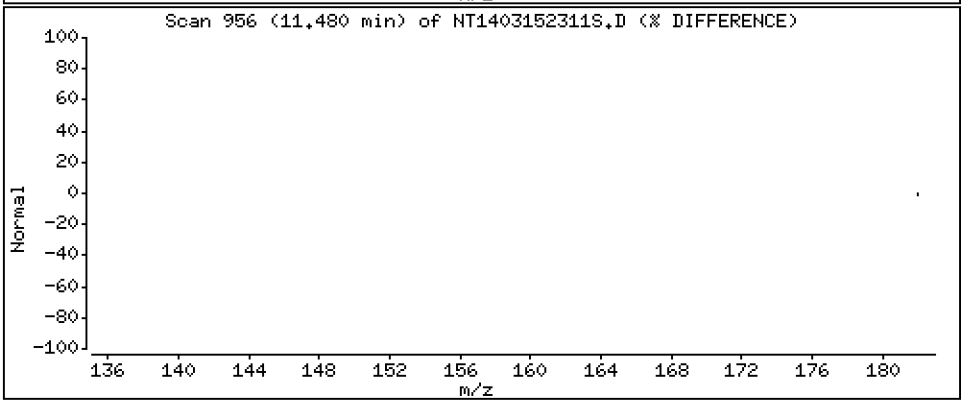












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

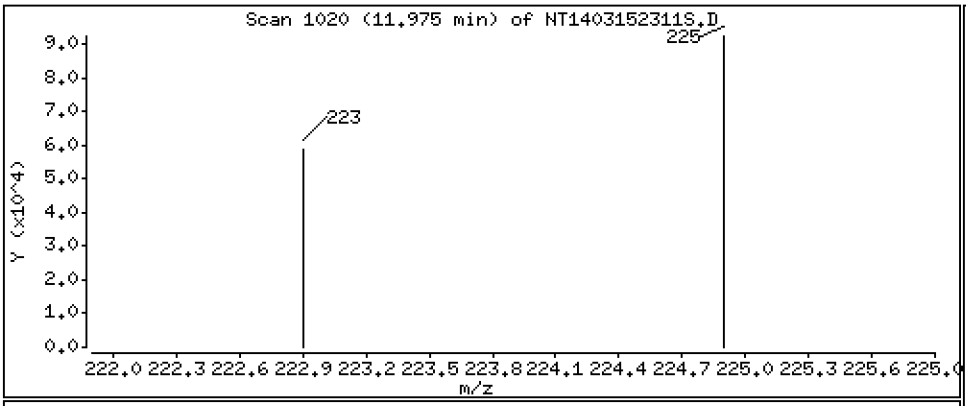
Operator: JGR

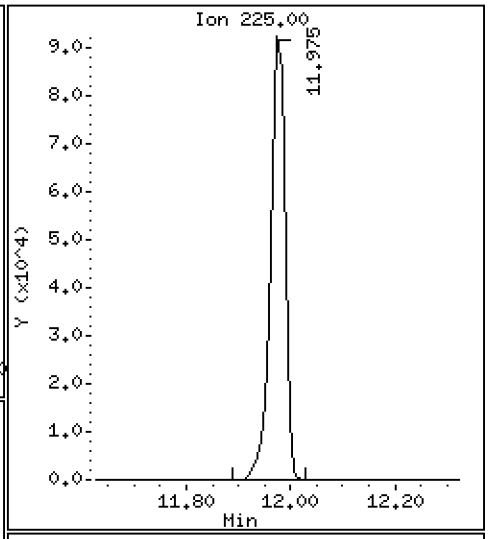
Column phase: ZB-5msi

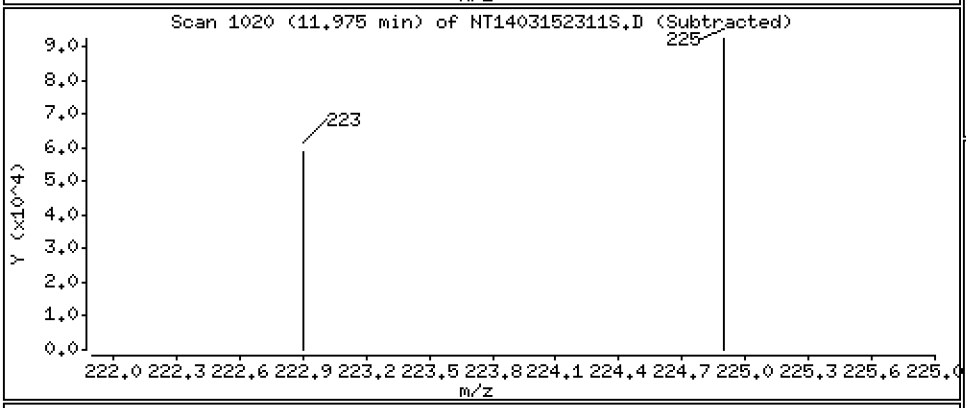
Column diameter: 0.25

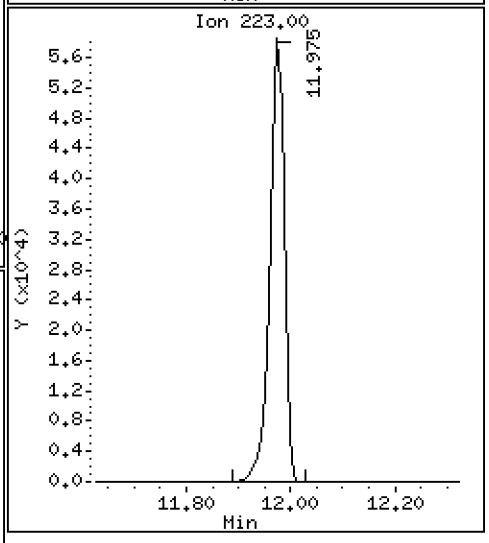
30 Hexachlorobutadiene

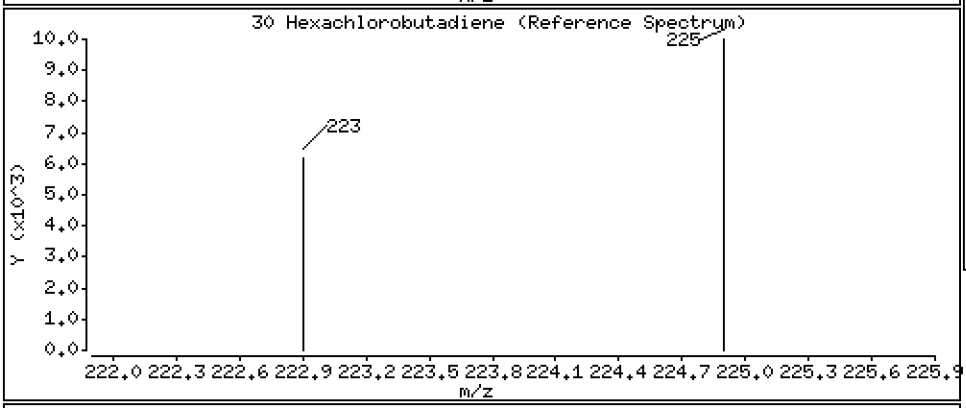
Concentration: 4.973 ug/mL

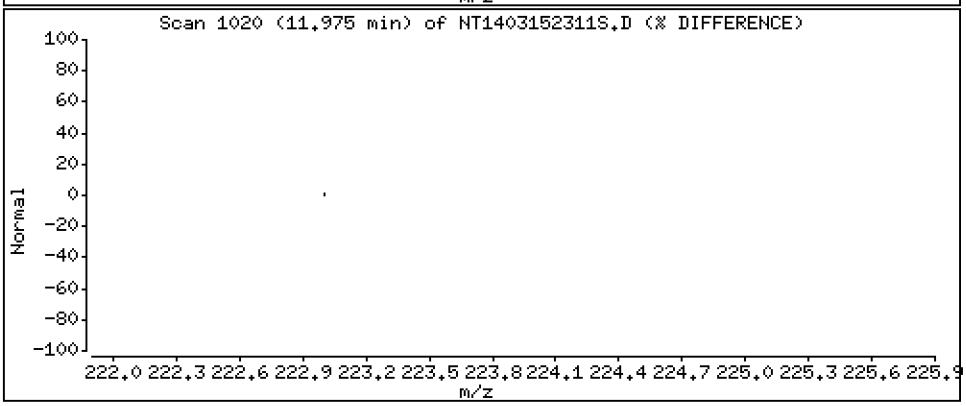












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

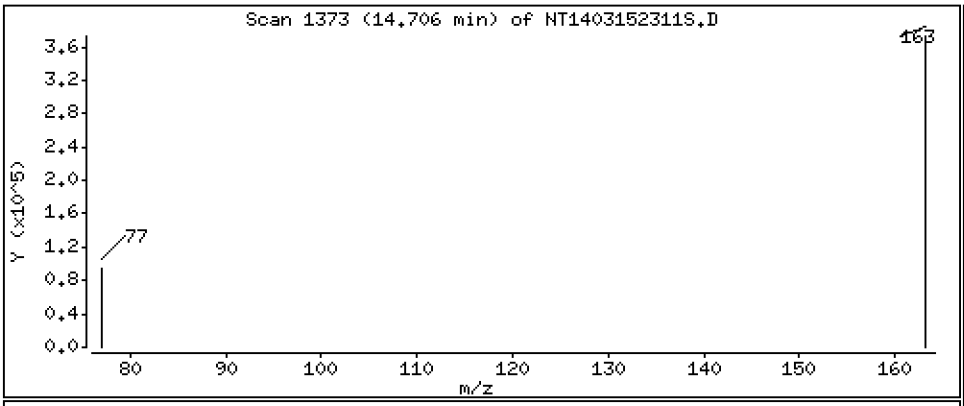
Operator: JGR

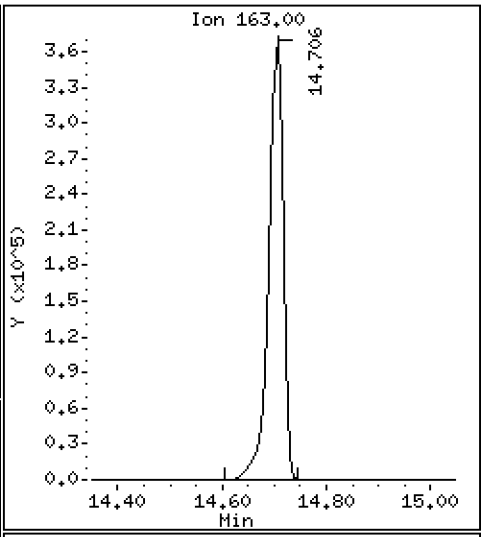
Column phase: ZB-5msi

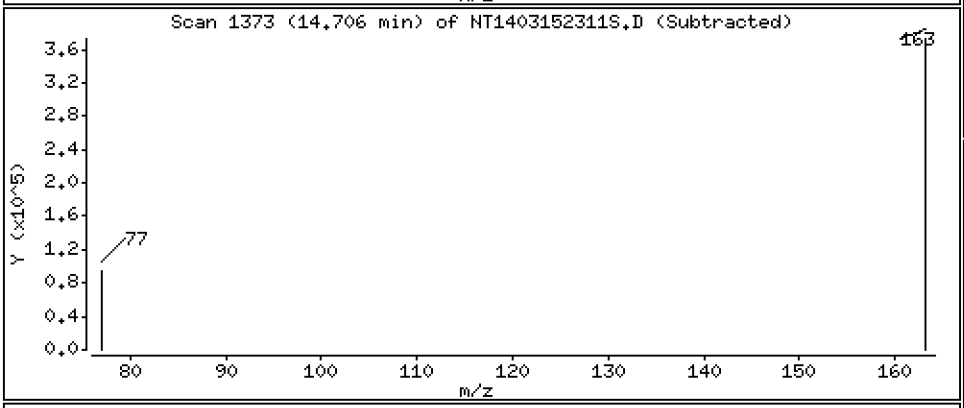
Column diameter: 0.25

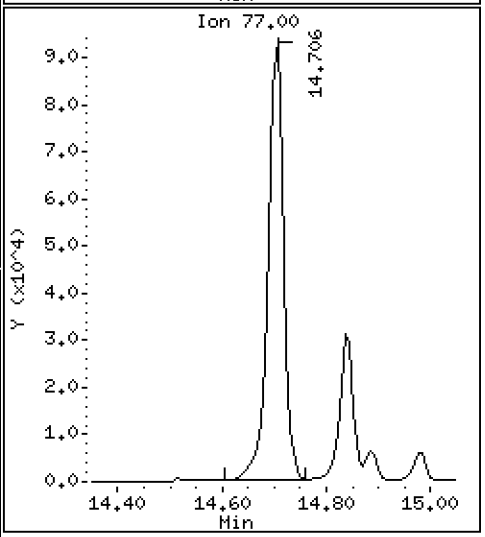
39 Dimethylphthalate

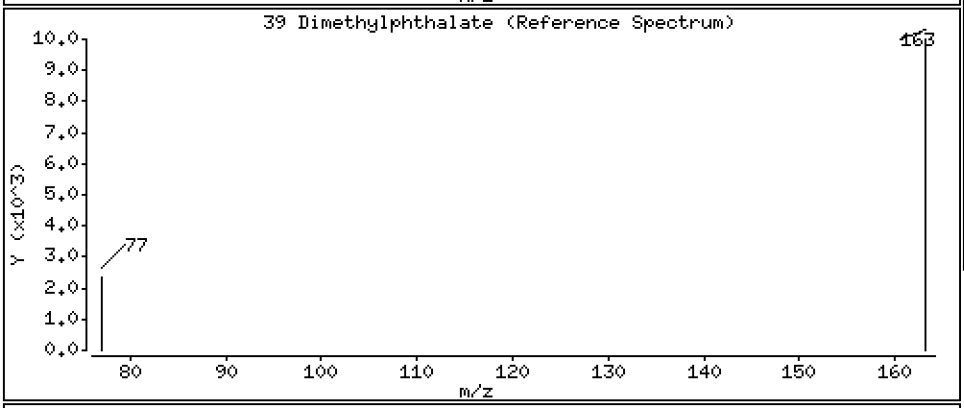
Concentration: 4.995 ug/mL

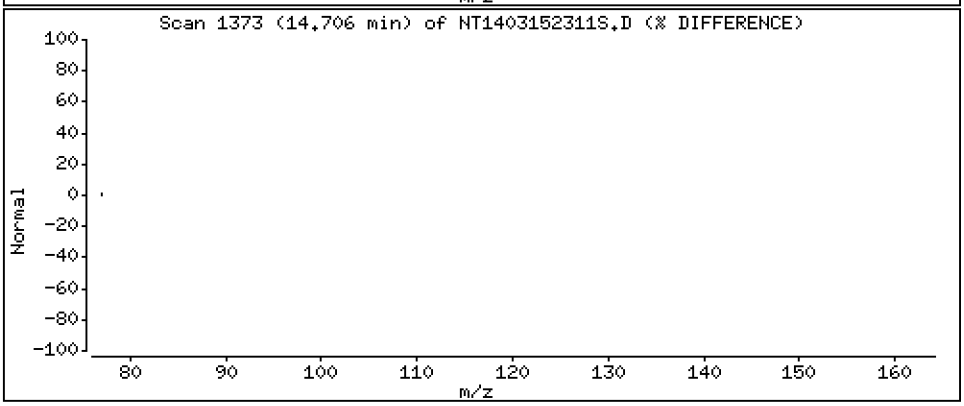












Data File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT1403152311S.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

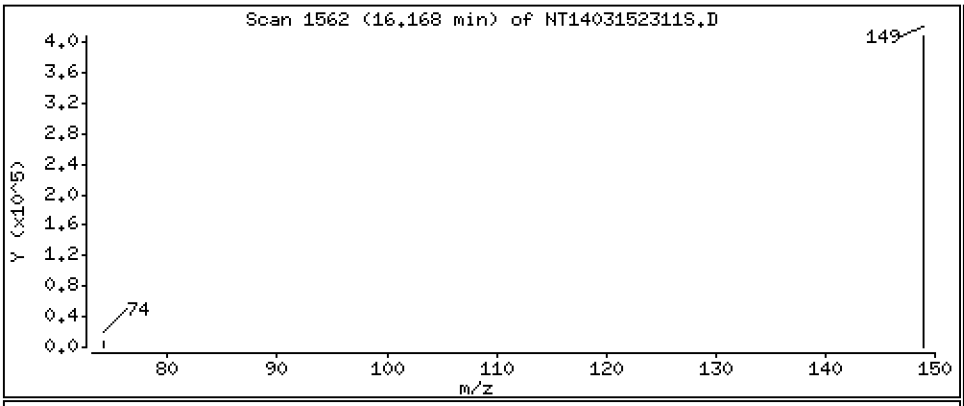
Operator: JGR

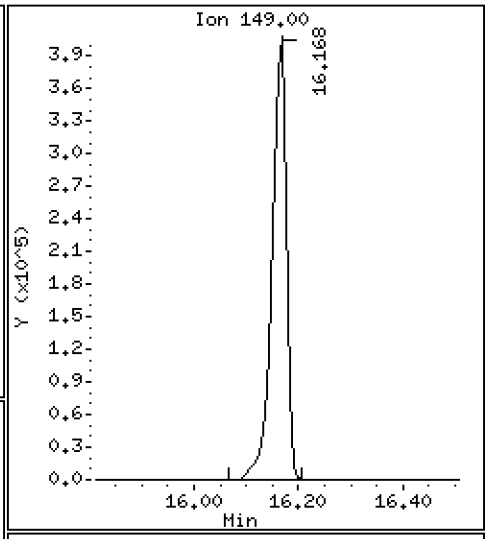
Column phase: ZB-5msi

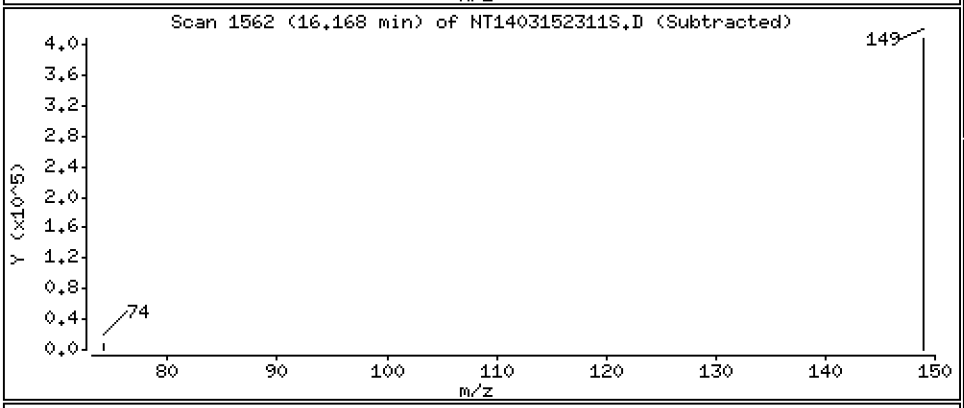
Column diameter: 0.25

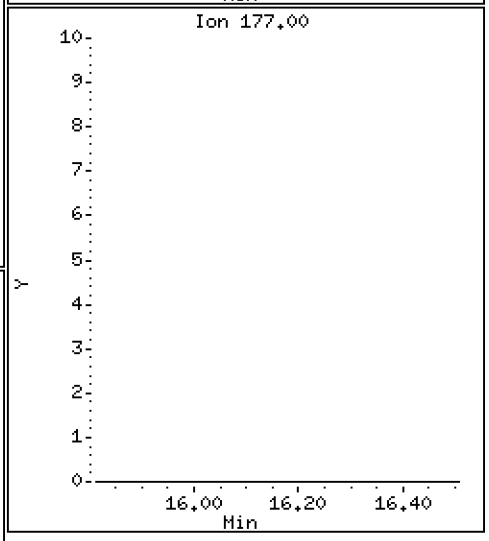
50 Diethylphthalate

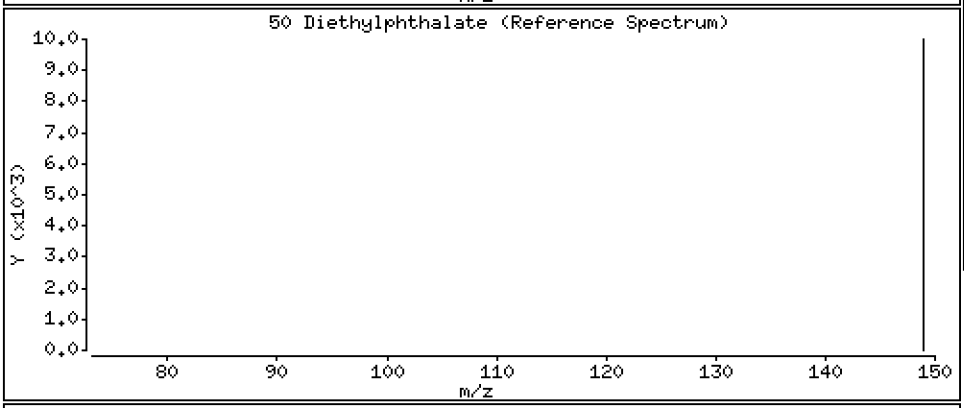
Concentration: 5.174 ug/mL

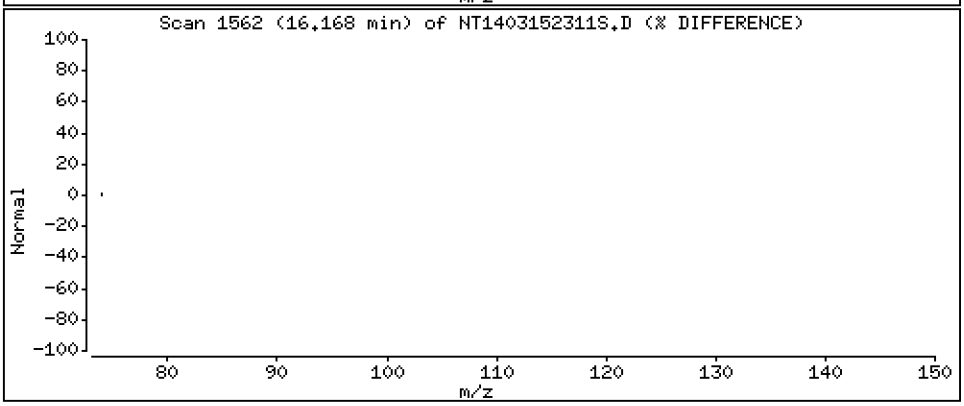












Data File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT1403152311S.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

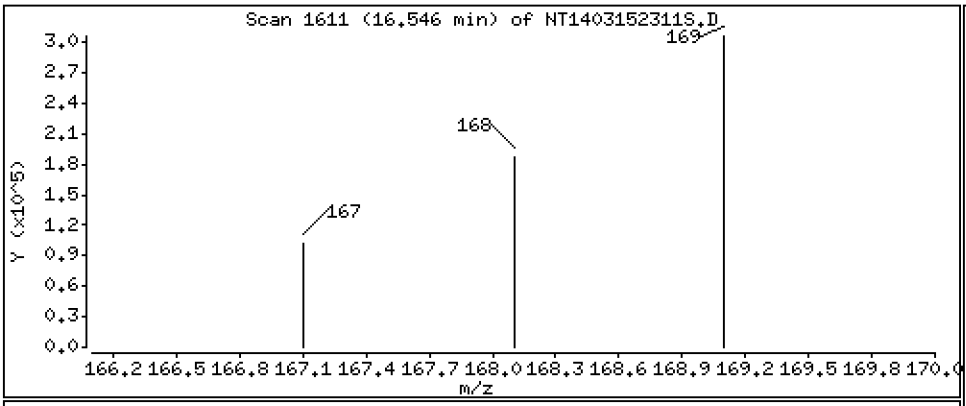
Operator: JGR

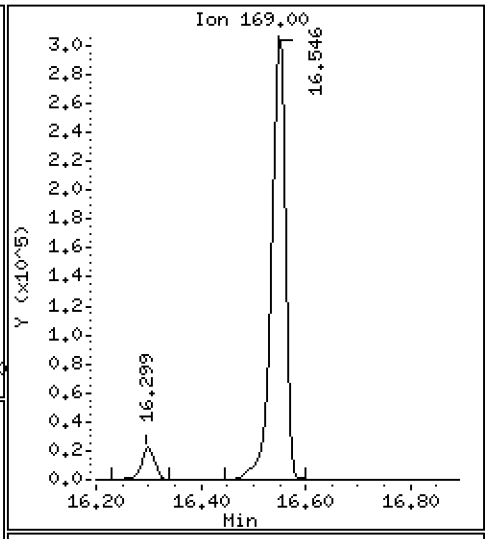
Column phase: ZB-5msi

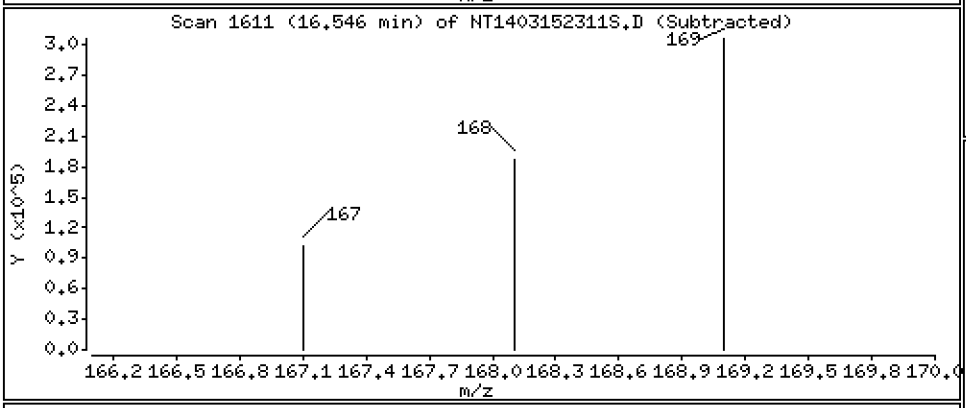
Column diameter: 0.25

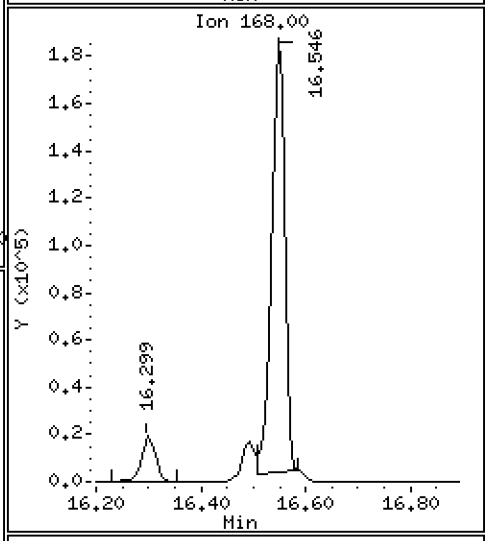
54 N-Nitrosodiphenylamine

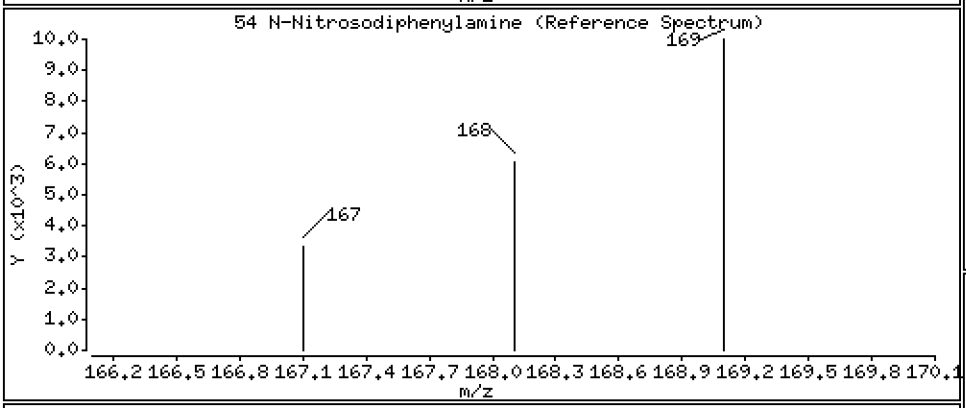
Concentration: 5.019 ug/mL

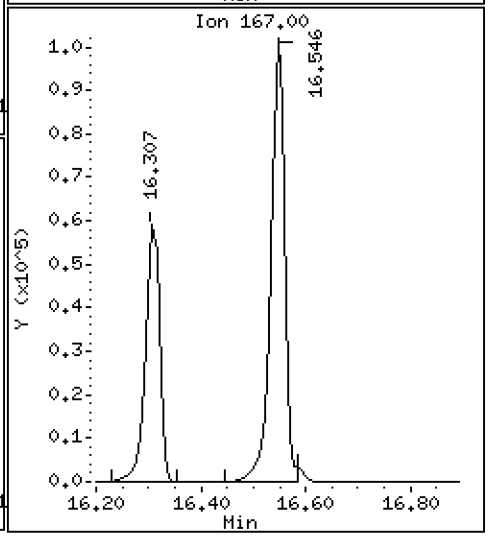


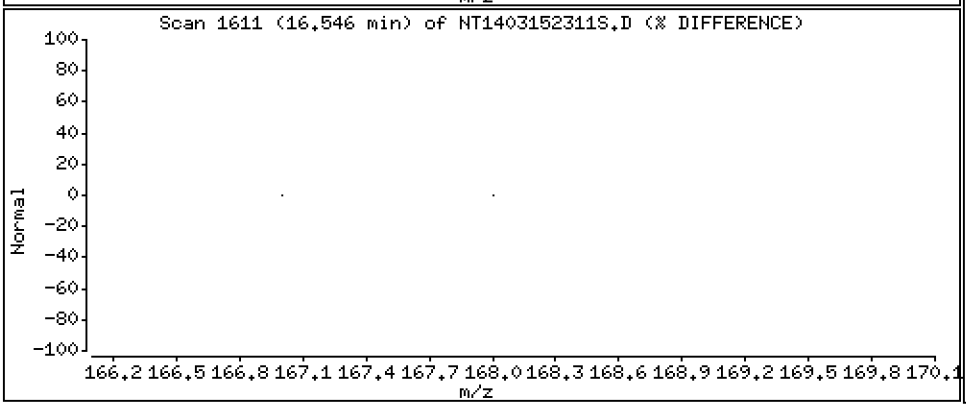












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

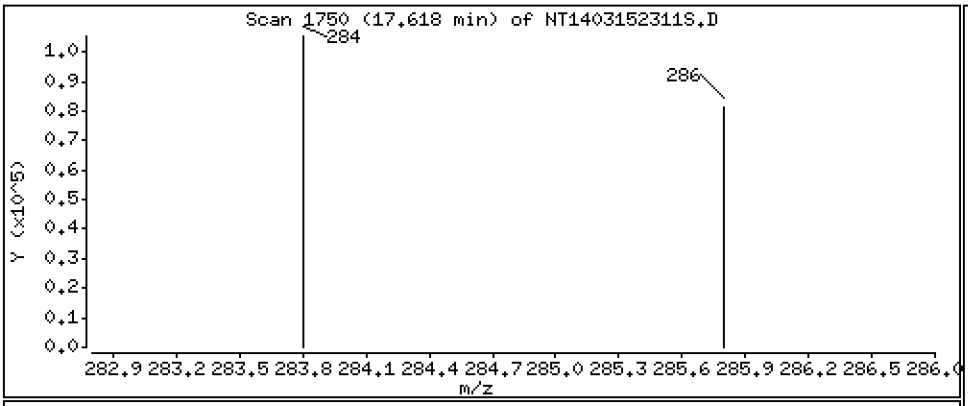
Operator: JGR

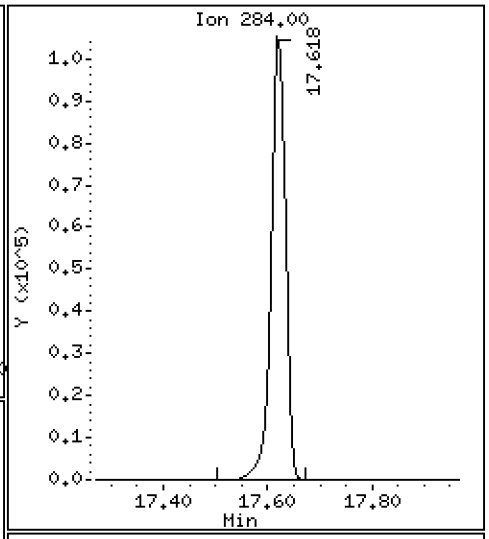
Column phase: ZB-5msi

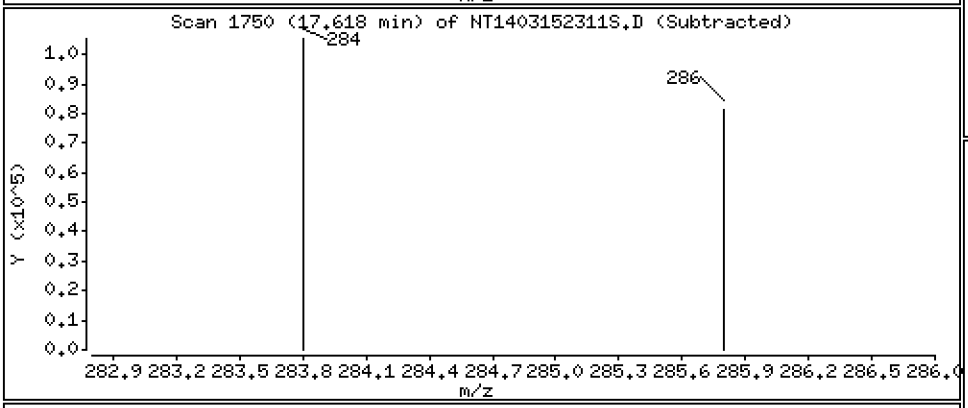
Column diameter: 0.25

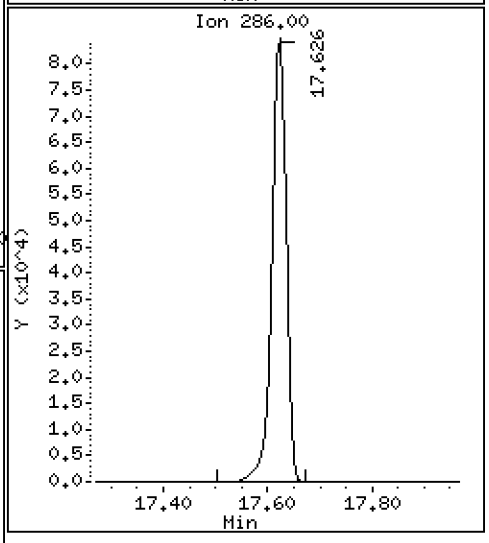
57 Hexachlorobenzene

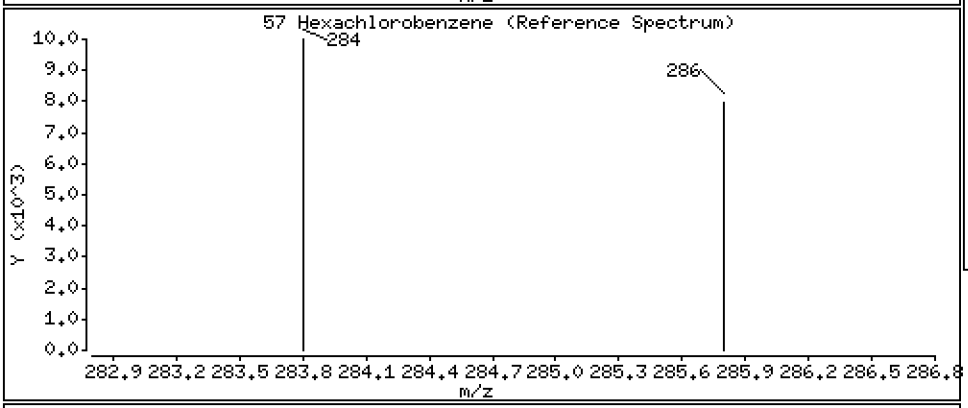
Concentration: 4.693 ug/mL

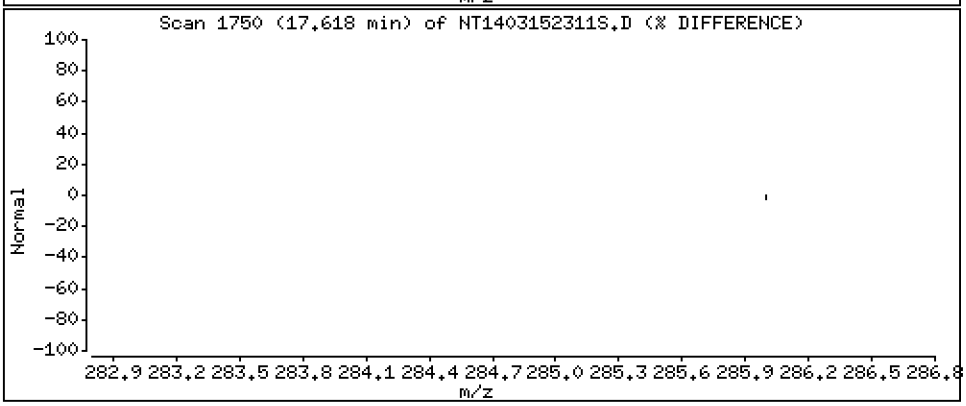












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

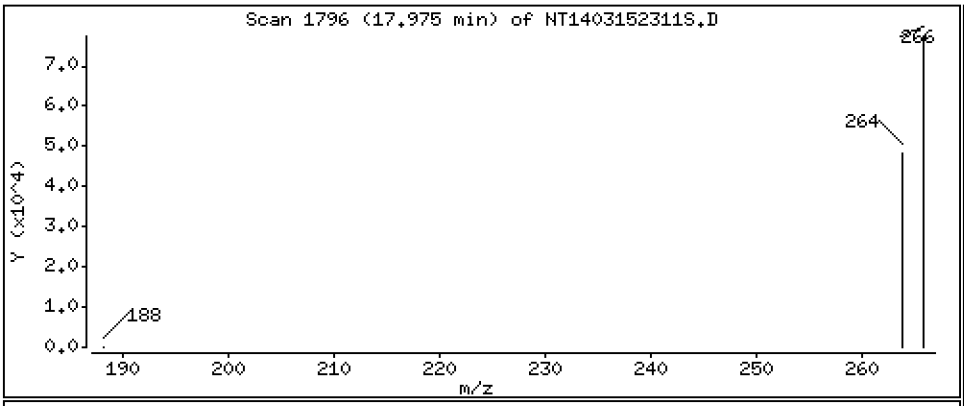
Operator: JGR

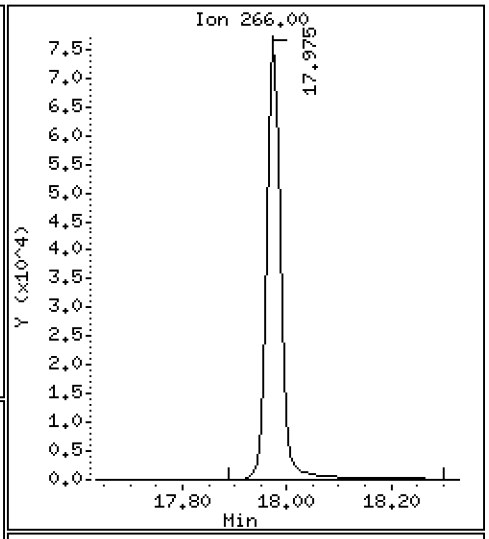
Column phase: ZB-5msi

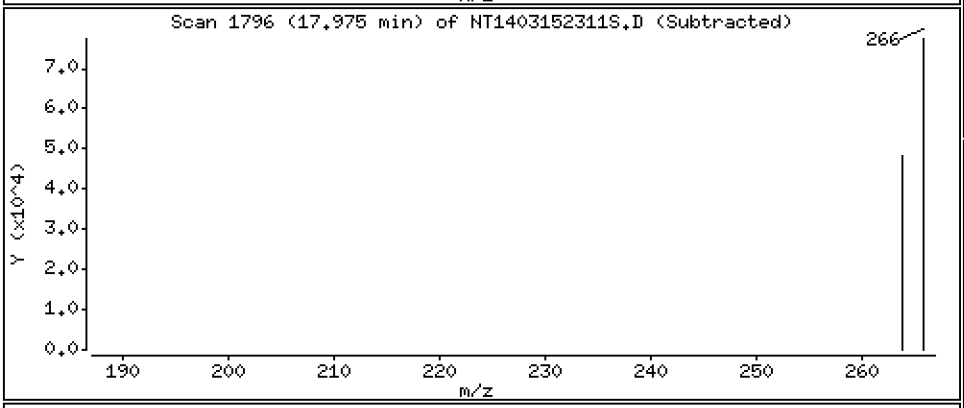
Column diameter: 0.25

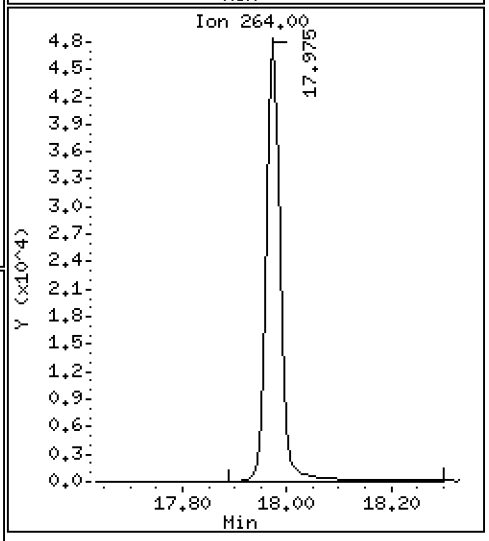
58 Pentachlorophenol

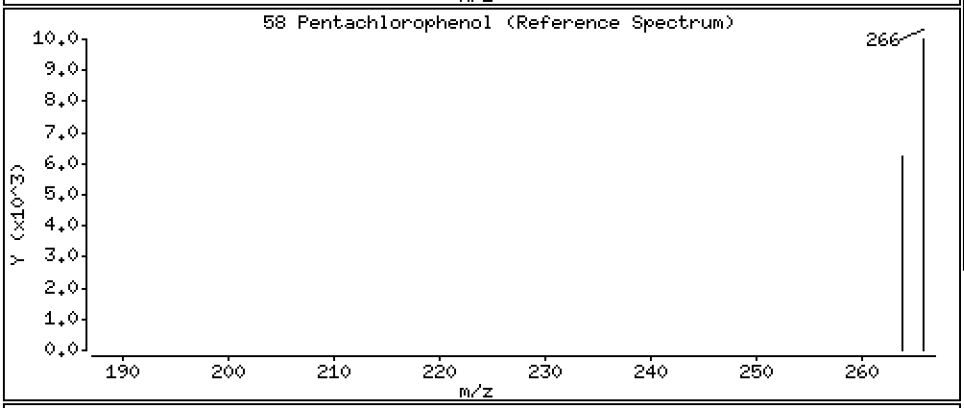
Concentration: 4.800 ug/mL

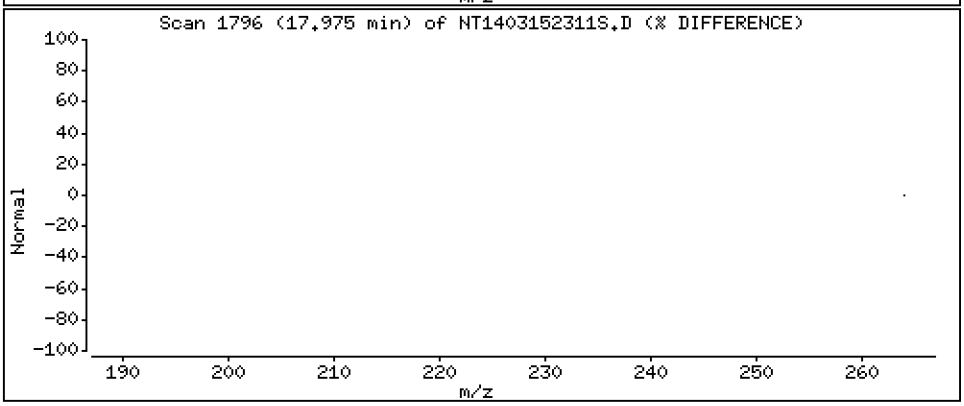












Data File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT1403152311S.D

Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

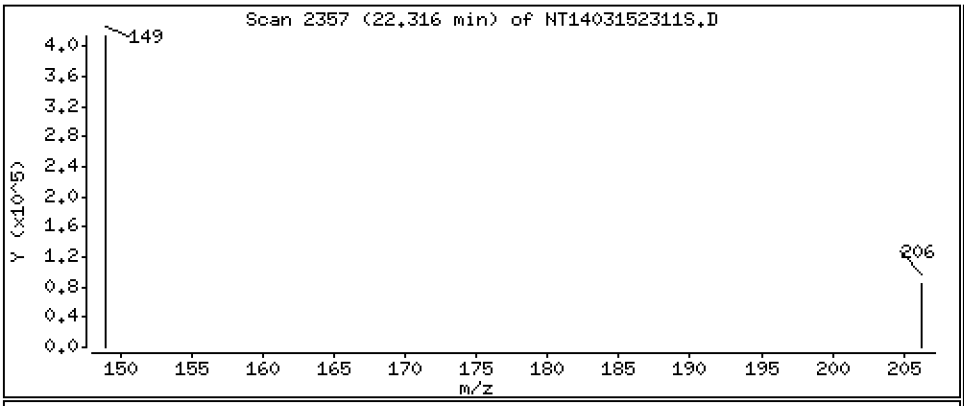
Operator: JGR

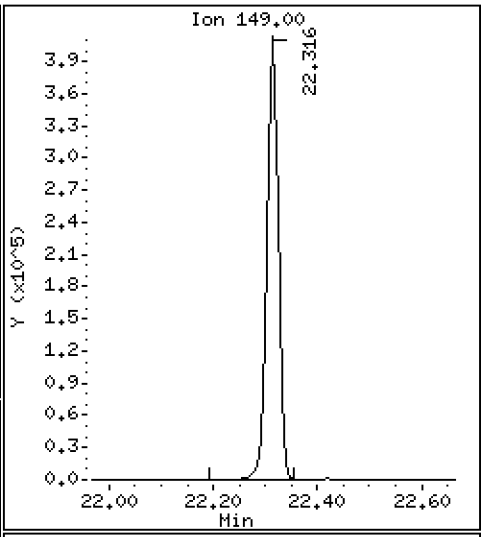
Column phase: ZB-5msi

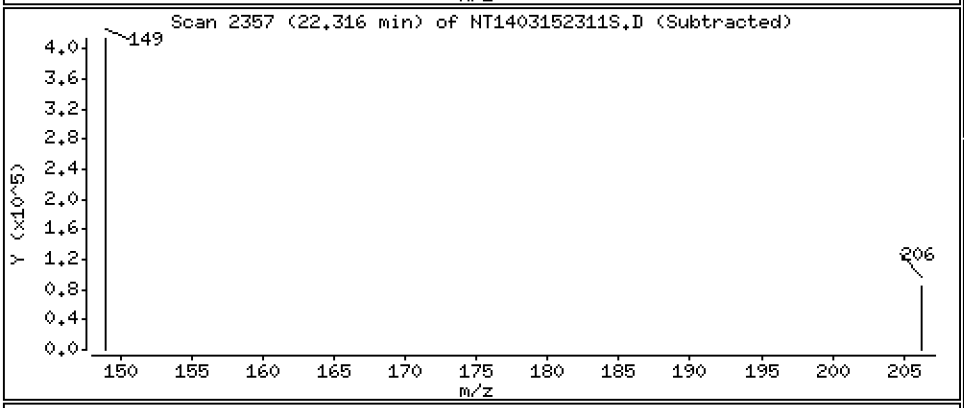
Column diameter: 0.25

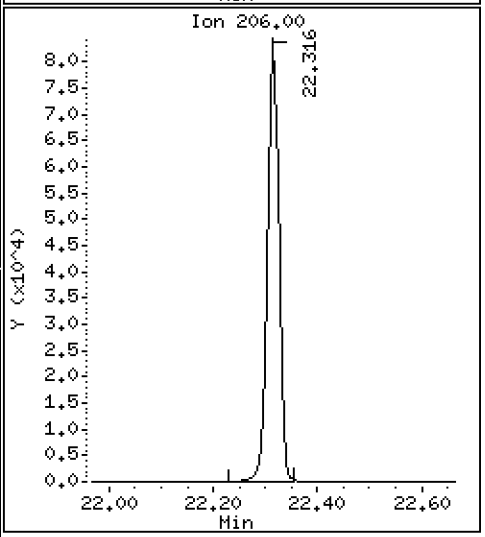
67 Butylbenzylphthalate

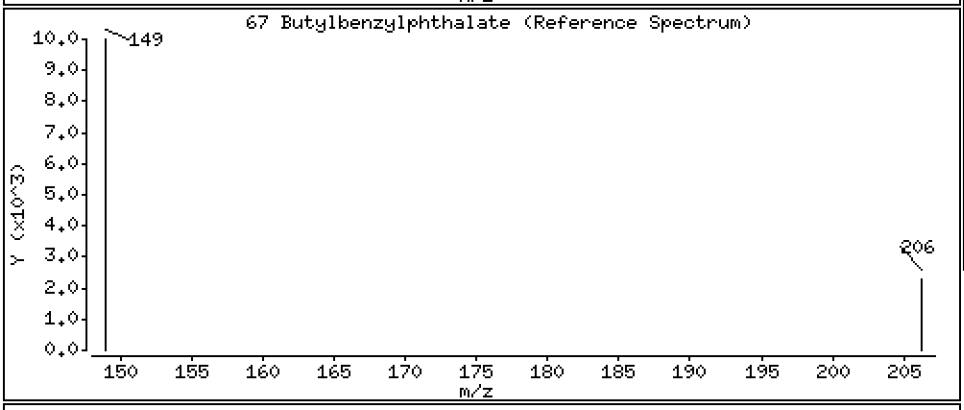
Concentration: 5.366 ug/mL

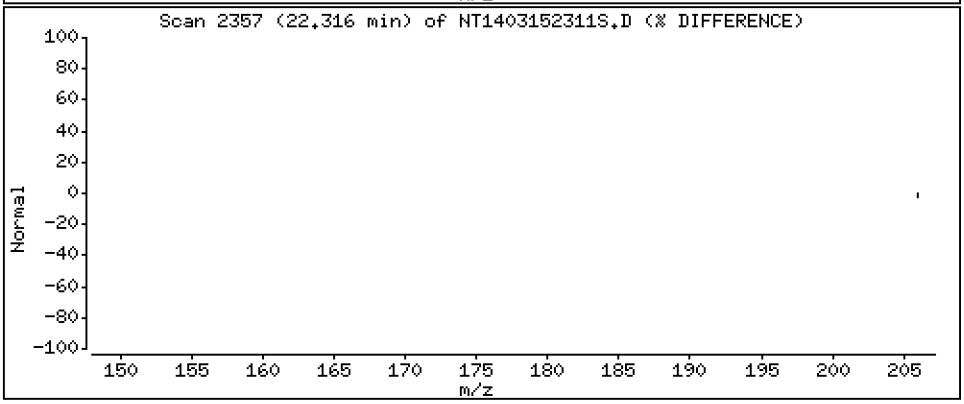












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

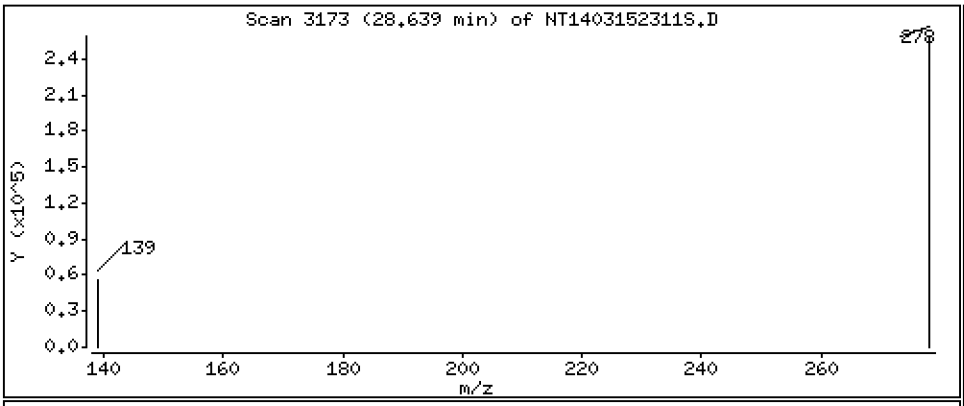
Operator: JGR

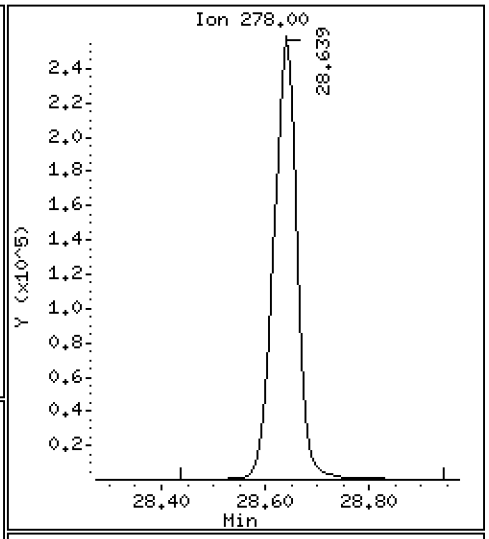
Column phase: ZB-5msi

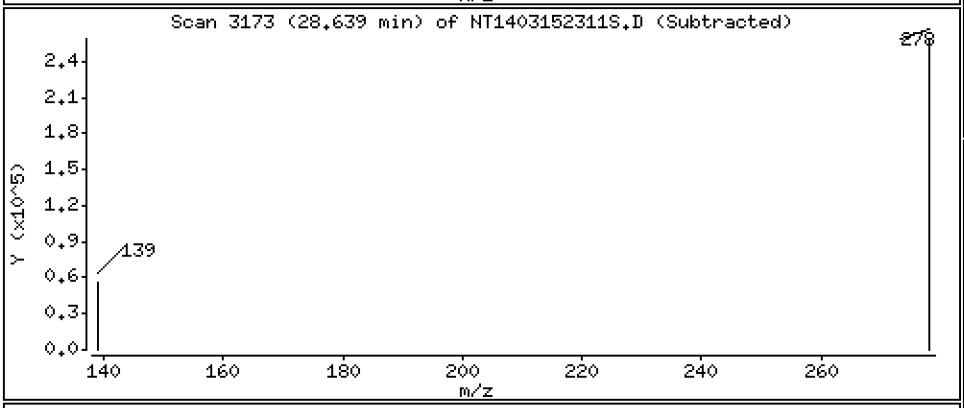
Column diameter: 0.25

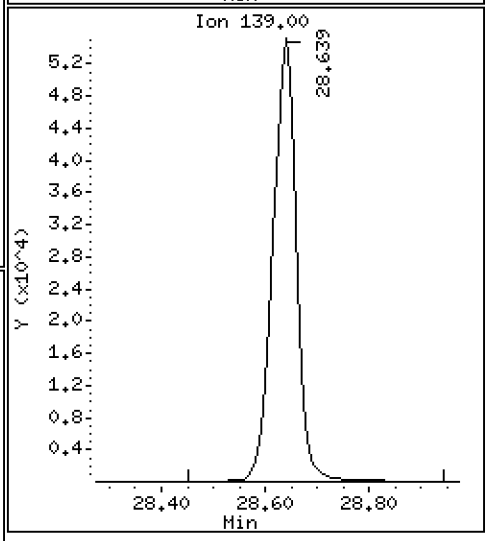
79 Dibenzo(a,h)anthracene

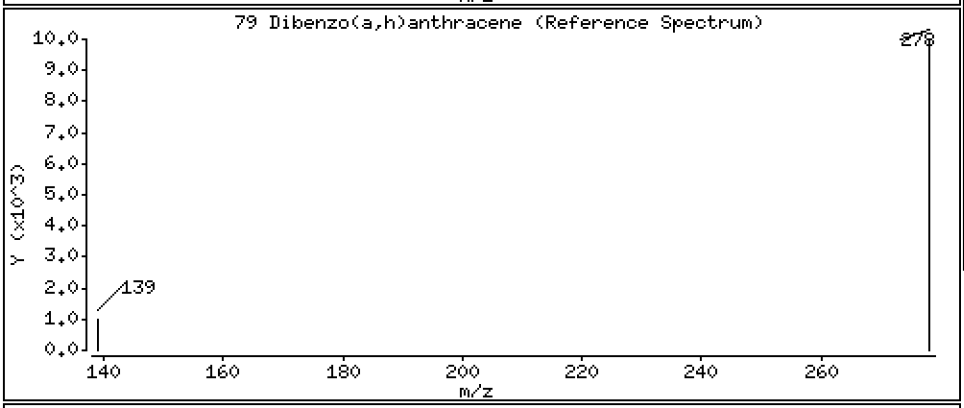
Concentration: 5.166 ug/mL

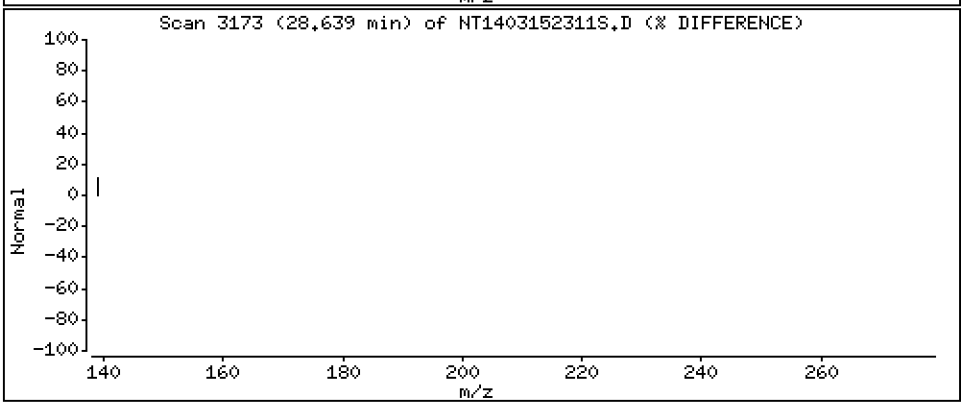












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Date : 15-MAR-2023 17:39

Client ID:

Instrument: nt14.i

Sample Info: SLC0242-SCV1

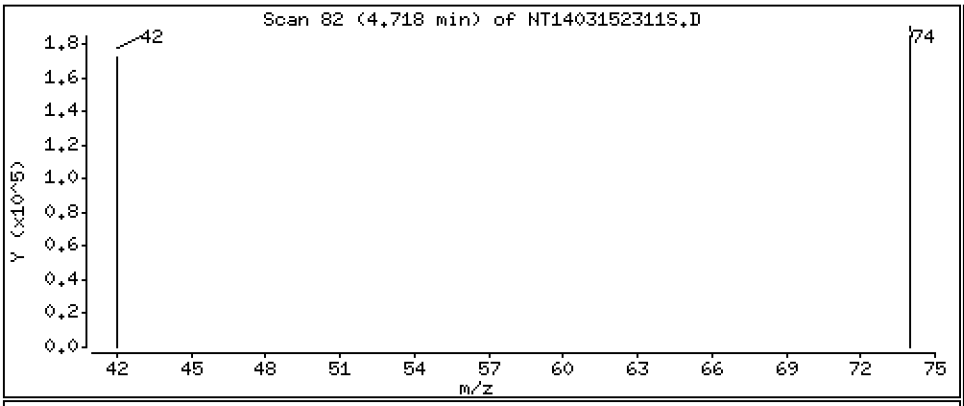
Operator: JGR

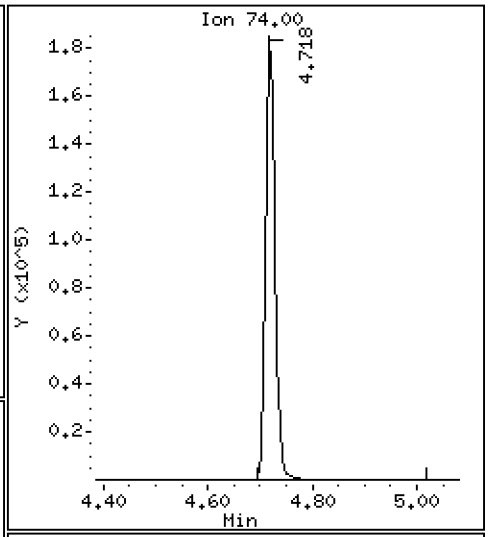
Column phase: ZB-5msi

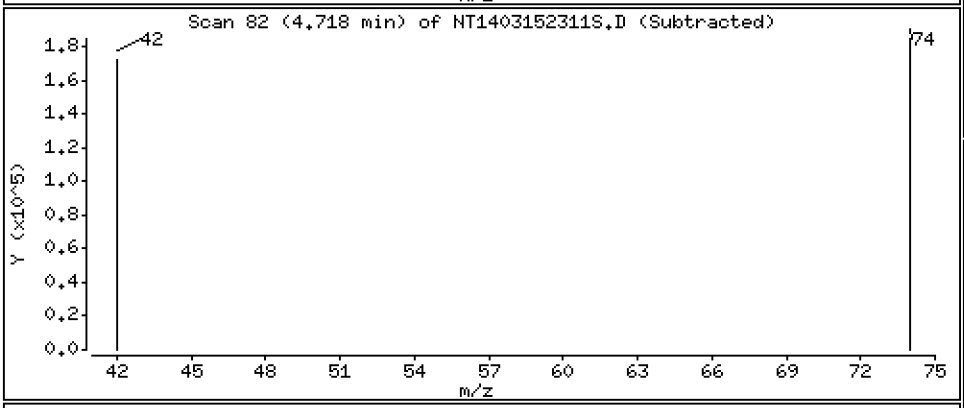
Column diameter: 0.25

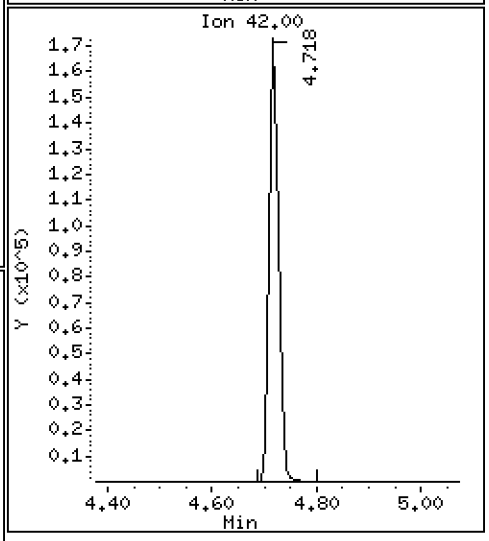
90 N-Nitrosodimethylamine

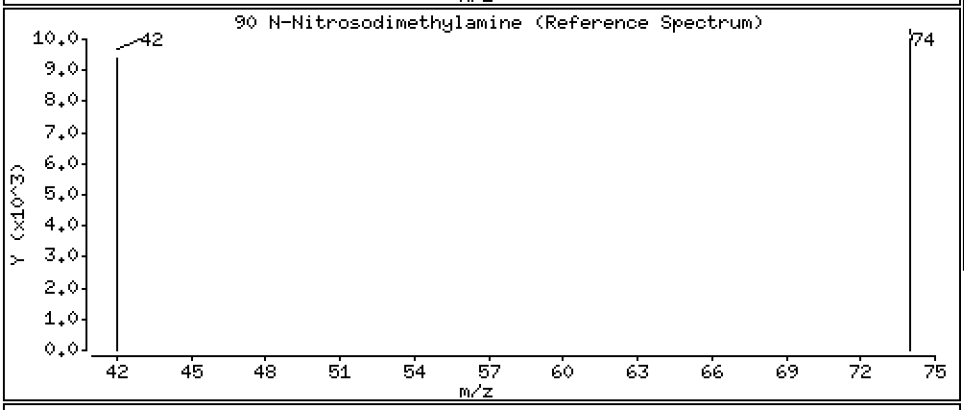
Concentration: 5.261 ug/mL

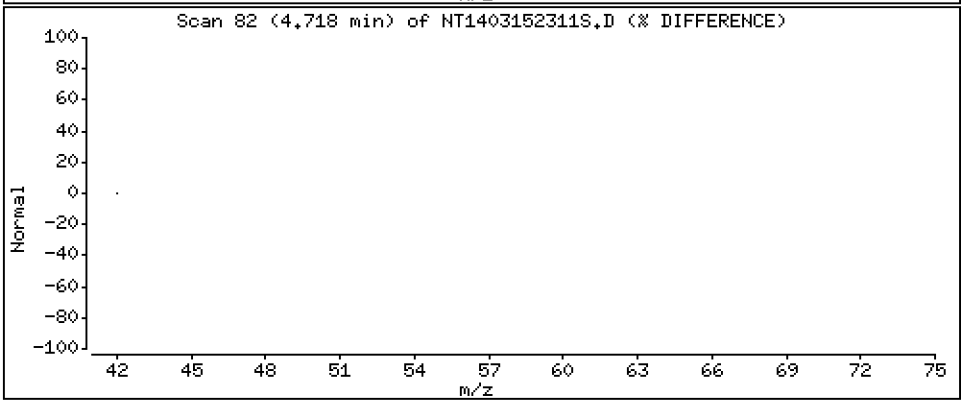












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt14.i\20230315.b\20230315.b\NT1403152311S.D
Lab Smp Id: SLC0242-SCV1
Inj Date : 15-MAR-2023 17:39 MS Autotune Date: 11-MAR-2023 16:01
Operator : JGR Inst ID: nt14.i
Smp Info : SLC0242-SCV1
Misc Info :
Comment :
Method : \\target\share\chem3\nt14.i\20230315.b\20230315.b\SIMABN2.m
Meth Date : 16-Mar-2023 15:17 deenayd Quant Type: ISTD
Cal Date : 15-MAR-2023 15:50 Cal File: NT1403152308.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: DEENAY-201905

			QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1	2-Fluorophenol	112	6.834	6.826	(0.754)	131	0.00180	0.001799(R)
	3	Phenol	94	8.441	8.433	(0.931)	454904	4.54237	4.542
	7	1,3-Dichlorobenzene	146	9.005	9.005	(0.993)	414667	4.83856	4.839
*	8	1,4-Dichlorobenzene-d4	152	9.067	9.067	(1.000)	214548	4.00000	
	9	1,4-Dichlorobenzene	146	9.098	9.098	(1.003)	402045	4.84807	4.848
	11	Benzyl alcohol	79	9.339	9.339	(1.030)	313629	5.34291	5.343
	12	1,2-Dichlorobenzene	146	9.455	9.455	(1.043)	389531	4.82237	4.822
	13	2-Methylphenol	108	9.564	9.556	(1.055)	296655	4.28818	4.288
	15	4-Methylphenol	108	9.836	9.828	(1.085)	331703	4.53863	4.539
	16	N-Nitroso-di-n-propylamine	70	9.905	9.898	(1.092)	265440	5.13699	5.137
	22	2,4-Dimethylphenol	107	10.883	10.883	(0.941)	272931	3.93394	3.934
	24	Benzoic acid	105	11.061	10.883	(0.956)	494569	9.08128	9.081
	26	1,2,4-Trichlorobenzene	180	11.480	11.480	(0.993)	311017	4.57388	4.574
*	27	Naphthalene-d8	136	11.565	11.564	(1.000)	807045	4.00000	
	30	Hexachlorobutadiene	225	11.974	11.974	(1.035)	171122	4.97279	4.973
	39	Dimethylphthalate	163	14.706	14.698	(0.967)	683967	4.99496	4.995
*	42	Acenaphthene-d10	162	15.201	15.201	(1.000)	400955	4.00000	
	50	Diethylphthalate	149	16.168	16.160	(1.064)	754333	5.17432	5.174
	54	N-Nitrosodiphenylamine	169	16.546	16.546	(0.907)	544923	5.01904	5.019
	57	Hexachlorobenzene	284	17.618	17.618	(0.966)	195732	4.69277	4.693
	58	Pentachlorophenol	266	17.974	17.982	(0.985)	138145	4.79996	4.800
*	59	Phenanthrene-d10	188	18.245	18.245	(1.000)	801298	4.00000	
$	66	Terphenyl-d14	244	21.386	21.386	(0.918)	546	0.00507	0.005072(R)
	67	Butylbenzylphthalate	149	22.315	22.315	(0.958)	588546	5.36591	5.366
*	69	Chrysene-d12	240	23.299	23.299	(1.000)	624454	4.00000	
*	77	Perylene-d12	264	25.939	25.939	(1.000)	623001	4.00000	
	79	Dibenzo(a,h)anthracene	278	28.639	28.623	(1.104)	815876	5.16593	5.166
	90	N-Nitrosodimethylamine	74	4.717	4.733	(0.520)	234083	5.26142	5.261

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1403152311S.D
Lab Smp Id: SLC0242-SCV1
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt14.i\20230315.b\20230315.b\SIMABN2.m
Misc Info:

Calibration Date: 15-MAR-2023
Calibration Time: 14:38
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	223201	111601	446402	214548	-3.88
27 Naphthalene-d8	832937	416469	1665874	807045	-3.11
42 Acenaphthene-d10	403175	201588	806350	400955	-0.55
59 Phenanthrene-d10	814822	407411	1629644	801298	-1.66
69 Chrysene-d12	625755	312878	1251510	624454	-0.21
77 Perylene-d12	614085	307043	1228170	623001	1.45

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.08	8.58	9.58	9.07	-0.08
27 Naphthalene-d8	11.56	11.06	12.06	11.57	0.00
42 Acenaphthene-d10	15.20	14.70	15.70	15.20	0.00
59 Phenanthrene-d10	18.25	17.75	18.75	18.25	0.00
69 Chrysene-d12	23.30	22.80	23.80	23.30	0.00
77 Perylene-d12	25.94	25.44	26.44	25.94	0.00

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

REVIEW SUMMARY FOR FILE - NT1403152311S.D

Lab ID: SLC0242-SCV1
nt14.i, 20230315.b\20230315.b\SIMABN2.m,   15-MAR-2023 17:39

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT14	Calibration:	GC00050
Lab File ID:	NT1403172331S.D	Calibration Date:	03/15/2023
Sequence:	SLC0376	Injection Date:	03/18/23
Lab Sample ID:	SLC0376-CCV1	Injection Time:	08:30
Sequence Name:	Calibration Check		

		CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT	
1,4-Dichlorobenzene	A	1.0000	1.0	1.5461150	1.5291550		-1.1	+/-50	
1,2-Dichlorobenzene	A	1.0000	1.0	1.5059720	1.4953380		-0.7	+/-50	
Benzyl Alcohol	A	1.0000	0.7	1.0943940	0.8082583		-26.1	+/-50	
Benzoic acid	A	4.0000	2.1	0.1762504	0.1396452		-46.8	+/-50	
2,4-Dimethylphenol	A	2.0000	2.0	0.3438645	0.3416153		-0.7	+/-50	
1,2,4-Trichlorobenzene	A	1.0000	1.0	0.3370247	0.3433713		1.9	+/-50	
N-Nitrosodiphenylamine	A	1.0000	1.1	0.5419762	0.6004019		10.8	+/-50	
Pentachlorophenol	A	2.0000	1.0	0.1113753	0.0718187		-49.1	+/-50	
2-Fluorophenol	A	1.5000	1.29	1.3577520	1.1657020		-14.1	+/-50	
p-Terphenyl-d14	A	1.0000	1.78	0.6895811	1.2308360		78.5	+/-50	*

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT14031723315.D

Date : 18-MAR-2023 08:30

Client ID:

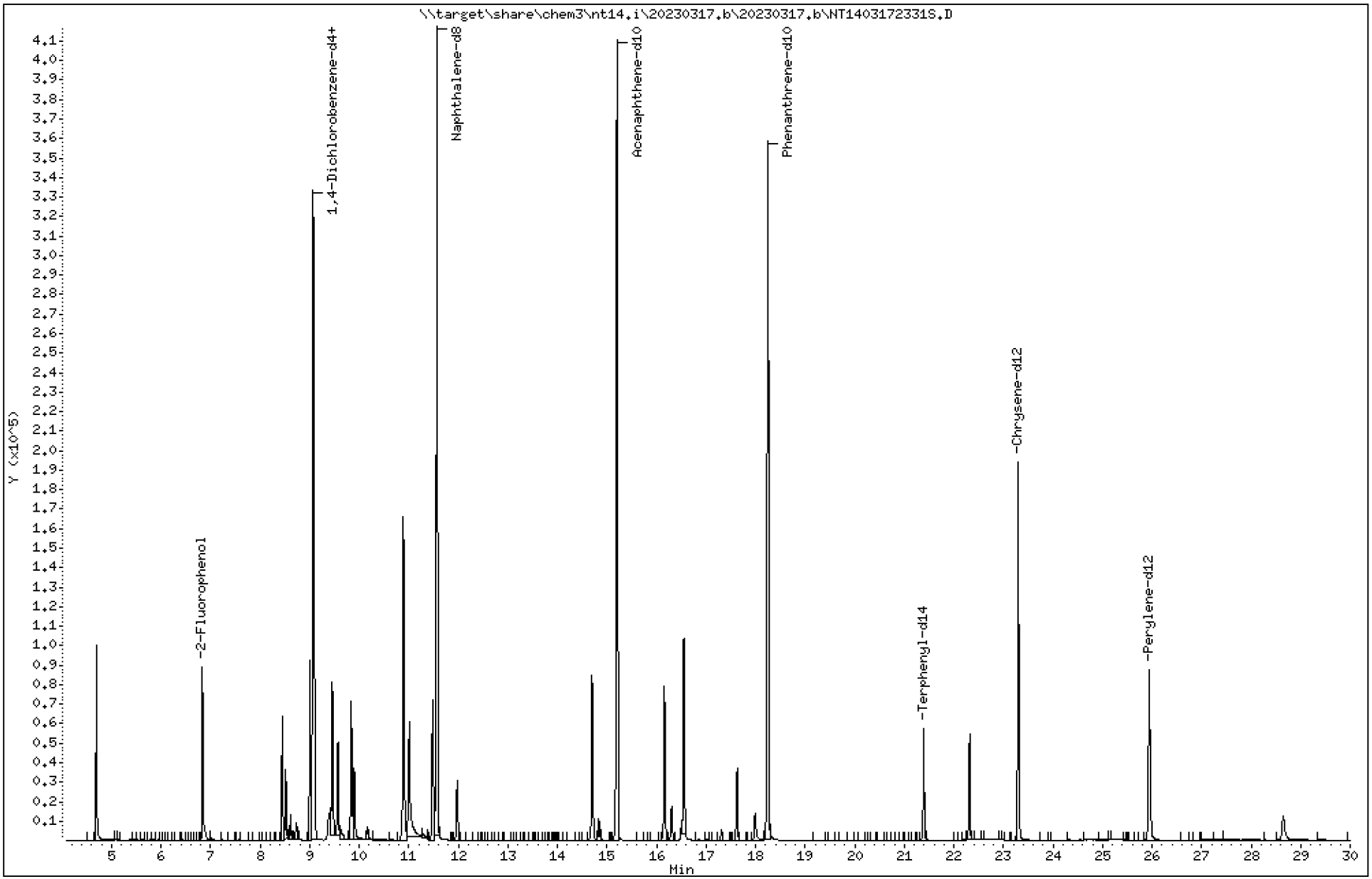
Instrument: nt14.i

Sample Info: SLC0376-CCV1

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



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Date : 18-MAR-2023 08:30

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-CCV1

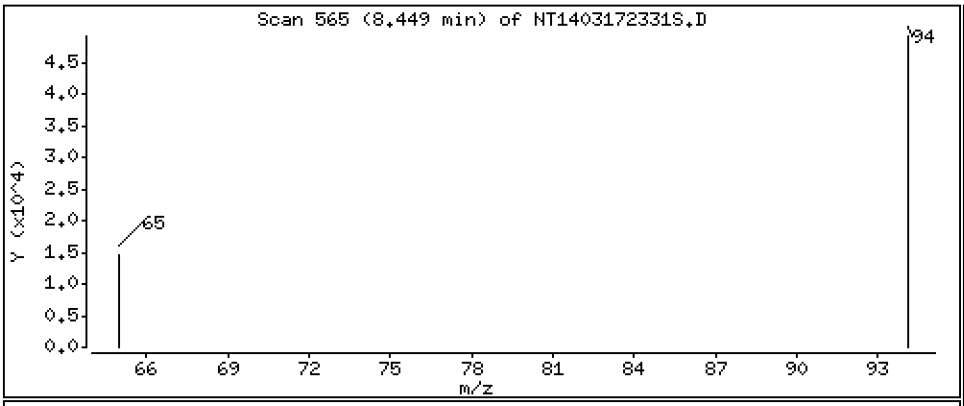
Operator: JGR

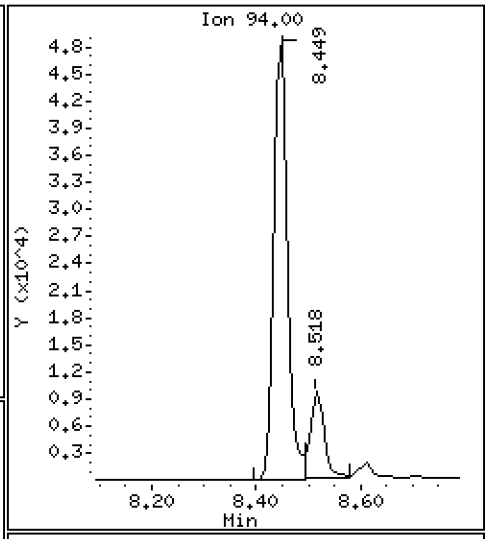
Column phase: ZB-5msi

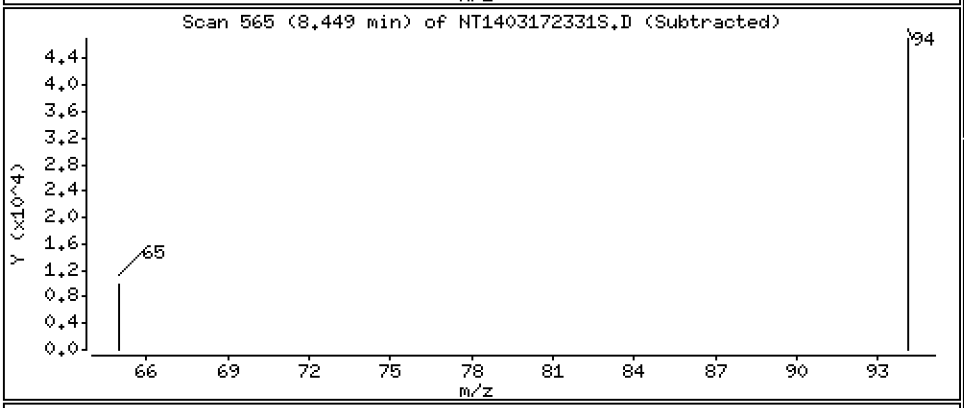
Column diameter: 0.25

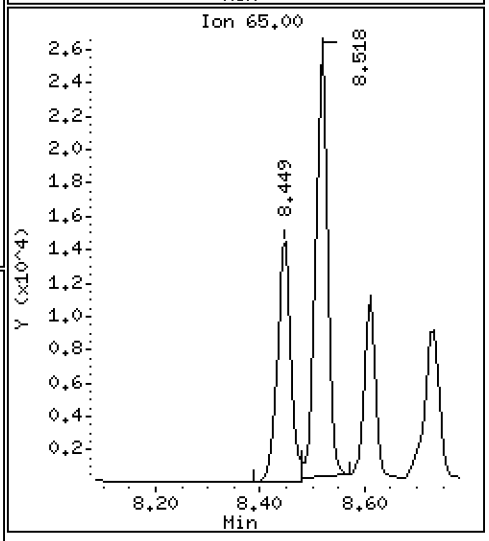
3 Phenol

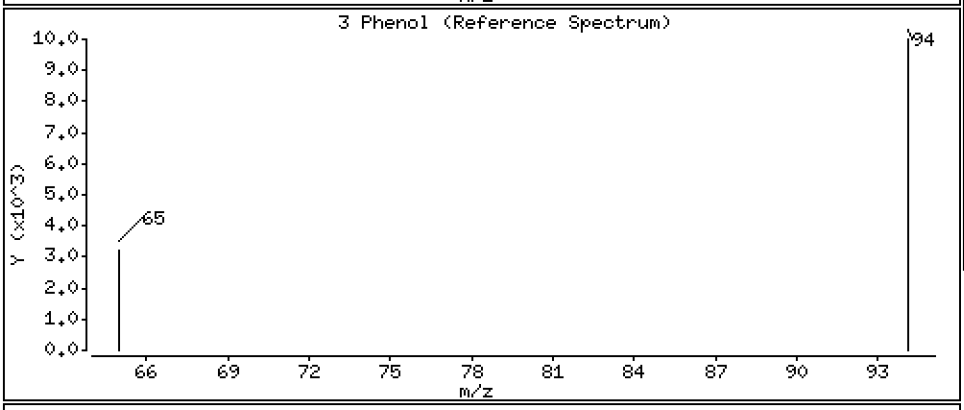
Concentration: 0.8649 ug/mL

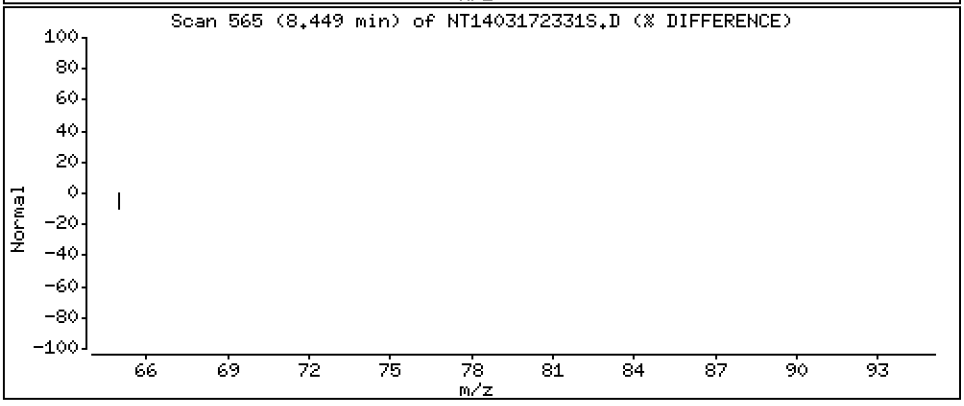












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Date : 18-MAR-2023 08:30

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-CCV1

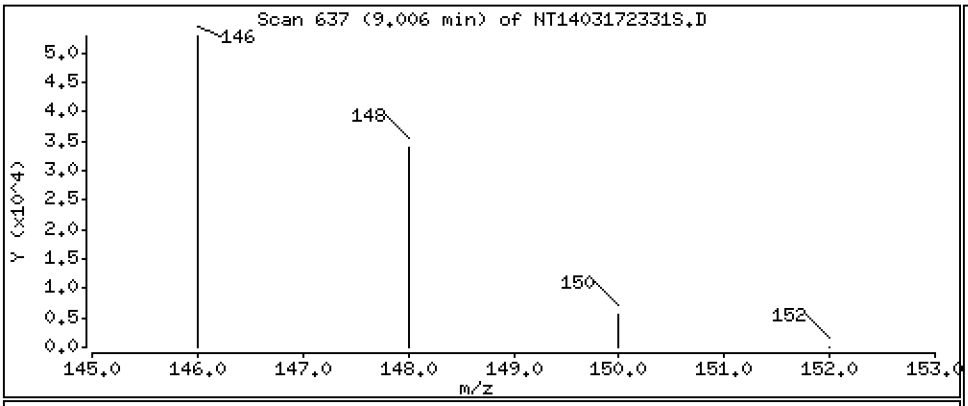
Operator: JGR

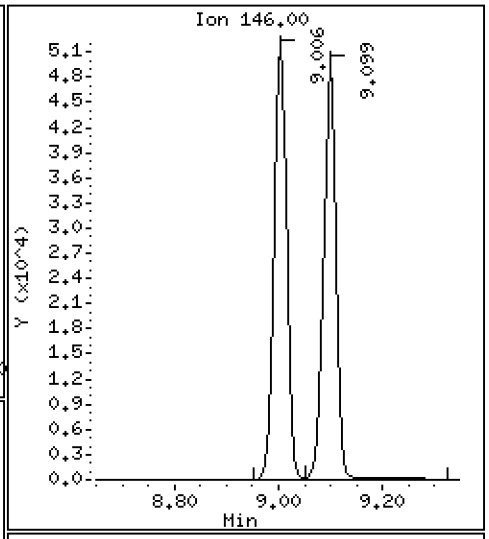
Column phase: ZB-5msi

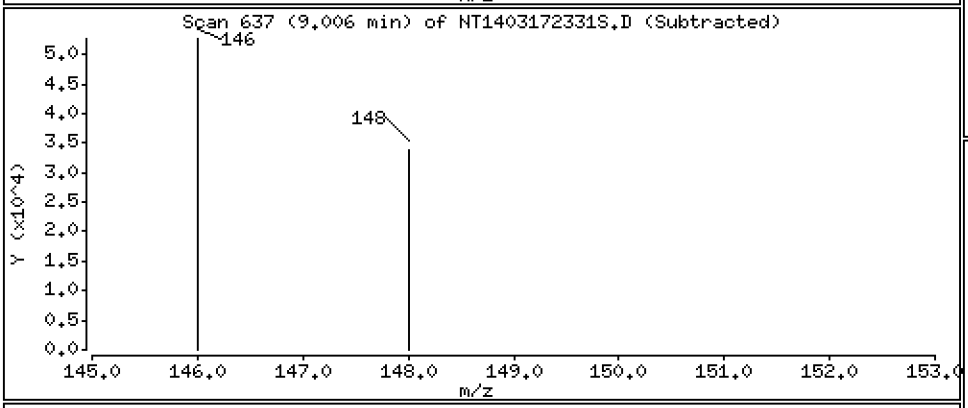
Column diameter: 0.25

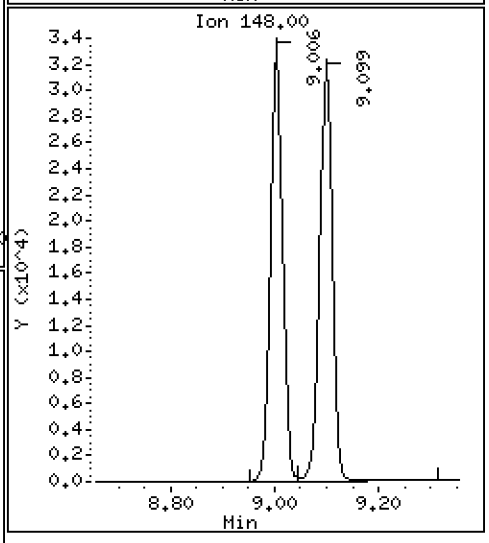
7 1,3-Dichlorobenzene

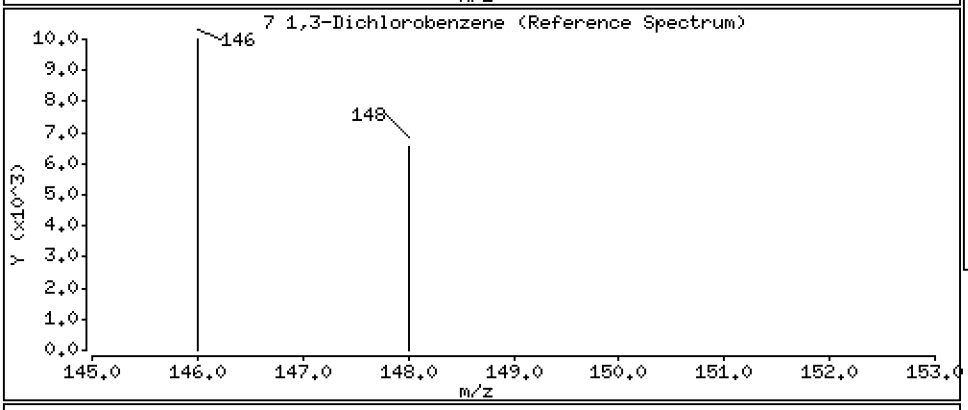
Concentration: 0.9875 ug/mL

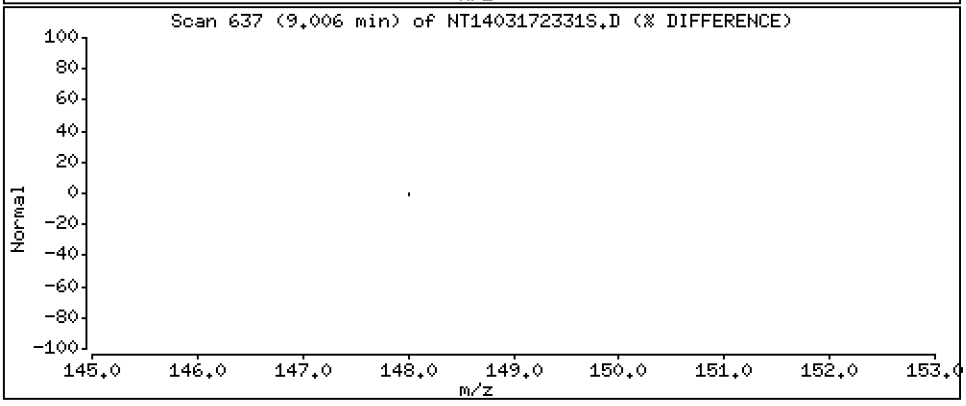












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172331S.D

Date : 18-MAR-2023 08:30

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-CCV1

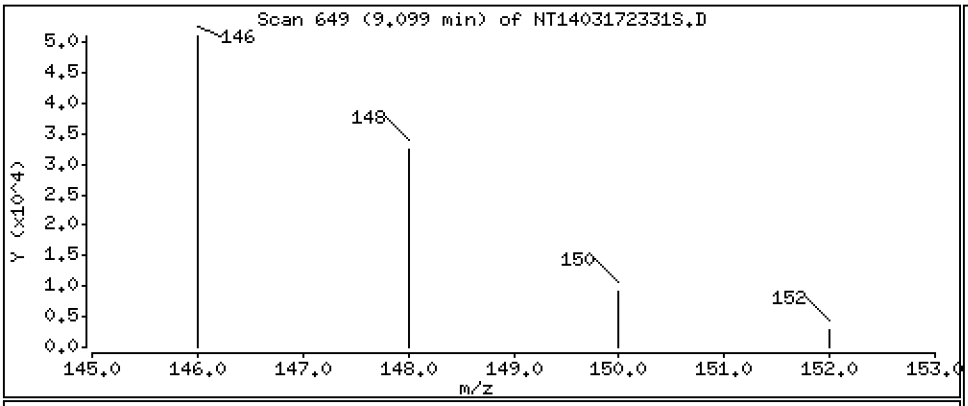
Operator: JGR

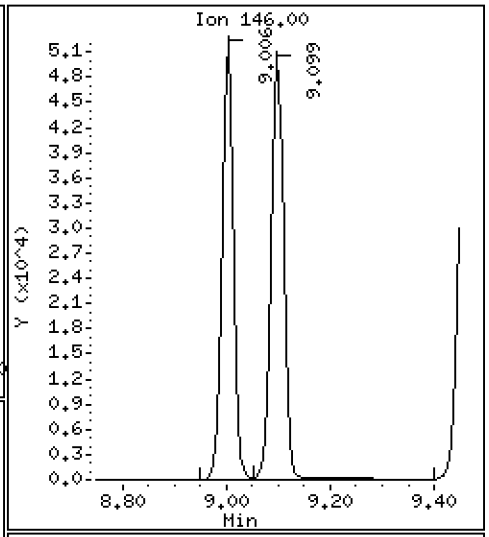
Column phase: ZB-5msi

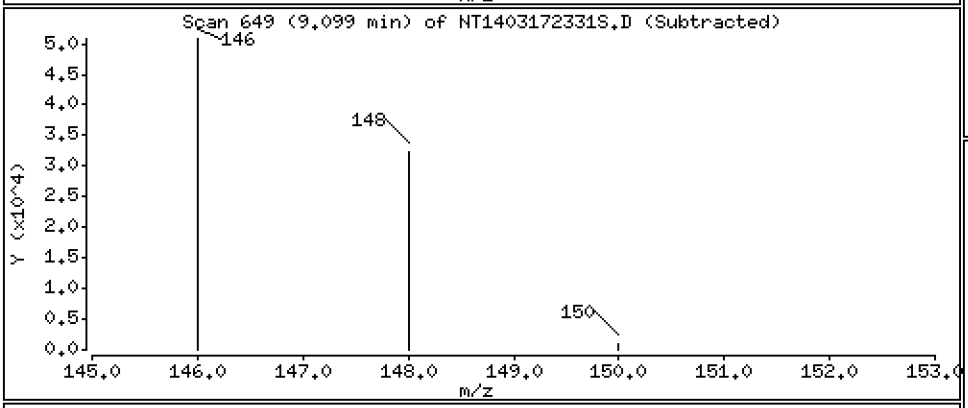
Column diameter: 0.25

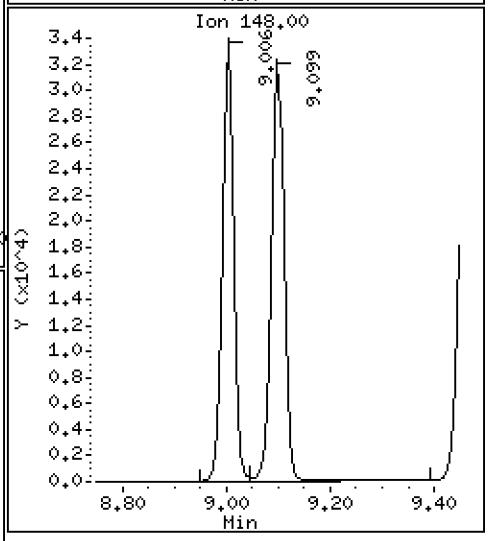
9 1,4-Dichlorobenzene

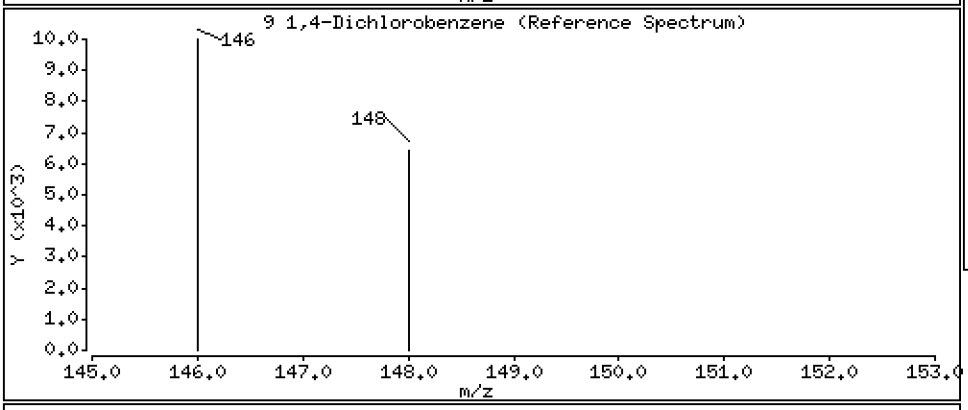
Concentration: 0.9890 ug/mL

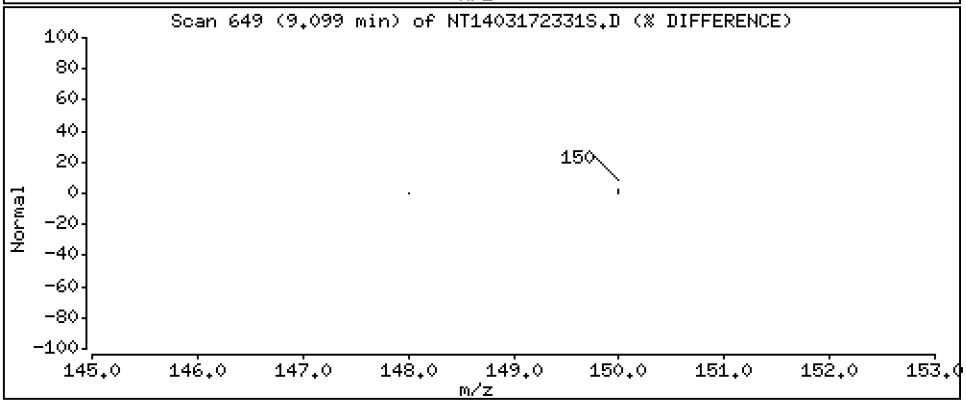












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172331S.D

Date : 18-MAR-2023 08:30

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-CCV1

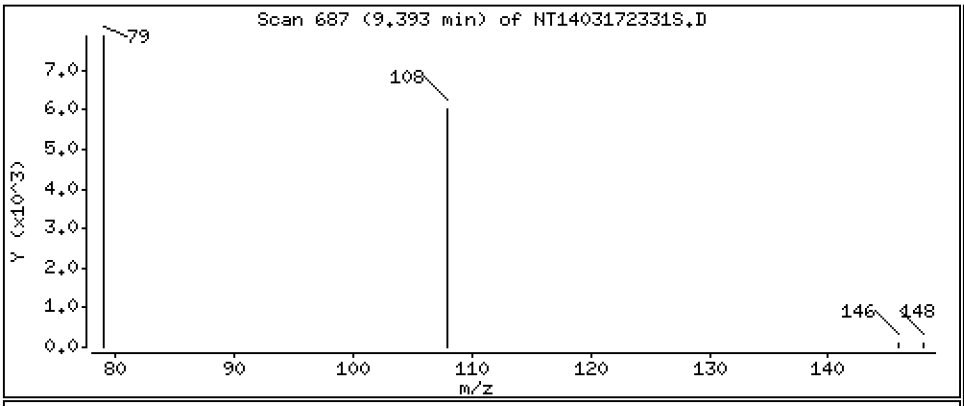
Operator: JGR

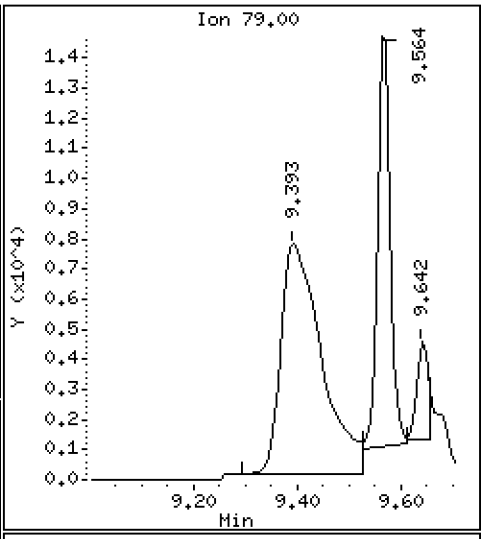
Column phase: ZB-5msi

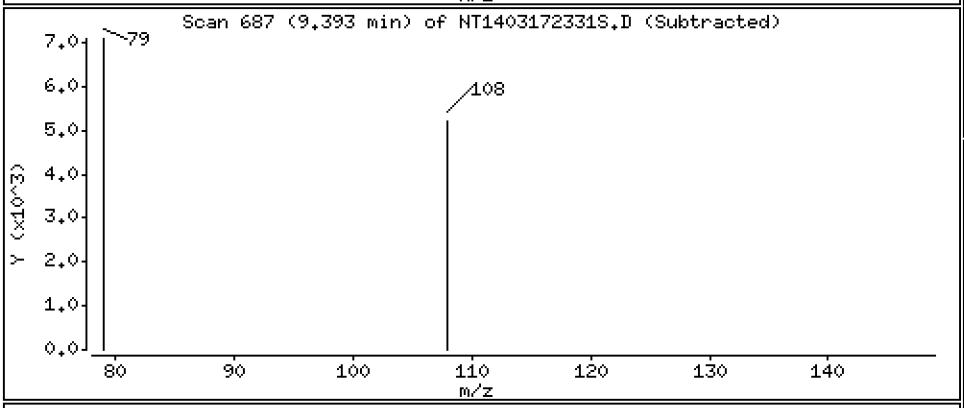
Column diameter: 0.25

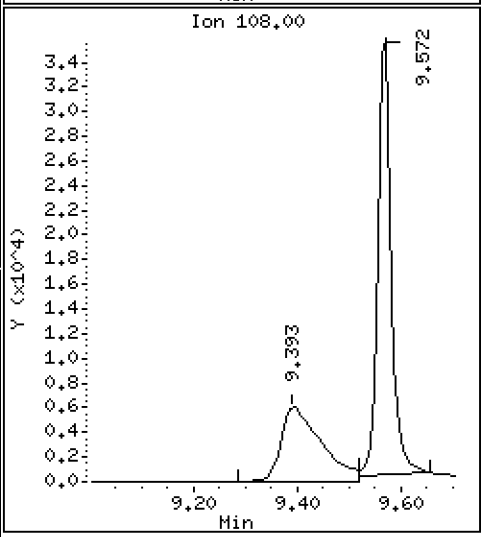
11 Benzyl alcohol

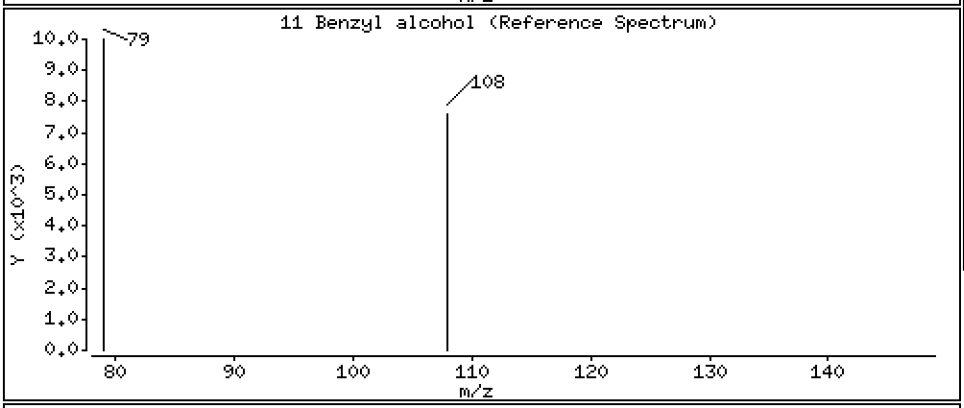
Concentration: 0.7385 ug/mL

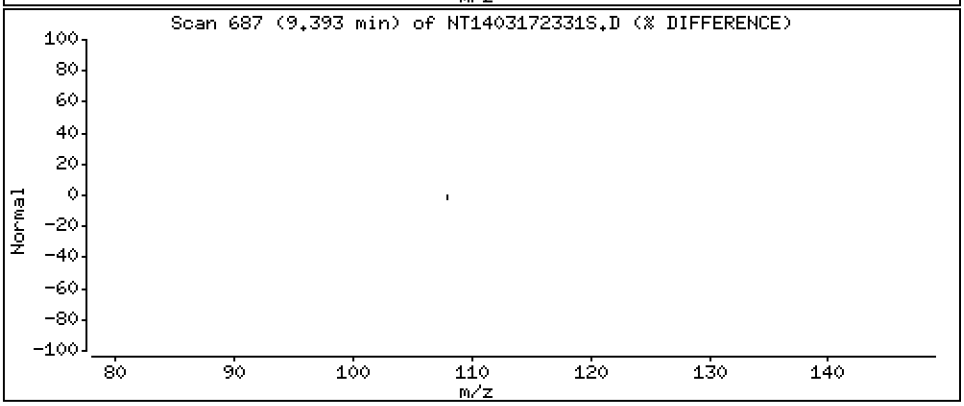












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172331S.D

Date : 18-MAR-2023 08:30

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-CCV1

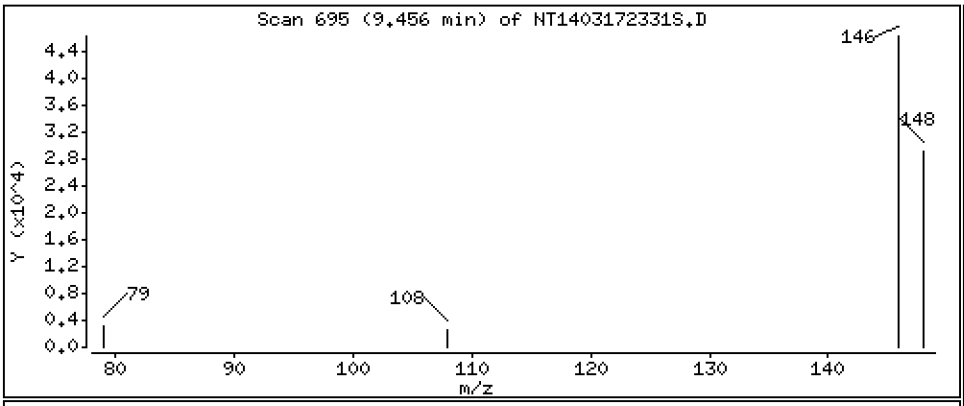
Operator: JGR

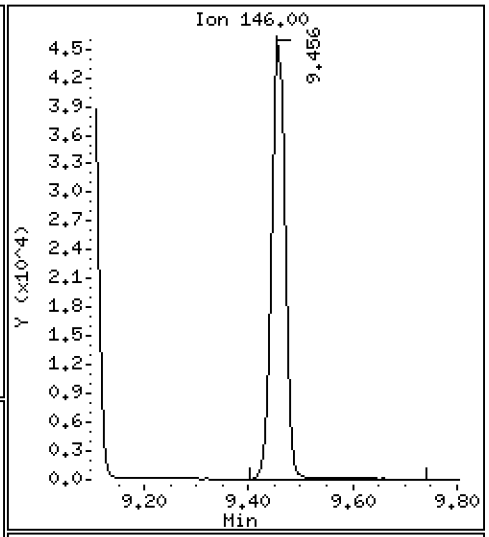
Column phase: ZB-5msi

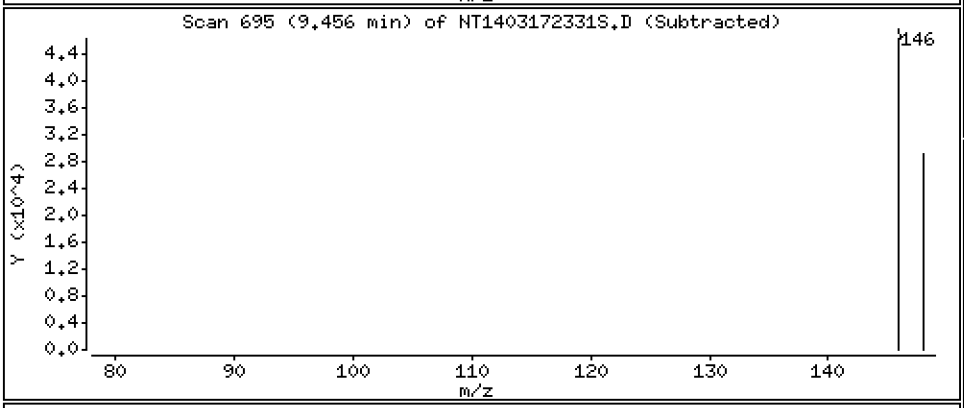
Column diameter: 0.25

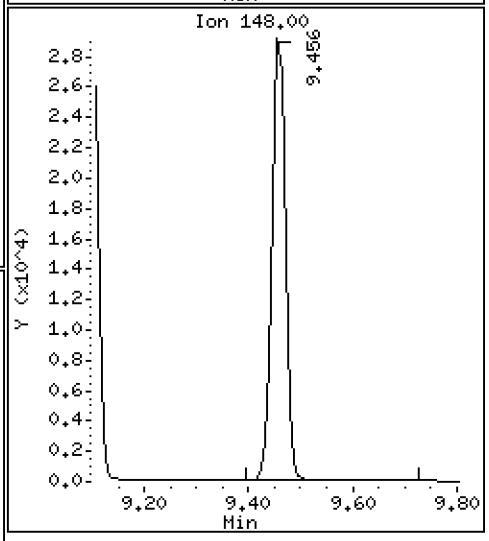
12 1,2-Dichlorobenzene

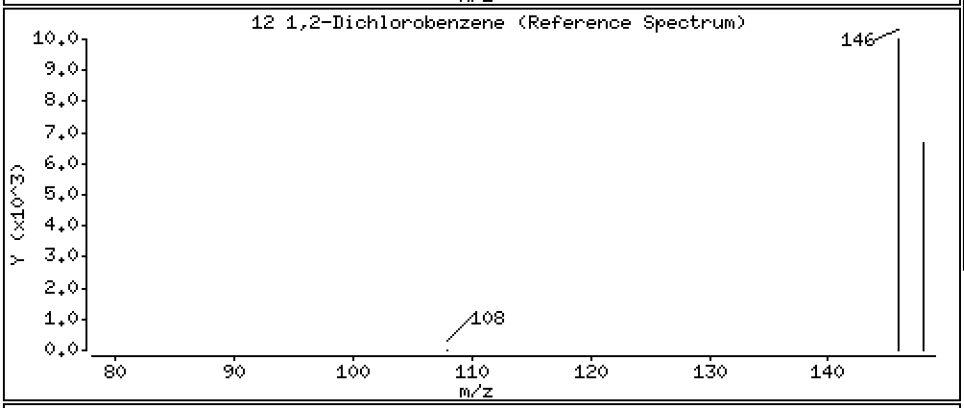
Concentration: 0.9929 ug/mL

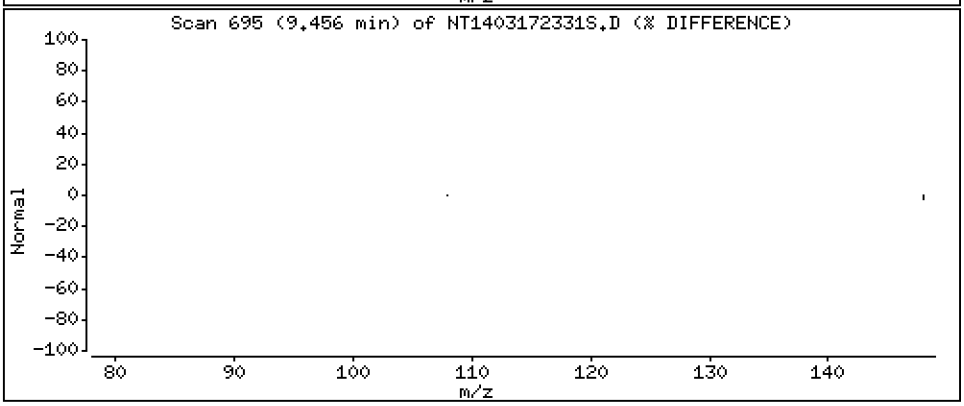












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172331S.D

Date : 18-MAR-2023 08:30

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-CCV1

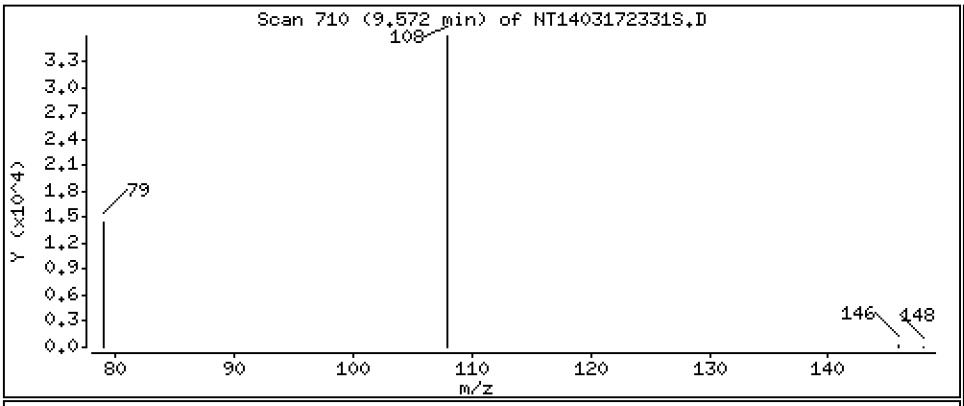
Operator: JGR

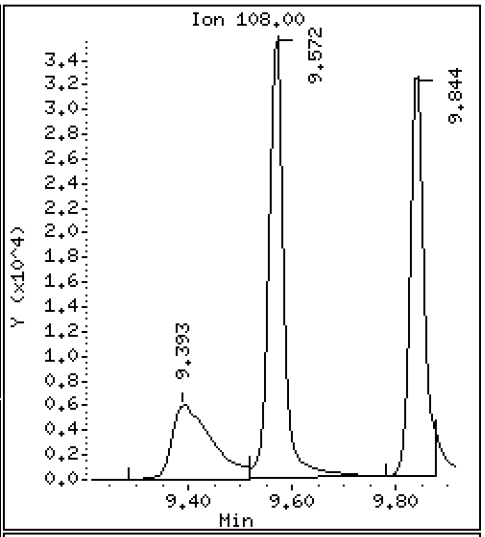
Column phase: ZB-5msi

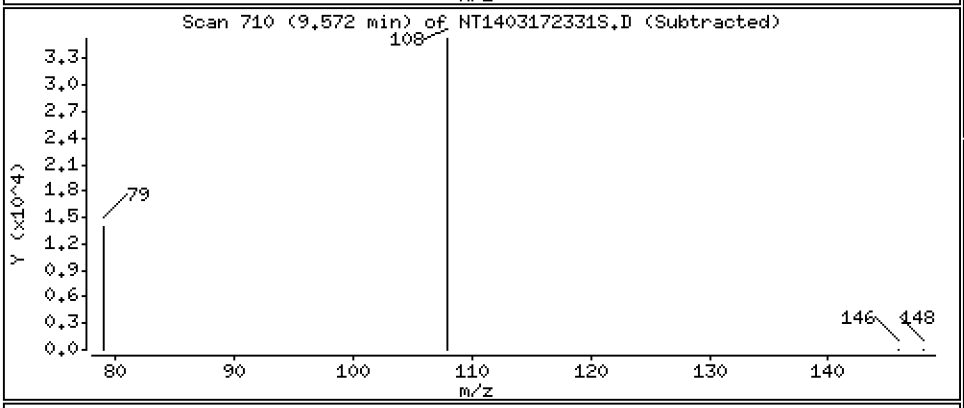
Column diameter: 0.25

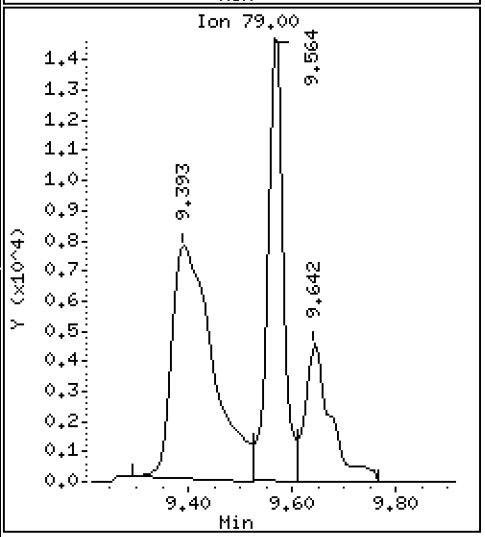
13 2-Methylphenol

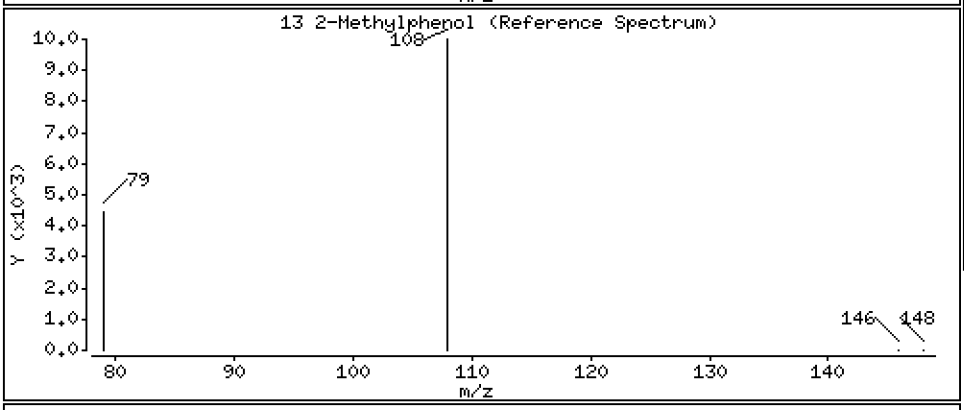
Concentration: 1.026 ug/mL

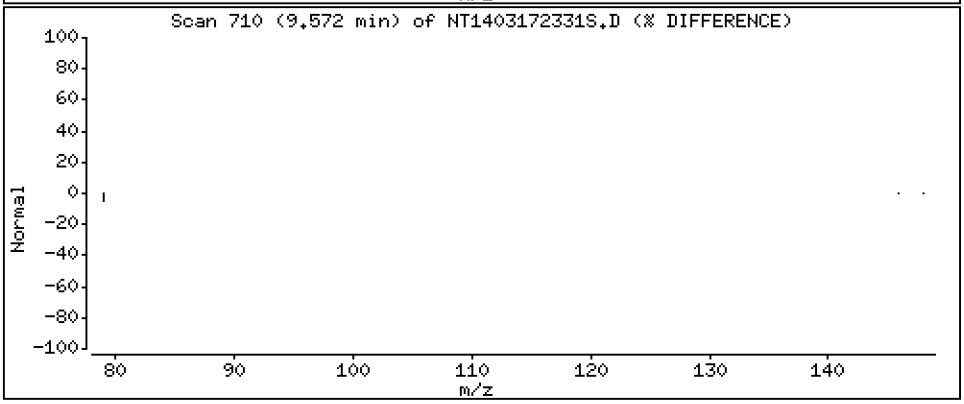












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172331S.D

Date : 18-MAR-2023 08:30

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-CCV1

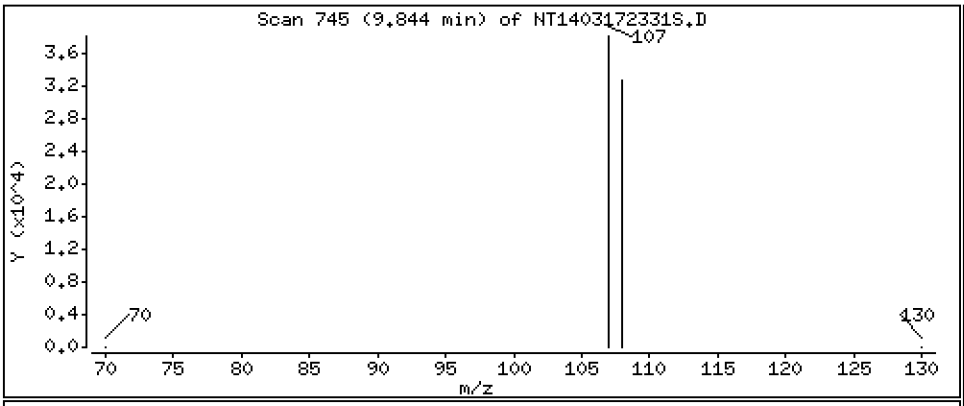
Operator: JGR

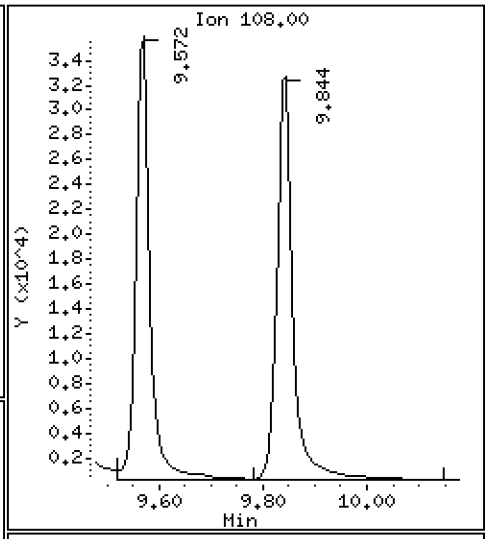
Column phase: ZB-5msi

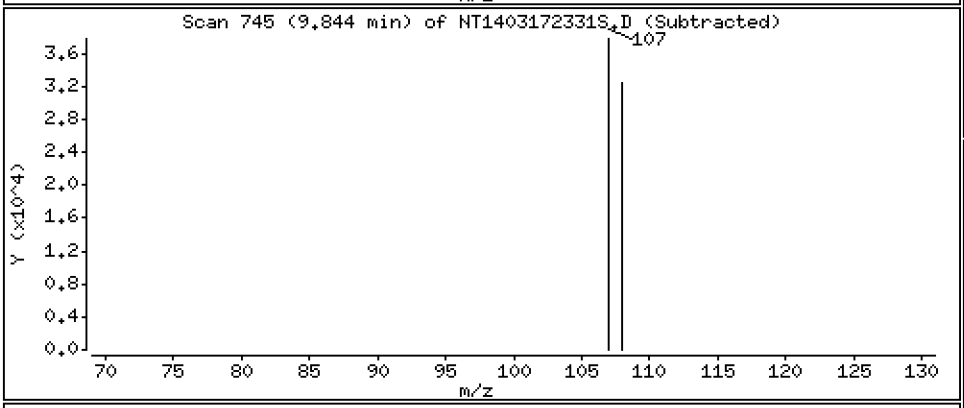
Column diameter: 0.25

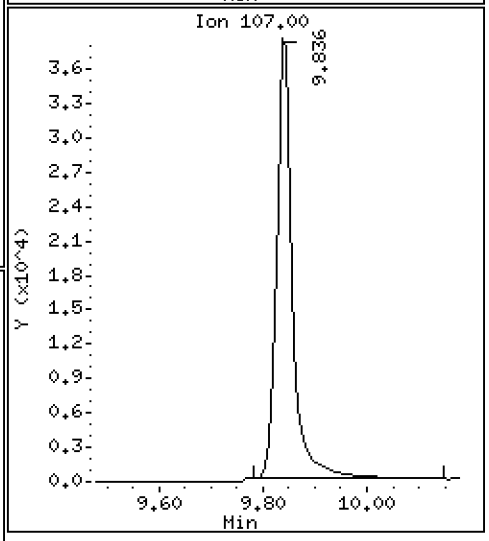
15 4-Methylphenol

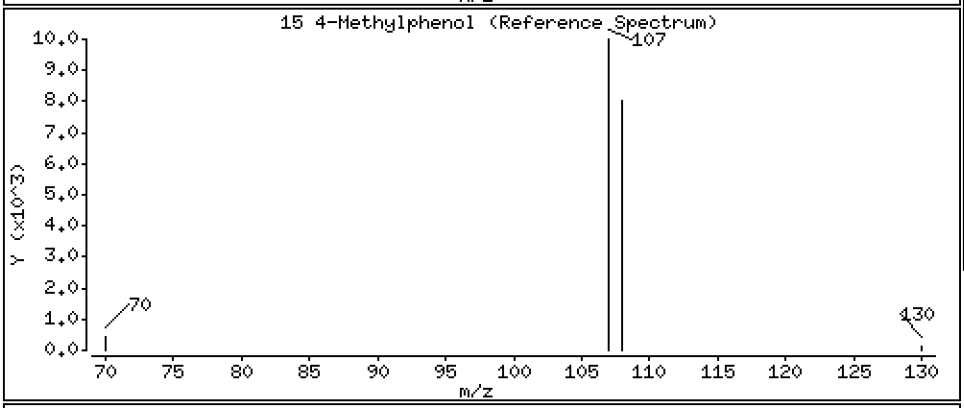
Concentration: 0.9752 ug/mL

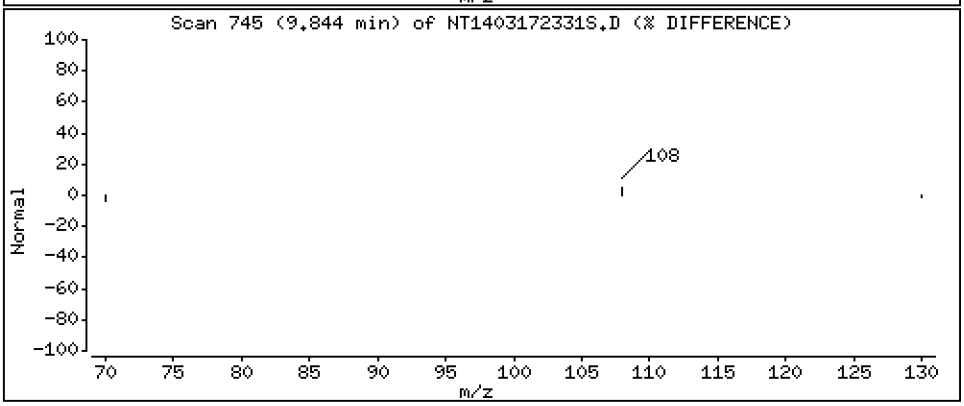












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172331S.D

Date : 18-MAR-2023 08:30

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-CCV1

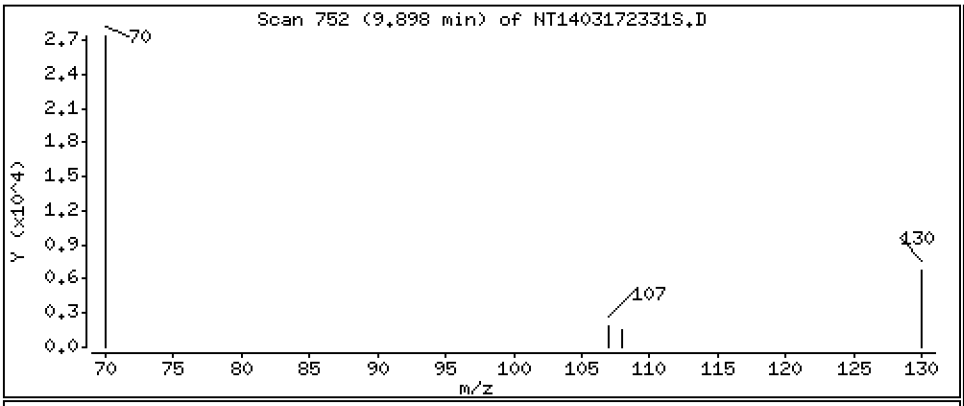
Operator: JGR

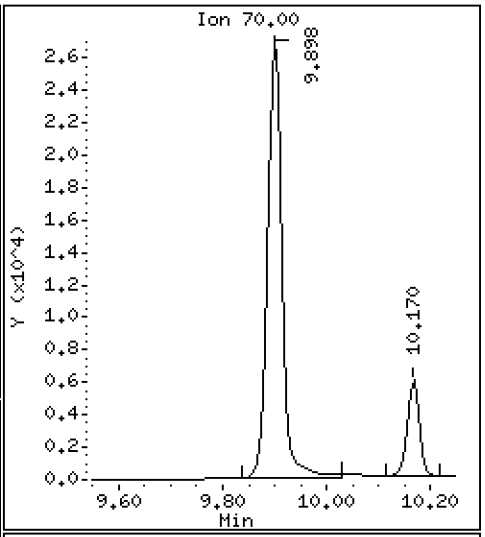
Column phase: ZB-5msi

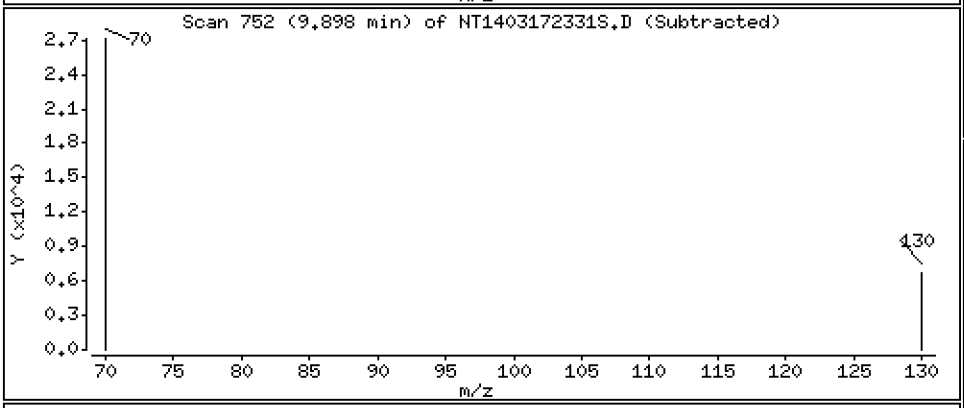
Column diameter: 0.25

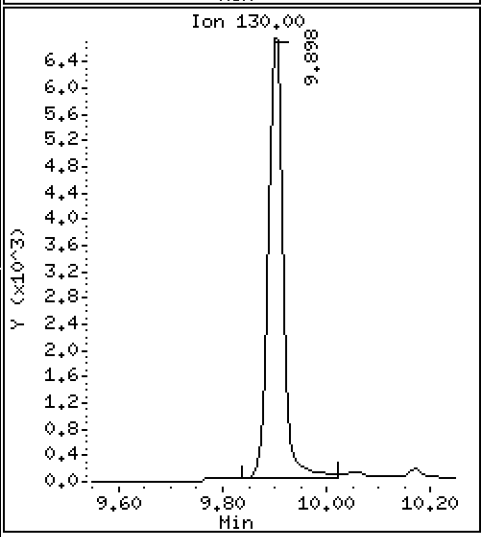
16 N-Nitroso-di-n-propylamine

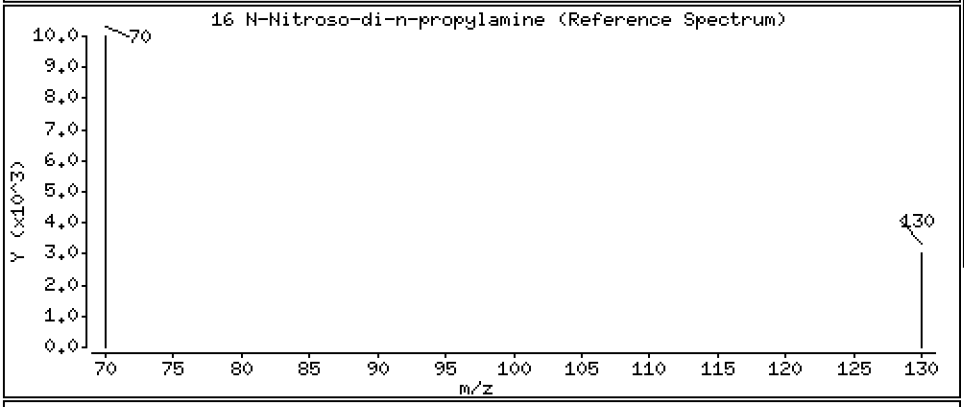
Concentration: 0.9895 ug/mL

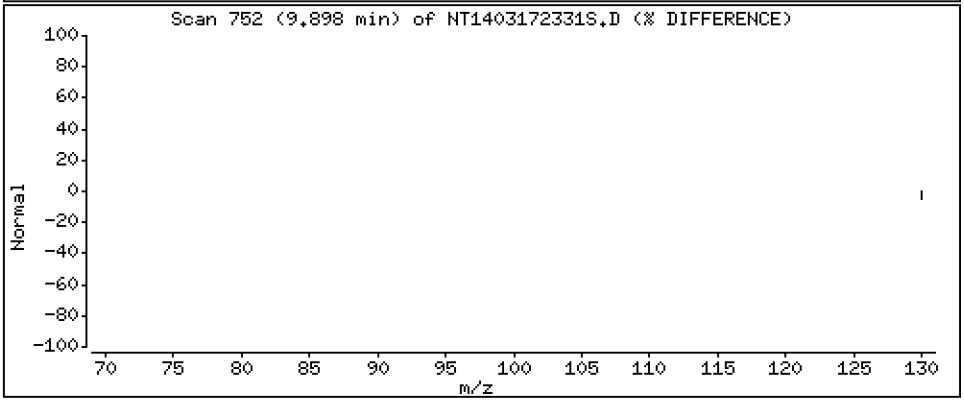












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Date : 18-MAR-2023 08:30

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-CCV1

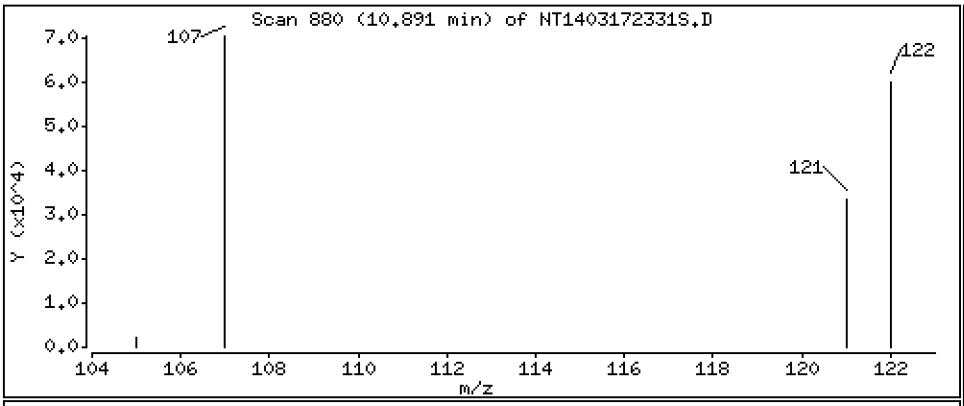
Operator: JGR

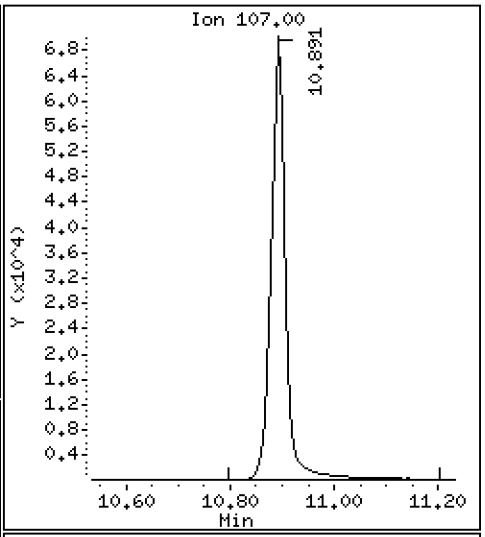
Column phase: ZB-5msi

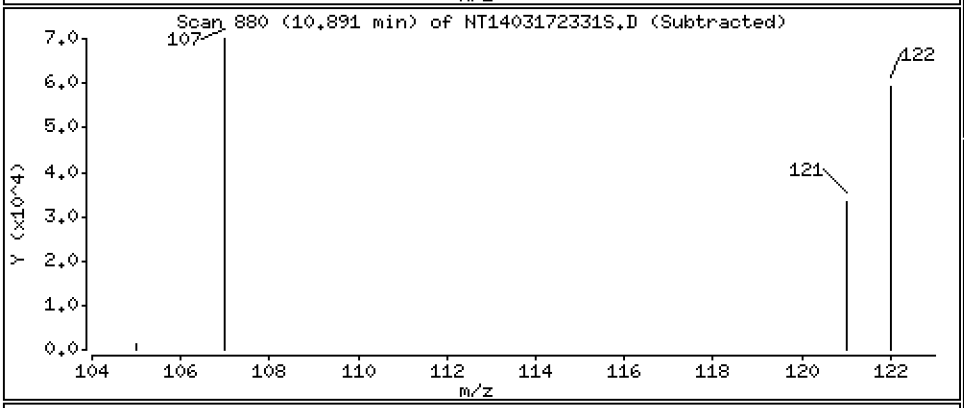
Column diameter: 0.25

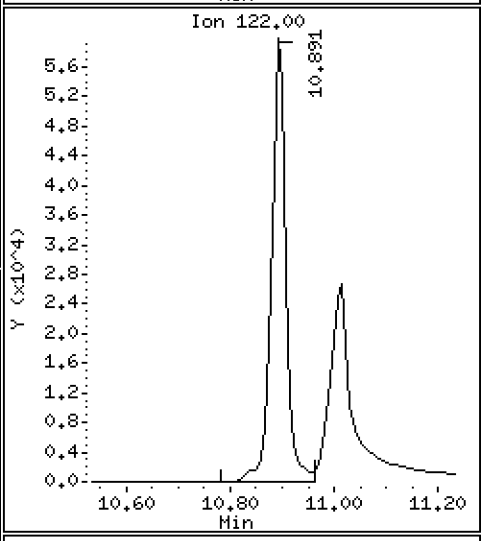
22 2,4-Dimethylphenol

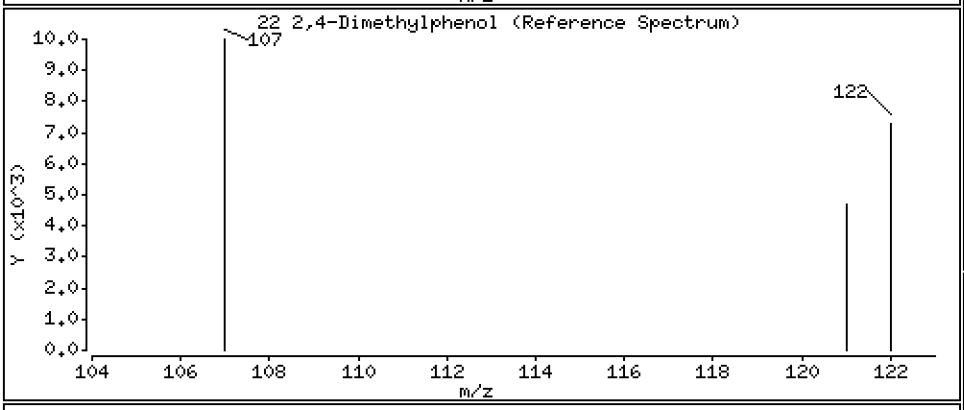
Concentration: 1.987 ug/mL

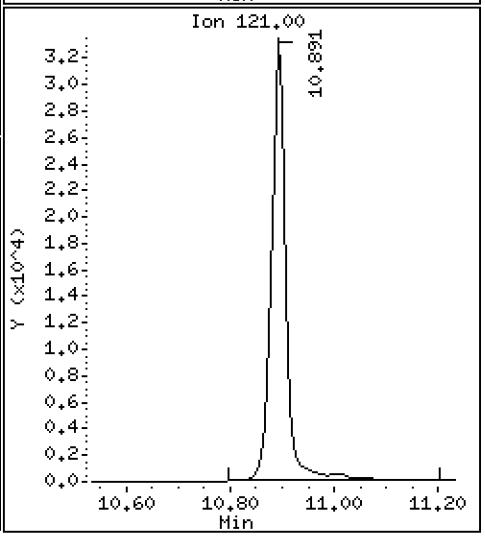


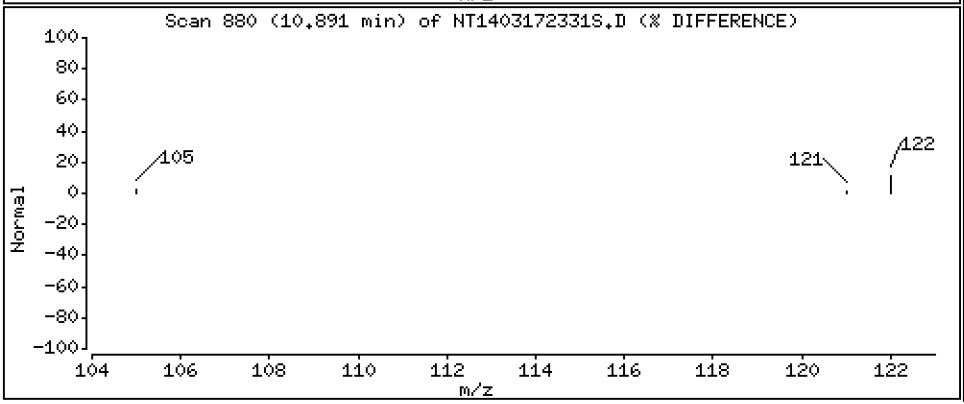












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Date : 18-MAR-2023 08:30

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-CCV1

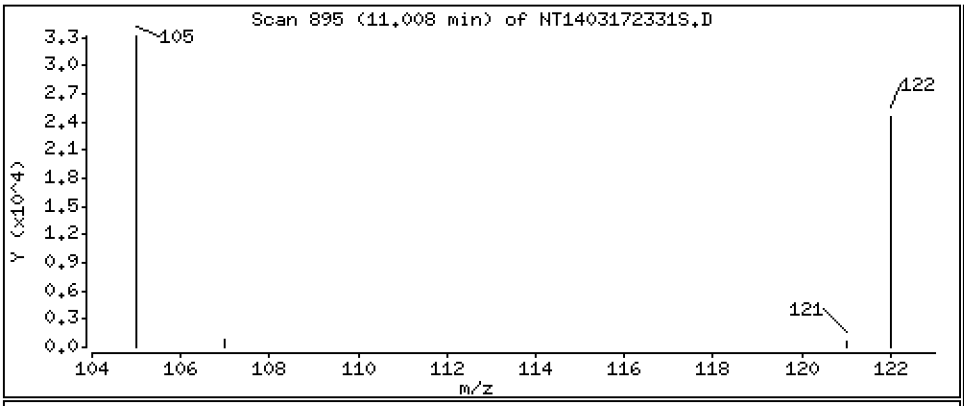
Operator: JGR

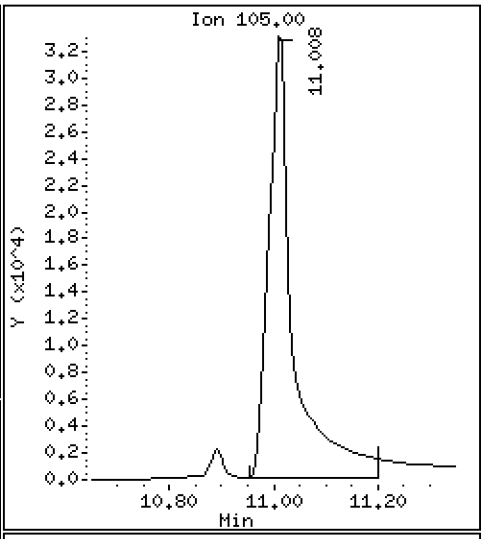
Column phase: ZB-5msi

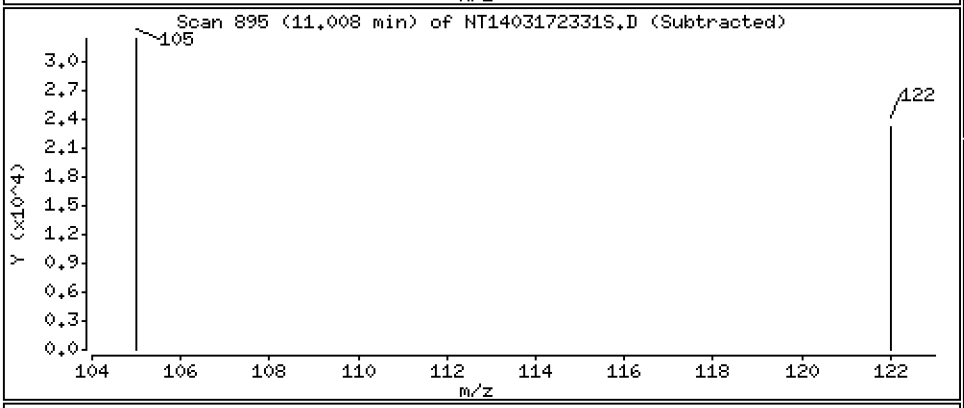
Column diameter: 0.25

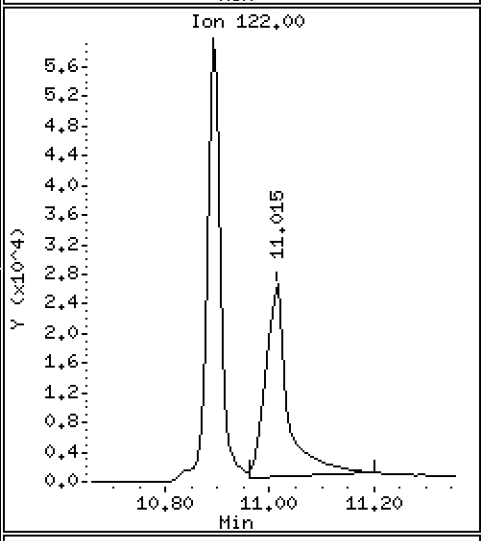
24 Benzoic acid

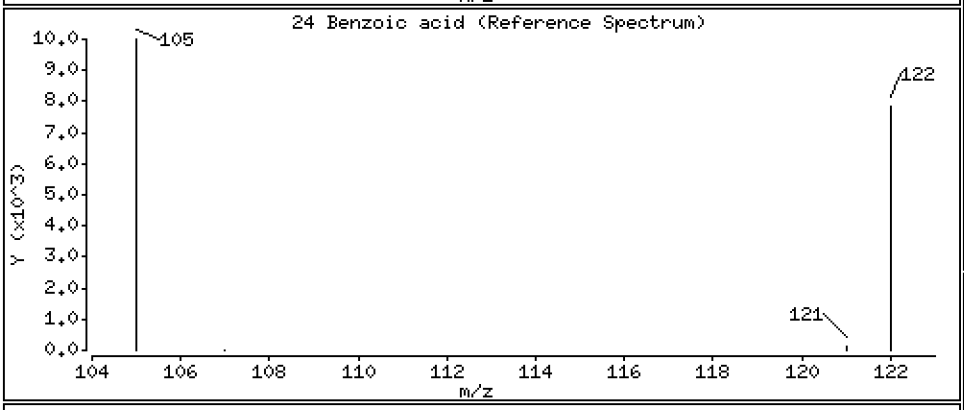
Concentration: 2.130 ug/mL

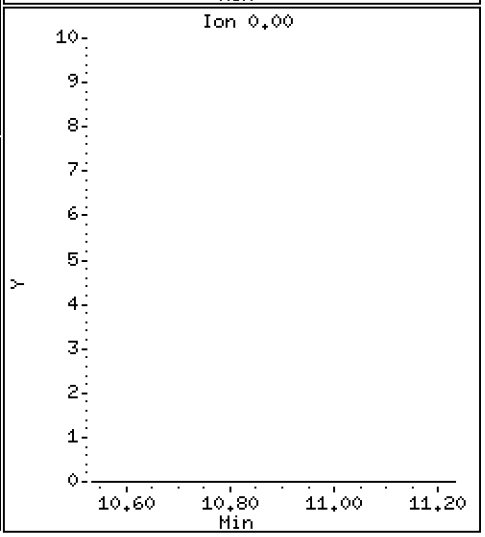


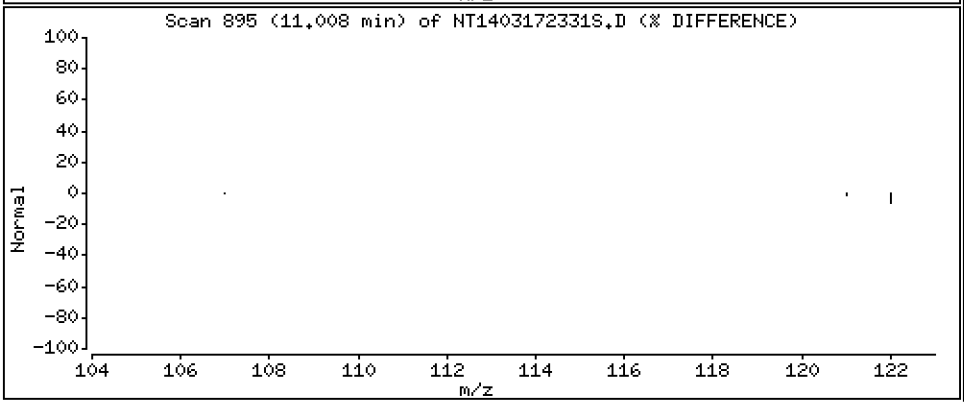












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT14031723315.D

Date : 18-MAR-2023 08:30

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-CCV1

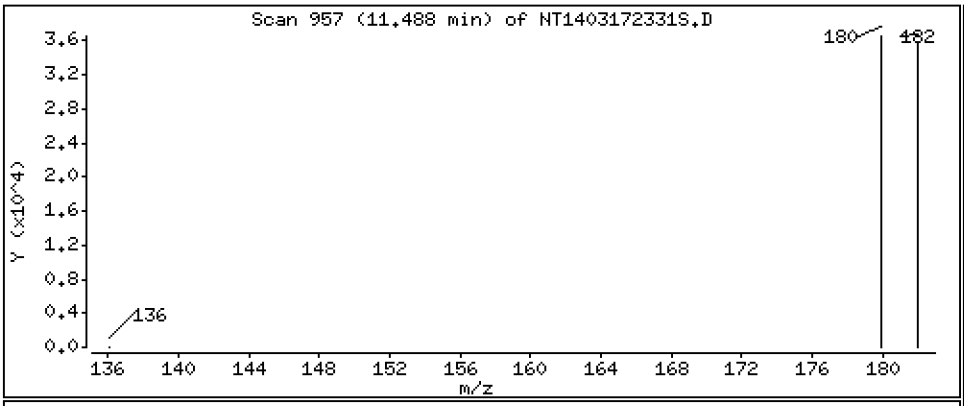
Operator: JGR

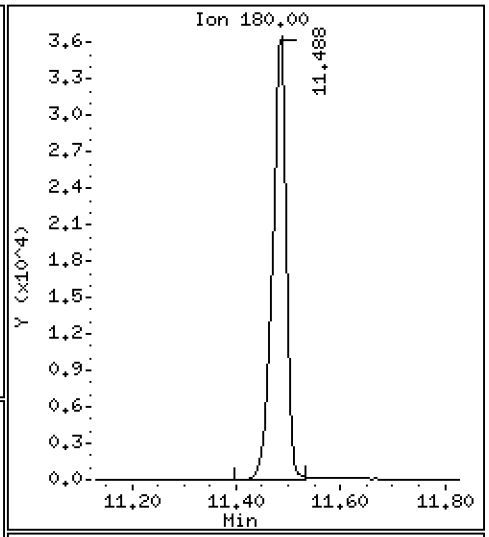
Column phase: ZB-5msi

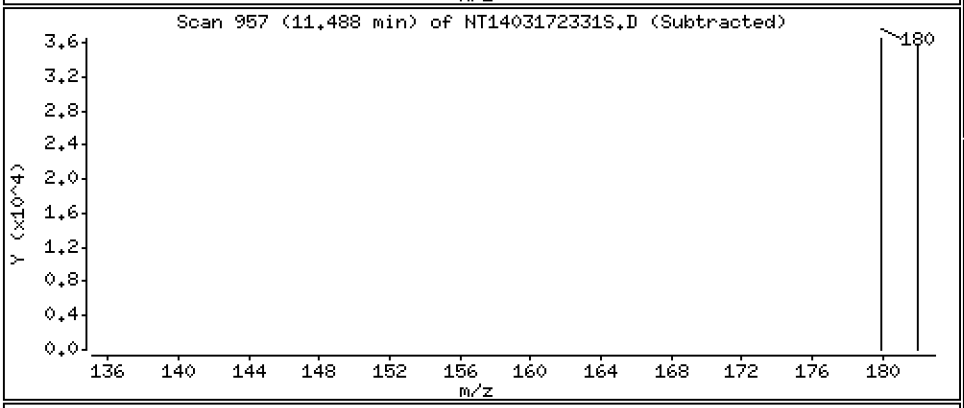
Column diameter: 0.25

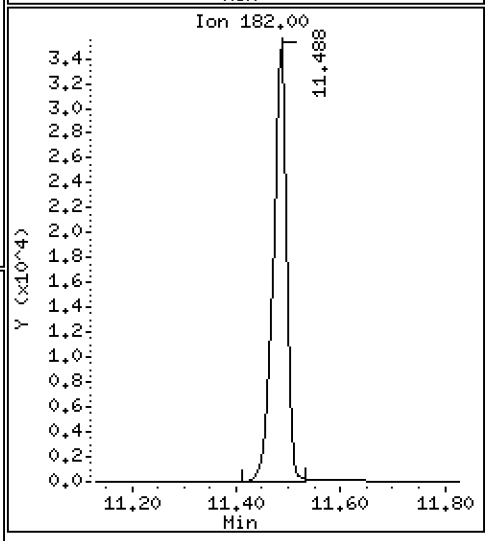
26 1,2,4-Trichlorobenzene

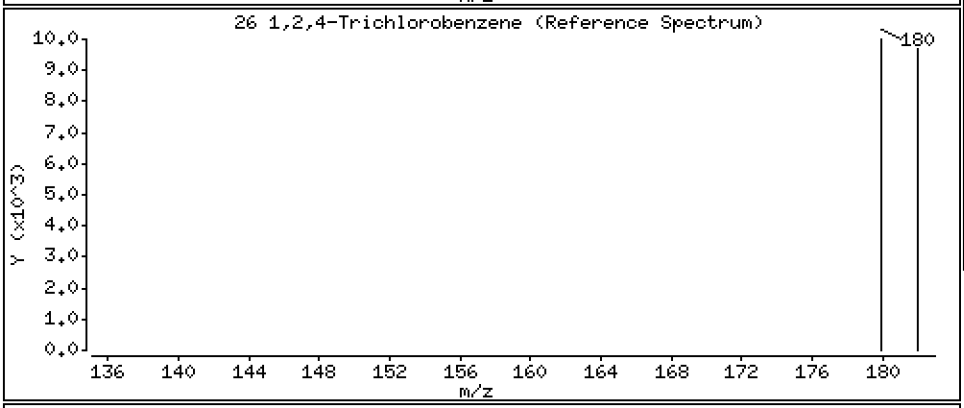
Concentration: 1.019 ug/mL

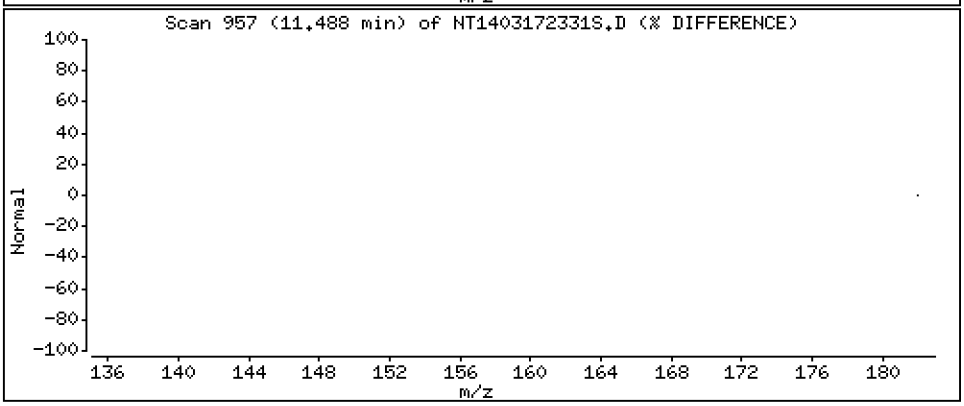












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Date : 18-MAR-2023 08:30

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-CCV1

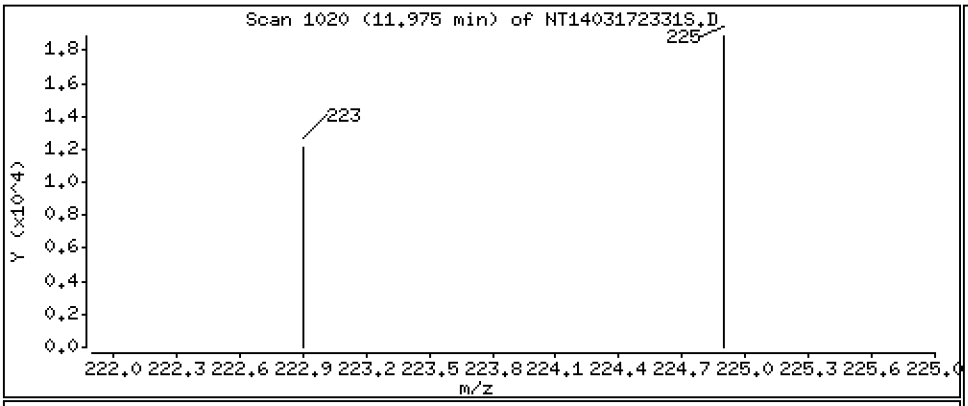
Operator: JGR

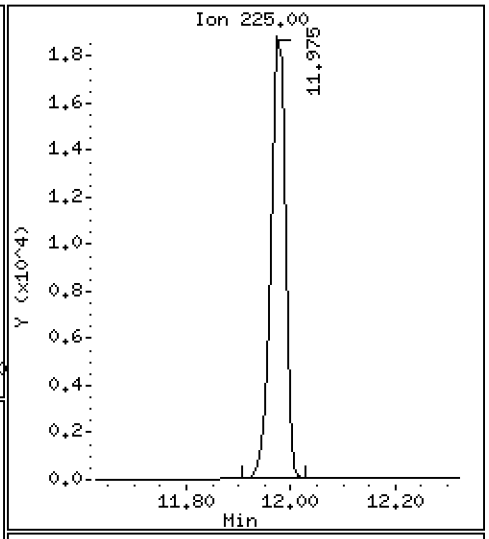
Column phase: ZB-5msi

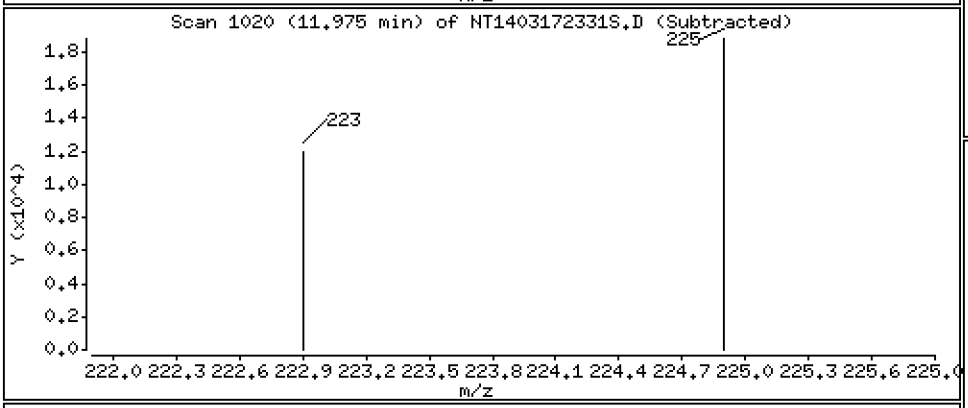
Column diameter: 0.25

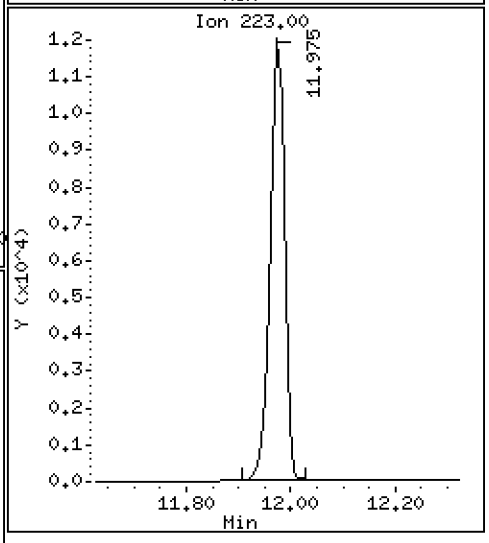
30 Hexachlorobutadiene

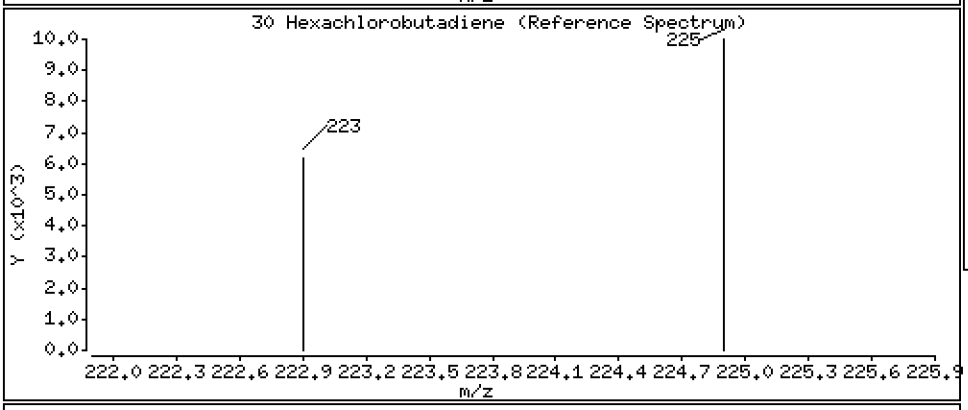
Concentration: 1.055 ug/mL

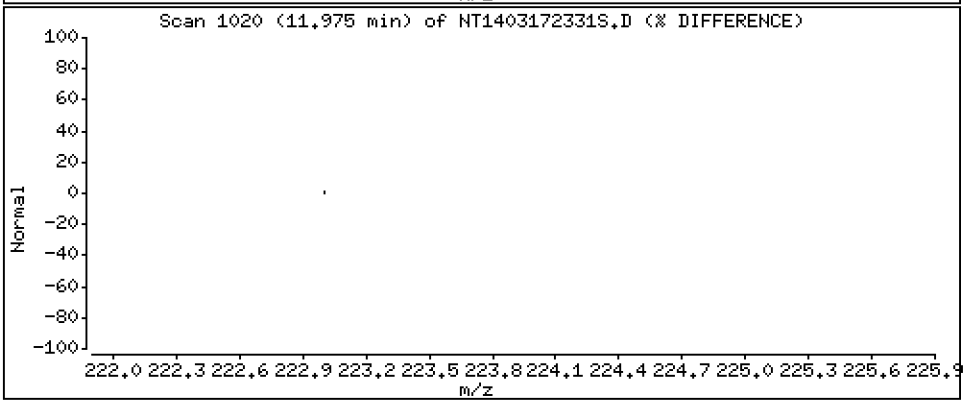












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172331S.D

Date : 18-MAR-2023 08:30

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-CCV1

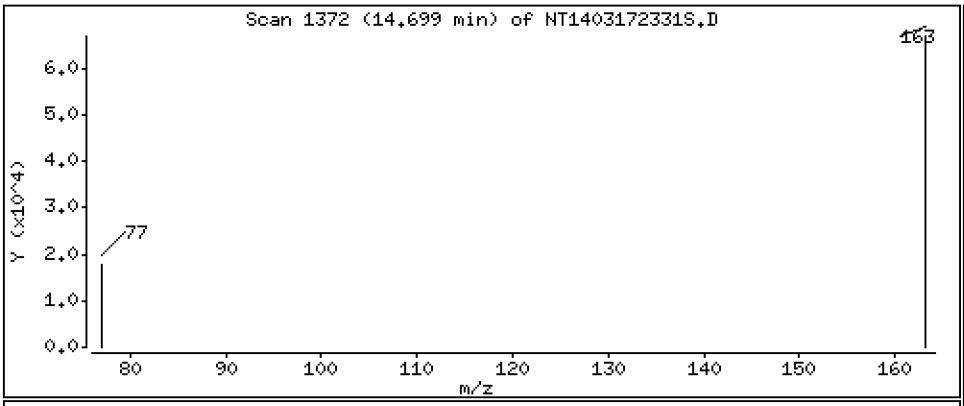
Operator: JGR

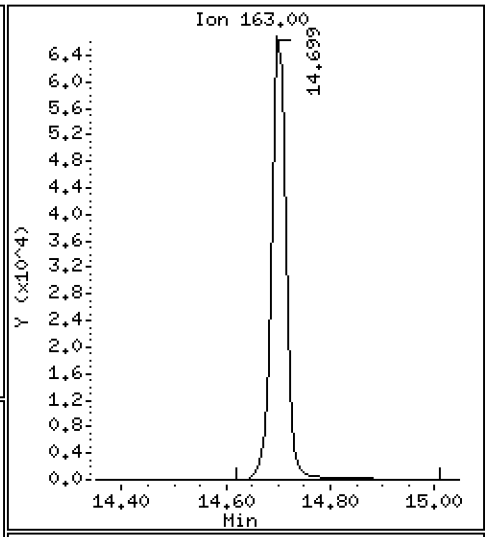
Column phase: ZB-5msi

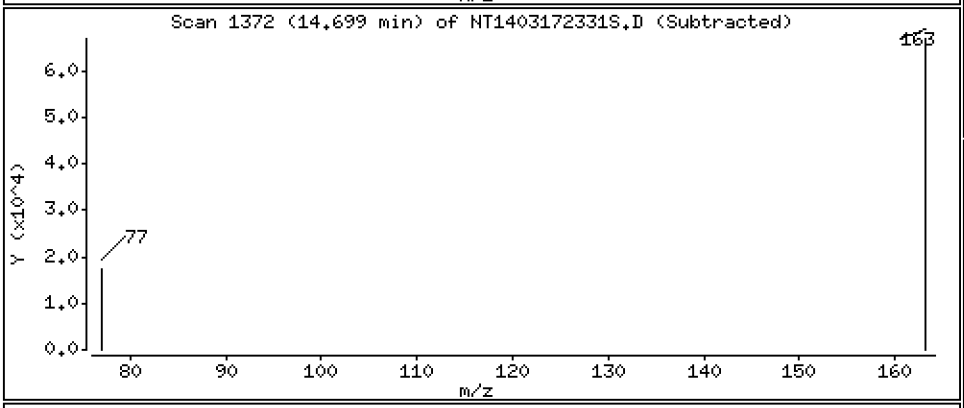
Column diameter: 0.25

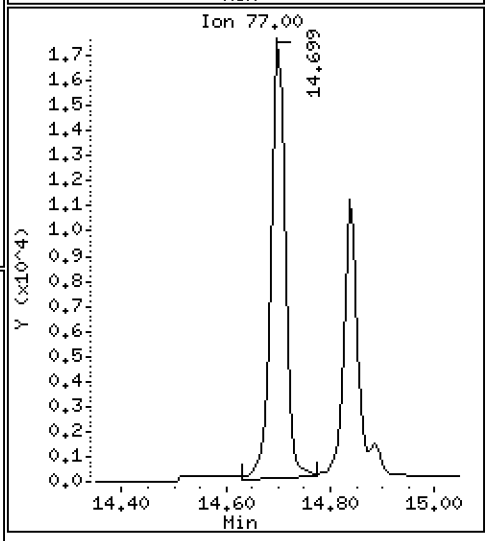
39 Dimethylphthalate

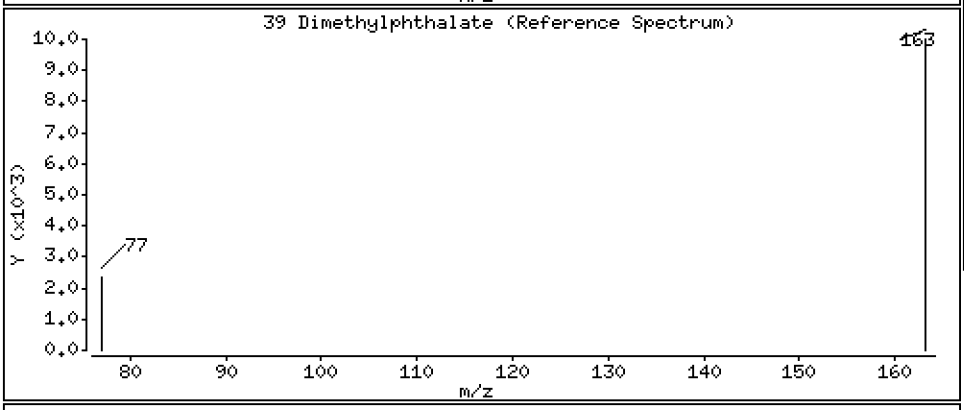
Concentration: 1.030 ug/mL

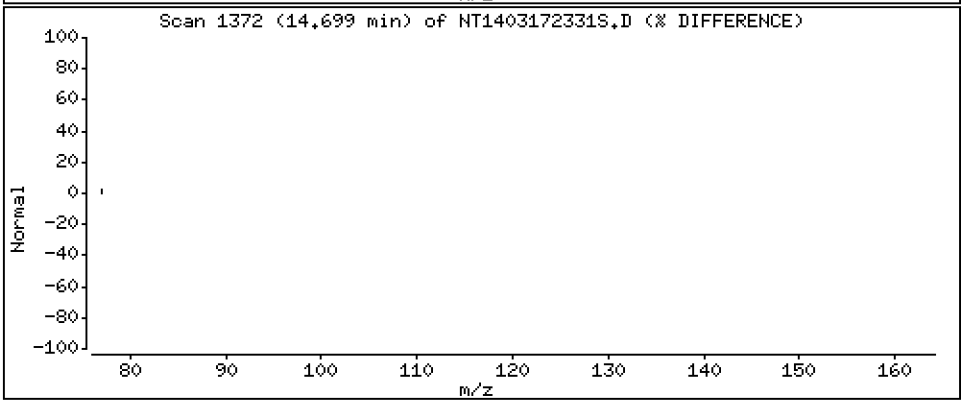












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172331S.D

Date : 18-MAR-2023 08:30

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-CCV1

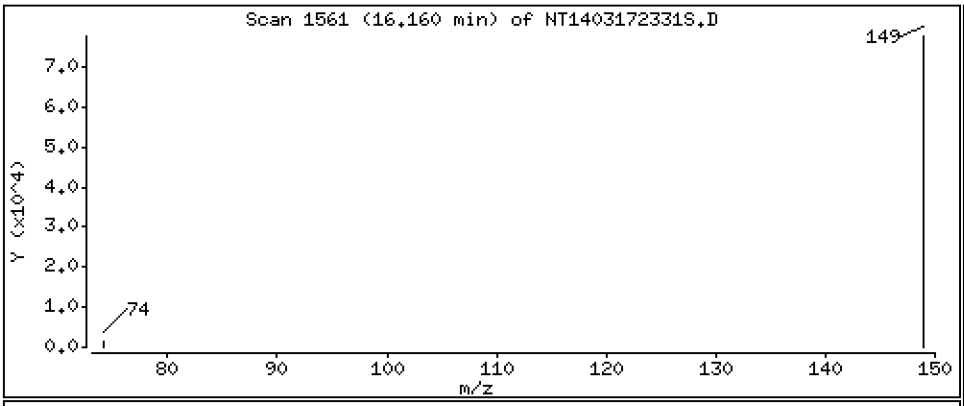
Operator: JGR

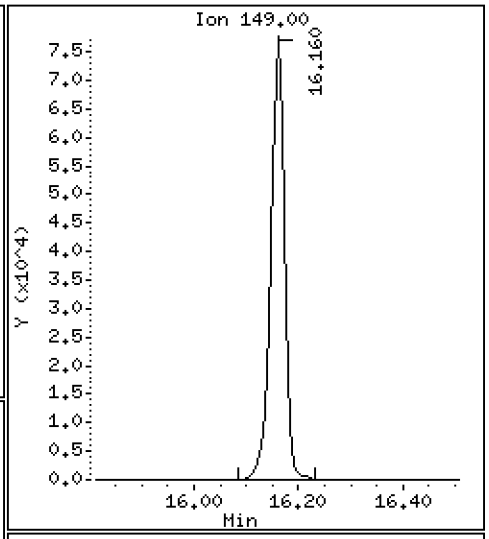
Column phase: ZB-5msi

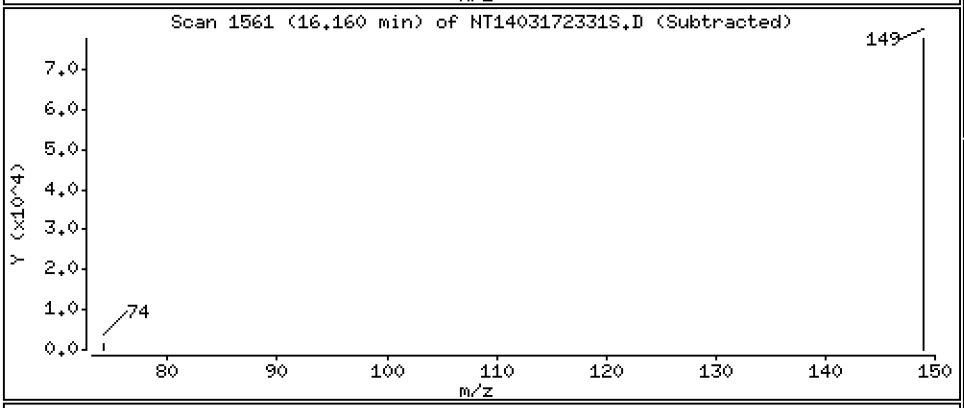
Column diameter: 0.25

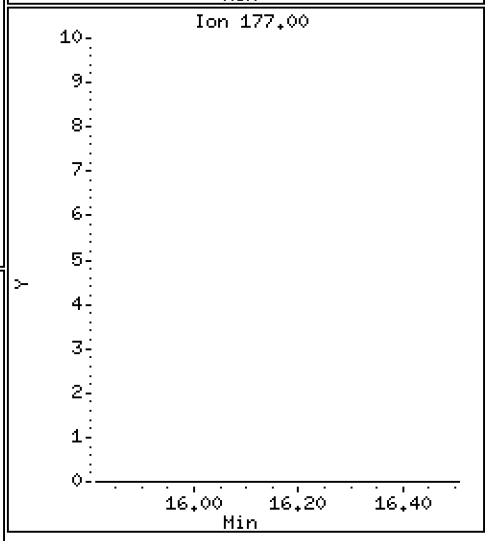
50 Diethylphthalate

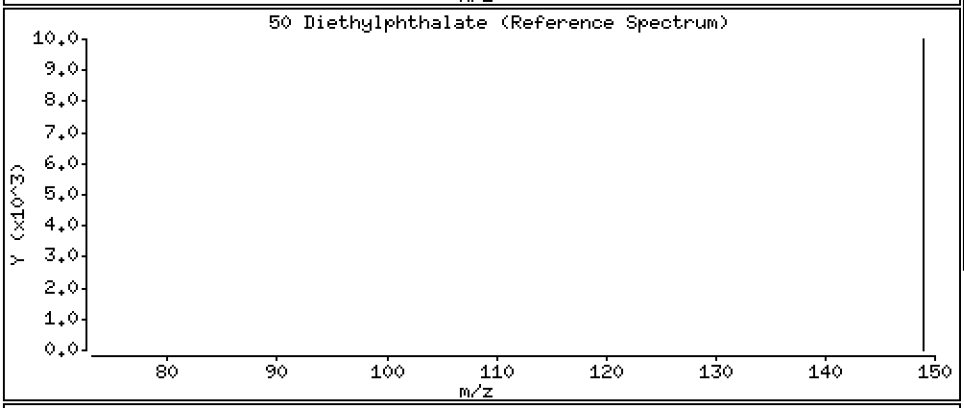
Concentration: 1.048 ug/mL

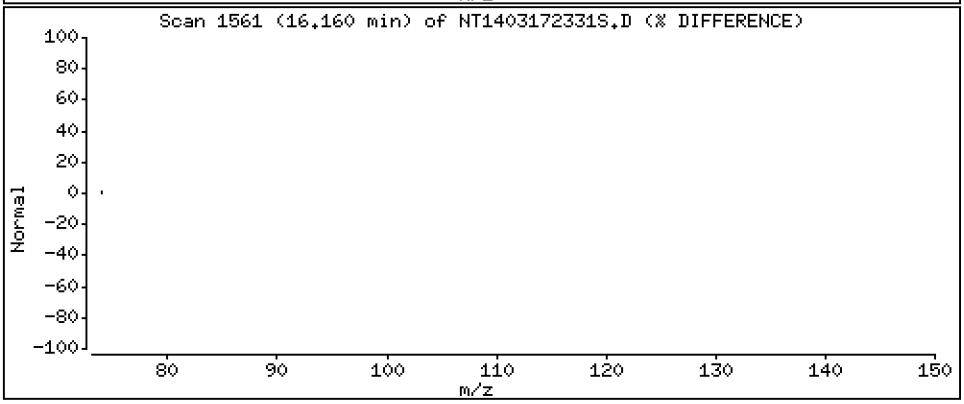












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172331S.D

Date : 18-MAR-2023 08:30

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-CCV1

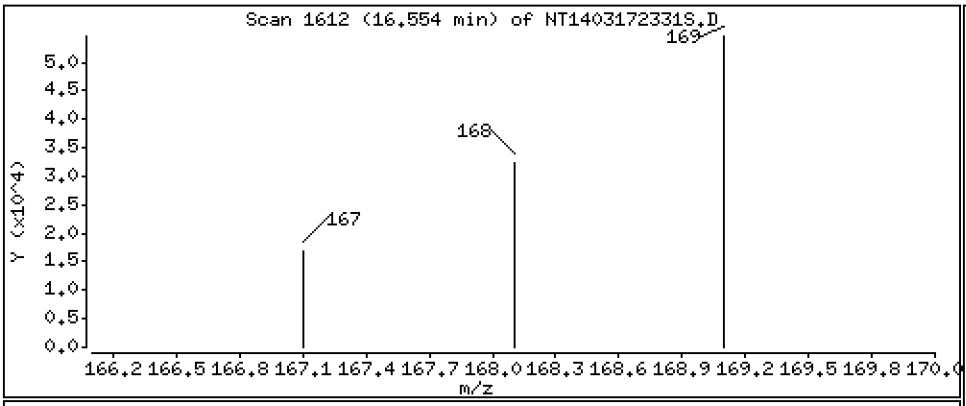
Operator: JGR

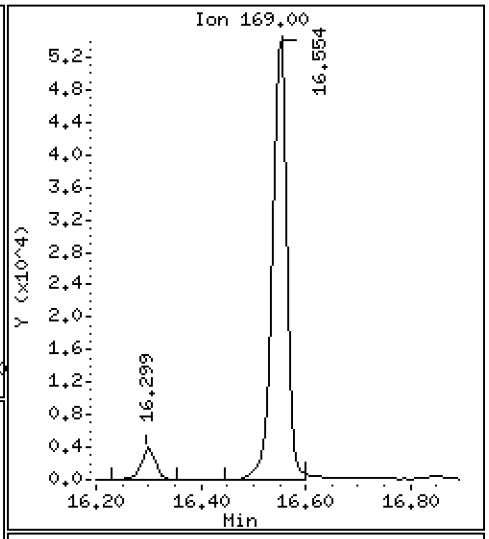
Column phase: ZB-5msi

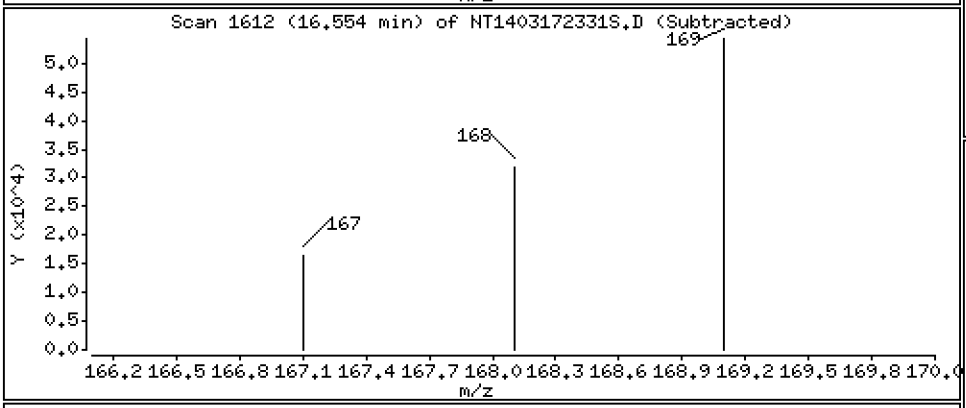
Column diameter: 0.25

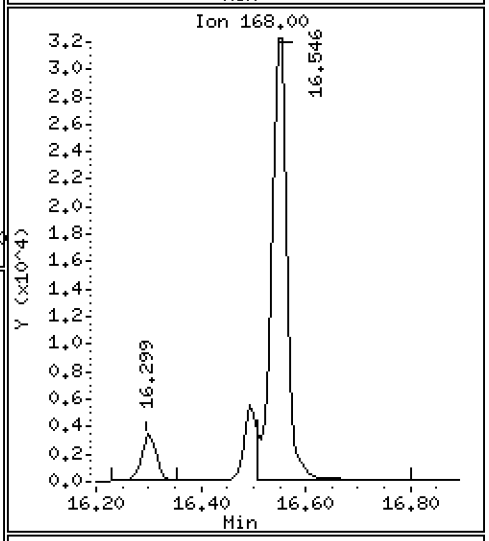
54 N-Nitrosodiphenylamine

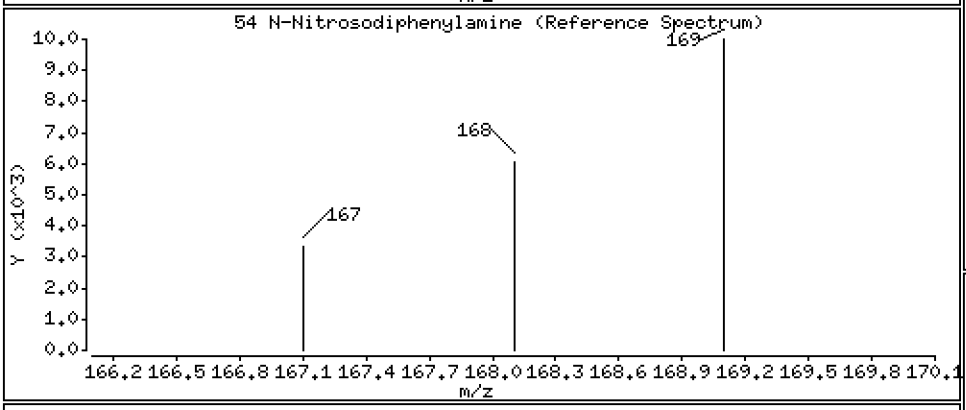
Concentration: 1.108 ug/mL

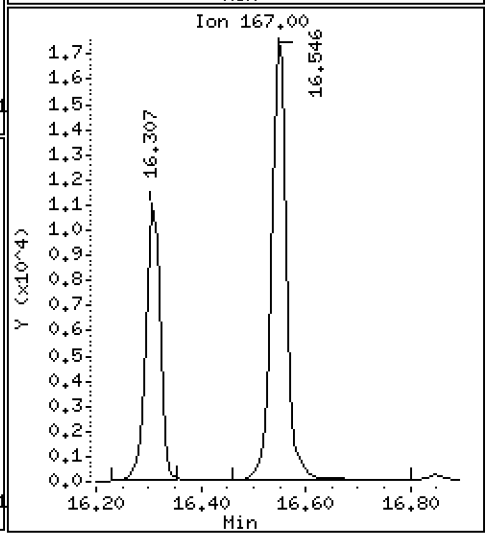


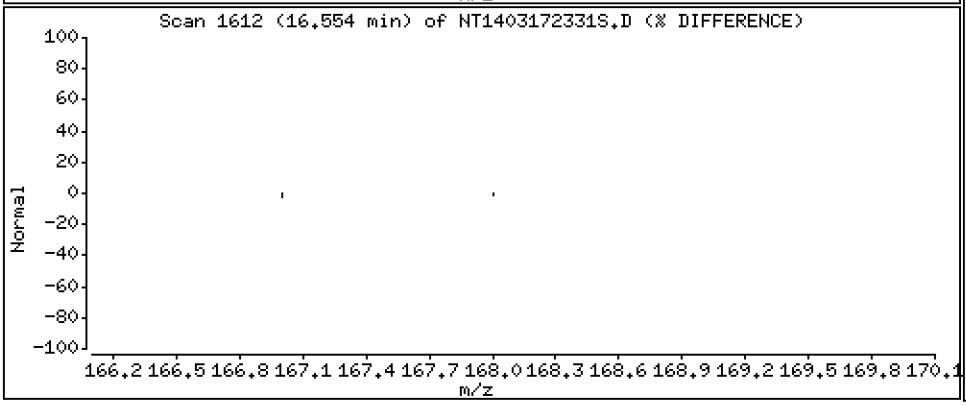












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Date : 18-MAR-2023 08:30

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-CCV1

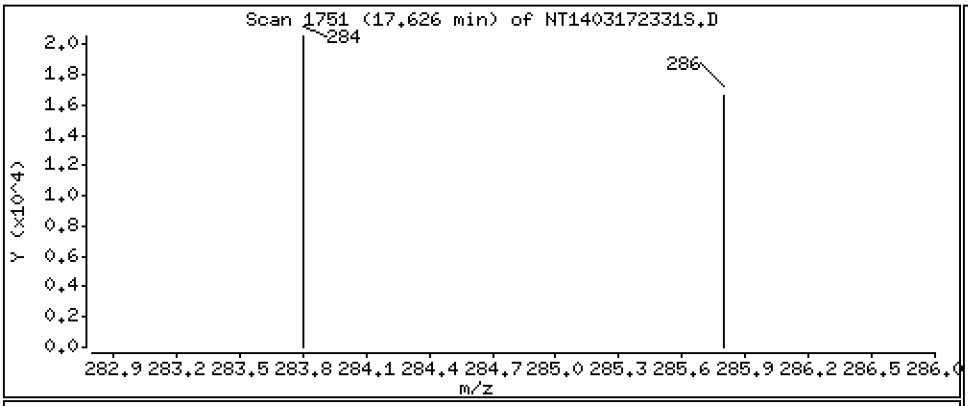
Operator: JGR

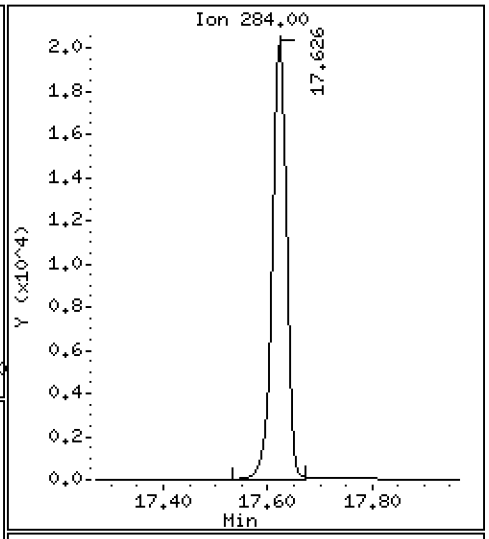
Column phase: ZB-5msi

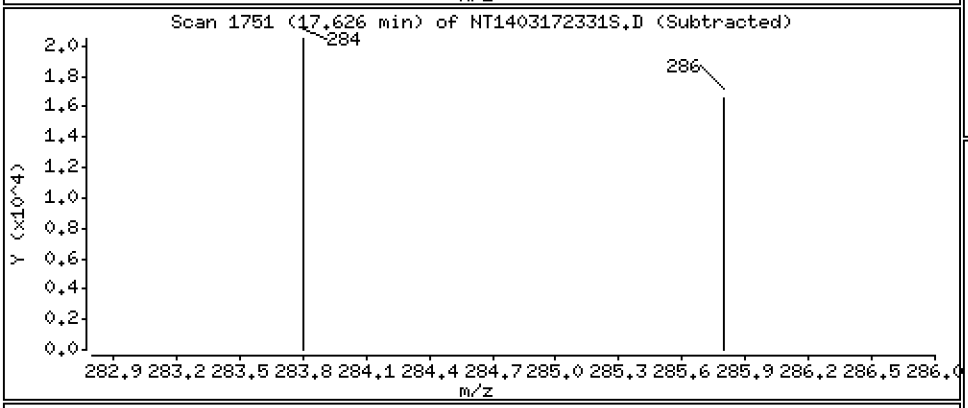
Column diameter: 0.25

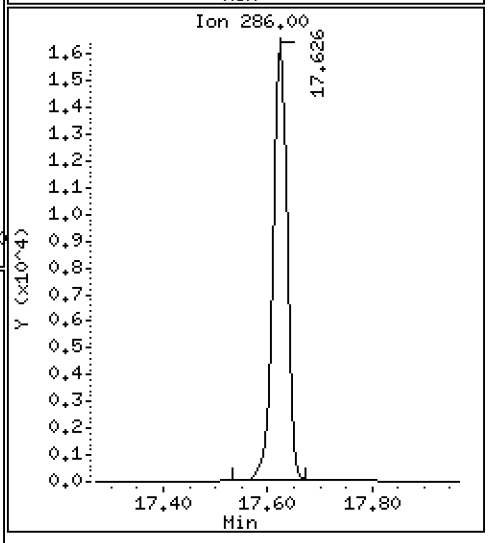
57 Hexachlorobenzene

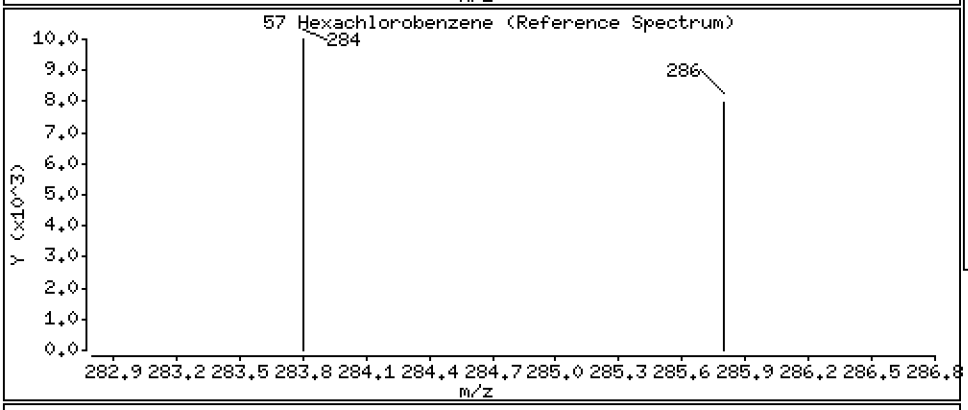
Concentration: 1.058 ug/mL

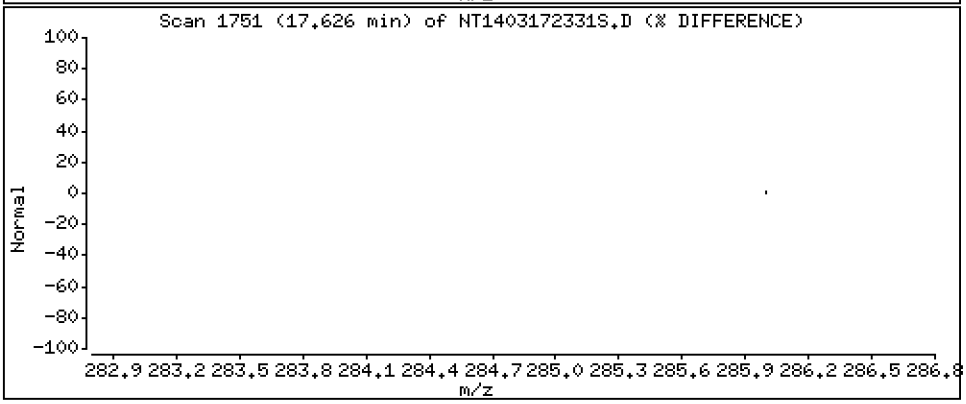












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Date : 18-MAR-2023 08:30

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-CCV1

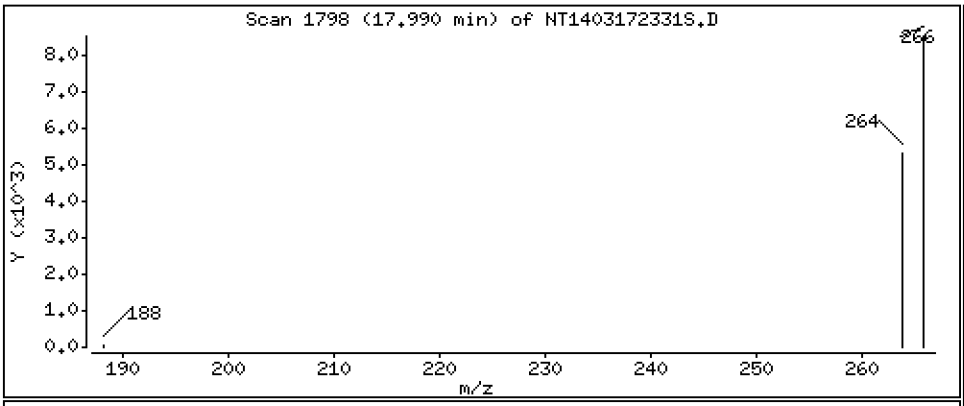
Operator: JGR

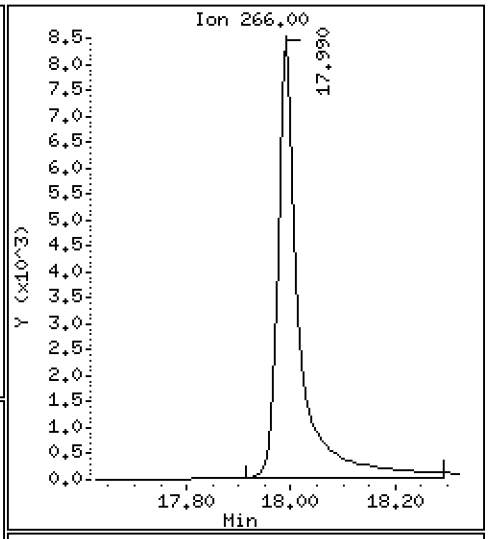
Column phase: ZB-5msi

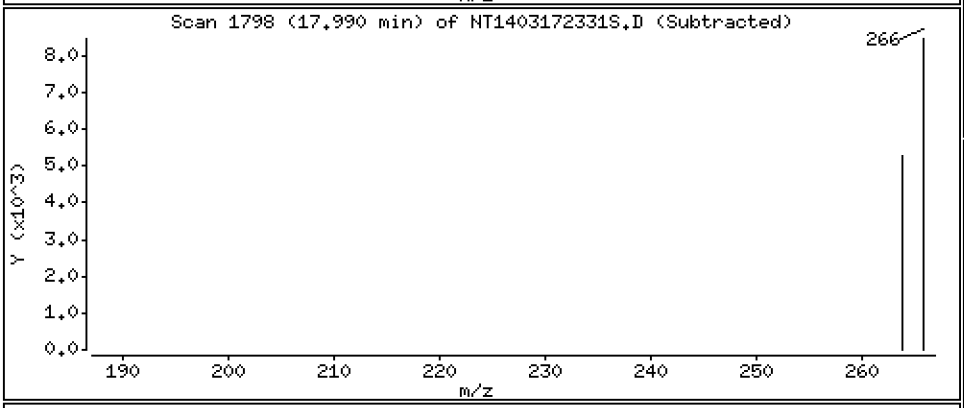
Column diameter: 0.25

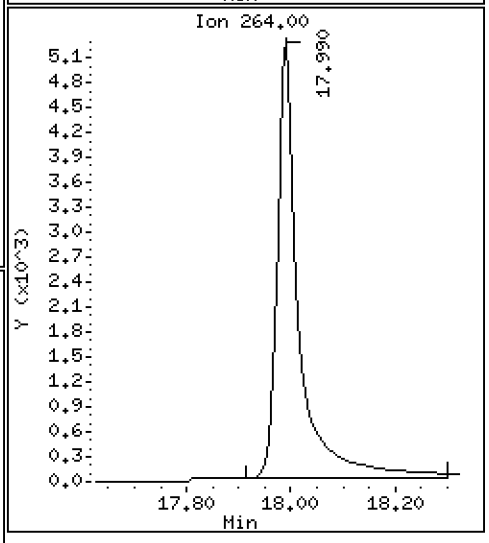
58 Pentachlorophenol

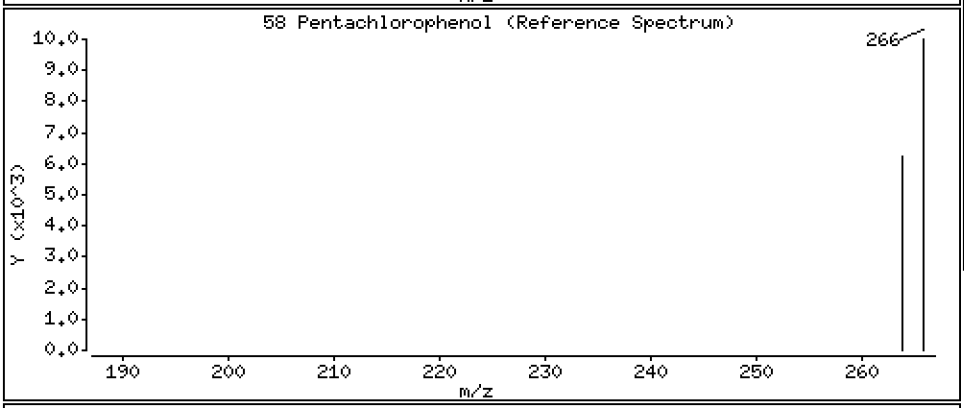
Concentration: 1.018 ug/mL

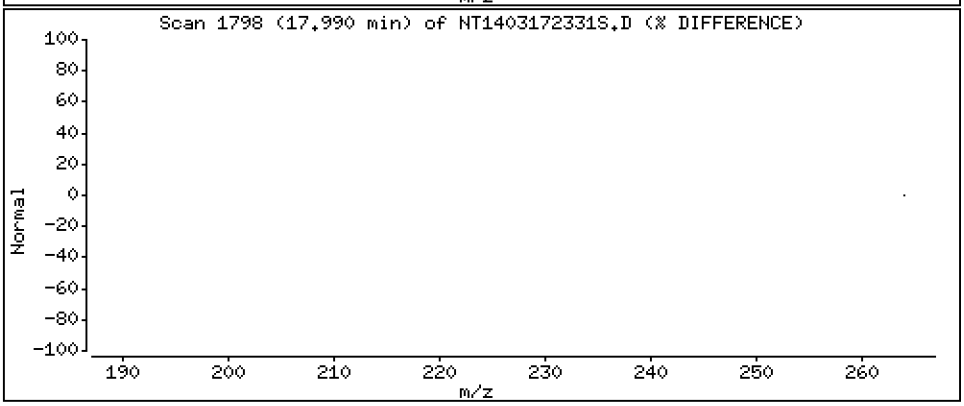












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT14031723315.D

Date : 18-MAR-2023 08:30

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-CCV1

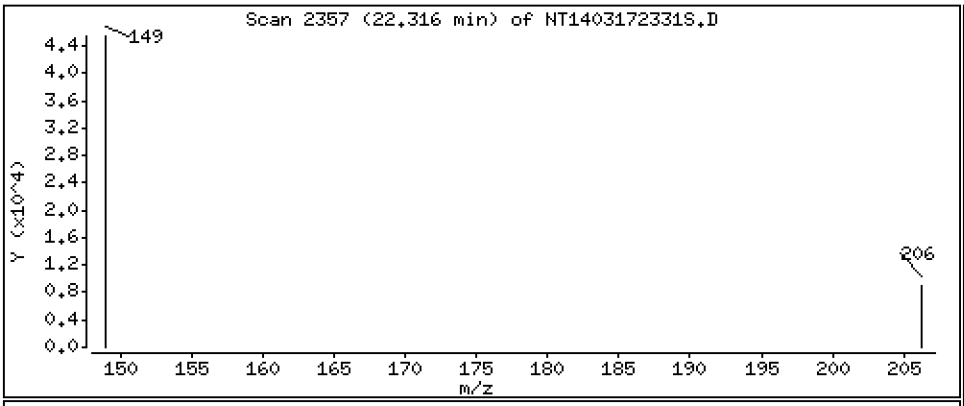
Operator: JGR

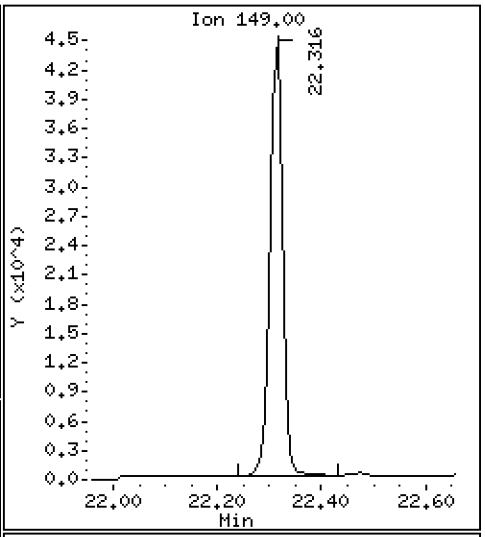
Column phase: ZB-5msi

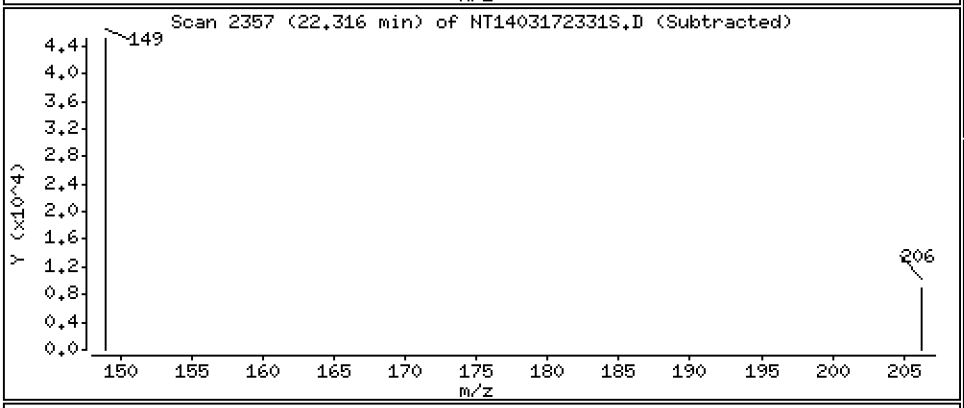
Column diameter: 0.25

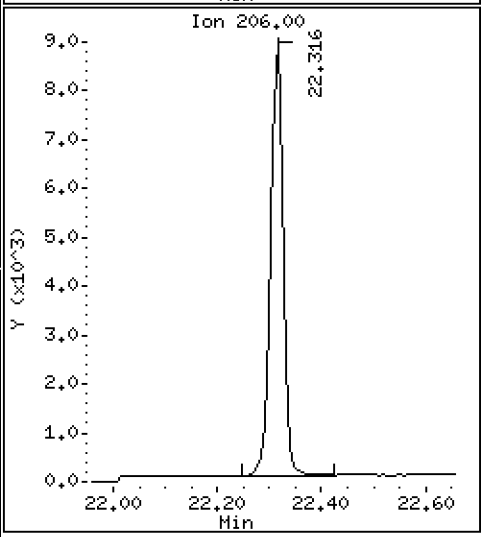
67 Butylbenzylphthalate

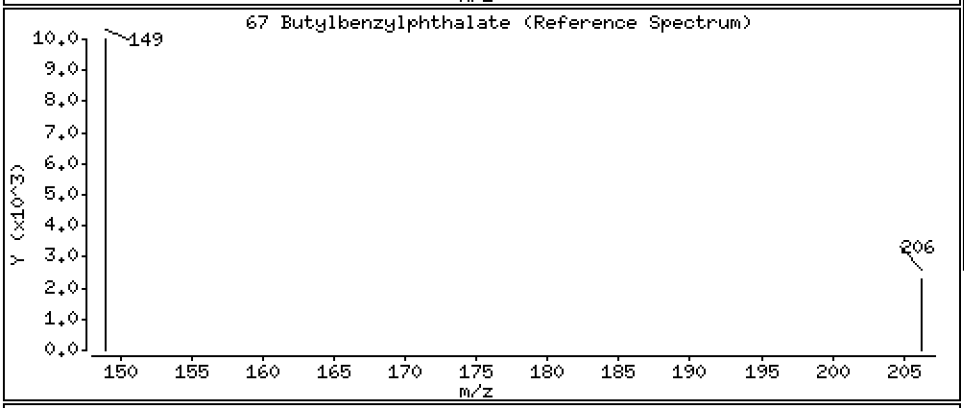
Concentration: 1.614 ug/mL

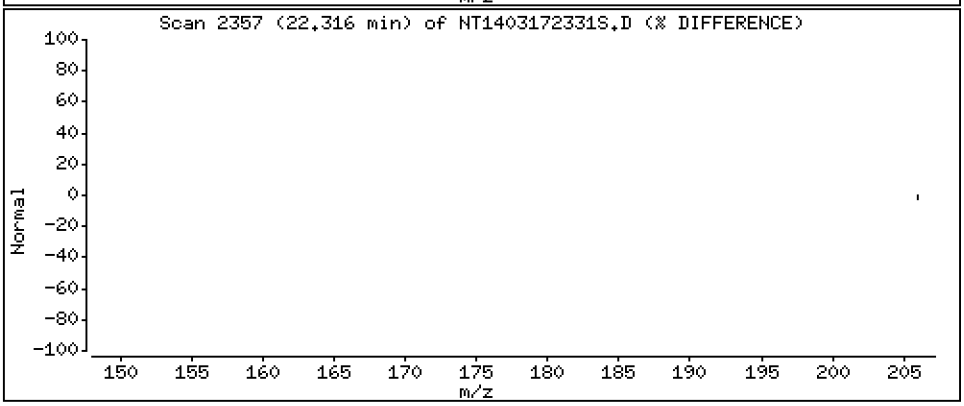












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172331S.D

Date : 18-MAR-2023 08:30

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-CCV1

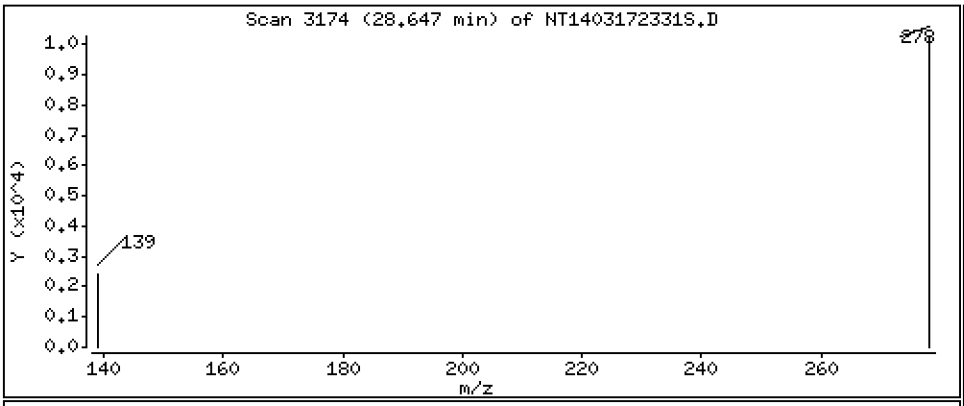
Operator: JGR

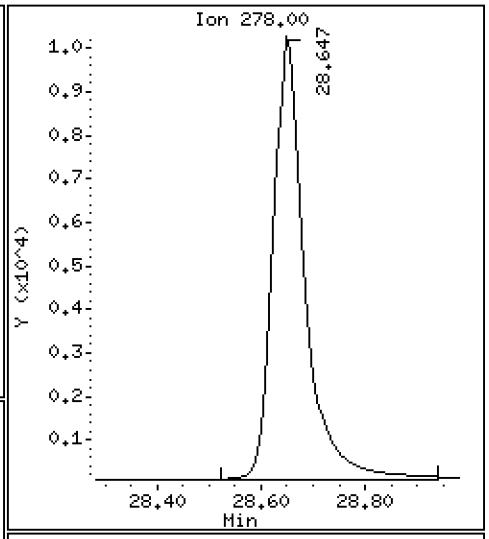
Column phase: ZB-5msi

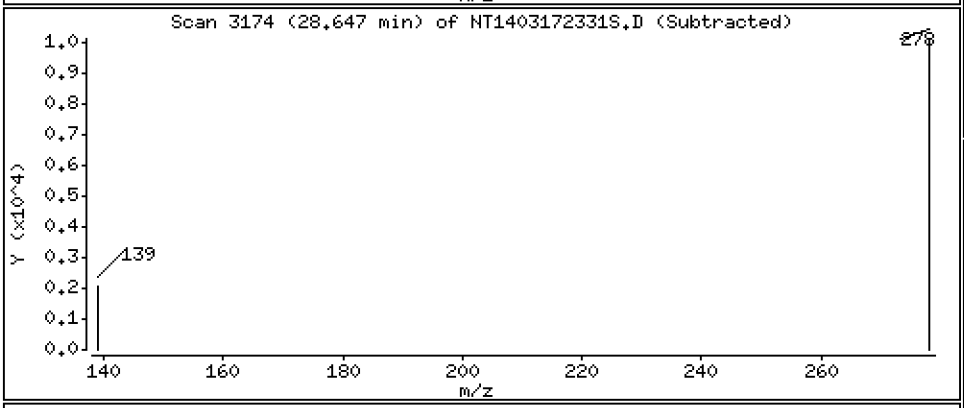
Column diameter: 0.25

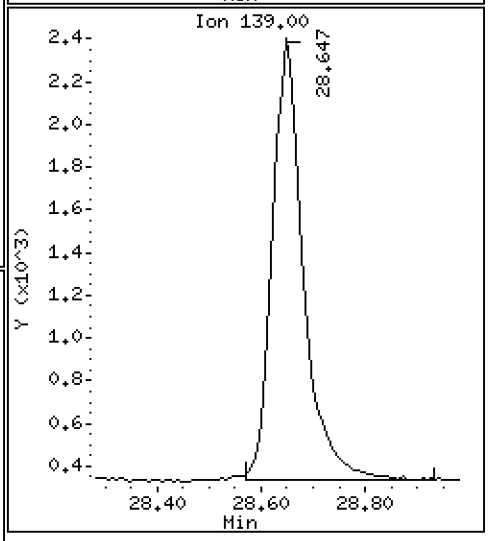
79 Dibenzo(a,h)anthracene

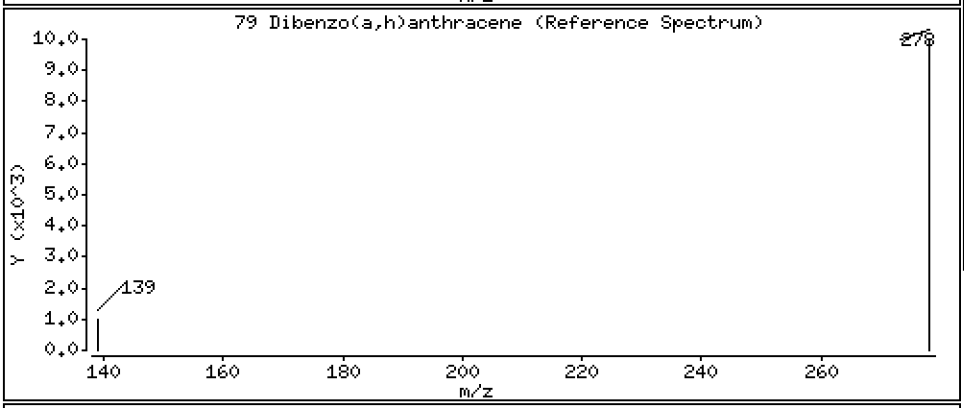
Concentration: 0.9286 ug/mL

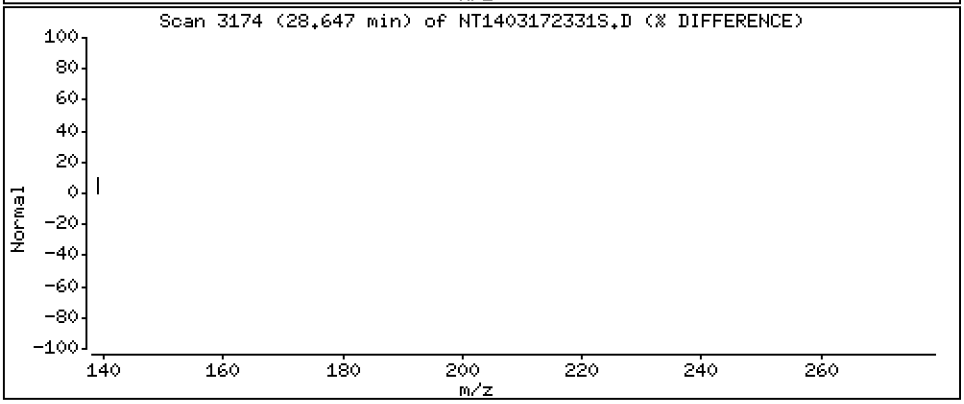












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT14031723315.D

Date : 18-MAR-2023 08:30

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-CCV1

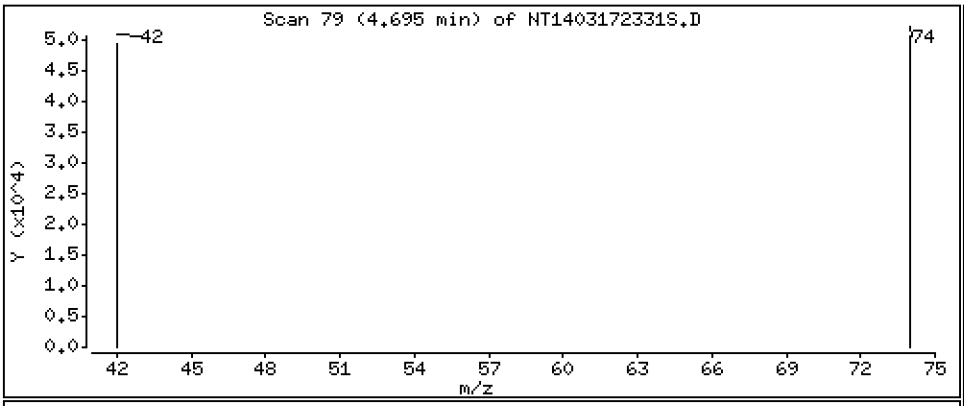
Operator: JGR

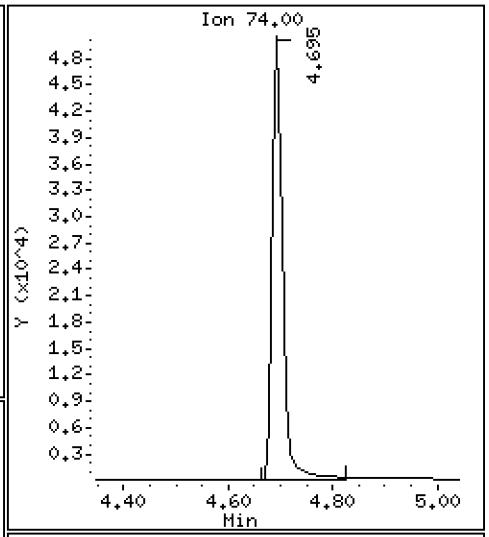
Column phase: ZB-5msi

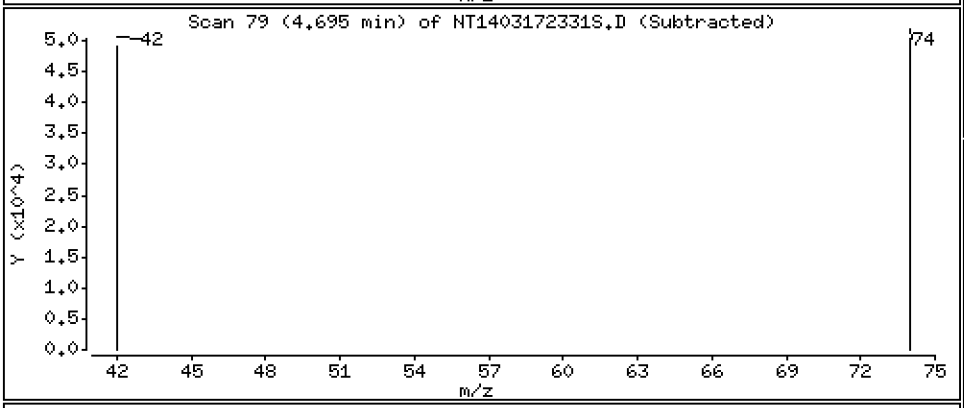
Column diameter: 0.25

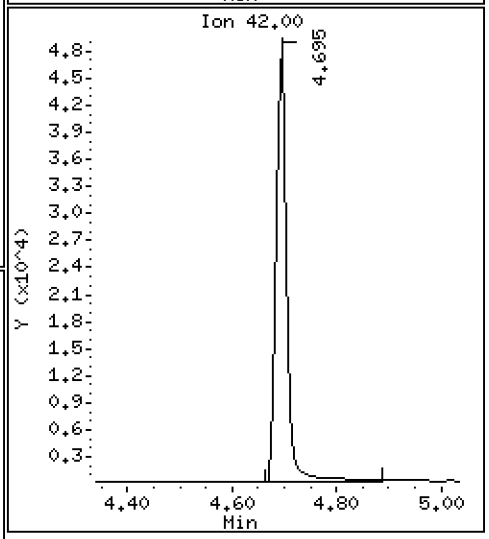
90 N-Nitrosodimethylamine

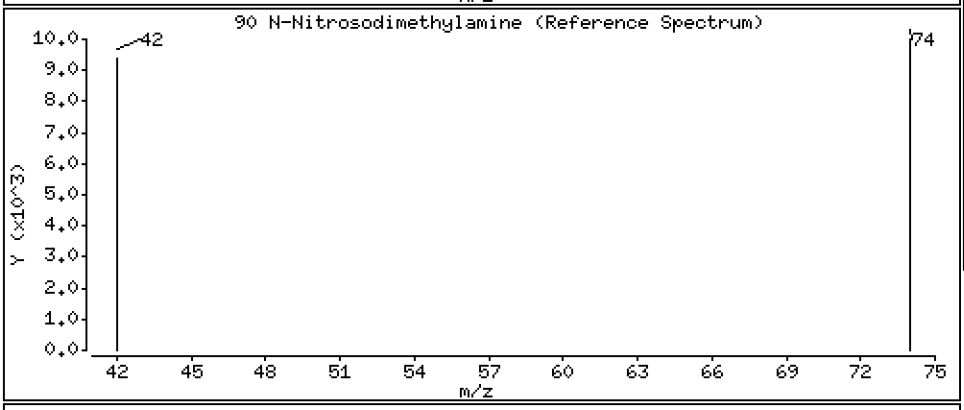
Concentration: 1.514 ug/mL

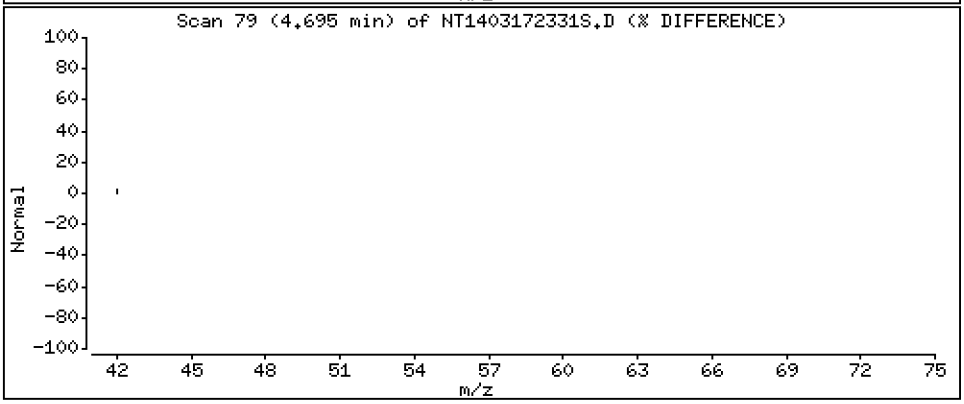












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172331S.D
Lab Smp Id: SLC0376-CCV1
Inj Date : 18-MAR-2023 08:30 MS Autotune Date: 11-MAR-2023 16:01
Operator : JGR Inst ID: nt14.i
Smp Info : SLC0376-CCV1
Misc Info :
Comment :
Method : \\target\share\chem3\nt14.i\20230317.b\20230317.b\SIMABN2.m
Meth Date : 23-Mar-2023 16:55 van Quant Type: ISTD
Cal Date : 15-MAR-2023 15:50 Cal File: NT1403152308.D
Als bottle: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.834	6.826	(0.754)	91469	1.28783	1.288(R)
	3 Phenol	94	8.448	8.441	(0.932)	84478	0.86492	0.8649
	7 1,3-Dichlorobenzene	146	9.005	8.997	(0.993)	82540	0.98753	0.9875
*	8 1,4-Dichlorobenzene-d4	152	9.067	9.067	(1.000)	209245	4.00000	
	9 1,4-Dichlorobenzene	146	9.098	9.098	(1.003)	79992	0.98903	0.9890
	11 Benzyl alcohol	79	9.393	9.354	(1.036)	42281	0.73854	0.7385
	12 1,2-Dichlorobenzene	146	9.455	9.455	(1.043)	78223	0.99294	0.9929
	13 2-Methylphenol	108	9.572	9.564	(1.056)	69242	1.02627	1.026
	15 4-Methylphenol	108	9.843	9.828	(1.086)	69508	0.97517	0.9752
	16 N-Nitroso-di-n-propylamine	70	9.898	9.898	(1.092)	49864	0.98946	0.9895
	22 2,4-Dimethylphenol	107	10.891	10.883	(0.942)	132097	1.98692	1.987
	24 Benzoic acid	105	11.007	10.999	(0.952)	107997	2.12993	2.130
	26 1,2,4-Trichlorobenzene	180	11.487	11.480	(0.993)	66388	1.01883	1.019
*	27 Naphthalene-d8	136	11.565	11.565	(1.000)	773367	4.00000	
	30 Hexachlorobutadiene	225	11.974	11.974	(1.035)	34789	1.05499	1.055
	39 Dimethylphthalate	163	14.698	14.698	(0.967)	123824	1.02995	1.030
*	42 Acenaphthene-d10	162	15.201	15.201	(1.000)	352031	4.00000	
	50 Diethylphthalate	149	16.160	16.160	(1.063)	134077	1.04751	1.048
	54 N-Nitrosodiphenylamine	169	16.553	16.546	(0.907)	100700	1.10780	1.108
	57 Hexachlorobenzene	284	17.626	17.618	(0.966)	36942	1.05788	1.058
	58 Pentachlorophenol	266	17.990	17.974	(0.986)	24091	1.01820	1.018
*	59 Phenanthrene-d10	188	18.245	18.245	(1.000)	670884	4.00000	
$	66 Terphenyl-d14	244	21.394	21.386	(0.918)	78475	1.78490	1.785(R)
	67 Butylbenzylphthalate	149	22.315	22.308	(0.958)	72013	1.61378	1.614
*	69 Chrysene-d12	240	23.299	23.291	(1.000)	255030	4.00000	
*	77 Perylene-d12	264	25.947	25.931	(1.000)	183174	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.647	28.631	(1.104)	43121	0.92862	0.9286
	90 N-Nitrosodimethylamine	74	4.694	4.694	(0.518)	65699	1.51412	1.514

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1403172331S.D
Lab Smp Id: SLC0376-CCV1
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\SIMABN2.m
Misc Info:

Calibration Date: 18-MAR-2023
Calibration Time: 00:07
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	225221	112611	450442	209245	-7.09
27 Naphthalene-d8	830434	415217	1660868	773367	-6.87
42 Acenaphthene-d10	389907	194954	779814	352031	-9.71
59 Phenanthrene-d10	763679	381840	1527358	670884	-12.15
69 Chrysene-d12	415791	207896	831582	255030	-38.66
77 Perylene-d12	274872	137436	549744	183174	-33.36

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.07	8.57	9.57	9.07	-0.00
27 Naphthalene-d8	11.57	11.07	12.07	11.57	-0.00
42 Acenaphthene-d10	15.20	14.70	15.70	15.20	-0.00
59 Phenanthrene-d10	18.25	17.75	18.75	18.25	-0.00
69 Chrysene-d12	23.29	22.79	23.79	23.30	0.03
77 Perylene-d12	25.93	25.43	26.43	25.95	0.06

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

REVIEW SUMMARY FOR FILE - NT1403172331S.D

Lab ID: SLC0376-CCV1
nt14.i, 20230317.b\20230317.b\SIMABN2.m,   18-MAR-2023 08:30

RT	CO-ELUTION COMPOUNDS
NO CO-ELUTIONS	

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
NONE			

RRT check based on Ccal File: 20230317.b/NT1403172317S.D

On Column LOD for nt14.i, 20230317.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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

LOW-CONCENTRATION
CONTINUING CALIBRATION CHECK
EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT14	Calibration:	GC00050
Lab File ID:	NT1403172304S.D	Calibration Date:	03/15/2023
Sequence:	SLC0376	Injection Date:	03/17/23
Lab Sample ID:	SLC0376-LCV1	Injection Time:	16:16
Sequence Name:	ABN 0.2		

		CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
1,4-Dichlorobenzene	A	0.20000	0.2	1.5461150	1.5601430		0.9	
1,2-Dichlorobenzene	A	0.20000	0.2	1.5059720	1.5333410		1.8	
Benzyl Alcohol	A	0.20000	0.1	1.0943940	0.7827201		-28.5	
Benzoic acid	A	0.80000	0.1	0.1762504	0.0315423		-87.9	
2,4-Dimethylphenol	A	0.40000	0.4	0.3438645	0.3465282		0.8	
1,2,4-Trichlorobenzene	A	0.20000	0.2	0.3370247	0.3508013		4.1	
N-Nitrosodiphenylamine	A	0.20000	0.2	0.5419762	0.5193183		-4.2	
Pentachlorophenol	A	0.40000	0.1	0.1113753	0.0490550		-65.1	
2-Fluorophenol	A	0.30000	0.253	1.3577520	1.1429820		-15.8	
p-Terphenyl-d14	A	0.20000	0.236	0.6895811	0.8146659		18.1	

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT14031723048.D

Date : 17-MAR-2023 16:16

Client ID:

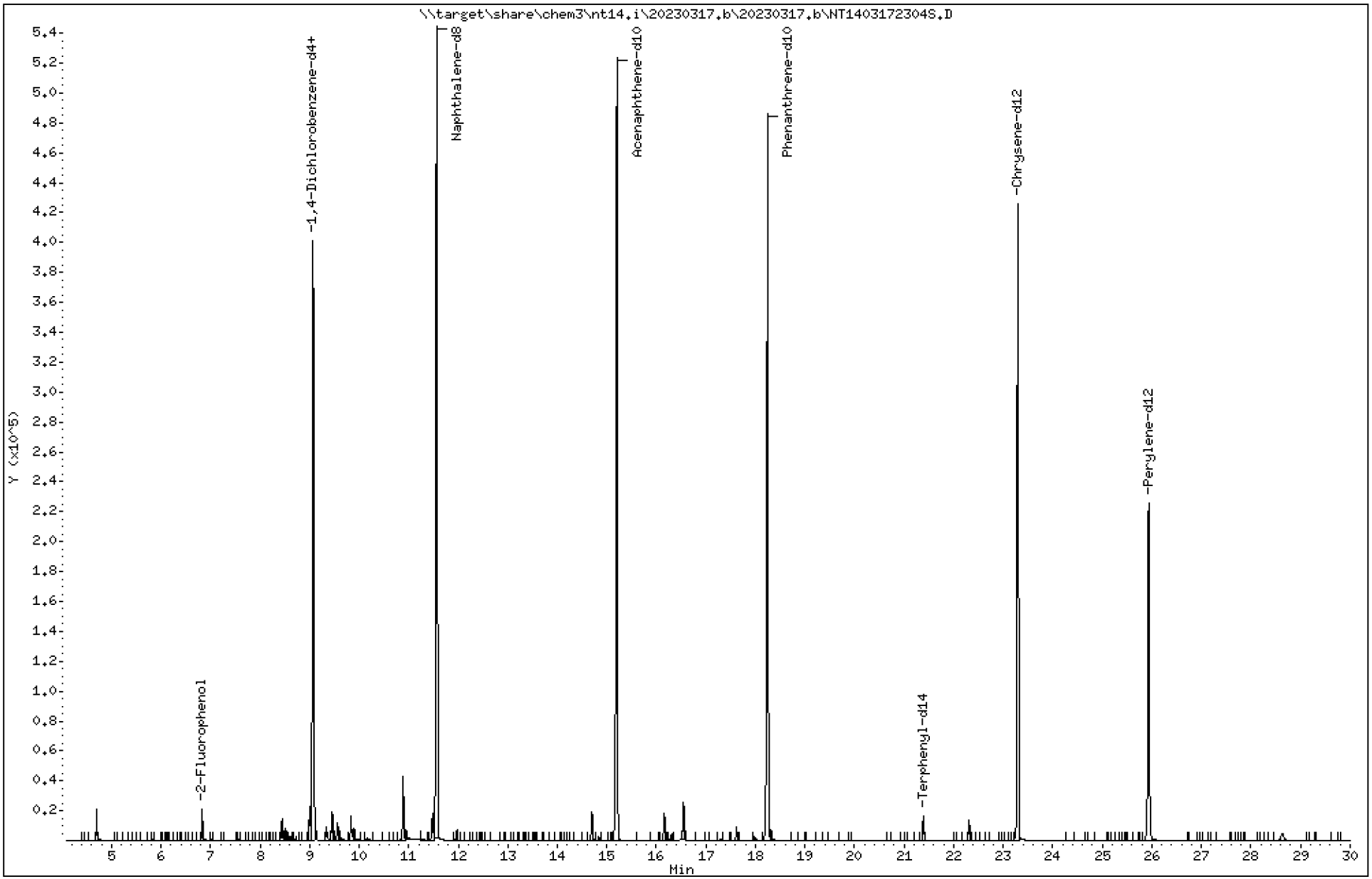
Instrument: nt14.i

Sample Info: SLC0376-LCV1

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172304S.D

Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV1

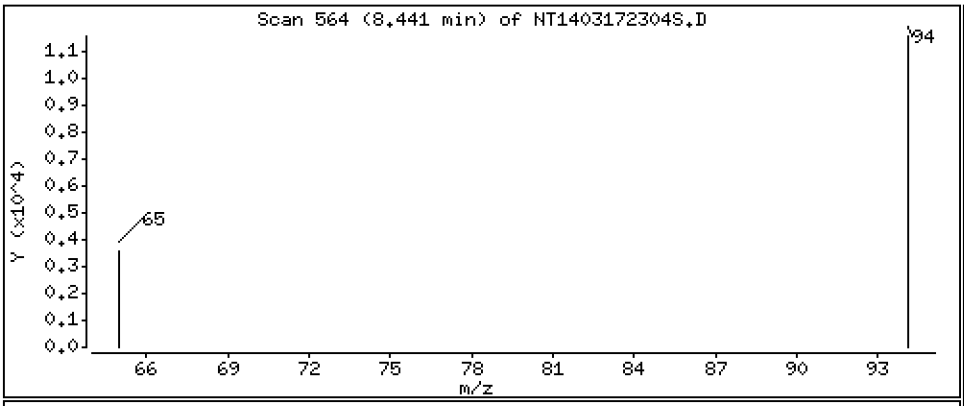
Operator: JGR

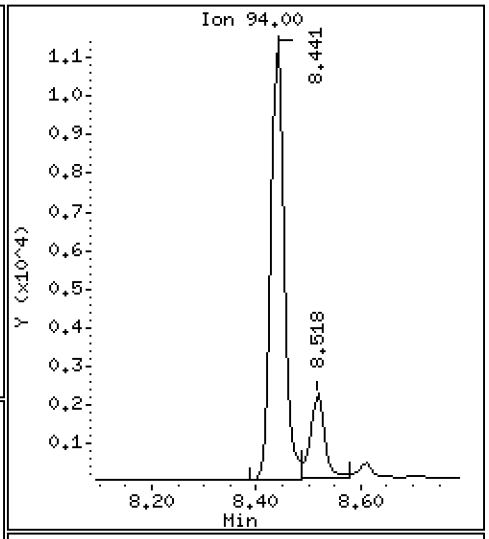
Column phase: ZB-5msi

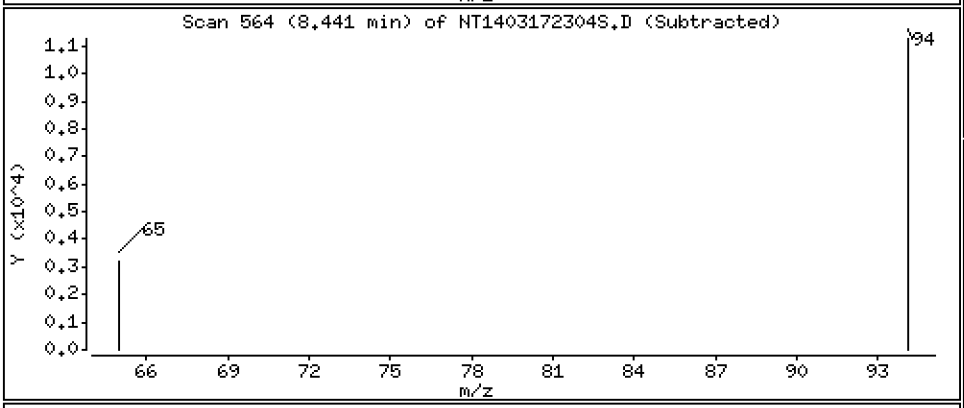
Column diameter: 0.25

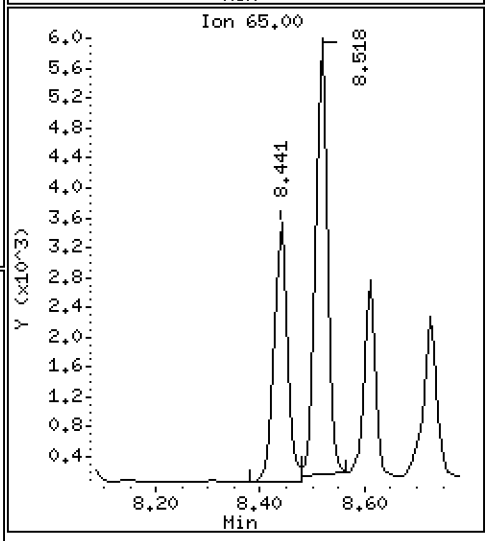
3 Phenol

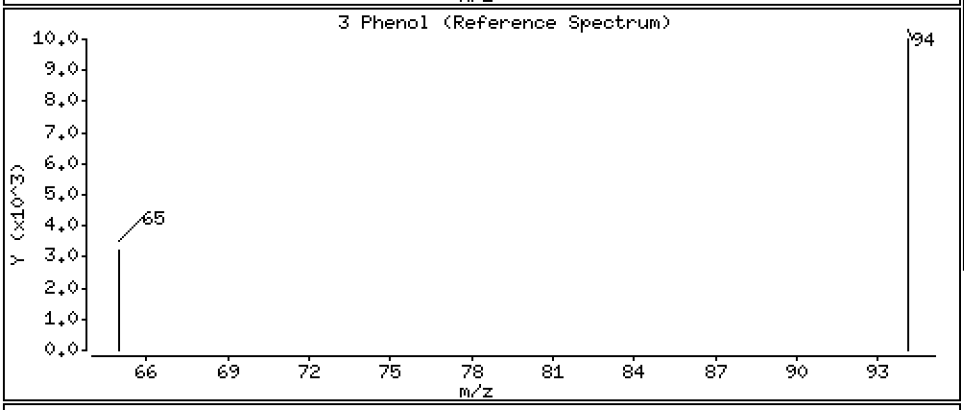
Concentration: 0.1621 ug/mL

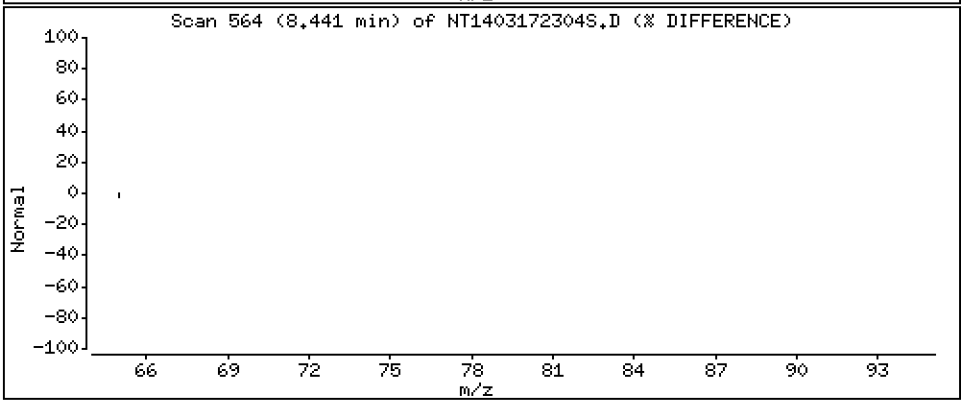












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172304S.D

Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV1

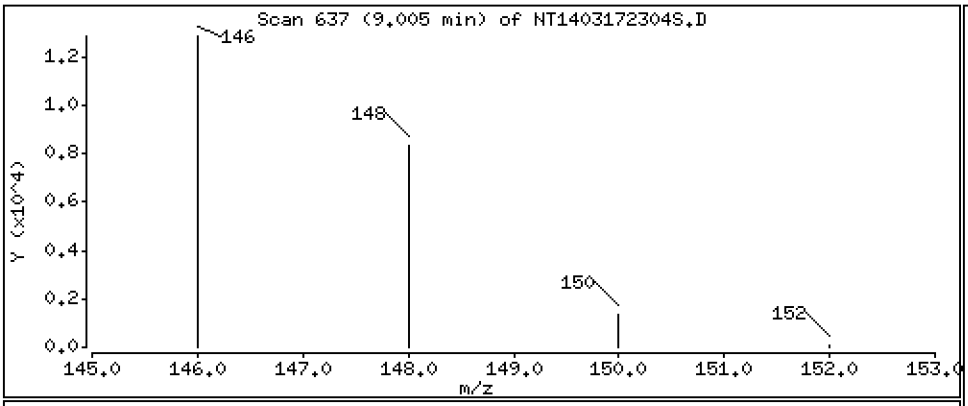
Operator: JGR

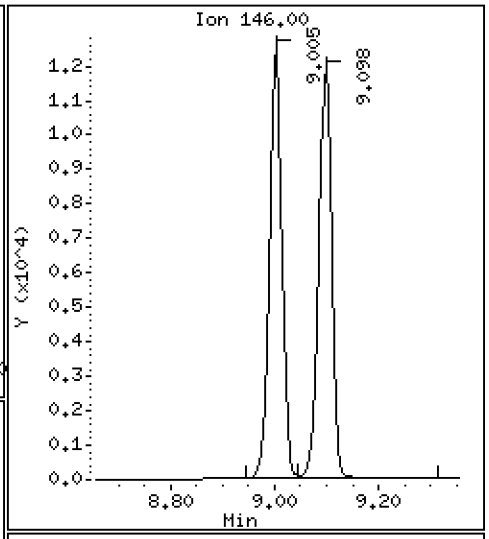
Column phase: ZB-5msi

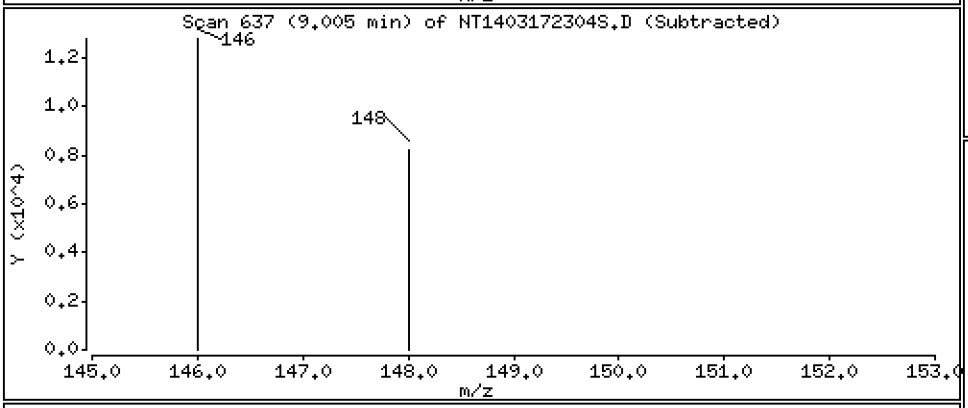
Column diameter: 0.25

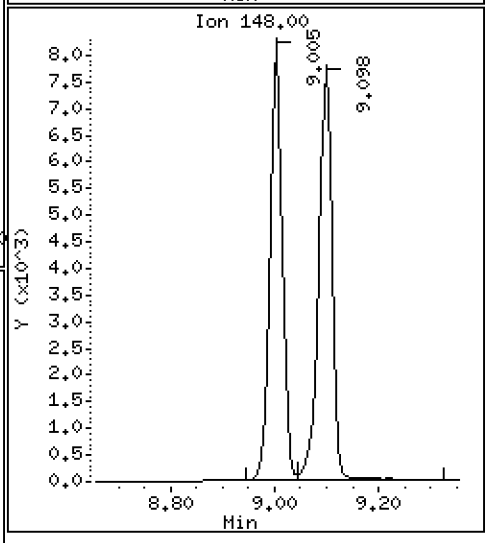
7 1,3-Dichlorobenzene

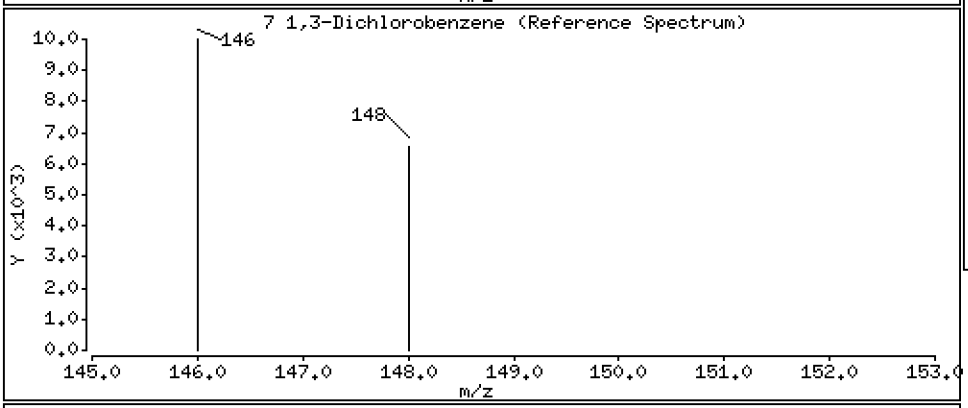
Concentration: 0.2023 ug/mL

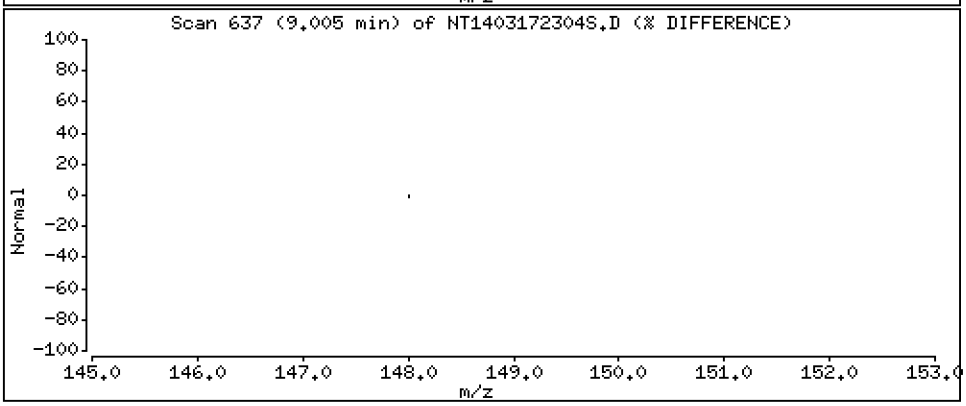












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172304S.D

Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV1

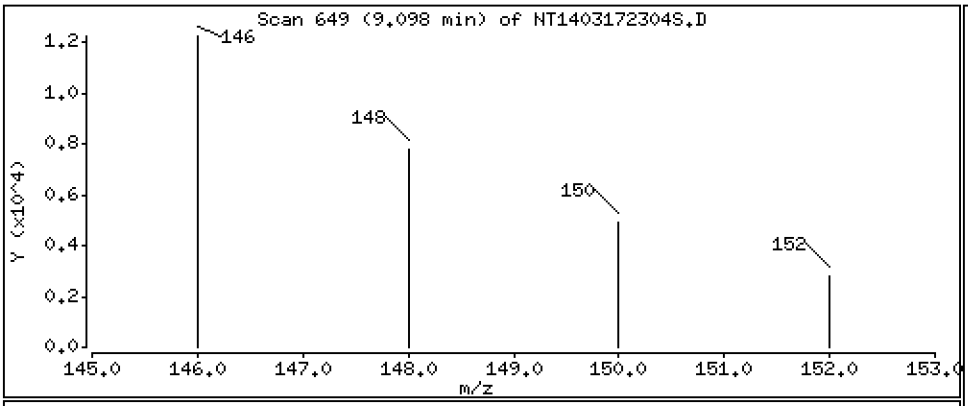
Operator: JGR

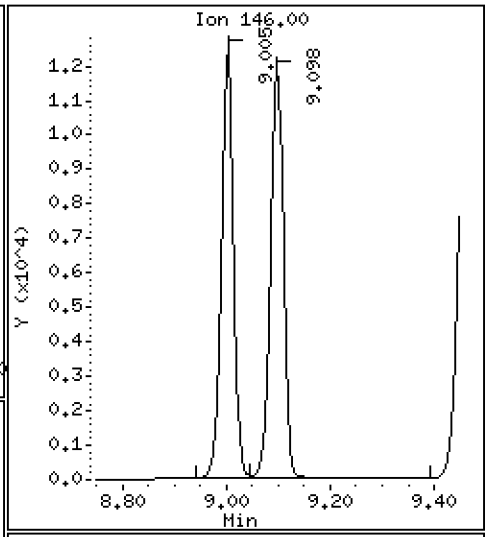
Column phase: ZB-5msi

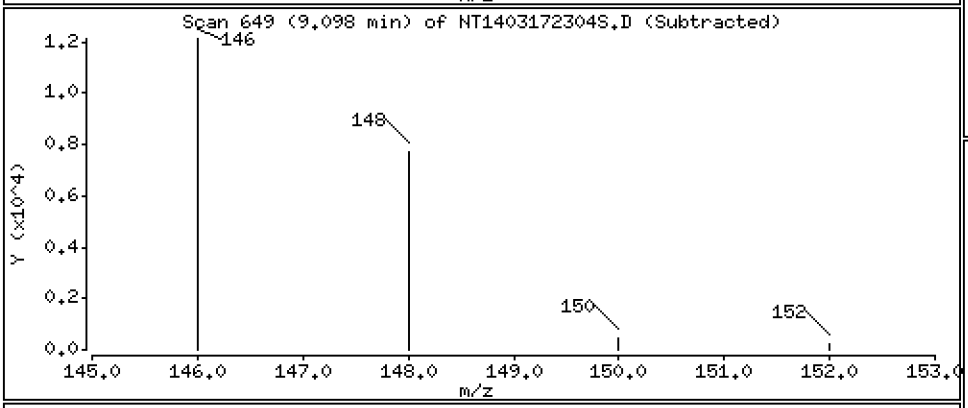
Column diameter: 0.25

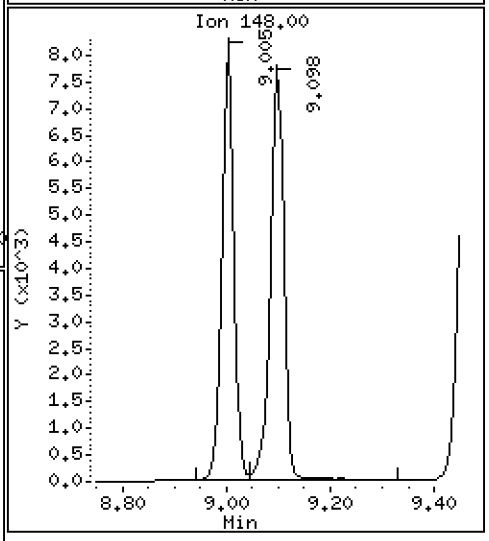
9 1,4-Dichlorobenzene

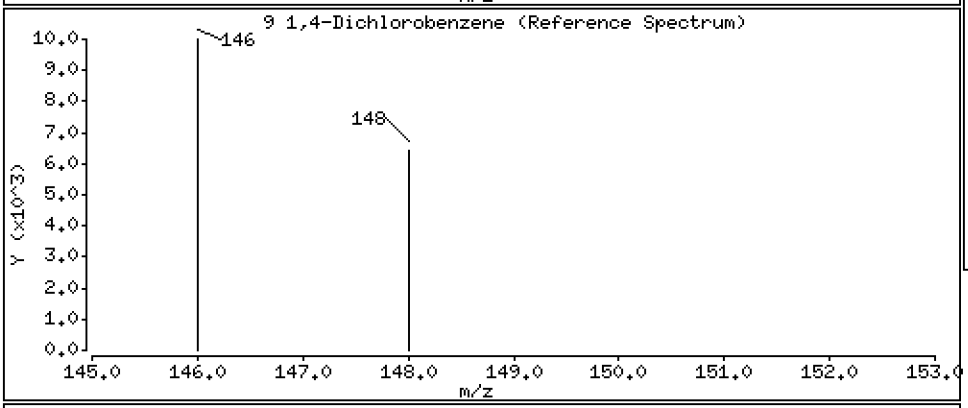
Concentration: 0.2018 ug/mL

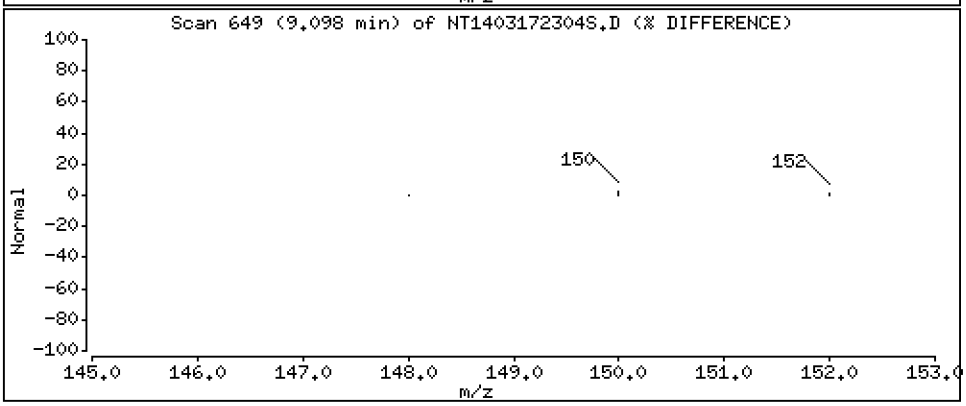












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172304S.D

Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV1

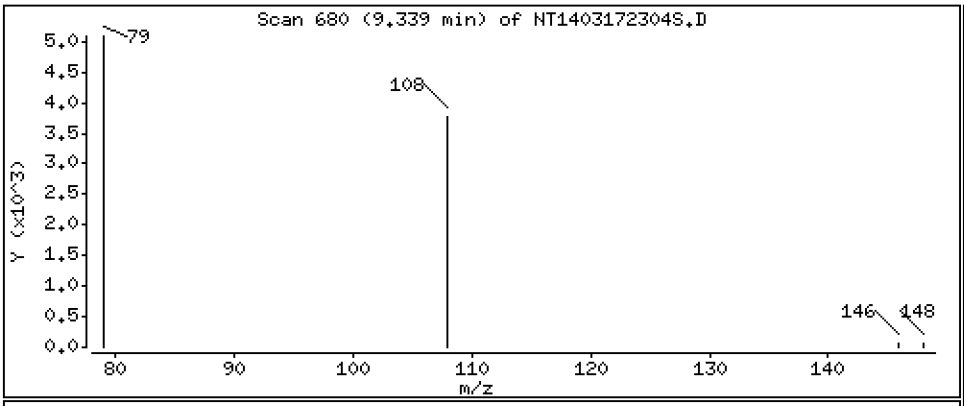
Operator: JGR

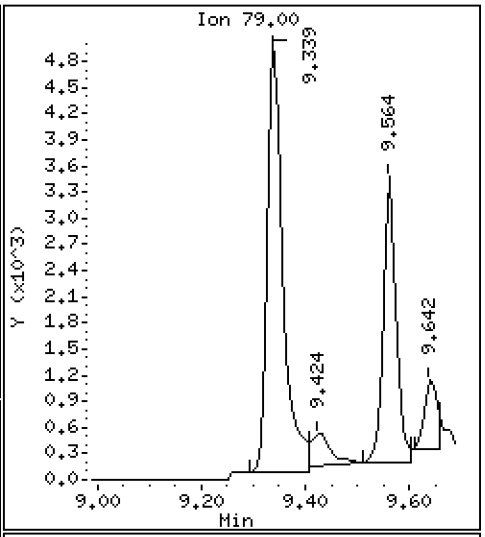
Column phase: ZB-5msi

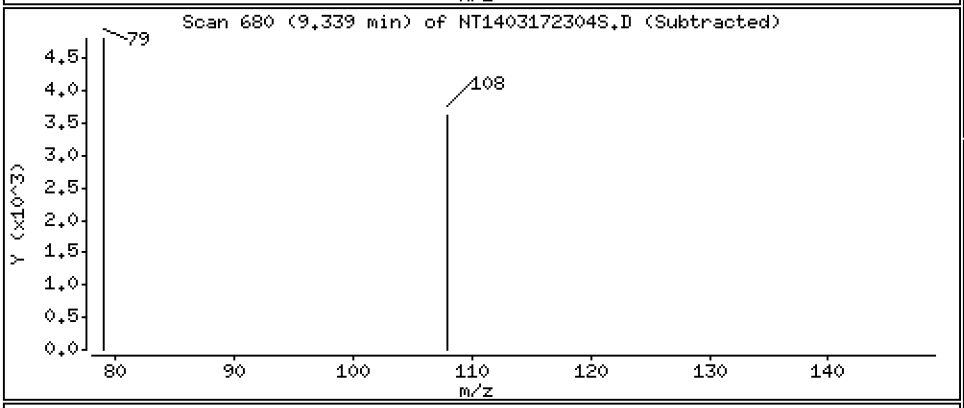
Column diameter: 0.25

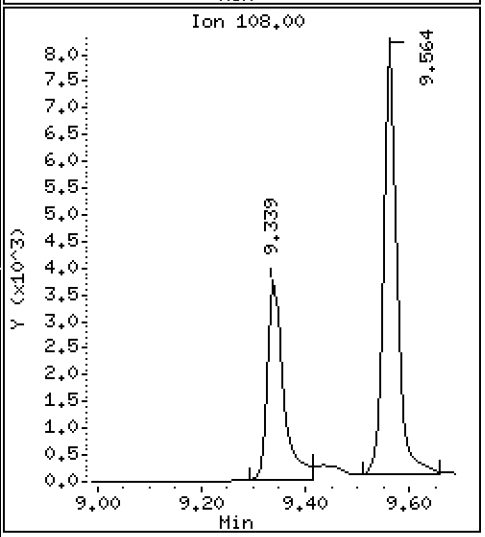
11 Benzyl alcohol

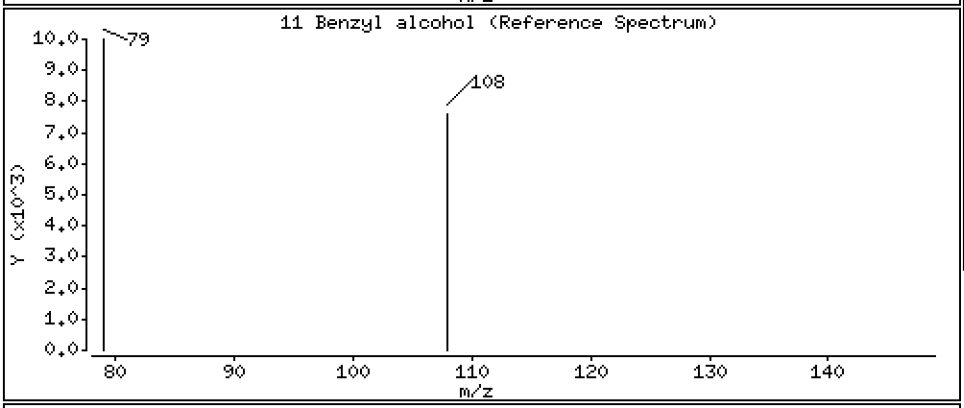
Concentration: 0.1430 ug/mL

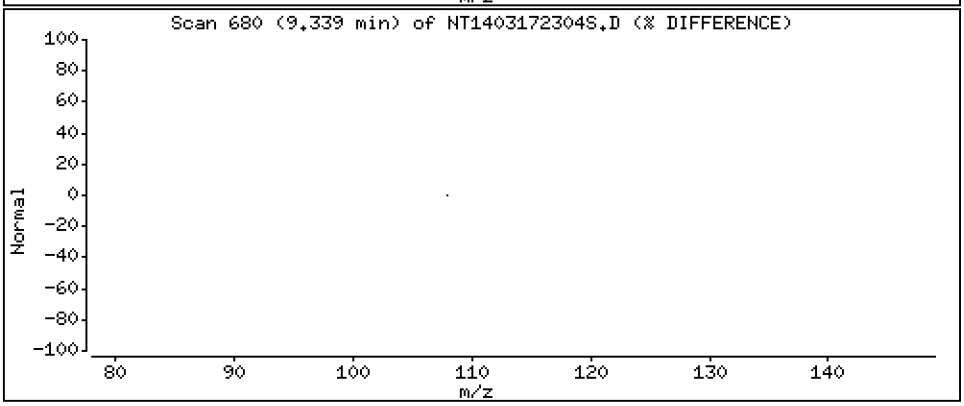












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172304S.D

Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV1

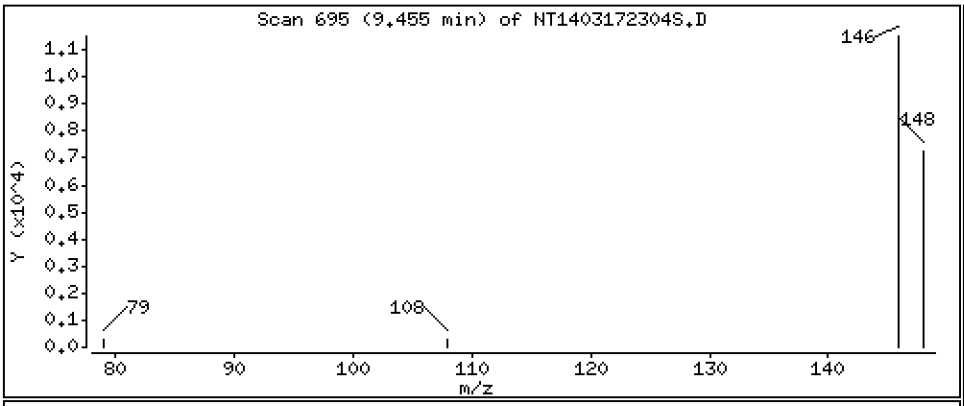
Operator: JGR

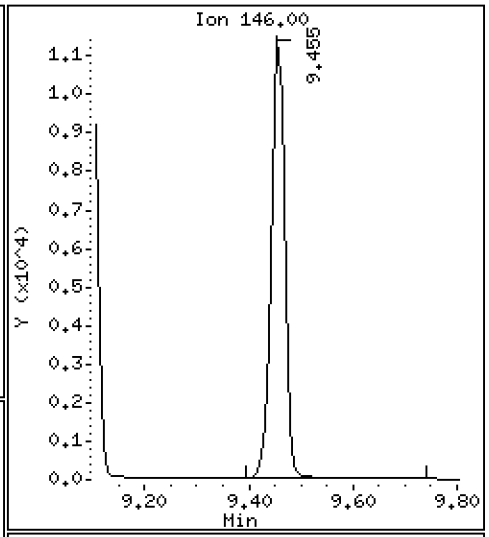
Column phase: ZB-5msi

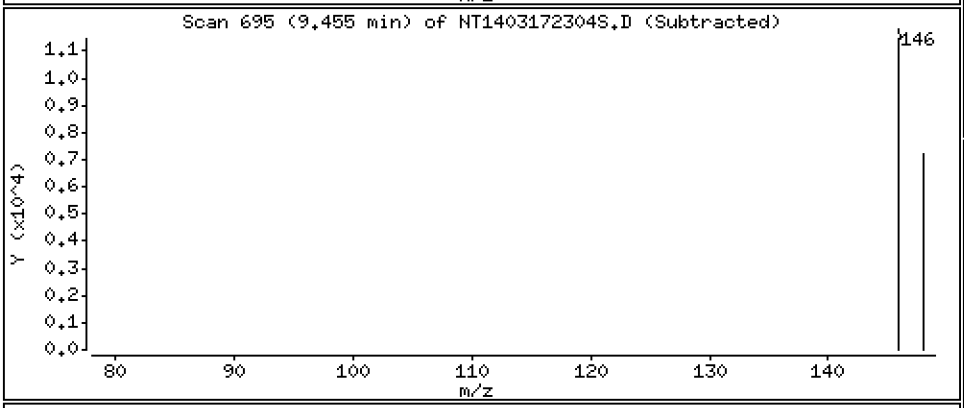
Column diameter: 0.25

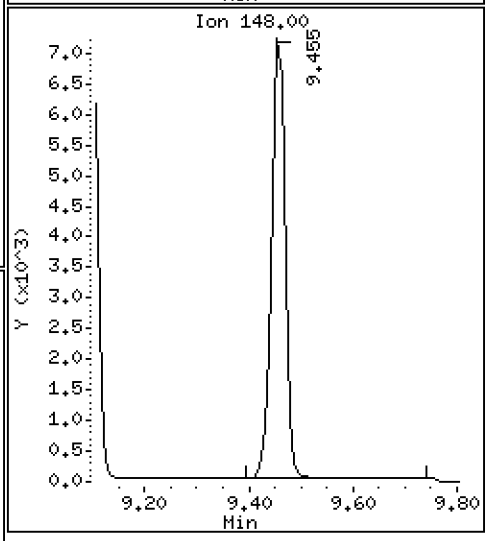
12 1,2-Dichlorobenzene

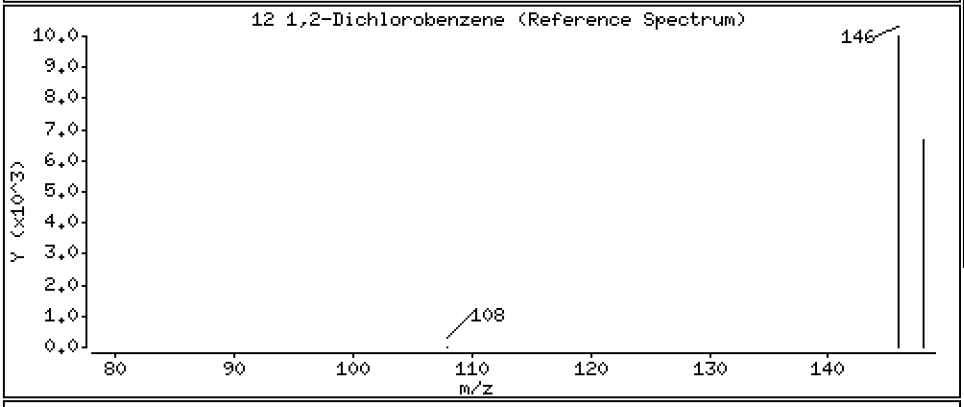
Concentration: 0.2036 ug/mL

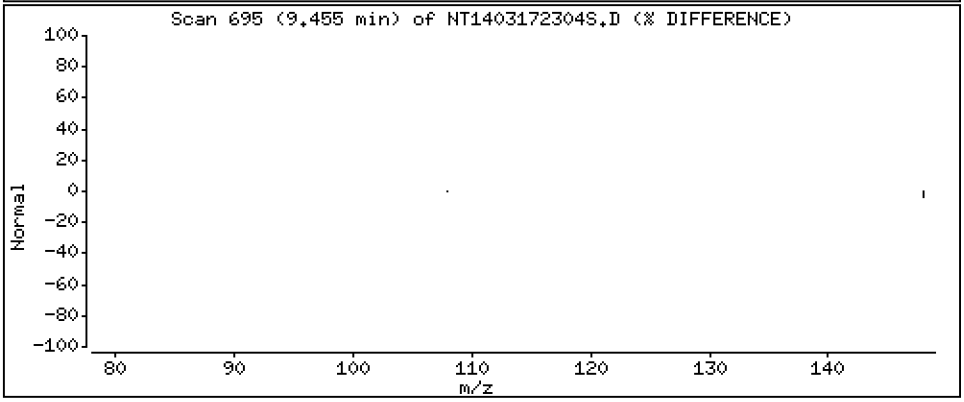












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172304S.D

Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV1

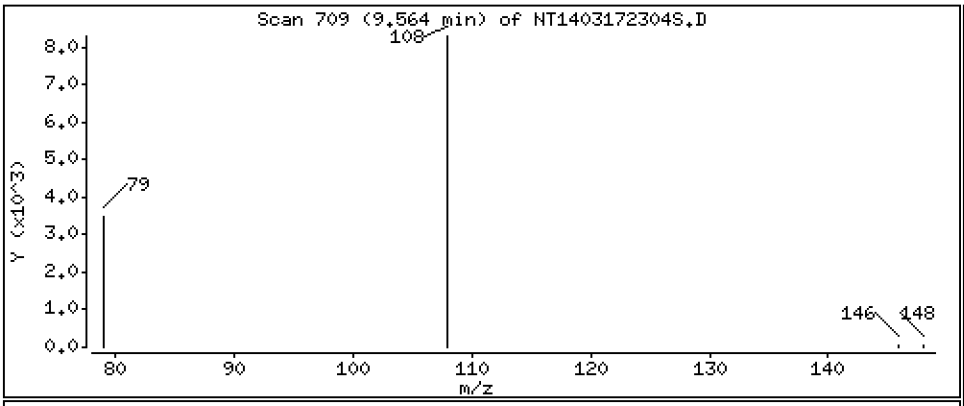
Operator: JGR

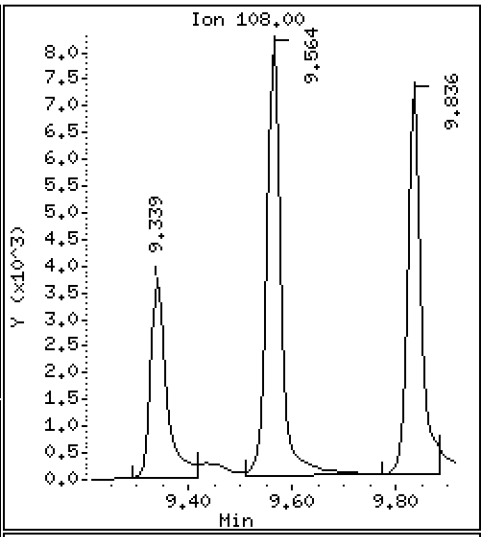
Column phase: ZB-5msi

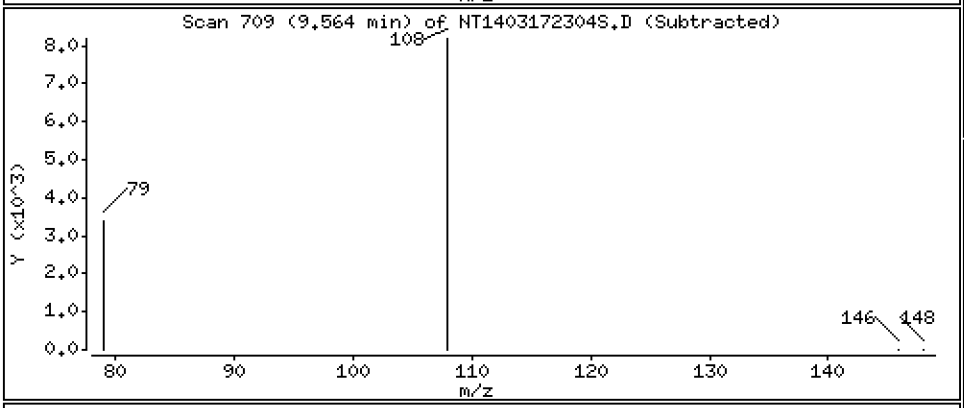
Column diameter: 0.25

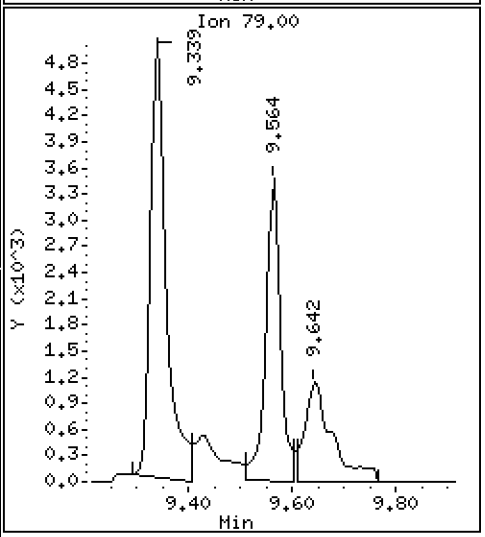
13 2-Methylphenol

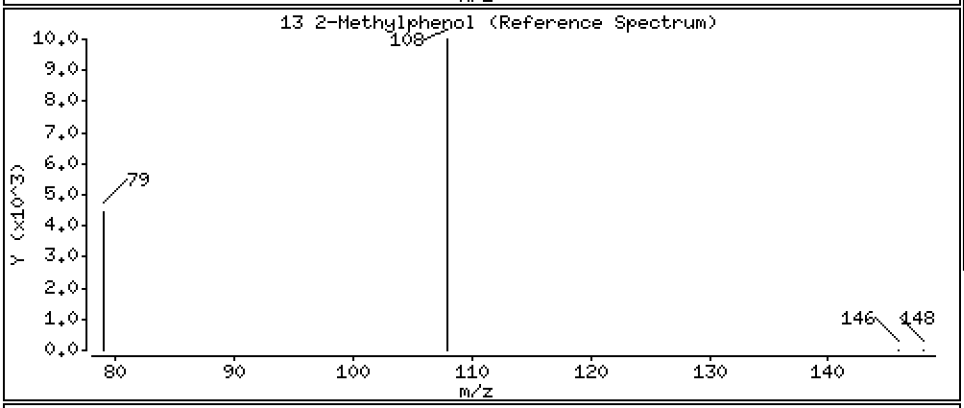
Concentration: 0.1830 ug/mL

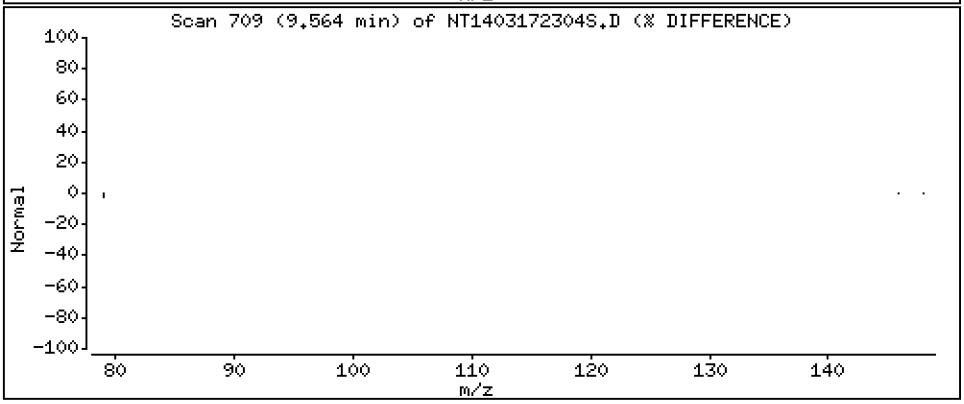












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV1

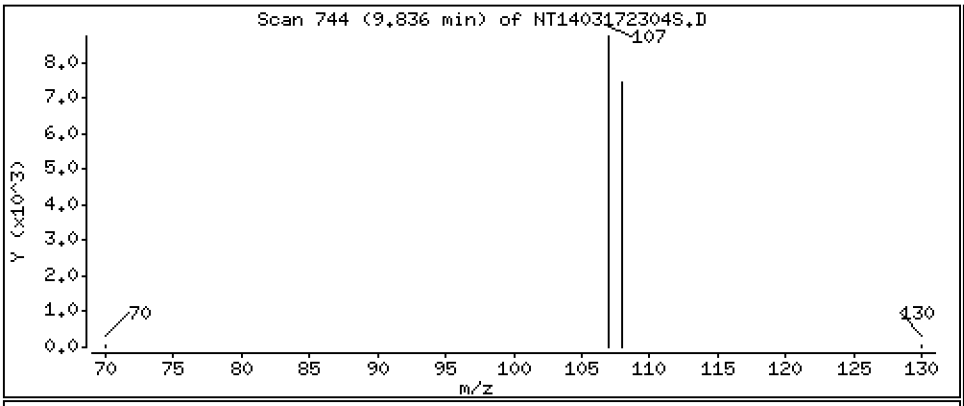
Operator: JGR

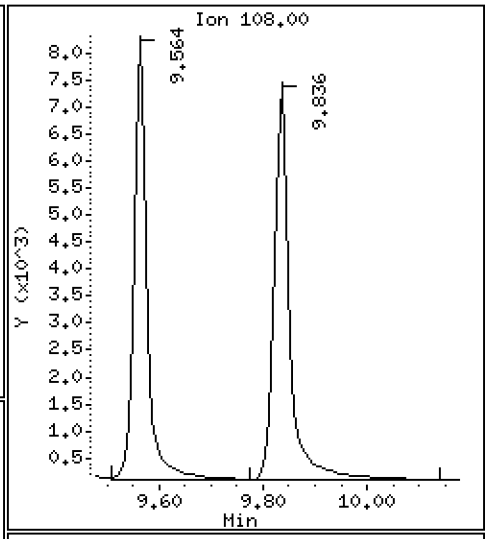
Column phase: ZB-5msi

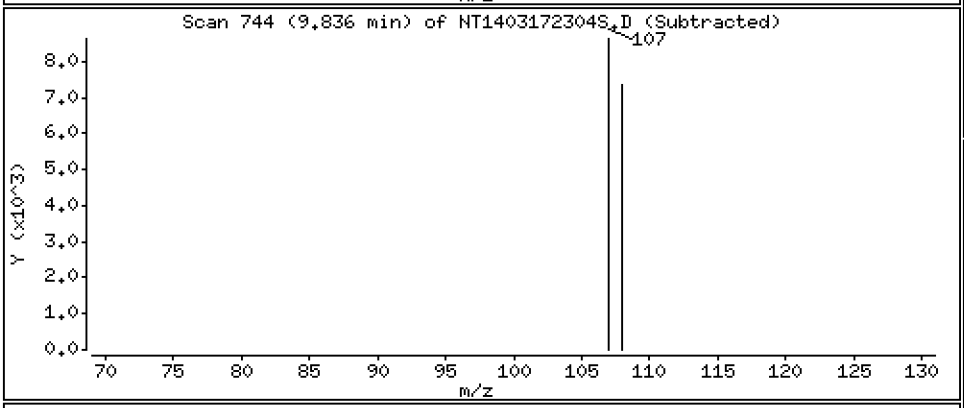
Column diameter: 0.25

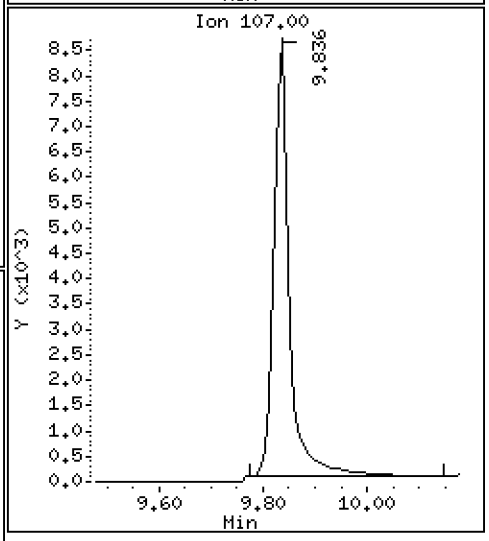
15 4-Methylphenol

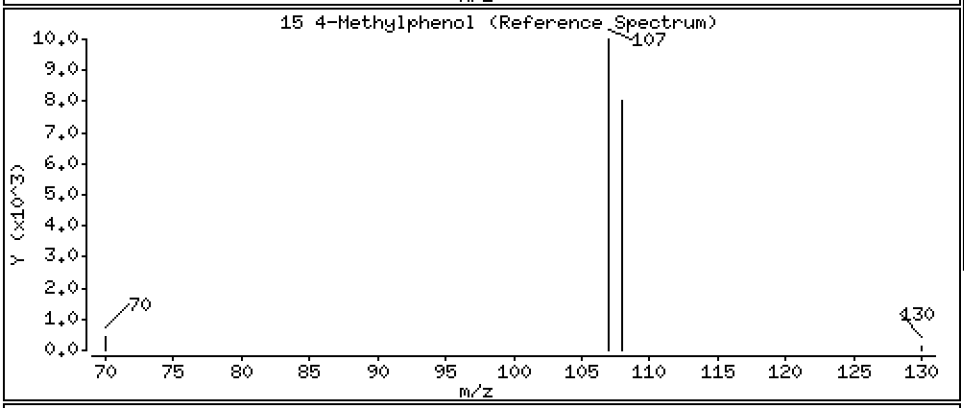
Concentration: 0.1712 ug/mL

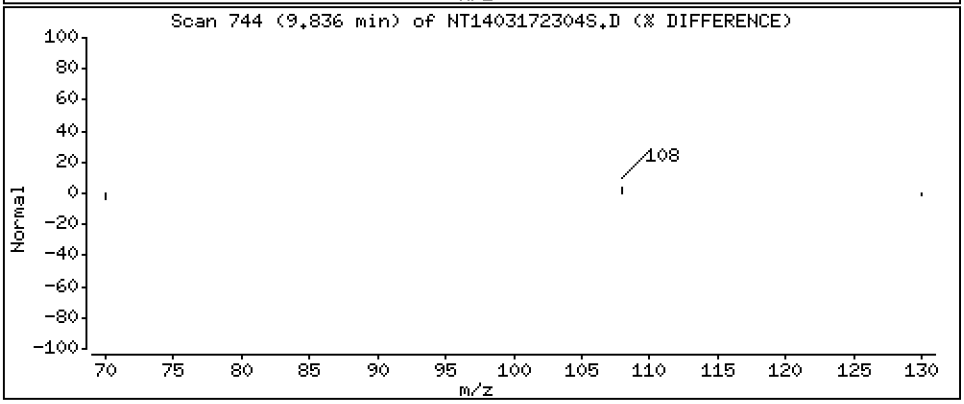












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV1

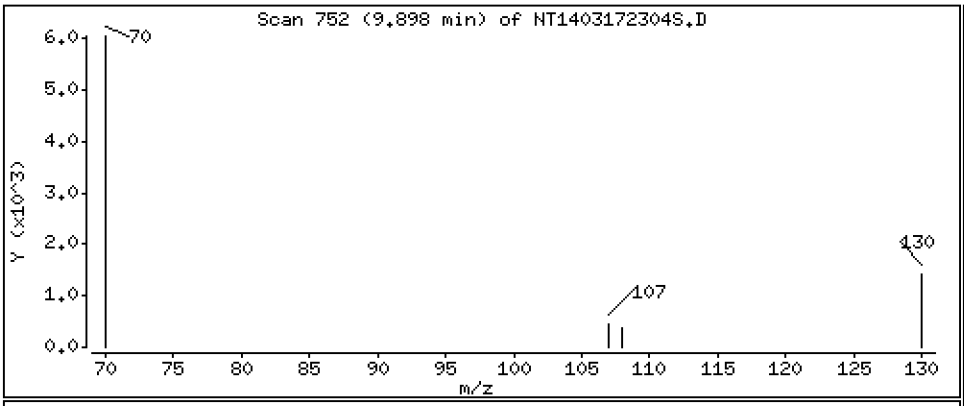
Operator: JGR

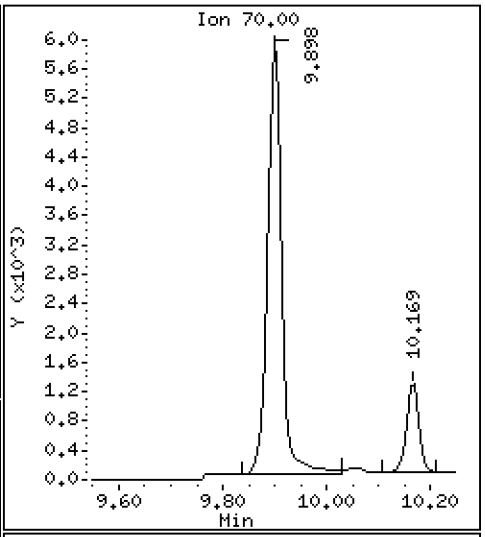
Column phase: ZB-5msi

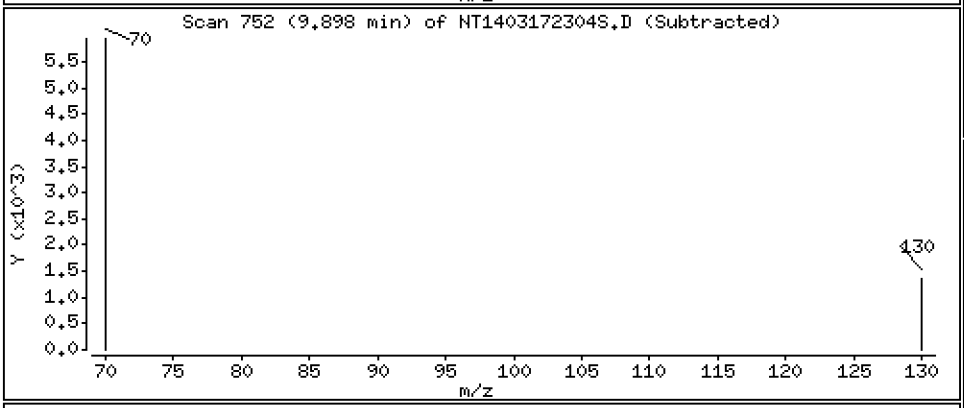
Column diameter: 0.25

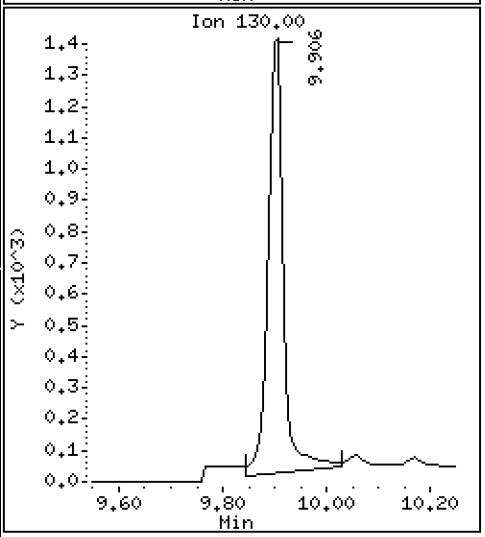
16 N-Nitroso-di-n-propylamine

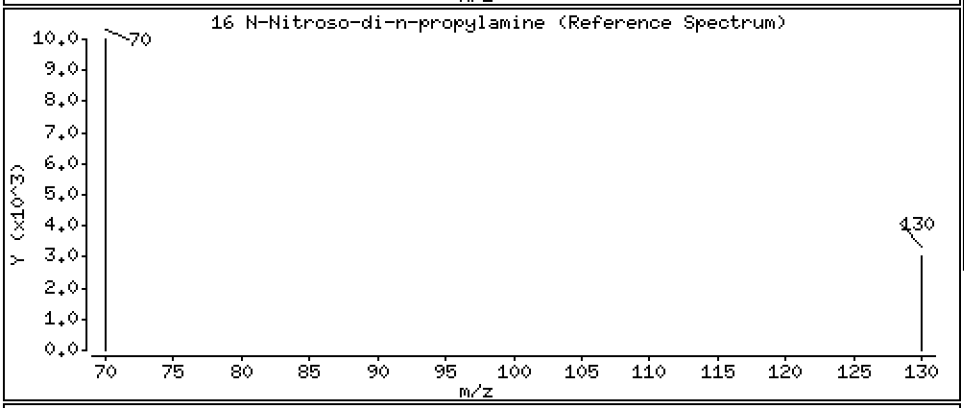
Concentration: 0.1753 ug/mL

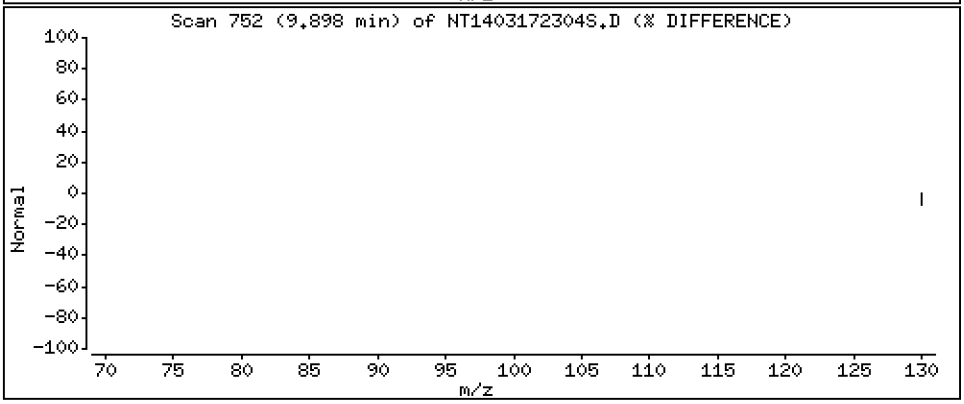












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV1

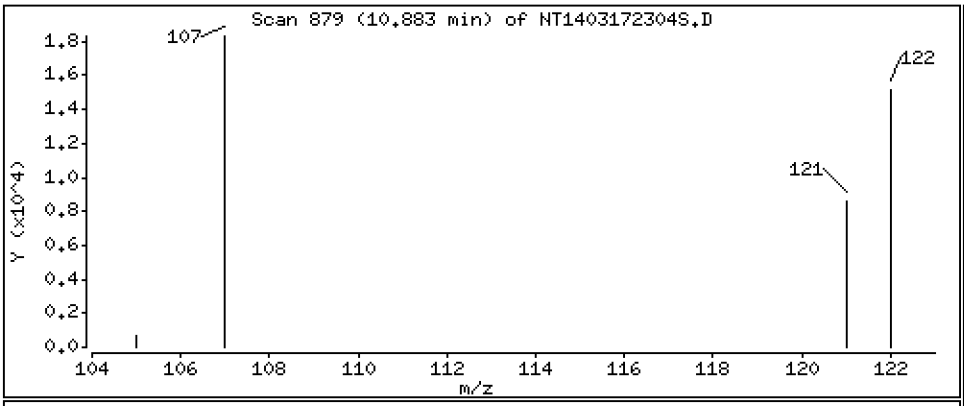
Operator: JGR

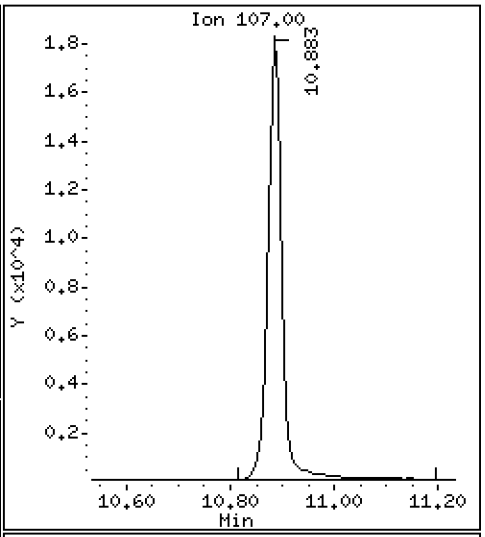
Column phase: ZB-5msi

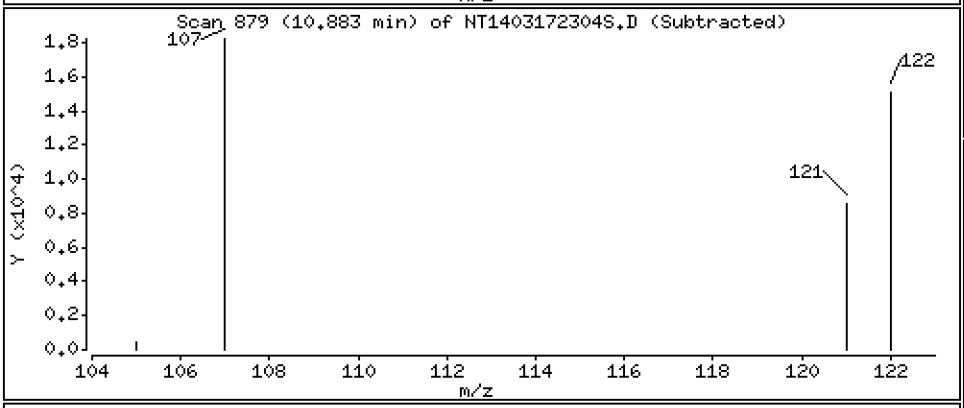
Column diameter: 0.25

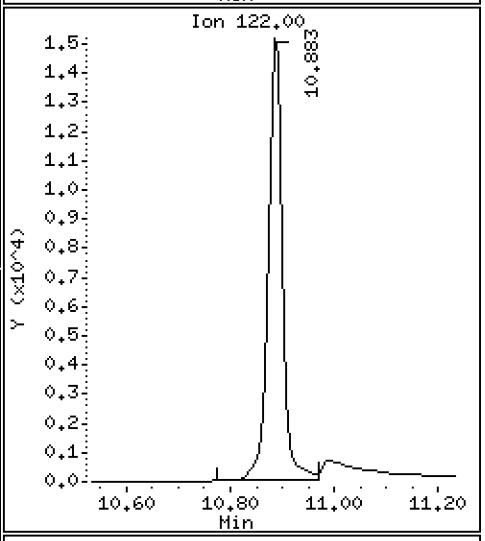
22 2,4-Dimethylphenol

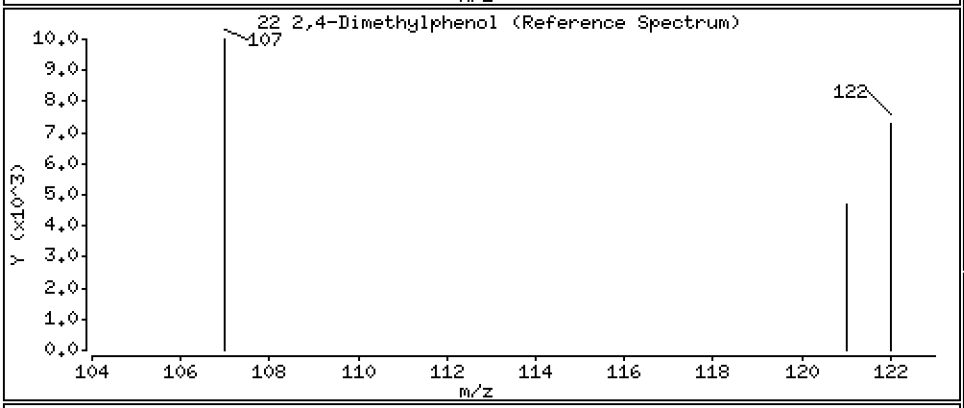
Concentration: 0.4031 ug/mL

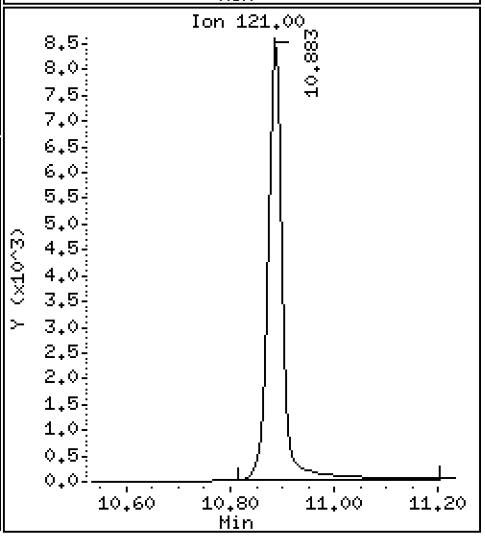


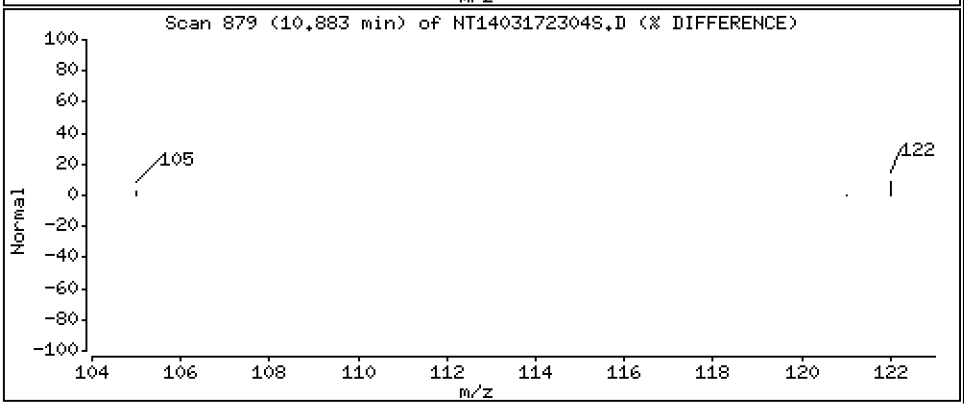












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV1

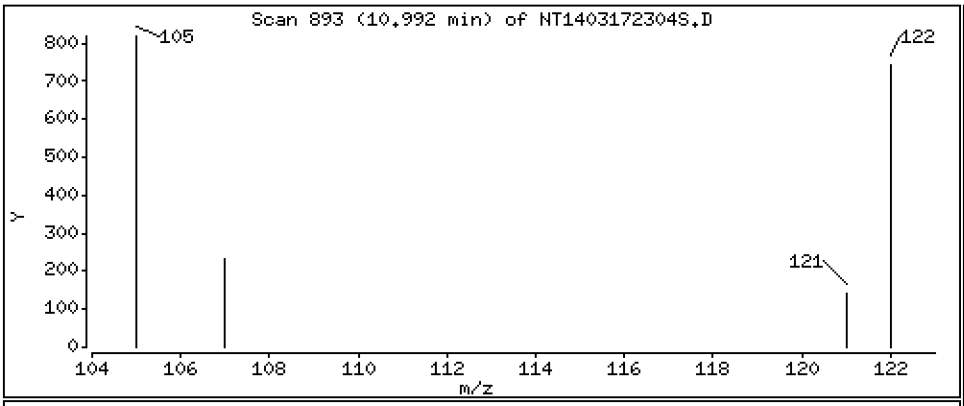
Operator: JGR

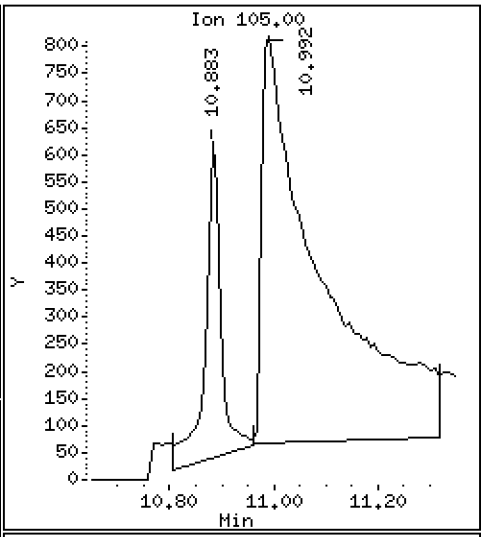
Column phase: ZB-5msi

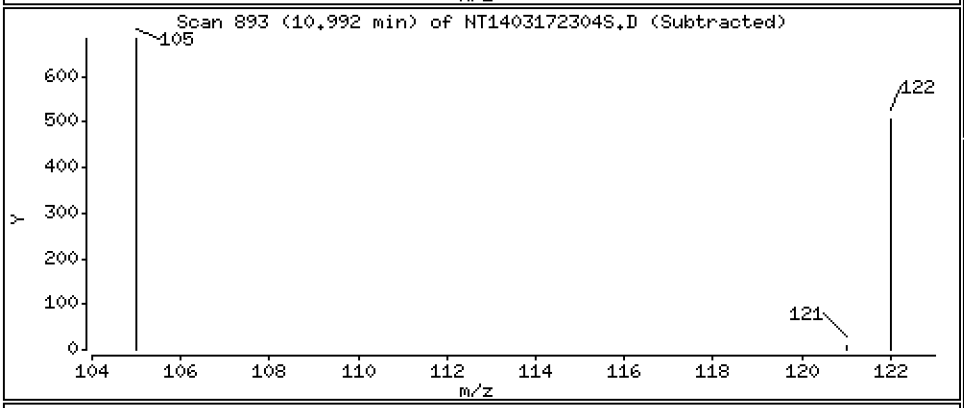
Column diameter: 0.25

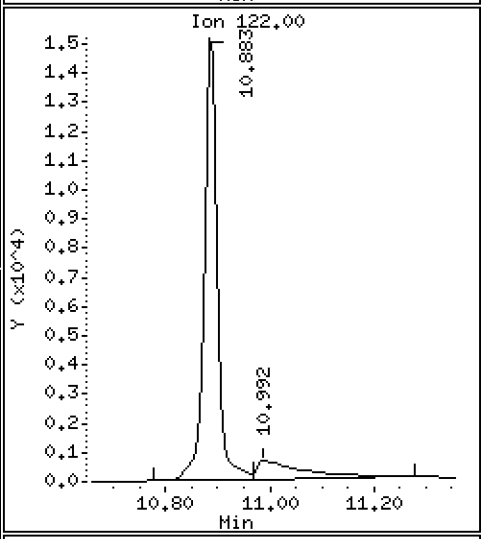
24 Benzoic acid

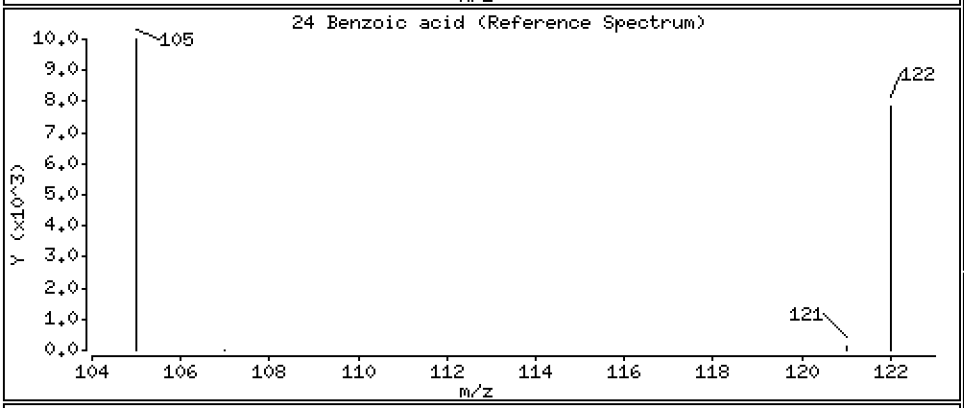
Concentration: 0.09699 ug/mL

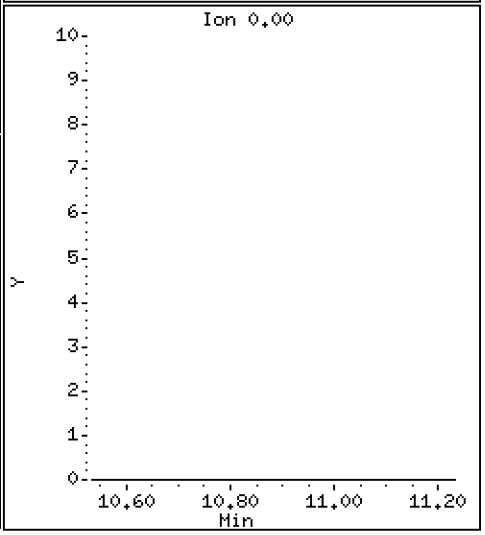


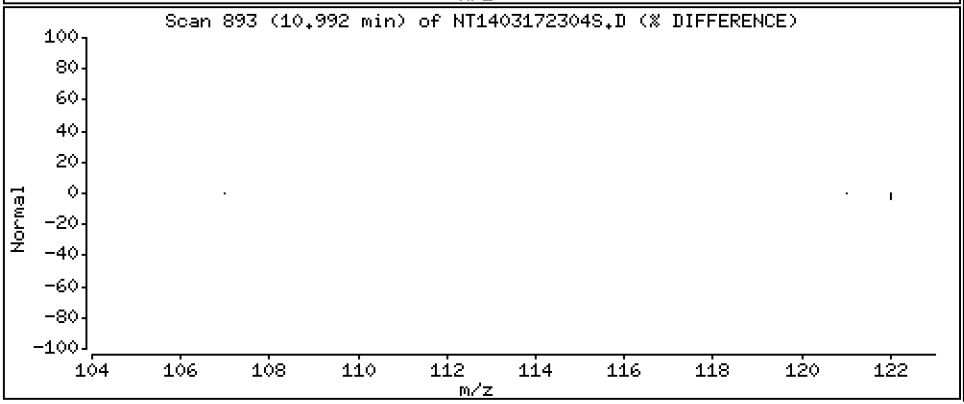












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV1

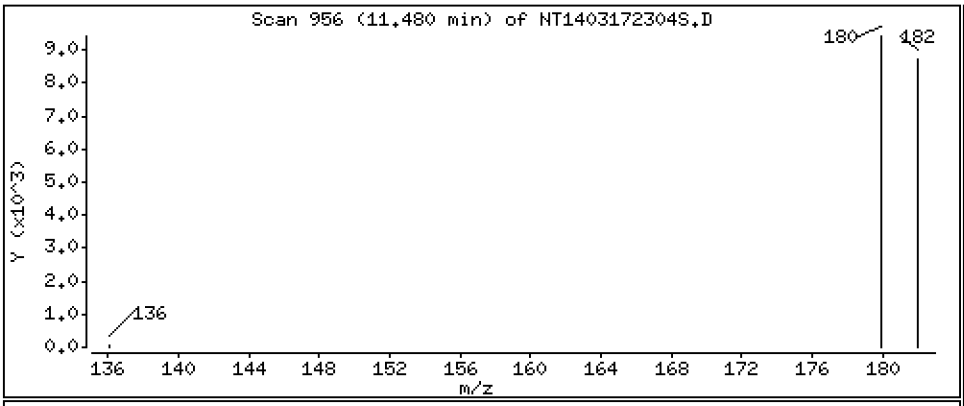
Operator: JGR

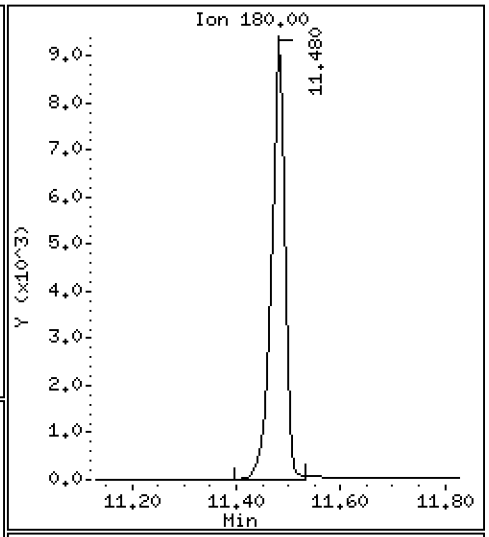
Column phase: ZB-5msi

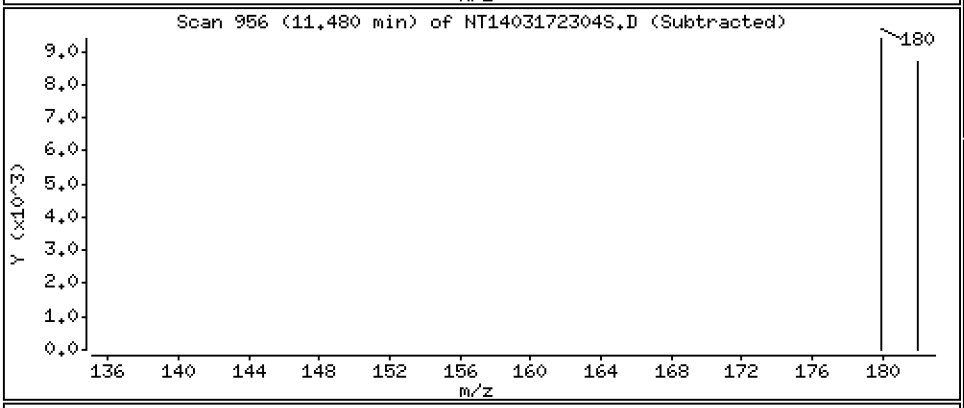
Column diameter: 0.25

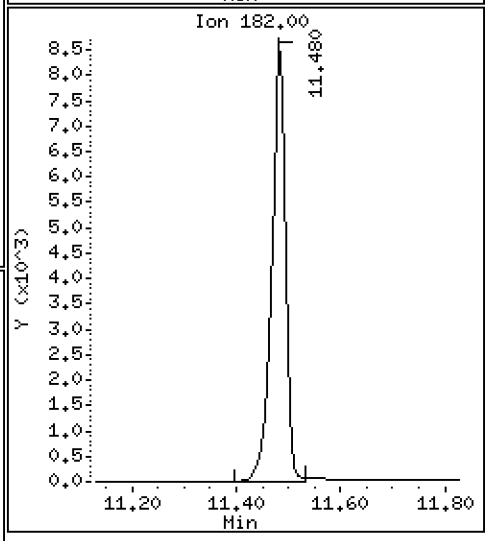
26 1,2,4-Trichlorobenzene

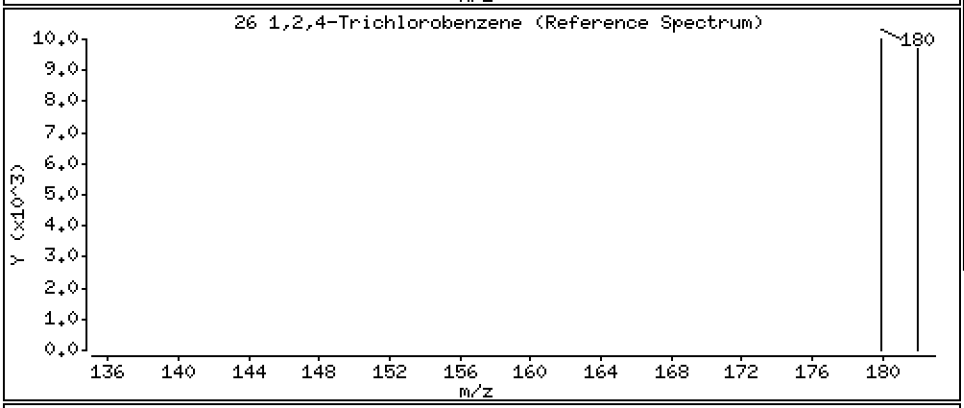
Concentration: 0.2082 ug/mL

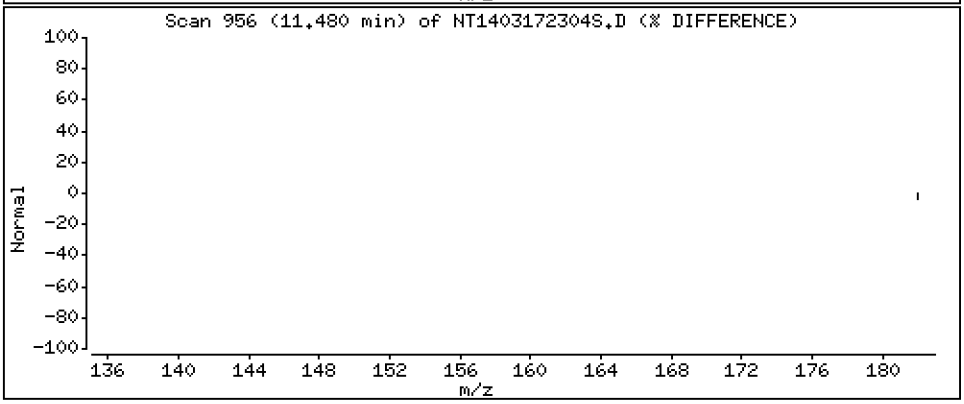












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV1

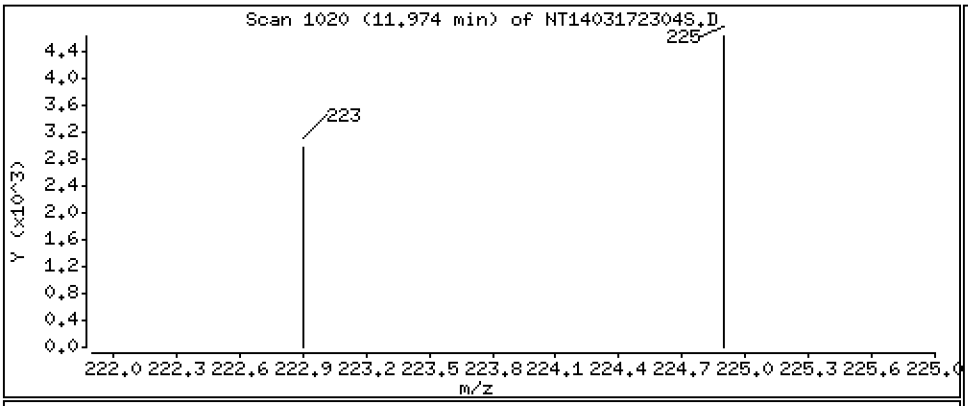
Operator: JGR

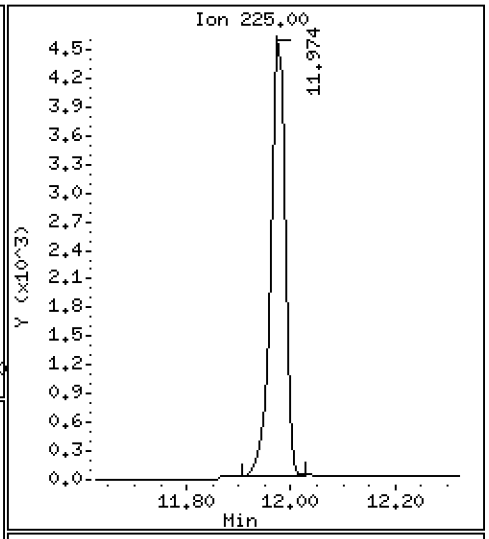
Column phase: ZB-5msi

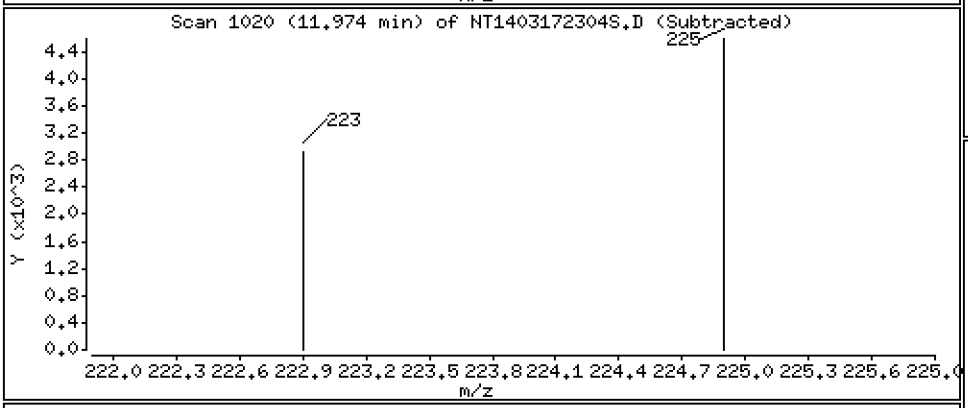
Column diameter: 0.25

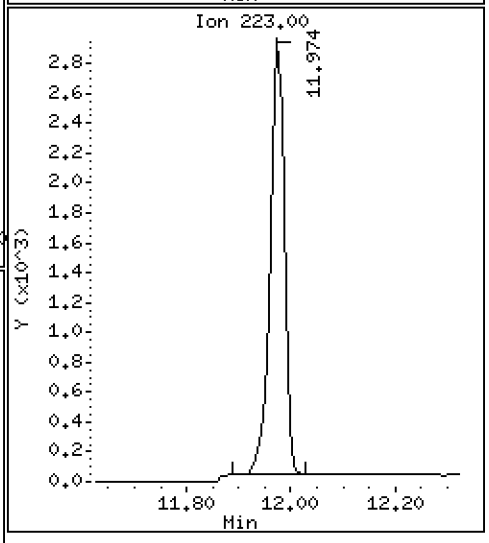
30 Hexachlorobutadiene

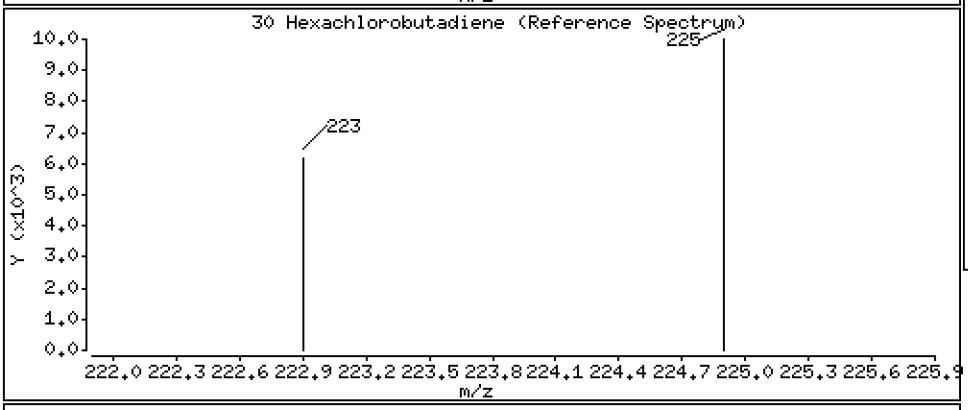
Concentration: 0.2078 ug/mL

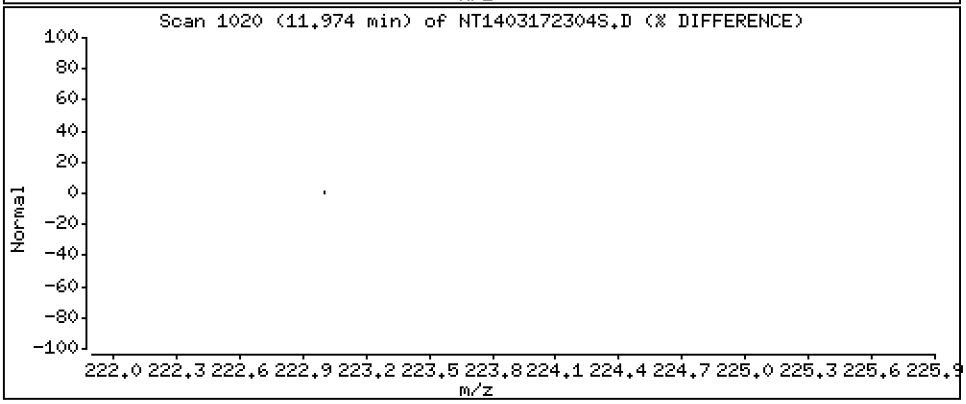












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV1

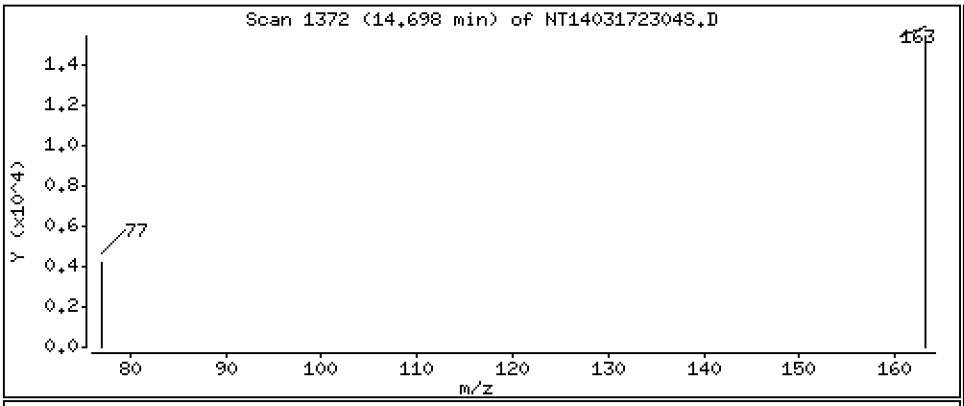
Operator: JGR

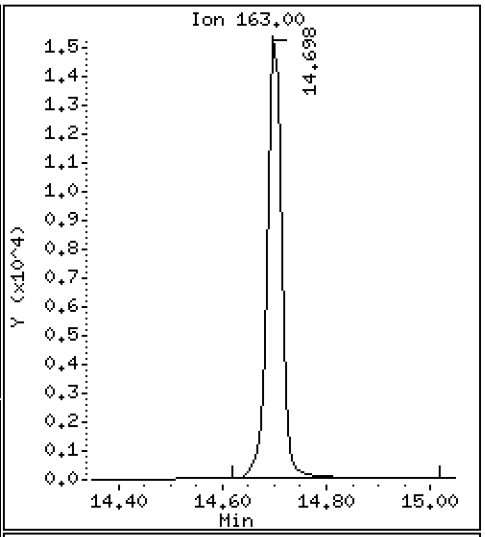
Column phase: ZB-5msi

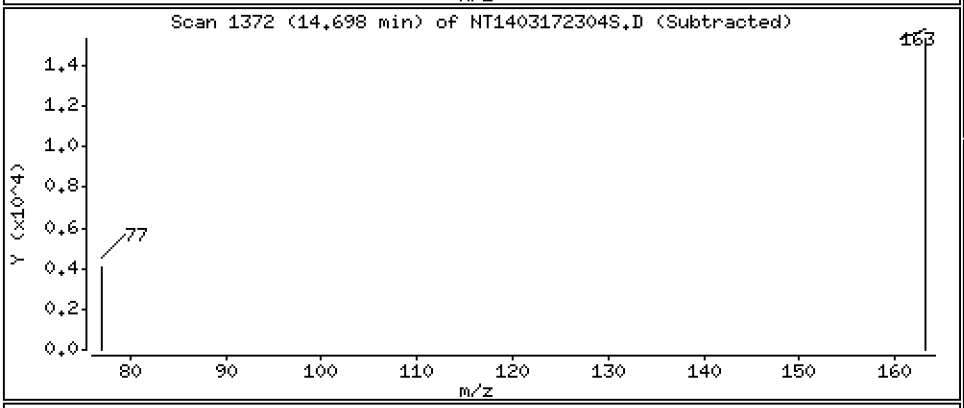
Column diameter: 0.25

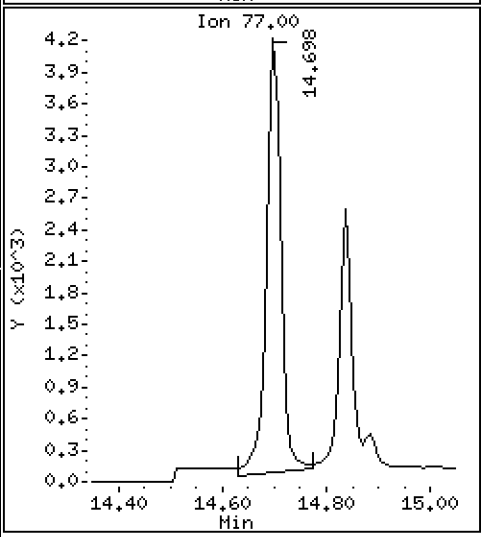
39 Dimethylphthalate

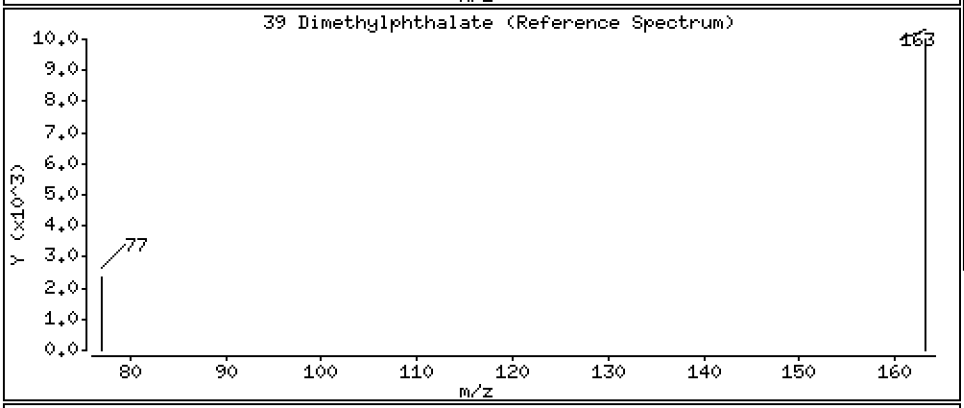
Concentration: 0.1922 ug/mL

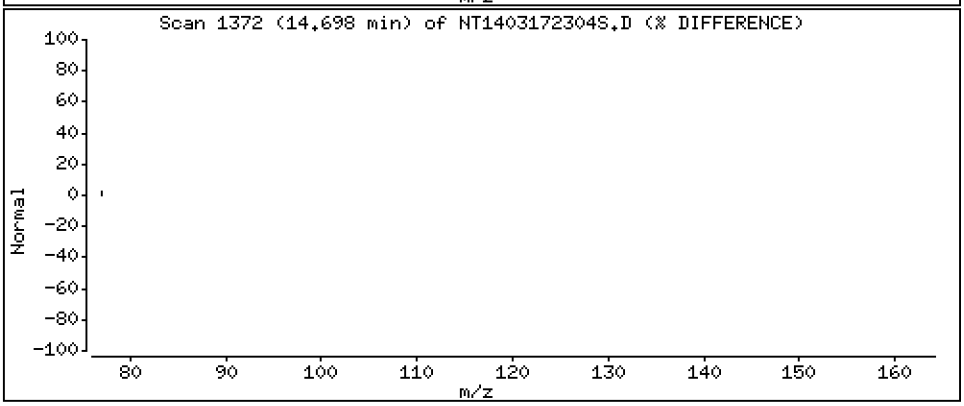












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV1

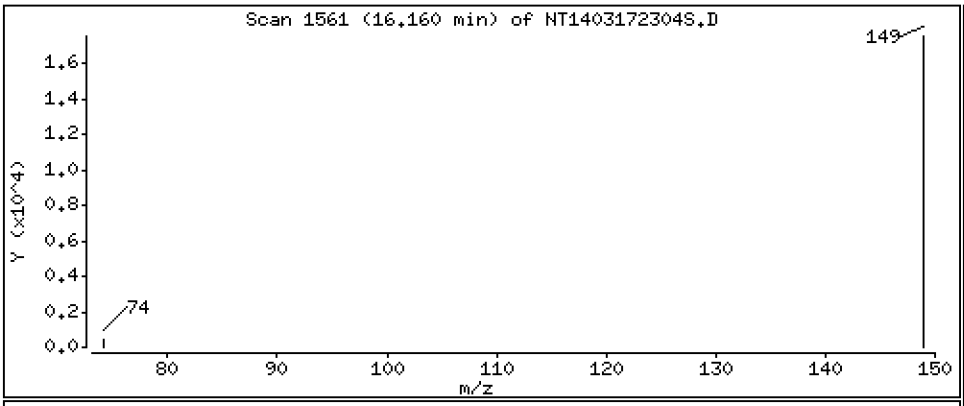
Operator: JGR

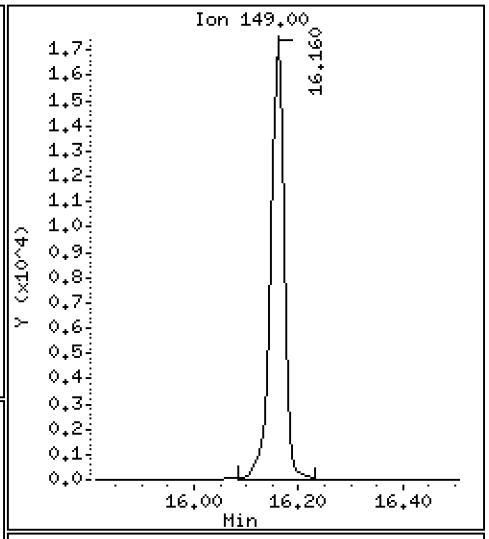
Column phase: ZB-5msi

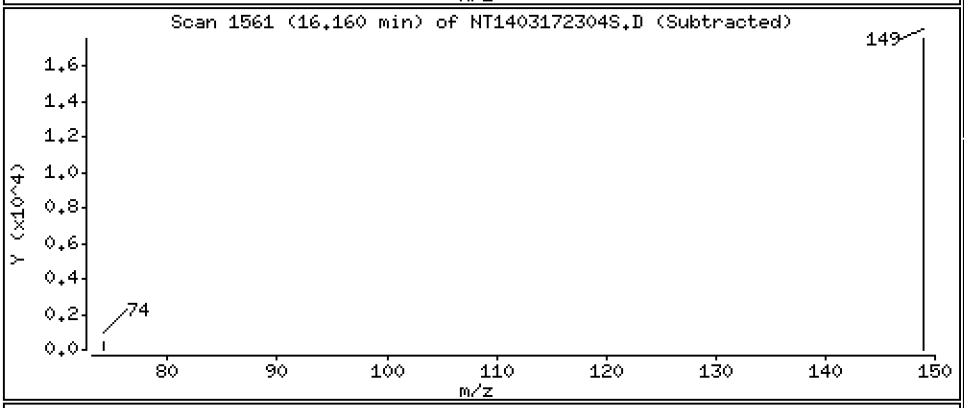
Column diameter: 0.25

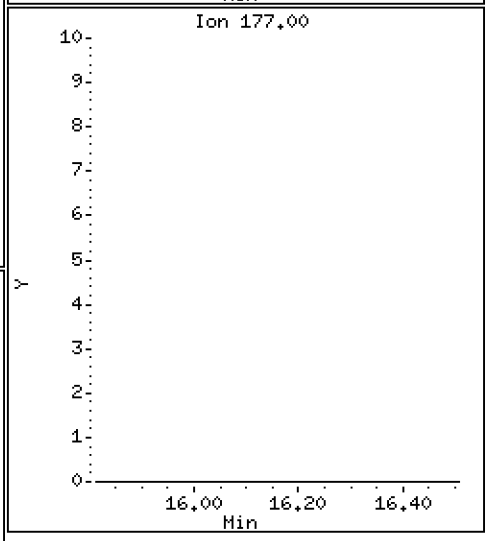
50 Diethylphthalate

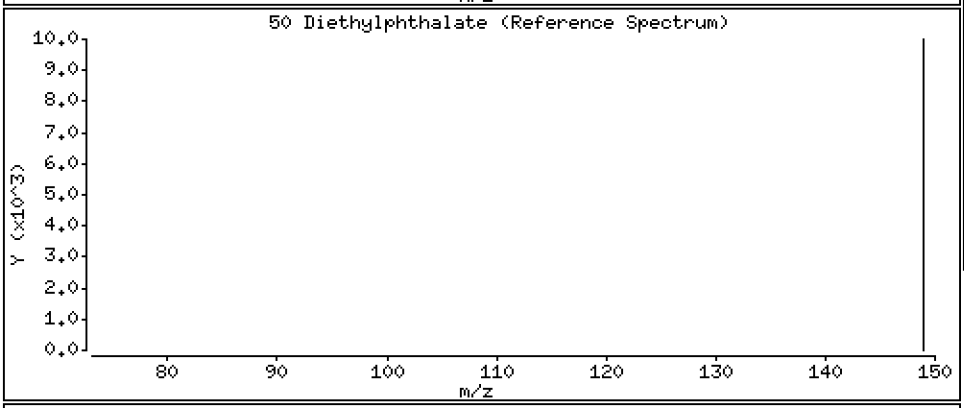
Concentration: 0.1898 ug/mL

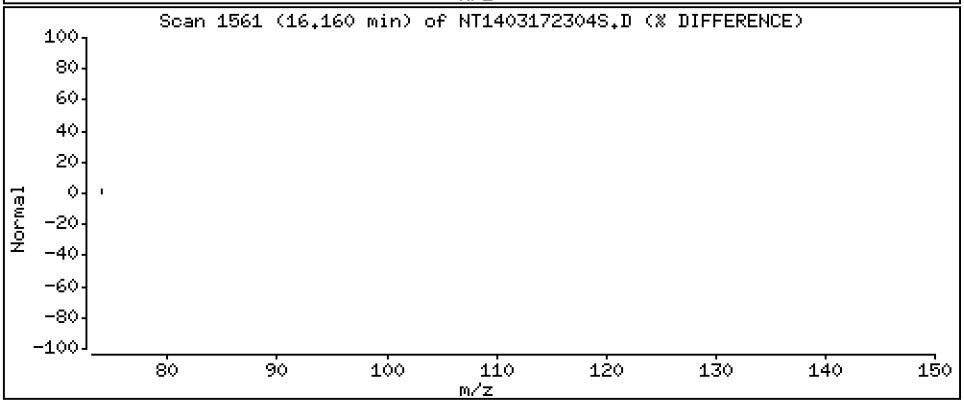












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV1

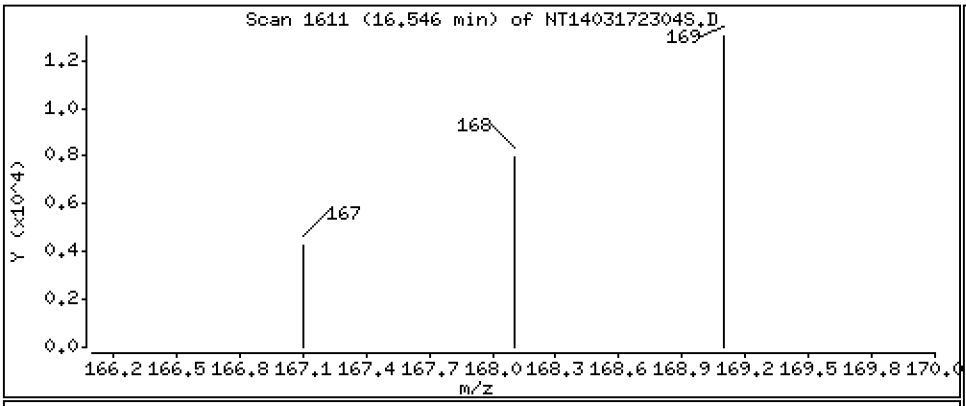
Operator: JGR

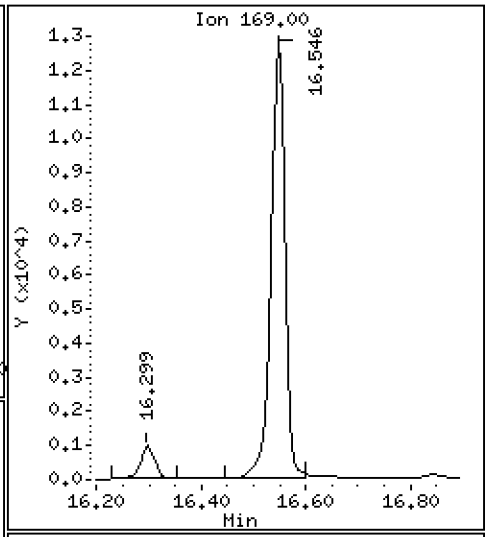
Column phase: ZB-5msi

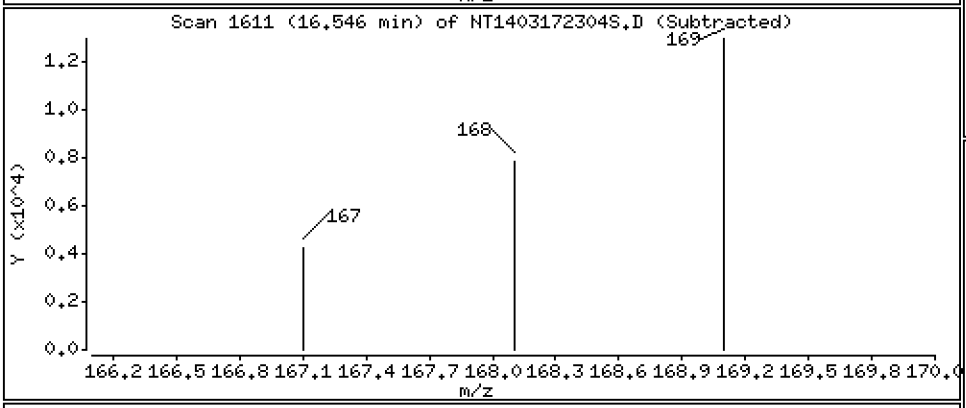
Column diameter: 0.25

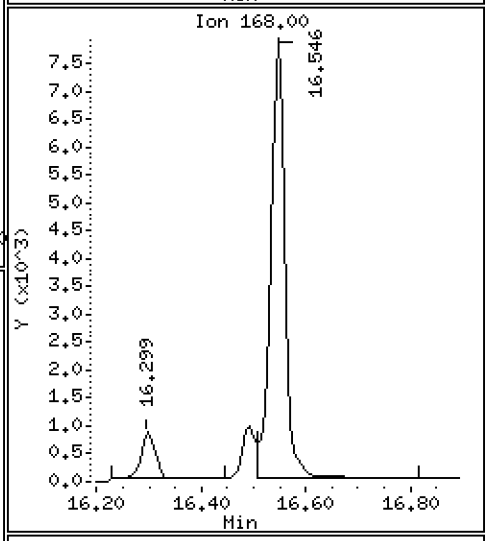
54 N-Nitrosodiphenylamine

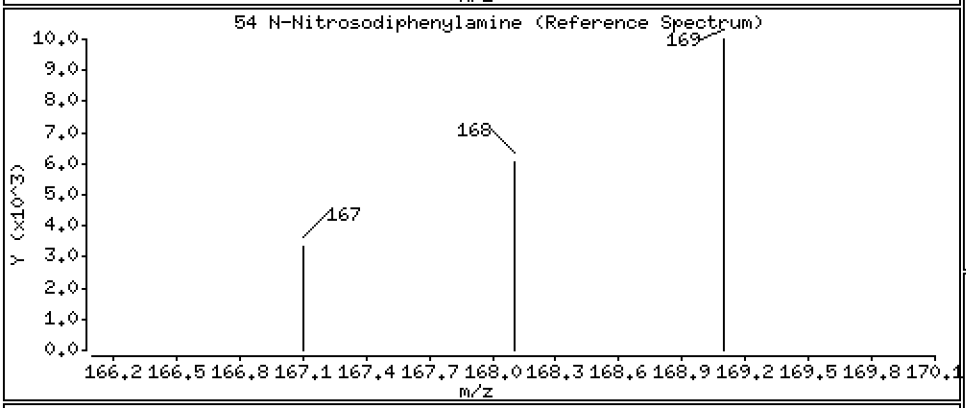
Concentration: 0.1916 ug/mL

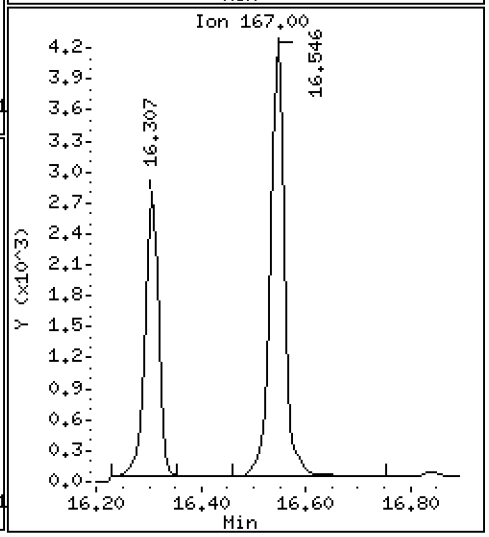


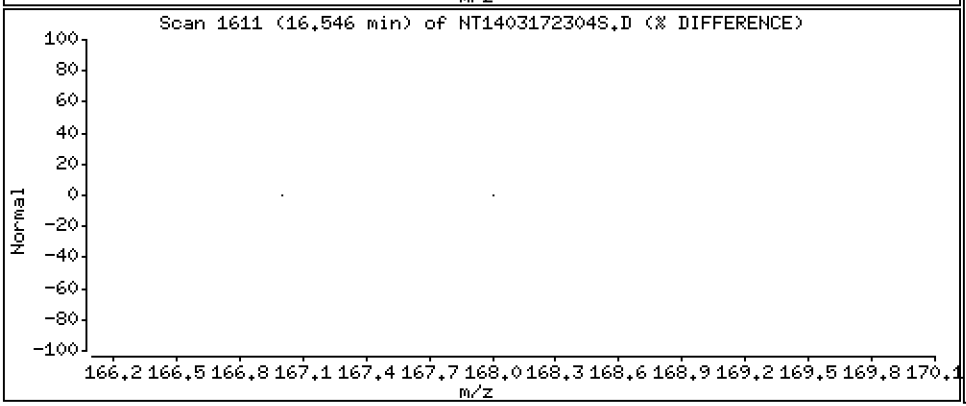












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV1

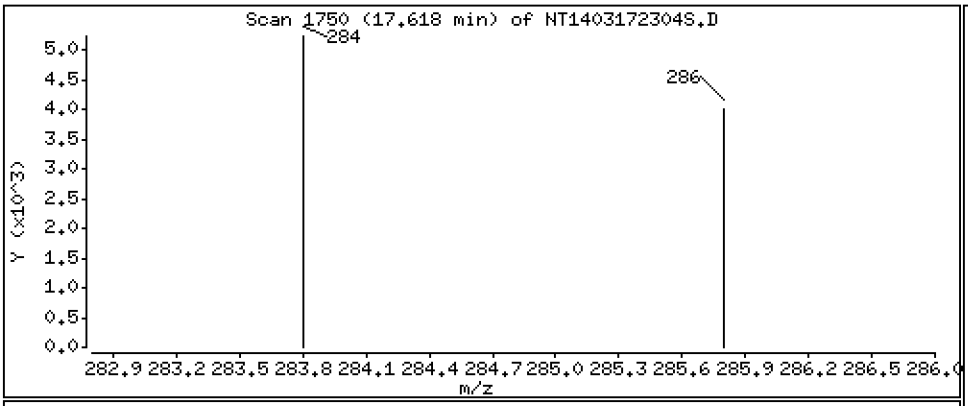
Operator: JGR

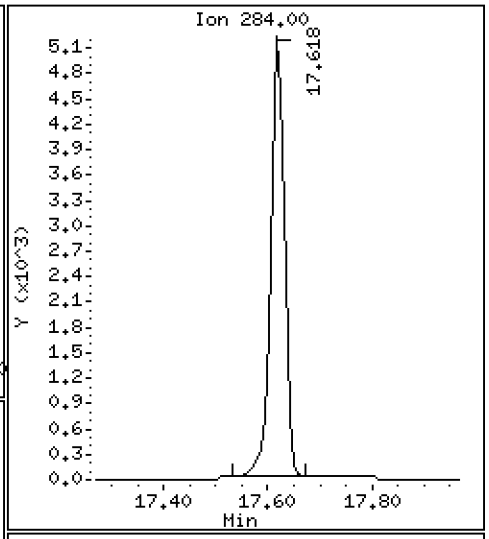
Column phase: ZB-5msi

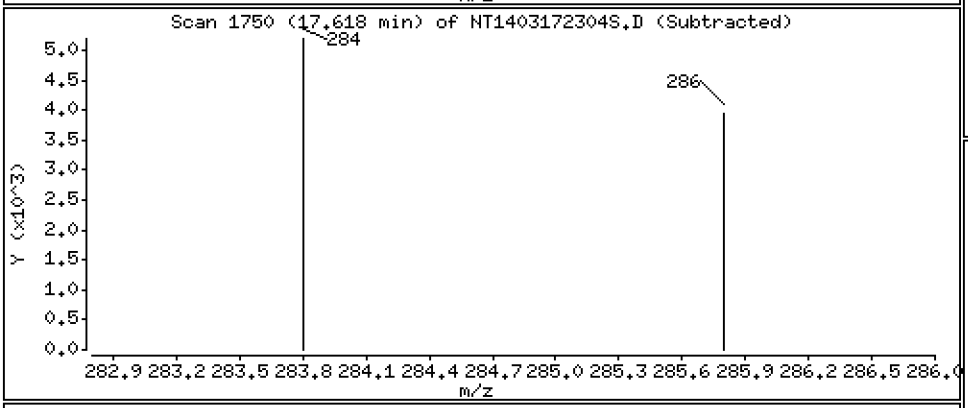
Column diameter: 0.25

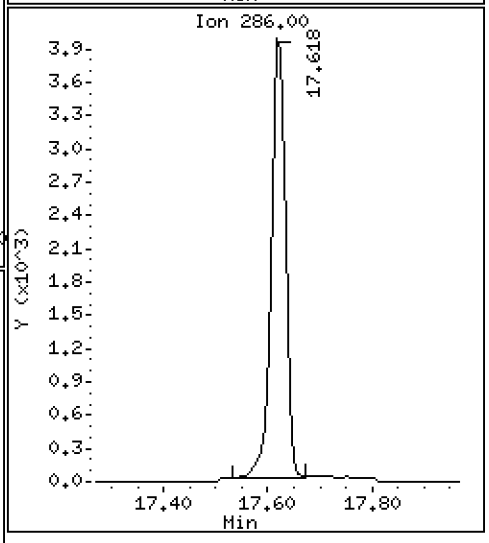
57 Hexachlorobenzene

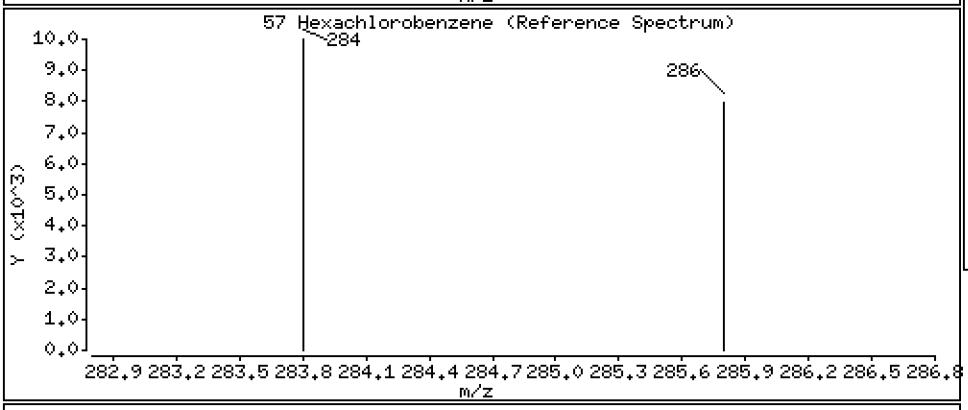
Concentration: 0.2017 ug/mL

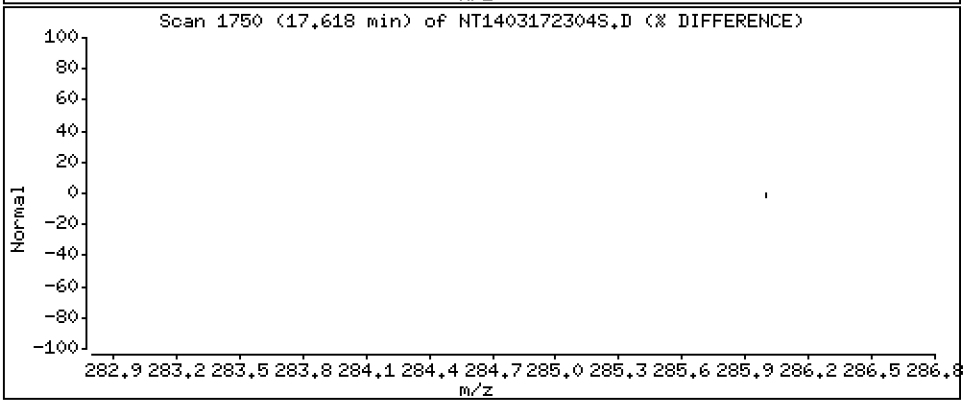












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV1

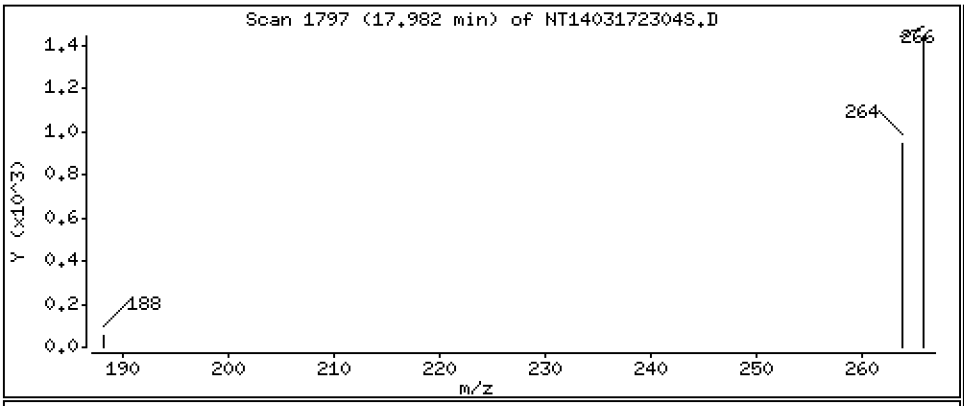
Operator: JGR

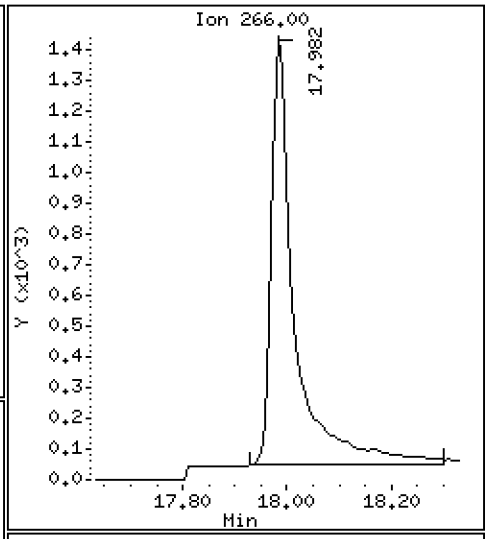
Column phase: ZB-5msi

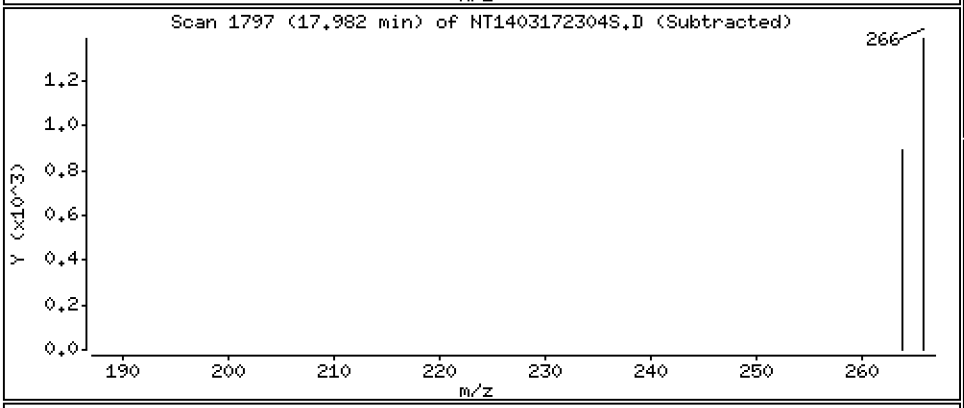
Column diameter: 0.25

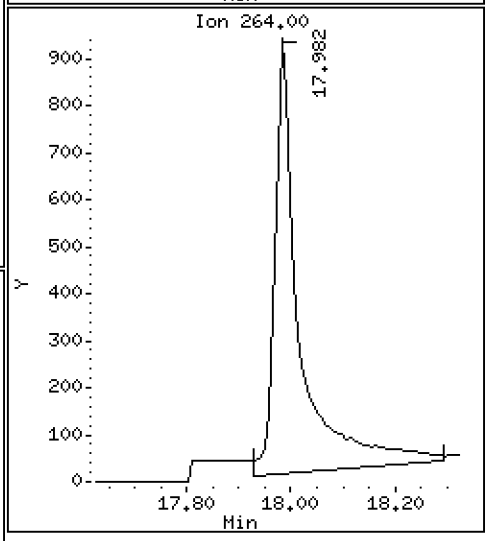
58 Pentachlorophenol

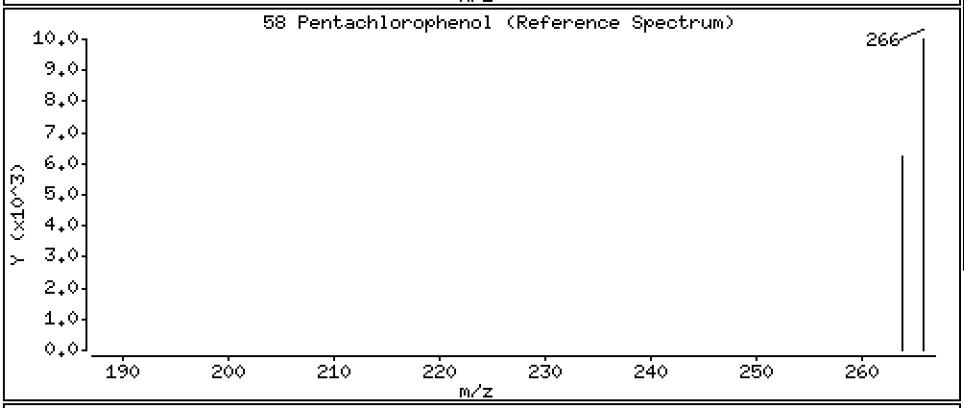
Concentration: 0.1397 ug/mL

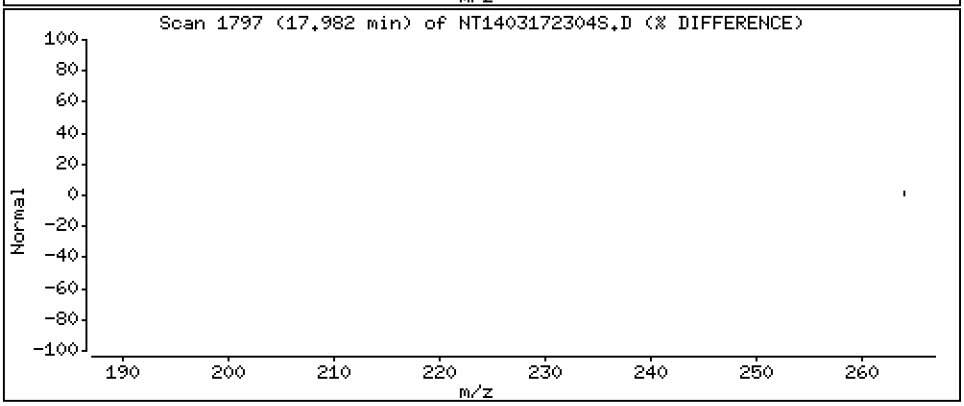












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172304S.D

Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV1

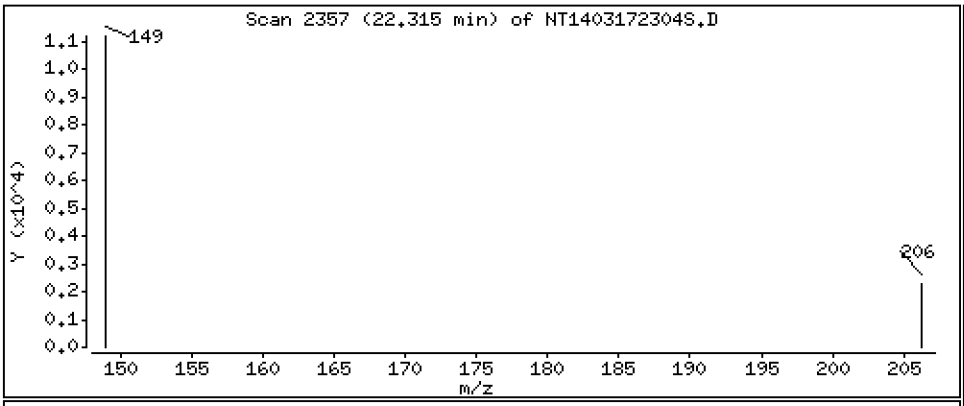
Operator: JGR

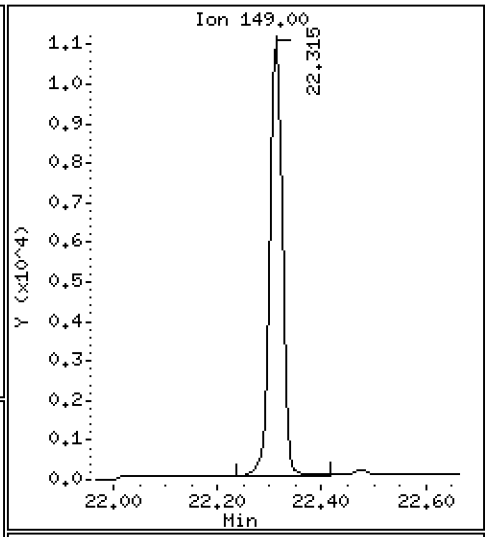
Column phase: ZB-5msi

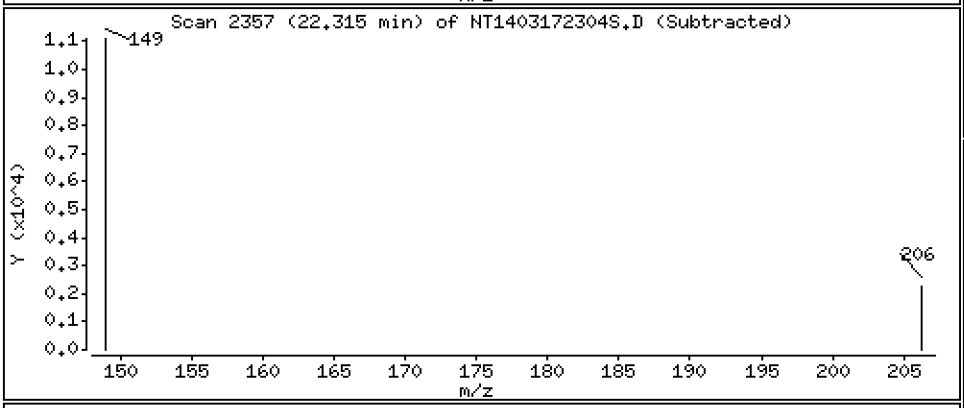
Column diameter: 0.25

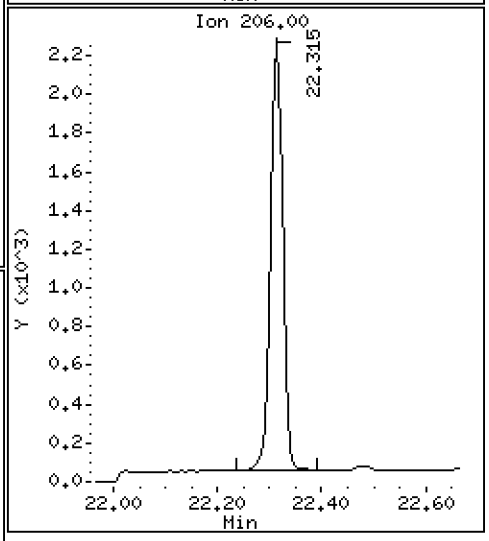
67 Butylbenzylphthalate

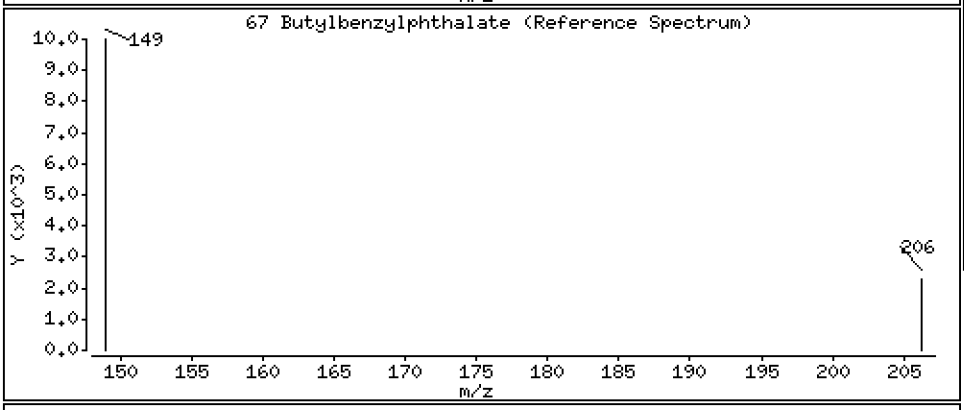
Concentration: 0.1779 ug/mL

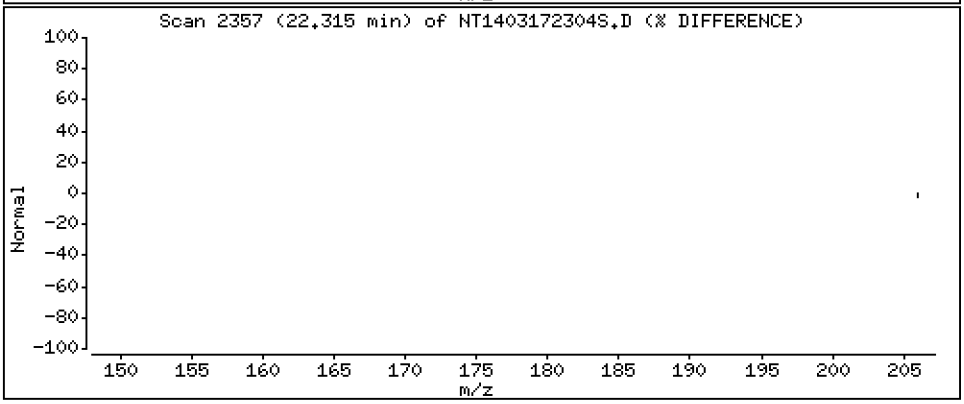












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Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV1

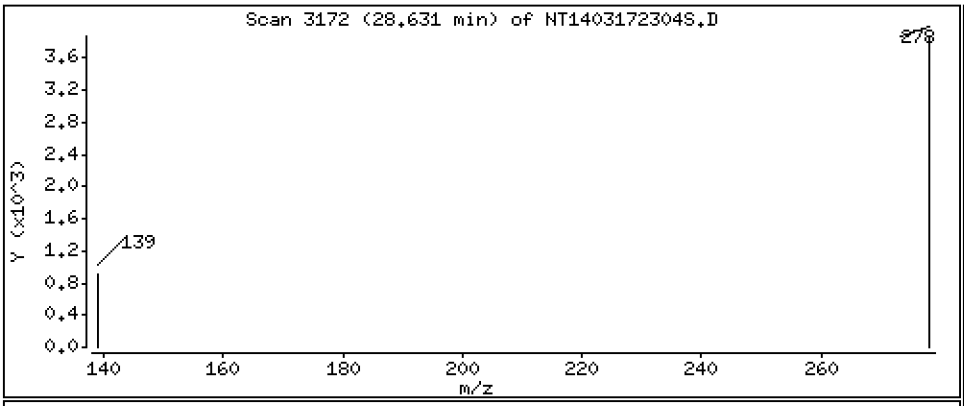
Operator: JGR

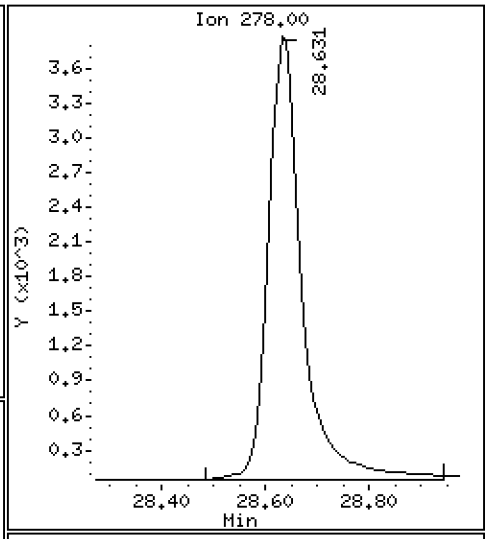
Column phase: ZB-5msi

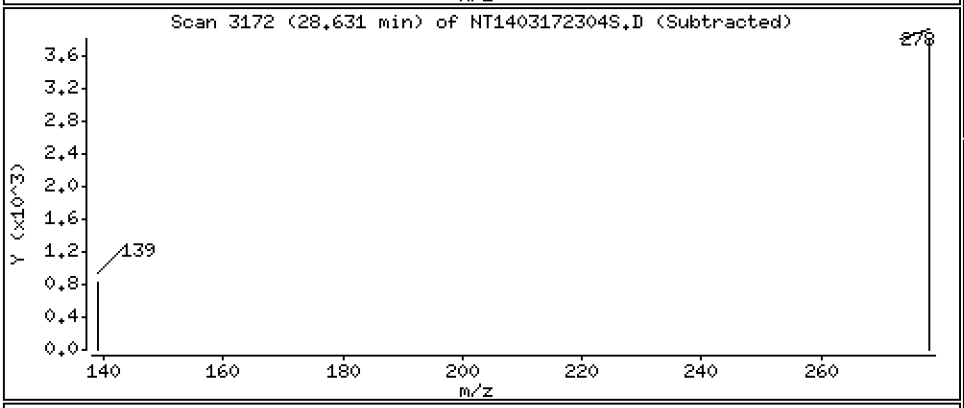
Column diameter: 0.25

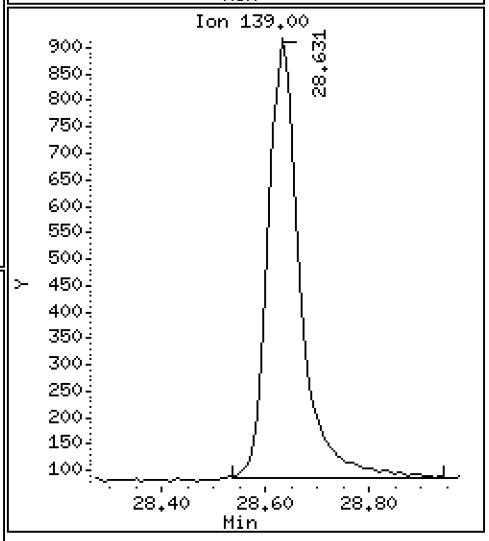
79 Dibenzo(a,h)anthracene

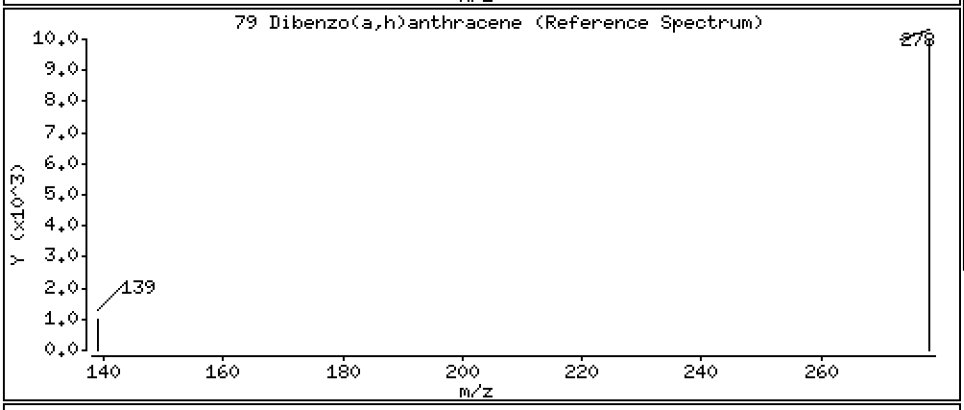
Concentration: 0.1599 ug/mL

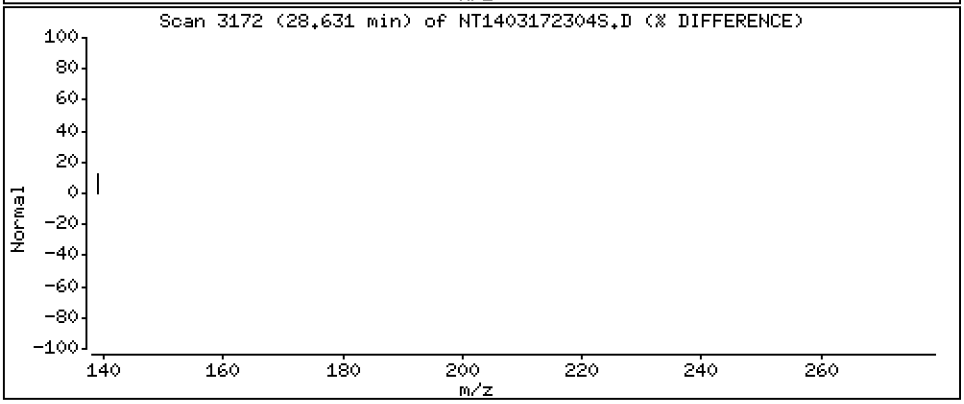












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172304S.D

Date : 17-MAR-2023 16:16

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV1

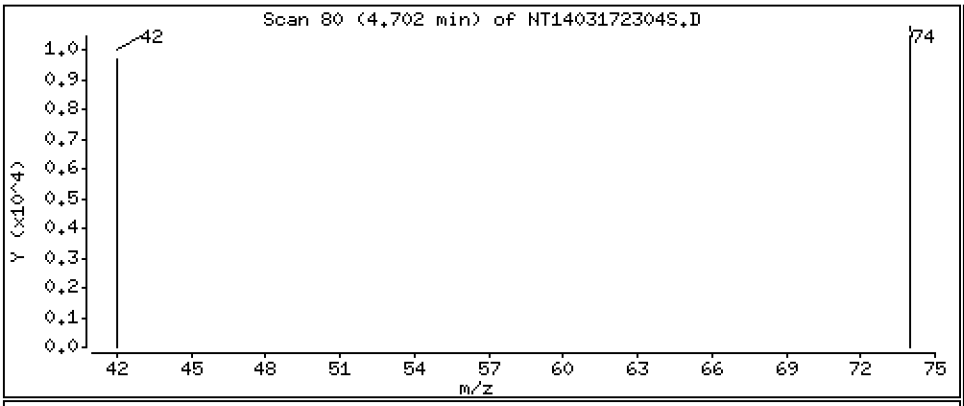
Operator: JGR

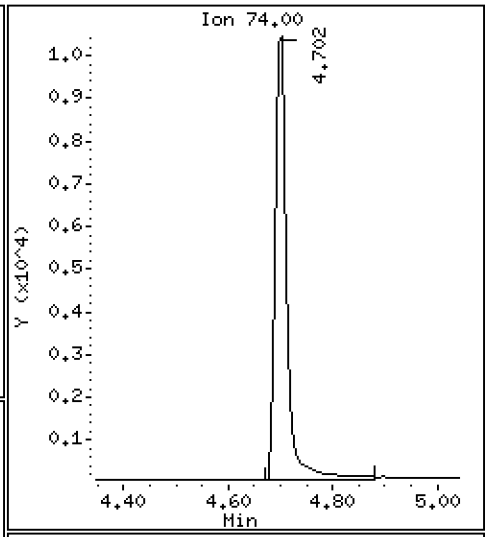
Column phase: ZB-5msi

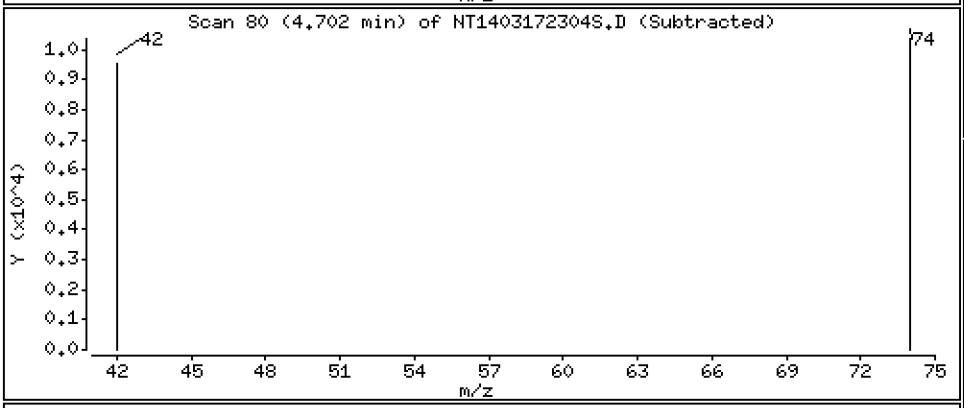
Column diameter: 0.25

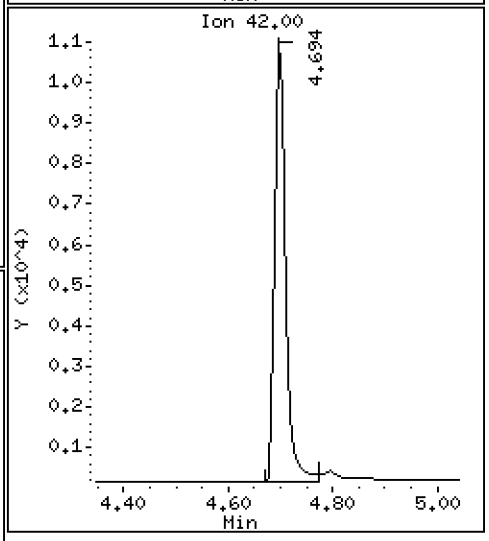
90 N-Nitrosodimethylamine

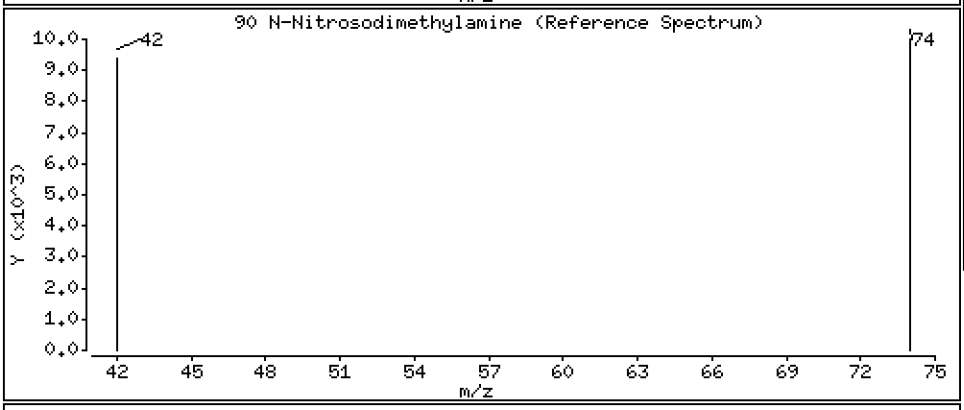
Concentration: 0.2986 ug/mL

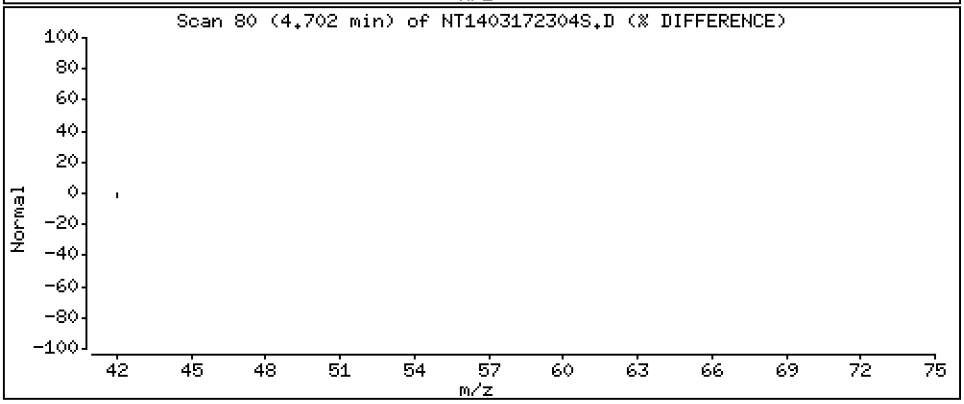












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172304S.D
Lab Smp Id: SLC0376-LCV1
Inj Date : 17-MAR-2023 16:16 MS Autotune Date: 11-MAR-2023 16:01
Operator : JGR Inst ID: nt14.i
Smp Info : SLC0376-LCV1
Misc Info :
Comment :
Method : \\target\share\chem3\nt14.i\20230317.b\20230317.b\SIMABN2.m
Meth Date : 23-Mar-2023 16:53 van Quant Type: ISTD
Cal Date : 15-MAR-2023 15:50 Cal File: NT1403152308.D
Als bottle: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.826	6.826	(0.753)	21685	0.25255	0.2525(R)
	3 Phenol	94	8.440	8.440	(0.931)	19137	0.16207	0.1621
	7 1,3-Dichlorobenzene	146	9.005	9.005	(0.993)	20438	0.20227	0.2023
*	8 1,4-Dichlorobenzene-d4	152	9.067	9.067	(1.000)	252964	4.00000	
	9 1,4-Dichlorobenzene	146	9.098	9.098	(1.003)	19733	0.20181	0.2018
	11 Benzyl alcohol	79	9.338	9.338	(1.030)	9900	0.14304	0.1430
	12 1,2-Dichlorobenzene	146	9.455	9.455	(1.043)	19394	0.20363	0.2036
	13 2-Methylphenol	108	9.564	9.563	(1.055)	14928	0.18302	0.1830
	15 4-Methylphenol	108	9.835	9.827	(1.085)	14749	0.17116	0.1712
	16 N-Nitroso-di-n-propylamine	70	9.897	9.897	(1.092)	10682	0.17533	0.1753
	22 2,4-Dimethylphenol	107	10.883	10.883	(0.941)	32519	0.40310	0.4031
	24 Benzoic acid	105	10.991	10.999	(0.950)	5920	0.09699	0.09699
	26 1,2,4-Trichlorobenzene	180	11.479	11.479	(0.993)	16460	0.20818	0.2082
*	27 Naphthalene-d8	136	11.564	11.564	(1.000)	938423	4.00000	
	30 Hexachlorobutadiene	225	11.974	11.974	(1.035)	8315	0.20780	0.2078
	39 Dimethylphthalate	163	14.698	14.698	(0.967)	28451	0.19222	0.1922
*	42 Acenaphthene-d10	162	15.201	15.201	(1.000)	433407	4.00000	
	50 Diethylphthalate	149	16.160	16.160	(1.063)	29917	0.18985	0.1898
	54 N-Nitrosodiphenylamine	169	16.545	16.545	(0.907)	22655	0.19164	0.1916
	57 Hexachlorobenzene	284	17.618	17.618	(0.966)	9160	0.20170	0.2017
	58 Pentachlorophenol	266	17.982	17.982	(0.986)	4280	0.13967	0.1397
*	59 Phenanthrene-d10	188	18.245	18.245	(1.000)	872490	4.00000	
$	66 Terphenyl-d14	244	21.386	21.386	(0.918)	23037	0.23628	0.2363(R)
	67 Butylbenzylphthalate	149	22.315	22.315	(0.958)	17584	0.17795	0.1779
*	69 Chrysene-d12	240	23.298	23.298	(1.000)	565557	4.00000	
*	77 Perylene-d12	264	25.939	25.938	(1.000)	425973	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.631	28.623	(1.104)	17269	0.15992	0.1599
	90 N-Nitrosodimethylamine	74	4.702	4.694	(0.519)	15662	0.29857	0.2986

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1403172304S.D
Lab Smp Id: SLC0376-LCV1
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\SIMABN2.m
Misc Info:

Calibration Date: 17-MAR-2023
Calibration Time: 15:39
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	224436	112218	448872	252964	12.71
27 Naphthalene-d8	825617	412809	1651234	938423	13.66
42 Acenaphthene-d10	392947	196474	785894	433407	10.30
59 Phenanthrene-d10	789887	394944	1579774	872490	10.46
69 Chrysene-d12	494007	247004	988014	565557	14.48
77 Perylene-d12	375441	187721	750882	425973	13.46

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.07	8.57	9.57	9.07	0.00
27 Naphthalene-d8	11.56	11.06	12.06	11.56	0.00
42 Acenaphthene-d10	15.20	14.70	15.70	15.20	0.00
59 Phenanthrene-d10	18.25	17.75	18.75	18.25	0.00
69 Chrysene-d12	23.30	22.80	23.80	23.30	0.00
77 Perylene-d12	25.94	25.44	26.44	25.94	0.00

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

REVIEW SUMMARY FOR FILE - NT1403172304S.D

Lab ID: SLC0376-LCV1
nt14.i, 20230317.b\20230317.b\SIMABN2.m,   17-MAR-2023 16:16

RT	CO-ELUTION COMPOUNDS
NO CO-ELUTIONS	

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
NONE			

RRT check based on Ccal File: 20230317.b/NT1403172303S.D

On Column LOD for nt14.i, 20230317.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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

Analytical Resources, LLC
Analytical Chemists and Consultants

LOW-CONCENTRATION CONTINUING CALIBRATION CHECK

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT14	Calibration:	GC00050
Lab File ID:	NT1403172305S.D	Calibration Date:	03/15/2023
Sequence:	SLC0376	Injection Date:	03/17/23
Lab Sample ID:	SLC0376-LCV2	Injection Time:	16:52
Sequence Name:	ABN 0.1		

		CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
1,4-Dichlorobenzene	A	0.10000	0.1	1.5461150	1.6186310		4.7	
1,2-Dichlorobenzene	A	0.10000	0.1	1.5059720	1.5955440		6.0	
Benzyl Alcohol	A	0.10000	0.06	1.0943940	0.7042581		-35.7	
Benzoic acid	A	0.40000	0.01	0.1762504	0.0069770		-97.3	
2,4-Dimethylphenol	A	0.20000	0.2	0.3438645	0.3299160		-4.1	
1,2,4-Trichlorobenzene	A	0.10000	0.1	0.3370247	0.3667360		8.8	
N-Nitrosodiphenylamine	A	0.10000	0.09	0.5419762	0.5049911		-6.8	
Pentachlorophenol	A	0.20000	0.04	0.1113753	0.0304867		-78.3	
2-Fluorophenol	A	0.15000	0.119	1.3577520	1.0776410		-20.6	
p-Terphenyl-d14	A	0.10000	0.119	0.6895811	0.8202201		18.9	

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT14031723058.D

Date : 17-MAR-2023 16:52

Client ID:

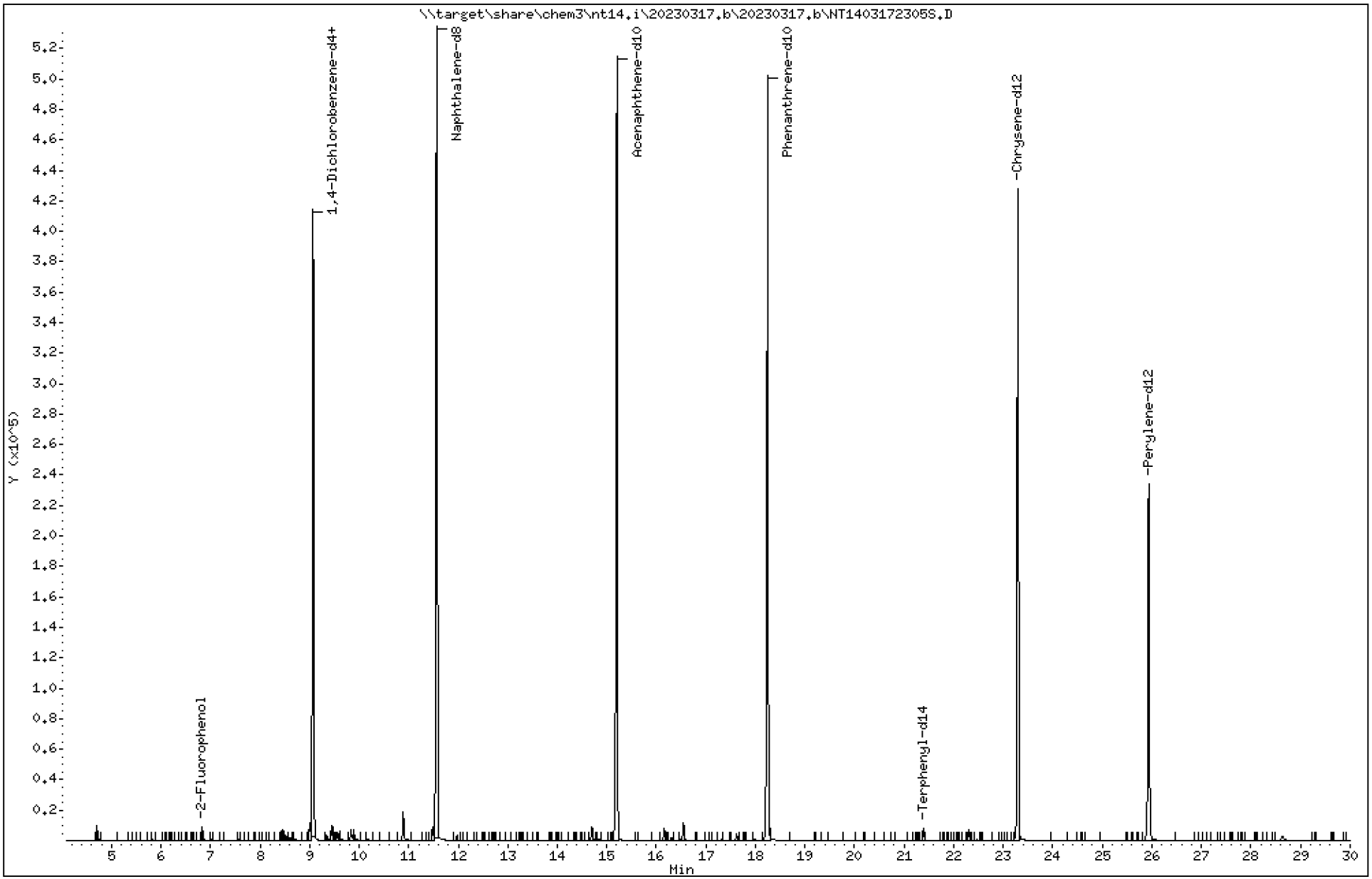
Instrument: nt14.i

Sample Info: SLC0376-LCV2

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172305S.D

Date : 17-MAR-2023 16:52

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV2

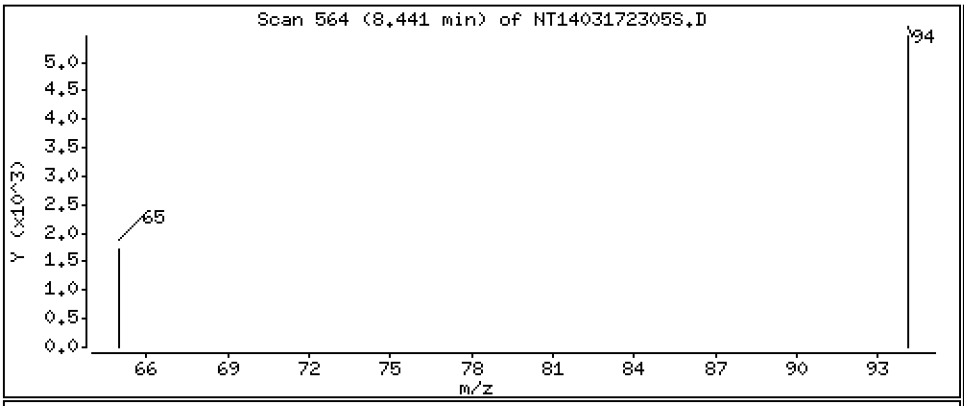
Operator: JGR

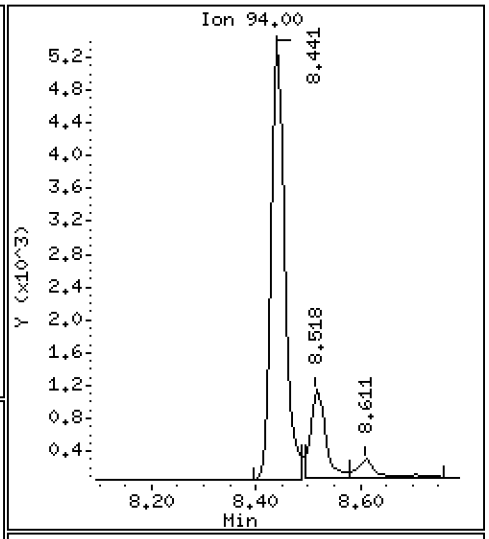
Column phase: ZB-5msi

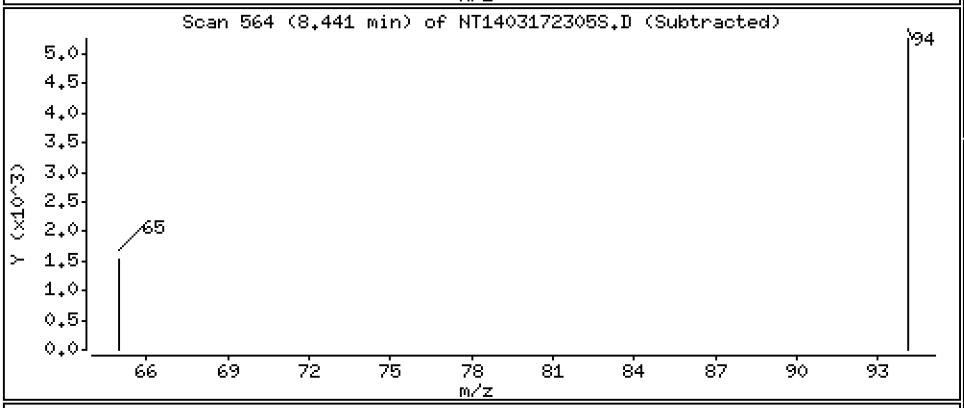
Column diameter: 0.25

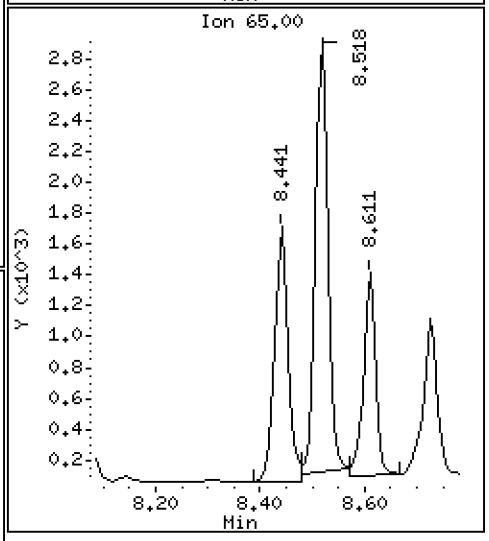
3 Phenol

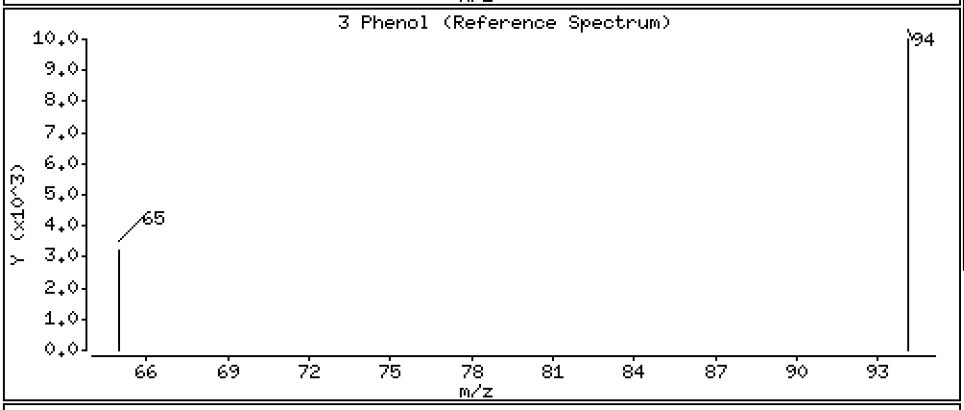
Concentration: 0.07614 ug/mL

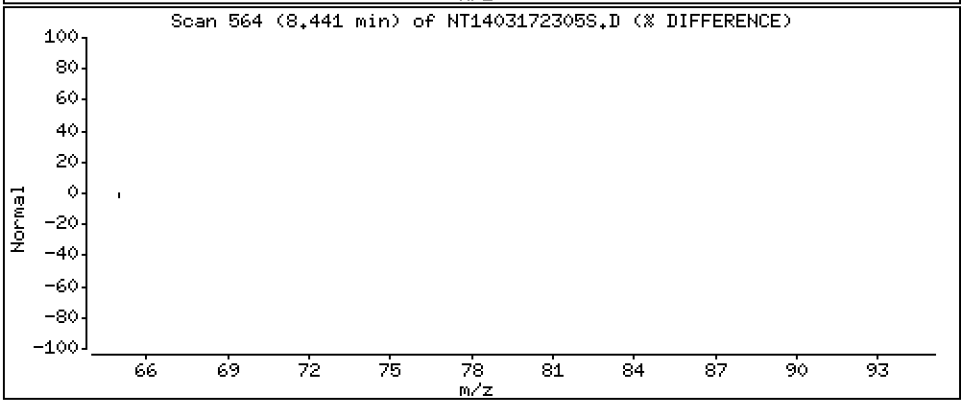












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172305S.D

Date : 17-MAR-2023 16:52

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV2

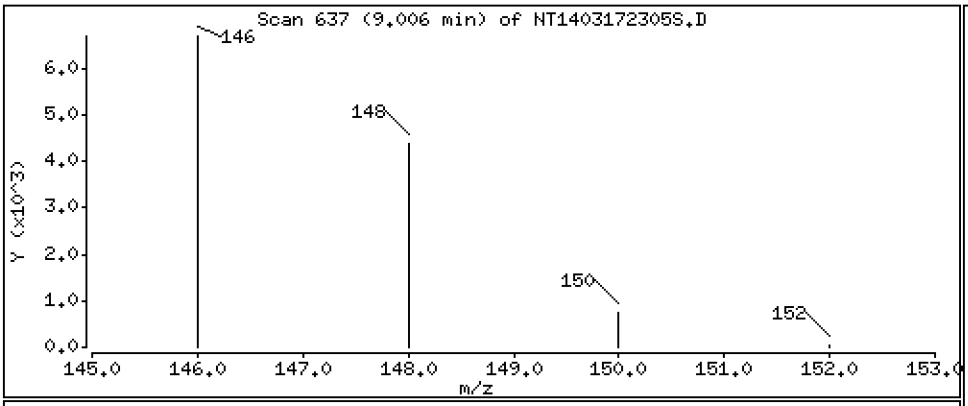
Operator: JGR

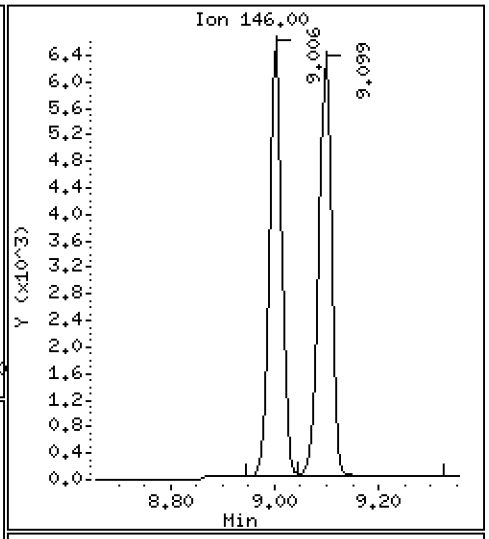
Column phase: ZB-5msi

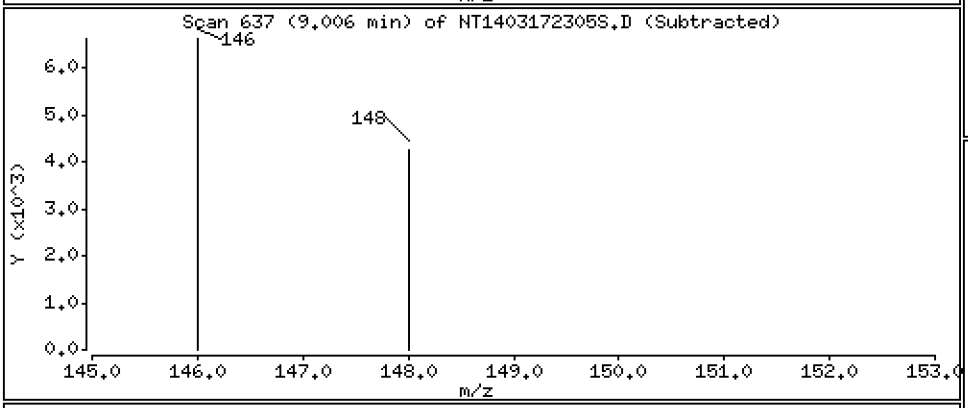
Column diameter: 0.25

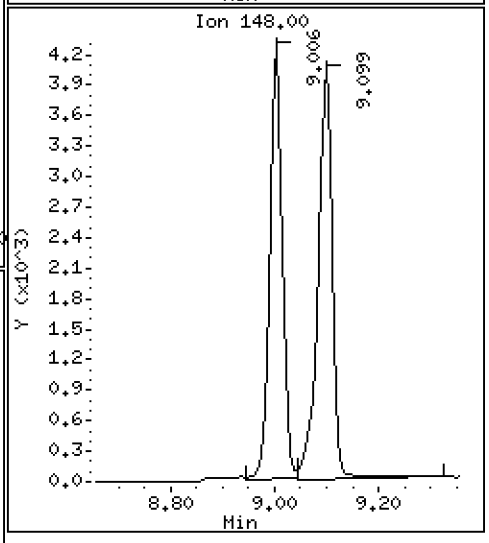
7 1,3-Dichlorobenzene

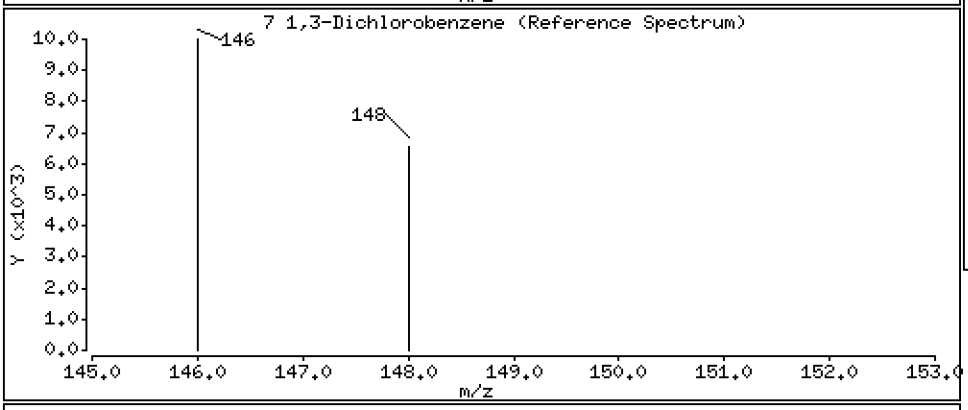
Concentration: 0.1046 ug/mL

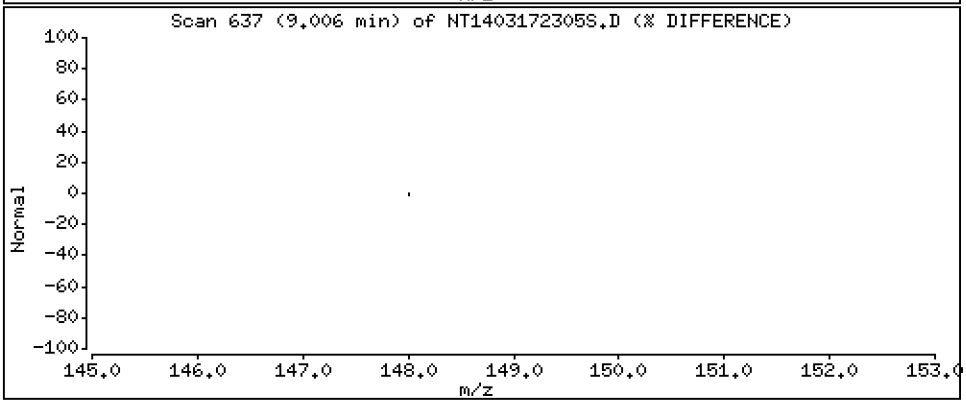












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172305S.D

Date : 17-MAR-2023 16:52

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV2

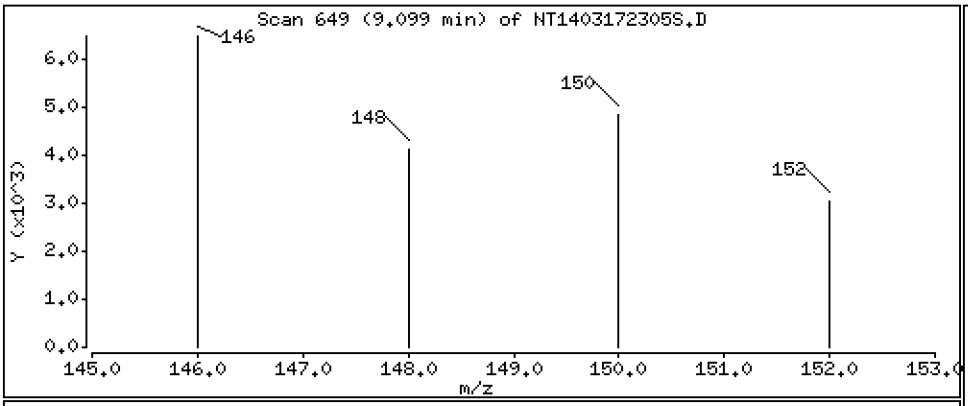
Operator: JGR

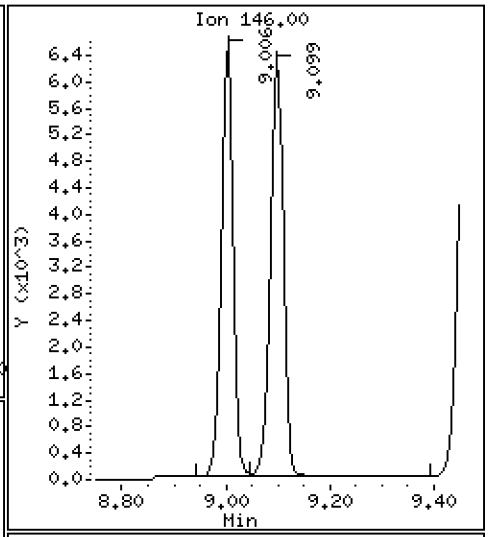
Column phase: ZB-5msi

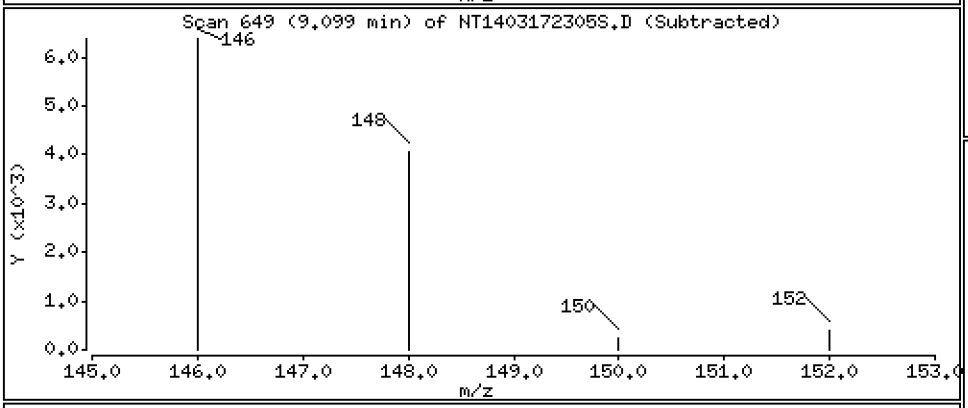
Column diameter: 0.25

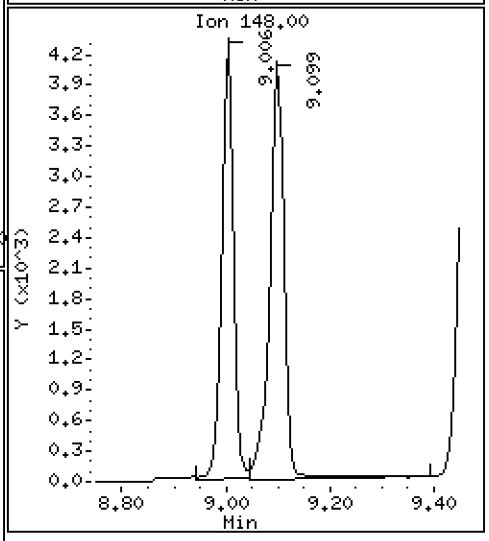
9 1,4-Dichlorobenzene

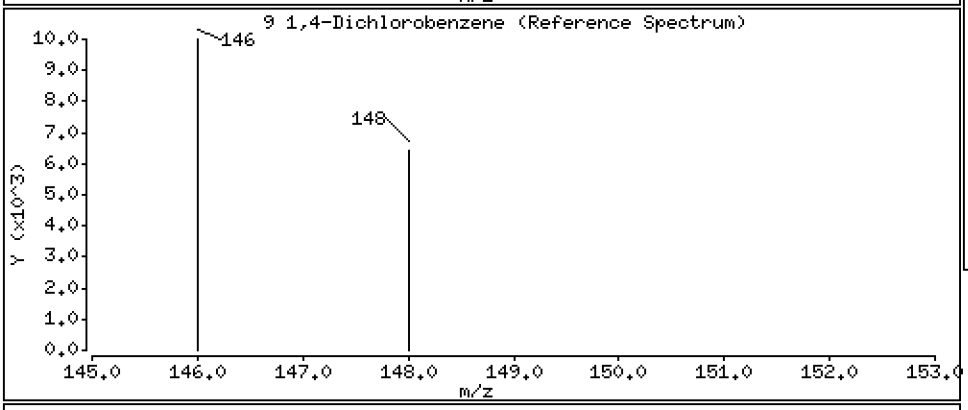
Concentration: 0.1047 ug/mL

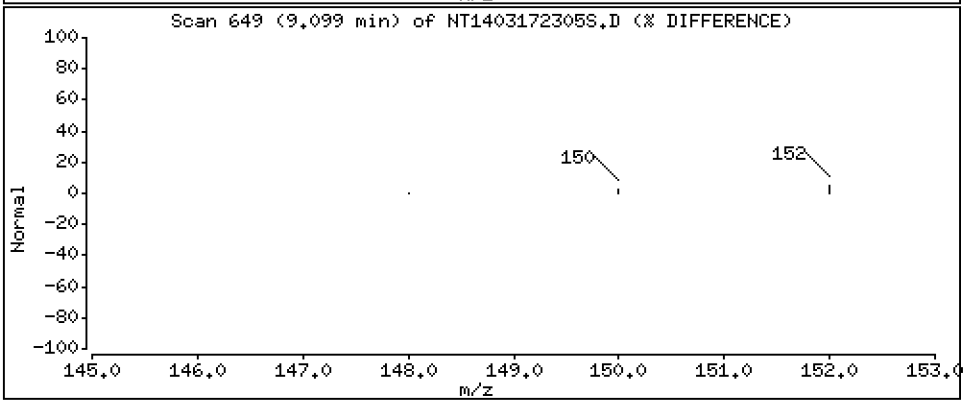












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172305S.D

Date : 17-MAR-2023 16:52

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV2

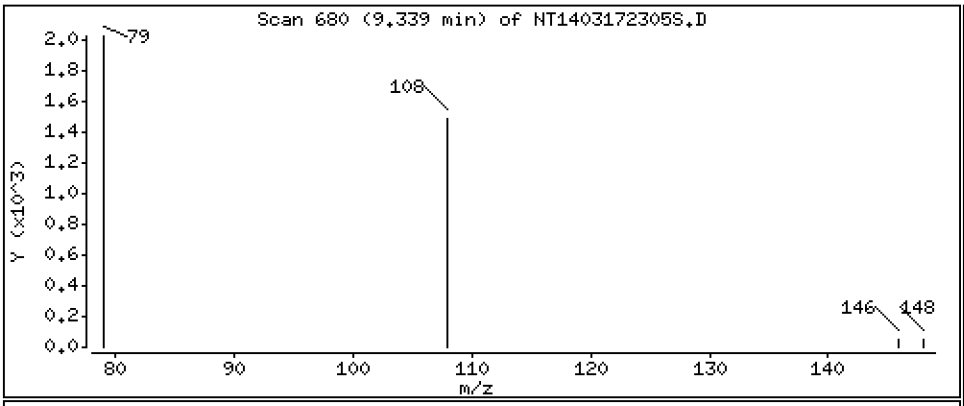
Operator: JGR

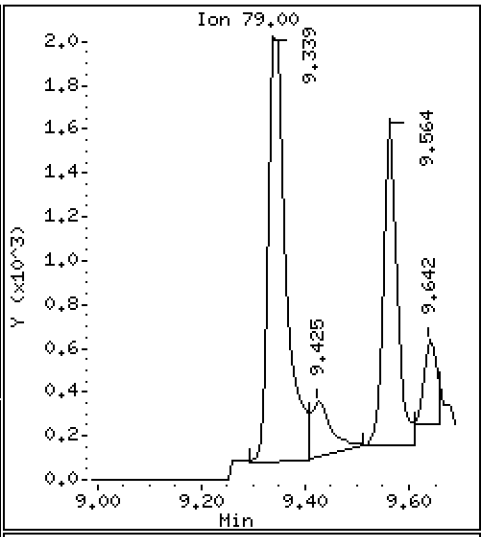
Column phase: ZB-5msi

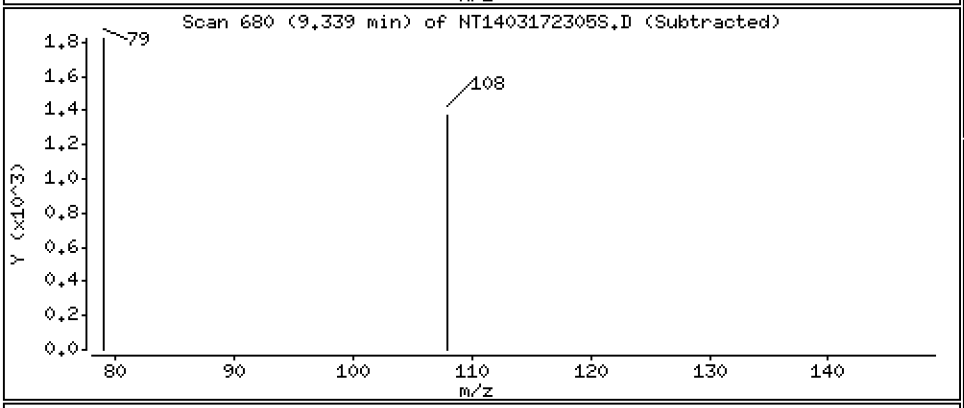
Column diameter: 0.25

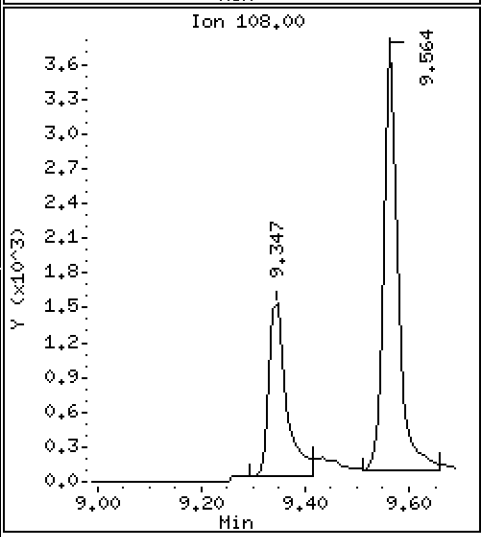
11 Benzyl alcohol

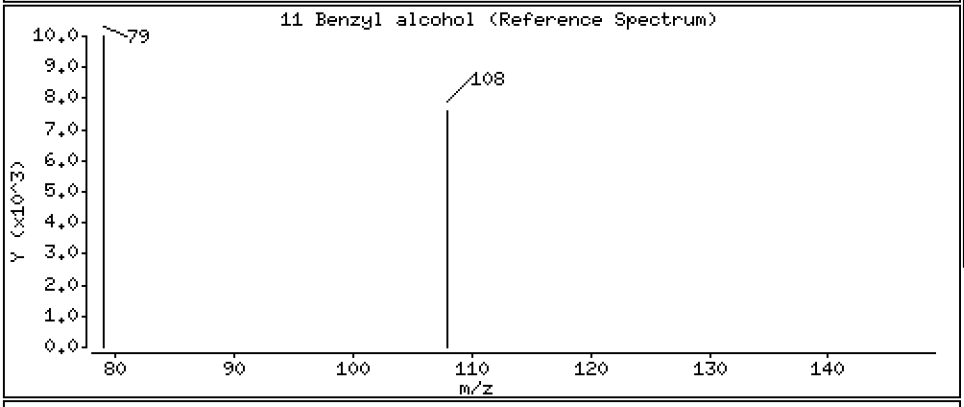
Concentration: 0.06435 ug/mL

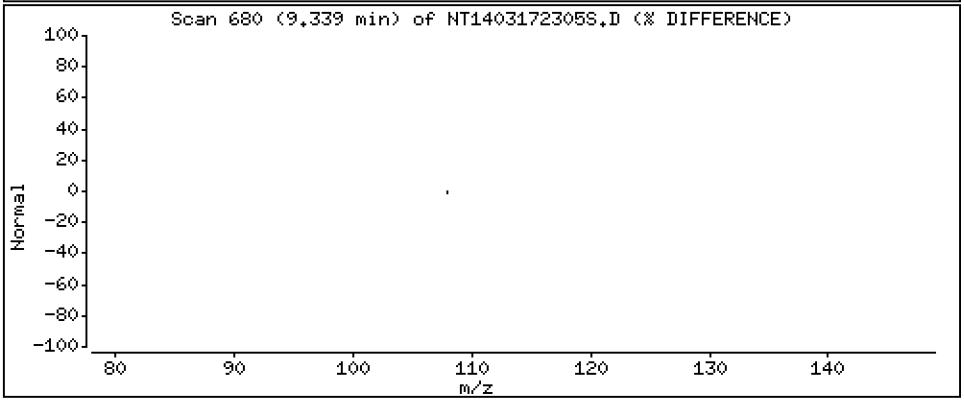












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172305S.D

Date : 17-MAR-2023 16:52

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV2

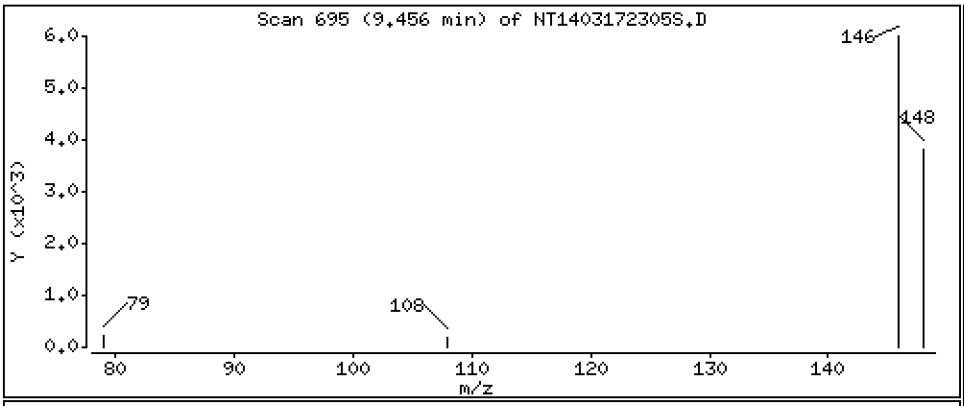
Operator: JGR

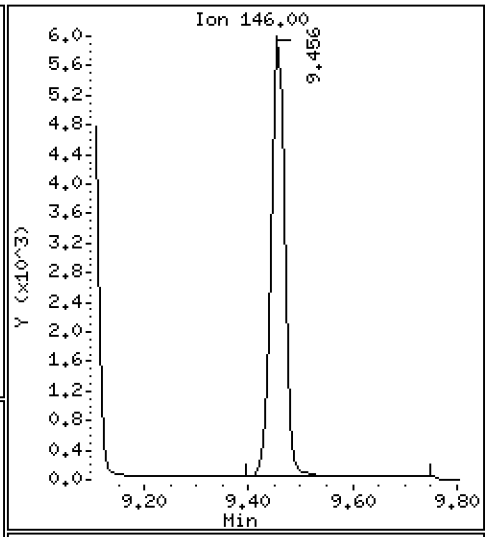
Column phase: ZB-5msi

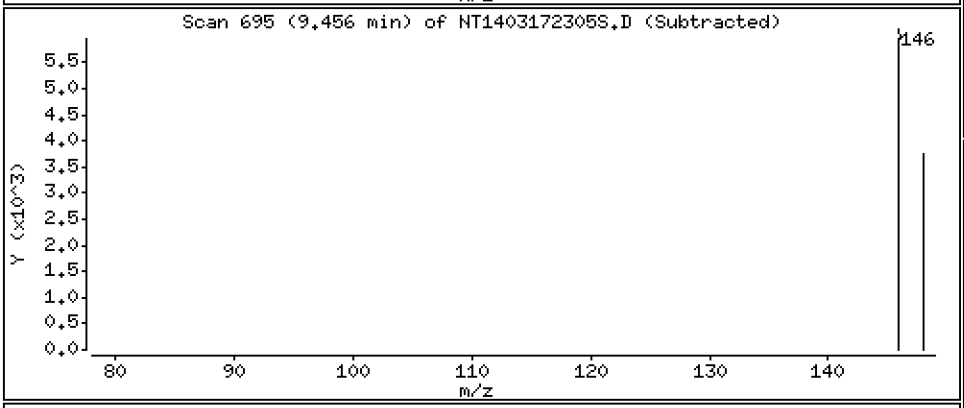
Column diameter: 0.25

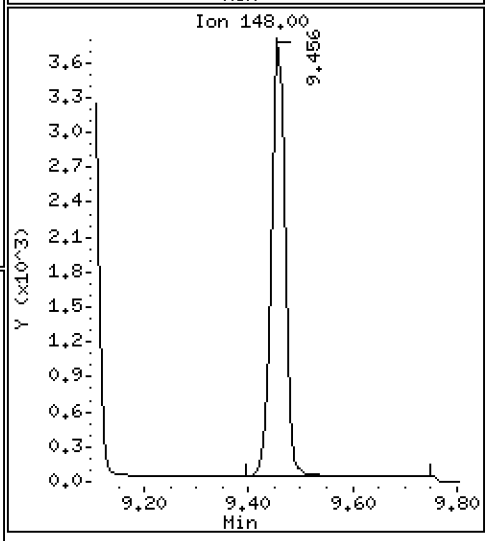
12 1,2-Dichlorobenzene

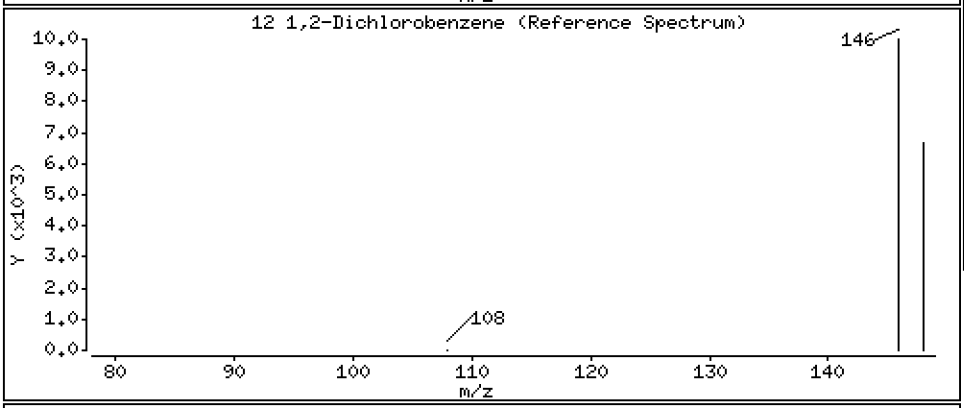
Concentration: 0.1059 ug/mL

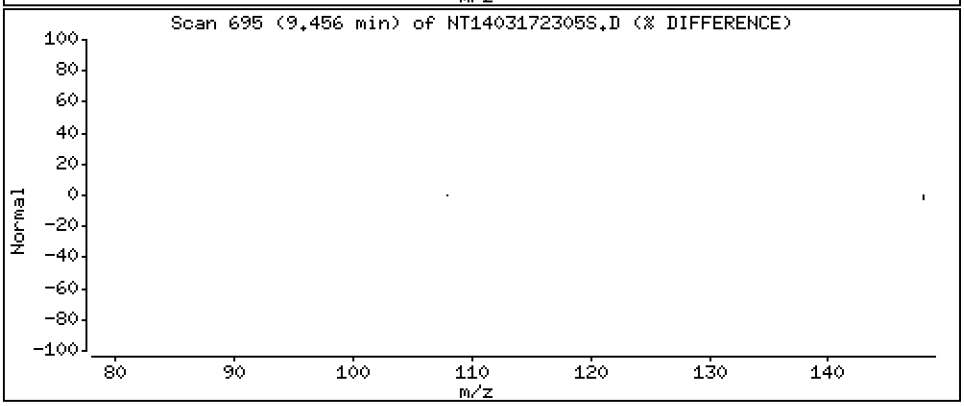












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172305S.D

Date : 17-MAR-2023 16:52

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV2

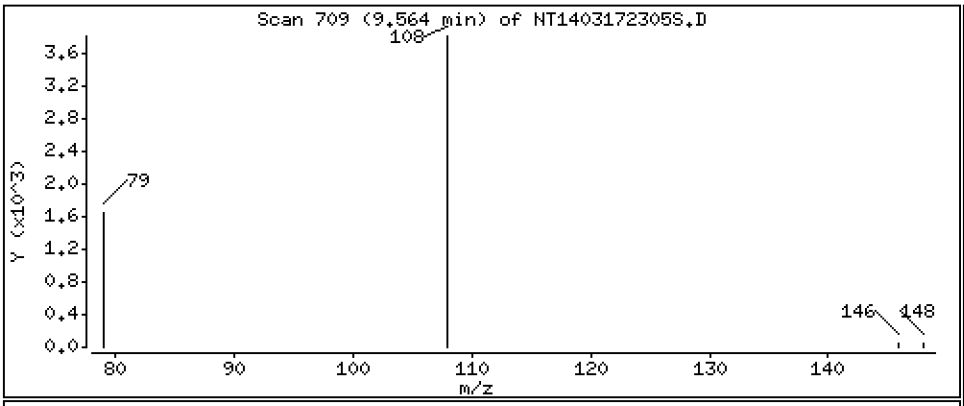
Operator: JGR

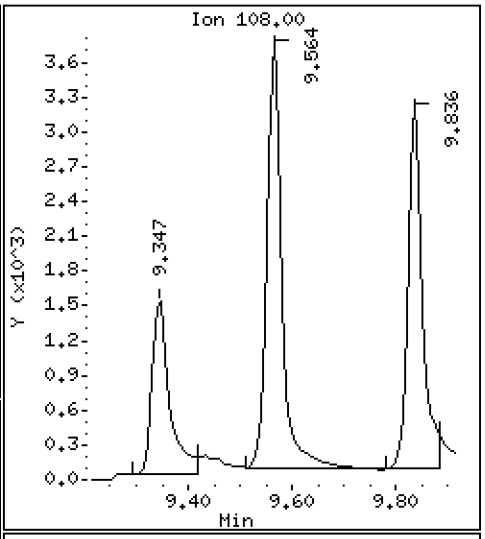
Column phase: ZB-5msi

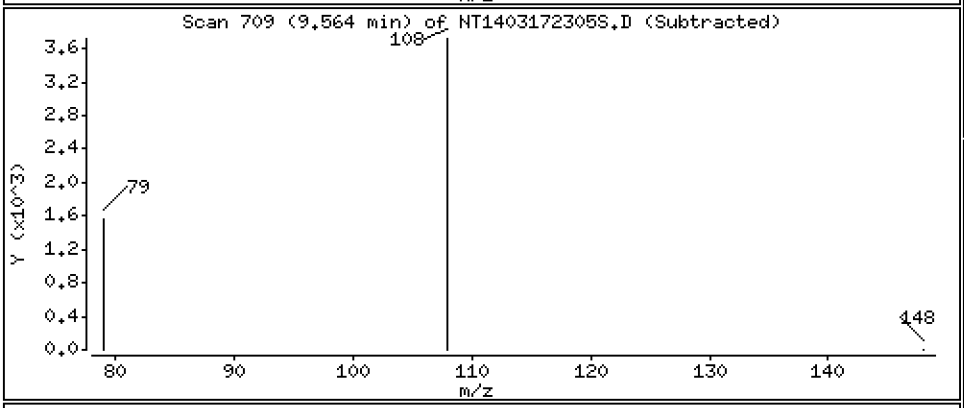
Column diameter: 0.25

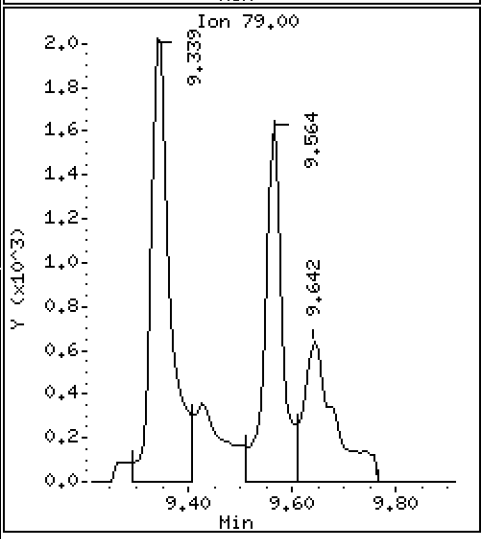
13 2-Methylphenol

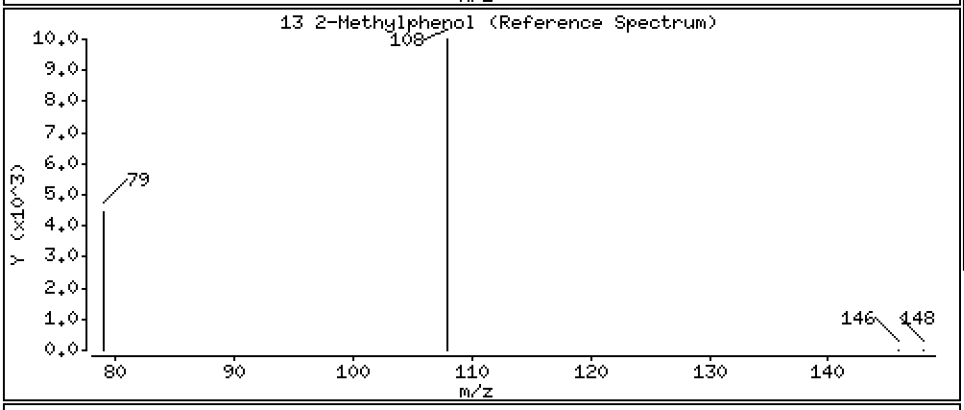
Concentration: 0.08466 ug/mL

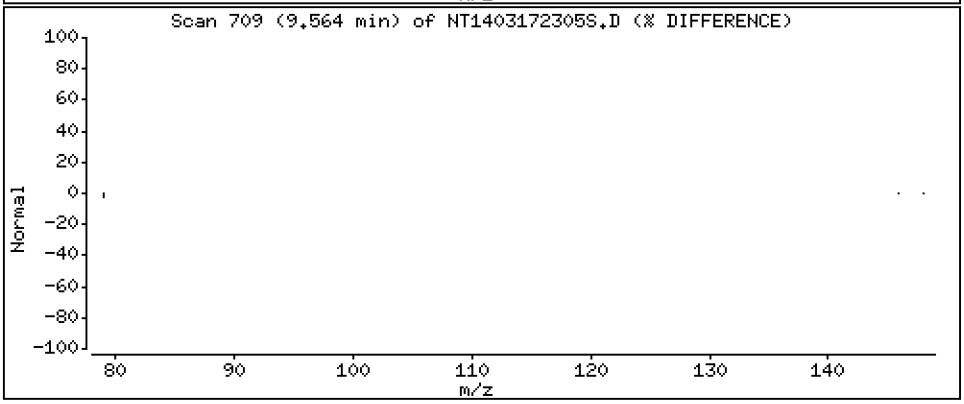












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172305S.D

Date : 17-MAR-2023 16:52

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV2

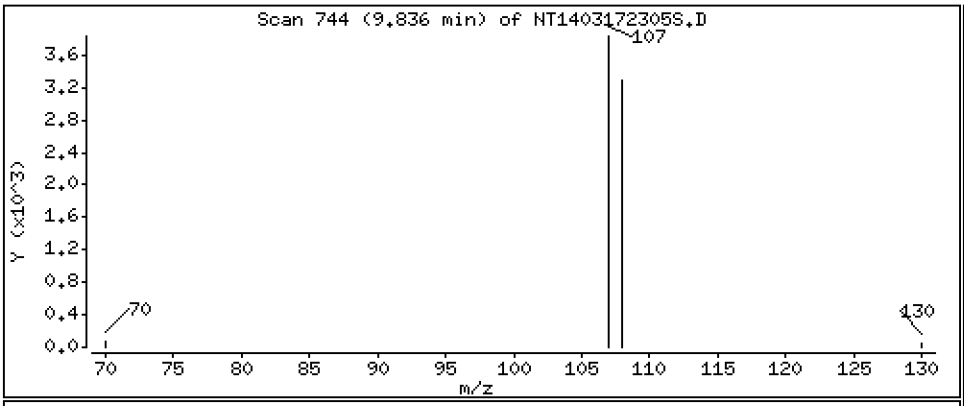
Operator: JGR

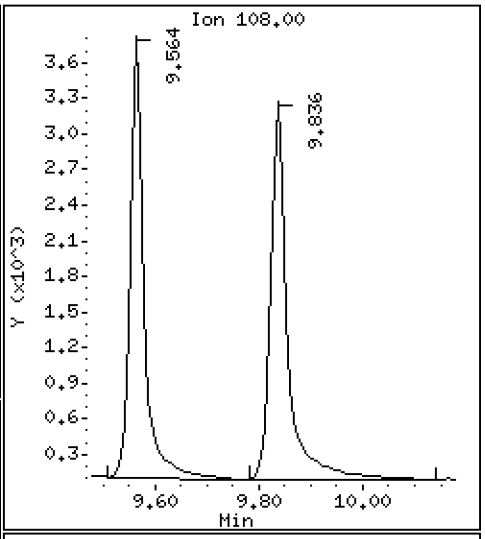
Column phase: ZB-5msi

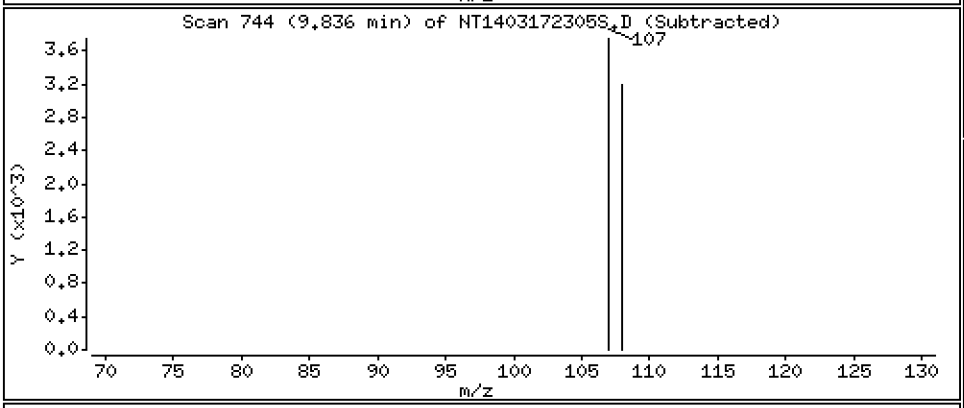
Column diameter: 0.25

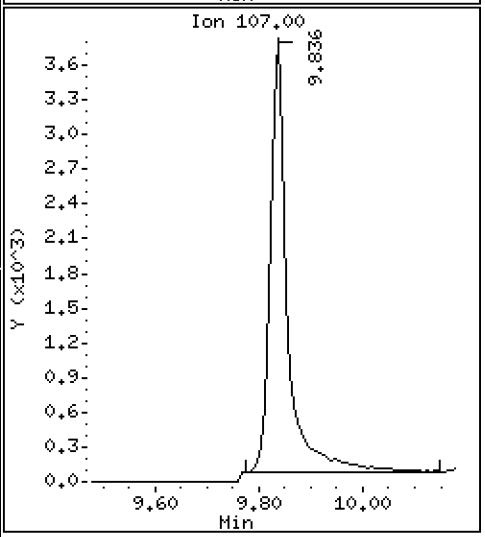
15 4-Methylphenol

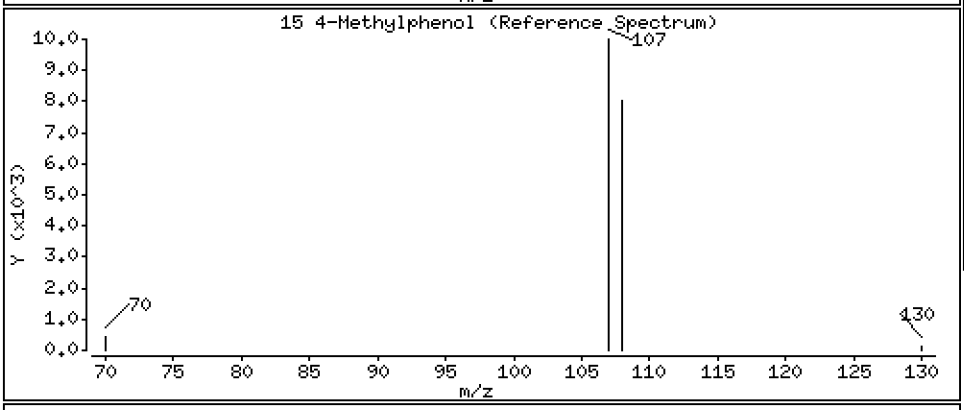
Concentration: 0.08043 ug/mL

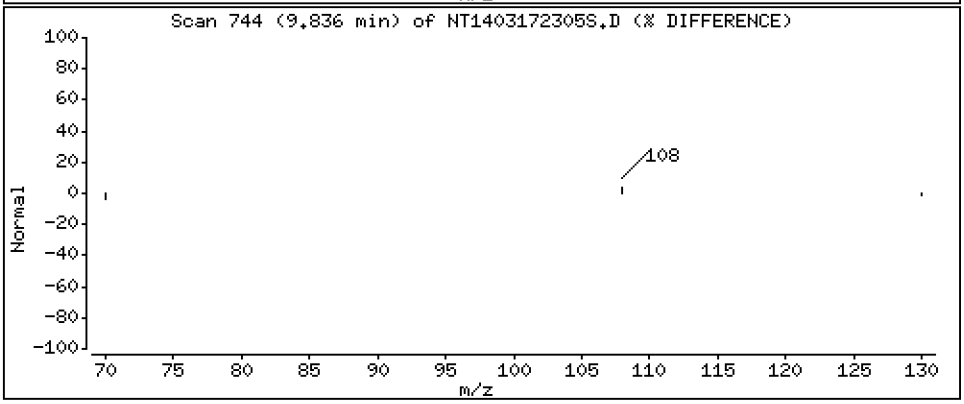












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Date : 17-MAR-2023 16:52

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV2

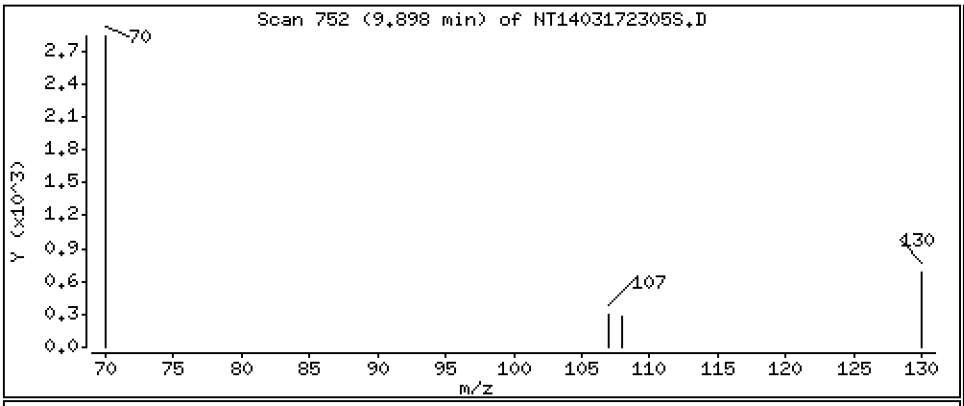
Operator: JGR

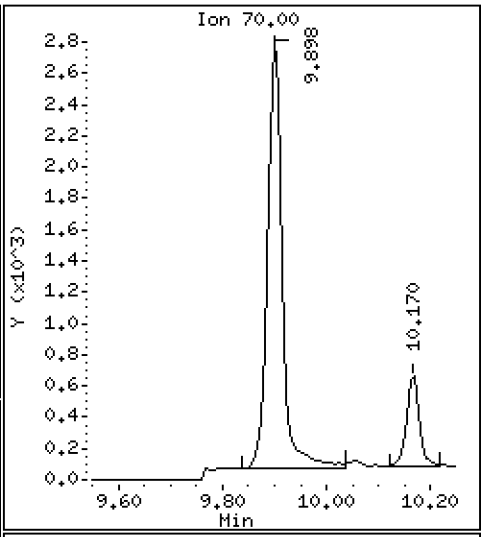
Column phase: ZB-5msi

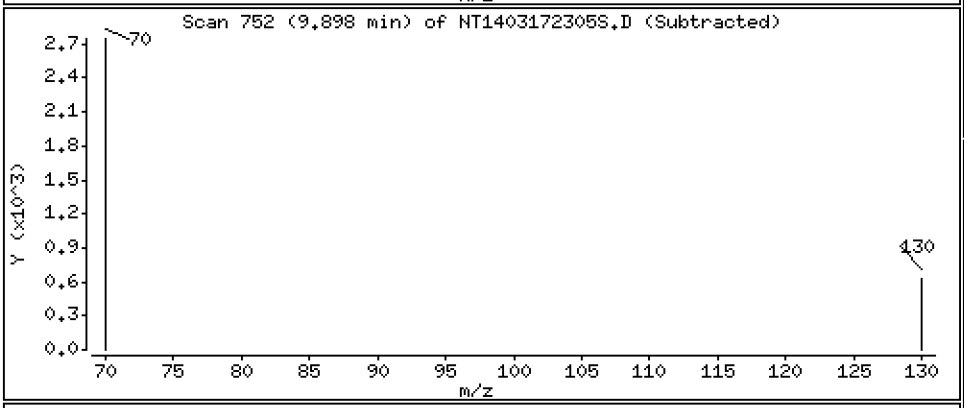
Column diameter: 0.25

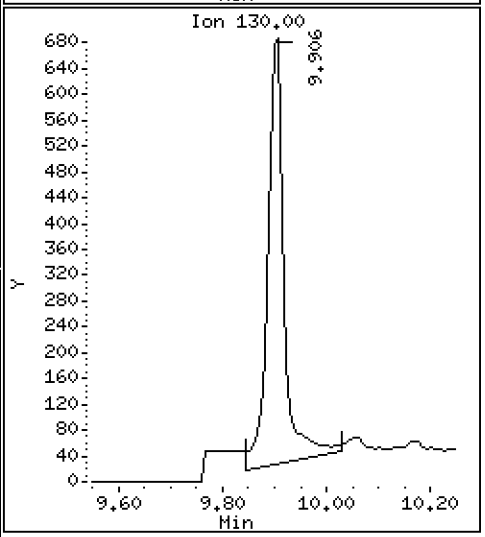
16 N-Nitroso-di-n-propylamine

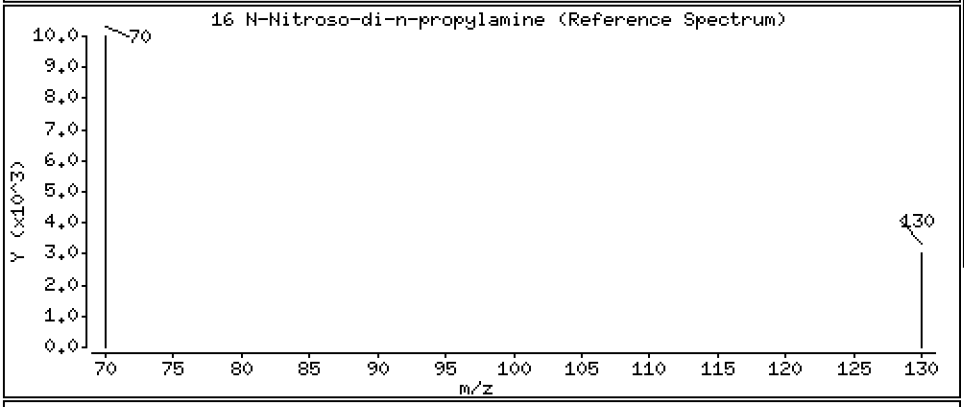
Concentration: 0.08357 ug/mL

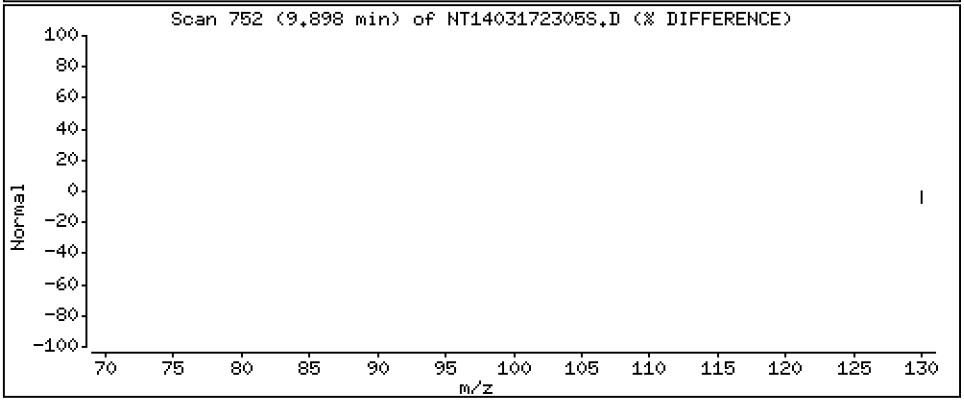












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Date : 17-MAR-2023 16:52

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV2

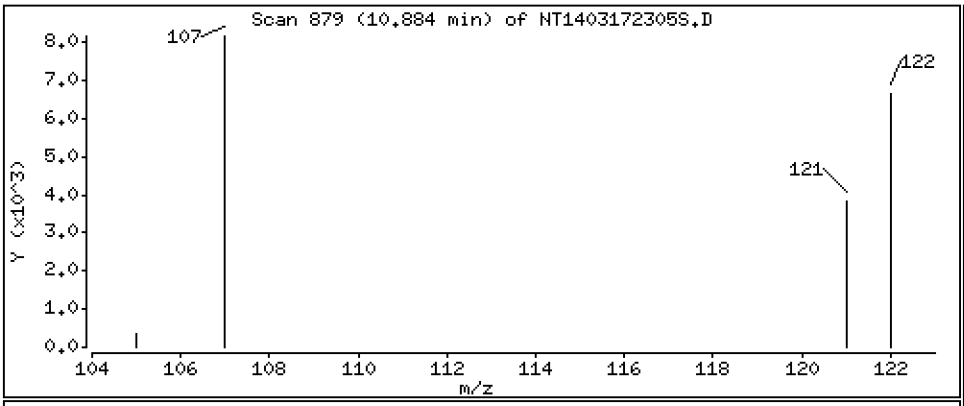
Operator: JGR

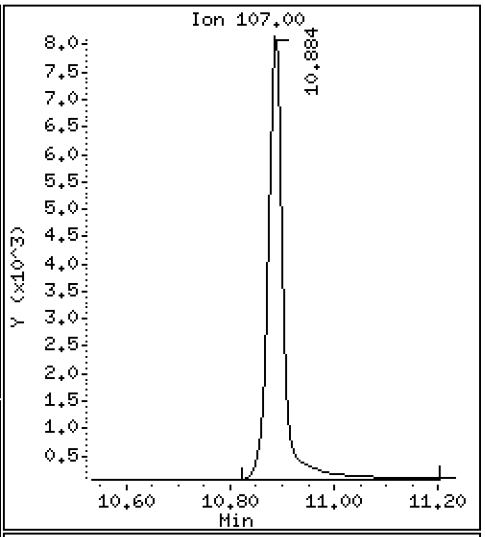
Column phase: ZB-5msi

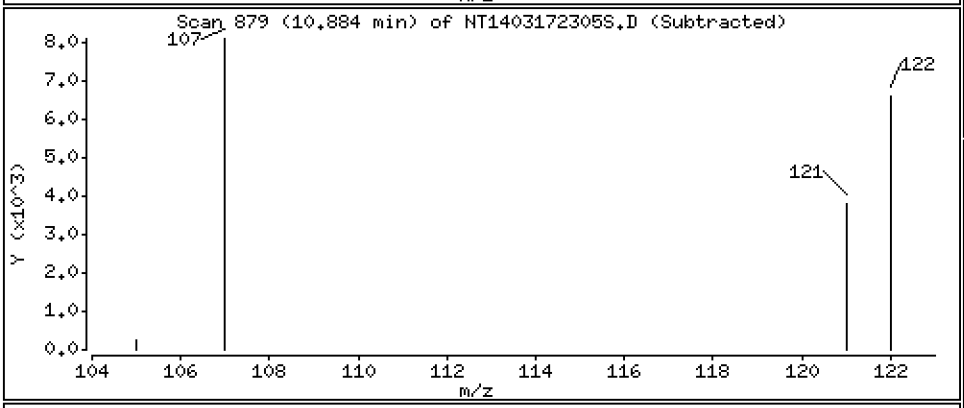
Column diameter: 0.25

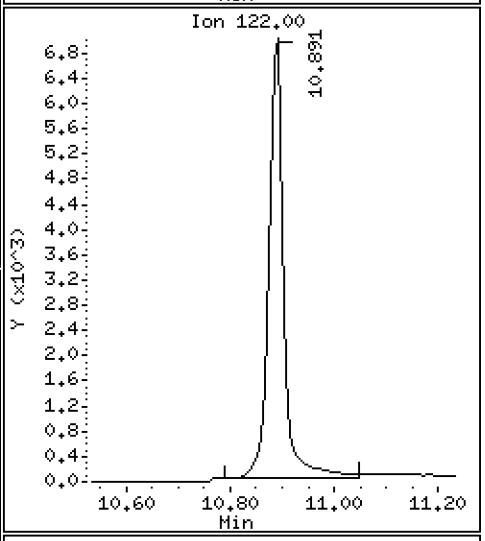
22 2,4-Dimethylphenol

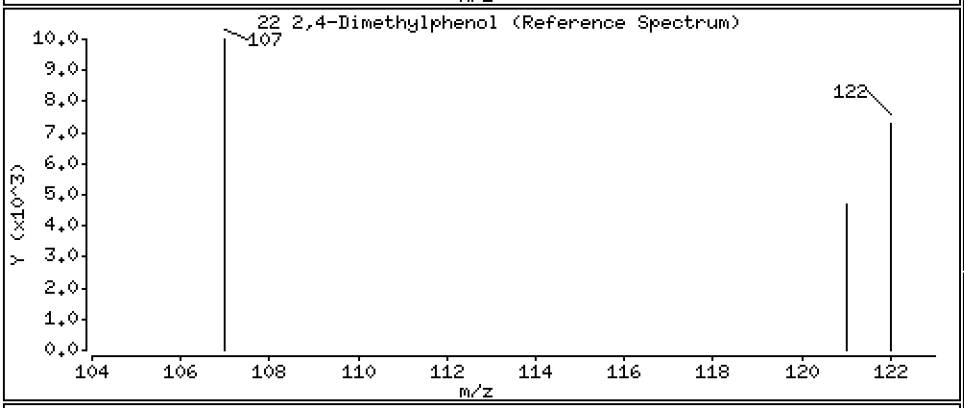
Concentration: 0.1919 ug/mL

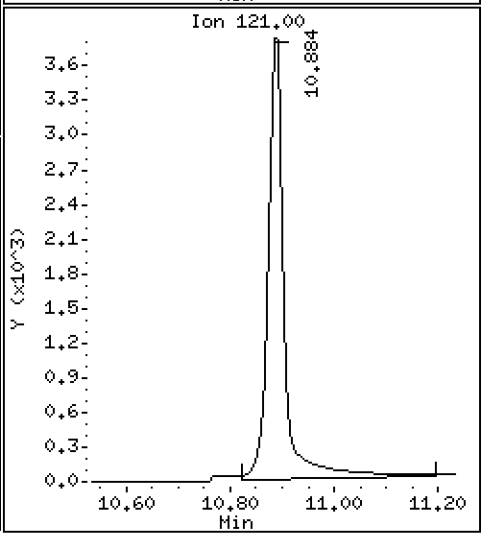


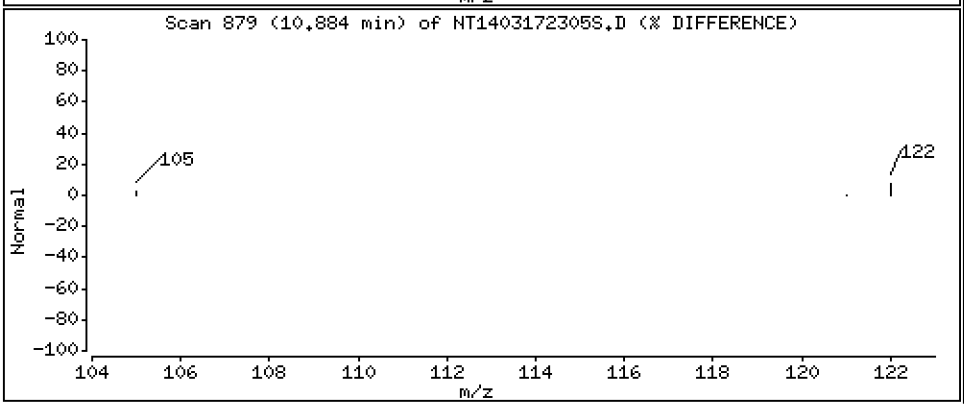












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Date : 17-MAR-2023 16:52

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV2

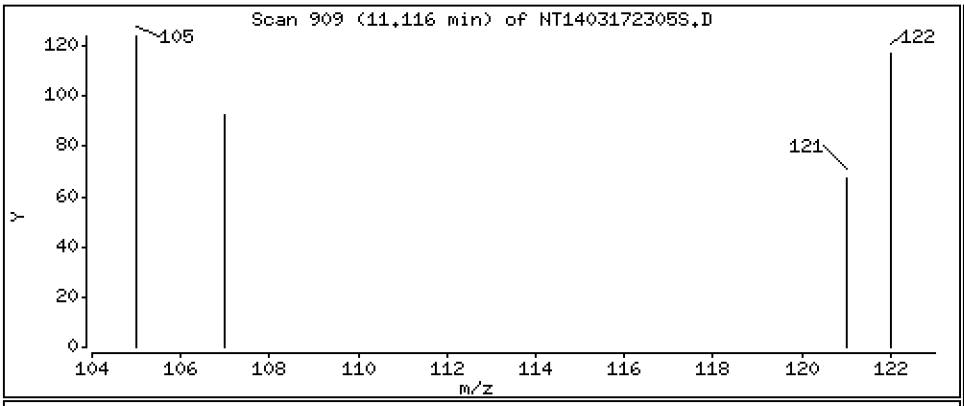
Operator: JGR

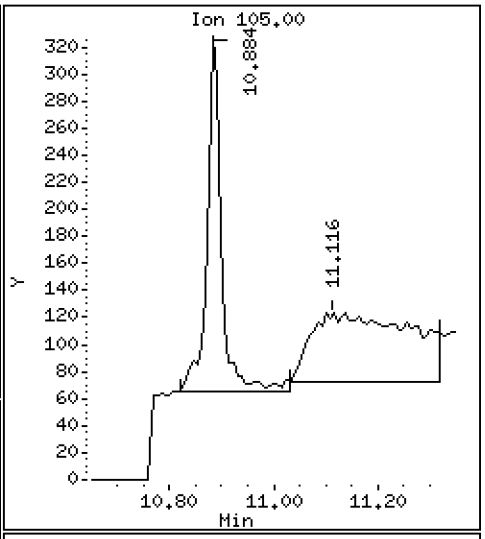
Column phase: ZB-5msi

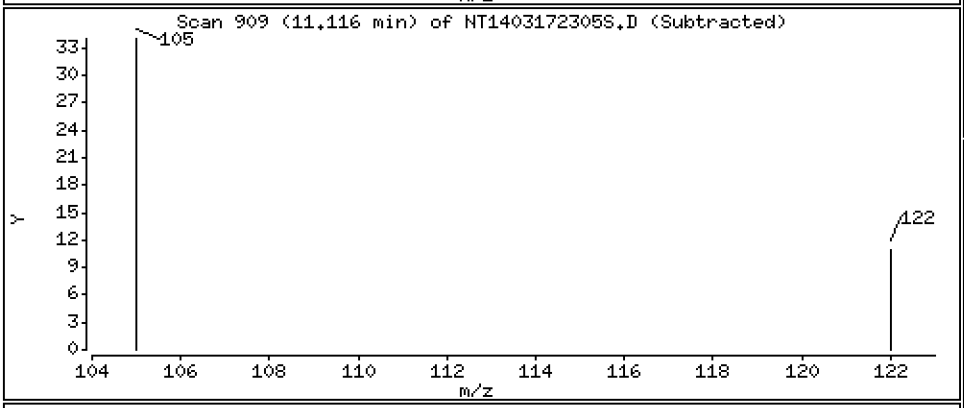
Column diameter: 0.25

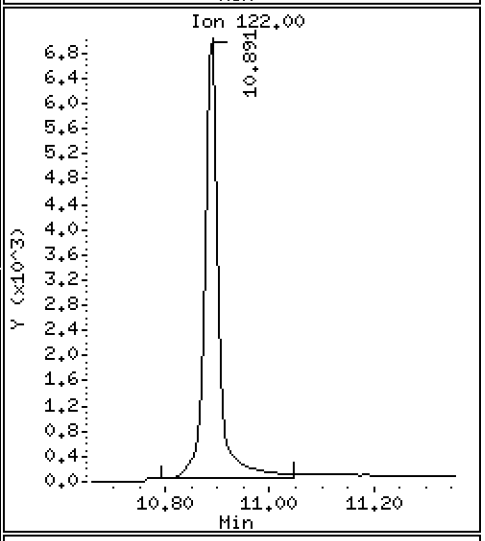
24 Benzoic acid

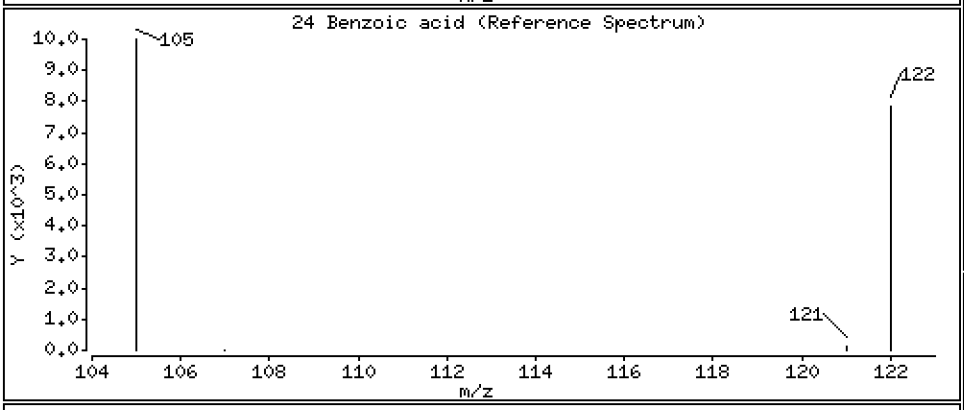
Concentration: 0.01073 ug/mL

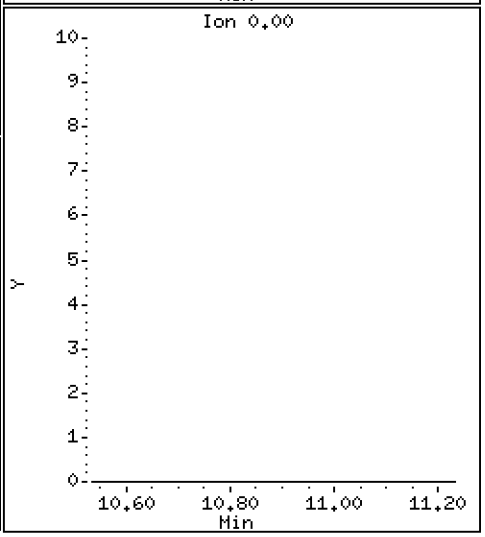


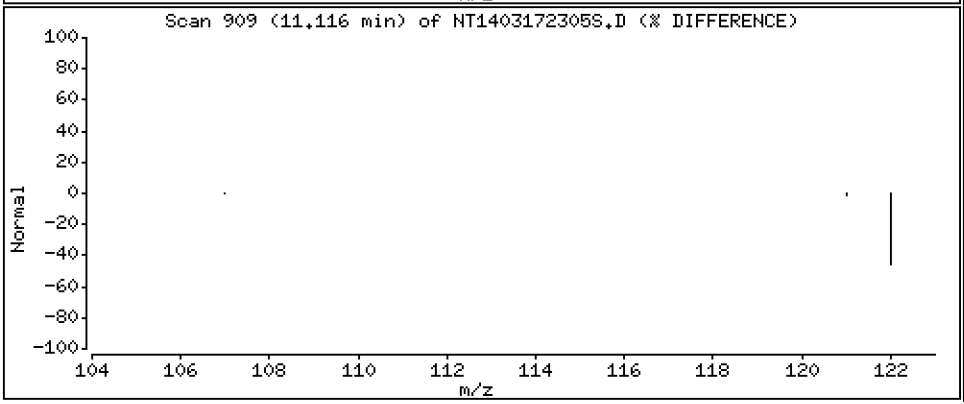












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Date : 17-MAR-2023 16:52

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV2

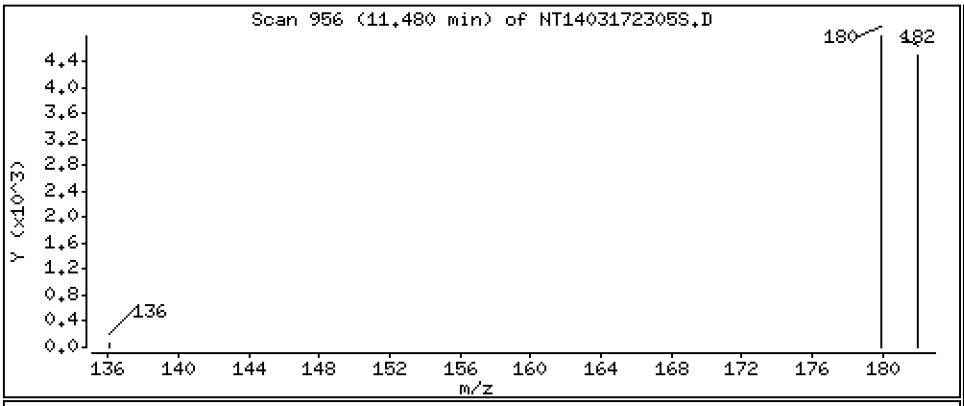
Operator: JGR

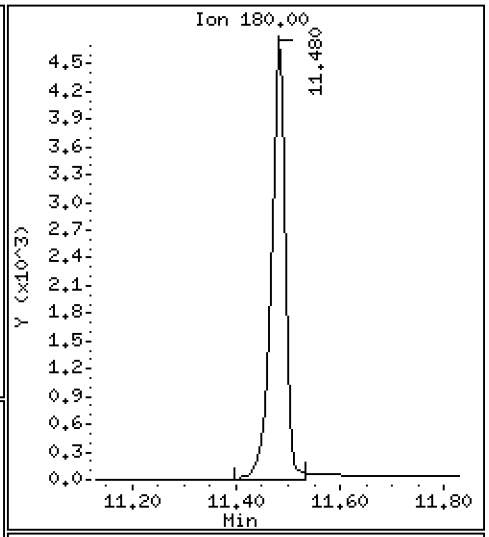
Column phase: ZB-5msi

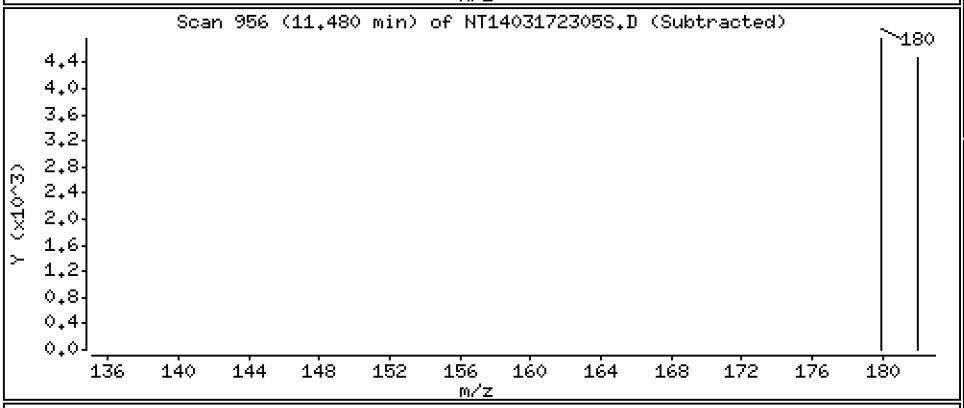
Column diameter: 0.25

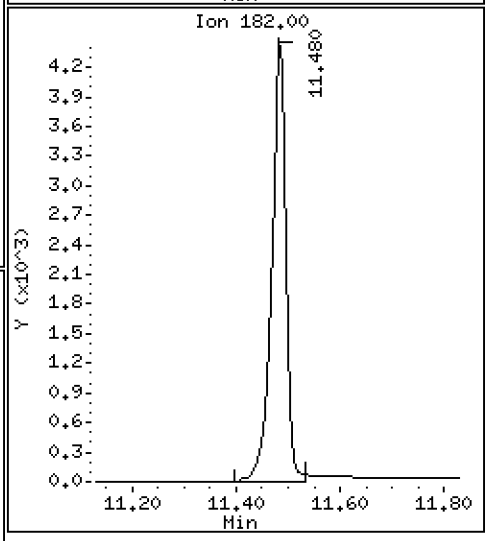
26 1,2,4-Trichlorobenzene

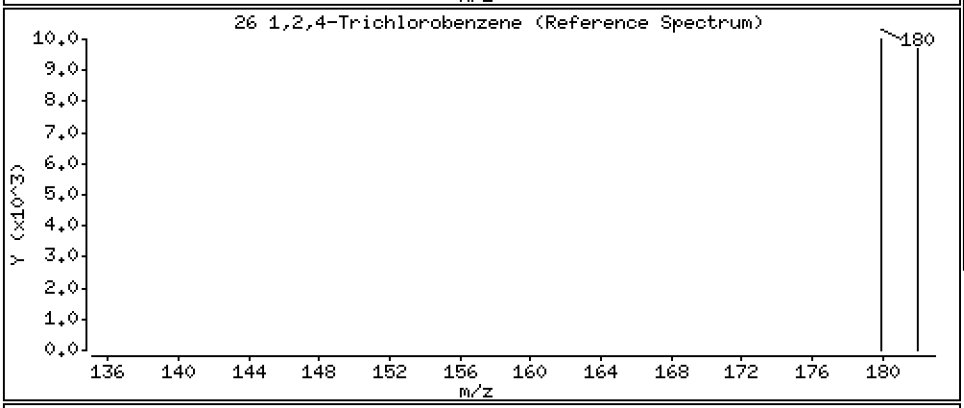
Concentration: 0.1088 ug/mL

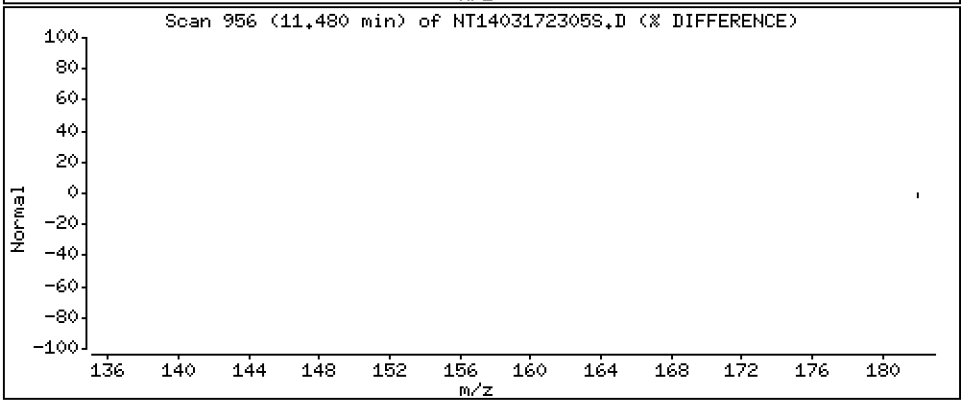












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Date : 17-MAR-2023 16:52

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV2

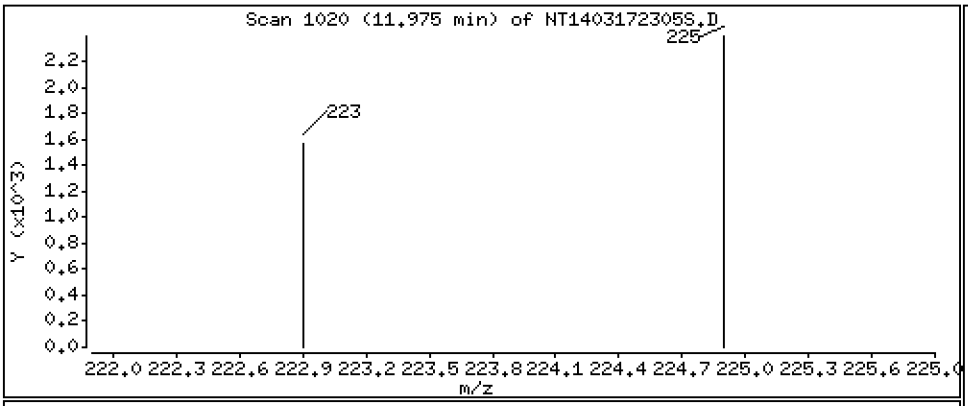
Operator: JGR

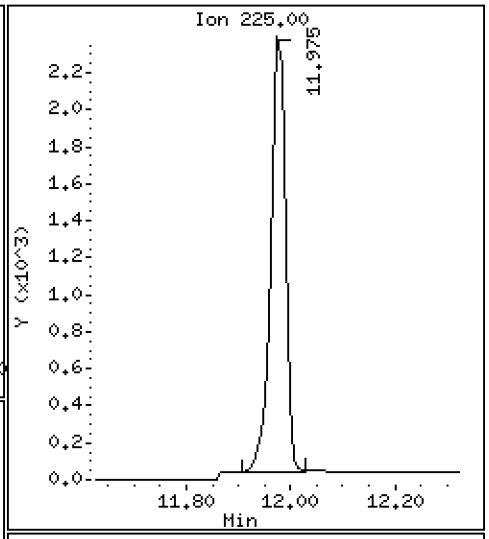
Column phase: ZB-5msi

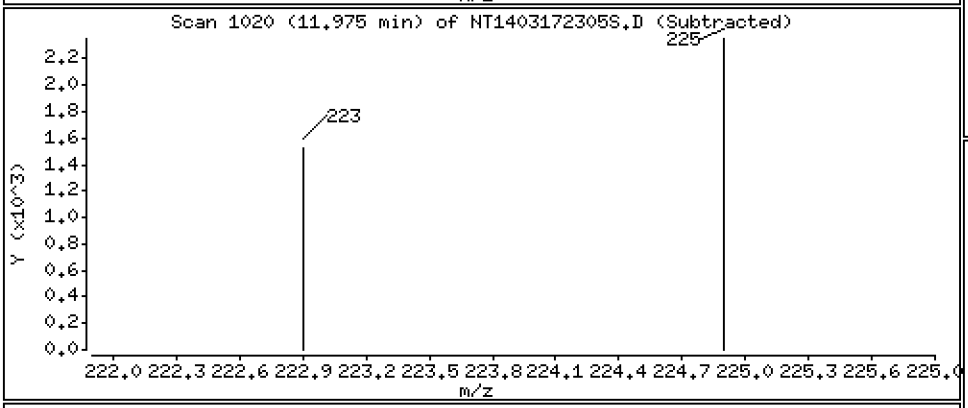
Column diameter: 0.25

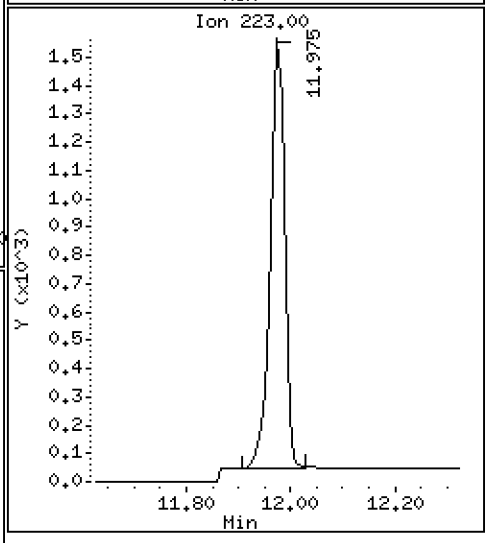
30 Hexachlorobutadiene

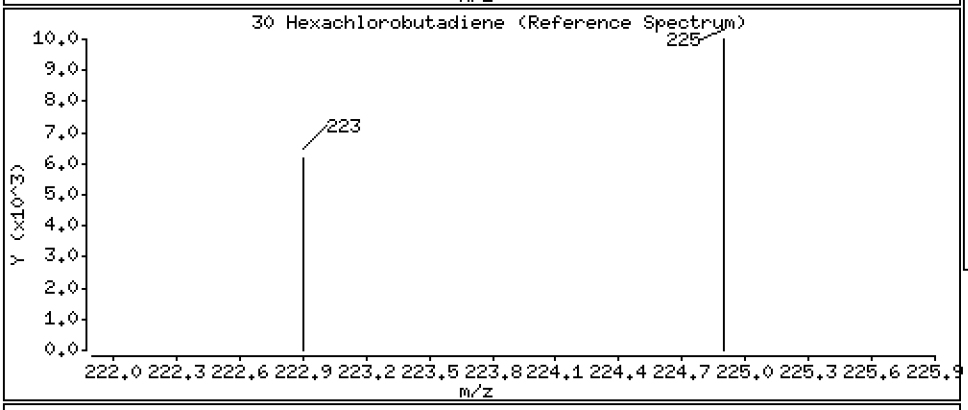
Concentration: 0.1073 ug/mL

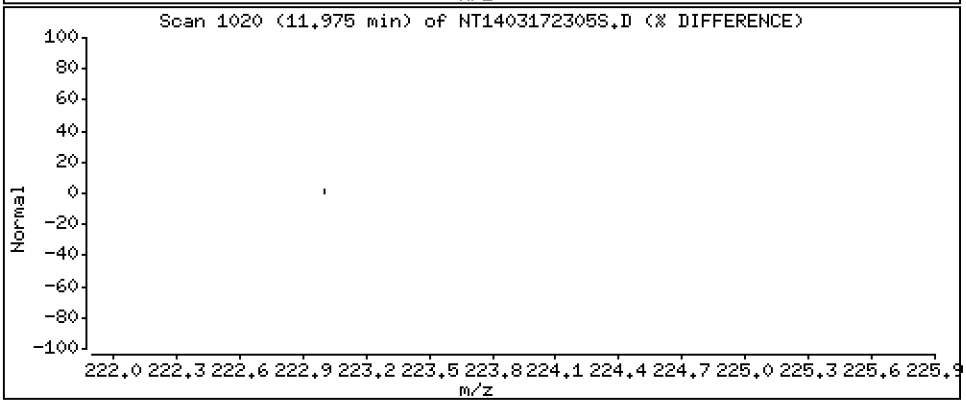












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Date : 17-MAR-2023 16:52

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV2

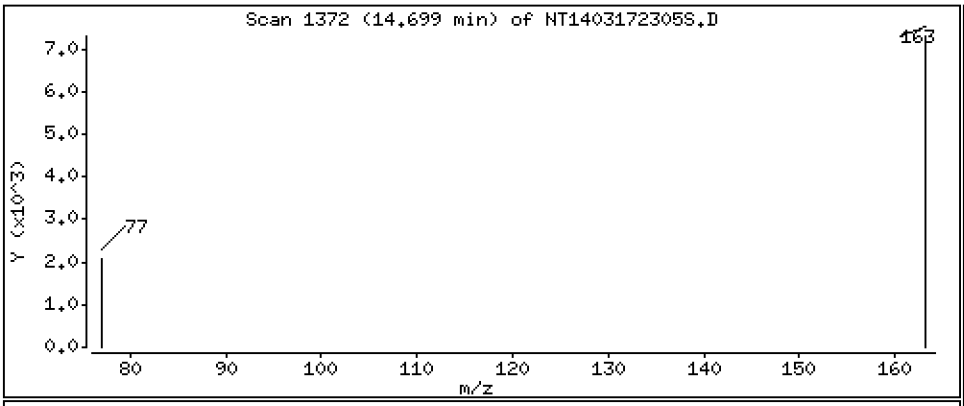
Operator: JGR

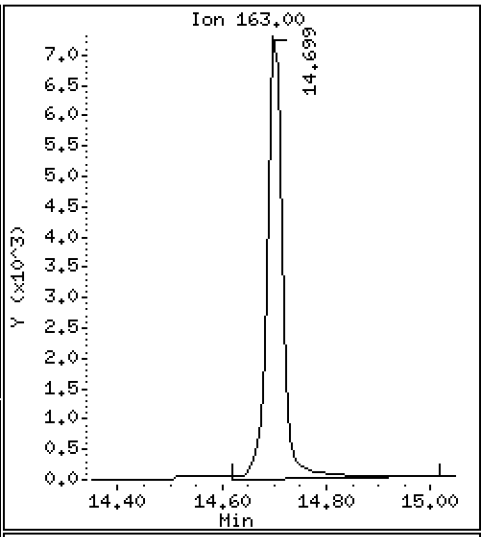
Column phase: ZB-5msi

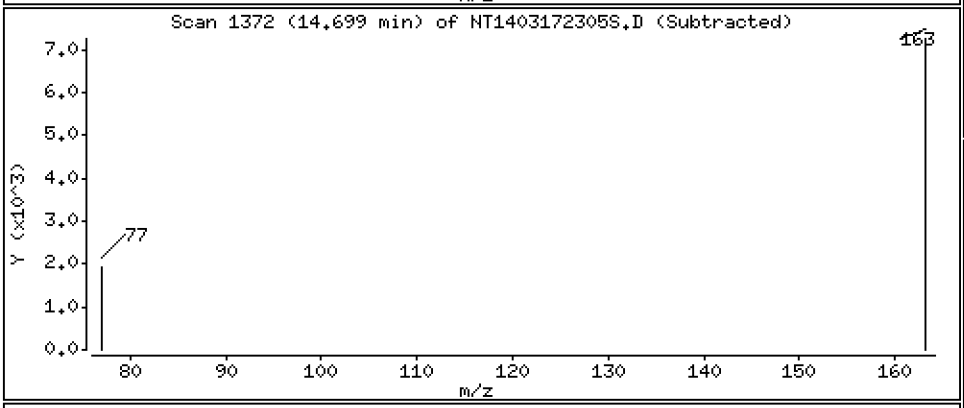
Column diameter: 0.25

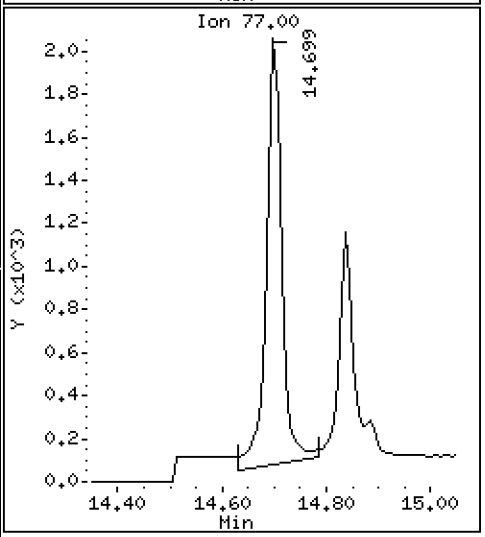
39 Dimethylphthalate

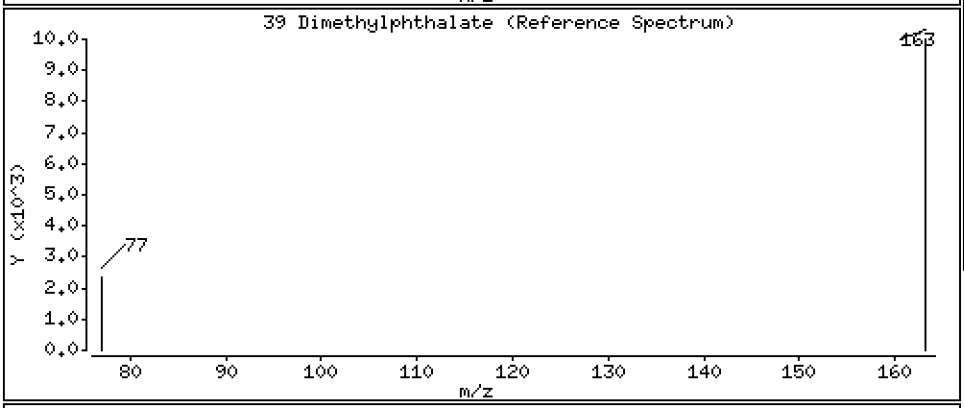
Concentration: 0.09719 ug/mL

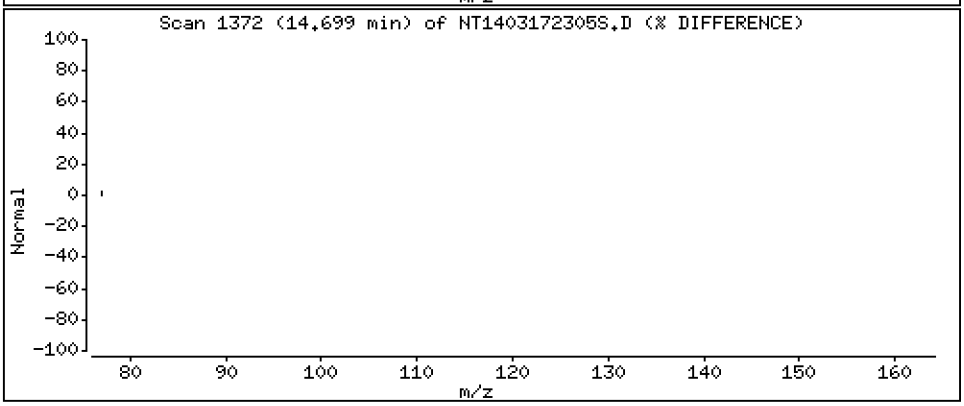












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Date : 17-MAR-2023 16:52

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV2

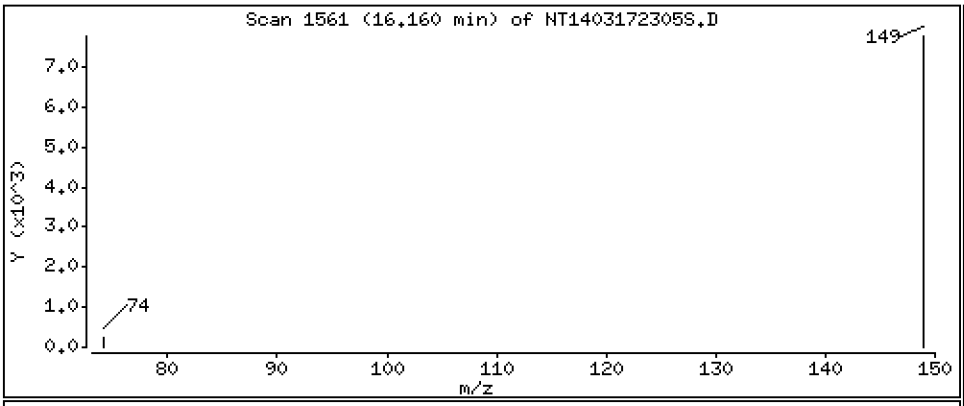
Operator: JGR

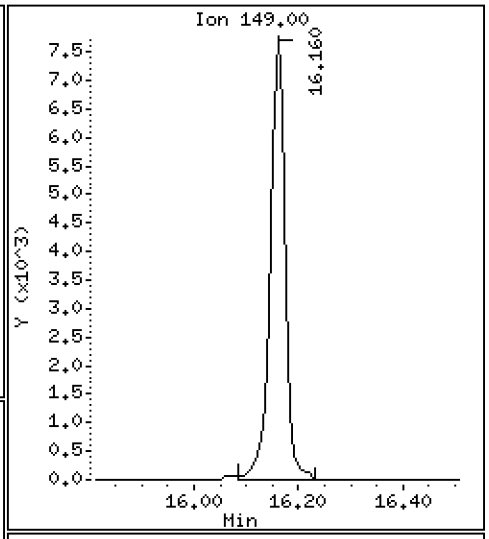
Column phase: ZB-5msi

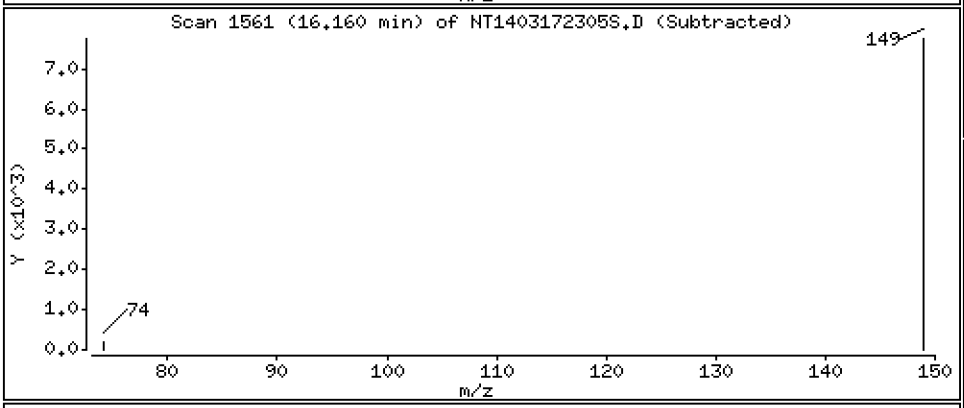
Column diameter: 0.25

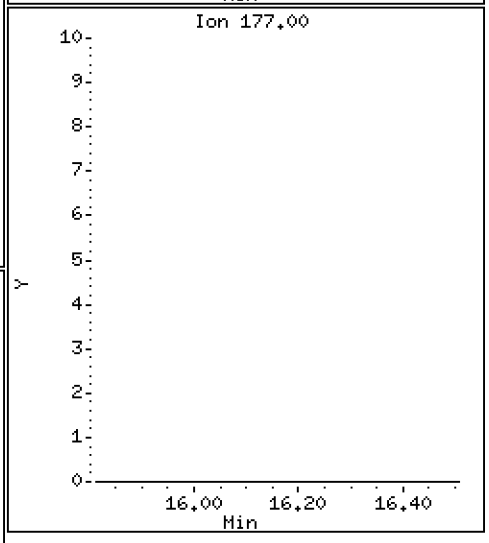
50 Diethylphthalate

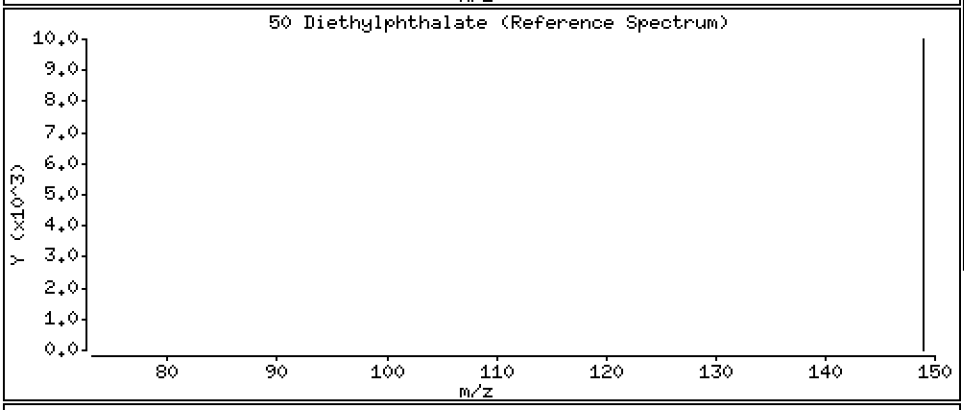
Concentration: 0.09213 ug/mL

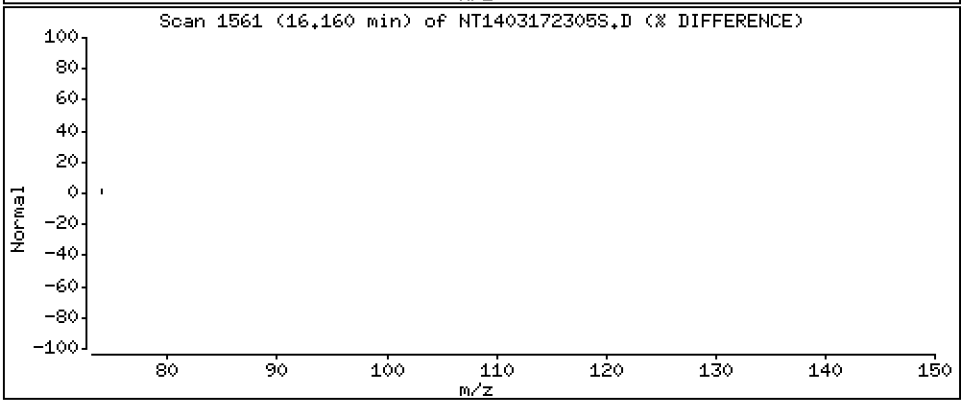












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Date : 17-MAR-2023 16:52

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV2

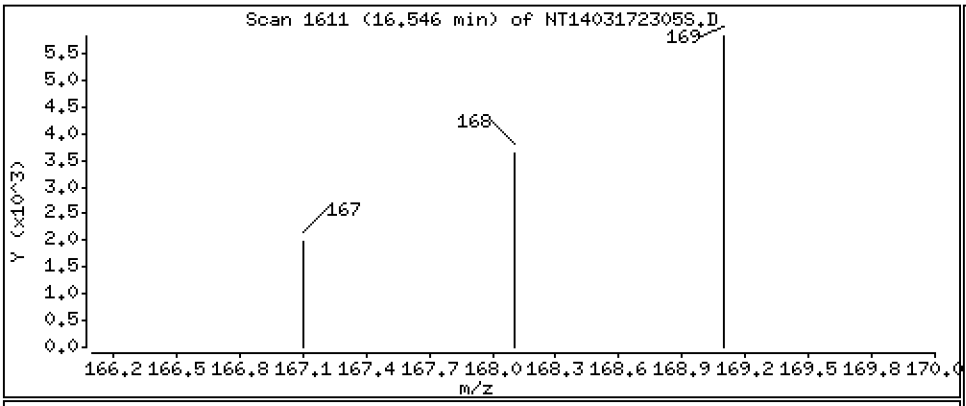
Operator: JGR

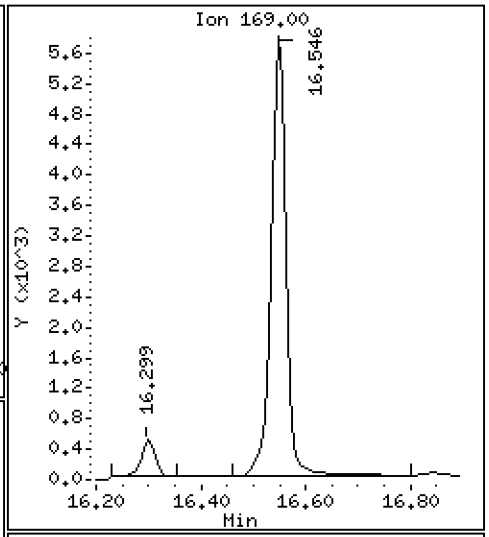
Column phase: ZB-5msi

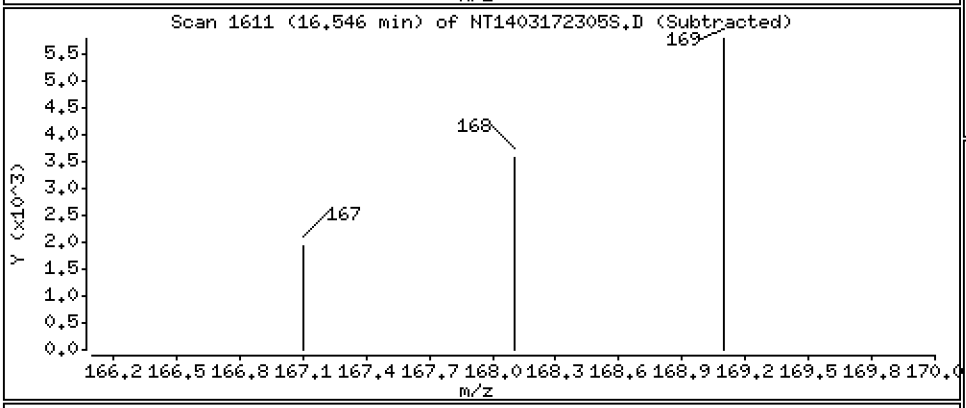
Column diameter: 0.25

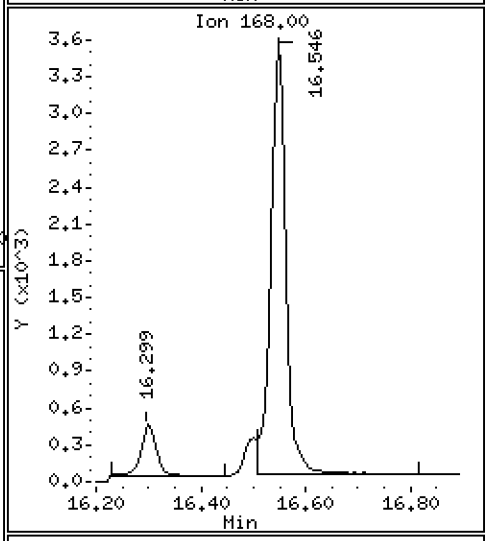
54 N-Nitrosodiphenylamine

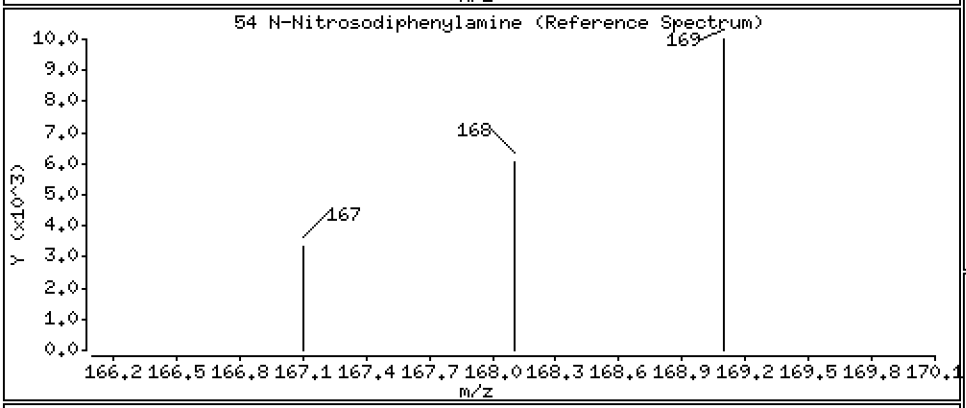
Concentration: 0.09318 ug/mL

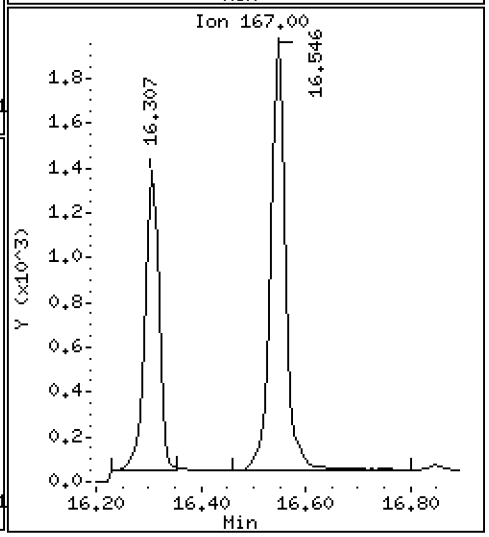


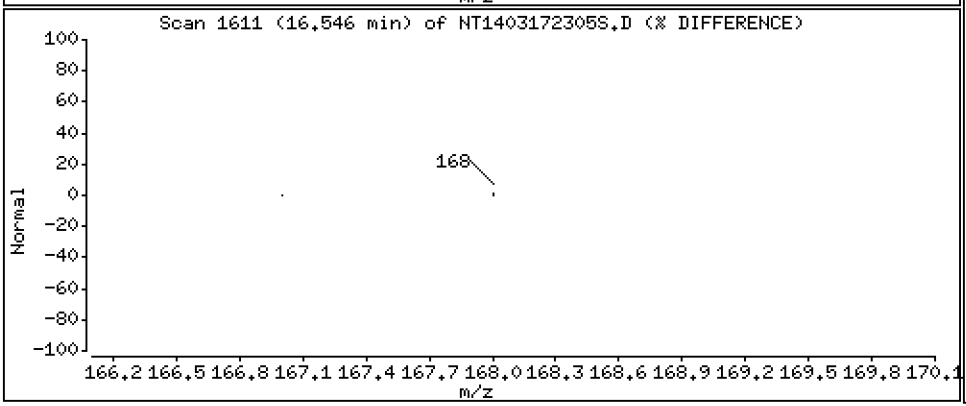












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Date : 17-MAR-2023 16:52

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV2

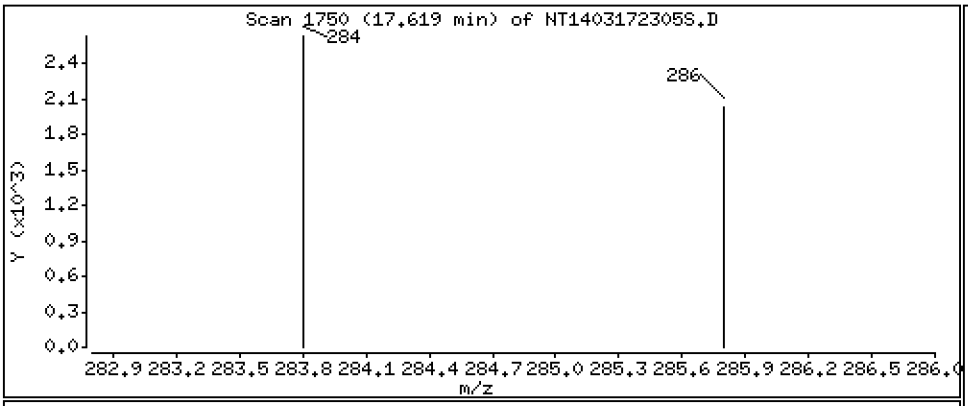
Operator: JGR

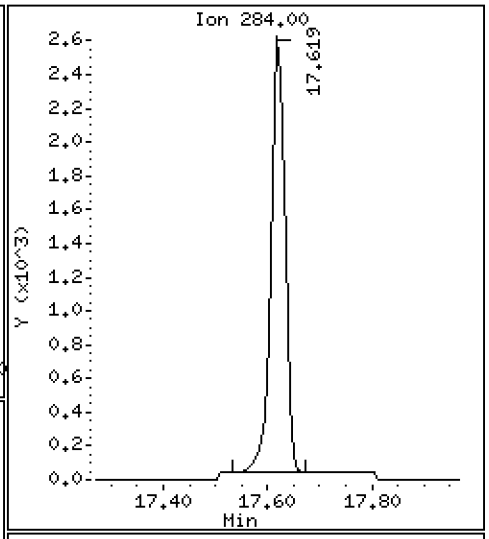
Column phase: ZB-5msi

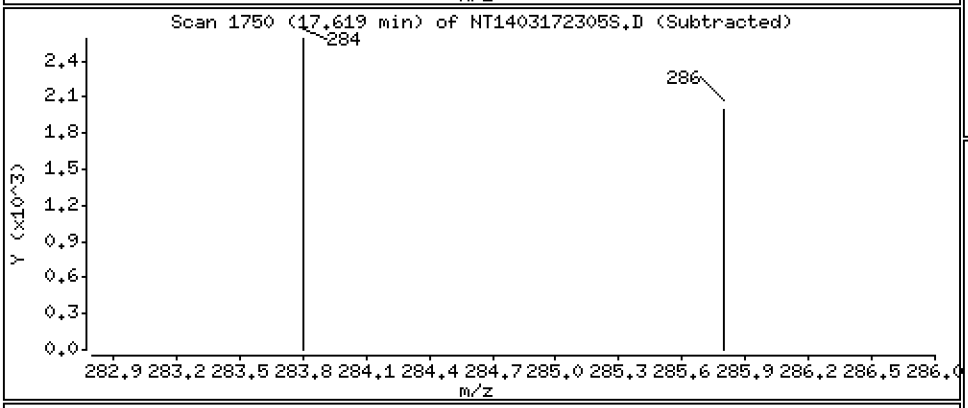
Column diameter: 0.25

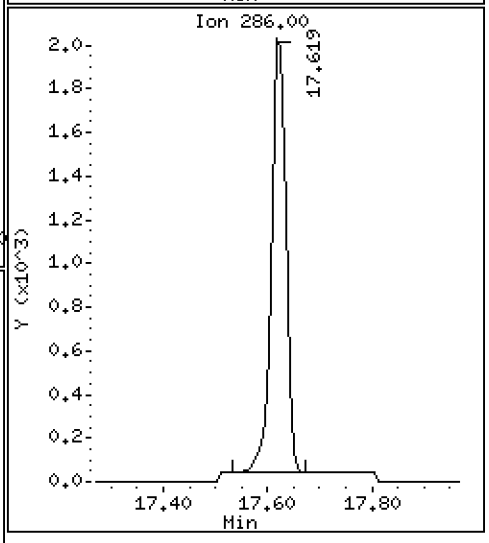
57 Hexachlorobenzene

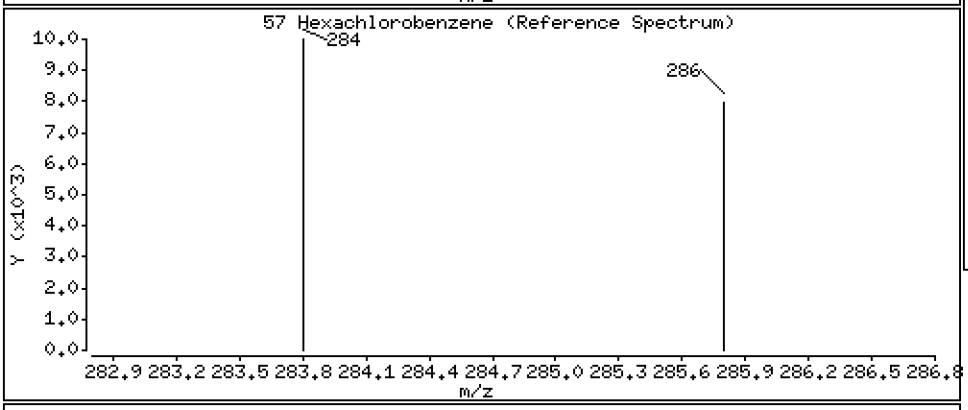
Concentration: 0.1032 ug/mL

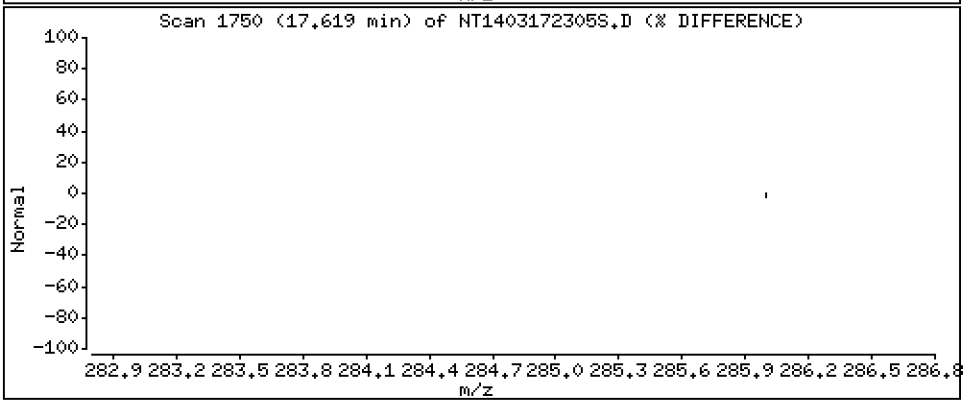












Date : 17-MAR-2023 16:52

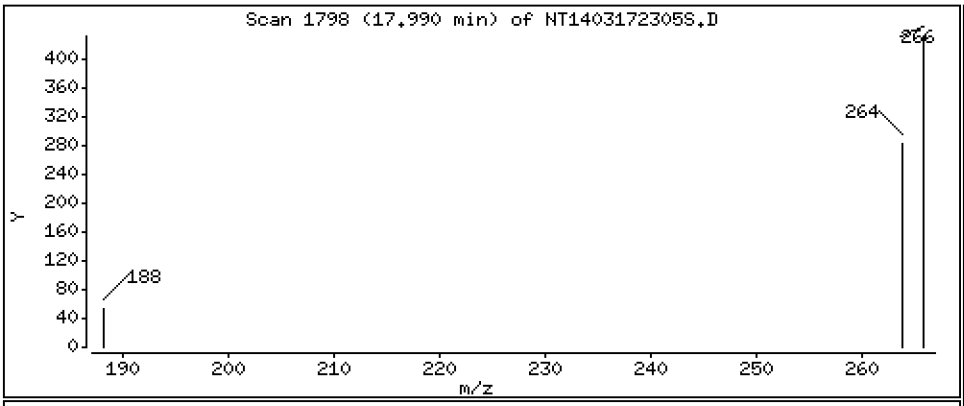
Client ID: Instrument: nt14.i

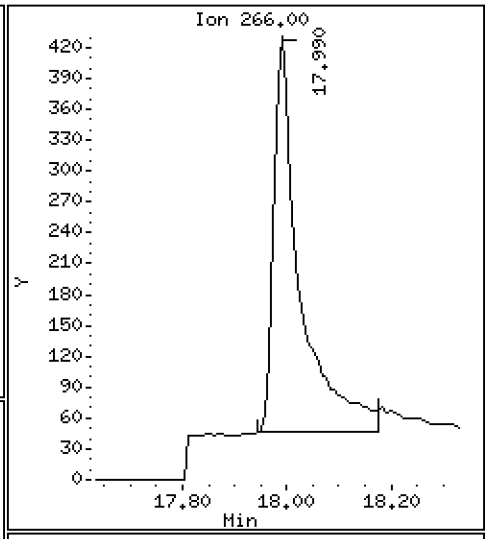
Sample Info: SLC0376-LCV2

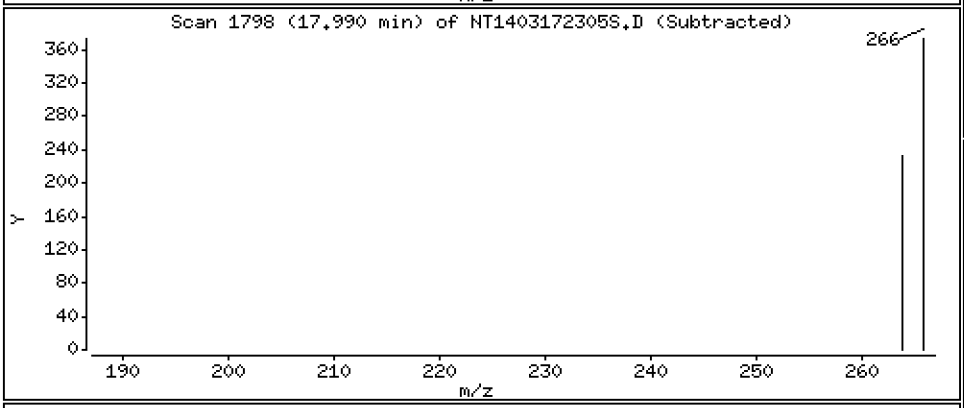
Operator: JGR

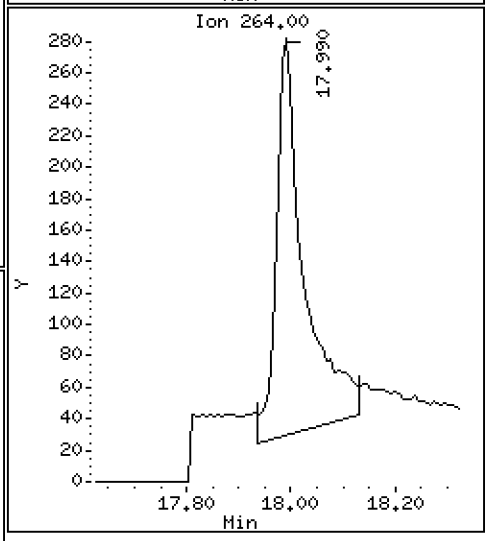
Column phase: ZB-5msi Column diameter: 0.25

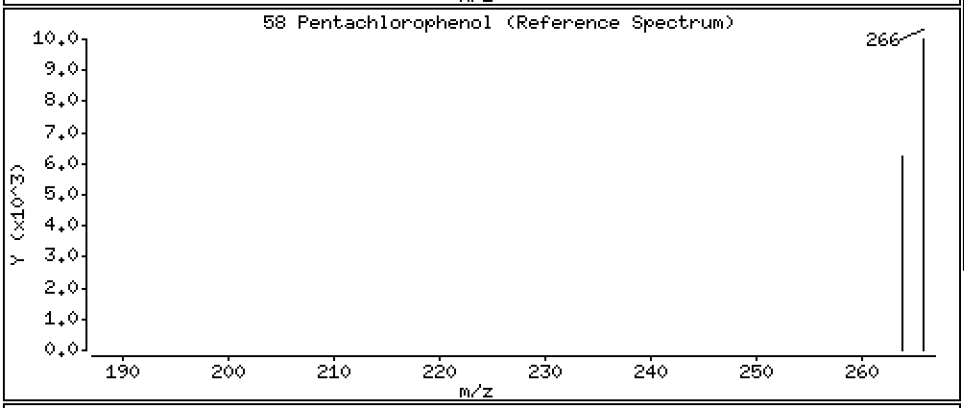
58 Pentachlorophenol Concentration: 0.04342 ug/mL

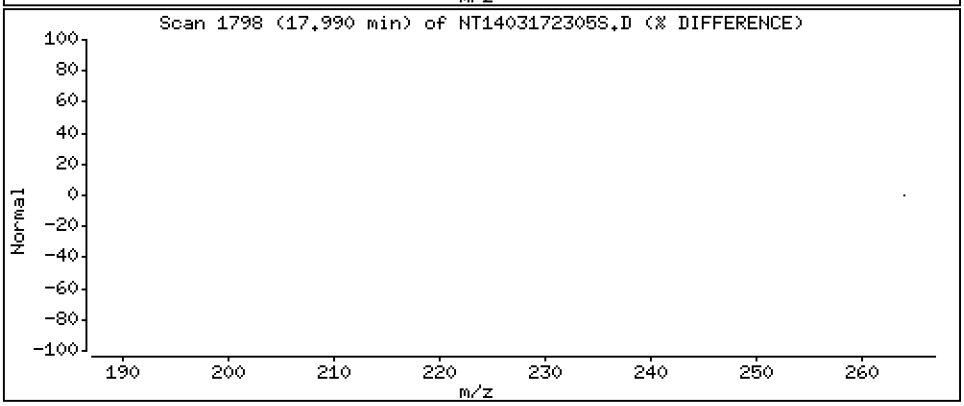












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Date : 17-MAR-2023 16:52

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV2

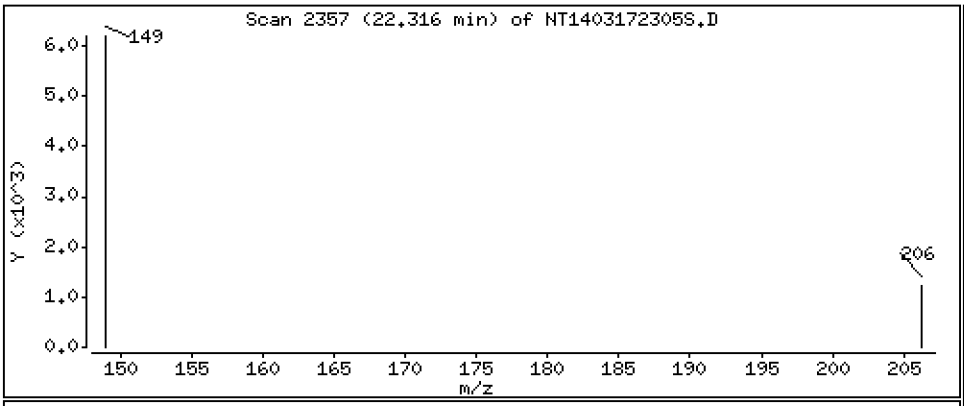
Operator: JGR

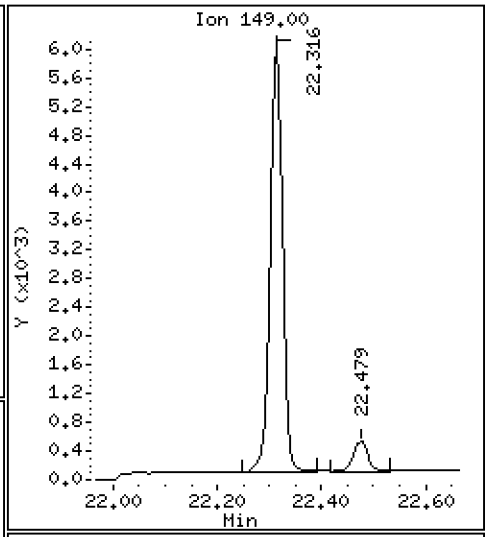
Column phase: ZB-5msi

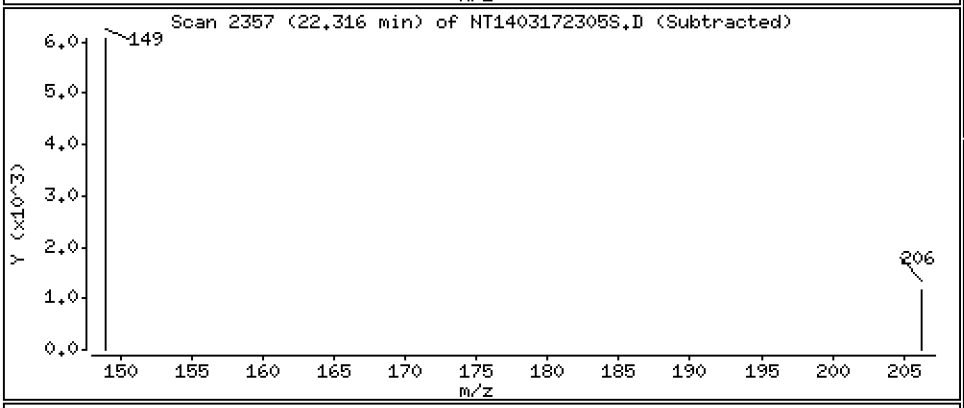
Column diameter: 0.25

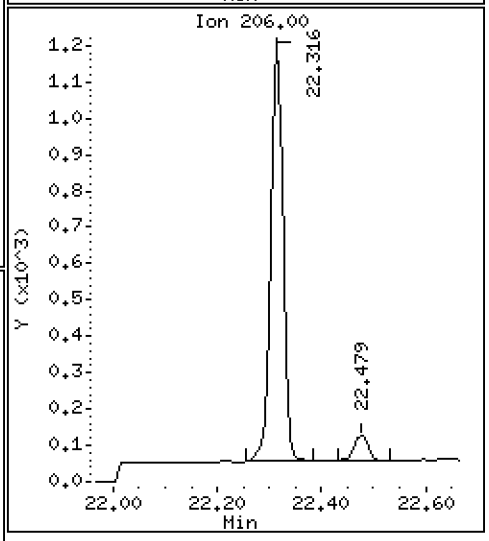
67 Butylbenzylphthalate

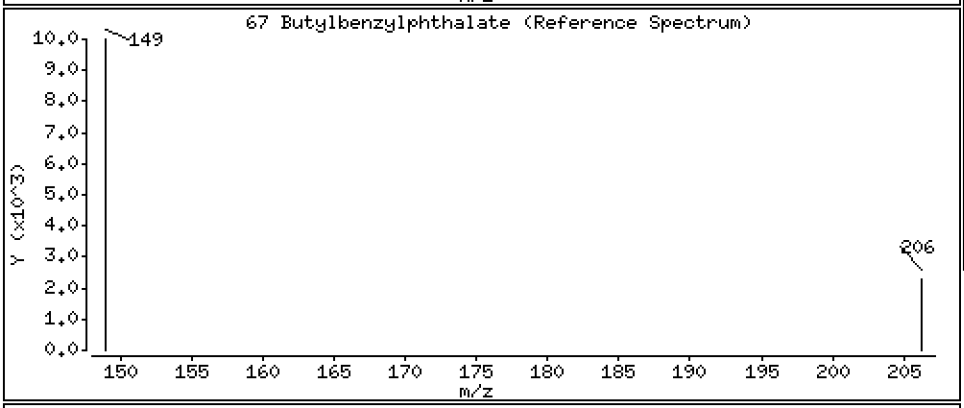
Concentration: 0.09436 ug/mL

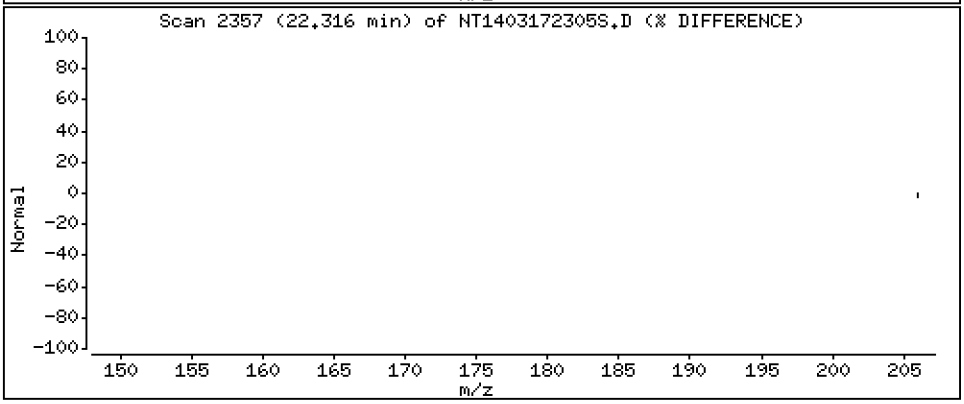












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172305S.D

Date : 17-MAR-2023 16:52

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV2

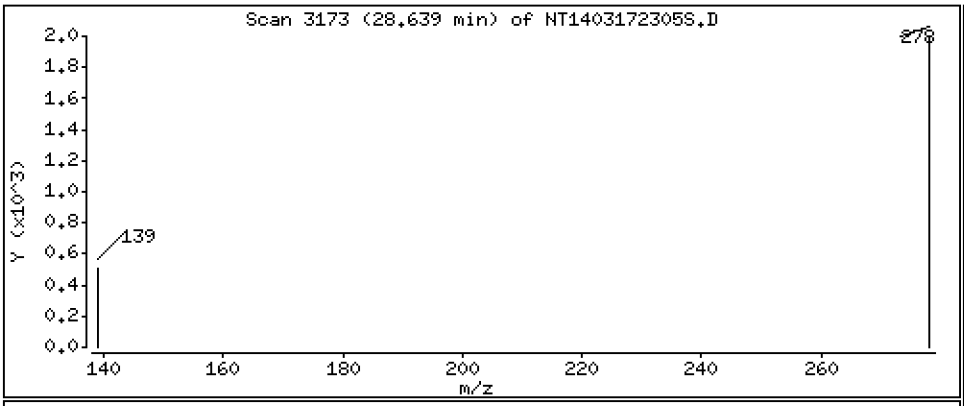
Operator: JGR

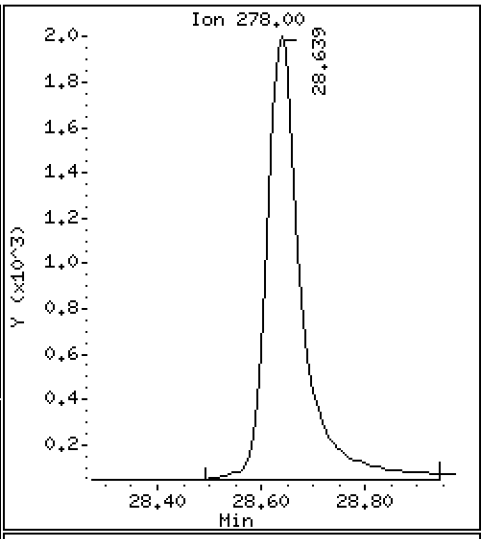
Column phase: ZB-5msi

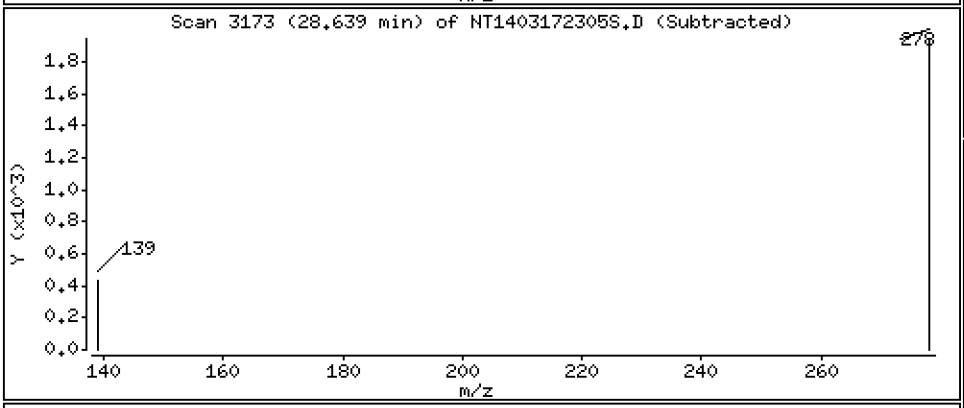
Column diameter: 0.25

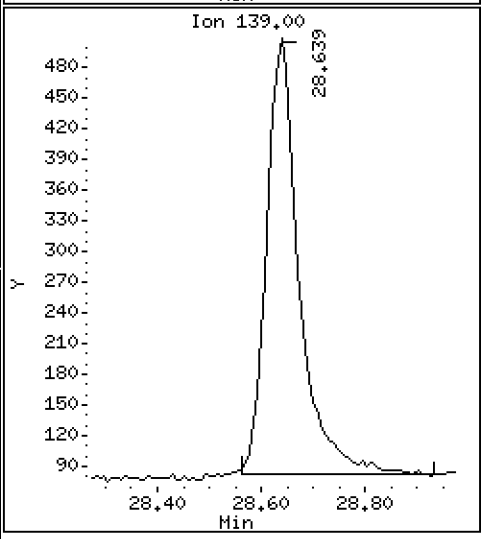
79 Dibenzo(a,h)anthracene

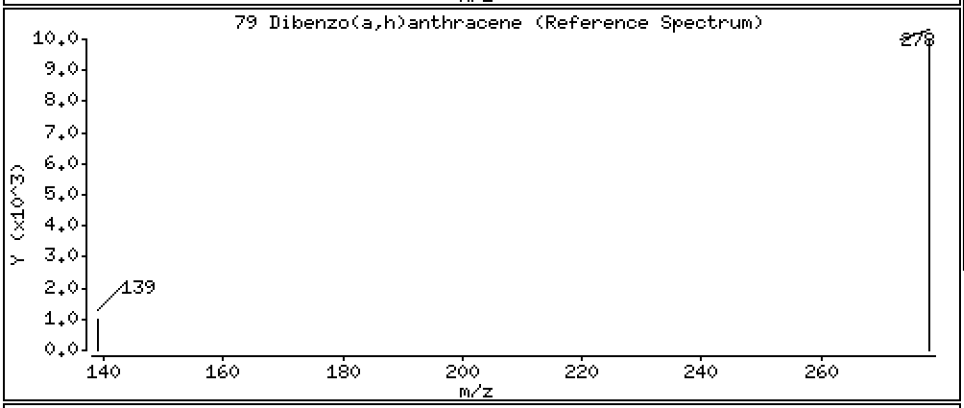
Concentration: 0.08170 ug/mL

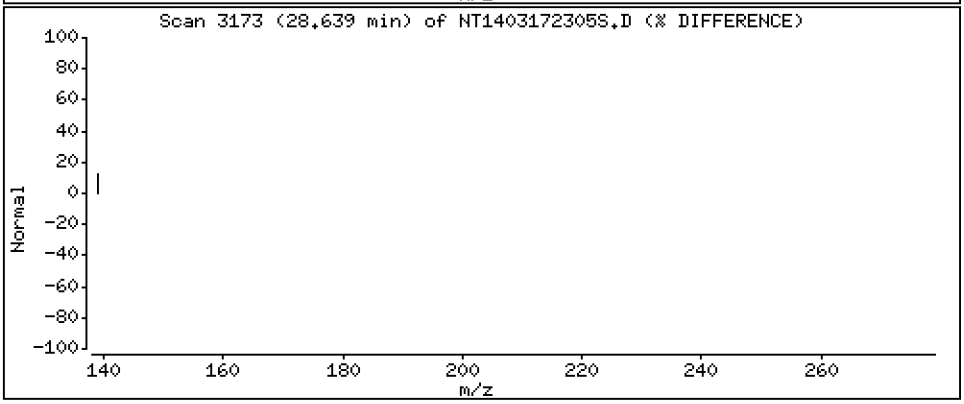












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172305S.D

Date : 17-MAR-2023 16:52

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV2

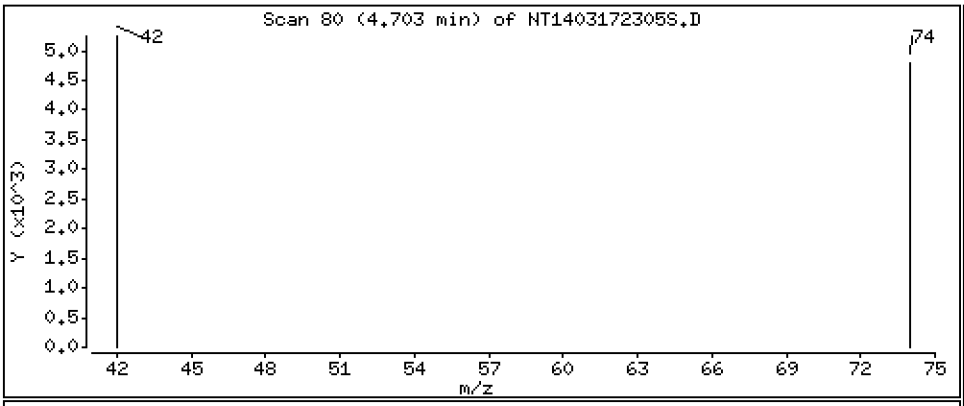
Operator: JGR

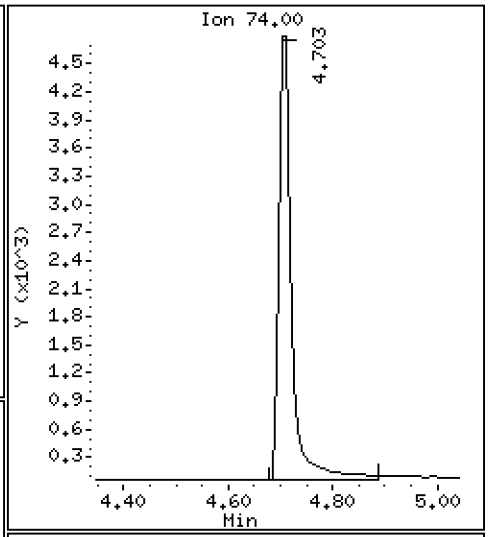
Column phase: ZB-5msi

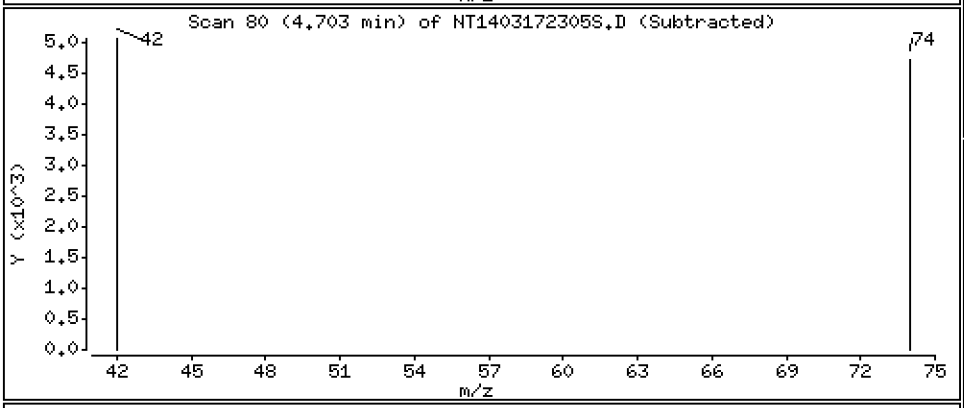
Column diameter: 0.25

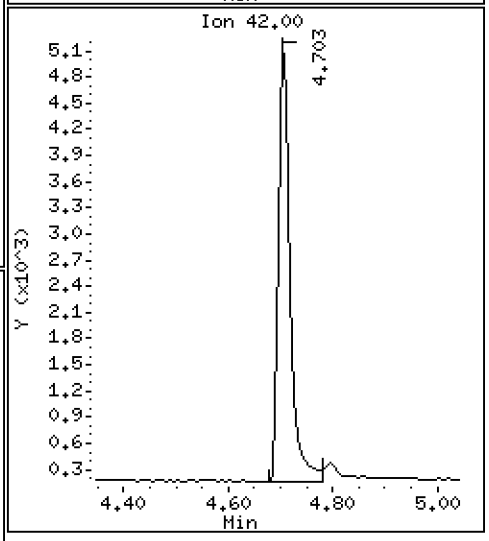
90 N-Nitrosodimethylamine

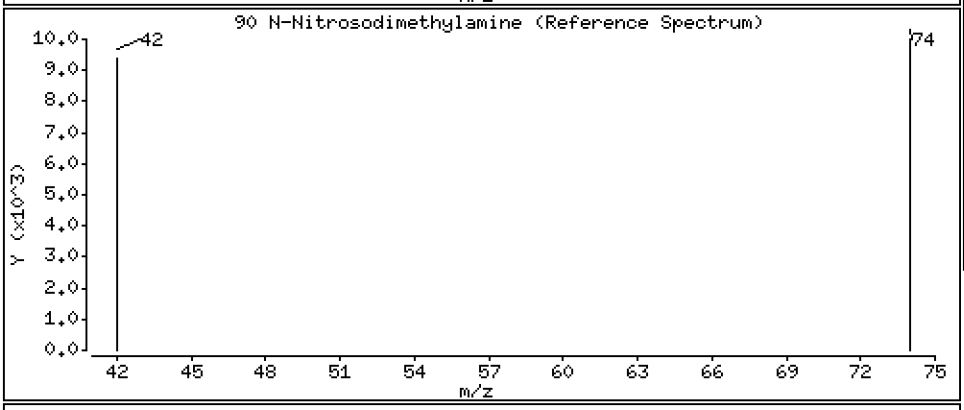
Concentration: 0.1443 ug/mL

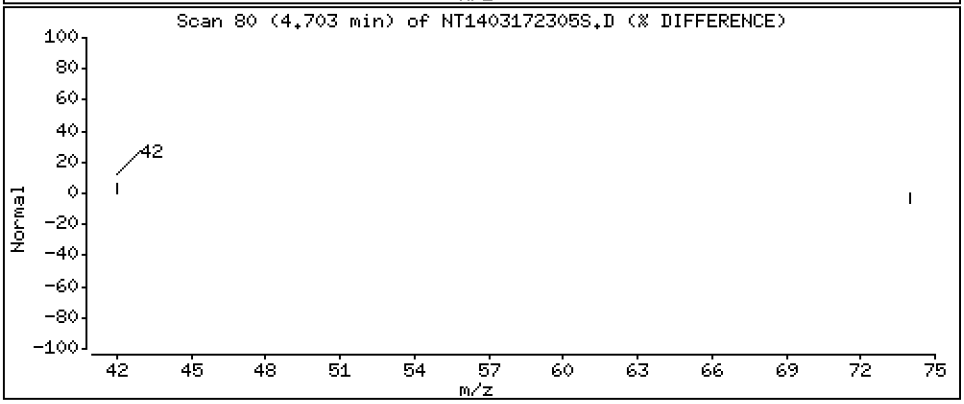












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172305S.D
Lab Smp Id: SLC0376-LCV2
Inj Date : 17-MAR-2023 16:52 MS Autotune Date: 11-MAR-2023 16:01
Operator : JGR Inst ID: nt14.i
Smp Info : SLC0376-LCV2
Misc Info :
Comment :
Method : \\target\share\chem3\nt14.i\20230317.b\20230317.b\SIMABN2.m
Meth Date : 23-Mar-2023 16:53 van Quant Type: ISTD
Cal Date : 15-MAR-2023 15:50 Cal File: NT1403152308.D
Als bottle: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

			QUANT SIG					CONCENTRATIONS ON-COLUMN	CONCENTRATIONS FINAL
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
$	1	2-Fluorophenol	112	6.834	6.826	(0.754)	10432	0.11905	0.1191(R)
	3	Phenol	94	8.441	8.440	(0.931)	9175	0.07614	0.07614
	7	1,3-Dichlorobenzene	146	9.005	9.005	(0.993)	10782	0.10456	0.1046
*	8	1,4-Dichlorobenzene-d4	152	9.067	9.067	(1.000)	258144	4.00000	
	9	1,4-Dichlorobenzene	146	9.098	9.098	(1.003)	10446	0.10469	0.1047
	11	Benzyl alcohol	79	9.339	9.338	(1.030)	4545	0.06435	0.06435
	12	1,2-Dichlorobenzene	146	9.455	9.455	(1.043)	10297	0.10595	0.1059
	13	2-Methylphenol	108	9.564	9.563	(1.055)	7047	0.08466	0.08466
	15	4-Methylphenol	108	9.836	9.827	(1.085)	7073	0.08043	0.08043
	16	N-Nitroso-di-n-propylamine	70	9.898	9.897	(1.092)	5196	0.08357	0.08357
	22	2,4-Dimethylphenol	107	10.883	10.883	(0.941)	15770	0.19189	0.1919
	24	Benzoic acid	105	11.116	10.999	(0.961)	667	0.01073	0.01073(H)
	26	1,2,4-Trichlorobenzene	180	11.480	11.479	(0.993)	8765	0.10882	0.1088
*	27	Naphthalene-d8	136	11.565	11.564	(1.000)	956001	4.00000	
	30	Hexachlorobutadiene	225	11.974	11.974	(1.035)	4373	0.10728	0.1073
	39	Dimethylphthalate	163	14.698	14.698	(0.967)	14619	0.09719	0.09719
*	42	Acenaphthene-d10	162	15.201	15.201	(1.000)	440462	4.00000	
	50	Diethylphthalate	149	16.160	16.160	(1.063)	14755	0.09213	0.09213
	54	N-Nitrosodiphenylamine	169	16.546	16.545	(0.907)	11007	0.09318	0.09318
	57	Hexachlorobenzene	284	17.618	17.618	(0.966)	4685	0.10323	0.1032
	58	Pentachlorophenol	266	17.990	17.982	(0.986)	1329	0.04342	0.04342
*	59	Phenanthrene-d10	188	18.245	18.245	(1.000)	871857	4.00000	
$	66	Terphenyl-d14	244	21.386	21.386	(0.918)	11595	0.11894	0.1189(R)
	67	Butylbenzylphthalate	149	22.315	22.315	(0.958)	9322	0.09436	0.09436
*	69	Chrysene-d12	240	23.299	23.298	(1.000)	565458	4.00000	
*	77	Perylene-d12	264	25.939	25.938	(1.000)	439880	4.00000	
	79	Dibenzo(a,h)anthracene	278	28.639	28.623	(1.104)	9110	0.08170	0.08170
	90	N-Nitrosodimethylamine	74	4.702	4.694	(0.519)	7723	0.14427	0.1443

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
H - Operator selected an alternate compound hit.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1403172305S.D
Lab Smp Id: SLC0376-LCV2
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\SIMABN2.m
Misc Info:

Calibration Date: 17-MAR-2023
Calibration Time: 15:39
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	224436	112218	448872	258144	15.02
27 Naphthalene-d8	825617	412809	1651234	956001	15.79
42 Acenaphthene-d10	392947	196474	785894	440462	12.09
59 Phenanthrene-d10	789887	394944	1579774	871857	10.38
69 Chrysene-d12	494007	247004	988014	565458	14.46
77 Perylene-d12	375441	187721	750882	439880	17.16

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.07	8.57	9.57	9.07	0.00
27 Naphthalene-d8	11.56	11.06	12.06	11.57	0.00
42 Acenaphthene-d10	15.20	14.70	15.70	15.20	0.00
59 Phenanthrene-d10	18.25	17.75	18.75	18.25	0.00
69 Chrysene-d12	23.30	22.80	23.80	23.30	0.00
77 Perylene-d12	25.94	25.44	26.44	25.94	0.00

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

REVIEW SUMMARY FOR FILE - NT1403172305S.D

Lab ID: SLC0376-LCV2
nt14.i, 20230317.b\20230317.b\SIMABN2.m,   17-MAR-2023 16:52

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.961	0.951	0.0100	Benzoic acid

RRT check based on Ccal File: 20230317.b/NT1403172303S.D

On Column LOD for nt14.i, 20230317.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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

Analytical Resources, LLC
Analytical Chemists and Consultants

LOW-CONCENTRATION CONTINUING CALIBRATION CHECK
EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT14	Calibration:	GC00050
Lab File ID:	NT1403172318S.D	Calibration Date:	03/15/2023
Sequence:	SLC0376	Injection Date:	03/18/23
Lab Sample ID:	SLC0376-LCV3	Injection Time:	00:43
Sequence Name:	ABN 0.2		

		CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
1,4-Dichlorobenzene	A	0.20000	0.2	1.5461150	1.5667900		1.3	
1,2-Dichlorobenzene	A	0.20000	0.2	1.5059720	1.5318690		1.7	
Benzyl Alcohol	A	0.20000	0.1	1.0943940	0.7112341		-35.0	
Benzoic acid	A	0.80000	0.05	0.1762504	0.0153303		-94.1	
2,4-Dimethylphenol	A	0.40000	0.4	0.3438645	0.3421315		-0.5	
1,2,4-Trichlorobenzene	A	0.20000	0.2	0.3370247	0.3492228		3.6	
N-Nitrosodiphenylamine	A	0.20000	0.2	0.5419762	0.5350874		-1.3	
Pentachlorophenol	A	0.40000	0.1	0.1113753	0.0368606		-73.8	
2-Fluorophenol	A	0.30000	0.242	1.3577520	1.0973290		-19.2	
p-Terphenyl-d14	A	0.20000	0.246	0.6895811	0.8493763		23.2	

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT14031723185.D

Date : 18-MAR-2023 00:43

Client ID:

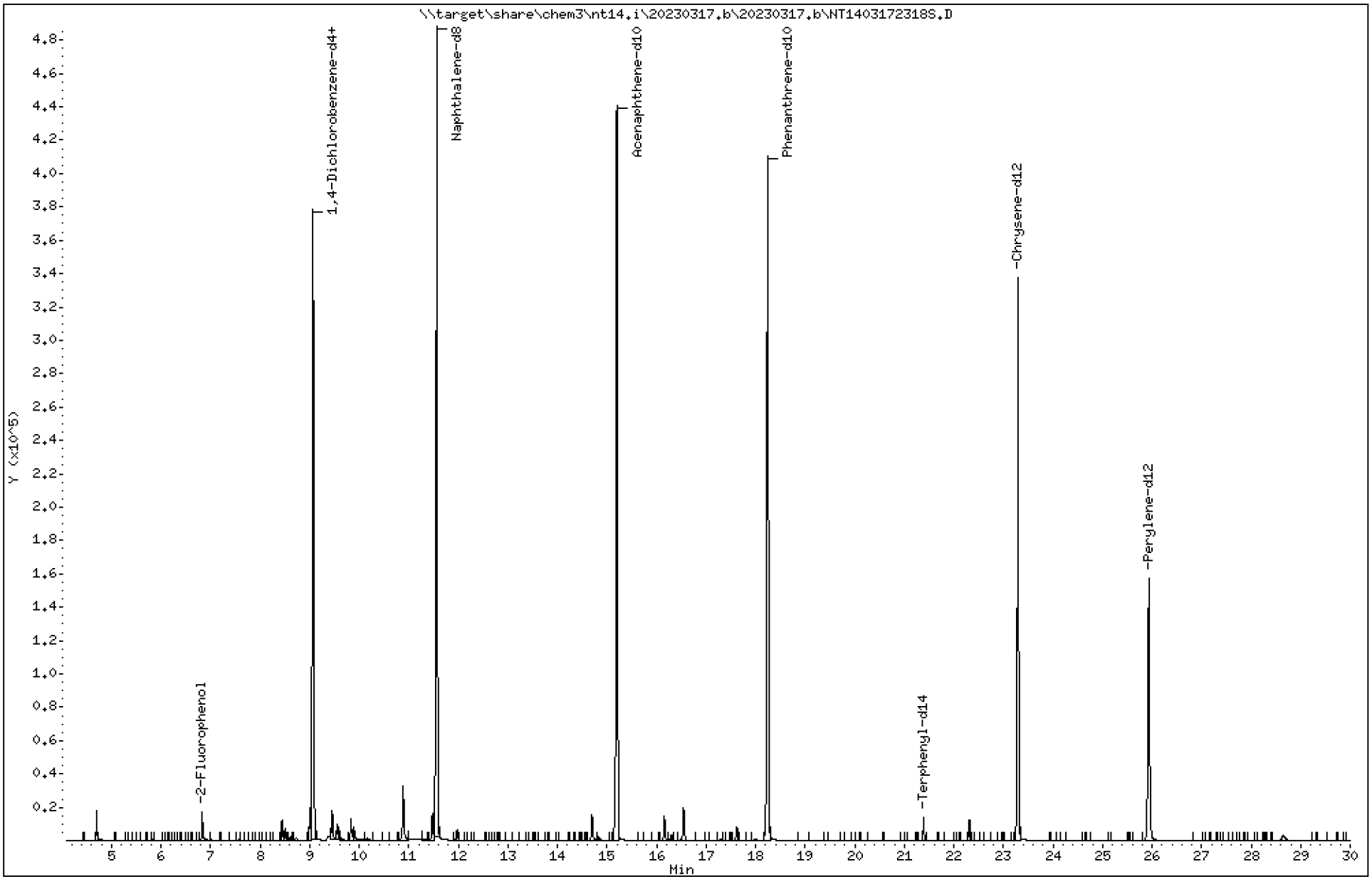
Sample Info: SLC0376-LCV3

Instrument: nt14.i

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV3

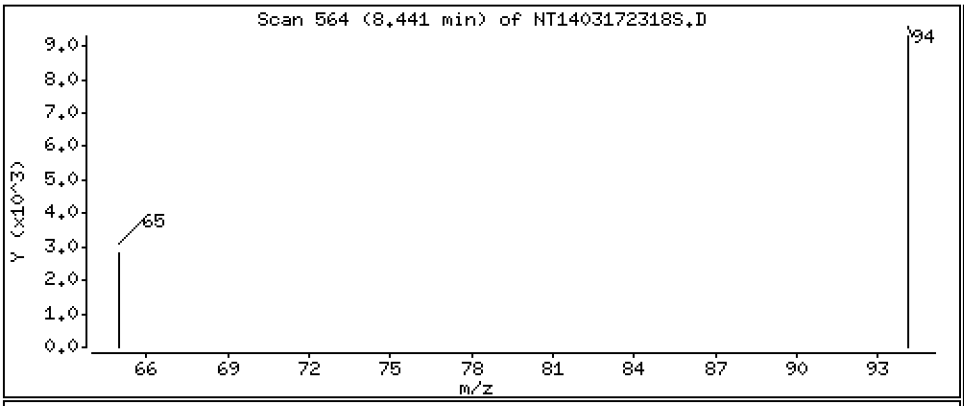
Operator: JGR

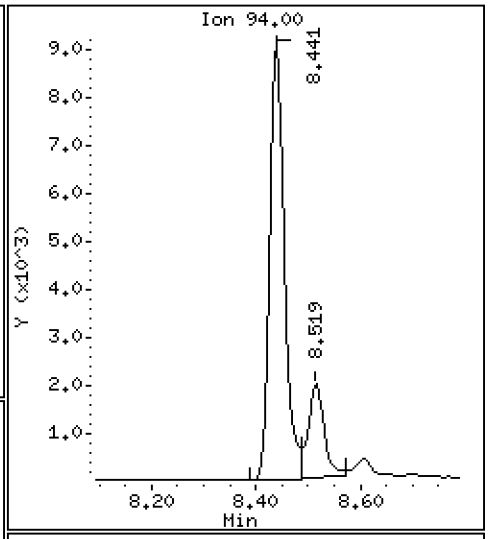
Column phase: ZB-5msi

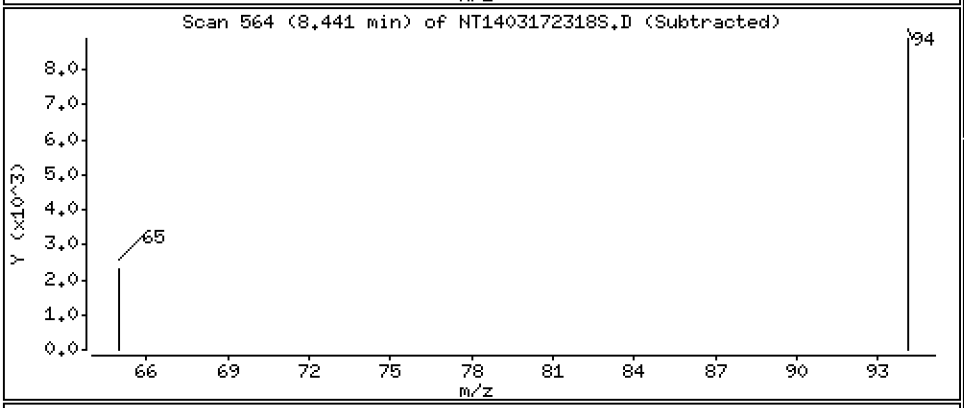
Column diameter: 0.25

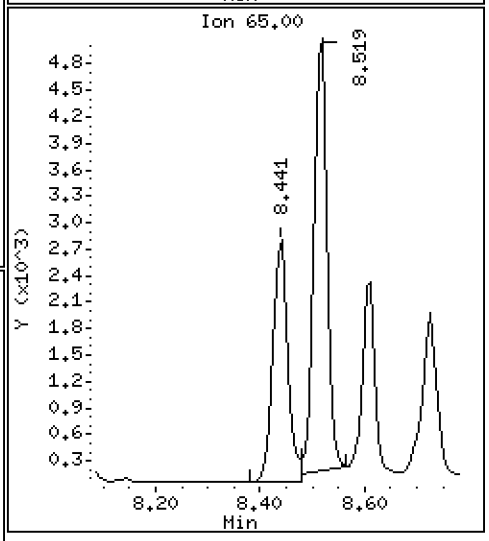
3 Phenol

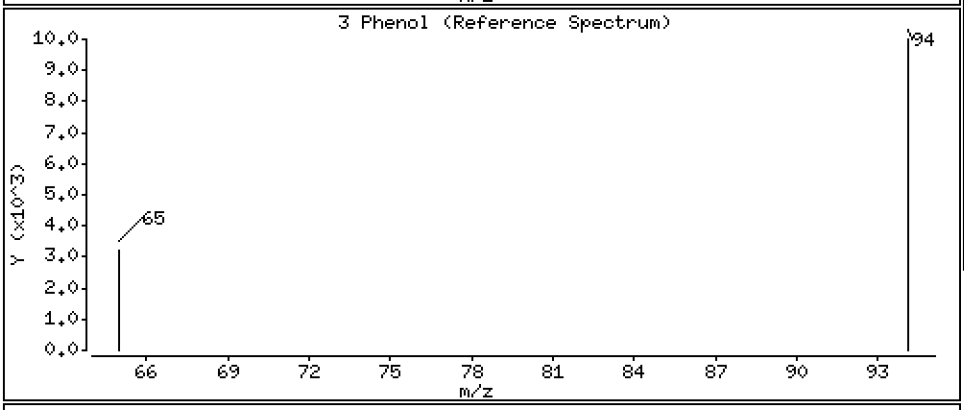
Concentration: 0.1536 ug/mL

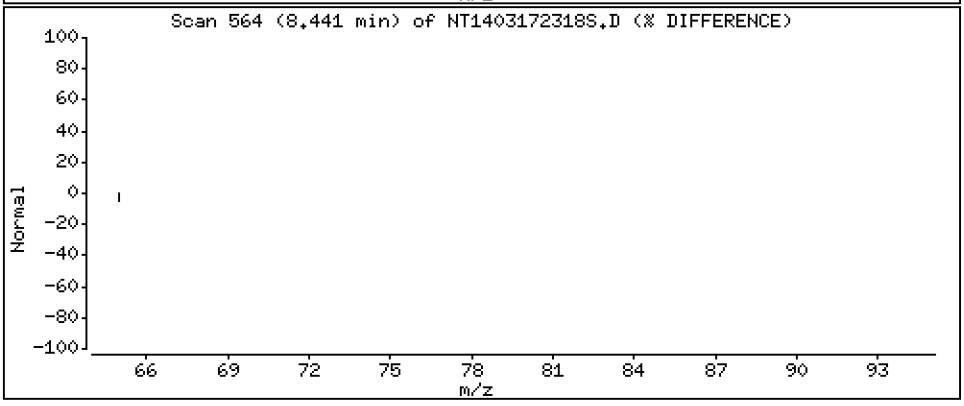












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT14031723185.D

Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV3

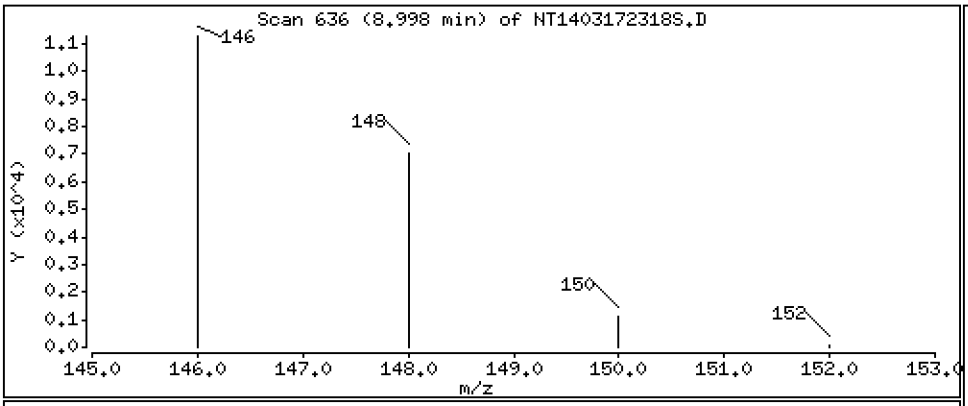
Operator: JGR

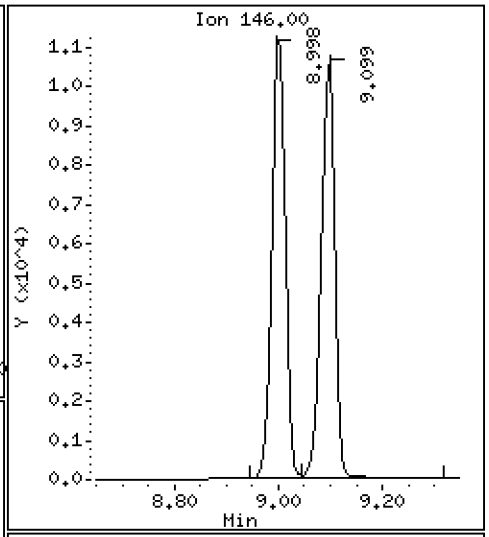
Column phase: ZB-5msi

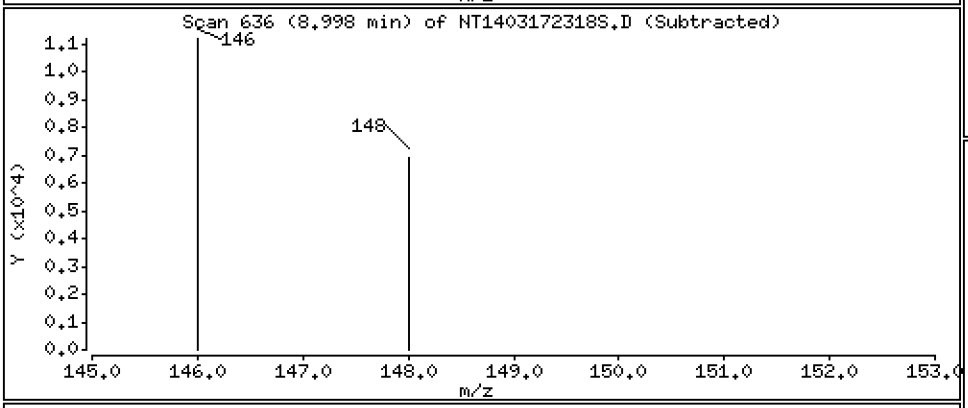
Column diameter: 0.25

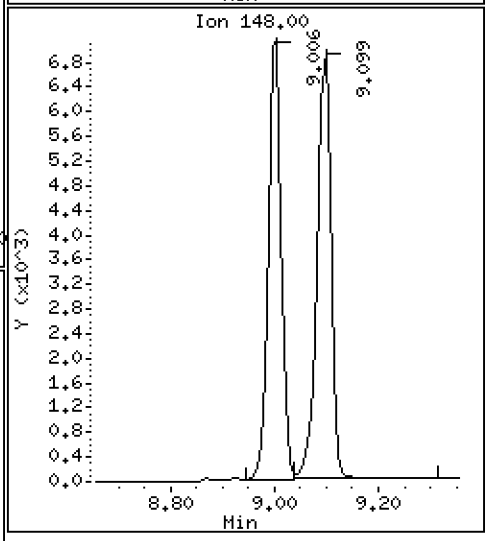
7 1,3-Dichlorobenzene

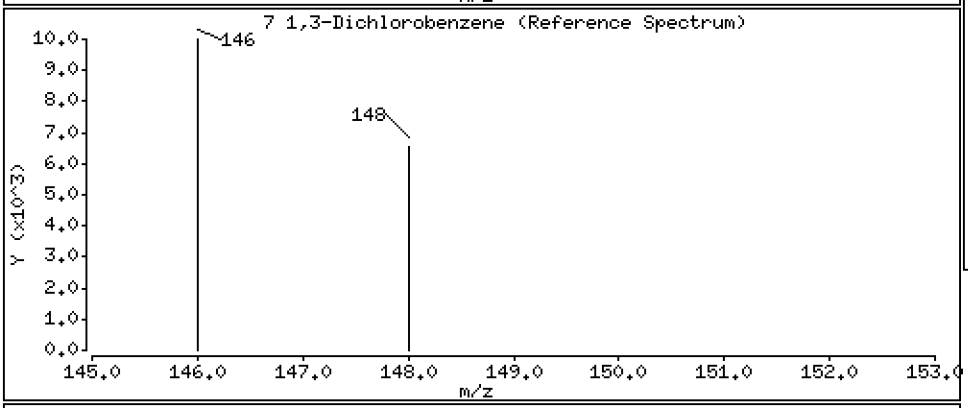
Concentration: 0.2027 ug/mL

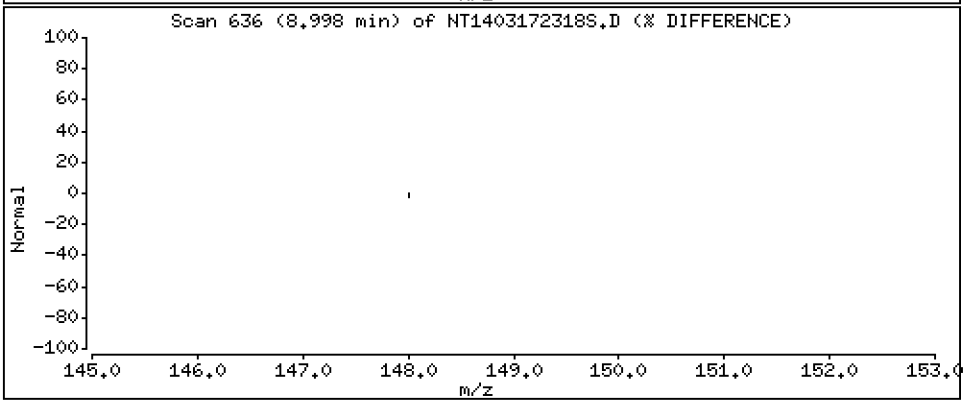












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172318S.D

Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV3

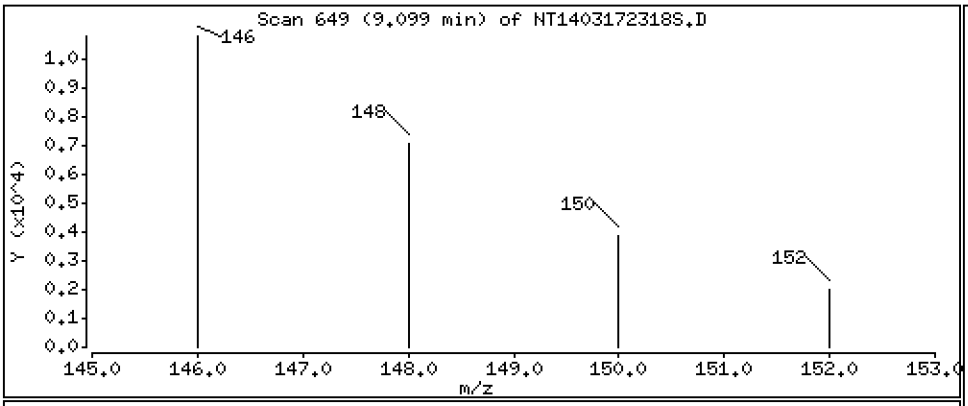
Operator: JGR

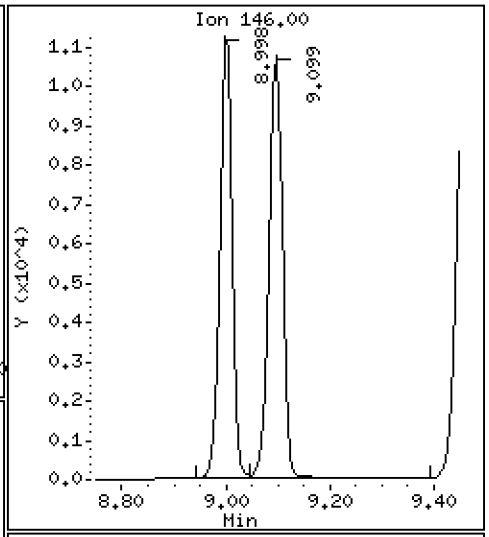
Column phase: ZB-5msi

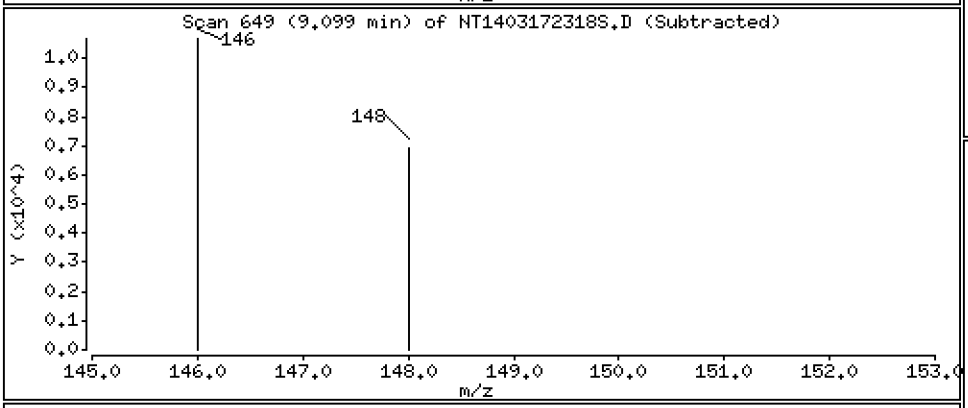
Column diameter: 0.25

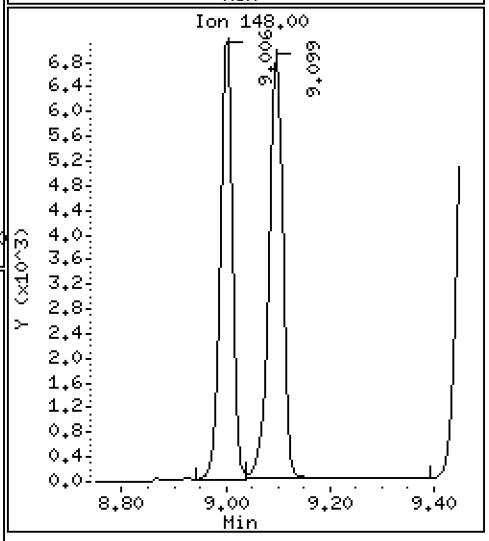
9 1,4-Dichlorobenzene

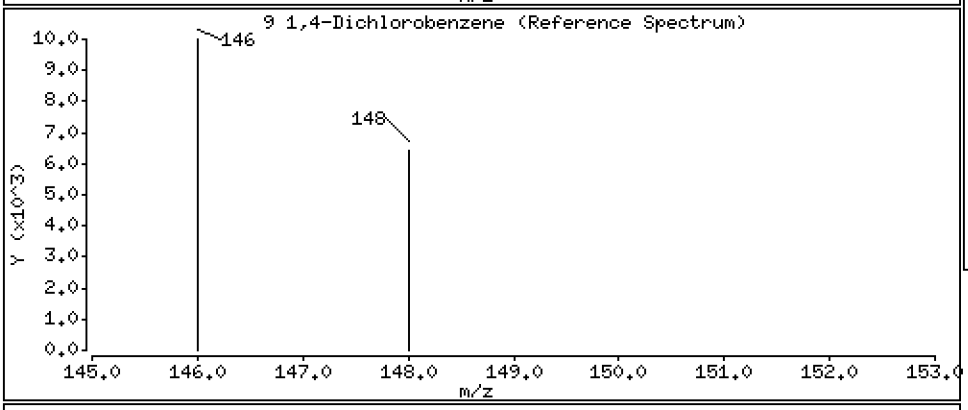
Concentration: 0.2027 ug/mL

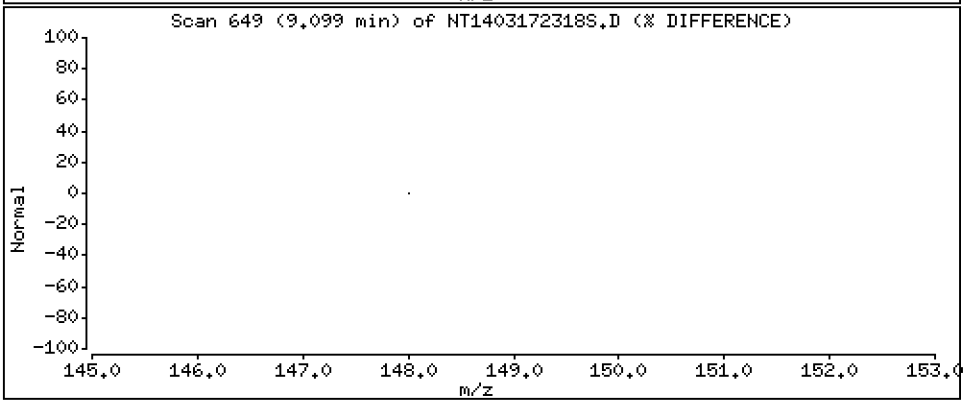












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT14031723185.D

Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV3

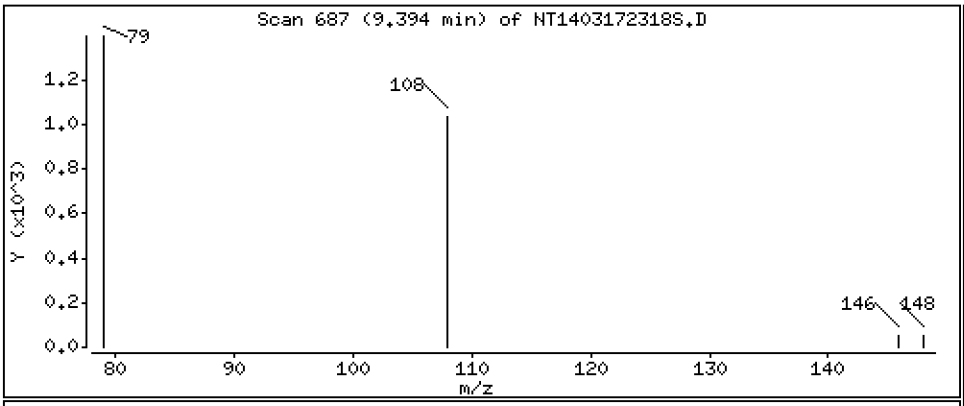
Operator: JGR

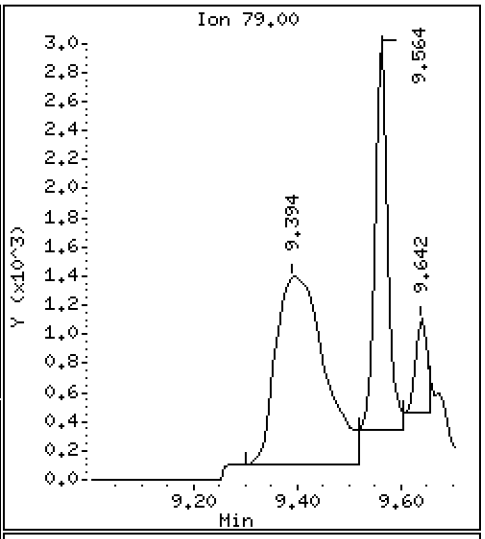
Column phase: ZB-5msi

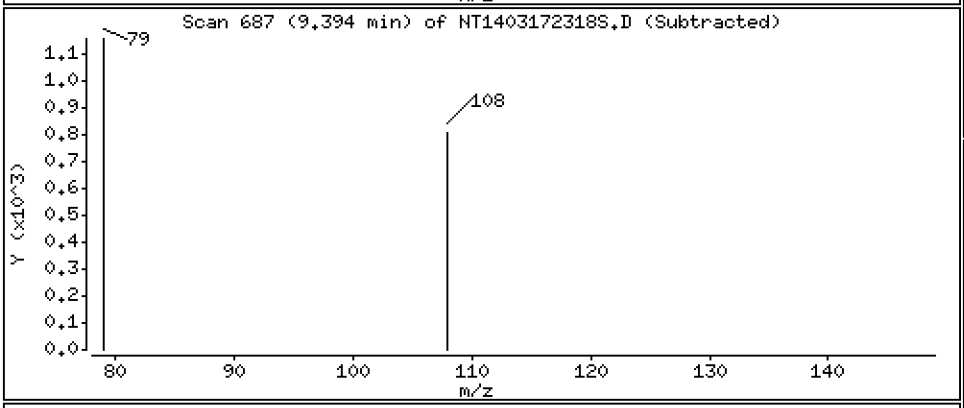
Column diameter: 0.25

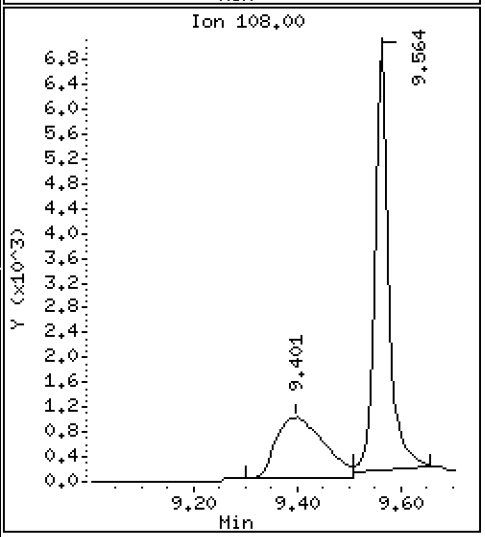
11 Benzyl alcohol

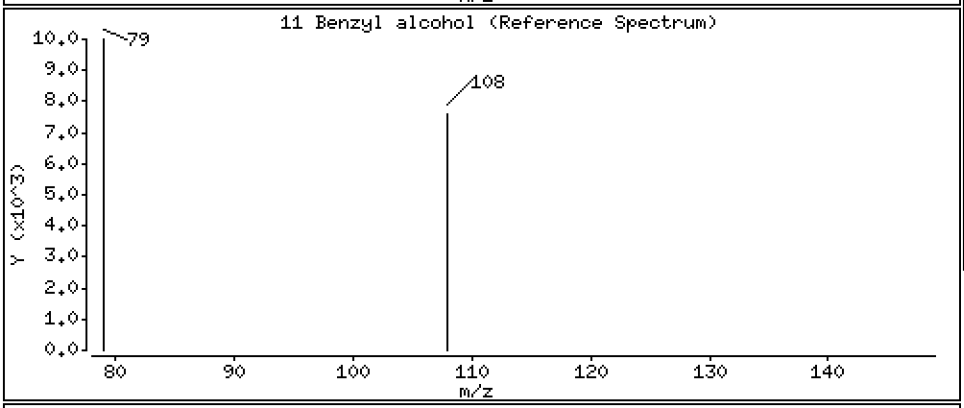
Concentration: 0.1300 ug/mL

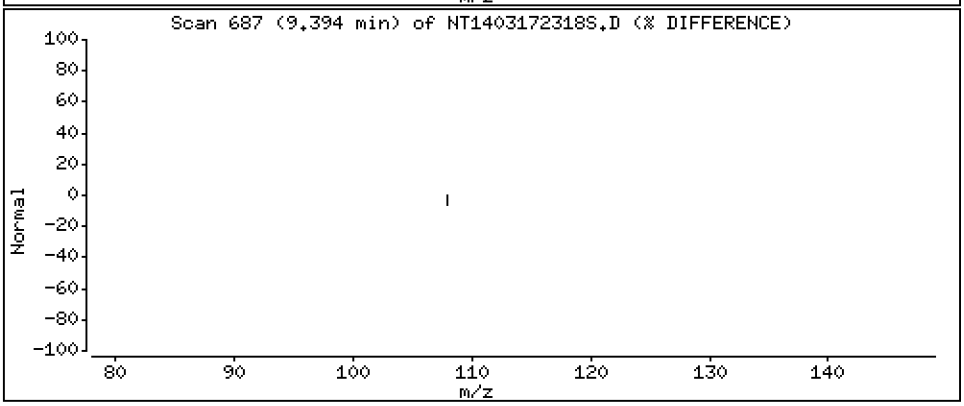












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT14031723185.D

Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV3

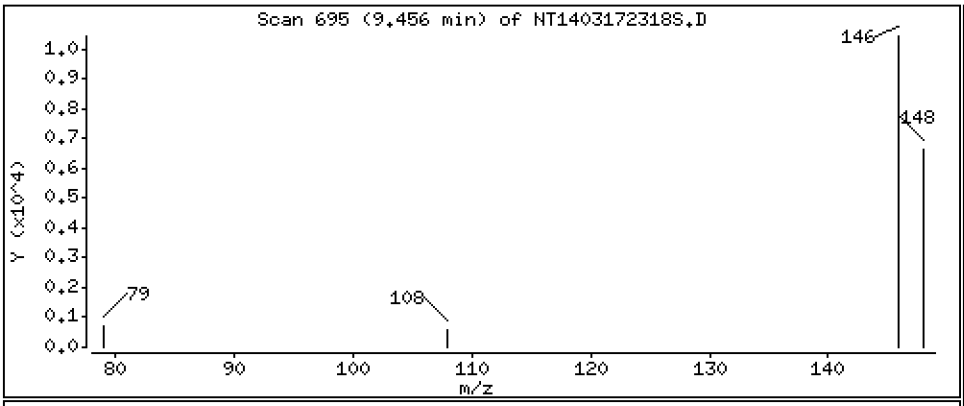
Operator: JGR

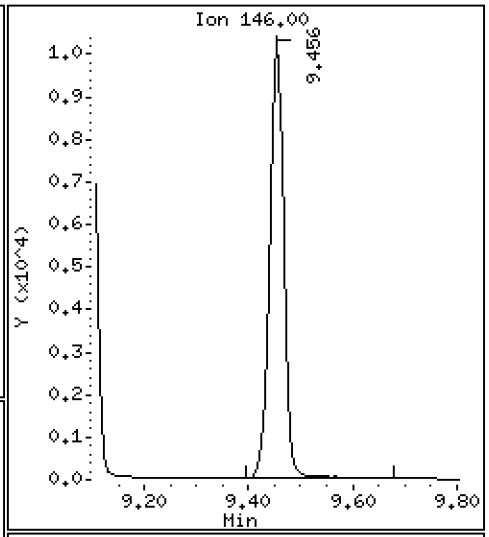
Column phase: ZB-5msi

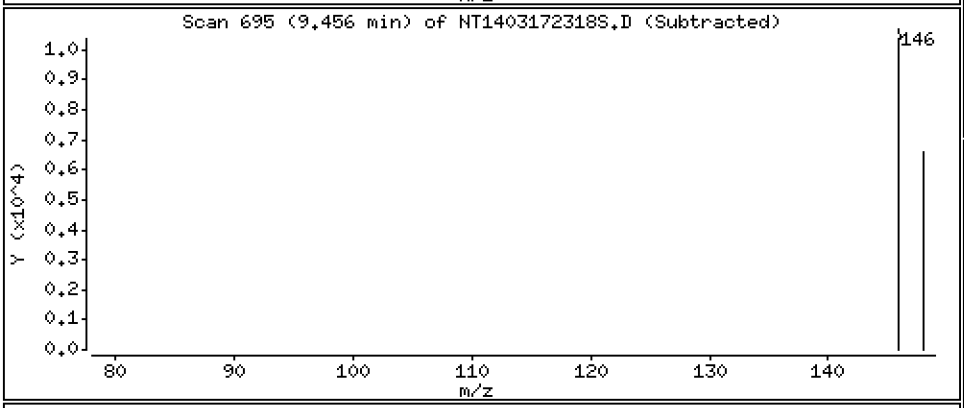
Column diameter: 0.25

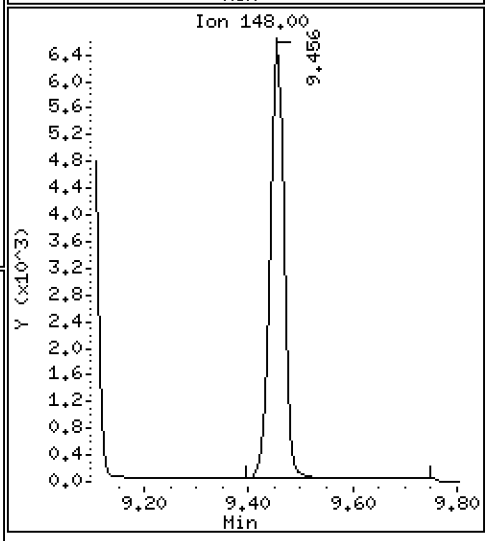
12 1,2-Dichlorobenzene

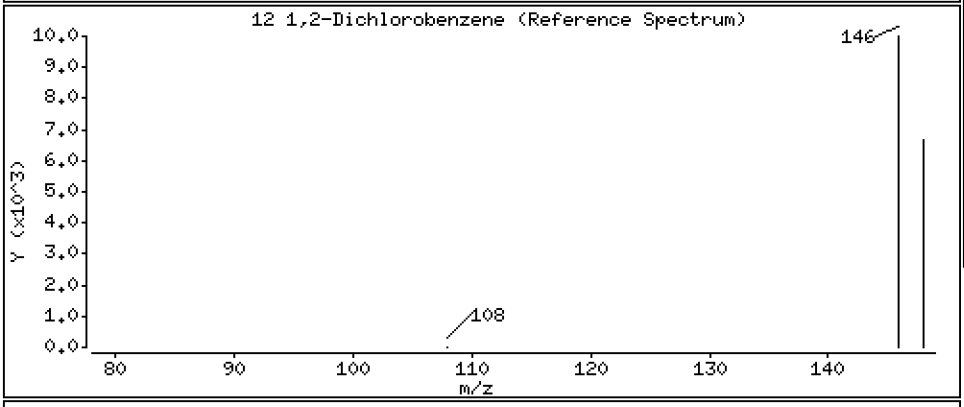
Concentration: 0.2034 ug/mL

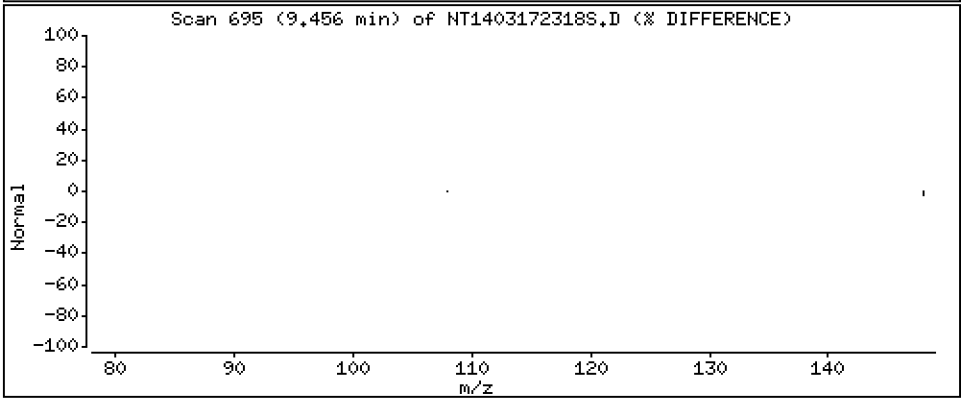












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT14031723185.D

Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV3

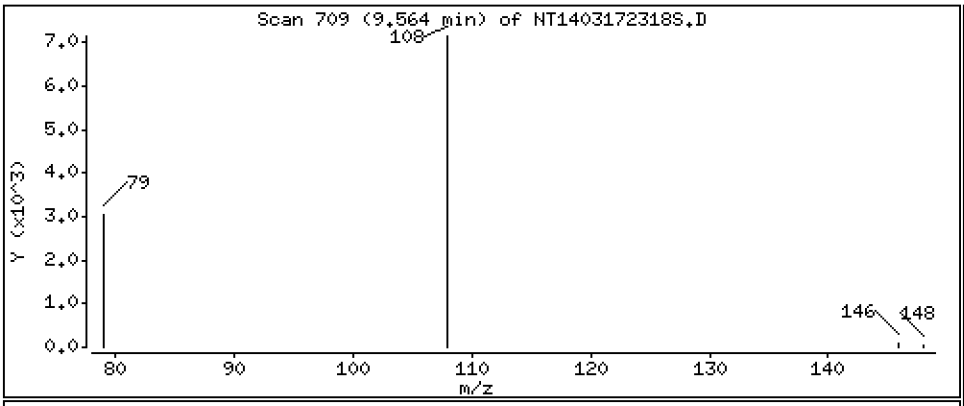
Operator: JGR

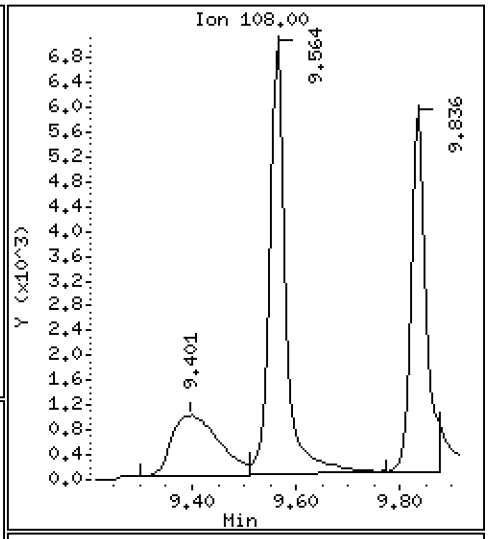
Column phase: ZB-5msi

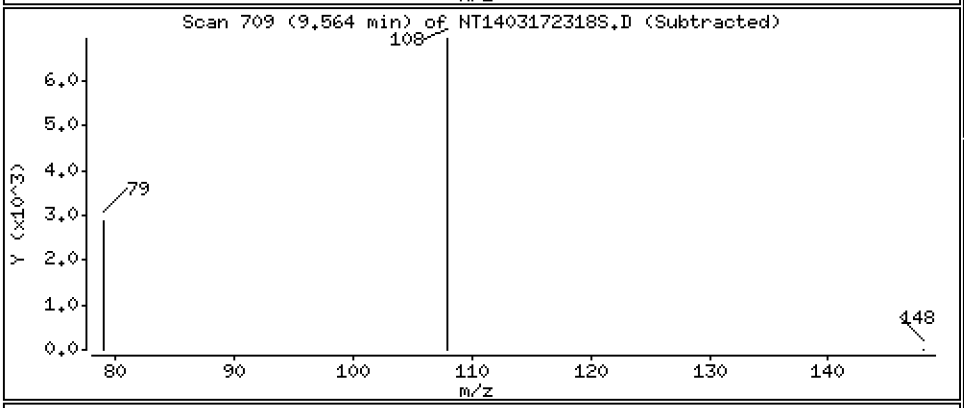
Column diameter: 0.25

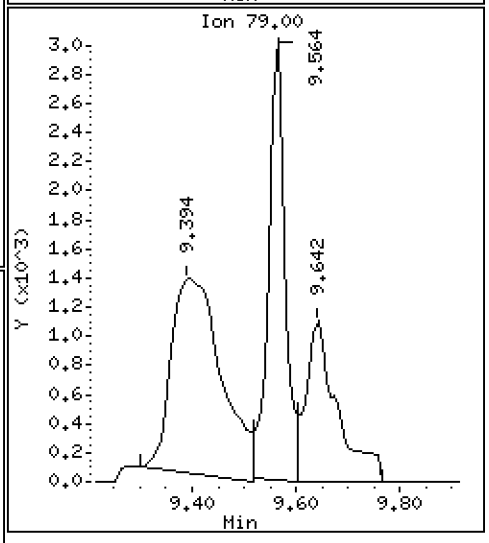
13 2-Methylphenol

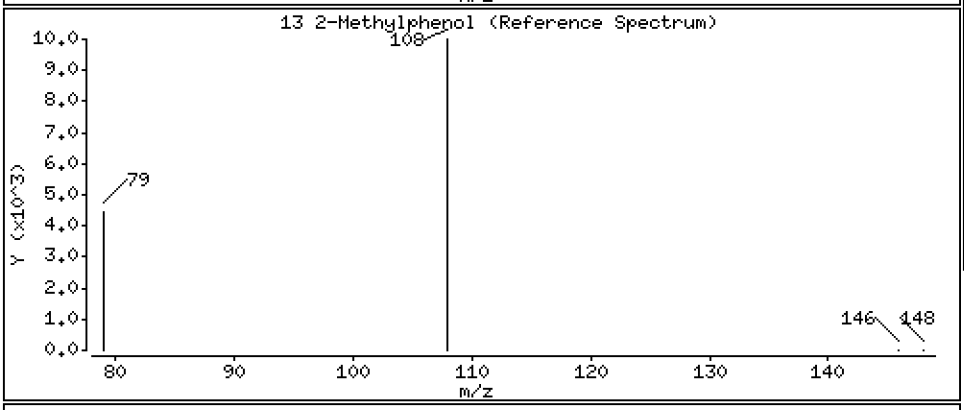
Concentration: 0.1877 ug/mL

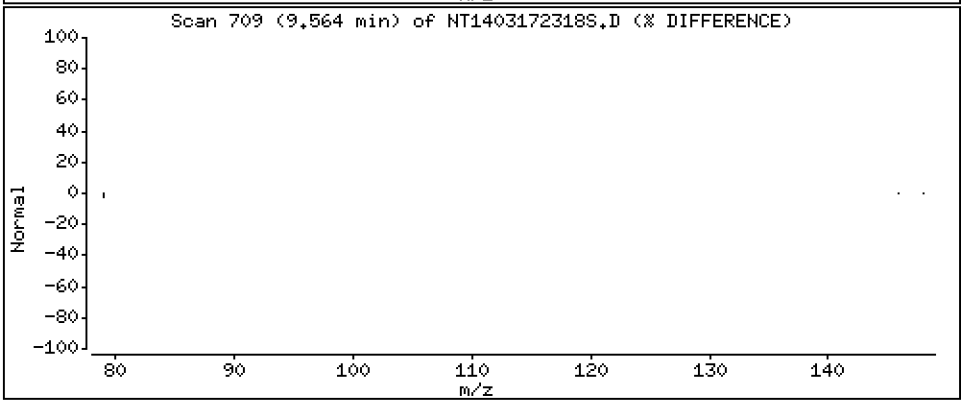












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT14031723185.D

Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV3

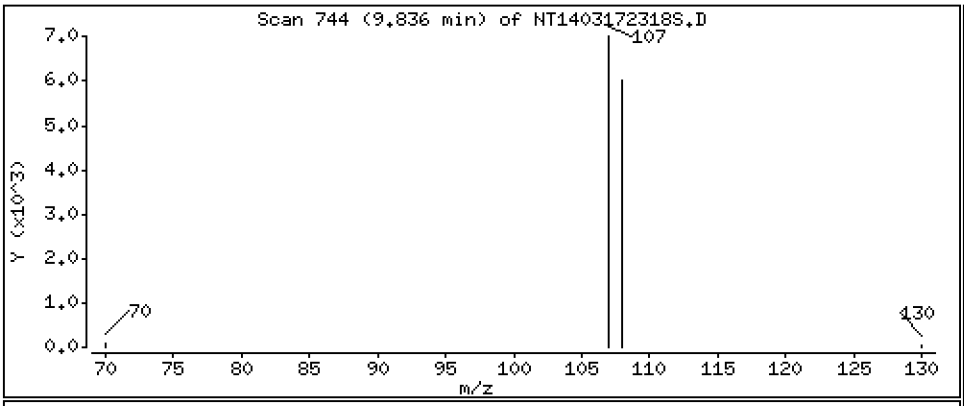
Operator: JGR

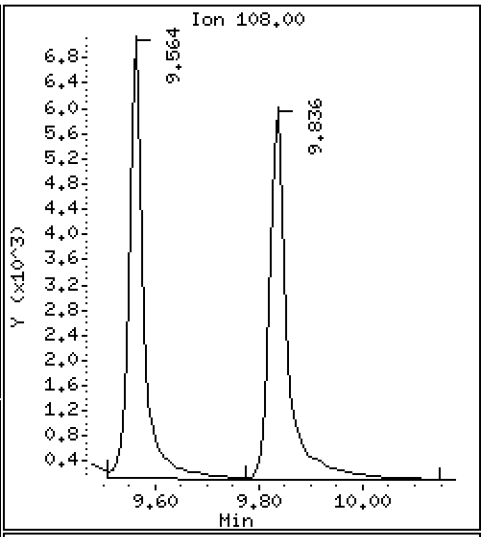
Column phase: ZB-5msi

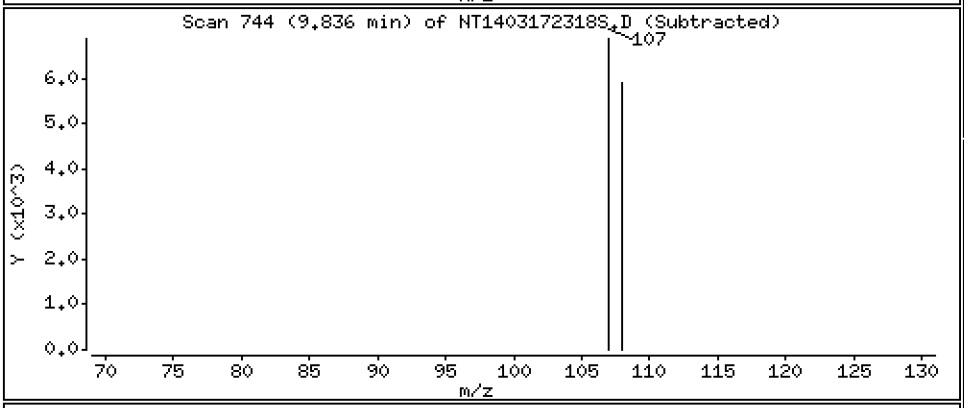
Column diameter: 0.25

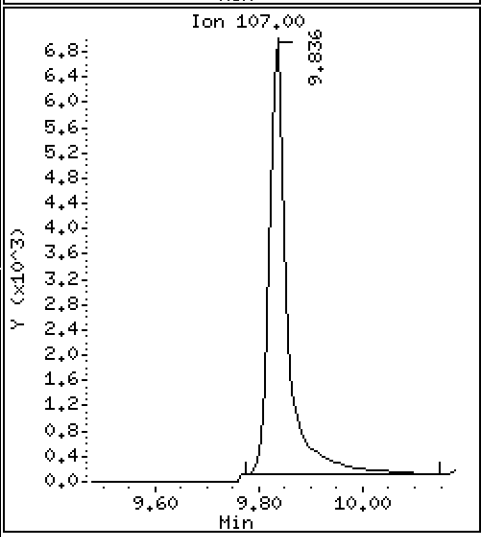
15 4-Methylphenol

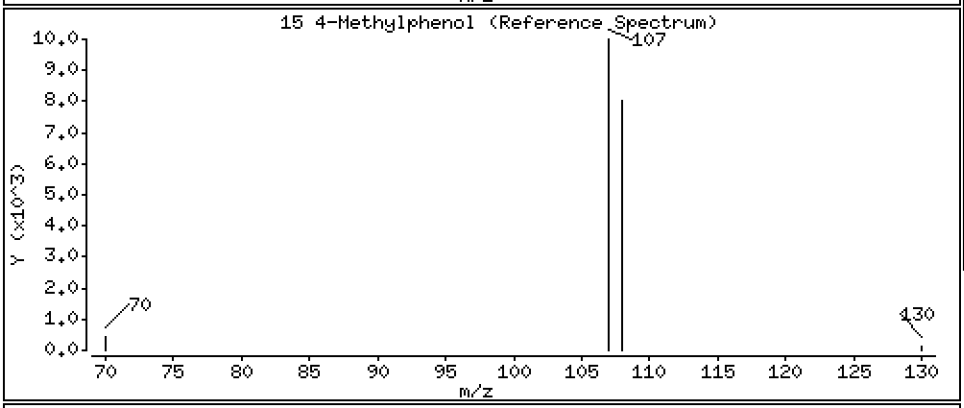
Concentration: 0.1738 ug/mL

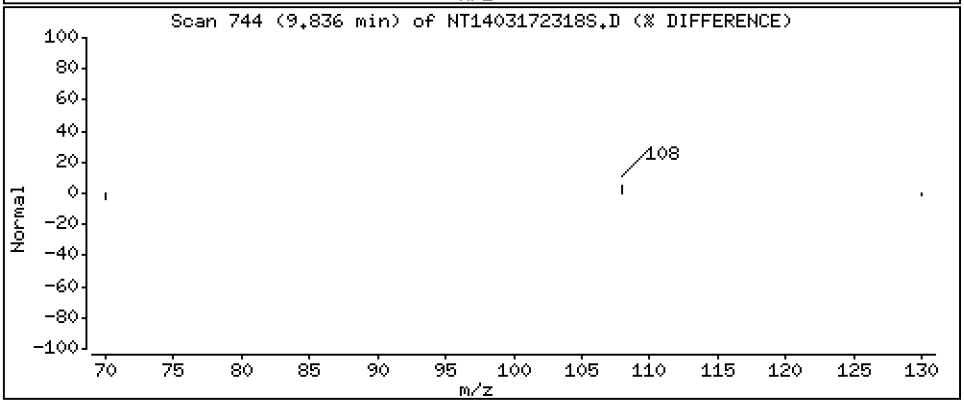












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV3

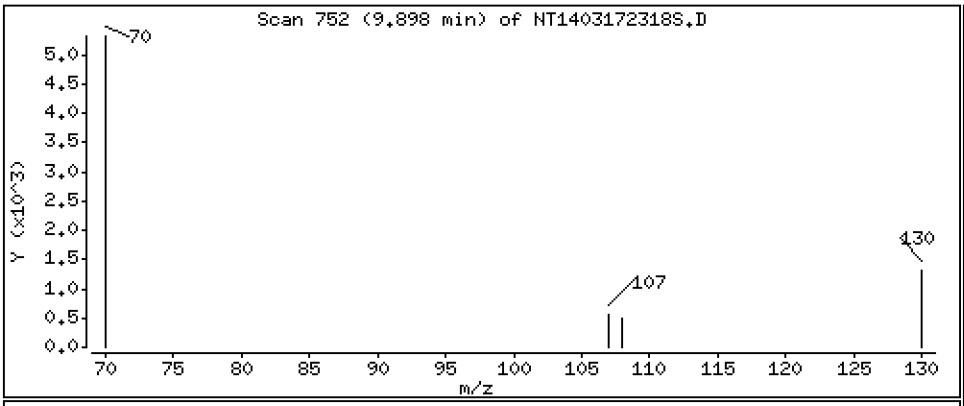
Operator: JGR

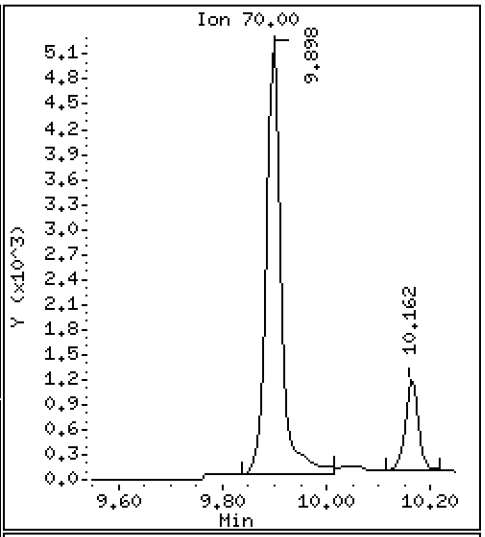
Column phase: ZB-5msi

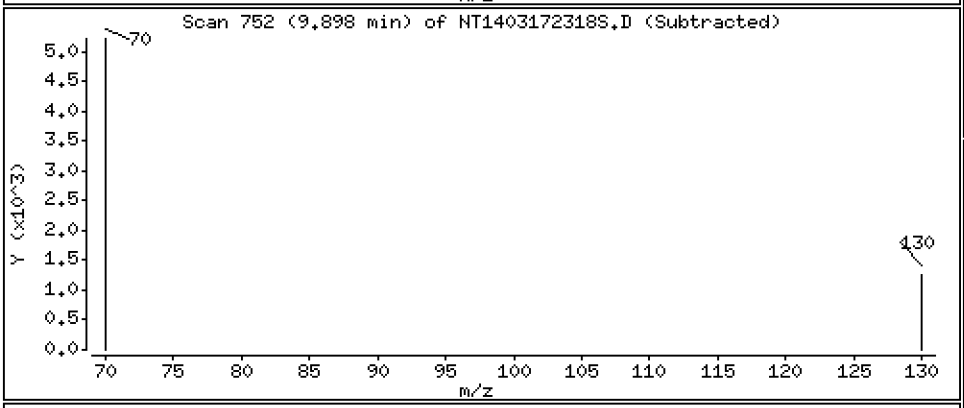
Column diameter: 0.25

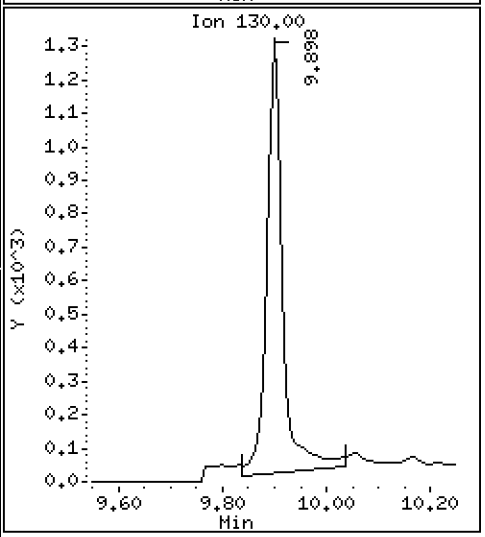
16 N-Nitroso-di-n-propylamine

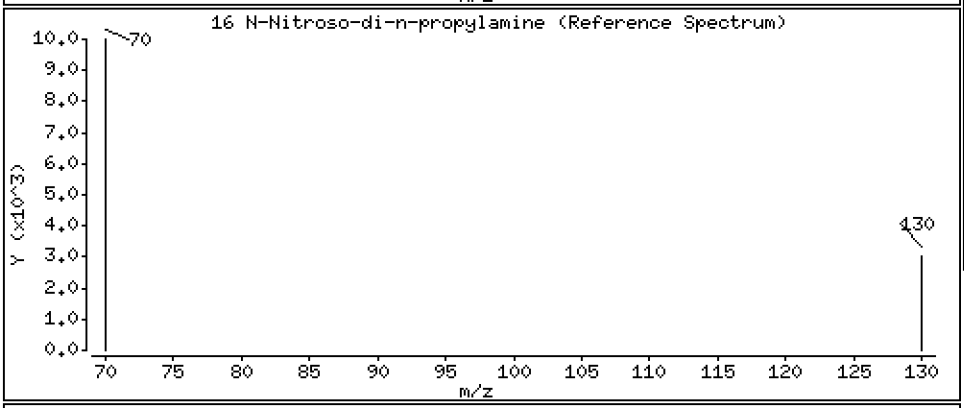
Concentration: 0.1717 ug/mL

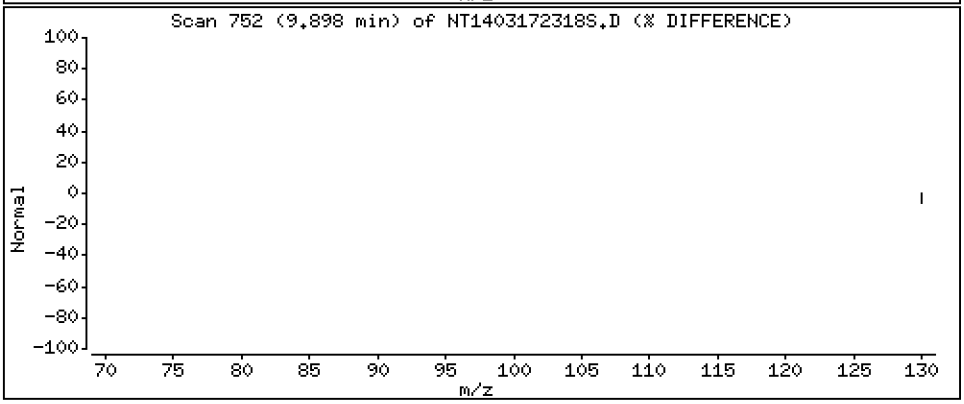












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV3

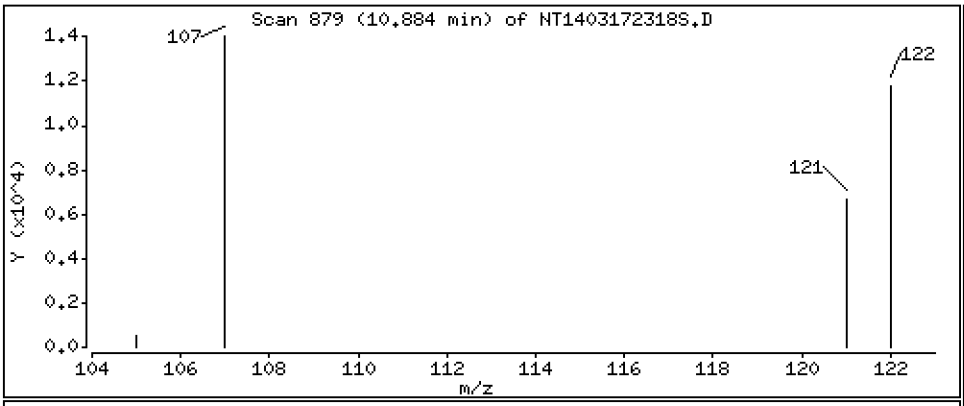
Operator: JGR

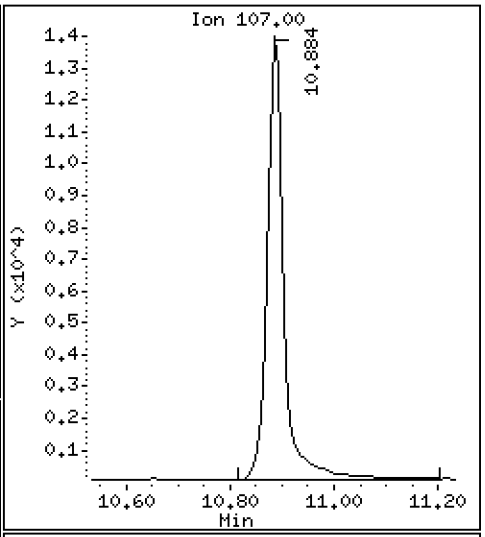
Column phase: ZB-5msi

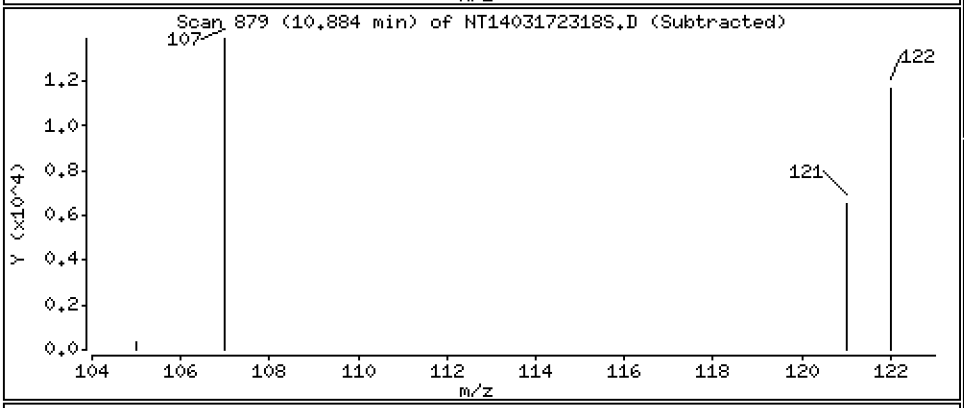
Column diameter: 0.25

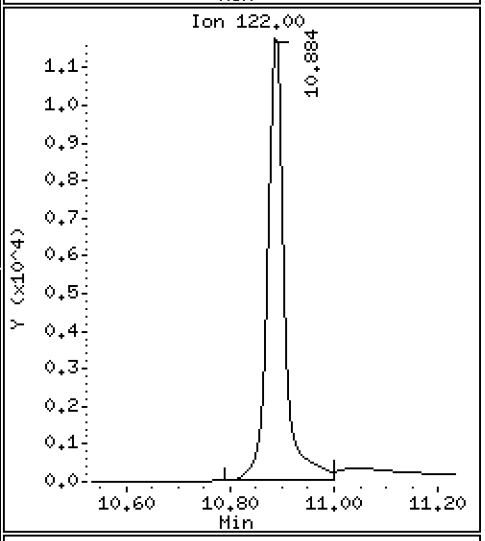
22 2,4-Dimethylphenol

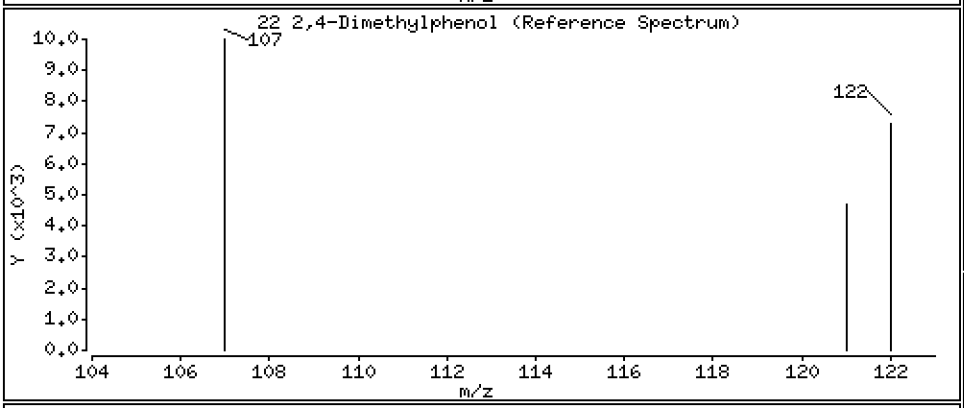
Concentration: 0.3980 ug/mL

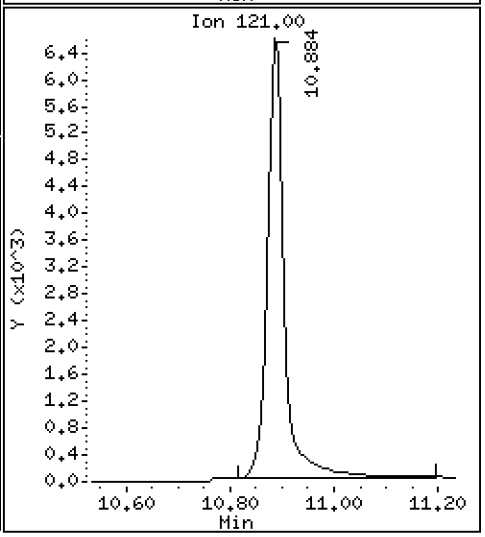


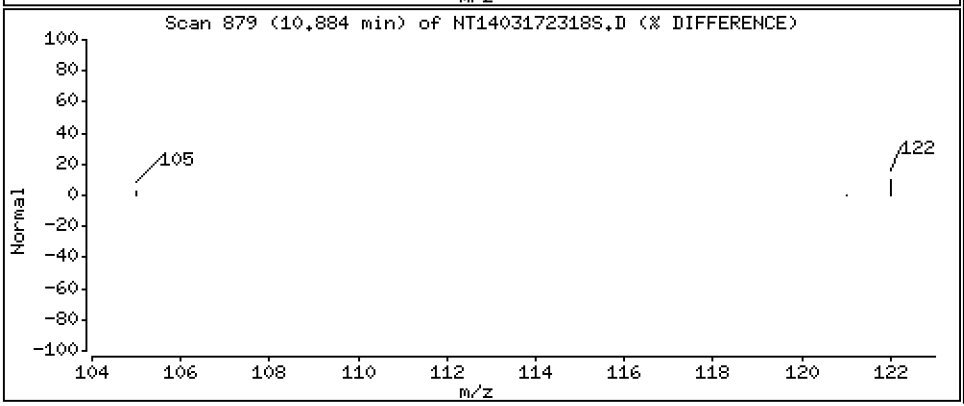












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV3

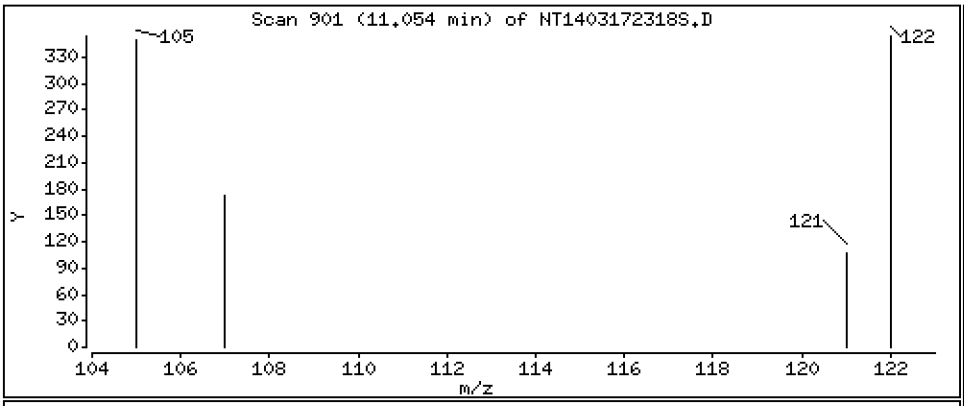
Operator: JGR

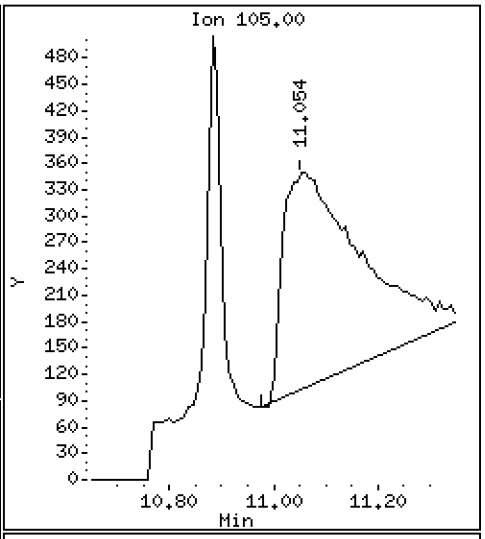
Column phase: ZB-5msi

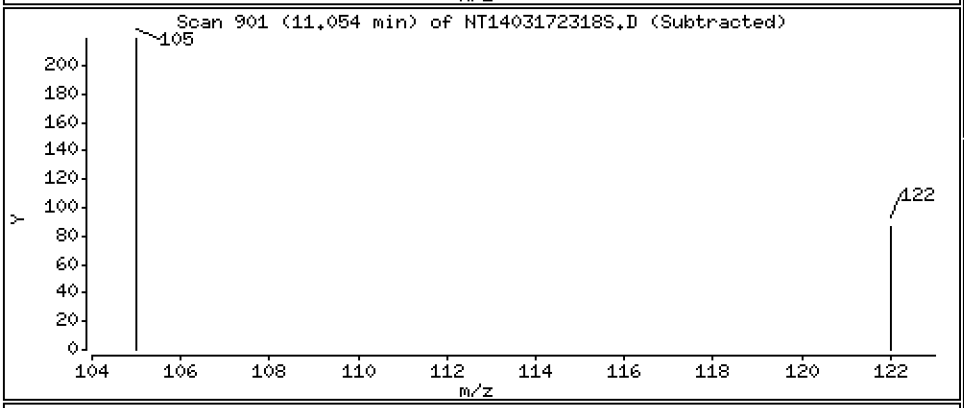
Column diameter: 0.25

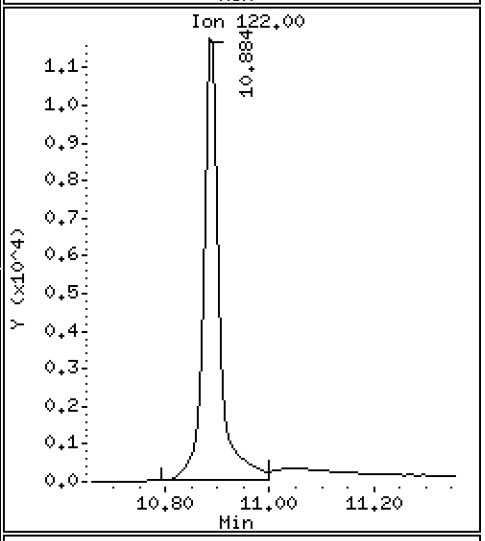
24 Benzoic acid

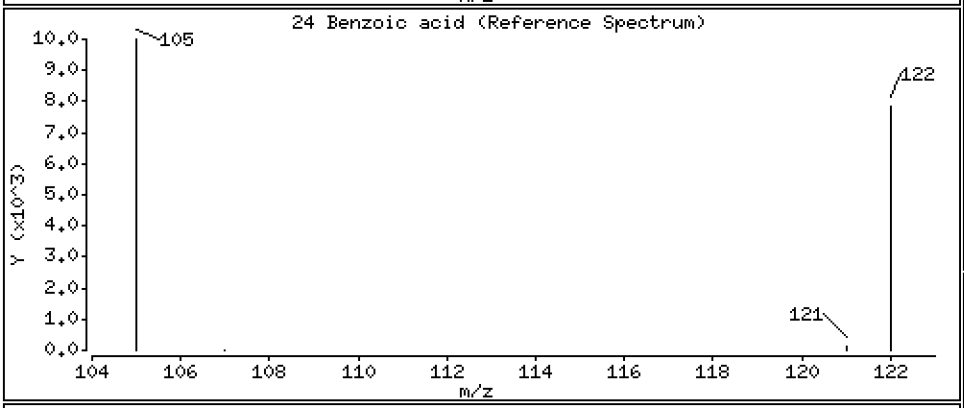
Concentration: 0.04715 ug/mL

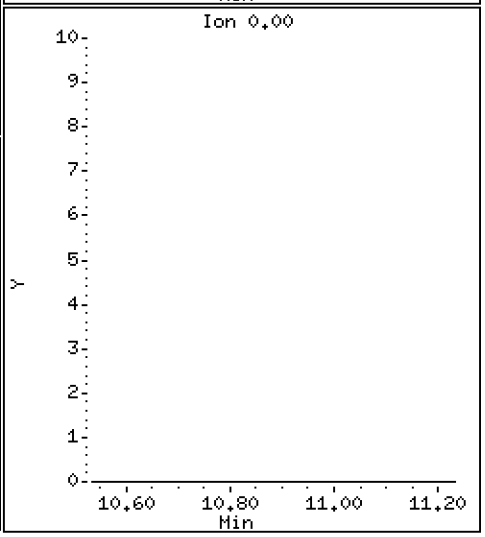


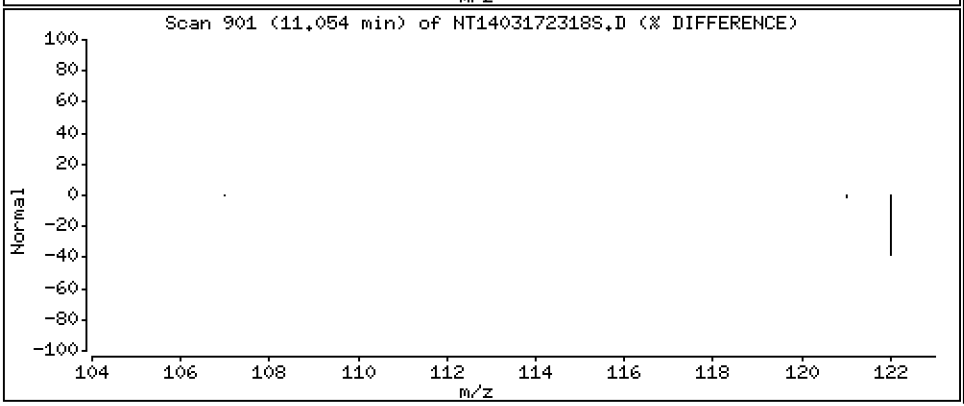












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT14031723185.D

Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV3

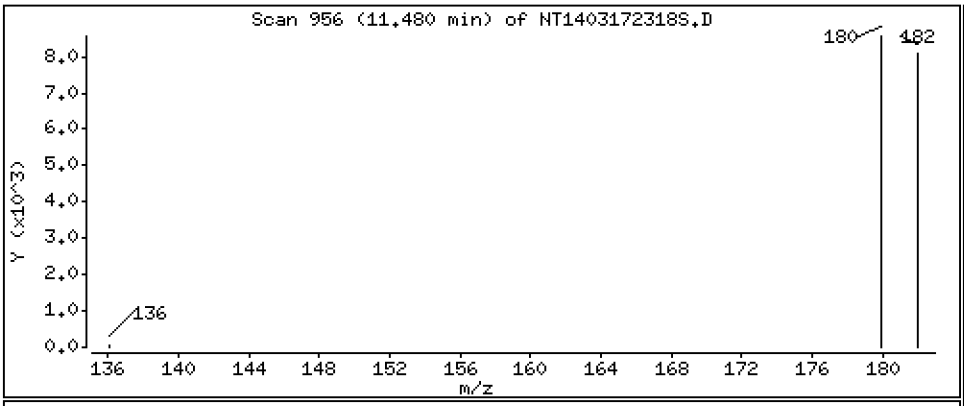
Operator: JGR

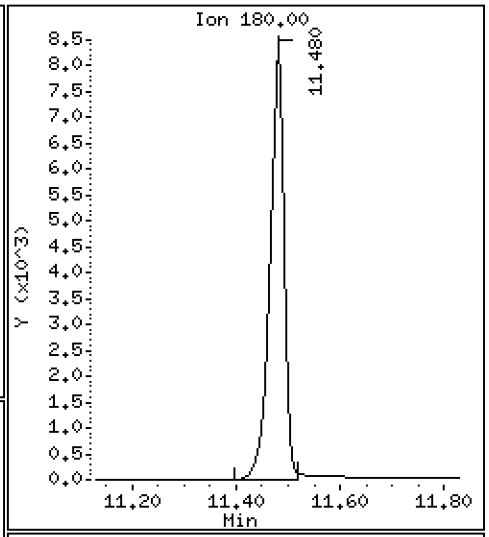
Column phase: ZB-5msi

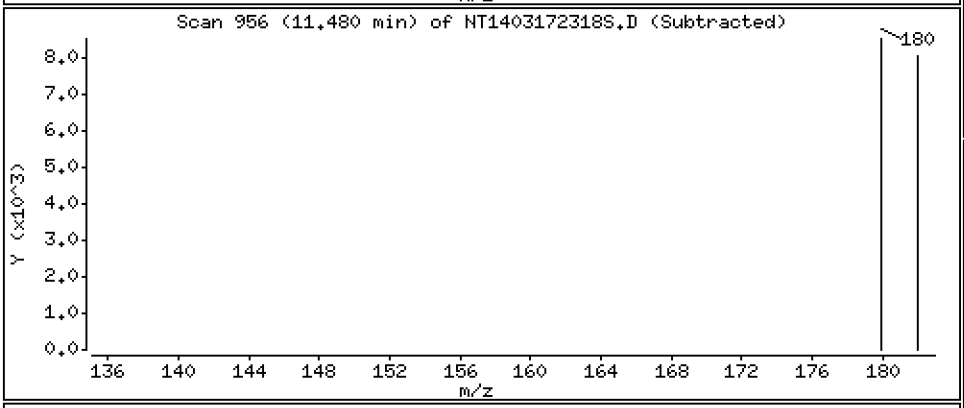
Column diameter: 0.25

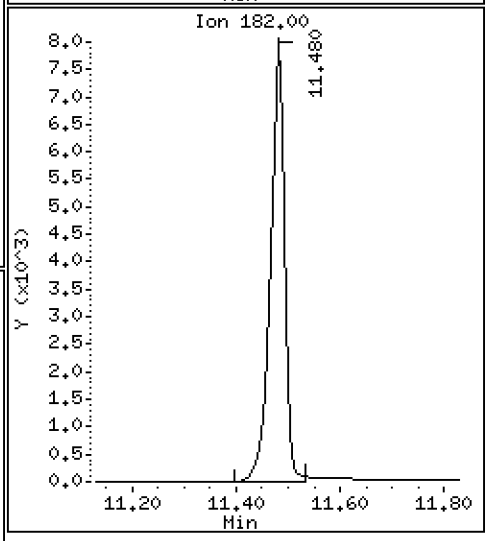
26 1,2,4-Trichlorobenzene

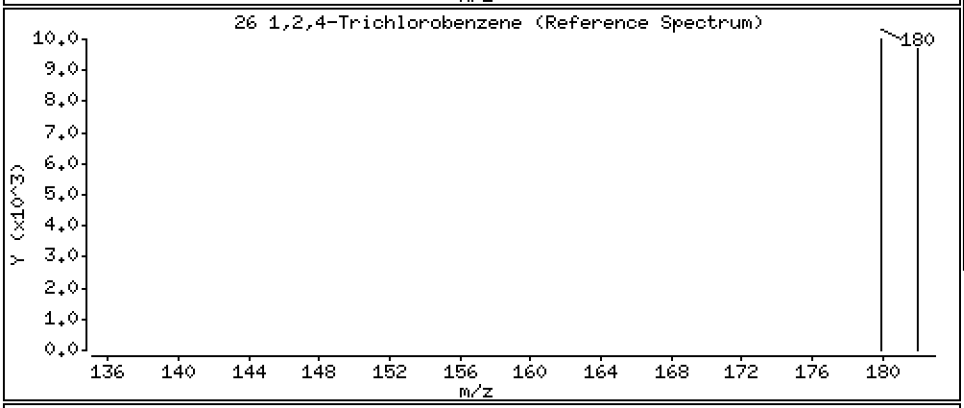
Concentration: 0.2072 ug/mL

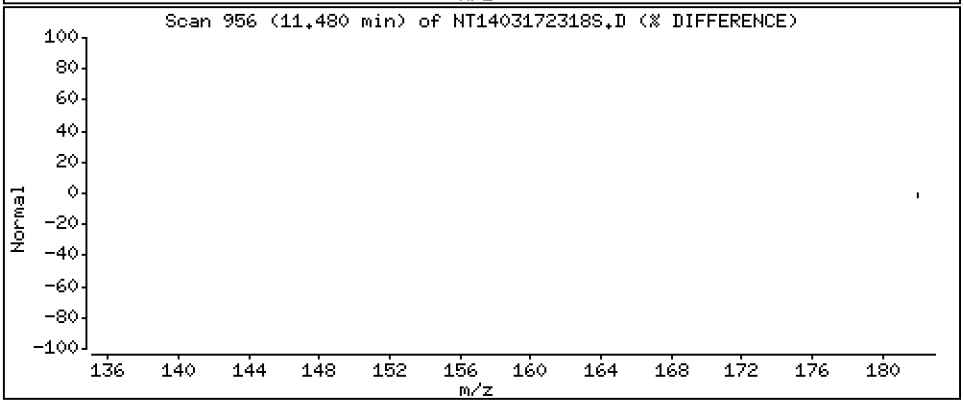












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV3

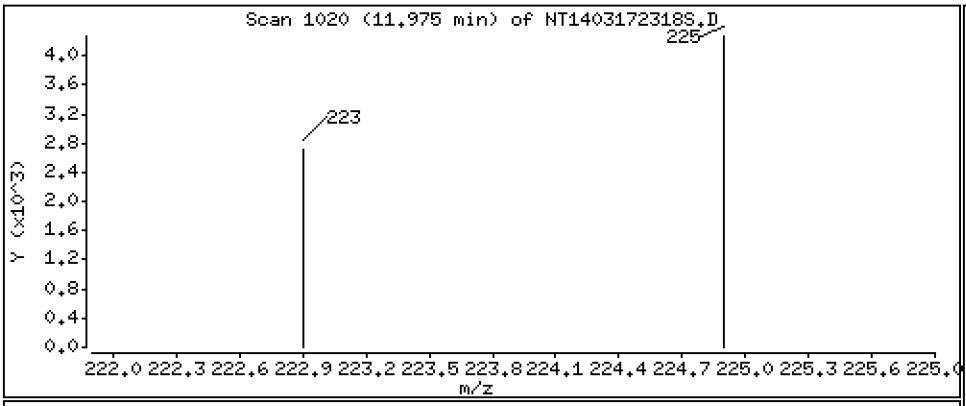
Operator: JGR

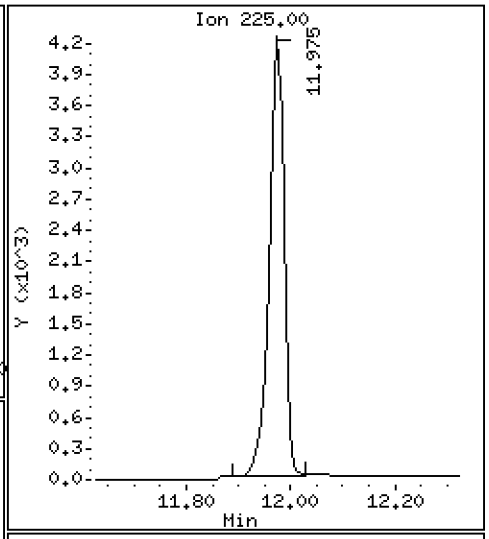
Column phase: ZB-5msi

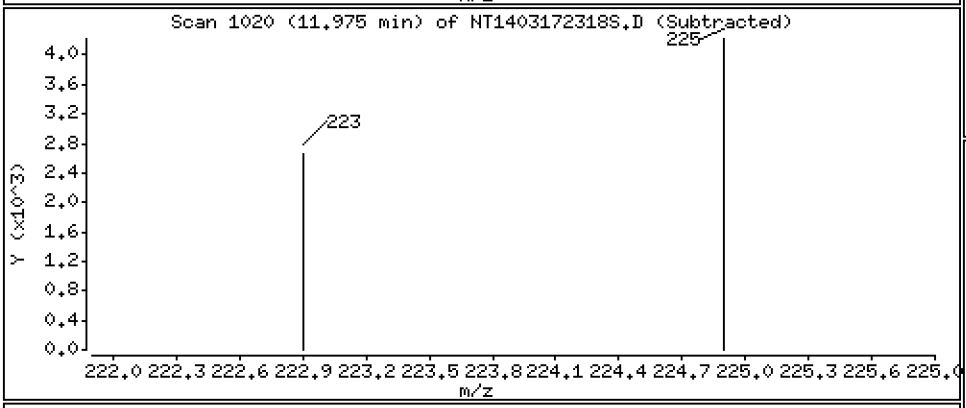
Column diameter: 0.25

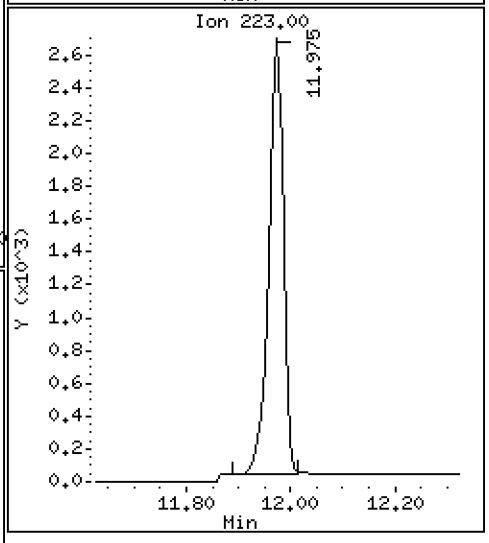
30 Hexachlorobutadiene

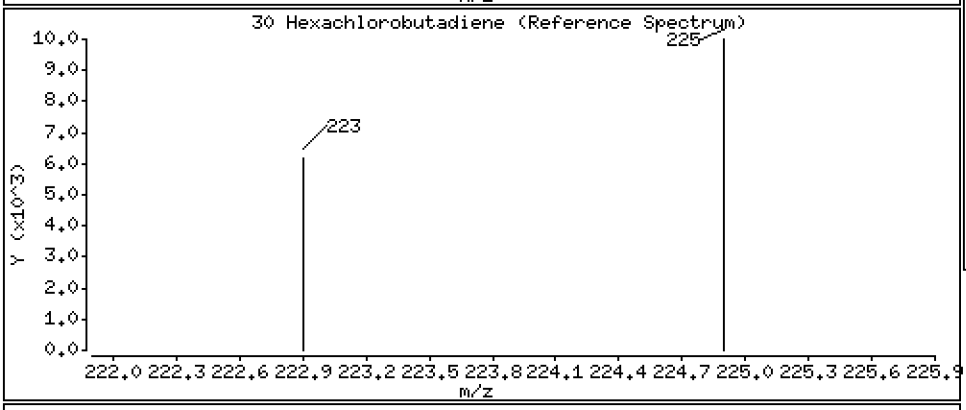
Concentration: 0.2108 ug/mL

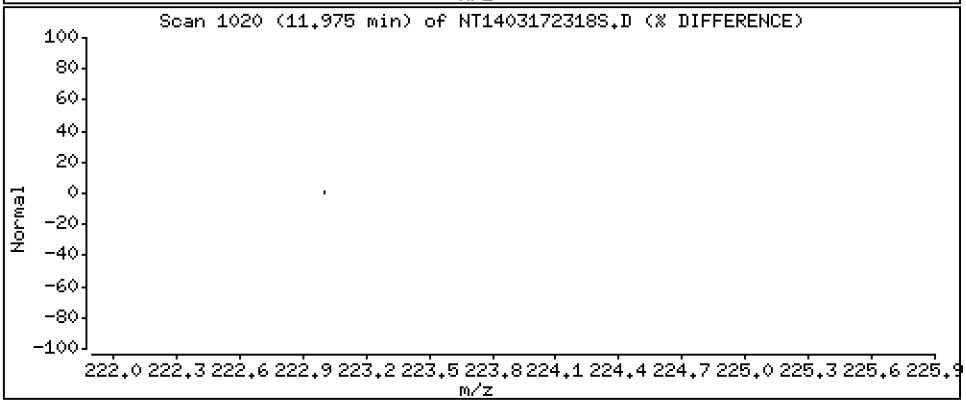












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV3

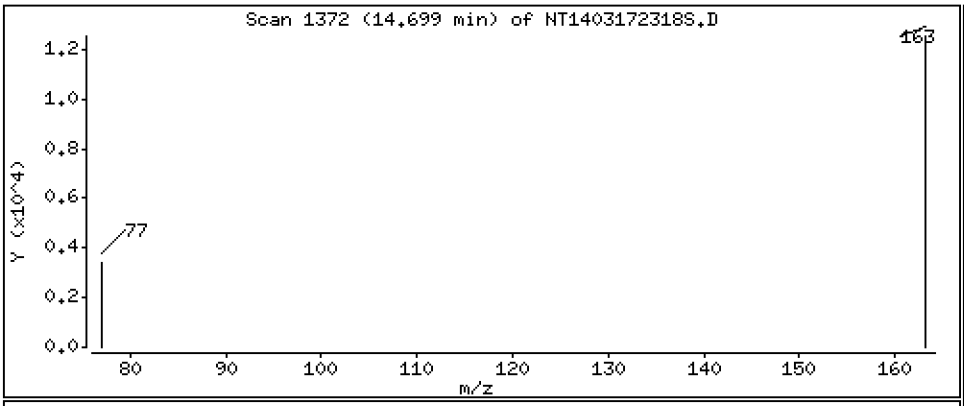
Operator: JGR

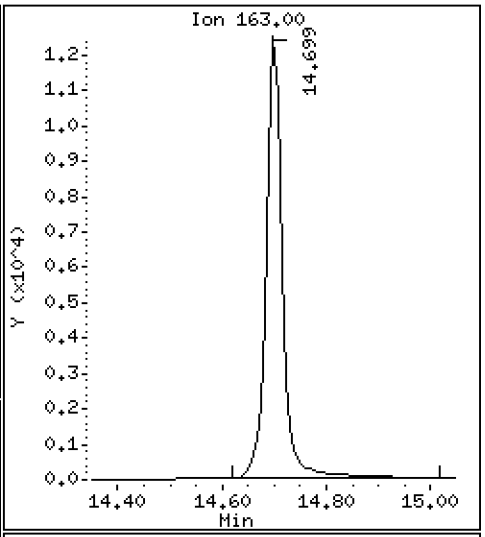
Column phase: ZB-5msi

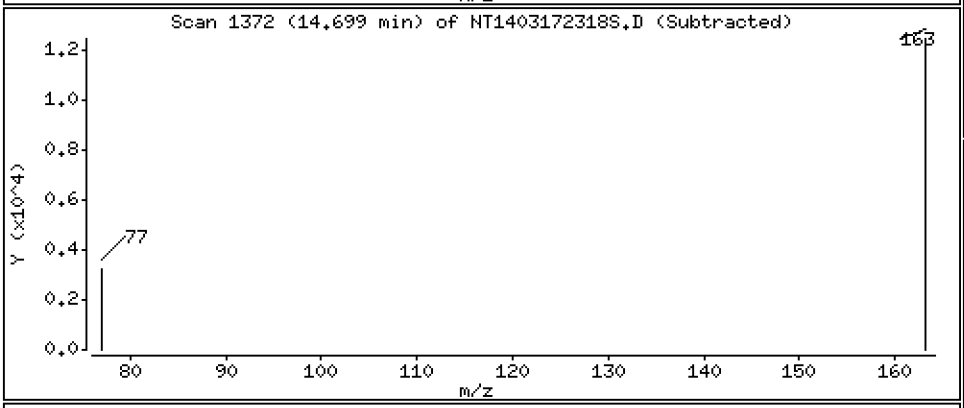
Column diameter: 0.25

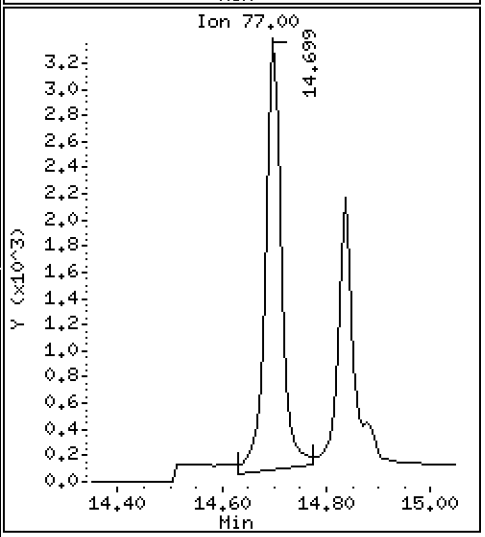
39 Dimethylphthalate

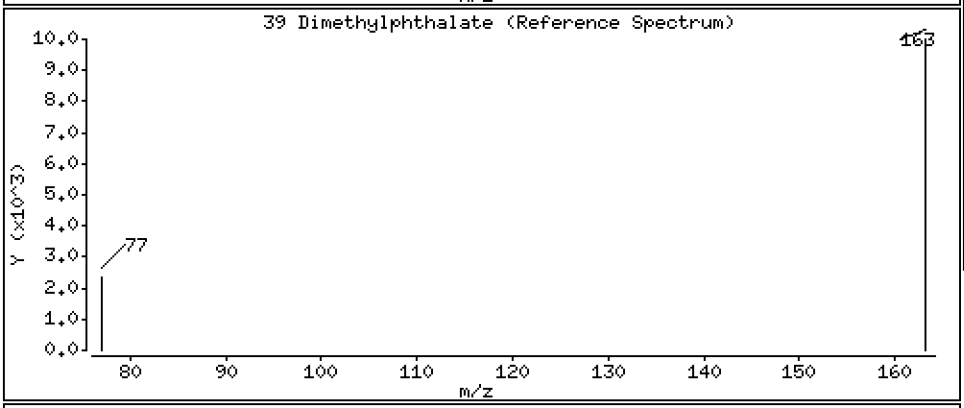
Concentration: 0.1887 ug/mL

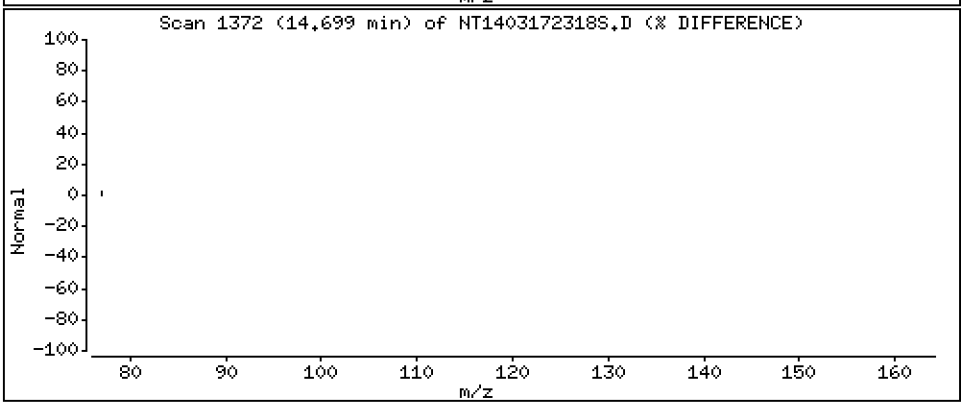












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172318S.D

Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV3

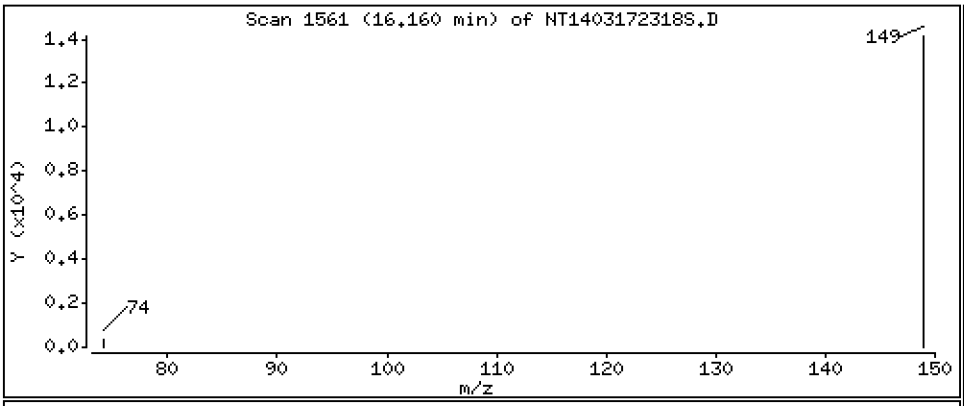
Operator: JGR

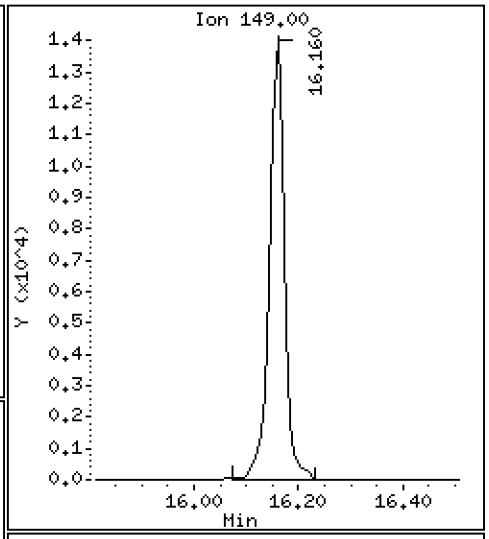
Column phase: ZB-5msi

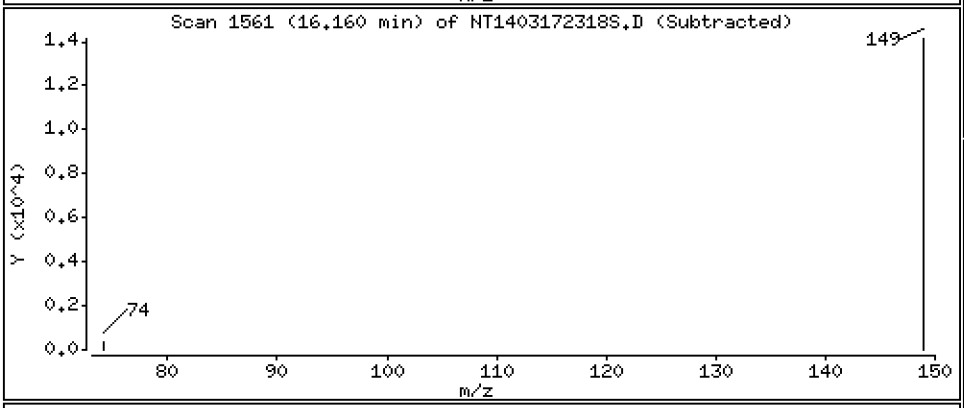
Column diameter: 0.25

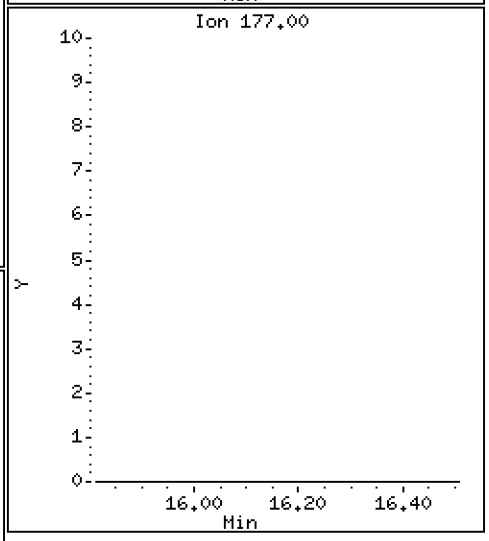
50 Diethylphthalate

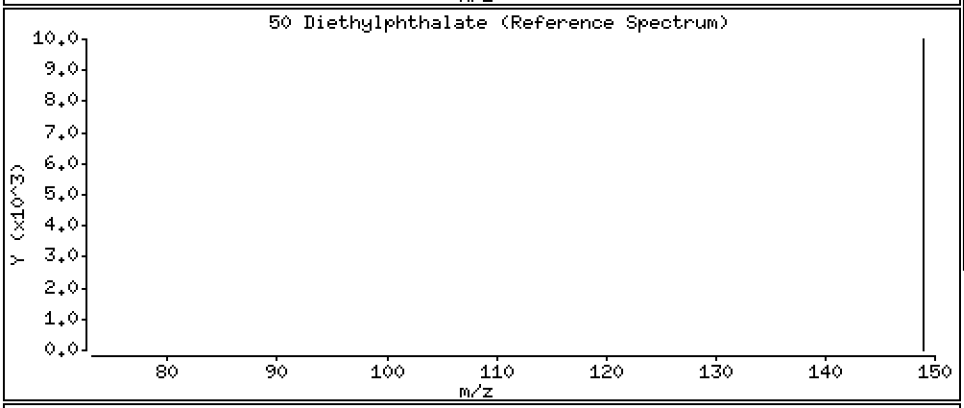
Concentration: 0.1834 ug/mL

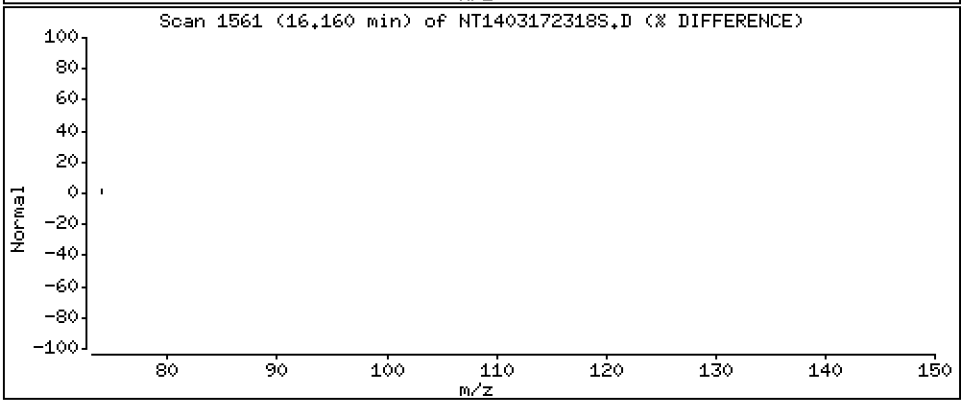












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV3

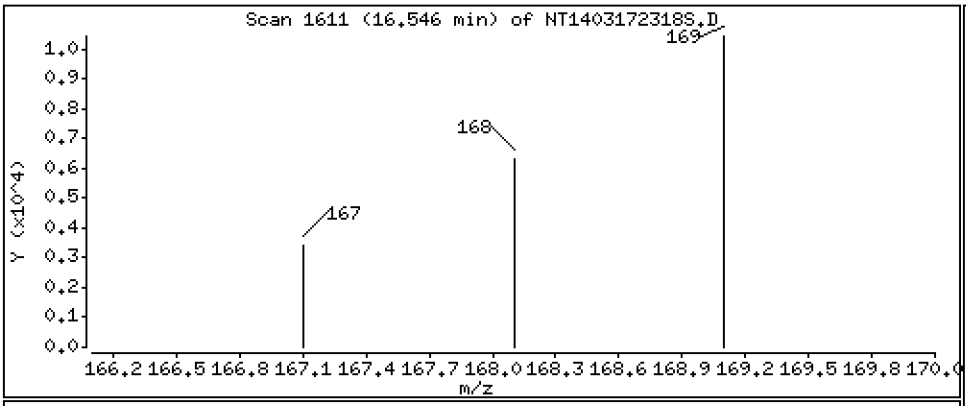
Operator: JGR

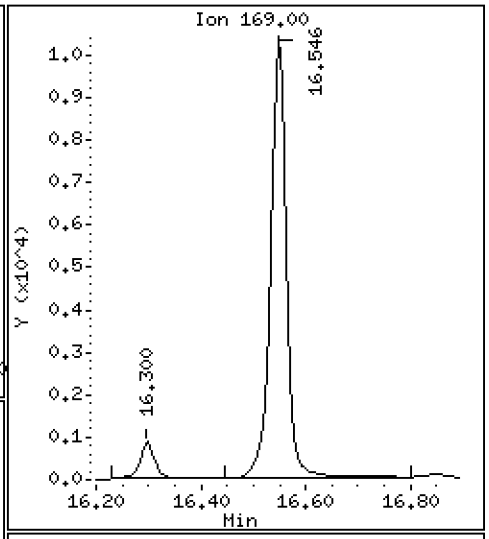
Column phase: ZB-5msi

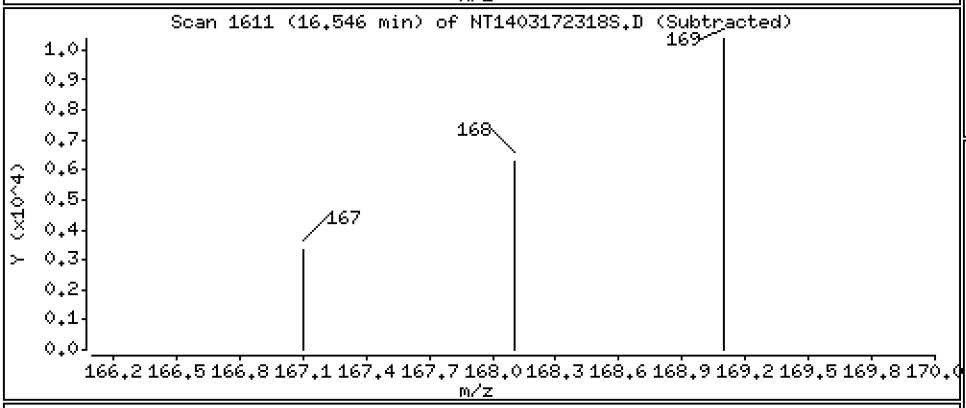
Column diameter: 0.25

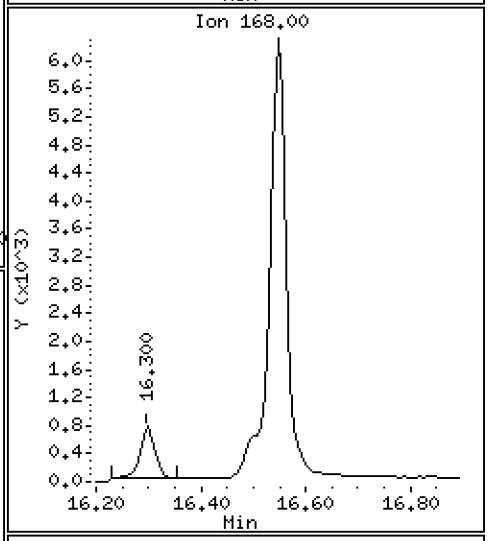
54 N-Nitrosodiphenylamine

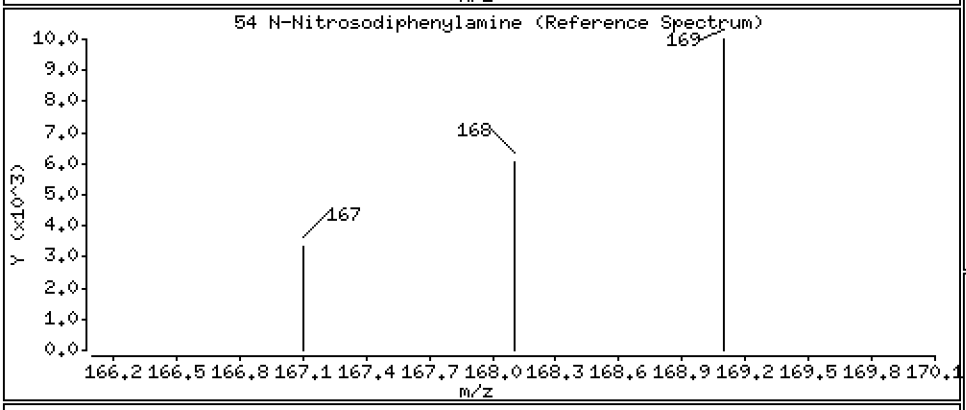
Concentration: 0.1975 ug/mL

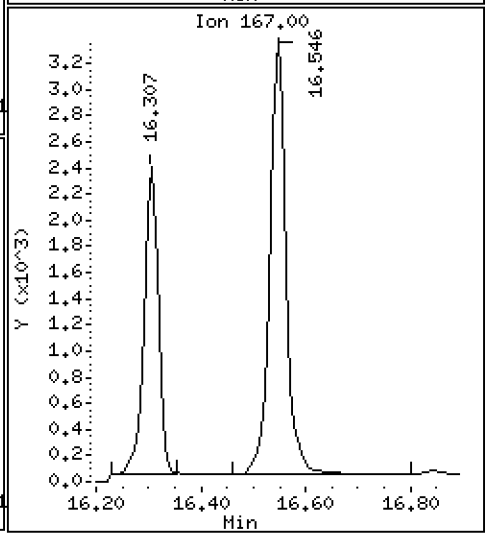


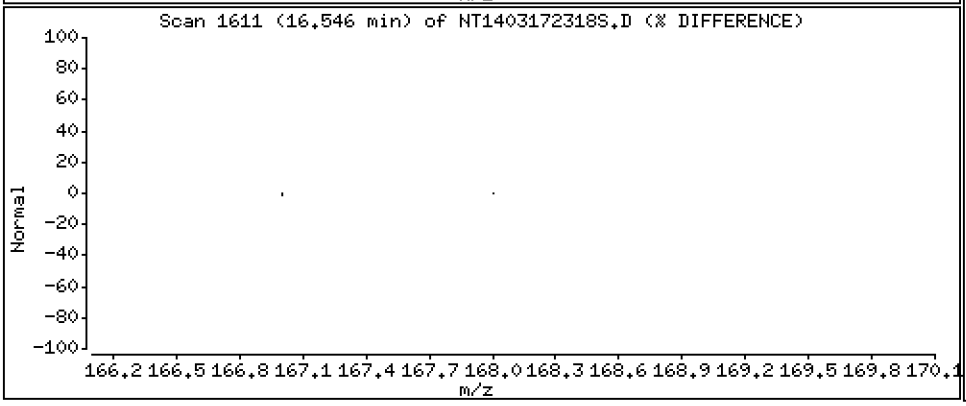












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Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV3

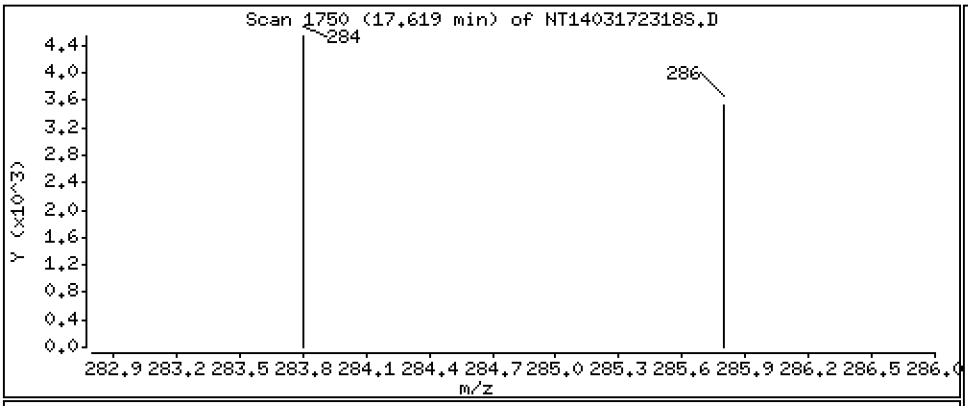
Operator: JGR

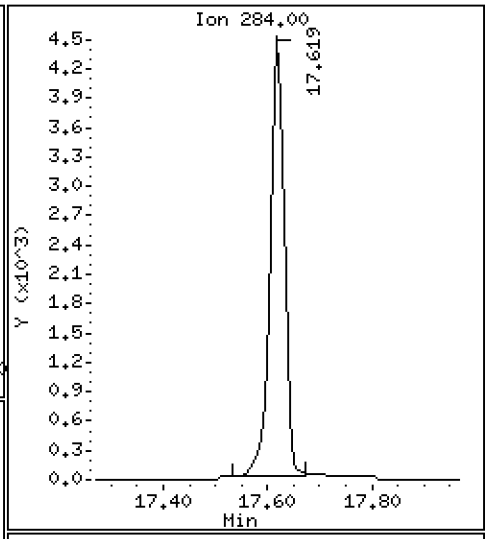
Column phase: ZB-5msi

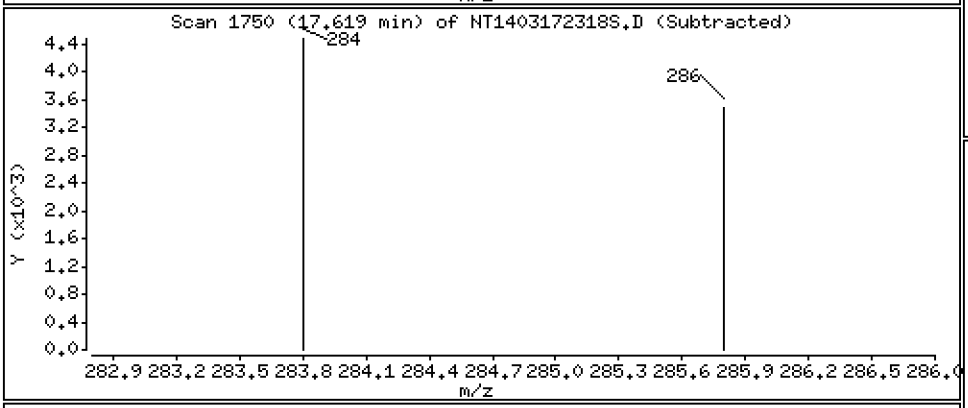
Column diameter: 0.25

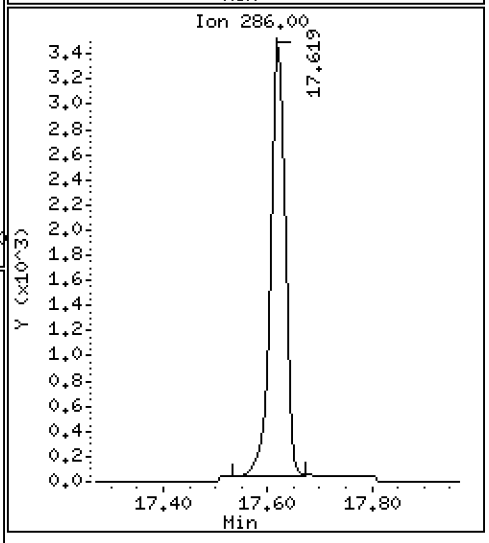
57 Hexachlorobenzene

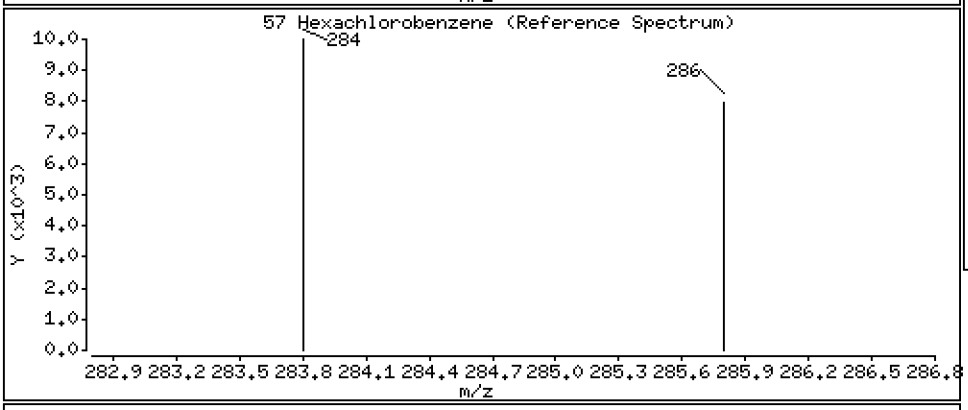
Concentration: 0.2034 ug/mL

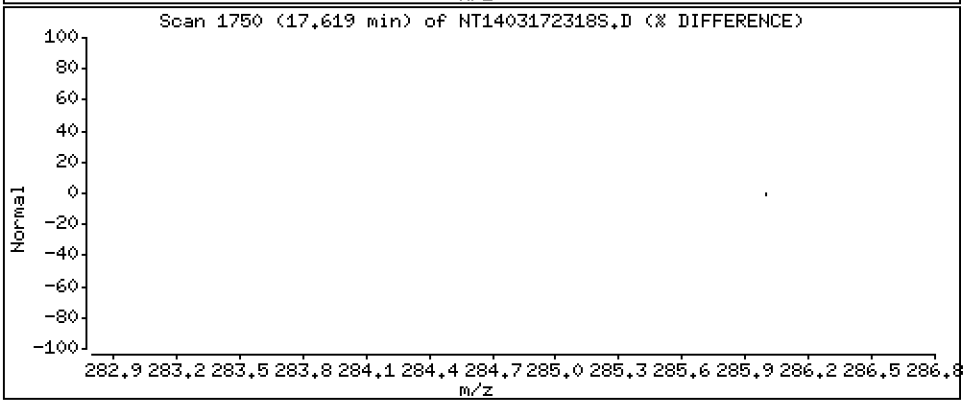












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172318S.D

Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV3

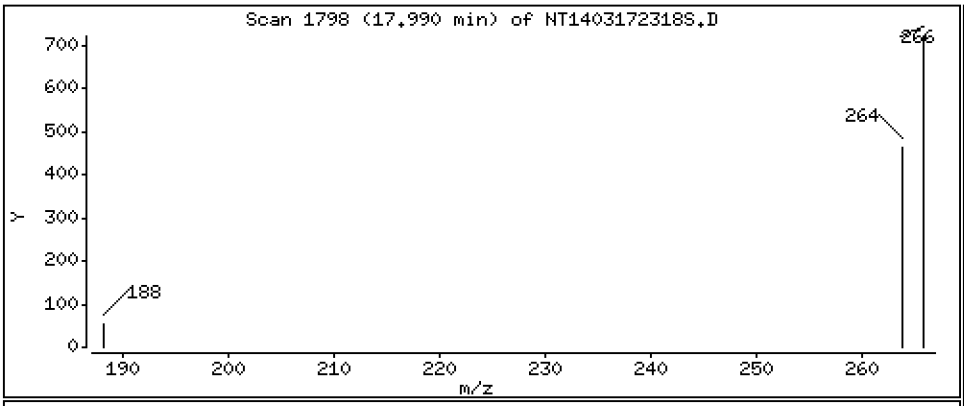
Operator: JGR

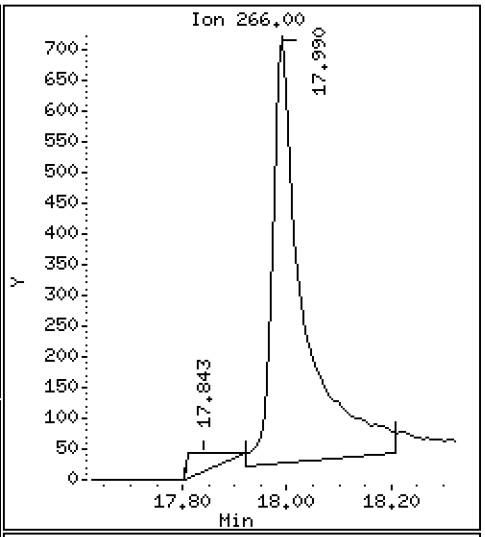
Column phase: ZB-5msi

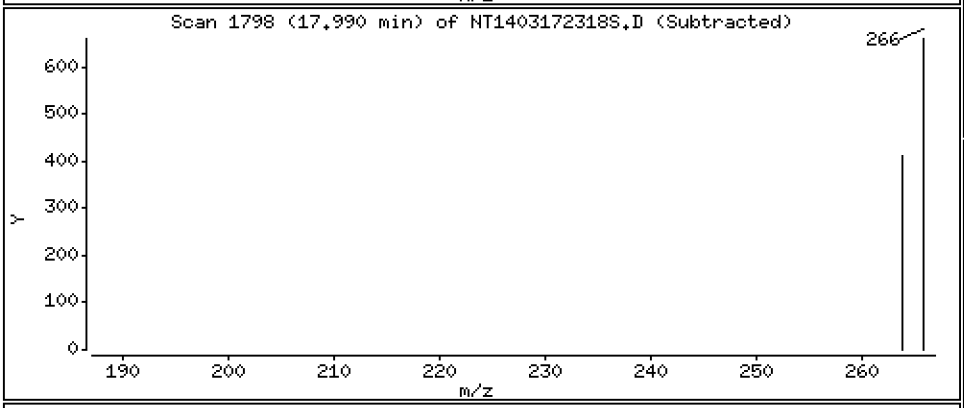
Column diameter: 0.25

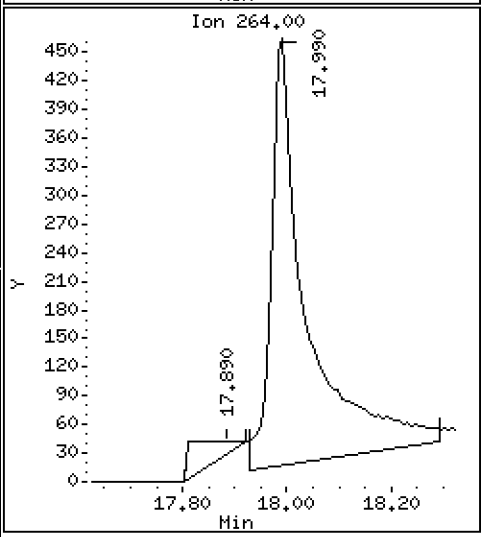
58 Pentachlorophenol

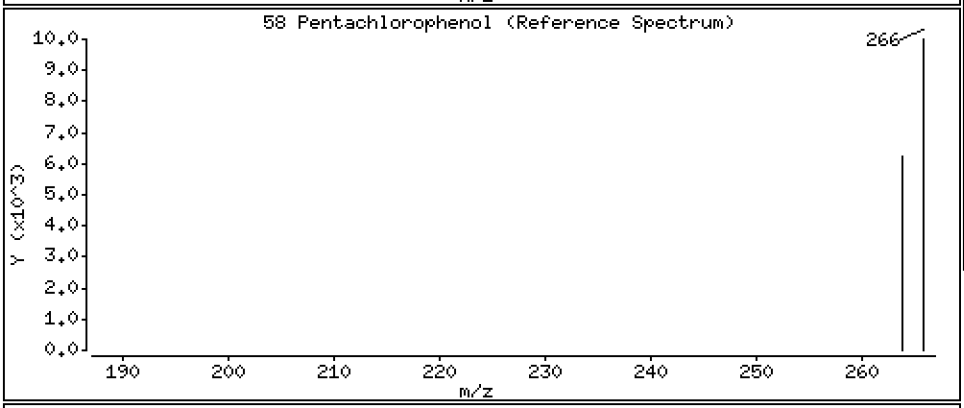
Concentration: 0.1050 ug/mL

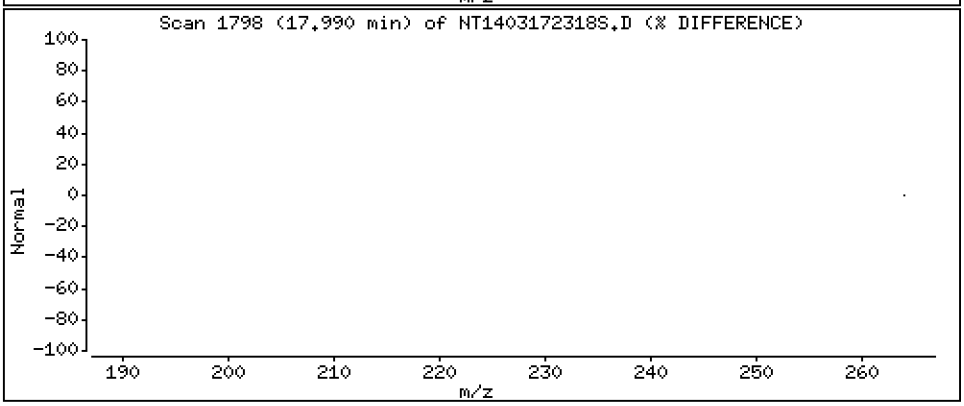












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172318S.D

Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV3

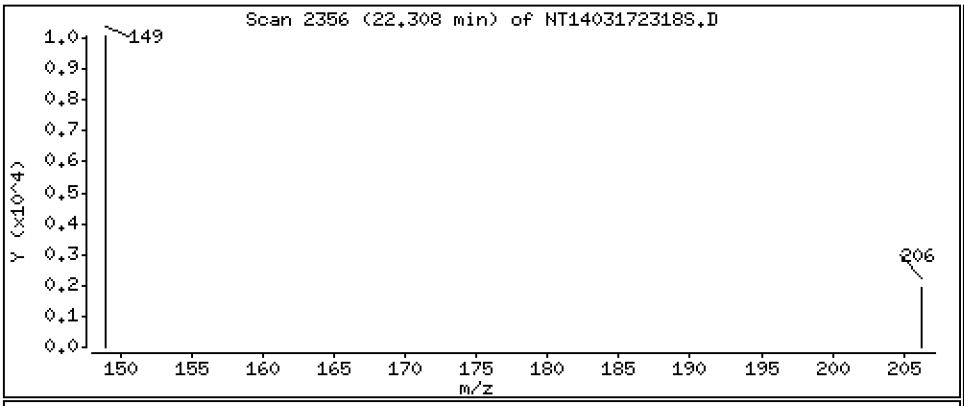
Operator: JGR

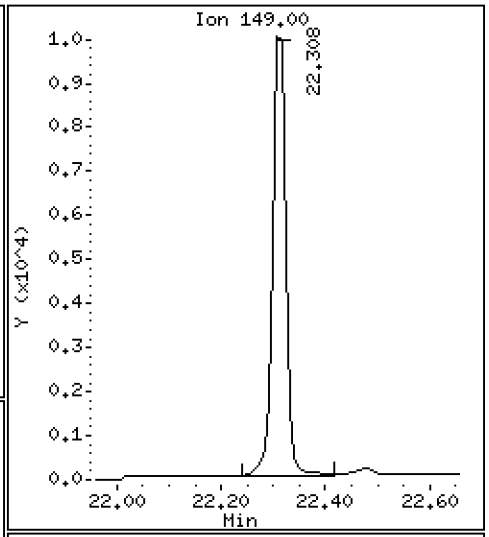
Column phase: ZB-5msi

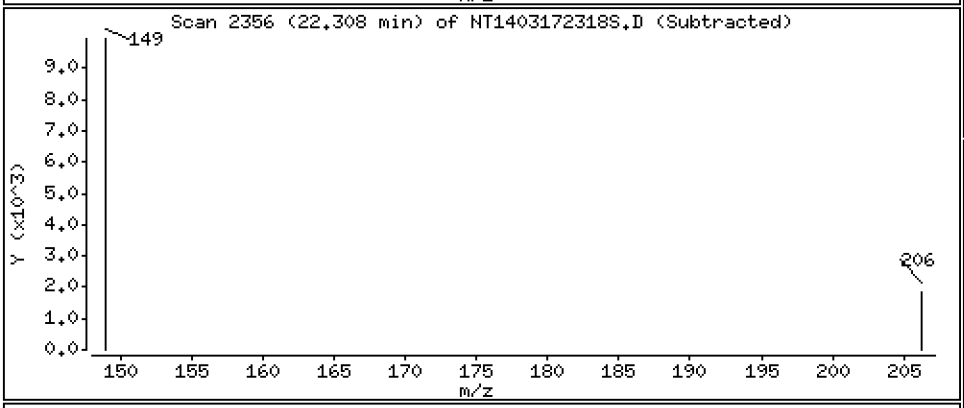
Column diameter: 0.25

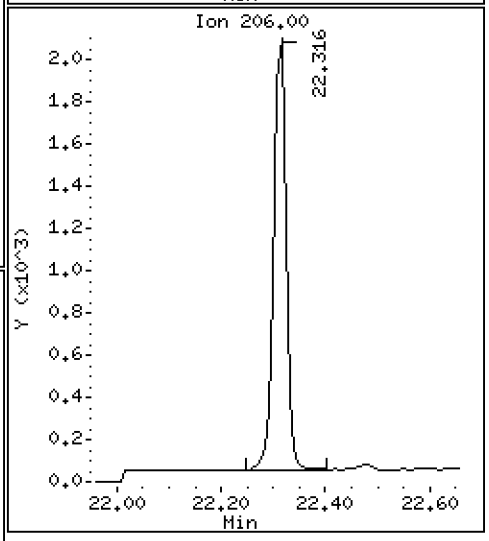
67 Butylbenzylphthalate

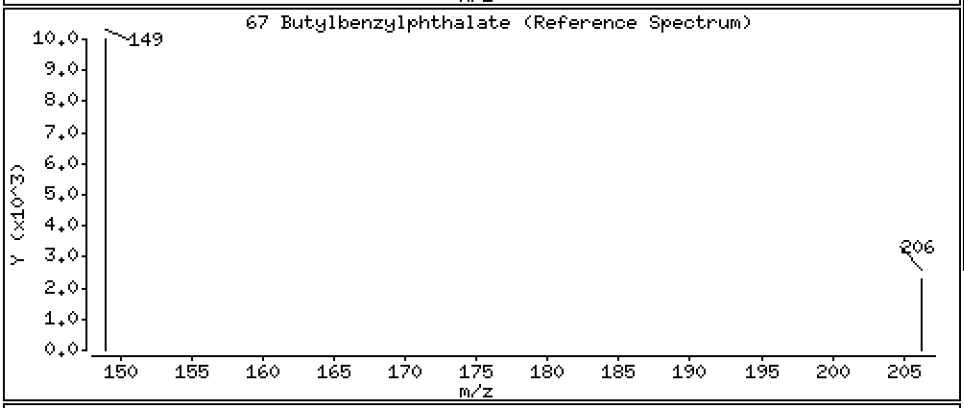
Concentration: 0.2001 ug/mL

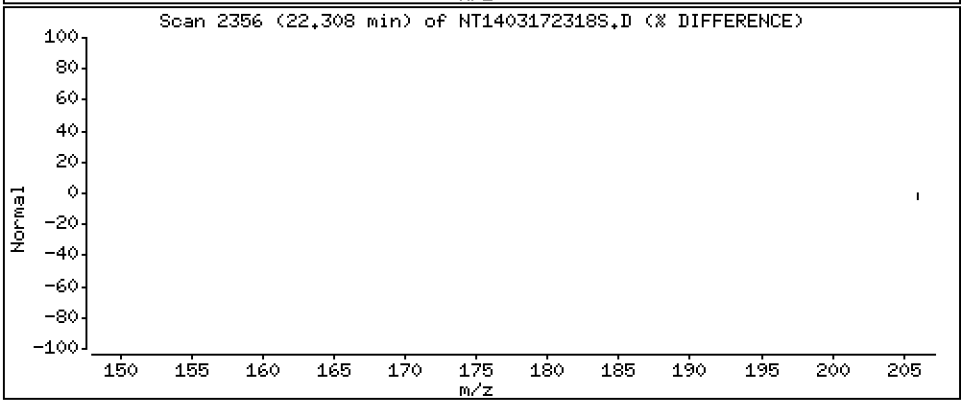












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172318S.D

Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV3

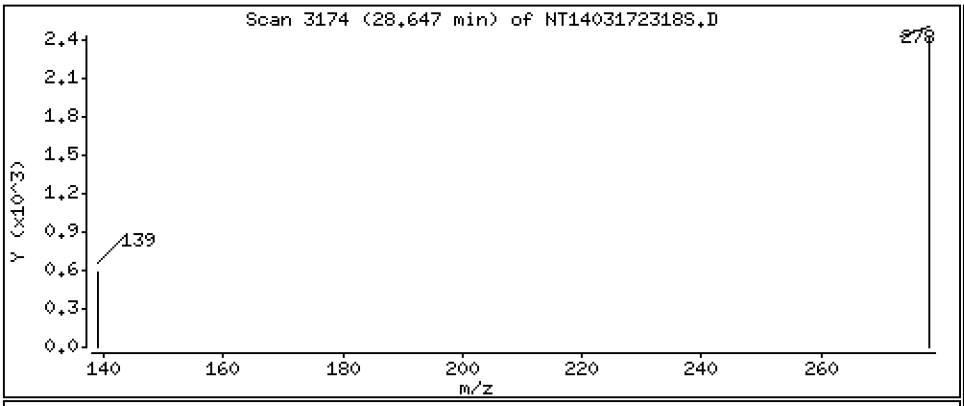
Operator: JGR

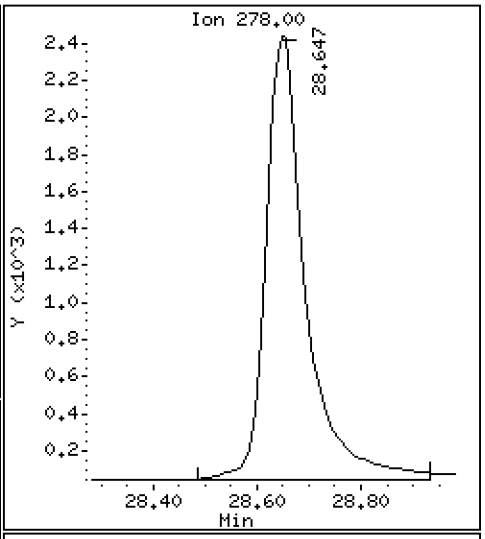
Column phase: ZB-5msi

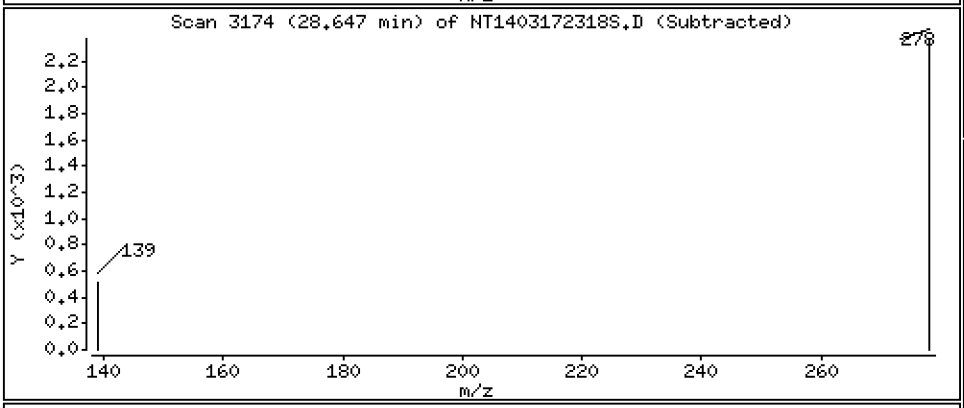
Column diameter: 0.25

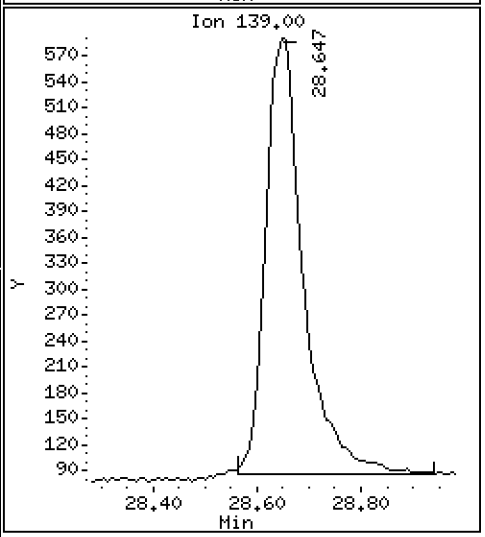
79 Dibenzo(a,h)anthracene

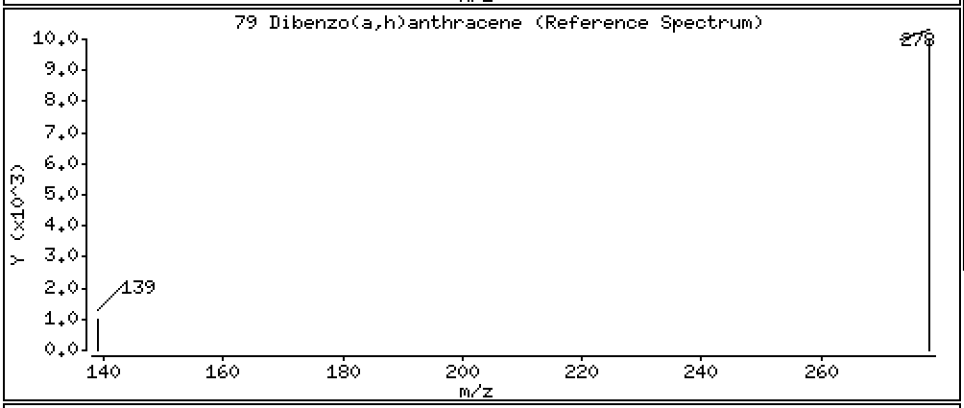
Concentration: 0.1587 ug/mL

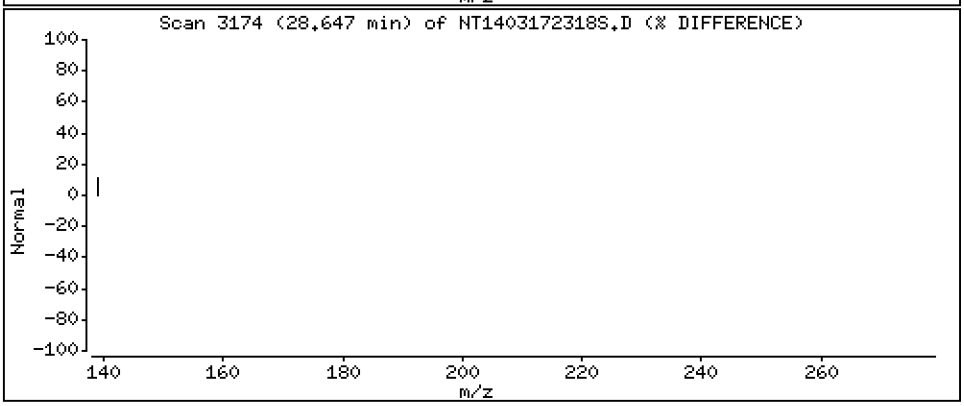












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT14031723185.D

Date : 18-MAR-2023 00:43

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV3

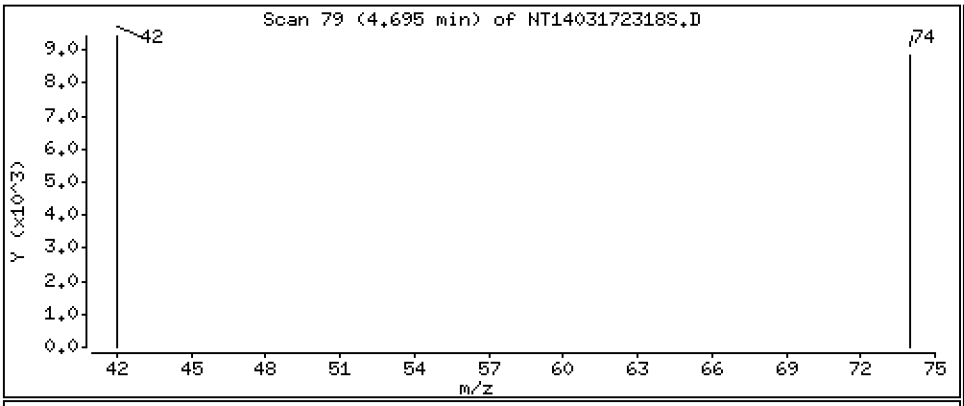
Operator: JGR

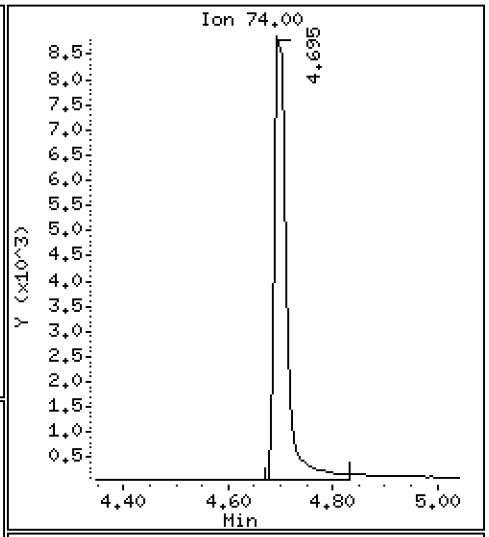
Column phase: ZB-5msi

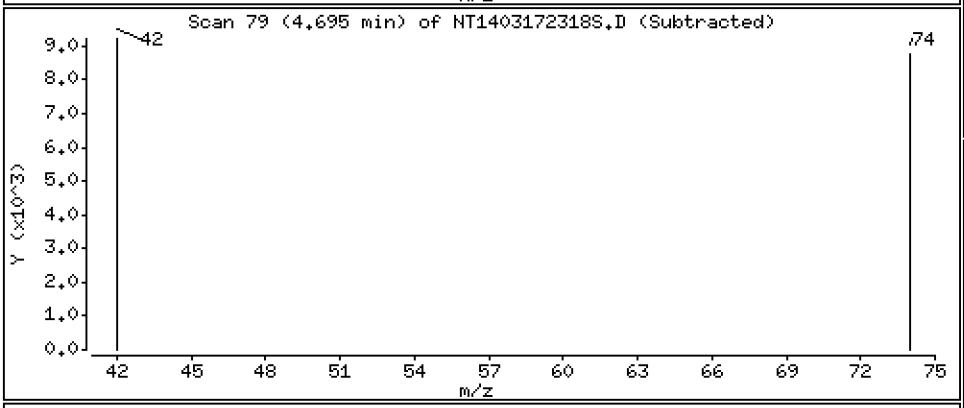
Column diameter: 0.25

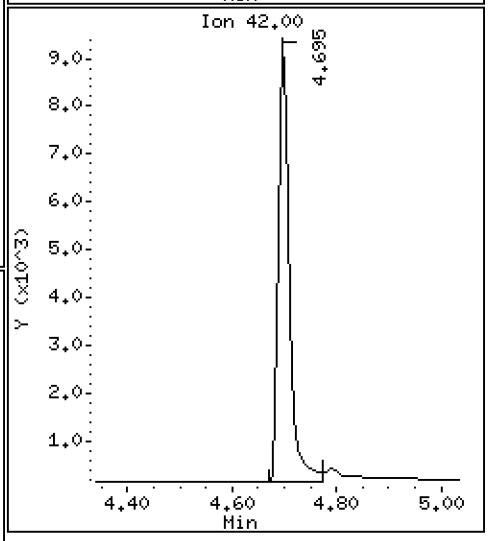
90 N-Nitrosodimethylamine

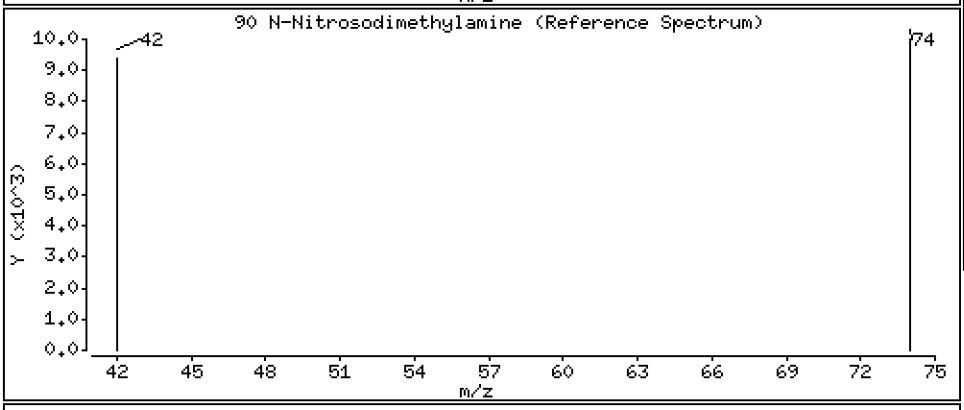
Concentration: 0.2716 ug/mL

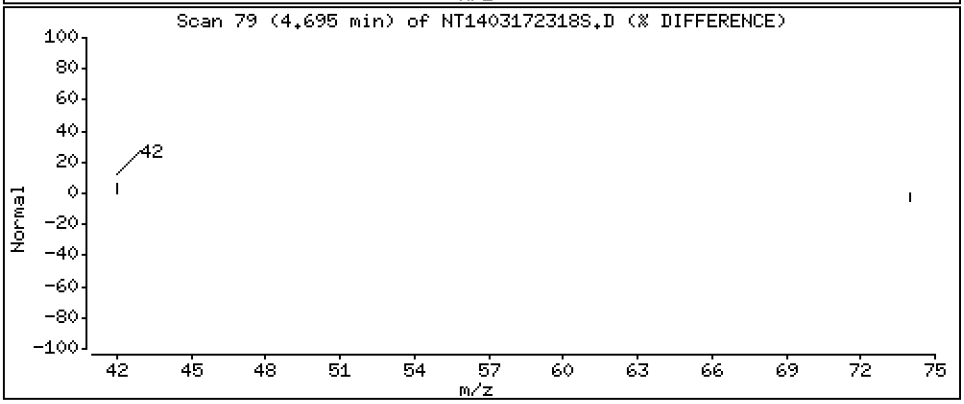












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172318S.D
Lab Smp Id: SLC0376-LCV3
Inj Date : 18-MAR-2023 00:43 MS Autotune Date: 11-MAR-2023 16:01
Operator : JGR Inst ID: nt14.i
Smp Info : SLC0376-LCV3
Misc Info :
Comment :
Method : \\target\share\chem3\nt14.i\20230317.b\20230317.b\SIMABN2.m
Meth Date : 23-Mar-2023 16:55 van Quant Type: ISTD
Cal Date : 15-MAR-2023 15:50 Cal File: NT1403152308.D
Als bottle: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.826	6.826	(0.753)	19514	0.24246	0.2425(R)
	3 Phenol	94	8.441	8.441	(0.931)	17005	0.15364	0.1536
	7 1,3-Dichlorobenzene	146	8.997	8.997	(0.992)	19198	0.20270	0.2027
*	8 1,4-Dichlorobenzene-d4	152	9.067	9.067	(1.000)	237109	4.00000	
	9 1,4-Dichlorobenzene	146	9.098	9.098	(1.003)	18575	0.20267	0.2027
	11 Benzyl alcohol	79	9.393	9.354	(1.036)	8432	0.12998	0.1300
	12 1,2-Dichlorobenzene	146	9.455	9.455	(1.043)	18161	0.20344	0.2034
	13 2-Methylphenol	108	9.564	9.564	(1.055)	14348	0.18767	0.1877
	15 4-Methylphenol	108	9.836	9.828	(1.085)	14038	0.17380	0.1738
	16 N-Nitroso-di-n-propylamine	70	9.898	9.898	(1.092)	9805	0.17170	0.1717
	22 2,4-Dimethylphenol	107	10.883	10.883	(0.941)	29961	0.39798	0.3980
	24 Benzoic acid	105	11.054	10.999	(0.956)	2685	0.04715	0.04715(M)
	26 1,2,4-Trichlorobenzene	180	11.480	11.480	(0.993)	15291	0.20724	0.2072
*	27 Naphthalene-d8	136	11.565	11.565	(1.000)	875716	4.00000	
	30 Hexachlorobutadiene	225	11.974	11.974	(1.035)	7872	0.21082	0.2108
	39 Dimethylphthalate	163	14.698	14.698	(0.967)	25932	0.18866	0.1887
*	42 Acenaphthene-d10	162	15.194	15.201	(1.000)	402477	4.00000	
	50 Diethylphthalate	149	16.160	16.160	(1.064)	26833	0.18336	0.1834
	54 N-Nitrosodiphenylamine	169	16.546	16.546	(0.907)	20853	0.19746	0.1975
	57 Hexachlorobenzene	284	17.618	17.618	(0.966)	8254	0.20345	0.2034
	58 Pentachlorophenol	266	17.990	17.974	(0.986)	2873	0.10496	0.1050
*	59 Phenanthrene-d10	188	18.245	18.245	(1.000)	779424	4.00000	
$	66 Terphenyl-d14	244	21.386	21.386	(0.918)	20015	0.24635	0.2463(R)
	67 Butylbenzylphthalate	149	22.308	22.308	(0.958)	16474	0.20006	0.2001
*	69 Chrysene-d12	240	23.291	23.291	(1.000)	471287	4.00000	
*	77 Perylene-d12	264	25.931	25.931	(1.000)	312893	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.647	28.631	(1.105)	12592	0.15875	0.1587
	90 N-Nitrosodimethylamine	74	4.694	4.694	(0.518)	13356	0.27163	0.2716

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1403172318S.D
Lab Smp Id: SLC0376-LCV3
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\SIMABN2.m
Misc Info:

Calibration Date: 18-MAR-2023
Calibration Time: 00:07
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	225221	112611	450442	237109	5.28
27 Naphthalene-d8	830434	415217	1660868	875716	5.45
42 Acenaphthene-d10	389907	194954	779814	402477	3.22
59 Phenanthrene-d10	763679	381840	1527358	779424	2.06
69 Chrysene-d12	415791	207896	831582	471287	13.35
77 Perylene-d12	274872	137436	549744	312893	13.83

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.07	8.57	9.57	9.07	0.00
27 Naphthalene-d8	11.57	11.07	12.07	11.57	0.00
42 Acenaphthene-d10	15.20	14.70	15.70	15.19	-0.05
59 Phenanthrene-d10	18.25	17.75	18.75	18.25	0.00
69 Chrysene-d12	23.29	22.79	23.79	23.29	0.00
77 Perylene-d12	25.93	25.43	26.43	25.93	0.00

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

REVIEW SUMMARY FOR FILE - NT1403172318S.D

Lab ID: SLC0376-LCV3
nt14.i, 20230317.b\20230317.b\SIMABN2.m,   18-MAR-2023 00:43

RT	CO-ELUTION COMPOUNDS
NO CO-ELUTIONS	

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
NONE			

RRT check based on Ccal File: 20230317.b/NT1403172317S.D

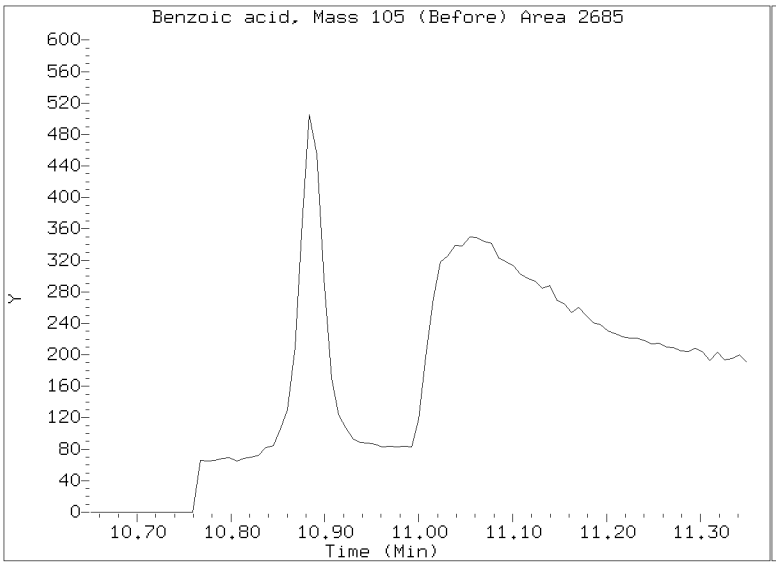
On Column LOD for nt14.i, 20230317.b\SIMABN2.m, PSDDA.sub = 0.0000

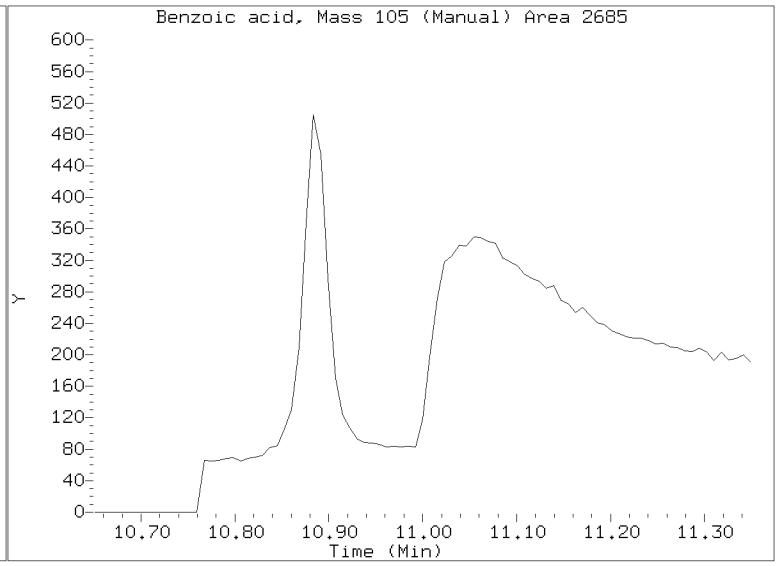
Exception: 1,2,4-Trichlorobenzene 0.0010

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

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230317.b/20230317.b/NT1403172318S.D
Injection Date: 18-MAR-2023 00:43
Lab ID:SLC0376-LCV3 Client ID:
Report Date: 03/23/2023 16:55





Analytical Resources, LLC
Analytical Chemists and Consultants

LOW-CONCENTRATION
CONTINUING CALIBRATION CHECK
EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT14	Calibration:	GC00050
Lab File ID:	NT1403172319S.D	Calibration Date:	03/15/2023
Sequence:	SLC0376	Injection Date:	03/18/23
Lab Sample ID:	SLC0376-LCV4	Injection Time:	01:19
Sequence Name:	ABN 0.1		

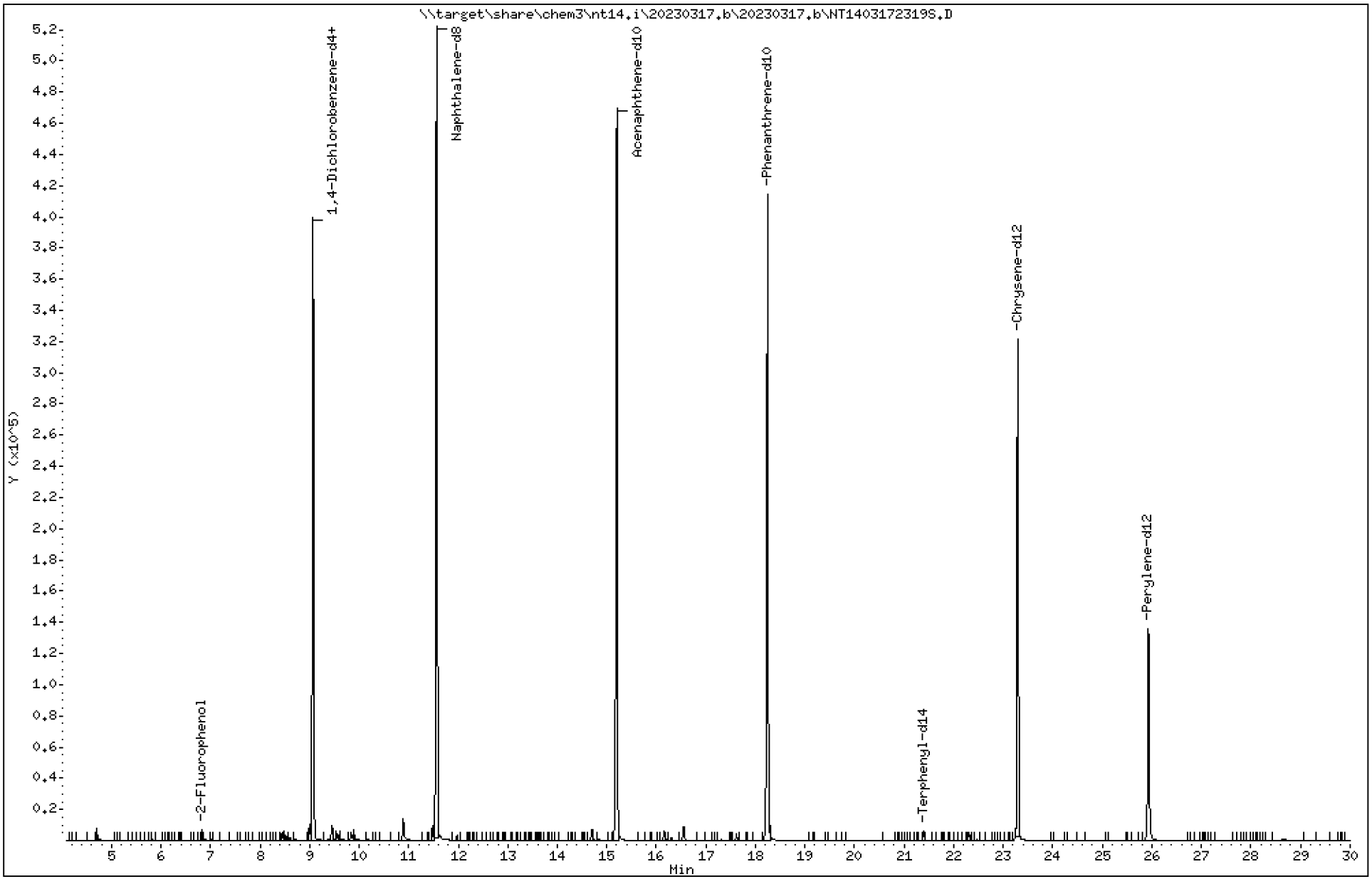
		CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
1,4-Dichlorobenzene	A	0.10000	0.1	1.5461150	1.6203860		4.8	
1,2-Dichlorobenzene	A	0.10000	0.1	1.5059720	1.5875940		5.4	
Benzyl Alcohol	A	0.10000	0.04	1.0943940	0.3863985		-64.7	
Benzoic acid	A	0.40000	0.0	0.1762504				
2,4-Dimethylphenol	A	0.20000	0.2	0.3438645	0.3240668		-5.8	
1,2,4-Trichlorobenzene	A	0.10000	0.1	0.3370247	0.3634431		7.8	
N-Nitrosodiphenylamine	A	0.10000	0.09	0.5419762	0.5115377		-5.6	
Pentachlorophenol	A	0.20000	0.03	0.1113753	0.0190260		-86.5	
2-Fluorophenol	A	0.15000	0.110	1.3577520	0.9995962		-26.4	
p-Terphenyl-d14	A	0.10000	0.129	0.6895811	0.8863625		28.5	

* Values outside of QC limits

Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT14031723198.D
Date : 18-MAR-2023 01:19
Client ID:
Sample Info: SLC0376-LCV4

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

Column phase: ZB-5msi



Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT14031723195.D

Date : 18-MAR-2023 01:19

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV4

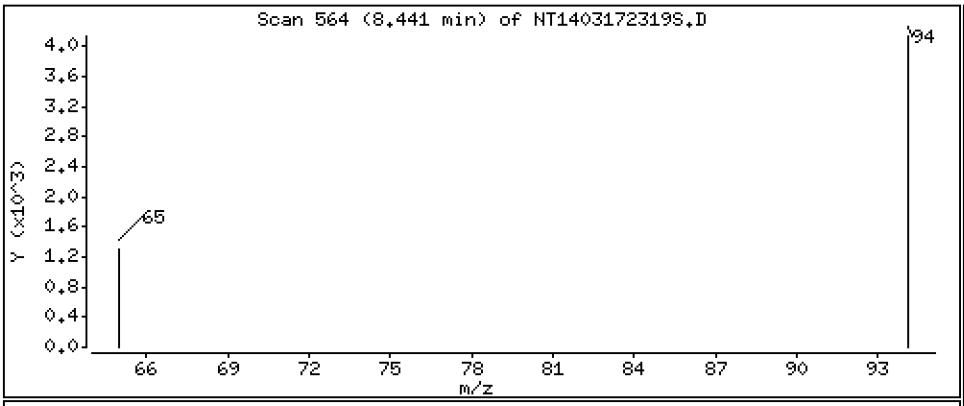
Operator: JGR

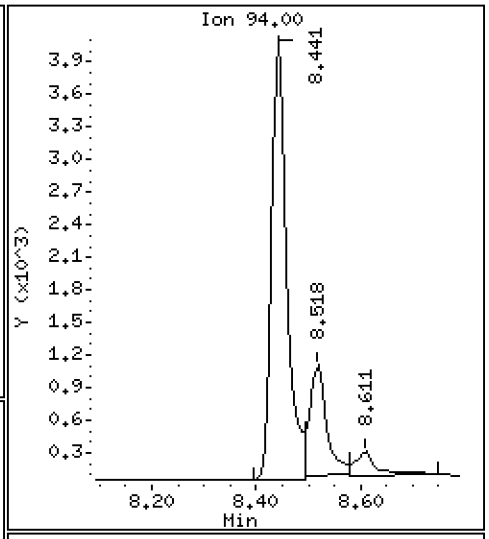
Column phase: ZB-5msi

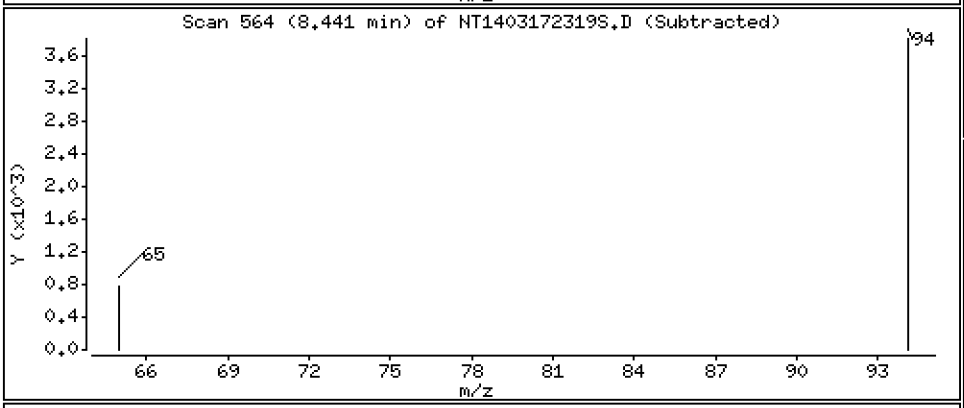
Column diameter: 0.25

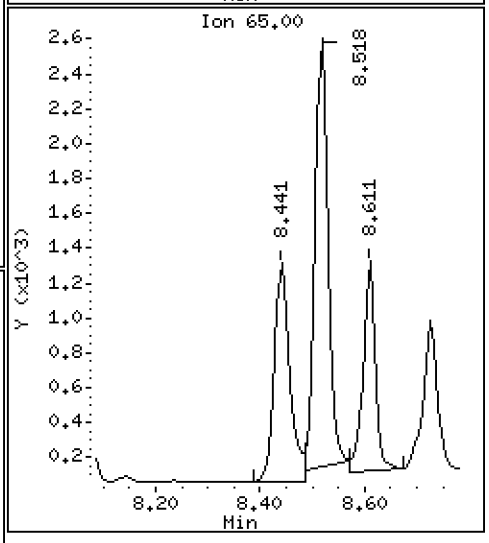
3 Phenol

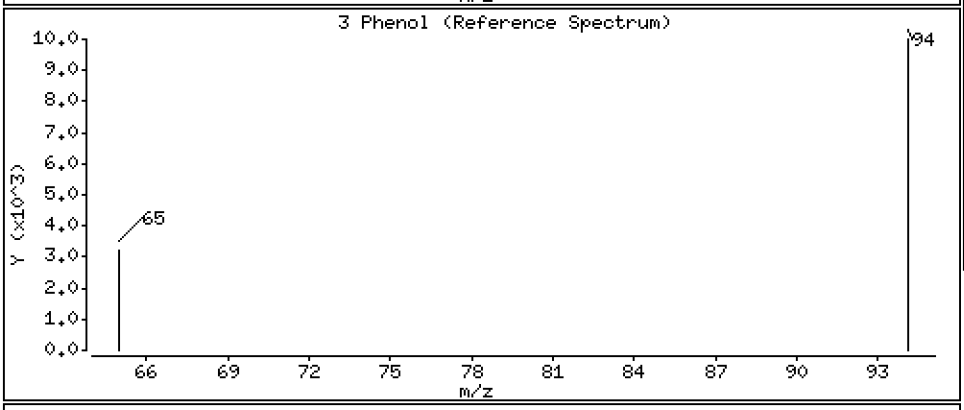
Concentration: 0.06874 ug/mL

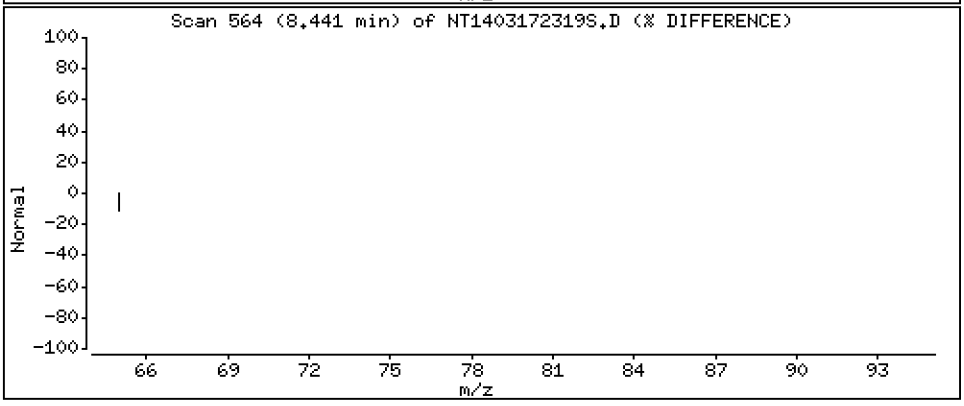












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT14031723195.D

Date : 18-MAR-2023 01:19

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV4

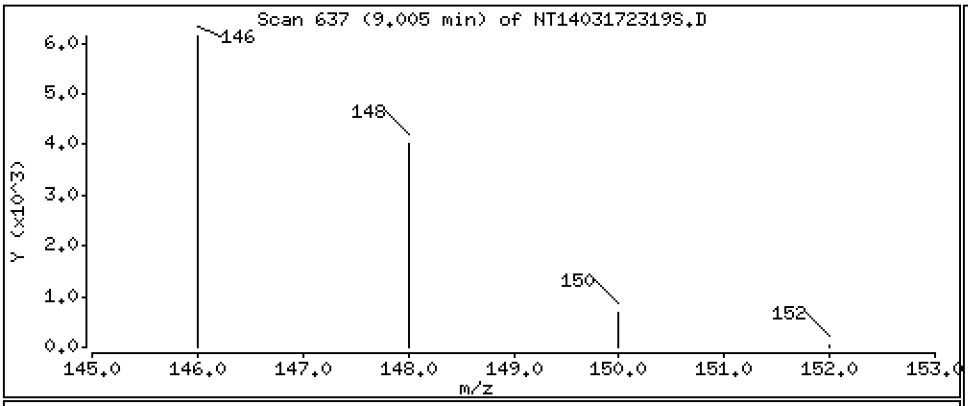
Operator: JGR

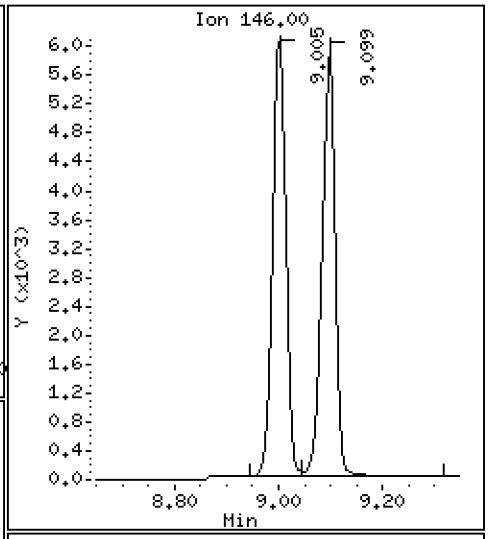
Column phase: ZB-5msi

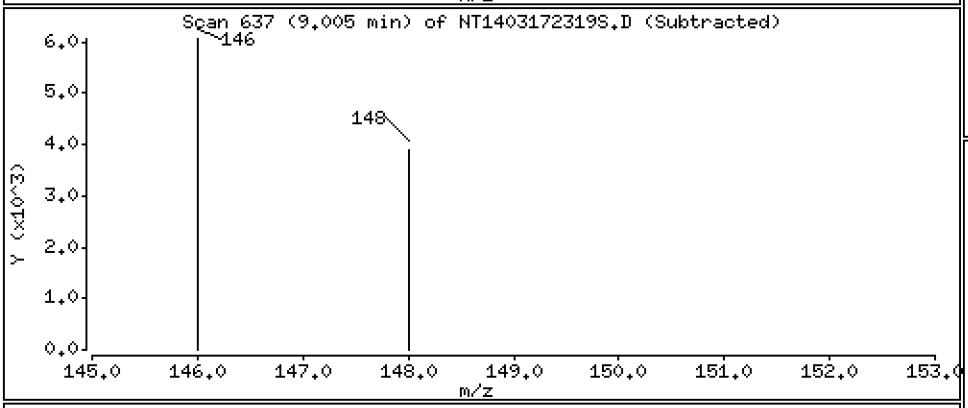
Column diameter: 0.25

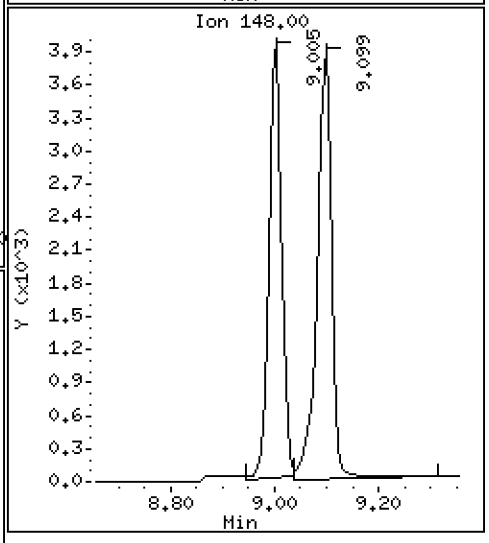
7 1,3-Dichlorobenzene

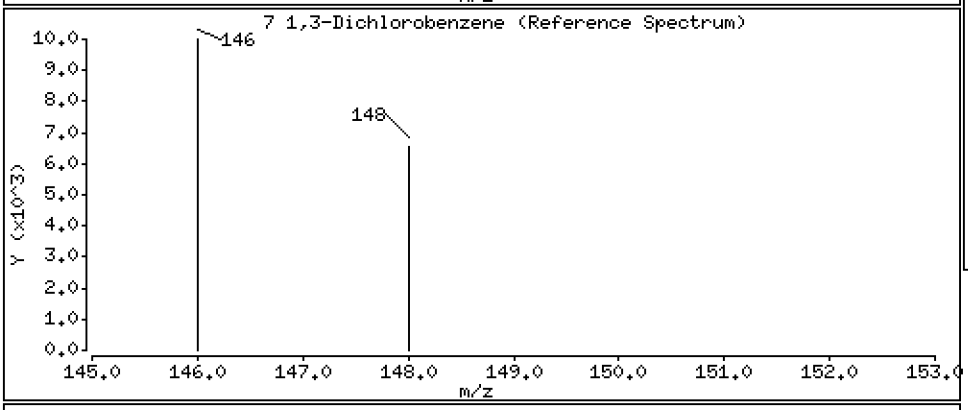
Concentration: 0.1039 ug/mL

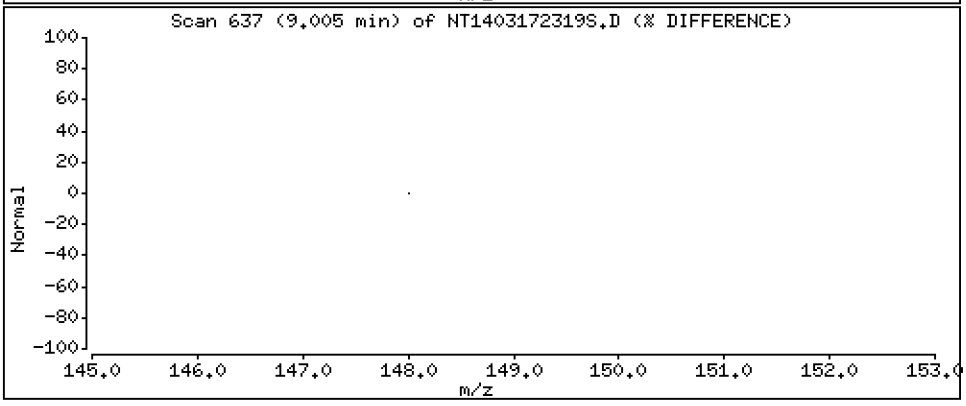












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT14031723195.D

Date : 18-MAR-2023 01:19

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV4

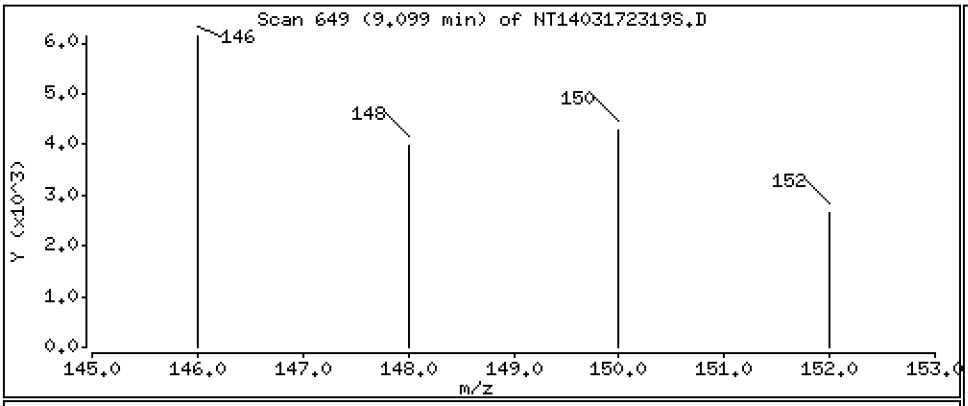
Operator: JGR

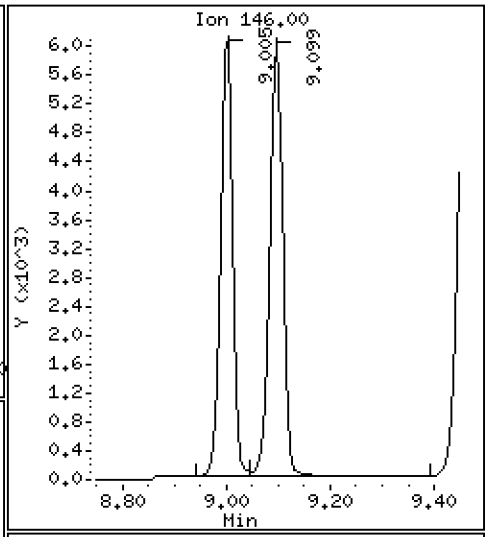
Column phase: ZB-5msi

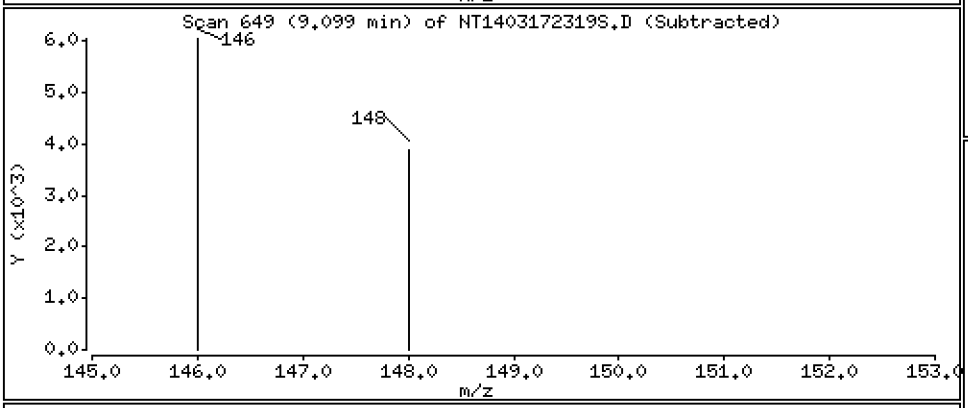
Column diameter: 0.25

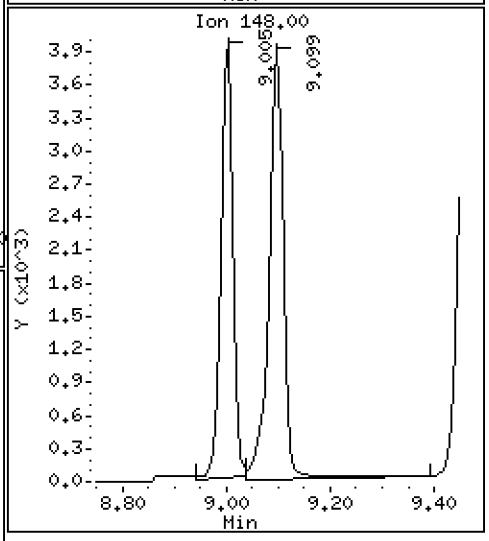
9 1,4-Dichlorobenzene

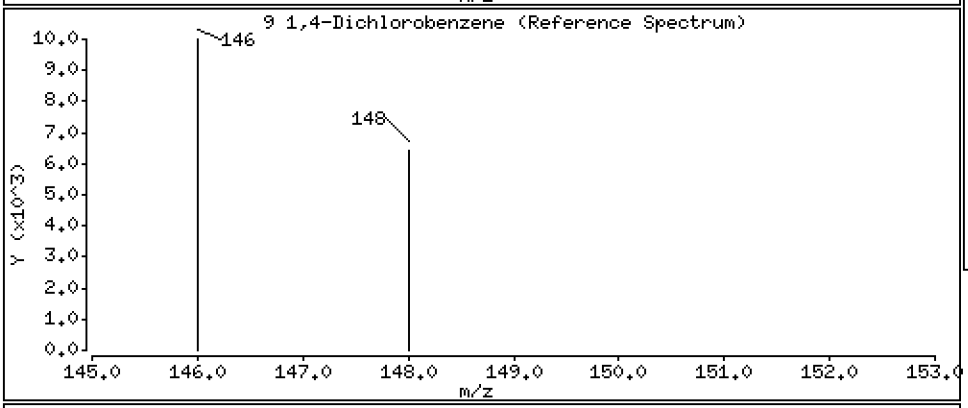
Concentration: 0.1048 ug/mL

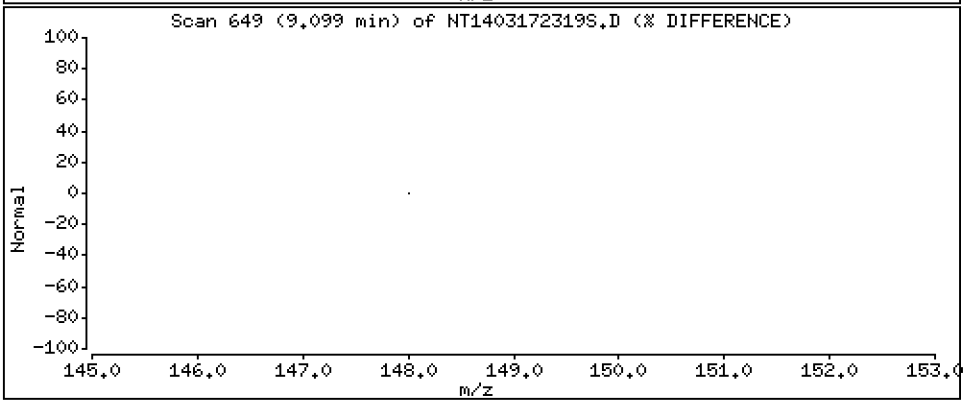












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT14031723195.D

Date : 18-MAR-2023 01:19

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV4

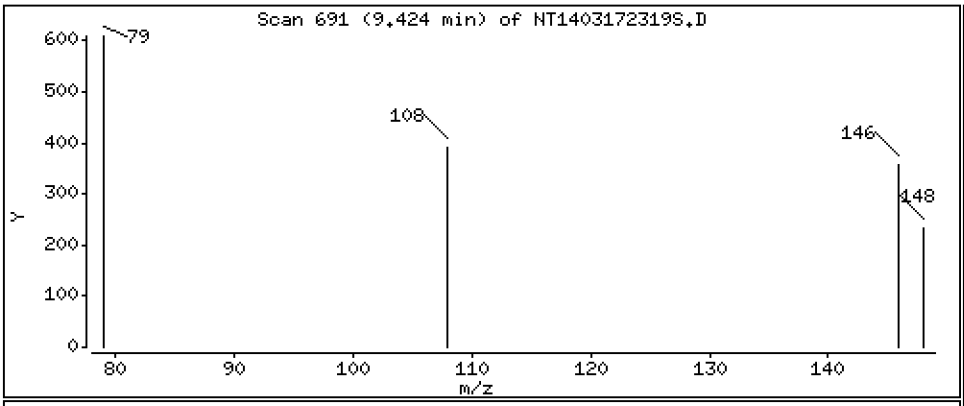
Operator: JGR

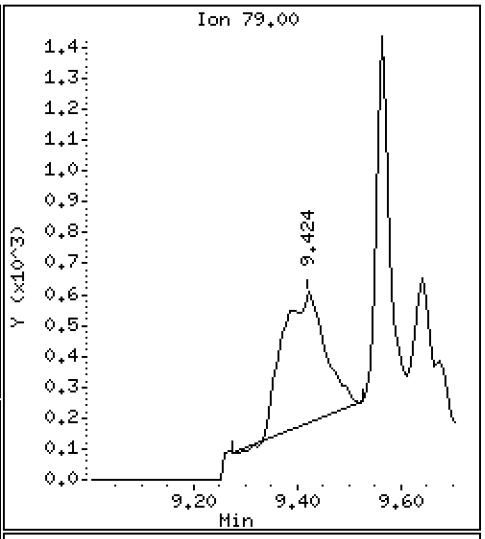
Column phase: ZB-5msi

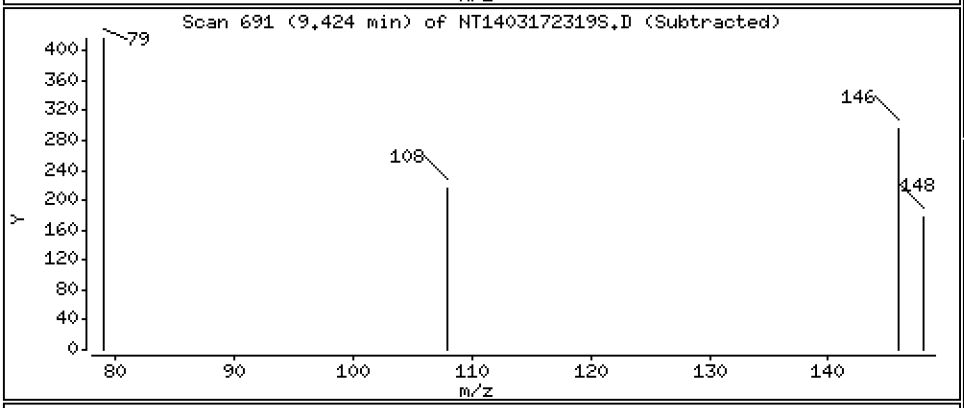
Column diameter: 0.25

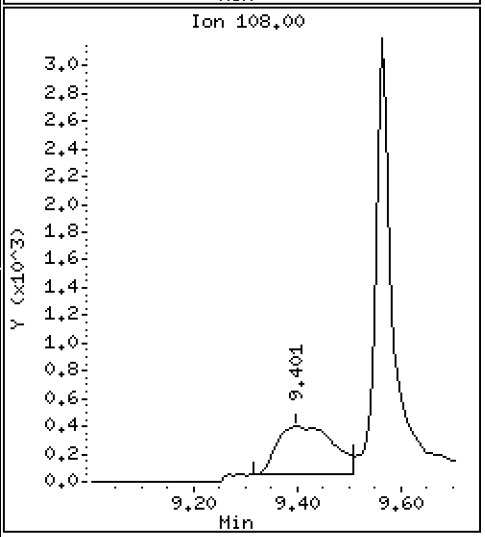
11 Benzyl alcohol

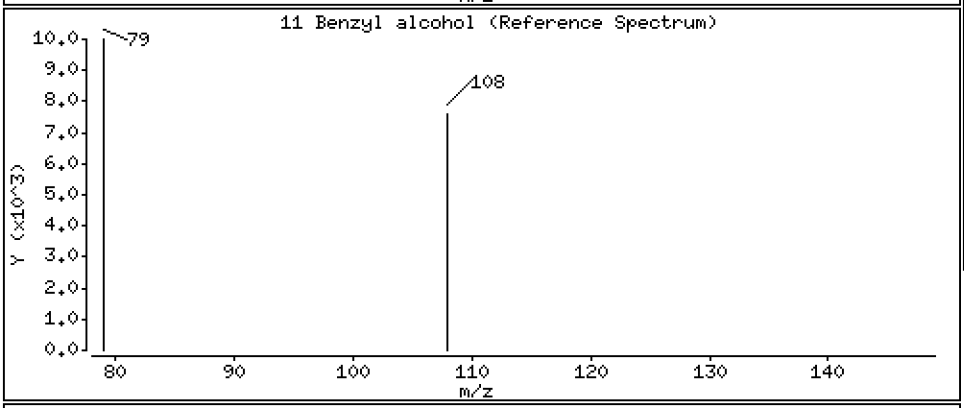
Concentration: 0.03531 ug/mL

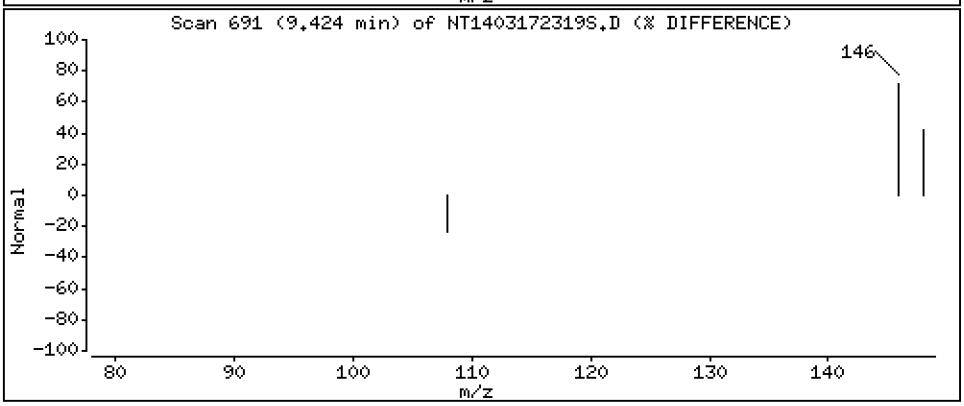












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Date : 18-MAR-2023 01:19

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV4

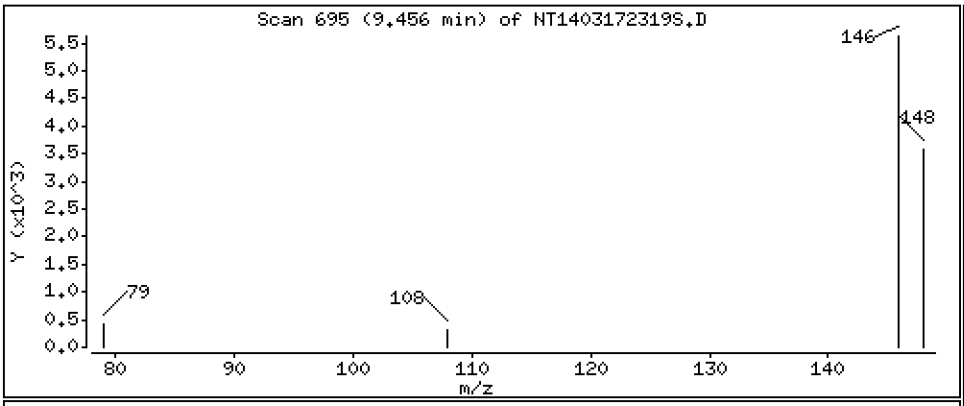
Operator: JGR

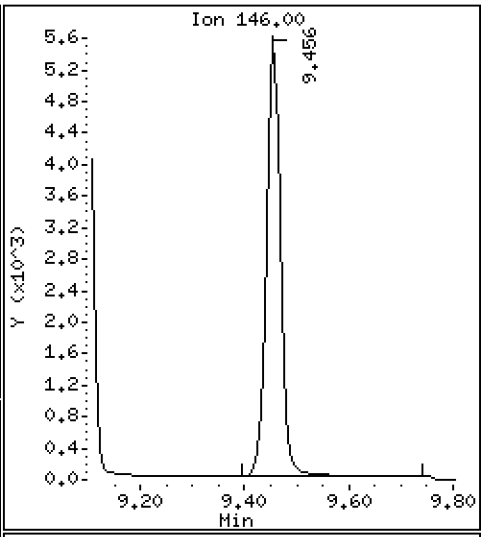
Column phase: ZB-5msi

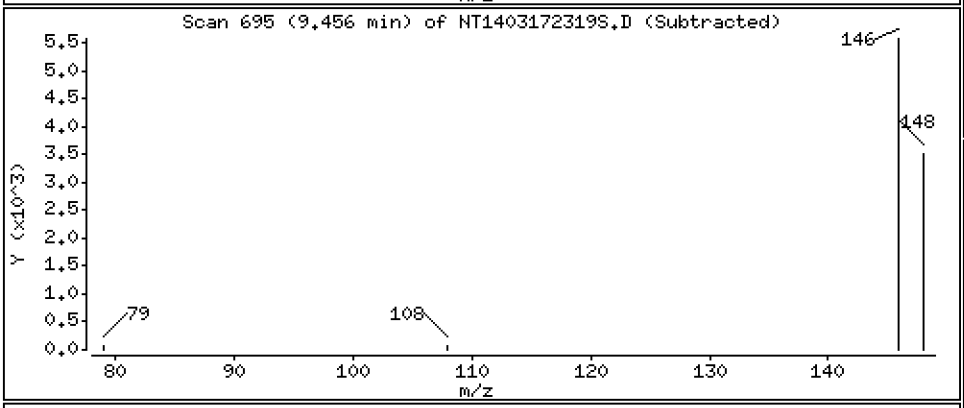
Column diameter: 0.25

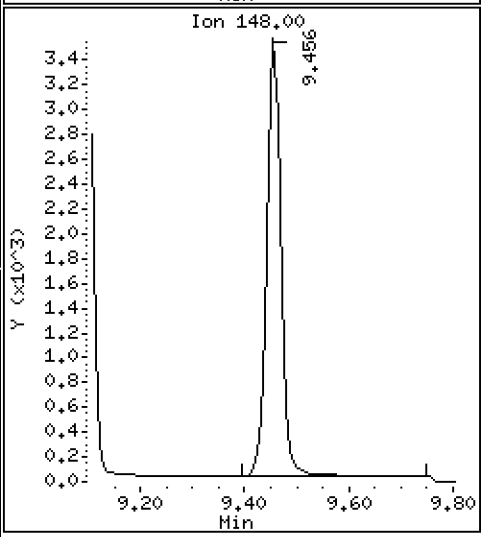
12 1,2-Dichlorobenzene

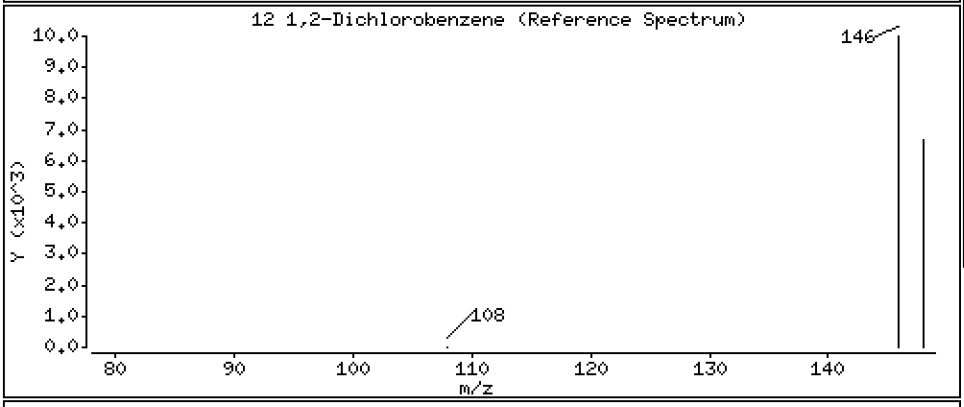
Concentration: 0.1054 ug/mL

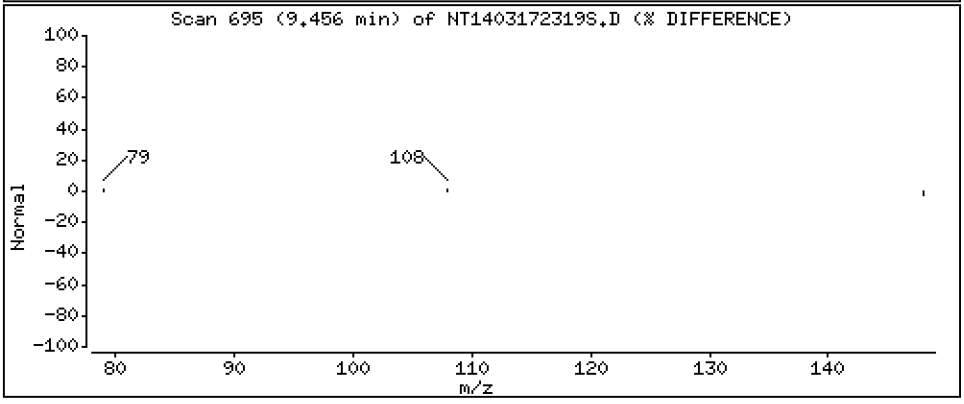












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT14031723195.D

Date : 18-MAR-2023 01:19

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV4

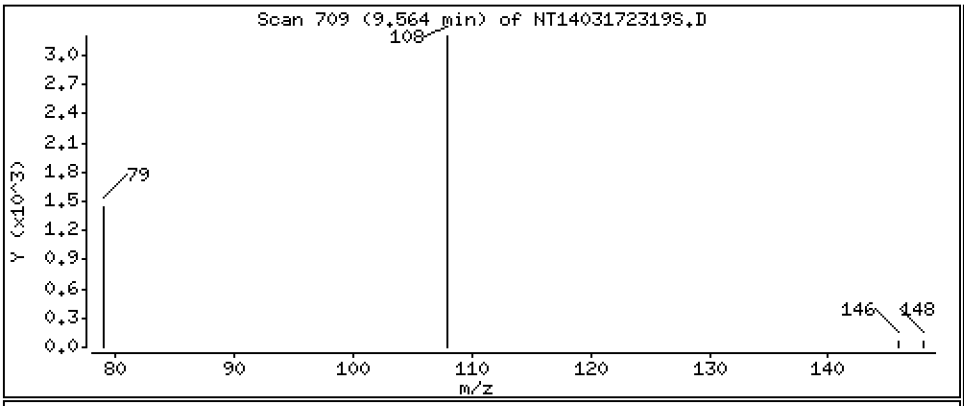
Operator: JGR

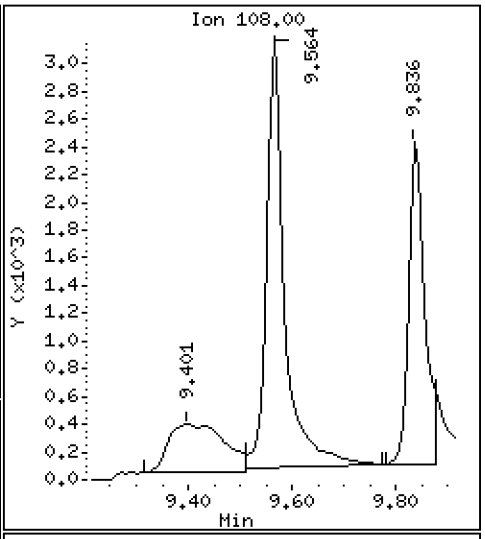
Column phase: ZB-5msi

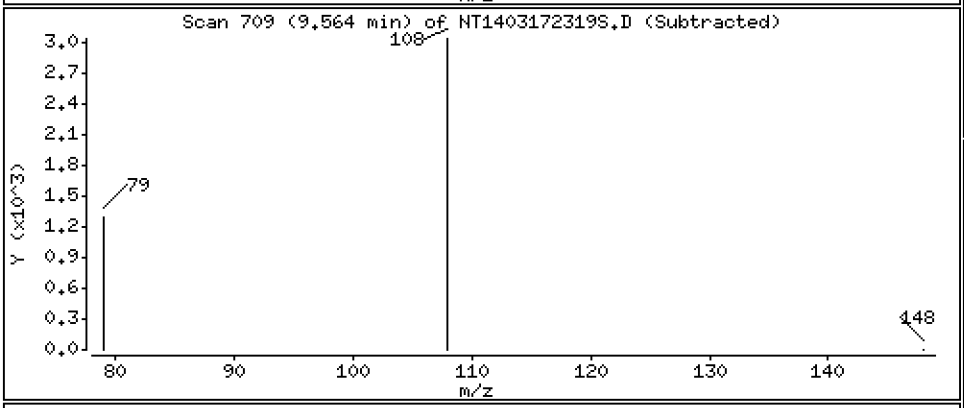
Column diameter: 0.25

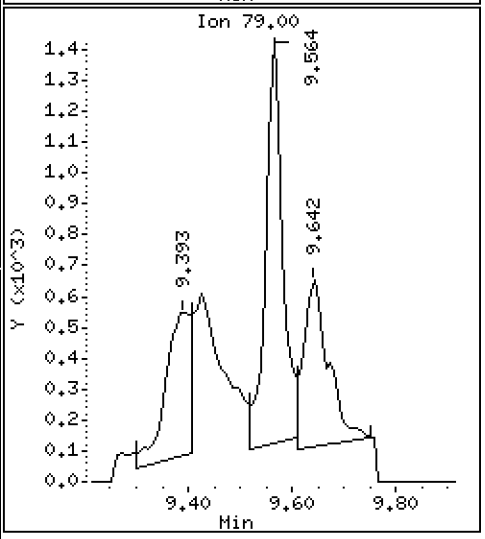
13 2-Methylphenol

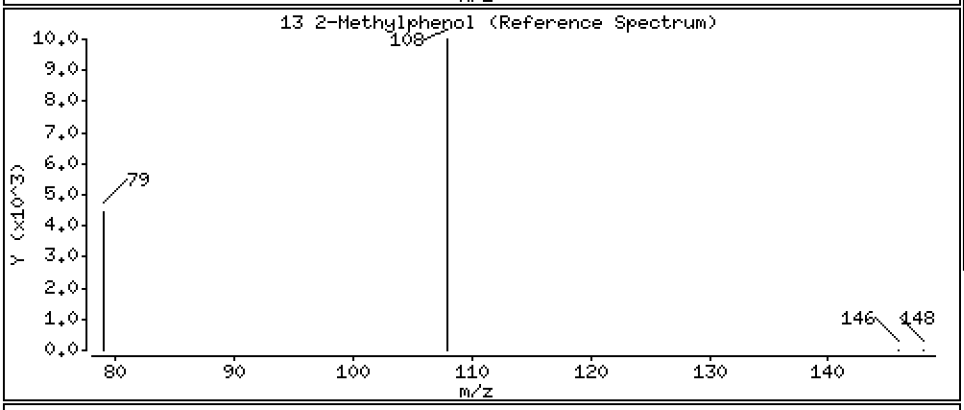
Concentration: 0.08993 ug/mL

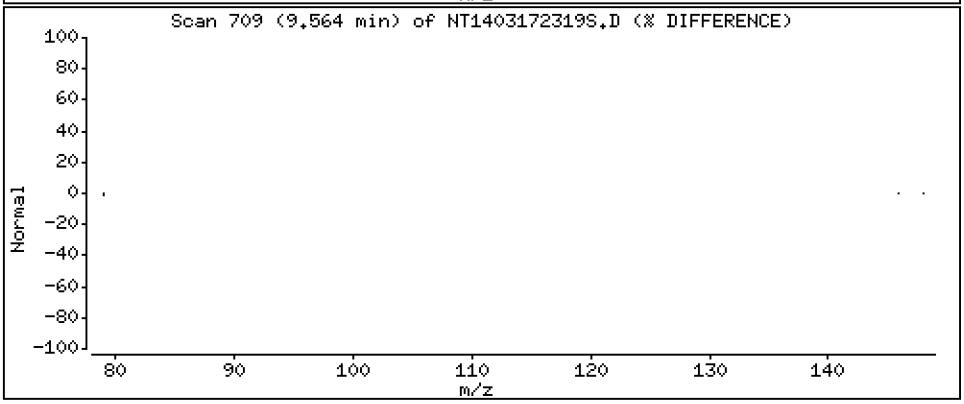












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Date : 18-MAR-2023 01:19

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV4

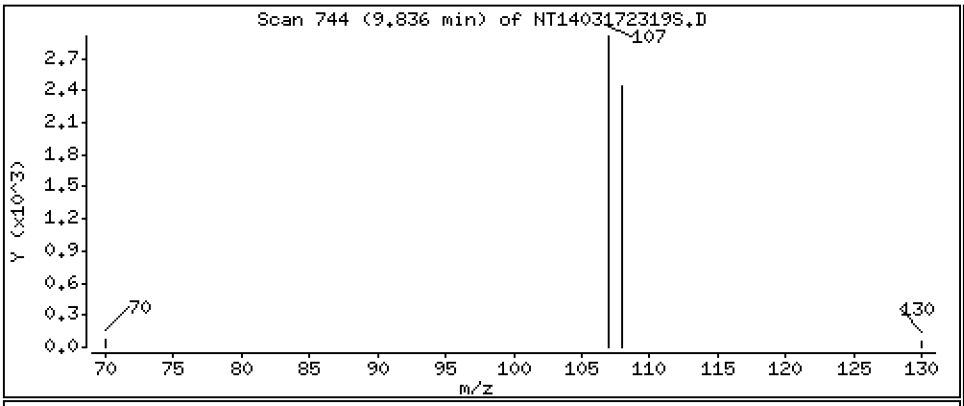
Operator: JGR

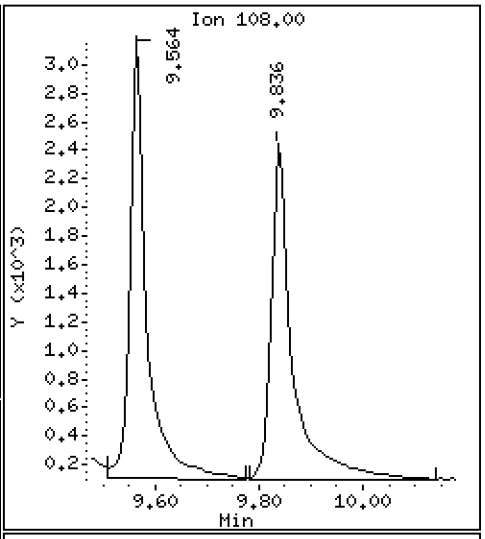
Column phase: ZB-5msi

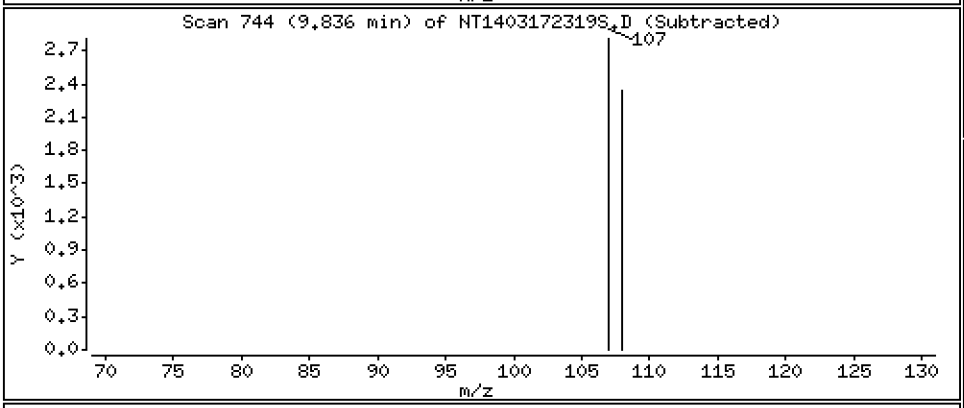
Column diameter: 0.25

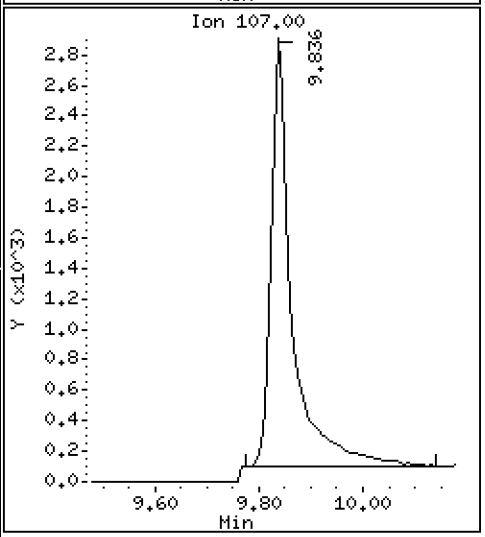
15 4-Methylphenol

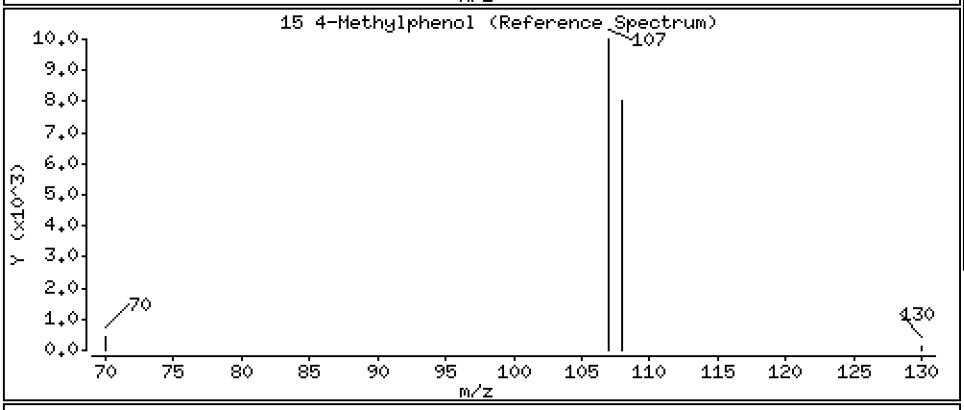
Concentration: 0.07821 ug/mL

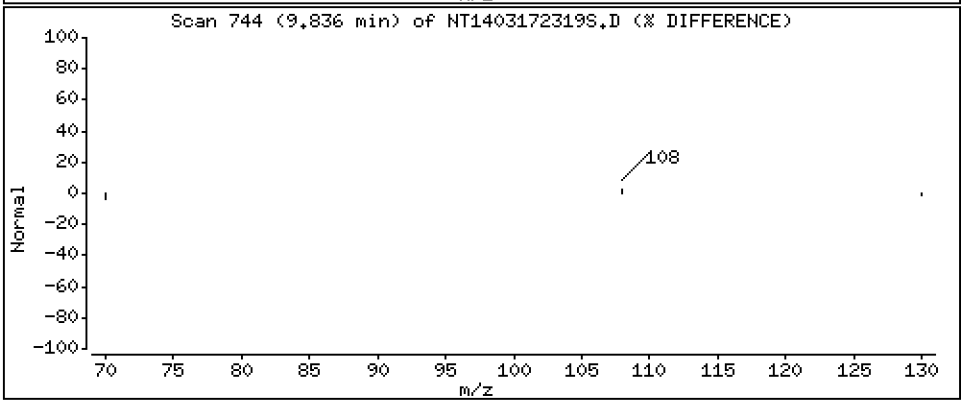












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Date : 18-MAR-2023 01:19

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV4

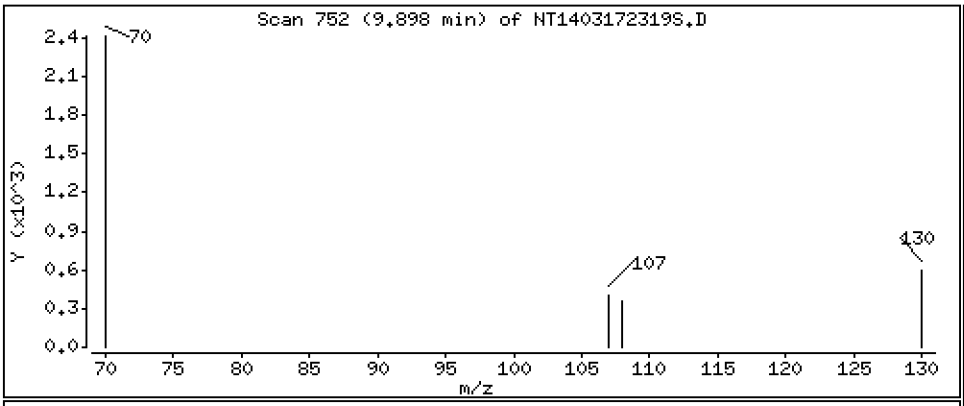
Operator: JGR

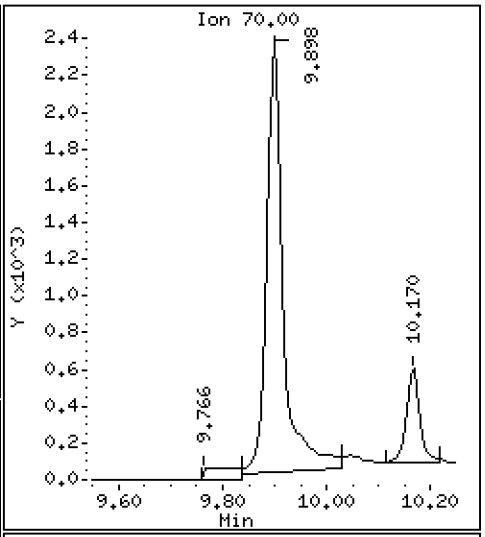
Column phase: ZB-5msi

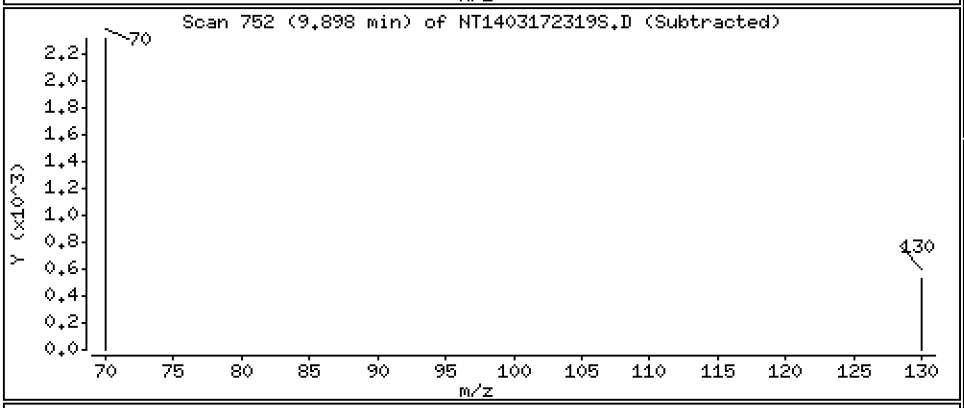
Column diameter: 0.25

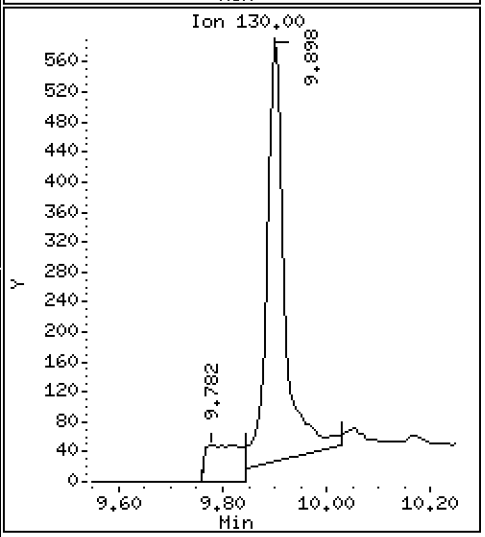
16 N-Nitroso-di-n-propylamine

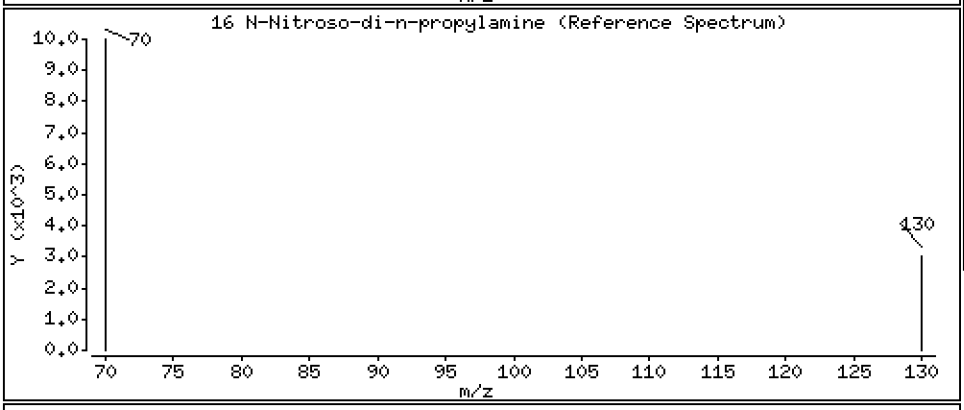
Concentration: 0.08396 ug/mL

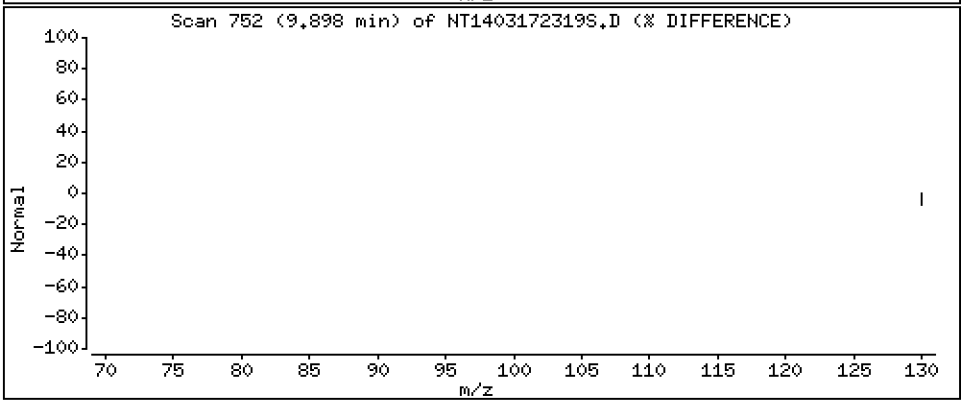












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Date : 18-MAR-2023 01:19

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV4

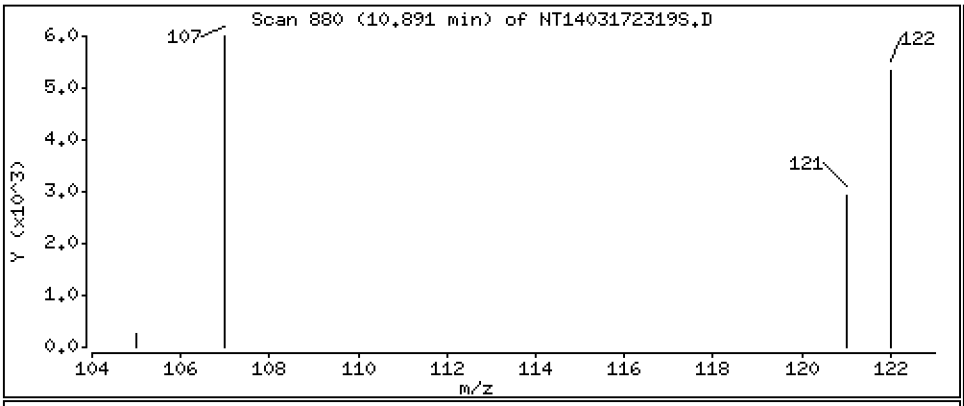
Operator: JGR

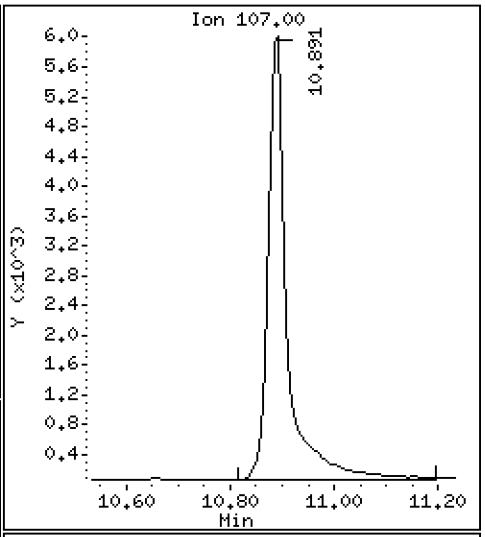
Column phase: ZB-5msi

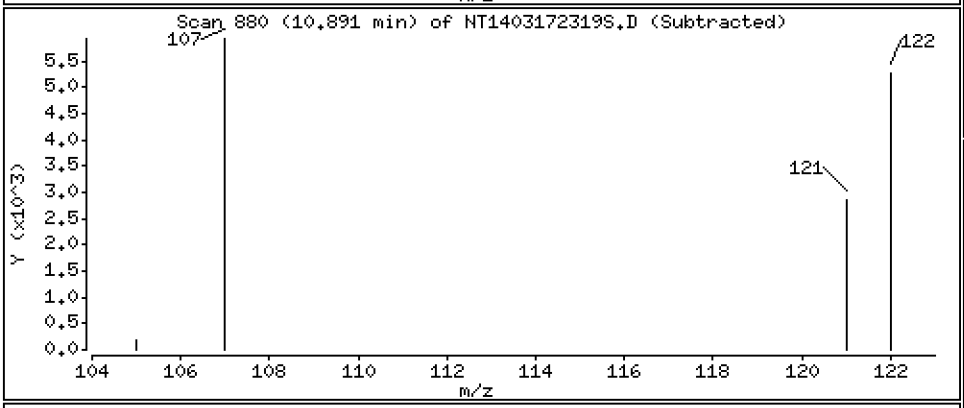
Column diameter: 0.25

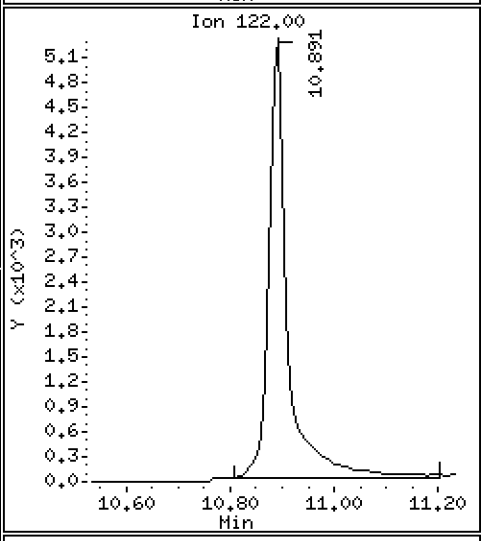
22 2,4-Dimethylphenol

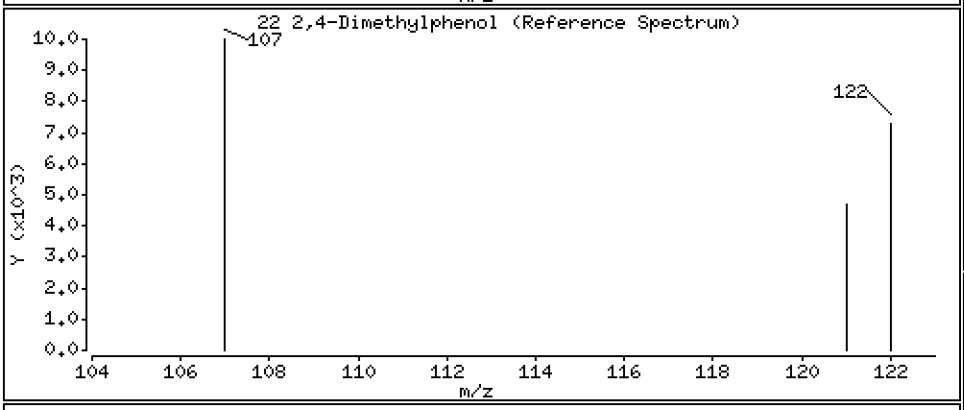
Concentration: 0.1885 ug/mL

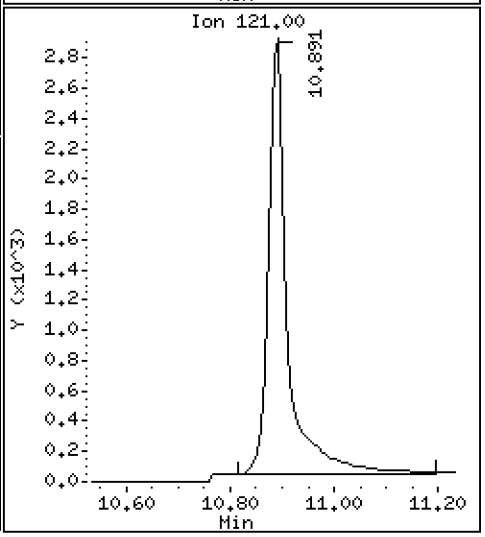


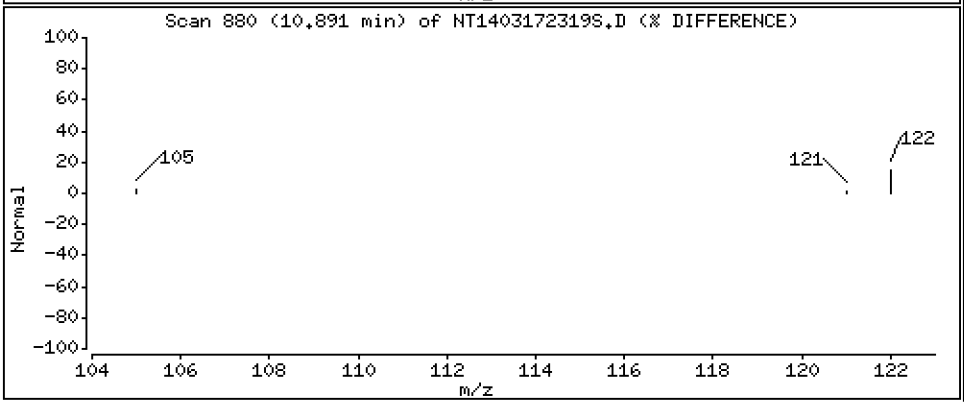












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Date : 18-MAR-2023 01:19

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV4

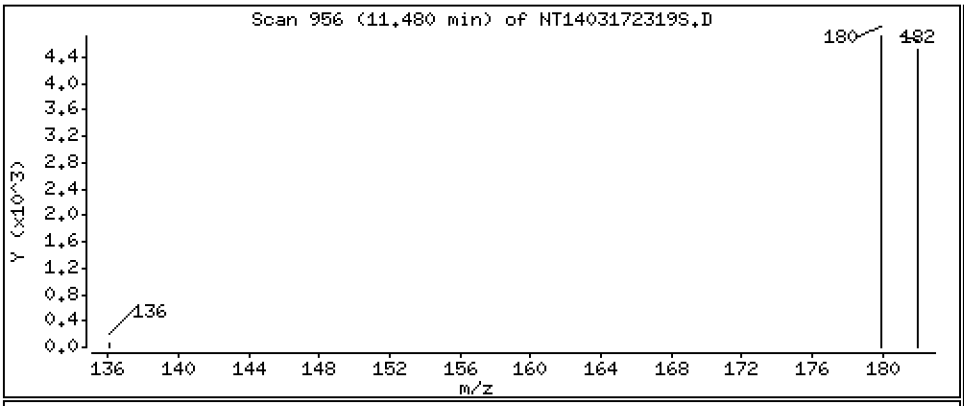
Operator: JGR

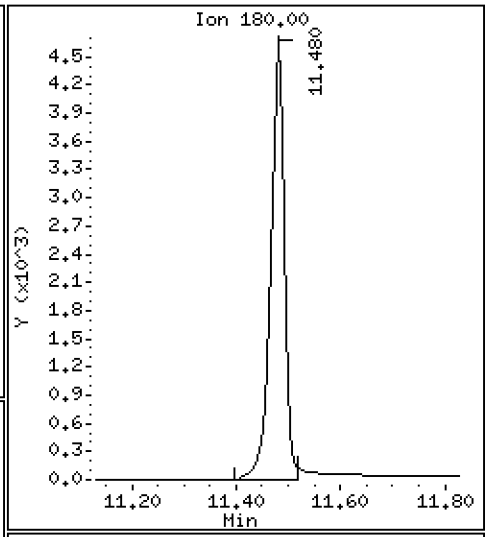
Column phase: ZB-5msi

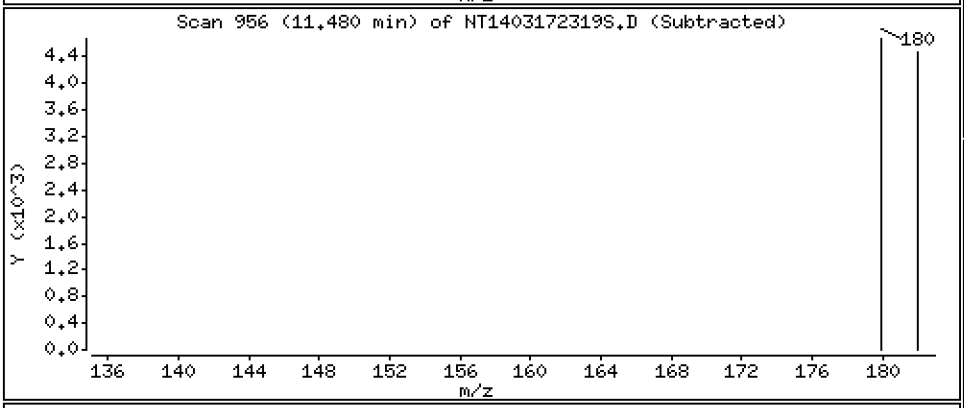
Column diameter: 0.25

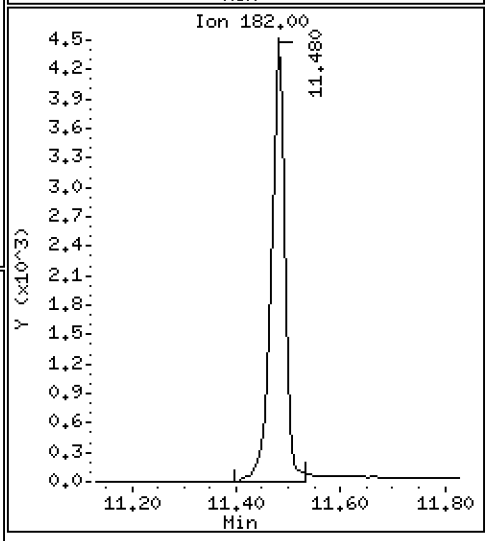
26 1,2,4-Trichlorobenzene

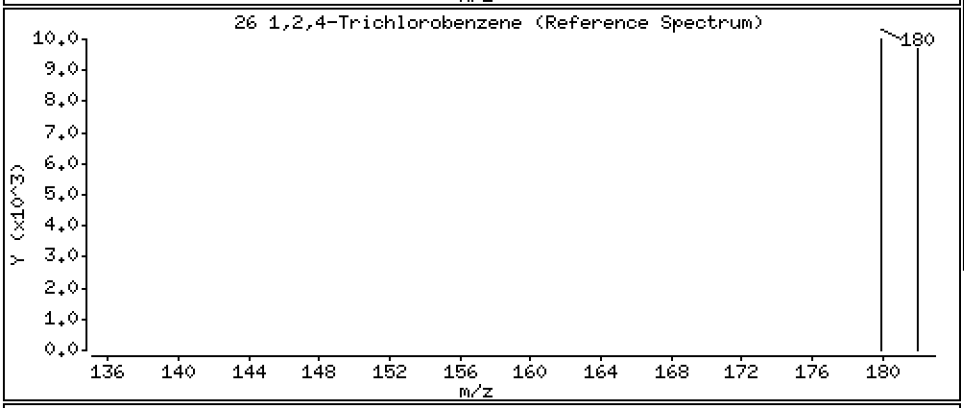
Concentration: 0.1078 ug/mL

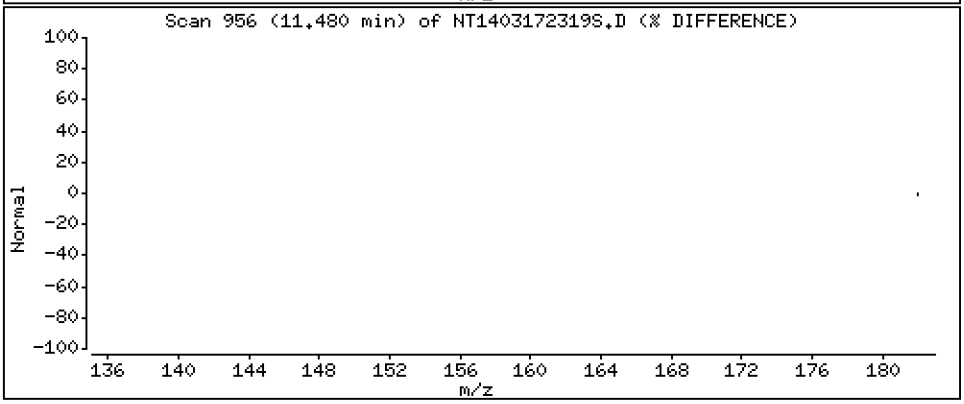












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT14031723195.D

Date : 18-MAR-2023 01:19

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV4

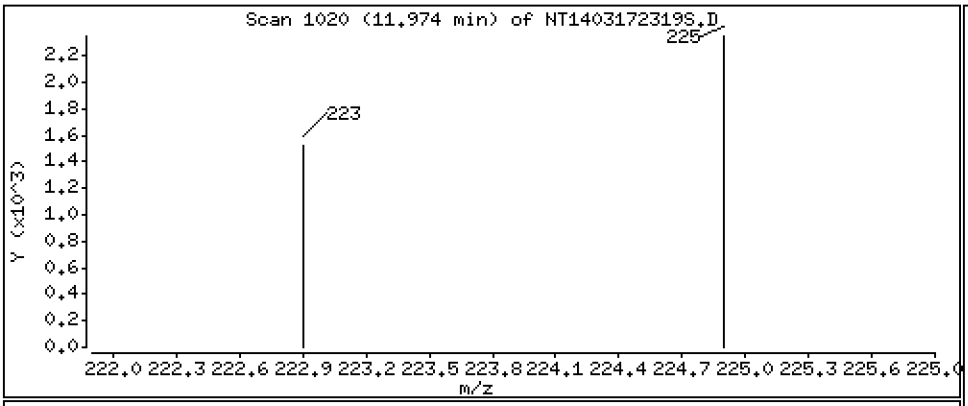
Operator: JGR

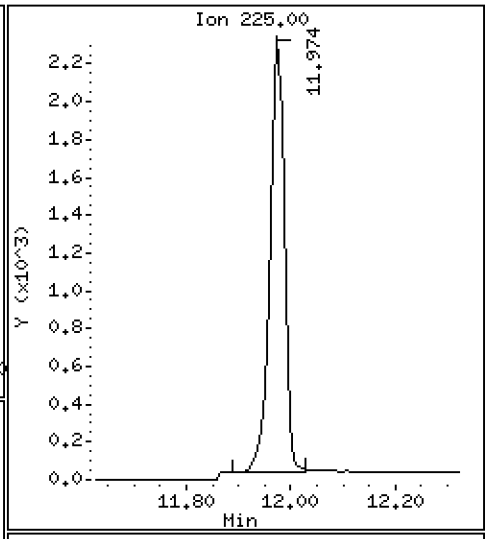
Column phase: ZB-5msi

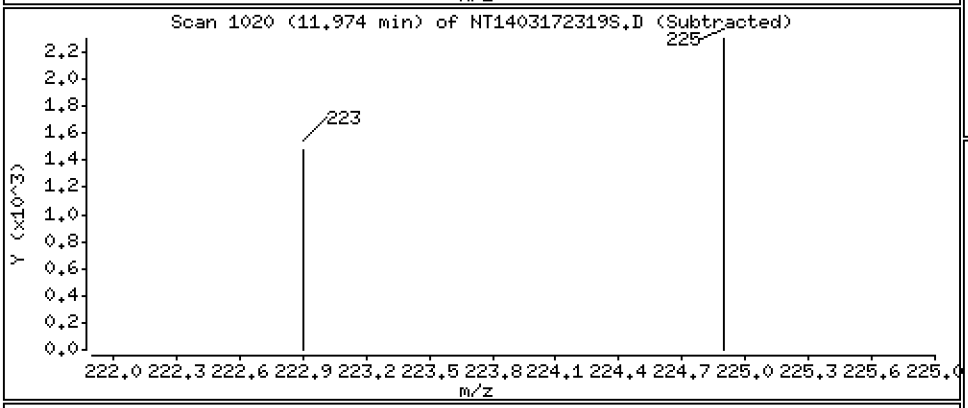
Column diameter: 0.25

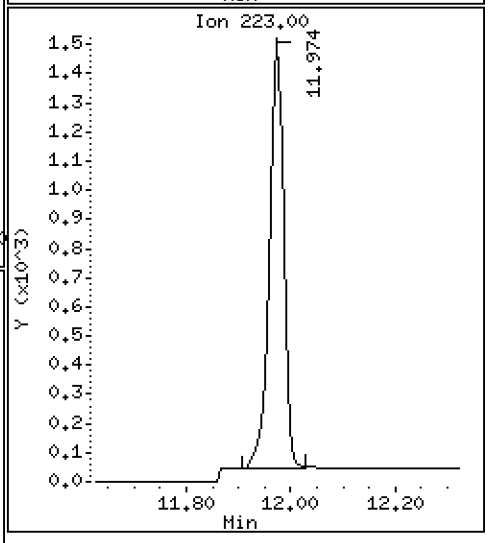
30 Hexachlorobutadiene

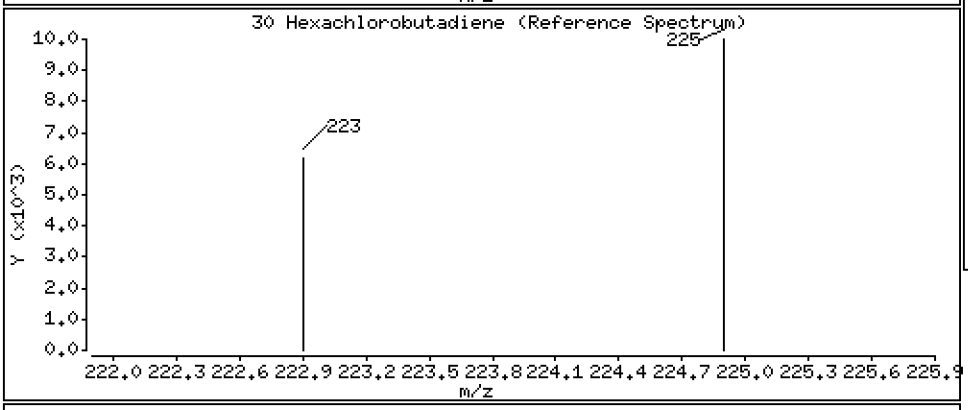
Concentration: 0.1075 ug/mL

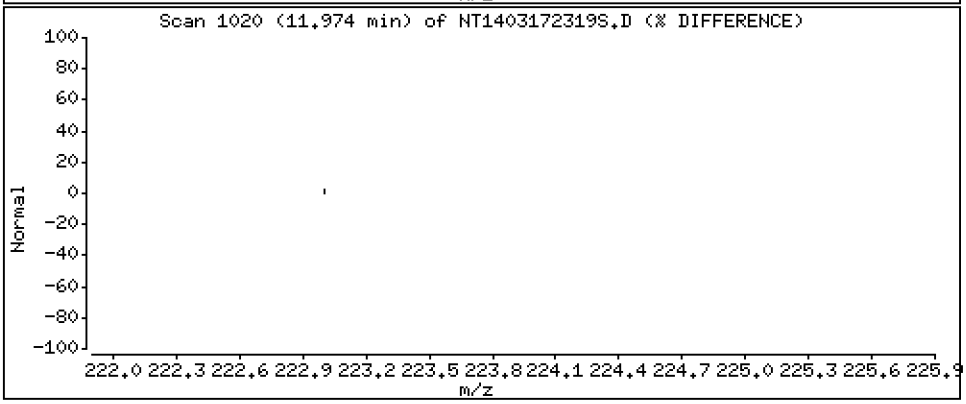












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Date : 18-MAR-2023 01:19

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV4

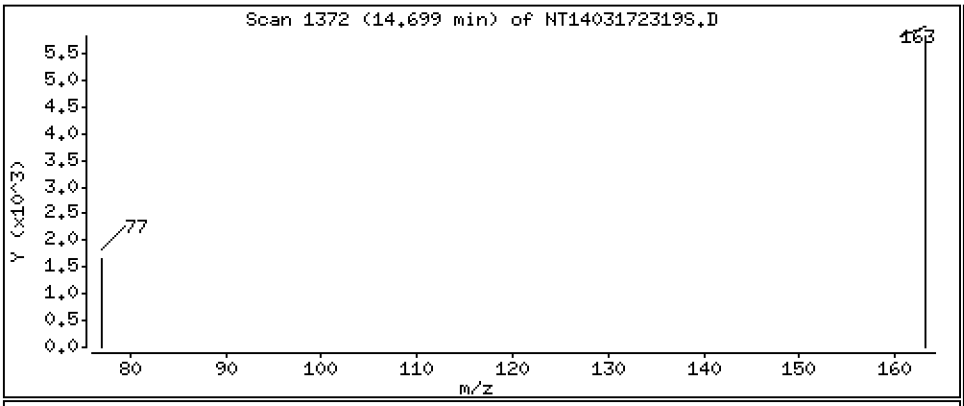
Operator: JGR

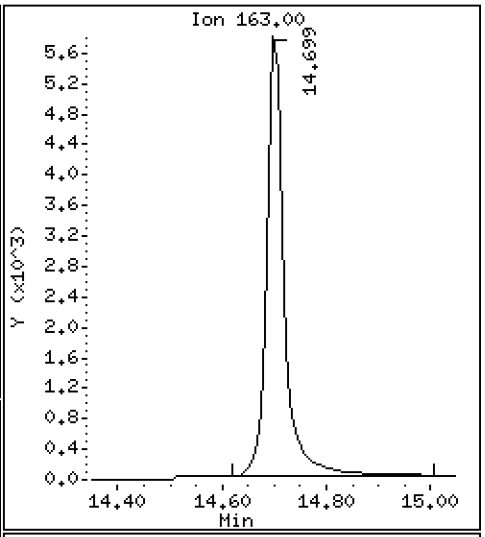
Column phase: ZB-5msi

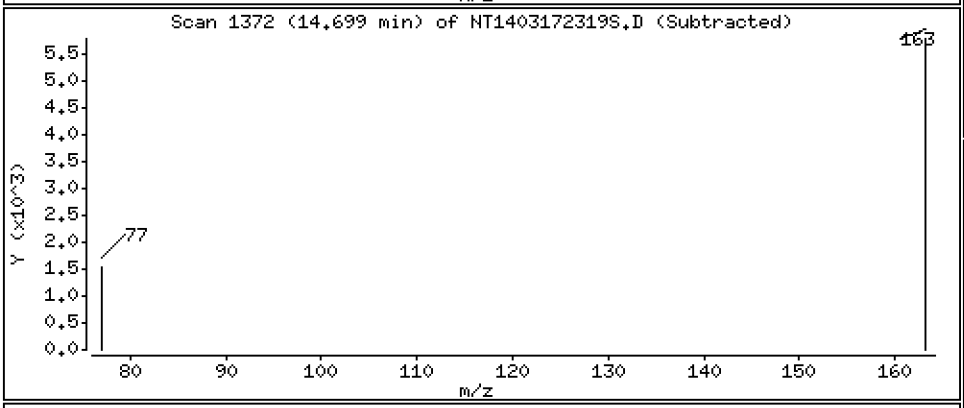
Column diameter: 0.25

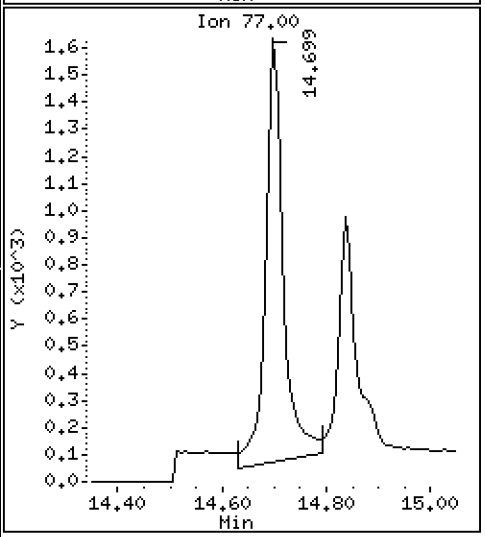
39 Dimethylphthalate

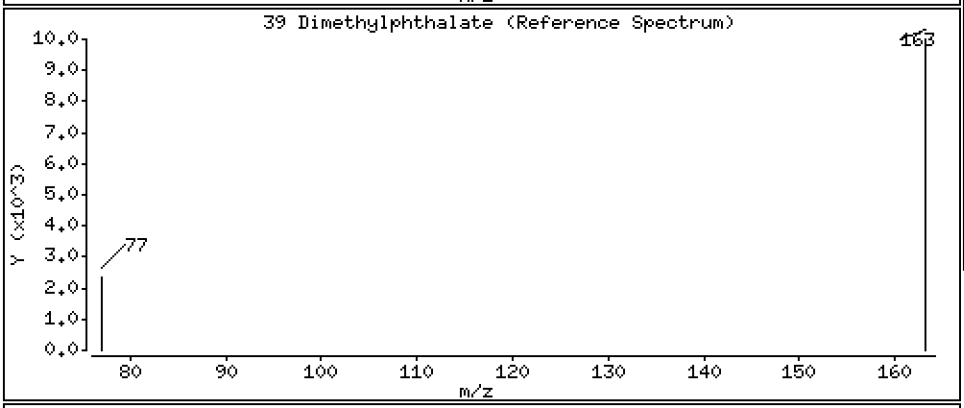
Concentration: 0.09264 ug/mL

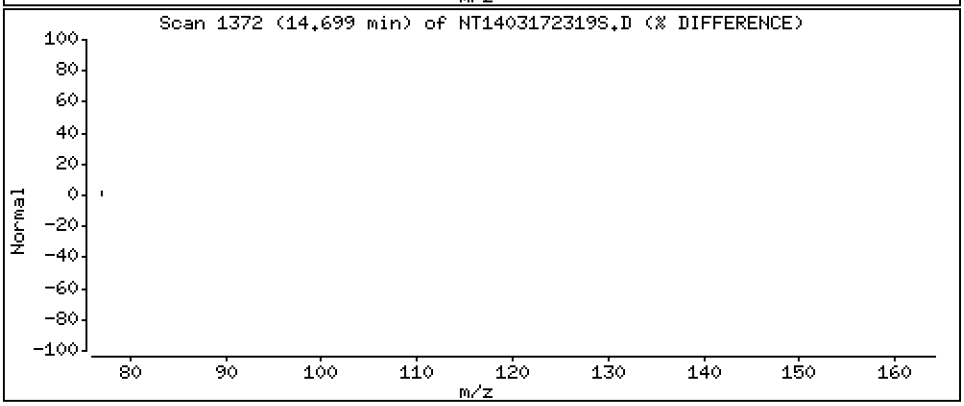












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Date : 18-MAR-2023 01:19

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV4

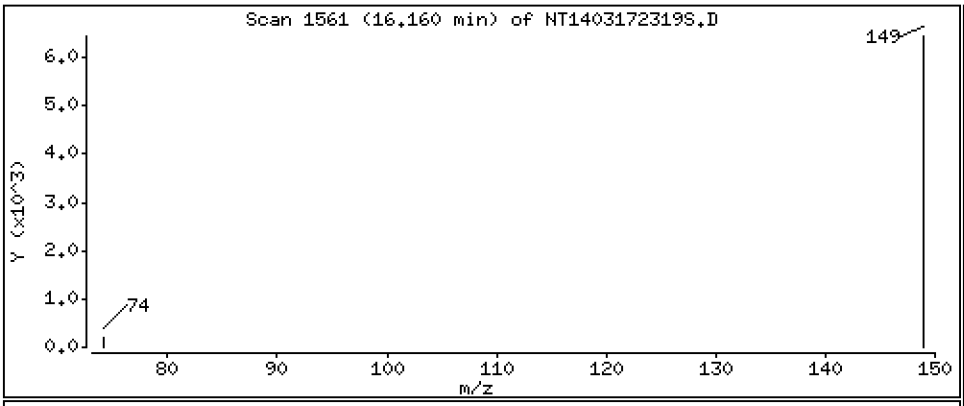
Operator: JGR

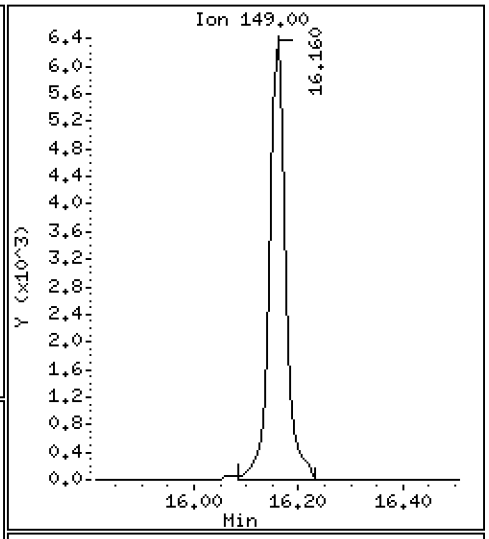
Column phase: ZB-5msi

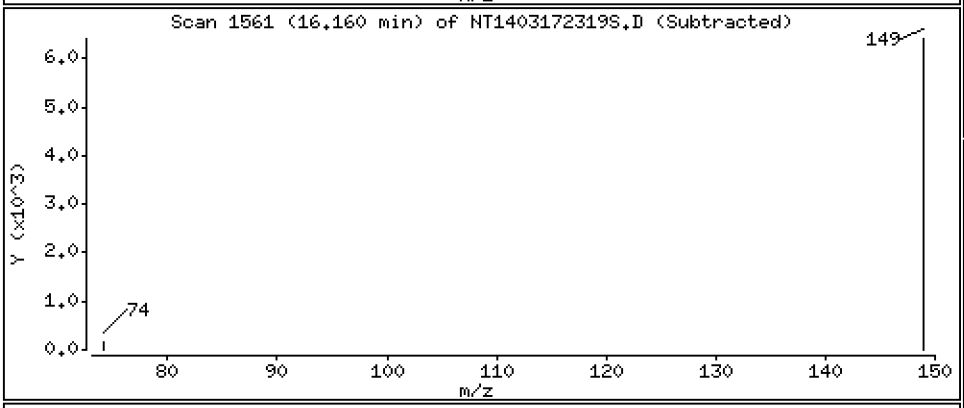
Column diameter: 0.25

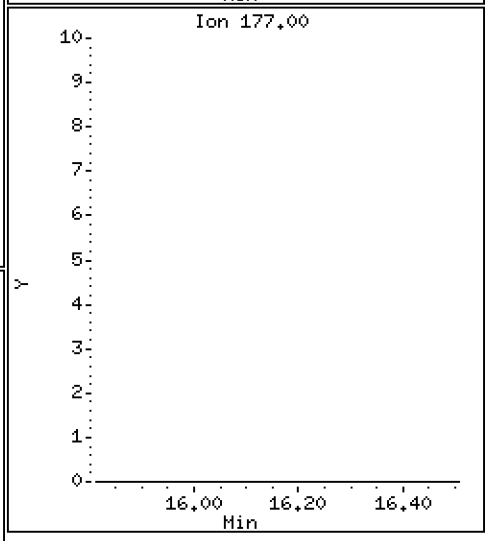
50 Diethylphthalate

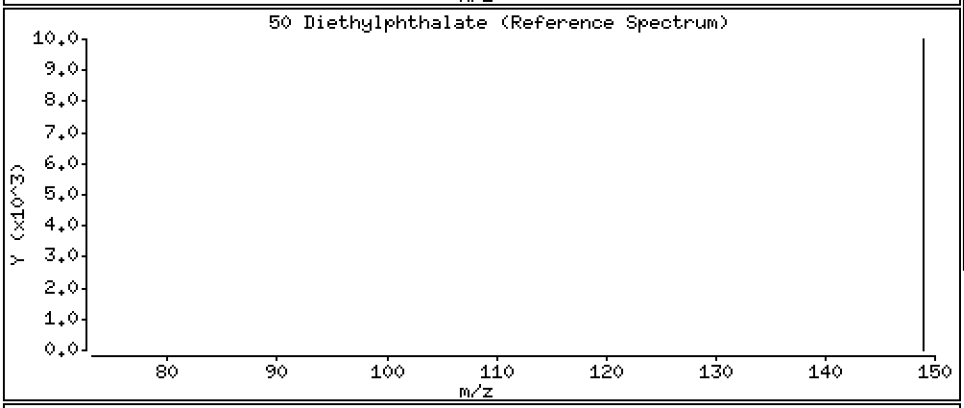
Concentration: 0.08870 ug/mL

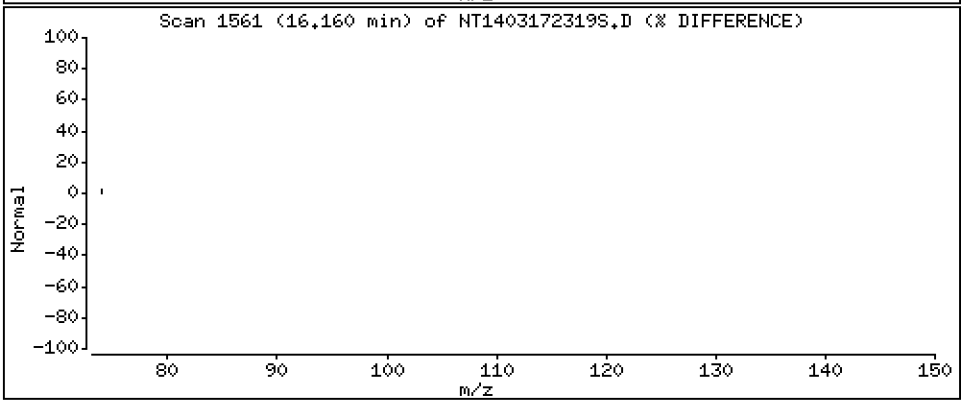












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT14031723195.D

Date : 18-MAR-2023 01:19

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV4

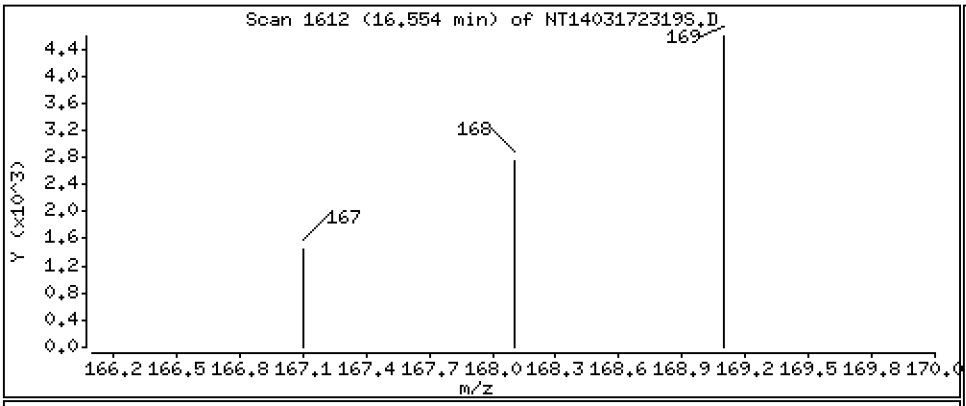
Operator: JGR

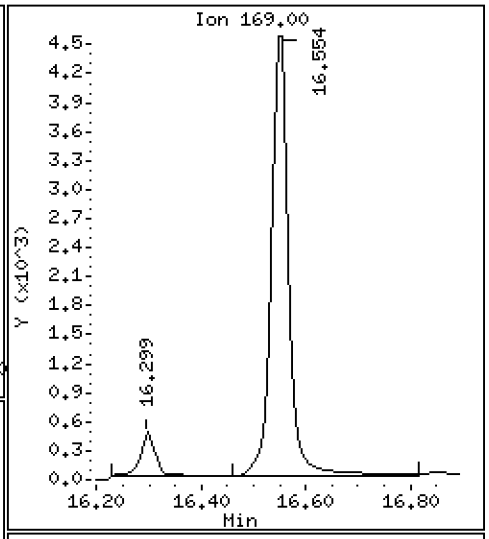
Column phase: ZB-5msi

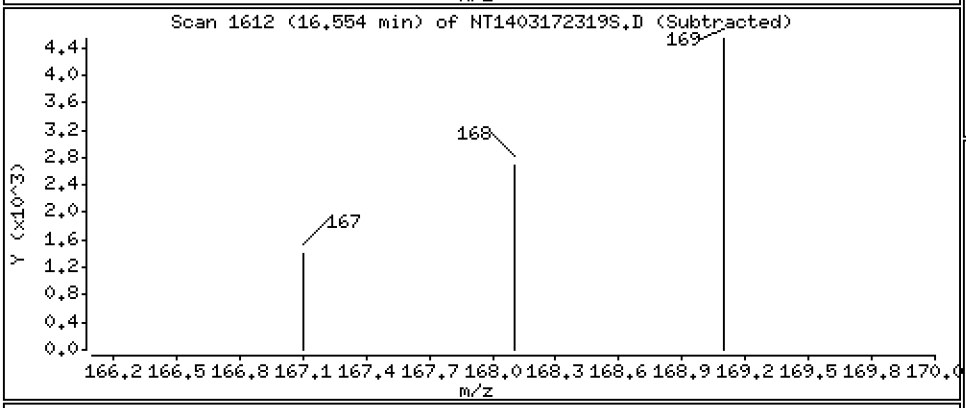
Column diameter: 0.25

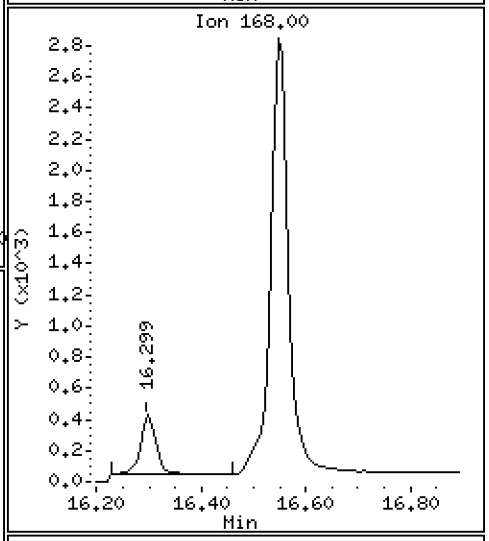
54 N-Nitrosodiphenylamine

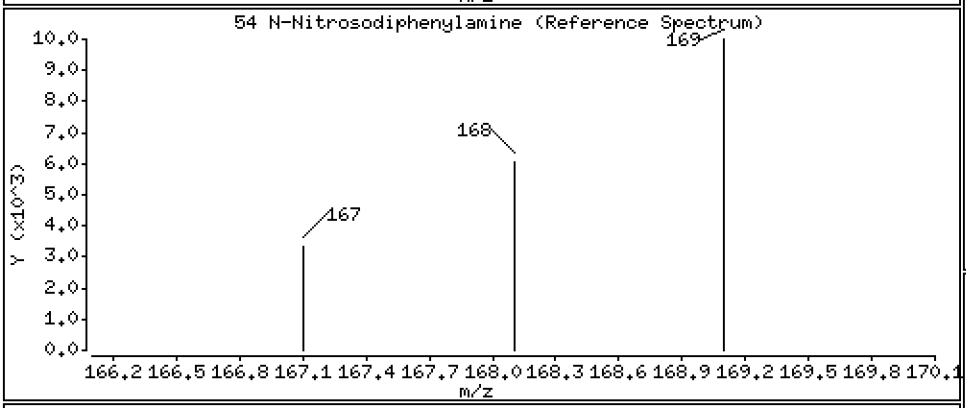
Concentration: 0.09438 ug/mL

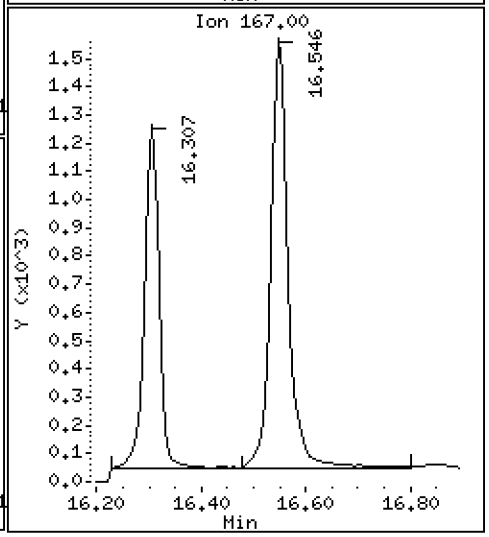


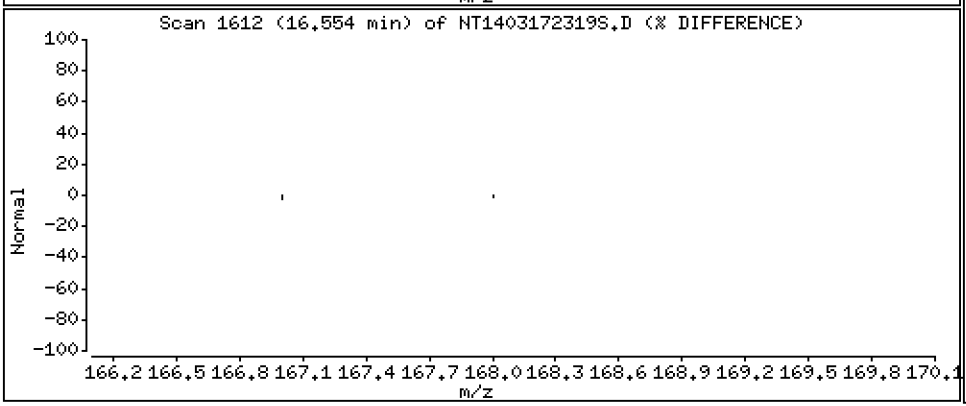












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Date : 18-MAR-2023 01:19

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV4

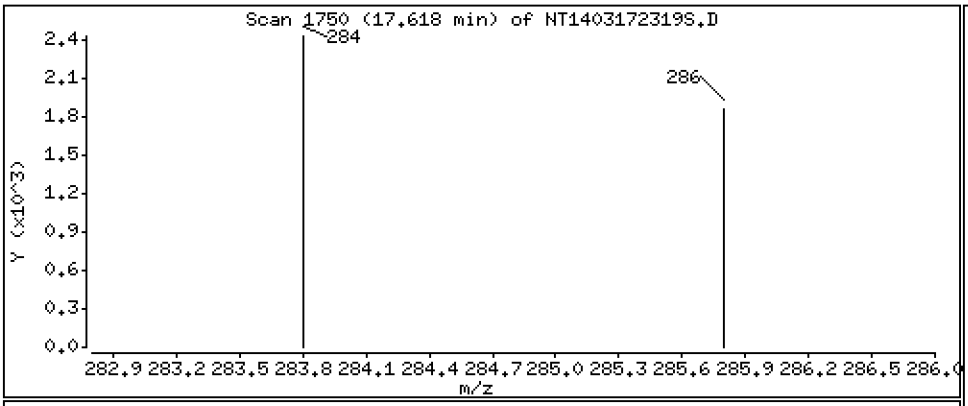
Operator: JGR

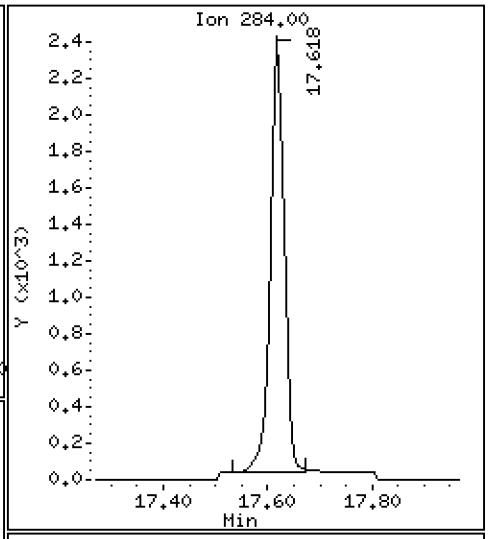
Column phase: ZB-5msi

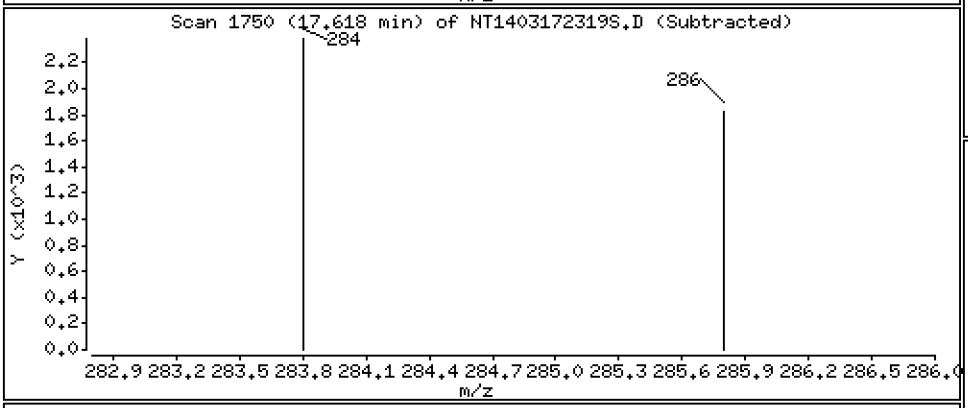
Column diameter: 0.25

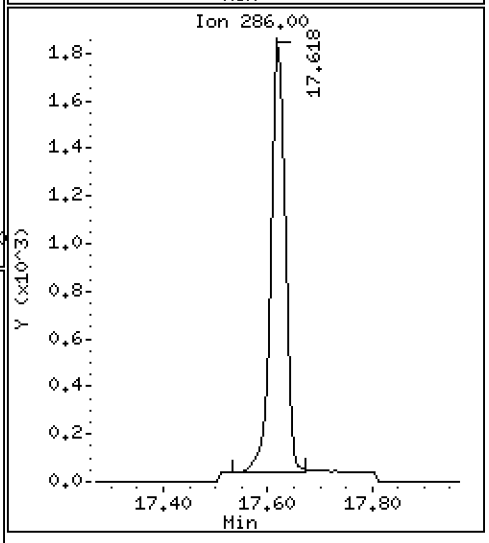
57 Hexachlorobenzene

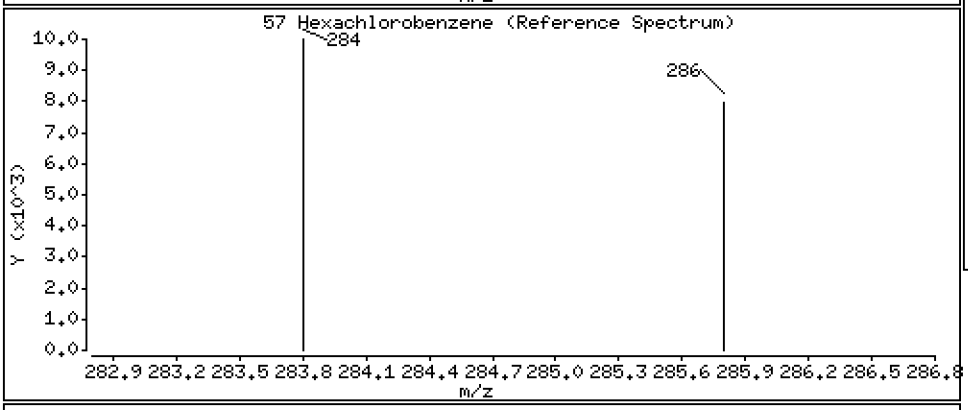
Concentration: 0.1030 ug/mL

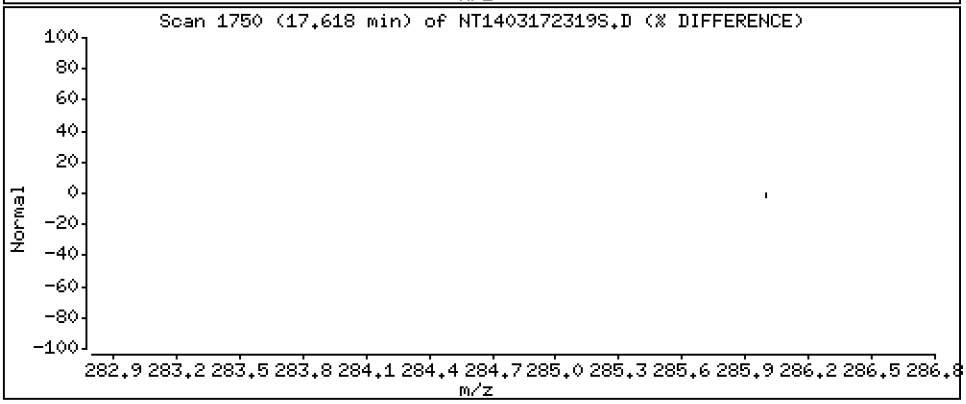












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172319S.D

Date : 18-MAR-2023 01:19

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV4

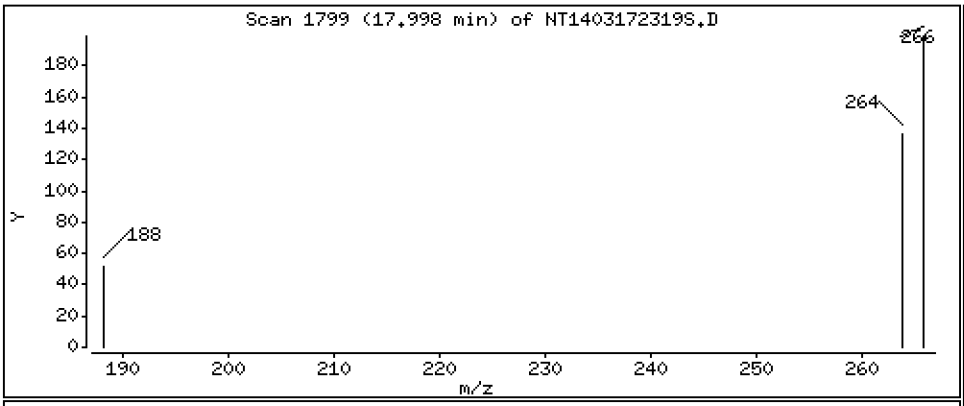
Operator: JGR

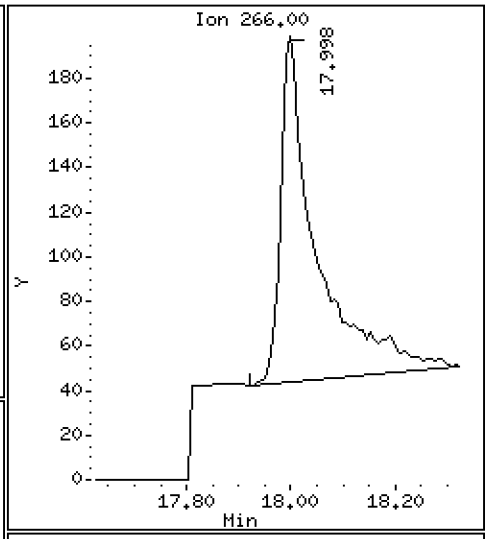
Column phase: ZB-5msi

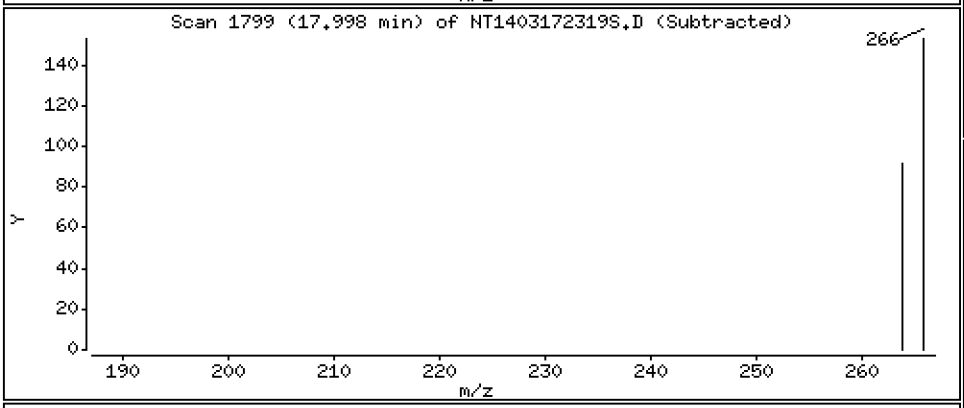
Column diameter: 0.25

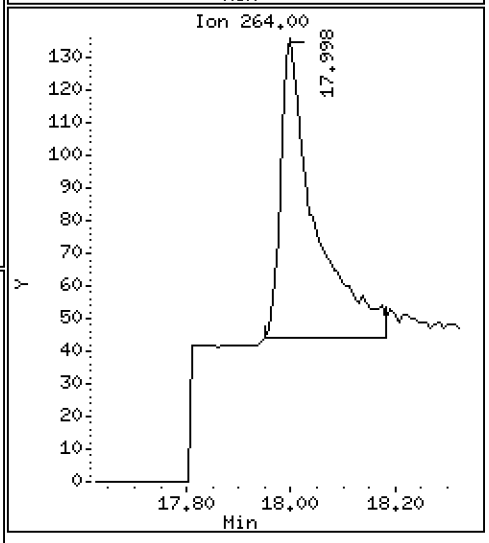
58 Pentachlorophenol

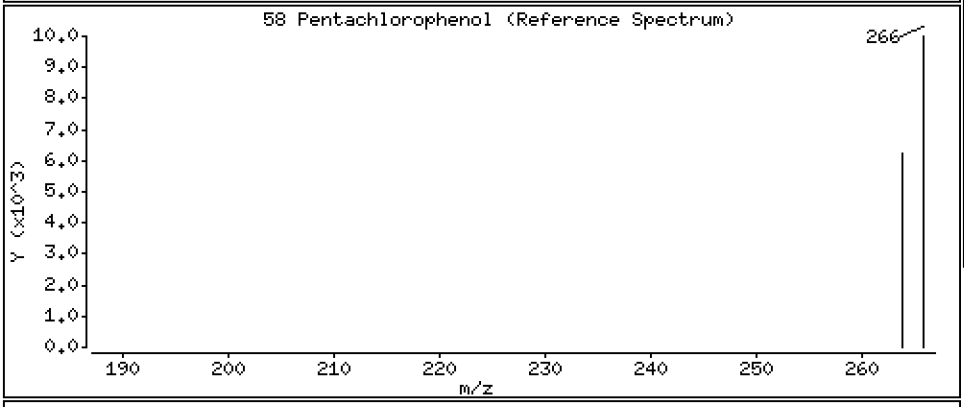
Concentration: 0.02710 ug/mL

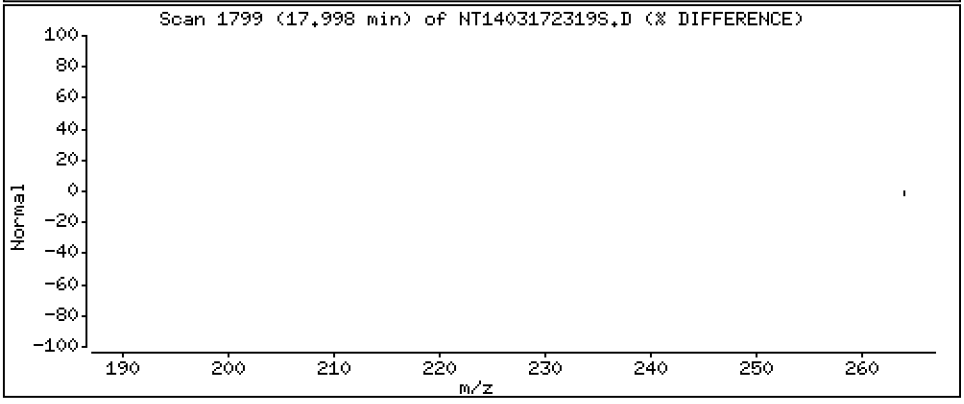












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172319S.D

Date : 18-MAR-2023 01:19

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV4

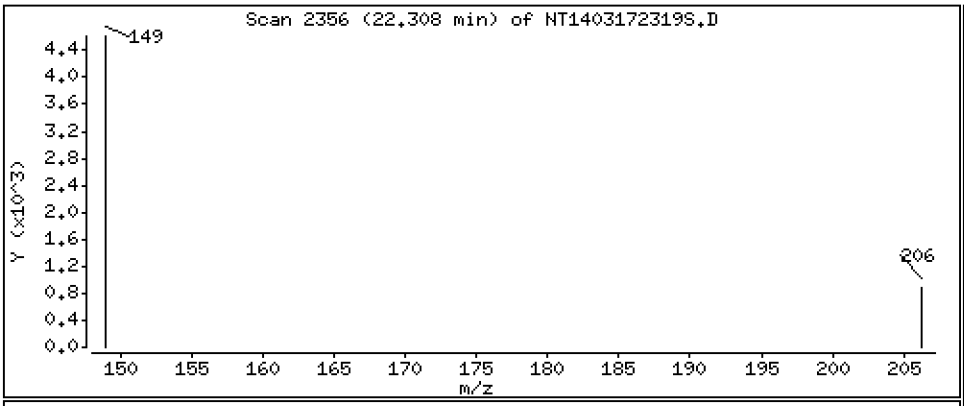
Operator: JGR

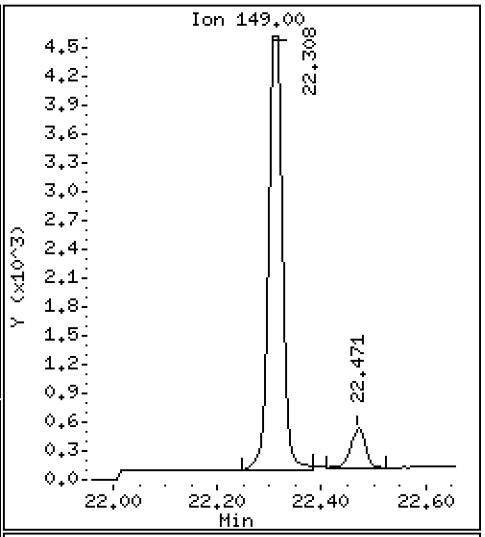
Column phase: ZB-5msi

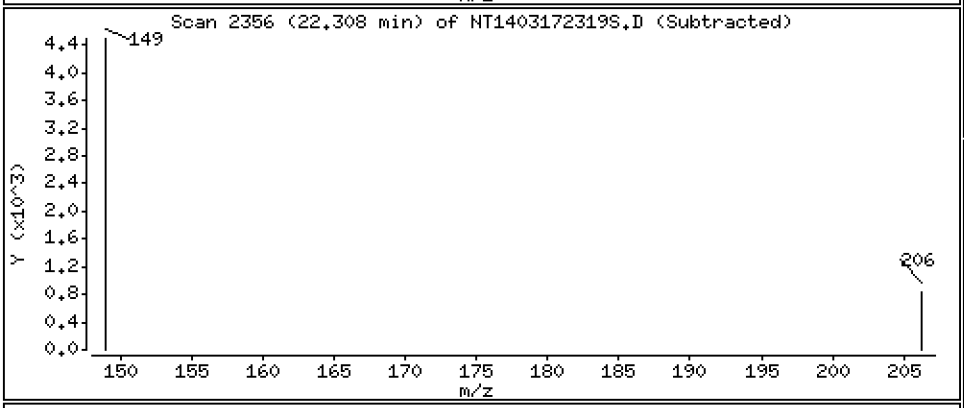
Column diameter: 0.25

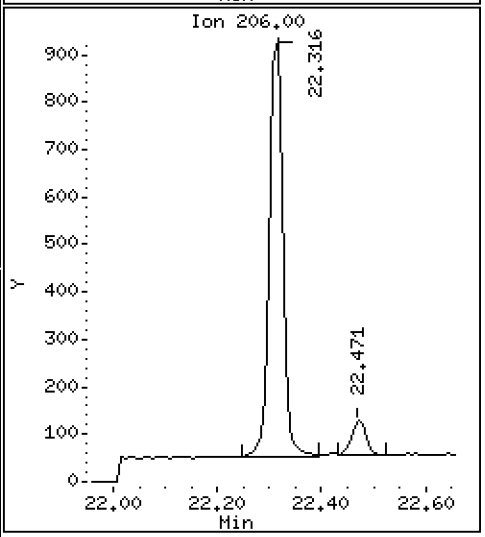
67 Butylbenzylphthalate

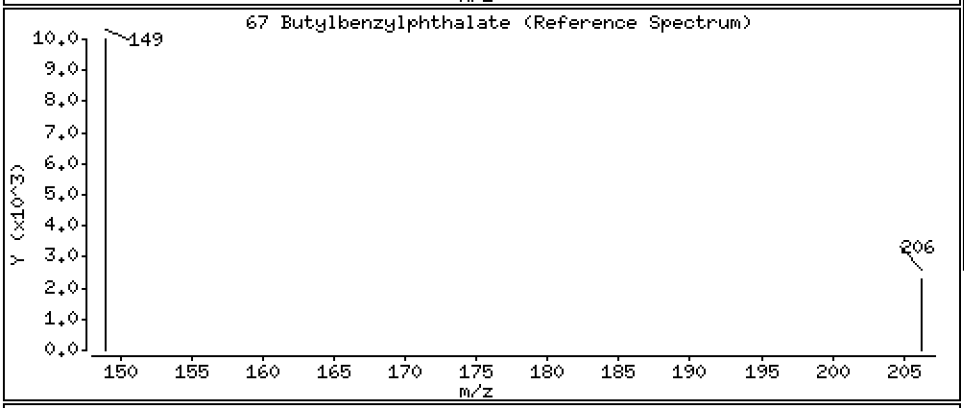
Concentration: 0.1049 ug/mL

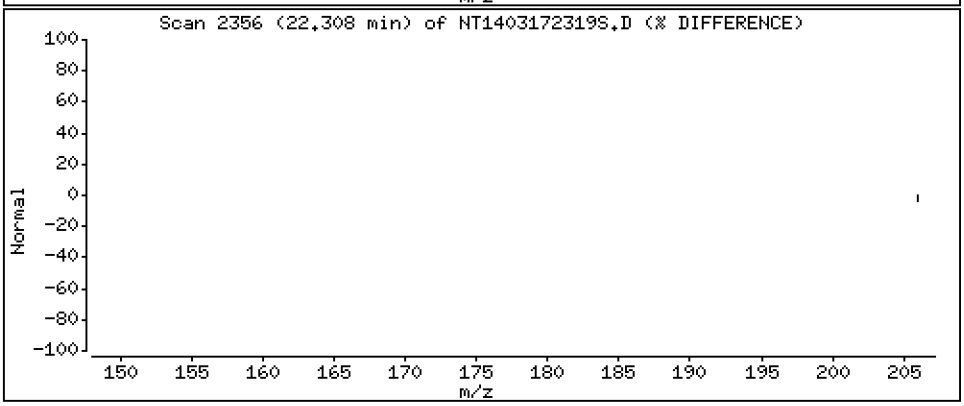












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Date : 18-MAR-2023 01:19

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV4

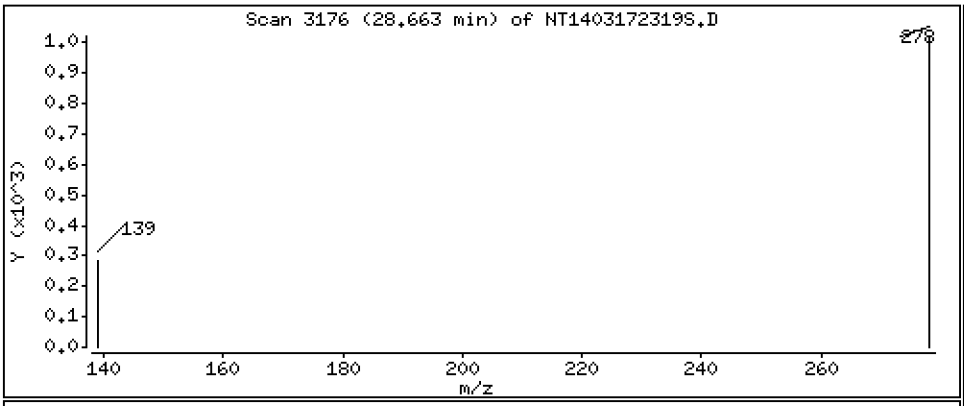
Operator: JGR

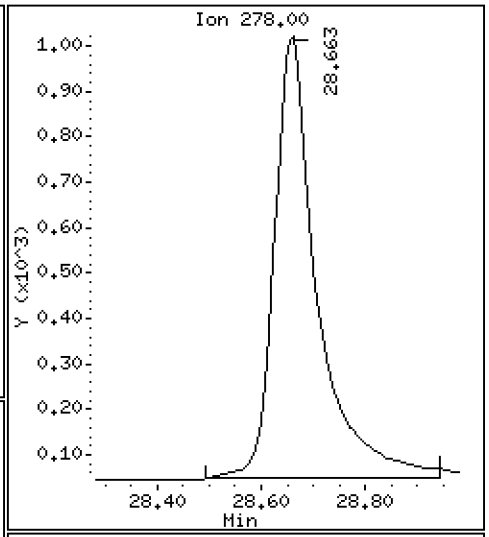
Column phase: ZB-5msi

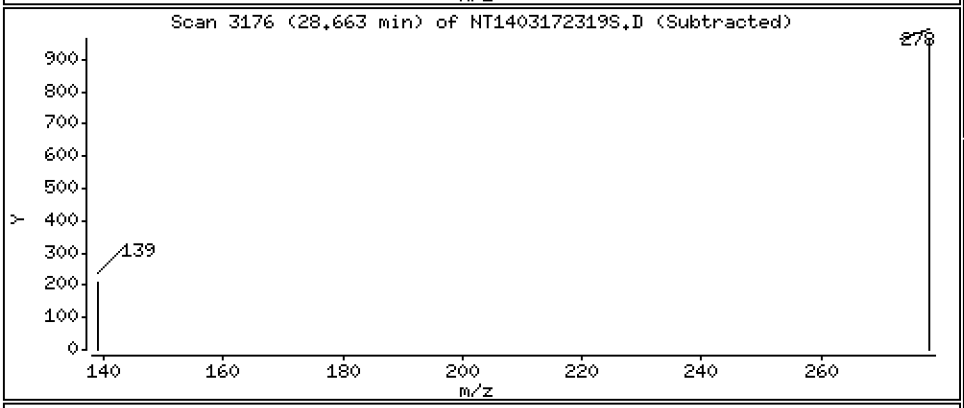
Column diameter: 0.25

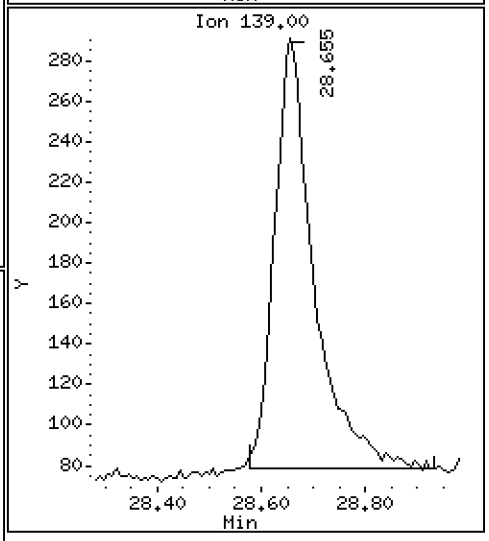
79 Dibenzo(a,h)anthracene

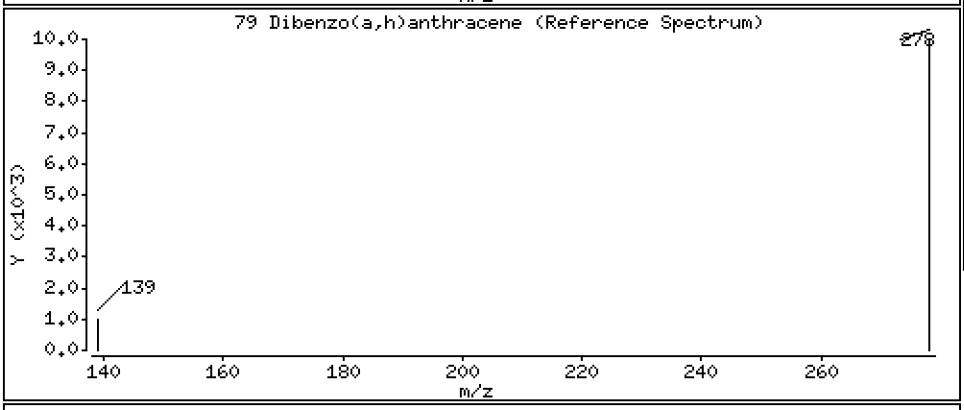
Concentration: 0.08011 ug/mL

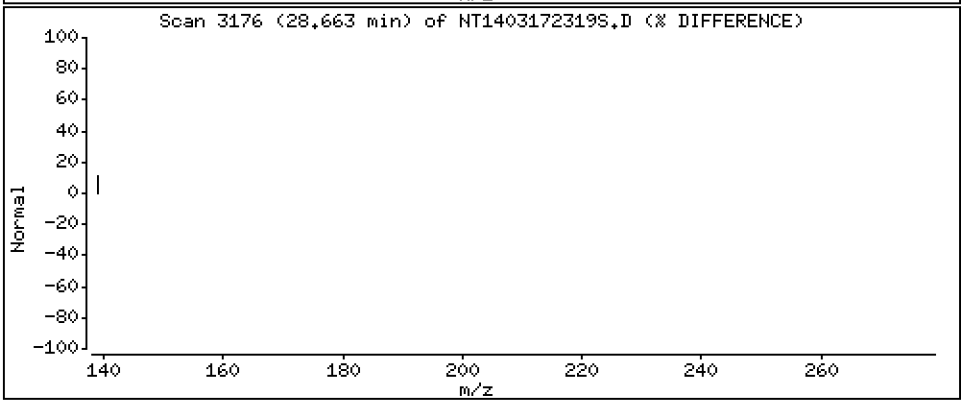












Data File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT14031723195.D

Date : 18-MAR-2023 01:19

Client ID:

Instrument: nt14.i

Sample Info: SLC0376-LCV4

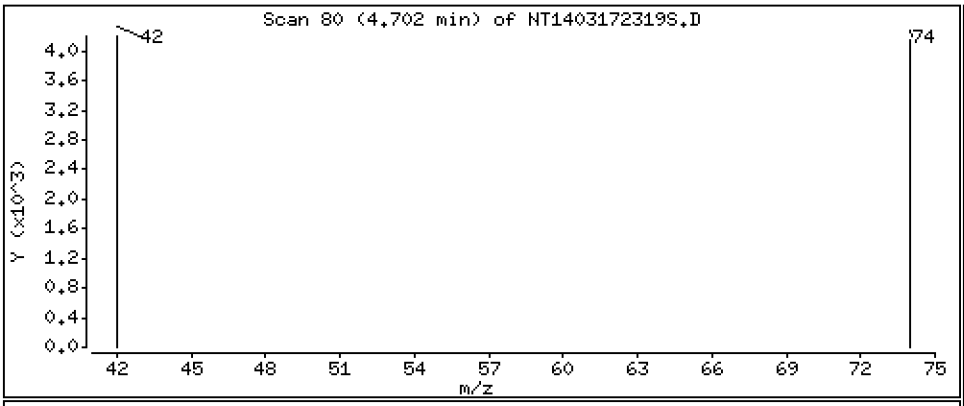
Operator: JGR

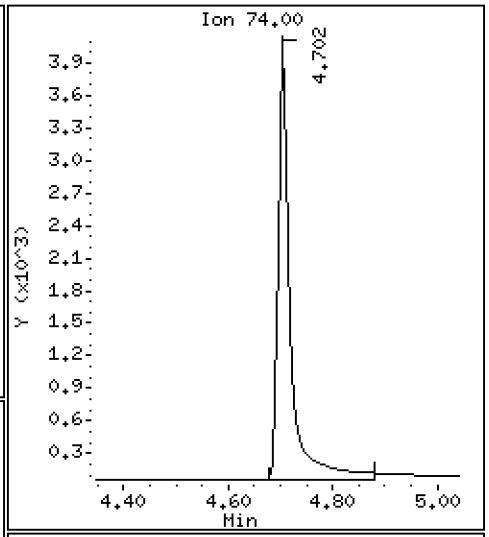
Column phase: ZB-5msi

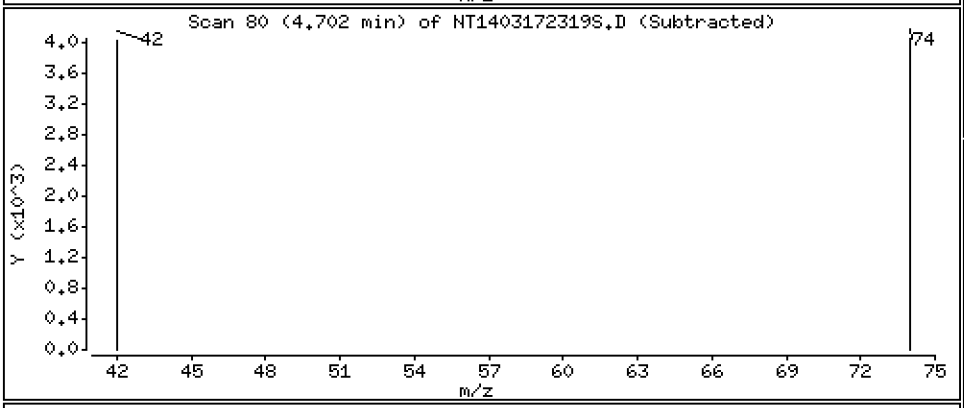
Column diameter: 0.25

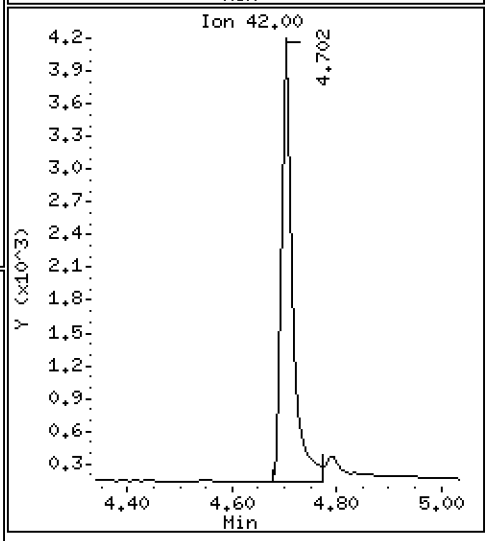
90 N-Nitrosodimethylamine

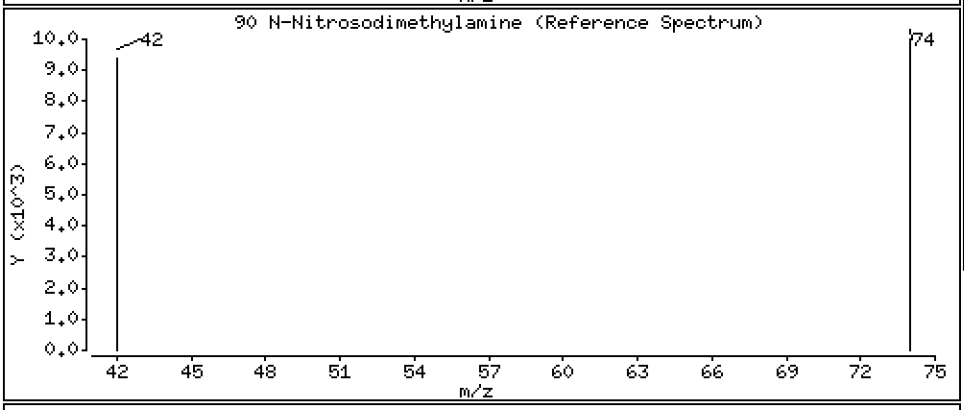
Concentration: 0.1264 ug/mL

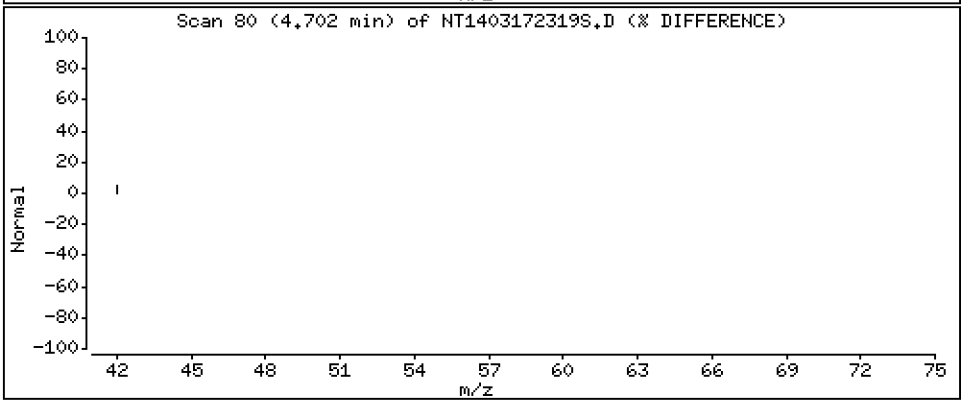












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt14.i\20230317.b\20230317.b\NT1403172319S.D
Lab Smp Id: SLC0376-LCV4
Inj Date : 18-MAR-2023 01:19 MS Autotune Date: 11-MAR-2023 16:01
Operator : JGR Inst ID: nt14.i
Smp Info : SLC0376-LCV4
Misc Info :
Comment :
Method : \\target\share\chem3\nt14.i\20230317.b\20230317.b\SIMABN2.m
Meth Date : 23-Mar-2023 16:55 van Quant Type: ISTD
Cal Date : 15-MAR-2023 15:50 Cal File: NT1403152308.D
Als bottle: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.834	6.826	(0.754)	9282	0.11043	0.1104(R)
	3 Phenol	94	8.441	8.441	(0.931)	7945	0.06874	0.06874
	7 1,3-Dichlorobenzene	146	9.005	8.997	(0.993)	10278	0.10391	0.1039
*	8 1,4-Dichlorobenzene-d4	152	9.067	9.067	(1.000)	247620	4.00000	
	9 1,4-Dichlorobenzene	146	9.098	9.098	(1.003)	10031	0.10480	0.1048
	11 Benzyl alcohol	79	9.424	9.354	(1.039)	2392	0.03531	0.03531(M)
	12 1,2-Dichlorobenzene	146	9.455	9.455	(1.043)	9828	0.10542	0.1054
	13 2-Methylphenol	108	9.564	9.564	(1.055)	7180	0.08993	0.08993
	15 4-Methylphenol	108	9.835	9.828	(1.085)	6597	0.07821	0.07821
	16 N-Nitroso-di-n-propylamine	70	9.898	9.898	(1.092)	5007	0.08396	0.08396
	22 2,4-Dimethylphenol	107	10.891	10.883	(0.942)	14814	0.18849	0.1885
	24 Benzoic acid	105	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	11.480	11.480	(0.993)	8307	0.10784	0.1078
*	27 Naphthalene-d8	136	11.565	11.565	(1.000)	914256	4.00000	
	30 Hexachlorobutadiene	225	11.974	11.974	(1.035)	4190	0.10748	0.1075
	39 Dimethylphthalate	163	14.698	14.698	(0.967)	13045	0.09264	0.09264
*	42 Acenaphthene-d10	162	15.201	15.201	(1.000)	412320	4.00000	
	50 Diethylphthalate	149	16.160	16.160	(1.063)	13298	0.08870	0.08870
	54 N-Nitrosodiphenylamine	169	16.553	16.546	(0.907)	10163	0.09438	0.09438
	57 Hexachlorobenzene	284	17.618	17.618	(0.966)	4259	0.10296	0.1030
	58 Pentachlorophenol	266	17.997	17.974	(0.986)	756	0.02710	0.02710(M)
*	59 Phenanthrene-d10	188	18.245	18.245	(1.000)	794702	4.00000	
$	66 Terphenyl-d14	244	21.386	21.386	(0.918)	9496	0.12854	0.1285(R)
	67 Butylbenzylphthalate	149	22.307	22.308	(0.958)	7855	0.10492	0.1049
*	69 Chrysene-d12	240	23.291	23.291	(1.000)	428538	4.00000	
*	77 Perylene-d12	264	25.931	25.931	(1.000)	278115	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.662	28.631	(1.105)	5648	0.08011	0.08011
	90 N-Nitrosodimethylamine	74	4.702	4.694	(0.519)	6491	0.12641	0.1264

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt14.i
Lab File ID: NT1403172319S.D
Lab Smp Id: SLC0376-LCV4
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt14.i\20230317.b\20230317.b\SIMABN2.m
Misc Info:

Calibration Date: 18-MAR-2023
Calibration Time: 00:07
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	225221	112611	450442	247620	9.95
27 Naphthalene-d8	830434	415217	1660868	914256	10.09
42 Acenaphthene-d10	389907	194954	779814	412320	5.75
59 Phenanthrene-d10	763679	381840	1527358	794702	4.06
69 Chrysene-d12	415791	207896	831582	428538	3.07
77 Perylene-d12	274872	137436	549744	278115	1.18

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.07	8.57	9.57	9.07	-0.00
27 Naphthalene-d8	11.57	11.07	12.07	11.57	-0.00
42 Acenaphthene-d10	15.20	14.70	15.70	15.20	-0.00
59 Phenanthrene-d10	18.25	17.75	18.75	18.25	-0.00
69 Chrysene-d12	23.29	22.79	23.79	23.29	-0.00
77 Perylene-d12	25.93	25.43	26.43	25.93	-0.00

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

REVIEW SUMMARY FOR FILE - NT1403172319S.D

Lab ID: SLC0376-LCV4
nt14.i, 20230317.b\20230317.b\SIMABN2.m,   18-MAR-2023 01:19

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
1.039	1.032	0.0077	Benzyl alcohol

RRT check based on Ccal File: 20230317.b/NT1403172317S.D

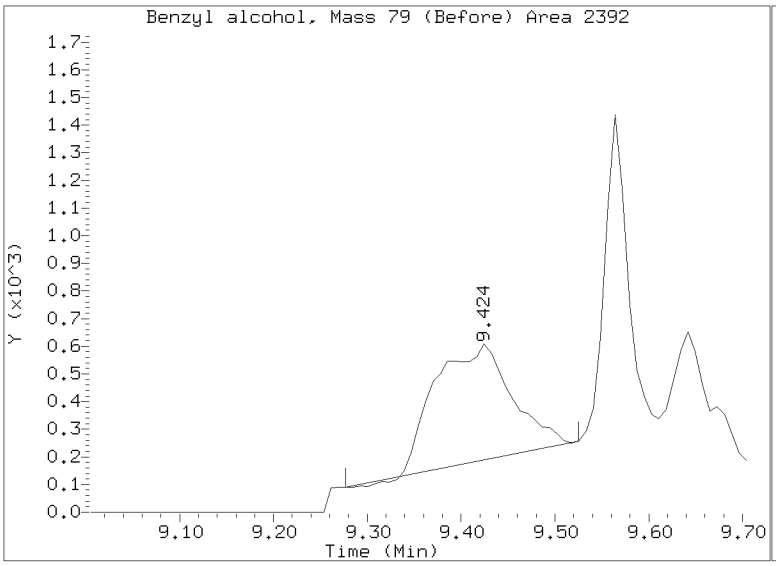
On Column LOD for nt14.i, 20230317.b\SIMABN2.m, PSDDA.sub = 0.0000

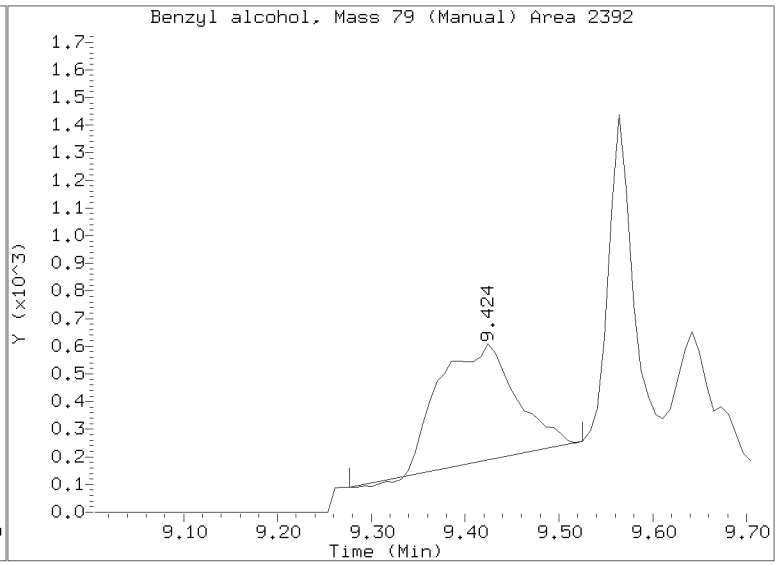
Exception: 1,2,4-Trichlorobenzene 0.0010

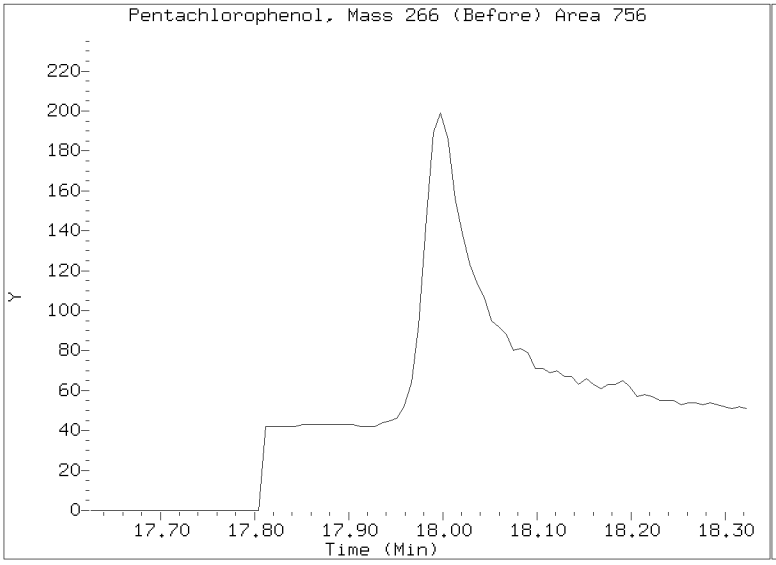
* Only compounds listed in the work order have been verified by the analyst *

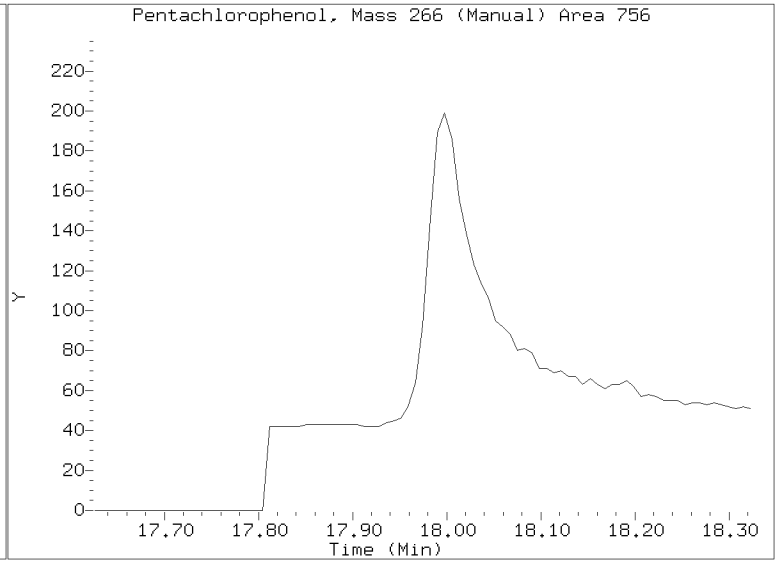
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt14.i/20230317.b/20230317.b/NT1403172319S.D
Injection Date: 18-MAR-2023 01:19
Lab ID:SLC0376-LCV4 Client ID:
Report Date: 03/23/2023 16:55









Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0242	Instrument:	NT14
		Calibration:	GC00050

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
MS Tune	SLC0242-TUN1	NT1403152301S.D	NA	03/15/23 12:00
ABN 10.0	SLC0242-CAL8	NT1403152303S.D	NA	03/15/23 12:49
ABN 5.0	SLC0242-CAL7	NT1403152304S.D	NA	03/15/23 13:26
ABN 2.5	SLC0242-CAL6	NT1403152305S.D	NA	03/15/23 14:02
ABN 1.0	SLC0242-CAL5	NT1403152306S.D	NA	03/15/23 14:38
ABN 0.5	SLC0242-CAL4	NT1403152307S.D	NA	03/15/23 15:14
ABN 0.2	SLC0242-CAL3	NT1403152308S.D	NA	03/15/23 15:50
ABN 0.1	SLC0242-CAL2	NT1403152309S.D	NA	03/15/23 16:26
ABN 0.05	SLC0242-CAL1	NT1403152310S.D	NA	03/15/23 17:03
SCV 5.0	SLC0242-SCV1	NT1403152311S.D	NA	03/15/23 17:39
Initial Cal Blank	SLC0242-ICB1	NT1403152312S.D	NA	03/15/23 18:15

ANALYSIS SEQUENCE

SLC0242

Instrument ID: NT14
Calibration ID: GC00050
MS EM Level: EV

GCMS Description: Agilent 7890A/5975C XL
GCMS Column ID: ZB-5MS

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	File ID	Analyst	Comments
SLC0242-TUN1	MS Tune	QC		1	L002618		03/15/2023 12:00	NT1403152301S.D	JGR	
SLC0242-CAL1	ABN 0.05	QC		2	L002878	K010831	03/15/2023 17:03	NT1403152310S.D	JGR	
SLC0242-CAL2	ABN 0.1	QC		3	L002877	K010831	03/15/2023 16:26	NT1403152309S.D	JGR	
SLC0242-CAL3	ABN 0.2	QC		4	K011105	K010831	03/15/2023 15:50	NT1403152308S.D	JGR	
SLC0242-CAL4	ABN 0.5	QC		5	K011106	K010831	03/15/2023 15:14	NT1403152307S.D	JGR	
SLC0242-CAL5	ABN 1.0	QC		6	K011107	K010831	03/15/2023 14:38	NT1403152306S.D	JGR	
SLC0242-CAL6	ABN 2.5	QC		7	K011108	K010831	03/15/2023 14:02	NT1403152305S.D	JGR	
SLC0242-CAL7	ABN 5.0	QC		8	K011109	K010831	03/15/2023 13:26	NT1403152304S.D	JGR	
SLC0242-CAL8	ABN 10.0	QC		9	K011110	K010831	03/15/2023 12:49	NT1403152303S.D	JGR	
SLC0242-SCV1	SCV 5.0	QC		10	K010066	K010831	03/15/2023 17:39	NT1403152311S.D	JGR	
SLC0242-ICB1	Initial Cal Blank	QC		11	K005156	K010831	03/15/2023 18:15	NT1403152312S.D	JGR	

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230315.b\20230315.b

	Time	Filename	LabID	ClientId	DF											
1	1200	NT1403152301S.D	SLC0242-TUN1		1	|NO ISTDS FOUND||										
2	1213	NT1403152302S.D	SLC0242-CAL9		1	9.08	193189||11.58	746194||15.22	372879||18.25	755327||23.31	598001||25.95	566994|				
3	1249	NT1403152303S.D	SLC0242-CAL8		1	9.08	199100||11.57	763281||15.21	374468||18.25	756122||23.31	588196||25.95	568824|				
4	1326	NT1403152304S.D	SLC0242-CAL7		1	9.08	210618||11.57	802273||15.20	393217||18.25	796801||23.30	615139||25.94	604825|				
5	1402	NT1403152305S.D	SLC0242-CAL6		1	9.08	220094||11.57	828379||15.20	403583||18.25	810171||23.30	624805||25.94	615084|				
6	1438	NT1403152306S.D	SLC0242-CAL5		1	9.08	223201||11.56	832937||15.20	403175||18.25	814822||23.30	625755||25.94	614085|				
7	1514	NT1403152307S.D	SLC0242-CAL4		1	9.07	244579||11.57	905671||15.20	432686||18.25	872507||23.30	672118||25.94	660787|				
8	1550	NT1403152308S.D	SLC0242-CAL3		1	9.07	224982||11.57	833810||15.20	394134||18.25	791855||23.30	613885||25.94	596641|				
9	1626	NT1403152309S.D	SLC0242-CAL2		1	9.07	226822||11.57	834986||15.20	395938||18.25	787336||23.30	609729||25.94	588547|				
10	1703	NT1403152310S.D	SLC0242-CAL1		1	9.07	225451||11.56	838488||15.20	392849||18.25	771492||23.30	602035||25.94	580071|				
11	1739	NT1403152311S.D	SLC0242-SCV1		1	9.07	214548||11.57	807045||15.20	400955||18.25	801298||23.30	624454||25.94	623001|				
12	1815	NT1403152312S.D	SLC0242-ICB1		1	9.07	212376||11.56	811708||15.19	379238||18.25	759480||23.30	583854||25.94	563750|				

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230315.b\20230315.b

ARI Job No.: SLC0 Method: DFTPP8270E.m Instrument: nt14.i Date: 15-MAR-2023

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1200	NT1403152301S.D	SLC0242-TUN1		1	NO MANUAL INTEGRATION
1213	NT1403152302S.D	SLC0242-CAL9		1	NO MANUAL INTEGRATION
1249	NT1403152303S.D	SLC0242-CAL8		1	NO MANUAL INTEGRATION
1326	NT1403152304S.D	SLC0242-CAL7		1	NO MANUAL INTEGRATION
1402	NT1403152305S.D	SLC0242-CAL6		1	NO MANUAL INTEGRATION
1438	NT1403152306S.D	SLC0242-CAL5		1	NO MANUAL INTEGRATION
1514	NT1403152307S.D	SLC0242-CAL4		1	NO MANUAL INTEGRATION
1550	NT1403152308S.D	SLC0242-CAL3		1	NO MANUAL INTEGRATION
1626	NT1403152309S.D	SLC0242-CAL2		1	NO MANUAL INTEGRATION
1703	NT1403152310S.D	SLC0242-CAL1		1	NO MANUAL INTEGRATION
1739	NT1403152311S.D	SLC0242-SCV1		1	NO MANUAL INTEGRATION
1815	NT1403152312S.D	SLC0242-ICB1		1	NO MANUAL INTEGRATION

Security Status Report

Date: 16-Mar-2023 15:20

NT1403152301S.D	Data Locked	deenayd, 16-
NT1403152302S.D	Data Locked	deenayd, 16-
NT1403152303S.D	Data Locked	deenayd, 16-
NT1403152304S.D	Data Locked	deenayd, 16-
NT1403152305S.D	Data Locked	deenayd, 16-
NT1403152306S.D	Data Locked	deenayd, 16-
NT1403152307S.D	Data Locked	deenayd, 16-
NT1403152308S.D	Data Locked	deenayd, 16-
NT1403152309S.D	Data Locked	deenayd, 16-
NT1403152310S.D	Data Locked	deenayd, 16-
NT1403152311S.D	Data Locked	deenayd, 16-
NT1403152312S.D	Data Locked	deenayd, 16-

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0376	Instrument:	NT14
		Calibration:	GC00050

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
MS Tune	SLC0376-TUN1	NT1403172301S.D	NA	03/17/23 14:49
Initial Cal Check	SLC0376-ICV1	NT1403172303S.D	NA	03/17/23 15:39
ABN 0.2	SLC0376-LCV1	NT1403172304S.D	NA	03/17/23 16:16
ABN 0.1	SLC0376-LCV2	NT1403172305S.D	NA	03/17/23 16:52
Blank	BLB0424-BLK2	NT1403172312S.D	Solid	03/17/23 21:06
LCS	BLB0424-BS2	NT1403172313S.D	Solid	03/17/23 21:42
LCS Dup	BLB0424-BSD2	NT1403172314S.D	Solid	03/17/23 22:19
Reference	BLB0424-SRM2	NT1403172315S.D	Solid	03/17/23 22:55
ABN 1	SLC0376-ICV2	NT1403172317S.D	NA	03/18/23 00:07
ABN 0.2	SLC0376-LCV3	NT1403172318S.D	NA	03/18/23 00:43
ABN 0.1	SLC0376-LCV4	NT1403172319S.D	NA	03/18/23 01:19
ZZZZZ	23A0099-04	NT1403172320S.D	Solid	03/18/23 01:55
ZZZZZ	23B0229-02	NT1403172321S.D	Solid	03/18/23 02:31
ZZZZZ	23B0229-03	NT1403172322S.D	Solid	03/18/23 03:07
ZZZZZ	23B0229-04	NT1403172323S.D	Solid	03/18/23 03:42
ZZZZZ	23B0229-05	NT1403172324S.D	Solid	03/18/23 04:18
ZZZZZ	23B0229-06	NT1403172325S.D	Solid	03/18/23 04:54
ZZZZZ	23B0229-08	NT1403172326S.D	Solid	03/18/23 05:30
LDW23-SC1150B	23B0276-01	NT1403172327S.D	Solid	03/18/23 06:06
LDW23-SC1150B	BLB0424-MS2	NT1403172328S.D	Solid	03/18/23 06:42
LDW23-SC1150B	BLB0424-MSD2	NT1403172329S.D	Solid	03/18/23 07:18
Calibration Check	SLC0376-CCV1	NT1403172331S.D	NA	03/18/23 08:30

ANALYSIS SEQUENCE

SLC0376

Instrument ID: NT14
Calibration ID: GC00050
MS EM Level: 1906 EV

GCMS Description: Agilent 7890A/5975C XL
GCMS Column ID: L002738

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	File ID	Analyst	Comments
SLC0376-TUN1	MS Tune	QC		1	K004775		03/17/2023 14:49	NT1403172301S.D	JGR	
SLC0376-ICV1	Initial Cal Check	QC		2	K011107	K010831	03/17/2023 15:39	NT1403172303S.D	JGR	
SLC0376-LCV1	ABN 0.2	QC		3	K011105	K010831	03/17/2023 16:16	NT1403172304S.D	JGR	
SLC0376-LCV2	ABN 0.1	QC		4	L002877	K010831	03/17/2023 16:52	NT1403172305S.D	JGR	
BLB0424-BLK2	Blank	QC		5		K010831	03/17/2023 21:06	NT1403172312S.D	JGR	
BLB0424-BS2	LCS	QC		6		K010831	03/17/2023 21:42	NT1403172313S.D	JGR	
BLB0424-BSD2	LCS Dup	QC		7		K010831	03/17/2023 22:19	NT1403172314S.D	JGR	
BLB0424-SRM2	Reference	QC		8		K010831	03/17/2023 22:55	NT1403172315S.D	JGR	
SLC0376-ICV2	ABN 1	QC		9	K011107	K010831	03/18/2023 00:07	NT1403172317S.D	JGR	
SLC0376-LCV3	ABN 0.2	QC		10	K011105	K010831	03/18/2023 00:43	NT1403172318S.D	JGR	
SLC0376-LCV4	ABN 0.1	QC		11	L002877	K010831	03/18/2023 01:19	NT1403172319S.D	JGR	
23A0099-04	LDW23-SC1186	270E-SIM Dual Scan SVO	A 05	12		K010831	03/18/2023 01:55	NT1403172320S.D	JGR	
23B0229-02	LDW23-SS1236	270E-SIM Dual Scan SVO	A 03	13		K010831	03/18/2023 02:31	NT1403172321S.D	JGR	
23B0229-03	LDW23-SS1237	270E-SIM Dual Scan SVO	A 03	14		K010831	03/18/2023 03:07	NT1403172322S.D	JGR	
23B0229-04	LDW23-SS1150	270E-SIM Dual Scan SVO	A 03	15		K010831	03/18/2023 03:42	NT1403172323S.D	JGR	
23B0229-05	LDW23-SS1008	270E-SIM Dual Scan SVO	A 03	16		K010831	03/18/2023 04:18	NT1403172324S.D	JGR	
23B0229-06	LDW23-SC1008	270E-SIM Dual Scan SVO	A 03	17		K010831	03/18/2023 04:54	NT1403172325S.D	JGR	
23B0229-08	LDW23-SC1013	270E-SIM Dual Scan SVO	A 03	18		K010831	03/18/2023 05:30	NT1403172326S.D	JGR	
23B0276-01	LDW23-SC1150B	270E-SIM Dual Scan SVO	A 03	19		K010831	03/18/2023 06:06	NT1403172327S.D	JGR	
BLB0424-MS2	Matrix Spike	QC		20		K010831	03/18/2023 06:42	NT1403172328S.D	JGR	
BLB0424-MSD2	Matrix Spike Dup	QC		21		K010831	03/18/2023 07:18	NT1403172329S.D	JGR	
SLC0376-CCV1	Calibration Check	QC		22	K011107	K010831	03/18/2023 08:30	NT1403172331S.D	JGR	

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230317.b\20230317.b

	Time	Filename	LabID	ClientId	DF												
1	1449	NT1403172301S.D	SLC0376-TUN1		1	|NO ISTDS FOUND||											
2	1503	NT1403172302S.D			1	| 0.00	0|| 0.00	0|| 0.00	0|| 0.00	0|| 0.00	0|| 0.00	0|| 0.00	0|			
3	1539	NT1403172303S.D	SLC0376-ICV1		1	| 9.07	224436||11.56	825617||15.20	392947||18.25	789887||23.30	494007||25.94	375441|				
4	1616	NT1403172304S.D	SLC0376-LCV1		1	| 9.07	252964||11.56	938423||15.20	433407||18.25	872490||23.30	565557||25.94	425973|				
5	1652	NT1403172305S.D	SLC0376-LCV2		1	| 9.07	258144||11.57	956001||15.20	440462||18.25	871857||23.30	565458||25.94	439880|				
6	1728	NT1403172306S.D	23A0417-14		1	| 9.07	213657||11.57	797669||15.20	356932||18.25	750203||23.30	306638||25.95	225854|				
7	1805	NT1403172307S.D	23A0417-15		1	| 9.07	241262||11.57	924018||15.20	405633||18.25	759057||23.30	304470||25.95	237632|				
8	1841	NT1403172308S.D	BLB0026-MS2		1	| 9.07	209536||11.57	783115||15.20	359263||18.25	702671||23.30	286699||25.94	208324|				
9	1918	NT1403172309S.D	BLB0026-MSD2		1	| 9.08	216843||11.57	821174||15.21	383780||18.25	794528||23.30	377187||25.94	252820|				
10	1954	NT1403172310S.D	23B0261-16RE1		20	| 9.07	265922||11.57	1007291||15.20	460551||18.25	886561||23.30	481130||25.94	352475|				
11	2030	NT1403172311S.D	23B0261-28RE1		4	| 9.07	257101||11.57	979963||15.20	447046||18.25	919113||23.30	495801||25.93	348731|				
12	2106	NT1403172312S.D	BLB0424-BLK2		1	| 9.07	256011||11.56	992862||15.20	455611||18.25	866949||23.30	479252||25.94	323704|				
13	2142	NT1403172313S.D	BLB0424-BS2		1	| 9.07	242461||11.57	913509||15.20	430694||18.25	818351||23.30	441807||25.93	296844|				
14	2219	NT1403172314S.D	BLB0424-BSD2		1	| 9.07	249790||11.57	947229||15.20	439174||18.25	832353||23.30	446664||25.94	299018|				
15	2255	NT1403172315S.D	BLB0424-SRM2		1	| 9.07	267869||11.57	995304||15.20	457995||18.25	866459||23.30	456685||25.93	299254|				
16	2331	NT1403172316S.D	SEQ-CCVFULL		1	| 9.07	253146||11.57	945673||15.20	452747||18.25	902182||23.30	504216||25.93	327783|				
17	0007	NT1403172317S.D	SLC0376-ICV2		1	| 9.07	225221||11.57	830434||15.20	389907||18.25	763679||23.29	415791||25.93	274872|				
18	0043	NT1403172318S.D	SLC0376-LCV3		1	| 9.07	237109||11.57	875716||15.19	402477||18.25	779424||23.29	471287||25.93	312893|				
19	0119	NT1403172319S.D	SLC0376-LCV4		1	| 9.07	247620||11.57	914256||15.20	412320||18.25	794702||23.29	428538||25.93	278115|				
20	0155	NT1403172320S.D	23A0099-04		1	| 9.07	250829||11.57	941882||15.20	418426||18.25	808772||23.30	298464||25.94	222303|				

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230317.b\20230317.b

	Time	Filename	LabID	ClientId	DF											
21	0231	NT1403172321S.D	23B0229-02		1	9.07	245187	11.57	915475	15.20	408415	18.25	726429	23.30	258515	25.94	195534
22	0307	NT1403172322S.D	23B0229-03		1	9.07	246172	11.57	940950	15.20	430030	18.25	830545	23.30	289109	25.95	198771
23	0342	NT1403172323S.D	23B0229-04		1	9.07	259410	11.56	978160	15.20	431277	18.25	761577	23.30	252525	25.94	188068
24	0418	NT1403172324S.D	23B0229-05		1	9.07	236781	11.56	892726	15.20	398891	18.25	730854	23.31	251679	25.95	181024
25	0454	NT1403172325S.D	23B0229-06		1	9.07	235108	11.57	892040	15.20	400304	18.25	751806	23.31	255532	25.95	185509
26	0530	NT1403172326S.D	23B0229-08		1	9.07	245309	11.57	937432	15.20	415064	18.25	754279	23.31	236642	25.95	176821
27	0606	NT1403172327S.D	23B0276-01		1	9.07	251363	11.57	969521	15.20	434752	18.25	783103	23.31	242155	25.95	186352
28	0642	NT1403172328S.D	BLB0424-MS2		1	9.07	241033	11.57	925783	15.21	432475	18.25	795089	23.31	240602	25.95	183923
29	0718	NT1403172329S.D	BLB0424-MSD2		1	9.07	233702	11.57	892852	15.21	423831	18.25	849353	23.31	275198	25.95	195079
30	0754	NT1403172330S.D	SEQ-CCVFULL		1	9.08	252171	11.57	950296	15.20	429535	18.25	743698	23.30	243833	25.95	183887
31	0830	NT1403172331S.D	SLC0376-CCV1		1	9.07	209245	11.57	773367	15.20	352031	18.25	670884	23.30	255030	25.95	183174

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230317.b\20230317.b

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

Time	Filename	LabID	DF	Manually Integrated Compounds
1449	NT1403172301S.D	SLC0376-TUN1	1	NO MANUAL INTEGRATION
1503	NT1403172302S.D		1	NO MANUAL INTEGRATION
1539	NT1403172303S.D	SLC0376-ICV1	1	NO MANUAL INTEGRATION
1616	NT1403172304S.D	SLC0376-LCV1	1	NO MANUAL INTEGRATION
1652	NT1403172305S.D	SLC0376-LCV2	1	NO MANUAL INTEGRATION
1728	NT1403172306S.D	23A0417-14	1	NO MANUAL INTEGRATION
1805	NT1403172307S.D	23A0417-15	1	NO MANUAL INTEGRATION
1841	NT1403172308S.D	BLB0026-MS2	1	NO MANUAL INTEGRATION
1918	NT1403172309S.D	BLB0026-MSD2	1	NO MANUAL INTEGRATION
1954	NT1403172310S.D	23B0261-16RE1	20	NO MANUAL INTEGRATION
2030	NT1403172311S.D	23B0261-28RE1	4	NO MANUAL INTEGRATION
2106	NT1403172312S.D	BLB0424-BLK2	1	1,3-Dichlorobenzene, 1,4-Dichlorobenzene, 1,2-Dichlorobenzene,
2142	NT1403172313S.D	BLB0424-BS2	1	NO MANUAL INTEGRATION
2219	NT1403172314S.D	BLB0424-BSD2	1	NO MANUAL INTEGRATION
2255	NT1403172315S.D	BLB0424-SRM2	1	1,4-Dichlorobenzene, 1,2-Dichlorobenzene,
2331	NT1403172316S.D	SEQ-CCVFULL	1	NO MANUAL INTEGRATION
0007	NT1403172317S.D	SLC0376-ICV2	1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt14.i\20230317.b\20230317.b page

Instrument: nt14.i Date: 18-MAR-2023

Time	Filename	LabID	DF	Manually Integrated Compounds
0043	NT1403172318S.D	SLC0376-LCV3	1	Benzoic acid,
0119	NT1403172319S.D	SLC0376-LCV4	1	Benzyl alcohol, Pentachlorophenol,
0155	NT1403172320S.D	23A0099-04	1	Dimethylphthalate,
0231	NT1403172321S.D	23B0229-02	1	1,2-Dichlorobenzene, Dimethylphthalate,
0307	NT1403172322S.D	23B0229-03	1	Dimethylphthalate,
0342	NT1403172323S.D	23B0229-04	1	1,2-Dichlorobenzene, 2-Methylphenol, Dimethylphthalate, Pentachlorophenol,
0418	NT1403172324S.D	23B0229-05	1	2-Methylphenol, Dimethylphthalate, Pentachlorophenol,
0454	NT1403172325S.D	23B0229-06	1	2-Methylphenol, Dimethylphthalate, Pentachlorophenol,
0530	NT1403172326S.D	23B0229-08	1	2-Methylphenol, Dimethylphthalate, Pentachlorophenol,
0606	NT1403172327S.D	23B0276-01	1	Benzyl alcohol, Dimethylphthalate,
0642	NT1403172328S.D	BLB0424-MS2	1	NO MANUAL INTEGRATION
0718	NT1403172329S.D	BLB0424-MSD2	1	NO MANUAL INTEGRATION
0754	NT1403172330S.D	SEQ-CCVFULL	1	NO MANUAL INTEGRATION
0830	NT1403172331S.D	SLC0376-CCV1	1	NO MANUAL INTEGRATION

Security Status Report

Date: 23-Mar-2023 16:51

NT1403172301S.D	Data Locked	van, 23-Mar-2023 16:51
NT1403172302S.D	Data Locked	van, 23-Mar-2023 16:51
NT1403172303S.D	Data Locked	van, 23-Mar-2023 16:51
NT1403172304S.D	Data Locked	van, 23-Mar-2023 16:51
NT1403172305S.D	Data Locked	van, 23-Mar-2023 16:51
NT1403172306S.D	Data Locked	van, 23-Mar-2023 16:51
NT1403172307S.D	Data Locked	van, 23-Mar-2023 16:51
NT1403172308S.D	Data Locked	van, 23-Mar-2023 16:51
NT1403172309S.D	Data Locked	van, 23-Mar-2023 16:51
NT1403172310S.D	Data Locked	van, 23-Mar-2023 16:51
NT1403172311S.D	Data Locked	van, 23-Mar-2023 16:51
NT1403172312S.D	Data Locked	van, 23-Mar-2023 16:51
NT1403172313S.D	Data Locked	van, 23-Mar-2023 16:51
NT1403172314S.D	Data Locked	van, 23-Mar-2023 16:51
NT1403172315S.D	Data Locked	van, 23-Mar-2023 16:51
NT1403172316S.D	Data Locked	van, 23-Mar-2023 16:51
NT1403172317S.D	Data Locked	van, 23-Mar-2023 16:51
NT1403172318S.D	Data Locked	van, 23-Mar-2023 16:51
NT1403172319S.D	Data Locked	van, 23-Mar-2023 16:51
NT1403172320S.D	Data Locked	van, 23-Mar-2023 16:51
NT1403172321S.D	Data Locked	van, 23-Mar-2023 16:51
NT1403172322S.D	Data Locked	van, 23-Mar-2023 16:51
NT1403172323S.D	Data Locked	van, 23-Mar-2023 16:51
NT1403172324S.D	Data Locked	van, 23-Mar-2023 16:51
NT1403172325S.D	Data Locked	van, 23-Mar-2023 16:51
NT1403172326S.D	Data Locked	van, 23-Mar-2023 16:51
NT1403172327S.D	Data Locked	van, 23-Mar-2023 16:51
NT1403172328S.D	Data Locked	van, 23-Mar-2023 16:51
NT1403172329S.D	Data Locked	van, 23-Mar-2023 16:51
NT1403172330S.D	Data Locked	van, 23-Mar-2023 16:51
NT1403172331S.D	Data Locked	van, 23-Mar-2023 16:51

SURROGATE RECOVERY AND RT SUMMARY
EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG/WO:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0242	Instrument:	NT14
Calibration:	GC00050	Calibration Date:	03/15/2023

Surrogate Compound	Spike Level ug/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SLC0242-SCV1 (Solid)			Lab File ID: NT1403152311S.D				Analyzed: 03/15/23 17:39	
2-Fluorophenol	7.5000	0.0240	0 - 200	6.834	6.828	0.0060	N/A	
p-Terphenyl-d14	5.0000	0.101	0 - 200	21.386	21.388	-0.0020	N/A	
SLC0242-ICB1 (Solid)			Lab File ID: NT1403152312S.D				Analyzed: 03/15/23 18:15	
2-Fluorophenol	7.5000	95.6	27 - 120	6.826	6.828	-0.0020	N/A	
p-Terphenyl-d14	5.0000	97.2	37 - 120	21.386	21.388	-0.0020	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG/WO:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0376	Instrument:	NT14
Calibration:	GC00050	Calibration Date:	03/15/2023

Surrogate Compound	Spike Level ug/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SLC0376-ICV1 (Solid)			Lab File ID: NT1403172303S.D			Analyzed: 03/17/23 15:39		
2-Fluorophenol	1.5000	94.5	80 - 120	6.826	6.828	-0.0020	N/A	
p-Terphenyl-d14	1.0000	123	80 - 120	21.386	21.388	-0.0020	N/A	*
SLC0376-LCV1 (Solid)			Lab File ID: NT1403172304S.D			Analyzed: 03/17/23 16:16		
2-Fluorophenol	0.30000	84.2	0 - 200	6.826	6.828	-0.0020	N/A	
p-Terphenyl-d14	0.20000	118	0 - 200	21.386	21.388	-0.0020	N/A	
SLC0376-LCV2 (Solid)			Lab File ID: NT1403172305S.D			Analyzed: 03/17/23 16:52		
2-Fluorophenol	0.15000	79.4	0 - 200	6.834	6.828	0.0060	N/A	
p-Terphenyl-d14	0.10000	119	0 - 200	21.386	21.388	-0.0020	N/A	
BLB0424-BLK2 (Solid)			Lab File ID: NT1403172312S.D			Analyzed: 03/17/23 21:06		
2-Fluorophenol	750.00	51.9	27 - 120	6.841	6.828	0.0130	N/A	
p-Terphenyl-d14	500.00	120	37 - 120	21.386	21.388	-0.0020	N/A	
BLB0424-BS2 (Solid)			Lab File ID: NT1403172313S.D			Analyzed: 03/17/23 21:42		
2-Fluorophenol	750.00	78.8	27 - 120	6.834	6.828	0.0060	N/A	
p-Terphenyl-d14	500.00	134	37 - 120	21.386	21.388	-0.0020	N/A	*
BLB0424-BSD2 (Solid)			Lab File ID: NT1403172314S.D			Analyzed: 03/17/23 22:19		
2-Fluorophenol	750.00	77.6	27 - 120	6.834	6.828	0.0060	N/A	
p-Terphenyl-d14	500.00	128	37 - 120	21.386	21.388	-0.0020	N/A	*
BLB0424-SRM2 (Solid)			Lab File ID: NT1403172315S.D			Analyzed: 03/17/23 22:55		
2-Fluorophenol	7500.0	72.7	27 - 120	6.842	6.828	0.0140	N/A	
p-Terphenyl-d14	5000.0	119	37 - 120	21.386	21.388	-0.0020	N/A	
SLC0376-ICV2 (Solid)			Lab File ID: NT1403172317S.D			Analyzed: 03/18/23 00:07		
2-Fluorophenol	1.5000	93.1	80 - 120	6.826	6.828	-0.0020	N/A	
p-Terphenyl-d14	1.0000	134	80 - 120	21.386	21.388	-0.0020	N/A	*
SLC0376-LCV3 (Solid)			Lab File ID: NT1403172318S.D			Analyzed: 03/18/23 00:43		
2-Fluorophenol	0.30000	80.8	0 - 200	6.826	6.828	-0.0020	N/A	
p-Terphenyl-d14	0.20000	123	0 - 200	21.386	21.388	-0.0020	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG/WO:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0376	Instrument:	NT14
Calibration:	GC00050	Calibration Date:	03/15/2023

Surrogate Compound	Spike Level ug/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SLC0376-LCV4 (Solid)			Lab File ID: NT1403172319S.D			Analyzed: 03/18/23 01:19		
2-Fluorophenol	0.15000	73.6	0 - 200	6.834	6.828	0.0060	N/A	
p-Terphenyl-d14	0.10000	129	0 - 200	21.386	21.388	-0.0020	N/A	
23B0276-01 (Solid)			Lab File ID: NT1403172327S.D			Analyzed: 03/18/23 06:06		
2-Fluorophenol	749.80	70.5	27 - 120	6.841	6.828	0.0130	N/A	
p-Terphenyl-d14	499.87	166	37 - 120	21.402	21.388	0.0140	N/A	*
BLB0424-MS2 (Solid)			Lab File ID: NT1403172328S.D			Analyzed: 03/18/23 06:42		
2-Fluorophenol	749.80	71.5	27 - 120	6.842	6.828	0.0140	N/A	
p-Terphenyl-d14	499.87	166	37 - 120	21.402	21.388	0.0140	N/A	*
BLB0424-MSD2 (Solid)			Lab File ID: NT1403172329S.D			Analyzed: 03/18/23 07:18		
2-Fluorophenol	749.80	69.3	27 - 120	6.842	6.828	0.0140	N/A	
p-Terphenyl-d14	499.87	162	37 - 120	21.402	21.388	0.0140	N/A	*
SLC0376-CCV1 (Solid)			Lab File ID: NT1403172331S.D			Analyzed: 03/18/23 08:30		
2-Fluorophenol	1.5000	85.9	50 - 150	6.834	6.828	0.0060	N/A	
p-Terphenyl-d14	1.0000	178	50 - 150	21.394	21.388	0.0060	N/A	*

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0242	Instrument:	NT14
		Calibration:	GC00050

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Secondary Cal Check (SLC0242-SCV1)		(Solid)	Lab File ID: NT1403152311S.D				Analyzed: 03/15/23 17:39		
1,4-Dichlorobenzene-d4	214548	9.067	223201	9.075	96	50 - 200	-0.008	+/-0.50	
Naphthalene-d8	807045	11.565	832937	11.564	97	50 - 200	0.001	+/-0.50	
Acenaphthene-d10	400955	15.201	403175	15.201	99	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	801298	18.245	814822	18.245	98	50 - 200	0.000	+/-0.50	
Chrysene-d12	624454	23.299	625755	23.298	100	50 - 200	0.001	+/-0.50	
Perylene-d12	623001	25.939	614085	25.939	101	50 - 200	0.000	+/-0.50	
Initial Cal Blank (SLC0242-ICB1)		(Solid)	Lab File ID: NT1403152312S.D				Analyzed: 03/15/23 18:15		
1,4-Dichlorobenzene-d4	212376	9.067	223201	9.075	95	50 - 200	-0.008	+/-0.50	
Naphthalene-d8	811708	11.564	832937	11.564	97	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	379238	15.193	403175	15.201	94	50 - 200	-0.008	+/-0.50	
Phenanthrene-d10	759480	18.245	814822	18.245	93	50 - 200	0.000	+/-0.50	
Chrysene-d12	583854	23.299	625755	23.298	93	50 - 200	0.001	+/-0.50	
Perylene-d12	563750	25.939	614085	25.939	92	50 - 200	0.000	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0376	Instrument:	NT14
		Calibration:	GC00050

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (SLC0376-ICV1)		(Solid)	Lab File ID: NT1403172303S.D				Analyzed: 03/17/23 15:39		
1,4-Dichlorobenzene-d4	224436	9.067	224436	9.067	100	50 - 200	0.000	+/-0.50	
Naphthalene-d8	825617	11.564	825617	11.564	100	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	392947	15.201	392947	15.201	100	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	789887	18.245	789887	18.245	100	50 - 200	0.000	+/-0.50	
Chrysene-d12	494007	23.298	494007	23.298	100	50 - 200	0.000	+/-0.50	
Perylene-d12	375441	25.938	375441	25.938	100	50 - 200	0.000	+/-0.50	
Low Cal Check (SLC0376-LCV1)		(Solid)	Lab File ID: NT1403172304S.D				Analyzed: 03/17/23 16:16		
1,4-Dichlorobenzene-d4	252964	9.067	224436	9.067	113	50 - 200	0.000	+/-0.50	
Naphthalene-d8	938423	11.564	825617	11.564	114	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	433407	15.201	392947	15.201	110	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	872490	18.245	789887	18.245	110	50 - 200	0.000	+/-0.50	
Chrysene-d12	565557	23.298	494007	23.298	114	50 - 200	0.000	+/-0.50	
Perylene-d12	425973	25.939	375441	25.938	113	50 - 200	0.001	+/-0.50	
Low Cal Check (SLC0376-LCV2)		(Solid)	Lab File ID: NT1403172305S.D				Analyzed: 03/17/23 16:52		
1,4-Dichlorobenzene-d4	258144	9.067	224436	9.067	115	50 - 200	0.000	+/-0.50	
Naphthalene-d8	956001	11.565	825617	11.564	116	50 - 200	0.001	+/-0.50	
Acenaphthene-d10	440462	15.201	392947	15.201	112	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	871857	18.245	789887	18.245	110	50 - 200	0.000	+/-0.50	
Chrysene-d12	565458	23.299	494007	23.298	114	50 - 200	0.001	+/-0.50	
Perylene-d12	439880	25.939	375441	25.938	117	50 - 200	0.001	+/-0.50	
Blank (BLB0424-BLK2)		(Solid)	Lab File ID: NT1403172312S.D				Analyzed: 03/17/23 21:06		
1,4-Dichlorobenzene-d4	256011	9.067	224436	9.067	114	50 - 200	0.000	+/-0.50	
Naphthalene-d8	992862	11.564	825617	11.564	120	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	455611	15.201	392947	15.201	116	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	866949	18.245	789887	18.245	110	50 - 200	0.000	+/-0.50	
Chrysene-d12	479252	23.299	494007	23.298	97	50 - 200	0.001	+/-0.50	
Perylene-d12	323704	25.939	375441	25.938	86	50 - 200	0.001	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0376	Instrument:	NT14
		Calibration:	GC00050

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LCS (BLB0424-BS2)		(Solid)	Lab File ID: NT1403172313S.D				Analyzed: 03/17/23 21:42		
1,4-Dichlorobenzene-d4	242461	9.067	224436	9.067	108	50 - 200	0.000	+/-0.50	
Naphthalene-d8	913509	11.565	825617	11.564	111	50 - 200	0.001	+/-0.50	
Acenaphthene-d10	430694	15.201	392947	15.201	110	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	818351	18.245	789887	18.245	104	50 - 200	0.000	+/-0.50	
Chrysene-d12	441807	23.299	494007	23.298	89	50 - 200	0.001	+/-0.50	
Perylene-d12	296844	25.931	375441	25.938	79	50 - 200	-0.007	+/-0.50	
LCS Dup (BLB0424-BSD2)		(Solid)	Lab File ID: NT1403172314S.D				Analyzed: 03/17/23 22:19		
1,4-Dichlorobenzene-d4	249790	9.067	224436	9.067	111	50 - 200	0.000	+/-0.50	
Naphthalene-d8	947229	11.565	825617	11.564	115	50 - 200	0.001	+/-0.50	
Acenaphthene-d10	439174	15.201	392947	15.201	112	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	832353	18.245	789887	18.245	105	50 - 200	0.000	+/-0.50	
Chrysene-d12	446664	23.299	494007	23.298	90	50 - 200	0.001	+/-0.50	
Perylene-d12	299018	25.939	375441	25.938	80	50 - 200	0.001	+/-0.50	
Reference (BLB0424-SRM2)		(Solid)	Lab File ID: NT1403172315S.D				Analyzed: 03/17/23 22:55		
1,4-Dichlorobenzene-d4	267869	9.067	224436	9.067	119	50 - 200	0.000	+/-0.50	
Naphthalene-d8	995304	11.565	825617	11.564	121	50 - 200	0.001	+/-0.50	
Acenaphthene-d10	457995	15.201	392947	15.201	117	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	866459	18.245	789887	18.245	110	50 - 200	0.000	+/-0.50	
Chrysene-d12	456685	23.299	494007	23.298	92	50 - 200	0.001	+/-0.50	
Perylene-d12	299254	25.931	375441	25.938	80	50 - 200	-0.007	+/-0.50	
Initial Cal Check (SLC0376-ICV2)		(Solid)	Lab File ID: NT1403172317S.D				Analyzed: 03/18/23 00:07		
1,4-Dichlorobenzene-d4	225221	9.067	225221	9.067	100	50 - 200	0.000	+/-0.50	
Naphthalene-d8	830434	11.565	830434	11.565	100	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	389907	15.201	389907	15.201	100	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	763679	18.245	763679	18.245	100	50 - 200	0.000	+/-0.50	
Chrysene-d12	415791	23.291	415791	23.291	100	50 - 200	0.000	+/-0.50	
Perylene-d12	274872	25.931	274872	25.931	100	50 - 200	0.000	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0376	Instrument:	NT14
		Calibration:	GC00050

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Low Cal Check (SLC0376-LCV3)		(Solid)	Lab File ID: NT1403172318S.D				Analyzed: 03/18/23 00:43		
1,4-Dichlorobenzene-d4	237109	9.067	225221	9.067	105	50 - 200	0.000	+/-0.50	
Naphthalene-d8	875716	11.565	830434	11.565	105	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	402477	15.194	389907	15.201	103	50 - 200	-0.007	+/-0.50	
Phenanthrene-d10	779424	18.245	763679	18.245	102	50 - 200	0.000	+/-0.50	
Chrysene-d12	471287	23.291	415791	23.291	113	50 - 200	0.000	+/-0.50	
Perylene-d12	312893	25.931	274872	25.931	114	50 - 200	0.000	+/-0.50	
Low Cal Check (SLC0376-LCV4)		(Solid)	Lab File ID: NT1403172319S.D				Analyzed: 03/18/23 01:19		
1,4-Dichlorobenzene-d4	247620	9.067	225221	9.067	110	50 - 200	0.000	+/-0.50	
Naphthalene-d8	914256	11.565	830434	11.565	110	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	412320	15.201	389907	15.201	106	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	794702	18.245	763679	18.245	104	50 - 200	0.000	+/-0.50	
Chrysene-d12	428538	23.291	415791	23.291	103	50 - 200	0.000	+/-0.50	
Perylene-d12	278115	25.931	274872	25.931	101	50 - 200	0.000	+/-0.50	
LDW23-SC1150B (23B0276-01)		(Solid)	Lab File ID: NT1403172327S.D				Analyzed: 03/18/23 06:06		
1,4-Dichlorobenzene-d4	251363	9.067	225221	9.067	112	50 - 200	0.000	+/-0.50	
Naphthalene-d8	969521	11.572	830434	11.565	117	50 - 200	0.007	+/-0.50	
Acenaphthene-d10	434752	15.201	389907	15.201	112	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	783103	18.253	763679	18.245	103	50 - 200	0.008	+/-0.50	
Chrysene-d12	242155	23.306	415791	23.291	58	50 - 200	0.015	+/-0.50	
Perylene-d12	186352	25.947	274872	25.931	68	50 - 200	0.016	+/-0.50	
Matrix Spike (BLB0424-MS2)		(Solid)	Lab File ID: NT1403172328S.D				Analyzed: 03/18/23 06:42		
1,4-Dichlorobenzene-d4	241033	9.067	225221	9.067	107	50 - 200	0.000	+/-0.50	
Naphthalene-d8	925783	11.572	830434	11.565	111	50 - 200	0.007	+/-0.50	
Acenaphthene-d10	432475	15.209	389907	15.201	111	50 - 200	0.008	+/-0.50	
Phenanthrene-d10	795089	18.253	763679	18.245	104	50 - 200	0.008	+/-0.50	
Chrysene-d12	240602	23.307	415791	23.291	58	50 - 200	0.016	+/-0.50	
Perylene-d12	183923	25.954	274872	25.931	67	50 - 200	0.023	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0376	Instrument:	NT14
		Calibration:	GC00050

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Matrix Spike Dup (BLB0424-MSD2)		(Solid)	Lab File ID: NT1403172329S.D					Analyzed: 03/18/23 07:18	
1,4-Dichlorobenzene-d4	233702	9.067	225221	9.067	104	50 - 200	0.000	+/-0.50	
Naphthalene-d8	892852	11.573	830434	11.565	108	50 - 200	0.008	+/-0.50	
Acenaphthene-d10	423831	15.209	389907	15.201	109	50 - 200	0.008	+/-0.50	
Phenanthrene-d10	849353	18.253	763679	18.245	111	50 - 200	0.008	+/-0.50	
Chrysene-d12	275198	23.307	415791	23.291	66	50 - 200	0.016	+/-0.50	
Perylene-d12	195079	25.954	274872	25.931	71	50 - 200	0.023	+/-0.50	
Calibration Check (SLC0376-CCV1)		(Solid)	Lab File ID: NT1403172331S.D					Analyzed: 03/18/23 08:30	
1,4-Dichlorobenzene-d4	209245	9.067	225221	9.067	93	50 - 200	0.000	+/-0.50	
Naphthalene-d8	773367	11.565	830434	11.565	93	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	352031	15.201	389907	15.201	90	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	670884	18.245	763679	18.245	88	50 - 200	0.000	+/-0.50	
Chrysene-d12	255030	23.299	415791	23.291	61	50 - 200	0.008	+/-0.50	
Perylene-d12	183174	25.947	274872	25.931	67	50 - 200	0.016	+/-0.50	

HOLDING TIME SUMMARY

Analysis: EPA 8270E-SIM

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
LDW23-SC1150B 23B0276-01	12/14/22 09:03	12/14/22 16:47	02/17/23 15:00	65	365	03/18/23 06:06	29	40	
Matrix Spike BLB0424-MS2	12/14/22 09:03	12/14/22 16:47	02/17/23 15:00	65	365	03/18/23 06:42	29	40	
Matrix Spike Dup BLB0424-MSD2	12/14/22 09:03	12/14/22 16:47	02/17/23 15:00	65	365	03/18/23 07:18	29	40	

* Indicates hold time exceedance.

METHOD DETECTION AND REPORTING LIMITS

EPA 8270E-SIM

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Instrument: NT14

Analyte	MDL	RL	Units
1,4-Dichlorobenzene	0.6	5.0	ug/kg
1,2-Dichlorobenzene	0.7	5.0	ug/kg
Benzyl Alcohol	2.5	20.0	ug/kg
Benzoic acid	13.4	100	ug/kg
2,4-Dimethylphenol	2.2	20.0	ug/kg
1,2,4-Trichlorobenzene	2.7	5.0	ug/kg
N-Nitrosodiphenylamine	1.3	5.0	ug/kg
Pentachlorophenol	2.1	20.0	ug/kg

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer: NA

Chemical: Tributyl Phosphate

Manufacturer: Chemservice

Product #: O-916

Lot #: 59-57A

Purity: 99%

Analyst: VB

Element: B000954

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B001873

Printed: 9/23/2013 11:47:03AM

Description:	SVOC 4,4 DDT	Expires:	31-Dec-29
Standard Type:	Calibration Stan	Prepared:	23-Sep-13
Solvent:	N/A	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	23-Sep-13 11:46 by JZ
Vendor:	Chem Service	Lot #:	198-128A
Vendor Catalog #:			

Comments

Neat, Purity @ 99.2%. (ARI#: 790A)

Analyte	CAS Number	Concentration	Units
4,4'-DDT	50-29-3	1000000	ug/mL

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer: _____

Chemical: 4,4' DDT

Manufacturer: Chem Service

Product #: _____

Lot #: 198-128A

Purity: 99.2%

Analyst: AB

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B001875

Printed: 9/23/2013 12:13:55PM

Description:	SVOC alpha-Terpineol	Expires:	31-Dec-29
Standard Type:	Calibration Stan	Prepared:	31-Dec-12
Solvent:	N/A	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	23-Sep-13 12:13 by JZ
Vendor:	ACROS Organics	Lot #:	AD16481201
Vendor Catalog #:			

Comments

Neat, Purity @ 98%. (ARI#: I1582A)

Analyte	CAS Number	Concentration	Units
alpha-Terpineol	98-55-5	1000000	ug/mL

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer:_____

Chemical: alpha-Terpineol

Manufacturer: Acros Organics

Product #: _____

Lot #: A0648170 1

Purity: 98%

Analyst: [signature]

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B001885

Printed: 9/23/2013 3:45:57PM

Description:	SVOA Dibutyl Phenyl phosphate	Expires:	31-Dec-29
Standard Type:	Calibration Stan	Prepared:	31-Dec-12
Solvent:	NA	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	23-Sep-13 15:45 by JZ
Vendor:	Monsanto	Lot #:	N/A
Vendor Catalog #:			

Comments

Neat, Purity @ 98.9%.

Analyte	CAS Number	Concentration	Units
Dibutyl Phenyl Phosphate	2528-36-1	1000000	ug/mL

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer:_____

Chemical: Dibutyl Phenyl Phosphate

Manufacturer: Monsanto

Product #: N/A

Lot #: N/A

Purity: 98.9%

Analyst: [signature]

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B001886

Printed: 9/23/2013 3:59:35PM

Description:	SVOC Triphenyl Phosphate	Expires:	31-Dec-29
Standard Type:	Calibration Stan	Prepared:	31-Dec-12
Solvent:	NA	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	23-Sep-13 15:59 by JZ
Vendor:	Aldrich	Lot #:	04902CM
Vendor Catalog #:			

Comments

Neat, Purity @ 99%.

Analyte	CAS Number	Concentration	Units
Triphenyl Phosphate	115-86-6	1000000	ug/mL

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer:_____

Chemical: Triphenyl phosphate

Manufacturer: Aldrich

Product #: _____

Lot #: 04907CM

Purity: 99%

Analyst: _____

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B001887

Printed: 9/23/2013 4:18:55PM

Description:	SVOC Butylated Hydroxytoluene	Expires:	31-Dec-29
Standard Type:	Calibration Stan	Prepared:	31-Dec-12
Solvent:	NA	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	23-Sep-13 16:18 by JZ
Vendor:	SIGMA	Lot #:	39F-0197
Vendor Catalog #:			

Comments

neat,Purity @ 99.9%.

Analyte	CAS Number	Concentration	Units
Butylated Hydroxytoluene	128-37-0	1000000	ug/mL

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer: _____

Chemical: Butylated Hydroxytoluene

Manufacturer: Sigma

Product #: _____

Lot #: 39F-0197

Purity: 99.8%

Analyst: AR

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B001890

Printed: 9/23/2013 5:02:53PM

Description:	SVOC Butyl Diphenyl Phosphate	Expires:	31-Dec-29
Standard Type:	Calibration Stan	Prepared:	31-Dec-12
Solvent:	NA	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	23-Sep-13 17:02 by JZ
Vendor:	Monsanto	Lot #:	N/A
Vendor Catalog #:			

Comments

Neat, Purity @ 98%.

Analyte	CAS Number	Concentration	Units
Butyl Diphenyl Phosphate	2752-95-6	1000000	ug/mL

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer: _____

Chemical: Butyl Diphenyl Phosphate

Manufacturer: Monsanto

Product #: NA

Lot #: NA

Purity: 98%

Analyst: [signature]

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B001941

Printed: 9/25/2013 1:45:31PM

Description:	SVOC 2,4-Dinitrophenol	Expires:	31-Dec-29
Standard Type:	Calibration Stan	Prepared:	25-Sep-13
Solvent:	NA	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	25-Sep-13 13:45 by JZ
Vendor:	SIGMA	Lot #:	65H5021
Vendor Catalog #:			

Comments

Neat, Purity @ 90-95%. (ARI#: 0466)

Analyte	CAS Number	Concentration	Units
2,4-Dinitrophenol	51-28-5	1000000	ug/mL

B001941
SVOA 2,4-Dinitrophenol
Expires 12/31/2029
Prepared By Jianqing Zhou 9/25/2013

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer:_____

Chemical: 2,4-Dinitrophenol

Manufacturer: Sigma

Product #: _____

Lot #: bEH 502 1

Purity: 90 ~ 94%

Analyst: _____

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B001945

Printed: 9/25/2013 3:23:22PM

Description:	SVOC Benzoic Acid	Expires:	31-Dec-29
Standard Type:	Calibration Stan	Prepared:	31-Dec-12
Solvent:	NA	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	25-Sep-13 15:23 by JZ
Vendor:	ACROS Organics	Lot #:	A0224339
Vendor Catalog #:			

Comments

Neat, Purity @ 98%.

Analyte	CAS Number	Concentration	Units
Benzoic acid	65-85-0	1000000	ug/mL

B001945
SVOC Benzoic Acid
Expires 12/31/2029
Prepared By Jianqing Zhou 12/31/2012

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer:_____

Chemical: Benzoic Acid

Manufacturer: Acros Organics

Product #: _____

Lot #: A0224339

Purity: 98%

Analyst: _____

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B001948

Printed: 9/25/2013 3:37:51PM

Description:	SVOC 4,6-Dinitro-2-Methylphenol	Expires:	31-Dec-29
Standard Type:	Calibration Stan	Prepared:	25-Sep-13
Solvent:	NA	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	25-Sep-13 15:37 by JZ
Vendor:	Chem Service	Lot #:	179-31A
Vendor Catalog #:			

Comments

Neat, Purity @ 99%. (ARI#: 009A)

Analyte	CAS Number	Concentration	Units
4,6-Dinitro-2-methylphenol	534-52-1	1000000	ug/mL

B001948
SVOA 4,6-Dinitro-2-Methylphenol
Expires 12/31/2029
Prepared By Jianqing Zhou 9/25/2013

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer: _____

Chemical: 4,6-Dinitro-2-Methylphenol

Manufacturer: Chem Service

Product #: _____

Lot #: 179-31A

Purity: 99%

Analyst: KB

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B002054

Printed: 10/4/2013 6:32:21PM

Description:	SVOA 1-Methylnaphthalene	Expires:	02-Apr-14
Standard Type:	Analyte Spike	Prepared:	13-Dec-12
Solvent:	NA	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	04-Oct-13 18:32 by JZ
Vendor:	Chem Service	Lot #:	62-5B
Vendor Catalog #:			

Comments

Neat, Purity @ 99%

Analyte	CAS Number	Concentration	Units
1-Methylnaphthalene	90-12-0	1000000	ug/mL

B002054
SVOA 1-Methylnaphthalene
Solvent / Lot: NA
Prep: 12/13/2012 by JZ
Exp: 12/31/2029
Location:

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer:_____

Chemical: 1-Methyl naphthalene

Manufacturer: Chem Service

Product #: 0787

Lot #: 67-53

Purity: 99%

Analyst: AZ

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B002135

Printed: 10/15/2013 12:07:39PM

Description:	SVOA Benzidine	Expires:	31-Dec-29
Standard Type:	Analyte Spike	Prepared:	15-Oct-13
Solvent:	N/A	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	15-Oct-13 12:07 by JZ
Vendor:	SIGMA	Lot #:	18C0024
Vendor Catalog #:			

Comments

Purity @ 95%. ARI#: 0467.

Analyte	CAS Number	Concentration	Units
Benzidine	92-87-5	1000000	ug/mL

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer:_____

Chemical: Benzidine

Manufacturer: Sigma

Product #: B-3503

Lot #: 18C0024

Purity: 98%

Analyst: [signature]

Certificate of Analysis

Product Name:	1,2,4,5-Tetrachlorobenzene
Product Description:	98%
Product Brand:	Sigma-Aldrich
Product Number:	131857
Molecular Weight:	215.89
CAS Number:	95-94-3

TEST	SPECIFICATION	LOT 19309JR RESULTS
APPEARANCE	WHITE POWDER, CHIPS OR CRYSTALS	WHITE CHIPS
INFRARED SPECTRUM	CONFORMS TO STRUCTURE.	CONFORMS TO STRUCTURE AND STANDARD AS
** **		ILLUSTRATED ON PAGE 1011C OF EDITION I,
** **		VOLUME 1 OF "THE ALDRICH LIBRARY OF FT-IR
** **		SPECTRA".
GAS LIQUID	97.5% (MINIMUM)	99.9 %
QUALITY CONTROL		JULY 1997

Barbara Rajzer, Supervisor
Quality Control
Milwaukee, Wisconsin USA

F009172
SVOC 1,2,4,5-Tetrachlorobenzene
Expires 12/31/2079
Prepared By Joshua Rains 10/6/2017

H000691

Data File: \\target\share\chem2\fid4a.i\20230317.b\423C1703.D

Page 1

Date : 17-MAR-2023 10:46

Client ID:

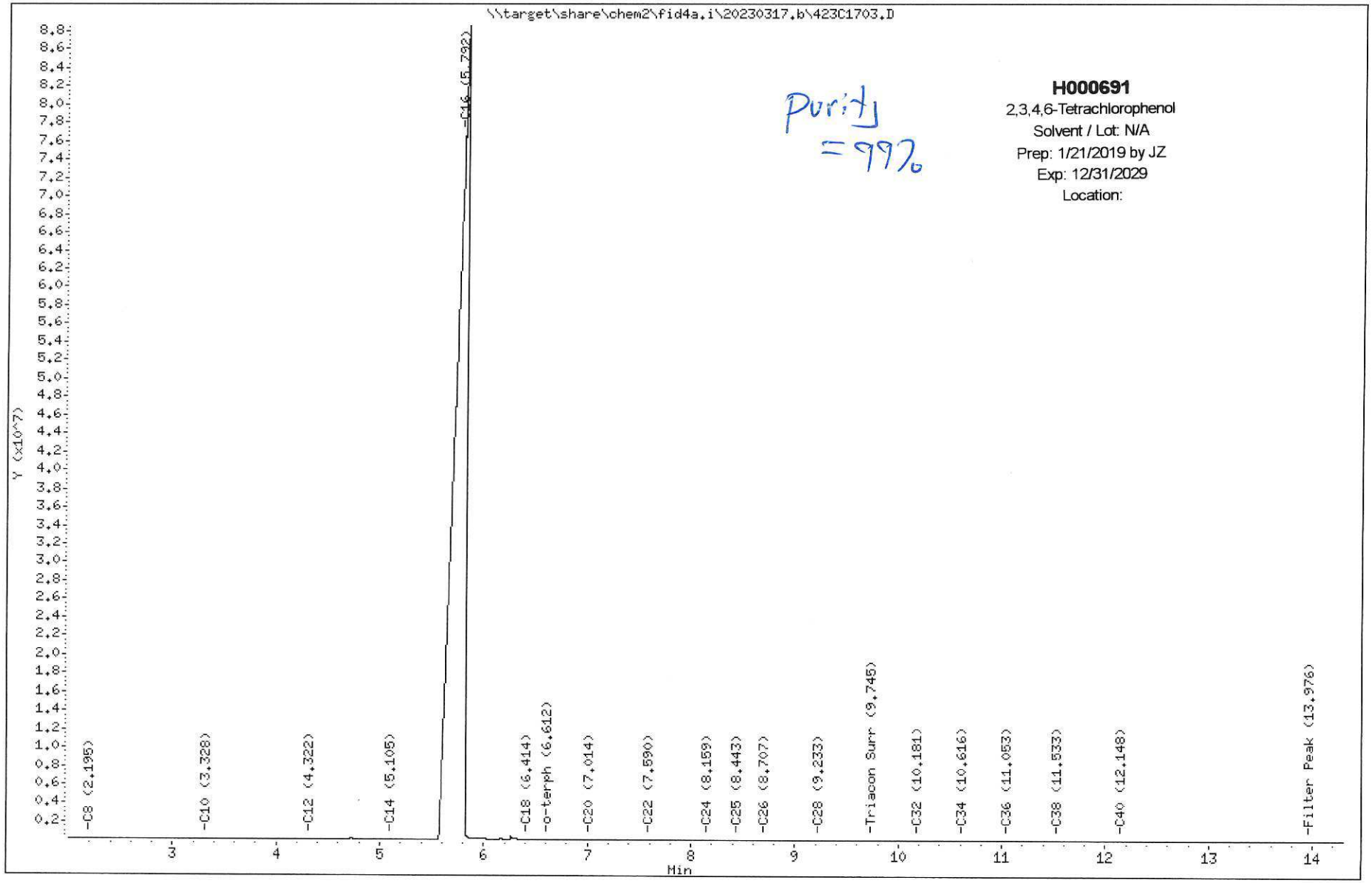
Instrument: fid4a.i

Sample Info: K007226

Operator: AA

Column phase: RTX-1

Column diameter: 0.25



Purity = 99%

H000691
2,3,4,6-Tetrachlorophenol
Solvent / Lot: N/A
Prep: 1/21/2019 by JZ
Exp: 12/31/2029
Location:

ARI Labs, Inc.

Data file : \\target\share\chem2\fid4a.i\20230317.b\423C1703.D
Lab Smp Id: K007226
Inj Date : 17-MAR-2023 10:46
Operator : AA   Inst ID: fid4a.i
Smp Info : K007226
Misc Info :
Comment   :
Method   : \\target\share\chem2\fid4a.i\20230317.b\FID4TPH.m
Meth Date : 17-Mar-2023 16:58 alfonso   Quant Type: AREA%
Cal Date : 18-AUG-2022 11:51   Cal File: 422H1803.D
Als bottle: 10
Dil Factor: 1.00000
Integrator: Falcon+   Compound Sublist: tph.sub
Target Version: 4.14
Processing Host: ALFONSO-201901

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable   Local Compound Variable

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
2.043	81395	55677	0.684	0.012	1 Toluene
2.074	68503	39991	0.584	0.010	
2.104	85451	37158	0.435	0.012	
2.146	59381	25207	0.424	0.008	
2.181	11414	22862	2.003	0.001	
2.195	34939	23199	0.664	0.005	2 C8
2.218	8679	21808	2.513	0.001	
2.224	21070	21832	1.036	0.003	
2.243	45086	20191	0.448	0.006	
2.286	3130	15677	5.009	0.000	
2.291	12615	15880	1.259	0.001	
2.313	20979	15888	0.757	0.003	
2.333	7621	15373	2.017	0.001	
2.348	31874	17112	0.537	0.004	
2.373	4619	13267	2.872	0.000	
2.380	12003	13446	1.120	0.001	
2.393	10327	13347	1.292	0.001	
2.408	9963	12697	1.274	0.001	
2.446	24366	11882	0.488	0.003	
2.498	24898	10214	0.410	0.003	
2.557	1592	6395	4.017	0.000	
2.570	4427	6384	1.442	0.000	
2.583	4275	6215	1.454	0.000	
2.595	1208	6068	5.024	0.000	
2.602	3076	6230	2.025	0.000	
2.607	1560	6270	4.019	0.000	
2.631	17195	8933	0.520	0.002	
2.654	17386	7637	0.439	0.002	
2.703	4531	5468	1.207	0.000	
2.717	9156	5741	0.627	0.001	
2.740	3955	5045	1.275	0.000	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
2.768	1029	4134	4.017	0.000	
2.771	830	4189	5.050	0.000	
2.778	1924	4438	2.307	0.000	
2.784	5498	4564	0.830	0.000	
2.846	25970	8400	0.323	0.003	
2.880	939	3165	3.370	0.000	
2.884	1885	3183	1.688	0.000	
2.901	4805	3504	0.729	0.000	
2.938	581	1990	3.423	0.000	
2.944	1450	2016	1.390	0.000	
2.955	449	1816	4.043	0.000	
2.967	1234	2009	1.629	0.000	
2.982	712	2087	2.931	0.000	
2.988	1000	2338	2.337	0.000	
3.001	3475	3541	1.019	0.000	
3.018	3528	3705	1.050	0.000	
3.033	983	2521	2.564	0.000	
3.038	1297	2686	2.070	0.000	
3.044	2547	2541	0.997	0.000	
3.069	389	1330	3.418	0.000	
3.078	728	1545	2.123	0.000	
3.085	1244	1637	1.316	0.000	
3.098	1115	1624	1.457	0.000	
3.108	926	1475	1.593	0.000	
3.119	239	1202	5.036	0.000	
3.125	540	1251	2.315	0.000	
3.133	409	1219	2.978	0.000	
3.144	2600	1886	0.725	0.000	
3.165	620	1604	2.588	0.000	
3.173	554	1647	2.972	0.000	
3.192	2423	2273	0.938	0.000	
3.197	582	2418	4.158	0.000	
3.204	1161	2723	2.346	0.000	
3.208	825	2777	3.364	0.000	
3.228	4472	3391	0.758	0.000	
3.246	1586	2676	1.688	0.000	
3.279	1194	2070	1.734	0.000	
3.293	854	1951	2.285	0.000	
3.298	595	2029	3.408	0.000	
3.315	2640	2597	0.984	0.000	
3.320	1015	2542	2.504	0.000	
3.328	1549	2593	1.674	0.000	3 C10
3.338	1314	2533	1.928	0.000	
3.350	523	2159	4.130	0.000	
3.358	1776	2105	1.185	0.000	
3.371	356	1797	5.043	0.000	
3.378	914	1880	2.057	0.000	
3.383	380	1927	5.068	0.000	
3.387	595	2023	3.399	0.000	
3.395	1390	2270	1.633	0.000	
3.405	1490	1994	1.338	0.000	
3.423	690	1601	2.321	0.000	
3.435	821	1554	1.894	0.000	
3.441	387	1583	4.087	0.000	
3.444	401	1625	4.051	0.000	
3.448	403	1636	4.060	0.000	
3.455	1216	1700	1.398	0.000	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
3.478	235	1185	5.047	0.000	
3.482	412	1229	2.986	0.000	
3.488	695	1177	1.694	0.000	
3.501	239	969	4.063	0.000	
3.509	914	1149	1.258	0.000	
3.520	1078	1069	0.992	0.000	
3.540	301	927	3.079	0.000	
3.556	406	849	2.089	0.000	
3.567	370	873	2.359	0.000	
3.572	178	939	5.270	0.000	
3.578	591	1171	1.981	0.000	
3.591	869	1353	1.556	0.000	
3.596	741	1352	1.826	0.000	
3.606	471	1401	2.976	0.000	
3.613	548	1411	2.577	0.000	
3.618	433	1521	3.511	0.000	
3.625	710	1635	2.303	0.000	
3.630	910	1667	1.832	0.000	
3.652	661	1562	2.362	0.000	
3.670	462	1214	2.627	0.000	
3.686	1036	1453	1.403	0.000	
3.690	829	1374	1.658	0.000	
3.702	531	1191	2.241	0.000	
3.712	452	1355	3.001	0.000	
3.716	820	1423	1.736	0.000	
3.736	2685	2093	0.780	0.000	
3.752	689	2030	2.946	0.000	
3.760	4109	2349	0.572	0.000	
3.805	3183	2036	0.640	0.000	
3.823	496	1686	3.401	0.000	
3.835	1641	2314	1.410	0.000	
3.859	9243	4616	0.499	0.001	
3.897	851	1745	2.051	0.000	
3.904	503	1721	3.419	0.000	
3.927	3866	3293	0.852	0.000	
3.941	5520	3558	0.645	0.000	
3.980	573	1715	2.991	0.000	
3.992	1027	1794	1.748	0.000	
3.995	1494	1860	1.245	0.000	
4.010	887	1639	1.847	0.000	
4.021	663	1724	2.602	0.000	
4.026	1380	1776	1.287	0.000	
4.045	306	1546	5.059	0.000	
4.053	1001	1758	1.757	0.000	
4.061	1137	1804	1.586	0.000	
4.072	779	1773	2.275	0.000	
4.080	989	1896	1.917	0.000	
4.087	561	1905	3.396	0.000	
4.098	1956	2156	1.103	0.000	
4.106	1168	2044	1.750	0.000	
4.127	1049	1627	1.551	0.000	
4.142	587	1545	2.633	0.000	
4.148	1155	1572	1.361	0.000	
4.173	3682	2398	0.651	0.000	
4.189	1023	1738	1.700	0.000	
4.204	549	1627	2.961	0.000	
4.213	628	1658	2.641	0.000	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
4.221	1039	1830	1.761	0.000	
4.227	447	1814	4.058	0.000	
4.248	2703	2638	0.976	0.000	
4.256	1387	2945	2.123	0.000	
4.260	743	2988	4.022	0.000	
4.265	912	3081	3.378	0.000	
4.268	779	3140	4.031	0.000	
4.275	1736	3217	1.853	0.000	
4.289	2688	3495	1.300	0.000	
4.295	3466	3448	0.995	0.000	
4.322	1054	2680	2.543	0.000	4 C12
4.330	1686	2627	1.558	0.000	
4.358	1066	1974	1.852	0.000	
4.378	434	1758	4.054	0.000	
4.384	1324	1879	1.419	0.000	
4.403	860	1608	1.869	0.000	
4.414	457	1567	3.431	0.000	
4.421	1117	1675	1.499	0.000	
4.433	910	1538	1.690	0.000	
4.439	865	1534	1.774	0.000	
4.449	764	1302	1.705	0.000	
4.471	433	1123	2.593	0.000	
4.476	734	1135	1.546	0.000	
4.490	385	1005	2.610	0.000	
4.498	555	1186	2.137	0.000	
4.502	695	1166	1.677	0.000	
4.518	587	949	1.618	0.000	
4.526	316	925	2.924	0.000	
4.533	560	989	1.765	0.000	
4.543	469	1001	2.135	0.000	
4.548	222	916	4.130	0.000	
4.553	188	980	5.207	0.000	
4.558	255	1038	4.076	0.000	
4.568	652	1157	1.775	0.000	
4.573	338	1151	3.409	0.000	
4.580	487	1283	2.636	0.000	
4.596	3801	1950	0.513	0.000	
4.631	531	1429	2.692	0.000	
4.663	4548	3737	0.822	0.000	
4.667	2815	3822	1.358	0.000	
4.679	2199	3760	1.710	0.000	
4.688	1068	3585	3.356	0.000	
4.694	2166	3742	1.727	0.000	
4.723	372603	172476	0.463	0.055	
4.894	47034	21828	0.464	0.006	
4.956	80510	28154	0.350	0.011	
4.999	54273	16950	0.312	0.008	
5.068	1137	5713	5.027	0.000	
5.072	8415	5792	0.688	0.001	
5.105	4203	4316	1.027	0.000	5 C14
5.146	660	2685	4.070	0.000	
5.153	2524	2649	1.050	0.000	
5.170	1076	2437	2.265	0.000	
5.174	2371	2438	1.028	0.000	
5.201	1013	2011	1.986	0.000	
5.210	2064	2332	1.130	0.000	
5.224	1083	2304	2.127	0.000	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
5.228	2027	2354	1.162	0.000	
5.276	4673	2682	0.574	0.000	
5.322	195	844	4.328	0.000	
5.331	977	1203	1.231	0.000	
5.356	490	993	2.027	0.000	
5.361	814	1044	1.283	0.000	
5.382	115	387	3.351	0.000	
5.399	619	960	1.551	0.000	
5.406	402	1035	2.576	0.000	
5.410	378	1122	2.968	0.000	
5.423	1663	1555	0.935	0.000	
5.452	5951	5020	0.844	0.000	
5.501	290	797	2.753	0.000	
5.523	2317	2472	1.067	0.000	
5.538	5946	6823	1.147	0.000	
5.792	501855376	76456669	0.152	74.449	6 C16
5.807	79757019	82319946	1.032	11.775	
5.823	77929961	88539160	1.136	11.505	
5.962	75333	84828	1.126	0.011	
5.986	474748	124326	0.262	0.070	
6.070	17103	57180	3.343	0.002	
6.074	120761	57565	0.477	0.017	
6.113	90233	47140	0.522	0.013	
6.165	407438	218439	0.536	0.060	
6.263	944101	374166	0.396	0.139	
6.414	114839	39498	0.344	0.016	7 C18
6.464	53190	31177	0.586	0.007	
6.523	31509	25870	0.821	0.004	
6.551	4785	23963	5.008	0.000	
6.559	51194	25409	0.496	0.007	
6.590	21354	21666	1.015	0.003	
6.612	35061	21127	0.603	0.005	$ 8 o-terph
6.638	17712	19934	1.125	0.002	
6.672	22159	19651	0.887	0.003	
6.683	26846	19268	0.718	0.003	
6.708	5413	18142	3.351	0.000	
6.713	24941	18247	0.732	0.003	
6.747	50657	18478	0.365	0.007	
6.795	23973	17444	0.728	0.003	
6.814	28457	17895	0.629	0.004	
6.837	10746	15445	1.437	0.001	
6.871	29974	21406	0.714	0.004	
6.874	4287	21471	5.009	0.000	
6.882	20520	21675	1.056	0.003	
6.944	32864	17445	0.531	0.004	
6.978	9138	15347	1.679	0.001	
7.014	4130	13830	3.348	0.000	9 C20
7.025	12567	14083	1.121	0.001	
7.038	4952	14274	2.882	0.000	
7.044	6508	14578	2.240	0.000	
7.050	25344	14736	0.581	0.003	
7.099	5531	12365	2.236	0.000	
7.108	16440	12371	0.752	0.002	
7.129	9415	11275	1.198	0.001	
7.175	3589	10327	2.878	0.000	
7.182	7285	10474	1.438	0.001	
7.212	11252	10002	0.889	0.001	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
7.227	5193	9506	1.830	0.000	
7.237	5172	9476	1.832	0.000	
7.247	4652	9357	2.011	0.000	
7.254	3258	9369	2.875	0.000	
7.259	7003	9455	1.350	0.001	
7.272	5540	9252	1.670	0.000	
7.283	4511	9087	2.014	0.000	
7.296	5828	9031	1.550	0.000	
7.308	4850	8866	1.828	0.000	
7.318	3111	9014	2.897	0.000	
7.324	3191	9168	2.873	0.000	
7.328	2775	9325	3.360	0.000	
7.339	6190	9713	1.569	0.000	
7.344	2920	9761	3.343	0.000	
7.350	17091	9874	0.578	0.002	
7.379	7217	8616	1.194	0.001	
7.395	5430	8408	1.548	0.000	
7.404	2492	8342	3.348	0.000	
7.409	1666	8354	5.014	0.000	
7.415	2955	8500	2.877	0.000	
7.423	3887	8782	2.259	0.000	
7.465	28160	14253	0.506	0.004	
7.471	6466	14499	2.242	0.000	
7.480	6649	15111	2.273	0.000	
7.484	26595	15197	0.571	0.003	
7.514	13964	13621	0.975	0.002	
7.539	8118	12614	1.554	0.001	
7.553	10540	12495	1.185	0.001	
7.584	2820	11307	4.010	0.000	
7.590	4522	11429	2.527	0.000	10 C22
7.620	16634	10435	0.627	0.002	
7.653	6793	9783	1.440	0.001	
7.663	8606	9666	1.123	0.001	
7.675	2827	9464	3.347	0.000	
7.683	9373	9620	1.026	0.001	
7.699	3657	9205	2.517	0.000	
7.708	5071	9290	1.832	0.000	
7.713	10483	9274	0.885	0.001	
7.735	10686	9257	0.866	0.001	
7.752	4732	8664	1.831	0.000	
7.765	5624	8765	1.558	0.000	
7.773	5614	8686	1.547	0.000	
7.784	3375	8506	2.520	0.000	
7.793	2118	8517	4.021	0.000	
7.799	10086	8544	0.847	0.001	
7.817	7761	8325	1.073	0.001	
7.833	2415	8088	3.350	0.000	
7.838	2838	8160	2.875	0.000	
7.844	3649	8173	2.240	0.000	
7.858	2009	8069	4.017	0.000	
7.864	4482	8197	1.829	0.000	
7.871	3688	8223	2.230	0.000	
7.879	4875	8269	1.696	0.000	
7.889	2009	8061	4.013	0.000	
7.897	4080	8308	2.036	0.000	
7.916	17828	10103	0.567	0.002	
7.935	4052	9086	2.242	0.000	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
7.940	2229	8948	4.015	0.000	
7.945	5765	8973	1.556	0.000	
7.954	6458	8765	1.357	0.000	
7.976	2099	8428	4.016	0.000	
7.984	10213	8807	0.862	0.001	
7.999	4897	8282	1.691	0.000	
8.013	8782	8112	0.924	0.001	
8.028	5860	7858	1.341	0.000	
8.040	3929	7871	2.003	0.000	
8.054	9161	8146	0.889	0.001	
8.067	2701	7766	2.876	0.000	
8.074	3069	7702	2.510	0.000	
8.081	2694	7742	2.874	0.000	
8.088	2705	7793	2.881	0.000	
8.095	5842	7832	1.341	0.000	
8.104	5419	7841	1.447	0.000	
8.119	5740	7735	1.348	0.000	
8.134	4986	7768	1.558	0.000	
8.141	5893	8009	1.359	0.000	
8.159	9098	8027	0.882	0.001	11 C24
8.174	3156	7971	2.526	0.000	
8.185	2376	7967	3.353	0.000	
8.190	4739	7937	1.675	0.000	
8.202	5181	8028	1.549	0.000	
8.212	1994	8027	4.025	0.000	
8.223	6137	8270	1.348	0.000	
8.236	6864	8171	1.190	0.001	
8.248	2383	7986	3.351	0.000	
8.253	2405	8059	3.351	0.000	
8.259	5294	8207	1.550	0.000	
8.268	2866	8235	2.874	0.000	
8.280	6583	8312	1.263	0.000	
8.289	4538	8296	1.828	0.000	
8.295	2060	8300	4.029	0.000	
8.300	2063	8291	4.020	0.000	
8.313	7062	8400	1.189	0.001	
8.318	1667	8375	5.023	0.000	
8.332	11362	9100	0.801	0.001	
8.343	4357	8741	2.006	0.000	
8.358	1267	8458	6.676	0.000	
8.363	2991	8621	2.882	0.000	
8.371	3980	8983	2.257	0.000	
8.379	6330	9083	1.435	0.000	
8.385	3111	8963	2.881	0.000	
8.393	6706	9050	1.349	0.000	
8.404	4903	8943	1.824	0.000	
8.417	8437	8972	1.063	0.001	
8.438	7166	9103	1.270	0.001	
8.443	3211	9227	2.873	0.000	12 C25
8.450	3688	9295	2.521	0.000	
8.455	2313	9276	4.010	0.000	
8.475	30054	13714	0.456	0.004	
8.504	5760	9733	1.690	0.000	
8.519	2799	9376	3.350	0.000	
8.529	4766	9710	2.037	0.000	
8.537	4875	9815	2.013	0.000	
8.543	8411	9973	1.186	0.001	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
8.555	2969	9916	3.340	0.000	
8.560	3974	9987	2.513	0.000	
8.568	2483	9997	4.026	0.000	
8.572	5007	10043	2.006	0.000	
8.591	14074	10725	0.762	0.002	
8.602	2648	10665	4.028	0.000	
8.606	2159	10862	5.032	0.000	
8.609	2183	10952	5.017	0.000	
8.633	7361	10561	1.435	0.001	
8.647	6774	10495	1.549	0.001	
8.658	2596	10420	4.014	0.000	
8.663	4723	10573	2.239	0.000	
8.669	3156	10589	3.355	0.000	
8.687	15405	11334	0.736	0.002	
8.699	6103	11158	1.828	0.000	
8.707	2223	11136	5.009	0.000	13 C26
8.730	28697	12536	0.437	0.004	
8.754	8658	11553	1.334	0.001	
8.763	2896	11612	4.010	0.000	
8.780	15029	12352	0.822	0.002	
8.788	1833	12243	6.680	0.000	
8.798	11854	12679	1.070	0.001	
8.806	1873	12509	6.677	0.000	
8.809	3133	12565	4.011	0.000	
8.813	2506	12550	5.008	0.000	
8.819	7588	12757	1.681	0.001	
8.829	4418	12679	2.870	0.000	
8.835	6988	12762	1.826	0.001	
8.848	13711	13258	0.967	0.002	
8.872	26625	13656	0.513	0.003	
8.894	4575	13127	2.869	0.000	
8.898	2631	13188	5.013	0.000	
8.902	5918	13262	2.241	0.000	
8.914	8577	13313	1.552	0.001	
8.922	4011	13433	3.349	0.000	
8.926	4724	13546	2.867	0.000	
8.933	6787	13651	2.011	0.001	
8.946	9614	13923	1.448	0.001	
8.951	6274	14004	2.232	0.000	
8.960	5592	14036	2.510	0.000	
8.966	3513	14090	4.011	0.000	
8.969	2829	14171	5.009	0.000	
8.973	4976	14233	2.860	0.000	
8.980	4289	14365	3.350	0.000	
8.996	27708	16441	0.593	0.004	
9.013	8129	14847	1.827	0.001	
9.025	8129	14840	1.826	0.001	
9.036	7503	15229	2.030	0.001	
9.040	4559	15225	3.340	0.000	
9.057	14920	16251	1.089	0.002	
9.067	9915	16831	1.698	0.001	
9.076	8535	17331	2.031	0.001	
9.081	5250	17596	3.352	0.000	
9.084	10558	17675	1.674	0.001	
9.095	4386	17601	4.013	0.000	
9.111	30564	19262	0.630	0.004	
9.128	8346	18722	2.243	0.001	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
9.139	15095	18986	1.258	0.002	
9.149	6655	19050	2.862	0.000	
9.158	23240	19719	0.848	0.003	
9.171	1903	19042	10.005	0.000	
9.175	4773	19156	4.013	0.000	
9.187	23630	19927	0.843	0.003	
9.199	4925	19763	4.013	0.000	
9.208	14115	20394	1.445	0.002	
9.219	12303	20691	1.682	0.001	
9.226	7266	20831	2.867	0.001	
9.233	15622	21000	1.344	0.002	14 C28
9.247	9280	20714	2.232	0.001	
9.262	45057	27849	0.618	0.006	
9.281	22651	23200	1.024	0.003	
9.304	13489	22820	1.692	0.001	
9.307	18038	22862	1.267	0.002	
9.328	8656	21778	2.516	0.001	
9.334	8635	21650	2.507	0.001	
9.343	16240	21738	1.339	0.002	
9.354	5409	21709	4.013	0.000	
9.367	16481	22234	1.349	0.002	
9.370	6683	22346	3.344	0.000	
9.382	14775	23166	1.568	0.002	
9.390	11679	23531	2.015	0.001	
9.394	12888	23584	1.830	0.001	
9.408	18752	23645	1.261	0.002	
9.416	4675	23396	5.004	0.000	
9.428	25138	24392	0.970	0.003	
9.438	20233	24095	1.191	0.002	
9.468	67429	26696	0.396	0.009	
9.496	8413	24122	2.867	0.001	
9.507	12049	24259	2.013	0.001	
9.527	36362	25771	0.709	0.005	
9.538	12891	25911	2.010	0.001	
9.543	6452	25853	4.007	0.000	
9.551	10420	26202	2.515	0.001	
9.557	29750	26593	0.894	0.004	
9.574	6252	25071	4.010	0.000	
9.593	29143	27655	0.949	0.004	
9.599	40783	27905	0.684	0.006	
9.620	13159	26364	2.004	0.001	
9.632	17259	26799	1.553	0.002	
9.640	13210	26592	2.013	0.001	
9.664	35362	28170	0.797	0.005	
9.672	27890	28134	1.009	0.004	
9.696	26737	28634	1.071	0.003	
9.711	53475	30848	0.577	0.007	
9.745	33266	29504	0.887	0.004	$ 15 Triacon Surr
9.752	7348	29501	4.015	0.001	
9.756	20542	29565	1.439	0.003	
9.768	7255	29059	4.005	0.001	
9.773	7275	29173	4.010	0.001	
9.785	31543	30611	0.970	0.004	
9.803	46804	32832	0.701	0.006	
9.821	10456	30060	2.875	0.001	
9.833	30772	31156	1.012	0.004	
9.860	77784	33514	0.431	0.011	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
9.881	12779	32069	2.510	0.001	
9.892	14531	32668	2.248	0.002	
9.896	8201	32902	4.012	0.001	
9.908	23357	33882	1.451	0.003	
9.912	27050	34095	1.260	0.003	
9.939	14585	32570	2.233	0.002	
9.951	23032	33095	1.437	0.003	
9.956	11596	33292	2.871	0.001	
9.966	16544	33271	2.011	0.002	
9.971	11660	33391	2.864	0.001	
9.975	10051	33617	3.345	0.001	
9.983	15209	33983	2.234	0.002	
9.988	15177	33830	2.229	0.002	
9.996	10128	33907	3.348	0.001	
10.018	43348	35629	0.822	0.006	
10.021	7133	35693	5.004	0.001	
10.025	8960	35988	4.016	0.001	
10.034	42064	36944	0.878	0.006	
10.063	65447	38699	0.591	0.009	
10.077	7375	36906	5.004	0.001	
10.083	16743	37428	2.235	0.002	
10.095	34467	38665	1.122	0.005	
10.118	90921	40621	0.447	0.013	
10.151	37738	38047	1.008	0.005	
10.158	11383	38037	3.342	0.001	
10.168	36074	38274	1.061	0.005	
10.181	15072	37809	2.509	0.002	16 C32
10.185	5655	37746	6.675	0.000	
10.198	43905	38471	0.876	0.006	
10.208	24771	38177	1.541	0.003	
10.218	19031	38113	2.003	0.002	
10.228	13353	38279	2.867	0.001	
10.237	21225	38826	1.829	0.003	
10.243	30946	38929	1.258	0.004	
10.266	43064	39733	0.923	0.006	
10.275	11912	39784	3.340	0.001	
10.278	19932	39886	2.001	0.002	
10.293	46366	40725	0.878	0.006	
10.318	46465	41024	0.883	0.006	
10.328	24720	41353	1.673	0.003	
10.334	10308	41278	4.005	0.001	
10.343	29100	41866	1.439	0.004	
10.354	22822	41695	1.827	0.003	
10.360	16568	41490	2.504	0.002	
10.376	31388	42321	1.348	0.004	
10.384	36478	43119	1.182	0.005	
10.393	21427	43144	2.014	0.003	
10.416	82339	44731	0.543	0.012	
10.434	23173	42257	1.824	0.003	
10.455	42801	43684	1.021	0.006	
10.459	19648	44004	2.240	0.002	
10.469	19632	43883	2.235	0.002	
10.492	56113	45807	0.816	0.008	
10.497	20626	45915	2.226	0.003	
10.503	27439	45837	1.671	0.004	
10.513	31833	45842	1.440	0.004	
10.523	6773	45190	6.672	0.001	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
10.529	22697	45513	2.005	0.003	
10.543	39087	46432	1.188	0.005	
10.552	16284	46719	2.869	0.002	
10.558	18796	47158	2.509	0.002	
10.576	69878	48769	0.698	0.010	
10.586	12085	48384	4.004	0.001	
10.592	21757	48469	2.228	0.003	
10.609	46960	50482	1.075	0.006	
10.616	40486	50812	1.255	0.005	17 C34
10.628	52392	50284	0.960	0.007	
10.665	99744	52644	0.528	0.014	
10.680	20832	52264	2.509	0.003	
10.699	126137	55939	0.443	0.018	
10.723	18258	52316	2.865	0.002	
10.733	65550	52928	0.807	0.009	
10.751	49102	51903	1.057	0.007	
10.765	10288	51490	5.005	0.001	
10.777	73220	52877	0.722	0.010	
10.791	15621	52150	3.338	0.002	
10.799	46819	52190	1.115	0.006	
10.817	52000	52328	1.006	0.007	
10.828	13014	52167	4.008	0.001	
10.833	18275	52280	2.861	0.002	
10.838	67284	52271	0.777	0.009	
10.860	15395	51401	3.339	0.002	
10.867	15366	51252	3.335	0.002	
10.874	25712	51608	2.007	0.003	
10.885	59363	52064	0.877	0.008	
10.901	33199	51247	1.544	0.004	
10.911	35859	51446	1.435	0.005	
10.925	15150	50526	3.335	0.002	
10.936	27761	50508	1.819	0.004	
10.954	40634	51235	1.261	0.005	
10.958	17973	51428	2.861	0.002	
10.982	101216	54997	0.543	0.014	
10.999	80380	54264	0.675	0.011	
11.022	15822	52869	3.342	0.002	
11.029	23878	53171	2.227	0.003	
11.032	23908	53219	2.226	0.003	
11.044	39793	53228	1.338	0.005	
11.053	13218	52959	4.007	0.001	19 C36
11.057	26491	53088	2.004	0.003	
11.069	47933	53454	1.115	0.007	
11.079	78088	52997	0.679	0.011	
11.132	4853	48537	10.002	0.000	
11.138	21933	48845	2.227	0.003	
11.148	46678	49317	1.057	0.006	
11.158	12248	49060	4.006	0.001	
11.164	14711	49102	3.338	0.002	
11.179	64473	49939	0.775	0.009	
11.192	19751	49439	2.503	0.002	
11.197	14848	49541	3.337	0.002	
11.202	17336	49566	2.859	0.002	
11.206	12400	49639	4.003	0.001	
11.212	56808	49881	0.878	0.008	
11.230	26830	48794	1.819	0.003	
11.263	19014	47590	2.503	0.002	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
11.267	11927	47790	4.007	0.001	
11.285	66432	50042	0.753	0.009	
11.308	17214	49235	2.860	0.002	
11.312	19684	49285	2.504	0.002	
11.322	19740	49570	2.511	0.002	
11.331	27467	50208	1.828	0.004	
11.334	12565	50301	4.003	0.001	
11.338	17617	50367	2.859	0.002	
11.356	50450	50688	1.005	0.007	
11.383	31641	48774	1.541	0.004	
11.392	14562	48589	3.337	0.002	
11.398	14566	48593	3.336	0.002	
11.405	21947	48858	2.226	0.003	
11.418	36961	49602	1.342	0.005	
11.428	52174	49838	0.955	0.007	
11.438	46900	49605	1.058	0.006	
11.456	66003	49218	0.746	0.009	
11.481	84312	48818	0.579	0.012	
11.518	39837	46996	1.180	0.005	
11.533	55836	46822	0.839	0.008	20 C38
11.560	30101	46465	1.544	0.004	
11.568	20916	46512	2.224	0.003	
11.573	11637	46596	4.004	0.001	
11.579	23274	46598	2.002	0.003	
11.586	13953	46531	3.335	0.002	
11.591	9318	46631	5.004	0.001	
11.623	97892	48831	0.499	0.014	
11.631	17107	48984	2.863	0.002	
11.638	22090	49260	2.230	0.003	
11.642	32050	49351	1.540	0.004	
11.669	95446	50981	0.534	0.014	
11.685	95822	49865	0.520	0.014	
11.788	8918	44609	5.002	0.001	
11.791	35704	44768	1.254	0.005	
11.804	11082	44350	4.002	0.001	
11.813	22172	44403	2.003	0.003	
11.823	19993	44543	2.228	0.002	
11.829	13395	44754	3.341	0.001	
11.837	20184	44981	2.228	0.002	
11.852	26933	44942	1.669	0.003	
11.866	36041	45224	1.255	0.005	
11.877	15835	45355	2.864	0.002	
11.883	18222	45726	2.509	0.002	
11.889	15985	45741	2.861	0.002	
11.896	20679	46117	2.230	0.003	
11.905	23259	46896	2.016	0.003	
11.929	70146	49826	0.710	0.010	
11.936	52288	50085	0.958	0.007	
11.951	14787	49369	3.339	0.002	
11.957	17313	49595	2.865	0.002	
11.961	32199	49647	1.542	0.004	
11.971	19578	49063	2.506	0.002	
11.980	34244	49065	1.433	0.005	
12.019	96987	51133	0.527	0.014	
12.025	48685	51499	1.058	0.007	
12.053	38386	51386	1.339	0.005	
12.062	38575	51549	1.336	0.005	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
12.070	17923	51300	2.862	0.002	
12.078	45780	51141	1.117	0.006	
12.105	31495	48817	1.550	0.004	
12.118	85510	48295	0.565	0.012	
12.148	55474	46657	0.841	0.008	21 C40
12.172	34299	45899	1.338	0.005	
12.181	18286	45754	2.502	0.002	
12.188	20565	45727	2.223	0.003	
12.198	29701	45787	1.542	0.004	
12.212	11377	45530	4.002	0.001	
12.218	29576	45566	1.541	0.004	
12.237	41054	45750	1.114	0.006	
12.243	13695	45701	3.337	0.002	
12.253	27528	46122	1.675	0.004	
12.260	16149	46201	2.861	0.002	
12.272	32473	46571	1.434	0.004	
12.347	231342	54259	0.235	0.034	
12.355	96470	54322	0.563	0.014	
12.383	13155	52687	4.005	0.001	
12.389	52817	52930	1.002	0.007	
12.434	117936	55204	0.468	0.017	
12.440	19323	55283	2.861	0.002	
12.448	22049	55156	2.502	0.003	
12.460	127044	56114	0.442	0.018	
12.500	63536	55700	0.877	0.009	
12.519	44746	56237	1.257	0.006	
12.523	16928	56556	3.341	0.002	
12.528	14154	56666	4.003	0.002	
12.532	14154	56644	4.002	0.002	
12.538	25607	57089	2.229	0.003	
12.543	31284	57010	1.822	0.004	
12.560	76588	57084	0.745	0.011	
12.574	22463	56167	2.500	0.003	
12.583	192414	56305	0.293	0.028	
12.668	201456	54098	0.269	0.029	
12.722	63529	49368	0.777	0.009	
12.744	14574	48683	3.340	0.002	
12.757	68233	49046	0.719	0.010	
12.777	29106	48653	1.672	0.004	
12.802	69072	49884	0.722	0.010	
12.805	19947	49915	2.502	0.002	
12.813	12457	49907	4.006	0.001	
12.826	42860	50672	1.182	0.006	
12.830	15192	50711	3.338	0.002	
12.835	63121	50727	0.804	0.009	
12.856	30109	50299	1.671	0.004	
12.871	12459	49875	4.003	0.001	
12.876	24950	49913	2.001	0.003	
12.883	12458	49860	4.002	0.001	
12.892	24999	50091	2.004	0.003	
12.904	37682	50442	1.339	0.005	
12.918	60965	51059	0.838	0.009	
12.929	15268	50972	3.338	0.002	
12.950	101236	52476	0.518	0.014	
12.991	32619	50285	1.542	0.004	
13.030	23826	47690	2.002	0.003	
13.047	49429	47410	0.959	0.007	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
13.072	11668	46709	4.003	0.001	
13.077	14056	46964	3.341	0.002	
13.083	21201	47214	2.227	0.003	
13.092	45034	47490	1.055	0.006	
13.103	33139	47401	1.430	0.004	
13.119	58622	47300	0.807	0.008	
13.136	61979	46406	0.749	0.009	
13.163	36232	45399	1.253	0.005	
13.172	13552	45219	3.337	0.002	
13.178	13550	45211	3.337	0.002	
13.183	13581	45318	3.337	0.002	
13.188	15867	45365	2.859	0.002	
13.193	11350	45433	4.003	0.001	
13.206	54879	45909	0.837	0.008	
13.233	74220	46899	0.632	0.010	
13.246	18724	46923	2.506	0.002	
13.250	14089	47028	3.338	0.002	
13.254	9392	46999	5.004	0.001	
13.261	35241	47103	1.337	0.005	
13.270	21093	46884	2.223	0.003	
13.278	16404	46889	2.858	0.002	
13.284	28108	46937	1.670	0.004	
13.309	27777	46575	1.677	0.004	
13.313	11643	46617	4.004	0.001	
13.323	30391	46938	1.544	0.004	
13.337	49696	47554	0.957	0.007	
13.345	11906	47686	4.005	0.001	
13.352	21499	47921	2.229	0.003	
13.358	14416	48133	3.339	0.002	
13.366	24163	48487	2.007	0.003	
13.391	108474	49842	0.459	0.016	
13.411	39818	49922	1.254	0.005	
13.421	140245	49882	0.356	0.020	
13.468	75433	46221	0.613	0.011	
13.519	59701	44435	0.744	0.008	
13.538	26345	44021	1.671	0.003	
13.553	17475	43727	2.502	0.002	
13.559	19699	43828	2.225	0.002	
13.566	15324	43832	2.860	0.002	
13.574	28519	43956	1.541	0.004	
13.585	21950	43943	2.002	0.003	
13.595	26497	44341	1.673	0.003	
13.603	22230	44574	2.005	0.003	
13.608	11135	44585	4.004	0.001	
13.633	100703	46371	0.460	0.014	
13.650	25255	45974	1.820	0.003	
13.663	20511	45675	2.227	0.003	
13.670	15945	45584	2.859	0.002	
13.677	40973	45642	1.114	0.006	
13.688	4544	45448	10.002	0.000	
13.693	29520	45508	1.542	0.004	
13.718	24720	44995	1.820	0.003	
13.727	11216	44890	4.002	0.001	
13.735	29185	45025	1.543	0.004	
13.752	17874	44782	2.505	0.002	
13.767	35874	45020	1.255	0.005	
13.775	36036	45104	1.252	0.005	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
13.785	11226	44939	4.003	0.001	
13.790	47016	44953	0.956	0.006	
13.813	11118	44516	4.004	0.001	
13.818	37641	44507	1.182	0.005	
13.832	15424	44192	2.865	0.002	
13.838	17564	43967	2.503	0.002	
13.844	26339	43892	1.666	0.003	
13.855	30567	43821	1.434	0.004	
13.865	23854	43526	1.825	0.003	
13.882	28266	43639	1.544	0.004	
13.886	30418	43629	1.434	0.004	
13.901	34702	43472	1.253	0.005	
13.920	48162	44005	0.914	0.007	
13.928	17577	43956	2.501	0.002	
13.941	15410	44084	2.861	0.002	
13.946	11045	44251	4.006	0.001	
13.949	24369	44341	1.820	0.003	
13.959	22103	44264	2.003	0.003	
13.967	22088	44195	2.001	0.003	
13.976	33207	44336	1.335	0.004	18 Filter Peak
13.998	24195	44018	1.819	0.003	
14.007	15335	43888	2.862	0.002	
14.014	17519	43863	2.504	0.002	
14.019	54335	43870	0.807	0.008	
14.046	10722	42915	4.003	0.001	
14.052	19305	42955	2.225	0.002	
14.058	8568	42864	5.003	0.001	
14.067	38739	43159	1.114	0.005	
14.077	15012	42931	2.860	0.002	
14.083	25753	42977	1.669	0.003	
14.102	25682	42913	1.671	0.003	
14.108	19267	42865	2.225	0.002	
14.116	12834	42815	3.336	0.001	
14.126	25874	43369	1.676	0.003	
14.133	56339	43595	0.774	0.008	
14.161	32503	43582	1.341	0.004	
14.165	10909	43696	4.006	0.001	
14.170	15313	43822	2.862	0.002	
14.175	10960	43911	4.007	0.001	
14.178	13176	43945	3.335	0.001	
14.183	19785	43976	2.223	0.002	
14.191	8796	44018	5.005	0.001	
14.197	17636	44177	2.505	0.002	
14.208	28815	44459	1.543	0.004	
14.219	8873	44379	5.002	0.001	
14.223	13318	44445	3.337	0.001	
14.229	28860	44456	1.540	0.004	
14.247	15436	44194	2.863	0.002	
14.260	37147	43758	1.178	0.005	
14.274	45685	43705	0.957	0.006	
	677340272	268782821		100.000	

Total unknown % area = 25.478

Supelco®

www.sigmaaldrich.com

Certificate of Composition - Analytical Standard

BASE STOCK

Product no.: 22523051
Lot no.: LRAC9813
Expiry Date: May 2023
Manufacturing Date: May 2021
Storage: Refrigerate
Solvent/Matrix: Dichloromethane
Certificate version: LRAC9813.01 *(Note: Certificates may be updated due to the availability of new data. Check our website at: www.sigma-aldrich.com for the most current version.)*

J005199
SVOA-ABN BASE STOCK-200-800ug/ml
Expires 5/31/2023
Prepared By Jianqing Zhou 5/18/2021

Analyte	*Assigned Value*	*Units*	*Raw Material Purity,%*	*Raw Material Lot*
3,3'-DICHLOROBENZIDINE CAS# 91-94-1	802	µg/mL	99.9	LC27068
2,4-DINITROTOLUENE CAS# 121-14-2	802	µg/mL	97.8	LB46632
2,6-DINITROTOLUENE CAS# 606-20-2	801	µg/mL	99.9	LB79891
HEXACHLOROCYCLOPENTADIENE CAS# 77-47-4	802	µg/mL	96.0	LB95525
N-NITROSODIMETHYLAMINE CAS# 62-75-9	801	µg/mL	95.0	2019-030598 5
PERYLENE CAS# 198-55-0	201	µg/mL	99.6	04101PG
ANILINE CAS# 62-53-3	803	µg/mL	100.0	10126MG
4-CHLOROANILINE CAS# 106-47-8	803	µg/mL	100.0	MKBZ6909V
2-NITROANILINE CAS# 88-74-4	802	µg/mL	99.9	LC05068
3-NITROANILINE CAS# 99-09-2	802	µg/mL	99.9	LC09264
4-NITROANILINE CAS# 100-01-6	802	µg/mL	99.9	LC11400
PYRIDINE (LOW WATER) CAS# 110-86-1	802	µg/mL	100.0	SHBJ9218

Measurement method: Where applicable, the assigned value is based on a purity determination by mass balance and gravimetrically prepared value.

Intended use: Intended for R&D and Analytical Use only. Not for drug, household or other uses.

Packaging: 1 mL in amber ampule

Instructions for handling and correct use: Use on the as is basis. The internal pressure of the container may be slightly different from the atmospheric pressure at the user`s location. Open slowly and carefully to avoid dispersion of the material.

Sigma-Aldrich RTC, 2931 Soldier Springs Rd. Laramie, WY 82070, USA;
Tel. 1 307-742-5452; Fax 1 855-831-9211; www.sigmaaldrich.com
Sigma-Aldrich RTC is a subsidiary of Merck KGaA, Darmstadt, Germany.

Health and safety information: All chemical reference materials should be considered potentially hazardous and should be used only by qualified laboratory personnel. Please refer to the Safety Data Sheet for detailed information about the nature of any hazard and appropriate precautions to be taken.

Certificate issue date: 12-May-2021

Andy Ommen - QC Manager

Mark Pooler - QA Supervisor

Certificate of analysis revision history:

Certificate version	Date	Reason for version
LRAC9813.01	12-May-2021	Original Release Date

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Disclaimer: The purchaser is required to determine the suitability of this product for any particular application. Sigma-Aldrich RTC makes no warranty of any kind, express or implied, other than its products meet all quality control standards set by Sigma-Aldrich RTC. We do not guarantee that the product can be used for any particular application.

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Certificate of Composition - Analytical Standard

ACID STOC"

Product no.: 22523046
Lot no.: LRAC9812
Expiry Date: May 2023
Manufacturing Date: May 2021
Storage: Refrigerate
Solvent/Matrix: Dichloromethane
Certificate version: LRAC9812.01 *(Note: Certificates may be updated due to the availability of new data. Check our website at: www.sigma-aldrich.com for the most current version.)*

J005200
SVOA-ABN ACID STOCK-200-800ug/ml
Solvent / Lot: DCM
Prep: 5/18/2021 by JZ
Exp: 5/31/2023
Location:

JZ 5/18/21

Analyte	*Assigned Value*	*Units*	*Raw Material Purity,%*	*Raw Material Lot*
2,4-DIMETHYLPHENOL CAS# 105-67-9	802	µg/mL	99.9	LB88935
2,4-DICHLOROPHENOL CAS# 120-83-2	802	µg/mL	100.0	BCBZ6787
2,4,5-TRICHLOROPHENOL CAS# 95-95-4	802	µg/mL	99.9	JS00008
2,4-DINITROPHENOL CAS# 51-28-5	1806	µg/mL	75.9	MKBP5833V
2,4,6-TRICHLOROPHENOL CAS# 88-06-2	803	µg/mL	98.7	LB82983
4-CHLORO-3-METHYLPHENOL CAS# 59-50-7	801	µg/mL	99.9	JS00013
4-NITROPHENOL CAS# 100-02-7	801	µg/mL	99.9	LC10889
2-METHYL-4,6-DINITROPHENOL CAS# 534-52-1	1804	µg/mL	99.7	LC18338
PENTACHLOROPHENOL CAS# 87-86-5	803	µg/mL	98.7	MKCK8156
BENZOIC ACID CAS# 65-85-0	1805	µg/mL	99.9	LC16514

Measurement method: Where applicable, the assigned value is based on a purity determination by mass balance and gravimetrically prepared value.

Intended use: Intended for R&D and Analytical Use only. Not for drug, household or other uses.

Packaging: 1 mL in amber ampule

Instructions for handling and correct use: Use on the as is basis. The internal pressure of the container may be slightly different from the atmospheric pressure at the user`s location. Open slowly and carefully to avoid dispersion of the material.

Health and safety information: All chemical reference materials should be considered potentially hazardous and should be used only by qualified laboratory personnel. Please refer to the Safety Data Sheet for detailed information about the nature of any hazard and appropriate precautions to be taken.

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Tel. 1 307-742-5452; Fax 1 855-831-9211; www.sigmaaldrich.com
Sigma-Aldrich RTC is a subsidiary of Merck KGaA, Darmstadt, Germany.

Agilent

Certificate of Analysis

J008074

SVOA PAH STD 2000ug/ml
Expires 6/30/2023
Prepared By Joshua Rains 8/5/2021

Product Name: PAH Standard

Product Number: US-106N-1

Lot Number: 0006540449

Lot Issue Date: 11-Jun-2020

Expiration Date: 30-Jun-2023

Description:

This analytical reference material (RM) was manufactured and verified in accordance with an ISO 9001 registered quality system, and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	Concentration ± Uncertainty
acenaphthene	000083-32-9	RM10879	2008 ± 10 µg/mL
acenaphthylene	000208-96-8	RM10891	2003 ± 10 µg/mL
anthracene	000120-12-7	RM14212	2006 ± 10 µg/mL
benz[a]anthracene	000056-55-3	RM16072	2006 ± 10 µg/mL
benzo[b]fluoranthene	000205-99-2	RM14571	2005 ± 10 µg/mL
benzo[k]fluoranthene	000207-08-9	RM14321	2009 ± 10 µg/mL
benzo[ghi]perylene	000191-24-2	RM15761	2008 ± 10 µg/mL
benzo[a]pyrene	000050-32-8	RM12669	2009 ± 10 µg/mL
chrysene	000218-01-9	RM12260	2009 ± 10 µg/mL
dibenz[a,h]anthracene	000053-70-3	RM06786	2009 ± 10 µg/mL
fluoranthene	000206-44-0	RM12277	2004 ± 10 µg/mL
fluorene	000086-73-7	RM09441	2009 ± 10 µg/mL
indeno[1,2,3-cd]pyrene	000193-39-5	RM14192	2009 ± 10 µg/mL
naphthalene	000091-20-3	NT00970	2008 ± 10 µg/mL
phenanthrene	000085-01-8	RM10495	2009 ± 10 µg/mL
pyrene	000129-00-0	RM03479	2008 ± 10 µg/mL

Matrix: methylene chloride/benzene (1:1)

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

ISO 17034 Cert No. AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026

www.agilent.com/quality/

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY

ISO 17025 Cert No. AT-1937

Certificate of Analysis

Product Number: US-106N-1 **Lot Number:** 0006540449

Storage Conditions: Store at Room Temperature (15° to 30°C).

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This RM was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Intended Use:
This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Hazards:
Refer to the Safety Data Sheet on www.agilent.com for information regarding this RM.

Expiration of Certification:
The certification of this RM is valid until the expiration date specified above, provided the RM is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the RM is damaged, contaminated, or otherwise modified.

Maintenance of Certification:
If substantive changes are noted that affect the certification before the expiration of this certificate, Agilent will notify the purchaser.

Sample lot approver:

Monica Bourgeois
QMS Representative

ISO 17034 Cert No.
AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026

www.agilent.com/quality/

ISO 17025 Cert
No. AT-1937

Certificate of Analysis

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ■ Tel: 303-940-0033 ■ Fax: 303-940-0043 ■ info@phenova.com
Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101244
Description: Benzidines Standard
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Methylene Chloride

Lot Number: CL16062
Certification Date: November 19, 2020
Expiration Date: November 30, 2030

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Benzidine	92-87-5	2000	± 2.740%
3,3'-Dichlorobenzidine	91-94-1	2000	± 3.229%

J008310
Benzidines std @2000ug/ml
Expires 11/30/2030
Prepared By Van Spohn 8/12/2021

ACCREDITED
Reference Material Producer
Certicate No. 2427.02

Phenova is an accredited ISO/IEC 17034 Reference Material Producer and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ACCREDITED
Chemical Testing Laboratory
Certicate No. 2427.03

IL64691018_us

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1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO 17034[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

   Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

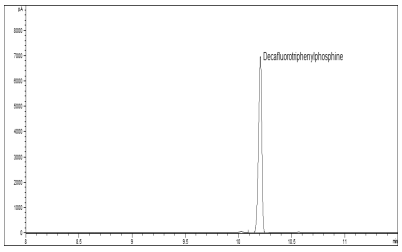
References:

[1] ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
[3] ISO 17034 – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

Certificate of Analysis - Certified Reference Material

Decafluorotriphenylphosphine solution

Product no.: 48724-U
Lot no.: LRAD0628
Expiry Date: October 2024
Manufacturing Date: September 2021
Storage: ROOM TEMPERATURE
Solvent/Matrix: DICHLOROMETHANE
Certificate version: LRAD0628.01 (*Note: Certificates may be updated due to the availability of new data. Check our website at: www.sigma-aldrich.com for the most current version.)*

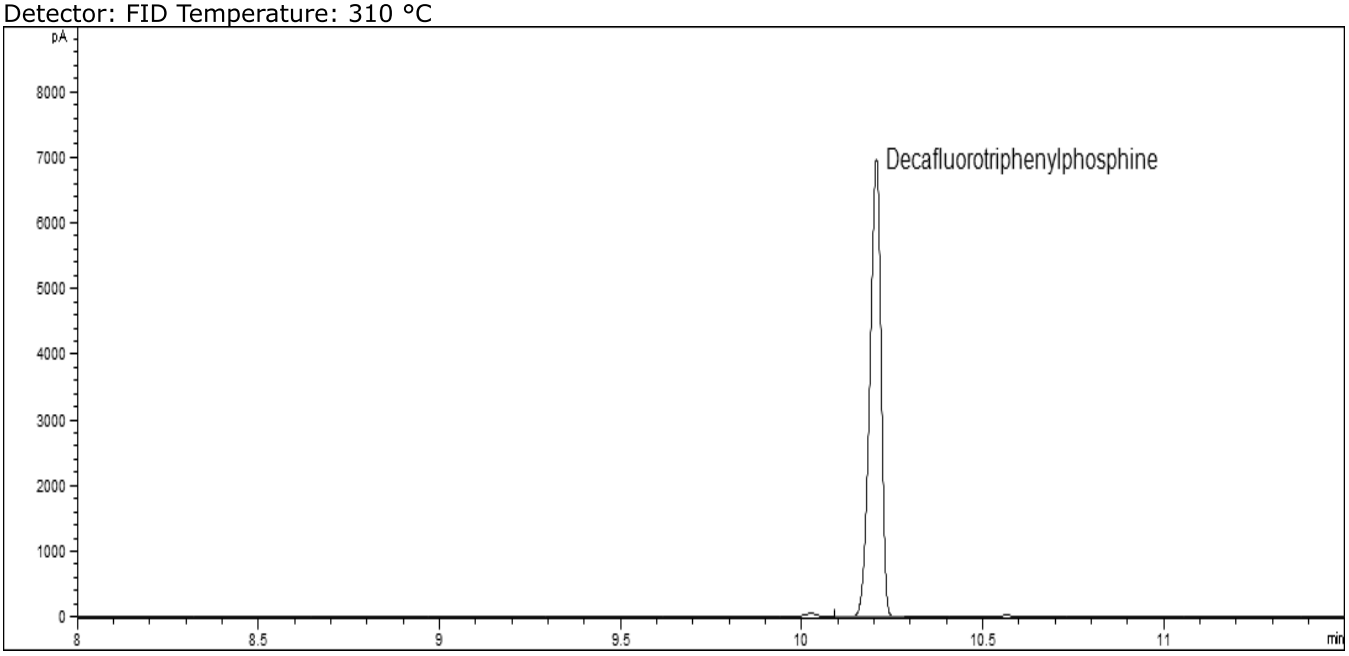


Certified Values:

Analyte	*Certified Value*	*Units*	*Raw Material Purity,%*	*Raw Material Lot*
DFTPP CAS# 5074-71-5	25.2 ± 2.6	mg/mL	97.0	10220909

ASSAY Method

METHOD: GC (BELLEFONTE)
Column: SPB-5, 30 m × 0.53 mm I.D., 1.5 µm film thickness
Carrier Gas: H_2 Flow Rate: 4.3 mL/min
Inlet Temperature: 250 °C Injection Volume: 1 µL
Injection Mode: 25:1
Temperature Program: 120 °C (Hold 0 min) @ 12 °C/min to 260 °C (Hold 0 min)
Detector: FID Temperature: 310 °C



Sigma-Aldrich RTC, 2931 Soldier Springs Rd. Laramie, WY 82070, USA;
Tel. 1 307-742-5452; Fax 1 855-831-9211; www.sigmaaldrich.com
Sigma-Aldrich RTC is a subsidiary of Merck KGaA, Darmstadt, Germany.

Elution details:

EO	RT(MIN)	ANALYTE
1	10.206	Decafluorotriphenylphosphine

Metrological traceability: Traceable to the SI and higher order standards from NIST through an unbroken chain of comparisons. The balance used to weigh raw materials is accurate to +/-0.0001 g and calibrated regularly using mass standards traceable to NIST. All dilutions were performed gravimetrically. Additionally, individual analytes are traceable to NIST SRMs where available and specified above.

Measurement method: Where applicable, the assigned value is based on a purity determination by mass balance and gravimetrically prepared value.

Intended use: Intended for R&D and Analytical Use only. Not for drug, household or other uses.

Minimum sample size: 1 µL

Packaging: 1 mL in amber ampule

Instructions for handling and correct use: Use on the as is basis. The internal pressure of the container may be slightly different from the atmospheric pressure at the user`s location. Open slowly and carefully to avoid dispersion of the material.

Health and safety information: All chemical reference materials should be considered potentially hazardous and should be used only by qualified laboratory personnel. Please refer to the Safety Data Sheet for detailed information about the nature of any hazard and appropriate precautions to be taken.

Accreditation: Sigma-Aldrich RTC is accredited by the US accreditation authority ANAB as a registered reference material producer AR-1470 in accordance with ISO 17034.

Certificate issue date: 30-Sep-2021

Andy Ommen - QC Manager

Scott Stetler - QA Manager

Details on metrological traceability: This standard has been gravimetrically prepared using balances that have been fully qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error. Fill volume to predetermined specifications is gravimetrically verified throughout the dispensing process using qualified and calibrated balances. Further traceability to a corresponding Primary Standard may be achieved through a direct comparison assay. Where a Primary Standard is available, the assay value will be included in the specified section of the COA.

Associated uncertainty: Ucrm - Uncertainty values in this document are expressed as Expanded Uncertainty (Ucrm) corresponding to the 95% confidence interval. Ucrm is derived from the combined standard uncertainty multiplied by the coverage factor k, which is obtained from a *t*-distribution and degrees of freedom. The components of combined standard uncertainty include the uncertainties due to characterization, homogeneity, long term stability, and short term stability (transport). The components due to stability are generally considered to be negligible unless otherwise indicated by stability studies. The mathematical representation of the Ucrm calculation is as follows:

$$u_{CRM} = \sqrt{u_{char}^2 + u_{\text{hom } ogeneity}^2 + u_{stability}^2}$$

Homogeneity assessment: Homogeneity was assessed in accordance with ISO Guide 35. Completed units were sampled using a random stratified sampling protocol. The results of chemical analysis were then compared by Single Factor Analysis of Variance (ANOVA). The uncertainty due to homogeneity was derived from the ANOVA. Heterogeneity was not detected under the conditions of the ANOVA.

Stability assessment: Significance of the stability assessment will be demonstrated if the analytical result of the study and the range of values represented by the Expanded Uncertainty do not overlap the result of the original assay and the range of its values represented by the Expanded Uncertainty. The method employed will usually be the same method used to characterize the assay value in the initial

Certificate of analysis revision history:

Certificate version	Date	Reason for version
LRAD0628.01	30-Sep-2021	Original Release Date

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Disclaimer: The purchaser is required to determine the suitability of this product for any particular application. Sigma-Aldrich RTC makes no warranty of any kind, express or implied, other than its products meet all quality control standards set by Sigma-Aldrich RTC. We do not guarantee that the product can be used for any particular application.

Certificate of Analysis

phenova Certified Reference Materials | A Phenomenex Company

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ▪ Tel: 303-940-0033 ▪ Fax: 303-940-0043 ▪ info@phenova.com
Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101246
Description: Benzoic Acid
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Methylene Chloride

Lot Number: CL16693
Certification Date: May 6, 2021
Expiration Date: April 30, 2031

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Benzoic acid	65-85-0	2000	± 4.383%

K3238

ACCREDITED
Reference Material Producer
Certicate No. 2427.02

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Phenova is an accredited ISO/IEC 17034 Reference Material Producer and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ACCREDITED
Chemical Testing Laboratory
Certicate No. 2427.03

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1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO 17034[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 25 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
[3] ISO 17034 – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

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Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101443
Description: Aniline
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Methylene Chloride

Lot Number: CL17696
Certification Date: December 14, 2021
Expiration Date: December 31, 2029

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aniline	62-53-3	1000	± 0.760%

K 3239

ACCREDITED
Reference Material Producer
Certicate No. 2427.02

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Phenova is an accredited ISO/IEC 17034 Reference Material Producer and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ACCREDITED
Chemical Testing Laboratory
Certicate No. 2427.03

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2. Quality Standards: Phenova is accredited by A2LA to ISO 17034[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

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[2] ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
[3] ISO 17034 – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

Certificate of Analysis

BNAs - Sandy Loam 1

Certified Reference Material

Description

Product ID CRM143-50G
Lot **LRAC8918**
Expiration Date January 2024
Manufacturing Date January 2021
Storage Conditions Refrigerate
Solvent/Matrix SOIL

Certified Values

Analyte	*Units*	*Certified Value* [1,4]
1,2,4-Trichlorobenzene	µg/Kg	1477 ± 181
1,3-Dichlorobenzene (m-Dichlorobenzene)	µg/Kg	1625 ± 292
1-Chloronaphthalene	µg/Kg	2809 ± 84
2,3-Dimethylphenol	µg/Kg	4552 ± 137
2,4,5-Trichlorophenol	µg/Kg	3438 ± 245
2,4,6-Trichlorophenol	µg/Kg	2194 ± 251
2,4-Dichlorophenol	µg/Kg	6991 ± 394
2,4-Dimethylphenol	µg/Kg	6357 ± 879
2,4-Dinitrophenol	µg/Kg	2922 ± 523
2,4-Dinitrotoluene (2,4-DNT)	µg/Kg	3318 ± 442
2,6-Dichlorophenol	µg/Kg	4578 ± 874
2,6-Dimethylphenol	µg/Kg	7582 ± 228
2-Chloronaphthalene	µg/Kg	2223 ± 168
2-Chlorophenol	µg/Kg	1678 ± 202
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	µg/Kg	5148 ± 685
2-Methylphenol (o-Cresol)	µg/Kg	6004 ± 573
2-Nitrophenol	µg/Kg	6456 ± 383
3,4-Dimethylphenol	µg/Kg	7185 ± 216
3+4-Methylphenol (m+p-Cresol)	µg/Kg	8033 ± 1613
4-Bromophenyl phenyl ether (BDE-3)	µg/Kg	7169 ± 310
4-Chloro-3-methylphenol	µg/Kg	2071 ± 110
4-Chlorophenyl phenylether	µg/Kg	2052 ± 113
4-Methylphenol (p-Cresol)	µg/Kg	6617 ± 1371
4-Nitrophenol	µg/Kg	6812 ± 595
Acenaphthene	µg/Kg	5489 ± 380

Description

Lot **LRAC8918**
Expiration Date January 2024
Manufacturing Date January 2021
Storage Conditions Refrigerate
Solvent/Matrix SOIL

Acenaphthylene	µg/Kg	1948 ± 240
Anthracene	µg/Kg	2866 ± 237
Benzo(a)anthracene	µg/Kg	5751 ± 552
Benzo(a)pyrene	µg/Kg	5902 ± 612
Benzo(b)fluoranthene	µg/Kg	3010 ± 409
Benzo(b+k)fluoranthene	µg/Kg	6534 ± 196
Benzo(g,h,i)perylene	µg/Kg	1380 ± 136
Benzo(k)fluoranthene	µg/Kg	2215 ± 237
Butyl benzyl phthalate	µg/Kg	3511 ± 384
Carbazole	µg/Kg	5412 ± 407
Chrysene	µg/Kg	1477 ± 72
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	µg/Kg	2905 ± 321
Dibenzo(a,h)anthracene	µg/Kg	3420 ± 302
Dibenzofuran	µg/Kg	6130 ± 253
Dimethyl phthalate	µg/Kg	4537 ± 250
Di-n-butyl phthalate	µg/Kg	1721 ± 154
Di-n-octyl phthalate	µg/Kg	2744 ± 288
Fluoranthene	µg/Kg	2497 ± 222
Fluorene	µg/Kg	3724 ± 222
Hexachlorobutadiene	µg/Kg	1877 ± 245
Indeno(1,2,3-cd) pyrene	µg/Kg	3914 ± 409
Isophorone	µg/Kg	1615 ± 170
Naphthalene	µg/Kg	4458 ± 480
Nitrobenzene	µg/Kg	3539 ± 266
n-Nitrosodimethylamine	µg/Kg	1580 ± 402
n-Nitrosodiphenylamine	µg/Kg	2854 ± 379
Pentachlorophenol	µg/Kg	3411 ± 358
Phenanthrene	µg/Kg	5052 ± 385
Phenol	µg/Kg	2660 ± 184
Pyrene	µg/Kg	2964 ± 256
Pyridine	µg/Kg	1008 ± 30

Informational Values

Certificate of Analysis

BNAs - Sandy Loam 1

Certified Reference Material

Description

Product ID CRM143-50G
Lot **LRAC8918**
Expiration Date January 2024
Manufacturing Date January 2021
Storage Conditions Refrigerate
Solvent/Matrix SOIL

Analyte	*Units*	*Suggested Acceptance Windows*	*Standard Deviation*
1,2,4-Trichlorobenzene	µg/Kg	148 to 2853	459
1,3-Dichlorobenzene (m-Dichlorobenzene)	µg/Kg	163 to 3440	605
1-Chloronaphthalene	µg/Kg	1123 to 4494	562
2,3-Dimethylphenol	µg/Kg	1821 to 7284	910
2,4,5-Trichlorophenol	µg/Kg	1003 to 5872	811
2,4,6-Trichlorophenol	µg/Kg	640 to 3748	518
2,4-Dichlorophenol	µg/Kg	2391 to 11591	1533
2,4-Dimethylphenol	µg/Kg	0.00 to 13959	2534
2,4-Dinitrophenol	µg/Kg	1169 to 4675	584
2,4-Dinitrotoluene (2,4-DNT)	µg/Kg	1248 to 5388	690
2,6-Dichlorophenol	µg/Kg	1831 to 7324	916
2,6-Dimethylphenol	µg/Kg	3033 to 12132	1516
2-Chloronaphthalene	µg/Kg	748 to 3699	492
2-Chlorophenol	µg/Kg	415 to 2942	421
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	µg/Kg	0.00 to 10347	1733
2-Methylphenol (o-Cresol)	µg/Kg	1306 to 10702	1566
2-Nitrophenol	µg/Kg	1534 to 11379	1641
3,4-Dimethylphenol	µg/Kg	2874 to 11495	1437
3+4-Methylphenol (m+p-Cresol)	µg/Kg	4054 to 16218	2027
4-Bromophenyl phenyl ether (BDE-3)	µg/Kg	2901 to 11437	1423
4-Chloro-3-methylphenol	µg/Kg	677 to 3464	464
4-Chlorophenyl phenylether	µg/Kg	756 to 3348	432
4-Methylphenol (p-Cresol)	µg/Kg	2647 to 10587	1323
4-Nitrophenol	µg/Kg	681 to 14762	2650
Acenaphthene	µg/Kg	2243 to 8736	1082
Acenaphthylene	µg/Kg	712 to 3183	412
Anthracene	µg/Kg	1218 to 4515	550
Benzo(a)anthracene	µg/Kg	2806 to 8696	982
Benzo(a)pyrene	µg/Kg	2512 to 9292	1130
Benzo(b)fluoranthene	µg/Kg	1197 to 4822	604
Benzo(b+k)fluoranthene	µg/Kg	2614 to 10454	1307

Description

Lot **LRAC8918**
Expiration Date January 2024
Manufacturing Date January 2021
Storage Conditions Refrigerate
Solvent/Matrix SOIL

Benzo(g,h,i)perylene	µg/Kg	489 to 2271	297
Benzo(k)fluoranthene	µg/Kg	892 to 3537	441
Butyl benzyl phthalate	µg/Kg	1255 to 5766	752
Carbazole	µg/Kg	2032 to 8792	1127
Chrysene	µg/Kg	669 to 2284	269
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	µg/Kg	765 to 5045	713
Dibenzo(a,h)anthracene	µg/Kg	1257 to 5583	721
Dibenzofuran	µg/Kg	2766 to 9493	1121
Dimethyl phthalate	µg/Kg	1842 to 7231	898
Di-n-butyl phthalate	µg/Kg	495 to 2947	409
Di-n-octyl phthalate	µg/Kg	690 to 4798	685
Fluoranthene	µg/Kg	984 to 4009	504
Fluorene	µg/Kg	1638 to 5810	695
Hexachlorobutadiene	µg/Kg	425 to 3329	484
Indeno(1,2,3-cd) pyrene	µg/Kg	870 to 6957	1015
Isophorone	µg/Kg	437 to 2792	392
Naphthalene	µg/Kg	1131 to 7784	1109
Nitrobenzene	µg/Kg	1024 to 6054	838
n-Nitrosodimethylamine	µg/Kg	632 to 2528	316
n-Nitrosodiphenylamine	µg/Kg	1142 to 4567	571
Pentachlorophenol	µg/Kg	341 to 7037	1209
Phenanthrene	µg/Kg	2307 to 7798	915
Phenol	µg/Kg	681 to 4639	660
Pyrene	µg/Kg	1118 to 4810	615
Pyridine	µg/Kg	403 to 1613	202

Additional Information:

DESCRIPTION

The organic sample is a soil containing extractable BNAs for analysis by 8100, 8270, 8310 or equivalent methods.

This product consist of a 5 vials each containing 10g of soil for analysis of PAHs. Each vial is identical and has been tested how homogeneity. Only one vial is need for test the remaining vials are to be used for multiple methods or routine testing.

The soil has been sterilized to minimize degradation of the sample.

The sample has been sized to 100 mesh.

Required storage condition is 4ºC.

The sample has been intentionally prepared with an apparent headspace.

STORAGE

The sample should be stored at 4ºC. It has been determined to be stable for the duration of the expiration date.

After sub-sampling replace cap securely and store remaining sample at 4ºC.

The shelf life of the product was determined by historic stability of similar CRM's. The expiration date may be extended based on stock and popularity upon successful stability testing by a 17025 accredited laboratory.

Certificate of Analysis

BNAs - Sandy Loam 1

Certified Reference Material

Description

Product ID	CRM143-50G
Lot	**LRAC8918**
Expiration Date	January 2024
Manufacturing Date	January 2021
Storage Conditions	Refrigerate
Solvent/Matrix	SOIL

Stability and shelf life after opening must be determined by the user, taking into account sampling frequency/volume and all local conditions.

SAMPLE PREPARATION

Extract the complete contents of a single vial. Transfer entire contents of one vial to extraction vessel. Rinse vial and cap with extraction solvent.

Assume a 10g sample size for all calculations.

Note: Sample extracts and calibration solutions should be in the same solvent.

Report all results on a wet weight basis, do not correct for moisture.

NOTE: For method 8100 and using a packed column gas chromatographic method or cannot adequately resolve the following may coelute in four pairs of compounds: anthracene and phenanthrene; chrysene and benzo(a)anthracene; benzo(b)fluoranthene and benzo(k)fluoranthene; and dibenzo(a,h)anthracene and indeno(1,2,3-cd)pyrene.

SCOPE AND APPLICATION

The BNAs in Soil Certified Reference Material (CRM) consists of 5 10mL VOA vials, with a Teflon lined closures containing approximately 10 grams of soil, fortified with BNAs. Being a natural matrix waste sample the analyst is challenged by the same preparation problems, analytical interferences, etc. as is typical for similar matrices received by the laboratory for analysis.

Description

Lot	**LRAC8918**
Expiration Date	January 2024
Manufacturing Date	January 2021
Storage Conditions	Refrigerate
Solvent/Matrix	SOIL

1 **Metrological traceability:** Traceable to the SI and higher order standards from NIST through an unbroken chain of comparisons. The balance used to weigh raw materials is accurate to +/-0.0001 g and calibrated regularly using mass standards traceable to NIST. All dilutions were performed gravimetrically. Additionally, individual analytes are traceable to NIST SRMs where available and specified above.
4 Ucrm - Uncertainty values in this document are expressed as Expanded Uncertainty (Ucrm) corresponding to the 95% confidence interval. Ucrm is derived from the combined standard uncertainty multiplied by the coverage factor k, which is obtained from a *t*-distribution and degrees of freedom. K=2 unless specified. The components of combined standard uncertainty include the uncertainties due to characterization, homogeneity, long term stability, and short term stability (transport). The components due to stability are generally considered to be negligible unless otherwise indicated by stability studies. The mathematical representation of the Ucrm calculation is as follows:

$$u_{CRM} = \sqrt{u_{char}^2 + u_{\text{hom } ogeneity}^2 + u_{stability}^2}$$

***k*:** Coverage factor derived from a t-distribution table, based on the degrees of freedom of the data set. Assume 2.0 for a **Confidence interval = 95%**

6 Analytical Value- For QC verification of the certified value only- not to be used in calculations. Represents the analytical data obtained by comparison to a standard as analyzed by the method described in the CoA or another acceptable method. The result may differ from the certified value and UCRM based on method uncertainty as well as the uncertainty associated with the standard used for comparison.

Traceability: The standard was manufactured under an ISO/IEC 17025:2017 certified quality system. The balance used to weigh raw materials is accurate to +/- 0.0001g and calibrated regularly using mass standards traceable to NIST. All dilutions were preformed gravimetrically. Additionally, individual analytes are traceable to NIST SRMs where available and specified above.

Homogeneity: Homogeneity was assessed in accordance with ISO 17034:2016. Completed units were sampled using a random stratified sampling protocol. The results of chemical analysis were then compared using a one-way analysis of variance approach as described by TNI EL-V3-2009 Appendix A.2. See Instructions for minimum sub-sample size.

Expiration is at end of month given on certificate and label.

MSDS reports for components comprising greater than 1.0% of the solution or 0.1% for components known to be carcinogens are available upon request.

THIS PRODUCT WAS DESIGNED, PRODUCED AND VERIFIED FOR ACCURACY AND STABILITY IN ACCORDANCE WITH **ISO/IEC 17025:2017 (ANAB Cert AT-1467)** and **ISO 17034:2016 (ANAB Cert AR-1470).**

Andy Ommen - QC Manager

Mark Pooler - QA Supervisor

Certification Date	January 05, 2021
Version	0-152021

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Certificate of Analysis

Phenova Certified Reference Materials are sold by Phenomenex.
411 Madrid Ave., Torrance, CA 90501 USA ▪ Tel: 310-212-0555 ▪ Fax: 310-328-7768 ▪ info@phenomenex.com
Access your MSDS and digital C of A at **www.phenomenex.com/mysupport. Re-order at www.phenomenex.com/standards**

Certified Reference Material

This product is included in Phenova's ISO/IEC 17025 and ISO Guide 34 Scopes of Accreditation

Catalog No.:	AL0-101291	**Lot Number:**	CL11000
Description:	GC/MS Tuning Mix	**Certification Date:**	May 9, 2014
Storage:	4 °C	**Expiration Date:**	December 31, 2023
Provided As:	1 mL in 2 mL Ampoule in Methylene chloride	**Revision Date:**	August 5, 2015

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty (%)
Benzidine	92-87-5	1000	± 0.208%
Decafluorotriphenylphosphine (DFTPP)	5074-71-5	1000	± 0.057%
4,4'-DDT	50-29-3	1000	± 0.056%
Pentachlorophenol	87-86-5	1000	± 0.061%

K003891
GC/MS Tune solution-1000ug/ml
Solvent / Lot: CL11000
Prep: 4/22/2022 by VS
Exp: 12/31/2023
Location:

ACCREDITED
Reference Material Producer
Certificate No. 2427.02

phenova® Certified Reference Materials

Manufactured by Phenova, Inc.

Phenova's testing and calibration results are internationally recognized through the ILAC MRA. Phenova is an accredited ISO Guide 34 Reference Material Provider and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ilac-MRA ACCREDITED
Chemical Testing Laboratory
Certificate No. 2427.03

IL111106131.us

Agilent

Certificate of Analysis

Product Name: Toxic Substances Standard

Product Number: US-103N-1 **Lot Issue Date:** 25-May-2021

Lot Number: 0006609664 **Expiration Date:** 30-Jun-2024

Description:
This analytical reference material (RM) was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	Concentration ± Uncertainty
benzoic acid	000065-85-0	RM01884	2005 ± 10 µg/mL
o-cresol	000095-48-7	RM12877	2005 ± 10 µg/mL
p-cresol	000106-44-5	RM01988	2005 ± 10 µg/mL
2,4,5-trichlorophenol	000095-95-4	NT00344	2004 ± 10 µg/mL

Matrix: methylene chloride (dichloromethane)

Storage Conditions: Store at Room Temperature (15° to 30°C).

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This RM was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Intended Use:
This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Hazards:
Refer to the Safety Data Sheet on www.agilent.com for information regarding this RM.

5/11/22

K004539
toxic sub mix#1
Solvent / Lot: methylene chloride
Prep: 5/11/2022 by JZ
Exp: 6/30/2024
Location:

ANAB ACCREDITED ISO17034 REFERENCE MATERIAL PRODUCER
ISO 17034 Cert No. AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026

www.agilent.com/quality/
CSD-QA-015.1

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY
ISO 17025 Cert No. AT-1937

ISO 17034

Agilent
Trusted Answers

Reference Material Certificate

Product Name: Phenols Standard
Product Number: US-107N-1
Storage Conditions: Store at Room Temperature (15° to 30°C).

Lot Number: 0006648297
Lot Issue Date: 17-Nov-2021
Expiration Date: 31-Dec-2024

Component Name	CERTIFIED VALUES Concentration	Expanded Uncertainty	CAS#	Analyte Lot
4-chloro-3-methylphenol	2006 ±	10 µg/mL	000059-50-7	RM01885
2-chlorophenol	2007 ±	10 µg/mL	000095-57-8	RM01871
2,4-dichlorophenol	2005 ±	10 µg/mL	000120-83-2	RM13878
2,4-dimethylphenol	2006 ±	10 µg/mL	000105-67-9	RM13009
2,4-dinitrophenol	2006 ±	10 µg/mL	000051-28-5	RM02112
2-methyl-4,6-dinitrophenol	2005 ±	10 µg/mL	000534-52-1	RM02292
2-nitrophenol	2007 ±	10 µg/mL	000088-75-5	RM13445
4-nitrophenol	2006 ±	10 µg/mL	000100-02-7	RM03752
pentachlorophenol	2006 ±	10 µg/mL	000087-86-5	RM02474
phenol	2006 ±	10 µg/mL	000108-95-2	RM11471
2,4,6-trichlorophenol	2006 ±	10 µg/mL	000088-06-2	RM18096

Matrix: methylene chloride (dichloromethane)

Description:
This document is prepared in accordance with ISO 17034 and Guide 31. This analytical reference material standard was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed above.

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This analytical reference standard was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Safety:
Refer to the Safety Data Sheet on www.agilent.com for information regarding this analytical reference material.

5/11/22

CSD-QA-015.1

K004540
phenols mix
Solvent / Lot: methylene chloride
Prep: 5/11/2022 by JZ
Exp: 12/31/2024
Location:

ISO 17034

Agilent
Trusted Answers

Reference Material Certificate

Product Name: PAH Standard
Product Number: US-106N-1
Storage Conditions: Store at Room Temperature (15° to 30°C).

Lot Number: 0006627349
Lot Issue Date: 17-Sep-2021
Expiration Date: 31-Oct-2024

Component Name	CERTIFIED VALUES Concentration	Expanded Uncertainty	CAS#	Analyte Lot
acenaphthene	2007 ±	10 µg/mL	000083-32-9	RM10879
acenaphthylene	2004 ±	10 µg/mL	000208-96-8	RM10891
anthracene	2006 ±	10 µg/mL	000120-12-7	RM14212
benz[a]anthracene	2006 ±	10 µg/mL	000056-55-3	RM16072
benzo[b]fluoranthene	2006 ±	10 µg/mL	000205-99-2	RM14571
benzo[k]fluoranthene	2006 ±	10 µg/mL	000207-08-9	RM18376
benzo[ghi]perylene	2006 ±	10 µg/mL	000191-24-2	RM15761
benzo[a]pyrene	2006 ±	10 µg/mL	000050-32-8	RM17573
chrysene	2007 ±	10 µg/mL	000218-01-9	RM13771
dibenz[a,h]anthracene	2006 ±	10 µg/mL	000053-70-3	RM06786
fluoranthene	2006 ±	10 µg/mL	000206-44-0	RM12277
fluorene	2006 ±	10 µg/mL	000086-73-7	RM09441
indeno[1,2,3-cd]pyrene	2006 ±	10 µg/mL	000193-39-5	RM14192
naphthalene	2007 ±	10 µg/mL	000091-20-3	RM10445
phenanthrene	2005 ±	10 µg/mL	000085-01-8	RM10495
pyrene	2005 ±	10 µg/mL	000129-00-0	RM16126

Matrix: methylene chloride/benzene (1:1)

Description:
This document is prepared in accordance with ISO 17034 and Guide 31. This analytical reference material standard was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed above.

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This analytical reference standard was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

K004541
SVOA PAH STD 2000ug/ml
Solvent / Lot: DCM/BENZENE
Prep: 5/11/2022 by JZ
Exp: 10/31/2024
Location: Fridge 19

CSD-QA-015.1

11/22

Reference Materials Producer
Cert #2495.01

Certificate of Analysis

Chemical Testing
Cert #2495.02

Catalog Number: ECS-A-030 **Lot No.** AA210126005

Description: Base/Neutrals Mix 1

Matrix: Methylene Chloride

Manufactured Date: 1-26-2021

Expiration Date: 1-26-2024

This **SPEXOrganics**® Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality control standard for organic chromatography instrumentation such as GC, GC-MS, LC, and LC-MS. It can be employed in USEPA, ASTM and other methods relevant to the certified properties listed below.

Certified Compounds:

Compound	CAS #	Labeled	Purity	Certified†	Uncertainty
1,2,4-Trichlorobenzene	120-82-1	2000 µg/mL	99%	2010 µg/mL	± 50 µg/mL
1,2-Dichlorobenzene	95-50-1	2000 µg/mL	99%	2002 µg/mL	± 50 µg/mL
1,3-Dichlorobenzene	541-73-1	2000 µg/mL	98%	2021 µg/mL	± 51 µg/mL
1,4-Dichlorobenzene	106-46-7	2000 µg/mL	99%	2012 µg/mL	± 50 µg/mL
2,4-Dinitrotoluene	121-14-2	2000 µg/mL	97%	2006 µg/mL	± 50 µg/mL
2,6-Dinitrotoluene	606-20-2	2000 µg/mL	99.6%	2012 µg/mL	± 50 µg/mL
2-Chloronaphthalene	91-58-7	2000 µg/mL	98%	2004 µg/mL	± 50 µg/mL
4-Bromodiphenyl ether	101-55-3	2000 µg/mL	99%	2022 µg/mL	± 51 µg/mL
4-Chlorophenyl-phenyl ether	7005-72-3	2000 µg/mL	98%	2001 µg/mL	± 50 µg/mL
Azobenzene	103-33-3	2000 µg/mL	98%	2001 µg/mL	± 50 µg/mL
Bis(2-chloro-1-methylethyl) ether	108-60-1	2000 µg/mL	98.9%	2010 µg/mL	± 50 µg/mL
bis(2-Chloroethoxy)methane	111-91-1	2000 µg/mL	97%	2001 µg/mL	± 50 µg/mL
bis(2-Chloroethyl)ether	111-44-4	2000 µg/mL	99%	2002 µg/mL	± 50 µg/mL
Bis(2-Ethylhexyl)phthalate	117-81-7	2000 µg/mL	99%	2003 µg/mL	± 50 µg/mL
Butylbenzyl phthalate	85-68-7	2000 µg/mL	98%	2000 µg/mL	± 50 µg/mL
Carbazole	86-74-8	2000 µg/mL	95%	2009 µg/mL	± 50 µg/mL
Di-n-butyl phthalate	84-74-2	2000 µg/mL	99%	2020 µg/mL	± 50 µg/mL
Di-n-octyl phthalate	117-84-0	2000 µg/mL	98%	2000 µg/mL	± 50 µg/mL
Diethyl phthalate	84-66-2	2000 µg/mL	99.5%	2002 µg/mL	± 50 µg/mL
Dimethyl phthalate	131-11-3	2000 µg/mL	99%	2006 µg/mL	± 50 µg/mL
Hexachlorobenzene	118-74-1	2000 µg/mL	99%	2003 µg/mL	± 50 µg/mL
Hexachlorobutadiene	87-68-3	2000 µg/mL	97%	2003 µg/mL	± 50 µg/mL
Hexachlorocyclopentadiene	77-47-4	2000 µg/mL	99%	2003 µg/mL	± 50 µg/mL
Hexachloroethane	67-72-1	2000 µg/mL	98%	2003 µg/mL	± 50 µg/mL
Isophorone	78-59-1	2000 µg/mL	97%	2003 µg/mL	± 50 µg/mL
N-Nitrosodi-n-propylamine	621-64-7	2000 µg/mL	98%	2000 µg/mL	± 50 µg/mL
N-Nitrosodiphenylamine	86-30-6	2000 µg/mL	97%	2001 µg/mL	± 50 µg/mL
Nitrobenzene	98-95-3	2000 µg/mL	99%	2001 µg/mL	± 50 µg/mL
Pyridine	110-86-1	2000 µg/mL	99%	2004 µg/mL	± 50 µg/mL
N-Nitrosodimethylamine	62-75-9	2000 µg/mL	97%	2000 µg/mL	± 50 µg/mL

Certificate of Reference Material

Catalog Number: ECS-A-030 **Lot No.** AA210126005

Description: Base/Neutrals Mix 1

Matrix: Methylene Chloride

Manufactured Date: 1-26-2021

Expiration Date: 1-26-2024

Final Solution Verification:

Final solution integrity verified by Gas Chromatography/Mass Spectrometry. The mass spectrum of each compound was confirmed against the NIST mass spectral database.

† Certified concentration based on gravimetric weights and corrected for the purity of the compound(s) used to prepare the standard. Analytical balance calibration is verified daily with C1 weight set #23-190006 which is registered with Atlantic Scale, and traceable to NIST and NJ Division of Weights and Measures.

This CRM is guaranteed stable and accurate to within the uncertainty listed for the certified value. This includes uncertainty components due to preparation, homogeneity, short term and long term stability. During the stated period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution. For further information, contact the Sales Support Department at crmsales@spexcsp.com.

Date of Certification: 1-26-2021 Certifying Officer: Shannon Mora

Report of Certification

Catalog Number: ECS-A-030 **Lot No.** AA210126005

Description: Base/Neutrals Mix 1

Matrix: Methylene Chloride

Manufactured Date: 1-26-2021

Expiration Date: 1-26-2024

This Certified Reference Material (CRM) has been prepared and certified under an ISO 9001:2008, ISO 17025:2005, and ISO Guide 34:2009 Quality System consistent with the following standards:

- ISO 9001:2008: Quality management systems - Requirements - Certified by UL-DQS
- ISO 17025:2005: General Requirements for the Competence of Testing and Calibration Laboratories - Accredited by A2LA
- ISO Guide 34:2009: General Requirements for the Competence of Reference Material Producers - Accredited by A2LA
- ISO Guide 31:2000: Reference Materials - Contents of Certificates and Labels
- ISO Guide 35:2006: Reference Materials - General and statistical principals for certification
- Guide to the Expression of Uncertainty in Measurement 1997
- EURACHEM/CITAC Guide: Qualifying Uncertainty in Analytical Measurements - Second Edition
- ASTM Guide D6362-98
- NIST Technical Note 1297
- ILAC-G12-2000: Guidelines for the requirements for the competence of reference material producers
- ISO/REMCO N280

Storage Requirements:

To ensure the stability of the product once it arrives in your laboratory , please store this product in a refrigerator (2°C to 8°C). Note: Shipping conditions may differ from storage conditions. The EXPIRATION DATE is calculated from the MANUFACTURED DATE using our stability data and is applicable only if the product is unopened and stored under the prescribed conditions.

Instructions for Use:

Let material come to room temperature before use. Check for precipitate and if necessary sonicate for one minute. If compounds do not dissolve after one minute then sonicate further until the product is dissolved. A clear appearance is acceptable. The minimum recommended amount that should be removed from this vial is 5 µL with a 25µL gas tight syringe. All solutions should be thoroughly mixed, by shaking, prior to use. All surfaces that come in contact with the solution must be thoroughly cleaned prior to use. Dilutions should be performed only with Class A volumetric glassware.

Material Source:

All analytes and matrix materials are obtained and verified by SPEX CertiPrep from pre-qualified vendors as per ISO guidelines. Vendor identifications are proprietary, however sources of all materials used in the preparation and testing of SPEX CertiPrep CRMs are tracked and documented. For assistance, please contact sales support at crmsales@spexcsp.com.

Method of Preparation:

Clean laboratory procedures and techniques have been used throughout the preparation. All materials, equipment, and analytical instrumentation have been qualified prior to use. The highest purity solvents and Class A / calibrated volumetrics have been been used in all preparations.

Homogeneity:

The homogeneity of this CRM has been confirmed by procedures consistent with ISO 17025:2005, ISO Guide 34:2009, and ASTM D6362-98 Appendix X2. Random, replicate samples of the final, packaged material have been analyzed to prove homogeneity in accordance with our internal procedure 4300-HOMOGEN-1A. This is consistent with the intended use of this CRM. The Degree of Homogeneity, as expressed as maximum between-bottle variation, is 1.2%

Statistical Estimator and Confidence Limits:

The Certified value 'X' as listed on the reverse of this document is at the 95% level of confidence and can be expressed as:

- $X = x \pm U$ where X=certified value, U=expanded uncertainty, x=property value
- $U = ku_c$ where k=2 is the coverage factor at the 95% confidence level
- u_c = combined standard uncertainty obtained by combining the individual compound standard uncertainty components u_i, where $u_c = \sqrt{\sum u_i^2}$

Legal Notice:

SPEX CertiPrep Certified Reference Materials are not for any cosmetic, drug, or household application and are to be used only by qualified individuals who are trained in appropriate procedures. No claims against SPEX CertiPrep of any kind whatsoever, whether based on breech of warranty, alleged negligence, or otherwise, with respect to this Reference Material shall be greater than the purchase price. In no event shall SPEX CertiPrep be liable for any loss of profits or any incidental, special, or consequential damages.

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Accredited to 17025 & Guide 34 ISO Certified to 9001

ACCREDITED
Reference Materials Producer
Cert #2495.01

ECS

Certificate of Analysis

ilac-MRA ACCREDITED
Chemical Testing
Cert #2495.02

Catalog Number: ECS-A-030 **Lot No.** AA210126005

Description: Base/Neutrals Mix 1

Matrix: Methylene Chloride

Manufactured Date: 1-26-2021

Expiration Date: 1-26-2024

This **SPEXOrganics®** Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality control standard for organic chromatography instrumentation such as GC, GC-MS, LC, and LC-MS. It can be employed in USEPA, ASTM and other methods relevant to the certified properties listed below.

Certified Compounds:

Compound	CAS #	Labeled	Purity	Certified†	Uncertainty
1,2,4-Trichlorobenzene	120-82-1	2000 µg/mL	99%	2010 µg/mL	± 50 µg/mL
1,2-Dichlorobenzene	95-50-1	2000 µg/mL	99%	2002 µg/mL	± 50 µg/mL
1,3-Dichlorobenzene	541-73-1	2000 µg/mL	98%	2021 µg/mL	± 51 µg/mL
1,4-Dichlorobenzene	106-46-7	2000 µg/mL	99%	2012 µg/mL	± 50 µg/mL
2,4-Dinitrotoluene	121-14-2	2000 µg/mL	97%	2006 µg/mL	± 50 µg/mL
2,6-Dinitrotoluene	606-20-2	2000 µg/mL	99.6%	2012 µg/mL	± 50 µg/mL
2-Chloronaphthalene	91-58-7	2000 µg/mL	98%	2004 µg/mL	± 50 µg/mL
4-Bromodiphenyl ether	101-55-3	2000 µg/mL	99%	2022 µg/mL	± 51 µg/mL
4-Chlorophenyl-phenyl ether	7005-72-3	2000 µg/mL	98%	2001 µg/mL	± 50 µg/mL
Azobenzene	103-33-3	2000 µg/mL	98%	2001 µg/mL	± 50 µg/mL
Bis(2-chloro-1-methylethyl) ether	108-60-1	2000 µg/mL	98.9%	2010 µg/mL	± 50 µg/mL
bis(2-Chloroethoxy)methane	111-91-1	2000 µg/mL	97%	2001 µg/mL	± 50 µg/mL
bis(2-Chloroethyl)ether	111-44-4	2000 µg/mL	99%	2002 µg/mL	± 50 µg/mL
Bis(2-Ethylhexyl)phthalate	117-81-7	2000 µg/mL	99%	2003 µg/mL	± 50 µg/mL
Butylbenzyl phthalate	85-68-7	2000 µg/mL	98%	2000 µg/mL	± 50 µg/mL
Carbazole	86-74-8	2000 µg/mL	95%	2009 µg/mL	± 50 µg/mL
Di-n-butyl phthalate	84-74-2	2000 µg/mL	99%	2020 µg/mL	± 50 µg/mL
Di-n-octyl phthalate	117-84-0	2000 µg/mL	98%	2000 µg/mL	± 50 µg/mL
Diethyl phthalate	84-66-2	2000 µg/mL	99.5%	2002 µg/mL	± 50 µg/mL
Dimethyl phthalate	131-11-3	2000 µg/mL	99%	2006 µg/mL	± 50 µg/mL
Hexachlorobenzene	118-74-1	2000 µg/mL	99%	2003 µg/mL	± 50 µg/mL
Hexachlorobutadiene	87-68-3	2000 µg/mL	97%	2003 µg/mL	± 50 µg/mL
Hexachlorocyclopentadiene	77-47-4	2000 µg/mL	99%	2003 µg/mL	± 50 µg/mL
Hexachloroethane	67-72-1	2000 µg/mL	98%	2003 µg/mL	± 50 µg/mL
Isophorone	78-59-1	2000 µg/mL	97%	2003 µg/mL	± 50 µg/mL
N-Nitrosodi-n-propylamine	621-64-7	2000 µg/mL	98%	2000 µg/mL	± 50 µg/mL
N-Nitrosodiphenylamine	86-30-6	2000 µg/mL	97%	2001 µg/mL	± 50 µg/mL
Nitrobenzene	98-95-3	2000 µg/mL	99%	2001 µg/mL	± 50 µg/mL
Pyridine	110-86-1	2000 µg/mL	99%	2004 µg/mL	± 50 µg/mL
N-Nitrosodimethylamine	62-75-9	2000 µg/mL	97%	2000 µg/mL	± 50 µg/mL

K004542

Certificate of Reference Material

Catalog Number: ECS-A-030

Description: Base/Neutrals Mix 1

Matrix: Methylene Chloride

Lot No. AA210126005

Manufactured Date: 1-26-2021

Expiration Date: 1-26-2024

Final Solution Verification:

Final solution integrity verified by Gas Chromatography/Mass Spectrometry. The mass spectrum of each compound was confirmed against the NIST mass spectral database.

† Certified concentration based on gravimetric weights and corrected for the purity of the compound(s) used to prepare the standard. Analytical balance calibration is verified daily with C1 weight set #23-190006 which is registered with Atlantic Scale, and traceable to NIST and NJ Division of Weights and Measures.

This CRM is guaranteed stable and accurate to within the uncertainty listed for the certified value. This includes uncertainty components due to preparation, homogeneity, short term and long term stability. During the stated period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution. For further information, contact the Sales Support Department at crmsales@spexcsp.com.

Date of Certification: 1-26-2021

Certifying Officer: Shannon Nave

Report of Certification

Catalog Number: ECS-A-030 **Lot No.** AA210126005

Description: Base/Neutrals Mix 1

Matrix: Methylene Chloride

Manufactured Date: 1-26-2021

Expiration Date: 1-26-2024

This Certified Reference Material (CRM) has been prepared and certified under an ISO 9001:2008, ISO 17025:2005, and ISO Guide 34:2009 Quality System consistent with the following standards:

- ISO 9001:2008: Quality management systems - Requirements - Certified by UL-DQS
- ISO 17025:2005: General Requirements for the Competence of Testing and Calibration Laboratories - Accredited by A2LA
- ISO Guide 34:2009: General Requirements for the Competence of Reference Material Producers - Accredited by A2LA
- ISO Guide 31:2000: Reference Materials - Contents of Certificates and Labels
- ISO Guide 35:2006: Reference Materials - General and statistical principals for certification
- Guide to the Expression of Uncertainty in Measurement 1997
- EURACHEM/CITAC Guide: Qualifying Uncertainty in Analytical Measurements - Second Edition
- ASTM Guide D6362-98
- NIST Technical Note 1297
- ILAC-G12-2000: Guidelines for the requirements for the competence of reference material producers
- ISO/REMCO N280

Storage Requirements:

To ensure the stability of the product once it arrives in your laboratory, please store this product in a refrigerator (2°C to 8°C). Note: Shipping conditions may differ from storage conditions. The EXPIRATION DATE is calculated from the MANUFACTURED DATE using our stability data and is applicable only if the product is unopened and stored under the prescribed conditions.

Instructions for Use:

Let material come to room temperature before use. Check for precipitate and if necessary sonicate for one minute. If compounds do not dissolve after one minute then sonicate further until the product is dissolved. A clear appearance is acceptable. The minimum recommended amount that should be removed from this vial is 5µL with a 25µL gas tight syringe. All solutions should be thoroughly mixed, by shaking, prior to use. All surfaces that come in contact with the solution must be thoroughly cleaned prior to use. Dilutions should be performed only with Class A volumetric glassware.

Material Source:

All analytes and matrix materials are obtained and verified by SPEX CertiPrep from pre-qualified vendors as per ISO guidelines. Vendor identifications are proprietary, however sources of all materials used in the preparation and testing of SPEX CertiPrep CRMs are tracked and documented. For assistance, please contact sales support at crmsales@spexcsp.com.

Method of Preparation:

Clean laboratory procedures and techniques have been used throughout the preparation. All materials, equipment, and analytical instrumentation have been qualified prior to use. The highest purity solvents and Class A / calibrated volumetrics have been been used in all preparations.

Homogeneity:

The homogeneity of this CRM has been confirmed by procedures consistent with ISO 17025:2005, ISO Guide 34:2009, and ASTM D6362-98 Appendix X2. Random, replicate samples of the final, packaged material have been analyzed to prove homogeneity in accordance with our internal procedure 4300-HOMOGEN-1A. This is consistent with the intended use of this CRM. The Degree of Homogeneity, as expressed as maximum between-bottle variation, is 1.2%

Statistical Estimator and Confidence Limits:

The Certified value 'X' as listed on the reverse of this document is at the 95% level of confidence and can be expressed as:

- $X = x \pm U$ where X=certified value, U=expanded uncertainty, x=property value
- $U = ku_c$ where k=2 is the coverage factor at the 95% confidence level
- u_c = combined standard uncertainty obtained by combining the individual compound standard uncertainty components u_i where $u_c = \sqrt{\sum u_i^2}$

Legal Notice:

SPEX CertiPrep Certified Reference Materials are not for any cosmetic, drug, or household application and are to be used only by qualified individuals who are trained in appropriate procedures. No claims against SPEX CertiPrep of any kind whatsoever, whether based on breech of warranty, alleged negligence, or otherwise, with respect to this Reference Material shall be greater than the purchase price. In no event shall SPEX CertiPrep be liable for any loss of profits or any incidental, special, or consequential damages.

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Accredited to 17025 & Guide 34 ISO Certified to 9001

Agilent

Certificate of Analysis

Product Name: 1-Methylnaphthalene Standard

Product Number: EPA-1225-1 **Lot Issue Date:** 19-Jul-2021

Lot Number: 0006624769 **Expiration Date:** 31-Jul-2023

Description:
This analytical reference material (RM) was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	Concentration ± Uncertainty
1-methylnaphthalene	000090-12-0	RM07712	999.3 ± 5.0 µg/mL

Matrix: methanol (methyl alcohol)

Storage Conditions: Store at Room Temperature (15° to 30°C).

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This RM was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Intended Use:
This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Hazards:
Refer to the Safety Data Sheet on www.agilent.com for information regarding this RM.

Expiration of Certification:
The certification of this RM is valid until the expiration date specified above, provided the RM is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the RM is damaged, contaminated, or otherwise modified.

Maintenance of Certification:
If substantive changes are noted that affect the certification before the expiration of this certificate, Agilent will notify the purchaser.

K004543
1-Methylnaphthalene
Solvent / Lot: MEOH
Prep: 5/11/2022 by JZ
Exp: 7/31/2023
Location:

5/11/22

Sample lot approver:
Monica Bourgeois
QMS Representative

ANAB ACCREDITED ISO17034 REFERENCE MATERIAL PRODUCER
ISO 17034 Cert
No. AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026
Page: 1 of 1
www.agilent.com/quality/
CSD-QA-015.1

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY
ISO 17025 Cert
No. AT-1937

Agilent

Certificate of Analysis

Product Name: Toxic Substances Standard

Product Number: US-104N-1 **Lot Issue Date:** 02-Jul-2021

Lot Number: 0006620643 **Expiration Date:** 31-Jul-2023

Description:
This analytical reference material (RM) was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	Concentration ± Uncertainty
aniline	000062-53-3	RM12853	2005 ± 10 µg/mL
benzyl alcohol	000100-51-6	RM10547	2004 ± 10 µg/mL
4-chloroaniline	000106-47-8	RM01886	2002 ± 10 µg/mL
dibenzofuran	000132-64-9	RM02077	2002 ± 10 µg/mL
2-methylnaphthalene	000091-57-6	RM01258	2006 ± 10 µg/mL
2-nitroaniline	000088-74-4	RM02402	2003 ± 10 µg/mL
3-nitroaniline	000099-09-2	RM02424	2003 ± 10 µg/mL
4-nitroaniline	000100-01-6	RM02425	2003 ± 10 µg/mL

Matrix: methylene chloride (dichloromethane)

Storage Conditions: Store at Room Temperature (15° to 30°C).

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This RM was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Intended Use:
This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

K004544
toxic sub mix#2
Solvent / Lot: methylene chloride
Prep: 5/11/2022 by JZ
Exp: 7/31/2023
Location:

05/11/22

ANAB ACCREDITED ISO17034 REFERENCE MATERIAL PRODUCER
ISO 17034 Cert No. AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026

www.agilent.com/quality/
CSD-QA-015.1

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY
ISO 17025 Cert No. AT-1937

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31493 **Lot No.:** A0181243

Description : CLP 04.1 BNA Surrogate Mix

CLP 04.1 BNA Surrogate Mix 1000-1500 µg/mL, Methylene Chloride, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : October 31, 2025 **Storage:** 10°C or colder

Handling: Sonicate prior to use. **Ship:** Ambient

05/11/22

K004545
CLP 04.1 BNA SURR MIX
Solvent / Lot: AO175316
Prep: 5/11/2022 by JZ
Exp: 10/20/2025
Location:

Elution Order	Compound	Gr (weig					
1	2-Fluorophenol **CAS #** 367-12-4 (Lot STBJ2508) **Purity** 99%	1,50				µg/mL	Stressed
				+/-	53.3632	µg/mL	Stressed
2	Phenol-d6 **CAS #** 13127-88-3 (Lot PR-31262) **Purity** 99%	1,506.0	µg/mL	+/-	8.9452	µg/mL	Gravimetric
				+/-	43.9882	µg/mL	Unstressed
				+/-	53.3632	µg/mL	Stressed
3	2-Chlorophenol-d4 **CAS #** 93951-73-6 (Lot PR-30568) **Purity** 99%	1,510.0	µg/mL	+/-	8.9689	µg/mL	Gravimetric
				+/-	44.1050	µg/mL	Unstressed
				+/-	53.5049	µg/mL	Stressed
4	1,2-Dichlorobenzene-d4 **CAS #** 2199-69-1 (Lot PR-32542/022621DB1 **Purity** 99%	1,004.0	µg/mL	+/-	5.9635	µg/mL	Gravimetric
				+/-	29.3255	µg/mL	Unstressed
				+/-	35.5754	µg/mL	Stressed
5	Nitrobenzene-d5 **CAS #** 4165-60-0 (Lot PR-29940A) **Purity** 99%	1,008.0	µg/mL	+/-	5.9872	µg/mL	Gravimetric
				+/-	29.4423	µg/mL	Unstressed
				+/-	35.7172	µg/mL	Stressed
6	2-Fluorobiphenyl **CAS #** 321-60-8 (Lot 19169) **Purity** 99%	1,006.0	µg/mL	+/-	5.9753	µg/mL	Gravimetric
				+/-	29.3839	µg/mL	Unstressed
				+/-	35.6463	µg/mL	Stressed
7	2,4,6-Tribromophenol **CAS #** 118-79-6 (Lot MKCJ7664) **Purity** 99%	1,506.0	µg/mL	+/-	8.9452	µg/mL	Gravimetric
				+/-	43.9882	µg/mL	Unstressed
				+/-	53.3632	µg/mL	Stressed

Certificate of Analysis

phenova Certified Reference Materials | A Phenomenex Company

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Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.:	AL0-101246	**Lot Number:**	CL17953
Description:	Benzoic Acid	**Certification Date:**	January 31, 2022
Storage:	4 °C	**Expiration Date:**	January 31, 2032
Provided As:	1 mL in 2 mL Ampoule in Methylene Chloride		

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Benzoic acid	65-85-0	2000	± 2.714%

K004603
Benzoic Acid @2000ug/ml
Solvent / Lot: N/A
Prep: 5/13/2022 by JZ
Exp: 1/31/2032
Location: GC

5/13/22

ACCREDITED
Reference Material Producer
Certicate No. 2427.02

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ACCREDITED
Chemical Testing Laboratory
Certicate No. 2427.03

IL64691018 us

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Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101244
Description: Benzidines Standard
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Methylene Chloride

Lot Number: CL17662
Certification Date: December 2, 2021
Expiration Date: November 30, 2031

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Benzidine	92-87-5	2000	± 0.211%
3,3'-Dichlorobenzidine	91-94-1	2000	± 1.305%

K004604
Benzidines std @2000ug/ml
Solvent / Lot: MeCl2
Prep: 5/13/2022 by JZ
Exp: 11/30/2031
Location: GC

5/13/22

ACCREDITED
Reference Material Producer
Certicate No. 2427.02

phenova Certified Reference Materials | A Phenomenex Company

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ACCREDITED
Chemical Testing Laboratory
Certicate No. 2427.03

IL64591018_us

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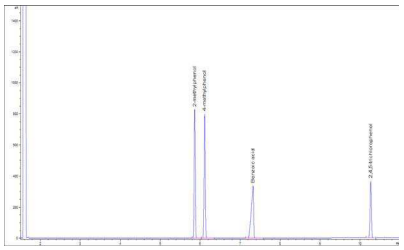
Certificate of Analysis - Certified Reference Material

EPA TCL Hazardous Substances Mix 1

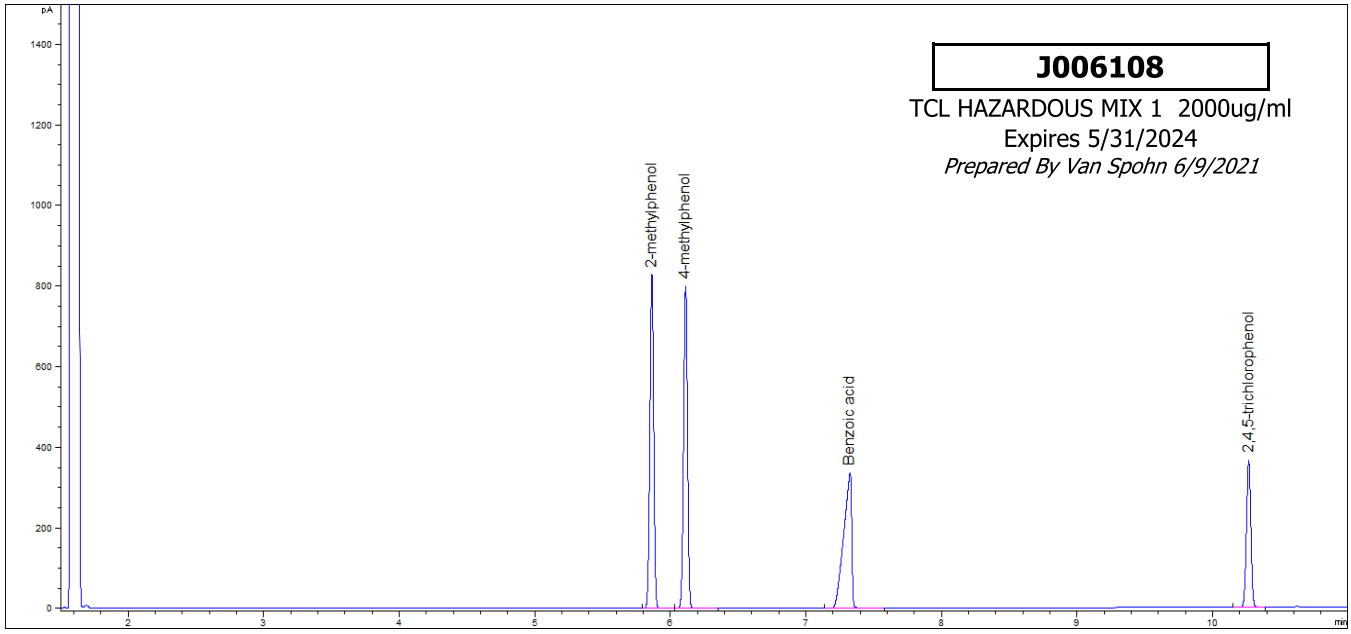
Product no.: 48907
Lot no.: LRAC9610
Expiry Date: May 2024
Manufacturing Date: May 2021
Storage: Refrigerate
Solvent/Matrix: DICHLOROMETHANE
Certificate version: LRAC9610.01 *(Note: Certificates may be updated due to the availability of new data. Check our website at: www.sigma-aldrich.com for the most current version.)*



Certified Values:

Analyte	*Certified Value*	*Units*	*Raw Material Purity,%*	*Elution order*	*Raw Material Lot*
2-METHYLPHENOL CAS# 95-48-7	2004 ± 9	µg/mL	99.0	1	G1735A
4-METHYLPHENOL CAS# 106-44-5	2004 ± 13	µg/mL	98.9	2	06921MG
BENZOIC ACID CAS# 65-85-0	2012 ± 6	µg/mL	99.9	3	LC16514
2,4,5-TRICHLOROPHENOL CAS# 95-95-4	2003 ± 6	µg/mL	99.9	4	JS00008

Informational Values:



Additional Information:
Analytical Method Parameters:
Column: Equity-5, 30 m × 0.53 mm I.D., 1.5 µm film thickness (Column #98)
Carrier Gas: H2, Flow: 4.5 mL/min
Inlet Temperature: 170 °C, Injection Volume: 1 µL
Injection Mode: Split, Split Ratio: 20:1

Sigma-Aldrich RTC, 2931 Soldier Springs Rd. Laramie, WY 82070, USA;
Tel. 1 307-742-5452; Fax 1 855-831-9211; www.sigmaaldrich.com
Sigma-Aldrich RTC is a subsidiary of Merck KGaA, Darmstadt, Germany.

Temperature Program: 80 °C @ 10 °C/min to 190 °C (Hold 5 min)
Detector: FID
Detector Temperature: 310 °C

Metrological traceability: Traceable to the SI and higher order standards from NIST through an unbroken chain of comparisons. The balance used to weigh raw materials is accurate to +/-0.0001 g and calibrated regularly using mass standards traceable to NIST. All dilutions were performed gravimetrically. Additionally, individual analytes are traceable to NIST SRMs where available and specified above.

Measurement method: Where applicable, the assigned value is based on a purity determination by mass balance and gravimetrically prepared value.

Intended use: Intended for R&D and Analytical Use only. Not for drug, household or other uses.

Packaging: 1 mL in amber ampule

Instructions for handling and correct use: Use on the as is basis. The internal pressure of the container may be slightly different from the atmospheric pressure at the user`s location. Open slowly and carefully to avoid dispersion of the material.

Health and safety information: All chemical reference materials should be considered potentially hazardous and should be used only by qualified laboratory personnel. Please refer to the Safety Data Sheet for detailed information about the nature of any hazard and appropriate precautions to be taken.

Accreditation: Sigma-Aldrich RTC is accredited by the US accreditation authority ANAB as a registered reference material producer AR-1470 in accordance with ISO 17034.

Certificate issue date: 20-May-2021

Andy Ommen - QC Manager

Mark Pooler - QA Supervisor

Details on metrological traceability: This standard has been gravimetrically prepared using balances that have been fully qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error. Fill volume to predetermined specifications is gravimetrically verified throughout the dispensing process using qualified and calibrated balances. Further traceability to a corresponding Primary Standard may be achieved through a direct comparison assay. Where a Primary Standard is available, the assay value will be included in the specified section of the COA.

Associated uncertainty: Ucrm - Uncertainty values in this document are expressed as Expanded Uncertainty (Ucrm) corresponding to the 95% confidence interval. Ucrm is derived from the combined standard uncertainty multiplied by the coverage factor k, which is obtained from a *t*-distribution and degrees of freedom. The components of combined standard uncertainty include the uncertainties due to characterization, homogeneity, long term stability, and short term stability (transport). The components due to stability are generally considered to be negligible unless otherwise indicated by stability studies. The mathematical representation of the Ucrm calculation is as follows:

$$u_{CRM} = \sqrt{u_{char}^2 + u_{\text{hom}\ ogeneity}^2 + u_{stability}^2}$$

Homogeneity assessment: Homogeneity was assessed in accordance with ISO Guide 35. Completed units were sampled using a random stratified sampling protocol. The results of chemical analysis were then compared by Single Factor Analysis of Variance (ANOVA). The uncertainty due to homogeneity was derived from the ANOVA. Heterogeneity was not detected under the conditions of the ANOVA.

Stability assessment: Significance of the stability assessment will be demonstrated if the analytical result of the study and the range of values represented by the Expanded Uncertainty do not overlap the result of the original assay and the range of its values represented by the Expanded Uncertainty. The method employed will usually be the same method used to characterize the assay value in the initial

Certificate of analysis revision history:

Certificate version	Date	Reason for version
LRAC9610.01	20-May-2021	Original Release Date

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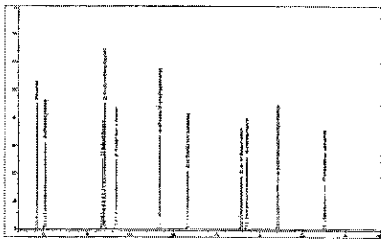
Certificate of Analysis - Certified Reference Material

EPA TCL Phenols Mix

Product no.: 48904
Lot no.: LRAD0139
Expiry Date: July 2024
Manufacturing Date: July 2021
Storage: REFRIGERATE
Solvent/Matrix: DICHLOROMETHANE
Certificate version: LRAD0139.01 *(Note: Certificates may be updated due to the availability of new data. Check our website at: www.sigma-aldrich.com for the most current version.)*



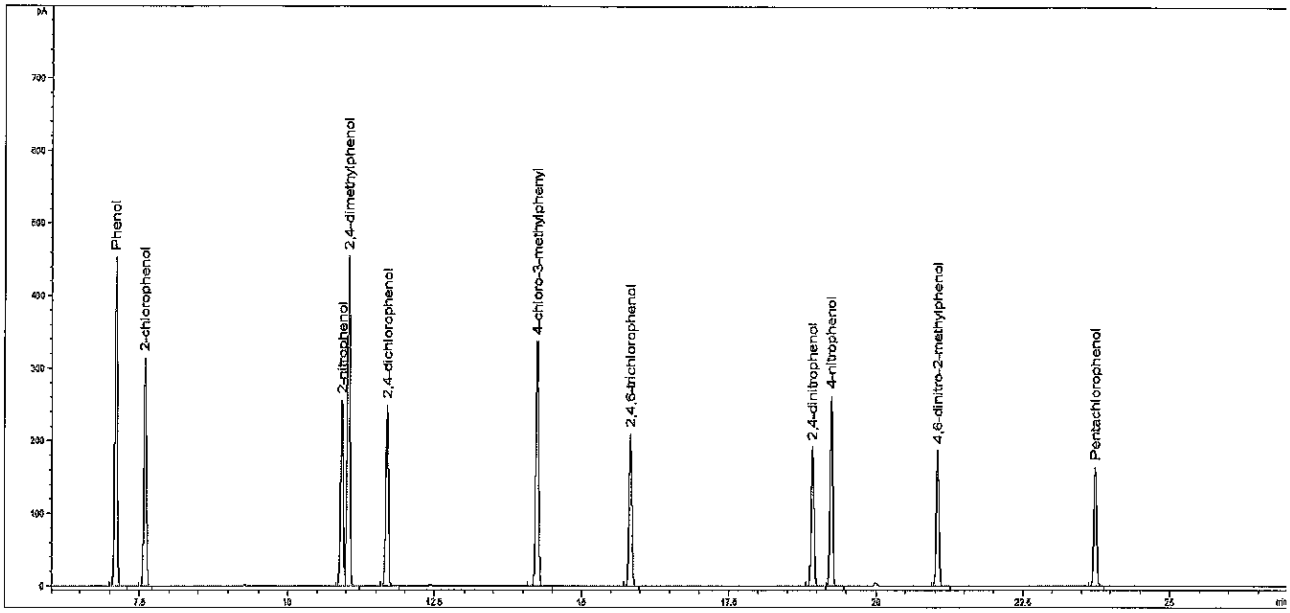
Certified Values:

Analyte	*Certified Value*	*Units*	*Raw Material Purity,%*	*Raw Material Lot*
2-CHLOROPHENOL CAS# 95-57-8	2001 ± 25	µg/mL	99.9	STBG3033V
2-NITROPHENOL CAS# 88-75-5	1999 ± 18	µg/mL	99.3	15905BB
2,4-DIMETHYLPHENOL CAS# 105-67-9	2000 ± 14	µg/mL	99.2	05421CO
2,4-DICHLOROPHENOL CAS# 120-83-2	2000 ± 17	µg/mL	99.5	03221TN
4-CHLORO-3-METHYLPHENOL CAS# 59-50-7	2000 ± 5	µg/mL	99.9	JS00013
2,4,6-TRICHLOROPHENOL CAS# 88-06-2	2002 ± 5	µg/mL	99.5	04212PS
2,4-DINITROPHENOL CAS# 51-28-5	2000 ± 28	µg/mL	66.9	STBJ5751
4-NITROPHENOL CAS# 100-02-7	2000 ± 33	µg/mL	99.0	04628LT
2-METHYL-4,6-DINITROPHENOL CAS# 534-52-1	2000 ± 27	µg/mL	99.7	LC18338
PENTACHLOROPHENOL CAS# 87-86-5	1999 ± 25	µg/mL	97.9	MKCD2150

ASSAY Method

J013597
TCL Phenols Mix 2000ug/ml
Solvent / Lot: LRAD0139
Prep: 12/30/2021 by VS
Exp: 7/31/2024
Location:

Sigma-Aldrich RTC, 2931 Soldier Springs Rd. Laramie, WY 82070, USA;
Tel. 1 307-742-5452; Fax 1 855-831-9211; www.sigmaaldrich.com
Sigma-Aldrich RTC is a subsidiary of Merck KGaA, Darmstadt, Germany.



METHOD: GC (Bellefonte Method)

Column: SPB-5, 30 m × 0.53 mm I.D., 1.5 µm film thickness
Carrier Gas: H_2 Flow Rate: 4.5 mL/min
Inlet Temperature: 200 °C Injection Volume: 1.0 µL
Injection Mode: 25:1
Temperature Program: 80 °C (Hold 2 min) @ 6 °C/min to 260 °C (Hold 5 min)
Detector: FID Temperature: 310 °C

Elution details:

EO	RT(MIN)	ANALYTE
1	7.095	Phenol
2	7.585	2-chlorophenol
3	10.925	2-nitrophenol
4	11.037	2,4-dimethylphenol
5	11.696	2,4-dichlorphenol
6	14.242	4-chloro-3-m3thylphenol
7	15.842	2,4,6-trichlorophenol
8	18.93	2,4-dinitrophenol
9	19.25	4-nitrophenol
10	21.05	4,6-dinitro-2-methylphenol
11	23.752	Pentachlorophenol

Metrological traceability: Traceable to the SI and higher order standards from NIST through an unbroken chain of comparisons. The balance used to weigh raw materials is accurate to +/-0.0001 g and calibrated regularly using mass standards traceable to NIST. All dilutions were performed gravimetrically. Additionally, individual analytes are traceable to NIST SRMs where available and specified above.

Measurement method: Where applicable, the assigned value is based on a purity determination by mass balance and gravimetrically prepared value.

Intended use: Intended for R&D and Analytical Use only. Not for drug, household or other uses.

Packaging: 1 mL in amber ampule

Instructions for handling and correct use: Use on the as is basis. The internal pressure of the container may be slightly different from the atmospheric pressure at the user`s location. Open slowly and carefully to avoid dispersion of the material.

Health and safety information: All chemical reference materials should be considered potentially hazardous and should be used only by qualified laboratory personnel. Please refer to the Safety Data Sheet for detailed information about the nature of any hazard and appropriate precautions to be taken.

Accreditation: Sigma-Aldrich RTC is accredited by the US accreditation authority ANAB as a registered reference material producer AR-1470 in accordance with ISO 17034.

Certificate issue date: 12-Jul-2021

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Andy Ommen - QC Manager

Mark Pooler - QA Supervisor

Details on metrological traceability: This standard has been gravimetrically prepared using balances that have been fully qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error. Fill volume to predetermined specifications is gravimetrically verified throughout the dispensing process using qualified and calibrated balances. Further traceability to a corresponding Primary Standard may be achieved through a direct comparison assay. Where a Primary Standard is available, the assay value will be included in the specified section of the COA.

Associated uncertainty: Ucrm - Uncertainty values in this document are expressed as Expanded Uncertainty (Ucrm) corresponding to the 95% confidence interval. Ucrm is derived from the combined standard uncertainty multiplied by the coverage factor k, which is obtained from a *t*-distribution and degrees of freedom. The components of combined standard uncertainty include the uncertainties due to characterization, homogeneity, long term stability, and short term stability (transport). The components due to stability are generally considered to be negligible unless otherwise indicated by stability studies. The mathematical representation of the Ucrm calculation is as follows:

$$u_{CRM} = \sqrt{u_{char}^2 + u_{hom\ ogeneity}^2 + u_{stability}^2}$$

Homogeneity assessment: Homogeneity was assessed in accordance with ISO Guide 35. Completed units were sampled using a random stratified sampling protocol. The results of chemical analysis were then compared by Single Factor Analysis of Variance (ANOVA). The uncertainty due to homogeneity was derived from the ANOVA. Heterogeneity was not detected under the conditions of the ANOVA.

Stability assessment: Significance of the stability assessment will be demonstrated if the analytical result of the study and the range of values represented by the Expanded Uncertainty do not overlap the result of the original assay and the range of its values represented by the Expanded Uncertainty. The method employed will usually be the same method used to characterize the assay value in the initial

Certificate of analysis revision history:

Certificate version	Date	Reason for version
LRAD0139.01	12-Jul-2021	Original Release Date

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K007194
CLP 04.1 BNA SURR MIX
Solvent / Lot: AO187400
Prep: 8/5/2022 by VS
Exp: 4/30/2026
Location:

Certificate of Analysis

IAL

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31493 **Lot No.:** A0187400

Description : CLP 04.1 BNA Surrogate Mix

CLP 04.1 BNA Surrogate Mix 1000-1500 µg/mL, Methylene Chloride, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : April 30, 2026 **Storage:** 10°C or colder

Handling: Sonicate prior to use. **Ship:** Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	2-Fluorophenol **CAS #** 367-12-4 (Lot STBJ3299) **Purity** 99%	1,508.0 µg/mL	+/- 8.9571 µg/mL +/- 44.0466 µg/mL +/- 53.4340 µg/mL	Gravimetric Unstressed Stressed
2	Phenol-d6 **CAS #** 13127-88-3 (Lot SL210831) **Purity** 99%	1,510.0 µg/mL	+/- 8.9689 µg/mL +/- 44.1050 µg/mL +/- 53.5049 µg/mL	Gravimetric Unstressed Stressed
3	2-Chlorophenol-d4 **CAS #** 93951-73-6 (Lot PR-30568) **Purity** 99%	1,512.0 µg/mL	+/- 8.9808 µg/mL +/- 44.1635 µg/mL +/- 53.5758 µg/mL	Gravimetric Unstressed Stressed
4	1,2-Dichlorobenzene-d4 **CAS #** 2199-69-1 (Lot PR-32597) **Purity** 99%	1,004.0 µg/mL	+/- 5.9635 µg/mL +/- 29.3255 µg/mL +/- 35.5754 µg/mL	Gravimetric Unstressed Stressed
5	Nitrobenzene-d5 **CAS #** 4165-60-0 (Lot PR-29940A) **Purity** 99%	1,004.0 µg/mL	+/- 5.9635 µg/mL +/- 29.3255 µg/mL +/- 35.5754 µg/mL	Gravimetric Unstressed Stressed
6	2-Fluorobiphenyl **CAS #** 321-60-8 (Lot 00021384) **Purity** 99%	1,004.0 µg/mL	+/- 5.9635 µg/mL +/- 29.3255 µg/mL +/- 35.5754 µg/mL	Gravimetric Unstressed Stressed
7	2,4,6-Tribromophenol **CAS #** 118-79-6 (Lot MKCJ7664) **Purity** 99%	1,502.0 µg/mL	+/- 8.9214 µg/mL +/- 43.8714 µg/mL +/- 53.2214 µg/mL	Gravimetric Unstressed Stressed

8	p-Terphenyl-d14		1,002.0	µg/mL	+/-	5.9516	µg/mL	Gravimetric
	CAS # 1718-51-0	(Lot PR-30504)			+/-	29.2671	µg/mL	Unstressed
	Purity 99%				+/-	35.5046	µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Tech Tips:
Due to the limited solubility of p-terphenyl-d14 in methanol, we do not recommend that this mixture be diluted in methanol.

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

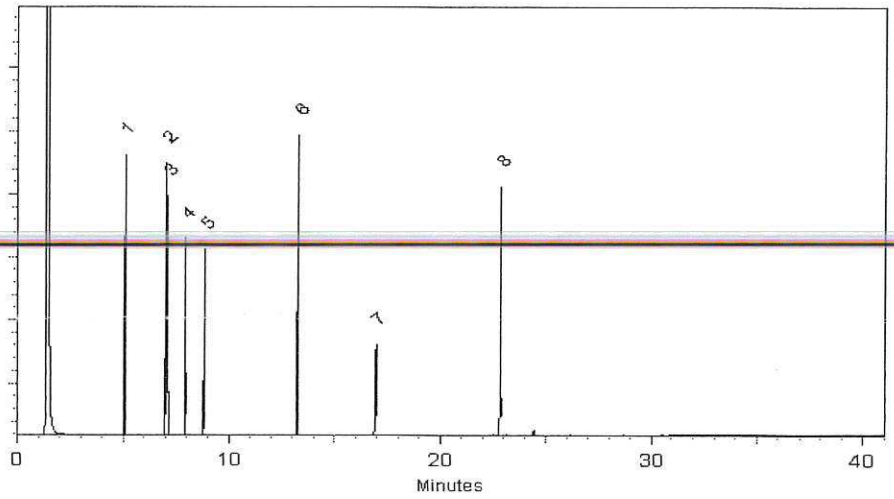
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Bryan Snyder - Operations Tech I

Date Mixed: 17-Jul-2022 **Balance:** 1128353505

Christie Mills - Operations Tech II - ARM QC

Date Passed: 21-Jul-2022

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.

Certificate of Analysis

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ■ Tel: 303-940-0033 ■ Fax: 303-940-0043 ■ info@phenova.com
Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101444
Description: 8270 Calibration Standard
Storage: -18 °C
Provided As: 1 mL in 2 mL Ampoule in MeCl2/Methanol (97:3)

Lot Number: CL18355
Certification Date: July 25, 2022
Expiration Date: August 31, 2023

K007995
SVOA-8270 LCS MIX 1000ug/ml
Solvent / Lot: N/A
Prep: 8/29/2022 by JZ
Exp: 8/31/2023
Location: FREEZER 44

Aaron Dukes, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Acenaphthene	83-32-9	1000	± 0.300%
Acenaphthylene	208-96-8	1000	± 0.225%
Anthracene	120-12-7	1000	± 6.858%
Azobenzene	103-33-3	1000	± 0.224%
Benzo(a)anthracene	56-55-3	1000	± 0.247%
Benzo(a)pyrene	50-32-8	1000	± 0.270%
Benzo(b)fluoranthene	205-99-2	1000	± 0.635%
Benzo(k)fluoranthene	207-08-9	1000	± 0.682%
Benzo(g,h,i)perylene	191-24-2	1000	± 0.272%
Benzyl alcohol	100-51-6	1000	± 0.231%
Benzyl butyl phthalate	85-68-7	1000	± 0.480%
bis(2-Chloroethoxy)methane	111-91-1	1000	± 0.479%
bis(2-Chloroethyl) ether	111-44-4	1000	± 0.479%
bis(2-Chloroisopropyl) ether	108-60-1	1000	± 0.550%
bis(2-Ethylhexyl) adipate	103-23-1	1000	± 0.479%
bis(2-Ethylhexyl) phthalate	117-81-7	1000	± 0.479%
4-Bromophenyl phenyl ether	101-55-3	1000	± 0.479%
Carbazole	86-74-8	1000	± 0.146%

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Catalog No.: AL0-101444
Lot Number: CL18355
Description: 8270 Calibration Standard
Certification Date: July 25, 2022
Storage: -18 °C
Expiration Date: August 31, 2023
Provided As: 1 mL in 2 mL Ampoule in MeCl2/Methanol (97:3)

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
4-Chloroaniline	106-47-8	1000	± 0.300%
4-Chloro-3-methylphenol	59-50-7	1000	± 0.545%
2-Chloronaphthalene	91-58-7	1000	± 0.224%
2-Chlorophenol	95-57-8	1000	± 0.507%
4-Chlorophenyl phenyl ether	7005-72-3	1000	± 0.479%
Chrysene	218-01-9	1000	± 0.145%
Dibenz(a,h)anthracene	53-70-3	1000	± 1.058%
Dibenzofuran	132-64-9	1000	± 0.302%
Di-n-butyl phthalate	84-74-2	1000	± 0.518%
1,2-Dichlorobenzene	95-50-1	1000	± 0.247%
1,3-Dichlorobenzene	541-73-1	1000	± 0.225%
1,4-Dichlorobenzene	106-46-7	1000	± 0.224%
2,4-Dichlorophenol	120-83-2	1000	± 0.545%
Diethyl phthalate	84-66-2	1000	± 0.518%
2,4-Dimethylphenol	105-67-9	1000	± 0.507%
Dimethyl phthalate	131-11-3	1000	± 0.518%
1,2-Dinitrobenzene	528-29-0	1000	± 0.361%
1,3-Dinitrobenzene	99-65-0	1000	± 0.300%
1,4-Dinitrobenzene	100-25-4	1000	± 0.242%
2,4-Dinitrophenol	51-28-5	1000	± 0.545%
2,4-Dinitrotoluene	121-14-2	1000	± 1.128%

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Certified Reference Material

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Catalog No.: AL0-101444
Lot Number: CL18355
Description: 8270 Calibration Standard
Certification Date: July 25, 2022
Storage: -18 °C
Expiration Date: August 31, 2023
Provided As: 1 mL in 2 mL Ampoule in MeCl2/Methanol (97:3)

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
2,6-Dinitrotoluene	606-20-2	1000	± 0.224%
Di-n-octyl phthalate	117-84-0	1000	± 0.486%
Fluoranthene	206-44-0	1000	± 0.224%
Fluorene	86-73-7	1000	± 0.224%
Hexachlorobenzene	118-74-1	1000	± 0.152%
Hexachlorobutadiene	87-68-3	1000	± 0.746%
Hexachlorocyclopentadiene	77-47-4	1000	± 0.153%
Hexachloroethane	67-72-1	1000	± 0.300%
Indeno(1,2,3-cd)pyrene	193-39-5	1000	± 0.883%
Isophorone	78-59-1	1000	± 0.145%
2-Methyl-4,6-dinitrophenol	534-52-1	1000	± 0.508%
1-Methylnaphthalene	90-12-0	1000	± 0.479%
2-Methylnaphthalene	91-57-6	1000	± 0.487%
2-Methylphenol	95-48-7	1000	± 0.545%
3-Methylphenol	108-39-4	500	± 0.279%
4-Methylphenol	106-44-5	500	± 0.399%
Naphthalene	91-20-3	1000	± 0.226%
2-Nitroaniline	88-74-4	1000	± 0.224%
3-Nitroaniline	99-09-2	1000	± 0.235%
4-Nitroaniline	100-01-6	1000	± 0.300%
Nitrobenzene	98-95-3	1000	± 0.300%

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Catalog No.: AL0-101444
Lot Number: CL18355
Description: 8270 Calibration Standard
Certification Date: July 25, 2022
Storage: -18 °C
Expiration Date: August 31, 2023
Provided As: 1 mL in 2 mL Ampoule in MeCl2/Methanol (97:3)

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
2-Nitrophenol	88-75-5	1000	± 0.514%
4-Nitrophenol	100-02-7	1000	± 0.519%
N-Nitrosodimethylamine	62-75-9	1000	± 0.503%
N-Nitrosodiphenylamine	86-30-6	1000	± 0.476%
N-Nitrosodi-n-propylamine	621-64-7	1000	± 0.461%
Pentachlorophenol	87-86-5	1000	± 0.202%
Phenanthrene	85-01-8	1000	± 0.145%
Phenol	108-95-2	1000	± 0.545%
Pyrene	129-00-0	1000	± 0.147%
Pyridine	110-86-1	1000	± 0.503%
2,3,4,6-Tetrachlorophenol	58-90-2	1000	± 0.247%
2,3,5,6-Tetrachlorophenol	935-95-5	1000	± 0.247%
1,2,4-Trichlorobenzene	120-82-1	1000	± 0.224%
2,4,5-Trichlorophenol	95-95-4	1000	± 0.507%
2,4,6-Trichlorophenol	88-06-2	1000	± 0.509%

Notes: The proper chemical name for Bis(2-Chloroiospropyl) ether is 2,2'-oxybis(1-chloropropane). The analytical uncertainty contribution to the expanded uncertainty for 3 and 4-Methylphenol is measured as the total of the two analytes. N-Nitrosodiphenylamine presents as Diphenylamine at 854 µg/mL.

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1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO 17034[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

   Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
[3] ISO 17034 – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

Supelco®

www.sigmaaldrich.com

Certificate of Composition - Analytical Standard

BASE STOCK

Product no.: 22523051
Lot no.: LRAD2751
Expiry Date: June 2024
Manufacturing Date: June 2022
Storage: REFRIGERATE
Solvent/Matrix: DICHLOROMETHANE
Certificate version: LRAD2751.01 (*Note: Certificates may be updated due to the availability of new data. Check our website at:* www.sigma-aldrich.com *for the most current version.)*

Analyte	*Assigned Value*	*Units*	*Raw Material Purity,%*	*Raw Material Lot*
3,3'-DICHLOROBENZIDINE, 100MG, NEAT CAS# 91-94-1	799	µg/mL	99.8	LRAD2376
2,4-DINITROTOLUENE CAS# 121-14-2	801	µg/mL	97.8	LB46632
2,6-DINITROTOLUENE CAS# 606-20-2	800	µg/mL	99.2	11231AN
HEXACHLOROCYCLOPENTADIENE CAS# 77-47-4	800	µg/mL	96.0	LB95525
N-NITROSODIMETHYLAMINE CAS# 62-75-9	800	µg/mL	95.0	2019-030598 5
PERYLENE CAS# 198-55-0	200	µg/mL	99.6	04101PG
ANILINE CAS# 62-53-3	800	µg/mL	99.9	LA41596
4-CHLOROANILINE CAS# 106-47-8	800	µg/mL	100.0	MKBZ6909V
2-NITROANILINE CAS# 88-74-4	799	µg/mL	99.9	07411KN
3-NITROANILINE CAS# 99-09-2	800	µg/mL	99.9	LC09264
4-NITROANILINE CAS# 100-01-6	800	µg/mL	99.9	15609AA
PYRIDINE (LOW WATER) CAS# 110-86-1	800	µg/mL	100.0	SHBJ9218

Measurement method: Where applicable, the assigned value is based on a purity determination by mass balance and gravimetrically prepared value.

Intended use: Intended for R&D and Analytical Use only. Not for drug, household or other uses.

Packaging: 1 mL in amber ampule

Instructions for handling and correct use: Use on the as is basis. The internal pressure of the container may be slightly different from the atmospheric pressure at the user`s location. Open slowly and carefully to avoid dispersion of the material.

Sigma-Aldrich RTC, 2931 Soldier Springs Rd. Laramie, WY 82070, USA;
Tel. 1 307-742-5452; Fax 1 855-831-9211; www.sigmaaldrich.com
Sigma-Aldrich RTC is a subsidiary of Merck KGaA, Darmstadt, Germany.

Health and safety information: All chemical reference materials should be considered potentially hazardous and should be used only by qualified laboratory personnel. Please refer to the Safety Data Sheet for detailed information about the nature of any hazard and appropriate precautions to be taken.

Certificate issue date: 03 JUN 2022

Andy Ommen - QC Manager

Scott Stetler - QA Manager

Certificate of analysis revision history:

Certificate version	Date	Reason for version
LRAD2751.01	03 JUN 2022	Original Release Date

Disclaimer: The purchaser is required to determine the suitability of this product for any particular application. Sigma-Aldrich RTC makes no warranty of any kind, express or implied, other than its products meet all quality control standards set by Sigma-Aldrich RTC. We do not guarantee that the product can be used for any particular application.

Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SC1150B

ORGANIC ANALYSIS DATA SHEET
EPA 8081B

Laboratory:	Analytical Resources, LLC			SDG:	23B0276
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23B0276-01RE1 A	File ID:	23032454.D
Sampled:	12/14/22 09:03	Prepared:	03/08/23 11:36	Analyzed:	03/25/23 07:46
% Solids:	62.57	Preparation:	EPA 3546 (Microwave)	Initial/Final:	19.65 g Wet / 2.5 mL
Batch:	BLC0155	Sequence:	SLC0442	Calibration:	FL00041
Instrument:	ECD6	Column 1:	STX-CLP	Column 2:	STX-CLPII

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
118-74-1	Hexachlorobenzene	2	1	0.51	0.15	0.51	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*2*	*8.1335*	*5.08*	*62.5*	*30 - 160*	
Tetrachlorometaxylene	*2*	*8.1335*	*4.22*	*51.8*	*30 - 160*	

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230324.b/23032454.D
Data file 2: /20230324.b/B20230324.b/23032454.D
Method: \20230324.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: 23B0276-01
Client ID:
Injection Date: 25-MAR-2023 07:46
Report Date: 03/28/2023 10:51
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
----			----			0.00	0.00	---	alpha-BHC
----			----			0.00	0.00	---	beta-BHC
----			----			0.00	0.00	---	delta-BHC
----			----			0.00	0.00	---	gamma-BHC (Lindane)
----			----			0.00	0.00	---	Heptachlor
----			----			0.00	0.00	---	Aldrin
----			----			0.00	0.00	---	Heptachlor epoxide b
----			----			0.00	0.00	---	Endosulfan I
----			----			0.00	0.00	---	Dieldrin
----			----			0.00	0.00	---	4,4'-DDE
----			----			0.00	0.00	---	Endrin
----			----			0.00	0.00	---	Endosulfan II
----			----			0.00	0.00	---	4,4'-DDD
----			----			0.00	0.00	---	Endosulfan sulfate
----			----			0.00	0.00	---	4,4'-DDT
----			----			0.00	0.00	---	Methoxychlor
----			----			0.00	0.00	---	Endrin ketone
----			----			0.00	0.00	---	Endrin aldehyde
----			----			0.00	0.00	---	trans-Chlordane
----			----			0.00	0.00	---	cis-Chlordane
----			----			0.00	0.00	---	Hexachlorobutadiene
4.204	-0.012	8445	----			0.81	0.00	---	Hexachlorobenzene
3.847	-0.010	198706	4.166	-0.012	231391	24.96	20.73	18.5	Tetrachloro-m-xylene
9.404	-0.011	108442	10.358	-0.015	126994	25.82	24.99	3.2	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

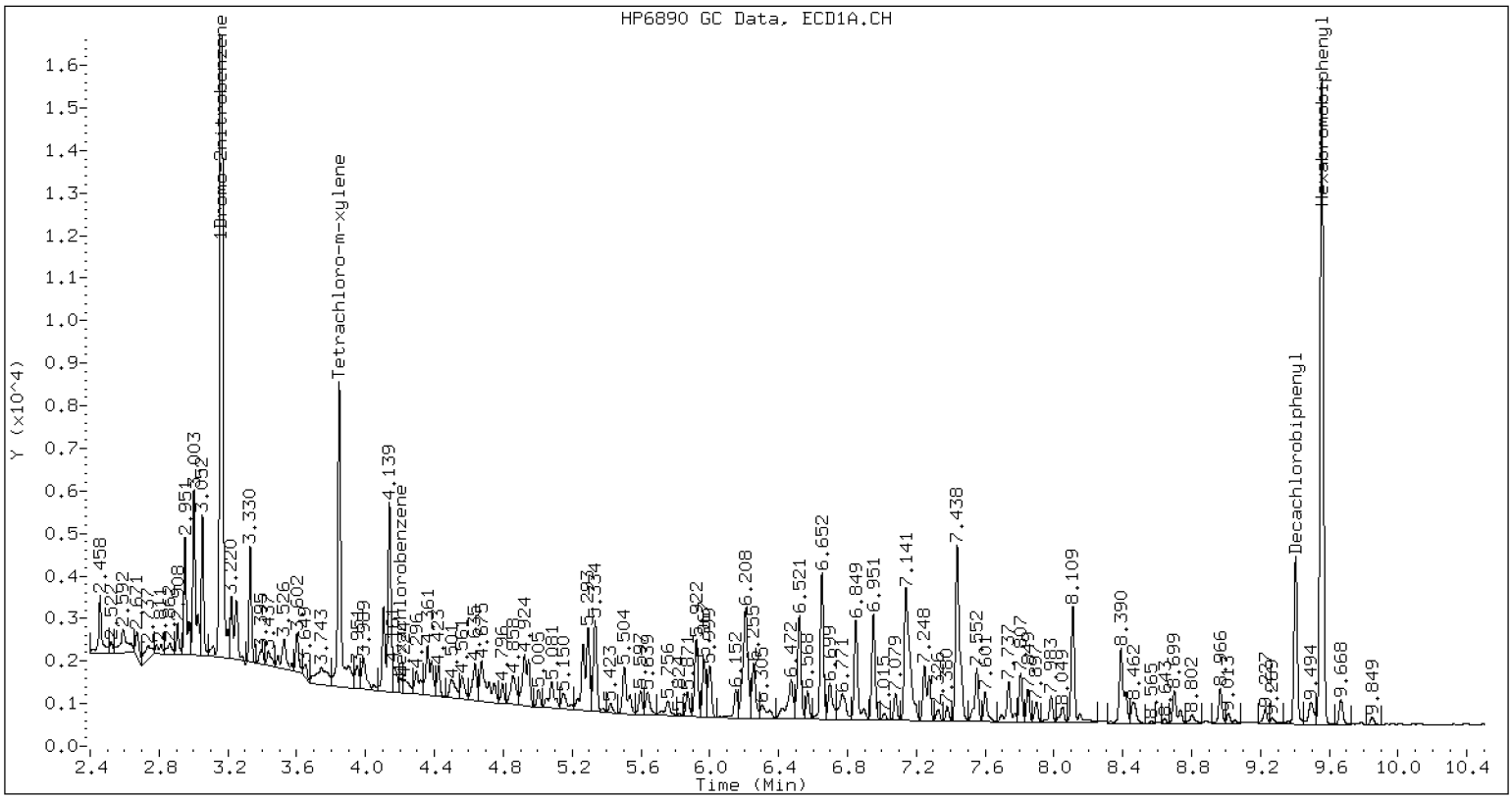
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	585434	-12.9
Hexabromobiphenyl	609723	414577	-32.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	792994	-21.2
Hexabromobiphenyl	769764	459713	-40.3

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

/20230324.b/23032454.D 23B0276-01 STX-CLP 25-MAR-2023 07:46 1ul



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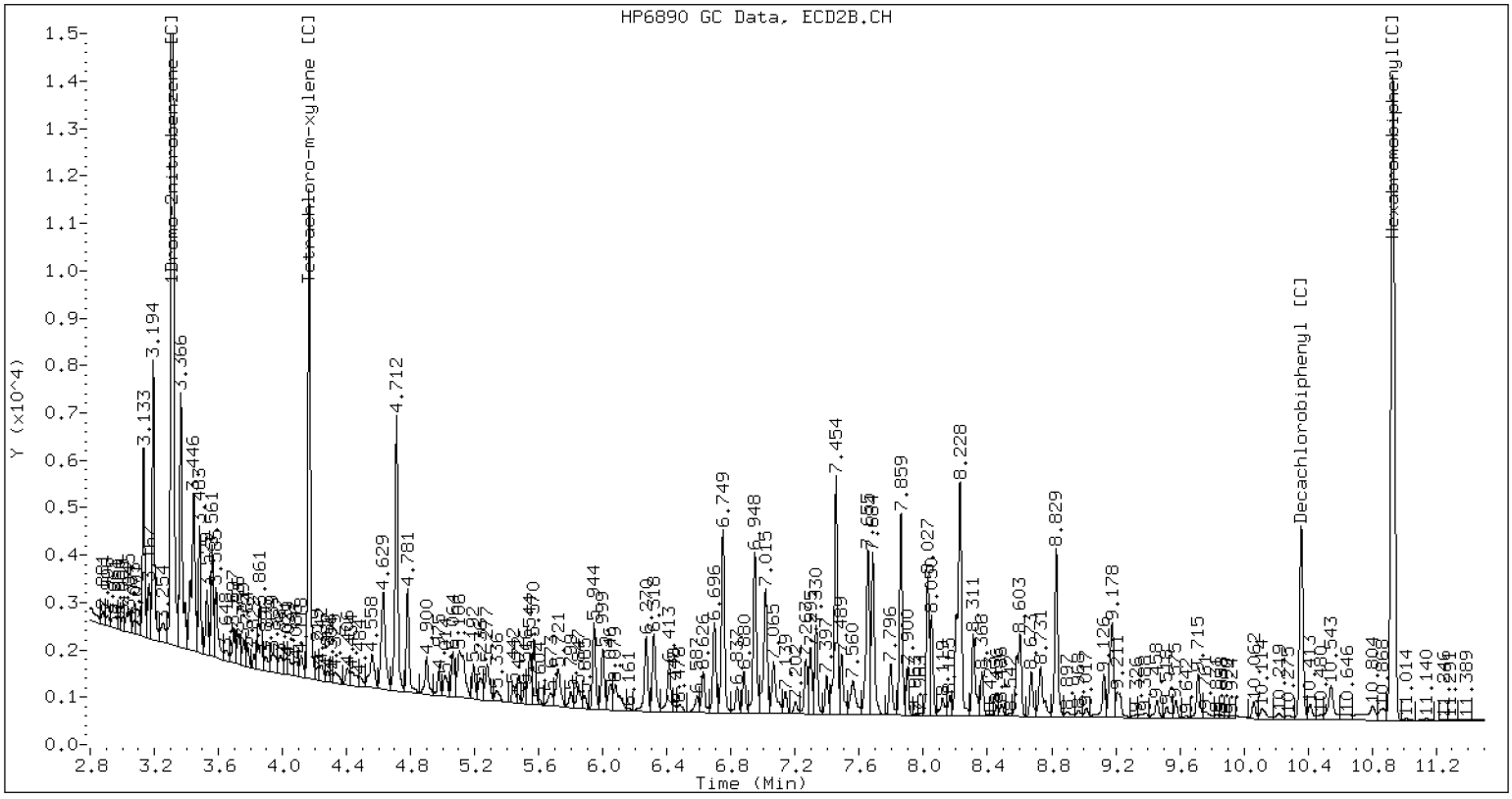
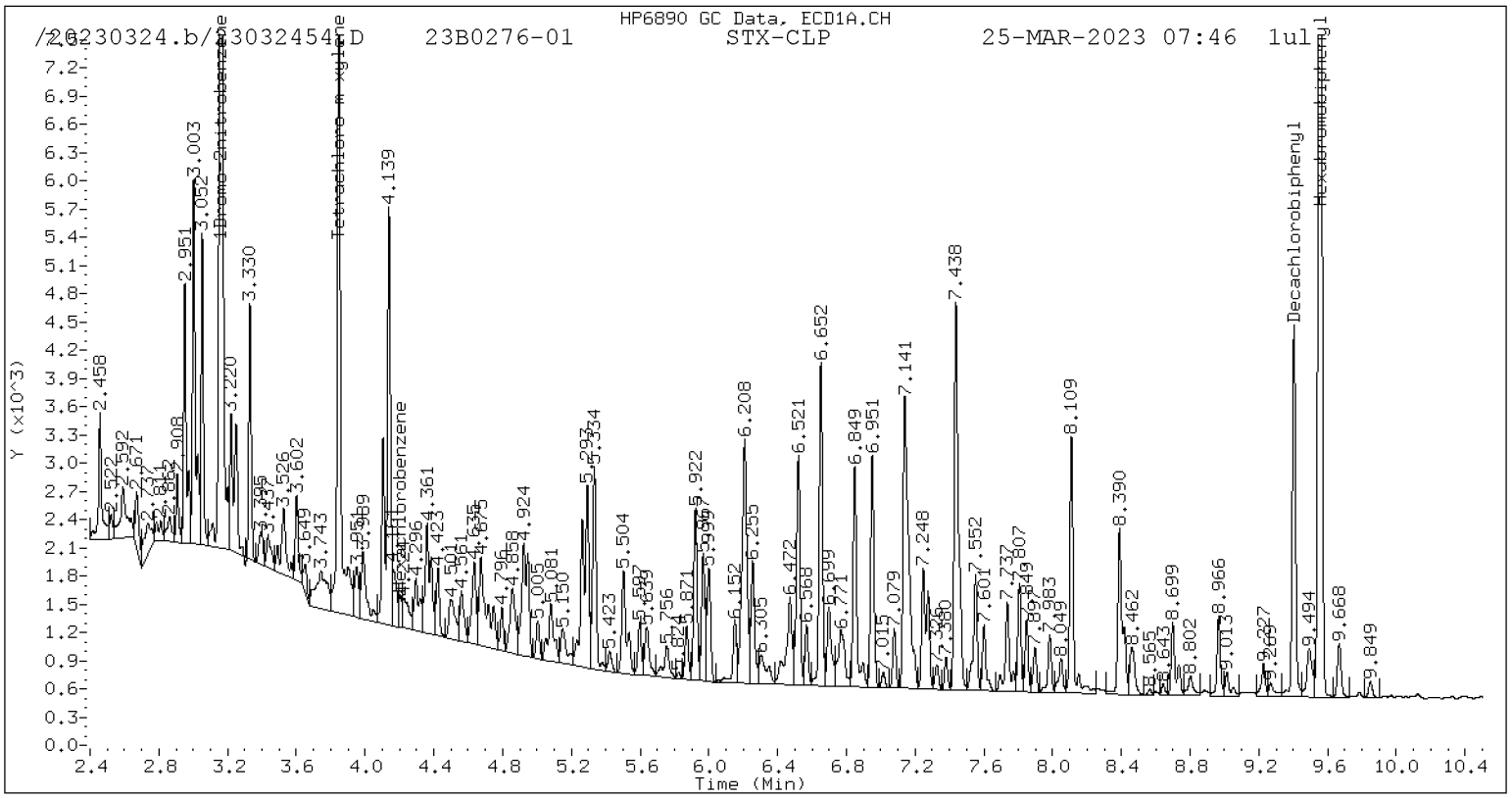
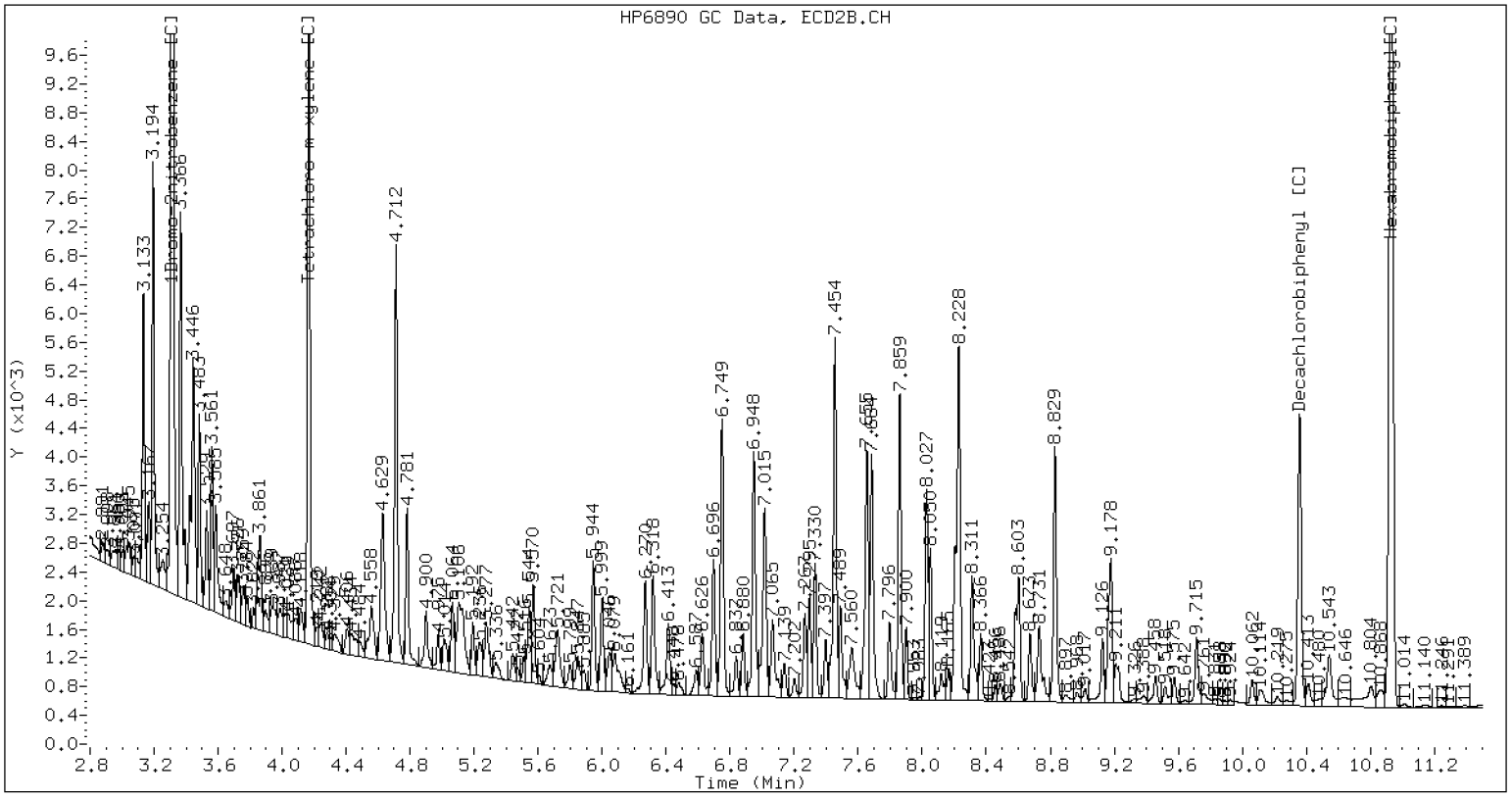


Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: YES

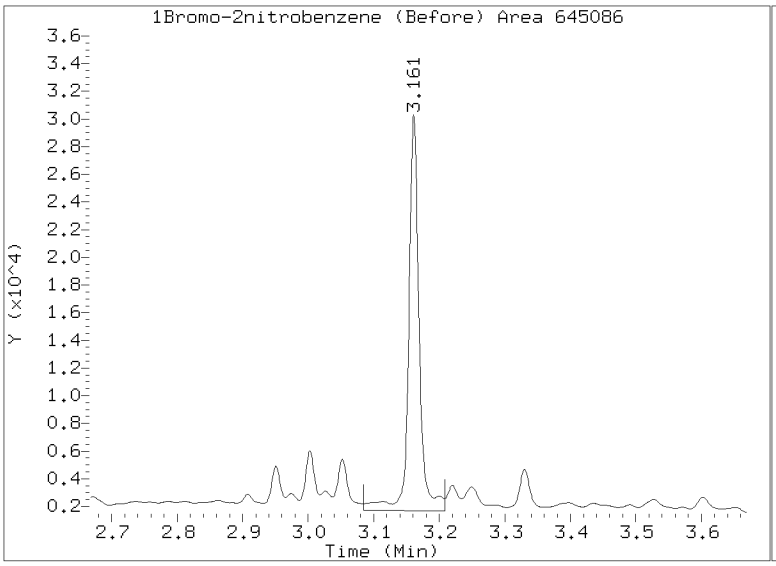
/20230324.b/B20230324.b/23032454.D 23B0276-01 CLP2

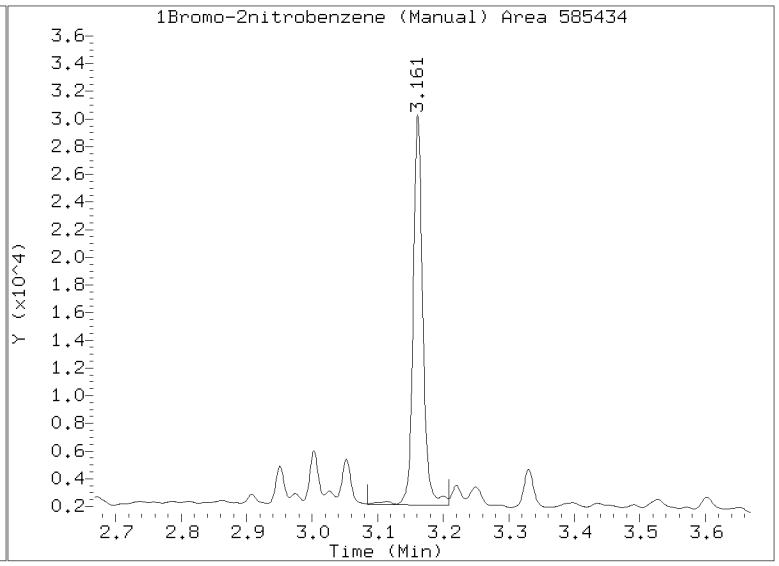


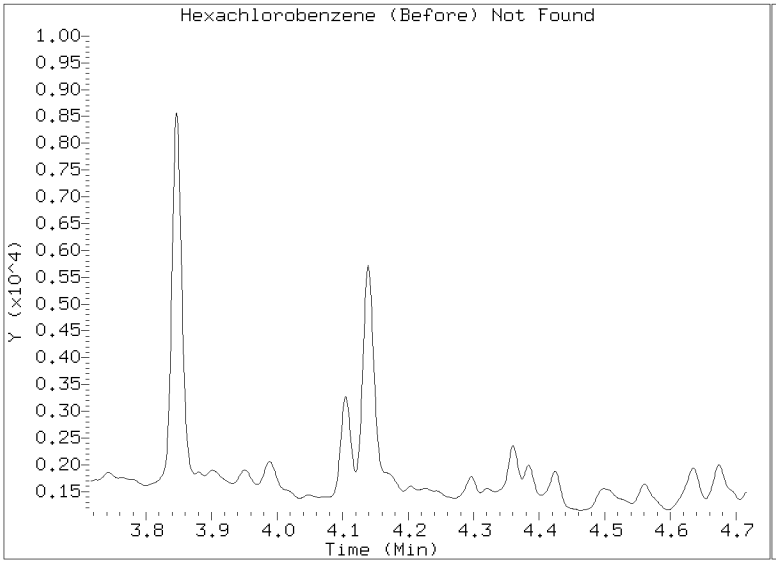
CLP-2 Manual Integration: NO

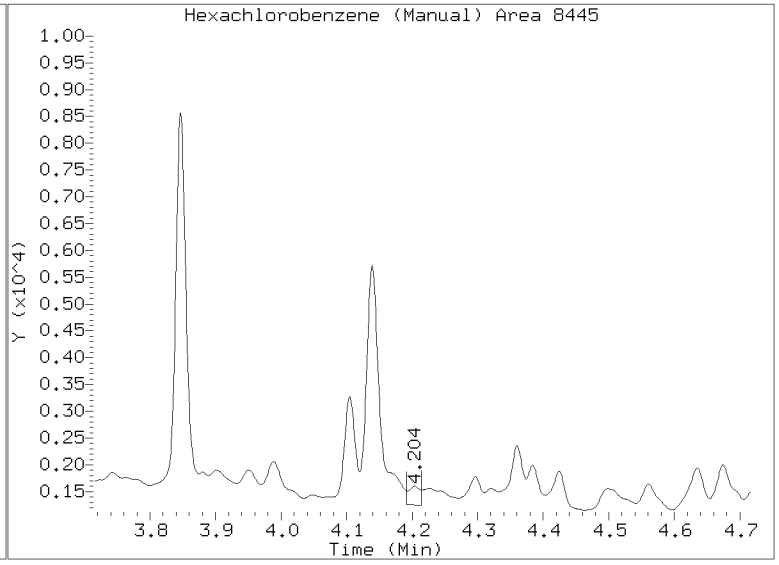
Manual Peak Adjustment Report, STX-CLP

Datafile: /20230324.b/23032454.D
Injection Date: 25-MAR-2023 07:46
Lab ID:23B0276-01 Client ID:
Report Date: 03/28/2023 10:51









PREPARATION BATCH SUMMARY

EPA 8081B

Laboratory: Analytical Resources, LLC SDG: 23B0276

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

Batch: BLB0422 Batch Matrix: Solid Preparation: EPA 3546 (Microwave)

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
Blank	BLB0422-BLK1	062F7101.D	02/17/23 10:59	
LCS	BLB0422-BS1	063F7201.D	02/17/23 10:59	
LCS Dup	BLB0422-BSD1	064F7301.D	02/17/23 10:59	

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLB0422

Prepared using: EPA 3546 (Microwave)

8081B Pest (PSDDA) in Solid (Version:HCB Only)

Matrix: Solid **Date Prepared:** 02/17/23 **Balance ID:** B14646 2614 **Set Up By:** CTO 2/16/23

WO Comments

23B0229: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM H002055, SIM RM H010158, PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)
23B0276: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM H002055, SIM RM H010158, PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H>Please push this to front of LDW line of samples

The following standards may be missing from this batch!

Designator	Description
62	Toxaphene
44	WND
QLS 10	QLS Spike

Analysis: 8081B Pest (PSDDA)

Lab Number & Container	% Solids	Initial (g) Target Dry: 12.5 (Wet) Actual	(REQ) GPC (1:1) 1 2 3	(Yes) / No) Acid Clean 5mL	(REQ) Sulfur C/U 4.5mL+0.5 mL ~~Ethyl Acetate~~	(REQ) Silica Gel C/U (2:5)	Final Effective Vol (mL)	Vol (mL) to Lab	Extraction Comments
23B0229-02 A	56.0	(22.33) 22.38	(1:1)	5mL	5mL	(2:5) 2mL	2.5	1.0	
23B0229-03 A	54.8	(22.81) 22.81	(1:1)	5mL	5mL	(2:5) 2mL	2.5	1.0	
23B0229-04 A	52.2	(23.97) 23.99	(1:1)	5mL	5mL	(2:5) 2mL	2.5	1.0	
23B0229-05 A	44.9	(27.82) 27.87	(1:1)	5mL	5mL	(2:5) 2mL	2.5	1.0	
23B0229-06 A	48.6	(25.71) 25.74	(1:1)	5mL	5mL	(2:5) 2mL	2.5	1.0	
23B0229-08 A	49.7	(25.16) 25.18	(1:1)	5mL	5mL	(2:5) 2mL	2.5	1.0	
23B0276-01 A	63.6	(19.65) 19.65	(1:1)	5mL	5mL	(2:5) 2mL	2.5	1.0	

Batch QC

Lab Number	% Solids	Initial (g) Target Dry: 12.5 (Wet) Actual	(REQ) GPC (1:1) 1 2 3	(Yes) / No) Acid Clean 5mL	(REQ) Sulfur C/U 4.5mL+0.5 mL ~~Ethyl Acetate~~	(REQ) Silica Gel C/U (2:5)	Final Effective Vol (mL)	Vol (mL) to Lab	Extraction Comments
BLB0422-BLK1	100.0	(12.50) 12.50	(1:1)	5mL	5mL	(2:5) 2mL	2.5	1.0	
BLB0422-BS1	100.0	(12.50) 12.50	(1:1)	5mL	5mL	(2:5) 2mL	2.5	1.0	
BLB0422-BSD1	100.0	(12.50) 12.50	(1:1)	5mL	5mL	(2:5) 2mL	2.5	1.0	
BLB0422-MS1	49.7	(25.16) 25.16	(1:1)	5mL	5mL	(2:5) 2mL	2.5	1.0	Use 23B0229-08
BLB0422-MSD1	49.7	(25.16) 25.16	(1:1)	5mL	5mL	(2:5) 2mL	2.5	1.0	Use 23B0229-08

02/17/23 — Client ID verified By — Date

LJ 2/23/23 — Preparation Reviewed By — Date

02/17/23 10:59 — Extraction Date and Time

Printed: 2/16/2023 11:39:03AM

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLB0422

Prepared using: EPA 3546 (Microwave)

8081B Pest (PSDDA) in Solid (Version:HCB Only)

WO Comments

23B0229: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM H002055, SIM RM H010158, PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)
23B0276: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM H002055, SIM RM H010158, PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H>Please push this to front of LDW line of samples

Prep Steps	Reagents Used		
Microwave 1 2 3 CT 2/17/23 Analyst/Date	**Station/Reagent**		**Standard ID**
	Microwave **Analyst:** CT/LJ	**Date:** 2/17/23	
	Hexane		L000889
	80:20 Hexane/Acetone		L000122
	1:1 Hexane/Acetone		L000122
	Neutral Glass Wool		L000350
	Anhydrous Sodium Sulfate		L000128
Pre GPC KD 100°C (No Exchange) 3 4 5 6 LD 2-21 Analyst/Date	**Pre GPC KD** **Analyst:** LD	**Date:** 2-21	
	Hexane		L000889
	Anhydrous Sodium Sulfate		
	Neutral Glass Wool		
TurboVap **Pre GPC** 1 2 3 4 5 LJ 2/21/23 Analyst/Date	**GPC Filter Prep** **Analyst:** LJ	**Date:** 2/21/23	
	Methylene Chloride		I000941
	GPC Filter		L000799
Post GPC KD 80 - 85°C Hexane Exchange (2 X 20 mL) 100°C 1 2 3 4 5 6 LD 2-23 Analyst/Date	**GPC** **Analyst:** NR3	**Date:** 2/21/23	
	Methylene Chloride		I000941
	GPC Calibration File		CLB0132-GPC2
TurboVap **Pre-Cleanups** 1 2 3 4 5 LJ 2/23/23 Analyst/Date	**Post GPC KD** **Analyst:** LD	**Date:** 2-23-23	
	Methylene Chloride		I000941
	Hexane		L000889
TurboVap **Post-Cleanups** 1 2 3 4 5 LD 2/23/23 Analyst/Date	**Vialing** **Analyst:**	**Date:**	
	Hexane		K011373
	Sulfuric Acid		I001033
	Ethyl Acetate		N/A
Vialing LJ 2/23/23	Tetrabutylammonium hydrogensulfate (TBAS)		L001601
	Sodium Sulfite		K010363

Surrogates & Spike Standards Used

Type	Vial ID / Standard ID	Vol uL	Analyst	Witness
Surrogate 2µg/mL	N L000773 (V) Exp Date: 7/21/23	50µL	CT	
Spike (Freezer) 0.5/1/5µg/mL	3 K011471 (V) Exp Date: 6/14/2023	100µL	CT	

MANUALLY ENTER EXPIRATION DATES!

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

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

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLB0422

Prepared using: EPA 3546 (Microwave)

8081B Pest (PSDDA) in Solid (Version:HCB Only)

WO Comments

23B0229: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM H002055, SIM RM H010158, PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)

23B0276: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM H002055, SIM RM H010158, PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H>Please push this to front of LDW line of samples

LJ 2/15/23	Silica Gel (SPE) Darts	LDW084
Analyst/Date		

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLB0422

Prepared using: EPA 3546 (Microwave)

8081B Pest (PSDDA) in Solid (Version:HCB Only)

WO Comments

23B0229: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM H002055, SIM RM H010158, PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)
23B0276: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM H002055, SIM RM H010158, PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H>Please push this to front of LDW line of samples

Prep Instructions	
SPECIAL INSTRUCTIONS: 1. Weigh into beakers-lightly dry with Sodium Sulfate. 2. Transfer to microwave vessels. 3. Add 1:1 Hex/ACE to the vessels (until solvent is 3" above soil layer after homogenization). 4. Add surr/spike. 5. Microwave on appropriate power setting determined by # of samples. 6. After microwave-re-homogenize while hot then let cool 15 min in cold water. Re-homogenize while cool. 7. Decant 1:1 Hex/ACE into Erlenmeyer flask using a funnel containing neutral glasswool. 8. Rinse with Hexane. 9. Microwave a 2nd time using 8:2 Hex/Ace (until solvent is 3" above soil layer after homogenization). 10. Let cool and decant the solvent then empty the soil into the funnel and rinse with Hexane. 11. KD to 5mL at 100°C. (NO HEXANE EXCHANGE). 12. TurboVap 13. GPC 14. After GPC: KD at 80 - 85°C 15. Exchange to Hexane at 100°C 2 x 20 mL). 16. TurboVap. 17. Cleanups, If Acid cleaning do not add Ethyl Acetate for Sulfur Clean. Do Not Acid Clean if Acid liable compounds are requested. 18. Vial in Hexane. A. Need Total Solids Y (N) B. Archive/Freeze (Y) N	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

Extraction Parameter: PEST Extraction Batch: BLB0422

Total Solids Batch: BLB0340 Work Order(s): 23B0229 01-08

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
[X] No Anomalies (standard soil/wet sediment/sand/gravel)= 01-08	VR 2/15/23
[X] Standing Water Decanted (Not shared)= 01-08	VR 2/15/23
[ ] Standing Water Homogenized (Shared samples)=	
[ ] Clay/Clumps (Difficult to homogenize)=	
[ ] Rocks (%+size)?	
[ ] Organics (Leaves/sticks/grass)=	
[ ] Oily, obvious fuel/sulfur odors=	
[ ] Received in 32oz jar(s)=Homogenized in Pyrex dish=	
[X] Previously Frozen = 01-08	VR 2/15/23
[ ] Other (Details)=	
Aqueous:	
[ ] No Anomalies	
[ ] Turbid/Color=	
[ ] Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
[ ] Emulsions (%)=	
[ ] Oily, obvious fuel/sulfur odors=	
[ ] Other (Details)=	
[ ] Received in 1.0L Bottle(s)=No Bottle Rinse=	
[ ] Other Notes/Comments= (Note problems, concerns, corrective actions).	
[X] Share Samples Y / (N)	VR 2/15/23
[X] Multiple Jars Y / (N)	VR 2/15/23
[ ] Sample Pre-Screens indicate analyte activity=	
[ ] Sample weights/volumes reduced based on Pre-Screen=	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

Extraction Parameter: PEST Extraction Batch: BLB0427

Total Solids Batch: BLB0338 Work Order(s): 23B0261, 276

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☒ No Anomalies (standard soil/wet sediment/sand/gravel)= Φ1,04,07,14,13,16,19,22,276=Φ1	YJ Φ2/14/23
☒ Standing Water Decanted (Not shared)= 23B0261 Φ1,04,Φ7,14,13,16,19,22,25,28,31,34	YJ Φ2/14/23
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☒ Oily, obvious fuel/sulfur odors= 276 Φ1.	YJ Φ2/14/23
☐ Received in 32oz jar(s)=Homogenized in Pyrex dish=	
☐ Previously Frozen =	
☒ Other (Details)= Shell pieces = 10.4.0 25, 28, 31, 34.	YJ Φ2/14/23
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
☐ Received in 1.0L Bottle(s)=No Bottle Rinse=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	
☒ Share Samples Y / N	YJ Φ2/14/23
☒ Multiple Jars Y / N	YJ Φ2/14/23
☐ Sample Pre-Screens indicate analyte activity=	
☐ Sample weights/volumes reduced based on Pre-Screen=	

BLA0735/BLB0422 23A0385/523/554/563/23B0229/276 PCB/PEST

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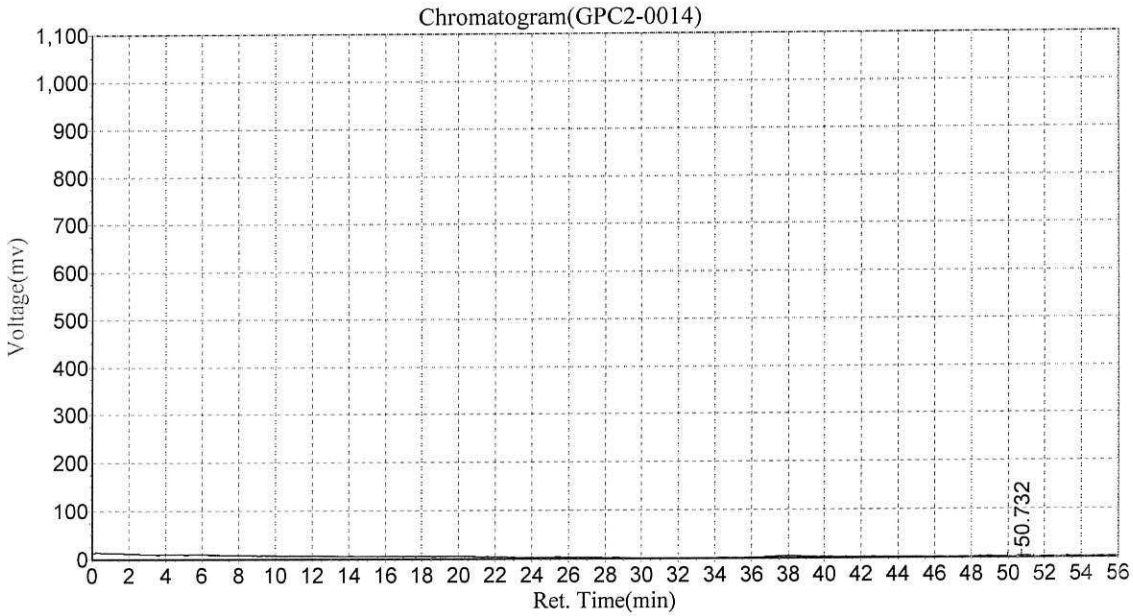
Method File:E:\GPC2_InHouse.mtd

Analyst£°NRB
Date/Time2023-02-22,5:23:03 AM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		50.732	1771.550	115269.297	100.0000
Total			1771.550	115269.297	100.000

Ingredient Table

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

BS1

BLA0735/BLB0422 23A0385/523/554/563/23B0229/276 PCB/PEST

Date:2023-02-22,6:20:46 AM
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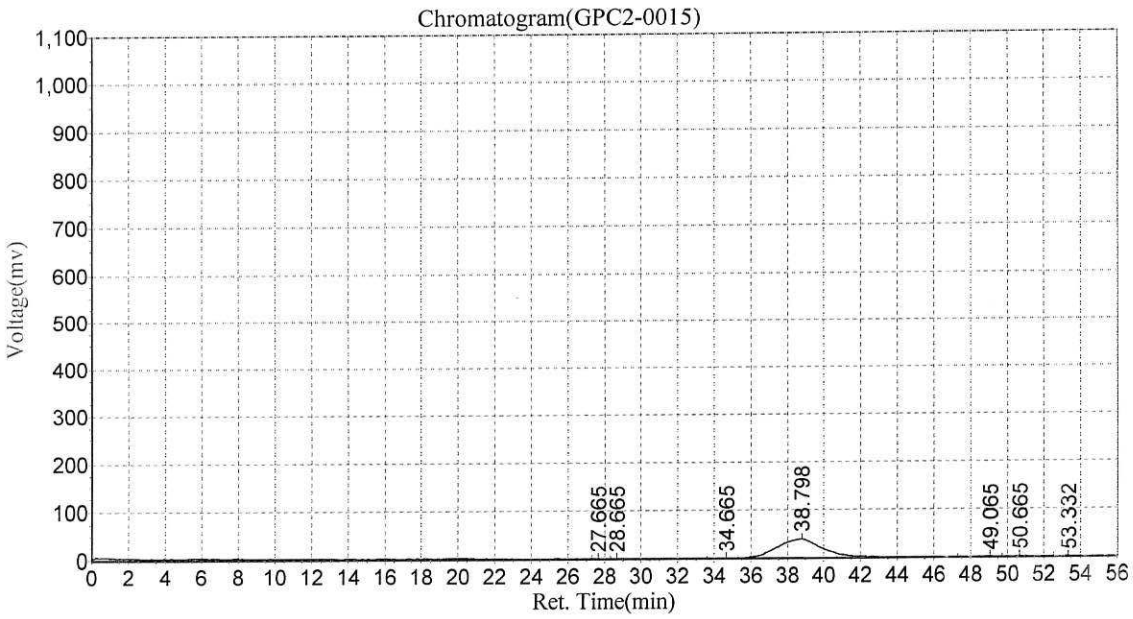
Method File:E:\GPC2_InHouse.mtd

Analyst£°NRB
Date/Time2023-02-22,6:20:46 AM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		27.665	2304.832	113156.570	1.4980
2		28.665	2584.090	142491.813	1.8863
3		34.665	1627.697	106206.992	1.4060
4		38.798	40655.273	6772375.000	89.6518
5		49.065	1670.333	162981.891	2.1575
6		50.665	1972.500	156547.031	2.0723
7		53.332	1594.111	100327.063	1.3281
Total			52408.836	7554086.359	100.000

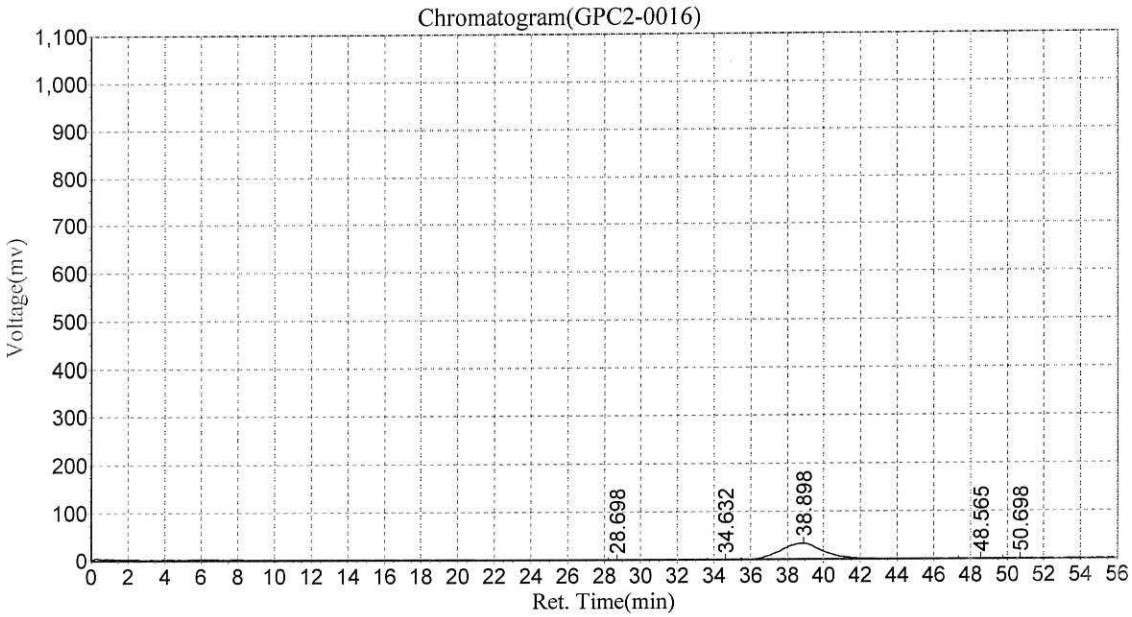
Ingredient Table

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

BLA0735/BLB0422 23A0385/523/554/563/23B0229/276 PCB/PEST

Date:2023-02-22,7:18:28 AM
Data File:c:\n2000\data\gpc2\022123\GPC2-0016
Method File:E:\GPC2_InHouse.mtd

Analyst£ºNRB
Date/Time2023-02-22,7:18:29 AM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		28.698	2519.238	144903.953	2.1584
2		34.632	1616.752	113280.234	1.6874
3		38.898	35351.375	6128889.000	91.2929
4		48.565	1534.656	139620.328	2.0797
5		50.698	1933.377	186743.453	2.7816
Total			42955.398	6713436.969	100.000

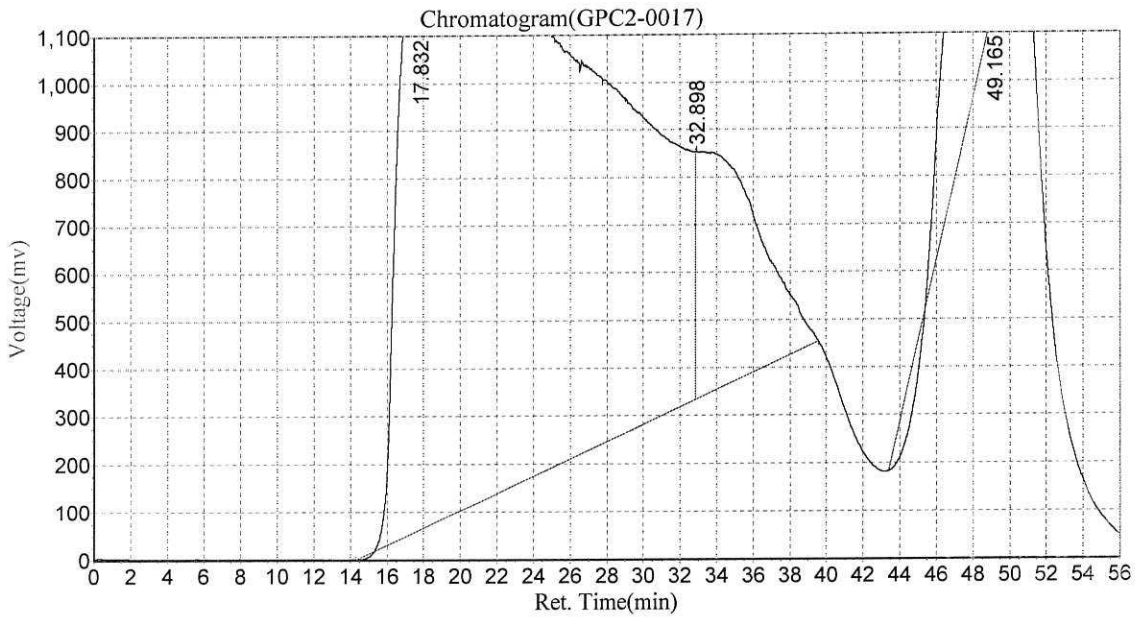
Ingredient Table

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

BLA0735/BLB0422 23A0385/523/554/563/23B0229/276 PCB/PEST

Date:2023-02-22,8:16:12 AM
Data File:c:\n2000\data\gpc2\022123\GPC2-0017
Method File:E:\GPC2_InHouse.mtd

Analyst£ºNRB
Date/Time2023-02-22,8:16:12 AM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		17.832	1185793.250	896898496.000	83.5734
2		32.898	518006.531	118480576.000	11.0401
3		49.165	91419.555	57807876.000	5.3866
Total			1795219.336	1073186948.000	100.000

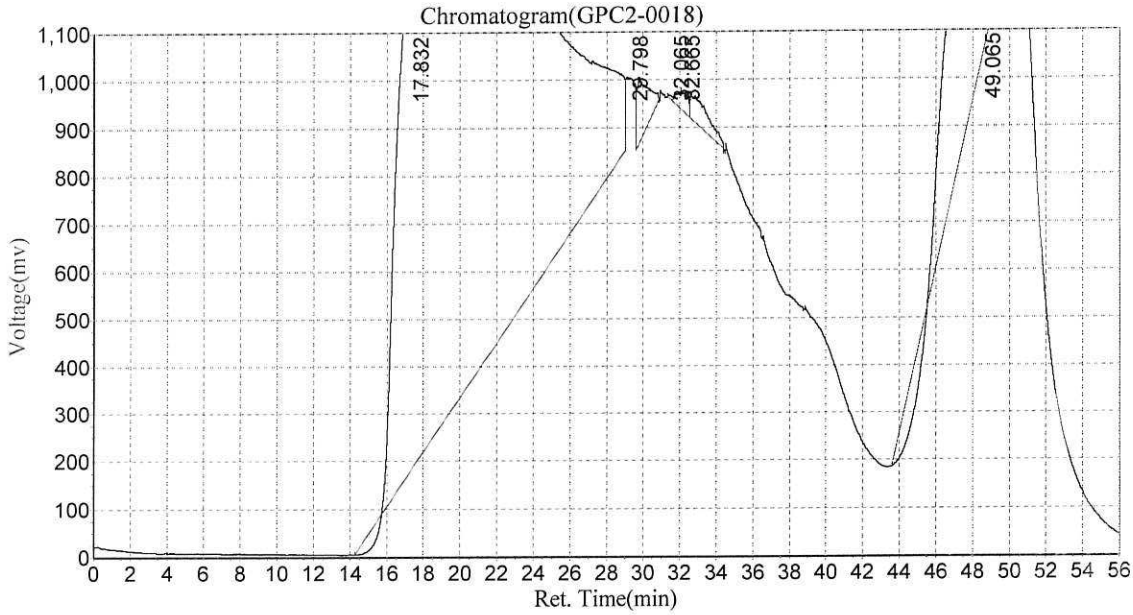
Ingredient Table

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

BLA0735/BLB0422 23A0385/523/554/563/23B0229/276 PCB/PEST

Date:2023-02-22,9:13:54 AM
Data File:c:\n2000\data\gpc2\022123\GPC2-0018
Method File:E:\GPC2_InHouse.mtd

Analyst£ºNRB
Date/Time2023-02-22,9:13:55 AM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		17.832	1040055.938	511775776.000	88.5712
2		29.798	104011.742	4540854.000	0.7859
3		32.065	35709.828	1850083.875	0.3202
4		32.665	54083.871	4230595.500	0.7322
5		49.065	116272.156	55415280.000	9.5905
Total			1350133.535	577812589.375	100.000

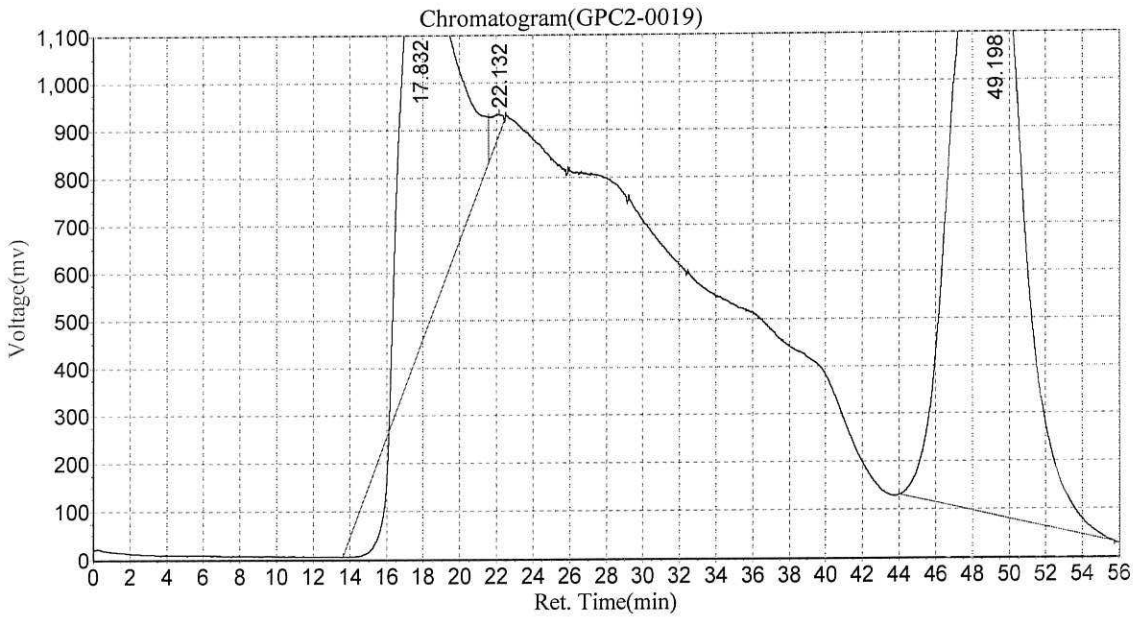
Ingredient Table

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

BLA0735/BLB0422 23A0385/523/554/563/23B0229/276 PCB/PEST

Date:2023-02-22,10:11:39 AM
Data File:c:\n2000\data\gpc2\022123\GPC2-0019
Method File:E:\GPC2_InHouse.mtd

Analyst£ºNRB
Date/Time2023-02-22,10:11:39 AM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		17.832	808521.313	150548736.000	30.9425
2		22.132	45927.684	2948488.750	0.6060
3		49.198	1161927.125	333046304.000	68.4515
Total			2016376.121	486543528.750	100.000

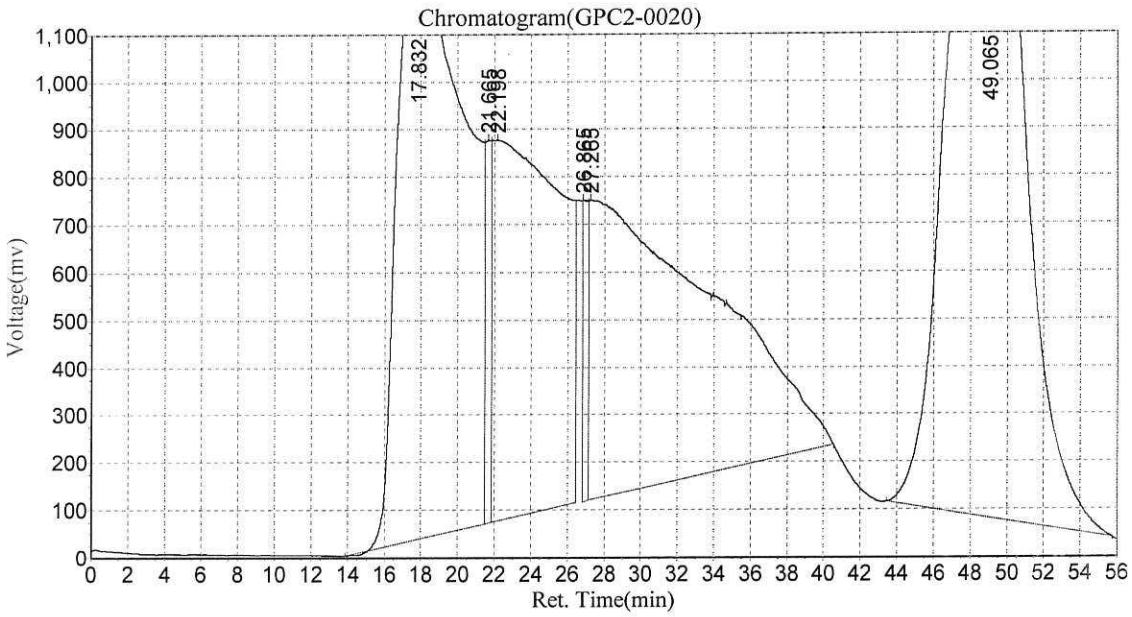
Ingredient Table

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

BLA0735/BLB0422 23A0385/523/554/563/23B0229/276 PCB/PEST

Date:2023-02-22,11:09:21 AM
Data File:c:\n2000\data\gpc2\022123\GPC2-0020
Method File:E:\GPC2_InHouse.mtd

Analyst£°NRB
Date/Time2023-02-22,11:09:21 AM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		17.832	1210169.250	314915200.000	25.7927
2		21.665	803370.313	17632914.000	1.4442
3		22.198	799064.500	199053856.000	16.3032
4		26.865	631565.875	12580913.000	1.0304
5		27.265	627073.000	283255808.000	23.1996
6		49.065	1167305.875	393510496.000	32.2299
Total			5238548.813	1220949187.000	100.000

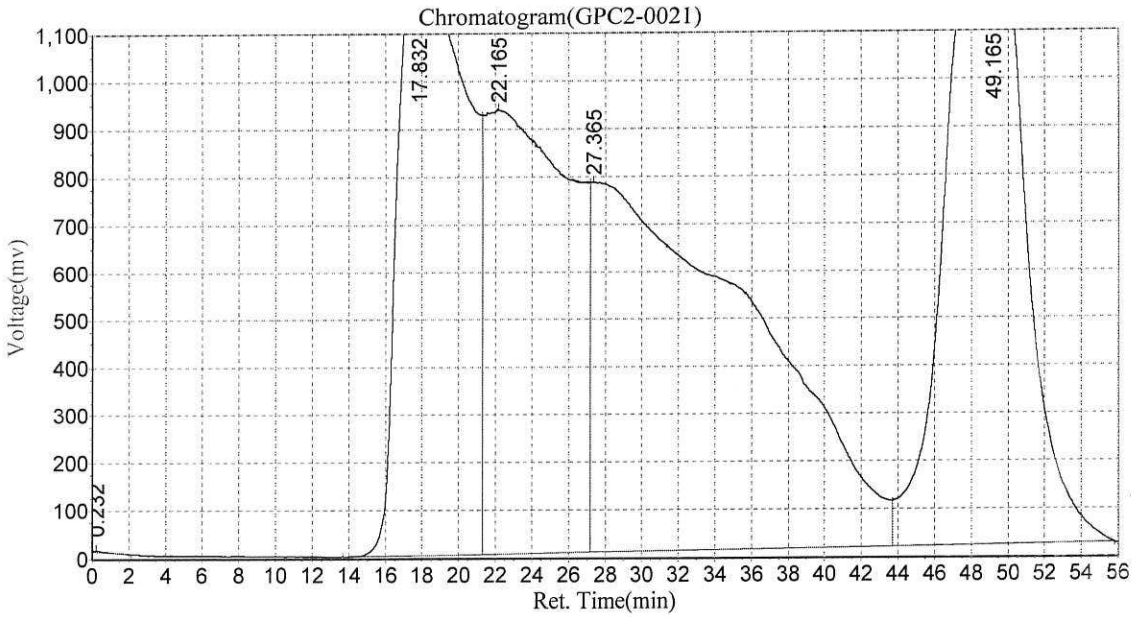
Ingredient Table

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

BLA0735/BLB0422 23A0385/523/554/563/23B0229/276 PCB/PEST

Date:2023-02-22,12:07:03 PM
Data File:c:\n2000\data\gpc2\022123\GPC2-0021
Method File:E:\GPC2_InHouse.mtd

Analyst£°NRB
Date/Time2023-02-22,12:07:04 PM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		0.232	3435.048	105194.797	0.0071
2		17.832	1243251.625	326842816.000	21.9565
3		22.165	931778.188	300460064.000	20.1842
4		27.365	775772.188	475030112.000	31.9114
5		49.165	1222569.750	386153312.000	25.9409
Total			4176806.798	1488591498.797	100.000

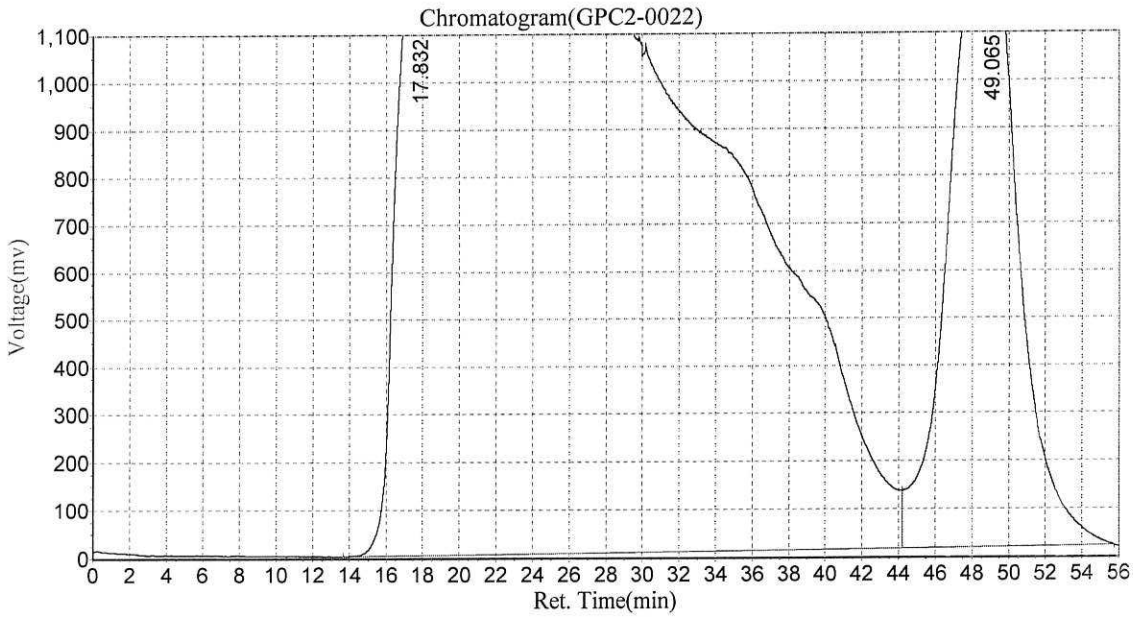
Ingredient Table

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

BLA0735/BLB0422 23A0385/523/554/563/23B0229/276 PCB/PEST

Date:2023-02-22,1:04:45 PM
Data File:c:\n2000\data\gpc2\022123\GPC2-0022
Method File:E:\GPC2_InHouse.mtd

Analyst£°NRB
Date/Time2023-02-22,1:04:46 PM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		17.832	1243936.500	1516613248.000	82.1257
2		49.065	1226150.500	330083904.000	17.8743
Total			2470087.000	1846697152.000	100.000

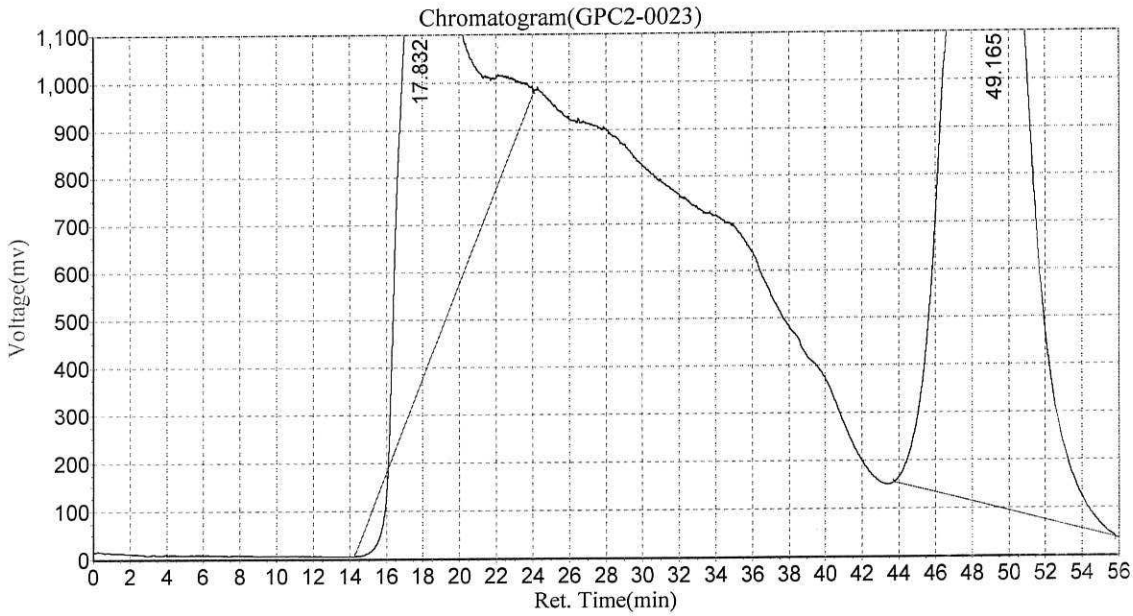
Ingredient Table

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

BLA0735/BLB0422 23A0385/523/554/563/23B0229/276 PCB/PEST

Date:2023-02-22,2:02:29 PM
Data File:c:\n2000\data\gpc2\022123\GPC2-0023
Method File:E:\GPC2_InHouse.mtd

Analyst£°NRB
Date/Time2023-02-22,2:02:30 PM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		17.832	891302.125	222068176.000	35.1180
2		49.165	1147313.875	410280384.000	64.8820
Total			2038616.000	632348560.000	100.000

Ingredient Table

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

BLA0735/BLB0422 23A0385/523/554/563/23B0229/276 PCB/PEST

Date:2023-02-22,3:00:11 PM
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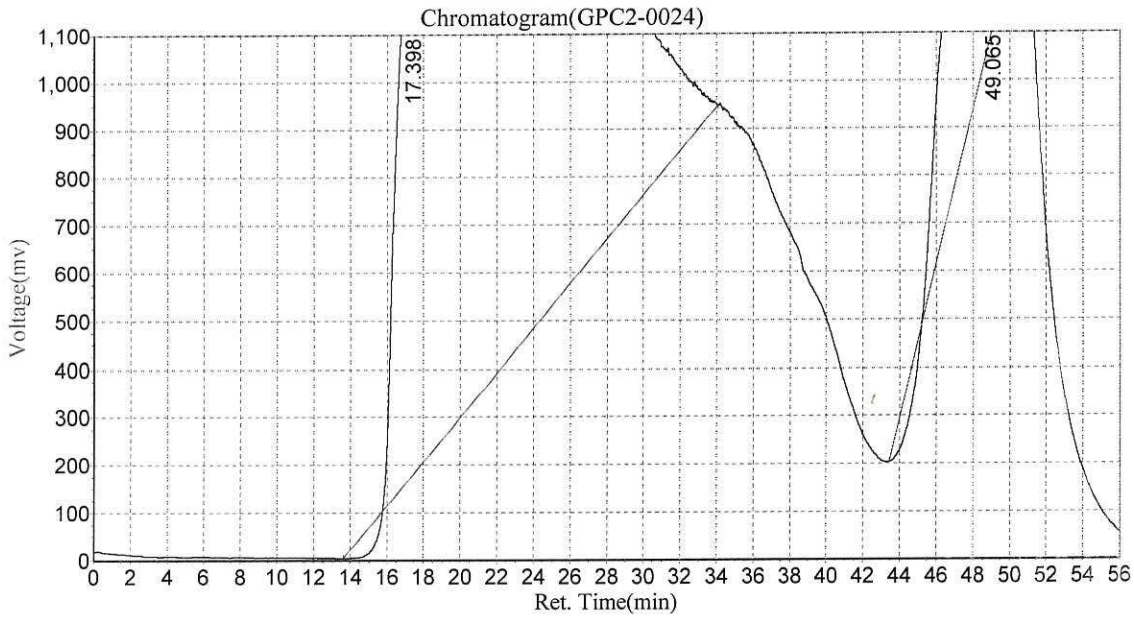
Method File:E:\GPC2_InHouse.mtd

Analyst£°NRB
Date/Time2023-02-22,3:00:11 PM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		17.398	1072313.750	687413184.000	90.4647
2		49.065	150184.703	72456208.000	9.5354
Total			1222498.453	759869392.000	100.000

Ingredient Table

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

BLA0735/BLB0422 23A0385/523/554/563/23B0229/276 PCB/PEST

Date:2023-02-22,3:57:54 PM
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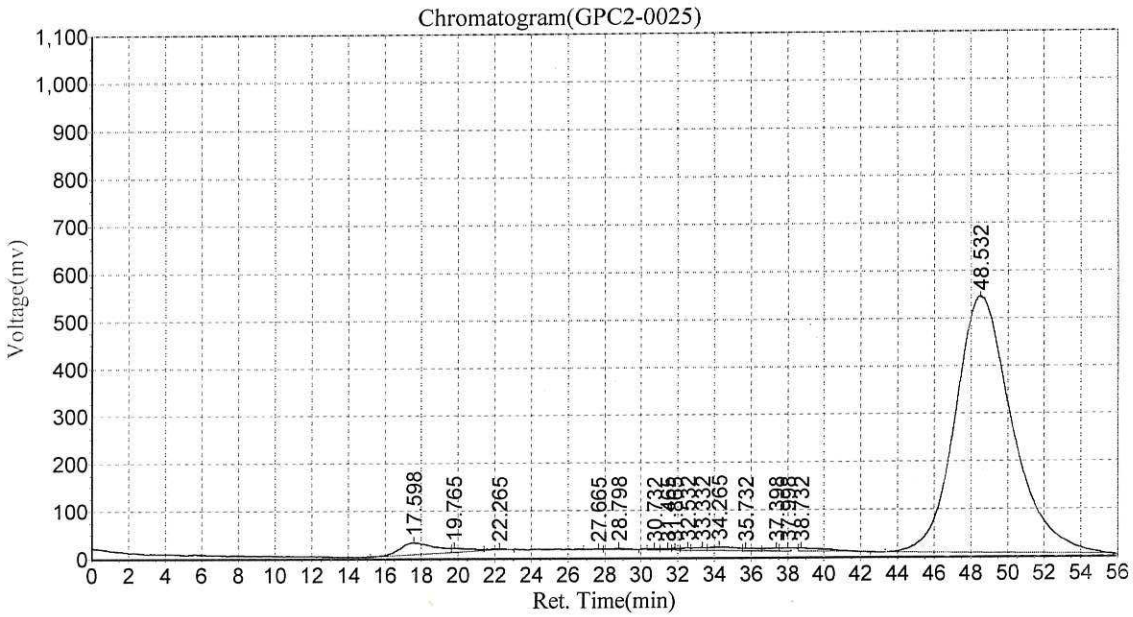
Method File:E:\GPC2_InHouse.mtd

Analyst£ºNRB
Date/Time2023-02-22,3:57:55 PM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		17.598	24120.254	3202491.250	2.5918
2		19.765	9331.525	684899.063	0.5543
3		22.265	2847.915	228725.516	0.1851
4		27.665	2647.421	137865.078	0.1116
5		28.798	3967.986	359087.219	0.2906
6		30.732	3921.007	147309.828	0.1192
7		31.465	4752.843	173323.000	0.1403
8		31.865	4980.571	135632.094	0.1098
9		32.532	6137.786	204946.625	0.1659
10		33.332	6986.243	342642.563	0.2773
11		34.265	8468.942	881712.938	0.7136
12		35.732	6641.614	392998.156	0.3181
13		37.398	6790.150	354979.281	0.2873
14		37.998	7029.743	274038.000	0.2218
15		38.732	7259.579	875811.250	0.7088
16		48.532	536644.063	115168168.000	93.2048
Total			642527.641	123564629.859	100.000

Ingredient Table

No	Peak ID	Ret Time	Peak Width	Factor1	Factor2	ISTD Wt.

PREPARATION BATCH SUMMARY

EPA 8081B

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Batch: BLC0155 Batch Matrix: Solid
Preparation: EPA 3546 (Microwave)

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SC1150B	23B0276-01RE1	23032454.D	03/08/23 11:36	From BLB0422 by CTO on 07-Mar-2023
Blank	BLC0155-BLK1	23032450.D	03/08/23 11:36	
LCS	BLC0155-BS1	23032451.D	03/08/23 11:36	
LCS Dup	BLC0155-BSD1	23032452.D	03/08/23 11:36	
MRL Check	BLC0155-MRL1	23032453.D	03/08/23 11:36	
LDW23-SC1150B	BLC0155-MS1	23032455.D	03/08/23 11:36	
LDW23-SC1150B	BLC0155-MSD1	23032456.D	03/08/23 11:36	

Analytical Resources, LLC
Analytical Chemists and Consultants

RUSH!

ORGANICS PREPARATION BENCH SHEET

Batch: BLC0155RE

Prepared using: EPA 3546 (Microwave)

8081B Pest (PSDDA) in Solid (Version:HCB Only)

Matrix: Solid **Date Prepared:** 03/08/23 **Balance ID:** B14646261 4 **Set Up By:** CTO 3/7/23

From BLB0422 on 3/7/2023 by CTO

WO Comments

23B0276: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM H002055, SIM RM H010158, PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H>Please push this to front of LDW line of samples

The following standards may be missing from this batch!

Designator	Description
62	Toxaphene
44	WND

Analysis: 8081B Pest (PSDDA)

Lab Number & Container	% Solids	Initial (g) Target Dry: 12.5 (Wet) Actual	(REQ) GPC (1:1) 1 2 3	(Yes / No) Acid Clean 5mL	(REQ) Sulfur C/U 4.5mL+0.5 mL ~~Ethyl~~ ~~Acetate~~	(REQ) Silica Gel C/U (2:5)	Final Effective Vol (mL)	Vol (mL) to Lab	Extraction Comments
23B0276-01RE1 A	63.6	(19.65) 19.65	(1:1)	5mL	5mL	(2:5) 2mL	2.5	1.0	

Batch QC

Lab Number	% Solids	Initial (g) Target Dry: 12.5 (Wet) Actual	(REQ) GPC (1:1) 1 2 3	(Yes / No) Acid Clean 5mL	(REQ) Sulfur C/U 4.5mL+0.5 mL ~~Ethyl~~ ~~Acetate~~	(REQ) Silica Gel C/U (2:5)	Final Effective Vol (mL)	Vol (mL) to Lab	Extraction Comments
BLC0155-BLK1	100.0	(12.50) 12.50	(1:1)	5mL	5mL	(2:5) 2mL	2.5	1.0	
BLC0155-BS1	100.0	(12.50) 12.50	(1:1)	5mL	5mL	(2:5) 2mL	2.5	1.0	
BLC0155-BSD1	100.0	(12.50) 12.50	(1:1)	5mL	5mL	(2:5) 2mL	2.5	1.0	
BLC0155-MRL1	100.0	(12.50) 12.54	(1:1)	5mL	5mL	(2:5) 2mL	2.5	1.0	
BLC0155-MS1	63.6	(19.65) 19.65	(1:1)	5mL	5mL	(2:5) 2mL	2.5	1.0	Use 23B0276-01RE1
BLC0155-MSD1	63.6	(19.65) 19.65	(1:1)	5mL	5mL	(2:5) 2mL	2.5	1.0	Use 23B0276-01RE1

03/08/23 — Client ID verified By — Date

NKN 3/15/23 — Preparation Reviewed By — Date

03/08/23 11:36 — Extraction Date and Time

Printed: 3/7/2023 2:14:30PM

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLC0155

Prepared using: EPA 3546 (Microwave)

8081B Pest (PSDDA) in Solid (Version:HCB Only)

WO Comments

23B0276: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM H002055, SIM RM H010158, PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H>Please push this to front of LDW line of samples

Prep Steps

Microwave
CT (1) 2 3
CT 03/08/23
Analyst/Date

Pre GPC KD
100°C
(No Exchange)
(1) 3 4 5 6
LD 3-9
Analyst/Date

TurboVap
Pre GPC
1 2 3 (4) 5
NKB 3/9/23
Analyst/Date

Post GPC KD
80 - 85°C
Hexane Exchange
(2 X 20 mL)
100°C
1 (2) 3 4 (5) 6
LO 3-13
Analyst/Date

TurboVap
Pre-Cleanups
1 2 3 (4) 5
NKB 3/13/23
Analyst/Date

TurboVap
Post-Cleanups
1 2 (3) 4 5
NKB 3/13/23
Analyst/Date

Vialing
NKB 3/13/23
Analyst/Date

Reagents Used

Station/Reagent	Standard ID
Microwave Analyst: CT Date: 03/08/23	
Hexane	LOO1957
80:20 Hexane/Acetone	LOO1221
1:1 Hexane/Acetone	LOO2245
Neutral Glass Wool	LOOO497
Anhydrous Sodium Sulfate	LOO2114
Pre GPC KD Analyst: LO Date: 3-9-23	
Hexane	L000889
Anhydrous Sodium Sulfate	
Neutral Glass Wool	
GPC Filter Prep Analyst: NKB Date: 3/9/23	
Methylene Chloride	K005158
GPC Filter	LOO1799
GPC Analyst: CTO Date: 3/10/23	
Methylene Chloride	K005158
GPC Calibration File	CLC0092
Post GPC KD Analyst: LO Date: 3-13-23	
Methylene Chloride	K005941
Hexane	L000889
Vialing Analyst: NKB Date: 3/13/23	
Hexane	L000889
Sulfuric Acid	L001033
Ethyl Acetate	N/A
Tetrabutylammonium hydrogensulfate (TBAS)	L002438
Sodium Sulfite	L002437
Silica Gel (SPE) Darts	L002256

Surrogates & Spike Standards Used

Type	Vial ID / Standard ID	Vol uL	Analyst	Witness
Surrogate 2µg/mL	N L000773 (V) Exp Date: 7/12/2023	50µL	CT	✓
Spike (Freezer) 0.5/1/5µg/mL	3 K011471 (V) BS1, BSD1, MS1, MSD1 ONLY Exp Date: 6/16/2023	100µL	CT	✓
QLS Spike 0.25-2.5µg/mL	QLS10 K011472 MRL ONLY Exp Date: 6/16/2023	25µL	CT	✓

MANUALLY ENTER EXPIRATION DATES!

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

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

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLC0155

Prepared using: EPA 3546 (Microwave)

8081B Pest (PSDDA) in Solid (Version:HCB Only)

WO Comments

23B0276: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM H002055, SIM RM H010158, PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H>Please push this to front of LDW line of samples

Prep Instructions	
SPECIAL INSTRUCTIONS: 1. Weigh into beakers-lightly dry with Sodium Sulfate. 2. Transfer to microwave vessels. 3. Add 1:1 Hex/ACE to the vessels (until solvent is 3" above soil layer after homogenization). 4. Add surr/spike. 5. Microwave on appropriate power setting determined by # of samples. 6. After microwave-re-homogenize while hot then let cool 15 min in cold water. Re-homogenize while cool. 7. Decant 1:1 Hex/ACE into Erlenmeyer flask using a funnel containing neutral glasswool. 8. Rinse with Hexane. 9. Microwave a 2nd time using 8:2 Hex/Ace (until solvent is 3" above soil layer after homogenization). 10. Let cool and decant the solvent then empty the soil into the funnel and rinse with Hexane. 11. KD to 5mL at 100°C. (NO HEXANE EXCHANGE). 12. TurboVap 13. GPC 14. After GPC: KD at 80 - 85°C 15. Exchange to Hexane at 100°C 2 x 20 mL). 16. TurboVap. 17. Cleanups, If Acid cleaning do not add Ethyl Acetate for Sulfur Clean. Do Not Acid Clean if Acid liable compounds are requested. 18. Vial in Hexane. A. Need Total Solids Y / (N) B. Archive/Freeze (Y) N	

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLC0155

Prepared using: EPA 3546 (Microwave)

8081B Pest (PSDDA) in Solid (Version:HCB Only)

WO Comments

23B0276: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM H002055, SIM RM H010158, PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H>Please push this to front of LDW line of samples

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

Extraction Parameter: PEST Extraction Batch: BLC0155RE

Total Solids Batch: N/A Work Order(s): 23B0276

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☐ No Anomalies (standard soil/wet sediment/sand/gravel)=	
☐ Standing Water Decanted (Not shared)=	
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☒ Oily, obvious fuel/sulfur odors= ϕ1.	MJ ϕ3/ϕ8/23
☐ Received in 32oz jar(s)=Homogenized in Pyrex dish=	MJ
☐ Previously Frozen =	
☐ Other (Details)=	
Aqueous:	
☑ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
☐ Received in 1.0L Bottle(s)=No Bottle Rinse=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	
☒ Share Samples Y / N	MJ ϕ3/ϕ8/23
☒ Multiple Jars Y / N	MJ ϕ3/ϕ8/23
☐ Sample Pre-Screens indicate analyte activity=	MJ
☐ Sample weights/volumes reduced based on Pre-Screen=	

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CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Cleanup Batch:	CLB0211	Cleanup Type:	Silica Gel
Cleanup Method:	EPA 3630C Silica Gel Cleanup - uL	Analysis:	EPA 8081B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
Blank	BLB0422-BLK1	062F7101.D	02/23/2023	
LDW23-SC1150B	23B0276-01		02/23/2023	
LCS	BLB0422-BS1	063F7201.D	02/23/2023	
LCS Dup	BLB0422-BSD1	064F7301.D	02/23/2023	

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CLEANUP BENCH SHEET

CLB0211

Matrix: Solid **Cleanup using: Organics - EPA 3630C Silica Gel Cleanup - uL** **Printed: 2/23/2023 2:52:53PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23B0229-02	A	LDW23-SS1236	A 02	2.5	2.5	8081B Pest (PSDDA)	2/23/2023	LMJ	
23B0229-03	A	LDW23-SS1237	A 02	2.5	2.5	8081B Pest (PSDDA)	2/23/2023	LMJ	
23B0229-04	A	LDW23-SS1150	A 02	2.5	2.5	8081B Pest (PSDDA)	2/23/2023	LMJ	
23B0229-05	A	LDW23-SS1008	A 02	2.5	2.5	8081B Pest (PSDDA)	2/23/2023	LMJ	
23B0229-06	A	LDW23-SC1008	A 02	2.5	2.5	8081B Pest (PSDDA)	2/23/2023	LMJ	
23B0229-08	A	LDW23-SC1013	A 02	2.5	2.5	8081B Pest (PSDDA)	2/23/2023	LMJ	
23B0276-01	A	LDW23-SC1150B	A 02	2.5	2.5	8081B Pest (PSDDA)	2/23/2023	LMJ	
BLB0422-BLK1	-	Blank	-	2.5	2.5	-	2/23/2023	LMJ	
BLB0422-BS1	-	LCS	-	2.5	2.5	-	2/23/2023	LMJ	
BLB0422-BSD1	-	LCS Dup	-	2.5	2.5	-	2/23/2023	LMJ	
BLB0422-MS1	-	Matrix Spike	-	2.5	2.5	-	2/23/2023	LMJ	
BLB0422-MSD1	-	Matrix Spike Dup	-	2.5	2.5	-	2/23/2023	LMJ	

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Cleanup Batch:	CLB0212	Cleanup Type:	GPC
Cleanup Method:	EPA 3640A GPC Cleanup 1:1	Analysis:	EPA 8081B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
Blank	BLB0422-BLK1	062F7101.D	02/23/2023	
LDW23-SC1150B	23B0276-01		02/23/2023	
LCS	BLB0422-BS1	063F7201.D	02/23/2023	
LCS Dup	BLB0422-BSD1	064F7301.D	02/23/2023	

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CLEANUP BENCH SHEET

CLB0212

Matrix: Solid **Cleanup using: Organics - EPA 3640A GPC Cleanup 1:1** **Check Standard: CLB0132-GPC2** **Printed: 2/23/2023 3:00:29PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23B0229-02	A	LDW23-SS1236	A 02	2.5	2.5	8081B Pest (PSDDA)	2/23/2023	LMJ	
23B0229-03	A	LDW23-SS1237	A 02	2.5	2.5	8081B Pest (PSDDA)	2/23/2023	LMJ	
23B0229-04	A	LDW23-SS1150	A 02	2.5	2.5	8081B Pest (PSDDA)	2/23/2023	LMJ	
23B0229-05	A	LDW23-SS1008	A 02	2.5	2.5	8081B Pest (PSDDA)	2/23/2023	LMJ	
23B0229-06	A	LDW23-SC1008	A 02	2.5	2.5	8081B Pest (PSDDA)	2/23/2023	LMJ	
23B0229-08	A	LDW23-SC1013	A 02	2.5	2.5	8081B Pest (PSDDA)	2/23/2023	LMJ	
23B0276-01	A	LDW23-SC1150B	A 02	2.5	2.5	8081B Pest (PSDDA)	2/23/2023	LMJ	
BLB0422-BLK1	-	Blank	-	2.5	2.5	-	2/23/2023	LMJ	
BLB0422-BS1	-	LCS	-	2.5	2.5	-	2/23/2023	LMJ	
BLB0422-BSD1	-	LCS Dup	-	2.5	2.5	-	2/23/2023	LMJ	
BLB0422-MS1	-	Matrix Spike	-	2.5	2.5	-	2/23/2023	LMJ	
BLB0422-MSD1	-	Matrix Spike Dup	-	2.5	2.5	-	2/23/2023	LMJ	

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Cleanup Batch:	CLB0213	Cleanup Type:	Sulfur
Cleanup Method:	EPA 3660B Sulfur Cleanup - uL	Analysis:	EPA 8081B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SC1150B	23B0276-01		02/23/2023	
Blank	BLB0422-BLK1	062F7101.D	02/23/2023	
LCS	BLB0422-BS1	063F7201.D	02/23/2023	
LCS Dup	BLB0422-BSD1	064F7301.D	02/23/2023	

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CLEANUP BENCH SHEET

CLB0213

Matrix: Solid **Cleanup using: Organics - EPA 3660B Sulfur Cleanup - uL** **Printed: 2/23/2023 3:01:01PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23B0229-02	A	LDW23-SS1236	A 02	2.5	2.5	8081B Pest (PSDDA)	2/23/2023	LMJ	
23B0229-03	A	LDW23-SS1237	A 02	2.5	2.5	8081B Pest (PSDDA)	2/23/2023	LMJ	
23B0229-04	A	LDW23-SS1150	A 02	2.5	2.5	8081B Pest (PSDDA)	2/23/2023	LMJ	
23B0229-05	A	LDW23-SS1008	A 02	2.5	2.5	8081B Pest (PSDDA)	2/23/2023	LMJ	
23B0229-06	A	LDW23-SC1008	A 02	2.5	2.5	8081B Pest (PSDDA)	2/23/2023	LMJ	
23B0229-08	A	LDW23-SC1013	A 02	2.5	2.5	8081B Pest (PSDDA)	2/23/2023	LMJ	
23B0276-01	A	LDW23-SC1150B	A 02	2.5	2.5	8081B Pest (PSDDA)	2/23/2023	LMJ	
BLB0422-BLK1	-	Blank	-	2.5	2.5	-	2/23/2023	LMJ	
BLB0422-BS1	-	LCS	-	2.5	2.5	-	2/23/2023	LMJ	
BLB0422-BSD1	-	LCS Dup	-	2.5	2.5	-	2/23/2023	LMJ	
BLB0422-MS1	-	Matrix Spike	-	2.5	2.5	-	2/23/2023	LMJ	
BLB0422-MSD1	-	Matrix Spike Dup	-	2.5	2.5	-	2/23/2023	LMJ	

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CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Cleanup Batch:	CLB0214	Cleanup Type:	Sulfuric Acid
Cleanup Method:	EPA 3665 Sulfuric Acid Cleanup - uL	Analysis:	EPA 8081B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SC1150B	23B0276-01		02/23/2023	
Blank	BLB0422-BLK1	062F7101.D	02/23/2023	
LCS Dup	BLB0422-BSD1	064F7301.D	02/23/2023	
LCS	BLB0422-BS1	063F7201.D	02/23/2023	

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CLEANUP BENCH SHEET

CLB0214

Matrix: Solid **Cleanup using: Organics - EPA 3665 Sulfuric Acid Cleanup - uL** **Printed: 2/23/2023 3:01:40PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23B0229-02	A	LDW23-SS1236	A 02	2.5	2.5	8081B Pest (PSDDA)	2/23/2023	LMJ	
23B0229-03	A	LDW23-SS1237	A 02	2.5	2.5	8081B Pest (PSDDA)	2/23/2023	LMJ	
23B0229-04	A	LDW23-SS1150	A 02	2.5	2.5	8081B Pest (PSDDA)	2/23/2023	LMJ	
23B0229-05	A	LDW23-SS1008	A 02	2.5	2.5	8081B Pest (PSDDA)	2/23/2023	LMJ	
23B0229-06	A	LDW23-SC1008	A 02	2.5	2.5	8081B Pest (PSDDA)	2/23/2023	LMJ	
23B0229-08	A	LDW23-SC1013	A 02	2.5	2.5	8081B Pest (PSDDA)	2/23/2023	LMJ	
23B0276-01	A	LDW23-SC1150B	A 02	2.5	2.5	8081B Pest (PSDDA)	2/23/2023	LMJ	
BLB0422-BLK1	-	Blank	-	2.5	2.5	-	2/23/2023	LMJ	
BLB0422-BS1	-	LCS	-	2.5	2.5	-	2/23/2023	LMJ	
BLB0422-BSD1	-	LCS Dup	-	2.5	2.5	-	2/23/2023	LMJ	
BLB0422-MS1	-	Matrix Spike	-	2.5	2.5	-	2/23/2023	LMJ	
BLB0422-MSD1	-	Matrix Spike Dup	-	2.5	2.5	-	2/23/2023	LMJ	

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CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Cleanup Batch:	CLC0104	Cleanup Type:	Sulfuric Acid
Cleanup Method:	EPA 3665 Sulfuric Acid Cleanup - uL	Analysis:	EPA 8081B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LCS Dup	BLC0155-BSD1	23032452.D	03/13/2023	
LCS	BLC0155-BS1	23032451.D	03/13/2023	
Matrix Spike	BLC0155-MS1	23032455.D	03/13/2023	
Matrix Spike Dup	BLC0155-MSD1	23032456.D	03/13/2023	
MRL Check	BLC0155-MRL1	23032453.D	03/13/2023	
LDW23-SC1150B	23B0276-01RE1	23032454.D	03/13/2023	
Blank	BLC0155-BLK1	23032450.D	03/13/2023	

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CLEANUP BENCH SHEET

CLC0104

Matrix: Solid **Cleanup using: Organics - EPA 3665 Sulfuric Acid Cleanup - uL** **Printed: 3/13/2023 4:22:52PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23B0276-01RE1	A	LDW23-SC1150B	A 04	2.5	2.5	8081B Pest (PSDDA)	3/13/2023	NRB	
BLC0155-BLK1	-	Blank	-	2.5	2.5	-	3/13/2023	NRB	
BLC0155-BS1	-	LCS	-	2.5	2.5	-	3/13/2023	NRB	
BLC0155-BSD1	-	LCS Dup	-	2.5	2.5	-	3/13/2023	NRB	
BLC0155-MRL1	-	MRL Check	-	2.5	2.5	-	3/13/2023	NRB	
BLC0155-MS1	-	Matrix Spike	-	2.5	2.5	-	3/13/2023	NRB	
BLC0155-MSD1	-	Matrix Spike Dup	-	2.5	2.5	-	3/13/2023	NRB	

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Cleanup Batch:	CLC0105	Cleanup Type:	Sulfur
Cleanup Method:	EPA 3660B Sulfur Cleanup - uL	Analysis:	EPA 8081B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
MRL Check	BLC0155-MRL1	23032453.D	03/13/2023	
LCS Dup	BLC0155-BSD1	23032452.D	03/13/2023	
LCS	BLC0155-BS1	23032451.D	03/13/2023	
Blank	BLC0155-BLK1	23032450.D	03/13/2023	
Matrix Spike	BLC0155-MS1	23032455.D	03/13/2023	
Matrix Spike Dup	BLC0155-MSD1	23032456.D	03/13/2023	
LDW23-SC1150B	23B0276-01RE1	23032454.D	03/13/2023	

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CLEANUP BENCH SHEET

CLC0105

Matrix: Solid **Cleanup using: Organics - EPA 3660B Sulfur Cleanup - uL** **Printed: 3/13/2023 4:23:16PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23B0276-01RE1	A	LDW23-SC1150B	A 04	2.5	2.5	8081B Pest (PSDDA)	3/13/2023	NRB	
BLC0155-BLK1	-	Blank	-	2.5	2.5	-	3/13/2023	NRB	
BLC0155-BS1	-	LCS	-	2.5	2.5	-	3/13/2023	NRB	
BLC0155-BSD1	-	LCS Dup	-	2.5	2.5	-	3/13/2023	NRB	
BLC0155-MRL1	-	MRL Check	-	2.5	2.5	-	3/13/2023	NRB	
BLC0155-MS1	-	Matrix Spike	-	2.5	2.5	-	3/13/2023	NRB	
BLC0155-MSD1	-	Matrix Spike Dup	-	2.5	2.5	-	3/13/2023	NRB	

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CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Cleanup Batch:	CLC0106	Cleanup Type:	Silica Gel
Cleanup Method:	EPA 3630C Silica Gel Cleanup - uL	Analysis:	EPA 8081B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SC1150B	23B0276-01RE1	23032454.D	03/13/2023	
LCS	BLC0155-BS1	23032451.D	03/13/2023	
LCS Dup	BLC0155-BSD1	23032452.D	03/13/2023	
Blank	BLC0155-BLK1	23032450.D	03/13/2023	
Matrix Spike	BLC0155-MS1	23032455.D	03/13/2023	
Matrix Spike Dup	BLC0155-MSD1	23032456.D	03/13/2023	
MRL Check	BLC0155-MRL1	23032453.D	03/13/2023	

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CLEANUP BENCH SHEET

CLC0106

Matrix: Solid **Cleanup using: Organics - EPA 3630C Silica Gel Cleanup - uL** **Printed: 3/13/2023 4:23:40PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23B0276-01RE1	A	LDW23-SC1150B	A 04	2.5	2.5	8081B Pest (PSDDA)	3/13/2023	NRB	
BLC0155-BLK1	-	Blank	-	2.5	2.5	-	3/13/2023	NRB	
BLC0155-BS1	-	LCS	-	2.5	2.5	-	3/13/2023	NRB	
BLC0155-BSD1	-	LCS Dup	-	2.5	2.5	-	3/13/2023	NRB	
BLC0155-MRL1	-	MRL Check	-	2.5	2.5	-	3/13/2023	NRB	
BLC0155-MS1	-	Matrix Spike	-	2.5	2.5	-	3/13/2023	NRB	
BLC0155-MSD1	-	Matrix Spike Dup	-	2.5	2.5	-	3/13/2023	NRB	

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Cleanup Batch:	CLC0107	Cleanup Type:	GPC
Cleanup Method:	EPA 3640A GPC Cleanup 1:1	Analysis:	EPA 8081B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
Matrix Spike Dup	BLC0155-MSD1	23032456.D	03/13/2023	
Matrix Spike	BLC0155-MS1	23032455.D	03/13/2023	
LCS Dup	BLC0155-BSD1	23032452.D	03/13/2023	
LCS	BLC0155-BS1	23032451.D	03/13/2023	
MRL Check	BLC0155-MRL1	23032453.D	03/13/2023	
LDW23-SC1150B	23B0276-01RE1	23032454.D	03/13/2023	
Blank	BLC0155-BLK1	23032450.D	03/13/2023	

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CLEANUP BENCH SHEET

CLC0107

Matrix: Solid **Cleanup using: Organics - EPA 3640A GPC Cleanup 1:1** **Check Standard: CLC0092-GPC1** **Printed: 3/13/2023 4:24:08PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23B0276-01RE1	A	LDW23-SC1150B	A 04	2.5	2.5	8081B Pest (PSDDA)	3/13/2023	NRB	
BLC0155-BLK1	-	Blank	-	2.5	2.5	-	3/13/2023	NRB	
BLC0155-BS1	-	LCS	-	2.5	2.5	-	3/13/2023	NRB	
BLC0155-BSD1	-	LCS Dup	-	2.5	2.5	-	3/13/2023	NRB	
BLC0155-MRL1	-	MRL Check	-	2.5	2.5	-	3/13/2023	NRB	
BLC0155-MS1	-	Matrix Spike	-	2.5	2.5	-	3/13/2023	NRB	
BLC0155-MSD1	-	Matrix Spike Dup	-	2.5	2.5	-	3/13/2023	NRB	

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Form I

METHOD BLANK DATA SHEET

EPA 8081B

Blank

Laboratory:	Analytical Resources, LLC			SDG:	23B0276
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Solid	Laboratory ID:	BLB0422-BLK1	File ID:	062F7101.D
Sampled:	N/A	Prepared:	02/17/23 10:59	Analyzed:	03/03/23 20:55
Solids:		Preparation:	EPA 3546 (Microwave)	Initial/Final:	12.5 g / 2.5 mL
Batch:	BLB0422	Sequence:	SLC0093	Calibration:	FL00041
Instrument:	ECD6	Column:	STX-CLP	Cleanups:	GPC, Silica Gel, Sulfur, Sulfuric Acid

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg wet)	Q	DL	RL
118-74-1	Hexachlorobenzene	1	0.50	U	0.15	0.50

SURROGATES	ADDED: (ug/kg wet)	FOUND: (ug/kg wet)	% REC	QC LIMITS	Q
Decachlorobiphenyl	8.0000	5.25	65.6	30 - 160	
Decachlorobiphenyl [2C]	8.0000	5.34	66.7	30 - 160	
Tetrachlorometaxylene	8.0000	4.73	59.1	30 - 160	
Tetrachlorometaxylene [2C]	8.0000	4.66	58.2	30 - 160	

[2C] indicates second-column analyte, present if quantification on any batch samples used second column data.

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230302.b/062F7101.D
Data file 2: /20230302.b/B20230302.b/062F7101.D
Method: \20230302.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: AA

ARI ID: BLB0422-BLK1
Client ID:
Injection Date: 03-MAR-2023 20:55
Report Date: 03/09/2023 11:19
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
----			4.833	0.004	5009	0.00	0.17	---	alpha-BHC
4.810	0.031	3089	5.282	-0.020	2521	0.45	0.23	63.4*	beta-BHC
----			5.650	-0.004	781	0.00	0.03	---	delta-BHC
----			----			0.00	0.00	---	gamma-BHC (Lindane)
----			----			0.00	0.00	---	Heptachlor
----			6.153	0.002	8454	0.00	0.34	---	Aldrin
----			----			0.00	0.00	---	Heptachlor epoxide b
----			----			0.00	0.00	---	Endosulfan I
6.879	-0.022	2697	7.524	-0.019	2608	0.20	0.13	44.8*	Dieldrin
6.552	-0.008	2613	7.326	-0.005	13829	0.21	0.75	111.4*	4,4'-DDE
7.172	0.021	4680	7.890	0.024	2258	0.49	0.19	86.9*	Endrin N
----			8.058	-0.020	14471	0.00	1.21	---	Endosulfan II
----			7.929	-0.008	2973	0.00	0.26	---	4,4'-DDD
----			----			0.00	0.00	---	Endosulfan sulfate
----			8.255	0.001	11483	0.00	1.05	---	4,4'-DDT
7.973	-0.013	7117	8.903	0.010	14452	1.85	2.99	46.8*	Methoxychlor N
8.517	-0.007	4771	9.179	-0.017	17048	0.51	1.51	98.5*	Endrin ketone N
----			8.393	-0.015	8843	0.00	1.05	---	Endrin aldehyde
6.353	0.014	7114	----			0.52	0.00	---	trans-Chlordane
6.498	0.011	3649	----			0.27	0.00	---	cis-Chlordane
2.347	0.001	7714	----			0.41	0.00	---	Hexachlorobutadiene
4.229	-0.002	8503	4.683	-0.005	3857	0.51	0.15	110.0*	Hexachlorobenzene
3.869	-0.003	300129	4.192	-0.003	468400	23.65	23.29	1.6	Tetrachloro-m-xylene
9.435	-0.003	192948	10.400	-0.002	241623	26.24	26.69	1.7	Decachlorobiphenyl N

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

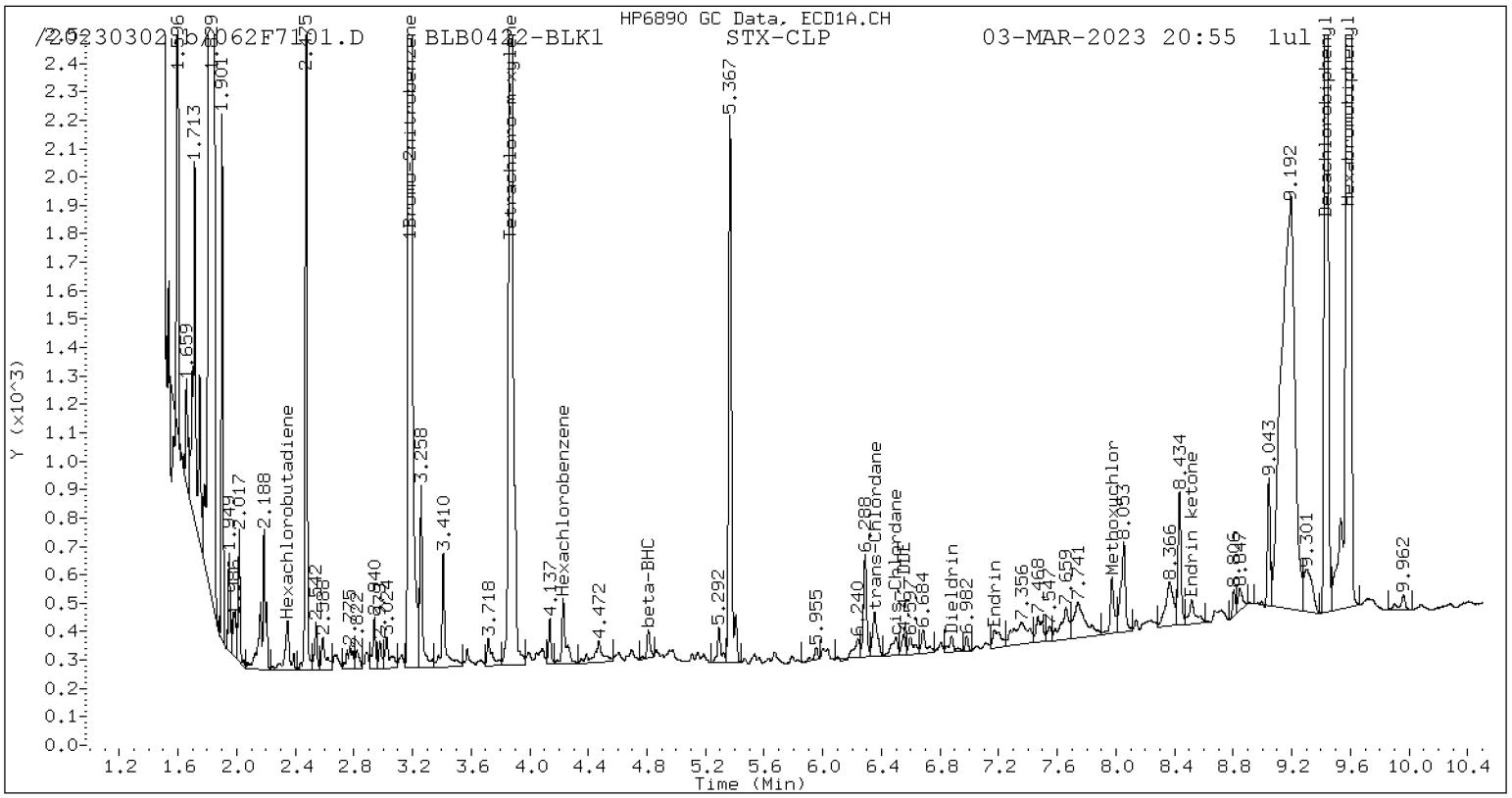
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	933051	38.8
Hexabromobiphenyl	609723	725730	19.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	1429005	42.0
Hexabromobiphenyl	769764	818965	6.4

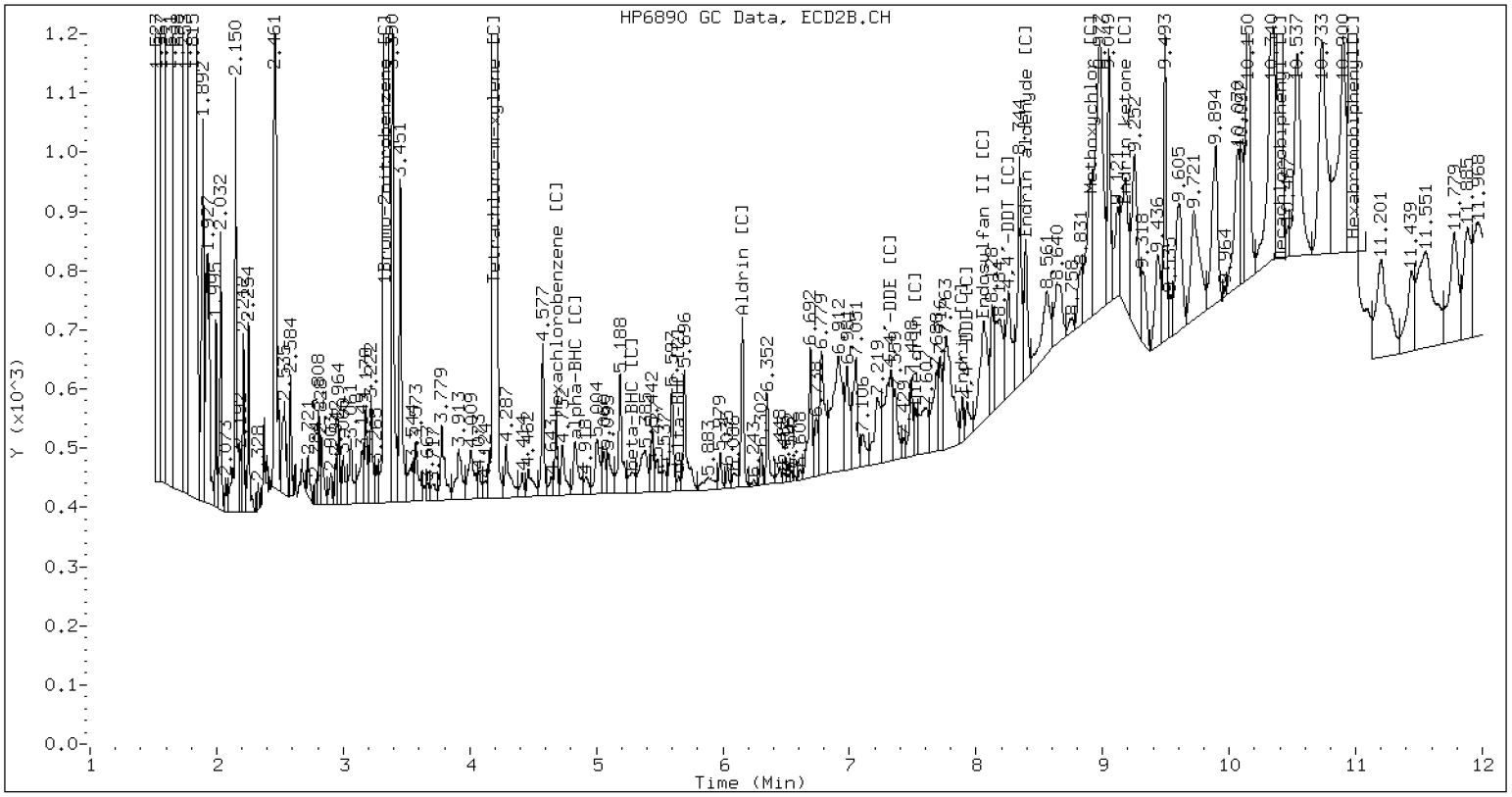
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

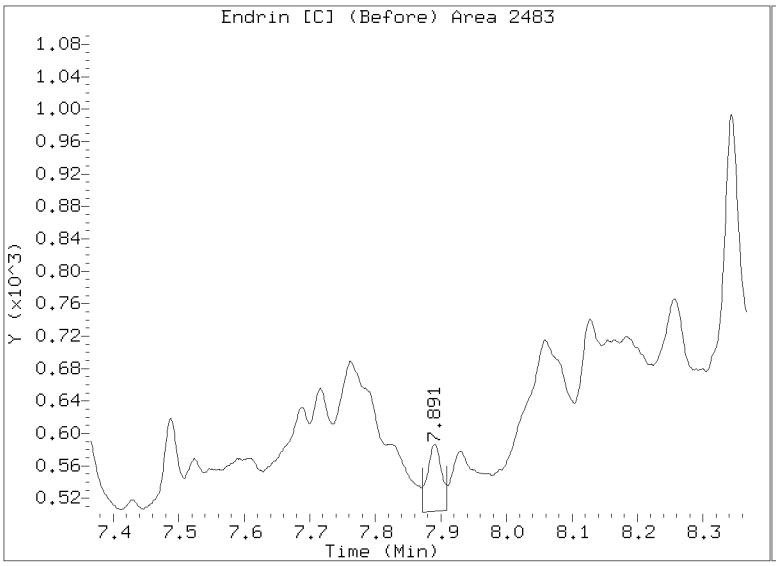
/20230302.b/B20230302.b/062F7101.D BLB0422-BLK1 CLP2

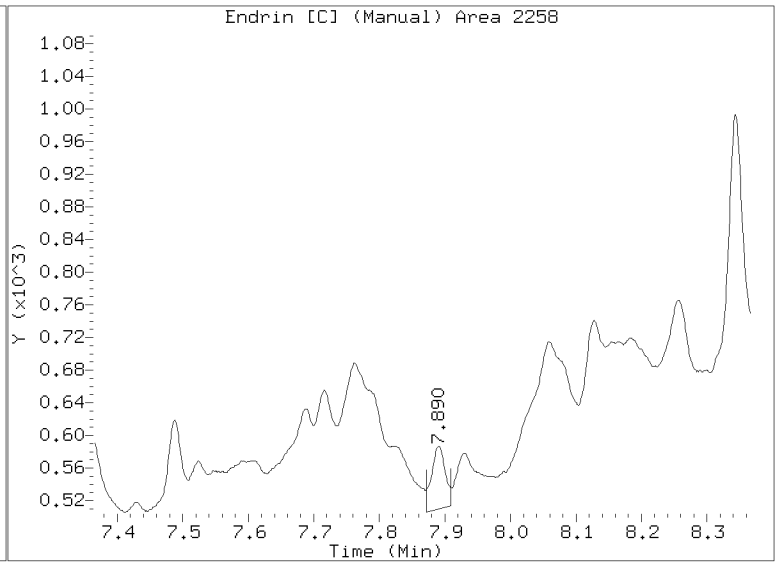


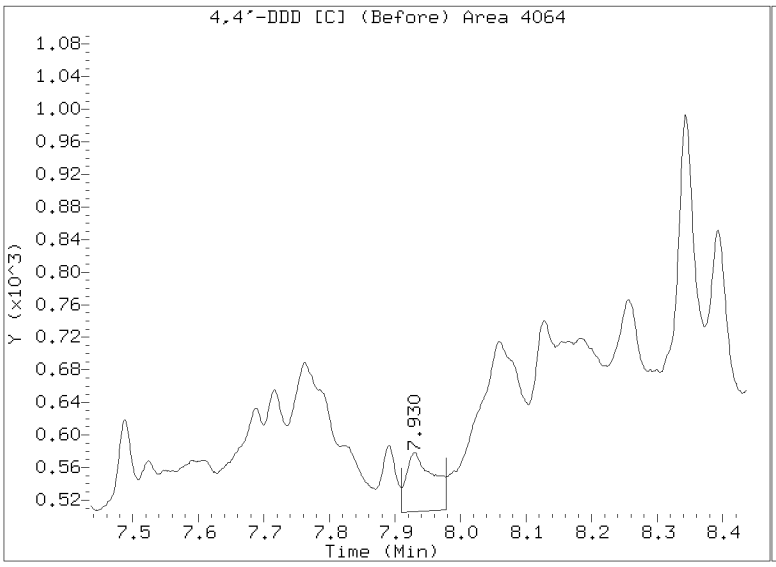
CLP-2 Manual Integration: YES

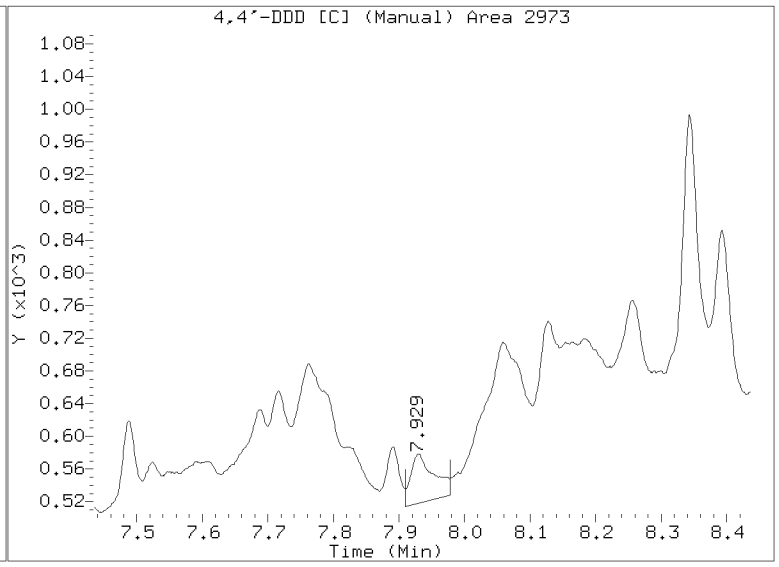
Manual Peak Adjustment Report, CLP-2

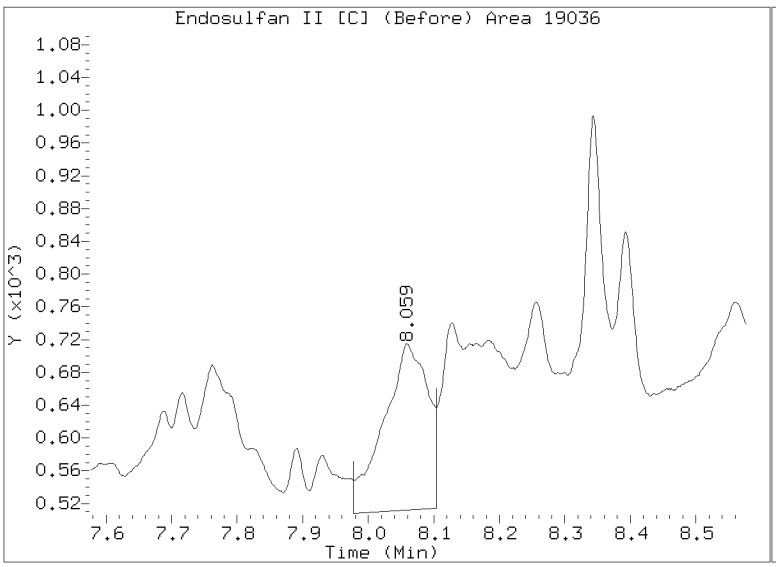
Datafile: /20230302.b/B20230302.b/062F7101.D
Injection Date: 03-MAR-2023 20:55
Lab ID:BLB0422-BLK1 Client ID:

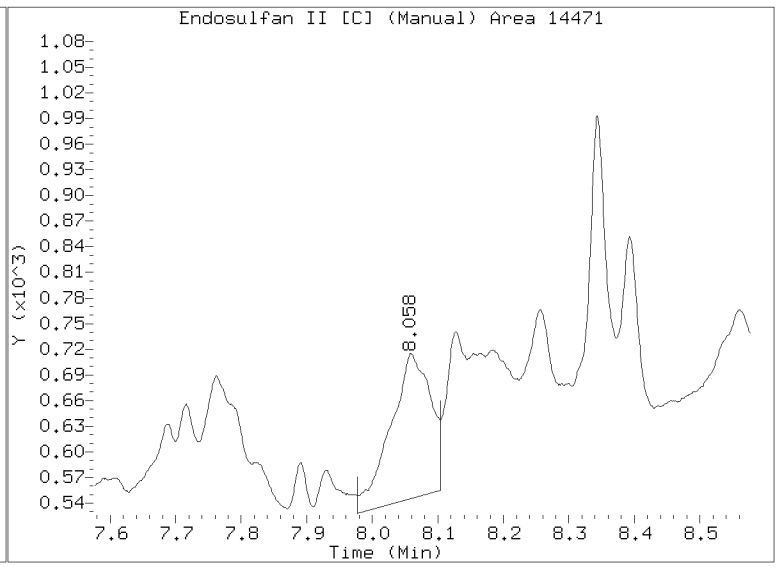






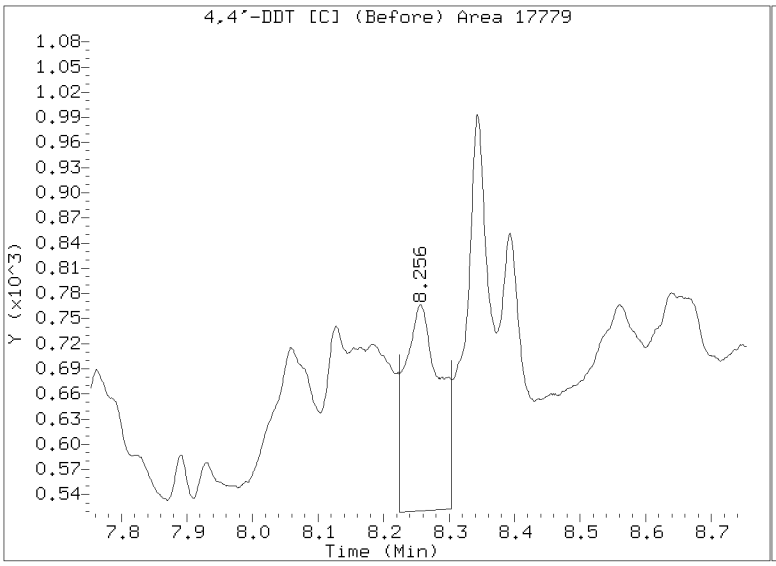


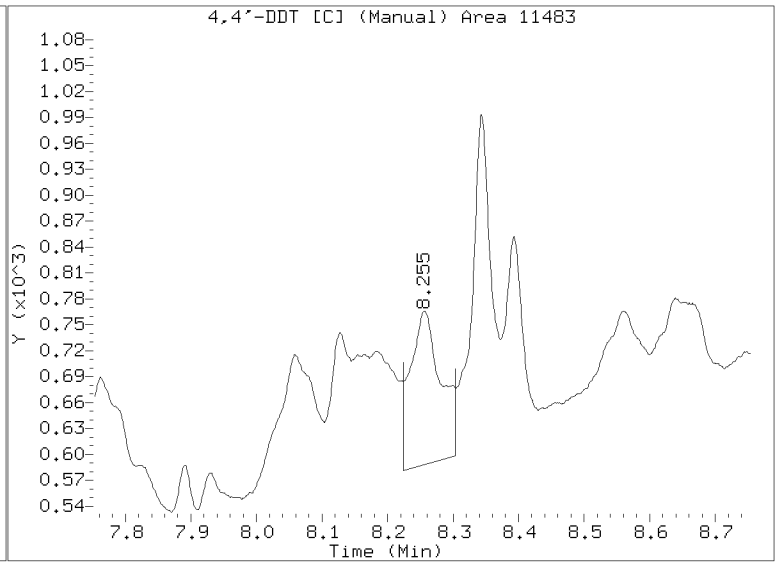


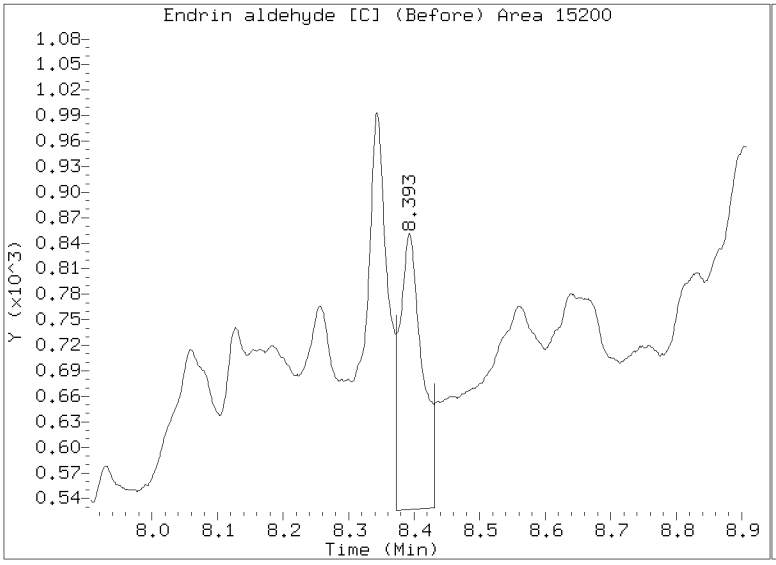


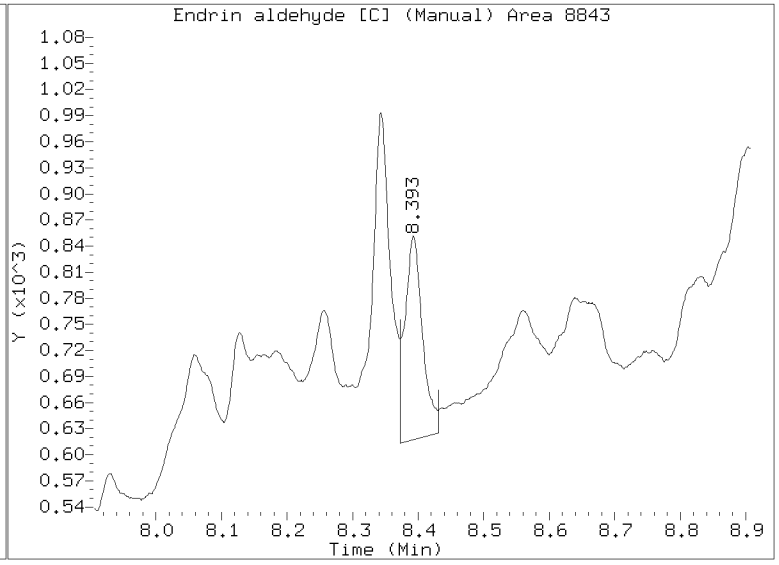
Manual Peak Adjustment Report, CLP-2

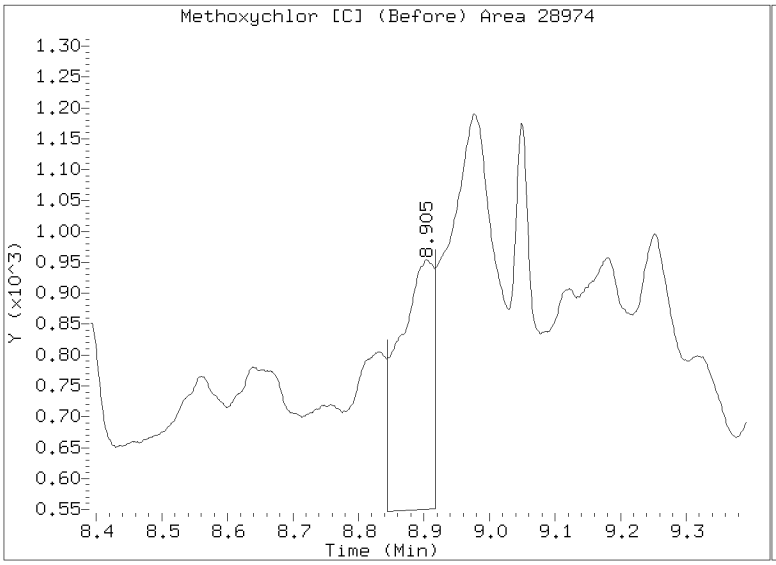
Datafile: /20230302.b/B20230302.b/062F7101.D
Injection Date: 03-MAR-2023 20:55
Lab ID:BLB0422-BLK1 Client ID:

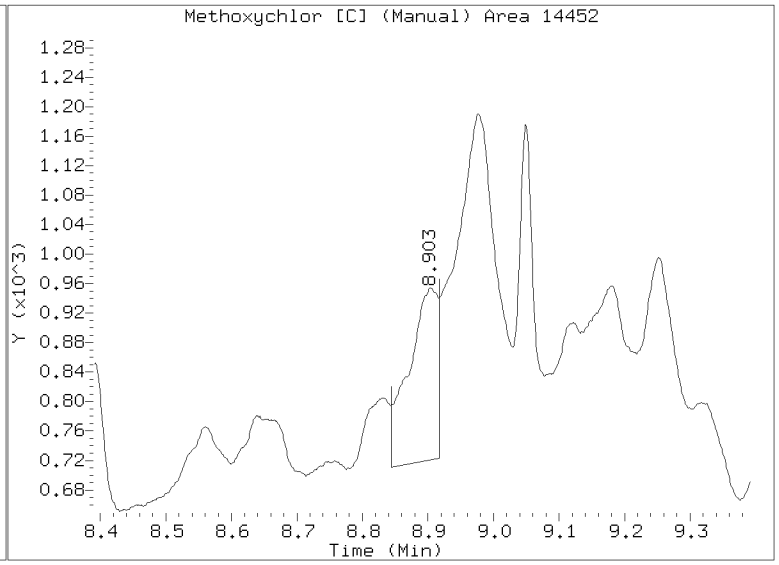






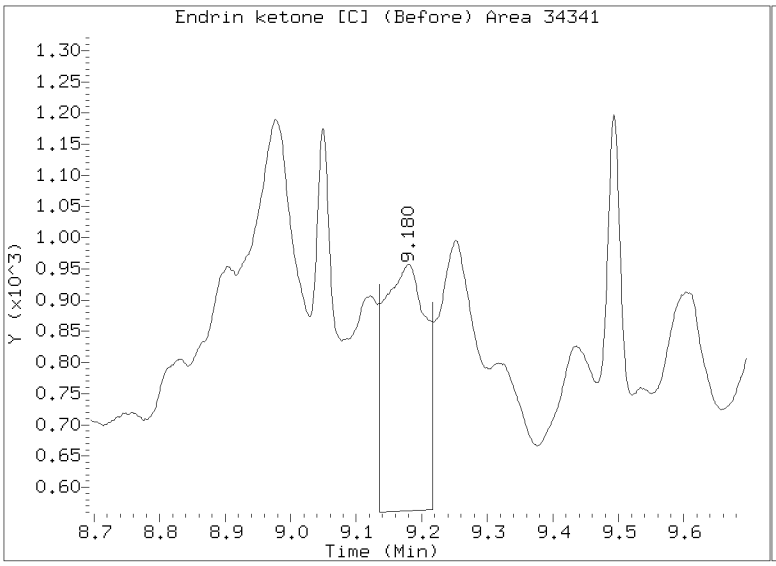


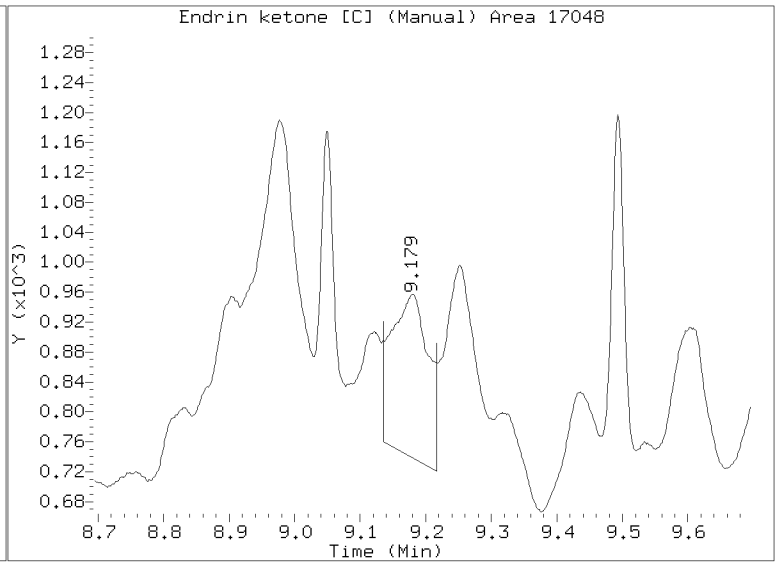


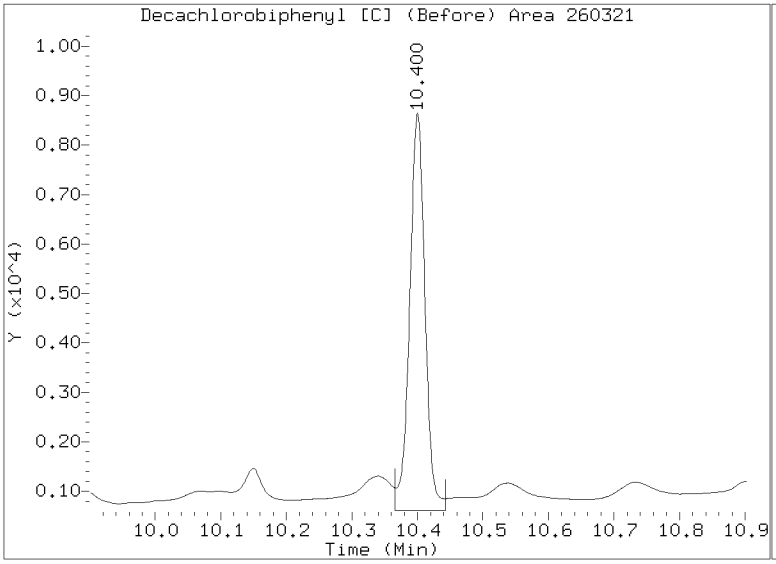


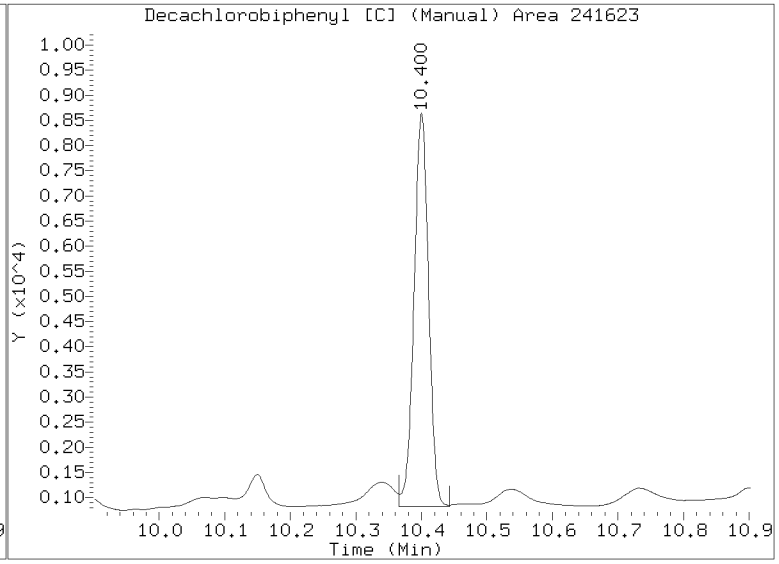
Manual Peak Adjustment Report, CLP-2

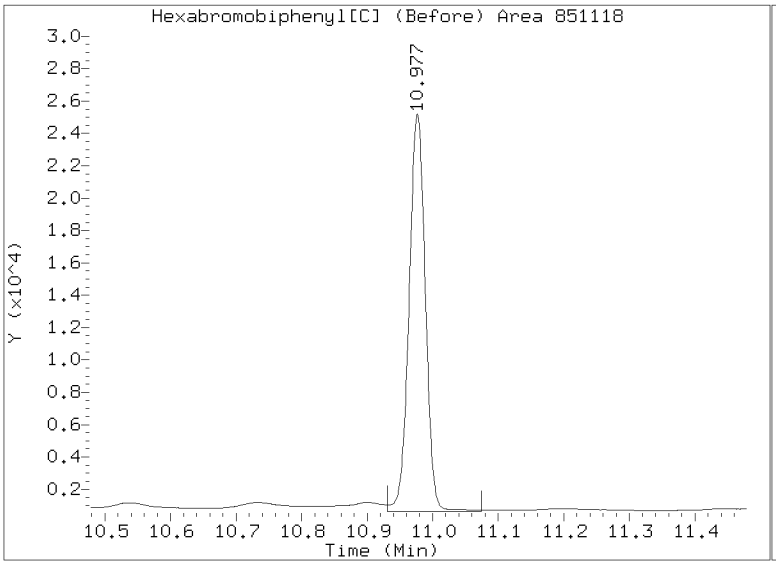
Datafile: /20230302.b/B20230302.b/062F7101.D
Injection Date: 03-MAR-2023 20:55
Lab ID:BLB0422-BLK1 Client ID:

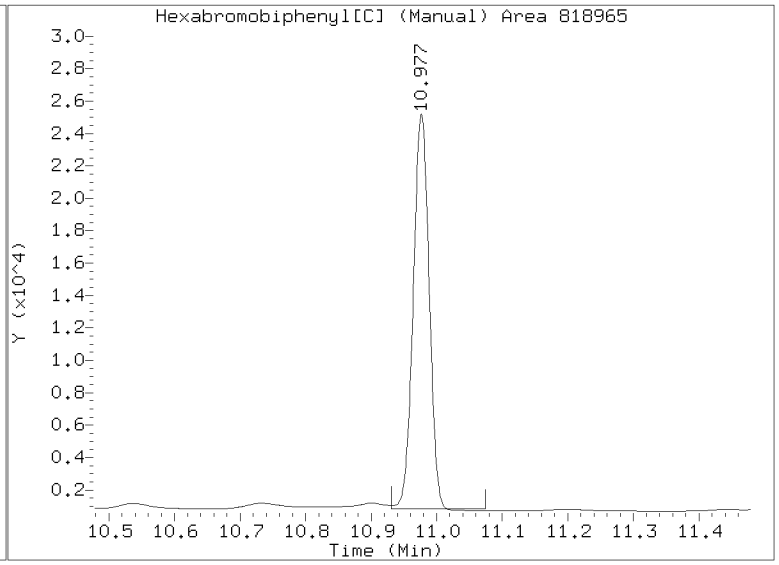












Analytical Resources, LLC
Analytical Chemists and Consultants

Form I

METHOD BLANK DATA SHEET

EPA 8081B

Blank

Laboratory:	Analytical Resources, LLC			SDG:	23B0276
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Solid	Laboratory ID:	BLC0155-BLK1	File ID:	23032450.D
Sampled:	N/A	Prepared:	03/08/23 11:36	Analyzed:	03/25/23 06:35
Solids:		Preparation:	EPA 3546 (Microwave)	Initial/Final:	12.5 g / 2.5 mL
Batch:	BLC0155	Sequence:	SLC0442	Calibration:	FL00041
Instrument:	ECD6	Column:	STX-CLP	Cleanups:	GPC, Silica Gel, Sulfur, Sulfuric Acid

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg wet)	Q	DL	RL
118-74-1	Hexachlorobenzene	1	0.50	U	0.15	0.50

SURROGATES	ADDED: (ug/kg wet)	FOUND: (ug/kg wet)	% REC	QC LIMITS	Q
Decachlorobiphenyl	8.0000	6.37	79.6	30 - 160	
Decachlorobiphenyl [2C]	8.0000	6.70	83.7	30 - 160	
Tetrachlorometaxylene	8.0000	5.05	63.1	30 - 160	
Tetrachlorometaxylene [2C]	8.0000	4.82	60.3	30 - 160	

[2C] indicates second-column analyte, present if quantification on any batch samples used second column data.

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230324.b/23032450.D
Data file 2: /20230324.b/B20230324.b/23032450.D
Method: \20230324.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: BLC0155-BLK1
Client ID:
Injection Date: 25-MAR-2023 06:35
Report Date: 03/28/2023 10:51
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP on col	CLP2 on col	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response				
----			----			0.00	0.00	---	alpha-BHC
----			----			0.00	0.00	---	beta-BHC
----			----			0.00	0.00	---	delta-BHC
----			----			0.00	0.00	---	gamma-BHC (Lindane)
----			----			0.00	0.00	---	Heptachlor
----			----			0.00	0.00	---	Aldrin
----			----			0.00	0.00	---	Heptachlor epoxide b
----			----			0.00	0.00	---	Endosulfan I
----			----			0.00	0.00	---	Dieldrin
----			----			0.00	0.00	---	4,4'-DDE
----			----			0.00	0.00	---	Endrin
----			----			0.00	0.00	---	Endosulfan II
----			----			0.00	0.00	---	4,4'-DDD
----			----			0.00	0.00	---	Endosulfan sulfate
----			----			0.00	0.00	---	4,4'-DDT
----			----			0.00	0.00	---	Methoxychlor
----			----			0.00	0.00	---	Endrin ketone
----			----			0.00	0.00	---	Endrin aldehyde
----			----			0.00	0.00	---	trans-Chlordane
----			----			0.00	0.00	---	cis-Chlordane
----			----			0.00	0.00	---	Hexachlorobutadiene
4.207	-0.009	6457	4.658	-0.012	1849	0.66	0.13	132.7*	Hexachlorobenzene
3.848	-0.010	188483	4.169	-0.010	258587	25.24	24.12	4.5	Tetrachloro-m-xylene M
9.404	-0.010	132398	10.359	-0.015	162471	31.84	33.49	5.1	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

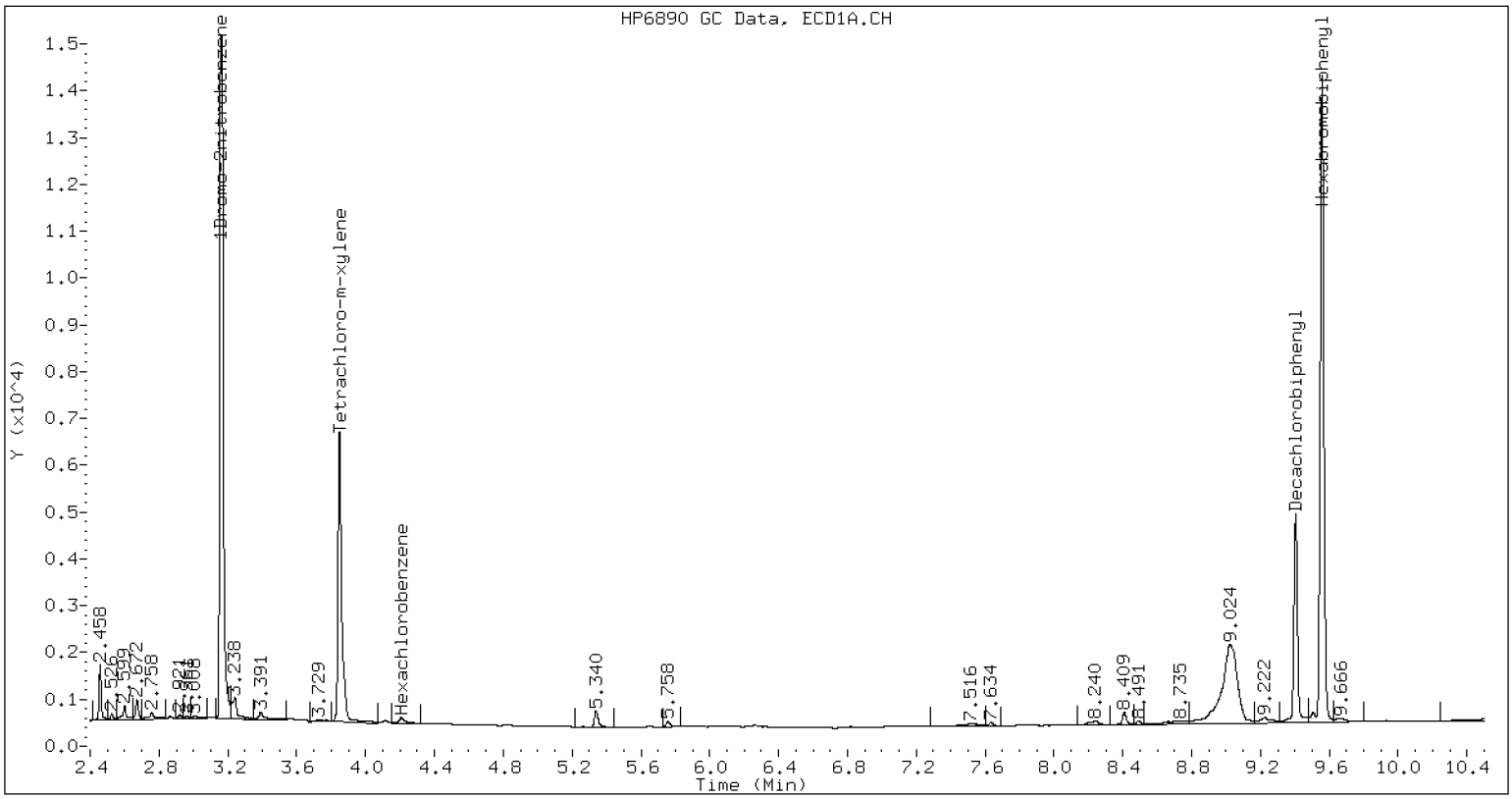
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	549188	-18.3
Hexabromobiphenyl	609723	410427	-32.7

Column 2

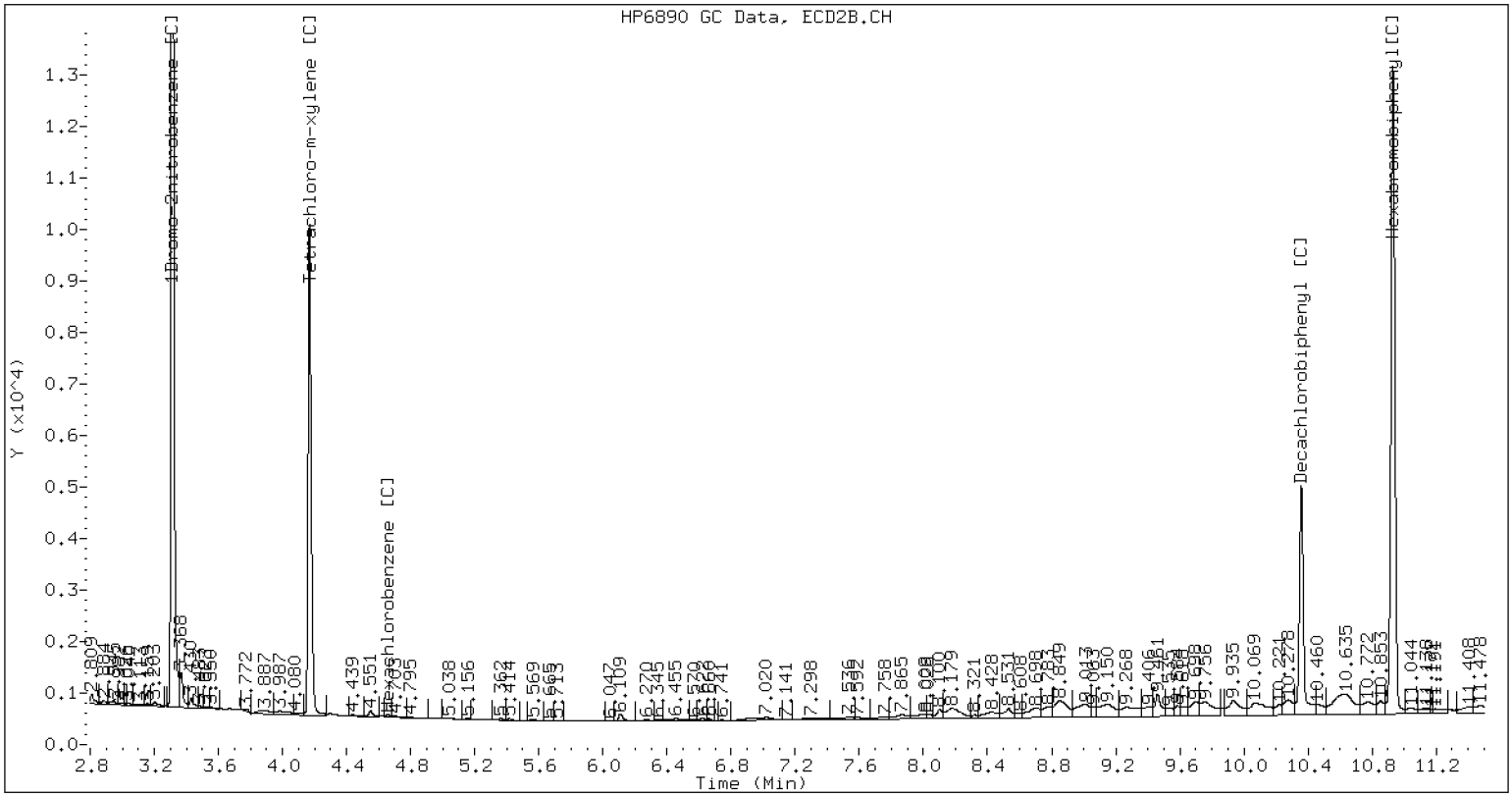
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	761530	-24.3
Hexabromobiphenyl	769764	438980	-43.0

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

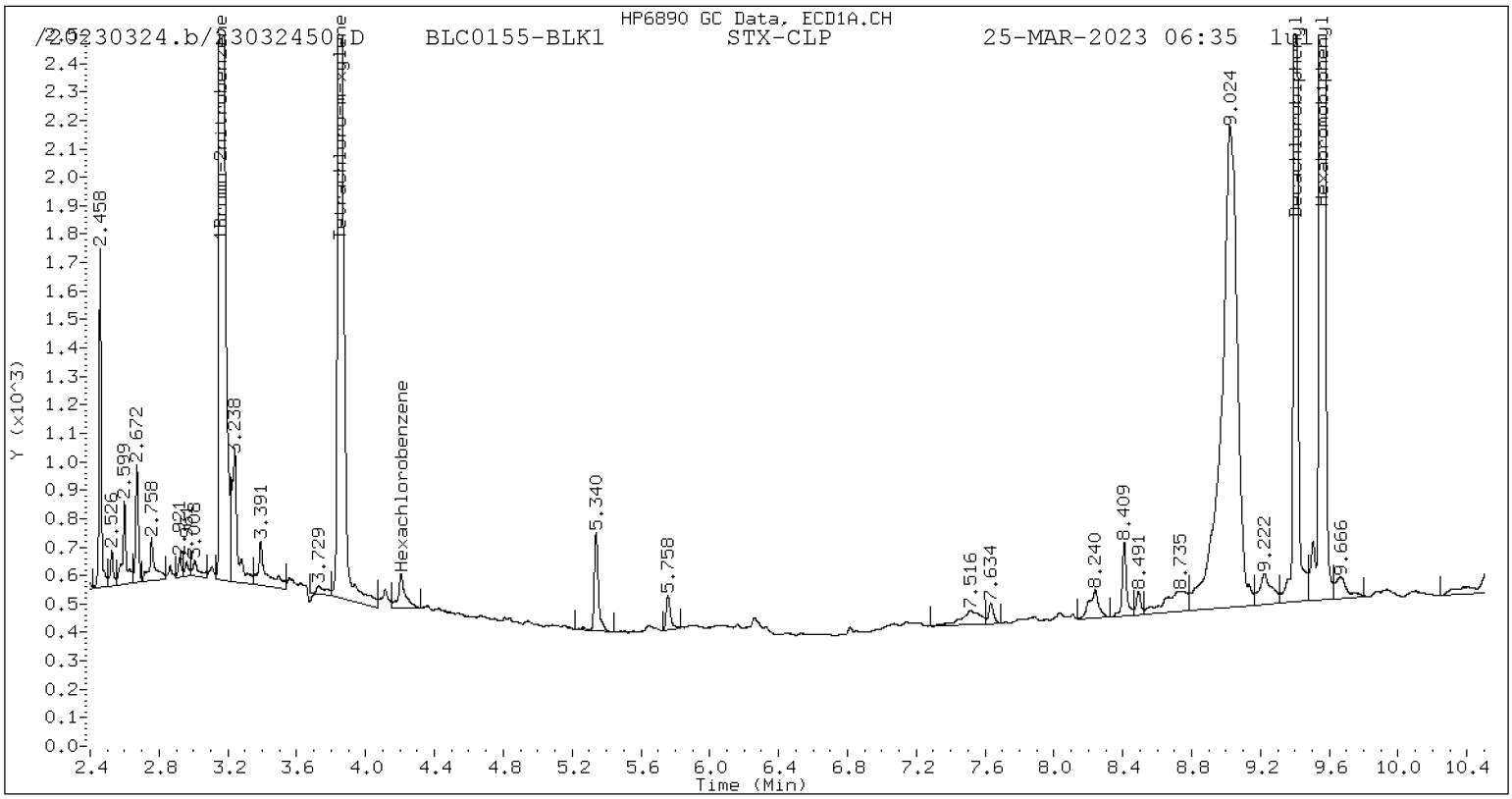
/20230324.b/23032450.D BLC0155-BLK1 STX-CLP 25-MAR-2023 06:35 1ul



/20230324.b/B20230324.b/23032450.D BLC0155-BLK1 CLP2 25-MAR-2023 06:35 1ul

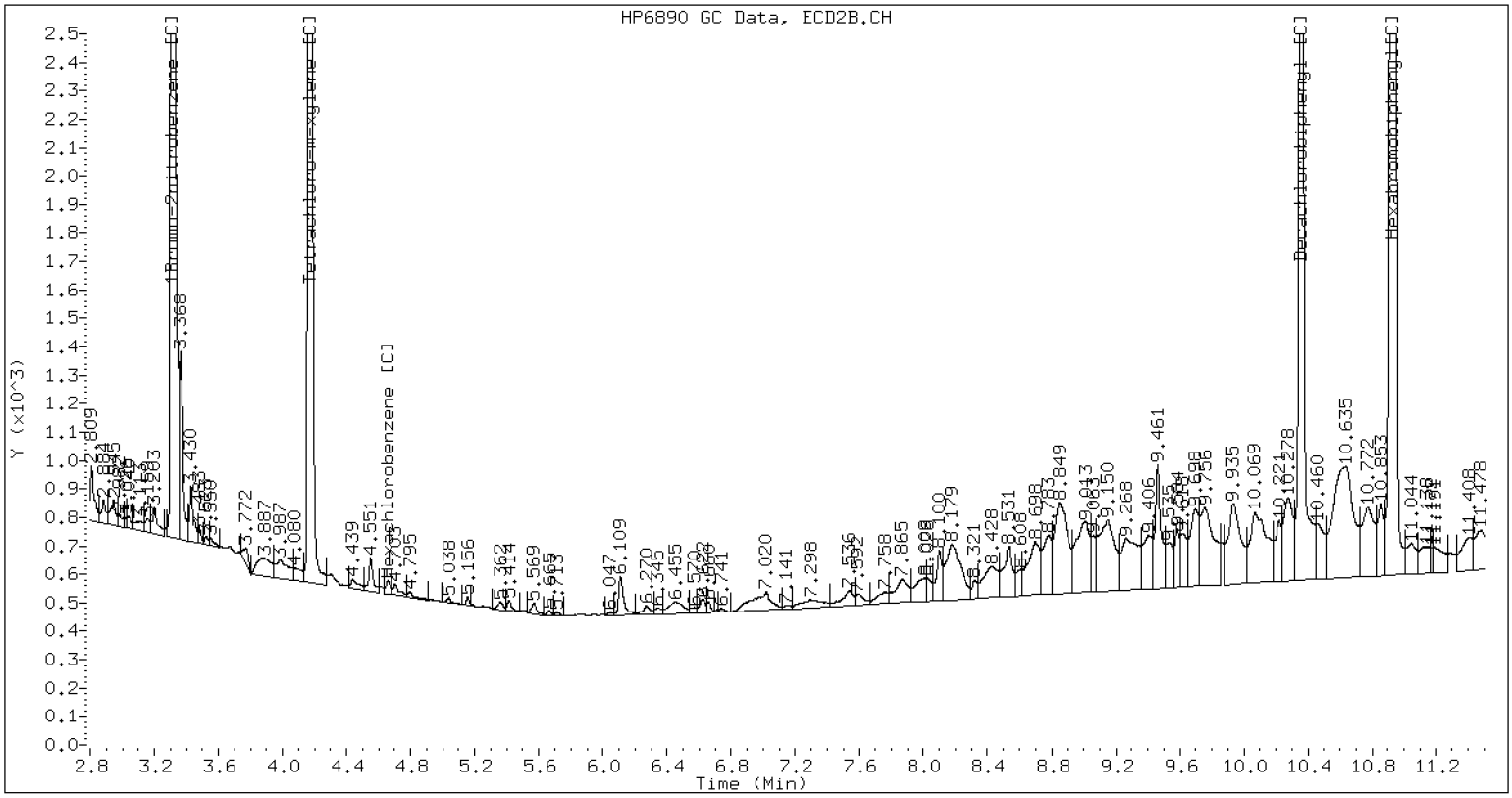


Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: YES

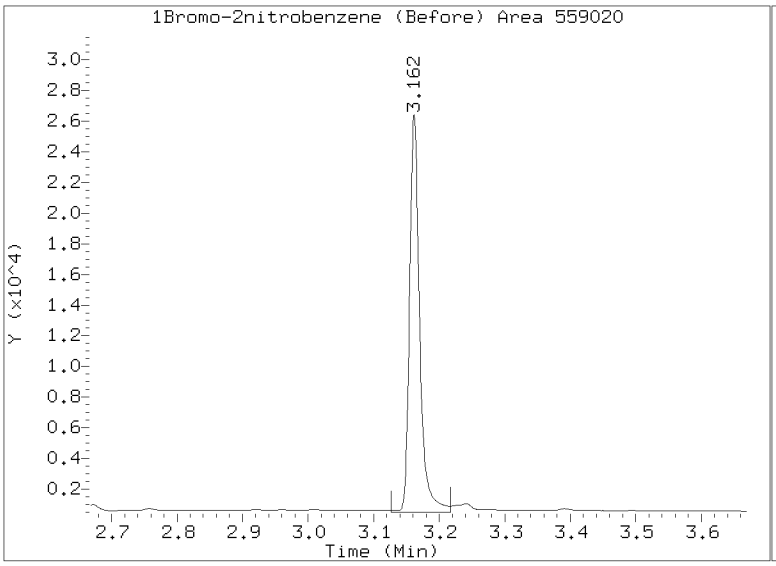
/20230324.b/B20230324.b/23032450.D BLC0155-BLK1 CLP2

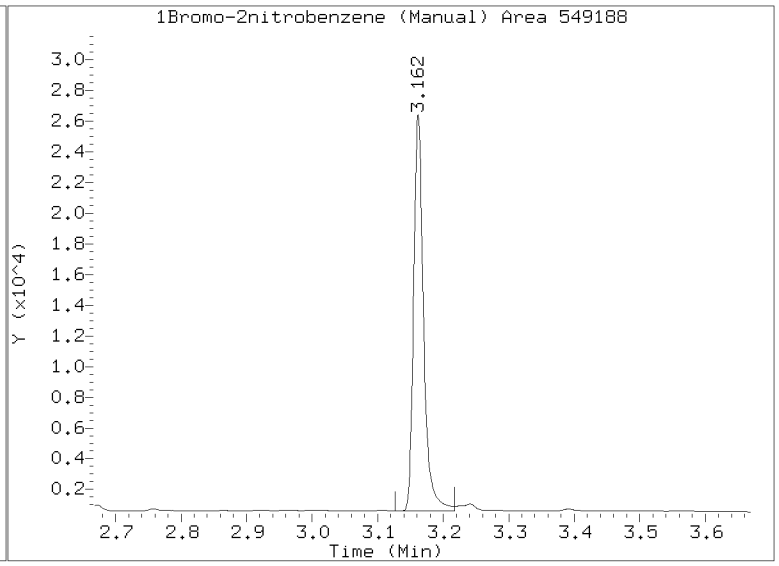


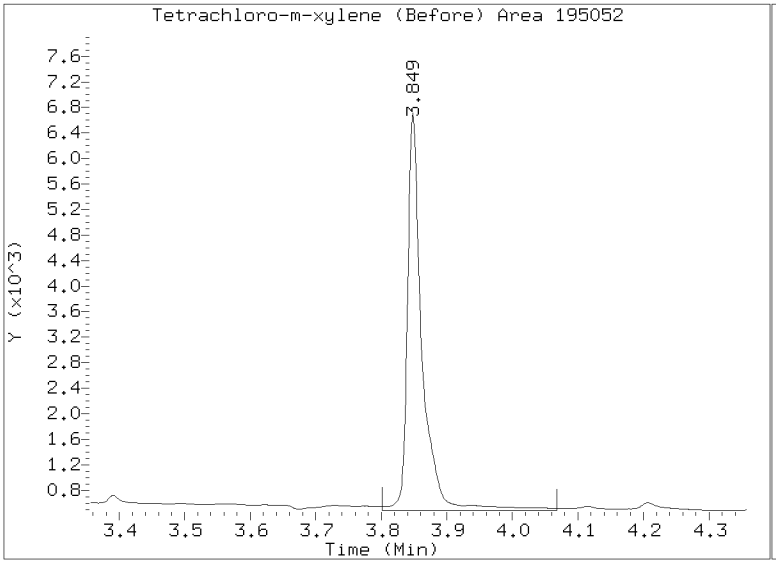
CLP-2 Manual Integration: NO

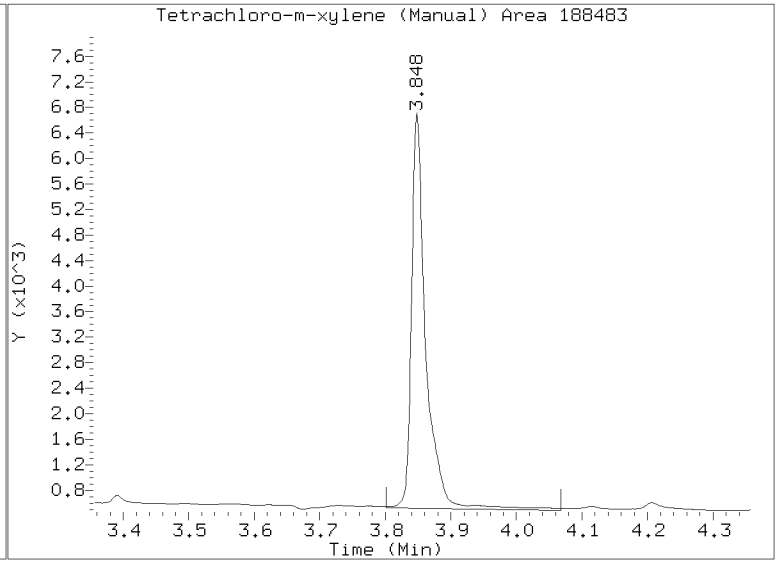
Manual Peak Adjustment Report, STX-CLP

Datafile: /20230324.b/23032450.D
Injection Date: 25-MAR-2023 06:35
Lab ID:BLC0155-BLK1 Client ID:
Report Date: 03/28/2023 10:51









LCS / LCS DUPLICATE RECOVERY

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	03/03/23 21:13
Batch:	BLB0422	Laboratory ID:	BLB0422-BS1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	LCS
Initial/Final:	12.5 g / 2.5 mL		

COMPOUND	SPIKE ADDED (ug/kg wet)	LCS CONCENTRATION (ug/kg wet)	Q	LCS % REC. #	QC LIMITS REC.
Hexachlorobenzene	4.00	2.09		52.3	26 - 128

* Indicates values outside of QC limits

COMPOUND	SPIKE ADDED (ug/kg wet)	LCSD CONCENTRATION (ug/kg wet)	Q	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Hexachlorobenzene	4.00	2.33		58.1	10.6	30	26 - 128

* Indicates values outside of QC limits

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230302.b/063F7201.D
Data file 2: /20230302.b/B20230302.b/063F7201.D
Method: \20230302.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: AA

ARI ID: BLB0422-BS1
Client ID:
Injection Date: 03-MAR-2023 21:13
Report Date: 03/09/2023 11:19
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.388	-0.003	212709	4.826	-0.003	319253	11.09	10.19	8.4	alpha-BHC
4.776	-0.003	88684	5.299	-0.003	129982	12.01	10.92	9.5	beta-BHC
4.963	-0.003	208345	5.650	-0.004	306410	13.29	11.88	11.2	delta-BHC
4.695	-0.003	198826	5.220	-0.003	306966	11.95	11.55	3.4	gamma-BHC (Lindane)
5.189	-0.003	172014	5.746	-0.004	248943	11.62	10.34	11.7	Heptachlor
5.516	-0.003	178933	6.148	-0.003	237524	10.79	8.64	22.1	Aldrin
6.196	-0.003	165792	6.804	-0.003	220136	11.53	9.68	17.4	Heptachlor epoxide b
6.638	-0.003	239775	7.247	-0.004	299323	18.17	14.94	19.5	Endosulfan I
----			7.547	0.004	360	0.00	0.02	---	Dieldrin
6.557	-0.004	312233	7.328	-0.003	383883	23.72	18.91	22.6	4,4'-DDE
----			7.869	0.003	2528	0.00	0.20	---	Endrin
7.383	-0.005	87267	8.073	-0.005	106630	9.49	8.33	13.0	Endosulfan II
7.203	-0.004	257064	7.932	-0.004	311398	27.93	25.64	8.6	4,4'-DDD
8.246	-0.004	184889	8.670	-0.003	235140	21.17	20.92	1.2	Endosulfan sulfate
7.497	-0.004	252564	8.251	-0.003	314093	27.16	26.79	1.3	4,4'-DDT
7.982	-0.004	30102	8.890	-0.003	35174	7.30	6.78	7.4	Methoxychlor
8.521	-0.003	192281	9.193	-0.003	233212	19.22	19.21	0.0	Endrin ketone
7.811	-0.005	18060	8.403	-0.004	22897	2.46	2.54	3.0	Endrin aldehyde
6.336	-0.003	167395	7.014	-0.004	218662	11.46	9.65	17.2	trans-Chlordane
6.483	-0.003	167038	7.174	-0.003	205089	11.40	9.25	20.9	cis-Chlordane
2.343	-0.003	198096	2.489	-0.003	270614	9.86	9.10	8.0	Hexachlorobutadiene
4.228	-0.002	186306	4.686	-0.003	274809	10.46	9.64	8.1	Hexachlorobenzene
3.869	-0.002	287921	4.192	-0.003	453264	21.24	20.60	3.1	Tetrachloro-m-xylene
9.435	-0.003	180030	10.400	-0.002	229669	22.80	23.66	3.7	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

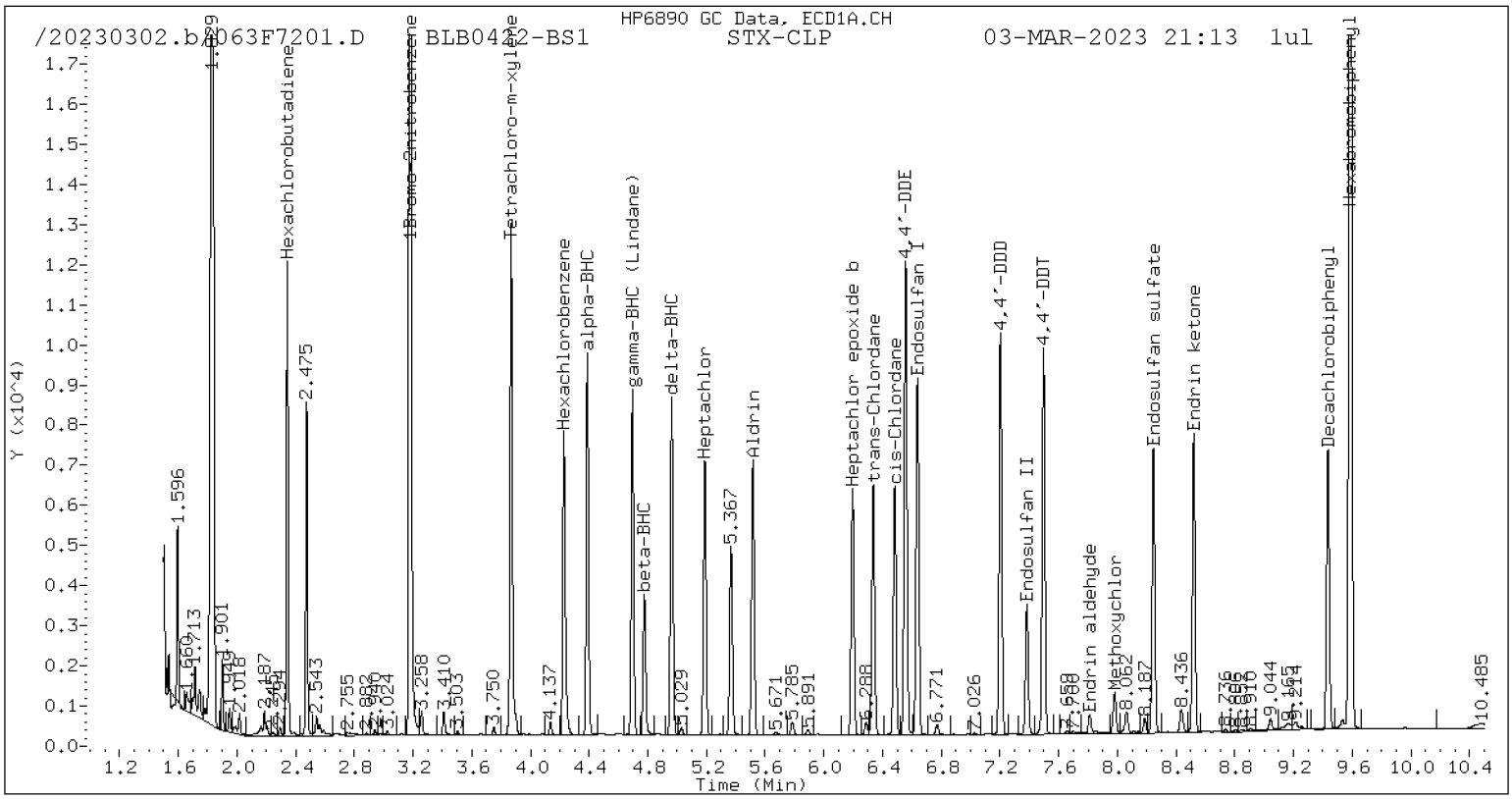
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	996589	48.2
Hexabromobiphenyl	609723	779254	27.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	1562925	55.3
Hexabromobiphenyl	769764	878175	14.1

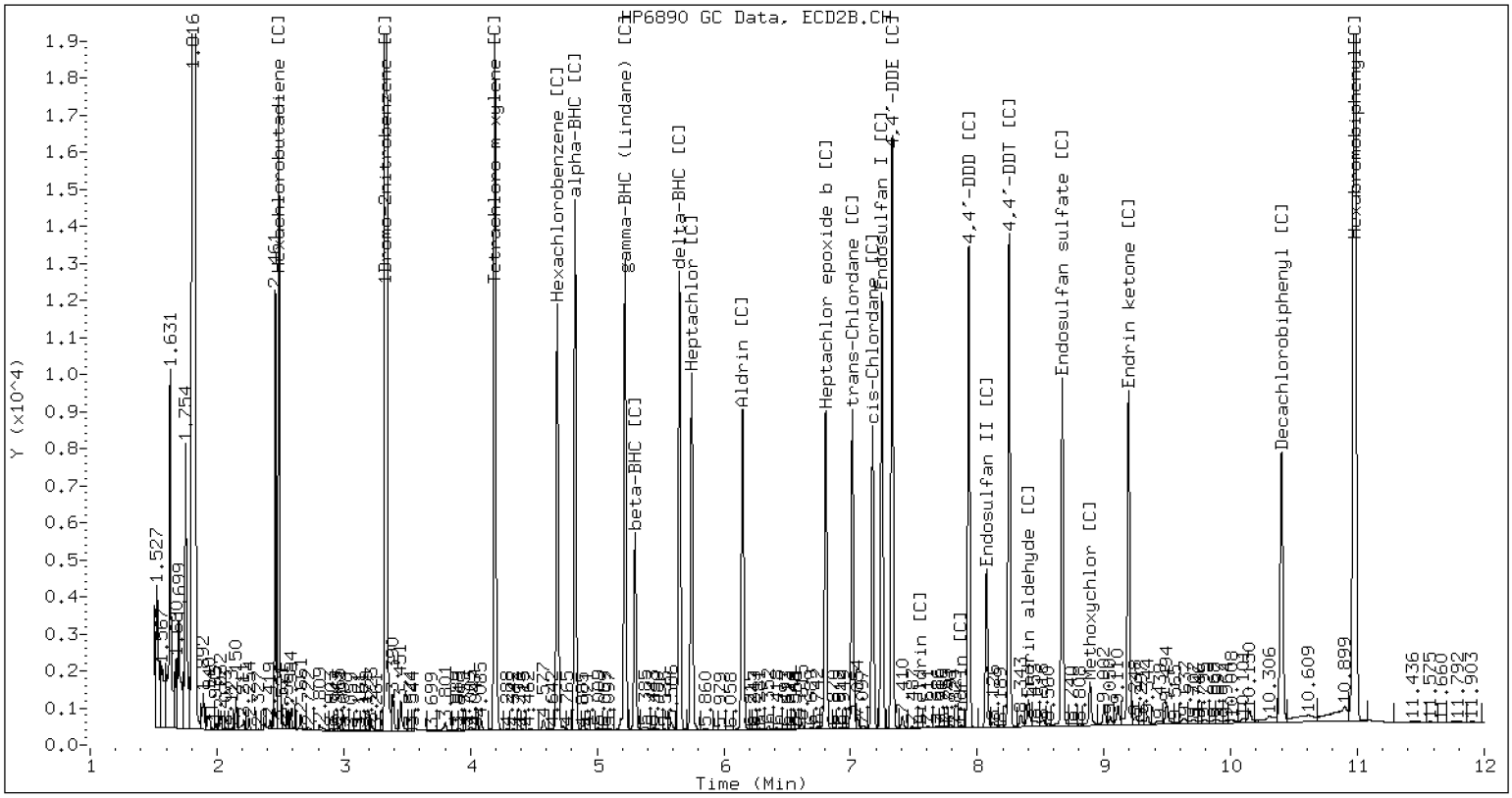
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230302.b/B20230302.b/063F7201.D BLB0422-BS1 CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230302.b/064F7301.D
Data file 2: /20230302.b/B20230302.b/064F7301.D
Method: \20230302.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: AA

ARI ID: BLB0422-BSD1
Client ID:
Injection Date: 03-MAR-2023 21:31
Report Date: 03/09/2023 11:19
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.388	-0.003	258486	4.826	-0.003	393331	13.49	12.53	7.4	alpha-BHC
4.776	-0.003	109323	5.299	-0.003	163669	14.82	13.71	7.8	beta-BHC
4.963	-0.003	255026	5.650	-0.004	371374	16.29	14.36	12.6	delta-BHC
4.696	-0.003	241717	5.221	-0.003	368448	14.55	13.83	5.1	gamma-BHC (Lindane)
5.188	-0.003	208386	5.747	-0.003	311190	14.10	12.89	8.9	Heptachlor
5.516	-0.003	221060	6.148	-0.003	292928	13.35	10.63	22.7	Aldrin
6.196	-0.003	208821	6.803	-0.003	281439	14.54	12.35	16.3	Heptachlor epoxide b
6.637	-0.003	308300	7.247	-0.003	397135	23.39	19.77	16.8	Endosulfan I
----			7.547	0.004	546	0.00	0.02	---	Dieldrin
6.557	-0.004	394426	7.328	-0.003	506283	30.00	24.88	18.7	4,4'-DDE
----			7.869	0.003	2435	0.00	0.19	---	Endrin
7.384	-0.005	111086	8.073	-0.005	129867	11.81	9.84	18.2	Endosulfan II
7.203	-0.004	329025	7.932	-0.004	411123	34.97	32.84	6.3	4,4'-DDD
8.246	-0.004	244034	8.670	-0.003	308420	27.33	26.62	2.6	Endosulfan sulfate
7.497	-0.003	328280	8.251	-0.003	409060	34.52	33.86	2.0	4,4'-DDT
7.982	-0.004	30777	8.889	-0.003	41076	7.30	7.68	5.0	Methoxychlor
8.520	-0.004	251221	9.193	-0.003	295484	24.56	23.62	3.9	Endrin ketone
7.812	-0.004	21913	8.403	-0.004	31527	2.92	3.39	14.8	Endrin aldehyde
6.337	-0.003	212696	7.014	-0.003	281645	14.58	12.39	16.2	trans-Chlordane
6.483	-0.003	212462	7.174	-0.003	269255	14.52	12.11	18.1	cis-Chlordane
2.344	-0.002	190931	2.489	-0.003	250759	9.51	8.41	12.3	Hexachlorobutadiene
4.229	-0.002	206811	4.686	-0.003	313095	11.63	10.96	5.9	Hexachlorobenzene
3.869	-0.003	306084	4.193	-0.002	493911	22.62	22.39	1.0	Tetrachloro-m-xylene
9.435	-0.003	231313	10.399	-0.003	302355	28.66	30.22	5.3	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

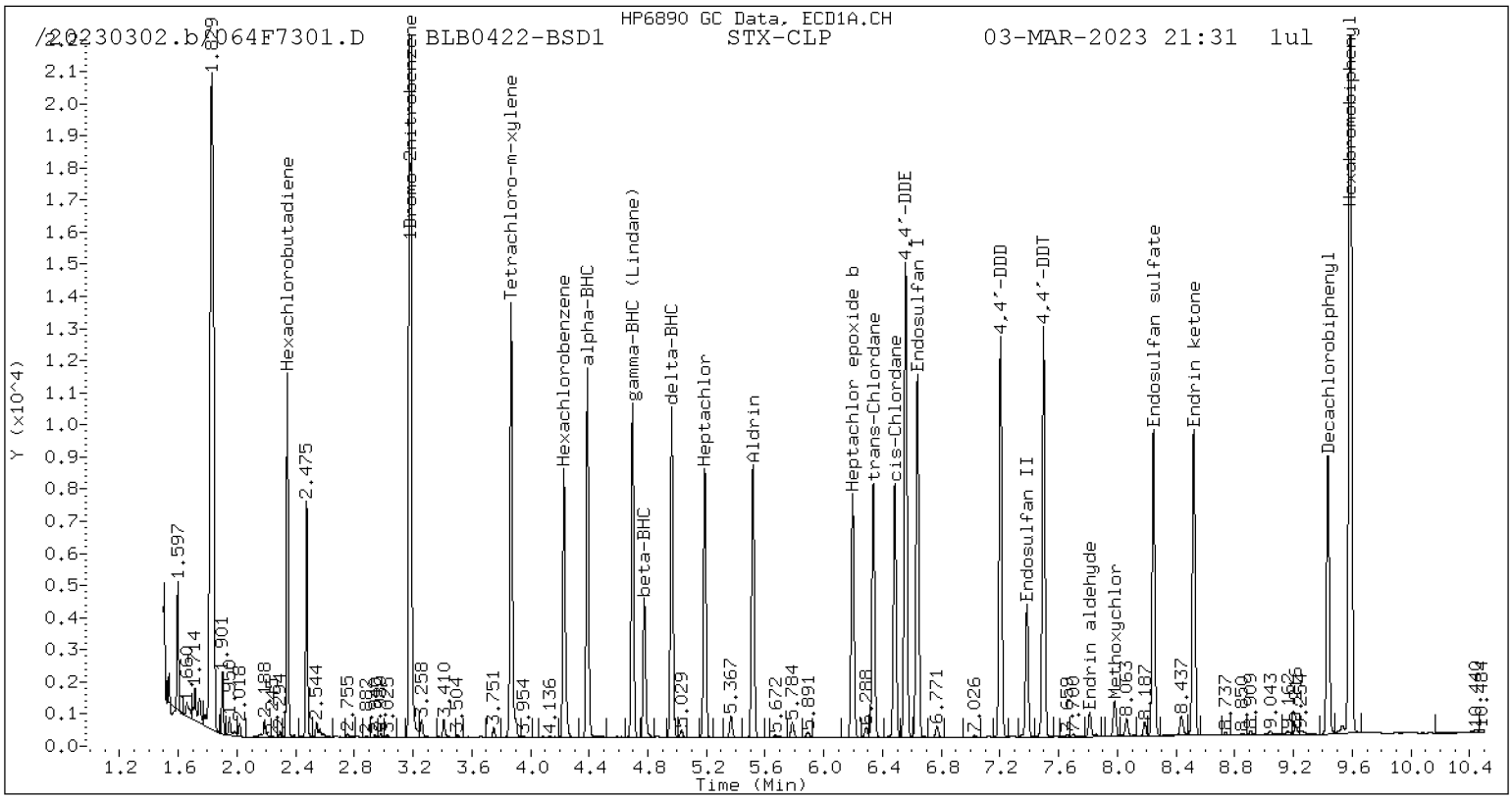
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	995171	48.0
Hexabromobiphenyl	609723	796684	30.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	1566782	55.7
Hexabromobiphenyl	769764	905131	17.6

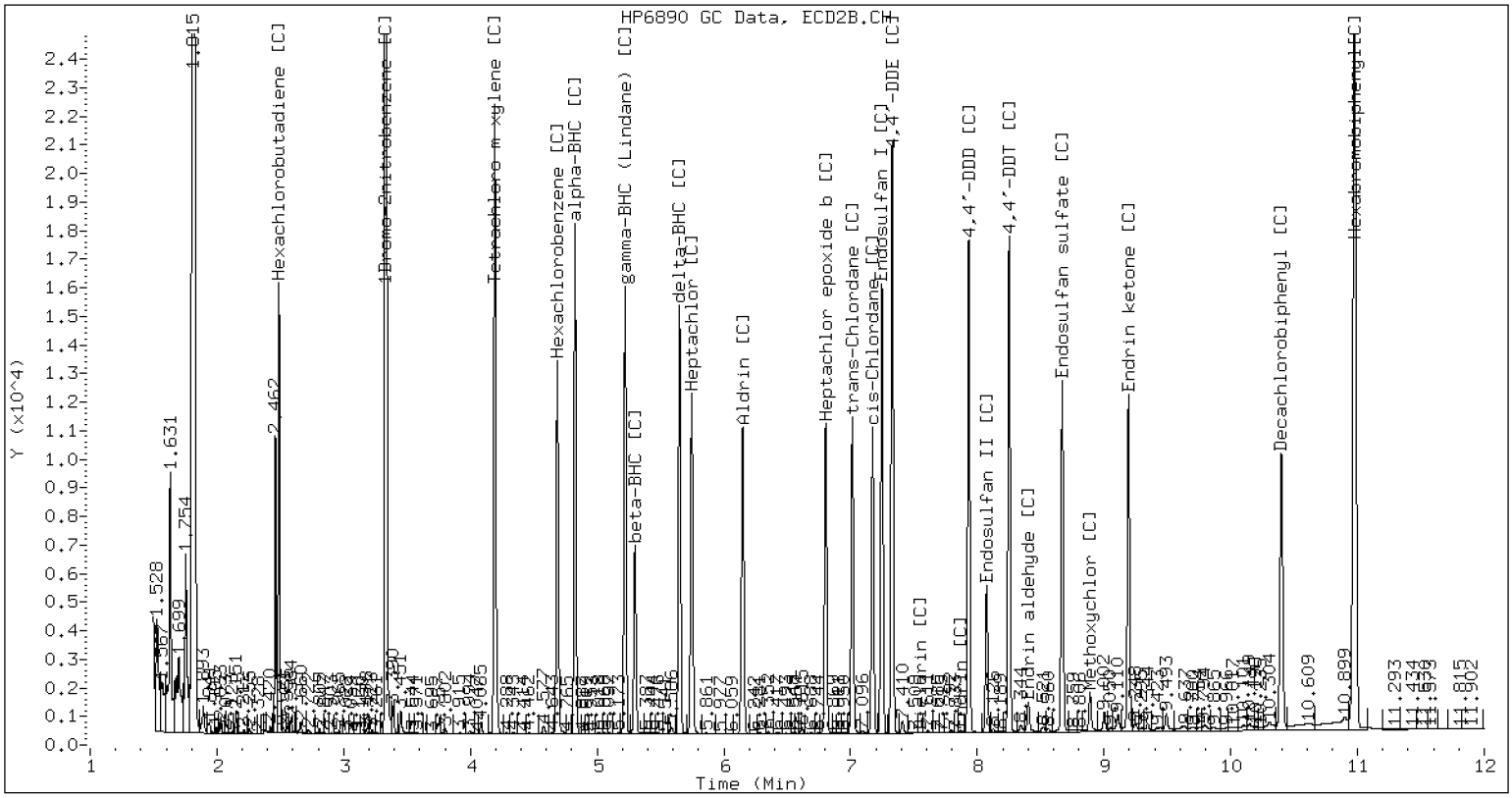
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230302.b/B20230302.b/064F7301.D BLB0422-BSD1 CLP2



CLP-2 Manual Integration: NO

LCS / LCS DUPLICATE RECOVERY

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	03/25/23 06:53
Batch:	BLC0155	Laboratory ID:	BLC0155-BS1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	LCS
Initial/Final:	12.5 g / 2.5 mL		

COMPOUND	SPIKE ADDED (ug/kg wet)	LCS CONCENTRATION (ug/kg wet)	Q	LCS % REC. #	QC LIMITS REC.
Hexachlorobenzene	4.00	2.88		72.1	26 - 128

* Indicates values outside of QC limits

COMPOUND	SPIKE ADDED (ug/kg wet)	LCSD CONCENTRATION (ug/kg wet)	Q	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Hexachlorobenzene	4.00	2.98		74.5	3.32	30	26 - 128

* Indicates values outside of QC limits

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230324.b/23032451.D
Data file 2: /20230324.b/B20230324.b/23032451.D
Method: \20230324.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: BLC0155-BS1
Client ID:
Injection Date: 25-MAR-2023 06:53
Report Date: 03/28/2023 10:51
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
----			----			0.00	0.00	---	alpha-BHC
----			----			0.00	0.00	---	beta-BHC
----			----			0.00	0.00	---	delta-BHC
----			----			0.00	0.00	---	gamma-BHC (Lindane)
----			----			0.00	0.00	---	Heptachlor
----			----			0.00	0.00	---	Aldrin
----			----			0.00	0.00	---	Heptachlor epoxide b
----			----			0.00	0.00	---	Endosulfan I
----			----			0.00	0.00	---	Dieldrin
----			----			0.00	0.00	---	4,4'-DDE
----			----			0.00	0.00	---	Endrin
----			----			0.00	0.00	---	Endosulfan II
----			----			0.00	0.00	---	4,4'-DDD
----			----			0.00	0.00	---	Endosulfan sulfate
----			----			0.00	0.00	---	4,4'-DDT
----			----			0.00	0.00	---	Methoxychlor
----			----			0.00	0.00	---	Endrin ketone
----			----			0.00	0.00	---	Endrin aldehyde
----			----			0.00	0.00	---	trans-Chlordane
----			----			0.00	0.00	---	cis-Chlordane
----			----			0.00	0.00	---	Hexachlorobutadiene
4.207	-0.010	151443	4.659	-0.011	160197	14.41	10.40	32.3	Hexachlorobenzene
3.847	-0.010	186814	4.168	-0.011	264558	23.37	22.26	4.9	Tetrachloro-m-xylene M
9.404	-0.011	120878	10.358	-0.016	141348	27.58	28.69	4.0	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

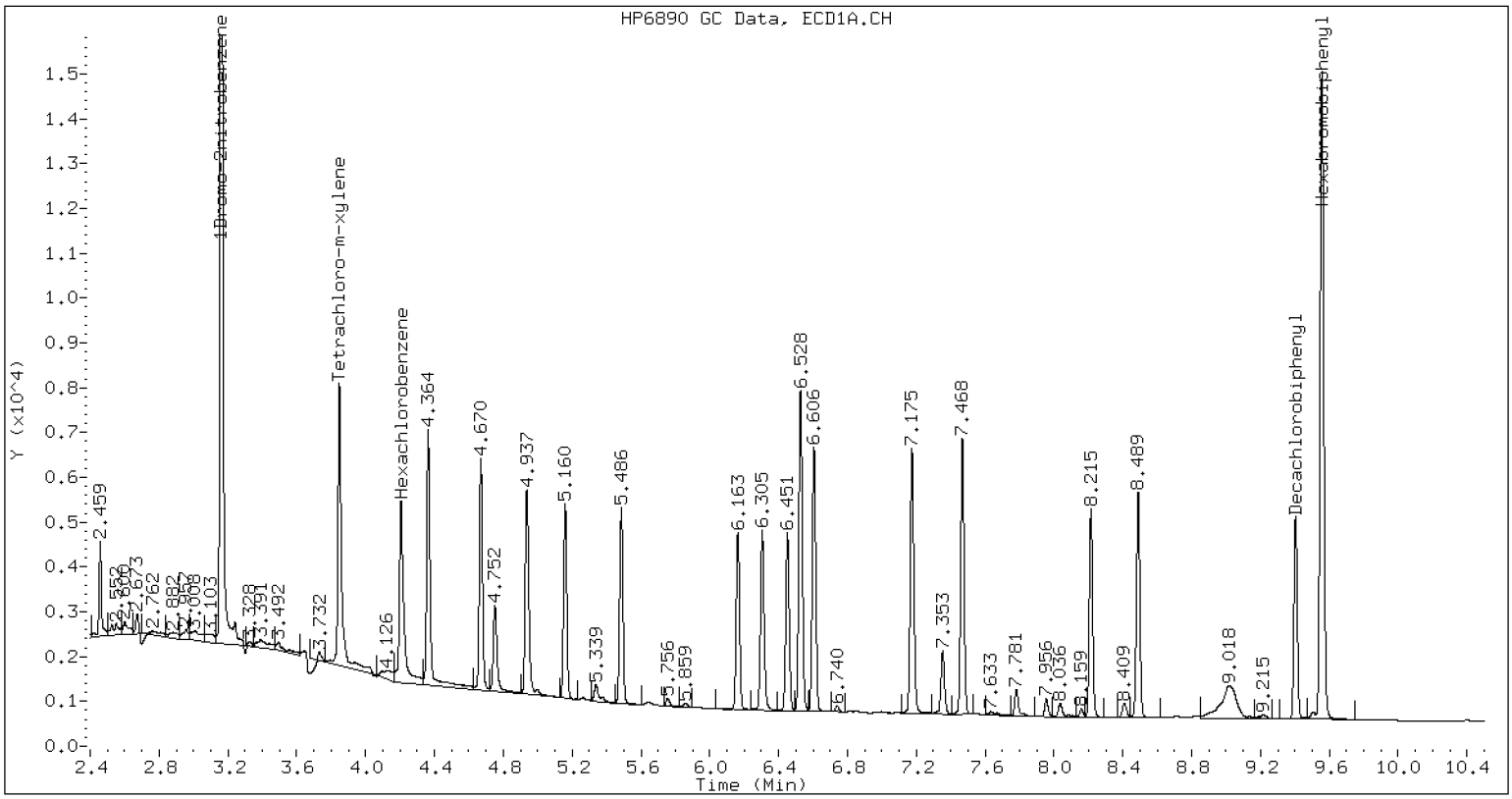
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	587890	-12.6
Hexabromobiphenyl	609723	432557	-29.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	844431	-16.1
Hexabromobiphenyl	769764	445739	-42.1

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

/20230324.b/23032451.D BLC0155-BS1 STX-CLP 25-MAR-2023 06:53 1ul



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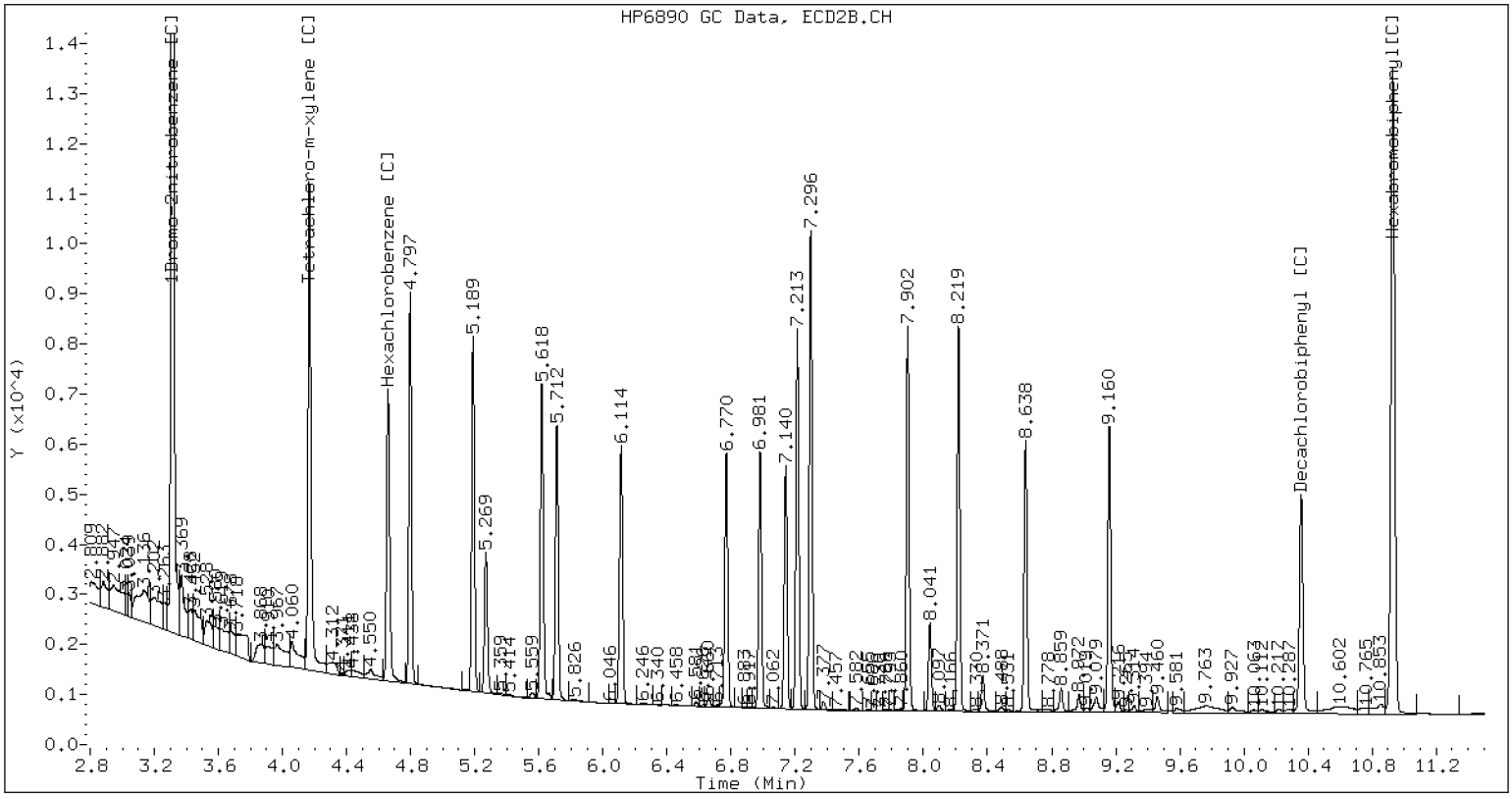
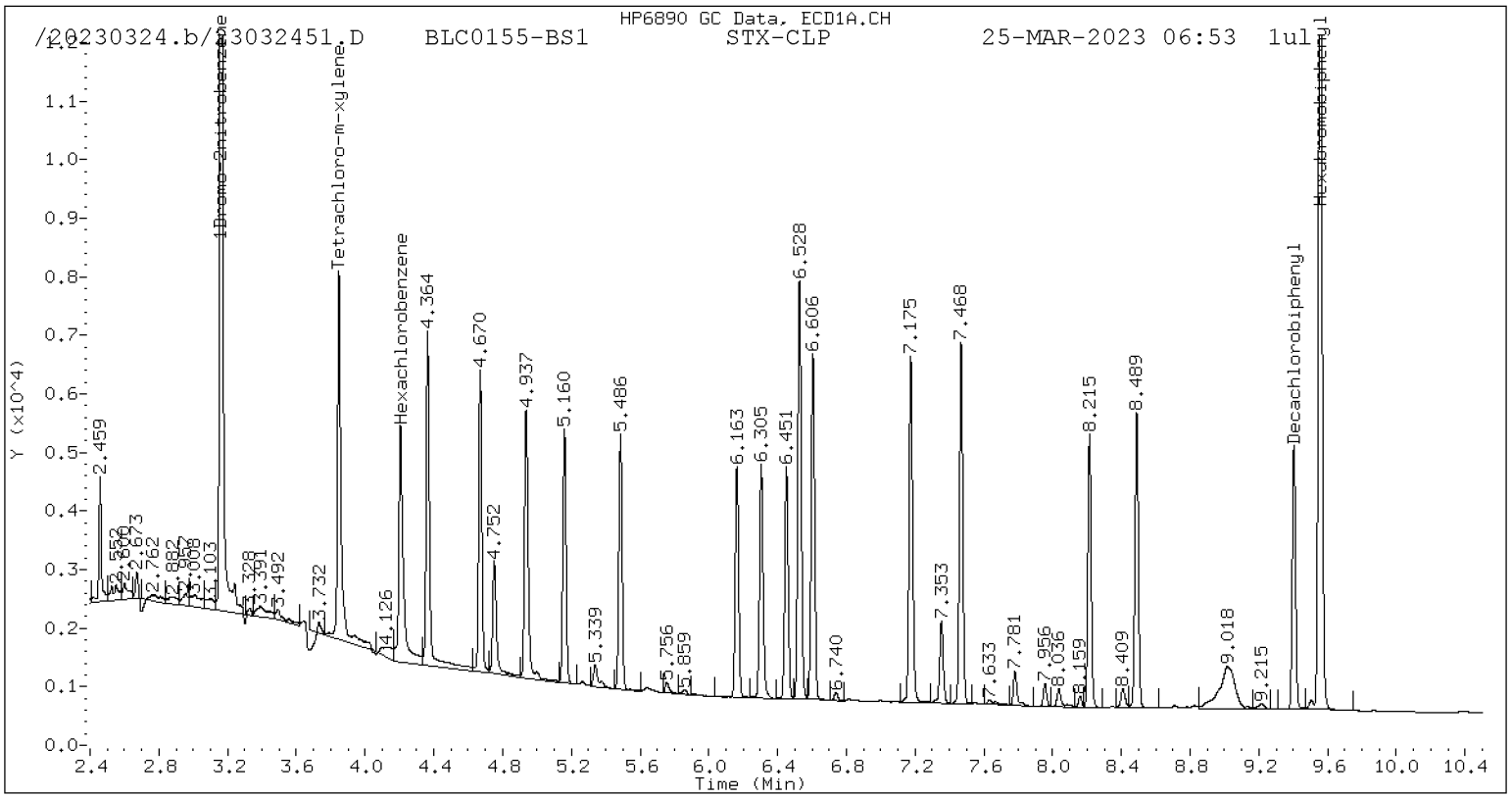
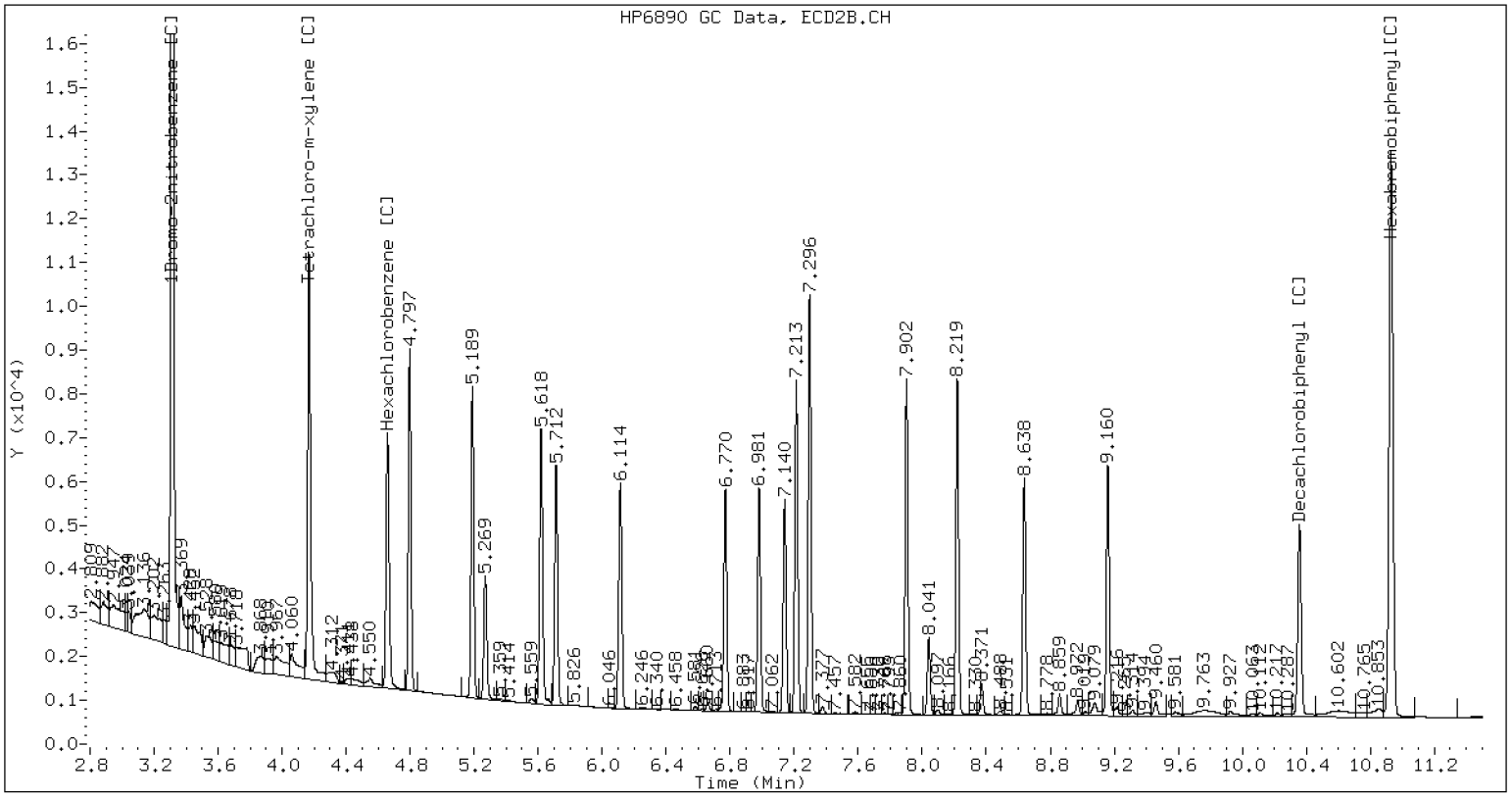


Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: YES

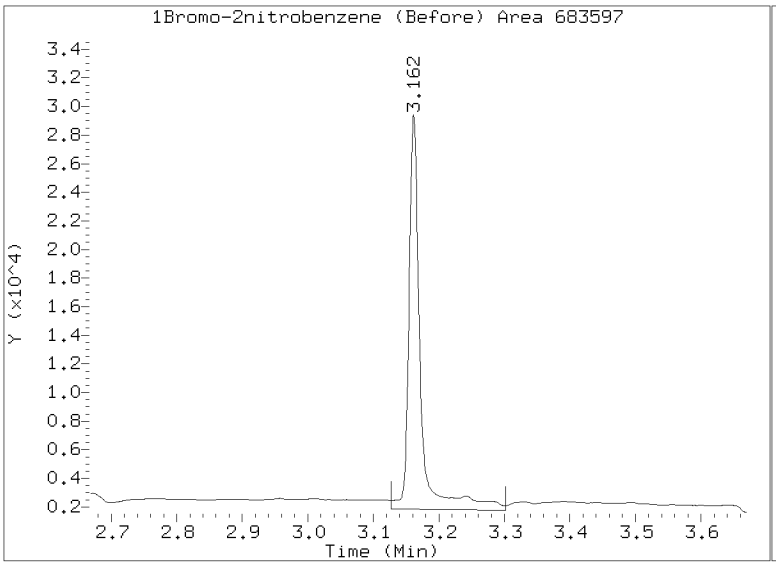
/20230324.b/B20230324.b/23032451.D BLC0155-BS1 CLP2

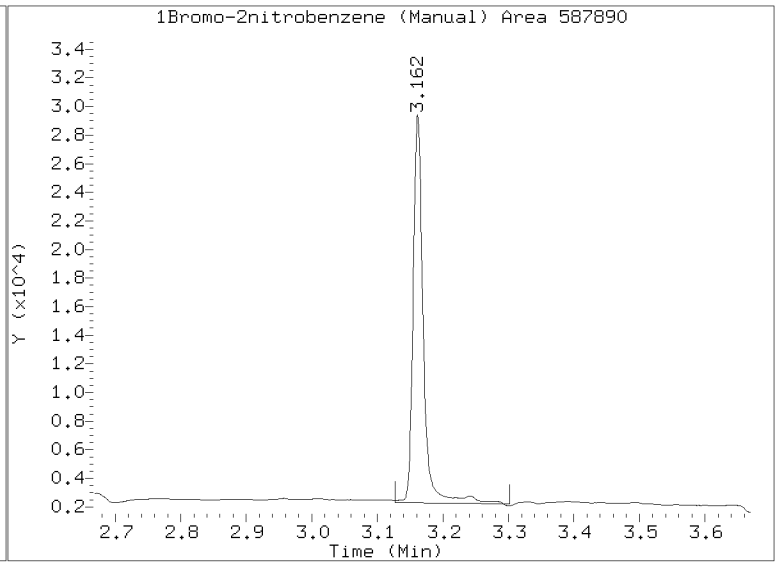


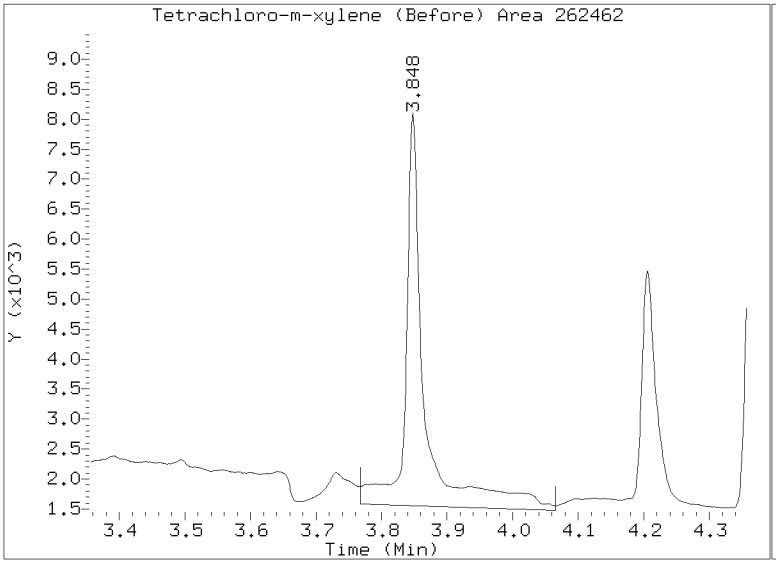
CLP-2 Manual Integration: NO

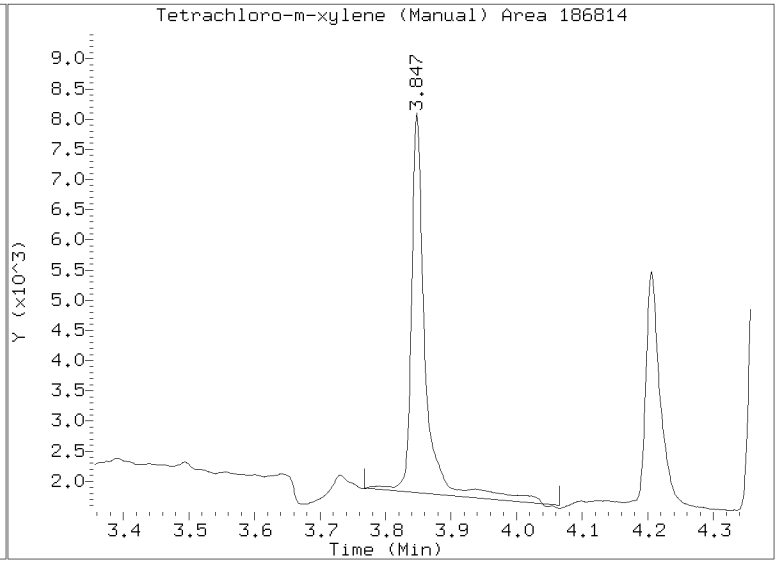
Manual Peak Adjustment Report, STX-CLP

Datafile: /20230324.b/23032451.D
Injection Date: 25-MAR-2023 06:53
Lab ID:BLC0155-BS1 Client ID:
Report Date: 03/28/2023 10:51









Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230324.b/23032452.D
Data file 2: /20230324.b/B20230324.b/23032452.D
Method: \20230324.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: BLC0155-BSD1
Client ID:
Injection Date: 25-MAR-2023 07:11
Report Date: 03/28/2023 10:51
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP on col	CLP2 on col	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response				
----			----			0.00	0.00	---	alpha-BHC
----			----			0.00	0.00	---	beta-BHC
----			----			0.00	0.00	---	delta-BHC
----			----			0.00	0.00	---	gamma-BHC (Lindane)
----			----			0.00	0.00	---	Heptachlor
----			----			0.00	0.00	---	Aldrin
----			----			0.00	0.00	---	Heptachlor epoxide b
----			----			0.00	0.00	---	Endosulfan I
----			----			0.00	0.00	---	Dieldrin
----			----			0.00	0.00	---	4,4'-DDE
----			----			0.00	0.00	---	Endrin
----			----			0.00	0.00	---	Endosulfan II
----			----			0.00	0.00	---	4,4'-DDD
----			----			0.00	0.00	---	Endosulfan sulfate
----			----			0.00	0.00	---	4,4'-DDT
----			----			0.00	0.00	---	Methoxychlor
----			----			0.00	0.00	---	Endrin ketone
----			----			0.00	0.00	---	Endrin aldehyde
----			----			0.00	0.00	---	trans-Chlordane
----			----			0.00	0.00	---	cis-Chlordane
----			----			0.00	0.00	---	Hexachlorobutadiene
4.206	-0.010	149590	4.658	-0.012	189728	14.90	12.66	16.2	Hexachlorobenzene M
3.848	-0.009	223240	4.168	-0.011	299957	29.22	25.94	11.9	Tetrachloro-m-xylene M
9.404	-0.011	139191	10.358	-0.015	156246	31.04	30.95	0.3	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

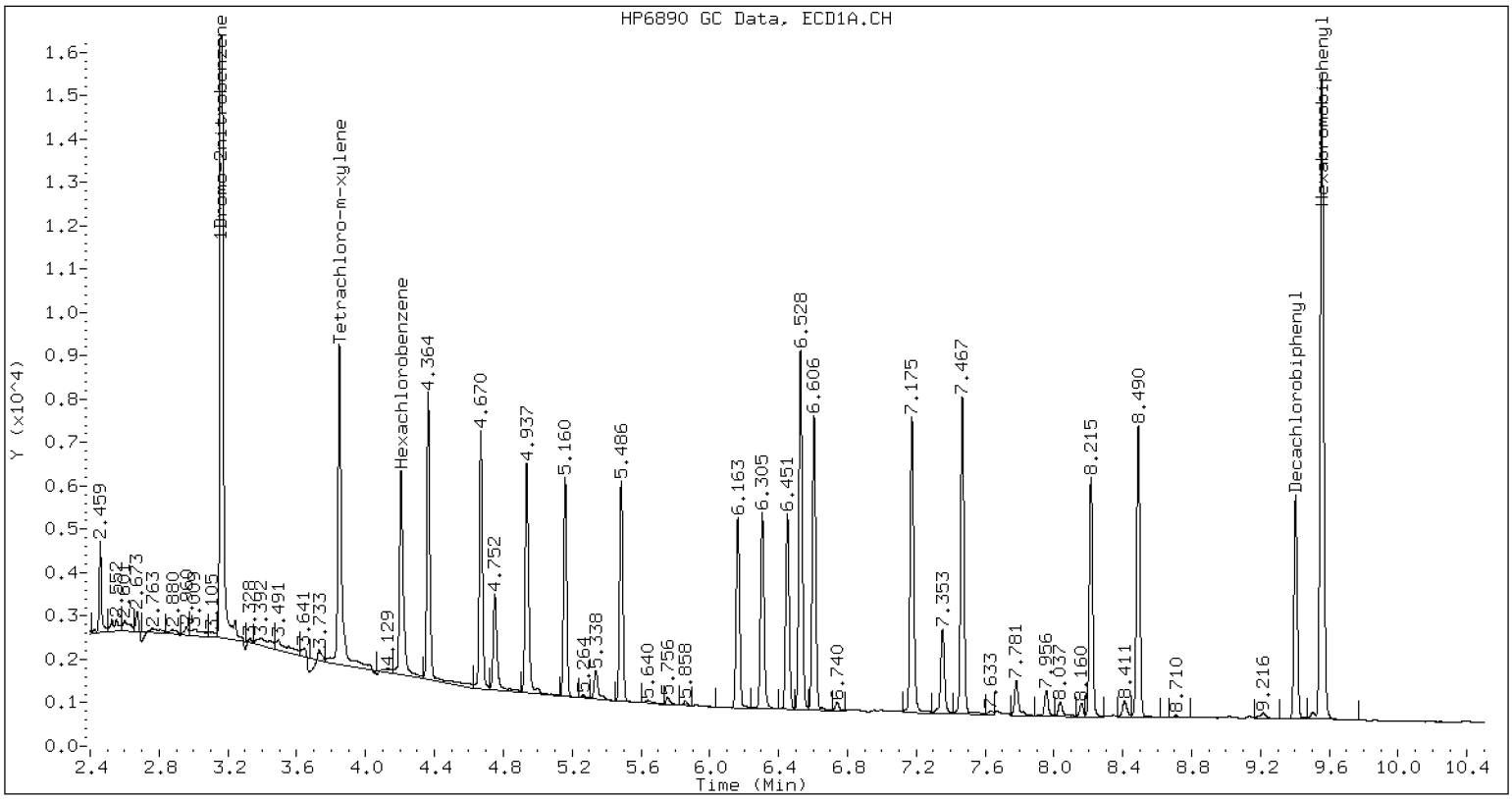
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	561745	-16.5
Hexabromobiphenyl	609723	442602	-27.4

Column 2

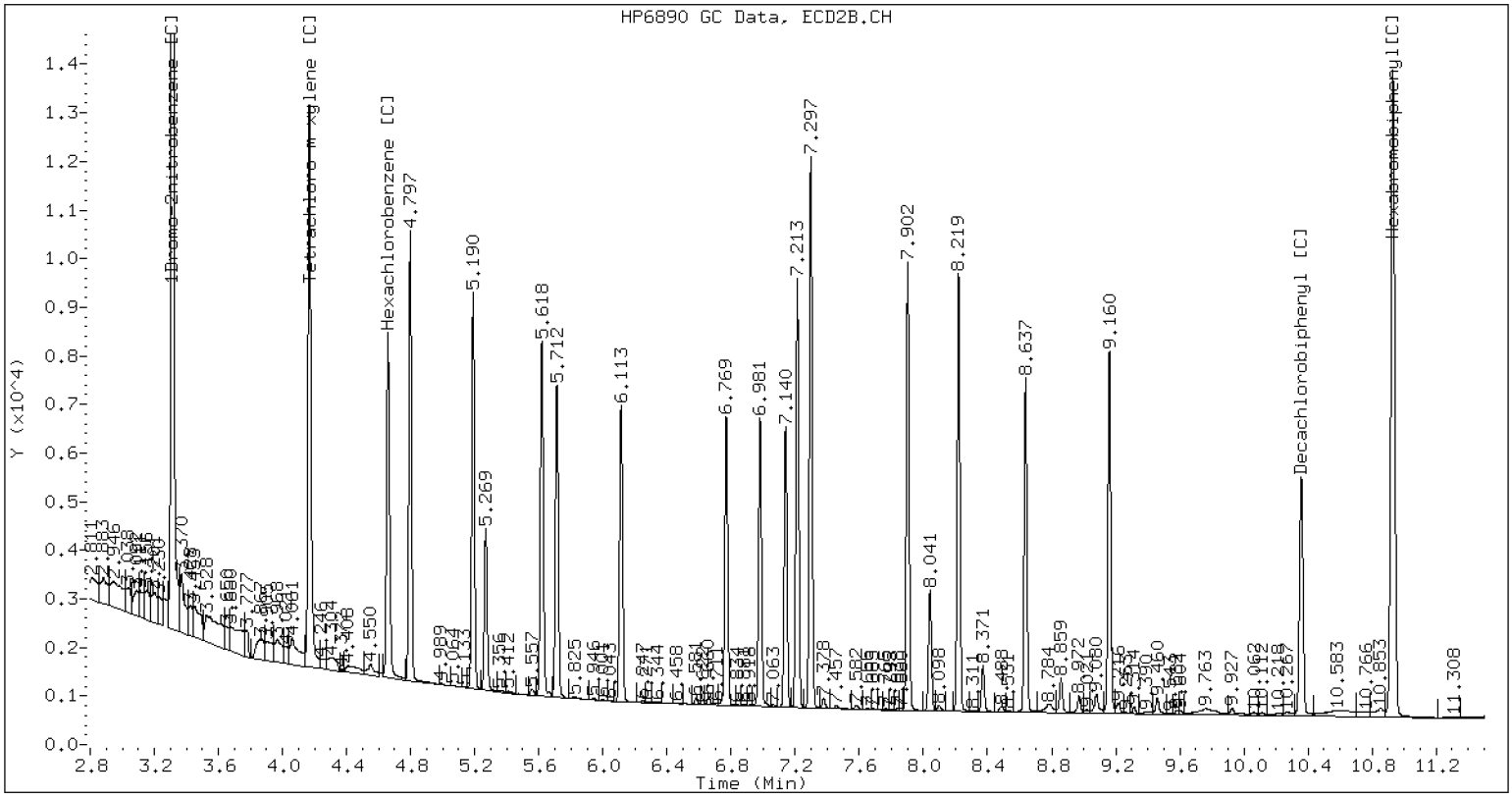
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	821419	-18.4
Hexabromobiphenyl	769764	456796	-40.7

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

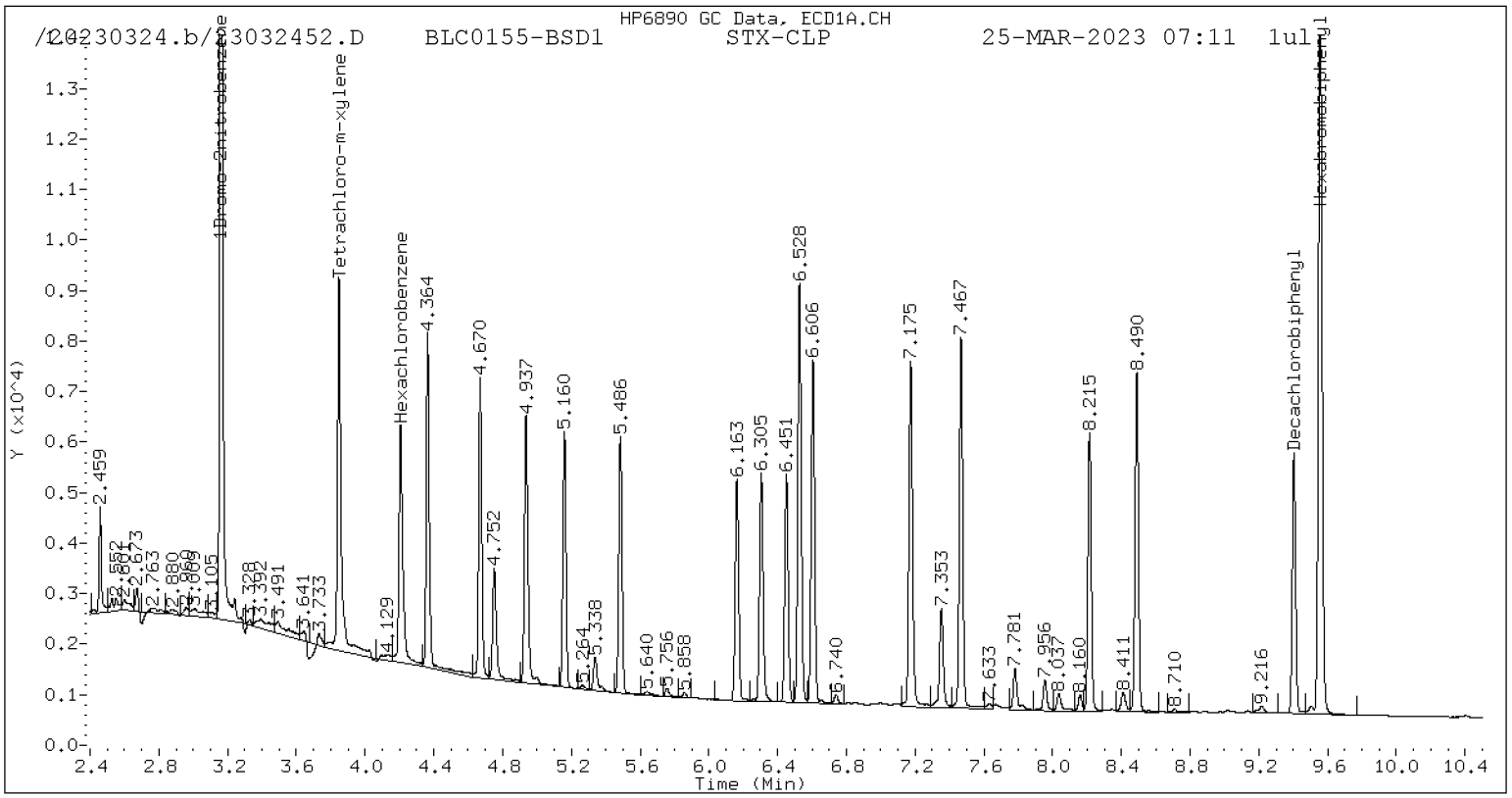
/20230324.b/23032452.D BLC0155-BSD1 STX-CLP 25-MAR-2023 07:11 1ul



/20230324.b/B20230324.b/23032452.D BLC0155-BSD1 CLP2 25-MAR-2023 07:11 1ul

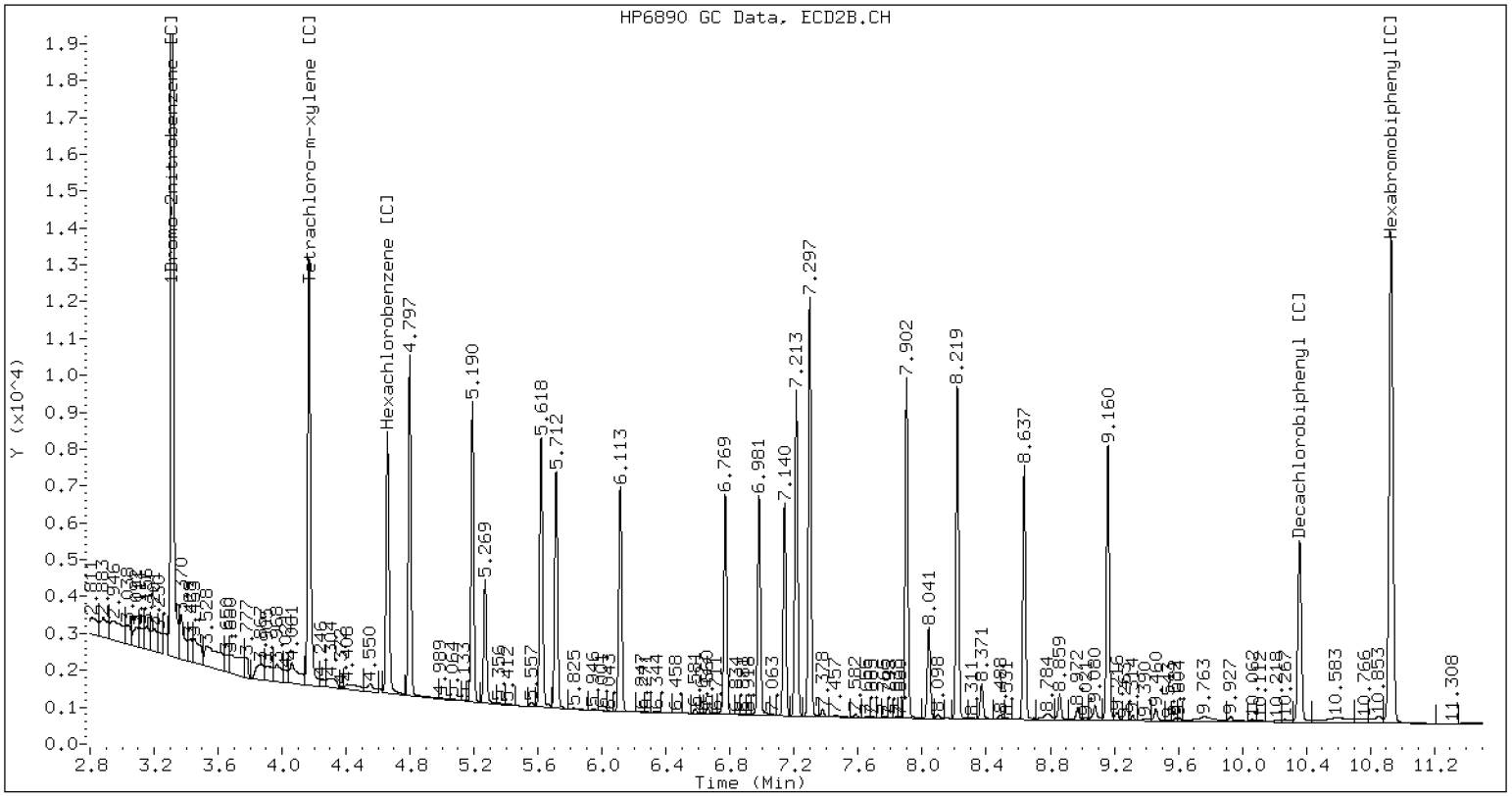


Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: YES

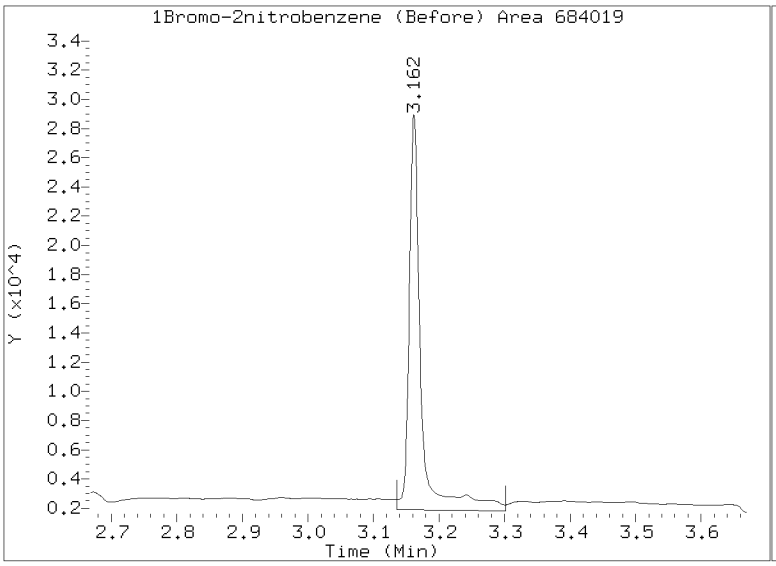
/20230324.b/B20230324.b/23032452.D BLC0155-BSD1 CLP2

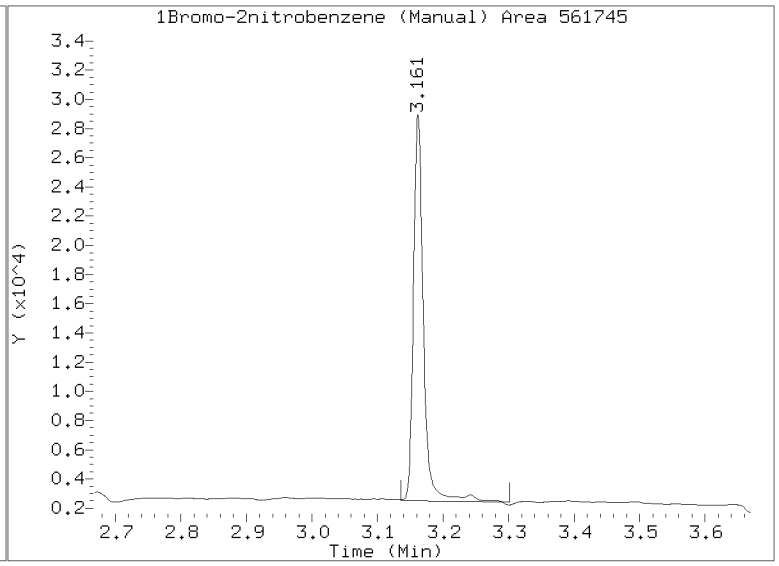


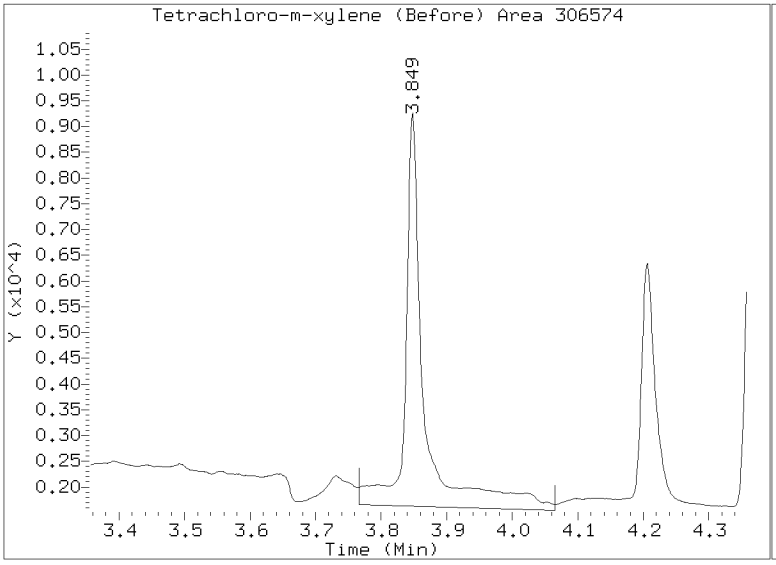
CLP-2 Manual Integration: NO

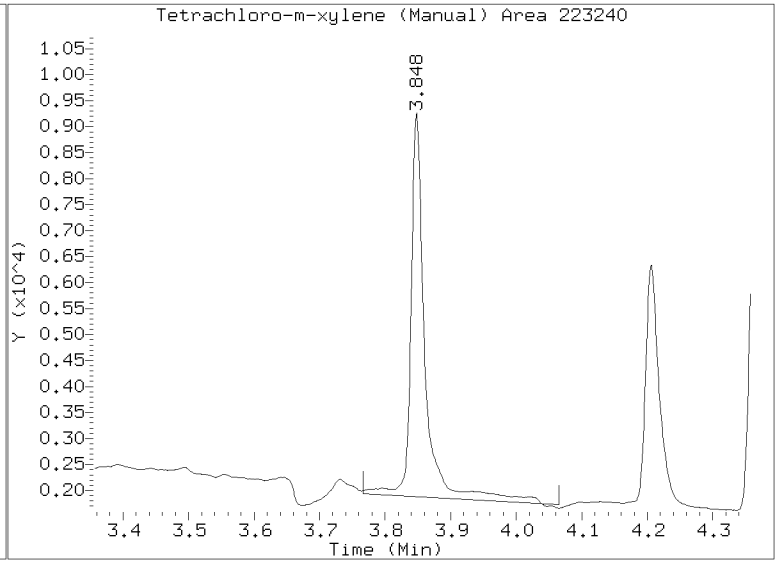
Manual Peak Adjustment Report, STX-CLP

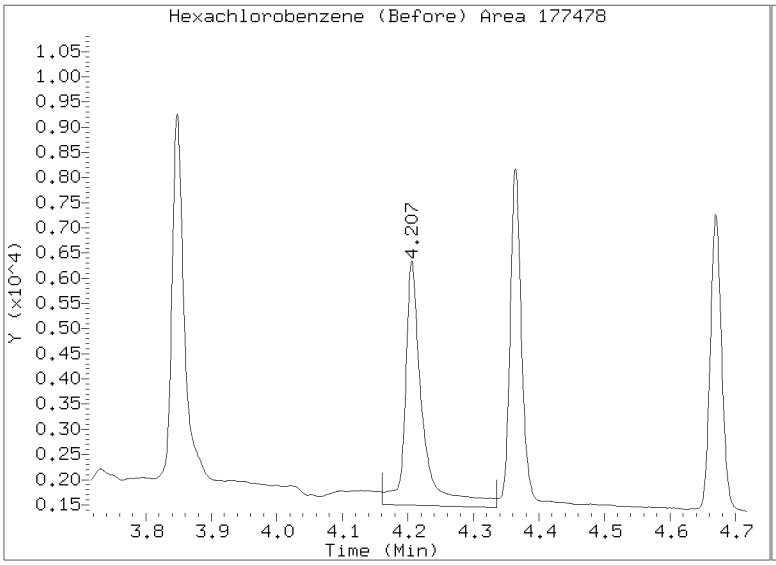
Datafile: /20230324.b/23032452.D
Injection Date: 25-MAR-2023 07:11
Lab ID:BLC0155-BSD1 Client ID:
Report Date: 03/28/2023 10:51

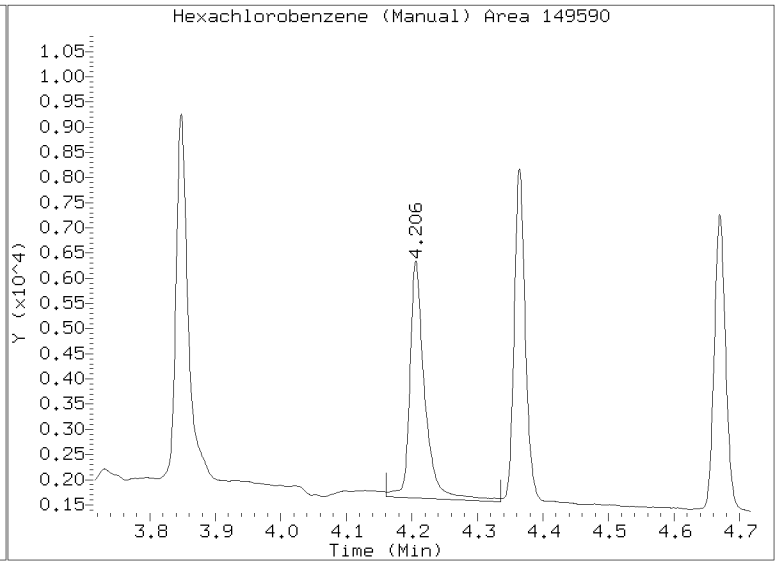












MS / MS DUPLICATE RECOVERY
EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	03/25/23 08:04
Batch:	BLC0155	Laboratory ID:	BLC0155-MS1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	Matrix Spike
Initial/Final:	19.65 g / 2.5 mL	Source Sample:	LDW23-SC1150B

COMPOUND	SPIKE ADDED (ug/kg dry)	SAMPLE CONCENTRATION (ug/kg dry)	Q	MS CONCENTRATION (ug/kg dry)	Q	MS % REC. #	QC LIMITS REC.
Hexachlorobenzene [2C]	4.07	0.16	U	2.39		58.7	26 - 128

* Values outside of QC limits

[2C] indicates second-column analyte, present if quantification on any batch samples used second column data.

MS / MS DUPLICATE RECOVERY
EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	03/25/23 08:22
Batch:	BLC0155	Laboratory ID:	BLC0155-MSD1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	Matrix Spike Dup
Initial/Final:	19.65 g / 2.5 mL	Source Sample:	LDW23-SC1150B

COMPOUND	SPIKE ADDED (ug/kg dry)	MSD CONCENTRATION (ug/kg dry)	Q	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Hexachlorobenzene [2C]	4.07	2.23		54.9	6.59	30	26 - 128

* Values outside of QC limits

[2C] indicates second-column analyte, present if quantification on any batch samples used second column data.

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230324.b/23032455.D
Data file 2: /20230324.b/B20230324.b/23032455.D
Method: \20230324.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: BLC0155-MS1
Client ID:
Injection Date: 25-MAR-2023 08:04
Report Date: 03/28/2023 10:51
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP on col	CLP2 on col	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response				
----			----			0.00	0.00	---	alpha-BHC
----			----			0.00	0.00	---	beta-BHC
----			----			0.00	0.00	---	delta-BHC
----			----			0.00	0.00	---	gamma-BHC (Lindane)
----			----			0.00	0.00	---	Heptachlor
----			----			0.00	0.00	---	Aldrin
----			----			0.00	0.00	---	Heptachlor epoxide b
----			----			0.00	0.00	---	Endosulfan I
----			----			0.00	0.00	---	Dieldrin
----			----			0.00	0.00	---	4,4'-DDE
----			----			0.00	0.00	---	Endrin
----			----			0.00	0.00	---	Endosulfan II
----			----			0.00	0.00	---	4,4'-DDD
----			----			0.00	0.00	---	Endosulfan sulfate
----			----			0.00	0.00	---	4,4'-DDT
----			----			0.00	0.00	---	Methoxychlor
----			----			0.00	0.00	---	Endrin ketone
----			----			0.00	0.00	---	Endrin aldehyde
----			----			0.00	0.00	---	trans-Chlordane
----			----			0.00	0.00	---	cis-Chlordane
----			----			0.00	0.00	---	Hexachlorobutadiene
4.205	-0.012	136966	4.657	-0.014	166432	11.29	11.73	3.8	Hexachlorobenzene MN
3.847	-0.010	210355	4.167	-0.012	265550	22.80	24.25	6.2	Tetrachloro-m-xylene M
9.404	-0.011	143340	10.358	-0.015	161529	34.15	31.84	7.0	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

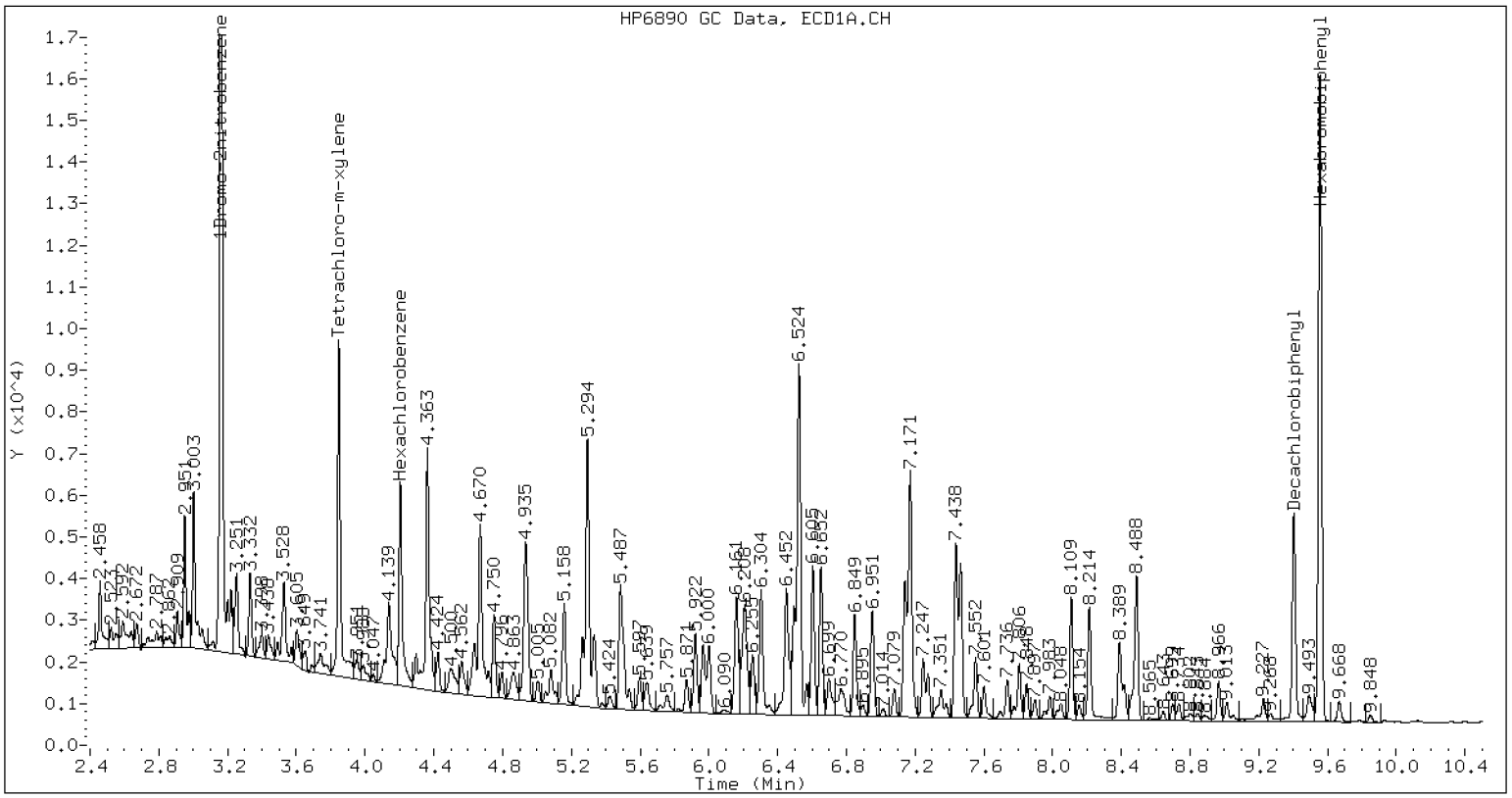
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	678500	0.9
Hexabromobiphenyl	609723	414215	-32.1

Column 2

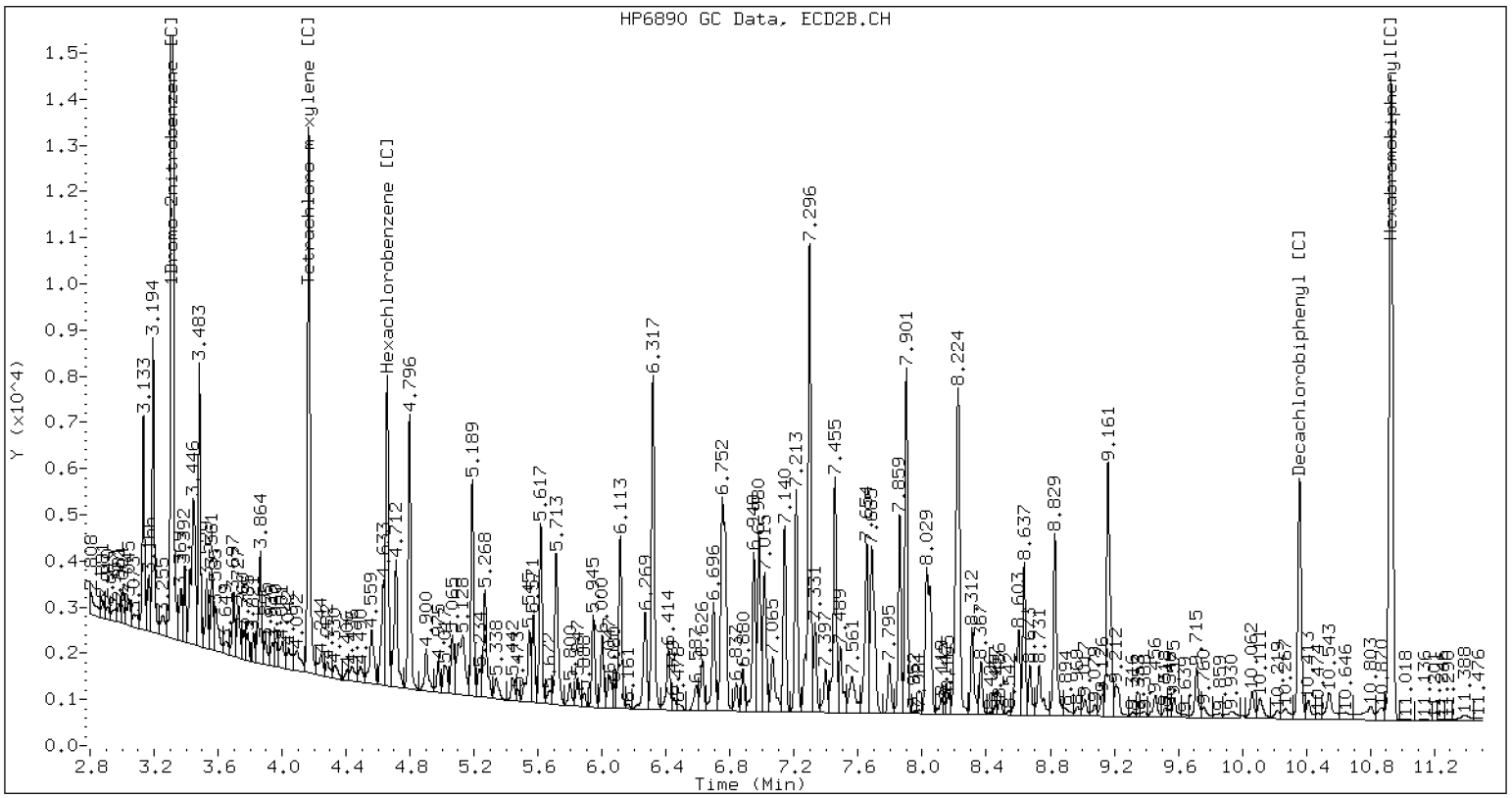
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	777849	-22.7
Hexabromobiphenyl	769764	459081	-40.4

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

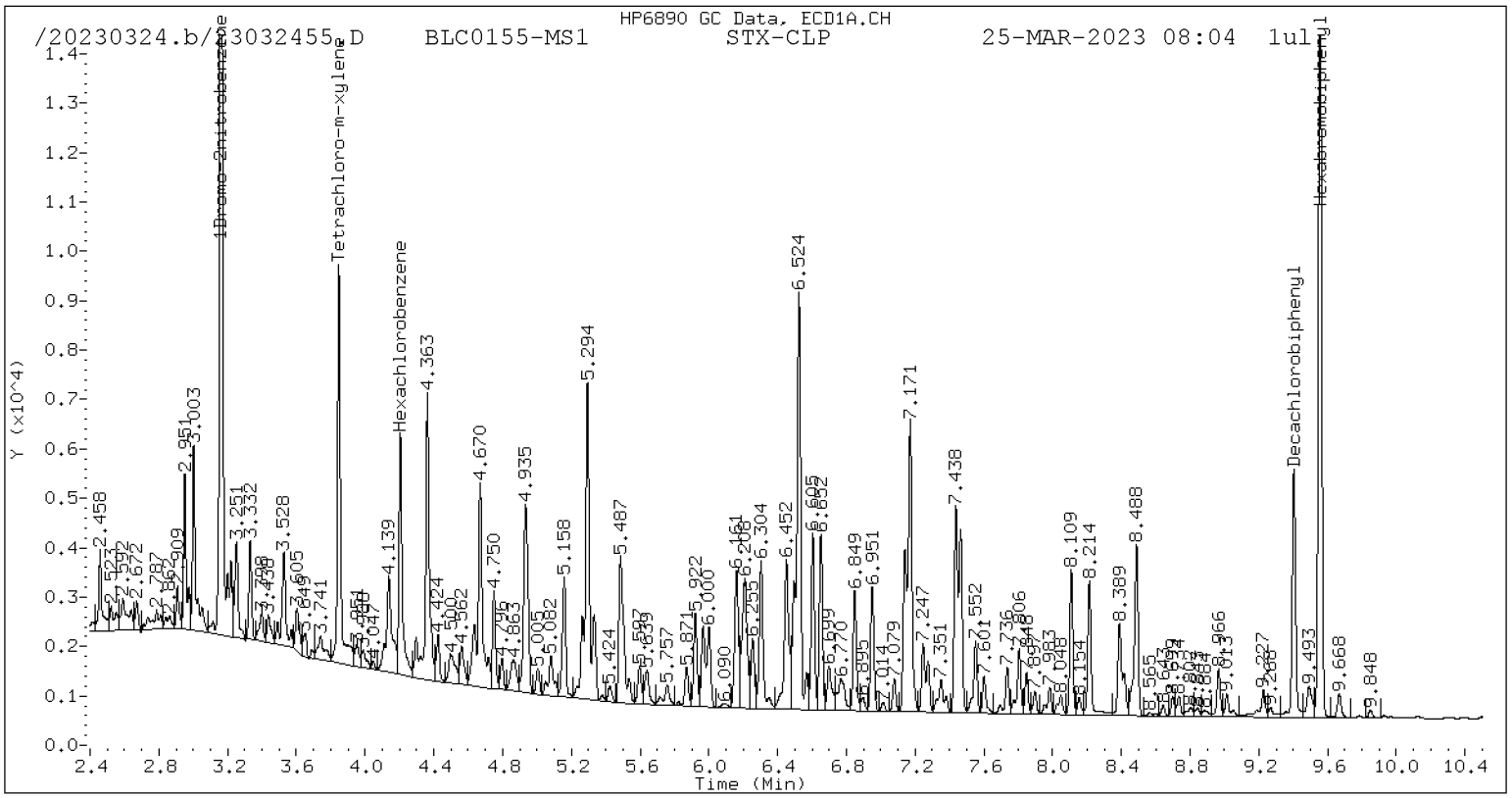
/20230324.b/23032455.D BLC0155-MS1 STX-CLP 25-MAR-2023 08:04 1ul



/20230324.b/B20230324.b/23032455.D BLC0155-MS1 CLP2 25-MAR-2023 08:04 1ul

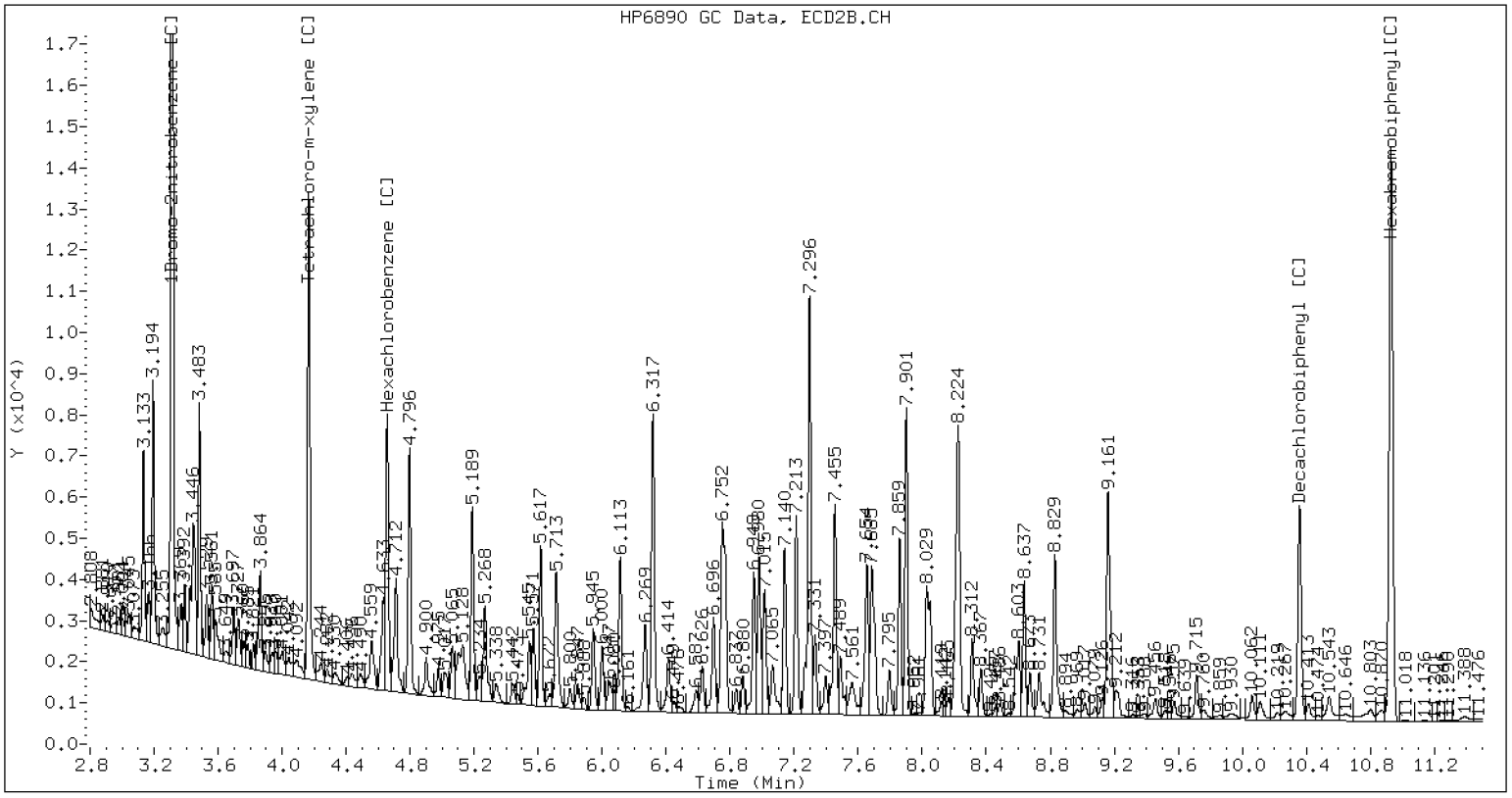


Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: YES

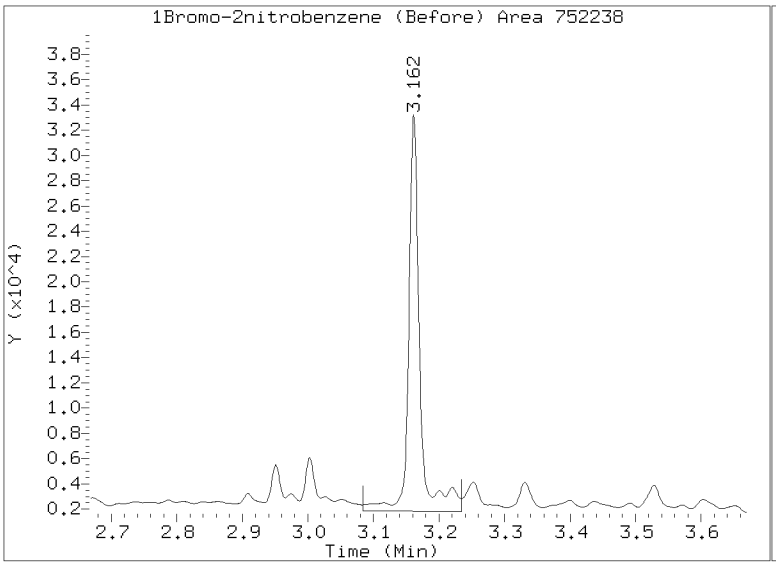
/20230324.b/B20230324.b/23032455.D BLC0155-MS1 CLP2

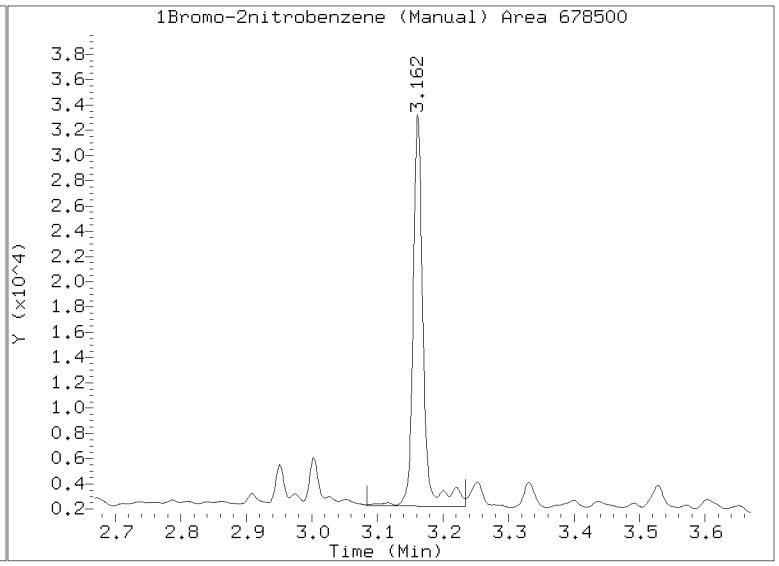


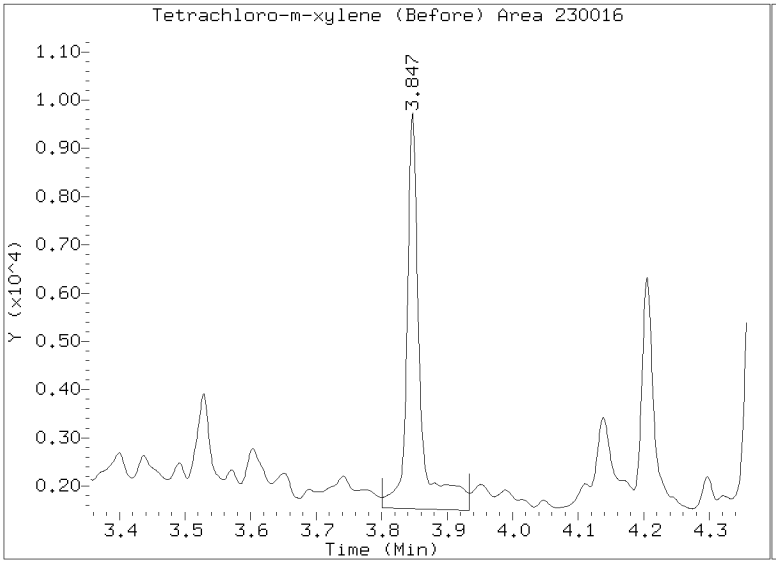
CLP-2 Manual Integration: YES

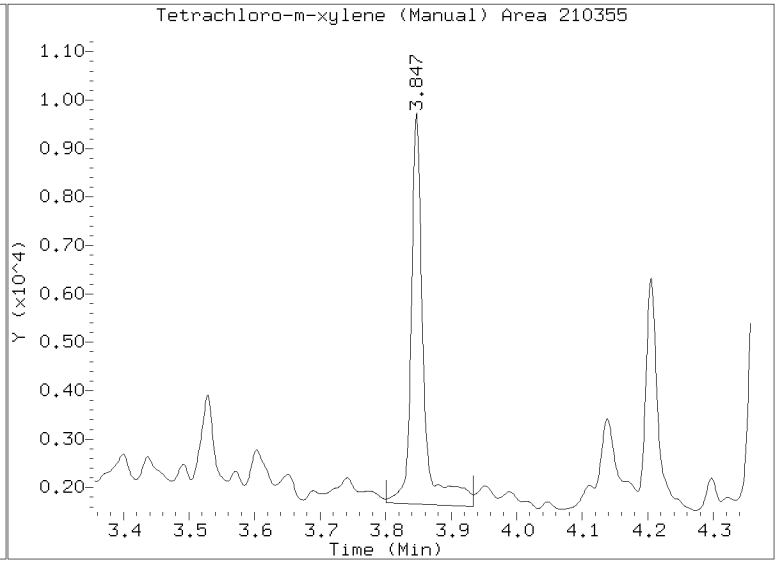
Manual Peak Adjustment Report, STX-CLP

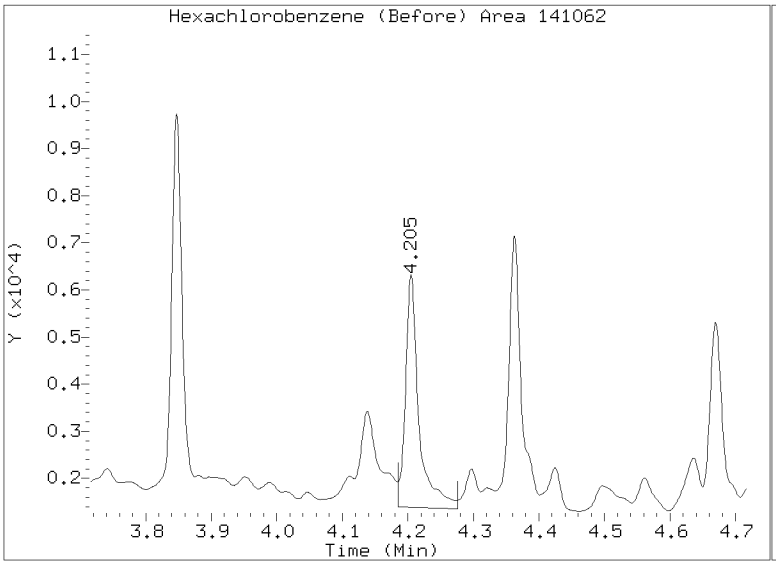
Datafile: /20230324.b/23032455.D
Injection Date: 25-MAR-2023 08:04
Lab ID:BLC0155-MS1 Client ID:
Report Date: 03/28/2023 10:51

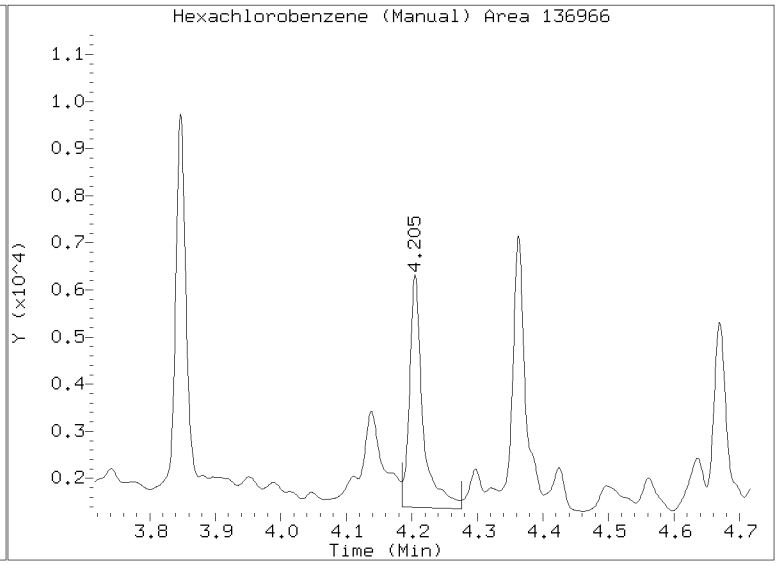






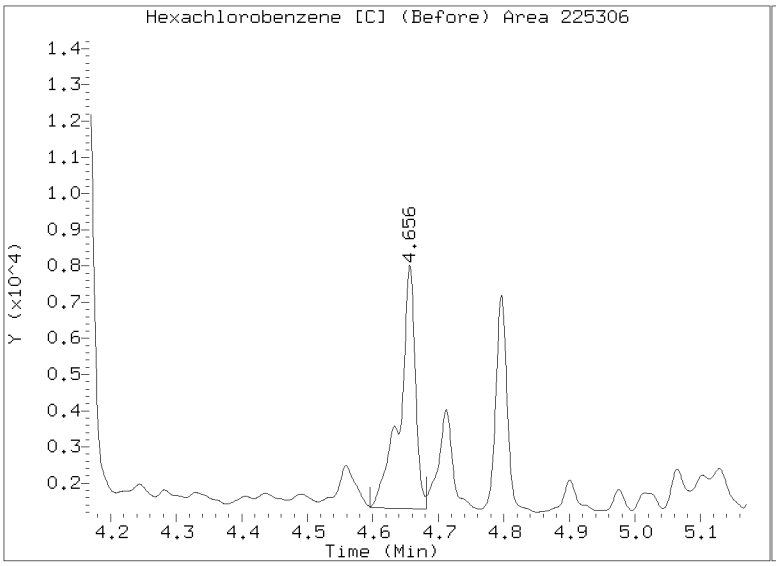


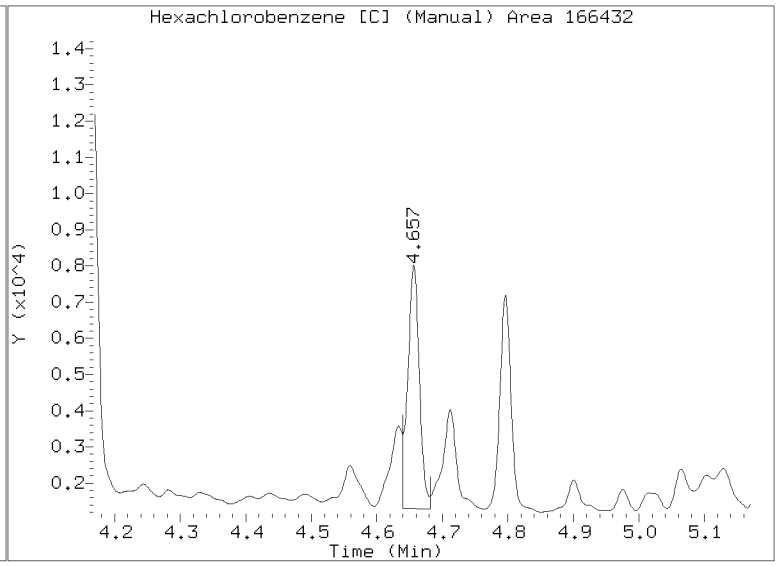




Manual Peak Adjustment Report, CLP-2

Datafile: /20230324.b/B20230324.b/23032455.D
Injection Date: 25-MAR-2023 08:04
Lab ID:BLC0155-MS1 Client ID:





Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230324.b/23032456.D
Data file 2: /20230324.b/B20230324.b/23032456.D
Method: \20230324.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: BLC0155-MSD1
Client ID:
Injection Date: 25-MAR-2023 08:22
Report Date: 03/28/2023 10:51
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
----			----			0.00	0.00	---	alpha-BHC
----			----			0.00	0.00	---	beta-BHC
----			----			0.00	0.00	---	delta-BHC
----			----			0.00	0.00	---	gamma-BHC (Lindane)
----			----			0.00	0.00	---	Heptachlor
----			----			0.00	0.00	---	Aldrin
----			----			0.00	0.00	---	Heptachlor epoxide b
----			----			0.00	0.00	---	Endosulfan I
----			----			0.00	0.00	---	Dieldrin
----			----			0.00	0.00	---	4,4'-DDE
----			----			0.00	0.00	---	Endrin
----			----			0.00	0.00	---	Endosulfan II
----			----			0.00	0.00	---	4,4'-DDD
----			----			0.00	0.00	---	Endosulfan sulfate
----			----			0.00	0.00	---	4,4'-DDT
----			----			0.00	0.00	---	Methoxychlor
----			----			0.00	0.00	---	Endrin ketone
----			----			0.00	0.00	---	Endrin aldehyde
----			----			0.00	0.00	---	trans-Chlordane
----			----			0.00	0.00	---	cis-Chlordane
----			----			0.00	0.00	---	Hexachlorobutadiene
4.204	-0.012	139773	4.656	-0.014	160942	13.20	10.98	18.3	Hexachlorobenzene M
3.847	-0.011	265244	4.166	-0.012	300432	32.93	26.56	21.4	Tetrachloro-m-xylene M
9.404	-0.010	140929	10.359	-0.015	157679	33.87	31.49	7.3	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

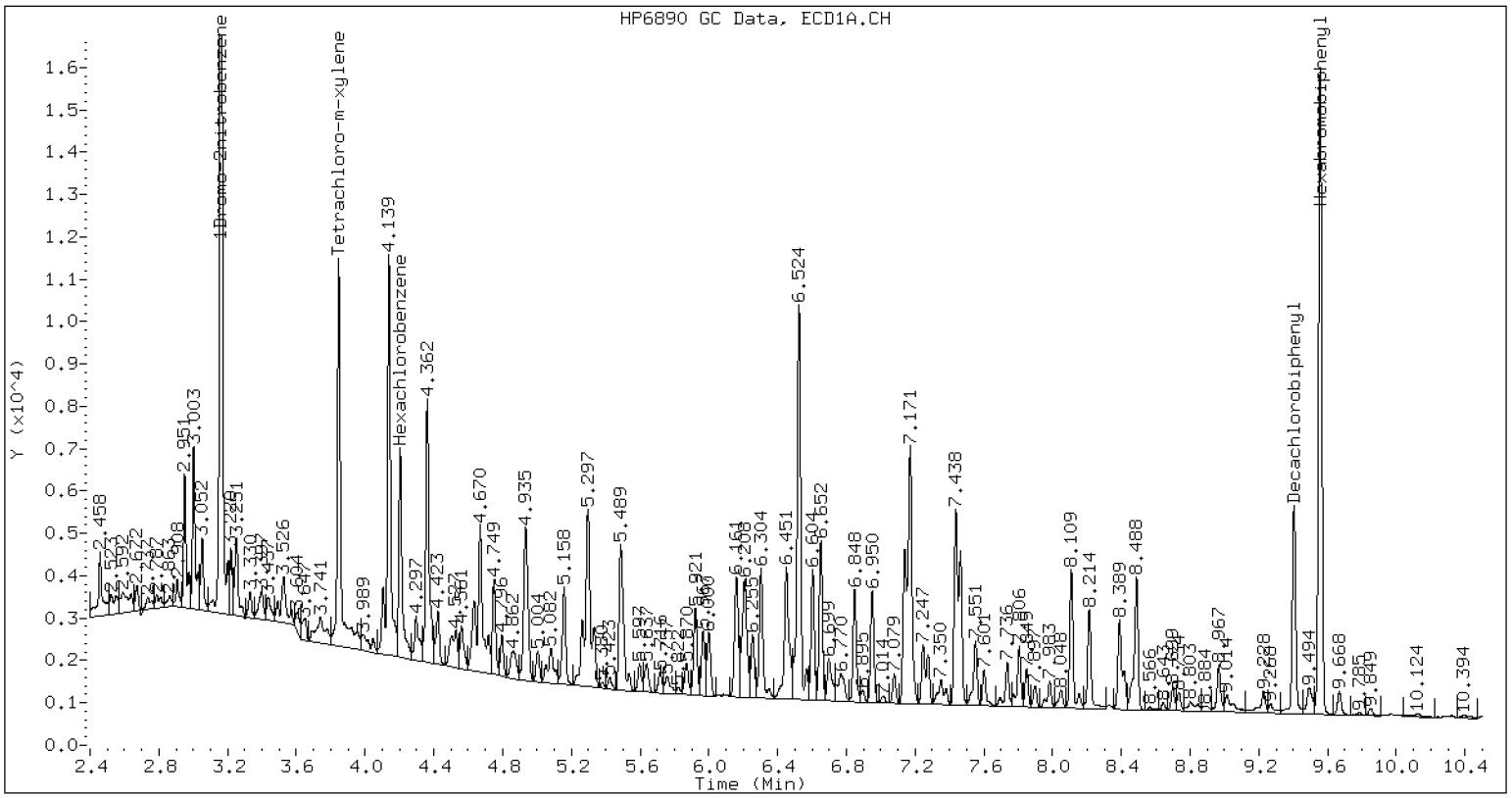
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	592357	-11.9
Hexabromobiphenyl	609723	410605	-32.7

Column 2

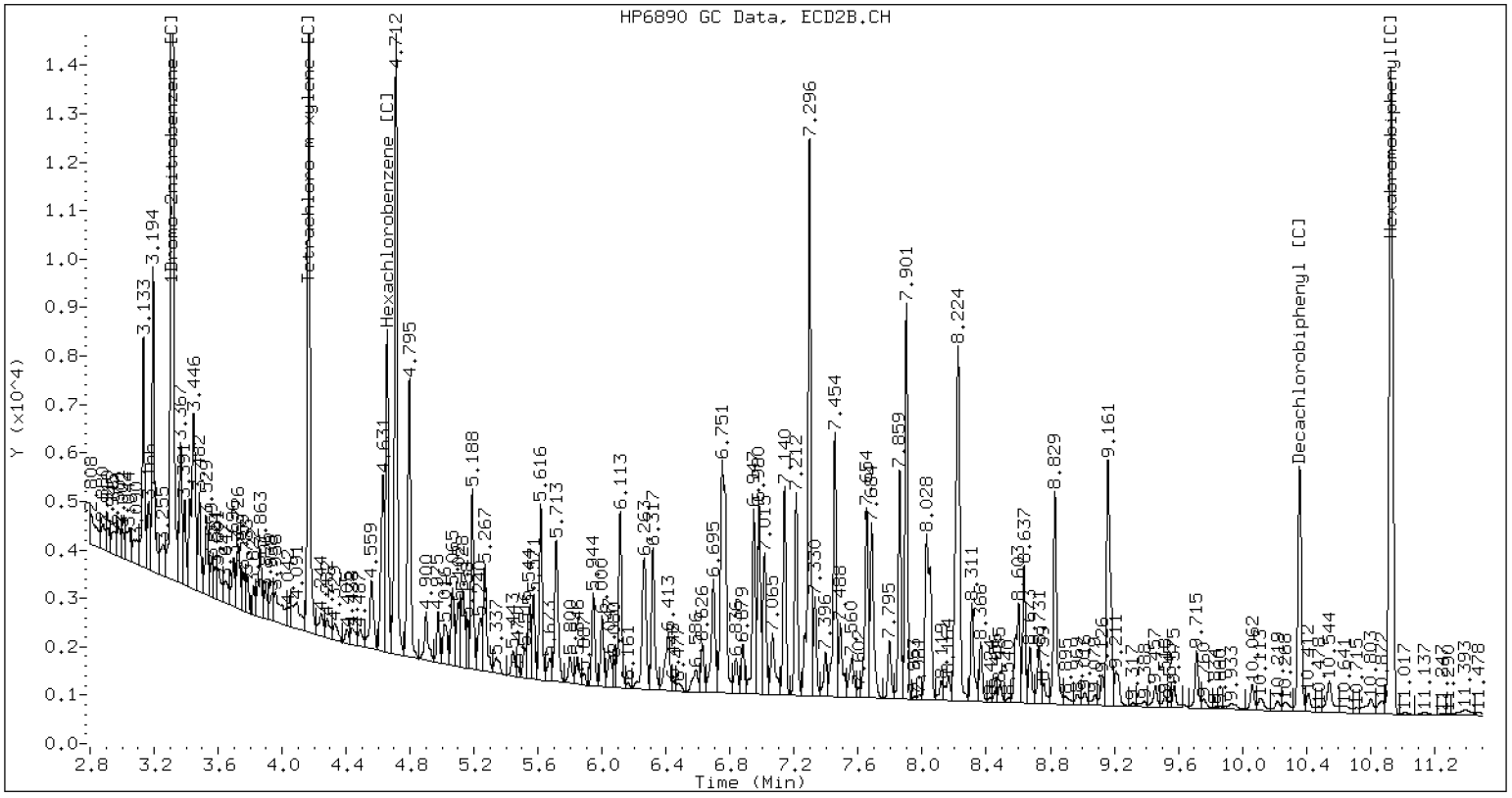
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	803428	-20.2
Hexabromobiphenyl	769764	453014	-41.1

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

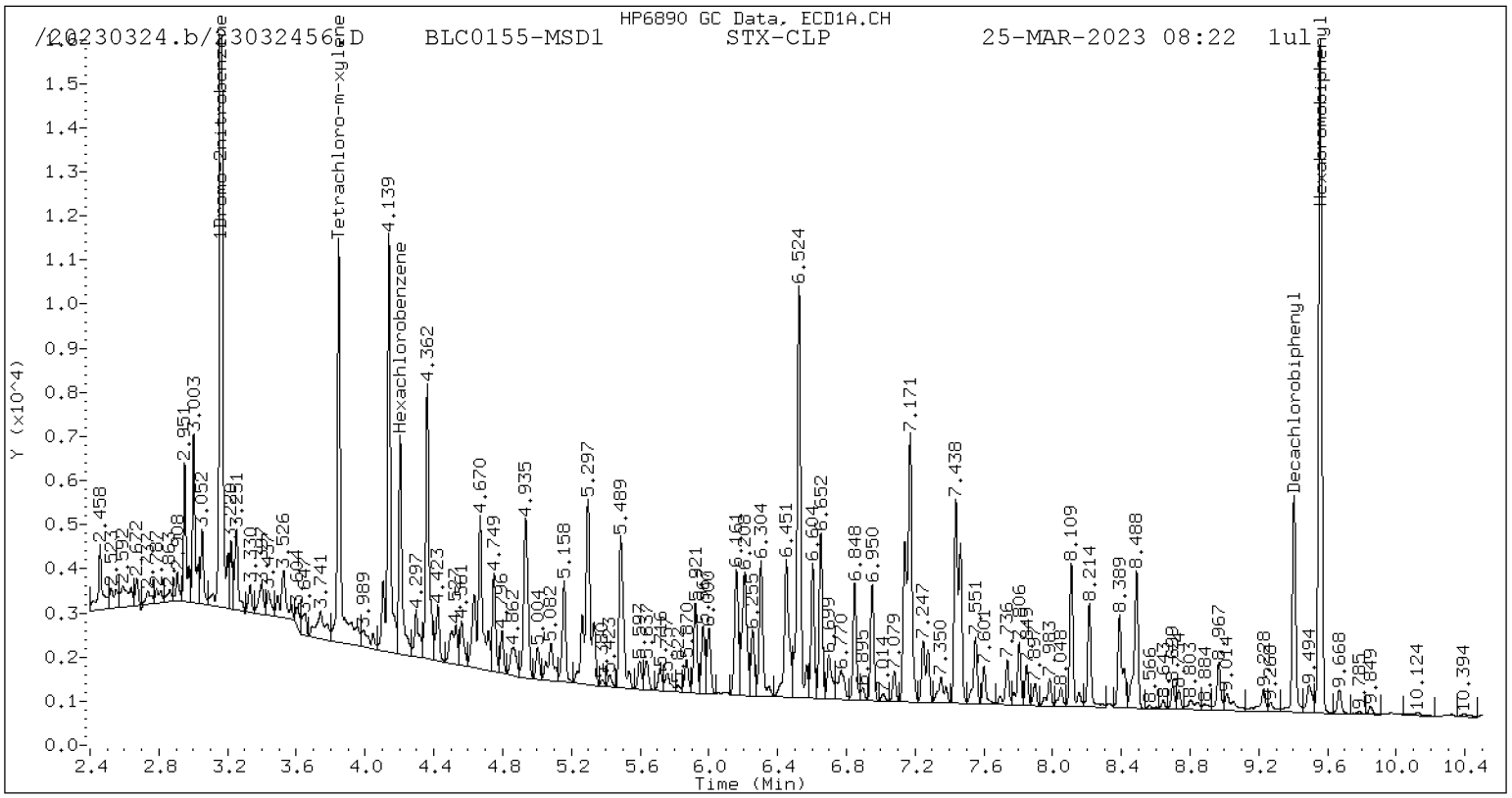
/20230324.b/23032456.D BLC0155-MSD1 STX-CLP 25-MAR-2023 08:22 1ul



/20230324.b/B20230324.b/23032456.D BLC0155-MSD1 CLP2 25-MAR-2023 08:22 1ul

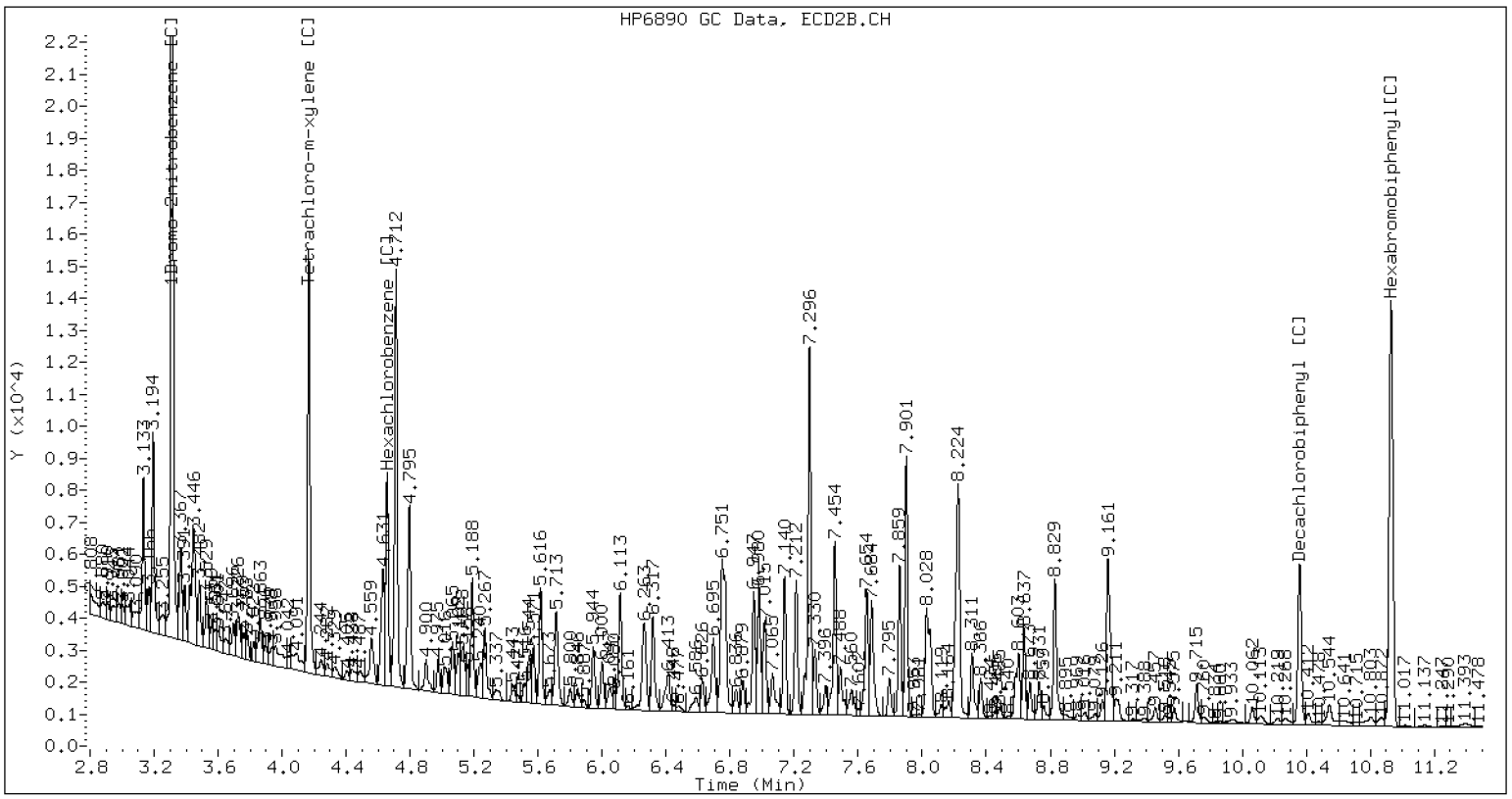


Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: YES

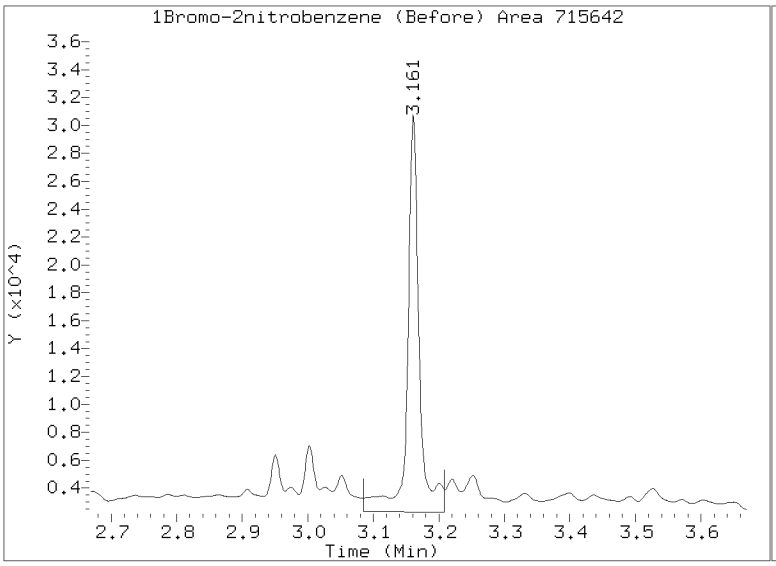
/20230324.b/B20230324.b/23032456.D BLC0155-MSD1 CLP2

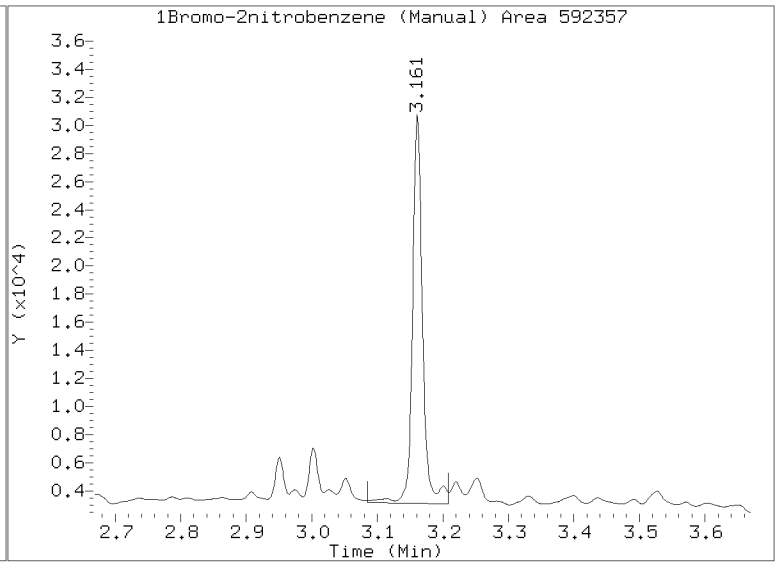


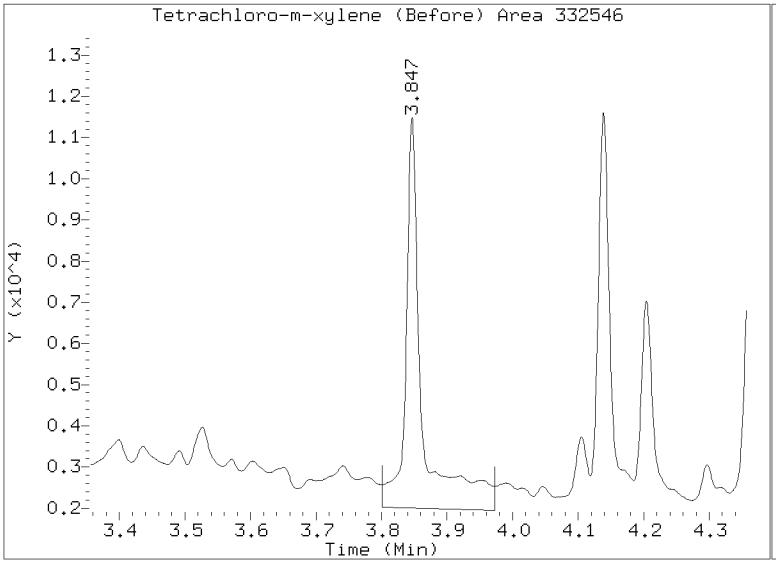
CLP-2 Manual Integration: NO

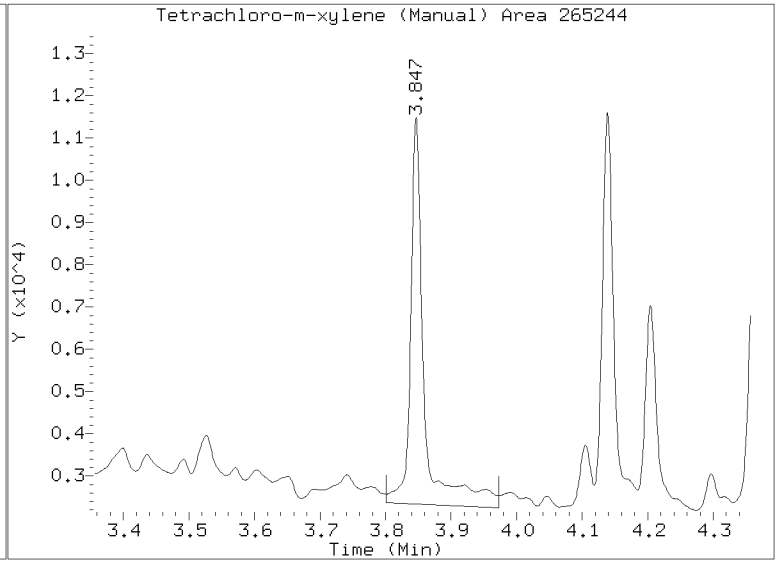
Manual Peak Adjustment Report, STX-CLP

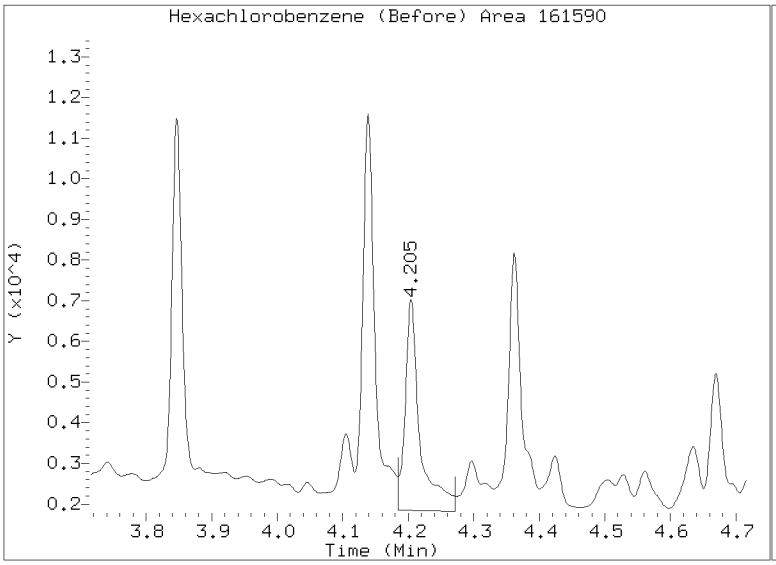
Datafile: /20230324.b/23032456.D
Injection Date: 25-MAR-2023 08:22
Lab ID:BLC0155-MSD1 Client ID:
Report Date: 03/28/2023 10:51

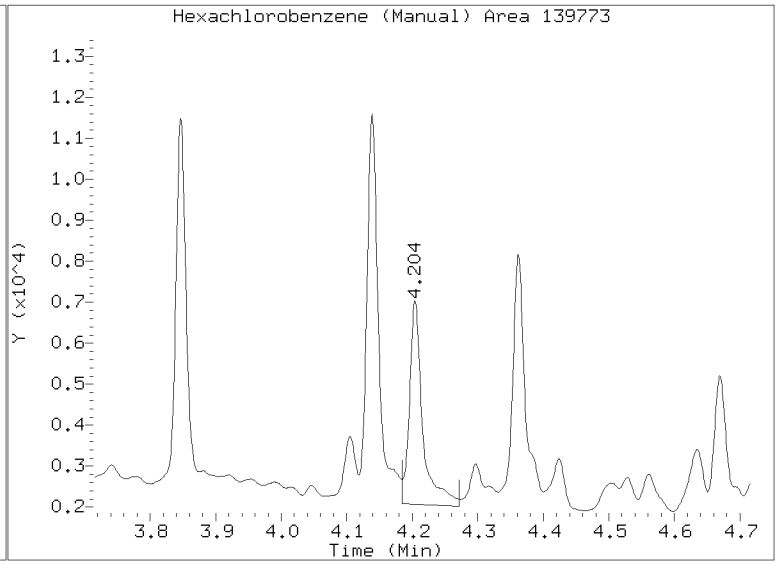












INITIAL CALIBRATION DATA

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FL00041	Instrument:	ECD6
Calibration Date:	12/14/2022	Column (1):	STX-CLP

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RRF	Conc	**RRF**	Conc	RRF	Conc	RRF	Conc	**RRF**	Conc	**RRF**
alpha-BHC			2.5	1.564682	5	1.558115	10	1.57359	20	1.566596	40	1.528219
beta-BHC			2.5	0.6501672	5	0.6116678	10	0.6049898	20	0.5910241	40	0.567415
gamma-BHC (Lindane)			2.5	1.364013	5	1.359107	10	1.367627	20	1.357913	40	1.317203
delta-BHC			2.5	1.267737	5	1.264366	10	1.278672	20	1.286232	40	1.255792
Heptachlor			2.5	1.26903	5	1.222902	10	1.218715	20	1.207966	40	1.145438
Aldrin			2.5	1.349967	5	1.349283	10	1.40535	20	1.372547	40	1.307197
Heptachlor Epoxide			2.5	1.231126	5	1.189593	10	1.20792	20	1.178021	40	1.104377
trans-Chlordane (beta-Chlordane)			2.5	1.262297	5	1.202181	10	1.202336	20	1.19062	40	1.128117
cis-Chlordane (alpha-chlordane)			2.5	1.308183	5	1.222582	10	1.200602	20	1.177182	40	1.111332
Endosulfan I			2.5	1.143813	5	1.097776	10	1.093658	20	1.076133	40	1.011287
4,4'-DDE			5	1.141182	10	1.108491	20	1.098369	40	1.077225	80	0.9961189
Dieldrin			5	1.225418	10	1.190449	20	1.185191	40	1.155764	80	1.077517
Endrin			5	1.158191	10	1.117563	20	1.079508	40	1.061387	80	0.9725989
Endosulfan II			5	0.9400399	10	0.9913797	20	1.005265	40	0.925043	80	0.9337917
4,4'-DDD			5	1.004568	10	0.9927897	20	0.9803235	40	0.9586353	80	0.8937077
Endrin Aldehyde			5	0.8167784	10	0.7834798	20	0.7706241	40	0.7573308	80	0.7147756
4,4'-DDT			5	1.007054	10	0.9936998	20	0.9768522	40	0.9722874	80	0.9123228
Endosulfan Sulfate			5	0.9534179	10	0.9413755	20	0.9158457	40	0.9056998	80	0.8542021
Endrin Ketone			5	1.134866	10	1.083274	20	1.043162	40	1.021136	80	0.9645492
Methoxychlor			25	0.4887243	50	0.4567517	100	0.4291758	200	0.4123964	400	0.380531
Hexachlorobutadiene			2.5	1.967135	5	1.727858	10	1.608612	20	1.550898	40	1.457962
Hexachlorobenzene			2.5	1.583946	5	1.509865	10	1.463674	20	1.414258	40	1.348389
Decachlorobiphenyl			5	0.9567749	10	0.8690419	20	0.8114883	40	0.7853665	80	0.7399881
Tetrachlorometaxylene			5	1.223478	10	1.154628	20	1.122612	40	1.064313	80	1.018952

INITIAL CALIBRATION DATA

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FL00041	Instrument:	ECD6
Calibration Date:	12/14/2022	Column (1):	STX-CLP

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
alpha-BHC	80	1.449687										
beta-BHC	80	0.5324503										
gamma-BHC (Lindane)	80	1.246178										
delta-BHC	80	1.199667										
Heptachlor	80	1.064858										
Aldrin	80	1.204866										
Heptachlor Epoxide	80	1.016142										
trans-Chlordane (beta-Chlordane)	80	1.050129										
cis-Chlordane (alpha-chlordane)	80	1.036345										
Endosulfan I	80	0.9344351										
4,4'-DDE	160	0.9196699										
Dieldrin	160	0.9953457										
Endrin	160	0.903669										
Endosulfan II	160	0.8694106										
4,4'-DDD	160	0.8394108										
Endrin Aldehyde	160	0.6754471										
4,4'-DDT	160	0.8666848										
Endosulfan Sulfate	160	0.808554										
Endrin Ketone	160	0.9150773										
Methoxychlor	800	0.3710888										
Hexachlorobutadiene	80	1.368623										
Hexachlorobenzene	80	1.259233										
2,4'-DDE					5	0.8703192	10	0.8471901	20	0.8231684	40	0.7887622
2,4'-DDD					5	0.761682	10	0.7418629	20	0.7301989	40	0.7053717
2,4'-DDT					5	0.8194572	10	0.8004965	20	0.7842725	40	0.7616258
Oxychlordane					5	1.016746	10	1.011016	20	0.9890796	40	0.9530961
cis-Nonachlor					5	1.323191	10	1.277938	20	1.243982	40	1.217703

INITIAL CALIBRATION DATA

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FL00041	Instrument:	ECD6
Calibration Date:	12/14/2022	Column (1):	STX-CLP

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
trans-Nonachlor					5	1.347777	10	1.328677	20	1.28535	40	1.249062
Mirex					5	0.8317764	10	0.8043457	20	0.7641487	40	0.7481553
Decachlorobiphenyl	160	0.7008722										
Tetrachlorometaxylene	160	0.9437243										

INITIAL CALIBRATION DATA

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FL00041	Instrument:	ECD6
Calibration Date:	12/14/2022	Column (1):	STX-CLP

Compound	Level 13		Level 14		Level 15		Level 16		Level 17		Level 18	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
2,4'-DDE	80	0.7262802	160	0.6559468								
2,4'-DDD	80	0.6522807	160	0.6001736								
2,4'-DDT	80	0.7135595	160	0.6495601								
Oxychlordane	80	0.9018234	160	0.8351028								
cis-Nonachlor	80	1.140435	160	1.065099								
trans-Nonachlor	80	1.167639	160	1.085646								
Mirex	80	0.706171	160	0.6667706								

INITIAL CALIBRATION DATA

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FL00041	Instrument:	ECD6
Calibration Date:	12/14/2022	Column (1):	STX-CLP

Compound	Level 19		Level 20		Level 21		Level 22		Level 23		Level 24	
	Conc		Conc		Conc		Conc		Conc		Conc	

INITIAL CALIBRATION DATA

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FL00041	Instrument:	ECD6
Calibration Date:	12/14/2022	Column (1):	STX-CLP

Compound	Level 25		Level 26		Level 27		Level 28		Level 29		Level 30	
	Conc		Conc		Conc		Conc		Conc		Conc	

INITIAL CALIBRATION DATA

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FL00041	Instrument:	ECD6
Calibration Date:	12/14/2022	Column (1):	STX-CLP

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
alpha-BHC	1.540148	3.1			RSD (20)	
beta-BHC	0.5929524	6.8			RSD (20)	
gamma-BHC (Lindane)	1.33534	3.5			RSD (20)	
delta-BHC	1.258744	2.5			RSD (20)	
Heptachlor	1.188151	6.1			RSD (20)	
Aldrin	1.331535	5.2			RSD (20)	
Heptachlor Epoxide	1.15453	6.9			RSD (20)	
trans-Chlordane (beta-Chlordane)	1.172613	6.3			RSD (20)	
cis-Chlordane (alpha-chlordane)	1.176038	8.0			RSD (20)	
Endosulfan I	1.059517	7.1			RSD (20)	
4,4'-DDE	1.056843	7.9			RSD (20)	
Dieldrin	1.138281	7.6			RSD (20)	
Endrin	1.048819	9.0			RSD (20)	
Endosulfan II	0.944155	5.2			RSD (20)	
4,4'-DDD	0.9449058	6.9			RSD (20)	
Endrin Aldehyde	0.7530726	6.7			RSD (20)	
4,4'-DDT	0.9548168	5.7			RSD (20)	
Endosulfan Sulfate	0.8965158	6.2			RSD (20)	
Endrin Ketone	1.027011	7.7			RSD (20)	
Methoxychlor	0.4231113	10.6			RSD (20)	
Hexachlorobutadiene	1.613515	13.2			RSD (20)	
Hexachlorobenzene	1.429894	8.1			RSD (20)	
2,4'-DDE	0.7852778	10.3			RSD (20)	
2,4'-DDD	0.698595	8.8			RSD (20)	
2,4'-DDT	0.7548286	8.4			RSD (20)	
Oxychlordane	0.951144	7.5			RSD (20)	
cis-Nonachlor	1.211391	7.8			RSD (20)	
trans-Nonachlor	1.244025	8.1			RSD (20)	
Mirex	0.7535613	8.1			RSD (20)	
Decachlorobiphenyl	0.8105886	11.4			RSD (20)	
Tetrachlorometaxylene	1.087951	9.2			RSD (20)	

INITIAL CALIBRATION DATA

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FL00041	Instrument:	ECD6
Calibration Date:	12/14/2022	Column (2):	STX-CLPII

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RRF	Conc	**RRF**	Conc	RRF	Conc	RRF	Conc	**RRF**	Conc	**RRF**
alpha-BHC [2C]			2.5	1.582358	5	1.586238	10	1.633164	20	1.640486	40	1.615441
beta-BHC [2C]			2.5	0.652782	5	0.6172948	10	0.6184608	20	0.6125812	40	0.5918008
gamma-BHC (Lindane) [2C]			2.5	1.355071	5	1.348783	10	1.381456	20	1.392772	40	1.366606
delta-BHC [2C]			2.5	1.323764	5	1.307234	10	1.339425	20	1.328433	40	1.331977
Heptachlor [2C]			2.5	1.270249	5	1.234236	10	1.258409	20	1.272245	40	1.215755
Aldrin [2C]			2.5	1.511397	5	1.416724	10	1.432636	20	1.430376	40	1.370917
Heptachlor Epoxide [2C]			2.5	1.2977	5	1.174596	10	1.174288	20	1.174706	40	1.114434
trans-Chlordane (beta-Chlordane) [2C]			2.5	1.25449	5	1.176102	10	1.164843	20	1.168848	40	1.125534
cis-Chlordane (alpha-chlordane) [2C]			2.5	1.258498	5	1.153199	10	1.135052	20	1.136251	40	1.089792
Endosulfan I [2C]			2.5	1.118263	5	1.044155	10	1.035412	20	1.034697	40	0.9885012
4,4'-DDE [2C]			5	1.120237	10	1.069625	20	1.064387	40	1.055415	80	0.9897135
Dieldrin [2C]			5	1.270008	10	1.162844	20	1.139359	40	1.136098	80	1.071389
Endrin [2C]			5	1.256912	10	1.17909	20	1.159477	40	1.149599	80	1.066056
Endosulfan II [2C]			5	1.296819	10	1.202961	20	1.188491	40	1.160501	80	1.099056
4,4'-DDD [2C]			5	1.234482	10	1.121556	20	1.117792	40	1.112003	80	1.04628
Endrin Aldehyde [2C]			5	0.9430111	10	0.8430348	20	0.8249196	40	0.8129946	80	0.7727701
4,4'-DDT [2C]			5	1.175911	10	1.077825	20	1.067612	40	1.073272	80	1.019364
Endosulfan Sulfate [2C]			5	1.137768	10	1.042553	20	1.030373	40	1.023023	80	0.9721732
Endrin Ketone [2C]			5	1.235631	10	1.119988	20	1.114405	40	1.100852	80	1.047659
Methoxychlor [2C]			25	0.5184064	50	0.4866753	100	0.4751666	200	0.4681736	400	0.4433957
Hexachlorobutadiene [2C]			2.5	1.975612	5	1.648845	10	1.492482	20	1.376096	40	1.341211
Hexachlorobenzene [2C]			2.5	1.602215	5	1.520618	10	1.491402	20	1.450251	40	1.385947
Decachlorobiphenyl [2C]			5	1.087142	10	0.9391597	20	0.8562421	40	0.8499592	80	0.8013928
Tetrachlorometaxylene [2C]			5	1.220863	10	1.179368	20	1.164832	40	1.127982	80	1.06878

INITIAL CALIBRATION DATA

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FL00041	Instrument:	ECD6
Calibration Date:	12/14/2022	Column (2):	STX-CLPII

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
alpha-BHC [2C]	80	1.561903										
beta-BHC [2C]	80	0.5642956										
gamma-BHC (Lindane) [2C]	80	1.31891										
delta-BHC [2C]	80	1.29291										
Heptachlor [2C]	80	1.144118										
Aldrin [2C]	80	1.281263										
Heptachlor Epoxide [2C]	80	1.046144										
trans-Chlordane (beta-Chlordane) [2C]	80	1.072685										
cis-Chlordane (alpha-chlordane) [2C]	80	1.03859										
Endosulfan I [2C]	80	0.9325836										
4,4'-DDE [2C]	160	0.9356313										
Dieldrin [2C]	160	1.019365										
Endrin [2C]	160	1.013782										
Endosulfan II [2C]	160	1.047801										
4,4'-DDD [2C]	160	1.006382										
Endrin Aldehyde [2C]	160	0.7380269										
4,4'-DDT [2C]	160	0.9933936										
Endosulfan Sulfate [2C]	160	0.9372514										
Endrin Ketone [2C]	160	1.016567										
Methoxychlor [2C]	800	0.4436418										
Hexachlorobutadiene [2C]	80	1.300813										
Hexachlorobenzene [2C]	80	1.304223										
2,4'-DDE [2C]					5	0.8343307	10	0.8052418	20	0.7431295	40	0.7258871
2,4'-DDD [2C]					5	0.9097548	10	0.8797099	20	0.8273813	40	0.8164191
2,4'-DDT [2C]					5	0.9400077	10	0.8804604	20	0.8502582	40	0.8485216
Oxychlordane [2C]					5	0.9644685	10	0.9467754	20	0.9033255	40	0.8966281
cis-Nonachlor [2C]					5	1.449238	10	1.407074	20	1.376474	40	1.372123

INITIAL CALIBRATION DATA

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FL00041	Instrument:	ECD6
Calibration Date:	12/14/2022	Column (2):	STX-CLPII

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
trans-Nonachlor [2C]					5	1.488853	10	1.51762	20	1.451789	40	1.447663
Mirex [2C]					5	0.9331395	10	0.8115521	20	0.7946205	40	0.762682
Decachlorobiphenyl [2C]	160	0.7711875										
Tetrachlorometaxylene [2C]	160	0.9948184										

INITIAL CALIBRATION DATA

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FL00041	Instrument:	ECD6
Calibration Date:	12/14/2022	Column (2):	STX-CLPII

Compound	Level 13		Level 14		Level 15		Level 16		Level 17		Level 18	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
2,4'-DDE [2C]	80	0.6667087	160	0.6020159								
2,4'-DDD [2C]	80	0.76623	160	0.7136982								
2,4'-DDT [2C]	80	0.7977257	160	0.7424898								
Oxychlordane [2C]	80	0.8433342	160	0.7909247								
cis-Nonachlor [2C]	80	1.313286	160	1.248174								
trans-Nonachlor [2C]	80	1.376815	160	1.306683								
Mirex [2C]	80	0.7399752	160	0.7075065								

INITIAL CALIBRATION DATA

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FL00041	Instrument:	ECD6
Calibration Date:	12/14/2022	Column (2):	STX-CLPII

Compound	Level 19		Level 20		Level 21		Level 22		Level 23		Level 24	
	Conc		Conc		Conc		Conc		Conc		Conc	

INITIAL CALIBRATION DATA

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FL00041	Instrument:	ECD6
Calibration Date:	12/14/2022	Column (2):	STX-CLPII

Compound	Level 25		Level 26		Level 27		Level 28		Level 29		Level 30	
	Conc		Conc		Conc		Conc		Conc		Conc	

INITIAL CALIBRATION DATA

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FL00041	Instrument:	ECD6
Calibration Date:	12/14/2022	Column (2):	STX-CLPII

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
alpha-BHC [2C]	1.603265	1.9			RSD (20)	
beta-BHC [2C]	0.6095359	4.9			RSD (20)	
gamma-BHC (Lindane) [2C]	1.3606	1.9			RSD (20)	
delta-BHC [2C]	1.320624	1.3			RSD (20)	
Heptachlor [2C]	1.232502	3.9			RSD (20)	
Aldrin [2C]	1.407219	5.4			RSD (20)	
Heptachlor Epoxide [2C]	1.163645	7.1			RSD (20)	
trans-Chlordane (beta-Chlordane) [2C]	1.160417	5.2			RSD (20)	
cis-Chlordane (alpha-chlordane) [2C]	1.13523	6.5			RSD (20)	
Endosulfan I [2C]	1.025602	6.0			RSD (20)	
4,4'-DDE [2C]	1.039168	6.3			RSD (20)	
Dieldrin [2C]	1.133177	7.5			RSD (20)	
Endrin [2C]	1.137486	7.6			RSD (20)	
Endosulfan II [2C]	1.165938	7.4			RSD (20)	
4,4'-DDD [2C]	1.106416	7.0			RSD (20)	
Endrin Aldehyde [2C]	0.8224595	8.5			RSD (20)	
4,4'-DDT [2C]	1.067896	5.9			RSD (20)	
Endosulfan Sulfate [2C]	1.023857	6.7			RSD (20)	
Endrin Ketone [2C]	1.10585	6.8			RSD (20)	
Methoxychlor [2C]	0.4725766	6.0			RSD (20)	
Hexachlorobutadiene [2C]	1.52251	16.8			RSD (20)	
Hexachlorobenzene [2C]	1.459109	7.2			RSD (20)	
2,4'-DDE [2C]	0.7295523	11.8			RSD (20)	
2,4'-DDD [2C]	0.8188656	8.8			RSD (20)	
2,4'-DDT [2C]	0.8432439	8.1			RSD (20)	
Oxychlordane [2C]	0.8909094	7.3			RSD (20)	
cis-Nonachlor [2C]	1.361061	5.2			RSD (20)	
trans-Nonachlor [2C]	1.43157	5.4			RSD (20)	
Mirex [2C]	0.7915793	9.9			RSD (20)	
Decachlorobiphenyl [2C]	0.8841805	13.0			RSD (20)	
Tetrachlorometaxylene [2C]	1.126107	7.3			RSD (20)	

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ANALYSIS SEQUENCE

SKL0233

Instrument: ECD6 Element Column ID:
Calibration ID: FL00041

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	Comments
SKL0233-PEM1	DS1	QC		1	K007286	K006953		
SKL0233-CAL1	INDAA	QC		2	K011594	K006953		
SKL0233-CAL2	INDAB	QC		3	K011593	K006953		
SKL0233-CAL3	INDAC	QC		4	K011592	K006953		
SKL0233-CAL4	INDAD	QC		5	K011591	K006953		
SKL0233-CAL5	INDAE	QC		6	K011590	K006953		
SKL0233-CAL6	INDAF	QC		7	K011589	K006953		
SKL0233-CAL7	INDAG	QC		8	K011463	K006953		
SKL0233-CAL8	WNDA	QC		9	K011595	K006953		
SKL0233-CAL9	WNDB	QC		10	K007148	K006953		
SKL0233-CALA	WNDC	QC		11	K007147	K006953		
SKL0233-CALB	WNDD	QC		12	K007146	K006953		
SKL0233-CALC	WNDE	QC		13	K007145	K006953		
SKL0233-CALD	WNDF	QC		14	K007144	K006953		
SKL0233-CALE	WNDG	QC		15	K007093	K006953		
SKL0233-CALM	NOS1	QC		16	K007375	K006953		
SKL0233-CALN	NOS2	QC		17	K007374	K006953		
SKL0233-CALO	NOS3	QC		18	K007373	K006953		
SKL0233-CALP	NOS4	QC		19	K007372	K006953		
SKL0233-CALQ	NOS5	QC		20	K007371	K006953		
SKL0233-CALR	NOS6	QC		21	K007370	K006953		
SKL0233-CALS	NOS7	QC		22	K007287	K006953		

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ANALYSIS SEQUENCE

SKL0233

Instrument: ECD6 Element Column ID:
Calibration ID: FL00041

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	Comments
SKL0233-CALF	TOXAPH1	QC		23	K011601	K006953		
SKL0233-CALG	TOXAPH2	QC		24	K011600	K006953		
SKL0233-CALH	TOXAPH3	QC		25	K011599	K006953		
SKL0233-CALI	TOXAPH4	QC		26	K011598	K006953		
SKL0233-CALJ	TOXAPH5	QC		27	K011597	K006953		
SKL0233-CALK	TOXAPH6	QC		28	K011596	K006953		
SKL0233-CALL	TOXAPH7	QC		29	K008546	K006953		

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	14-DEC-2022 19:27	22121401.D	1	RINSE	
2	14-DEC-2022 19:44	22121402.D	1	RINSE	
3	14-DEC-2022 20:02	22121403.D	1	SEQ-IBL1	
4	14-DEC-2022 20:20	22121404.D	1	SEQ-PEM1	
5	14-DEC-2022 20:38	22121405.D	1	SEQ-CAL1	
6	14-DEC-2022 20:56	22121406.D	1	SEQ-CAL2	
7	14-DEC-2022 21:14	22121407.D	1	SEQ-CAL3	
8	14-DEC-2022 21:31	22121408.D	1	SEQ-CAL4	
9	14-DEC-2022 21:49	22121409.D	1	SEQ-CAL5	
10	14-DEC-2022 22:07	22121410.D	1	SEQ-CAL6	
11	14-DEC-2022 22:25	22121411.D	1	SEQ-CAL7	
12	14-DEC-2022 22:43	22121412.D	1	SEQ-CAL8	
13	14-DEC-2022 23:01	22121413.D	1	SEQ-CAL9	
14	14-DEC-2022 23:19	22121414.D	1	SEQ-CALA	
15	14-DEC-2022 23:36	22121415.D	1	SEQ-CALB	
16	14-DEC-2022 23:54	22121416.D	1	SEQ-CALC	
17	15-DEC-2022 00:12	22121417.D	1	SEQ-CALD	
18	15-DEC-2022 00:30	22121418.D	1	SEQ-CALE	
19	15-DEC-2022 00:48	22121419.D	1	SEQ-SCV1	
20	15-DEC-2022 01:06	22121420.D	1	SEQ-SCV2	
21	15-DEC-2022 01:24	22121421.D	1	SEQ-CAL1A	
22	15-DEC-2022 01:42	22121422.D	1	SEQ-CAL2A	
23	15-DEC-2022 01:59	22121423.D	1	SEQ-CAL3A	
24	15-DEC-2022 02:17	22121424.D	1	SEQ-CAL4A	
25	15-DEC-2022 02:35	22121425.D	1	SEQ-CAL5A	
26	15-DEC-2022 02:53	22121426.D	1	SEQ-CAL6A	
27	15-DEC-2022 03:11	22121427.D	1	SEQ-CAL7A	
28	15-DEC-2022 03:29	22121428.D	1	SEQ-CAL8A	
29	15-DEC-2022 03:46	22121429.D	1	SEQ-CAL9A	
30	15-DEC-2022 04:04	22121430.D	1	SEQ-CALAA	
31	15-DEC-2022 04:22	22121431.D	1	SEQ-CALAB	
32	15-DEC-2022 04:40	22121432.D	1	SEQ-CALAC	
33	15-DEC-2022 04:58	22121433.D	1	SEQ-CALAD	
34	15-DEC-2022 05:16	22121434.D	1	SEQ-CALAE	
35	15-DEC-2022 05:33	22121435.D	1	SEQ-PEM2	
36	15-DEC-2022 05:51	22121436.D	1	SEQ-ICV1	
37	15-DEC-2022 06:09	22121437.D	1	SEQ-ICV2	
38	15-DEC-2022 06:27	22121438.D	1	SEQ-ICV3	
39	15-DEC-2022 06:45	22121439.D	1	SEQ-ICV4	
40	15-DEC-2022 07:03	22121440.D	1	BKK0688-BLK1	
41	15-DEC-2022 07:21	22121441.D	1	BKK0688-BS1	
42	15-DEC-2022 07:39	22121442.D	1	BKK0688-BS2	
43	15-DEC-2022 07:57	22121443.D	1	BKK0688-BS3	
44	15-DEC-2022 08:15	22121444.D	1	BKK0688-BSD1	
45	15-DEC-2022 08:32	22121445.D	1	BKK0142-BLK1	
46	15-DEC-2022 08:50	22121446.D	1	BKK0142-BS1	
47	15-DEC-2022 09:08	22121447.D	1	BKK0142-BS2	
48	15-DEC-2022 09:26	22121448.D	1	BKK0142-BSD1	
49	15-DEC-2022 09:44	22121449.D	1	BKK0142-MS1	
50	15-DEC-2022 10:02	22121450.D	1	BKK0142-MSD1	

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b p

	Inject Date/Time	Filename	DF	LabID	ClientID
51	15-DEC-2022 10:20	22121451.D	1	22J0513-01	
52	15-DEC-2022 10:38	22121452.D	1	22J0513-04	
53	15-DEC-2022 10:55	22121453.D	1	22J0535-01	
54	15-DEC-2022 11:13	22121454.D	1	22K0429-01	
55	15-DEC-2022 11:31	22121455.D	1	22K0429-02	
56	15-DEC-2022 11:49	22121456.D	1	22K0429-03	
57	15-DEC-2022 12:07	22121457.D	1	SEQ-PEM3	
58	15-DEC-2022 12:25	22121458.D	1	SEQ-CCV1	
59	15-DEC-2022 12:43	22121459.D	1	SEQ-CCV2	
60	15-DEC-2022 13:01	22121460.D	1	SEQ-CCV3	
61	15-DEC-2022 13:19	22121461.D	1	SEQ-CCV4	
62	15-DEC-2022 13:36	22121462.D	1	BKK0380-BLK1	
63	15-DEC-2022 13:54	22121463.D	1	BKK0380-BS1	
64	15-DEC-2022 14:12	22121464.D	1	BKK0380-BSD1	
65	15-DEC-2022 14:30	22121465.D	1	22K0157-01	
66	15-DEC-2022 14:48	22121466.D	1	22K0230-01	
67	15-DEC-2022 15:06	22121467.D	1	22K0231-01	
68	15-DEC-2022 15:24	22121468.D	1	BKK0382-BLK1	
69	15-DEC-2022 15:42	22121469.D	1	BKK0382-BS1	
70	15-DEC-2022 16:00	22121470.D	1	BKK0382-BS2	
71	15-DEC-2022 16:18	22121471.D	1	BKK0382-BSD1	
72	15-DEC-2022 16:35	22121472.D	1	22K0075-01	
73	15-DEC-2022 16:53	22121473.D	1	SEQ-PEM4	
74	15-DEC-2022 17:11	22121474.D	1	SEQ-CCV5	
75	15-DEC-2022 17:29	22121475.D	1	SEQ-CCV6	
76	15-DEC-2022 17:47	22121476.D	1	SEQ-CCV7	
77	15-DEC-2022 18:05	22121477.D	1	SEQ-CCV8	
78	15-DEC-2022 18:23	22121478.D	1	BKK0537-BLK1	
79	15-DEC-2022 18:40	22121479.D	1	BKK0537-BS1	
80	15-DEC-2022 18:58	22121480.D	1	BKK0537-BS2	
81	15-DEC-2022 19:16	22121481.D	1	22K0194-01	
82	15-DEC-2022 19:34	22121482.D	1	22K0194-01RE1	10
83	15-DEC-2022 19:52	22121483.D	1	SEQ-PEM5	
84	15-DEC-2022 20:09	22121484.D	1	SEQ-CCV9	
85	15-DEC-2022 20:27	22121485.D	1	SEQ-CCVA	
86	15-DEC-2022 20:45	22121486.D	1	SEQ-CCVB	
87	15-DEC-2022 21:03	22121487.D	1	SEQ-CCVC	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b

ARI Job No.: RINS Method: PEST.m Instrument: ecd6.i Date: 14-DEC-2022

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1927	22121401.D	RINSE		1	NO MANUAL INTEGRATION
1944	22121402.D	RINSE		1	NO MANUAL INTEGRATION
2002	22121403.D	SEQ-IBL1		1	NO MANUAL INTEGRATION
2020	22121404.D	SEQ-PEM1		1	NO MANUAL INTEGRATION
2038	22121405.D	SEQ-CAL1		1	NO MANUAL INTEGRATION
2056	22121406.D	SEQ-CAL2		1	NO MANUAL INTEGRATION
2114	22121407.D	SEQ-CAL3		1	NO MANUAL INTEGRATION
2131	22121408.D	SEQ-CAL4		1	NO MANUAL INTEGRATION
2149	22121409.D	SEQ-CAL5		1	NO MANUAL INTEGRATION
2207	22121410.D	SEQ-CAL6		1	NO MANUAL INTEGRATION
2225	22121411.D	SEQ-CAL7		1	NO MANUAL INTEGRATION
2243	22121412.D	SEQ-CAL8		1	NO MANUAL INTEGRATION
2301	22121413.D	SEQ-CAL9		1	NO MANUAL INTEGRATION
2319	22121414.D	SEQ-CALA		1	NO MANUAL INTEGRATION
2336	22121415.D	SEQ-CALB		1	NO MANUAL INTEGRATION
2354	22121416.D	SEQ-CALC		1	NO MANUAL INTEGRATION
0012	22121417.D	SEQ-CALD		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0030	22121418.D	SEQ-CALE		1	NO MANUAL INTEGRATION
0048	22121419.D	SEQ-SCV1		1	NO MANUAL INTEGRATION
0106	22121420.D	SEQ-SCV2		1	NO MANUAL INTEGRATION
0124	22121421.D	SEQ-CAL1A		1	NO MANUAL INTEGRATION
0142	22121422.D	SEQ-CAL2A		1	NO MANUAL INTEGRATION
0159	22121423.D	SEQ-CAL3A		1	NO MANUAL INTEGRATION
0217	22121424.D	SEQ-CAL4A		1	NO MANUAL INTEGRATION
0235	22121425.D	SEQ-CAL5A		1	NO MANUAL INTEGRATION
0253	22121426.D	SEQ-CAL6A		1	NO MANUAL INTEGRATION
0311	22121427.D	SEQ-CAL7A		1	NO MANUAL INTEGRATION
0329	22121428.D	SEQ-CAL8A		1	NO MANUAL INTEGRATION
0346	22121429.D	SEQ-CAL9A		1	NO MANUAL INTEGRATION
0404	22121430.D	SEQ-CALAA		1	NO MANUAL INTEGRATION
0422	22121431.D	SEQ-CALAB		1	NO MANUAL INTEGRATION
0440	22121432.D	SEQ-CALAC		1	NO MANUAL INTEGRATION
0458	22121433.D	SEQ-CALAD		1	NO MANUAL INTEGRATION
0516	22121434.D	SEQ-CALAE		1	NO MANUAL INTEGRATION
0533	22121435.D	SEQ-PEM2		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0551	22121436.D	SEQ-ICV1		1	NO MANUAL INTEGRATION
0609	22121437.D	SEQ-ICV2		1	NO MANUAL INTEGRATION
0627	22121438.D	SEQ-ICV3		1	NO MANUAL INTEGRATION
0645	22121439.D	SEQ-ICV4		1	NO MANUAL INTEGRATION
0703	22121440.D	BKK0688-BLK1		1	NO MANUAL INTEGRATION
0721	22121441.D	BKK0688-BS1		1	NO MANUAL INTEGRATION
0739	22121442.D	BKK0688-BS2		1	NO MANUAL INTEGRATION
0757	22121443.D	BKK0688-BS3		1	NO MANUAL INTEGRATION
0815	22121444.D	BKK0688-BSD1		1	NO MANUAL INTEGRATION
0832	22121445.D	BKK0142-BLK1		1	NO MANUAL INTEGRATION
0850	22121446.D	BKK0142-BS1		1	NO MANUAL INTEGRATION
0908	22121447.D	BKK0142-BS2		1	NO MANUAL INTEGRATION
0926	22121448.D	BKK0142-BSD1		1	NO MANUAL INTEGRATION
0944	22121449.D	BKK0142-MS1		1	NO MANUAL INTEGRATION
1002	22121450.D	BKK0142-MSD1		1	NO MANUAL INTEGRATION
1020	22121451.D	22J0513-01		1	NO MANUAL INTEGRATION
1038	22121452.D	22J0513-04		1	NO MANUAL INTEGRATION
1055	22121453.D	22J0535-01		1	trans-Chlordane,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1113	22121454.D	22K0429-01		1	Heptachlor epoxide b,
1131	22121455.D	22K0429-02		1	Heptachlor epoxide b,
1149	22121456.D	22K0429-03		1	Hexachlorobenzene,
1207	22121457.D	SEQ-PEM3		1	NO MANUAL INTEGRATION
1225	22121458.D	SEQ-CCV1		1	NO MANUAL INTEGRATION
1243	22121459.D	SEQ-CCV2		1	NO MANUAL INTEGRATION
1301	22121460.D	SEQ-CCV3		1	NO MANUAL INTEGRATION
1319	22121461.D	SEQ-CCV4		1	NO MANUAL INTEGRATION
1336	22121462.D	BKK0380-BLK1		1	NO MANUAL INTEGRATION
1354	22121463.D	BKK0380-BS1		1	NO MANUAL INTEGRATION
1412	22121464.D	BKK0380-BSD1		1	NO MANUAL INTEGRATION
1430	22121465.D	22K0157-01		1	NO MANUAL INTEGRATION
1448	22121466.D	22K0230-01		1	NO MANUAL INTEGRATION
1506	22121467.D	22K0231-01		1	NO MANUAL INTEGRATION
1524	22121468.D	BKK0382-BLK1		1	NO MANUAL INTEGRATION
1542	22121469.D	BKK0382-BS1		1	NO MANUAL INTEGRATION
1600	22121470.D	BKK0382-BS2		1	NO MANUAL INTEGRATION
1618	22121471.D	BKK0382-BSD1		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1635	22121472.D	22K0075-01		1	NO MANUAL INTEGRATION
1653	22121473.D	SEQ-PEM4		1	NO MANUAL INTEGRATION
1711	22121474.D	SEQ-CCV5		1	NO MANUAL INTEGRATION
1729	22121475.D	SEQ-CCV6		1	NO MANUAL INTEGRATION
1747	22121476.D	SEQ-CCV7		1	NO MANUAL INTEGRATION
1805	22121477.D	SEQ-CCV8		1	NO MANUAL INTEGRATION
1823	22121478.D	BKK0537-BLK1		1	NO MANUAL INTEGRATION
1840	22121479.D	BKK0537-BS1		1	NO MANUAL INTEGRATION
1858	22121480.D	BKK0537-BS2		1	NO MANUAL INTEGRATION
1916	22121481.D	22K0194-01		1	NO MANUAL INTEGRATION
1934	22121482.D	22K0194-01RE1	10	1	NO MANUAL INTEGRATION
1952	22121483.D	SEQ-PEM5		1	NO MANUAL INTEGRATION
2009	22121484.D	SEQ-CCV9		1	NO MANUAL INTEGRATION
2027	22121485.D	SEQ-CCVA		1	NO MANUAL INTEGRATION
2045	22121486.D	SEQ-CCVB		1	NO MANUAL INTEGRATION
2103	22121487.D	SEQ-CCVC		1	NO MANUAL INTEGRATION
1927	22121401.D	RINSE		1	NO MANUAL INTEGRATION
1944	22121402.D	RINSE		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b\B20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2002	22121403.D	SEQ-IBL1		1	NO MANUAL INTEGRATION
2020	22121404.D	SEQ-PEM1		1	NO MANUAL INTEGRATION
2038	22121405.D	SEQ-CAL1		1	NO MANUAL INTEGRATION
2056	22121406.D	SEQ-CAL2		1	NO MANUAL INTEGRATION
2114	22121407.D	SEQ-CAL3		1	NO MANUAL INTEGRATION
2131	22121408.D	SEQ-CAL4		1	NO MANUAL INTEGRATION
2149	22121409.D	SEQ-CAL5		1	NO MANUAL INTEGRATION
2207	22121410.D	SEQ-CAL6		1	NO MANUAL INTEGRATION
2225	22121411.D	SEQ-CAL7		1	NO MANUAL INTEGRATION
2243	22121412.D	SEQ-CAL8		1	NO MANUAL INTEGRATION
2301	22121413.D	SEQ-CAL9		1	NO MANUAL INTEGRATION
2319	22121414.D	SEQ-CALA		1	NO MANUAL INTEGRATION
2336	22121415.D	SEQ-CALB		1	NO MANUAL INTEGRATION
2354	22121416.D	SEQ-CALC		1	NO MANUAL INTEGRATION
0012	22121417.D	SEQ-CALD		1	NO MANUAL INTEGRATION
0030	22121418.D	SEQ-CALE		1	NO MANUAL INTEGRATION
0048	22121419.D	SEQ-SCV1		1	NO MANUAL INTEGRATION
0106	22121420.D	SEQ-SCV2		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b\B20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0124	22121421.D	SEQ-CAL1A		1	NO MANUAL INTEGRATION
0142	22121422.D	SEQ-CAL2A		1	NO MANUAL INTEGRATION
0159	22121423.D	SEQ-CAL3A		1	NO MANUAL INTEGRATION
0217	22121424.D	SEQ-CAL4A		1	NO MANUAL INTEGRATION
0235	22121425.D	SEQ-CAL5A		1	NO MANUAL INTEGRATION
0253	22121426.D	SEQ-CAL6A		1	NO MANUAL INTEGRATION
0311	22121427.D	SEQ-CAL7A		1	NO MANUAL INTEGRATION
0329	22121428.D	SEQ-CAL8A		1	NO MANUAL INTEGRATION
0346	22121429.D	SEQ-CAL9A		1	NO MANUAL INTEGRATION
0404	22121430.D	SEQ-CALAA		1	NO MANUAL INTEGRATION
0422	22121431.D	SEQ-CALAB		1	NO MANUAL INTEGRATION
0440	22121432.D	SEQ-CALAC		1	NO MANUAL INTEGRATION
0458	22121433.D	SEQ-CALAD		1	NO MANUAL INTEGRATION
0516	22121434.D	SEQ-CALAE		1	NO MANUAL INTEGRATION
0533	22121435.D	SEQ-PEM2		1	NO MANUAL INTEGRATION
0551	22121436.D	SEQ-ICV1		1	NO MANUAL INTEGRATION
0609	22121437.D	SEQ-ICV2		1	NO MANUAL INTEGRATION
0627	22121438.D	SEQ-ICV3		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b\B20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0645	22121439.D	SEQ-ICV4		1	NO MANUAL INTEGRATION
0703	22121440.D	BKK0688-BLK1		1	NO MANUAL INTEGRATION
0721	22121441.D	BKK0688-BS1		1	NO MANUAL INTEGRATION
0739	22121442.D	BKK0688-BS2		1	NO MANUAL INTEGRATION
0757	22121443.D	BKK0688-BS3		1	NO MANUAL INTEGRATION
0815	22121444.D	BKK0688-BSD1		1	NO MANUAL INTEGRATION
0832	22121445.D	BKK0142-BLK1		1	NO MANUAL INTEGRATION
0850	22121446.D	BKK0142-BS1		1	NO MANUAL INTEGRATION
0908	22121447.D	BKK0142-BS2		1	NO MANUAL INTEGRATION
0926	22121448.D	BKK0142-BSD1		1	NO MANUAL INTEGRATION
0944	22121449.D	BKK0142-MS1		1	NO MANUAL INTEGRATION
1002	22121450.D	BKK0142-MSD1		1	NO MANUAL INTEGRATION
1020	22121451.D	22J0513-01		1	NO MANUAL INTEGRATION
1038	22121452.D	22J0513-04		1	NO MANUAL INTEGRATION
1055	22121453.D	22J0535-01		1	trans-Chlordane [C],
1113	22121454.D	22K0429-01		1	NO MANUAL INTEGRATION
1131	22121455.D	22K0429-02		1	Aldrin [C], Heptachlor epoxide b [C], trans-Chlordane [C],
1149	22121456.D	22K0429-03		1	Aldrin [C],

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b\B20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1207	22121457.D	SEQ-PEM3		1	NO MANUAL INTEGRATION
1225	22121458.D	SEQ-CCV1		1	NO MANUAL INTEGRATION
1243	22121459.D	SEQ-CCV2		1	NO MANUAL INTEGRATION
1301	22121460.D	SEQ-CCV3		1	NO MANUAL INTEGRATION
1319	22121461.D	SEQ-CCV4		1	NO MANUAL INTEGRATION
1336	22121462.D	BKK0380-BLK1		1	NO MANUAL INTEGRATION
1354	22121463.D	BKK0380-BS1		1	NO MANUAL INTEGRATION
1412	22121464.D	BKK0380-BSD1		1	NO MANUAL INTEGRATION
1430	22121465.D	22K0157-01		1	NO MANUAL INTEGRATION
1448	22121466.D	22K0230-01		1	NO MANUAL INTEGRATION
1506	22121467.D	22K0231-01		1	NO MANUAL INTEGRATION
1524	22121468.D	BKK0382-BLK1		1	NO MANUAL INTEGRATION
1542	22121469.D	BKK0382-BS1		1	NO MANUAL INTEGRATION
1600	22121470.D	BKK0382-BS2		1	NO MANUAL INTEGRATION
1618	22121471.D	BKK0382-BSD1		1	NO MANUAL INTEGRATION
1635	22121472.D	22K0075-01		1	NO MANUAL INTEGRATION
1653	22121473.D	SEQ-PEM4		1	NO MANUAL INTEGRATION
1711	22121474.D	SEQ-CCV5		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b\B20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1729	22121475.D	SEQ-CCV6		1	NO MANUAL INTEGRATION
1747	22121476.D	SEQ-CCV7		1	NO MANUAL INTEGRATION
1805	22121477.D	SEQ-CCV8		1	NO MANUAL INTEGRATION
1823	22121478.D	BKK0537-BLK1		1	NO MANUAL INTEGRATION
1840	22121479.D	BKK0537-BS1		1	NO MANUAL INTEGRATION
1858	22121480.D	BKK0537-BS2		1	NO MANUAL INTEGRATION
1916	22121481.D	22K0194-01		1	NO MANUAL INTEGRATION
1934	22121482.D	22K0194-01RE1	10	1	NO MANUAL INTEGRATION
1952	22121483.D	SEQ-PEM5		1	NO MANUAL INTEGRATION
2010	22121484.D	SEQ-CCV9		1	NO MANUAL INTEGRATION
2027	22121485.D	SEQ-CCVA		1	NO MANUAL INTEGRATION
2045	22121486.D	SEQ-CCVB		1	NO MANUAL INTEGRATION
2103	22121487.D	SEQ-CCVC		1	NO MANUAL INTEGRATION

Security Status Report

Date: 17-Dec-2022 10:57

22121401.D	Data Locked	jrains, 17-Dec-2022 10:57
22121402.D	Data Locked	jrains, 17-Dec-2022 10:57
22121403.D	Data Locked	jrains, 17-Dec-2022 10:57
22121404.D	Data Locked	jrains, 17-Dec-2022 10:57
22121405.D	Data Locked	jrains, 17-Dec-2022 10:57
22121406.D	Data Locked	jrains, 17-Dec-2022 10:57
22121407.D	Data Locked	jrains, 17-Dec-2022 10:57
22121408.D	Data Locked	jrains, 17-Dec-2022 10:57
22121409.D	Data Locked	jrains, 17-Dec-2022 10:57
22121410.D	Data Locked	jrains, 17-Dec-2022 10:57
22121411.D	Data Locked	jrains, 17-Dec-2022 10:57
22121412.D	Data Locked	jrains, 17-Dec-2022 10:57
22121413.D	Data Locked	jrains, 17-Dec-2022 10:57
22121414.D	Data Locked	jrains, 17-Dec-2022 10:57
22121415.D	Data Locked	jrains, 17-Dec-2022 10:57
22121416.D	Data Locked	jrains, 17-Dec-2022 10:57
22121417.D	Data Locked	jrains, 17-Dec-2022 10:57
22121418.D	Data Locked	jrains, 17-Dec-2022 10:57
22121419.D	Data Locked	jrains, 17-Dec-2022 10:57
22121420.D	Data Locked	jrains, 17-Dec-2022 10:57
22121421.D	Data Locked	jrains, 17-Dec-2022 10:57
22121422.D	Data Locked	jrains, 17-Dec-2022 10:57
22121423.D	Data Locked	jrains, 17-Dec-2022 10:57
22121424.D	Data Locked	jrains, 17-Dec-2022 10:57
22121425.D	Data Locked	jrains, 17-Dec-2022 10:57
22121426.D	Data Locked	jrains, 17-Dec-2022 10:57
22121427.D	Data Locked	jrains, 17-Dec-2022 10:57
22121428.D	Data Locked	jrains, 17-Dec-2022 10:57
22121429.D	Data Locked	jrains, 17-Dec-2022 10:57
22121430.D	Data Locked	jrains, 17-Dec-2022 10:57
22121431.D	Data Locked	jrains, 17-Dec-2022 10:57
22121432.D	Data Locked	jrains, 17-Dec-2022 10:57
22121433.D	Data Locked	jrains, 17-Dec-2022 10:57
22121434.D	Data Locked	jrains, 17-Dec-2022 10:57

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-DEC-2022 20:38
End Cal Date : 15-DEC-2022 05:16
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Last Edit : 15-Dec-2022 08:33 jrains
Curve Type : Average

Calibration File Names:
Level 1: \\target\share\chem4\ecd6.i\20221214.b\20221214.b\22121428.D
Level 2: \\target\share\chem4\ecd6.i\20221214.b\20221214.b\22121429.D
Level 3: \\target\share\chem4\ecd6.i\20221214.b\20221214.b\22121430.D
Level 4: \\target\share\chem4\ecd6.i\20221214.b\20221214.b\22121431.D
Level 5: \\target\share\chem4\ecd6.i\20221214.b\20221214.b\22121432.D
Level 6: \\target\share\chem4\ecd6.i\20221214.b\20221214.b\22121433.D
Level 7: \\target\share\chem4\ecd6.i\20221214.b\20221214.b\22121434.D

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	RRF	% RSD
1 Hexachlorobutadiene [C]	+++++	1.97561	1.64885	1.49248	1.37610	1.34121	1.30081	1.52251	16.761
5 Hexachlorobenzene [C]	+++++	1.60221	1.52062	1.49140	1.45025	1.38595	1.30422	1.45911	7.170
6 alpha-BHC [C]	+++++	1.58236	1.58624	1.63316	1.64049	1.61544	1.56190	1.60327	1.946
7 gamma-BHC (Lindane) [C]	+++++	1.35507	1.34878	1.38146	1.39277	1.36661	1.31891	1.36060	1.921
8 beta-BHC [C]	+++++	0.65278	0.61729	0.61846	0.61258	0.59180	0.56430	0.60954	4.856
9 delta-BHC [C]	+++++	1.32376	1.30723	1.33943	1.32843	1.33198	1.29291	1.32062	1.312
10 Heptachlor [C]	+++++	1.27025	1.23424	1.25841	1.27225	1.21576	1.14412	1.23250	3.937
11 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-DEC-2022 20:38
End Cal Date : 15-DEC-2022 05:16
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Last Edit : 15-Dec-2022 08:33 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	___ RRF	% RSD
12 Aldrin [C]	+++++	1.51140	1.41672	1.43264	1.43038	1.37092	1.28126	1.40722	5.441
13 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
14 Heptachlor epoxide b [C]	+++++	1.29770	1.17460	1.17429	1.17471	1.11443	1.04614	1.16364	7.144
15 cis-Chlordane [C]	+++++	1.25850	1.15320	1.13505	1.13625	1.08979	1.03859	1.13523	6.464
16 trans-Chlordane [C]	+++++	1.25449	1.17610	1.16484	1.16885	1.12553	1.07269	1.16042	5.185
17 Endosulfan I [C]	+++++	1.11826	1.04415	1.03541	1.03470	0.98850	0.93258	1.02560	6.032
18 4,4'-DDE [C]	+++++	1.12024	1.06963	1.06439	1.05541	0.98971	0.93563	1.03917	6.320
19 Dieldrin [C]	+++++	1.27001	1.16284	1.13936	1.13610	1.07139	1.01937	1.13318	7.532
20 Endrin [C]	+++++	1.25691	1.17909	1.15948	1.14960	1.06606	1.01378	1.13749	7.566
21 4,4'-DDD [C]	+++++	1.23448	1.12156	1.11779	1.11200	1.04628	1.00638	1.10642	7.049
22 Endosulfan II [C]	+++++	1.29682	1.20296	1.18849	1.16050	1.09906	1.04780	1.16594	7.425

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-DEC-2022 20:38
End Cal Date : 15-DEC-2022 05:16
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Last Edit : 15-Dec-2022 08:33 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	___ RRF	% RSD
23 4,4'-DDT [C]	+++++	1.17591	1.07782	1.06761	1.07327	1.01936	0.99339	1.06790	5.878
24 Endrin aldehyde [C]	+++++	0.94301	0.84303	0.82492	0.81299	0.77277	0.73803	0.82246	8.537
25 Endosulfan sulfate [C]	+++++	1.13777	1.04255	1.03037	1.02302	0.97217	0.93725	1.02386	6.702
26 Methoxychlor [C]	+++++	0.51841	0.48668	0.47517	0.46817	0.44340	0.44364	0.47258	5.996
27 Endrin ketone [C]	+++++	1.23563	1.11999	1.11440	1.10085	1.04766	1.01657	1.10585	6.827
29 Aroclor-1016(1)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
30 Aroclor-1221(1)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-DEC-2022 20:38
End Cal Date : 15-DEC-2022 05:16
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Last Edit : 15-Dec-2022 08:33 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	___ RRF	% RSD
(2)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(3)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(4)	*****	*****	*****	*****	*****	*****	*****	*****	*****
31 Aroclor-1232(1)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(2)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(3)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(4)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(5)	*****	*****	*****	*****	*****	*****	*****	*****	*****
32 Aroclor-1242(1)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(2)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(3)	*****	*****	*****	*****	*****	*****	*****	*****	*****

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-DEC-2022 20:38
End Cal Date : 15-DEC-2022 05:16
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Last Edit : 15-Dec-2022 08:33 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	___ RRF	% RSD
(4)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(5)	*****	*****	*****	*****	*****	*****	*****	*****	*****
33 Aroclor-1248(1)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(2)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(3)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(4)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(5)	*****	*****	*****	*****	*****	*****	*****	*****	*****
34 Aroclor-1254(1)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(2)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(3)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(4)	*****	*****	*****	*****	*****	*****	*****	*****	*****

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-DEC-2022 20:38
End Cal Date : 15-DEC-2022 05:16
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Last Edit : 15-Dec-2022 08:33 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	___ RRF	% RSD
(5)	#####	#####	#####	#####	#####	#####	#####	#####	#####
35 Aroclor-1260(1)	#####	#####	#####	#####	#####	#####	#####	#####	#####
(2)	#####	#####	#####	#####	#####	#####	#####	#####	#####
(3)	#####	#####	#####	#####	#####	#####	#####	#####	#####
(4)	#####	#####	#####	#####	#####	#####	#####	#####	#####
(5)	#####	#####	#####	#####	#####	#####	#####	#####	#####
36 Aroclor-1262(1)	#####	#####	#####	#####	#####	#####	#####	#####	#####
(2)	#####	#####	#####	#####	#####	#####	#####	#####	#####
(3)	#####	#####	#####	#####	#####	#####	#####	#####	#####
(4)	#####	#####	#####	#####	#####	#####	#####	#####	#####
(5)	#####	#####	#####	#####	#####	#####	#####	#####	#####

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-DEC-2022 20:38
End Cal Date : 15-DEC-2022 05:16
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Last Edit : 15-Dec-2022 08:33 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	___ RRF	% RSD
37 Aroclor-1268(1)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(2)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(3)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(4)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(5)	*****	*****	*****	*****	*****	*****	*****	*****	*****
38 Toxaphene [C](1)	0.01492	0.01529	0.01573	0.01558	0.01527	0.01455	0.01387	0.01503	4.285
(2)	0.03524	0.03538	0.03581	0.03480	0.03351	0.03170	0.03010	0.03379	6.368
(3)	0.02615	0.02659	0.02671	0.02640	0.02571	0.02464	0.02387	0.02572	4.197
(4)	0.08868	0.08690	0.08740	0.08502	0.08225	0.07926	0.07782	0.08390	5.022
(5)	0.04138	0.04124	0.04193	0.04145	0.04102	0.04046	0.04062	0.04116	1.227
39 2,4-DDE [C]	*****	0.83433	0.80524	0.74313	0.72589	0.66671	0.60202	0.72955	11.810

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-DEC-2022 20:38
End Cal Date : 15-DEC-2022 05:16
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Last Edit : 15-Dec-2022 08:33 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7							
40 2,4-DDD [C]	+++++	0.90975	0.87971	0.82738	0.81642	0.76623		
	0.71370						0.81887	8.785
41 2,4-DDT [C]	+++++	0.94001	0.88046	0.85026	0.84852	0.79773		
	0.74249						0.84324	8.052
42 Hexachloroethane [C]	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
43 Oxychlordane [C]	+++++	0.96447	0.94678	0.90333	0.89663	0.84333		
	0.79092						0.89091	7.271
44 trans-Nonachlor [C]	+++++	1.48885	1.51762	1.45179	1.44766	1.37681		
	1.30668						1.43157	5.406
45 cis-Nonachlor [C]	+++++	1.44924	1.40707	1.37647	1.37212	1.31329		
	1.24817						1.36106	5.224
46 Mirex [C]	+++++	0.93314	0.81155	0.79462	0.76268	0.73998		
	0.70751						0.79158	9.949
47 bis-(2-ethylhexyl) Phthalate	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
48 Chlordane (NOS) [C](1)	0.03877	0.03690	0.03764	0.03840	0.03761	0.03805		
	0.03764						0.03786	1.615
(2)	0.04647	0.04439	0.04416	0.04357	0.04103	0.03978		
	0.03825						0.04252	6.844
(3)	0.14135	0.14252	0.14927	0.15059	0.14418	0.14081		
	0.13812						0.14383	3.173

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-DEC-2022 20:38
End Cal Date : 15-DEC-2022 05:16
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Last Edit : 15-Dec-2022 08:33 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	___ RRF	% RSD
49 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
50 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
51 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
52 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
53 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
54 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
55 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
56 Kepone [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
57 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 4 Tetrachloro-m-xylene [C]	+++++	1.22086	1.17937	1.16483	1.12798	1.06878	0.99482	1.12611	7.306
$ 28 Decachlorobiphenyl [C]	+++++	1.08714	0.93916	0.85624	0.84996	0.80139	0.77119	0.88418	12.973

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-AUG-2022 11:03
End Cal Date : 13-DEC-2022 22:43
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Last Edit : 14-Dec-2022 10:32
Curve Type : Average

Calibration File Names:
Level 1: \\target\share\chem4\ecd6.i\20220809.b\22080909.D
Level 2: \\target\share\chem4\ecd6.i\20220809.b\22080910.D
Level 3: \\target\share\chem4\ecd6.i\20220809.b\22080911.D
Level 4: \\target\share\chem4\ecd6.i\20220809.b\22080912.D
Level 5: \\target\share\chem4\ecd6.i\20220809.b\22080913.D
Level 6: \\target\share\chem4\ecd6.i\20220809.b\22080914.D
Level 7: \\target\share\chem4\ecd6.i\20220809.b\22080915.D

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7							
1 Hexachlorobutadiene	+++++	1.64215	1.55667	1.51049	1.47308	1.40536		
	1.30292						1.48178	7.988
5 Hexachlorobenzene	+++++	1.48647	1.40778	1.36481	1.31957	1.25458		
	1.15582						1.33150	8.750
6 alpha-BHC	+++++	1.41183	1.40802	1.42270	1.42790	1.37811		
	1.29587						1.39074	3.567
7 gamma-BHC (Lindane)	+++++	1.20108	1.18733	1.20704	1.21598	1.18532		
	1.11861						1.18589	2.948
8 beta-BHC	+++++	0.65244	0.60612	0.58927	0.57533	0.54649		
	0.50588						0.57925	8.684
9 delta-BHC	+++++	1.15252	1.13315	1.18185	1.21952	1.21492		
	1.16159						1.17726	2.950
10 Heptachlor	+++++	1.18674	1.12881	1.11527	1.09009	1.03076		
	0.94214						1.08230	7.897
11 Aldrin	+++++	1.14505	1.10493	1.10576	1.09698	1.04621		
	0.96536						1.07738	5.877

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-AUG-2022 11:03
End Cal Date : 13-DEC-2022 22:43
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Last Edit : 14-Dec-2022 10:32
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	___ RRF	% RSD
12 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
13 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
14 Heptachlor epoxide b	+++++	1.05278	0.99602	0.98316	0.95413	0.89408	0.81733	0.94959	8.751
15 cis-Chlordane	+++++	1.00217	0.95563	0.94931	0.93343	0.89233	0.82943	0.92705	6.424
16 trans-Chlordane	+++++	1.02223	0.96054	0.95840	0.94631	0.90606	0.84267	0.93937	6.420
17 Endosulfan I	+++++	1.10444	1.01004	0.97510	0.92642	0.86761	0.77363	0.94287	12.207
18 4,4'-DDE	+++++	0.85783	0.84618	0.86175	0.85068	0.80349	0.73346	0.82557	6.027
19 Dieldrin	+++++	1.02112	0.97469	0.96064	0.93395	0.87876	0.79720	0.92773	8.553
20 Endrin	+++++	1.03359	0.99258	1.01493	1.03951	0.95184	0.92125	0.99228	4.755
21 4,4'-DDD	+++++	1.26749	1.21690	1.21140	1.19455	1.09258	1.02286	1.16763	7.815
22 Endosulfan II	+++++	1.32213	1.30831	1.28817	1.25191	1.14300	1.05695	1.22841	8.614

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-AUG-2022 11:03
End Cal Date : 13-DEC-2022 22:43
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Last Edit : 14-Dec-2022 10:32
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	___ RRF	% RSD
23 4,4'-DDT	+++++	1.20278	1.19912	1.21231	1.21971	1.13284	1.06544	1.17203	5.186
24 Endrin aldehyde	+++++	1.05042	1.01673	1.00197	0.99460	0.91340	0.84575	0.97048	7.836
25 Methoxychlor	+++++	0.56408	0.54010	0.51985	0.50693	0.45626	0.43428	0.50358	9.854
26 Endosulfan sulfate	+++++	1.14290	1.11216	1.09802	1.09968	1.00734	0.94888	1.06816	6.922
27 Endrin ketone	+++++	1.47959	1.40243	1.34455	1.31335	1.19489	1.12695	1.31029	9.966
29 Aroclor-1016(1)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
30 Aroclor-1221(1)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-AUG-2022 11:03
End Cal Date : 13-DEC-2022 22:43
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Last Edit : 14-Dec-2022 10:32
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	___ RRF	% RSD
(2)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(3)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(4)	*****	*****	*****	*****	*****	*****	*****	*****	*****
31 Aroclor-1232(1)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(2)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(3)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(4)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(5)	*****	*****	*****	*****	*****	*****	*****	*****	*****
32 Aroclor-1242(1)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(2)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(3)	*****	*****	*****	*****	*****	*****	*****	*****	*****

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-AUG-2022 11:03
End Cal Date : 13-DEC-2022 22:43
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Last Edit : 14-Dec-2022 10:32
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	___ RRF	% RSD
(4)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(5)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(6)	*****	*****	*****	*****	*****	*****	*****	*****	*****
33 Aroclor-1248(1)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(2)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(3)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(4)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(5)	*****	*****	*****	*****	*****	*****	*****	*****	*****
34 Aroclor-1254(1)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(2)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(3)	*****	*****	*****	*****	*****	*****	*****	*****	*****

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-AUG-2022 11:03
End Cal Date : 13-DEC-2022 22:43
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Last Edit : 14-Dec-2022 10:32
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	___ RRF	% RSD
(4)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(5)	*****	*****	*****	*****	*****	*****	*****	*****	*****
35 Aroclor-1260(1)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(2)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(3)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(4)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(5)	*****	*****	*****	*****	*****	*****	*****	*****	*****
36 Aroclor-1262(1)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(2)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(3)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(4)	*****	*****	*****	*****	*****	*****	*****	*****	*****

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-AUG-2022 11:03
End Cal Date : 13-DEC-2022 22:43
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Last Edit : 14-Dec-2022 10:32
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	___ RRF	% RSD
(5)	*****	*****	*****	*****	*****	*****	*****	*****	*****
37 Aroclor-1268(1)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(2)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(3)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(4)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(5)	*****	*****	*****	*****	*****	*****	*****	*****	*****
38 Toxaphene(1)	0.02824	0.03896	0.03693	0.03480	0.03418	0.02891	0.02792	0.03285	13.645
(2)	0.08343	0.10636	0.10204	0.09499	0.09608	0.08394	0.08263	0.09278	10.362
(3)	0.04776	0.06283	0.06069	0.06020	0.06090	0.05141	0.05119	0.05643	10.755
(4)	0.05098	0.07225	0.07089	0.06844	0.06847	0.06296	0.06388	0.06541	11.021
(5)	0.04955	0.06896	0.06748	0.06372	0.06603	0.05846	0.05934	0.06194	10.880

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-AUG-2022 11:03
End Cal Date : 13-DEC-2022 22:43
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Last Edit : 14-Dec-2022 10:32
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	___ RRF	% RSD
39 2,4-DDE	+++++	1.14103	1.08072	1.09005	1.06169	0.88466	0.89319	1.02522	10.614
40 2,4-DDD	+++++	1.08881	1.01841	0.99599	0.98400	0.85150	0.85318	0.96531	9.816
41 2,4-DDT	+++++	0.97799	0.97179	0.97332	0.98841	0.88743	0.88215	0.94685	5.117
42 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
43 Oxychlordane	+++++	1.32927	1.24890	1.22496	1.20236	1.04785	1.05015	1.18392	9.540
44 trans-Nonachlor	+++++	1.68629	1.57989	1.58456	1.55669	1.34437	1.36253	1.51906	8.949
45 cis-Nonachlor	+++++	1.62941	1.55213	1.53413	1.52347	1.34758	1.35527	1.49033	7.639
46 Mirex	+++++	1.20478	1.11168	1.05006	1.00932	0.85381	0.85786	1.01459	13.749
47 bis-(2-ethylhexyl) Phthalate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
48 Chlordane (NOS)(1)	0.06029	0.05735	0.05369	0.05005	0.04581	0.04808	0.04531	0.05151	11.230
(2)	0.15038	0.14213	0.13501	0.13074	0.12020	0.12674	0.12030	0.13221	8.482

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-AUG-2022 11:03
End Cal Date : 13-DEC-2022 22:43
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Last Edit : 14-Dec-2022 10:32
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	___ RRF	% RSD
(3)	0.17221	0.15459	0.13623	0.13893	0.12753	0.13518	0.13160	0.14232	11.024
49 Trifluralin	*****	*****	*****	*****	*****	*****	*****	*****	*****
50 Dacthal	*****	*****	*****	*****	*****	*****	*****	*****	*****
51 Oxadiazon	*****	*****	*****	*****	*****	*****	*****	*****	*****
52 Kelthane	*****	*****	*****	*****	*****	*****	*****	*****	*****
53 Chlorpyrifos	*****	*****	*****	*****	*****	*****	*****	*****	*****
54 Methyl Parathion	*****	*****	*****	*****	*****	*****	*****	*****	*****
55 Ethyl Parathion	*****	*****	*****	*****	*****	*****	*****	*****	*****
56 Kepone	*****	*****	*****	*****	*****	*****	*****	*****	*****
57 1-Chloropyrene	*****	*****	*****	*****	*****	*****	*****	*****	*****
$ 4 Tetrachloro-m-xylene	*****	1.10401	1.05839	1.02629	0.99588	0.93352	0.85040	0.99475	9.166

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-AUG-2022 11:03
End Cal Date : 13-DEC-2022 22:43
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Last Edit : 14-Dec-2022 10:32
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	___ RRF	% RSD
	80.000 Level 7							
$ 28 Decachlorobiphenyl	+++++	0.99444	0.96249	0.90111	0.87014	0.79161		
	0.75653						0.87939	10.607

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b
Inst ID: ecd6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	22121405	22121406	22121407	22121408	22121409	22121410	22121411
INJ.DATE:	14-DEC-2022	14-DEC-2022	14-DEC-2022	14-DEC-2022	14-DEC-2022	14-DEC-2022	14-DEC-2022
INJ.TIME:	20:38	20:56	21:14	21:31	21:49	22:07	22:25

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 Hexachlorobutadiene	2.323	2.323	2.324	2.323	2.324	2.324	2.324	2.324	2.294-2.354	2.323	0.000
* 2 1Bromo-2nitrobenzene	3.151	3.151	3.152	3.151	3.151	3.151	3.151	3.151	3.121-3.181	3.151	0.000
* 3 Hexabromobiphenyl	9.504	9.503	9.504	9.505	9.505	9.504	9.504	9.505	9.475-9.535	9.504	0.001
$ 4 Tetrachloro-m-xylene	3.828	3.828	3.828	3.828	3.828	3.828	3.828	3.828	3.798-3.858	3.828	0.000
5 Hexachlorobenzene	4.182	4.182	4.183	4.183	4.182	4.183	4.182	4.182	4.152-4.212	4.183	0.000
6 alpha-BHC	4.342	4.342	4.343	4.343	4.342	4.342	4.342	4.342	4.312-4.372	4.342	0.000
7 gamma-BHC (Lindane)	4.645	4.645	4.646	4.646	4.645	4.646	4.645	4.645	4.615-4.675	4.645	0.000
8 beta-BHC	4.726	4.726	4.727	4.726	4.726	4.726	4.726	4.726	4.696-4.756	4.726	0.000
9 delta-BHC	4.909	4.909	4.910	4.910	4.909	4.910	4.910	4.909	4.879-4.939	4.910	0.000
10 Heptachlor	5.130	5.129	5.130	5.130	5.130	5.130	5.130	5.130	5.100-5.160	5.130	0.000
11 Aldrin	5.453	5.453	5.455	5.454	5.454	5.454	5.454	5.454	5.424-5.484	5.454	0.000
12 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.627	13.597-13.657	+++++	+++++
13 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.869	10.839-10.899	+++++	+++++
14 Heptachlor epoxide b	6.130	6.130	6.132	6.131	6.130	6.130	6.130	6.130	6.100-6.160	6.131	0.001
15 cis-Chlordane	6.417	6.417	6.417	6.418	6.417	6.417	6.417	6.417	6.387-6.447	6.417	0.000
16 trans-Chlordane	6.270	6.271	6.271	6.271	6.271	6.271	6.271	6.271	6.241-6.301	6.271	0.000
17 Endosulfan I	6.572	6.572	6.573	6.573	6.572	6.572	6.573	6.572	6.542-6.602	6.573	0.000

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

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b
Inst ID: ecd6.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	18 4,4'-DDE	6.489	6.489	6.490	6.490	6.489	6.489	6.490	6.489	6.459-6.519	6.489	0.000
	19 Dieldrin	6.831	6.832	6.832	6.832	6.831	6.832	6.832	6.831	6.801-6.861	6.832	0.000
	20 Endrin	7.081	7.081	7.082	7.082	7.081	7.082	7.082	7.081	7.051-7.111	7.082	0.000
	21 4,4'-DDD	7.135	7.136	7.136	7.136	7.135	7.136	7.135	7.135	7.105-7.165	7.136	0.000
	22 Endosulfan II	7.318	7.317	7.318	7.318	7.317	7.317	7.317	7.317	7.287-7.347	7.317	0.000
	23 4,4'-DDT	7.427	7.427	7.428	7.428	7.427	7.427	7.428	7.427	7.397-7.457	7.428	0.000
	24 Endrin aldehyde	7.746	7.746	7.746	7.746	7.746	7.746	7.746	7.746	7.716-7.776	7.746	0.000
	25 Methoxychlor	7.912	7.912	7.913	7.912	7.912	7.912	7.912	7.912	7.882-7.942	7.912	0.000
	26 Endosulfan sulfate	8.180	8.179	8.180	8.180	8.180	8.179	8.180	8.180	8.150-8.210	8.180	0.000
	27 Endrin ketone	8.453	8.452	8.454	8.453	8.453	8.453	8.454	8.453	8.423-8.483	8.453	0.001
$	28 Decachlorobiphenyl	9.355	9.354	9.355	9.355	9.355	9.355	9.356	9.355	9.325-9.385	9.355	0.000
	29 Aroclor-1016	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.765	3.735-3.795	+++++	+++++
	30 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.881	4.851-4.911	+++++	+++++
	31 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.359	5.329-5.389	+++++	+++++
	32 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.765	3.735-3.795	+++++	+++++
	33 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.418	4.388-4.448	+++++	+++++
	34 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.257	5.227-5.287	+++++	+++++
	35 Aroclor-1260	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.045	6.015-6.075	+++++	+++++
	36 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.301	8.271-8.331	+++++	+++++
	37 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.259	11.229-11.289	+++++	+++++
	38 Toxaphene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.931	6.901-6.961	+++++	+++++
	39 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.106	6.076-6.136	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
40 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.681	6.651-6.711	+++++	+++++
41 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.957	6.927-6.987	+++++	+++++
42 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.774	1.744-1.804	+++++	+++++
43 Oxychlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.014	5.984-6.044	+++++	+++++
44 trans-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.397	6.367-6.427	+++++	+++++
45 cis-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.112	7.082-7.142	+++++	+++++
46 Mirex	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.082	8.052-8.112	+++++	+++++
47 bis-(2-ethylhexyl) Pht	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.156	20.126-20.186	+++++	+++++
48 Chlordane (NOS)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.593	5.563-5.623	+++++	+++++
49 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.319	6.289-6.349	+++++	+++++
50 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.936	9.906-9.966	+++++	+++++
51 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.891	11.861-11.921	+++++	+++++
52 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.827	14.797-14.857	+++++	+++++
53 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.750	9.720-9.780	+++++	+++++
54 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.107	9.077-9.137	+++++	+++++
55 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.251	10.221-10.281	+++++	+++++
56 Kepone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.588	6.558-6.618	+++++	+++++
57 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.953	6.923-6.983	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b\B20221214.b
Inst ID: ecd6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	22121405	22121406	22121407	22121408	22121409	22121410	22121411
INJ.DATE:	14-DEC-2022	14-DEC-2022	14-DEC-2022	14-DEC-2022	14-DEC-2022	14-DEC-2022	14-DEC-2022
INJ.TIME:	20:38	20:56	21:14	21:31	21:49	22:07	22:25

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 Hexachlorobutadiene [C	2.500	2.500	2.500	2.500	2.500	2.500	2.501	2.501	2.471-2.531	2.500	0.000
* 2 1Bromo-2nitrobenzene [	3.350	3.350	3.351	3.351	3.350	3.351	3.351	3.351	3.321-3.381	3.351	0.000
* 3 Hexabromobiphenyl[C]	11.054	11.053	11.054	11.054	11.053	11.053	11.054	11.054	11.024-11.084	11.054	0.000
$ 4 Tetrachloro-m-xylene [	4.220	4.220	4.220	4.220	4.220	4.221	4.220	4.220	4.190-4.250	4.220	0.000
5 Hexachlorobenzene [C]	4.718	4.718	4.718	4.718	4.718	4.718	4.718	4.718	4.688-4.748	4.718	0.000
6 alpha-BHC [C]	4.860	4.859	4.860	4.860	4.860	4.860	4.861	4.861	4.831-4.891	4.860	0.000
7 gamma-BHC (Lindane) [C	5.257	5.257	5.258	5.258	5.258	5.258	5.258	5.258	5.228-5.288	5.258	0.000
8 beta-BHC [C]	5.337	5.337	5.338	5.337	5.337	5.337	5.337	5.337	5.307-5.367	5.337	0.000
9 delta-BHC [C]	5.690	5.691	5.691	5.691	5.690	5.691	5.691	5.691	5.661-5.721	5.691	0.000
10 Heptachlor [C]	5.786	5.787	5.787	5.787	5.787	5.787	5.787	5.787	5.757-5.817	5.787	0.000
11 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.588	14.558-14.618	+++++	+++++
12 Aldrin [C]	6.190	6.190	6.191	6.191	6.191	6.190	6.191	6.191	6.161-6.221	6.191	0.000
13 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.680	12.650-12.710	+++++	+++++
14 Heptachlor epoxide b [	6.845	6.845	6.845	6.846	6.845	6.846	6.845	6.845	6.815-6.875	6.845	0.000
15 cis-Chlordane [C]	7.215	7.215	7.216	7.216	7.216	7.215	7.216	7.216	7.186-7.246	7.215	0.000
16 trans-Chlordane [C]	7.056	7.055	7.056	7.056	7.056	7.056	7.056	7.056	7.026-7.086	7.056	0.000
17 Endosulfan I [C]	7.288	7.288	7.289	7.289	7.289	7.288	7.289	7.289	7.259-7.319	7.288	0.000

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

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b\B20221214.b
Inst ID: ecd6.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	18 4,4'-DDE [C]	7.370	7.370	7.371	7.371	7.370	7.371	7.371	7.371	7.341-7.401	7.371	0.000
	19 Dieldrin [C]	7.582	7.582	7.583	7.583	7.582	7.582	7.583	7.583	7.553-7.613	7.582	0.000
	20 Endrin [C]	7.906	7.906	7.906	7.907	7.907	7.907	7.907	7.907	7.877-7.937	7.907	0.000
	21 4,4'-DDD [C]	7.976	7.976	7.976	7.977	7.976	7.976	7.976	7.976	7.946-8.006	7.976	0.000
	22 Endosulfan II [C]	8.117	8.116	8.117	8.117	8.117	8.117	8.117	8.117	8.087-8.147	8.117	0.000
	23 4,4'-DDT [C]	8.294	8.294	8.294	8.295	8.295	8.295	8.295	8.295	8.265-8.325	8.295	0.000
	24 Endrin aldehyde [C]	8.448	8.447	8.448	8.448	8.448	8.448	8.448	8.448	8.418-8.478	8.448	0.000
	25 Endosulfan sulfate [C]	8.715	8.714	8.715	8.715	8.715	8.715	8.715	8.715	8.685-8.745	8.715	0.000
	26 Methoxychlor [C]	8.935	8.934	8.935	8.936	8.935	8.935	8.936	8.936	8.906-8.966	8.935	0.001
	27 Endrin ketone [C]	9.239	9.239	9.239	9.240	9.239	9.239	9.240	9.240	9.210-9.270	9.239	0.000
$	28 Decachlorobiphenyl [C]	10.466	10.465	10.466	10.466	10.466	10.466	10.467	10.467	10.437-10.497	10.466	0.001
	29 Aroclor-1016	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.180	4.150-4.210	+++++	+++++
	30 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.051	5.021-5.081	+++++	+++++
	31 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.171	5.141-5.201	+++++	+++++
	32 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.970	4.940-5.000	+++++	+++++
	33 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.285	5.255-5.315	+++++	+++++
	34 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.968	5.938-5.998	+++++	+++++
	35 Aroclor-1260	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.767	6.737-6.797	+++++	+++++
	36 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.714	9.684-9.744	+++++	+++++
	37 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.791	11.761-11.821	+++++	+++++
	38 Toxaphene [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.126	7.096-7.156	+++++	+++++
	39 2,4-DDE [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.036	7.006-7.066	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b\B20221214.b
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
40 2,4-DDD [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.591	7.561-7.621	+++++	+++++
41 2,4-DDT [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.913	7.883-7.943	+++++	+++++
42 Hexachloroethane [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.676	1.646-1.706	+++++	+++++
43 Oxychlordane [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.741	6.711-6.771	+++++	+++++
44 trans-Nonachlor [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.155	7.125-7.185	+++++	+++++
45 cis-Nonachlor [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.975	7.945-8.005	+++++	+++++
46 Mirex [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.223	9.193-9.253	+++++	+++++
47 bis-(2-ethylhexyl) Pht	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.499	21.469-21.529	+++++	+++++
48 Chlordane (NOS) [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.612	5.582-5.642	+++++	+++++
49 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.871	4.841-4.901	+++++	+++++
50 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.640	6.610-6.670	+++++	+++++
51 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.115	8.085-8.145	+++++	+++++
52 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.286	11.256-11.316	+++++	+++++
53 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.527	6.497-6.557	+++++	+++++
54 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.342	6.312-6.372	+++++	+++++
55 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.841	6.811-6.871	+++++	+++++
56 Kepone [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.336	7.306-7.366	+++++	+++++
57 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.745	7.715-7.775	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b
Inst ID: ecd6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	22121412	22121413	22121414	22121415	22121416	22121417	22121418
INJ.DATE:	14-DEC-2022	14-DEC-2022	14-DEC-2022	14-DEC-2022	14-DEC-2022	15-DEC-2022	15-DEC-2022
INJ.TIME:	22:43	23:01	23:19	23:36	23:54	00:12	00:30

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.324	2.294-2.354	+++++	+++++
*	2 1Bromo-2nitrobenzene	3.151	3.151	3.151	3.151	3.151	3.151	3.151	3.151	3.121-3.181	3.151	0.000
*	3 Hexabromobiphenyl	9.504	9.504	9.504	9.504	9.504	9.504	9.504	9.505	9.475-9.535	9.504	0.000
$	4 Tetrachloro-m-xylene	+++++	+++++	+++++	+++++	3.800	3.800	3.800	3.828	3.798-3.858	3.800	0.000
	5 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.182	4.152-4.212	+++++	+++++
	6 alpha-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.342	4.312-4.372	+++++	+++++
	7 gamma-BHC (Lindane)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.645	4.615-4.675	+++++	+++++
	8 beta-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.726	4.696-4.756	+++++	+++++
	9 delta-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.909	4.879-4.939	+++++	+++++
	10 Heptachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.130	5.100-5.160	+++++	+++++
	11 Aldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.454	5.424-5.484	+++++	+++++
	12 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.627	13.597-13.657	+++++	+++++
	13 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.869	10.839-10.899	+++++	+++++
	14 Heptachlor epoxide b	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.130	6.100-6.160	+++++	+++++
	15 cis-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.417	6.387-6.447	+++++	+++++
	16 trans-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.271	6.241-6.301	+++++	+++++
	17 Endosulfan I	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.572	6.542-6.602	+++++	+++++

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

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b
Inst ID: ecd6.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	18 4,4'-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.489	6.459-6.519	+++++	+++++
	19 Dieldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.831	6.801-6.861	+++++	+++++
	20 Endrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.081	7.051-7.111	+++++	+++++
	21 4,4'-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.135	7.105-7.165	+++++	+++++
	22 Endosulfan II	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.317	7.287-7.347	+++++	+++++
	23 4,4'-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.427	7.397-7.457	+++++	+++++
	24 Endrin aldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.746	7.716-7.776	+++++	+++++
	25 Methoxychlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.912	7.882-7.942	+++++	+++++
	26 Endosulfan sulfate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.180	8.150-8.210	+++++	+++++
	27 Endrin ketone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.453	8.423-8.483	+++++	+++++
$	28 Decachlorobiphenyl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.355	9.325-9.385	+++++	+++++
	29 Aroclor-1016	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.765	3.735-3.795	+++++	+++++
	30 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.881	4.851-4.911	+++++	+++++
	31 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.359	5.329-5.389	+++++	+++++
	32 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.765	3.735-3.795	+++++	+++++
	33 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.418	4.388-4.448	+++++	+++++
	34 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.257	5.227-5.287	+++++	+++++
	35 Aroclor-1260	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.045	6.015-6.075	+++++	+++++
	36 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.301	8.271-8.331	+++++	+++++
	37 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.259	11.229-11.289	+++++	+++++
	38 Toxaphene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.931	6.901-6.961	+++++	+++++
	39 2,4-DDE	6.106	6.106	6.106	6.106	6.106	6.106	6.106	6.106	6.076-6.136	6.106	0.000

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
40 2,4-DDD	6.681	6.681	6.681	6.681	6.681	6.681	6.680	6.681	6.651-6.711	6.681	0.000
41 2,4-DDT	6.956	6.957	6.956	6.956	6.957	6.956	6.956	6.957	6.927-6.987	6.956	0.000
42 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.774	1.744-1.804	+++++	+++++
43 Oxychlordane	6.014	6.015	6.014	6.015	6.014	6.014	6.014	6.014	5.984-6.044	6.015	0.000
44 trans-Nonachlor	6.397	6.398	6.398	6.398	6.397	6.397	6.397	6.397	6.367-6.427	6.398	0.000
45 cis-Nonachlor	7.112	7.112	7.111	7.112	7.112	7.112	7.112	7.112	7.082-7.142	7.112	0.000
46 Mirex	8.082	8.082	8.082	8.082	8.082	8.082	8.082	8.082	8.052-8.112	8.082	0.000
47 bis-(2-ethylhexyl) Pht	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.156	20.126-20.186	+++++	+++++
48 Chlordane (NOS)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.593	5.563-5.623	+++++	+++++
49 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.319	6.289-6.349	+++++	+++++
50 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.936	9.906-9.966	+++++	+++++
51 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.891	11.861-11.921	+++++	+++++
52 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.827	14.797-14.857	+++++	+++++
53 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.750	9.720-9.780	+++++	+++++
54 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.107	9.077-9.137	+++++	+++++
55 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.251	10.221-10.281	+++++	+++++
56 Kepone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.588	6.558-6.618	+++++	+++++
57 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.953	6.923-6.983	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b\B20221214.b
Inst ID: ecd6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	22121412	22121413	22121414	22121415	22121416	22121417	22121418
INJ.DATE:	14-DEC-2022	14-DEC-2022	14-DEC-2022	14-DEC-2022	14-DEC-2022	15-DEC-2022	15-DEC-2022
INJ.TIME:	22:43	23:01	23:19	23:36	23:54	00:12	00:30

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 Hexachlorobutadiene [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.501	2.471-2.531	+++++	+++++
*	2 1Bromo-2nitrobenzene [	3.351	3.351	3.351	3.351	3.351	3.351	3.351	3.351	3.321-3.381	3.351	0.000
*	3 Hexabromobiphenyl[C]	11.054	11.054	11.054	11.054	11.054	11.054	11.054	11.054	11.024-11.084	11.054	0.000
$	4 Tetrachloro-m-xylene [	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.220	4.190-4.250	+++++	+++++
	5 Hexachlorobenzene [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.718	4.688-4.748	+++++	+++++
	6 alpha-BHC [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.861	4.831-4.891	+++++	+++++
	7 gamma-BHC (Lindane) [C	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.258	5.228-5.288	+++++	+++++
	8 beta-BHC [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.337	5.307-5.367	+++++	+++++
	9 delta-BHC [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.691	5.661-5.721	+++++	+++++
	10 Heptachlor [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.787	5.757-5.817	+++++	+++++
	11 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.588	14.558-14.618	+++++	+++++
	12 Aldrin [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.191	6.161-6.221	+++++	+++++
	13 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.680	12.650-12.710	+++++	+++++
	14 Heptachlor epoxide b [	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.845	6.815-6.875	+++++	+++++
	15 cis-Chlordane [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.216	7.186-7.246	+++++	+++++
	16 trans-Chlordane [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.056	7.026-7.086	+++++	+++++
	17 Endosulfan I [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.289	7.259-7.319	+++++	+++++

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

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b\B20221214.b
Inst ID: ecd6.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	18 4,4'-DDE [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.371	7.341-7.401	+++++	+++++
	19 Dieldrin [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.583	7.553-7.613	+++++	+++++
	20 Endrin [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.907	7.877-7.937	+++++	+++++
	21 4,4'-DDD [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.976	7.946-8.006	+++++	+++++
	22 Endosulfan II [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.117	8.087-8.147	+++++	+++++
	23 4,4'-DDT [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.295	8.265-8.325	+++++	+++++
	24 Endrin aldehyde [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.448	8.418-8.478	+++++	+++++
	25 Endosulfan sulfate [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.715	8.685-8.745	+++++	+++++
	26 Methoxychlor [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.936	8.906-8.966	+++++	+++++
	27 Endrin ketone [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.240	9.210-9.270	+++++	+++++
$	28 Decachlorobiphenyl [C]	+++++	+++++	+++++	+++++	+++++	+++++	10.471	10.467	10.437-10.497	10.471	0.000
	29 Aroclor-1016	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.180	4.150-4.210	+++++	+++++
	30 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.051	5.021-5.081	+++++	+++++
	31 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.171	5.141-5.201	+++++	+++++
	32 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.970	4.940-5.000	+++++	+++++
	33 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.285	5.255-5.315	+++++	+++++
	34 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.968	5.938-5.998	+++++	+++++
	35 Aroclor-1260	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.767	6.737-6.797	+++++	+++++
	36 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.714	9.684-9.744	+++++	+++++
	37 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.791	11.761-11.821	+++++	+++++
	38 Toxaphene [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.126	7.096-7.156	+++++	+++++
	39 2,4-DDE [C]	7.036	7.036	7.035	7.036	7.036	7.036	7.036	7.036	7.006-7.066	7.036	0.000

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b\B20221214.b
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
40 2,4-DDD [C]	7.591	7.590	7.590	7.591	7.590	7.591	7.591	7.591	7.561-7.621	7.591	0.000
41 2,4-DDT [C]	7.913	7.914	7.913	7.913	7.913	7.914	7.913	7.913	7.883-7.943	7.913	0.000
42 Hexachloroethane [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.676	1.646-1.706	+++++	+++++
43 Oxychlordane [C]	6.741	6.741	6.741	6.741	6.741	6.741	6.741	6.741	6.711-6.771	6.741	0.000
44 trans-Nonachlor [C]	7.154	7.154	7.154	7.155	7.154	7.155	7.155	7.155	7.125-7.185	7.154	0.000
45 cis-Nonachlor [C]	7.975	7.975	7.975	7.975	7.975	7.975	7.975	7.975	7.945-8.005	7.975	0.000
46 Mirex [C]	9.223	9.223	9.222	9.223	9.222	9.223	9.223	9.223	9.193-9.253	9.223	0.000
47 bis-(2-ethylhexyl) Pht	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.499	21.469-21.529	+++++	+++++
48 Chlordane (NOS) [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.612	5.582-5.642	+++++	+++++
49 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.871	4.841-4.901	+++++	+++++
50 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.640	6.610-6.670	+++++	+++++
51 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.115	8.085-8.145	+++++	+++++
52 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.286	11.256-11.316	+++++	+++++
53 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.527	6.497-6.557	+++++	+++++
54 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.342	6.312-6.372	+++++	+++++
55 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.841	6.811-6.871	+++++	+++++
56 Kepone [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.336	7.306-7.366	+++++	+++++
57 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.745	7.715-7.775	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b
Inst ID: ecd6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	22121421	22121422	22121423	22121424	22121425	22121426	22121427
INJ.DATE:	15-DEC-2022	15-DEC-2022	15-DEC-2022	15-DEC-2022	15-DEC-2022	15-DEC-2022	15-DEC-2022
INJ.TIME:	01:24	01:42	01:59	02:17	02:35	02:53	03:11

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.324	2.294-2.354	+++++	+++++
*	2 1Bromo-2nitrobenzene	3.151	3.151	3.151	3.151	3.151	3.151	3.151	3.151	3.121-3.181	3.151	0.000
*	3 Hexabromobiphenyl	9.504	9.504	9.505	9.504	9.504	9.504	9.505	9.505	9.475-9.535	9.504	0.000
$	4 Tetrachloro-m-xylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.828	3.798-3.858	+++++	+++++
	5 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.182	4.152-4.212	+++++	+++++
	6 alpha-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.342	4.312-4.372	+++++	+++++
	7 gamma-BHC (Lindane)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.645	4.615-4.675	+++++	+++++
	8 beta-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.726	4.696-4.756	+++++	+++++
	9 delta-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.909	4.879-4.939	+++++	+++++
	10 Heptachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.130	5.100-5.160	+++++	+++++
	11 Aldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.454	5.424-5.484	+++++	+++++
	12 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.627	13.597-13.657	+++++	+++++
	13 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.869	10.839-10.899	+++++	+++++
	14 Heptachlor epoxide b	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.130	6.100-6.160	+++++	+++++
	15 cis-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.417	6.387-6.447	+++++	+++++
	16 trans-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.271	6.241-6.301	+++++	+++++
	17 Endosulfan I	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.572	6.542-6.602	+++++	+++++

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

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b
Inst ID: ecd6.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	18 4,4'-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.489	6.459-6.519	+++++	+++++
	19 Dieldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.831	6.801-6.861	+++++	+++++
	20 Endrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.081	7.051-7.111	+++++	+++++
	21 4,4'-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.135	7.105-7.165	+++++	+++++
	22 Endosulfan II	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.317	7.287-7.347	+++++	+++++
	23 4,4'-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.427	7.397-7.457	+++++	+++++
	24 Endrin aldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.746	7.716-7.776	+++++	+++++
	25 Methoxychlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.912	7.882-7.942	+++++	+++++
	26 Endosulfan sulfate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.180	8.150-8.210	+++++	+++++
	27 Endrin ketone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.453	8.423-8.483	+++++	+++++
$	28 Decachlorobiphenyl	+++++	+++++	+++++	+++++	+++++	+++++	9.380	9.355	9.325-9.385	9.380	0.000
	29 Aroclor-1016	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.765	3.735-3.795	+++++	+++++
	30 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.881	4.851-4.911	+++++	+++++
	31 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.359	5.329-5.389	+++++	+++++
	32 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.765	3.735-3.795	+++++	+++++
	33 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.418	4.388-4.448	+++++	+++++
	34 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.257	5.227-5.287	+++++	+++++
	35 Aroclor-1260	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.045	6.015-6.075	+++++	+++++
	36 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.301	8.271-8.331	+++++	+++++
	37 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.259	11.229-11.289	+++++	+++++
	38 Toxaphene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.931	6.901-6.961	+++++	+++++
	39 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.106	6.076-6.136	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
40 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.681	6.651-6.711	+++++	+++++
41 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.957	6.927-6.987	+++++	+++++
42 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.774	1.744-1.804	+++++	+++++
43 Oxychlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.014	5.984-6.044	+++++	+++++
44 trans-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.397	6.367-6.427	+++++	+++++
45 cis-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.112	7.082-7.142	+++++	+++++
46 Mirex	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.082	8.052-8.112	+++++	+++++
47 bis-(2-ethylhexyl) Pht	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.156	20.126-20.186	+++++	+++++
48 Chlordane (NOS)	5.593	5.593	5.593	5.593	5.593	5.592	5.593	5.593	5.563-5.623	5.593	0.000
49 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.319	6.289-6.349	+++++	+++++
50 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.936	9.906-9.966	+++++	+++++
51 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.891	11.861-11.921	+++++	+++++
52 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.827	14.797-14.857	+++++	+++++
53 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.750	9.720-9.780	+++++	+++++
54 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.107	9.077-9.137	+++++	+++++
55 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.251	10.221-10.281	+++++	+++++
56 Kepone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.588	6.558-6.618	+++++	+++++
57 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.953	6.923-6.983	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b\B20221214.b
Inst ID: ecd6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	22121421	22121422	22121423	22121424	22121425	22121426	22121427
INJ.DATE:	15-DEC-2022	15-DEC-2022	15-DEC-2022	15-DEC-2022	15-DEC-2022	15-DEC-2022	15-DEC-2022
INJ.TIME:	01:24	01:42	01:59	02:17	02:35	02:53	03:11

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 Hexachlorobutadiene [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.501	2.471-2.531	+++++	+++++
*	2 1Bromo-2nitrobenzene [	3.351	3.351	3.351	3.351	3.351	3.351	3.351	3.351	3.321-3.381	3.351	0.000
*	3 Hexabromobiphenyl[C]	11.054	11.055	11.054	11.054	11.054	11.054	11.054	11.054	11.024-11.084	11.054	0.000
$	4 Tetrachloro-m-xylene [	4.215	+++++	+++++	+++++	+++++	+++++	+++++	4.220	4.190-4.250	4.215	0.000
	5 Hexachlorobenzene [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.718	4.688-4.748	+++++	+++++
	6 alpha-BHC [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.861	4.831-4.891	+++++	+++++
	7 gamma-BHC (Lindane) [C	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.258	5.228-5.288	+++++	+++++
	8 beta-BHC [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.337	5.307-5.367	+++++	+++++
	9 delta-BHC [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.691	5.661-5.721	+++++	+++++
	10 Heptachlor [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.787	5.757-5.817	+++++	+++++
	11 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.588	14.558-14.618	+++++	+++++
	12 Aldrin [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.191	6.161-6.221	+++++	+++++
	13 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.680	12.650-12.710	+++++	+++++
	14 Heptachlor epoxide b [	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.845	6.815-6.875	+++++	+++++
	15 cis-Chlordane [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.216	7.186-7.246	+++++	+++++
	16 trans-Chlordane [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.056	7.026-7.086	+++++	+++++
	17 Endosulfan I [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.289	7.259-7.319	+++++	+++++

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

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b\B20221214.b
Inst ID: ecd6.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	18 4,4'-DDE [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.371	7.341-7.401	+++++	+++++
	19 Dieldrin [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.583	7.553-7.613	+++++	+++++
	20 Endrin [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.907	7.877-7.937	+++++	+++++
	21 4,4'-DDD [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.976	7.946-8.006	+++++	+++++
	22 Endosulfan II [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.117	8.087-8.147	+++++	+++++
	23 4,4'-DDT [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.295	8.265-8.325	+++++	+++++
	24 Endrin aldehyde [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.448	8.418-8.478	+++++	+++++
	25 Endosulfan sulfate [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.715	8.685-8.745	+++++	+++++
	26 Methoxychlor [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.936	8.906-8.966	+++++	+++++
	27 Endrin ketone [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.240	9.210-9.270	+++++	+++++
$	28 Decachlorobiphenyl [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.467	10.437-10.497	+++++	+++++
	29 Aroclor-1016	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.180	4.150-4.210	+++++	+++++
	30 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.051	5.021-5.081	+++++	+++++
	31 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.171	5.141-5.201	+++++	+++++
	32 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.970	4.940-5.000	+++++	+++++
	33 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.285	5.255-5.315	+++++	+++++
	34 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.968	5.938-5.998	+++++	+++++
	35 Aroclor-1260	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.767	6.737-6.797	+++++	+++++
	36 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.714	9.684-9.744	+++++	+++++
	37 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.791	11.761-11.821	+++++	+++++
	38 Toxaphene [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.126	7.096-7.156	+++++	+++++
	39 2,4-DDE [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.036	7.006-7.066	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b\B20221214.b
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
40 2,4-DDD [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.591	7.561-7.621	+++++	+++++
41 2,4-DDT [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.913	7.883-7.943	+++++	+++++
42 Hexachloroethane [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.676	1.646-1.706	+++++	+++++
43 Oxychlordane [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.741	6.711-6.771	+++++	+++++
44 trans-Nonachlor [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.155	7.125-7.185	+++++	+++++
45 cis-Nonachlor [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.975	7.945-8.005	+++++	+++++
46 Mirex [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.223	9.193-9.253	+++++	+++++
47 bis-(2-ethylhexyl) Pht	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.499	21.469-21.529	+++++	+++++
48 Chlordane (NOS) [C]	5.612	5.612	5.612	5.611	5.612	5.612	5.612	5.612	5.582-5.642	5.612	0.000
49 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.871	4.841-4.901	+++++	+++++
50 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.640	6.610-6.670	+++++	+++++
51 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.115	8.085-8.145	+++++	+++++
52 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.286	11.256-11.316	+++++	+++++
53 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.527	6.497-6.557	+++++	+++++
54 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.342	6.312-6.372	+++++	+++++
55 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.841	6.811-6.871	+++++	+++++
56 Kepone [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.336	7.306-7.366	+++++	+++++
57 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.745	7.715-7.775	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b
Inst ID: ecd6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	22121428	22121429	22121430	22121431	22121432	22121433	22121434
INJ.DATE:	15-DEC-2022	15-DEC-2022	15-DEC-2022	15-DEC-2022	15-DEC-2022	15-DEC-2022	15-DEC-2022
INJ.TIME:	03:29	03:46	04:04	04:22	04:40	04:58	05:16

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.324	2.294-2.354	+++++	+++++
*	2 1Bromo-2nitrobenzene	3.151	3.151	3.151	3.151	3.151	3.151	3.151	3.151	3.121-3.181	3.151	0.000
*	3 Hexabromobiphenyl	9.505	9.504	9.504	9.504	9.505	9.504	9.504	9.505	9.475-9.535	9.504	0.000
$	4 Tetrachloro-m-xylene	3.828	3.828	3.828	3.828	3.828	3.828	3.828	3.828	3.798-3.858	3.828	0.000
	5 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.182	4.152-4.212	+++++	+++++
	6 alpha-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.342	4.312-4.372	+++++	+++++
	7 gamma-BHC (Lindane)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.645	4.615-4.675	+++++	+++++
	8 beta-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.726	4.696-4.756	+++++	+++++
	9 delta-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.909	4.879-4.939	+++++	+++++
	10 Heptachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.130	5.100-5.160	+++++	+++++
	11 Aldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.454	5.424-5.484	+++++	+++++
	12 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.627	13.597-13.657	+++++	+++++
	13 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.869	10.839-10.899	+++++	+++++
	14 Heptachlor epoxide b	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.130	6.100-6.160	+++++	+++++
	15 cis-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.417	6.387-6.447	+++++	+++++
	16 trans-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.271	6.241-6.301	+++++	+++++
	17 Endosulfan I	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.572	6.542-6.602	+++++	+++++

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

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b
Inst ID: ecd6.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	18 4,4'-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.489	6.459-6.519	+++++	+++++
	19 Dieldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.831	6.801-6.861	+++++	+++++
	20 Endrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.081	7.051-7.111	+++++	+++++
	21 4,4'-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.135	7.105-7.165	+++++	+++++
	22 Endosulfan II	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.317	7.287-7.347	+++++	+++++
	23 4,4'-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.427	7.397-7.457	+++++	+++++
	24 Endrin aldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.746	7.716-7.776	+++++	+++++
	25 Methoxychlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.912	7.882-7.942	+++++	+++++
	26 Endosulfan sulfate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.180	8.150-8.210	+++++	+++++
	27 Endrin ketone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.453	8.423-8.483	+++++	+++++
$	28 Decachlorobiphenyl	9.355	9.355	9.355	9.355	9.356	9.356	9.355	9.355	9.325-9.385	9.356	0.000
	29 Aroclor-1016	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.765	3.735-3.795	+++++	+++++
	30 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.881	4.851-4.911	+++++	+++++
	31 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.359	5.329-5.389	+++++	+++++
	32 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.765	3.735-3.795	+++++	+++++
	33 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.418	4.388-4.448	+++++	+++++
	34 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.257	5.227-5.287	+++++	+++++
	35 Aroclor-1260	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.045	6.015-6.075	+++++	+++++
	36 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.301	8.271-8.331	+++++	+++++
	37 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.259	11.229-11.289	+++++	+++++
	38 Toxaphene	6.931	6.931	6.931	6.931	6.931	6.931	6.931	6.931	6.901-6.961	6.931	0.000
	39 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.106	6.076-6.136	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
40 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.681	6.651-6.711	+++++	+++++
41 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.957	6.927-6.987	+++++	+++++
42 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.774	1.744-1.804	+++++	+++++
43 Oxychlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.014	5.984-6.044	+++++	+++++
44 trans-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.397	6.367-6.427	+++++	+++++
45 cis-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.112	7.082-7.142	+++++	+++++
46 Mirex	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.082	8.052-8.112	+++++	+++++
47 bis-(2-ethylhexyl) Pht	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.156	20.126-20.186	+++++	+++++
48 Chlordane (NOS)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.593	5.563-5.623	+++++	+++++
49 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.319	6.289-6.349	+++++	+++++
50 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.936	9.906-9.966	+++++	+++++
51 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.891	11.861-11.921	+++++	+++++
52 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.827	14.797-14.857	+++++	+++++
53 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.750	9.720-9.780	+++++	+++++
54 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.107	9.077-9.137	+++++	+++++
55 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.251	10.221-10.281	+++++	+++++
56 Kepone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.588	6.558-6.618	+++++	+++++
57 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.953	6.923-6.983	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b\B20221214.b
Inst ID: ecd6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	22121428	22121429	22121430	22121431	22121432	22121433	22121434
INJ.DATE:	15-DEC-2022	15-DEC-2022	15-DEC-2022	15-DEC-2022	15-DEC-2022	15-DEC-2022	15-DEC-2022
INJ.TIME:	03:29	03:46	04:04	04:22	04:40	04:58	05:16

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 Hexachlorobutadiene [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.501	2.471-2.531	+++++	+++++
* 2 1Bromo-2nitrobenzene [	3.351	3.351	3.351	3.351	3.351	3.351	3.351	3.351	3.321-3.381	3.351	0.000
* 3 Hexabromobiphenyl[C]	11.055	11.054	11.054	11.055	11.054	11.054	11.054	11.054	11.024-11.084	11.054	0.000
$ 4 Tetrachloro-m-xylene [	4.221	4.220	4.220	4.221	4.221	4.221	4.221	4.220	4.190-4.250	4.221	0.000
5 Hexachlorobenzene [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.718	4.688-4.748	+++++	+++++
6 alpha-BHC [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.861	4.831-4.891	+++++	+++++
7 gamma-BHC (Lindane) [C	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.258	5.228-5.288	+++++	+++++
8 beta-BHC [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.337	5.307-5.367	+++++	+++++
9 delta-BHC [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.691	5.661-5.721	+++++	+++++
10 Heptachlor [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.787	5.757-5.817	+++++	+++++
11 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.588	14.558-14.618	+++++	+++++
12 Aldrin [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.191	6.161-6.221	+++++	+++++
13 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.680	12.650-12.710	+++++	+++++
14 Heptachlor epoxide b [	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.845	6.815-6.875	+++++	+++++
15 cis-Chlordane [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.216	7.186-7.246	+++++	+++++
16 trans-Chlordane [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.056	7.026-7.086	+++++	+++++
17 Endosulfan I [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.289	7.259-7.319	+++++	+++++

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

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b\B20221214.b
Inst ID: ecd6.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
18	4,4'-DDE [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.371	7.341-7.401	+++++	+++++
19	Dieldrin [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.583	7.553-7.613	+++++	+++++
20	Endrin [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.907	7.877-7.937	+++++	+++++
21	4,4'-DDD [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.976	7.946-8.006	+++++	+++++
22	Endosulfan II [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.117	8.087-8.147	+++++	+++++
23	4,4'-DDT [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.295	8.265-8.325	+++++	+++++
24	Endrin aldehyde [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.448	8.418-8.478	+++++	+++++
25	Endosulfan sulfate [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.715	8.685-8.745	+++++	+++++
26	Methoxychlor [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.936	8.906-8.966	+++++	+++++
27	Endrin ketone [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.240	9.210-9.270	+++++	+++++
$ 28	Decachlorobiphenyl [C]	10.467	10.467	10.467	10.466	10.466	10.466	10.467	10.467	10.437-10.497	10.466	0.000
29	Aroclor-1016	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.180	4.150-4.210	+++++	+++++
30	Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.051	5.021-5.081	+++++	+++++
31	Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.171	5.141-5.201	+++++	+++++
32	Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.970	4.940-5.000	+++++	+++++
33	Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.285	5.255-5.315	+++++	+++++
34	Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.968	5.938-5.998	+++++	+++++
35	Aroclor-1260	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.767	6.737-6.797	+++++	+++++
36	Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.714	9.684-9.744	+++++	+++++
37	Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.791	11.761-11.821	+++++	+++++
38	Toxaphene [C]	7.125	7.125	7.125	7.125	7.126	7.126	7.126	7.126	7.096-7.156	7.125	0.000
39	2,4-DDE [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.036	7.006-7.066	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b\B20221214.b
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
40 2,4-DDD [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.591	7.561-7.621	+++++	+++++
41 2,4-DDT [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.913	7.883-7.943	+++++	+++++
42 Hexachloroethane [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.676	1.646-1.706	+++++	+++++
43 Oxychlordane [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.741	6.711-6.771	+++++	+++++
44 trans-Nonachlor [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.155	7.125-7.185	+++++	+++++
45 cis-Nonachlor [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.975	7.945-8.005	+++++	+++++
46 Mirex [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.223	9.193-9.253	+++++	+++++
47 bis-(2-ethylhexyl) Pht	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.499	21.469-21.529	+++++	+++++
48 Chlordane (NOS) [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.612	5.582-5.642	+++++	+++++
49 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.871	4.841-4.901	+++++	+++++
50 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.640	6.610-6.670	+++++	+++++
51 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.115	8.085-8.145	+++++	+++++
52 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.286	11.256-11.316	+++++	+++++
53 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.527	6.497-6.557	+++++	+++++
54 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.342	6.312-6.372	+++++	+++++
55 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.841	6.811-6.871	+++++	+++++
56 Kepone [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.336	7.306-7.366	+++++	+++++
57 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.745	7.715-7.775	+++++	+++++

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121403.D
Data file 2: /20221214.b/B20221214.b/22121403.D
Method: \20221214.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-IBL1
Client ID:
Injection Date: 14-DEC-2022 20:02
Report Date: 12/16/2022 15:19
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
----			----			0.00	0.00	---	alpha-BHC
----			----			0.00	0.00	---	beta-BHC
----			----			0.00	0.00	---	delta-BHC
----			----			0.00	0.00	---	gamma-BHC (Lindane)
----			----			0.00	0.00	---	Heptachlor
----			----			0.00	0.00	---	Aldrin
----			6.824	-0.021	2291	0.00	0.14	---	Heptachlor epoxide b
----			----			0.00	0.00	---	Endosulfan I
----			7.597	0.015	1696	0.00	0.11	---	Dieldrin
----			----			0.00	0.00	---	4,4'-DDE
----			----			0.00	0.00	---	Endrin
----			8.135	0.018	285	0.00	0.02	---	Endosulfan II
----			7.975	-0.002	1369	0.00	0.12	---	4,4'-DDD
----			8.720	0.005	243	0.00	0.02	---	Endosulfan sulfate
----			----			0.00	0.00	---	4,4'-DDT
----			8.924	-0.013	546	0.00	0.11	---	Methoxychlor
8.444	-0.009	1962	9.226	-0.013	2888	0.23	0.25	10.1	Endrin ketone
----			----			0.00	0.00	---	Endrin aldehyde
----			7.070	0.014	4708	0.00	0.30	---	trans-Chlordane
----			7.219	0.003	810	0.00	0.05	---	cis-Chlordane
2.351	0.028	6378	2.512	0.012	33421	0.42	1.60	116.6*	Hexachlorobutadiene
4.183	0.001	4869	4.721	0.003	421	0.36	0.02	178.1*	Hexachlorobenzene
3.828	0.000	375293	4.220	-0.000	579767	36.70	37.46	2.1	Tetrachloro-m-xylene
9.356	0.001	243291	10.467	0.000	323668	35.86	35.40	1.3	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

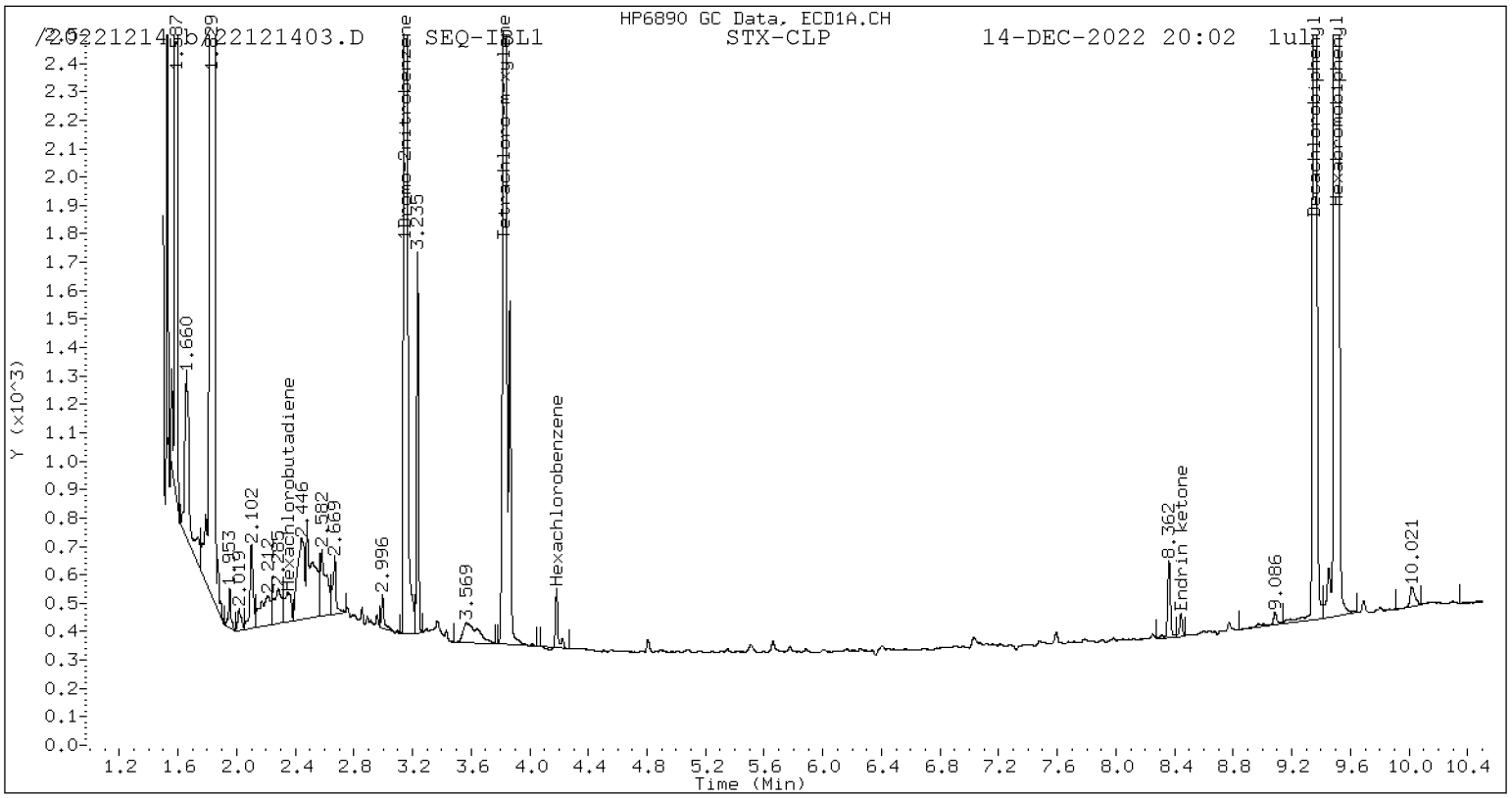
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	751998	5.8
Hexabromobiphenyl	641833	669495	4.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1099555	3.8
Hexabromobiphenyl	797125	827325	3.8

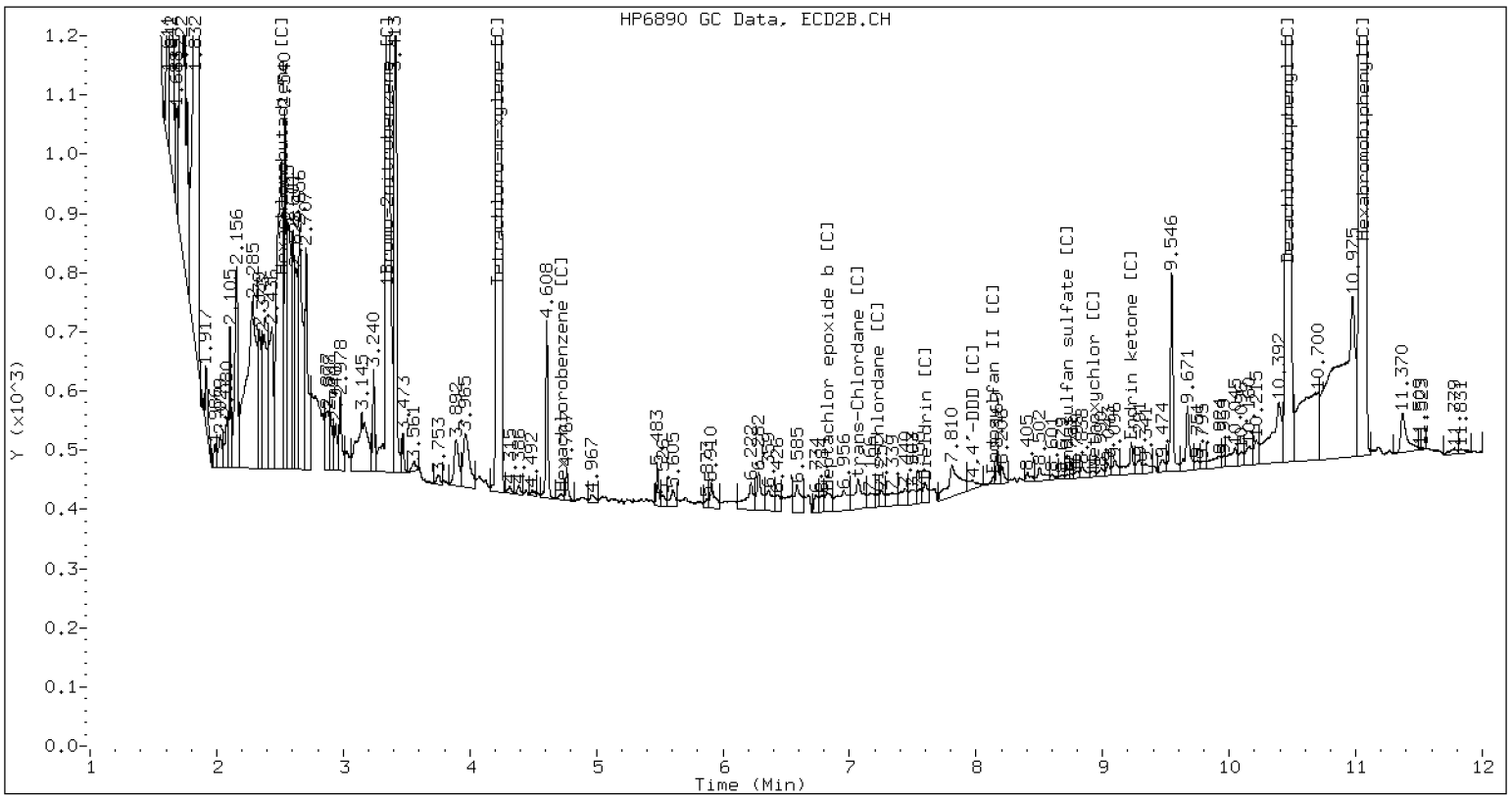
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121403.D SEQ-IBL1 CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121403.D
Data file 2: /20221214.b/B20221214.b/22121403.D
Method: \20221214.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-IBL1
Client ID:
Injection Date: 14-DEC-2022 20:02
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

7E

8081 DDT/ENDRIN BREAKDOWN VERIFICATION SUMMARY

Lab ID: SEQ-PEM1 InstID,Data File: ecd6.i, 22121404.D

Analysis Date: 14-DEC-2022 20:20 Init. Calib. Date: 14-DEC-2022

GC Column: STX-CLP1 ID: 0.53(mm)

COMPOUND	RT	AREA
1Bromo-2nitrobenzene	3.151	683485
4,4'-DDE	6.490	6258
Endrin	7.082	745471
4,4'-DDD	7.136	15566
4,4'-DDT	7.428	629664
Endrin ketone	8.453	19276
Endrin aldehyde	7.747	21328
Hexabromobiphenyl	9.504	619012
Tetrachloro-m-xylene	3.828	1161664
Decachlorobiphenyl	9.355	833312

DDT Percent Breakdown = 3.3 %
((6258+15566) * 100)/(6258+15566+629664)

Endrin Percent Breakdown = 5.2 %
((21328+19276) * 100)/(21328+19276+745471)

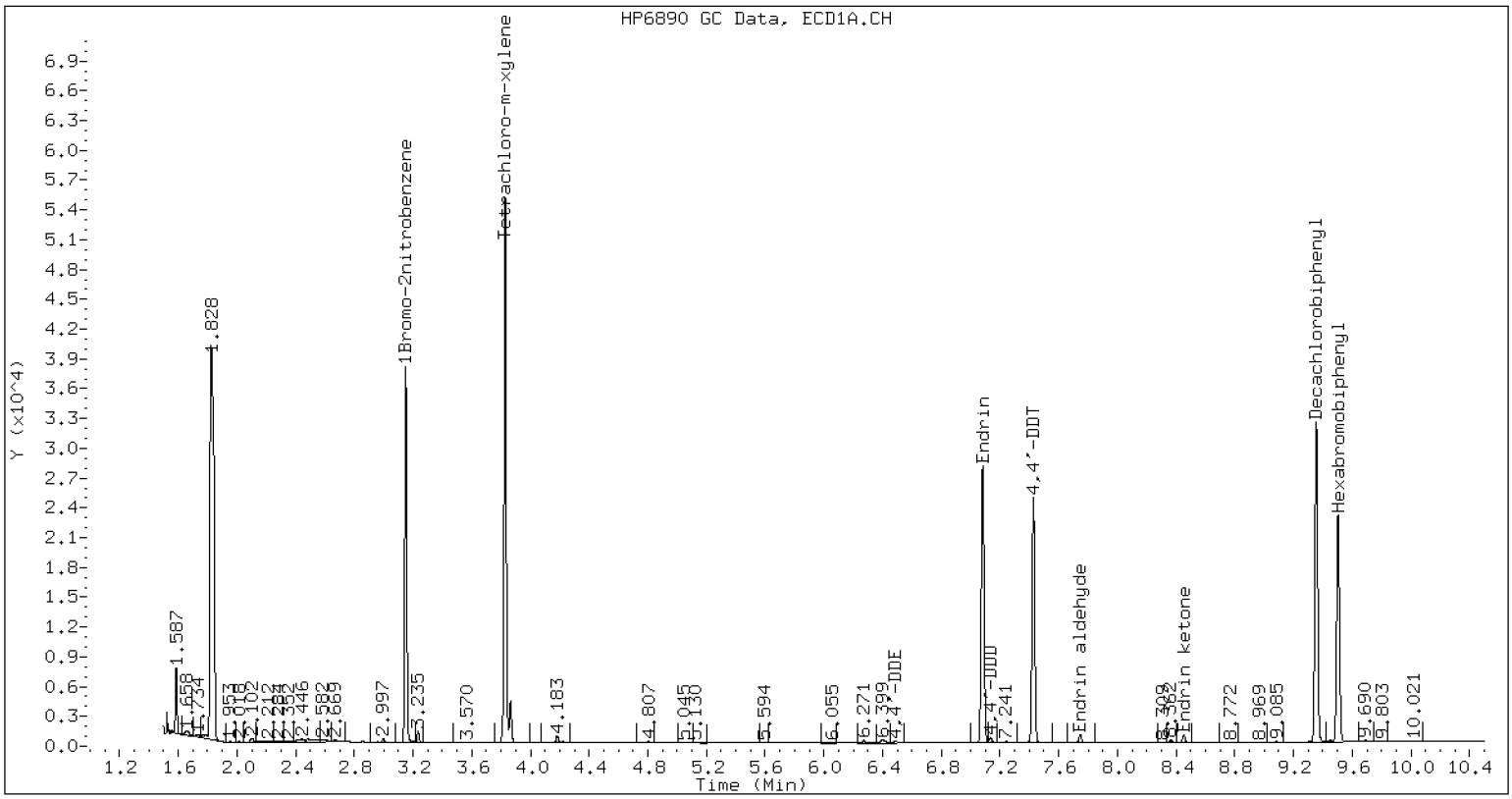
GC Column: STX-CLP2 ID: 0.53(mm)

COMPOUND	RT	AREA
1Bromo-2nitrobenzene [C]	3.350	1005375
4,4'-DDE [C]	7.370	11906
Endrin [C]	7.907	1029194
4,4'-DDD [C]	7.977	32697
4,4'-DDT [C]	8.295	890195
Endrin ketone [C]	9.239	28268
Endrin aldehyde [C]	8.448	31426
Hexabromobiphenyl[C]	11.054	772586
Tetrachloro-m-xylene [C]	4.220	1890294
Decachlorobiphenyl [C]	10.467	1140978

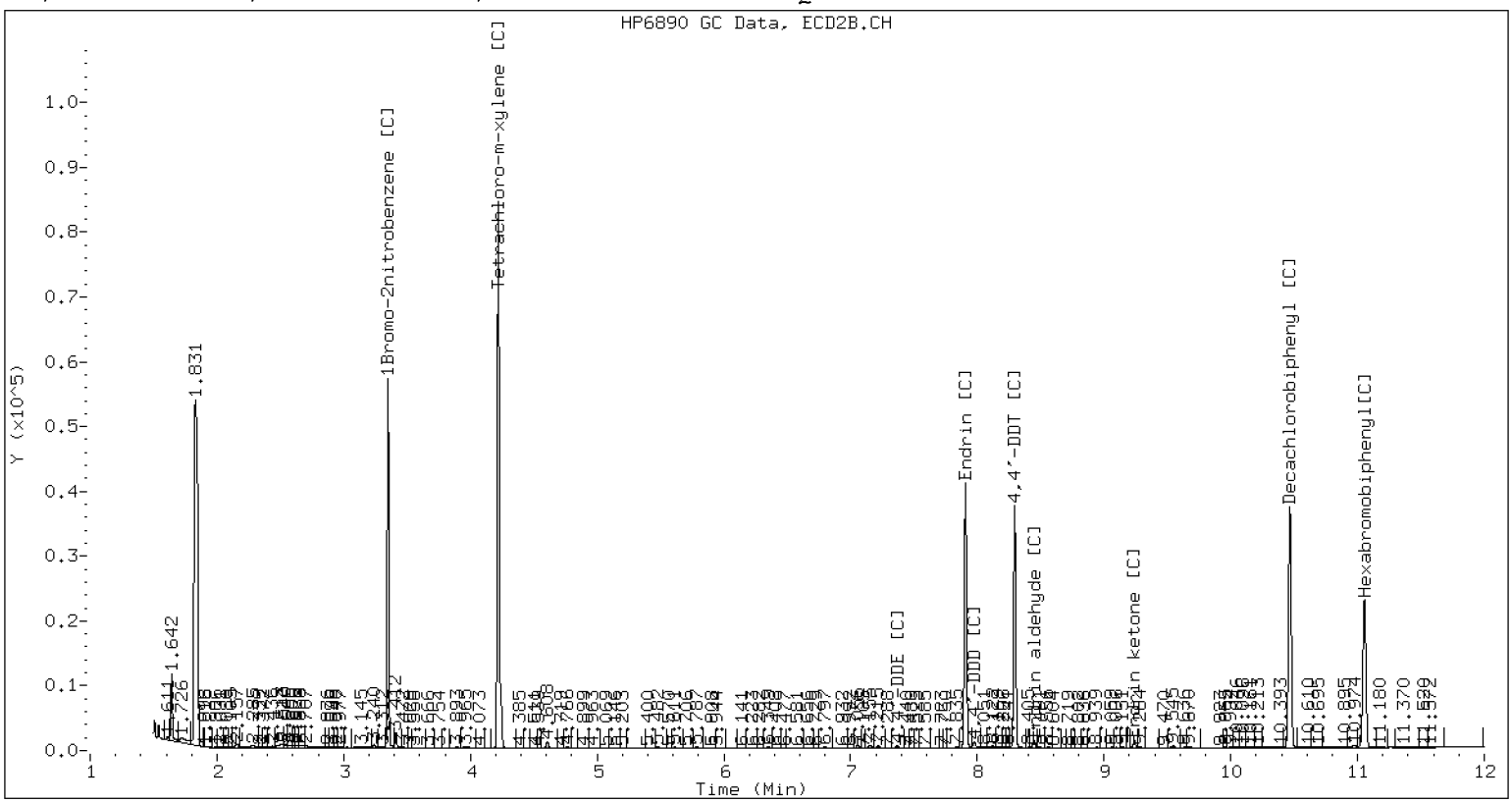
DDT Percent Breakdown = 4.8 %
((11906+32697) * 100)/(11906+32697+890195)

Endrin Percent Breakdown = 5.5 %
((31426+28268) * 100)/(31426+28268+1029194)

/20221214.b/22121404.D SEQ-PEM1 STX-CLP 14-DEC-2022 20:20 1ul



/20221214.b/B20221214.b/22121404.D SEQ-PEM1 CLP2 14-DEC-2022



7E

8081 DDT/ENDRIN BREAKDOWN VERIFICATION SUMMARY

Lab ID: SEQ-PEM1 InstID,Data File: ecd6.i, 22121404.D

Analysis Date: 14-DEC-2022 20:20 Init. Calib. Date: 14-DEC-2022

GC Column: STX-CLP1 ID: 0.53(mm)

COMPOUND	RT	AREA
1Bromo-2nitrobenzene	3.151	683485
4,4'-DDE	6.490	6258
Endrin	7.082	745471
4,4'-DDD	7.136	15566
4,4'-DDT	7.428	629664
Endrin ketone	8.453	19276
Endrin aldehyde	7.747	21328
Hexabromobiphenyl	9.504	619012
Tetrachloro-m-xylene	3.828	1161664
Decachlorobiphenyl	9.355	833312

DDT Percent Breakdown = 3.3 %
((6258+15566) * 100)/(6258+15566+629664)

Endrin Percent Breakdown = 5.2 %
((21328+19276) * 100)/(21328+19276+745471)

GC Column: STX-CLP1 ID: 0.53(mm)

COMPOUND	RT	AREA
Decachlorobiphenyl	9.355	833312
Decachlorobiphenyl	9.355	833312
Decachlorobiphenyl	9.355	833312

Decachlorobiphenyl	9.355	833312
Decachlorobiphenyl	9.355	833312
Decachlorobiphenyl	9.355	833312
Decachlorobiphenyl	9.355	833312
Decachlorobiphenyl	9.355	833312
Decachlorobiphenyl	9.355	833312
Decachlorobiphenyl	9.355	833312

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121405.D
Data file 2: /20221214.b/B20221214.b/22121405.D
Method: \20221214.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL1
Client ID:
Injection Date: 14-DEC-2022 20:38
Report Date: 12/16/2022 15:19
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.342	-0.000	17720	4.860	-0.001	25579	1.30	1.22	6.4	alpha-BHC
4.726	-0.000	7513	5.337	-0.000	10927	1.43	1.37	4.4	beta-BHC
4.909	-0.000	14050	5.690	-0.000	21188	1.26	1.23	2.8	delta-BHC
4.645	-0.000	15329	5.257	-0.001	21981	1.30	1.24	4.9	gamma-BHC (Lindane)
5.130	-0.000	14540	5.786	-0.000	20395	1.38	1.27	8.9	Heptachlor
5.453	-0.001	15026	6.190	-0.001	24413	1.28	1.33	3.9	Aldrin
6.130	0.000	13937	6.845	-0.000	21959	1.37	1.44	5.6	Heptachlor epoxide b
6.572	-0.000	13220	7.288	-0.000	19257	1.41	1.44	1.8	Endosulfan I
6.831	0.000	27285	7.582	-0.001	43580	2.71	2.94	8.2	Dieldrin
6.489	0.000	25951	7.370	-0.001	37722	2.78	2.78	0.0	4,4'-DDE
7.081	0.000	24429	7.906	-0.001	31381	2.94	2.78	5.3	Endrin
7.318	0.001	19827	8.117	-0.000	30675	2.65	2.66	0.3	Endosulfan II
7.135	0.000	20434	7.976	-0.000	28995	2.73	2.65	3.0	4,4'-DDD
8.180	-0.000	19661	8.715	-0.000	26689	2.76	2.63	4.9	Endosulfan sulfate
7.427	0.000	20071	8.294	-0.001	26950	2.65	2.55	3.9	4,4'-DDT
7.912	-0.000	52385	8.935	-0.001	65896	15.60	14.07	10.3	Methoxychlor
8.453	-0.001	24276	9.239	-0.000	30129	2.98	2.75	8.0	Endrin ketone
7.746	-0.000	17209	8.448	-0.000	21218	2.88	2.60	10.1	Endrin aldehyde
6.270	-0.001	14829	7.056	-0.000	22517	1.43	1.48	3.7	trans-Chlordane
6.417	0.000	15767	7.215	-0.000	22150	1.52	1.49	1.6	cis-Chlordane
2.323	-0.001	27320	2.500	-0.001	42655	1.92	2.14	11.3	Hexachlorobutadiene
4.182	0.000	18555	4.718	-0.000	27377	1.47	1.44	2.2	Hexachlorobenzene
3.828	-0.000	28792	4.220	-0.001	41270	2.99	2.80	6.5	Tetrachloro-m-xylene
9.355	-0.000	21954	10.466	-0.000	30646	3.41	3.50	2.5	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

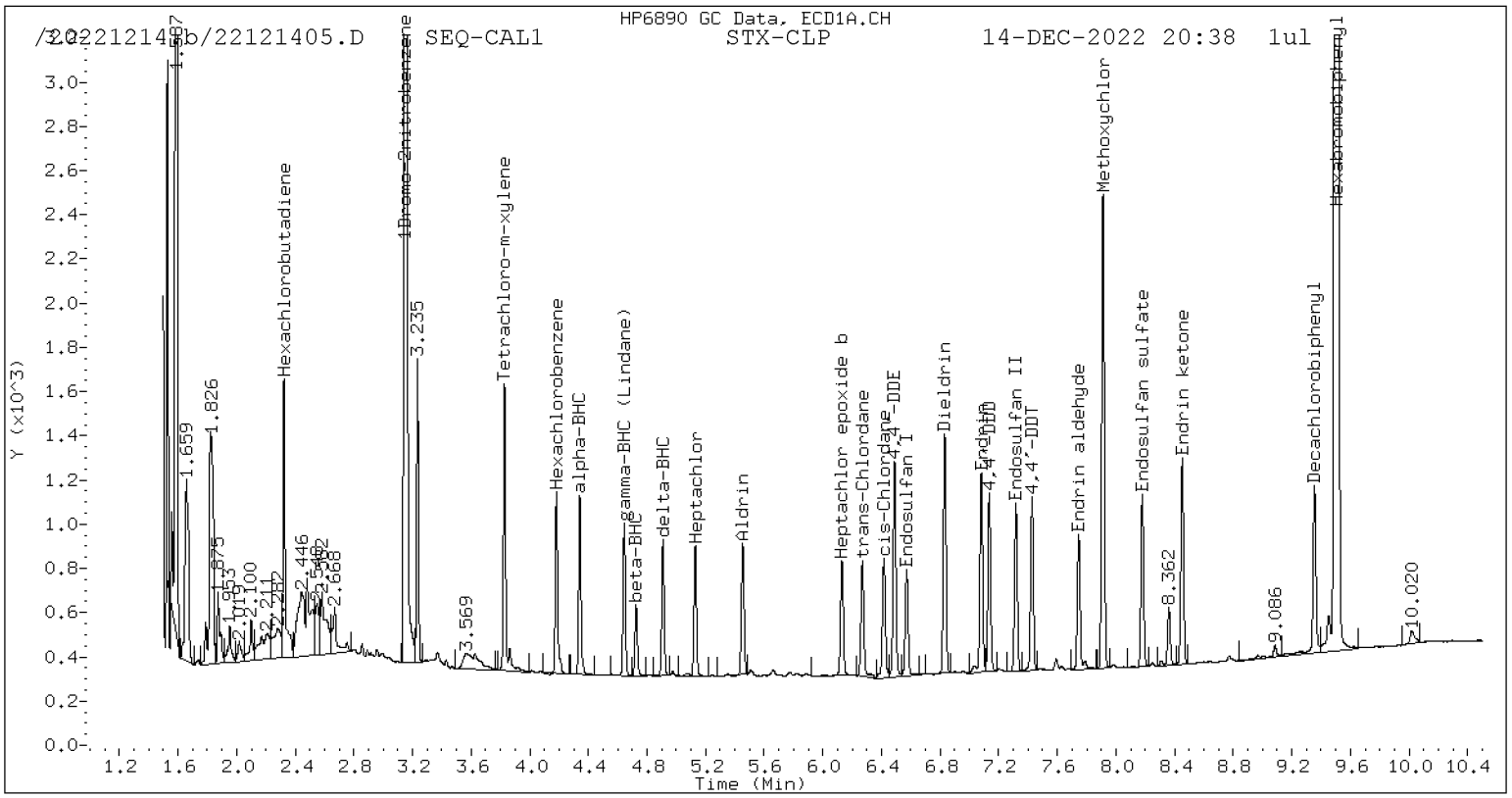
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	707324	-0.5
Hexabromobiphenyl	641833	634819	-1.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1045524	-1.3
Hexabromobiphenyl	797125	792558	-0.6

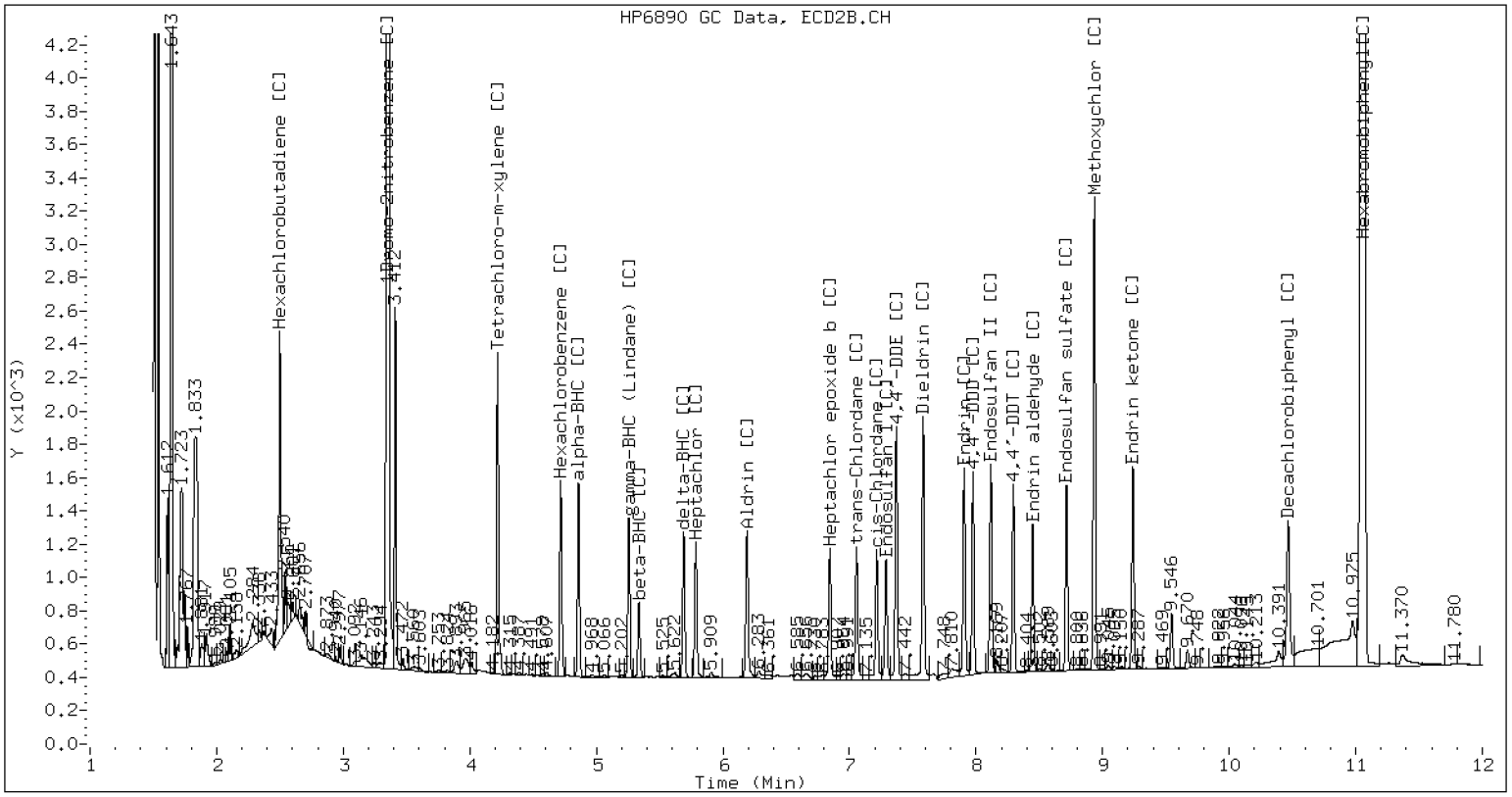
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121405.D SEQ-CAL1 CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121405.D
Data file 2: /20221214.b/B20221214.b/22121405.D
Method: \20221214.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL1
Client ID:
Injection Date: 14-DEC-2022 20:38
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121406.D
Data file 2: /20221214.b/B20221214.b/22121406.D
Method: \20221214.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL2
Client ID:
Injection Date: 14-DEC-2022 20:56
Report Date: 12/16/2022 15:19
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.342	-0.000	35088	4.859	-0.001	52514	2.54	2.47	2.9	alpha-BHC
4.726	-0.000	14580	5.337	-0.000	21664	2.74	2.68	2.4	beta-BHC
4.909	-0.000	28429	5.691	-0.000	43932	2.52	2.51	0.5	delta-BHC
4.645	0.000	30588	5.257	-0.001	44971	2.55	2.49	2.5	gamma-BHC (Lindane)
5.129	-0.001	28458	5.787	-0.000	42156	2.67	2.58	3.6	Heptachlor
5.453	-0.001	30273	6.190	-0.001	50159	2.53	2.69	5.8	Aldrin
6.130	-0.001	27608	6.845	-0.001	43067	2.67	2.79	4.5	Heptachlor epoxide b
6.572	-0.000	25650	7.288	-0.001	37112	2.70	2.73	1.0	Endosulfan I
6.832	0.000	54960	7.582	-0.001	84296	5.38	5.60	4.0	Dieldrin
6.489	-0.000	51182	7.370	-0.001	74355	5.40	5.39	0.2	4,4'-DDE
7.081	0.000	46577	7.906	-0.001	63434	5.52	5.52	0.1	Endrin
7.317	0.001	37804	8.116	-0.001	65448	4.98	5.56	11.1	Endosulfan II
7.136	0.001	40399	7.976	-0.001	62302	5.32	5.58	4.8	4,4'-DDD
8.179	-0.001	38342	8.714	-0.001	57421	5.32	5.56	4.4	Endosulfan sulfate
7.427	-0.000	40499	8.294	-0.001	59346	5.27	5.51	4.3	4,4'-DDT
7.912	-0.000	98271	8.934	-0.002	130815	28.88	27.42	5.2	Methoxychlor
8.452	-0.001	45639	9.239	-0.001	62360	5.53	5.59	1.1	Endrin ketone
7.746	0.000	32847	8.447	-0.001	47592	5.42	5.73	5.6	Endrin aldehyde
6.271	0.000	28307	7.055	-0.001	41633	2.69	2.70	0.4	trans-Chlordane
6.417	0.000	29336	7.215	-0.000	41766	2.78	2.77	0.3	cis-Chlordane
2.323	-0.001	44113	2.500	-0.001	65565	3.05	3.24	6.2	Hexachlorobutadiene
4.182	-0.000	35520	4.718	-0.000	53173	2.77	2.75	0.9	Hexachlorobenzene
3.828	-0.000	54873	4.220	-0.001	81034	5.62	5.42	3.7	Tetrachloro-m-xylene
9.354	-0.001	38477	10.465	-0.001	54866	5.90	6.15	4.1	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

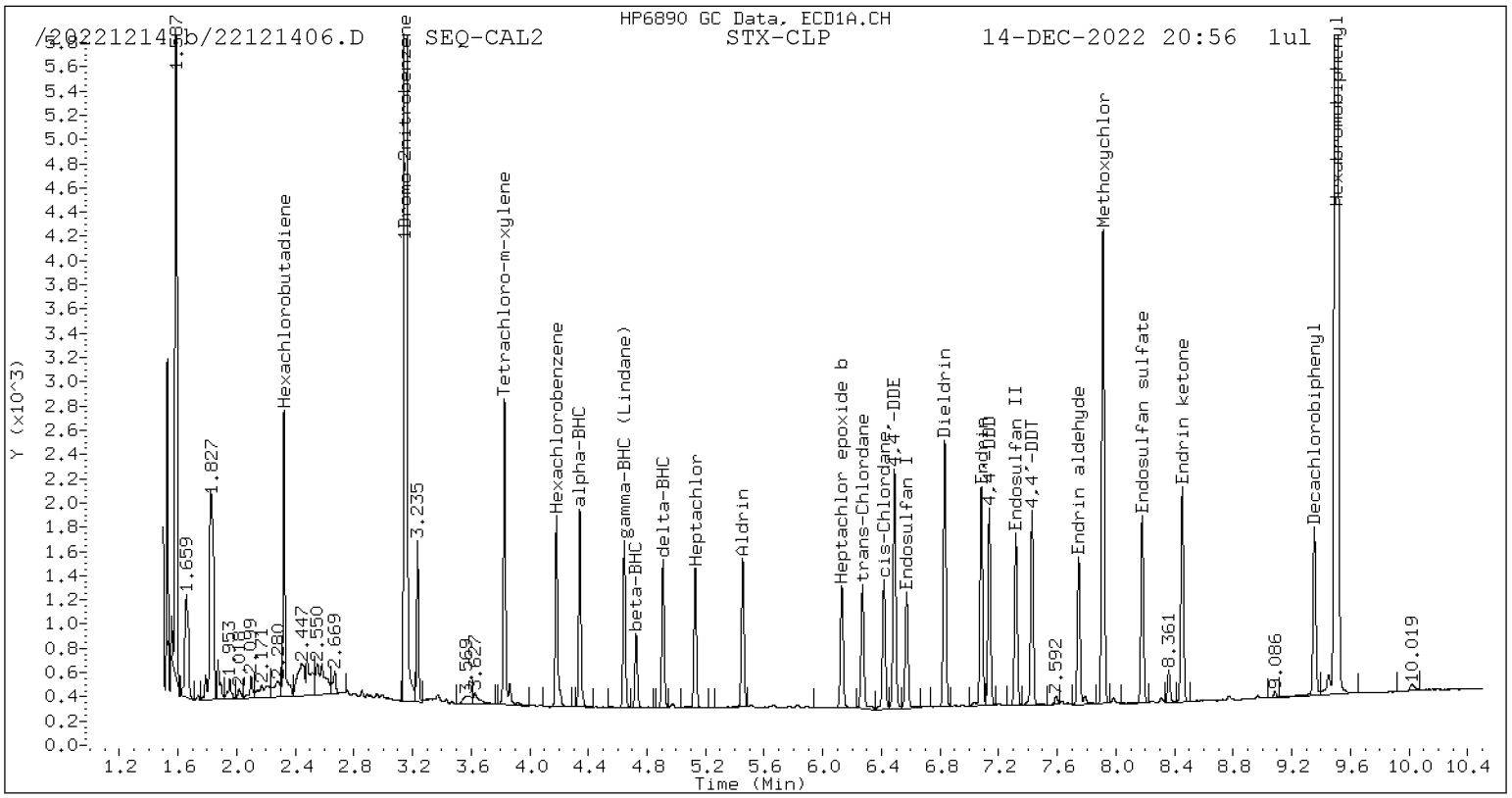
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	717600	1.0
Hexabromobiphenyl	641833	643445	0.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1061990	0.3
Hexabromobiphenyl	797125	807490	1.3

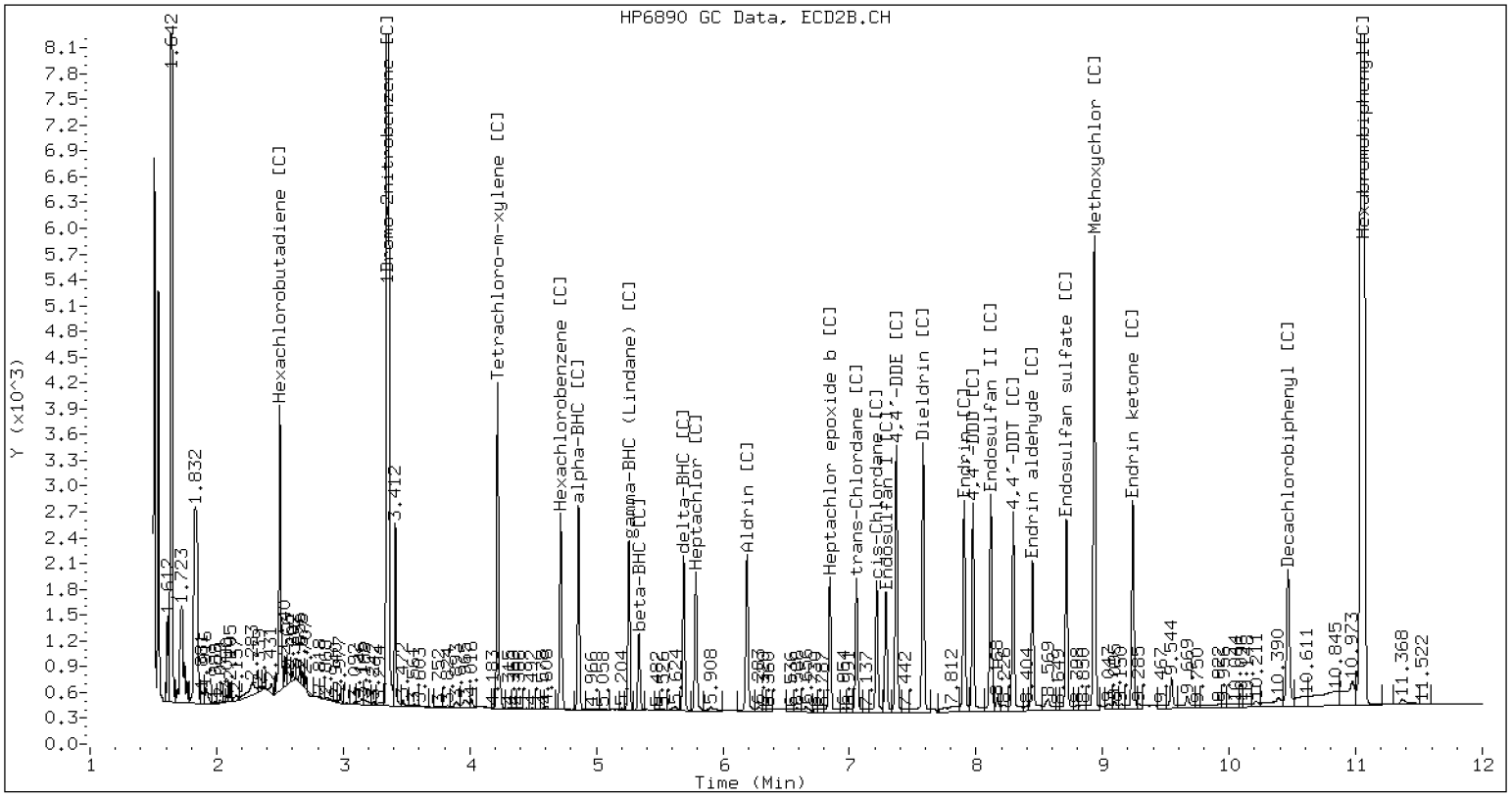
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121406.D SEQ-CAL2 CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121406.D
Data file 2: /20221214.b/B20221214.b/22121406.D
Method: \20221214.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL2
Client ID:
Injection Date: 14-DEC-2022 20:56
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121407.D
Data file 2: /20221214.b/B20221214.b/22121407.D
Method: \20221214.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL3
Client ID:
Injection Date: 14-DEC-2022 21:14
Report Date: 12/16/2022 15:19
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.343	0.001	68202	4.860	-0.000	103195	5.06	4.95	2.2	alpha-BHC
4.727	0.000	26774	5.338	0.000	40159	5.16	5.06	1.8	beta-BHC
4.910	0.001	55344	5.691	0.000	85044	5.02	4.95	1.5	delta-BHC
4.646	0.001	59491	5.258	0.000	87747	5.09	4.96	2.6	gamma-BHC (Lindane)
5.130	0.000	53529	5.787	0.000	80295	5.15	5.01	2.7	Heptachlor
5.455	0.001	59061	6.191	0.000	92167	5.07	5.03	0.7	Aldrin
6.132	0.001	52071	6.845	-0.000	76415	5.15	5.05	2.1	Heptachlor epoxide b
6.573	0.001	48052	7.289	-0.000	67929	5.18	5.09	1.8	Endosulfan I
6.832	0.001	104217	7.583	-0.000	151301	10.46	10.26	1.9	Dieldrin
6.490	0.001	97042	7.371	0.000	139172	10.49	10.29	1.9	4,4'-DDE
7.082	0.001	87185	7.906	-0.001	115830	10.66	10.37	2.8	Endrin
7.318	0.001	77341	8.117	0.000	118175	10.50	10.32	1.8	Endosulfan II
7.136	0.001	77451	7.976	0.000	110178	10.51	10.14	3.6	4,4'-DDD
8.180	0.001	73440	8.715	0.000	102417	10.50	10.18	3.1	Endosulfan sulfate
7.428	0.001	77522	8.294	-0.001	105882	10.41	10.09	3.1	4,4'-DDT
7.913	0.001	178164	8.935	-0.001	239047	53.98	51.49	4.7	Methoxychlor
8.454	0.000	84510	9.239	-0.000	110024	10.55	10.13	4.1	Endrin ketone
7.746	0.001	61122	8.448	-0.000	82817	10.40	10.25	1.5	Endrin aldehyde
6.271	0.001	52622	7.056	-0.000	76513	5.13	5.07	1.1	trans-Chlordane
6.417	0.001	53515	7.216	0.000	75023	5.20	5.08	2.3	cis-Chlordane
2.324	-0.000	75632	2.500	-0.000	107268	5.35	5.41	1.1	Hexachlorobutadiene
4.183	0.001	66090	4.718	-0.000	98926	5.28	5.21	1.3	Hexachlorobenzene
3.828	0.000	101081	4.220	-0.000	153451	10.61	10.47	1.3	Tetrachloro-m-xylene
9.355	-0.000	67797	10.466	-0.000	92260	10.72	10.62	0.9	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

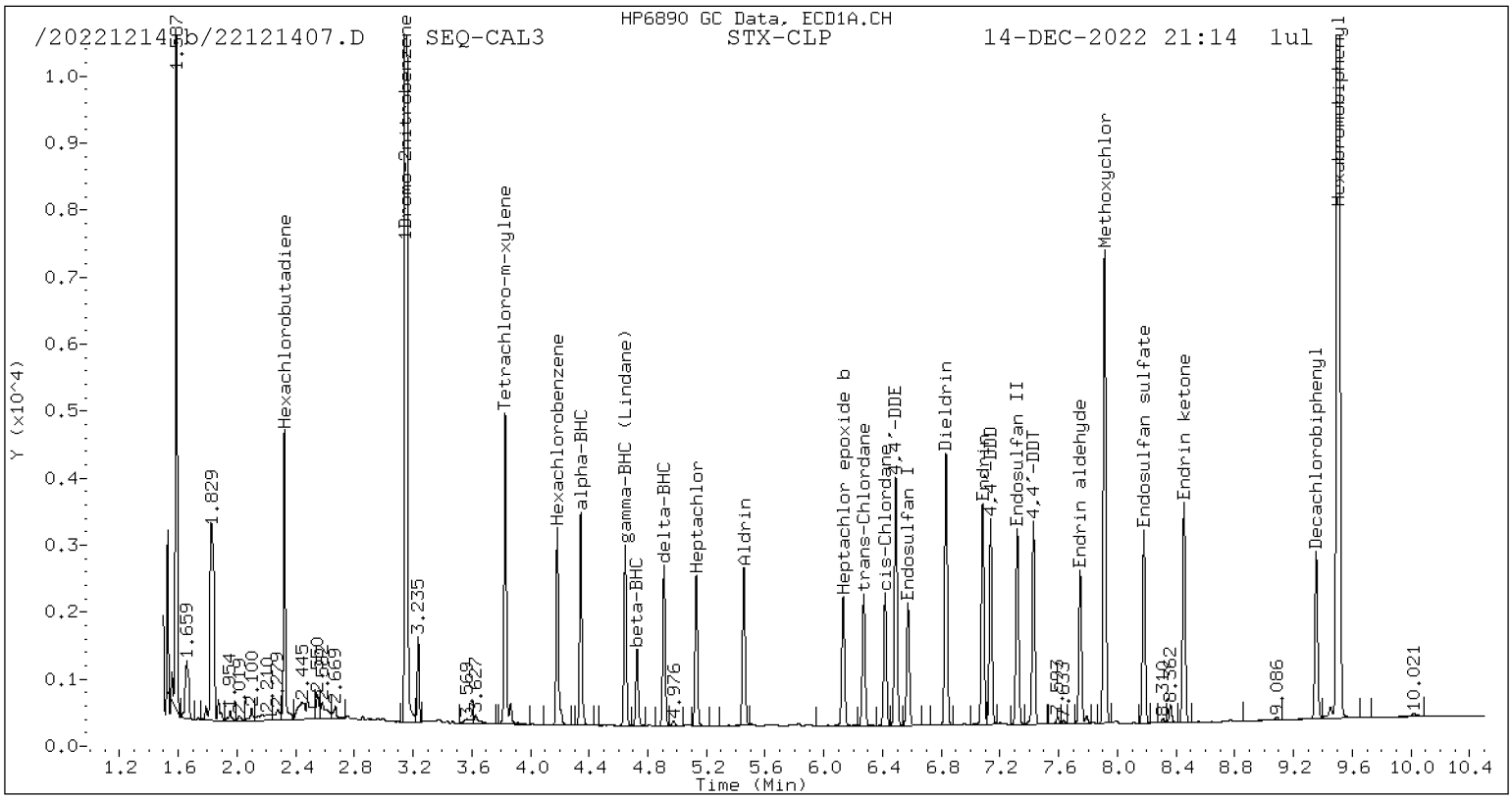
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	700354	-1.4
Hexabromobiphenyl	641833	624108	-2.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1040903	-1.7
Hexabromobiphenyl	797125	785894	-1.4

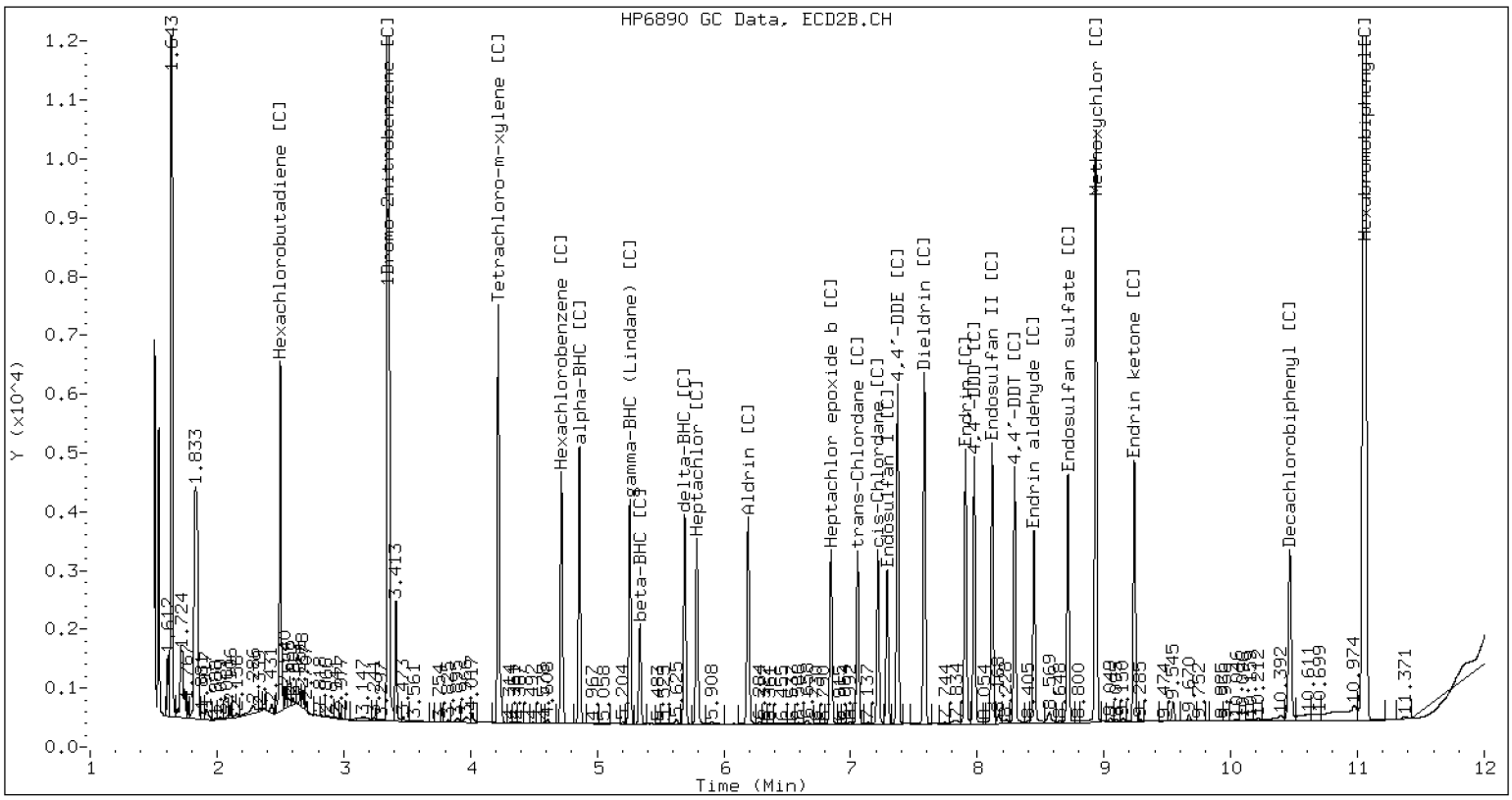
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121407.D SEQ-CAL3 CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121407.D
Data file 2: /20221214.b/B20221214.b/22121407.D
Method: \20221214.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL3
Client ID:
Injection Date: 14-DEC-2022 21:14
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121408.D
Data file 2: /20221214.b/B20221214.b/22121408.D
Method: \20221214.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL4
Client ID:
Injection Date: 14-DEC-2022 21:31
Report Date: 12/16/2022 15:19
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.343	0.000	139784	4.860	-0.000	216159	10.22	10.19	0.3	alpha-BHC
4.726	0.000	53742	5.337	0.000	81857	10.20	10.15	0.6	beta-BHC
4.910	0.001	113586	5.691	0.000	177281	10.16	10.14	0.2	delta-BHC
4.646	0.000	121488	5.258	0.000	182844	10.24	10.15	0.9	gamma-BHC (Lindane)
5.130	0.000	108260	5.787	-0.000	166558	10.26	10.21	0.5	Heptachlor
5.454	0.000	124839	6.191	0.000	189618	10.55	10.18	3.6	Aldrin
6.131	0.001	107301	6.846	0.001	155424	10.46	10.09	3.6	Heptachlor epoxide b
6.573	0.000	97151	7.289	0.000	137043	10.32	10.10	2.2	Endosulfan I
6.832	0.001	210564	7.583	0.000	301602	20.82	20.11	3.5	Dieldrin
6.490	0.001	195139	7.371	0.000	281756	20.79	20.49	1.5	4,4'-DDE
7.082	0.001	173216	7.907	-0.000	231062	20.59	20.39	1.0	Endrin
7.318	0.001	161303	8.117	0.001	236844	21.29	20.39	4.4	Endosulfan II
7.136	0.001	157301	7.977	0.001	222755	20.75	20.21	2.7	4,4'-DDD
8.180	0.000	146955	8.715	0.000	205334	20.43	20.13	1.5	Endosulfan sulfate
7.428	0.001	156744	8.295	-0.000	212755	20.46	19.99	2.3	4,4'-DDT
7.912	0.001	344324	8.936	-0.001	473459	101.43	100.55	0.9	Methoxychlor
8.453	-0.000	167384	9.240	0.000	222080	20.31	20.15	0.8	Endrin ketone
7.746	0.000	123653	8.448	0.000	164391	20.47	20.06	2.0	Endrin aldehyde
6.271	0.001	106805	7.056	0.000	154174	10.25	10.04	2.1	trans-Chlordane
6.418	0.001	106651	7.216	0.001	150231	10.21	10.00	2.1	cis-Chlordane
2.323	-0.000	142895	2.500	-0.001	197539	9.97	9.80	1.7	Hexachlorobutadiene
4.183	0.000	130020	4.718	0.000	197396	10.24	10.22	0.1	Hexachlorobenzene
3.828	0.000	199446	4.220	-0.000	308345	20.64	20.69	0.2	Tetrachloro-m-xylene
9.355	0.000	130210	10.466	-0.000	170633	20.02	19.37	3.3	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

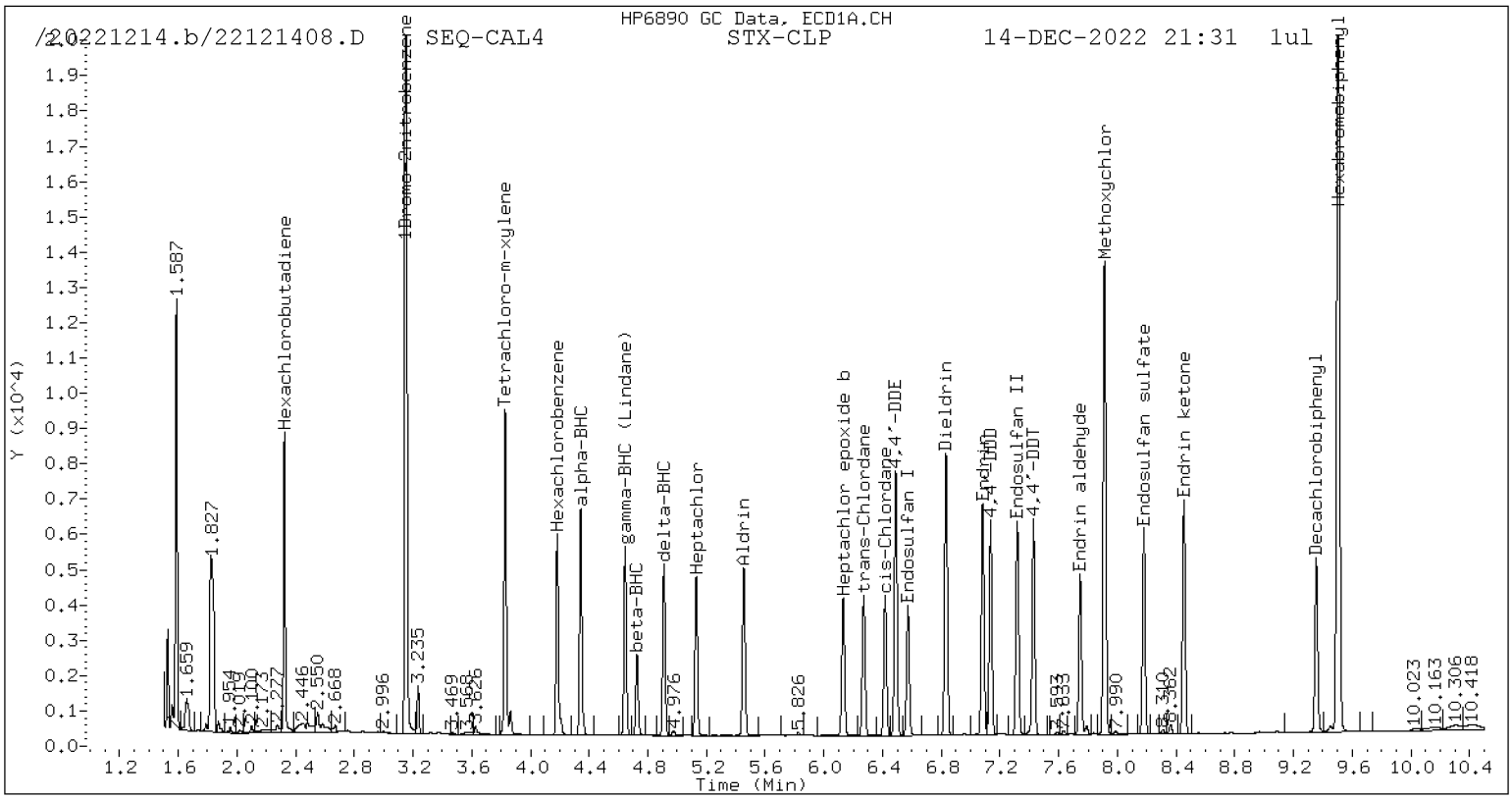
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	710650	0.0
Hexabromobiphenyl	641833	641833	0.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1058848	0.0
Hexabromobiphenyl	797125	797125	0.0

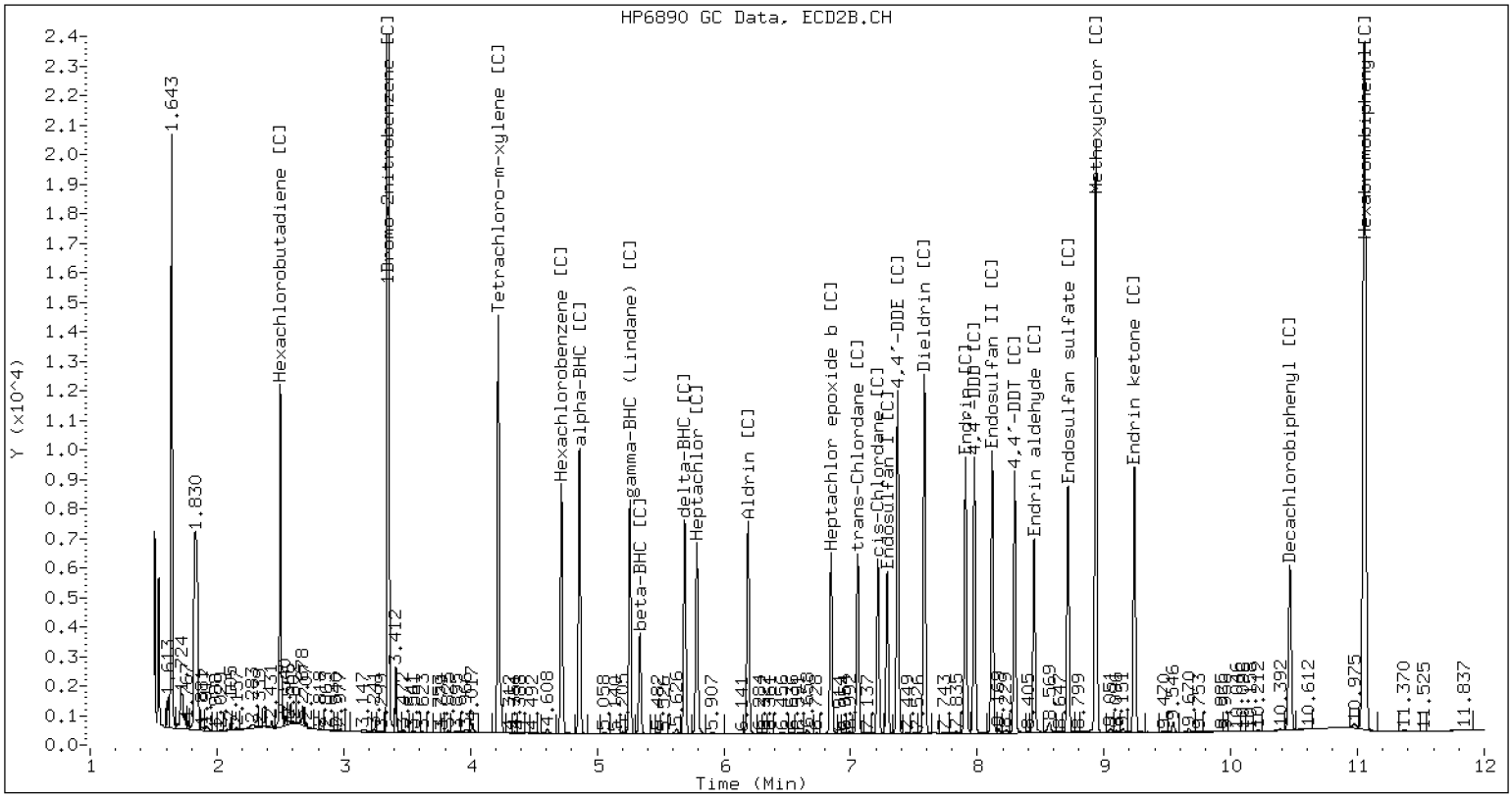
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121408.D SEQ-CAL4 CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121408.D
Data file 2: /20221214.b/B20221214.b/22121408.D
Method: \20221214.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL4
Client ID:
Injection Date: 14-DEC-2022 21:31
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121409.D
Data file 2: /20221214.b/B20221214.b/22121409.D
Method: \20221214.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL5
Client ID:
Injection Date: 14-DEC-2022 21:49
Report Date: 12/16/2022 15:30
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.342	0.000	263355	4.860	-0.001	412780	20.34	20.46	0.6	alpha-BHC
4.726	0.000	99355	5.337	-0.000	154138	19.93	20.10	0.8	beta-BHC
4.909	0.000	216224	5.690	-0.000	334261	20.44	20.12	1.6	delta-BHC
4.645	0.000	228274	5.258	-0.000	350450	20.34	20.47	0.7	gamma-BHC (Lindane)
5.130	0.000	203067	5.787	-0.000	320123	20.33	20.64	1.5	Heptachlor
5.454	0.000	230734	6.191	-0.000	359912	20.62	20.33	1.4	Aldrin
6.130	0.000	198033	6.845	-0.000	295580	20.41	20.19	1.1	Heptachlor epoxide b
6.572	0.000	180905	7.289	-0.000	260351	20.31	20.18	0.7	Endosulfan I
6.831	0.000	388583	7.582	-0.000	571731	40.61	40.10	1.3	Dieldrin
6.489	0.000	362177	7.370	-0.000	531128	40.77	40.63	0.4	4,4'-DDE
7.081	0.000	323576	7.907	-0.000	442460	40.48	40.43	0.1	Endrin
7.317	0.000	282010	8.117	-0.000	446656	39.19	39.81	1.6	Endosulfan II
7.135	0.000	292251	7.976	-0.000	427990	40.58	40.20	0.9	4,4'-DDD
8.180	0.000	276113	8.715	0.000	393743	40.41	39.97	1.1	Endosulfan sulfate
7.427	0.000	296413	8.295	-0.000	413083	40.73	40.20	1.3	4,4'-DDT
7.912	0.000	628619	8.935	-0.001	900958	194.94	198.14	1.6	Methoxychlor
8.453	0.000	311305	9.239	-0.000	423698	39.77	39.82	0.1	Endrin ketone
7.746	0.000	230881	8.448	0.000	312907	40.23	39.54	1.7	Endrin aldehyde
6.271	0.000	200151	7.056	-0.000	294106	20.31	20.15	0.8	trans-Chlordane
6.417	0.000	197892	7.216	-0.000	285904	20.02	20.02	0.0	cis-Chlordane
2.324	0.000	260716	2.500	-0.000	346254	19.22	18.08	6.2	Hexachlorobutadiene
4.182	0.000	237746	4.718	-0.000	364913	19.78	19.88	0.5	Hexachlorobenzene
3.828	0.000	357836	4.220	-0.000	567647	39.13	40.07	2.4	Tetrachloro-m-xylene
9.355	0.000	239428	10.466	-0.001	327134	38.76	38.45	0.8	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

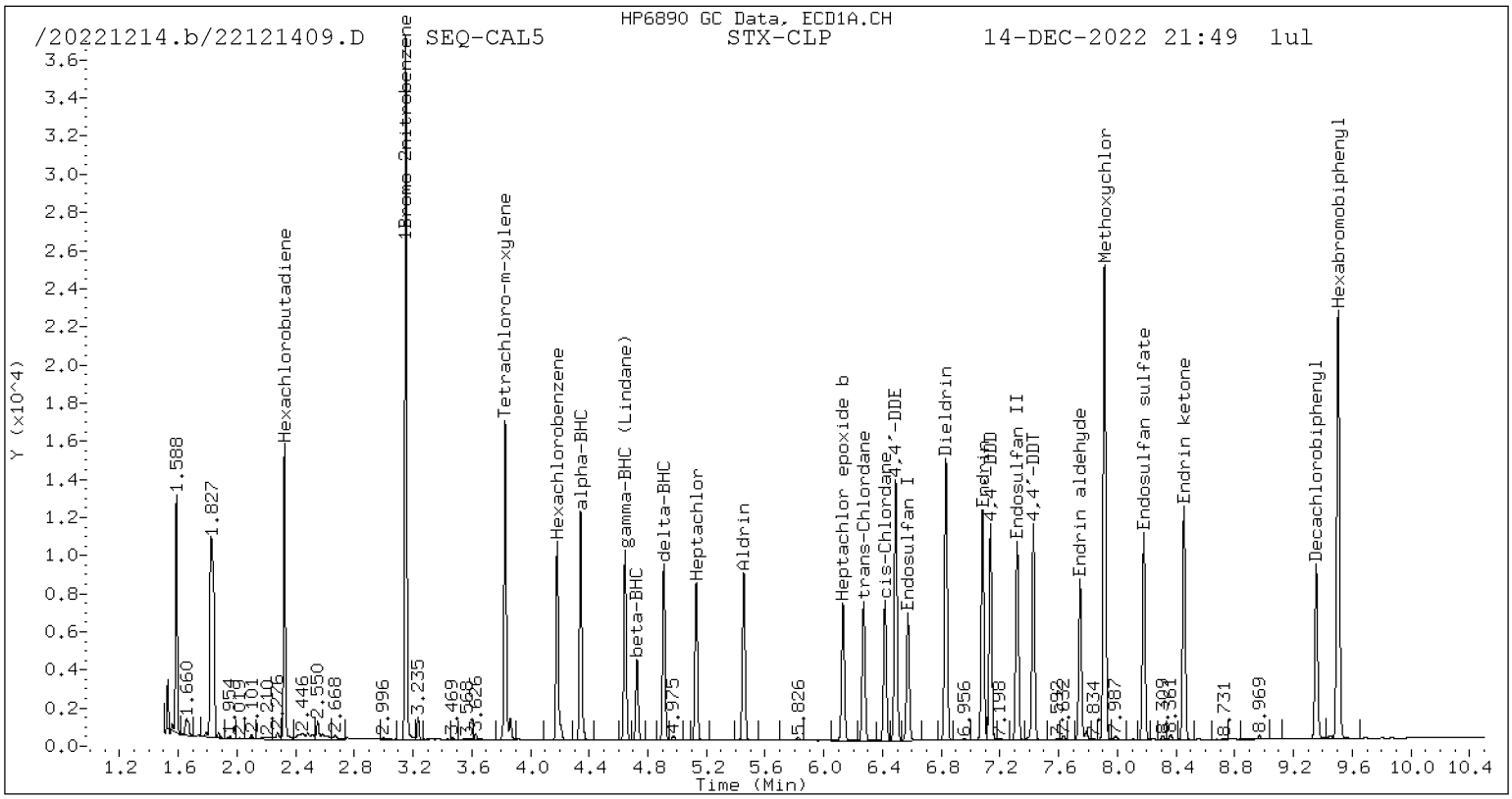
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	672426	0.0
Hexabromobiphenyl	609723	609723	0.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	1006482	0.0
Hexabromobiphenyl	769764	769764	0.0

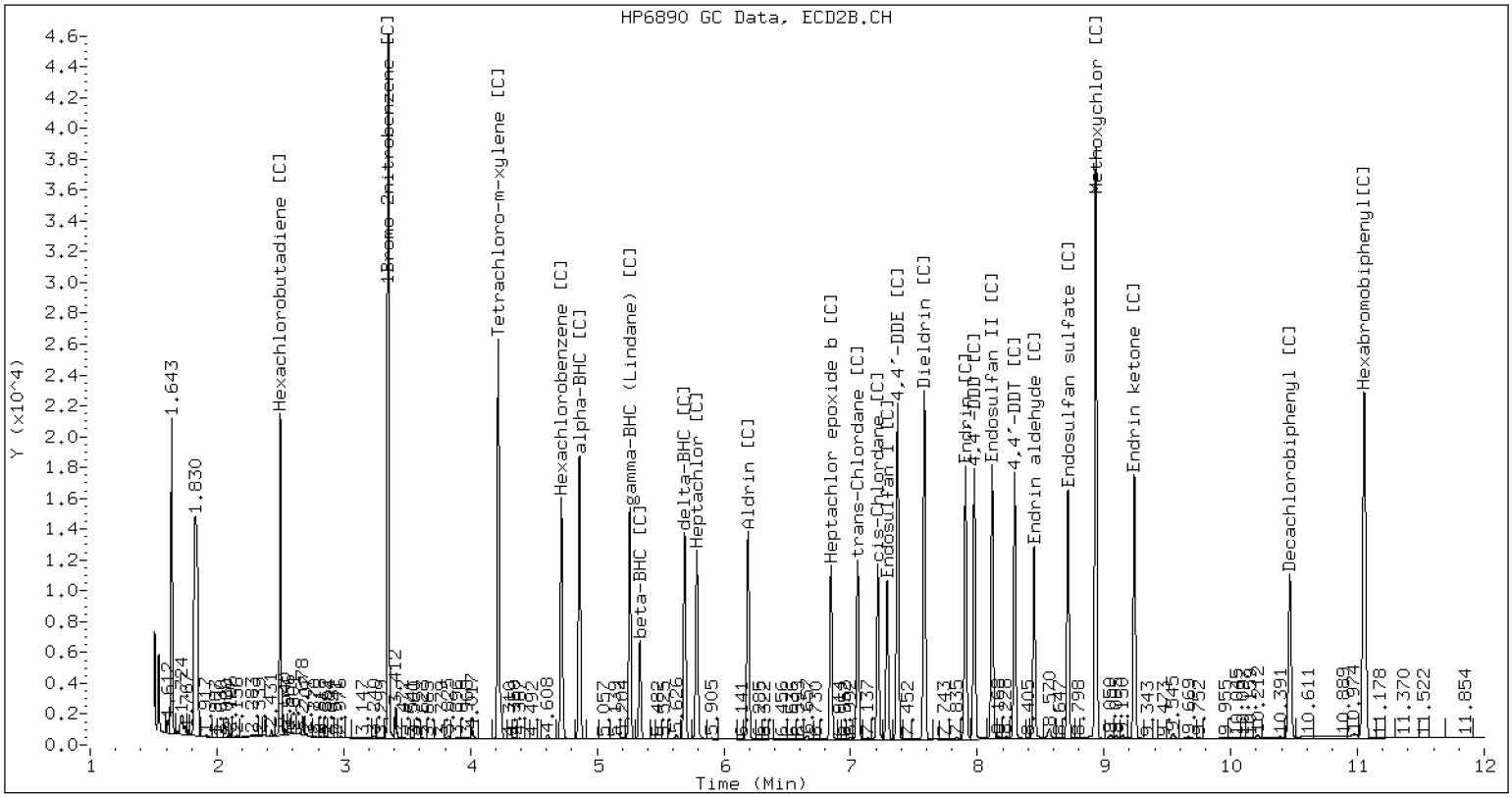
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121409.D SEQ-CAL5 CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121409.D
Data file 2: /20221214.b/B20221214.b/22121409.D
Method: \20221214.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL5
Client ID:
Injection Date: 14-DEC-2022 21:49
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121410.D
Data file 2: /20221214.b/B20221214.b/22121410.D
Method: \20221214.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL6
Client ID:
Injection Date: 14-DEC-2022 22:07
Report Date: 12/16/2022 15:19
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.342	0.000	535902	4.860	-0.000	849533	39.69	40.30	1.5	alpha-BHC
4.726	0.000	198976	5.337	-0.000	311218	38.28	38.84	1.4	beta-BHC
4.910	0.000	440370	5.691	0.000	700464	39.91	40.34	1.1	delta-BHC
4.646	0.000	461905	5.258	0.000	718675	39.46	40.18	1.8	gamma-BHC (Lindane)
5.130	0.000	401672	5.787	0.000	639345	38.56	39.46	2.3	Heptachlor
5.454	0.000	458396	6.190	-0.000	720942	39.27	38.97	0.8	Aldrin
6.130	0.000	387273	6.846	0.000	586062	38.26	38.31	0.1	Heptachlor epoxide b
6.572	-0.000	354629	7.288	-0.001	519836	38.18	38.55	1.0	Endosulfan I
6.832	0.000	755708	7.582	-0.000	1126850	75.73	75.64	0.1	Dieldrin
6.489	0.000	698620	7.371	-0.000	1040947	75.40	76.19	1.0	4,4'-DDE
7.082	0.000	615481	7.907	-0.000	858461	74.19	74.98	1.1	Endrin
7.317	0.000	590923	8.117	-0.000	885035	79.12	75.41	4.8	Endosulfan II
7.136	0.000	565557	7.976	-0.000	842536	75.67	75.65	0.0	4,4'-DDD
8.179	-0.001	540557	8.715	0.000	782860	76.22	75.96	0.3	Endosulfan sulfate
7.427	0.000	577337	8.295	-0.000	820861	76.44	76.36	0.1	4,4'-DDT
7.912	-0.000	1204040	8.935	-0.001	1785262	359.75	375.30	4.2	Methoxychlor
8.453	-0.001	610387	9.239	-0.000	843646	75.13	75.79	0.9	Endrin ketone
7.746	-0.000	452325	8.448	0.000	622287	75.93	75.17	1.0	Endrin aldehyde
6.271	0.000	395598	7.056	-0.000	591899	38.48	38.80	0.8	trans-Chlordane
6.417	0.001	389712	7.215	-0.000	573103	37.80	38.40	1.6	cis-Chlordane
2.324	0.000	511265	2.500	-0.000	705320	36.14	35.24	2.5	Hexachlorobutadiene
4.183	0.001	472841	4.718	0.000	728846	37.72	37.99	0.7	Hexachlorobenzene
3.828	-0.000	714634	4.221	0.000	1124106	74.93	75.93	1.3	Tetrachloro-m-xylene
9.355	-0.000	468280	10.466	-0.001	645336	73.03	72.51	0.7	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

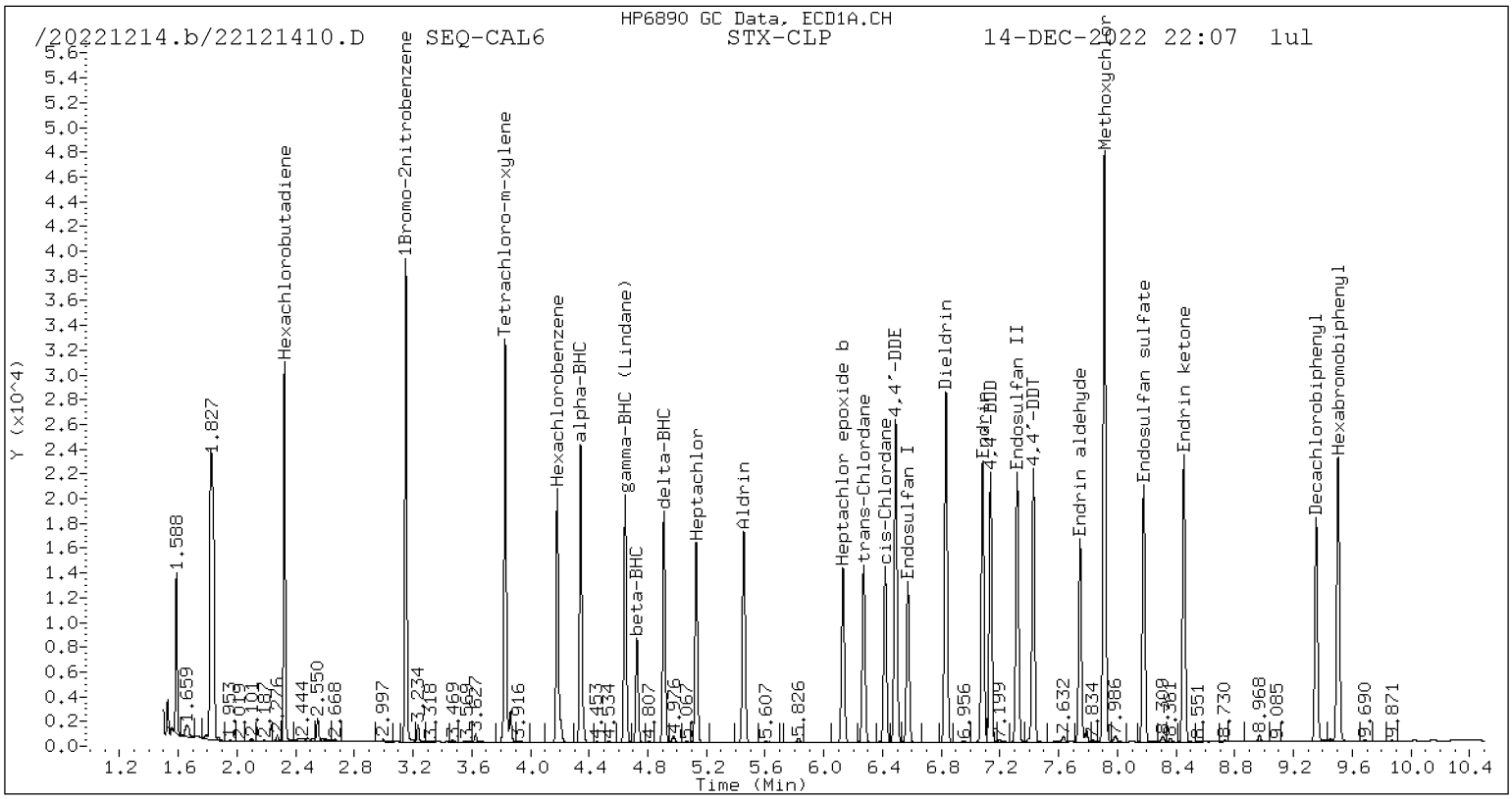
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	701342	-1.3
Hexabromobiphenyl	641833	632821	-1.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1051766	-0.7
Hexabromobiphenyl	797125	805268	1.0

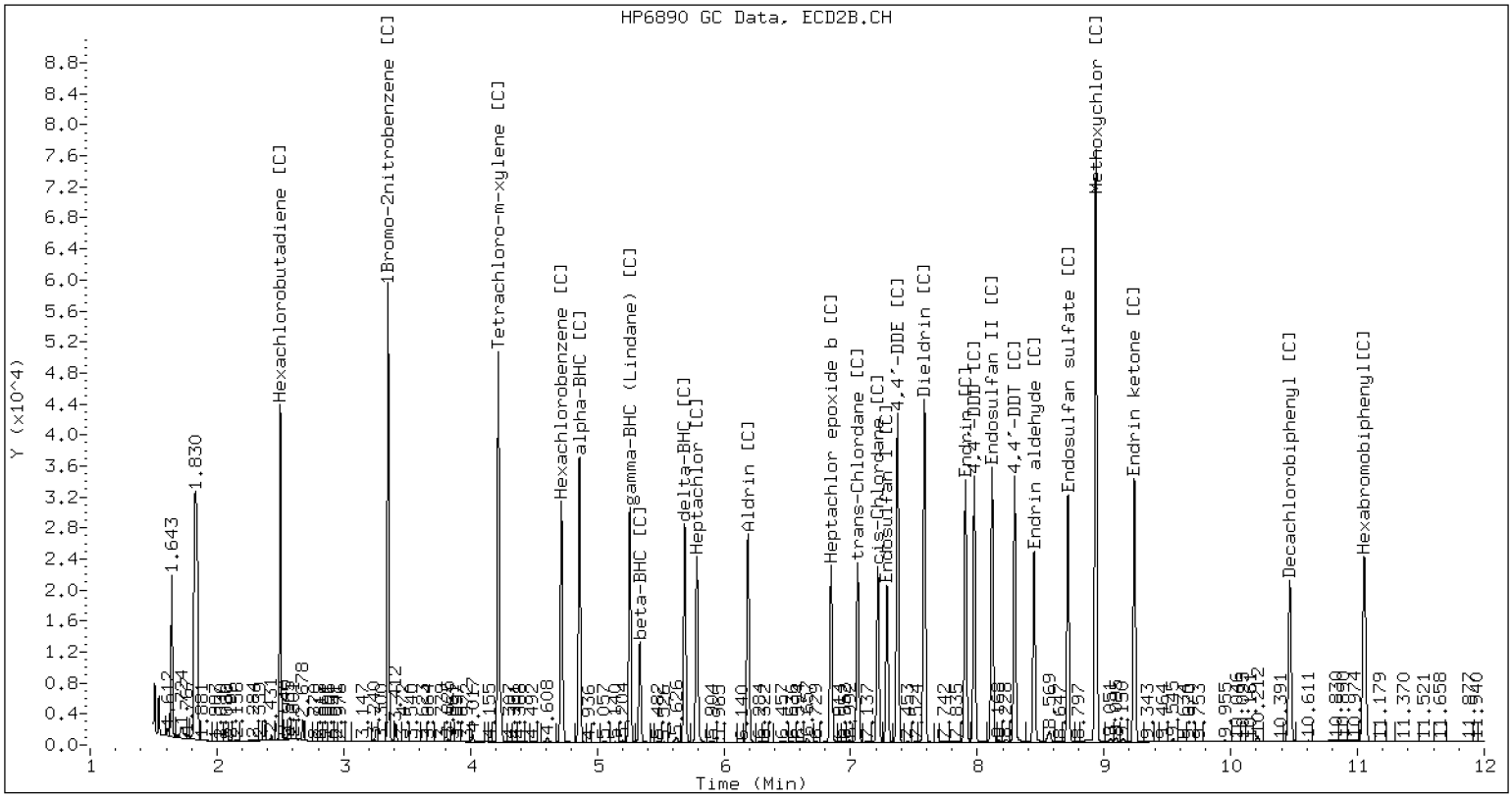
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121410.D SEQ-CAL6 CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121410.D
Data file 2: /20221214.b/B20221214.b/22121410.D
Method: \20221214.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL6
Client ID:
Injection Date: 14-DEC-2022 22:07
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121411.D
Data file 2: /20221214.b/B20221214.b/22121411.D
Method: \20221214.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL7
Client ID:
Injection Date: 14-DEC-2022 22:25
Report Date: 12/16/2022 15:19
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.342	0.000	1012605	4.861	0.000	1623058	75.30	77.94	3.4	alpha-BHC
4.726	0.000	371916	5.337	0.000	586390	71.84	74.06	3.1	beta-BHC
4.910	0.000	837966	5.691	0.000	1343533	76.25	78.32	2.7	delta-BHC
4.645	-0.000	870454	5.258	0.000	1370551	74.66	77.55	3.8	gamma-BHC (Lindane)
5.130	0.000	743802	5.787	0.000	1188915	71.70	74.26	3.5	Heptachlor
5.454	0.000	841598	6.191	0.000	1331430	72.39	72.84	0.6	Aldrin
6.130	-0.000	709774	6.845	0.000	1087105	70.41	71.92	2.1	Heptachlor epoxide b
6.573	0.000	652702	7.289	0.000	969098	70.56	72.74	3.1	Endosulfan I
6.832	0.000	1390496	7.583	0.000	2118555	139.91	143.93	2.8	Dieldrin
6.490	0.001	1284777	7.371	0.000	1944530	139.23	144.06	3.4	4,4'-DDE
7.082	0.001	1132487	7.907	0.000	1618631	137.86	142.60	3.4	Endrin
7.317	0.000	1089554	8.117	0.000	1672946	147.33	143.79	2.4	Endosulfan II
7.135	0.000	1051958	7.976	0.000	1606815	142.14	145.53	2.4	4,4'-DDD
8.180	0.000	1013288	8.715	0.000	1496440	144.30	146.47	1.5	Endosulfan sulfate
7.428	0.001	1086138	8.295	0.000	1586078	145.23	148.84	2.5	4,4'-DDT
7.912	0.001	2325261	8.936	0.000	3541650	701.64	751.02	6.8	Methoxychlor
8.454	0.000	1146784	9.240	0.000	1623077	142.56	147.08	3.1	Endrin ketone
7.746	-0.000	846477	8.448	0.000	1178353	143.51	143.57	0.0	Endrin aldehyde
6.271	0.000	733514	7.056	0.000	1114685	71.64	73.95	3.2	trans-Chlordane
6.417	0.001	723886	7.216	0.000	1079255	70.50	73.19	3.7	cis-Chlordane
2.324	0.000	955982	2.501	0.000	1351745	67.86	68.35	0.7	Hexachlorobutadiene
4.182	0.000	879573	4.718	0.000	1355289	70.45	71.51	1.5	Hexachlorobenzene
3.828	0.000	1318381	4.220	0.000	2067539	138.79	141.35	1.8	Tetrachloro-m-xylene
9.356	0.000	878340	10.467	0.000	1231298	138.34	139.55	0.9	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

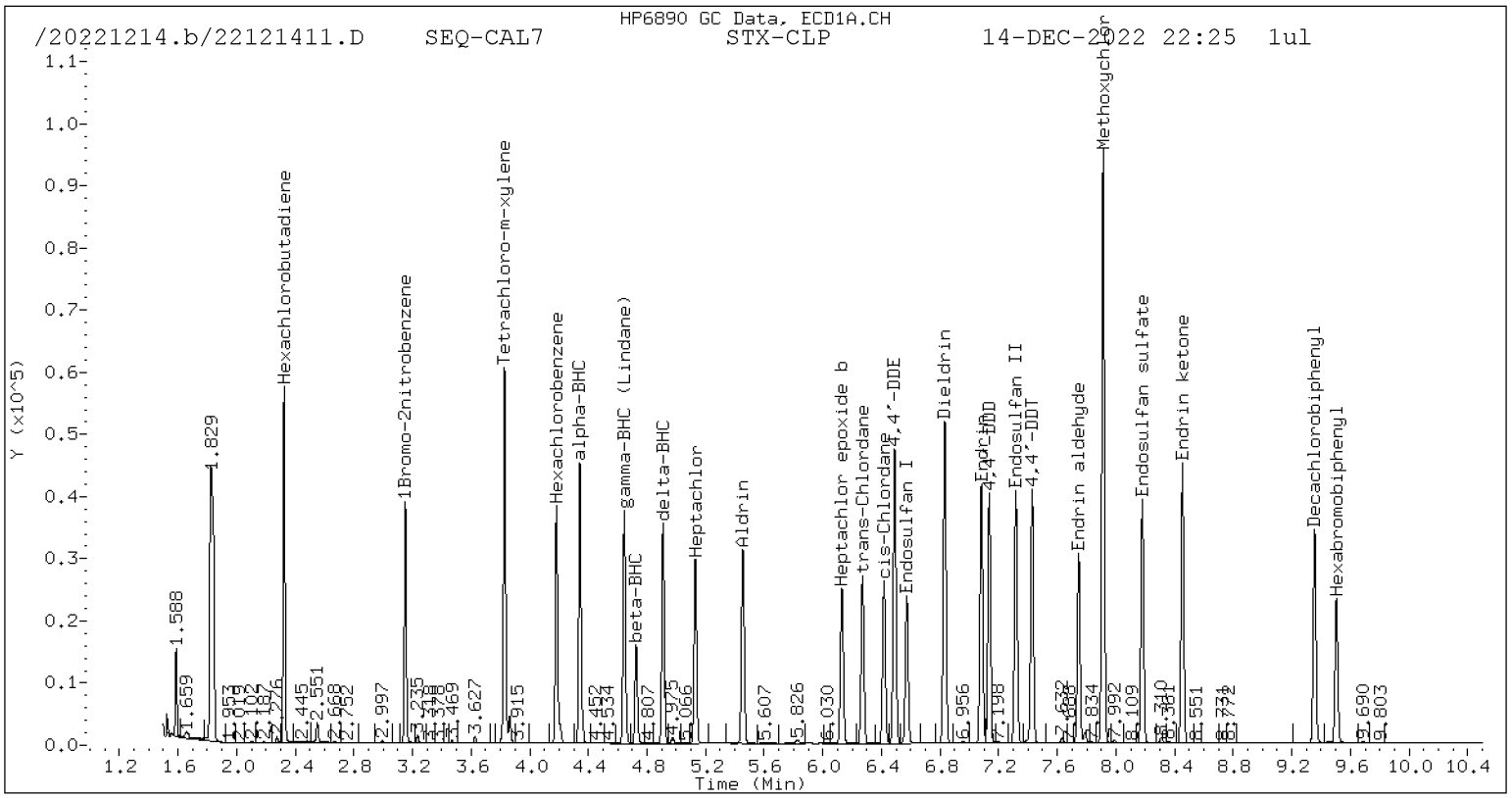
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	698499	-1.7
Hexabromobiphenyl	641833	626605	-2.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1039154	-1.9
Hexabromobiphenyl	797125	798313	0.1

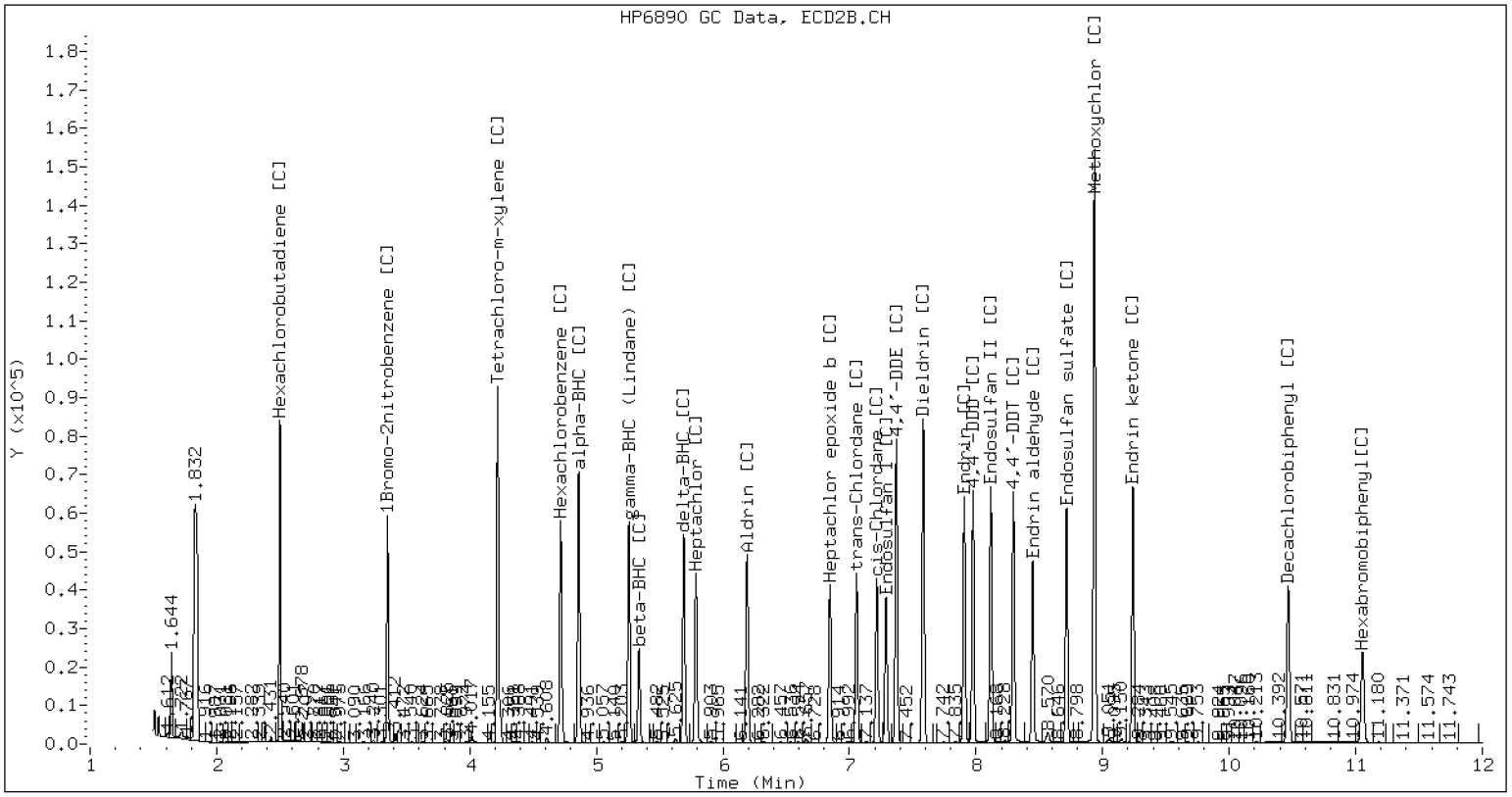
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121411.D SEQ-CAL7 CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121411.D
Data file 2: /20221214.b/B20221214.b/22121411.D
Method: \20221214.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL7
Client ID:
Injection Date: 14-DEC-2022 22:25
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121412.D
Data file 2: /20221214.b/B20221214.b/22121412.D
Method: \20221214.b\PEST.m
Compound Sublist: WND.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL8
Client ID:
Injection Date: 14-DEC-2022 22:43
Report Date: 12/16/2022 15:19
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
6.014	-0.000	22184	6.741	-0.000	34211	2.89	2.85	1.2	Oxychlordane
6.106	-0.000	18661	7.036	-0.000	30817	2.94	3.14	6.5	2,4-DDE
6.397	-0.000	30616	7.154	-0.001	41466	3.05	2.82	7.5	trans-Nonachlor
6.681	0.000	16263	7.591	0.000	26177	2.88	3.12	7.9	2,4-DDD
6.956	-0.001	17569	7.913	-0.000	24398	2.88	2.82	2.1	2,4-DDT
7.112	-0.000	29417	7.975	-0.000	37972	3.01	2.72	9.9	cis-Nonachlor
8.082	-0.000	18819	9.223	-0.000	24312	3.09	3.00	3.1	Mirex
----			----			0.00	0.00	---	Tetrachloro-m-xylene
----			----			0.00	0.00	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

˜ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

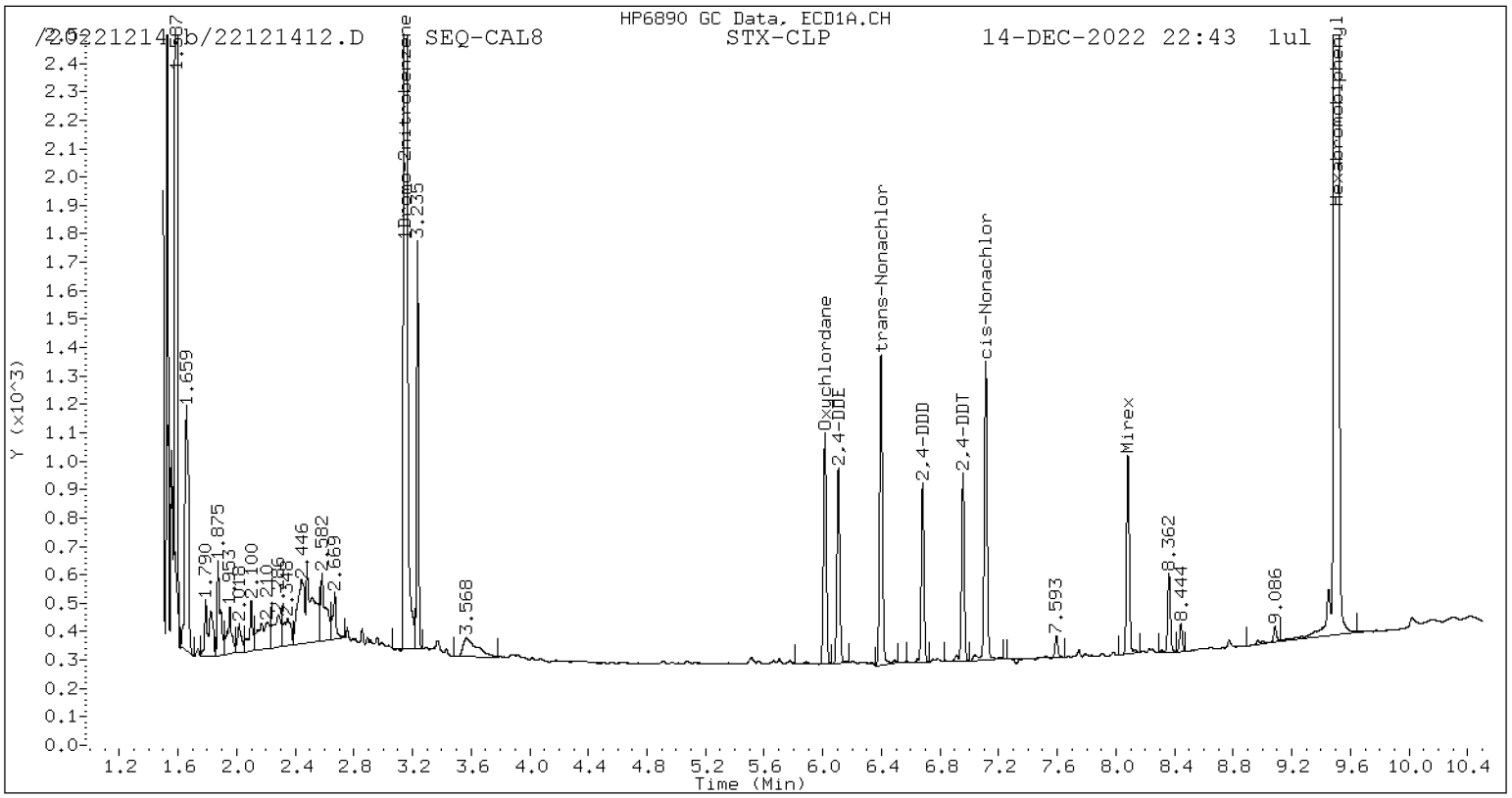
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	713898	0.5
Hexabromobiphenyl	641833	646441	0.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1076864	1.7
Hexabromobiphenyl	797125	820275	2.9

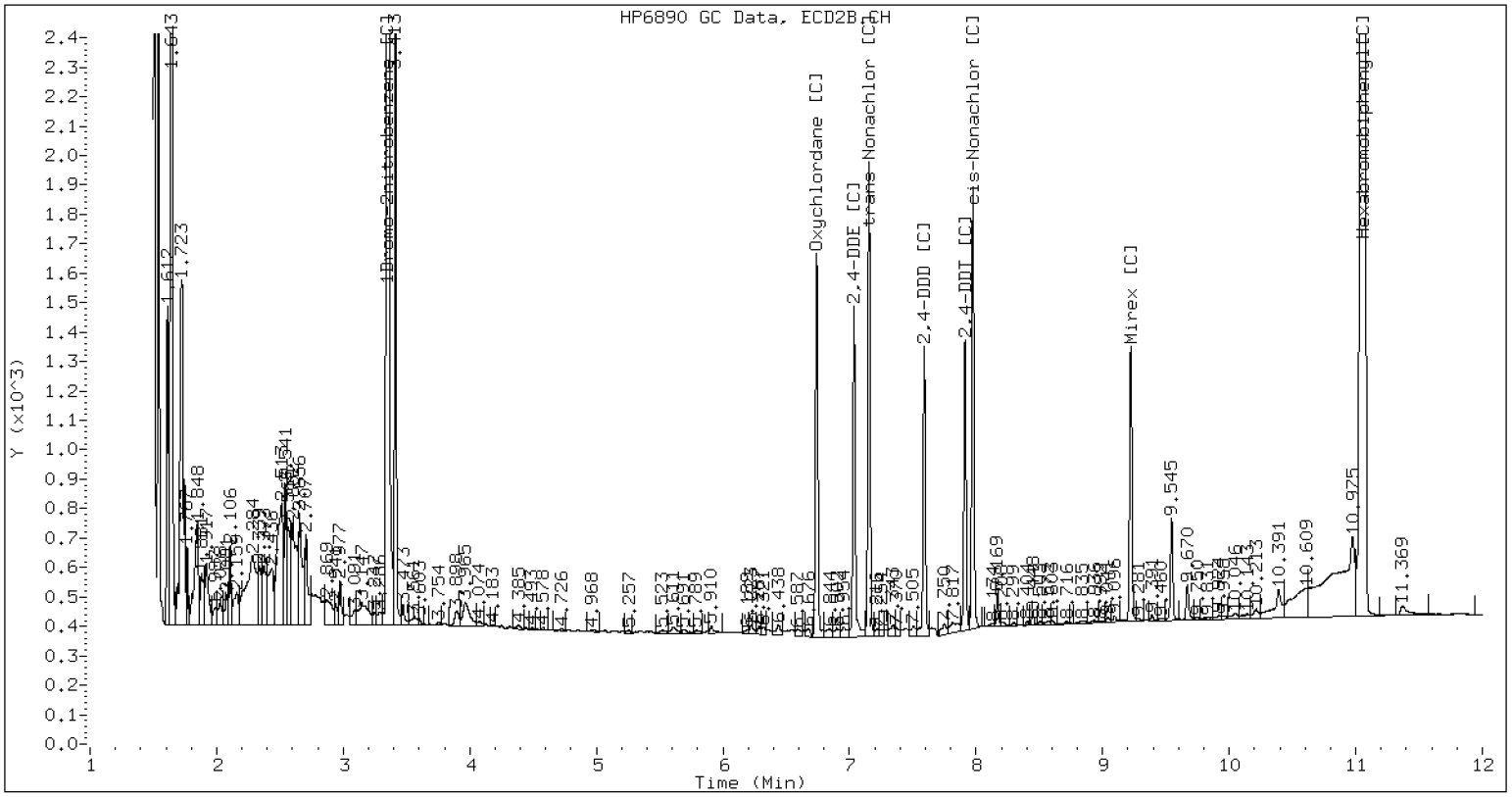
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121412.D SEQ-CAL8 CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121412.D
Data file 2: /20221214.b/B20221214.b/22121412.D
Method: \20221214.b\PEST.m
Compound Sublist: WND.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL8
Client ID:
Injection Date: 14-DEC-2022 22:43
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121413.D
Data file 2: /20221214.b/B20221214.b/22121413.D
Method: \20221214.b\PEST.m
Compound Sublist: WND.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL9
Client ID:
Injection Date: 14-DEC-2022 23:01
Report Date: 12/16/2022 15:19
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
6.015	0.000	39121	6.741	-0.000	61505	5.34	5.41	1.3	Oxychlordane
6.106	0.000	33487	7.036	-0.000	53206	5.54	5.72	3.1	2,4-DDE
6.398	0.000	51858	7.154	-0.001	72836	5.42	5.20	4.1	trans-Nonachlor
6.681	0.000	29307	7.590	-0.000	44506	5.45	5.55	1.9	2,4-DDD
6.957	-0.000	31530	7.914	0.000	45986	5.43	5.57	2.6	2,4-DDT
7.112	-0.000	50912	7.975	0.000	70898	5.46	5.32	2.6	cis-Nonachlor
8.082	-0.000	32004	9.223	-0.000	45650	5.52	5.89	6.6	Mirex
----			----			0.00	0.00	---	Tetrachloro-m-xylene
----			----			0.00	0.00	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

˜ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

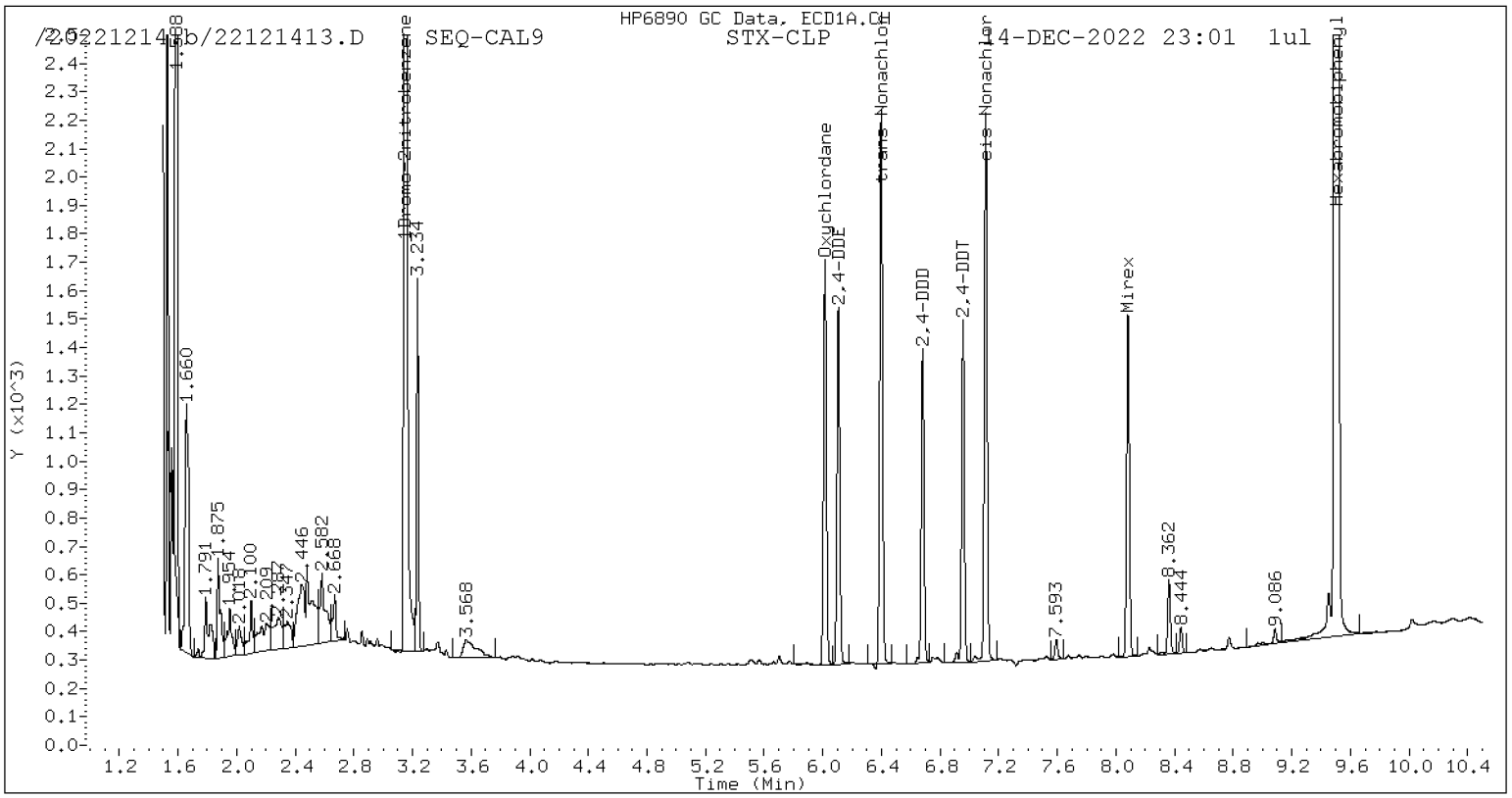
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	672507	-5.4
Hexabromobiphenyl	641833	615627	-4.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1020334	-3.6
Hexabromobiphenyl	797125	782734	-1.8

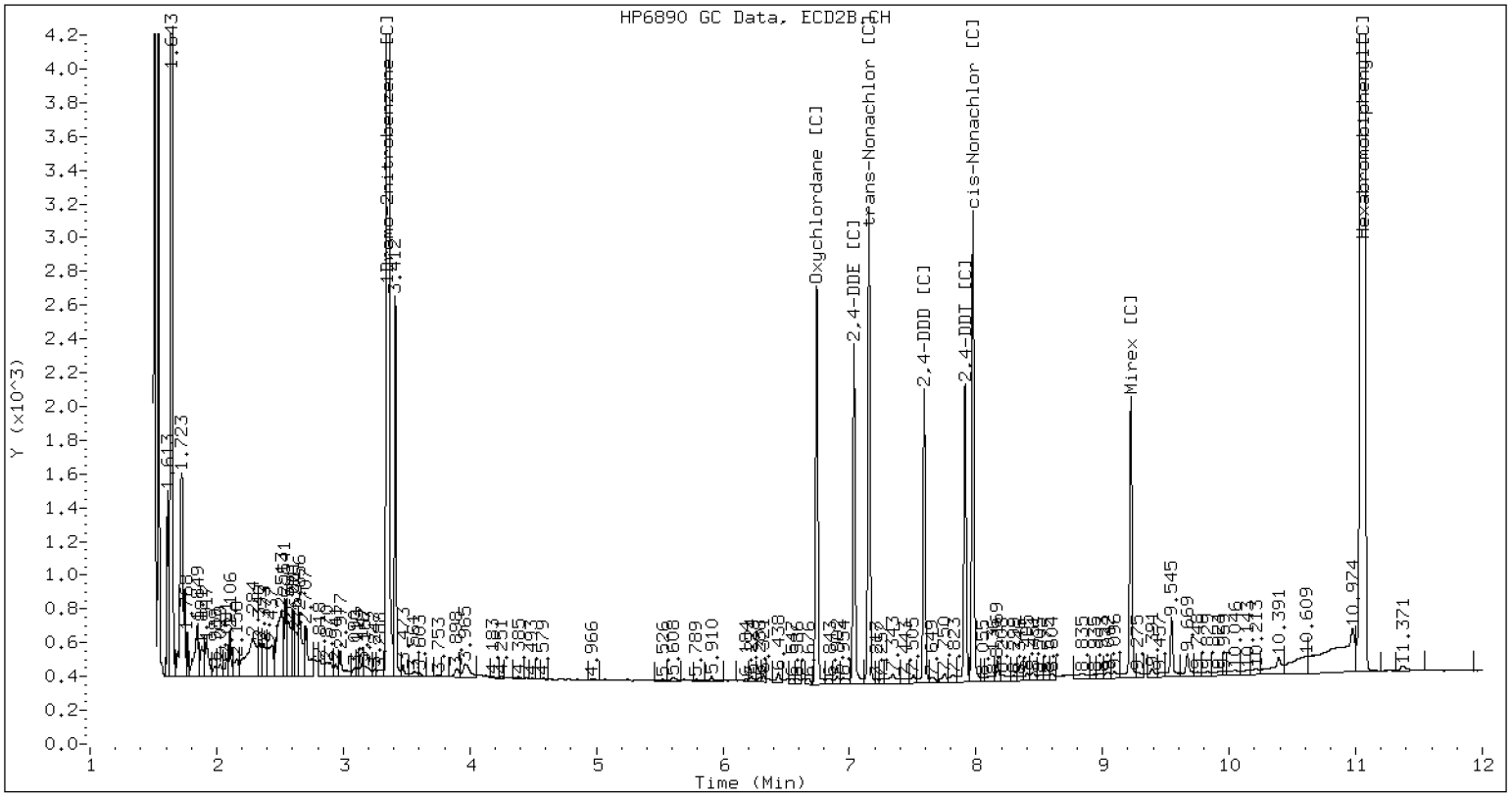
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121413.D SEQ-CAL9 CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121413.D
Data file 2: /20221214.b/B20221214.b/22121413.D
Method: \20221214.b\PEST.m
Compound Sublist: WND.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL9
Client ID:
Injection Date: 14-DEC-2022 23:01
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121414.D
Data file 2: /20221214.b/B20221214.b/22121414.D
Method: \20221214.b\PEST.m
Compound Sublist: WND.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CALA
Client ID:
Injection Date: 14-DEC-2022 23:19
Report Date: 12/16/2022 15:19
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
6.014	-0.000	82473	6.741	-0.001	127500	10.63	10.63	0.0	Oxychlordane
6.106	-0.000	69109	7.035	-0.001	108440	10.79	11.04	2.3	2,4-DDE
6.398	0.000	108386	7.154	-0.001	157712	10.68	10.60	0.7	trans-Nonachlor
6.681	0.000	60517	7.590	-0.000	91420	10.62	10.74	1.2	2,4-DDD
6.956	-0.001	65300	7.913	0.000	91498	10.61	10.44	1.6	2,4-DDT
7.111	-0.001	104247	7.975	-0.000	146224	10.55	10.34	2.0	cis-Nonachlor
8.082	-0.000	65614	9.222	-0.000	84337	10.67	10.25	4.0	Mirex
----			----			0.00	0.00	---	Tetrachloro-m-xylene
----			----			0.00	0.00	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

˜ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

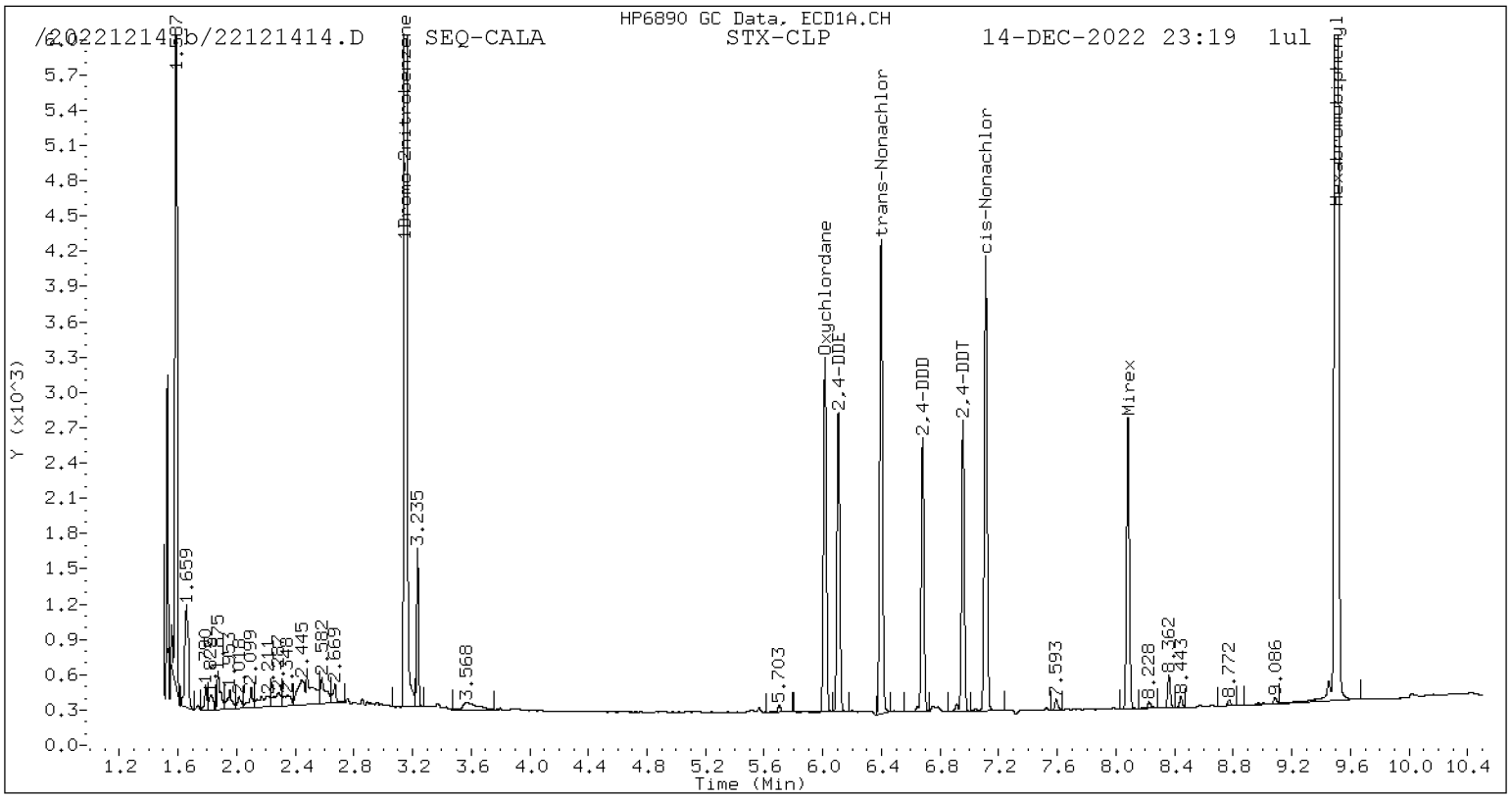
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	712122	0.2
Hexabromobiphenyl	641833	652595	1.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1077341	1.7
Hexabromobiphenyl	797125	831365	4.3

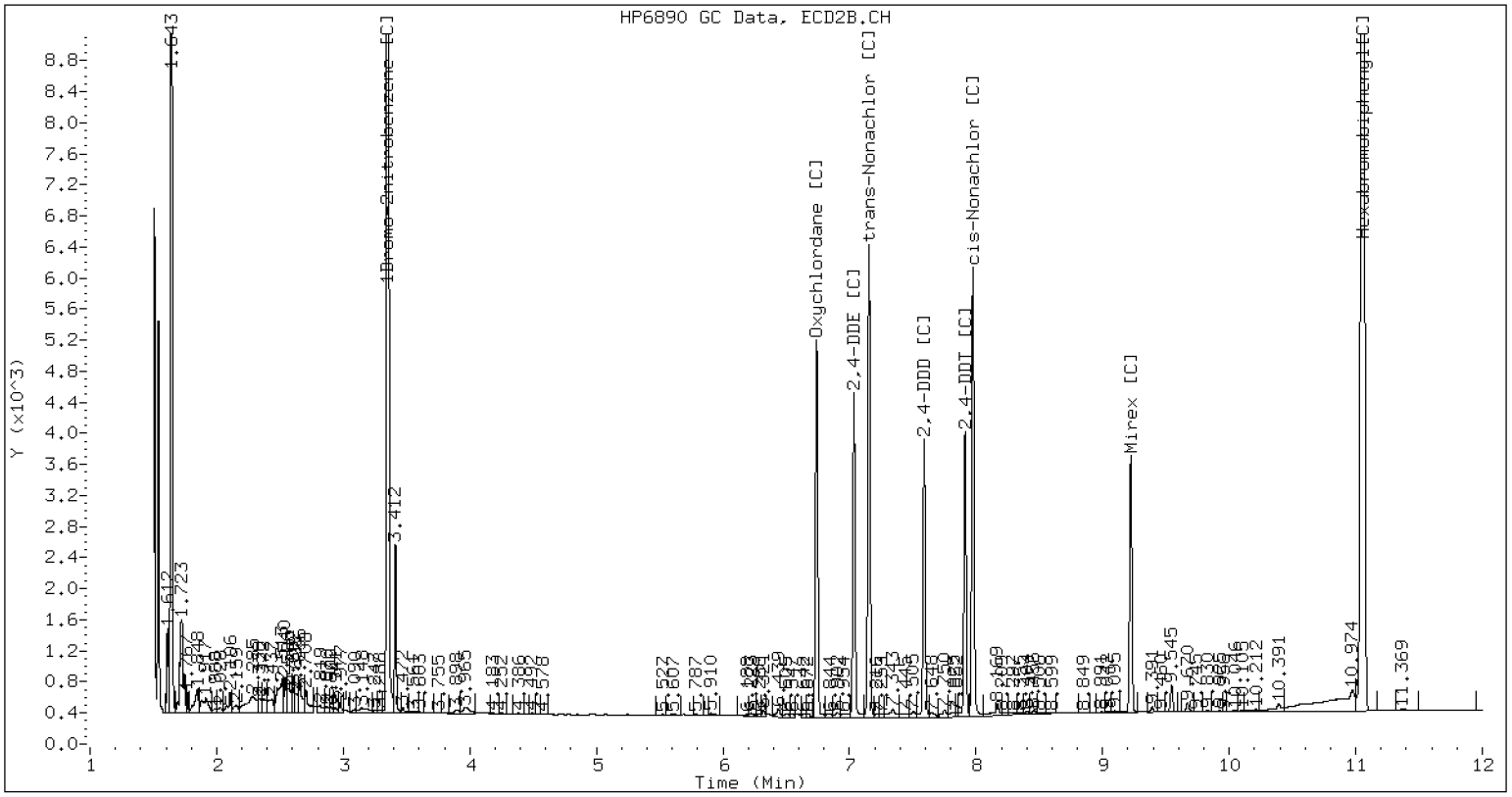
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121414.D SEQ-CALA CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121414.D
Data file 2: /20221214.b/B20221214.b/22121414.D
Method: \20221214.b\PEST.m
Compound Sublist: WND.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CALA
Client ID:
Injection Date: 14-DEC-2022 23:19
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121415.D
Data file 2: /20221214.b/B20221214.b/22121415.D
Method: \20221214.b\PEST.m
Compound Sublist: WND.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CALB
Client ID:
Injection Date: 14-DEC-2022 23:36
Report Date: 12/16/2022 15:19
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
6.015	0.001	154379	6.741	-0.000	238017	20.80	20.28	2.5	Oxychlordane
6.106	-0.000	128483	7.036	-0.000	195807	20.97	20.37	2.9	2,4-DDE
6.398	0.000	200622	7.155	-0.000	289952	20.66	20.28	1.9	trans-Nonachlor
6.681	0.000	113972	7.591	0.000	165245	20.90	20.21	3.4	2,4-DDD
6.956	-0.001	122412	7.913	0.000	169814	20.78	20.17	3.0	2,4-DDT
7.112	-0.000	194165	7.975	-0.000	274910	20.54	20.23	1.5	cis-Nonachlor
8.082	-0.000	119271	9.223	0.000	158702	20.28	20.08	1.0	Mirex
----			----			0.00	0.00	---	Tetrachloro-m-xylene
----			----			0.00	0.00	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

˜ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

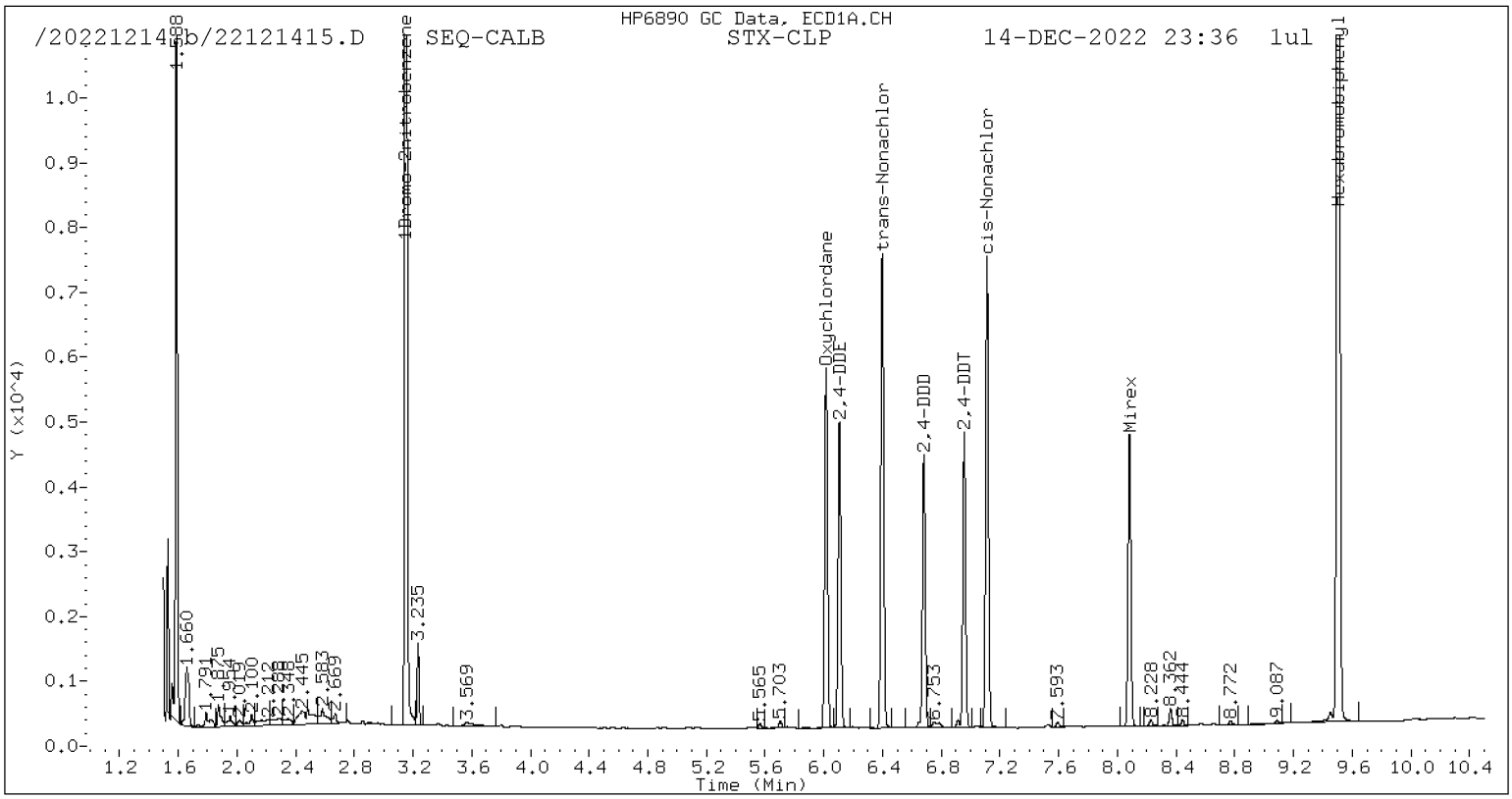
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	693450	-2.4
Hexabromobiphenyl	641833	624334	-2.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1053959	-0.5
Hexabromobiphenyl	797125	798882	0.2

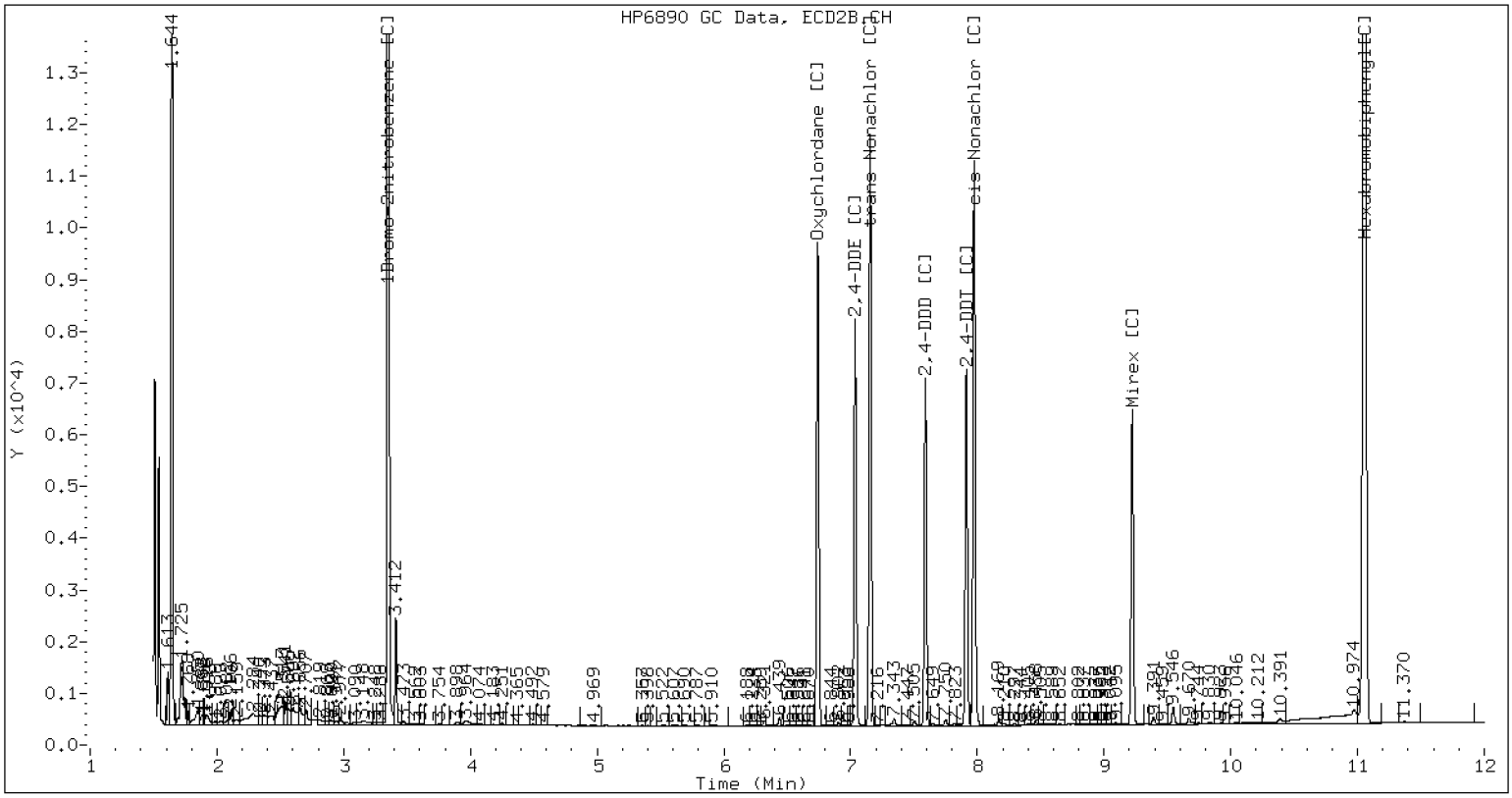
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121415.D SEQ-CALB CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121415.D
Data file 2: /20221214.b/B20221214.b/22121415.D
Method: \20221214.b\PEST.m
Compound Sublist: WND.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CALB
Client ID:
Injection Date: 14-DEC-2022 23:36
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121416.D
Data file 2: /20221214.b/B20221214.b/22121416.D
Method: \20221214.b\PEST.m
Compound Sublist: WND.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CALC
Client ID:
Injection Date: 14-DEC-2022 23:54
Report Date: 12/16/2022 15:19
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
6.014	0.000	292499	6.741	-0.000	460731	40.08	40.26	0.4	Oxychlordane
6.106	0.000	242066	7.036	-0.000	372996	40.18	39.80	0.9	2,4-DDE
6.397	0.000	383329	7.154	-0.001	567971	40.16	40.45	0.7	trans-Nonachlor
6.681	0.000	216474	7.590	-0.000	320311	40.39	39.88	1.3	2,4-DDD
6.957	0.000	233738	7.913	-0.000	332906	40.36	40.25	0.3	2,4-DDT
7.112	0.000	373705	7.975	-0.000	538334	40.21	40.33	0.3	cis-Nonachlor
8.082	0.000	229604	9.222	-0.000	299228	39.71	38.54	3.0	Mirex
3.800	-0.028	1151	----			0.13	0.00	---	Tetrachloro-m-xylene
----			----			0.00	0.00	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

˜ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

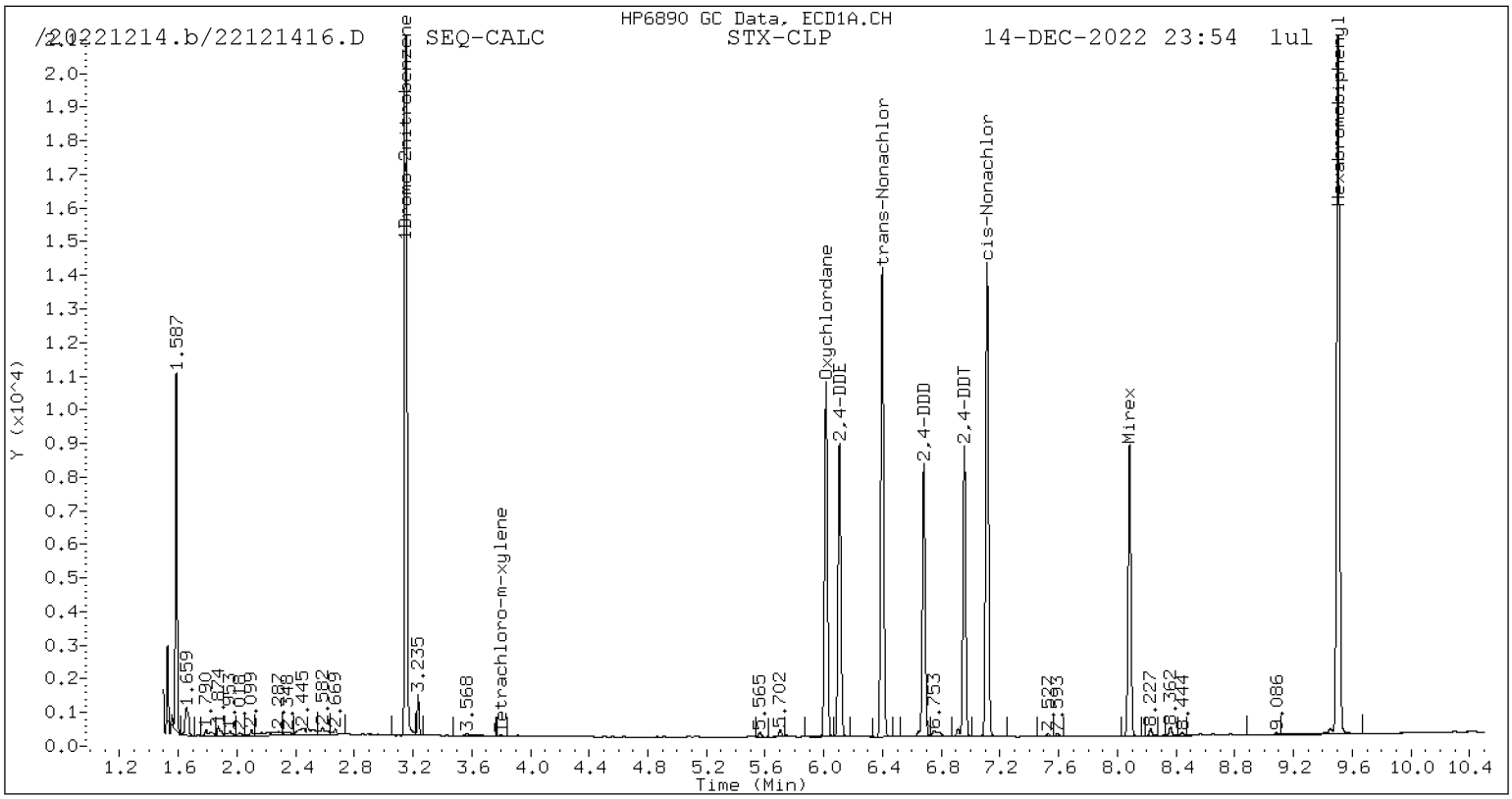
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	674573	-5.1
Hexabromobiphenyl	641833	613787	-4.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1027697	-2.9
Hexabromobiphenyl	797125	784673	-1.6

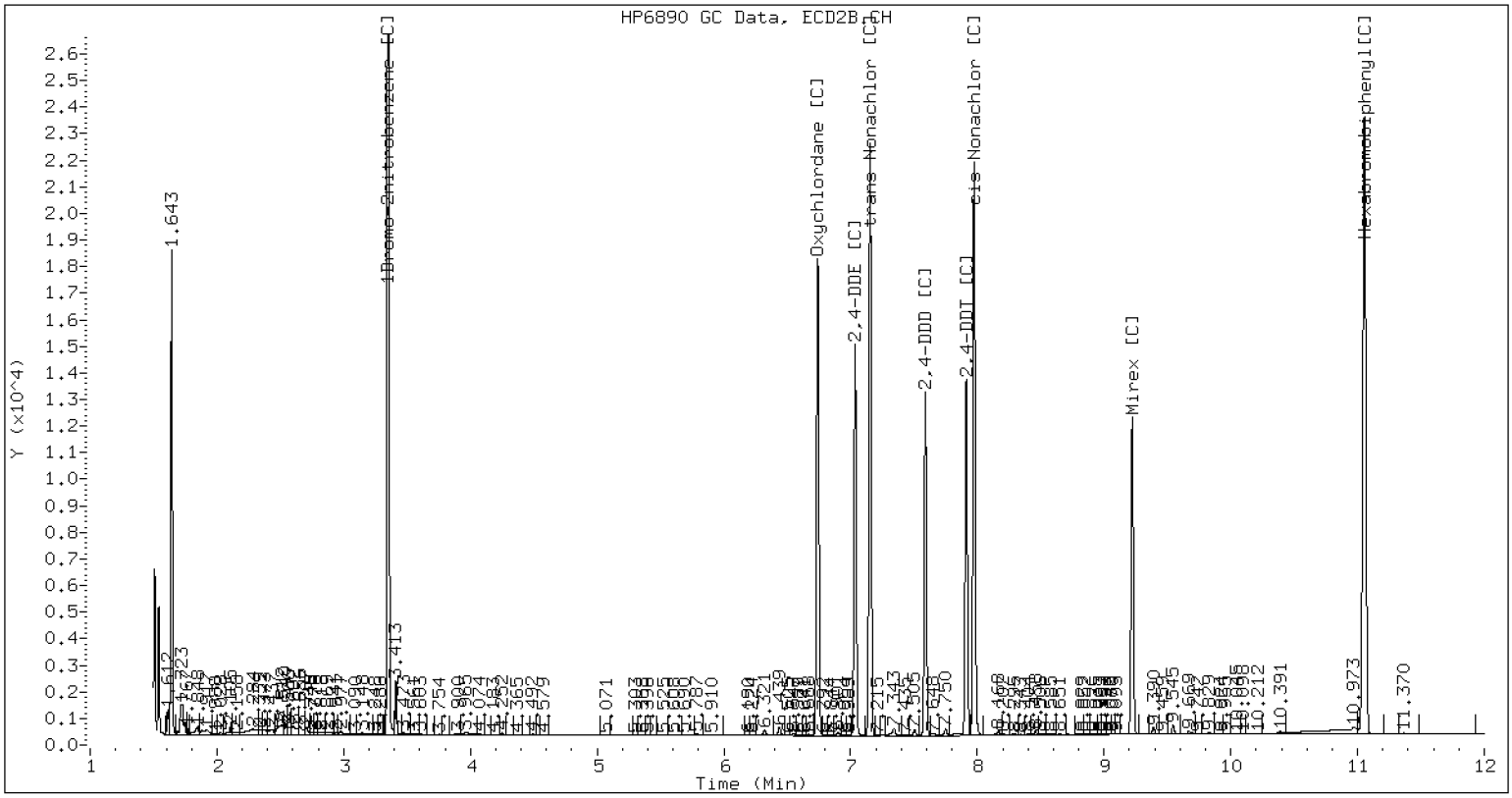
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121416.D SEQ-CALC CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121416.D
Data file 2: /20221214.b/B20221214.b/22121416.D
Method: \20221214.b\PEST.m
Compound Sublist: WND.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CALC
Client ID:
Injection Date: 14-DEC-2022 23:54
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121417.D
Data file 2: /20221214.b/B20221214.b/22121417.D
Method: \20221214.b\PEST.m
Compound Sublist: WND.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CALD
Client ID:
Injection Date: 15-DEC-2022 00:12
Report Date: 12/16/2022 15:19
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
6.014	-0.000	544254	6.741	-0.000	856443	75.85	75.73	0.2	Oxychlordane
6.106	-0.000	438313	7.036	-0.000	677072	73.99	73.11	1.2	2,4-DDE
6.397	-0.000	704675	7.155	0.000	1067899	75.09	76.94	2.4	trans-Nonachlor
6.681	0.000	393654	7.591	0.000	594311	74.70	74.86	0.2	2,4-DDD
6.956	-0.001	430636	7.914	0.000	618740	75.63	75.68	0.1	2,4-DDT
7.112	-0.000	688257	7.975	0.000	1018624	75.31	77.19	2.5	cis-Nonachlor
8.082	-0.001	426177	9.223	0.000	573947	74.97	74.78	0.2	Mirex
3.800	-0.028	2109	----			0.23	0.00	---	Tetrachloro-m-xylene
----			----			0.00	0.00	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

˜ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

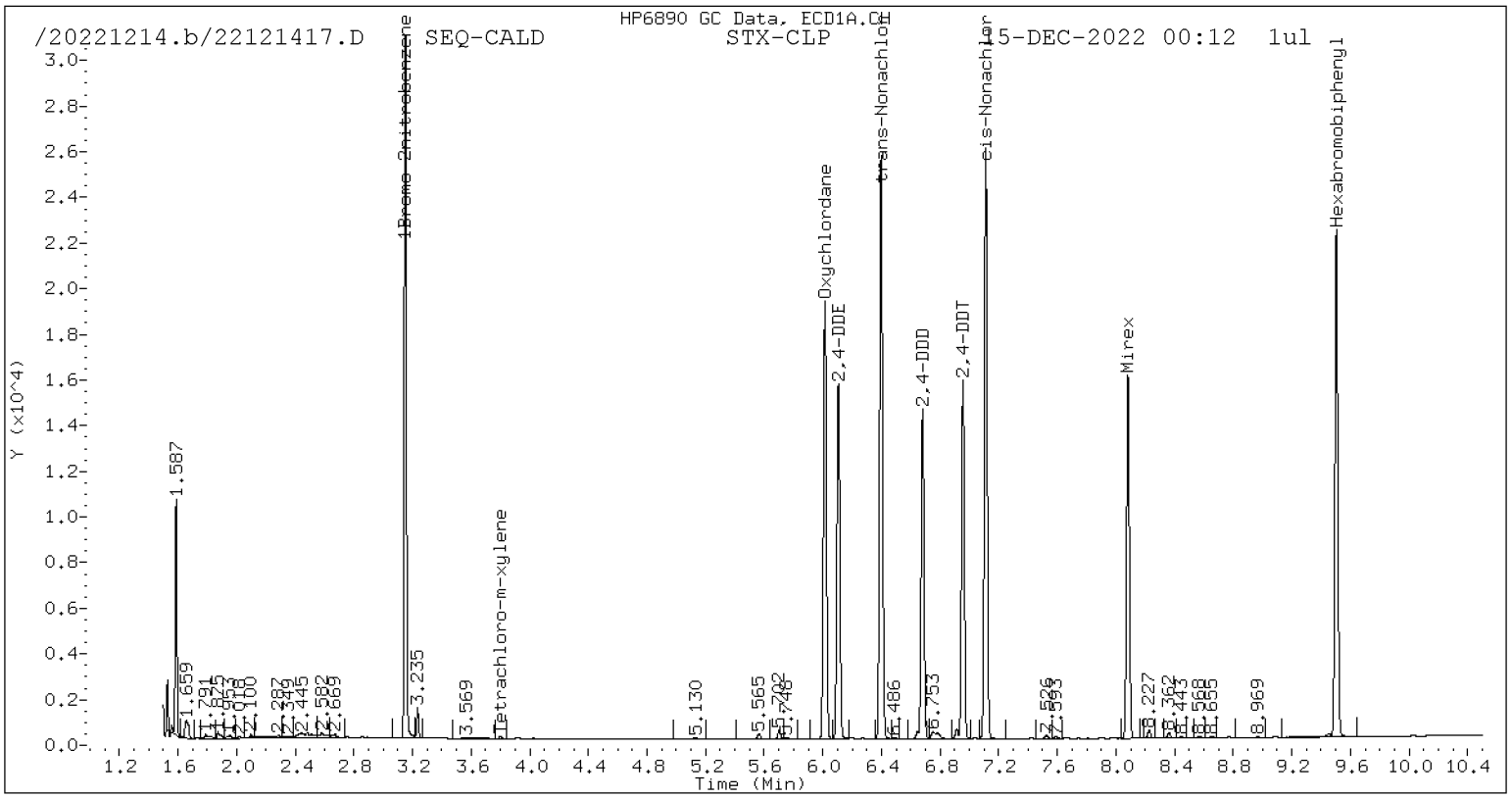
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	664375	-6.5
Hexabromobiphenyl	641833	603504	-6.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1015544	-4.1
Hexabromobiphenyl	797125	775630	-2.7

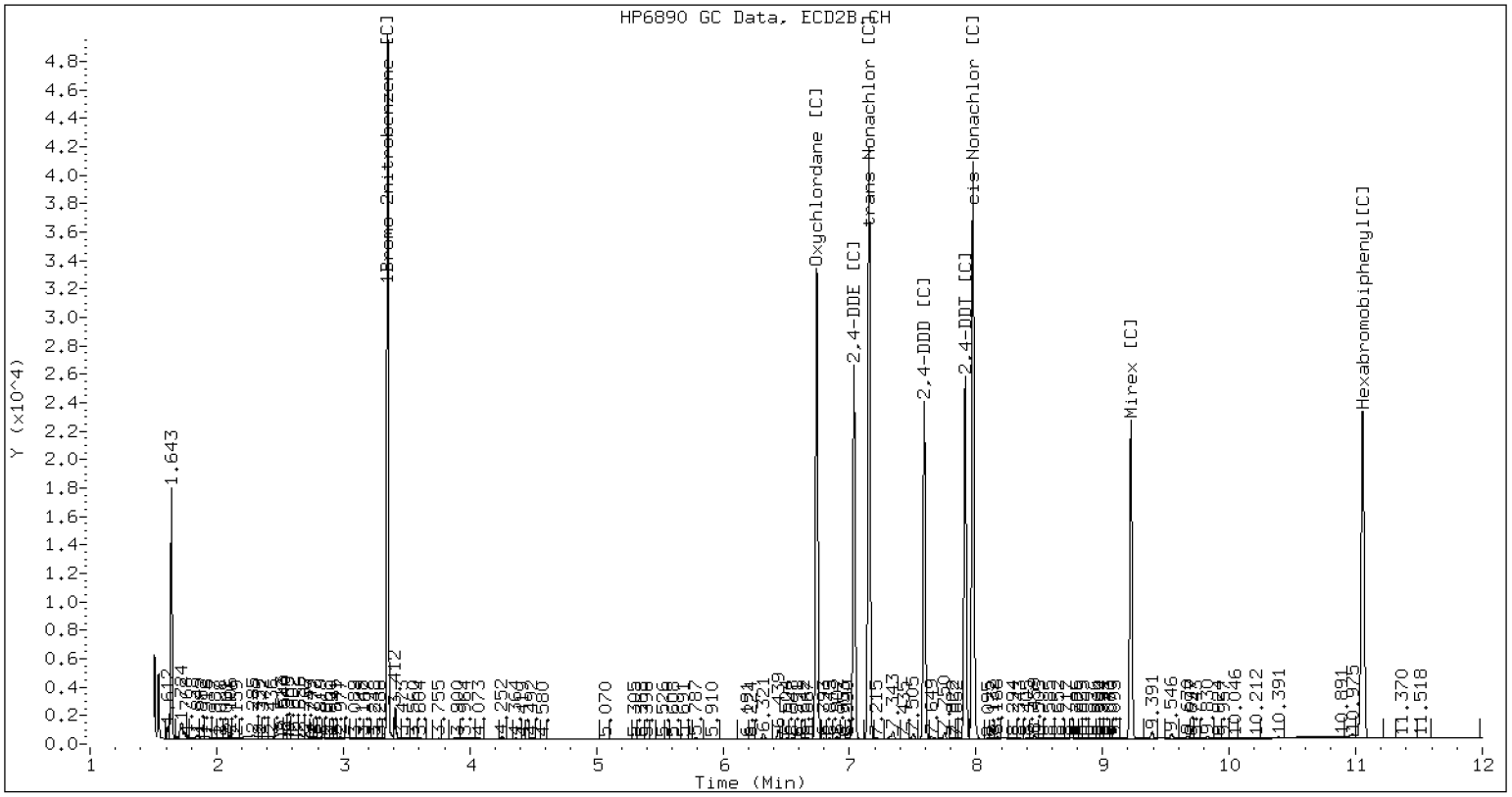
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121417.D SEQ-CALD CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121417.D
Data file 2: /20221214.b/B20221214.b/22121417.D
Method: \20221214.b\PEST.m
Compound Sublist: WND.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CALD
Client ID:
Injection Date: 15-DEC-2022 00:12
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121418.D
Data file 2: /20221214.b/B20221214.b/22121418.D
Method: \20221214.b\PEST.m
Compound Sublist: WND.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CALE
Client ID:
Injection Date: 15-DEC-2022 00:30
Report Date: 12/16/2022 15:19
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
6.014	0.000	1020828	6.741	0.000	1630330	140.48	142.04	1.1	Oxychlordane
6.106	-0.000	801828	7.036	0.000	1240933	133.65	132.03	1.2	2,4-DDE
6.397	0.000	1327091	7.155	0.000	2047915	139.63	146.04	4.5	trans-Nonachlor
6.680	-0.000	733651	7.591	0.000	1118552	137.46	139.45	1.4	2,4-DDD
6.956	-0.001	794021	7.913	0.000	1163676	137.69	140.88	2.3	2,4-DDT
7.112	-0.000	1301975	7.975	0.000	1956215	140.68	146.73	4.2	cis-Nonachlor
8.082	-0.001	815059	9.223	0.000	1108848	141.57	143.01	1.0	Mirex
3.800	-0.028	3997	----			0.43	0.00	---	Tetrachloro-m-xylene
----			10.471	0.004	3393	0.00	0.39	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

˜ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

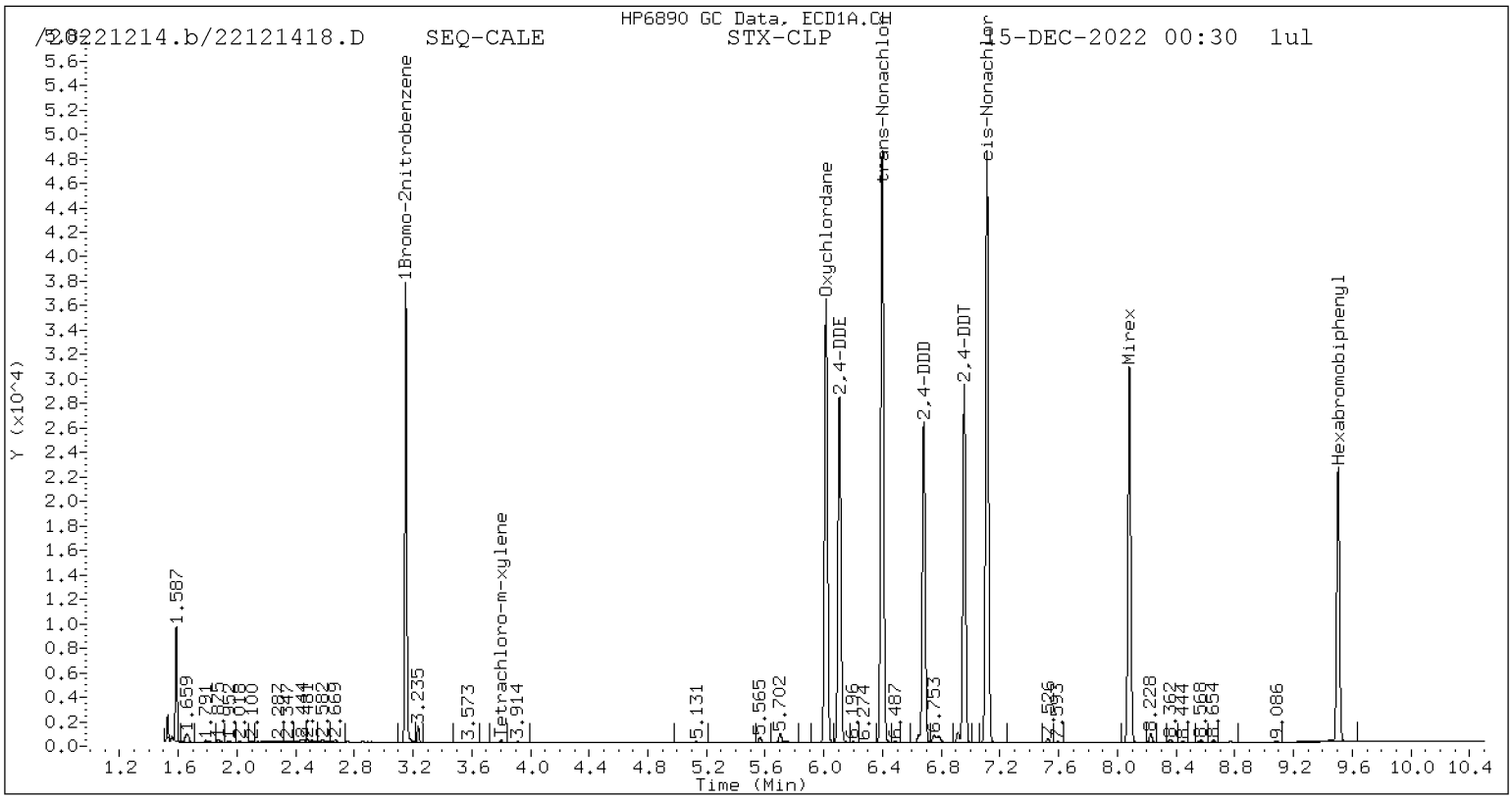
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	675789	-4.9
Hexabromobiphenyl	641833	611199	-4.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1030648	-2.7
Hexabromobiphenyl	797125	783631	-1.7

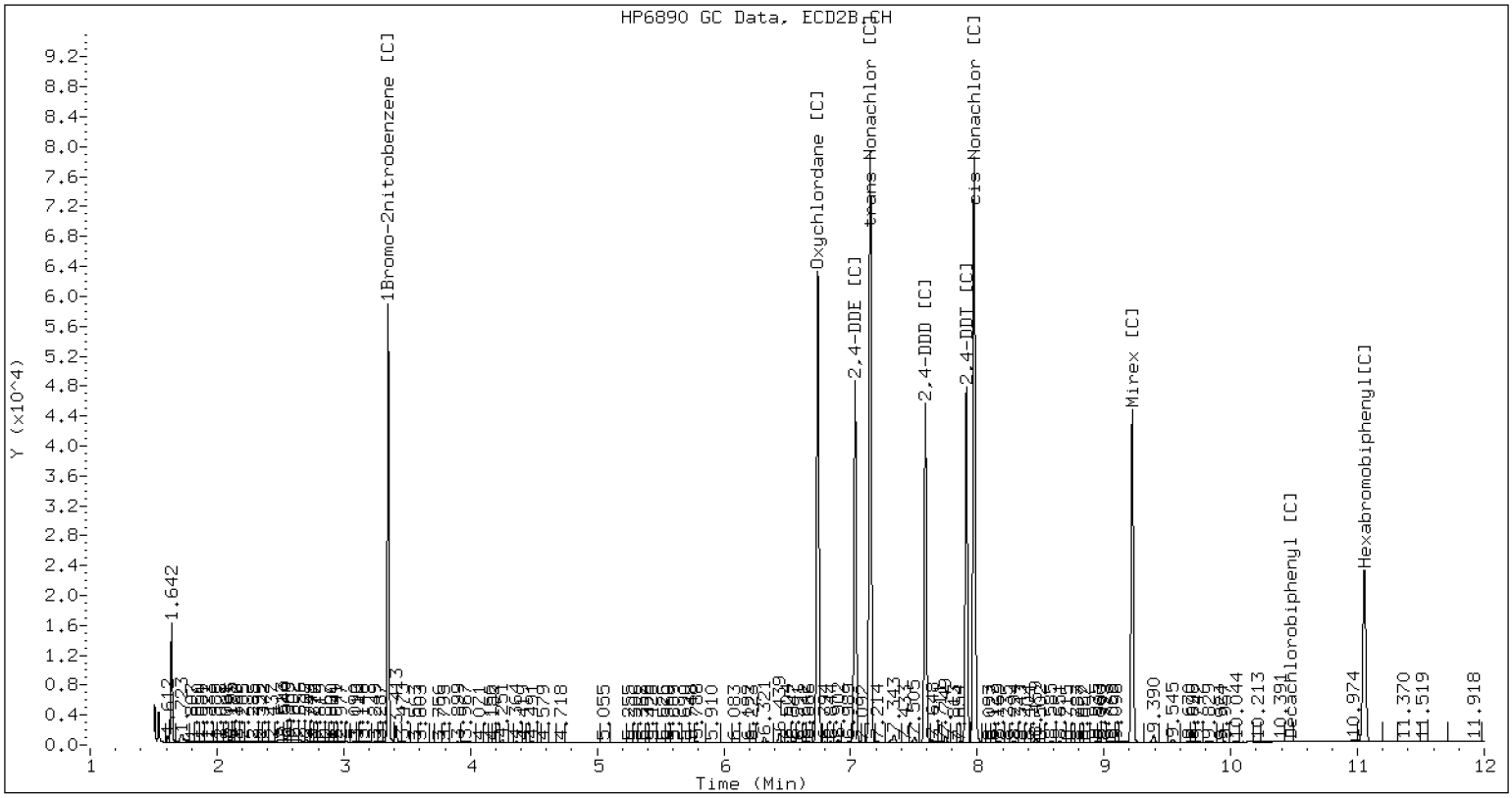
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121418.D SEQ-CALE CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121418.D
Data file 2: /20221214.b/B20221214.b/22121418.D
Method: \20221214.b\PEST.m
Compound Sublist: WND.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CALE
Client ID:
Injection Date: 15-DEC-2022 00:30
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121419.D
Data file 2: /20221214.b/B20221214.b/22121419.D
Method: \20221214.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-SCV1
Client ID:
Injection Date: 15-DEC-2022 00:48
Report Date: 12/16/2022 15:19
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.342	0.000	643235	4.860	-0.000	1047709	49.66	51.22	3.1	alpha-BHC
4.726	-0.000	242617	5.337	0.000	386388	48.66	49.69	2.1	beta-BHC
4.909	0.000	554797	5.692	0.001	897343	52.41	53.26	1.6	delta-BHC
4.646	0.001	573983	5.258	0.000	915596	51.11	52.75	3.1	gamma-BHC (Lindane)
5.130	0.000	495138	5.788	0.001	804002	49.55	51.13	3.1	Heptachlor
5.454	0.000	526615	6.191	0.000	842909	47.03	46.95	0.2	Aldrin
6.130	0.000	469481	6.846	0.000	724932	48.36	48.83	1.0	Heptachlor epoxide b
6.573	0.000	423102	7.289	-0.000	632890	47.49	48.37	1.8	Endosulfan I
6.832	0.000	478299	7.583	0.000	724854	49.97	50.14	0.3	Dieldrin
6.489	0.000	448741	7.371	0.000	670346	50.49	50.56	0.1	4,4'-DDE
7.082	0.001	396143	7.907	0.000	551004	50.36	50.73	0.7	Endrin
7.318	0.001	350431	8.118	0.001	537104	49.49	48.24	2.6	Endosulfan II
7.136	0.001	355688	7.977	0.001	525927	50.19	49.78	0.8	4,4'-DDD
8.180	0.000	347949	8.716	0.001	502438	51.75	51.39	0.7	Endosulfan sulfate
7.428	0.001	368644	8.295	-0.000	524685	51.48	51.45	0.1	4,4'-DDT
7.913	0.001	174306	8.935	-0.001	238791	54.93	52.91	3.7	Methoxychlor
8.454	0.000	394474	9.240	-0.000	540431	51.21	51.18	0.1	Endrin ketone
7.746	0.001	316262	8.448	0.000	449269	56.00	57.20	2.1	Endrin aldehyde
6.271	0.000	490842	7.056	0.000	748350	49.78	50.55	1.5	trans-Chlordane
6.417	0.001	469513	7.216	0.000	700871	47.47	48.39	1.9	cis-Chlordane
----			2.512	0.011	11364	0.00	0.59	---	Hexachlorobutadiene
----			4.719	0.001	634	0.00	0.03	---	Hexachlorobenzene
----			4.220	-0.000	1724	0.00	0.12	---	Tetrachloro-m-xylene
----			10.468	0.001	643	0.00	0.08	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

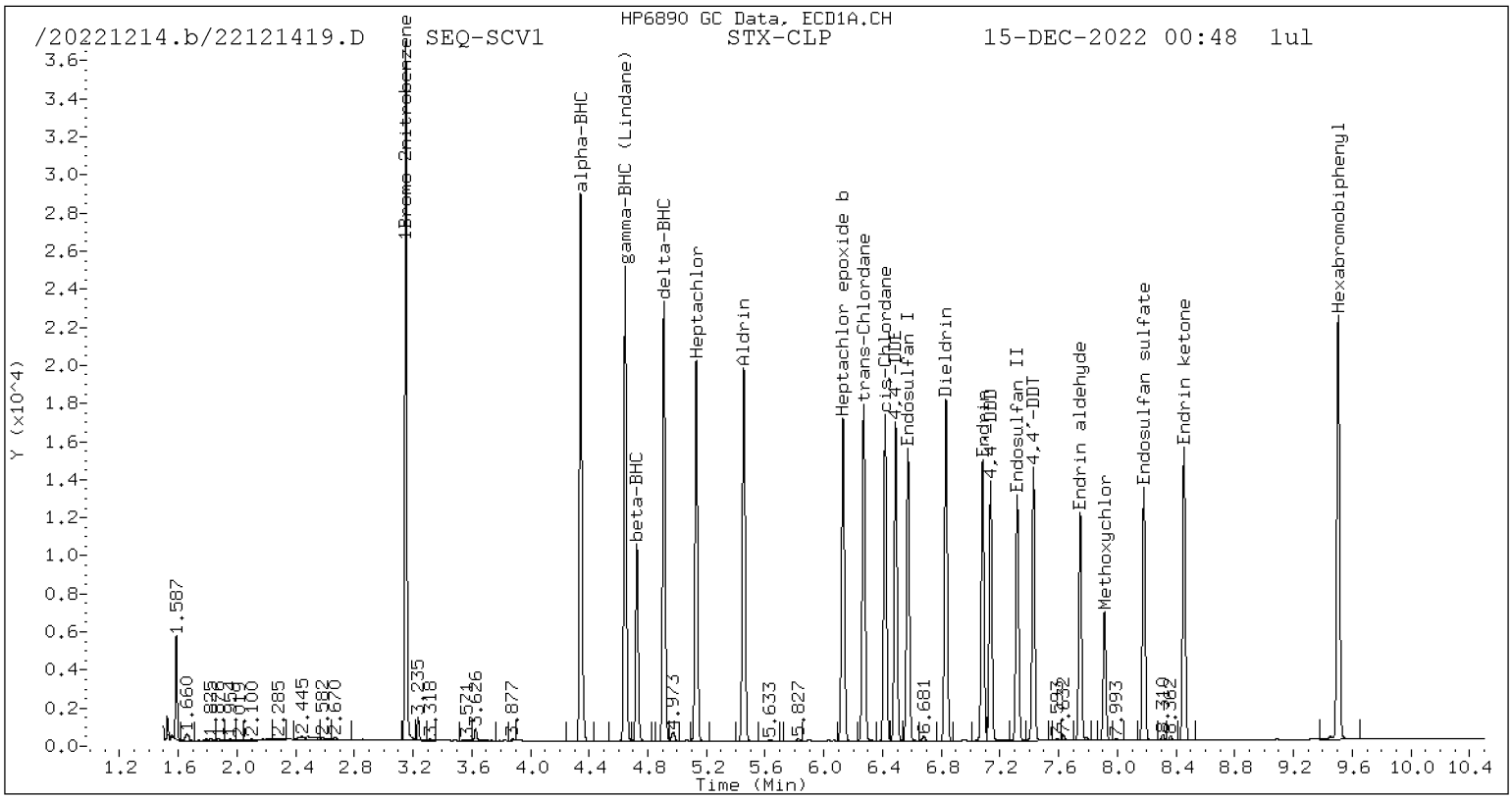
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	672755	-5.3
Hexabromobiphenyl	641833	599983	-6.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1020655	-3.6
Hexabromobiphenyl	797125	763949	-4.2

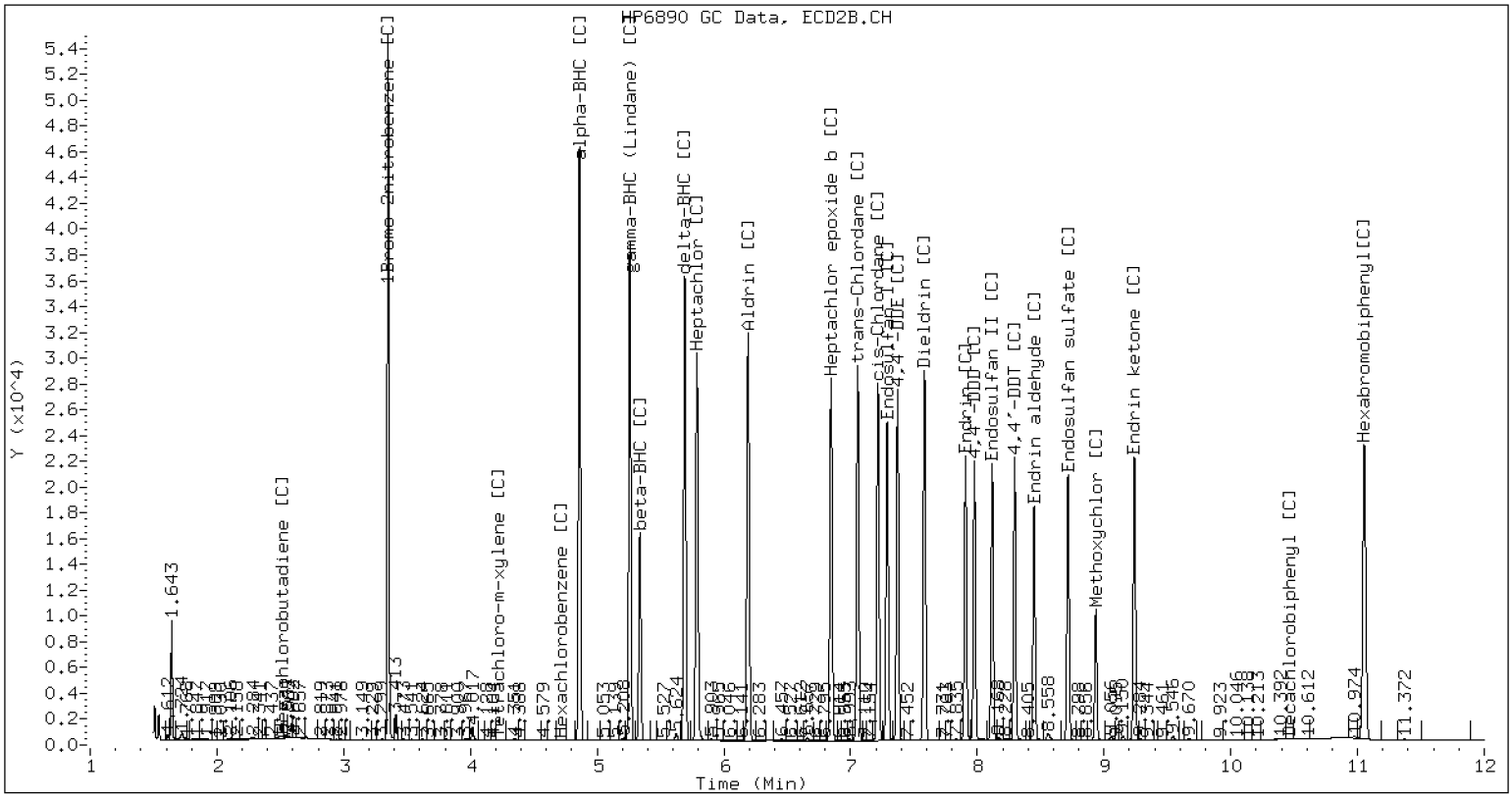
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121419.D SEQ-SCV1 CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121419.D
Data file 2: /20221214.b/B20221214.b/22121419.D
Method: \20221214.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-SCV1
Client ID:
Injection Date: 15-DEC-2022 00:48
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121420.D
Data file 2: /20221214.b/B20221214.b/22121420.D
Method: \20221214.b\PEST.m
Compound Sublist: WND.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-SCV2
Client ID:
Injection Date: 15-DEC-2022 01:06
Report Date: 12/16/2022 15:20
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
6.014	-0.000	374516	6.741	0.000	591348	51.08	50.07	2.0	Oxychlordane
6.106	-0.000	261097	7.036	-0.000	403824	43.13	41.76	3.2	2,4-DDE
6.397	-0.000	444133	7.155	-0.000	657777	46.31	45.91	0.9	trans-Nonachlor
6.681	0.000	222534	7.591	0.000	334706	41.32	40.84	1.2	2,4-DDD
6.956	-0.001	262722	7.914	0.000	382016	45.15	45.26	0.2	2,4-DDT
7.111	-0.001	455894	7.975	0.000	655718	48.82	48.13	1.4	cis-Nonachlor
8.081	-0.001	256593	9.223	0.000	343173	44.17	43.31	2.0	Mirex
----			----			0.00	0.00	---	Tetrachloro-m-xylene
----			----			0.00	0.00	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

˜ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

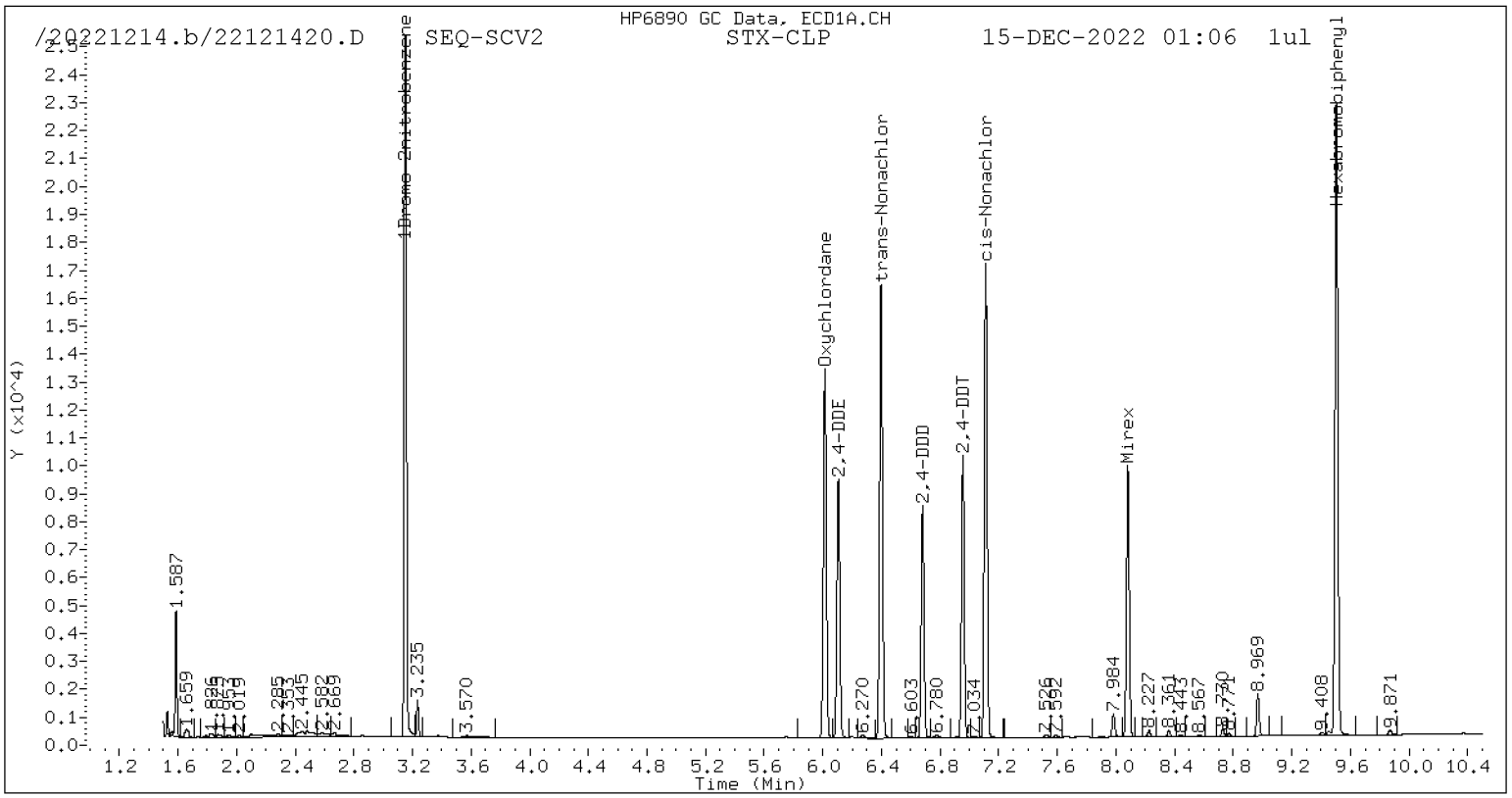
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	687052	-3.3
Hexabromobiphenyl	641833	616730	-3.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1060438	0.2
Hexabromobiphenyl	797125	800740	0.5

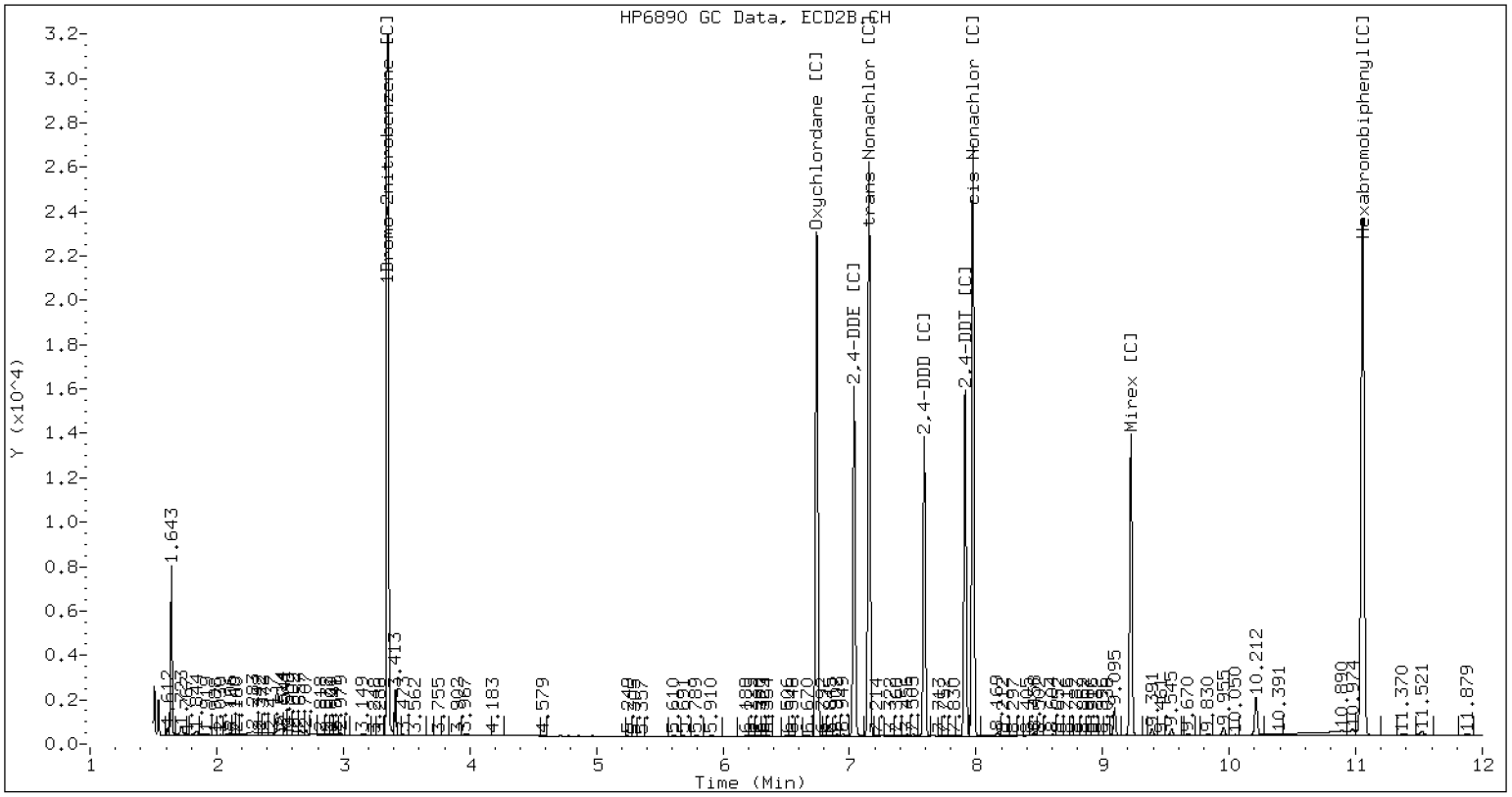
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121420.D SEQ-SCV2 CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121420.D
Data file 2: /20221214.b/B20221214.b/22121420.D
Method: \20221214.b\PEST.m
Compound Sublist: WND.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-SCV2
Client ID:
Injection Date: 15-DEC-2022 01:06
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121421.D
Data file 2: /20221214.b/B20221214.b/22121421.D
Method: \20221214.b\PEST.m
Compound Sublist: TECHCHLOR.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL1A
Client ID:
Injection Date: 15-DEC-2022 01:24
Report Date: 12/16/2022 15:20
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
----			4.215	-0.006	361	0.00	0.02	---	Tetrachloro-m-xylene
----			----			0.00	0.00	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	601512	-15.4
Hexabromobiphenyl	641833	690103	7.5

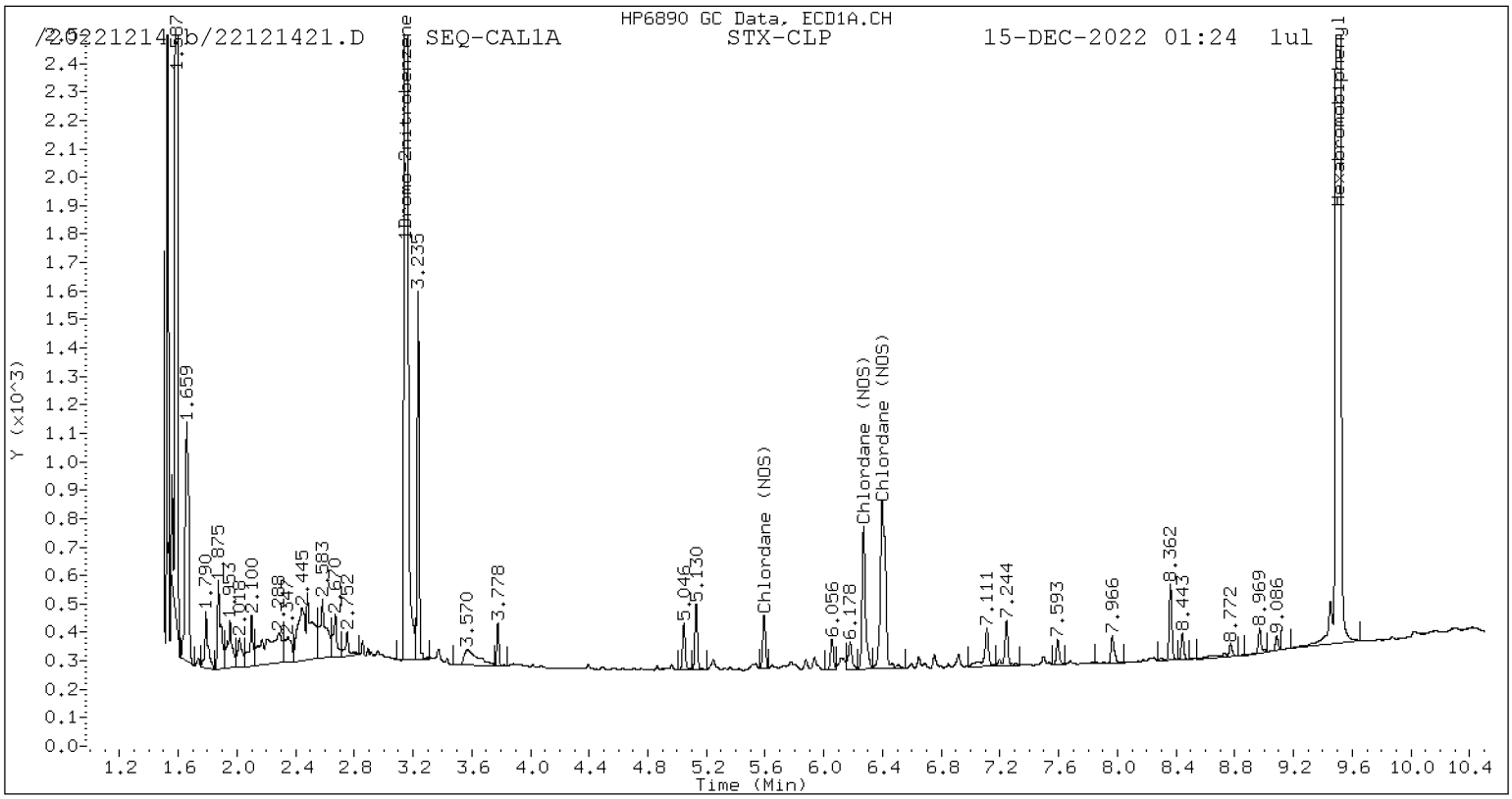
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	776759	-26.6
Hexabromobiphenyl	797125	1058847	32.8

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

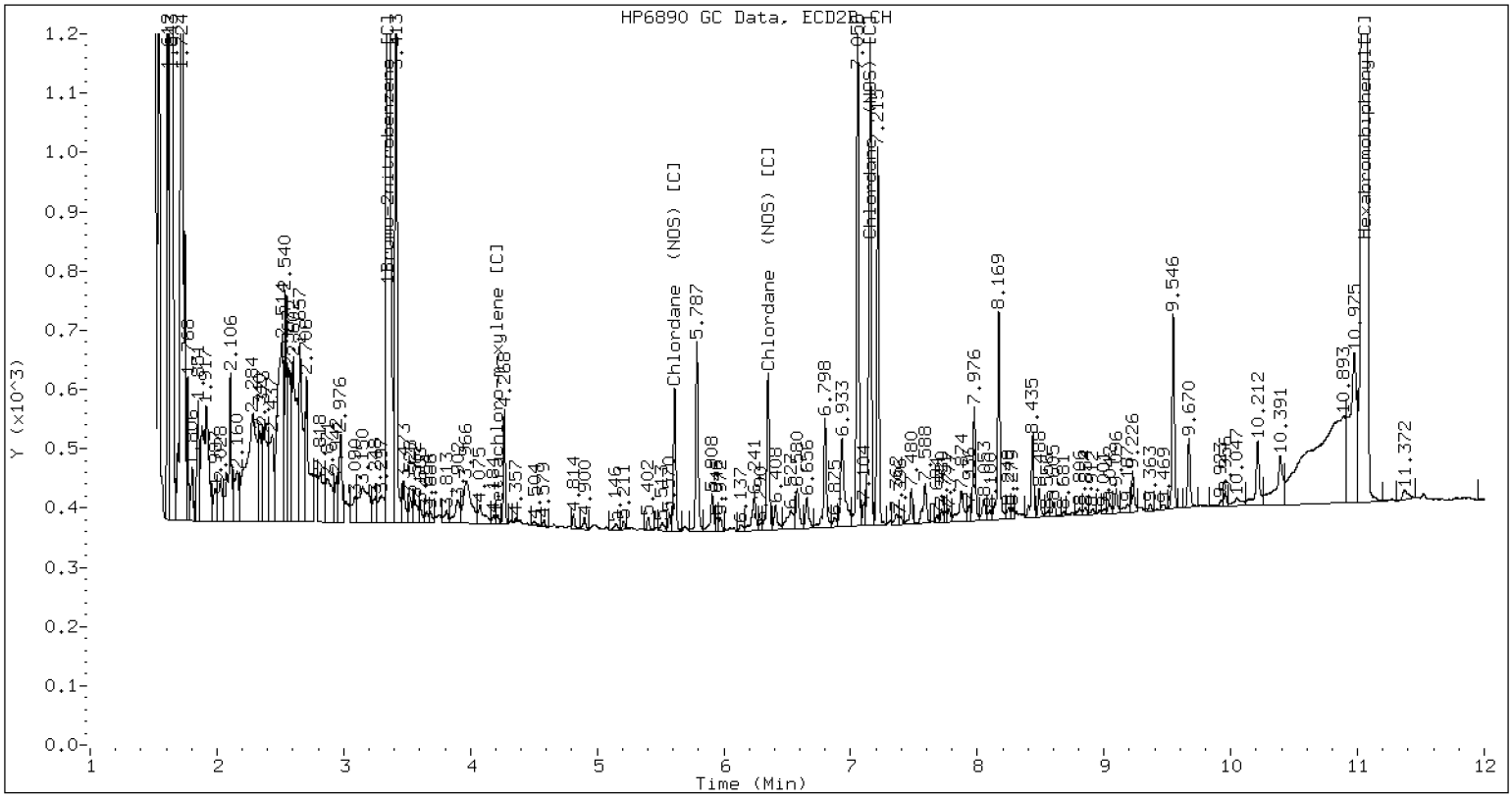
	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Chlordane (NOS)	1	5.593	0.000	5054	13.1	1	5.612	-0.000	6415	12.8
Chlordane (NOS)	2	6.271	-0.000	15913	12.4	2	6.349	-0.000	7689	13.7
Chlordane (NOS)	3	6.399	0.000	29332	13.1	3	7.155	-0.001	23386	12.3
Total STX-CLPAve (3 peaks): 12.882						Total CLP2Ave (3 peaks): 12.916			RPD = 0	
Corrected Ave (3 peaks): 12.882						Corrected Ave (3 peaks): 12.916			RPD = 0	

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121421.D SEQ-CAL1A CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121421.D
Data file 2: /20221214.b/B20221214.b/22121421.D
Method: \20221214.b\PEST.m
Compound Sublist: TECHCHLOR.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL1A
Client ID:
Injection Date: 15-DEC-2022 01:24
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121422.D
Data file 2: /20221214.b/B20221214.b/22121422.D
Method: \20221214.b\PEST.m
Compound Sublist: TECHCHLOR.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL2A
Client ID:
Injection Date: 15-DEC-2022 01:42
Report Date: 12/16/2022 15:20
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
----			----			0.00	0.00	---	Tetrachloro-m-xylene
----			----			0.00	0.00	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	611280	-14.0
Hexabromobiphenyl	641833	704720	9.8

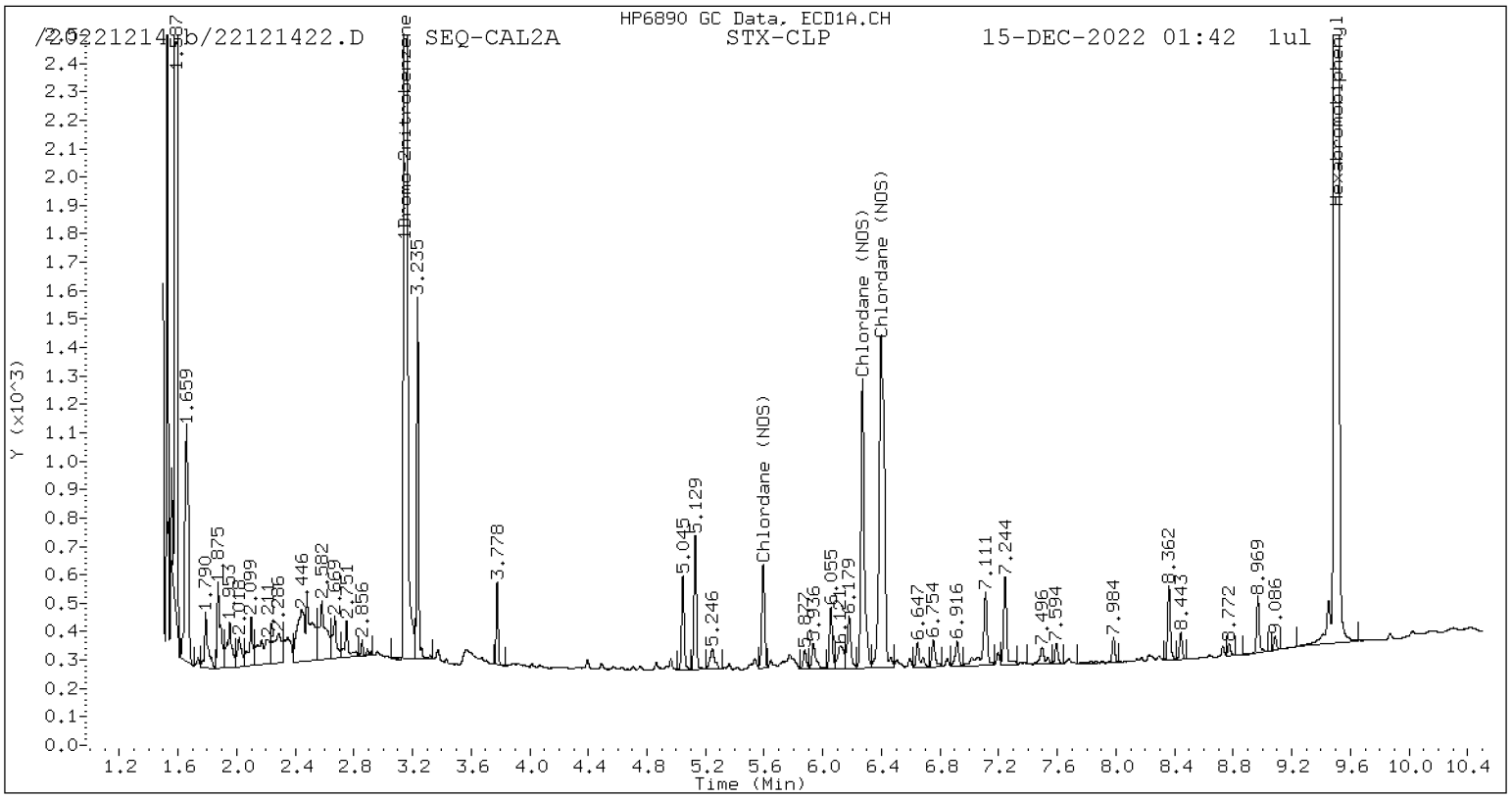
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	793365	-25.1
Hexabromobiphenyl	797125	1083049	35.9

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

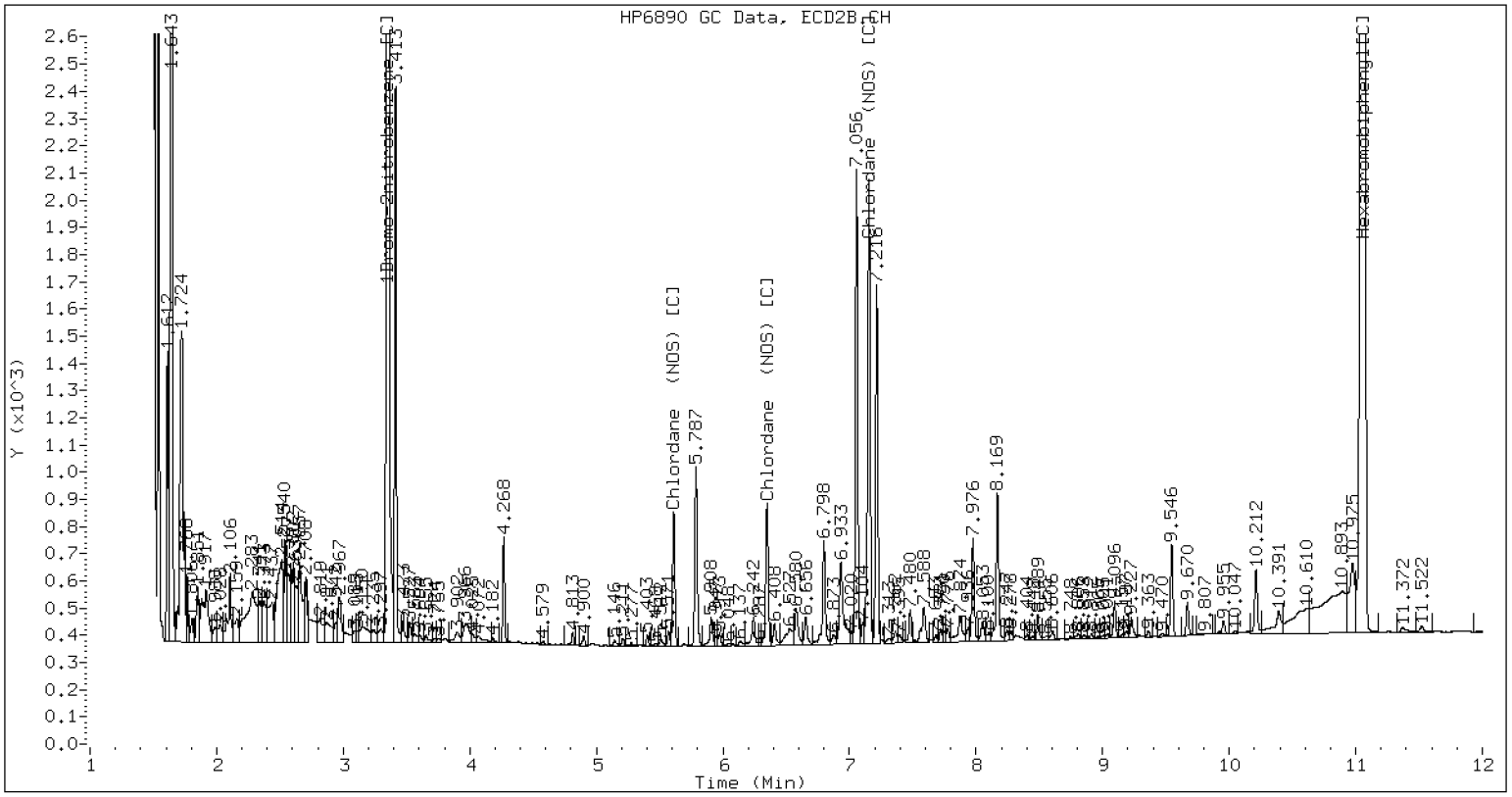
		STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount	
Chlordane (NOS)	1	5.593	0.000	10046	25.5	1	5.612	-0.000	12488	24.4	
Chlordane (NOS)	2	6.271	-0.000	32715	25.0	2	6.348	-0.001	15023	26.1	
Chlordane (NOS)	3	6.399	0.000	58016	25.4	3	7.155	-0.000	48236	24.8	
Total STX-CLPAve (3 peaks): 25.309						Total CLP2Ave (3 peaks): 25.077				RPD = 1	
Corrected Ave (3 peaks): 25.309						Corrected Ave (3 peaks): 25.077				RPD = 1	

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121422.D SEQ-CAL2A CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121422.D
Data file 2: /20221214.b/B20221214.b/22121422.D
Method: \20221214.b\PEST.m
Compound Sublist: TECHCHLOR.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL2A
Client ID:
Injection Date: 15-DEC-2022 01:42
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121423.D
Data file 2: /20221214.b/B20221214.b/22121423.D
Method: \20221214.b\PEST.m
Compound Sublist: TECHCHLOR.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL3A
Client ID:
Injection Date: 15-DEC-2022 01:59
Report Date: 12/16/2022 15:20
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
----			----			0.00	0.00	---	Tetrachloro-m-xylene
----			----			0.00	0.00	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	592438	-16.6
Hexabromobiphenyl	641833	685225	6.8

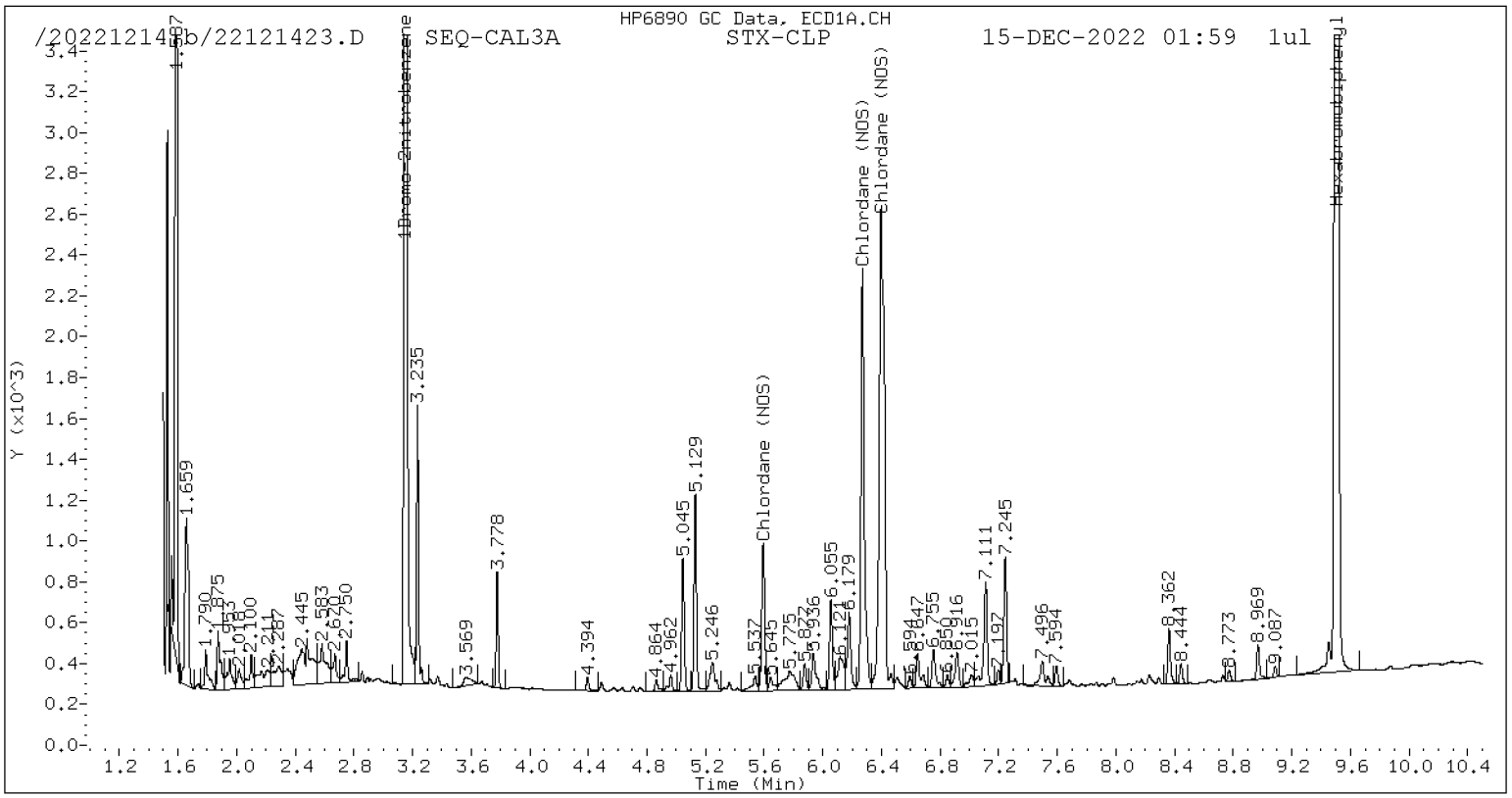
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	769029	-27.4
Hexabromobiphenyl	797125	1054742	32.3

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

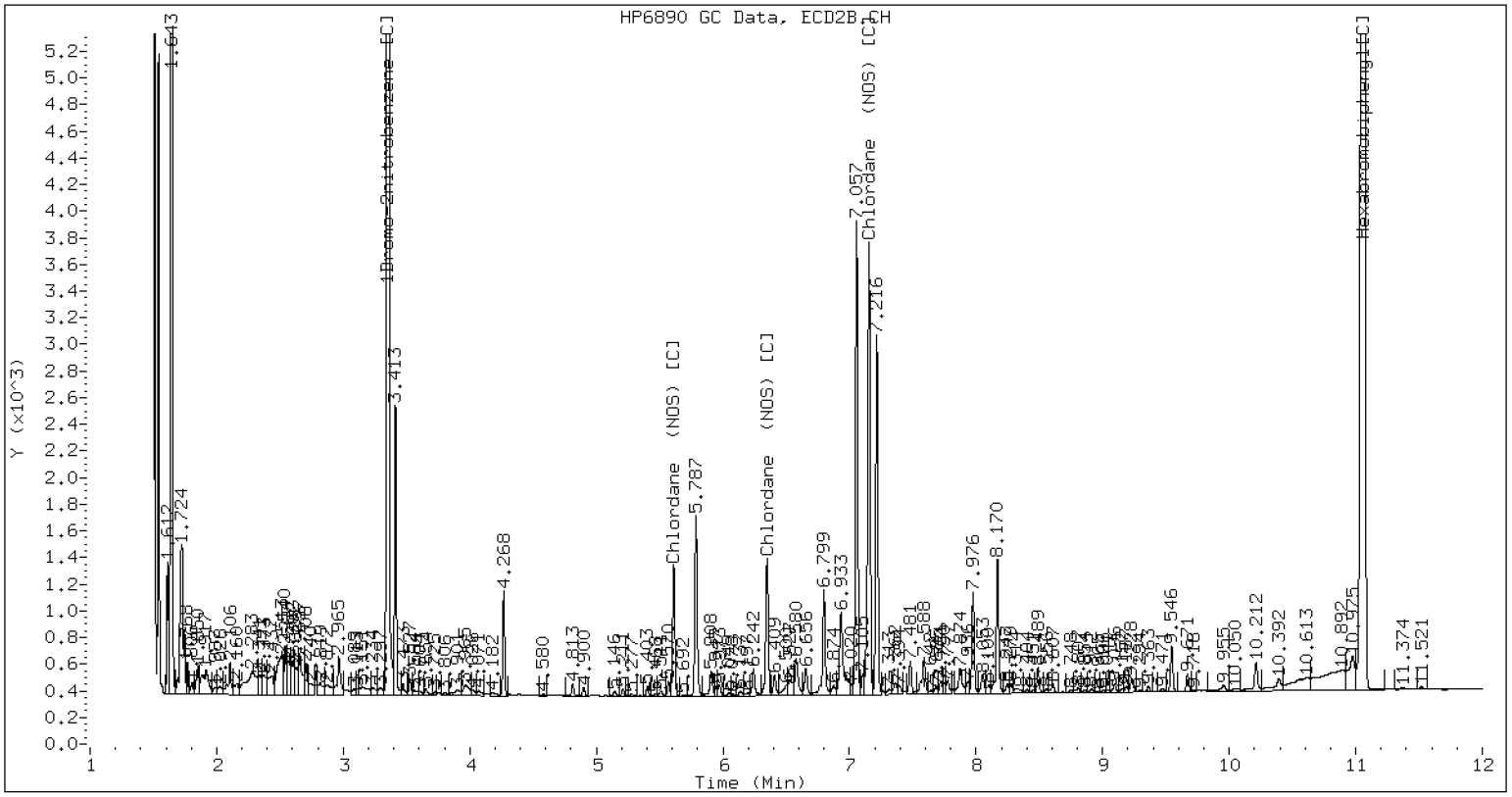
		STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount	
Chlordane (NOS)	1	5.593	0.001	20502	53.5	1	5.612	-0.000	24816	49.7	
Chlordane (NOS)	2	6.271	-0.000	66320	52.2	2	6.349	0.000	29114	51.9	
Chlordane (NOS)	3	6.399	0.000	116820	52.6	3	7.155	-0.000	98401	51.9	
Total STX-CLPAve (3 peaks): 52.767						Total CLP2Ave (3 peaks): 51.179				RPD = 3	
Corrected Ave (3 peaks): 52.767						Corrected Ave (3 peaks): 51.179				RPD = 3	

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121423.D SEQ-CAL3A CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121423.D
Data file 2: /20221214.b/B20221214.b/22121423.D
Method: \20221214.b\PEST.m
Compound Sublist: TECHCHLOR.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL3A
Client ID:
Injection Date: 15-DEC-2022 01:59
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121424.D
Data file 2: /20221214.b/B20221214.b/22121424.D
Method: \20221214.b\PEST.m
Compound Sublist: TECHCHLOR.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL4A
Client ID:
Injection Date: 15-DEC-2022 02:17
Report Date: 12/16/2022 15:20
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
----			----			0.00	0.00	---	Tetrachloro-m-xylene
----			----			0.00	0.00	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	584808	-17.7
Hexabromobiphenyl	641833	675665	5.3

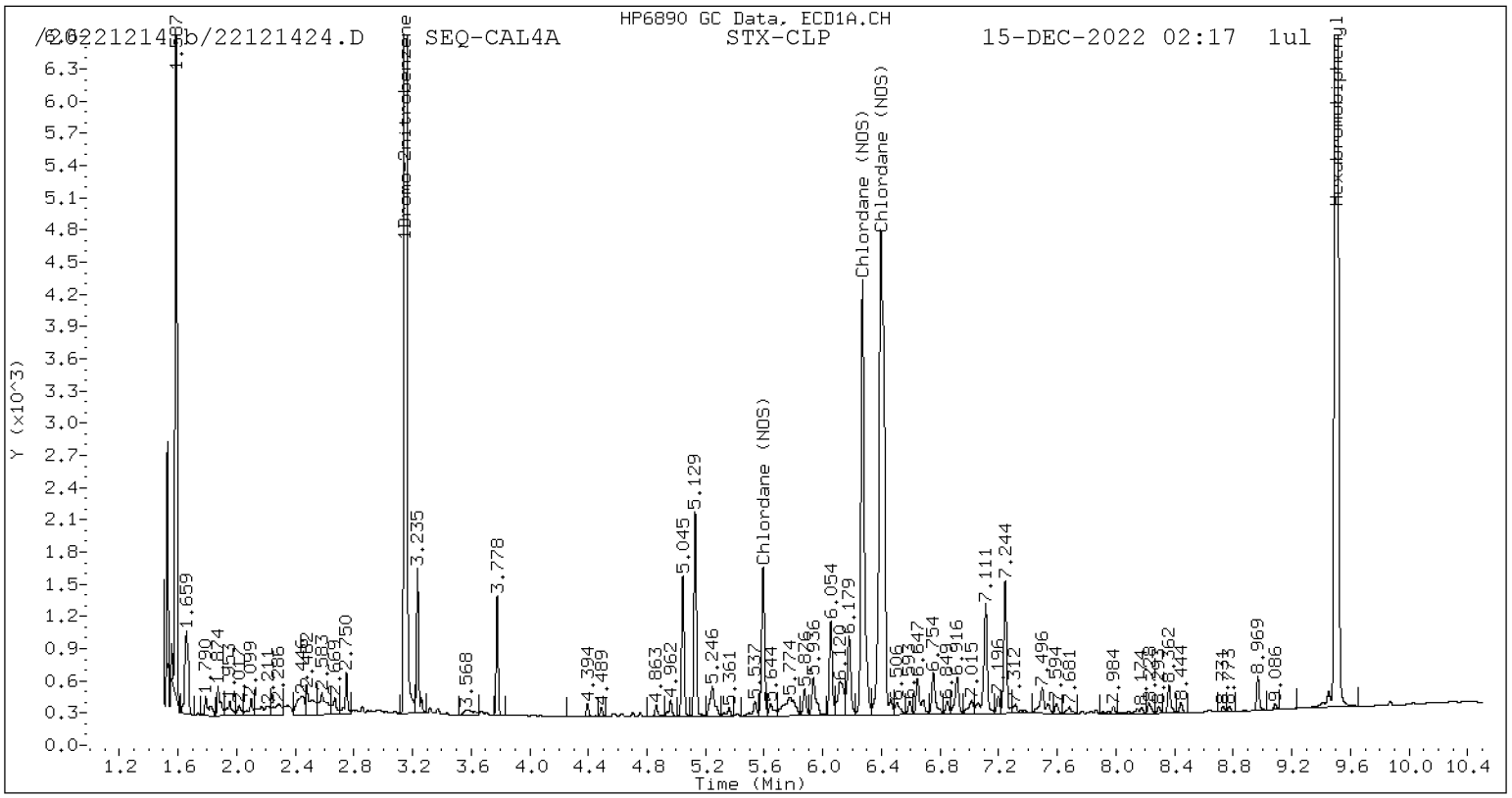
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	758204	-28.4
Hexabromobiphenyl	797125	1039488	30.4

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

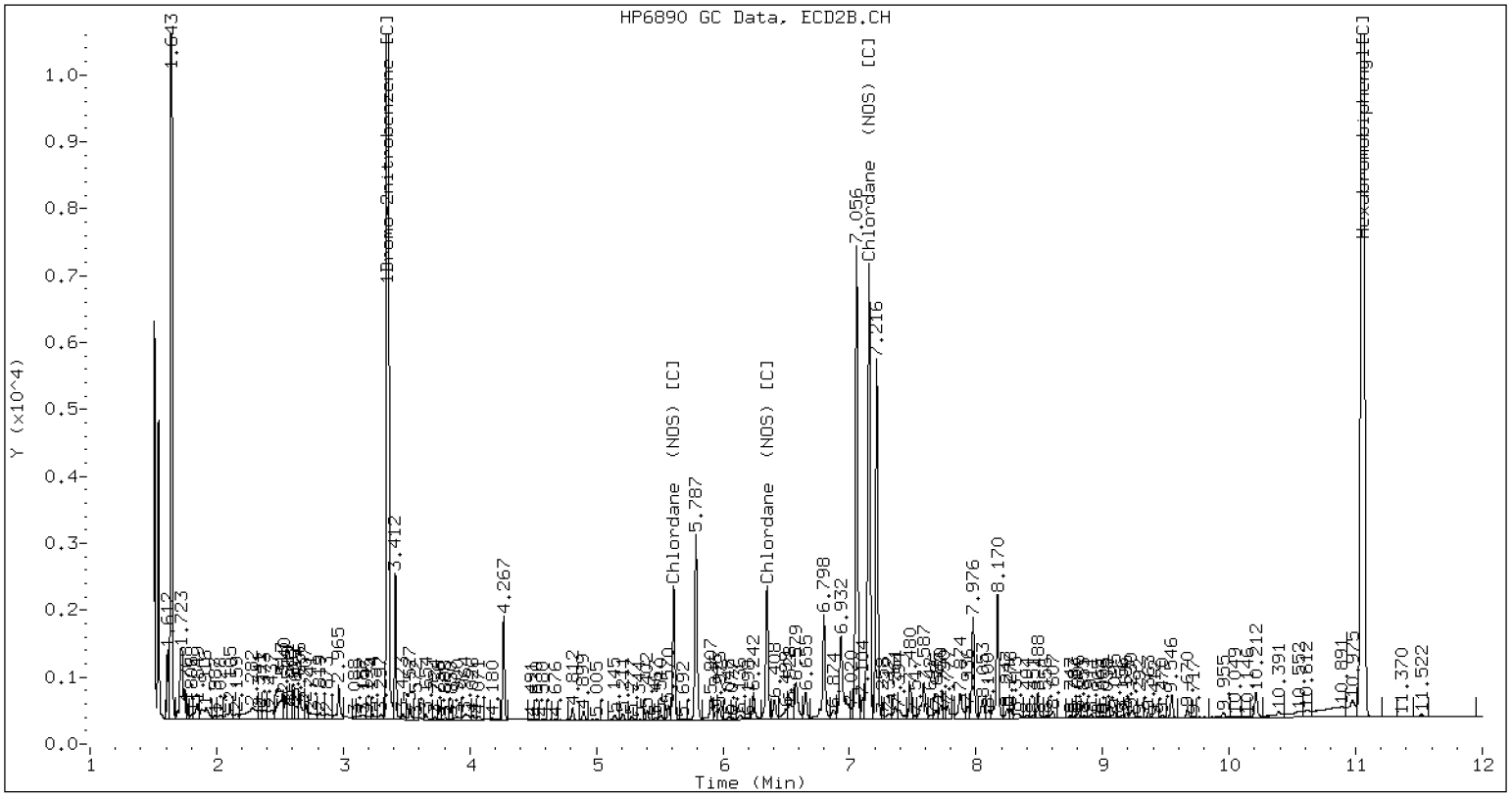
		STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount	
Chlordane (NOS)	1	5.593	-0.000	39696	105.0	1	5.611	-0.001	49889	101.4	
Chlordane (NOS)	2	6.271	-0.000	131726	105.2	2	6.348	-0.001	56608	102.5	
Chlordane (NOS)	3	6.398	-0.001	229050	104.6	3	7.155	-0.000	195665	104.7	
Total STX-CLPAve (3 peaks): 104.931						Total CLP2Ave (3 peaks): 102.854				RPD = 2	
Corrected Ave (3 peaks): 104.931						Corrected Ave (3 peaks): 102.854				RPD = 2	

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121424.D SEQ-CAL4A CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121424.D
Data file 2: /20221214.b/B20221214.b/22121424.D
Method: \20221214.b\PEST.m
Compound Sublist: TECHCHLOR.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL4A
Client ID:
Injection Date: 15-DEC-2022 02:17
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121425.D
Data file 2: /20221214.b/B20221214.b/22121425.D
Method: \20221214.b\PEST.m
Compound Sublist: TECHCHLOR.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL5A
Client ID:
Injection Date: 15-DEC-2022 02:35
Report Date: 12/16/2022 15:20
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
----			----			0.00	0.00	---	Tetrachloro-m-xylene
----			----			0.00	0.00	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	612592	-13.8
Hexabromobiphenyl	641833	705251	9.9

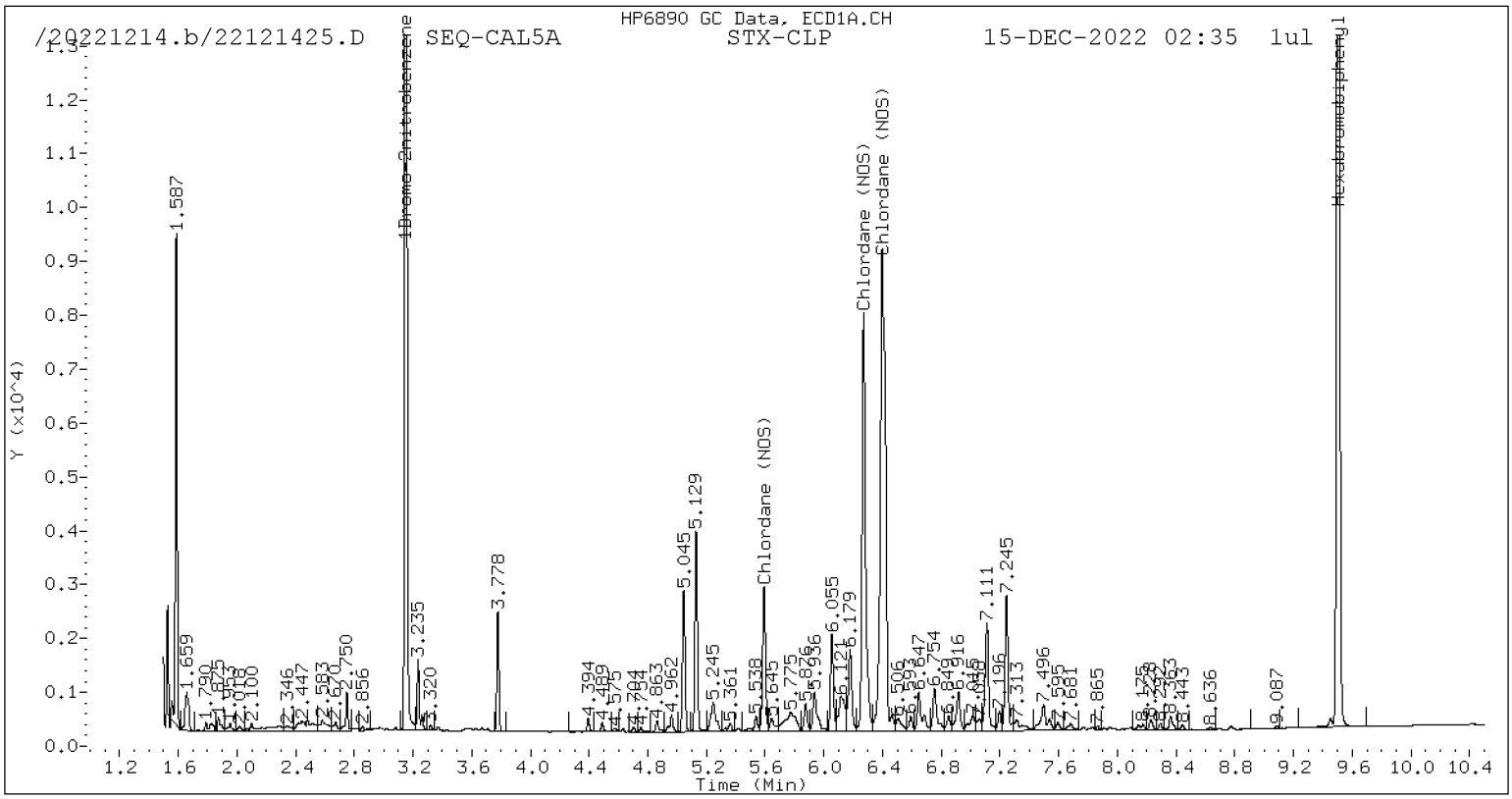
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	792856	-25.1
Hexabromobiphenyl	797125	1079718	35.5

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

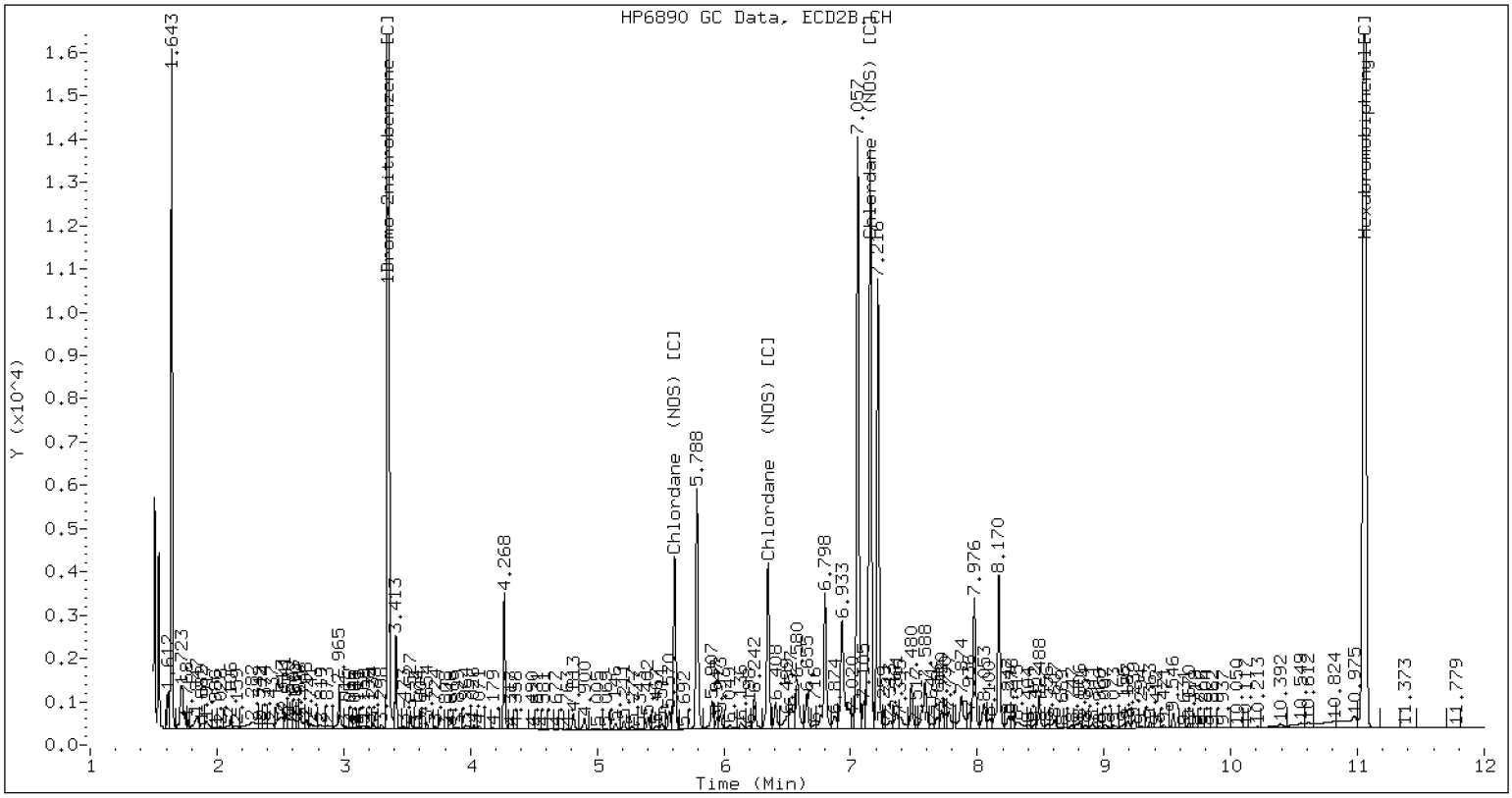
		STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount	
Chlordane (NOS)	1	5.593	0.000	77307	196.0	1	5.612	-0.000	101527	198.7	
Chlordane (NOS)	2	6.271	0.000	261078	199.7	2	6.349	-0.001	110757	193.0	
Chlordane (NOS)	3	6.399	0.000	449301	196.5	3	7.155	-0.000	389197	200.5	
Total STX-CLPAve (3 peaks): 197.408						Total CLP2Ave (3 peaks): 197.390				RPD = 0	
Corrected Ave (3 peaks): 197.408						Corrected Ave (3 peaks): 197.390				RPD = 0	

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121425.D SEQ-CAL5A CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121425.D
Data file 2: /20221214.b/B20221214.b/22121425.D
Method: \20221214.b\PEST.m
Compound Sublist: TECHCHLOR.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL5A
Client ID:
Injection Date: 15-DEC-2022 02:35
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121426.D
Data file 2: /20221214.b/B20221214.b/22121426.D
Method: \20221214.b\PEST.m
Compound Sublist: TECHCHLOR.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL6A
Client ID:
Injection Date: 15-DEC-2022 02:53
Report Date: 12/16/2022 15:20
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
----			----			0.00	0.00	---	Tetrachloro-m-xylene
----			----			0.00	0.00	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	603526	-15.1
Hexabromobiphenyl	641833	699031	8.9

Column 2

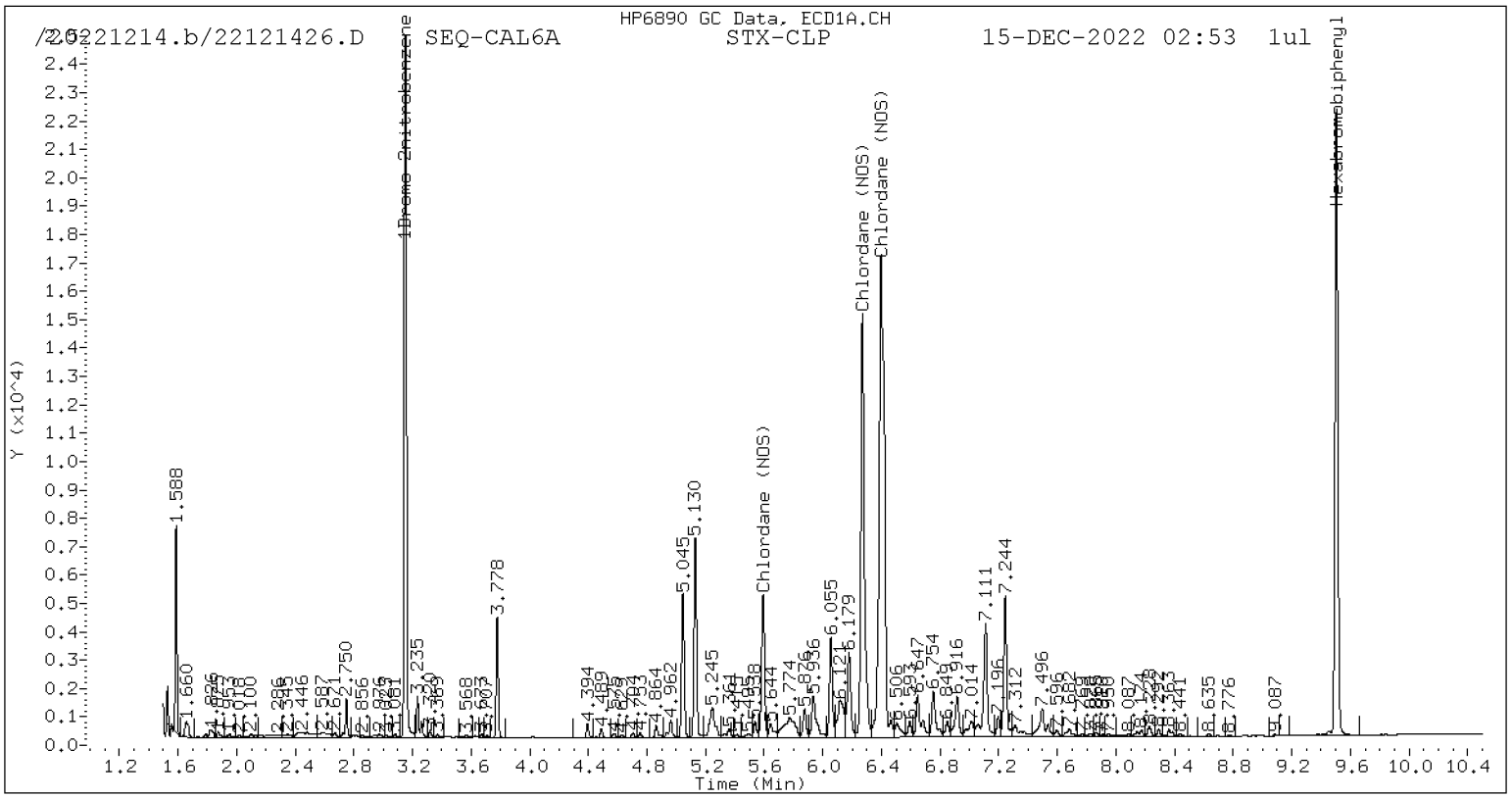
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	779405	-26.4
Hexabromobiphenyl	797125	1068976	34.1

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col				CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Chlordane (NOS)	1	5.592	-0.000	146950	375.8	1	5.612	-0.000	203386	402.0
Chlordane (NOS)	2	6.271	-0.000	503310	388.5	2	6.349	-0.000	212637	374.2
Chlordane (NOS)	3	6.399	0.000	857451	378.4	3	7.155	-0.000	752631	391.6

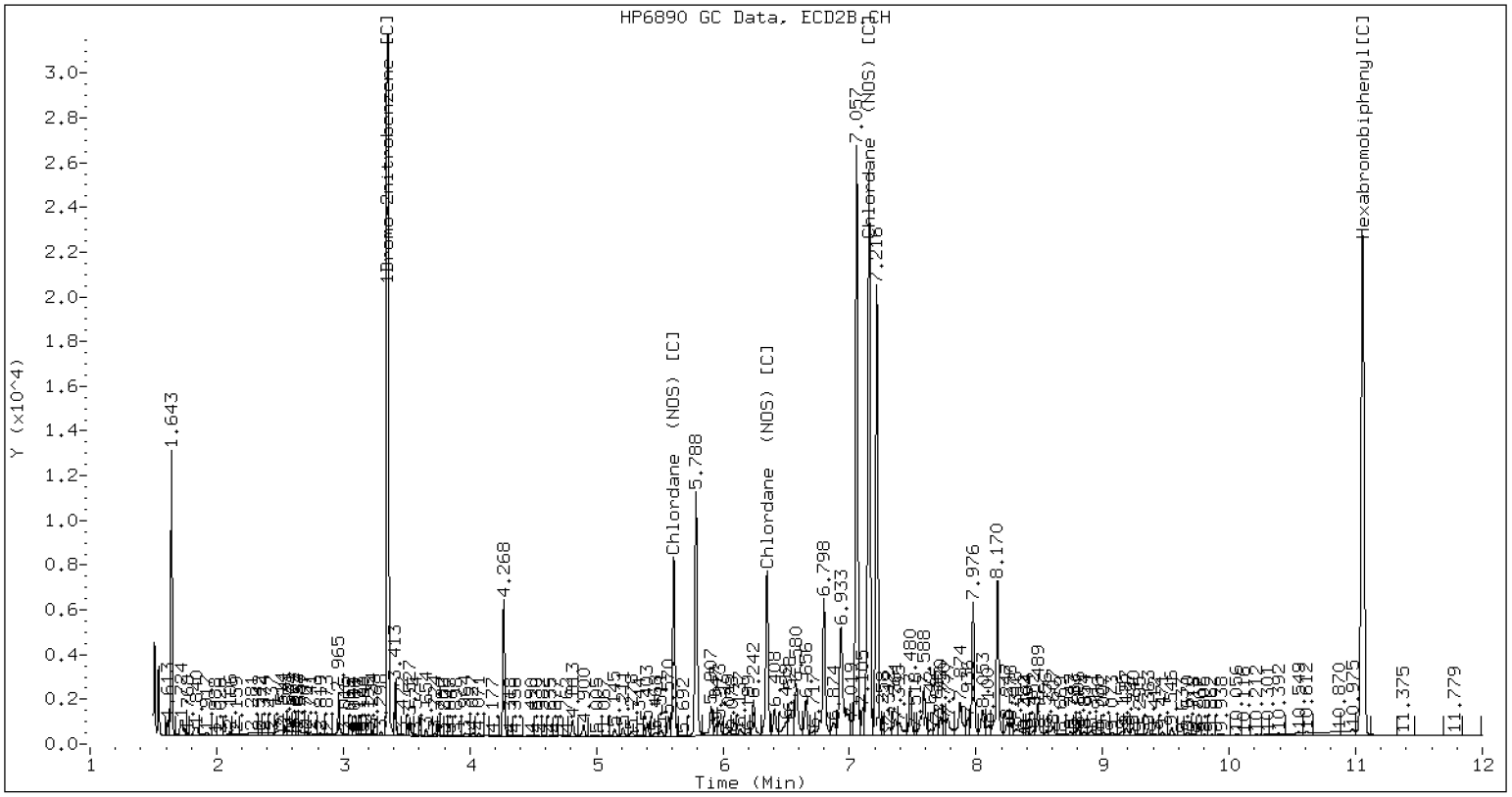
Total STX-CLPAve (3 peaks): 380.894 Total CLP2Ave (3 peaks): 389.290 RPD = 2
Corrected Ave (3 peaks): 380.894 Corrected Ave (3 peaks): 389.290 RPD = 2

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121426.D SEQ-CAL6A CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121426.D
Data file 2: /20221214.b/B20221214.b/22121426.D
Method: \20221214.b\PEST.m
Compound Sublist: TECHCHLOR.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL6A
Client ID:
Injection Date: 15-DEC-2022 02:53
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121427.D
Data file 2: /20221214.b/B20221214.b/22121427.D
Method: \20221214.b\PEST.m
Compound Sublist: TECHCHLOR.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL7A
Client ID:
Injection Date: 15-DEC-2022 03:11
Report Date: 12/16/2022 15:20
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
----			----			0.00	0.00	---	Tetrachloro-m-xylene
9.380	0.025	1930	----			0.31	0.00	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	610159	-14.1
Hexabromobiphenyl	641833	692215	7.8

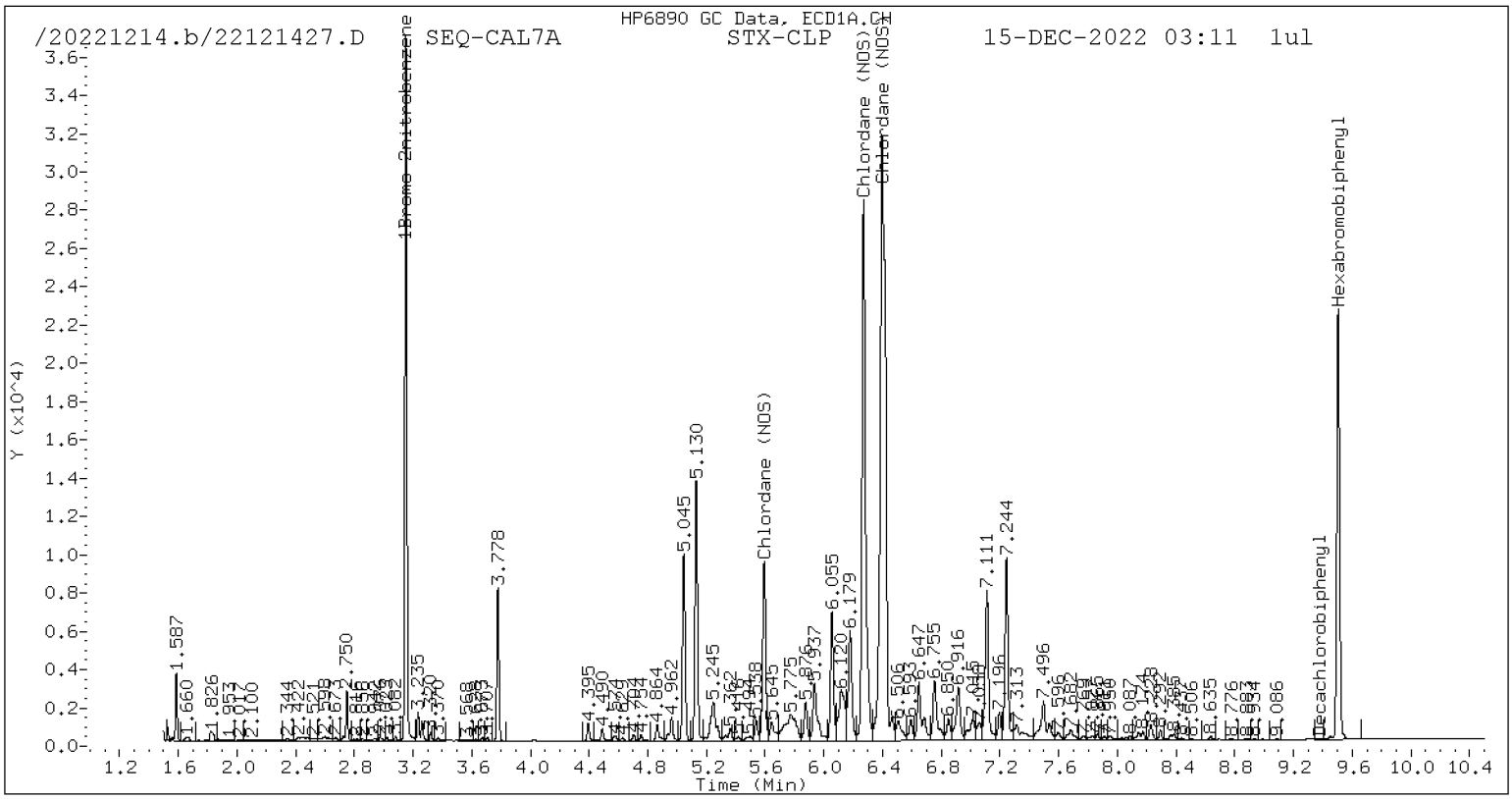
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	790388	-25.4
Hexabromobiphenyl	797125	1059143	32.9

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

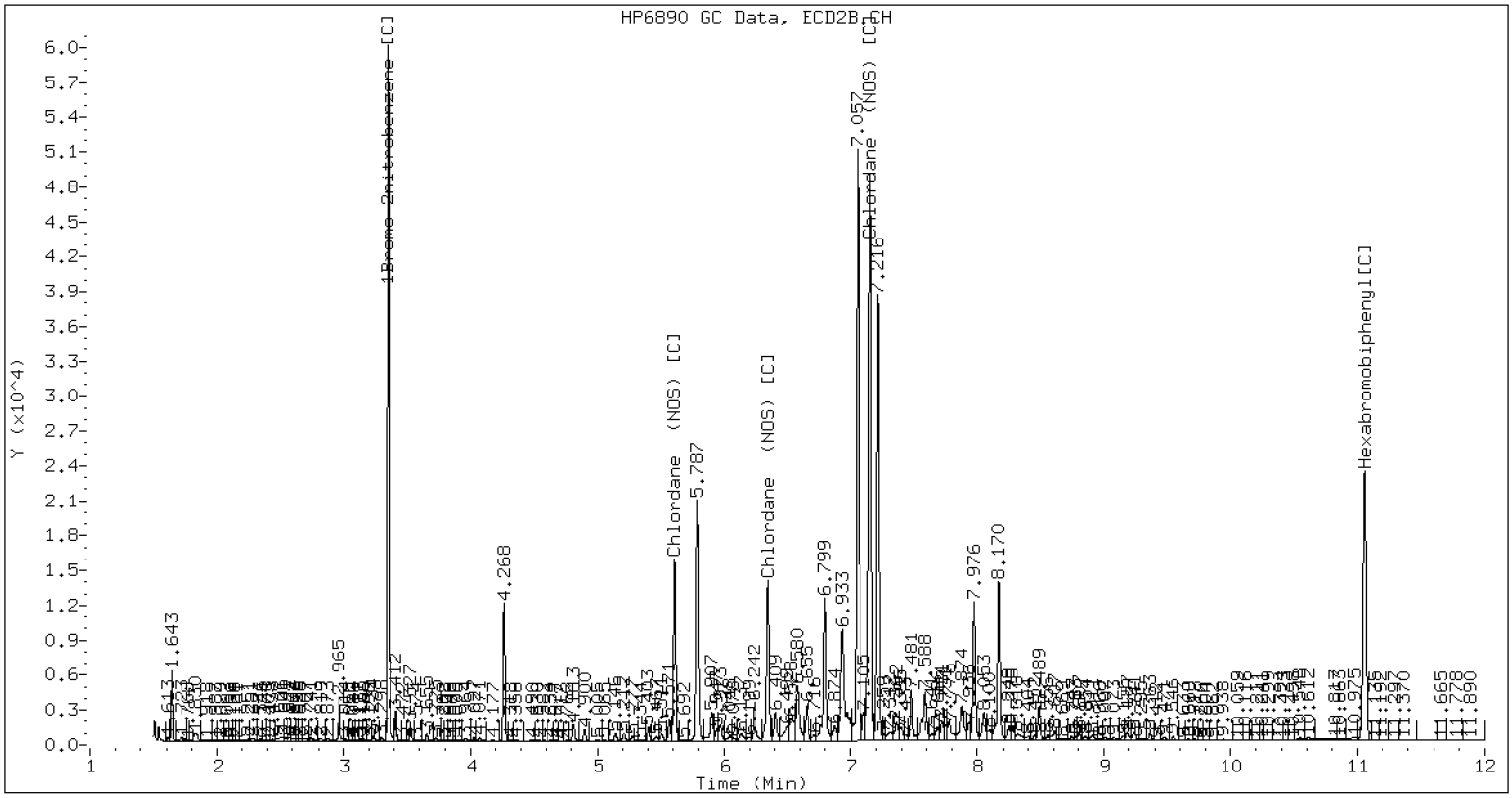
		STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount	
Chlordane (NOS)	1	5.593	0.001	276980	715.3	1	5.612	0.000	398620	795.3	
Chlordane (NOS)	2	6.271	-0.000	961368	749.3	2	6.349	0.000	405170	719.7	
Chlordane (NOS)	3	6.399	-0.000	1631241	727.0	3	7.155	0.000	1462876	768.2	
Total STX-CLPAve (3 peaks): 730.539						Total CLP2Ave (3 peaks): 761.064				RPD = 4	
Corrected Ave (3 peaks): 730.539						Corrected Ave (3 peaks): 761.064				RPD = 4	

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121427.D SEQ-CAL7A CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121427.D
Data file 2: /20221214.b/B20221214.b/22121427.D
Method: \20221214.b\PEST.m
Compound Sublist: TECHCHLOR.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL7A
Client ID:
Injection Date: 15-DEC-2022 03:11
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121428.D
Data file 2: /20221214.b/B20221214.b/22121428.D
Method: \20221214.b\PEST.m
Compound Sublist: TOXAPH.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL8A
Client ID:
Injection Date: 15-DEC-2022 03:29
Report Date: 12/16/2022 15:20
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.828	0.000	8893	4.221	0.000	14795	0.95	0.98	4.0	Tetrachloro-m-xylene
9.355	0.000	15511	10.467	0.000	24896	2.54	2.86	11.7	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	691781	-2.7
Hexabromobiphenyl	641833	602865	-6.1

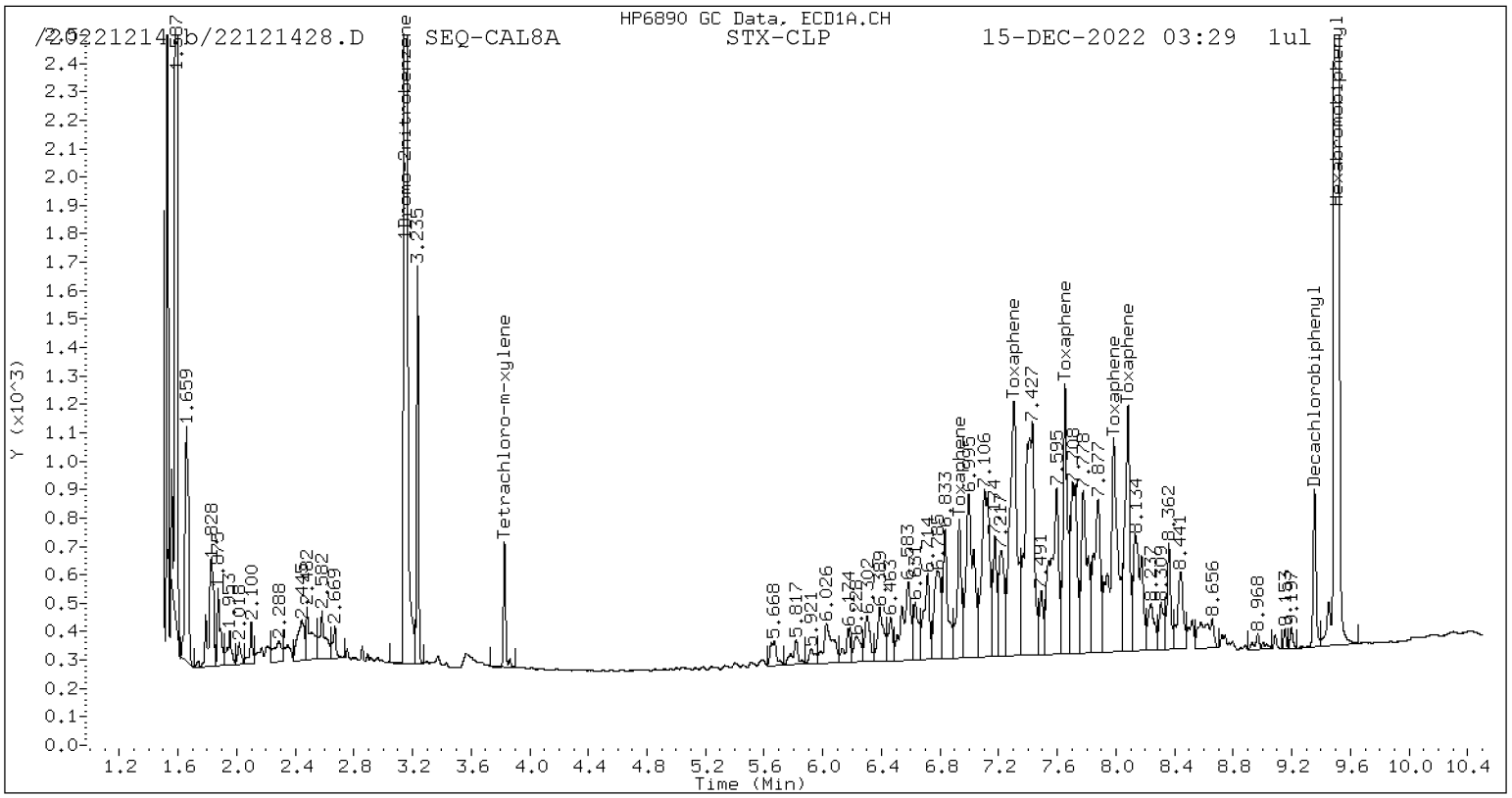
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1068328	0.9
Hexabromobiphenyl	797125	788806	-1.0

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

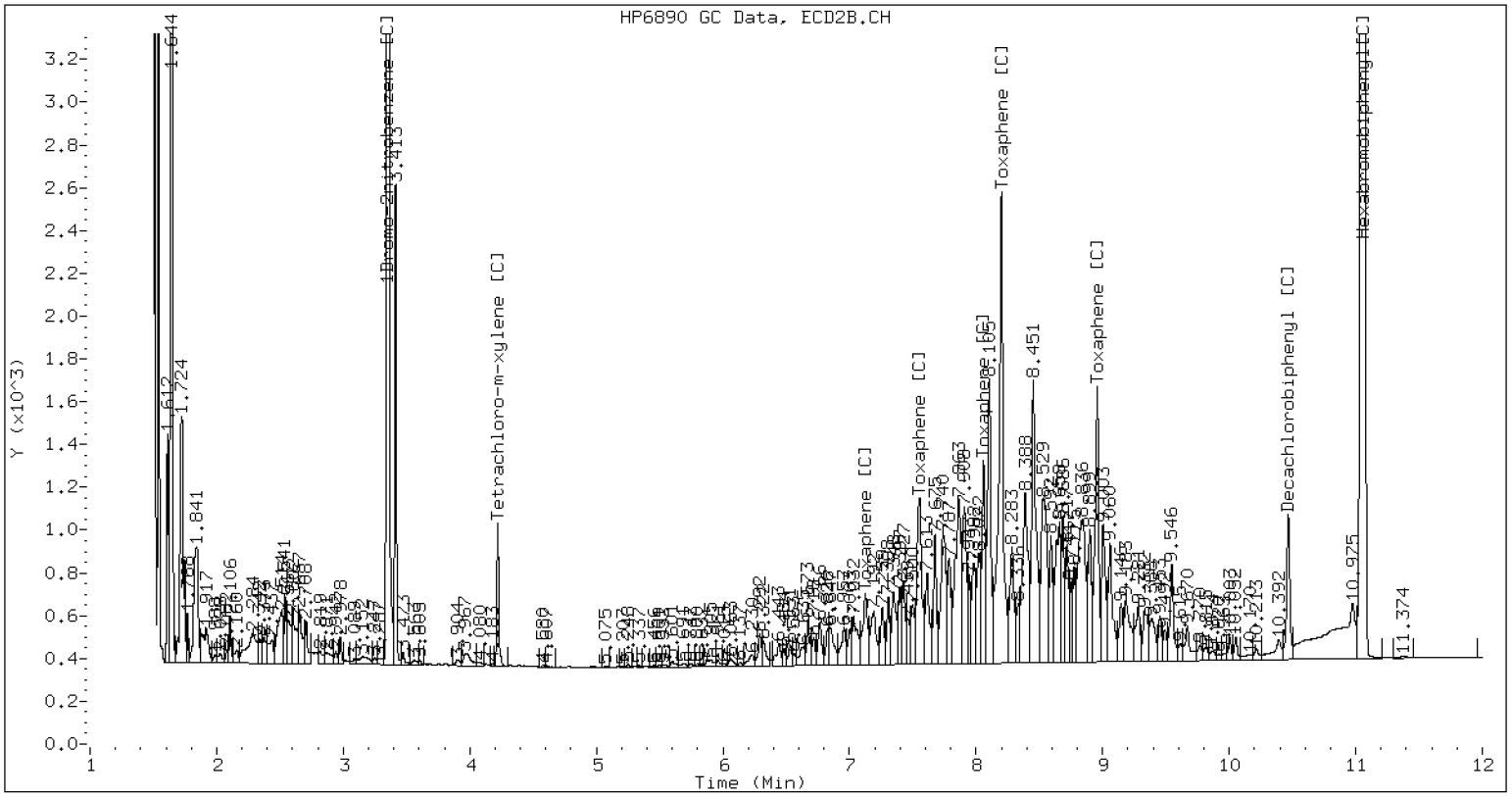
		STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount	
Toxaphene	1	6.931	0.000	20939	118.9	1	7.125	-0.000	18390	124.1	
Toxaphene	2	7.304	0.000	62921	127.5	2	7.553	-0.000	43437	130.4	
Toxaphene	3	7.653	-0.000	40147	126.2	3	8.059	-0.001	32235	127.1	
Toxaphene	4	7.985	-0.001	56816	133.6	4	8.201	-0.001	109296	132.1	
Toxaphene	5	8.082	-0.000	39643	123.4	5	8.958	-0.001	50997	125.7	
Total STX-CLPAve (5 peaks): 125.907						Total CLP2Ave (5 peaks): 127.865					RPD = 2
Corrected Ave (5 peaks): 125.907						Corrected Ave (5 peaks): 127.865					RPD = 2

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121428.D SEQ-CAL8A CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121428.D
Data file 2: /20221214.b/B20221214.b/22121428.D
Method: \20221214.b\PEST.m
Compound Sublist: TOXAPH.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL8A
Client ID:
Injection Date: 15-DEC-2022 03:29
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121429.D
Data file 2: /20221214.b/B20221214.b/22121429.D
Method: \20221214.b\PEST.m
Compound Sublist: TOXAPH.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL9A
Client ID:
Injection Date: 15-DEC-2022 03:46
Report Date: 12/16/2022 15:20
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.828	-0.000	18632	4.220	-0.000	29829	1.92	1.92	0.1	Tetrachloro-m-xylene
9.355	0.000	29179	10.467	0.000	44716	4.64	4.98	7.1	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	713620	0.4
Hexabromobiphenyl	641833	620026	-3.4

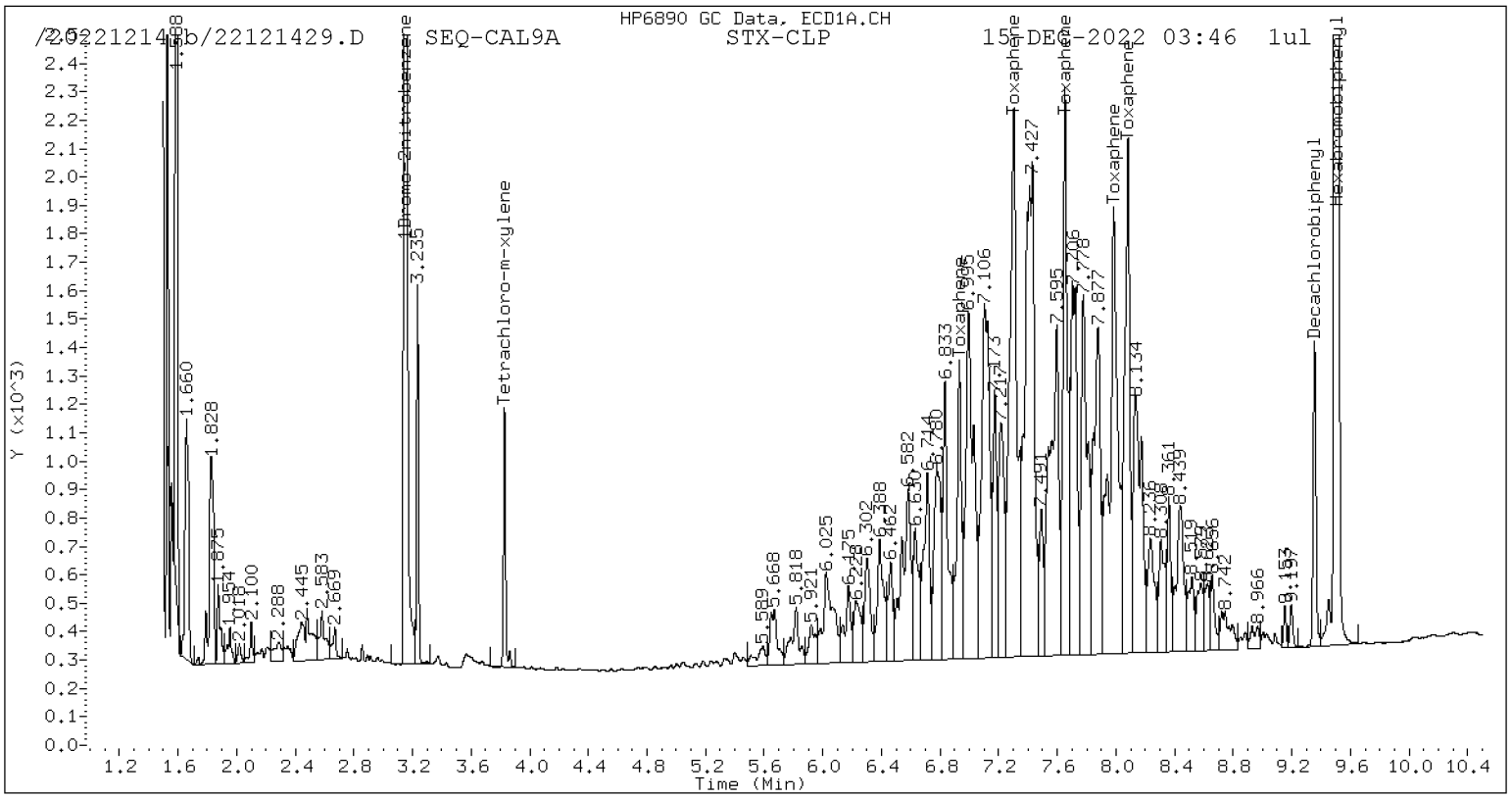
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1104488	4.3
Hexabromobiphenyl	797125	811719	1.8

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

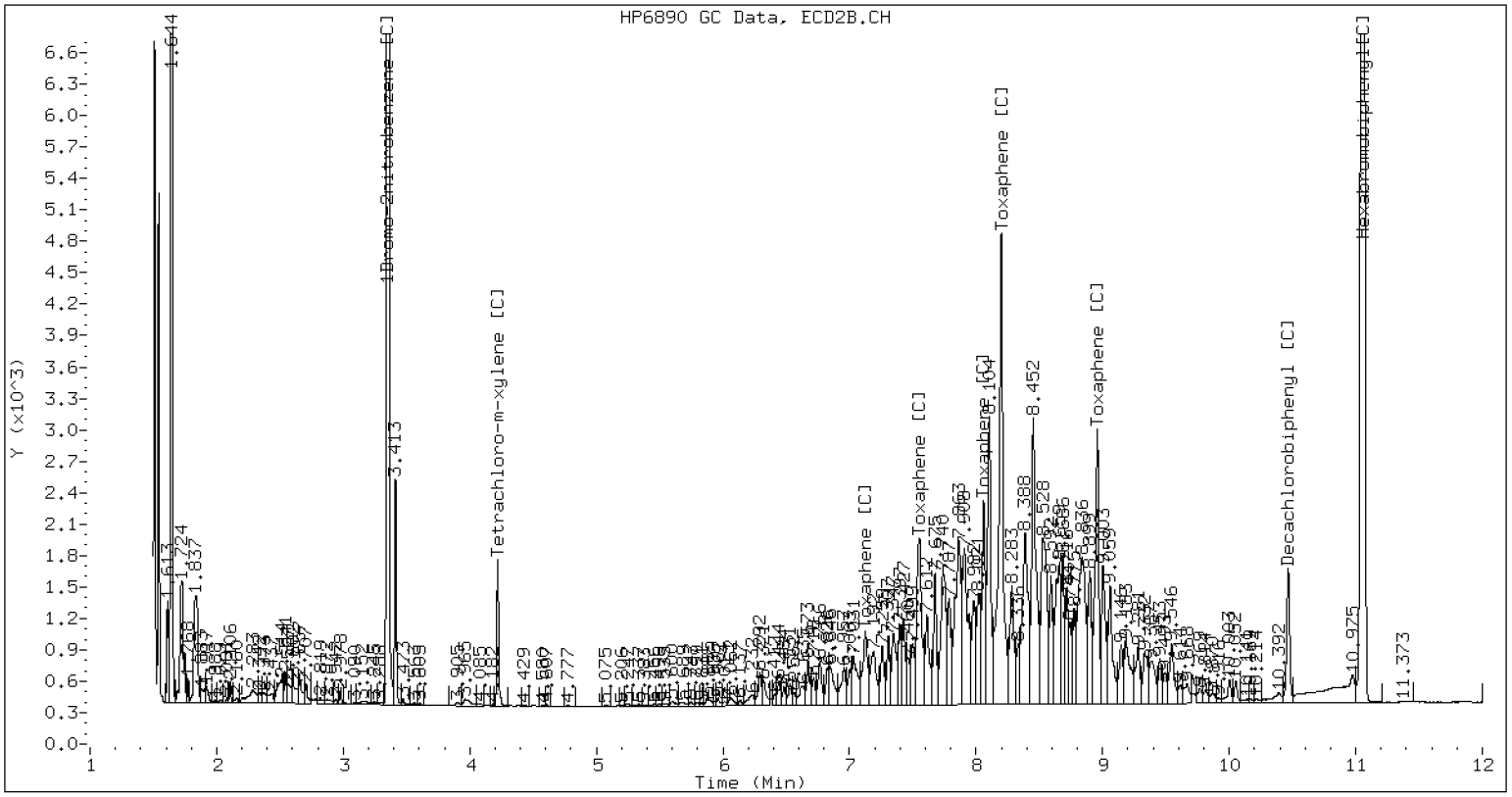
		STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount	
Toxaphene	1	6.931	0.000	47415	261.8	1	7.125	-0.001	38790	254.4	
Toxaphene	2	7.302	-0.001	134642	265.2	2	7.552	-0.001	89754	261.8	
Toxaphene	3	7.652	-0.001	86679	264.9	3	8.059	-0.001	67442	258.4	
Toxaphene	4	7.985	-0.001	125891	287.7	4	8.200	-0.001	220426	258.9	
Toxaphene	5	8.081	-0.000	85903	260.0	5	8.958	-0.001	104601	250.5	
Total STX-CLPAve (5 peaks): 267.939						Total CLP2Ave (5 peaks): 256.784				RPD = 4	
Corrected Ave (5 peaks): 267.939						Corrected Ave (5 peaks): 256.784				RPD = 4	

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121429.D SEQ-CAL9A CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121429.D
Data file 2: /20221214.b/B20221214.b/22121429.D
Method: \20221214.b\PEST.m
Compound Sublist: TOXAPH.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL9A
Client ID:
Injection Date: 15-DEC-2022 03:46
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121430.D
Data file 2: /20221214.b/B20221214.b/22121430.D
Method: \20221214.b\PEST.m
Compound Sublist: TOXAPH.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CALAA
Client ID:
Injection Date: 15-DEC-2022 04:04
Report Date: 12/16/2022 15:20
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.828	-0.000	37717	4.220	0.000	60469	3.98	3.98	0.0	Tetrachloro-m-xylene
9.355	0.000	57106	10.467	0.000	82418	9.20	9.32	1.3	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	696179	-2.0
Hexabromobiphenyl	641833	612804	-4.5

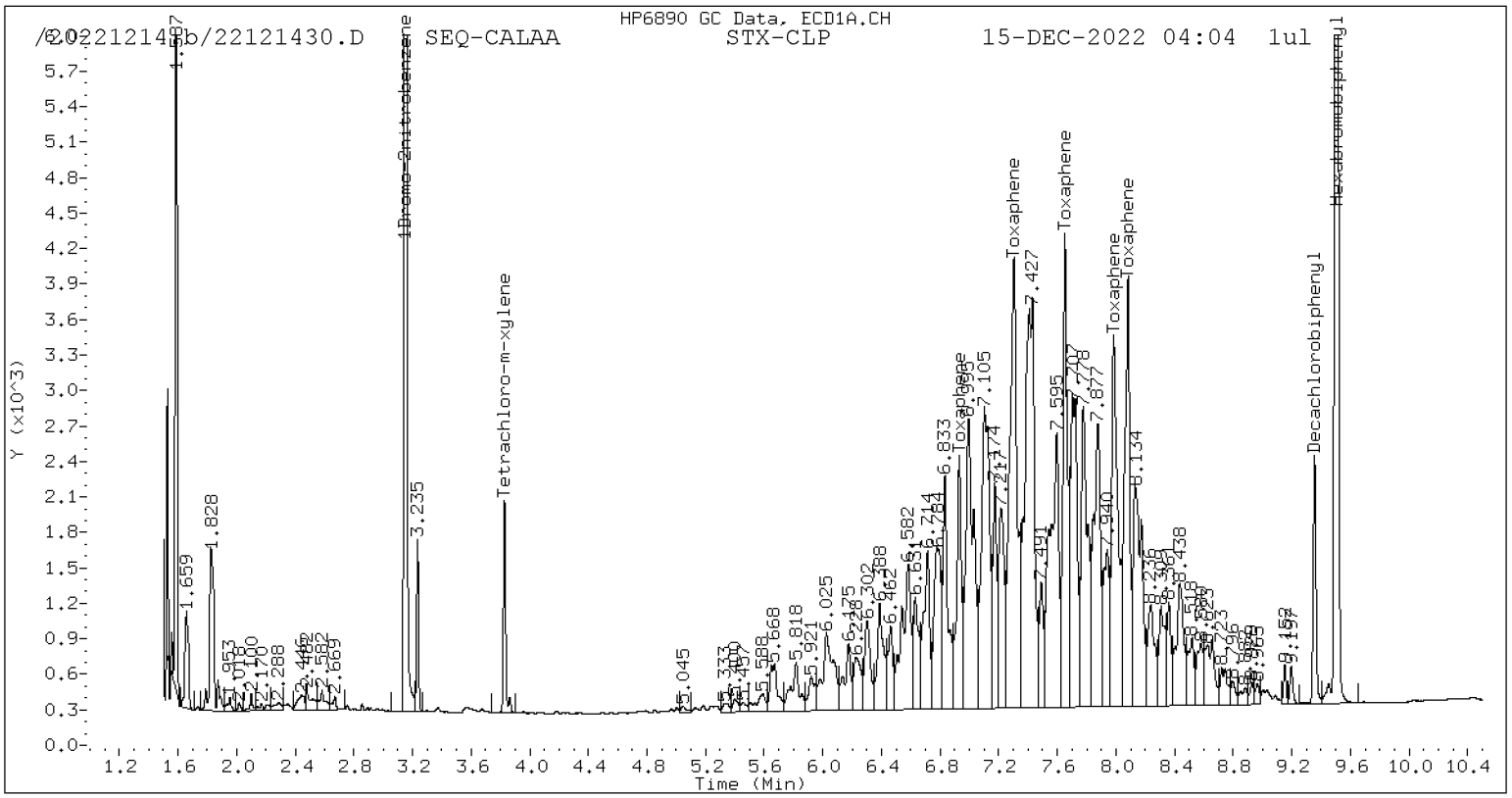
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1078803	1.9
Hexabromobiphenyl	797125	800071	0.4

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

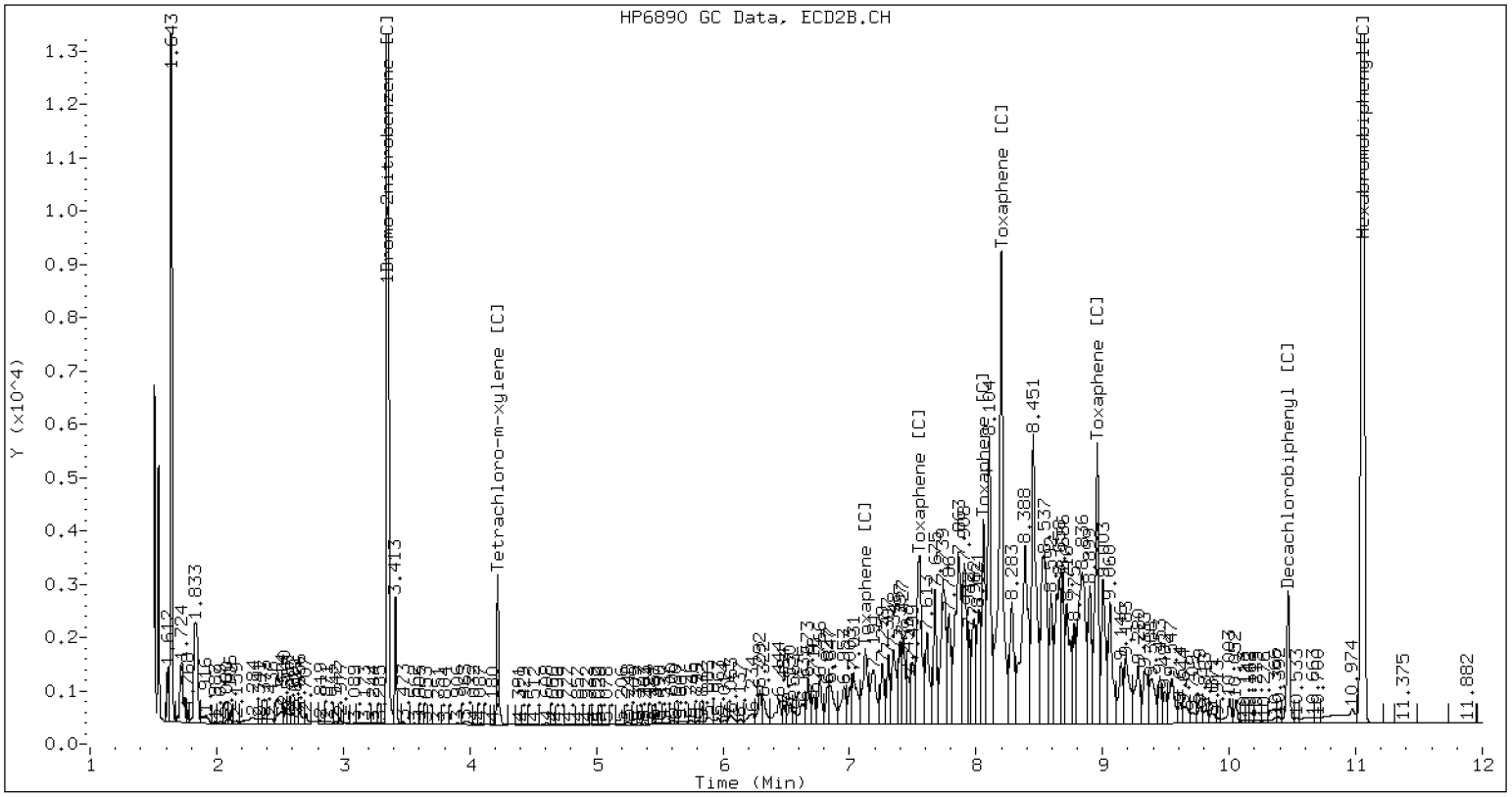
	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.931	-0.000	96535	539.4	1	7.125	-0.001	78635	523.1
Toxaphene	2	7.304	0.000	273576	545.2	2	7.553	-0.001	179081	529.9
Toxaphene	3	7.652	-0.001	177095	547.7	3	8.059	-0.001	133547	519.1
Toxaphene	4	7.985	-0.001	190443	440.4	4	8.200	-0.001	437035	520.8
Toxaphene	5	8.082	-0.000	175009	535.8	5	8.958	-0.001	209659	509.4
Total STX-CLPAve (5 peaks): 521.711						Total CLP2Ave (5 peaks): 520.468				RPD = 0
Corrected Ave (5 peaks): 521.711						Corrected Ave (5 peaks): 520.468				RPD = 0

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121430.D SEQ-CALAA CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121430.D
Data file 2: /20221214.b/B20221214.b/22121430.D
Method: \20221214.b\PEST.m
Compound Sublist: TOXAPH.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CALAA
Client ID:
Injection Date: 15-DEC-2022 04:04
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121431.D
Data file 2: /20221214.b/B20221214.b/22121431.D
Method: \20221214.b\PEST.m
Compound Sublist: TOXAPH.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CALAB
Client ID:
Injection Date: 15-DEC-2022 04:22
Report Date: 12/16/2022 15:20
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.828	0.000	74347	4.221	0.000	119694	7.73	7.77	0.5	Tetrachloro-m-xylene
9.355	-0.000	107024	10.466	-0.000	151970	17.00	17.11	0.7	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	706924	-0.5
Hexabromobiphenyl	641833	621486	-3.2

Column 2

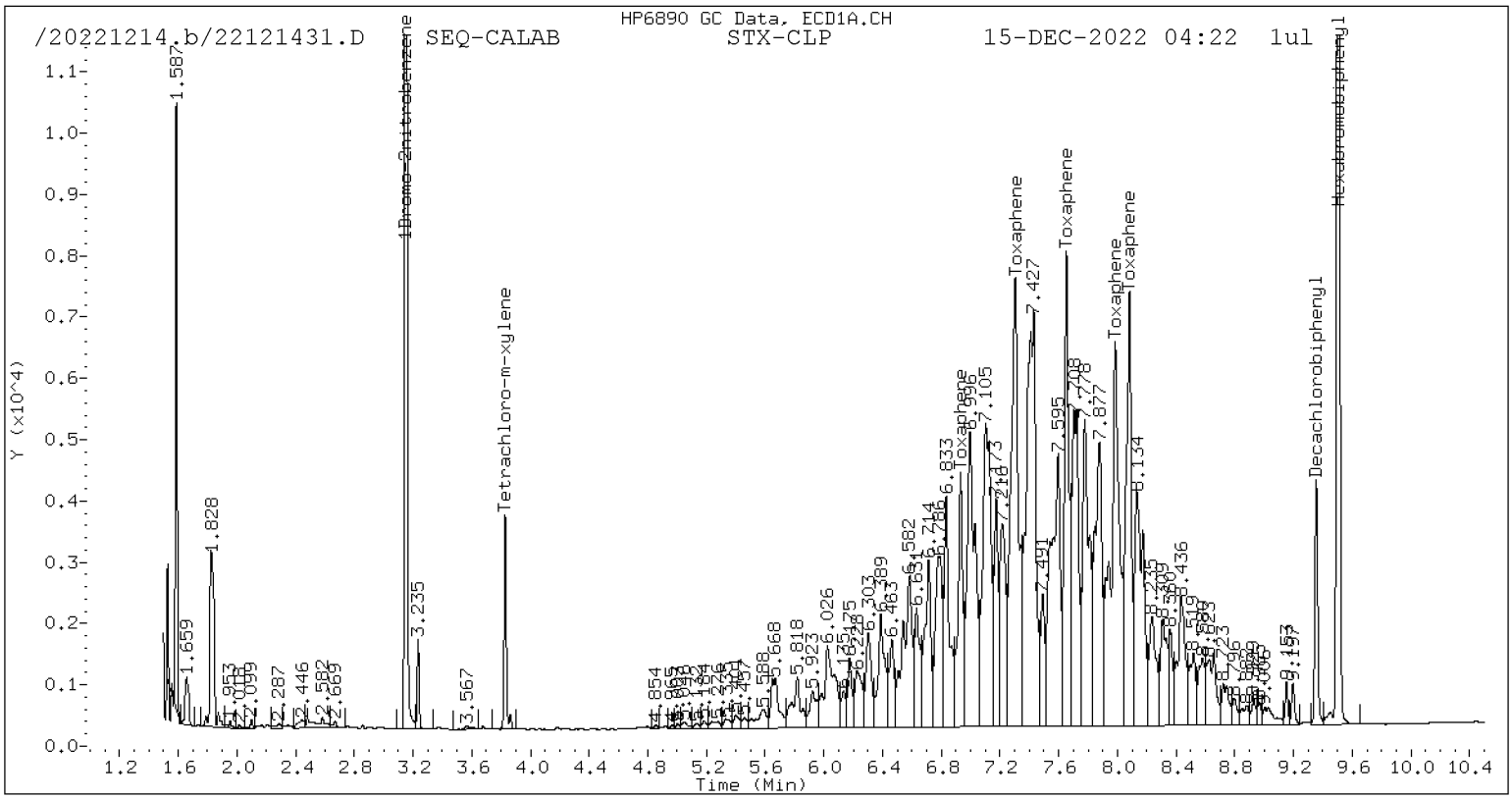
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1093936	3.3
Hexabromobiphenyl	797125	803782	0.8

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.931	0.000	192757	1062.0	1	7.125	-0.000	156515	1036.5
Toxaphene	2	7.303	-0.000	530863	1043.2	2	7.553	-0.001	349637	1029.8
Toxaphene	3	7.653	-0.000	344194	1049.6	3	8.059	-0.000	265296	1026.5
Toxaphene	4	7.986	-0.000	522105	1190.6	4	8.201	-0.001	854255	1013.3
Toxaphene	5	8.082	-0.000	345477	1043.0	5	8.958	-0.001	416452	1007.1

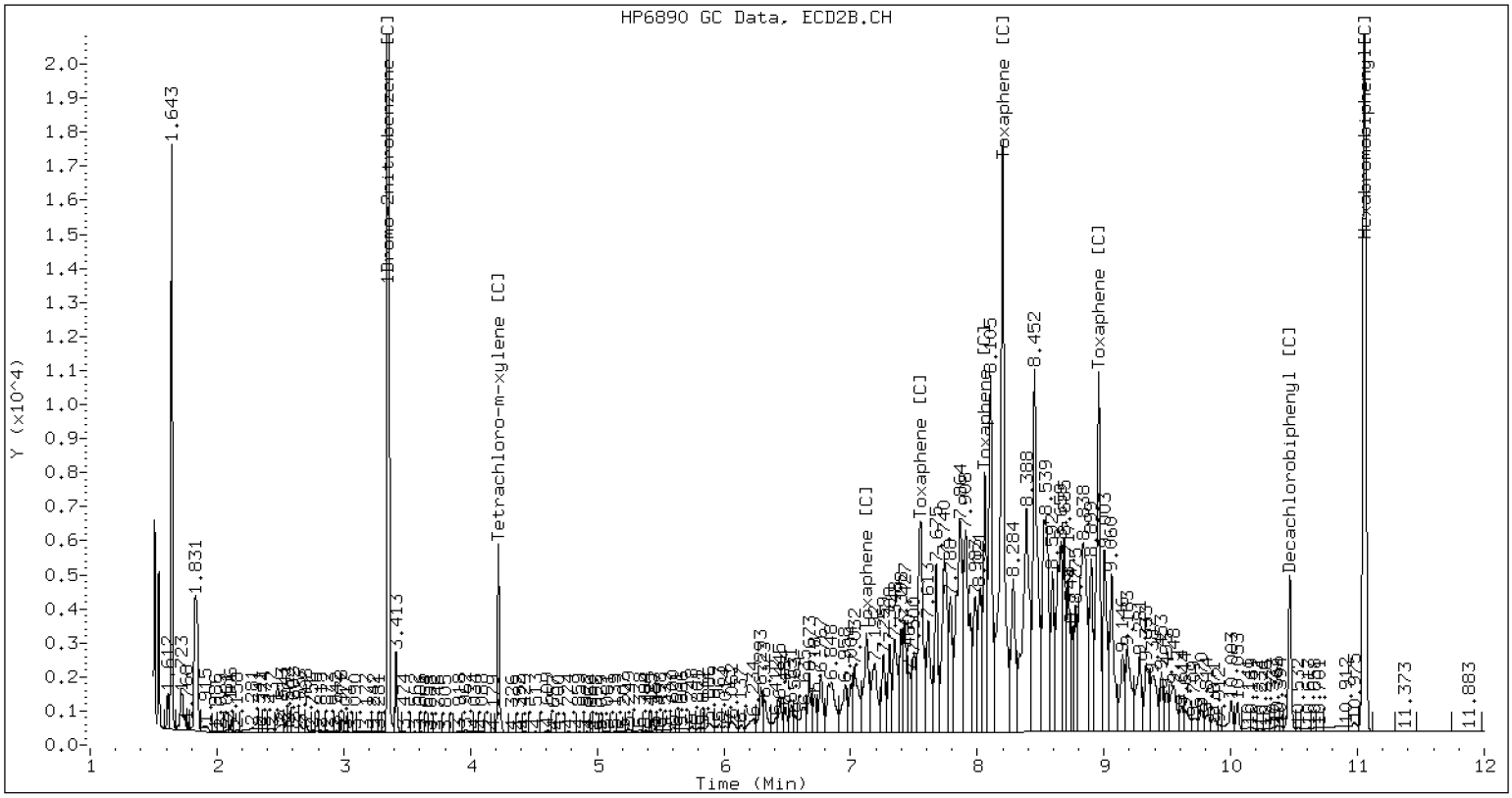
Total STX-CLPAve (5 peaks): 1077.665 Total CLP2Ave (5 peaks): 1022.630 RPD = 5
Corrected Ave (5 peaks): 1077.665 Corrected Ave (5 peaks): 1022.630 RPD = 5

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121431.D SEQ-CALAB CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121431.D
Data file 2: /20221214.b/B20221214.b/22121431.D
Method: \20221214.b\PEST.m
Compound Sublist: TOXAPH.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CALAB
Client ID:
Injection Date: 15-DEC-2022 04:22
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121432.D
Data file 2: /20221214.b/B20221214.b/22121432.D
Method: \20221214.b\PEST.m
Compound Sublist: TOXAPH.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CALAC
Client ID:
Injection Date: 15-DEC-2022 04:40
Report Date: 12/16/2022 15:20
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.828	0.000	169388	4.221	0.000	273030	18.51	18.69	1.0	Tetrachloro-m-xylene
9.356	0.001	234532	10.466	-0.000	332716	40.53	40.11	1.0	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	672958	-5.3
Hexabromobiphenyl	641833	571112	-11.0

Column 2

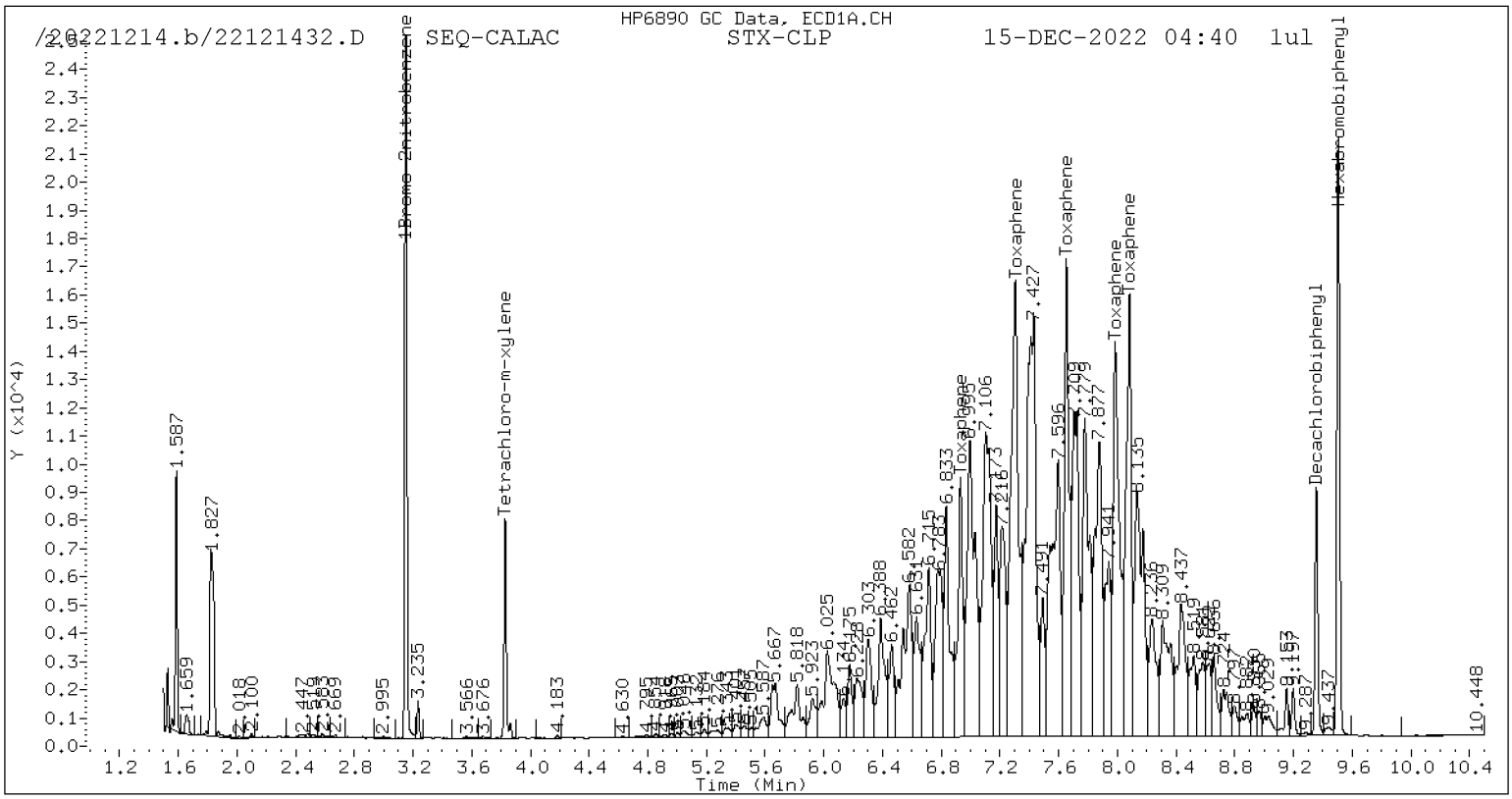
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1037593	-2.0
Hexabromobiphenyl	797125	750492	-5.9

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.931	0.000	432250	2591.5	1	7.126	-0.000	358061	2539.5
Toxaphene	2	7.303	0.000	1180375	2524.1	2	7.553	0.000	785942	2479.1
Toxaphene	3	7.653	0.000	762221	2529.4	3	8.059	-0.000	602985	2498.7
Toxaphene	4	7.986	0.000	863552	2142.9	4	8.201	-0.001	1929083	2450.8
Toxaphene	5	8.082	0.000	777497	2554.3	5	8.958	-0.001	962132	2492.0

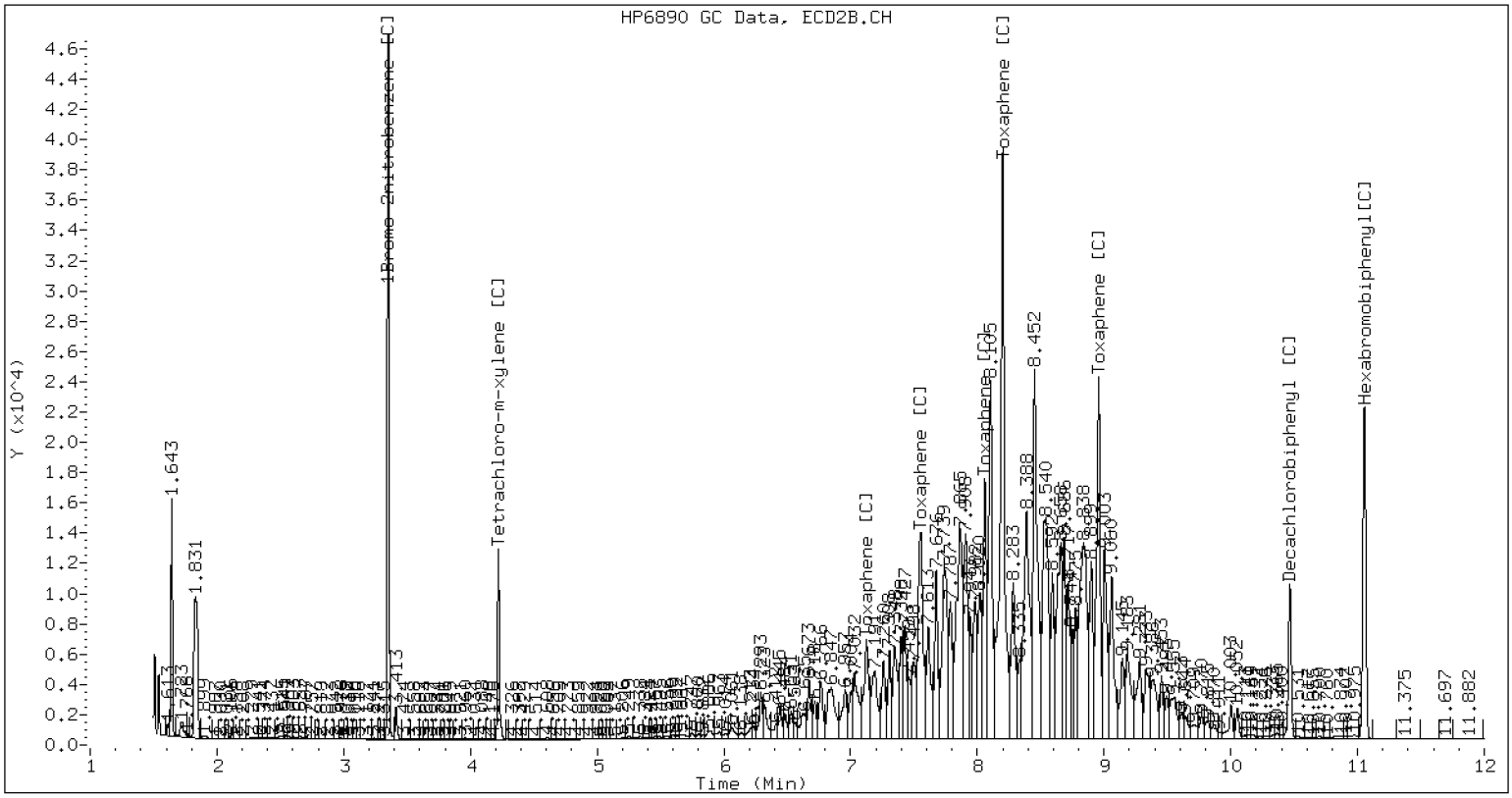
Total STX-CLPAve (5 peaks): 2468.427 Total CLP2Ave (5 peaks): 2492.024 RPD = 1
Corrected Ave (5 peaks): 2468.427 Corrected Ave (5 peaks): 2492.024 RPD = 1

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121432.D SEQ-CALAC CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121432.D
Data file 2: /20221214.b/B20221214.b/22121432.D
Method: \20221214.b\PEST.m
Compound Sublist: TOXAPH.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CALAC
Client ID:
Injection Date: 15-DEC-2022 04:40
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121433.D
Data file 2: /20221214.b/B20221214.b/22121433.D
Method: \20221214.b\PEST.m
Compound Sublist: TOXAPH.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CALAD
Client ID:
Injection Date: 15-DEC-2022 04:58
Report Date: 12/16/2022 15:20
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.828	-0.000	329284	4.221	0.000	536251	34.78	35.63	2.4	Tetrachloro-m-xylene
9.356	0.000	464116	10.466	-0.000	660536	76.95	77.19	0.3	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	696178	-2.0
Hexabromobiphenyl	641833	595287	-7.3

Column 2

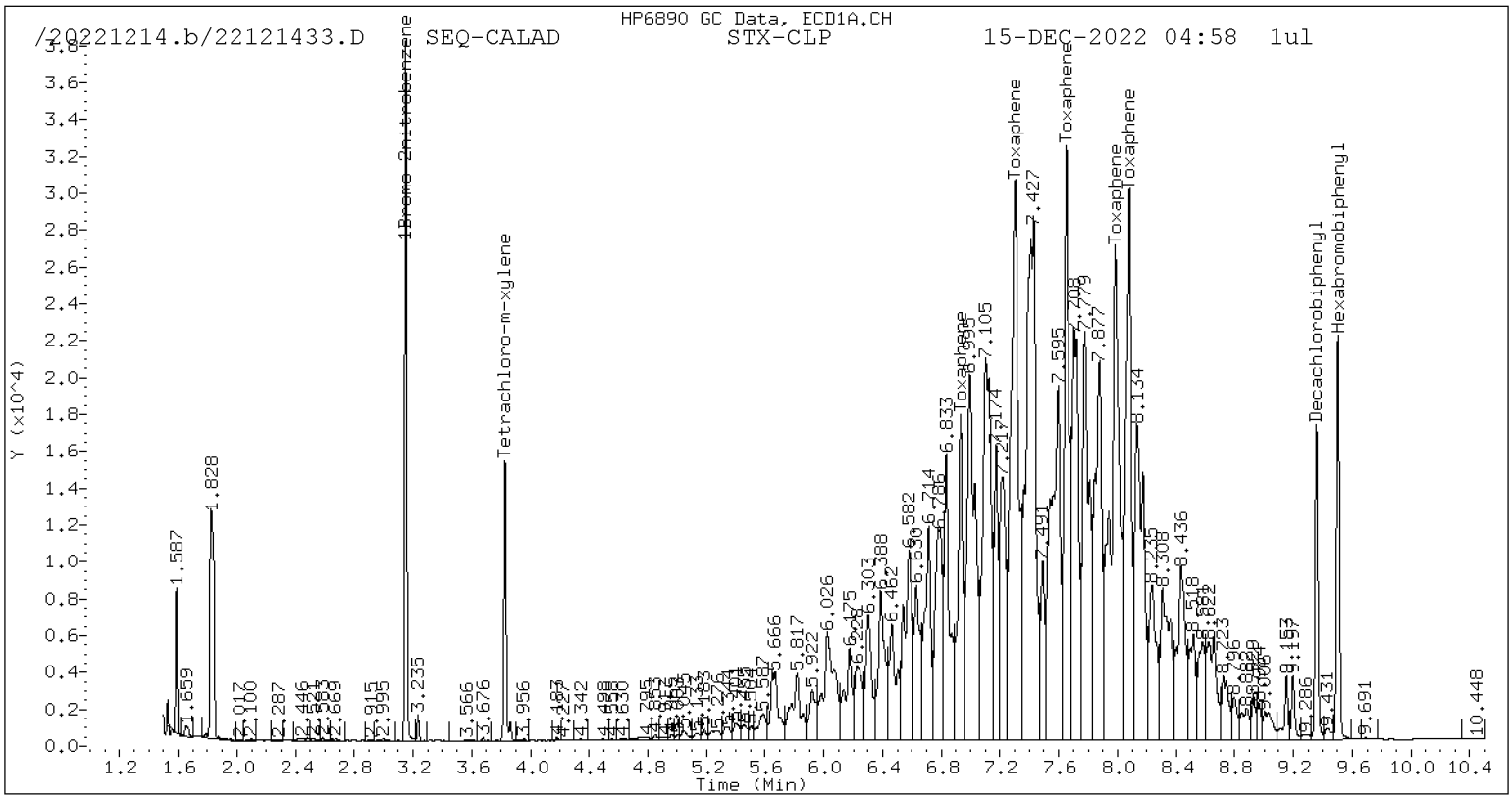
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1069205	1.0
Hexabromobiphenyl	797125	774218	-2.9

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.931	0.000	828531	4765.6	1	7.126	-0.000	704213	4841.5
Toxaphene	2	7.303	-0.000	2275106	4667.4	2	7.554	0.000	1533921	4690.3
Toxaphene	3	7.653	-0.000	1493693	4755.4	3	8.059	-0.001	1192086	4788.5
Toxaphene	4	7.986	0.000	2318449	5519.5	4	8.201	-0.001	3835448	4723.4
Toxaphene	5	8.081	-0.000	1509568	4758.0	5	8.958	-0.000	1957568	4914.8

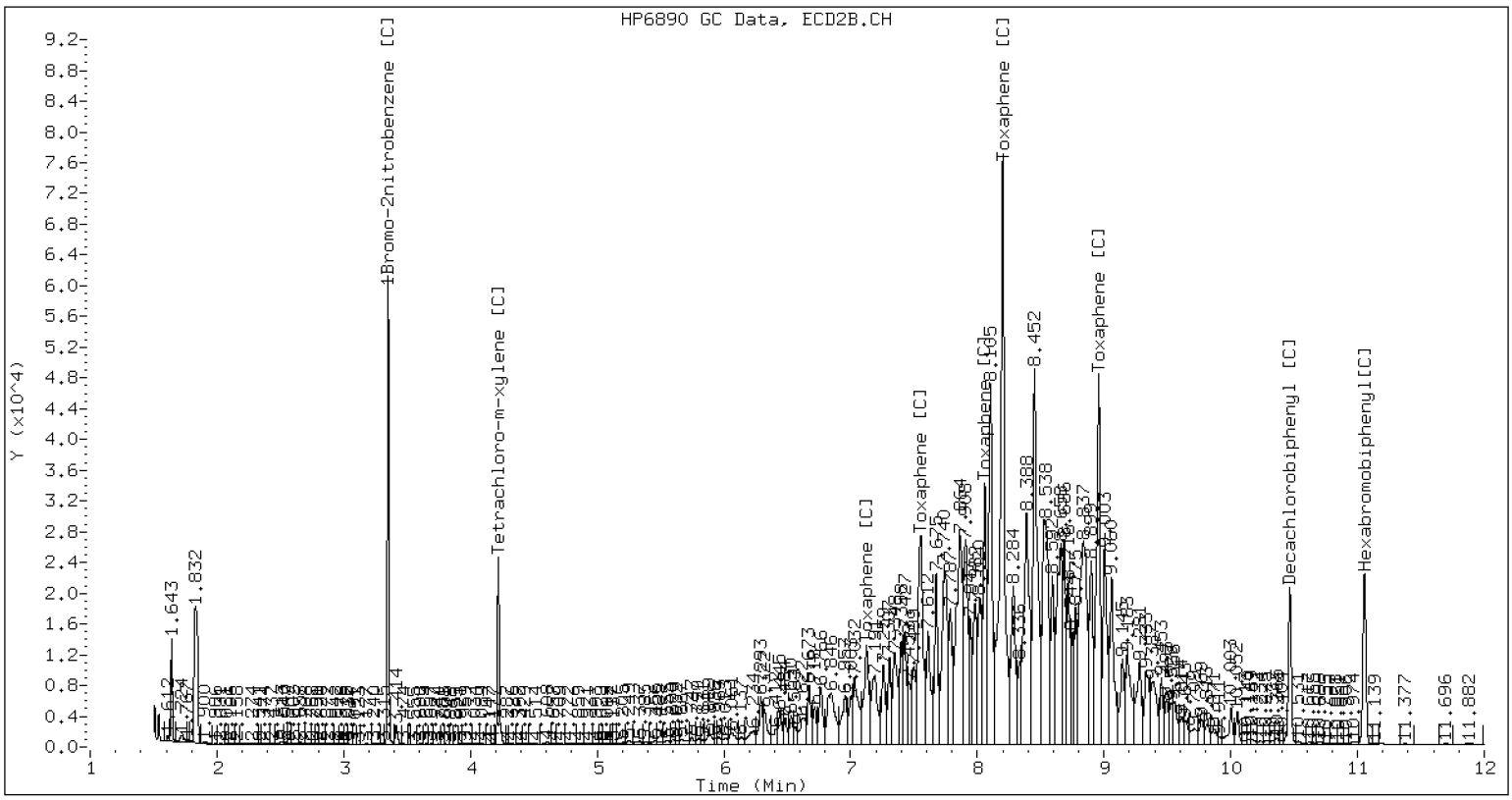
Total STX-CLPAve (5 peaks): 4893.192 Total CLP2Ave (5 peaks): 4791.694 RPD = 2
Corrected Ave (5 peaks): 4893.192 Corrected Ave (5 peaks): 4791.694 RPD = 2

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121433.D SEQ-CALAD CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121433.D
Data file 2: /20221214.b/B20221214.b/22121433.D
Method: \20221214.b\PEST.m
Compound Sublist: TOXAPH.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CALAD
Client ID:
Injection Date: 15-DEC-2022 04:58
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121434.D
Data file 2: /20221214.b/B20221214.b/22121434.D
Method: \20221214.b\PEST.m
Compound Sublist: TOXAPH.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CALAE
Client ID:
Injection Date: 15-DEC-2022 05:16
Report Date: 12/16/2022 15:20
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.828	-0.000	626937	4.221	0.000	1016753	65.66	67.54	2.8	Tetrachloro-m-xylene
9.355	0.000	899917	10.467	0.000	1293767	145.37	151.89	4.4	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	702143	-1.2
Hexabromobiphenyl	641833	610983	-4.8

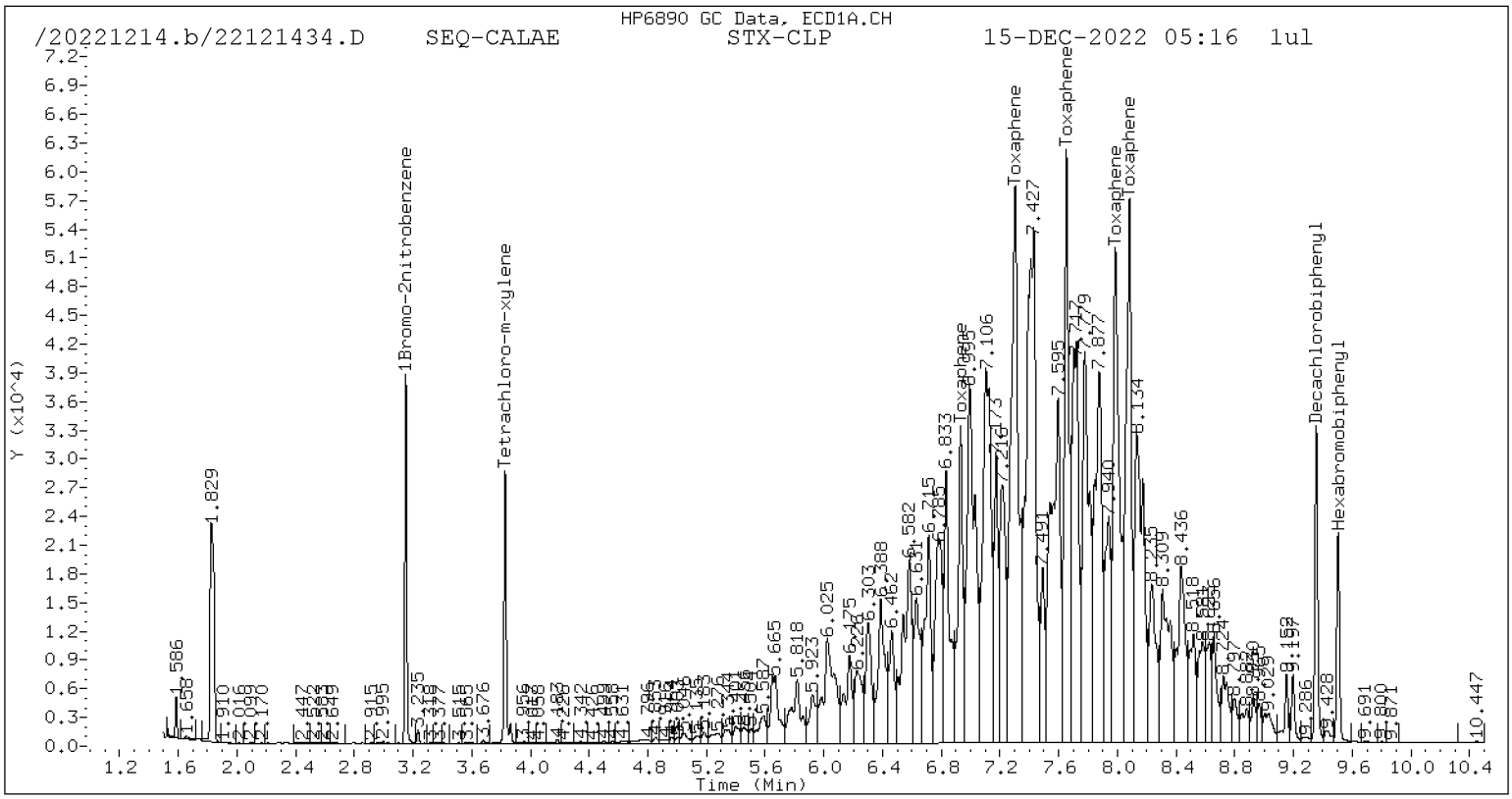
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1069521	1.0
Hexabromobiphenyl	797125	770702	-3.3

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

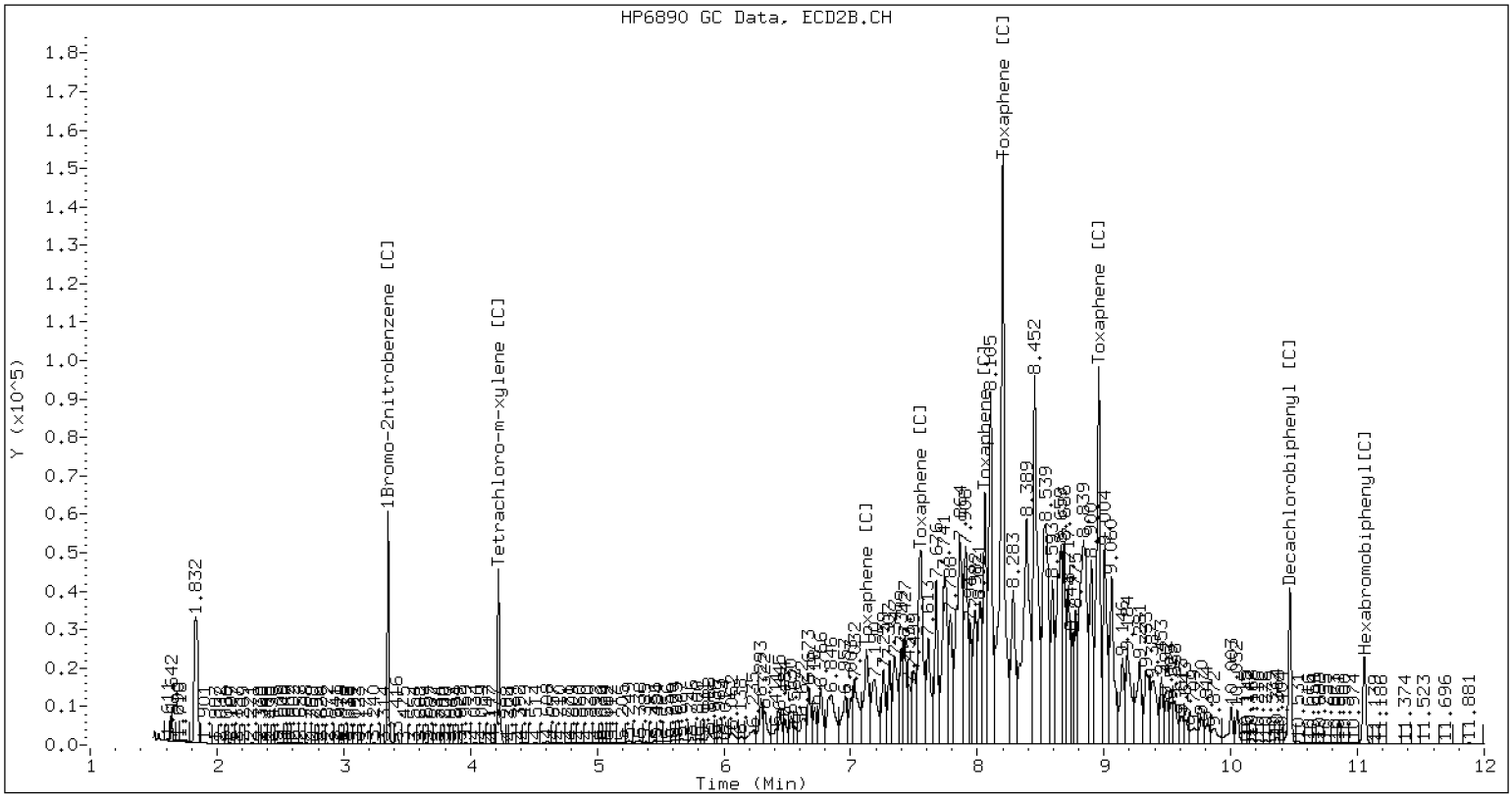
		STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount	
Toxaphene	1	6.931	0.000	1553785	8707.6	1	7.126	0.000	1336419	9229.8	
Toxaphene	2	7.303	-0.000	4216546	8428.1	2	7.553	0.000	2900195	8908.4	
Toxaphene	3	7.653	-0.000	2652265	8227.0	3	8.060	0.000	2299294	9278.2	
Toxaphene	4	7.987	0.001	3225164	7480.8	4	8.201	0.000	7496819	9274.6	
Toxaphene	5	8.082	-0.000	2882252	8851.2	5	8.959	0.000	3913616	9870.7	
Total STX-CLPAve (5 peaks): 8338.950						Total CLP2Ave (5 peaks): 9312.318				RPD = 11	
Corrected Ave (5 peaks): 8338.950						Corrected Ave (5 peaks): 9312.318				RPD = 11	

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121434.D SEQ-CALAE CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

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Data file 2: /20221214.b/B20221214.b/22121434.D
Method: \20221214.b\PEST.m
Compound Sublist: TOXAPH.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CALAE
Client ID:
Injection Date: 15-DEC-2022 05:16
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD6	Calibration:	FL00041
Lab File ID:	23C03023.D	Calibration Date:	12/14/2022
Sequence:	SLC0093	Injection Date:	03/03/23
Lab Sample ID:	SLC0093-ICV1	Injection Time:	00:34
Sequence Name:	INDAE1		

		CONC. (ng/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Hexachlorobenzene	A	20.000	19.2	1.4298940	1.3740710		-4.0	+/-20
Hexachlorobenzene [2C]	A	20.000	18.4	1.4591090	1.3403750		-8.0	+/-20
Decachlorobiphenyl	A	40.000	37.9	0.8105886	0.7680604		-5.3	+/-20
Decachlorobiphenyl [2C]	A	40.000	38.0	0.8841805	0.8392586		-5.0	+/-20
Tetrachlorometaxylene	A	40.000	37.0	1.0879510	1.0054160		-7.5	+/-20
Tetrachlorometaxylene [2C]	A	40.000	36.7	1.1261070	1.0323690		-8.3	+/-20

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230302.b/23C03023.D
Data file 2: /20230302.b/B20230302.b/23C03023.D
Method: \20230302.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: AA

ARI ID: SEQ-INDA1
Client ID:
Injection Date: 03-MAR-2023 00:34
Report Date: 03/09/2023 11:19
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.391	0.000	183062	4.829	0.000	264706	20.14	19.12	5.2	alpha-BHC
4.779	0.000	70663	5.302	0.000	100950	20.19	19.18	5.2	beta-BHC
4.965	0.000	157975	5.654	0.000	222619	21.27	19.52	8.6	delta-BHC
4.698	0.000	159687	5.223	0.000	229812	20.26	19.56	3.5	gamma-BHC (Lindane)
5.191	0.000	147595	5.750	0.000	200100	21.05	18.80	11.3	Heptachlor
5.519	0.000	156781	6.152	0.000	217550	19.95	17.90	10.8	Aldrin
6.199	0.000	138028	6.807	0.000	175914	20.26	17.51	14.6	Heptachlor epoxide b
6.641	0.000	123673	7.250	0.000	149530	19.78	16.89	15.8	Endosulfan I
6.901	0.000	260632	7.543	0.000	321444	38.80	32.85	16.6	Dieldrin
6.561	0.000	249441	7.331	0.000	307144	40.00	34.23	15.5	4,4'-DDE
7.151	0.000	171344	7.866	0.000	191394	34.62	33.20	4.2	Endrin
7.388	0.000	215006	8.078	0.000	259590	48.26	43.93	9.4	Endosulfan II
7.207	0.000	202817	7.936	0.000	249024	45.48	44.41	2.4	4,4'-DDD
8.249	0.000	186171	8.673	0.000	234465	44.00	45.18	2.6	Endosulfan sulfate
7.500	0.000	205859	8.254	0.000	234837	45.69	43.39	5.2	4,4'-DDT
7.986	0.000	443110	8.892	0.000	524337	221.92	218.91	1.4	Methoxychlor
8.524	0.000	231289	9.196	0.000	270054	47.72	48.18	1.0	Endrin ketone
7.816	0.000	171425	8.408	0.000	202528	48.24	48.59	0.7	Endrin aldehyde
6.339	0.000	136541	7.017	0.000	166872	19.73	16.65	16.9	trans-Chlordane
6.486	0.000	135083	7.177	0.000	164901	19.46	16.82	14.6	cis-Chlordane
2.346	0.000	176391	2.492	0.000	228593	18.53	17.39	6.3	Hexachlorobutadiene
4.231	0.000	162171	4.689	0.000	231474	19.22	18.37	4.5	Hexachlorobenzene
3.871	0.000	237323	4.195	0.000	356567	36.97	36.67	0.8	Tetrachloro-m-xylene
9.437	0.000	144981	10.402	0.000	170145	37.90	37.97	0.2	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

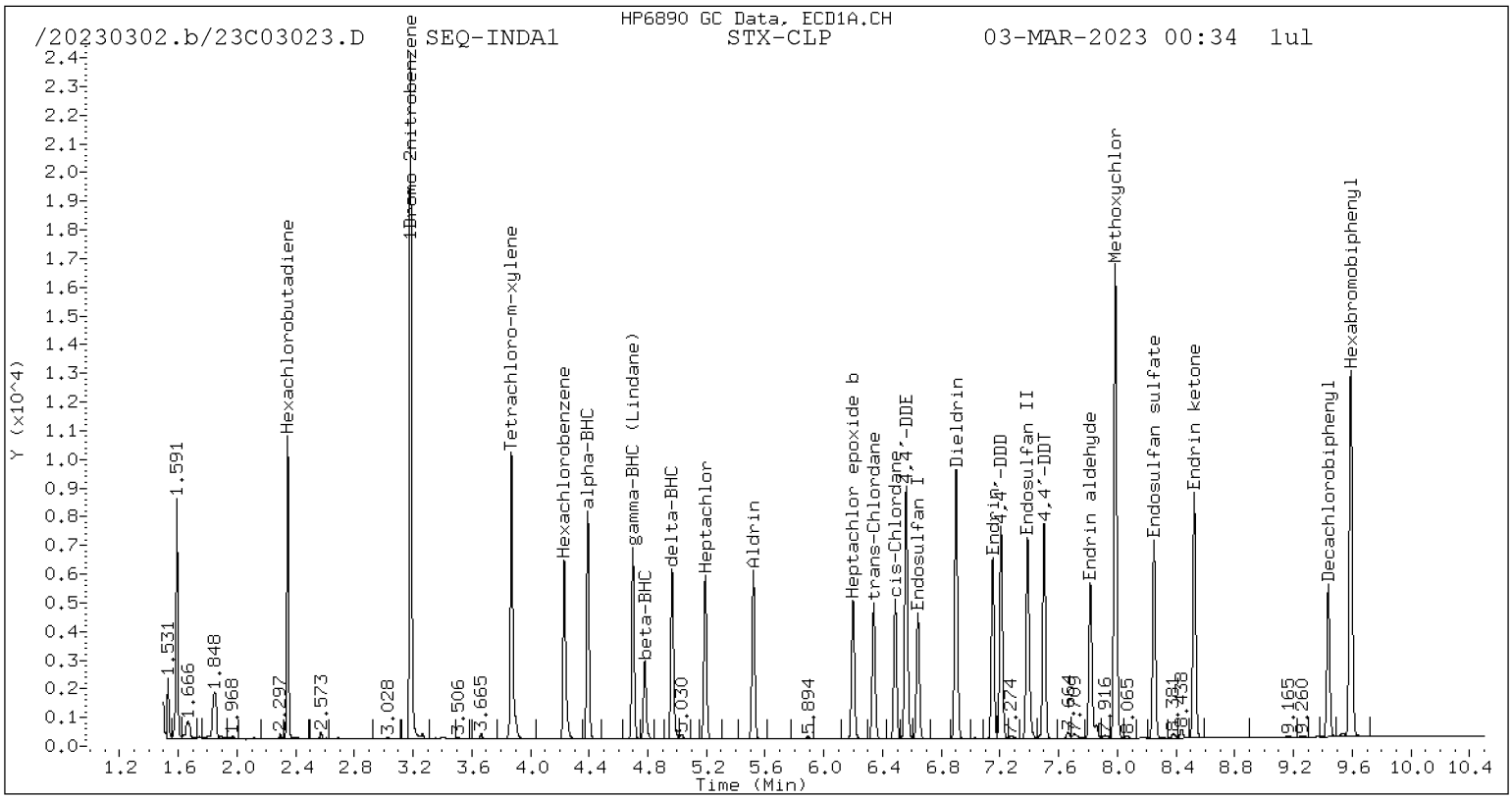
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	472089	-29.8
Hexabromobiphenyl	609723	377525	-38.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	690774	-31.4
Hexabromobiphenyl	769764	405465	-47.3

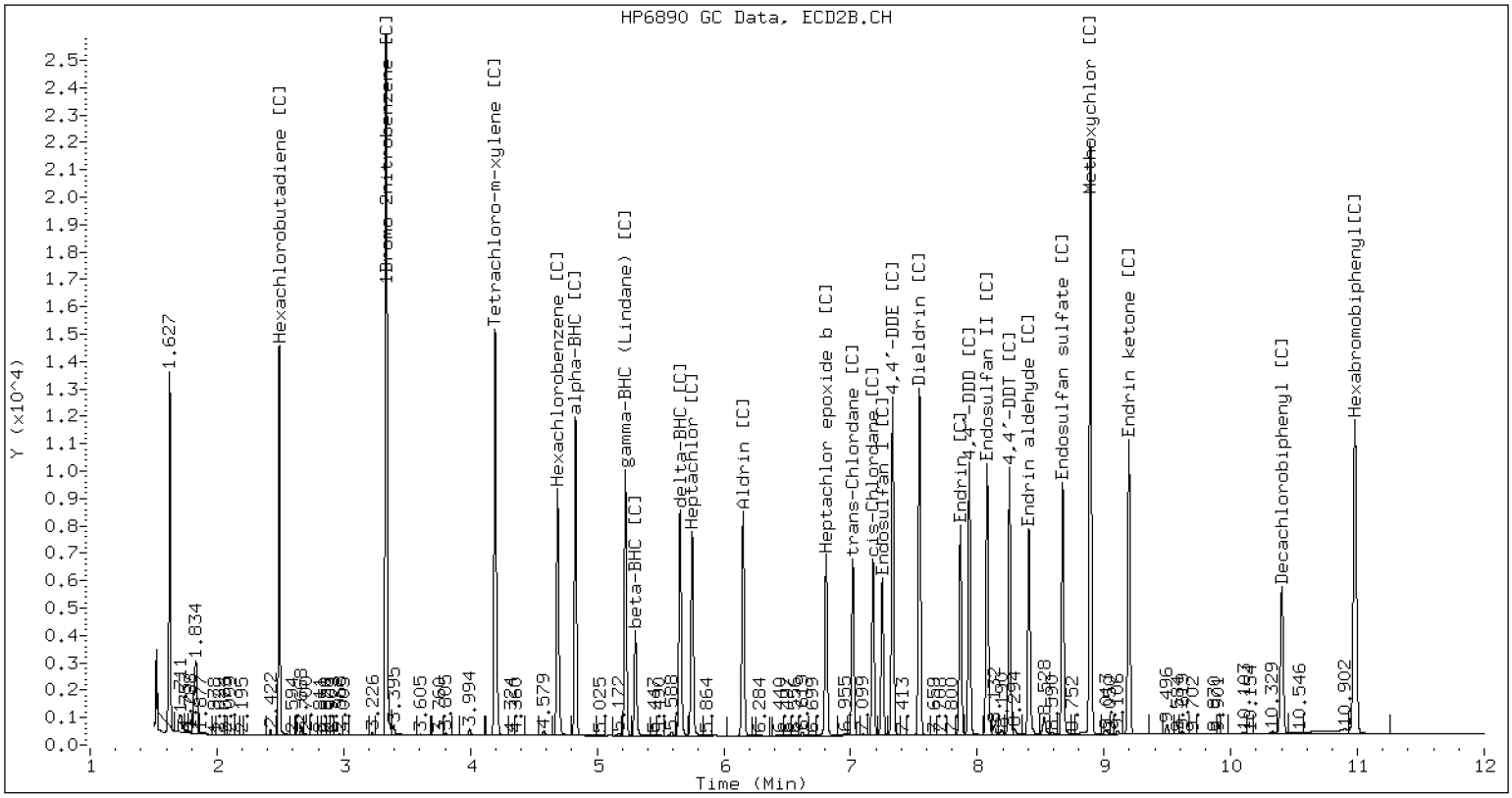
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230302.b/B20230302.b/23C03023.D SEQ-INDA1 CLP2



CLP-2 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD6	Calibration:	FL00041
Lab File ID:	23C03073.D	Calibration Date:	12/14/2022
Sequence:	SLC0106	Injection Date:	03/07/23
Lab Sample ID:	SLC0106-ICV1	Injection Time:	09:35
Sequence Name:	INDAE1		

		CONC. (ng/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Hexachlorobenzene	A	20.000	19.7	1.4298940	1.4087490		-1.5	+/-20
Hexachlorobenzene [2C]	A	20.000	19.2	1.4591090	1.3981120		-4.0	+/-20
Decachlorobiphenyl	A	40.000	37.5	0.8105886	0.7599394		-6.3	+/-20
Decachlorobiphenyl [2C]	A	40.000	36.8	0.8841805	0.8128448		-8.0	+/-20
Tetrachlorometaxylene	A	40.000	35.7	1.0879510	0.9702200		-10.8	+/-20
Tetrachlorometaxylene [2C]	A	40.000	37.8	1.1261070	1.0650870		-5.5	+/-20

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230307.b/23C03073.D
Data file 2: /20230307.b/B20230307.b/23C03073.D
Method: \20230307.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: AA

ARI ID: SEQ-INDA1
Client ID:
Injection Date: 07-MAR-2023 09:35
Report Date: 03/09/2023 13:37
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.378	0.000	325929	4.816	0.000	494898	21.10	20.60	2.4	alpha-BHC
4.766	0.000	126955	5.289	0.000	184681	21.35	20.22	5.4	beta-BHC
4.952	0.000	277905	5.641	0.000	371523	22.01	18.77	15.9	delta-BHC
4.684	0.000	282813	5.210	0.000	428139	21.12	21.00	0.6	gamma-BHC (Lindane)
5.176	0.000	258082	5.735	0.000	383099	21.66	20.74	4.3	Heptachlor
5.504	0.000	272577	6.137	0.000	402592	20.41	19.09	6.7	Aldrin
6.183	0.000	231421	6.793	0.000	324748	19.99	18.62	7.1	Heptachlor epoxide b
6.625	0.000	215572	7.236	0.000	282875	20.29	18.40	9.7	Endosulfan I
6.885	0.000	460870	7.530	0.000	611544	40.37	36.01	11.4	Dieldrin
6.546	0.000	428294	7.319	0.000	575872	40.41	36.98	8.9	4,4'-DDE
7.135	0.000	320148	7.853	0.000	408164	38.69	39.71	2.6	Endrin
7.372	0.000	372458	8.064	0.000	485545	50.00	46.09	8.1	Endosulfan II
7.192	0.000	341363	7.924	0.000	489488	45.79	48.96	6.7	4,4'-DDD
8.234	0.000	327223	8.660	0.000	435275	46.26	47.05	1.7	Endosulfan sulfate
7.485	0.000	368275	8.241	0.000	461337	48.88	47.81	2.2	4,4'-DDT
7.972	0.000	755666	8.880	0.000	990921	226.35	232.07	2.5	Methoxychlor
8.508	0.000	401738	9.182	0.000	485441	49.58	48.58	2.0	Endrin ketone
7.800	0.000	287029	8.394	0.000	358159	48.31	48.20	0.2	Endrin aldehyde
6.324	0.000	235537	7.004	0.000	319249	20.03	18.36	8.7	trans-Chlordane
6.471	0.000	231718	7.163	0.000	310912	19.64	18.28	7.2	cis-Chlordane
2.336	0.000	293527	2.482	0.000	326794	18.14	14.32	23.5	Hexachlorobutadiene
4.219	0.000	282589	4.676	0.000	419048	19.70	19.16	2.8	Hexachlorobenzene
3.859	0.000	389244	4.183	0.000	638465	35.67	37.83	5.9	Tetrachloro-m-xylene
9.421	0.000	239846	10.385	0.000	293780	37.50	36.77	2.0	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

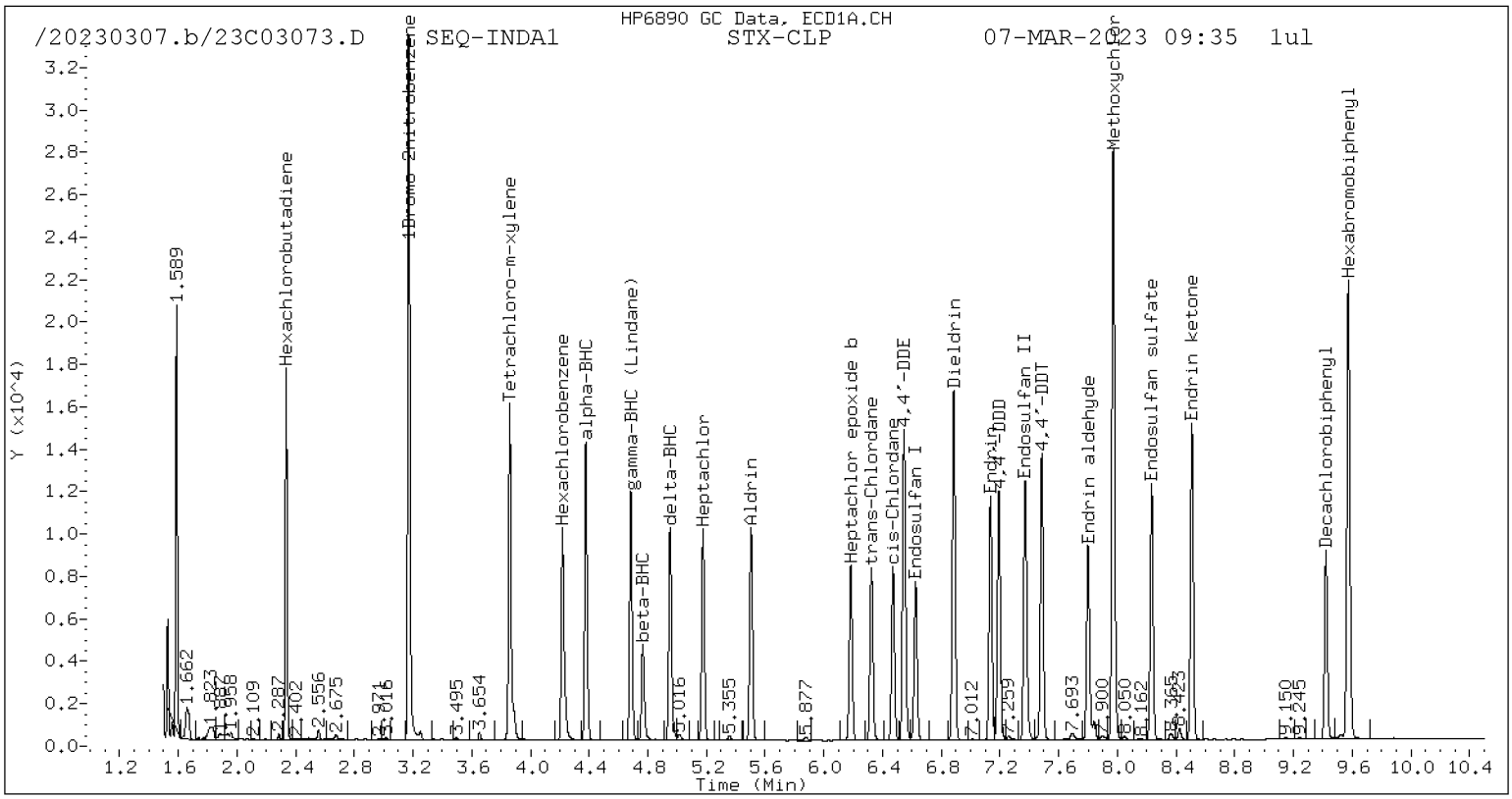
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	802383	19.3
Hexabromobiphenyl	609723	631224	3.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	1198897	19.1
Hexabromobiphenyl	769764	722844	-6.1

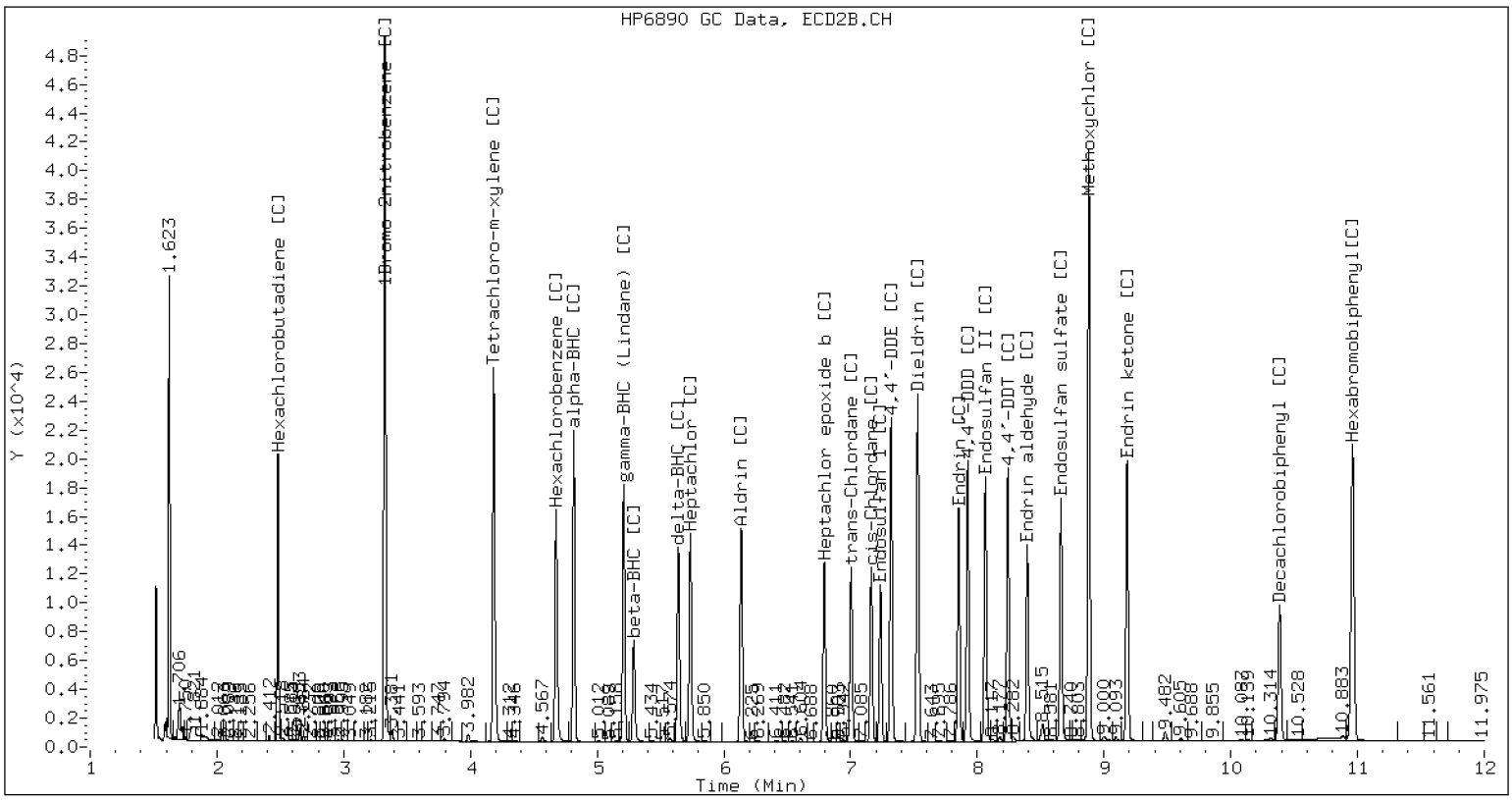
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

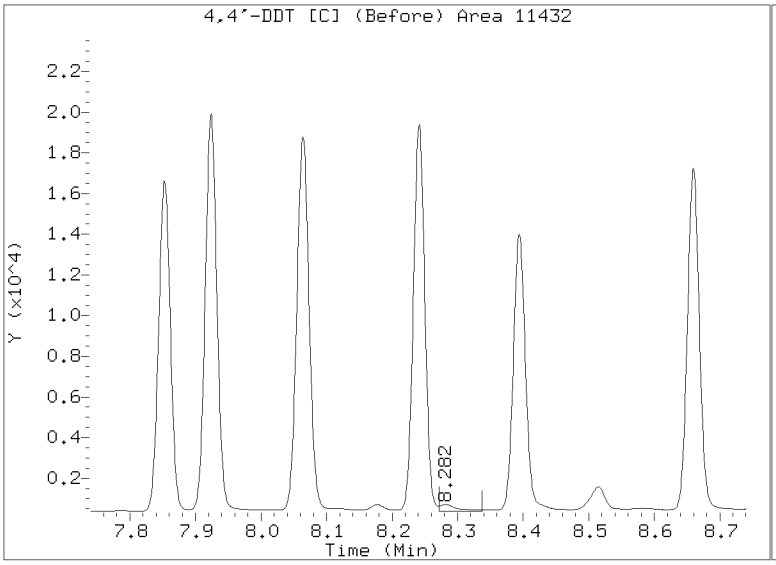
/20230307.b/B20230307.b/23C03073.D SEQ-INDA1 CLP2

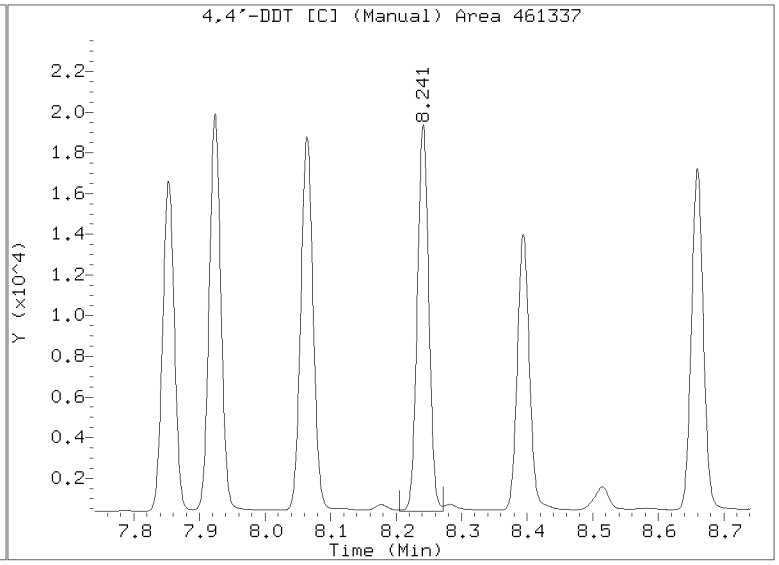


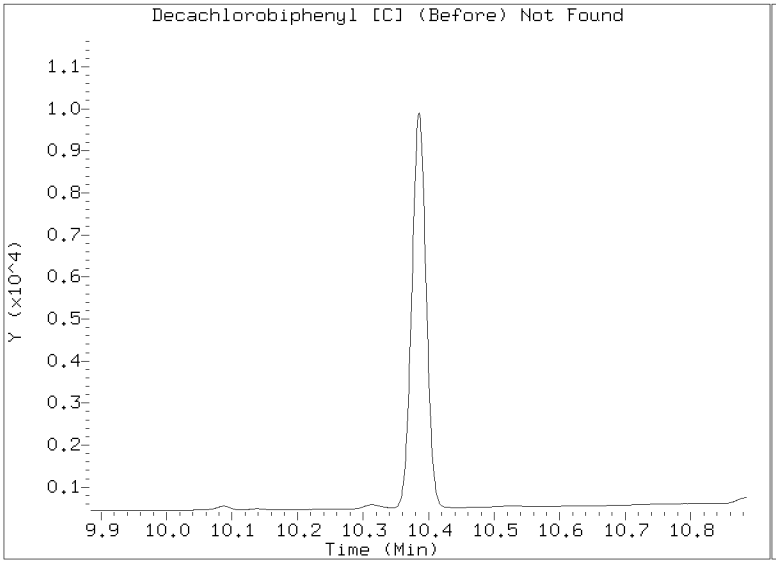
CLP-2 Manual Integration: NO

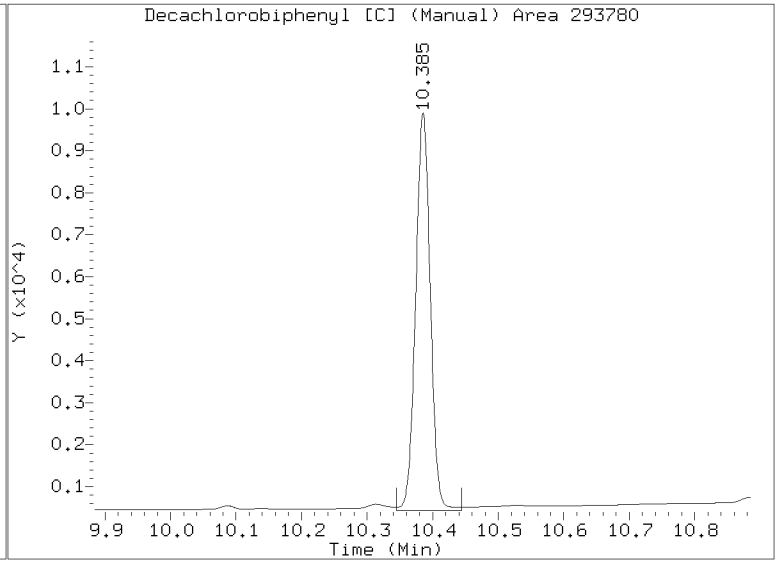
Manual Peak Adjustment Report, CLP-2

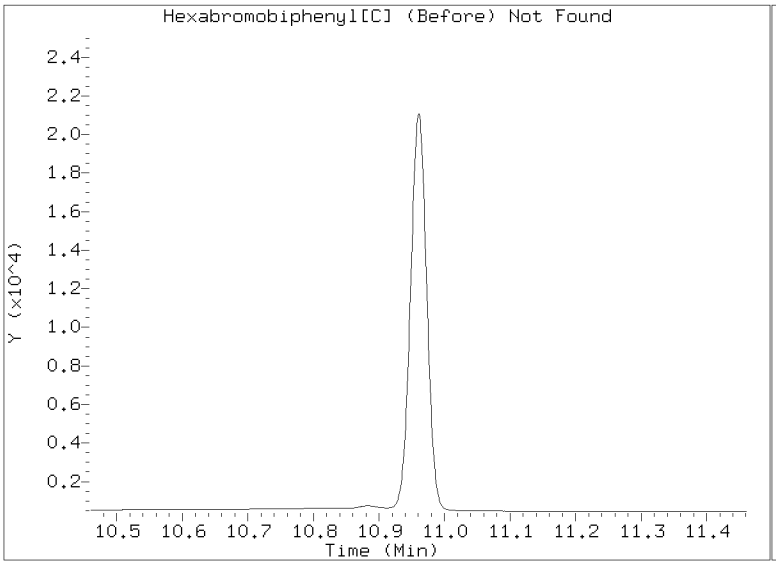
Datafile: /20230307.b/B20230307.b/23C03073.D
Injection Date: 07-MAR-2023 09:35
Lab ID:SEQ-INDA1 Client ID:

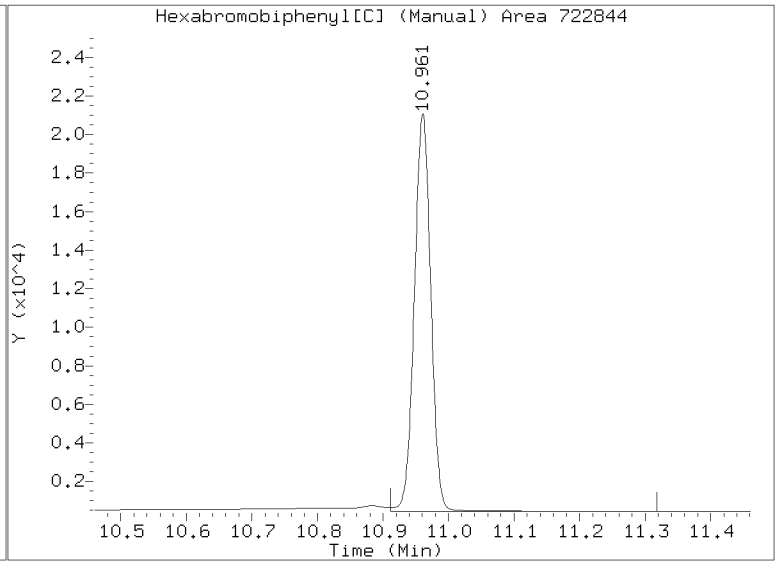












Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD6	Calibration:	FL00041
Lab File ID:	23032406.D	Calibration Date:	12/14/2022
Sequence:	SLC0442	Injection Date:	03/24/23
Lab Sample ID:	SLC0442-ICV1	Injection Time:	17:27
Sequence Name:	INDAE1		

		CONC. (ng/mL)		RESPONSE FACTOR			% DRIFT/DIFF		
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT	
alpha-BHC	A	20.000	17.5	1.5401480	1.3495940		-12.4	+/-20	
alpha-BHC [2C]	A	20.000	18.9	1.6032650	1.5174700		-5.4	+/-20	
beta-BHC	A	20.000	17.7	0.5929524	0.5253438		-11.4	+/-20	
beta-BHC [2C]	A	20.000	18.9	0.6095359	0.5773569		-5.3	+/-20	
gamma-BHC (Lindane)	A	20.000	17.8	1.3353400	1.1852260		-11.2	+/-20	
gamma-BHC (Lindane) [2C]	A	20.000	18.8	1.3606	1.2799590		-5.9	+/-20	
delta-BHC	A	20.000	16.9	1.2587440	1.0663720		-15.3	+/-20	
delta-BHC [2C]	A	20.000	11.2	1.3206240	0.7394749		-44.0	+/-20	*
Heptachlor	A	20.000	17.6	1.1881510	1.0458810		-12.0	+/-20	
Heptachlor [2C]	A	20.000	18.7	1.2325020	1.1507700		-6.6	+/-20	
Aldrin	A	20.000	17.0	1.3315350	1.1350550		-14.8	+/-20	
Aldrin [2C]	A	20.000	17.9	1.4072190	1.2626960		-10.3	+/-20	
Heptachlor Epoxide	A	20.000	17.6	1.1545300	1.0174650		-11.9	+/-20	
Heptachlor Epoxide [2C]	A	20.000	17.8	1.1636450	1.0365360		-10.9	+/-20	
trans-Chlordane (beta-Chlordane)	A	20.000	17.4	1.1726130	1.0212900		-12.9	+/-20	
trans-Chlordane (beta-Chlordane) [2C]	A	20.000	17.4	1.1604170	1.0101990		-12.9	+/-20	
cis-Chlordane (alpha-chlordane)	A	20.000	17.2	1.1760380	1.0139390		-13.8	+/-20	
cis-Chlordane (alpha-chlordane) [2C]	A	20.000	17.4	1.1352300	0.9861284		-13.1	+/-20	
Endosulfan I	A	20.000	18.1	1.0595170	0.9588982		-9.5	+/-20	
Endosulfan I [2C]	A	20.000	17.8	1.0256020	0.9118711		-11.1	+/-20	
4,4'-DDE	A	40.000	35.6	1.0568430	0.9393105		-11.1	+/-20	
4,4'-DDE [2C]	A	40.000	36.4	1.0391680	0.9449396		-9.1	+/-20	
Dieldrin	A	40.000	34.7	1.1382810	0.9880679		-13.2	+/-20	
Dieldrin [2C]	A	40.000	35.5	1.1331770	1.0053130		-11.3	+/-20	
Endrin	A	40.000	36.5	1.0488190	0.9581713		-8.6	+/-20	
Endrin [2C]	A	40.000	37.7	1.1374860	1.0727350		-5.7	+/-20	
Endosulfan II	A	40.000	40.6	0.9441550	0.9582318		1.5	+/-20	
Endosulfan II [2C]	A	40.000	38.0	1.1659380	1.1073660		-5.0	+/-20	
4,4'-DDD	A	40.000	40.7	0.9449058	0.9614335		1.7	+/-20	
4,4'-DDD [2C]	A	40.000	40.2	1.1064160	1.1105800		0.4	+/-20	

* Values outside of QC limits

INITIAL CALIBRATION CHECK
EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD6	Calibration:	FL00041
Lab File ID:	23032406.D	Calibration Date:	12/14/2022
Sequence:	SLC0442	Injection Date:	03/24/23
Lab Sample ID:	SLC0442-ICV1	Injection Time:	17:27
Sequence Name:	INDAE1		

		CONC. (ng/mL)		RESPONSE FACTOR			% DRIFT/DIFF		
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT	
Endrin Aldehyde	A	40.000	39.5	0.7530726	0.7445861		-1.1	+/-20	
Endrin Aldehyde [2C]	A	40.000	39.5	0.8224595	0.8114831		-1.3	+/-20	
4,4'-DDT	A	40.000	35.3	0.9548168	0.8427533		-11.7	+/-20	
4,4'-DDT [2C]	A	40.000	37.4	1.0678960	0.9992475		-6.4	+/-20	
Endosulfan Sulfate	A	40.000	38.7	0.8965158	0.8670636		-3.3	+/-20	
Endosulfan Sulfate [2C]	A	40.000	35.4	1.0238570	0.9067039		-11.4	+/-20	
Endrin Ketone	A	40.000	39.8	1.0270110	1.0226610		-0.4	+/-20	
Endrin Ketone [2C]	A	40.000	38.1	1.1058500	1.0529870		-4.8	+/-20	
Methoxychlor	A	200.00	196	0.4231113	0.4150813		-1.9	+/-20	
Methoxychlor [2C]	A	200.00	191	0.4725766	0.4504488		-4.7	+/-20	
Hexachlorobutadiene	A	20.000	12.2	1.6135150	0.9844472		-39.0	+/-20	*
Hexachlorobutadiene [2C]	A	20.000	9.22	1.5225100	0.7018004		-53.9	+/-20	*
Hexachlorobenzene	A	20.000	16.5	1.4298940	1.1806710		-17.4	+/-20	
Hexachlorobenzene [2C]	A	20.000	18.3	1.4591090	1.3387070		-8.3	+/-20	
Decachlorobiphenyl	A	40.000	34.2	0.8105886	0.6932014		-14.5	+/-20	
Decachlorobiphenyl [2C]	A	40.000	33.8	0.8841805	0.7481270		-15.4	+/-20	
Tetrachlorometaxylene	A	40.000	24.7	1.0879510	0.6719458		-38.2	+/-20	*
Tetrachlorometaxylene [2C]	A	40.000	35.6	1.1261070	1.0019880		-11.0	+/-20	

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230324.b/23032406.D
Data file 2: /20230324.b/B20230324.b/23032406.D
Method: \20230324.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-ICV1INDA1
Client ID:
Injection Date: 24-MAR-2023 17:27
Report Date: 03/28/2023 10:49
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.366	-0.008	171836	4.799	-0.010	240503	17.53	18.93	7.7	alpha-BHC
4.754	-0.008	66889	5.271	-0.010	91505	17.72	18.94	6.7	beta-BHC
4.939	-0.009	135775	5.621	-0.011	117199	16.94	11.20	40.8*	delta-BHC
4.672	-0.008	150908	5.191	-0.011	202860	17.75	18.81	5.8	gamma-BHC (Lindane)
5.162	-0.009	133166	5.714	-0.012	182385	17.61	18.67	5.9	Heptachlor
5.488	-0.010	144520	6.115	-0.012	200124	17.05	17.95	5.1	Aldrin
6.166	-0.010	129548	6.771	-0.011	164280	17.63	17.82	1.1	Heptachlor epoxide b
6.608	-0.010	122091	7.215	-0.012	144522	18.10	17.78	1.8	Endosulfan I
6.868	-0.010	251610	7.509	-0.011	318663	34.72	35.49	2.2	Dieldrin
6.532	-0.009	239194	7.300	-0.010	299526	35.55	36.37	2.3	4,4'-DDE
7.118	-0.009	205900	7.832	-0.012	241617	36.54	37.72	3.2	Endrin
7.356	-0.010	205913	8.043	-0.012	249417	40.60	37.99	6.6	Endosulfan II
7.179	-0.008	206601	7.905	-0.010	250141	40.70	40.15	1.4	4,4'-DDD
8.218	-0.008	186322	8.640	-0.010	204221	38.69	35.42	8.8	Endosulfan sulfate
7.470	-0.009	181098	8.222	-0.011	225065	35.31	37.43	5.8	4,4'-DDT
7.959	-0.007	445981	8.862	-0.011	507283	196.20	190.64	2.9	Methoxychlor
8.492	-0.009	219758	9.162	-0.012	237169	39.83	38.09	4.5	Endrin ketone
7.784	-0.009	160003	8.374	-0.011	182774	39.55	39.47	0.2	Endrin aldehyde
6.308	-0.011	130035	6.982	-0.012	160106	17.42	17.41	0.0	trans-Chlordane
6.454	-0.010	129099	7.142	-0.011	156291	17.24	17.37	0.8	cis-Chlordane
2.327	-0.006	125344	2.472	-0.006	111228	12.20	9.22	27.9	Hexachlorobutadiene
4.209	-0.008	150328	4.660	-0.010	212171	16.51	18.35	10.5	Hexachlorobenzene
3.848	-0.009	171110	4.169	-0.009	317609	24.70	35.59	36.1	Tetrachloro-m-xylene
9.407	-0.008	148961	10.360	-0.013	168504	34.21	33.84	1.1	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

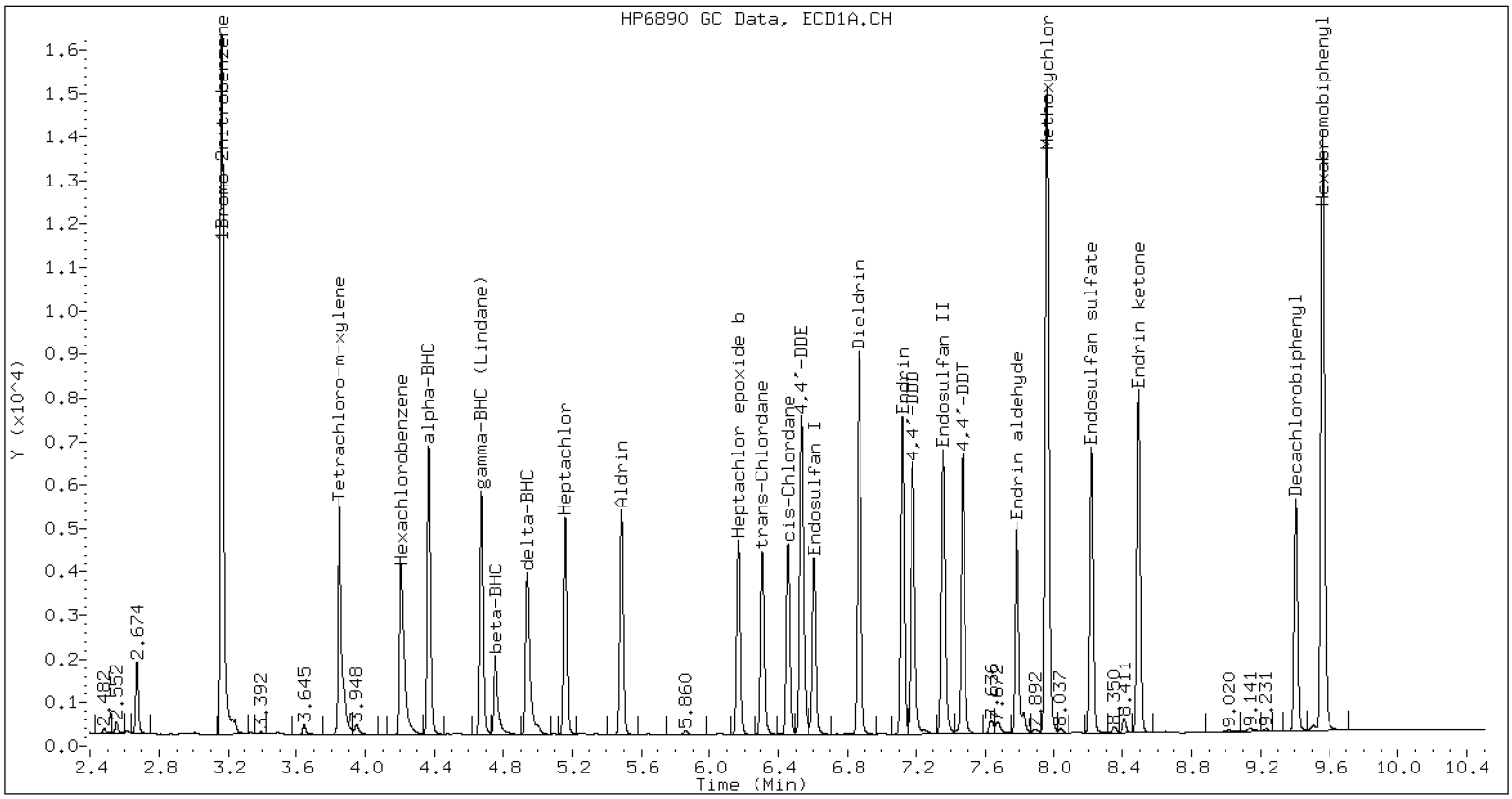
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	509297	-24.3
Hexabromobiphenyl	609723	429777	-29.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	633958	-37.0
Hexabromobiphenyl	769764	450469	-41.5

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

/20230324.b/23032406.D SEQ-ICV1INDA1 STX-CLP 24-MAR-2023 17:27 1ul



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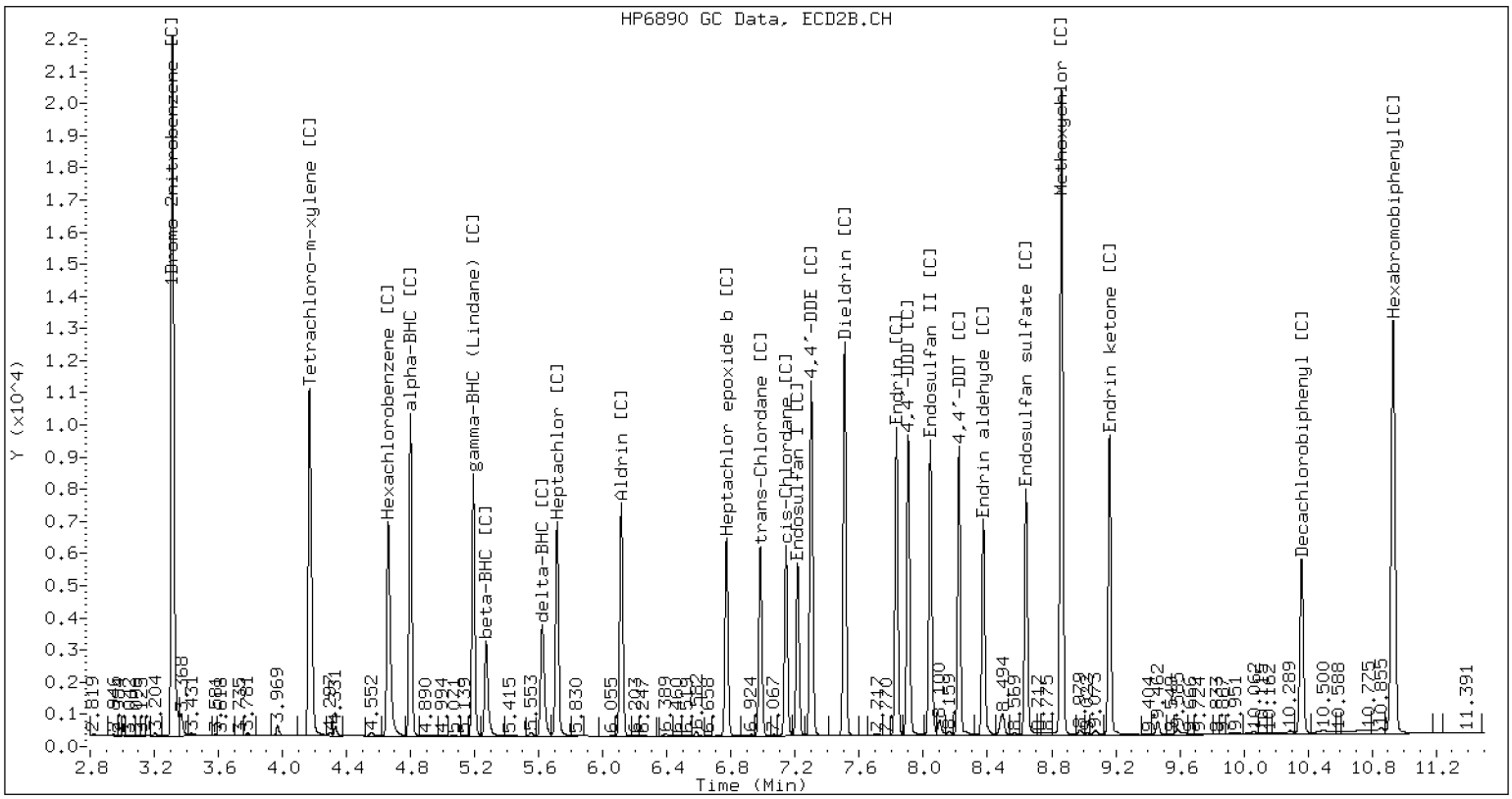
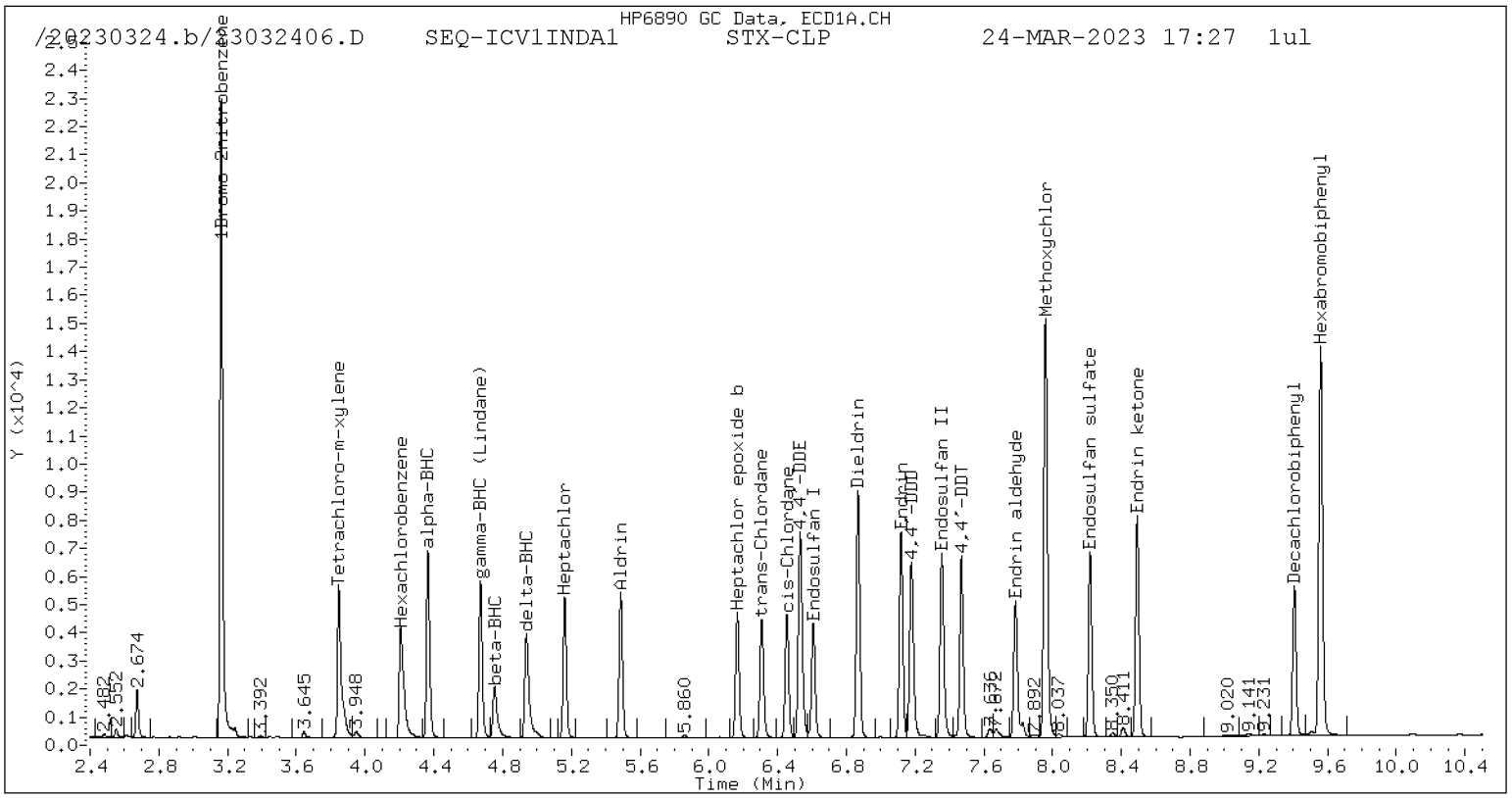
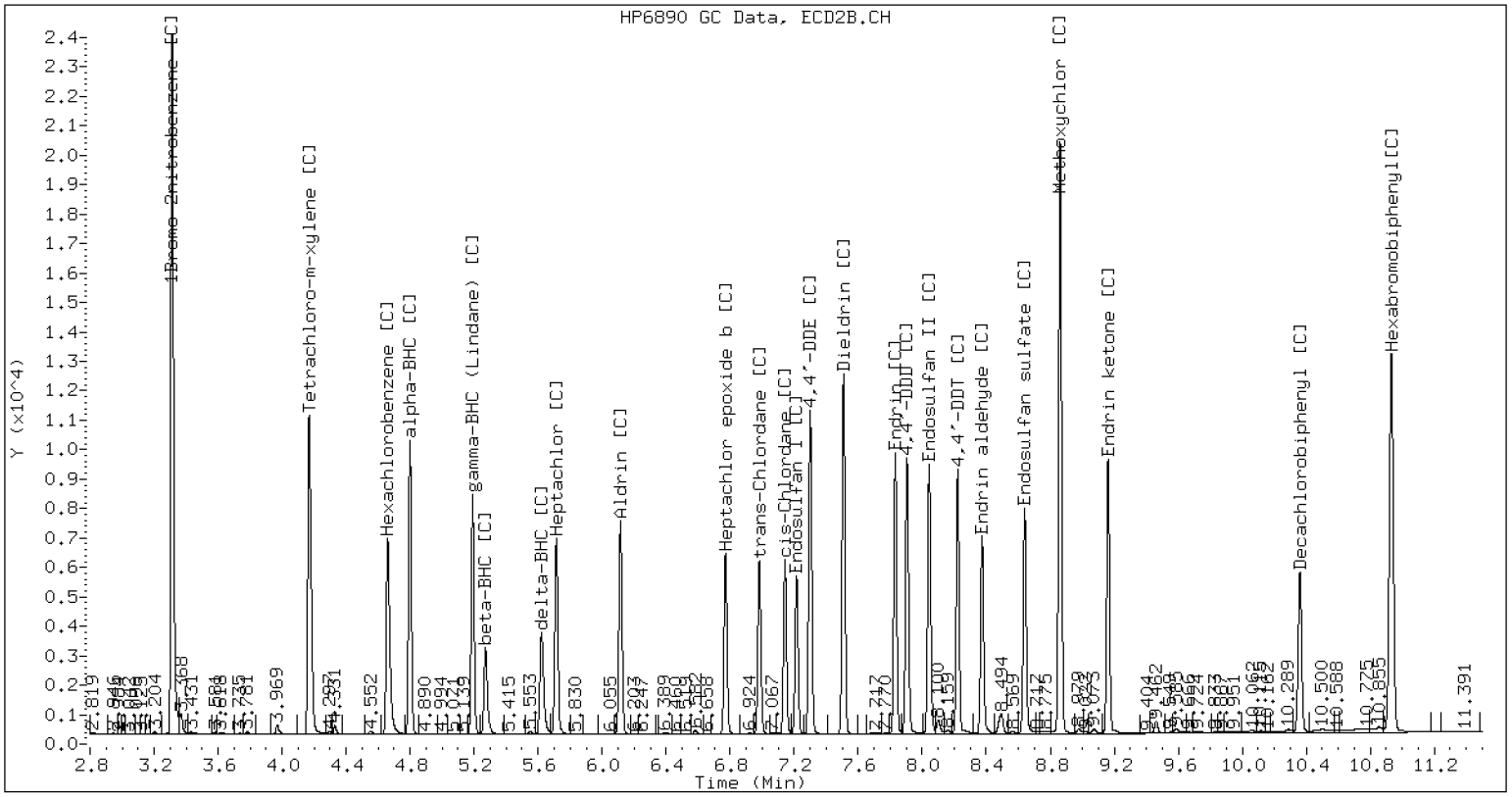


Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230324.b/B20230324.b/23032406.D SEQ-ICV1INDA1 CLP2



CLP-2 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD6	Calibration:	FL00041
Lab File ID:	002F1801.D	Calibration Date:	12/14/2022
Sequence:	SLC0093	Injection Date:	03/03/23
Lab Sample ID:	SLC0093-CCV1	Injection Time:	05:03
Sequence Name:	INDAE2		

		CONC. (ng/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Hexachlorobenzene	A	20.000	19.7	1.4298940	1.4075310		-1.5	+/-20
Hexachlorobenzene [2C]	A	20.000	18.4	1.4591090	1.3462030		-8.0	+/-20
Decachlorobiphenyl	A	40.000	36.3	0.8105886	0.7358649		-9.3	+/-20
Decachlorobiphenyl [2C]	A	40.000	36.1	0.8841805	0.7989683		-9.8	+/-20
Tetrachlorometaxylene	A	40.000	37.6	1.0879510	1.0232470		-6.0	+/-20
Tetrachlorometaxylene [2C]	A	40.000	36.6	1.1261070	1.0306140		-8.5	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230302.b/002F1801.D
Data file 2: /20230302.b/B20230302.b/002F1801.D
Method: \20230302.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: AA

ARI ID: SEQ-INDA2
Client ID:
Injection Date: 03-MAR-2023 05:03
Report Date: 03/09/2023 11:17
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.389	-0.002	343168	4.827	-0.002	523633	21.36	19.90	7.1	alpha-BHC
4.777	-0.002	130399	5.301	-0.001	195475	21.08	19.54	7.6	beta-BHC
4.964	-0.002	301259	5.652	-0.002	447075	22.94	20.63	10.6	delta-BHC
4.696	-0.002	298011	5.222	-0.001	455223	21.39	20.38	4.8	gamma-BHC (Lindane)
5.190	-0.002	271697	5.748	-0.001	401965	21.92	19.87	9.8	Heptachlor
5.517	-0.002	286941	6.150	-0.001	422330	20.65	18.29	12.2	Aldrin
6.196	-0.002	241170	6.805	-0.002	328965	20.02	17.22	15.0	Heptachlor epoxide b
6.639	-0.002	222373	7.248	-0.002	282710	20.12	16.79	18.0	Endosulfan I
6.899	-0.002	459350	7.542	-0.002	598481	38.68	32.18	18.3	Dieldrin
6.558	-0.002	445996	7.330	-0.002	573822	40.45	33.64	18.4	4,4'-DDE
7.149	-0.002	289978	7.864	-0.002	349879	33.34	32.02	4.0	Endrin
7.385	-0.003	380821	8.075	-0.002	482441	48.64	43.08	12.1	Endosulfan II
7.204	-0.003	359106	7.934	-0.002	461474	45.83	43.42	5.4	4,4'-DDD
8.247	-0.003	327788	8.671	-0.002	438173	44.10	44.56	1.0	Endosulfan sulfate
7.498	-0.002	362592	8.252	-0.002	460505	45.80	44.90	2.0	4,4'-DDT
7.984	-0.002	782122	8.891	-0.002	1021448	222.94	225.03	0.9	Methoxychlor
8.522	-0.002	401746	9.194	-0.002	525667	47.18	49.49	4.8	Endrin ketone
7.813	-0.003	298557	8.405	-0.002	379452	47.81	48.03	0.5	Endrin aldehyde
6.338	-0.002	246874	7.016	-0.002	321581	20.18	16.88	17.8	trans-Chlordane
6.484	-0.002	243082	7.176	-0.002	310953	19.81	16.69	17.1	cis-Chlordane
2.344	-0.002	318266	2.490	-0.002	433551	18.90	17.35	8.6	Hexachlorobutadiene
4.229	-0.002	293718	4.687	-0.002	441908	19.69	18.45	6.5	Hexachlorobenzene
3.869	-0.002	427054	4.193	-0.002	676624	37.62	36.61	2.7	Tetrachloro-m-xylene
9.435	-0.002	244061	10.400	-0.002	306966	36.31	36.15	0.5	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

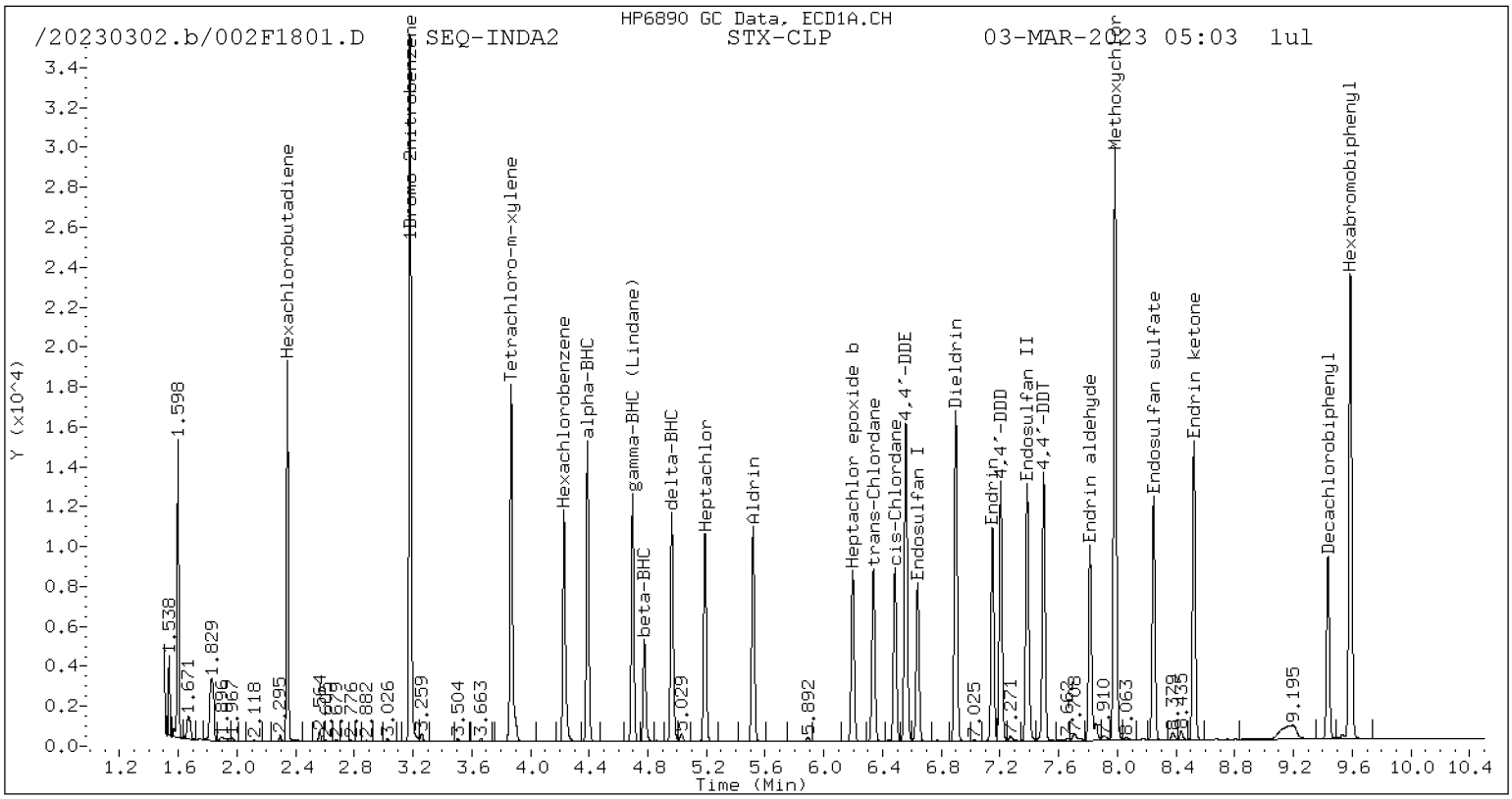
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	834704	24.1
Hexabromobiphenyl	609723	663331	8.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	1313050	30.5
Hexabromobiphenyl	769764	768406	-0.2

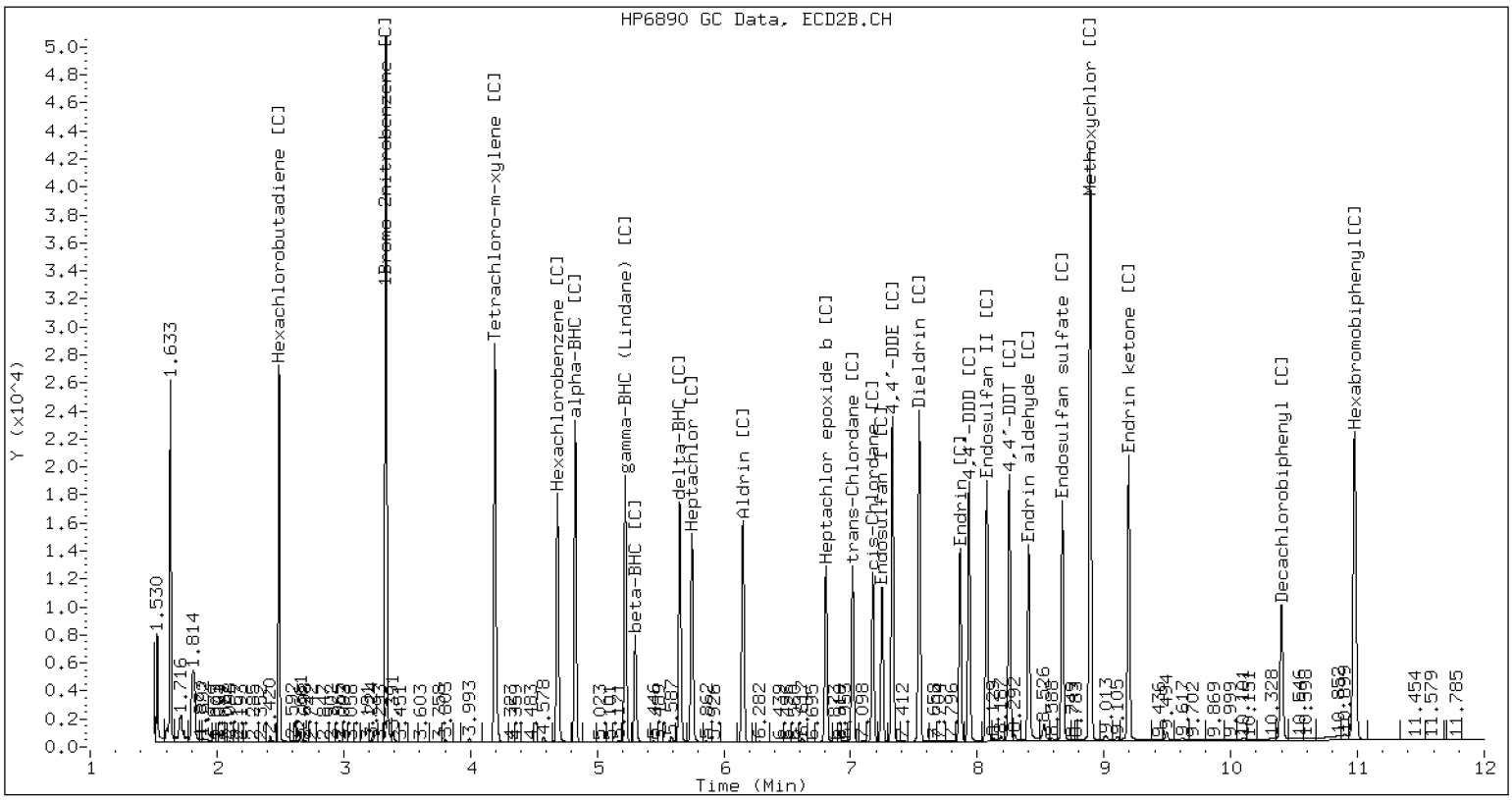
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230302.b/B20230302.b/002F1801.D SEQ-INDA2 CLP2



CLP-2 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD6	Calibration:	FL00041
Lab File ID:	002F3501.D	Calibration Date:	12/14/2022
Sequence:	SLC0093	Injection Date:	03/03/23
Lab Sample ID:	SLC0093-CCV2	Injection Time:	10:08
Sequence Name:	INDAE3		

		CONC. (ng/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Hexachlorobenzene	A	20.000	19.1	1.4298940	1.3662080		-4.5	+/-20
Hexachlorobenzene [2C]	A	20.000	17.8	1.4591090	1.2955280		-11.0	+/-20
Decachlorobiphenyl	A	40.000	37.2	0.8105886	0.7548490		-7.0	+/-20
Decachlorobiphenyl [2C]	A	40.000	39.1	0.8841805	0.8653759		-2.3	+/-20
Tetrachlorometaxylene	A	40.000	36.7	1.0879510	0.9994100		-8.3	+/-20
Tetrachlorometaxylene [2C]	A	40.000	35.6	1.1261070	1.0022730		-11.0	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230302.b/002F3501.D
Data file 2: /20230302.b/B20230302.b/002F3501.D
Method: \20230302.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: AA

ARI ID: SEQ-INDA3
Client ID:
Injection Date: 03-MAR-2023 10:08
Report Date: 03/09/2023 11:17
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.390	-0.001	188143	4.828	-0.002	275046	20.16	18.61	8.0	alpha-BHC
4.778	-0.001	72578	5.301	-0.001	105366	20.20	18.75	7.4	beta-BHC
4.964	-0.001	164939	5.653	-0.001	233517	21.63	19.18	12.0	delta-BHC
4.697	-0.002	164164	5.223	-0.001	240371	20.29	19.16	5.7	gamma-BHC (Lindane)
5.190	-0.002	149850	5.748	-0.001	211270	20.81	18.60	11.3	Heptachlor
5.518	-0.002	158122	6.150	-0.002	220726	19.60	17.02	14.1	Aldrin
6.197	-0.002	135037	6.805	-0.002	172673	19.30	16.10	18.1	Heptachlor epoxide b
6.638	-0.002	121689	7.249	-0.002	144082	18.95	15.24	21.7	Endosulfan I
6.899	-0.002	254846	7.542	-0.002	310486	36.95	29.72	21.7	Dieldrin
6.558	-0.002	246764	7.330	-0.001	293802	38.53	30.67	22.7	4,4'-DDE
7.149	-0.002	137316	7.865	-0.001	154172	28.85	26.63	8.0	Endrin
7.386	-0.002	206483	8.076	-0.001	253584	48.20	42.72	12.0	Endosulfan II
7.205	-0.002	195256	7.935	-0.002	237045	45.54	42.09	7.9	4,4'-DDD
8.247	-0.003	178093	8.672	-0.002	229175	43.78	43.97	0.4	Endosulfan sulfate
7.498	-0.002	194392	8.252	-0.002	241758	44.87	44.47	0.9	4,4'-DDT
7.984	-0.002	427965	8.891	-0.001	525596	222.91	218.48	2.0	Methoxychlor
8.522	-0.002	221528	9.195	-0.001	282492	47.54	50.18	5.4	Endrin ketone
7.814	-0.002	167495	8.406	-0.002	201428	49.02	48.11	1.9	Endrin aldehyde
6.338	-0.002	134516	7.016	-0.002	164467	18.93	15.37	20.7	trans-Chlordane
6.484	-0.002	132633	7.175	-0.002	158664	18.61	15.16	20.4	cis-Chlordane
2.345	-0.000	180359	2.492	-0.000	243057	18.45	17.32	6.3	Hexachlorobutadiene
4.230	-0.001	165566	4.688	-0.001	238852	19.11	17.76	7.3	Hexachlorobenzene
3.870	-0.001	242230	4.194	-0.001	369571	36.74	35.60	3.2	Tetrachloro-m-xylene
9.435	-0.002	137010	10.401	-0.001	176210	37.25	39.15	5.0	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

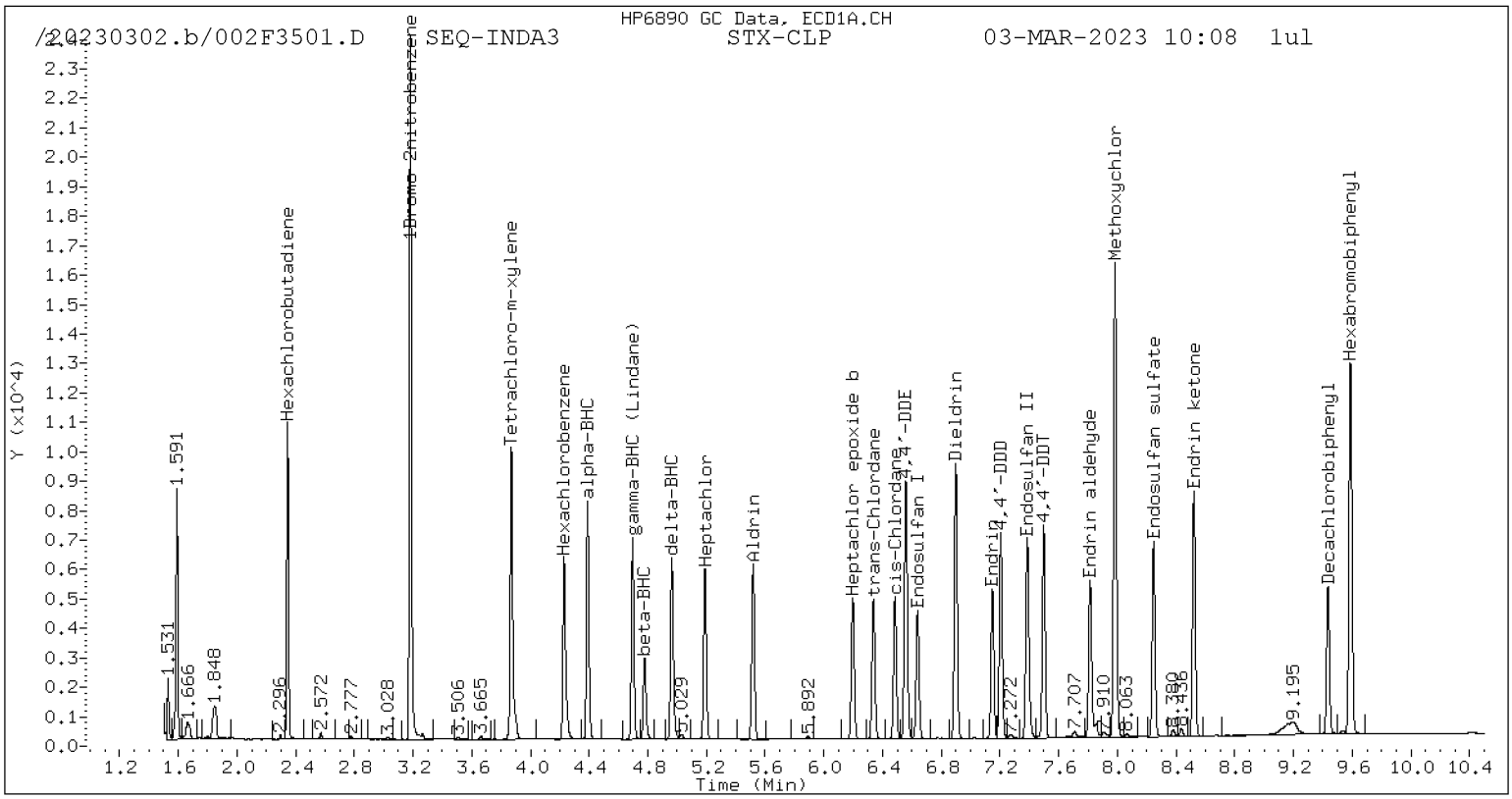
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	484746	-27.9
Hexabromobiphenyl	609723	363013	-40.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	737466	-26.7
Hexabromobiphenyl	769764	407245	-47.1

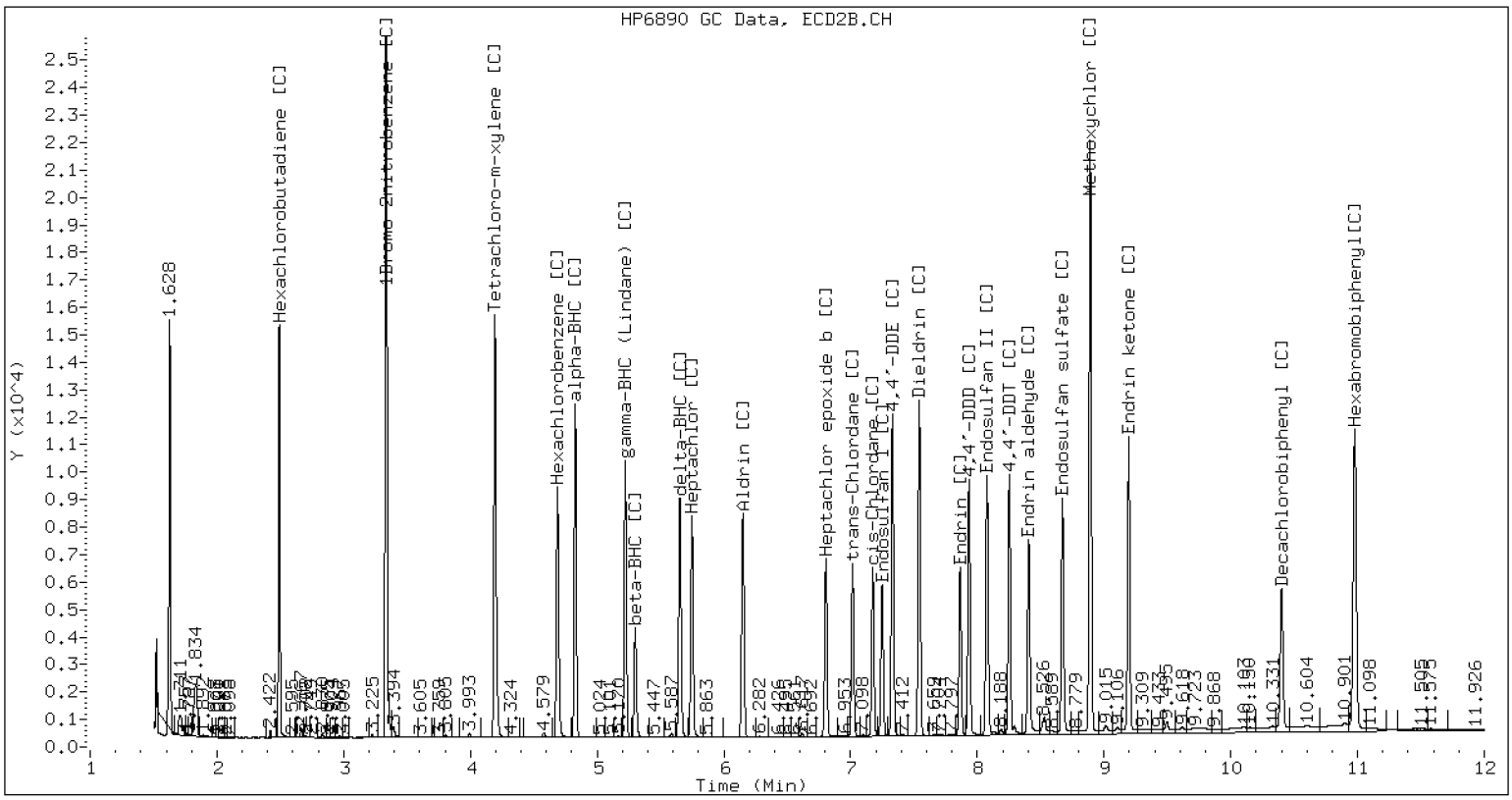
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230302.b/B20230302.b/002F3501.D SEQ-INDA3 CLP2



CLP-2 Manual Integration: NO

CONTINUING CALIBRATION CHECK

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD6	Calibration:	FL00041
Lab File ID:	002F4701.D	Calibration Date:	12/14/2022
Sequence:	SLC0093	Injection Date:	03/03/23
Lab Sample ID:	SLC0093-CCV3	Injection Time:	13:44
Sequence Name:	INDAE4		

		CONC. (ng/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Hexachlorobenzene	A	20.000	19.7	1.4298940	1.4099430		-1.5	+/-20
Hexachlorobenzene [2C]	A	20.000	18.3	1.4591090	1.3359870		-8.5	+/-20
Decachlorobiphenyl	A	40.000	36.6	0.8105886	0.7427974		-8.5	+/-20
Decachlorobiphenyl [2C]	A	40.000	37.1	0.8841805	0.8195756		-7.3	+/-20
Tetrachlorometaxylene	A	40.000	37.6	1.0879510	1.0221840		-6.0	+/-20
Tetrachlorometaxylene [2C]	A	40.000	36.4	1.1261070	1.0237650		-9.0	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230302.b/002F4701.D
Data file 2: /20230302.b/B20230302.b/002F4701.D
Method: \20230302.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: AA

ARI ID: SEQ-INDA4
Client ID:
Injection Date: 03-MAR-2023 13:44
Report Date: 03/09/2023 11:17
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.388	-0.003	379468	4.827	-0.003	577232	21.57	19.98	7.7	alpha-BHC
4.777	-0.003	144483	5.300	-0.002	213799	21.33	19.47	9.2	beta-BHC
4.963	-0.002	333612	5.651	-0.003	492614	23.21	20.70	11.4	delta-BHC
4.696	-0.003	329374	5.221	-0.002	500419	21.60	20.41	5.6	gamma-BHC (Lindane)
5.189	-0.003	299929	5.747	-0.002	443759	22.10	19.98	10.1	Heptachlor
5.517	-0.003	316209	6.149	-0.003	460479	20.79	18.16	13.5	Aldrin
6.195	-0.003	267512	6.804	-0.002	361113	20.29	17.22	16.3	Heptachlor epoxide b
6.638	-0.003	246695	7.247	-0.003	310176	20.39	16.79	19.4	Endosulfan I
6.898	-0.003	509698	7.541	-0.002	657623	39.21	32.21	19.6	Dieldrin
6.558	-0.003	493672	7.330	-0.002	629206	40.90	33.61	19.6	4,4'-DDE
7.148	-0.003	300689	7.864	-0.002	353106	31.04	30.07	3.2	Endrin
7.385	-0.004	423983	8.074	-0.003	526901	48.62	43.77	10.5	Endosulfan II
7.204	-0.003	399949	7.933	-0.003	507547	45.83	44.43	3.1	4,4'-DDD
8.246	-0.003	367025	8.671	-0.002	479504	44.32	45.36	2.3	Endosulfan sulfate
7.497	-0.003	408068	8.252	-0.002	507007	46.27	45.98	0.6	4,4'-DDT
7.983	-0.003	860998	8.890	-0.002	1119933	220.32	229.53	4.1	Methoxychlor
8.521	-0.003	456538	9.193	-0.003	564083	48.13	49.41	2.6	Endrin ketone
7.813	-0.003	332618	8.405	-0.002	405394	47.82	47.74	0.2	Endrin aldehyde
6.337	-0.003	273685	7.015	-0.003	351857	20.44	16.83	19.4	trans-Chlordane
6.483	-0.003	269319	7.174	-0.003	340839	20.05	16.66	18.5	cis-Chlordane
2.344	-0.002	344557	2.489	-0.002	468591	18.70	17.08	9.0	Hexachlorobutadiene
4.229	-0.002	322063	4.686	-0.003	481416	19.72	18.31	7.4	Hexachlorobenzene
3.868	-0.003	466980	4.193	-0.002	737817	37.58	36.36	3.3	Tetrachloro-m-xylene
9.434	-0.003	274425	10.399	-0.003	338472	36.65	37.08	1.1	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

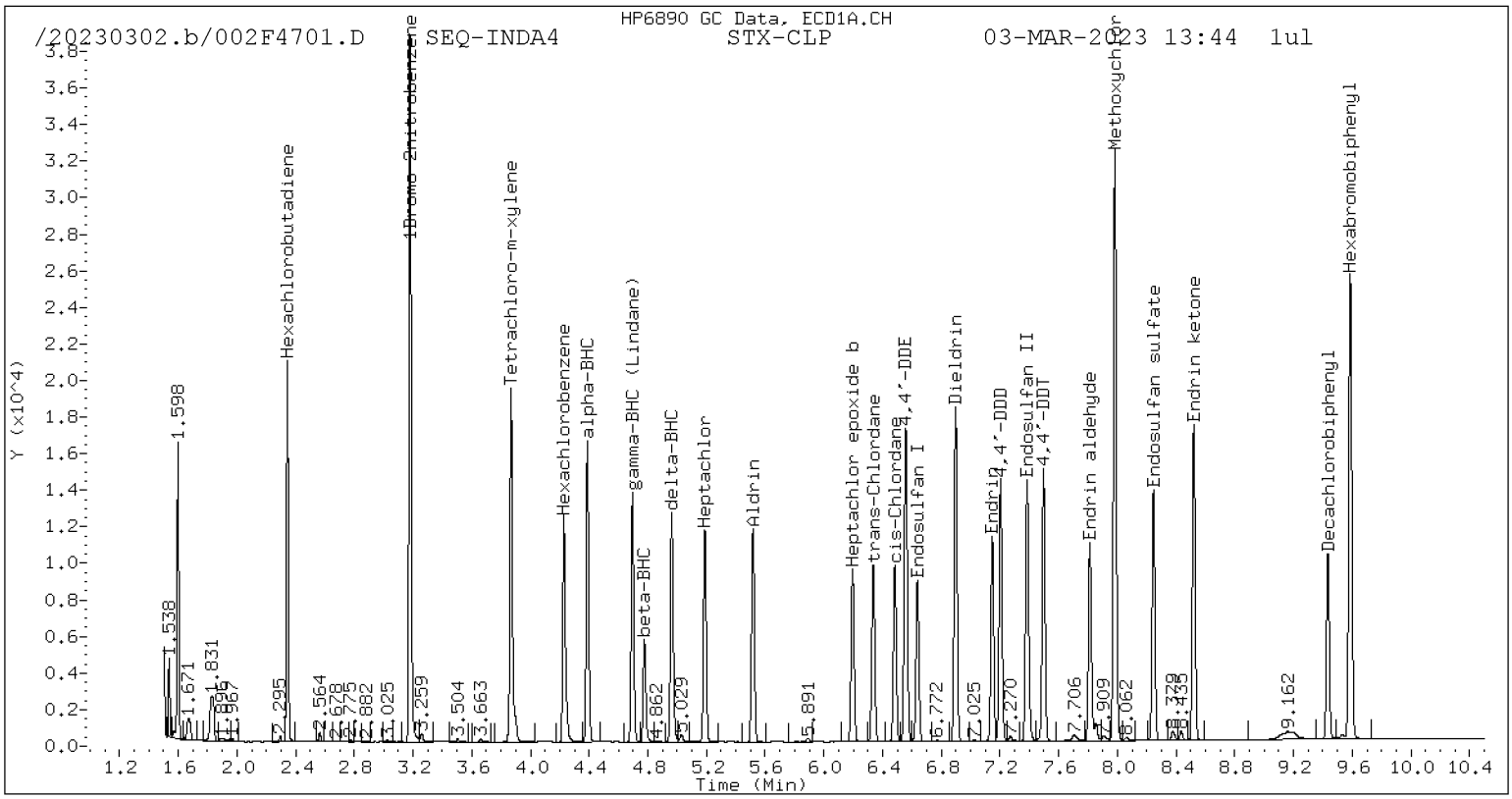
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	913691	35.9
Hexabromobiphenyl	609723	738896	21.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	1441379	43.2
Hexabromobiphenyl	769764	825969	7.3

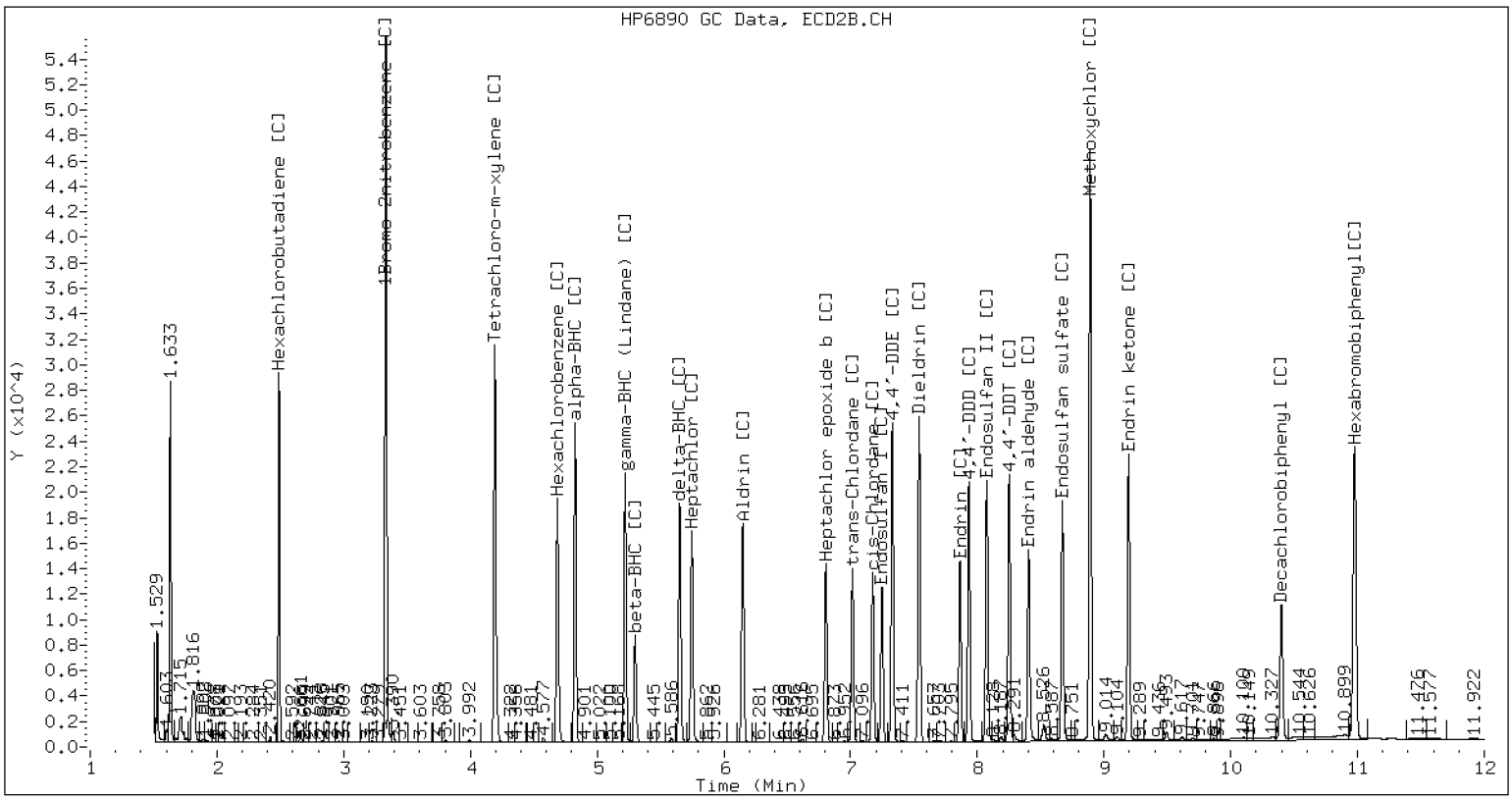
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230302.b/B20230302.b/002F4701.D SEQ-INDA4 CLP2



CLP-2 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD6	Calibration:	FL00041
Lab File ID:	002F6401.D	Calibration Date:	12/14/2022
Sequence:	SLC0093	Injection Date:	03/03/23
Lab Sample ID:	SLC0093-CCV4	Injection Time:	18:49
Sequence Name:	INDAE5		

		CONC. (ng/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Hexachlorobenzene	A	20.000	19.7	1.4298940	1.4095660		-1.5	+/-20
Hexachlorobenzene [2C]	A	20.000	18.3	1.4591090	1.3381500		-8.5	+/-20
Decachlorobiphenyl	A	40.000	36.6	0.8105886	0.7418655		-8.5	+/-20
Decachlorobiphenyl [2C]	A	40.000	36.4	0.8841805	0.8049382		-9.0	+/-20
Tetrachlorometaxylene	A	40.000	37.4	1.0879510	1.0168510		-6.5	+/-20
Tetrachlorometaxylene [2C]	A	40.000	36.2	1.1261070	1.0206150		-9.5	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230302.b/002F6401.D
Data file 2: /20230302.b/B20230302.b/002F6401.D
Method: \20230302.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: AA

ARI ID: SEQ-INDA5
Client ID:
Injection Date: 03-MAR-2023 18:49
Report Date: 03/09/2023 11:17
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.389	-0.002	403802	4.827	-0.003	612327	21.63	20.13	7.2	alpha-BHC
4.777	-0.002	153697	5.300	-0.002	225088	21.38	19.46	9.4	beta-BHC
4.963	-0.002	355860	5.652	-0.002	519240	23.32	20.72	11.8	delta-BHC
4.696	-0.002	350121	5.221	-0.002	528176	21.63	20.46	5.6	gamma-BHC (Lindane)
5.189	-0.002	318388	5.748	-0.002	467209	22.11	19.98	10.1	Heptachlor
5.517	-0.002	334458	6.149	-0.003	483720	20.72	18.11	13.4	Aldrin
6.196	-0.002	280279	6.805	-0.002	376773	20.03	17.06	16.0	Heptachlor epoxide b
6.638	-0.002	259074	7.248	-0.003	321896	20.17	16.54	19.8	Endosulfan I
6.898	-0.002	535604	7.541	-0.002	690086	38.82	32.09	19.0	Dieldrin
6.558	-0.003	518999	7.330	-0.002	653975	40.51	33.16	20.0	4,4'-DDE
7.148	-0.002	287586	7.864	-0.002	373877	27.72	29.68	6.9	Endrin
7.385	-0.003	444918	8.075	-0.003	547436	47.63	42.40	11.6	Endosulfan II
7.204	-0.003	421292	7.934	-0.002	528703	45.07	43.16	4.3	4,4'-DDD
8.246	-0.003	387652	8.671	-0.002	507917	43.71	44.80	2.5	Endosulfan sulfate
7.498	-0.003	428334	8.252	-0.002	560840	45.35	47.43	4.5	4,4'-DDT
7.983	-0.002	910628	8.891	-0.002	1193144	217.56	228.01	4.7	Methoxychlor
8.521	-0.003	486178	9.194	-0.002	599065	47.85	48.92	2.2	Endrin ketone
7.813	-0.003	364729	8.405	-0.003	427903	48.96	46.99	4.1	Endrin aldehyde
6.337	-0.002	287083	7.015	-0.002	367731	20.20	16.70	19.0	trans-Chlordane
6.484	-0.002	282842	7.174	-0.003	354428	19.84	16.45	18.7	cis-Chlordane
2.344	-0.001	369947	2.490	-0.002	492751	18.92	17.06	10.3	Hexachlorobutadiene
4.229	-0.002	341714	4.686	-0.002	507857	19.72	18.34	7.2	Hexachlorobenzene
3.869	-0.002	493020	4.193	-0.002	774691	37.39	36.25	3.1	Tetrachloro-m-xylene
9.435	-0.003	293561	10.400	-0.002	356518	36.61	36.42	0.5	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

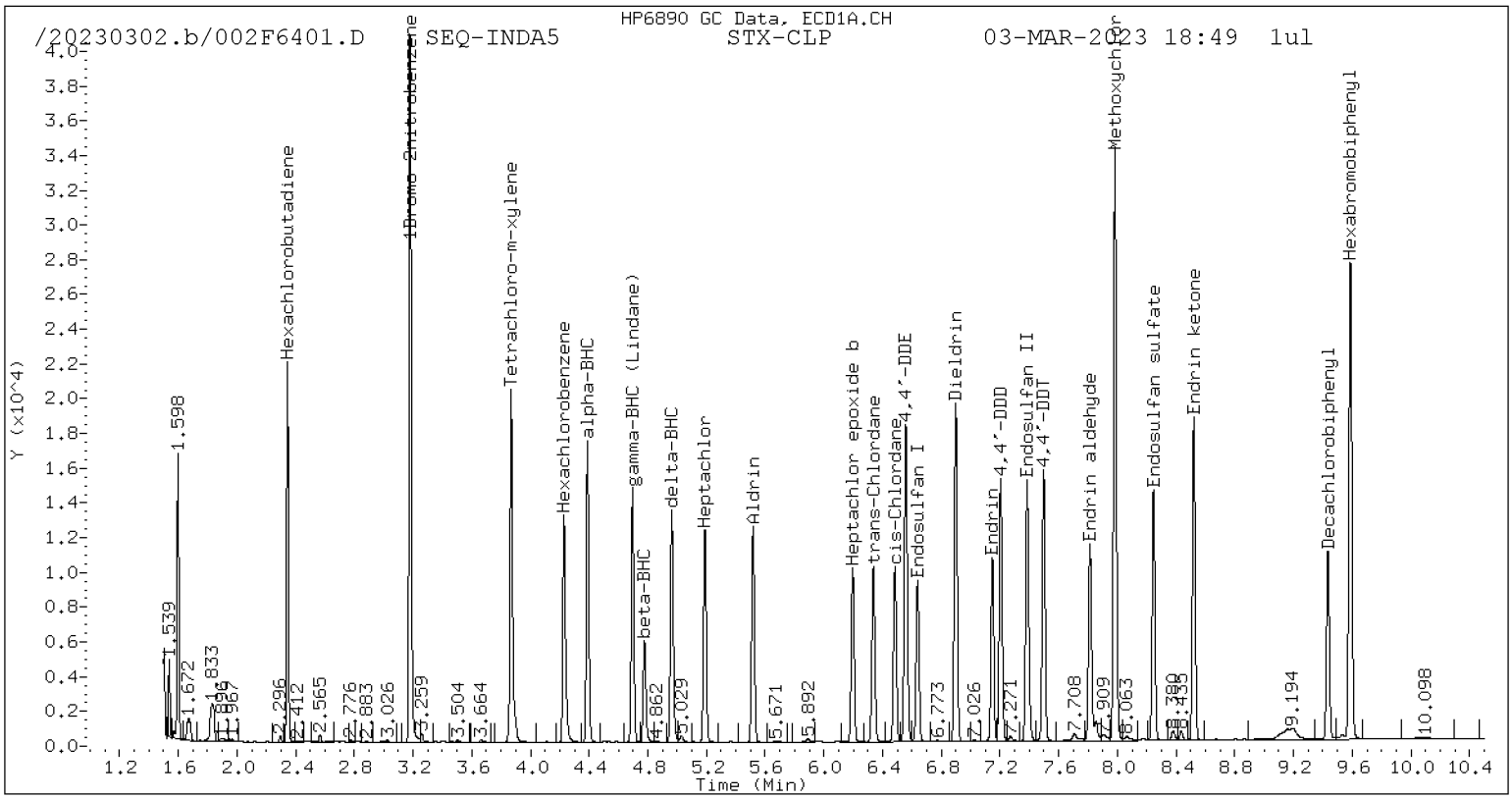
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	969700	44.2
Hexabromobiphenyl	609723	791413	29.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	1518087	50.8
Hexabromobiphenyl	769764	885827	15.1

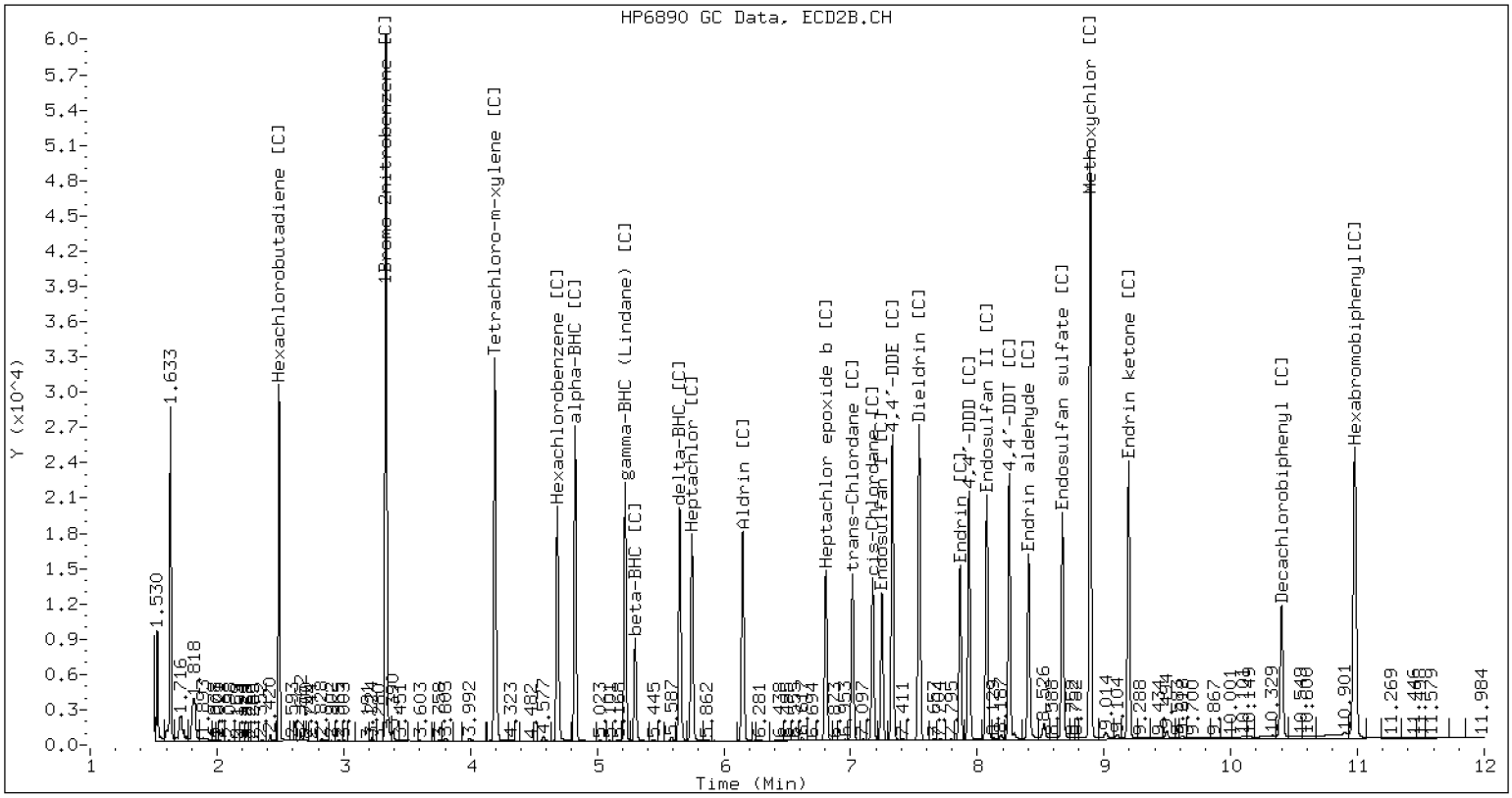
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230302.b/B20230302.b/002F6401.D SEQ-INDA5 CLP2



CLP-2 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD6	Calibration:	FL00041
Lab File ID:	002F8101.D	Calibration Date:	12/14/2022
Sequence:	SLC0093	Injection Date:	03/03/23
Lab Sample ID:	SLC0093-CCV5	Injection Time:	23:55
Sequence Name:	INDAE6		

		CONC. (ng/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Hexachlorobenzene	A	20.000	19.4	1.4298940	1.3896490		-3.0	+/-20
Hexachlorobenzene [2C]	A	20.000	17.9	1.4591090	1.3063800		-10.5	+/-20
Decachlorobiphenyl	A	40.000	36.3	0.8105886	0.7362187		-9.3	+/-20
Decachlorobiphenyl [2C]	A	40.000	36.1	0.8841805	0.7988071		-9.8	+/-20
Tetrachlorometaxylene	A	40.000	37.1	1.0879510	1.0095270		-7.3	+/-20
Tetrachlorometaxylene [2C]	A	40.000	35.4	1.1261070	0.9979182		-11.5	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230302.b/002F8101.D
Data file 2: /20230302.b/B20230302.b/002F8101.D
Method: \20230302.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: AA

ARI ID: SEQ-INDA6
Client ID:
Injection Date: 03-MAR-2023 23:55
Report Date: 03/09/2023 11:17
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.389	-0.002	423670	4.826	-0.003	632459	21.39	19.66	8.4	alpha-BHC
4.777	-0.002	161663	5.299	-0.003	237106	21.20	19.39	8.9	beta-BHC
4.963	-0.002	374799	5.651	-0.003	545788	23.15	20.60	11.7	delta-BHC
4.696	-0.002	369134	5.221	-0.002	554303	21.49	20.30	5.7	gamma-BHC (Lindane)
5.189	-0.002	330103	5.747	-0.003	487989	21.60	19.73	9.0	Heptachlor
5.516	-0.003	347634	6.149	-0.003	500567	20.30	17.73	13.5	Aldrin
6.196	-0.003	293193	6.804	-0.003	391207	19.74	16.75	16.4	Heptachlor epoxide b
6.638	-0.002	267449	7.247	-0.003	329740	19.62	16.02	20.2	Endosulfan I
6.898	-0.003	555584	7.541	-0.003	709727	37.95	31.21	19.5	Dieldrin
6.558	-0.002	537176	7.329	-0.002	668290	39.52	32.05	20.9	4,4'-DDE
7.148	-0.003	326649	7.863	-0.003	392822	30.86	30.09	2.5	Endrin
7.385	-0.003	450235	8.075	-0.003	571156	47.25	42.69	10.1	Endosulfan II
7.204	-0.003	431860	7.933	-0.003	549109	45.28	43.25	4.6	4,4'-DDD
8.246	-0.003	393731	8.670	-0.003	522785	43.51	44.49	2.2	Endosulfan sulfate
7.498	-0.003	436042	8.251	-0.002	557519	45.25	45.49	0.5	4,4'-DDT
7.984	-0.002	952291	8.890	-0.002	1225977	223.00	226.06	1.4	Methoxychlor
8.521	-0.003	486130	9.193	-0.003	613799	46.90	48.37	3.1	Endrin ketone
7.813	-0.003	353104	8.404	-0.003	440487	46.46	46.67	0.5	Endrin aldehyde
6.337	-0.002	297118	7.014	-0.003	380777	19.70	16.35	18.6	trans-Chlordane
6.484	-0.003	291264	7.174	-0.003	363732	19.25	15.97	18.7	cis-Chlordane
2.344	-0.001	390461	2.490	-0.002	519362	18.81	17.00	10.1	Hexachlorobutadiene
4.229	-0.002	357497	4.686	-0.002	524287	19.44	17.91	8.2	Hexachlorobenzene
3.869	-0.002	519416	4.193	-0.002	800985	37.12	35.45	4.6	Tetrachloro-m-xylene
9.435	-0.003	297224	10.400	-0.003	366678	36.33	36.14	0.5	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

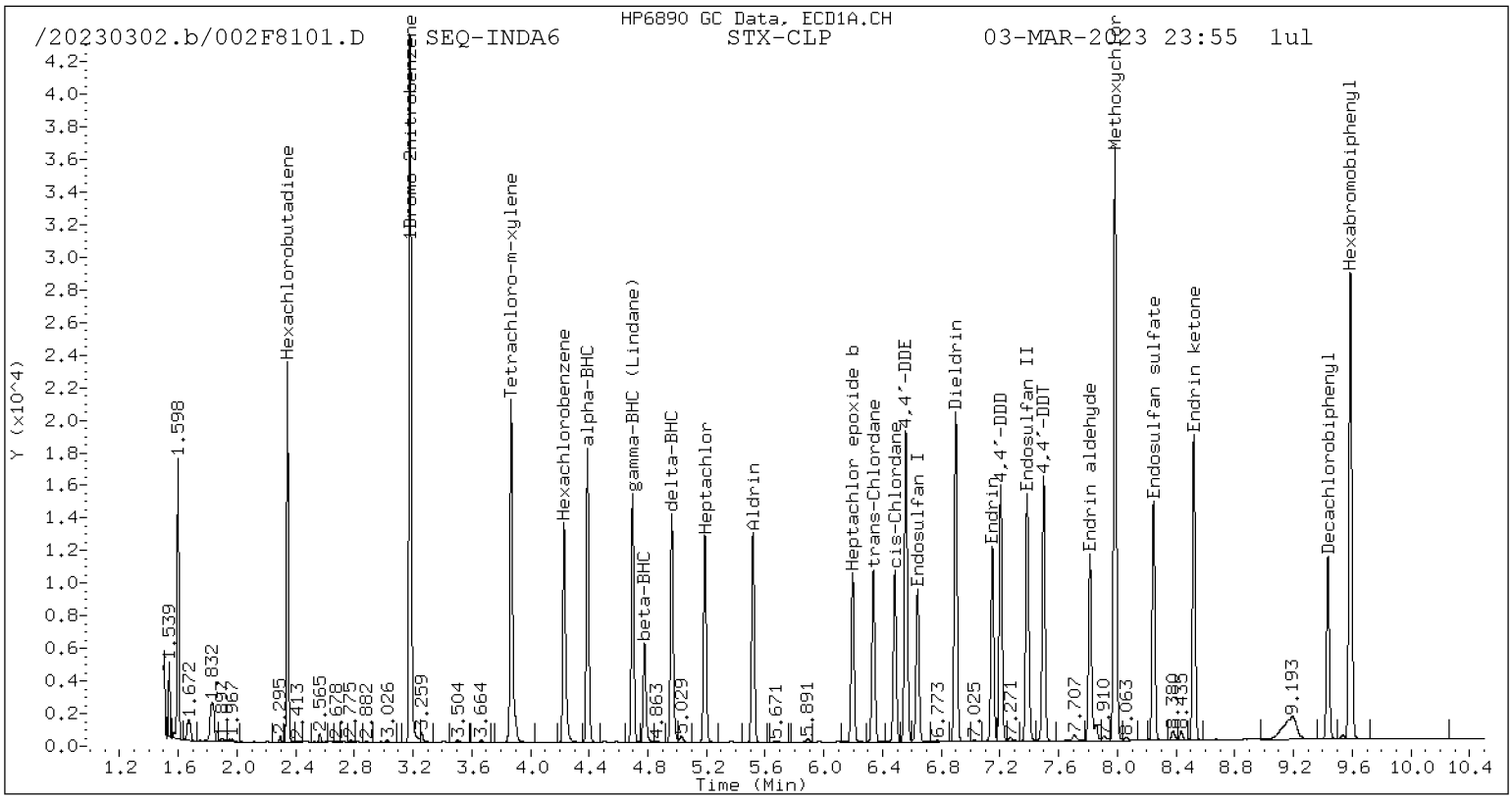
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	1029028	53.0
Hexabromobiphenyl	609723	807434	32.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	1605312	59.5
Hexabromobiphenyl	769764	918064	19.3

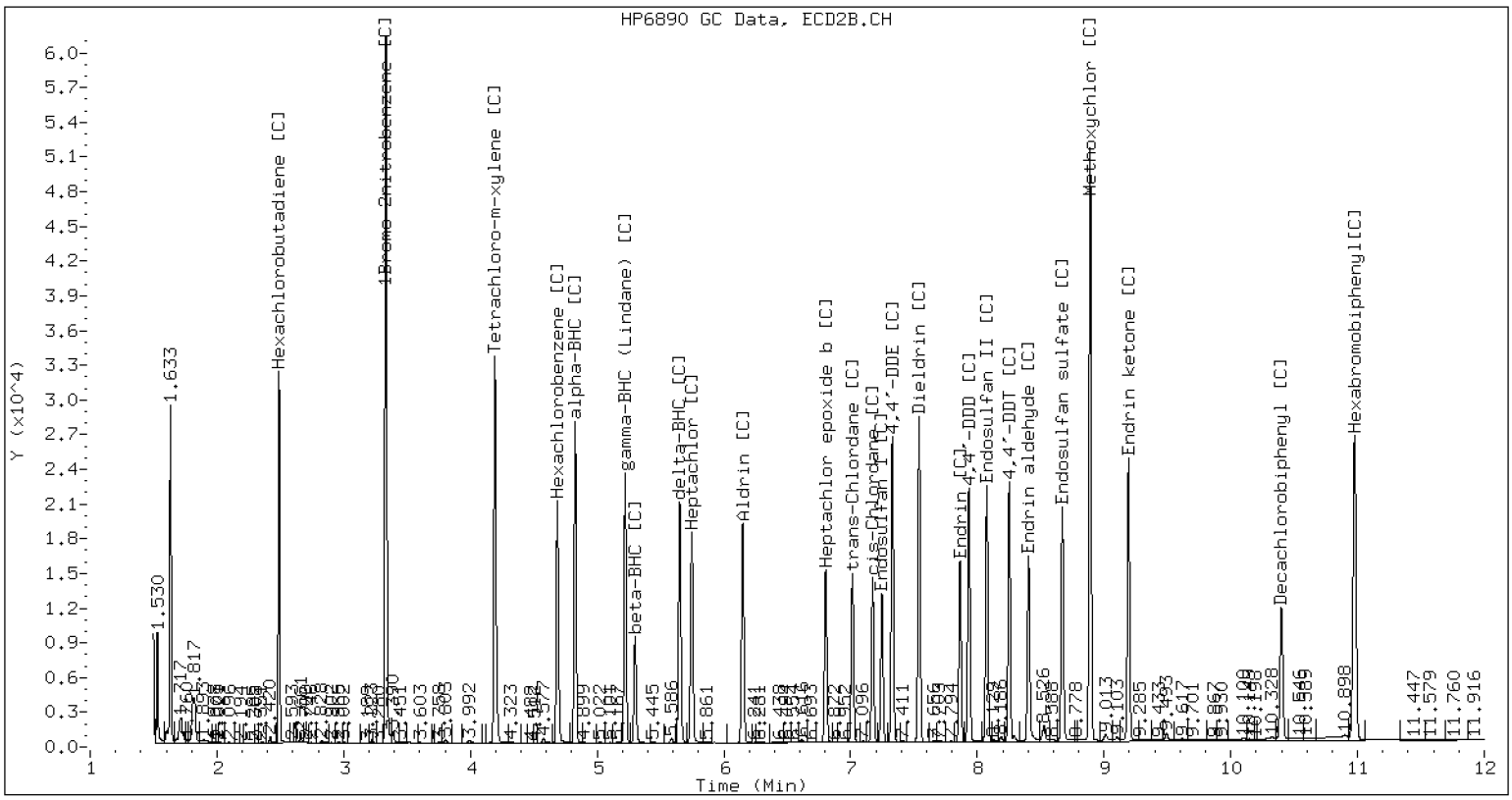
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230302.b/B20230302.b/002F8101.D SEQ-INDA6 CLP2



CLP-2 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD6	Calibration:	FL00041
Lab File ID:	002F8601.D	Calibration Date:	12/14/2022
Sequence:	SLC0093	Injection Date:	03/04/23
Lab Sample ID:	SLC0093-CCV6	Injection Time:	01:24
Sequence Name:	INDAE7		

		CONC. (ng/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Hexachlorobenzene	A	20.000	19.6	1.4298940	1.4046940		-2.0	+/-20
Hexachlorobenzene [2C]	A	20.000	18.4	1.4591090	1.3433990		-8.0	+/-20
Decachlorobiphenyl	A	40.000	36.8	0.8105886	0.7463003		-8.0	+/-20
Decachlorobiphenyl [2C]	A	40.000	38.3	0.8841805	0.8471666		-4.3	+/-20
Tetrachlorometaxylene	A	40.000	37.4	1.0879510	1.0181890		-6.5	+/-20
Tetrachlorometaxylene [2C]	A	40.000	36.9	1.1261070	1.0399830		-7.8	+/-20

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230302.b/002F8601.D
Data file 2: /20230302.b/B20230302.b/002F8601.D
Method: \20230302.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: AA

ARI ID: SEQ-INDA7
Client ID:
Injection Date: 04-MAR-2023 01:24
Report Date: 03/09/2023 11:17
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.390	-0.002	232463	4.827	-0.003	348200	20.93	19.69	6.1	alpha-BHC
4.778	-0.001	88525	5.300	-0.002	130148	20.70	19.36	6.7	beta-BHC
4.965	-0.001	203026	5.652	-0.002	293836	22.37	20.17	10.3	delta-BHC
4.697	-0.002	201127	5.221	-0.002	300315	20.89	20.01	4.3	gamma-BHC (Lindane)
5.189	-0.002	183971	5.747	-0.003	263668	21.47	19.40	10.2	Heptachlor
5.517	-0.002	195945	6.149	-0.003	278631	20.41	17.95	12.8	Aldrin
6.196	-0.003	166908	6.803	-0.003	220132	20.05	17.15	15.6	Heptachlor epoxide b
6.638	-0.002	153603	7.247	-0.003	184462	20.10	16.31	20.9	Endosulfan I
6.898	-0.003	319494	7.540	-0.003	395976	38.92	31.68	20.5	Dieldrin
6.558	-0.002	308565	7.329	-0.003	375932	40.49	32.80	21.0	4,4'-DDE
7.148	-0.003	163573	7.863	-0.003	180559	27.02	25.12	7.3	Endrin
7.386	-0.002	264500	8.075	-0.003	318841	48.53	43.27	11.5	Endosulfan II
7.205	-0.002	250266	7.933	-0.003	301992	45.88	43.19	6.0	4,4'-DDD
8.246	-0.003	229289	8.671	-0.003	305427	44.31	47.21	6.3	Endosulfan sulfate
7.498	-0.003	251470	8.251	-0.002	311428	45.63	46.15	1.1	4,4'-DDT
7.984	-0.002	527622	8.890	-0.002	661873	216.03	221.63	2.6	Methoxychlor
8.522	-0.002	288922	9.193	-0.003	351587	48.74	50.31	3.2	Endrin ketone
7.813	-0.003	214471	8.405	-0.002	248838	49.34	47.88	3.0	Endrin aldehyde
6.337	-0.002	168370	7.014	-0.003	211553	19.91	16.53	18.6	trans-Chlordane
6.484	-0.003	166433	7.174	-0.003	203902	19.63	16.29	18.6	cis-Chlordane
2.345	-0.000	216480	2.491	-0.000	290101	18.61	17.28	7.4	Hexachlorobutadiene
4.230	-0.001	202586	4.687	-0.001	296322	19.65	18.41	6.5	Hexachlorobenzene
3.870	-0.001	293688	4.194	-0.001	458791	37.44	36.94	1.3	Tetrachloro-m-xylene
9.435	-0.002	172317	10.399	-0.003	214140	36.83	38.33	4.0	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

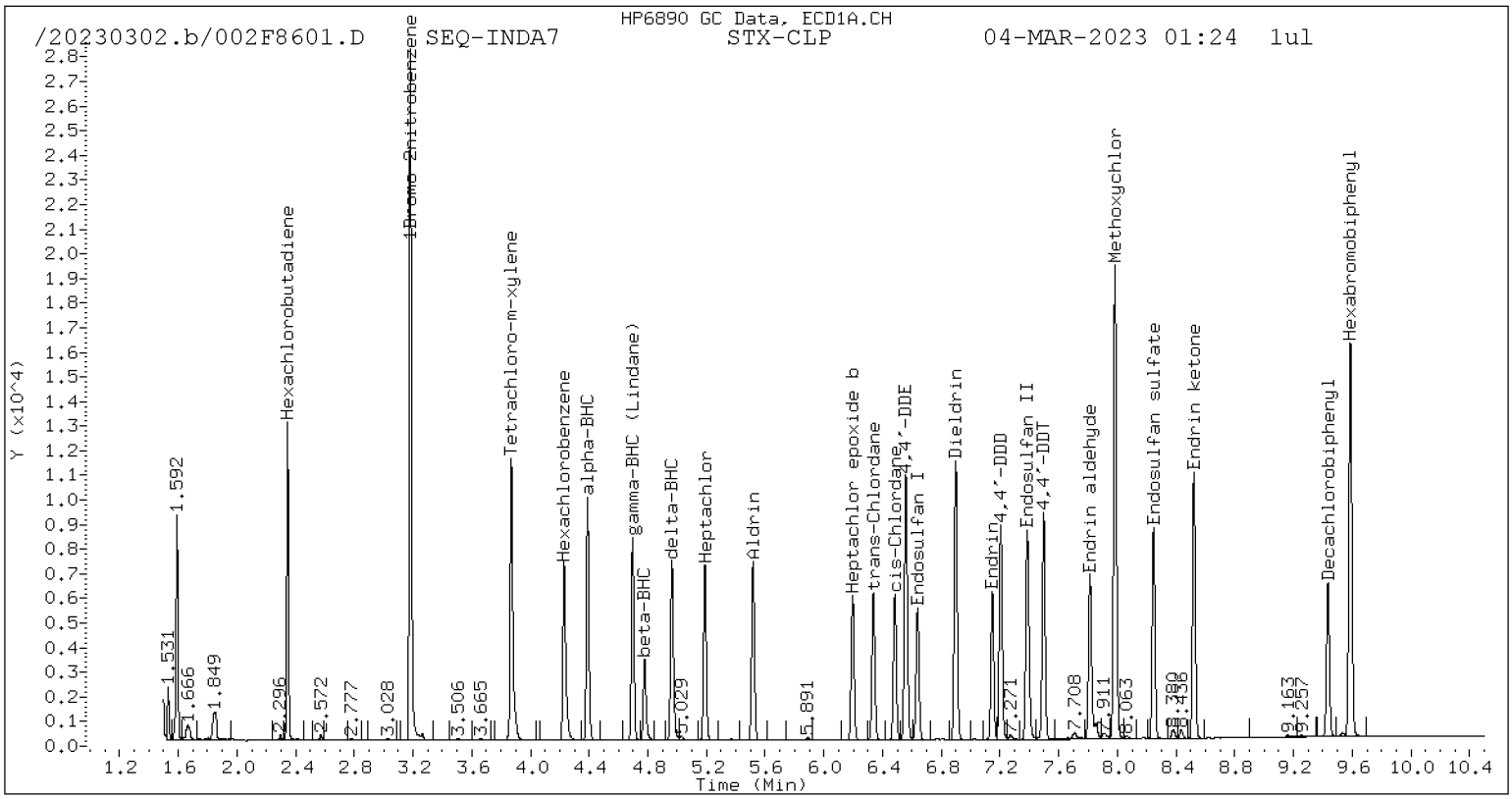
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	576883	-14.2
Hexabromobiphenyl	609723	461790	-24.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	882305	-12.3
Hexabromobiphenyl	769764	505544	-34.3

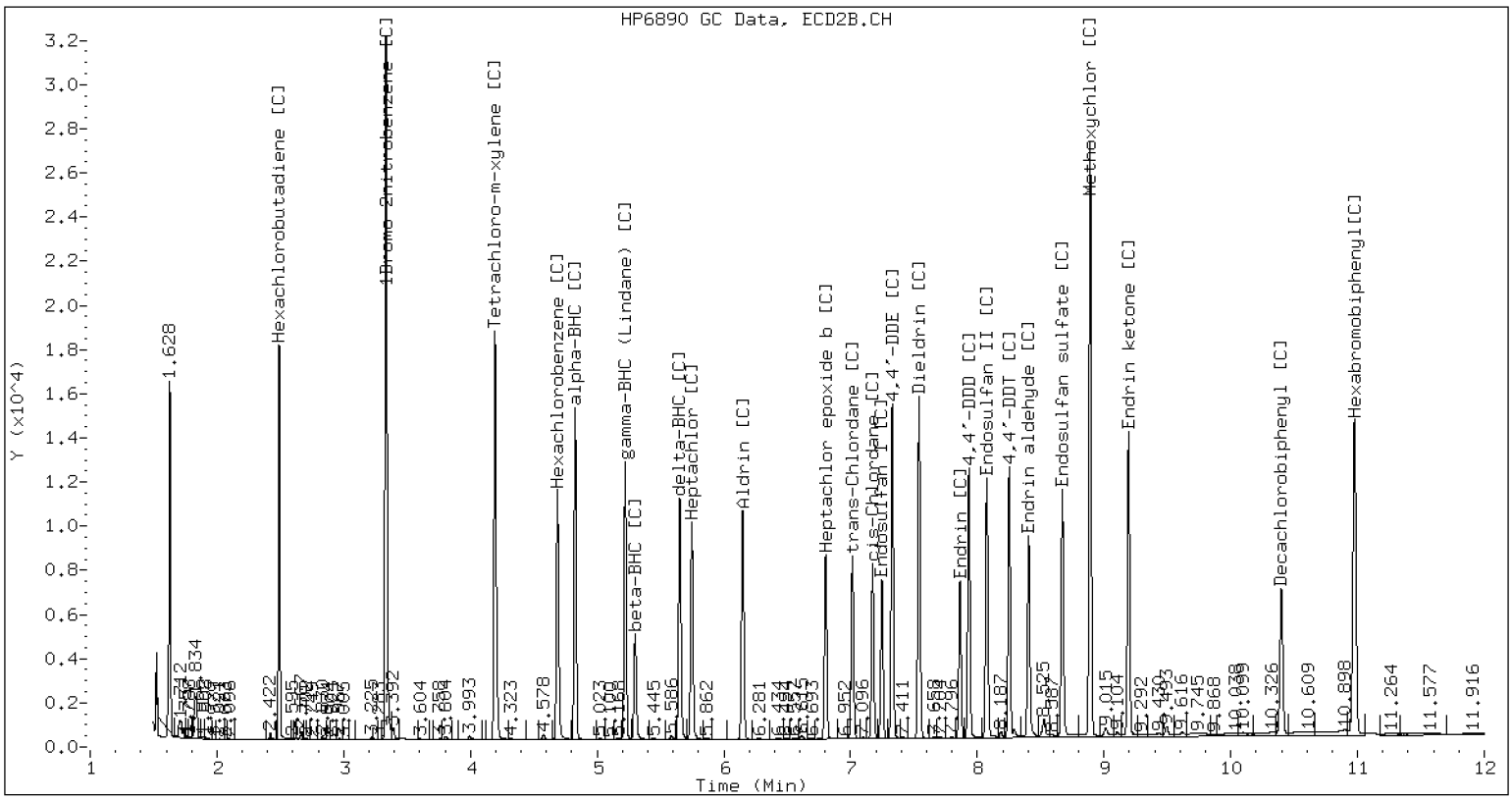
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230302.b/B20230302.b/002F8601.D SEQ-INDA7 CLP2



CLP-2 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD6	Calibration:	FL00041
Lab File ID:	002F1601.D	Calibration Date:	12/14/2022
Sequence:	SLC0106	Injection Date:	03/07/23
Lab Sample ID:	SLC0106-CCV1	Injection Time:	13:29
Sequence Name:	INDAE2		

		CONC. (ng/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Hexachlorobenzene	A	20.000	19.7	1.4298940	1.4092350		-1.5	+/-20
Hexachlorobenzene [2C]	A	20.000	18.3	1.4591090	1.3381770		-8.5	+/-20
Decachlorobiphenyl	A	40.000	36.5	0.8105886	0.7388784		-8.8	+/-20
Decachlorobiphenyl [2C]	A	40.000	37.7	0.8841805	0.8333868		-5.8	+/-20
Tetrachlorometaxylene	A	40.000	35.9	1.0879510	0.9766068		-10.3	+/-20
Tetrachlorometaxylene [2C]	A	40.000	36.7	1.1261070	1.0342220		-8.3	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230307.b/002F1601.D
Data file 2: /20230307.b/B20230307.b/002F1601.D
Method: \20230307.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: AA

ARI ID: SEQ-INDA2
Client ID:
Injection Date: 07-MAR-2023 13:29
Report Date: 03/09/2023 13:37
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.378	-0.000	320553	4.816	-0.000	482298	21.19	19.70	7.3	alpha-BHC
4.766	0.000	121405	5.289	-0.000	181344	20.84	19.48	6.8	beta-BHC
4.952	-0.000	277506	5.640	-0.000	367860	22.44	18.24	20.7	delta-BHC
4.685	0.000	278205	5.210	0.000	420392	21.21	20.23	4.7	gamma-BHC (Lindane)
5.177	0.000	252486	5.735	-0.001	368629	21.63	19.58	10.0	Heptachlor
5.504	-0.000	262997	6.137	-0.000	379463	20.11	17.65	13.0	Aldrin
6.182	-0.001	223548	6.792	-0.001	304634	19.71	17.14	14.0	Heptachlor epoxide b
6.625	-0.000	204089	7.236	-0.000	254368	19.61	16.24	18.8	Endosulfan I
6.884	-0.001	433328	7.529	-0.001	559090	38.76	32.30	18.2	Dieldrin
6.545	-0.001	408330	7.318	-0.001	517727	39.33	32.62	18.7	4,4'-DDE
7.135	-0.001	282335	7.852	-0.001	340641	36.39	34.64	4.9	Endrin
7.371	-0.001	340308	8.062	-0.002	444173	48.72	44.06	10.0	Endosulfan II
7.192	-0.000	319954	7.923	-0.001	432495	45.77	45.21	1.2	4,4'-DDD
8.232	-0.001	299066	8.659	-0.001	395437	45.09	44.67	0.9	Endosulfan sulfate
7.484	-0.001	328944	8.240	-0.001	410518	46.57	44.46	4.6	4,4'-DDT
7.971	-0.001	702494	8.880	-0.001	915670	224.44	224.11	0.1	Methoxychlor
8.507	-0.001	361468	9.182	0.000	458683	47.58	47.98	0.8	Endrin ketone
7.799	-0.001	263235	8.393	-0.001	329555	47.25	46.35	1.9	Endrin aldehyde
6.323	-0.000	223432	7.003	-0.001	296469	19.40	16.73	14.8	trans-Chlordane
6.470	-0.001	218904	7.163	-0.000	281087	18.95	16.21	15.6	cis-Chlordane
2.336	0.000	291636	2.482	-0.000	337517	18.40	14.51	23.6	Hexachlorobutadiene
4.219	0.000	276853	4.676	0.000	408776	19.71	18.34	7.2	Hexachlorobenzene
3.859	0.000	383721	4.183	0.000	631852	35.91	36.74	2.3	Tetrachloro-m-xylene
9.421	-0.000	218633	10.384	-0.001	288206	36.46	37.70	3.3	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

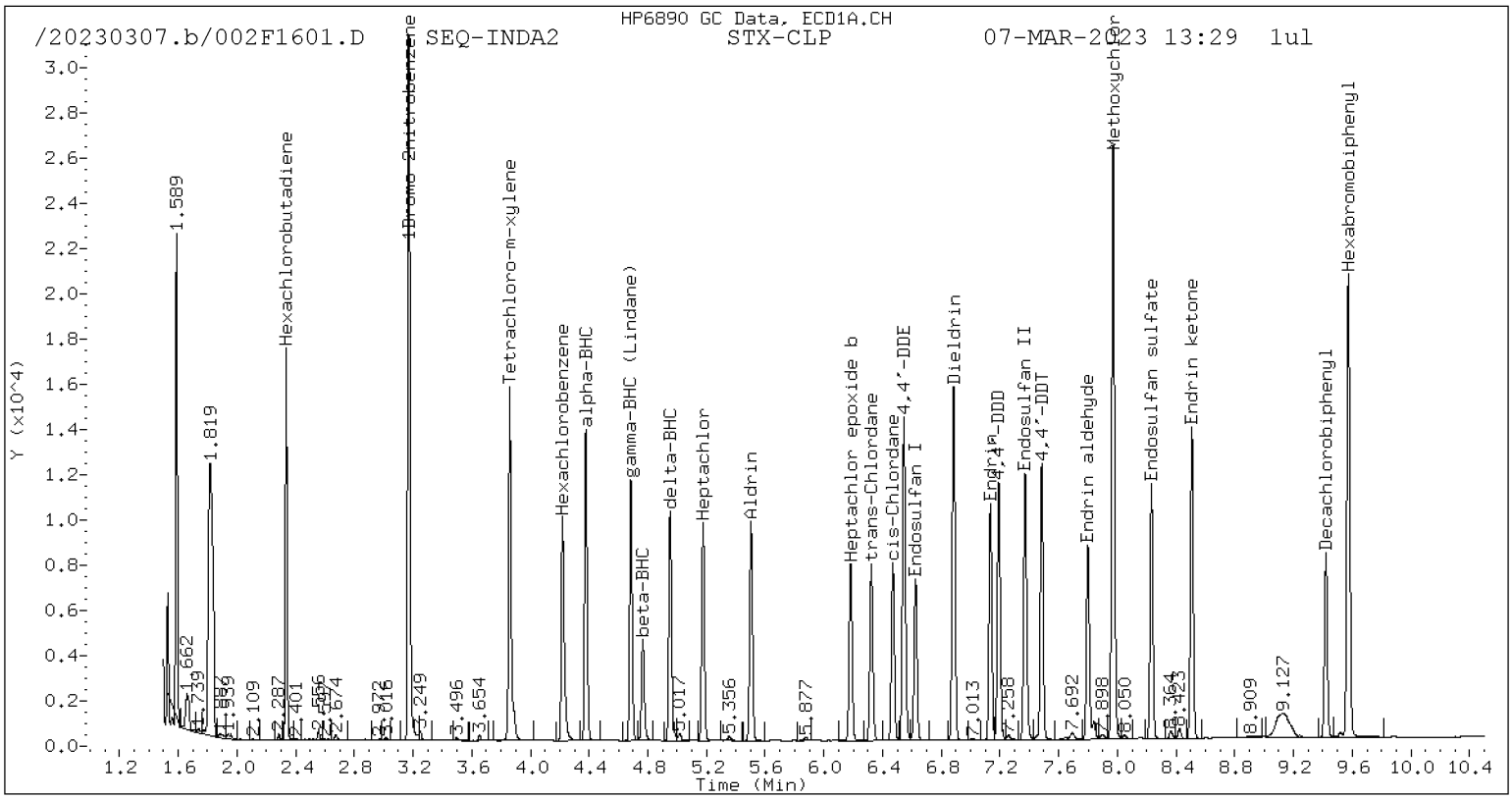
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	785825	16.9
Hexabromobiphenyl	609723	591797	-2.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	1221889	21.4
Hexabromobiphenyl	769764	691650	-10.1

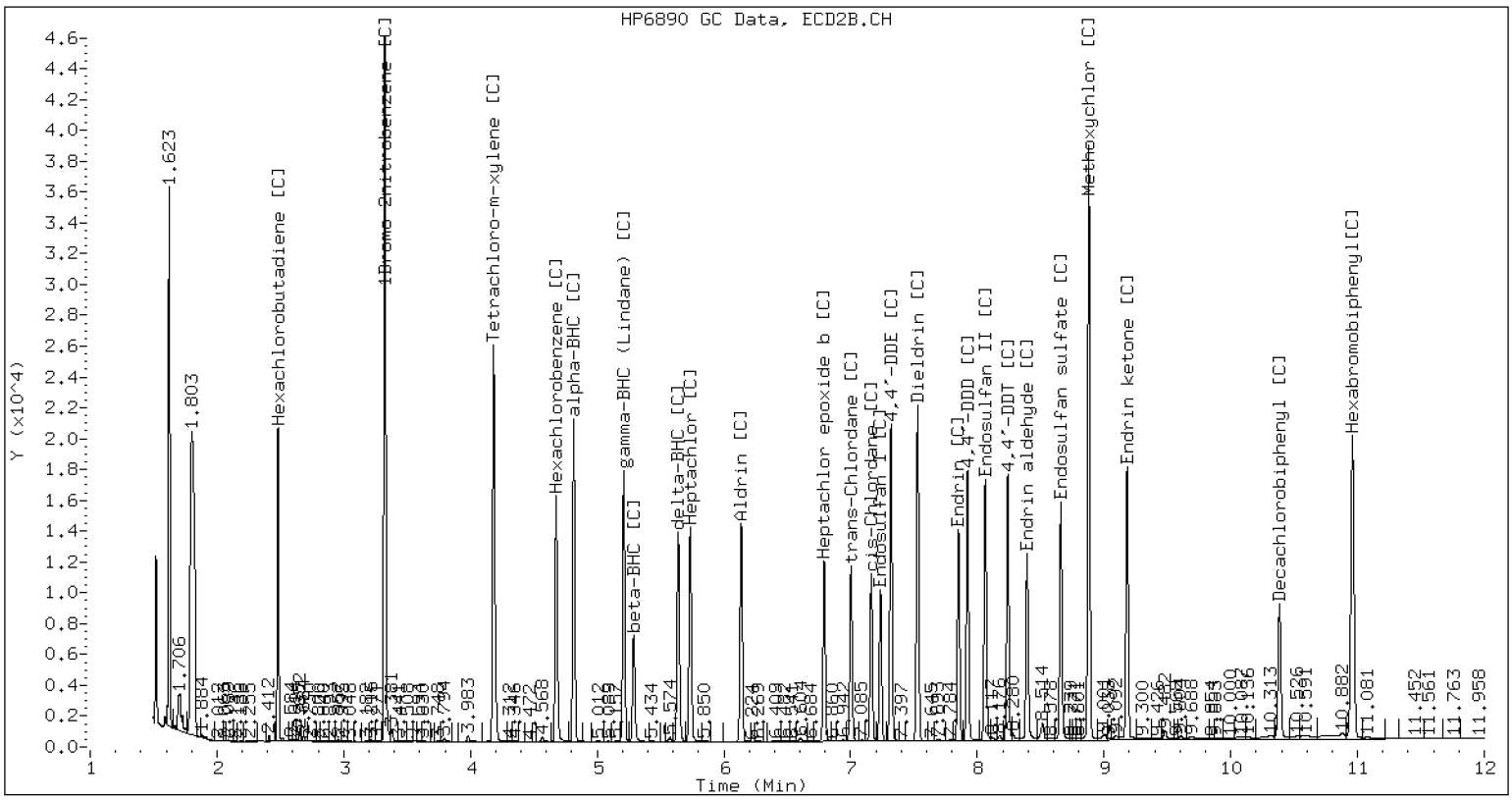
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230307.b/B20230307.b/002F1601.D SEQ-INDA2 CLP2



CLP-2 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD6	Calibration:	FL00041
Lab File ID:	002F3001.D	Calibration Date:	12/14/2022
Sequence:	SLC0106	Injection Date:	03/07/23
Lab Sample ID:	SLC0106-CCV2	Injection Time:	17:41
Sequence Name:	INDAE3		

		CONC. (ng/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Hexachlorobenzene	A	20.000	19.8	1.4298940	1.4178620		-1.0	+/-20
Hexachlorobenzene [2C]	A	20.000	18.5	1.4591090	1.3468270		-7.5	+/-20
Decachlorobiphenyl	A	40.000	36.1	0.8105886	0.7310366		-9.8	+/-20
Decachlorobiphenyl [2C]	A	40.000	36.7	0.8841805	0.8122374		-8.3	+/-20
Tetrachlorometaxylene	A	40.000	36.1	1.0879510	0.9822595		-9.8	+/-20
Tetrachlorometaxylene [2C]	A	40.000	36.8	1.1261070	1.0371160		-8.0	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230307.b/002F3001.D
Data file 2: /20230307.b/B20230307.b/002F3001.D
Method: \20230307.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: AA

ARI ID: SEQ-INDA3
Client ID:
Injection Date: 07-MAR-2023 17:41
Report Date: 03/09/2023 13:37
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.378	-0.000	331795	4.815	-0.001	506296	21.31	19.87	7.0	alpha-BHC
4.766	-0.000	127380	5.288	-0.001	190406	21.25	19.66	7.8	beta-BHC
4.951	-0.001	287040	5.639	-0.001	385433	22.56	18.37	20.5	delta-BHC
4.684	-0.000	288824	5.209	-0.000	440439	21.40	20.37	4.9	gamma-BHC (Lindane)
5.176	0.000	258476	5.734	-0.001	387759	21.52	19.80	8.3	Heptachlor
5.504	-0.000	272236	6.136	-0.001	402747	20.23	18.01	11.6	Aldrin
6.182	-0.001	230076	6.792	-0.001	317341	19.71	17.16	13.8	Heptachlor epoxide b
6.624	-0.001	208981	7.235	-0.001	267500	19.51	16.41	17.3	Endosulfan I
6.884	-0.001	441962	7.528	-0.002	584066	38.41	32.43	16.9	Dieldrin
6.545	-0.001	418514	7.318	-0.002	540799	39.18	32.75	17.9	4,4'-DDE
7.134	-0.001	268949	7.852	-0.001	328926	32.73	30.91	5.7	Endrin
7.371	-0.001	352294	8.063	-0.001	466834	47.63	42.80	10.7	Endosulfan II
7.191	-0.001	338673	7.922	-0.001	442618	45.75	42.76	6.8	4,4'-DDD
8.232	-0.002	315241	8.659	-0.001	414944	44.88	43.32	3.5	Endosulfan sulfate
7.484	-0.001	335219	8.239	-0.002	429256	44.81	42.97	4.2	4,4'-DDT
7.970	-0.002	714703	8.879	-0.001	937242	215.62	212.00	1.7	Methoxychlor
8.507	-0.001	385573	9.181	-0.001	486022	47.92	46.98	2.0	Endrin ketone
7.799	-0.001	279874	8.392	-0.002	345706	47.44	44.93	5.4	Endrin aldehyde
6.323	-0.001	230017	7.003	-0.001	309648	19.41	16.79	14.4	trans-Chlordane
6.470	-0.001	225040	7.162	-0.001	294815	18.93	16.34	14.7	cis-Chlordane
2.335	-0.000	300435	2.482	-0.000	349318	18.42	14.44	24.2	Hexachlorobutadiene
4.219	-0.000	286642	4.676	-0.000	428056	19.83	18.46	7.2	Hexachlorobenzene
3.859	0.000	397157	4.183	0.000	659244	36.11	36.84	2.0	Tetrachloro-m-xylene
9.420	-0.001	229082	10.384	-0.001	303936	36.07	36.75	1.8	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

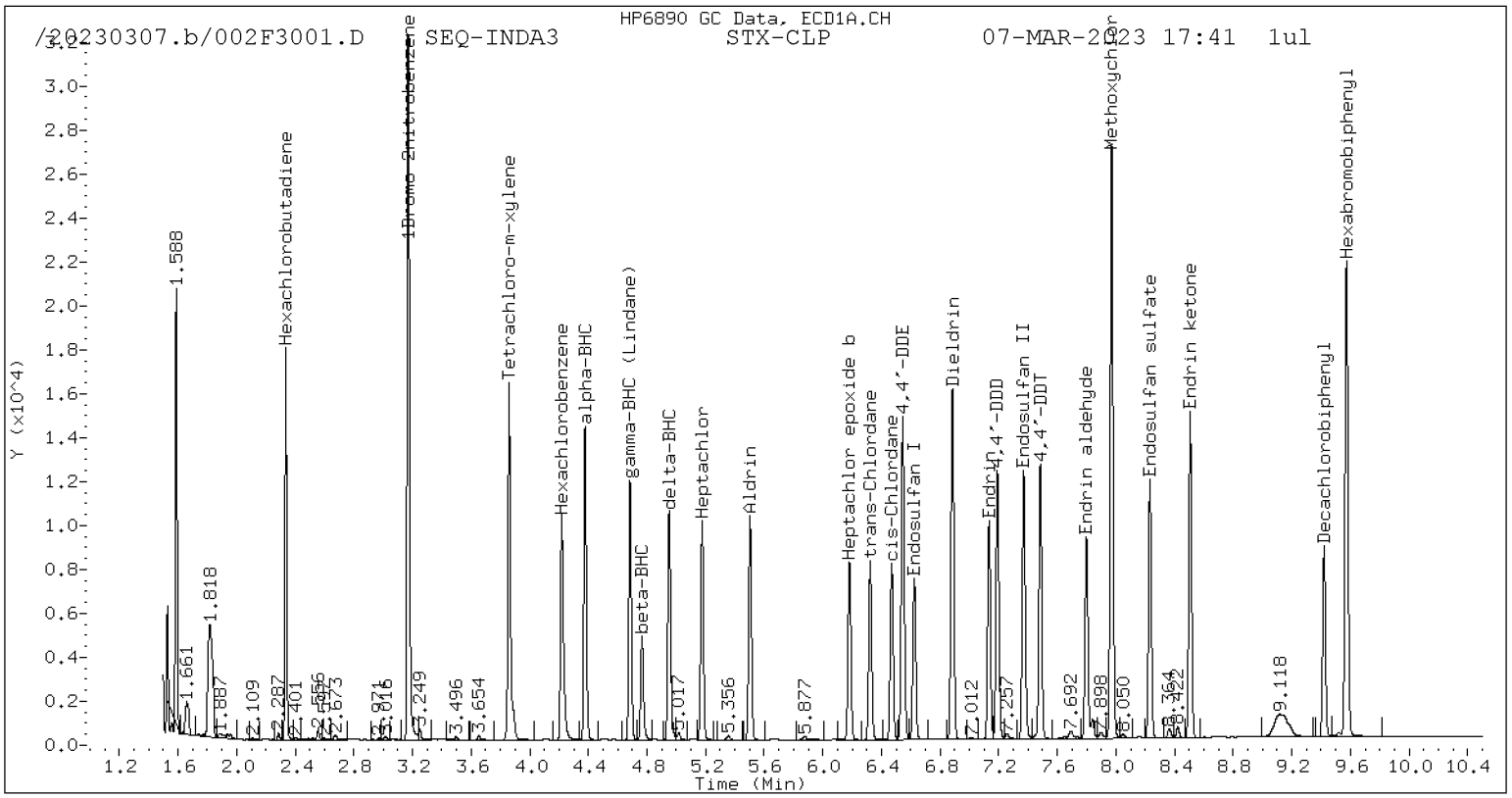
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	808660	20.3
Hexabromobiphenyl	609723	626732	2.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	1271302	26.3
Hexabromobiphenyl	769764	748392	-2.8

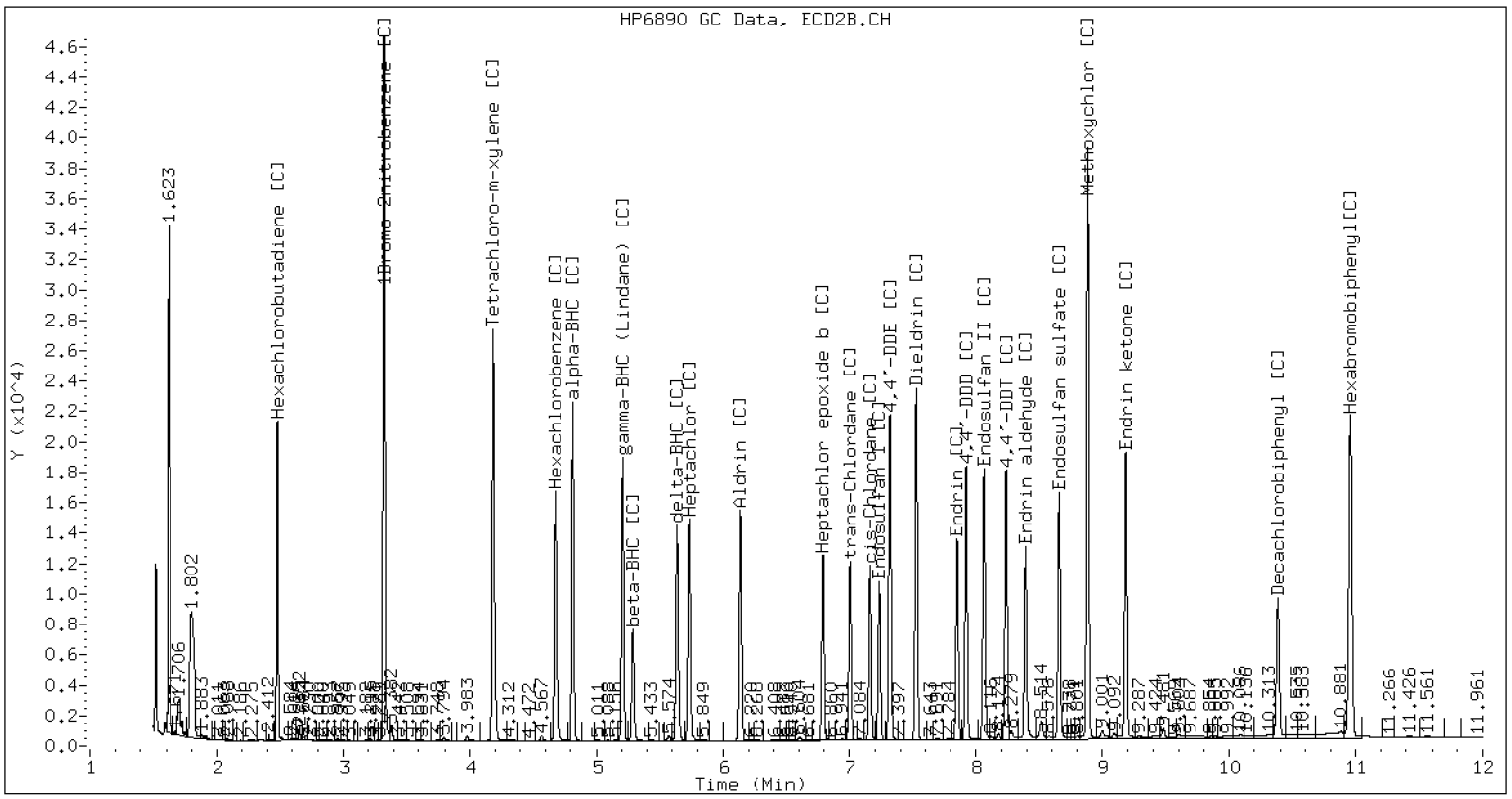
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230307.b/B20230307.b/002F3001.D SEQ-INDA3 CLP2



CLP-2 Manual Integration: NO

CONTINUING CALIBRATION CHECK

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD6	Calibration:	FL00041
Lab File ID:	002F3401.D	Calibration Date:	12/14/2022
Sequence:	SLC0106	Injection Date:	03/07/23
Lab Sample ID:	SLC0106-CCV3	Injection Time:	18:53
Sequence Name:	INDAE4		

		CONC. (ng/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Hexachlorobenzene	A	20.000	19.6	1.4298940	1.4043550		-2.0	+/-20
Hexachlorobenzene [2C]	A	20.000	18.2	1.4591090	1.3292630		-9.0	+/-20
Decachlorobiphenyl	A	40.000	37.4	0.8105886	0.7583349		-6.5	+/-20
Decachlorobiphenyl [2C]	A	40.000	38.4	0.8841805	0.8498141		-4.0	+/-20
Tetrachlorometaxylene	A	40.000	36.2	1.0879510	0.9840989		-9.5	+/-20
Tetrachlorometaxylene [2C]	A	40.000	36.8	1.1261070	1.0366350		-8.0	+/-20

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230307.b/002F3401.D
Data file 2: /20230307.b/B20230307.b/002F3401.D
Method: \20230307.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: AA

ARI ID: SEQ-INDA4
Client ID:
Injection Date: 07-MAR-2023 18:53
Report Date: 03/09/2023 13:37
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.379	0.001	175125	4.816	0.000	261369	20.32	18.96	6.9	alpha-BHC
4.767	0.001	69842	5.289	-0.000	100875	21.05	19.25	9.0	beta-BHC
4.952	0.000	154645	5.640	-0.000	207029	21.96	18.23	18.6	delta-BHC
4.685	0.001	152912	5.210	0.001	229369	20.47	19.61	4.3	gamma-BHC (Lindane)
5.177	0.000	137979	5.735	-0.001	203047	20.76	19.16	8.0	Heptachlor
5.504	-0.000	146086	6.136	-0.001	215282	19.61	17.79	9.7	Aldrin
6.182	-0.001	125399	6.791	-0.002	170913	19.41	17.08	12.8	Heptachlor epoxide b
6.624	-0.001	115352	7.235	-0.001	143253	19.46	16.24	18.0	Endosulfan I
6.884	-0.000	247910	7.528	-0.002	313099	38.93	32.13	19.1	Dieldrin
6.545	-0.001	228676	7.318	-0.002	288440	38.68	32.28	18.0	4,4'-DDE
7.134	-0.001	134725	7.851	-0.002	160123	29.88	27.41	8.6	Endrin
7.372	-0.000	195347	8.063	-0.001	257965	48.13	43.08	11.1	Endosulfan II
7.192	-0.001	187650	7.922	-0.001	236067	46.20	41.54	10.6	4,4'-DDD
8.232	-0.001	173365	8.658	-0.002	232997	44.98	44.31	1.5	Endosulfan sulfate
7.484	-0.001	185008	8.240	-0.002	228490	45.07	41.66	7.9	4,4'-DDT
7.971	-0.001	392930	8.878	-0.002	508835	216.02	209.63	3.0	Methoxychlor
8.507	-0.001	212630	9.181	-0.001	282662	48.16	49.76	3.3	Endrin ketone
7.799	-0.001	164247	8.393	-0.001	201150	50.73	47.62	6.3	Endrin aldehyde
6.323	-0.000	124493	7.002	-0.001	165751	18.98	16.61	13.3	trans-Chlordane
6.470	-0.001	123136	7.162	-0.001	158806	18.71	16.27	14.0	cis-Chlordane
2.337	0.001	164716	2.483	0.002	200236	18.25	15.29	17.6	Hexachlorobutadiene
4.220	0.001	157140	4.677	0.001	228601	19.64	18.22	7.5	Hexachlorobenzene
3.861	0.002	220231	4.184	0.001	356552	36.18	36.82	1.8	Tetrachloro-m-xylene
9.421	-0.001	130401	10.385	-0.000	174596	37.42	38.45	2.7	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

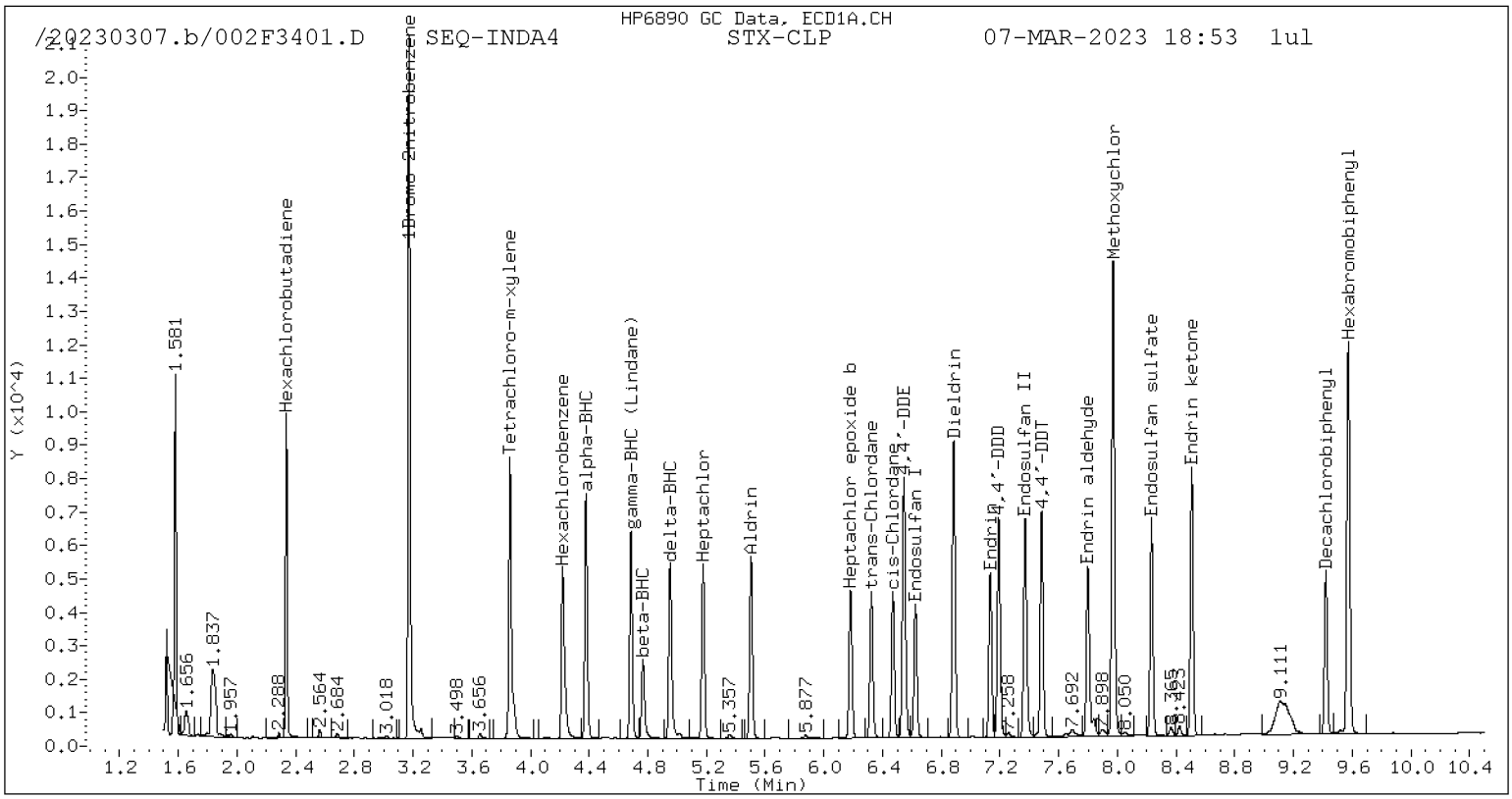
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	447579	-33.4
Hexabromobiphenyl	609723	343914	-43.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	687903	-31.7
Hexabromobiphenyl	769764	410904	-46.6

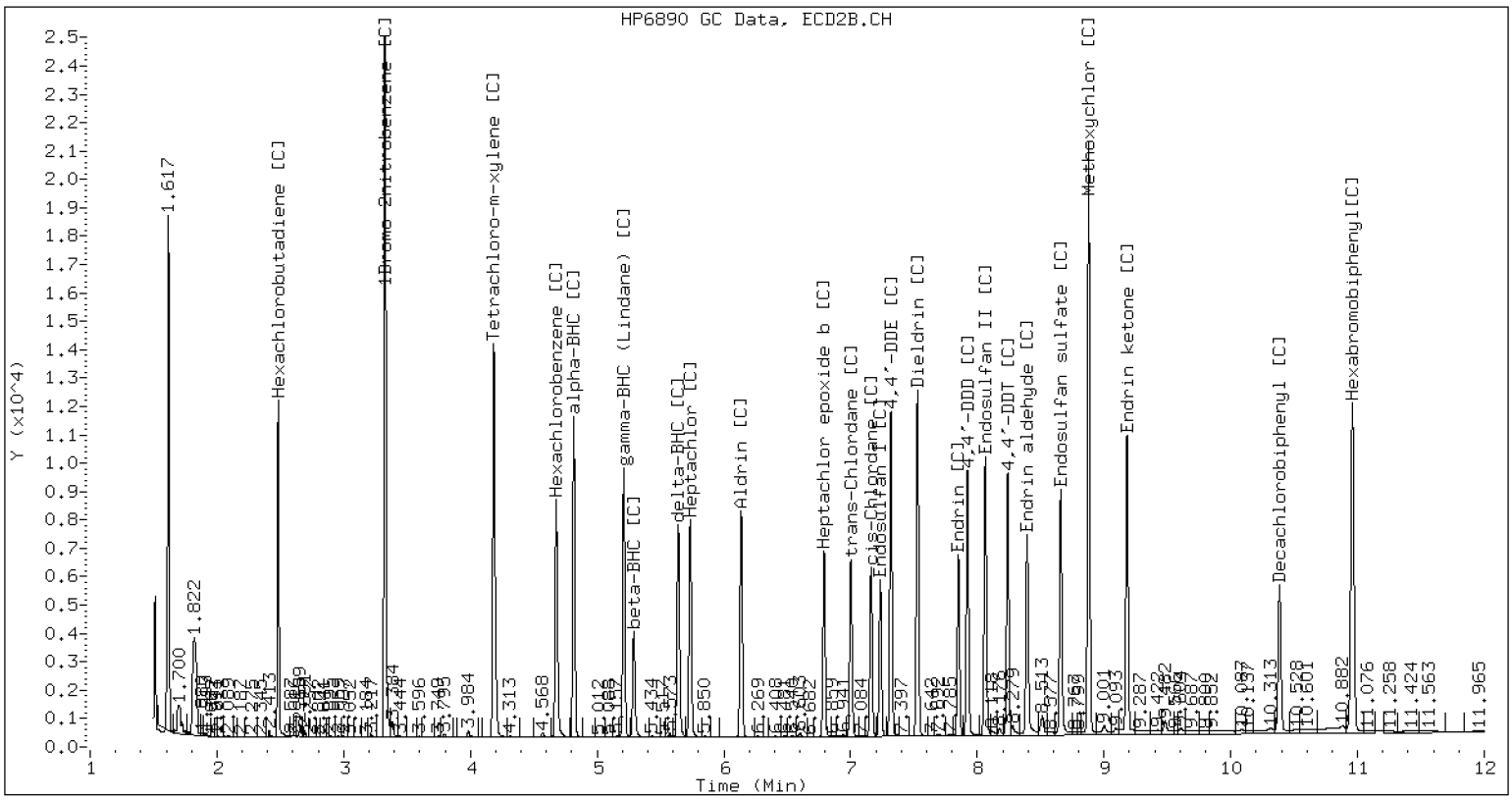
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230307.b/B20230307.b/002F3401.D SEQ-INDA4 CLP2



CLP-2 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD6	Calibration:	FL00041
Lab File ID:	23032423.D	Calibration Date:	12/14/2022
Sequence:	SLC0442	Injection Date:	03/24/23
Lab Sample ID:	SLC0442-CCV1	Injection Time:	22:31
Sequence Name:	INDAE2		

		CONC. (ng/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT	
alpha-BHC	A	20.000	17.6	1.5401480	1.3564650		-11.9	+/-20	
alpha-BHC [2C]	A	20.000	18.2	1.6032650	1.4624550		-8.8	+/-20	
beta-BHC	A	20.000	17.9	0.5929524	0.5301622		-10.6	+/-20	
beta-BHC [2C]	A	20.000	18.2	0.6095359	0.5557549		-8.8	+/-20	
gamma-BHC (Lindane)	A	20.000	17.8	1.3353400	1.1871720		-11.1	+/-20	
gamma-BHC (Lindane) [2C]	A	20.000	18.2	1.3606000	1.2371270		-9.1	+/-20	
delta-BHC	A	20.000	17.1	1.2587440	1.0787500		-14.3	+/-20	
delta-BHC [2C]	A	20.000	10.9	1.3206240	0.7212978		-45.4	+/-20	*
Heptachlor	A	20.000	17.7	1.1881510	1.0495540		-11.7	+/-20	
Heptachlor [2C]	A	20.000	18.4	1.2325020	1.1357770		-7.8	+/-20	
Aldrin	A	20.000	17.0	1.3315350	1.1317250		-15.0	+/-20	
Aldrin [2C]	A	20.000	17.3	1.4072190	1.2177560		-13.5	+/-20	
Heptachlor Epoxide	A	20.000	17.6	1.1545300	1.0150740		-12.1	+/-20	
Heptachlor Epoxide [2C]	A	20.000	17.2	1.1636450	0.9992371		-14.1	+/-20	
trans-Chlordane (beta-Chlordane)	A	20.000	17.4	1.1726130	1.0198940		-13.0	+/-20	
trans-Chlordane (beta-Chlordane) [2C]	A	20.000	16.9	1.1604170	0.9796599		-15.6	+/-20	
cis-Chlordane (alpha-chlordane)	A	20.000	17.3	1.1760380	1.0154690		-13.7	+/-20	
cis-Chlordane (alpha-chlordane) [2C]	A	20.000	16.6	1.1352300	0.9448063		-16.8	+/-20	
Endosulfan I	A	20.000	18.2	1.0595170	0.9630445		-9.1	+/-20	
Endosulfan I [2C]	A	20.000	17.4	1.0256020	0.8899572		-13.2	+/-20	
4,4'-DDE	A	40.000	35.4	1.0568430	0.9342246		-11.6	+/-20	
4,4'-DDE [2C]	A	40.000	35.1	1.0391680	0.9114196		-12.3	+/-20	
Dieldrin	A	40.000	34.5	1.1382810	0.9812878		-13.8	+/-20	
Dieldrin [2C]	A	40.000	34.4	1.1331770	0.9736654		-14.1	+/-20	
Endrin	A	40.000	31.5	1.0488190	0.8255884		-21.3	+/-20	*
Endrin [2C]	A	40.000	33.3	1.1374860	0.9472854		-16.7	+/-20	
Endosulfan II	A	40.000	42.2	0.9441550	0.9955324		5.4	+/-20	
Endosulfan II [2C]	A	40.000	39.4	1.1659380	1.1493820		-1.4	+/-20	
4,4'-DDD	A	40.000	40.7	0.9449058	0.9621766		1.8	+/-20	
4,4'-DDD [2C]	A	40.000	41.1	1.1064160	1.1355560		2.6	+/-20	
Endrin Aldehyde	A	40.000	42.1	0.7530726	0.7931454		5.3	+/-20	
Endrin Aldehyde [2C]	A	40.000	43.2	0.8224595	0.8885392		8.0	+/-20	
4,4'-DDT	A	40.000	35.5	0.9548168	0.8468807		-11.3	+/-20	

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD6	Calibration:	FL00041
Lab File ID:	23032423.D	Calibration Date:	12/14/2022
Sequence:	SLC0442	Injection Date:	03/24/23
Lab Sample ID:	SLC0442-CCV1	Injection Time:	22:31
Sequence Name:	INDAE2		

		CONC. (ng/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT	
4,4'-DDT [2C]	A	40.000	37.8	1.0678960	1.0101880		-5.4	+/-20	
Endosulfan Sulfate	A	40.000	38.6	0.8965158	0.8644485		-3.6	+/-20	
Endosulfan Sulfate [2C]	A	40.000	36.5	1.0238570	0.9347375		-8.7	+/-20	
Endrin Ketone	A	40.000	42.1	1.0270110	1.0811880		5.3	+/-20	
Endrin Ketone [2C]	A	40.000	40.7	1.1058500	1.1260760		1.8	+/-20	
Methoxychlor	A	200.00	195	0.4231113	0.4125185		-2.5	+/-20	
Methoxychlor [2C]	A	200.00	198	0.4725766	0.4672057		-1.1	+/-20	
Hexachlorobutadiene	A	20.000	12.3	1.6135150	0.9906284		-38.6	+/-20	*
Hexachlorobutadiene [2C]	A	20.000	8.95	1.5225100	0.6811006		-55.3	+/-20	*
Hexachlorobenzene	A	20.000	16.7	1.4298940	1.1952300		-16.4	+/-20	
Hexachlorobenzene [2C]	A	20.000	17.6	1.4591090	1.2840750		-12.0	+/-20	
Decachlorobiphenyl	A	40.000	34.3	0.8105886	0.6952154		-14.2	+/-20	
Decachlorobiphenyl [2C]	A	40.000	34.8	0.8841805	0.7702095		-12.9	+/-20	
Tetrachlorometaxylene	A	40.000	24.7	1.0879510	0.6708056		-38.3	+/-20	*
Tetrachlorometaxylene [2C]	A	40.000	34.1	1.1261070	0.9602771		-14.7	+/-20	

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230324.b/23032423.D
Data file 2: /20230324.b/B20230324.b/23032423.D
Method: \20230324.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CCV1INDA1
Client ID:
Injection Date: 24-MAR-2023 22:31
Report Date: 03/28/2023 10:50
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.366	-0.008	175066	4.799	-0.010	248235	17.61	18.24	3.5	alpha-BHC
4.754	-0.009	68423	5.271	-0.010	94333	17.88	18.24	2.0	beta-BHC
4.940	-0.008	139224	5.621	-0.011	122432	17.14	10.92	44.3*	delta-BHC
4.672	-0.009	153217	5.191	-0.011	209988	17.78	18.19	2.2	gamma-BHC (Lindane)
5.162	-0.009	135456	5.714	-0.012	192785	17.67	18.43	4.2	Heptachlor
5.488	-0.010	146061	6.115	-0.012	206700	17.00	17.31	1.8	Aldrin
6.165	-0.010	131006	6.771	-0.011	169609	17.58	17.17	2.4	Heptachlor epoxide b
6.608	-0.010	124291	7.215	-0.012	151060	18.18	17.35	4.6	Endosulfan I
6.868	-0.010	253291	7.508	-0.012	330537	34.48	34.37	0.3	Dieldrin
6.532	-0.009	241143	7.300	-0.010	309406	35.36	35.08	0.8	4,4'-DDE
7.118	-0.010	179989	7.831	-0.012	214931	31.49	33.31	5.6	Endrin
7.356	-0.010	217039	8.043	-0.012	260785	42.18	39.43	6.7	Endosulfan II
7.179	-0.008	209767	7.905	-0.010	257648	40.73	41.05	0.8	4,4'-DDD
8.218	-0.008	188461	8.639	-0.011	212084	38.57	36.52	5.5	Endosulfan sulfate
7.469	-0.010	184631	8.221	-0.011	229203	35.48	37.84	6.4	4,4'-DDT
7.958	-0.007	449672	8.861	-0.012	530025	194.99	197.73	1.4	Methoxychlor
8.492	-0.009	235713	9.161	-0.012	255497	42.11	40.73	3.3	Endrin ketone
7.784	-0.009	172916	8.373	-0.012	201602	42.13	43.21	2.5	Endrin aldehyde
6.308	-0.010	131628	6.982	-0.012	166286	17.40	16.88	3.0	trans-Chlordane
6.454	-0.010	131057	7.142	-0.011	160370	17.27	16.65	3.7	cis-Chlordane
2.327	-0.006	127851	2.472	-0.007	115609	12.28	8.95	31.4	Hexachlorobutadiene
4.209	-0.008	154257	4.660	-0.010	217957	16.72	17.60	5.1	Hexachlorobenzene
3.848	-0.009	173149	4.169	-0.009	325992	24.66	34.11	32.1	Tetrachloro-m-xylene
9.406	-0.009	151566	10.359	-0.014	174754	34.31	34.84	1.6	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	516242	-23.2
Hexabromobiphenyl	609723	436026	-28.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	678954	-32.5
Hexabromobiphenyl	769764	453783	-41.0

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

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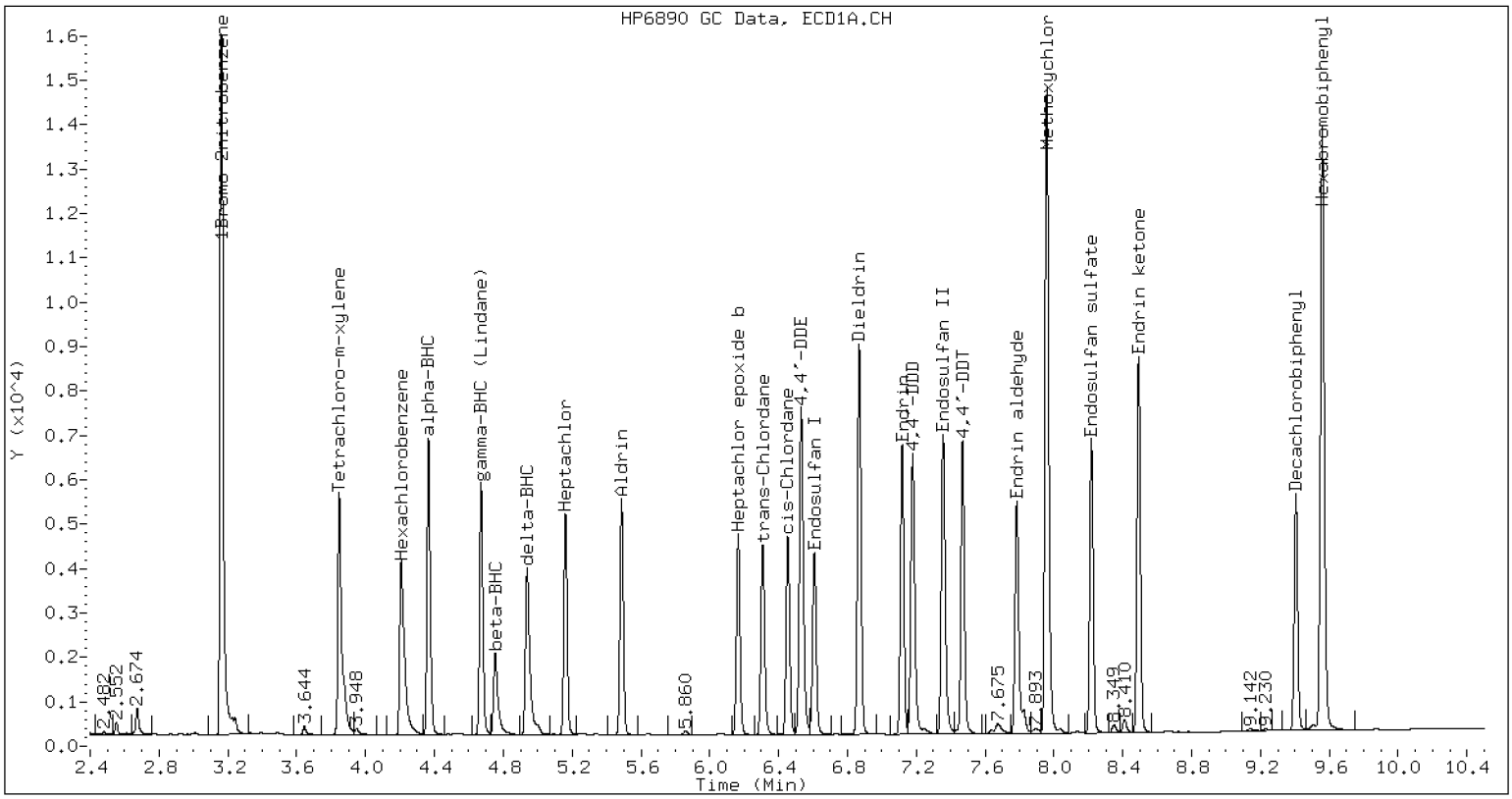

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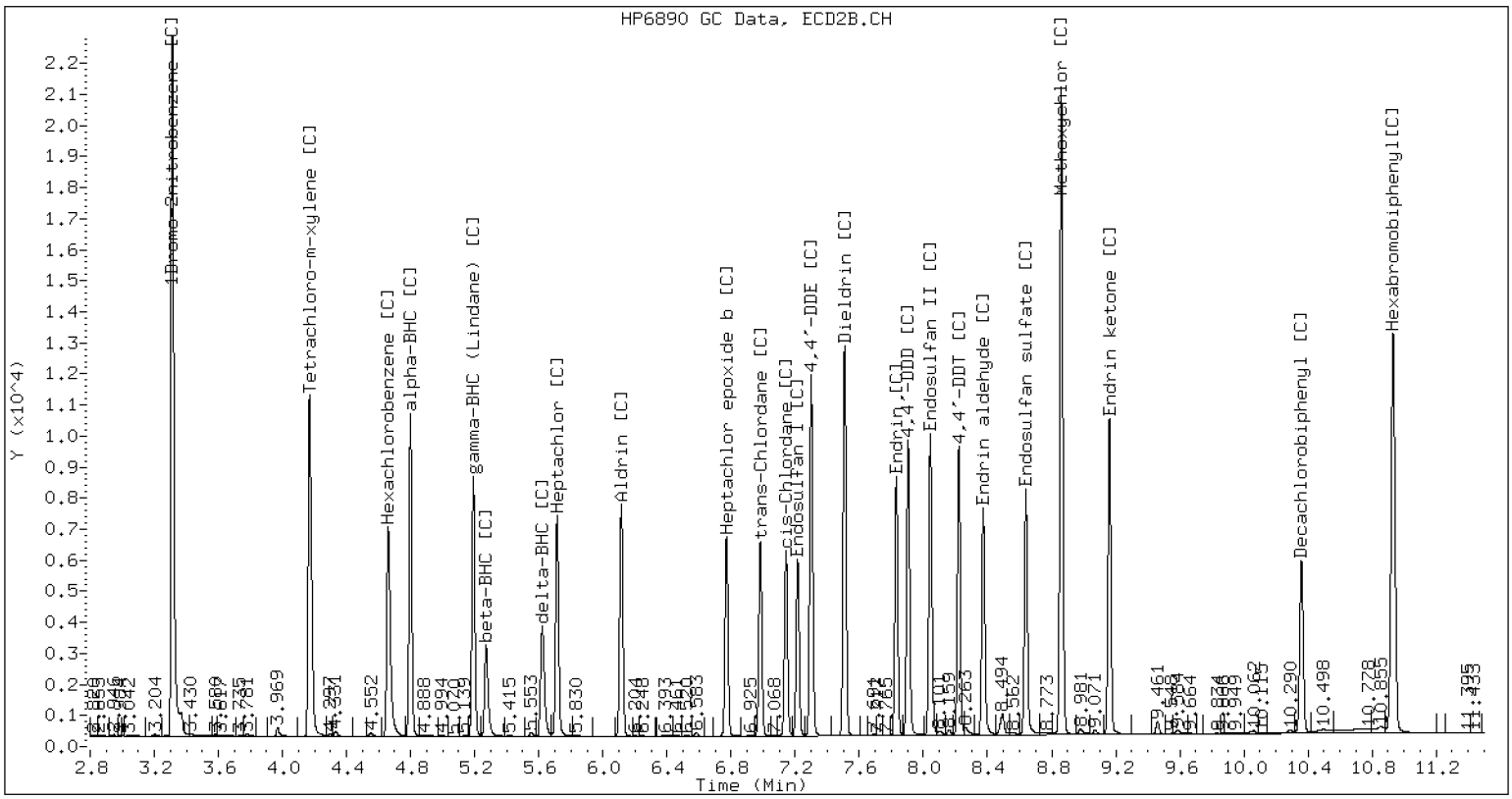
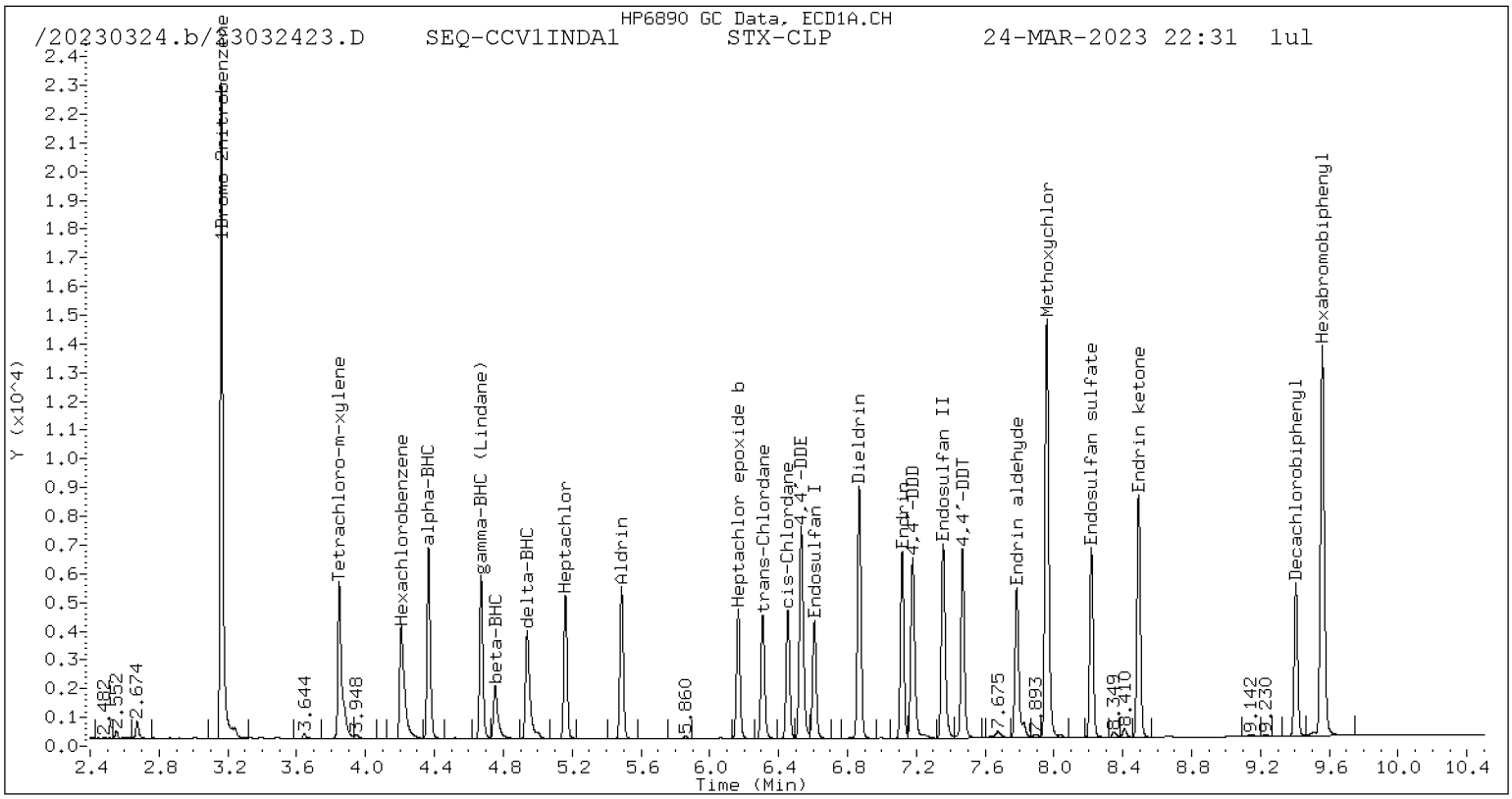
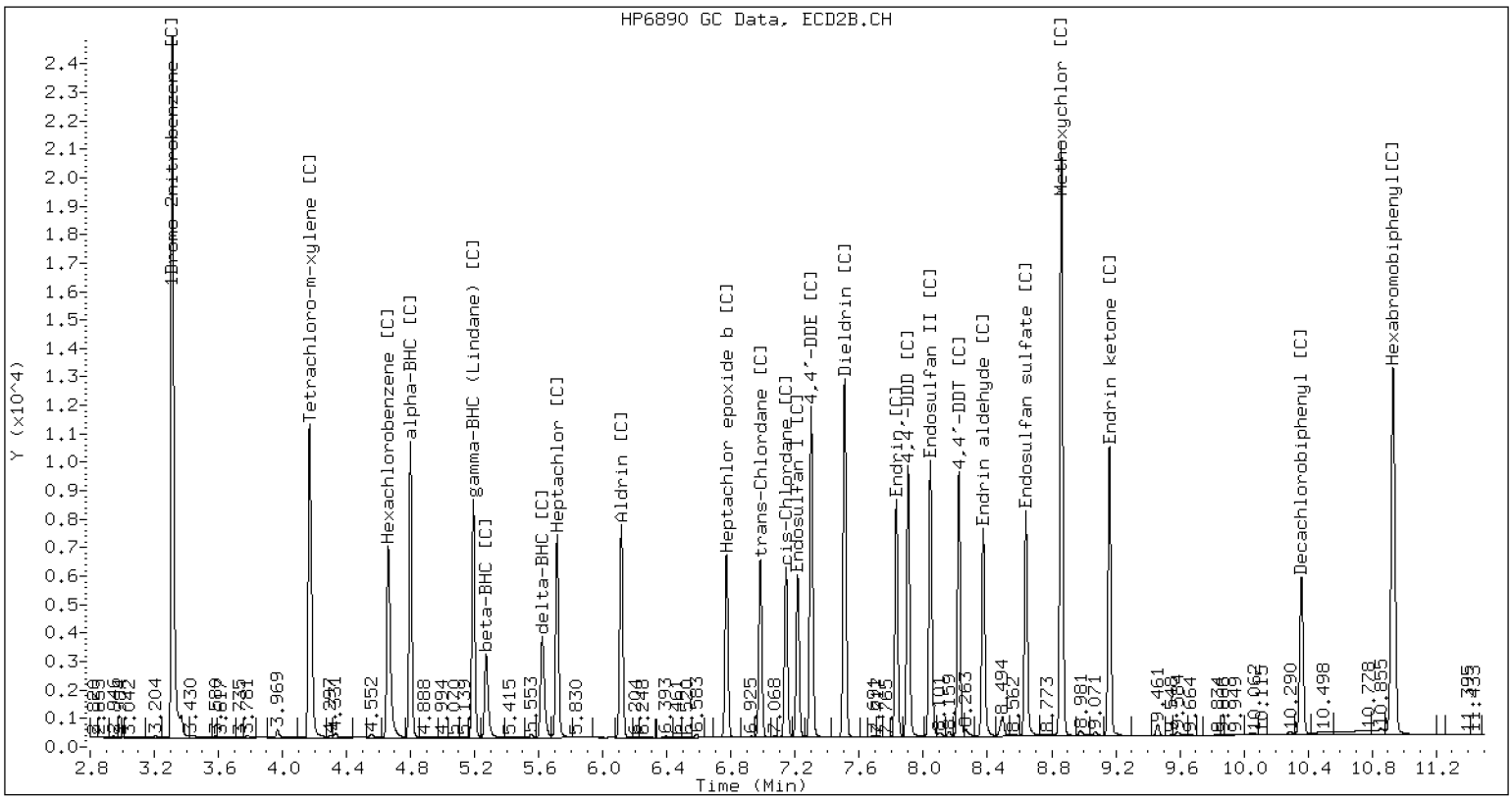


Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230324.b/B20230324.b/23032423.D SEQ-CCV1INDA1 CLP2



CLP-2 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD6	Calibration:	FL00041
Lab File ID:	23032438.D	Calibration Date:	12/14/2022
Sequence:	SLC0442	Injection Date:	03/25/23
Lab Sample ID:	SLC0442-CCV3	Injection Time:	03:00
Sequence Name:	INDAE3		

		CONC. (ng/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
alpha-BHC	A	20.000	17.1	1.5401480	1.3147550		-14.6	+/-20
alpha-BHC [2C]	A	20.000	17.9	1.6032650	1.4378350		-10.3	+/-20
beta-BHC	A	20.000	17.4	0.5929524	0.5148793		-13.2	+/-20
beta-BHC [2C]	A	20.000	18.1	0.6095359	0.5517624		-9.5	+/-20
gamma-BHC (Lindane)	A	20.000	17.4	1.3353400	1.1617250		-13.0	+/-20
gamma-BHC (Lindane) [2C]	A	20.000	18.1	1.3606000	1.2293150		-9.6	+/-20
delta-BHC	A	20.000	17.0	1.2587440	1.0673680		-15.2	+/-20
delta-BHC [2C]	A	20.000	11.3	1.3206240	0.7492462		-43.3	+/-20
Heptachlor	A	20.000	16.9	1.1881510	1.0025480		-15.6	+/-20
Heptachlor [2C]	A	20.000	17.9	1.2325020	1.1010140		-10.7	+/-20
Aldrin	A	20.000	16.2	1.3315350	1.0803300		-18.9	+/-20
Aldrin [2C]	A	20.000	16.7	1.4072190	1.1769770		-16.4	+/-20
Heptachlor Epoxide	A	20.000	16.6	1.1545300	0.9572563		-17.1	+/-20
Heptachlor Epoxide [2C]	A	20.000	16.0	1.1636450	0.9287383		-20.2	+/-20 *
trans-Chlordane (beta-Chlordane)	A	20.000	16.2	1.1726130	0.9517793		-18.8	+/-20
trans-Chlordane (beta-Chlordane) [2C]	A	20.000	15.6	1.1604170	0.9033729		-22.2	+/-20 *
cis-Chlordane (alpha-chlordane)	A	20.000	16.0	1.1760380	0.9415022		-19.9	+/-20
cis-Chlordane (alpha-chlordane) [2C]	A	20.000	15.4	1.1352300	0.8746420		-23.0	+/-20 *
Endosulfan I	A	20.000	16.8	1.0595170	0.8905126		-16.0	+/-20
Endosulfan I [2C]	A	20.000	15.5	1.0256020	0.7941010		-22.6	+/-20 *
4,4'-DDE	A	40.000	32.9	1.0568430	0.8681252		-17.9	+/-20
4,4'-DDE [2C]	A	40.000	30.8	1.0391680	0.8001013		-23.0	+/-20 *
Dieldrin	A	40.000	32.2	1.1382810	0.9162166		-19.5	+/-20
Dieldrin [2C]	A	40.000	30.1	1.1331770	0.8536457		-24.7	+/-20 *
Endrin	A	40.000	29.4	1.0488190	0.7704859		-26.5	+/-20 *
Endrin [2C]	A	40.000	26.7	1.1374860	0.7587246		-33.3	+/-20 *
Endosulfan II	A	40.000	44.0	0.9441550	1.0384940		10.0	+/-20
Endosulfan II [2C]	A	40.000	37.2	1.1659380	1.0857300		-6.9	+/-20
4,4'-DDD	A	40.000	42.5	0.9449058	1.0044680		6.3	+/-20
4,4'-DDD [2C]	A	40.000	37.4	1.1064160	1.0331280		-6.6	+/-20
Endrin Aldehyde	A	40.000	44.2	0.7530726	0.8329429		10.6	+/-20
Endrin Aldehyde [2C]	A	40.000	42.6	0.8224595	0.8764021		6.6	+/-20
4,4'-DDT	A	40.000	38.6	0.9548168	0.9205743		-3.6	+/-20
4,4'-DDT [2C]	A	40.000	36.2	1.0678960	0.9669445		-9.5	+/-20

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD6	Calibration:	FL00041
Lab File ID:	23032438.D	Calibration Date:	12/14/2022
Sequence:	SLC0442	Injection Date:	03/25/23
Lab Sample ID:	SLC0442-CCV3	Injection Time:	03:00
Sequence Name:	INDAE3		

		CONC. (ng/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT	
Endosulfan Sulfate	A	40.000	38.8	0.8965158	0.8690791		-3.1	+/-20	
Endosulfan Sulfate [2C]	A	40.000	38.7	1.0238570	0.9898957		-3.3	+/-20	
Endrin Ketone	A	40.000	42.7	1.0270110	1.0958470		6.7	+/-20	
Endrin Ketone [2C]	A	40.000	42.2	1.1058500	1.1680350		5.6	+/-20	
Methoxychlor	A	200.00	200	0.4231113	0.4239536		0.2	+/-20	
Methoxychlor [2C]	A	200.00	181	0.4725766	0.4280967		-9.4	+/-20	
Hexachlorobutadiene	A	20.000	12.2	1.6135150	0.9840405		-39.0	+/-20	*
Hexachlorobutadiene [2C]	A	20.000	9.58	1.5225100	0.7291018		-52.1	+/-20	*
Hexachlorobenzene	A	20.000	16.2	1.4298940	1.1550990		-19.2	+/-20	
Hexachlorobenzene [2C]	A	20.000	17.4	1.4591090	1.2674510		-13.1	+/-20	
Decachlorobiphenyl	A	40.000	33.4	0.8105886	0.6773737		-16.4	+/-20	
Decachlorobiphenyl [2C]	A	40.000	35.9	0.8841805	0.7925395		-10.4	+/-20	
Tetrachlorometaxylene	A	40.000	24.7	1.0879510	0.6724049		-38.2	+/-20	*
Tetrachlorometaxylene [2C]	A	40.000	34.3	1.1261070	0.9656858		-14.2	+/-20	

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230324.b/23032438.D
Data file 2: /20230324.b/B20230324.b/23032438.D
Method: \20230324.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CCV1INDA2
Client ID:
Injection Date: 25-MAR-2023 03:00
Report Date: 03/28/2023 10:50
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.366	-0.009	172835	4.798	-0.010	237113	17.07	17.94	4.9	alpha-BHC
4.754	-0.009	67685	5.271	-0.011	90991	17.37	18.10	4.2	beta-BHC
4.939	-0.009	140314	5.621	-0.011	123558	16.96	11.35	39.7	delta-BHC
4.671	-0.009	152718	5.191	-0.011	202726	17.40	18.07	3.8	gamma-BHC (Lindane)
5.161	-0.010	131793	5.713	-0.012	181568	16.88	17.87	5.7	Heptachlor
5.487	-0.010	142018	6.114	-0.013	194095	16.23	16.73	3.0	Aldrin
6.165	-0.011	125839	6.771	-0.012	153158	16.58	15.96	3.8	Heptachlor epoxide b
6.607	-0.010	117065	7.214	-0.013	130955	16.81	15.49	8.2	Endosulfan I
6.867	-0.011	240888	7.507	-0.013	281549	32.20	30.13	6.6	Dieldrin
6.531	-0.009	228244	7.299	-0.012	263889	32.86	30.80	6.5	4,4'-DDE
7.117	-0.011	147184	7.830	-0.013	156861	29.38	26.68	9.6	Endrin
7.355	-0.010	198381	8.042	-0.013	224467	44.00	37.25	16.6	Endosulfan II
7.178	-0.009	191881	7.904	-0.011	213592	42.52	37.35	12.9	4,4'-DDD
8.216	-0.010	166018	8.639	-0.012	204654	38.78	38.67	0.3	Endosulfan sulfate
7.469	-0.010	175855	8.221	-0.012	199909	38.57	36.22	6.3	4,4'-DDT
7.957	-0.008	404934	8.860	-0.012	442530	200.40	181.18	10.1	Methoxychlor
8.491	-0.010	209337	9.161	-0.012	241483	42.68	42.25	1.0	Endrin ketone
7.783	-0.010	159115	8.372	-0.013	181190	44.24	42.62	3.7	Endrin aldehyde
6.307	-0.011	125119	6.981	-0.013	148975	16.23	15.57	4.2	trans-Chlordane
6.453	-0.011	123768	7.142	-0.012	144237	16.01	15.41	3.8	cis-Chlordane
2.327	-0.006	129360	2.472	-0.006	120236	12.20	9.58	24.1	Hexachlorobutadiene
4.209	-0.008	151847	4.661	-0.009	209015	16.16	17.37	7.3	Hexachlorobenzene
3.848	-0.010	176786	4.169	-0.009	318502	24.72	34.30	32.5	Tetrachloro-m-xylene
9.405	-0.009	129397	10.358	-0.015	163852	33.43	35.85	7.0	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

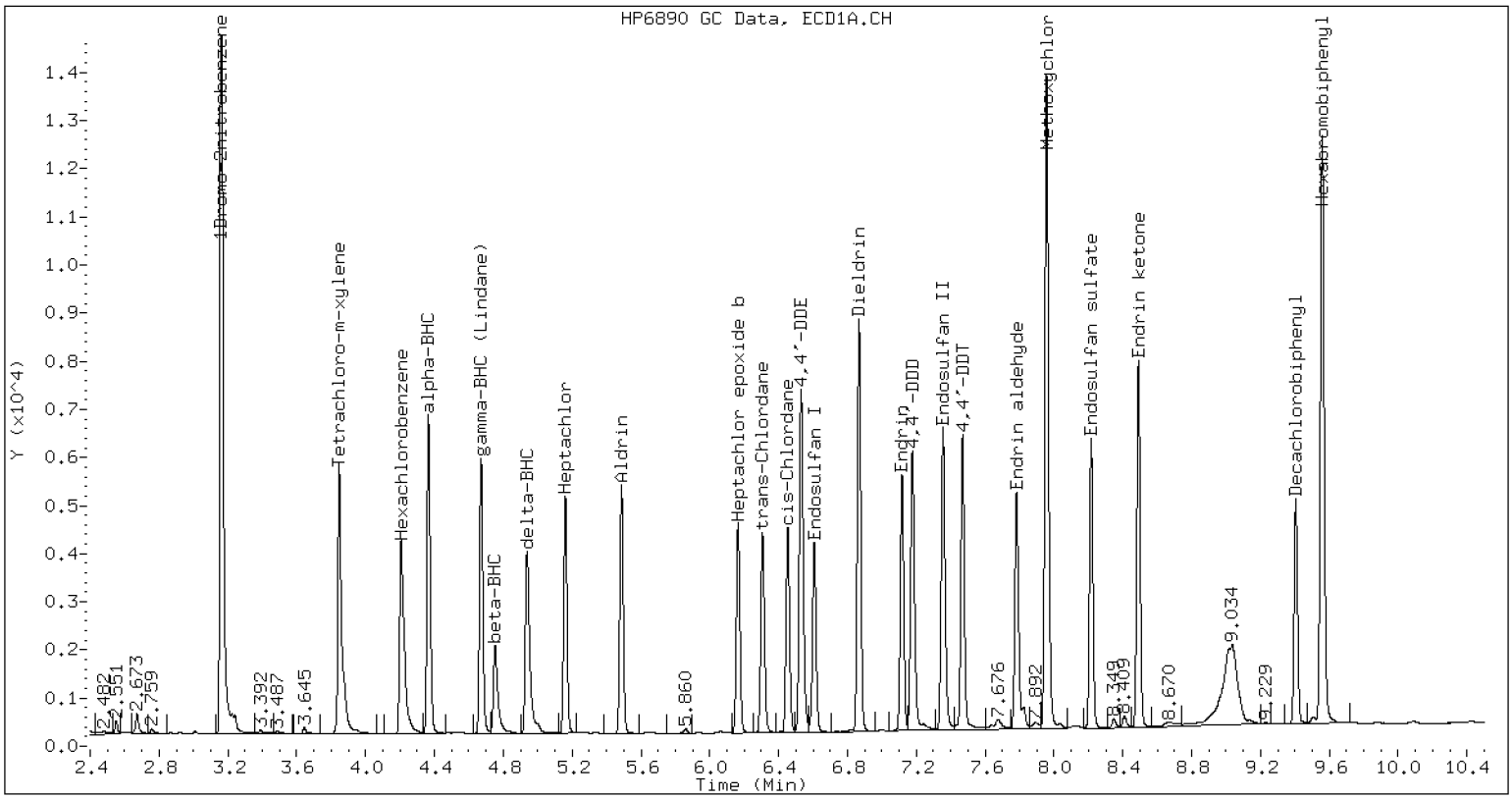
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	525832	-21.8
Hexabromobiphenyl	609723	382055	-37.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	659639	-34.5
Hexabromobiphenyl	769764	413486	-46.3

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

/20230324.b/23032438.D SEQ-CCV1INDA2 STX-CLP 25-MAR-2023 03:00 1ul



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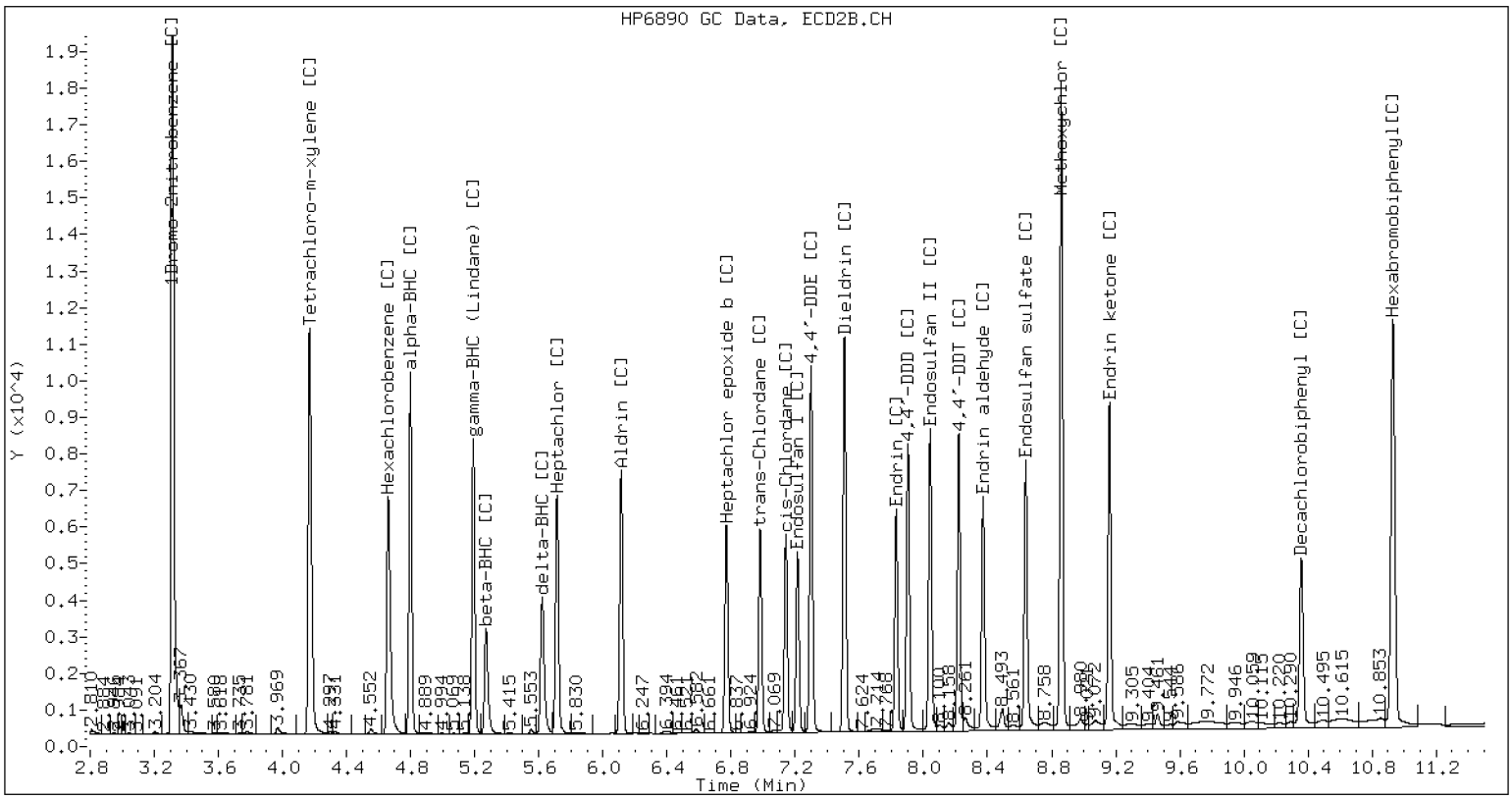
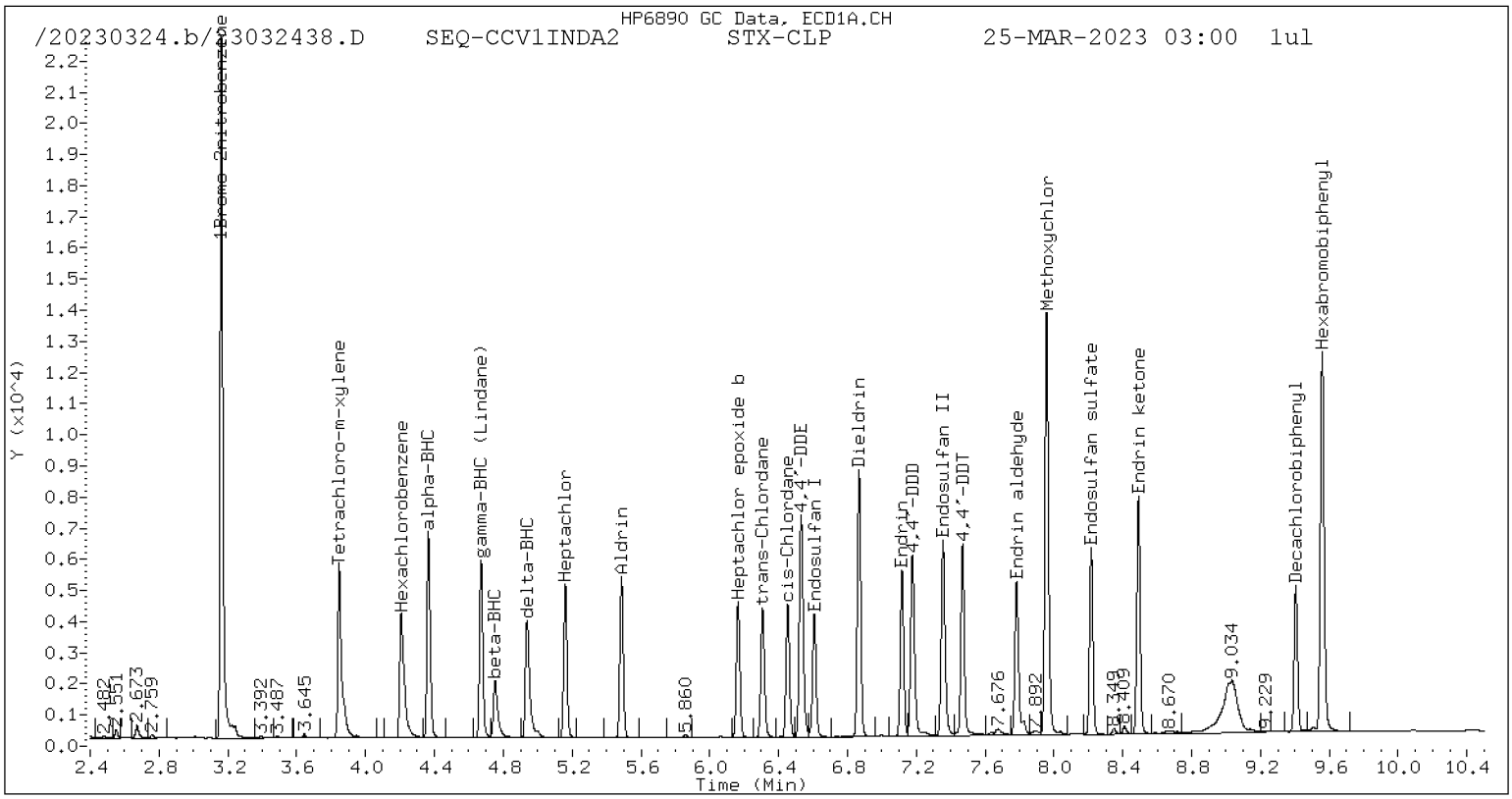


Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

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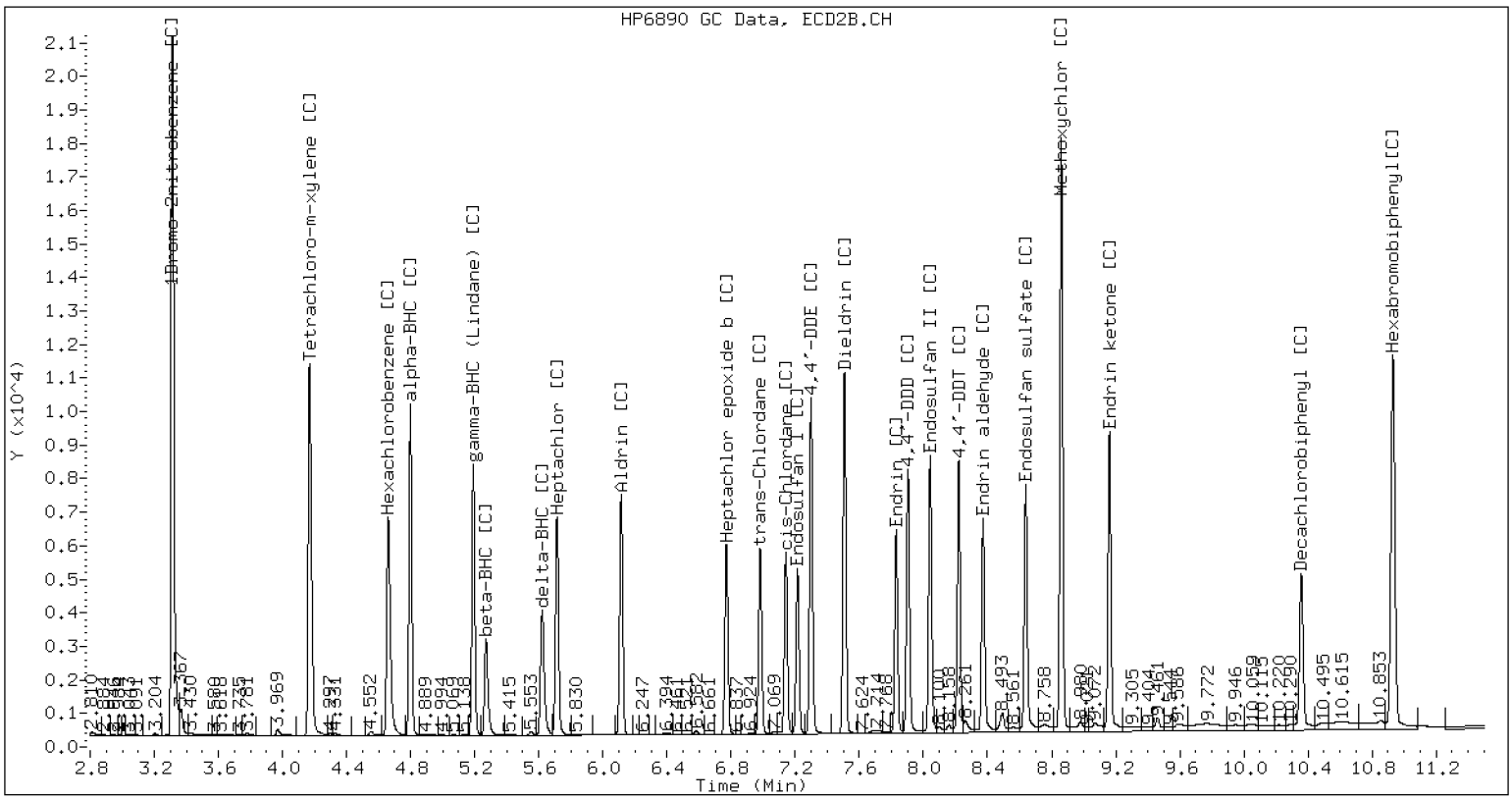


CLP-2 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD6	Calibration:	FL00041
Lab File ID:	23032458.D	Calibration Date:	12/14/2022
Sequence:	SLC0442	Injection Date:	03/25/23
Lab Sample ID:	SLC0442-CCV4	Injection Time:	08:58
Sequence Name:	INDAE4		

		CONC. (ng/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT	
alpha-BHC	A	20.000	17.5	1.5401480	1.3461410		-12.6	+/-20	
alpha-BHC [2C]	A	20.000	18.2	1.6032650	1.4561110		-9.2	+/-20	
beta-BHC	A	20.000	17.7	0.5929524	0.5250959		-11.4	+/-20	
beta-BHC [2C]	A	20.000	18.3	0.6095359	0.5569346		-8.6	+/-20	
gamma-BHC (Lindane)	A	20.000	17.8	1.3353400	1.1868020		-11.1	+/-20	
gamma-BHC (Lindane) [2C]	A	20.000	18.2	1.3606000	1.2375540		-9.0	+/-20	
delta-BHC	A	20.000	17.2	1.2587440	1.0809150		-14.1	+/-20	
delta-BHC [2C]	A	20.000	11.1	1.3206240	0.7357295		-44.3	+/-20	
Heptachlor	A	20.000	17.5	1.1881510	1.0414510		-12.3	+/-20	
Heptachlor [2C]	A	20.000	18.5	1.2325020	1.1380430		-7.7	+/-20	
Aldrin	A	20.000	17.1	1.3315350	1.1376350		-14.6	+/-20	
Aldrin [2C]	A	20.000	17.2	1.4072190	1.2128110		-13.8	+/-20	
Heptachlor Epoxide	A	20.000	17.6	1.1545300	1.0175590		-11.9	+/-20	
Heptachlor Epoxide [2C]	A	20.000	17.0	1.1636450	0.9901372		-14.9	+/-20	
trans-Chlordane (beta-Chlordane)	A	20.000	17.4	1.1726130	1.0202290		-13.0	+/-20	
trans-Chlordane (beta-Chlordane) [2C]	A	20.000	16.7	1.1604170	0.9692298		-16.5	+/-20	
cis-Chlordane (alpha-chlordane)	A	20.000	17.2	1.1760380	1.0115500		-14.0	+/-20	
cis-Chlordane (alpha-chlordane) [2C]	A	20.000	16.4	1.1352300	0.9334790		-17.8	+/-20	
Endosulfan I	A	20.000	18.1	1.0595170	0.9609939		-9.3	+/-20	
Endosulfan I [2C]	A	20.000	16.9	1.0256020	0.8676954		-15.4	+/-20	
4,4'-DDE	A	40.000	35.3	1.0568430	0.9339031		-11.6	+/-20	
4,4'-DDE [2C]	A	40.000	33.9	1.0391680	0.8808879		-15.2	+/-20	
Dieldrin	A	40.000	34.4	1.1382810	0.9788552		-14.0	+/-20	
Dieldrin [2C]	A	40.000	33.1	1.1331770	0.9386047		-17.2	+/-20	
Endrin	A	40.000	25.4	1.0488190	0.6647526		-36.6	+/-20	*
Endrin [2C]	A	40.000	25.0	1.1374860	0.7109666		-37.5	+/-20	*
Endosulfan II	A	40.000	43.2	0.9441550	1.0207980		8.1	+/-20	
Endosulfan II [2C]	A	40.000	38.8	1.1659380	1.1296070		-3.1	+/-20	
4,4'-DDD	A	40.000	40.9	0.9449058	0.9651514		2.1	+/-20	
4,4'-DDD [2C]	A	40.000	38.9	1.1064160	1.0773120		-2.6	+/-20	
Endrin Aldehyde	A	40.000	44.4	0.7530726	0.8359883		11.0	+/-20	
Endrin Aldehyde [2C]	A	40.000	44.2	0.8224595	0.9087417		10.5	+/-20	
4,4'-DDT	A	40.000	35.5	0.9548168	0.8475976		-11.2	+/-20	
4,4'-DDT [2C]	A	40.000	37.2	1.0678960	0.9919060		-7.1	+/-20	

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD6	Calibration:	FL00041
Lab File ID:	23032458.D	Calibration Date:	12/14/2022
Sequence:	SLC0442	Injection Date:	03/25/23
Lab Sample ID:	SLC0442-CCV4	Injection Time:	08:58
Sequence Name:	INDAE4		

		CONC. (ng/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT	
Endosulfan Sulfate	A	40.000	38.9	0.8965158	0.8727949		-2.6	+/-20	
Endosulfan Sulfate [2C]	A	40.000	37.4	1.0238570	0.9569664		-6.5	+/-20	
Endrin Ketone	A	40.000	43.4	1.0270110	1.1155130		8.6	+/-20	
Endrin Ketone [2C]	A	40.000	42.7	1.1058500	1.1811840		6.8	+/-20	
Methoxychlor	A	200.00	188	0.4231113	0.3986879		-5.8	+/-20	
Methoxychlor [2C]	A	200.00	185	0.4725766	0.4364399		-7.6	+/-20	
Hexachlorobutadiene	A	20.000	12.4	1.6135150	0.9988667		-38.1	+/-20	*
Hexachlorobutadiene [2C]	A	20.000	9.39	1.5225100	0.7149453		-53.0	+/-20	*
Hexachlorobenzene	A	20.000	16.5	1.4298940	1.1787920		-17.6	+/-20	
Hexachlorobenzene [2C]	A	20.000	17.5	1.4591090	1.2744370		-12.7	+/-20	
Decachlorobiphenyl	A	40.000	33.7	0.8105886	0.6824046		-15.8	+/-20	
Decachlorobiphenyl [2C]	A	40.000	33.4	0.8841805	0.7374973		-16.6	+/-20	
Tetrachlorometaxylene	A	40.000	25.0	1.0879510	0.6790788		-37.6	+/-20	*
Tetrachlorometaxylene [2C]	A	40.000	33.8	1.1261070	0.9519320		-15.5	+/-20	

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230324.b/23032458.D
Data file 2: /20230324.b/B20230324.b/23032458.D
Method: \20230324.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CCV1INDA3
Client ID:
Injection Date: 25-MAR-2023 08:58
Report Date: 03/28/2023 10:51
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.364	-0.010	173418	0.000	-4.809	0	17.48	0.00	---	alpha-BHC
4.752	-0.011	67646	0.000	-5.281	0	17.71	0.00	---	beta-BHC
4.937	-0.011	139250	0.000	-5.632	0	17.17	0.00	---	delta-BHC
4.670	-0.011	152891	0.000	-5.202	0	17.78	0.00	---	gamma-BHC (Lindane)
5.159	-0.012	134166	0.000	-5.726	0	17.53	0.00	---	Heptachlor
5.485	-0.013	146557	0.000	-6.127	0	17.09	0.00	---	Aldrin
6.163	-0.013	131088	0.000	-6.782	0	17.63	0.00	---	Heptachlor epoxide b
6.605	-0.013	123801	0.000	-7.227	0	18.14	0.00	---	Endosulfan I
6.865	-0.013	252204	0.000	-7.520	0	34.40	0.00	---	Dieldrin
6.529	-0.011	240622	0.000	-7.310	0	35.35	0.00	---	4,4'-DDE
7.115	-0.013	143781	0.000	-7.843	0	25.35	0.00	---	Endrin
7.353	-0.013	220791	0.000	-8.055	0	43.25	0.00	---	Endosulfan II
7.176	-0.011	208755	0.000	-7.915	0	40.86	0.00	---	4,4'-DDD
8.214	-0.012	188779	0.000	-8.651	0	38.94	0.00	---	Endosulfan sulfate
7.466	-0.013	183329	0.000	-8.232	0	35.51	0.00	---	4,4'-DDT
7.955	-0.011	431166	0.000	-8.872	0	188.46	0.00	---	Methoxychlor
8.488	-0.013	241277	0.000	-9.173	0	43.45	0.00	---	Endrin ketone
7.780	-0.013	180818	0.000	-8.385	0	44.40	0.00	---	Endrin aldehyde
6.305	-0.013	131432	0.000	-6.994	0	17.40	0.00	---	trans-Chlordane
6.451	-0.013	130314	0.000	-7.154	0	17.20	0.00	---	cis-Chlordane
2.327	-0.007	128680	0.000	-2.478	0	12.38	0.00	---	Hexachlorobutadiene
4.207	-0.010	151859	0.000	-4.670	0	16.49	0.00	---	Hexachlorobenzene
3.846	-0.011	174966	0.000	-4.178	0	24.97	0.00	---	Tetrachloro-m-xylene
9.402	-0.012	147599	0.000	-10.373	0	33.67	0.00	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

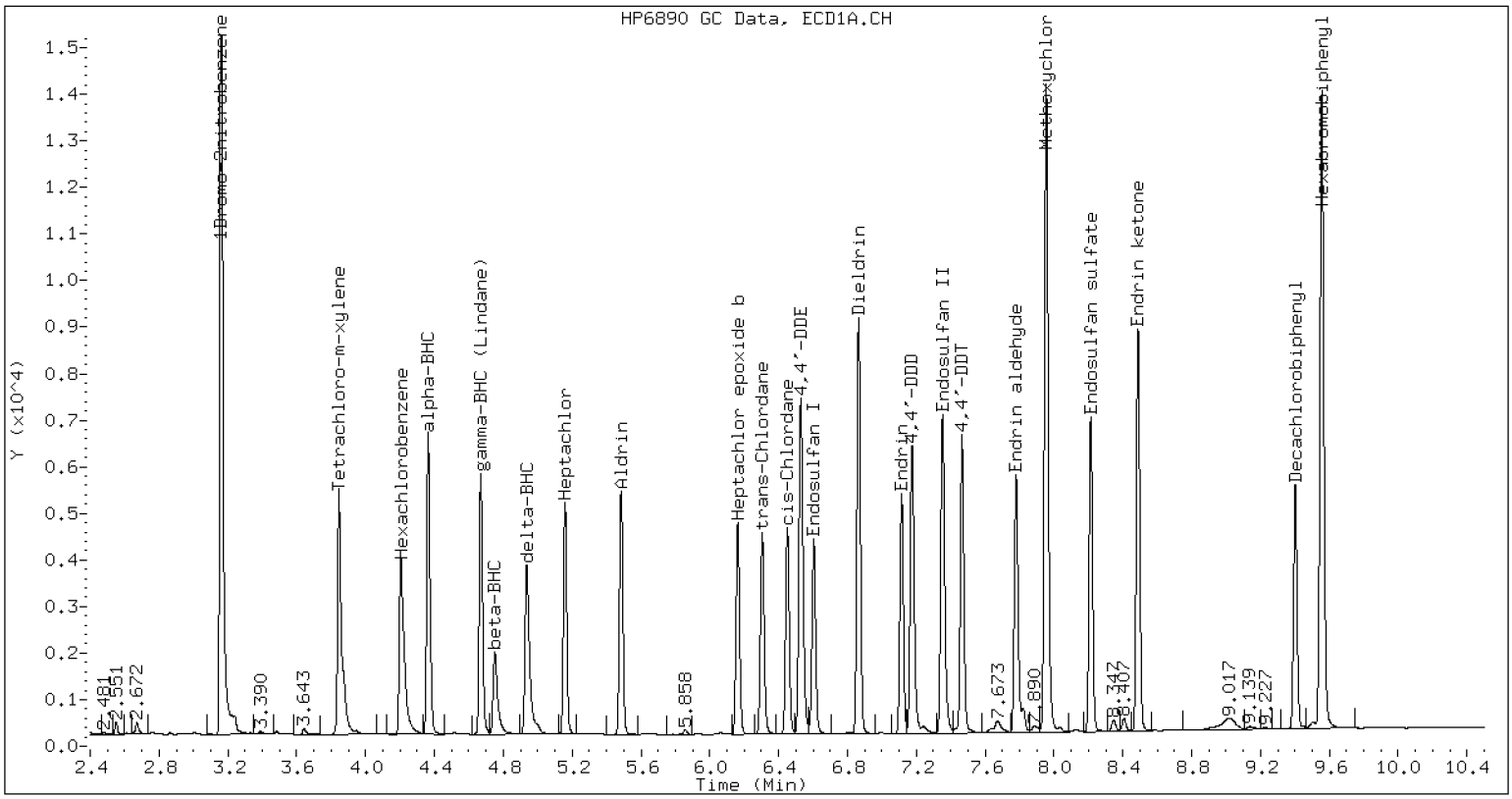
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	515304	-23.4
Hexabromobiphenyl	609723	432585	-29.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	0	-100.0 <-
Hexabromobiphenyl	769764	0	-100.0 <-

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

/20230324.b/23032458.D SEQ-CCV1INDA3 STX-CLP 25-MAR-2023 08:58 1ul



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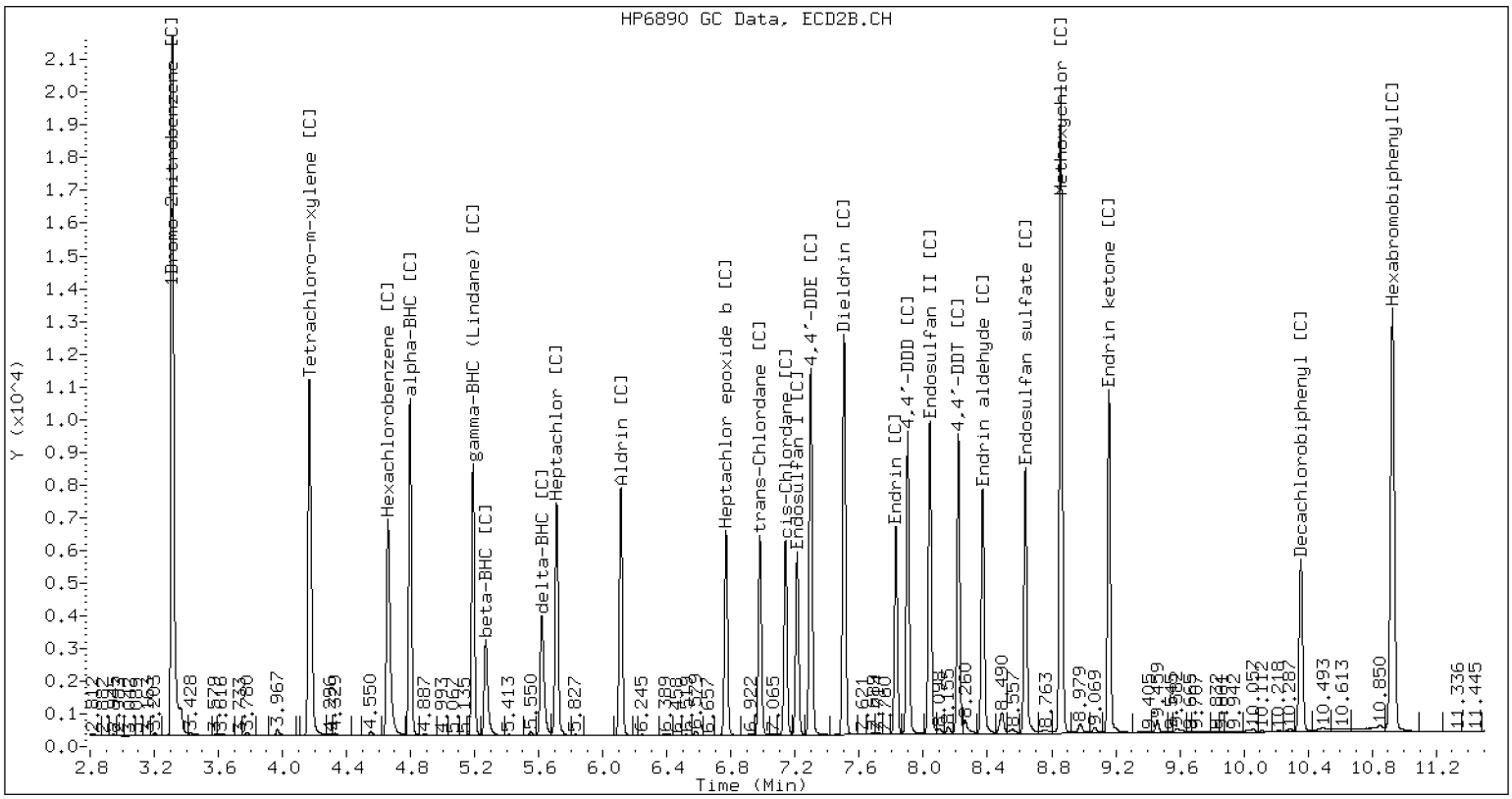
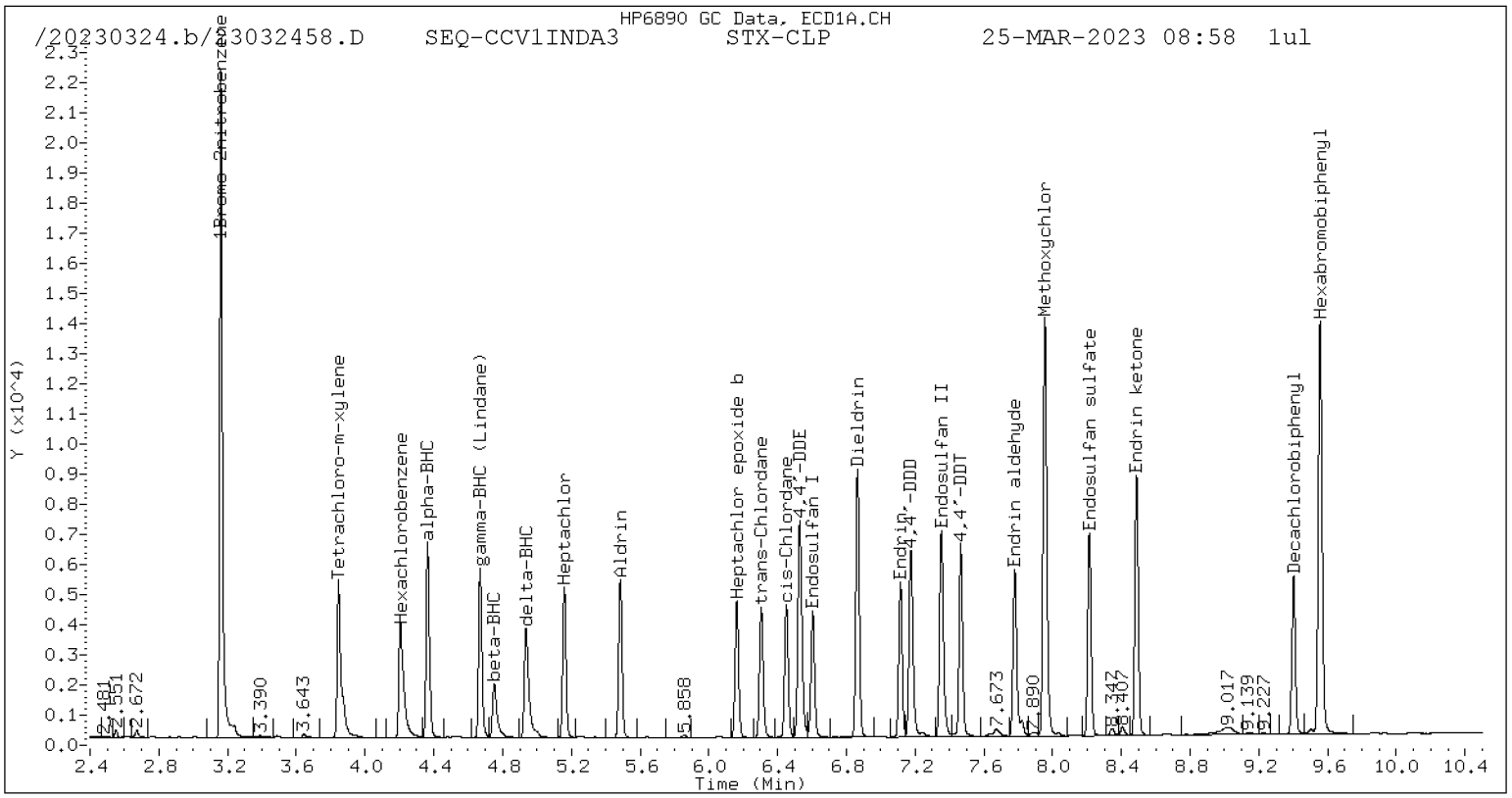


Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

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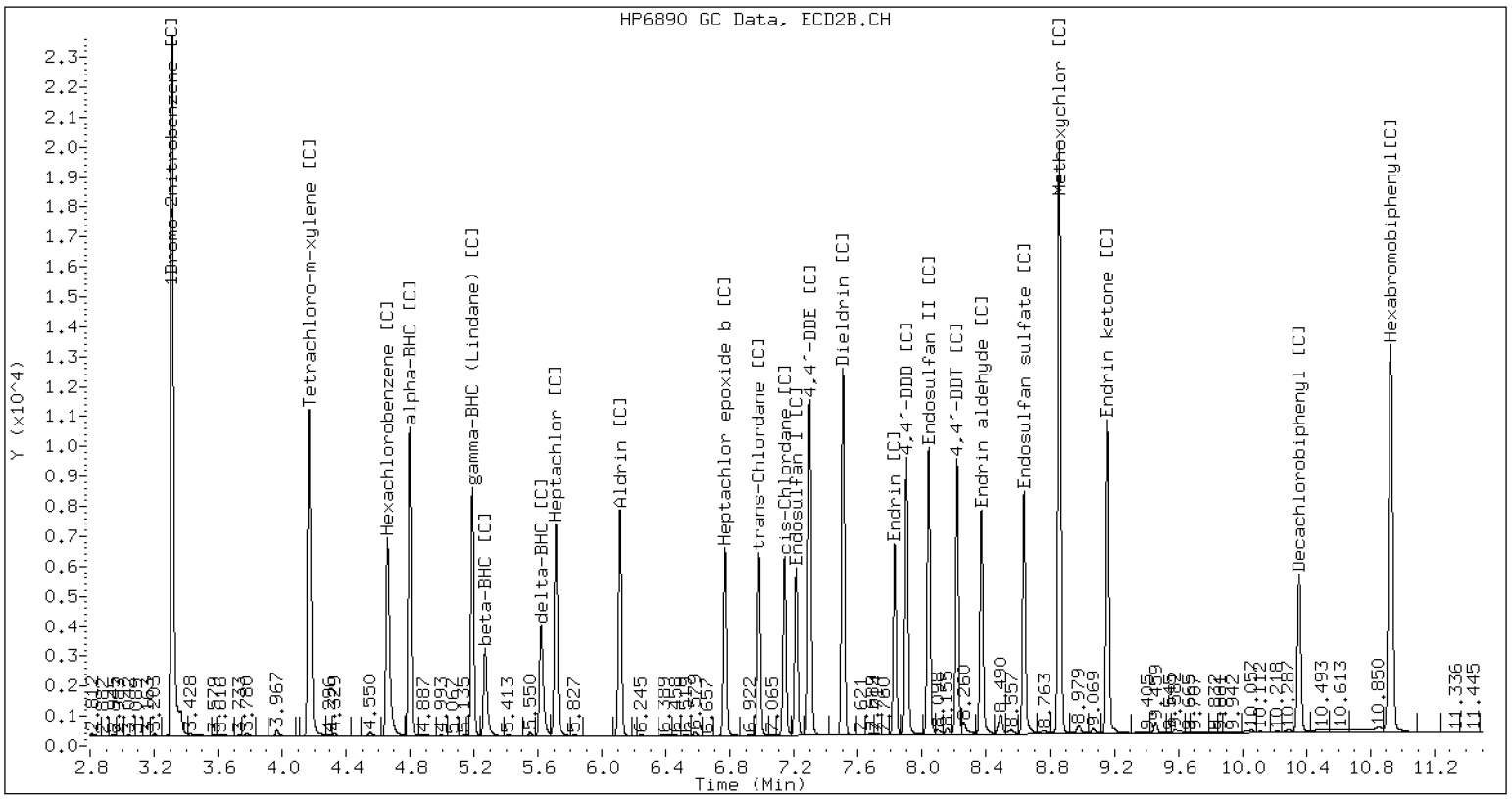

CLP-2 Manual Integration: NO

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PERFORMANCE EVAUATION DATA SHEET

DS1

EPA 8081B

Laboratory:	Analytical Resources, LLC	Laboratory ID:	SKL0233-PEM1	File ID:	22121404.D
Client:	Anchor QEA, LLC	Matrix:	Water	Instrument:	ECD6
Project:	AOC5 MR Phase 1	Analyzed:	12/14/2022	Sequence:	SKL0233
SDG:	23B0276	Calibration:	FL00041	Column:	1

PEM COMPOUND	RT	Response
4,4'-DDE	6.49	6258
Endrin	7.08	745471
4,4'-DDD	7.14	15566
Endrin Aldehyde	7.75	21328
4,4'-DDT	7.43	629664
Endrin Ketone	8.45	19276

4,4'-DDT %Breakdown (1): 3.3

Endrin %Breakdown (1): 5.2

Analytical Resources, LLC
Analytical Chemists and Consultants

PERFORMANCE EVAUATION DATA SHEET

DS1

EPA 8081B

Laboratory:	Analytical Resources, LLC	Laboratory ID:	SKL0233-PEM1	File ID:	22121404.D
Client:	Anchor QEA, LLC	Matrix:	Water	Instrument:	ECD6
Project:	AOC5 MR Phase 1	Analyzed:	12/14/2022	Sequence:	SKL0233
SDG:	23B0276	Calibration:	FL00041	Column:	2

PEM COMPOUND	RT	Response
4,4'-DDE	7.37	11906
Endrin	7.91	1029194
4,4'-DDD	7.98	32697
Endrin Aldehyde	8.45	31426
4,4'-DDT	8.30	890195
Endrin Ketone	9.24	28268

4,4'-DDT %Breakdown (1): 4.8

Endrin %Breakdown (1): 5.5

7E

8081 DDT/ENDRIN BREAKDOWN VERIFICATION SUMMARY

Lab ID: SEQ-PEM1 InstID,Data File: ecd6.i, 22121404.D

Analysis Date: 14-DEC-2022 20:20 Init. Calib. Date: 14-DEC-2022

GC Column: STX-CLP1 ID: 0.53(mm)

COMPOUND	RT	AREA
1Bromo-2nitrobenzene	3.151	683485
4,4'-DDE	6.490	6258
Endrin	7.082	745471
4,4'-DDD	7.136	15566
4,4'-DDT	7.428	629664
Endrin ketone	8.453	19276
Endrin aldehyde	7.747	21328
Hexabromobiphenyl	9.504	619012
Tetrachloro-m-xylene	3.828	1161664
Decachlorobiphenyl	9.355	833312

DDT Percent Breakdown = 3.3 %
((6258+15566) * 100)/(6258+15566+629664)

Endrin Percent Breakdown = 5.2 %
((21328+19276) * 100)/(21328+19276+745471)

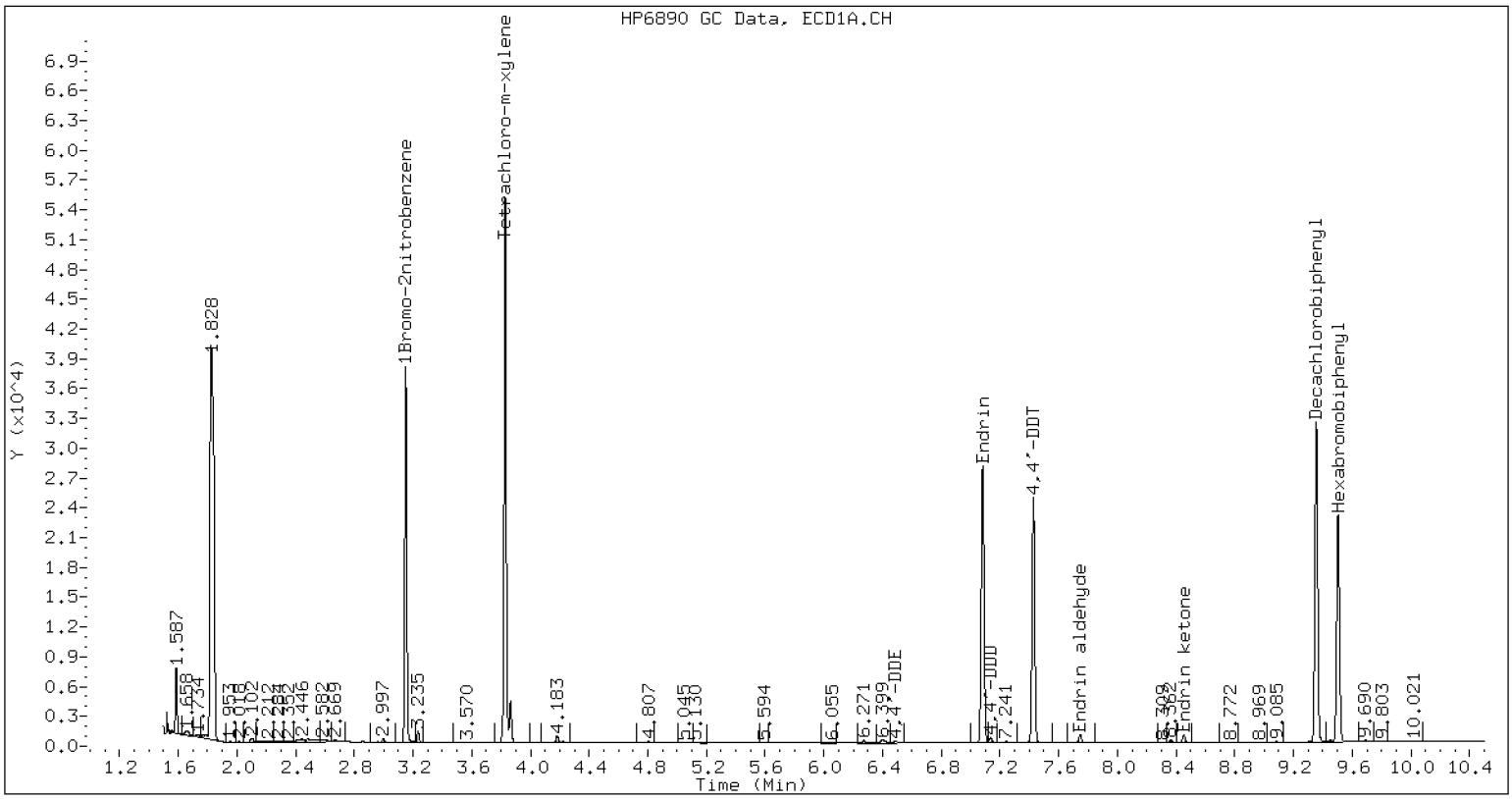
GC Column: STX-CLP2 ID: 0.53(mm)

COMPOUND	RT	AREA
1Bromo-2nitrobenzene [C]	3.350	1005375
4,4'-DDE [C]	7.370	11906
Endrin [C]	7.907	1029194
4,4'-DDD [C]	7.977	32697
4,4'-DDT [C]	8.295	890195
Endrin ketone [C]	9.239	28268
Endrin aldehyde [C]	8.448	31426
Hexabromobiphenyl[C]	11.054	772586
Tetrachloro-m-xylene [C]	4.220	1890294
Decachlorobiphenyl [C]	10.467	1140978

DDT Percent Breakdown = 4.8 %
((11906+32697) * 100)/(11906+32697+890195)

Endrin Percent Breakdown = 5.5 %
((31426+28268) * 100)/(31426+28268+1029194)

/20221214.b/22121404.D SEQ-PEM1 STX-CLP 14-DEC-2022 20:20 1ul



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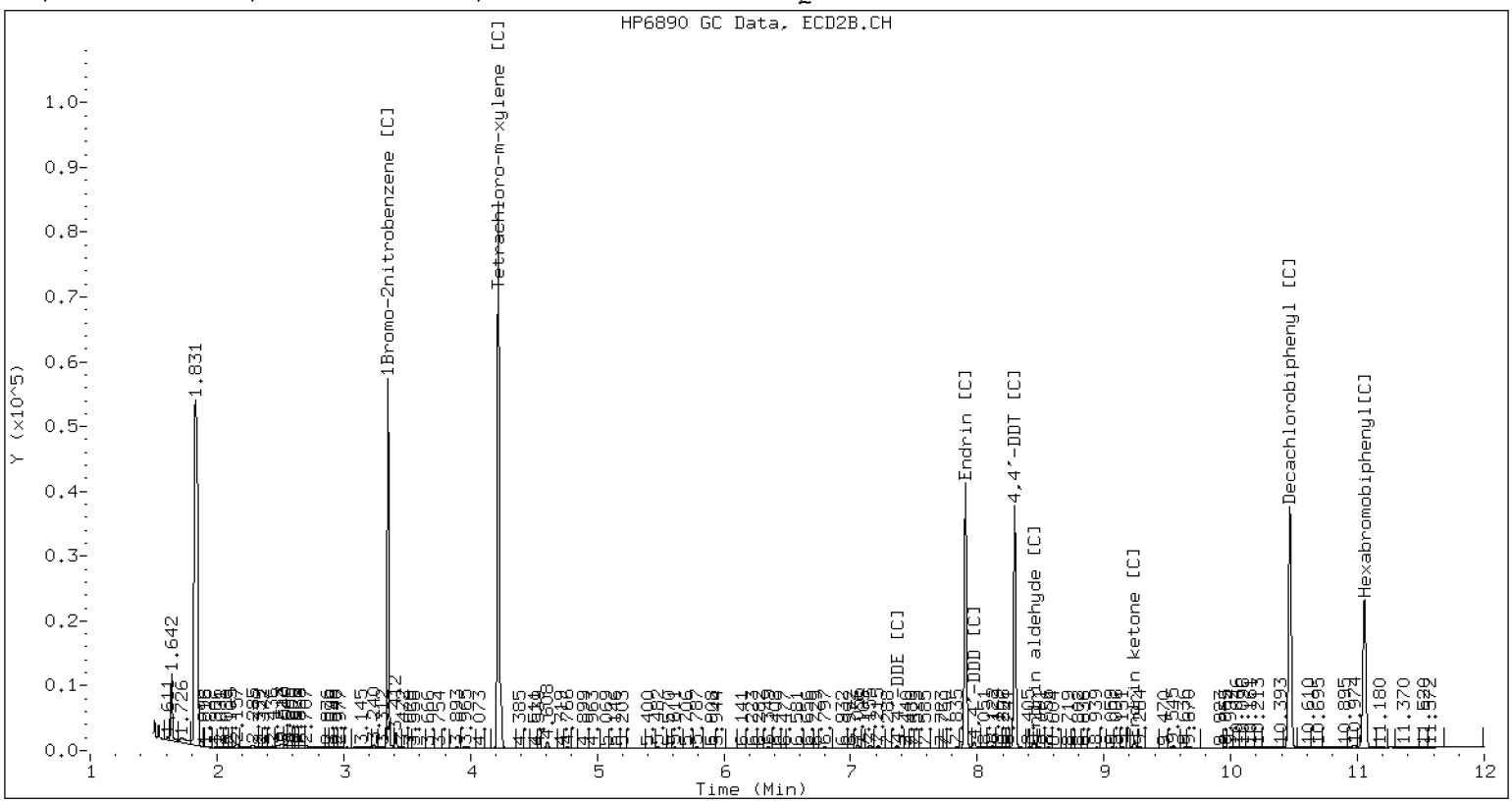

7E

8081 DDT/ENDRIN BREAKDOWN VERIFICATION SUMMARY

Lab ID: SEQ-PEM1 InstID,Data File: ecd6.i, 22121404.D

Analysis Date: 14-DEC-2022 20:20 Init. Calib. Date: 14-DEC-2022

GC Column: STX-CLP1 ID: 0.53(mm)

COMPOUND	RT	AREA
1Bromo-2nitrobenzene	3.151	683485
4,4'-DDE	6.490	6258
Endrin	7.082	745471
4,4'-DDD	7.136	15566
4,4'-DDT	7.428	629664
Endrin ketone	8.453	19276
Endrin aldehyde	7.747	21328
Hexabromobiphenyl	9.504	619012
Tetrachloro-m-xylene	3.828	1161664
Decachlorobiphenyl	9.355	833312

DDT Percent Breakdown = 3.3 %
((6258+15566) * 100)/(6258+15566+629664)

Endrin Percent Breakdown = 5.2 %
((21328+19276) * 100)/(21328+19276+745471)

GC Column: STX-CLP1 ID: 0.53(mm)

COMPOUND	RT	AREA
Decachlorobiphenyl	9.355	833312
Decachlorobiphenyl	9.355	833312
Decachlorobiphenyl	9.355	833312

Decachlorobiphenyl	9.355	833312
Decachlorobiphenyl	9.355	833312
Decachlorobiphenyl	9.355	833312
Decachlorobiphenyl	9.355	833312
Decachlorobiphenyl	9.355	833312
Decachlorobiphenyl	9.355	833312
Decachlorobiphenyl	9.355	833312

Analytical Resources, LLC
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PERFORMANCE EVAUATION DATA SHEET

DS1

EPA 8081B

Laboratory:	Analytical Resources, LLC	Laboratory ID:	SLC0442-PEM1	File ID:	23032405.D
Client:	Anchor QEA, LLC	Matrix:	Water	Instrument:	ECD6
Project:	AOC5 MR Phase 1	Analyzed:	03/24/2023	Sequence:	SLC0442
SDG:	23B0276	Calibration:	FL00041	Column:	1

PEM COMPOUND	RT	Response
4,4'-DDE	6.53	6257
Endrin	7.12	489126
4,4'-DDD	7.18	17273
Endrin Aldehyde	7.79	34476
4,4'-DDT	7.47	423243
Endrin Ketone	8.49	38462

4,4'-DDT %Breakdown (1): 5.3

Endrin %Breakdown (1): 13.0

Analytical Resources, LLC
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PERFORMANCE EVAUATION DATA SHEET

DS1

EPA 8081B

Laboratory:	Analytical Resources, LLC	Laboratory ID:	SLC0442-PEM1	File ID:	23032405.D
Client:	Anchor QEA, LLC	Matrix:	Water	Instrument:	ECD6
Project:	AOC5 MR Phase 1	Analyzed:	03/24/2023	Sequence:	SLC0442
SDG:	23B0276	Calibration:	FL00041	Column:	2

PEM COMPOUND	RT	Response
4,4'-DDE	7.30	9927
Endrin	7.83	582898
4,4'-DDD	7.91	28371
Endrin Aldehyde	8.37	40526
4,4'-DDT	8.22	537884
Endrin Ketone	9.16	43649

4,4'-DDT %Breakdown (1): 6.6

Endrin %Breakdown (1): 12.6

7E

8081 DDT/ENDRIN BREAKDOWN VERIFICATION SUMMARY

Lab ID: SEQ-PEM1 InstID,Data File: ecd6.i, 23032405.D

Analysis Date: 24-MAR-2023 17:09 Init. Calib. Date: 14-DEC-2022

GC Column: STX-CLP1 ID: 0.53(mm)

COMPOUND	RT	AREA
1Bromo-2nitrobenzene	3.163	518811
4,4'-DDE	6.534	6257
Endrin	7.118	489126
4,4'-DDD	7.183	17273
4,4'-DDT	7.470	423243
Endrin ketone	8.493	38462
Endrin aldehyde	7.786	34476
Hexabromobiphenyl	9.560	432866
Tetrachloro-m-xylene	3.848	186702
Decachlorobiphenyl	9.407	153028

DDT Percent Breakdown = 5.3 %
((6257+17273) * 100)/(6257+17273+423243)

Endrin Percent Breakdown = 13.0 %
((34476+38462) * 100)/(34476+38462+489126)

GC Column: STX-CLP2 ID: 0.53(mm)

COMPOUND	RT	AREA
1Bromo-2nitrobenzene [C]	3.313	687832
4,4'-DDE [C]	7.301	9927
Endrin [C]	7.832	582898
4,4'-DDD [C]	7.908	28371
4,4'-DDT [C]	8.221	537884
Endrin ketone [C]	9.162	43649
Endrin aldehyde [C]	8.374	40526
Hexabromobiphenyl[C]	10.932	451073
Tetrachloro-m-xylene [C]	4.170	335728
Decachlorobiphenyl [C]	10.360	172471

DDT Percent Breakdown = 6.6 %
((9927+28371) * 100)/(9927+28371+537884)

Endrin Percent Breakdown = 12.6 %
((40526+43649) * 100)/(40526+43649+582898)

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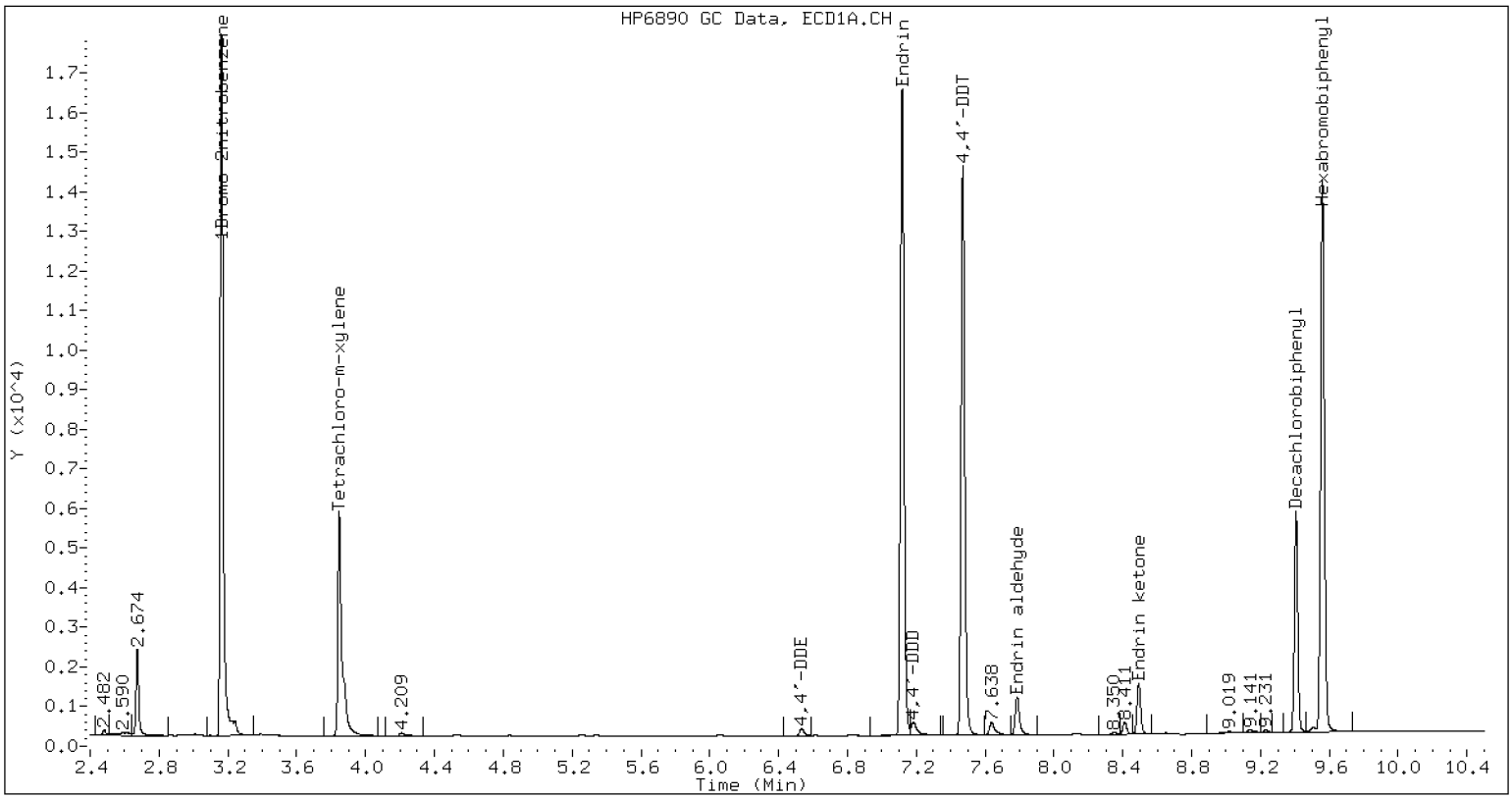

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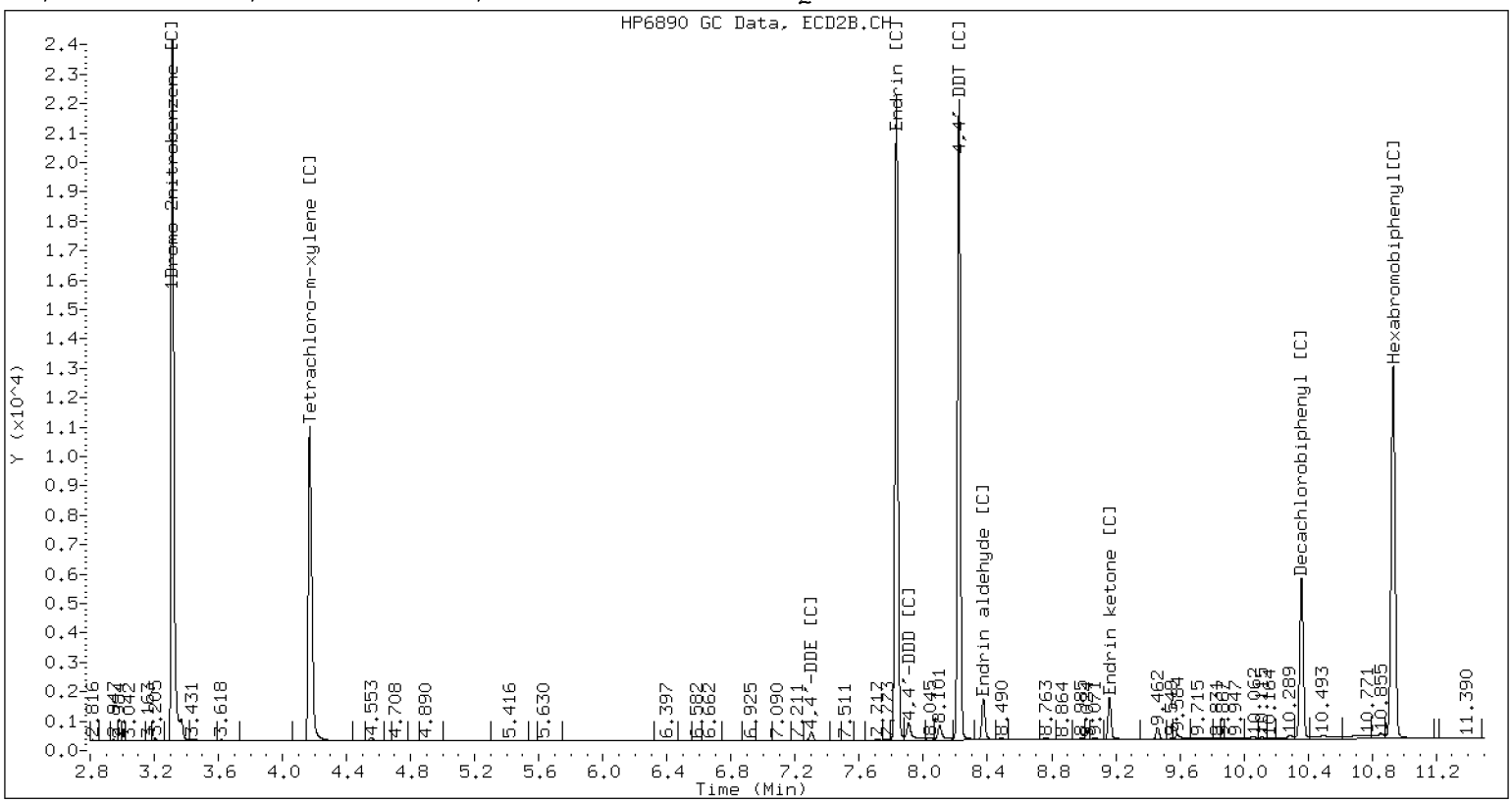

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PERFORMANCE EVAUATION DATA SHEET

DS2

EPA 8081B

Laboratory:	Analytical Resources, LLC	Laboratory ID:	SLC0442-PEM2	File ID:	23032422.D
Client:	Anchor QEA, LLC	Matrix:	Water	Instrument:	ECD6
Project:	AOC5 MR Phase 1	Analyzed:	03/24/2023	Sequence:	SLC0442
SDG:	23B0276	Calibration:	FL00041	Column:	1

PEM COMPOUND	RT	Response
4,4'-DDE	6.53	7832
Endrin	7.12	423851
4,4'-DDD	7.18	18132
Endrin Aldehyde	7.78	70656
4,4'-DDT	7.47	437491
Endrin Ketone	8.49	66548

4,4'-DDT %Breakdown (1): 5.6

Endrin %Breakdown (1): 24.5

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PERFORMANCE EVAUATION DATA SHEET

DS2

EPA 8081B

Laboratory:	Analytical Resources, LLC	Laboratory ID:	SLC0442-PEM2	File ID:	23032422.D
Client:	Anchor QEA, LLC	Matrix:	Water	Instrument:	ECD6
Project:	AOC5 MR Phase 1	Analyzed:	03/24/2023	Sequence:	SLC0442
SDG:	23B0276	Calibration:	FL00041	Column:	2

PEM COMPOUND	RT	Response
4,4'-DDE	7.30	10119
Endrin	7.83	514640
4,4'-DDD	7.91	29940
Endrin Aldehyde	8.37	83116
4,4'-DDT	8.22	578108
Endrin Ketone	9.16	71129

4,4'-DDT %Breakdown (1): 6.5

Endrin %Breakdown (1): 23.1

7E

8081 DDT/ENDRIN BREAKDOWN VERIFICATION SUMMARY

Lab ID: SEQ-PEM2 InstID,Data File: ecd6.i, 23032422.D

Analysis Date: 24-MAR-2023 22:13 Init. Calib. Date: 14-DEC-2022

GC Column: STX-CLP1 ID: 0.53(mm)

COMPOUND	RT	AREA
1Bromo-2nitrobenzene	3.163	529882
4,4'-DDE	6.534	7832
Endrin	7.118	423851
4,4'-DDD	7.183	18132
4,4'-DDT	7.470	437491
Endrin ketone	8.492	66548
Endrin aldehyde	7.785	70656
Hexabromobiphenyl	9.560	443814
Tetrachloro-m-xylene	3.848	192346
Decachlorobiphenyl	9.405	155600

DDT Percent Breakdown = 5.6 %
((7832+18132) * 100)/(7832+18132+437491)

Endrin Percent Breakdown = 24.5 %
((70656+66548) * 100)/(70656+66548+423851)

GC Column: STX-CLP2 ID: 0.53(mm)

COMPOUND	RT	AREA
1Bromo-2nitrobenzene [C]	3.313	721391
4,4'-DDE [C]	7.301	10119
Endrin [C]	7.831	514640
4,4'-DDD [C]	7.908	29940
4,4'-DDT [C]	8.221	578108
Endrin ketone [C]	9.162	71129
Endrin aldehyde [C]	8.374	83116
Hexabromobiphenyl[C]	10.932	452983
Tetrachloro-m-xylene [C]	4.170	344267
Decachlorobiphenyl [C]	10.360	181323

DDT Percent Breakdown = 6.5 %
((10119+29940) * 100)/(10119+29940+578108)

Endrin Percent Breakdown = 23.1 %
((83116+71129) * 100)/(83116+71129+514640)

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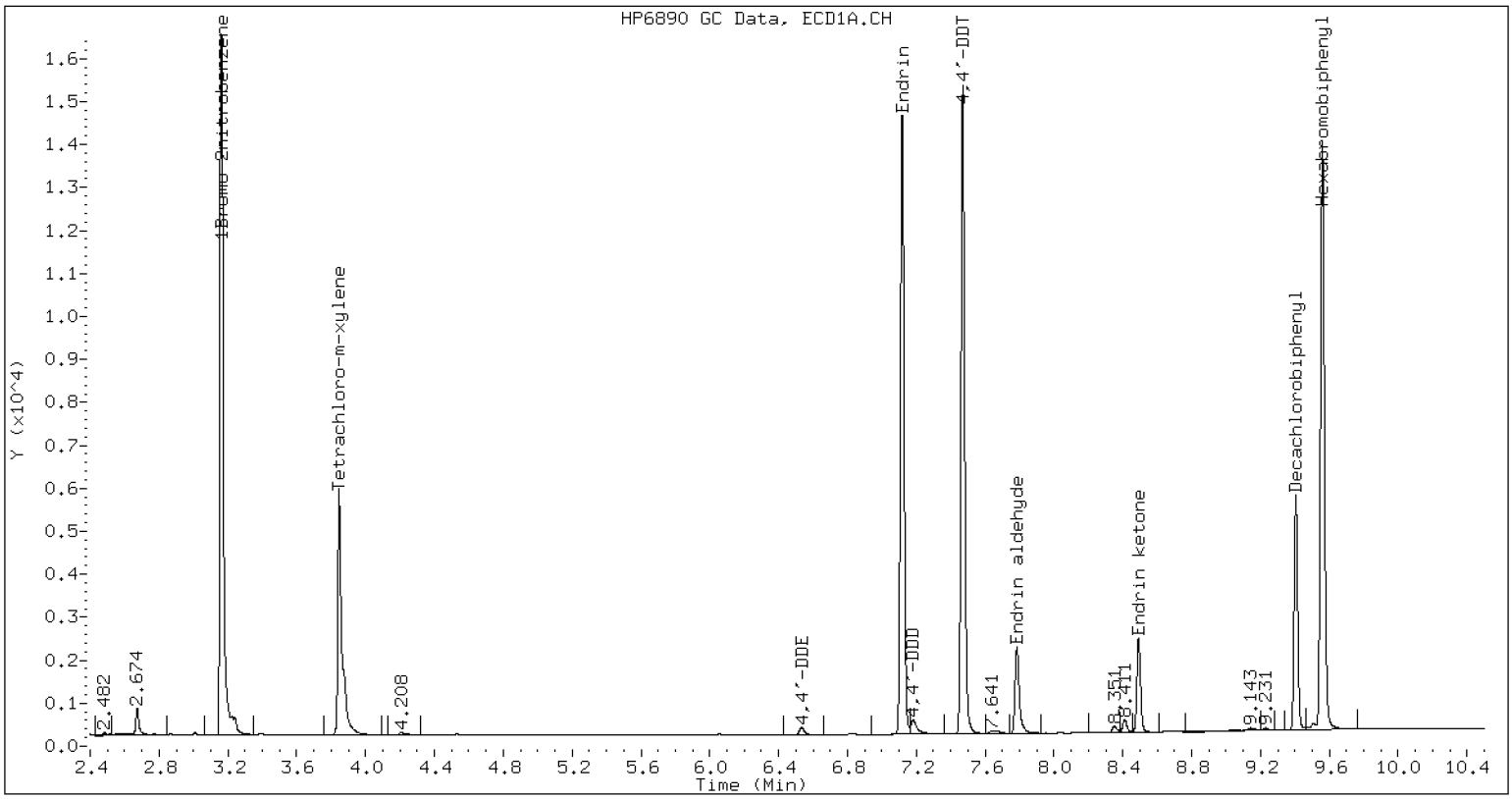

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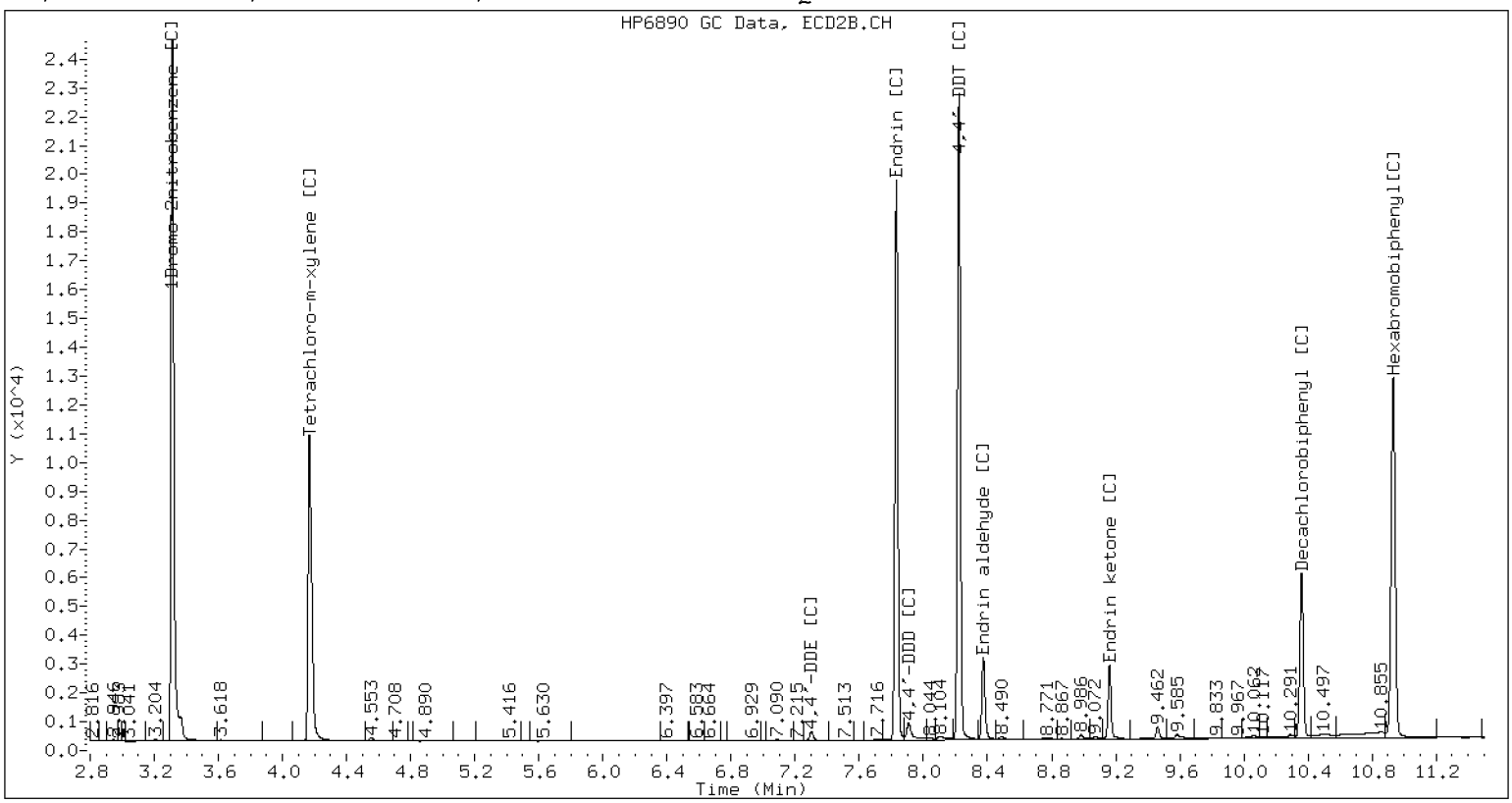

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PERFORMANCE EVAUATION DATA SHEET

DS3

EPA 8081B

Laboratory: Analytical Resources, LLC
Laboratory ID: SLC0442-PEM3
File ID: 23032437.D
Client: Anchor QEA, LLC
Matrix: Water
Instrument: ECD6
Project: AOC5 MR Phase 1
Analyzed: 03/25/2023
Sequence: SLC0442
SDG: 23B0276
Calibration: FL00041
Column: 1

PEM COMPOUND	RT	Response
4,4'-DDE	6.53	6360
Endrin	7.12	331418
4,4'-DDD	7.18	15415
Endrin Aldehyde	7.78	62932
4,4'-DDT	7.47	386048
Endrin Ketone	8.49	59739

4,4'-DDT %Breakdown (1): 5.3

Endrin %Breakdown (1): 27.0

Analytical Resources, LLC
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PERFORMANCE EVAUATION DATA SHEET

DS3

EPA 8081B

Laboratory:	Analytical Resources, LLC	Laboratory ID:	SLC0442-PEM3	File ID:	23032437.D
Client:	Anchor QEA, LLC	Matrix:	Water	Instrument:	ECD6
Project:	AOC5 MR Phase 1	Analyzed:	03/25/2023	Sequence:	SLC0442
SDG:	23B0276	Calibration:	FL00041	Column:	2

PEM COMPOUND	RT	Response
4,4'-DDE	7.30	12803
Endrin	7.83	368081
4,4'-DDD	7.91	24909
Endrin Aldehyde	8.37	92395
4,4'-DDT	8.22	491185
Endrin Ketone	9.16	108082

4,4'-DDT %Breakdown (1): 7.1

Endrin %Breakdown (1): 35.3

7E

8081 DDT/ENDRIN BREAKDOWN VERIFICATION SUMMARY

Lab ID: SEQ-PEM3 InstID,Data File: ecd6.i, 23032437.D

Analysis Date: 25-MAR-2023 02:42 Init. Calib. Date: 14-DEC-2022

GC Column: STX-CLP1 ID: 0.53(mm)

COMPOUND	RT	AREA
1Bromo-2nitrobenzene	3.163	501513
4,4'-DDE	6.535	6360
Endrin	7.118	331418
4,4'-DDD	7.182	15415
4,4'-DDT	7.471	386048
Endrin ketone	8.492	59739
Endrin aldehyde	7.785	62932
Hexabromobiphenyl	9.559	359734
Tetrachloro-m-xylene	3.848	186866
Decachlorobiphenyl	9.405	147743

DDT Percent Breakdown = 5.3 %
((6360+15415) * 100)/(6360+15415+386048)

Endrin Percent Breakdown = 27.0 %
((62932+59739) * 100)/(62932+59739+331418)

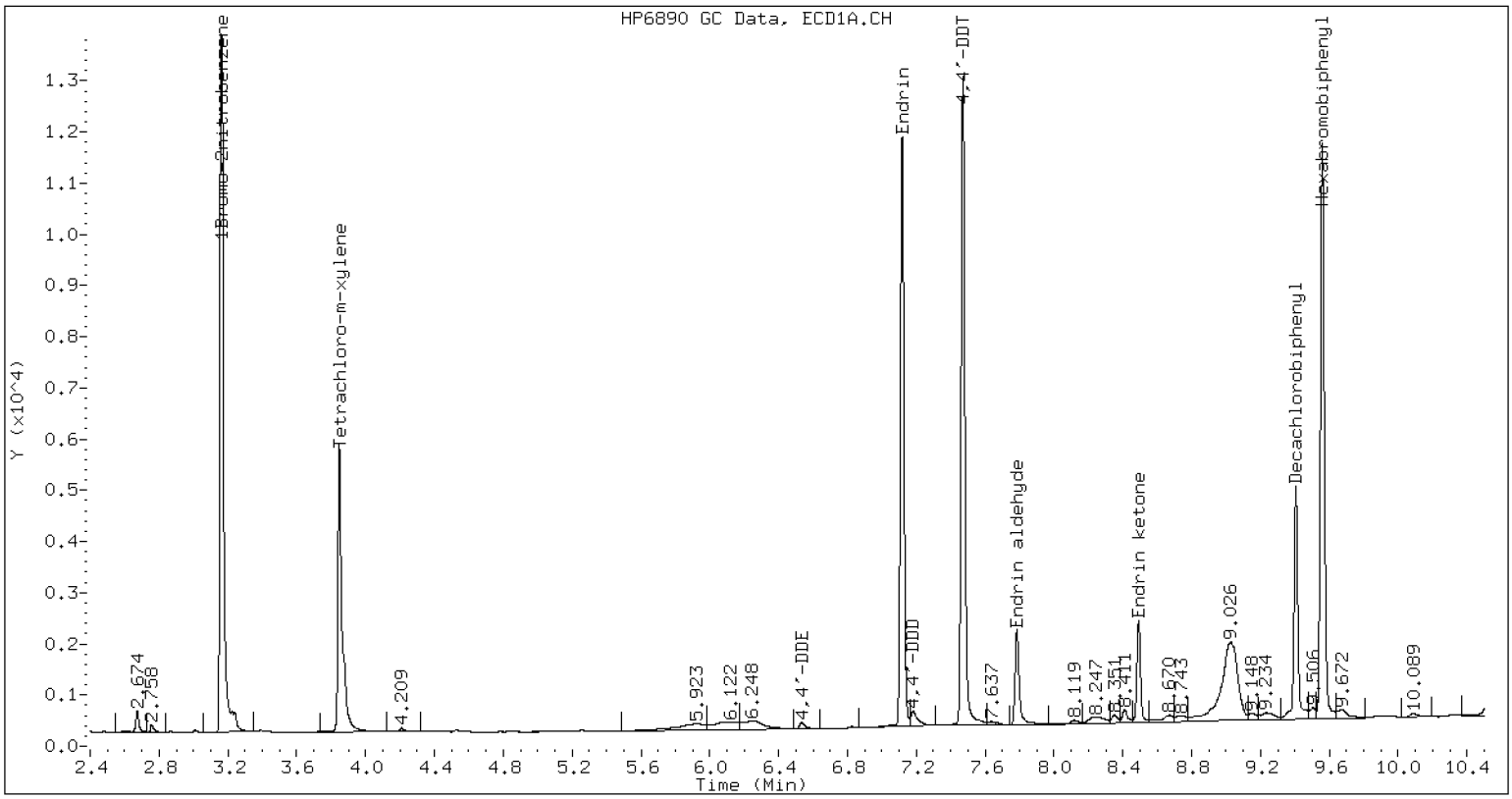
GC Column: STX-CLP2 ID: 0.53(mm)

COMPOUND	RT	AREA
1Bromo-2nitrobenzene [C]	3.313	663308
4,4'-DDE [C]	7.302	12803
Endrin [C]	7.831	368081
4,4'-DDD [C]	7.907	24909
4,4'-DDT [C]	8.222	491185
Endrin ketone [C]	9.161	108082
Endrin aldehyde [C]	8.374	92395
Hexabromobiphenyl[C]	10.931	397193
Tetrachloro-m-xylene [C]	4.169	317961
Decachlorobiphenyl [C]	10.359	167836

DDT Percent Breakdown = 7.1 %
((12803+24909) * 100)/(12803+24909+491185)

Endrin Percent Breakdown = 35.3 %
((92395+108082) * 100)/(92395+108082+368081)

/20230324.b/23032437.D SEQ-PEM3 STX-CLP 25-MAR-2023 02:42 1ul



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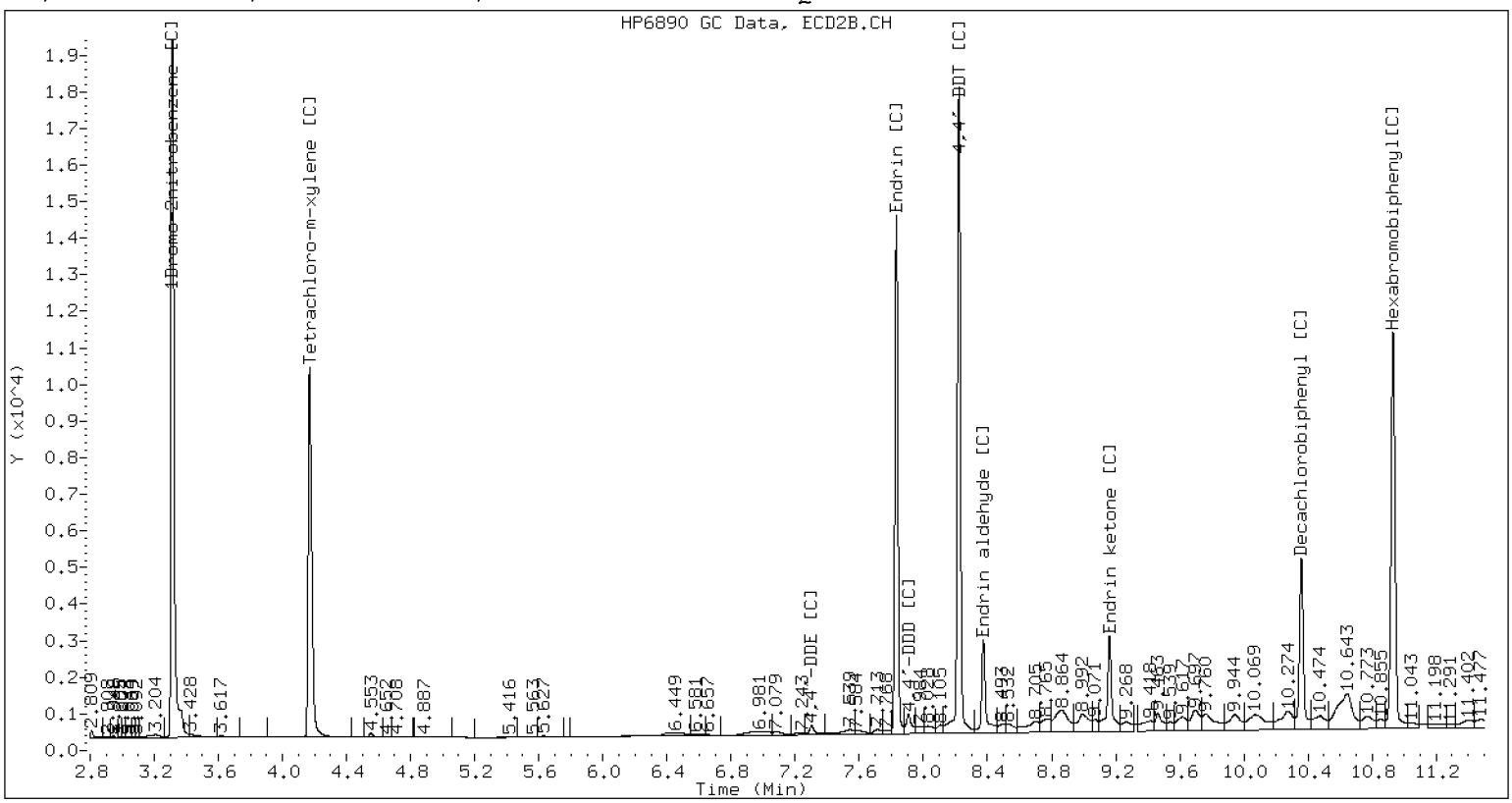


Analytical Resources, LLC
Analytical Chemists and Consultants

PERFORMANCE EVAUATION DATA SHEET

DS4

EPA 8081B

Laboratory: Analytical Resources, LLC | Laboratory ID: SLC0442-PEM4 | File ID: 23032457.D

Client: Anchor QEA, LLC | Matrix: Water | Instrument: ECD6

Project: AOC5 MR Phase 1 | Analyzed: 03/25/2023 | Sequence: SLC0442

SDG: 23B0276 | Calibration: FL00041 | Column: 1

PEM COMPOUND	RT	Response
4,4'-DDE	6.53	8383
Endrin	7.12	305324
4,4'-DDD	7.18	18488
Endrin Aldehyde	7.78	100522
4,4'-DDT	7.47	414929
Endrin Ketone	8.49	90689

4,4'-DDT %Breakdown (1): 6.1

Endrin %Breakdown (1): 38.5

Analytical Resources, LLC
Analytical Chemists and Consultants

PERFORMANCE EVAUATION DATA SHEET

DS4

EPA 8081B

Laboratory: Analytical Resources, LLC | Laboratory ID: SLC0442-PEM4 | File ID: 23032457.D

Client: Anchor QEA, LLC | Matrix: Water | Instrument: ECD6

Project: AOC5 MR Phase 1 | Analyzed: 03/25/2023 | Sequence: SLC0442

SDG: 23B0276 | Calibration: FL00041 | Column: 2

PEM COMPOUND	RT	Response
4,4'-DDE	7.30	10259
Endrin	7.83	340707
4,4'-DDD	7.91	27721
Endrin Aldehyde	8.37	121886
4,4'-DDT	8.22	517206
Endrin Ketone	9.16	123322

4,4'-DDT %Breakdown (1): 6.8

Endrin %Breakdown (1): 41.9

7E

8081 DDT/ENDRIN BREAKDOWN VERIFICATION SUMMARY

Lab ID: SEQ-PEM4 InstID,Data File: ecd6.i, 23032457.D

Analysis Date: 25-MAR-2023 08:40 Init. Calib. Date: 14-DEC-2022

GC Column: STX-CLP1 ID: 0.53(mm)

COMPOUND	RT	AREA
1Bromo-2nitrobenzene	3.161	509106
4,4'-DDE	6.533	8383
Endrin	7.116	305324
4,4'-DDD	7.180	18488
4,4'-DDT	7.468	414929
Endrin ketone	8.490	90689
Endrin aldehyde	7.782	100522
Hexabromobiphenyl	9.556	422512
Tetrachloro-m-xylene	3.846	189018
Decachlorobiphenyl	9.402	155923

DDT Percent Breakdown = 6.1 %
((8383+18488) * 100)/(8383+18488+414929)

Endrin Percent Breakdown = 38.5 %
((100522+90689) * 100)/(100522+90689+305324)

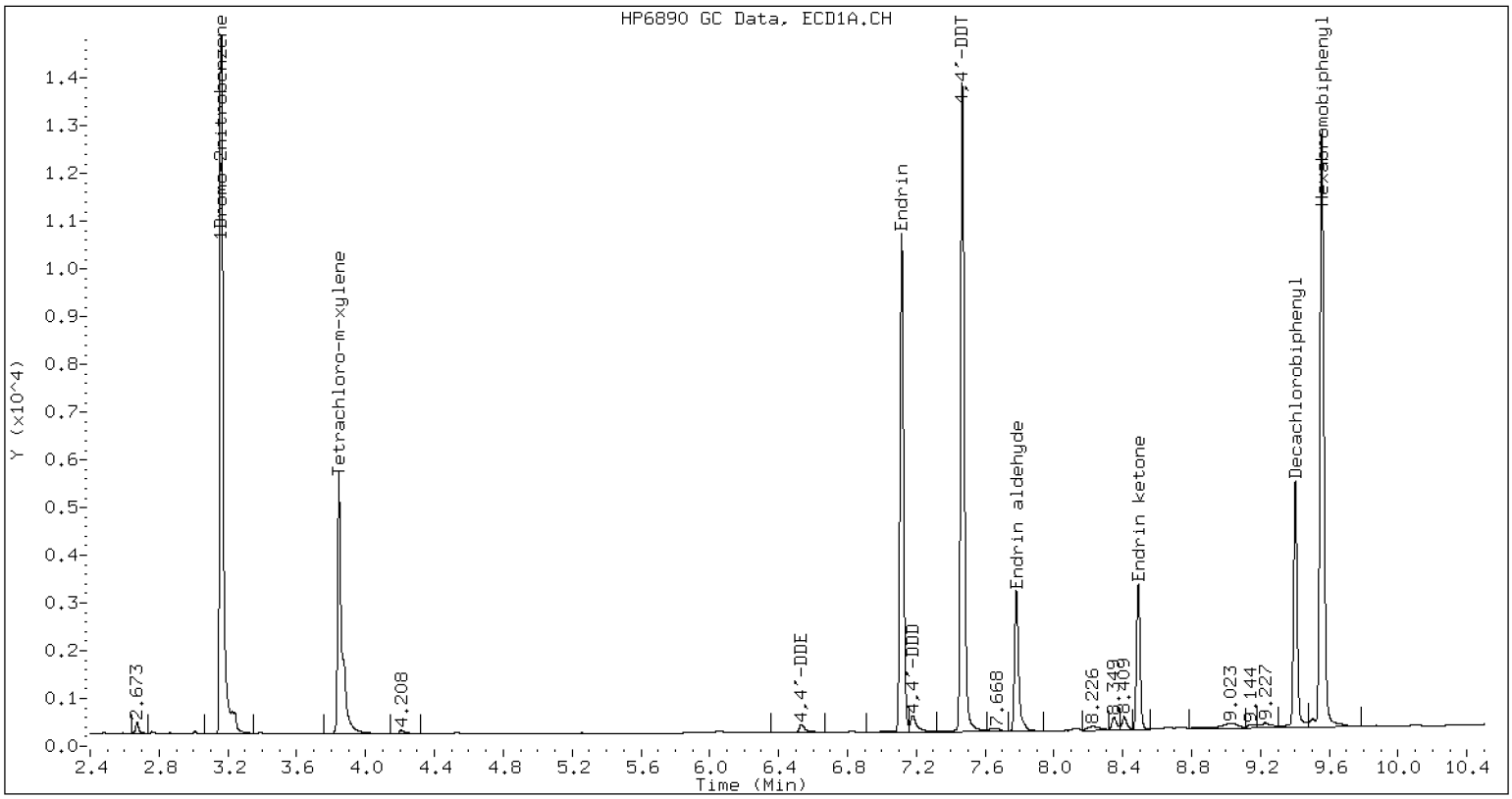
GC Column: STX-CLP2 ID: 0.53(mm)

COMPOUND	RT	AREA
1Bromo-2nitrobenzene [C]	3.312	693430
4,4'-DDE [C]	7.300	10259
Endrin [C]	7.829	340707
4,4'-DDD [C]	7.905	27721
4,4'-DDT [C]	8.220	517206
Endrin ketone [C]	9.159	123322
Endrin aldehyde [C]	8.372	121886
Hexabromobiphenyl[C]	10.928	445549
Tetrachloro-m-xylene [C]	4.168	333930
Decachlorobiphenyl [C]	10.357	174927

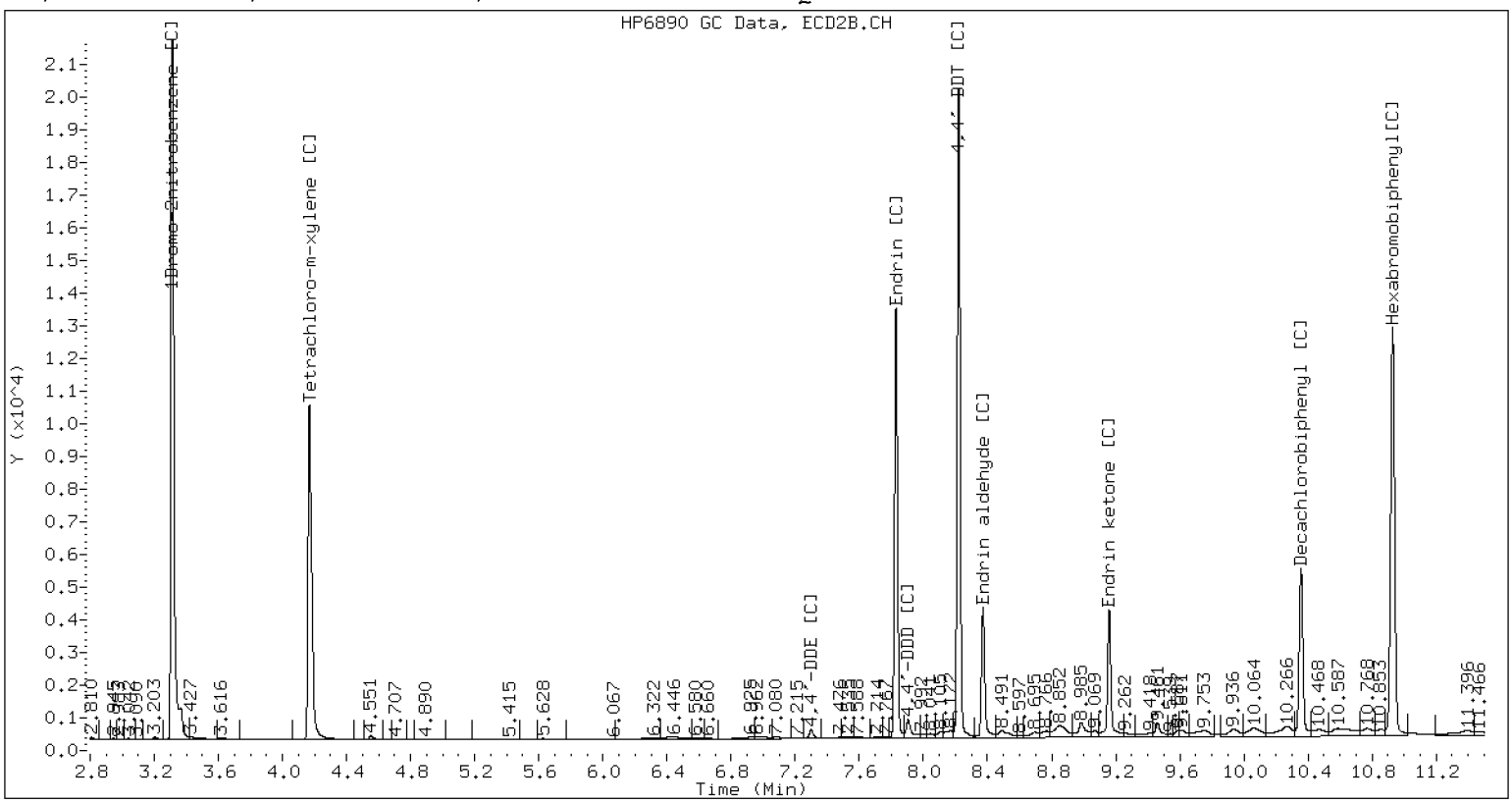
DDT Percent Breakdown = 6.8 %
((10259+27721) * 100)/(10259+27721+517206)

Endrin Percent Breakdown = 41.9 %
((121886+123322) * 100)/(121886+123322+340707)

/20230324.b/23032457.D SEQ-PEM4 STX-CLP 25-MAR-2023 08:40 1ul



/20230324.b/B20230324.b/23032457.D SEQ-PEM4 CLP2 25-MAR-2023



Dual Column

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8081B

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SKL0233
Instrument: ECD6
Calibration: FL00041

Sample Name	Lab Sample ID	Column 1 File ID	Column 2 File ID	Matrix	Analysis Date/Time
Performance Mix	SKL0233-PEM1	22121404.D	22121404.D	NA	12/14/22 20:20
Cal Standard	SKL0233-CAL1	22121405.D	22121405.D	NA	12/14/22 20:38
Cal Standard	SKL0233-CAL2	22121406.D	22121406.D	NA	12/14/22 20:56
Cal Standard	SKL0233-CAL3	22121407.D	22121407.D	NA	12/14/22 21:14
Cal Standard	SKL0233-CAL4	22121408.D	22121408.D	NA	12/14/22 21:31
Cal Standard	SKL0233-CAL5	22121409.D	22121409.D	NA	12/14/22 21:49
Cal Standard	SKL0233-CAL6	22121410.D	22121410.D	NA	12/14/22 22:07
Cal Standard	SKL0233-CAL7	22121411.D	22121411.D	NA	12/14/22 22:25
Cal Standard	SKL0233-CAL8	22121412.D	22121412.D	NA	12/14/22 22:43
Cal Standard	SKL0233-CAL9	22121413.D	22121413.D	NA	12/14/22 23:01
Cal Standard	SKL0233-CALA	22121414.D	22121414.D	NA	12/14/22 23:19
Cal Standard	SKL0233-CALB	22121415.D	22121415.D	NA	12/14/22 23:36
Cal Standard	SKL0233-CALC	22121416.D	22121416.D	NA	12/14/22 23:54
Cal Standard	SKL0233-CALD	22121417.D	22121417.D	NA	12/15/22 00:12
Cal Standard	SKL0233-CALE	22121418.D	22121418.D	NA	12/15/22 00:30

Printed: 12/17/2022 10:57:45AM

ANALYSIS SEQUENCE

SKL0233

Instrument: ECD6 Element Column ID:
Calibration ID: FL00041

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	Comments
SKL0233-PEM1	DS1	QC		1	K007286	K006953		
SKL0233-CAL1	INDAA	QC		2	K011594	K006953		
SKL0233-CAL2	INDAB	QC		3	K011593	K006953		
SKL0233-CAL3	INDAC	QC		4	K011592	K006953		
SKL0233-CAL4	INDAD	QC		5	K011591	K006953		
SKL0233-CAL5	INDAE	QC		6	K011590	K006953		
SKL0233-CAL6	INDAF	QC		7	K011589	K006953		
SKL0233-CAL7	INDAG	QC		8	K011463	K006953		
SKL0233-CAL8	WNDA	QC		9	K011595	K006953		
SKL0233-CAL9	WNDB	QC		10	K007148	K006953		
SKL0233-CALA	WNDC	QC		11	K007147	K006953		
SKL0233-CALB	WNDD	QC		12	K007146	K006953		
SKL0233-CALC	WNDE	QC		13	K007145	K006953		
SKL0233-CALD	WNDF	QC		14	K007144	K006953		
SKL0233-CALE	WNDG	QC		15	K007093	K006953		
SKL0233-CALM	NOS1	QC		16	K007375	K006953		
SKL0233-CALN	NOS2	QC		17	K007374	K006953		
SKL0233-CALO	NOS3	QC		18	K007373	K006953		
SKL0233-CALP	NOS4	QC		19	K007372	K006953		
SKL0233-CALQ	NOS5	QC		20	K007371	K006953		
SKL0233-CALR	NOS6	QC		21	K007370	K006953		
SKL0233-CALS	NOS7	QC		22	K007287	K006953		

Printed: 12/17/2022 10:57:45AM

ANALYSIS SEQUENCE

SKL0233

Instrument: ECD6 Element Column ID:
Calibration ID: FL00041

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	Comments
SKL0233-CALF	TOXAPH1	QC		23	K011601	K006953		
SKL0233-CALG	TOXAPH2	QC		24	K011600	K006953		
SKL0233-CALH	TOXAPH3	QC		25	K011599	K006953		
SKL0233-CALI	TOXAPH4	QC		26	K011598	K006953		
SKL0233-CALJ	TOXAPH5	QC		27	K011597	K006953		
SKL0233-CALK	TOXAPH6	QC		28	K011596	K006953		
SKL0233-CALL	TOXAPH7	QC		29	K008546	K006953		

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	14-DEC-2022 19:27	22121401.D	1	RINSE	
2	14-DEC-2022 19:44	22121402.D	1	RINSE	
3	14-DEC-2022 20:02	22121403.D	1	SEQ-IBL1	
4	14-DEC-2022 20:20	22121404.D	1	SEQ-PEM1	
5	14-DEC-2022 20:38	22121405.D	1	SEQ-CAL1	
6	14-DEC-2022 20:56	22121406.D	1	SEQ-CAL2	
7	14-DEC-2022 21:14	22121407.D	1	SEQ-CAL3	
8	14-DEC-2022 21:31	22121408.D	1	SEQ-CAL4	
9	14-DEC-2022 21:49	22121409.D	1	SEQ-CAL5	
10	14-DEC-2022 22:07	22121410.D	1	SEQ-CAL6	
11	14-DEC-2022 22:25	22121411.D	1	SEQ-CAL7	
12	14-DEC-2022 22:43	22121412.D	1	SEQ-CAL8	
13	14-DEC-2022 23:01	22121413.D	1	SEQ-CAL9	
14	14-DEC-2022 23:19	22121414.D	1	SEQ-CALA	
15	14-DEC-2022 23:36	22121415.D	1	SEQ-CALB	
16	14-DEC-2022 23:54	22121416.D	1	SEQ-CALC	
17	15-DEC-2022 00:12	22121417.D	1	SEQ-CALD	
18	15-DEC-2022 00:30	22121418.D	1	SEQ-CALE	
19	15-DEC-2022 00:48	22121419.D	1	SEQ-SCV1	
20	15-DEC-2022 01:06	22121420.D	1	SEQ-SCV2	
21	15-DEC-2022 01:24	22121421.D	1	SEQ-CAL1A	
22	15-DEC-2022 01:42	22121422.D	1	SEQ-CAL2A	
23	15-DEC-2022 01:59	22121423.D	1	SEQ-CAL3A	
24	15-DEC-2022 02:17	22121424.D	1	SEQ-CAL4A	
25	15-DEC-2022 02:35	22121425.D	1	SEQ-CAL5A	
26	15-DEC-2022 02:53	22121426.D	1	SEQ-CAL6A	
27	15-DEC-2022 03:11	22121427.D	1	SEQ-CAL7A	
28	15-DEC-2022 03:29	22121428.D	1	SEQ-CAL8A	
29	15-DEC-2022 03:46	22121429.D	1	SEQ-CAL9A	
30	15-DEC-2022 04:04	22121430.D	1	SEQ-CALAA	
31	15-DEC-2022 04:22	22121431.D	1	SEQ-CALAB	
32	15-DEC-2022 04:40	22121432.D	1	SEQ-CALAC	
33	15-DEC-2022 04:58	22121433.D	1	SEQ-CALAD	
34	15-DEC-2022 05:16	22121434.D	1	SEQ-CALAE	
35	15-DEC-2022 05:33	22121435.D	1	SEQ-PEM2	
36	15-DEC-2022 05:51	22121436.D	1	SEQ-ICV1	
37	15-DEC-2022 06:09	22121437.D	1	SEQ-ICV2	
38	15-DEC-2022 06:27	22121438.D	1	SEQ-ICV3	
39	15-DEC-2022 06:45	22121439.D	1	SEQ-ICV4	
40	15-DEC-2022 07:03	22121440.D	1	BKK0688-BLK1	
41	15-DEC-2022 07:21	22121441.D	1	BKK0688-BS1	
42	15-DEC-2022 07:39	22121442.D	1	BKK0688-BS2	
43	15-DEC-2022 07:57	22121443.D	1	BKK0688-BS3	
44	15-DEC-2022 08:15	22121444.D	1	BKK0688-BSD1	
45	15-DEC-2022 08:32	22121445.D	1	BKK0142-BLK1	
46	15-DEC-2022 08:50	22121446.D	1	BKK0142-BS1	
47	15-DEC-2022 09:08	22121447.D	1	BKK0142-BS2	
48	15-DEC-2022 09:26	22121448.D	1	BKK0142-BSD1	
49	15-DEC-2022 09:44	22121449.D	1	BKK0142-MS1	
50	15-DEC-2022 10:02	22121450.D	1	BKK0142-MSD1	

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b p

	Inject Date/Time	Filename	DF	LabID	ClientID
51	15-DEC-2022 10:20	22121451.D	1	22J0513-01	
52	15-DEC-2022 10:38	22121452.D	1	22J0513-04	
53	15-DEC-2022 10:55	22121453.D	1	22J0535-01	
54	15-DEC-2022 11:13	22121454.D	1	22K0429-01	
55	15-DEC-2022 11:31	22121455.D	1	22K0429-02	
56	15-DEC-2022 11:49	22121456.D	1	22K0429-03	
57	15-DEC-2022 12:07	22121457.D	1	SEQ-PEM3	
58	15-DEC-2022 12:25	22121458.D	1	SEQ-CCV1	
59	15-DEC-2022 12:43	22121459.D	1	SEQ-CCV2	
60	15-DEC-2022 13:01	22121460.D	1	SEQ-CCV3	
61	15-DEC-2022 13:19	22121461.D	1	SEQ-CCV4	
62	15-DEC-2022 13:36	22121462.D	1	BKK0380-BLK1	
63	15-DEC-2022 13:54	22121463.D	1	BKK0380-BS1	
64	15-DEC-2022 14:12	22121464.D	1	BKK0380-BSD1	
65	15-DEC-2022 14:30	22121465.D	1	22K0157-01	
66	15-DEC-2022 14:48	22121466.D	1	22K0230-01	
67	15-DEC-2022 15:06	22121467.D	1	22K0231-01	
68	15-DEC-2022 15:24	22121468.D	1	BKK0382-BLK1	
69	15-DEC-2022 15:42	22121469.D	1	BKK0382-BS1	
70	15-DEC-2022 16:00	22121470.D	1	BKK0382-BS2	
71	15-DEC-2022 16:18	22121471.D	1	BKK0382-BSD1	
72	15-DEC-2022 16:35	22121472.D	1	22K0075-01	
73	15-DEC-2022 16:53	22121473.D	1	SEQ-PEM4	
74	15-DEC-2022 17:11	22121474.D	1	SEQ-CCV5	
75	15-DEC-2022 17:29	22121475.D	1	SEQ-CCV6	
76	15-DEC-2022 17:47	22121476.D	1	SEQ-CCV7	
77	15-DEC-2022 18:05	22121477.D	1	SEQ-CCV8	
78	15-DEC-2022 18:23	22121478.D	1	BKK0537-BLK1	
79	15-DEC-2022 18:40	22121479.D	1	BKK0537-BS1	
80	15-DEC-2022 18:58	22121480.D	1	BKK0537-BS2	
81	15-DEC-2022 19:16	22121481.D	1	22K0194-01	
82	15-DEC-2022 19:34	22121482.D	1	22K0194-01RE1	10
83	15-DEC-2022 19:52	22121483.D	1	SEQ-PEM5	
84	15-DEC-2022 20:09	22121484.D	1	SEQ-CCV9	
85	15-DEC-2022 20:27	22121485.D	1	SEQ-CCVA	
86	15-DEC-2022 20:45	22121486.D	1	SEQ-CCVB	
87	15-DEC-2022 21:03	22121487.D	1	SEQ-CCVC	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b

ARI Job No.: RINS Method: PEST.m Instrument: ecd6.i Date: 14-DEC-2022

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1927	22121401.D	RINSE		1	NO MANUAL INTEGRATION
1944	22121402.D	RINSE		1	NO MANUAL INTEGRATION
2002	22121403.D	SEQ-IBL1		1	NO MANUAL INTEGRATION
2020	22121404.D	SEQ-PEM1		1	NO MANUAL INTEGRATION
2038	22121405.D	SEQ-CAL1		1	NO MANUAL INTEGRATION
2056	22121406.D	SEQ-CAL2		1	NO MANUAL INTEGRATION
2114	22121407.D	SEQ-CAL3		1	NO MANUAL INTEGRATION
2131	22121408.D	SEQ-CAL4		1	NO MANUAL INTEGRATION
2149	22121409.D	SEQ-CAL5		1	NO MANUAL INTEGRATION
2207	22121410.D	SEQ-CAL6		1	NO MANUAL INTEGRATION
2225	22121411.D	SEQ-CAL7		1	NO MANUAL INTEGRATION
2243	22121412.D	SEQ-CAL8		1	NO MANUAL INTEGRATION
2301	22121413.D	SEQ-CAL9		1	NO MANUAL INTEGRATION
2319	22121414.D	SEQ-CALA		1	NO MANUAL INTEGRATION
2336	22121415.D	SEQ-CALB		1	NO MANUAL INTEGRATION
2354	22121416.D	SEQ-CALC		1	NO MANUAL INTEGRATION
0012	22121417.D	SEQ-CALD		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0030	22121418.D	SEQ-CALE		1	NO MANUAL INTEGRATION
0048	22121419.D	SEQ-SCV1		1	NO MANUAL INTEGRATION
0106	22121420.D	SEQ-SCV2		1	NO MANUAL INTEGRATION
0124	22121421.D	SEQ-CAL1A		1	NO MANUAL INTEGRATION
0142	22121422.D	SEQ-CAL2A		1	NO MANUAL INTEGRATION
0159	22121423.D	SEQ-CAL3A		1	NO MANUAL INTEGRATION
0217	22121424.D	SEQ-CAL4A		1	NO MANUAL INTEGRATION
0235	22121425.D	SEQ-CAL5A		1	NO MANUAL INTEGRATION
0253	22121426.D	SEQ-CAL6A		1	NO MANUAL INTEGRATION
0311	22121427.D	SEQ-CAL7A		1	NO MANUAL INTEGRATION
0329	22121428.D	SEQ-CAL8A		1	NO MANUAL INTEGRATION
0346	22121429.D	SEQ-CAL9A		1	NO MANUAL INTEGRATION
0404	22121430.D	SEQ-CALAA		1	NO MANUAL INTEGRATION
0422	22121431.D	SEQ-CALAB		1	NO MANUAL INTEGRATION
0440	22121432.D	SEQ-CALAC		1	NO MANUAL INTEGRATION
0458	22121433.D	SEQ-CALAD		1	NO MANUAL INTEGRATION
0516	22121434.D	SEQ-CALAE		1	NO MANUAL INTEGRATION
0533	22121435.D	SEQ-PEM2		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0551	22121436.D	SEQ-ICV1		1	NO MANUAL INTEGRATION
0609	22121437.D	SEQ-ICV2		1	NO MANUAL INTEGRATION
0627	22121438.D	SEQ-ICV3		1	NO MANUAL INTEGRATION
0645	22121439.D	SEQ-ICV4		1	NO MANUAL INTEGRATION
0703	22121440.D	BKK0688-BLK1		1	NO MANUAL INTEGRATION
0721	22121441.D	BKK0688-BS1		1	NO MANUAL INTEGRATION
0739	22121442.D	BKK0688-BS2		1	NO MANUAL INTEGRATION
0757	22121443.D	BKK0688-BS3		1	NO MANUAL INTEGRATION
0815	22121444.D	BKK0688-BSD1		1	NO MANUAL INTEGRATION
0832	22121445.D	BKK0142-BLK1		1	NO MANUAL INTEGRATION
0850	22121446.D	BKK0142-BS1		1	NO MANUAL INTEGRATION
0908	22121447.D	BKK0142-BS2		1	NO MANUAL INTEGRATION
0926	22121448.D	BKK0142-BSD1		1	NO MANUAL INTEGRATION
0944	22121449.D	BKK0142-MS1		1	NO MANUAL INTEGRATION
1002	22121450.D	BKK0142-MSD1		1	NO MANUAL INTEGRATION
1020	22121451.D	22J0513-01		1	NO MANUAL INTEGRATION
1038	22121452.D	22J0513-04		1	NO MANUAL INTEGRATION
1055	22121453.D	22J0535-01		1	trans-Chlordane,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1113	22121454.D	22K0429-01		1	Heptachlor epoxide b,
1131	22121455.D	22K0429-02		1	Heptachlor epoxide b,
1149	22121456.D	22K0429-03		1	Hexachlorobenzene,
1207	22121457.D	SEQ-PEM3		1	NO MANUAL INTEGRATION
1225	22121458.D	SEQ-CCV1		1	NO MANUAL INTEGRATION
1243	22121459.D	SEQ-CCV2		1	NO MANUAL INTEGRATION
1301	22121460.D	SEQ-CCV3		1	NO MANUAL INTEGRATION
1319	22121461.D	SEQ-CCV4		1	NO MANUAL INTEGRATION
1336	22121462.D	BKK0380-BLK1		1	NO MANUAL INTEGRATION
1354	22121463.D	BKK0380-BS1		1	NO MANUAL INTEGRATION
1412	22121464.D	BKK0380-BSD1		1	NO MANUAL INTEGRATION
1430	22121465.D	22K0157-01		1	NO MANUAL INTEGRATION
1448	22121466.D	22K0230-01		1	NO MANUAL INTEGRATION
1506	22121467.D	22K0231-01		1	NO MANUAL INTEGRATION
1524	22121468.D	BKK0382-BLK1		1	NO MANUAL INTEGRATION
1542	22121469.D	BKK0382-BS1		1	NO MANUAL INTEGRATION
1600	22121470.D	BKK0382-BS2		1	NO MANUAL INTEGRATION
1618	22121471.D	BKK0382-BSD1		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1635	22121472.D	22K0075-01		1	NO MANUAL INTEGRATION
1653	22121473.D	SEQ-PEM4		1	NO MANUAL INTEGRATION
1711	22121474.D	SEQ-CCV5		1	NO MANUAL INTEGRATION
1729	22121475.D	SEQ-CCV6		1	NO MANUAL INTEGRATION
1747	22121476.D	SEQ-CCV7		1	NO MANUAL INTEGRATION
1805	22121477.D	SEQ-CCV8		1	NO MANUAL INTEGRATION
1823	22121478.D	BKK0537-BLK1		1	NO MANUAL INTEGRATION
1840	22121479.D	BKK0537-BS1		1	NO MANUAL INTEGRATION
1858	22121480.D	BKK0537-BS2		1	NO MANUAL INTEGRATION
1916	22121481.D	22K0194-01		1	NO MANUAL INTEGRATION
1934	22121482.D	22K0194-01RE1	10	1	NO MANUAL INTEGRATION
1952	22121483.D	SEQ-PEM5		1	NO MANUAL INTEGRATION
2009	22121484.D	SEQ-CCV9		1	NO MANUAL INTEGRATION
2027	22121485.D	SEQ-CCVA		1	NO MANUAL INTEGRATION
2045	22121486.D	SEQ-CCVB		1	NO MANUAL INTEGRATION
2103	22121487.D	SEQ-CCVC		1	NO MANUAL INTEGRATION
1927	22121401.D	RINSE		1	NO MANUAL INTEGRATION
1944	22121402.D	RINSE		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b\B20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2002	22121403.D	SEQ-IBL1		1	NO MANUAL INTEGRATION
2020	22121404.D	SEQ-PEM1		1	NO MANUAL INTEGRATION
2038	22121405.D	SEQ-CAL1		1	NO MANUAL INTEGRATION
2056	22121406.D	SEQ-CAL2		1	NO MANUAL INTEGRATION
2114	22121407.D	SEQ-CAL3		1	NO MANUAL INTEGRATION
2131	22121408.D	SEQ-CAL4		1	NO MANUAL INTEGRATION
2149	22121409.D	SEQ-CAL5		1	NO MANUAL INTEGRATION
2207	22121410.D	SEQ-CAL6		1	NO MANUAL INTEGRATION
2225	22121411.D	SEQ-CAL7		1	NO MANUAL INTEGRATION
2243	22121412.D	SEQ-CAL8		1	NO MANUAL INTEGRATION
2301	22121413.D	SEQ-CAL9		1	NO MANUAL INTEGRATION
2319	22121414.D	SEQ-CALA		1	NO MANUAL INTEGRATION
2336	22121415.D	SEQ-CALB		1	NO MANUAL INTEGRATION
2354	22121416.D	SEQ-CALC		1	NO MANUAL INTEGRATION
0012	22121417.D	SEQ-CALD		1	NO MANUAL INTEGRATION
0030	22121418.D	SEQ-CALE		1	NO MANUAL INTEGRATION
0048	22121419.D	SEQ-SCV1		1	NO MANUAL INTEGRATION
0106	22121420.D	SEQ-SCV2		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b\B20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0124	22121421.D	SEQ-CAL1A		1	NO MANUAL INTEGRATION
0142	22121422.D	SEQ-CAL2A		1	NO MANUAL INTEGRATION
0159	22121423.D	SEQ-CAL3A		1	NO MANUAL INTEGRATION
0217	22121424.D	SEQ-CAL4A		1	NO MANUAL INTEGRATION
0235	22121425.D	SEQ-CAL5A		1	NO MANUAL INTEGRATION
0253	22121426.D	SEQ-CAL6A		1	NO MANUAL INTEGRATION
0311	22121427.D	SEQ-CAL7A		1	NO MANUAL INTEGRATION
0329	22121428.D	SEQ-CAL8A		1	NO MANUAL INTEGRATION
0346	22121429.D	SEQ-CAL9A		1	NO MANUAL INTEGRATION
0404	22121430.D	SEQ-CALAA		1	NO MANUAL INTEGRATION
0422	22121431.D	SEQ-CALAB		1	NO MANUAL INTEGRATION
0440	22121432.D	SEQ-CALAC		1	NO MANUAL INTEGRATION
0458	22121433.D	SEQ-CALAD		1	NO MANUAL INTEGRATION
0516	22121434.D	SEQ-CALAE		1	NO MANUAL INTEGRATION
0533	22121435.D	SEQ-PEM2		1	NO MANUAL INTEGRATION
0551	22121436.D	SEQ-ICV1		1	NO MANUAL INTEGRATION
0609	22121437.D	SEQ-ICV2		1	NO MANUAL INTEGRATION
0627	22121438.D	SEQ-ICV3		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b\B20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0645	22121439.D	SEQ-ICV4		1	NO MANUAL INTEGRATION
0703	22121440.D	BKK0688-BLK1		1	NO MANUAL INTEGRATION
0721	22121441.D	BKK0688-BS1		1	NO MANUAL INTEGRATION
0739	22121442.D	BKK0688-BS2		1	NO MANUAL INTEGRATION
0757	22121443.D	BKK0688-BS3		1	NO MANUAL INTEGRATION
0815	22121444.D	BKK0688-BSD1		1	NO MANUAL INTEGRATION
0832	22121445.D	BKK0142-BLK1		1	NO MANUAL INTEGRATION
0850	22121446.D	BKK0142-BS1		1	NO MANUAL INTEGRATION
0908	22121447.D	BKK0142-BS2		1	NO MANUAL INTEGRATION
0926	22121448.D	BKK0142-BSD1		1	NO MANUAL INTEGRATION
0944	22121449.D	BKK0142-MS1		1	NO MANUAL INTEGRATION
1002	22121450.D	BKK0142-MSD1		1	NO MANUAL INTEGRATION
1020	22121451.D	22J0513-01		1	NO MANUAL INTEGRATION
1038	22121452.D	22J0513-04		1	NO MANUAL INTEGRATION
1055	22121453.D	22J0535-01		1	trans-Chlordane [C],
1113	22121454.D	22K0429-01		1	NO MANUAL INTEGRATION
1131	22121455.D	22K0429-02		1	Aldrin [C], Heptachlor epoxide b [C], trans-Chlordane [C],
1149	22121456.D	22K0429-03		1	Aldrin [C],

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b\B20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1207	22121457.D	SEQ-PEM3		1	NO MANUAL INTEGRATION
1225	22121458.D	SEQ-CCV1		1	NO MANUAL INTEGRATION
1243	22121459.D	SEQ-CCV2		1	NO MANUAL INTEGRATION
1301	22121460.D	SEQ-CCV3		1	NO MANUAL INTEGRATION
1319	22121461.D	SEQ-CCV4		1	NO MANUAL INTEGRATION
1336	22121462.D	BKK0380-BLK1		1	NO MANUAL INTEGRATION
1354	22121463.D	BKK0380-BS1		1	NO MANUAL INTEGRATION
1412	22121464.D	BKK0380-BSD1		1	NO MANUAL INTEGRATION
1430	22121465.D	22K0157-01		1	NO MANUAL INTEGRATION
1448	22121466.D	22K0230-01		1	NO MANUAL INTEGRATION
1506	22121467.D	22K0231-01		1	NO MANUAL INTEGRATION
1524	22121468.D	BKK0382-BLK1		1	NO MANUAL INTEGRATION
1542	22121469.D	BKK0382-BS1		1	NO MANUAL INTEGRATION
1600	22121470.D	BKK0382-BS2		1	NO MANUAL INTEGRATION
1618	22121471.D	BKK0382-BSD1		1	NO MANUAL INTEGRATION
1635	22121472.D	22K0075-01		1	NO MANUAL INTEGRATION
1653	22121473.D	SEQ-PEM4		1	NO MANUAL INTEGRATION
1711	22121474.D	SEQ-CCV5		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b\B20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1729	22121475.D	SEQ-CCV6		1	NO MANUAL INTEGRATION
1747	22121476.D	SEQ-CCV7		1	NO MANUAL INTEGRATION
1805	22121477.D	SEQ-CCV8		1	NO MANUAL INTEGRATION
1823	22121478.D	BKK0537-BLK1		1	NO MANUAL INTEGRATION
1840	22121479.D	BKK0537-BS1		1	NO MANUAL INTEGRATION
1858	22121480.D	BKK0537-BS2		1	NO MANUAL INTEGRATION
1916	22121481.D	22K0194-01		1	NO MANUAL INTEGRATION
1934	22121482.D	22K0194-01RE1	10	1	NO MANUAL INTEGRATION
1952	22121483.D	SEQ-PEM5		1	NO MANUAL INTEGRATION
2010	22121484.D	SEQ-CCV9		1	NO MANUAL INTEGRATION
2027	22121485.D	SEQ-CCVA		1	NO MANUAL INTEGRATION
2045	22121486.D	SEQ-CCVB		1	NO MANUAL INTEGRATION
2103	22121487.D	SEQ-CCVC		1	NO MANUAL INTEGRATION

Security Status Report

Date: 17-Dec-2022 10:57

22121401.D	Data Locked	jrains, 17-Dec-2022 10:57
22121402.D	Data Locked	jrains, 17-Dec-2022 10:57
22121403.D	Data Locked	jrains, 17-Dec-2022 10:57
22121404.D	Data Locked	jrains, 17-Dec-2022 10:57
22121405.D	Data Locked	jrains, 17-Dec-2022 10:57
22121406.D	Data Locked	jrains, 17-Dec-2022 10:57
22121407.D	Data Locked	jrains, 17-Dec-2022 10:57
22121408.D	Data Locked	jrains, 17-Dec-2022 10:57
22121409.D	Data Locked	jrains, 17-Dec-2022 10:57
22121410.D	Data Locked	jrains, 17-Dec-2022 10:57
22121411.D	Data Locked	jrains, 17-Dec-2022 10:57
22121412.D	Data Locked	jrains, 17-Dec-2022 10:57
22121413.D	Data Locked	jrains, 17-Dec-2022 10:57
22121414.D	Data Locked	jrains, 17-Dec-2022 10:57
22121415.D	Data Locked	jrains, 17-Dec-2022 10:57
22121416.D	Data Locked	jrains, 17-Dec-2022 10:57
22121417.D	Data Locked	jrains, 17-Dec-2022 10:57
22121418.D	Data Locked	jrains, 17-Dec-2022 10:57
22121419.D	Data Locked	jrains, 17-Dec-2022 10:57
22121420.D	Data Locked	jrains, 17-Dec-2022 10:57
22121421.D	Data Locked	jrains, 17-Dec-2022 10:57
22121422.D	Data Locked	jrains, 17-Dec-2022 10:57
22121423.D	Data Locked	jrains, 17-Dec-2022 10:57
22121424.D	Data Locked	jrains, 17-Dec-2022 10:57
22121425.D	Data Locked	jrains, 17-Dec-2022 10:57
22121426.D	Data Locked	jrains, 17-Dec-2022 10:57
22121427.D	Data Locked	jrains, 17-Dec-2022 10:57
22121428.D	Data Locked	jrains, 17-Dec-2022 10:57
22121429.D	Data Locked	jrains, 17-Dec-2022 10:57
22121430.D	Data Locked	jrains, 17-Dec-2022 10:57
22121431.D	Data Locked	jrains, 17-Dec-2022 10:57
22121432.D	Data Locked	jrains, 17-Dec-2022 10:57
22121433.D	Data Locked	jrains, 17-Dec-2022 10:57
22121434.D	Data Locked	jrains, 17-Dec-2022 10:57

Dual Column

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0093	Instrument:	ECD6
		Calibration:	FL00041

Sample Name	Lab Sample ID	Column 1 File ID	Column 2 File ID	Matrix	Analysis Date/Time
Initial Cal Check	SLC0093-ICV1	23C03023.D	23C03023.D	NA	03/03/23 00:34
Calibration Check	SLC0093-CCV1	002F1801.D	002F1801.D	NA	03/03/23 05:03
Calibration Check	SLC0093-CCV2	002F3501.D	002F3501.D	NA	03/03/23 10:08
Calibration Check	SLC0093-CCV3	002F4701.D	002F4701.D	NA	03/03/23 13:44
Calibration Check	SLC0093-CCV4	002F6401.D	002F6401.D	NA	03/03/23 18:49
Blank	BLB0422-BLK1	062F7101.D	062F7101.D	Solid	03/03/23 20:55
LCS	BLB0422-BS1	063F7201.D	063F7201.D	Solid	03/03/23 21:13
LCS Dup	BLB0422-BSD1	064F7301.D	064F7301.D	Solid	03/03/23 21:31
Calibration Check	SLC0093-CCV5	002F8101.D	002F8101.D	NA	03/03/23 23:55
Calibration Check	SLC0093-CCV6	002F8601.D	002F8601.D	NA	03/04/23 01:24

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SLC0093

Instrument: ECD6
Calibration ID: FL00041

Printed: 3/9/2023 11:10:02AM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SLC0093-PEM2	QC		1		L002116	L000844		
SLC0093-PEM3	QC		2		L002116	L000844		
SLC0093-PEM4	QC		3		L002116	L000844		
SLC0093-PEM5	QC		4		L002116	L000844		
SLC0093-PEM6	QC		5		L002116	L000844		
SLC0093-PEM7	QC		6		L002116	L000844		
SLC0093-CCV1	QC		7		L000845	L000844		
SLC0093-CCV2	QC		8		L000845	L000844		
SLC0093-CCV3	QC		9		L000845	L000844		
SLC0093-CCV4	QC		10		L000845	L000844		
SLC0093-CCV5	QC		11		L000845	L000844		
SLC0093-CCV6	QC		12		L000845	L000844		
23A0328-03	8081B Pest (PSDDA)	A 04	13			L000844	Anchor QEA, LLC	
23A0328-04	8081B Pest (PSDDA)	A 04	14			L000844	Anchor QEA, LLC	
23A0328-05	8081B Pest (PSDDA)	A 04	15			L000844	Anchor QEA, LLC	
23A0328-06	8081B Pest (PSDDA)	A 04	16			L000844	Anchor QEA, LLC	
23A0328-07	8081B Pest (PSDDA)	A 04	17			L000844	Anchor QEA, LLC	
BLB0018-MS1	QC		18			L000844		
BLB0018-MSD1	QC		19			L000844		
23A0328-08	8081B Pest (PSDDA)	A 04	20			L000844	Anchor QEA, LLC	
23A0328-09	8081B Pest (PSDDA)	A 04	21			L000844	Anchor QEA, LLC	

Samples Loaded By Date

Data Processed By Date

ANALYSIS SEQUENCE

SLC0093

Instrument: ECD6
Calibration ID: FL00041

Printed: 3/9/2023 11:10:02AM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
23A0328-10	8081B Pest (PSDDA)	A 04	22			L000844	Anchor QEA, LLC	
23A0328-11	8081B Pest (PSDDA)	A 04	23			L000844	Anchor QEA, LLC	
23A0328-12	8081B Pest (PSDDA)	A 04	24			L000844	Anchor QEA, LLC	
BLB0023-BLK1	QC		25			L000844		
BLB0023-BS1	QC		26			L000844		
BLB0023-BSD1	QC		27			L000844		
BLB0023-MSD1	QC		28			L000844		
23A0417-12	8081B Pest (PSDDA)	A 02	29			L000844	Anchor QEA, LLC	
23A0417-14	8081B Pest (PSDDA)	A 02	30			L000844	Anchor QEA, LLC	
BLB0382-BLK1	QC		31			L000844		
BLB0382-BS1	QC		32			L000844		
BLB0382-BSD1	QC		33			L000844		
23A0419-01	8081B Pest (PSDDA)	A 03	34			L000844	Anchor QEA, LLC	
23A0419-03	8081B Pest (PSDDA)	A 03	35			L000844	Anchor QEA, LLC	
23A0419-04	8081B Pest (PSDDA)	A 03	36			L000844	Anchor QEA, LLC	
23A0419-05	8081B Pest (PSDDA)	A 03	37			L000844	Anchor QEA, LLC	
23A0419-06	8081B Pest (PSDDA)	A 03	38			L000844	Anchor QEA, LLC	
23A0419-07	8081B Pest (PSDDA)	A 03	39			L000844	Anchor QEA, LLC	
BLB0382-MS1	QC		40			L000844		
BLB0382-MSD1	QC		41			L000844		
23A0419-10	8081B Pest (PSDDA)	A 03	42			L000844	Anchor QEA, LLC	

Samples Loaded By Date

Data Processed By Date

ANALYSIS SEQUENCE

SLC0093

Instrument: ECD6
Calibration ID: FL00041

Printed: 3/9/2023 11:10:02AM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
23A0419-11	8081B Pest (PSDDA)	A 03	43			L000844	Anchor QEA, LLC	
23A0420-01	8081B Pest (PSDDA)	A 01	44			L000844	Anchor QEA, LLC	
23A0420-07	8081B Pest (PSDDA)	A 01	45			L000844	Anchor QEA, LLC	
23A0420-08	8081B Pest (PSDDA)	A 01	46			L000844	Anchor QEA, LLC	
23A0420-09	8081B Pest (PSDDA)	A 01	47			L000844	Anchor QEA, LLC	
BLB0422-BLK1	QC		48			L000844		
BLB0422-BS1	QC		49			L000844		
BLB0422-BSD1	QC		50			L000844		
23B0229-02	8081B Pest (PSDDA)	A 02	51			L000844	Anchor QEA, LLC	
23B0229-04	8081B Pest (PSDDA)	A 02	52			L000844	Anchor QEA, LLC	
23B0229-06	8081B Pest (PSDDA)	A 02	53			L000844	Anchor QEA, LLC	
SLC0093-PEM1	QC		54		L002116	L000844		
SLC0093-ICV1	QC		55		L000845	L000844		
BLB0018-BLK1	QC		56			L000844		
BLB0018-BS1	QC		57			L000844		
BLB0018-BSD1	QC		58			L000844		
23A0328-02	8081B Pest (PSDDA)	A 04	59			L000844	Anchor QEA, LLC	

Samples Loaded By Date

Data Processed By Date

GC LOG SUMMARY FOR DATABATCH - \ecd6.i\20230302.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	03-MAR-2023 04:45	001F1701.D	1	SEQ-PEM2	
2	03-MAR-2023 09:50	001F3401.D	1	SEQ-PEM3	
3	03-MAR-2023 13:26	001F4601.D	1	SEQ-PEM4	
4	03-MAR-2023 18:31	001F6301.D	1	SEQ-PEM5	
5	03-MAR-2023 23:37	001F8001.D	1	SEQ-PEM6	
6	04-MAR-2023 01:06	001F8501.D	1	SEQ-PEM7	
7	03-MAR-2023 05:03	002F1801.D	1	SEQ-INDA2	
8	03-MAR-2023 10:08	002F3501.D	1	SEQ-INDA3	
9	03-MAR-2023 13:44	002F4701.D	1	SEQ-INDA4	
10	03-MAR-2023 18:49	002F6401.D	1	SEQ-INDA5	
11	03-MAR-2023 23:55	002F8101.D	1	SEQ-INDA6	
12	04-MAR-2023 01:24	002F8601.D	1	SEQ-INDA7	
13	03-MAR-2023 02:40	009F1001.D	1	23A0328-03	
14	03-MAR-2023 02:58	010F1101.D	1	23A0328-04	
15	03-MAR-2023 03:15	011F1201.D	1	23A0328-05	
16	03-MAR-2023 03:33	012F1301.D	1	23A0328-06	
17	03-MAR-2023 03:51	013F1401.D	1	23A0328-07	
18	03-MAR-2023 04:09	014F1501.D	1	BLB0018-MS1	
19	03-MAR-2023 04:27	015F1601.D	1	BLB0018-MSD1	
20	03-MAR-2023 05:21	016F1901.D	1	23A0328-08	
21	03-MAR-2023 05:39	017F2001.D	1	23A0328-09	
22	03-MAR-2023 05:57	018F2101.D	1	23A0328-10	
23	03-MAR-2023 06:15	019F2201.D	1	23A0328-11	
24	03-MAR-2023 06:33	020F2301.D	1	23A0328-12	
25	03-MAR-2023 06:51	021F2401.D	1	BLB0023-BLK1	
26	03-MAR-2023 07:09	022F2501.D	1	BLB0023-BS1	
27	03-MAR-2023 07:27	023F2601.D	1	BLB0023-BSD1	
28	03-MAR-2023 07:45	024F2701.D	1	BLB0023-MS1	
29	03-MAR-2023 08:03	025F2801.D	1	BLB0023-MSD1	
30	03-MAR-2023 08:21	026F2901.D	1	23A0417-01	
31	03-MAR-2023 08:39	027F3001.D	1	23A0417-02	
32	03-MAR-2023 08:57	028F3101.D	1	23A0417-03	
33	03-MAR-2023 09:15	029F3201.D	1	23A0417-04	
34	03-MAR-2023 09:32	030F3301.D	1	23A0417-05	
35	03-MAR-2023 10:26	031F3601.D	1	23A0417-06	
36	03-MAR-2023 10:44	032F3701.D	1	23A0417-07	
37	03-MAR-2023 11:02	033F3801.D	1	23A0417-08	
38	03-MAR-2023 11:20	034F3901.D	1	23A0417-09	
39	03-MAR-2023 11:38	035F4001.D	1	23A0417-10	
40	03-MAR-2023 11:56	036F4101.D	1	23A0417-11	
41	03-MAR-2023 12:14	037F4201.D	1	23A0417-12	
42	03-MAR-2023 12:32	038F4301.D	1	23A0417-13	
43	03-MAR-2023 12:50	039F4401.D	1	23A0417-14	
44	03-MAR-2023 13:08	040F4501.D	1	23A0417-15	
45	03-MAR-2023 14:02	041F4801.D	1	BLB0382-BLK1	
46	03-MAR-2023 14:20	042F4901.D	1	BLB0382-BS1	
47	03-MAR-2023 14:38	043F5001.D	1	BLB0382-BSD1	
48	03-MAR-2023 14:56	044F5101.D	1	23A0419-01	
49	03-MAR-2023 15:14	045F5201.D	1	23A0419-02	
50	03-MAR-2023 15:32	046F5301.D	1	23A0419-03	

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20230302.b p

	Inject Date/Time	Filename	DF	LabID	ClientID
51	03-MAR-2023 15:50	047F5401.D	1	23A0419-04	
52	03-MAR-2023 16:08	048F5501.D	1	23A0419-05	
53	03-MAR-2023 16:25	049F5601.D	1	23A0419-06	
54	03-MAR-2023 16:43	050F5701.D	1	23A0419-07	
55	03-MAR-2023 17:01	051F5801.D	1	BLB0382-MS1	
56	03-MAR-2023 17:19	052F5901.D	1	BLB0382-MSD1	
57	03-MAR-2023 17:37	053F6001.D	1	23A0419-08	
58	03-MAR-2023 17:55	054F6101.D	1	23A0419-09	
59	03-MAR-2023 18:13	055F6201.D	1	23A0419-10	
60	03-MAR-2023 19:07	056F6501.D	1	23A0419-11	
61	03-MAR-2023 19:25	057F6601.D	1	23A0419-12	
62	03-MAR-2023 19:43	058F6701.D	1	23A0420-01	
63	03-MAR-2023 20:01	059F6801.D	1	23A0420-07	
64	03-MAR-2023 20:19	060F6901.D	1	23A0420-08	
65	03-MAR-2023 20:37	061F7001.D	1	23A0420-09	
66	03-MAR-2023 20:55	062F7101.D	1	BLB0422-BLK1	
67	03-MAR-2023 21:13	063F7201.D	1	BLB0422-BS1	
68	03-MAR-2023 21:31	064F7301.D	1	BLB0422-BSD1	
69	03-MAR-2023 21:49	065F7401.D	1	BLB0422-MS1	
70	03-MAR-2023 22:07	066F7501.D	1	BLB0422-MSD1	
71	03-MAR-2023 22:25	067F7601.D	1	23B0229-02	
72	03-MAR-2023 22:43	068F7701.D	1	23B0229-03	
73	03-MAR-2023 23:01	069F7801.D	1	23B0229-04	
74	03-MAR-2023 23:19	070F7901.D	1	23B0229-05	
75	04-MAR-2023 00:13	071F8201.D	1	23B0229-06	
76	04-MAR-2023 00:30	072F8301.D	1	23B0229-08	
77	04-MAR-2023 00:48	073F8401.D	1	23B0276-01	
78	02-MAR-2023 23:58	23C03021.D	1	RINSE	
79	03-MAR-2023 00:16	23C03022.D	1	SEQ-PEM1	
80	03-MAR-2023 00:34	23C03023.D	1	SEQ-INDA1	
81	03-MAR-2023 00:52	23C03024.D	1	23A0295-04	
82	03-MAR-2023 01:10	23C03025.D	1	23A0249-05	
83	03-MAR-2023 01:28	23C03026.D	1	BLB0018-BLK1	
84	03-MAR-2023 01:46	23C03027.D	1	BLB0018-BS1	
85	03-MAR-2023 02:04	23C03028.D	1	BLB0018-BSD1	
86	03-MAR-2023 02:22	23C03029.D	1	23A0328-02	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20230302.b

ARI Job No.: SEQ- Method: PEST.m Instrument: ecd6.i Date: 03-MAR-2023

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0445	001F1701.D	SEQ-PEM2		1	NO MANUAL INTEGRATION
0950	001F3401.D	SEQ-PEM3		1	NO MANUAL INTEGRATION
1326	001F4601.D	SEQ-PEM4		1	NO MANUAL INTEGRATION
1831	001F6301.D	SEQ-PEM5		1	NO MANUAL INTEGRATION
2337	001F8001.D	SEQ-PEM6		1	NO MANUAL INTEGRATION
0106	001F8501.D	SEQ-PEM7		1	NO MANUAL INTEGRATION
0503	002F1801.D	SEQ-INDA2		1	NO MANUAL INTEGRATION
1008	002F3501.D	SEQ-INDA3		1	NO MANUAL INTEGRATION
1344	002F4701.D	SEQ-INDA4		1	NO MANUAL INTEGRATION
1849	002F6401.D	SEQ-INDA5		1	NO MANUAL INTEGRATION
2355	002F8101.D	SEQ-INDA6		1	NO MANUAL INTEGRATION
0124	002F8601.D	SEQ-INDA7		1	NO MANUAL INTEGRATION
0240	009F1001.D	23A0328-03		1	1Bromo-2nitrobenzene, alpha-BHC, beta-BHC, delta-BHC, gamma-BHC (Lindane), Heptachlor, Dieldrin, 4,4'-DDE, Endrin, Endosulfan II, Endosulfan sulfate, Methoxychlor, Endrin aldehyde, trans-Chlordane, cis-Chlordane, Hexabromobiphenyl, Tetrachloro-m-xylene, Decachlorobiphenyl,
0258	010F1101.D	23A0328-04		1	1Bromo-2nitrobenzene, alpha-BHC, beta-BHC, delta-BHC, Heptachlor, Aldrin, Heptachlor epoxide b, Dieldrin, 4,4'-DDE, Endosulfan II, 4,4'-DDD, Endosulfan sulfate, Endrin aldehyde, trans-Chlordane, cis-Chlordane, Hexabromobiphenyl, Tetrachloro-m-xylene, Decachlorobiphenyl,
0315	011F1201.D	23A0328-05		1	1Bromo-2nitrobenzene, alpha-BHC, delta-BHC, gamma-BHC (Lindane), Heptachlor, Dieldrin, 4,4'-DDE, Endrin, Endosulfan II, Endosulfan sulfate, Methoxychlor, Endrin aldehyde, trans-Chlordane, cis-Chlordane, Hexabromobiphenyl, Tetrachloro-m-xylene, Decachlorobiphenyl,
0333	012F1301.D	23A0328-06		1	1Bromo-2nitrobenzene, alpha-BHC, beta-BHC, delta-BHC, gamma-BHC (Lindane), Heptachlor, Aldrin, Dieldrin, 4,4'-DDE, Endrin, Endosulfan II, Endosulfan sulfate, Methoxychlor, Endrin aldehyde, trans-Chlordane, cis-Chlordane, Hexabromobiphenyl, Tetrachloro-m-xylene, Decachlorobiphenyl,
0351	013F1401.D	23A0328-07		1	1Bromo-2nitrobenzene, alpha-BHC, delta-BHC, gamma-BHC (Lindane), Heptachlor, Aldrin,

Dieldrin, 4,4'-DDE, Endrin, Endosulfan II, Methoxychlor, Endrin aldehyde,
trans-Chlordane, cis-Chlordane, Hexabromobiphenyl, Tetrachloro-m-xylene, Decachlorobiphenyl,

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MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20230302.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0409	014F1501.D	BLB0018-MS1		1	1Bromo-2nitrobenzene, alpha-BHC, beta-BHC, delta-BHC, gamma-BHC (Lindane), Heptachlor, Heptachlor epoxide b, Endosulfan I, Dieldrin, 4,4'-DDE, Endosulfan II, 4,4'-DDD, Endosulfan sulfate, 4,4'-DDT, Methoxychlor, Endrin ketone, Endrin aldehyde, trans-Chlordane, cis-Chlordane, Hexachlorobutadiene, H
0427	015F1601.D	BLB0018-MSD1		1	1Bromo-2nitrobenzene, alpha-BHC, beta-BHC, delta-BHC, gamma-BHC (Lindane), Heptachlor, Heptachlor epoxide b, Endosulfan I, Dieldrin, 4,4'-DDE, Endosulfan II, 4,4'-DDD, Endosulfan sulfate, 4,4'-DDT, Methoxychlor, Endrin ketone, Endrin aldehyde, trans-Chlordane, cis-Chlordane, Hexachlorobutadiene, H
0521	016F1901.D	23A0328-08		1	1Bromo-2nitrobenzene, alpha-BHC, beta-BHC, delta-BHC, gamma-BHC (Lindane), Heptachlor, Aldrin, Endosulfan sulfate, Methoxychlor, Endrin aldehyde, Hexabromobiphenyl, Tetrachloro-m-xylene, Decachlorobiphenyl,
0539	017F2001.D	23A0328-09		1	1Bromo-2nitrobenzene, alpha-BHC, delta-BHC, gamma-BHC (Lindane), Heptachlor, Aldrin, Heptachlor epoxide b, Dieldrin, 4,4'-DDE, Endosulfan sulfate, Methoxychlor, Endrin aldehyde, trans-Chlordane, cis-Chlordane, Hexabromobiphenyl, Tetrachloro-m-xylene, Decachlorobiphenyl,
0557	018F2101.D	23A0328-10		1	1Bromo-2nitrobenzene, alpha-BHC, beta-BHC, delta-BHC, gamma-BHC (Lindane), Heptachlor, Dieldrin, 4,4'-DDE, Endrin, Endosulfan II, Endosulfan sulfate, Methoxychlor, Endrin aldehyde, trans-Chlordane, cis-Chlordane, Hexabromobiphenyl, Tetrachloro-m-xylene, Decachlorobiphenyl,
0615	019F2201.D	23A0328-11		1	1Bromo-2nitrobenzene, alpha-BHC, beta-BHC, delta-BHC, gamma-BHC (Lindane), Heptachlor, Aldrin, Dieldrin, 4,4'-DDE, Endrin, Endosulfan II, Endosulfan sulfate, Methoxychlor, Endrin aldehyde, trans-Chlordane, cis-Chlordane, Hexabromobiphenyl, Tetrachloro-m-xylene, Decachlorobiphenyl,
0633	020F2301.D	23A0328-12		1	1Bromo-2nitrobenzene, alpha-BHC, beta-BHC, delta-BHC, gamma-BHC (Lindane), Heptachlor, Aldrin, Dieldrin, 4,4'-DDE, Endrin, Endosulfan II, Endosulfan sulfate, Methoxychlor, Endrin aldehyde, trans-Chlordane, cis-Chlordane, Hexabromobiphenyl, Tetrachloro-m-xylene, Decachlorobiphenyl,
0651	021F2401.D	BLB0023-BLK1		1	NO MANUAL INTEGRATION
0709	022F2501.D	BLB0023-BS1		1	NO MANUAL INTEGRATION
0727	023F2601.D	BLB0023-BSD1		1	NO MANUAL INTEGRATION
0745	024F2701.D	BLB0023-MS1		1	1Bromo-2nitrobenzene, alpha-BHC, beta-BHC, delta-BHC, gamma-BHC (Lindane), Heptachlor, Hexachlorobenzene, Tetrachloro-m-xylene,
0803	025F2801.D	BLB0023-MSD1		1	1Bromo-2nitrobenzene, alpha-BHC, beta-BHC, gamma-BHC (Lindane), Heptachlor epoxide b, Endosulfan I, Dieldrin, 4,4'-DDE, Endosulfan II, 4,4'-DDD, Endosulfan sulfate, 4,4'-DDT, Methoxychlor, Endrin ketone, Endrin aldehyde, trans-Chlordane, cis-Chlordane, Hexachlorobenzene, Hexabromobiphenyl, Tetrachloro-m-
0821	026F2901.D	23A0417-01		1	1Bromo-2nitrobenzene, alpha-BHC, beta-BHC, delta-BHC, gamma-BHC (Lindane), Heptachlor, Tetrachloro-m-xylene,

0839	027F3001.D 23A0417-02	1	1Bromo-2nitrobenzene, alpha-BHC, beta-BHC, delta-BHC, gamma-BHC (Lindane), Heptachlor, Dieldrin, 4,4'-DDE, Endrin, Endosulfan II, Endosulfan sulfate, Methoxychlor, Endrin aldehyde, trans-Chlordane, cis-Chlordane, Hexabromobiphenyl, Tetrachloro-m-xylene, Decachlorobiphenyl,
0857	028F3101.D 23A0417-03	1	1Bromo-2nitrobenzene, alpha-BHC, beta-BHC, delta-BHC, gamma-BHC (Lindane), Aldrin, Heptachlor epoxide b, Dieldrin, 4,4'-DDE, Endrin, Endosulfan II, Methoxychlor, Endrin aldehyde, trans-Chlordane, cis-Chlordane, Tetrachloro-m-xylene,
0915	029F3201.D 23A0417-04	1	1Bromo-2nitrobenzene, alpha-BHC, beta-BHC, delta-BHC, gamma-BHC (Lindane), Aldrin, Heptachlor epoxide b, Dieldrin, 4,4'-DDE, Endrin, Endosulfan II, trans-Chlordane, cis-Chlordane, Tetrachloro-m-xylene,
0932	030F3301.D 23A0417-05	1	1Bromo-2nitrobenzene, alpha-BHC, delta-BHC, gamma-BHC (Lindane), Heptachlor, Heptachlor epoxide b, Dieldrin, 4,4'-DDE, Endrin, Endosulfan II, Endrin aldehyde, trans-Chlordane, cis-Chlordane, Tetrachloro-m-xylene,
1026	031F3601.D 23A0417-06	1	1Bromo-2nitrobenzene, alpha-BHC, gamma-BHC (Lindane), Aldrin, Heptachlor epoxide b, Dieldrin, 4,4'-DDE, Endrin, Endosulfan II, Methoxychlor, Endrin aldehyde, trans-Chlordane, cis-Chlordane, Tetrachloro-m-xylene,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20230302.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1044	032F3701.D	23A0417-07		1	alpha-BHC, gamma-BHC (Lindane), Aldrin, Heptachlor epoxide b, Dieldrin, 4,4'-DDE, Endrin, Endosulfan II, Endosulfan sulfate, Methoxychlor, Endrin aldehyde, trans-Chlordane, cis-Chlordane, Hexabromobiphenyl, Tetrachloro-m-xylene, Decachlorobiphenyl,
1102	033F3801.D	23A0417-08		1	alpha-BHC, beta-BHC, gamma-BHC (Lindane), Aldrin, Heptachlor epoxide b, Endosulfan I, Dieldrin, 4,4'-DDE, Endrin, Endosulfan II, Endosulfan sulfate, Endrin aldehyde, trans-Chlordane, cis-Chlordane, Hexabromobiphenyl, Tetrachloro-m-xylene, Decachlorobiphenyl,
1120	034F3901.D	23A0417-09		1	alpha-BHC, beta-BHC, gamma-BHC (Lindane), Aldrin, Dieldrin, 4,4'-DDE, Endrin, Endosulfan II, Methoxychlor, Endrin aldehyde, trans-Chlordane, cis-Chlordane, Hexabromobiphenyl, Tetrachloro-m-xylene, Decachlorobiphenyl,
1138	035F4001.D	23A0417-10		1	1Bromo-2nitrobenzene, alpha-BHC, delta-BHC, gamma-BHC (Lindane), Heptachlor, Heptachlor epoxide b, Dieldrin, 4,4'-DDE, Endosulfan II, 4,4'-DDD, Endrin aldehyde, trans-Chlordane, cis-Chlordane, Hexabromobiphenyl, Tetrachloro-m-xylene, Decachlorobiphenyl,
1156	036F4101.D	23A0417-11		1	1Bromo-2nitrobenzene, alpha-BHC, beta-BHC, delta-BHC, gamma-BHC (Lindane), Aldrin, Heptachlor epoxide b, Dieldrin, 4,4'-DDE, Endrin, Endosulfan II, Methoxychlor, Endrin aldehyde, trans-Chlordane, cis-Chlordane, Tetrachloro-m-xylene,
1214	037F4201.D	23A0417-12		1	1Bromo-2nitrobenzene, alpha-BHC, delta-BHC, gamma-BHC (Lindane), Heptachlor, Aldrin, Heptachlor epoxide b, Dieldrin, 4,4'-DDE, Methoxychlor, Endrin aldehyde, trans-Chlordane, cis-Chlordane, Hexachlorobutadiene, Hexabromobiphenyl, Tetrachloro-m-xylene, Decachlorobiphenyl,
1232	038F4301.D	23A0417-13		1	1Bromo-2nitrobenzene, alpha-BHC, delta-BHC, gamma-BHC (Lindane), Heptachlor, Heptachlor epoxide b, Dieldrin, 4,4'-DDE, Endrin, Endosulfan II, Methoxychlor, Endrin aldehyde, trans-Chlordane, cis-Chlordane, Tetrachloro-m-xylene, Decachlorobiphenyl,
1250	039F4401.D	23A0417-14		1	1Bromo-2nitrobenzene, alpha-BHC, delta-BHC, gamma-BHC (Lindane), Heptachlor, Aldrin, Dieldrin, 4,4'-DDE, Endrin, Endosulfan II, Endosulfan sulfate, Methoxychlor, Endrin aldehyde, trans-Chlordane, cis-Chlordane, Hexachlorobutadiene, Hexabromobiphenyl, Tetrachloro-m-xylene, Decachlorobiphenyl,
1308	040F4501.D	23A0417-15		1	1Bromo-2nitrobenzene, alpha-BHC, delta-BHC, gamma-BHC (Lindane), Heptachlor, Tetrachloro-m-xylene,
1402	041F4801.D	BLB0382-BLK1		1	NO MANUAL INTEGRATION
1420	042F4901.D	BLB0382-BS1		1	NO MANUAL INTEGRATION
1438	043F5001.D	BLB0382-BSD1		1	NO MANUAL INTEGRATION
1456	044F5101.D	23A0419-01		1	1Bromo-2nitrobenzene, alpha-BHC, delta-BHC, gamma-BHC (Lindane), Hexabromobiphenyl, Tetrachloro-m-xylene, Decachlorobiphenyl,

1514	045F5201.D 23A0419-02	1	1Bromo-2nitrobenzene, alpha-BHC, beta-BHC, delta-BHC, gamma-BHC (Lindane), Heptachlor, Aldrin, Dieldrin, 4,4'-DDE, Endrin, Endosulfan II, Endosulfan sulfate, Methoxychlor, Endrin aldehyde, trans-Chlordane, cis-Chlordane, Hexabromobiphenyl, Tetrachloro-m-xylene, Decachlorobiphenyl,
1532	046F5301.D 23A0419-03	1	1Bromo-2nitrobenzene, alpha-BHC, delta-BHC, gamma-BHC (Lindane), Heptachlor epoxide b, Dieldrin, 4,4'-DDE, Endrin, Endosulfan II, Methoxychlor, Endrin aldehyde, trans-Chlordane, cis-Chlordane, Hexachlorobutadiene, Hexabromobiphenyl, Tetrachloro-m-xylene, Decachlorobiphenyl,
1550	047F5401.D 23A0419-04	1	1Bromo-2nitrobenzene, alpha-BHC, delta-BHC, gamma-BHC (Lindane), Heptachlor, Aldrin, Dieldrin, 4,4'-DDE, Endrin, Endosulfan II, Methoxychlor, Endrin aldehyde, trans-Chlordane, cis-Chlordane, Hexachlorobutadiene, Hexabromobiphenyl, Tetrachloro-m-xylene, Decachlorobiphenyl,
1608	048F5501.D 23A0419-05	1	1Bromo-2nitrobenzene, alpha-BHC, delta-BHC, gamma-BHC (Lindane), Heptachlor, Aldrin, Heptachlor epoxide b, Dieldrin, 4,4'-DDE, Endrin, Endosulfan II, Methoxychlor, Endrin aldehyde, trans-Chlordane, cis-Chlordane, Hexabromobiphenyl, Tetrachloro-m-xylene, Decachlorobiphenyl,
1625	049F5601.D 23A0419-06	1	1Bromo-2nitrobenzene, alpha-BHC, delta-BHC, Heptachlor, Aldrin, Heptachlor epoxide b, Dieldrin, 4,4'-DDE, Endrin, Endosulfan II, trans-Chlordane, cis-Chlordane, Hexabromobiphenyl, Tetrachloro-m-xylene, Decachlorobiphenyl,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20230302.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1643	050F5701.D	23A0419-07		1	1Bromo-2nitrobenzene, alpha-BHC, delta-BHC, gamma-BHC (Lindane), Heptachlor, Endosulfan sulfate, Methoxychlor, Hexabromobiphenyl, Tetrachloro-m-xylene, Decachlorobiphenyl,
1701	051F5801.D	BLB0382-MS1		1	1Bromo-2nitrobenzene, alpha-BHC, beta-BHC, delta-BHC, gamma-BHC (Lindane), Heptachlor, Aldrin, Heptachlor epoxide b, Endosulfan I, Dieldrin, 4,4'-DDE, Endosulfan II, 4,4'-DDD, Endosulfan sulfate, 4,4'-DDT, Methoxychlor, Endrin ketone, Endrin aldehyde, trans-Chlordane, cis-Chlordane, Hexachlorobe
1719	052F5901.D	BLB0382-MSD1		1	1Bromo-2nitrobenzene, alpha-BHC, beta-BHC, delta-BHC, gamma-BHC (Lindane), Heptachlor, Aldrin, Heptachlor epoxide b, Endosulfan I, Dieldrin, 4,4'-DDE, Endosulfan II, 4,4'-DDD, Endosulfan sulfate, 4,4'-DDT, Methoxychlor, Endrin ketone, Endrin aldehyde, trans-Chlordane, cis-Chlordane, Hexachlorobe
1737	053F6001.D	23A0419-08		1	1Bromo-2nitrobenzene, alpha-BHC, beta-BHC, delta-BHC, Heptachlor, Aldrin, Dieldrin, 4,4'-DDE, Endrin, Endosulfan II, Endosulfan sulfate, Methoxychlor, Endrin aldehyde, trans-Chlordane, cis-Chlordane, Hexabromobiphenyl, Tetrachloro-m-xylene, Decachlorobiphenyl,
1755	054F6101.D	23A0419-09		1	1Bromo-2nitrobenzene, alpha-BHC, beta-BHC, delta-BHC, gamma-BHC (Lindane), Heptachlor, Aldrin, Heptachlor epoxide b, Dieldrin, 4,4'-DDE, trans-Chlordane, cis-Chlordane, Tetrachloro-m-xylene,
1813	055F6201.D	23A0419-10		1	1Bromo-2nitrobenzene, alpha-BHC, delta-BHC, gamma-BHC (Lindane), Heptachlor, Dieldrin, 4,4'-DDE, Endrin, Endosulfan II, 4,4'-DDT, Methoxychlor, Endrin aldehyde, trans-Chlordane, cis-Chlordane, Hexabromobiphenyl, Tetrachloro-m-xylene, Decachlorobiphenyl,
1907	056F6501.D	23A0419-11		1	1Bromo-2nitrobenzene, alpha-BHC, delta-BHC, gamma-BHC (Lindane), Heptachlor, Aldrin, Heptachlor epoxide b, Endosulfan I, Dieldrin, 4,4'-DDE, trans-Chlordane, cis-Chlordane, Hexachlorobutadiene, Tetrachloro-m-xylene,
1925	057F6601.D	23A0419-12		1	1Bromo-2nitrobenzene, alpha-BHC, delta-BHC, gamma-BHC (Lindane), Heptachlor, Heptachlor epoxide b, Dieldrin, 4,4'-DDE, trans-Chlordane, cis-Chlordane, Hexabromobiphenyl, Tetrachloro-m-xylene, Decachlorobiphenyl,
1943	058F6701.D	23A0420-01		1	1Bromo-2nitrobenzene, alpha-BHC, beta-BHC, delta-BHC, gamma-BHC (Lindane), Heptachlor, Aldrin, Heptachlor epoxide b, Dieldrin, 4,4'-DDE, Endrin, Endosulfan II, Endosulfan sulfate, 4,4'-DDT, Methoxychlor, Endrin aldehyde, cis-Chlordane, Hexabromobiphenyl, Tetrachloro-m-xylene, Decachlorobip
2001	059F6801.D	23A0420-07		1	1Bromo-2nitrobenzene, alpha-BHC, beta-BHC, delta-BHC, gamma-BHC (Lindane), Heptachlor, Heptachlor epoxide b, Dieldrin, 4,4'-DDE, Endrin, Endosulfan II, Endosulfan sulfate, Methoxychlor, Endrin aldehyde, trans-Chlordane, cis-Chlordane, Hexabromobiphenyl, Tetrachloro-m-xylene, Decachlorobiphenyl,
2019	060F6901.D	23A0420-08		1	1Bromo-2nitrobenzene, alpha-BHC, beta-BHC, delta-BHC, gamma-BHC (Lindane), Heptachlor, Aldrin, Heptachlor epoxide b, Dieldrin, 4,4'-DDE, Endrin, Endosulfan II, Methoxychlor, Endrin aldehyde, cis-Chlordane, Hexachlorobutadiene, Hexabromobiphenyl, Tetrachloro-m-xylene, Decachlorobiphenyl,

2037	061F7001.D 23A0420-09	1	1Bromo-2nitrobenzene, alpha-BHC, beta-BHC, delta-BHC, gamma-BHC (Lindane), Heptachlor, Aldrin, Heptachlor epoxide b, Dieldrin, 4,4'-DDE, Endrin, Endosulfan II, Methoxychlor, Endrin aldehyde, cis-Chlordane, Hexabromobiphenyl, Tetrachloro-m-xylene, Decachlorobiphenyl,
2055	062F7101.D BLB0422-BLK1	1	NO MANUAL INTEGRATION
2113	063F7201.D BLB0422-BS1	1	NO MANUAL INTEGRATION
2131	064F7301.D BLB0422-BSD1	1	NO MANUAL INTEGRATION
2149	065F7401.D BLB0422-MS1	1	1Bromo-2nitrobenzene, alpha-BHC, beta-BHC, delta-BHC, gamma-BHC (Lindane), Heptachlor, Endosulfan I, Dieldrin, 4,4'-DDE, cis-Chlordane, Hexachlorobenzene, Tetrachloro-m-xylene,
2207	066F7501.D BLB0422-MSD1	1	1Bromo-2nitrobenzene, alpha-BHC, beta-BHC, delta-BHC, gamma-BHC (Lindane), Heptachlor, Aldrin, Heptachlor epoxide b, Endosulfan I, Dieldrin, 4,4'-DDE, Endosulfan II, 4,4'-DDD, 4,4'-DDT, Methoxychlor, Endrin aldehyde, trans-Chlordane, cis-Chlordane, Hexachlorobenzene, Hexabromobiphenyl, Tetrachlo
2225	067F7601.D 23B0229-02	1	1Bromo-2nitrobenzene, alpha-BHC, beta-BHC, delta-BHC, gamma-BHC (Lindane), Heptachlor, Aldrin, Heptachlor epoxide b, Dieldrin, 4,4'-DDE, Endrin, Endosulfan II, Endosulfan sulfate, Methoxychlor, Endrin aldehyde, cis-Chlordane, Hexachlorobutadiene, Hexabromobiphenyl, Tetrachloro-m-xylene, De

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20230302.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2243	068F7701.D	23B0229-03		1	1Bromo-2nitrobenzene, alpha-BHC, beta-BHC, delta-BHC, gamma-BHC (Lindane), Heptachlor, Tetrachloro-m-xylene,
2301	069F7801.D	23B0229-04		1	1Bromo-2nitrobenzene, alpha-BHC, beta-BHC, delta-BHC, gamma-BHC (Lindane), Heptachlor, Aldrin, Heptachlor epoxide b, Dieldrin, 4,4'-DDE, Endosulfan II, Endosulfan sulfate, Methoxychlor, Endrin aldehyde, cis-Chlordane, Hexachlorobutadiene, Hexabromobiphenyl, Tetrachloro-m-xylene, Decachlorobiphenyl,
2319	070F7901.D	23B0229-05		1	1Bromo-2nitrobenzene, alpha-BHC, beta-BHC, delta-BHC, gamma-BHC (Lindane), Heptachlor, Dieldrin, 4,4'-DDE, Endrin, Endosulfan II, Endosulfan sulfate, Methoxychlor, Endrin aldehyde, trans-Chlordane, cis-Chlordane, Hexabromobiphenyl, Tetrachloro-m-xylene, Decachlorobiphenyl,
0013	071F8201.D	23B0229-06		1	1Bromo-2nitrobenzene, alpha-BHC, beta-BHC, delta-BHC, gamma-BHC (Lindane), Heptachlor, Aldrin, Heptachlor epoxide b, Dieldrin, 4,4'-DDE, Endrin, Endosulfan II, Endosulfan sulfate, Methoxychlor, Endrin aldehyde, cis-Chlordane, Hexabromobiphenyl, Tetrachloro-m-xylene, Decachlorobiphenyl,
0030	072F8301.D	23B0229-08		1	1Bromo-2nitrobenzene, alpha-BHC, beta-BHC, delta-BHC, gamma-BHC (Lindane), Heptachlor, Heptachlor epoxide b, Dieldrin, 4,4'-DDE, Endrin, Endosulfan II, Endrin aldehyde, trans-Chlordane, cis-Chlordane, Tetrachloro-m-xylene,
0048	073F8401.D	23B0276-01		1	Endosulfan I, Dieldrin, 4,4'-DDE, Endrin ketone, Hexabromobiphenyl,
2358	23C03021.D	RINSE		1	NO MANUAL INTEGRATION
0016	23C03022.D	SEQ-PEM1		1	NO MANUAL INTEGRATION
0034	23C03023.D	SEQ-INDA1		1	NO MANUAL INTEGRATION
0052	23C03024.D	23A0295-04		1	1Bromo-2nitrobenzene, alpha-BHC, delta-BHC, gamma-BHC (Lindane), Heptachlor, Aldrin, Heptachlor epoxide b, Dieldrin, 4,4'-DDE, Endrin, Endosulfan II, Endosulfan sulfate, Methoxychlor, Endrin aldehyde, cis-Chlordane, Hexachlorobutadiene, Hexabromobiphenyl, Tetrachloro-m-xylene, Decachlorobiphenyl,
0110	23C03025.D	23A0249-05		1	1Bromo-2nitrobenzene, alpha-BHC, delta-BHC, gamma-BHC (Lindane), Heptachlor, Aldrin, Dieldrin, 4,4'-DDE, trans-Chlordane, cis-Chlordane, Hexachlorobenzene, Hexabromobiphenyl, Tetrachloro-m-xylene, Decachlorobiphenyl,
0128	23C03026.D	BLB0018-BLK1		1	NO MANUAL INTEGRATION
0146	23C03027.D	BLB0018-BS1		1	NO MANUAL INTEGRATION
0204	23C03028.D	BLB0018-BSD1		1	NO MANUAL INTEGRATION
0222	23C03029.D	23A0328-02		1	1Bromo-2nitrobenzene, alpha-BHC, beta-BHC, gamma-BHC (Lindane), Heptachlor epoxide b, Dieldrin, 4,4'-DDE, Endrin, Endosulfan II, Endosulfan sulfate, 4,4'-DDT, Endrin ketone,

			Endrin aldehyde, cis-Chlordane, Hexabromobiphenyl, Tetrachloro-m-xylene, Decachlorobiphenyl,
0445	001F1701.D SEQ-PEM2	1	4,4'-DDE [C], Endrin [C], 4,4'-DDD [C], 4,4'-DDT [C], Endrin ketone [C], Endrin aldehyde [C], Hexabromobiphenyl[C], Decachlorobiphenyl [C],
0950	001F3401.D SEQ-PEM3	1	Endrin [C], 4,4'-DDD [C], 4,4'-DDT [C], Endrin ketone [C], Endrin aldehyde [C], Hexabromobiphenyl[C], Decachlorobiphenyl [C],
1326	001F4601.D SEQ-PEM4	1	Endrin [C], 4,4'-DDD [C], 4,4'-DDT [C], Endrin ketone [C], Endrin aldehyde [C], Hexabromobiphenyl[C], Decachlorobiphenyl [C],

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Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1831	001F6301.D	SEQ-PEM5		1	4,4'-DDE [C], Endrin [C], 4,4'-DDD [C], 4,4'-DDT [C], Endrin ketone [C], Endrin aldehyde [C], Hexabromobiphenyl[C], Decachlorobiphenyl [C],
2337	001F8001.D	SEQ-PEM6		1	Endrin [C], 4,4'-DDD [C], 4,4'-DDT [C], Endrin ketone [C], Endrin aldehyde [C], Hexabromobiphenyl[C], Decachlorobiphenyl [C],
0106	001F8501.D	SEQ-PEM7		1	Endrin [C], 4,4'-DDD [C], 4,4'-DDT [C], Endrin ketone [C], Endrin aldehyde [C], Hexabromobiphenyl[C], Decachlorobiphenyl [C],
0503	002F1801.D	SEQ-INDA2		1	NO MANUAL INTEGRATION
1008	002F3501.D	SEQ-INDA3		1	NO MANUAL INTEGRATION
1344	002F4701.D	SEQ-INDA4		1	NO MANUAL INTEGRATION
1849	002F6401.D	SEQ-INDA5		1	NO MANUAL INTEGRATION
2355	002F8101.D	SEQ-INDA6		1	NO MANUAL INTEGRATION
0124	002F8601.D	SEQ-INDA7		1	NO MANUAL INTEGRATION
0240	009F1001.D	23A0328-03		1	1Bromo-2nitrobenzene [C], alpha-BHC [C], beta-BHC [C], gamma-BHC (Lindane) [C], Heptachlor [C], Heptachlor epoxide b [C], Endosulfan I [C], Dieldrin [C], 4,4'-DDE [C], Endrin [C], Endosulfan II [C], 4,4'-DDD [C], 4,4'-DDT [C], Endrin ketone [C], Endrin aldehyde [C], trans-Chlordane [C], cis-Chlordane [C], Hexabromobiphenyl[C], Tetrachloro-m-
0258	010F1101.D	23A0328-04		1	1Bromo-2nitrobenzene [C], alpha-BHC [C], beta-BHC [C], gamma-BHC (Lindane) [C], Endosulfan I [C], Dieldrin [C], 4,4'-DDE [C], Endrin [C], Endosulfan II [C], 4,4'-DDD [C], 4,4'-DDT [C], Endrin ketone [C], Endrin aldehyde [C], trans-Chlordane [C], cis-Chlordane [C], Hexabromobiphenyl[C], Tetrachloro-m-xylene [C], Decachlorobiphenyl [C
0315	011F1201.D	23A0328-05		1	1Bromo-2nitrobenzene [C], alpha-BHC [C], beta-BHC [C], gamma-BHC (Lindane) [C], Heptachlor [C], Heptachlor epoxide b [C], Endosulfan I [C], Dieldrin [C], 4,4'-DDE [C], Endrin [C], Endosulfan II [C], 4,4'-DDD [C], Endosulfan sulfate [C], 4,4'-DDT [C], Endrin ketone [C], Endrin aldehyde [C], trans-Chlordane [C], cis-Chlordane [C], Tetrachloro-
0333	012F1301.D	23A0328-06		1	1Bromo-2nitrobenzene [C], alpha-BHC [C], beta-BHC [C], gamma-BHC (Lindane) [C], Heptachlor [C], Heptachlor epoxide b [C], Endosulfan I [C], Dieldrin [C], 4,4'-DDE [C], Endrin [C], Endosulfan II [C], 4,4'-DDD [C], 4,4'-DDT [C], Endrin ketone [C], Endrin aldehyde [C], trans-Chlordane [C], cis-Chlordane [C], Hexabromobiphenyl[C], Tetrachloro-m-
0351	013F1401.D	23A0328-07		1	1Bromo-2nitrobenzene [C], alpha-BHC [C], beta-BHC [C], gamma-BHC (Lindane) [C], Heptachlor epoxide b [C], Endosulfan I [C], Dieldrin [C], 4,4'-DDE [C], Endrin [C], Endosulfan II [C], 4,4'-DDD [C], Endosulfan sulfate [C], 4,4'-DDT [C], Endrin ketone [C], Endrin aldehyde [C], trans-Chlordane [C], cis-Chlordane [C], Hexabromobiphenyl[C], Tetrachloro-m-
0409	014F1501.D	BLB0018-MS1		1	1Bromo-2nitrobenzene [C], alpha-BHC [C], beta-BHC [C], delta-BHC [C], gamma-BHC (Lindane) [C], Heptachlor [C], Heptachlor epoxide b [C], Endosulfan I [C], 4,4'-DDE [C], Endrin [C], Endosulfan II [C], 4,4'-DDD [C],

			Endosulfan sulfate [C], 4,4'-DDT [C], Endrin ketone [C], Endrin aldehyde [C], trans-Chlordane [C], cis-Chlordane [C], Hexachlorobe
0427	015F1601.D BLB0018-MSD1	1	1Bromo-2nitrobenzene [C], alpha-BHC [C], beta-BHC [C], gamma-BHC (Lindane) [C], Heptachlor epoxide b [C], Endosulfan I [C], 4,4'-DDE [C], Endrin [C], Endosulfan II [C], 4,4'-DDD [C], Endosulfan sulfate [C], 4,4'-DDT [C], Endrin ketone [C], Endrin aldehyde [C], trans-Chlordane [C], cis-Chlordane [C], Hexachlorobenzene [C], Hexabromobiphenyl[C], Tetra
0521	016F1901.D 23A0328-08	1	1Bromo-2nitrobenzene [C], alpha-BHC [C], beta-BHC [C], gamma-BHC (Lindane) [C], Heptachlor [C], Heptachlor epoxide b [C], Endosulfan I [C], Dieldrin [C], 4,4'-DDE [C], Endrin [C], Endosulfan II [C], 4,4'-DDD [C], 4,4'-DDT [C], Endrin ketone [C], Endrin aldehyde [C], trans-Chlordane [C], cis-Chlordane [C], Hexabromobiphenyl[C], Tetrachloro-m-
0539	017F2001.D 23A0328-09	1	1Bromo-2nitrobenzene [C], alpha-BHC [C], beta-BHC [C], gamma-BHC (Lindane) [C], Heptachlor [C], Heptachlor epoxide b [C], Endosulfan I [C], Dieldrin [C], 4,4'-DDE [C], Endrin [C], Endosulfan II [C], 4,4'-DDD [C], 4,4'-DDT [C], Endrin ketone [C], Endrin aldehyde [C], trans-Chlordane [C], cis-Chlordane [C], Hexachlorobenzene [C], Hexabromobiph

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Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0557	018F2101.D	23A0328-10		1	1Bromo-2nitrobenzene [C], alpha-BHC [C], beta-BHC [C], gamma-BHC (Lindane) [C], Heptachlor [C], Heptachlor epoxide b [C], Endosulfan I [C], Dieldrin [C], 4,4'-DDE [C], Endrin [C], Endosulfan II [C], 4,4'-DDD [C], 4,4'-DDT [C], Methoxychlor [C], Endrin ketone [C], Endrin aldehyde [C], trans-Chlordane [C], cis-Chlordane [C], Hexabromobiphenyl[
0615	019F2201.D	23A0328-11		1	1Bromo-2nitrobenzene [C], alpha-BHC [C], beta-BHC [C], gamma-BHC (Lindane) [C], Heptachlor [C], Heptachlor epoxide b [C], Endosulfan I [C], Dieldrin [C], 4,4'-DDE [C], Endrin [C], Endosulfan II [C], 4,4'-DDD [C], 4,4'-DDT [C], Endrin ketone [C], Endrin aldehyde [C], trans-Chlordane [C], cis-Chlordane [C], Hexabromobiphenyl[C], Tetrachloro-m-
0633	020F2301.D	23A0328-12		1	1Bromo-2nitrobenzene [C], alpha-BHC [C], beta-BHC [C], gamma-BHC (Lindane) [C], Heptachlor [C], Heptachlor epoxide b [C], Endosulfan I [C], 4,4'-DDE [C], Endrin [C], Endosulfan II [C], 4,4'-DDD [C], 4,4'-DDT [C], Endrin ketone [C], Endrin aldehyde [C], trans-Chlordane [C], cis-Chlordane [C], Hexabromobiphenyl[C], Tetrachloro-m-xylene [C], De
0651	021F2401.D	BLB0023-BLK1		1	Endrin [C], Endosulfan II [C], 4,4'-DDD [C], Endosulfan sulfate [C], 4,4'-DDT [C], Methoxychlor [C], Endrin ketone [C], Hexabromobiphenyl[C], Decachlorobiphenyl [C],
0709	022F2501.D	BLB0023-BS1		1	NO MANUAL INTEGRATION
0727	023F2601.D	BLB0023-BSD1		1	NO MANUAL INTEGRATION
0745	024F2701.D	BLB0023-MS1		1	1Bromo-2nitrobenzene [C], alpha-BHC [C], beta-BHC [C], delta-BHC [C], gamma-BHC (Lindane) [C], Heptachlor [C], Aldrin [C], Heptachlor epoxide b [C], Endosulfan I [C], Dieldrin [C], 4,4'-DDE [C], Endrin [C], Endosulfan II [C], 4,4'-DDD [C], Endosulfan sulfate [C], 4,4'-DDT [C], Endrin ketone [C], Endrin aldehyde [C], trans-Chlordane [C]
0803	025F2801.D	BLB0023-MSD1		1	1Bromo-2nitrobenzene [C], Heptachlor epoxide b [C], Endosulfan I [C], Dieldrin [C], 4,4'-DDE [C], Endrin [C], Endosulfan II [C], 4,4'-DDD [C], Endosulfan sulfate [C], 4,4'-DDT [C], Endrin ketone [C], Endrin aldehyde [C], trans-Chlordane [C], cis-Chlordane [C], Hexachlorobenzene [C], Hexabromobiphenyl[C], Tetrachloro-m-xylene [C], Decachlorobiphenyl
0821	026F2901.D	23A0417-01		1	NO MANUAL INTEGRATION
0839	027F3001.D	23A0417-02		1	NO MANUAL INTEGRATION
0857	028F3101.D	23A0417-03		1	NO MANUAL INTEGRATION
0915	029F3201.D	23A0417-04		1	NO MANUAL INTEGRATION
0932	030F3301.D	23A0417-05		1	NO MANUAL INTEGRATION
1026	031F3601.D	23A0417-06		1	NO MANUAL INTEGRATION
1044	032F3701.D	23A0417-07		1	NO MANUAL INTEGRATION
1102	033F3801.D	23A0417-08		1	NO MANUAL INTEGRATION

1120	034F3901.D 23A0417-09	1	NO MANUAL INTEGRATION
1138	035F4001.D 23A0417-10	1	NO MANUAL INTEGRATION

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Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1156	036F4101.D	23A0417-11		1	NO MANUAL INTEGRATION
1214	037F4201.D	23A0417-12		1	1Bromo-2nitrobenzene [C], alpha-BHC [C], beta-BHC [C], gamma-BHC (Lindane) [C], Heptachlor [C], Aldrin [C], Heptachlor epoxide b [C], Endosulfan I [C], Dieldrin [C], 4,4'-DDE [C], 4,4'-DDT [C], Endrin ketone [C], Endrin aldehyde [C], trans-Chlordane [C], cis-Chlordane [C], Hexabromobiphenyl[C], Tetrachloro-m-xylene [C], Decachlorobiphenyl [C
1232	038F4301.D	23A0417-13		1	NO MANUAL INTEGRATION
1250	039F4401.D	23A0417-14		1	1Bromo-2nitrobenzene [C], alpha-BHC [C], beta-BHC [C], delta-BHC [C], Heptachlor [C], Aldrin [C], Heptachlor epoxide b [C], Endosulfan I [C], Dieldrin [C], 4,4'-DDE [C], Endrin [C], Endosulfan II [C], 4,4'-DDD [C], 4,4'-DDT [C], Endrin ketone [C], Endrin aldehyde [C], cis-Chlordane [C], Hexabromobiphenyl[C], Tetrachloro-m-xylene
1308	040F4501.D	23A0417-15		1	NO MANUAL INTEGRATION
1402	041F4801.D	BLB0382-BLK1		1	NO MANUAL INTEGRATION
1420	042F4901.D	BLB0382-BS1		1	NO MANUAL INTEGRATION
1438	043F5001.D	BLB0382-BSD1		1	NO MANUAL INTEGRATION
1456	044F5101.D	23A0419-01		1	1Bromo-2nitrobenzene [C], alpha-BHC [C], beta-BHC [C], gamma-BHC (Lindane) [C], Endosulfan II [C], 4,4'-DDT [C], Endrin ketone [C], Endrin aldehyde [C], Tetrachloro-m-xylene [C],
1514	045F5201.D	23A0419-02		1	NO MANUAL INTEGRATION
1532	046F5301.D	23A0419-03		1	alpha-BHC [C], beta-BHC [C], delta-BHC [C], gamma-BHC (Lindane) [C], Heptachlor [C], Aldrin [C], Heptachlor epoxide b [C], Endosulfan I [C], Dieldrin [C], 4,4'-DDE [C], Endrin [C], Endosulfan II [C], 4,4'-DDD [C], Endosulfan sulfate [C], 4,4'-DDT [C], Endrin ketone [C], Endrin aldehyde [C], trans-Chlordane [C], cis-Chlordane [C]
1550	047F5401.D	23A0419-04		1	1Bromo-2nitrobenzene [C], alpha-BHC [C], beta-BHC [C], delta-BHC [C], gamma-BHC (Lindane) [C], Heptachlor [C], Aldrin [C], Heptachlor epoxide b [C], Endosulfan I [C], Dieldrin [C], 4,4'-DDE [C], Endrin [C], Endosulfan II [C], 4,4'-DDD [C], Endosulfan sulfate [C], 4,4'-DDT [C], Endrin ketone [C], Endrin aldehyde [C], trans-Chlordane [C]
1608	048F5501.D	23A0419-05		1	1Bromo-2nitrobenzene [C], alpha-BHC [C], gamma-BHC (Lindane) [C], Heptachlor epoxide b [C], Endosulfan I [C], Dieldrin [C], 4,4'-DDE [C], Endrin [C], Endosulfan II [C], 4,4'-DDD [C], Endosulfan sulfate [C], 4,4'-DDT [C], Endrin ketone [C], Endrin aldehyde [C], trans-Chlordane [C], cis-Chlordane [C], Hexabromobiphenyl[C], Tetrachloro-m-xylene [C], De
1625	049F5601.D	23A0419-06		1	1Bromo-2nitrobenzene [C], alpha-BHC [C], Heptachlor [C], Dieldrin [C], 4,4'-DDE [C], Endrin [C], Endosulfan II [C], 4,4'-DDD [C], 4,4'-DDT [C], Endrin ketone [C], Endrin aldehyde [C], Hexabromobiphenyl[C], Tetrachloro-m-xylene [C], Decachlorobiphenyl [C],
1643	050F5701.D	23A0419-07		1	1Bromo-2nitrobenzene [C], alpha-BHC [C], beta-BHC [C], gamma-BHC (Lindane) [C], Heptachlor [C], Endosulfan II [C], Endosulfan sulfate [C], 4,4'-DDT [C], Endrin ketone [C], Endrin aldehyde [C], Hexabromobiphenyl[C], Tetrachloro-m-xylene [C],

				Decachlorobiphenyl [C],
1701	051F5801.D	BLB0382-MS1	1	1Bromo-2nitrobenzene [C], alpha-BHC [C], beta-BHC [C], delta-BHC [C], gamma-BHC (Lindane) [C], Heptachlor [C], Heptachlor epoxide b [C], Endosulfan I [C], Dieldrin [C], 4,4'-DDE [C], Endrin [C], Endosulfan II [C], 4,4'-DDD [C], Endosulfan sulfate [C], 4,4'-DDT [C], Endrin ketone [C], Endrin aldehyde [C], trans-Chlordane [C], cis-Chlordane [C]
1719	052F5901.D	BLB0382-MSD1	1	1Bromo-2nitrobenzene [C], alpha-BHC [C], beta-BHC [C], delta-BHC [C], gamma-BHC (Lindane) [C], Heptachlor [C], Heptachlor epoxide b [C], Endosulfan I [C], Dieldrin [C], 4,4'-DDE [C], Endrin [C], Endosulfan II [C], 4,4'-DDD [C], Endosulfan sulfate [C], 4,4'-DDT [C], Endrin ketone [C], Endrin aldehyde [C], trans-Chlordane [C], cis-Chlordane [C]
1737	053F6001.D	23A0419-08	1	Heptachlor [C], Aldrin [C], Heptachlor epoxide b [C], Endosulfan I [C], Dieldrin [C], 4,4'-DDE [C], Endrin [C], Endosulfan II [C], 4,4'-DDD [C], Endosulfan sulfate [C], 4,4'-DDT [C], Methoxychlor [C], Endrin ketone [C], Endrin aldehyde [C], trans-Chlordane [C], cis-Chlordane [C], Hexabromobiphenyl[C], Decachlorobiphenyl [C],

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Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1755	054F6101.D	23A0419-09		1	alpha-BHC [C], beta-BHC [C], gamma-BHC (Lindane) [C], Heptachlor epoxide b [C], Endosulfan I [C], Dieldrin [C], 4,4'-DDE [C], Endrin [C], Endosulfan II [C], 4,4'-DDD [C], 4,4'-DDT [C], Endrin ketone [C], Endrin aldehyde [C], cis-Chlordane [C], Hexabromobiphenyl[C], Tetrachloro-m-xylene [C], Decachlorobiphenyl [C],
1813	055F6201.D	23A0419-10		1	1Bromo-2nitrobenzene [C], alpha-BHC [C], beta-BHC [C], gamma-BHC (Lindane) [C], Aldrin [C], Heptachlor epoxide b [C], Endosulfan I [C], Dieldrin [C], 4,4'-DDE [C], Endrin [C], Endosulfan II [C], 4,4'-DDD [C], Endosulfan sulfate [C], 4,4'-DDT [C], Endrin ketone [C], Endrin aldehyde [C], trans-Chlordane [C], cis-Chlordane [C], Hexabromobip
1907	056F6501.D	23A0419-11		1	1Bromo-2nitrobenzene [C], alpha-BHC [C], beta-BHC [C], gamma-BHC (Lindane) [C], Heptachlor [C], 4,4'-DDT [C], Endrin ketone [C], Endrin aldehyde [C], Hexabromobiphenyl[C], Tetrachloro-m-xylene [C], Decachlorobiphenyl [C],
1925	057F6601.D	23A0419-12		1	1Bromo-2nitrobenzene [C], alpha-BHC [C], beta-BHC [C], delta-BHC [C], gamma-BHC (Lindane) [C], Heptachlor [C], Aldrin [C], Heptachlor epoxide b [C], Endosulfan I [C], Dieldrin [C], 4,4'-DDE [C], Endrin [C], Endosulfan II [C], 4,4'-DDD [C], Endosulfan sulfate [C], 4,4'-DDT [C], Endrin ketone [C], Endrin aldehyde [C], cis-Chlordane [C],
1943	058F6701.D	23A0420-01		1	1Bromo-2nitrobenzene [C], alpha-BHC [C], beta-BHC [C], delta-BHC [C], Heptachlor [C], Heptachlor epoxide b [C], Endosulfan I [C], Dieldrin [C], 4,4'-DDE [C], Endrin [C], Endosulfan II [C], 4,4'-DDD [C], 4,4'-DDT [C], Endrin ketone [C], Endrin aldehyde [C], trans-Chlordane [C], cis-Chlordane [C], Hexabromobiphenyl[C], Tetrachloro-m-
2001	059F6801.D	23A0420-07		1	1Bromo-2nitrobenzene [C], alpha-BHC [C], beta-BHC [C], delta-BHC [C], Heptachlor [C], Heptachlor epoxide b [C], Endosulfan I [C], Dieldrin [C], 4,4'-DDE [C], Endrin [C], Endosulfan II [C], 4,4'-DDD [C], 4,4'-DDT [C], Endrin ketone [C], Endrin aldehyde [C], cis-Chlordane [C], Hexabromobiphenyl[C], Tetrachloro-m-xylene [C], Decachlor
2019	060F6901.D	23A0420-08		1	1Bromo-2nitrobenzene [C], alpha-BHC [C], beta-BHC [C], delta-BHC [C], Heptachlor [C], Heptachlor epoxide b [C], Endosulfan I [C], Dieldrin [C], 4,4'-DDE [C], Endrin [C], Endosulfan II [C], 4,4'-DDD [C], Endosulfan sulfate [C], 4,4'-DDT [C], Endrin ketone [C], Endrin aldehyde [C], trans-Chlordane [C], cis-Chlordane [C], Hexabromobip
2037	061F7001.D	23A0420-09		1	1Bromo-2nitrobenzene [C], alpha-BHC [C], beta-BHC [C], delta-BHC [C], gamma-BHC (Lindane) [C], Heptachlor [C], Aldrin [C], Heptachlor epoxide b [C], Endosulfan I [C], Dieldrin [C], 4,4'-DDE [C], Endrin [C], Endosulfan II [C], 4,4'-DDD [C], 4,4'-DDT [C], Endrin ketone [C], Endrin aldehyde [C], trans-Chlordane [C], cis-Chlordane [C], Hex
2055	062F7101.D	BLB0422-BLK1		1	Endrin [C], Endosulfan II [C], 4,4'-DDD [C], 4,4'-DDT [C], Methoxychlor [C], Endrin ketone [C], Endrin aldehyde [C], Hexabromobiphenyl[C], Decachlorobiphenyl [C],
2113	063F7201.D	BLB0422-BS1		1	NO MANUAL INTEGRATION
2131	064F7301.D	BLB0422-BSD1		1	NO MANUAL INTEGRATION
2149	065F7401.D	BLB0422-MS1		1	1Bromo-2nitrobenzene [C], alpha-BHC [C], beta-BHC [C], delta-BHC [C], gamma-BHC (Lindane) [C], Heptachlor [C], Aldrin [C], Heptachlor epoxide b [C], Endosulfan I [C], Dieldrin [C], 4,4'-DDE [C], Endrin [C], Endosulfan II [C], 4,4'-DDD [C], Endosulfan sulfate [C], 4,4'-DDT [C], Endrin ketone [C], Endrin aldehyde [C], trans-Chlordane [C]
2207	066F7501.D	BLB0422-MSD1		1	NO MANUAL INTEGRATION

2225	067F7601.D 23B0229-02	1	1Bromo-2nitrobenzene [C], alpha-BHC [C], beta-BHC [C], delta-BHC [C], Heptachlor [C], Heptachlor epoxide b [C], Endosulfan I [C], Dieldrin [C], 4,4'-DDE [C], Endrin [C], Endosulfan II [C], 4,4'-DDD [C], Endosulfan sulfate [C], 4,4'-DDT [C], Endrin ketone [C], Endrin aldehyde [C], trans-Chlordane [C], cis-Chlordane [C], Hexabromobip
2243	068F7701.D 23B0229-03	1	1Bromo-2nitrobenzene [C], alpha-BHC [C], beta-BHC [C], delta-BHC [C], gamma-BHC (Lindane) [C], Heptachlor [C], Aldrin [C], Heptachlor epoxide b [C], Endosulfan I [C], Dieldrin [C], 4,4'-DDE [C], Endrin [C], Endosulfan II [C], 4,4'-DDD [C], Endosulfan sulfate [C], 4,4'-DDT [C], Endrin ketone [C], Endrin aldehyde [C], trans-Chlordane [C]
2301	069F7801.D 23B0229-04	1	1Bromo-2nitrobenzene [C], alpha-BHC [C], beta-BHC [C], delta-BHC [C], gamma-BHC (Lindane) [C], Heptachlor [C], Aldrin [C], Heptachlor epoxide b [C], Endosulfan I [C], Dieldrin [C], 4,4'-DDE [C], Endrin [C], Endosulfan II [C], 4,4'-DDD [C], Endosulfan sulfate [C], 4,4'-DDT [C], Endrin ketone [C], Endrin aldehyde [C], trans-Chlordane [C]
2319	070F7901.D 23B0229-05	1	1Bromo-2nitrobenzene [C], alpha-BHC [C], beta-BHC [C], delta-BHC [C], Heptachlor [C], Heptachlor epoxide b [C], Endosulfan I [C], 4,4'-DDE [C], Endrin [C], Endosulfan II [C], 4,4'-DDT [C], Endrin ketone [C], Endrin aldehyde [C], cis-Chlordane [C], Hexachlorobenzene [C], Hexabromobiphenyl[C], Tetrachloro-m-xylene [C], Decachlorobiphenyl
0013	071F8201.D 23B0229-06	1	1Bromo-2nitrobenzene [C], alpha-BHC [C], beta-BHC [C], delta-BHC [C], Heptachlor [C], Heptachlor epoxide b [C], Endosulfan I [C], Dieldrin [C], 4,4'-DDE [C], Endrin [C], Endosulfan II [C], 4,4'-DDD [C], Endosulfan sulfate [C], 4,4'-DDT [C], Endrin ketone [C], Endrin aldehyde [C], cis-Chlordane [C], Hexachlorobenzene [C], Hexabromob

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20230302.b\B20230302.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0031	072F8301.D	23B0229-08		1	NO MANUAL INTEGRATION
0048	073F8401.D	23B0276-01		1	1Bromo-2nitrobenzene [C], alpha-BHC [C], Dieldrin [C], Endrin [C], Endosulfan II [C], 4,4'-DDD [C], Endosulfan sulfate [C], 4,4'-DDT [C], Methoxychlor [C], Endrin aldehyde [C], Hexabromobiphenyl[C], Tetrachloro-m-xylene [C], Decachlorobiphenyl [C],
2358	23C03021.D	RINSE		1	NO MANUAL INTEGRATION
0016	23C03022.D	SEQ-PEM1		1	NO MANUAL INTEGRATION
0034	23C03023.D	SEQ-INDA1		1	NO MANUAL INTEGRATION
0052	23C03024.D	23A0295-04		1	1Bromo-2nitrobenzene [C], alpha-BHC [C], beta-BHC [C], delta-BHC [C], Heptachlor [C], Aldrin [C], Heptachlor epoxide b [C], Endosulfan I [C], Dieldrin [C], 4,4'-DDE [C], Endrin [C], Endosulfan II [C], 4,4'-DDD [C], 4,4'-DDT [C], Endrin ketone [C], Endrin aldehyde [C], cis-Chlordane [C], Hexachlorobenzene [C], Tetrachloro-m-xylene
0110	23C03025.D	23A0249-05		1	1Bromo-2nitrobenzene [C], alpha-BHC [C], beta-BHC [C], gamma-BHC (Lindane) [C], Heptachlor [C], Aldrin [C], Heptachlor epoxide b [C], Endosulfan I [C], Dieldrin [C], 4,4'-DDE [C], Endrin [C], Endosulfan II [C], 4,4'-DDD [C], 4,4'-DDT [C], Endrin ketone [C], Endrin aldehyde [C], cis-Chlordane [C], Hexabromobiphenyl[C], Tetrachloro-m-xylene
0128	23C03026.D	BLB0018-BLK1		1	1Bromo-2nitrobenzene [C], alpha-BHC [C], Endosulfan II [C], 4,4'-DDD [C], Endosulfan sulfate [C], 4,4'-DDT [C], Endrin ketone [C], Hexachlorobenzene [C], Hexabromobiphenyl[C], Tetrachloro-m-xylene [C], Decachlorobiphenyl [C],
0146	23C03027.D	BLB0018-BS1		1	Endosulfan II [C], Endosulfan sulfate [C], 4,4'-DDT [C], Methoxychlor [C], Endrin ketone [C], Endrin aldehyde [C], Hexabromobiphenyl[C], Decachlorobiphenyl [C],
0204	23C03028.D	BLB0018-BSD1		1	NO MANUAL INTEGRATION
0222	23C03029.D	23A0328-02		1	1Bromo-2nitrobenzene [C], alpha-BHC [C], beta-BHC [C], delta-BHC [C], gamma-BHC (Lindane) [C], Heptachlor [C], Aldrin [C], Heptachlor epoxide b [C], Endosulfan I [C], Dieldrin [C], 4,4'-DDE [C], Endrin [C], Endosulfan II [C], 4,4'-DDD [C], 4,4'-DDT [C], Endrin ketone [C], Endrin aldehyde [C], cis-Chlordane [C], Hexabromobiphenyl[C], Te

Security Status Report

Date: 09-Mar-2023 11:14

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001F3401.D	Data Locked	alfonso, 09-Mar-2023 11:14
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029F3201.D	Data Locked	alfonso, 09-Mar-2023 11:14
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23C03029.D	Data Locked	alfonso, 09-Mar-2023 11:14

Dual Column

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0106	Instrument:	ECD6
		Calibration:	FL00041

Sample Name	Lab Sample ID	Column 1 File ID	Column 2 File ID	Matrix	Analysis Date/Time
Initial Cal Check	SLC0106-ICV1	23C03073.D	23C03073.D	NA	03/07/23 09:35
Calibration Check	SLC0106-CCV1	002F1601.D	002F1601.D	NA	03/07/23 13:29
Calibration Check	SLC0106-CCV2	002F3001.D	002F3001.D	NA	03/07/23 17:41
Calibration Check	SLC0106-CCV3	002F3401.D	002F3401.D	NA	03/07/23 18:53

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SLC0106

Instrument: ECD6
Calibration ID: FL00041

Printed: 3/9/2023 1:32:25PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SLC0106-PEM2	QC		1		L002116	L000844		
SLC0106-PEM3	QC		2		L002116	L000844		
SLC0106-PEM4	QC		3		L002116	L000844		
SLC0106-CCV1	QC		4		L000845	L000844		
SLC0106-CCV2	QC		5		L000845	L000844		
SLC0106-CCV3	QC		6		L000845	L000844		
23A0417-04	8081B Pest (PSDDA)	A 04	7			L000844	Anchor QEA, LLC	
23A0417-05	8081B Pest (PSDDA)	A 04	8			L000844	Anchor QEA, LLC	
23A0417-06	8081B Pest (PSDDA)	A 04	9			L000844	Anchor QEA, LLC	
23A0417-07	8081B Pest (PSDDA)	A 04	10			L000844	Anchor QEA, LLC	
23A0417-08	8081B Pest (PSDDA)	A 04	11			L000844	Anchor QEA, LLC	
23A0417-09	8081B Pest (PSDDA)	A 04	12			L000844	Anchor QEA, LLC	
23A0417-10	8081B Pest (PSDDA)	A 04	13			L000844	Anchor QEA, LLC	
23A0417-11	8081B Pest (PSDDA)	A 04	14			L000844	Anchor QEA, LLC	
23A0417-13	8081B Pest (PSDDA)	A 04	15			L000844	Anchor QEA, LLC	
23A0417-15	8081B Pest (PSDDA)	A 04	16			L000844	Anchor QEA, LLC	
23A0419-02	8081B Pest (PSDDA)	A 04	17			L000844	Anchor QEA, LLC	
23A0419-08	8081B Pest (PSDDA)	A 04	18			L000844	Anchor QEA, LLC	
23A0419-09	8081B Pest (PSDDA)	A 04	19			L000844	Anchor QEA, LLC	
23A0419-12	8081B Pest (PSDDA)	A 04	20			L000844	Anchor QEA, LLC	
BLB0422-MS1	QC		21			L000844		

Samples Loaded By Date

Data Processed By Date

ANALYSIS SEQUENCE

SLC0106

Instrument: ECD6
Calibration ID: FL00041

Printed: 3/9/2023 1:32:25PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
BLB0422-MSD1	QC		22			L000844		
23B0229-03	8081B Pest (PSDDA)	A 02	23			L000844	Anchor QEA, LLC	
23B0229-05	8081B Pest (PSDDA)	A 02	24			L000844	Anchor QEA, LLC	
23B0229-08	8081B Pest (PSDDA)	A 02	25			L000844	Anchor QEA, LLC	
SLC0106-PEM1	QC		26		L002116	L000844		
SLC0106-ICV1	QC		27		L000845	L000844		
23A0249-05	8081B Pest (PSDDA)	A 03	28			L000844	Anchor QEA, LLC	
23A0295-04	8081B Pest (PSDDA)	A 04	29			L000844	Anchor QEA, LLC	
BLB0023-MS1	QC		30			L000844		
23A0417-01	8081B Pest (PSDDA)	A 04	31			L000844	Anchor QEA, LLC	
23A0417-02	8081B Pest (PSDDA)	A 04	32			L000844	Anchor QEA, LLC	
23A0417-03	8081B Pest (PSDDA)	A 04	33			L000844	Anchor QEA, LLC	

Samples Loaded By Date

Data Processed By Date

GC LOG SUMMARY FOR DATABATCH - \ecd6.i\20230307.b\B20230307.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	07-MAR-2023 13:11	001F1501.D	1	SEQ-PEM2	
2	07-MAR-2023 17:23	001F2901.D	1	SEQ-PEM3	
3	07-MAR-2023 18:35	001F3301.D	1	SEQ-PEM4	
4	07-MAR-2023 13:29	002F1601.D	1	SEQ-INDA2	
5	07-MAR-2023 17:41	002F3001.D	1	SEQ-INDA3	
6	07-MAR-2023 18:53	002F3401.D	1	SEQ-INDA4	
7	07-MAR-2023 11:41	009F1001.D	1	23A0417-04	
8	07-MAR-2023 11:59	010F1101.D	1	23A0417-05	
9	07-MAR-2023 12:17	011F1201.D	1	23A0417-06	
10	07-MAR-2023 12:35	012F1301.D	1	23A0417-07	
11	07-MAR-2023 12:53	013F1401.D	1	23A0417-08	
12	07-MAR-2023 13:47	014F1701.D	1	23A0417-09	
13	07-MAR-2023 14:05	015F1801.D	1	23A0417-10	
14	07-MAR-2023 14:23	016F1901.D	1	23A0417-11	
15	07-MAR-2023 14:41	017F2001.D	1	23A0417-13	
16	07-MAR-2023 14:59	018F2101.D	1	23A0417-15	
17	07-MAR-2023 15:17	019F2201.D	1	23A0419-02	
18	07-MAR-2023 15:35	020F2301.D	1	23A0419-08	
19	07-MAR-2023 15:53	021F2401.D	1	23A0419-09	
20	07-MAR-2023 16:11	022F2501.D	1	23A0419-12	
21	07-MAR-2023 16:29	023F2601.D	1	BLB0422-MS1	
22	07-MAR-2023 16:47	024F2701.D	1	BLB0422-MSD1	
23	07-MAR-2023 17:05	025F2801.D	1	23B0229-03	
24	07-MAR-2023 17:59	026F3101.D	1	23B0229-05	
25	07-MAR-2023 18:17	027F3201.D	1	23B0229-08	
26	07-MAR-2023 08:59	23C03071.D	1	RINSE	
27	07-MAR-2023 09:17	23C03072.D	1	SEQ-PEM1	
28	07-MAR-2023 09:35	23C03073.D	1	SEQ-INDA1	
29	07-MAR-2023 09:53	23C03074.D	1	23A0249-05	
30	07-MAR-2023 10:11	23C03075.D	1	23A0295-04	
31	07-MAR-2023 10:29	23C03076.D	1	BLB0023-MS1	
32	07-MAR-2023 10:47	23C03077.D	1	23A0417-01	
33	07-MAR-2023 11:05	23C03078.D	1	23A0417-02	
34	07-MAR-2023 11:23	23C03079.D	1	23A0417-03	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20230307.b

ARI Job No.: SEQ- Method: PEST.m Instrument: ecd6.i Date: 07-MAR-2023

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1311	001F1501.D	SEQ-PEM2		1	NO MANUAL INTEGRATION
1723	001F2901.D	SEQ-PEM3		1	NO MANUAL INTEGRATION
1835	001F3301.D	SEQ-PEM4		1	NO MANUAL INTEGRATION
1329	002F1601.D	SEQ-INDA2		1	NO MANUAL INTEGRATION
1741	002F3001.D	SEQ-INDA3		1	NO MANUAL INTEGRATION
1853	002F3401.D	SEQ-INDA4		1	NO MANUAL INTEGRATION
1141	009F1001.D	23A0417-04		1	1Bromo-2nitrobenzene, Hexachlorobenzene, Hexabromobiphenyl, Tetrachloro-m-xylene, Decachlorobiphenyl,
1159	010F1101.D	23A0417-05		1	1Bromo-2nitrobenzene, alpha-BHC, delta-BHC, Heptachlor, Aldrin, Heptachlor epoxide b, Endosulfan I, 4,4'-DDE, Endrin, Endosulfan II, Endosulfan sulfate, Methoxychlor, Endrin aldehyde, trans-Chlordane, cis-Chlordane, Hexabromobiphenyl, Tetrachloro-m-xylene, Decachlorobiphenyl,
1217	011F1201.D	23A0417-06		1	1Bromo-2nitrobenzene, alpha-BHC, beta-BHC, delta-BHC, gamma-BHC (Lindane), Heptachlor, Heptachlor epoxide b, 4,4'-DDE, Methoxychlor, Endrin aldehyde, trans-Chlordane, cis-Chlordane, Hexabromobiphenyl, Tetrachloro-m-xylene, Decachlorobiphenyl,
1235	012F1301.D	23A0417-07		1	1Bromo-2nitrobenzene, alpha-BHC, Endosulfan I, Dieldrin, 4,4'-DDE, Endosulfan II, Endosulfan sulfate, Methoxychlor, Endrin aldehyde, trans-Chlordane, cis-Chlordane, Hexabromobiphenyl, Tetrachloro-m-xylene, Decachlorobiphenyl,
1253	013F1401.D	23A0417-08		1	1Bromo-2nitrobenzene, Heptachlor epoxide b, Endosulfan I, Dieldrin, 4,4'-DDE, Endrin, Endosulfan II, Endosulfan sulfate, Endrin aldehyde, trans-Chlordane, cis-Chlordane, Hexabromobiphenyl, Tetrachloro-m-xylene, Decachlorobiphenyl,
1347	014F1701.D	23A0417-09		1	1Bromo-2nitrobenzene, Methoxychlor, Endrin aldehyde, Hexabromobiphenyl, Tetrachloro-m-xylene, Decachlorobiphenyl,
1405	015F1801.D	23A0417-10		1	1Bromo-2nitrobenzene, Tetrachloro-m-xylene,
1423	016F1901.D	23A0417-11		1	1Bromo-2nitrobenzene, Tetrachloro-m-xylene,
1441	017F2001.D	23A0417-13		1	NO MANUAL INTEGRATION

1459	018F2101.D 23A0417-15	1	1Bromo-2nitrobenzene,
1517	019F2201.D 23A0419-02	1	1Bromo-2nitrobenzene, alpha-BHC, beta-BHC, delta-BHC, gamma-BHC (Lindane), Heptachlor, Hexabromobiphenyl, Tetrachloro-m-xylene, Decachlorobiphenyl,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20230307.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1535	020F2301.D	23A0419-08		1	delta-BHC, Heptachlor, Aldrin, Heptachlor epoxide b, Endosulfan I, 4,4'-DDE, Endrin, Endosulfan II, Endosulfan sulfate, Methoxychlor, Endrin aldehyde, trans-Chlordane, cis-Chlordane, Hexabromobiphenyl, Decachlorobiphenyl,
1553	021F2401.D	23A0419-09		1	1Bromo-2nitrobenzene, alpha-BHC, gamma-BHC (Lindane), Tetrachloro-m-xylene,
1611	022F2501.D	23A0419-12		1	1Bromo-2nitrobenzene, alpha-BHC, beta-BHC, delta-BHC, gamma-BHC (Lindane), Heptachlor, Hexabromobiphenyl, Tetrachloro-m-xylene, Decachlorobiphenyl,
1629	023F2601.D	BLB0422-MS1		1	1Bromo-2nitrobenzene, alpha-BHC, Endosulfan II, 4,4'-DDD, Endosulfan sulfate, 4,4'-DDT, Methoxychlor, Endrin ketone, Endrin aldehyde, Hexachlorobenzene, Hexabromobiphenyl, Tetrachloro-m-xylene, Decachlorobiphenyl,
1647	024F2701.D	BLB0422-MSD1		1	1Bromo-2nitrobenzene, alpha-BHC, beta-BHC, delta-BHC, gamma-BHC (Lindane), Heptachlor, Endosulfan I, Dieldrin, 4,4'-DDE, Endosulfan II, Endosulfan sulfate, 4,4'-DDT, Methoxychlor, Endrin ketone, Endrin aldehyde, trans-Chlordane, cis-Chlordane, Hexachlorobutadiene, Hexachlorobenzene, Hexabromobip
1705	025F2801.D	23B0229-03		1	1Bromo-2nitrobenzene, alpha-BHC, beta-BHC, delta-BHC, gamma-BHC (Lindane), Heptachlor, Hexabromobiphenyl, Tetrachloro-m-xylene, Decachlorobiphenyl,
1759	026F3101.D	23B0229-05		1	1Bromo-2nitrobenzene, alpha-BHC, beta-BHC, delta-BHC, gamma-BHC (Lindane), Endosulfan I, Dieldrin, 4,4'-DDE, Endosulfan sulfate, Methoxychlor, Endrin aldehyde, cis-Chlordane, Hexachlorobutadiene, Hexabromobiphenyl, Tetrachloro-m-xylene, Decachlorobiphenyl,
1817	027F3201.D	23B0229-08		1	1Bromo-2nitrobenzene, alpha-BHC, beta-BHC, delta-BHC, gamma-BHC (Lindane), Tetrachloro-m-xylene,
0859	23C03071.D	RINSE		1	NO MANUAL INTEGRATION
0917	23C03072.D	SEQ-PEM1		1	NO MANUAL INTEGRATION
0935	23C03073.D	SEQ-INDA1		1	NO MANUAL INTEGRATION
0953	23C03074.D	23A0249-05		1	1Bromo-2nitrobenzene, Hexabromobiphenyl, Tetrachloro-m-xylene, Decachlorobiphenyl,
1011	23C03075.D	23A0295-04		1	1Bromo-2nitrobenzene, Hexabromobiphenyl, Tetrachloro-m-xylene, Decachlorobiphenyl,
1029	23C03076.D	BLB0023-MS1		1	Hexabromobiphenyl, Decachlorobiphenyl,
1047	23C03077.D	23A0417-01		1	1Bromo-2nitrobenzene, Hexabromobiphenyl, Tetrachloro-m-xylene, Decachlorobiphenyl,

1105	23C03078.D	23A0417-02	1	1Bromo-2nitrobenzene, alpha-BHC, Hexabromobiphenyl, Tetrachloro-m-xylene, Decachlorobiphenyl,
1123	23C03079.D	23A0417-03	1	1Bromo-2nitrobenzene, Hexabromobiphenyl, Tetrachloro-m-xylene, Decachlorobiphenyl,
1311	001F1501.D	SEQ-PEM2	1	4,4'-DDE [C], Endrin [C], 4,4'-DDD [C], 4,4'-DDT [C], Endrin ketone [C], Endrin aldehyde [C], Hexabromobiphenyl[C], Decachlorobiphenyl [C],

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20230307.b\B20230307.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1723	001F2901.D	SEQ-PEM3		1	Endrin [C], 4,4'-DDD [C], 4,4'-DDT [C], Endrin ketone [C], Endrin aldehyde [C], Hexabromobiphenyl[C], Decachlorobiphenyl [C],
1835	001F3301.D	SEQ-PEM4		1	4,4'-DDE [C], Endrin [C], 4,4'-DDD [C], 4,4'-DDT [C], Endrin ketone [C], Endrin aldehyde [C], Hexabromobiphenyl[C], Decachlorobiphenyl [C],
1329	002F1601.D	SEQ-INDA2		1	NO MANUAL INTEGRATION
1741	002F3001.D	SEQ-INDA3		1	NO MANUAL INTEGRATION
1853	002F3401.D	SEQ-INDA4		1	NO MANUAL INTEGRATION
1141	009F1001.D	23A0417-04		1	1Bromo-2nitrobenzene [C], alpha-BHC [C], beta-BHC [C], gamma-BHC (Lindane) [C], Heptachlor [C], Endosulfan I [C], 4,4'-DDE [C], Endrin [C], Endosulfan II [C], 4,4'-DDD [C], Endosulfan sulfate [C], 4,4'-DDT [C], Endrin ketone [C], Endrin aldehyde [C], trans-Chlordane [C], cis-Chlordane [C], Hexachlorobenzene [C], Hexabromobiphenyl[C], Tetra
1159	010F1101.D	23A0417-05		1	1Bromo-2nitrobenzene [C], alpha-BHC [C], gamma-BHC (Lindane) [C], Heptachlor [C], Endosulfan I [C], 4,4'-DDE [C], Endrin [C], Endosulfan II [C], 4,4'-DDD [C], Endosulfan sulfate [C], 4,4'-DDT [C], Methoxychlor [C], Endrin ketone [C], Endrin aldehyde [C], trans-Chlordane [C], cis-Chlordane [C], Hexabromobiphenyl[C], Tetrachloro-m-xylene [C], De
1217	011F1201.D	23A0417-06		1	Endrin [C], Endosulfan II [C], 4,4'-DDD [C], Endosulfan sulfate [C], 4,4'-DDT [C], Methoxychlor [C], Endrin ketone [C], Endrin aldehyde [C], Hexabromobiphenyl[C], Decachlorobiphenyl [C],
1235	012F1301.D	23A0417-07		1	1Bromo-2nitrobenzene [C], alpha-BHC [C], beta-BHC [C], gamma-BHC (Lindane) [C], Endosulfan I [C], 4,4'-DDE [C], Endrin [C], Endosulfan II [C], 4,4'-DDD [C], Endosulfan sulfate [C], 4,4'-DDT [C], Endrin ketone [C], trans-Chlordane [C], cis-Chlordane [C], Hexabromobiphenyl[C], Tetrachloro-m-xylene [C], Decachlorobiphenyl [C],
1253	013F1401.D	23A0417-08		1	1Bromo-2nitrobenzene [C], alpha-BHC [C], beta-BHC [C], gamma-BHC (Lindane) [C], Heptachlor epoxide b [C], Endosulfan I [C], 4,4'-DDE [C], Endrin [C], Endosulfan II [C], 4,4'-DDD [C], Endosulfan sulfate [C], 4,4'-DDT [C], Methoxychlor [C], Endrin ketone [C], Endrin aldehyde [C], trans-Chlordane [C], cis-Chlordane [C], Hexabromobiphenyl[C], Tetrachlor
1347	014F1701.D	23A0417-09		1	1Bromo-2nitrobenzene [C], alpha-BHC [C], beta-BHC [C], gamma-BHC (Lindane) [C], Endosulfan sulfate [C], Methoxychlor [C], Endrin ketone [C], Hexabromobiphenyl[C], Tetrachloro-m-xylene [C], Decachlorobiphenyl [C],
1405	015F1801.D	23A0417-10		1	1Bromo-2nitrobenzene [C], alpha-BHC [C], beta-BHC [C], gamma-BHC (Lindane) [C], Heptachlor [C], Endosulfan I [C], 4,4'-DDE [C], Endrin [C], Endosulfan II [C], Endosulfan sulfate [C], 4,4'-DDT [C], Methoxychlor [C], Endrin ketone [C], Endrin aldehyde [C], trans-Chlordane [C], Hexabromobiphenyl[C], Tetrachloro-m-xylene [C], Decachlorobiphenyl [C
1423	016F1901.D	23A0417-11		1	1Bromo-2nitrobenzene [C], alpha-BHC [C], beta-BHC [C], gamma-BHC (Lindane) [C], Heptachlor [C], Endosulfan I [C],

			4,4'-DDE [C], Endrin [C], Endosulfan II [C], 4,4'-DDD [C], Endosulfan sulfate [C], 4,4'-DDT [C], Methoxychlor [C], Endrin ketone [C], Endrin aldehyde [C], trans-Chlordane [C], cis-Chlordane [C], Hexabromobiphenyl[C], Tetrachlor
1441	017F2001.D 23A0417-13	1	1Bromo-2nitrobenzene [C], alpha-BHC [C], beta-BHC [C], gamma-BHC (Lindane) [C], Heptachlor [C], Heptachlor epoxide b [C], Endosulfan I [C], 4,4'-DDE [C], Endrin [C], Endosulfan II [C], 4,4'-DDD [C], Endosulfan sulfate [C], 4,4'-DDT [C], Methoxychlor [C], Endrin ketone [C], Endrin aldehyde [C], trans-Chlordane [C], cis-Chlordane [C], Hexabromobiphenyl[
1459	018F2101.D 23A0417-15	1	1Bromo-2nitrobenzene [C], alpha-BHC [C], beta-BHC [C], delta-BHC [C], gamma-BHC (Lindane) [C], Heptachlor [C], Aldrin [C], Heptachlor epoxide b [C], Endosulfan I [C], 4,4'-DDE [C], Endrin [C], Endosulfan II [C], 4,4'-DDD [C], Endosulfan sulfate [C], 4,4'-DDT [C], Methoxychlor [C], Endrin ketone [C], Endrin aldehyde [C], trans-Chlordane [C],
1517	019F2201.D 23A0419-02	1	1Bromo-2nitrobenzene [C], alpha-BHC [C], beta-BHC [C], gamma-BHC (Lindane) [C], Endosulfan II [C], Endosulfan sulfate [C], 4,4'-DDT [C], Methoxychlor [C], Endrin ketone [C], Endrin aldehyde [C], Hexabromobiphenyl[C], Tetrachloro-m-xylene [C], Decachlorobiphenyl [C],
1535	020F2301.D 23A0419-08	1	Aldrin [C], Heptachlor epoxide b [C], Endosulfan I [C], 4,4'-DDE [C], Endrin [C], Endosulfan II [C], 4,4'-DDD [C], Endosulfan sulfate [C], 4,4'-DDT [C], Methoxychlor [C], Endrin ketone [C], Endrin aldehyde [C], trans-Chlordane [C], cis-Chlordane [C], Hexabromobiphenyl[C], Decachlorobiphenyl [C],
1553	021F2401.D 23A0419-09	1	1Bromo-2nitrobenzene [C], Hexabromobiphenyl[C], Tetrachloro-m-xylene [C], Decachlorobiphenyl [C],

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20230307.b\B20230307.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1611	022F2501.D	23A0419-12		1	1Bromo-2nitrobenzene [C], alpha-BHC [C], Hexabromobiphenyl[C], Tetrachloro-m-xylene [C], Decachlorobiphenyl [C],
1629	023F2601.D	BLB0422-MS1		1	1Bromo-2nitrobenzene [C], Hexachlorobenzene [C], Hexabromobiphenyl[C], Tetrachloro-m-xylene [C], Decachlorobiphenyl [C],
1647	024F2701.D	BLB0422-MSD1		1	1Bromo-2nitrobenzene [C], Hexachlorobenzene [C], Hexabromobiphenyl[C], Tetrachloro-m-xylene [C], Decachlorobiphenyl [C],
1705	025F2801.D	23B0229-03		1	1Bromo-2nitrobenzene [C], Hexabromobiphenyl[C], Tetrachloro-m-xylene [C], Decachlorobiphenyl [C],
1759	026F3101.D	23B0229-05		1	1Bromo-2nitrobenzene [C], Hexabromobiphenyl[C], Tetrachloro-m-xylene [C], Decachlorobiphenyl [C],
1817	027F3201.D	23B0229-08		1	1Bromo-2nitrobenzene [C], Hexabromobiphenyl[C], Tetrachloro-m-xylene [C], Decachlorobiphenyl [C],
0859	23C03071.D	RINSE		1	NO MANUAL INTEGRATION
0917	23C03072.D	SEQ-PEM1		1	NO MANUAL INTEGRATION
0935	23C03073.D	SEQ-INDA1		1	NO MANUAL INTEGRATION
0953	23C03074.D	23A0249-05		1	1Bromo-2nitrobenzene [C], Hexabromobiphenyl[C], Tetrachloro-m-xylene [C], Decachlorobiphenyl [C],
1011	23C03075.D	23A0295-04		1	1Bromo-2nitrobenzene [C], Hexabromobiphenyl[C], Tetrachloro-m-xylene [C], Decachlorobiphenyl [C],
1029	23C03076.D	BLB0023-MS1		1	1Bromo-2nitrobenzene [C], Hexachlorobenzene [C], Hexabromobiphenyl[C], Tetrachloro-m-xylene [C], Decachlorobiphenyl [C],
1047	23C03077.D	23A0417-01		1	1Bromo-2nitrobenzene [C], Hexachlorobenzene [C], Hexabromobiphenyl[C], Tetrachloro-m-xylene [C], Decachlorobiphenyl [C],
1105	23C03078.D	23A0417-02		1	1Bromo-2nitrobenzene [C], Hexabromobiphenyl[C], Tetrachloro-m-xylene [C], Decachlorobiphenyl [C],
1123	23C03079.D	23A0417-03		1	1Bromo-2nitrobenzene [C], Hexabromobiphenyl[C], Tetrachloro-m-xylene [C], Decachlorobiphenyl [C],

Security Status Report

Date: 09-Mar-2023 13:33

001F1501.D	Data Locked	alfonso, 09-Mar-2023 13:33
001F2901.D	Data Locked	alfonso, 09-Mar-2023 13:33
001F3301.D	Data Locked	alfonso, 09-Mar-2023 13:33
002F1601.D	Data Locked	alfonso, 09-Mar-2023 13:33
002F3001.D	Data Locked	alfonso, 09-Mar-2023 13:33
002F3401.D	Data Locked	alfonso, 09-Mar-2023 13:33
009F1001.D	Data Locked	alfonso, 09-Mar-2023 13:33
010F1101.D	Data Locked	alfonso, 09-Mar-2023 13:33
011F1201.D	Data Locked	alfonso, 09-Mar-2023 13:33
012F1301.D	Data Locked	alfonso, 09-Mar-2023 13:33
013F1401.D	Data Locked	alfonso, 09-Mar-2023 13:33
014F1701.D	Data Locked	alfonso, 09-Mar-2023 13:33
015F1801.D	Data Locked	alfonso, 09-Mar-2023 13:33
016F1901.D	Data Locked	alfonso, 09-Mar-2023 13:33
017F2001.D	Data Locked	alfonso, 09-Mar-2023 13:33
018F2101.D	Data Locked	alfonso, 09-Mar-2023 13:33
019F2201.D	Data Locked	alfonso, 09-Mar-2023 13:33
020F2301.D	Data Locked	alfonso, 09-Mar-2023 13:33
021F2401.D	Data Locked	alfonso, 09-Mar-2023 13:33
022F2501.D	Data Locked	alfonso, 09-Mar-2023 13:33
023F2601.D	Data Locked	alfonso, 09-Mar-2023 13:33
024F2701.D	Data Locked	alfonso, 09-Mar-2023 13:33
025F2801.D	Data Locked	alfonso, 09-Mar-2023 13:33
026F3101.D	Data Locked	alfonso, 09-Mar-2023 13:33
027F3201.D	Data Locked	alfonso, 09-Mar-2023 13:33
23C03071.D	Data Locked	alfonso, 09-Mar-2023 13:33
23C03072.D	Data Locked	alfonso, 09-Mar-2023 13:33
23C03073.D	Data Locked	alfonso, 09-Mar-2023 13:33
23C03074.D	Data Locked	alfonso, 09-Mar-2023 13:33
23C03075.D	Data Locked	alfonso, 09-Mar-2023 13:33
23C03076.D	Data Locked	alfonso, 09-Mar-2023 13:33
23C03077.D	Data Locked	alfonso, 09-Mar-2023 13:33
23C03078.D	Data Locked	alfonso, 09-Mar-2023 13:33
23C03079.D	Data Locked	alfonso, 09-Mar-2023 13:33

Dual Column

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8081B

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLC0442
Instrument: ECD6
Calibration: FL00041

Sample Name	Lab Sample ID	Column 1 File ID	Column 2 File ID	Matrix	Analysis Date/Time
Performance Mix	SLC0442-PEM1	23032405.D	23032405.D	NA	03/24/23 17:09
Initial Cal Check	SLC0442-ICV1	23032406.D	23032406.D	NA	03/24/23 17:27
Performance Mix	SLC0442-PEM2	23032422.D	23032422.D	NA	03/24/23 22:13
Calibration Check	SLC0442-CCV1	23032423.D	23032423.D	NA	03/24/23 22:31
Performance Mix	SLC0442-PEM3	23032437.D	23032437.D	NA	03/25/23 02:42
Calibration Check	SLC0442-CCV3	23032438.D	23032438.D	NA	03/25/23 03:00
Blank	BLC0155-BLK1	23032450.D	23032450.D	Solid	03/25/23 06:35
LCS	BLC0155-BS1	23032451.D	23032451.D	Solid	03/25/23 06:53
LCS Dup	BLC0155-BSD1	23032452.D	23032452.D	Solid	03/25/23 07:11
MRL Check	BLC0155-MRL1	23032453.D	23032453.D	Solid	03/25/23 07:28
LDW23-SC1150B	23B0276-01RE1	23032454.D	23032454.D	Solid	03/25/23 07:46
LDW23-SC1150B	BLC0155-MS1	23032455.D	23032455.D	Solid	03/25/23 08:04
LDW23-SC1150B	BLC0155-MSD1	23032456.D	23032456.D	Solid	03/25/23 08:22
Performance Mix	SLC0442-PEM4	23032457.D	23032457.D	NA	03/25/23 08:40
Calibration Check	SLC0442-CCV4	23032458.D	23032458.D	NA	03/25/23 08:58

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SLC0442

Instrument: ECD6
Calibration ID: FL00041

Printed: 3/28/2023 3:15:01PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SLC0442-PEM1	QC		1		L002116	L000844		
SLC0442-ICV1	QC		2		L000845	L000844		
SLC0442-PEM2	QC		3		L002116	L000844		
SLC0442-CCV1	QC		4		L000845	L000844		
BLC0183-BLK1	QC		5			L000844		
BLC0183-BS1	QC		6			L000844		
BLC0183-BSD1	QC		7			L000844		
23C0108-02	8081B Pest (PSDDA)	A 01	8			L000844	Anchor QEA, LLC	
BLC0183-MS1	QC		9			L000844		
BLC0183-MSD1	QC		10			L000844		
23C0108-06	8081B Pest (PSDDA)	A 01	11			L000844	Anchor QEA, LLC	
23C0108-07	8081B Pest (PSDDA)	A 01	12			L000844	Anchor QEA, LLC	
23C0108-08	8081B Pest (PSDDA)	A 01	13			L000844	Anchor QEA, LLC	
23C0108-09	8081B Pest (PSDDA)	A 01	14			L000844	Anchor QEA, LLC	
23C0109-02	8081B Pest (PSDDA)	A 01	15			L000844	Anchor QEA, LLC	
23C0109-03	8081B Pest (PSDDA)	A 01	16			L000844	Anchor QEA, LLC	
SLC0442-PEM3	QC		17		L002116	L000844		
SLC0442-CCV3	QC		18		L000845	L000844		
BLC0107-BLK1	QC		19			L000844		
BLC0107-BS1	QC		20			L000844		
BLC0107-BSD1	QC		21			L000844		

Samples Loaded By Date

Data Processed By Date

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SLC0442

Instrument: ECD6
Calibration ID: FL00041

Printed: 3/28/2023 3:15:01PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
23C0071-01	8081B Pest (PSDDA)	A 01	22			L000844	Anchor QEA, LLC	
23C0071-02	8081B Pest (PSDDA)	A 01	23			L000844	Anchor QEA, LLC	
23C0071-03	8081B Pest (PSDDA)	A 01	24			L000844	Anchor QEA, LLC	
23C0071-04	8081B Pest (PSDDA)	A 01	25			L000844	Anchor QEA, LLC	
23C0071-05	8081B Pest (PSDDA)	A 01	26			L000844	Anchor QEA, LLC	
23C0071-06	8081B Pest (PSDDA)	A 01	27			L000844	Anchor QEA, LLC	
BLC0107-MS1	QC		28			L000844		
BLC0107-MSD1	QC		29			L000844		
BLC0155-BLK1	QC		30			L000844		
BLC0155-BS1	QC		31			L000844		
BLC0155-BSD1	QC		32			L000844		
BLC0155-MRL1	QC		33			L000844		
23B0276-01RE1	8081B Pest (PSDDA)	A 02	34			L000844	Anchor QEA, LLC	From BLB0422 by CTO on 07-Mar-20
BLC0155-MS1	QC		35			L000844		
BLC0155-MSD1	QC		36			L000844		
SLC0442-PEM4	QC		37		L002116	L000844		
SLC0442-CCV4	QC		38		L000845	L000844		

Samples Loaded By Date

Data Processed By Date

GC LOG SUMMARY FOR DATABATCH - \ecd6.i\20230324.b\B20230324.b

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1	24-MAR-2023 15:50	23032401.D	1	RINSE	
2	24-MAR-2023 16:08	23032402.D	1	SEQ-PEM1	
3	24-MAR-2023 16:26	23032403.D	1	SEQ-ICV1INDA1	
4	24-MAR-2023 16:51	23032404.D	1	SEQ-PEM1	
5	24-MAR-2023 17:09	23032405.D	1	SEQ-PEM1	
6	24-MAR-2023 17:27	23032406.D	1	SEQ-ICV1INDA1	
7	24-MAR-2023 17:45	23032407.D	1	SEQ-ICV2WNDA1	
8	24-MAR-2023 18:02	23032408.D	1	CLC0059-GPC2	
9	24-MAR-2023 18:20	23032409.D	1	CLC0059-GPC3	
10	24-MAR-2023 18:38	23032410.D	1	BLC0116-BLK1	
11	24-MAR-2023 18:56	23032411.D	1	BLC0116-BS1	
12	24-MAR-2023 19:14	23032412.D	1	BLC0116-BSD1	
13	24-MAR-2023 19:32	23032413.D	1	23C0035-01	
14	24-MAR-2023 19:50	23032414.D	1	BLC0300-BLK1	
15	24-MAR-2023 20:08	23032415.D	1	BLC0300-BS1	
16	24-MAR-2023 20:26	23032416.D	1	23C0258-01	
17	24-MAR-2023 20:44	23032417.D	1	BLC0300-MS1	
18	24-MAR-2023 21:02	23032418.D	1	BLC0300-MSD1	
19	24-MAR-2023 21:20	23032419.D	1	23C0258-02	
20	24-MAR-2023 21:38	23032420.D	1	23C0258-03	
21	24-MAR-2023 21:56	23032421.D	1	23C0258-04	
22	24-MAR-2023 22:13	23032422.D	1	SEQ-PEM2	
23	24-MAR-2023 22:31	23032423.D	1	SEQ-CCV1INDA1	
24	24-MAR-2023 22:49	23032424.D	1	SEQ-CCV2WNDA1	
25	24-MAR-2023 23:07	23032425.D	1	BLC0183-BLK1	
26	24-MAR-2023 23:25	23032426.D	1	BLC0183-BS1	
27	24-MAR-2023 23:43	23032427.D	1	BLC0183-BSD1	
28	25-MAR-2023 00:01	23032428.D	1	23C0108-02	
29	25-MAR-2023 00:19	23032429.D	1	BLC0183-MS1	
30	25-MAR-2023 00:36	23032430.D	1	BLC0183-MSD1	
31	25-MAR-2023 00:54	23032431.D	1	23C0108-06	
32	25-MAR-2023 01:12	23032432.D	1	23C0108-07	
33	25-MAR-2023 01:30	23032433.D	1	23C0108-08	
34	25-MAR-2023 01:48	23032434.D	1	23C0108-09	
35	25-MAR-2023 02:06	23032435.D	1	23C0109-02	
36	25-MAR-2023 02:24	23032436.D	1	23C0109-03	
37	25-MAR-2023 02:42	23032437.D	1	SEQ-PEM3	
38	25-MAR-2023 03:00	23032438.D	1	SEQ-CCV1INDA2	
39	25-MAR-2023 03:18	23032439.D	1	BLC0107-BLK1	
40	25-MAR-2023 03:35	23032440.D	1	BLC0107-BS1	
41	25-MAR-2023 03:53	23032441.D	1	BLC0107-BSD1	
42	25-MAR-2023 04:11	23032442.D	1	23C0071-01	
43	25-MAR-2023 04:29	23032443.D	1	23C0071-02	
44	25-MAR-2023 04:47	23032444.D	1	23C0071-03	
45	25-MAR-2023 05:05	23032445.D	1	23C0071-04	
46	25-MAR-2023 05:23	23032446.D	1	23C0071-05	
47	25-MAR-2023 05:41	23032447.D	1	23C0071-06	
48	25-MAR-2023 05:59	23032448.D	1	BLC0107-MS1	
49	25-MAR-2023 06:17	23032449.D	1	BLC0107-MSD1	
50	25-MAR-2023 06:35	23032450.D	1	BLC0155-BLK1	

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20230324.b\B20230324.

	Inject Date/Time	Filename	DF	LabID	ClientID
51	25-MAR-2023 06:53	23032451.D	1	BLC0155-BS1	
52	25-MAR-2023 07:11	23032452.D	1	BLC0155-BSD1	
53	25-MAR-2023 07:28	23032453.D	1	BLC0155-MRL1	
54	25-MAR-2023 07:46	23032454.D	1	23B0276-01	
55	25-MAR-2023 08:04	23032455.D	1	BLC0155-MS1	
56	25-MAR-2023 08:22	23032456.D	1	BLC0155-MSD1	
57	25-MAR-2023 08:40	23032457.D	1	SEQ-PEM4	
58	25-MAR-2023 08:58	23032458.D	1	SEQ-CCV1INDA3	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20230324.b

ARI Job No.: RINS Method: PEST.m Instrument: ecd6.i Date: 24-MAR-2023

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1550	23032401.D	RINSE		1	NO MANUAL INTEGRATION
1608	23032402.D	SEQ-PEM1		1	NO MANUAL INTEGRATION
1626	23032403.D	SEQ-ICV1INDA1		1	NO MANUAL INTEGRATION
1651	23032404.D	SEQ-PEM1		1	NO MANUAL INTEGRATION
1709	23032405.D	SEQ-PEM1		1	NO MANUAL INTEGRATION
1727	23032406.D	SEQ-ICV1INDA1		1	NO MANUAL INTEGRATION
1745	23032407.D	SEQ-ICV2WNDA1		1	NO MANUAL INTEGRATION
1802	23032408.D	CLC0059-GPC2		1	NO MANUAL INTEGRATION
1820	23032409.D	CLC0059-GPC3		1	NO MANUAL INTEGRATION
1838	23032410.D	BLC0116-BLK1		1	Hexachlorobutadiene,
1856	23032411.D	BLC0116-BS1		1	1Bromo-2nitrobenzene, alpha-BHC, beta-BHC, delta-BHC, gamma-BHC (Lindane), Heptachlor, Aldrin, Hexachlorobutadiene, Hexachlorobenzene, Tetrachloro-m-xylene,
1914	23032412.D	BLC0116-BSD1		1	1Bromo-2nitrobenzene, alpha-BHC, beta-BHC, delta-BHC, gamma-BHC (Lindane), Hexachlorobutadiene, Hexachlorobenzene, Tetrachloro-m-xylene,
1932	23032413.D	23C0035-01		1	1Bromo-2nitrobenzene, Aldrin, Endosulfan I, Oxychlordane, Tetrachloro-m-xylene,
1950	23032414.D	BLC0300-BLK1		1	1Bromo-2nitrobenzene, Hexachlorobenzene, Tetrachloro-m-xylene,
2008	23032415.D	BLC0300-BS1		1	1Bromo-2nitrobenzene, alpha-BHC, beta-BHC, delta-BHC, gamma-BHC (Lindane), Heptachlor, Hexachlorobutadiene, Hexachlorobenzene, Tetrachloro-m-xylene,
2026	23032416.D	23C0258-01		1	1Bromo-2nitrobenzene, cis-Chlordane, Tetrachloro-m-xylene,
2044	23032417.D	BLC0300-MS1		1	1Bromo-2nitrobenzene, alpha-BHC, beta-BHC, delta-BHC, gamma-BHC (Lindane), Heptachlor, Aldrin, Hexachlorobutadiene, Hexachlorobenzene, Tetrachloro-m-xylene,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20230324.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2102	23032418.D	BLC0300-MSD1		1	1Bromo-2nitrobenzene, Hexachlorobutadiene,
2120	23032419.D	23C0258-02		1	1Bromo-2nitrobenzene, Heptachlor epoxide b, cis-Chlordane, Tetrachloro-m-xylene,
2138	23032420.D	23C0258-03		1	1Bromo-2nitrobenzene, trans-Chlordane, cis-Chlordane, Tetrachloro-m-xylene,
2156	23032421.D	23C0258-04		1	1Bromo-2nitrobenzene, Endrin ketone, Tetrachloro-m-xylene,
2213	23032422.D	SEQ-PEM2		1	NO MANUAL INTEGRATION
2231	23032423.D	SEQ-CCV1INDA1		1	NO MANUAL INTEGRATION
2249	23032424.D	SEQ-CCV2WNDA1		1	NO MANUAL INTEGRATION
2307	23032425.D	BLC0183-BLK1		1	NO MANUAL INTEGRATION
2325	23032426.D	BLC0183-BS1		1	1Bromo-2nitrobenzene, Hexachlorobenzene, Tetrachloro-m-xylene,
2343	23032427.D	BLC0183-BSD1		1	1Bromo-2nitrobenzene, Hexachlorobenzene, Tetrachloro-m-xylene,
0001	23032428.D	23C0108-02		1	1Bromo-2nitrobenzene, Hexachlorobenzene, Tetrachloro-m-xylene,
0019	23032429.D	BLC0183-MS1		1	1Bromo-2nitrobenzene, Hexachlorobenzene, Tetrachloro-m-xylene,
0036	23032430.D	BLC0183-MSD1		1	1Bromo-2nitrobenzene, Hexachlorobenzene, Tetrachloro-m-xylene,
0054	23032431.D	23C0108-06		1	1Bromo-2nitrobenzene, Hexachlorobenzene, Tetrachloro-m-xylene,
0112	23032432.D	23C0108-07		1	1Bromo-2nitrobenzene, Hexachlorobenzene, Tetrachloro-m-xylene,
0130	23032433.D	23C0108-08		1	1Bromo-2nitrobenzene, Hexachlorobenzene, Tetrachloro-m-xylene,
0148	23032434.D	23C0108-09		1	1Bromo-2nitrobenzene, Hexachlorobenzene, Tetrachloro-m-xylene,
0206	23032435.D	23C0109-02		1	1Bromo-2nitrobenzene, Hexachlorobenzene, Tetrachloro-m-xylene,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20230324.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0224	23032436.D	23C0109-03		1	1Bromo-2nitrobenzene, Hexachlorobenzene, Tetrachloro-m-xylene,
0242	23032437.D	SEQ-PEM3		1	NO MANUAL INTEGRATION
0300	23032438.D	SEQ-CCV1INDA2		1	NO MANUAL INTEGRATION
0318	23032439.D	BLC0107-BLK1		1	NO MANUAL INTEGRATION
0335	23032440.D	BLC0107-BS1		1	1Bromo-2nitrobenzene, Hexachlorobenzene, Tetrachloro-m-xylene,
0353	23032441.D	BLC0107-BSD1		1	1Bromo-2nitrobenzene, Hexachlorobenzene, Tetrachloro-m-xylene,
0411	23032442.D	23C0071-01		1	1Bromo-2nitrobenzene, Hexachlorobenzene, Tetrachloro-m-xylene,
0429	23032443.D	23C0071-02		1	1Bromo-2nitrobenzene, Hexachlorobenzene, Tetrachloro-m-xylene,
0447	23032444.D	23C0071-03		1	1Bromo-2nitrobenzene, Hexachlorobenzene, Tetrachloro-m-xylene,
0505	23032445.D	23C0071-04		1	1Bromo-2nitrobenzene, Hexachlorobenzene, Tetrachloro-m-xylene,
0523	23032446.D	23C0071-05		1	1Bromo-2nitrobenzene, Hexachlorobenzene, Tetrachloro-m-xylene,
0541	23032447.D	23C0071-06		1	1Bromo-2nitrobenzene, Hexachlorobenzene, Tetrachloro-m-xylene,
0559	23032448.D	BLC0107-MS1		1	1Bromo-2nitrobenzene, Hexachlorobenzene, Tetrachloro-m-xylene,
0617	23032449.D	BLC0107-MSD1		1	1Bromo-2nitrobenzene, Hexachlorobenzene, Tetrachloro-m-xylene,
0635	23032450.D	BLC0155-BLK1		1	1Bromo-2nitrobenzene, Tetrachloro-m-xylene,
0653	23032451.D	BLC0155-BS1		1	1Bromo-2nitrobenzene, Tetrachloro-m-xylene,
0711	23032452.D	BLC0155-BSD1		1	1Bromo-2nitrobenzene, Hexachlorobenzene, Tetrachloro-m-xylene,
0728	23032453.D	BLC0155-MRL1		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20230324.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0746	23032454.D	23B0276-01		1	1Bromo-2nitrobenzene, Hexachlorobenzene,
0804	23032455.D	BLC0155-MS1		1	1Bromo-2nitrobenzene, Hexachlorobenzene, Tetrachloro-m-xylene,
0822	23032456.D	BLC0155-MSD1		1	1Bromo-2nitrobenzene, Hexachlorobenzene, Tetrachloro-m-xylene,
0840	23032457.D	SEQ-PEM4		1	NO MANUAL INTEGRATION
0858	23032458.D	SEQ-CCV1INDA3		1	NO MANUAL INTEGRATION
1550	23032401.D	RINSE		1	NO MANUAL INTEGRATION
1608	23032402.D	SEQ-PEM1		1	NO MANUAL INTEGRATION
1626	23032403.D	SEQ-ICV1INDA1		1	NO MANUAL INTEGRATION
1651	23032404.D	SEQ-PEM1		1	NO MANUAL INTEGRATION
1709	23032405.D	SEQ-PEM1		1	NO MANUAL INTEGRATION
1727	23032406.D	SEQ-ICV1INDA1		1	NO MANUAL INTEGRATION
1745	23032407.D	SEQ-ICV2WNDA1		1	NO MANUAL INTEGRATION
1802	23032408.D	CLC0059-GPC2		1	NO MANUAL INTEGRATION
1820	23032409.D	CLC0059-GPC3		1	NO MANUAL INTEGRATION
1838	23032410.D	BLC0116-BLK1		1	NO MANUAL INTEGRATION
1856	23032411.D	BLC0116-BS1		1	1Bromo-2nitrobenzene [C], alpha-BHC [C], beta-BHC [C], gamma-BHC (Lindane) [C], Hexachlorobenzene [C], Tetrachloro-m-xylene [C],
1914	23032412.D	BLC0116-BSD1		1	1Bromo-2nitrobenzene [C], alpha-BHC [C], Hexachlorobenzene [C], Tetrachloro-m-xylene [C],
1932	23032413.D	23C0035-01		1	Endosulfan I [C], Dieldrin [C], 4,4'-DDT [C], Methoxychlor [C], Endrin ketone [C], Oxychlordane [C], Decachlorobiphenyl [C],

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20230324.b\B20230324.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1950	23032414.D	BLC0300-BLK1		1	1Bromo-2nitrobenzene [C], Hexabromobiphenyl[C], Tetrachloro-m-xylene [C], Decachlorobiphenyl [C],
2008	23032415.D	BLC0300-BS1		1	1Bromo-2nitrobenzene [C], Tetrachloro-m-xylene [C],
2026	23032416.D	23C0258-01		1	1Bromo-2nitrobenzene [C], Tetrachloro-m-xylene [C],
2044	23032417.D	BLC0300-MS1		1	1Bromo-2nitrobenzene [C], alpha-BHC [C], Hexachlorobenzene [C], Tetrachloro-m-xylene [C],
2102	23032418.D	BLC0300-MSD1		1	NO MANUAL INTEGRATION
2120	23032419.D	23C0258-02		1	1Bromo-2nitrobenzene [C], Heptachlor epoxide b [C], Tetrachloro-m-xylene [C],
2138	23032420.D	23C0258-03		1	1Bromo-2nitrobenzene [C], Tetrachloro-m-xylene [C],
2156	23032421.D	23C0258-04		1	1Bromo-2nitrobenzene [C], Tetrachloro-m-xylene [C],
2213	23032422.D	SEQ-PEM2		1	NO MANUAL INTEGRATION
2231	23032423.D	SEQ-CCV1INDA1		1	NO MANUAL INTEGRATION
2249	23032424.D	SEQ-CCV2WNDA1		1	NO MANUAL INTEGRATION
2307	23032425.D	BLC0183-BLK1		1	NO MANUAL INTEGRATION
2325	23032426.D	BLC0183-BS1		1	1Bromo-2nitrobenzene [C], Tetrachloro-m-xylene [C],
2343	23032427.D	BLC0183-BSD1		1	1Bromo-2nitrobenzene [C],
0001	23032428.D	23C0108-02		1	1Bromo-2nitrobenzene [C], Tetrachloro-m-xylene [C],
0019	23032429.D	BLC0183-MS1		1	1Bromo-2nitrobenzene [C], Hexachlorobenzene [C], Tetrachloro-m-xylene [C],
0036	23032430.D	BLC0183-MSD1		1	NO MANUAL INTEGRATION
0054	23032431.D	23C0108-06		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20230324.b\B20230324.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0112	23032432.D	23C0108-07		1	Hexachlorobenzene [C],
0130	23032433.D	23C0108-08		1	NO MANUAL INTEGRATION
0148	23032434.D	23C0108-09		1	Hexachlorobenzene [C],
0206	23032435.D	23C0109-02		1	Hexachlorobenzene [C],
0224	23032436.D	23C0109-03		1	Hexachlorobenzene [C],
0242	23032437.D	SEQ-PEM3		1	NO MANUAL INTEGRATION
0300	23032438.D	SEQ-CCV1INDA2		1	NO MANUAL INTEGRATION
0318	23032439.D	BLC0107-BLK1		1	NO MANUAL INTEGRATION
0335	23032440.D	BLC0107-BS1		1	NO MANUAL INTEGRATION
0353	23032441.D	BLC0107-BSD1		1	NO MANUAL INTEGRATION
0411	23032442.D	23C0071-01		1	NO MANUAL INTEGRATION
0429	23032443.D	23C0071-02		1	NO MANUAL INTEGRATION
0447	23032444.D	23C0071-03		1	NO MANUAL INTEGRATION
0505	23032445.D	23C0071-04		1	NO MANUAL INTEGRATION
0523	23032446.D	23C0071-05		1	NO MANUAL INTEGRATION
0541	23032447.D	23C0071-06		1	NO MANUAL INTEGRATION
0559	23032448.D	BLC0107-MS1		1	NO MANUAL INTEGRATION
0617	23032449.D	BLC0107-MSD1		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20230324.b\B20230324.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0635	23032450.D	BLC0155-BLK1		1	NO MANUAL INTEGRATION
0653	23032451.D	BLC0155-BS1		1	NO MANUAL INTEGRATION
0711	23032452.D	BLC0155-BSD1		1	NO MANUAL INTEGRATION
0728	23032453.D	BLC0155-MRL1		1	NO MANUAL INTEGRATION
0746	23032454.D	23B0276-01		1	NO MANUAL INTEGRATION
0804	23032455.D	BLC0155-MS1		1	Hexachlorobenzene [C],
0822	23032456.D	BLC0155-MSD1		1	NO MANUAL INTEGRATION
0840	23032457.D	SEQ-PEM4		1	NO MANUAL INTEGRATION
0858	23032458.D	SEQ-CCV1INDA3		1	NO MANUAL INTEGRATION

Security Status Report

Date: 28-Mar-2023 15:17

23032401.D	Data Locked	alfonso, 28-Mar-2023 15:17
23032402.D	Data Locked	alfonso, 28-Mar-2023 15:17
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23032458.D	Data Locked	alfonso, 28-Mar-2023 15:17

SURROGATE RECOVERY AND RT SUMMARY
EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG/WO:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SKL0233	Instrument:	ECD6
Calibration:	FL00041	Calibration Date:	12/15/2022

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SKL0233-PEM1 (Water)				Lab File ID: 22121404.D			Analyzed: 12/14/22 20:20	
Decachlorobiphenyl	160.00	83.0	0 - 200	9.355	9.354666	0.0003	+/-0.1	
Decachlorobiphenyl [2C]	160.00	83.5	0 - 200	10.466	10.4655	0.0005	+/-0.1	
Tetrachlorometaxylene	160.00	78.1	0 - 200	3.828	3.827833	0.0002	+/-0.1	
Tetrachlorometaxylene [2C]	160.00	83.5	0 - 200	4.22	4.219666	0.0003	+/-0.1	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8081B

Laboratory: Analytical Resources, LLC
SDG/WO: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLC0093
Instrument: ECD6
Calibration: FL00041
Calibration Date: 12/14/2022

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SLC0093-ICV1 (Solid)				Lab File ID: 23C03023.D			Analyzed: 03/03/23 00:34	
Decachlorobiphenyl	40.000	94.8	80 - 120	9.437	9.354666	0.0823	+/-0.1	
Decachlorobiphenyl [2C]	40.000	95.0	80 - 120	10.402	10.4655	-0.0635	+/-0.1	
Tetrachlorometaxylene	40.000	92.5	80 - 120	3.871	3.827833	0.0432	+/-0.1	
Tetrachlorometaxylene [2C]	40.000	91.8	80 - 120	4.195	4.219666	-0.0247	+/-0.1	
SLC0093-CCV1 (Solid)				Lab File ID: 002F1801.D			Analyzed: 03/03/23 05:03	
Decachlorobiphenyl	40.000	90.8	80 - 120	9.434	9.354666	0.0793	+/-0.1	
Decachlorobiphenyl [2C]	40.000	90.3	80 - 120	10.399	10.4655	-0.0665	+/-0.1	
Tetrachlorometaxylene	40.000	94.0	80 - 120	3.869	3.827833	0.0412	+/-0.1	
Tetrachlorometaxylene [2C]	40.000	91.5	80 - 120	4.193	4.219666	-0.0267	+/-0.1	
SLC0093-CCV2 (Solid)				Lab File ID: 002F3501.D			Analyzed: 03/03/23 10:08	
Decachlorobiphenyl	40.000	93.0	80 - 120	9.435	9.354666	0.0803	+/-0.1	
Decachlorobiphenyl [2C]	40.000	97.8	80 - 120	10.4	10.4655	-0.0655	+/-0.1	
Tetrachlorometaxylene	40.000	91.8	80 - 120	3.87	3.827833	0.0422	+/-0.1	
Tetrachlorometaxylene [2C]	40.000	89.0	80 - 120	4.193	4.219666	-0.0267	+/-0.1	
SLC0093-CCV3 (Solid)				Lab File ID: 002F4701.D			Analyzed: 03/03/23 13:44	
Decachlorobiphenyl	40.000	91.5	80 - 120	9.434	9.354666	0.0793	+/-0.1	
Decachlorobiphenyl [2C]	40.000	92.8	80 - 120	10.399	10.4655	-0.0665	+/-0.1	
Tetrachlorometaxylene	40.000	94.0	80 - 120	3.868	3.827833	0.0402	+/-0.1	
Tetrachlorometaxylene [2C]	40.000	91.0	80 - 120	4.193	4.219666	-0.0267	+/-0.1	
SLC0093-CCV4 (Solid)				Lab File ID: 002F6401.D			Analyzed: 03/03/23 18:49	
Decachlorobiphenyl	40.000	91.5	80 - 120	9.434	9.354666	0.0793	+/-0.1	
Decachlorobiphenyl [2C]	40.000	91.0	80 - 120	10.4	10.4655	-0.0655	+/-0.1	
Tetrachlorometaxylene	40.000	93.5	80 - 120	3.869	3.827833	0.0412	+/-0.1	
Tetrachlorometaxylene [2C]	40.000	90.5	80 - 120	4.192	4.219666	-0.0277	+/-0.1	
BLB0422-BLK1 (Solid)				Lab File ID: 062F7101.D			Analyzed: 03/03/23 20:55	
Decachlorobiphenyl	8.0000	65.6	30 - 160	9.434	9.354666	0.0793	+/-0.1	
Decachlorobiphenyl [2C]	8.0000	66.7	30 - 160	10.4	10.4655	-0.0655	+/-0.1	
Tetrachlorometaxylene	8.0000	59.1	30 - 160	3.868	3.827833	0.0402	+/-0.1	
Tetrachlorometaxylene [2C]	8.0000	58.2	30 - 160	4.192	4.219666	-0.0277	+/-0.1	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8081B

Laboratory: Analytical Resources, LLC
SDG/WO: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLC0093
Instrument: ECD6
Calibration: FL00041
Calibration Date: 12/15/2022

Surrogate Compound	Spike Level ug/kg wet	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
BLB0422-BS1 (Solid)				Lab File ID: 063F7201.D			Analyzed: 03/03/23 21:13	
Decachlorobiphenyl	8.0000	57.0	30 - 160	9.434	9.354666	0.0793	+/-0.1	
Decachlorobiphenyl [2C]	8.0000	59.2	30 - 160	10.399	10.4655	-0.0665	+/-0.1	
Tetrachlorometaxylene	8.0000	53.1	30 - 160	3.868	3.827833	0.0402	+/-0.1	
Tetrachlorometaxylene [2C]	8.0000	51.5	30 - 160	4.192	4.219666	-0.0277	+/-0.1	
BLB0422-BSD1 (Solid)				Lab File ID: 064F7301.D			Analyzed: 03/03/23 21:31	
Decachlorobiphenyl	8.0000	71.6	30 - 160	9.434	9.354666	0.0793	+/-0.1	
Decachlorobiphenyl [2C]	8.0000	75.6	30 - 160	10.399	10.4655	-0.0665	+/-0.1	
Tetrachlorometaxylene	8.0000	56.5	30 - 160	3.868	3.827833	0.0402	+/-0.1	
Tetrachlorometaxylene [2C]	8.0000	56.0	30 - 160	4.192	4.219666	-0.0277	+/-0.1	
SLC0093-CCV5 (Solid)				Lab File ID: 002F8101.D			Analyzed: 03/03/23 23:55	
Decachlorobiphenyl	40.000	90.8	80 - 120	9.434	9.354666	0.0793	+/-0.1	
Decachlorobiphenyl [2C]	40.000	90.3	80 - 120	10.399	10.4655	-0.0665	+/-0.1	
Tetrachlorometaxylene	40.000	92.8	80 - 120	3.869	3.827833	0.0412	+/-0.1	
Tetrachlorometaxylene [2C]	40.000	88.5	80 - 120	4.193	4.219666	-0.0267	+/-0.1	
SLC0093-CCV6 (Solid)				Lab File ID: 002F8601.D			Analyzed: 03/04/23 01:24	
Decachlorobiphenyl	40.000	92.0	80 - 120	9.434	9.354666	0.0793	+/-0.1	
Decachlorobiphenyl [2C]	40.000	95.8	80 - 120	10.399	10.4655	-0.0665	+/-0.1	
Tetrachlorometaxylene	40.000	93.5	80 - 120	3.87	3.827833	0.0422	+/-0.1	
Tetrachlorometaxylene [2C]	40.000	92.3	80 - 120	4.193	4.219666	-0.0267	+/-0.1	

Analytical Resources, LLC
Analytical Chemists and Consultants

SURROGATE RECOVERY AND RT SUMMARY
EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG/WO:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0106	Instrument:	ECD6
Calibration:	FL00041	Calibration Date:	12/14/2022

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SLC0106-ICV1 (Solid)				Lab File ID: 23C03073.D			Analyzed: 03/07/23 09:35	
Decachlorobiphenyl	40.000	93.8	80 - 120	9.421	9.354666	0.0663	+/-0.1	
Decachlorobiphenyl [2C]	40.000	92.0	80 - 120	10.385	10.4655	-0.0805	+/-0.1	
Tetrachlorometaxylene	40.000	89.3	80 - 120	3.859	3.827833	0.0312	+/-0.1	
Tetrachlorometaxylene [2C]	40.000	94.5	80 - 120	4.183	4.219666	-0.0367	+/-0.1	
SLC0106-CCV1 (Solid)				Lab File ID: 002F1601.D			Analyzed: 03/07/23 13:29	
Decachlorobiphenyl	40.000	91.3	80 - 120	9.421	9.354666	0.0663	+/-0.1	
Decachlorobiphenyl [2C]	40.000	94.3	80 - 120	10.384	10.4655	-0.0815	+/-0.1	
Tetrachlorometaxylene	40.000	89.8	80 - 120	3.859	3.827833	0.0312	+/-0.1	
Tetrachlorometaxylene [2C]	40.000	91.8	80 - 120	4.183	4.219666	-0.0367	+/-0.1	
SLC0106-CCV2 (Solid)				Lab File ID: 002F3001.D			Analyzed: 03/07/23 17:41	
Decachlorobiphenyl	40.000	90.3	80 - 120	9.42	9.354666	0.0653	+/-0.1	
Decachlorobiphenyl [2C]	40.000	91.8	80 - 120	10.383	10.4655	-0.0825	+/-0.1	
Tetrachlorometaxylene	40.000	90.3	80 - 120	3.859	3.827833	0.0312	+/-0.1	
Tetrachlorometaxylene [2C]	40.000	92.0	80 - 120	4.183	4.219666	-0.0367	+/-0.1	
SLC0106-CCV3 (Solid)				Lab File ID: 002F3401.D			Analyzed: 03/07/23 18:53	
Decachlorobiphenyl	40.000	93.5	80 - 120	9.42	9.354666	0.0653	+/-0.1	
Decachlorobiphenyl [2C]	40.000	96.0	80 - 120	10.384	10.4655	-0.0815	+/-0.1	
Tetrachlorometaxylene	40.000	90.5	80 - 120	3.861	3.827833	0.0332	+/-0.1	
Tetrachlorometaxylene [2C]	40.000	92.0	80 - 120	4.184	4.219666	-0.0357	+/-0.1	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8081B

Laboratory: Analytical Resources, LLC
SDG/WO: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLC0442
Instrument: ECD6
Calibration: FL00041
Calibration Date: 12/15/2022

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SLC0442-PEM1 (Water)				Lab File ID: 23032405.D			Analyzed: 03/24/23 17:09	
Decachlorobiphenyl	40.000	87.2	0 - 200	9.406	9.354666	0.0513	+/-0.1	
Decachlorobiphenyl [2C]	40.000	86.5	0 - 200	10.359	10.4655	-0.1065	+/-0.1	
Tetrachlorometaxylene	40.000	66.2	0 - 200	3.848	3.827833	0.0202	+/-0.1	
Tetrachlorometaxylene [2C]	40.000	86.7	0 - 200	4.169	4.219666	-0.0507	+/-0.1	
SLC0442-ICV1 (Water)				Lab File ID: 23032406.D			Analyzed: 03/24/23 17:27	
Decachlorobiphenyl	40.000	85.5	80 - 120	9.406	9.354666	0.0513	+/-0.1	
Decachlorobiphenyl [2C]	40.000	84.6	80 - 120	10.36	10.4655	-0.1055	+/-0.1	
Tetrachlorometaxylene	40.000	61.8	80 - 120	3.848	3.827833	0.0202	+/-0.1	*
Tetrachlorometaxylene [2C]	40.000	89.0	80 - 120	4.169	4.219666	-0.0507	+/-0.1	
SLC0442-PEM2 (Water)				Lab File ID: 23032422.D			Analyzed: 03/24/23 22:13	
Decachlorobiphenyl	40.000	86.5	0 - 200	9.405	9.354666	0.0503	+/-0.1	
Decachlorobiphenyl [2C]	40.000	90.5	0 - 200	10.359	10.4655	-0.1065	+/-0.1	
Tetrachlorometaxylene	40.000	66.7	0 - 200	3.847	3.827833	0.0192	+/-0.1	
Tetrachlorometaxylene [2C]	40.000	84.8	0 - 200	4.169	4.219666	-0.0507	+/-0.1	
SLC0442-CCV1 (Water)				Lab File ID: 23032423.D			Analyzed: 03/24/23 22:31	
Decachlorobiphenyl	40.000	85.8	80 - 120	9.405	9.354666	0.0503	+/-0.1	
Decachlorobiphenyl [2C]	40.000	87.1	80 - 120	10.359	10.4655	-0.1065	+/-0.1	
Tetrachlorometaxylene	40.000	61.7	80 - 120	3.848	3.827833	0.0202	+/-0.1	*
Tetrachlorometaxylene [2C]	40.000	85.3	80 - 120	4.169	4.219666	-0.0507	+/-0.1	
SLC0442-PEM3 (Water)				Lab File ID: 23032437.D			Analyzed: 03/25/23 02:42	
Decachlorobiphenyl	40.000	101	0 - 200	9.405	9.354666	0.0503	+/-0.1	
Decachlorobiphenyl [2C]	40.000	95.6	0 - 200	10.358	10.4655	-0.1075	+/-0.1	
Tetrachlorometaxylene	40.000	68.5	0 - 200	3.848	3.827833	0.0202	+/-0.1	
Tetrachlorometaxylene [2C]	40.000	85.1	0 - 200	4.169	4.219666	-0.0507	+/-0.1	
SLC0442-CCV3 (Water)				Lab File ID: 23032438.D			Analyzed: 03/25/23 03:00	
Decachlorobiphenyl	40.000	83.6	80 - 120	9.405	9.354666	0.0503	+/-0.1	
Decachlorobiphenyl [2C]	40.000	89.6	80 - 120	10.358	10.4655	-0.1075	+/-0.1	
Tetrachlorometaxylene	40.000	61.8	80 - 120	3.847	3.827833	0.0192	+/-0.1	*
Tetrachlorometaxylene [2C]	40.000	85.8	80 - 120	4.169	4.219666	-0.0507	+/-0.1	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8081B

Laboratory: Analytical Resources, LLC
SDG/WO: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLC0442
Instrument: ECD6
Calibration: FL00041
Calibration Date: 12/15/2022

Surrogate Compound	Spike Level ug/kg wet	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
BLC0155-BLK1 (Solid)				Lab File ID: 23032450.D			Analyzed: 03/25/23 06:35	
Decachlorobiphenyl	8.0000	79.6	30 - 160	9.404	9.354666	0.0493	+/-0.1	
Decachlorobiphenyl [2C]	8.0000	83.7	30 - 160	10.358	10.4655	-0.1075	+/-0.1	
Tetrachlorometaxylene	8.0000	63.1	30 - 160	3.847	3.827833	0.0192	+/-0.1	
Tetrachlorometaxylene [2C]	8.0000	60.3	30 - 160	4.168	4.219666	-0.0517	+/-0.1	
BLC0155-BS1 (Solid)				Lab File ID: 23032451.D			Analyzed: 03/25/23 06:53	
Decachlorobiphenyl	8.0000	68.9	30 - 160	9.403	9.354666	0.0483	+/-0.1	
Decachlorobiphenyl [2C]	8.0000	71.7	30 - 160	10.357	10.4655	-0.1085	+/-0.1	
Tetrachlorometaxylene	8.0000	58.4	30 - 160	3.847	3.827833	0.0192	+/-0.1	
Tetrachlorometaxylene [2C]	8.0000	55.6	30 - 160	4.167	4.219666	-0.0527	+/-0.1	
BLC0155-BSD1 (Solid)				Lab File ID: 23032452.D			Analyzed: 03/25/23 07:11	
Decachlorobiphenyl	8.0000	77.6	30 - 160	9.403	9.354666	0.0483	+/-0.1	
Decachlorobiphenyl [2C]	8.0000	77.4	30 - 160	10.358	10.4655	-0.1075	+/-0.1	
Tetrachlorometaxylene	8.0000	73.1	30 - 160	3.848	3.827833	0.0202	+/-0.1	
Tetrachlorometaxylene [2C]	8.0000	64.9	30 - 160	4.167	4.219666	-0.0527	+/-0.1	
BLC0155-MRL1 (Solid)				Lab File ID: 23032453.D			Analyzed: 03/25/23 07:28	
Decachlorobiphenyl	8.0000	81.7	30 - 160	9.403	9.354666	0.0483	+/-0.1	
Decachlorobiphenyl [2C]	8.0000	81.4	30 - 160	10.357	10.4655	-0.1085	+/-0.1	
Tetrachlorometaxylene	8.0000	71.5	30 - 160	3.849	3.827833	0.0212	+/-0.1	
Tetrachlorometaxylene [2C]	8.0000	66.0	30 - 160	4.168	4.219666	-0.0517	+/-0.1	
23B0276-01RE1 (Solid)				Lab File ID: 23032454.D			Analyzed: 03/25/23 07:46	
Decachlorobiphenyl	8.1335	64.5	30 - 160	9.404	9.354666	0.0493	+/-0.1	
Decachlorobiphenyl [2C]	8.1335	62.5	30 - 160	10.358	10.4655	-0.1075	+/-0.1	
Tetrachlorometaxylene	8.1335	62.4	30 - 160	3.847	3.827833	0.0192	+/-0.1	
Tetrachlorometaxylene [2C]	8.1335	51.8	30 - 160	4.166	4.219666	-0.0537	+/-0.1	
BLC0155-MS1 (Solid)				Lab File ID: 23032455.D			Analyzed: 03/25/23 08:04	
Decachlorobiphenyl	8.1335	85.4	30 - 160	9.403	9.354666	0.0483	+/-0.1	
Decachlorobiphenyl [2C]	8.1335	79.6	30 - 160	10.358	10.4655	-0.1075	+/-0.1	
Tetrachlorometaxylene	8.1335	57.0	30 - 160	3.847	3.827833	0.0192	+/-0.1	
Tetrachlorometaxylene [2C]	8.1335	60.6	30 - 160	4.166	4.219666	-0.0537	+/-0.1	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG/WO:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0442	Instrument:	ECD6
Calibration:	FL00041	Calibration Date:	12/15/2022

Surrogate Compound	Spike Level ug/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
BLC0155-MSD1 (Solid)			Lab File ID: 23032456.D			Analyzed: 03/25/23 08:22		
Decachlorobiphenyl	8.1335	84.7	30 - 160	9.404	9.354666	0.0493	+/-0.1	
Decachlorobiphenyl [2C]	8.1335	78.7	30 - 160	10.358	10.4655	-0.1075	+/-0.1	
Tetrachlorometaxylene	8.1335	82.3	30 - 160	3.846	3.827833	0.0182	+/-0.1	
Tetrachlorometaxylene [2C]	8.1335	66.4	30 - 160	4.166	4.219666	-0.0537	+/-0.1	
SLC0442-PEM4 (Water)			Lab File ID: 23032457.D			Analyzed: 03/25/23 08:40		
Decachlorobiphenyl	40.000	91.1	0 - 200	9.402	9.354666	0.0473	+/-0.1	
Decachlorobiphenyl [2C]	40.000	88.8	0 - 200	10.356	10.4655	-0.1095	+/-0.1	
Tetrachlorometaxylene	40.000	68.3	0 - 200	3.846	3.827833	0.0182	+/-0.1	
Tetrachlorometaxylene [2C]	40.000	85.5	0 - 200	4.168	4.219666	-0.0517	+/-0.1	
SLC0442-CCV4 (Water)			Lab File ID: 23032458.D			Analyzed: 03/25/23 08:58		
Decachlorobiphenyl	40.000	84.2	80 - 120	9.402	9.354666	0.0473	+/-0.1	
Decachlorobiphenyl [2C]	40.000	83.4	80 - 120	10.355	10.4655	-0.1105	+/-0.1	
Tetrachlorometaxylene	40.000	62.4	80 - 120	3.846	3.827833	0.0182	+/-0.1	*
Tetrachlorometaxylene [2C]	40.000	84.5	80 - 120	4.167	4.219666	-0.0527	+/-0.1	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SKL0233	Instrument:	ECD6
		Calibration:	FL00041

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Performance Mix (SKL0233-PEM1)		(Water)		Lab File ID: 22121404.D			Analyzed: 12/14/22 20:20		
1-Bromo-2-Nitrobenzene	683485	3.15	672426	3.15	102	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	619012	9.503	609723	9.504	102	50 - 200	-0.001	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	1005375	3.35	1006482	3.35	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	772586	11.054	769764	11.053	100	50 - 200	0.001	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0093	Instrument:	ECD6
		Calibration:	FL00041

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (SLC0093-ICV1)		(Solid)		Lab File ID: 23C03023.D				Analyzed: 03/03/23 00:34	
1-Bromo-2-Nitrobenzene	472089	3.182	472089	3.182	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	377525	9.59	377525	9.59	100	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	690774	3.335	690774	3.335	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	405465	10.979	405465	10.979	100	50 - 200	0.000	+/-0.50	
Blank (BLB0422-BLK1)		(Solid)		Lab File ID: 062F7101.D				Analyzed: 03/03/23 20:55	
1-Bromo-2-Nitrobenzene	933051	3.179	472089	3.182	198	50 - 200	-0.003	+/-0.50	
Hexabromobiphenyl	725730	9.587	377525	9.59	192	50 - 200	-0.003	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	1429005	3.332	690774	3.335	207	50 - 200	-0.003	+/-0.50	*
Hexabromobiphenyl [2C]	818965	10.976	405465	10.979	202	50 - 200	-0.003	+/-0.50	*
LCS (BLB0422-BS1)		(Solid)		Lab File ID: 063F7201.D				Analyzed: 03/03/23 21:13	
1-Bromo-2-Nitrobenzene	996589	3.179	472089	3.182	211	50 - 200	-0.003	+/-0.50	*
Hexabromobiphenyl	779254	9.587	377525	9.59	206	50 - 200	-0.003	+/-0.50	*
1-Bromo-2-Nitrobenzene [2C]	1562925	3.332	690774	3.335	226	50 - 200	-0.003	+/-0.50	*
Hexabromobiphenyl [2C]	878175	10.976	405465	10.979	217	50 - 200	-0.003	+/-0.50	*
LCS Dup (BLB0422-BSD1)		(Solid)		Lab File ID: 064F7301.D				Analyzed: 03/03/23 21:31	
1-Bromo-2-Nitrobenzene	995171	3.179	472089	3.182	211	50 - 200	-0.003	+/-0.50	*
Hexabromobiphenyl	796684	9.586	377525	9.59	211	50 - 200	-0.004	+/-0.50	*
1-Bromo-2-Nitrobenzene [2C]	1566782	3.332	690774	3.335	227	50 - 200	-0.003	+/-0.50	*
Hexabromobiphenyl [2C]	905131	10.976	405465	10.979	223	50 - 200	-0.003	+/-0.50	*

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0106	Instrument:	ECD6
		Calibration:	FL00041

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (SLC0106-ICV1)		(Solid)		Lab File ID: 23C03073.D				Analyzed: 03/07/23 09:35	
1-Bromo-2-Nitrobenzene	802383	3.171	802383	3.171	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	631224	9.574	631224	9.574	100	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	1198897	3.324	1198897	3.324	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	722844	10.96	722844	10.96	100	50 - 200	0.000	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8081B

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLC0442
Instrument: ECD6
Calibration: FL00041

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Performance Mix (SLC0442-PEM1)		(Water)		Lab File ID: 23032405.D				Analyzed: 03/24/23 17:09	
1-Bromo-2-Nitrobenzene	518811	3.162	509297	3.163	102	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	432866	9.559	429777	9.559	101	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	687832	3.312	633958	3.312	108	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	451073	10.931	450469	10.931	100	50 - 200	0.000	+/-0.50	
Initial Cal Check (SLC0442-ICV1)		(Water)		Lab File ID: 23032406.D				Analyzed: 03/24/23 17:27	
1-Bromo-2-Nitrobenzene	509297	3.163	509297	3.163	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	429777	9.559	429777	9.559	100	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	633958	3.312	633958	3.312	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	450469	10.931	450469	10.931	100	50 - 200	0.000	+/-0.50	
Performance Mix (SLC0442-PEM2)		(Water)		Lab File ID: 23032422.D				Analyzed: 03/24/23 22:13	
1-Bromo-2-Nitrobenzene	529882	3.162	509297	3.163	104	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	443814	9.559	429777	9.559	103	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	721391	3.312	633958	3.312	114	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	452983	10.931	450469	10.931	101	50 - 200	0.000	+/-0.50	
Performance Mix (SLC0442-PEM3)		(Water)		Lab File ID: 23032437.D				Analyzed: 03/25/23 02:42	
1-Bromo-2-Nitrobenzene	501513	3.162	509297	3.163	98	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	359734	9.559	429777	9.559	84	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	663308	3.312	633958	3.312	105	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	397193	10.93	450469	10.931	88	50 - 200	-0.001	+/-0.50	
Blank (BLC0155-BLK1)		(Solid)		Lab File ID: 23032450.D				Analyzed: 03/25/23 06:35	
1-Bromo-2-Nitrobenzene	549188	3.161	509297	3.163	108	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl	410427	9.557	429777	9.559	95	50 - 200	-0.002	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	761530	3.312	633958	3.312	120	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	438980	10.93	450469	10.931	97	50 - 200	-0.001	+/-0.50	
LCS (BLC0155-BS1)		(Solid)		Lab File ID: 23032451.D				Analyzed: 03/25/23 06:53	
1-Bromo-2-Nitrobenzene	587890	3.161	509297	3.163	115	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl	432557	9.556	429777	9.559	101	50 - 200	-0.003	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	844431	3.312	633958	3.312	133	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	445739	10.929	450469	10.931	99	50 - 200	-0.002	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8081B

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Sequence: SLC0442

SDG: 23B0276
Project: AOC5 MR Phase 1
Instrument: ECD6
Calibration: FL00041

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LCS Dup (BLC0155-BSD1)		(Solid)		Lab File ID: 23032452.D			Analyzed: 03/25/23 07:11		
1-Bromo-2-Nitrobenzene	561745	3.161	509297	3.163	110	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl	442602	9.556	429777	9.559	103	50 - 200	-0.003	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	821419	3.312	633958	3.312	130	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	456796	10.929	450469	10.931	101	50 - 200	-0.002	+/-0.50	
MRL Check (BLC0155-MRL1)		(Solid)		Lab File ID: 23032453.D			Analyzed: 03/25/23 07:28		
1-Bromo-2-Nitrobenzene	556996	3.162	509297	3.163	109	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	464446	9.556	429777	9.559	108	50 - 200	-0.003	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	826751	3.312	633958	3.312	130	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	482527	10.929	450469	10.931	107	50 - 200	-0.002	+/-0.50	
LDW23-SC1150B (23B0276-01RE1)		(Solid)		Lab File ID: 23032454.D			Analyzed: 03/25/23 07:46		
1-Bromo-2-Nitrobenzene	585434	3.161	509297	3.163	115	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl	414577	9.555	429777	9.559	96	50 - 200	-0.004	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	792994	3.311	633958	3.312	125	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	459713	10.93	450469	10.931	102	50 - 200	-0.001	+/-0.50	
Matrix Spike (BLC0155-MS1)		(Solid)		Lab File ID: 23032455.D			Analyzed: 03/25/23 08:04		
1-Bromo-2-Nitrobenzene	678500	3.161	509297	3.163	133	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl	414215	9.555	429777	9.559	96	50 - 200	-0.004	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	777849	3.311	633958	3.312	123	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	459081	10.929	450469	10.931	102	50 - 200	-0.002	+/-0.50	
Matrix Spike Dup (BLC0155-MSD1)		(Solid)		Lab File ID: 23032456.D			Analyzed: 03/25/23 08:22		
1-Bromo-2-Nitrobenzene	592357	3.16	509297	3.163	116	50 - 200	-0.003	+/-0.50	
Hexabromobiphenyl	410605	9.556	429777	9.559	96	50 - 200	-0.003	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	803428	3.311	633958	3.312	127	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	453014	10.929	450469	10.931	101	50 - 200	-0.002	+/-0.50	
Performance Mix (SLC0442-PEM4)		(Water)		Lab File ID: 23032457.D			Analyzed: 03/25/23 08:40		
1-Bromo-2-Nitrobenzene	509106	3.161	509297	3.163	100	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl	422512	9.556	429777	9.559	98	50 - 200	-0.003	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	693430	3.311	633958	3.312	109	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	445549	10.928	450469	10.931	99	50 - 200	-0.003	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	23B0276
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	23B0276-01RE1	File ID:	23032454.D
Sampled:	12/14/22 09:03	Prepared:	03/08/23 11:36	Analyzed:	03/25/23 07:46
Solids:	62.57	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD6
Batch:	BLC0155	Sequence:	SLC0442		
GC Column(1):	STX-CLP			GC Column(2):	STX-CLPII

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Hexachlorobenzene	1	4.204	4.182	0.022	8445	0.16	N/A
	* 2		4.717833	4.72		ND	

* Column used for quantitation

HOLDING TIME SUMMARY

Analysis: EPA 8081B

Laboratory: Analytical Resources, LLC SDG: 23B0276

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

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
LDW23-SC1150B 23B0276-01RE1	12/14/22 09:03	12/14/22 16:47	03/08/23 11:36	84	365	03/25/23 07:46	17	40	
Matrix Spike BLC0155-MS1	12/14/22 09:03	12/14/22 16:47	03/08/23 11:36	84	365	03/25/23 08:04	17	40	
Matrix Spike Dup BLC0155-MSD1	12/14/22 09:03	12/14/22 16:47	03/08/23 11:36	84	365	03/25/23 08:22	17	40	

* Indicates hold time exceedance.

METHOD DETECTION AND REPORTING LIMITS

EPA 8081B

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Instrument: ECD6

Analyte	MDL	RL	Units
Hexachlorobenzene	0.15	0.50	ug/kg
Hexachlorobenzene [2C]	0.15	0.50	ug/kg

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CERTIFICATE OF ANALYSIS

Catalog No: S-279N
Description: Tetrachloro-m-xylene
Lot: 0052481B-1
Solvent: N/A
Hazards: *Refer to SDS for complete safety information*

Signal Word: Warning

Date Certified: Jul 28, 2005
Expiration: Jul 28, 2015
Sample Size: 100 mg
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

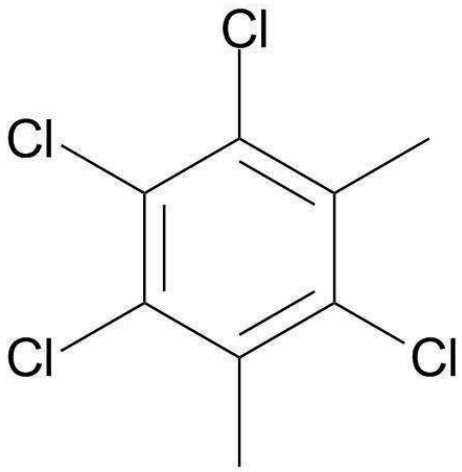
ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

Component	CAS #	Purity % (GC/FID)	Prepared Concentration	Certified Analyte Concentration[1]
Tetrachloro-meta-xylene	877-09-8	96.0	N/A	N/A

Identification:

Molecular formula: C8H6Cl4
Molecular weight: 243.94



C000147
tetrachlormetaxylene
Expires 1/15/2020
Prepared By Joshua Rains 1/15/2014

This Certified Reference Material was verified in accordance with ISO/IEC 17025

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] The Uncertainty calculated for this product is ±2.4%. These values are the expanded uncertainty and represent an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Metrological traceability is established through in-house validated methods.

Purity, if stated, is equal to 100% minus found impurity components. Impurity components have not been identified.

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015

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Rev. 5/18

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CERTIFICATE OF PRODUCT DATA

PRODUCT: C-209N
DESCRIPTION: 2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl
LOT #: 990521LB-AC
SOLVENT: N/A

EXPIRATION: Jul 28, 2015

This product is guaranteed accurate to ±0.5% of the Certified Analyte concentration through the Expiration Date on the Label.

Component	CAS #	Purity % (GC/MS)	Prepared Concentration[1]	Certified Analyte Concentration[2]
2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl	2051-24-3	100	N/A	N/A

C000148
decachlorbiphenyl
Expires 1/15/2020
Prepared By Joshua Rains 1/15/2014

* I1768A

Certified by: R. Cooper

1. All weights are traceable through National Institute of Standards & Technology, Test No. 822/264480
2. Certified Analyte Concentration = Purity x Prepared Concentration. The Uncertainty calculated for this product is ±4% which is the Combined Uncertainty uc(y). It represents an estimated standard deviation equal to the positive square root of the total variance of the uncertainty of components. The Expanded Uncertainty is U which is Uc(y) *K where K is the coverage factor at the 95% confidence level (K=2).
3. A product with a suffix (-1A, -2B, etc.) on its lot# has had its expiration date extended and is identical to the same lot# without the suffix.

Please note: AccuStandard follows the U.S. conventions in reporting numerical values, on both certificates and labels.

A comma (,) is used to separate units of one-thousand or greater.
A period (.) is used as a decimal place marker.

This product was manufactured in accordance to quality system requirements of ISO 9001:2000 and ISO 17025

* Recertified 2 4-6-09 JS

Analytical Standard Record

Standard ID: C000148 **Printed: 4/23/2015 11:54:44AM**

Description:	decachlorbiphenyl	Expires:	15-Jan-2020
Standard Type:	Other	Prepared:	15-Jan-2014
Solvent:	na/a	Prepared By:	Joshua Rains
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	27-Feb-2015 13:03 by JGR
Vendor:	Accustandard	Lot #:	990521lb-ac
Vendor Catalog #:			

Comments

see i1768a
SOM calibrations added 06/12/14 sdrd

Analyte	CAS Number	Concentration	Units
Decachlorobiphenyl [2C]	2051-24-3	1000000	ug/mL
Decachlorobiphenyl	2051-24-3	1000000	ug/mL
DCB 1660 [2C]	2051-24-3	1000000	ug/mL
DCB 1660	2051-24-3	1000000	ug/mL
DCB [2C]	2051-24-3	1000000	ug/mL
DCB (A) [2C]	2051-24-3	1000000	ug/mL
DCB (A)	2051-24-3	1000000	ug/mL
DCB	2051-24-3	1000000	ug/mL

Reviewed By Date

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CERTIFICATE OF ANALYSIS

Catalog No: P-066S
Description: Mirex
Lot: 219051741-01
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Jun 5, 2020
Expiration: Jun 5, 2024
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER AR-1463

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY AT-1339

ilac-MRA

Component	CAS #	Purity % (GC/MS)	Prepared Concentration² (µg/mL)	Certified Analyte Concentration¹ (µg/mL)
Mirex	2385-85-5	98.2	100.2	98.4

I007970
Mirex 2d source
Solvent / Lot: MeOH
Prep: 9/7/2020 by JR
Exp: 6/5/2024
Location:

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

² All weights are traceable through NIST, Test No. 684/289871-17

¹ Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015

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CERTIFICATE OF ANALYSIS

Catalog No: P-026S
Description: o,p'-DDE
Lot: 218021093-01
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Feb 10, 2020
Expiration: Feb 10, 2023
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463
ANAB ACCREDITED TESTING LABORATORY AT-1339
ilac-MRA

Component	CAS #	Purity % (GC/MS)	Prepared Concentration² (µg/mL)	Certified Analyte Concentration¹ (µg/mL)
o,p'-DDE	3424-82-6	99.9	100.4	100.3

I7971

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

² All weights are traceable through NIST, Test No. 822-275872-11

¹ Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Certified By: Larry Decker, Organic QC Manager

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CERTIFICATE OF ANALYSIS

Catalog No: P-184S
Description: trans-Nonachlor
Lot: 218011470
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Jan 30, 2018
Expiration: Jan 30, 2028
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463
ANAB ACCREDITED TESTING LABORATORY AT-1339
ilac-MRA

Component	CAS #	Purity % (GC/MS)	Prepared Concentration[2] (µg/mL)	Certified Analyte Concentration[1] (µg/mL)
trans-Nonachlor	39765-80-5	99.0	100.2	99.2

I 7974

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[2] All weights are traceable through NIST, Test No. 822-275872-11

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

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CERTIFICATE OF ANALYSIS

Catalog No: P-024S
Description: o,p'-DDD
Lot: 220051307
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: May 27, 2020
Expiration: Jun 27, 2022
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER AR-1463
ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY AT-1339
ilac-MRA

Component	CAS #	Purity % (GC/MS)	Prepared Concentration² (µg/mL)	Certified Analyte Concentration¹ (µg/mL)
o,p'-DDD	53-19-0	100.0	100.2	100.2

I010773
o,p-DDD
Solvent / Lot: methanol
Prep: 11/20/2020 by VS
Exp: 6/27/2022
Location:

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

² All weights are traceable through NIST, Test No. 684/289871-17

¹ Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Certified By: Larry Decker, Organic QC Manager

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1. **Quality Standards:**

   ISO 17034 – General Requirements for the Competence of Reference Material Producers ANAB Certificate Number AR-1463

   ISO/IEC 17025 – General Requirements for the Competence of Testing And Calibration Laboratories ANAB Certificate Number AT-1339

   ISO 9001:2015 – Quality Management System – Requirements Eagle Registrations Certificate Number 3774

2 **Intended Use:** The product covered by this certificate is designed for calibration or for use in quality control procedures for the specified chemical compounds listed on the reverse side. This product can be used for quantification and/or identification. This product can also be used as a reference material to validate analytical procedures, subject to the conditions under Section 7

3 **Manufacturing:** All balances are calibrated daily using an in-house procedure with weights that are compared annually to master weights and traceable to NIST. The balances are also calibrated annually by an ISO/IEC 17025 accredited calibration laboratory. Please refer to the NIST test number listed on the front of this certificate. Class A glassware is used in the manufacture and quality control of all standards. Good Laboratory Practices have been used throughout the preparation of this .

4 **Homogeneity:** This product is sufficiently homogeneous and any sample size would be within the uncertainty budget.

5 **Stability:** The manufacturer guarantees the stability of this solution through the expiration date stated on the label, when handled and stored according to the conditions stated on the label

6 **Uncertainty:** The uncertainty values as stated on the face of this certificate have been determined using the EURACHEM/CITAC Guide. We report a combined expanded uncertainty equal to the positive square root of the total variance of the uncertainty of the components using the following formula: $u_a = \sqrt{(u(\mathrm{V}))^2 + (u(\mathrm{m}))^2 + (u(\mathrm{IV}))^2 + (u(\mathrm{RO}))^2}$ This formula represents uncertainty components from the mass, volume, short-term stability, long-term stability and homogeneity factors associated with the production of this product. The expanded uncertainty, assumes a normal distribution and a coverage factor of k=2 is chosen using approximately a 95% confidence level.

7 **Legal Notice and Limit of Liability:** This product is for routine laboratory analysis and research purposes only. The company's liability will be limited to replacement of product or refund of purchase price. Notice of claims must be made within thirty (30) days from date of delivery.

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CERTIFICATE OF ANALYSIS

Catalog No: P-331S
Description: Oxychlordane Isomer
Lot: 218101131
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Oct 8, 2018
Expiration: Nov 8, 2020
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER AR-1463
ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY AT-1339
ilac-MRA

Component	CAS #	Purity % (GC/MS)	Prepared Concentration² (µg/mL)	Certified Analyte Concentration¹ (µg/mL)
Oxychlordane Isomer	27304-13-8	97.7	102.4*	100.0

I010795
Oxychlordane isomer
Solvent / Lot: methanol
Prep: 11/20/2020 by VS
Exp: 6/20/2022
Location:

* Weight compensated to 100% purity.

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

² All weights are traceable through NIST, Test No. 684/289871-17

¹ Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015

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Rev. 5/18

1. **Quality Standards:**

   ISO 17034 – General Requirements for the Competence of Reference Material Producers ANAB Certificate Number AR-1463

   ISO/IEC 17025 – General Requirements for the Competence of Testing And Calibration Laboratories ANAB Certificate Number AT-1339

   ISO 9001:2015 – Quality Management System – Requirements Eagle Registrations Certificate Number 3774

2 **Intended Use:** The product covered by this certificate is designed for calibration or for use in quality control procedures for the specified chemical compounds listed on the reverse side. This product can be used for quantification and/or identification. This product can also be used as a reference material to validate analytical procedures, subject to the conditions under Section 7

3 **Manufacturing:** All balances are calibrated daily using an in-house procedure with weights that are compared annually to master weights and traceable to NIST. The balances are also calibrated annually by an ISO/IEC 17025 accredited calibration laboratory. Please refer to the NIST test number listed on the front of this certificate. Class A glassware is used in the manufacture and quality control of all standards and calibrated using an in-house procedure. Good Laboratory Practices have been used throughout the preparation of this CRM.

4 **Homogeneity:** This product is sufficiently homogeneous and any sample size would be within the uncertainty budget.

5 **Stability:** The manufacturer guarantees the stability of this solution through the expiration date stated on the label, when handled and stored according to the conditions stated on the label

6 **Uncertainty:** The uncertainty values as stated on the face of this certificate have been determined using the EURACHEM/CITAC Guide. We report a combined expanded uncertainty equal to the positive square root of the total variance of the uncertainty of the components using the following formula: $u_a = \sqrt{(u(\mathrm{V}))^2 + (u(\mathrm{m}))^2 + (u(\mathrm{IV}))^2 + (u(\mathrm{RO}))^2}$ This formula represents uncertainty components from the mass, volume, short-term stability, long-term stability and homogeneity factors associated with the production of this product. The expanded uncertainty, assumes a normal distribution and a coverage factor of k=2 is chosen using approximately a 95% confidence level.

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CERTIFICATE OF ANALYSIS

Catalog No: P-297S
Description: cis-Nonachlor
Lot: 217121240
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Dec 13, 2017
Expiration: Dec 13, 2020
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER AR-1463

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY AT-1339

ilac-MRA

Component	CAS #	Purity % (GC/MS)	Prepared Concentration[1] (µg/mL)	Certified Analyte Concentration[2] (µg/mL)
cis-Nonachlor	5103-73-1	98.6	100.4	99.0

I010796
cis-Nonochlor-Accustd-100ug/ml
Solvent / Lot: methanol
Prep: 11/20/2020 by VS
Exp: 11/27/2022
Location:

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] All weights are traceable through NIST, Test No. 822-275872-11

[2] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

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1. **Quality Standards:**

   ISO 17034 – General Requirements for the Competence of Reference Material Producers ANAB Certificate Number AR-1463

   ISO/IEC 17025 – General Requirements for the Competence of Testing And Calibration Laboratories ANAB Certificate Number AT-1339

   ISO 9001:2015 – Quality Management System – Requirements Eagle Registrations Certificate Number 3774

2. **Intended Use:** The product covered by this certificate is designed for calibration or for use in quality control procedures for the specified chemical compounds listed on the reverse side. This product can be used for quantification and/or identification. This product can also be used as a reference material to validate analytical procedures, subject to the conditions under Section 11.

3. **Manufacturing:** All balances are calibrated daily using an in-house procedure with weights that are compared annually to master weights and traceable to NIST. The balances are also calibrated annually by an ISO/IEC 17025 accredited calibration laboratory. Please refer to the NIST test number listed on the front of this certificate. Class A glassware is used in the manufacture and quality control of all standards and calibrated using an in-house procedure. Good Laboratory Practices have been used throughout the preparation of this CRM.

4. **Homogeneity:** This product is sufficiently homogeneous and any sample size would be within the uncertainty budget.

5. **Stability:** The manufacturer guarantees the stability of this solution through the expiration date stated on the label, when handled and stored according to the conditions stated on the label

6. **Uncertainty:** The uncertainty values as stated on the face of this certificate have been determined using the EURACHEM/CITAC Guide. We report a combined expanded uncertainty equal to the positive square root of the total variance of the uncertainty of the components using the following formula: $u_a = \sqrt{(u(\mathrm{V}))^2 + (u(\mathrm{m}))^2 + (u(\mathrm{IV}))^2 + (u(\mathrm{RO}))^2}$ This formula represents uncertainty components from the mass, volume, short-term stability, long-term stability and homogeneity factors associated with the production of this product. The expanded uncertainty, assumes a normal distribution and a coverage factor of k=2 is chosen using approximately a 95% confidence level.

7. **Legal Notice and Limit of Liability:** This product is for routine laboratory analysis and research purposes only. The company's liability will be limited to replacement of product or refund of purchase price. Notice of claims must be made within thirty (30) days from date of delivery.

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CERTIFICATE OF ANALYSIS

Catalog No: APP-9-112-D-20X
Description: Hexachlorobenzene in Dichloromethane
Lot: 219051389
Solvent: Dichloromethane
Hazards: *Refer to SDS for complete safety information*

Signal Word: Warning

Date Certified: May 13, 2019
Expiration: May 13, 2029
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER AR-1463
ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY AT-1339
ilac-MRA

Component	CAS #	Purity % (GC/MS)	Prepared Concentration² (µg/mL)	Certified Analyte Concentration¹ (µg/mL)
Hexachlorobenzene	118-74-1	99.0	2002	1982

J006504
Hexachlorobenzene
Solvent / Lot: Dichloromethane
Prep: 6/21/2021 by YZ
Exp: 5/13/2029
Location:

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

² All weights are traceable through NIST, Test No. 684/289871-17

¹ Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

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1. **Quality Standards:**

   ISO 17034 – General Requirements for the Competence of Reference Material Producers ANAB Certificate Number AR-1463

   ISO/IEC 17025 – General Requirements for the Competence of Testing And Calibration Laboratories ANAB Certificate Number AT-1339

   ISO 9001:2015 – Quality Management System – Requirements Eagle Registrations Certificate Number 3774

2 **Intended Use:** The product covered by this certificate is designed for calibration or for use in quality control procedures for the specified chemical compounds listed on the reverse side. This product can be used for quantification and/or identification. This product can also be used as a reference material to validate analytical procedures, subject to the conditions under Section 7

3 **Manufacturing:** All balances are calibrated daily using an in-house procedure with weights that are compared annually to master weights and traceable to NIST. The balances are also calibrated annually by an ISO/IEC 17025 accredited calibration laboratory. Please refer to the NIST test number listed on the front of this certificate. Class A glassware is used in the manufacture and quality control of all standards and calibrated using an in-house procedure. Good Laboratory Practices have been used throughout the preparation of this .

4 **Homogeneity:** This product is sufficiently homogeneous and any sample size would be within the uncertainty budget.

5 **Stability:** The manufacturer guarantees the stability of this solution through the expiration date stated on the label, when handled and stored according to the conditions stated on the label

6 **Uncertainty:** The uncertainty values as stated on the face of this certificate have been determined using the EURACHEM/CITAC Guide. We report a combined expanded uncertainty equal to the positive square root of the total variance of the uncertainty of the components using the following formula: $u_a = \sqrt{(u(\mathrm{V}))^2 + (u(\mathrm{m}))^2 + (u(\mathrm{IV}))^2 + (u(\mathrm{RO}))^2}$ This formula represents uncertainty components from the mass, volume, short-term stability, long-term stability and homogeneity factors associated with the production of this product. The expanded uncertainty, assumes a normal distribution and a coverage factor of k=2 is chosen using approximately a 95% confidence level.

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CERTIFICATE OF ANALYSIS

Catalog No: P-028S
Description: o,p'-DDT
Lot: 221071322
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Jul 21, 2021
Expiration: Aug 21, 2023
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

Component	CAS #	Purity % (GC/MS)	Prepared Concentration² (µg/mL)	Certified Analyte Concentration¹ (µg/mL)
o,p'-DDT	789-02-6	99.9	100.1	100.0

This Certified Reference Material was verified in accordance with ISO/IEC 17025

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

² All weights are traceable through NIST, Test No. 684/289871-17

¹ Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015

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Rev. 5/18

1. **Quality Standards:**

   ISO 17034:2016 – General Requirements for the Competence of Reference Material Producers

   ISO/IEC 17025:2017 – General Requirements for the Competence of Testing And Calibration Laboratories

   ISO 9001:2015 – Quality Management System – Requirements Eagle Registrations

2. **Intended Use:** The product covered by this certificate is designed for calibration or for use in quality control procedures for the specified chemical compounds listed on the reverse side. This product can be used for quantification and/or identification. This product can also be used as a reference material to validate analytical procedures, subject to the conditions under Section 7.

3. **Manufacturing:** All balances are calibrated daily using an in-house procedure with weights that are compared annually to master weights and traceable to NIST. The balances are also calibrated annually by an ISO/IEC 17025 accredited calibration laboratory. Please refer to the NIST test number listed on the front of this certificate. Class A glassware is used in the manufacture and quality control of all standards. Good Laboratory Practices have been used throughout the preparation of this Standard.

4. **Homogeneity:** This product is sufficiently homogeneous and any sample size would be within the uncertainty budget.

5. **Stability:** The manufacturer guarantees the stability of this solution through the expiration date stated on the label, when handled and stored according to the conditions stated on the label

6. **Uncertainty:** The uncertainty values as stated on the face of this certificate have been determined using the EURACHEM/CITAC Guide. We report a combined expanded uncertainty equal to the positive square root of the total variance of the uncertainty of the components using the following formula: $u_a = \sqrt{(u(\mathrm{V}))^2 + (u(\mathrm{m}))^2 + (u(\mathrm{IV}))^2 + (u(\mathrm{RO}))^2}$ This formula represents uncertainty components from the mass, volume, short-term stability, long-term stability and homogeneity factors associated with the production of this product. The expanded uncertainty, assumes a normal distribution and a coverage factor of k=2 is chosen using approximately a 95% confidence level.

7. **Legal Notice and Limit of Liability:** This product is for routine laboratory analysis and research purposes only. The company's liability will be limited to replacement of product or refund of purchase price. Notice of claims must be made within thirty (30) days from date of delivery.

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CERTIFICATE OF ANALYSIS

Catalog No: P-024S
Description: o,p'-DDD
Lot: 220051307-01
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Jul 6, 2021
Expiration: Aug 6, 2023
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

Component	CAS #	Purity % (GC/MS)	Prepared Concentration² (µg/mL)	Certified Analyte Concentration¹ (µg/mL)
o,p'-DDD	53-19-0	100.0	100.2	100.2

K 0448

This Certified Reference Material was verified in accordance with ISO/IEC 17025

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

² All weights are traceable through NIST, Test No. 684/289871-17

¹ Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

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CERTIFICATE OF ANALYSIS

Catalog No: P-331S
Description: Oxychlordane Isomer
Lot: 221051706
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: May 28, 2021
Expiration: Jun 28, 2023
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

Component	CAS #	Purity % (GC/MS)	Prepared Concentration² (µg/mL)	Certified Analyte Concentration¹ (µg/mL)
Oxychlordane Isomer	27304-13-8	99.2	100.1	99.3

K000449
Oxychlordane isomer
Solvent / Lot: methanol
Prep: 1/13/2022 by YZ
Exp: 6/28/2023
Location:

This Certified Reference Material was verified in accordance with ISO/IEC 17025

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

² All weights are traceable through NIST, Test No. 684/289871-17

¹ Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager

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1. **Quality Standards:**

   ISO 17034:2016 – General Requirements for the Competence of Reference Material Producers

   ISO/IEC 17025:2017 – General Requirements for the Competence of Testing And Calibration Laboratories

   ISO 9001:2015 – Quality Management System – Requirements Eagle Registrations

2. **Intended Use:** The product covered by this certificate is designed for calibration or for use in quality control procedures for the specified chemical compounds listed on the reverse side. This product can be used for quantification and/or identification. This product can also be used as a reference material to validate analytical procedures, subject to the conditions under Section 7.

3. **Manufacturing:** All balances are calibrated daily using an in-house procedure with weights that are compared annually to master weights and traceable to NIST. The balances are also calibrated annually by an ISO/IEC 17025 accredited calibration laboratory. Please refer to the NIST test number listed on the front of this certificate. Class A glassware is used in the manufacture and quality control of all standards. Good Laboratory Practices have been used throughout the preparation of this Standard.

4. **Homogeneity:** This product is sufficiently homogeneous and any sample size would be within the uncertainty budget.

5. **Stability:** The manufacturer guarantees the stability of this solution through the expiration date stated on the label, when handled and stored according to the conditions stated on the label

6. **Uncertainty:** The uncertainty values as stated on the face of this certificate have been determined using the EURACHEM/CITAC Guide. We report a combined expanded uncertainty equal to the positive square root of the total variance of the uncertainty of the components using the following formula: $u_a = \sqrt{(u(\mathrm{V}))^2 + (u(\mathrm{m}))^2 + (u(\mathrm{IV}))^2 + (u(\mathrm{RO}))^2}$ This formula represents uncertainty components from the mass, volume, short-term stability, long-term stability and homogeneity factors associated with the production of this product. The expanded uncertainty, assumes a normal distribution and a coverage factor of k=2 is chosen using approximately a 95% confidence level.

7. **Legal Notice and Limit of Liability:** This product is for routine laboratory analysis and research purposes only. The company's liability will be limited to replacement of product or refund of purchase price. Notice of claims must be made within thirty (30) days from date of delivery.

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CERTIFICATE OF ANALYSIS

Catalog No: P-297S
Description: cis-Nonachlor
Lot: 221041461
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Apr 22, 2021
Expiration: Apr 22, 2024
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463
ANAB ACCREDITED TESTING LABORATORY AT-1339
ilac-MRA

Component	CAS #	Purity % (GC/MS)	Prepared Concentration[2] (µg/mL)	Certified Analyte Concentration[1] (µg/mL)
cis-Nonachlor	5103-73-1	98.6	101.1	99.7

K 000450

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[2] All weights are traceable through NIST, Test No. 684/289871-17

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By:
Larry Decker, Organic QC Manager

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CERTIFICATE OF ANALYSIS

Catalog No: P-184S
Description: trans-Nonachlor
Lot: 220091107
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Sep 11, 2020
Expiration: Sep 11, 2030
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB AR-1463 ANAB AT-1339 ilac-MRA

Component	CAS #	Purity % (GC/MS)	Prepared Concentration² (µg/mL)	Certified Analyte Concentration¹ (µg/mL)
trans-Nonachlor	39765-80-5	99.0	100.2	99.2

K 0045 I

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

² All weights are traceable through NIST, Test No. 684/289871-17

¹ Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

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CERTIFICATE OF ANALYSIS

Catalog No: P-066S
Description: Mirex
Lot: 219051741-01
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Jun 5, 2020
Expiration: Jun 5, 2024
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED AR-1463 ANAB ACCREDITED AT-1339 ilac-MRA

Component	CAS #	Purity % (GC/MS)	Prepared Concentration² (µg/mL)	Certified Analyte Concentration¹ (µg/mL)
Mirex	2385-85-5	98.2	100.2	98.4

K 000452

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

² All weights are traceable through NIST, Test No. 684/289871-17

¹ Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

125 Market Street
New Haven, CT 06513
USA

AccuStandard®

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

K 000 452

CERTIFICATE OF ANALYSIS

Catalog No: P-066S
Description: Mirex
Lot: 221121451
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Dec 27, 2021
Expiration: Dec 27, 2025
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

Component	CAS #	Purity % (GC/MS)	Prepared Concentration² (µg/mL)	Certified Analyte Concentration¹ (µg/mL)
Mirex	2385-85-5	98.2	100.0	98.2

This Certified Reference Material was verified in accordance with ISO/IEC 17025

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

² All weights are traceable through NIST, Test No. 684/289871-17

¹ Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015

QR-ORG/INO-001
Rev. 7/20

125 Market Street
New Haven, CT 06513
USA

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Fax (203)786-5287
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CERTIFICATE OF ANALYSIS

Catalog No: M-8081-DS
Description: 4,4'-DDT & Endrin
Lot: 221031488-04
Solvent: Hexane
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Apr 8, 2022
Expiration: May 8, 2023
Sample Size: 1 mL
Components: 2
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

Component	CAS #	Purity % (GC/MS)	Prepared Concentration² (µg/mL)	Certified Analyte Concentration¹ (µg/mL)
4,4'-DDT	50-29-3	100.0	200.9	200.9
Endrin	72-20-8	99.8	200.0	199.6

K7002

This Certified Reference Material was verified in accordance with ISO/IEC 17025

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

² All weights are traceable through NIST, Test No. 684/289871-17

¹ Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32292 **Lot No.:** A0185477

Description : Organochlorine Pesticide Mix AB # 2

Organochlorine Pesticide Mix AB # 2 8-80 µg/mL, Hexane/Toluene(1:1), 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 2026 **Storage:** 10°C or colder

Ship: Ambient

C E R T I F I E D V A L U E S

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	alpha-BHC	8.1 µg/mL	+/- 0.0660 µg/mL	Gravimetric
	CAS # 319-84-6 (Lot 12307600)		+/- 0.3703 µg/mL	Unstressed
	Purity 99%		+/- 0.5325 µg/mL	Stressed
2	gamma-BHC (Lindane)	8.0 µg/mL	+/- 0.0654 µg/mL	Gravimetric
	CAS # 58-89-9 (Lot 13087200)		+/- 0.3672 µg/mL	Unstressed
	Purity 99%		+/- 0.5281 µg/mL	Stressed
3	beta-BHC	8.1 µg/mL	+/- 0.0660 µg/mL	Gravimetric
	CAS # 319-85-7 (Lot 0588007-4)		+/- 0.3703 µg/mL	Unstressed
	Purity 99%		+/- 0.5325 µg/mL	Stressed
4	delta-BHC	8.1 µg/mL	+/- 0.0660 µg/mL	Gravimetric
	CAS # 319-86-8 (Lot 13112400)		+/- 0.3703 µg/mL	Unstressed
	Purity 99%		+/- 0.5325 µg/mL	Stressed
5	Heptachlor	8.0 µg/mL	+/- 0.0654 µg/mL	Gravimetric
	CAS # 76-44-8 (Lot 803759)		+/- 0.3672 µg/mL	Unstressed
	Purity 99%		+/- 0.5281 µg/mL	Stressed
6	Aldrin	8.1 µg/mL	+/- 0.0660 µg/mL	Gravimetric
	CAS # 309-00-2 (Lot 12983100)		+/- 0.3702 µg/mL	Unstressed
	Purity 96%		+/- 0.5323 µg/mL	Stressed
7	Heptachlor epoxide (isomer B)	8.1 µg/mL	+/- 0.0660 µg/mL	Gravimetric
	CAS # 1024-57-3 (Lot 13168200)		+/- 0.3703 µg/mL	Unstressed
	Purity 99%		+/- 0.5325 µg/mL	Stressed

8	trans-Chlordane		8.0	µg/mL	+/-	0.0657	µg/mL	Gravimetric
	CAS # 5103-74-2	(Lot 32943)			+/-	0.3689	µg/mL	Unstressed
	Purity 98%				+/-	0.5305	µg/mL	Stressed
9	cis-Chlordane		8.0	µg/mL	+/-	0.0657	µg/mL	Gravimetric
	CAS # 5103-71-9	(Lot 31766)			+/-	0.3689	µg/mL	Unstressed
	Purity 98%				+/-	0.5305	µg/mL	Stressed
10	Endosulfan I		8.0	µg/mL	+/-	0.0654	µg/mL	Gravimetric
	CAS # 959-98-8	(Lot BCCF4060)			+/-	0.3672	µg/mL	Unstressed
	Purity 99%				+/-	0.5281	µg/mL	Stressed
11	4,4'-DDE		16.1	µg/mL	+/-	0.1314	µg/mL	Gravimetric
	CAS # 72-55-9	(Lot GHYQG)			+/-	0.7375	µg/mL	Unstressed
	Purity 99%				+/-	1.0606	µg/mL	Stressed
12	Dieldrin		16.1	µg/mL	+/-	0.1320	µg/mL	Gravimetric
	CAS # 60-57-1	(Lot 11129900)			+/-	0.7408	µg/mL	Unstressed
	Purity 98%				+/-	1.0653	µg/mL	Stressed
13	Endrin		16.1	µg/mL	+/-	0.1320	µg/mL	Gravimetric
	CAS # 72-20-8	(Lot 13157400)			+/-	0.7406	µg/mL	Unstressed
	Purity 99%				+/-	1.0650	µg/mL	Stressed
14	4,4'-DDD		16.1	µg/mL	+/-	0.1320	µg/mL	Gravimetric
	CAS # 72-54-8	(Lot HAN02)			+/-	0.7406	µg/mL	Unstressed
	Purity 99%				+/-	1.0650	µg/mL	Stressed
15	Endosulfan II		16.0	µg/mL	+/-	0.1309	µg/mL	Gravimetric
	CAS # 33213-65-9	(Lot 12448900)			+/-	0.7345	µg/mL	Unstressed
	Purity 99%				+/-	1.0562	µg/mL	Stressed
16	4,4'-DDT		16.1	µg/mL	+/-	0.1315	µg/mL	Gravimetric
	CAS # 50-29-3	(Lot 220428JLM)			+/-	0.7378	µg/mL	Unstressed
	Purity 98%				+/-	1.0610	µg/mL	Stressed
17	Endrin aldehyde		16.1	µg/mL	+/-	0.1314	µg/mL	Gravimetric
	CAS # 7421-93-4	(Lot 30720)			+/-	0.7375	µg/mL	Unstressed
	Purity 99%				+/-	1.0606	µg/mL	Stressed
18	Endosulfan sulfate		16.1	µg/mL	+/-	0.1320	µg/mL	Gravimetric
	CAS # 1031-07-8	(Lot BCCB0424)			+/-	0.7406	µg/mL	Unstressed
	Purity 99%				+/-	1.0650	µg/mL	Stressed
19	Methoxychlor		80.2	µg/mL	+/-	0.5781	µg/mL	Gravimetric
	CAS # 72-43-5	(Lot 13027000)			+/-	3.6697	µg/mL	Unstressed
	Purity 98%				+/-	5.2871	µg/mL	Stressed
20	Endrin ketone		16.1	µg/mL	+/-	0.1314	µg/mL	Gravimetric
	CAS # 53494-70-5	(Lot 13026800)			+/-	0.7375	µg/mL	Unstressed
	Purity 99%				+/-	1.0606	µg/mL	Stressed

Solvent: Hexane/Toluene (50:50)
CAS # 110-54-3/108-88-3
Purity 99%

Column:
30m x .25mm x .2um
Rtx-CLP II (cat.# 11323)

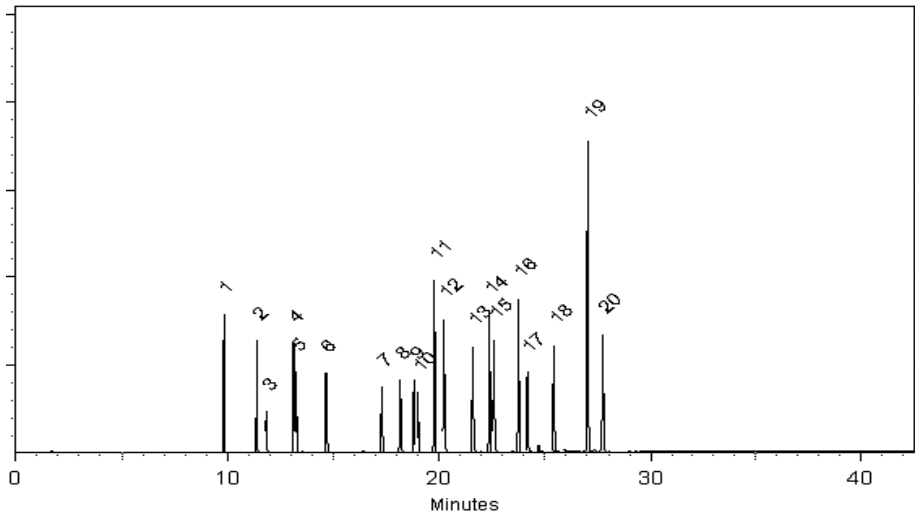
Carrier Gas:
helium-constant pressure 20 psi.

Temp. Program:
150°C to 300°C
@ 4°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
300°C

Det. Type:
ECD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Morgan Craighead - Mix Technician

Date Mixed: 19-May-2022 **Balance:** B442140311

Fang-Yun Lo - QC Analyst

Date Passed: 26-May-2022

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.

125 Market Street
New Haven, CT 06513
USA

AccuStandard® Inc.

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

CERTIFICATE OF ANALYSIS

Catalog No: M-502-36-10X
Description: Hexachlorobutadiene
Lot: 222031188
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Mar 11, 2022
Expiration: Apr 11, 2024
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

Component	CAS #	Purity % (GC/MS)	Prepared Concentration² (µg/mL)	Certified Analyte Concentration¹ (µg/mL)
Hexachlorobutadiene	87-68-3	98.0	2002	1962

This Certified Reference Material was verified in accordance with ISO/IEC 17025

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

² All weights are traceable through NIST, Test No. 684/289871-17

¹ Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015

QR-ORG/INO-001
Rev. 5/18

1. **Quality Standards:**

   ISO 17034:2016 – General Requirements for the Competence of Reference Material Producers

   ISO/IEC 17025:2017 – General Requirements for the Competence of Testing And Calibration Laboratories

   ISO 9001:2015 – Quality Management System – Requirements Eagle Registrations

2. **Intended Use:** The product covered by this certificate is designed for calibration or for use in quality control procedures for the specified chemical compounds listed on the reverse side. This product can be used for quantification and/or identification. This product can also be used as a reference material to validate analytical procedures, subject to the conditions under Section 7.

3. **Manufacturing:** All balances are calibrated daily using an in-house procedure with weights that are compared annually to master weights and traceable to NIST. The balances are also calibrated annually by an ISO/IEC 17025 accredited calibration laboratory. Please refer to the NIST test number listed on the front of this certificate. Class A glassware is used in the manufacture and quality control of all standards. Good Laboratory Practices have been used throughout the preparation of this Standard.

4. **Homogeneity:** This product is sufficiently homogeneous and any sample size would be within the uncertainty budget.

5. **Stability:** The manufacturer guarantees the stability of this solution through the expiration date stated on the label, when handled and stored according to the conditions stated on the label

6. **Uncertainty:** The uncertainty values as stated on the face of this certificate have been determined using the EURACHEM/CITAC Guide. We report a combined expanded uncertainty equal to the positive square root of the total variance of the uncertainty of the components using the following formula: $u_a = \sqrt{(u(\mathrm{V}))^2 + (u(\mathrm{m}))^2 + (u(\mathrm{IV}))^2 + (u(\mathrm{RO}))^2}$ This formula represents uncertainty components from the mass, volume, short-term stability, long-term stability and homogeneity factors associated with the production of this product. The expanded uncertainty, assumes a normal distribution and a coverage factor of k=2 is chosen using approximately a 95% confidence level.

7. **Legal Notice and Limit of Liability:** This product is for routine laboratory analysis and research purposes only. The company's liability will be limited to replacement of product or refund of purchase price. Notice of claims must be made within thirty (30) days from date of delivery.

125 Market Street
New Haven, CT 06513
USA

AccuStandard®

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Fax (203)786-5287
www.AccuStandard.com

CERTIFICATE OF ANALYSIS

Catalog No: M-502-36-10X
Description: Hexachlorobutadiene
Lot: 222031188
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Mar 11, 2022
Expiration: Apr 11, 2024
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

Component	CAS #	Purity % (GC/MS)	Prepared Concentration² (µg/mL)	Certified Analyte Concentration¹ (µg/mL)
Hexachlorobutadiene	87-68-3	98.0	2002	1962

K011468

This Certified Reference Material was verified in accordance with ISO/IEC 17025

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

² All weights are traceable through NIST, Test No. 684/289871-17

¹ Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SC1150B

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, LLC			SDG:	23B0276
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23B0276-01 A	File ID:	02282330ECD7.D
Sampled:	12/14/22 09:03	Prepared:	02/15/23 16:55	Analyzed:	03/01/23 02:05
% Solids:	63.63	Preparation:	EPA 3546 (Microwave)	Initial/Final:	19.75 g Wet / 2.5 mL
Batch:	BLB0391	Sequence:	SLC0014	Calibration:	GB00069
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	3	11.9	4.7	11.9	U
11104-28-2	Aroclor 1221	1	3	11.9	4.7	11.9	U
11141-16-5	Aroclor 1232	1	3	11.9	4.7	11.9	U
53469-21-9	Aroclor 1242	1	3	11.9	4.7	11.9	U
12672-29-6	Aroclor 1248	1	3	44.3	4.7	11.9	D
11097-69-1	Aroclor 1254	2	3	62.1	4.7	11.9	D
11096-82-5	Aroclor 1260	2	3	56.7	1.8	11.9	D
37324-23-5	Aroclor 1262	1	3	11.9	1.8	11.9	U
11100-14-4	Aroclor 1268	1	3	11.9	1.8	11.9	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9574*	*7.93*	*99.7*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9574*	*5.49*	*69.0*	*44 - 120*	
Decachlorobiphenyl	*2*	*7.9574*	*7.62*	*95.8*	*40 - 126*	
Tetrachlorometaxylene	*2*	*7.9574*	*6.24*	*78.4*	*44 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230228.b/02282330ECD7.D
Data file 2: /230228.b/230228.b/02282330ECD7.D
Method: \\target\share\chem4\ecd7.i\230228.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 23A0276-01RE1
Client ID:
Injection Date: 01-MAR-2023 02:05
Report Date: 03/01/2023 12:20
Matrix: NONE
Dilution Factor: 3.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.804	-0.004	111091	5.683	-0.004	51485	9.2	10.5	12.8	Tetrachloro-m-xylene
13.886	-0.008	103878	14.112	-0.007	67656	13.3	12.8	4.0	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	809185	20.1
Hexabromobiphenyl	1429847	793360	-44.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	335652	6.5
Hexabromobiphenyl	513946	347801	-32.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1248	1	8.395	-0.011	27207	68.9	1	8.299	-0.008	11492	71.7
Aroclor-1248	2	8.566	-0.015	20360	40.6	2	8.706	-0.009	10030	60.5
Aroclor-1248	3	8.985	-0.012	54333	57.4	3	9.141	-0.027	13746	72.1
Aroclor-1248	4	9.286	-0.009	62521	129.7	4	9.532	-0.062	13338	~~58.3~~ 68.1
		Total Col1Ave (4 peaks):			74.1		Total Col2Ave (4 peaks):			65.6 RPD = 12
		Corrected Ave (3 peaks):			55.6		Corrected Ave (3 peaks):			63.5 RPD = 13
Aroclor-1254	1	9.286	-0.013	62521	76.9	1	9.439	-0.013	25654	100.6
Aroclor-1254	2	9.362	-0.016	25395	69.5	2	9.956	-0.015	11901	58.0
Aroclor-1254	3	9.662	-0.008	47497	90.9	3	10.107	-0.019	43289	97.5
Aroclor-1254	4	9.788	-0.020	86968	85.6	4	10.355	-0.020	52074	120.3
Aroclor-1254	5	10.115	-0.063	62699	~~98.5~~	5	10.555	-0.015	37857	143.6
		Total Col1Ave (5 peaks):			~~84.3~~		Total Col2Ave (5 peaks):			104.0 RPD = 21
		Corrected Ave (4 peaks):			80.7		Corrected Ave (4 peaks):			94.1 RPD = 15
Aroclor-1260	1	11.033	-0.011	33160	116.2	1	11.644	-0.008	23857	116.7
Aroclor-1260	2	11.349	-0.011	28960	97.1	2	11.905	-0.013	40914	78.4
Aroclor-1260	3	11.719	-0.017	79744	100.8	3	12.424	-0.011	14381	103.8
Aroclor-1260	4	12.120	-0.020	43449	109.1	4	12.488	-0.013	28566	81.2
Aroclor-1260	5	12.234	-0.009	18433	107.5	NS	---			----
		Total Col1Ave (5 peaks):			106.2		Total Col2Ave (4 peaks):			95.0 RPD = 11
		Corrected Ave (4 peaks):			103.6		Corrected Ave (3 peaks):			87.8 RPD = 17
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			

Total PCB Area Col1 (5.907 - 13.793) = 1676910 Col1 Total PCB = 0.2 ppm*

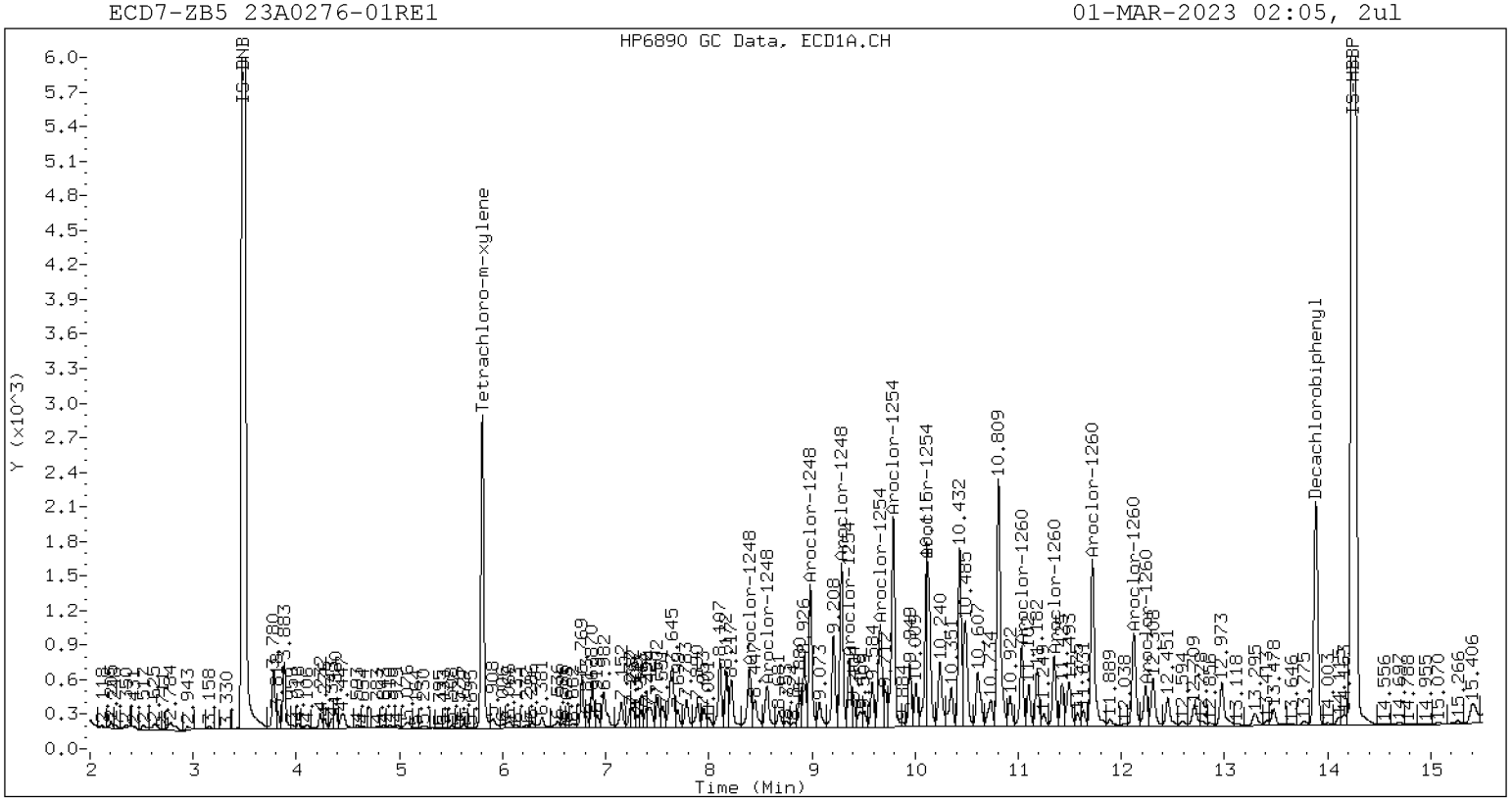
Total PCB Area Col2 (5.787 - 14.020) = 820102 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

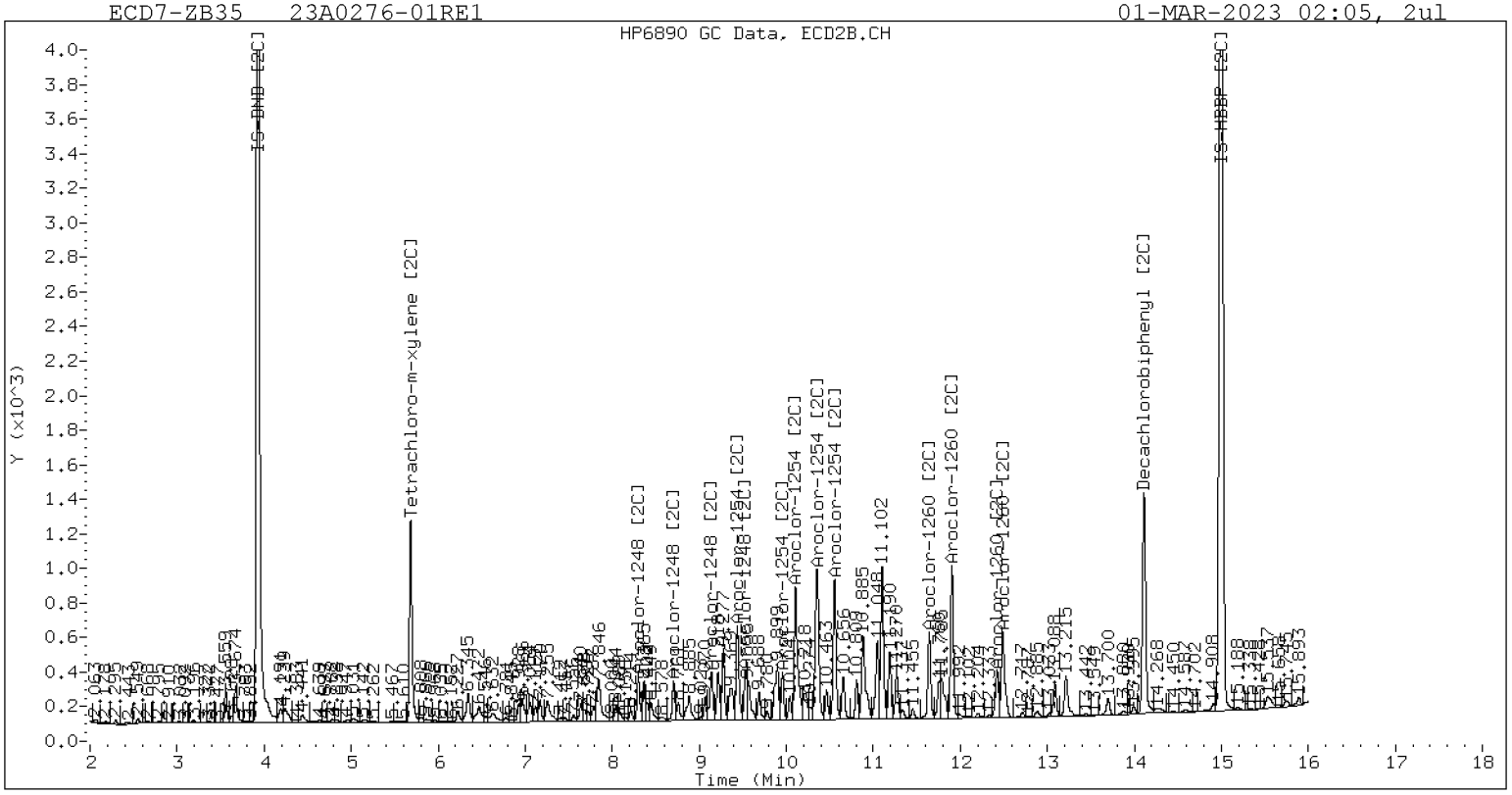
PCB Dual Column Chromatograms

ECD7-ZB5 23A0276-01RE1 01-MAR-2023 02:05, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 23A0276-01RE1 01-MAR-2023 02:05, 2ul

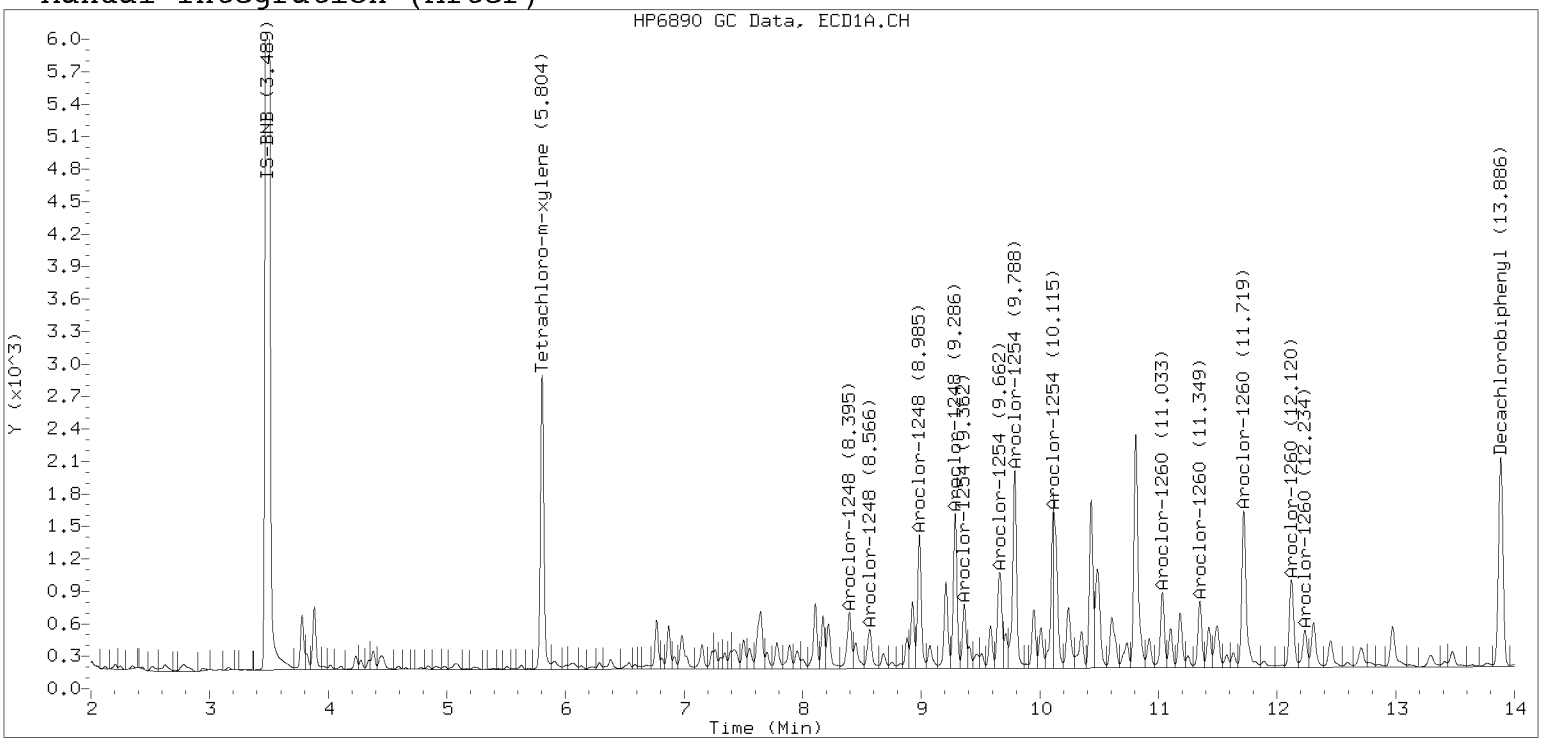


ZB-35 Manual Integration: YES

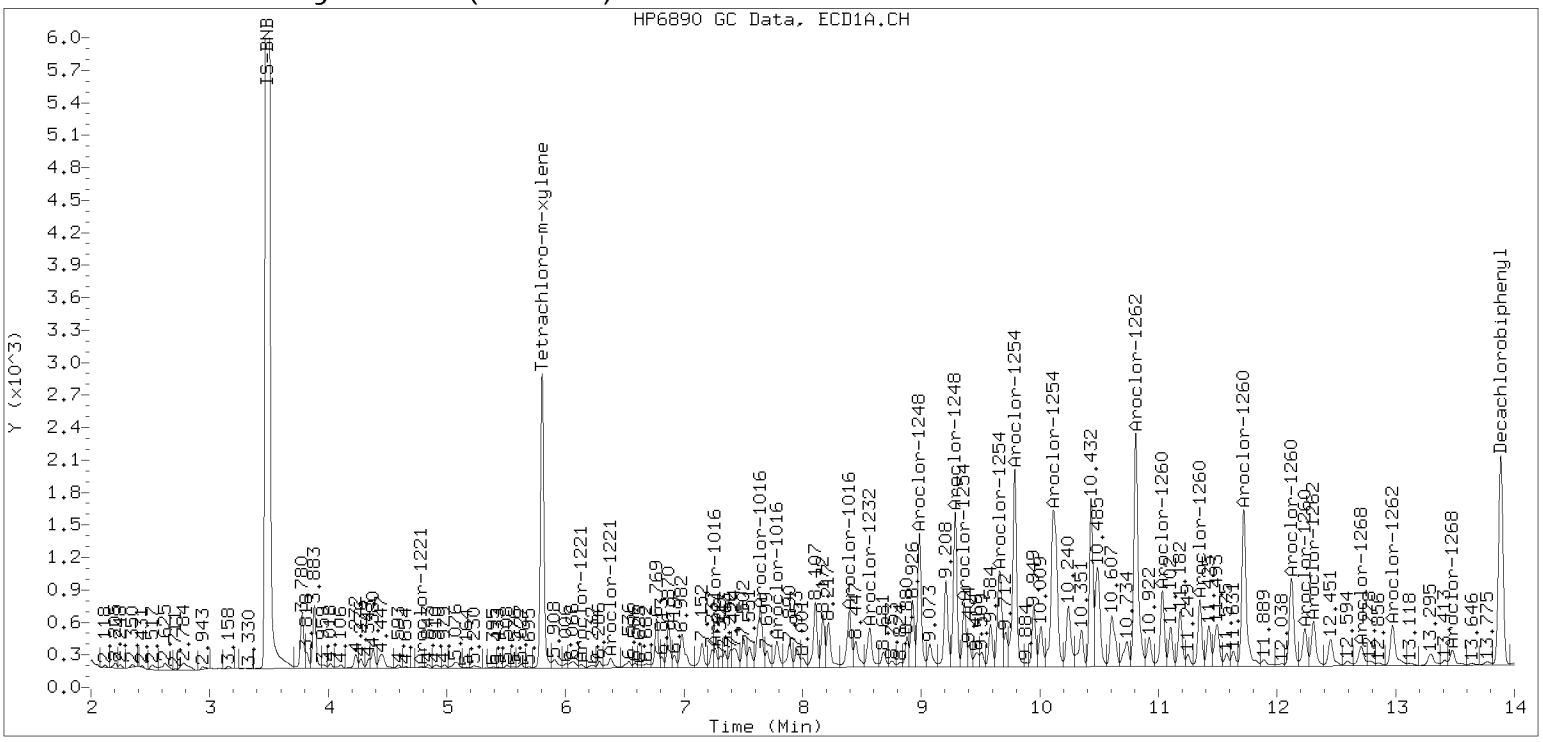
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/230228.b/02282330ECD7.D Injection Date: 01-MAR-2023 02:05

Manual Integration (After)



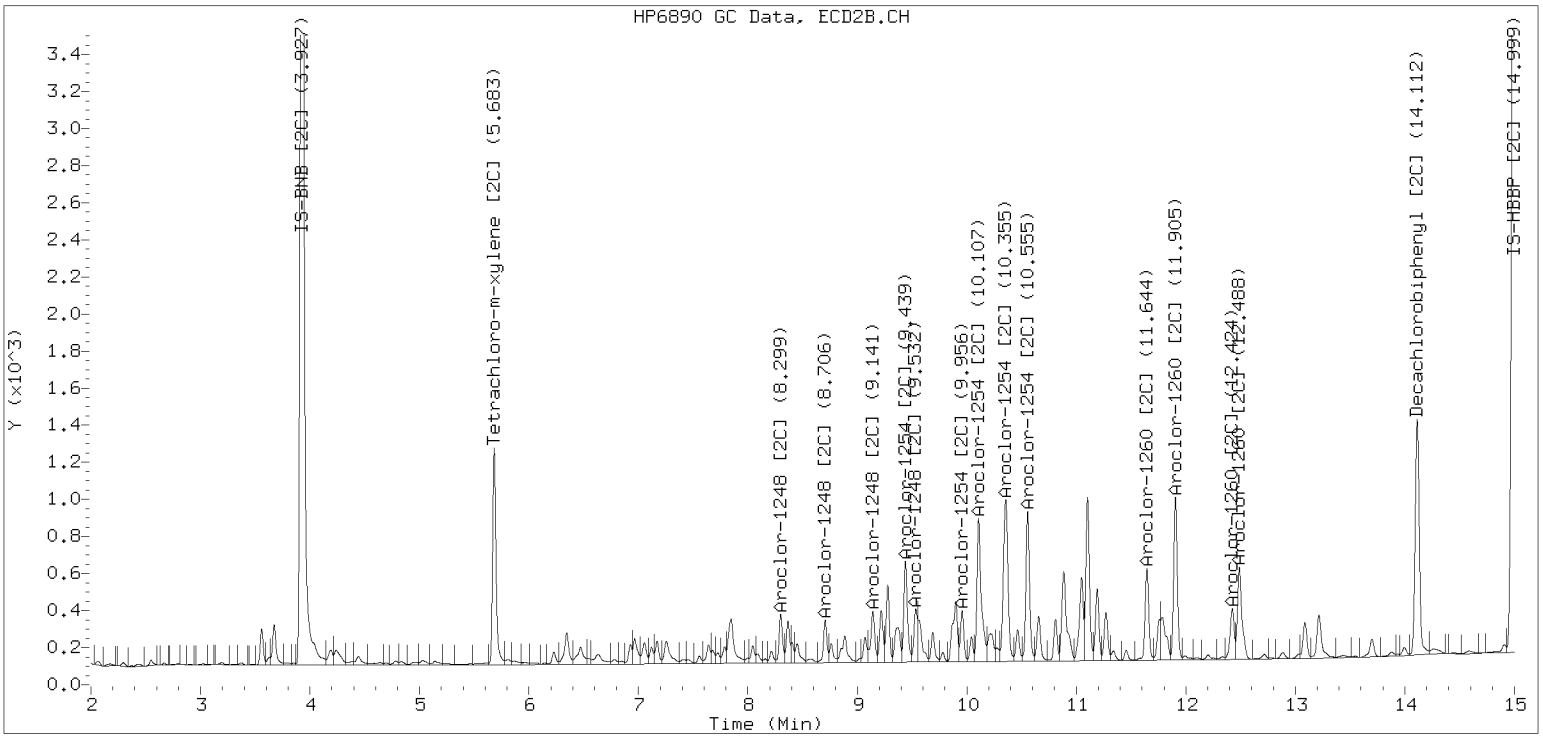
Processed Integration (Before)



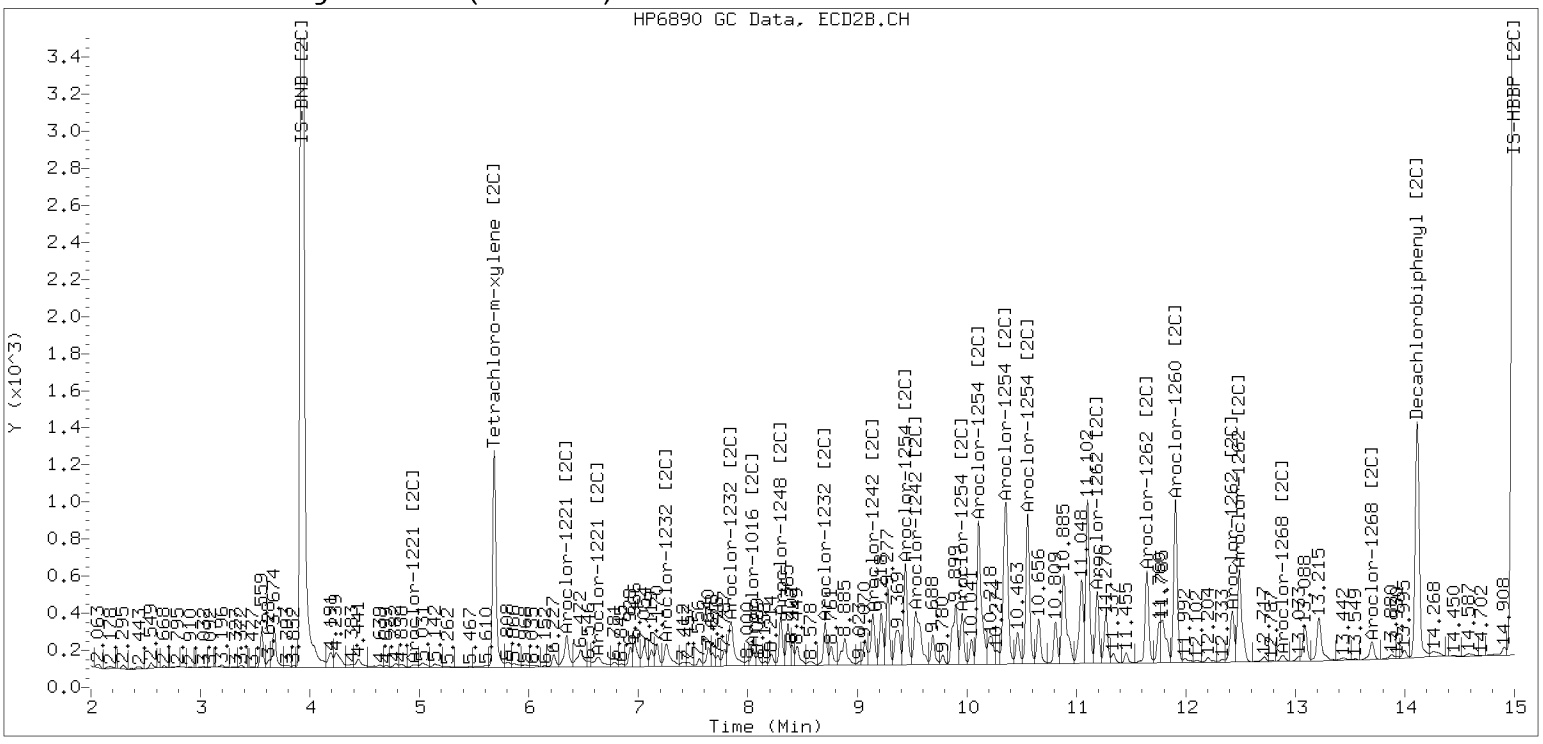
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230228.b/230228.b/02282330ECD7.D Injection Date: 01-MAR-2023

Manual Integration (After)



Processed Integration (Before)



PREPARATION BATCH SUMMARY

EPA 8082A

Laboratory: Analytical Resources, LLC SDG: 23B0276

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

Batch: BLB0391 Batch Matrix: Solid Preparation: EPA 3546 (Microwave)

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SC1150B	23B0276-01	02282330ECD7.D	02/15/23 16:55	
Blank	BLB0391-BLK1	02282315ECD7.D	02/15/23 16:55	
LCS	BLB0391-BS1	02282316ECD7.D	02/15/23 16:55	
LCS Dup	BLB0391-BSD1	02282317ECD7.D	02/15/23 16:55	
Reference	BLB0391-SRM1	02282318ECD7.D	02/15/23 16:55	

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLB0391

Prepared using: EPA 3546 (Microwave)

8082A PCB Solid 4 in Solid (Version:)
8082A PCB Solid 4 in Solid (Version:7 Aroclors)

Matrix: Solid Date Prepared: 2/15/23 Balance ID: B139298002 Set Up By: CGD 2/15/23

WO Comments

23A0420: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)
23B0276: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM H002055, SIM RM H010158, PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H>Please push this to front of LDW line of samples

The following standards may be missing from this batch!

Designator	Description
QLS 5	QLS Spike

Analysis: 8082A PCB Solid 4

Lab Number & Container	% Solids	Initial (g) Target Dry: 12.5 (Wet)	Initial (g) Actual	(REQ) Acid C/U (5mL)	(REQ) Sulfur C/U (5mL) 1 2 3	(REQ) Silica Gel C/U (2:5)	Final Effective Vol (mL)	Vol (mL) to Lab	Extraction Comments
23A0420-01 A	54.7	(22.85)	22.88	5mL	5mL	2mL	2.5	1.0	
23A0420-02 A	53.6	(23.34)	23.64	5mL	5mL	2mL	2.5	1.0	
23A0420-03 A	55.9	(22.35)	22.86	5mL	5mL	2mL	2.5	1.0	
23A0420-04 A	70.5	(17.72)	17.72	5mL	5mL	2mL	2.5	1.0	
23A0420-05 A	54.7	(22.86)	22.90	5mL	5mL	2mL	2.5	1.0	
23A0420-06 A	57.2	(21.84)	21.85	5mL	5mL	2mL	2.5	1.0	
23A0420-07 A	51.3	(24.38)	24.81	5mL	5mL	2mL	2.5	1.0	
23A0420-08 A	59.9	(20.87)	20.87	5mL	5mL	2mL	2.5	1.0	
23A0420-09 A	58.9	(21.23)	21.69	5mL	5mL	2mL	2.5	1.0	
23B0276-01 A	63.6	(19.65)	19.75	5mL	5mL	2mL	2.5	1.0	

Batch QC

Lab Number	% Solids	Initial (g) Target Dry: 12.5 (Wet)	Initial (g) Actual	(REQ) Acid C/U (5mL)	(REQ) Sulfur C/U (5mL) 1 2 3	(REQ) Silica Gel C/U (2:5)	Final Effective Vol (mL)	Vol (mL) to Lab	Extraction Comments
BLB0391-BLK1	100.0	(12.50)	12.50	5mL	5mL	2mL	2.5	1.0	(10g Actual Wt.)
BLB0391-BS1	100.0	(12.50)	12.50	5mL	5mL	2mL	2.5	1.0	(10g Actual Wt.)
BLB0391-BSD1	100.0	(12.50)	12.50	5mL	5mL	2mL	2.5	1.0	(10g Actual Wt.)
BLB0391-MS1	70.5	(17.72)	17.72	5mL	5mL	2mL	2.5	1.0	Use 23A0420-04
BLB0391-MSD1	70.5	(17.72)	17.72	5mL	5mL	2mL	2.5	1.0	Use 23A0420-04
BLB0391-SRM1	100.0	~~(12.50)~~ (2.50)	2.50	5mL	5mL	2mL	2.5	1.0	Use K011478

+1g DI WATER

CR 2/15/23 — Client ID verified By / Date

NR3 2/18/23 — Preparation Reviewed By / Date

2/15/23 16:55 — Extraction Date and Time

Printed: 2/15/2023 1:50:55PM

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLB0391

Prepared using: EPA 3546 (Microwave)

8082A PCB Solid 4 in Solid (Version:)
8082A PCB Solid 4 in Solid (Version:7 Aroclors)

WO Comments

23A0420: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)
23B0276: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM H002055, SIM RM H010158, PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H>Please push this to front of LDW line of samples

Prep Steps

Microwave
1 2 3
NJ 02/16/23
Analyst/Date

KD
100°C
Hexane Exchange
(2 X 20 mL)
1 2 3 4 5 6
LD 2-17
Analyst/Date

TurboVap
Pre Cleanups
1 2 3 4 5
NKB 2/18/23
Analyst/Date

TurboVap
Post Cleanups
1 2 3 4 5
NKB 2/18/23
Analyst/Date

Vialing
NKB 2/18/23
Analyst/Date

Reagents Used

Station/Reagent	Standard ID
Microwave Analyst: NJ/ET Date: 02/16/23	
Neutral Glass Wool	L000350
1:1 Hexane/Acetone	L001220
Hexane	L000389
Anhydrous Sodium Sulfate	L000980
KD Analyst: LD Date: 2-17-23	
Anhydrous Sodium Sulfate	
Hexane	~~L000889~~
Vialing Analyst: NKB Date: 2/18/23	
Hexane	L000889
Concentrated Sulfuric Acid	L001033
Silica Gel (SPE) Darts	L001084
Sodium Sulfite	K010363
Tetrabutylammonium hydrogensulfate (TBAS)	L001601

Surrogates & Spike Standards Used

Type	Vial ID / Standard ID	Vol uL	Analyst	Witness
Surrogate 2µg/mL	N L000773 Exp Date: 7/21/23	50µL	VR	NJ
Spike 20µg/mL	1 L001587 Exp Date: 8/3/23	63µL	VR	NJ

MANUALLY ENTER EXPIRATION DATES!

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

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

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

Extraction Parameter: PCB Extraction Batch: BLB0391

Total Solids Batch: BLB0154 Work Order(s): 23A0420

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☐ No Anomalies (standard soil/wet sediment/sand/gravel)=	
☒ Standing Water Decanted (Not shared)= Φ1 – Φ9.	MJ Φ2/14/23
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☒ Oily, obvious fuel/sulfur odors= Φ1 – Φ9.	MJ Φ2/14/23
☐ Received in 32oz jar(s)=Homogenized in Pyrex dish=	
☐ Previously Frozen =	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
☐ Received in 1.0L Bottle(s)=No Bottle Rinse=	
☒ Other Notes/Comments= (Note problems, concerns, corrective actions).	
– lost 5% on vortex during acid clear 420 – Φ7	MKB 2/18/23
☒ Share Samples Y (N)	MJ Φ2/14/23
☒ Multiple Jars Y (N)	MJ Φ2/14/23
☐ Sample Pre-Screens indicate analyte activity=	
☐ Sample weights/volumes reduced based on Pre-Screen=	

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLB0391

Prepared using: EPA 3546 (Microwave)

8082A PCB Solid 4 in Solid (Version:)
8082A PCB Solid 4 in Solid (Version:7 Aroclors)

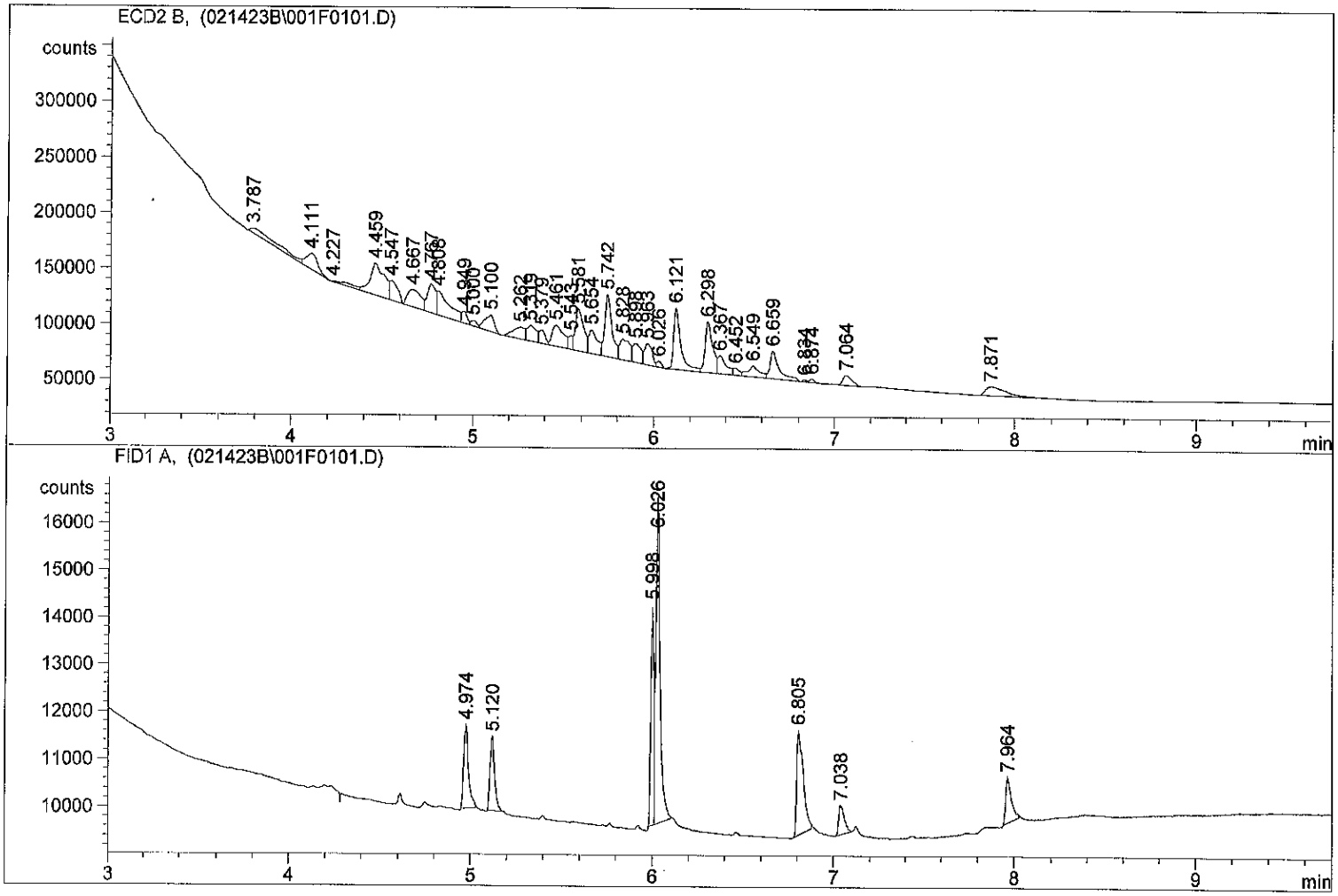
WO Comments

23A0420: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)
23B0276: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM H002055, SIM RM H010158, PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H>Please push this to front of LDW line of samples

Prep Instructions	
SPECIAL INSTRUCTIONS: 1. Weigh soil/sed into beakers-lightly dry with sodium sulfate. 2. Transfer to microwave vessel(s). Note: (do not fill vessels more than 2/3rd full. Some samples may require two vessels). 3. Add 1:1 Hexane/Acetone until the solvent layer is 3 inches above the soil layer after homogenization. 4. Add surr/spike. 5. Microwave on appropriate power setting determined by # of samples. 6. After microwave-Re-homogenize while hot then cool vessels in R-05 15 minutes. Re-homogenize while cool. 7. Decant 1:1 Hex/Ace into Erlenmeyer flask with sodium sulfate in bottom and funnel with neutral glasswool plug. 8. Re-homogenize and rinse with 1:1 Hexane/Acetone. 9. Let cool and decant solvent then empty the soil into the funnel and rinse with Hexane. 10. KD on 100° bath. 11. Exchange (2 X with 20mL) Hexane. 12. TurboVap. 13. Clean-ups. 14. TurboVap. 15. Vial with Hexane. A. Need Total Solids Y /(N) B. Archive/Freeze(Y)/N	

Data File C:\HPCHEM\1\DATA\021423B\001F0101.D Sample Name: DCM RINSE

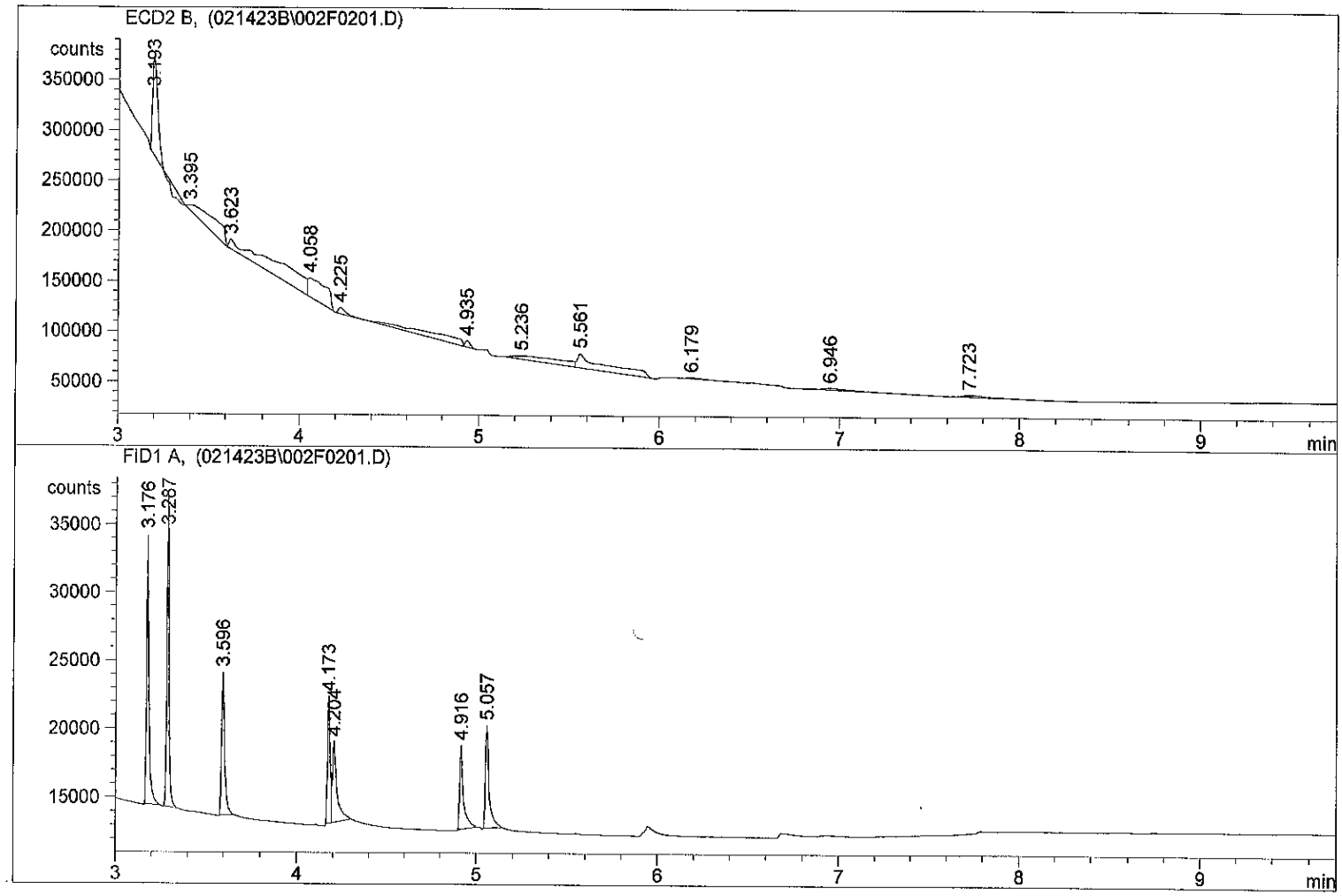
Injection Date	: 2/14/2023 3:47:52 PM	Seq. Line	: 1
Sample Name	: DCM RINSE	Location	: Vial 1
Acq. Operator	: YL	Inj	: 1
		Inj Volume	: 1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\021423B.S		
Method	: C:\HPCHEM\1\METHODS\SCREEN.M		
Last changed	: 7/9/2021 3:37:33 AM by TW		
SCREEN METHOD			



*** End of Report ***

Data File C:\HPCHEM\1\DATA\021423B\002F0201.D Sample Name: PNA STTD 10PPM

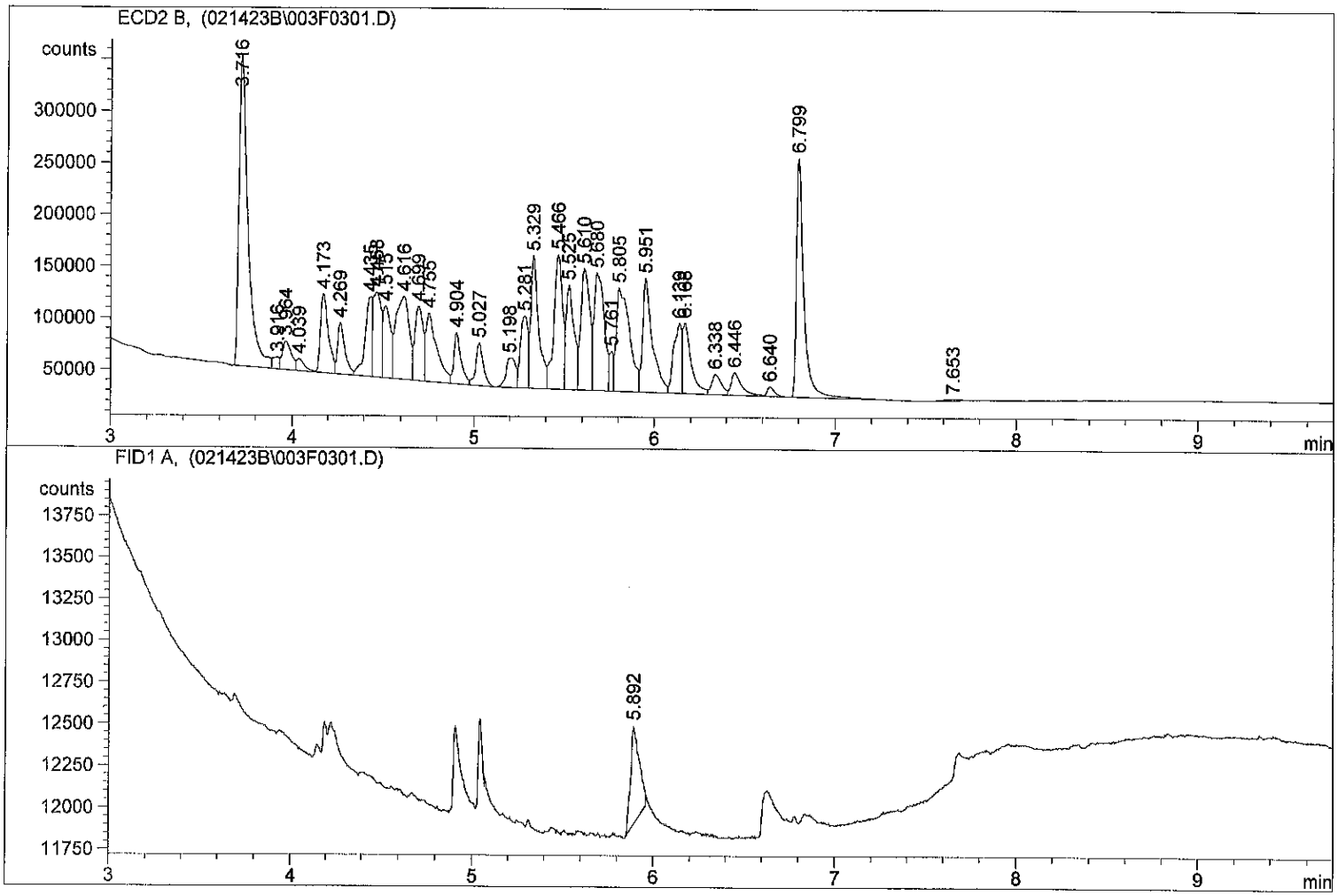
Injection Date	: 2/14/2023 4:02:20 PM	Seq. Line :	2
Sample Name	: PNA STTD 10PPM	Location :	Vial 2
Acq. Operator	: YL	Inj :	1
		Inj Volume :	1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\021423B.S		
Method	: C:\HPCHEM\1\METHODS\SCREEN.M		
Last changed	: 7/9/2021 3:37:33 AM by TW		
SCREEN METHOD			



*** End of Report ***

Data File C:\HPCHEM\1\DATA\021423B\003F0301.D Sample Name: AR1660 1PPM

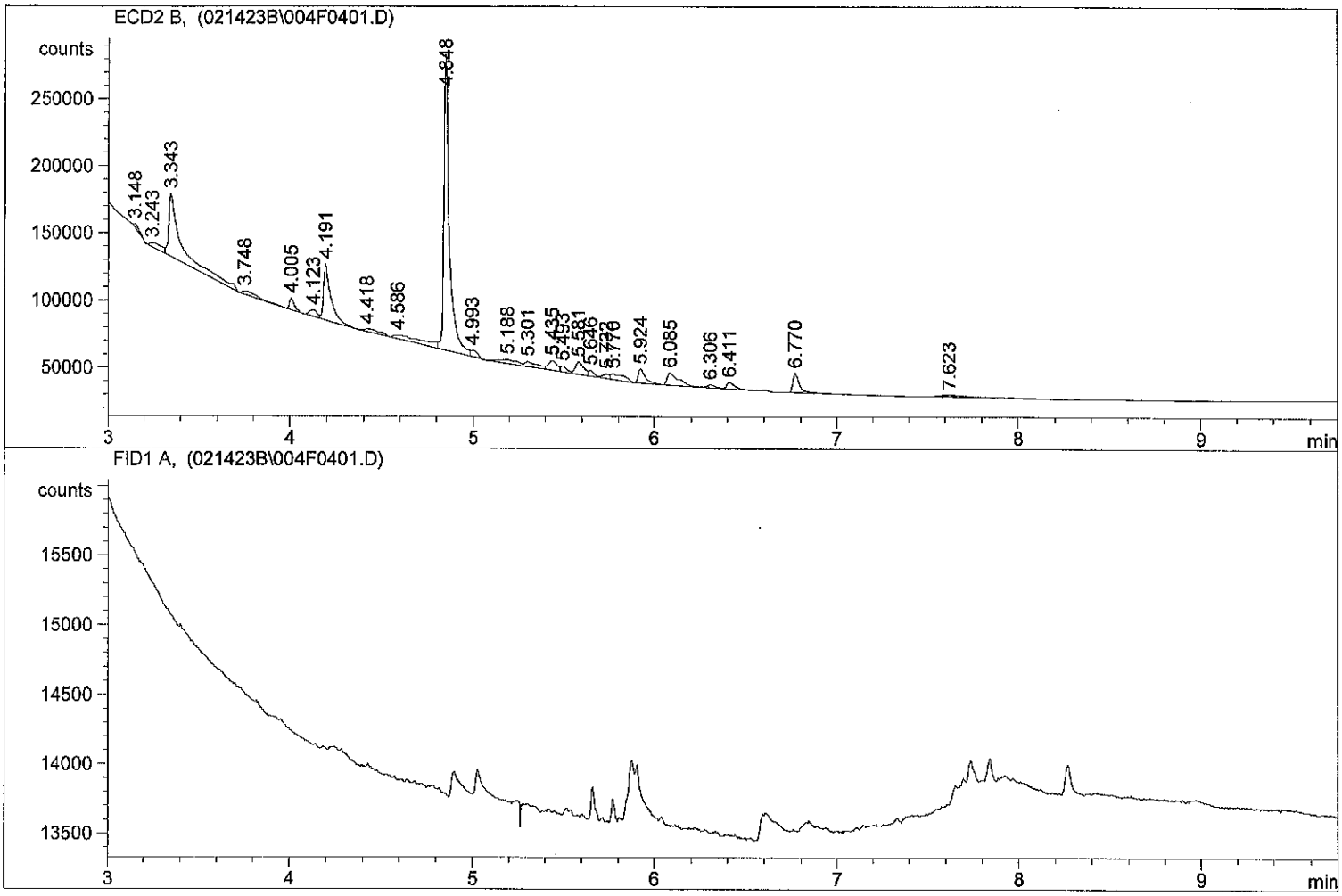
Injection Date	: 2/14/2023 4:16:37 PM	Seq. Line :	3
Sample Name	: AR1660 1PPM	Location :	Vial 3
Acq. Operator	: YL	Inj :	1
		Inj Volume :	1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\021423B.S		
Method	: C:\HPCHEM\1\METHODS\SCREEN.M		
Last changed	: 7/9/2021 3:37:33 AM by TW		
SCREEN METHOD			



*** End of Report ***

Data File C:\HPCHEM\1\DATA\021423B\004F0401.D Sample Name: 23B0420 01

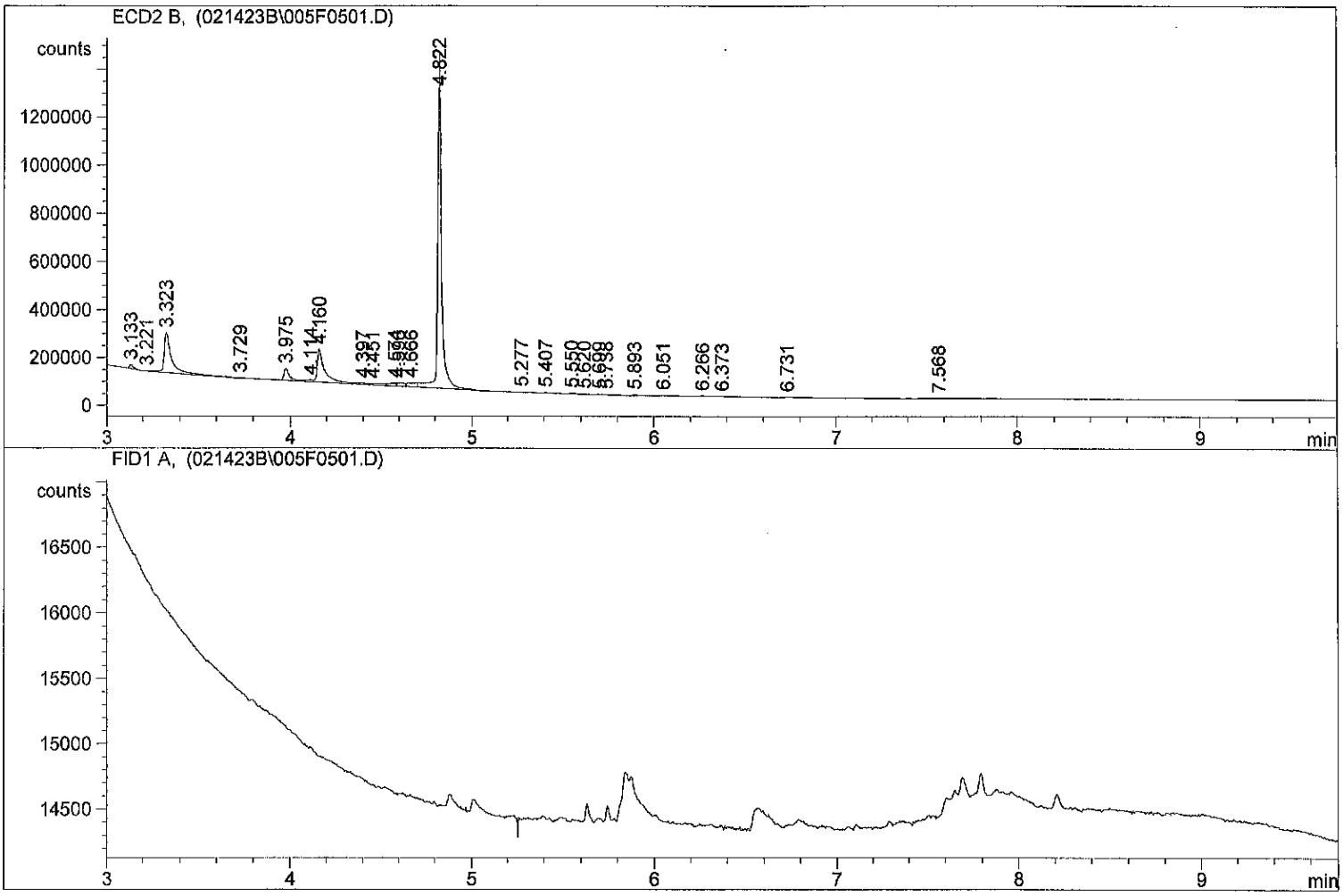
Injection Date	: 2/14/2023 4:30:33 PM	Seq. Line	: 4
Sample Name	: 23B0420 01	Location	: Vial 4
Acq. Operator	: YL	Inj	: 1
		Inj Volume	: 1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\021423B.S		
Method	: C:\HPCHEM\1\METHODS\SCREEN.M		
Last changed	: 7/9/2021 3:37:33 AM by TW		
SCREEN METHOD			



*** End of Report ***

Injection Date : 2/14/2023 4:45:04 PM Seq. Line : 5
Sample Name : 23B0420 02 Location : Vial 5
Acq. Operator : YL Inj : 1
Inj Volume : 1 µl

Sequence File : C:\HPCHEM\1\SEQUENCE\021423B.S
Method : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed : 7/9/2021 3:37:33 AM by TW
SCREEN METHOD



*** End of Report ***

```
Injection Date  : 2/14/2023 4:59:03 PM          Seq. Line :  6
Sample Name     : 23B0420 03                    Location : Vial 6
Acq. Operator   : YL                               Inj :  1
                                                Inj Volume : 1 µl
Sequence File   : C:\HPCHEM\1\SEQUENCE\021423B.S
Method          : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed    : 7/9/2021 3:37:33 AM by TW
SCREEN METHOD
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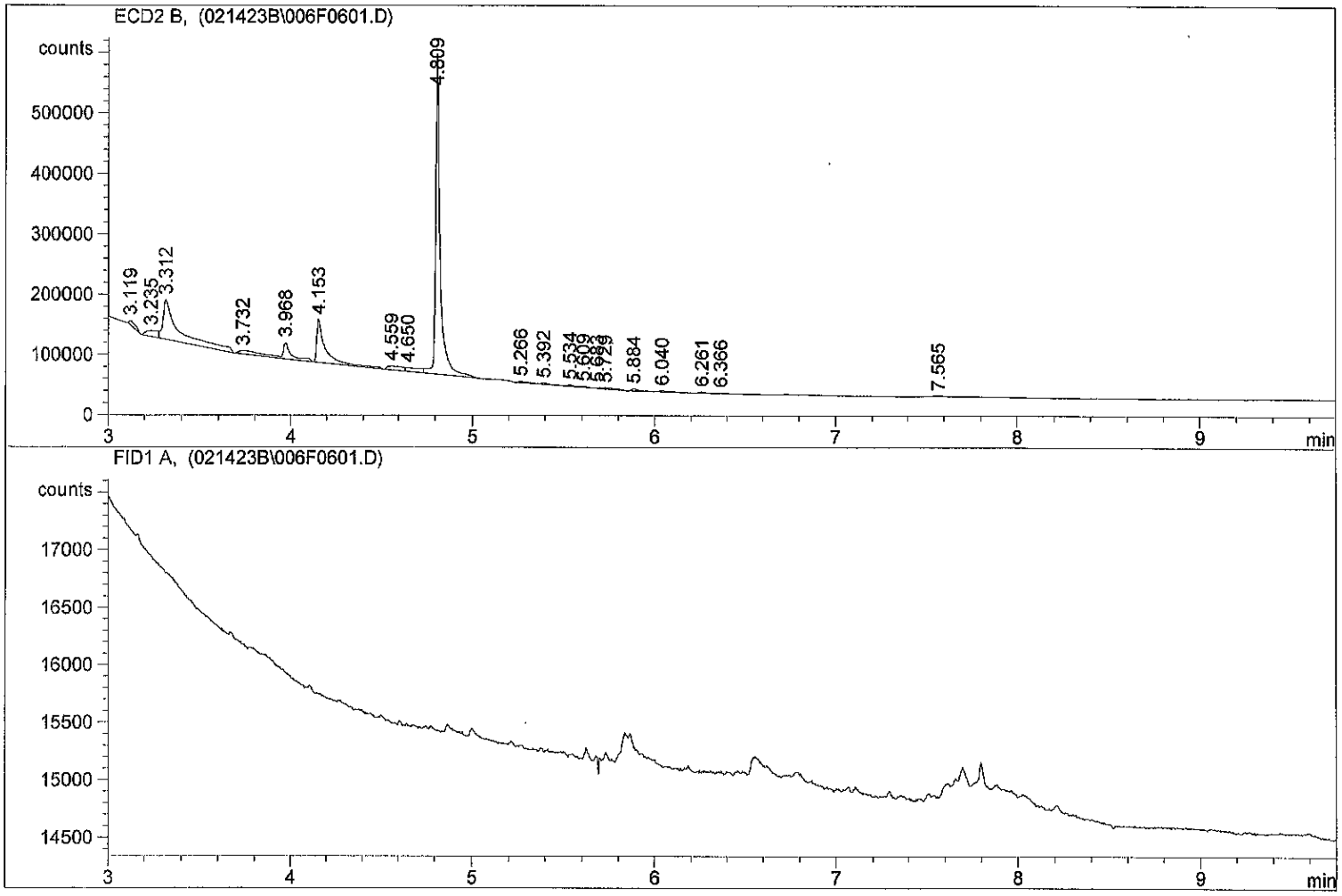
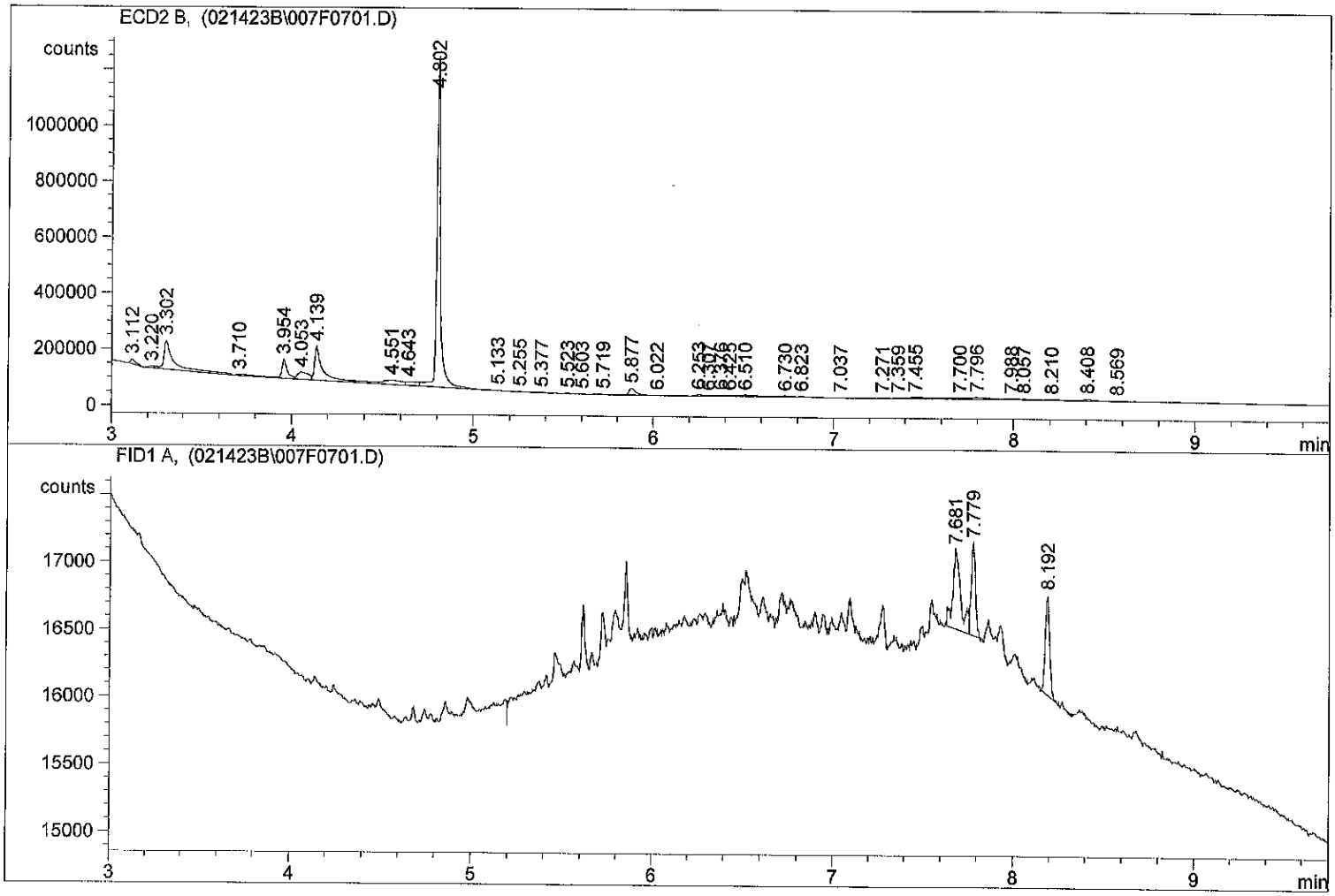


*** End of Report ***

Data File C:\HPCHEM\1\DATA\021423B\007F0701.D Sample Name: 23B0420 04

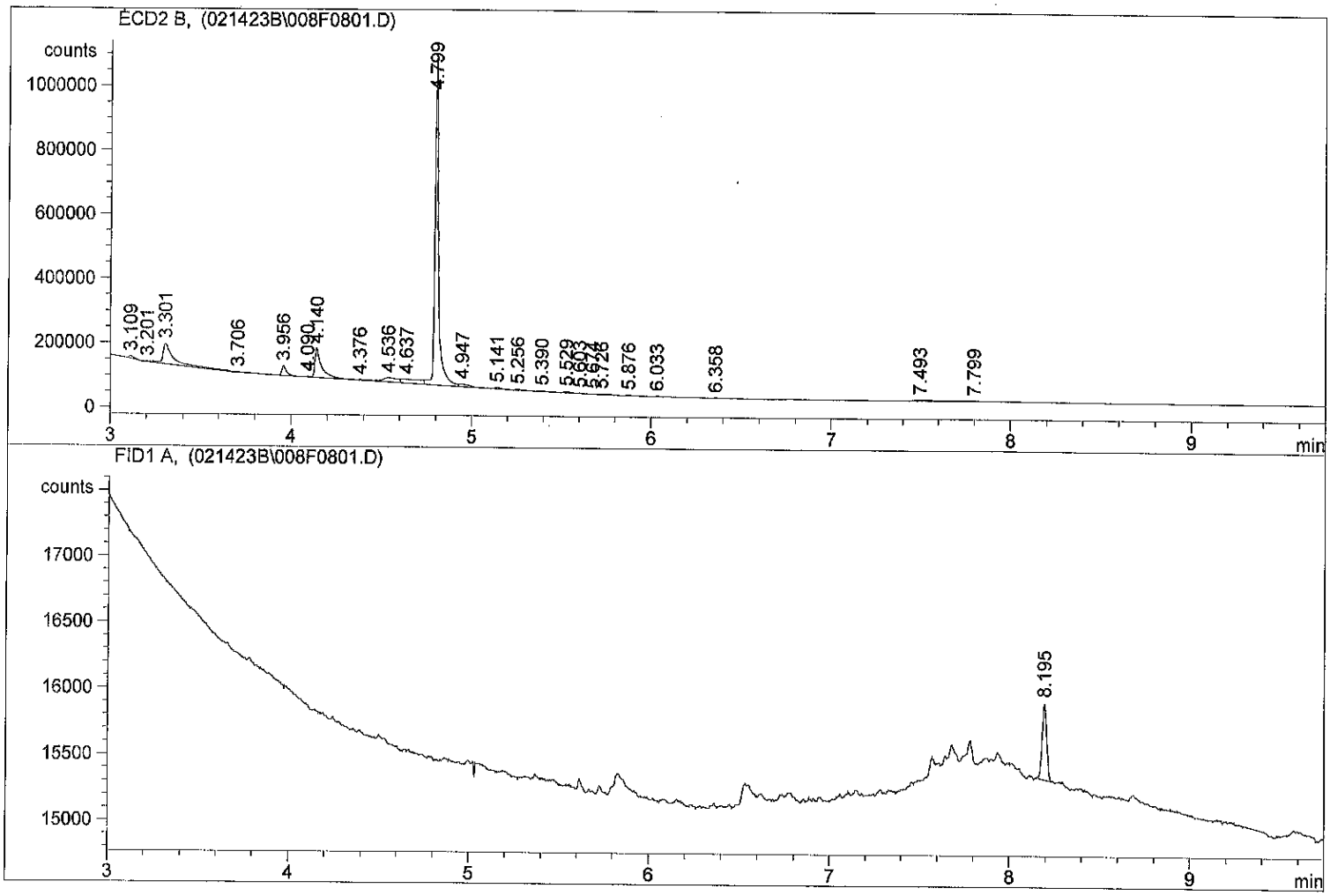
Injection Date	: 2/14/2023 5:13:35 PM	Seq. Line :	7
Sample Name	: 23B0420 04	Location :	Vial 7
Acq. Operator	: YL	Inj :	1
		Inj Volume :	1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\021423B.S		
Method	: C:\HPCHEM\1\METHODS\SCREEN.M		
Last changed	: 7/9/2021 3:37:33 AM by TW		
SCREEN METHOD			



*** End of Report ***

Data File C:\HPCHEM\1\DATA\021423B\008F0801.D Sample Name: 23B0420 05

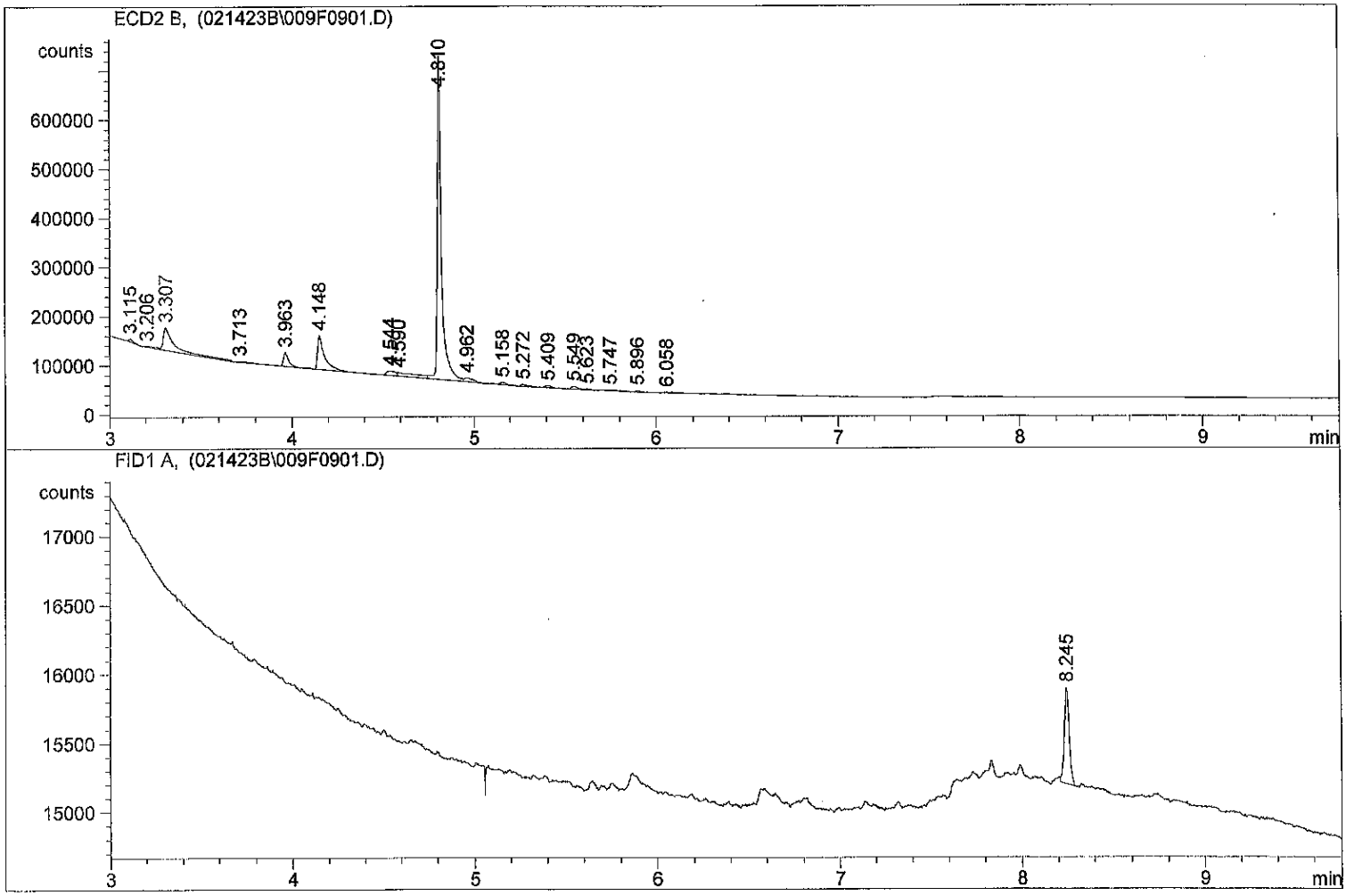
Injection Date	: 2/14/2023 5:27:33 PM	Seq. Line :	8
Sample Name	: 23B0420 05	Location :	Vial 8
Acq. Operator	: YL	Inj :	1
		Inj Volume :	1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\021423B.S		
Method	: C:\HPCHEM\1\METHODS\SCREEN.M		
Last changed	: 7/9/2021 3:37:33 AM by TW		
SCREEN METHOD			



*** End of Report ***

```
Injection Date  : 2/14/2023 5:42:01 PM        Seq. Line :   9
Sample Name     : 23B0420 06                  Location : Vial 9
Acq. Operator   : YL                             Inj :   1
                                              Inj Volume : 1 µl

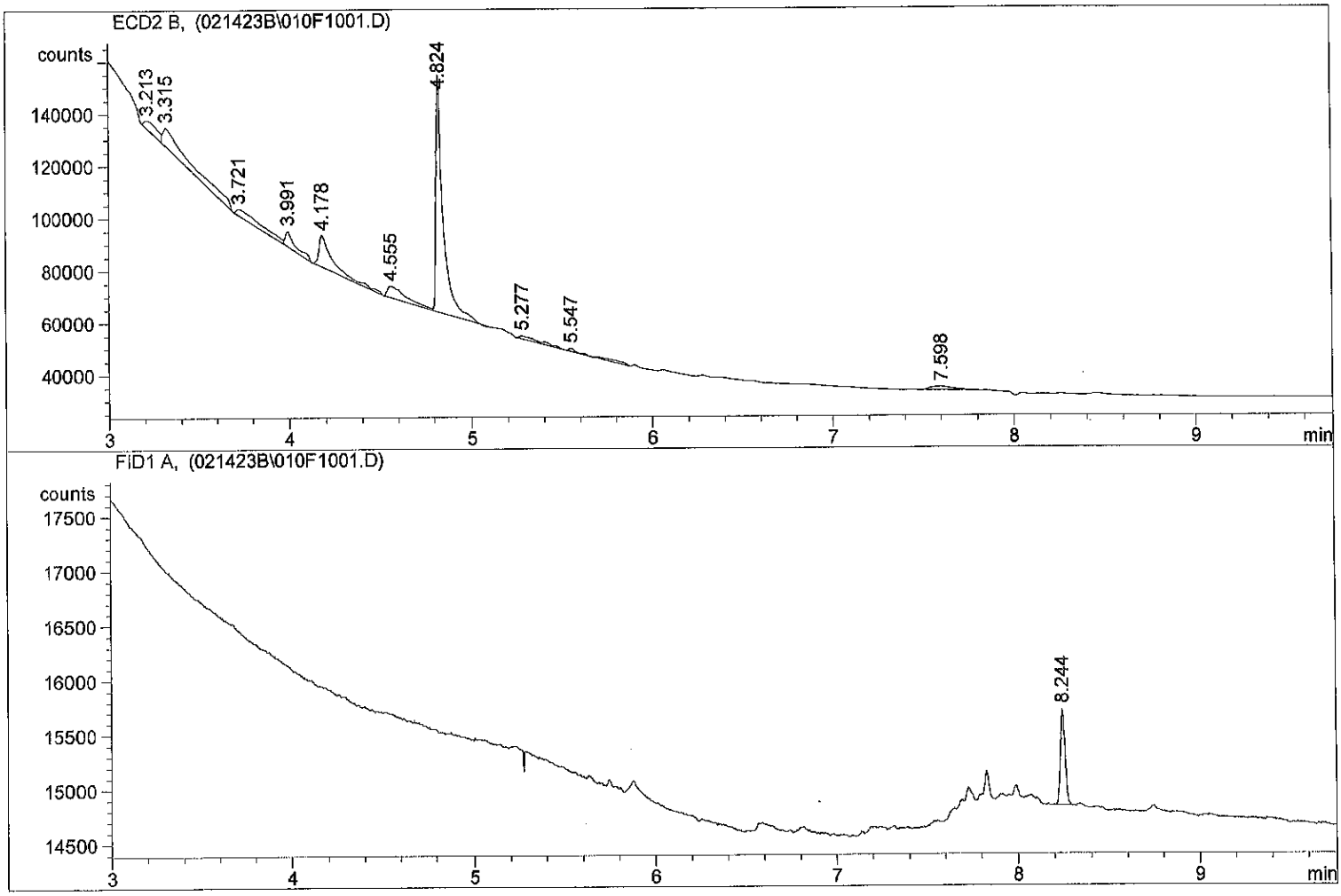
Sequence File   : C:\HPCHEM\1\SEQUENCE\021423B.S
Method          : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed    : 7/9/2021 3:37:33 AM by TW
SCREEN METHOD
```



*** End of Report ***

Data File C:\HPCHEM\1\DATA\021423B\010F1001.D Sample Name: 23B0420 07

Injection Date	: 2/14/2023 5:56:02 PM	Seq. Line	: 10
Sample Name	: 23B0420 07	Location	: Vial 10
Acq. Operator	: YL	Inj	: 1
		Inj Volume	: 1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\021423B.S		
Method	: C:\HPCHEM\1\METHODS\SCREEN.M		
Last changed	: 7/9/2021 3:37:33 AM by TW		
SCREEN METHOD			

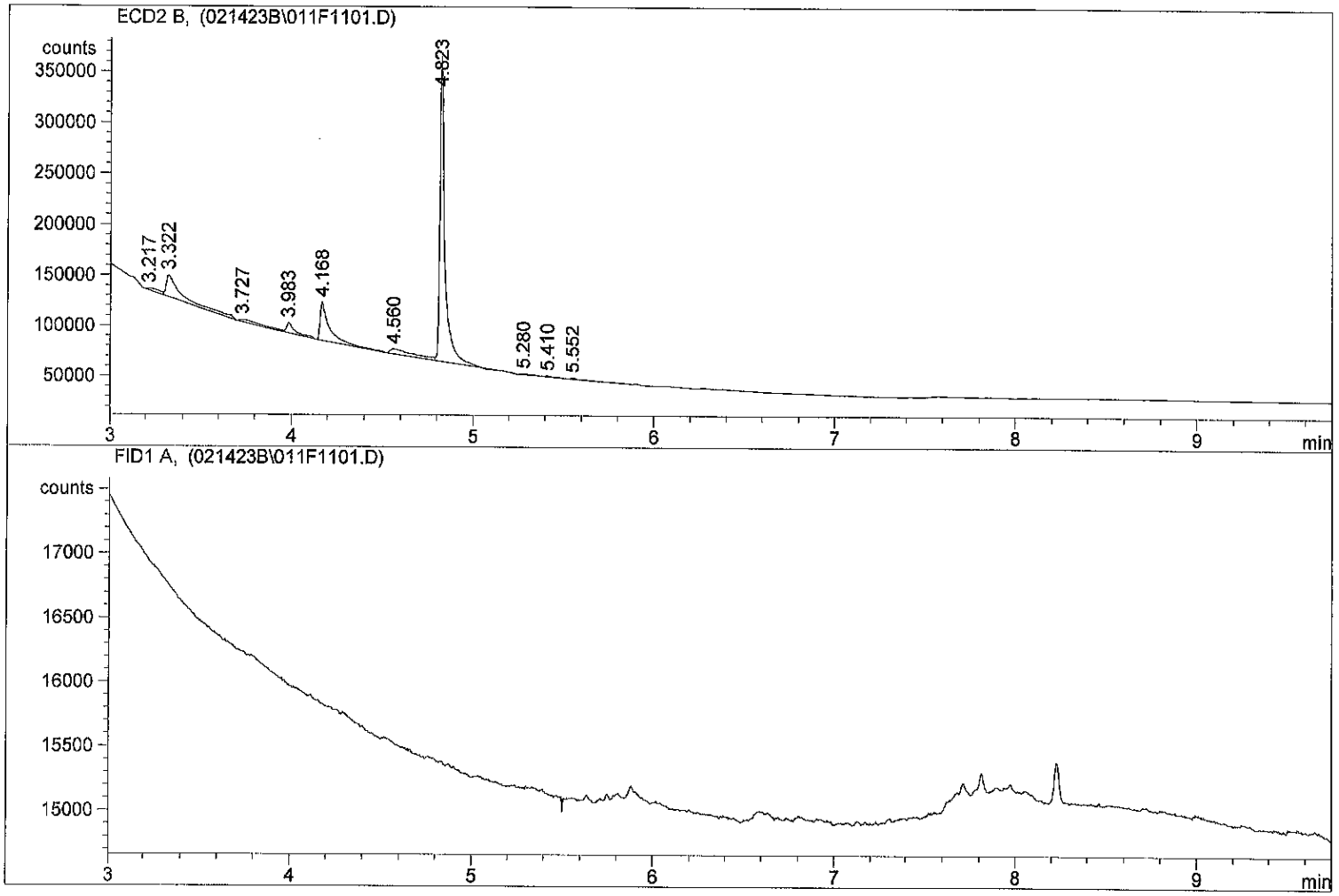


*** End of Report ***

Data File C:\HPCHEM\1\DATA\021423B\011F1101.D Sample Name: 23B0420 08

Injection Date : 2/14/2023 6:10:30 PM Seq. Line : 11
Sample Name : 23B0420 08 Location : Vial 11
Acq. Operator : YL Inj : 1
Inj Volume : 1 µl

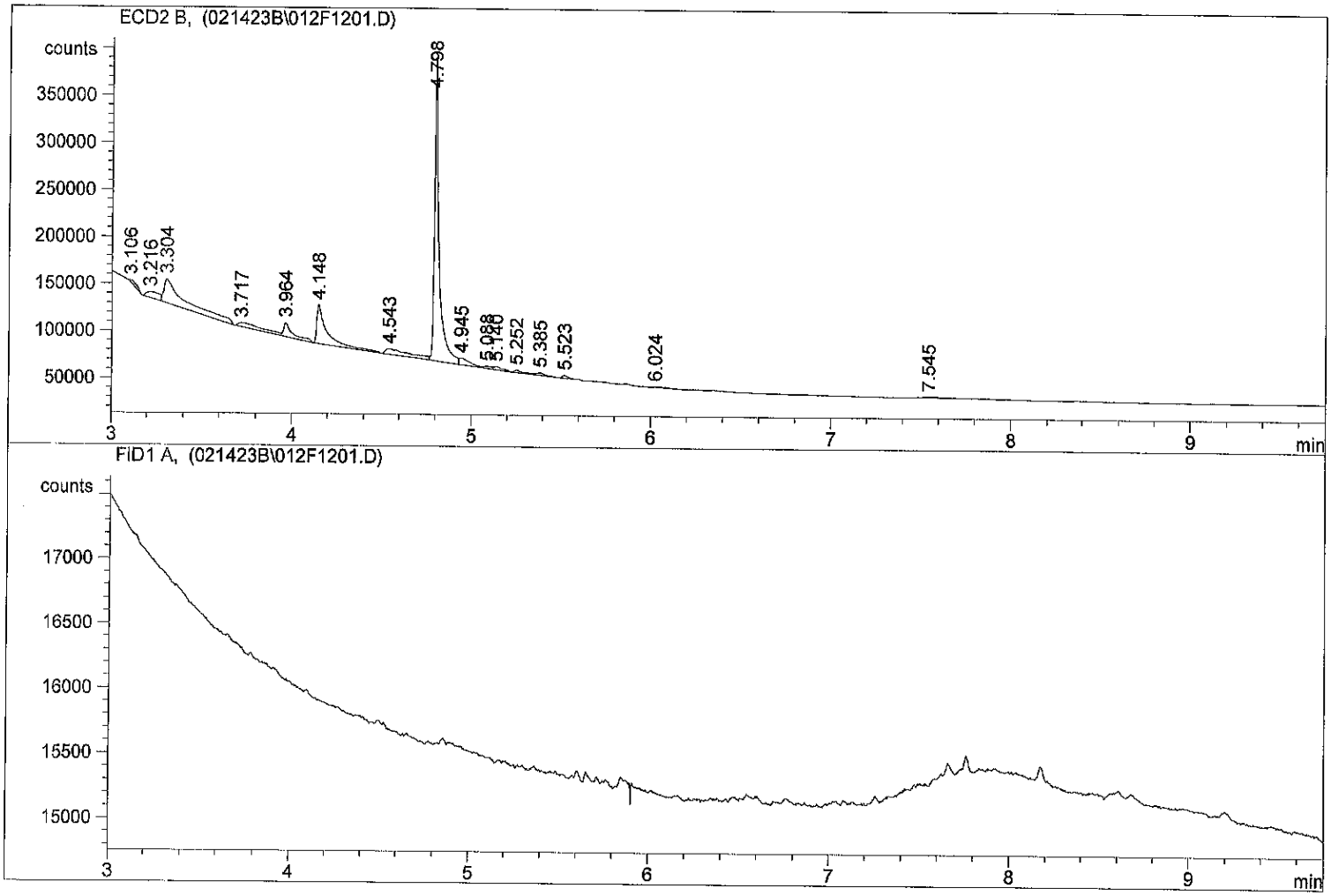
Sequence File : C:\HPCHEM\1\SEQUENCE\021423B.S
Method : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed : 7/9/2021 3:37:33 AM by TW
SCREEN METHOD



*** End of Report ***

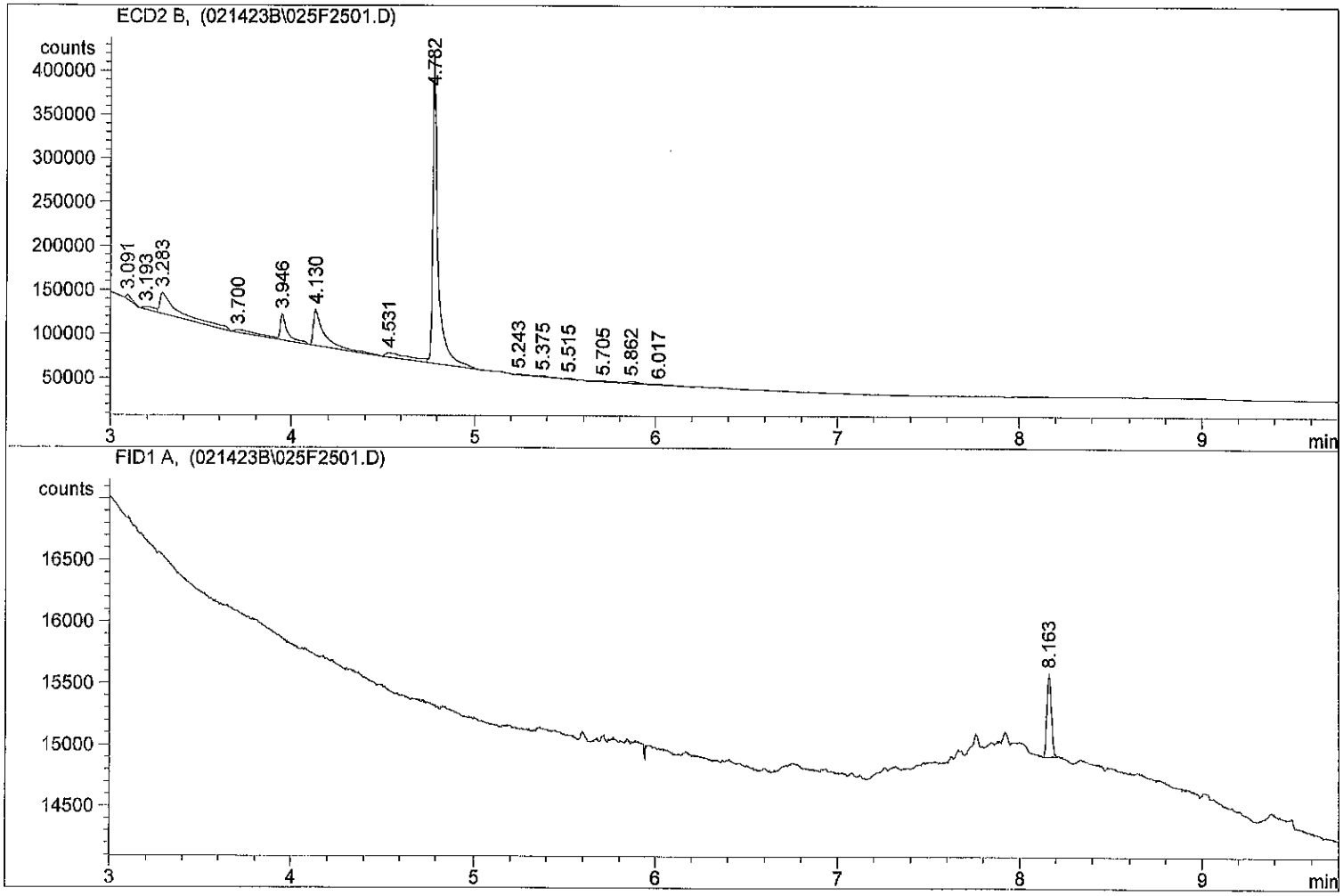
Data File C:\HPCHEM\1\DATA\021423B\012F1201.D Sample Name: 23B0420 09

Injection Date	: 2/14/2023 6:24:29 PM	Seq. Line :	12
Sample Name	: 23B0420 09	Location :	Vial 12
Acq. Operator	: YL	Inj :	1
		Inj Volume :	1 µl
Sequence File	: C:\HPCHEM\1\SEQUENCE\021423B.S		
Method	: C:\HPCHEM\1\METHODS\SCREEN.M		
Last changed	: 7/9/2021 3:37:33 AM by TW		
SCREEN METHOD			



*** End of Report ***

```
Injection Date  : 2/14/2023 9:29:57 PM          Seq. Line :  25
Sample Name     : 23B0276 01                    Location : Vial 25
Acq. Operator   : YL                               Inj :   1
                                                Inj Volume : 1 µl
Sequence File   : C:\HPCHEM\1\SEQUENCE\021423B.S
Method          : C:\HPCHEM\1\METHODS\SCREEN.M
Last changed    : 7/9/2021 3:37:33 AM by TW
SCREEN METHOD
```



*** End of Report ***

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Cleanup Batch:	CLB0161	Cleanup Type:	Sulfuric Acid
Cleanup Method:	EPA 3665 Sulfuric Acid Cleanup - uL	Analysis:	EPA 8082A

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
Reference	BLB0391-SRM1	02282318ECD7.D	02/18/2023	
LCS Dup	BLB0391-BSD1	02282317ECD7.D	02/18/2023	
LCS	BLB0391-BS1	02282316ECD7.D	02/18/2023	
Blank	BLB0391-BLK1	02282315ECD7.D	02/18/2023	
LDW23-SC1150B	23B0276-01	02282330ECD7.D	02/18/2023	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BENCH SHEET

CLB0161

Matrix: Solid **Cleanup using: Organics - EPA 3665 Sulfuric Acid Cleanup - uL** **Printed: 2/18/2023 2:42:56PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23A0420-01	A	LDW23-SC1045	A 02	2.5	2.5	8082A PCB Solid 4	2/18/2023	NRB	
23A0420-02	A	LDW23-SC1052	A 02	2.5	2.5	8082A PCB Solid 4	2/18/2023	NRB	
23A0420-03	A	LDW23-SC1057	A 02	2.5	2.5	8082A PCB Solid 4	2/18/2023	NRB	
23A0420-04	A	LDW23-IT1051	A 02	2.5	2.5	8082A PCB Solid 4	2/18/2023	NRB	
23A0420-05	A	LDW23-SC1125	A 02	2.5	2.5	8082A PCB Solid 4	2/18/2023	NRB	
23A0420-06	A	LDW23-SC1132	A 02	2.5	2.5	8082A PCB Solid 4	2/18/2023	NRB	
23A0420-07	A	LDW23-SC1003	A 02	2.5	2.5	8082A PCB Solid 4	2/18/2023	NRB	
23A0420-08	A	LDW23-SC1004	A 02	2.5	2.5	8082A PCB Solid 4	2/18/2023	NRB	
23A0420-09	A	LDW23-SC1082	A 02	2.5	2.5	8082A PCB Solid 4	2/18/2023	NRB	
23B0276-01	A	LDW23-SC1150B	A 01	2.5	2.5	8082A PCB Solid 4	2/18/2023	NRB	
BLB0391-BLK1	-	Blank	-	2.5	2.5	-	2/18/2023	NRB	
BLB0391-BS1	-	LCS	-	2.5	2.5	-	2/18/2023	NRB	
BLB0391-BSD1	-	LCS Dup	-	2.5	2.5	-	2/18/2023	NRB	
BLB0391-MS1	-	Matrix Spike	-	2.5	2.5	-	2/18/2023	NRB	
BLB0391-MSD1	-	Matrix Spike Dup	-	2.5	2.5	-	2/18/2023	NRB	
BLB0391-SRM1	-	Reference	-	2.5	2.5	-	2/18/2023	NRB	

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Cleanup Batch:	CLB0162	Cleanup Type:	Sulfur
Cleanup Method:	EPA 3660B Sulfur Cleanup - uL	Analysis:	EPA 8082A

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LCS Dup	BLB0391-BSD1	02282317ECD7.D	02/18/2023	
LCS	BLB0391-BS1	02282316ECD7.D	02/18/2023	
Blank	BLB0391-BLK1	02282315ECD7.D	02/18/2023	
LDW23-SC1150B	23B0276-01	02282330ECD7.D	02/18/2023	
Reference	BLB0391-SRM1	02282318ECD7.D	02/18/2023	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BENCH SHEET

CLB0162

Matrix: Solid **Cleanup using: Organics - EPA 3660B Sulfur Cleanup - uL** **Printed: 2/18/2023 2:44:20PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23A0420-01	A	LDW23-SC1045	A 02	2.5	2.5	8082A PCB Solid 4	2/18/2023	NRB	
23A0420-02	A	LDW23-SC1052	A 02	2.5	2.5	8082A PCB Solid 4	2/18/2023	NRB	
23A0420-03	A	LDW23-SC1057	A 02	2.5	2.5	8082A PCB Solid 4	2/18/2023	NRB	
23A0420-04	A	LDW23-IT1051	A 02	2.5	2.5	8082A PCB Solid 4	2/18/2023	NRB	
23A0420-05	A	LDW23-SC1125	A 02	2.5	2.5	8082A PCB Solid 4	2/18/2023	NRB	
23A0420-06	A	LDW23-SC1132	A 02	2.5	2.5	8082A PCB Solid 4	2/18/2023	NRB	
23A0420-07	A	LDW23-SC1003	A 02	2.5	2.5	8082A PCB Solid 4	2/18/2023	NRB	
23A0420-08	A	LDW23-SC1004	A 02	2.5	2.5	8082A PCB Solid 4	2/18/2023	NRB	
23A0420-09	A	LDW23-SC1082	A 02	2.5	2.5	8082A PCB Solid 4	2/18/2023	NRB	
23B0276-01	A	LDW23-SC1150B	A 01	2.5	2.5	8082A PCB Solid 4	2/18/2023	NRB	
BLB0391-BLK1	-	Blank	-	2.5	2.5	-	2/18/2023	NRB	
BLB0391-BS1	-	LCS	-	2.5	2.5	-	2/18/2023	NRB	
BLB0391-BSD1	-	LCS Dup	-	2.5	2.5	-	2/18/2023	NRB	
BLB0391-MS1	-	Matrix Spike	-	2.5	2.5	-	2/18/2023	NRB	
BLB0391-MSD1	-	Matrix Spike Dup	-	2.5	2.5	-	2/18/2023	NRB	
BLB0391-SRM1	-	Reference	-	2.5	2.5	-	2/18/2023	NRB	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Cleanup Batch:	CLB0163	Cleanup Type:	Silica Gel
Cleanup Method:	EPA 3630C Silica Gel Cleanup - uL	Analysis:	EPA 8082A

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LCS	BLB0391-BS1	02282316ECD7.D	02/18/2023	
LDW23-SC1150B	23B0276-01	02282330ECD7.D	02/18/2023	
Blank	BLB0391-BLK1	02282315ECD7.D	02/18/2023	
LCS Dup	BLB0391-BSD1	02282317ECD7.D	02/18/2023	
Reference	BLB0391-SRM1	02282318ECD7.D	02/18/2023	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BENCH SHEET

CLB0163

Matrix: Solid **Cleanup using: Organics - EPA 3630C Silica Gel Cleanup - uL** **Printed: 2/18/2023 2:44:57PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23A0420-01	A	LDW23-SC1045	A 02	2.5	2.5	8082A PCB Solid 4	2/18/2023	NRB	
23A0420-02	A	LDW23-SC1052	A 02	2.5	2.5	8082A PCB Solid 4	2/18/2023	NRB	
23A0420-03	A	LDW23-SC1057	A 02	2.5	2.5	8082A PCB Solid 4	2/18/2023	NRB	
23A0420-04	A	LDW23-IT1051	A 02	2.5	2.5	8082A PCB Solid 4	2/18/2023	NRB	
23A0420-05	A	LDW23-SC1125	A 02	2.5	2.5	8082A PCB Solid 4	2/18/2023	NRB	
23A0420-06	A	LDW23-SC1132	A 02	2.5	2.5	8082A PCB Solid 4	2/18/2023	NRB	
23A0420-07	A	LDW23-SC1003	A 02	2.5	2.5	8082A PCB Solid 4	2/18/2023	NRB	
23A0420-08	A	LDW23-SC1004	A 02	2.5	2.5	8082A PCB Solid 4	2/18/2023	NRB	
23A0420-09	A	LDW23-SC1082	A 02	2.5	2.5	8082A PCB Solid 4	2/18/2023	NRB	
23B0276-01	A	LDW23-SC1150B	A 01	2.5	2.5	8082A PCB Solid 4	2/18/2023	NRB	
BLB0391-BLK1	-	Blank	-	2.5	2.5	-	2/18/2023	NRB	
BLB0391-BS1	-	LCS	-	2.5	2.5	-	2/18/2023	NRB	
BLB0391-BSD1	-	LCS Dup	-	2.5	2.5	-	2/18/2023	NRB	
BLB0391-MS1	-	Matrix Spike	-	2.5	2.5	-	2/18/2023	NRB	
BLB0391-MSD1	-	Matrix Spike Dup	-	2.5	2.5	-	2/18/2023	NRB	
BLB0391-SRM1	-	Reference	-	2.5	2.5	-	2/18/2023	NRB	

Form I

METHOD BLANK DATA SHEET

EPA 8082A

Blank

Laboratory:	Analytical Resources, LLC			SDG:	23B0276
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Solid	Laboratory ID:	BLB0391-BLK1	File ID:	02282315ECD7.D
Sampled:	N/A	Prepared:	02/15/23 16:55	Analyzed:	02/28/23 20:49
Solids:		Preparation:	EPA 3546 (Microwave)	Initial/Final:	12.5 g / 2.5 mL
Batch:	BLB0391	Sequence:	SLC0014	Calibration:	GB00069
Instrument:	ECD7	Column:	ZB5	Cleanups:	Silica Gel, Sulfur, Sulfuric Acid

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg wet)	Q	DL	RL
12674-11-2	Aroclor 1016	1	4.0	U	1.6	4.0
11104-28-2	Aroclor 1221	1	4.0	U	1.6	4.0
11141-16-5	Aroclor 1232	1	4.0	U	1.6	4.0
53469-21-9	Aroclor 1242	1	4.0	U	1.6	4.0
12672-29-6	Aroclor 1248	1	4.0	U	1.6	4.0
11097-69-1	Aroclor 1254	1	4.0	U	1.6	4.0
11096-82-5	Aroclor 1260	1	4.0	U	0.6	4.0
37324-23-5	Aroclor 1262	1	4.0	U	0.6	4.0
11100-14-4	Aroclor 1268	1	4.0	U	0.6	4.0

SURROGATES	ADDED: (ug/kg wet)	FOUND: (ug/kg wet)	% REC	QC LIMITS	Q
Decachlorobiphenyl	8.0000	6.41	80.1	40 - 126	
Tetrachlorometaxylene	8.0000	5.43	67.9	44 - 120	
Decachlorobiphenyl [2C]	8.0000	6.70	83.8	40 - 126	
Tetrachlorometaxylene [2C]	8.0000	5.52	69.0	44 - 120	

[2C] indicates second-column analyte, present if quantification on any batch samples used second column data.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230228.b/02282315ECD7.D
Data file 2: /230228.b/230228.b/02282315ECD7.D
Method: \\target\share\chem4\ecd7.i\230228.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BLB0391-BLK1
Client ID:
Injection Date: 28-FEB-2023 20:49
Report Date: 03/01/2023 12:20
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.808	0.000	328738	5.686	-0.001	136124	27.1	27.6	1.6	Tetrachloro-m-xylene
13.893	0.000	536209	14.118	-0.002	259157	32.0	33.5	4.6	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	811031	20.4
Hexabromobiphenyl	1429847	1699761	18.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	336382	6.7
Hexabromobiphenyl	513946	507633	-1.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	ZB5 Col Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	---			0.0	1	---			0.0
Aroclor-1248	2	---			0.0	2	---			0.0
Aroclor-1248	3	---			0.0	3	---			0.0
Aroclor-1248	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1254	1	---			0.0	1	---			0.0
Aroclor-1254	2	---			0.0	2	---			0.0
Aroclor-1254	3	---			0.0	3	---			0.0
Aroclor-1254	4	---			0.0	4	---			0.0
Aroclor-1254	5	---			0.0	5	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1260	1	---			0.0	1	---			0.0
Aroclor-1260	2	---			0.0	2	---			0.0
Aroclor-1260	3	---			0.0	3	---			0.0
Aroclor-1260	4	---			0.0	4	---			0.0
Aroclor-1260	5	---			0.0	NS	---			----
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				

Total PCB Area Col1 (5.907 - 13.793) = 300320 Col1 Total PCB = 0.0 ppm*

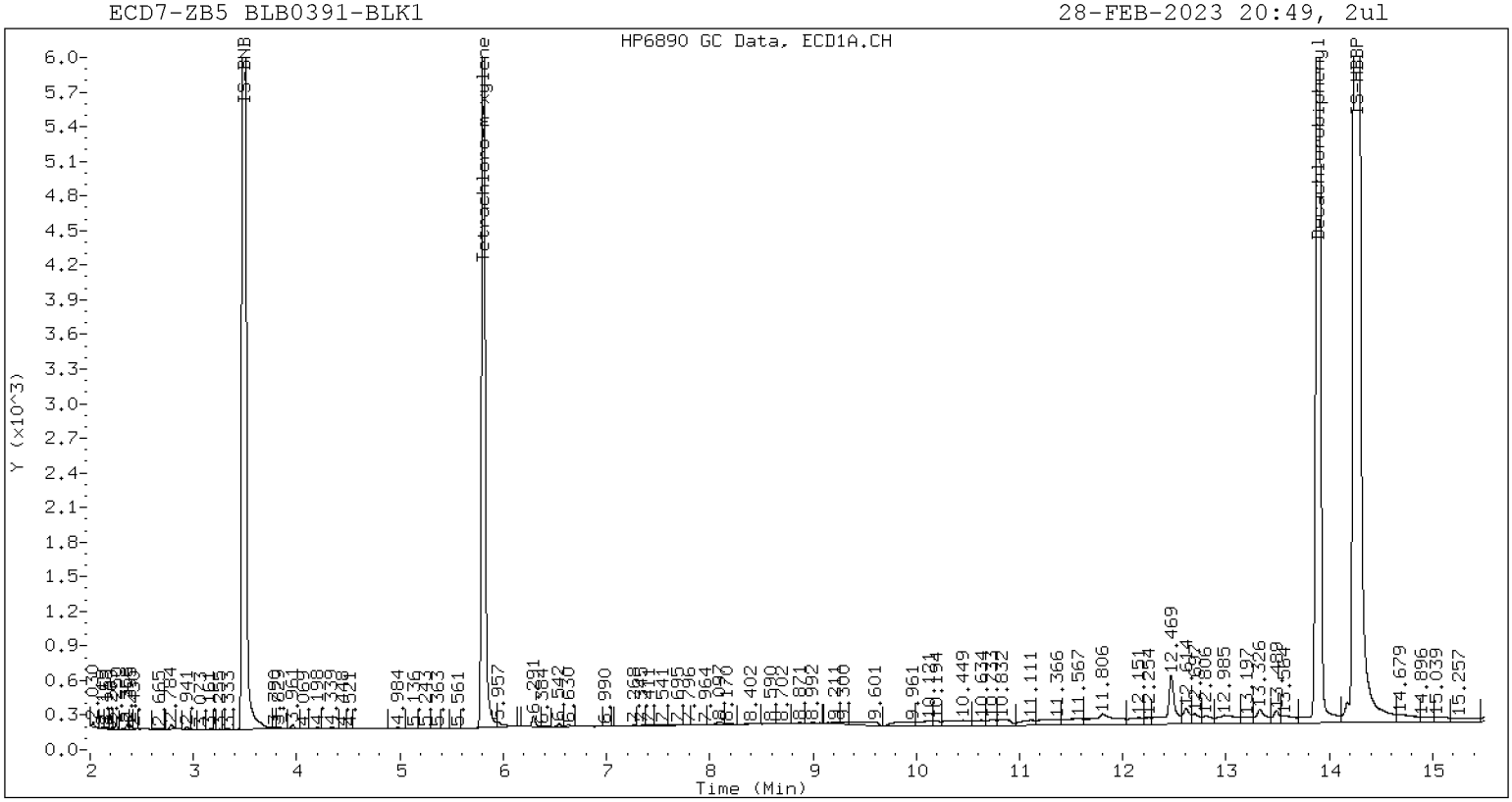
Total PCB Area Col2 (5.787 - 14.020) = 24116 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

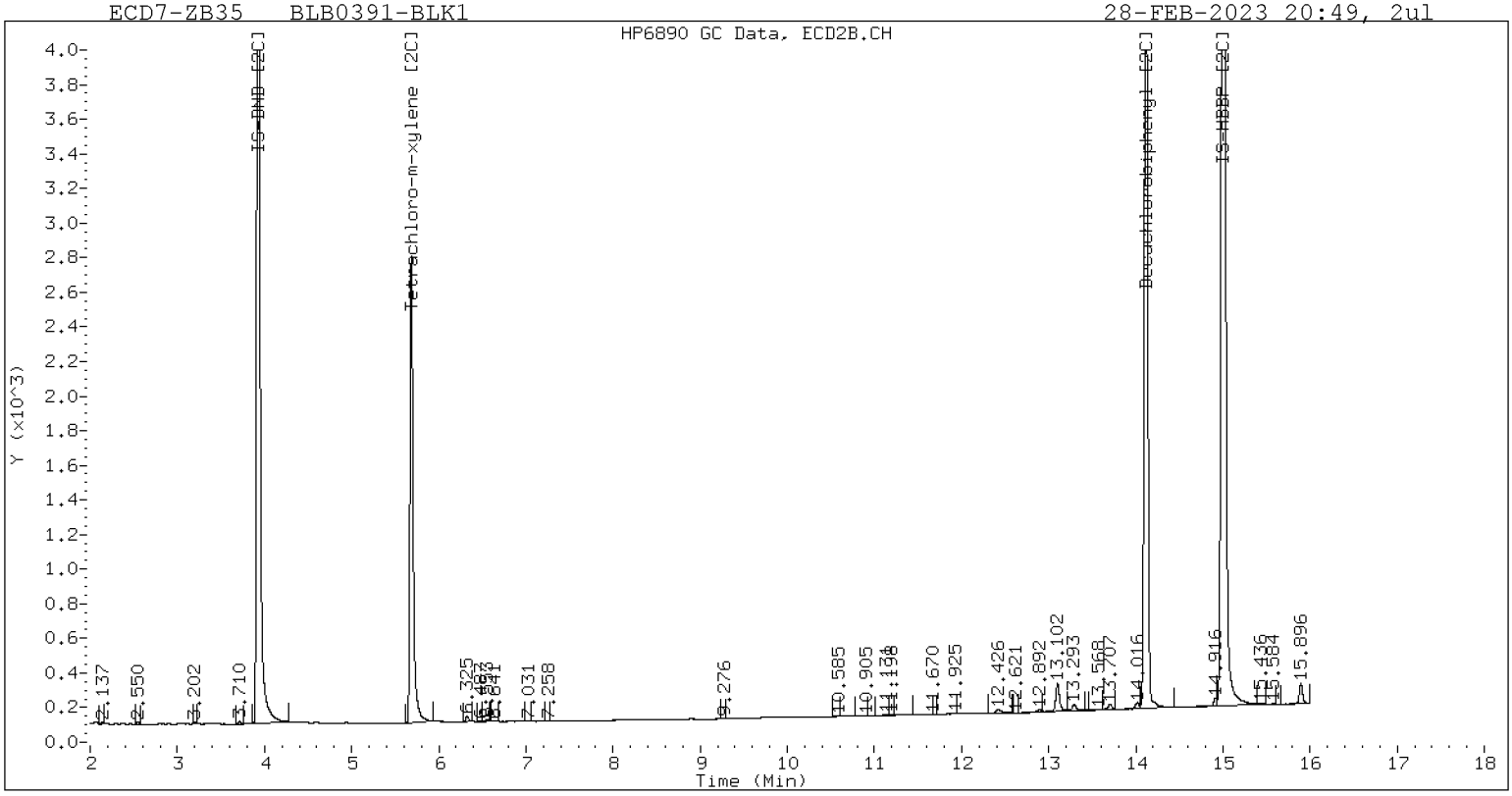
PCB Dual Column Chromatograms

ECD7-ZB5 BLB0391-BLK1 28-FEB-2023 20:49, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 BLB0391-BLK1 28-FEB-2023 20:49, 2ul



ZB-35 Manual Integration: NO

LCS / LCS DUPLICATE RECOVERY

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	02/28/23 21:10
Batch:	BLB0391	Laboratory ID:	BLB0391-BS1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	LCS
Initial/Final:	12.5 g / 2.5 mL		

COMPOUND	SPIKE ADDED (ug/kg wet)	LCS CONCENTRATION (ug/kg wet)	Q	LCS % REC. #	QC LIMITS REC.
Aroclor 1016	101	81.9		81.3	56 - 120
Aroclor 1260 [2C]	101	99.0		98.2	58 - 120

* Indicates values outside of QC limits

COMPOUND	SPIKE ADDED (ug/kg wet)	LCSD CONCENTRATION (ug/kg wet)	Q	LCSD % REC. #	% RPD #	QC LIMITS	
						RPD	REC.
Aroclor 1016	101	86.1		85.5	5.04	30	56 - 120
Aroclor 1260	101	103		103	9.75	30	58 - 120

* Indicates values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230228.b/02282316ECD7.D
Data file 2: /230228.b/230228.b/02282316ECD7.D
Method: \\target\share\chem4\ecd7.i\230228.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BLB0391-BS1
Client ID:
Injection Date: 28-FEB-2023 21:10
Report Date: 03/01/2023 12:20
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.808	0.001	396829	5.687	-0.001	155760	32.0	30.9	3.7	Tetrachloro-m-xylene
13.892	-0.001	607607	14.118	-0.002	309970	32.8	38.4	15.8	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	830219	23.2
Hexabromobiphenyl	1429847	1880213	31.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	344030	9.1
Hexabromobiphenyl	513946	529461	3.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.268	-0.001	125739	398.8	1	7.253	-0.002	76955	382.1
Aroclor-1016	2	7.652	-0.004	412349	429.0	2	7.853	-0.006	174691	427.7
Aroclor-1016	3	7.789	-0.003	178538	380.5	3	8.052	-0.006	72952	395.5
Aroclor-1016	4	8.403	-0.003	130388	429.8	4	8.305	-0.003	56492	390.4
Total Col1Ave (4 peaks):					409.5	Total Col2Ave (4 peaks):				398.9 RPD = 3
Corrected Ave (3 peaks):					402.7	Corrected Ave (3 peaks):				389.3 RPD = 3
Aroclor-1221	1	4.732	0.001	680	9.1	1	---			0.0
Aroclor-1221	2	6.130	-0.001	16280	122.4	2	6.298	0.002	7389	119.9
Aroclor-1221	3	6.382	-0.000	79239	256.7	3	6.621	-0.000	33393	332.8
Total Col1Ave (3 peaks):					129.4	Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	4.732	0.002	680	15.3	1	---			0.0
Aroclor-1232	2	6.130	-0.000	16280	184.6	2	7.253	-0.001	76955	879.8
Aroclor-1232	3	7.652	-0.004	412349	1032.7	3	7.853	-0.007	174691	998.8
Aroclor-1232	4	8.576	-0.005	165842	977.2	4	8.711	-0.004	55246	1097.6
Total Col1Ave (4 peaks):					552.4	Total Col2Ave (3 peaks):				992.0 RPD = 57*
Corrected Ave (3 peaks):					392.4	Corrected Ave: < 3 Peaks				
Aroclor-1242	1	7.268	-0.000	125739	488.7	1	7.253	0.000	76955	481.4
Aroclor-1242	2	7.652	-0.004	412349	527.7	2	7.853	-0.006	174691	519.9
Aroclor-1242	3	8.403	-0.002	130388	536.3	3	9.157	-0.010	9659	92.4
Aroclor-1242	4	8.576	-0.005	165842	461.5	4	9.582	-0.016	3942	30.9
Total Col1Ave (4 peaks):					503.6	Total Col2Ave (4 peaks):				281.2 RPD = 57*
Corrected Ave (3 peaks):					492.7	Corrected Ave (3 peaks):				201.6 RPD = 84*
Aroclor-1248	1	8.403	-0.003	130388	321.9	1	8.305	-0.003	56492	343.9
Aroclor-1248	2	8.576	-0.005	165842	322.1	2	8.711	-0.004	55246	325.3
Aroclor-1248	3	8.991	-0.006	183271	188.7	3	9.157	-0.011	9659	49.4
Aroclor-1248	4	9.297	0.002	143344	289.9	4	9.582	-0.013	3942	16.8
Total Col1Ave (4 peaks):					280.6	Total Col2Ave (4 peaks):				183.9 RPD = 42*
Corrected Ave (3 peaks):					266.8	Corrected Ave (3 peaks):				130.5 RPD = 69*
Aroclor-1254	1	9.297	-0.002	143344	171.9	1	9.446	-0.005	49410	189.0
Aroclor-1254	2	---			0.0	2	9.967	-0.005	10467	49.8
Aroclor-1254	3	9.663	-0.006	18433	34.4	3	10.142	0.017	105757	232.4
Aroclor-1254	4	9.802	-0.006	79037	75.8	4	10.367	-0.007	133928	301.8
Aroclor-1254	5	10.118	-0.061	378226	579.0	5	10.564	-0.006	185477	686.6
Total Col1Ave (4 peaks):					215.3	Total Col2Ave (5 peaks):				291.9 RPD = 30
Corrected Ave (3 peaks):					94.1	Corrected Ave (4 peaks):				193.2 RPD = 69*
Aroclor-1260	1	11.042	-0.002	290841	430.0	1	11.650	-0.003	142796	458.7
Aroclor-1260	2	11.359	-0.002	328957	465.5	2	11.915	-0.003	367767	462.9
Aroclor-1260	3	11.732	-0.003	937633	500.2	3	12.432	-0.003	123477	585.6
Aroclor-1260	4	12.136	-0.004	459600	486.9	4	12.499	-0.003	253355	473.1
Aroclor-1260	5	12.242	-0.001	188376	463.7	NS	---			----
Total Col1Ave (5 peaks):					469.3	Total Col2Ave (4 peaks):				495.1 RPD = 5
Corrected Ave (4 peaks):					461.5	Corrected Ave (3 peaks):				464.9 RPD = 1
Aroclor-1262	1	10.823	-0.006	628458	1089.6	1	11.197	-0.003	135585	299.9
Aroclor-1262	2	12.242	-0.001	188376	200.7	2	11.650	-0.001	142796	370.9
Aroclor-1262	3	12.318	-0.001	229571	227.5	3	12.432	-0.001	123477	282.6
Aroclor-1262	4	12.986	-0.002	251034	272.2	4	12.499	-0.003	253355	370.2
Total Col1Ave (4 peaks):					447.5	Total Col2Ave (4 peaks):				330.9 RPD = 30
Corrected Ave (3 peaks):					233.5	Corrected Ave (3 peaks):				317.6 RPD = 31
Aroclor-1268	1	12.242	-0.004	188376	78.2	1	12.432	0.000	123477	115.8
Aroclor-1268	2	12.318	0.001	229571	96.2	2	12.499	-0.001	253355	221.0
Aroclor-1268	3	12.720	0.021	104602	51.2	3	12.890	-0.002	7681	7.8
Aroclor-1268	4	13.488	-0.002	86804	12.9	4	13.706	-0.003	35512	11.4
Total Col1Ave (4 peaks):					59.6	Total Col2Ave (4 peaks):				89.0 RPD = 40
Corrected Ave (3 peaks):					47.4	Corrected Ave (3 peaks):				45.0 RPD = 5

Total PCB Area Col1 (5.907 - 13.793) = 8863827 Col1 Total PCB = 0.9 ppm*

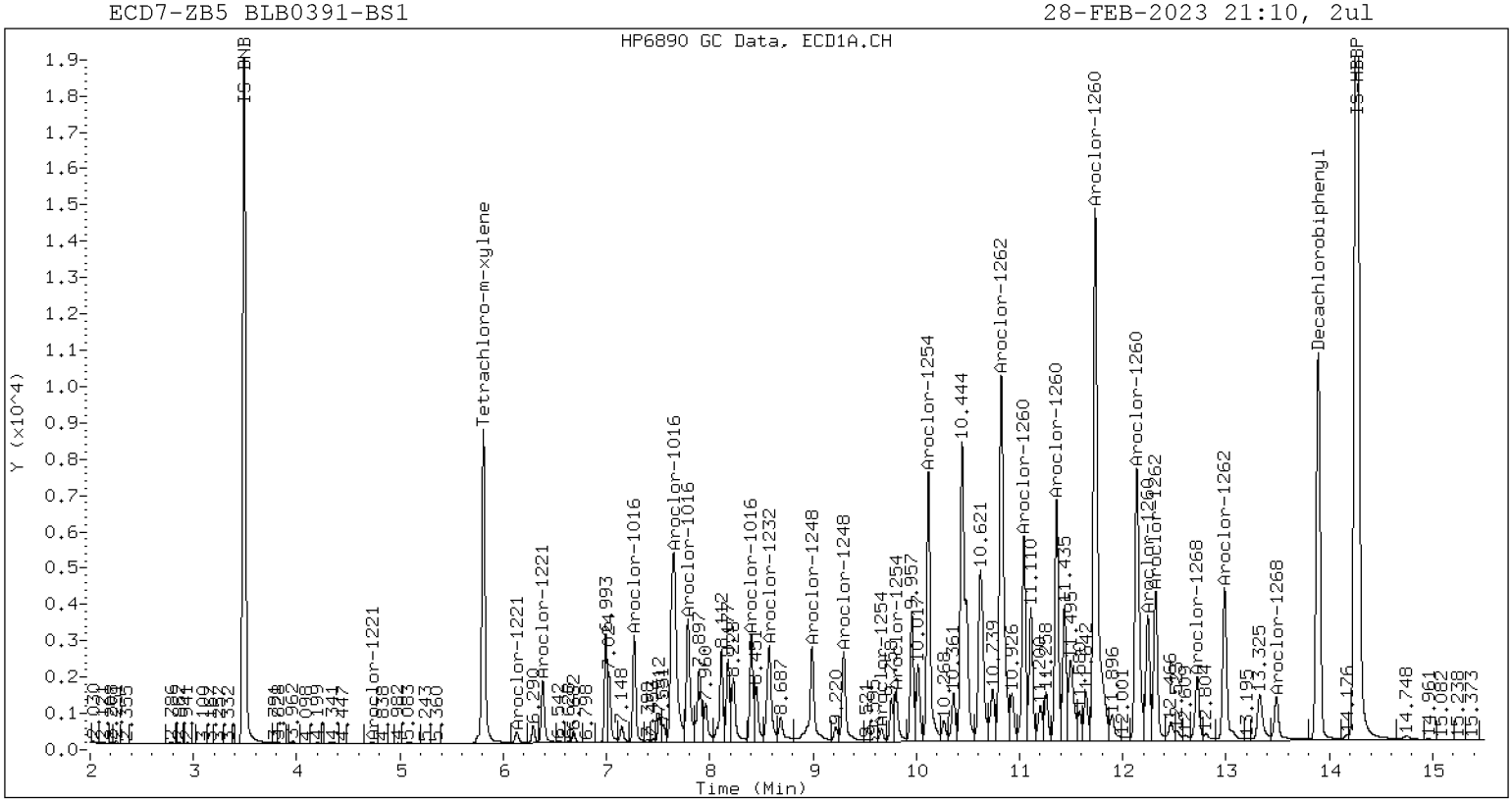
Total PCB Area Col2 (5.787 - 14.020) = 3418677 Col2 Total PCB = 0.8 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

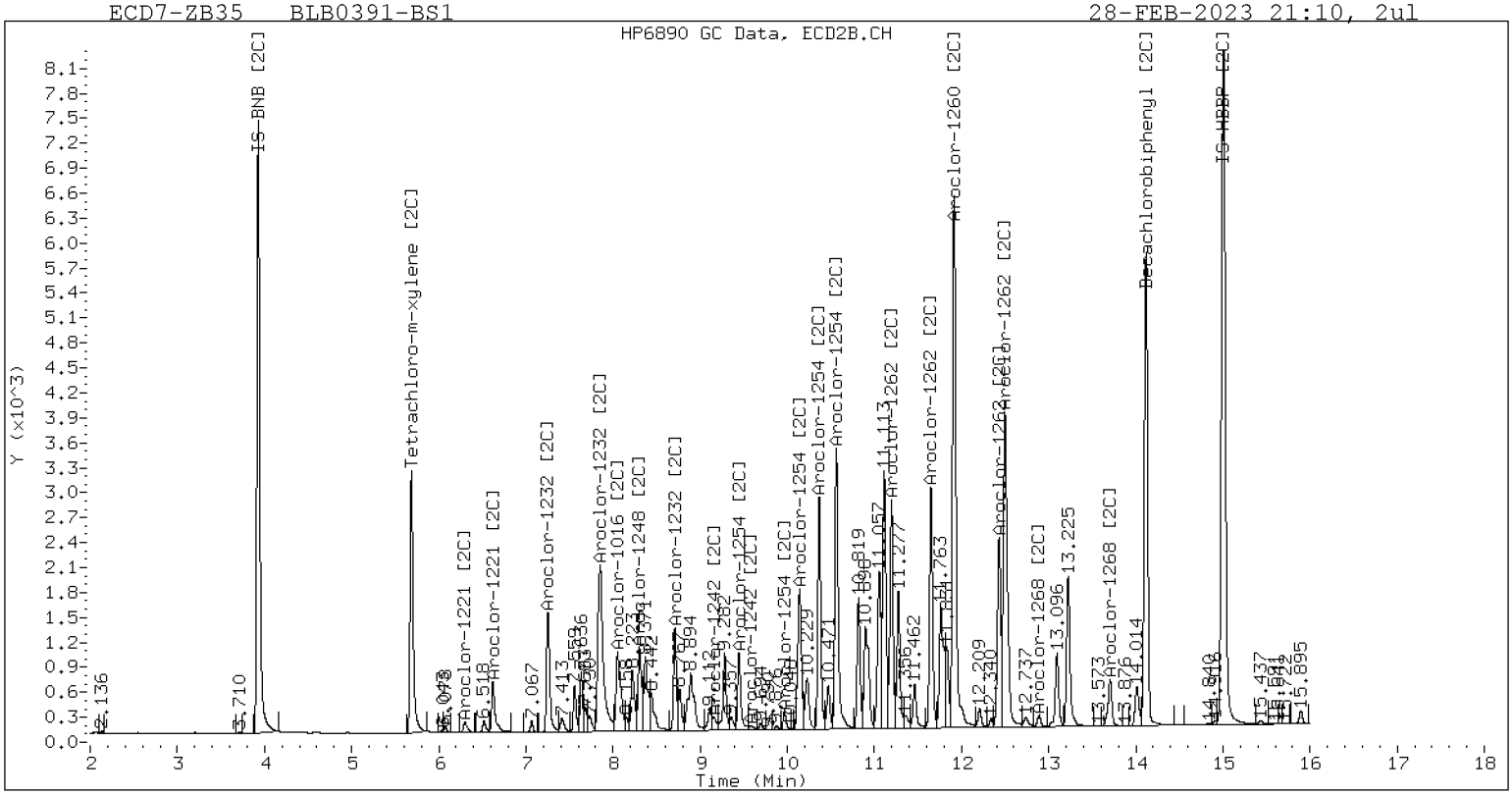
PCB Dual Column Chromatograms

ECD7-ZB5 BLB0391-BS1 28-FEB-2023 21:10, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 BLB0391-BS1 28-FEB-2023 21:10, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230228.b/02282317ECD7.D
Data file 2: /230228.b/230228.b/02282317ECD7.D
Method: \\target\share\chem4\ecd7.i\230228.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BLB0391-BSD1
Client ID:
Injection Date: 28-FEB-2023 21:31
Report Date: 03/01/2023 12:20
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.808	0.001	394802	5.686	-0.001	156172	33.3	32.6	2.0	Tetrachloro-m-xylene
13.893	-0.000	592555	14.118	-0.002	302113	35.9	38.9	8.1	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	793505	17.8
Hexabromobiphenyl	1429847	1676867	17.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	326035	3.4
Hexabromobiphenyl	513946	510092	-0.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.268	-0.001	126002	418.1	1	7.253	-0.002	76590	401.3
Aroclor-1016	2	7.651	-0.004	416308	453.1	2	7.854	-0.006	173242	447.6
Aroclor-1016	3	7.789	-0.003	179707	400.7	3	8.052	-0.007	71983	411.8
Aroclor-1016	4	8.403	-0.002	130725	450.9	4	8.305	-0.003	56021	408.5
Total Col1Ave (4 peaks):					430.7	Total Col2Ave (4 peaks):				417.3 RPD = 3
Corrected Ave (3 peaks):					423.2	Corrected Ave (3 peaks):				407.2 RPD = 4
Aroclor-1221	1	4.731	0.001	666	9.4	1	---			0.0
Aroclor-1221	2	6.130	-0.002	15721	123.7	2	6.297	0.000	7604	130.2
Aroclor-1221	3	6.382	-0.000	79989	271.1	3	6.622	0.000	34049	358.1
Total Col1Ave (3 peaks):					134.7	Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	4.731	0.001	666	15.7	1	---			0.0
Aroclor-1232	2	6.130	-0.001	15721	186.5	2	7.253	-0.001	76590	923.9
Aroclor-1232	3	7.651	-0.005	416308	1090.8	3	7.854	-0.007	173242	1045.2
Aroclor-1232	4	8.576	-0.005	165875	1022.6	4	8.711	-0.004	54545	1143.4
Total Col1Ave (4 peaks):					578.9	Total Col2Ave (3 peaks):				1037.5 RPD = 57*
Corrected Ave (3 peaks):					408.3	Corrected Ave: < 3 Peaks				
Aroclor-1242	1	7.268	-0.000	126002	512.4	1	7.253	-0.001	76590	505.6
Aroclor-1242	2	7.651	-0.005	416308	557.5	2	7.854	-0.006	173242	544.1
Aroclor-1242	3	8.403	-0.001	130725	562.6	3	9.157	-0.010	9200	92.9
Aroclor-1242	4	8.576	-0.004	165875	482.9	4	9.585	-0.013	3757	31.1
Total Col1Ave (4 peaks):					528.9	Total Col2Ave (4 peaks):				293.4 RPD = 57*
Corrected Ave (3 peaks):					517.6	Corrected Ave (3 peaks):				209.9 RPD = 85*
Aroclor-1248	1	8.403	-0.002	130725	337.7	1	8.305	-0.003	56021	359.9
Aroclor-1248	2	8.576	-0.005	165875	337.1	2	8.711	-0.004	54545	338.9
Aroclor-1248	3	8.991	-0.005	181611	195.6	3	9.157	-0.012	9200	49.7
Aroclor-1248	4	9.297	0.002	145190	307.2	4	9.585	-0.010	3757	16.9
Total Col1Ave (4 peaks):					294.4	Total Col2Ave (4 peaks):				191.3 RPD = 42*
Corrected Ave (3 peaks):					280.0	Corrected Ave (3 peaks):				135.1 RPD = 70*
Aroclor-1254	1	9.297	-0.002	145190	182.2	1	9.447	-0.004	49391	199.3
Aroclor-1254	2	---			0.0	2	9.968	-0.004	10512	52.7
Aroclor-1254	3	9.663	-0.006	20907	40.8	3	10.144	0.019	107523	249.3
Aroclor-1254	4	9.802	-0.006	78155	78.5	4	10.368	-0.007	134425	319.7
Aroclor-1254	5	10.118	-0.060	379913	608.5	5	10.565	-0.005	186438	728.2
Total Col1Ave (4 peaks):					227.5	Total Col2Ave (5 peaks):				309.8 RPD = 31
Corrected Ave (3 peaks):					100.5	Corrected Ave (4 peaks):				205.3 RPD = 69*
Aroclor-1260	1	11.043	-0.001	293229	486.1	1	11.651	-0.002	141608	472.1
Aroclor-1260	2	11.360	-0.000	329992	523.6	2	11.915	-0.003	367844	480.5
Aroclor-1260	3	11.733	-0.003	866298	518.2	3	12.434	-0.001	98894	486.8
Aroclor-1260	4	12.138	-0.002	455857	541.5	4	12.499	-0.003	246346	477.4
Aroclor-1260	5	12.244	0.001	187452	517.3	NS	---			----
Total Col1Ave (5 peaks):					517.4	Total Col2Ave (4 peaks):				479.2 RPD = 8
Corrected Ave (4 peaks):					511.3	Corrected Ave (3 peaks):				476.7 RPD = 7
Aroclor-1262	1	10.823	-0.006	622725	1210.6	1	11.197	-0.003	133695	307.0
Aroclor-1262	2	12.244	-0.000	187452	223.9	2	11.651	-0.001	141608	381.7
Aroclor-1262	3	12.318	-0.001	227938	253.3	3	12.434	0.000	98894	235.0
Aroclor-1262	4	12.986	-0.001	209990	255.3	4	12.499	-0.003	246346	373.6
Total Col1Ave (4 peaks):					485.8	Total Col2Ave (4 peaks):				324.3 RPD = 40
Corrected Ave (3 peaks):					244.2	Corrected Ave (3 peaks):				305.2 RPD = 22
Aroclor-1268	1	12.244	-0.003	187452	87.2	1	12.434	0.002	98894	96.3
Aroclor-1268	2	12.318	0.001	227938	107.1	2	12.499	-0.001	246346	223.1
Aroclor-1268	3	12.722	0.023	103209	56.7	3	12.890	-0.001	7329	7.8
Aroclor-1268	4	13.488	-0.002	69630	11.6	4	13.707	-0.002	29028	9.6
Total Col1Ave (4 peaks):					65.7	Total Col2Ave (4 peaks):				84.2 RPD = 25
Corrected Ave (3 peaks):					51.9	Corrected Ave (3 peaks):				37.9 RPD = 31

Total PCB Area Col1 (5.907 - 13.793) = 8610196 Col1 Total PCB = 0.9 ppm*

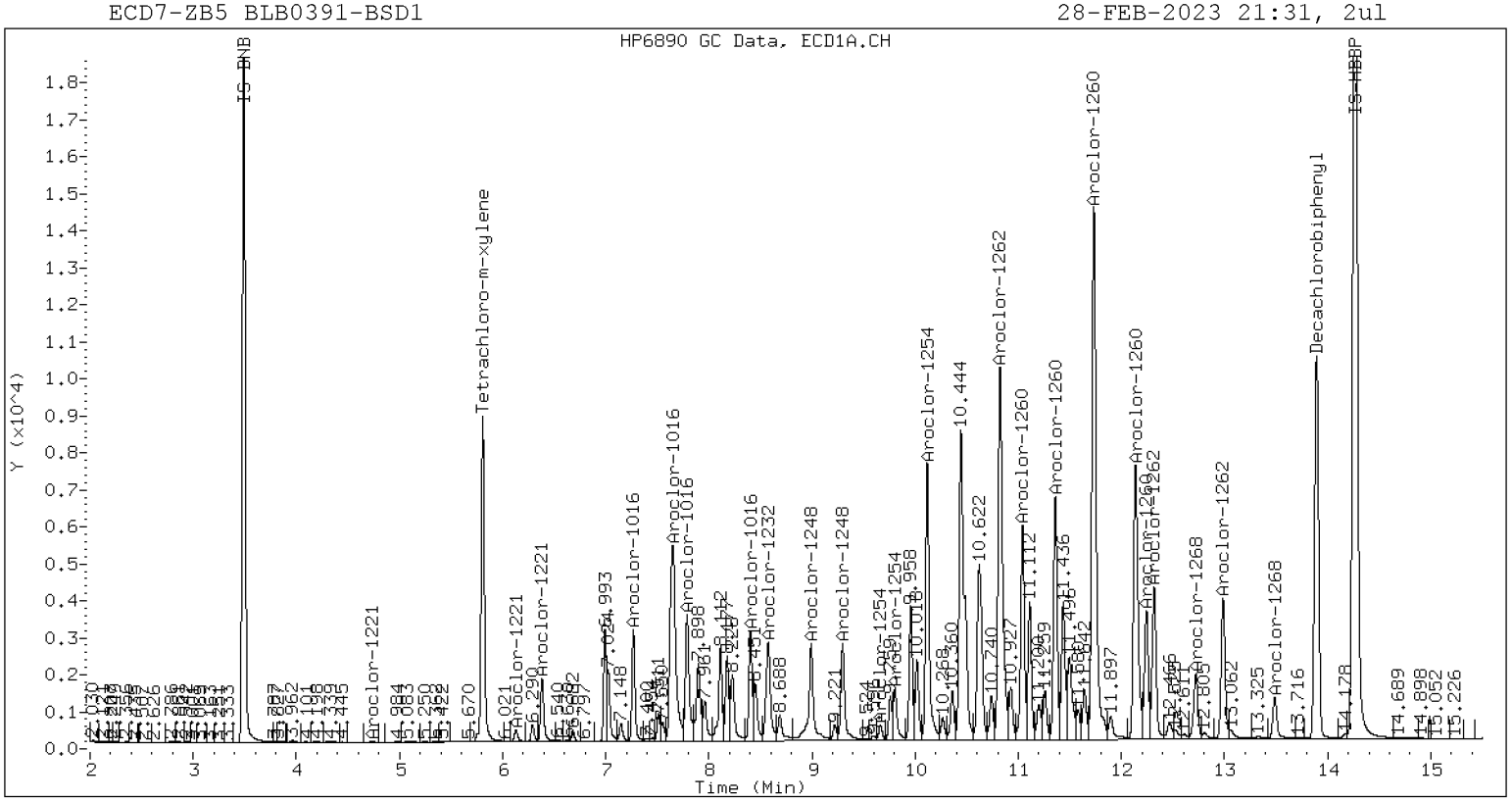
Total PCB Area Col2 (5.787 - 14.020) = 3357653 Col2 Total PCB = 0.9 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

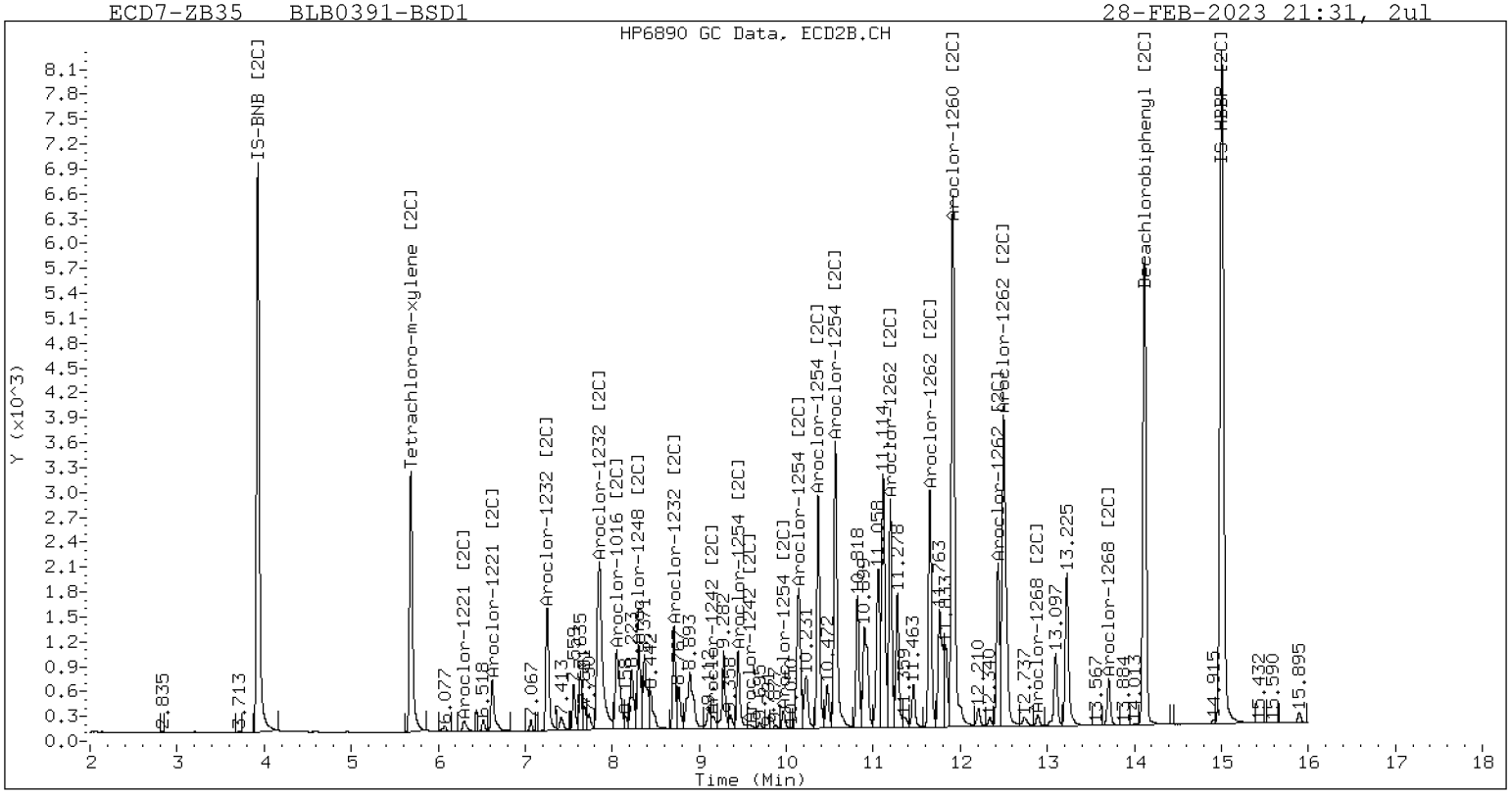
PCB Dual Column Chromatograms

ECD7-ZB5 BLB0391-BSD1 28-FEB-2023 21:31, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 BLB0391-BSD1 28-FEB-2023 21:31, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

STANDARD REFERENCE MATERIAL RECOVERY

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Laboratory ID: BLB0391-SRM1
Batch: BLB0391
Initial/Final: 2.5 g / 2.5 mL
Preparation: EPA 3546 (Microwave)
Analyzed: 02/28/2023 21:53
Standard ID: K011478
Expires: 06/11/2023
Standard Lot#: PSRM0169
Description: Puget Sound reference-SRM

ANALYTE	TRUE (ug/kg wet)	FOUND (ug/kg wet)	MDL	MRL	Q	SRM % REC.	QC LIMITS REC.
Aroclor 1260	108.00	120	2.9	20.0		111	38 - 167
Aroclor 1260 [2C]	108.00	117	2.9	20.0		108	38 - 167

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230228.b/02282318ECD7.D
Data file 2: /230228.b/230228.b/02282318ECD7.D
Method: \\target\share\chem4\ecd7.i\230228.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BLB0391-SRM1
Client ID:
Injection Date: 28-FEB-2023 21:53
Report Date: 03/01/2023 12:20
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.806	-0.002	336386	5.685	-0.002	141149	26.3	28.2	7.0	Tetrachloro-m-xylene
13.888	-0.005	482536	14.115	-0.005	269992	34.8	35.7	2.6	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	857849	27.3
Hexabromobiphenyl	1429847	1407985	-1.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	341454	8.3
Hexabromobiphenyl	513946	496203	-3.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.264	-0.005	6190	19.0	1	7.253	-0.002	2055	10.3
Aroclor-1016	2	7.649	-0.007	15468	15.6	2	7.851	-0.009	6875	17.0
Aroclor-1016	3	7.788	-0.004	5510	11.4	3	8.049	-0.009	1941	10.6
Aroclor-1016	4	8.399	-0.006	10479	33.4	4	8.301	-0.007	6479	45.1
Total Col1Ave (4 peaks):					19.8	Total Col2Ave (4 peaks):				20.7 RPD = 4
Corrected Ave (3 peaks):					15.3	Corrected Ave (3 peaks):				12.6 RPD = 19
Aroclor-1221	1	4.776	0.046	809	10.5	1	4.942	-0.014	808	25.0
Aroclor-1221	2	6.161	0.029	1000	7.3	2	6.329	0.033	3537	57.8
Aroclor-1221	3	6.392	0.009	3440	10.8	3	6.634	0.012	1700	17.1
Total Col1Ave (3 peaks):					9.5	Total Col2Ave (3 peaks):				33.3 RPD = 111*
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	4.776	0.046	809	17.6	1	4.942	-0.014	808	46.2
Aroclor-1232	2	6.161	0.030	1000	11.0	2	7.253	-0.001	2055	23.7
Aroclor-1232	3	7.649	-0.007	15468	37.5	3	7.851	-0.010	6875	39.6
Aroclor-1232	4	8.571	-0.010	10007	57.1	4	8.708	-0.007	4283	85.7
Total Col1Ave (4 peaks):					30.8	Total Col2Ave (4 peaks):				48.8 RPD = 45*
Corrected Ave (3 peaks):					22.0	Corrected Ave (3 peaks):				36.5 RPD = 50*
Aroclor-1242	1	7.264	-0.005	6190	23.3	1	7.253	-0.000	2055	13.0
Aroclor-1242	2	7.649	-0.007	15468	19.2	2	7.851	-0.009	6875	20.6
Aroclor-1242	3	8.399	-0.006	10479	41.7	3	9.149	-0.018	5700	54.9
Aroclor-1242	4	8.571	-0.010	10007	26.9	4	9.571	-0.027	4936	39.0
Total Col1Ave (4 peaks):					27.8	Total Col2Ave (4 peaks):				31.9 RPD = 14
Corrected Ave (3 peaks):					23.1	Corrected Ave (3 peaks):				24.2 RPD = 5
Aroclor-1248	1	8.399	-0.007	10479	25.0	1	8.301	-0.007	6479	39.7
Aroclor-1248	2	8.571	-0.010	10007	18.8	2	8.708	-0.007	4283	25.4
Aroclor-1248	3	8.987	-0.009	42244	42.1	3	9.149	-0.020	5700	29.4
Aroclor-1248	4	9.291	-0.004	49984	97.8	4	9.571	-0.023	4936	21.2
Total Col1Ave (4 peaks):					45.9	Total Col2Ave (4 peaks):				28.9 RPD = 45*
Corrected Ave (3 peaks):					28.6	Corrected Ave (3 peaks):				25.3 RPD = 12
Aroclor-1254	1	9.291	-0.008	49984	58.0	1	9.442	-0.009	18854	72.6
Aroclor-1254	2	9.367	-0.012	19288	49.8	2	9.960	-0.012	9011	43.2
Aroclor-1254	3	9.663	-0.006	22581	40.8	3	10.117	-0.008	38009	84.1
Aroclor-1254	4	9.793	-0.015	72941	67.7	4	10.362	-0.013	46522	105.6
Aroclor-1254	5	10.112	-0.066	110202	163.3	5	10.558	-0.012	48416	180.6
Total Col1Ave (5 peaks):					75.9	Total Col2Ave (5 peaks):				97.2 RPD = 25
Corrected Ave (4 peaks):					54.1	Corrected Ave (4 peaks):				76.4 RPD = 34
Aroclor-1260	1	11.036	-0.008	64553	127.4	1	11.646	-0.007	36186	124.0
Aroclor-1260	2	11.349	-0.011	55069	104.1	2	11.907	-0.010	80429	108.0
Aroclor-1260	3	11.723	-0.013	181079	129.0	3	12.426	-0.009	25907	131.1
Aroclor-1260	4	12.126	-0.014	88954	125.9	4	12.491	-0.011	52777	105.1
Aroclor-1260	5	12.236	-0.007	34080	112.0	NS	---			----
Total Col1Ave (5 peaks):					119.7	Total Col2Ave (4 peaks):				117.1 RPD = 2
Corrected Ave (4 peaks):					117.3	Corrected Ave (3 peaks):				112.4 RPD = 4
Aroclor-1262	1	10.814	-0.015	148155	343.0	1	11.192	-0.009	31898	75.3
Aroclor-1262	2	12.236	-0.008	34080	48.5	2	11.646	-0.006	36186	100.3
Aroclor-1262	3	12.310	-0.008	42735	56.6	3	12.426	-0.008	25907	63.3
Aroclor-1262	4	12.978	-0.009	43866	63.5	4	12.491	-0.011	52777	82.3
Total Col1Ave (4 peaks):					127.9	Total Col2Ave (4 peaks):				80.3 RPD = 46*
Corrected Ave (3 peaks):					56.2	Corrected Ave (3 peaks):				73.6 RPD = 27
Aroclor-1268	1	12.236	-0.011	34080	18.9	1	12.426	-0.006	25907	25.9
Aroclor-1268	2	12.310	-0.006	42735	23.9	2	12.491	-0.009	52777	49.1
Aroclor-1268	3	12.714	0.014	21169	13.8	3	12.888	-0.004	1949	2.1
Aroclor-1268	4	13.480	-0.010	12893	2.6	4	13.701	-0.008	8610	2.9
Total Col1Ave (4 peaks):					14.8	Total Col2Ave (4 peaks):				20.0 RPD = 30

Corrected Ave (3 peaks): 11.8 Corrected Ave (3 peaks): 10.3 RPD = 13

Total PCB Area Col1 (5.907 - 13.793) = 1797198 Col1 Total PCB = 0.2 ppm*

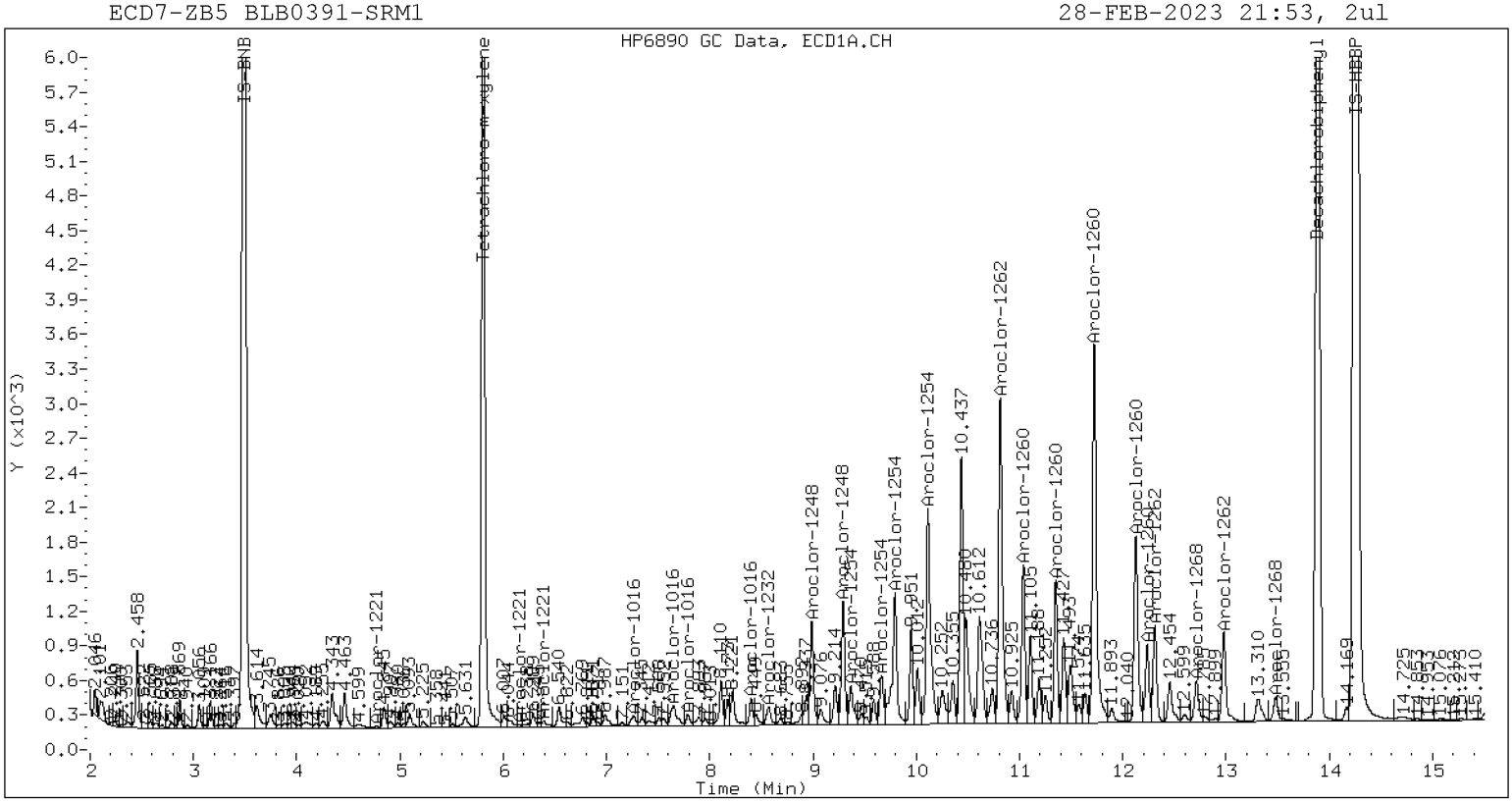
Total PCB Area Col2 (5.787 - 14.020) = 801672 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

PCB Dual Column Chromatograms

ECD7-ZB5 BLB0391-SRM1 28-FEB-2023 21:53, 2ul



ZB-5 Manual Integration: NO

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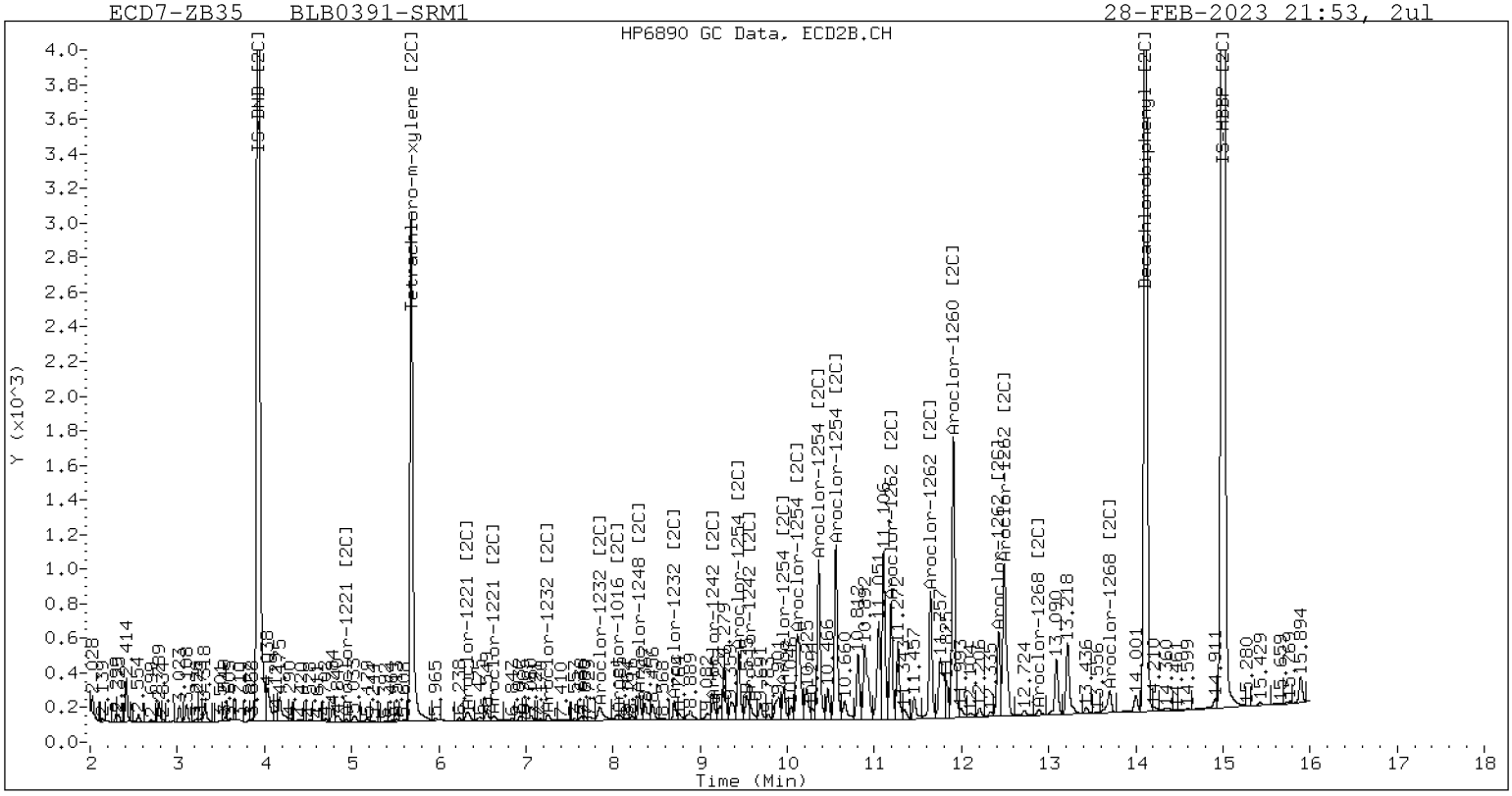


ZB-35 Manual Integration: NO

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GB00069	Instrument:	ECD7
Calibration Date:	02/24/2023	Column (1):	ZB5

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
Aroclor 1016	250	0.0511017	20	0.0514466	50	5.107478E-02	1000	4.502727E-02	100	5.036259E-02	500	0.0471841
Aroclor-1016 (1)	250	0.031405	20	3.172321E-02	50	3.253176E-02	1000	2.667138E-02	100	3.141686E-02	500	2.856283E-02
Aroclor-1016 (2)	250	9.848704E-02	20	9.239415E-02	50	9.245774E-02	1000	8.848657E-02	100	9.221759E-02	500	0.0917416
Aroclor-1016 (3)	250	4.393471E-02	20	5.165382E-02	50	5.037363E-02	1000	3.720718E-02	100	4.822959E-02	500	3.990906E-02
Aroclor-1016 (4)	250	3.058004E-02	20	3.001523E-02	50	2.893599E-02	1000	2.774395E-02	100	2.958631E-02	500	2.852291E-02
Aroclor 1260	250	4.264611E-02	20	3.933745E-02	50	3.914748E-02	1000	0.0377098	100	3.888069E-02	500	3.753326E-02
Aroclor-1260 (1)	250	3.096387E-02	20	2.926415E-02	50	2.920486E-02	1000	2.746159E-02	100	2.841034E-02	500	2.736642E-02
Aroclor-1260 (2)	250	3.291004E-02	20	2.966791E-02	50	3.006192E-02	1000	2.856573E-02	100	3.010757E-02	500	2.910054E-02
Aroclor-1260 (3)	250	8.575373E-02	20	8.087657E-02	50	8.045158E-02	1000	7.674417E-02	100	7.953737E-02	500	7.514663E-02
Aroclor-1260 (4)	250	4.484933E-02	20	3.904963E-02	50	3.886754E-02	1000	3.922291E-02	100	3.955346E-02	500	3.941669E-02
Aroclor-1260 (5)	250	1.875356E-02	20	1.782901E-02	50	1.715148E-02	1000	1.655457E-02	100	1.679471E-02	500	1.663603E-02
Decachlorobiphenyl	40	0.7880759	3.2	0.8290115	8	0.8055828	160	0.797423	16	0.7758675	80	0.7312517
Tetrachlorometaxylene	40	1.205085	3.2	1.168271	8	1.244015	160	1.241136	16	1.185465	80	1.122954

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GB00069	Instrument:	ECD7
Calibration Date:	02/24/2023	Column (1):	ZB5

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
Aroclor 1221							250	1.657582E-02				
Aroclor-1221 (1)							250	7.164712E-03				
Aroclor-1221 (2)							250	0.0128135				
Aroclor-1221 (3)							250	2.974924E-02				
Aroclor 1232									250	1.690391E-02		
Aroclor-1232 (1)									250	4.285984E-03		
Aroclor-1232 (2)									250	8.499602E-03		
Aroclor-1232 (3)									250	3.847671E-02		
Aroclor-1232 (4)									250	1.635336E-02		
Aroclor 1242	250	3.953397E-02										
Aroclor-1242 (1)	250	2.479209E-02										
Aroclor-1242 (2)	250	7.528986E-02										
Aroclor-1242 (3)	250	2.342574E-02										
Aroclor-1242 (4)	250	3.462819E-02										
Aroclor 1248			250	5.747549E-02								
Aroclor-1248 (1)			250	3.903293E-02								
Aroclor-1248 (2)			250	0.0496149								
Aroclor-1248 (3)			250	9.360202E-02								
Aroclor-1248 (4)			250	4.765213E-02								
Aroclor 1254					250	6.629494E-02						
Aroclor-1254 (1)					250	8.033306E-02						
Aroclor-1254 (2)					250	0.0361302						
Aroclor-1254 (3)					250	5.164705E-02						
Aroclor-1254 (4)					250	0.100423						
Aroclor-1254 (5)					250	6.294139E-02						
Aroclor 1262							250	3.665955E-02				
Aroclor-1262 (1)							250	2.454122E-02				
Aroclor-1262 (2)							250	3.993338E-02				

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GB00069	Instrument:	ECD7
Calibration Date:	02/24/2023	Column (1):	ZB5

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
Aroclor-1262 (3)							250	4.292945E-02				
Aroclor-1262 (4)							250	3.923413E-02				
Aroclor 1268									250	0.1442124		
Aroclor-1268 (1)									250	0.102504		
Aroclor-1268 (2)									250	0.1015072		
Aroclor-1268 (3)									250	8.685666E-02		
Aroclor-1268 (4)									250	0.2859818		

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GB00069	Instrument:	ECD7
Calibration Date:	02/24/2023	Column (1):	ZB5

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Aroclor 1016	4.936617E-02	5.3			RSD (20)	
Aroclor-1016 (1)	3.038517E-02	7.4			RSD (20)	
Aroclor-1016 (2)	9.263078E-02	3.5			RSD (20)	
Aroclor-1016 (3)	0.045218	12.9			RSD (20)	
Aroclor-1016 (4)	2.923074E-02	3.5			RSD (20)	
Aroclor 1221		0.0			RSD (20)	
Aroclor-1221 (1)		0.0			RSD (20)	
Aroclor-1221 (2)		0.0			RSD (20)	
Aroclor-1221 (3)		0.0			RSD (20)	
Aroclor 1232		0.0			RSD (20)	
Aroclor-1232 (1)		0.0			RSD (20)	
Aroclor-1232 (2)		0.0			RSD (20)	
Aroclor-1232 (3)		0.0			RSD (20)	
Aroclor-1232 (4)		0.0			RSD (20)	
Aroclor 1242		0.0			RSD (20)	
Aroclor-1242 (1)		0.0			RSD (20)	
Aroclor-1242 (2)		0.0			RSD (20)	
Aroclor-1242 (3)		0.0			RSD (20)	
Aroclor-1242 (4)		0.0			RSD (20)	
Aroclor 1248		0.0			RSD (20)	
Aroclor-1248 (1)		0.0			RSD (20)	
Aroclor-1248 (2)		0.0			RSD (20)	
Aroclor-1248 (3)		0.0			RSD (20)	
Aroclor-1248 (4)		0.0			RSD (20)	
Aroclor 1254		0.0			RSD (20)	
Aroclor-1254 (1)		0.0			RSD (20)	
Aroclor-1254 (2)		0.0			RSD (20)	
Aroclor-1254 (3)		0.0			RSD (20)	
Aroclor-1254 (4)		0.0			RSD (20)	
Aroclor-1254 (5)		0.0			RSD (20)	
Aroclor 1260	3.920913E-02	4.7			RSD (20)	

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GB00069	Instrument:	ECD7
Calibration Date:	02/24/2023	Column (1):	ZB5

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Aroclor-1260 (1)	2.877854E-02	4.7			RSD (20)	
Aroclor-1260 (2)	3.006895E-02	5.0			RSD (20)	
Aroclor-1260 (3)	7.975167E-02	4.6			RSD (20)	
Aroclor-1260 (4)	4.015993E-02	5.8			RSD (20)	
Aroclor-1260 (5)	1.728656E-02	5.0			RSD (20)	
Aroclor 1262		0.0			RSD (20)	
Aroclor-1262 (1)		0.0			RSD (20)	
Aroclor-1262 (2)		0.0			RSD (20)	
Aroclor-1262 (3)		0.0			RSD (20)	
Aroclor-1262 (4)		0.0			RSD (20)	
Aroclor 1268		0.0			RSD (20)	
Aroclor-1268 (1)		0.0			RSD (20)	
Aroclor-1268 (2)		0.0			RSD (20)	
Aroclor-1268 (3)		0.0			RSD (20)	
Aroclor-1268 (4)		0.0			RSD (20)	
Decachlorobiphenyl	0.7878687	4.2			RSD (20)	
Tetrachlorometaxylene	1.194488	3.9			RSD (20)	

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GB00069	Instrument:	ECD7
Calibration Date:	02/24/2023	Column (2):	ZB35

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
Aroclor 1016 [2C]	250	0.0571297	20	5.099991E-02	50	0.0573721	1000	5.075893E-02	100	5.836783E-02	500	5.288542E-02
Aroclor-1016 (1) [2C]	250	4.732763E-02	20	5.070692E-02	50	5.021603E-02	1000	4.080107E-02	100	4.868029E-02	500	4.325569E-02
Aroclor-1016 (2) [2C]	250	0.1025919	20	8.142537E-02	50	9.407053E-02	1000	9.361548E-02	100	0.1015897	500	9.651233E-02
Aroclor-1016 (3) [2C]	250	4.410181E-02	20	4.005508E-02	50	4.718351E-02	1000	3.925581E-02	100	4.613223E-02	500	4.062487E-02
Aroclor-1016 (4) [2C]	250	3.449742E-02	20	3.181228E-02	50	3.801833E-02	1000	0.0293633	100	0.0370691	500	3.114879E-02
Aroclor 1260 [2C]	250	7.266587E-02	20	0.0760446	50	7.181489E-02	1000	0.0636872	100	6.942709E-02	500	6.617305E-02
Aroclor-1260 (1) [2C]	250	4.801376E-02	20	5.286013E-02	50	4.911343E-02	1000	4.201242E-02	100	4.695569E-02	500	4.328842E-02
Aroclor-1260 (2) [2C]	250	0.1266443	20	0.1297611	50	0.1243096	1000	0.1054494	100	0.1209452	500	0.1132043
Aroclor-1260 (3) [2C]	250	3.207621E-02	20	3.524009E-02	50	3.146502E-02	1000	0.0319805	100	2.936945E-02	500	3.102287E-02
Aroclor-1260 (4) [2C]	250	8.392913E-02	20	8.631709E-02	50	8.237154E-02	1000	7.530648E-02	100	0.080438	500	7.717658E-02
Decachlorobiphenyl [2C]	40	1.310398	3.2	1.170661	8	1.20406	160	1.207975	16	1.205489	80	1.211045
Tetrachlorometaxylene [2C]	40	1.219073	3.2	1.21526	8	1.195453	160	1.111394	16	1.175548	80	1.125598

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GB00069	Instrument:	ECD7
Calibration Date:	02/24/2023	Column (2):	ZB35

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
Aroclor 1221 [2C]							250	1.507982E-02				
Aroclor-1221 (1) [2C]							250	7.573277E-03				
Aroclor-1221 (2) [2C]							250	0.0143332				
Aroclor-1221 (3) [2C]							250	2.333296E-02				
Aroclor 1232 [2C]									250	1.920227E-02		
Aroclor-1232 (1) [2C]									250	4.09321E-03		
Aroclor-1232 (2) [2C]									250	2.034072E-02		
Aroclor-1232 (3) [2C]									250	4.067023E-02		
Aroclor-1232 (4) [2C]									250	1.170493E-02		
Aroclor 1242 [2C]	250	4.230924E-02										
Aroclor-1242 (1) [2C]	250	3.716893E-02										
Aroclor-1242 (2) [2C]	250	7.813249E-02										
Aroclor-1242 (3) [2C]	250	2.431205E-02										
Aroclor-1242 (4) [2C]	250	0.0296235										
Aroclor 1248 [2C]			250	4.442703E-02								
Aroclor-1248 (1) [2C]			250	3.819713E-02								
Aroclor-1248 (2) [2C]			250	3.949349E-02								
Aroclor-1248 (3) [2C]			250	4.544987E-02								
Aroclor-1248 (4) [2C]			250	5.456762E-02								
Aroclor 1254 [2C]					250	0.0763106						
Aroclor-1254 (1) [2C]					250	6.080523E-02						
Aroclor-1254 (2) [2C]					250	4.891616E-02						
Aroclor-1254 (3) [2C]					250	0.1058376						
Aroclor-1254 (4) [2C]					250	0.103175						
Aroclor-1254 (5) [2C]					250	6.281905E-02						
Aroclor 1262 [2C]							250	7.397596E-02				
Aroclor-1262 (1) [2C]							250	6.830764E-02				
Aroclor-1262 (2) [2C]							250	5.817803E-02				

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GB00069	Instrument:	ECD7
Calibration Date:	02/24/2023	Column (2):	ZB35

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
Aroclor-1262 (3) [2C]							250	6.600951E-02				
Aroclor-1262 (4) [2C]							250	0.1034087				
Aroclor 1268 [2C]									250	0.2386862		
Aroclor-1268 (1) [2C]									250	0.1610947		
Aroclor-1268 (2) [2C]									250	0.1731794		
Aroclor-1268 (3) [2C]									250	0.1478672		
Aroclor-1268 (4) [2C]									250	0.4726034		

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GB00069	Instrument:	ECD7
Calibration Date:	02/24/2023	Column (2):	ZB35

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Aroclor 1016 [2C]	5.458565E-02	6.3			RSD (20)	
Aroclor-1016 (1) [2C]	4.683127E-02	8.5			RSD (20)	
Aroclor-1016 (2) [2C]	9.496755E-02	8.0			RSD (20)	
Aroclor-1016 (3) [2C]	4.289222E-02	7.9			RSD (20)	
Aroclor-1016 (4) [2C]	3.365154E-02	10.3			RSD (20)	
Aroclor 1221 [2C]		0.0			RSD (20)	
Aroclor-1221 (1) [2C]		0.0			RSD (20)	
Aroclor-1221 (2) [2C]		0.0			RSD (20)	
Aroclor-1221 (3) [2C]		0.0			RSD (20)	
Aroclor 1232 [2C]		0.0			RSD (20)	
Aroclor-1232 (1) [2C]		0.0			RSD (20)	
Aroclor-1232 (2) [2C]		0.0			RSD (20)	
Aroclor-1232 (3) [2C]		0.0			RSD (20)	
Aroclor-1232 (4) [2C]		0.0			RSD (20)	
Aroclor 1242 [2C]		0.0			RSD (20)	
Aroclor-1242 (1) [2C]		0.0			RSD (20)	
Aroclor-1242 (2) [2C]		0.0			RSD (20)	
Aroclor-1242 (3) [2C]		0.0			RSD (20)	
Aroclor-1242 (4) [2C]		0.0			RSD (20)	
Aroclor 1248 [2C]		0.0			RSD (20)	
Aroclor-1248 (1) [2C]		0.0			RSD (20)	
Aroclor-1248 (2) [2C]		0.0			RSD (20)	
Aroclor-1248 (3) [2C]		0.0			RSD (20)	
Aroclor-1248 (4) [2C]		0.0			RSD (20)	
Aroclor 1254 [2C]		0.0			RSD (20)	
Aroclor-1254 (1) [2C]		0.0			RSD (20)	
Aroclor-1254 (2) [2C]		0.0			RSD (20)	
Aroclor-1254 (3) [2C]		0.0			RSD (20)	
Aroclor-1254 (4) [2C]		0.0			RSD (20)	
Aroclor-1254 (5) [2C]		0.0			RSD (20)	
Aroclor 1260 [2C]	6.996878E-02	6.4			RSD (20)	

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GB00069	Instrument:	ECD7
Calibration Date:	02/24/2023	Column (2):	ZB35

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Aroclor-1260 (1) [2C]	4.704064E-02	8.4			RSD (20)	
Aroclor-1260 (2) [2C]	0.1200523	7.6			RSD (20)	
Aroclor-1260 (3) [2C]	3.185902E-02	6.0			RSD (20)	
Aroclor-1260 (4) [2C]	8.092314E-02	5.1			RSD (20)	
Aroclor 1262 [2C]		0.0			RSD (20)	
Aroclor-1262 (1) [2C]		0.0			RSD (20)	
Aroclor-1262 (2) [2C]		0.0			RSD (20)	
Aroclor-1262 (3) [2C]		0.0			RSD (20)	
Aroclor-1262 (4) [2C]		0.0			RSD (20)	
Aroclor 1268 [2C]		0.0			RSD (20)	
Aroclor-1268 (1) [2C]		0.0			RSD (20)	
Aroclor-1268 (2) [2C]		0.0			RSD (20)	
Aroclor-1268 (3) [2C]		0.0			RSD (20)	
Aroclor-1268 (4) [2C]		0.0			RSD (20)	
Decachlorobiphenyl [2C]	1.218271	3.9			RSD (20)	
Tetrachlorometaxylene [2C]	1.173721	3.9			RSD (20)	

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SLB0342

Instrument: ECD7
Calibration ID: GB00069

Printed: 2/28/2023 9:54:44AM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SLB0342-CAL1	QC		1		L000856	L000844		
SLB0342-CAL2	QC		2		L000859	L000844		
SLB0342-CAL3	QC		3		L000858	L000844		
SLB0342-CAL4	QC		4		L000731	L000844		
SLB0342-CAL5	QC		5		L000857	L000844		
SLB0342-CAL6	QC		6		L000855	L000844		
SLB0342-CAL7	QC		7		L000860	L000844		
SLB0342-CAL8	QC		8		L000861	L000844		
SLB0342-CAL9	QC		9		L000862	L000844		
SLB0342-CALA	QC		10		L000863	L000844		
SLB0342-CALB	QC		11		L000864	L000844		
SLB0342-SCV1	QC		12		L002065	L000844		
SLB0342-SCV2	QC		13		K007656	L000844		
SLB0342-SCV3	QC		14		L002066	L000844		
SLB0342-SCV4	QC		15		L002067	L000844		
SLB0342-SCV5	QC		16		L002068	L000844		
SLB0342-SCV6	QC		17		L002069	L000844		

Samples Loaded By Date

Data Processed By Date

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230224.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	24-FEB-2023 10:51	02242301ECD7.D	1	IB	
2	24-FEB-2023 11:12	02242302ECD7.D	1	0.25PPMAR1660	
3	24-FEB-2023 11:33	02242303ECD7.D	1	0.02PPMAR1660	
4	24-FEB-2023 11:54	02242304ECD7.D	1	0.05PPMAR1660	
5	24-FEB-2023 12:15	02242305ECD7.D	1	1.0PPMAR1660	
6	24-FEB-2023 12:36	02242306ECD7.D	1	0.1PPMAR1660	
7	24-FEB-2023 12:57	02242307ECD7.D	1	0.5PPMAR1660	
8	24-FEB-2023 13:18	02242308ECD7.D	1	0.25PPMAR1242	
9	24-FEB-2023 13:39	02242309ECD7.D	1	0.25PPMAR1248	
10	24-FEB-2023 14:00	02242310ECD7.D	1	0.25PPMAR1254	
11	24-FEB-2023 14:21	02242311ECD7.D	1	0.25PPMAR2162	
12	24-FEB-2023 14:42	02242312ECD7.D	1	0.25PPMAR3268	
13	24-FEB-2023 15:03	02242313ECD7.D	1	AR1660SCV	
14	24-FEB-2023 15:24	02242314ECD7.D	1	AR1242SCV	
15	24-FEB-2023 15:45	02242315ECD7.D	1	AR1248SCV	
16	24-FEB-2023 16:06	02242316ECD7.D	1	AR1254SCV	
17	24-FEB-2023 16:27	02242317ECD7.D	1	AR2162SCV	
18	24-FEB-2023 16:48	02242318ECD7.D	1	AR3268SCV	
19	24-FEB-2023 17:09	02242319ECD7.D	1	DDTS	
20	24-FEB-2023 17:30	02242320ECD7.D	1	DDT BD	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230224.b

ARI Job No.: IB Method: PCB.m Instrument: ecd7.i Date: 24-FEB-2023

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1051	02242301ECD7.D	IB		1	NO MANUAL INTEGRATION
1112	02242302ECD7.D	0.25PPMAR1660		1	NO MANUAL INTEGRATION
1133	02242303ECD7.D	0.02PPMAR1660		1	NO MANUAL INTEGRATION
1154	02242304ECD7.D	0.05PPMAR1660		1	NO MANUAL INTEGRATION
1215	02242305ECD7.D	1.0PPMAR1660		1	NO MANUAL INTEGRATION
1236	02242306ECD7.D	0.1PPMAR1660		1	NO MANUAL INTEGRATION
1257	02242307ECD7.D	0.5PPMAR1660		1	NO MANUAL INTEGRATION
1318	02242308ECD7.D	0.25PPMAR1242		1	NO MANUAL INTEGRATION
1339	02242309ECD7.D	0.25PPMAR1248		1	NO MANUAL INTEGRATION
1400	02242310ECD7.D	0.25PPMAR1254		1	NO MANUAL INTEGRATION
1421	02242311ECD7.D	0.25PPMAR2162		1	NO MANUAL INTEGRATION
1442	02242312ECD7.D	0.25PPMAR3268		1	NO MANUAL INTEGRATION
1503	02242313ECD7.D	AR1660SCV		1	NO MANUAL INTEGRATION
1524	02242314ECD7.D	AR1242SCV		1	NO MANUAL INTEGRATION
1545	02242315ECD7.D	AR1248SCV		1	NO MANUAL INTEGRATION
1606	02242316ECD7.D	AR1254SCV		1	NO MANUAL INTEGRATION
1627	02242317ECD7.D	AR2162SCV		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230224.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1648	02242318ECD7.D	AR3268SCV		1	NO MANUAL INTEGRATION
1709	02242319ECD7.D	DDTS		1	NO MANUAL INTEGRATION
1730	02242320ECD7.D	DDT BD		1	NO MANUAL INTEGRATION
1751	02242321ECD7.D			1	NO MANUAL INTEGRATION
1812	02242322ECD7.D			1	NO MANUAL INTEGRATION
1833	02242323ECD7.D			1	NO MANUAL INTEGRATION
1854	02242324ECD7.D			1	NO MANUAL INTEGRATION
1915	02242325ECD7.D			1	NO MANUAL INTEGRATION
1936	02242326ECD7.D			1	NO MANUAL INTEGRATION
1957	02242327ECD7.D			1	NO MANUAL INTEGRATION
2018	02242328ECD7.D			1	NO MANUAL INTEGRATION
2039	02242329ECD7.D			1	NO MANUAL INTEGRATION
2059	02242330ECD7.D			1	NO MANUAL INTEGRATION
2120	02242331ECD7.D			1	NO MANUAL INTEGRATION
2141	02242332ECD7.D			1	NO MANUAL INTEGRATION
2202	02242333ECD7.D			1	NO MANUAL INTEGRATION
2223	02242334ECD7.D			1	NO MANUAL INTEGRATION
2244	02242335ECD7.D			1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230224.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2305	02242336ECD7.D			1	NO MANUAL INTEGRATION
2326	02242337ECD7.D			1	NO MANUAL INTEGRATION
2347	02242338ECD7.D			1	NO MANUAL INTEGRATION
0008	02242339ECD7.D			1	NO MANUAL INTEGRATION
0029	02242340ECD7.D			1	NO MANUAL INTEGRATION
0050	02242341ECD7.D			1	NO MANUAL INTEGRATION
0111	02242342ECD7.D			1	NO MANUAL INTEGRATION
0132	02242343ECD7.D			1	NO MANUAL INTEGRATION
0153	02242344ECD7.D			1	NO MANUAL INTEGRATION
0214	02242345ECD7.D			1	NO MANUAL INTEGRATION
0235	02242346ECD7.D			1	NO MANUAL INTEGRATION
0256	02242347ECD7.D			1	NO MANUAL INTEGRATION
0317	02242348ECD7.D			1	NO MANUAL INTEGRATION
0338	02242349ECD7.D			1	NO MANUAL INTEGRATION
0359	02242350ECD7.D			1	NO MANUAL INTEGRATION
0420	02242351ECD7.D			1	NO MANUAL INTEGRATION
0441	02242352ECD7.D			1	NO MANUAL INTEGRATION
0502	02242353ECD7.D			1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230224.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0523	02242354ECD7.D			1	NO MANUAL INTEGRATION
0544	02242355ECD7.D			1	NO MANUAL INTEGRATION
0605	02242356ECD7.D			1	NO MANUAL INTEGRATION
0626	02242357ECD7.D			1	NO MANUAL INTEGRATION
0647	02242358ECD7.D			1	NO MANUAL INTEGRATION
0708	02242359ECD7.D			1	NO MANUAL INTEGRATION
0729	02242360ECD7.D			1	NO MANUAL INTEGRATION
0750	02242361ECD7.D			1	NO MANUAL INTEGRATION
0811	02242362ECD7.D			1	NO MANUAL INTEGRATION
0832	02242363ECD7.D			1	NO MANUAL INTEGRATION
0853	02242364ECD7.D			1	NO MANUAL INTEGRATION
0914	02242365ECD7.D			1	NO MANUAL INTEGRATION
0935	02242366ECD7.D			1	NO MANUAL INTEGRATION
0956	02242367ECD7.D			1	NO MANUAL INTEGRATION
1017	02242368ECD7.D			1	NO MANUAL INTEGRATION
1038	02242369ECD7.D			1	NO MANUAL INTEGRATION
1059	02242370ECD7.D			1	NO MANUAL INTEGRATION
1120	02242371ECD7.D			1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230224.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1141	02242372ECD7.D			1	NO MANUAL INTEGRATION
1202	02242373ECD7.D			1	NO MANUAL INTEGRATION
1223	02242374ECD7.D			1	NO MANUAL INTEGRATION
1244	02242375ECD7.D			1	NO MANUAL INTEGRATION
1305	02242376ECD7.D			1	NO MANUAL INTEGRATION
1326	02242377ECD7.D			1	NO MANUAL INTEGRATION
1347	02242378ECD7.D			1	NO MANUAL INTEGRATION
1408	02242379ECD7.D			1	NO MANUAL INTEGRATION
1429	02242380ECD7.D			1	NO MANUAL INTEGRATION
1450	02242381ECD7.D			1	NO MANUAL INTEGRATION
1511	02242382ECD7.D			1	NO MANUAL INTEGRATION
1532	02242383ECD7.D			1	NO MANUAL INTEGRATION
1553	02242384ECD7.D			1	NO MANUAL INTEGRATION
1051	02242301ECD7.D	IB		1	NO MANUAL INTEGRATION
1112	02242302ECD7.D	0.25PPMAR1660		1	NO MANUAL INTEGRATION
1133	02242303ECD7.D	0.02PPMAR1660		1	Aroclor-1016 [2C],
1154	02242304ECD7.D	0.05PPMAR1660		1	NO MANUAL INTEGRATION
1215	02242305ECD7.D	1.0PPMAR1660		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230224.b\230224.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1236	02242306ECD7.D	0.1PPMAR1660		1	NO MANUAL INTEGRATION
1257	02242307ECD7.D	0.5PPMAR1660		1	NO MANUAL INTEGRATION
1318	02242308ECD7.D	0.25PPMAR1242		1	NO MANUAL INTEGRATION
1339	02242309ECD7.D	0.25PPMAR1248		1	NO MANUAL INTEGRATION
1400	02242310ECD7.D	0.25PPMAR1254		1	NO MANUAL INTEGRATION
1421	02242311ECD7.D	0.25PPMAR2162		1	NO MANUAL INTEGRATION
1442	02242312ECD7.D	0.25PPMAR3268		1	NO MANUAL INTEGRATION
1503	02242313ECD7.D	AR1660SCV		1	NO MANUAL INTEGRATION
1524	02242314ECD7.D	AR1242SCV		1	NO MANUAL INTEGRATION
1545	02242315ECD7.D	AR1248SCV		1	NO MANUAL INTEGRATION
1606	02242316ECD7.D	AR1254SCV		1	NO MANUAL INTEGRATION
1627	02242317ECD7.D	AR2162SCV		1	NO MANUAL INTEGRATION
1648	02242318ECD7.D	AR3268SCV		1	NO MANUAL INTEGRATION
1709	02242319ECD7.D	DDTS		1	NO MANUAL INTEGRATION
1730	02242320ECD7.D	DDT BD		1	NO MANUAL INTEGRATION
1751	02242321ECD7.D			1	NO MANUAL INTEGRATION
1812	02242322ECD7.D			1	NO MANUAL INTEGRATION
1833	02242323ECD7.D			1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230224.b\230224.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1854	02242324ECD7.D			1	NO MANUAL INTEGRATION
1915	02242325ECD7.D			1	NO MANUAL INTEGRATION
1936	02242326ECD7.D			1	NO MANUAL INTEGRATION
1957	02242327ECD7.D			1	NO MANUAL INTEGRATION
2018	02242328ECD7.D			1	NO MANUAL INTEGRATION
2038	02242329ECD7.D			1	NO MANUAL INTEGRATION
2059	02242330ECD7.D			1	NO MANUAL INTEGRATION
2120	02242331ECD7.D			1	NO MANUAL INTEGRATION
2141	02242332ECD7.D			1	NO MANUAL INTEGRATION
2202	02242333ECD7.D			1	NO MANUAL INTEGRATION
2223	02242334ECD7.D			1	NO MANUAL INTEGRATION
2244	02242335ECD7.D			1	NO MANUAL INTEGRATION
2305	02242336ECD7.D			1	NO MANUAL INTEGRATION
2326	02242337ECD7.D			1	NO MANUAL INTEGRATION
2347	02242338ECD7.D			1	NO MANUAL INTEGRATION
0008	02242339ECD7.D			1	NO MANUAL INTEGRATION
0029	02242340ECD7.D			1	NO MANUAL INTEGRATION
0050	02242341ECD7.D			1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230224.b\230224.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0111	02242342ECD7.D			1	NO MANUAL INTEGRATION
0132	02242343ECD7.D			1	NO MANUAL INTEGRATION
0153	02242344ECD7.D			1	NO MANUAL INTEGRATION
0214	02242345ECD7.D			1	NO MANUAL INTEGRATION
0235	02242346ECD7.D			1	NO MANUAL INTEGRATION
0256	02242347ECD7.D			1	NO MANUAL INTEGRATION
0317	02242348ECD7.D			1	NO MANUAL INTEGRATION
0338	02242349ECD7.D			1	NO MANUAL INTEGRATION
0359	02242350ECD7.D			1	NO MANUAL INTEGRATION
0420	02242351ECD7.D			1	NO MANUAL INTEGRATION
0441	02242352ECD7.D			1	NO MANUAL INTEGRATION
0502	02242353ECD7.D			1	NO MANUAL INTEGRATION
0523	02242354ECD7.D			1	NO MANUAL INTEGRATION
0544	02242355ECD7.D			1	NO MANUAL INTEGRATION
0605	02242356ECD7.D			1	NO MANUAL INTEGRATION
0626	02242357ECD7.D			1	NO MANUAL INTEGRATION
0647	02242358ECD7.D			1	NO MANUAL INTEGRATION
0708	02242359ECD7.D			1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230224.b\230224.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0729	02242360ECD7.D			1	NO MANUAL INTEGRATION
0750	02242361ECD7.D			1	NO MANUAL INTEGRATION
0811	02242362ECD7.D			1	NO MANUAL INTEGRATION
0832	02242363ECD7.D			1	NO MANUAL INTEGRATION
0853	02242364ECD7.D			1	NO MANUAL INTEGRATION
0914	02242365ECD7.D			1	NO MANUAL INTEGRATION
0935	02242366ECD7.D			1	NO MANUAL INTEGRATION
0956	02242367ECD7.D			1	NO MANUAL INTEGRATION
1017	02242368ECD7.D			1	NO MANUAL INTEGRATION
1038	02242369ECD7.D			1	NO MANUAL INTEGRATION
1059	02242370ECD7.D			1	NO MANUAL INTEGRATION
1120	02242371ECD7.D			1	NO MANUAL INTEGRATION
1141	02242372ECD7.D			1	NO MANUAL INTEGRATION
1202	02242373ECD7.D			1	NO MANUAL INTEGRATION
1223	02242374ECD7.D			1	NO MANUAL INTEGRATION
1244	02242375ECD7.D			1	NO MANUAL INTEGRATION
1305	02242376ECD7.D			1	NO MANUAL INTEGRATION
1326	02242377ECD7.D			1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230224.b\230224.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1347	02242378ECD7.D			1	NO MANUAL INTEGRATION
1408	02242379ECD7.D			1	NO MANUAL INTEGRATION
1429	02242380ECD7.D			1	NO MANUAL INTEGRATION
1450	02242381ECD7.D			1	NO MANUAL INTEGRATION
1511	02242382ECD7.D			1	NO MANUAL INTEGRATION
1532	02242383ECD7.D			1	NO MANUAL INTEGRATION
1553	02242384ECD7.D			1	NO MANUAL INTEGRATION

Security Status Report

Date: 28-Feb-2023 09:27

02242301ECD7.D	Data Locked	richardl, 28-Feb-2023 09:27
02242302ECD7.D	Data Locked	richardl, 28-Feb-2023 09:27
02242303ECD7.D	Data Locked	richardl, 28-Feb-2023 09:27
02242304ECD7.D	Data Locked	richardl, 28-Feb-2023 09:27
02242305ECD7.D	Data Locked	richardl, 28-Feb-2023 09:27
02242306ECD7.D	Data Locked	richardl, 28-Feb-2023 09:27
02242307ECD7.D	Data Locked	richardl, 28-Feb-2023 09:27
02242308ECD7.D	Data Locked	richardl, 28-Feb-2023 09:27
02242309ECD7.D	Data Locked	richardl, 28-Feb-2023 09:27
02242310ECD7.D	Data Locked	richardl, 28-Feb-2023 09:27
02242311ECD7.D	Data Locked	richardl, 28-Feb-2023 09:27
02242312ECD7.D	Data Locked	richardl, 28-Feb-2023 09:27
02242313ECD7.D	Data Locked	richardl, 28-Feb-2023 09:27
02242314ECD7.D	Data Locked	richardl, 28-Feb-2023 09:27
02242315ECD7.D	Data Locked	richardl, 28-Feb-2023 09:27
02242316ECD7.D	Data Locked	richardl, 28-Feb-2023 09:27
02242317ECD7.D	Data Locked	richardl, 28-Feb-2023 09:27
02242318ECD7.D	Data Locked	richardl, 28-Feb-2023 09:27
02242319ECD7.D	Data Locked	richardl, 28-Feb-2023 09:27
02242320ECD7.D	Data Locked	richardl, 28-Feb-2023 09:27

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-FEB-2023 11:12
End Cal Date : 24-FEB-2023 14:42
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230224.b\PCB.m
Last Edit : 24-Feb-2023 15:31 richardl
Curve Type : Average

Calibration File Names:
Level 1: \\target\share\chem4\ecd7.i\230224.b\02242303ECD7.D
Level 2: \\target\share\chem4\ecd7.i\230224.b\02242304ECD7.D
Level 3: \\target\share\chem4\ecd7.i\230224.b\02242306ECD7.D
Level 4: \\target\share\chem4\ecd7.i\230224.b\02242302ECD7.D
Level 5: \\target\share\chem4\ecd7.i\230224.b\02242307ECD7.D
Level 6: \\target\share\chem4\ecd7.i\230224.b\02242305ECD7.D
Level 7: \\target\share\chem4\ecd7.i\230224.b\02242312ECD7.D

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	___ RRF	% RSD
2 Aroclor-1221(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.00716	0.00716	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.01281	0.01281	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.02975	0.02975	0.000
3 Aroclor-1242(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.02479	0.02479	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.07529	0.07529	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.02343	0.02343	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.03463	0.03463	0.000
4 Aroclor-1232(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.00429	0.00429	0.000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-FEB-2023 11:12
End Cal Date : 24-FEB-2023 14:42
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230224.b\PCB.m
Last Edit : 24-Feb-2023 15:31 richardl
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	___ RRF	% RSD
(2)	+++++	+++++	+++++	+++++	+++++	+++++			
	0.00850							0.00850	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++			
	0.03848							0.03848	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++			
	0.01635							0.01635	0.000
7 Aroclor-1016(1)	0.03172	0.03253	0.03142	0.03141	0.02856	0.02667			
	+++++							0.03039	7.449
(2)	0.09239	0.09246	0.09222	0.09849	0.09174	0.08849			
	+++++							0.09263	3.499
(3)	0.05165	0.05037	0.04823	0.04393	0.03991	0.03721			
	+++++							0.04522	12.936
(4)	0.03002	0.02894	0.02959	0.03058	0.02852	0.02774			
	+++++							0.02923	3.542
6 Aroclor-1248(1)	+++++	+++++	+++++	+++++	+++++	+++++			
	0.03903							0.03903	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++			
	0.04961							0.04961	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++			
	0.09360							0.09360	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++			
	0.04765							0.04765	0.000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-FEB-2023 11:12
End Cal Date : 24-FEB-2023 14:42
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230224.b\PCB.m
Last Edit : 24-Feb-2023 15:31 richardl
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	___ RRF	% RSD
8 Aroclor-1254(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.08033	0.08033	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.03613	0.03613	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.05165	0.05165	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.10042	0.10042	0.000
(5)	+++++	+++++	+++++	+++++	+++++	+++++	0.06294	0.06294	0.000
9 Aroclor-1260(1)	0.02926	0.02920	0.02841	0.03096	0.02737	0.02746	+++++	0.02878	4.677
(2)	0.02967	0.03006	0.03011	0.03291	0.02910	0.02857	+++++	0.03007	5.029
(3)	0.08088	0.08045	0.07954	0.08575	0.07515	0.07674	+++++	0.07975	4.627
(4)	0.03905	0.03887	0.03955	0.04485	0.03942	0.03922	+++++	0.04016	5.753
(5)	0.01783	0.01715	0.01679	0.01875	0.01664	0.01655	+++++	0.01729	4.953
10 Aroclor-1262(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.02454	0.02454	0.000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-FEB-2023 11:12
End Cal Date : 24-FEB-2023 14:42
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230224.b\PCB.m
Last Edit : 24-Feb-2023 15:31 richardl
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	___ RRF	% RSD
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.03993	0.03993	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.04293	0.04293	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.03923	0.03923	0.000
11 Aroclor-1268(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.10250	0.10250	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.10151	0.10151	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.08686	0.08686	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.28598	0.28598	0.000
42 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
43 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
44 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
46 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-FEB-2023 11:12
End Cal Date : 24-FEB-2023 14:42
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230224.b\PCB.m
Last Edit : 24-Feb-2023 15:31 richardl
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	___ RRF	% RSD
47 4,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
48 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
49 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
50 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 1 Tetrachloro-m-xylene	1.16827	1.24402	1.18546	1.20509	1.12295	1.24114	+++++	1.19449	3.860
$ 13 Decachlorobiphenyl	0.82901	0.80558	0.77587	0.78808	0.73125	0.79742	+++++	0.78787	4.189

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-FEB-2023 11:12
End Cal Date : 24-FEB-2023 14:42
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230224.b\PCB.m\PCB2.m
Last Edit : 24-Feb-2023 15:29 richardl
Curve Type : Average

Calibration File Names:
Level 1: \\target\share\chem4\ecd7.i\230224.b\230224.b\02242303ECD7.D
Level 2: \\target\share\chem4\ecd7.i\230224.b\230224.b\02242304ECD7.D
Level 3: \\target\share\chem4\ecd7.i\230224.b\230224.b\02242306ECD7.D
Level 4: \\target\share\chem4\ecd7.i\230224.b\230224.b\02242302ECD7.D
Level 5: \\target\share\chem4\ecd7.i\230224.b\230224.b\02242307ECD7.D
Level 6: \\target\share\chem4\ecd7.i\230224.b\230224.b\02242305ECD7.D
Level 7: \\target\share\chem4\ecd7.i\230224.b\230224.b\02242312ECD7.D

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	RRF	% RSD
1 Aroclor-1221 [2C](1)	+++++	+++++	+++++	+++++	+++++	+++++	0.00757	0.00757	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.01433	0.01433	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.02333	0.02333	0.000
4 Aroclor-1232 [2C](1)	+++++	+++++	+++++	+++++	+++++	+++++	0.00409	0.00409	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.02034	0.02034	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.04067	0.04067	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.01170	0.01170	0.000
3 Aroclor-1242 [2C](1)	+++++	+++++	+++++	+++++	+++++	+++++	0.03717	0.03717	0.000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-FEB-2023 11:12
End Cal Date : 24-FEB-2023 14:42
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230224.b\PCB.m\PCB2.m
Last Edit : 24-Feb-2023 15:29 richardl
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	___ RRF	% RSD
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.07813	0.07813	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.02431	0.02431	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.02962	0.02962	0.000
6 Aroclor-1248 [2C](1)	+++++	+++++	+++++	+++++	+++++	+++++	0.03820	0.03820	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.03949	0.03949	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.04545	0.04545	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.05457	0.05457	0.000
7 Aroclor-1016 [2C](1)	0.05071	0.05022	0.04868	0.04733	0.04326	0.04080	+++++	0.04683	8.503
(2)	0.08143	0.09407	0.10159	0.10259	0.09651	0.09362	+++++	0.09497	8.025
(3)	0.04006	0.04718	0.04613	0.04410	0.04062	0.03926	+++++	0.04289	7.857
(4)	0.03181	0.03802	0.03707	0.03450	0.03115	0.02936	+++++	0.03365	10.251

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-FEB-2023 11:12
End Cal Date : 24-FEB-2023 14:42
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230224.b\PCB.m\PCB2.m
Last Edit : 24-Feb-2023 15:29 richardl
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	___ RRF	% RSD
8 Aroclor-1254 [2C](1)	*****	*****	*****	*****	*****	*****	0.06081	0.06081	0.000
(2)	*****	*****	*****	*****	*****	*****	0.04892	0.04892	0.000
(3)	*****	*****	*****	*****	*****	*****	0.10584	0.10584	0.000
(4)	*****	*****	*****	*****	*****	*****	0.10317	0.10317	0.000
(5)	*****	*****	*****	*****	*****	*****	0.06282	0.06282	0.000
10 Aroclor-1262 [2C](1)	*****	*****	*****	*****	*****	*****	0.06831	0.06831	0.000
(2)	*****	*****	*****	*****	*****	*****	0.05818	0.05818	0.000
(3)	*****	*****	*****	*****	*****	*****	0.06601	0.06601	0.000
(4)	*****	*****	*****	*****	*****	*****	0.10341	0.10341	0.000
9 Aroclor-1260 [2C](1)	0.05286	0.04911	0.04696	0.04801	0.04329	0.04201	*****	0.04704	8.422
(2)	0.12976	0.12431	0.12095	0.12664	0.11320	0.10545	*****	0.12005	7.605

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-FEB-2023 11:12
End Cal Date : 24-FEB-2023 14:42
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230224.b\PCB.m\PCB2.m
Last Edit : 24-Feb-2023 15:29 richardl
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	___ RRF	% RSD
(3)	0.03524	0.03147	0.02937	0.03208	0.03102	0.03198	#####	0.03186	6.045
(4)	0.08632	0.08237	0.08044	0.08393	0.07718	0.07531	#####	0.08092	5.126
11 Aroclor-1268 [2C](1)	#####	#####	#####	#####	#####	#####	0.16109	0.16109	0.000
(2)	#####	#####	#####	#####	#####	#####	0.17318	0.17318	0.000
(3)	#####	#####	#####	#####	#####	#####	0.14787	0.14787	0.000
(4)	#####	#####	#####	#####	#####	#####	0.47260	0.47260	0.000
41 2,4-DDE [2C]	#####	#####	#####	#####	#####	#####	#####	#####	#####
42 2,4-DDD [2C]	#####	#####	#####	#####	#####	#####	#####	#####	#####
44 4,4-DDE [2C]	#####	#####	#####	#####	#####	#####	#####	#####	#####
45 4,4-DDD/2,4-DDT [2C]	#####	#####	#####	#####	#####	#####	#####	#####	#####
46 4,4-DDT [2C]	#####	#####	#####	#####	#####	#####	#####	#####	#####

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-FEB-2023 11:12
End Cal Date : 24-FEB-2023 14:42
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230224.b\PCB.m\PCB2.m
Last Edit : 24-Feb-2023 15:29 richardl
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	___ RRF	% RSD
48 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
49 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 2 Tetrachloro-m-xylene [2C]	1.21526	1.19545	1.17555	1.21907	1.12560	1.11139	+++++	1.17372	3.897
$ 13 Decachlorobiphenyl [2C]	1.17066	1.20406	1.20549	1.31040	1.21104	1.20797	+++++	1.21827	3.898

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Batch File: \\target\share\chem4\ecd7.i\230224.b
Inst ID: ecd7.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	02242302ECD7	02242303ECD7	02242304ECD7	02242305ECD7	02242306ECD7	02242307ECD7
INJ.DATE:	24-FEB-2023	24-FEB-2023	24-FEB-2023	24-FEB-2023	24-FEB-2023	24-FEB-2023
INJ.TIME:	11:12	11:33	11:54	12:15	12:36	12:57

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
* 41 IS-BNB	3.493	3.492	3.492	3.492	3.491	3.491	3.493	3.393-3.593	3.492	0.001
$ 1 Tetrachloro-m-xylene	5.811	5.809	5.809	5.813	5.809	5.810	5.811	5.711-5.911	5.810	0.002
2 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	4.732	4.632-4.832	+++++	+++++
3 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	7.269	7.169-7.369	+++++	+++++
4 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	4.732	4.632-4.832	+++++	+++++
7 Aroclor-1016	7.272	7.272	7.272	7.270	7.271	7.270	7.272	7.172-7.372	7.271	0.001
6 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	8.403	8.303-8.503	+++++	+++++
8 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	9.295	9.195-9.395	+++++	+++++
9 Aroclor-1260	11.046	11.047	11.046	11.044	11.045	11.044	11.046	10.946-11.146	11.045	0.001
10 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	10.824	10.724-10.924	+++++	+++++
11 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	12.243	12.143-12.343	+++++	+++++
$ 13 Decachlorobiphenyl	13.897	13.893	13.893	13.899	13.892	13.898	13.897	13.797-13.997	13.895	0.003
* 12 IS-HBBP	14.269	14.268	14.268	14.267	14.268	14.268	14.269	14.169-14.369	14.268	0.001
42 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	9.260	9.210-9.310	+++++	+++++
43 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	9.801	9.751-9.851	+++++	+++++
44 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	10.293	10.243-10.343	+++++	+++++
46 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	9.683	9.583-9.783	+++++	+++++

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

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Batch File: \\target\share\chem4\ecd7.i\230224.b
Inst ID: ecd7.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
47 4,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	10.254	10.154-10.354	+++++	+++++
48 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	10.754	10.654-10.854	+++++	+++++
49 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	1.842	1.742-1.942	+++++	+++++
50 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	6.708	6.608-6.808	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd7.i\230224.b\PCB.m\PCB2.m
Batch File: \\target\share\chem4\ecd7.i\230224.b\230224.b
Inst ID: ecd7.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	02242302ECD7	02242303ECD7	02242304ECD7	02242305ECD7	02242306ECD7	02242307ECD7
INJ.DATE:	24-FEB-2023	24-FEB-2023	24-FEB-2023	24-FEB-2023	24-FEB-2023	24-FEB-2023
INJ.TIME:	11:12	11:33	11:54	12:15	12:36	12:57

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
* 40 IS-BNB [2C]	3.928	3.929	3.929	3.929	3.928	3.929	3.928	3.828-4.028	3.929	0.000
$ 2 Tetrachloro-m-xylene [	5.687	5.688	5.688	5.688	5.688	5.688	5.687	5.587-5.787	5.688	0.001
1 Aroclor-1221 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	4.958	4.858-5.058	+++++	+++++
4 Aroclor-1232 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	4.958	4.859-5.059	+++++	+++++
3 Aroclor-1242 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	7.254	7.154-7.354	+++++	+++++
6 Aroclor-1248 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	8.305	8.205-8.405	+++++	+++++
7 Aroclor-1016 [2C]	7.255	7.256	7.256	7.254	7.255	7.256	7.255	7.155-7.355	7.255	0.001
8 Aroclor-1254 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	9.447	9.347-9.547	+++++	+++++
10 Aroclor-1262 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	11.198	11.098-11.298	+++++	+++++
9 Aroclor-1260 [2C]	11.653	11.656	11.655	11.652	11.655	11.653	11.653	11.553-11.753	11.654	0.001
11 Aroclor-1268 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	12.431	12.331-12.531	+++++	+++++
$ 13 Decachlorobiphenyl [2C	14.120	14.120	14.119	14.122	14.119	14.120	14.120	14.020-14.220	14.120	0.001
* 12 IS-HBBP [2C]	15.008	15.008	15.008	15.008	15.007	15.008	15.008	14.908-15.108	15.008	0.000
41 2,4-DDE [2C]	+++++	+++++	+++++	+++++	+++++	+++++	9.911	9.861-9.961	+++++	+++++
42 2,4-DDD [2C]	+++++	+++++	+++++	+++++	+++++	+++++	9.536	9.486-9.586	+++++	+++++
44 4,4-DDE [2C]	+++++	+++++	+++++	+++++	+++++	+++++	10.209	10.109-10.309	+++++	+++++
45 4,4-DDD/2,4-DDT [2C]	+++++	+++++	+++++	+++++	+++++	+++++	10.667	10.567-10.767	+++++	+++++

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

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd7.i\230224.b\PCB.m\PCB2.m
Batch File: \\target\share\chem4\ecd7.i\230224.b\230224.b
Inst ID: ecd7.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
46 4,4-DDT [2C]	+++++	+++++	+++++	+++++	+++++	+++++	11.092	10.992-11.192	+++++	+++++
48 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	1.703	1.603-1.803	+++++	+++++
49 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	7.178	7.078-7.278	+++++	+++++

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242301ECD7.D
Data file 2: /230224.b/230224.b/02242301ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: IB
Client ID:
Injection Date: 24-FEB-2023 10:51
Report Date: 02/28/2023 09:50
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.826	0.019	382217	5.683	-0.002	180378	33.8	36.5	7.7	Tetrachloro-m-xylene
13.904	0.011	534110	14.120	0.001	295605	35.3	37.2	5.2	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	756896	12.3
Hexabromobiphenyl	1429847	1534275	7.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	336543	6.8
Hexabromobiphenyl	513946	521508	1.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	6.321	0.025	1873	31.1
Aroclor-1221	3	---			0.0	3	6.633	0.012	314	3.2
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	7.698	0.043	2193	6.0	3	---			0.0
Aroclor-1232	4	8.505	-0.076	11525	74.5	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	7.698	0.042	2193	3.1	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	8.505	-0.074	11525	35.2	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	---			0.0	1	---			0.0
Aroclor-1248	2	---			0.0	2	---			0.0
Aroclor-1248	3	---			0.0	3	---			0.0
Aroclor-1248	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1254	1	---			0.0	1	---			0.0
Aroclor-1254	2	---			0.0	2	---			0.0
Aroclor-1254	3	9.596	-0.072	31424	64.3	3	---			0.0
Aroclor-1254	4	---			0.0	4	---			0.0
Aroclor-1254	5	10.167	-0.010	18361	30.8	5	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1260	1	11.098	0.054	6994	12.7	1	---			0.0
Aroclor-1260	2	---			0.0	2	---			0.0
Aroclor-1260	3	11.706	-0.027	7806	5.1	3	---			0.0
Aroclor-1260	4	---			0.0	4	---			0.0
Aroclor-1260	5	---			0.0	NS	---			----
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1262	1	10.824	-0.005	16873	35.8	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	13.040	0.053	14031	18.6	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	12.709	0.009	6037	3.6	3	12.891	-0.001	659	0.7
Aroclor-1268	4	13.499	0.010	12396	2.3	4	13.710	0.001	1848	0.6
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				

Total PCB Area Col1 (5.906 - 13.793) = 260205 Col1 Total PCB = 0.0 ppm*

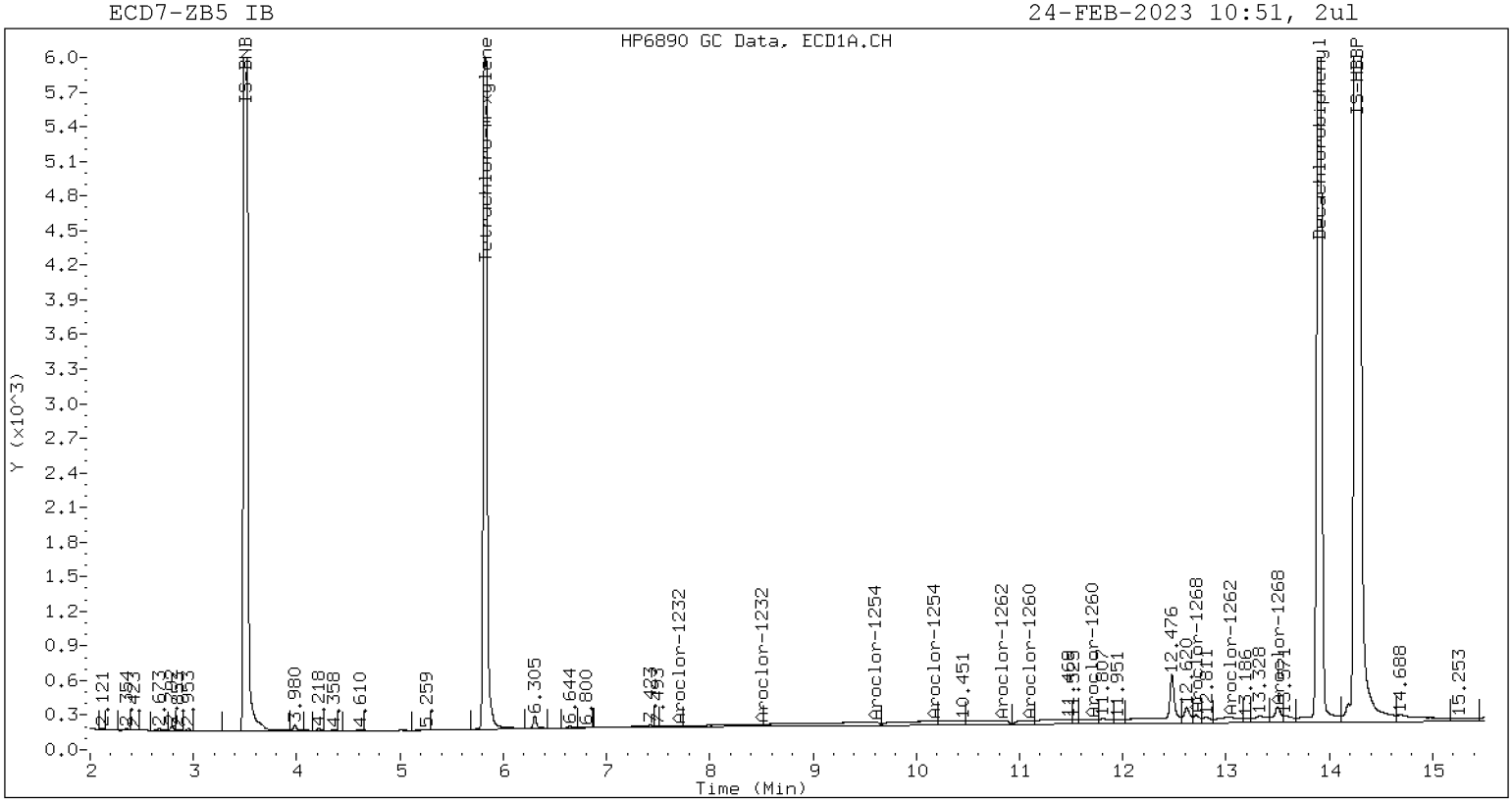
Total PCB Area Col2 (5.785 - 14.019) = 18252 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

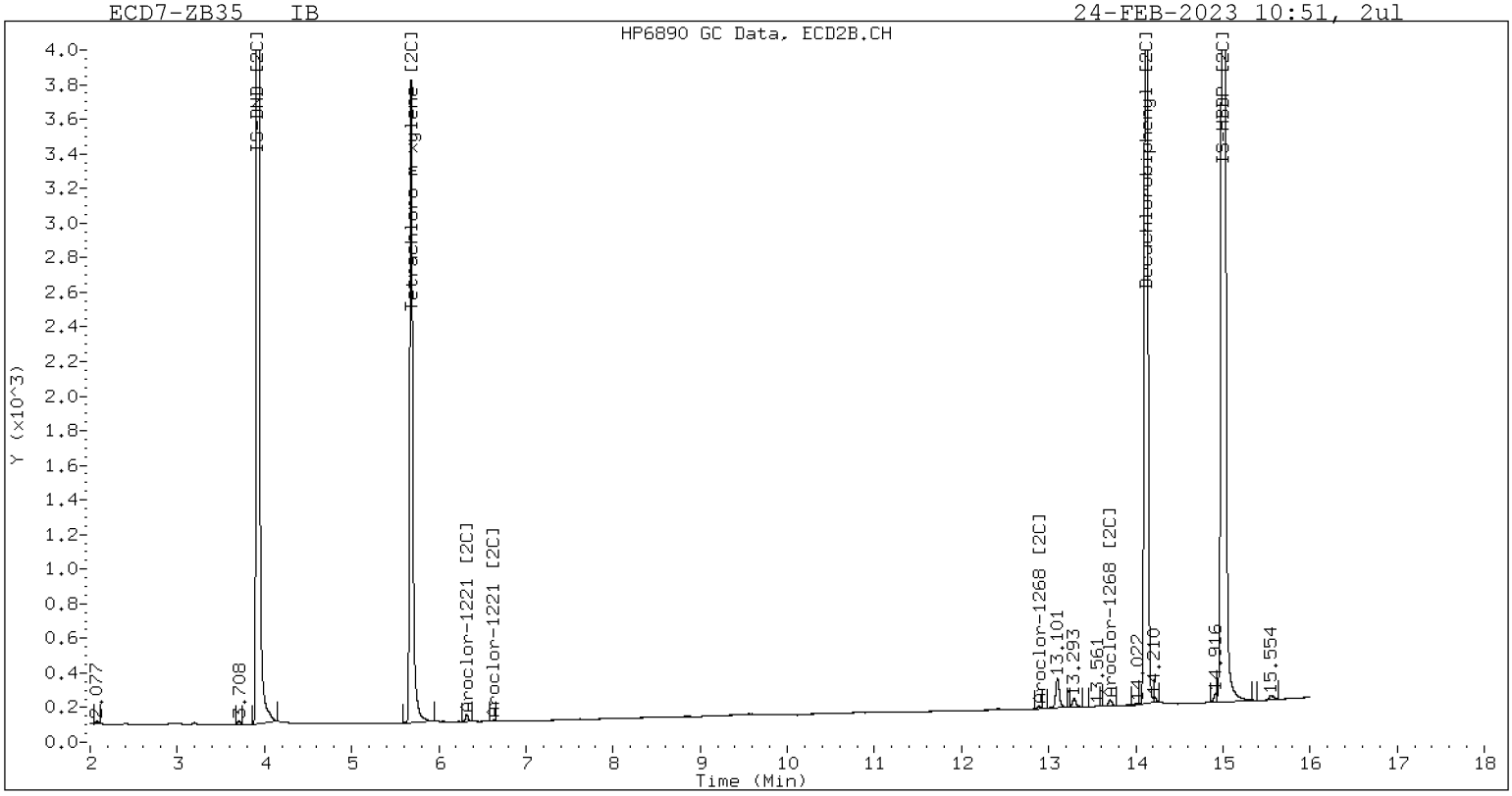
PCB Dual Column Chromatograms

ECD7-ZB5 IB 24-FEB-2023 10:51, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 IB 24-FEB-2023 10:51, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242302ECD7.D
Data file 2: /230224.b/230224.b/02242302ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.25PPMAR1660
Client ID:
Injection Date: 24-FEB-2023 11:12
Report Date: 02/28/2023 09:50
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.811	0.005	405980	5.687	0.002	192160	40.4	41.5	2.9	Tetrachloro-m-xylene
13.897	0.004	563414	14.120	0.001	336737	40.0	43.0	7.3	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	673778	0.0
Hexabromobiphenyl	1429847	1429847	0.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	315256	0.0
Hexabromobiphenyl	513946	513946	0.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	7.272	0.001	66125	258.4	1	7.255	-0.001	46626	252.6
Aroclor-1016	2	7.654	-0.000	207370	265.8	2	7.855	-0.001	101071	270.1
Aroclor-1016	3	7.792	0.002	92507	242.9	3	8.055	0.001	43448	257.1
Aroclor-1016	4	8.406	0.001	64388	261.5	4	8.306	-0.000	33986	256.3
Total Col1Ave (4 peaks):					257.2	Total Col2Ave (4 peaks):				259.0 RPD = 1
Corrected Ave (3 peaks):					254.3	Corrected Ave (3 peaks):				255.3 RPD = 0
CalAmt %D:					2.9	CalAmt %D:				3.6
Aroclor-1260	1	11.046	0.001	138355	269.0	1	11.653	0.001	77114	255.2
Aroclor-1260	2	11.363	0.002	147051	273.6	2	11.918	0.001	203401	263.7
Aroclor-1260	3	11.736	0.003	383171	268.8	3	12.435	-0.000	51517	251.7
Aroclor-1260	4	12.141	0.002	200399	279.2	4	12.502	0.001	134797	259.3
Aroclor-1260	5	12.247	0.003	83796	271.2	NS	---			----
Total Col1Ave (5 peaks):					272.4	Total Col2Ave (4 peaks):				257.5 RPD = 6
Corrected Ave (4 peaks):					270.7	Corrected Ave (3 peaks):				255.4 RPD = 6
CalAmt %D:					8.9	CalAmt %D:				3.0

Total PCB Area Col1 (5.906 - 13.793) = 4024419 Col1 Total PCB = 0.5 ppm*

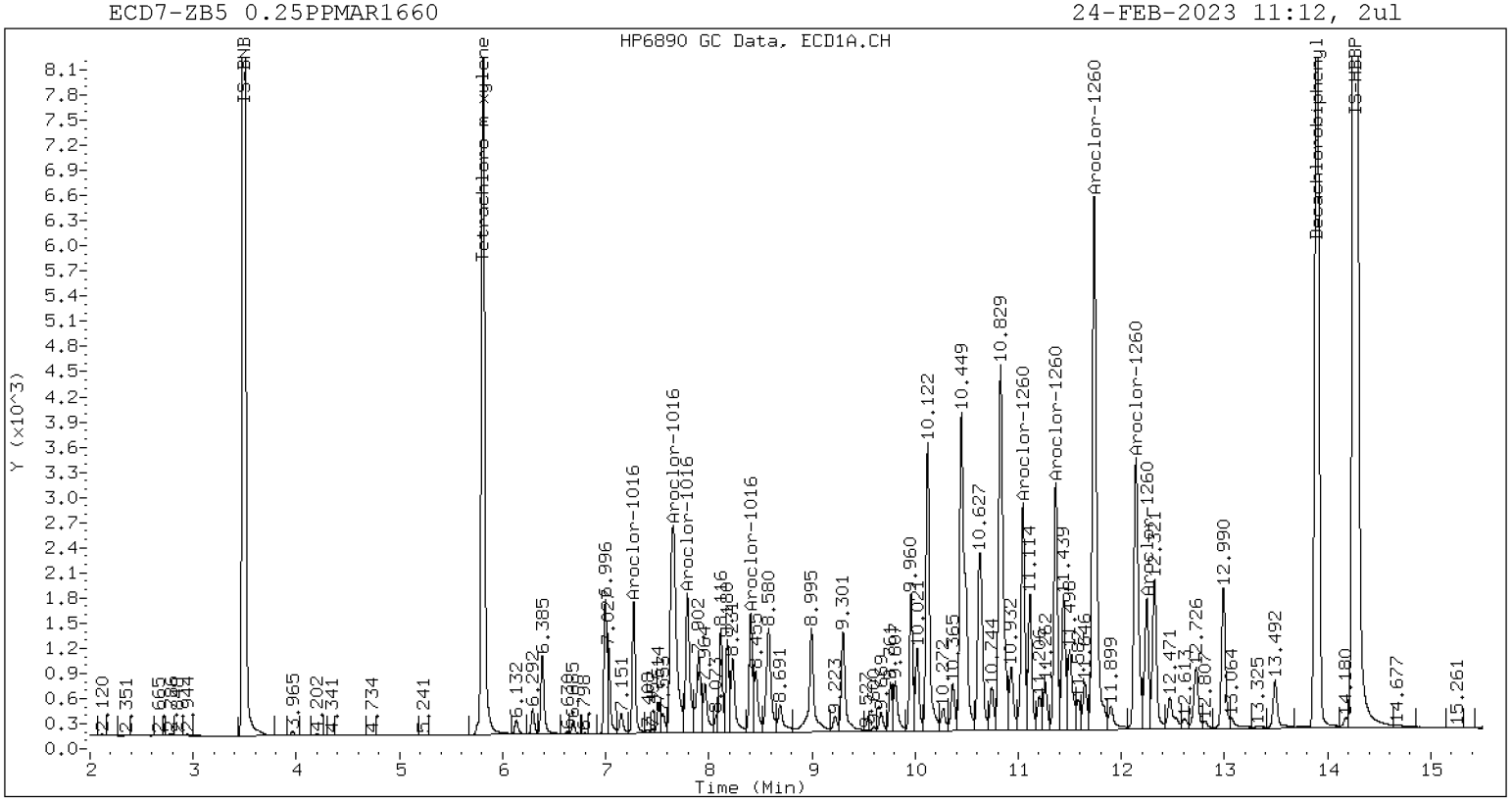
Total PCB Area Col2 (5.785 - 14.019) = 1889311 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

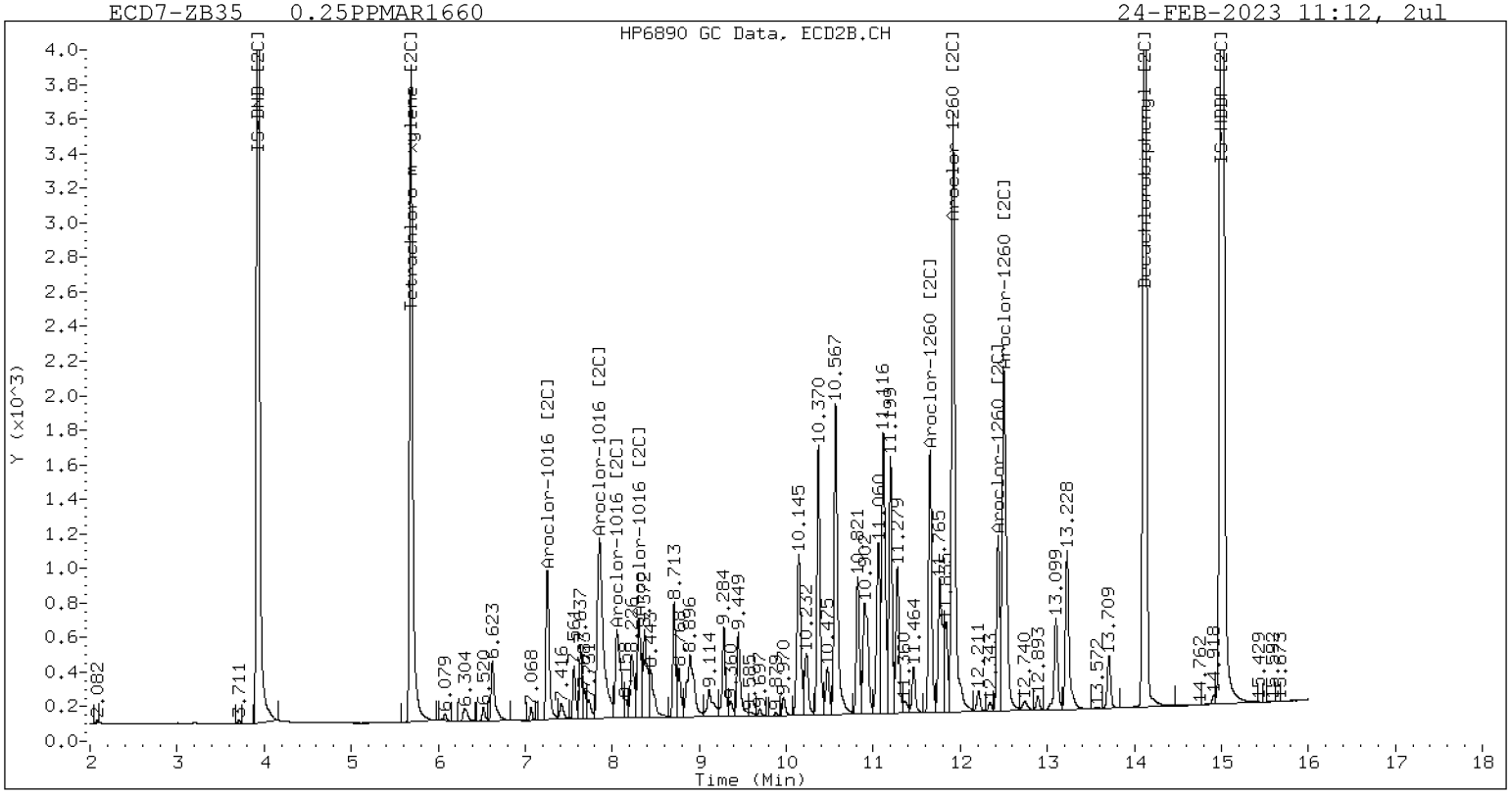
PCB Dual Column Chromatograms

ECD7-ZB5 0.25PPMAR1660 24-FEB-2023 11:12, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.25PPMAR1660 24-FEB-2023 11:12, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242303ECD7.D
Data file 2: /230224.b/230224.b/02242303ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.02PPMAR1660
Client ID:
Injection Date: 24-FEB-2023 11:33
Report Date: 02/28/2023 09:50
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	0.002	29768	5.688	0.003	14932	3.1	3.3	5.7	Tetrachloro-m-xylene
13.893	0.000	45992	14.120	0.000	23950	3.4	3.1	9.1	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	637010	-5.5
Hexabromobiphenyl	1429847	1386953	-3.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	307177	-2.6
Hexabromobiphenyl	513946	511463	-0.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.272	0.001	5052	20.9	1	7.256	0.000	3894	21.7
Aroclor-1016	2	7.659	0.005	14714	19.9	2	7.864	0.008	6253	17.1
Aroclor-1016	3	7.795	0.005	8226	22.8	3	8.060	0.006	3076	18.7
Aroclor-1016	4	8.407	0.002	4780	20.5	4	8.309	0.002	2443	18.9
Total Col1Ave (4 peaks):					21.1	Total Col2Ave (4 peaks):				19.1 RPD = 10
Corrected Ave (3 peaks):					20.5	Corrected Ave (3 peaks):				18.2 RPD = 11
CalAmt %D:					5.3	CalAmt %D:				-4.5
Aroclor-1260	1	11.047	0.003	10147	20.3	1	11.656	0.003	6759	22.5
Aroclor-1260	2	11.364	0.003	10287	19.7	2	11.922	0.005	16592	21.6
Aroclor-1260	3	11.740	0.006	28043	20.3	3	12.438	0.002	4506	22.1
Aroclor-1260	4	12.145	0.006	13540	19.4	4	12.505	0.004	11037	21.3
Aroclor-1260	5	12.246	0.002	6182	20.6	NS	---			----
Total Col1Ave (5 peaks):					20.1	Total Col2Ave (4 peaks):				21.9 RPD = 9
Corrected Ave (4 peaks):					19.9	Corrected Ave (3 peaks):				21.7 RPD = 8
CalAmt %D:					0.4	CalAmt %D:				9.4

Total PCB Area Col1 (5.906 - 13.793) = 324832 Col1 Total PCB = 0.0 ppm*

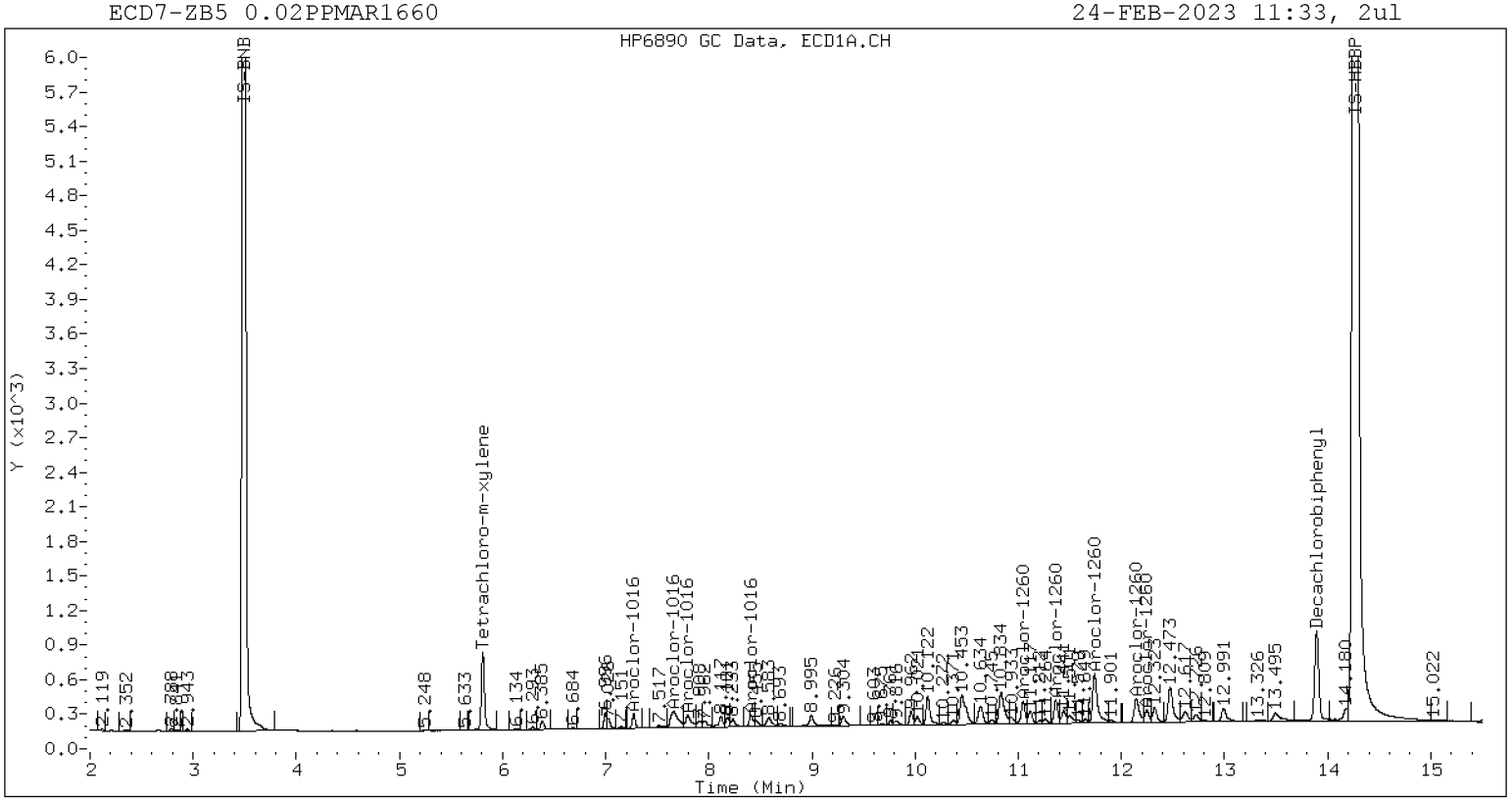
Total PCB Area Col2 (5.785 - 14.019) = 157149 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

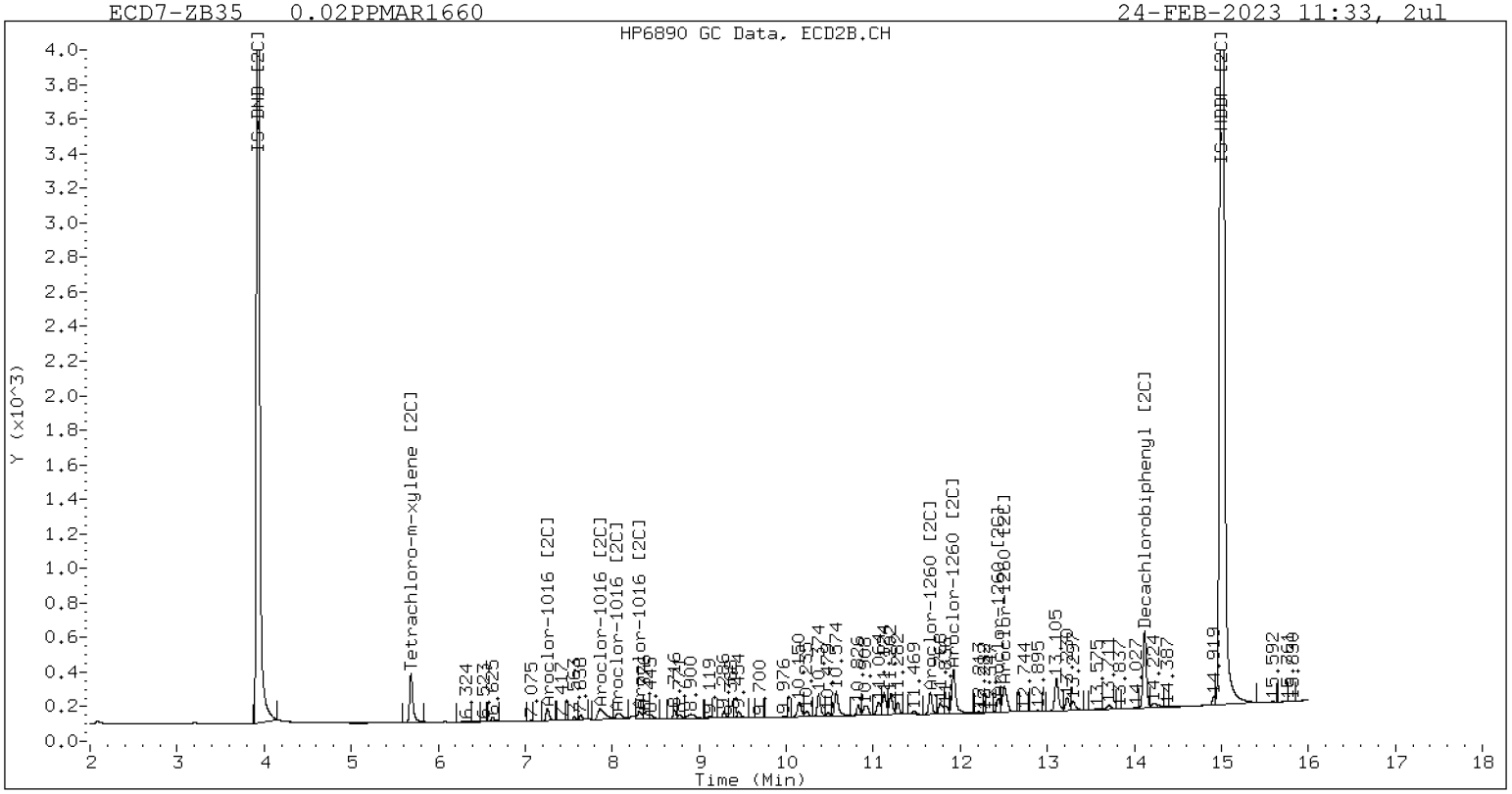
PCB Dual Column Chromatograms

ECD7-ZB5 0.02PPMAR1660 24-FEB-2023 11:33, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.02PPMAR1660 24-FEB-2023 11:33, 2ul

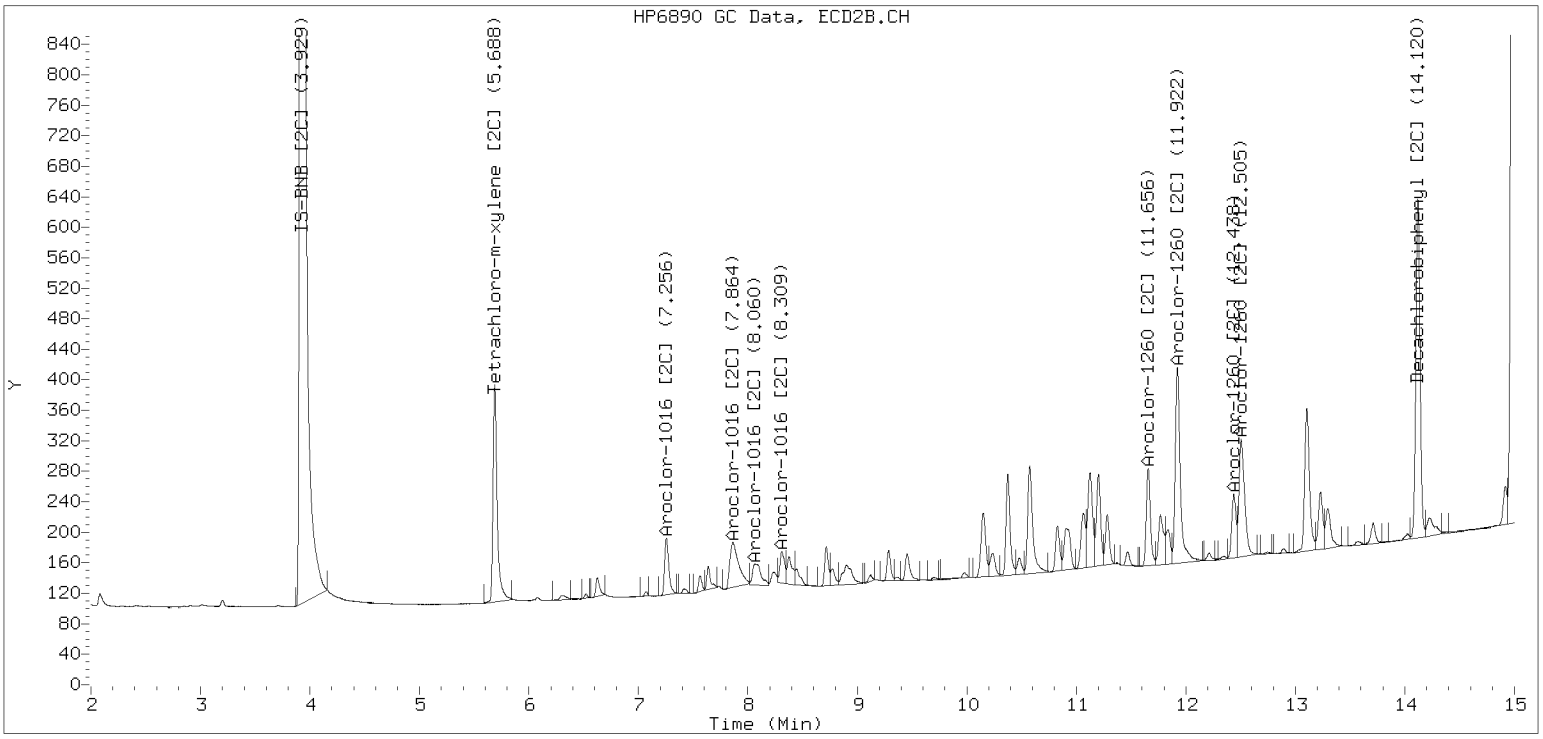


ZB-35 Manual Integration: YES

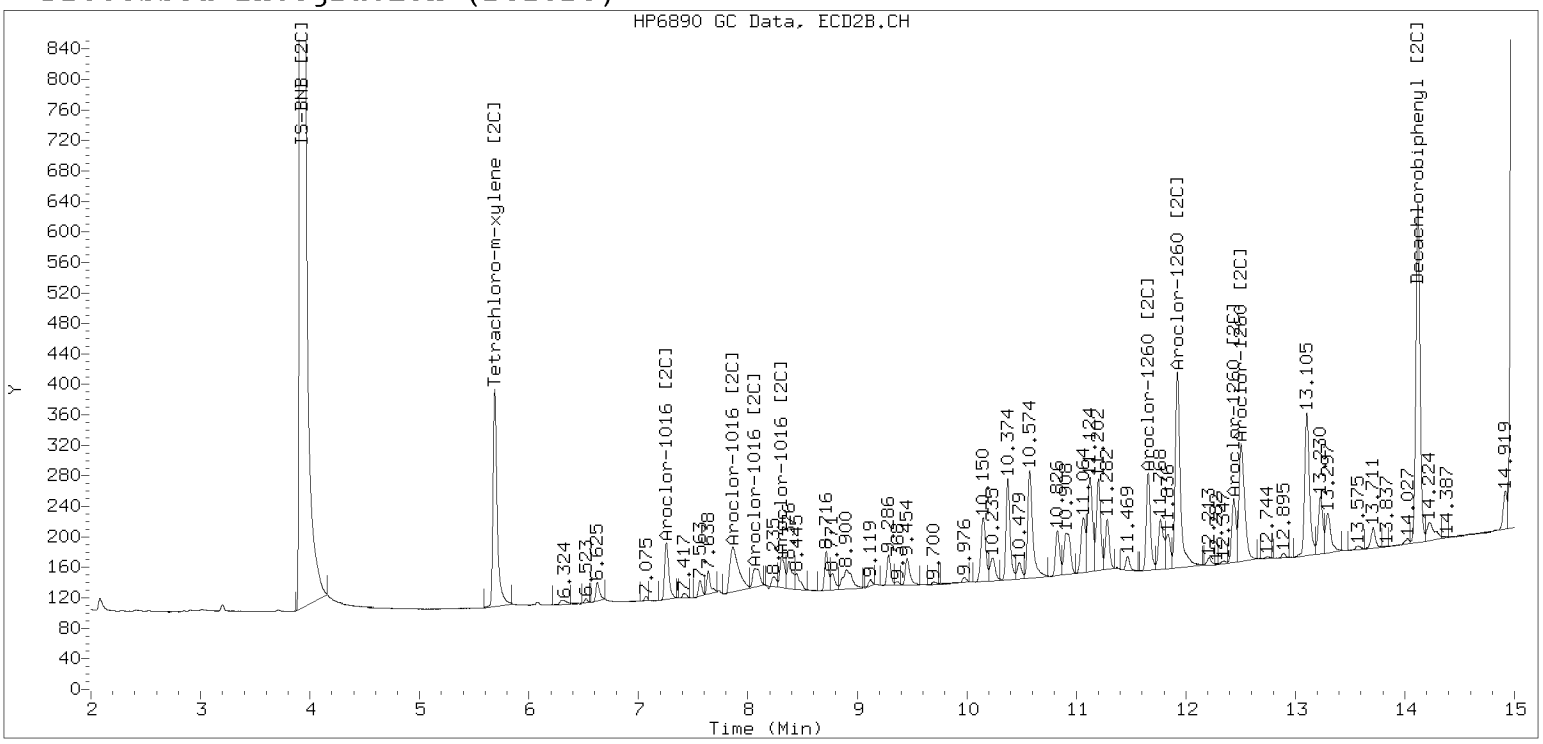
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230224.b/230224.b/02242303ECD7.D Injection Date: 24-FEB-2023

Manual Integration (After)



Processed Integration (Before)



Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242304ECD7.D
Data file 2: /230224.b/230224.b/02242304ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.05PPMAR1660
Client ID:
Injection Date: 24-FEB-2023 11:54
Report Date: 02/28/2023 09:50
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	0.003	78493	5.688	0.003	36772	8.3	8.1	2.2	Tetrachloro-m-xylene
13.893	-0.000	113544	14.119	-0.000	62745	8.2	7.9	3.4	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	630965	-6.4
Hexabromobiphenyl	1429847	1409464	-1.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	307599	-2.4
Hexabromobiphenyl	513946	521112	1.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.272	0.002	12829	53.5	1	7.256	0.000	9654	53.6
Aroclor-1016	2	7.660	0.006	36461	49.9	2	7.864	0.008	18085	49.5
Aroclor-1016	3	7.795	0.005	19865	55.7	3	8.063	0.008	9071	55.0
Aroclor-1016	4	8.408	0.003	11411	49.5	4	8.310	0.003	7309	56.5
Total Col1Ave (4 peaks):					52.2	Total Col2Ave (4 peaks):				53.7 RPD = 3
Corrected Ave (3 peaks):					51.0	Corrected Ave (3 peaks):				52.7 RPD = 3
CalAmt %D:					4.3	CalAmt %D:				7.3
Aroclor-1260	1	11.046	0.002	25727	50.7	1	11.655	0.002	15996	52.2
Aroclor-1260	2	11.363	0.002	26482	50.0	2	11.922	0.004	40487	51.8
Aroclor-1260	3	11.739	0.005	70871	50.4	3	12.437	0.002	10248	49.4
Aroclor-1260	4	12.143	0.004	34239	48.4	4	12.506	0.004	26828	50.9
Aroclor-1260	5	12.246	0.002	15109	49.6	NS	---			----
Total Col1Ave (5 peaks):					49.8	Total Col2Ave (4 peaks):				51.1 RPD = 2
Corrected Ave (4 peaks):					49.6	Corrected Ave (3 peaks):				50.7 RPD = 2
CalAmt %D:					-0.3	CalAmt %D:				2.1

Total PCB Area Col1 (5.906 - 13.793) = 758292 Col1 Total PCB = 0.1 ppm*

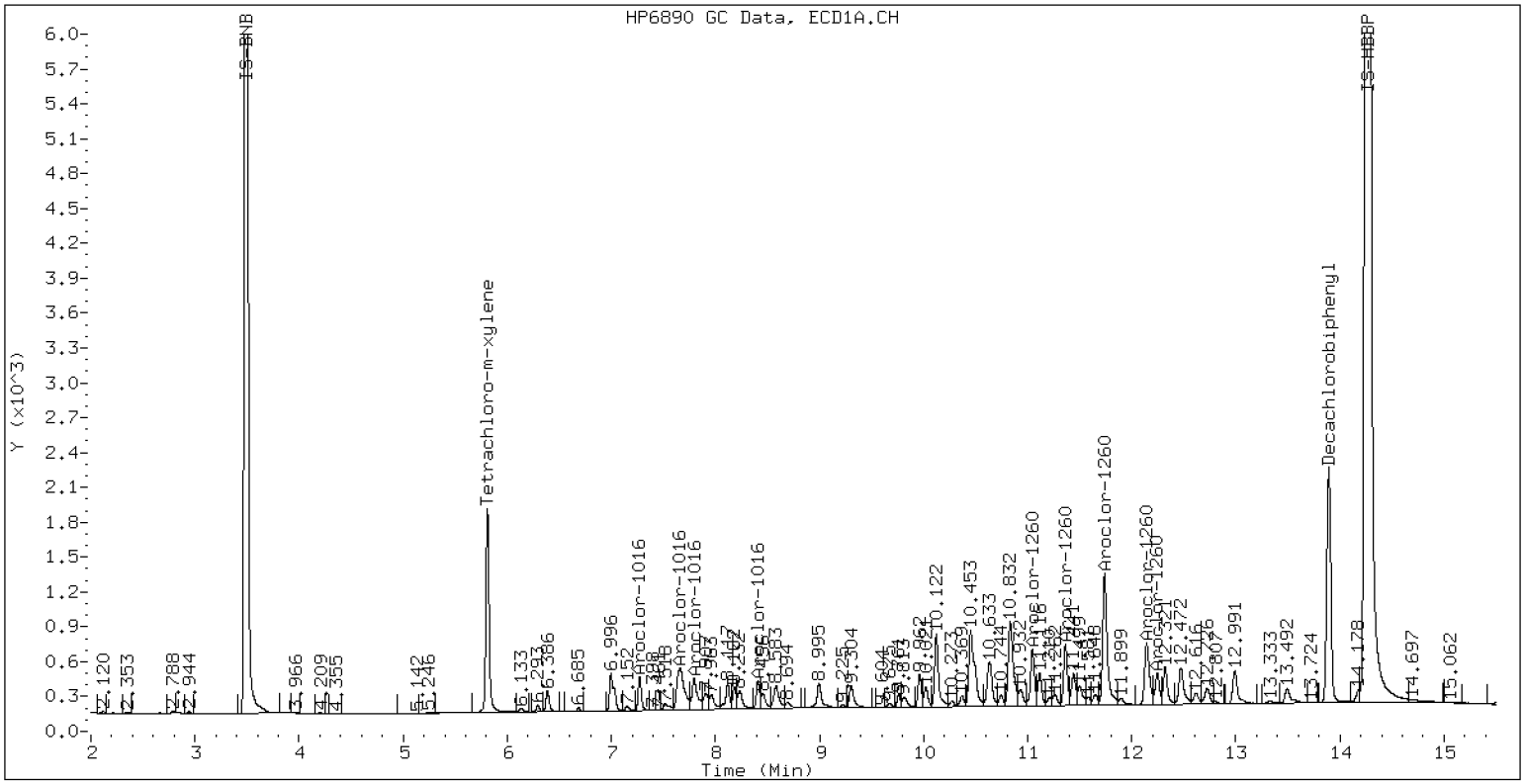
Total PCB Area Col2 (5.785 - 14.019) = 386383 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

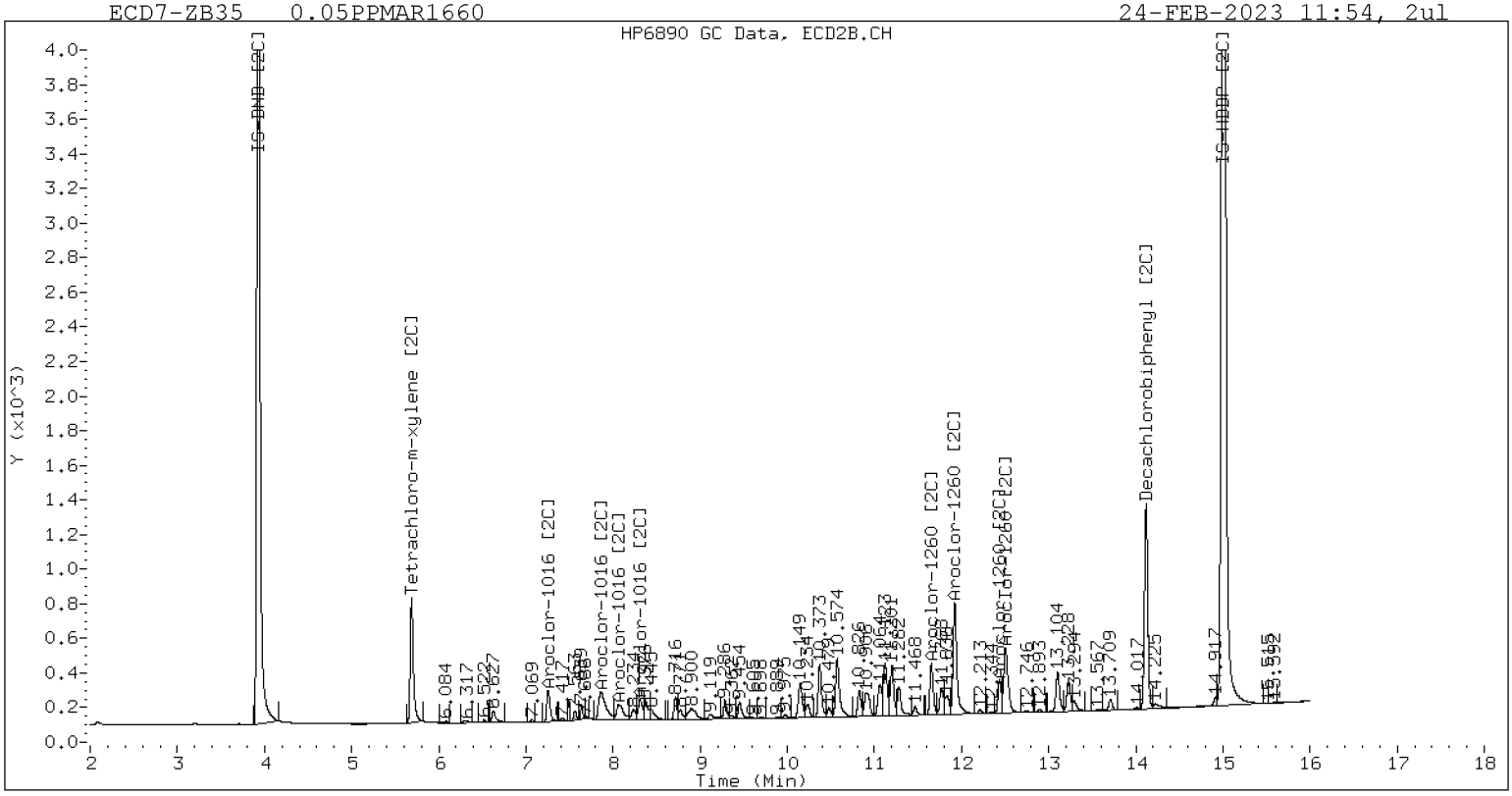
PCB Dual Column Chromatograms

ECD7-ZB5 0.05PPMAR1660 24-FEB-2023 11:54, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.05PPMAR1660 24-FEB-2023 11:54, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242305ECD7.D
Data file 2: /230224.b/230224.b/02242305ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 1.0PPMAR1660
Client ID:
Injection Date: 24-FEB-2023 12:15
Report Date: 02/28/2023 09:50
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.813	0.006	1641874	5.688	0.003	709674	166.2	151.5	9.3	Tetrachloro-m-xylene
13.899	0.006	2344583	14.122	0.002	1300114	161.9	158.6	2.1	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	661440	-1.8
Hexabromobiphenyl	1429847	1470100	2.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	319272	1.3
Hexabromobiphenyl	513946	538138	4.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	7.270	-0.000	220519	877.8	1	7.254	-0.001	162833	871.2
Aroclor-1016	2	7.652	-0.002	731607	955.3	2	7.852	-0.004	373610	985.8
Aroclor-1016	3	7.789	-0.001	307629	822.8	3	8.051	-0.003	156666	915.2
Aroclor-1016	4	8.404	-0.001	229387	949.1	4	8.305	-0.002	117186	872.6
Total Col1Ave (4 peaks):					901.3	Total Col2Ave (4 peaks):				911.2 RPD = 1
Corrected Ave (3 peaks):					883.3	Corrected Ave (3 peaks):				886.3 RPD = 0
CalAmt %D:					-9.9	CalAmt %D:				-8.9
Aroclor-1260	1	11.044	-0.000	504641	954.2	1	11.652	-0.000	282606	893.1
Aroclor-1260	2	11.360	-0.001	524931	950.0	2	11.917	-0.000	709329	878.4
Aroclor-1260	3	11.734	-0.000	1410270	962.3	3	12.434	-0.001	215124	1003.8
Aroclor-1260	4	12.137	-0.002	720770	976.7	4	12.501	-0.001	506566	930.6
Aroclor-1260	5	12.243	-0.001	304211	957.7	NS	---			----
Total Col1Ave (5 peaks):					960.2	Total Col2Ave (4 peaks):				926.5 RPD = 4
Corrected Ave (4 peaks):					956.0	Corrected Ave (3 peaks):				900.7 RPD = 6
CalAmt %D:					-4.0	CalAmt %D:				-7.4

Total PCB Area Col1 (5.906 - 13.793) = 14454279 Col1 Total PCB = 1.8 ppm*

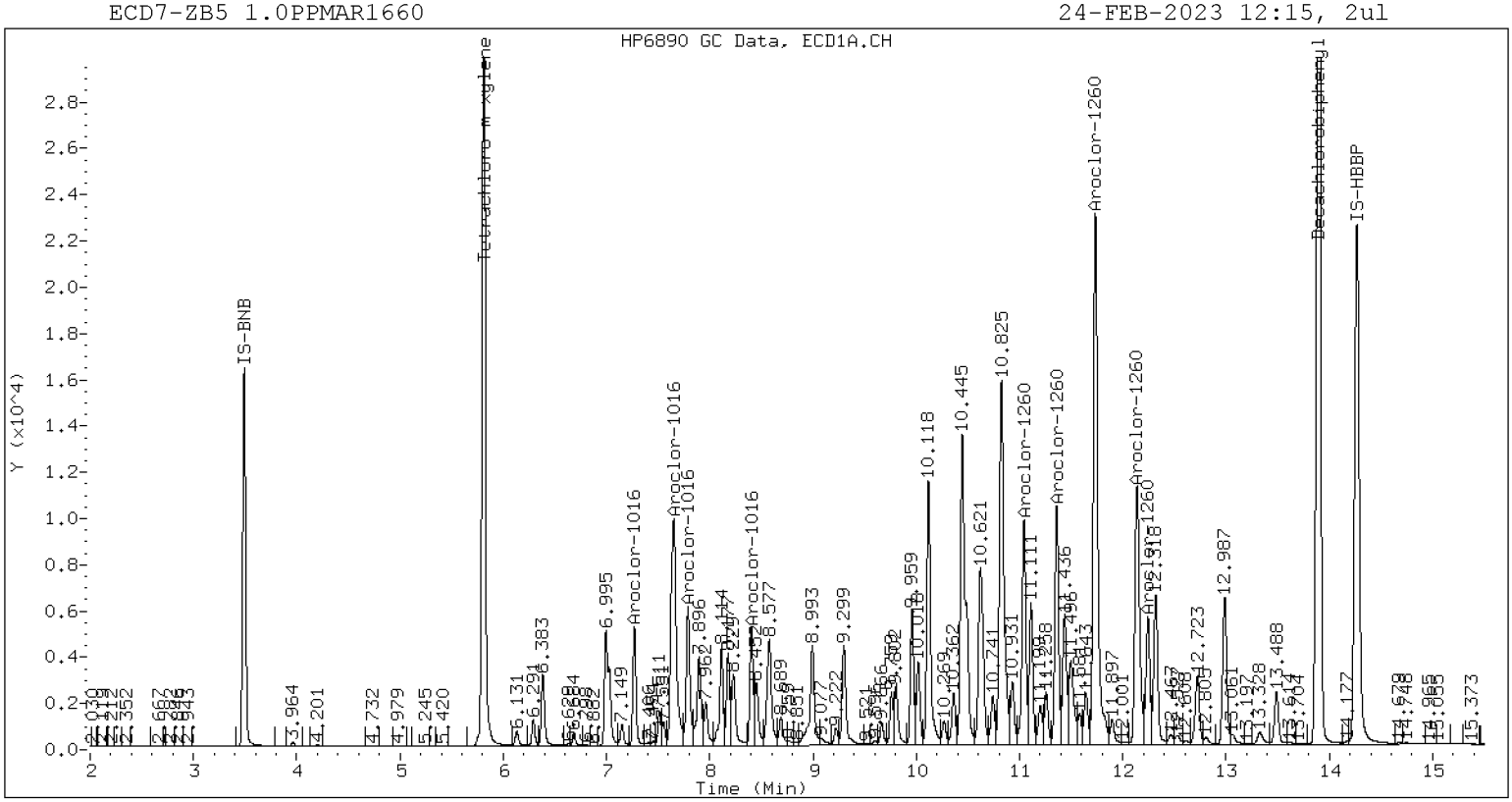
Total PCB Area Col2 (5.785 - 14.019) = 7029563 Col2 Total PCB = 1.8 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

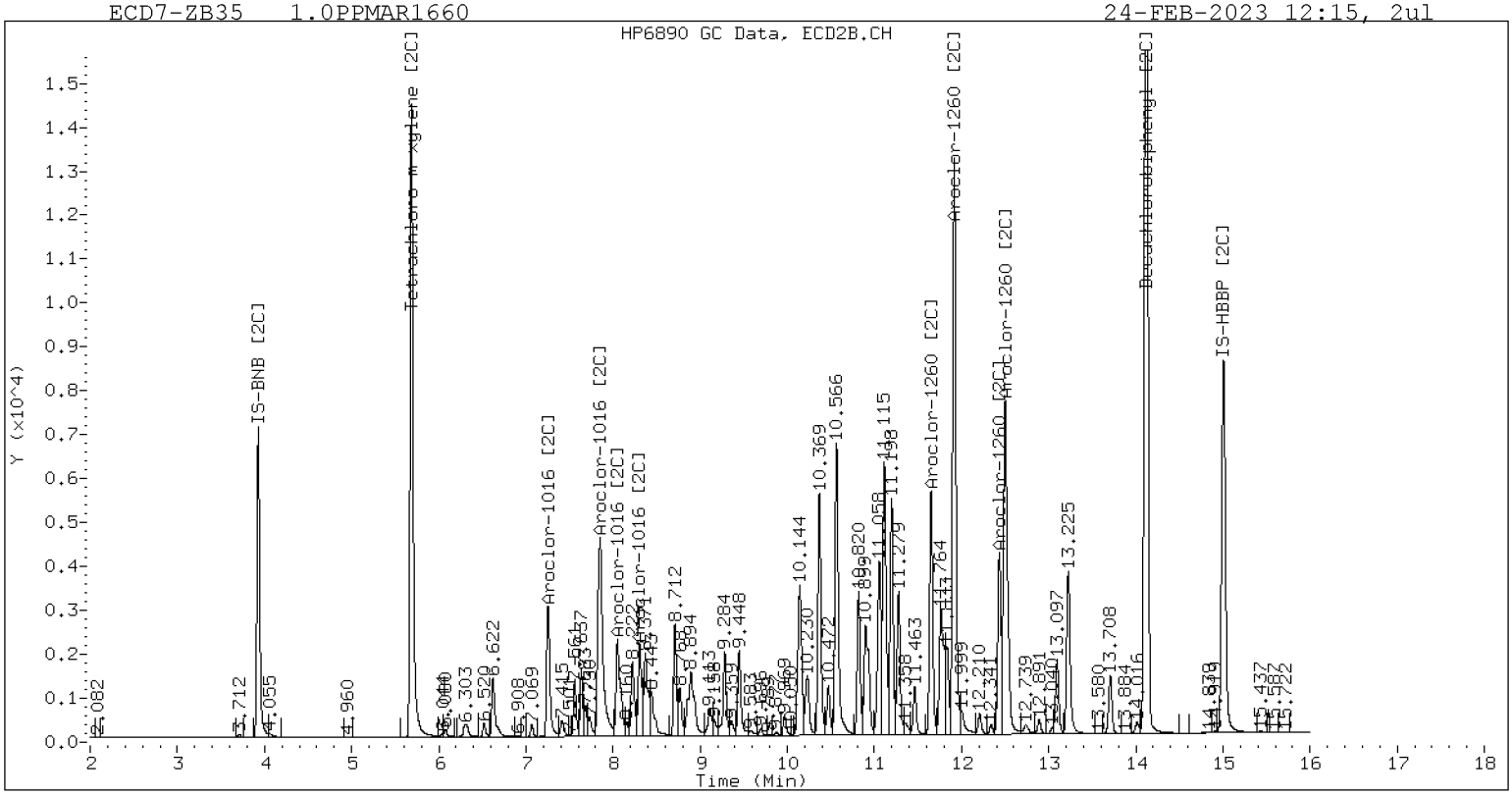
PCB Dual Column Chromatograms

ECD7-ZB5 1.0PPMAR1660 24-FEB-2023 12:15, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 1.0PPMAR1660 24-FEB-2023 12:15, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242306ECD7.D
Data file 2: /230224.b/230224.b/02242306ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.1PPMAR1660
Client ID:
Injection Date: 24-FEB-2023 12:36
Report Date: 02/28/2023 09:50
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	0.002	155528	5.688	0.003	74628	15.9	16.0	0.9	Tetrachloro-m-xylene
13.892	-0.001	227253	14.119	-0.000	128496	15.8	15.8	0.5	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	655979	-2.6
Hexabromobiphenyl	1429847	1464509	2.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	317418	0.7
Hexabromobiphenyl	513946	532962	3.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.271	0.000	25761	103.4	1	7.255	-0.000	19315	103.9
Aroclor-1016	2	7.657	0.003	75616	99.6	2	7.863	0.007	40308	107.0
Aroclor-1016	3	7.794	0.004	39547	106.7	3	8.059	0.005	18304	107.6
Aroclor-1016	4	8.406	0.001	24260	101.2	4	8.309	0.002	14708	110.2
Total Col1Ave (4 peaks):					102.7	Total Col2Ave (4 peaks):				107.2 RPD = 4
Corrected Ave (3 peaks):					101.4	Corrected Ave (3 peaks):				106.2 RPD = 5
CalAmt %D:					2.7	CalAmt %D:				7.2
Aroclor-1260	1	11.045	0.000	52009	98.7	1	11.655	0.002	31282	99.8
Aroclor-1260	2	11.362	0.001	55116	100.1	2	11.920	0.003	80574	100.7
Aroclor-1260	3	11.738	0.004	145604	99.7	3	12.437	0.002	19566	92.2
Aroclor-1260	4	12.141	0.002	72408	98.5	4	12.503	0.001	53588	99.4
Aroclor-1260	5	12.245	0.001	30745	97.2	NS	---			----
Total Col1Ave (5 peaks):					98.8	Total Col2Ave (4 peaks):				98.0 RPD = 1
Corrected Ave (4 peaks):					98.5	Corrected Ave (3 peaks):				97.1 RPD = 1
CalAmt %D:					-1.2	CalAmt %D:				-2.0

Total PCB Area Col1 (5.906 - 13.793) = 1555762 Col1 Total PCB = 0.2 ppm*

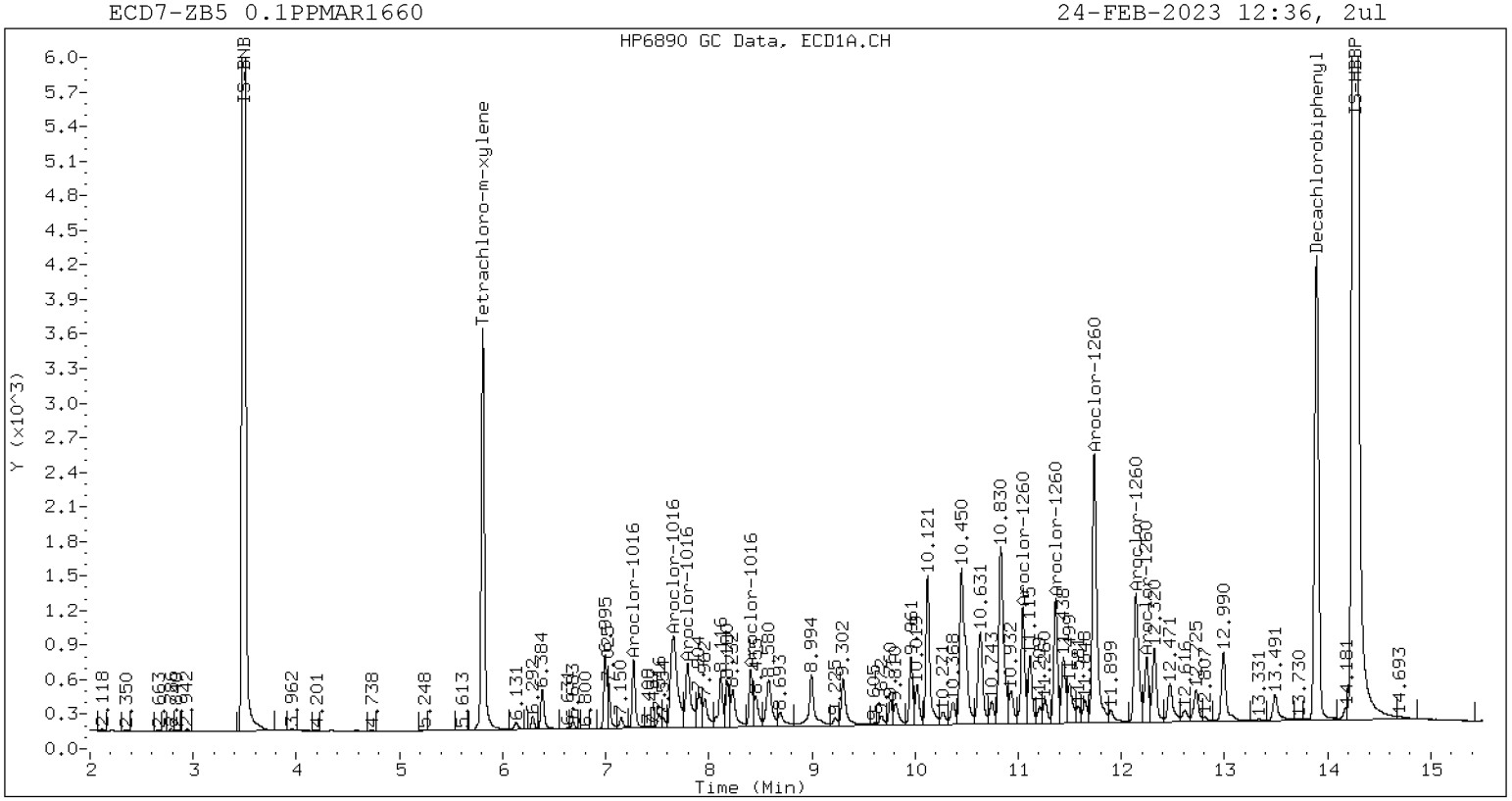
Total PCB Area Col2 (5.785 - 14.019) = 764924 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

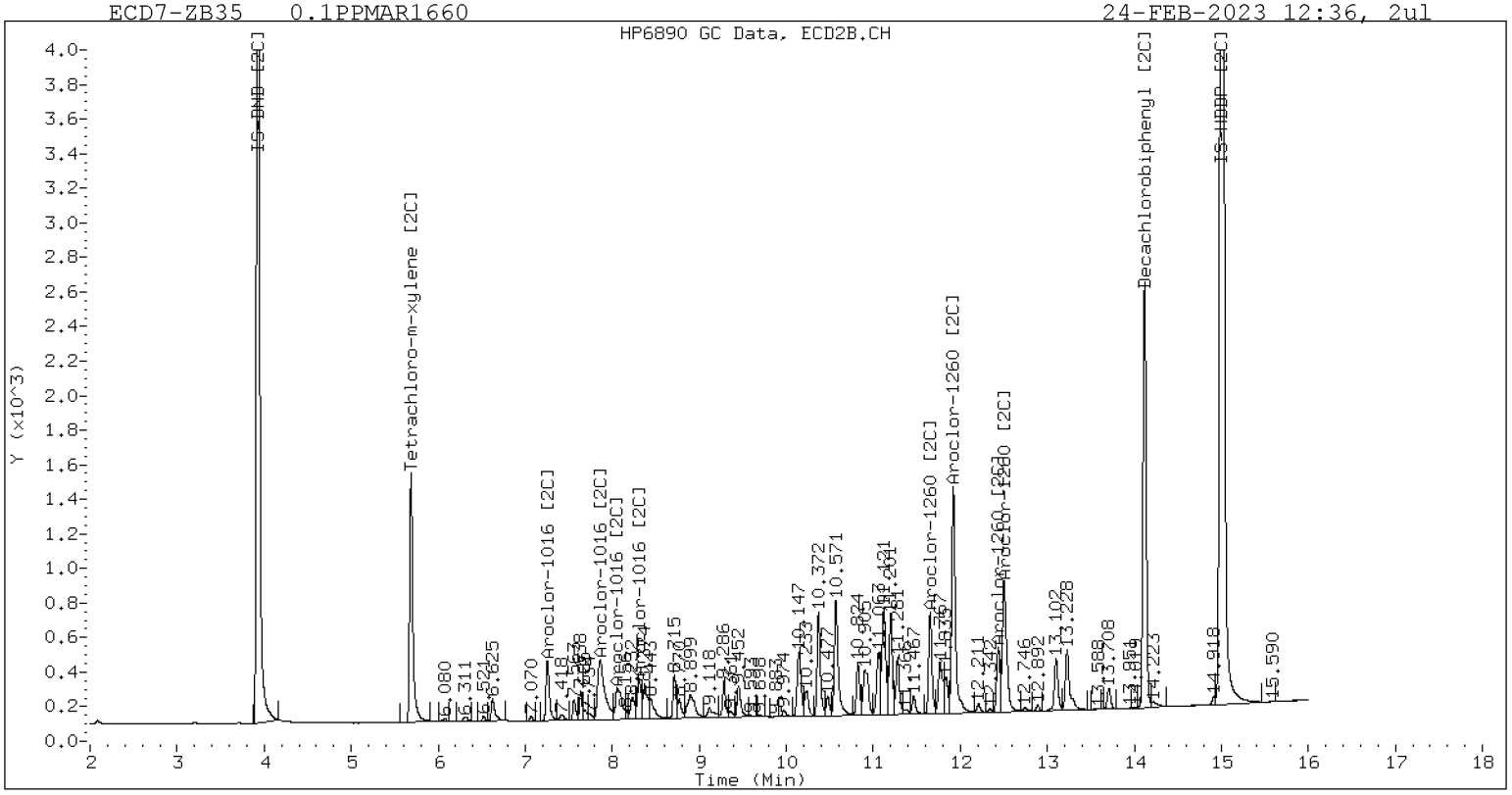
PCB Dual Column Chromatograms

ECD7-ZB5 0.1PPMAR1660 24-FEB-2023 12:36, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.1PPMAR1660 24-FEB-2023 12:36, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242307ECD7.D
Data file 2: /230224.b/230224.b/02242307ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.5PPMAR1660
Client ID:
Injection Date: 24-FEB-2023 12:57
Report Date: 02/28/2023 09:50
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.810	0.004	724614	5.688	0.003	359257	75.2	76.7	2.0	Tetrachloro-m-xylene
13.898	0.005	1056911	14.120	0.000	650153	74.3	79.5	6.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	645275	-4.2
Hexabromobiphenyl	1429847	1445345	1.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	319170	1.2
Hexabromobiphenyl	513946	536853	4.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.270	0.000	115193	470.0	1	7.256	0.000	86287	461.8
Aroclor-1016	2	7.654	0.000	369991	495.2	2	7.856	0.000	192524	508.1
Aroclor-1016	3	7.790	0.000	160952	441.3	3	8.055	0.000	81039	473.6
Aroclor-1016	4	8.405	0.000	115032	487.9	4	8.307	0.000	62136	462.8
Total Col1Ave (4 peaks):					473.6	Total Col2Ave (4 peaks):				476.6 RPD = 1
Corrected Ave (3 peaks):					466.4	Corrected Ave (3 peaks):				466.1 RPD = 0
CalAmt %D:					-5.3	CalAmt %D:				-4.7
Aroclor-1260	1	11.044	0.000	247212	475.5	1	11.653	0.000	145247	460.1
Aroclor-1260	2	11.361	0.000	262877	483.9	2	11.918	0.000	379838	471.5
Aroclor-1260	3	11.734	0.000	678830	471.1	3	12.436	0.000	104092	486.9
Aroclor-1260	4	12.139	0.000	356067	490.7	4	12.502	0.000	258953	476.9
Aroclor-1260	5	12.244	0.000	150280	481.2	NS	---			----
Total Col1Ave (5 peaks):					480.5	Total Col2Ave (4 peaks):				473.8 RPD = 1
Corrected Ave (4 peaks):					477.9	Corrected Ave (3 peaks):				469.5 RPD = 2
CalAmt %D:					-3.9	CalAmt %D:				-5.2

Total PCB Area Col1 (5.906 - 13.793) = 7134169 Col1 Total PCB = 0.9 ppm*

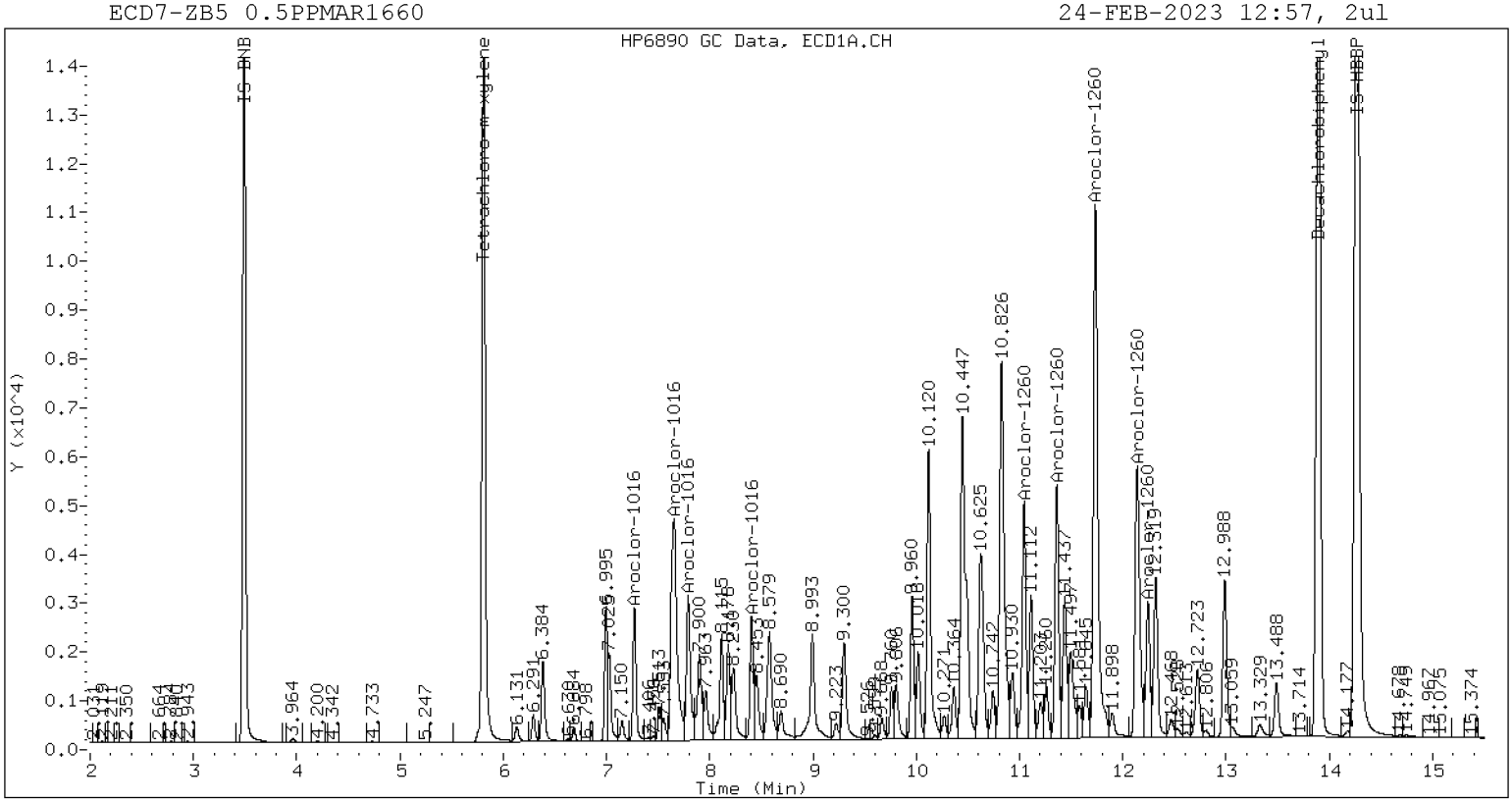
Total PCB Area Col2 (5.785 - 14.019) = 3589735 Col2 Total PCB = 0.9 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

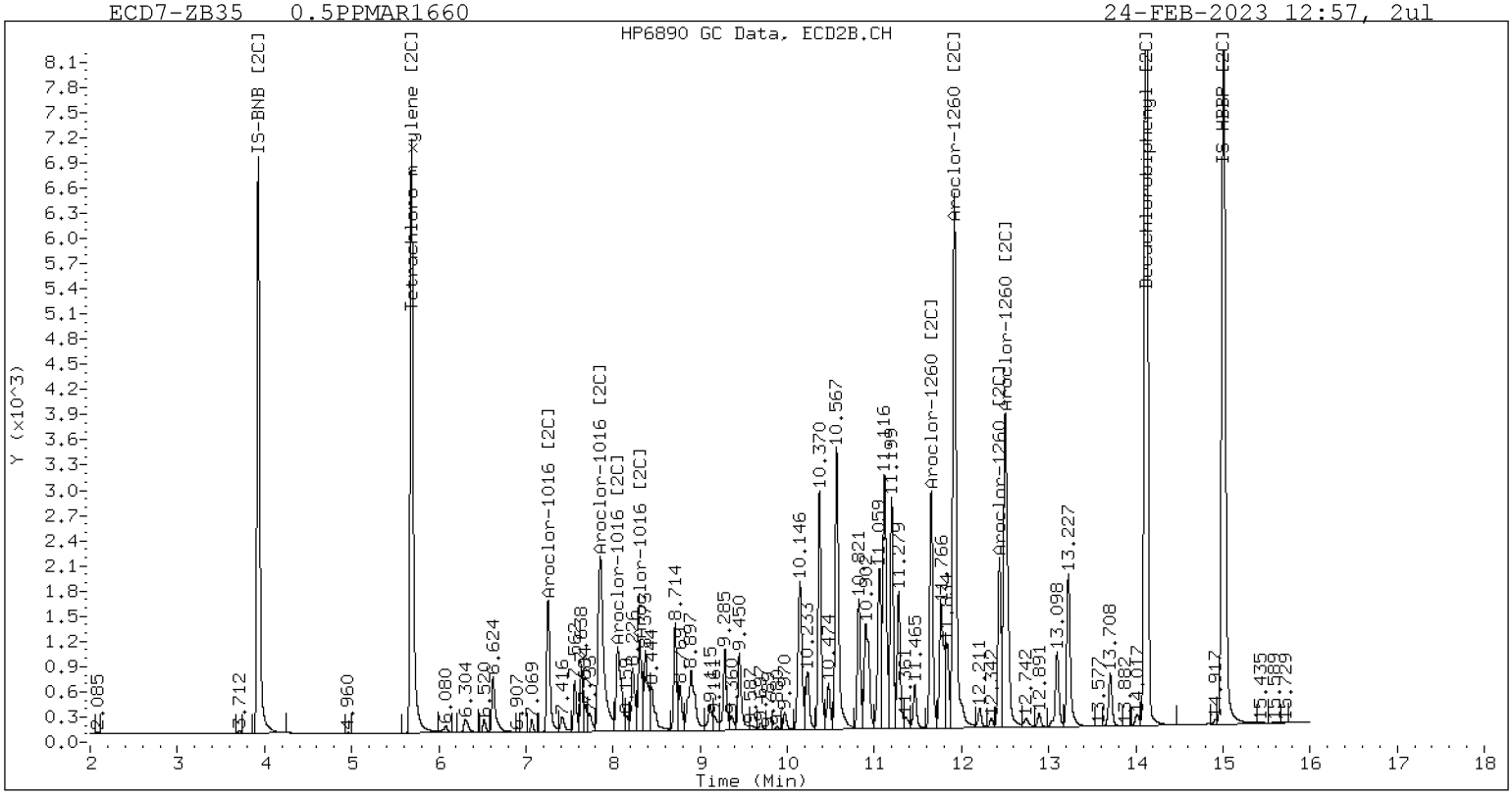
PCB Dual Column Chromatograms

ECD7-ZB5 0.5PPMAR1660 24-FEB-2023 12:57, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.5PPMAR1660 24-FEB-2023 12:57, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242308ECD7.D
Data file 2: /230224.b/230224.b/02242308ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: AR1242.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.25PPMAR1242
Client ID:
Injection Date: 24-FEB-2023 13:18
Report Date: 02/28/2023 09:50
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	0.003	434187	5.688	0.003	214306	46.0	46.5	1.1	Tetrachloro-m-xylene
13.894	0.000	515867	14.119	-0.001	312943	35.6	38.5	7.6	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	632576	-6.1
Hexabromobiphenyl	1429847	1469715	2.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	314129	-0.4
Hexabromobiphenyl	513946	534294	4.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1242	1	7.271	0.000	49009	250.0	1	7.255	0.000	36487	250.0
Aroclor-1242	2	7.656	0.000	148833	250.0	2	7.858	0.000	76699	250.0
Aroclor-1242	3	8.405	0.000	46308	250.0	3	9.167	0.000	23866	250.0
Aroclor-1242	4	8.579	0.000	68453	250.0	4	9.597	0.000	29080	250.0

Total Col1Ave (4 peaks): 250.0 Total Col2Ave (4 peaks): 250.0 RPD = 0

Corrected Ave (3 peaks): 250.0 Corrected Ave (3 peaks): 250.0 RPD = 0

Total PCB Area Col1 (5.906 - 13.793) = 1221467 Col1 Total PCB = 0.2 ppm*

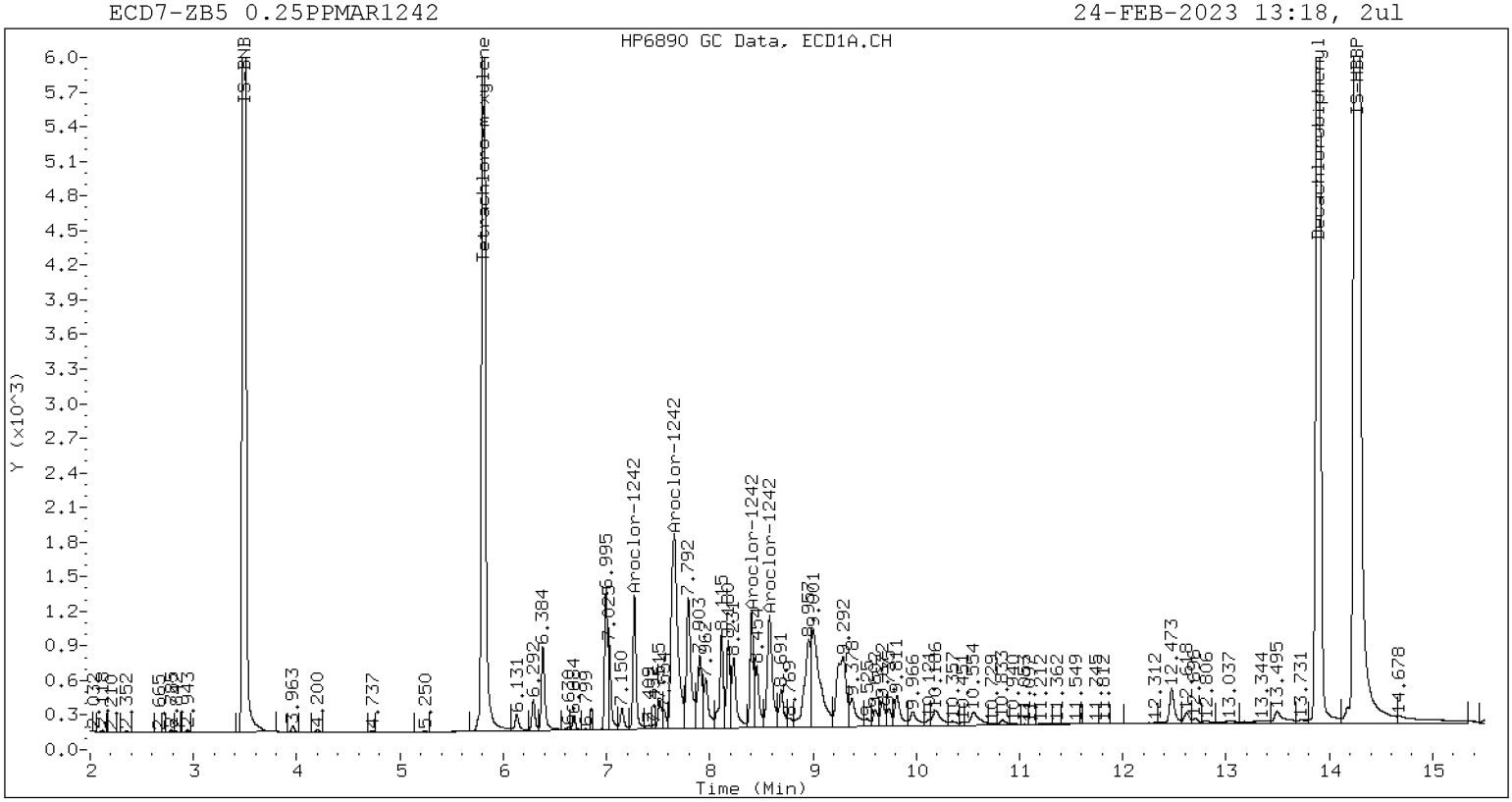
Total PCB Area Col2 (5.785 - 14.019) = 572067 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

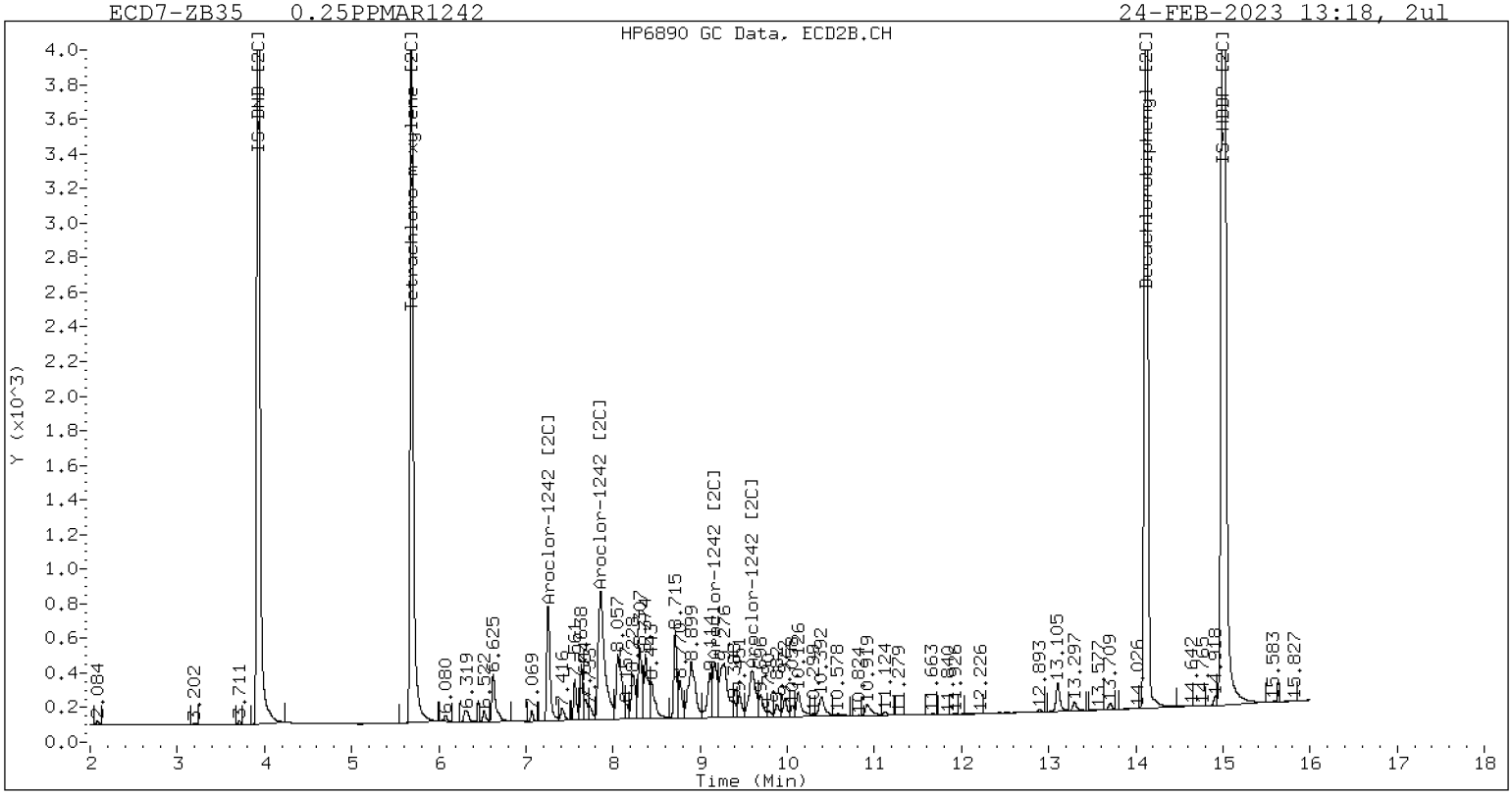
PCB Dual Column Chromatograms

ECD7-ZB5 0.25PPMAR1242 24-FEB-2023 13:18, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.25PPMAR1242 24-FEB-2023 13:18, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242309ECD7.D
Data file 2: /230224.b/230224.b/02242309ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: AR1248.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.25PPMAR1248
Client ID:
Injection Date: 24-FEB-2023 13:39
Report Date: 02/28/2023 09:51
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	0.003	349513	5.688	0.003	176615	36.6	37.9	3.4	Tetrachloro-m-xylene
13.894	0.001	523008	14.121	0.001	322054	36.4	39.3	7.5	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	639911	-5.0
Hexabromobiphenyl	1429847	1458696	2.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	317938	0.9
Hexabromobiphenyl	513946	538760	4.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1248	1	8.405	0.000	78055	250.0	1	8.308	0.000	37951	250.0
Aroclor-1248	2	8.580	0.000	99216	250.0	2	8.714	0.000	39239	250.0
Aroclor-1248	3	8.999	0.000	187178	250.0	3	9.166	0.000	45157	250.0
Aroclor-1248	4	9.295	0.000	95291	250.0	4	9.590	0.000	54216	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0

Total PCB Area Col1 (5.906 - 13.793) = 1565180 Col1 Total PCB = 0.2 ppm*

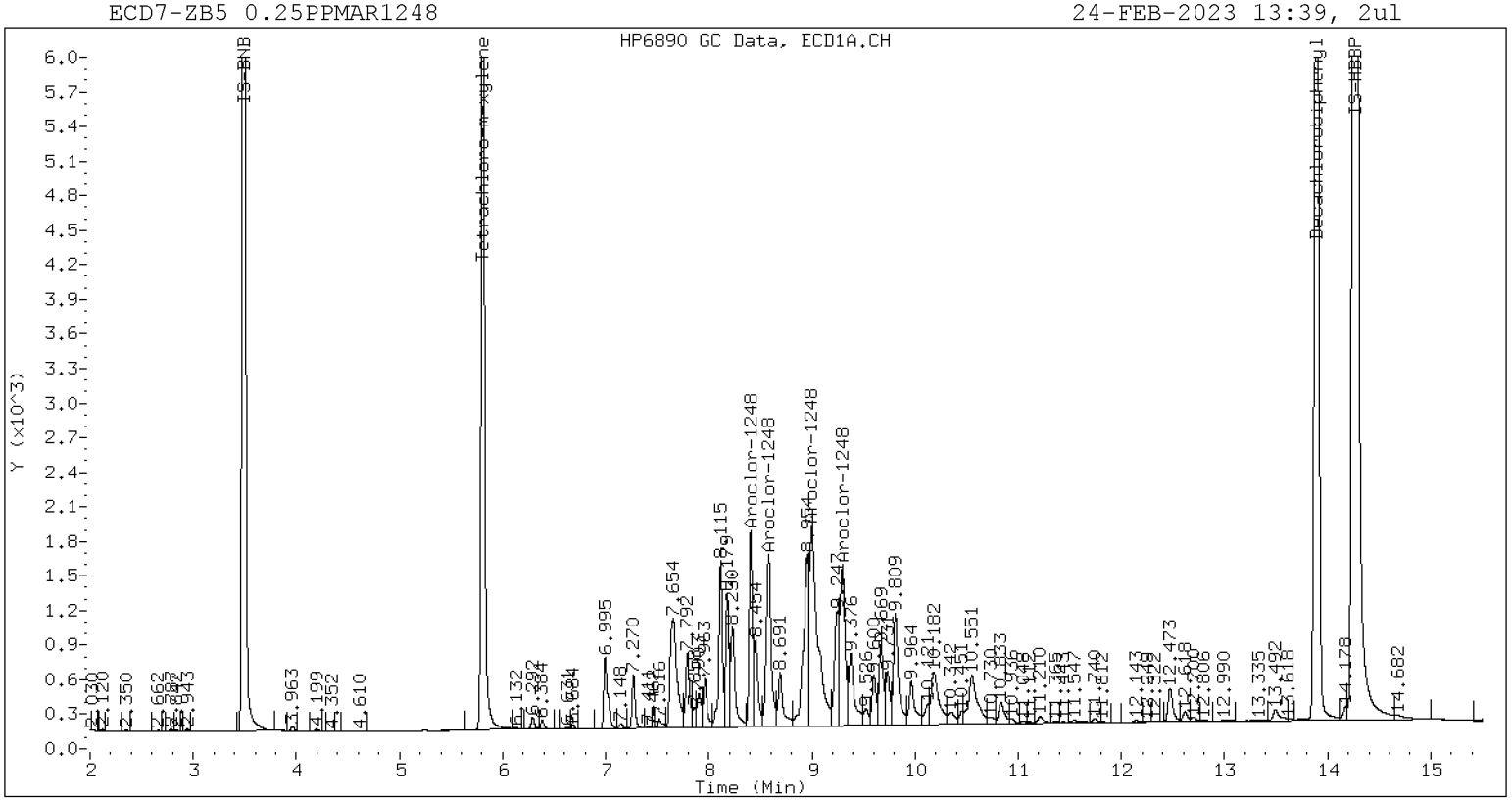
Total PCB Area Col2 (5.785 - 14.019) = 754991 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

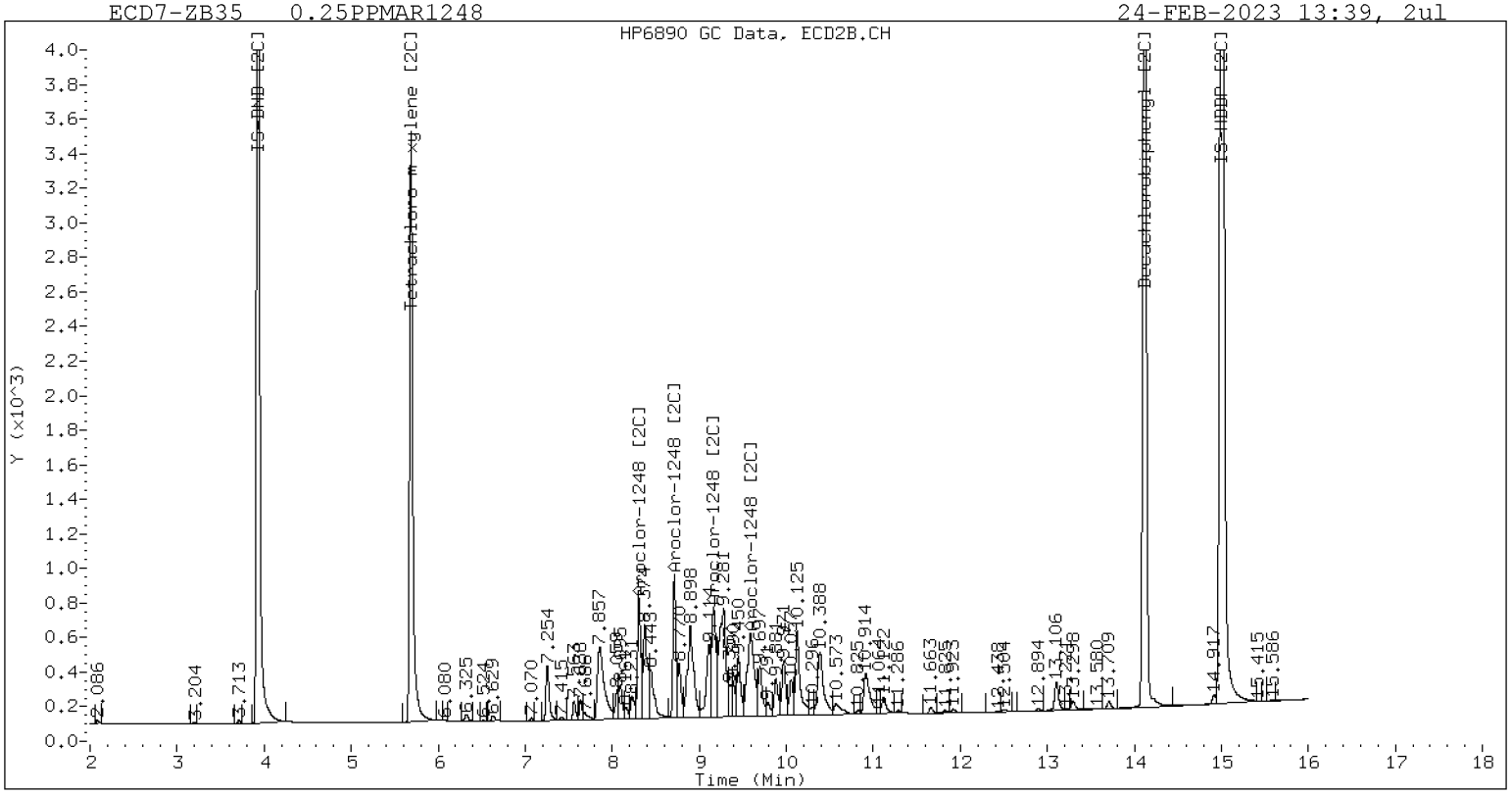
PCB Dual Column Chromatograms

ECD7-ZB5 0.25PPMAR1248 24-FEB-2023 13:39, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.25PPMAR1248 24-FEB-2023 13:39, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242310ECD7.D
Data file 2: /230224.b/230224.b/02242310ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: AR1254.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.25PPMAR1254
Client ID:
Injection Date: 24-FEB-2023 14:00
Report Date: 02/28/2023 09:51
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.808	0.002	352587	5.687	0.002	177502	37.3	38.6	3.4	Tetrachloro-m-xylene
13.895	0.002	532500	14.119	0.000	325903	37.0	40.2	8.2	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	633407	-6.0
Hexabromobiphenyl	1429847	1460265	2.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	313673	-0.5
Hexabromobiphenyl	513946	532442	3.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1254	1	9.299	0.000	159011	250.0	1	9.449	0.000	59603	250.0
Aroclor-1254	2	9.377	0.000	71516	250.0	2	9.970	0.000	47949	250.0
Aroclor-1254	3	9.668	0.000	102230	250.0	3	10.124	0.000	103745	250.0
Aroclor-1254	4	9.807	0.000	198777	250.0	4	10.373	0.000	101135	250.0
Aroclor-1254	5	10.176	0.000	124586	250.0	5	10.569	0.000	61577	250.0

Total Col1Ave (5 peaks): 250.0 Total Col2Ave (5 peaks): 250.0 RPD = 0

Corrected Ave (4 peaks): 250.0 Corrected Ave (4 peaks): 250.0 RPD = 0

Total PCB Area Col1 (5.906 - 13.793) = 2179224 Col1 Total PCB = 0.3 ppm*

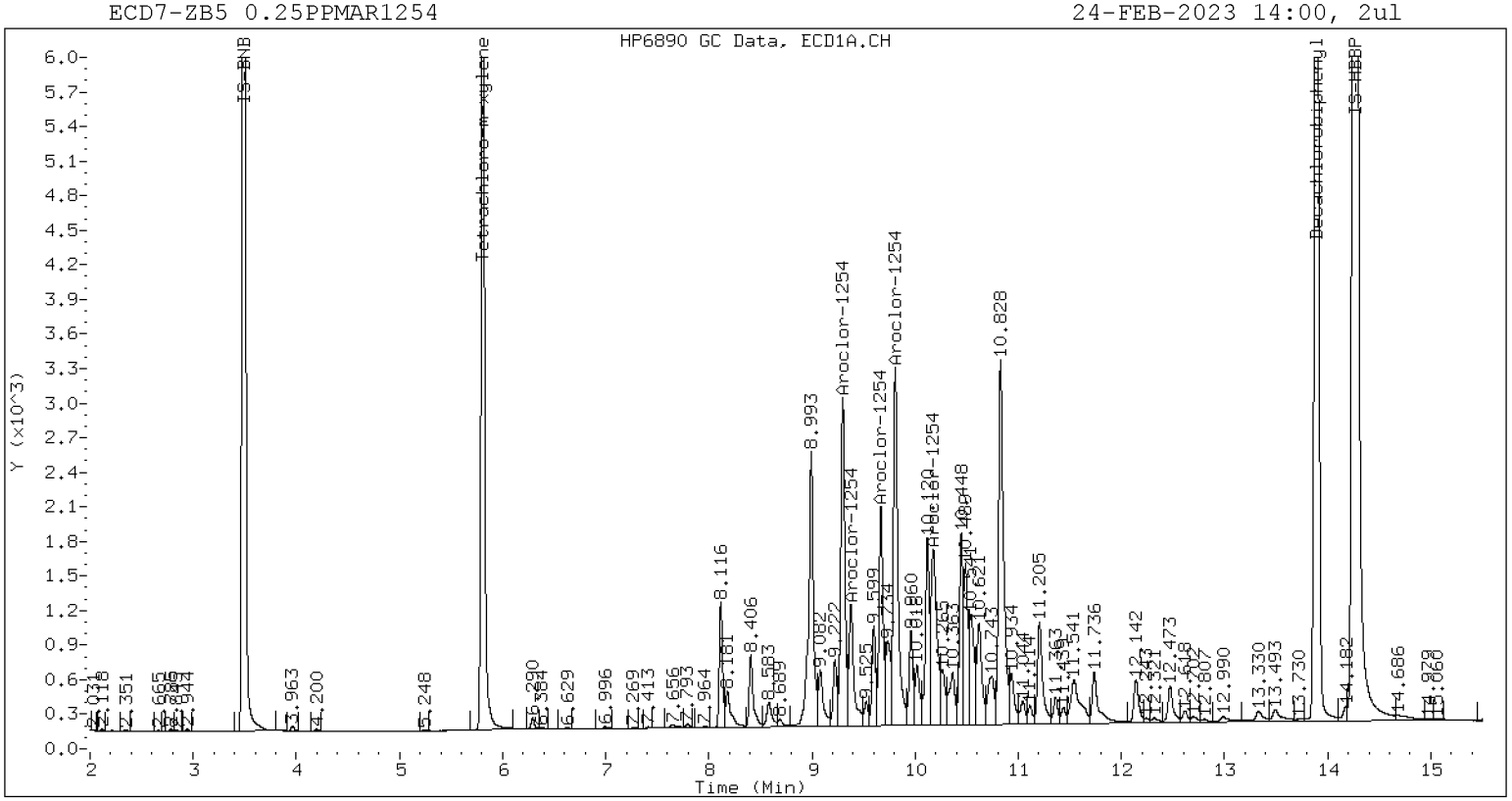
Total PCB Area Col2 (5.785 - 14.019) = 1022156 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

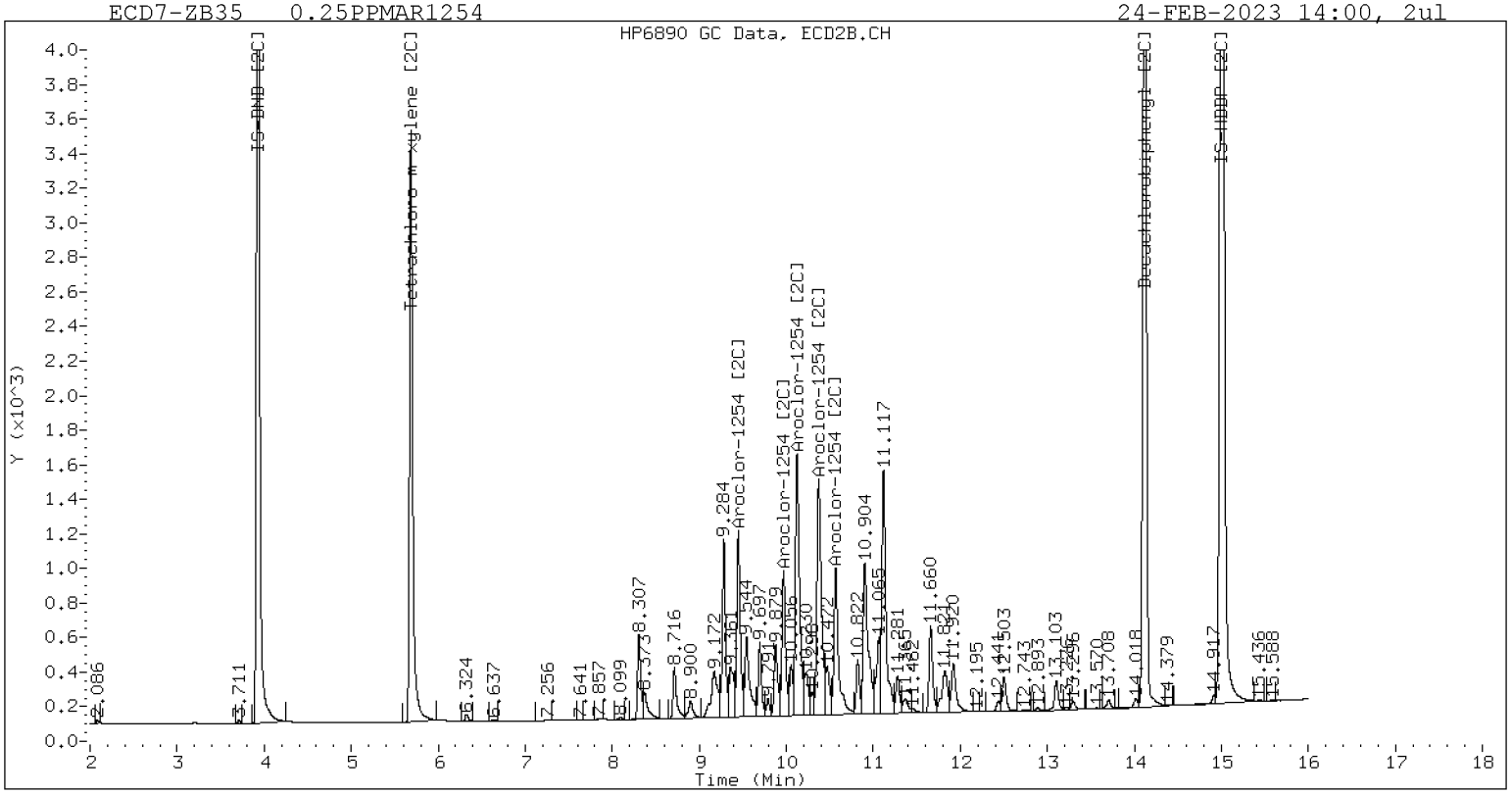
PCB Dual Column Chromatograms

ECD7-ZB5 0.25PPMAR1254 24-FEB-2023 14:00, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.25PPMAR1254 24-FEB-2023 14:00, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242311ECD7.D
Data file 2: /230224.b/230224.b/02242311ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: AR2162.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.25PPMAR2162
Client ID:
Injection Date: 24-FEB-2023 14:21
Report Date: 02/28/2023 09:51
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.807	0.001	362236	5.686	0.000	177349	38.4	39.2	2.1	Tetrachloro-m-xylene
13.894	0.001	523254	14.119	-0.000	321034	36.0	39.2	8.3	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	632433	-6.1
Hexabromobiphenyl	1429847	1474039	3.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	308453	-2.2
Hexabromobiphenyl	513946	538177	4.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1221	1	4.731	0.000	14160	250.0	1	4.956	0.000	7300	250.0
Aroclor-1221	2	6.132	0.000	25324	250.0	2	6.296	0.000	13816	250.0
Aroclor-1221	3	6.382	0.000	58795	250.0	3	6.622	0.000	22491	250.0
Total Col1Ave (3 peaks):					250.0	Total Col2Ave (3 peaks):				250.0 RPD = 0
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1262	1	10.829	0.000	113046	250.0	1	11.200	0.000	114880	250.0
Aroclor-1262	2	12.244	0.000	183948	250.0	2	11.652	0.000	97844	250.0
Aroclor-1262	3	12.319	0.000	197749	250.0	3	12.434	0.000	111015	250.0
Aroclor-1262	4	12.987	0.000	180727	250.0	4	12.502	0.000	173913	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0

Total PCB Area Col1 (5.906 - 13.793) = 3105316 Col1 Total PCB = 0.4 ppm*

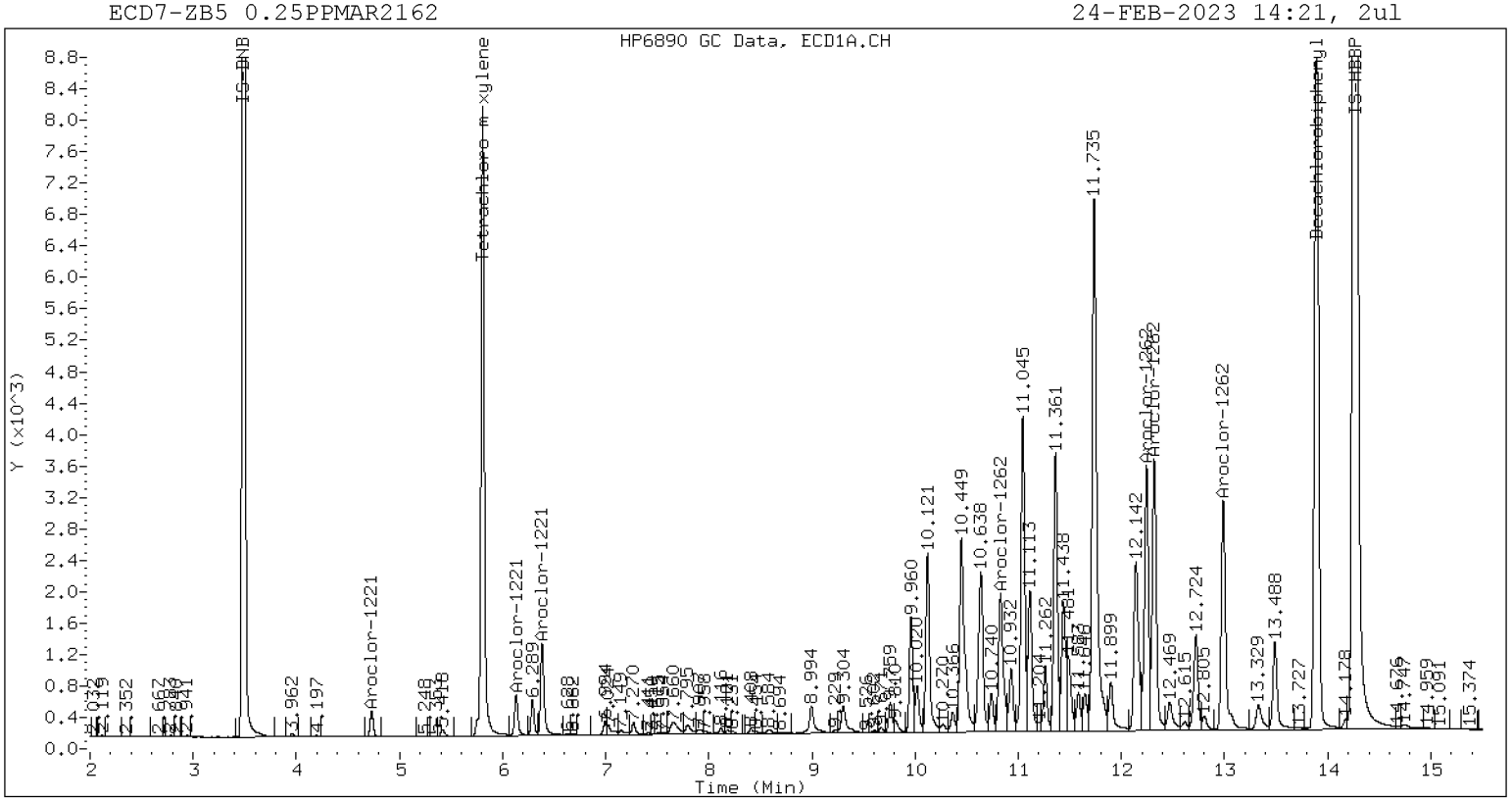
Total PCB Area Col2 (5.785 - 14.019) = 1573107 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

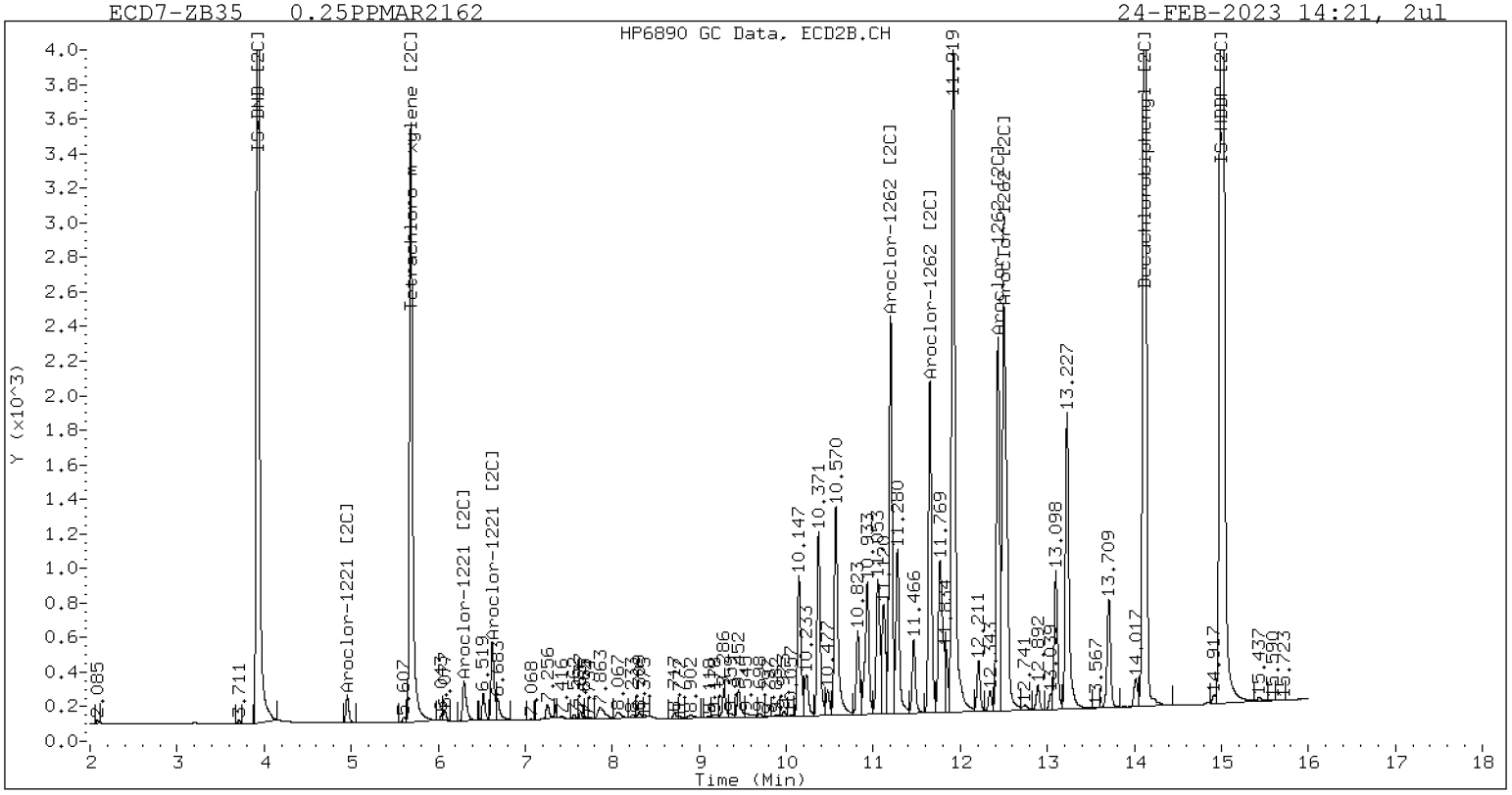
PCB Dual Column Chromatograms

ECD7-ZB5 0.25PPMAR2162 24-FEB-2023 14:21, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.25PPMAR2162 24-FEB-2023 14:21, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242312ECD7.D
Data file 2: /230224.b/230224.b/02242312ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: AR3268.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.25PPMAR3268
Client ID:
Injection Date: 24-FEB-2023 14:42
Report Date: 02/28/2023 09:51
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.806	0.000	366416	5.685	0.000	179450	38.0	38.9	2.4	Tetrachloro-m-xylene
13.893	0.000	778191	14.119	0.000	477889	53.0	57.5	8.3	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	645602	-4.2
Hexabromobiphenyl	1429847	1492154	4.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	314042	-0.4
Hexabromobiphenyl	513946	545458	6.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1232	1	4.730	0.000	8647	250.0	1	4.956	0.000	4017	250.0
Aroclor-1232	2	6.131	0.000	17148	250.0	2	7.254	0.000	19962	250.0
Aroclor-1232	3	7.656	0.000	77627	250.0	3	7.861	0.000	39913	250.0
Aroclor-1232	4	8.581	0.000	32993	250.0	4	8.715	0.000	11487	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0
Aroclor-1268	1	12.247	0.000	477974	250.0	1	12.432	0.000	274595	250.0
Aroclor-1268	2	12.317	0.000	473326	250.0	2	12.500	0.000	295194	250.0
Aroclor-1268	3	12.699	0.000	405011	250.0	3	12.892	0.000	252048	250.0
Aroclor-1268	4	13.490	0.000	1333528	250.0	4	13.709	0.000	805579	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0

Total PCB Area Col1 (5.906 - 13.793) = 3998414 Col1 Total PCB = 0.5 ppm*

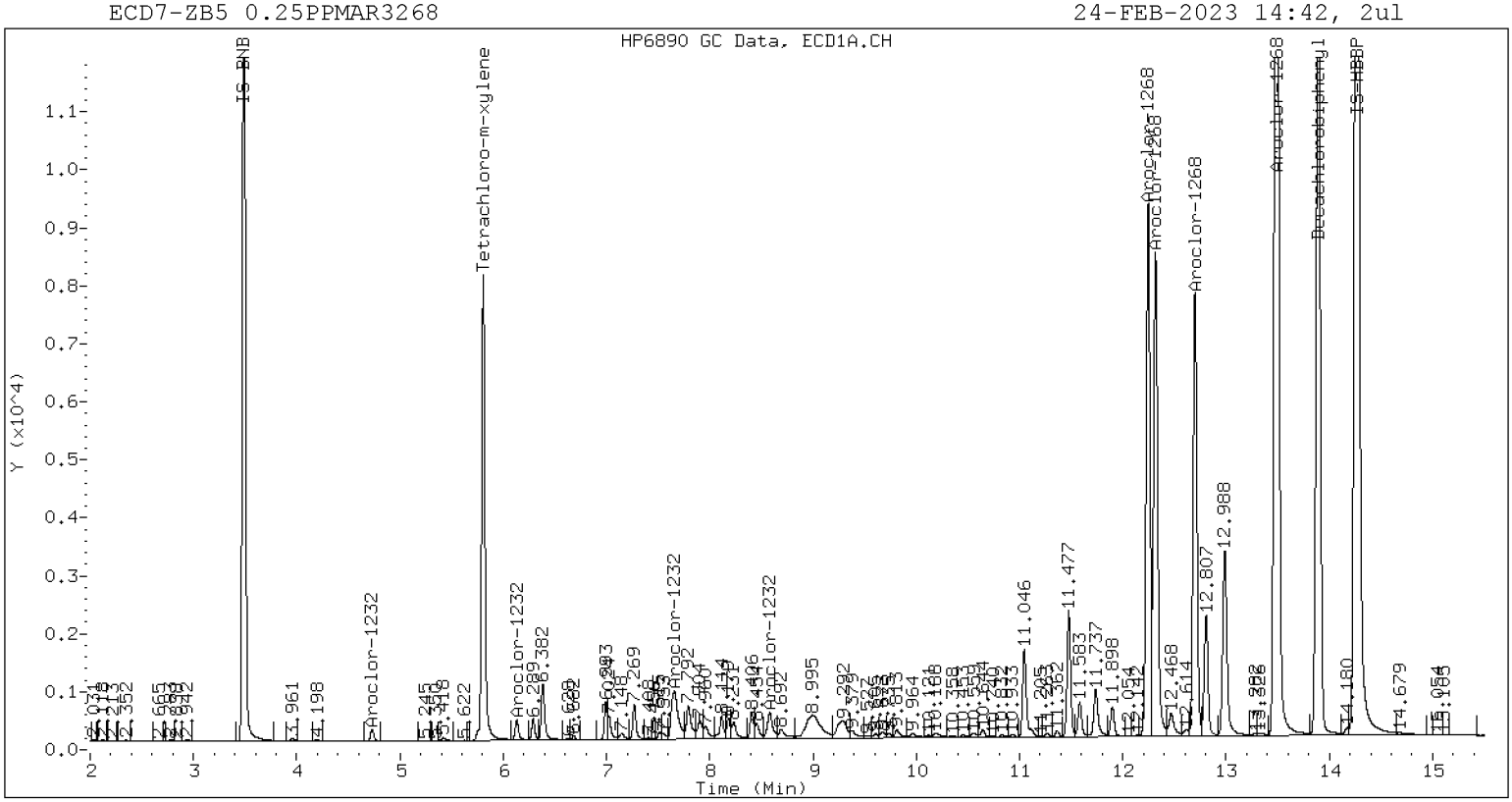
Total PCB Area Col2 (5.785 - 14.019) = 2300029 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

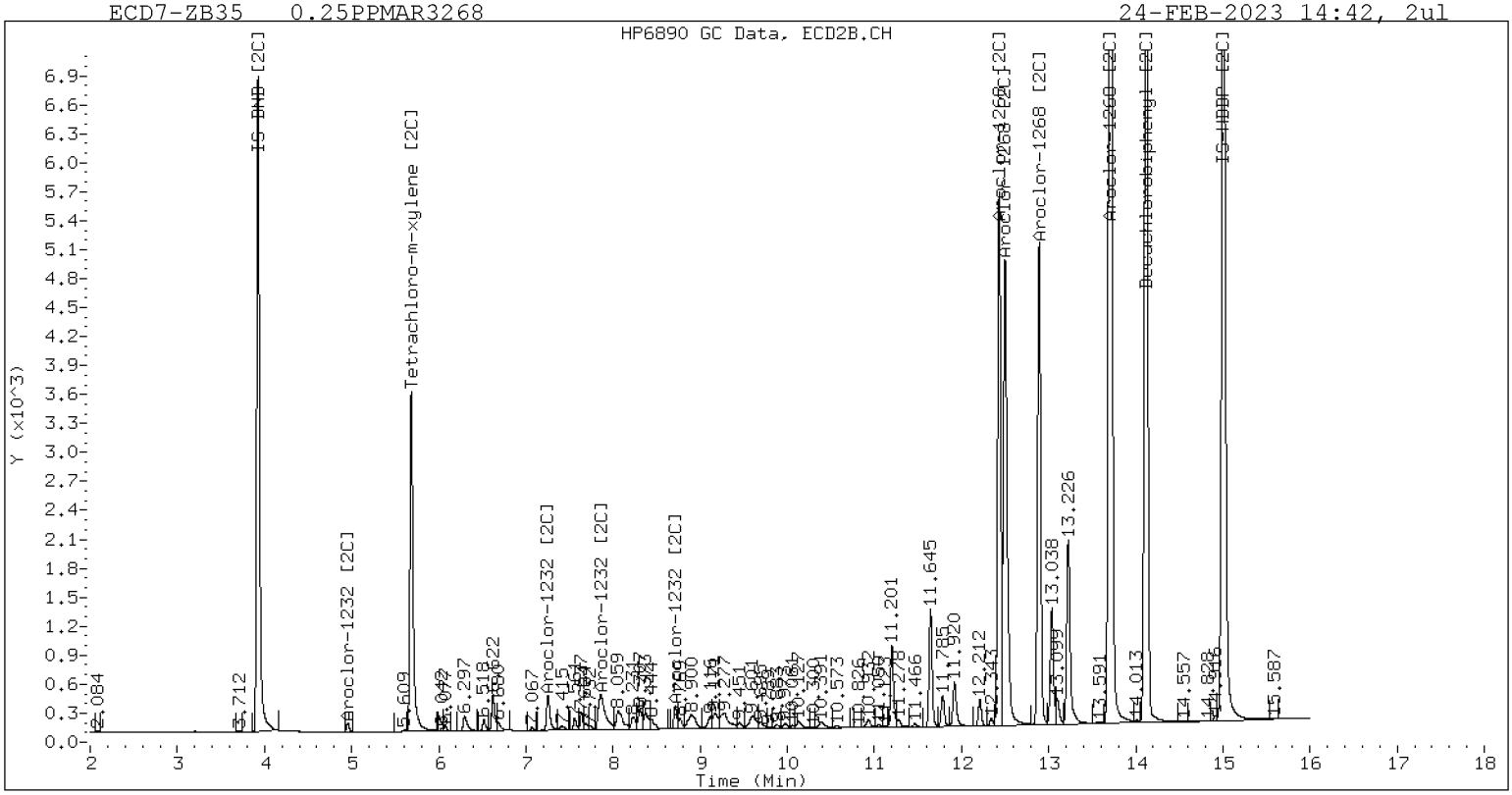
PCB Dual Column Chromatograms

ECD7-ZB5 0.25PPMAR3268 24-FEB-2023 14:42, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.25PPMAR3268 24-FEB-2023 14:42, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242313ECD7.D
Data file 2: /230224.b/230224.b/02242313ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660SCV
Client ID:
Injection Date: 24-FEB-2023 15:03
Report Date: 02/28/2023 09:51
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.807	0.001	337070	5.686	0.001	165848	34.9	35.8	2.3	Tetrachloro-m-xylene
13.895	0.002	515407	14.119	-0.000	316730	34.3	37.3	8.4	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	645975	-4.1
Hexabromobiphenyl	1429847	1524245	6.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	316115	0.3
Hexabromobiphenyl	513946	556950	8.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.269	-0.002	59491	242.5	1	7.254	-0.002	44576	240.9
Aroclor-1016	2	7.655	0.001	181090	242.1	2	7.857	0.002	95386	254.2
Aroclor-1016	3	7.790	0.000	88470	242.3	3	8.056	0.002	42160	248.8
Aroclor-1016	4	8.404	-0.001	57980	245.6	4	8.307	0.000	32197	242.1
Total Col1Ave (4 peaks):					243.1	Total Col2Ave (4 peaks):				246.5 RPD = 1
Corrected Ave (3 peaks):					242.3	Corrected Ave (3 peaks):				243.9 RPD = 1
Aroclor-1221	1	4.731	0.000	464	8.0	1	---			0.0
Aroclor-1221	2	6.130	-0.002	9233	89.2	2	6.300	0.004	5379	95.0
Aroclor-1221	3	6.382	-0.001	42570	177.2	3	6.623	0.001	20952	227.2
Total Col1Ave (3 peaks):					91.5	Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	4.731	0.001	464	13.4	1	---			0.0
Aroclor-1232	2	6.130	-0.001	9233	134.5	2	7.254	-0.000	44576	554.6
Aroclor-1232	3	7.655	-0.001	181090	582.9	3	7.857	-0.003	95386	593.5
Aroclor-1232	4	8.580	-0.001	79916	605.2	4	8.713	-0.002	29795	644.2
Total Col1Ave (4 peaks):					334.0	Total Col2Ave (3 peaks):				597.4 RPD = 57*
Corrected Ave (3 peaks):					243.6	Corrected Ave: < 3 Peaks				
Aroclor-1242	1	7.269	-0.002	59491	297.2	1	7.254	-0.002	44576	303.5
Aroclor-1242	2	7.655	-0.001	181090	297.9	2	7.857	-0.000	95386	309.0
Aroclor-1242	3	8.404	-0.001	57980	306.5	3	9.115	-0.052	18754	195.2
Aroclor-1242	4	8.580	0.000	79916	285.8	4	9.697	0.100	1355	11.6
Total Col1Ave (4 peaks):					296.8	Total Col2Ave (4 peaks):				204.8 RPD = 37
Corrected Ave (3 peaks):					293.6	Corrected Ave (3 peaks):				170.1 RPD = 53*
Aroclor-1248	1	8.404	-0.001	57980	184.0	1	8.307	-0.001	32197	213.3
Aroclor-1248	2	8.580	-0.001	79916	199.5	2	8.713	-0.001	29795	190.9
Aroclor-1248	3	8.993	-0.006	71805	95.0	3	9.115	-0.050	18754	104.4
Aroclor-1248	4	9.300	0.006	47348	123.1	4	---			0.0
Total Col1Ave (4 peaks):					150.4	Total Col2Ave (3 peaks):				169.6 RPD = 12
Corrected Ave (3 peaks):					134.0	Corrected Ave: < 3 Peaks				
Aroclor-1254	1	9.300	0.002	47348	73.0	1	9.451	0.001	22438	93.4
Aroclor-1254	2	---			0.0	2	9.972	0.001	2694	13.9
Aroclor-1254	3	9.670	0.002	5461	13.1	3	10.147	0.024	52914	126.5
Aroclor-1254	4	9.807	-0.000	18944	23.4	4	10.370	-0.003	70430	172.8
Aroclor-1254	5	10.121	-0.056	154170	303.3	5	10.568	-0.000	98525	396.9
Total Col1Ave (4 peaks):					103.2	Total Col2Ave (5 peaks):				160.7 RPD = 44*
Corrected Ave (3 peaks):					36.5	Corrected Ave (4 peaks):				101.7 RPD = 94*
Aroclor-1260	1	11.044	0.000	149195	272.1	1	11.653	0.000	82210	251.0
Aroclor-1260	2	11.361	-0.000	153832	268.5	2	11.919	0.001	222226	265.9
Aroclor-1260	3	11.736	0.002	396660	261.0	3	12.435	-0.000	59148	266.7
Aroclor-1260	4	12.140	0.001	190448	248.9	4	12.504	0.002	147180	261.2
Aroclor-1260	5	12.244	-0.000	91385	277.5	NS	---			----
Total Col1Ave (5 peaks):					265.6	Total Col2Ave (4 peaks):				261.2 RPD = 2
Corrected Ave (4 peaks):					262.6	Corrected Ave (3 peaks):				259.4 RPD = 1
Aroclor-1262	1	10.827	-0.002	220238	471.0	1	11.199	-0.001	84479	177.6
Aroclor-1262	2	12.244	0.000	91385	120.1	2	11.653	0.002	82210	203.0
Aroclor-1262	3	12.320	0.001	113066	138.2	3	12.435	0.002	59148	128.7
Aroclor-1262	4	12.988	0.001	102156	136.7	4	12.504	0.002	147180	204.4
Total Col1Ave (4 peaks):					216.5	Total Col2Ave (4 peaks):				178.4 RPD = 19
Corrected Ave (3 peaks):					131.7	Corrected Ave (3 peaks):				169.8 RPD = 25
Aroclor-1268	1	12.244	-0.003	91385	46.8	1	12.435	0.003	59148	52.7
Aroclor-1268	2	12.320	0.003	113066	58.5	2	12.504	0.004	147180	122.1
Aroclor-1268	3	12.726	0.027	46633	28.2	3	12.893	0.001	2874	2.8
Aroclor-1268	4	13.489	-0.000	25567	4.7	4	13.709	-0.000	13041	4.0
Total Col1Ave (4 peaks):					34.5	Total Col2Ave (4 peaks):				45.4 RPD = 27
Corrected Ave (3 peaks):					26.6	Corrected Ave (3 peaks):				19.8 RPD = 29

Total PCB Area Col1 (5.906 - 13.793) = 3743076 Col1 Total PCB = 0.5 ppm*

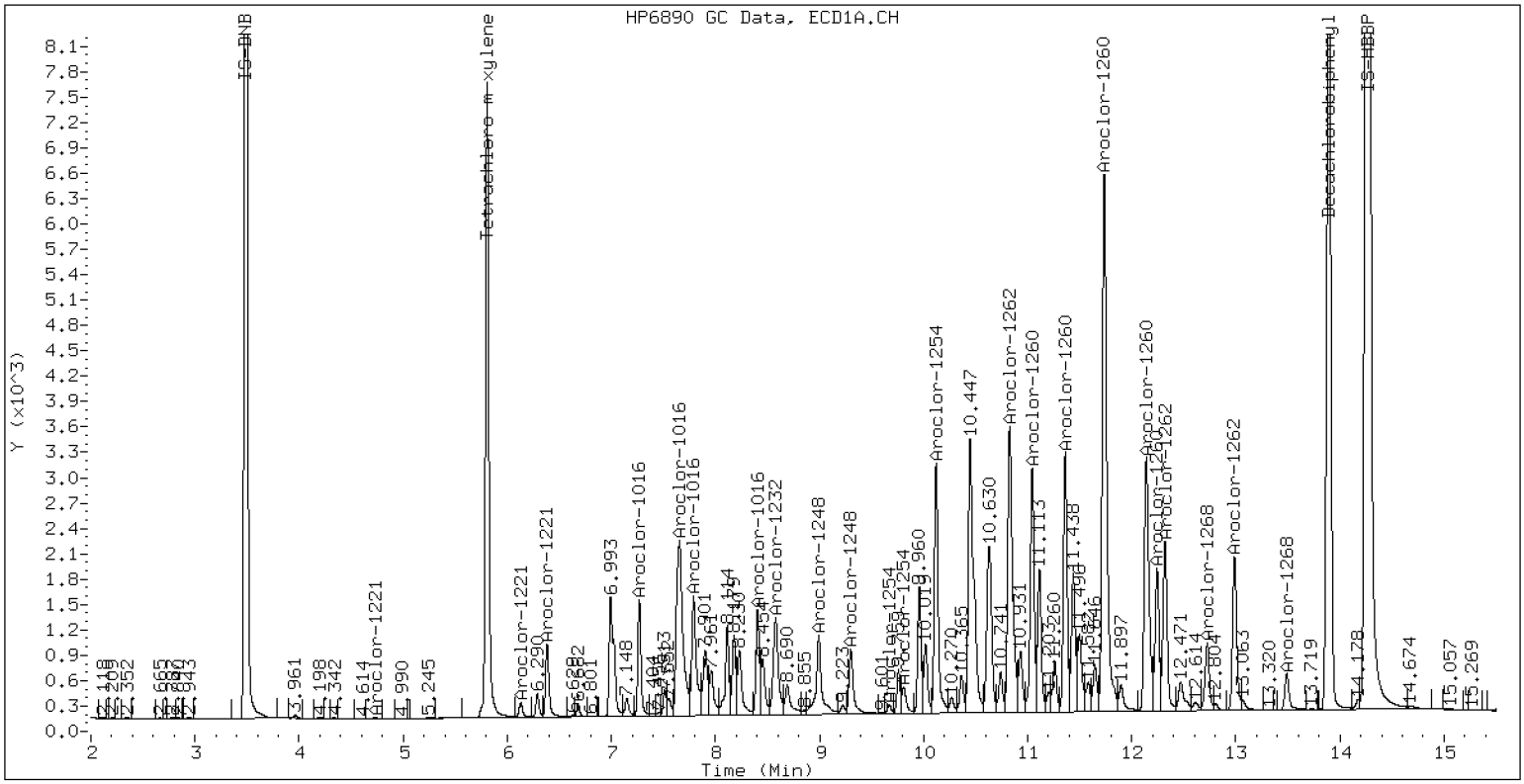
Total PCB Area Col2 (5.785 - 14.019) = 1897008 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

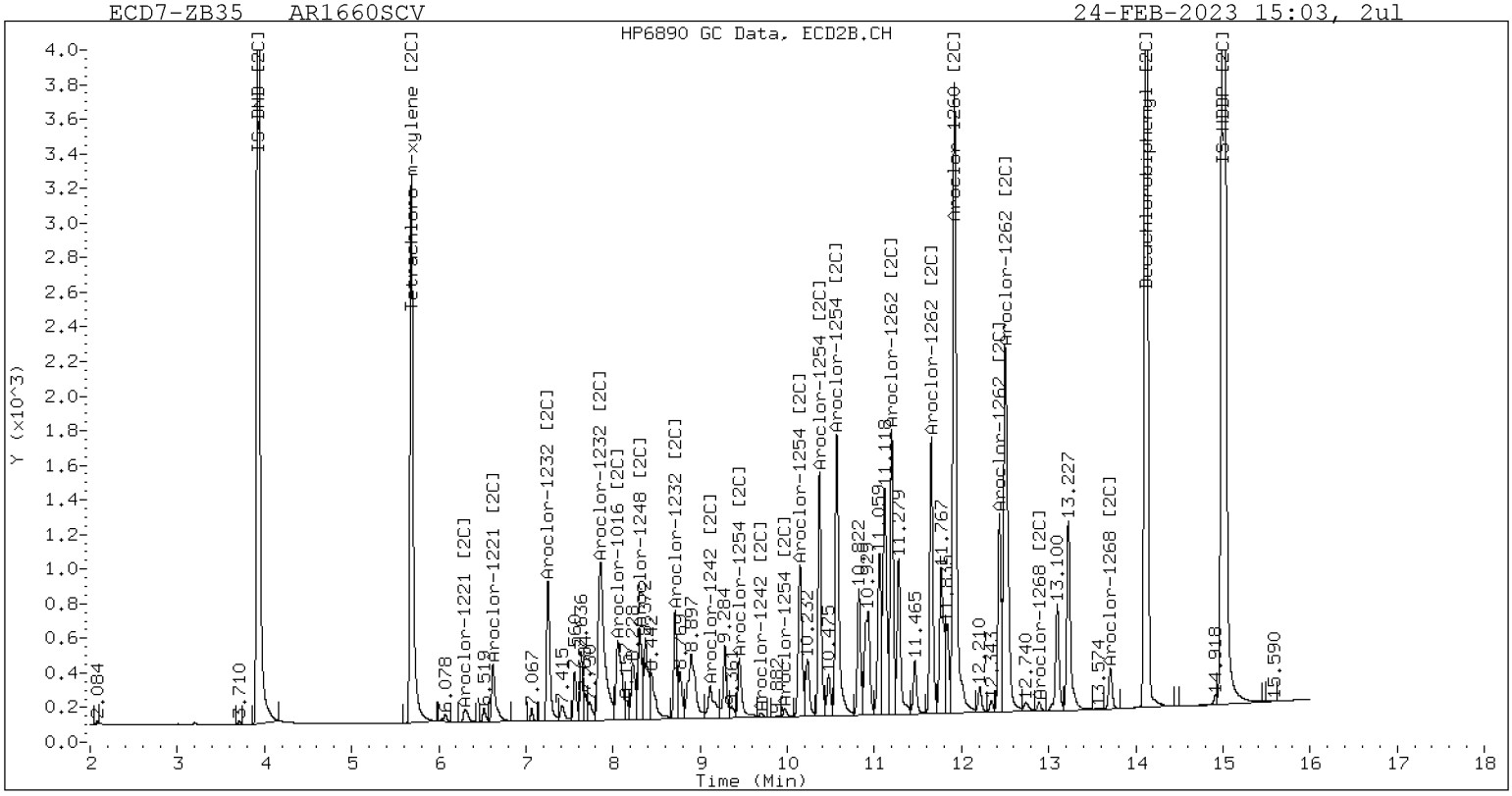
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660SCV 24-FEB-2023 15:03, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660SCV 24-FEB-2023 15:03, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242314ECD7.D
Data file 2: /230224.b/230224.b/02242314ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242SCV
Client ID:
Injection Date: 24-FEB-2023 15:24
Report Date: 02/28/2023 09:51
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.808	0.002	354283	5.686	0.001	172455	33.6	34.5	2.6	Tetrachloro-m-xylene
13.895	0.002	567088	14.120	0.001	347430	37.0	40.3	8.6	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	705650	4.7
Hexabromobiphenyl	1429847	1555683	8.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	340433	8.0
Hexabromobiphenyl	513946	565609	10.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.270	-0.000	39927	149.0	1	7.256	0.000	32417	162.7
Aroclor-1016	2	7.653	-0.001	132339	162.0	2	7.856	0.001	69235	171.3
Aroclor-1016	3	7.791	0.001	59310	148.7	3	8.055	0.000	29473	161.5
Aroclor-1016	4	8.405	0.000	42537	165.0	4	8.307	-0.000	22792	159.2
Total Col1Ave (4 peaks): 156.2						Total Col2Ave (4 peaks): 163.7				RPD = 5
Corrected Ave (3 peaks): 153.2						Corrected Ave (3 peaks): 161.1				RPD = 5
Aroclor-1221	1	4.733	0.002	319	5.0	1	---			0.0
Aroclor-1221	2	6.131	-0.001	6534	57.8	2	6.319	0.022	4365	71.6
Aroclor-1221	3	6.384	0.001	29664	113.0	3	6.624	0.002	14916	150.2
Total Col1Ave (3 peaks): 58.6						Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	4.733	0.003	319	8.4	1	---			0.0
Aroclor-1232	2	6.131	0.000	6534	87.2	2	7.256	0.002	32417	374.5
Aroclor-1232	3	7.653	-0.003	132339	389.9	3	7.856	-0.004	69235	400.0
Aroclor-1232	4	8.579	-0.002	69445	481.4	4	8.714	-0.001	22167	445.0
Total Col1Ave (4 peaks): 241.7						Total Col2Ave (3 peaks): 406.5				RPD = 51*
Corrected Ave (3 peaks): 161.8						Corrected Ave: < 3 Peaks				
Aroclor-1242	1	7.270	-0.001	39927	182.6	1	7.256	0.000	32417	205.0
Aroclor-1242	2	7.653	-0.003	132339	199.3	2	7.856	-0.002	69235	208.2
Aroclor-1242	3	8.405	-0.000	42537	205.9	3	9.164	-0.004	23068	223.0
Aroclor-1242	4	8.579	-0.000	69445	227.4	4	9.587	-0.010	31021	246.1
Total Col1Ave (4 peaks): 203.8						Total Col2Ave (4 peaks): 220.6				RPD = 8
Corrected Ave (3 peaks): 195.9						Corrected Ave (3 peaks): 212.1				RPD = 8
Aroclor-1248	1	8.405	0.000	42537	123.5	1	8.307	-0.001	22792	140.2
Aroclor-1248	2	8.579	-0.001	69445	158.7	2	8.714	-0.000	22167	131.9
Aroclor-1248	3	9.001	0.003	91942	111.4	3	9.164	-0.002	23068	119.3
Aroclor-1248	4	9.294	-0.000	38711	92.1	4	9.587	-0.003	31021	133.6
Total Col1Ave (4 peaks): 121.4						Total Col2Ave (4 peaks): 131.2				RPD = 8
Corrected Ave (3 peaks): 109.0						Corrected Ave (3 peaks): 128.3				RPD = 16
Aroclor-1254	1	9.294	-0.005	38711	54.6	1	9.450	0.001	13131	50.7
Aroclor-1254	2	9.377	-0.000	17371	54.5	2	9.970	0.000	8340	40.1
Aroclor-1254	3	9.668	-0.000	16373	35.9	3	10.123	-0.000	16364	36.3
Aroclor-1254	4	9.807	-0.001	27490	31.0	4	10.382	0.009	16062	36.6
Aroclor-1254	5	10.175	-0.001	20494	36.9	5	10.572	0.004	4818	18.0
Total Col1Ave (5 peaks): 42.6						Total Col2Ave (5 peaks): 36.4				RPD = 16
Corrected Ave (4 peaks): 39.6						Corrected Ave (4 peaks): 32.8				RPD = 19
Aroclor-1260	1	11.048	0.003	794	1.4	1	11.665	0.012	1652	5.0
Aroclor-1260	2	11.366	0.005	814	1.4	2	11.926	0.008	842	1.0
Aroclor-1260	3	11.739	0.006	1848	1.2	3	12.438	0.002	483	2.1
Aroclor-1260	4	12.145	0.006	1372	1.8	4	12.506	0.004	790	1.4
Aroclor-1260	5	---			0.0	NS	---			----
Total Col1Ave (4 peaks): 1.4						Total Col2Ave (4 peaks): 2.4				RPD = 49*
Corrected Ave (3 peaks): 1.3						Corrected Ave (3 peaks): 1.5				RPD = 12
Aroclor-1262	1	10.832	0.003	13157	27.6	1	11.121	-0.079	6113	12.7
Aroclor-1262	2	12.145	-0.098	1372	1.8	2	11.665	0.013	1652	4.0
Aroclor-1262	3	---			0.0	3	12.438	0.004	483	1.0
Aroclor-1262	4	13.038	0.051	842	1.1	4	12.506	0.004	790	1.1
Total Col1Ave (3 peaks): 10.1						Total Col2Ave (4 peaks): 4.7				RPD = 73*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks): 2.0				
Aroclor-1268	1	---			0.0	1	12.438	0.006	483	0.4
Aroclor-1268	2	---			0.0	2	12.506	0.006	790	0.6
Aroclor-1268	3	12.617	-0.082	5851	3.5	3	12.899	0.007	491	0.5
Aroclor-1268	4	13.500	0.010	1745	0.3	4	13.714	0.005	379	0.1
Col1Ave: <3 Quant Peaks						Col2Ave: 0.4				

Total PCB Area Col1 (5.906 - 13.793) = 1149784 Col1 Total PCB = 0.1 ppm*

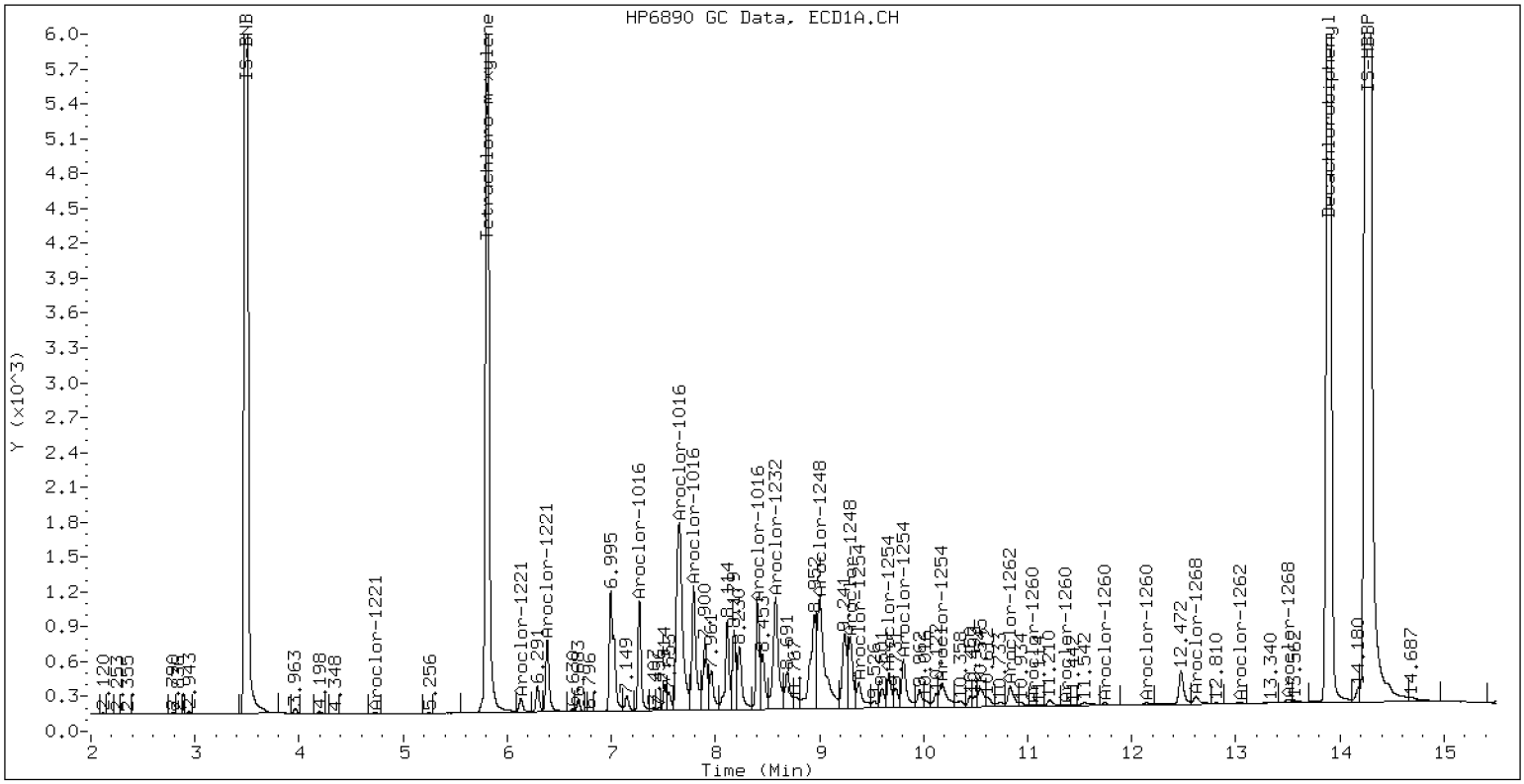
Total PCB Area Col2 (5.785 - 14.019) = 572210 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

PCB Dual Column Chromatograms

ECD7-ZB5 AR1242SCV 24-FEB-2023 15:24, 2ul



ZB-5 Manual Integration: NO

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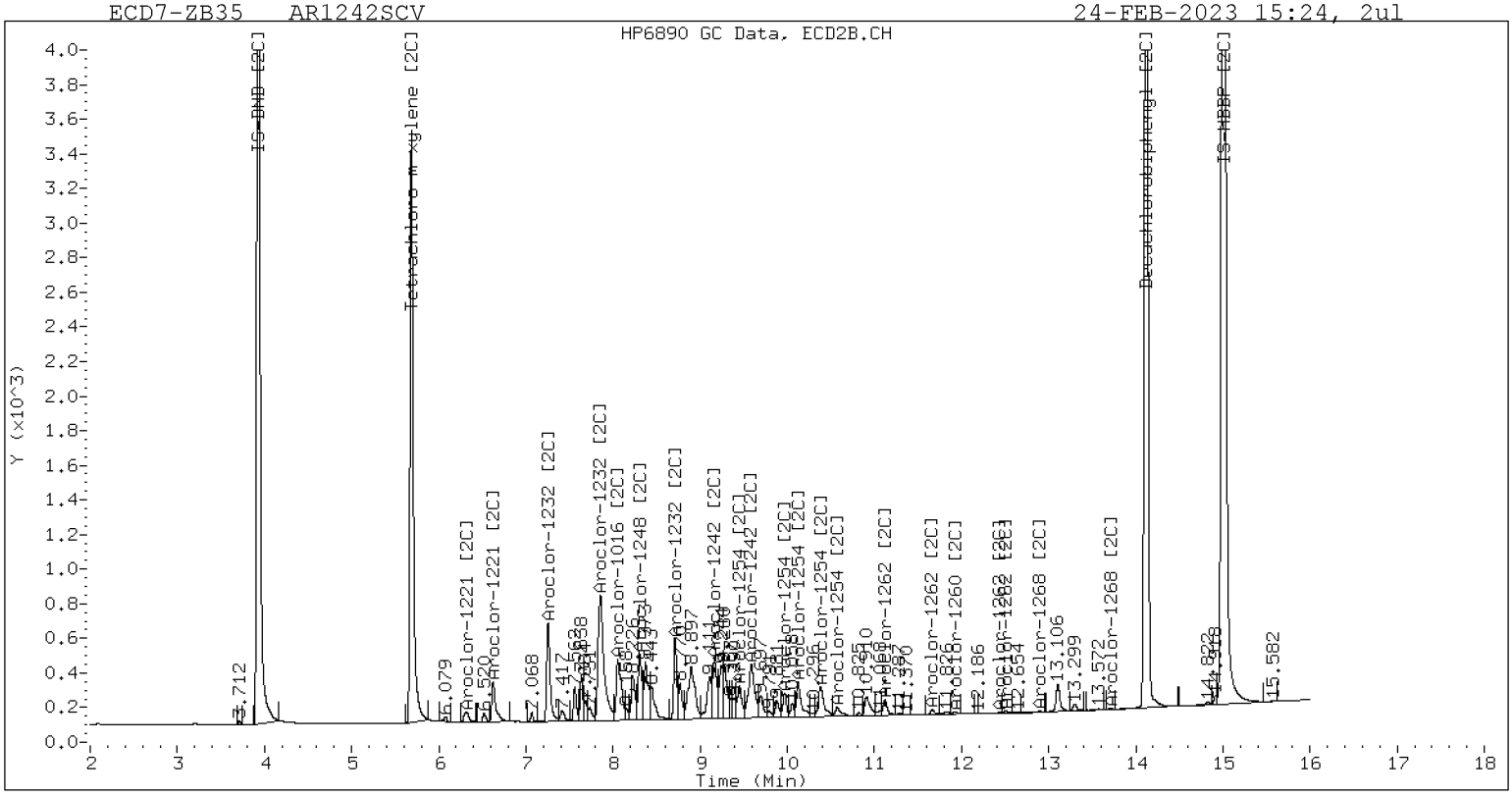


ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242315ECD7.D
Data file 2: /230224.b/230224.b/02242315ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248SCV
Client ID:
Injection Date: 24-FEB-2023 15:45
Report Date: 02/28/2023 09:51
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	0.002	336655	5.687	0.002	168719	34.9	36.4	4.2	Tetrachloro-m-xylene
13.894	0.001	499162	14.118	-0.001	308317	33.1	36.3	9.2	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	646554	-4.0
Hexabromobiphenyl	1429847	1529451	7.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	316066	0.3
Hexabromobiphenyl	513946	557213	8.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.271	0.000	19773	80.5	1	7.254	-0.002	16926	91.5
Aroclor-1016	2	7.653	-0.001	88099	117.7	2	7.857	0.001	45733	121.9
Aroclor-1016	3	7.794	0.003	35915	98.3	3	8.060	0.005	8078	47.7
Aroclor-1016	4	8.406	0.001	77842	329.5	4	8.307	0.000	37348	280.9
Total Col1Ave (4 peaks):					156.5	Total Col2Ave (4 peaks):				135.5 RPD = 14
Corrected Ave (3 peaks):					98.8	Corrected Ave (3 peaks):				87.0 RPD = 13
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	6.133	0.001	680	6.6	2	6.326	0.030	1966	34.7
Aroclor-1221	3	6.384	0.002	3390	14.1	3	6.631	0.009	1571	17.0
Col1Ave: <3 Quant Peaks						Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	6.133	0.002	680	9.9	2	7.254	-0.000	16926	210.6
Aroclor-1232	3	7.653	-0.002	88099	283.3	3	7.857	-0.004	45733	284.6
Aroclor-1232	4	8.581	-0.000	99572	753.4	4	8.714	-0.001	38224	826.6
Total Col1Ave (3 peaks):					348.9	Total Col2Ave (3 peaks):				440.6 RPD = 23
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1242	1	7.271	-0.000	19773	98.7	1	7.254	-0.002	16926	115.3
Aroclor-1242	2	7.653	-0.003	88099	144.8	2	7.857	-0.001	45733	148.2
Aroclor-1242	3	8.406	0.000	77842	411.2	3	9.165	-0.002	45021	468.7
Aroclor-1242	4	8.581	0.001	99572	355.8	4	9.590	-0.008	53613	458.1
Total Col1Ave (4 peaks):					252.6	Total Col2Ave (4 peaks):				297.6 RPD = 16
Corrected Ave (3 peaks):					199.8	Corrected Ave (3 peaks):				240.5 RPD = 19
Aroclor-1248	1	8.406	0.000	77842	246.8	1	8.307	-0.001	37348	247.5
Aroclor-1248	2	8.581	0.000	99572	248.3	2	8.714	-0.000	38224	245.0
Aroclor-1248	3	8.998	-0.000	186857	247.0	3	9.165	-0.000	45021	250.7
Aroclor-1248	4	9.294	-0.000	98398	255.5	4	9.590	-0.001	53613	248.7
Total Col1Ave (4 peaks):					249.4	Total Col2Ave (4 peaks):				248.0 RPD = 1
Corrected Ave (3 peaks):					247.4	Corrected Ave (3 peaks):				247.0 RPD = 0
Aroclor-1254	1	9.294	-0.004	98398	151.6	1	9.450	0.001	21823	90.8
Aroclor-1254	2	9.377	-0.001	49616	169.9	2	9.971	0.001	19450	100.6
Aroclor-1254	3	9.669	0.001	40230	96.4	3	10.124	0.000	36574	87.5
Aroclor-1254	4	9.808	0.001	68500	84.4	4	10.389	0.016	35100	86.1
Aroclor-1254	5	10.183	0.007	47365	93.1	5	10.573	0.004	5676	22.9
Total Col1Ave (5 peaks):					119.1	Total Col2Ave (5 peaks):				77.6 RPD = 42*
Corrected Ave (4 peaks):					106.4	Corrected Ave (4 peaks):				71.8 RPD = 39
Aroclor-1260	1	11.047	0.003	1670	3.0	1	11.662	0.009	2055	6.3
Aroclor-1260	2	11.362	0.001	1111	1.9	2	11.924	0.007	1466	1.8
Aroclor-1260	3	11.739	0.005	2107	1.4	3	12.434	-0.002	573	2.6
Aroclor-1260	4	12.144	0.005	1379	1.8	4	12.505	0.003	1003	1.8
Aroclor-1260	5	12.251	0.006	698	2.1	NS	---			----
Total Col1Ave (5 peaks):					2.1	Total Col2Ave (4 peaks):				3.1 RPD = 41*
Corrected Ave (4 peaks):					1.8	Corrected Ave (3 peaks):				2.0 RPD = 12
Aroclor-1262	1	10.833	0.005	15355	32.7	1	11.122	-0.079	7225	15.2
Aroclor-1262	2	12.251	0.007	698	0.9	2	11.662	0.011	2055	5.1
Aroclor-1262	3	12.321	0.002	836	1.0	3	12.434	0.000	573	1.2
Aroclor-1262	4	12.991	0.004	1043	1.4	4	12.505	0.003	1003	1.4
Total Col1Ave (4 peaks):					9.0	Total Col2Ave (4 peaks):				5.7 RPD = 45*
Corrected Ave (3 peaks):					1.1	Corrected Ave (3 peaks):				2.6 RPD = 80*
Aroclor-1268	1	12.251	0.004	698	0.4	1	12.434	0.002	573	0.5
Aroclor-1268	2	12.321	0.004	836	0.4	2	12.505	0.005	1003	0.8
Aroclor-1268	3	12.700	0.001	2449	1.5	3	12.892	0.001	721	0.7
Aroclor-1268	4	13.493	0.003	7547	1.4	4	13.708	-0.001	2265	0.7
Total Col1Ave (4 peaks):					0.9	Total Col2Ave (4 peaks):				0.7 RPD = 29
Corrected Ave (3 peaks):					0.7	Corrected Ave (3 peaks):				0.6 RPD = 13

Total PCB Area Col1 (5.906 - 13.793) = 1574335 Col1 Total PCB = 0.2 ppm*

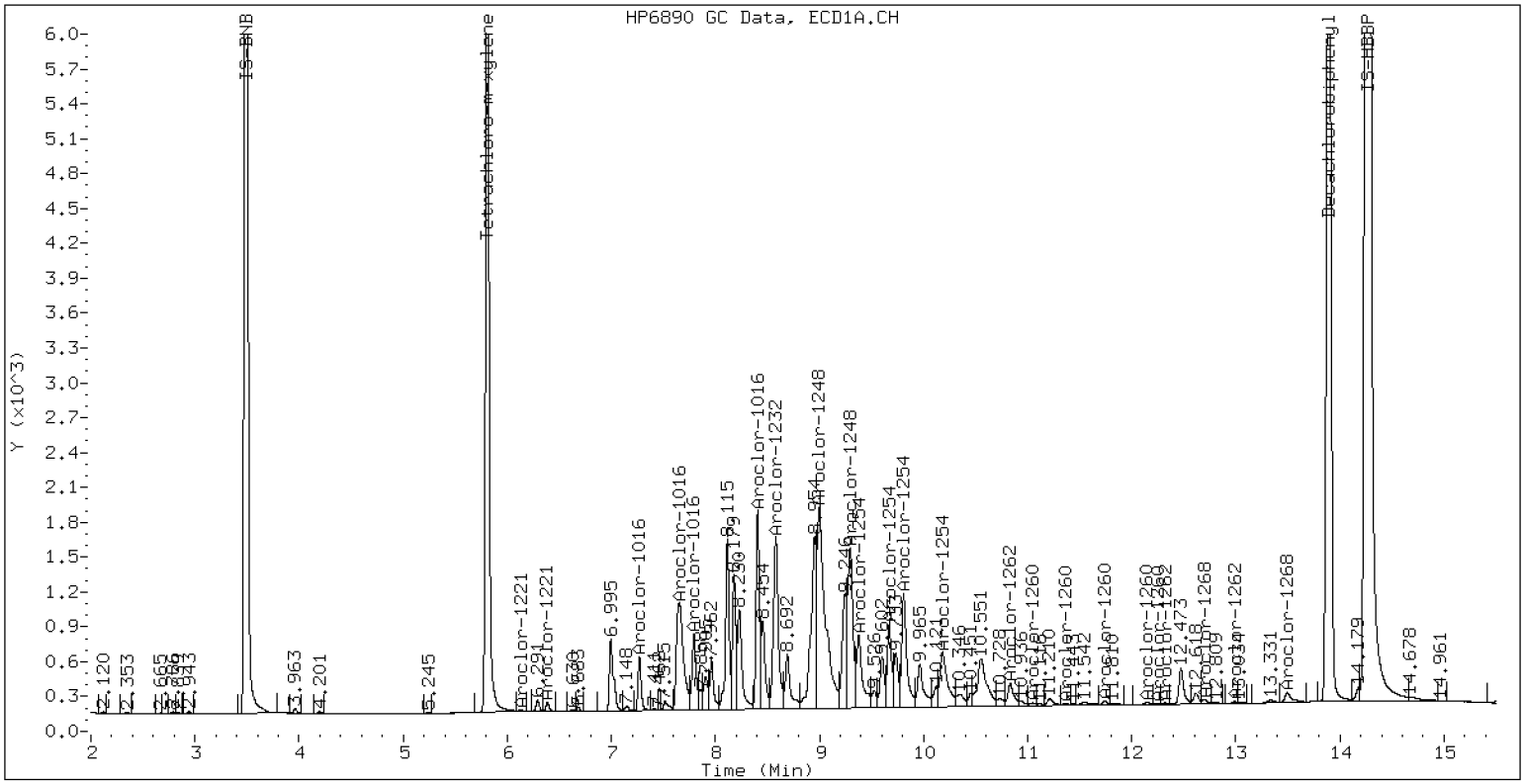
Total PCB Area Col2 (5.785 - 14.019) = 746330 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

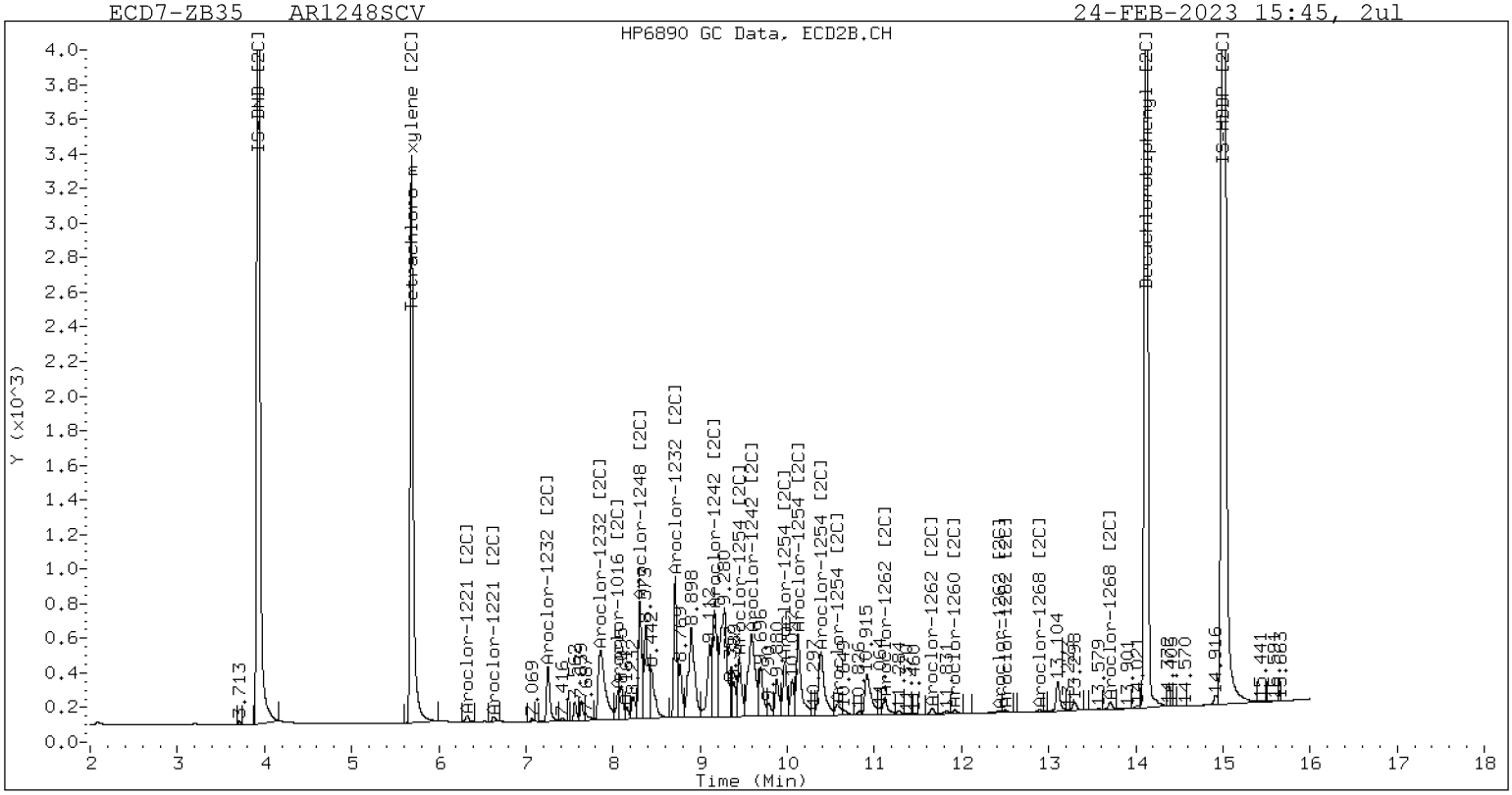
PCB Dual Column Chromatograms

ECD7-ZB5 AR1248SCV 24-FEB-2023 15:45, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248SCV 24-FEB-2023 15:45, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242316ECD7.D
Data file 2: /230224.b/230224.b/02242316ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254SCV
Client ID:
Injection Date: 24-FEB-2023 16:06
Report Date: 02/28/2023 09:51
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.806	-0.000	354312	5.686	0.001	174604	36.1	37.1	2.6	Tetrachloro-m-xylene
13.895	0.002	540961	14.119	-0.000	329134	34.6	37.9	9.0	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	656887	-2.5
Hexabromobiphenyl	1429847	1585505	10.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	320936	1.8
Hexabromobiphenyl	513946	570006	10.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.270	0.000	565	2.3	1	7.255	-0.001	387	2.1
Aroclor-1016	2	7.656	0.002	1875	2.5	2	7.854	-0.002	860	2.3
Aroclor-1016	3	7.792	0.002	1106	3.0	3	8.098	0.043	578	3.4
Aroclor-1016	4	8.405	0.000	29924	124.7	4	8.307	0.000	21985	162.9
	Total Col1Ave (4 peaks):				33.1	Total Col2Ave (4 peaks):				42.6 RPD = 25
	Corrected Ave (3 peaks):				2.6	Corrected Ave (3 peaks):				2.6 RPD = 0
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	6.325	0.028	1947	33.9
Aroclor-1221	3	---			0.0	3	6.637	0.015	368	3.9
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	7.255	0.001	387	4.7
Aroclor-1232	3	7.656	0.000	1875	5.9	3	7.854	-0.007	860	5.3
Aroclor-1232	4	8.583	0.002	12327	91.8	4	8.715	0.000	15013	319.7
	Col1Ave: <3 Quant Peaks					Col2Ave: 109.9				
Aroclor-1242	1	7.270	-0.000	565	2.8	1	7.255	-0.001	387	2.6
Aroclor-1242	2	7.656	0.000	1875	3.0	2	7.854	-0.004	860	2.7
Aroclor-1242	3	8.405	-0.000	29924	155.6	3	9.169	0.002	21933	224.9
Aroclor-1242	4	8.583	0.003	12327	43.4	4	9.545	-0.053	34065	286.6
	Total Col1Ave (4 peaks):				51.2	Total Col2Ave (4 peaks):				129.2 RPD = 87*
	Corrected Ave (3 peaks):				16.4	Corrected Ave (3 peaks):				76.7 RPD = 130*
Aroclor-1248	1	8.405	0.000	29924	93.4	1	8.307	-0.001	21985	143.5
Aroclor-1248	2	8.583	0.002	12327	30.3	2	8.715	0.001	15013	94.8
Aroclor-1248	3	8.992	-0.007	145580	189.4	3	9.169	0.004	21933	120.3
Aroclor-1248	4	9.298	0.003	155450	397.3	4	9.545	-0.046	34065	155.6
	Total Col1Ave (4 peaks):				177.6	Total Col2Ave (4 peaks):				128.5 RPD = 32
	Corrected Ave (3 peaks):				104.3	Corrected Ave (3 peaks):				119.5 RPD = 14
Aroclor-1254	1	9.298	-0.001	155450	235.7	1	9.450	0.001	58639	240.4
Aroclor-1254	2	9.377	-0.001	69801	235.3	2	9.971	0.000	47008	239.5
Aroclor-1254	3	9.668	-0.000	100839	237.8	3	10.124	0.000	100062	235.7
Aroclor-1254	4	9.807	0.000	190544	231.1	4	10.373	0.000	99535	240.5
Aroclor-1254	5	10.176	-0.000	122321	236.7	5	10.570	0.001	61549	244.2
	Total Col1Ave (5 peaks):				235.3	Total Col2Ave (5 peaks):				240.1 RPD = 2
	Corrected Ave (4 peaks):				234.7	Corrected Ave (4 peaks):				239.0 RPD = 2
Aroclor-1260	1	11.043	-0.002	12288	21.5	1	11.661	0.008	29062	86.7
Aroclor-1260	2	11.361	-0.001	13660	22.9	2	11.921	0.003	22238	26.0
Aroclor-1260	3	11.736	0.002	37632	23.8	3	12.441	0.005	3555	15.7
Aroclor-1260	4	12.141	0.002	27105	34.1	4	12.503	0.001	13126	22.8
Aroclor-1260	5	12.320	0.076	2381	6.9	NS	---			----
	Total Col1Ave (5 peaks):				21.9	Total Col2Ave (4 peaks):				37.8 RPD = 53*
	Corrected Ave (4 peaks):				18.8	Corrected Ave (3 peaks):				21.5 RPD = 13
Aroclor-1262	1	10.827	-0.002	220626	453.6	1	11.281	0.081	13562	27.9
Aroclor-1262	2	12.320	0.076	2381	3.0	2	11.661	0.009	29062	70.1
Aroclor-1262	3	---			0.0	3	12.441	0.007	3555	7.6
Aroclor-1262	4	12.989	0.002	3225	4.1	4	12.503	0.001	13126	17.8
	Total Col1Ave (3 peaks):				153.6	Total Col2Ave (4 peaks):				30.8 RPD = 133*
	Corrected Ave: < 3 Peaks					Corrected Ave (3 peaks):				17.7
Aroclor-1268	1	12.320	0.074	2381	1.2	1	12.441	0.009	3555	3.1
Aroclor-1268	2	---			0.0	2	12.503	0.003	13126	10.6
Aroclor-1268	3	12.701	0.002	2939	1.7	3	12.892	0.000	772	0.7
Aroclor-1268	4	13.493	0.003	9164	1.6	4	13.707	-0.002	2801	0.8
	Total Col1Ave (3 peaks):				1.5	Total Col2Ave (4 peaks):				3.8 RPD = 87*
	Corrected Ave: < 3 Peaks					Corrected Ave (3 peaks):				1.6

Total PCB Area Col1 (5.906 - 13.793) = 2118645 Col1 Total PCB = 0.3 ppm*

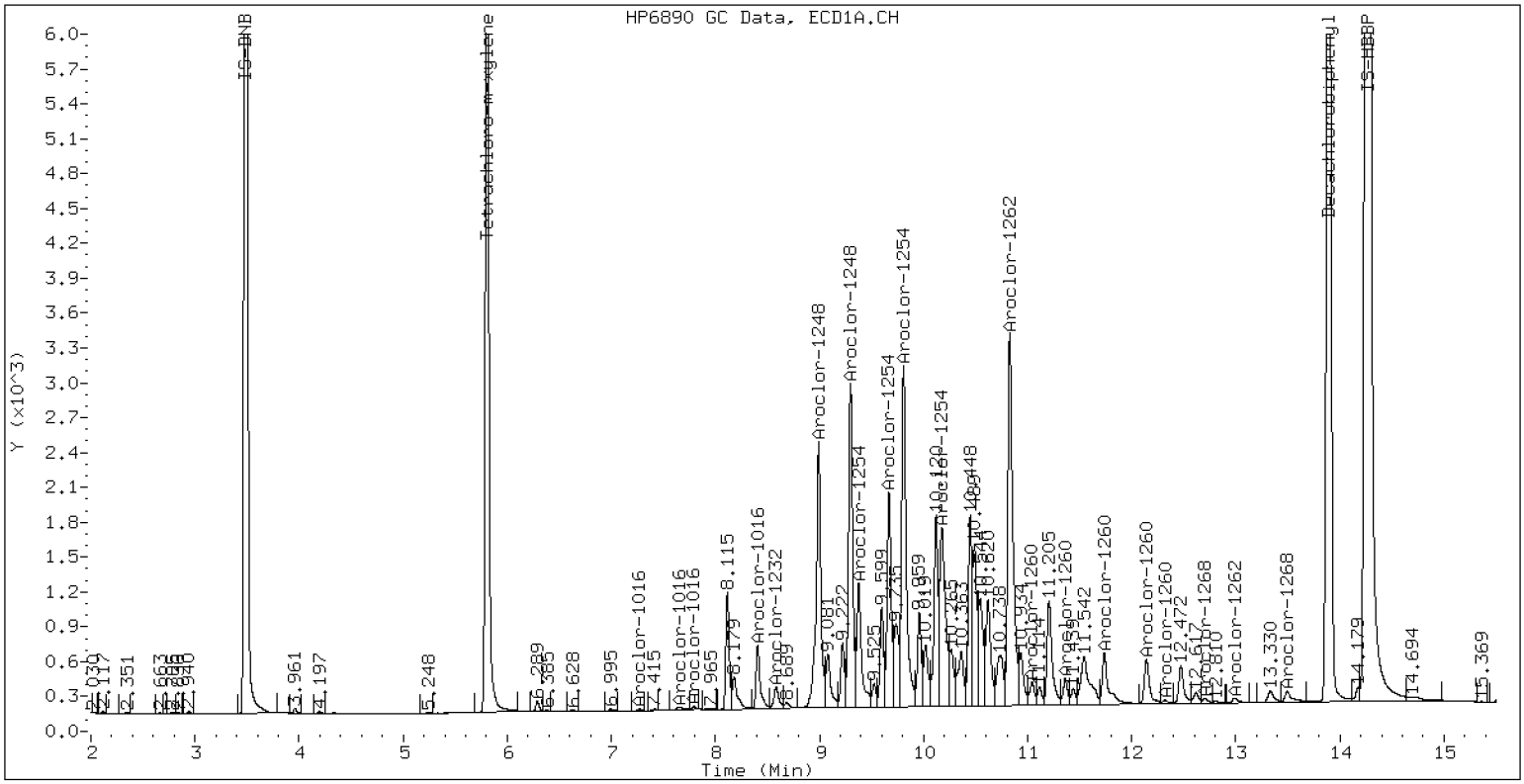
Total PCB Area Col2 (5.785 - 14.019) = 1007601 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

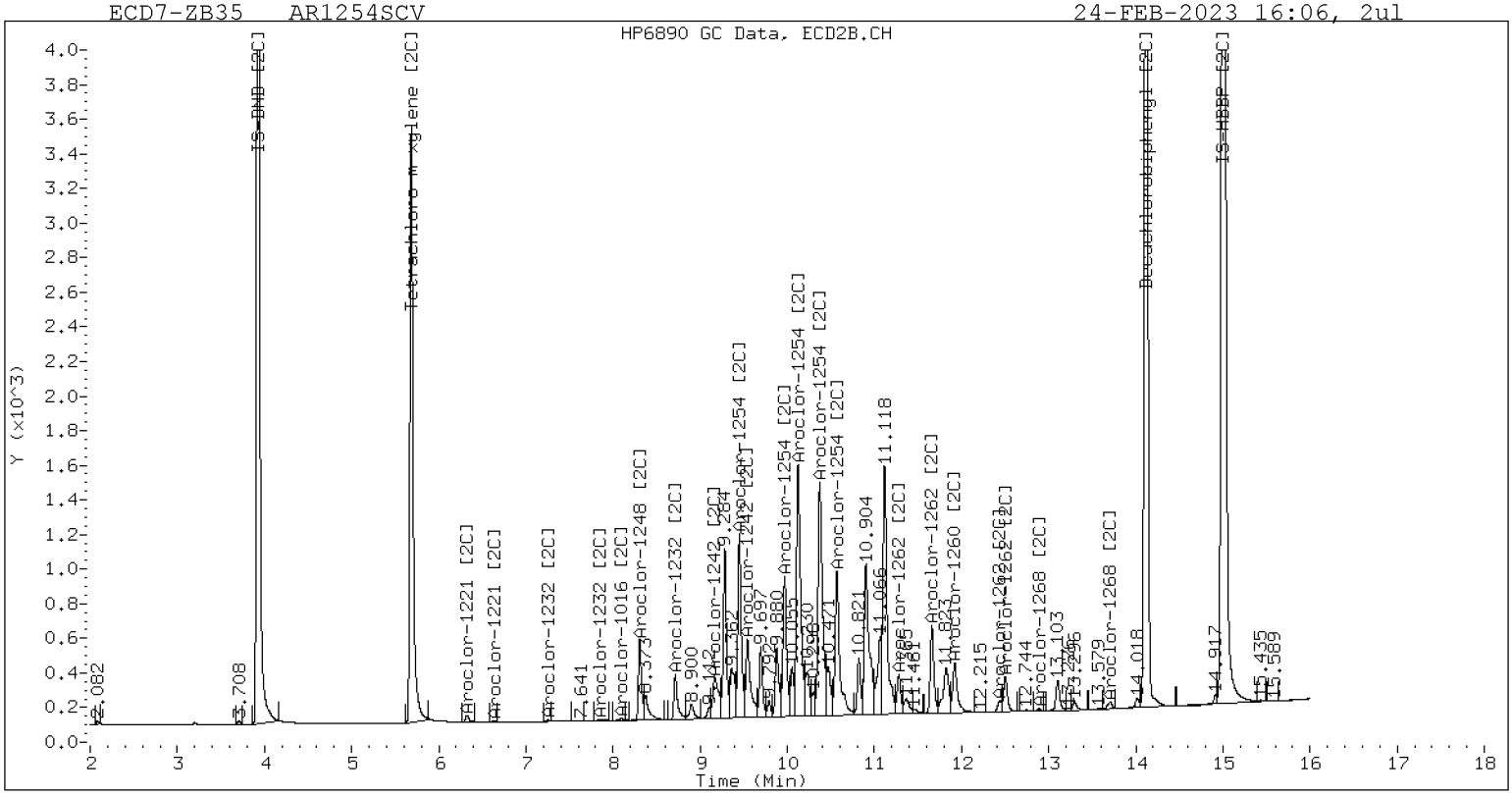
PCB Dual Column Chromatograms

ECD7-ZB5 AR1254SCV 24-FEB-2023 16:06, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254SCV 24-FEB-2023 16:06, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242317ECD7.D
Data file 2: /230224.b/230224.b/02242317ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR2162SCV
Client ID:
Injection Date: 24-FEB-2023 16:27
Report Date: 02/28/2023 09:51
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.807	0.000	356001	5.685	0.000	170882	36.0	36.6	1.7	Tetrachloro-m-xylene
13.895	0.002	533971	14.119	0.000	326235	34.4	37.9	9.5	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	661953	-1.8
Hexabromobiphenyl	1429847	1574993	10.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	317807	0.8
Hexabromobiphenyl	513946	565951	10.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.269	-0.001	7175	28.5	1	7.256	0.000	3727	20.0
Aroclor-1016	2	7.659	0.005	12893	16.8	2	7.863	0.007	5834	15.5
Aroclor-1016	3	7.794	0.004	6936	18.5	3	8.063	0.009	2963	17.4
Aroclor-1016	4	8.408	0.003	3610	14.9	4	8.308	0.002	2045	15.3
Total Col1Ave (4 peaks):					19.7	Total Col2Ave (4 peaks):				17.0 RPD = 14
Corrected Ave (3 peaks):					16.8	Corrected Ave (3 peaks):				16.1 RPD = 4
Aroclor-1221	1	4.730	-0.000	15803	266.6	1	4.955	-0.001	7909	262.9
Aroclor-1221	2	6.131	-0.001	26946	254.1	2	6.296	-0.000	14303	251.2
Aroclor-1221	3	6.382	-0.000	62477	253.8	3	6.622	0.000	23612	254.7
Total Col1Ave (3 peaks):					258.2	Total Col2Ave (3 peaks):				256.3 RPD = 1
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	4.730	0.000	15803	445.6	1	4.955	-0.001	7909	486.4
Aroclor-1232	2	6.131	0.000	26946	383.1	2	7.256	0.002	3727	46.1
Aroclor-1232	3	7.659	0.003	12893	40.5	3	7.863	0.002	5834	36.1
Aroclor-1232	4	8.583	0.003	2684	19.8	4	8.716	0.002	1189	25.6
Total Col1Ave (4 peaks):					222.3	Total Col2Ave (4 peaks):				148.5 RPD = 40
Corrected Ave (3 peaks):					147.8	Corrected Ave (3 peaks):				35.9 RPD = 122*
Aroclor-1242	1	7.269	-0.001	7175	35.0	1	7.256	0.000	3727	25.2
Aroclor-1242	2	7.659	0.003	12893	20.7	2	7.863	0.005	5834	18.8
Aroclor-1242	3	8.408	0.002	3610	18.6	3	9.175	0.008	1082	11.2
Aroclor-1242	4	8.583	0.004	2684	9.4	4	9.543	-0.054	1390	11.8
Total Col1Ave (4 peaks):					20.9	Total Col2Ave (4 peaks):				16.8 RPD = 22
Corrected Ave (3 peaks):					16.2	Corrected Ave (3 peaks):				13.9 RPD = 15
Aroclor-1248	1	8.408	0.002	3610	11.2	1	8.308	0.001	2045	13.5
Aroclor-1248	2	8.583	0.003	2684	6.5	2	8.716	0.002	1189	7.6
Aroclor-1248	3	8.994	-0.005	24440	31.6	3	9.175	0.009	1082	6.0
Aroclor-1248	4	9.302	0.008	26328	66.8	4	9.543	-0.048	1390	6.4
Total Col1Ave (4 peaks):					29.0	Total Col2Ave (4 peaks):				8.4 RPD = 110*
Corrected Ave (3 peaks):					16.4	Corrected Ave (3 peaks):				6.7 RPD = 85*
Aroclor-1254	1	9.302	0.004	26328	39.6	1	9.452	0.003	9571	39.6
Aroclor-1254	2	---			0.0	2	9.972	0.002	1733	8.9
Aroclor-1254	3	9.670	0.002	3721	8.7	3	10.147	0.023	49218	117.1
Aroclor-1254	4	9.808	0.000	9653	11.6	4	10.370	-0.002	59603	145.4
Aroclor-1254	5	10.120	-0.056	131179	251.9	5	10.569	0.001	79533	318.7
Total Col1Ave (4 peaks):					78.0	Total Col2Ave (5 peaks):				125.9 RPD = 47*
Corrected Ave (3 peaks):					20.0	Corrected Ave (4 peaks):				77.8 RPD = 118*
Aroclor-1260	1	11.044	-0.000	223208	394.0	1	11.652	-0.001	104071	312.7
Aroclor-1260	2	11.361	-0.001	190166	321.2	2	11.919	0.002	251579	296.2
Aroclor-1260	3	11.737	0.003	458281	291.9	3	12.435	-0.001	113645	504.2
Aroclor-1260	4	12.141	0.002	149720	189.4	4	12.501	-0.001	182951	319.6
Aroclor-1260	5	12.244	0.000	196033	576.0	NS	---			----
Total Col1Ave (5 peaks):					354.5	Total Col2Ave (4 peaks):				358.2 RPD = 1
Corrected Ave (4 peaks):					299.1	Corrected Ave (3 peaks):				309.5 RPD = 3
Aroclor-1262	1	10.828	-0.001	121431	251.3	1	11.201	0.000	121335	251.1
Aroclor-1262	2	12.244	0.000	196033	249.3	2	11.652	0.000	104071	252.9
Aroclor-1262	3	12.319	0.001	211092	249.8	3	12.435	0.001	113645	243.4
Aroclor-1262	4	12.988	0.001	183455	237.5	4	12.501	-0.001	182951	250.1
Total Col1Ave (4 peaks):					247.0	Total Col2Ave (4 peaks):				249.3 RPD = 1
Corrected Ave (3 peaks):					245.5	Corrected Ave (3 peaks):				248.2 RPD = 1
Aroclor-1268	1	12.244	-0.002	196033	97.1	1	12.435	0.003	113645	99.7
Aroclor-1268	2	12.319	0.002	211092	105.6	2	12.501	0.001	182951	149.3
Aroclor-1268	3	12.723	0.024	77240	45.2	3	12.891	-0.000	7755	7.4
Aroclor-1268	4	13.488	-0.002	65479	11.6	4	13.709	0.000	35146	10.5
Total Col1Ave (4 peaks):					64.9	Total Col2Ave (4 peaks):				66.7 RPD = 3

Corrected Ave (3 peaks): 51.3 Corrected Ave (3 peaks): 39.2 RPD = 27

Total PCB Area Col1 (5.906 - 13.793) = 3239932 Col1 Total PCB = 0.4 ppm*

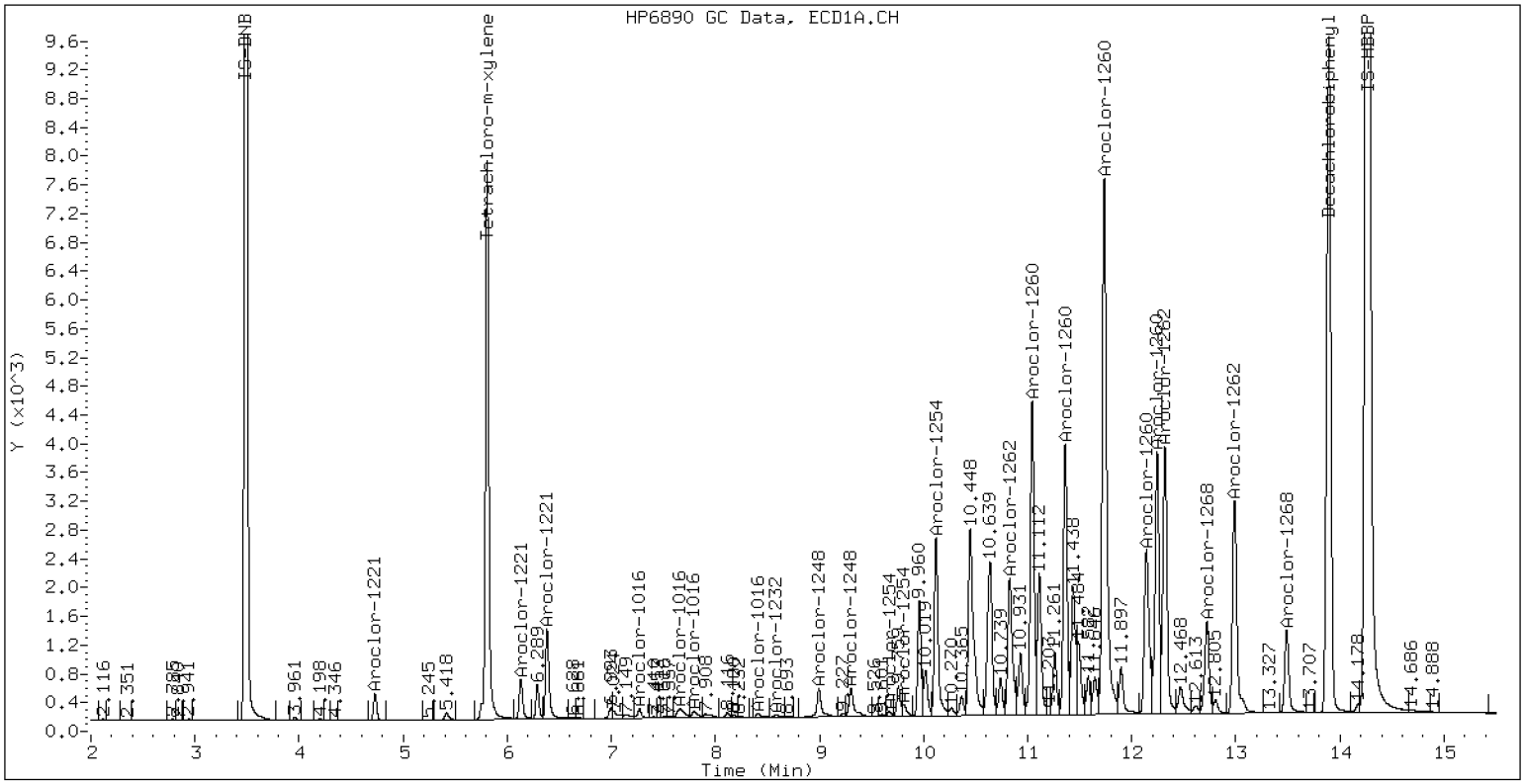
Total PCB Area Col2 (5.785 - 14.019) = 1655522 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

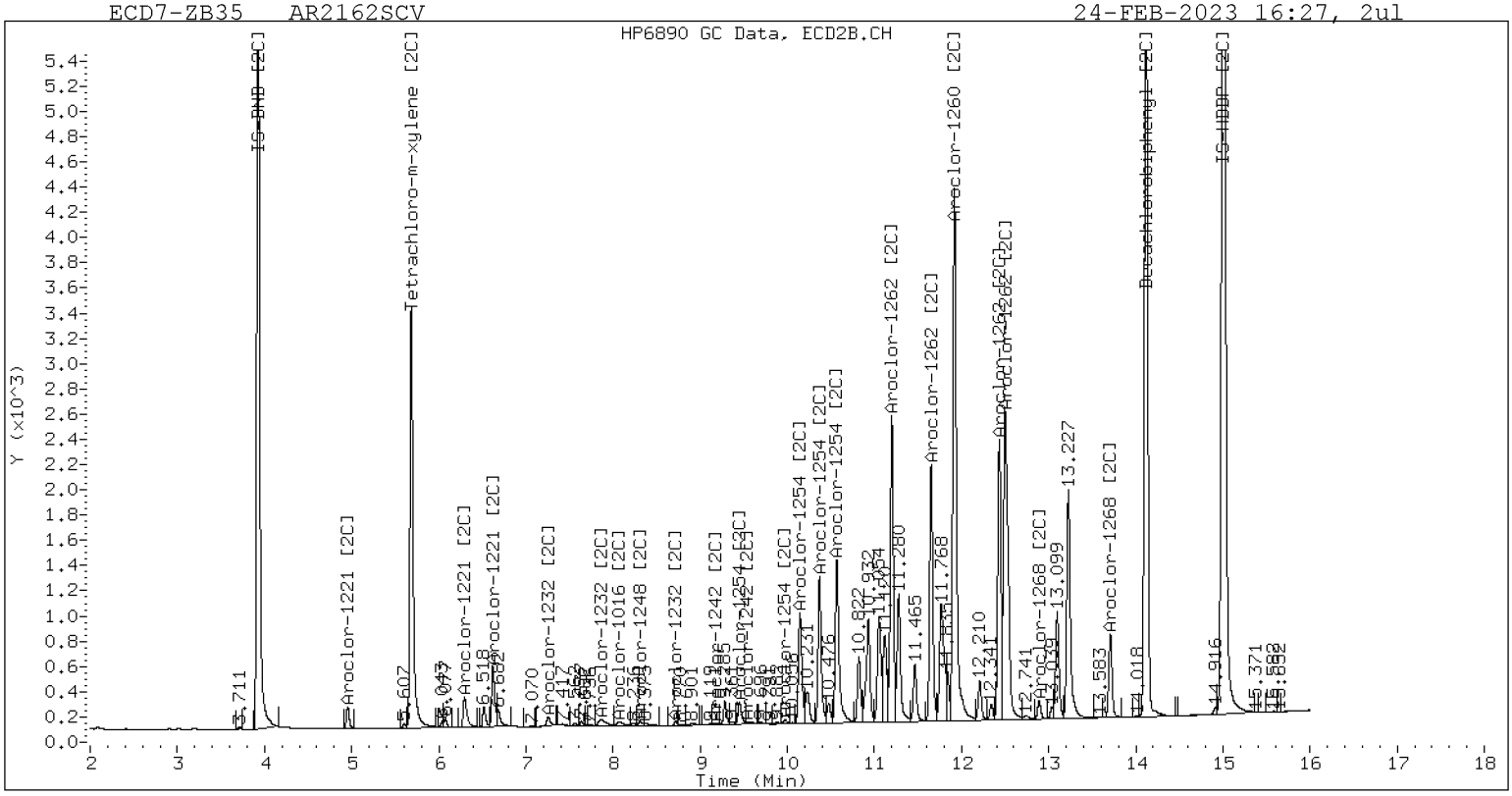
PCB Dual Column Chromatograms

ECD7-ZB5 AR2162SCV 24-FEB-2023 16:27, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR2162SCV 24-FEB-2023 16:27, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242318ECD7.D
Data file 2: /230224.b/230224.b/02242318ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR3268SCV
Client ID:
Injection Date: 24-FEB-2023 16:48
Report Date: 02/28/2023 09:51
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.806	0.000	363331	5.685	0.000	176204	37.1	38.2	2.9	Tetrachloro-m-xylene
13.894	0.001	800845	14.118	-0.001	488290	51.3	56.4	9.5	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	656592	-2.6
Hexabromobiphenyl	1429847	1584453	10.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	314741	-0.2
Hexabromobiphenyl	513946	568346	10.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	7.270	-0.001	28327	113.6	1	7.254	-0.001	20651	112.1
Aroclor-1016	2	7.657	0.003	80668	106.1	2	7.861	0.005	41326	110.6
Aroclor-1016	3	7.793	0.003	40661	109.6	3	8.060	0.005	20446	121.2
Aroclor-1016	4	8.407	0.002	24680	102.9	4	8.308	0.001	13576	102.5
Total Col1Ave (4 peaks):					108.0	Total Col2Ave (4 peaks):				111.6 RPD = 3
Corrected Ave (3 peaks):					106.2	Corrected Ave (3 peaks):				108.4 RPD = 2
Aroclor-1221	1	4.729	-0.001	8535	145.1	1	4.956	-0.000	3965	133.1
Aroclor-1221	2	6.132	-0.000	15523	147.6	2	6.297	0.001	8689	154.1
Aroclor-1221	3	6.382	-0.000	45872	187.9	3	6.622	0.001	22272	242.6
Total Col1Ave (3 peaks):					160.2	Total Col2Ave (3 peaks):				176.6 RPD = 10
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	4.729	-0.001	8535	242.6	1	4.956	0.000	3965	246.2
Aroclor-1232	2	6.132	0.001	15523	222.5	2	7.254	0.000	20651	258.1
Aroclor-1232	3	7.657	0.001	80668	255.4	3	7.861	0.001	41326	258.3
Aroclor-1232	4	8.582	0.001	34784	259.2	4	8.714	-0.001	12504	271.5
Total Col1Ave (4 peaks):					244.9	Total Col2Ave (4 peaks):				258.5 RPD = 5
Corrected Ave (3 peaks):					240.2	Corrected Ave (3 peaks):				254.2 RPD = 6
Aroclor-1242	1	7.270	-0.001	28327	139.2	1	7.254	-0.001	20651	141.2
Aroclor-1242	2	7.657	0.001	80668	130.5	2	7.861	0.003	41326	134.4
Aroclor-1242	3	8.407	0.001	24680	128.4	3	9.170	0.003	12830	134.1
Aroclor-1242	4	8.582	0.003	34784	122.4	4	9.600	0.003	14836	127.3
Total Col1Ave (4 peaks):					130.1	Total Col2Ave (4 peaks):				134.3 RPD = 3
Corrected Ave (3 peaks):					127.1	Corrected Ave (3 peaks):				132.0 RPD = 4
Aroclor-1248	1	8.407	0.001	24680	77.0	1	8.308	0.000	13576	90.3
Aroclor-1248	2	8.582	0.001	34784	85.4	2	8.714	-0.000	12504	80.5
Aroclor-1248	3	8.996	-0.003	83592	108.8	3	9.170	0.004	12830	71.8
Aroclor-1248	4	9.292	-0.003	39603	101.3	4	9.600	0.010	14836	69.1
Total Col1Ave (4 peaks):					93.1	Total Col2Ave (4 peaks):				77.9 RPD = 18
Corrected Ave (3 peaks):					87.9	Corrected Ave (3 peaks):				73.8 RPD = 17
Aroclor-1254	1	9.292	-0.007	39603	60.1	1	9.452	0.003	4590	19.2
Aroclor-1254	2	9.377	-0.000	11450	38.6	2	9.973	0.003	2892	15.0
Aroclor-1254	3	9.674	0.005	6387	15.1	3	10.131	0.007	6052	14.5
Aroclor-1254	4	9.813	0.006	10162	12.3	4	10.390	0.017	5324	13.1
Aroclor-1254	5	10.189	0.012	6862	13.3	5	10.572	0.004	1891	7.7
Total Col1Ave (5 peaks):					27.9	Total Col2Ave (5 peaks):				13.9 RPD = 67*
Corrected Ave (4 peaks):					19.8	Corrected Ave (4 peaks):				12.6 RPD = 45*
Aroclor-1260	1	11.046	0.002	87033	152.7	1	11.645	-0.008	62543	187.1
Aroclor-1260	2	11.362	0.001	6300	10.6	2	11.920	0.003	28552	33.5
Aroclor-1260	3	11.738	0.004	54524	34.5	3	12.432	-0.004	285450	1261.2
Aroclor-1260	4	12.144	0.005	1727	2.2	4	12.499	-0.002	306992	534.0
Aroclor-1260	5	12.246	0.002	502931	1469.0	NS	---			----
Total Col1Ave (5 peaks):					333.8	Total Col2Ave (4 peaks):				503.9 RPD = 41*
Corrected Ave (4 peaks):					50.0	Corrected Ave (3 peaks):				251.5 RPD = 134*
Aroclor-1262	1	10.832	0.004	3395	7.0	1	11.201	0.001	44255	91.2
Aroclor-1262	2	12.246	0.002	502931	635.9	2	11.645	-0.007	62543	151.3
Aroclor-1262	3	12.318	-0.000	497006	584.5	3	12.432	-0.002	285450	608.7
Aroclor-1262	4	12.987	-0.000	202197	260.2	4	12.499	-0.003	306992	417.9
Total Col1Ave (4 peaks):					371.9	Total Col2Ave (4 peaks):				317.3 RPD = 16
Corrected Ave (3 peaks):					283.9	Corrected Ave (3 peaks):				220.1 RPD = 25
Aroclor-1268	1	12.246	-0.001	502931	247.7	1	12.432	-0.000	285450	249.4
Aroclor-1268	2	12.318	0.002	497006	247.2	2	12.499	-0.001	306992	249.5
Aroclor-1268	3	12.699	-0.000	422793	245.8	3	12.892	0.000	260893	248.4
Aroclor-1268	4	13.490	0.000	1386953	244.9	4	13.709	-0.000	829733	247.1
Total Col1Ave (4 peaks):					246.4	Total Col2Ave (4 peaks):				248.6 RPD = 1

Corrected Ave (3 peaks): 246.0 Corrected Ave (3 peaks): 248.3 RPD = 1

Total PCB Area Col1 (5.906 - 13.793) = 4180607 Col1 Total PCB = 0.5 ppm*

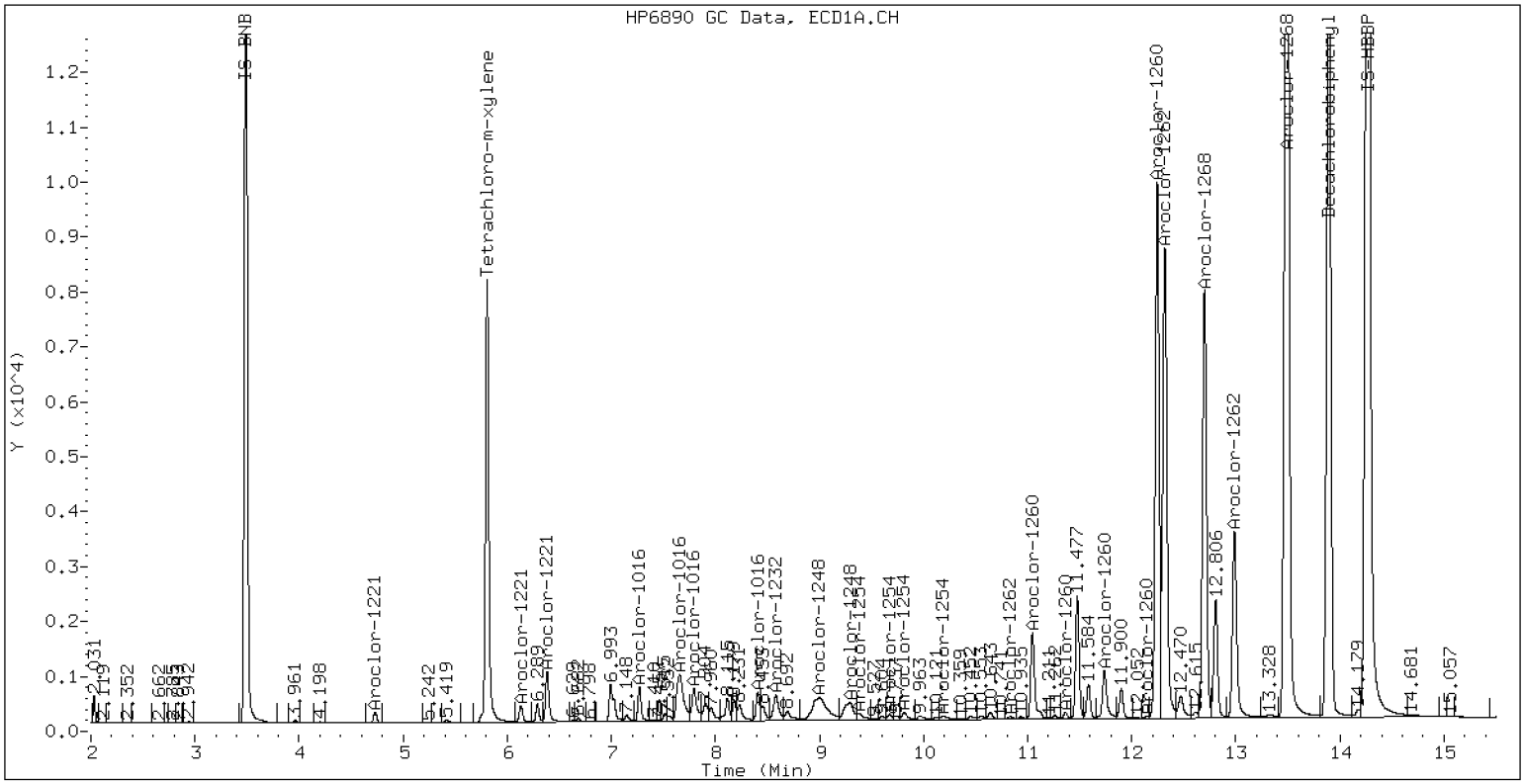
Total PCB Area Col2 (5.785 - 14.019) = 2376912 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

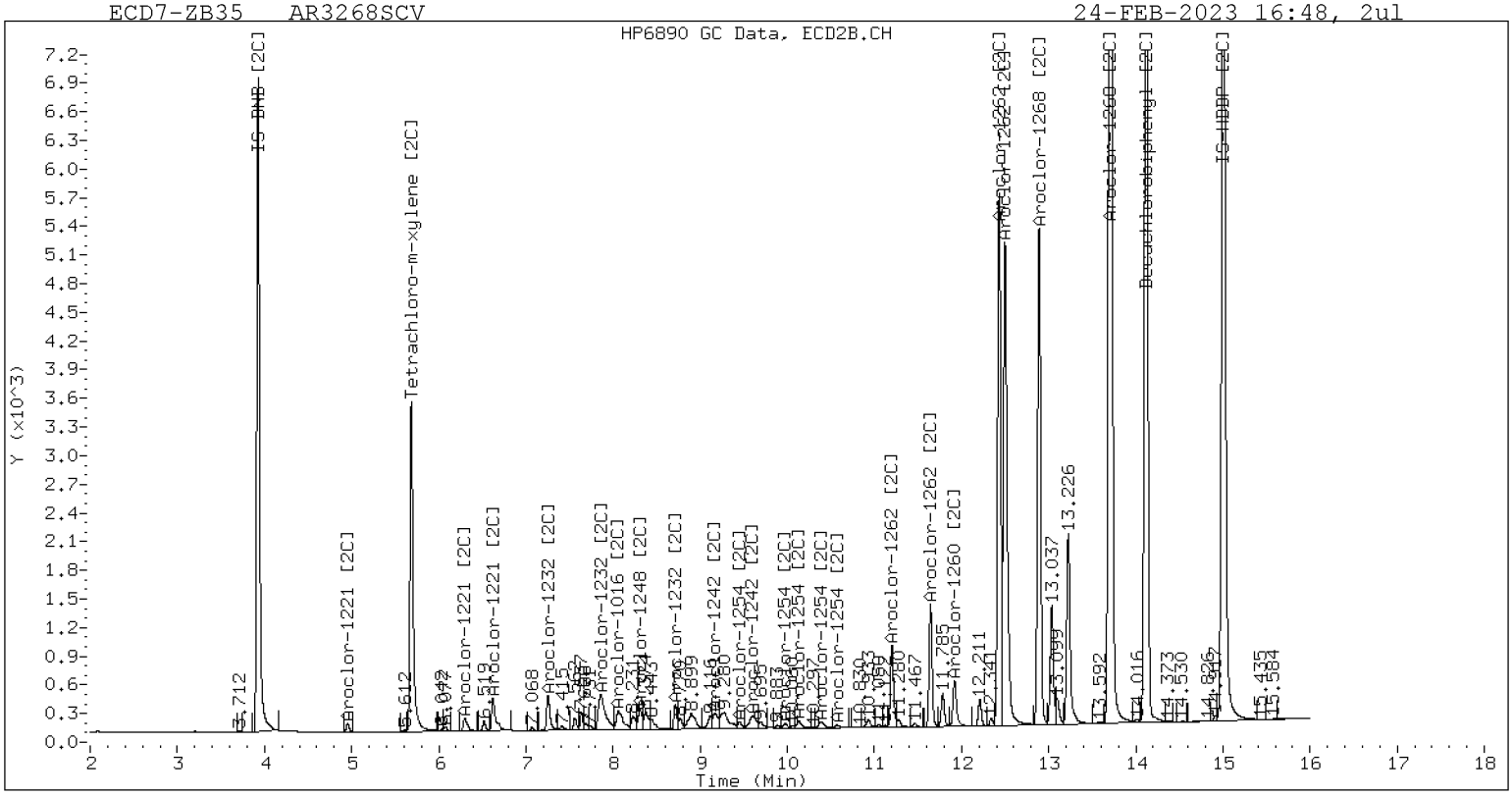
PCB Dual Column Chromatograms

ECD7-ZB5 AR3268SCV 24-FEB-2023 16:48, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR3268SCV 24-FEB-2023 16:48, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
8082 DDT SCREEN REPORT

Data file 1: /230224.b/02242319ECD7.D ARI ID: DDTS

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
9.261	0.000	694353	9.912	0.000	580269	0.100	0.100	0.0	2,4-DDE
0.000	-10.293	0	10.672	0.000	673479	0.000	0.200#	----	2,4-DDT
9.686	0.000	1191406	10.212	0.000	433373	0.100	0.100	0.0	4,4-DDE
10.259	0.000	1721760	10.672	0.000	673479	0.100	0.200#	66.7*	4,4-DDD

# Indicates value is from co-eluting peaks
* Indicates RPD > 40%

Analytical Resources Inc.
8082 DDT SCREEN REPORT

Data file 1: /230224.b/02242320ECD7.D ARI ID: DDT BD

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
9.285	0.023	4923	9.921	0.009	9972	0.001	0.002	84.3*	2,4-DDE
0.000	-10.293	0	10.677	0.004	249094	0.000	0.074#	----	2,4-DDT
9.692	0.006	12128	10.221	0.009	528	0.001	0.000	156.7*	4,4-DDE
10.265	0.006	410017	10.677	0.004	249094	0.023	0.074#	103.6*	4,4-DDD

# Indicates value is from co-eluting peaks
* Indicates RPD > 40%

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SLB0342

Instrument: ECD7
Calibration ID: GB00069

Printed: 2/28/2023 9:54:44AM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SLB0342-CAL1	QC		1		L000856	L000844		
SLB0342-CAL2	QC		2		L000859	L000844		
SLB0342-CAL3	QC		3		L000858	L000844		
SLB0342-CAL4	QC		4		L000731	L000844		
SLB0342-CAL5	QC		5		L000857	L000844		
SLB0342-CAL6	QC		6		L000855	L000844		
SLB0342-CAL7	QC		7		L000860	L000844		
SLB0342-CAL8	QC		8		L000861	L000844		
SLB0342-CAL9	QC		9		L000862	L000844		
SLB0342-CALA	QC		10		L000863	L000844		
SLB0342-CALB	QC		11		L000864	L000844		
SLB0342-SCV1	QC		12		L002065	L000844		
SLB0342-SCV2	QC		13		K007656	L000844		
SLB0342-SCV3	QC		14		L002066	L000844		
SLB0342-SCV4	QC		15		L002067	L000844		
SLB0342-SCV5	QC		16		L002068	L000844		
SLB0342-SCV6	QC		17		L002069	L000844		

Samples Loaded By Date

Data Processed By Date

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230224.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	24-FEB-2023 10:51	02242301ECD7.D	1	IB	
2	24-FEB-2023 11:12	02242302ECD7.D	1	0.25PPMAR1660	
3	24-FEB-2023 11:33	02242303ECD7.D	1	0.02PPMAR1660	
4	24-FEB-2023 11:54	02242304ECD7.D	1	0.05PPMAR1660	
5	24-FEB-2023 12:15	02242305ECD7.D	1	1.0PPMAR1660	
6	24-FEB-2023 12:36	02242306ECD7.D	1	0.1PPMAR1660	
7	24-FEB-2023 12:57	02242307ECD7.D	1	0.5PPMAR1660	
8	24-FEB-2023 13:18	02242308ECD7.D	1	0.25PPMAR1242	
9	24-FEB-2023 13:39	02242309ECD7.D	1	0.25PPMAR1248	
10	24-FEB-2023 14:00	02242310ECD7.D	1	0.25PPMAR1254	
11	24-FEB-2023 14:21	02242311ECD7.D	1	0.25PPMAR2162	
12	24-FEB-2023 14:42	02242312ECD7.D	1	0.25PPMAR3268	
13	24-FEB-2023 15:03	02242313ECD7.D	1	AR1660SCV	
14	24-FEB-2023 15:24	02242314ECD7.D	1	AR1242SCV	
15	24-FEB-2023 15:45	02242315ECD7.D	1	AR1248SCV	
16	24-FEB-2023 16:06	02242316ECD7.D	1	AR1254SCV	
17	24-FEB-2023 16:27	02242317ECD7.D	1	AR2162SCV	
18	24-FEB-2023 16:48	02242318ECD7.D	1	AR3268SCV	
19	24-FEB-2023 17:09	02242319ECD7.D	1	DDTS	
20	24-FEB-2023 17:30	02242320ECD7.D	1	DDT BD	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230224.b

ARI Job No.: IB Method: PCB.m Instrument: ecd7.i Date: 24-FEB-2023

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1051	02242301ECD7.D	IB		1	NO MANUAL INTEGRATION
1112	02242302ECD7.D	0.25PPMAR1660		1	NO MANUAL INTEGRATION
1133	02242303ECD7.D	0.02PPMAR1660		1	NO MANUAL INTEGRATION
1154	02242304ECD7.D	0.05PPMAR1660		1	NO MANUAL INTEGRATION
1215	02242305ECD7.D	1.0PPMAR1660		1	NO MANUAL INTEGRATION
1236	02242306ECD7.D	0.1PPMAR1660		1	NO MANUAL INTEGRATION
1257	02242307ECD7.D	0.5PPMAR1660		1	NO MANUAL INTEGRATION
1318	02242308ECD7.D	0.25PPMAR1242		1	NO MANUAL INTEGRATION
1339	02242309ECD7.D	0.25PPMAR1248		1	NO MANUAL INTEGRATION
1400	02242310ECD7.D	0.25PPMAR1254		1	NO MANUAL INTEGRATION
1421	02242311ECD7.D	0.25PPMAR2162		1	NO MANUAL INTEGRATION
1442	02242312ECD7.D	0.25PPMAR3268		1	NO MANUAL INTEGRATION
1503	02242313ECD7.D	AR1660SCV		1	NO MANUAL INTEGRATION
1524	02242314ECD7.D	AR1242SCV		1	NO MANUAL INTEGRATION
1545	02242315ECD7.D	AR1248SCV		1	NO MANUAL INTEGRATION
1606	02242316ECD7.D	AR1254SCV		1	NO MANUAL INTEGRATION
1627	02242317ECD7.D	AR2162SCV		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230224.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1648	02242318ECD7.D	AR3268SCV		1	NO MANUAL INTEGRATION
1709	02242319ECD7.D	DDTS		1	NO MANUAL INTEGRATION
1730	02242320ECD7.D	DDT BD		1	NO MANUAL INTEGRATION
1751	02242321ECD7.D			1	NO MANUAL INTEGRATION
1812	02242322ECD7.D			1	NO MANUAL INTEGRATION
1833	02242323ECD7.D			1	NO MANUAL INTEGRATION
1854	02242324ECD7.D			1	NO MANUAL INTEGRATION
1915	02242325ECD7.D			1	NO MANUAL INTEGRATION
1936	02242326ECD7.D			1	NO MANUAL INTEGRATION
1957	02242327ECD7.D			1	NO MANUAL INTEGRATION
2018	02242328ECD7.D			1	NO MANUAL INTEGRATION
2039	02242329ECD7.D			1	NO MANUAL INTEGRATION
2059	02242330ECD7.D			1	NO MANUAL INTEGRATION
2120	02242331ECD7.D			1	NO MANUAL INTEGRATION
2141	02242332ECD7.D			1	NO MANUAL INTEGRATION
2202	02242333ECD7.D			1	NO MANUAL INTEGRATION
2223	02242334ECD7.D			1	NO MANUAL INTEGRATION
2244	02242335ECD7.D			1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230224.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2305	02242336ECD7.D			1	NO MANUAL INTEGRATION
2326	02242337ECD7.D			1	NO MANUAL INTEGRATION
2347	02242338ECD7.D			1	NO MANUAL INTEGRATION
0008	02242339ECD7.D			1	NO MANUAL INTEGRATION
0029	02242340ECD7.D			1	NO MANUAL INTEGRATION
0050	02242341ECD7.D			1	NO MANUAL INTEGRATION
0111	02242342ECD7.D			1	NO MANUAL INTEGRATION
0132	02242343ECD7.D			1	NO MANUAL INTEGRATION
0153	02242344ECD7.D			1	NO MANUAL INTEGRATION
0214	02242345ECD7.D			1	NO MANUAL INTEGRATION
0235	02242346ECD7.D			1	NO MANUAL INTEGRATION
0256	02242347ECD7.D			1	NO MANUAL INTEGRATION
0317	02242348ECD7.D			1	NO MANUAL INTEGRATION
0338	02242349ECD7.D			1	NO MANUAL INTEGRATION
0359	02242350ECD7.D			1	NO MANUAL INTEGRATION
0420	02242351ECD7.D			1	NO MANUAL INTEGRATION
0441	02242352ECD7.D			1	NO MANUAL INTEGRATION
0502	02242353ECD7.D			1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230224.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0523	02242354ECD7.D			1	NO MANUAL INTEGRATION
0544	02242355ECD7.D			1	NO MANUAL INTEGRATION
0605	02242356ECD7.D			1	NO MANUAL INTEGRATION
0626	02242357ECD7.D			1	NO MANUAL INTEGRATION
0647	02242358ECD7.D			1	NO MANUAL INTEGRATION
0708	02242359ECD7.D			1	NO MANUAL INTEGRATION
0729	02242360ECD7.D			1	NO MANUAL INTEGRATION
0750	02242361ECD7.D			1	NO MANUAL INTEGRATION
0811	02242362ECD7.D			1	NO MANUAL INTEGRATION
0832	02242363ECD7.D			1	NO MANUAL INTEGRATION
0853	02242364ECD7.D			1	NO MANUAL INTEGRATION
0914	02242365ECD7.D			1	NO MANUAL INTEGRATION
0935	02242366ECD7.D			1	NO MANUAL INTEGRATION
0956	02242367ECD7.D			1	NO MANUAL INTEGRATION
1017	02242368ECD7.D			1	NO MANUAL INTEGRATION
1038	02242369ECD7.D			1	NO MANUAL INTEGRATION
1059	02242370ECD7.D			1	NO MANUAL INTEGRATION
1120	02242371ECD7.D			1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230224.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1141	02242372ECD7.D			1	NO MANUAL INTEGRATION
1202	02242373ECD7.D			1	NO MANUAL INTEGRATION
1223	02242374ECD7.D			1	NO MANUAL INTEGRATION
1244	02242375ECD7.D			1	NO MANUAL INTEGRATION
1305	02242376ECD7.D			1	NO MANUAL INTEGRATION
1326	02242377ECD7.D			1	NO MANUAL INTEGRATION
1347	02242378ECD7.D			1	NO MANUAL INTEGRATION
1408	02242379ECD7.D			1	NO MANUAL INTEGRATION
1429	02242380ECD7.D			1	NO MANUAL INTEGRATION
1450	02242381ECD7.D			1	NO MANUAL INTEGRATION
1511	02242382ECD7.D			1	NO MANUAL INTEGRATION
1532	02242383ECD7.D			1	NO MANUAL INTEGRATION
1553	02242384ECD7.D			1	NO MANUAL INTEGRATION
1051	02242301ECD7.D	IB		1	NO MANUAL INTEGRATION
1112	02242302ECD7.D	0.25PPMAR1660		1	NO MANUAL INTEGRATION
1133	02242303ECD7.D	0.02PPMAR1660		1	Aroclor-1016 [2C],
1154	02242304ECD7.D	0.05PPMAR1660		1	NO MANUAL INTEGRATION
1215	02242305ECD7.D	1.0PPMAR1660		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230224.b\230224.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1236	02242306ECD7.D	0.1PPMAR1660		1	NO MANUAL INTEGRATION
1257	02242307ECD7.D	0.5PPMAR1660		1	NO MANUAL INTEGRATION
1318	02242308ECD7.D	0.25PPMAR1242		1	NO MANUAL INTEGRATION
1339	02242309ECD7.D	0.25PPMAR1248		1	NO MANUAL INTEGRATION
1400	02242310ECD7.D	0.25PPMAR1254		1	NO MANUAL INTEGRATION
1421	02242311ECD7.D	0.25PPMAR2162		1	NO MANUAL INTEGRATION
1442	02242312ECD7.D	0.25PPMAR3268		1	NO MANUAL INTEGRATION
1503	02242313ECD7.D	AR1660SCV		1	NO MANUAL INTEGRATION
1524	02242314ECD7.D	AR1242SCV		1	NO MANUAL INTEGRATION
1545	02242315ECD7.D	AR1248SCV		1	NO MANUAL INTEGRATION
1606	02242316ECD7.D	AR1254SCV		1	NO MANUAL INTEGRATION
1627	02242317ECD7.D	AR2162SCV		1	NO MANUAL INTEGRATION
1648	02242318ECD7.D	AR3268SCV		1	NO MANUAL INTEGRATION
1709	02242319ECD7.D	DDTS		1	NO MANUAL INTEGRATION
1730	02242320ECD7.D	DDT BD		1	NO MANUAL INTEGRATION
1751	02242321ECD7.D			1	NO MANUAL INTEGRATION
1812	02242322ECD7.D			1	NO MANUAL INTEGRATION
1833	02242323ECD7.D			1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230224.b\230224.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1854	02242324ECD7.D			1	NO MANUAL INTEGRATION
1915	02242325ECD7.D			1	NO MANUAL INTEGRATION
1936	02242326ECD7.D			1	NO MANUAL INTEGRATION
1957	02242327ECD7.D			1	NO MANUAL INTEGRATION
2018	02242328ECD7.D			1	NO MANUAL INTEGRATION
2038	02242329ECD7.D			1	NO MANUAL INTEGRATION
2059	02242330ECD7.D			1	NO MANUAL INTEGRATION
2120	02242331ECD7.D			1	NO MANUAL INTEGRATION
2141	02242332ECD7.D			1	NO MANUAL INTEGRATION
2202	02242333ECD7.D			1	NO MANUAL INTEGRATION
2223	02242334ECD7.D			1	NO MANUAL INTEGRATION
2244	02242335ECD7.D			1	NO MANUAL INTEGRATION
2305	02242336ECD7.D			1	NO MANUAL INTEGRATION
2326	02242337ECD7.D			1	NO MANUAL INTEGRATION
2347	02242338ECD7.D			1	NO MANUAL INTEGRATION
0008	02242339ECD7.D			1	NO MANUAL INTEGRATION
0029	02242340ECD7.D			1	NO MANUAL INTEGRATION
0050	02242341ECD7.D			1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230224.b\230224.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0111	02242342ECD7.D			1	NO MANUAL INTEGRATION
0132	02242343ECD7.D			1	NO MANUAL INTEGRATION
0153	02242344ECD7.D			1	NO MANUAL INTEGRATION
0214	02242345ECD7.D			1	NO MANUAL INTEGRATION
0235	02242346ECD7.D			1	NO MANUAL INTEGRATION
0256	02242347ECD7.D			1	NO MANUAL INTEGRATION
0317	02242348ECD7.D			1	NO MANUAL INTEGRATION
0338	02242349ECD7.D			1	NO MANUAL INTEGRATION
0359	02242350ECD7.D			1	NO MANUAL INTEGRATION
0420	02242351ECD7.D			1	NO MANUAL INTEGRATION
0441	02242352ECD7.D			1	NO MANUAL INTEGRATION
0502	02242353ECD7.D			1	NO MANUAL INTEGRATION
0523	02242354ECD7.D			1	NO MANUAL INTEGRATION
0544	02242355ECD7.D			1	NO MANUAL INTEGRATION
0605	02242356ECD7.D			1	NO MANUAL INTEGRATION
0626	02242357ECD7.D			1	NO MANUAL INTEGRATION
0647	02242358ECD7.D			1	NO MANUAL INTEGRATION
0708	02242359ECD7.D			1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230224.b\230224.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0729	02242360ECD7.D			1	NO MANUAL INTEGRATION
0750	02242361ECD7.D			1	NO MANUAL INTEGRATION
0811	02242362ECD7.D			1	NO MANUAL INTEGRATION
0832	02242363ECD7.D			1	NO MANUAL INTEGRATION
0853	02242364ECD7.D			1	NO MANUAL INTEGRATION
0914	02242365ECD7.D			1	NO MANUAL INTEGRATION
0935	02242366ECD7.D			1	NO MANUAL INTEGRATION
0956	02242367ECD7.D			1	NO MANUAL INTEGRATION
1017	02242368ECD7.D			1	NO MANUAL INTEGRATION
1038	02242369ECD7.D			1	NO MANUAL INTEGRATION
1059	02242370ECD7.D			1	NO MANUAL INTEGRATION
1120	02242371ECD7.D			1	NO MANUAL INTEGRATION
1141	02242372ECD7.D			1	NO MANUAL INTEGRATION
1202	02242373ECD7.D			1	NO MANUAL INTEGRATION
1223	02242374ECD7.D			1	NO MANUAL INTEGRATION
1244	02242375ECD7.D			1	NO MANUAL INTEGRATION
1305	02242376ECD7.D			1	NO MANUAL INTEGRATION
1326	02242377ECD7.D			1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230224.b\230224.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1347	02242378ECD7.D			1	NO MANUAL INTEGRATION
1408	02242379ECD7.D			1	NO MANUAL INTEGRATION
1429	02242380ECD7.D			1	NO MANUAL INTEGRATION
1450	02242381ECD7.D			1	NO MANUAL INTEGRATION
1511	02242382ECD7.D			1	NO MANUAL INTEGRATION
1532	02242383ECD7.D			1	NO MANUAL INTEGRATION
1553	02242384ECD7.D			1	NO MANUAL INTEGRATION

Security Status Report

Date: 28-Feb-2023 10:53

02242301ECD7.D	Data Locked	richardl, 28-Feb-2023 10:53
02242302ECD7.D	Data Locked	richardl, 28-Feb-2023 10:53
02242303ECD7.D	Data Locked	richardl, 28-Feb-2023 10:53
02242304ECD7.D	Data Locked	richardl, 28-Feb-2023 10:53
02242305ECD7.D	Data Locked	richardl, 28-Feb-2023 10:53
02242306ECD7.D	Data Locked	richardl, 28-Feb-2023 10:53
02242307ECD7.D	Data Locked	richardl, 28-Feb-2023 10:53
02242308ECD7.D	Data Locked	richardl, 28-Feb-2023 10:53
02242309ECD7.D	Data Locked	richardl, 28-Feb-2023 10:53
02242310ECD7.D	Data Locked	richardl, 28-Feb-2023 10:53
02242311ECD7.D	Data Locked	richardl, 28-Feb-2023 10:53
02242312ECD7.D	Data Locked	richardl, 28-Feb-2023 10:53
02242313ECD7.D	Data Locked	richardl, 28-Feb-2023 10:53
02242314ECD7.D	Data Locked	richardl, 28-Feb-2023 10:53
02242315ECD7.D	Data Locked	richardl, 28-Feb-2023 10:53
02242316ECD7.D	Data Locked	richardl, 28-Feb-2023 10:53
02242317ECD7.D	Data Locked	richardl, 28-Feb-2023 10:53
02242318ECD7.D	Data Locked	richardl, 28-Feb-2023 10:53
02242319ECD7.D	Data Locked	richardl, 28-Feb-2023 10:53
02242320ECD7.D	Data Locked	richardl, 28-Feb-2023 10:53

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-FEB-2023 11:12
End Cal Date : 24-FEB-2023 14:42
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230224.b\PCB.m
Last Edit : 24-Feb-2023 15:31 richardl
Curve Type : Average

Calibration File Names:
Level 1: \\target\share\chem4\ecd7.i\230224.b\02242303ECD7.D
Level 2: \\target\share\chem4\ecd7.i\230224.b\02242304ECD7.D
Level 3: \\target\share\chem4\ecd7.i\230224.b\02242306ECD7.D
Level 4: \\target\share\chem4\ecd7.i\230224.b\02242302ECD7.D
Level 5: \\target\share\chem4\ecd7.i\230224.b\02242307ECD7.D
Level 6: \\target\share\chem4\ecd7.i\230224.b\02242305ECD7.D
Level 7: \\target\share\chem4\ecd7.i\230224.b\02242312ECD7.D

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	RRF	% RSD
2 Aroclor-1221(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.00716	0.00716	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.01281	0.01281	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.02975	0.02975	0.000
3 Aroclor-1242(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.02479	0.02479	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.07529	0.07529	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.02343	0.02343	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.03463	0.03463	0.000
4 Aroclor-1232(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.00429	0.00429	0.000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-FEB-2023 11:12
End Cal Date : 24-FEB-2023 14:42
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230224.b\PCB.m
Last Edit : 24-Feb-2023 15:31 richardl
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	___ RRF	% RSD
(2)	*****	*****	*****	*****	*****	*****	0.00850	0.00850	0.000
(3)	*****	*****	*****	*****	*****	*****	0.03848	0.03848	0.000
(4)	*****	*****	*****	*****	*****	*****	0.01635	0.01635	0.000
7 Aroclor-1016(1)	0.03172	0.03253	0.03142	0.03141	0.02856	0.02667	*****	0.03039	7.449
(2)	0.09239	0.09246	0.09222	0.09849	0.09174	0.08849	*****	0.09263	3.499
(3)	0.05165	0.05037	0.04823	0.04393	0.03991	0.03721	*****	0.04522	12.936
(4)	0.03002	0.02894	0.02959	0.03058	0.02852	0.02774	*****	0.02923	3.542
6 Aroclor-1248(1)	*****	*****	*****	*****	*****	*****	0.03903	0.03903	0.000
(2)	*****	*****	*****	*****	*****	*****	0.04961	0.04961	0.000
(3)	*****	*****	*****	*****	*****	*****	0.09360	0.09360	0.000
(4)	*****	*****	*****	*****	*****	*****	0.04765	0.04765	0.000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-FEB-2023 11:12
End Cal Date : 24-FEB-2023 14:42
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230224.b\PCB.m
Last Edit : 24-Feb-2023 15:31 richardl
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	___ RRF	% RSD
8 Aroclor-1254(1)	*****	*****	*****	*****	*****	*****	0.08033	0.08033	0.000
(2)	*****	*****	*****	*****	*****	*****	0.03613	0.03613	0.000
(3)	*****	*****	*****	*****	*****	*****	0.05165	0.05165	0.000
(4)	*****	*****	*****	*****	*****	*****	0.10042	0.10042	0.000
(5)	*****	*****	*****	*****	*****	*****	0.06294	0.06294	0.000
9 Aroclor-1260(1)	0.02926	0.02920	0.02841	0.03096	0.02737	0.02746	*****	0.02878	4.677
(2)	0.02967	0.03006	0.03011	0.03291	0.02910	0.02857	*****	0.03007	5.029
(3)	0.08088	0.08045	0.07954	0.08575	0.07515	0.07674	*****	0.07975	4.627
(4)	0.03905	0.03887	0.03955	0.04485	0.03942	0.03922	*****	0.04016	5.753
(5)	0.01783	0.01715	0.01679	0.01875	0.01664	0.01655	*****	0.01729	4.953
10 Aroclor-1262(1)	*****	*****	*****	*****	*****	*****	0.02454	0.02454	0.000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-FEB-2023 11:12
End Cal Date : 24-FEB-2023 14:42
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230224.b\PCB.m
Last Edit : 24-Feb-2023 15:31 richardl
Curve Type : Average

Compound	20.000 Level 1 / 250.000 Level 7	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
(2)	+++++ / 0.03993	+++++	+++++	+++++	+++++	+++++	0.03993	0.000
(3)	+++++ / 0.04293	+++++	+++++	+++++	+++++	+++++	0.04293	0.000
(4)	+++++ / 0.03923	+++++	+++++	+++++	+++++	+++++	0.03923	0.000
11 Aroclor-1268(1)	+++++ / 0.10250	+++++	+++++	+++++	+++++	+++++	0.10250	0.000
(2)	+++++ / 0.10151	+++++	+++++	+++++	+++++	+++++	0.10151	0.000
(3)	+++++ / 0.08686	+++++	+++++	+++++	+++++	+++++	0.08686	0.000
(4)	+++++ / 0.28598	+++++	+++++	+++++	+++++	+++++	0.28598	0.000
42 2,4-DDE	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
43 2,4-DDD	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
44 2,4-DDT	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
46 4,4-DDE	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-FEB-2023 11:12
End Cal Date : 24-FEB-2023 14:42
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230224.b\PCB.m
Last Edit : 24-Feb-2023 15:31 richardl
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	___ RRF	% RSD
47 4,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
48 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
49 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
50 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 1 Tetrachloro-m-xylene	1.16827	1.24402	1.18546	1.20509	1.12295	1.24114	+++++	1.19449	3.860
$ 13 Decachlorobiphenyl	0.82901	0.80558	0.77587	0.78808	0.73125	0.79742	+++++	0.78787	4.189

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-FEB-2023 11:12
End Cal Date : 24-FEB-2023 14:42
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230224.b\PCB.m\PCB2.m
Last Edit : 24-Feb-2023 15:29 richardl
Curve Type : Average

Calibration File Names:
Level 1: \\target\share\chem4\ecd7.i\230224.b\230224.b\02242303ECD7.D
Level 2: \\target\share\chem4\ecd7.i\230224.b\230224.b\02242304ECD7.D
Level 3: \\target\share\chem4\ecd7.i\230224.b\230224.b\02242306ECD7.D
Level 4: \\target\share\chem4\ecd7.i\230224.b\230224.b\02242302ECD7.D
Level 5: \\target\share\chem4\ecd7.i\230224.b\230224.b\02242307ECD7.D
Level 6: \\target\share\chem4\ecd7.i\230224.b\230224.b\02242305ECD7.D
Level 7: \\target\share\chem4\ecd7.i\230224.b\230224.b\02242312ECD7.D

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	___ RRF	% RSD
1 Aroclor-1221 [2C](1)	+++++	+++++	+++++	+++++	+++++	+++++	0.00757	0.00757	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.01433	0.01433	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.02333	0.02333	0.000
4 Aroclor-1232 [2C](1)	+++++	+++++	+++++	+++++	+++++	+++++	0.00409	0.00409	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.02034	0.02034	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.04067	0.04067	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.01170	0.01170	0.000
3 Aroclor-1242 [2C](1)	+++++	+++++	+++++	+++++	+++++	+++++	0.03717	0.03717	0.000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-FEB-2023 11:12
End Cal Date : 24-FEB-2023 14:42
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230224.b\PCB.m\PCB2.m
Last Edit : 24-Feb-2023 15:29 richardl
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	___ RRF	% RSD
(2)	*****	*****	*****	*****	*****	*****			
	0.07813							0.07813	0.000
(3)	*****	*****	*****	*****	*****	*****			
	0.02431							0.02431	0.000
(4)	*****	*****	*****	*****	*****	*****			
	0.02962							0.02962	0.000
6 Aroclor-1248 [2C](1)	*****	*****	*****	*****	*****	*****			
	0.03820							0.03820	0.000
(2)	*****	*****	*****	*****	*****	*****			
	0.03949							0.03949	0.000
(3)	*****	*****	*****	*****	*****	*****			
	0.04545							0.04545	0.000
(4)	*****	*****	*****	*****	*****	*****			
	0.05457							0.05457	0.000
7 Aroclor-1016 [2C](1)	0.05071	0.05022	0.04868	0.04733	0.04326	0.04080			
	*****							0.04683	8.503
(2)	0.08143	0.09407	0.10159	0.10259	0.09651	0.09362			
	*****							0.09497	8.025
(3)	0.04006	0.04718	0.04613	0.04410	0.04062	0.03926			
	*****							0.04289	7.857
(4)	0.03181	0.03802	0.03707	0.03450	0.03115	0.02936			
	*****							0.03365	10.251

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-FEB-2023 11:12
End Cal Date : 24-FEB-2023 14:42
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230224.b\PCB.m\PCB2.m
Last Edit : 24-Feb-2023 15:29 richardl
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	___ RRF	% RSD
8 Aroclor-1254 [2C](1)	*****	*****	*****	*****	*****	*****	0.06081	0.06081	0.000
(2)	*****	*****	*****	*****	*****	*****	0.04892	0.04892	0.000
(3)	*****	*****	*****	*****	*****	*****	0.10584	0.10584	0.000
(4)	*****	*****	*****	*****	*****	*****	0.10317	0.10317	0.000
(5)	*****	*****	*****	*****	*****	*****	0.06282	0.06282	0.000
10 Aroclor-1262 [2C](1)	*****	*****	*****	*****	*****	*****	0.06831	0.06831	0.000
(2)	*****	*****	*****	*****	*****	*****	0.05818	0.05818	0.000
(3)	*****	*****	*****	*****	*****	*****	0.06601	0.06601	0.000
(4)	*****	*****	*****	*****	*****	*****	0.10341	0.10341	0.000
9 Aroclor-1260 [2C](1)	0.05286	0.04911	0.04696	0.04801	0.04329	0.04201	*****	0.04704	8.422
(2)	0.12976	0.12431	0.12095	0.12664	0.11320	0.10545	*****	0.12005	7.605

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-FEB-2023 11:12
End Cal Date : 24-FEB-2023 14:42
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230224.b\PCB.m\PCB2.m
Last Edit : 24-Feb-2023 15:29 richardl
Curve Type : Average

Compound	20.000 Level 1 / 250.000 Level 7	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	___ RRF	% RSD
(3)	0.03524 / +++++	0.03147	0.02937	0.03208	0.03102	0.03198	0.03186	6.045
(4)	0.08632 / +++++	0.08237	0.08044	0.08393	0.07718	0.07531	0.08092	5.126
11 Aroclor-1268 [2C](1)	+++++ / 0.16109	+++++	+++++	+++++	+++++	+++++	0.16109	0.000
(2)	+++++ / 0.17318	+++++	+++++	+++++	+++++	+++++	0.17318	0.000
(3)	+++++ / 0.14787	+++++	+++++	+++++	+++++	+++++	0.14787	0.000
(4)	+++++ / 0.47260	+++++	+++++	+++++	+++++	+++++	0.47260	0.000
41 2,4-DDE [2C]	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
42 2,4-DDD [2C]	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
44 4,4-DDE [2C]	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
45 4,4-DDD/2,4-DDT [2C]	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
46 4,4-DDT [2C]	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-FEB-2023 11:12
End Cal Date : 24-FEB-2023 14:42
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230224.b\PCB.m\PCB2.m
Last Edit : 24-Feb-2023 15:29 richardl
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	___ RRF	% RSD
48 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
49 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 2 Tetrachloro-m-xylene [2C]	1.21526	1.19545	1.17555	1.21907	1.12560	1.11139	+++++	1.17372	3.897
$ 13 Decachlorobiphenyl [2C]	1.17066	1.20406	1.20549	1.31040	1.21104	1.20797	+++++	1.21827	3.898

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Batch File: \\target\share\chem4\ecd7.i\230224.b
Inst ID: ecd7.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	02242302ECD7	02242303ECD7	02242304ECD7	02242305ECD7	02242306ECD7	02242307ECD7
INJ.DATE:	24-FEB-2023	24-FEB-2023	24-FEB-2023	24-FEB-2023	24-FEB-2023	24-FEB-2023
INJ.TIME:	11:12	11:33	11:54	12:15	12:36	12:57

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
* 41 IS-BNB	3.493	3.492	3.492	3.492	3.491	3.491	3.493	3.393-3.593	3.492	0.001
$ 1 Tetrachloro-m-xylene	5.811	5.809	5.809	5.813	5.809	5.810	5.811	5.711-5.911	5.810	0.002
2 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	4.732	4.632-4.832	+++++	+++++
3 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	7.269	7.169-7.369	+++++	+++++
4 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	4.732	4.632-4.832	+++++	+++++
7 Aroclor-1016	7.272	7.272	7.272	7.270	7.271	7.270	7.272	7.172-7.372	7.271	0.001
6 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	8.403	8.303-8.503	+++++	+++++
8 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	9.295	9.195-9.395	+++++	+++++
9 Aroclor-1260	11.046	11.047	11.046	11.044	11.045	11.044	11.046	10.946-11.146	11.045	0.001
10 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	10.824	10.724-10.924	+++++	+++++
11 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	12.243	12.143-12.343	+++++	+++++
$ 13 Decachlorobiphenyl	13.897	13.893	13.893	13.899	13.892	13.898	13.897	13.797-13.997	13.895	0.003
* 12 IS-HBBP	14.269	14.268	14.268	14.267	14.268	14.268	14.269	14.169-14.369	14.268	0.001
42 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	9.260	9.210-9.310	+++++	+++++
43 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	9.801	9.751-9.851	+++++	+++++
44 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	10.293	10.243-10.343	+++++	+++++
46 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	9.683	9.583-9.783	+++++	+++++

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

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Batch File: \\target\share\chem4\ecd7.i\230224.b
Inst ID: ecd7.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
47 4,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	10.254	10.154-10.354	+++++	+++++
48 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	10.754	10.654-10.854	+++++	+++++
49 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	1.842	1.742-1.942	+++++	+++++
50 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	6.708	6.608-6.808	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd7.i\230224.b\PCB.m\PCB2.m
Batch File: \\target\share\chem4\ecd7.i\230224.b\230224.b
Inst ID: ecd7.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	02242302ECD7	02242303ECD7	02242304ECD7	02242305ECD7	02242306ECD7	02242307ECD7
INJ.DATE:	24-FEB-2023	24-FEB-2023	24-FEB-2023	24-FEB-2023	24-FEB-2023	24-FEB-2023
INJ.TIME:	11:12	11:33	11:54	12:15	12:36	12:57

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
* 40 IS-BNB [2C]	3.928	3.929	3.929	3.929	3.928	3.929	3.928	3.828-4.028	3.929	0.000
$ 2 Tetrachloro-m-xylene [	5.687	5.688	5.688	5.688	5.688	5.688	5.687	5.587-5.787	5.688	0.001
1 Aroclor-1221 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	4.958	4.858-5.058	+++++	+++++
4 Aroclor-1232 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	4.958	4.859-5.059	+++++	+++++
3 Aroclor-1242 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	7.254	7.154-7.354	+++++	+++++
6 Aroclor-1248 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	8.305	8.205-8.405	+++++	+++++
7 Aroclor-1016 [2C]	7.255	7.256	7.256	7.254	7.255	7.256	7.255	7.155-7.355	7.255	0.001
8 Aroclor-1254 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	9.447	9.347-9.547	+++++	+++++
10 Aroclor-1262 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	11.198	11.098-11.298	+++++	+++++
9 Aroclor-1260 [2C]	11.653	11.656	11.655	11.652	11.655	11.653	11.653	11.553-11.753	11.654	0.001
11 Aroclor-1268 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	12.431	12.331-12.531	+++++	+++++
$ 13 Decachlorobiphenyl [2C	14.120	14.120	14.119	14.122	14.119	14.120	14.120	14.020-14.220	14.120	0.001
* 12 IS-HBBP [2C]	15.008	15.008	15.008	15.008	15.007	15.008	15.008	14.908-15.108	15.008	0.000
41 2,4-DDE [2C]	+++++	+++++	+++++	+++++	+++++	+++++	9.911	9.861-9.961	+++++	+++++
42 2,4-DDD [2C]	+++++	+++++	+++++	+++++	+++++	+++++	9.536	9.486-9.586	+++++	+++++
44 4,4-DDE [2C]	+++++	+++++	+++++	+++++	+++++	+++++	10.209	10.109-10.309	+++++	+++++
45 4,4-DDD/2,4-DDT [2C]	+++++	+++++	+++++	+++++	+++++	+++++	10.667	10.567-10.767	+++++	+++++

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

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd7.i\230224.b\PCB.m\PCB2.m
Batch File: \\target\share\chem4\ecd7.i\230224.b\230224.b
Inst ID: ecd7.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
46 4,4-DDT [2C]	+++++	+++++	+++++	+++++	+++++	+++++	11.092	10.992-11.192	+++++	+++++
48 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	1.703	1.603-1.803	+++++	+++++
49 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	7.178	7.078-7.278	+++++	+++++

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242301ECD7.D
Data file 2: /230224.b/230224.b/02242301ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: IB
Client ID:
Injection Date: 24-FEB-2023 10:51
Report Date: 02/28/2023 09:50
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.826	0.019	382217	5.683	-0.002	180378	33.8	36.5	7.7	Tetrachloro-m-xylene
13.904	0.011	534110	14.120	0.001	295605	35.3	37.2	5.2	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	756896	12.3
Hexabromobiphenyl	1429847	1534275	7.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	336543	6.8
Hexabromobiphenyl	513946	521508	1.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	6.321	0.025	1873	31.1
Aroclor-1221	3	---			0.0	3	6.633	0.012	314	3.2
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	7.698	0.043	2193	6.0	3	---			0.0
Aroclor-1232	4	8.505	-0.076	11525	74.5	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	7.698	0.042	2193	3.1	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	8.505	-0.074	11525	35.2	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1248	1	---			0.0	1	---			0.0
Aroclor-1248	2	---			0.0	2	---			0.0
Aroclor-1248	3	---			0.0	3	---			0.0
Aroclor-1248	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1254	1	---			0.0	1	---			0.0
Aroclor-1254	2	---			0.0	2	---			0.0
Aroclor-1254	3	9.596	-0.072	31424	64.3	3	---			0.0
Aroclor-1254	4	---			0.0	4	---			0.0
Aroclor-1254	5	10.167	-0.010	18361	30.8	5	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1260	1	11.098	0.054	6994	12.7	1	---			0.0
Aroclor-1260	2	---			0.0	2	---			0.0
Aroclor-1260	3	11.706	-0.027	7806	5.1	3	---			0.0
Aroclor-1260	4	---			0.0	4	---			0.0
Aroclor-1260	5	---			0.0	NS	---			----
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1262	1	10.824	-0.005	16873	35.8	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	13.040	0.053	14031	18.6	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	12.709	0.009	6037	3.6	3	12.891	-0.001	659	0.7
Aroclor-1268	4	13.499	0.010	12396	2.3	4	13.710	0.001	1848	0.6
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			

Total PCB Area Col1 (5.906 - 13.793) = 260205 Col1 Total PCB = 0.0 ppm*

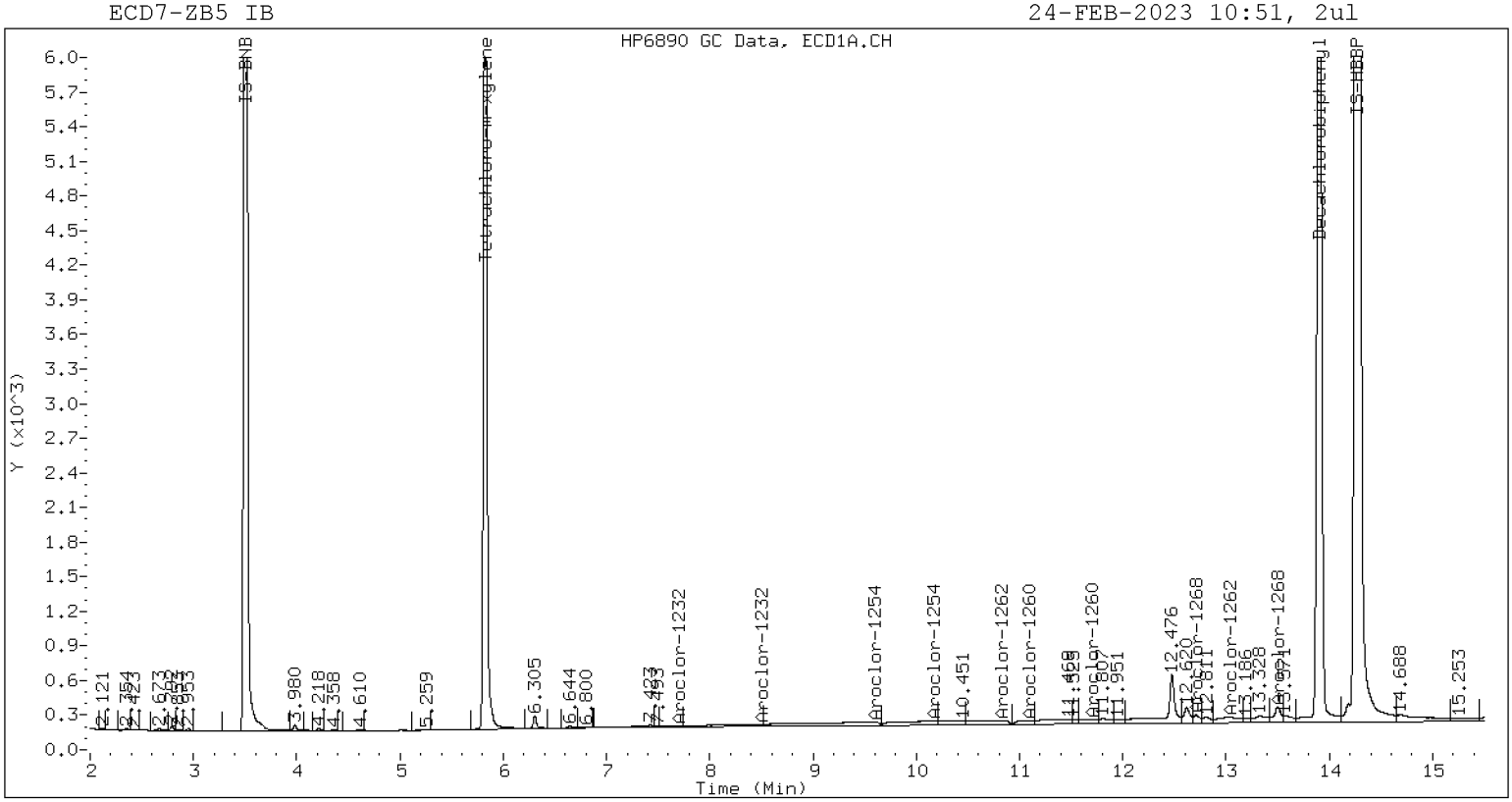
Total PCB Area Col2 (5.785 - 14.019) = 18252 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

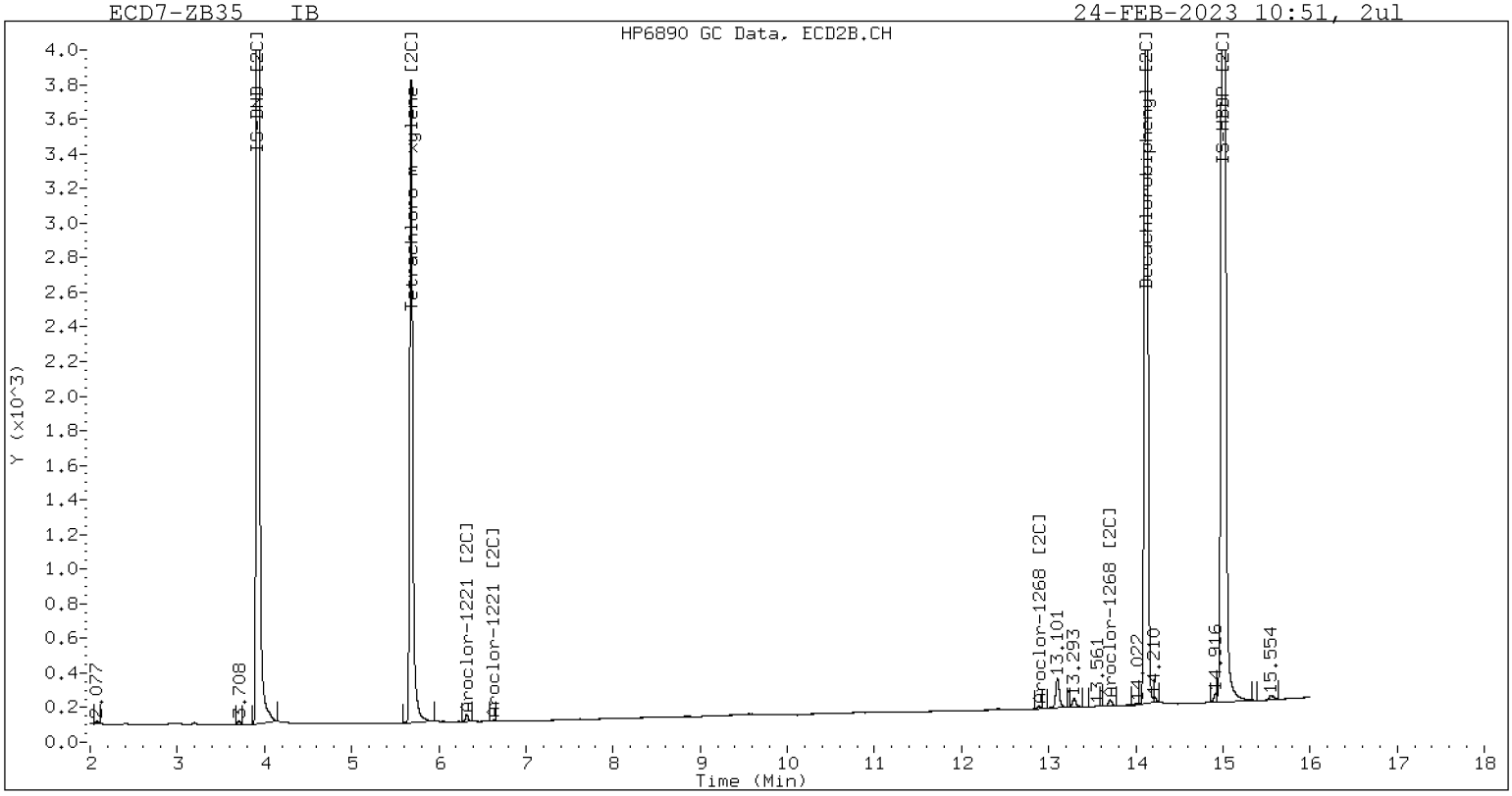
PCB Dual Column Chromatograms

ECD7-ZB5 IB 24-FEB-2023 10:51, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 IB 24-FEB-2023 10:51, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242302ECD7.D
Data file 2: /230224.b/230224.b/02242302ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.25PPMAR1660
Client ID:
Injection Date: 24-FEB-2023 11:12
Report Date: 02/28/2023 09:50
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.811	0.005	405980	5.687	0.002	192160	40.4	41.5	2.9	Tetrachloro-m-xylene
13.897	0.004	563414	14.120	0.001	336737	40.0	43.0	7.3	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	673778	0.0
Hexabromobiphenyl	1429847	1429847	0.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	315256	0.0
Hexabromobiphenyl	513946	513946	0.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.272	0.001	66125	258.4	1	7.255	-0.001	46626	252.6
Aroclor-1016	2	7.654	-0.000	207370	265.8	2	7.855	-0.001	101071	270.1
Aroclor-1016	3	7.792	0.002	92507	242.9	3	8.055	0.001	43448	257.1
Aroclor-1016	4	8.406	0.001	64388	261.5	4	8.306	-0.000	33986	256.3
Total Col1Ave (4 peaks):					257.2	Total Col2Ave (4 peaks):				259.0 RPD = 1
Corrected Ave (3 peaks):					254.3	Corrected Ave (3 peaks):				255.3 RPD = 0
CalAmt %D:					2.9	CalAmt %D:				3.6
Aroclor-1260	1	11.046	0.001	138355	269.0	1	11.653	0.001	77114	255.2
Aroclor-1260	2	11.363	0.002	147051	273.6	2	11.918	0.001	203401	263.7
Aroclor-1260	3	11.736	0.003	383171	268.8	3	12.435	-0.000	51517	251.7
Aroclor-1260	4	12.141	0.002	200399	279.2	4	12.502	0.001	134797	259.3
Aroclor-1260	5	12.247	0.003	83796	271.2	NS	---			----
Total Col1Ave (5 peaks):					272.4	Total Col2Ave (4 peaks):				257.5 RPD = 6
Corrected Ave (4 peaks):					270.7	Corrected Ave (3 peaks):				255.4 RPD = 6
CalAmt %D:					8.9	CalAmt %D:				3.0

Total PCB Area Col1 (5.906 - 13.793) = 4024419 Col1 Total PCB = 0.5 ppm*

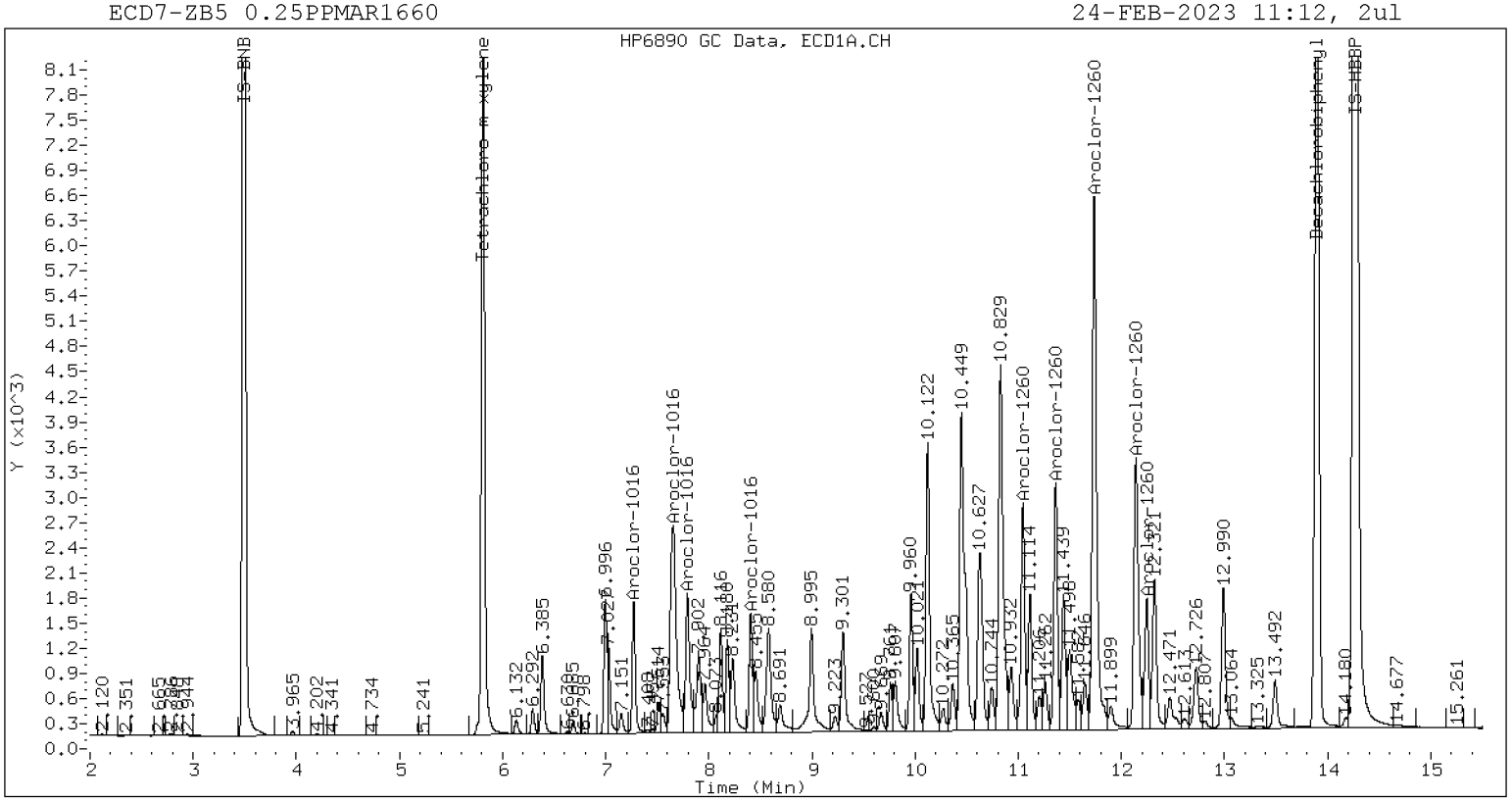
Total PCB Area Col2 (5.785 - 14.019) = 1889311 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

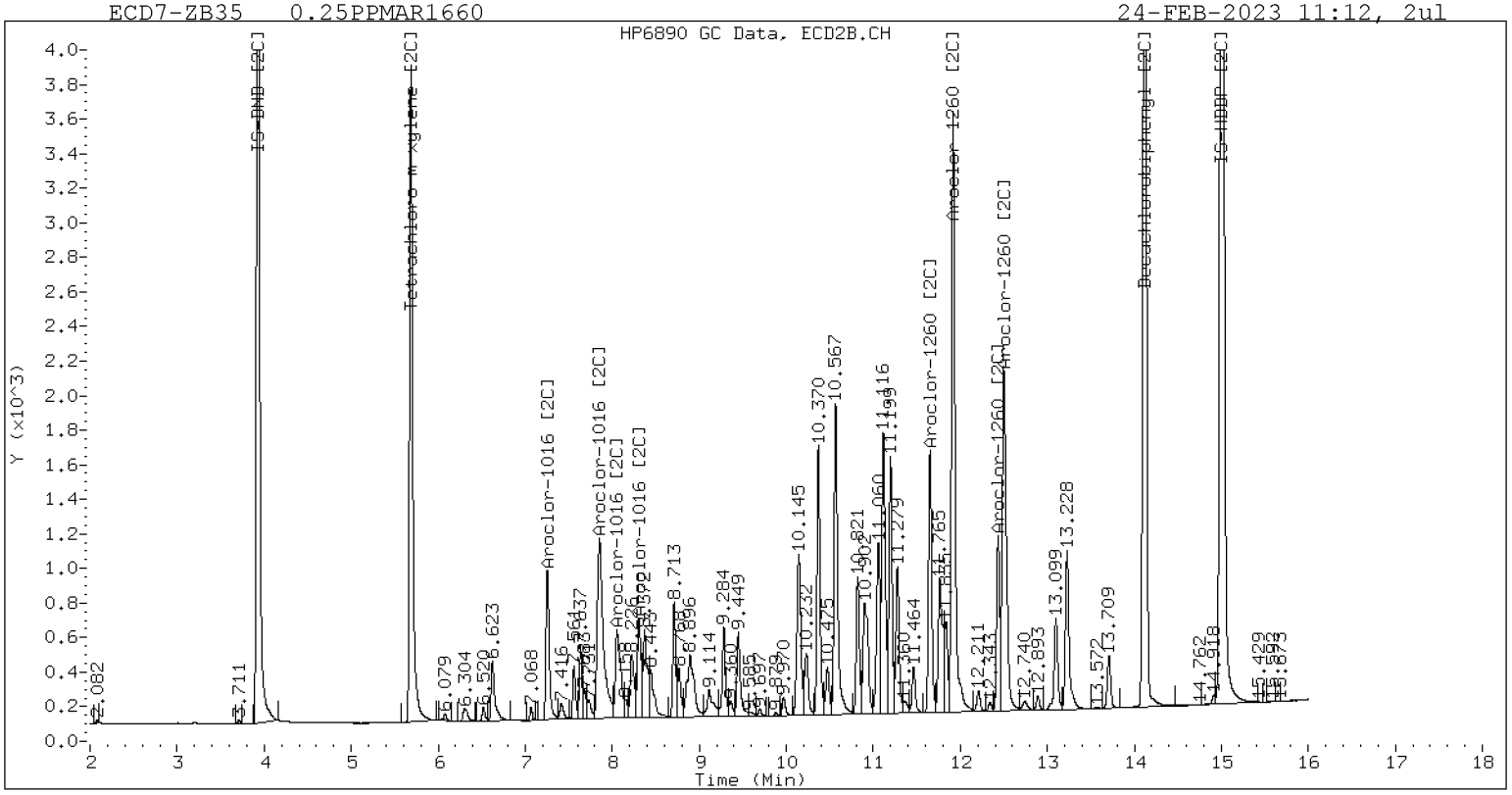
PCB Dual Column Chromatograms

ECD7-ZB5 0.25PPMAR1660 24-FEB-2023 11:12, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.25PPMAR1660 24-FEB-2023 11:12, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242303ECD7.D
Data file 2: /230224.b/230224.b/02242303ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.02PPMAR1660
Client ID:
Injection Date: 24-FEB-2023 11:33
Report Date: 02/28/2023 09:50
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	0.002	29768	5.688	0.003	14932	3.1	3.3	5.7	Tetrachloro-m-xylene
13.893	0.000	45992	14.120	0.000	23950	3.4	3.1	9.1	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	637010	-5.5
Hexabromobiphenyl	1429847	1386953	-3.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	307177	-2.6
Hexabromobiphenyl	513946	511463	-0.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.272	0.001	5052	20.9	1	7.256	0.000	3894	21.7
Aroclor-1016	2	7.659	0.005	14714	19.9	2	7.864	0.008	6253	17.1
Aroclor-1016	3	7.795	0.005	8226	22.8	3	8.060	0.006	3076	18.7
Aroclor-1016	4	8.407	0.002	4780	20.5	4	8.309	0.002	2443	18.9
Total Col1Ave (4 peaks):					21.1	Total Col2Ave (4 peaks):				19.1 RPD = 10
Corrected Ave (3 peaks):					20.5	Corrected Ave (3 peaks):				18.2 RPD = 11
CalAmt %D:					5.3	CalAmt %D:				-4.5
Aroclor-1260	1	11.047	0.003	10147	20.3	1	11.656	0.003	6759	22.5
Aroclor-1260	2	11.364	0.003	10287	19.7	2	11.922	0.005	16592	21.6
Aroclor-1260	3	11.740	0.006	28043	20.3	3	12.438	0.002	4506	22.1
Aroclor-1260	4	12.145	0.006	13540	19.4	4	12.505	0.004	11037	21.3
Aroclor-1260	5	12.246	0.002	6182	20.6	NS	---			----
Total Col1Ave (5 peaks):					20.1	Total Col2Ave (4 peaks):				21.9 RPD = 9
Corrected Ave (4 peaks):					19.9	Corrected Ave (3 peaks):				21.7 RPD = 8
CalAmt %D:					0.4	CalAmt %D:				9.4

Total PCB Area Col1 (5.906 - 13.793) = 324832 Col1 Total PCB = 0.0 ppm*

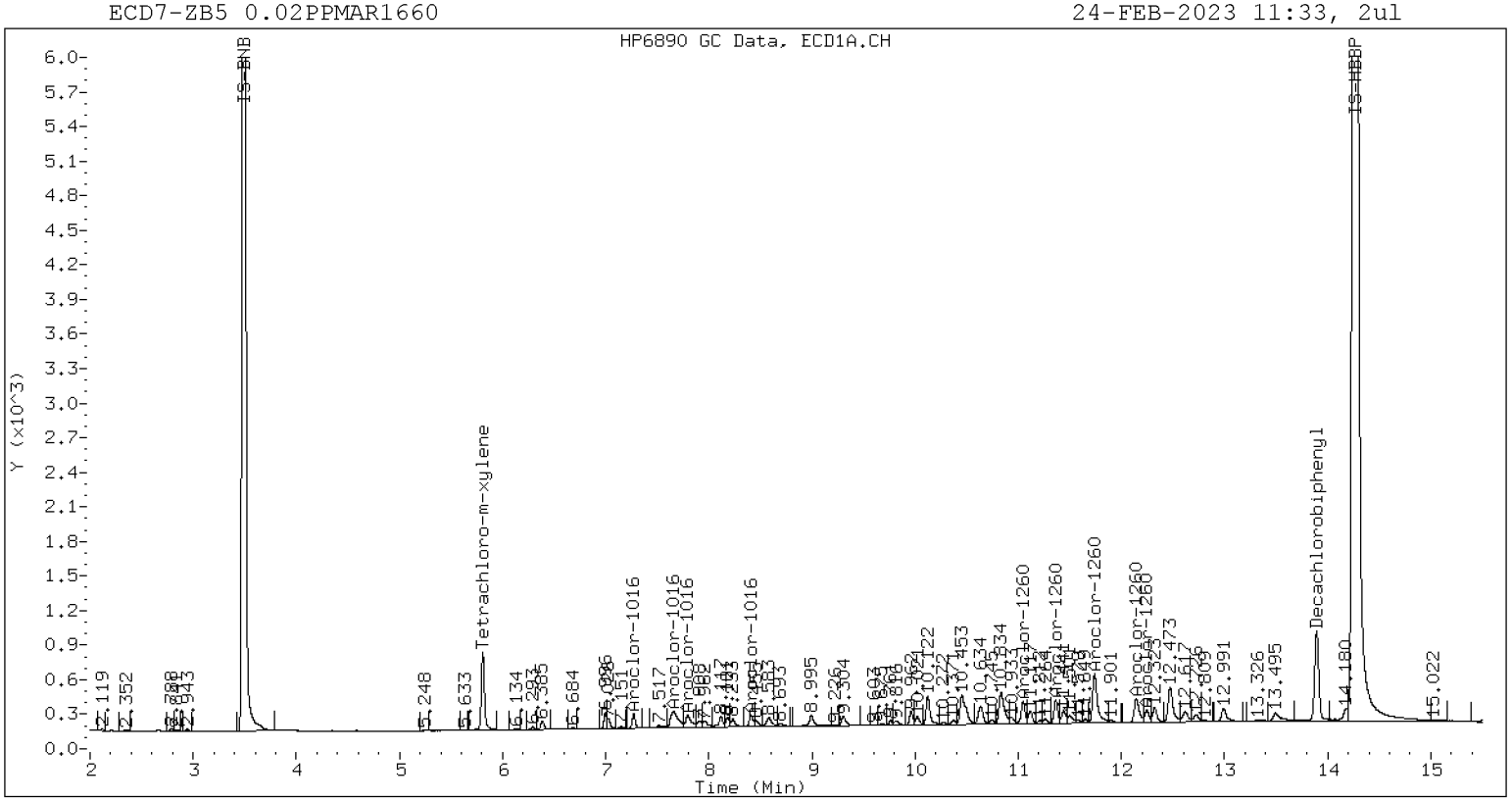
Total PCB Area Col2 (5.785 - 14.019) = 157149 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

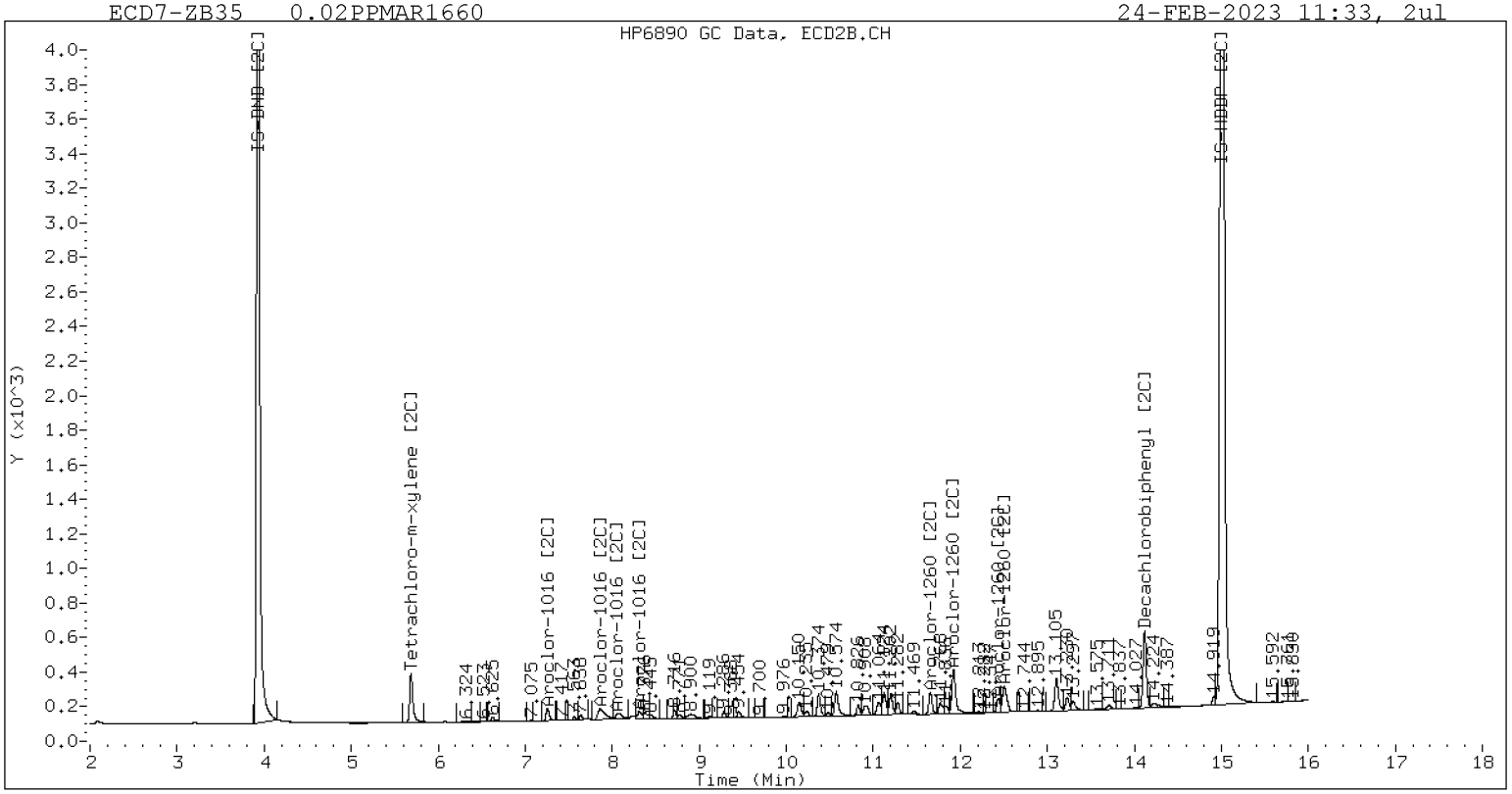
PCB Dual Column Chromatograms

ECD7-ZB5 0.02PPMAR1660 24-FEB-2023 11:33, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.02PPMAR1660 24-FEB-2023 11:33, 2ul

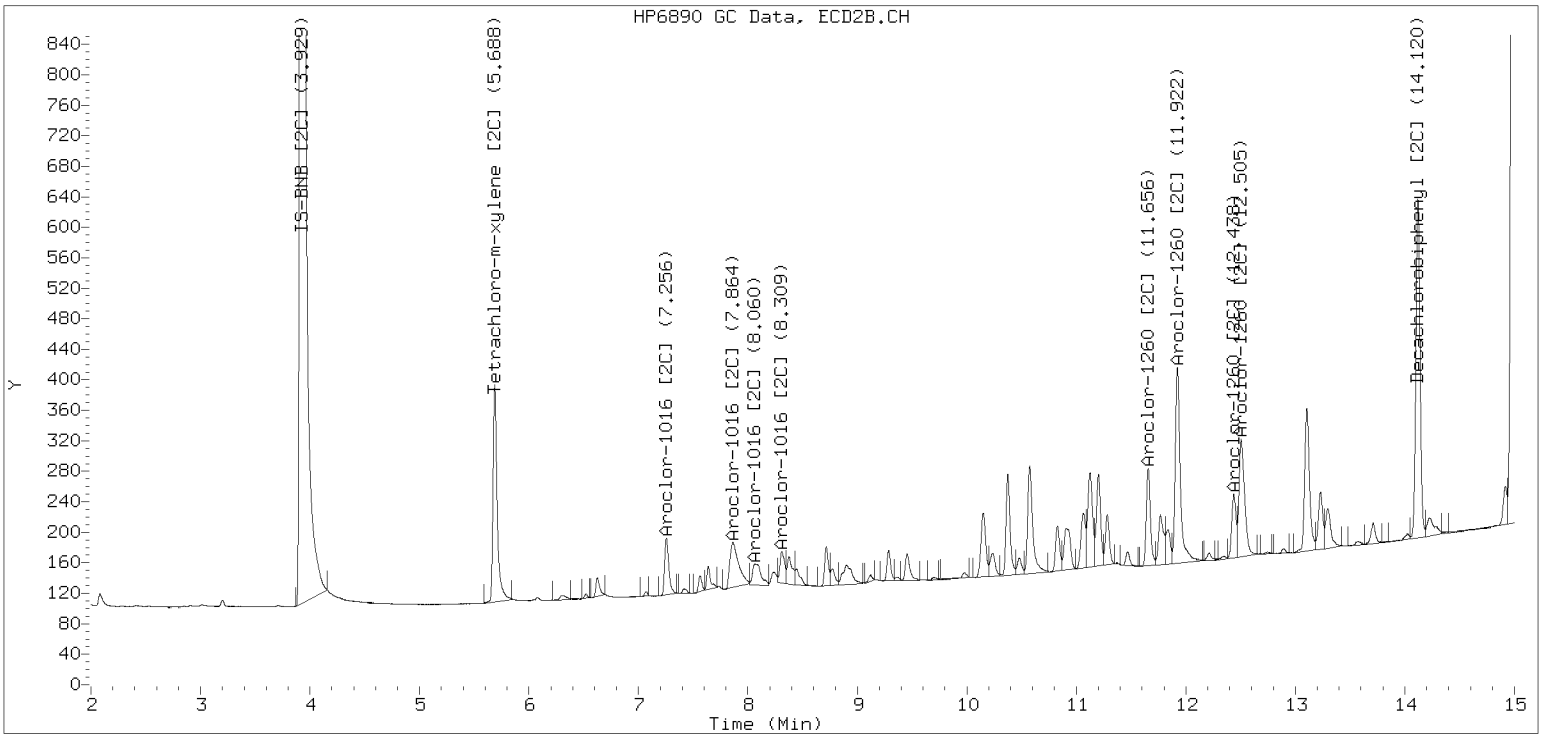


ZB-35 Manual Integration: YES

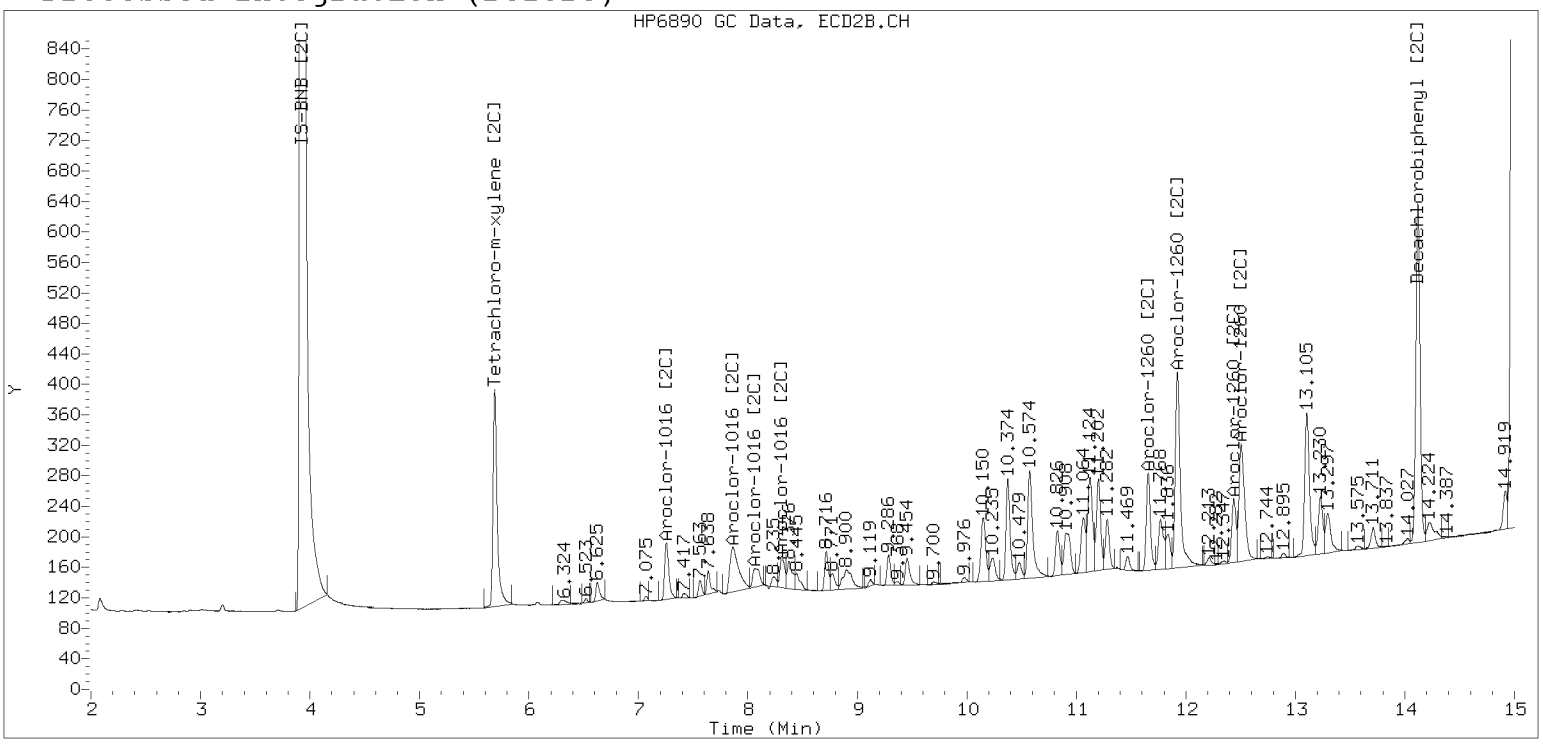
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230224.b/230224.b/02242303ECD7.D Injection Date: 24-FEB-2023

Manual Integration (After)



Processed Integration (Before)



Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242304ECD7.D
Data file 2: /230224.b/230224.b/02242304ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.05PPMAR1660
Client ID:
Injection Date: 24-FEB-2023 11:54
Report Date: 02/28/2023 09:50
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	0.003	78493	5.688	0.003	36772	8.3	8.1	2.2	Tetrachloro-m-xylene
13.893	-0.000	113544	14.119	-0.000	62745	8.2	7.9	3.4	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	630965	-6.4
Hexabromobiphenyl	1429847	1409464	-1.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	307599	-2.4
Hexabromobiphenyl	513946	521112	1.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.272	0.002	12829	53.5	1	7.256	0.000	9654	53.6
Aroclor-1016	2	7.660	0.006	36461	49.9	2	7.864	0.008	18085	49.5
Aroclor-1016	3	7.795	0.005	19865	55.7	3	8.063	0.008	9071	55.0
Aroclor-1016	4	8.408	0.003	11411	49.5	4	8.310	0.003	7309	56.5
Total Col1Ave (4 peaks):					52.2	Total Col2Ave (4 peaks):				53.7 RPD = 3
Corrected Ave (3 peaks):					51.0	Corrected Ave (3 peaks):				52.7 RPD = 3
CalAmt %D:					4.3	CalAmt %D:				7.3
Aroclor-1260	1	11.046	0.002	25727	50.7	1	11.655	0.002	15996	52.2
Aroclor-1260	2	11.363	0.002	26482	50.0	2	11.922	0.004	40487	51.8
Aroclor-1260	3	11.739	0.005	70871	50.4	3	12.437	0.002	10248	49.4
Aroclor-1260	4	12.143	0.004	34239	48.4	4	12.506	0.004	26828	50.9
Aroclor-1260	5	12.246	0.002	15109	49.6	NS	---			----
Total Col1Ave (5 peaks):					49.8	Total Col2Ave (4 peaks):				51.1 RPD = 2
Corrected Ave (4 peaks):					49.6	Corrected Ave (3 peaks):				50.7 RPD = 2
CalAmt %D:					-0.3	CalAmt %D:				2.1

Total PCB Area Col1 (5.906 - 13.793) = 758292 Col1 Total PCB = 0.1 ppm*

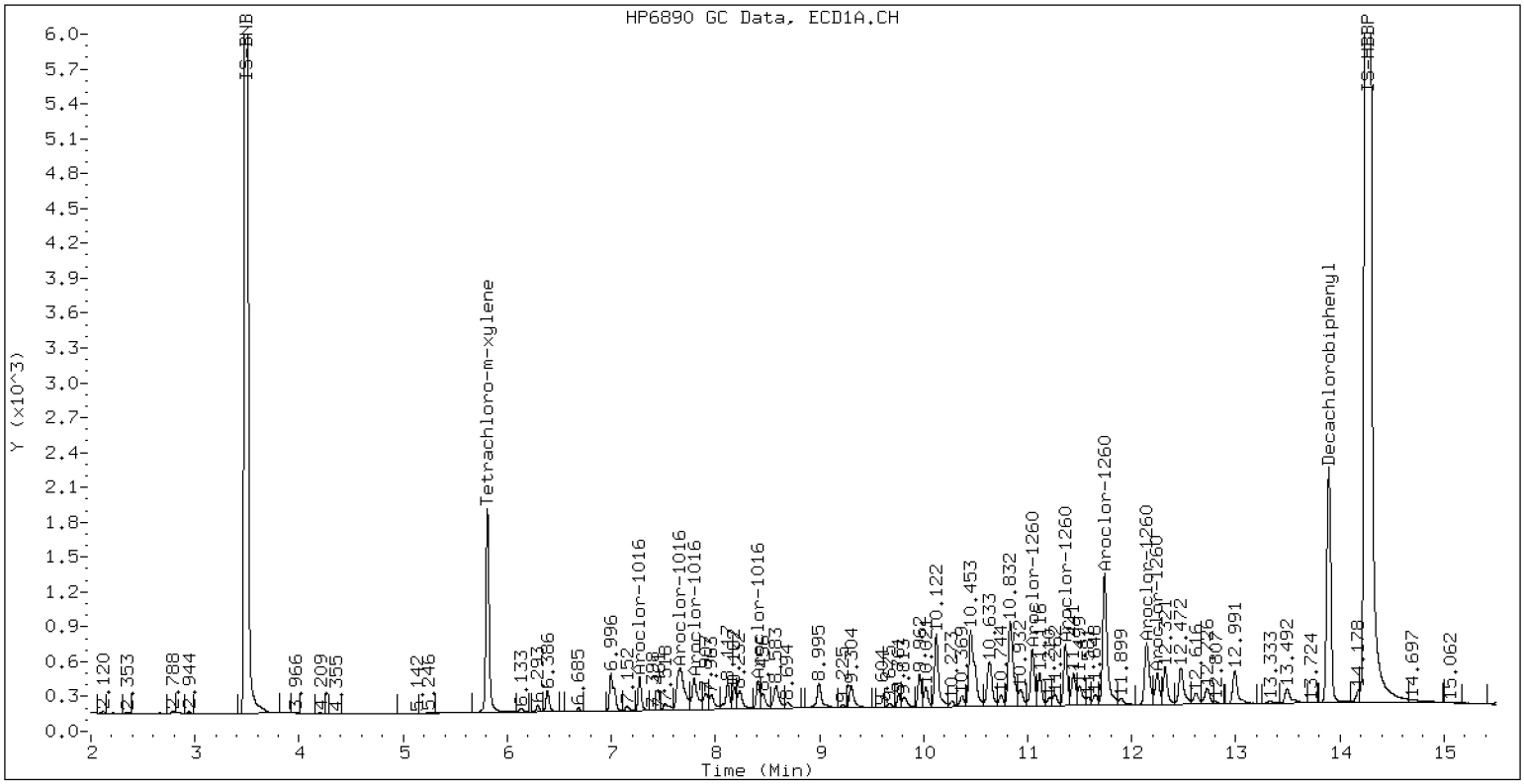
Total PCB Area Col2 (5.785 - 14.019) = 386383 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

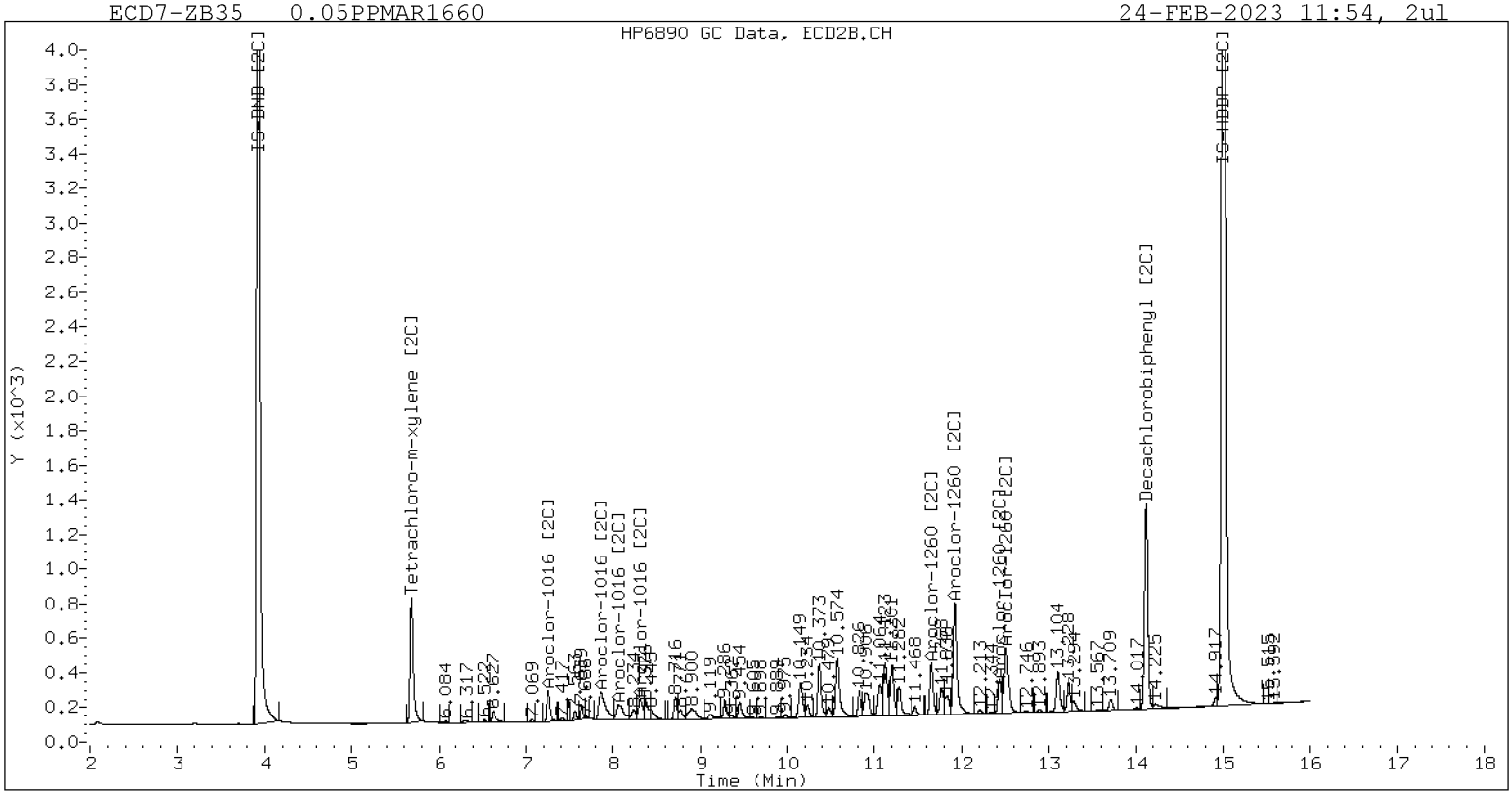
PCB Dual Column Chromatograms

ECD7-ZB5 0.05PPMAR1660 24-FEB-2023 11:54, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.05PPMAR1660 24-FEB-2023 11:54, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242305ECD7.D
Data file 2: /230224.b/230224.b/02242305ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 1.0PPMAR1660
Client ID:
Injection Date: 24-FEB-2023 12:15
Report Date: 02/28/2023 09:50
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.813	0.006	1641874	5.688	0.003	709674	166.2	151.5	9.3	Tetrachloro-m-xylene
13.899	0.006	2344583	14.122	0.002	1300114	161.9	158.6	2.1	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	661440	-1.8
Hexabromobiphenyl	1429847	1470100	2.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	319272	1.3
Hexabromobiphenyl	513946	538138	4.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	7.270	-0.000	220519	877.8	1	7.254	-0.001	162833	871.2
Aroclor-1016	2	7.652	-0.002	731607	955.3	2	7.852	-0.004	373610	985.8
Aroclor-1016	3	7.789	-0.001	307629	822.8	3	8.051	-0.003	156666	915.2
Aroclor-1016	4	8.404	-0.001	229387	949.1	4	8.305	-0.002	117186	872.6
Total Col1Ave (4 peaks):					901.3	Total Col2Ave (4 peaks):				911.2 RPD = 1
Corrected Ave (3 peaks):					883.3	Corrected Ave (3 peaks):				886.3 RPD = 0
CalAmt %D:					-9.9	CalAmt %D:				-8.9
Aroclor-1260	1	11.044	-0.000	504641	954.2	1	11.652	-0.000	282606	893.1
Aroclor-1260	2	11.360	-0.001	524931	950.0	2	11.917	-0.000	709329	878.4
Aroclor-1260	3	11.734	-0.000	1410270	962.3	3	12.434	-0.001	215124	1003.8
Aroclor-1260	4	12.137	-0.002	720770	976.7	4	12.501	-0.001	506566	930.6
Aroclor-1260	5	12.243	-0.001	304211	957.7	NS	---			----
Total Col1Ave (5 peaks):					960.2	Total Col2Ave (4 peaks):				926.5 RPD = 4
Corrected Ave (4 peaks):					956.0	Corrected Ave (3 peaks):				900.7 RPD = 6
CalAmt %D:					-4.0	CalAmt %D:				-7.4

Total PCB Area Col1 (5.906 - 13.793) = 14454279 Col1 Total PCB = 1.8 ppm*

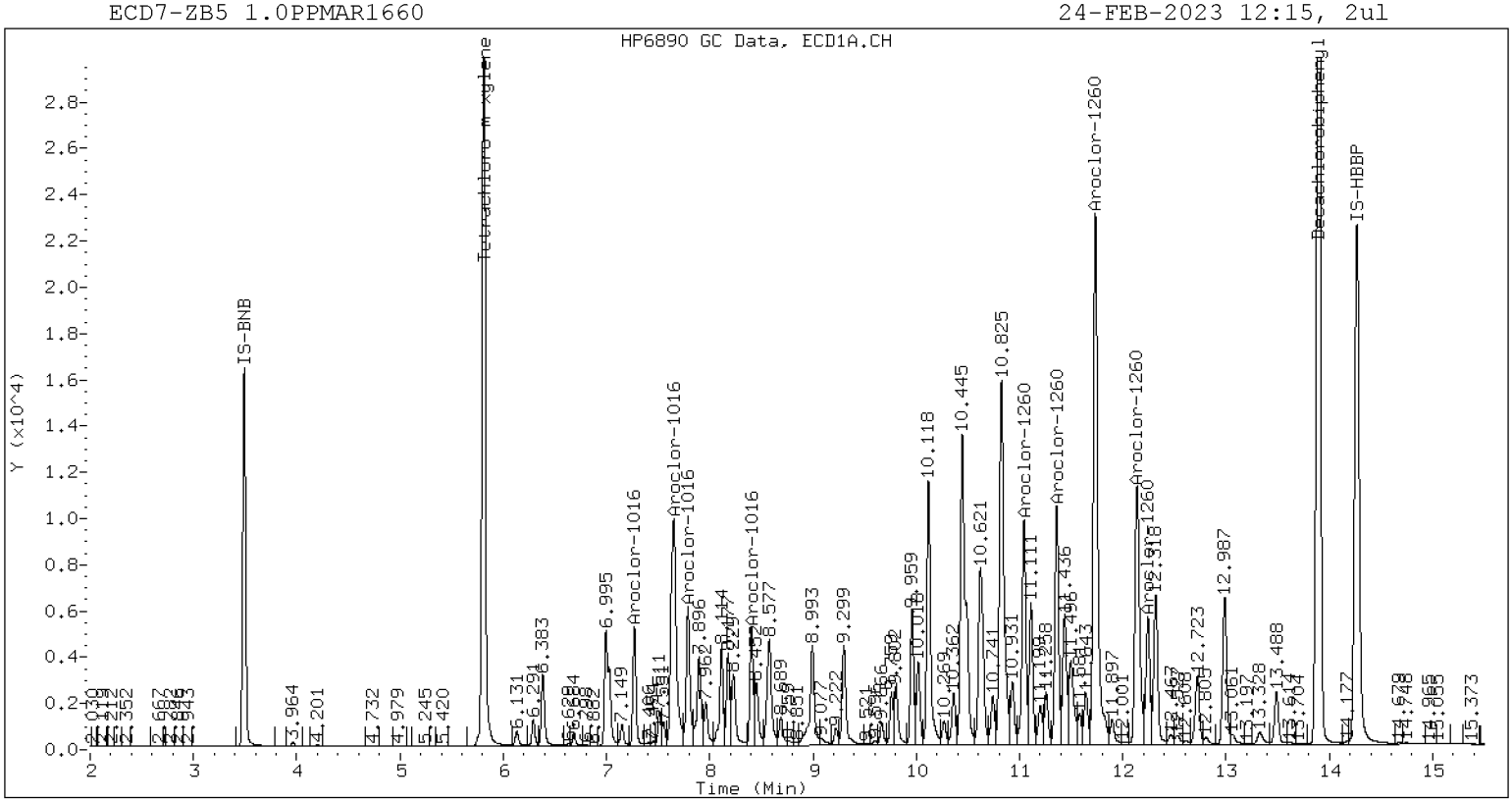
Total PCB Area Col2 (5.785 - 14.019) = 7029563 Col2 Total PCB = 1.8 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

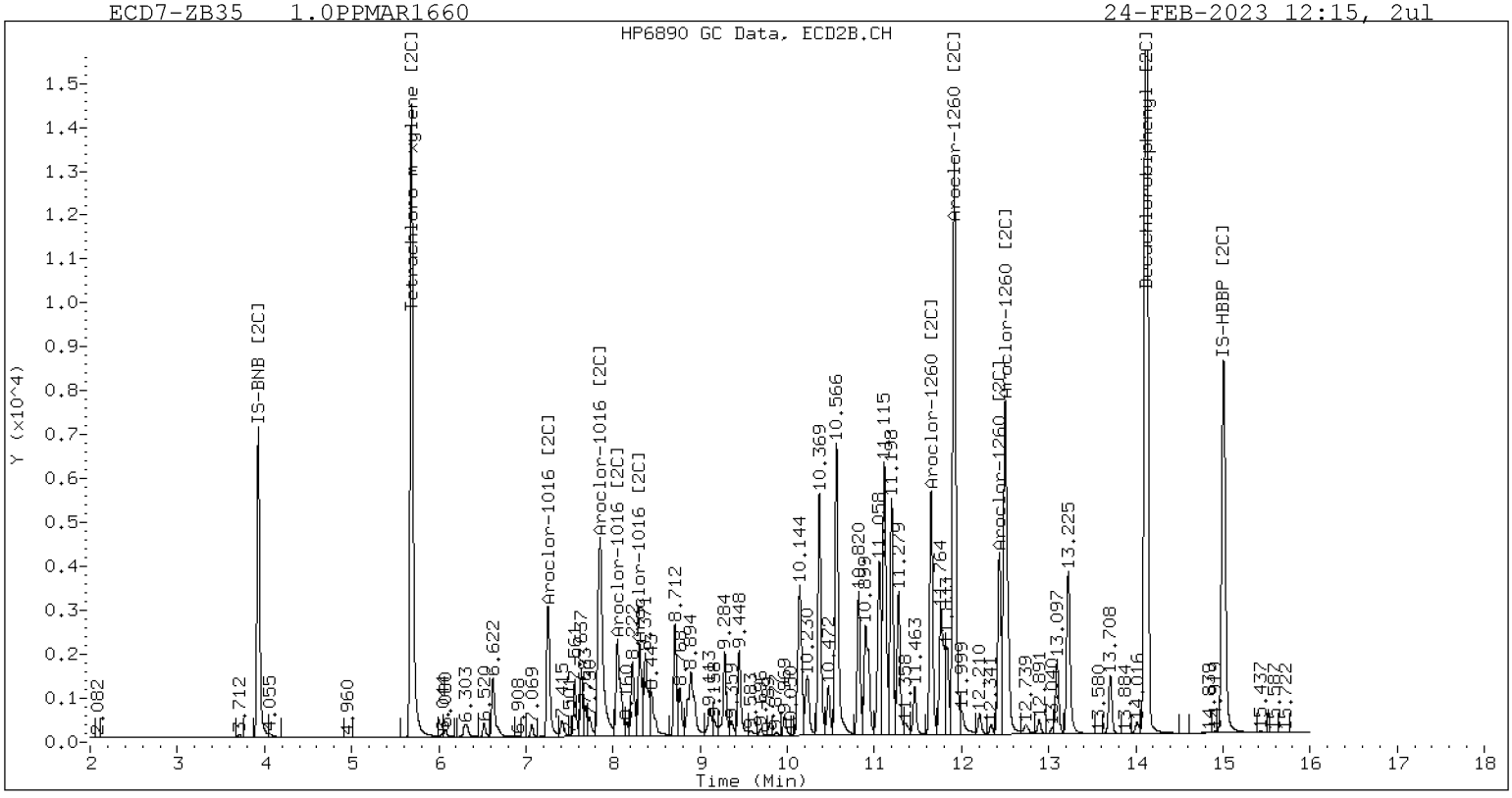
PCB Dual Column Chromatograms

ECD7-ZB5 1.0PPMAR1660 24-FEB-2023 12:15, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 1.0PPMAR1660 24-FEB-2023 12:15, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242306ECD7.D
Data file 2: /230224.b/230224.b/02242306ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.1PPMAR1660
Client ID:
Injection Date: 24-FEB-2023 12:36
Report Date: 02/28/2023 09:50
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	0.002	155528	5.688	0.003	74628	15.9	16.0	0.9	Tetrachloro-m-xylene
13.892	-0.001	227253	14.119	-0.000	128496	15.8	15.8	0.5	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	655979	-2.6
Hexabromobiphenyl	1429847	1464509	2.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	317418	0.7
Hexabromobiphenyl	513946	532962	3.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.271	0.000	25761	103.4	1	7.255	-0.000	19315	103.9
Aroclor-1016	2	7.657	0.003	75616	99.6	2	7.863	0.007	40308	107.0
Aroclor-1016	3	7.794	0.004	39547	106.7	3	8.059	0.005	18304	107.6
Aroclor-1016	4	8.406	0.001	24260	101.2	4	8.309	0.002	14708	110.2
Total Col1Ave (4 peaks):					102.7	Total Col2Ave (4 peaks):				107.2 RPD = 4
Corrected Ave (3 peaks):					101.4	Corrected Ave (3 peaks):				106.2 RPD = 5
CalAmt %D:					2.7	CalAmt %D:				7.2
Aroclor-1260	1	11.045	0.000	52009	98.7	1	11.655	0.002	31282	99.8
Aroclor-1260	2	11.362	0.001	55116	100.1	2	11.920	0.003	80574	100.7
Aroclor-1260	3	11.738	0.004	145604	99.7	3	12.437	0.002	19566	92.2
Aroclor-1260	4	12.141	0.002	72408	98.5	4	12.503	0.001	53588	99.4
Aroclor-1260	5	12.245	0.001	30745	97.2	NS	---			----
Total Col1Ave (5 peaks):					98.8	Total Col2Ave (4 peaks):				98.0 RPD = 1
Corrected Ave (4 peaks):					98.5	Corrected Ave (3 peaks):				97.1 RPD = 1
CalAmt %D:					-1.2	CalAmt %D:				-2.0

Total PCB Area Col1 (5.906 - 13.793) = 1555762 Col1 Total PCB = 0.2 ppm*

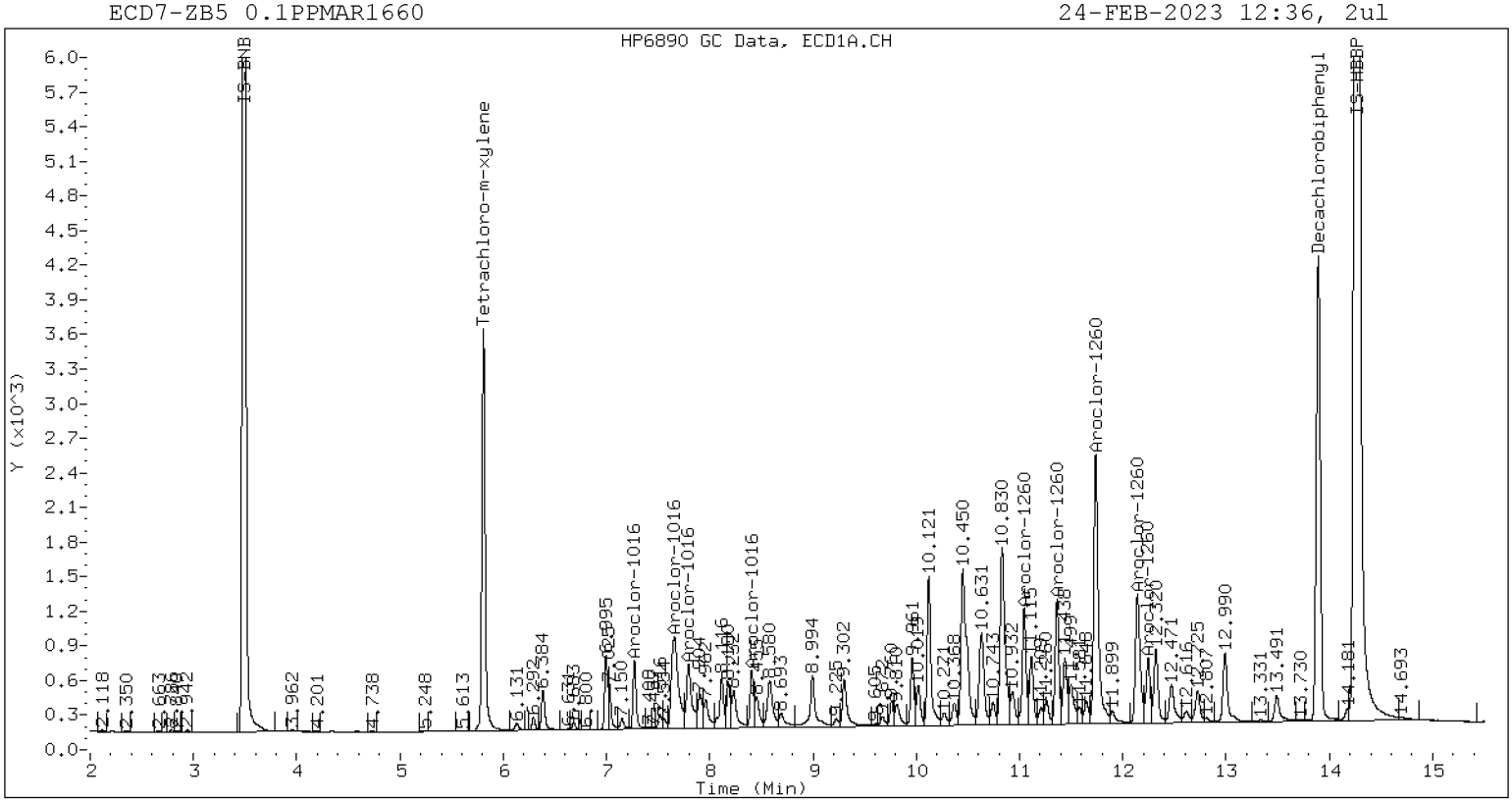
Total PCB Area Col2 (5.785 - 14.019) = 764924 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

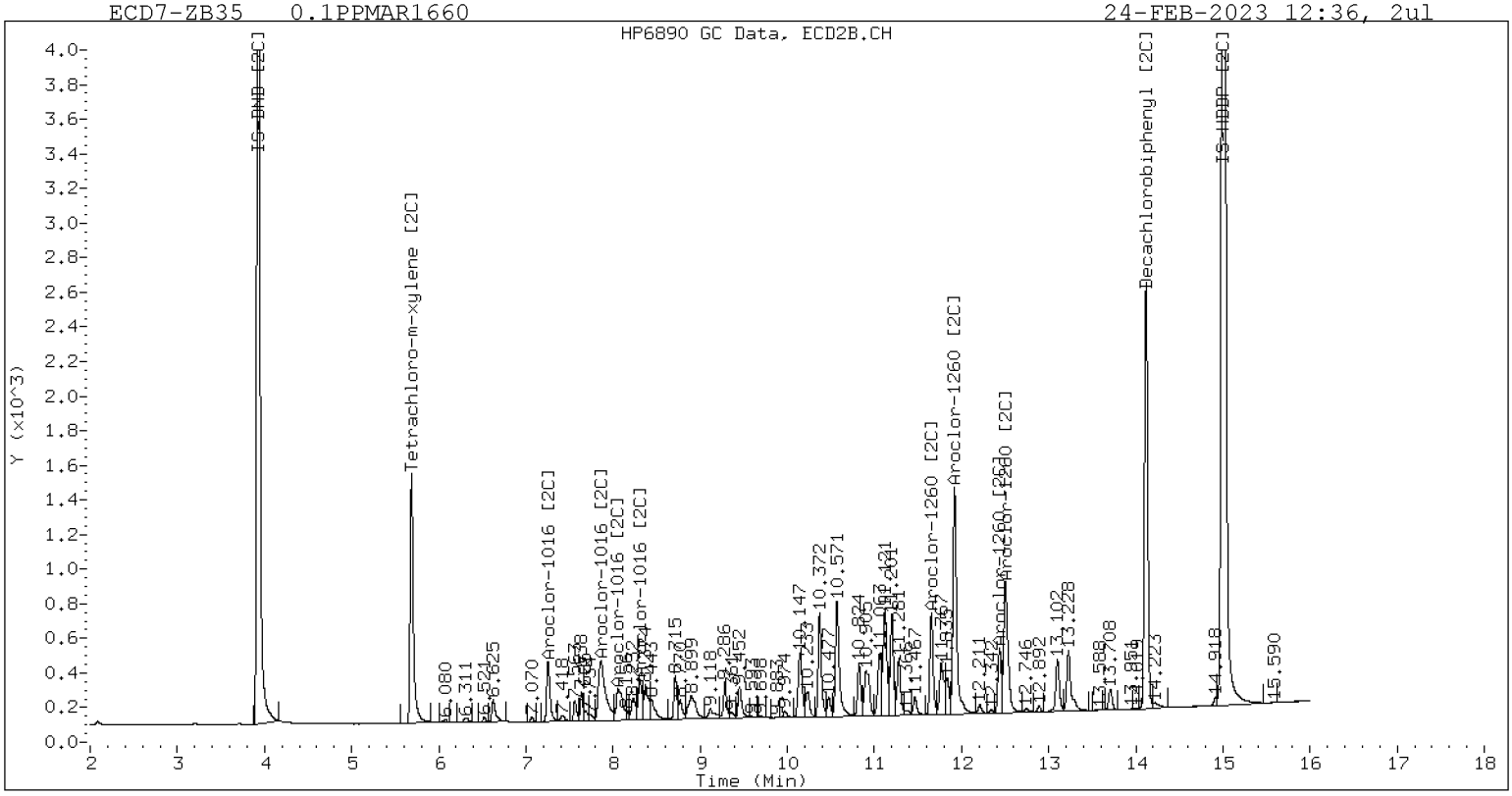
PCB Dual Column Chromatograms

ECD7-ZB5 0.1PPMAR1660 24-FEB-2023 12:36, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.1PPMAR1660 24-FEB-2023 12:36, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242307ECD7.D
Data file 2: /230224.b/230224.b/02242307ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.5PPMAR1660
Client ID:
Injection Date: 24-FEB-2023 12:57
Report Date: 02/28/2023 09:50
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.810	0.004	724614	5.688	0.003	359257	75.2	76.7	2.0	Tetrachloro-m-xylene
13.898	0.005	1056911	14.120	0.000	650153	74.3	79.5	6.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	645275	-4.2
Hexabromobiphenyl	1429847	1445345	1.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	319170	1.2
Hexabromobiphenyl	513946	536853	4.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.270	0.000	115193	470.0	1	7.256	0.000	86287	461.8
Aroclor-1016	2	7.654	0.000	369991	495.2	2	7.856	0.000	192524	508.1
Aroclor-1016	3	7.790	0.000	160952	441.3	3	8.055	0.000	81039	473.6
Aroclor-1016	4	8.405	0.000	115032	487.9	4	8.307	0.000	62136	462.8
Total Col1Ave (4 peaks):					473.6	Total Col2Ave (4 peaks):				476.6 RPD = 1
Corrected Ave (3 peaks):					466.4	Corrected Ave (3 peaks):				466.1 RPD = 0
CalAmt %D:					-5.3	CalAmt %D:				-4.7
Aroclor-1260	1	11.044	0.000	247212	475.5	1	11.653	0.000	145247	460.1
Aroclor-1260	2	11.361	0.000	262877	483.9	2	11.918	0.000	379838	471.5
Aroclor-1260	3	11.734	0.000	678830	471.1	3	12.436	0.000	104092	486.9
Aroclor-1260	4	12.139	0.000	356067	490.7	4	12.502	0.000	258953	476.9
Aroclor-1260	5	12.244	0.000	150280	481.2	NS	---			----
Total Col1Ave (5 peaks):					480.5	Total Col2Ave (4 peaks):				473.8 RPD = 1
Corrected Ave (4 peaks):					477.9	Corrected Ave (3 peaks):				469.5 RPD = 2
CalAmt %D:					-3.9	CalAmt %D:				-5.2

Total PCB Area Col1 (5.906 - 13.793) = 7134169 Col1 Total PCB = 0.9 ppm*

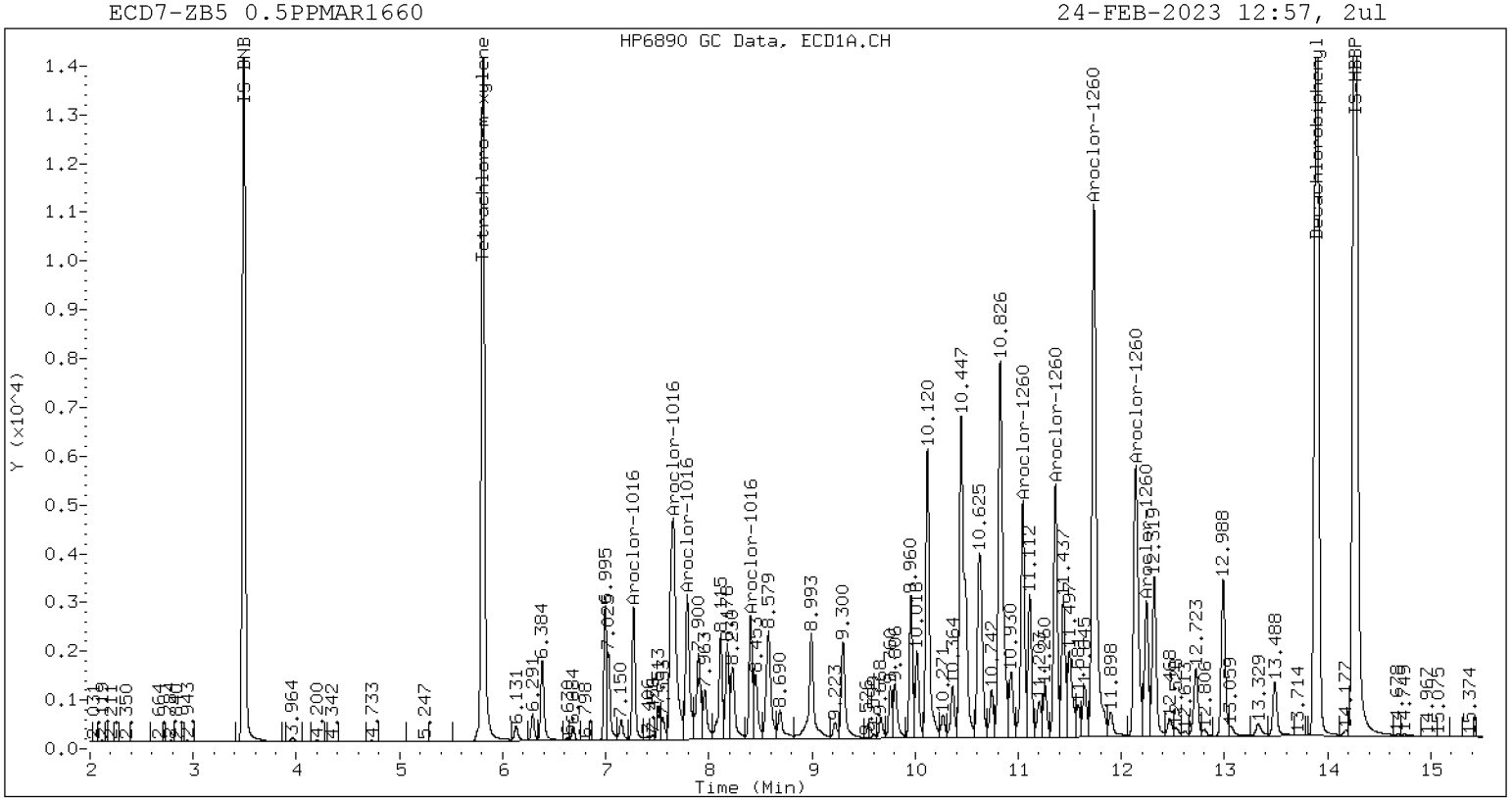
Total PCB Area Col2 (5.785 - 14.019) = 3589735 Col2 Total PCB = 0.9 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

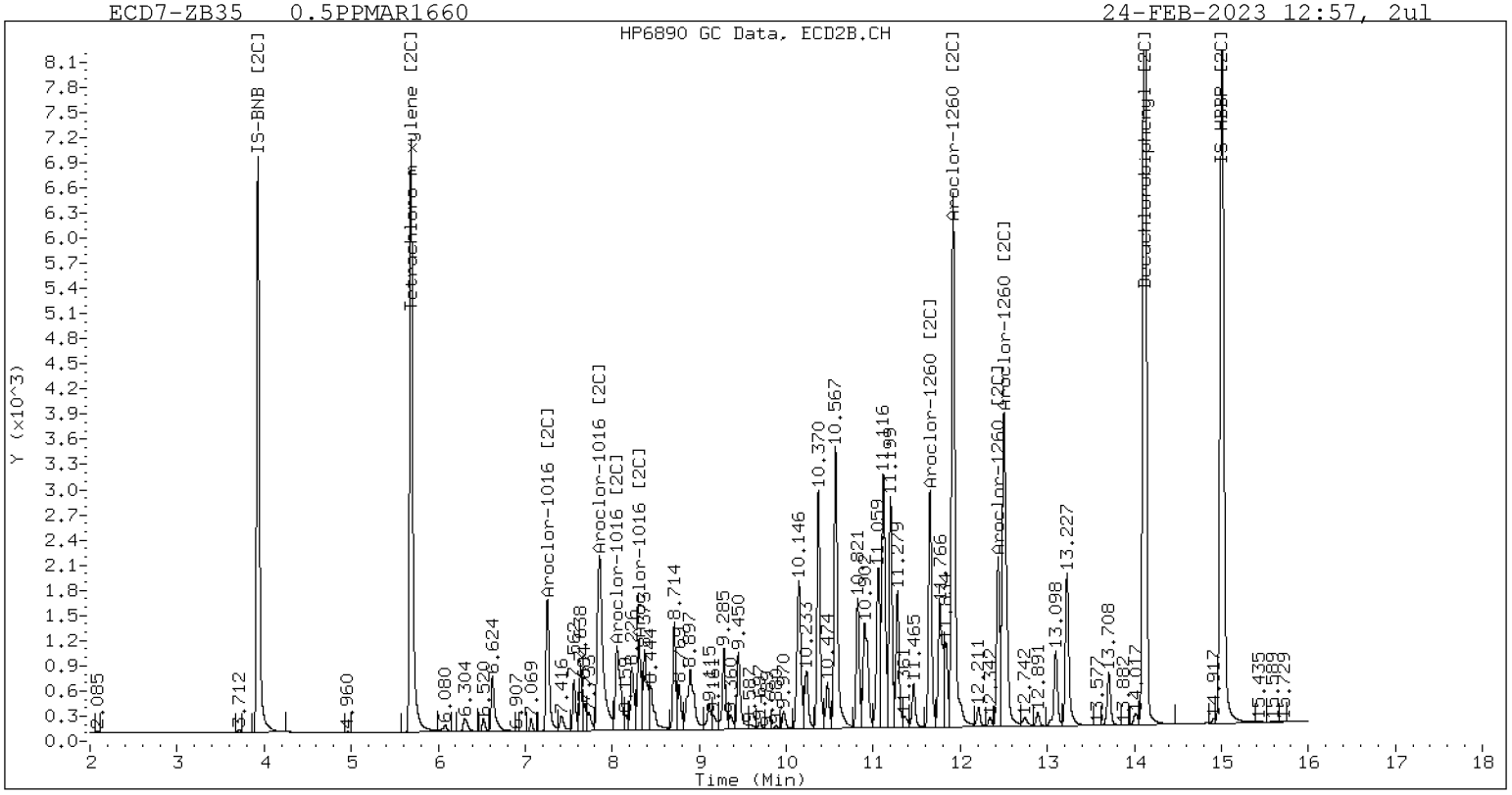
PCB Dual Column Chromatograms

ECD7-ZB5 0.5PPMAR1660 24-FEB-2023 12:57, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.5PPMAR1660 24-FEB-2023 12:57, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242308ECD7.D
Data file 2: /230224.b/230224.b/02242308ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: AR1242.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.25PPMAR1242
Client ID:
Injection Date: 24-FEB-2023 13:18
Report Date: 02/28/2023 09:50
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	0.003	434187	5.688	0.003	214306	46.0	46.5	1.1	Tetrachloro-m-xylene
13.894	0.000	515867	14.119	-0.001	312943	35.6	38.5	7.6	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	632576	-6.1
Hexabromobiphenyl	1429847	1469715	2.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	314129	-0.4
Hexabromobiphenyl	513946	534294	4.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1242	1	7.271	0.000	49009	250.0	1	7.255	0.000	36487	250.0
Aroclor-1242	2	7.656	0.000	148833	250.0	2	7.858	0.000	76699	250.0
Aroclor-1242	3	8.405	0.000	46308	250.0	3	9.167	0.000	23866	250.0
Aroclor-1242	4	8.579	0.000	68453	250.0	4	9.597	0.000	29080	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0

Total PCB Area Col1 (5.906 - 13.793) = 1221467 Col1 Total PCB = 0.2 ppm*

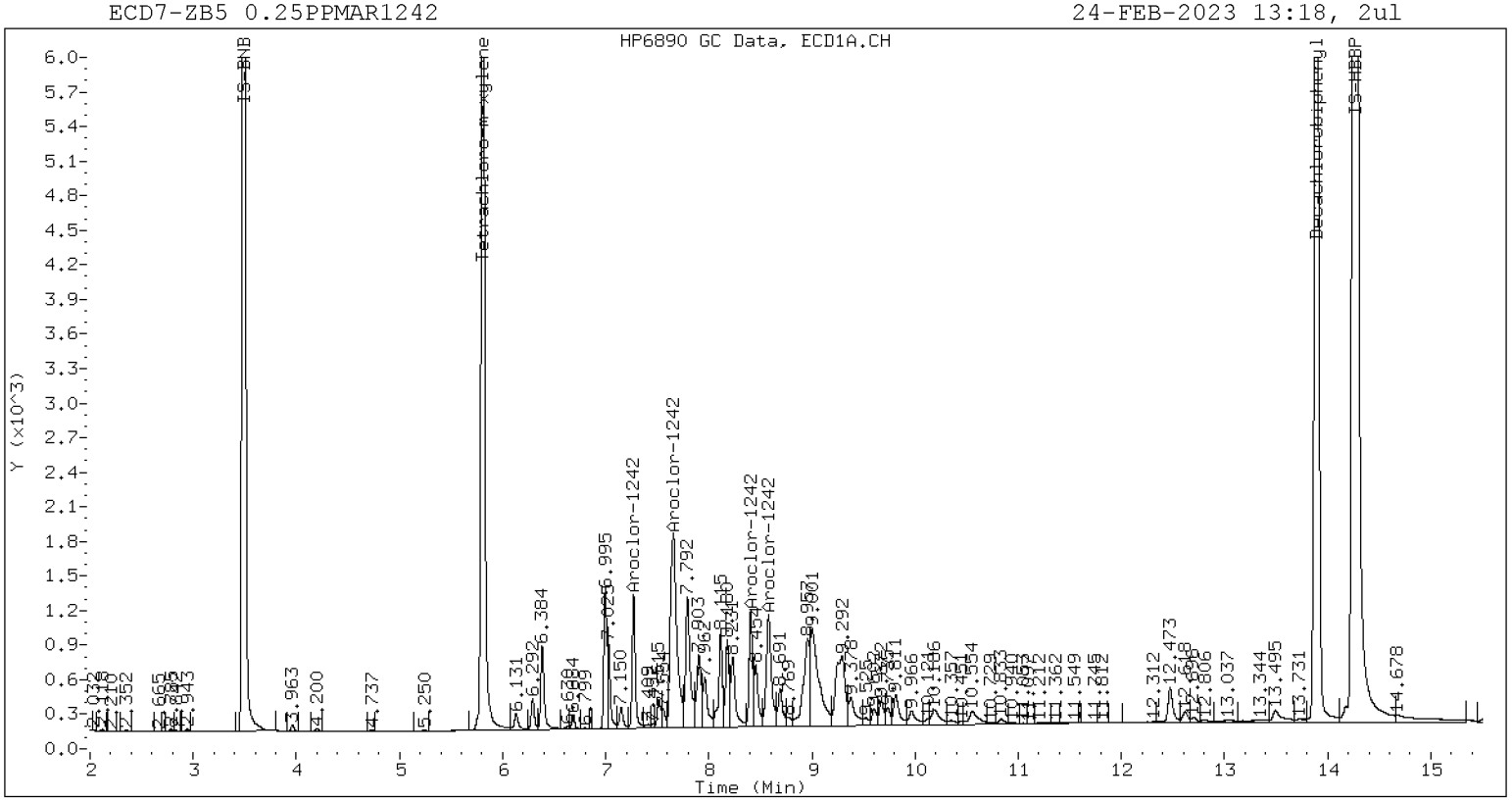
Total PCB Area Col2 (5.785 - 14.019) = 572067 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

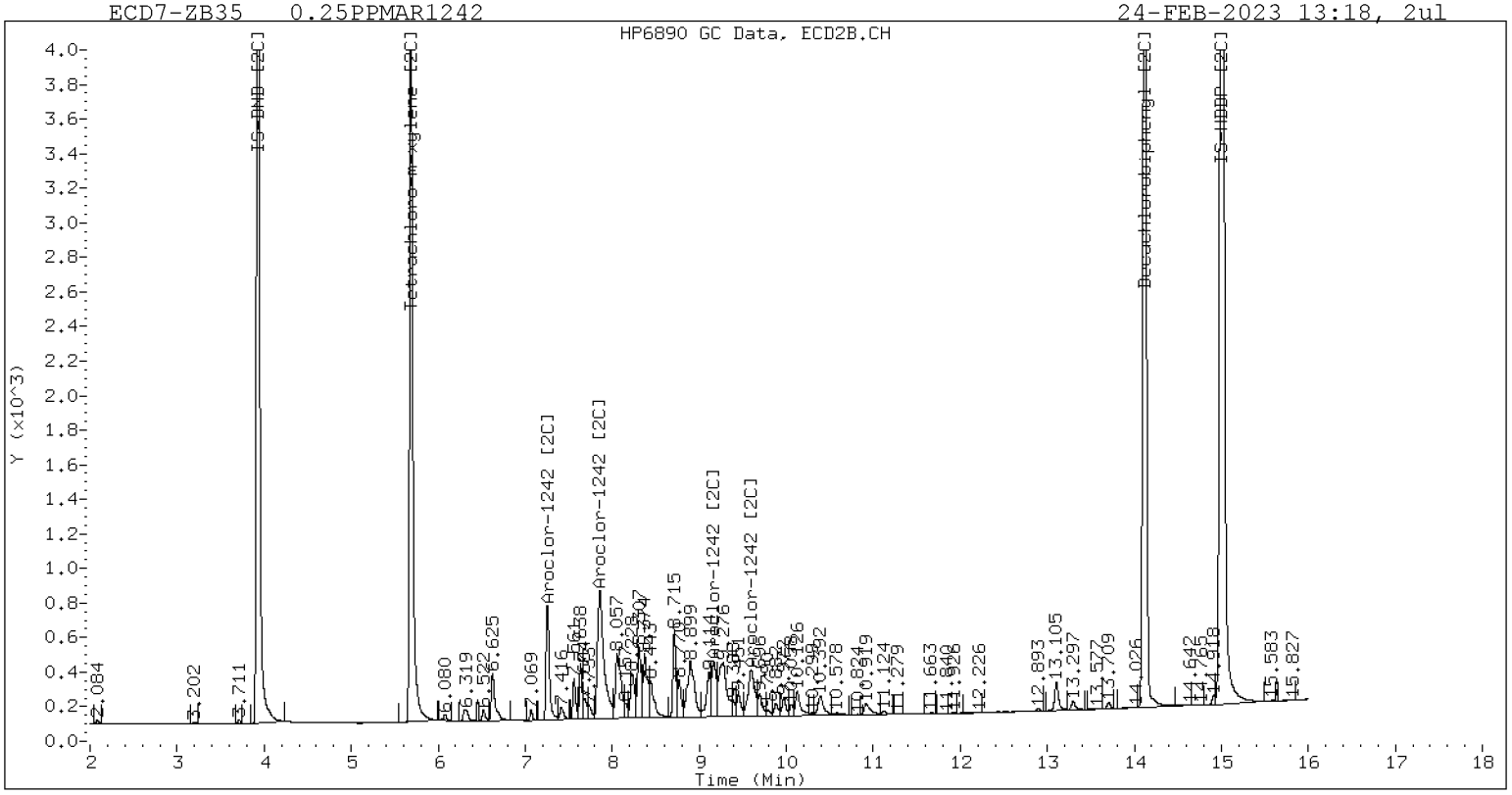
PCB Dual Column Chromatograms

ECD7-ZB5 0.25PPMAR1242 24-FEB-2023 13:18, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.25PPMAR1242 24-FEB-2023 13:18, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242309ECD7.D
Data file 2: /230224.b/230224.b/02242309ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: AR1248.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.25PPMAR1248
Client ID:
Injection Date: 24-FEB-2023 13:39
Report Date: 02/28/2023 09:51
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	0.003	349513	5.688	0.003	176615	36.6	37.9	3.4	Tetrachloro-m-xylene
13.894	0.001	523008	14.121	0.001	322054	36.4	39.3	7.5	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	639911	-5.0
Hexabromobiphenyl	1429847	1458696	2.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	317938	0.9
Hexabromobiphenyl	513946	538760	4.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1248	1	8.405	0.000	78055	250.0	1	8.308	0.000	37951	250.0
Aroclor-1248	2	8.580	0.000	99216	250.0	2	8.714	0.000	39239	250.0
Aroclor-1248	3	8.999	0.000	187178	250.0	3	9.166	0.000	45157	250.0
Aroclor-1248	4	9.295	0.000	95291	250.0	4	9.590	0.000	54216	250.0

Total Col1Ave (4 peaks): 250.0 Total Col2Ave (4 peaks): 250.0 RPD = 0

Corrected Ave (3 peaks): 250.0 Corrected Ave (3 peaks): 250.0 RPD = 0

Total PCB Area Col1 (5.906 - 13.793) = 1565180 Col1 Total PCB = 0.2 ppm*

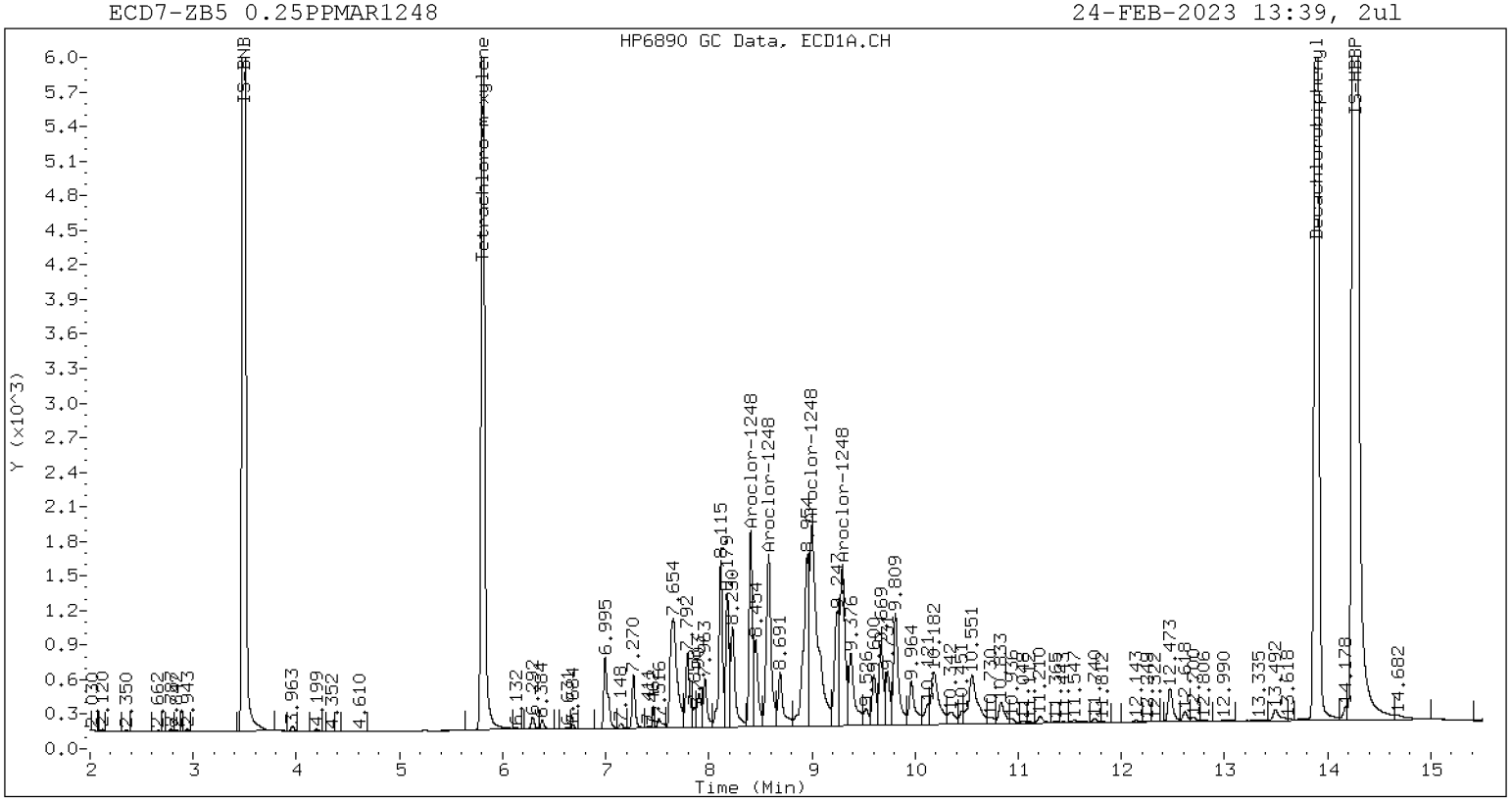
Total PCB Area Col2 (5.785 - 14.019) = 754991 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

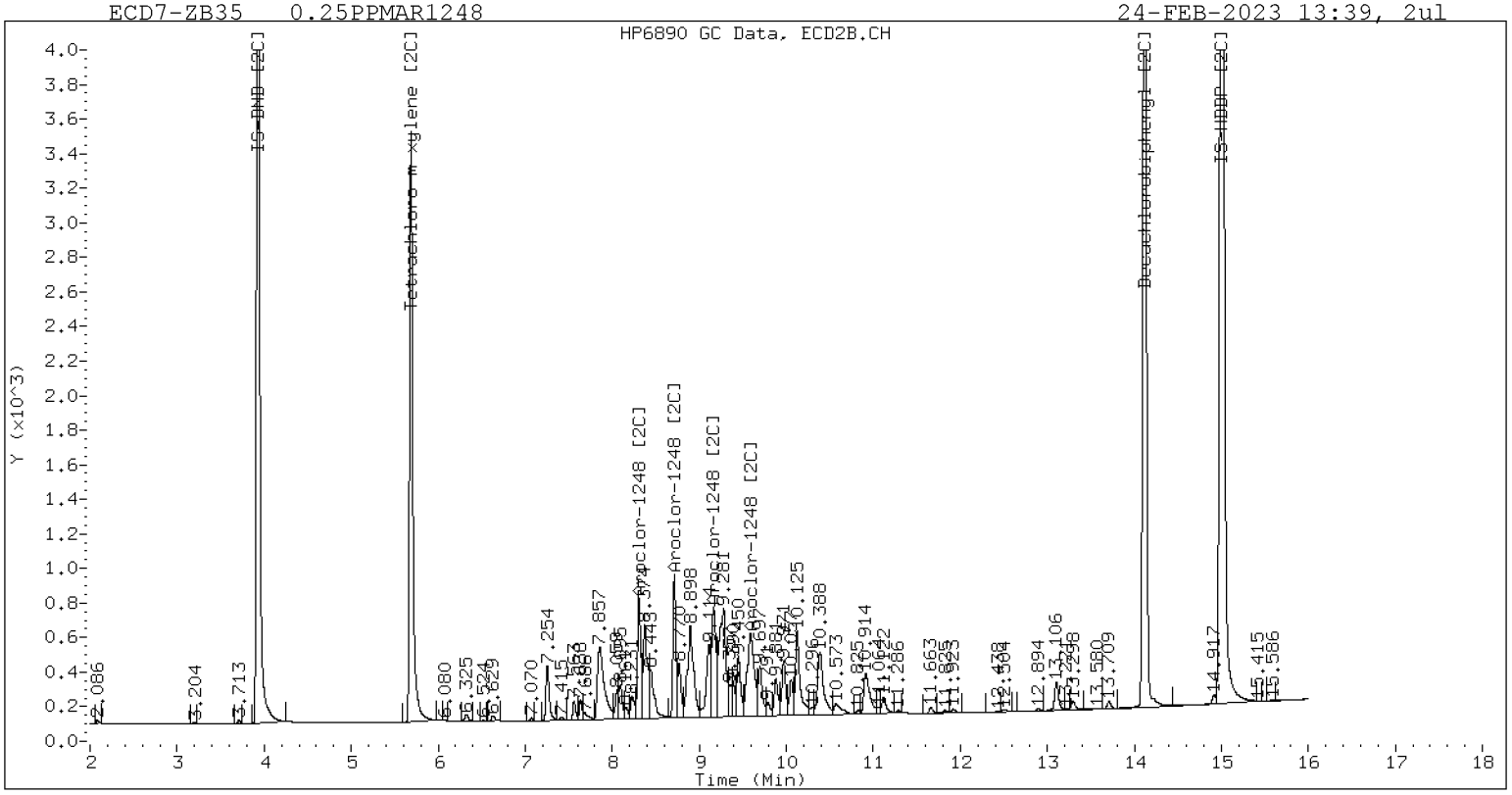
PCB Dual Column Chromatograms

ECD7-ZB5 0.25PPMAR1248 24-FEB-2023 13:39, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.25PPMAR1248 24-FEB-2023 13:39, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

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Data file 2: /230224.b/230224.b/02242310ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: AR1254.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.25PPMAR1254
Client ID:
Injection Date: 24-FEB-2023 14:00
Report Date: 02/28/2023 09:51
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.808	0.002	352587	5.687	0.002	177502	37.3	38.6	3.4	Tetrachloro-m-xylene
13.895	0.002	532500	14.119	0.000	325903	37.0	40.2	8.2	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	633407	-6.0
Hexabromobiphenyl	1429847	1460265	2.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	313673	-0.5
Hexabromobiphenyl	513946	532442	3.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1254	1	9.299	0.000	159011	250.0	1	9.449	0.000	59603	250.0
Aroclor-1254	2	9.377	0.000	71516	250.0	2	9.970	0.000	47949	250.0
Aroclor-1254	3	9.668	0.000	102230	250.0	3	10.124	0.000	103745	250.0
Aroclor-1254	4	9.807	0.000	198777	250.0	4	10.373	0.000	101135	250.0
Aroclor-1254	5	10.176	0.000	124586	250.0	5	10.569	0.000	61577	250.0

Total Col1Ave (5 peaks): 250.0 Total Col2Ave (5 peaks): 250.0 RPD = 0

Corrected Ave (4 peaks): 250.0 Corrected Ave (4 peaks): 250.0 RPD = 0

Total PCB Area Col1 (5.906 - 13.793) = 2179224 Col1 Total PCB = 0.3 ppm*

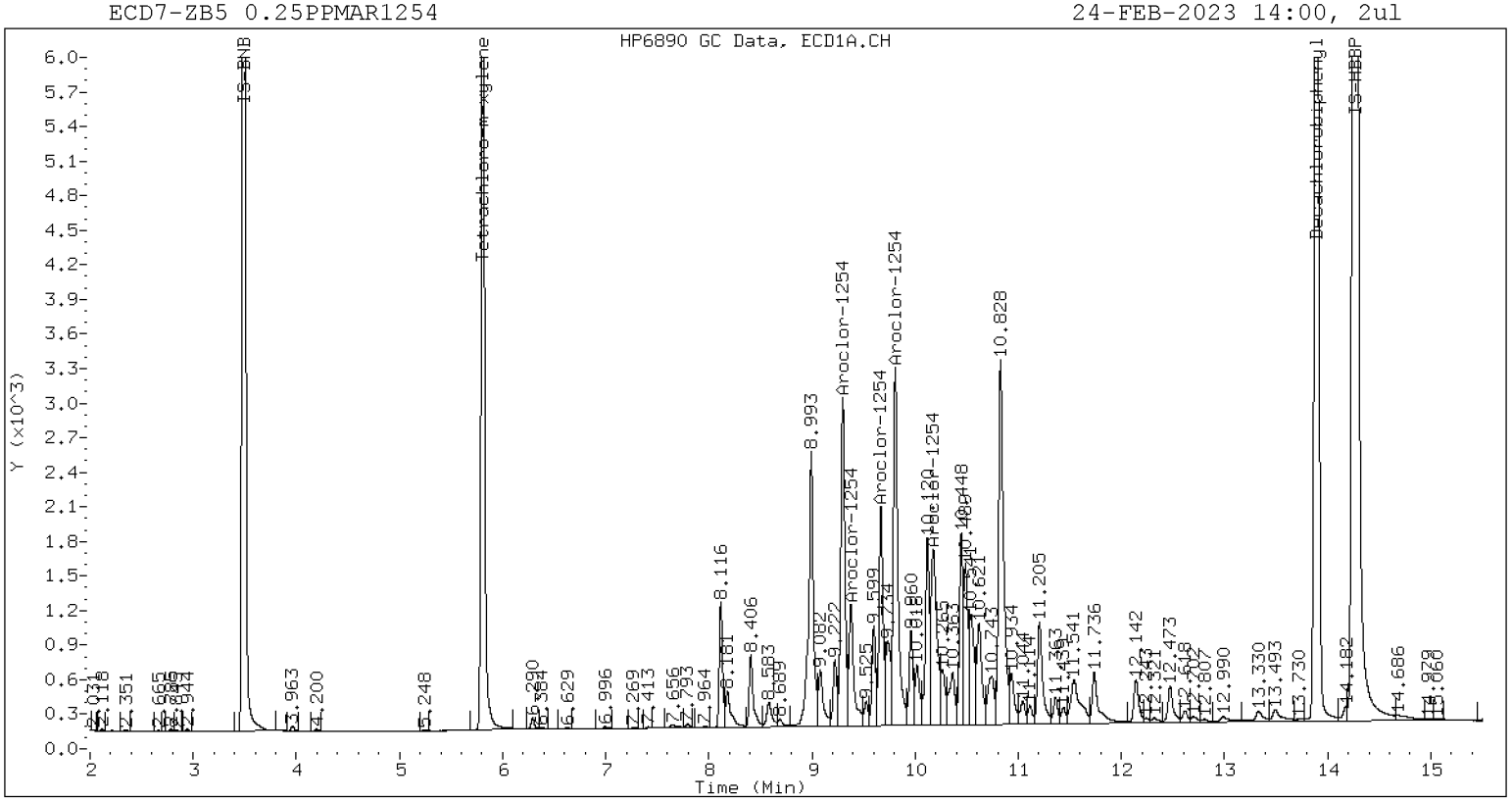
Total PCB Area Col2 (5.785 - 14.019) = 1022156 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

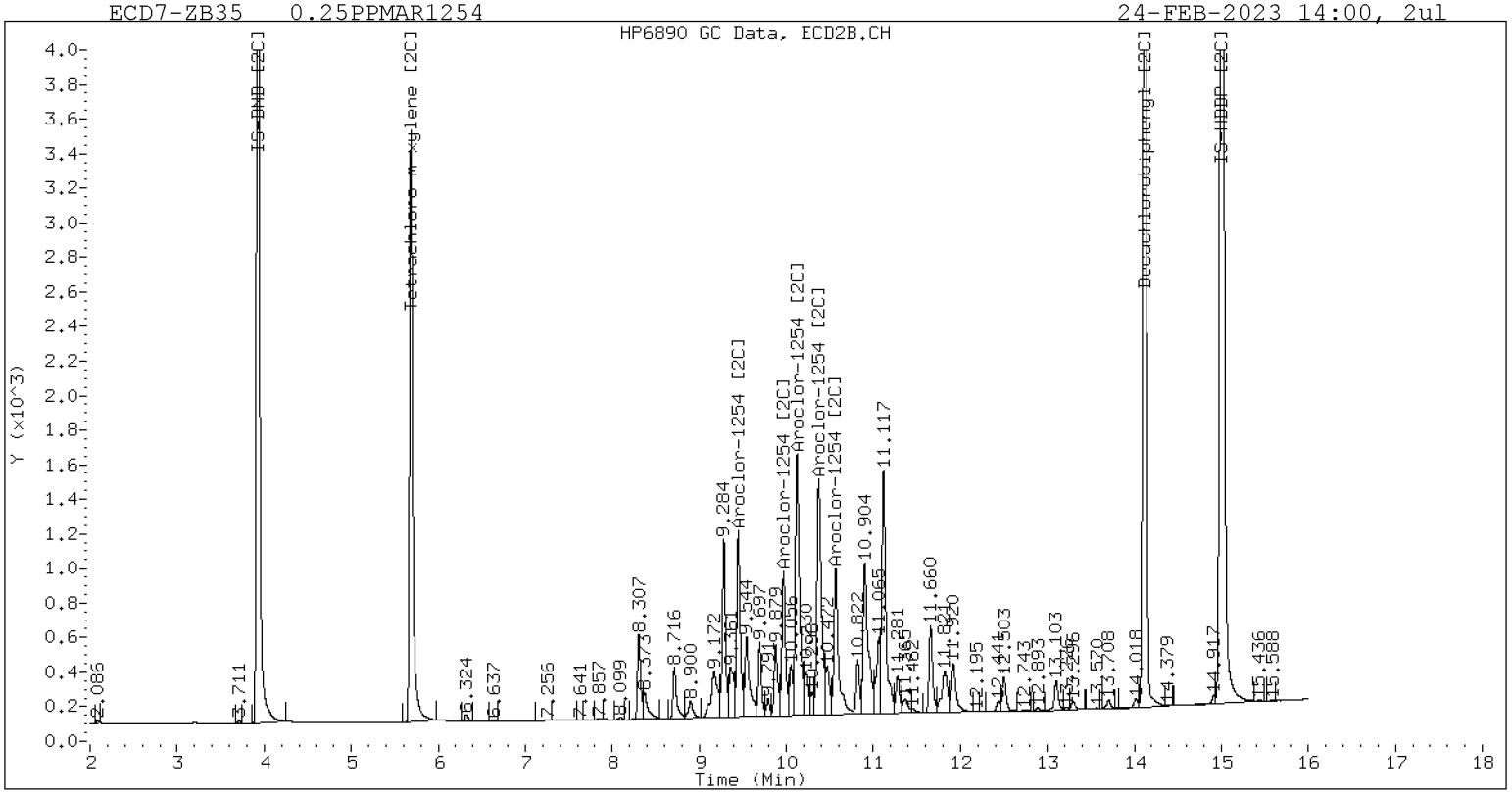
PCB Dual Column Chromatograms

ECD7-ZB5 0.25PPMAR1254 24-FEB-2023 14:00, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.25PPMAR1254 24-FEB-2023 14:00, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242311ECD7.D
Data file 2: /230224.b/230224.b/02242311ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: AR2162.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.25PPMAR2162
Client ID:
Injection Date: 24-FEB-2023 14:21
Report Date: 02/28/2023 09:51
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.807	0.001	362236	5.686	0.000	177349	38.4	39.2	2.1	Tetrachloro-m-xylene
13.894	0.001	523254	14.119	-0.000	321034	36.0	39.2	8.3	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	632433	-6.1
Hexabromobiphenyl	1429847	1474039	3.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	308453	-2.2
Hexabromobiphenyl	513946	538177	4.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1221	1	4.731	0.000	14160	250.0	1	4.956	0.000	7300	250.0
Aroclor-1221	2	6.132	0.000	25324	250.0	2	6.296	0.000	13816	250.0
Aroclor-1221	3	6.382	0.000	58795	250.0	3	6.622	0.000	22491	250.0
Total Col1Ave (3 peaks):					250.0	Total Col2Ave (3 peaks):				250.0 RPD = 0
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1262	1	10.829	0.000	113046	250.0	1	11.200	0.000	114880	250.0
Aroclor-1262	2	12.244	0.000	183948	250.0	2	11.652	0.000	97844	250.0
Aroclor-1262	3	12.319	0.000	197749	250.0	3	12.434	0.000	111015	250.0
Aroclor-1262	4	12.987	0.000	180727	250.0	4	12.502	0.000	173913	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0

Total PCB Area Col1 (5.906 - 13.793) = 3105316 Col1 Total PCB = 0.4 ppm*

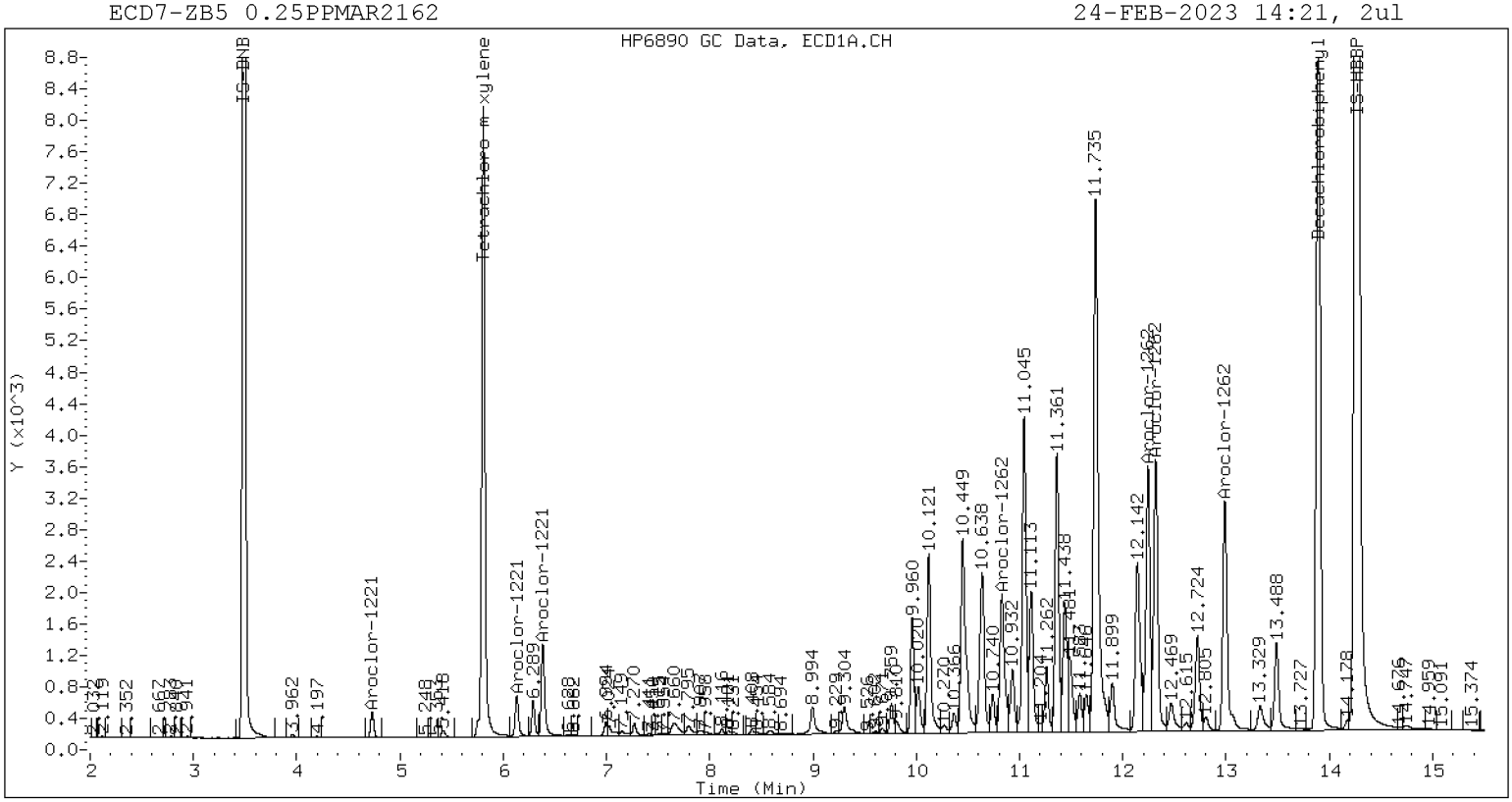
Total PCB Area Col2 (5.785 - 14.019) = 1573107 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

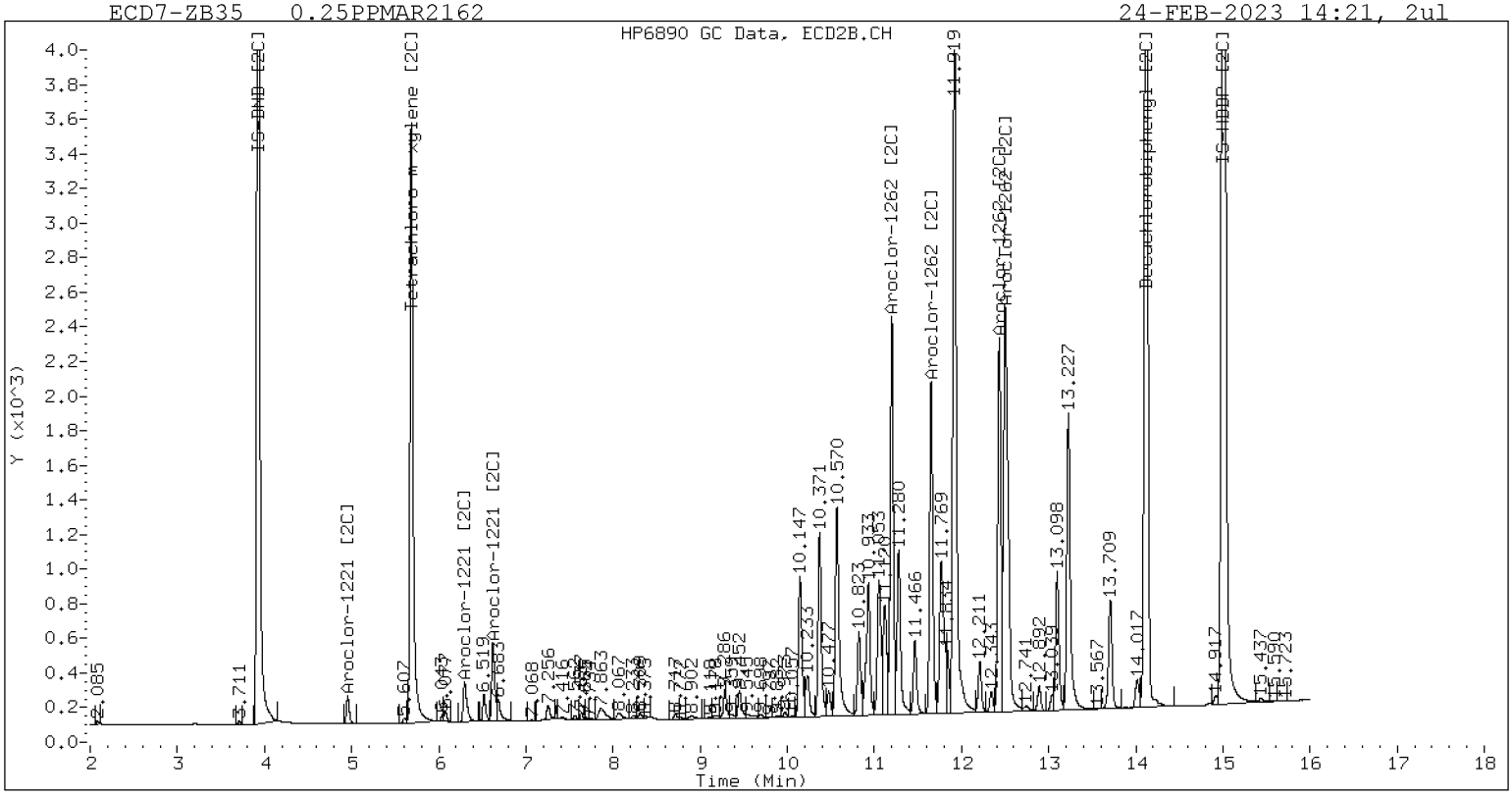
PCB Dual Column Chromatograms

ECD7-ZB5 0.25PPMAR2162 24-FEB-2023 14:21, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.25PPMAR2162 24-FEB-2023 14:21, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242312ECD7.D
Data file 2: /230224.b/230224.b/02242312ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: AR3268.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.25PPMAR3268
Client ID:
Injection Date: 24-FEB-2023 14:42
Report Date: 02/28/2023 09:51
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.806	0.000	366416	5.685	0.000	179450	38.0	38.9	2.4	Tetrachloro-m-xylene
13.893	0.000	778191	14.119	0.000	477889	53.0	57.5	8.3	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	645602	-4.2
Hexabromobiphenyl	1429847	1492154	4.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	314042	-0.4
Hexabromobiphenyl	513946	545458	6.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1232	1	4.730	0.000	8647	250.0	1	4.956	0.000	4017	250.0
Aroclor-1232	2	6.131	0.000	17148	250.0	2	7.254	0.000	19962	250.0
Aroclor-1232	3	7.656	0.000	77627	250.0	3	7.861	0.000	39913	250.0
Aroclor-1232	4	8.581	0.000	32993	250.0	4	8.715	0.000	11487	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0
Aroclor-1268	1	12.247	0.000	477974	250.0	1	12.432	0.000	274595	250.0
Aroclor-1268	2	12.317	0.000	473326	250.0	2	12.500	0.000	295194	250.0
Aroclor-1268	3	12.699	0.000	405011	250.0	3	12.892	0.000	252048	250.0
Aroclor-1268	4	13.490	0.000	1333528	250.0	4	13.709	0.000	805579	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0

Total PCB Area Col1 (5.906 - 13.793) = 3998414 Col1 Total PCB = 0.5 ppm*

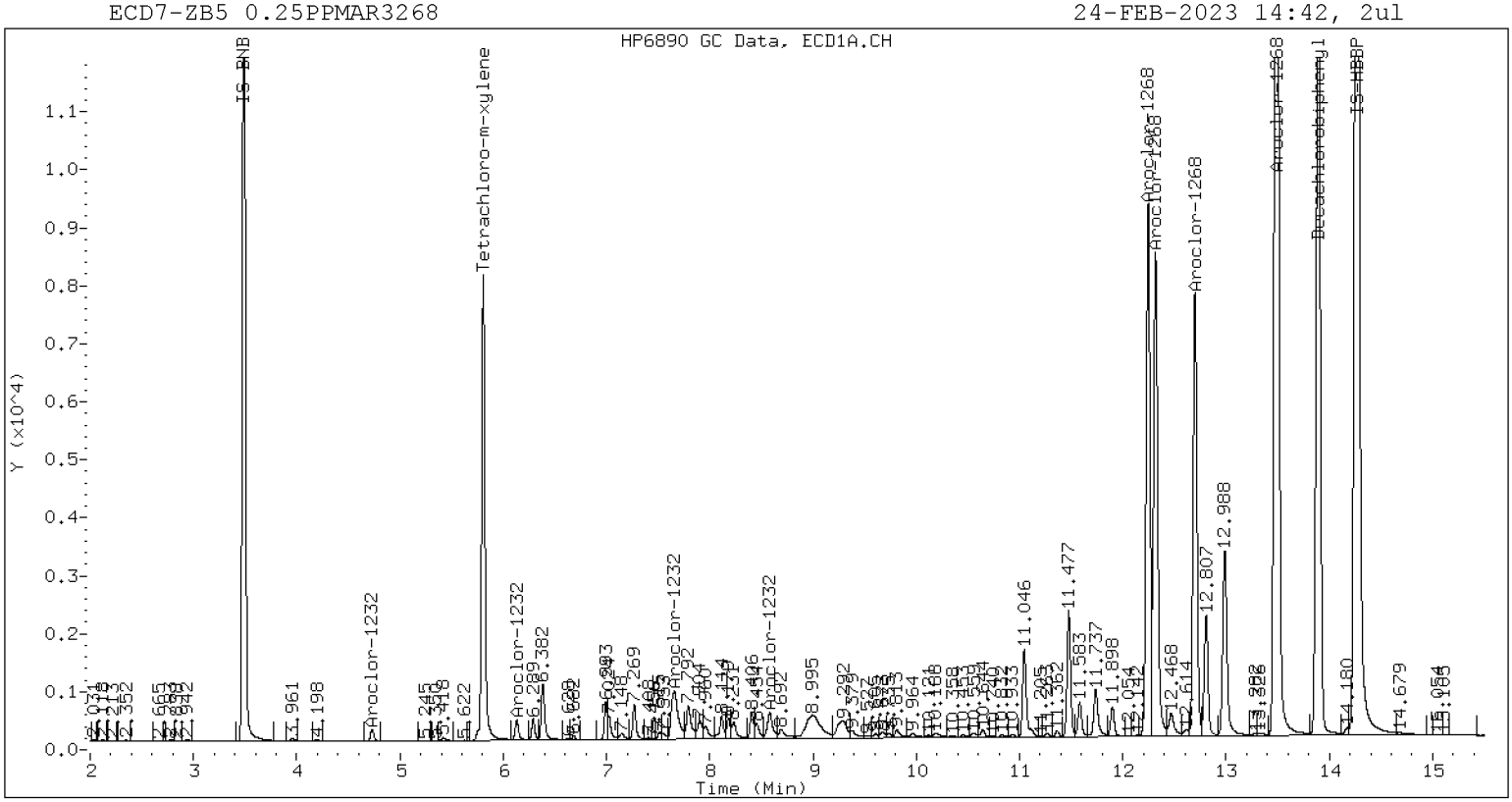
Total PCB Area Col2 (5.785 - 14.019) = 2300029 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

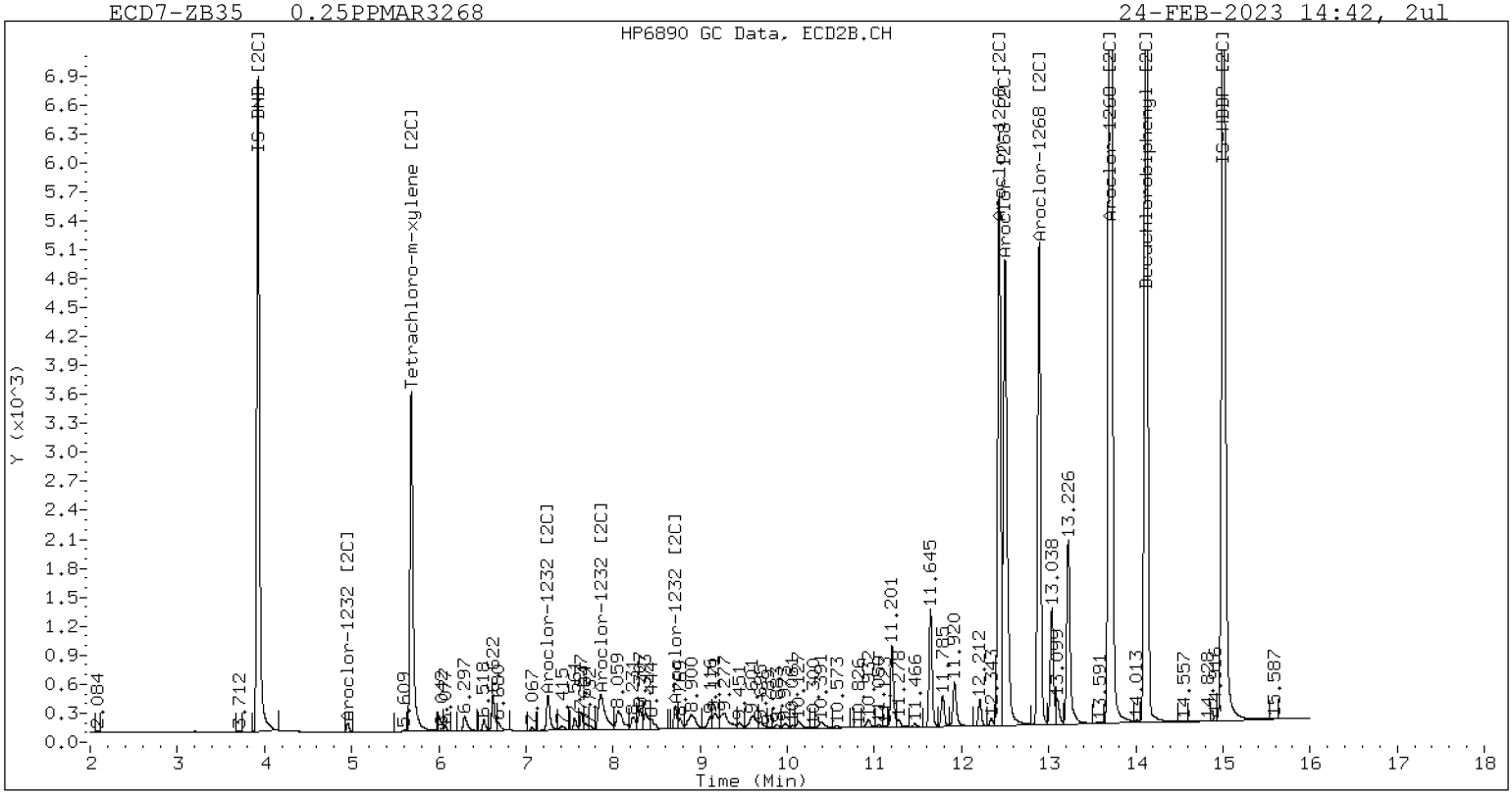
PCB Dual Column Chromatograms

ECD7-ZB5 0.25PPMAR3268 24-FEB-2023 14:42, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.25PPMAR3268 24-FEB-2023 14:42, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242313ECD7.D
Data file 2: /230224.b/230224.b/02242313ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660SCV
Client ID:
Injection Date: 24-FEB-2023 15:03
Report Date: 02/28/2023 09:51
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.807	0.001	337070	5.686	0.001	165848	34.9	35.8	2.3	Tetrachloro-m-xylene
13.895	0.002	515407	14.119	-0.000	316730	34.3	37.3	8.4	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	645975	-4.1
Hexabromobiphenyl	1429847	1524245	6.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	316115	0.3
Hexabromobiphenyl	513946	556950	8.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.269	-0.002	59491	242.5	1	7.254	-0.002	44576	240.9
Aroclor-1016	2	7.655	0.001	181090	242.1	2	7.857	0.002	95386	254.2
Aroclor-1016	3	7.790	0.000	88470	242.3	3	8.056	0.002	42160	248.8
Aroclor-1016	4	8.404	-0.001	57980	245.6	4	8.307	0.000	32197	242.1
Total Col1Ave (4 peaks):					243.1	Total Col2Ave (4 peaks):				246.5 RPD = 1
Corrected Ave (3 peaks):					242.3	Corrected Ave (3 peaks):				243.9 RPD = 1
Aroclor-1221	1	4.731	0.000	464	8.0	1	---			0.0
Aroclor-1221	2	6.130	-0.002	9233	89.2	2	6.300	0.004	5379	95.0
Aroclor-1221	3	6.382	-0.001	42570	177.2	3	6.623	0.001	20952	227.2
Total Col1Ave (3 peaks):					91.5	Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	4.731	0.001	464	13.4	1	---			0.0
Aroclor-1232	2	6.130	-0.001	9233	134.5	2	7.254	-0.000	44576	554.6
Aroclor-1232	3	7.655	-0.001	181090	582.9	3	7.857	-0.003	95386	593.5
Aroclor-1232	4	8.580	-0.001	79916	605.2	4	8.713	-0.002	29795	644.2
Total Col1Ave (4 peaks):					334.0	Total Col2Ave (3 peaks):				597.4 RPD = 57*
Corrected Ave (3 peaks):					243.6	Corrected Ave: < 3 Peaks				
Aroclor-1242	1	7.269	-0.002	59491	297.2	1	7.254	-0.002	44576	303.5
Aroclor-1242	2	7.655	-0.001	181090	297.9	2	7.857	-0.000	95386	309.0
Aroclor-1242	3	8.404	-0.001	57980	306.5	3	9.115	-0.052	18754	195.2
Aroclor-1242	4	8.580	0.000	79916	285.8	4	9.697	0.100	1355	11.6
Total Col1Ave (4 peaks):					296.8	Total Col2Ave (4 peaks):				204.8 RPD = 37
Corrected Ave (3 peaks):					293.6	Corrected Ave (3 peaks):				170.1 RPD = 53*
Aroclor-1248	1	8.404	-0.001	57980	184.0	1	8.307	-0.001	32197	213.3
Aroclor-1248	2	8.580	-0.001	79916	199.5	2	8.713	-0.001	29795	190.9
Aroclor-1248	3	8.993	-0.006	71805	95.0	3	9.115	-0.050	18754	104.4
Aroclor-1248	4	9.300	0.006	47348	123.1	4	---			0.0
Total Col1Ave (4 peaks):					150.4	Total Col2Ave (3 peaks):				169.6 RPD = 12
Corrected Ave (3 peaks):					134.0	Corrected Ave: < 3 Peaks				
Aroclor-1254	1	9.300	0.002	47348	73.0	1	9.451	0.001	22438	93.4
Aroclor-1254	2	---			0.0	2	9.972	0.001	2694	13.9
Aroclor-1254	3	9.670	0.002	5461	13.1	3	10.147	0.024	52914	126.5
Aroclor-1254	4	9.807	-0.000	18944	23.4	4	10.370	-0.003	70430	172.8
Aroclor-1254	5	10.121	-0.056	154170	303.3	5	10.568	-0.000	98525	396.9
Total Col1Ave (4 peaks):					103.2	Total Col2Ave (5 peaks):				160.7 RPD = 44*
Corrected Ave (3 peaks):					36.5	Corrected Ave (4 peaks):				101.7 RPD = 94*
Aroclor-1260	1	11.044	0.000	149195	272.1	1	11.653	0.000	82210	251.0
Aroclor-1260	2	11.361	-0.000	153832	268.5	2	11.919	0.001	222226	265.9
Aroclor-1260	3	11.736	0.002	396660	261.0	3	12.435	-0.000	59148	266.7
Aroclor-1260	4	12.140	0.001	190448	248.9	4	12.504	0.002	147180	261.2
Aroclor-1260	5	12.244	-0.000	91385	277.5	NS	---			----
Total Col1Ave (5 peaks):					265.6	Total Col2Ave (4 peaks):				261.2 RPD = 2
Corrected Ave (4 peaks):					262.6	Corrected Ave (3 peaks):				259.4 RPD = 1
Aroclor-1262	1	10.827	-0.002	220238	471.0	1	11.199	-0.001	84479	177.6
Aroclor-1262	2	12.244	0.000	91385	120.1	2	11.653	0.002	82210	203.0
Aroclor-1262	3	12.320	0.001	113066	138.2	3	12.435	0.002	59148	128.7
Aroclor-1262	4	12.988	0.001	102156	136.7	4	12.504	0.002	147180	204.4
Total Col1Ave (4 peaks):					216.5	Total Col2Ave (4 peaks):				178.4 RPD = 19
Corrected Ave (3 peaks):					131.7	Corrected Ave (3 peaks):				169.8 RPD = 25
Aroclor-1268	1	12.244	-0.003	91385	46.8	1	12.435	0.003	59148	52.7
Aroclor-1268	2	12.320	0.003	113066	58.5	2	12.504	0.004	147180	122.1
Aroclor-1268	3	12.726	0.027	46633	28.2	3	12.893	0.001	2874	2.8
Aroclor-1268	4	13.489	-0.000	25567	4.7	4	13.709	-0.000	13041	4.0
Total Col1Ave (4 peaks):					34.5	Total Col2Ave (4 peaks):				45.4 RPD = 27
Corrected Ave (3 peaks):					26.6	Corrected Ave (3 peaks):				19.8 RPD = 29

Total PCB Area Col1 (5.906 - 13.793) = 3743076 Col1 Total PCB = 0.5 ppm*

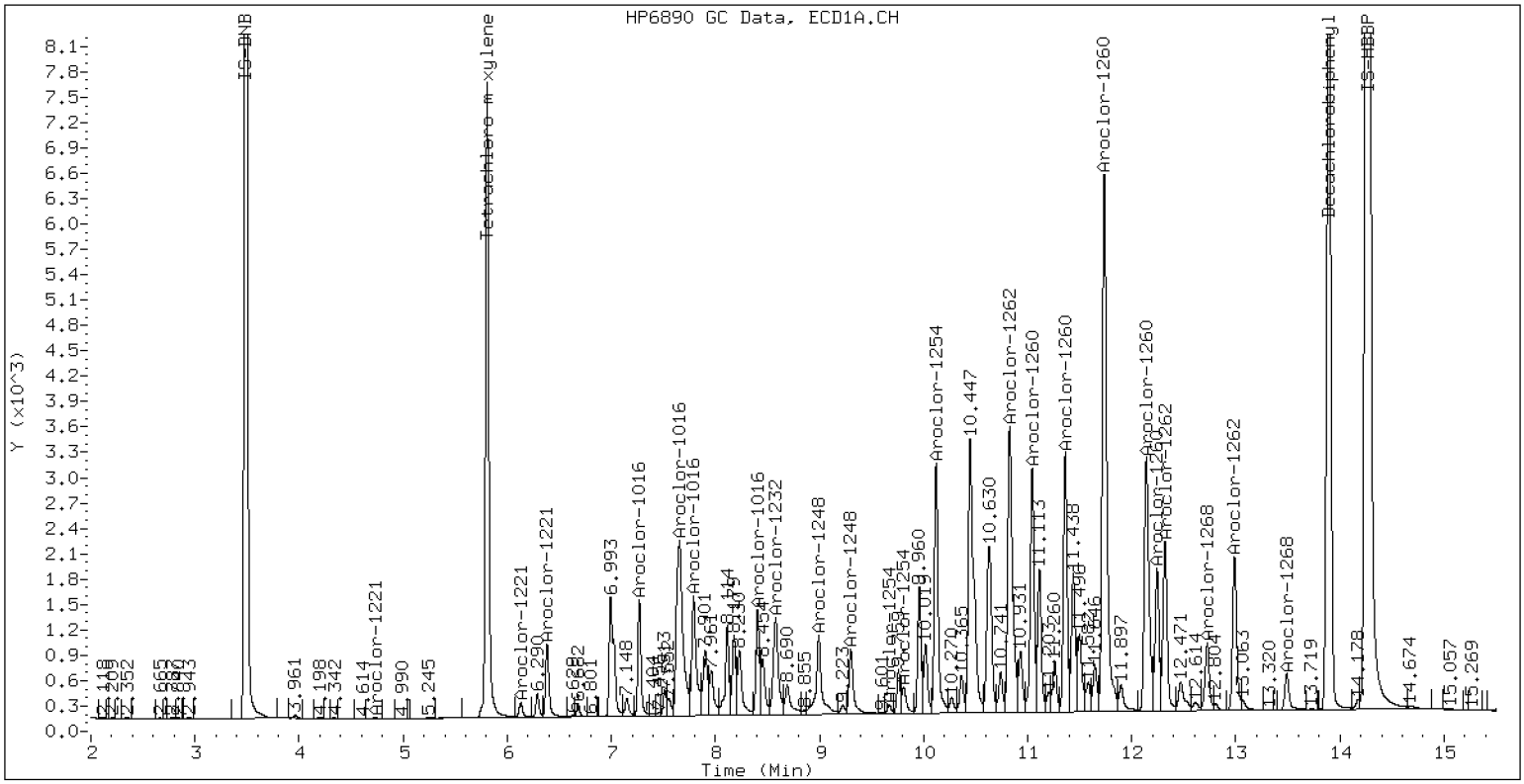
Total PCB Area Col2 (5.785 - 14.019) = 1897008 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

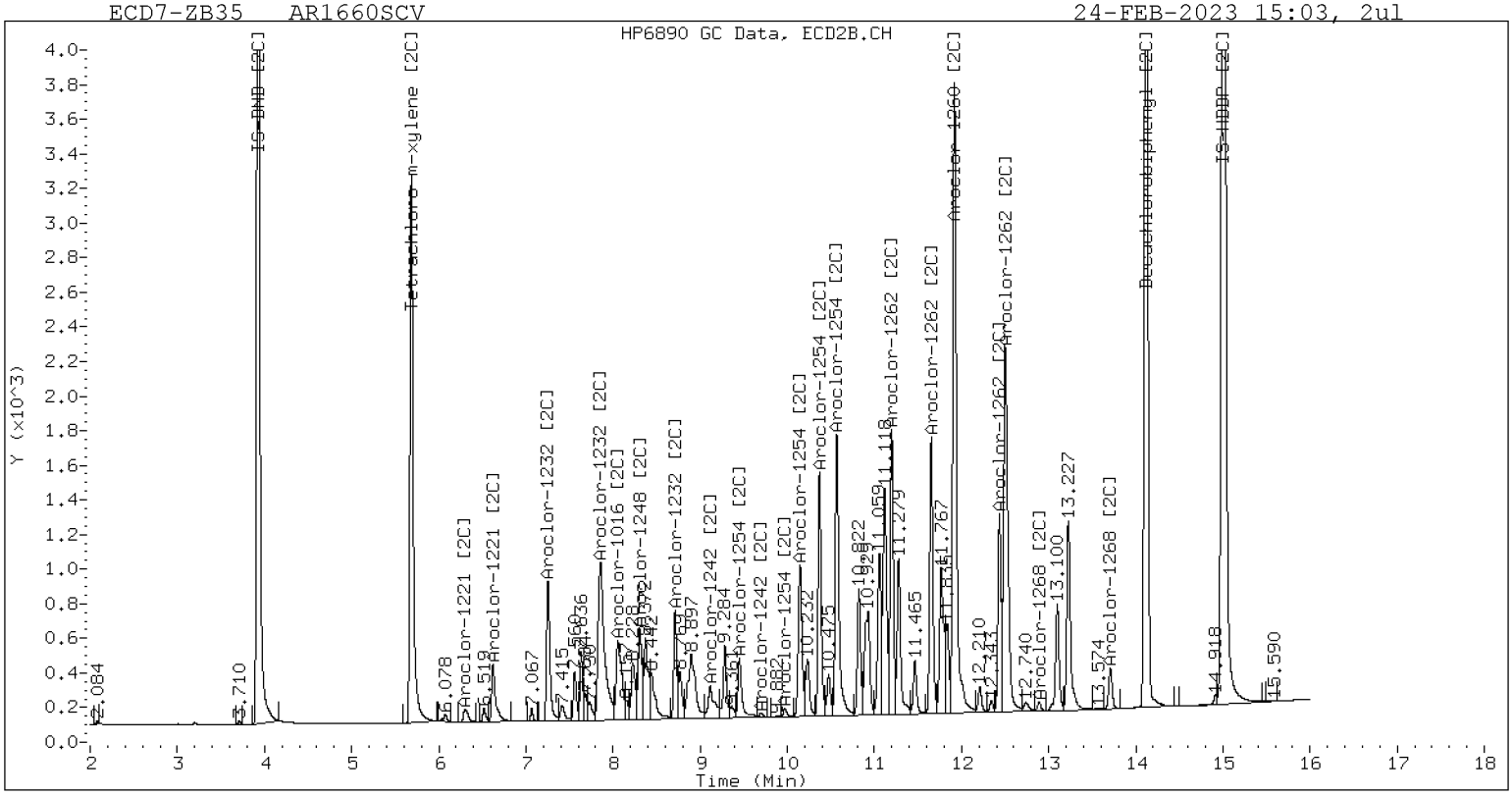
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660SCV 24-FEB-2023 15:03, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660SCV 24-FEB-2023 15:03, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242314ECD7.D
Data file 2: /230224.b/230224.b/02242314ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242SCV
Client ID:
Injection Date: 24-FEB-2023 15:24
Report Date: 02/28/2023 09:51
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.808	0.002	354283	5.686	0.001	172455	33.6	34.5	2.6	Tetrachloro-m-xylene
13.895	0.002	567088	14.120	0.001	347430	37.0	40.3	8.6	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	705650	4.7
Hexabromobiphenyl	1429847	1555683	8.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	340433	8.0
Hexabromobiphenyl	513946	565609	10.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.270	-0.000	39927	149.0	1	7.256	0.000	32417	162.7
Aroclor-1016	2	7.653	-0.001	132339	162.0	2	7.856	0.001	69235	171.3
Aroclor-1016	3	7.791	0.001	59310	148.7	3	8.055	0.000	29473	161.5
Aroclor-1016	4	8.405	0.000	42537	165.0	4	8.307	-0.000	22792	159.2
Total Col1Ave (4 peaks): 156.2						Total Col2Ave (4 peaks): 163.7			RPD = 5	
Corrected Ave (3 peaks): 153.2						Corrected Ave (3 peaks): 161.1			RPD = 5	
Aroclor-1221	1	4.733	0.002	319	5.0	1	---			0.0
Aroclor-1221	2	6.131	-0.001	6534	57.8	2	6.319	0.022	4365	71.6
Aroclor-1221	3	6.384	0.001	29664	113.0	3	6.624	0.002	14916	150.2
Total Col1Ave (3 peaks): 58.6						Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	4.733	0.003	319	8.4	1	---			0.0
Aroclor-1232	2	6.131	0.000	6534	87.2	2	7.256	0.002	32417	374.5
Aroclor-1232	3	7.653	-0.003	132339	389.9	3	7.856	-0.004	69235	400.0
Aroclor-1232	4	8.579	-0.002	69445	481.4	4	8.714	-0.001	22167	445.0
Total Col1Ave (4 peaks): 241.7						Total Col2Ave (3 peaks): 406.5			RPD = 51*	
Corrected Ave (3 peaks): 161.8						Corrected Ave: < 3 Peaks				
Aroclor-1242	1	7.270	-0.001	39927	182.6	1	7.256	0.000	32417	205.0
Aroclor-1242	2	7.653	-0.003	132339	199.3	2	7.856	-0.002	69235	208.2
Aroclor-1242	3	8.405	-0.000	42537	205.9	3	9.164	-0.004	23068	223.0
Aroclor-1242	4	8.579	-0.000	69445	227.4	4	9.587	-0.010	31021	246.1
Total Col1Ave (4 peaks): 203.8						Total Col2Ave (4 peaks): 220.6			RPD = 8	
Corrected Ave (3 peaks): 195.9						Corrected Ave (3 peaks): 212.1			RPD = 8	
Aroclor-1248	1	8.405	0.000	42537	123.5	1	8.307	-0.001	22792	140.2
Aroclor-1248	2	8.579	-0.001	69445	158.7	2	8.714	-0.000	22167	131.9
Aroclor-1248	3	9.001	0.003	91942	111.4	3	9.164	-0.002	23068	119.3
Aroclor-1248	4	9.294	-0.000	38711	92.1	4	9.587	-0.003	31021	133.6
Total Col1Ave (4 peaks): 121.4						Total Col2Ave (4 peaks): 131.2			RPD = 8	
Corrected Ave (3 peaks): 109.0						Corrected Ave (3 peaks): 128.3			RPD = 16	
Aroclor-1254	1	9.294	-0.005	38711	54.6	1	9.450	0.001	13131	50.7
Aroclor-1254	2	9.377	-0.000	17371	54.5	2	9.970	0.000	8340	40.1
Aroclor-1254	3	9.668	-0.000	16373	35.9	3	10.123	-0.000	16364	36.3
Aroclor-1254	4	9.807	-0.001	27490	31.0	4	10.382	0.009	16062	36.6
Aroclor-1254	5	10.175	-0.001	20494	36.9	5	10.572	0.004	4818	18.0
Total Col1Ave (5 peaks): 42.6						Total Col2Ave (5 peaks): 36.4			RPD = 16	
Corrected Ave (4 peaks): 39.6						Corrected Ave (4 peaks): 32.8			RPD = 19	
Aroclor-1260	1	11.048	0.003	794	1.4	1	11.665	0.012	1652	5.0
Aroclor-1260	2	11.366	0.005	814	1.4	2	11.926	0.008	842	1.0
Aroclor-1260	3	11.739	0.006	1848	1.2	3	12.438	0.002	483	2.1
Aroclor-1260	4	12.145	0.006	1372	1.8	4	12.506	0.004	790	1.4
Aroclor-1260	5	---			0.0	NS	---			----
Total Col1Ave (4 peaks): 1.4						Total Col2Ave (4 peaks): 2.4			RPD = 49*	
Corrected Ave (3 peaks): 1.3						Corrected Ave (3 peaks): 1.5			RPD = 12	
Aroclor-1262	1	10.832	0.003	13157	27.6	1	11.121	-0.079	6113	12.7
Aroclor-1262	2	12.145	-0.098	1372	1.8	2	11.665	0.013	1652	4.0
Aroclor-1262	3	---			0.0	3	12.438	0.004	483	1.0
Aroclor-1262	4	13.038	0.051	842	1.1	4	12.506	0.004	790	1.1
Total Col1Ave (3 peaks): 10.1						Total Col2Ave (4 peaks): 4.7			RPD = 73*	
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks): 2.0				
Aroclor-1268	1	---			0.0	1	12.438	0.006	483	0.4
Aroclor-1268	2	---			0.0	2	12.506	0.006	790	0.6
Aroclor-1268	3	12.617	-0.082	5851	3.5	3	12.899	0.007	491	0.5
Aroclor-1268	4	13.500	0.010	1745	0.3	4	13.714	0.005	379	0.1
Col1Ave: <3 Quant Peaks						Col2Ave: 0.4				

Total PCB Area Col1 (5.906 - 13.793) = 1149784 Col1 Total PCB = 0.1 ppm*

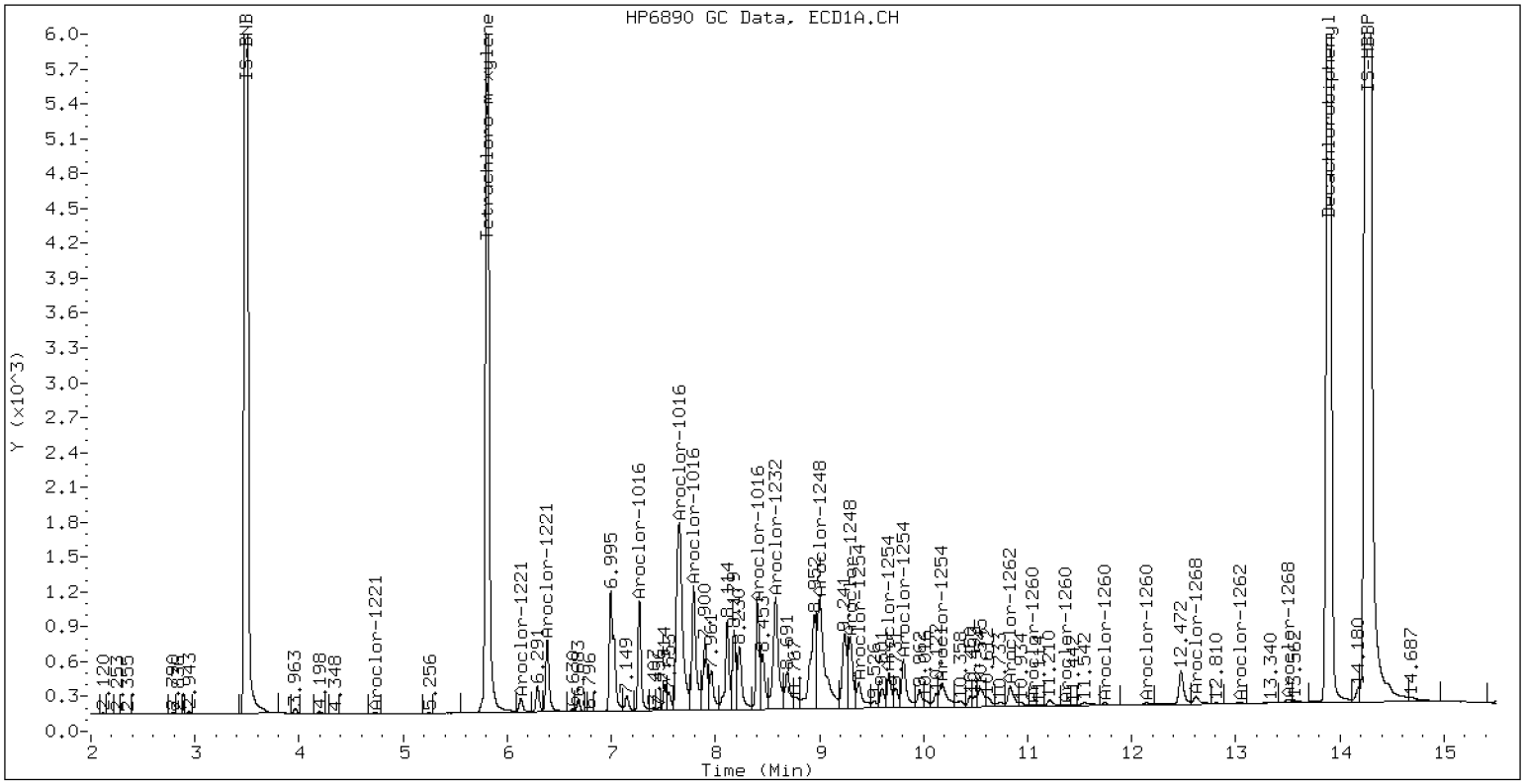
Total PCB Area Col2 (5.785 - 14.019) = 572210 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

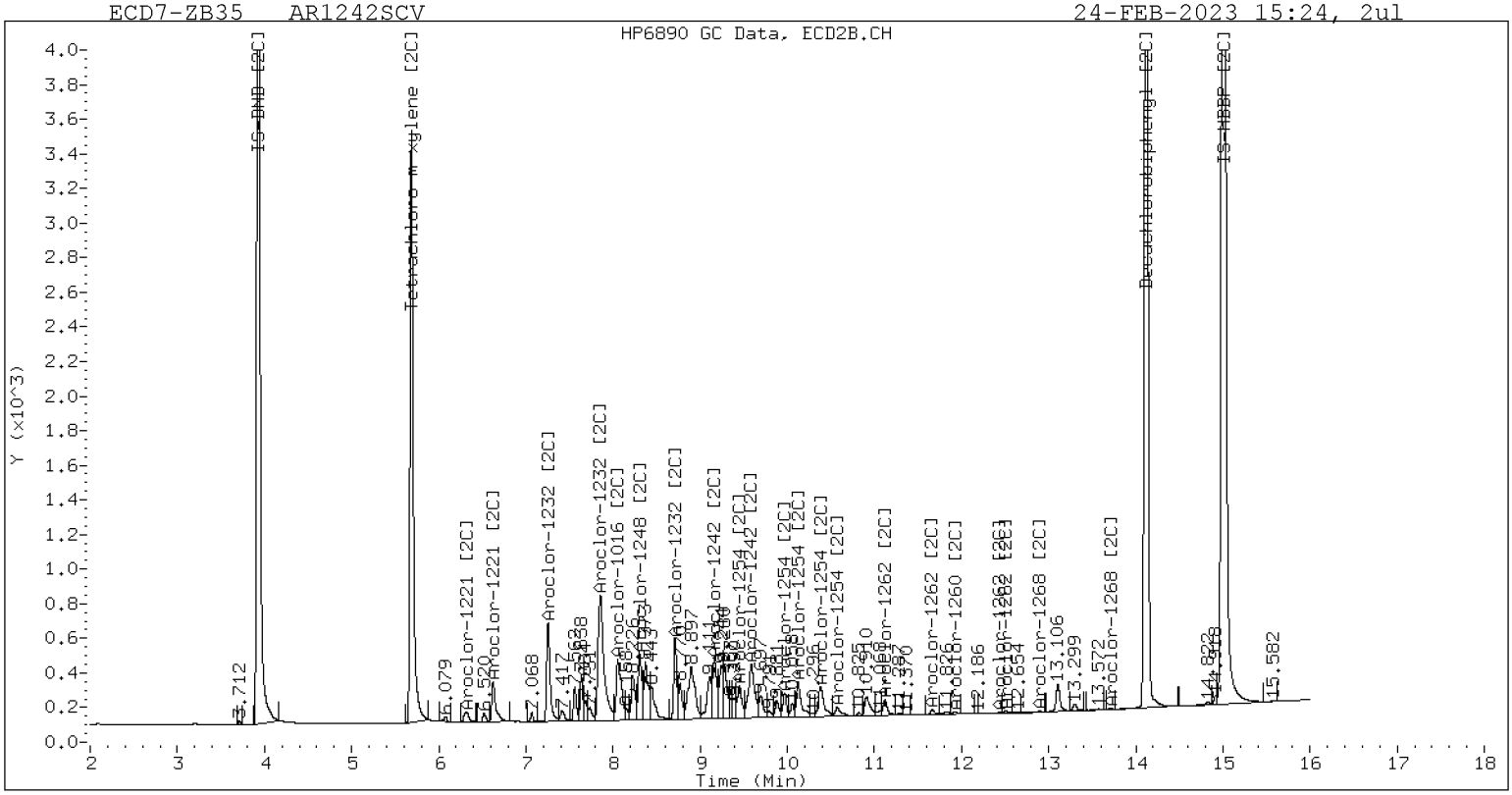
PCB Dual Column Chromatograms

ECD7-ZB5 AR1242SCV 24-FEB-2023 15:24, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1242SCV 24-FEB-2023 15:24, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242315ECD7.D
Data file 2: /230224.b/230224.b/02242315ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248SCV
Client ID:
Injection Date: 24-FEB-2023 15:45
Report Date: 02/28/2023 09:51
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	0.002	336655	5.687	0.002	168719	34.9	36.4	4.2	Tetrachloro-m-xylene
13.894	0.001	499162	14.118	-0.001	308317	33.1	36.3	9.2	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	646554	-4.0
Hexabromobiphenyl	1429847	1529451	7.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	316066	0.3
Hexabromobiphenyl	513946	557213	8.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.271	0.000	19773	80.5	1	7.254	-0.002	16926	91.5
Aroclor-1016	2	7.653	-0.001	88099	117.7	2	7.857	0.001	45733	121.9
Aroclor-1016	3	7.794	0.003	35915	98.3	3	8.060	0.005	8078	47.7
Aroclor-1016	4	8.406	0.001	77842	329.5	4	8.307	0.000	37348	280.9
Total Col1Ave (4 peaks):					156.5	Total Col2Ave (4 peaks):				135.5 RPD = 14
Corrected Ave (3 peaks):					98.8	Corrected Ave (3 peaks):				87.0 RPD = 13
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	6.133	0.001	680	6.6	2	6.326	0.030	1966	34.7
Aroclor-1221	3	6.384	0.002	3390	14.1	3	6.631	0.009	1571	17.0
Col1Ave: <3 Quant Peaks						Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	6.133	0.002	680	9.9	2	7.254	-0.000	16926	210.6
Aroclor-1232	3	7.653	-0.002	88099	283.3	3	7.857	-0.004	45733	284.6
Aroclor-1232	4	8.581	-0.000	99572	753.4	4	8.714	-0.001	38224	826.6
Total Col1Ave (3 peaks):					348.9	Total Col2Ave (3 peaks):				440.6 RPD = 23
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1242	1	7.271	-0.000	19773	98.7	1	7.254	-0.002	16926	115.3
Aroclor-1242	2	7.653	-0.003	88099	144.8	2	7.857	-0.001	45733	148.2
Aroclor-1242	3	8.406	0.000	77842	411.2	3	9.165	-0.002	45021	468.7
Aroclor-1242	4	8.581	0.001	99572	355.8	4	9.590	-0.008	53613	458.1
Total Col1Ave (4 peaks):					252.6	Total Col2Ave (4 peaks):				297.6 RPD = 16
Corrected Ave (3 peaks):					199.8	Corrected Ave (3 peaks):				240.5 RPD = 19
Aroclor-1248	1	8.406	0.000	77842	246.8	1	8.307	-0.001	37348	247.5
Aroclor-1248	2	8.581	0.000	99572	248.3	2	8.714	-0.000	38224	245.0
Aroclor-1248	3	8.998	-0.000	186857	247.0	3	9.165	-0.000	45021	250.7
Aroclor-1248	4	9.294	-0.000	98398	255.5	4	9.590	-0.001	53613	248.7
Total Col1Ave (4 peaks):					249.4	Total Col2Ave (4 peaks):				248.0 RPD = 1
Corrected Ave (3 peaks):					247.4	Corrected Ave (3 peaks):				247.0 RPD = 0
Aroclor-1254	1	9.294	-0.004	98398	151.6	1	9.450	0.001	21823	90.8
Aroclor-1254	2	9.377	-0.001	49616	169.9	2	9.971	0.001	19450	100.6
Aroclor-1254	3	9.669	0.001	40230	96.4	3	10.124	0.000	36574	87.5
Aroclor-1254	4	9.808	0.001	68500	84.4	4	10.389	0.016	35100	86.1
Aroclor-1254	5	10.183	0.007	47365	93.1	5	10.573	0.004	5676	22.9
Total Col1Ave (5 peaks):					119.1	Total Col2Ave (5 peaks):				77.6 RPD = 42*
Corrected Ave (4 peaks):					106.4	Corrected Ave (4 peaks):				71.8 RPD = 39
Aroclor-1260	1	11.047	0.003	1670	3.0	1	11.662	0.009	2055	6.3
Aroclor-1260	2	11.362	0.001	1111	1.9	2	11.924	0.007	1466	1.8
Aroclor-1260	3	11.739	0.005	2107	1.4	3	12.434	-0.002	573	2.6
Aroclor-1260	4	12.144	0.005	1379	1.8	4	12.505	0.003	1003	1.8
Aroclor-1260	5	12.251	0.006	698	2.1	NS	---			----
Total Col1Ave (5 peaks):					2.1	Total Col2Ave (4 peaks):				3.1 RPD = 41*
Corrected Ave (4 peaks):					1.8	Corrected Ave (3 peaks):				2.0 RPD = 12
Aroclor-1262	1	10.833	0.005	15355	32.7	1	11.122	-0.079	7225	15.2
Aroclor-1262	2	12.251	0.007	698	0.9	2	11.662	0.011	2055	5.1
Aroclor-1262	3	12.321	0.002	836	1.0	3	12.434	0.000	573	1.2
Aroclor-1262	4	12.991	0.004	1043	1.4	4	12.505	0.003	1003	1.4
Total Col1Ave (4 peaks):					9.0	Total Col2Ave (4 peaks):				5.7 RPD = 45*
Corrected Ave (3 peaks):					1.1	Corrected Ave (3 peaks):				2.6 RPD = 80*
Aroclor-1268	1	12.251	0.004	698	0.4	1	12.434	0.002	573	0.5
Aroclor-1268	2	12.321	0.004	836	0.4	2	12.505	0.005	1003	0.8
Aroclor-1268	3	12.700	0.001	2449	1.5	3	12.892	0.001	721	0.7
Aroclor-1268	4	13.493	0.003	7547	1.4	4	13.708	-0.001	2265	0.7
Total Col1Ave (4 peaks):					0.9	Total Col2Ave (4 peaks):				0.7 RPD = 29
Corrected Ave (3 peaks):					0.7	Corrected Ave (3 peaks):				0.6 RPD = 13

Total PCB Area Col1 (5.906 - 13.793) = 1574335 Col1 Total PCB = 0.2 ppm*

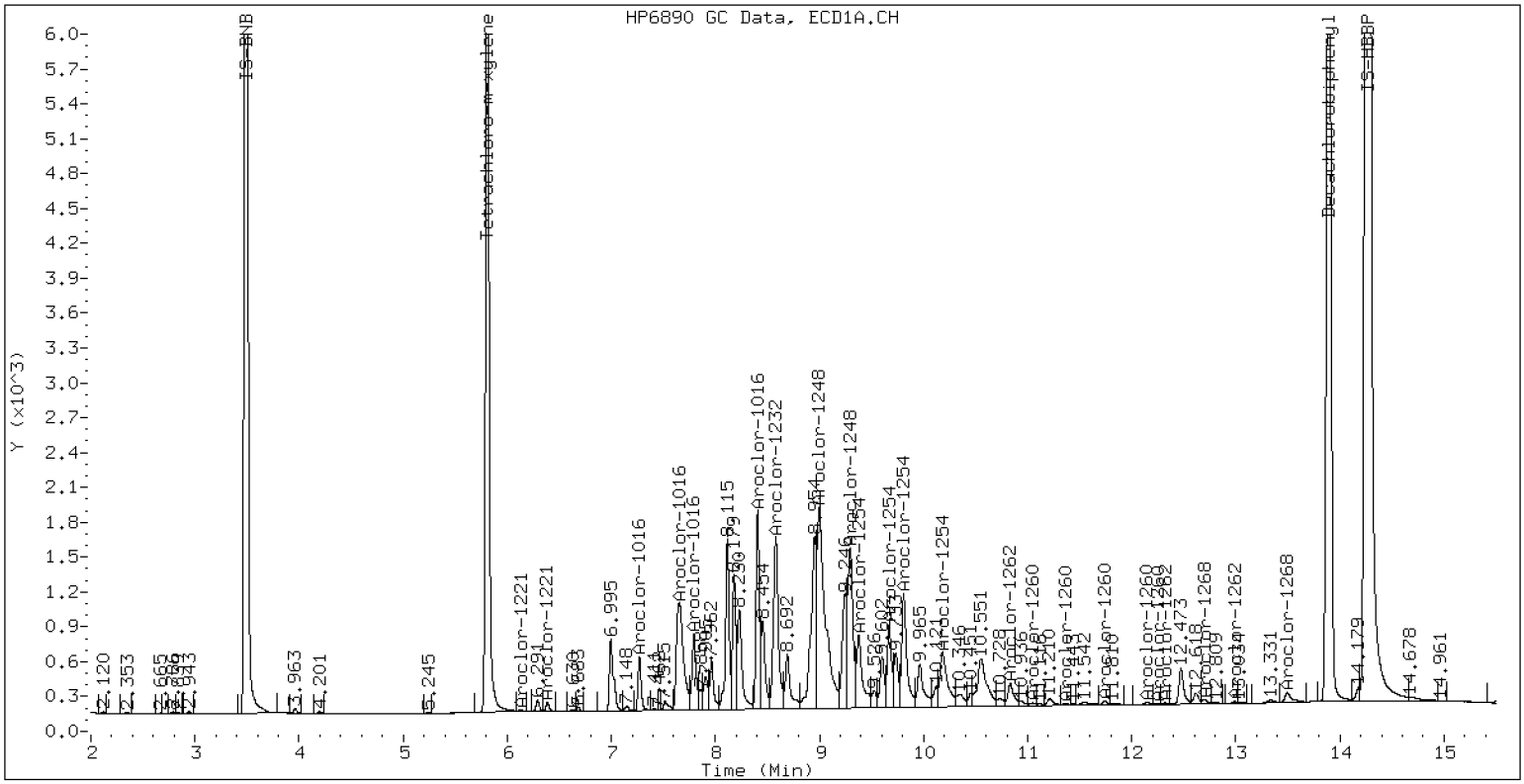
Total PCB Area Col2 (5.785 - 14.019) = 746330 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

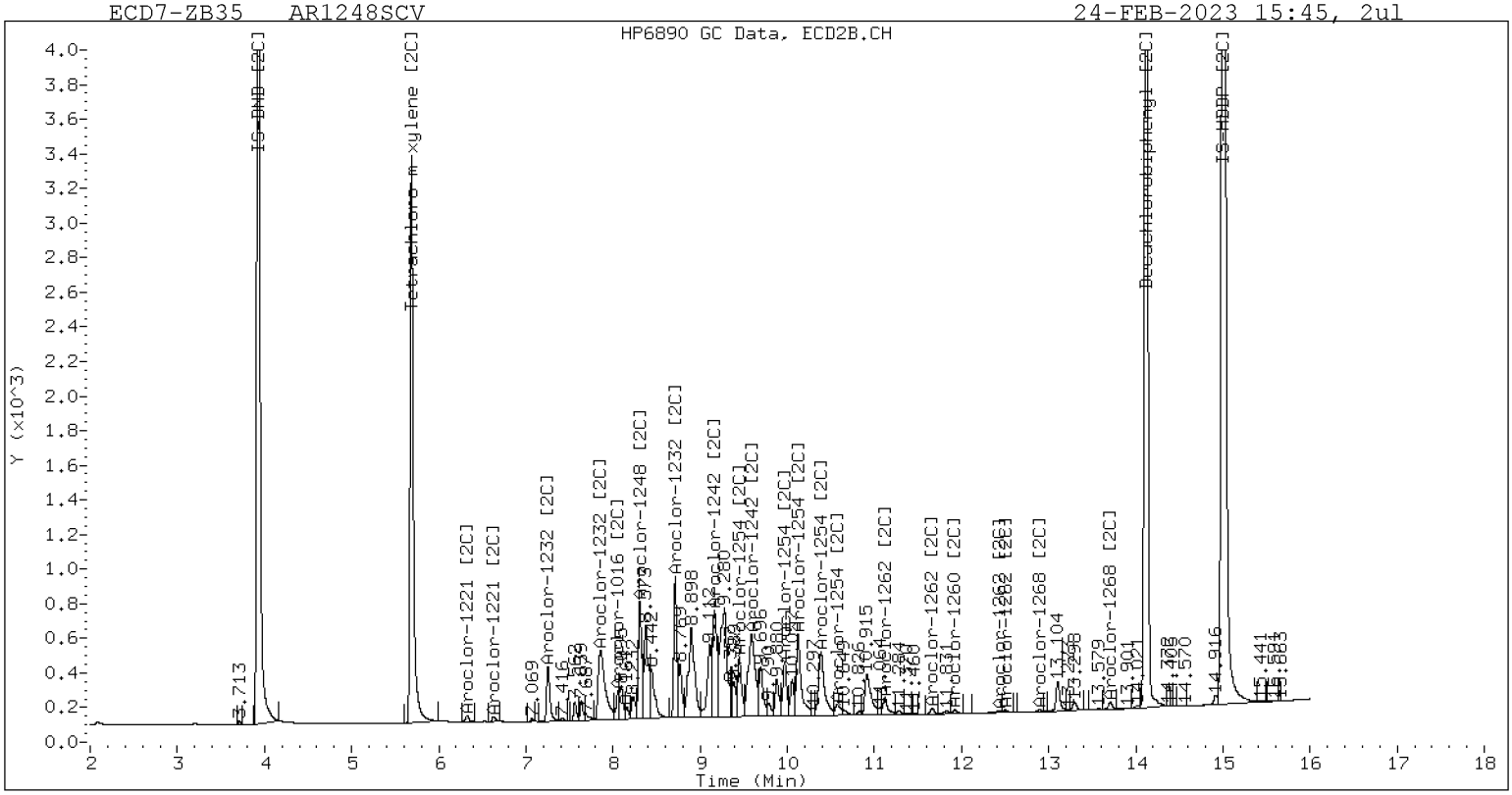
PCB Dual Column Chromatograms

ECD7-ZB5 AR1248SCV 24-FEB-2023 15:45, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248SCV 24-FEB-2023 15:45, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242316ECD7.D
Data file 2: /230224.b/230224.b/02242316ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254SCV
Client ID:
Injection Date: 24-FEB-2023 16:06
Report Date: 02/28/2023 09:51
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.806	-0.000	354312	5.686	0.001	174604	36.1	37.1	2.6	Tetrachloro-m-xylene
13.895	0.002	540961	14.119	-0.000	329134	34.6	37.9	9.0	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	656887	-2.5
Hexabromobiphenyl	1429847	1585505	10.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	320936	1.8
Hexabromobiphenyl	513946	570006	10.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.270	0.000	565	2.3	1	7.255	-0.001	387	2.1
Aroclor-1016	2	7.656	0.002	1875	2.5	2	7.854	-0.002	860	2.3
Aroclor-1016	3	7.792	0.002	1106	3.0	3	8.098	0.043	578	3.4
Aroclor-1016	4	8.405	0.000	29924	124.7	4	8.307	0.000	21985	162.9
	Total Col1Ave (4 peaks):				33.1	Total Col2Ave (4 peaks):				42.6 RPD = 25
	Corrected Ave (3 peaks):				2.6	Corrected Ave (3 peaks):				2.6 RPD = 0
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	6.325	0.028	1947	33.9
Aroclor-1221	3	---			0.0	3	6.637	0.015	368	3.9
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	7.255	0.001	387	4.7
Aroclor-1232	3	7.656	0.000	1875	5.9	3	7.854	-0.007	860	5.3
Aroclor-1232	4	8.583	0.002	12327	91.8	4	8.715	0.000	15013	319.7
	Col1Ave: <3 Quant Peaks					Col2Ave: 109.9				
Aroclor-1242	1	7.270	-0.000	565	2.8	1	7.255	-0.001	387	2.6
Aroclor-1242	2	7.656	0.000	1875	3.0	2	7.854	-0.004	860	2.7
Aroclor-1242	3	8.405	-0.000	29924	155.6	3	9.169	0.002	21933	224.9
Aroclor-1242	4	8.583	0.003	12327	43.4	4	9.545	-0.053	34065	286.6
	Total Col1Ave (4 peaks):				51.2	Total Col2Ave (4 peaks):				129.2 RPD = 87*
	Corrected Ave (3 peaks):				16.4	Corrected Ave (3 peaks):				76.7 RPD = 130*
Aroclor-1248	1	8.405	0.000	29924	93.4	1	8.307	-0.001	21985	143.5
Aroclor-1248	2	8.583	0.002	12327	30.3	2	8.715	0.001	15013	94.8
Aroclor-1248	3	8.992	-0.007	145580	189.4	3	9.169	0.004	21933	120.3
Aroclor-1248	4	9.298	0.003	155450	397.3	4	9.545	-0.046	34065	155.6
	Total Col1Ave (4 peaks):				177.6	Total Col2Ave (4 peaks):				128.5 RPD = 32
	Corrected Ave (3 peaks):				104.3	Corrected Ave (3 peaks):				119.5 RPD = 14
Aroclor-1254	1	9.298	-0.001	155450	235.7	1	9.450	0.001	58639	240.4
Aroclor-1254	2	9.377	-0.001	69801	235.3	2	9.971	0.000	47008	239.5
Aroclor-1254	3	9.668	-0.000	100839	237.8	3	10.124	0.000	100062	235.7
Aroclor-1254	4	9.807	0.000	190544	231.1	4	10.373	0.000	99535	240.5
Aroclor-1254	5	10.176	-0.000	122321	236.7	5	10.570	0.001	61549	244.2
	Total Col1Ave (5 peaks):				235.3	Total Col2Ave (5 peaks):				240.1 RPD = 2
	Corrected Ave (4 peaks):				234.7	Corrected Ave (4 peaks):				239.0 RPD = 2
Aroclor-1260	1	11.043	-0.002	12288	21.5	1	11.661	0.008	29062	86.7
Aroclor-1260	2	11.361	-0.001	13660	22.9	2	11.921	0.003	22238	26.0
Aroclor-1260	3	11.736	0.002	37632	23.8	3	12.441	0.005	3555	15.7
Aroclor-1260	4	12.141	0.002	27105	34.1	4	12.503	0.001	13126	22.8
Aroclor-1260	5	12.320	0.076	2381	6.9	NS	---			----
	Total Col1Ave (5 peaks):				21.9	Total Col2Ave (4 peaks):				37.8 RPD = 53*
	Corrected Ave (4 peaks):				18.8	Corrected Ave (3 peaks):				21.5 RPD = 13
Aroclor-1262	1	10.827	-0.002	220626	453.6	1	11.281	0.081	13562	27.9
Aroclor-1262	2	12.320	0.076	2381	3.0	2	11.661	0.009	29062	70.1
Aroclor-1262	3	---			0.0	3	12.441	0.007	3555	7.6
Aroclor-1262	4	12.989	0.002	3225	4.1	4	12.503	0.001	13126	17.8
	Total Col1Ave (3 peaks):				153.6	Total Col2Ave (4 peaks):				30.8 RPD = 133*
	Corrected Ave: < 3 Peaks					Corrected Ave (3 peaks):				17.7
Aroclor-1268	1	12.320	0.074	2381	1.2	1	12.441	0.009	3555	3.1
Aroclor-1268	2	---			0.0	2	12.503	0.003	13126	10.6
Aroclor-1268	3	12.701	0.002	2939	1.7	3	12.892	0.000	772	0.7
Aroclor-1268	4	13.493	0.003	9164	1.6	4	13.707	-0.002	2801	0.8
	Total Col1Ave (3 peaks):				1.5	Total Col2Ave (4 peaks):				3.8 RPD = 87*
	Corrected Ave: < 3 Peaks					Corrected Ave (3 peaks):				1.6

Total PCB Area Col1 (5.906 - 13.793) = 2118645 Col1 Total PCB = 0.3 ppm*

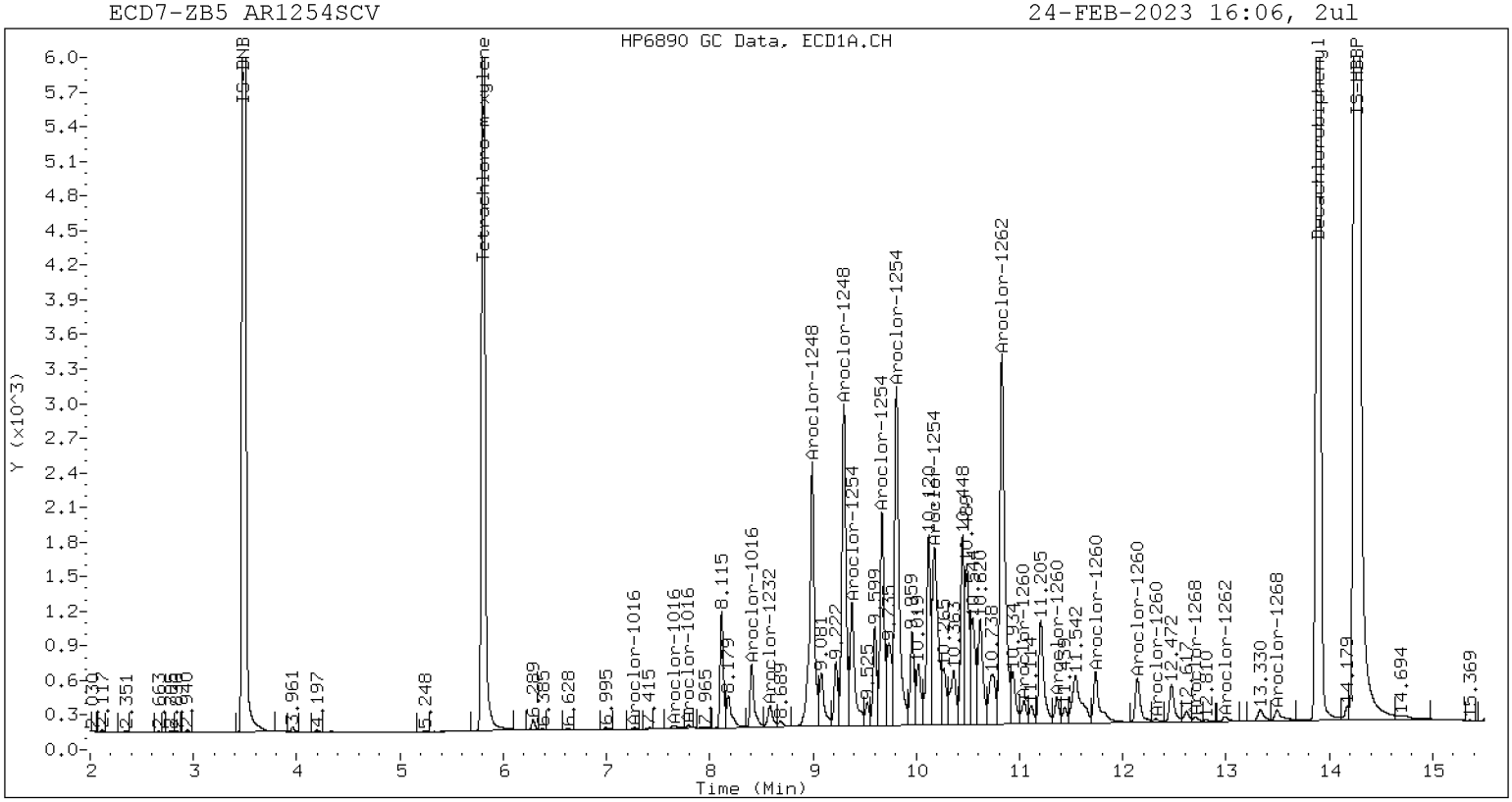
Total PCB Area Col2 (5.785 - 14.019) = 1007601 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

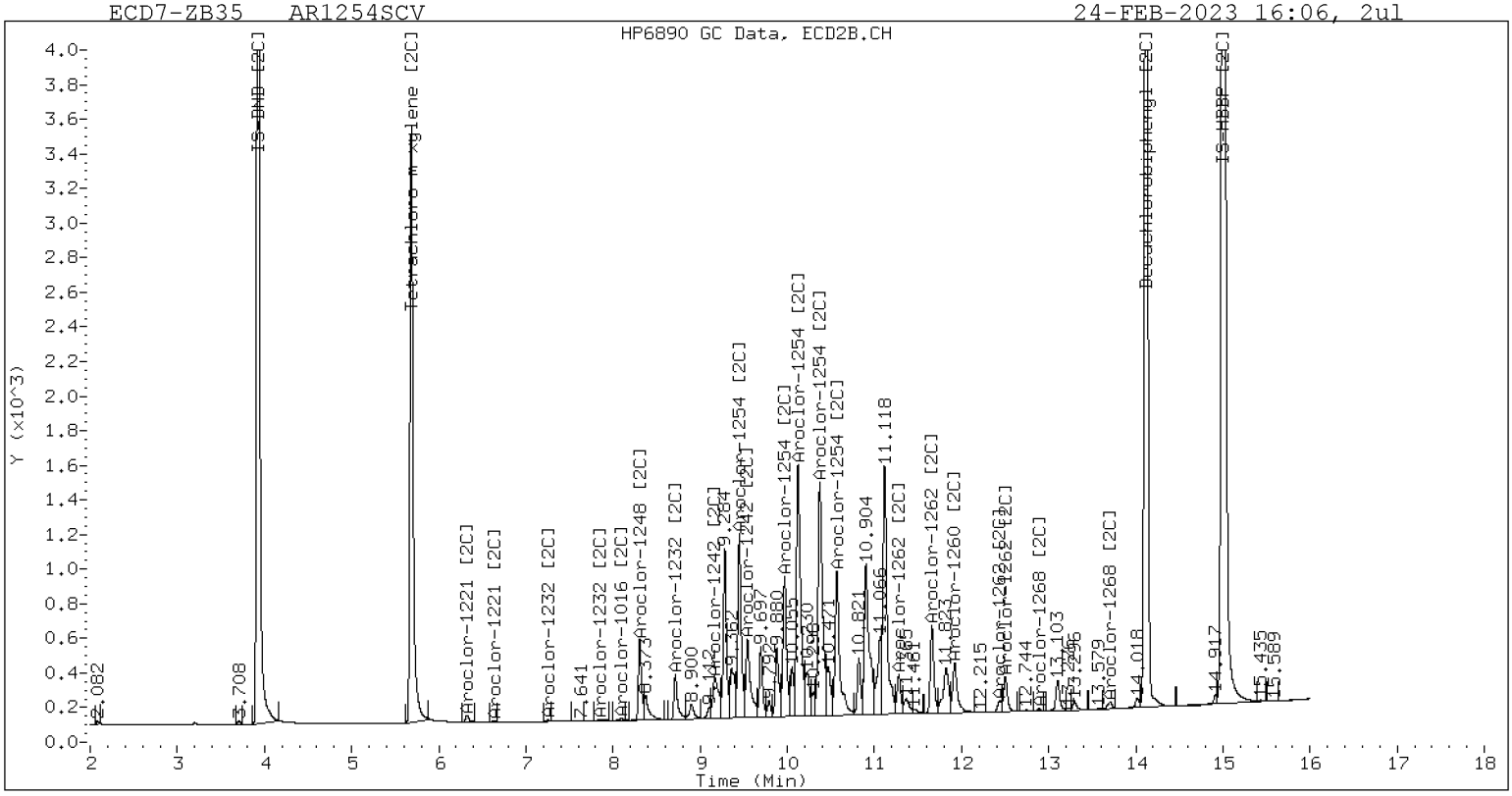
PCB Dual Column Chromatograms

ECD7-ZB5 AR1254SCV 24-FEB-2023 16:06, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254SCV 24-FEB-2023 16:06, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242317ECD7.D
Data file 2: /230224.b/230224.b/02242317ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR2162SCV
Client ID:
Injection Date: 24-FEB-2023 16:27
Report Date: 02/28/2023 09:51
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.807	0.000	356001	5.685	0.000	170882	36.0	36.6	1.7	Tetrachloro-m-xylene
13.895	0.002	533971	14.119	0.000	326235	34.4	37.9	9.5	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	661953	-1.8
Hexabromobiphenyl	1429847	1574993	10.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	317807	0.8
Hexabromobiphenyl	513946	565951	10.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.269	-0.001	7175	28.5	1	7.256	0.000	3727	20.0
Aroclor-1016	2	7.659	0.005	12893	16.8	2	7.863	0.007	5834	15.5
Aroclor-1016	3	7.794	0.004	6936	18.5	3	8.063	0.009	2963	17.4
Aroclor-1016	4	8.408	0.003	3610	14.9	4	8.308	0.002	2045	15.3
Total Col1Ave (4 peaks):					19.7	Total Col2Ave (4 peaks):				17.0 RPD = 14
Corrected Ave (3 peaks):					16.8	Corrected Ave (3 peaks):				16.1 RPD = 4
Aroclor-1221	1	4.730	-0.000	15803	266.6	1	4.955	-0.001	7909	262.9
Aroclor-1221	2	6.131	-0.001	26946	254.1	2	6.296	-0.000	14303	251.2
Aroclor-1221	3	6.382	-0.000	62477	253.8	3	6.622	0.000	23612	254.7
Total Col1Ave (3 peaks):					258.2	Total Col2Ave (3 peaks):				256.3 RPD = 1
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	4.730	0.000	15803	445.6	1	4.955	-0.001	7909	486.4
Aroclor-1232	2	6.131	0.000	26946	383.1	2	7.256	0.002	3727	46.1
Aroclor-1232	3	7.659	0.003	12893	40.5	3	7.863	0.002	5834	36.1
Aroclor-1232	4	8.583	0.003	2684	19.8	4	8.716	0.002	1189	25.6
Total Col1Ave (4 peaks):					222.3	Total Col2Ave (4 peaks):				148.5 RPD = 40
Corrected Ave (3 peaks):					147.8	Corrected Ave (3 peaks):				35.9 RPD = 122*
Aroclor-1242	1	7.269	-0.001	7175	35.0	1	7.256	0.000	3727	25.2
Aroclor-1242	2	7.659	0.003	12893	20.7	2	7.863	0.005	5834	18.8
Aroclor-1242	3	8.408	0.002	3610	18.6	3	9.175	0.008	1082	11.2
Aroclor-1242	4	8.583	0.004	2684	9.4	4	9.543	-0.054	1390	11.8
Total Col1Ave (4 peaks):					20.9	Total Col2Ave (4 peaks):				16.8 RPD = 22
Corrected Ave (3 peaks):					16.2	Corrected Ave (3 peaks):				13.9 RPD = 15
Aroclor-1248	1	8.408	0.002	3610	11.2	1	8.308	0.001	2045	13.5
Aroclor-1248	2	8.583	0.003	2684	6.5	2	8.716	0.002	1189	7.6
Aroclor-1248	3	8.994	-0.005	24440	31.6	3	9.175	0.009	1082	6.0
Aroclor-1248	4	9.302	0.008	26328	66.8	4	9.543	-0.048	1390	6.4
Total Col1Ave (4 peaks):					29.0	Total Col2Ave (4 peaks):				8.4 RPD = 110*
Corrected Ave (3 peaks):					16.4	Corrected Ave (3 peaks):				6.7 RPD = 85*
Aroclor-1254	1	9.302	0.004	26328	39.6	1	9.452	0.003	9571	39.6
Aroclor-1254	2	---			0.0	2	9.972	0.002	1733	8.9
Aroclor-1254	3	9.670	0.002	3721	8.7	3	10.147	0.023	49218	117.1
Aroclor-1254	4	9.808	0.000	9653	11.6	4	10.370	-0.002	59603	145.4
Aroclor-1254	5	10.120	-0.056	131179	251.9	5	10.569	0.001	79533	318.7
Total Col1Ave (4 peaks):					78.0	Total Col2Ave (5 peaks):				125.9 RPD = 47*
Corrected Ave (3 peaks):					20.0	Corrected Ave (4 peaks):				77.8 RPD = 118*
Aroclor-1260	1	11.044	-0.000	223208	394.0	1	11.652	-0.001	104071	312.7
Aroclor-1260	2	11.361	-0.001	190166	321.2	2	11.919	0.002	251579	296.2
Aroclor-1260	3	11.737	0.003	458281	291.9	3	12.435	-0.001	113645	504.2
Aroclor-1260	4	12.141	0.002	149720	189.4	4	12.501	-0.001	182951	319.6
Aroclor-1260	5	12.244	0.000	196033	576.0	NS	---			----
Total Col1Ave (5 peaks):					354.5	Total Col2Ave (4 peaks):				358.2 RPD = 1
Corrected Ave (4 peaks):					299.1	Corrected Ave (3 peaks):				309.5 RPD = 3
Aroclor-1262	1	10.828	-0.001	121431	251.3	1	11.201	0.000	121335	251.1
Aroclor-1262	2	12.244	0.000	196033	249.3	2	11.652	0.000	104071	252.9
Aroclor-1262	3	12.319	0.001	211092	249.8	3	12.435	0.001	113645	243.4
Aroclor-1262	4	12.988	0.001	183455	237.5	4	12.501	-0.001	182951	250.1
Total Col1Ave (4 peaks):					247.0	Total Col2Ave (4 peaks):				249.3 RPD = 1
Corrected Ave (3 peaks):					245.5	Corrected Ave (3 peaks):				248.2 RPD = 1
Aroclor-1268	1	12.244	-0.002	196033	97.1	1	12.435	0.003	113645	99.7
Aroclor-1268	2	12.319	0.002	211092	105.6	2	12.501	0.001	182951	149.3
Aroclor-1268	3	12.723	0.024	77240	45.2	3	12.891	-0.000	7755	7.4
Aroclor-1268	4	13.488	-0.002	65479	11.6	4	13.709	0.000	35146	10.5
Total Col1Ave (4 peaks):					64.9	Total Col2Ave (4 peaks):				66.7 RPD = 3

Corrected Ave (3 peaks): 51.3 Corrected Ave (3 peaks): 39.2 RPD = 27

Total PCB Area Col1 (5.906 - 13.793) = 3239932 Col1 Total PCB = 0.4 ppm*

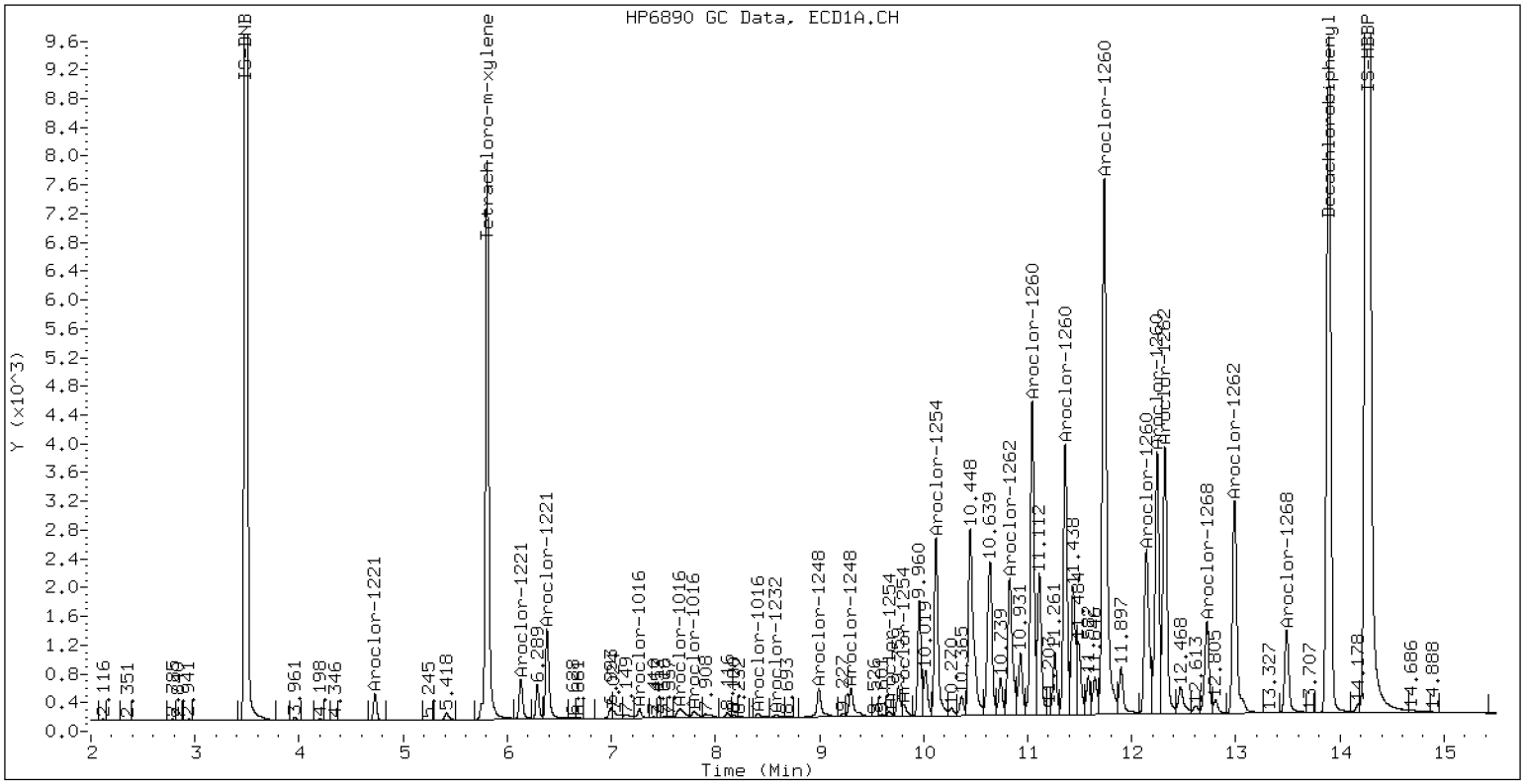
Total PCB Area Col2 (5.785 - 14.019) = 1655522 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

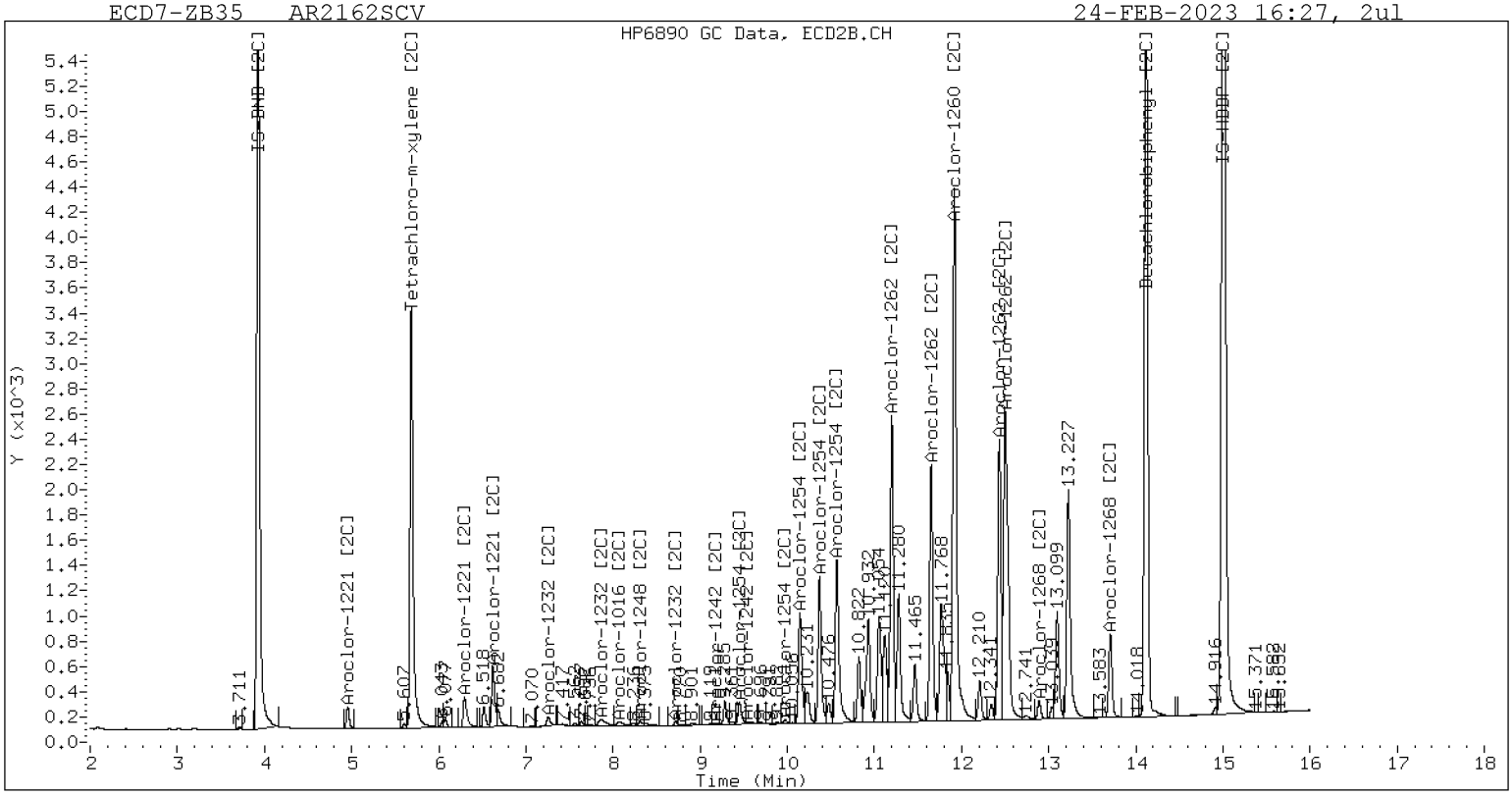
PCB Dual Column Chromatograms

ECD7-ZB5 AR2162SCV 24-FEB-2023 16:27, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR2162SCV 24-FEB-2023 16:27, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242318ECD7.D
Data file 2: /230224.b/230224.b/02242318ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR3268SCV
Client ID:
Injection Date: 24-FEB-2023 16:48
Report Date: 02/28/2023 09:51
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.806	0.000	363331	5.685	0.000	176204	37.1	38.2	2.9	Tetrachloro-m-xylene
13.894	0.001	800845	14.118	-0.001	488290	51.3	56.4	9.5	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	656592	-2.6
Hexabromobiphenyl	1429847	1584453	10.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	314741	-0.2
Hexabromobiphenyl	513946	568346	10.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	7.270	-0.001	28327	113.6	1	7.254	-0.001	20651	112.1
Aroclor-1016	2	7.657	0.003	80668	106.1	2	7.861	0.005	41326	110.6
Aroclor-1016	3	7.793	0.003	40661	109.6	3	8.060	0.005	20446	121.2
Aroclor-1016	4	8.407	0.002	24680	102.9	4	8.308	0.001	13576	102.5
Total Col1Ave (4 peaks):					108.0	Total Col2Ave (4 peaks):				111.6 RPD = 3
Corrected Ave (3 peaks):					106.2	Corrected Ave (3 peaks):				108.4 RPD = 2
Aroclor-1221	1	4.729	-0.001	8535	145.1	1	4.956	-0.000	3965	133.1
Aroclor-1221	2	6.132	-0.000	15523	147.6	2	6.297	0.001	8689	154.1
Aroclor-1221	3	6.382	-0.000	45872	187.9	3	6.622	0.001	22272	242.6
Total Col1Ave (3 peaks):					160.2	Total Col2Ave (3 peaks):				176.6 RPD = 10
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	4.729	-0.001	8535	242.6	1	4.956	0.000	3965	246.2
Aroclor-1232	2	6.132	0.001	15523	222.5	2	7.254	0.000	20651	258.1
Aroclor-1232	3	7.657	0.001	80668	255.4	3	7.861	0.001	41326	258.3
Aroclor-1232	4	8.582	0.001	34784	259.2	4	8.714	-0.001	12504	271.5
Total Col1Ave (4 peaks):					244.9	Total Col2Ave (4 peaks):				258.5 RPD = 5
Corrected Ave (3 peaks):					240.2	Corrected Ave (3 peaks):				254.2 RPD = 6
Aroclor-1242	1	7.270	-0.001	28327	139.2	1	7.254	-0.001	20651	141.2
Aroclor-1242	2	7.657	0.001	80668	130.5	2	7.861	0.003	41326	134.4
Aroclor-1242	3	8.407	0.001	24680	128.4	3	9.170	0.003	12830	134.1
Aroclor-1242	4	8.582	0.003	34784	122.4	4	9.600	0.003	14836	127.3
Total Col1Ave (4 peaks):					130.1	Total Col2Ave (4 peaks):				134.3 RPD = 3
Corrected Ave (3 peaks):					127.1	Corrected Ave (3 peaks):				132.0 RPD = 4
Aroclor-1248	1	8.407	0.001	24680	77.0	1	8.308	0.000	13576	90.3
Aroclor-1248	2	8.582	0.001	34784	85.4	2	8.714	-0.000	12504	80.5
Aroclor-1248	3	8.996	-0.003	83592	108.8	3	9.170	0.004	12830	71.8
Aroclor-1248	4	9.292	-0.003	39603	101.3	4	9.600	0.010	14836	69.1
Total Col1Ave (4 peaks):					93.1	Total Col2Ave (4 peaks):				77.9 RPD = 18
Corrected Ave (3 peaks):					87.9	Corrected Ave (3 peaks):				73.8 RPD = 17
Aroclor-1254	1	9.292	-0.007	39603	60.1	1	9.452	0.003	4590	19.2
Aroclor-1254	2	9.377	-0.000	11450	38.6	2	9.973	0.003	2892	15.0
Aroclor-1254	3	9.674	0.005	6387	15.1	3	10.131	0.007	6052	14.5
Aroclor-1254	4	9.813	0.006	10162	12.3	4	10.390	0.017	5324	13.1
Aroclor-1254	5	10.189	0.012	6862	13.3	5	10.572	0.004	1891	7.7
Total Col1Ave (5 peaks):					27.9	Total Col2Ave (5 peaks):				13.9 RPD = 67*
Corrected Ave (4 peaks):					19.8	Corrected Ave (4 peaks):				12.6 RPD = 45*
Aroclor-1260	1	11.046	0.002	87033	152.7	1	11.645	-0.008	62543	187.1
Aroclor-1260	2	11.362	0.001	6300	10.6	2	11.920	0.003	28552	33.5
Aroclor-1260	3	11.738	0.004	54524	34.5	3	12.432	-0.004	285450	1261.2
Aroclor-1260	4	12.144	0.005	1727	2.2	4	12.499	-0.002	306992	534.0
Aroclor-1260	5	12.246	0.002	502931	1469.0	NS	---			----
Total Col1Ave (5 peaks):					333.8	Total Col2Ave (4 peaks):				503.9 RPD = 41*
Corrected Ave (4 peaks):					50.0	Corrected Ave (3 peaks):				251.5 RPD = 134*
Aroclor-1262	1	10.832	0.004	3395	7.0	1	11.201	0.001	44255	91.2
Aroclor-1262	2	12.246	0.002	502931	635.9	2	11.645	-0.007	62543	151.3
Aroclor-1262	3	12.318	-0.000	497006	584.5	3	12.432	-0.002	285450	608.7
Aroclor-1262	4	12.987	-0.000	202197	260.2	4	12.499	-0.003	306992	417.9
Total Col1Ave (4 peaks):					371.9	Total Col2Ave (4 peaks):				317.3 RPD = 16
Corrected Ave (3 peaks):					283.9	Corrected Ave (3 peaks):				220.1 RPD = 25
Aroclor-1268	1	12.246	-0.001	502931	247.7	1	12.432	-0.000	285450	249.4
Aroclor-1268	2	12.318	0.002	497006	247.2	2	12.499	-0.001	306992	249.5
Aroclor-1268	3	12.699	-0.000	422793	245.8	3	12.892	0.000	260893	248.4
Aroclor-1268	4	13.490	0.000	1386953	244.9	4	13.709	-0.000	829733	247.1
Total Col1Ave (4 peaks):					246.4	Total Col2Ave (4 peaks):				248.6 RPD = 1

Corrected Ave (3 peaks): 246.0 Corrected Ave (3 peaks): 248.3 RPD = 1

Total PCB Area Col1 (5.906 - 13.793) = 4180607 Col1 Total PCB = 0.5 ppm*

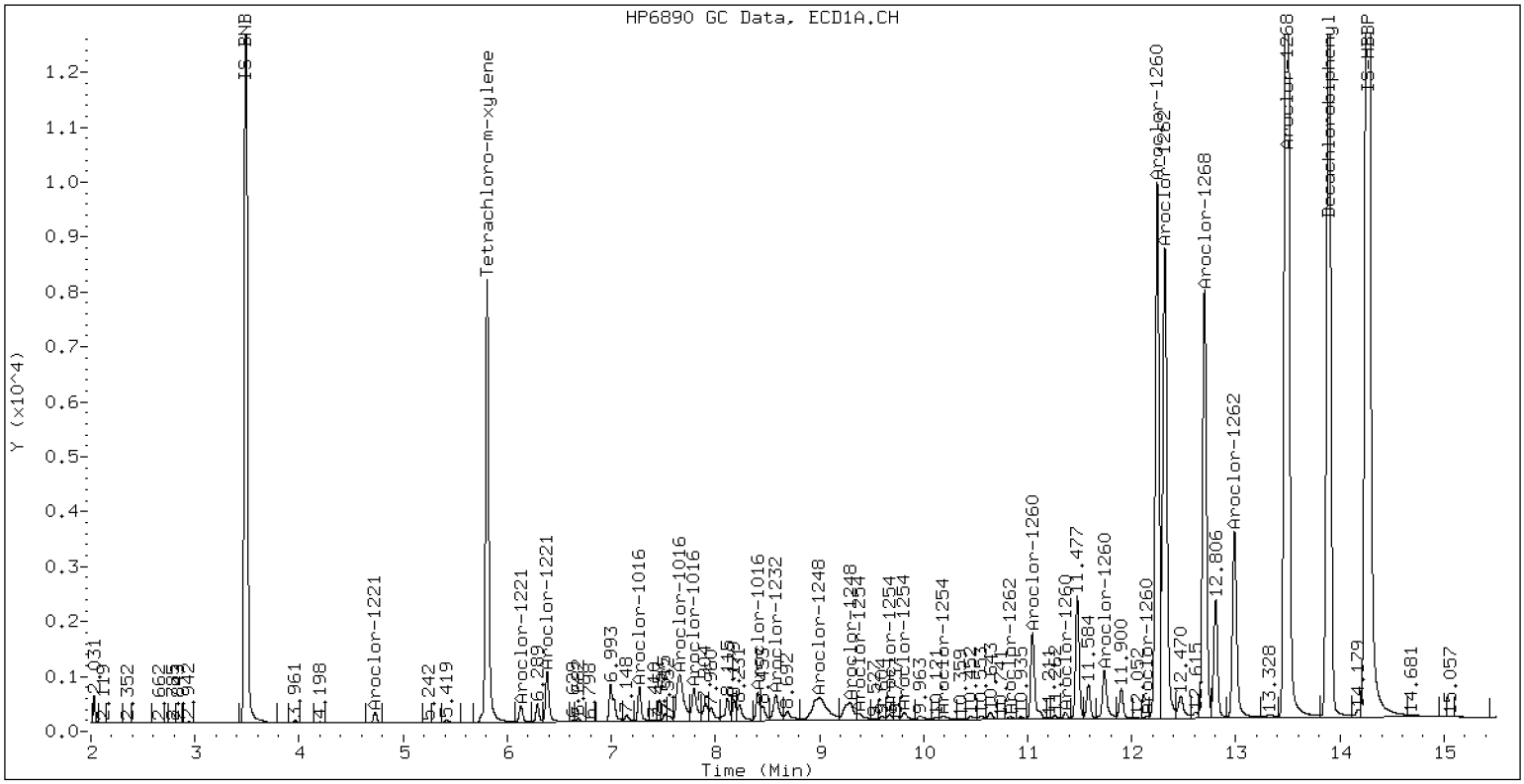
Total PCB Area Col2 (5.785 - 14.019) = 2376912 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

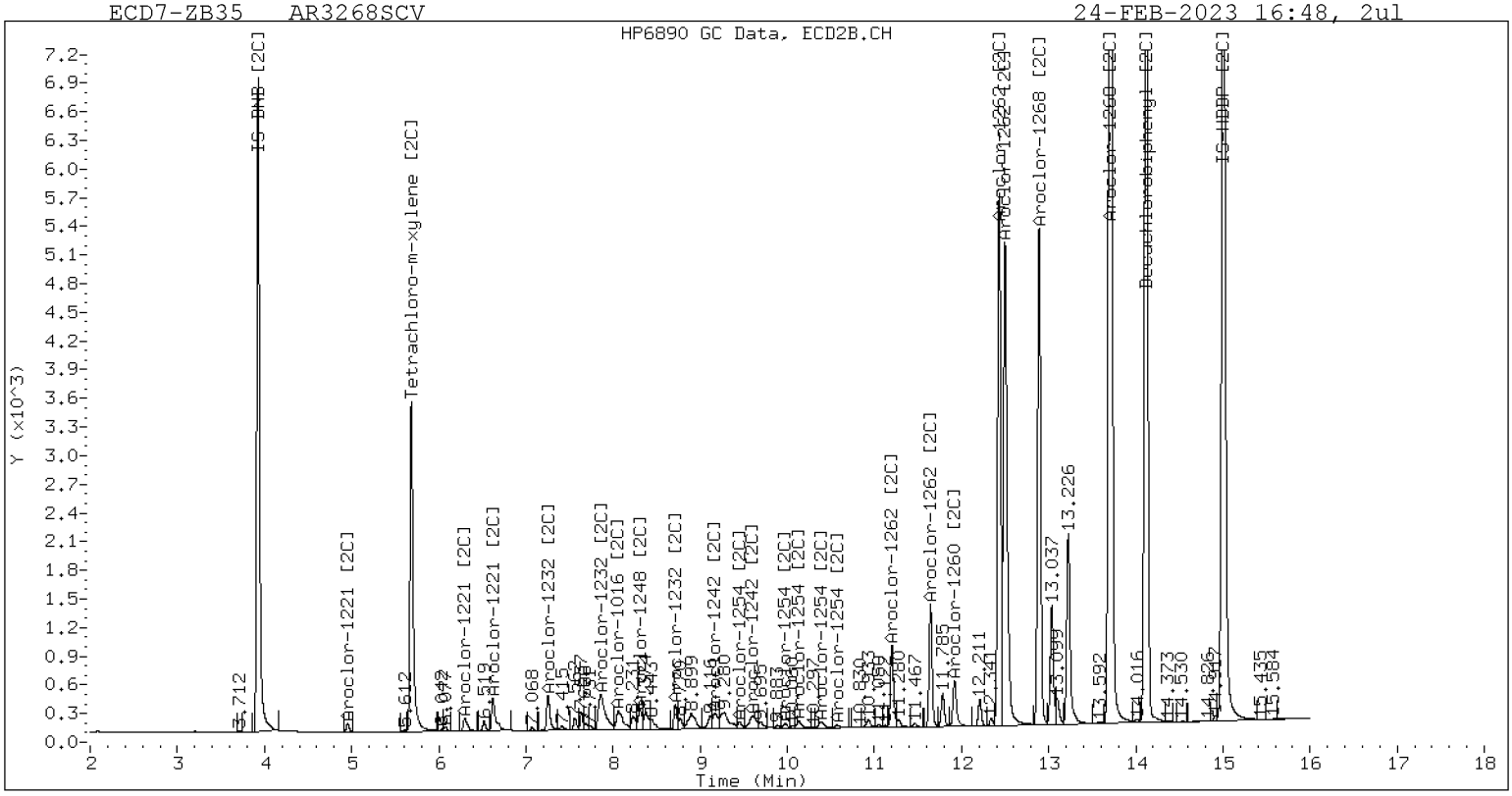
PCB Dual Column Chromatograms

ECD7-ZB5 AR3268SCV 24-FEB-2023 16:48, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR3268SCV 24-FEB-2023 16:48, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
8082 DDT SCREEN REPORT

Data file 1: /230224.b/02242319ECD7.D ARI ID: DDTS

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
9.261	0.000	694353	9.912	0.000	580269	0.100	0.100	0.0	2,4-DDE
0.000	-10.293	0	10.672	0.000	673479	0.000	0.200#	----	2,4-DDT
9.686	0.000	1191406	10.212	0.000	433373	0.100	0.100	0.0	4,4-DDE
10.259	0.000	1721760	10.672	0.000	673479	0.100	0.200#	66.7*	4,4-DDD

# Indicates value is from co-eluting peaks
* Indicates RPD > 40%

Analytical Resources Inc.
8082 DDT SCREEN REPORT

Data file 1: /230224.b/02242320ECD7.D ARI ID: DDT BD

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
9.285	0.023	4923	9.921	0.009	9972	0.001	0.002	84.3*	2,4-DDE
0.000	-10.293	0	10.677	0.004	249094	0.000	0.074#	----	2,4-DDT
9.692	0.006	12128	10.221	0.009	528	0.001	0.000	156.7*	4,4-DDE
10.265	0.006	410017	10.677	0.004	249094	0.023	0.074#	103.6*	4,4-DDD

# Indicates value is from co-eluting peaks
* Indicates RPD > 40%

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GB00069
Laboratory ID: SLB0342-SCV1
Sequence: SLB0342
Sequence Name: AR1660SCV1
Standard ID: L002065

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Aroclor 1016	250.00	243	-2.7	20.00
Aroclor 1016 [2C]	250.00	246	-1.4	20.00
Aroclor 1260	250.00	266	6.2	20.00
Aroclor 1260 [2C]	250.00	261	4.5	20.00
Decachlorobiphenyl	40.000	34.3	-14.2	20.00
Tetrachlorometaxylene	40.000	34.9	-12.6	20.00
Decachlorobiphenyl [2C]	40.000	37.3	-6.6	20.00
Tetrachlorometaxylene [2C]	40.000	35.8	-10.6	20.00

* Indicates values outside of QC limits
[2C] indicates second-column analyte.

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GB00069
Laboratory ID: SLB0342-SCV2
Sequence: SLB0342
Sequence Name: AR1242SCV2
Standard ID: K007656

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Aroclor 1242	250.00	204	-18.5	20.00
Aroclor 1242 [2C]	250.00	221	-11.8	20.00
Decachlorobiphenyl	40.000	37.0	-7.5	20.00
Tetrachlorometaxylene	40.000	33.6	-15.9	20.00
Decachlorobiphenyl [2C]	40.000	40.3	0.8	20.00
Tetrachlorometaxylene [2C]	40.000	34.5	-13.7	20.00

* Indicates values outside of QC limits
[2C] indicates second-column analyte.

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GB00069
Laboratory ID: SLB0342-SCV3
Sequence: SLB0342
Sequence Name: AR1248SCV3
Standard ID: L002066

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Aroclor 1248	250.00	249	-0.2	20.00
Aroclor 1248 [2C]	250.00	248	-0.8	20.00
Decachlorobiphenyl	40.000	33.1	-17.2	20.00
Tetrachlorometaxylene	40.000	34.9	-12.8	20.00
Decachlorobiphenyl [2C]	40.000	36.3	-9.2	20.00
Tetrachlorometaxylene [2C]	40.000	36.4	-9.0	20.00

* Indicates values outside of QC limits
[2C] indicates second-column analyte.

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GB00069
Laboratory ID: SLB0342-SCV4
Sequence: SLB0342
Sequence Name: AR1254SCV4
Standard ID: L002067

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Aroclor 1254	250.00	235	-5.9	20.00
Aroclor 1254 [2C]	250.00	240	-4.0	20.00
Decachlorobiphenyl	40.000	34.6	-13.4	20.00
Tetrachlorometaxylene	40.000	36.1	-9.7	20.00
Decachlorobiphenyl [2C]	40.000	37.9	-5.2	20.00
Tetrachlorometaxylene [2C]	40.000	37.1	-7.3	20.00

* Indicates values outside of QC limits
[2C] indicates second-column analyte.

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GB00069
Laboratory ID: SLB0342-SCV5
Sequence: SLB0342
Sequence Name: AR2162SCV5
Standard ID: L002068

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Aroclor 1221	250.00	258	3.3	20.00
Aroclor 1221 [2C]	250.00	256	2.5	20.00
Aroclor 1262	250.00	247	-1.2	20.00
Aroclor 1262 [2C]	250.00	249	-0.3	20.00
Decachlorobiphenyl	40.000	34.4	-13.9	20.00
Tetrachlorometaxylene	40.000	36.0	-10.0	20.00
Decachlorobiphenyl [2C]	40.000	37.9	-5.4	20.00
Tetrachlorometaxylene [2C]	40.000	36.6	-8.4	20.00

* Indicates values outside of QC limits
[2C] indicates second-column analyte.

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GB00069
Laboratory ID: SLB0342-SCV6
Sequence: SLB0342
Sequence Name: AR3268SCV6
Standard ID: L002069

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Aroclor 1232	250.00	245	-2.0	20.00
Aroclor 1232 [2C]	250.00	259	3.4	20.00
Aroclor 1268	250.00	246	-1.4	20.00
Aroclor 1268 [2C]	250.00	249	-0.6	20.00
Decachlorobiphenyl	40.000	51.3	28.3	20.00
Tetrachlorometaxylene	40.000	37.1	-7.3	20.00
Decachlorobiphenyl [2C]	40.000	56.4	41.0	20.00
Tetrachlorometaxylene [2C]	40.000	38.2	-4.6	20.00

* Indicates values outside of QC limits
[2C] indicates second-column analyte.

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GB00069
Lab File ID:	02282310ECD7.D	Calibration Date:	02/24/2023
Sequence:	SLC0014	Injection Date:	02/28/23
Lab Sample ID:	SLC0014-ICV1	Injection Time:	19:04
Sequence Name:	AR1254ICV1		

		CONC. (ug/L)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Aroclor 1254	A	250.00	284	0.0662949	0.0748899		13.7	+/-20
Aroclor-1254 (1)	A	250.00	282	0.0803331	0.0904834			
Aroclor-1254 (2)	A	250.00	292	0.0361302	0.0421510			
Aroclor-1254 (3)	A	250.00	291	0.0516471	0.0600635			
Aroclor-1254 (4)	A	250.00	278	0.1004230	0.1118357			
Aroclor-1254 (5)	A	250.00	278	0.0629414	0.0699159			
Aroclor 1254 [2C]	A	250.00	263	0.0763106	0.0803775		5.4	+/-20
Aroclor-1254 (1) [2C]	A	250.00	264	0.0608052	0.0641940			
Aroclor-1254 (2) [2C]	A	250.00	266	0.0489162	0.0521536			
Aroclor-1254 (3) [2C]	A	250.00	266	0.1058376	0.1127019			
Aroclor-1254 (4) [2C]	A	250.00	258	0.1031750	0.1067184			
Aroclor-1254 (5) [2C]	A	250.00	263	0.0628191	0.0661198			
Decachlorobiphenyl	A	40.000	37.4	0.7878687	0.7377254		-6.5	+/-20
Tetrachlorometaxylene	A	40.000	40.1	1.1944880	1.1986300		0.3	+/-20
Decachlorobiphenyl [2C]	A	40.000	41.4	1.2182710	1.2609770		3.5	+/-20
Tetrachlorometaxylene [2C]	A	40.000	40.4	1.1737210	1.1848750		1.0	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230228.b/02282310ECD7.D
Data file 2: /230228.b/230228.b/02282310ECD7.D
Method: \\target\share\chem4\ecd7.i\230228.b\PCB.m
Compound Sublist: AR1254.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254ICV1
Client ID:
Injection Date: 28-FEB-2023 19:04
Report Date: 03/01/2023 12:20
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	0.002	447919	5.688	0.001	178473	40.1	40.4	0.6	Tetrachloro-m-xylene
13.894	0.001	610235	14.119	-0.001	294184	37.5	41.4	10.0	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	747385	10.9
Hexabromobiphenyl	1429847	1654369	15.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	301252	-4.4
Hexabromobiphenyl	513946	466597	-9.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1254	1	9.300	0.001	211331	281.6	1	9.451	0.000	60433	263.9
Aroclor-1254	2	9.378	-0.000	98447	291.7	2	9.971	-0.001	49098	266.5
Aroclor-1254	3	9.670	0.001	140283	290.7	3	10.125	-0.000	106099	266.2
Aroclor-1254	4	9.809	0.001	261201	278.4	4	10.375	0.001	100466	258.6
Aroclor-1254	5	10.179	0.001	163294	277.7	5	10.570	0.000	62246	263.1

Total Col1Ave (5 peaks): 284.0 Total Col2Ave (5 peaks): 263.7 RPD = 7

Corrected Ave (4 peaks): 282.1 Corrected Ave (4 peaks): 263.0 RPD = 7

CalAmt %D: 13.6 CalAmt %D: 5.5

Total PCB Area Col1 (5.907 - 13.793) = 3085449 Col1 Total PCB = 0.3 ppm*

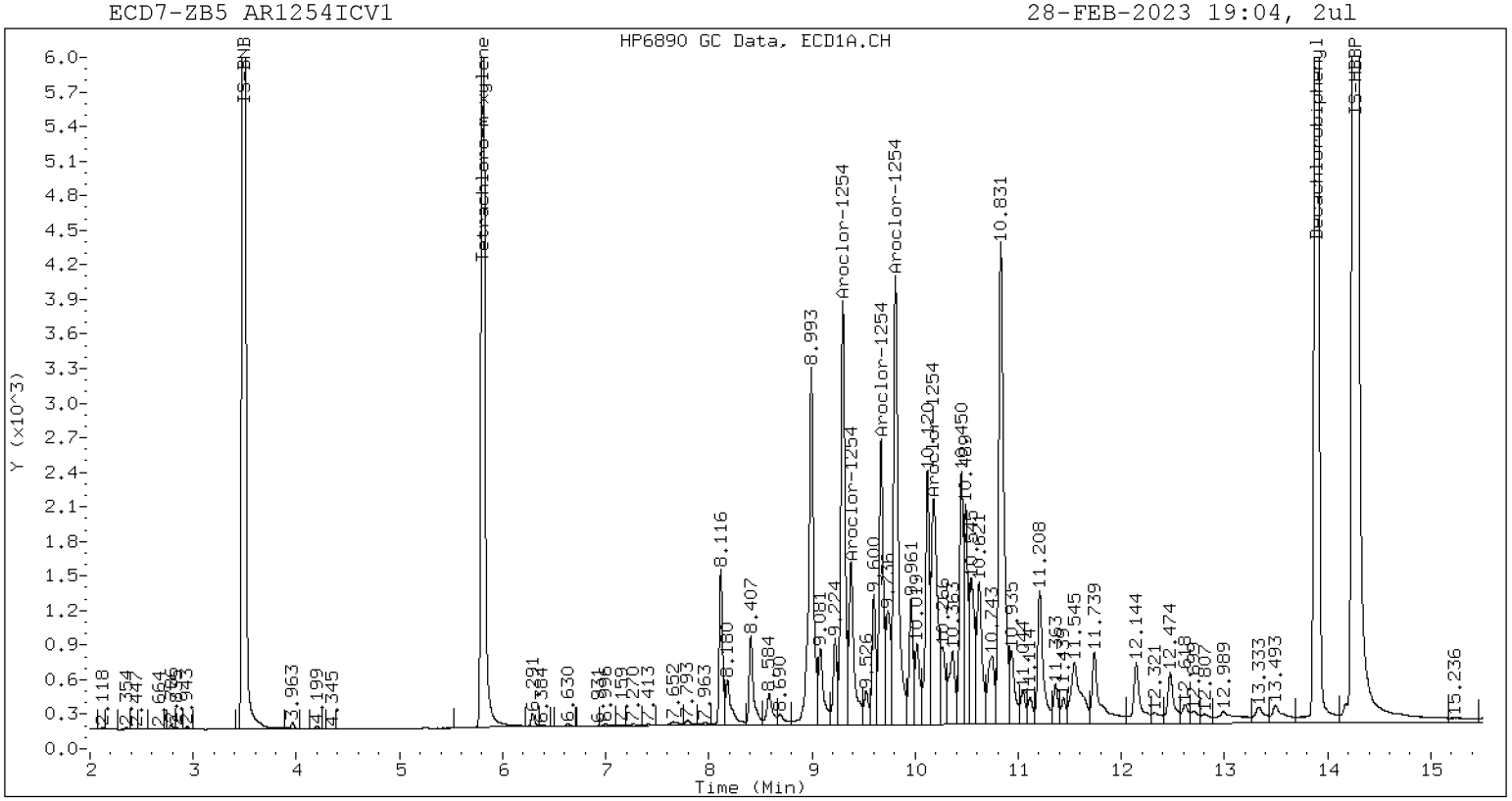
Total PCB Area Col2 (5.787 - 14.020) = 1027352 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

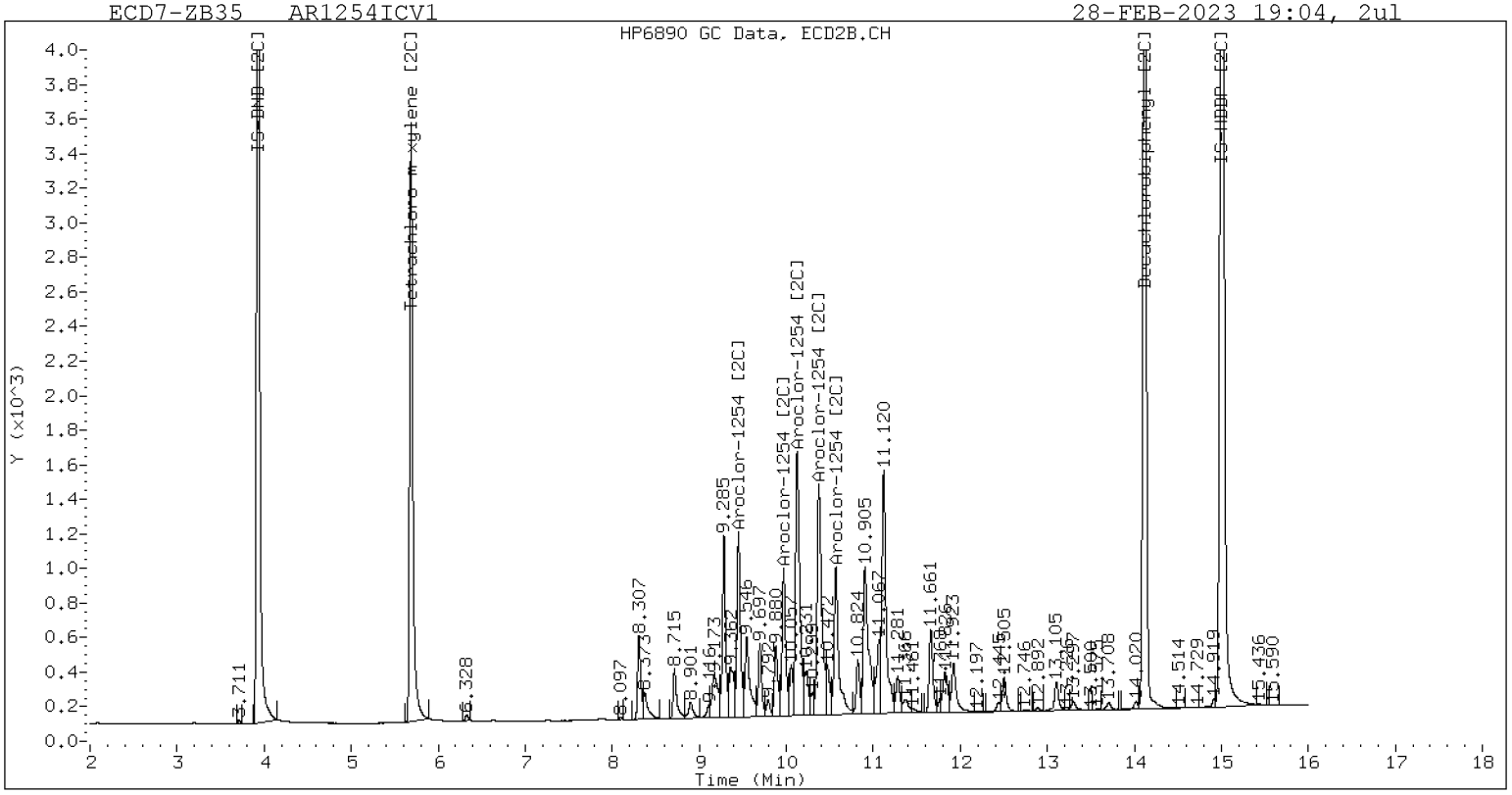
PCB Dual Column Chromatograms

ECD7-ZB5 AR1254ICV1 28-FEB-2023 19:04, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 AR1254ICV1 28-FEB-2023 19:04, 2ul

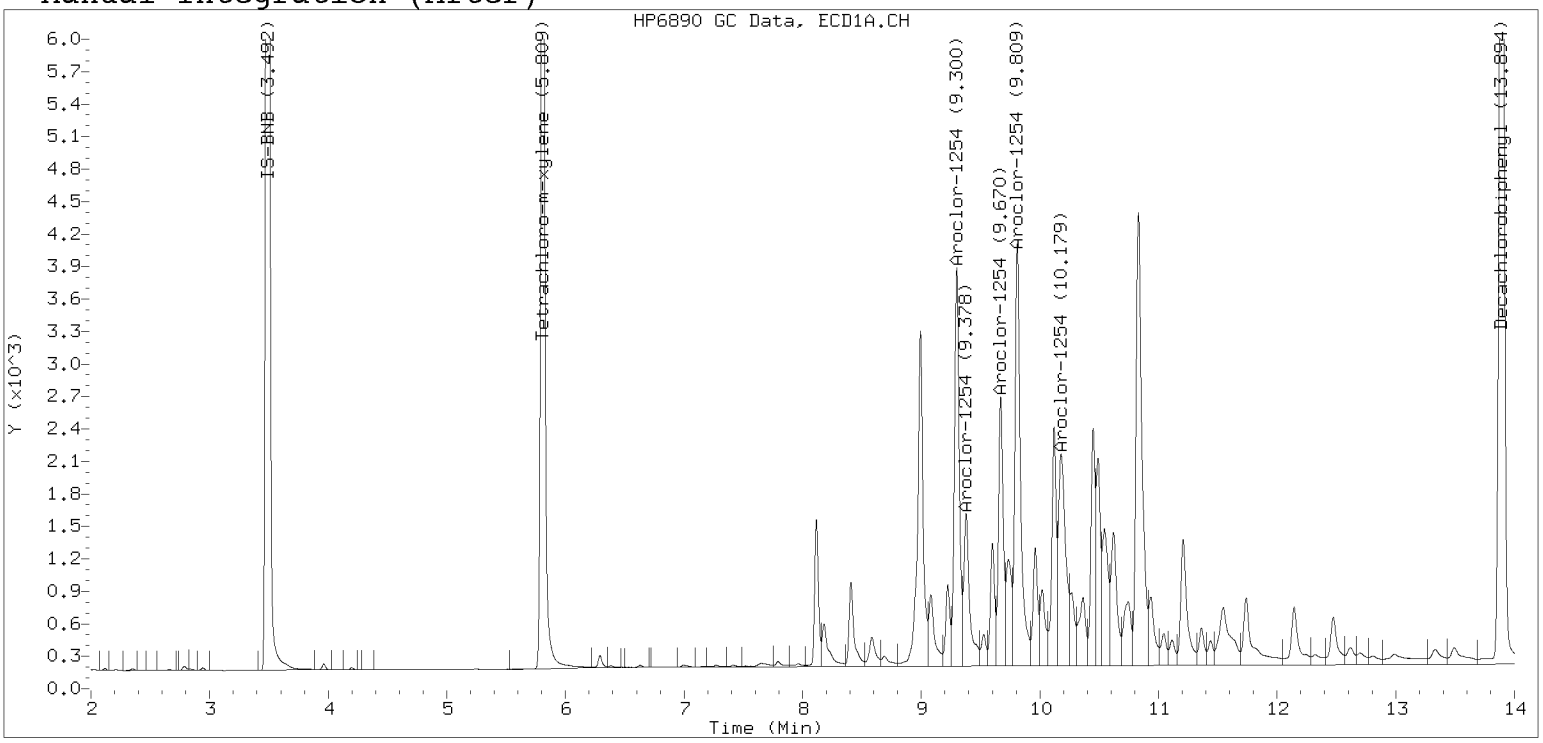


ZB-35 Manual Integration: NO

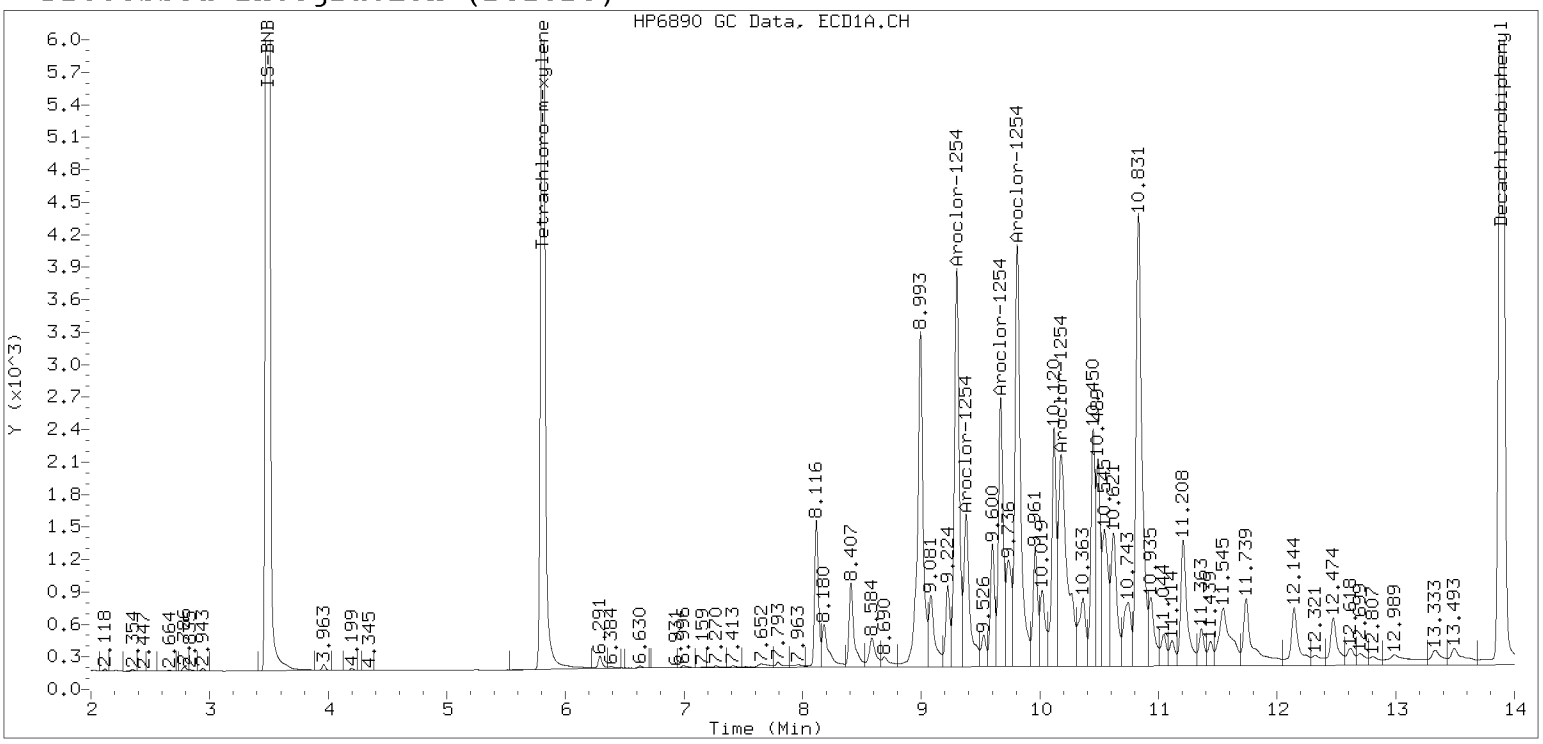
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/230228.b/02282310ECD7.D Injection Date: 28-FEB-2023 19:04

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GB00069
Lab File ID:	02282311ECD7.D	Calibration Date:	02/24/2023
Sequence:	SLC0014	Injection Date:	02/28/23
Lab Sample ID:	SLC0014-ICV2	Injection Time:	19:25
Sequence Name:	AR1660ICV2		

		CONC. (ug/L)		RESPONSE FACTOR			% DRIFT/DIFF		
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT	
Aroclor 1016	A	250.00	280	0.0493662	0.0552775		12.0	+/-20	
Aroclor-1016 (1)	A	250.00	277	0.0303852	0.0337077		10.8		
Aroclor-1016 (2)	A	250.00	278	0.0926308	0.1031854		11.2		
Aroclor-1016 (3)	A	250.00	284	0.0452180	0.0513640		13.6		
Aroclor-1016 (4)	A	250.00	281	0.0292307	0.0328528		12.4		
Aroclor 1016 [2C]	A	250.00	267	0.0545857	0.0586892		6.6	+/-20	
Aroclor-1016 (1) [2C]	A	250.00	258	0.0468313	0.0483572		3.2		
Aroclor-1016 (2) [2C]	A	250.00	278	0.0949676	0.1054261		11.2		
Aroclor-1016 (3) [2C]	A	250.00	260	0.0428922	0.0445645		4.0		
Aroclor-1016 (4) [2C]	A	250.00	270	0.0336515	0.0364091		8.0		
Aroclor 1260	A	250.00	308	0.0392091	0.0484773		23.3	+/-20	*
Aroclor-1260 (1)	A	250.00	282	0.0287785	0.0324665		12.8		
Aroclor-1260 (2)	A	250.00	318	0.0300690	0.0382204		27.2		
Aroclor-1260 (3)	A	250.00	310	0.0797517	0.0989819		24.0		
Aroclor-1260 (4)	A	250.00	318	0.0401599	0.0510785		27.2		
Aroclor-1260 (5)	A	250.00	313	0.0172866	0.0216391		25.2		
Aroclor 1260 [2C]	A	250.00	252	0.0699688	0.0716171		0.7	+/-20	
Aroclor-1260 (1) [2C]	A	250.00	237	0.0470406	0.0445304		-5.2		
Aroclor-1260 (2) [2C]	A	250.00	260	0.1200523	0.1249385		4.0		
Aroclor-1260 (3) [2C]	A	250.00	246	0.0318590	0.0313749		-1.6		
Aroclor-1260 (4) [2C]	A	250.00	264	0.0809231	0.0856245		5.6		
Decachlorobiphenyl	A	40.000	40.5	0.7878687	0.7977915		1.3	+/-20	
Tetrachlorometaxylene	A	40.000	41.8	1.1944880	1.2496600		4.5	+/-20	
Decachlorobiphenyl [2C]	A	40.000	40.4	1.2182710	1.2317770		1.0	+/-20	
Tetrachlorometaxylene [2C]	A	40.000	42.2	1.1737210	1.2392490		5.5	+/-20	

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230228.b/02282311ECD7.D
Data file 2: /230228.b/230228.b/02282311ECD7.D
Method: \\target\share\chem4\ecd7.i\230228.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660ICV2
Client ID:
Injection Date: 28-FEB-2023 19:25
Report Date: 03/01/2023 12:20
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.808	0.000	469361	5.687	-0.000	189615	41.8	42.2	0.9	Tetrachloro-m-xylene
13.893	-0.001	628838	14.118	-0.002	286648	40.5	40.4	0.1	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	751182	11.5
Hexabromobiphenyl	1429847	1576447	10.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	306016	-2.9
Hexabromobiphenyl	513946	465422	-9.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount	
Aroclor-1016	1	7.269	0.000	79127	277.3	1	7.254	-0.001	46244	258.1	
Aroclor-1016	2	7.655	-0.000	242222	278.5	2	7.858	-0.001	100819	277.5	
Aroclor-1016	3	7.792	0.000	120574	284.0	3	8.057	-0.002	42617	259.7	
Aroclor-1016	4	8.405	-0.001	77120	281.0	4	8.308	-0.000	34818	270.5	
Total Col1Ave (4 peaks):					280.2	Total Col2Ave (4 peaks):				266.5	RPD = 5
Corrected Ave (3 peaks):					278.9	Corrected Ave (3 peaks):				262.8	RPD = 6
CalAmt %D:					12.1	CalAmt %D:				6.6	
Aroclor-1260	1	11.045	0.001	159943	282.0	1	11.653	-0.000	64767	236.7	
Aroclor-1260	2	11.362	0.001	188289	317.8	2	11.919	0.001	181716	260.2	
Aroclor-1260	3	11.736	0.001	487624	310.3	3	12.436	0.001	45633	246.2	
Aroclor-1260	4	12.140	0.000	251633	318.0	4	12.502	0.000	124536	264.5	
Aroclor-1260	5	12.244	0.001	106603	312.9	NS	---			----	
Total Col1Ave (5 peaks):					308.2	Total Col2Ave (4 peaks):				251.9	RPD = 20
Corrected Ave (4 peaks):					305.8	Corrected Ave (3 peaks):				247.7	RPD = 21
CalAmt %D:					23.3	CalAmt %D:				0.8	

Total PCB Area Col1 (5.907 - 13.793) = 5090549 Col1 Total PCB = 0.6 ppm*

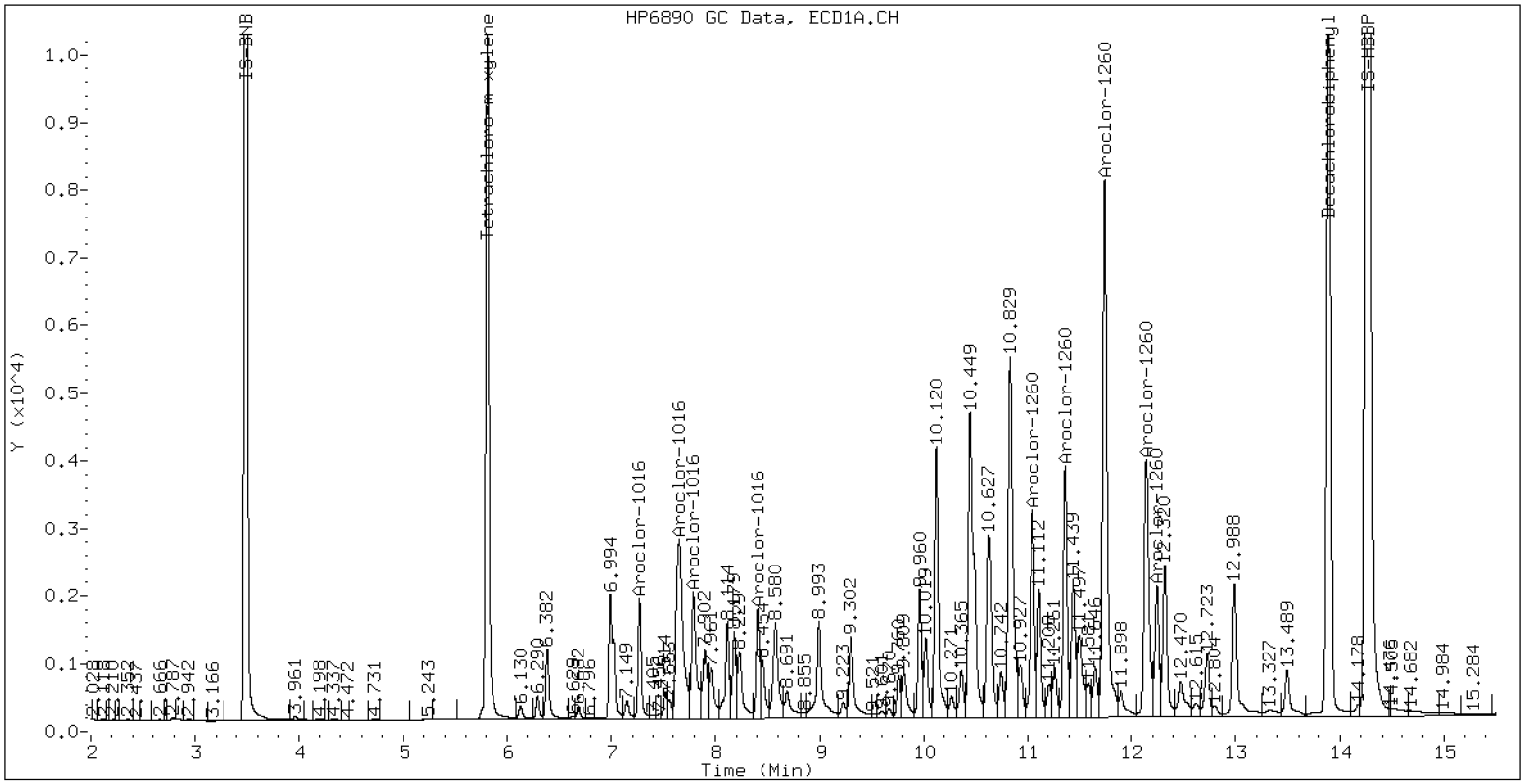
Total PCB Area Col2 (5.787 - 14.020) = 1776656 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

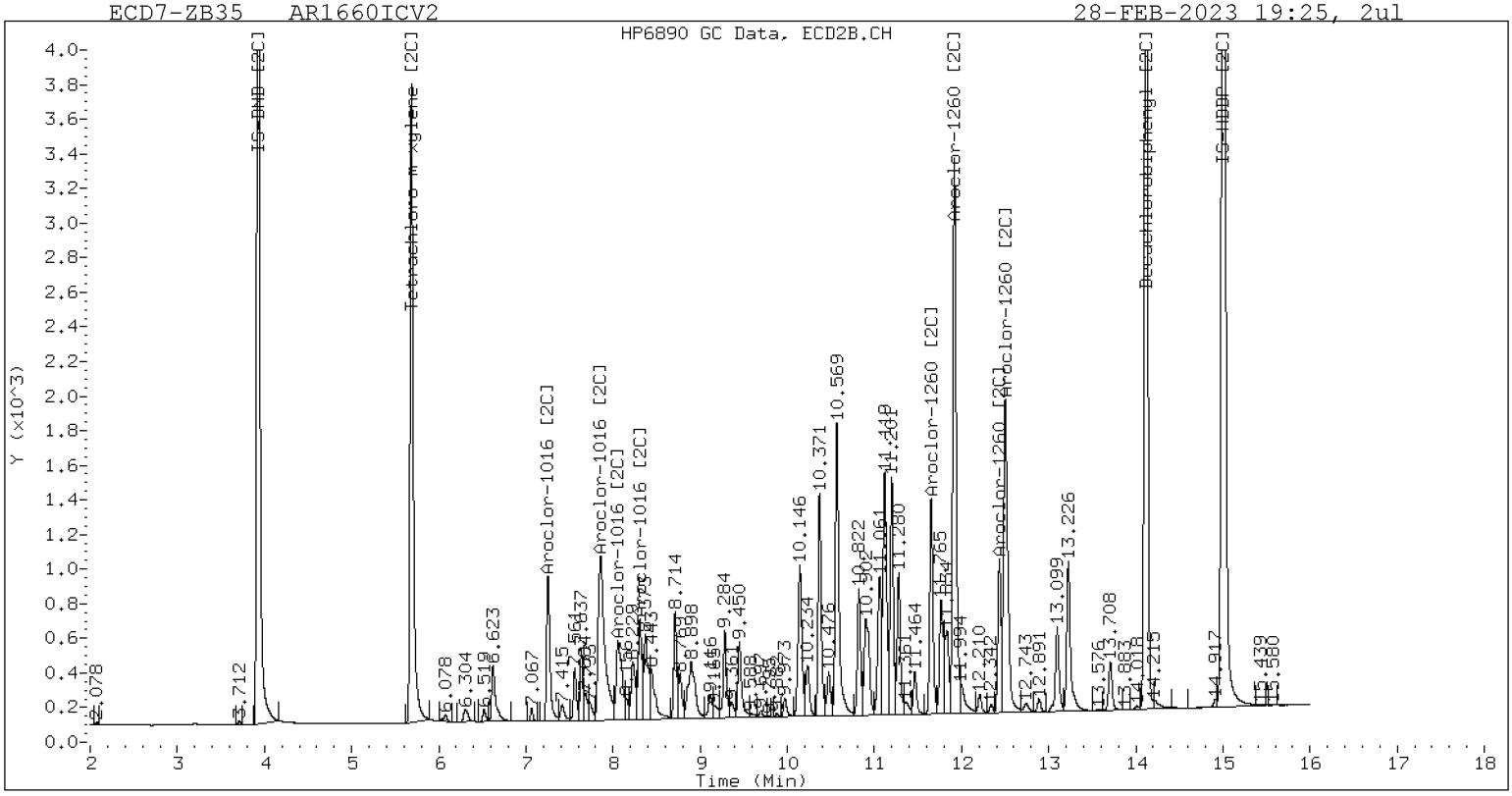
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660ICV2 28-FEB-2023 19:25, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660ICV2 28-FEB-2023 19:25, 2ul

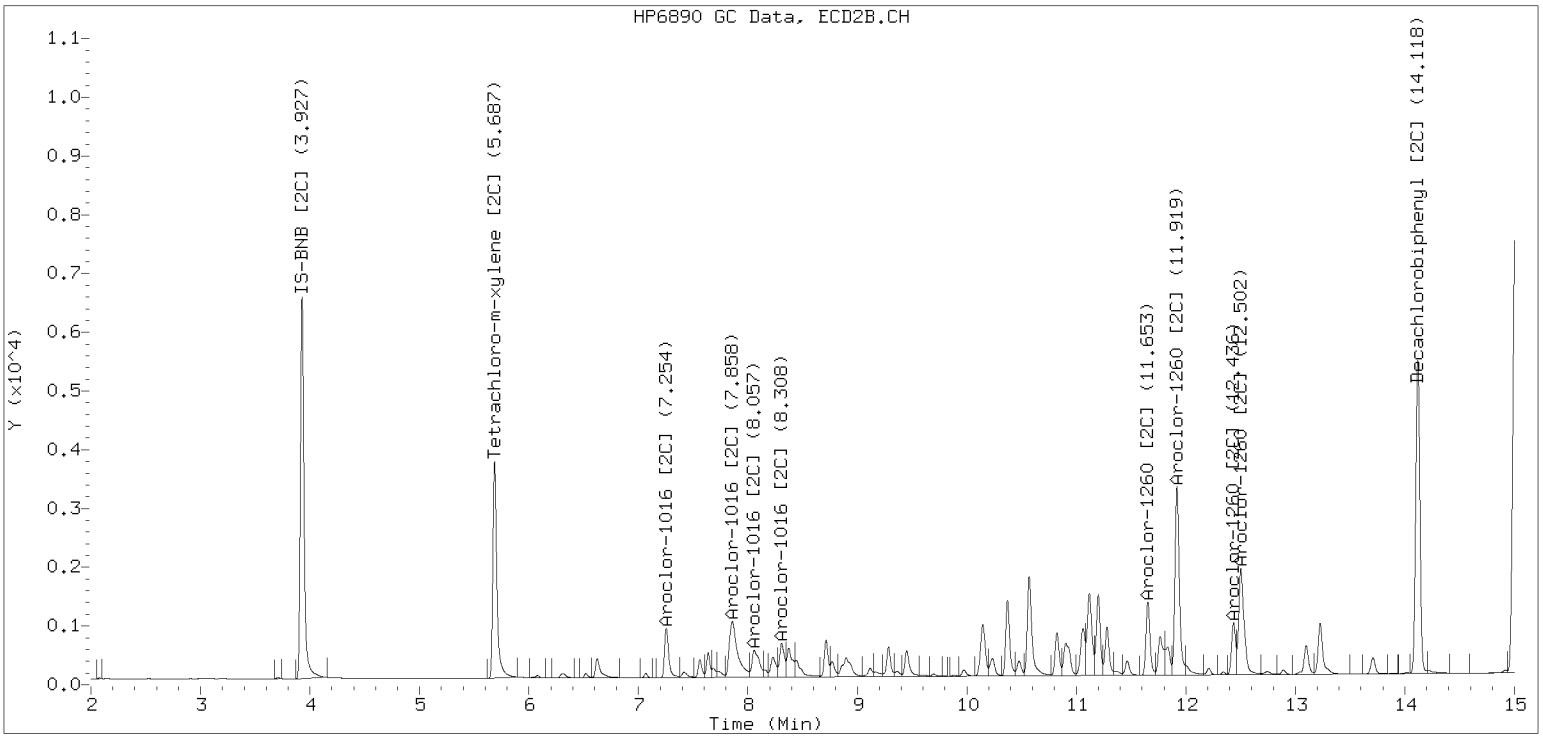


ZB-35 Manual Integration: YES

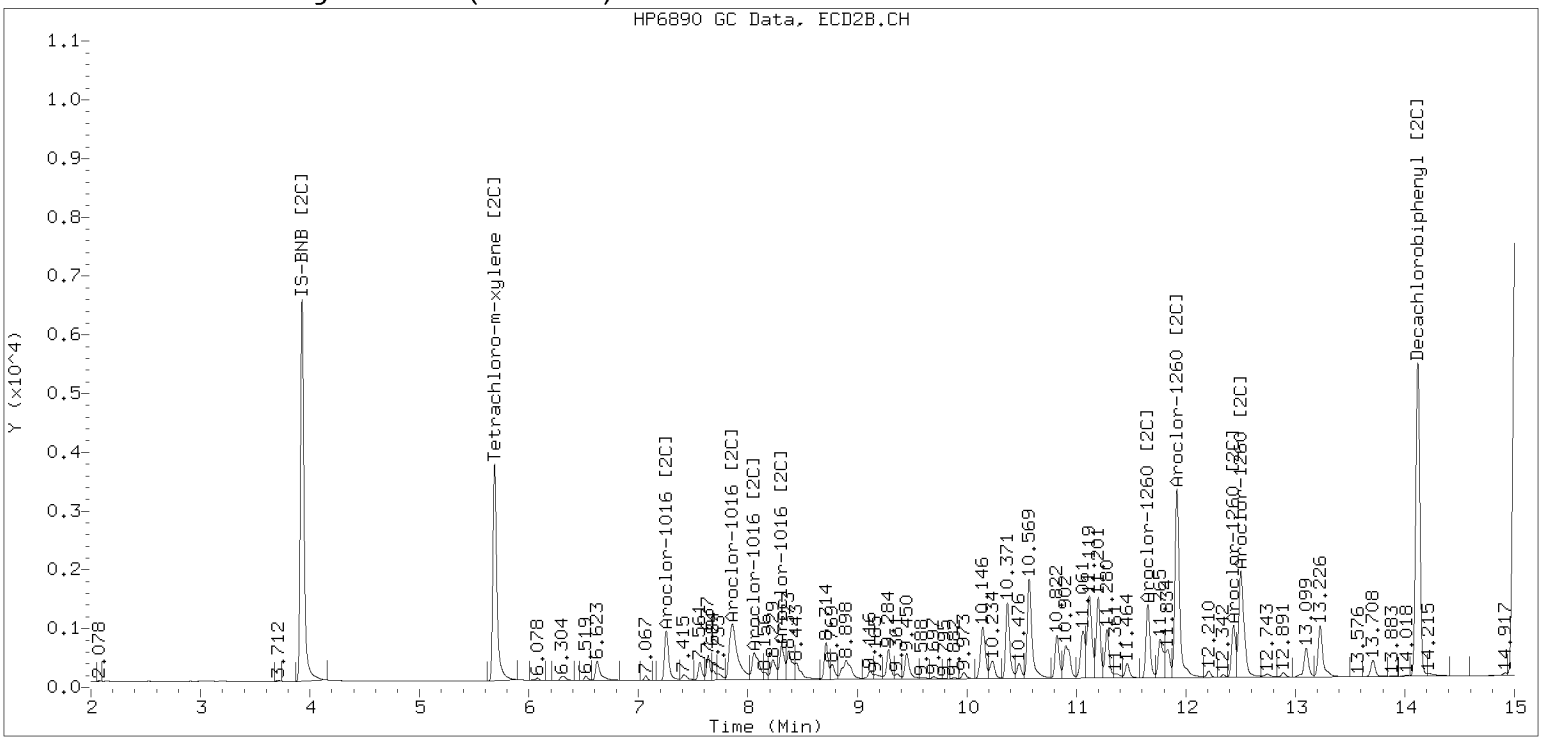
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230228.b/230228.b/02282311ECD7.D Injection Date: 28-FEB-2023

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GB00069
Lab File ID:	02242313ECD7.D	Calibration Date:	02/24/2023
Sequence:	SLB0342	Injection Date:	02/24/23
Lab Sample ID:	SLB0342-SCV1	Injection Time:	15:03
Sequence Name:	AR1660SCV1		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1016	A	250.00	243	0.0493662	0.0479314		-2.7	+/-20
Aroclor 1016 [2C]	A	250.00	246	0.0545857	0.0542382		-1.4	+/-20
Aroclor 1260	A	250.00	266	0.0392091	0.0412121		6.2	+/-20
Aroclor 1260 [2C]	A	250.00	261	0.0699688	0.0733659		4.5	+/-20
Decachlorobiphenyl	A	40.000	34.3	0.7878687	0.6762784		-14.2	+/-20
Tetrachlorometaxylene	A	40.000	34.9	1.1944880	1.0436010		-12.6	+/-20
Decachlorobiphenyl [2C]	A	40.000	37.3	1.2182710	1.1373730		-6.6	+/-20
Tetrachlorometaxylene [2C]	A	40.000	35.8	1.1737210	1.0492890		-10.6	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GB00069
Lab File ID:	02242314ECD7.D	Calibration Date:	02/24/2023
Sequence:	SLB0342	Injection Date:	02/24/23
Lab Sample ID:	SLB0342-SCV2	Injection Time:	15:24
Sequence Name:	AR1242SCV2		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1242	A	250.00	204	0.0395340	0.0322254		-18.5	+/-20
Aroclor 1242 [2C]	A	250.00	221	0.0423092	0.0365983		-11.8	+/-20
Decachlorobiphenyl	A	40.000	37.0	0.7878687	0.7290534		-7.5	+/-20
Tetrachlorometaxylene	A	40.000	33.6	1.1944880	1.0041320		-15.9	+/-20
Decachlorobiphenyl [2C]	A	40.000	40.3	1.2182710	1.2285170		0.8	+/-20
Tetrachlorometaxylene [2C]	A	40.000	34.5	1.1737210	1.0131510		-13.7	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GB00069
Lab File ID:	02242315ECD7.D	Calibration Date:	02/24/2023
Sequence:	SLB0342	Injection Date:	02/24/23
Lab Sample ID:	SLB0342-SCV3	Injection Time:	15:45
Sequence Name:	AR1248SCV3		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1248	A	250.00	249	0.0574755	0.0572474		-0.2	+/-20
Aroclor 1248 [2C]	A	250.00	248	0.0444270	0.0440936		-0.8	+/-20
Decachlorobiphenyl	A	40.000	33.1	0.7878687	0.6527336		-17.2	+/-20
Tetrachlorometaxylene	A	40.000	34.9	1.1944880	1.0413820		-12.8	+/-20
Decachlorobiphenyl [2C]	A	40.000	36.3	1.2182710	1.1066400		-9.2	+/-20
Tetrachlorometaxylene [2C]	A	40.000	36.4	1.1737210	1.0676190		-9.0	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GB00069
Lab File ID:	02242316ECD7.D	Calibration Date:	02/24/2023
Sequence:	SLB0342	Injection Date:	02/24/23
Lab Sample ID:	SLB0342-SCV4	Injection Time:	16:06
Sequence Name:	AR1254SCV4		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1254	A	250.00	235	0.0662949	0.0622529		-5.9	+/-20
Aroclor 1254 [2C]	A	250.00	240	0.0763106	0.0731447		-4.0	+/-20
Decachlorobiphenyl	A	40.000	34.6	0.7878687	0.6823832		-13.4	+/-20
Tetrachlorometaxylene	A	40.000	36.1	1.1944880	1.0787610		-9.7	+/-20
Decachlorobiphenyl [2C]	A	40.000	37.9	1.2182710	1.1548440		-5.2	+/-20
Tetrachlorometaxylene [2C]	A	40.000	37.1	1.1737210	1.0880920		-7.3	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GB00069
Lab File ID:	02242317ECD7.D	Calibration Date:	02/24/2023
Sequence:	SLB0342	Injection Date:	02/24/23
Lab Sample ID:	SLB0342-SCV5	Injection Time:	16:27
Sequence Name:	AR2162SCV5		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1221	A	250.00	258	0.0165758	0.0169561		3.3	+/-20
Aroclor 1221 [2C]	A	250.00	256	0.0150798	0.0153801		2.5	+/-20
Aroclor 1262	A	250.00	247	0.0366596	0.0361658		-1.2	+/-20
Aroclor 1262 [2C]	A	250.00	249	0.0739760	0.0737876		-0.3	+/-20
Decachlorobiphenyl	A	40.000	34.4	0.7878687	0.6780614		-13.9	+/-20
Tetrachlorometaxylene	A	40.000	36.0	1.1944880	1.0756080		-10.0	+/-20
Decachlorobiphenyl [2C]	A	40.000	37.9	1.2182710	1.1528740		-5.4	+/-20
Tetrachlorometaxylene [2C]	A	40.000	36.6	1.1737210	1.0753820		-8.4	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GB00069
Lab File ID:	02242318ECD7.D	Calibration Date:	02/24/2023
Sequence:	SLB0342	Injection Date:	02/24/23
Lab Sample ID:	SLB0342-SCV6	Injection Time:	16:48
Sequence Name:	AR3268SCV6		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1232	A	250.00	245	0.0169039	0.0169981		-2.0	+/-20
Aroclor 1232 [2C]	A	250.00	259	0.0192023	0.0199392		3.4	+/-20
Aroclor 1268	A	250.00	246	0.1442124	0.1418626		-1.4	+/-20
Aroclor 1268 [2C]	A	250.00	249	0.2386862	0.2369075		-0.6	+/-20
Decachlorobiphenyl	A	40.000	51.3	0.7878687	1.0108790		28.3	+/-20
Tetrachlorometaxylene	A	40.000	37.1	1.1944880	1.1067180		-7.3	+/-20
Decachlorobiphenyl [2C]	A	40.000	56.4	1.2182710	1.7182840		41.0	+/-20
Tetrachlorometaxylene [2C]	A	40.000	38.2	1.1737210	1.1196760		-4.6	+/-20

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GB00069
Lab File ID:	02282313ECD7.D	Calibration Date:	02/24/2023
Sequence:	SLC0014	Injection Date:	02/28/23
Lab Sample ID:	SLC0014-CCV1	Injection Time:	20:07
Sequence Name:	AR1248CCV1		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1248	A	250.00	269	0.0574755	0.0623062		7.6	+/-20
Aroclor-1248 (1)	A	250.00	262		0.0409869			
Aroclor-1248 (2)	A	250.00	263		0.0521196			
Aroclor-1248 (3)	A	250.00	278		0.1040716			
Aroclor-1248 (4)	A	250.00	273		0.0520464			
Aroclor 1248 [2C]	A	250.00	251	0.0444270	0.0445547		0.5	+/-20
Aroclor-1248 (1) [2C]	A	250.00	256		0.0391330			
Aroclor-1248 (2) [2C]	A	250.00	254		0.0400822			
Aroclor-1248 (3) [2C]	A	250.00	248		0.0450484			
Aroclor-1248 (4) [2C]	A	250.00	247		0.0539552			
Decachlorobiphenyl	A	40.000	36.6	0.7878687	0.7215080		-8.5	+/-20
Tetrachlorometaxylene	A	40.000	37.8	1.1944880	1.1297030		-5.5	+/-20
Decachlorobiphenyl [2C]	A	40.000	40.0	1.2182710	1.2199110		0.0	+/-20
Tetrachlorometaxylene [2C]	A	40.000	38.5	1.1737210	1.1298520		-3.8	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230228.b/02282313ECD7.D
Data file 2: /230228.b/230228.b/02282313ECD7.D
Method: \\target\share\chem4\ecd7.i\230228.b\PCB.m
Compound Sublist: AR1248.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248CCV1
Client ID:
Injection Date: 28-FEB-2023 20:07
Report Date: 03/01/2023 12:20
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.808	0.001	442341	5.687	-0.000	182079	37.8	38.5	1.8	Tetrachloro-m-xylene
13.894	0.001	593120	14.118	-0.001	303850	36.6	40.1	8.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	783110	16.2
Hexabromobiphenyl	1429847	1644112	15.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	322306	2.2
Hexabromobiphenyl	513946	498151	-3.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1248	1	8.406	0.000	100304	262.5	1	8.307	0.000	39415	256.1
Aroclor-1248	2	8.581	0.000	127548	262.6	2	8.715	0.000	40371	253.7
Aroclor-1248	3	8.997	0.000	254686	278.0	3	9.169	0.000	45373	247.8
Aroclor-1248	4	9.295	0.000	127369	273.1	4	9.594	0.000	54344	247.2

Total Col1Ave (4 peaks): 269.0 Total Col2Ave (4 peaks): 251.2 RPD = 7

Corrected Ave (3 peaks): 266.1 Corrected Ave (3 peaks): 249.6 RPD = 6

CalAmt %D: 7.6 CalAmt %D: 0.5

Total PCB Area Col1 (5.907 - 13.793) = 1982415 Col1 Total PCB = 0.2 ppm*

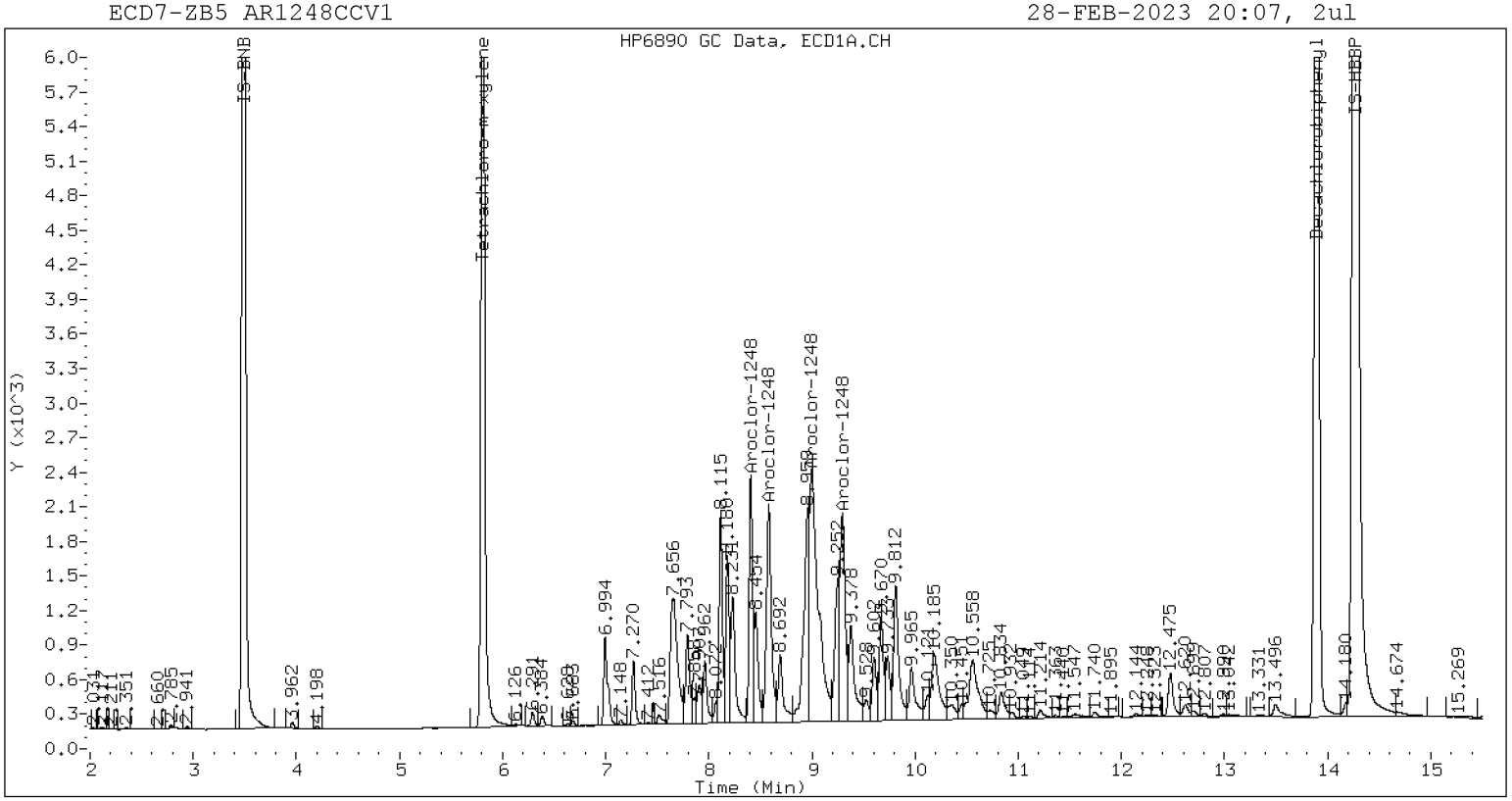
Total PCB Area Col2 (5.787 - 14.020) = 774039 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

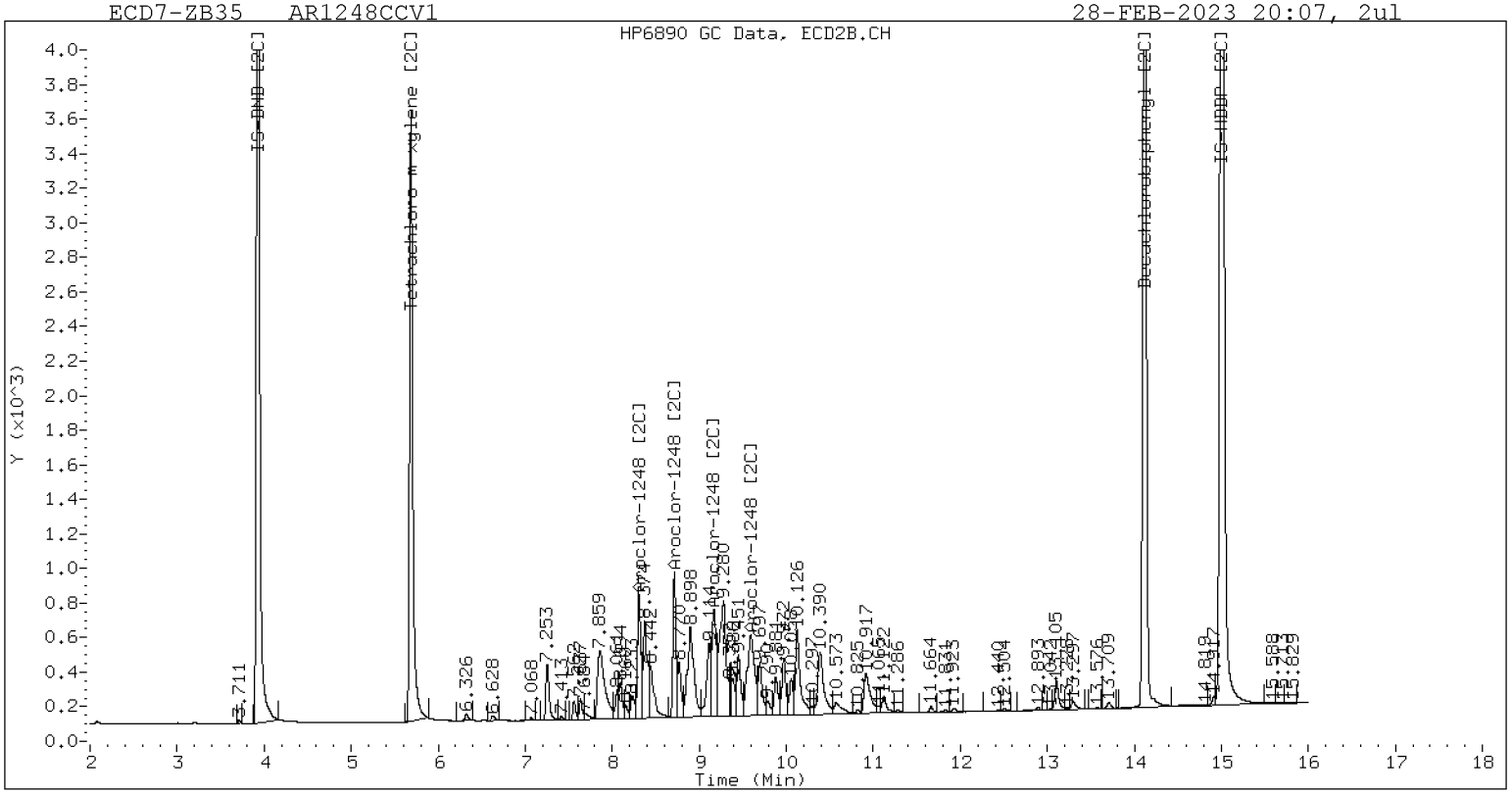
PCB Dual Column Chromatograms

ECD7-ZB5 AR1248CCV1 28-FEB-2023 20:07, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 AR1248CCV1 28-FEB-2023 20:07, 2ul

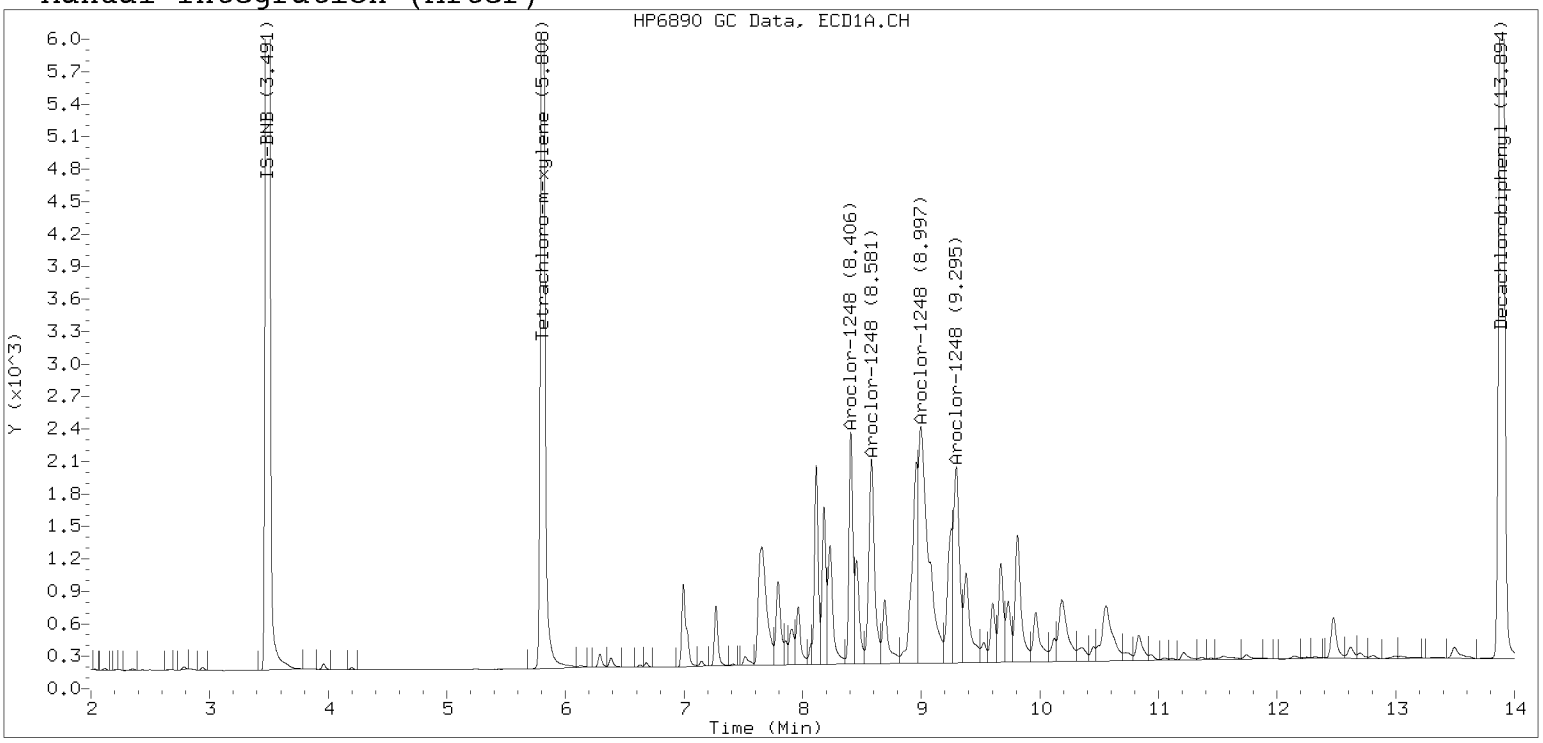


ZB-35 Manual Integration: NO

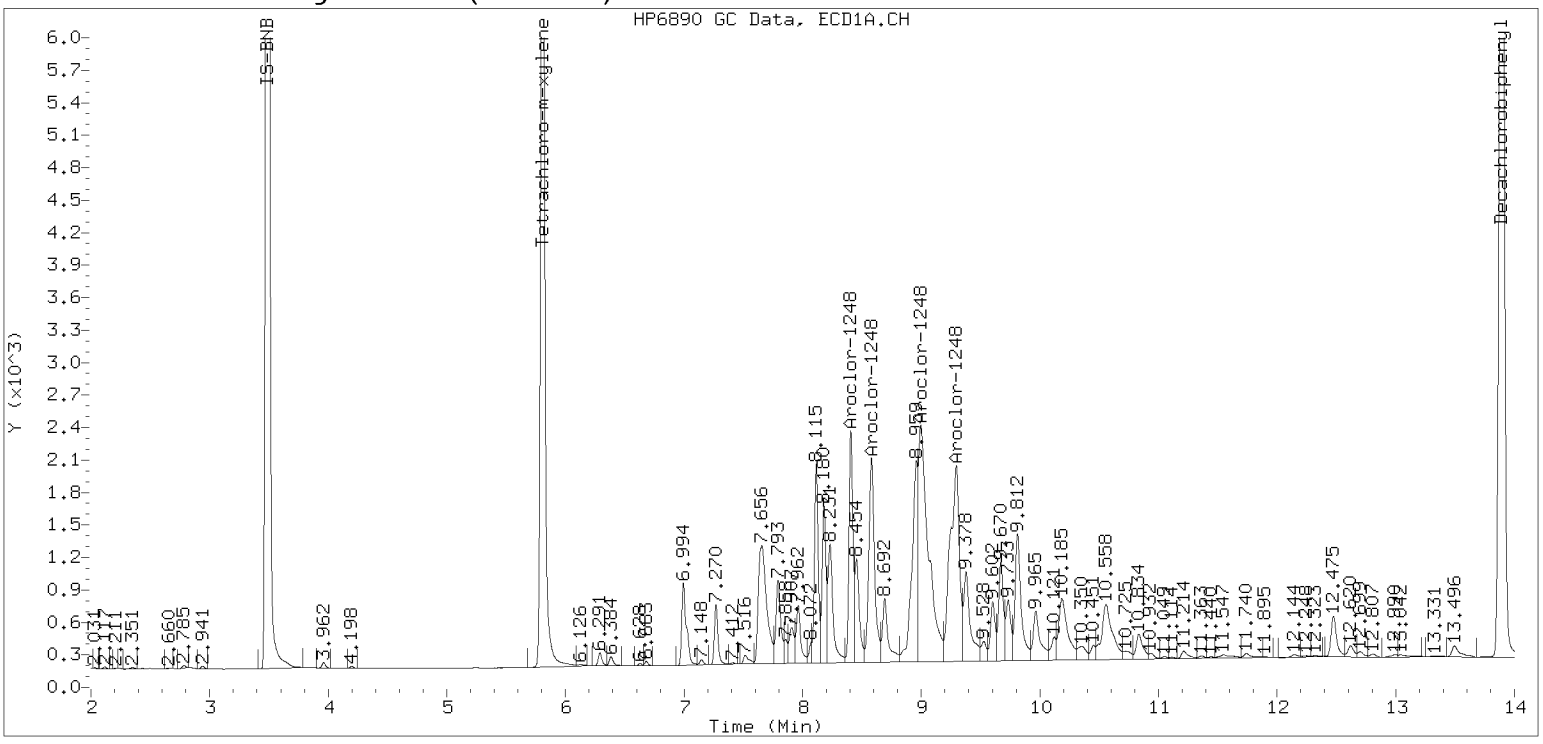
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/230228.b/02282313ECD7.D Injection Date: 28-FEB-2023 20:07

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GB00069
Lab File ID:	02282314ECD7.D	Calibration Date:	02/24/2023
Sequence:	SLC0014	Injection Date:	02/28/23
Lab Sample ID:	SLC0014-CCV2	Injection Time:	20:28
Sequence Name:	AR1660CCV2		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT	
Aroclor 1016	A	250.00	269	0.0493662	0.0531918		7.6	+/-20	
Aroclor-1016 (1)	A	250.00	264	0.0303852	0.0320347		5.6		
Aroclor-1016 (2)	A	250.00	270	0.0926308	0.0998609		8.0		
Aroclor-1016 (3)	A	250.00	274	0.0452180	0.0495154		9.6		
Aroclor-1016 (4)	A	250.00	268	0.0292307	0.0313563		7.2		
Aroclor 1016 [2C]	A	250.00	261	0.0545857	0.0576031		4.5	+/-20	
Aroclor-1016 (1) [2C]	A	250.00	252	0.0468313	0.0472870		0.8		
Aroclor-1016 (2) [2C]	A	250.00	272	0.0949676	0.1035346		8.8		
Aroclor-1016 (3) [2C]	A	250.00	254	0.0428922	0.0436436		1.6		
Aroclor-1016 (4) [2C]	A	250.00	267	0.0336515	0.0359471		6.8		
Aroclor 1260	A	250.00	302	0.0392091	0.0475954		20.8	+/-20	*
Aroclor-1260 (1)	A	250.00	277	0.0287785	0.0319038		10.8		
Aroclor-1260 (2)	A	250.00	310	0.0300690	0.0373331		24.0		
Aroclor-1260 (3)	A	250.00	306	0.0797517	0.0976402		22.4		
Aroclor-1260 (4)	A	250.00	310	0.0401599	0.0498416		24.0		
Aroclor-1260 (5)	A	250.00	307	0.0172866	0.0212581		22.8		
Aroclor 1260 [2C]	A	250.00	245	0.0699688	0.0695777		-2.2	+/-20	
Aroclor-1260 (1) [2C]	A	250.00	230	0.0470406	0.0433241		-8.0		
Aroclor-1260 (2) [2C]	A	250.00	252	0.1200523	0.1210413		0.8		
Aroclor-1260 (3) [2C]	A	250.00	238	0.0318590	0.0303454		-4.8		
Aroclor-1260 (4) [2C]	A	250.00	258	0.0809231	0.0835999		3.2		
Decachlorobiphenyl	A	40.000	40.1	0.7878687	0.7892449		0.3	+/-20	
Tetrachlorometaxylene	A	40.000	40.8	1.1944880	1.2188610		2.0	+/-20	
Decachlorobiphenyl [2C]	A	40.000	40.6	1.2182710	1.2361950		1.5	+/-20	
Tetrachlorometaxylene [2C]	A	40.000	41.3	1.1737210	1.2124060		3.3	+/-20	

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230228.b/02282314ECD7.D
Data file 2: /230228.b/230228.b/02282314ECD7.D
Method: \\target\share\chem4\ecd7.i\230228.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCV2
Client ID:
Injection Date: 28-FEB-2023 20:28
Report Date: 03/01/2023 12:20
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.808	0.001	465648	5.688	0.000	189813	40.8	41.3	1.2	Tetrachloro-m-xylene
13.893	-0.000	625756	14.119	-0.001	297494	40.1	40.6	1.3	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	764071	13.4
Hexabromobiphenyl	1429847	1585708	10.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	313118	-0.7
Hexabromobiphenyl	513946	481306	-6.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.270	0.001	76490	263.6	1	7.255	-0.000	46270	252.4
Aroclor-1016	2	7.657	0.002	238440	269.5	2	7.860	0.000	101308	272.6
Aroclor-1016	3	7.792	0.001	118229	273.8	3	8.059	0.000	42705	254.4
Aroclor-1016	4	8.406	-0.000	74870	268.2	4	8.307	-0.001	35174	267.1
Total Col1Ave (4 peaks):					268.8	Total Col2Ave (4 peaks):				261.6 RPD = 3
Corrected Ave (3 peaks):					267.1	Corrected Ave (3 peaks):				258.0 RPD = 3
CalAmt %D:					7.5	CalAmt %D:				4.6
Aroclor-1260	1	11.045	0.000	158094	277.1	1	11.654	0.001	65163	230.2
Aroclor-1260	2	11.362	0.001	184998	310.4	2	11.918	0.001	182056	252.1
Aroclor-1260	3	11.737	0.001	483840	306.1	3	12.436	0.001	45642	238.1
Aroclor-1260	4	12.141	0.001	246982	310.3	4	12.503	0.001	125741	258.3
Aroclor-1260	5	12.245	0.002	105341	307.4	NS	---			----
Total Col1Ave (5 peaks):					302.3	Total Col2Ave (4 peaks):				244.7 RPD = 21
Corrected Ave (4 peaks):					300.2	Corrected Ave (3 peaks):				240.1 RPD = 22
CalAmt %D:					20.9	CalAmt %D:				-2.1

Total PCB Area Col1 (5.907 - 13.793) = 4921192 Col1 Total PCB = 0.5 ppm*

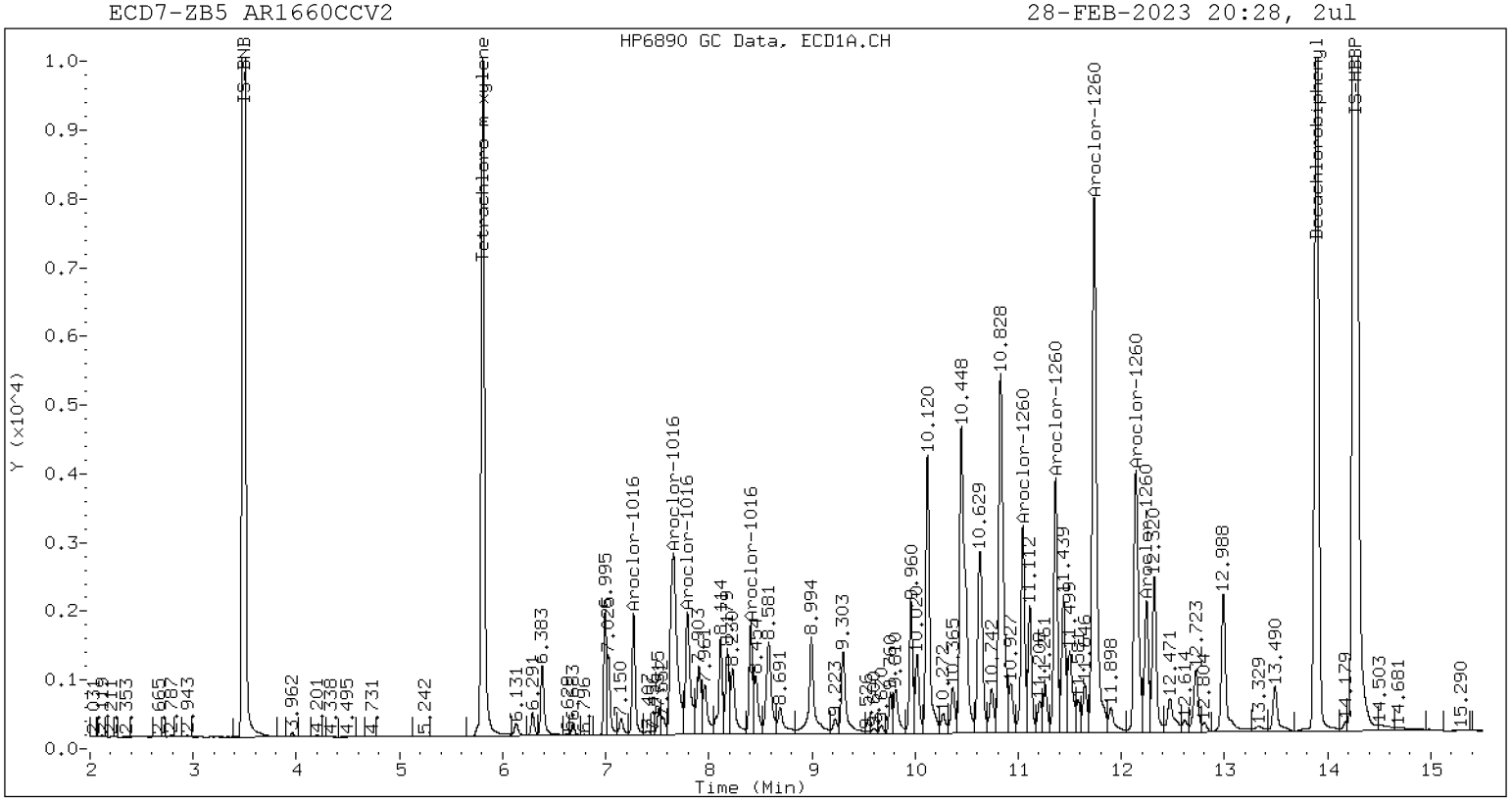
Total PCB Area Col2 (5.787 - 14.020) = 1783996 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

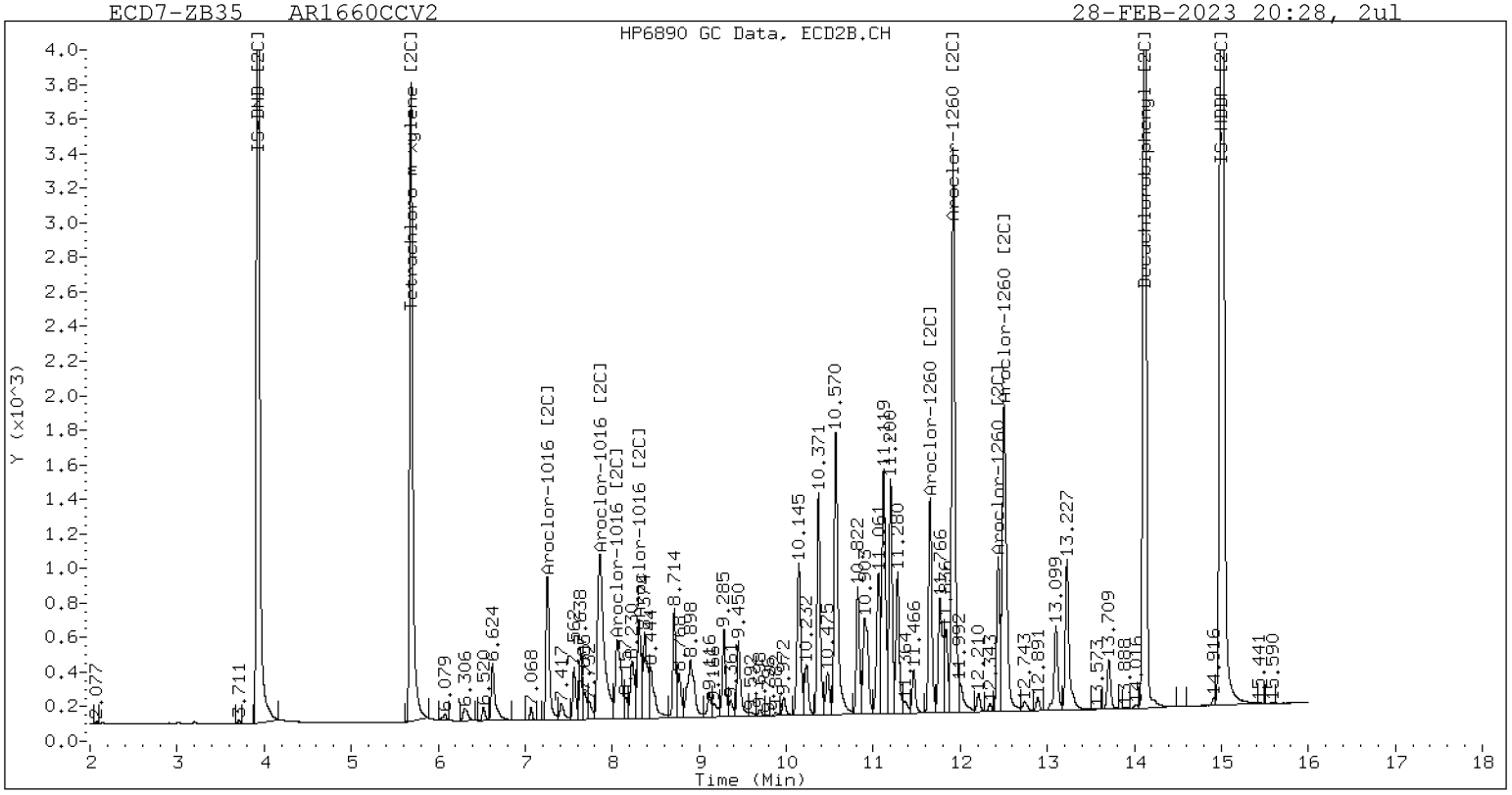
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV2 28-FEB-2023 20:28, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCV2 28-FEB-2023 20:28, 2ul

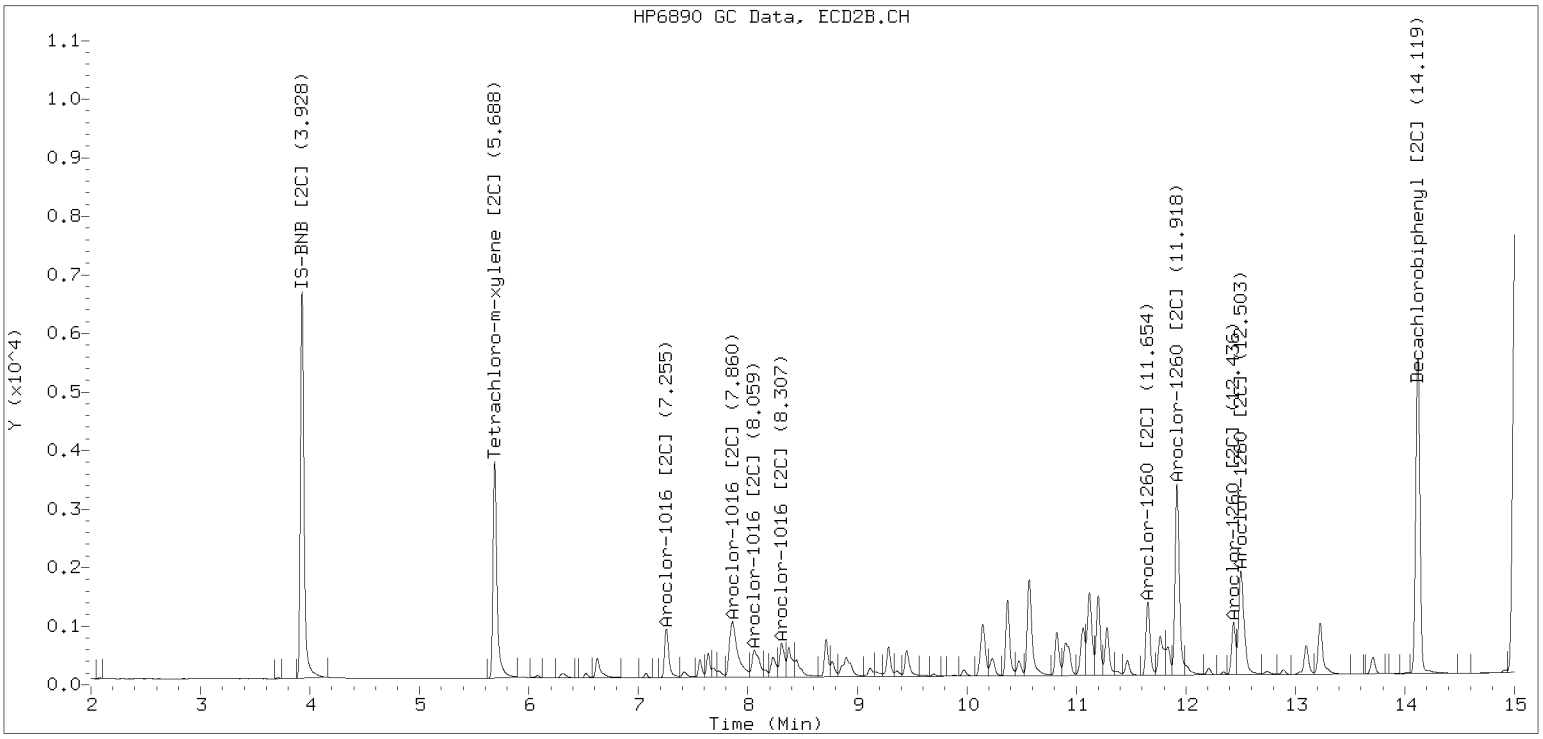


ZB-35 Manual Integration: YES

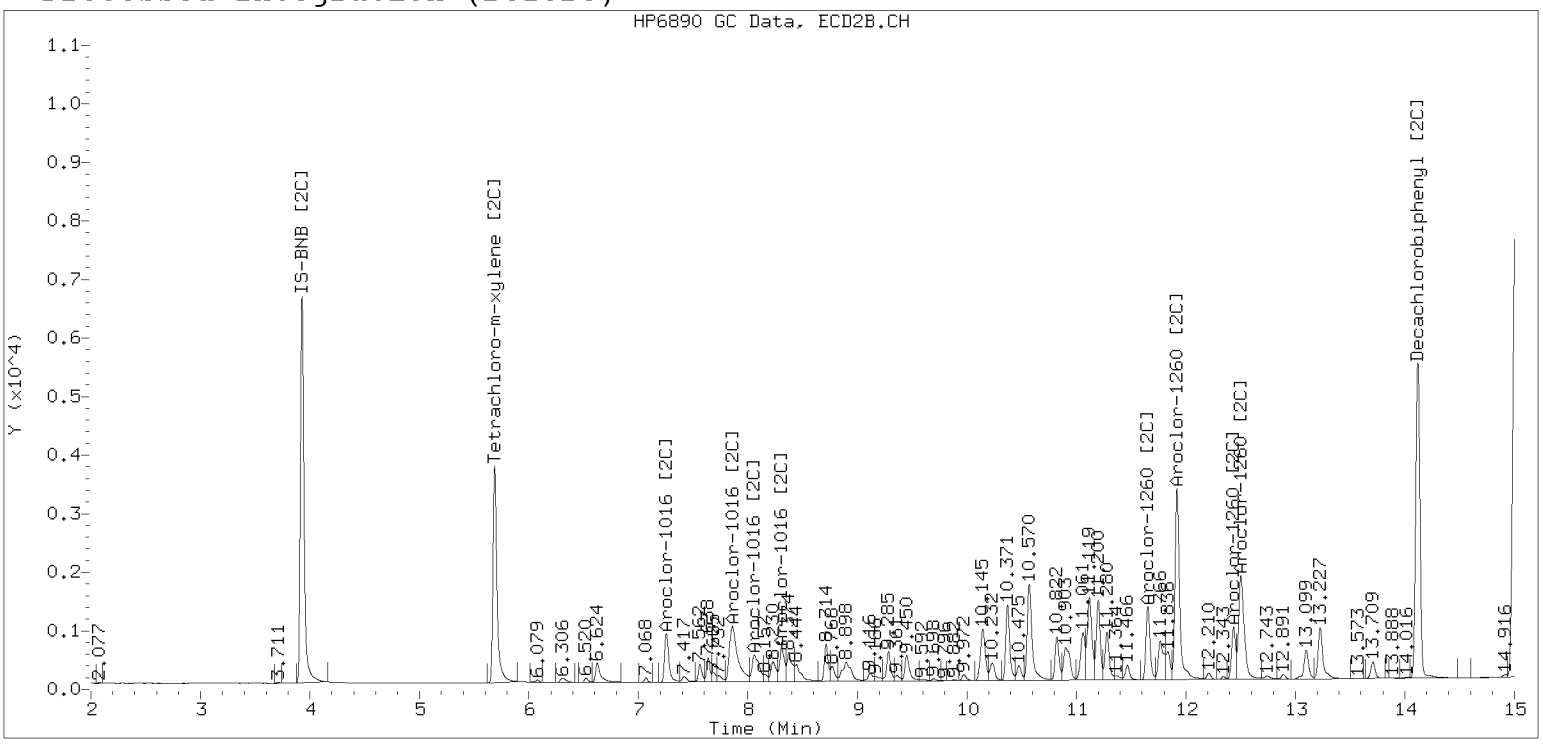
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230228.b/230228.b/02282314ECD7.D Injection Date: 28-FEB-2023

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GB00069
Lab File ID:	02282331ECD7.D	Calibration Date:	02/24/2023
Sequence:	SLC0014	Injection Date:	03/01/23
Lab Sample ID:	SLC0014-CCV3	Injection Time:	02:26
Sequence Name:	AR1242CCV3		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1242	A	250.00	250	0.0395340	0.0396605		0.1	+/-20
Aroclor-1242 (1)	A	250.00	249		0.0246910			
Aroclor-1242 (2)	A	250.00	251		0.0757041			
Aroclor-1242 (3)	A	250.00	250		0.0234345			
Aroclor-1242 (4)	A	250.00	251		0.0348122			
Aroclor 1242 [2C]	A	250.00	248	0.0423092	0.0421656		-0.8	+/-20
Aroclor-1242 (1) [2C]	A	250.00	251		0.0372722			
Aroclor-1242 (2) [2C]	A	250.00	251		0.0785934			
Aroclor-1242 (3) [2C]	A	250.00	246		0.0239032			
Aroclor-1242 (4) [2C]	A	250.00	244		0.0288938			
Decachlorobiphenyl	A	40.000	39.8	0.7878687	0.7842420		-0.5	+/-20
Tetrachlorometaxylene	A	40.000	44.9	1.1944880	1.3409470		12.3	+/-20
Decachlorobiphenyl [2C]	A	40.000	42.1	1.2182710	1.2828530		5.3	+/-20
Tetrachlorometaxylene [2C]	A	40.000	46.8	1.1737210	1.3739480		17.0	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230228.b/02282331ECD7.D
Data file 2: /230228.b/230228.b/02282331ECD7.D
Method: \\target\share\chem4\ecd7.i\230228.b\PCB.m
Compound Sublist: AR1242.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242CCV3
Client ID:
Injection Date: 01-MAR-2023 02:26
Report Date: 03/01/2023 12:20
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.807	-0.000	520986	5.687	-0.000	217825	44.9	46.8	4.2	Tetrachloro-m-xylene
13.892	-0.001	352496	14.118	-0.001	222500	39.8	42.1	5.6	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	777042	15.3
Hexabromobiphenyl	1429847	898947	-37.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	317079	0.6
Hexabromobiphenyl	513946	346883	-32.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1242	1	7.269	0.000	59956	249.0	1	7.253	0.000	36932	250.7
Aroclor-1242	2	7.656	0.000	183829	251.4	2	7.859	0.000	77876	251.5
Aroclor-1242	3	8.405	0.000	56905	250.1	3	9.167	0.000	23685	245.8
Aroclor-1242	4	8.580	0.000	84533	251.3	4	9.598	0.000	28630	243.8
Total Col1Ave (4 peaks):					250.4	Total Col2Ave (4 peaks):				248.0 RPD = 1
Corrected Ave (3 peaks):					250.1	Corrected Ave (3 peaks):				246.8 RPD = 1
CalAmt %D:					0.2	CalAmt %D:				-0.8

Total PCB Area Col1 (5.907 - 13.793) = 1461012 Col1 Total PCB = 0.2 ppm*

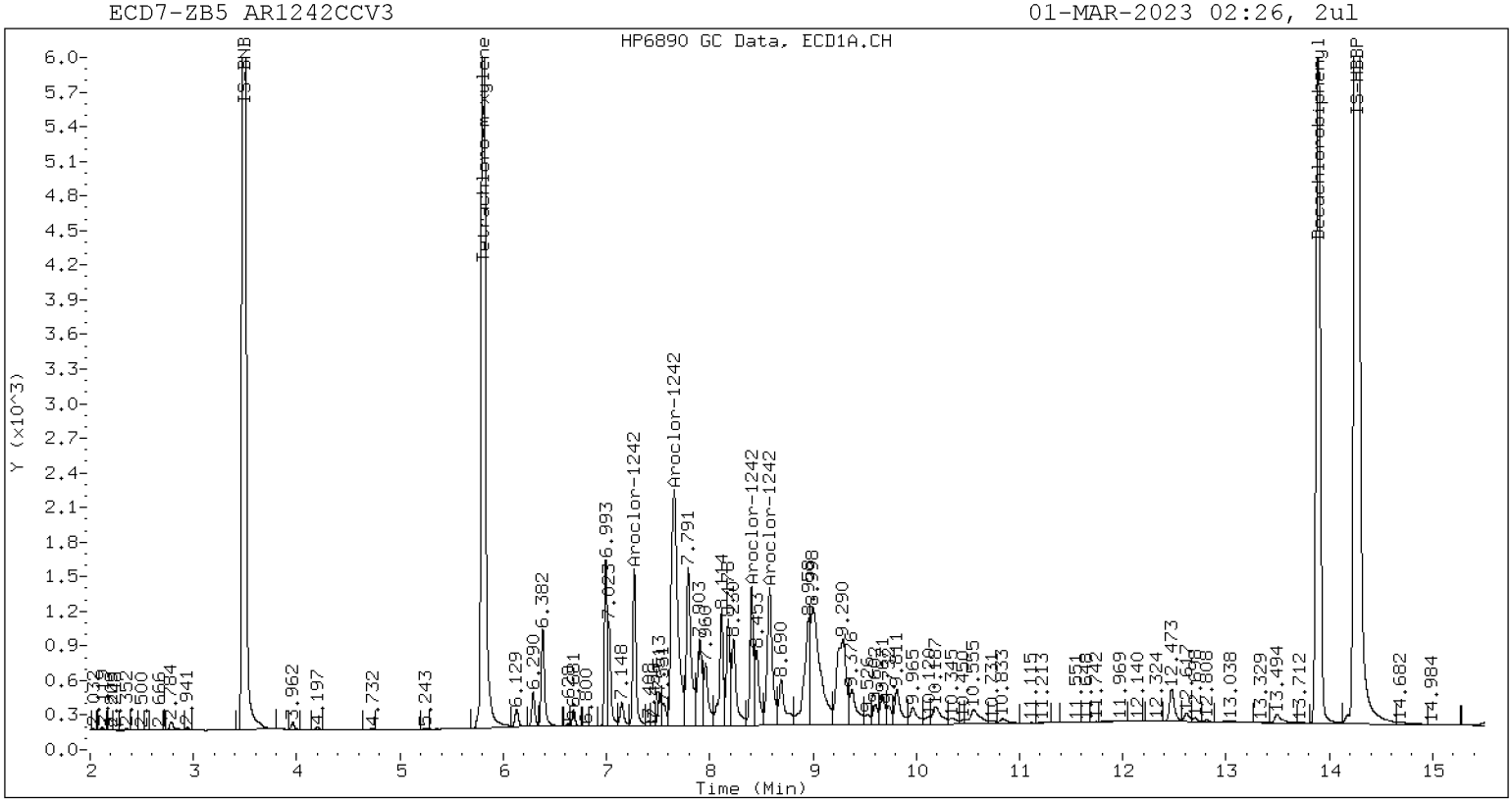
Total PCB Area Col2 (5.787 - 14.020) = 562198 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

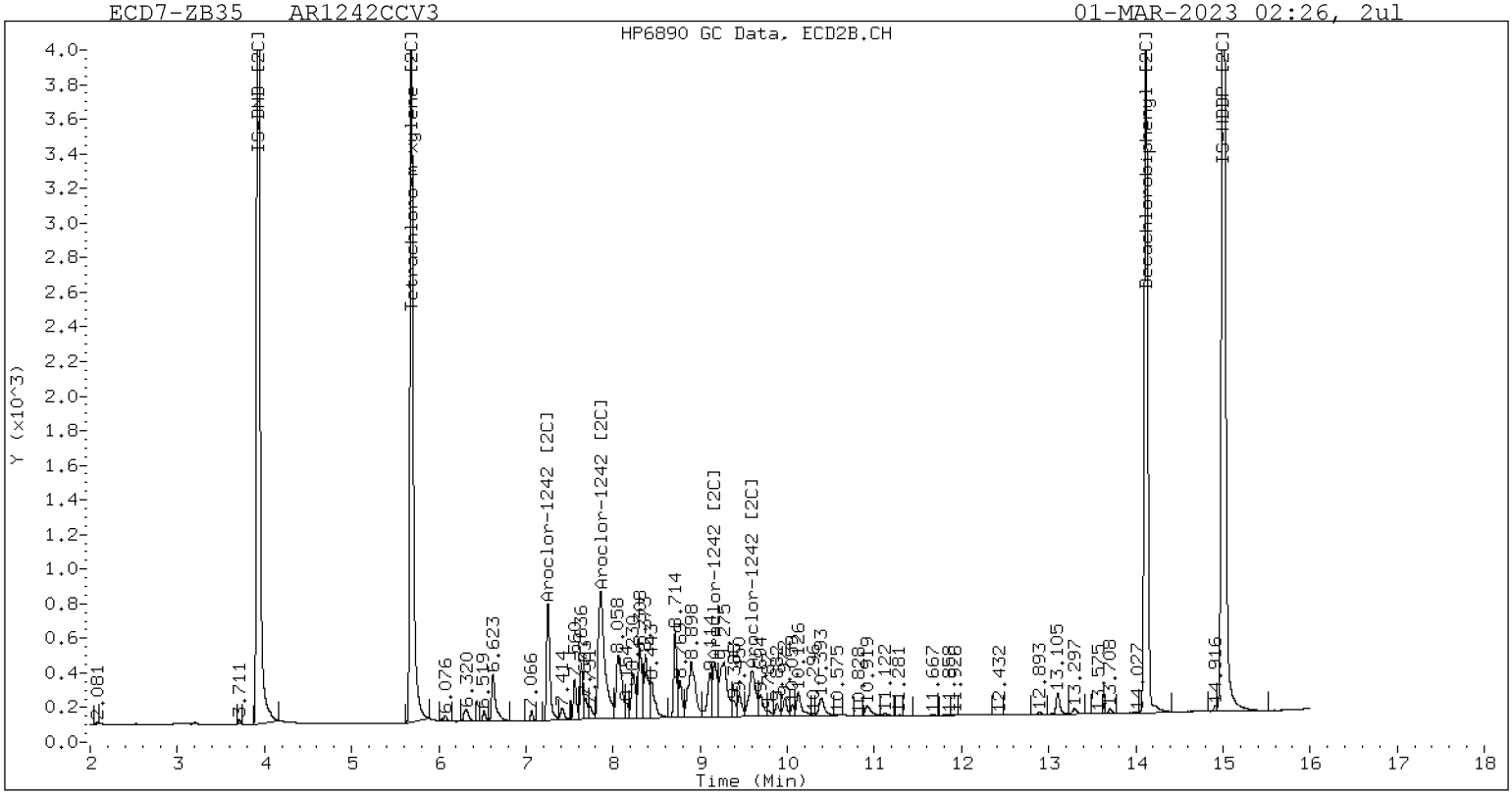
PCB Dual Column Chromatograms

ECD7-ZB5 AR1242CCV3 01-MAR-2023 02:26, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1242CCV3 01-MAR-2023 02:26, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GB00069
Lab File ID:	02282332ECD7.D	Calibration Date:	02/24/2023
Sequence:	SLC0014	Injection Date:	03/01/23
Lab Sample ID:	SLC0014-CCV4	Injection Time:	02:47
Sequence Name:	AR1660CCV4		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT	
Aroclor 1016	A	250.00	265	0.0493662	0.0524970		5.9	+/-20	
Aroclor-1016 (1)	A	250.00	258	0.0303852	0.0314097		3.2		
Aroclor-1016 (2)	A	250.00	267	0.0926308	0.0990067		6.8		
Aroclor-1016 (3)	A	250.00	266	0.0452180	0.0482150		6.4		
Aroclor-1016 (4)	A	250.00	268	0.0292307	0.0313565		7.2		
Aroclor 1016 [2C]	A	250.00	254	0.0545857	0.0560912		1.5	+/-20	
Aroclor-1016 (1) [2C]	A	250.00	247	0.0468313	0.0462735		-1.2		
Aroclor-1016 (2) [2C]	A	250.00	267	0.0949676	0.1015811		6.8		
Aroclor-1016 (3) [2C]	A	250.00	245	0.0428922	0.0420645		-2.0		
Aroclor-1016 (4) [2C]	A	250.00	256	0.0336515	0.0344458		2.4		
Aroclor 1260	A	250.00	383	0.0392091	0.0596066		53.2	+/-20	*
Aroclor-1260 (1)	A	250.00	366	0.0287785	0.0421980		46.4		
Aroclor-1260 (2)	A	250.00	379	0.0300690	0.0455431		51.6		
Aroclor-1260 (3)	A	250.00	369	0.0797517	0.1177419		47.6		
Aroclor-1260 (4)	A	250.00	406	0.0401599	0.0652154		62.4		
Aroclor-1260 (5)	A	250.00	395	0.0172866	0.0273346		58.0		
Aroclor 1260 [2C]	A	250.00	297	0.0699688	0.0837623		18.6	+/-20	
Aroclor-1260 (1) [2C]	A	250.00	288	0.0470406	0.0541160		15.2		
Aroclor-1260 (2) [2C]	A	250.00	303	0.1200523	0.1454699		21.2		
Aroclor-1260 (3) [2C]	A	250.00	291	0.0318590	0.0371272		16.4		
Aroclor-1260 (4) [2C]	A	250.00	304	0.0809231	0.0983362		21.6		
Decachlorobiphenyl	A	40.000	45.3	0.7878687	0.8917978		13.3	+/-20	
Tetrachlorometaxylene	A	40.000	39.7	1.1944880	1.1844690		-0.8	+/-20	
Decachlorobiphenyl [2C]	A	40.000	44.0	1.2182710	1.3404950		10.0	+/-20	
Tetrachlorometaxylene [2C]	A	40.000	41.8	1.1737210	1.2272110		4.5	+/-20	

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230228.b/02282332ECD7.D
Data file 2: /230228.b/230228.b/02282332ECD7.D
Method: \\target\share\chem4\ecd7.i\230228.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCV4
Client ID:
Injection Date: 01-MAR-2023 02:47
Report Date: 03/01/2023 12:20
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.807	-0.001	466455	5.686	-0.001	195329	39.7	41.8	5.3	Tetrachloro-m-xylene
13.892	-0.001	461529	14.118	-0.002	245956	45.3	44.0	2.8	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	787619	16.9
Hexabromobiphenyl	1429847	1035053	-27.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	318330	1.0
Hexabromobiphenyl	513946	366963	-28.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.269	-0.001	77309	258.4	1	7.253	-0.002	46032	247.0
Aroclor-1016	2	7.654	-0.001	243686	267.2	2	7.857	-0.003	101051	267.4
Aroclor-1016	3	7.791	-0.001	118672	266.6	3	8.056	-0.002	41845	245.2
Aroclor-1016	4	8.405	-0.001	77178	268.2	4	8.306	-0.002	34266	255.9
Total Col1Ave (4 peaks):					265.1	Total Col2Ave (4 peaks):				253.9 RPD = 4
Corrected Ave (3 peaks):					264.1	Corrected Ave (3 peaks):				249.4 RPD = 6
CalAmt %D:					6.0	CalAmt %D:				1.6
Aroclor-1260	1	11.044	-0.000	136491	366.6	1	11.653	-0.000	62058	287.6
Aroclor-1260	2	11.361	0.000	147311	378.7	2	11.917	-0.001	166819	302.9
Aroclor-1260	3	11.735	-0.000	380841	369.1	3	12.435	0.000	42576	291.3
Aroclor-1260	4	12.139	-0.001	210942	406.0	4	12.501	-0.001	112768	303.8
Aroclor-1260	5	12.244	0.001	88415	395.3	NS	---			----
Total Col1Ave (5 peaks):					383.1	Total Col2Ave (4 peaks):				296.4 RPD = 26
Corrected Ave (4 peaks):					377.4	Corrected Ave (3 peaks):				294.0 RPD = 25
CalAmt %D:					53.2	CalAmt %D:				18.6

Total PCB Area Col1 (5.907 - 13.793) = 4504656 Col1 Total PCB = 0.5 ppm*

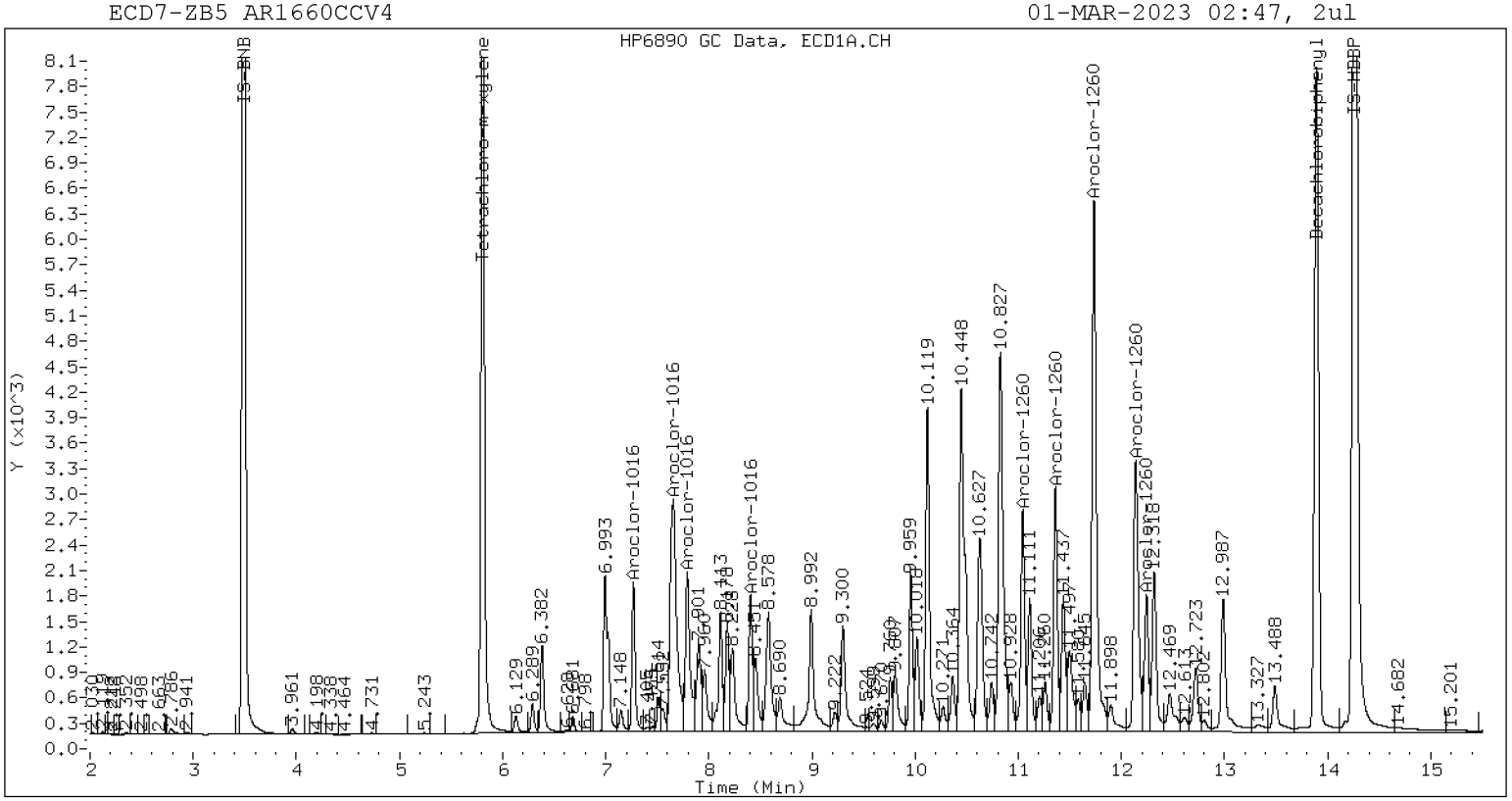
Total PCB Area Col2 (5.787 - 14.020) = 1698889 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

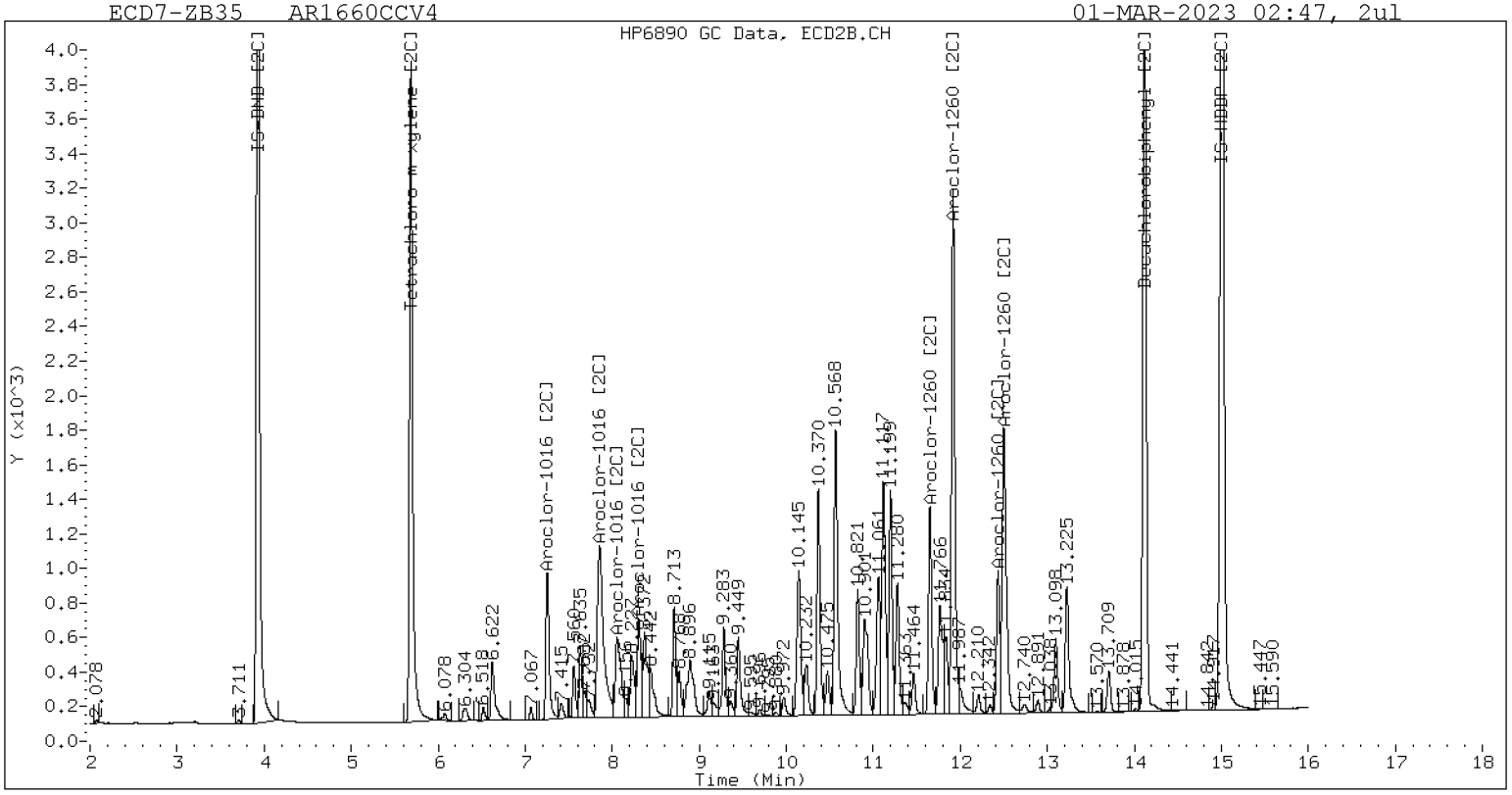
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV4 01-MAR-2023 02:47, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCV4 01-MAR-2023 02:47, 2ul

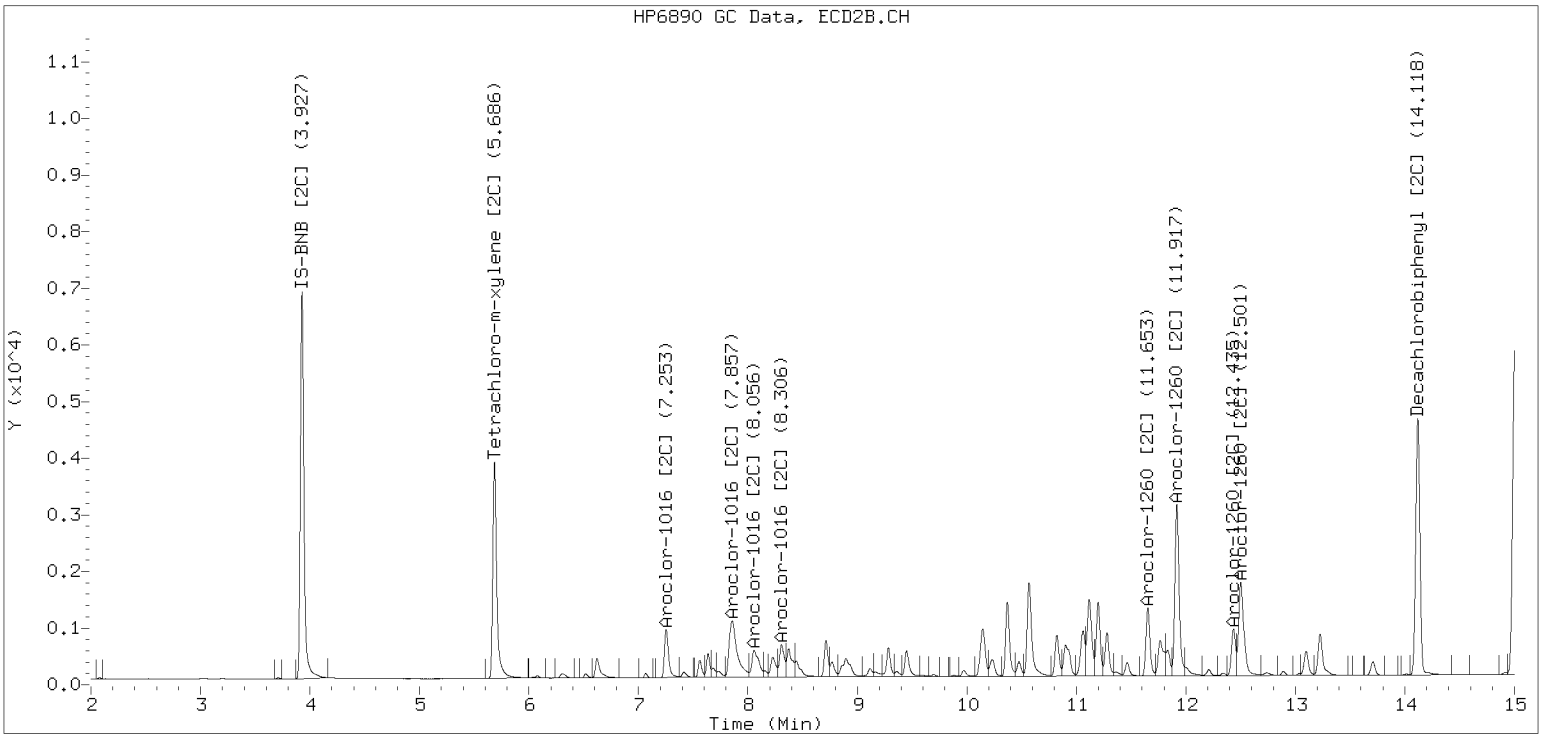


ZB-35 Manual Integration: YES

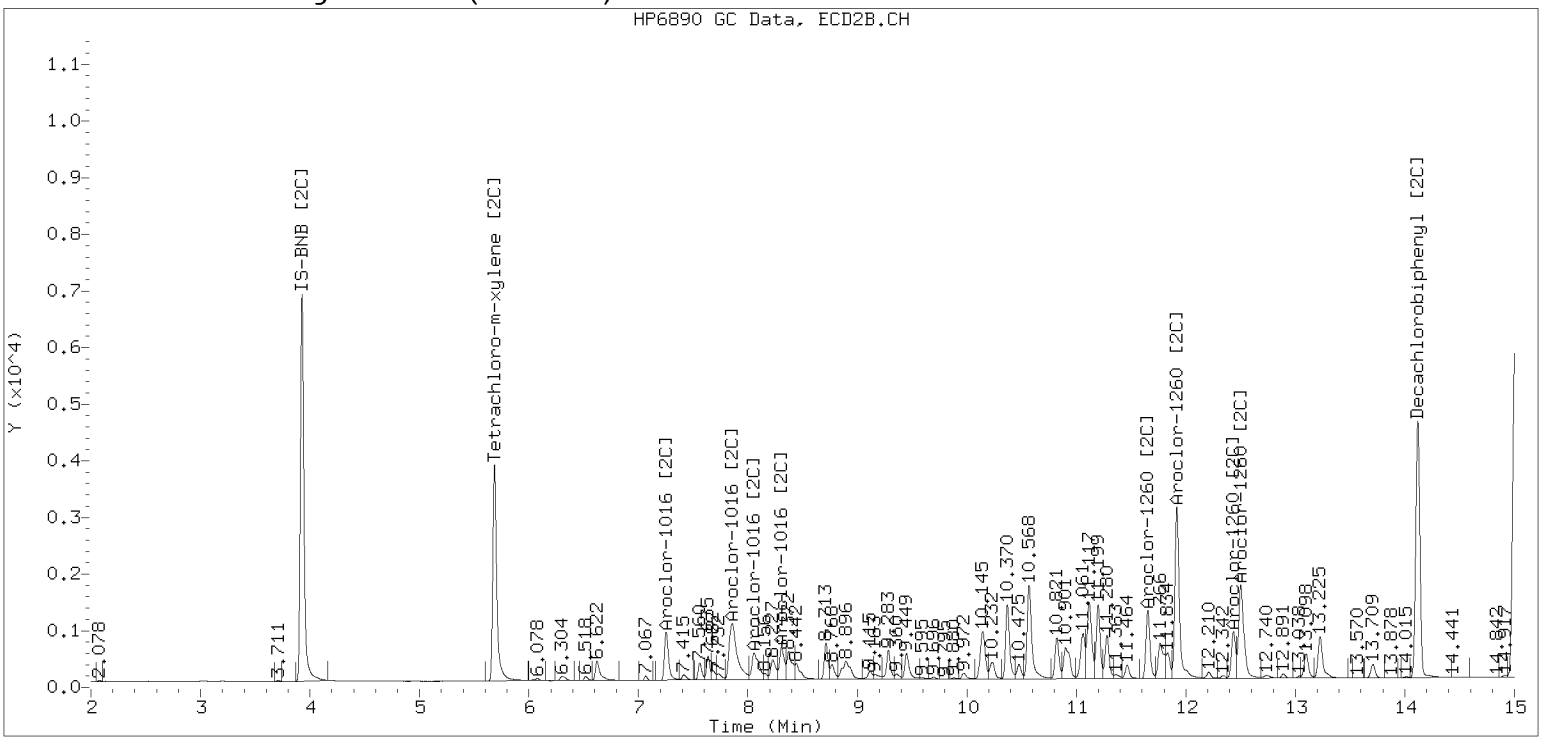
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230228.b/230228.b/02282332ECD7.D Injection Date: 01-MAR-2023

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GB00069
Lab File ID:	02282348ECD7.D	Calibration Date:	02/24/2023
Sequence:	SLC0014	Injection Date:	03/01/23
Lab Sample ID:	SLC0014-CCV5	Injection Time:	08:24
Sequence Name:	AR1254CCV5		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1254	A	250.00	245	0.0662949	0.0646060		-2.2	+/-20
Aroclor-1254 (1)	A	250.00	247		0.0793086			
Aroclor-1254 (2)	A	250.00	250		0.0361281			
Aroclor-1254 (3)	A	250.00	245		0.0506642			
Aroclor-1254 (4)	A	250.00	238		0.0956681			
Aroclor-1254 (5)	A	250.00	243		0.0612610			
Aroclor 1254 [2C]	A	250.00	243	0.0763106	0.0741904		-2.8	+/-20
Aroclor-1254 (1) [2C]	A	250.00	248		0.0603001			
Aroclor-1254 (2) [2C]	A	250.00	246		0.0482340			
Aroclor-1254 (3) [2C]	A	250.00	245		0.1038543			
Aroclor-1254 (4) [2C]	A	250.00	240		0.0991212			
Aroclor-1254 (5) [2C]	A	250.00	236		0.0594422			
Decachlorobiphenyl	A	40.000	38.4	0.7878687	0.7555757		-4.0	+/-20
Tetrachlorometaxylene	A	40.000	37.5	1.1944880	1.1209210		-6.3	+/-20
Decachlorobiphenyl [2C]	A	40.000	42.7	1.2182710	1.3011340		6.8	+/-20
Tetrachlorometaxylene [2C]	A	40.000	39.5	1.1737210	1.1593320		-1.3	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230228.b/02282348ECD7.D
Data file 2: /230228.b/230228.b/02282348ECD7.D
Method: \\target\share\chem4\ecd7.i\230228.b\PCB.m
Compound Sublist: AR1254.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254CCV5
Client ID:
Injection Date: 01-MAR-2023 08:24
Report Date: 03/01/2023 09:00
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.808	-0.000	436115	5.687	0.000	183801	37.5	39.5	5.1	Tetrachloro-m-xylene
13.893	-0.001	396137	14.119	0.000	249929	38.4	42.7	10.8	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	778137	15.5
Hexabromobiphenyl	1429847	1048570	-26.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	317081	0.6
Hexabromobiphenyl	513946	384171	-25.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1254	1	9.299	-0.001	192853	246.8	1	9.451	0.000	59750	247.9
Aroclor-1254	2	9.378	0.000	87852	250.0	2	9.972	0.000	47794	246.5
Aroclor-1254	3	9.669	-0.001	123199	245.2	3	10.125	0.000	102907	245.3
Aroclor-1254	4	9.808	-0.001	232634	238.2	4	10.374	0.000	98217	240.2
Aroclor-1254	5	10.178	-0.001	148967	243.3	5	10.570	0.000	58900	236.6

Total Col1Ave (5 peaks): 244.7 Total Col2Ave (5 peaks): 243.3 RPD = 1

Corrected Ave (4 peaks): 243.4 Corrected Ave (4 peaks): 242.1 RPD = 1

CalAmt %D: -2.1 CalAmt %D: -2.7

Total PCB Area Col1 (5.908 - 13.794) = 2555616 Col1 Total PCB = 0.3 ppm*

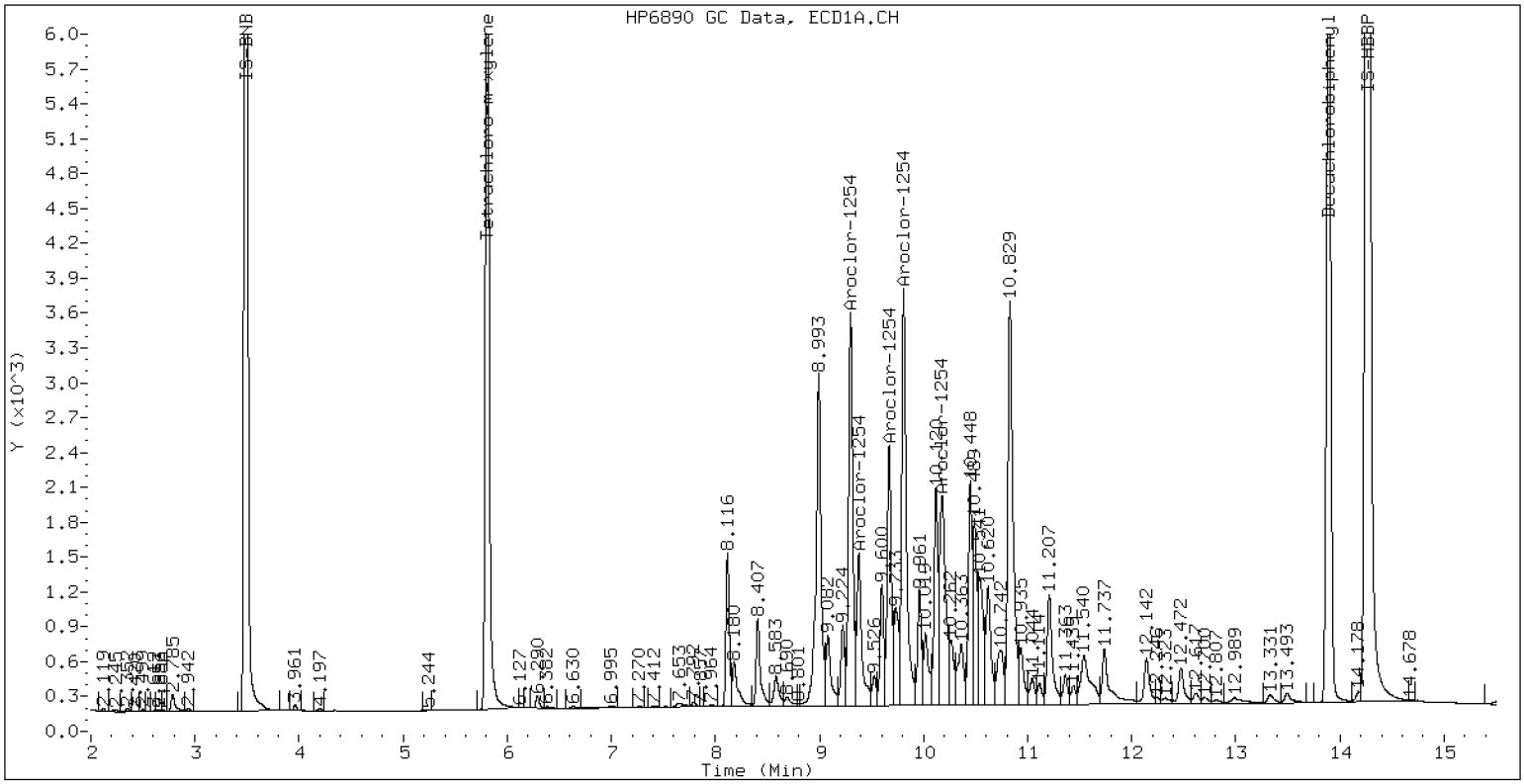
Total PCB Area Col2 (5.787 - 14.019) = 986433 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

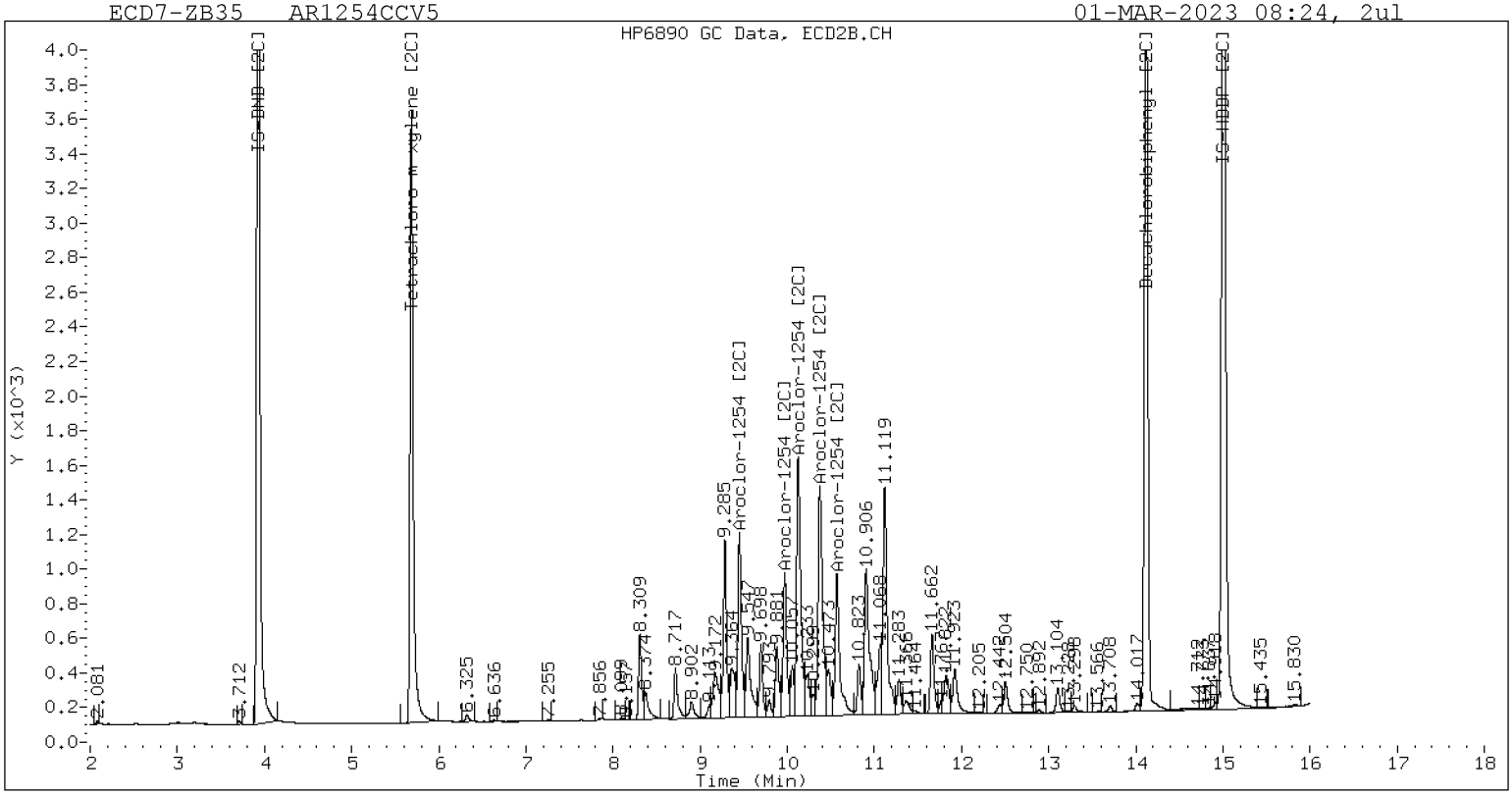
PCB Dual Column Chromatograms

ECD7-ZB5 AR1254CCV5 01-MAR-2023 08:24, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254CCV5 01-MAR-2023 08:24, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GB00069
Lab File ID:	02282349ECD7.D	Calibration Date:	02/24/2023
Sequence:	SLC0014	Injection Date:	03/01/23
Lab Sample ID:	SLC0014-CCV6	Injection Time:	08:45
Sequence Name:	AR1660CCV6		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT	
Aroclor 1016	A	250.00	267	0.0493662	0.0529550		6.6	+/-20	
Aroclor-1016 (1)	A	250.00	260	0.0303852	0.0316067		4.0		
Aroclor-1016 (2)	A	250.00	270	0.0926308	0.1001731		8.0		
Aroclor-1016 (3)	A	250.00	270	0.0452180	0.0488706		8.0		
Aroclor-1016 (4)	A	250.00	266	0.0292307	0.0311698		6.4		
Aroclor 1016 [2C]	A	250.00	256	0.0545857	0.0566479		2.4	+/-20	
Aroclor-1016 (1) [2C]	A	250.00	249	0.0468313	0.0466155		-0.4		
Aroclor-1016 (2) [2C]	A	250.00	272	0.0949676	0.1032238		8.8		
Aroclor-1016 (3) [2C]	A	250.00	244	0.0428922	0.0419403		-2.4		
Aroclor-1016 (4) [2C]	A	250.00	259	0.0336515	0.0348121		3.6		
Aroclor 1260	A	250.00	335	0.0392091	0.0526811		34.1	+/-20	*
Aroclor-1260 (1)	A	250.00	330	0.0287785	0.0379438		32.0		
Aroclor-1260 (2)	A	250.00	352	0.0300690	0.0422977		40.8		
Aroclor-1260 (3)	A	250.00	336	0.0797517	0.1070851		34.4		
Aroclor-1260 (4)	A	250.00	335	0.0401599	0.0537628		34.0		
Aroclor-1260 (5)	A	250.00	323	0.0172866	0.0223159		29.2		
Aroclor 1260 [2C]	A	250.00	272	0.0699688	0.0769061		8.6	+/-20	
Aroclor-1260 (1) [2C]	A	250.00	263	0.0470406	0.0494367		5.2		
Aroclor-1260 (2) [2C]	A	250.00	278	0.1200523	0.1337765		11.2		
Aroclor-1260 (3) [2C]	A	250.00	266	0.0318590	0.0339438		6.4		
Aroclor-1260 (4) [2C]	A	250.00	279	0.0809231	0.0904670		11.6		
Decachlorobiphenyl	A	40.000	38.7	0.7878687	0.7622857		-3.3	+/-20	
Tetrachlorometaxylene	A	40.000	40.1	1.1944880	1.1963830		0.3	+/-20	
Decachlorobiphenyl [2C]	A	40.000	42.8	1.2182710	1.3020620		7.0	+/-20	
Tetrachlorometaxylene [2C]	A	40.000	42.1	1.1737210	1.2367140		5.3	+/-20	

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230228.b/02282349ECD7.D
Data file 2: /230228.b/230228.b/02282349ECD7.D
Method: \\target\share\chem4\ecd7.i\230228.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCV6
Client ID:
Injection Date: 01-MAR-2023 08:45
Report Date: 03/01/2023 12:50
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.807	0.000	481038	5.687	0.000	200869	40.1	42.1	5.1	Tetrachloro-m-xylene
13.893	0.000	498212	14.120	0.000	275782	38.7	42.8	9.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	804154	19.3
Hexabromobiphenyl	1429847	1307153	-8.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	324843	3.0
Hexabromobiphenyl	513946	423608	-17.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.269	0.000	79427	260.1	1	7.255	0.000	47321	248.8
Aroclor-1016	2	7.655	0.000	251733	270.4	2	7.859	0.000	104786	271.7
Aroclor-1016	3	7.792	0.000	122811	270.2	3	8.059	0.000	42575	244.5
Aroclor-1016	4	8.406	0.000	78329	266.6	4	8.308	0.000	35339	258.6
Total Col1Ave (4 peaks):					266.8	Total Col2Ave (4 peaks):				255.9 RPD = 4
Corrected Ave (3 peaks):					265.6	Corrected Ave (3 peaks):				250.6 RPD = 6
CalAmt %D:					6.7	CalAmt %D:				2.4
Aroclor-1260	1	11.044	0.000	154995	329.6	1	11.653	0.000	65443	262.7
Aroclor-1260	2	11.360	0.000	172780	351.7	2	11.918	0.000	177090	278.6
Aroclor-1260	3	11.736	0.000	437427	335.7	3	12.435	0.000	44934	266.4
Aroclor-1260	4	12.140	0.000	219613	334.7	4	12.502	0.000	119758	279.5
Aroclor-1260	5	12.243	0.000	91157	322.7	NS	---			----
Total Col1Ave (5 peaks):					334.9	Total Col2Ave (4 peaks):				271.8 RPD = 21
Corrected Ave (4 peaks):					330.7	Corrected Ave (3 peaks):				269.2 RPD = 20
CalAmt %D:					34.0	CalAmt %D:				8.7

Total PCB Area Col1 (5.907 - 13.793) = 4749889 Col1 Total PCB = 0.5 ppm*

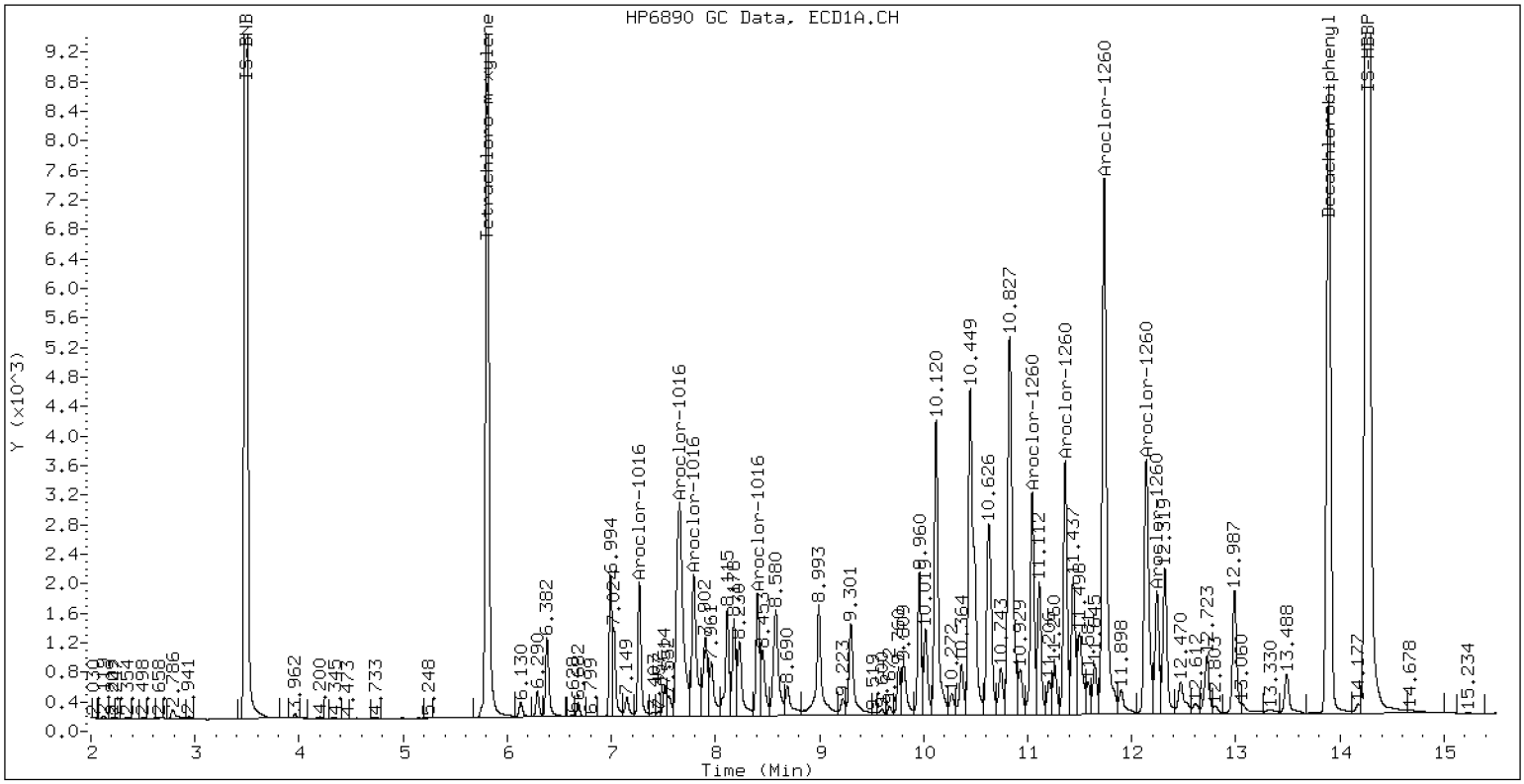
Total PCB Area Col2 (5.787 - 14.020) = 1777486 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

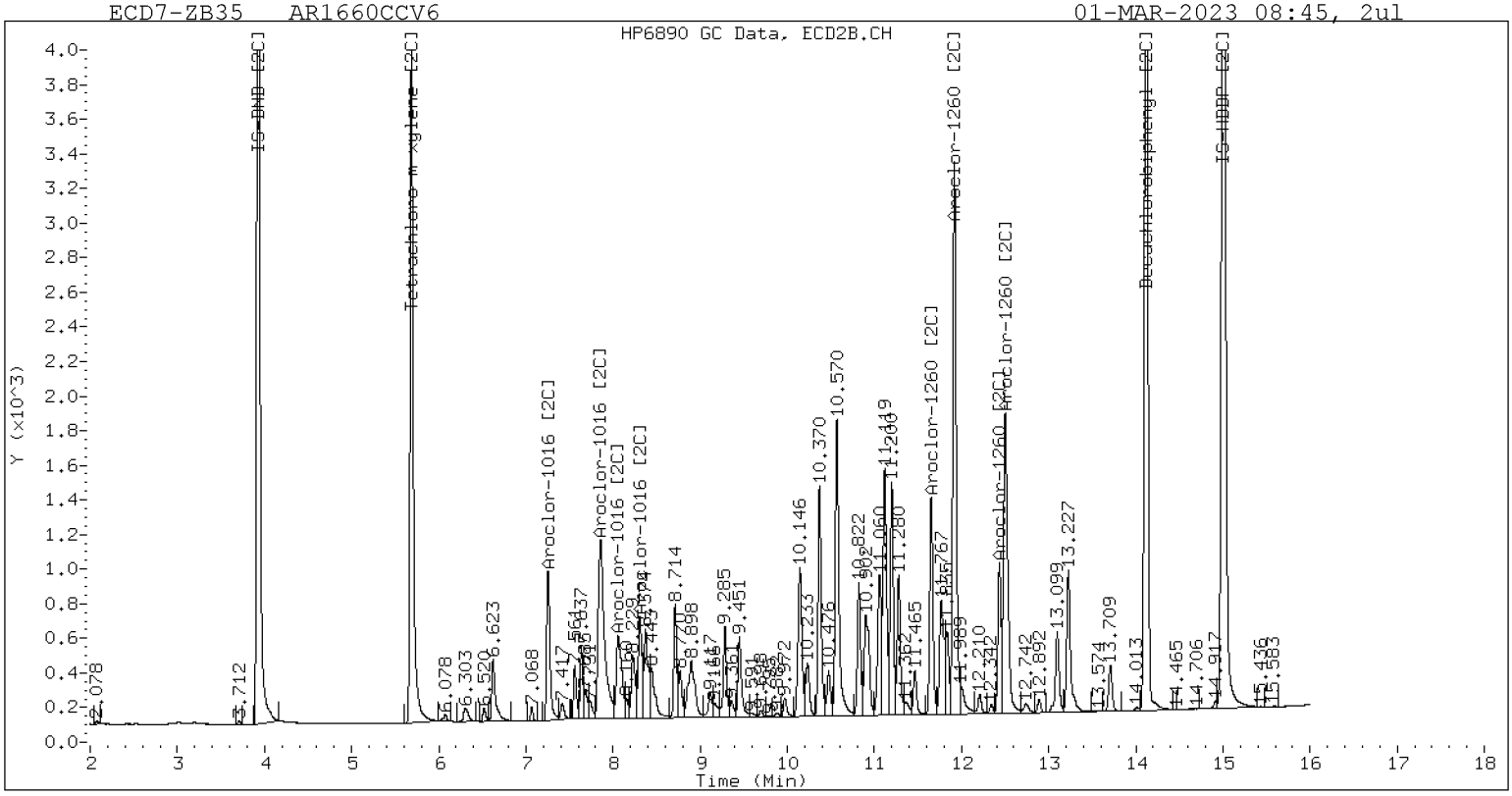
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV6 01-MAR-2023 08:45, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCV6 01-MAR-2023 08:45, 2ul

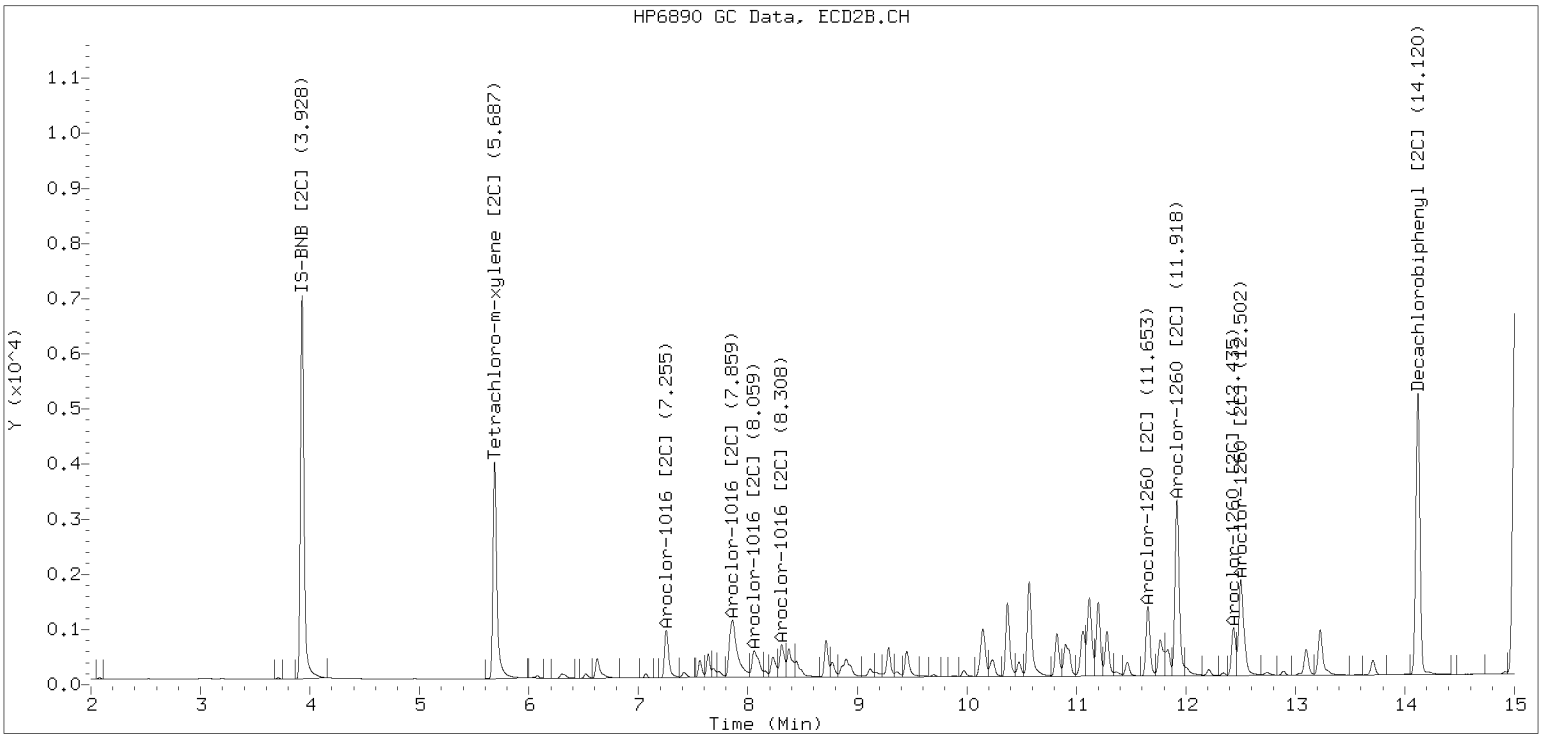


ZB-35 Manual Integration: YES

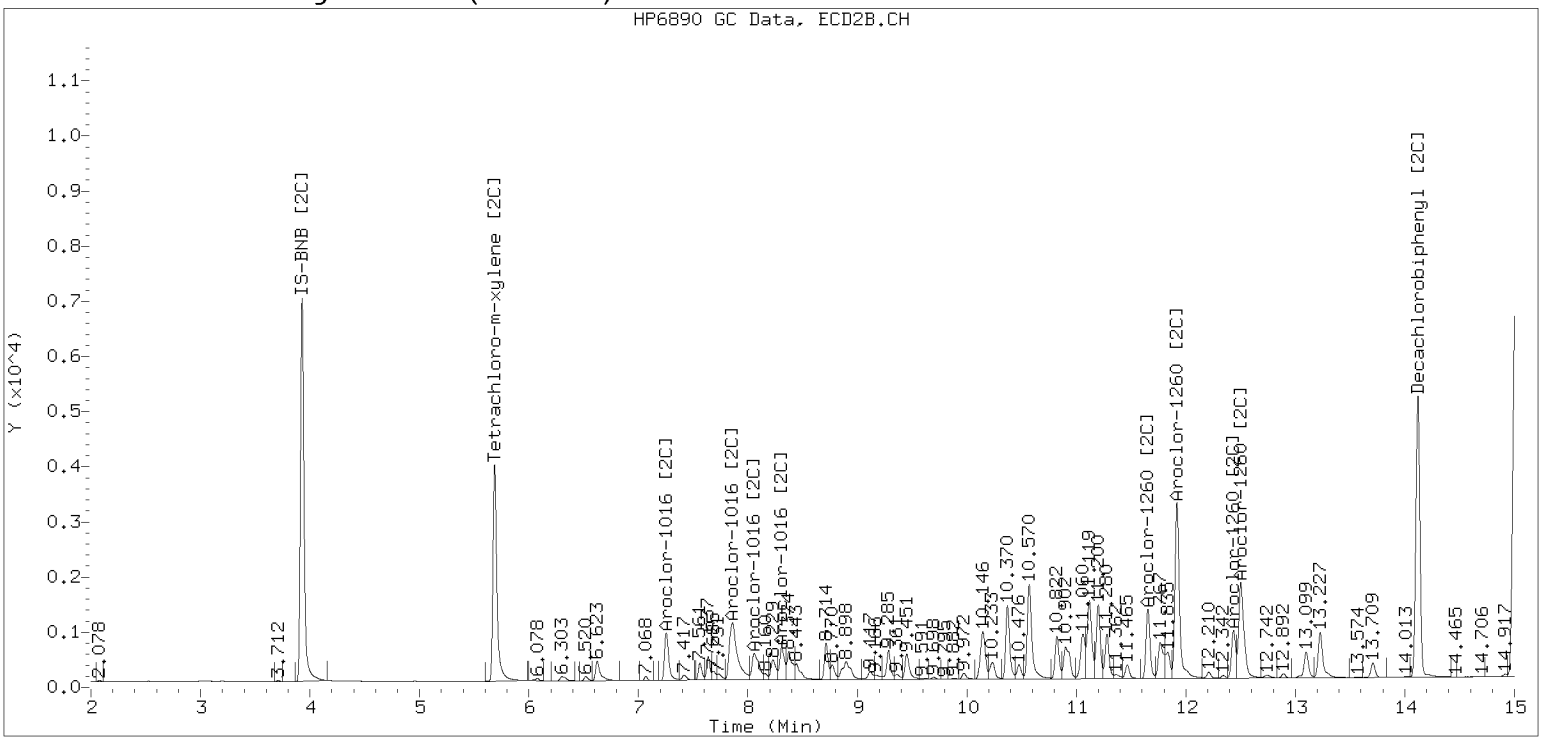
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230228.b/230228.b/02282349ECD7.D Injection Date: 01-MAR-2023

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLB0342
Instrument: ECD7
Calibration: GB00069

Sample Name	Lab Sample ID	Column 1 File ID	Column 2 File ID	Matrix	Analysis Date/Time
Cal Standard	SLB0342-CAL1	02242302ECD7.D	02242302ECD7.D	NA	02/24/23 11:12
Cal Standard	SLB0342-CAL2	02242303ECD7.D	02242303ECD7.D	NA	02/24/23 11:33
Cal Standard	SLB0342-CAL3	02242304ECD7.D	02242304ECD7.D	NA	02/24/23 11:54
Cal Standard	SLB0342-CAL4	02242305ECD7.D	02242305ECD7.D	NA	02/24/23 12:15
Cal Standard	SLB0342-CAL5	02242306ECD7.D	02242306ECD7.D	NA	02/24/23 12:36
Cal Standard	SLB0342-CAL6	02242307ECD7.D	02242307ECD7.D	NA	02/24/23 12:57
Cal Standard	SLB0342-CAL7	02242308ECD7.D	02242308ECD7.D	NA	02/24/23 13:18
Cal Standard	SLB0342-CAL8	02242309ECD7.D	02242309ECD7.D	NA	02/24/23 13:39
Cal Standard	SLB0342-CAL9	02242310ECD7.D	02242310ECD7.D	NA	02/24/23 14:00
Cal Standard	SLB0342-CALA	02242311ECD7.D	02242311ECD7.D	NA	02/24/23 14:21
Cal Standard	SLB0342-CALB	02242312ECD7.D	02242312ECD7.D	NA	02/24/23 14:42
Secondary Cal Check	SLB0342-SCV1	02242313ECD7.D	02242313ECD7.D	NA	02/24/23 15:03
Secondary Cal Check	SLB0342-SCV2	02242314ECD7.D	02242314ECD7.D	NA	02/24/23 15:24
Secondary Cal Check	SLB0342-SCV3	02242315ECD7.D	02242315ECD7.D	NA	02/24/23 15:45
Secondary Cal Check	SLB0342-SCV4	02242316ECD7.D	02242316ECD7.D	NA	02/24/23 16:06
Secondary Cal Check	SLB0342-SCV5	02242317ECD7.D	02242317ECD7.D	NA	02/24/23 16:27
Secondary Cal Check	SLB0342-SCV6	02242318ECD7.D	02242318ECD7.D	NA	02/24/23 16:48

Dual Column

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLC0014
Instrument: ECD7
Calibration: GB00069

Sample Name	Lab Sample ID	Column 1 File ID	Column 2 File ID	Matrix	Analysis Date/Time
Initial Cal Check	SLC0014-ICV1	02282310ECD7.D	02282310ECD7.D	NA	02/28/23 19:04
Initial Cal Check	SLC0014-ICV2	02282311ECD7.D	02282311ECD7.D	NA	02/28/23 19:25
Calibration Check	SLC0014-CCV1	02282313ECD7.D	02282313ECD7.D	NA	02/28/23 20:07
Calibration Check	SLC0014-CCV2	02282314ECD7.D	02282314ECD7.D	NA	02/28/23 20:28
Blank	BLB0391-BLK1	02282315ECD7.D	02282315ECD7.D	Solid	02/28/23 20:49
LCS	BLB0391-BS1	02282316ECD7.D	02282316ECD7.D	Solid	02/28/23 21:10
LCS Dup	BLB0391-BSD1	02282317ECD7.D	02282317ECD7.D	Solid	02/28/23 21:31
Reference	BLB0391-SRM1	02282318ECD7.D	02282318ECD7.D	Solid	02/28/23 21:53
LDW23-SC1150B	23B0276-01	02282330ECD7.D	02282330ECD7.D	Solid	03/01/23 02:05
Calibration Check	SLC0014-CCV3	02282331ECD7.D	02282331ECD7.D	NA	03/01/23 02:26
Calibration Check	SLC0014-CCV4	02282332ECD7.D	02282332ECD7.D	NA	03/01/23 02:47
Calibration Check	SLC0014-CCV5	02282348ECD7.D	02282348ECD7.D	NA	03/01/23 08:24
Calibration Check	SLC0014-CCV6	02282349ECD7.D	02282349ECD7.D	NA	03/01/23 08:45

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SLC0014

Instrument: ECD7
Calibration ID: GB00069

Printed: 3/1/2023 2:29:55PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SLC0014-ICV1	QC		1		L000862	L000844		
SLC0014-ICV2	QC		2		L000856	L000844		
23A0556-01	PCB (20 ug/kg) or (MTCA 0.	A 02	3			L000844	Integral Consulting, Inc.	Use this one
SLC0014-CCV1	QC		4		L000861	L000844		
SLC0014-CCV2	QC		5		L000856	L000844		
BLB0391-BLK1	QC		6			L000844		
BLB0391-BS1	QC		7			L000844		
BLB0391-BSD1	QC		8			L000844		
BLB0391-SRM1	QC		9			L000844		
23A0420-01	8082A PCB Solid 4	A 02	10			L000844	Anchor QEA, LLC	
23A0420-02	8082A PCB Solid 4	A 02	11			L000844	Anchor QEA, LLC	
23A0420-03	8082A PCB Solid 4	A 02	12			L000844	Anchor QEA, LLC	
23A0420-04	8082A PCB Solid 4	A 02	13			L000844	Anchor QEA, LLC	
BLB0391-MS1	QC		14			L000844		
BLB0391-MSD1	QC		15			L000844		
23A0420-05	8082A PCB Solid 4	A 02	16			L000844	Anchor QEA, LLC	
23A0420-06	8082A PCB Solid 4	A 02	17			L000844	Anchor QEA, LLC	
23A0420-07	8082A PCB Solid 4	A 02	18			L000844	Anchor QEA, LLC	
23A0420-08	8082A PCB Solid 4	A 02	19			L000844	Anchor QEA, LLC	
23A0420-09	8082A PCB Solid 4	A 02	20			L000844	Anchor QEA, LLC	
23B0276-01	8082A PCB Solid 4	A 01	21			L000844	Anchor QEA, LLC	

Samples Loaded By Date

Data Processed By Date

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SLC0014

Instrument: ECD7
Calibration ID: GB00069

Printed: 3/1/2023 2:29:55PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SLC0014-CCV3	QC		22		L000860	L000844		
SLC0014-CCV4	QC		23		L000856	L000844		
BLB0427-BLK1	QC		24			L000844		
BLB0427-BS1	QC		25			L000844		
BLB0427-BSD1	QC		26			L000844		
BLB0427-SRM1	QC		27			L000844		
23B0228-01	8082A PCB Solid 4	A 01	28			L000844	Anchor QEA, LLC	
23B0229-01	8082A PCB Solid 4	A 01	29			L000844	Anchor QEA, LLC	
23B0229-02	8082A PCB Solid 4	A 01	30			L000844	Anchor QEA, LLC	
23B0229-03	8082A PCB Solid 4	A 01	31			L000844	Anchor QEA, LLC	
23B0229-04	8082A PCB Solid 4	A 01	32			L000844	Anchor QEA, LLC	
23B0229-05	8082A PCB Solid 4	A 01	33			L000844	Anchor QEA, LLC	
23B0229-06	8082A PCB Solid 4	A 01	34			L000844	Anchor QEA, LLC	
23B0229-07	8082A PCB Solid 4	A 01	35			L000844	Anchor QEA, LLC	
BLB0427-MS1	QC		36			L000844		
BLB0427-MSD1	QC		37			L000844		
23B0229-08	8082A PCB Solid 4	A 01	38			L000844	Anchor QEA, LLC	
SLC0014-CCV5	QC		39		L000862	L000844		
SLC0014-CCV6	QC		40		L000856	L000844		

Samples Loaded By Date

Data Processed By Date

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230228.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	28-FEB-2023 19:04	02282310ECD7.D	1	AR1254ICV1	
2	28-FEB-2023 19:25	02282311ECD7.D	1	AR1660ICV2	
3	28-FEB-2023 19:46	02282312ECD7.D	10	23A0556-01RE1	
4	28-FEB-2023 20:07	02282313ECD7.D	1	AR1248CCV1	
5	28-FEB-2023 20:28	02282314ECD7.D	1	AR1660CCV2	
6	28-FEB-2023 20:49	02282315ECD7.D	1	BLB0391-BLK1	
7	28-FEB-2023 21:10	02282316ECD7.D	1	BLB0391-BS1	
8	28-FEB-2023 21:31	02282317ECD7.D	1	BLB0391-BSD1	
9	28-FEB-2023 21:53	02282318ECD7.D	1	BLB0391-SRM1	
10	28-FEB-2023 22:14	02282319ECD7.D	1	23A0420-01	
11	28-FEB-2023 22:35	02282320ECD7.D	3	23A0420-02RE1	
12	28-FEB-2023 22:56	02282321ECD7.D	3	23A0420-03RE1	
13	28-FEB-2023 23:17	02282322ECD7.D	1	23A0420-04	
14	28-FEB-2023 23:38	02282323ECD7.D	1	BLB0391-MS1	
15	28-FEB-2023 23:59	02282324ECD7.D	1	BLB0391-MSD1	
16	01-MAR-2023 00:20	02282325ECD7.D	15	23A0420-05RE2	
17	01-MAR-2023 00:41	02282326ECD7.D	25	23A0420-06RE2	
18	01-MAR-2023 01:02	02282327ECD7.D	3	23A0420-07RE1	
19	01-MAR-2023 01:23	02282328ECD7.D	1	23A0420-08	
20	01-MAR-2023 01:44	02282329ECD7.D	5	23A0420-09RE1	
21	01-MAR-2023 02:05	02282330ECD7.D	3	23A0276-01RE1	
22	01-MAR-2023 02:26	02282331ECD7.D	1	AR1242CCV3	
23	01-MAR-2023 02:47	02282332ECD7.D	1	AR1660CCV4	
24	01-MAR-2023 03:08	02282333ECD7.D	1	BLB0427-BLK1	
25	01-MAR-2023 03:29	02282334ECD7.D	1	BLB0427-BS1	
26	01-MAR-2023 03:50	02282335ECD7.D	1	BLB0427-BSD1	
27	01-MAR-2023 04:11	02282336ECD7.D	1	BLB0427-SRM1	
28	01-MAR-2023 04:32	02282337ECD7.D	3	23B0228-01RE1	
29	01-MAR-2023 04:53	02282338ECD7.D	1	23B0229-01	
30	01-MAR-2023 05:14	02282339ECD7.D	1	23B0229-02	
31	01-MAR-2023 05:35	02282340ECD7.D	1	23B0229-03	
32	01-MAR-2023 05:56	02282341ECD7.D	1	23B0229-04	
33	01-MAR-2023 06:17	02282342ECD7.D	4	23B0229-05RE1	
34	01-MAR-2023 06:39	02282343ECD7.D	3	23B0229-06RE1	
35	01-MAR-2023 07:00	02282344ECD7.D	1	23B0229-07	
36	01-MAR-2023 07:21	02282345ECD7.D	1	BLB0427-MS1	
37	01-MAR-2023 07:42	02282346ECD7.D	1	BLB0427-MSD1	
38	01-MAR-2023 08:03	02282347ECD7.D	3	23B0229-08RE1	
39	01-MAR-2023 08:24	02282348ECD7.D	1	AR1254CCV5	
40	01-MAR-2023 08:45	02282349ECD7.D	1	AR1660CCV6	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230228.b

ARI Job No.: AR12 Method: PCB.m Instrument: ecd7.i Date: 28-FEB-2023

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1904	02282310ECD7.D	AR1254ICV1		1	Aroclor-1254,
1925	02282311ECD7.D	AR1660ICV2		1	NO MANUAL INTEGRATION
1946	02282312ECD7.D	23A0556-01RE1		10	Aroclor-1262,
2007	02282313ECD7.D	AR1248CCV1		1	Aroclor-1248,
2028	02282314ECD7.D	AR1660CCV2		1	NO MANUAL INTEGRATION
2049	02282315ECD7.D	BLB0391-BLK1		1	NO MANUAL INTEGRATION
2110	02282316ECD7.D	BLB0391-BS1		1	NO MANUAL INTEGRATION
2131	02282317ECD7.D	BLB0391-BSD1		1	NO MANUAL INTEGRATION
2153	02282318ECD7.D	BLB0391-SRM1		1	NO MANUAL INTEGRATION
2214	02282319ECD7.D	23A0420-01		1	Aroclor-1254,
2235	02282320ECD7.D	23A0420-02RE1		3	NO MANUAL INTEGRATION
2256	02282321ECD7.D	23A0420-03RE1		3	NO MANUAL INTEGRATION
2317	02282322ECD7.D	23A0420-04		1	Aroclor-1254,
2338	02282323ECD7.D	BLB0391-MS1		1	NO MANUAL INTEGRATION
2359	02282324ECD7.D	BLB0391-MSD1		1	NO MANUAL INTEGRATION
0020	02282325ECD7.D	23A0420-05RE2		15	Aroclor-1254,
0041	02282326ECD7.D	23A0420-06RE2		25	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230228.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0102	02282327ECD7.D	23A0420-07RE1		3	Aroclor-1254,
0123	02282328ECD7.D	23A0420-08		1	NO MANUAL INTEGRATION
0144	02282329ECD7.D	23A0420-09RE1		5	Aroclor-1254,
0205	02282330ECD7.D	23A0276-01RE1		3	Aroclor-1254,
0226	02282331ECD7.D	AR1242CCV3		1	NO MANUAL INTEGRATION
0247	02282332ECD7.D	AR1660CCV4		1	NO MANUAL INTEGRATION
0308	02282333ECD7.D	BLB0427-BLK1		1	NO MANUAL INTEGRATION
0329	02282334ECD7.D	BLB0427-BS1		1	NO MANUAL INTEGRATION
0350	02282335ECD7.D	BLB0427-BSD1		1	NO MANUAL INTEGRATION
0411	02282336ECD7.D	BLB0427-SRM1		1	NO MANUAL INTEGRATION
0432	02282337ECD7.D	23B0228-01RE1		3	NO MANUAL INTEGRATION
0453	02282338ECD7.D	23B0229-01		1	Aroclor-1254,
0514	02282339ECD7.D	23B0229-02		1	NO MANUAL INTEGRATION
0535	02282340ECD7.D	23B0229-03		1	Aroclor-1254,
0556	02282341ECD7.D	23B0229-04		1	Aroclor-1254,
0617	02282342ECD7.D	23B0229-05RE1		4	Aroclor-1254,
0639	02282343ECD7.D	23B0229-06RE1		3	Aroclor-1254,
0700	02282344ECD7.D	23B0229-07		1	Aroclor-1254,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230228.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0721	02282345ECD7.D	BLB0427-MS1		1	NO MANUAL INTEGRATION
0742	02282346ECD7.D	BLB0427-MSD1		1	NO MANUAL INTEGRATION
0803	02282347ECD7.D	23B0229-08RE1		3	Aroclor-1254,
0824	02282348ECD7.D	AR1254CCV5		1	NO MANUAL INTEGRATION
0845	02282349ECD7.D	AR1660CCV6		1	NO MANUAL INTEGRATION
1216	02282302ECD7.D	AR2162SCVICAL		1	NO MANUAL INTEGRATION
1319	02282303ECD7.D	AR1660		1	NO MANUAL INTEGRATION
1412	02282304ECD7.D	AR1660		1	NO MANUAL INTEGRATION
1719	02282305ECD7.D	0.25PPMAR1660		1	NO MANUAL INTEGRATION
1740	02282306ECD7.D	0.25PPMAR1242		1	NO MANUAL INTEGRATION
1801	02282307ECD7.D	0.25PPMAR1248		1	NO MANUAL INTEGRATION
1822	02282308ECD7.D	0.25PPMAR1254		1	NO MANUAL INTEGRATION
1843	02282309ECD7.D	DDTS		1	NO MANUAL INTEGRATION
1904	02282310ECD7.D	AR1254ICV1		1	NO MANUAL INTEGRATION
1925	02282311ECD7.D	AR1660ICV2		1	Aroclor-1260 [2C],
1946	02282312ECD7.D	23A0556-01RE1		10	NO MANUAL INTEGRATION
2007	02282313ECD7.D	AR1248CCV1		1	NO MANUAL INTEGRATION
2028	02282314ECD7.D	AR1660CCV2		1	Aroclor-1260 [2C],

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230228.b\230228.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2049	02282315ECD7.D	BLB0391-BLK1		1	NO MANUAL INTEGRATION
2110	02282316ECD7.D	BLB0391-BS1		1	NO MANUAL INTEGRATION
2131	02282317ECD7.D	BLB0391-BSD1		1	NO MANUAL INTEGRATION
2153	02282318ECD7.D	BLB0391-SRM1		1	NO MANUAL INTEGRATION
2214	02282319ECD7.D	23A0420-01		1	Aroclor-1248 [2C],
2235	02282320ECD7.D	23A0420-02RE1		3	Aroclor-1248 [2C],
2256	02282321ECD7.D	23A0420-03RE1		3	Aroclor-1248 [2C],
2317	02282322ECD7.D	23A0420-04		1	Aroclor-1248 [2C],
2338	02282323ECD7.D	BLB0391-MS1		1	NO MANUAL INTEGRATION
2359	02282324ECD7.D	BLB0391-MSD1		1	NO MANUAL INTEGRATION
0020	02282325ECD7.D	23A0420-05RE2		15	Aroclor-1248 [2C],
0041	02282326ECD7.D	23A0420-06RE2		25	Aroclor-1248 [2C],
0102	02282327ECD7.D	23A0420-07RE1		3	Aroclor-1248 [2C],
0123	02282328ECD7.D	23A0420-08		1	Aroclor-1248 [2C],
0144	02282329ECD7.D	23A0420-09RE1		5	Aroclor-1248 [2C],
0205	02282330ECD7.D	23A0276-01RE1		3	Aroclor-1248 [2C],
0226	02282331ECD7.D	AR1242CCV3		1	NO MANUAL INTEGRATION
0247	02282332ECD7.D	AR1660CCV4		1	Aroclor-1260 [2C],

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230228.b\230228.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0308	02282333ECD7.D	BLB0427-BLK1		1	NO MANUAL INTEGRATION
0329	02282334ECD7.D	BLB0427-BS1		1	NO MANUAL INTEGRATION
0350	02282335ECD7.D	BLB0427-BSD1		1	NO MANUAL INTEGRATION
0411	02282336ECD7.D	BLB0427-SRM1		1	NO MANUAL INTEGRATION
0432	02282337ECD7.D	23B0228-01RE1		3	Aroclor-1248 [2C],
0453	02282338ECD7.D	23B0229-01		1	Aroclor-1248 [2C],
0514	02282339ECD7.D	23B0229-02		1	Aroclor-1248 [2C],
0535	02282340ECD7.D	23B0229-03		1	Aroclor-1248 [2C],
0556	02282341ECD7.D	23B0229-04		1	Aroclor-1248 [2C],
0617	02282342ECD7.D	23B0229-05RE1		4	Aroclor-1248 [2C],
0639	02282343ECD7.D	23B0229-06RE1		3	Aroclor-1248 [2C],
0700	02282344ECD7.D	23B0229-07		1	Aroclor-1248 [2C],
0721	02282345ECD7.D	BLB0427-MS1		1	NO MANUAL INTEGRATION
0742	02282346ECD7.D	BLB0427-MSD1		1	NO MANUAL INTEGRATION
0803	02282347ECD7.D	23B0229-08RE1		3	Aroclor-1248 [2C],
0824	02282348ECD7.D	AR1254CCV5		1	NO MANUAL INTEGRATION
0845	02282349ECD7.D	AR1660CCV6		1	Aroclor-1260 [2C],

Security Status Report

Date: 01-Mar-2023 12:52

02282302ECD7.D	Data Locked	richardl, 01-Mar-2023 12:23
02282303ECD7.D	Data Locked	richardl, 01-Mar-2023 12:23
02282304ECD7.D	Data Locked	richardl, 01-Mar-2023 12:23
02282305ECD7.D	Data Locked	richardl, 01-Mar-2023 12:23
02282306ECD7.D	Data Locked	richardl, 01-Mar-2023 12:23
02282307ECD7.D	Data Locked	richardl, 01-Mar-2023 12:23
02282308ECD7.D	Data Locked	richardl, 01-Mar-2023 12:23
02282309ECD7.D	Data Locked	richardl, 01-Mar-2023 12:23
02282310ECD7.D	Data Locked	richardl, 01-Mar-2023 12:23
02282311ECD7.D	Data Locked	richardl, 01-Mar-2023 12:23
02282312ECD7.D	Data Locked	richardl, 01-Mar-2023 12:52
02282313ECD7.D	Data Locked	richardl, 01-Mar-2023 12:23
02282314ECD7.D	Data Locked	richardl, 01-Mar-2023 12:23
02282315ECD7.D	Data Locked	richardl, 01-Mar-2023 12:23
02282316ECD7.D	Data Locked	richardl, 01-Mar-2023 12:23
02282317ECD7.D	Data Locked	richardl, 01-Mar-2023 12:23
02282318ECD7.D	Data Locked	richardl, 01-Mar-2023 12:23
02282319ECD7.D	Data Locked	richardl, 01-Mar-2023 12:23
02282320ECD7.D	Data Locked	richardl, 01-Mar-2023 12:23
02282321ECD7.D	Data Locked	richardl, 01-Mar-2023 12:23
02282322ECD7.D	Data Locked	richardl, 01-Mar-2023 12:23
02282323ECD7.D	Data Locked	richardl, 01-Mar-2023 12:23
02282324ECD7.D	Data Locked	richardl, 01-Mar-2023 12:23
02282325ECD7.D	Data Locked	richardl, 01-Mar-2023 12:23
02282326ECD7.D	Data Locked	richardl, 01-Mar-2023 12:23
02282327ECD7.D	Data Locked	richardl, 01-Mar-2023 12:23
02282328ECD7.D	Data Locked	richardl, 01-Mar-2023 12:23
02282329ECD7.D	Data Locked	richardl, 01-Mar-2023 12:23
02282330ECD7.D	Data Locked	richardl, 01-Mar-2023 12:23
02282331ECD7.D	Data Locked	richardl, 01-Mar-2023 12:23
02282332ECD7.D	Data Locked	richardl, 01-Mar-2023 12:23
02282333ECD7.D	Data Locked	richardl, 01-Mar-2023 12:23
02282334ECD7.D	Data Locked	richardl, 01-Mar-2023 12:23
02282335ECD7.D	Data Locked	richardl, 01-Mar-2023 12:23
02282336ECD7.D	Data Locked	richardl, 01-Mar-2023 12:23
02282337ECD7.D	Data Locked	richardl, 01-Mar-2023 12:23
02282338ECD7.D	Data Locked	richardl, 01-Mar-2023 12:23
02282339ECD7.D	Data Locked	richardl, 01-Mar-2023 12:23
02282340ECD7.D	Data Locked	richardl, 01-Mar-2023 12:23
02282341ECD7.D	Data Locked	richardl, 01-Mar-2023 12:23
02282342ECD7.D	Data Locked	richardl, 01-Mar-2023 12:23
02282343ECD7.D	Data Locked	richardl, 01-Mar-2023 12:23
02282344ECD7.D	Data Locked	richardl, 01-Mar-2023 12:23
02282345ECD7.D	Data Locked	richardl, 01-Mar-2023 12:23

02282346ECD7.D	Data Locked	richardl, 01-Mar-2023 12:23
02282347ECD7.D	Data Locked	richardl, 01-Mar-2023 12:23
02282348ECD7.D	Data Locked	richardl, 01-Mar-2023 12:23
02282349ECD7.D	Data Locked	richardl, 01-Mar-2023 12:23

SURROGATE RECOVERY AND RT SUMMARY
EPA 8082A

Laboratory: Analytical Resources, LLC
SDG/WO: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLB0342
Instrument: ECD7
Calibration: GB00069
Calibration Date: 02/24/2023

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SLB0342-SCV1 (Water)			Lab File ID: 02242313ECD7.D			Analyzed: 02/24/23 15:03		
Decachlorobiphenyl	40.000	85.8	80 - 120	13.894	13.89483	-0.0008	N/A	
Tetrachlorometaxylene	40.000	87.4	80 - 120	5.807	5.8095	-0.0025	N/A	
Decachlorobiphenyl [2C]	40.000	93.4	80 - 120	14.119	14.11917	-0.0002	N/A	
Tetrachlorometaxylene [2C]	40.000	89.4	80 - 120	5.685	5.687167	-0.0022	N/A	
SLB0342-SCV2 (Water)			Lab File ID: 02242314ECD7.D			Analyzed: 02/24/23 15:24		
Decachlorobiphenyl	40.000	92.5	80 - 120	13.895	13.89483	0.0002	N/A	
Tetrachlorometaxylene	40.000	84.1	80 - 120	5.808	5.8095	-0.0015	N/A	
Decachlorobiphenyl [2C]	40.000	101	80 - 120	14.12	14.11917	0.0008	N/A	
Tetrachlorometaxylene [2C]	40.000	86.3	80 - 120	5.686	5.687167	-0.0012	N/A	
SLB0342-SCV3 (Water)			Lab File ID: 02242315ECD7.D			Analyzed: 02/24/23 15:45		
Decachlorobiphenyl	40.000	82.8	80 - 120	13.893	13.89483	-0.0018	N/A	
Tetrachlorometaxylene	40.000	87.2	80 - 120	5.808	5.8095	-0.0015	N/A	
Decachlorobiphenyl [2C]	40.000	90.8	80 - 120	14.118	14.11917	-0.0012	N/A	
Tetrachlorometaxylene [2C]	40.000	91.0	80 - 120	5.687	5.687167	-0.0002	N/A	
SLB0342-SCV4 (Water)			Lab File ID: 02242316ECD7.D			Analyzed: 02/24/23 16:06		
Decachlorobiphenyl	40.000	86.6	80 - 120	13.894	13.89483	-0.0008	N/A	
Tetrachlorometaxylene	40.000	90.3	80 - 120	5.806	5.8095	-0.0035	N/A	
Decachlorobiphenyl [2C]	40.000	94.8	80 - 120	14.119	14.11917	-0.0002	N/A	
Tetrachlorometaxylene [2C]	40.000	92.7	80 - 120	5.685	5.687167	-0.0022	N/A	
SLB0342-SCV5 (Water)			Lab File ID: 02242317ECD7.D			Analyzed: 02/24/23 16:27		
Decachlorobiphenyl	40.000	86.1	80 - 120	13.894	13.89483	-0.0008	N/A	
Tetrachlorometaxylene	40.000	90.0	80 - 120	5.806	5.8095	-0.0035	N/A	
Decachlorobiphenyl [2C]	40.000	94.6	80 - 120	14.119	14.11917	-0.0002	N/A	
Tetrachlorometaxylene [2C]	40.000	91.6	80 - 120	5.685	5.687167	-0.0022	N/A	
SLB0342-SCV6 (Water)			Lab File ID: 02242318ECD7.D			Analyzed: 02/24/23 16:48		
Decachlorobiphenyl	40.000	128	80 - 120	13.893	13.89483	-0.0018	N/A	
Tetrachlorometaxylene	40.000	92.7	80 - 120	5.806	5.8095	-0.0035	N/A	
Decachlorobiphenyl [2C]	40.000	141	80 - 120	14.118	14.11917	-0.0012	N/A	
Tetrachlorometaxylene [2C]	40.000	95.4	80 - 120	5.685	5.687167	-0.0022	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8082A

Laboratory: Analytical Resources, LLC
SDG/WO: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLC0014
Instrument: ECD7
Calibration: GB00069
Calibration Date: 02/24/2023

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SLC0014-ICV1 (Solid)			Lab File ID: 02282310ECD7.D			Analyzed: 02/28/23 19:04		
Decachlorobiphenyl	40.000	93.5	80 - 120	13.894	13.89483	-0.0008	N/A	
Tetrachlorometaxylene	40.000	100	80 - 120	5.809	5.8095	-0.0005	N/A	
Decachlorobiphenyl [2C]	40.000	104	80 - 120	14.119	14.11917	-0.0002	N/A	
Tetrachlorometaxylene [2C]	40.000	101	80 - 120	5.688	5.687167	0.0008	N/A	
SLC0014-ICV2 (Solid)			Lab File ID: 02282311ECD7.D			Analyzed: 02/28/23 19:25		
Decachlorobiphenyl	40.000	101	80 - 120	13.892	13.89483	-0.0028	N/A	
Tetrachlorometaxylene	40.000	105	80 - 120	5.807	5.8095	-0.0025	N/A	
Decachlorobiphenyl [2C]	40.000	101	80 - 120	14.118	14.11917	-0.0012	N/A	
Tetrachlorometaxylene [2C]	40.000	106	80 - 120	5.686	5.687167	-0.0012	N/A	
SLC0014-CCV1 (Solid)			Lab File ID: 02282313ECD7.D			Analyzed: 02/28/23 20:07		
Decachlorobiphenyl	40.000	91.5	80 - 120	13.894	13.89483	-0.0008	N/A	
Tetrachlorometaxylene	40.000	94.5	80 - 120	5.808	5.8095	-0.0015	N/A	
Decachlorobiphenyl [2C]	40.000	100	80 - 120	14.118	14.11917	-0.0012	N/A	
Tetrachlorometaxylene [2C]	40.000	96.3	80 - 120	5.686	5.687167	-0.0012	N/A	
SLC0014-CCV2 (Solid)			Lab File ID: 02282314ECD7.D			Analyzed: 02/28/23 20:28		
Decachlorobiphenyl	40.000	100	80 - 120	13.893	13.89483	-0.0018	N/A	
Tetrachlorometaxylene	40.000	102	80 - 120	5.808	5.8095	-0.0015	N/A	
Decachlorobiphenyl [2C]	40.000	102	80 - 120	14.118	14.11917	-0.0012	N/A	
Tetrachlorometaxylene [2C]	40.000	103	80 - 120	5.687	5.687167	-0.0002	N/A	
BLB0391-BLK1 (Solid)			Lab File ID: 02282315ECD7.D			Analyzed: 02/28/23 20:49		
Decachlorobiphenyl	8.0000	80.1	40 - 126	13.893	13.89483	-0.0018	N/A	
Tetrachlorometaxylene	8.0000	67.9	44 - 120	5.807	5.8095	-0.0025	N/A	
Decachlorobiphenyl [2C]	8.0000	83.8	40 - 126	14.117	14.11917	-0.0022	N/A	
Tetrachlorometaxylene [2C]	8.0000	69.0	44 - 120	5.686	5.687167	-0.0012	N/A	
BLB0391-BS1 (Solid)			Lab File ID: 02282316ECD7.D			Analyzed: 02/28/23 21:10		
Decachlorobiphenyl	8.0000	82.0	40 - 126	13.891	13.89483	-0.0038	N/A	
Tetrachlorometaxylene	8.0000	80.0	44 - 120	5.808	5.8095	-0.0015	N/A	
Decachlorobiphenyl [2C]	8.0000	96.1	40 - 126	14.117	14.11917	-0.0022	N/A	
Tetrachlorometaxylene [2C]	8.0000	77.1	44 - 120	5.686	5.687167	-0.0012	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG/WO:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0014	Instrument:	ECD7
Calibration:	GB00069	Calibration Date:	02/24/2023

Surrogate Compound	Spike Level ug/kg wet	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
BLB0391-BSD1 (Solid)			Lab File ID: 02282317ECD7.D			Analyzed: 02/28/23 21:31		
Decachlorobiphenyl	8.0000	89.7	40 - 126	13.892	13.89483	-0.0028	N/A	
Tetrachlorometaxylene	8.0000	83.3	44 - 120	5.807	5.8095	-0.0025	N/A	
Decachlorobiphenyl [2C]	8.0000	97.2	40 - 126	14.117	14.11917	-0.0022	N/A	
Tetrachlorometaxylene [2C]	8.0000	81.6	44 - 120	5.686	5.687167	-0.0012	N/A	
BLB0391-SRM1 (Solid)			Lab File ID: 02282318ECD7.D			Analyzed: 02/28/23 21:53		
Decachlorobiphenyl	40.000	87.0	40 - 126	13.888	13.89483	-0.0068	N/A	
Tetrachlorometaxylene	40.000	65.7	44 - 120	5.805	5.8095	-0.0045	N/A	
Decachlorobiphenyl [2C]	40.000	89.3	40 - 126	14.114	14.11917	-0.0052	N/A	
Tetrachlorometaxylene [2C]	40.000	70.4	44 - 120	5.684	5.687167	-0.0032	N/A	
23B0276-01 (Solid)			Lab File ID: 02282330ECD7.D			Analyzed: 03/01/23 02:05		
Decachlorobiphenyl	7.9574	99.7	40 - 126	13.885	13.89483	-0.0098	N/A	
Tetrachlorometaxylene	7.9574	69.0	44 - 120	5.803	5.8095	-0.0065	N/A	
Decachlorobiphenyl [2C]	7.9574	95.8	40 - 126	14.112	14.11917	-0.0072	N/A	
Tetrachlorometaxylene [2C]	7.9574	78.4	44 - 120	5.683	5.687167	-0.0042	N/A	
SLC0014-CCV3 (Solid)			Lab File ID: 02282331ECD7.D			Analyzed: 03/01/23 02:26		
Decachlorobiphenyl	40.000	99.5	80 - 120	13.892	13.89483	-0.0028	N/A	
Tetrachlorometaxylene	40.000	112	80 - 120	5.806	5.8095	-0.0035	N/A	
Decachlorobiphenyl [2C]	40.000	105	80 - 120	14.118	14.11917	-0.0012	N/A	
Tetrachlorometaxylene [2C]	40.000	117	80 - 120	5.686	5.687167	-0.0012	N/A	
SLC0014-CCV4 (Solid)			Lab File ID: 02282332ECD7.D			Analyzed: 03/01/23 02:47		
Decachlorobiphenyl	40.000	113	80 - 120	13.892	13.89483	-0.0028	N/A	
Tetrachlorometaxylene	40.000	99.3	80 - 120	5.806	5.8095	-0.0035	N/A	
Decachlorobiphenyl [2C]	40.000	110	80 - 120	14.118	14.11917	-0.0012	N/A	
Tetrachlorometaxylene [2C]	40.000	105	80 - 120	5.686	5.687167	-0.0012	N/A	
SLC0014-CCV5 (Solid)			Lab File ID: 02282348ECD7.D			Analyzed: 03/01/23 08:24		
Decachlorobiphenyl	40.000	96.0	80 - 120	13.892	13.89483	-0.0028	N/A	
Tetrachlorometaxylene	40.000	93.8	80 - 120	5.807	5.8095	-0.0025	N/A	
Decachlorobiphenyl [2C]	40.000	107	80 - 120	14.118	14.11917	-0.0012	N/A	
Tetrachlorometaxylene [2C]	40.000	98.8	80 - 120	5.686	5.687167	-0.0012	N/A	

SURROGATE RECOVERY AND RT SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG/WO:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0014	Instrument:	ECD7
Calibration:	GB00069	Calibration Date:	02/24/2023

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SLC0014-CCV6 (Solid)			Lab File ID: 02282349ECD7.D				Analyzed: 03/01/23 08:45	
Decachlorobiphenyl	40.000	96.8	80 - 120	13.893	13.89483	-0.0018	N/A	
Tetrachlorometaxylene	40.000	100	80 - 120	5.807	5.8095	-0.0025	N/A	
Decachlorobiphenyl [2C]	40.000	107	80 - 120	14.119	14.11917	-0.0002	N/A	
Tetrachlorometaxylene [2C]	40.000	105	80 - 120	5.687	5.687167	-0.0002	N/A	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0342	Instrument:	ECD7
		Calibration:	GB00069

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Secondary Cal Check (SLB0342-SCV1)		(Water)	Lab File ID: 02242313ECD7.D				Analyzed: 02/24/23 15:03		
1-Bromo-2-Nitrobenzene	645975	3.489	673778	3.493	96	50 - 200	-0.004	+/-0.50	
Hexabromobiphenyl	1524245	14.268	1429847	14.268	107	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	316115	3.927	315256	3.928	100	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	556950	15.007	513946	15.008	108	50 - 200	-0.001	+/-0.50	
Secondary Cal Check (SLB0342-SCV2)		(Water)	Lab File ID: 02242314ECD7.D				Analyzed: 02/24/23 15:24		
1-Bromo-2-Nitrobenzene	705650	3.493	673778	3.493	105	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	1555683	14.267	1429847	14.268	109	50 - 200	-0.001	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	340433	3.929	315256	3.928	108	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl [2C]	565609	15.008	513946	15.008	110	50 - 200	0.000	+/-0.50	
Secondary Cal Check (SLB0342-SCV3)		(Water)	Lab File ID: 02242315ECD7.D				Analyzed: 02/24/23 15:45		
1-Bromo-2-Nitrobenzene	646554	3.49	673778	3.493	96	50 - 200	-0.003	+/-0.50	
Hexabromobiphenyl	1529451	14.268	1429847	14.268	107	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	316066	3.928	315256	3.928	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	557213	15.008	513946	15.008	108	50 - 200	0.000	+/-0.50	
Secondary Cal Check (SLB0342-SCV4)		(Water)	Lab File ID: 02242316ECD7.D				Analyzed: 02/24/23 16:06		
1-Bromo-2-Nitrobenzene	656887	3.488	673778	3.493	97	50 - 200	-0.005	+/-0.50	
Hexabromobiphenyl	1585505	14.267	1429847	14.268	111	50 - 200	-0.001	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	320936	3.925	315256	3.928	102	50 - 200	-0.003	+/-0.50	
Hexabromobiphenyl [2C]	570006	15.007	513946	15.008	111	50 - 200	-0.001	+/-0.50	
Secondary Cal Check (SLB0342-SCV5)		(Water)	Lab File ID: 02242317ECD7.D				Analyzed: 02/24/23 16:27		
1-Bromo-2-Nitrobenzene	661953	3.489	673778	3.493	98	50 - 200	-0.004	+/-0.50	
Hexabromobiphenyl	1574993	14.268	1429847	14.268	110	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	317807	3.926	315256	3.928	101	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl [2C]	565951	15.007	513946	15.008	110	50 - 200	-0.001	+/-0.50	
Secondary Cal Check (SLB0342-SCV6)		(Water)	Lab File ID: 02242318ECD7.D				Analyzed: 02/24/23 16:48		
1-Bromo-2-Nitrobenzene	656592	3.489	673778	3.493	97	50 - 200	-0.004	+/-0.50	
Hexabromobiphenyl	1584453	14.268	1429847	14.268	111	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	314741	3.926	315256	3.928	100	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl [2C]	568346	15.007	513946	15.008	111	50 - 200	-0.001	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0014	Instrument:	ECD7
		Calibration:	GB00069

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (SLC0014-ICV1)		(Solid)	Lab File ID: 02282310ECD7.D				Analyzed: 02/28/23 19:04		
1-Bromo-2-Nitrobenzene	747385	3.492	747385	3.492	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	1654369	14.268	1654369	14.268	100	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	301252	3.928	301252	3.928	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	466597	15.008	466597	15.008	100	50 - 200	0.000	+/-0.50	
Initial Cal Check (SLC0014-ICV2)		(Solid)	Lab File ID: 02282311ECD7.D				Analyzed: 02/28/23 19:25		
1-Bromo-2-Nitrobenzene	751182	3.491	751182	3.491	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	1576447	14.266	1576447	14.266	100	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	306016	3.927	306016	3.927	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	465422	15.006	465422	15.006	100	50 - 200	0.000	+/-0.50	
Blank (BLB0391-BLK1)		(Solid)	Lab File ID: 02282315ECD7.D				Analyzed: 02/28/23 20:49		
1-Bromo-2-Nitrobenzene	811031	3.49	751182	3.491	108	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	1699761	14.265	1576447	14.266	108	50 - 200	-0.001	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	336382	3.928	306016	3.927	110	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl [2C]	507633	15.005	465422	15.006	109	50 - 200	-0.001	+/-0.50	
LCS (BLB0391-BS1)		(Solid)	Lab File ID: 02282316ECD7.D				Analyzed: 02/28/23 21:10		
1-Bromo-2-Nitrobenzene	830219	3.491	751182	3.491	111	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	1880213	14.273	1576447	14.266	119	50 - 200	0.007	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	344030	3.928	306016	3.927	112	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl [2C]	529461	15.005	465422	15.006	114	50 - 200	-0.001	+/-0.50	
LCS Dup (BLB0391-BSD1)		(Solid)	Lab File ID: 02282317ECD7.D				Analyzed: 02/28/23 21:31		
1-Bromo-2-Nitrobenzene	793505	3.491	751182	3.491	106	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	1676867	14.267	1576447	14.266	106	50 - 200	0.001	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	326035	3.927	306016	3.927	107	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	510092	15.004	465422	15.006	110	50 - 200	-0.002	+/-0.50	
Reference (BLB0391-SRM1)		(Solid)	Lab File ID: 02282318ECD7.D				Analyzed: 02/28/23 21:53		
1-Bromo-2-Nitrobenzene	857849	3.489	751182	3.491	114	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl	1407985	14.258	1576447	14.266	89	50 - 200	-0.008	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	341454	3.927	306016	3.927	112	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	496203	14.999	465422	15.006	107	50 - 200	-0.007	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLC0014
Instrument: ECD7
Calibration: GB00069

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LDW23-SC1150B (23B0276-01)		(Solid)	Lab File ID: 02282330ECD7.D					Analyzed: 03/01/23 02:05	
1-Bromo-2-Nitrobenzene	809185	3.489	751182	3.491	108	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl	793360	14.252	1576447	14.266	50	50 - 200	-0.014	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	335652	3.927	306016	3.927	110	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	347801	14.998	465422	15.006	75	50 - 200	-0.008	+/-0.50	

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	23B0276
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	23B0276-01	File ID:	02282330ECD7.D
Sampled:	12/14/22 09:03	Prepared:	02/15/23 16:55	Analyzed:	03/01/23 02:05
Solids:	63.63	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BLB0391	Sequence:	SLC0014		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	* 1	8.394	8.405	0.011	41105.25	44.3	8.7
	2	8.299	8.307	0.008	12151.5	40.6	
Aroclor 1254	1	9.286	9.298	0.012	57016	48.2	25.2
	* 2	9.438	9.449	0.011	34155	62.1	
Aroclor 1260	1	11.033	11.04467	0.0117	40749.2	63.4	11.2
	* 2	11.644	11.6535	0.0095	26929.5	56.7	

* Column used for quantitation

HOLDING TIME SUMMARY

Analysis: EPA 8082A

Laboratory: Analytical Resources, LLC SDG: 23B0276

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

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
LDW23-SC1150B 23B0276-01	12/14/22 09:03	12/14/22 16:47	02/15/23 16:55	63	365	03/01/23 02:05	13	40	

* Indicates hold time exceedance.

METHOD DETECTION AND REPORTING LIMITS

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Instrument: ECD7

Analyte	MDL	RL	Units
Aroclor 1016	1.6	4.0	ug/kg
Aroclor 1016 [2C]	1.6	4.0	ug/kg
Aroclor 1221	1.6	4.0	ug/kg
Aroclor 1221 [2C]	1.6	4.0	ug/kg
Aroclor 1232	1.6	4.0	ug/kg
Aroclor 1232 [2C]	1.6	4.0	ug/kg
Aroclor 1242	1.6	4.0	ug/kg
Aroclor 1242 [2C]	1.6	4.0	ug/kg
Aroclor 1248	1.6	4.0	ug/kg
Aroclor 1248 [2C]	1.6	4.0	ug/kg
Aroclor 1254	1.6	4.0	ug/kg
Aroclor 1254 [2C]	1.6	4.0	ug/kg
Aroclor 1260	0.6	4.0	ug/kg
Aroclor 1260 [2C]	0.6	4.0	ug/kg
Aroclor 1262	0.6	4.0	ug/kg
Aroclor 1262 [2C]	0.6	4.0	ug/kg
Aroclor 1268	0.6	4.0	ug/kg
Aroclor 1268 [2C]	0.6	4.0	ug/kg

125 Market Street
New Haven, CT 06513
USA

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Fax (203)786-5287
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CERTIFICATE OF ANALYSIS

Catalog No: S-279N
Description: Tetrachloro-m-xylene
Lot: 0052481B-1
Solvent: N/A
Hazards: *Refer to SDS for complete safety information*

Signal Word: Warning

Date Certified: Jul 28, 2005
Expiration: Jul 28, 2015
Sample Size: 100 mg
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

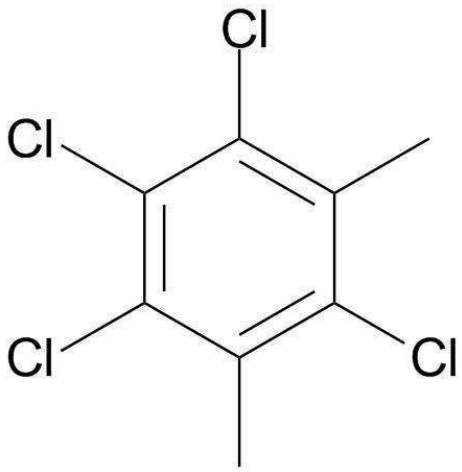
ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

Component	CAS #	Purity % (GC/FID)	Prepared Concentration	Certified Analyte Concentration[1]
Tetrachloro-meta-xylene	877-09-8	96.0	N/A	N/A

Identification:

Molecular formula: C8H6Cl4
Molecular weight: 243.94



C000147
tetrachlormetaxylene
Expires 1/15/2020
Prepared By Joshua Rains 1/15/2014

This Certified Reference Material was verified in accordance with ISO/IEC 17025

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] The Uncertainty calculated for this product is ±2.4%. These values are the expanded uncertainty and represent an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Metrological traceability is established through in-house validated methods.

Purity, if stated, is equal to 100% minus found impurity components. Impurity components have not been identified.

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015

QR-ORG/INO-001
Rev. 5/18

AccuStandard
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New Haven, CT 06513
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CERTIFICATE OF PRODUCT DATA

PRODUCT: C-209N
DESCRIPTION: 2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl
LOT #: 990521LB-AC
SOLVENT: N/A

EXPIRATION: Jul 28, 2015

This product is guaranteed accurate to ±0.5% of the Certified Analyte concentration through the Expiration Date on the Label.

Component	CAS #	Purity % (GC/MS)	Prepared Concentration[1]	Certified Analyte Concentration[2]
2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl	2051-24-3	100	N/A	N/A

C000148
decachlorbiphenyl
Expires 1/15/2020
Prepared By Joshua Rains 1/15/2014

* I1768A

Certified by: R. Cooper

1. All weights are traceable through National Institute of Standards & Technology, Test No. 822/254480
2. Certified Analyte Concentration = Purity x Prepared Concentration. The Uncertainty calculated for this product is ±4% which is the Combined Uncertainty uc(y). It represents an estimated standard deviation equal to the positive square root of the total variance of the uncertainty of components. The Expanded Uncertainty is U which is Uc(y) *K where K is the coverage factor at the 95% confidence level (K=2).
3. A product with a suffix (-1A, -2B, etc.) on its lot# has had its expiration date extended and is identical to the same lot# without the suffix.

Please note: AccuStandard follows the U.S. conventions in reporting numerical values, on both certificates and labels.

A comma (,) is used to separate units of one-thousand or greater.
A period (.) is used as a decimal place marker.

This product was manufactured in accordance to quality system requirements of ISO 9001:2000 and ISO 17025

* Recertified 2 4-6-09 JS

Analytical Standard Record

Standard ID: C000148 **Printed: 4/23/2015 11:54:44AM**

Description:	decachlorbiphenyl	Expires:	15-Jan-2020
Standard Type:	Other	Prepared:	15-Jan-2014
Solvent:	na/a	Prepared By:	Joshua Rains
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	27-Feb-2015 13:03 by JGR
Vendor:	Accustandard	Lot #:	990521lb-ac
Vendor Catalog #:			

Comments

see i1768a
SOM calibrations added 06/12/14 sdrd

Analyte	CAS Number	Concentration	Units
Decachlorobiphenyl [2C]	2051-24-3	1000000	ug/mL
Decachlorobiphenyl	2051-24-3	1000000	ug/mL
DCB 1660 [2C]	2051-24-3	1000000	ug/mL
DCB 1660	2051-24-3	1000000	ug/mL
DCB [2C]	2051-24-3	1000000	ug/mL
DCB (A) [2C]	2051-24-3	1000000	ug/mL
DCB (A)	2051-24-3	1000000	ug/mL
DCB	2051-24-3	1000000	ug/mL

Reviewed By Date

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Certified Reference Material

This product is included in Phenova's ISO/IEC 17025 and ISO Guide 34 Scopes of Accreditation

Catalog No.: AL0-101461
Description: Aroclor 1254
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Hexane

Lot Number: CL13053
Certification Date: November 29, 2018
Expiration Date: November 30, 2026

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1254	11097-69-1	1000	± 0.246%

I09808
Recd. JP
02/24/20

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Phenova's testing and calibration results are internationally recognized through the ILAC MRA. Phenova is an accredited ISO Guide 34 Reference Material Provider and ISO/IEC 17025 accredited Chemical Testing Laboratory.

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Chemical Testing Laboratory
Certificate No. 2427.03

IL111110613_us

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Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101468
Description: Aroclor 1221
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Isooctane

Lot Number: CL14017
Certification Date: August 20, 2019
Expiration Date: August 31, 2027

Andrea L Gill
Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1221	11104-28-2	1000	± 0.553%

J004466
Rec'd
06/18/21

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Certicate No. 2427.02

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1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO 17034[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
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[4] ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

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Certified Reference Material

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Catalog No.: AL0-101469
Description: Aroclor 1232
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Isooctane

Lot Number: CL14914
Certification Date: January 31, 2020
Expiration Date: January 31, 2028

Andrea L Gill
Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1232	11141-16-5	1000	± 0.738%

J006467 JR
read
06/18/21

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3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

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Certified Reference Material

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Catalog No.:	AL0-101470	**Lot Number:**	CL14018
Description:	Aroclor 1242	**Certification Date:**	August 20, 2019
Storage:	4 °C	**Expiration Date:**	August 31, 2027
Provided As:	1 mL in 2 mL Ampoule in Isooctane		

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1242	53469-21-9	1000	± 0.553%

J006468
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06/18/21

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3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

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5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

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Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.:	AL0-101471	**Lot Number:**	CL15384
Description:	Aroclor 1248	**Certification Date:**	June 19, 2020
Storage:	4 °C	**Expiration Date:**	June 30, 2028
Provided As:	1 mL in 2 mL Ampoule in Isooctane		

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1248	12672-29-6	1000	± 0.520%

JJ06469
Reed, JR
06/18/21

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Certicate No. 2427.02

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1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO 17034[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
[3] ISO 17034 – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

Certificate of Analysis

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411 Madrid Ave., Torrance, CA 90501 USA ▪ Tel: 310-212-0555 ▪ Fax: 310-328-7768 ▪ info@phenomenex.com
Access your MSDS and digital C of A at www.phenomenex.com/mysupport. Re-order at www.phenomenex.com/standards

Certified Reference Material

This product is included in Phenova's ISO/IEC 17025 and ISO Guide 34 Scopes of Accreditation

Catalog No.: AL0-101474
Description: Aroclor 1262
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Isooctane

Lot Number: CL11330
Certification Date: May 15, 2015
Expiration Date: April 30, 2023
Revision Date: April 2, 2018

Andrea L Gill
Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1262	37324-23-5	1000	± 0.516%

J 00647
Read JR
06/18/21

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Reference Material Producer
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phenova® Certified Reference Materials
Manufactured by Phenova, Inc.
Phenova's testing and calibration results are internationally recognized through the ILAC MRA. Phenova is an accredited ISO Guide 34 Reference Material Provider and ISO/IEC 17025 accredited Chemical Testing Laboratory.

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Chemical Testing Laboratory
Certificate No. 2427.03

IL111110613_us

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1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO Guide 34[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in the calibration and calibration verification of chromatographic instrumentation performed in routine laboratory analysis.

4. Instruction: Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all certified analytes in the mixture.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Material Safety Data Sheet (MSDS) is available at www.phenomenex.com/mysupport.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO Guide 34. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO Guide 34.

12. Period of Validity: The Certified Values and their uncertainties are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31:2000(E) – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35:2006(E) – Reference Material – General and Statistical Principles for Certification.
[3] ISO Guide 34:2009(E) – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025:2005(E) – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

Certificate of Analysis

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Access your MSDS and digital C of A at **www.phenomenex.com/mysupport. Re-order at www.phenomenex.com/standards**

Certified Reference Material

This product is included in Phenova's ISO/IEC 17025 and ISO Guide 34 Scopes of Accreditation

Catalog No.:	AL0-101475	**Lot Number:**	CL11331
Description:	Aroclor 1268	**Certification Date:**	May 15, 2015
Storage:	4 °C	**Expiration Date:**	April 30, 2023
Provided As:	1 mL in 2 mL Ampoule in Isooctane	**Revision Date:**	April 2, 2018

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1268	11100-14-4	1000	± 0.516%

J006472
Rec'd
06/18/21

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Phenova's testing and calibration results are internationally recognized through the ILAC MRA. Phenova is an accredited ISO Guide 34 Reference Material Provider and ISO/IEC 17025 accredited Chemical Testing Laboratory.

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Chemical Testing Laboratory
Certificate No. 2427.03

IL11110613_us

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1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO Guide 34[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in the calibration and calibration verification of chromatographic instrumentation performed in routine laboratory analysis.

4. Instruction: Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all certified analytes in the mixture.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Material Safety Data Sheet (MSDS) is available at www.phenomenex.com/mysupport.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO Guide 34. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO Guide 34.

12. Period of Validity: The Certified Values and their uncertainties are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31:2000(E) – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35:2006(E) – Reference Material – General and Statistical Principles for Certification.
[3] ISO Guide 34:2009(E) – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025:2005(E) – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

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Reference Material Producer
Certificate No. 2427.02

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Phenova's testing and calibration results are internationally recognized through the ILAC MRA. Phenova is an accredited ISO Guide 34 Reference Material Provider and ISO/IEC 17025 accredited Chemical Testing Laboratory.

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Certificate No. 2427.03

Certificate of Analysis

Agilent

Aroclor 1016 Solution

Product Number: PP-282 **Page:** 1 of 1

Lot Number: CR-0761 **Lot Issue Date:** 28-Feb-2017 **Expiration Date:** 31-Mar-2025

This ISO Guide 34 Reference Material (RM) was manufactured and verified in accordance with ULTRA's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
Aroclor 1016	012674-11-2	NT01016	100.2 ± 0.5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage: Store at Room Temperature (15° to 30°C).

K1254 JR
Reed
02/05/22

ULTRA uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

John Russo
President

Monica Bourgeois
Director of QA/RA

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY

ISO 9001
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Certificate of Analysis

Product Name: Aroclor 1260 Standard

Product Number: PP-362-1 **Lot Issue Date:** 20-Jan-2021

Lot Number: 0006582048 **Expiration Date:** 28-Feb-2025

Description:
This analytical reference material (RM) was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	Concentration ± Uncertainty
Aroclor 1260	011096-82-5	NT01023	100.4 ± 0.5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage Conditions: Store at Room Temperature (15° to 30°C).

K 1255

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This RM was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Intended Use:
This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Hazards:
Refer to the Safety Data Sheet on www.agilent.com for information regarding this RM.

Expiration of Certification:
The certification of this RM is valid until the expiration date specified above, provided the RM is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the RM is damaged, contaminated, or otherwise modified.

Maintenance of Certification:
If substantive changes are noted that affect the certification before the expiration of this certificate, Agilent will notify the purchaser.

Sample lot approver:

MJBourgeois

Monica Bourgeois
QMS Representative

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

ISO 17034 Cert
No. AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026

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Certificate of Analysis
ISO Guide 34

Aroclor 1242 Solution

Product Number: PP-312 **Page:** 1 of 1

Lot Number: CS-6293 **Lot Issue Date:** 04-Jan-2019 **Expiration Date:** 31-Jan-2023

This ISO Guide 34 Reference Material (RM) was manufactured and verified in accordance with Agilent's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
Aroclor 1242	053469-21-9	NT01020	100.4 ± 0.5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage: Store at Room Temperature (15° to 30°C).

K1256

Agilent uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

M Bourgeois

Monica Bourgeois
QMS Representative

ANAB ACCREDITED ISO GUIDE 34 REFERENCE MATERIAL PRODUCER
ISO Guide 34 Cert No.
AR-1936

Produced in accordance with TUV USA Inc 56 100 18560026
registered ISO 9001 Quality Management System

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY
ISO17025 Cert No.
AT-1937

ISO 17034

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Reference Material Certificate

Product Name:	Aroclor 1248 Standard	**Lot Number:**	0006626997
Product Number:	PP-342-1	**Lot Issue Date:**	17-Aug-2021
Storage Conditions:	Store at Room Temperature (15° to 30°C).	**Expiration Date:**	30-Sep-2025

	CERTIFIED VALUES				
Component Name	Concentration		Expanded Uncertainty	CAS#	Analyte Lot
Aroclor 1248	100.3	±	0.5 µg/mL	012672-29-6	NT01582

Matrix: isooctane (2,2,4-trimethylpentane)

K1257

Description:
This document is prepared in accordance with ISO 17034 and Guide 31. This analytical reference material standard was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed above.

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This analytical reference standard was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Safety:
Refer to the Safety Data Sheet on www.agilent.com for information regarding this analytical reference material.

Intended Use:
This analytical reference standard is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Expiration of Certification:
The certification of this analytical reference standard is valid until the expiration date specified above, provided the material is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the material is damaged, contaminated, or otherwise modified.

Certificate of Analysis

Agilent

Aroclor 1254 Solution

Product Number: PP-352 **Page:** 1 of 1

Lot Number: CS-2321 **Lot Issue Date:** 04-May-2018 **Expiration Date:** 31-May-2026

This ISO Guide 34 Reference Material (RM) was manufactured and verified in accordance with ULTRA's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
Aroclor 1254	011097-69-1	RM00922	100.4 ± 0.5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage: Store at Room Temperature (15° to 30°C).

K1258

ULTRA uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

John Russo
President

Monica Bourgeois
Director of QA/RA

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY

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Certificate of Analysis

Product Name: Aroclor 1221 Standard

Product Number: PP-292-1 **Lot Issue Date:** 28-Apr-2020

Lot Number: 0006535333 **Expiration Date:** 31-May-2024

Description:

This analytical reference material (RM) was manufactured and verified in accordance with an ISO 9001 registered quality system, and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	Concentration ± Uncertainty
Aroclor 1221	011104-28-2	RM04278	100.2 ± 0.5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage Conditions: Store at Room Temperature (15° to 30°C).

K1259

Traceability:

The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:

This RM was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Intended Use:

This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Instructions for Use:

Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Hazards:

Refer to the Safety Data Sheet on www.agilent.com for information regarding this RM.

Expiration of Certification:

The certification of this RM is valid until the expiration date specified above, provided the RM is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the RM is damaged, contaminated, or otherwise modified.

Maintenance of Certification:

If substantive changes are noted that affect the certification before the expiration of this certificate, Agilent will notify the purchaser.

Sample lot approver:

MBourgeois

Monica Bourgeois
QMS Representative

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

ISO 17034 Cert No. AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026

www.agilent.com/quality/
CSD-QA-015.1

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY

ISO 17025 Cert No. AT-1937

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Agilent

Certificate of Analysis
ISO 17034

Aroclor 1262 Standard

Product Number: PP-372-1 **Page:** 1 of 1

Lot Number: 0006499800 **Lot Issue Date:** 04-Nov-2019 **Expiration Date:** 30-Nov-2023

This ISO 17034 Reference Material (RM) was manufactured and verified in accordance with Agilent Technologies ISO 9001 registered quality system. A review of the gravimetric preparation data by our ISO 17025 accredited laboratory serves to verify the concentration of each analyte. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
Aroclor 1262	037324-23-5	RM14263	100.0 ± 0.5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage: Store at Room Temperature (15° to 30°C).

K1260

Agilent uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

Monica Bourgeois
QMS Representative

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER
ISO 17034 Cert No. AR-1936

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ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY
ISO 17025 Cert No. AT-1937

Agilent

Certificate of Analysis
ISO 17034

Aroclor 1232 Standard

Product Number: PP-302-1 **Page:** 1 of 1

Lot Number: CF-2197A **Lot Issue Date:** 05-Jul-2016 **Expiration Date:** 31-Aug-2023

This ISO 17034 Reference Material (RM) was manufactured and verified in accordance with Agilent's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
Aroclor 1232	011141-16-5	NT01717	100.4 ± 0.5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage: Store at Room Temperature (15° to 30°C).

K1261

Agilent uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

M Bourgeois

Monica Bourgeois
QMS Representative

ANAB ACCREDITED ISO GUIDE 34 REFERENCE MATERIAL PRODUCER
ISO 17034 Cert No. AR-1936

Produced in accordance with TUV USA Inc 56 100 18560026 registered ISO 9001 Quality Management System

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY
ISO17025 Cert No. AT-1937

Agilent

Certificate of Analysis

Product Name: Aroclor 1268 Standard

Product Number: PP-382-1 **Lot Issue Date:** 09-Feb-2021

Lot Number: 0006587800 **Expiration Date:** 31-Mar-2029

Description:
This analytical reference material (RM) was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	Concentration ± Uncertainty
Aroclor 1268	011100-14-4	RM00937	100.0 ± 0.5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage Conditions: Store at Room Temperature (15° to 30°C).

K1262

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This RM was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Intended Use:
This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Hazards:
Refer to the Safety Data Sheet on www.agilent.com for information regarding this RM.

Expiration of Certification:
The certification of this RM is valid until the expiration date specified above, provided the RM is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the RM is damaged, contaminated, or otherwise modified.

Maintenance of Certification:
If substantive changes are noted that affect the certification before the expiration of this certificate, Agilent will notify the purchaser.

Sample lot approver:

M Bourgeois

Monica Bourgeois
QMS Representative

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

ISO 17034 Cert
No. AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026

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CSD-QA-015.1

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY

ISO 17025 Cert
No. AT-1937

250 Smith Street North Kingstown, Rhode Island 02852 www.agilent.com/quality

Certificate of Analysis

Phenova Certified Reference Materials are sold by Phenomenex.
411 Madrid Ave., Torrance, CA 90501 USA ▪ Tel: 310-212-0555 ▪ Fax: 310-328-7768 ▪ info@phenomenex.com
Access your MSDS and digital C of A at **www.phenomenex.com/mysupport. Re-order at www.phenomenex.com/standards**

Certified Reference Material

This product is included in Phenova's ISO/IEC 17025 and ISO Guide 34 Scopes of Accreditation

Catalog No.: AL0-101467
Description: Aroclor 1016
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Isooctane

Lot Number: CL12975
Certification Date: November 19, 2018
Expiration Date: October 31, 2026

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1016	12674-11-2	1000	± 0.553%

K5829

IL11110613_us

ACCREDITED
Reference Material Producer
Certificate No. 2427.02

phenova® Certified Reference Materials

Manufactured by Phenova, Inc.

Phenova's testing and calibration results are internationally recognized through the ILAC MRA. Phenova is an accredited ISO Guide 34 Reference Material Provider and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ilac-MRA ACCREDITED
Chemical Testing Laboratory
Certificate No. 2427.03

Certificate of Analysis

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Access your MSDS and digital C of A at www.phenomenex.com/mysupport. Re-order at www.phenomenex.com/standards

1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO Guide 34[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in the calibration and calibration verification of chromatographic instrumentation performed in routine laboratory analysis.

4. Instruction: Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all certified analytes in the mixture.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Material Safety Data Sheet (MSDS) is available at www.phenomenex.com/mysupport.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

   $$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

   Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO Guide 34. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO Guide 34.

12. Period of Validity: The Certified Values and their uncertainties are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31:2000(E) – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35:2006(E) – Reference Material – General and Statistical Principles for Certification.
[3] ISO Guide 34:2009(E) – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025:2005(E) – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

ACCREDITED
Reference Material Producer
Certificate No. 2427.02

phenova® Certified Reference Materials

Manufactured by Phenova, Inc.
Phenova's testing and calibration results are internationally recognized through the ILAC MRA. Phenova is an accredited ISO Guide 34 Reference Material Provider and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ilac-MRA ACCREDITED
Chemical Testing Laboratory
Certificate No. 2427.03

ILT1116613_US

Certificate of Analysis

phenova Certified Reference Materials | A Phenomenex Company

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ▪ Tel: 303-940-0033 ▪ Fax: 303-940-0043 ▪ info@phenova.com
Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101462
Description: Aroclor 1260
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Hexane

Lot Number: CL18021
Certification Date: February 14, 2022
Expiration Date: February 28, 2030

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1260	11096-82-5	1000	± 0.553%

K005830

Certificate of Analysis

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ▪ Tel: 303-940-0033 ▪ Fax: 303-940-0043 ▪ info@phenova.com
Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO 17034[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
[3] ISO 17034 – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

Recipient Copy

CHAIN-OF-CUSTODY RECORD

COC No. 15570

Order Number: CB014985

Date Shipped: 12/12/2022

AirBill No(s): 519204142631

From: QATS LABORATORY
2700 CHANDLER AVENUE, BLDG. B
LAS VEGAS, NV 89120
PHONE: 1-702-895-8712

To: SUE DUNNIHOO
ANALYTICAL RESOURCES INC.
4611 S. 134TH PLACE SUITE 100
TUKWILA WA 98168
250-695-6207

Sample ID	Sigma ID	Qty	Description/Remarks	→ Catalogue Number
KO11477 PSRM0168	SR0431	1	PUGET SOUND SEDIMENT RM	PS-SRM
KO11478 PSRM0169	SR0431	1	PUGET SOUND SEDIMENT RM	PS-SRM
KO11479 PSRM0171	SR0431	1	PUGET SOUND SEDIMENT RM	PS-SRM

12/12/2022

PUGET SOUND SRM FOR DUWAMISH AOC4 PROJECT.

Please use the enclosed Sample Preparation Instructions. If catalogue number(s) are listed at the top of the Sample Preparation Instructions use the Sample Preparation Instructions with catalogue number(s) matching the catalogue number(s) of each of the samples listed above.

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
[signature]	(1400) 12/12/2022	Phillip PBH	12/12/22 11:15
Custody Seal(s): Present/Absent	Remarks:		
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time

Report No. 00, 9/11/2014

SMP Version 3.3

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6020B

Total Metals

LDW23-SC1150B

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23B0276-01 C	SDG:	23B0276
Sampled:	12/14/22 09:03	Prepared:	02/24/23 16:23	File ID:	XDT_m2230306-175
% Solids:	63.20	Preparation:	SWN EPA 3050B	Analyzed:	03/07/23 03:29
Batch:	BLB0518	Sequence:	SLC0078	Initial/Final:	1.034 g Wet / 50 mL
Instrument:	ICPMS1			Calibration:	GC00021

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-47-3	Chromium	20.2	20	0.40	0.77	
7439-92-1	Lead	24.9	20	0.08	0.15	
7440-22-4	Silver	0.19	20	0.03	0.31	J

PREPARATION BATCH SUMMARY

EPA 6020B

Laboratory: Analytical Resources, LLC SDG: 23B0276

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

Batch: BLB0518 Batch Matrix: Solid Preparation: SWN EPA 3050B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SC1150B	23B0276-01	XDT_m2230306-175	02/24/23 16:23	
Blank	BLB0518-BLK1	XDT_m2230301-060	02/24/23 16:23	
LCS	BLB0518-BS1	XDT_m2230301-061	02/24/23 16:23	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Digestion Log

Analyst: ML Date: 02/24/23 Time: 1100-1623 Balance ID: 16

Matrix: Soil Block ID: 3 Block Temp: 95° Thermometer: 20-4

ARI Sample ID	Btl #	pH<2	Prep Code: SNN Initial Wt (g) Vol (mL)	Prep Code: SNN Final Vol (mL)	Prep Code: Initial Wt (g) Vol (mL)	Prep Code: Final Vol (mL)	Comments
23A0031-01	D		1.072	1.072			
23A0032-01	B		1.070 (2)	~~1.069~~			
-02	C		1.029	1.029			
-03	↓		1.026	1.026			
-04	A		1.009	1.009			
-05	↓		1.015	~~1.014~~ (1)			
-06	B		1.014	1.014			
-07	↓		1.093	1.093			
-08	C		1.022	1.022			
-11	B		1.029	1.029			
23A0171-01			1.006	1.006			
-02			1.003	1.003			
-03			1.054	1.054			
-04			1.064	1.064			
23B0051-01	A		1.071	1.071			
-02			1.084	1.084			
-03			1.041	1.041			
23B0276-01	C		1.034	1.034			
BLB0518-BLK1	—		—	—			
-BS1	—		—	—			
-DUP1	—		1.070	1.070			23A0032-01
-MS1	—		1.075	1.075			↓
-MSD1	—		1.073	1.073			
-SEM1	—		1.001	1.001	(3)		
					ML 02/24/23		

Chemical/Reagent ID:

HNO_3: L492 1:1 HNO_3: L1314 HCl: — H_2O_2: K110560

Tube Lot#: 2208005 Boiling Chip Lot#: — (DoD Only)

(1) 1.015 (2) 1.070 (3) 50ml

Form I

METHOD BLANK DATA SHEET

EPA 6020B

Total Metals

Blank

Laboratory: Analytical Resources, LLC | SDG: 23B0276

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

Batch: BLB0518 | Laboratory ID: BLB0518-BLK1 | Prepared: 02/24/23 16:23

Matrix: Solid | Preparation: SWN EPA 3050B | Analyzed: 03/01/23 21:11

Sequence: SLC0028 | Calibration: GC00005 | Instrument: ICPMS2

CAS NO.	Analyte	Concentration (mg/kg wet)	Dilution Factor	MDL	MRL	Q
7440-47-3	Chromium-52	ND	20	0.26	0.50	U
7439-92-1	Lead-208	ND	20	0.05	0.10	U
7440-22-4	Silver-107	ND	20	0.02	0.20	U

LCS / LCS DUPLICATE RECOVERY

EPA 6020B

Total Metals

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	03/01/23 21:16
Batch:	BLB0518	Laboratory ID:	BLB0518-BS1
Preparation:	SWN EPA 3050B	Sequence Name:	LCS
Initial/Final:	1 g / 50 mL		

COMPOUND	SPIKE ADDED (mg/kg wet)	LCS CONCENTRATION (mg/kg wet)	Q	LCS % REC. #	QC LIMITS REC.
Chromium-52	25.0	26.0		104	80 - 120
Lead-208	25.0	26.0		104	80 - 120
Silver-107	25.0	27.0		108	80 - 120

* Indicates values outside of QC limits

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS2
Calibration: GC00005
Control Limt: +/- 10.00%
Sequence: SLC0028

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SLC0028-ICV1	Chromium-52	50.000	48.6	97.3	ug/L	EPA 6020B
	Chromium-53	50.000	49.0	98.0	ug/L	EPA 6020B
	Lead-208	50.000	50.8	102	ug/L	EPA 6020B
	Silver-107	50.000	51.2	102	ug/L	EPA 6020B
SLC0028-CCV1	Chromium-52	50.000	50.6	101	ug/L	EPA 6020B
	Chromium-53	50.000	51.0	102	ug/L	EPA 6020B
	Lead-208	50.000	50.7	101	ug/L	EPA 6020B
	Silver-107	50.000	49.5	98.9	ug/L	EPA 6020B
SLC0028-CCV2	Chromium-52	50.000	49.5	99.0	ug/L	EPA 6020B
	Chromium-53	50.000	49.5	99.0	ug/L	EPA 6020B
	Lead-208	50.000	51.5	103	ug/L	EPA 6020B
	Silver-107	50.000	49.0	98.0	ug/L	EPA 6020B
SLC0028-CCV3	Chromium-52	50.000	49.1	98.2	ug/L	EPA 6020B
	Chromium-53	50.000	51.1	102	ug/L	EPA 6020B
	Lead-208	50.000	46.9	93.9	ug/L	EPA 6020B
	Silver-107	50.000	54.3	109	ug/L	EPA 6020B
SLC0028-CCV4	Chromium-52	50.000	49.6	99.1	ug/L	EPA 6020B
	Chromium-53	50.000	50.0	100	ug/L	EPA 6020B
	Lead-208	50.000	47.5	95.0	ug/L	EPA 6020B
	Silver-107	50.000	51.8	104	ug/L	EPA 6020B
SLC0028-CCV5	Chromium-52	50.000	49.6	99.2	ug/L	EPA 6020B
	Chromium-53	50.000	50.0	99.9	ug/L	EPA 6020B
	Lead-208	50.000	49.4	98.7	ug/L	EPA 6020B
	Silver-107	50.000	53.3	107	ug/L	EPA 6020B
SLC0028-CCV6	Chromium-52	50.000	46.8	93.6	ug/L	EPA 6020B
	Chromium-53	50.000	47.3	94.6	ug/L	EPA 6020B
	Lead-208	50.000	48.6	97.2	ug/L	EPA 6020B
	Silver-107	50.000	49.1	98.3	ug/L	EPA 6020B
SLC0028-CCV7	Chromium-52	50.000	48.4	96.9	ug/L	EPA 6020B
	Chromium-53	50.000	48.1	96.3	ug/L	EPA 6020B
	Lead-208	50.000	48.5	96.9	ug/L	EPA 6020B
	Silver-107	50.000	50.3	101	ug/L	EPA 6020B

* Values outside of QC limits

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS1
Calibration: GC00021
Control Limt: +/- 10.00%
Sequence: SLC0078

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SLC0078-ICV1	Chromium-52	50.000	50.9	102	ug/L	EPA 6020B
	Chromium-53	50.000	49.1	98.2	ug/L	EPA 6020B
	Lead-208	50.000	51.1	102	ug/L	EPA 6020B
	Silver-107	50.000	51.5	103	ug/L	EPA 6020B
SLC0078-CCV1	Chromium-52	50.000	50.3	101	ug/L	EPA 6020B
	Chromium-53	50.000	48.4	96.9	ug/L	EPA 6020B
	Lead-208	50.000	49.7	99.4	ug/L	EPA 6020B
	Silver-107	50.000	50.2	100	ug/L	EPA 6020B
SLC0078-CCV2	Chromium-52	50.000	50.7	101	ug/L	EPA 6020B
	Chromium-53	50.000	49.2	98.4	ug/L	EPA 6020B
	Lead-208	50.000	48.9	97.9	ug/L	EPA 6020B
	Silver-107	50.000	48.8	97.7	ug/L	EPA 6020B
SLC0078-CCV3	Chromium-52	50.000	49.1	98.2	ug/L	EPA 6020B
	Chromium-53	50.000	48.7	97.4	ug/L	EPA 6020B
	Lead-208	50.000	48.9	97.8	ug/L	EPA 6020B
	Silver-107	50.000	47.8	95.7	ug/L	EPA 6020B
SLC0078-CCV4	Chromium-52	50.000	49.7	99.4	ug/L	EPA 6020B
	Chromium-53	50.000	49.4	98.8	ug/L	EPA 6020B
	Lead-208	50.000	50.3	101	ug/L	EPA 6020B
	Silver-107	50.000	48.5	96.9	ug/L	EPA 6020B
SLC0078-CCV5	Chromium-52	50.000	49.4	98.8	ug/L	EPA 6020B
	Chromium-53	50.000	49.6	99.1	ug/L	EPA 6020B
	Lead-208	50.000	48.6	97.2	ug/L	EPA 6020B
	Silver-107	50.000	49.0	98.1	ug/L	EPA 6020B
SLC0078-CCV6	Chromium-52	50.000	50.2	100	ug/L	EPA 6020B
	Chromium-53	50.000	48.8	97.6	ug/L	EPA 6020B
	Lead-208	50.000	47.5	94.9	ug/L	EPA 6020B
	Silver-107	50.000	48.4	96.8	ug/L	EPA 6020B
SLC0078-CCV7	Chromium-52	50.000	49.7	99.5	ug/L	EPA 6020B
	Chromium-53	50.000	48.8	97.7	ug/L	EPA 6020B
	Lead-208	50.000	48.9	97.8	ug/L	EPA 6020B
	Silver-107	50.000	49.7	99.4	ug/L	EPA 6020B
SLC0078-CCV8	Chromium-52	50.000	51.5	103	ug/L	EPA 6020B
	Chromium-53	50.000	50.5	101	ug/L	EPA 6020B

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS1
Calibration: GC00021
Control Limt: +/- 10.00%
Sequence: SLC0078

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SLC0078-CCV8	Lead-208	50.000	49.9	99.8	ug/L	EPA 6020B
	Silver-107	50.000	50.4	101	ug/L	EPA 6020B
SLC0078-CCV9	Chromium-52	50.000	50.0	99.9	ug/L	EPA 6020B
	Chromium-53	50.000	49.2	98.4	ug/L	EPA 6020B
	Lead-208	50.000	48.7	97.3	ug/L	EPA 6020B
	Silver-107	50.000	49.5	99.1	ug/L	EPA 6020B
SLC0078-CCVA	Chromium-52	50.000	50.3	101	ug/L	EPA 6020B
	Chromium-53	50.000	49.6	99.2	ug/L	EPA 6020B
	Lead-208	50.000	48.8	97.5	ug/L	EPA 6020B
	Silver-107	50.000	48.7	97.4	ug/L	EPA 6020B
SLC0078-CCVB	Chromium-52	50.000	50.1	100	ug/L	EPA 6020B
	Chromium-53	50.000	50.0	100	ug/L	EPA 6020B
	Lead-208	50.000	49.5	99.1	ug/L	EPA 6020B
	Silver-107	50.000	49.9	99.7	ug/L	EPA 6020B
SLC0078-CCVC	Chromium-52	50.000	49.9	99.7	ug/L	EPA 6020B
	Chromium-53	50.000	49.5	98.9	ug/L	EPA 6020B
	Lead-208	50.000	48.8	97.7	ug/L	EPA 6020B
	Silver-107	50.000	49.1	98.3	ug/L	EPA 6020B
SLC0078-CCVD	Chromium-52	50.000	51.6	103	ug/L	EPA 6020B
	Chromium-53	50.000	50.8	102	ug/L	EPA 6020B
	Lead-208	50.000	48.7	97.4	ug/L	EPA 6020B
	Silver-107	50.000	48.6	97.2	ug/L	EPA 6020B
SLC0078-CCVE	Chromium-52	50.000	50.0	100	ug/L	EPA 6020B
	Chromium-53	50.000	49.3	98.5	ug/L	EPA 6020B
	Lead-208	50.000	49.3	98.5	ug/L	EPA 6020B
	Silver-107	50.000	49.5	98.9	ug/L	EPA 6020B
SLC0078-CCVF	Chromium-52	50.000	50.2	100	ug/L	EPA 6020B
	Chromium-53	50.000	49.8	99.6	ug/L	EPA 6020B
	Lead-208	50.000	49.9	99.8	ug/L	EPA 6020B
	Silver-107	50.000	50.6	101	ug/L	EPA 6020B
SLC0078-CCVG	Chromium-52	50.000	51.8	104	ug/L	EPA 6020B
	Chromium-53	50.000	49.8	99.5	ug/L	EPA 6020B
	Lead-208	50.000	50.4	101	ug/L	EPA 6020B
	Silver-107	50.000	50.1	100	ug/L	EPA 6020B

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS1
Calibration: GC00021
Control Limt: +/- 10.00%
Sequence: SLC0078

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SLC0078-CCVH	Chromium-52	50.000	51.4	103	ug/L	EPA 6020B
	Chromium-53	50.000	50.6	101	ug/L	EPA 6020B
	Lead-208	50.000	50.2	100	ug/L	EPA 6020B
	Silver-107	50.000	49.4	98.7	ug/L	EPA 6020B
SLC0078-CCVI	Chromium-52	50.000	51.2	102	ug/L	EPA 6020B
	Chromium-53	50.000	51.0	102	ug/L	EPA 6020B
	Lead-208	50.000	51.0	102	ug/L	EPA 6020B
	Silver-107	50.000	49.1	98.2	ug/L	EPA 6020B
SLC0078-CCVJ	Chromium-52	50.000	51.3	103	ug/L	EPA 6020B
	Chromium-53	50.000	51.0	102	ug/L	EPA 6020B
	Lead-208	50.000	49.9	99.8	ug/L	EPA 6020B
	Silver-107	50.000	49.9	99.7	ug/L	EPA 6020B
SLC0078-CCVK	Chromium-52	50.000	51.0	102	ug/L	EPA 6020B
	Chromium-53	50.000	50.0	100	ug/L	EPA 6020B
	Lead-208	50.000	49.2	98.4	ug/L	EPA 6020B
	Silver-107	50.000	49.6	99.3	ug/L	EPA 6020B
SLC0078-CCVL	Chromium-52	50.000	50.9	102	ug/L	EPA 6020B
	Chromium-53	50.000	50.0	100	ug/L	EPA 6020B
	Lead-208	50.000	49.5	99.1	ug/L	EPA 6020B
	Silver-107	50.000	48.6	97.2	ug/L	EPA 6020B

* Values outside of QC limits

INSTRUMENT BLANKS
EPA 6020B

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS2
Sequence: SLC0028

SDG: 23B0276
Project: AOC5 MR Phase 1
Calibration: GC00005
Date Analyzed: 03/01/23 17:11

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLC0028-IBL1	Chromium-52	0.0160	0.26	0.500	ug/L	
SLC0028-IBL1	Chromium-53	-0.0150	0.239	0.500	ug/L	
SLC0028-IBL1	Lead-208	-0.00600	0.0513	0.100	ug/L	
SLC0028-IBL1	Silver-107	-0.00400	0.022	0.200	ug/L	
SLC0028-ICB1	Chromium-52	0.00600	0.26	0.500	ug/L	
SLC0028-ICB1	Chromium-53	-0.0100	0.239	0.500	ug/L	
SLC0028-ICB1	Lead-208	-0.00700	0.0513	0.100	ug/L	
SLC0028-ICB1	Silver-107	-0.00600	0.022	0.200	ug/L	
SLC0028-CCB1	Chromium-52	0.00400	0.26	0.500	ug/L	
SLC0028-CCB1	Chromium-53	-0.0120	0.239	0.500	ug/L	
SLC0028-CCB1	Lead-208	-0.00600	0.0513	0.100	ug/L	
SLC0028-CCB1	Silver-107	-0.00600	0.022	0.200	ug/L	
SLC0028-IBL2	Chromium-52	0.0280	0.26	0.500	ug/L	
SLC0028-IBL2	Chromium-53	0.0630	0.239	0.500	ug/L	
SLC0028-IBL2	Lead-208	0.0310	0.0513	0.100	ug/L	
SLC0028-IBL2	Silver-107	0.00400	0.022	0.200	ug/L	
SLC0028-IBL3	Chromium-52	0.0100	0.26	0.500	ug/L	
SLC0028-IBL3	Chromium-53	0.0520	0.239	0.500	ug/L	
SLC0028-IBL3	Lead-208	0.0290	0.0513	0.100	ug/L	
SLC0028-IBL3	Silver-107	-0.00300	0.022	0.200	ug/L	
SLC0028-CCB2	Chromium-52	-0.0300	0.26	0.500	ug/L	
SLC0028-CCB2	Chromium-53	0.0260	0.239	0.500	ug/L	
SLC0028-CCB2	Lead-208	-0.00700	0.0513	0.100	ug/L	
SLC0028-CCB2	Silver-107	-0.00600	0.022	0.200	ug/L	
SLC0028-IBL4	Chromium-52	0.243	0.26	0.500	ug/L	
SLC0028-IBL4	Chromium-53	5.16	0.239	0.500	ug/L	
SLC0028-IBL4	Lead-208	0.0100	0.0513	0.100	ug/L	
SLC0028-IBL4	Silver-107	-0.00900	0.022	0.200	ug/L	
SLC0028-IBL5	Chromium-52	0.251	0.26	0.500	ug/L	
SLC0028-IBL5	Chromium-53	2.24	0.239	0.500	ug/L	
SLC0028-IBL5	Lead-208	0.00	0.0513	0.100	ug/L	
SLC0028-IBL5	Silver-107	-0.0100	0.022	0.200	ug/L	
SLC0028-CCB3	Chromium-52	0.0150	0.26	0.500	ug/L	
SLC0028-CCB3	Chromium-53	1.57	0.239	0.500	ug/L	
SLC0028-CCB3	Lead-208	-0.00300	0.0513	0.100	ug/L	

INSTRUMENT BLANKS
EPA 6020B

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS2
Sequence: SLC0028

SDG: 23B0276
Project: AOC5 MR Phase 1
Calibration: GC00005
Date Analyzed: 03/01/23 20:04

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLC0028-CCB3	Silver-107	-0.00700	0.022	0.200	ug/L	
SLC0028-IBL6	Chromium-52	0.210	0.26	0.500	ug/L	
SLC0028-IBL6	Chromium-53	0.670	0.239	0.500	ug/L	
SLC0028-IBL6	Lead-208	-0.00600	0.0513	0.100	ug/L	
SLC0028-IBL6	Silver-107	-0.00800	0.022	0.200	ug/L	
SLC0028-CCB4	Chromium-52	0.0330	0.26	0.500	ug/L	
SLC0028-CCB4	Chromium-53	0.585	0.239	0.500	ug/L	
SLC0028-CCB4	Lead-208	-0.00600	0.0513	0.100	ug/L	
SLC0028-CCB4	Silver-107	-0.00500	0.022	0.200	ug/L	
SLC0028-CCB5	Chromium-52	-0.0240	0.26	0.500	ug/L	
SLC0028-CCB5	Chromium-53	0.305	0.239	0.500	ug/L	
SLC0028-CCB5	Lead-208	-0.00600	0.0513	0.100	ug/L	
SLC0028-CCB5	Silver-107	-0.00600	0.022	0.200	ug/L	
SLC0028-IBL7	Chromium-52	-0.0130	0.26	0.500	ug/L	
SLC0028-IBL7	Chromium-53	0.213	0.239	0.500	ug/L	
SLC0028-IBL7	Lead-208	-0.00600	0.0513	0.100	ug/L	
SLC0028-IBL7	Silver-107	-0.00800	0.022	0.200	ug/L	
SLC0028-CCB6	Chromium-52	-0.00700	0.26	0.500	ug/L	
SLC0028-CCB6	Chromium-53	0.210	0.239	0.500	ug/L	
SLC0028-CCB6	Lead-208	-0.00600	0.0513	0.100	ug/L	
SLC0028-CCB6	Silver-107	-0.00600	0.022	0.200	ug/L	
SLC0028-IBL8	Chromium-52	-0.0600	0.26	0.500	ug/L	
SLC0028-IBL8	Chromium-53	0.176	0.239	0.500	ug/L	
SLC0028-IBL8	Lead-208	-0.00600	0.0513	0.100	ug/L	
SLC0028-IBL8	Silver-107	-0.00800	0.022	0.200	ug/L	
SLC0028-CCB7	Chromium-52	-0.0490	0.26	0.500	ug/L	
SLC0028-CCB7	Chromium-53	0.193	0.239	0.500	ug/L	
SLC0028-CCB7	Lead-208	-0.00500	0.0513	0.100	ug/L	
SLC0028-CCB7	Silver-107	-0.00600	0.022	0.200	ug/L	

INSTRUMENT BLANKS
EPA 6020B

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS1
Sequence: SLC0078

SDG: 23B0276
Project: AOC5 MR Phase 1
Calibration: GC00021
Date Analyzed: 03/06/23 13:44

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLC0078-IBL1	Chromium-52	0.0940	0.26	0.500	ug/L	
SLC0078-IBL1	Chromium-53	-0.00500	0.239	0.500	ug/L	
SLC0078-IBL1	Lead-208	0.0130	0.0513	0.100	ug/L	
SLC0078-IBL1	Silver-107	0.0220	0.022	0.200	ug/L	
SLC0078-ICB1	Chromium-52	0.0970	0.26	0.500	ug/L	
SLC0078-ICB1	Chromium-53	-0.0150	0.239	0.500	ug/L	
SLC0078-ICB1	Lead-208	0.00	0.0513	0.100	ug/L	
SLC0078-ICB1	Silver-107	0.0120	0.022	0.200	ug/L	
SLC0078-CCB1	Chromium-52	0.0940	0.26	0.500	ug/L	
SLC0078-CCB1	Chromium-53	-0.0110	0.239	0.500	ug/L	
SLC0078-CCB1	Lead-208	0.00	0.0513	0.100	ug/L	
SLC0078-CCB1	Silver-107	0.0150	0.022	0.200	ug/L	
SLC0078-IBL2	Chromium-52	0.0830	0.26	0.500	ug/L	
SLC0078-IBL2	Chromium-53	0.0130	0.239	0.500	ug/L	
SLC0078-IBL2	Lead-208	0.0150	0.0513	0.100	ug/L	
SLC0078-IBL2	Silver-107	0.0430	0.022	0.200	ug/L	
SLC0078-IBL3	Chromium-52	0.0910	0.26	0.500	ug/L	
SLC0078-IBL3	Chromium-53	0.0700	0.239	0.500	ug/L	
SLC0078-IBL3	Lead-208	0.0140	0.0513	0.100	ug/L	
SLC0078-IBL3	Silver-107	0.00900	0.022	0.200	ug/L	
SLC0078-CCB2	Chromium-52	0.112	0.26	0.500	ug/L	
SLC0078-CCB2	Chromium-53	-0.00100	0.239	0.500	ug/L	
SLC0078-CCB2	Lead-208	0.00100	0.0513	0.100	ug/L	
SLC0078-CCB2	Silver-107	0.0170	0.022	0.200	ug/L	
SLC0078-CCB3	Chromium-52	0.00300	0.26	0.500	ug/L	
SLC0078-CCB3	Chromium-53	0.00	0.239	0.500	ug/L	
SLC0078-CCB3	Lead-208	0.00200	0.0513	0.100	ug/L	
SLC0078-CCB3	Silver-107	0.00900	0.022	0.200	ug/L	
SLC0078-IBL4	Chromium-52	0.00100	0.26	0.500	ug/L	
SLC0078-IBL4	Chromium-53	0.0140	0.239	0.500	ug/L	
SLC0078-IBL4	Lead-208	0.0130	0.0513	0.100	ug/L	
SLC0078-IBL4	Silver-107	-0.00700	0.022	0.200	ug/L	
SLC0078-CCB4	Chromium-52	-0.00300	0.26	0.500	ug/L	
SLC0078-CCB4	Chromium-53	-0.00700	0.239	0.500	ug/L	
SLC0078-CCB4	Lead-208	0.00100	0.0513	0.100	ug/L	

INSTRUMENT BLANKS
EPA 6020B

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS1
Sequence: SLC0078

SDG: 23B0276
Project: AOC5 MR Phase 1
Calibration: GC00021
Date Analyzed: 03/06/23 16:34

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLC0078-CCB4	Silver-107	0.00300	0.022	0.200	ug/L	
SLC0078-IBL5	Chromium-52	-0.0190	0.26	0.500	ug/L	
SLC0078-IBL5	Chromium-53	-0.00700	0.239	0.500	ug/L	
SLC0078-IBL5	Lead-208	0.00100	0.0513	0.100	ug/L	
SLC0078-IBL5	Silver-107	-0.00800	0.022	0.200	ug/L	
SLC0078-CCB5	Chromium-52	-0.0530	0.26	0.500	ug/L	
SLC0078-CCB5	Chromium-53	-0.0120	0.239	0.500	ug/L	
SLC0078-CCB5	Lead-208	0.00100	0.0513	0.100	ug/L	
SLC0078-CCB5	Silver-107	0.00300	0.022	0.200	ug/L	
SLC0078-CCB6	Chromium-52	-0.0130	0.26	0.500	ug/L	
SLC0078-CCB6	Chromium-53	-0.0130	0.239	0.500	ug/L	
SLC0078-CCB6	Lead-208	0.00	0.0513	0.100	ug/L	
SLC0078-CCB6	Silver-107	0.00500	0.022	0.200	ug/L	
SLC0078-IBL7	Chromium-52	0.0880	0.26	0.500	ug/L	
SLC0078-IBL7	Chromium-53	0.00700	0.239	0.500	ug/L	
SLC0078-IBL7	Lead-208	0.00300	0.0513	0.100	ug/L	
SLC0078-IBL7	Silver-107	-0.00800	0.022	0.200	ug/L	
SLC0078-CCB7	Chromium-52	-0.00500	0.26	0.500	ug/L	
SLC0078-CCB7	Chromium-53	-0.00100	0.239	0.500	ug/L	
SLC0078-CCB7	Lead-208	0.00300	0.0513	0.100	ug/L	
SLC0078-CCB7	Silver-107	0.00300	0.022	0.200	ug/L	
SLC0078-IBL8	Chromium-52	-0.0360	0.26	0.500	ug/L	
SLC0078-IBL8	Chromium-53	-0.0130	0.239	0.500	ug/L	
SLC0078-IBL8	Lead-208	0.00600	0.0513	0.100	ug/L	
SLC0078-IBL8	Silver-107	0.00600	0.022	0.200	ug/L	
SLC0078-CCB8	Chromium-52	-0.0170	0.26	0.500	ug/L	
SLC0078-CCB8	Chromium-53	-0.0270	0.239	0.500	ug/L	
SLC0078-CCB8	Lead-208	0.00400	0.0513	0.100	ug/L	
SLC0078-CCB8	Silver-107	0.00400	0.022	0.200	ug/L	
SLC0078-IBL9	Chromium-52	-0.0690	0.26	0.500	ug/L	
SLC0078-IBL9	Chromium-53	-0.0140	0.239	0.500	ug/L	
SLC0078-IBL9	Lead-208	0.00500	0.0513	0.100	ug/L	
SLC0078-IBL9	Silver-107	0.00100	0.022	0.200	ug/L	
SLC0078-CCB9	Chromium-52	-0.0120	0.26	0.500	ug/L	
SLC0078-CCB9	Chromium-53	-0.0180	0.239	0.500	ug/L	
SLC0078-CCB9	Lead-208	0.00400	0.0513	0.100	ug/L	

INSTRUMENT BLANKS
EPA 6020B

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS1
Sequence: SLC0078

SDG: 23B0276
Project: AOC5 MR Phase 1
Calibration: GC00021
Date Analyzed: 03/06/23 21:40

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLC0078-CCB9	Silver-107	0.00400	0.022	0.200	ug/L	
SLC0078-CCBA	Chromium-52	-0.0210	0.26	0.500	ug/L	
SLC0078-CCBA	Chromium-53	-0.00200	0.239	0.500	ug/L	
SLC0078-CCBA	Lead-208	0.00400	0.0513	0.100	ug/L	
SLC0078-CCBA	Silver-107	0.00500	0.022	0.200	ug/L	
SLC0078-CCBB	Chromium-52	-0.00400	0.26	0.500	ug/L	
SLC0078-CCBB	Chromium-53	0.00	0.239	0.500	ug/L	
SLC0078-CCBB	Lead-208	0.00100	0.0513	0.100	ug/L	
SLC0078-CCBB	Silver-107	0.00600	0.022	0.200	ug/L	
SLC0078-IBLC	Chromium-52	-0.0650	0.26	0.500	ug/L	
SLC0078-IBLC	Chromium-53	-0.00700	0.239	0.500	ug/L	
SLC0078-IBLC	Lead-208	0.00800	0.0513	0.100	ug/L	
SLC0078-IBLC	Silver-107	0.00800	0.022	0.200	ug/L	
SLC0078-CCBC	Chromium-52	-0.0220	0.26	0.500	ug/L	
SLC0078-CCBC	Chromium-53	-0.0100	0.239	0.500	ug/L	
SLC0078-CCBC	Lead-208	0.00100	0.0513	0.100	ug/L	
SLC0078-CCBC	Silver-107	0.00700	0.022	0.200	ug/L	
SLC0078-IBLD	Chromium-52	-0.0610	0.26	0.500	ug/L	
SLC0078-IBLD	Chromium-53	-0.00800	0.239	0.500	ug/L	
SLC0078-IBLD	Lead-208	0.00600	0.0513	0.100	ug/L	
SLC0078-IBLD	Silver-107	0.00800	0.022	0.200	ug/L	
SLC0078-CCBD	Chromium-52	-0.0390	0.26	0.500	ug/L	
SLC0078-CCBD	Chromium-53	-0.0180	0.239	0.500	ug/L	
SLC0078-CCBD	Lead-208	0.00100	0.0513	0.100	ug/L	
SLC0078-CCBD	Silver-107	0.00800	0.022	0.200	ug/L	
SLC0078-CCBE	Chromium-52	-0.0550	0.26	0.500	ug/L	
SLC0078-CCBE	Chromium-53	-0.0230	0.239	0.500	ug/L	
SLC0078-CCBE	Lead-208	0.00100	0.0513	0.100	ug/L	
SLC0078-CCBE	Silver-107	0.00600	0.022	0.200	ug/L	
SLC0078-CCBF	Chromium-52	-0.0180	0.26	0.500	ug/L	
SLC0078-CCBF	Chromium-53	-0.0150	0.239	0.500	ug/L	
SLC0078-CCBF	Lead-208	0.00100	0.0513	0.100	ug/L	
SLC0078-CCBF	Silver-107	0.00400	0.022	0.200	ug/L	
SLC0078-CCBG	Chromium-52	-0.0210	0.26	0.500	ug/L	
SLC0078-CCBG	Chromium-53	-0.0290	0.239	0.500	ug/L	
SLC0078-CCBG	Lead-208	0.00100	0.0513	0.100	ug/L	

INSTRUMENT BLANKS
EPA 6020B

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS1
Sequence: SLC0078

SDG: 23B0276
Project: AOC5 MR Phase 1
Calibration: GC00021
Date Analyzed: 03/07/23 03:42

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLC0078-CCBG	Silver-107	0.00400	0.022	0.200	ug/L	
SLC0078-CCBH	Chromium-52	0.0440	0.26	0.500	ug/L	
SLC0078-CCBH	Chromium-53	-0.00600	0.239	0.500	ug/L	
SLC0078-CCBH	Lead-208	0.00100	0.0513	0.100	ug/L	
SLC0078-CCBH	Silver-107	0.00700	0.022	0.200	ug/L	
SLC0078-CCBI	Chromium-52	0.0470	0.26	0.500	ug/L	
SLC0078-CCBI	Chromium-53	0.0190	0.239	0.500	ug/L	
SLC0078-CCBI	Lead-208	0.00200	0.0513	0.100	ug/L	
SLC0078-CCBI	Silver-107	0.00500	0.022	0.200	ug/L	
SLC0078-IBLJ	Chromium-52	0.0480	0.26	0.500	ug/L	
SLC0078-IBLJ	Chromium-53	0.172	0.239	0.500	ug/L	
SLC0078-IBLJ	Lead-208	0.00300	0.0513	0.100	ug/L	
SLC0078-IBLJ	Silver-107	-0.00300	0.022	0.200	ug/L	
SLC0078-CCBJ	Chromium-52	0.0460	0.26	0.500	ug/L	
SLC0078-CCBJ	Chromium-53	0.0520	0.239	0.500	ug/L	
SLC0078-CCBJ	Lead-208	0.00100	0.0513	0.100	ug/L	
SLC0078-CCBJ	Silver-107	0.00600	0.022	0.200	ug/L	
SLC0078-IBLK	Chromium-52	0.0590	0.26	0.500	ug/L	
SLC0078-IBLK	Chromium-53	0.127	0.239	0.500	ug/L	
SLC0078-IBLK	Lead-208	0.00	0.0513	0.100	ug/L	
SLC0078-IBLK	Silver-107	-0.00400	0.022	0.200	ug/L	
SLC0078-CCBK	Chromium-52	0.0630	0.26	0.500	ug/L	
SLC0078-CCBK	Chromium-53	0.0720	0.239	0.500	ug/L	
SLC0078-CCBK	Lead-208	0.00100	0.0513	0.100	ug/L	
SLC0078-CCBK	Silver-107	0.00400	0.022	0.200	ug/L	
SLC0078-IBLM	Chromium-52	0.0640	0.26	0.500	ug/L	
SLC0078-IBLM	Chromium-53	0.0670	0.239	0.500	ug/L	
SLC0078-IBLM	Lead-208	0.00	0.0513	0.100	ug/L	
SLC0078-IBLM	Silver-107	-0.00200	0.022	0.200	ug/L	
SLC0078-IBLL	Chromium-52	0.0690	0.26	0.500	ug/L	
SLC0078-IBLL	Chromium-53	0.0630	0.239	0.500	ug/L	
SLC0078-IBLL	Lead-208	0.00	0.0513	0.100	ug/L	
SLC0078-IBLL	Silver-107	-0.00200	0.022	0.200	ug/L	
SLC0078-CCBL	Chromium-52	0.0250	0.26	0.500	ug/L	
SLC0078-CCBL	Chromium-53	0.0400	0.239	0.500	ug/L	
SLC0078-CCBL	Lead-208	0.00100	0.0513	0.100	ug/L	

Analytical Resources, LLC
Analytical Chemists and Consultants

INSTRUMENT BLANKS
EPA 6020B

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS1
Sequence: SLC0078

SDG: 23B0276
Project: AOC5 MR Phase 1
Calibration: GC00021
Date Analyzed: 03/07/23 07:30

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLC0078-CCBL	Silver-107	0.00500	0.022	0.200	ug/L	

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLC0028
Instrument: ICPMS2
Calibration: GC00005

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
CAL 0	SLC0028-CAL1	XDT_m2230301-013	NA	03/01/23 16:36
CAL 1 - LOW CHECK	SLC0028-CAL2	XDT_m2230301-014	NA	03/01/23 16:41
CAL 2	SLC0028-CAL3	XDT_m2230301-015	NA	03/01/23 16:46
CAL 3	SLC0028-CAL4	XDT_m2230301-016	NA	03/01/23 16:51
CAL 4	SLC0028-CAL5	XDT_m2230301-017	NA	03/01/23 16:56
CAL 5	SLC0028-CAL6	XDT_m2230301-018	NA	03/01/23 17:03
RINSE	SLC0028-IBL1	XDT_m2230301-019	NA	03/01/23 17:11
Initial Cal Check	SLC0028-ICV1	XDT_m2230301-021	NA	03/01/23 17:23
Initial Cal Blank	SLC0028-ICB1	XDT_m2230301-022	NA	03/01/23 17:31
Calibration Check	SLC0028-CCV1	XDT_m2230301-023	NA	03/01/23 17:37
Calibration Blank	SLC0028-CCB1	XDT_m2230301-024	NA	03/01/23 17:44
Instrument RL Check	SLC0028-CRL1	XDT_m2230301-025	NA	03/01/23 17:49
Interference Check A	SLC0028-IFA1	XDT_m2230301-026	NA	03/01/23 17:55
Interference Check B	SLC0028-IFB1	XDT_m2230301-028	NA	03/01/23 18:08
LR200	SLC0028-HCV1	XDT_m2230301-029	NA	03/01/23 18:13
LR300	SLC0028-HCV2	XDT_m2230301-030	NA	03/01/23 18:18
Instrument Blank	SLC0028-IBL2	XDT_m2230301-031	NA	03/01/23 18:25
Instrument Blank	SLC0028-IBL3	XDT_m2230301-032	NA	03/01/23 18:32
Calibration Check	SLC0028-CCV2	XDT_m2230301-033	NA	03/01/23 18:39
Calibration Blank	SLC0028-CCB2	XDT_m2230301-035	NA	03/01/23 18:51
Instrument Blank	SLC0028-IBL4	XDT_m2230301-042	NA	03/01/23 19:35
Instrument Blank	SLC0028-IBL5	XDT_m2230301-045	NA	03/01/23 19:50
Calibration Check	SLC0028-CCV3	XDT_m2230301-046	NA	03/01/23 19:56
Calibration Blank	SLC0028-CCB3	XDT_m2230301-047	NA	03/01/23 20:04
ZZZZZ	23B0501-01	XDT_m2230301-054	Water	03/01/23 20:38
Instrument Blank	SLC0028-IBL6	XDT_m2230301-057	NA	03/01/23 20:52
Calibration Check	SLC0028-CCV4	XDT_m2230301-058	NA	03/01/23 20:58
Calibration Blank	SLC0028-CCB4	XDT_m2230301-059	NA	03/01/23 21:06
Blank	BLB0518-BLK1	XDT_m2230301-060	Solid	03/01/23 21:11

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Sequence: SLC0028

SDG: 23B0276
Project: AOC5 MR Phase 1
Instrument: ICPMS2
Calibration: GC00005

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
LCS	BLB0518-BS1	XDT_m2230301-061	Solid	03/01/23 21:16
ZZZZZ	23A0032-01	XDT_m2230301-065	Solid	03/01/23 21:35
ZZZZZ	23A0032-01	XDT_m2230301-065	Solid	03/01/23 21:35
Calibration Check	SLC0028-CCV5	XDT_m2230301-070	NA	03/01/23 22:00
Calibration Blank	SLC0028-CCB5	XDT_m2230301-071	NA	03/01/23 22:08
Instrument Blank	SLC0028-IBL7	XDT_m2230301-080	NA	03/01/23 22:52
Calibration Check	SLC0028-CCV6	XDT_m2230301-081	NA	03/01/23 22:56
Calibration Blank	SLC0028-CCB6	XDT_m2230301-082	NA	03/01/23 23:04
Instrument Blank	SLC0028-IBL8	XDT_m2230301-088	NA	03/01/23 23:33
Calibration Check	SLC0028-CCV7	XDT_m2230301-089	NA	03/01/23 23:38
Calibration Blank	SLC0028-CCB7	XDT_m2230301-090	NA	03/01/23 23:46

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0078	Instrument:	ICPMS1
		Calibration:	GC00021

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
CAL 0	SLC0078-CAL1	XDT_m2230306-006	NA	03/06/23 13:12
CAL 1 - LOW CHECK	SLC0078-CAL2	XDT_m2230306-007	NA	03/06/23 13:16
CAL 2	SLC0078-CAL3	XDT_m2230306-008	NA	03/06/23 13:21
CAL 3	SLC0078-CAL4	XDT_m2230306-009	NA	03/06/23 13:25
CAL 4	SLC0078-CAL5	XDT_m2230306-010	NA	03/06/23 13:30
CAL 5	SLC0078-CAL6	XDT_m2230306-011	NA	03/06/23 13:37
RINSE	SLC0078-IBL1	XDT_m2230306-012	NA	03/06/23 13:44
Initial Cal Check	SLC0078-ICV1	XDT_m2230306-014	NA	03/06/23 13:53
Initial Cal Blank	SLC0078-ICB1	XDT_m2230306-015	NA	03/06/23 14:00
Calibration Check	SLC0078-CCV1	XDT_m2230306-016	NA	03/06/23 14:05
Calibration Blank	SLC0078-CCB1	XDT_m2230306-017	NA	03/06/23 14:12
Instrument RL Check	SLC0078-CRL1	XDT_m2230306-018	NA	03/06/23 14:16
Interference Check B	SLC0078-IFB1	XDT_m2230306-020	NA	03/06/23 14:25
LR200	SLC0078-HCV1	XDT_m2230306-021	NA	03/06/23 14:30
LR300	SLC0078-HCV2	XDT_m2230306-022	NA	03/06/23 14:34
Instrument Blank	SLC0078-IBL2	XDT_m2230306-023	NA	03/06/23 14:41
Interference Check A	SLC0078-IFA1	XDT_m2230306-024	NA	03/06/23 14:48
Instrument Blank	SLC0078-IBL3	XDT_m2230306-025	NA	03/06/23 14:52
Calibration Check	SLC0078-CCV2	XDT_m2230306-026	NA	03/06/23 14:59
Calibration Blank	SLC0078-CCB2	XDT_m2230306-027	NA	03/06/23 15:06
Calibration Check	SLC0078-CCV3	XDT_m2230306-029	NA	03/06/23 15:17
Calibration Blank	SLC0078-CCB3	XDT_m2230306-030	NA	03/06/23 15:24
Instrument Blank	SLC0078-IBL4	XDT_m2230306-040	NA	03/06/23 16:22
Calibration Check	SLC0078-CCV4	XDT_m2230306-041	NA	03/06/23 16:27
Calibration Blank	SLC0078-CCB4	XDT_m2230306-042	NA	03/06/23 16:34
Instrument Blank	SLC0078-IBL5	XDT_m2230306-052	NA	03/06/23 17:25
Calibration Check	SLC0078-CCV5	XDT_m2230306-053	NA	03/06/23 17:30
Calibration Blank	SLC0078-CCB5	XDT_m2230306-054	NA	03/06/23 17:37
Calibration Check	SLC0078-CCV6	XDT_m2230306-065	NA	03/06/23 18:31

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLC0078
Instrument: ICPMS1
Calibration: GC00021

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Calibration Blank	SLC0078-CCB6	XDT_m2230306-066	NA	03/06/23 18:39
Instrument Blank	SLC0078-IBL7	XDT_m2230306-076	NA	03/06/23 19:36
Calibration Check	SLC0078-CCV7	XDT_m2230306-077	NA	03/06/23 19:40
Calibration Blank	SLC0078-CCB7	XDT_m2230306-078	NA	03/06/23 19:47
ZZZZZ	BLB0508-BLK1	XDT_m2230306-079	Solid	03/06/23 19:52
ZZZZZ	BLB0508-BS1	XDT_m2230306-080	Solid	03/06/23 19:56
ZZZZZ	23A0032-01	XDT_m2230306-083	Solid	03/06/23 20:10
Instrument Blank	SLC0078-IBL8	XDT_m2230306-088	NA	03/06/23 20:32
Calibration Check	SLC0078-CCV8	XDT_m2230306-089	NA	03/06/23 20:37
Calibration Blank	SLC0078-CCB8	XDT_m2230306-090	NA	03/06/23 20:44
ZZZZZ	BLB0615-BLK1	XDT_m2230306-093	Solid	03/06/23 20:57
ZZZZZ	BLB0615-BS1	XDT_m2230306-094	Solid	03/06/23 21:02
ZZZZZ	23A0031-02	XDT_m2230306-095	Solid	03/06/23 21:06
ZZZZZ	23A0031-02	XDT_m2230306-095	Solid	03/06/23 21:06
ZZZZZ	23A0031-02	XDT_m2230306-095	Solid	03/06/23 21:06
ZZZZZ	BLB0508-DUP1	XDT_m2230306-096	Solid	03/06/23 21:11
ZZZZZ	BLB0508-MS1	XDT_m2230306-097	Solid	03/06/23 21:15
ZZZZZ	BLB0508-MSD1	XDT_m2230306-098	Solid	03/06/23 21:19
ZZZZZ	BLB0508-PS1	XDT_m2230306-099	Solid	03/06/23 21:24
Instrument Blank	SLC0078-IBL9	XDT_m2230306-100	NA	03/06/23 21:28
Calibration Check	SLC0078-CCV9	XDT_m2230306-101	NA	03/06/23 21:33
Calibration Blank	SLC0078-CCB9	XDT_m2230306-102	NA	03/06/23 21:40
ZZZZZ	23B0217-02	XDT_m2230306-109	Solid	03/06/23 22:12
ZZZZZ	23B0217-02	XDT_m2230306-109	Solid	03/06/23 22:12
ZZZZZ	23B0217-02	XDT_m2230306-109	Solid	03/06/23 22:12
ZZZZZ	BLB0615-DUP1	XDT_m2230306-110	Solid	03/06/23 22:17
ZZZZZ	BLB0615-MS1	XDT_m2230306-111	Solid	03/06/23 22:21
ZZZZZ	BLB0615-MSD1	XDT_m2230306-112	Solid	03/06/23 22:26
Calibration Check	SLC0078-CCVA	XDT_m2230306-113	NA	03/06/23 22:32

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLC0078
Instrument: ICPMS1
Calibration: GC00021

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Calibration Blank	SLC0078-CCBA	XDT_m2230306-114	NA	03/06/23 22:39
Calibration Check	SLC0078-CCVB	XDT_m2230306-116	NA	03/06/23 22:48
Calibration Blank	SLC0078-CCBB	XDT_m2230306-117	NA	03/06/23 22:55
ZZZZZ	BLB0607-BLK1	XDT_m2230306-118	Solid	03/06/23 22:59
ZZZZZ	BLB0607-BS1	XDT_m2230306-119	Solid	03/06/23 23:04
ZZZZZ	BLB0607-SRL1	XDT_m2230306-120	Solid	03/06/23 23:08
ZZZZZ	23B0410-01	XDT_m2230306-121	Solid	03/06/23 23:13
ZZZZZ	BLB0607-DUP1	XDT_m2230306-122	Solid	03/06/23 23:17
ZZZZZ	BLB0607-MS1	XDT_m2230306-123	Solid	03/06/23 23:22
ZZZZZ	BLB0607-MSD1	XDT_m2230306-124	Solid	03/06/23 23:26
ZZZZZ	BLB0607-SRM1	XDT_m2230306-126	Solid	03/06/23 23:35
Instrument Blank	SLC0078-IBLC	XDT_m2230306-127	NA	03/06/23 23:40
Calibration Check	SLC0078-CCVC	XDT_m2230306-128	NA	03/06/23 23:44
Calibration Blank	SLC0078-CCBC	XDT_m2230306-129	NA	03/06/23 23:51
ZZZZZ	BLB0687-BLK1	XDT_m2230306-130	Solid	03/06/23 23:56
ZZZZZ	BLB0687-BS1	XDT_m2230306-131	Solid	03/07/23 00:00
ZZZZZ	BLB0687-SRL1	XDT_m2230306-132	Solid	03/07/23 00:05
ZZZZZ	23B0411-01	XDT_m2230306-133	Solid	03/07/23 00:09
ZZZZZ	BLB0687-DUP1	XDT_m2230306-134	Solid	03/07/23 00:14
ZZZZZ	BLB0687-MS1	XDT_m2230306-135	Solid	03/07/23 00:18
ZZZZZ	BLB0687-MSD1	XDT_m2230306-136	Solid	03/07/23 00:22
ZZZZZ	BLB0687-SRM1	XDT_m2230306-138	Solid	03/07/23 00:31
Instrument Blank	SLC0078-IBLD	XDT_m2230306-139	NA	03/07/23 00:36
Calibration Check	SLC0078-CCVD	XDT_m2230306-140	NA	03/07/23 00:40
Calibration Blank	SLC0078-CCBD	XDT_m2230306-141	NA	03/07/23 00:47
ZZZZZ	23A0031-01	XDT_m2230306-146	Solid	03/07/23 01:11
ZZZZZ	23A0031-01	XDT_m2230306-146	Solid	03/07/23 01:11
ZZZZZ	23A0031-01	XDT_m2230306-146	Solid	03/07/23 01:11
ZZZZZ	23A0031-03	XDT_m2230306-147	Solid	03/07/23 01:16

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLC0078
Instrument: ICPMS1
Calibration: GC00021

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	23A0031-03	XDT_m2230306-147	Solid	03/07/23 01:16
ZZZZZ	23A0031-03	XDT_m2230306-147	Solid	03/07/23 01:16
ZZZZZ	23A0031-04	XDT_m2230306-148	Solid	03/07/23 01:20
ZZZZZ	23A0031-04	XDT_m2230306-148	Solid	03/07/23 01:20
ZZZZZ	23A0031-04	XDT_m2230306-148	Solid	03/07/23 01:20
ZZZZZ	23A0031-05	XDT_m2230306-149	Solid	03/07/23 01:25
ZZZZZ	23A0031-05	XDT_m2230306-149	Solid	03/07/23 01:25
ZZZZZ	23A0031-06	XDT_m2230306-150	Solid	03/07/23 01:29
ZZZZZ	23A0031-06	XDT_m2230306-150	Solid	03/07/23 01:29
ZZZZZ	23A0031-06	XDT_m2230306-150	Solid	03/07/23 01:29
ZZZZZ	23A0031-07	XDT_m2230306-151	Solid	03/07/23 01:34
ZZZZZ	23A0031-07	XDT_m2230306-151	Solid	03/07/23 01:34
ZZZZZ	23A0031-07	XDT_m2230306-151	Solid	03/07/23 01:34
Calibration Check	SLC0078-CCVE	XDT_m2230306-152	NA	03/07/23 01:39
Calibration Blank	SLC0078-CCBE	XDT_m2230306-153	NA	03/07/23 01:47
ZZZZZ	23A0031-08	XDT_m2230306-154	Solid	03/07/23 01:51
ZZZZZ	23A0031-08	XDT_m2230306-154	Solid	03/07/23 01:51
ZZZZZ	23A0031-08	XDT_m2230306-154	Solid	03/07/23 01:51
ZZZZZ	23A0031-09	XDT_m2230306-155	Solid	03/07/23 01:56
ZZZZZ	23A0031-09	XDT_m2230306-155	Solid	03/07/23 01:56
ZZZZZ	23A0031-09	XDT_m2230306-155	Solid	03/07/23 01:56
ZZZZZ	23A0031-10	XDT_m2230306-156	Solid	03/07/23 02:00
ZZZZZ	23A0031-10	XDT_m2230306-156	Solid	03/07/23 02:00
ZZZZZ	23A0031-10	XDT_m2230306-156	Solid	03/07/23 02:00
ZZZZZ	23A0031-11	XDT_m2230306-157	Solid	03/07/23 02:04
ZZZZZ	23A0031-11	XDT_m2230306-157	Solid	03/07/23 02:04
ZZZZZ	23A0031-11	XDT_m2230306-157	Solid	03/07/23 02:04
ZZZZZ	23A0031-12	XDT_m2230306-158	Solid	03/07/23 02:09
ZZZZZ	23A0031-12	XDT_m2230306-158	Solid	03/07/23 02:09

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLC0078
Instrument: ICPMS1
Calibration: GC00021

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	23A0031-12	XDT_m2230306-158	Solid	03/07/23 02:09
ZZZZZ	23A0031-13	XDT_m2230306-159	Solid	03/07/23 02:13
ZZZZZ	23A0031-13	XDT_m2230306-159	Solid	03/07/23 02:13
ZZZZZ	23A0031-13	XDT_m2230306-159	Solid	03/07/23 02:13
ZZZZZ	23A0031-14	XDT_m2230306-160	Solid	03/07/23 02:18
ZZZZZ	23A0031-14	XDT_m2230306-160	Solid	03/07/23 02:18
ZZZZZ	23A0031-14	XDT_m2230306-160	Solid	03/07/23 02:18
ZZZZZ	23A0031-15	XDT_m2230306-161	Solid	03/07/23 02:22
ZZZZZ	23A0031-15	XDT_m2230306-161	Solid	03/07/23 02:22
ZZZZZ	23A0031-15	XDT_m2230306-161	Solid	03/07/23 02:22
ZZZZZ	23A0031-16	XDT_m2230306-162	Solid	03/07/23 02:27
ZZZZZ	23A0031-16	XDT_m2230306-162	Solid	03/07/23 02:27
ZZZZZ	23A0031-16	XDT_m2230306-162	Solid	03/07/23 02:27
ZZZZZ	23A0031-17	XDT_m2230306-163	Solid	03/07/23 02:31
ZZZZZ	23A0031-17	XDT_m2230306-163	Solid	03/07/23 02:31
ZZZZZ	23A0031-17	XDT_m2230306-163	Solid	03/07/23 02:31
Calibration Check	SLC0078-CCVF	XDT_m2230306-164	NA	03/07/23 02:37
Calibration Blank	SLC0078-CCBF	XDT_m2230306-165	NA	03/07/23 02:44
ZZZZZ	23A0031-18	XDT_m2230306-166	Solid	03/07/23 02:49
ZZZZZ	23A0031-18	XDT_m2230306-166	Solid	03/07/23 02:49
ZZZZZ	23A0031-18	XDT_m2230306-166	Solid	03/07/23 02:49
ZZZZZ	23A0031-19	XDT_m2230306-167	Solid	03/07/23 02:53
ZZZZZ	23A0031-19	XDT_m2230306-167	Solid	03/07/23 02:53
ZZZZZ	23A0031-19	XDT_m2230306-167	Solid	03/07/23 02:53
ZZZZZ	23A0031-20	XDT_m2230306-168	Solid	03/07/23 02:58
ZZZZZ	23A0031-20	XDT_m2230306-168	Solid	03/07/23 02:58
ZZZZZ	23A0031-20	XDT_m2230306-168	Solid	03/07/23 02:58
ZZZZZ	23A0031-21	XDT_m2230306-169	Solid	03/07/23 03:02
ZZZZZ	23A0031-21	XDT_m2230306-169	Solid	03/07/23 03:02

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLC0078
Instrument: ICPMS1
Calibration: GC00021

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	23A0031-21	XDT_m2230306-169	Solid	03/07/23 03:02
ZZZZZ	23A0032-05	XDT_m2230306-170	Solid	03/07/23 03:06
ZZZZZ	23A0032-05	XDT_m2230306-170	Solid	03/07/23 03:06
ZZZZZ	23A0032-05	XDT_m2230306-170	Solid	03/07/23 03:06
ZZZZZ	23A0032-08	XDT_m2230306-173	Solid	03/07/23 03:20
ZZZZZ	23A0032-08	XDT_m2230306-173	Solid	03/07/23 03:20
ZZZZZ	23A0032-08	XDT_m2230306-173	Solid	03/07/23 03:20
ZZZZZ	23A0032-11	XDT_m2230306-174	Solid	03/07/23 03:24
ZZZZZ	23A0032-11	XDT_m2230306-174	Solid	03/07/23 03:24
ZZZZZ	23A0032-11	XDT_m2230306-174	Solid	03/07/23 03:24
LDW23-SC1150B	23B0276-01	XDT_m2230306-175	Solid	03/07/23 03:29
LDW23-SC1150B	23B0276-01	XDT_m2230306-175	Solid	03/07/23 03:29
LDW23-SC1150B	23B0276-01	XDT_m2230306-175	Solid	03/07/23 03:29
Calibration Check	SLC0078-CCVG	XDT_m2230306-176	NA	03/07/23 03:35
Calibration Blank	SLC0078-CCBG	XDT_m2230306-177	NA	03/07/23 03:42
Calibration Check	SLC0078-CCVH	XDT_m2230306-179	NA	03/07/23 03:51
Calibration Blank	SLC0078-CCBH	XDT_m2230306-180	NA	03/07/23 03:58
ZZZZZ	23A0171-01	XDT_m2230306-184	Solid	03/07/23 04:17
ZZZZZ	23A0171-01	XDT_m2230306-184	Solid	03/07/23 04:17
ZZZZZ	23A0171-02	XDT_m2230306-185	Solid	03/07/23 04:21
ZZZZZ	23A0171-02	XDT_m2230306-185	Solid	03/07/23 04:21
ZZZZZ	23A0171-03	XDT_m2230306-186	Solid	03/07/23 04:26
ZZZZZ	23A0171-03	XDT_m2230306-186	Solid	03/07/23 04:26
ZZZZZ	23A0171-04	XDT_m2230306-187	Solid	03/07/23 04:30
ZZZZZ	23A0171-04	XDT_m2230306-187	Solid	03/07/23 04:30
ZZZZZ	23A0171-04	XDT_m2230306-187	Solid	03/07/23 04:30
ZZZZZ	23B0051-01	XDT_m2230306-188	Solid	03/07/23 04:35
ZZZZZ	23B0051-02	XDT_m2230306-189	Solid	03/07/23 04:39
ZZZZZ	23B0051-02	XDT_m2230306-189	Solid	03/07/23 04:39

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Sequence: SLC0078

SDG: 23B0276
Project: AOC5 MR Phase 1
Instrument: ICPMS1
Calibration: GC00021

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	23B0051-03	XDT_m2230306-190	Solid	03/07/23 04:44
ZZZZZ	23B0051-03	XDT_m2230306-190	Solid	03/07/23 04:44
ZZZZZ	23B0051-03	XDT_m2230306-190	Solid	03/07/23 04:44
Calibration Check	SLC0078-CCVI	XDT_m2230306-191	NA	03/07/23 04:50
Calibration Blank	SLC0078-CCBI	XDT_m2230306-192	NA	03/07/23 04:57
ZZZZZ	23B0217-03	XDT_m2230306-193	Solid	03/07/23 05:01
ZZZZZ	23B0217-03	XDT_m2230306-193	Solid	03/07/23 05:01
ZZZZZ	23B0217-03	XDT_m2230306-193	Solid	03/07/23 05:01
ZZZZZ	23B0217-04	XDT_m2230306-194	Solid	03/07/23 05:06
ZZZZZ	23B0217-04	XDT_m2230306-194	Solid	03/07/23 05:06
ZZZZZ	23B0217-04	XDT_m2230306-194	Solid	03/07/23 05:06
ZZZZZ	23B0217-05	XDT_m2230306-195	Solid	03/07/23 05:10
ZZZZZ	23B0217-05	XDT_m2230306-195	Solid	03/07/23 05:10
ZZZZZ	23B0217-05	XDT_m2230306-195	Solid	03/07/23 05:10
ZZZZZ	23B0217-06	XDT_m2230306-196	Solid	03/07/23 05:15
ZZZZZ	23B0217-06	XDT_m2230306-196	Solid	03/07/23 05:15
ZZZZZ	23B0217-06	XDT_m2230306-196	Solid	03/07/23 05:15
Instrument Blank	SLC0078-IBLJ	XDT_m2230306-202	NA	03/07/23 05:42
Calibration Check	SLC0078-CCVJ	XDT_m2230306-203	NA	03/07/23 05:46
Calibration Blank	SLC0078-CCBJ	XDT_m2230306-204	NA	03/07/23 05:53
Instrument Blank	SLC0078-IBLK	XDT_m2230306-214	NA	03/07/23 06:40
Calibration Check	SLC0078-CCVK	XDT_m2230306-215	NA	03/07/23 06:44
Calibration Blank	SLC0078-CCBK	XDT_m2230306-216	NA	03/07/23 06:51
Instrument Blank	SLC0078-IBLM	XDT_m2230306-219	NA	03/07/23 07:05
Instrument Blank	SLC0078-IBLL	XDT_m2230306-222	NA	03/07/23 07:18
Calibration Check	SLC0078-CCVL	XDT_m2230306-223	NA	03/07/23 07:22
Calibration Blank	SLC0078-CCBL	XDT_m2230306-224	NA	03/07/23 07:30

ICP INTERFERENCE CHECK SAMPLE

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS2
Calibration: GC00005
Sequence: SLC0028
Standard ID: L002006

Lab Sample ID	Analyte	True	Found	%R	Units
SLC0028-IFA1	Chromium-52	0	0.8390		ug/L
	Chromium-53	0	4.4050		ug/L
	Lead-208	0	0.0240		ug/L
	Silver-107	0	-0.0020		ug/L

* Indicates %R outside of QC limits

NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.

Analytical Resources, LLC
Analytical Chemists and Consultants

ICP INTERFERENCE CHECK SAMPLE

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS2
Calibration: GC00005
Sequence: SLC0028
Standard ID: L002006

Lab Sample ID	Analyte	True	Found	%R	Units
SLC0028-IFB1	Chromium-52	20.000	19.858	99.3	ug/L
	Chromium-53	20.000	23.335	117	ug/L
	Lead-208	0	0.0350		ug/L
	Silver-107	20.000	17.996	90.0	ug/L

* Indicates %R outside of QC limits

NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.

ICP INTERFERENCE CHECK SAMPLE

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS1
Calibration: GC00021
Sequence: SLC0078
Standard ID: L002006

Lab Sample ID	Analyte	True	Found	%R	Units
SLC0078-IFA1	Chromium-52	0	0.9600		ug/L
	Chromium-53	0	3.2240		ug/L
	Lead-208	0	0.0310		ug/L
	Silver-107	0	0.0320		ug/L

* Indicates %R outside of QC limits

NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.

Analytical Resources, LLC
Analytical Chemists and Consultants

ICP INTERFERENCE CHECK SAMPLE

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS1
Calibration: GC00021
Sequence: SLC0078
Standard ID: L002006

Lab Sample ID	Analyte	True	Found	%R	Units
SLC0078-IFB1	Chromium-52	20.000	20.054	100	ug/L
	Chromium-53	20.000	22.295	111	ug/L
	Lead-208	0	0.0420		ug/L
	Silver-107	20.000	18.571	92.9	ug/L

* Indicates %R outside of QC limits

NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.

DETECTION LEVEL STANDARD
EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS2
Calibration: GC00005
Sequence: SLC0028
Lab Sample ID: SLC0028-CRL1

Analyte	True	Found	%R	Units	QC Limts
Chromium-52	0.50000	0.446	89.2	ug/L	50 - 150
Chromium-53	0.50000	0.480	96.0	ug/L	50 - 150
Lead-208	0.10000	0.0980	98.0	ug/L	50 - 150
Silver-107	0.20000	0.192	96.0	ug/L	50 - 150

* Values outside of QC limits

DETECTION LEVEL STANDARD
EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS1
Calibration: GC00021
Sequence: SLC0078
Lab Sample ID: SLC0078-CRL1

Analyte	True	Found	%R	Units	QC Limts
Chromium-52	0.50000	0.579	116	ug/L	50 - 150
Chromium-53	0.50000	0.465	93.0	ug/L	50 - 150
Lead-208	0.10000	0.100	100	ug/L	50 - 150
Silver-107	0.20000	0.207	104	ug/L	50 - 150

* Values outside of QC limits

HIGH-CONCENTRATION CALIBRATION VERIFICATION

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GC00005
Laboratory ID: SLC0028-HCV1
Sequence: SLC0028
Standard ID: L002008

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Chromium-52	200.00	201	0.5	10.00
Chromium-53	200.00	195	-2.3	10.00
Lead-208	200.00	198	-1.2	10.00
Silver-107	200.00	194	-2.9	10.00

* Values outside of QC limits

HIGH-CONCENTRATION CALIBRATION VERIFICATION

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GC00005
Laboratory ID: SLC0028-HCV2
Sequence: SLC0028
Standard ID: L002009

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Chromium-52	300.00	301	0.4	10.00
Chromium-53	300.00	297	-1.0	10.00
Lead-208	300.00	306	1.8	10.00
Silver-107	300.00	297	-1.1	10.00

* Values outside of QC limits

HIGH-CONCENTRATION CALIBRATION VERIFICATION

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GC00021
Laboratory ID: SLC0078-HCV1
Sequence: SLC0078
Standard ID: L002008

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Chromium-52	200.00	195	-2.4	10.00
Chromium-53	200.00	195	-2.6	10.00
Lead-208	200.00	184	-8.1	10.00
Silver-107	200.00	191	-4.7	10.00

* Values outside of QC limits

HIGH-CONCENTRATION CALIBRATION VERIFICATION

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GC00021
Laboratory ID: SLC0078-HCV2
Sequence: SLC0078
Standard ID: L002009

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Chromium-52	300.00	291	-2.9	10.00
Chromium-53	300.00	291	-2.9	10.00
Lead-208	300.00	259	-13.6	10.00
Silver-107	300.00	279	-7.1	10.00

* Values outside of QC limits

HOLDING TIME SUMMARY

Analysis: EPA 6020B

Laboratory: Analytical Resources, LLC SDG: 23B0276

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

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
LDW23-SC1150B 23B0276-01	12/14/22 09:03	12/14/22 16:47	02/24/23 16:23	72	365	03/07/23 03:29	83	365	

* Indicates hold time exceedance.

METHOD DETECTION AND REPORTING LIMITS

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Instrument: ICPMS1

Analyte	MDL	RL	Units
Chromium-52	0.26	0.50	mg/kg
Chromium-53	0.24	0.50	mg/kg
Lead-208	0.05	0.10	mg/kg
Silver-107	0.02	0.20	mg/kg

METHOD DETECTION AND REPORTING LIMITS

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Instrument: ICPMS2

Analyte	MDL	RL	Units
Chromium-52	0.26	0.50	mg/kg
Lead-208	0.05	0.10	mg/kg
Silver-107	0.02	0.20	mg/kg

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCU10
Lot Number:	P2-CU682108
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Copper
Starting Material:	Cu Metal
Starting Material Lot#:	2095
Starting Material Purity:	99.9996%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10013 ± 30 µg/mL

Density: 1.032 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9977 ± 50 µg/mL**
ICP Assay NIST SRM 3114 Lot Number: 121207

Assay Method #2 **10024 ± 26 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10007 ± 46 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.007542	M	Eu	<	0.000942	O	Na		0.001434	M	Se	<	0.016971	M	Zn	<	0.005657
O	Al	<	0.000609	O	Fe		0.008700	M	Nb	<	0.000942	O	Si		0.003052	M	Zr	<	0.000942
M	As	<	0.010371	M	Ga	<	0.000942	M	Nd	<	0.000942	M	Sm	<	0.000942				
M	Au	<	0.001885	M	Gd	<	0.000942	M	Ni		0.003781	M	Sn	<	0.005657				
O	B		0.003663	M	Ge	<	0.005657	M	Os	<	0.000942	M	Sr	<	0.000942				
M	Ba		0.004253	M	Hf	<	0.000942	O	P	<	0.031668	M	Ta	<	0.000942				
M	Be	<	0.000942	O	Hg	<	0.007064	M	Pb		0.005789	M	Tb	<	0.000942				
M	Bi	<	0.000942	M	Ho	<	0.000942	M	Pd	<	0.000942	M	Te	<	0.004714				
O	Ca		0.002304	M	In	<	0.000942	M	Pr	<	0.000942	M	Th	<	0.000942				
M	Cd	<	0.000942	M	Ir	<	0.000942	M	Pt	<	0.000942	O	Ti	<	0.002801				
M	Ce	<	0.000942	O	K		0.000763	M	Rb	<	0.000942	M	Tl	<	0.000942				
M	Co		0.001890	M	La	<	0.000942	M	Re	<	0.000942	M	Tm	<	0.000942				
M	Cr	<	0.005657	O	Li	<	0.000243	i	Rh	<		M	U	<	0.000942				
M	Cs	<	0.000942	M	Lu	<	0.000942	M	Ru	<	0.039588	M	V	<	0.003771				
s	Cu	<		O	Mg		0.000320	O	S		0.007174	M	W	<	0.005657				
M	Dy	<	0.000942	O	Mn		0.000793	M	Sb	<	0.001885	M	Y	<	0.000942				
M	Er	<	0.000942	M	Mo	<	0.005657	M	Sc	<	0.000942	M	Yb	<	0.000942				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 63.55 +2 6 $Cu(H_2O)_6^{2+}$

Chemical Compatibility -Stable in HCl, HNO_3, H_2SO_4, HF, H_3PO_4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO_3 / LDPE container.

Cu Containing Samples (Preparation and Solution) -Metal (soluble in HNO_3); Oxides (Soluble in HCl); Ores (Dissolve in HCl / HNO_3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 63 amu	10 ppt	n/a	40Ar23Na 47Ti16O, 14N12C37Cl, 16O12C35Cl, 23Na40Ca
ICP-OES 219.958 nm	0.01/.002 µg/mL	1	Th, Ta, Nb, U, Hf
ICP-OES 224.700 nm	0.01/.001 µg/mL	1	Pb, Ir, Ni, W
ICP-OES 324.754 nm	0.06/.001 µg/mL		Nb, U, Th, Mo, Hf

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 24, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **August 24, 2023**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGPB10
Lot Number:	S2-PB713228
Matrix:	0.5% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Lead
Starting Material:	Lead Nitrate
Starting Material Lot#:	2343
Starting Material Purity:	99.9995%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10042 ± 31 µg/mL

Density: 1.015 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10024 ± 41 µg/mL**
ICP Assay NIST SRM 3128 Lot Number: 101026

Assay Method #2 **10054 ± 32 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000310	M	Eu	<	0.000310	M	Na		0.001470	M	Se	<	0.009100	O	Zn	0.006155
O	Al		0.017098	O	Fe		0.002496	M	Nb	<	0.000310	O	Si		0.003761	O	Zr	< 0.001700
M	As	<	0.003100	M	Ga	<	0.000310	M	Nd	<	0.000310	M	Sm	<	0.000310			
M	Au	<	0.000910	M	Gd	<	0.000310	O	Ni		0.001709	M	Sn	<	0.001300			
O	B	<	0.005600	M	Ge	<	0.002200	M	Os	<	0.000310	O	Sr		0.000444			
O	Ba		0.007865	M	Hf	<	0.000310	O	P	<	0.038000	M	Ta	<	0.000310			
O	Be	<	0.000320	M	Hg	<	0.002200	s	Pb	<		M	Tb	<	0.000610			
M	Bi	<	0.028000	M	Ho	<	0.000310	M	Pd	<	0.000610	M	Te	<	0.000310			
O	Ca		0.019834	M	In	<	0.000310	M	Pr	<	0.000310	M	Th	<	0.000310			
O	Cd	<	0.000630	M	Ir	<	0.000310	M	Pt	<	0.000910	O	Ti		0.005129			
M	Ce		0.004787	O	K		0.008207	M	Rb	<	0.006700	M	Tl	<	0.016000			
M	Co	<	0.000610	M	La	<	0.001900	M	Re	<	0.000310	M	Tm	<	0.000310			
O	Cr	<	0.001500	O	Li	<	0.000110	O	Rh	<	0.007700	M	U	<	0.000310			
M	Cs	<	0.006100	M	Lu	<	0.000310	M	Ru	<	0.001300	M	V	<	0.001600			
M	Cu	<	0.001600	O	Mg		0.003317	O	S	<	0.052000	M	W	<	0.000910			
M	Dy	<	0.000310	O	Mn	<	0.001600	O	Sb	<	0.015000	M	Y	<	0.000310			
M	Er	<	0.000310	M	Mo	<	0.000610	O	Sc	<	0.000630	M	Yb	<	0.000310			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 207.20 +2 6 $Pb(H_2O)_6^{+2}$

Chemical Compatibility - Soluble in HCl, HF and HNO_3. Avoid H_2SO_4. Stable with most metals and inorganic anions forming insoluble carbonate, borate, sulfate, sulfite, sulfide, phosphate, oxalate, chromate, tannate, iodate, and cyanide in neutral aqueous media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO_3 / LDPE container.

Pb Containing Samples (Preparation and Solution) -Metal (Best dissolved in 1:1 H_2O / HNO_3); Oxides (The many different Pb oxides are soluble in HNO_3 with the exception of PbO_2 which is soluble in HCl or HF); Ores and Alloys (Best attacked using 1:1 H_2O / HNO_3); Organic Matrices (Dry ash and dissolve in dilute HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 208 amu	5 ppt	n/a	192Pt16O, 192Os16O
ICP-OES 168.215 nm	0.03 / 0.003 µg/mL	1	Co
ICP-OES 217.000 nm	0.09 / 0.03 µg/mL	1	W, Ir, Hf, Sb, Th
ICP-OES 220.353 nm	0.04 / 0.006 µg/mL	1	Bi, Nb

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 10, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 10, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

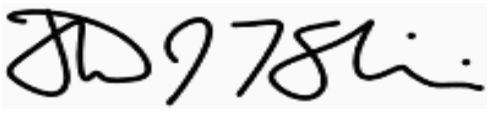
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Certificate of Analysis

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Christiansburg, VA 24073 USA
inorganicventures.com

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F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGZN10
Lot Number:	S2-ZN711249
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Zinc
Starting Material:	Zinc Metal
Starting Material Lot#:	2349
Starting Material Purity:	99.9988%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9992 ± 30 µg/mL

Density: 1.029 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9981 ± 56 µg/mL**
ICP Assay NIST SRM 3168a Lot Number: 120629

Assay Method #2 **9987 ± 32 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10002 ± 32 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.002000	M	Eu	<	0.000500	O	Na		0.008713	M	Se	<	0.048000	s	Zn	<
O	Al	<	0.011000	O	Fe		0.015467	M	Nb	<	0.000500	O	Si		0.007842	M	Zr	< 0.000500
O	As	<	0.012000	M	Ga	<	0.004900	M	Nd	<	0.000500	M	Sm	<	0.000500			
M	Au	<	0.006500	M	Gd	<	0.000500	O	Ni		0.003049	M	Sn		0.002614			
O	B	<	0.019000	M	Ge	<	0.009100	M	Os	<	0.000500	M	Sr	<	0.000500			
M	Ba	<	0.000500	M	Hf	<	0.000500	O	P	<	0.059000	M	Ta	<	0.000500			
O	Be	<	0.000230	O	Hg	<	0.003800	M	Pb		0.016774	M	Tb	<	0.000500			
M	Bi	<	0.002400	M	Ho	<	0.000500	M	Pd	<	0.001000	M	Te	<	0.017000			
O	Ca		0.052283	M	In	<	0.003500	M	Pr	<	0.000500	M	Th	<	0.000500			
O	Cd		0.000588	M	Ir	<	0.001000	M	Pt	<	0.000500	M	Ti	<	0.002000			
M	Ce	<	0.000500	O	K		0.017209	M	Rb	<	0.002500	M	Tl	<	0.000500			
M	Co		0.000653	M	La	<	0.000500	M	Re	<	0.000500	M	Tm	<	0.000500			
O	Cr		0.001089	O	Li	<	0.000230	M	Rh	<	0.000500	M	U	<	0.000500			
M	Cs	<	0.000500	M	Lu	<	0.000500	M	Ru	<	0.005000	M	V	<	0.000500			
O	Cu		0.001938	O	Mg		0.000871	O	S	<	0.048000	M	W	<	0.001000			
M	Dy	<	0.000500	O	Mn		0.000172	M	Sb	<	0.004300	M	Y	<	0.000500			
M	Er	<	0.000500	M	Mo	<	0.001500	O	Sc	<	0.000900	M	Yb	<	0.000500			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 65.39 +2 4 Zn(OH)(aq)1+
Chemical Compatibility -Stable in HCl, HNO3, H2SO4 ,HF, H3PO4. Avoid basic media forming insoluble carbonate and hydroxide. Stable with most metals and inorganic anions in acidic media.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.
Zn Containing Samples (Preparation and Solution) -Metal (soluble in HNO3); Oxides (Soluble in HCl); Ores (Dissolve in HCl / HNO3); Organic based (dry ash at 4500C and dissolve ash in HCl) (sulfuric/peroxide acid digestion)
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 66 amu	7 ppt	N/A	50Ti16O,50Cr16O, 50V16O, 34S16O2, 32S16O18O, 32S17O2, 33S16O17O, 32S34S, 33S2
ICP-OES 202.548 nm	0.004/0.0002 µg/mL	1	Nb, Cu, Co, Hf
ICP-OES 206.200 nm	0.006/0.0006 µg/mL	1	Sb, Ta, Bi, Os
ICP-OES 213.856 nm	0.002/0.0004 µg/mL	1	Ni, Cu, V

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

November 22, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **November 22, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

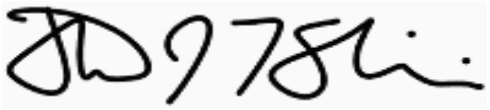
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSE10
Lot Number:	S2-SE711004
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Selenium
Starting Material:	Se Metal
Starting Material Lot#:	1962
Starting Material Purity:	99.9991%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9955 ± 61 µg/mL

Density: 1.035 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9955 ± 50 µg/mL**
ICP Assay NIST SRM 3149 Lot Number: 100901

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

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Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

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X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

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u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.002242	M	Eu	<	0.000373	O	Na		0.013654	s	Se	<		O	Zn		0.002374
M	Al		0.004450	M	Fe		0.008478	O	Nb	<	0.002975	O	Si		0.006249	M	Zr	<	0.001868
O	As	<	0.022040	M	Ga	<	0.000373	M	Nd	<	0.000373	M	Sm	<	0.000373				
M	Au	<	0.000373	M	Gd	<	0.000373	O	Ni		0.001843	M	Sn		0.000847				
O	B	<	0.007714	M	Ge	<	0.002616	M	Os	<	0.000373	M	Sr	<	0.001121				
M	Ba	<	0.001495	M	Hf	<	0.000373	O	P	<	0.022040	M	Ta	<	0.000373				
M	Be	<	0.001495	M	Hg	<	0.002240	M	Pb		0.006358	M	Tb	<	0.006353				
M	Bi	<	0.000373	M	Ho	<	0.000373	M	Pd	<	0.000373	M	Te	<	0.012707				
O	Ca		0.006530	M	In	<	0.000373	M	Pr	<	0.001495	M	Th	<	0.002990				
M	Cd		0.001165	M	Ir	<	0.000373	M	Pt	<	0.000373	M	Ti	<	0.003363				
M	Ce	<	0.000373	O	K		0.001999	M	Rb	<	0.001868	M	Tl		0.008584				
M	Co	<	0.000373	M	La	<	0.001121	M	Re	<	0.000373	M	Tm	<	0.000373				
M	Cr		0.002861	O	Li		0.000062	M	Rh	<	0.000373	M	U	<	0.000373				
M	Cs	<	0.001121	M	Lu	<	0.000373	M	Ru	<	0.001493	M	V	<	0.000747				
M	Cu	<	0.000747	O	Mg		0.001156	O	S		0.024591	M	W	<	0.002242				
M	Dy	<	0.000373	M	Mn	<	0.000373	M	Sb	<	0.002242	M	Y	<	0.000373				
M	Er	<	0.000373	O	Mo	<	0.003195	M	Sc	<	0.001121	M	Yb	<	0.000373				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 78.96 +4 6 H_2SeO_3

Chemical Compatibility -Soluble in HCl, HNO_3,H_3PO_4, H_2SO_4 and HF aqueous matrices and water. It is stable with most inorganic anions but many cationic metals form the insoluble selenites under pH neutral conditions. When fluorinated and/or under acidic conditions precipitation is typically not a problem at moderate to low concentrations.

Stability - 2-100 ppb levels stable for months alone or mixed with other elements at equivalent levels in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO_3 / LDPE container.

Se Containing Samples (Preparation and Solution) -Metal (soluble in HNO_3); Oxides (readily soluble in water); Minerals and alloys (acid digestion with HNO_3or HNO_3 / HF); Organic Matrices (acid digestion with hot concentrated H_2SO_4 accompanied by the careful dropwise addition of H_2O_2 until clear).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 82 amu	200 ppt	N/A	12C35Cl2
ICP-OES 196.026 nm	0.08/0.006 µg/mL	1	Fe
ICP-OES 203.985 nm	0.2/0.05 µg/mL	1	Sb, Ir, Cr, Ta
ICP-OES 206.279 nm	0.3/0.16 µg/mL	1	Cr, Pt

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

November 17, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **November 17, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Supervisor, Product Documentation

Certificate Approved By:

Michael Booth
Director, Technical

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGMO10
Lot Number:	S2-MO706255
Matrix:	H2O tr. NH4OH
Value / Analyte(s):	10 000 µg/mL ea: Molybdenum
Starting Material:	Ammonium Molybdate
Starting Material Lot#:	2361
Starting Material Purity:	99.9893%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10026 ± 47 µg/mL

Density: 1.011 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10032 ± 68 µg/mL**
ICP Assay NIST SRM 3134 Lot Number: 130418

Assay Method #2 **10020 ± 65 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000590	M	Eu	<	0.000300	M	Na		0.008739	M	Se	<	0.008000	M	Zn		0.005942
M	Al		0.005592	M	Fe	<	0.006500	M	Nb	<	0.029000	i	Si	<		M	Zr	<	0.001800
M	As	<	0.002100	M	Ga	<	0.000300	i	Nd	<		M	Sm	<	0.000300				
M	Au	<	0.000300	M	Gd	<	0.000300	M	Ni	<	0.008000	M	Sn	<	0.008900				
M	B	<	0.003300	M	Ge	<	0.000300	M	Os	<	0.000590	M	Sr		0.001747				
M	Ba		0.016778	M	Hf	<	0.001800	i	P	<		M	Ta	<	0.004200				
M	Be	<	0.000890	M	Hg	<	0.003300	M	Pb	<	0.000300	M	Tb	<	0.000300				
M	Bi	<	0.000890	M	Ho	<	0.000300	M	Pd	<	0.001800	M	Te	<	0.021000				
O	Ca		0.062920	M	In	<	0.032000	M	Pr	<	0.013000	M	Th	<	0.000300				
O	Cd	<	0.026000	M	Ir	<	0.000300	M	Pt	<	0.000300	O	Ti	<	0.032000				
M	Ce	<	0.008300	M	K		1.293372	M	Rb		0.045442	M	Tl		0.012584				
M	Co		0.005942	M	La	<	0.000300	M	Re	<	0.000300	M	Tm	<	0.000300				
M	Cr		0.005243	O	Li		0.000594	M	Rh	<	0.000300	M	U	<	0.005300				
M	Cs		0.005243	M	Lu	<	0.000300	M	Ru	<	0.079000	M	V	<	0.000890				
M	Cu		0.022371	M	Mg		0.005592	i	S	<		M	W		0.873900				
M	Dy	<	0.000300	M	Mn	<	0.005900	M	Sb		0.015031	M	Y	<	0.000300				
M	Er	<	0.000300	s	Mo	<		M	Sc	<	0.001200	M	Yb	<	0.000300				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 95.94 +6 6,7,8,9 [MoO4]-2(chemical form as received)

Chemical Compatibility -Mo is received in a NH4OH matrix giving the operator the option of using HCl or HF to stabilize acidic solutions. The [MoO4]-2 is soluble in concentrated HCl [MoOCl5]-2, dilute HF / HNO3 [MoOF5]-2 and basic media [MoO4]-2. Stable at ppm levels with some metals provided it is fluorinated. Do not mix with Alkaline or Rare Earths when HF is present. Stable with most inorganic anions provided it is in the [MoO4]-2 chemical form.

Stability - 2-100 ppb levels stable (alone or mixed with all other metals that are at comparable levels) as the [MoOF5]-2 for months in 1% HNO3 / LDPE container. 1-10,000 ppm single element solutions as the [MoO4]-2 chemically stable for years in 1% NH4OH in a LDPE container.

Mo Containing Samples (Preparation and Solution) -Metal (Soluble in HF / HNO3 or hot dilute HCl); Oxide (soluble in HF or NH4OH) ; Organic Matrices (Dry ash at 450EC in Pt0 and dissolve oxide with HF or HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 95 amu	3 ppt	n/a	40Ar39K16O,79Br16O,190Os2+,190Pt2+
ICP-OES 202.030 nm	0.008 / 0.0002 µg/mL	1	Os, Hf
ICP-OES 203.844 nm	0.012 / 0.002 µg/mL	1	
ICP-OES 204.598 nm	0.012 / 0.001 µg/mL	1	Ir, Ta

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 04, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **July 04, 2025**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGTL10
Lot Number:	T2-TL714687
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Thallium
Starting Material:	TlNO3
Starting Material Lot#:	2118
Starting Material Purity:	99.9998%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10030 ± 42 µg/mL

Density: 1.036 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10040 ± 43 µg/mL**
ICP Assay NIST SRM 3158 Lot Number: 151215

Assay Method #2 **10010 ± 65 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL(

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000200	M	Eu	<	0.000200	O	Na		0.002489	M	Se	<	0.011019	O	Zn		0.002298
O	Al	<	0.004184	O	Fe	<	0.002824	M	Nb	<	0.000200	O	Si		0.003760	M	Zr	<	0.000200
M	As	<	0.002003	M	Ga	<	0.000200	M	Nd	<	0.000200	M	Sm	<	0.000200				
O	Au	<	0.002824	M	Gd	<	0.000200	M	Ni		0.001724	M	Sn	<	0.000601				
O	B	<	0.004184	M	Ge	<	0.000801	M	Os	<	0.000198	O	Sr	<	0.000313				
M	Ba	<	0.000400	M	Hf	<	0.000200	O	P	<	0.010460	M	Ta	<	0.000200				
O	Be	<	0.000104	M	Hg	<	0.000794	M	Pb		0.000811	M	Tb	<	0.000200				
M	Bi	<	0.005209	M	Ho	<	0.000200	M	Pd	<	0.000400	M	Te	<	0.005008				
O	Ca		0.002436	M	In	<	0.000200	M	Pr	<	0.000200	M	Th	<	0.000200				
M	Cd		0.001318	M	Ir	<	0.000198	M	Pt	<	0.000801	O	Ti	<	0.001255				
M	Ce	<	0.000200	O	K		0.006175	M	Rb	<	0.000200	s	Tl	<					
M	Co	<	0.000601	M	La	<	0.000200	M	Re	<	0.000200	M	Tm	<	0.000200				
M	Cr	<	0.000801	O	Li	<	0.000177	M	Rh	<	0.000200	M	U	<	0.000200				
M	Cs	<	0.003606	M	Lu	<	0.000200	M	Ru	<	0.000397	M	V	<	0.002203				
M	Cu	<	0.001001	O	Mg		0.000529	O	S	<	0.015690	M	W	<	0.000601				
M	Dy	<	0.000200	M	Mn	<	0.000801	M	Sb	<	0.000400	M	Y	<	0.000200				
M	Er	<	0.000200	M	Mo	<	0.001202	O	Sc	<	0.000711	M	Yb	<	0.000200				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 204.38 +1 6 Tl(H2O)61+
Chemical Compatibility - Soluble in HCl, HNO3, and H2SO4. Stable with most metals and inorganic anions. The sulfite, thiocyanate and oxalate are moderately soluble; the phosphate and arsenite are slightly soluble and the sulfide is insoluble.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.
Tl Containing Samples)Preparation and Solution) -Metal (Best dissolved in HNO3 which forms chiefly the Tl1+ ion.); Oxide (The thallous oxide is readily soluble in water. The thallic oxide requires high levels of acid); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Sulfuric/peroxide digestion or dry ash and dissolution in HCl).
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 205 amu	2 ppt	N/A	189Os16O
ICP-OES 190.864 nm	0.04 / 0.004 µg/mL	1	V, Ti
ICP-OES 276.787 nm	0.1 / 0.01 µg/mL	1	Ta, V, Fe, Cr
ICP-OES 351.924 nm	0.2 / 0.02 µg/mL	1	Th, Ce, Zr

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

February 08, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **February 08, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

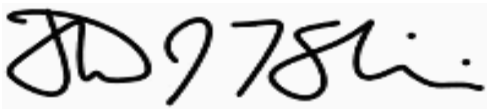
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCD10
Lot Number:	S2-CD710508
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Cadmium
Starting Material:	Cd Metal
Starting Material Lot#:	1953
Starting Material Purity:	99.9995%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10008 ± 30 µg/mL

Density: 1.029 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10010 ± 32 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #2 **10011 ± 30 µg/mL**
ICP Assay NIST SRM 3108 Lot Number: 130116

Assay Method #3 **10003 ± 30 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

O	Ag	<	0.003200	O	Eu	<	0.002500	O	Na		0.005499	M	Se	<	0.005700	O	Zn	<	0.001100
O	Al		0.008903	O	Fe		0.000602	M	Nb	<	0.000400	O	Si		0.016758	O	Zr	<	0.002600
M	As	<	0.003600	M	Ga	<	0.001200	M	Nd	<	0.000800	M	Sm	<	0.000400				
M	Au	<	0.000810	M	Gd	<	0.000400	M	Ni	<	0.003600	M	Sn	<	0.003200				
O	B		0.004189	O	Ge	<	0.012000	M	Os	<	0.000810	O	Sr	<	0.000330				
M	Ba	<	0.002400	M	Hf	<	0.000400	O	P	<	0.022000	M	Ta	<	0.000800				
M	Be	<	0.000400	M	Hg	<	0.001700	M	Pb	<	0.002400	M	Tb	<	0.000400				
M	Bi	<	0.000400	M	Ho	<	0.000400	M	Pd	<	0.001200	M	Te	<	0.008000				
O	Ca		0.011259	O	In	<	0.013000	M	Pr	<	0.000400	M	Th	<	0.000400				
s	Cd	<		M	Ir	<	0.000410	M	Pt	<	0.000400	O	Ti		0.000602				
M	Ce	<	0.000400	O	K		0.005237	M	Rb	<	0.004400	M	Tl		0.000523				
M	Co	<	0.000400	M	La	<	0.000400	M	Re	<	0.000400	M	Tm	<	0.000400				
O	Cr	<	0.005100	O	Li	<	0.000054	M	Rh	<	0.000400	M	U	<	0.000400				
M	Cs	<	0.002400	M	Lu	<	0.000400	M	Ru	<	0.002500	M	V	<	0.002000				
O	Cu	<	0.004800	O	Mg		0.000288	O	S	<	0.022000	M	W	<	0.000400				
M	Dy	<	0.000400	O	Mn	<	0.000860	O	Sb	<	0.018000	M	Y	<	0.000400				
M	Er	<	0.000400	M	Mo	<	0.001600	O	Sc	<	0.000430	M	Yb	<	0.000400				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 112.41 +2 4 Cd2(OH) (aq)3+ and Cd(OH)(aq)

Chemical Compatibility -Stable in HCl, HNO3, H2SO4 , and HF. Avoid basic media forming insoluble carbonate and hydroxide.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5 % HNO3 / LDPE container.

Cd Containing Samples (Preparation and Solution) -Metal (soluble in HNO3); Oxides (soluble in HCl or HNO3); Ores (dissolve in HCl /HNO3 then take to fumes with H2SO4. The silica and lead sulfate are filtered off after the addition of water); Organic based (dry ash at 450°C and dissolve ash in HCl), (sulfuric / peroxide acid digestion).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 111 amu	11 ppt	n/a	95Mo16O
ICP-OES 214.438 nm	0.003 / 0.0003 µg/mL	1	Pt, Ir
ICP-OES 226.502 nm	0.003 / 0.0003 µg/mL	1	Ir
ICP-OES 228.802 nm	0.003 / 0.0003 µg/mL	1	Co, Ir, As, Pt

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

November 01, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **November 01, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGMN10
Lot Number:	S2-MN704240
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Manganese
Starting Material:	Mn Metal
Starting Material Lot#:	2275
Starting Material Purity:	99.9909%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10011 ± 30 µg/mL

Density: 1.035 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9989 ± 69 µg/mL**
ICP Assay NIST SRM 3132 Lot Number: 050429

Assay Method #2 **10011 ± 25 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10024 ± 47 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001500	M	Eu	<	0.000730	O	Na		0.176097	M	Se	<	0.006600	M	Zn		0.009925
O	Al		0.004322	M	Fe	<	0.650000	M	Nb	<	0.000730	O	Si		0.097654	M	Zr	<	0.000730
M	As	<	0.008000	M	Ga		0.004322	M	Nd	<	0.001500	M	Sm	<	0.000730				
M	Au	<	0.000730	M	Gd	<	0.000730	M	Ni		0.024013	M	Sn	<	0.002200				
M	B		0.068838	M	Ge	<	0.004400	M	Os	<	0.000730	O	Sr		0.000928				
M	Ba	<	0.001500	M	Hf	<	0.000730	i	P	<		M	Ta	<	0.000730				
M	Be	<	0.000730	M	Hg	<	0.002200	M	Pb		0.007364	M	Tb	<	0.000730				
M	Bi	<	0.003000	M	Ho	<	0.000730	M	Pd	<	0.000730	M	Te	<	0.019000				
O	Ca		0.062434	M	In	<	0.003000	M	Pr	<	0.000730	M	Th	<	0.000730				
M	Cd	<	0.001500	M	Ir	<	0.000730	M	Pt	<	0.000730	O	Ti	<	0.006500				
M	Ce	<	0.007300	O	K		0.006403	M	Rb	<	0.006600	M	Tl	<	0.000730				
O	Co		0.014728	M	La	<	0.003000	M	Re	<	0.000730	M	Tm	<	0.000730				
O	Cr		0.272151	O	Li		0.000416	M	Rh	<	0.003000	M	U	<	0.001500				
M	Cs	<	0.000730	M	Lu	<	0.000730	M	Ru	<	0.004400	M	V	<	0.000730				
O	Cu		0.007684	O	Mg		0.320177	i	S	<		M	W	<	0.004400				
M	Dy	<	0.001500	s	Mn	<		M	Sb	<	0.021000	O	Y		0.001360				
M	Er	<	0.001500	M	Mo		0.010245	O	Sc	<	0.004100	M	Yb	<	0.000730				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 54.94 +2 6 $Mn(H_2O)_6^{2+}$

Chemical Compatibility -Stable in HCl, HNO_3, H_2SO_4 ,HF, H_3PO_4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5 % HNO_3/LDPE container.

Mn Containing Samples (Preparation and Solution) -Metal (Soluble in dilute acids); Oxides (Soluble in dilute acids); Ores (Dissolve with HCl. If silica is present add HF and then fume off silica by adding H_2SO_4 and heat to SO_3 fumes - dense white fumes).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 55 amu	10 ppt	n/a	40Ar14N1H,39K16O,37Cl18O,40Ar15N,38Ar17O,36Ar18O1H ,38Ar16O1H,37Cl17O1H,23Na32S
ICP-OES 257.610 nm	0.0014 / 0.00002 µg/mL	1	Ce, W, Re
ICP-OES 259.373 nm	0.0016 / 0.00002 µg/mL	1	U, Ta, Mo, Fe, Nb
ICP-OES 260.569 nm	0.0021 / 0.00002 µg/mL	1	Co

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 17, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **April 17, 2025**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSB10
Lot Number:	R2-SB688559
Matrix:	3% (v/v) HNO3 3% (w/v) tartaric acid
Value / Analyte(s):	10 000 µg/mL ea: Antimony
Starting Material:	Antimony Metal
Starting Material Lot#:	1857
Starting Material Purity:	99.9894%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10003 ± 47 µg/mL

Density: 1.061 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10003 ± 41 µg/mL**
ICP Assay NIST SRM 3102a Lot Number: 140911

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

$CRM/RM\ Expanded\ Uncertainty\ (\pm) = U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

$CRM/RM\ Expanded\ Uncertainty\ (\pm) = U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000200	M	Eu	<	0.000300	O	Na		0.140000	M	Se	<	0.007300	O	Zn	0.005000
M	Al		0.003200	O	Fe		0.060000	M	Nb	<	0.000100	O	Si		0.150000	O	Zr	< 0.006300
M	As	<	0.004400	M	Ga	<	0.000400	M	Nd	<	0.000100	M	Sm	<	0.000100			
M	Au	<	0.000210	M	Gd	<	0.000100	O	Ni		0.004800	M	Sn	<	0.001800			
M	B	<	0.011000	M	Ge	<	0.000600	M	Os	<	0.000110	O	Sr		0.000750			
O	Ba	<	0.004900	M	Hf	<	0.000100	O	P		0.540000	M	Ta		0.003300			
M	Be	<	0.000400	M	Hg	<	0.000110	M	Pb	<	0.000400	M	Tb	<	0.000100			
M	Bi	<	0.000200	M	Ho	<	0.000100	M	Pd	<	0.000210	M	Te	<	0.000600			
O	Ca		0.110000	M	In	<	0.000100	M	Pr	<	0.001600	M	Th	<	0.000100			
M	Cd	<	0.000200	M	Ir	<	0.000110	M	Pt	<	0.000600	M	Ti	<	0.002800			
M	Ce		0.006500	O	K		0.020000	M	Rb	<	0.001000	M	Tl	<	0.000100			
M	Co	<	0.000200	O	La	<	0.016000	M	Re	<	0.000100	M	Tm	<	0.000100			
M	Cr		0.006900	O	Li	<	0.000430	M	Rh	<	0.000300	M	U	<	0.000100			
M	Cs	<	0.000200	M	Lu	<	0.000100	M	Ru	<	0.000310	M	V	<	0.000800			
M	Cu	<	0.000600	O	Mg		0.021000	n	S	<		M	W	<	0.000200			
M	Dy	<	0.000100	O	Mn		0.001900	s	Sb	<		M	Y	<	0.000100			
M	Er	<	0.000100	M	Mo	<	0.000500	O	Sc	<	0.002300	M	Yb	<	0.000100			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 121.75 +3 6 Sb(O)C4H4O6-1

Chemical Compatibility -Stable in conc. HCl, dilute or conc. HF. Stable in dilute HNO3 as the fluoride or tartrate complex. Avoid basic media. Stable with most metals and inorganic anions in acidic media as the tartrate provided the acidity is not too high or the acid is oxidizing causing loss of the stabilizing tartrate ion. The fluoride complex of antimony is stable in strong acid but you should only mix with other metals that are fluorinated.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-2% HNO3 / LDPE container.

Sb Containing Samples (Preparation and Solution) -Metal and alloys (Soluble in H2O / HF / HNO3 mixture); Oxides (Soluble in HCl and tartaric acid or H2O / HF / HNO3 mixtures); Ores (fusion with Na2CO3 in Pt0 followed by dissolving the fuseate in a H2O / HF / HNO3 mixture); Organic based (sulfuric acid / hydrogen peroxide digestion)

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 121 amu	5 ppt	N/A	105Pd16O, 89Y16O2
ICP-OES 206.833 nm	0.03/0.003 µg/mL	1	Ta, Cr, Ge, Hf
ICP-OES 217.581 nm	0.05/0.005 µg/mL	1	Nb, W, Re, Fe
ICP-OES 231.147 nm	0.06/0.006 µg/mL	1	Ni, Co, Pt

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 30, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **April 30, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGAS10
Lot Number:	T2-AS718260
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Arsenic
Starting Material:	As Metal
Starting Material Lot#:	2208
Starting Material Purity:	99.9971%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10060 ± 40 µg/mL

Density: 1.037 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10062 ± 46 µg/mL**
ICP Assay NIST SRM 3103a Lot Number: 100818

Assay Method #2 **10055 ± 76 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	< 0.003200	M	Eu	< 0.000530	O	Na	0.032544	M	Se	< 0.006300	O	Zn	0.001952			
M	Al	0.007593	O	Fe	0.001475	O	Nb	< 0.012000	O	Si	0.238658	O	Zr	< 0.004100			
s	As	<	M	Ga	< 0.000530	M	Nd	< 0.000530	M	Sm	< 0.000530						
M	Au	< 0.003100	M	Gd	< 0.000530	M	Ni	< 0.002100	M	Sn	< 0.000530						
M	B	0.026035	M	Ge	< 0.001600	M	Os	< 0.000520	M	Sr	< 0.000530						
M	Ba	< 0.000530	M	Hf	< 0.000530	O	P	< 0.043000	M	Ta	< 0.000530						
O	Be	< 0.000360	M	Hg	< 0.001600	M	Pb	< 0.002100	M	Tb	< 0.000530						
M	Bi	< 0.000530	M	Ho	< 0.000530	M	Pd	< 0.001100	M	Te	< 0.004700						
O	Ca	0.004339	M	In	< 0.023000	M	Pr	< 0.005300	M	Th	< 0.000530						
M	Cd	< 0.001100	M	Ir	< 0.000520	M	Pt	< 0.000530	O	Ti	< 0.002300						
M	Ce	< 0.000530	O	K	0.002061	M	Rb	< 0.000530	M	Tl	< 0.000530						
M	Co	< 0.000530	M	La	< 0.001100	M	Re	< 0.000530	M	Tm	< 0.000530						
O	Cr	< 0.001800	O	Li	< 0.000120	M	Rh	< 0.000530	M	U	< 0.000530						
M	Cs	< 0.005300	M	Lu	< 0.000530	M	Ru	< 0.000520	M	V	< 0.002700						
M	Cu	< 0.001600	O	Mg	0.000154	O	S	0.028205	M	W	< 0.012000						
M	Dy	< 0.000530	O	Mn	0.000154	M	Sb	< 0.000530	M	Y	< 0.000530						
M	Er	< 0.000530	M	Mo	< 0.000530	O	Sc	< 0.001700	M	Yb	< 0.000530						

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 74.92 ; mix of +3 and +5 ; 6 ; H3AsO4 and HAsO2

Chemical Compatibility - Arsenic has no cationic chemistry. It is soluble in HCl, HNO3,H3PO4, H2SO4 and HF aqueous matrices water and NH4OH . It is stable with most inorganic anions (forms arsenate when boiled with chromate) but many cationic metals form the insoluble arsenates under pH neutral conditions. When fluorinated and / or under acidic conditions arsenate formation is typically not a problem at moderate to low concentrations.

Stability - 2-100 ppb levels stable for months alone or mixed with other elements at equivalent levels in 1% HNO3 / LDPE container.

As Containing Samples (Preparation and Solution) - Metal (soluble in 1:1 H2O / HNO3); Oxides (the oxide exists in crystalline and amorphous forms where the amorphic form is more water soluble. The oxides typically dissolve in dilute acidic solutions when boiled); Minerals (one gram of powered sample is fused in a Ni crucible with 10 grams of a 1:1 mix of K2CO3 and KNO3 and the melt extracted with hot water); Organic Matrices (0.2 to 0.5 grams of sample are fused with 15 grams of a 1:1 Na2CO3 / Na2O2 mix in a Ni crucible. The fuseate is extracted with water and acidified with HNO3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 75 amu	20 ppt	N/A	40Ar35Cl, 59Co16O, 36Ar38Ar1H,8Ar37Cl,Ar39K, 150Nd2+,150Sm2+
ICP-OES 189.042 nm	0.05/0.005 µg/mL	1	Cr
ICP-OES 193.696 nm	0.1/0.01 µg/mL	1	V, Ge
ICP-OES 228.812 nm	0.1/0.01 µg/mL	1	Cd, Pt, Ir, Co

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

May 10, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **May 10, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Supervisor, Product Documentation

Certificate Approved By:

Michael Booth
Director, Technical

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
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1.0 ACCREDITATION / REGISTRATION

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ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGBA10
Lot Number:	R2-BA692576
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Barium
Starting Material:	Barium Nitrate
Starting Material Lot#:	1969
Starting Material Purity:	99.9982%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10022 ± 30 µg/mL

Density: 1.025 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1	**10018 ± 50 µg/mL** ICP Assay NIST SRM 3104a Lot Number: 140909
Assay Method #2	**10023 ± 31 µg/mL** Gravimetric NIST SRM Lot Number: See Sec. 4.2
Assay Method #3	**10023 ± 30 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000410	O	Eu	<	0.005200	O	Na		0.004610	M	Se	<	0.003700	O	Zn		0.000658
M	Al	<	0.003100	O	Fe		0.015707	M	Nb	<	0.000210	O	Si		0.005573	M	Zr	<	0.001300
M	As	<	0.001300	M	Ga	<	0.000210	M	Nd	<	0.000210	O	Sm	<	0.021000				
M	Au	<	0.001300	M	Gd	<	0.000210	M	Ni	<	0.000810	M	Sn	<	0.000410				
O	B	<	0.005200	M	Ge	<	0.002500	M	Os	<	0.000410	O	Sr		0.003850				
s	Ba	<		M	Hf	<	0.000810	O	P	<	0.026000	M	Ta	<	0.000410				
O	Be	<	0.000320	M	Hg	<	0.000210	M	Pb	<	0.002300	M	Tb	<	0.000210				
M	Bi	<	0.000210	M	Ho	<	0.000210	M	Pd	<	0.000210	M	Te	<	0.001900				
O	Ca		0.007093	M	In	<	0.000210	M	Pr	<	0.000210	M	Th	<	0.000210				
M	Cd	<	0.000210	M	Ir	<	0.000210	M	Pt	<	0.000210	M	Ti	<	0.002100				
M	Ce	<	0.001300	O	K		0.035467	M	Rb	<	0.002100	M	Tl	<	0.000210				
M	Co	<	0.000410	O	La	<	0.005200	M	Re	<	0.000210	M	Tm	<	0.000410				
M	Cr	<	0.001700	O	Li	<	0.000630	M	Rh	<	0.000210	M	U	<	0.000210				
M	Cs	<	0.003300	M	Lu	<	0.001700	M	Ru	<	0.000210	O	V	<	0.005200				
M	Cu	<	0.001300	O	Mg		0.000861	O	S		0.268539	M	W	<	0.000410				
M	Dy	<	0.000210	M	Mn	<	0.000410	M	Sb	<	0.001300	O	Y	<	0.005200				
M	Er	<	0.001300	M	Mo	<	0.000410	M	Sc	<	0.000410	M	Yb	<	0.001300				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 137.33 +2 6 $Ba(H_2O)_6^{+2}$
Chemical Compatibility - Soluble in HCl, and HNO_3. Avoid H_2SO_4, HF and neutral to basic media. Stable with most metals and inorganic anions forming insoluble silicate, carbonate, hydroxide, oxide, fluoride, sulfate, oxalate, chromate, arsenate, iodate, molybdate, sulfite and tungstate in neutral aqueous media.
Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1 -10,000 ppm solutions chemically stable for years in 1-3.5% HNO_3 / LDPE container.
Ba Containing Samples (Preparation and Solution) -Metal(is best dissolved in diluted HNO_3); Ores(Carbonate fusion in Pt0 followed by HCl dissolution. If sulfate is present dissolve the fuseate using HCl / tartaric acid to prevent $BaSO_4$ precipitate); Organic Matrices (dry ash and dissolve in dilute HCl.)
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 138 amu	1 ppt	N/A	122Sn16O, 122Te16O
ICP-OES 230.424 nm	0.004/0.0005 µg/mL	1	Mo, Ir, Co
ICP-OES 233.527 nm	0.004/0.0003 µg/mL	1	
ICP-OES 455.403 nm	0.002/0.0001 µg/mL	1	Zr, U

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

May 11, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **May 11, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGBE10
Lot Number:	R2-BE692992
Matrix:	6% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Beryllium
Starting Material:	Beryllium Acetate
Starting Material Lot#:	2281
Starting Material Purity:	99.9998%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10032 ± 41 µg/mL

Density: 1.128 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10042 ± 67 µg/mL**
ICP Assay NIST SRM 3105a Lot Number: 090514

Assay Method #2 **10025 ± 51 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001100	M	Eu	<	0.000270	O	Na		0.040962	M	Se	<	0.005000	M	Zn		0.013054
O	Al		0.016205	O	Fe		0.015754	M	Nb	<	0.000270	O	Si		0.024307	O	Zr	<	0.001900
M	As	<	0.002900	M	Ga	<	0.000270	M	Nd	<	0.000270	M	Sm	<	0.000270				
M	Au	<	0.000520	M	Gd	<	0.000270	M	Ni	<	0.003700	M	Sn	<	0.000790				
M	B	<	0.091000	M	Ge	<	0.000270	M	Os	<	0.000260	M	Sr		0.000630				
M	Ba		0.002700	M	Hf	<	0.000270	O	P	<	0.066000	M	Ta	<	0.000270				
s	Be	<		M	Hg	<	0.000520	M	Pb	<	0.000270	M	Tb	<	0.000270				
M	Bi	<	0.000530	M	Ho	<	0.000270	M	Pd	<	0.000520	M	Te	<	0.003700				
O	Ca		0.072022	M	In	<	0.000790	M	Pr	<	0.000270	M	Th	<	0.000270				
M	Cd	<	0.000790	M	Ir	<	0.000260	M	Pt	<	0.000270	O	Ti	<	0.000400				
M	Ce	<	0.000270	O	K		0.045014	M	Rb	<	0.000270	M	Tl	<	0.000790				
O	Co	<	0.003200	M	La	<	0.000270	M	Re	<	0.000270	M	Tm	<	0.000270				
O	Cr	<	0.001800	O	Li	<	0.000660	M	Rh	<	0.001100	M	U	<	0.000270				
M	Cs		0.001440	M	Lu	<	0.000270	M	Ru	<	0.000260	M	V	<	0.000790				
M	Cu	<	0.002100	O	Mg		0.016205	i	S	<		M	W	<	0.000530				
M	Dy	<	0.000270	M	Mn		0.001215	M	Sb	<	0.000270	M	Y	<	0.000270				
M	Er	<	0.000270	M	Mo	<	0.000530	O	Sc	<	0.000930	M	Yb	<	0.000270				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 9.01 +2 4 $Be(H_2O)_4^{+2}$

Chemical Compatibility -Soluble in HCl, HNO_3, H_2SO_4 and HF aqueous matrices. Stable with all metals and inorganic anions.

Stability - 2-100 ppb levels stable for months in 1 % HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 5-10 % HNO_3 / LDPE container.

Be Containing Samples (Preparation and Solution) - Meta l(is best dissolved in diluted H_2SO_4); BeO (boiling nitric, hydrochloric, or sulfuric acids or KHSO4 fusion); Ores (H_2SO_4/HF digestion or carbonate fusion in Pt0); Organic Matrices (sulfuric/peroxide digestion or nitric/sulfuric/perchloric acid decomposition, or dry ash and dissolution according to the BeO procedure above).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 9 amu	4 ppt	N/A	
ICP-OES 234.861 nm	0.0003/0.00016 µg/mL	1	Fe, Ta, Mo
ICP-OES 313.042 nm	0.0003/0.00009 µg/mL	1	V, Ce, U
ICP-OES 313.107 nm	0.0007/0.0005 µg/mL	1	Ce, Th, Tm

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION, PERIOD OF VALIDITY AND REVISION HISTORY

11.1 Certification Issue Date

May 13, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **May 13, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

11.4 Revision Status

- Revision 1 - Revised on Thursday, Jan 14, 2021 by utruong. Revision was made for the following reason: Modified Section 7 Chemical Form in Solution.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
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1.0 ACCREDITATION / REGISTRATION

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ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCO10
Lot Number:	R2-CO695285
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Cobalt
Starting Material:	Co Metal
Starting Material Lot#:	2326
Starting Material Purity:	99.9934%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10012 ± 31 µg/mL

Density: 1.056 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10031 ± 67 µg/mL**
ICP Assay NIST SRM 3113 Lot Number: 190630

Assay Method #2 **10019 ± 32 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10000 ± 35 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	0.014660	M	Eu	<	0.000590	O	Na	0.007534	M	Se	<	0.019000	M	Zn	0.003461	
M	Al	< 0.024000	M	Fe	0.050905	M	Nb	<	0.000590	O	Si	0.075340	M	Zr	<	0.001200	
i	As	<	M	Ga	<	0.000590	M	Nd	<	0.000590	M	Sm	<	0.000590			
M	Au	< 0.004100	M	Gd	<	0.000590	O	Ni	0.427608	M	Sn	<	0.001200				
M	B	< 0.031000	M	Ge	<	0.003000	M	Os	<	0.000590	O	Sr	<	0.000260			
M	Ba	< 0.000590	M	Hf	<	0.000590	n	P	<		M	Ta	<	0.001200			
O	Be	< 0.001300	M	Hg	<	0.001800	M	Pb	0.003257	M	Tb	<	0.000590				
M	Bi	< 0.003000	M	Ho	<	0.000590	M	Pd	<	0.000590	M	Te	<	0.005300			
O	Ca	0.010588	M	In	<	0.001200	M	Pr	<	0.000590	M	Th	<	0.000590			
M	Cd	< 0.004700	M	Ir	<	0.001200	M	Pt	<	0.002400	M	Ti	<	0.014000			
M	Ce	< 0.000590	O	K	0.008144	M	Rb	<	0.000590	M	Tl	0.002647					
s	Co	<	M	La	<	0.000590	M	Re	<	0.000590	M	Tm	<	0.000590			
M	Cr	< 0.021000	O	Li	<	0.000130	M	Rh	<	0.000590	M	U	<	0.000590			
M	Cs	< 0.002400	M	Lu	<	0.000590	M	Ru	<	0.007100	O	V	<	0.000880			
M	Cu	0.189369	O	Mg	0.001893	n	S	<		M	W	<	0.000590				
M	Dy	< 0.000590	M	Mn	<	0.001800	M	Sb	<	0.003600	M	Y	<	0.000590			
M	Er	< 0.000590	M	Mo	<	0.002400	O	Sc	<	0.001600	M	Yb	<	0.000590			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 58.93 +2 6 $Co(H_2O)_6^{2+}$

Chemical Compatibility -Stable in HCl, HNO_3, H_2SO_4 ,HF, H_3PO_4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO_3 / LDPE container.

Co Containing Samples (Preparation and Solution) - Metal (soluble in HNO_3); Oxides (Soluble in HCl); Ores (dissolve in HCl / HNO_3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 59 amu	2 ppt	n/a	42Ca16O1H , 40Ar18O1H , 36Ar23Na, 43Ca16O, 24Mg35Cl
ICP-OES 228.616 nm	0.01/0.001 µg/mL	1	
ICP-OES 237.862 nm	0.01/0.002 µg/mL	1	W, Re, Al, Ta
ICP-OES 238.892 nm	0.01/0.002 µg/mL	1	Fe, W, Ta

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 04, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **August 04, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGAG10
Lot Number:	S2-AG712977
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Silver
Starting Material:	Ag Shot
Starting Material Lot#:	2289
Starting Material Purity:	99.9951%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10051 ± 30 µg/mL

Density: 1.056 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10051 ± 52 µg/mL**
ICP Assay NIST SRM 3151 Lot Number: 160729

Assay Method #2 **10051 ± 19 µg/mL**
Volhard NIST SRM 999c Lot Number: 999c

Assay Method #3 **10049 ± 31 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

s	Ag	<		M	Eu	<	0.000260	O	Na		0.003811	M	Se	<	0.003900	O	Zn		0.048146
M	Al		0.002688	O	Fe		0.006419	M	Nb	<	0.000260	O	Si		0.005215	M	Zr	<	0.000260
M	As	<	0.001100	M	Ga	<	0.000260	M	Nd	<	0.000260	M	Sm	<	0.000260				
M	Au	<	0.000260	M	Gd	<	0.000260	O	Ni		0.001765	M	Sn		0.020060				
O	B	<	0.004300	M	Ge	<	0.002300	M	Os	<	0.001100	O	Sr	<	0.000110				
M	Ba	<	0.000520	M	Hf	<	0.000260	O	P	<	0.017000	M	Ta	<	0.000260				
O	Be	<	0.001100	M	Hg	<	0.000770	M	Pb	<	0.003600	M	Tb	<	0.000260				
M	Bi		0.004814	M	Ho	<	0.000260	M	Pd		0.044134	M	Te	<	0.009000				
O	Ca		0.005215	M	In		0.003691	M	Pr	<	0.000260	M	Th	<	0.000260				
M	Cd	<	0.000260	M	Ir	<	0.000520	M	Pt	<	0.001100	O	Ti	<	0.000440				
M	Ce	<	0.002100	O	K	<	0.008700	M	Rb	<	0.001100	M	Tl	<	0.004100				
O	Co	<	0.000330	M	La	<	0.000260	M	Re	<	0.000260	M	Tm	<	0.000260				
O	Cr	<	0.002500	O	Li	<	0.000110	M	Rh	<	0.000520	M	U	<	0.000260				
M	Cs	<	0.002600	M	Lu	<	0.000260	M	Ru	<	0.000260	M	V	<	0.000260				
O	Cu		0.357085	O	Mg		0.001203	O	S	<	0.017000	M	W	<	0.000260				
M	Dy	<	0.000260	O	Mn	<	0.000220	M	Sb	<	0.014000	M	Y	<	0.000260				
M	Er	<	0.000260	M	Mo	<	0.000260	O	Sc	<	0.000220	M	Yb	<	0.000260				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 107.87 +1 6 $Ag(H_2O)_6^+$

Chemical Compatibility -Stable in HNO_3, and HF. Avoid basic media. Ag forms more insoluble salts than any other metal. It also is subject to photochemical reduction to the metal in HCl media although 10 µg/mL solutions in 10% HCl [$AgCl_{x1-x}$] are commonly used in the analytical laboratory. The most common solubility problems exist with arsenate, arsenite , bromide, chloride, iodide, carbonate , chromate, cyanide, iodate, oxalate, oxide, sulfate, sulfide, tartrate, and thiocyanate in aqueous media. The addition of nitric acid renders many of these salts soluble.

Stability - 2-100 ppb levels stable for 75+ days when mixed with equivalent levels of all other elements including the precious metals (where chloride is present) when in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO_3 / LDPE container.

Ag Containing Samples (Preparation and Solution) -Metal (Soluble in HNO_3); Oxides (Soluble in HNO_3); Ores (Digestion with conc. HNO_3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 107 amu	1 ppt	N/A	91Zr16O
ICP-OES 243.779 nm	0.12/0.01 µg/mL	1	Mn, Th, Ni, Rh
ICP-OES 328.068 nm	0.007/0.0007 µg/mL	1	Ce, Rh, V
ICP-OES 338.289 nm	0.013/0.001 µg/mL	1	Ce, Cr, Th

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 28, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **December 28, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Supervisor, Product Documentation

Certificate Approved By:

Michael Booth
Director, Technical

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCR(3)10
Lot Number:	S2-CR709784
Matrix:	10% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Chromium
Starting Material:	Cr Metal
Starting Material Lot#:	2328
Starting Material Purity:	99.9951%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10027 ± 41 µg/mL

Density: 1.072 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10027 ± 40 µg/mL**
ICP Assay NIST SRM 3112a Lot Number: 170630

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001700	M	Eu	<	0.003400	O	Na		0.090372	M	Se	<	0.012000	O	Zn	<	0.006100
M	Al		0.034916	O	Fe		0.246471	M	Nb	<	0.017000	n	Si	<		M	Zr	<	0.007800
M	As	<	0.028000	O	Ga	<	0.013000	M	Nd	<	0.013000	M	Sm	<	0.006900				
M	Au	<	0.001700	M	Gd	<	0.000560	M	Ni		0.016020	M	Sn		0.006983				
O	B	<	0.025000	O	Ge	<	0.014000	M	Os	<	0.000560	M	Sr		0.006367				
M	Ba	<	0.008900	M	Hf	<	0.000560	i	P	<		M	Ta	<	0.000560				
M	Be	<	0.013000	M	Hg	<	0.001700	M	Pb		0.010064	M	Tb	<	0.000560				
M	Bi	<	0.002300	M	Ho	<	0.000560	M	Pd	<	0.021000	M	Te	<	0.010000				
O	Ca		0.075995	M	In	<	0.000560	M	Pr	<	0.001700	M	Th	<	0.000560				
M	Cd	<	0.000560	M	Ir	<	0.000560	M	Pt	<	0.001200	O	Ti		0.013555				
M	Ce	<	0.001200	O	K		0.043132	i	Rb	<		M	Tl	<	0.000560				
M	Co	<	0.002600	M	La	<	0.001200	M	Re	<	0.001200	O	Tm	<	0.013000				
s	Cr	<		O	Li		0.000390	M	Rh	<	0.095000	M	U	<	0.000560				
M	Cs	<	0.007800	M	Lu	<	0.000560	M	Ru	<	0.087000	O	V		0.014993				
O	Cu		0.007599	O	Mg		0.000883	i	S	<		M	W	<	0.049000				
M	Dy	<	0.000560	M	Mn		0.008626	M	Sb	<	0.003400	M	Y	<	0.001700				
M	Er	<	0.019000	M	Mo	<	0.032000	M	Sc		0.003080	M	Yb	<	0.000560				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 52.00 +3 6 $Cr(H_2O)_6^{3+}$

Chemical Compatibility -Stable in HCl, HNO_3, H_2SO_4, HF, H_3PO_4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO_3 / LDPE container.

Cr3 Containing Samples (Preparation and Solution) -Metal (soluble in HCl); Oxides/Ores (Chrome ore/oxides are very difficult to dissolve. The following procedures [A-D] are commonly used: A. Fusion with $KHSO_4$ and extraction with hot KCl. The residue fused with Na_2CO_3 and $KClO_3$, 3:1. B. Fusion with $NaKSO_4$ and NaF 2:1, C. Fusion with magnesia or lime and sodium or potassium carbonates, 4:1. D. Fusion with Na_2O_2 or NaOH and KNO_3 or NaOH and Na_2O_2. Nickel, iron, copper, or silver crucibles should be used for D. Platinum may be used for A, <, C); Organic Matrices (ash at 4500C followed by one of the fusion methods above or sulfuric/hydrogen peroxide acid digestions may be applicable to non oxide containing samples).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 52 amu	40 ppt	N/A	36S16O, 36Ar16O - The 50Cr, 53Cr, 54Cr lines suffer from many more potential interferences from sulfur, chlorine and argon compounds of oxygen, nitrogen and carbon.
ICP-OES 205.552 nm	0.006/0.0008 µg/mL	1	Os
ICP-OES 276.654 nm	0.01/0.001 µg/mL	1	Cu, Ta, V
ICP-OES 284.325 nm	0.008/0.0007 µg/mL	1	

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

October 26, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **October 26, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGNI10
Lot Number:	P2-NI686384
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Nickel
Starting Material:	Ni Metal
Starting Material Lot#:	2277 and 2282
Starting Material Purity:	99.9992%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9979 ± 30 µg/mL

Density: 1.038 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9971 ± 54 µg/mL**
ICP Assay NIST SRM 3136 Lot Number: 120619

Assay Method #2 **9970 ± 32 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **9993 ± 33 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag		0.002606	M	Eu	<	0.001100	O	Na		0.004965	O	Se	<	0.067000	M	Zn		0.006578
M	Al	<	0.013000	O	Fe		0.018618	M	Nb	<	0.001100	O	Si		0.010923	M	Zr	<	0.001100
O	As	<	0.067000	M	Ga	<	0.001100	M	Nd	<	0.001100	M	Sm	<	0.001100				
M	Au	<	0.002100	M	Gd	<	0.001100	s	Ni	<		M	Sn	<	0.016000				
M	B	<	0.017000	M	Ge	<	0.004200	M	Os		0.002110	O	Sr	<	0.000940				
M	Ba	<	0.001100	M	Hf	<	0.001100	i	P	<		M	Ta	<	0.001100				
O	Be	<	0.000410	M	Hg		0.014895	M	Pb		0.006578	M	Tb	<	0.001100				
M	Bi	<	0.004200	M	Ho	<	0.001100	M	Pd	<	0.001100	M	Te	<	0.015000				
O	Ca		0.003351	M	In	<	0.001100	M	Pr	<	0.001100	M	Th	<	0.001100				
M	Cd		0.001365	M	Ir		0.004716	M	Pt	<	0.001100	M	Ti	<	0.004200				
M	Ce	<	0.001100	O	K		0.004716	M	Rb	<	0.001100	M	Tl	<	0.001100				
O	Co		0.017377	M	La	<	0.001100	M	Re		0.001737	M	Tm	<	0.001100				
O	Cr	<	0.006700	O	Li	<	0.000140	M	Rh	<	0.006300	M	U	<	0.001100				
M	Cs	<	0.007300	M	Lu	<	0.001100	M	Ru	<	0.019000	M	V	<	0.002100				
M	Cu		0.004096	O	Mg		0.000372	i	S	<		M	W	<	0.006300				
M	Dy	<	0.001100	O	Mn	<	0.001900	M	Sb		0.005833	O	Y	<	0.000540				
M	Er	<	0.001100	M	Mo	<	0.008400	M	Sc	<	0.002100	M	Yb	<	0.001100				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 58.69 +2 6 Ni(H2O)62+

Chemical Compatibility -Stable in HCl, HNO3, H2SO4 ,HF, H3PO4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.

Ni Containing Samples (Preparation and Solution) -Metal (Soluble in HNO3); Oxides (Soluble in HCl); Ores (Dissolve in HCl / HNO3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 60 amu	100 ppt	n/a	43Ca16O1H , 44Ca16O, 23Na37Cl
ICP-OES 221.647 nm	0.01 / 0.0009 µg/mL	1	Si
ICP-OES 231.604 nm	0.02 / 0.002 µg/mL	1	Sb, Ta, Co
ICP-OES 232.003 nm	0.02 / 0.006 µg/mL	1	Cr, Re, Os, Nb, Ag, Pt, Fe

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 02, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **December 02, 2023**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

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Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGV10
Lot Number:	S2-V711005
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Vanadium
Starting Material:	Vanadium Pentoxide
Starting Material Lot#:	1782
Starting Material Purity:	99.9877%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10014 ± 30 µg/mL

Density: 1.104 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10017 ± 42 µg/mL**
ICP Assay NIST SRM 3165 Lot Number: 160906

Assay Method #2 **10013 ± 30 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000110	M	Eu	<	0.000110	O	Na		0.120000	M	Se	<	0.009400	M	Zn		0.009400
O	Al		0.120000	O	Fe		0.460000	M	Nb	<	0.001300	O	Si		0.270000	M	Zr	<	0.002900
M	As	<	0.000210	M	Ga	<	0.009300	M	Nd	<	0.000610	M	Sm	<	0.000110				
M	Au	<	0.004700	M	Gd	<	0.000110	M	Ni		0.012000	M	Sn		0.003900				
M	B		0.051000	M	Ge	<	0.000410	M	Os	<	0.000110	O	Sr		0.007100				
M	Ba		0.003600	M	Hf	<	0.000110	O	P	<	0.034000	M	Ta	<	0.000110				
O	Be	<	0.000560	M	Hg	<	0.000410	M	Pb		0.001400	M	Tb	<	0.000110				
M	Bi	<	0.000210	M	Ho	<	0.000110	M	Pd	<	0.000410	M	Te	<	0.000110				
O	Ca		0.730000	M	In	<	0.000110	M	Pr	<	0.000110	M	Th	<	0.000210				
M	Cd	<	0.000610	M	Ir	<	0.000110	M	Pt	<	0.000110	M	Ti		0.017000				
M	Ce	<	0.000610	M	K		0.052000	M	Rb	<	0.000310	M	Tl	<	0.000110				
M	Co	<	0.001300	M	La	<	0.000410	M	Re		0.001700	M	Tm	<	0.000110				
O	Cr		0.170000	M	Li	<	0.000810	M	Rh	<	0.000110	M	U	<	0.000410				
M	Cs		0.005600	M	Lu	<	0.000110	M	Ru	<	0.000110	s	V	<					
M	Cu	<	0.001300	M	Mg		0.053000	i	S	<		M	W		0.002000				
M	Dy	<	0.000110	M	Mn		0.007900	M	Sb		0.078000	M	Y	<	0.000110				
M	Er	<	0.000110	M	Mo		0.094000	M	Sc	<	0.000410	M	Yb	<	0.000110				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 50.94 +5 6 H2V10O284-

Chemical Compatibility -Soluble in HCl, HNO3, H2SO4, HF, H3PO4 and strong basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.

V Containing Samples (Preparation and Solution) -Metal (Fusion with NaOH or KOH in Ni0 or Na2CO3 / KNO3); Oxides (V2O3 - use HCl, V2O4 - use HCl or HNO3, V2O5 - use concentrated acids); Ores (Na2CO3 / KNO3 in Pt0 caution - nitrates attack Pto followed by water extraction of fuseate); Organic Matrices (Ash at 450 EC followed by dissolving according to V2O5 above) .

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 51 amu	4 ppt	N/A	34S16O1H, 35Cl16O, 38Ar13C, 36Ar15N, 36Ar14N1H, 37Cl14N,36S15N, 33S18O, 34S17O, 102Ru+2,02Pd+2
ICP-OES 290.882 nm	0.008 / 0.0008 µg/mL	1	Hf, Nb
ICP-OES 292.402 nm	0.006 / 0.001 µg/mL	1	Th
ICP-OES 309.311 nm	0.005 / 0.001 µg/mL	1	Mg, U, Th

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 28, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **December 28, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

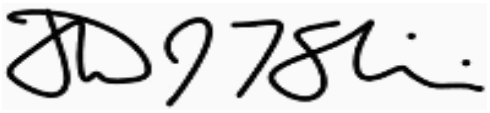
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGAL10
Lot Number:	T2-AL716102
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Aluminum
Starting Material:	Aluminum Nitrate Nonahydrate
Starting Material Lot#:	2460
Starting Material Purity:	99.9938%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10049 ± 31 µg/mL

Density: 1.087 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10059 ± 40 µg/mL**
ICP Assay NIST SRM 3101a Lot Number: 140903

Assay Method #2 **10044 ± 26 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10049 ± 35 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.002100	M	Eu	<	0.002100	O	Na		0.352819	M	Se	<	0.005200	M	Zn	0.006018
s	Al	<		O	Fe		0.074714	M	Nb	<	0.000520	O	Si		0.017848	O	Zr	0.004358
M	As		0.008716	O	Ga		0.112072	M	Nd	<	0.000520	M	Sm	<	0.000520			
M	Au	<	0.008400	M	Gd	<	0.001100	O	Ni	<	0.006000	M	Sn		0.000747			
O	B	<	0.014000	M	Ge	<	0.005200	M	Os	<	0.000650	O	Sr		0.000518			
O	Ba		0.012867	M	Hf	<	0.004100	n	P	<		M	Ta	<	0.000520			
O	Be	<	0.000270	M	Hg	<	0.002000	M	Pb		0.002282	M	Tb	<	0.000520			
M	Bi		0.001930	M	Ho	<	0.000520	M	Pd	<	0.000520	M	Te	<	0.001100			
O	Ca		0.076790	M	In	<	0.002100	M	Pr	<	0.000520	M	Th	<	0.000520			
M	Cd	<	0.000520	M	Ir	<	0.000650	M	Pt	<	0.000520	O	Ti		0.001930			
M	Ce	<	0.001100	O	K		0.043583	M	Rb	<	0.000520	M	Tl	<	0.000520			
O	Co	<	0.005400	M	La	<	0.002100	M	Re	<	0.000520	M	Tm	<	0.000520			
O	Cr		0.006018	O	Li		0.000112	M	Rh	<	0.000520	M	U	<	0.000520			
M	Cs		0.000643	M	Lu	<	0.000520	M	Ru	<	0.002000	M	V		0.001286			
O	Cu	<	0.008300	O	Mg		0.068488	i	S	<		M	W	<	0.009800			
M	Dy	<	0.002100	O	Mn		0.000913	M	Sb	<	0.003100	M	Y	<	0.001100			
M	Er	<	0.000520	M	Mo		0.005396	O	Sc	<	0.000950	M	Yb	<	0.000520			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 26.98 +3 6 Al(H2O)6+3
Chemical Compatibility -Soluble in HCl, HNO3, v F and v 2SO4. Avoid neutral media. Soluble in strongly basic NaOH forming the Al(OH)4(H2O)21- species. Stable with most metals and inorganic anions. The phosphate is insoluble in water and only slightly soluble in acid.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.
Al Containing Samples (Preparation and Solution) -Metal (Best dissolved in HCl / HNO3); a- Al2O3 (Na2CO3 fusion in Pt0);
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 27 amu	30 ppt	N/A	12C15N, 13C14N, 1H12C14N, 11B16O, 54Cr2+, 54Fe2+
ICP-OES 167.078 nm	0.1/0.009 µg/mL	1	Fe
ICP-OES 394.401 nm	0.05/0.006 µg/mL	1	U, Ce
ICP-OES 396.152 nm	0.03/0.006 µg/mL	1	Mo, Zr, Ce

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 22, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **March 22, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

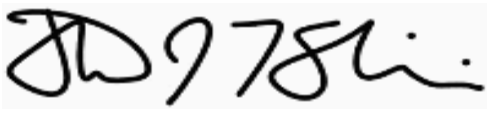
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGK10
Lot Number:	S2-K711973
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Potassium
Starting Material:	KNO3
Starting Material Lot#:	2313
Starting Material Purity:	99.9971%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9992 ± 30 µg/mL

Density: 1.024 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9987 ± 24 µg/mL**
Gravimetric NIST SRM Lot Number: See Sec. 4.2

Assay Method #2 **10004 ± 84 µg/mL**
ICP Assay NIST SRM 3141a Lot Number: 140813

Assay Method #3 **10007 ± 45 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001400	M	Eu	<	0.000660	O	Na		0.246220	M	Se	<	0.007900	O	Zn		0.018056
O	Al		0.001592	O	Fe		0.005909	M	Nb	<	0.000660	O	Si		0.011490	O	Zr	<	0.001600
M	As	<	0.005300	M	Ga	<	0.000660	M	Nd	<	0.000660	M	Sm	<	0.000660				
M	Au	<	0.002000	M	Gd	<	0.000660	O	Ni	<	0.004900	M	Sn	<	0.000660				
O	B	<	0.005600	M	Ge	<	0.002000	M	Os	<	0.003300	O	Sr		0.000055				
O	Ba	<	0.000860	M	Hf	<	0.000660	O	P	<	0.032000	M	Ta	<	0.000660				
O	Be	<	0.000082	M	Hg	<	0.002000	M	Pb	<	0.002300	M	Tb	<	0.000660				
M	Bi	<	0.006600	M	Ho	<	0.000660	M	Pd	<	0.000660	M	Te	<	0.017000				
O	Ca		0.031187	M	In	<	0.000660	M	Pr	<	0.000660	M	Th	<	0.000660				
O	Cd	<	0.000450	M	Ir	<	0.000660	M	Pt	<	0.002700	M	Ti	<	0.000660				
M	Ce	<	0.000660	s	K	<		M	Rb		0.476026	M	Tl	<	0.000660				
O	Co	<	0.000780	M	La	<	0.000660	M	Re	<	0.000660	M	Tm	<	0.000660				
O	Cr		0.000541	O	Li	<	0.000084	M	Rh	<	0.000660	M	U	<	0.000660				
M	Cs	<	0.000660	M	Lu	<	0.000660	M	Ru	<	0.000660	O	V	<	0.001100				
M	Cu	<	0.002700	O	Mg		0.006237	O	S		0.027905	M	W	<	0.000660				
M	Dy	<	0.000660	O	Mn		0.000476	M	Sb	<	0.000660	M	Y	<	0.000660				
M	Er	<	0.000660	M	Mo	<	0.000660	O	Sc	<	0.000340	O	Yb	<	0.000270				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 39.10 +1 (6) K+(aq)
Chemical Compatibility -Soluble in HCl, HNO3, H2SO4 and HF aqueous matrices. Avoid use of HClO4 due to insolubility of the perchlorate. Stable with all metals and inorganic anions except ClO4-.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.
K Containing Samples (Preparation and Solution) - Metal (Dissolves very rapidly in water); Ores (Sodium carbonate fusion in Pt0 followed by HCl dissolution-blank levels of K in sodium carbonate critical); Organic Matrices (Sulfuric/peroxide digestion)
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 39 amu	10 ppt	n/a	38ArH, 23Na16O, 78Se
ICP-OES 404.721 nm	1.1 / 0.05 µg/mL	1	U, Ce
ICP-OES 766.490 nm	0.4 / 0.001 µg/mL	1	2nd order radiation from R.E.s on some optical designs
ICP-OES 771.531 nm	1.0 / 0.03 µg/mL	1	2nd order radiation from R.E.s on some optical designs

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 10, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **December 10, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

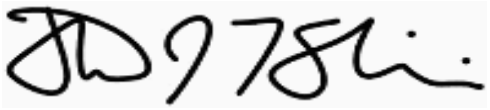
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Christiansburg, VA 24073 USA
inorganicventures.com

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1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGMG10
Lot Number:	S2-MG704239
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Magnesium
Starting Material:	Magnesium Metal
Starting Material Lot#:	2168
Starting Material Purity:	99.9984%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10053 ± 30 µg/mL

Density: 1.053 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10022 ± 62 µg/mL**
ICP Assay NIST SRM 3131a Lot Number: 140110

Assay Method #2 **10078 ± 26 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10033 ± 26 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

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k = coverage factor = 2

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4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

O	Ag		0.002106	M	Eu	<	0.000910	O	Na		0.071075	O	Se	<	0.048000	O	Zn		0.003299
M	Al		0.003553	M	Fe		0.002538	M	Nb	<	0.000460	O	Si	<	0.032000	O	Zr	<	0.002700
M	As	<	0.001400	M	Ga	<	0.000460	M	Nd	<	0.000910	M	Sm	<	0.000460				
M	Au	<	0.001400	M	Gd	<	0.000460	O	Ni	<	0.001600	M	Sn	<	0.002300				
O	B		0.006853	M	Ge	<	0.001400	M	Os	<	0.000460	O	Sr		0.000279				
O	Ba		0.000964	M	Hf	<	0.000460	O	P		0.015230	M	Ta	<	0.000460				
O	Be	<	0.000120	M	Hg	<	0.000460	M	Pb	<	0.000460	M	Tb	<	0.000460				
M	Bi	<	0.000460	M	Ho	<	0.000460	M	Pd	<	0.003200	M	Te	<	0.007300				
O	Ca		0.053306	M	In	<	0.000460	M	Pr	<	0.000460	M	Th	<	0.000460				
O	Cd	<	0.000360	M	Ir	<	0.000460	M	Pt	<	0.001900	O	Ti	<	0.001700				
M	Ce	<	0.002300	M	K		0.048229	M	Rb		0.002411	M	Tl		0.003046				
M	Co	<	0.000910	M	La	<	0.002800	M	Re	<	0.000460	M	Tm	<	0.000460				
M	Cr	<	0.002300	O	Li		0.027922	M	Rh	<	0.000460	M	U	<	0.000460				
M	Cs		0.001040	M	Lu	<	0.000460	M	Ru	<	0.000460	M	V	<	0.000460				
O	Cu	<	0.003000	s	Mg	<		O	S	<	0.190000	M	W	<	0.000460				
M	Dy	<	0.000460	O	Mn		0.015230	M	Sb		0.020814	O	Y	<	0.000720				
M	Er	<	0.000460	M	Mo	<	0.000910	O	Sc	<	0.000480	M	Yb	<	0.000460				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 24.31 +2 6 Mg(H2O)6+2
Chemical Compatibility -Soluble in HCl, HNO3, and H2SO4 avoid HF, H3PO4 and neutral to basic media. Stable with most metals and inorganic anions forming insoluble silicates, carbonates, hydroxides, oxides, and tungstates in neutral and slightly acidic media.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-10% HNO3 / LDPE container.
Mg Containing Samples (Preparation and Solution) -Metal (Best dissolved in diluted HNO3); Oxide (Readily soluble in above compatible aqueous acidic solutions); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Sulfuric / peroxide digestion or nitric / sulfuric / perchloric acid decomposition, or dry ash and dissolution in dilute HCl).
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 24 amu	42 ppt	n/a	7Li17O, 48Ti+2 , 48Ca+2
ICP-OES 279.553 nm	0.0002 / 0.00003 µg/mL	1	Th
ICP-OES 280.270 nm	0.0003 / 0.00005 µg/mL	1	U, V
ICP-OES 285.213 nm	0.002 / 0.00003 µg/mL	1	U, Hf, Cr, Zr

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 23, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **April 23, 2025**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCA10
Lot Number:	T2-CA716103
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Calcium
Starting Material:	CaCO3
Starting Material Lot#:	2472
Starting Material Purity:	99.9950%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10005 ± 30 µg/mL

Density: 1.039 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10005 ± 45 µg/mL**
ICP Assay NIST SRM 3109a Lot Number: 130213

Assay Method #2 **10005 ± 25 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10005 ± 31 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001200	M	Eu	<	0.001200	O	Na		0.006112	M	Se	<	0.024000	M	Zn		0.005362
M	Al		0.065419	O	Fe		0.009115	M	Nb	<	0.001200	O	Si		0.139417	O	Zr	<	0.006700
O	As	<	0.013000	M	Ga	<	0.015000	M	Nd	<	0.020000	M	Sm	<	0.001200				
M	Au	<	0.017000	M	Gd	<	0.004800	O	Ni		0.000793	M	Sn	<	0.003600				
O	B		0.001179	M	Ge	<	0.003600	M	Os	<	0.001200	M	Sr		0.081505				
O	Ba		0.002788	M	Hf	<	0.001200	O	P	<	0.041000	M	Ta	<	0.001200				
O	Be	<	0.000410	M	Hg	<	0.004800	M	Pb		0.001608	M	Tb	<	0.001200				
M	Bi		0.001608	M	Ho	<	0.001200	M	Pd	<	0.001200	M	Te	<	0.003600				
s	Ca	<		M	In	<	0.001200	M	Pr		0.000257	M	Th	<	0.001200				
O	Cd	<	0.001300	M	Ir	<	0.001200	M	Pt	<	0.003600	O	Ti	<	0.001900				
M	Ce		0.001029	O	K		0.009759	M	Rb	<	0.001200	M	Tl	<	0.001200				
O	Co		0.000418	M	La		0.001823	M	Re	<	0.001200	M	Tm	<	0.001200				
O	Cr		0.003324	O	Li	<	0.007300	M	Rh	<	0.001200	M	U		0.002144				
M	Cs		0.007399	M	Lu		0.000128	M	Ru	<	0.001200	M	V		0.001286				
O	Cu	<	0.011000	M	Mg		1.286934	O	S		0.055767	O	W	<	0.024000				
M	Dy	<	0.002400	O	Mn		0.004611	M	Sb	<	0.009600	O	Y		0.000536				
M	Er	<	0.002400	M	Mo		0.003539	O	Sc	<	0.001400	M	Yb	<	0.001200				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 40.08 +2 6 Ca(H2O)6+2
Chemical Compatibility - Soluble in HCl and HNO3. Avoid H2SO4, vF, v3PO4 and neutral to basic media. Stable with most metals and inorganic anions forming insoluble silicate, carbonate, hydroxide, oxide, fluoride, sulfate, oxalate, chromate, arsenate, and tungstate in neutral aqueous media.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-10% HNO3 / LDPE container.
Ca Containing Samples)Preparation and Solution) -Metal (best dissolved in diluted HNO3); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (dry ash and dissolution in dilute HCl. Do not heat when dissolving to avoid precipitation of SiO2). The oxide, hydroxide, carbonate, phosphate, and fluoride of calcium are soluble in % levels of HCl or HNO3. The sulfates (gypsum, anhydrite, etc.), certain silicates, and complex compounds require fusion with Na2CO3 followed by HCl / water dissolution. Note that contamination is a very real problem when analyzing for trace levels.
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 44 amu	1200 ppt	n/a	16O212C, 28Si16O, 88Sr
ICP-OES 393.366 nm	0.0002 / 0.00004 µg/mL	1	U, Ce
ICP-OES 396.847 nm	0.0005 / 0.00006 µg/mL	1	Th
ICP-OES 422.673 nm	0.01 / 0.001 µg/mL	1	Ge

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 14, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **March 14, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

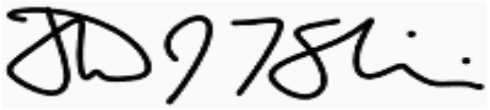
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Christiansburg, VA 24073 USA
inorganicventures.com

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F: 540-585-3012
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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGNA10
Lot Number:	T2-NA717221
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Sodium
Starting Material:	Na2CO3
Starting Material Lot#:	2358 and 2453
Starting Material Purity:	99.9977%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9977 ± 30 µg/mL

Density: 1.033 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9974 ± 18 µg/mL**
Gravimetric NIST SRM Lot Number: See Sec. 4.2

Assay Method #2 **9977 ± 34 µg/mL**
ICP Assay NIST SRM 3152a Lot Number: 200413

Assay Method #3 **9987 ± 31 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000930	M	Eu	<	0.000930	s	Na	<		M	Se	<	0.003800	O	Zn	0.000138
M	Al		0.004409	O	Fe		0.002393	M	Nb	<	0.000930	O	Si		0.056696	O	Zr	< 0.003200
O	As	<	0.023000	M	Ga	<	0.000930	M	Nd	<	0.000930	M	Sm	<	0.000930			
O	Au	<	0.004100	M	Gd	<	0.000930	O	Ni	<	0.003000	M	Sn	<	0.002800			
O	B		0.001385	M	Ge	<	0.004700	M	Os	<	0.000930	O	Sr		0.000251			
M	Ba		0.004031	M	Hf	<	0.000930	O	P		0.010205	M	Ta	<	0.000930			
O	Be	<	0.000130	M	Hg	<	0.000930	M	Pb	<	0.000930	M	Tb	<	0.000930			
M	Bi	<	0.000930	M	Ho	<	0.000930	M	Pd	<	0.000930	M	Te	<	0.001900			
O	Ca		0.176388	M	In	<	0.000930	M	Pr	<	0.000930	M	Th		0.000352			
O	Cd	<	0.000860	M	Ir	<	0.000930	M	Pt	<	0.000930	O	Ti		0.000592			
M	Ce	<	0.001900	O	K		0.302380	M	Rb	<	0.000930	M	Tl	<	0.000930			
O	Co	<	0.001800	O	La	<	0.002100	M	Re	<	0.000930	M	Tm	<	0.000930			
M	Cr	<	0.002800	O	Li		0.000031	M	Rh	<	0.000930	M	U	<	0.000930			
M	Cs	<	0.000930	M	Lu	<	0.000930	M	Ru	<	0.001900	O	V	<	0.001600			
O	Cu	<	0.003900	O	Mg		0.026458	O	S		0.040317	O	W	<	0.028000			
M	Dy	<	0.000930	O	Mn	<	0.000740	M	Sb	<	0.000930	O	Y	<	0.000860			
M	Er	<	0.000930	O	Mo	<	0.003600	O	Sc	<	0.000610	O	Yb	<	0.000250			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 22.99 +1 (6) Na+(aq) largely ionic in nature

Chemical Compatibility -Soluble in HCl, HNO3, H2SO4 and HF aqueous matrices. Stable with all metals and inorganic anions.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.

Na Containing Samples (Preparation and Solution) - Metal (Dissolves very rapidly in water); Ores (Lithium carbonate fusion in graphite crucible followed by HCl dissolution - blank levels of Na in lithium carbonate critical); Organic Matrices (Sulfuric / peroxide digestion or nitric/sulfuric/perchloric acid decomposition).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 23 amu	310 ppt	n/a	46Ti+2 , 46Ca+2
ICP-OES 330.237 nm	2.0 / 0.09 µg/mL	1	Pd, Zn
ICP-OES 588.995 nm	0.03 / 0.006 µg/mL	1	2nd order radiation from R.E.s on some optical designs
ICP-OES 589.595 nm	0.07 / 0.00009 µg/mL	1	2nd order radiation from R.E.s on some optical designs

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 20, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **April 20, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

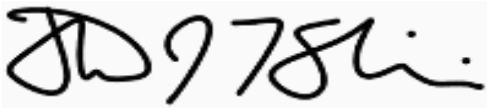
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
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info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGU1
Lot Number:	S2-U707914
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Uranium
Starting Material:	Uranyl Nitrate Hexahydrate
Starting Material Lot#:	P2-2322
Starting Material Purity:	99.9997%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 999 ± 5 µg/mL

Density: 1.010 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **998 ± 5 µg/mL**
ICP Assay NIST SRM 3164 Lot Number: 080521

Assay Method #2 **1001 ± 6 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope	Atom %
Uranium 238U	99.8 ± 0.1
Uranium 235U	0.19 ± 0.05

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000270	M	Eu	<	0.000270	M	Na	<	0.011000	M	Se	<	0.009300	M	Zn	0.002358
M	Al	<	0.011000	M	Fe		0.003222	M	Nb	<	0.000270	M	Si	<	0.160000	M	Zr	< 0.001100
M	As	<	0.002400	M	Ga	<	0.000270	M	Nd	<	0.000270	M	Sm	<	0.000270			
M	Au	<	0.000270	M	Gd	<	0.000270	M	Ni	<	0.020000	M	Sn	<	0.011000			
M	B	<	0.000270	M	Ge	<	0.000800	M	Os	<	0.001900	M	Sr	<	0.000270			
M	Ba	<	0.003800	M	Hf	<	0.000270	i	P	<		M	Ta	<	0.000270			
M	Be	<	0.000270	M	Hg	<	0.000540	M	Pb	<	0.002200	M	Tb	<	0.000270			
M	Bi	<	0.000270	M	Ho	<	0.000270	M	Pd	<	0.000540	M	Te	<	0.003800			
M	Ca	<	0.140000	M	In	<	0.000270	M	Pr	<	0.000270	M	Th		0.000129			
M	Cd	<	0.000270	M	Ir	<	0.000270	M	Pt	<	0.000270	M	Ti	<	0.002700			
M	Ce	<	0.000540	O	K	<	0.250000	M	Rb	<	0.000800	M	Tl	<	0.000270			
M	Co	<	0.000800	M	La		0.000117	M	Re	<	0.064000	M	Tm	<	0.000270			
M	Cr		0.000943	M	Li	<	0.003000	M	Rh	<	0.000270	s	U	<				
M	Cs		0.000106	M	Lu	<	0.000270	M	Ru	<	0.000540	M	V	<	0.000540			
M	Cu	<	0.001100	M	Mg	<	0.003000	i	S	<		M	W	<	0.000540			
M	Dy	<	0.000270	M	Mn	<	0.006900	M	Sb	<	0.000270	M	Y	<	0.000270			
M	Er	<	0.000270	M	Mo	<	0.006400	M	Sc	<	0.000540	M	Yb	<	0.000270			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 238.03 +6 8 UO22+(uranyl)
Chemical Compatibility - Soluble in HCl and HNO3. Avoid H3PO4. H2SO4 and HF matrices should not be a problem depending upon [U]. Although the UO22+ ion is distinctly basic, any U+4 will precipitate in basic media. UO22+salts are generally soluble in water and UO22+ is stable with most metals and inorganic anions. The uranyl phosphate is insoluble in water. UF4 and UF6 are water soluble.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.
U Containing Samples (Preparation and Solution) -Metal (Dissolves rapidly in HCl and HNO3); Oxide (Soluble in HNO3); Ores (Digest for 1-2 hours with 1 gram of ore to 30 mL 1:1 HNO3. Silica insolubles are removed by filtration after bringing the sample to fumes with conc. H2SO4.)
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 238 amu	2 ppt	N/A	206Pb16O2
ICP-OES 263.553 nm	0.3 / 0.01 µg/mL	1	Ce, Ir, Th, Rh, W, Zr, Ta, Ti, V, Hf, Fe, Re, Ru
ICP-OES 367.007 nm	0.3 / 0.02 µg/mL	1	Th, Ce
ICP-OES 385.958 nm	0.3 / 0.01 µg/mL	1	Th, Fe

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 28, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **August 28, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	AR-ICVMS-2
Lot Number:	T2-MEB719895
Matrix:	3% (v/v) HNO3 tr. HF
Value / Analyte(s):	2.5 µg/mL ea: Molybdenum, Antimony

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	**2.499 ± 0.015 µg/mL**	**Molybdenum, Mo**	**2.500 ± 0.017 µg/mL**

Density: 1.014 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Mo	ICP Assay	3134	130418
Mo	Calculated		See Sec. 4.2
Sb	ICP Assay	3102a	140911
Sb	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 06, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **June 06, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

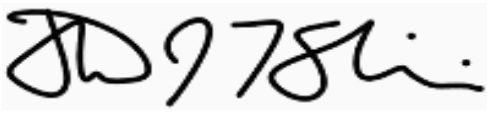
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
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1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	AR-ICVMS-3
Lot Number:	T2-MEB719896
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	250 µg/mL ea:

Aluminum, Calcium,
Iron, Potassium,
Magnesium, Sodium,

4 µg/mL ea:
Selenium,

2.5 µg/mL ea:

Thorium,	Thallium,
Uranium,	Vanadium,
Zinc,	Manganese,
Cadmium,	Cobalt,
Chromium,	Copper,
Arsenic,	Barium,
Beryllium,	Nickel,
Lead,	Silver

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	250.0 ± 0.9 µg/mL	Arsenic, As	2.500 ± 0.018 µg/mL
Barium, Ba	2.501 ± 0.013 µg/mL	Beryllium, Be	2.501 ± 0.015 µg/mL
Cadmium, Cd	2.501 ± 0.013 µg/mL	Calcium, Ca	250.0 ± 1.3 µg/mL
Chromium, Cr	2.500 ± 0.015 µg/mL	Cobalt, Co	2.500 ± 0.014 µg/mL
Copper, Cu	2.500 ± 0.014 µg/mL	Iron, Fe	250.0 ± 1.0 µg/mL
Lead, Pb	2.500 ± 0.013 µg/mL	Magnesium, Mg	250.0 ± 1.3 µg/mL
Manganese, Mn	2.500 ± 0.014 µg/mL	Nickel, Ni	2.500 ± 0.014 µg/mL
Potassium, K	250.0 ± 1.2 µg/mL	Selenium, Se	4.002 ± 0.024 µg/mL
Silver, Ag	2.501 ± 0.017 µg/mL	Sodium, Na	250.0 ± 1.2 µg/mL
Thallium, Tl	2.500 ± 0.017 µg/mL	Thorium, Th	2.499 ± 0.013 µg/mL
Uranium, U	2.501 ± 0.015 µg/mL	Vanadium, V	2.500 ± 0.014 µg/mL
Zinc, Zn	2.500 ± 0.014 µg/mL		

Density: 1.042 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Ag	Calculated		See Sec. 4.2
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
Ba	ICP Assay	3104a	140909
Ba	Calculated		See Sec. 4.2
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Cd	Calculated		See Sec. 4.2
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Co	Calculated		See Sec. 4.2
Cr	ICP Assay	3112a	170630
Cr	Calculated		See Sec. 4.2
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Cu	Calculated		See Sec. 4.2
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Mn	Calculated		See Sec. 4.2
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Ni	Calculated		See Sec. 4.2
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Pb	Calculated		See Sec. 4.2
Se	ICP Assay	3149	100901
Se	Calculated		See Sec. 4.2
Th	EDTA	928	928
Th	Calculated		See Sec. 4.2
Tl	ICP Assay	3158	151215
Tl	Calculated		See Sec. 4.2
U	ICP Assay	3164	080521
U	Calculated		See Sec. 4.2

V	ICP Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928
Zn	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope	Atom %
Uranium 238U	99.8 ± 0.1
Uranium 235U	0.19 ± 0.05

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Note: This solution contains Silver (Ag), please refer to our Sample Preparation Guide for more information.

https://www.inorganicventures.com/sample-preparation-guide/samples-containing-silver

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 06, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **June 06, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

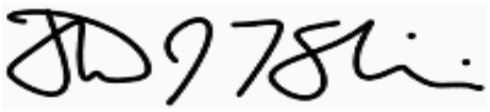
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	AR-6020ICS-0A10
Lot Number:	T2-MEB719898
Matrix:	1.4% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Chloride,
	200 µg/mL ea: Carbon,
	100 µg/mL ea: Calcium, Aluminum, Iron, Potassium, Magnesium, Sodium, Phosphorus, Sulfur,
	2 µg/mL ea: Titanium, Molybdenum

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	**100.0 ± 0.4 µg/mL**	**Calcium, Ca**	**100.0 ± 0.5 µg/mL**
Carbon, C	**200.1 ± 0.5 µg/mL**	**Chloride, Cl**	**1 000 ± 5 µg/mL**
Iron, Fe	**100.0 ± 0.5 µg/mL**	**Magnesium, Mg**	**100.0 ± 0.5 µg/mL**
Molybdenum, Mo	**2.001 ± 0.014 µg/mL**	**Phosphorus, P**	**100.0 ± 0.6 µg/mL**
Potassium, K	**100.0 ± 0.5 µg/mL**	**Sodium, Na**	**100.0 ± 0.5 µg/mL**
Sulfur, S	**100.0 ± 0.5 µg/mL**	**Titanium, Ti**	**2.001 ± 0.015 µg/mL**

Density: 1.009 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
C	Acidimetric	84L	84L
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cl	Acidimetric	84L	84L
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mo	ICP Assay	3134	130418
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
S	Acidimetric	84L	84L
S	ICP Assay	traceable to 3154	P2-S680745
Ti	ICP Assay	3162a	130925

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 07, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **June 07, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

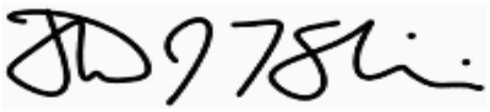
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6020B UCT-KED

Total Metals

LDW23-SC1150B

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23B0276-01 C	SDG:	23B0276
Sampled:	12/14/22 09:03	Prepared:	02/24/23 16:23	File ID:	XDT_m2230306-175
% Solids:	63.20	Preparation:	SWN EPA 3050B	Analyzed:	03/07/23 03:29
Batch:	BLB0518	Sequence:	SLC0078	Initial/Final:	1.034 g Wet / 50 mL
Instrument:	ICPMS1			Calibration:	GC00021

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic	8.18	20	0.06	0.31	
7440-43-9	Cadmium	0.26	20	0.05	0.15	
7440-50-8	Copper	37.0	20	0.27	0.77	
7440-66-6	Zinc	77.2	20	4.5	9.2	

PREPARATION BATCH SUMMARY

EPA 6020B UCT-KED

Laboratory:	Analytical Resources, LLC			SDG:	23B0276
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Batch:	BLB0518	Batch Matrix:	Solid	Preparation:	SWN EPA 3050B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SC1150B	23B0276-01	XDT_m2230306-175	02/24/23 16:23	
Blank	BLB0518-BLK1	XDT_m2230301-060	02/24/23 16:23	
Blank	BLB0518-BLK2	XDT_m2230306-081	02/24/23 16:23	Added 3/7/2023 by MCB
LCS	BLB0518-BS1	XDT_m2230301-061	02/24/23 16:23	
LCS	BLB0518-BS2	XDT_m2230306-082	02/24/23 16:23	Added 3/7/2023 by MCB

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Digestion Log

Analyst: ML Date: 02/24/23 Time: 1100-1623 Balance ID: 16

Matrix: Soil Block ID: 3 Block Temp: 95° Thermometer: 20-4

ARI Sample ID	Btl #	pH<2	Prep Code: SNN Initial Wt (g) Vol (mL)	Prep Code: SNN Final Vol (mL)	Prep Code: Initial Wt (g) Vol (mL)	Prep Code: Final Vol (mL)	Comments
23A0031-01	D		1.072	1.072			
23A0032-01	B		1.070 (2)	~~1.069~~			
-02	C		1.029	1.029			
-03	↓		1.026	1.026			
-04	A		1.009	1.009			
-05	↓		1.015	~~1.014~~ (1)			
-06	B		1.014	1.014			
-07	↓		1.093	1.093			
-08	C		1.022	1.022			
-11	B		1.029	1.029			
23A0171-01			1.006	1.006			
-02			1.003	1.003			
-03			1.054	1.054			
-04			1.064	1.064			
23B0051-01	A		1.071	1.071			
-02			1.084	1.084			
-03			1.041	1.041			
23B0276-01	C		1.034	1.034			
BLB0518-BLK1	—		—	—			
-BS1	—		—	—			
-DUP1	—		1.070	1.070			23A0032-01
-MS1	—		1.075	1.075			↓
-MSD1	—		1.073	1.073			
-SEM1	—		1.001	1.001	(3)		
—	—	—	—	—	ML 02/24/23	—	—
—	—	—	—	—	—	—	—

Chemical/Reagent ID:

HNO_3: L492 1:1 HNO_3: L1314 HCl: — H_2O_2: K110S6

Tube Lot#: 2208005 Boiling Chip Lot#: — (DoD Only)

(1) 1.015 (2) 1.070

(3) 50ml

Form I

METHOD BLANK DATA SHEET

EPA 6020B UCT-KED

Total Metals

Blank

Laboratory: Analytical Resources, LLC | SDG: 23B0276

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

Batch: BLB0518 | Laboratory ID: BLB0518-BLK1 | Prepared: 02/24/23 16:23

Matrix: Solid | Preparation: SWN EPA 3050B | Analyzed: 03/01/23 21:11

Sequence: SLC0028 | Calibration: GC00005 | Instrument: ICPMS2

CAS NO.	Analyte	Concentration (mg/kg wet)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic-75a	ND	20	0.04	0.20	U
7440-50-8	Copper-63	ND	20	0.17	0.50	U
7440-66-6	Zinc-66	ND	20	2.9	6.0	U

Form I

METHOD BLANK DATA SHEET

EPA 6020B UCT-KED

Total Metals

Blank

Laboratory: Analytical Resources, LLC | SDG: 23B0276

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

Batch: BLB0518 | Laboratory ID: BLB0518-BLK2 | Prepared: 02/24/23 16:23

Matrix: Solid | Preparation: SWN EPA 3050B | Analyzed: 03/06/23 20:01

Sequence: SLC0078 | Calibration: GC00021 | Instrument: ICPMS1

CAS NO.	Analyte	Concentration (mg/kg wet)	Dilution Factor	MDL	MRL	Q
7440-43-9	Cadmium-111	ND	20	0.03	0.10	U

LCS / LCS DUPLICATE RECOVERY

EPA 6020B UCT-KED

Total Metals

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	03/01/23 21:16
Batch:	BLB0518	Laboratory ID:	BLB0518-BS1
Preparation:	SWN EPA 3050B	Sequence Name:	LCS
Initial/Final:	1 g / 50 mL		

COMPOUND	SPIKE ADDED (mg/kg wet)	LCS CONCENTRATION (mg/kg wet)	Q	LCS % REC. #	QC LIMITS REC.
Arsenic-75a	25.0	24.8		99.2	80 - 120
Copper-63	25.0	25.5		102	80 - 120
Zinc-66	80.0	80.0		100	80 - 120

* Indicates values outside of QC limits

* Indicates values outside of QC limits

LCS / LCS DUPLICATE RECOVERY

EPA 6020B UCT-KED

Total Metals

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	03/06/23 20:05
Batch:	BLB0518	Laboratory ID:	BLB0518-BS2
Preparation:	SWN EPA 3050B	Sequence Name:	LCS
Initial/Final:	1 g / 50 mL		

COMPOUND	SPIKE ADDED (mg/kg wet)	LCS CONCENTRATION (mg/kg wet)	Q	LCS % REC. #	QC LIMITS REC.
Cadmium-111	25.0	24.8		99.0	80 - 120

* Indicates values outside of QC limits

INITIAL CALIBRATION DATA

EPA 6020B

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GC00005	Instrument:	ICPMS2
Calibration Date:	03/01/2023 16:36		

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF
Silver-107	0	0	0.2	10830	10	11072.9	20	10736.5	50	10448.78	100	10433.77
Chromium-52	0	0	0.5	40794	10	17610.2	20	16461.65	50	15736.4	100	16030.98
Chromium-53	0	0	0.5	1918	10	1880.8	20	1827.7	50	1793.9	100	1844.82
Lead-208	0	0	0.1	38050	10	38598.4	20	37718.45	50	36783.7	100	36762.39

INITIAL CALIBRATION DATA

EPA 6020B

Laboratory: Analytical Resources, LLC
Instrument: ICPMS2
Calibration: GC00005
Calibration Date: 3/1/2023

COMPOUND	Mean RF	RF RSD	Linear COD	Quad COD	COD Limit	Q
Silver-107	8920.325	49.1	0.9999		0.998	
Chromium-52	17772.21	73.6	0.9998		0.998	
Chromium-53	1544.203	49.1	0.9998		0.998	
Lead-208	31318.82	49.0	1.0000		0.998	

INITIAL CALIBRATION DATA

EPA 6020B UCT-KED

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GC00005	Instrument:	ICPMS2
Calibration Date:	03/01/2023 16:36		

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF
Arsenic-75a	0	0	0.2	170	10	170	20	166.05	50	163.18	100	163.91
Copper-63	0	0	0.5	2590	10	2703.2	20	2615.2	50	2552.64	100	2545.04
Copper-65	0	0	0.5	1338	10	1306.9	20	1279.35	50	1254.66	100	1267.76
Zinc-66	0	0	6	335.3333	10	341.6	20	335.3	50	324.4	100	322.91
Zinc-67	0	0	6	51.5	10	57.3	20	53.15	50	55.06	100	53.29

INITIAL CALIBRATION DATA

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
Instrument: ICPMS2
Calibration: GC00005
Calibration Date: 3/1/2023

COMPOUND	Mean RF	RF RSD	Linear COD	Quad COD	COD Limit	Q
Arsenic-75a	138.8567	49.0	1.0000		0.998	
Copper-63	2167.68	49.1	1.0000		0.998	
Copper-65	1074.445	49.1	1.0000		0.998	
Zinc-66	276.5906	49.1	1.0000		0.998	
Zinc-67	45.05	49.2	0.9997		0.998	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS 02 SAMPLE RUN LOG

PE Nexlon ICP-MS Serial No. 81DN1050201

Analysis Date: 3/1/23 **Analyst:** SD **Sequence:** SLC0028 **Cal:** GC00005

All corrections made by analyst unless otherwise noted. SD 3/1/23

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
	✓	SEQ -CAL1			
		-CAL2			
		-CAL3			Mo NOISY
		-CAL4			
		-CAL5			Mo & Cd NOISY
		-CAL6			
		-IBL1			
		-CAL1	L2232		
		-CAL2	L2200		
		-CAL3	L2201		
		-CAL4	L2202		Mo & Cd noisy ~~int.~~, NO Mo/Cd
		-CAL5	L2203		
		-CAL6	L2204		Ag sl. noisy
		-IBL1	—		
		-ICV1	L243		
		-ICB1	L2232		Se↑ NO Se
		-CCV1	L2203		
		-CCB1	L2232		
		-CRL1	L2200		
		-IFA1	L2006		Cr 53↑ ↓
	✓	-IFA1			
		-IFB1	L2007		Ni 62 noisy, %R & int. std. OK
		-HCV1	L2008		Ag sl. noisy
		-HCV2	L2009		Se↓ Cd 111 noisy & Cd 114 sl. noisy ~~Cd<200~~

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS 02 SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 3/1/23 **Analyst:** SD **Sequence:** — **Cal:** —

All corrections made by analyst unless otherwise noted. SD 3/1/23

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		SEQ-IBL2			
		-IBL3			
		-CCV2			~~Mo 6~~ Mo & Cd noisy NO Mo/Cd ~~%R & int. std. OK~~
		-CCB2			Sc sl. noisy In & Tb noisy
		-CCB2			
		BLC0008-BLK1	REN		NO Cd, Mo, Se, Tl
		↓ -BS1	↓		Zn^{67}, Cd noisy ↓
		23B0551-01		10	Zn↑ NO Cd; Zn NR
REI		↓ -01REI		100	
	✓	23C0004-01		20	
	✓	23B0511-01	↓		ALL INT. STDs↓
		SEQ-IBL4			
		23C0004-01	REN	5	NO Cd
		23B0511-01	↓	50	
		SEQ-IBL5			
		-CCV3			Mo & Tl↓
		-CCB3			In-1 noisy Cr^{53}↑
		23B0501-02	REN	2	NO Cd
		-03	↓	↓	↓
		-04			
		23B0367-01			
		23B0379-01			
		↓ -03			
		23B0501-01	↓	2	NO Cd, Mo, Se, Tl

Analytical Resources, Incorporated
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ICP/MS 02 SAMPLE RUN LOG

PE Nexlon ICP-MS Serial No. 81DN1050201

Analysis Date: 3/1/23 **Analyst:** SD **Sequence:** — **Cal:** —

All corrections made by analyst unless otherwise noted. SD 3/1/23

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		BLC0008-DUP1	REN	2	Cr52 sl. noisy, Mn noisy value matches parent NO Cd, Mo, Se, Tl
		↓ -MS1	↓	↓	↓
		SEQ-IBL6			
		↓ -CCV4			
		↓ -CCB4			Cr53↑
		BLB0518-BLK1	SWN	20	↓ NO Cd
		↓ -BS1	↓	↓	↓
		23A0232-02	↓	↓	SC↑
		↓ -03	↓	↓	↓
		↓ -04	↓	↓	↓
		↓ -01	↓	↓	SC↑ NO Cd/Cr
		BLB0518-DUP1	↓	↓	↓
		↓ -MS1	↓	↓	Pb & Zn %R↑
		↓ -MSD1	↓	↓	~~Cu~~ Zn %R↑ Pb RPD↑ Cu %R↓
		↓ -PS1	↓	↓	↓
		SEQ-CCV5			Mo & Cd noisy
		↓ -CCB5			
		BLB0724-BLK1	SPN	2	
		↓ -BS1	↓	↓	
		23B0330-29	REN	5	As noisy NO As; Cr ONLY
		↓ -39	↓	↓	Cr ONLY
		23B0387-01	↓	50	NO Cd
		23A0324-02	SPN	2	
		BLB0724-DUP1	↓	↓	

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ICP/MS 02 SAMPLE RUN LOG

PE Nexlon ICP-MS Serial No. 81DN1050201

Analysis Date: 3/1/23 **Analyst:** SD **Sequence:** — **Cal:** —

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		BLB0724-MS1	SPN	2	Ge sl. noisy Cu noisy; value matches DUP & parent
		SEQ-IBL7			
		↓ -CCV6			Mn sl. noisy
		↓ -CCB6			
		BLB0716-BLK1	SPN	2	SC↑
		↓ -BS1	↓	↓	↓
		23A0324-02RE1			
		BLB0716-DUP1			
		↓ -MS1	↓	↓	↓
		SEQ-IBL8			
		↓ -CCV7			Mo sl. noisy Cd114 noisy
		↓ -CCB7			
		RINSE/DI			

SD 3/1/23

Performance Check Report

Sample ID: STD Performance Check
Sample Date/Time: Wednesday, March 01, 2023 14:59:12
Sample Description:
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\STD Performance Check.mth
Dataset File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\DataSet\Default\STD Performance Check.5296
MassCal File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Conditions File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Dual Detector Mode: Pulse
Acq. Dead Time (ns): 35
Current Dead Time (ns): 35
Torch Z position (mm): 0.00

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD	Mode
	Be	9.0	12204.8	12204.803	1448.694	11.9	Standard
	In	114.9	62922.7	62922.683	6035.955	9.6	Standard
	U	238.1	52132.3	52132.332	4573.286	8.8	Standard
⎡	CeO	155.9	1500.6	0.029	0.002	6.7	Standard
⎢>	Ce	139.9	52055.2	52055.180	4555.471	8.8	Standard
⎣	Ce++	70.0	2058.7	0.040	0.000	1.1	Standard
	Bkgd	220.0	0.1	0.067	0.091	136.9	Standard

Current Conditions File Data

Current Value	Description
1.06	Nebulizer Gas Flow STD/KED [NEB]
1.20	Auxiliary Gas Flow
18.00	Plasma Gas Flow
-11.25	Deflector Voltage
1600.00	ICP RF Power
-1675.00	Analog Stage Voltage
1400.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-8.00	Cell Rod Offset STD [CRO]
12.00	Discriminator Threshold
-4.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.25	RPq
1.06	DRC Mode NEB
-10.00	DRC Mode QRO
-3.00	DRC Mode CRO
-7.00	DRC Mode Cell Entrance/Exit Voltage
0.60	Cell Gas A
0.00	Cell Gas B
250.00	Axial Field Voltage
-16.50	KED Mode CRO
-12.00	KED Mode QRO
-4.00	KED Mode Cell Entrance Voltage
-39.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
5.00	KED Cell Gas B
0.00	KED RPa
0.25	KED RPq
475.00	KED Mode Axial Field Voltage

SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Wizard\SmartTune\ARIdaily_UCT.swz

Start Time: 3/1/2023 2:59:08 PM
End Time: 3/1/2023 3:06:38 PM

STD Performance Check - [Failed]
Obtained Intensity (Be 9): 12204.80
Obtained Intensity (In 115): 62922.68
Obtained Intensity (U 238): 52132.33
Obtained Intensity (Bkgd 220): 0.07
Obtained Formula (Ce++ 70 / Ce 140): 0.040 (=2058.68 / 52055.18) - <Target not achieved>
Obtained Formula (CeO 156 / Ce 140): 0.029 (=1500.61 / 52055.18) - <Target not achieved>
Obtained RSD (Be 9): 0.1187 - <Target not achieved>
Obtained RSD (In 115): 0.0959 - <Target not achieved>
Obtained RSD (U 238): 0.0877 - <Target not achieved>

Torch Alignment - [Passed]

Vertical	Horizontal	Intensity
0.85 mm	0.32 mm	66869.14

Nebulizer Gas Flow STD/KED [NEB] - [Passed] Optimum value(s): 1.05
Obtained Intensity (In 115): 55247.62
Obtained Formula (CeO 156 / Ce 140): 0.0198 (=895.03 / 45267.61)

Mass Calibration and Resolution - [Passed] Optimum value(s): N/A
Target/Obtained mass (7.016/7.025), Target/Obtained resolution (0.7/0.694)
Target/Obtained mass (23.985/23.975), Target/Obtained resolution (0.7/0.722)
Target/Obtained mass (114.904/114.925), Target/Obtained resolution (0.7/0.700)
Target/Obtained mass (238.05/238.075), Target/Obtained resolution (0.7/0.691)

QID STD/DRC - Optimum value(s): Correlation Coefficient = 0.986; Intercept = -12.64

SmartTune Wizard - Details

Optimization Details

SmartTune file: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Wizard\SmartTune\ARIdaily_UCT.swz

Optimization Status

Start Time: 3/1/2023 2:59:08 PM

STD Performance Check
	Optimization Settings:
		Method: STD Performance Check.mth.
		Intensity Criterion: Be 9 > 2000
		Intensity Criterion: In 115 > 40000
		Intensity Criterion: U 238 > 30000
		Intensity Criterion: Bkgd 220 <= 1
		Formula Criterion: Ce++ 70 / Ce 140 <= 0.03
		Formula Criterion: CeO 156 / Ce 140 <= 0.025
		RSD Criterion: Be 9.0122 < 0.05
		RSD Criterion: In 114.904 < 0.05
		RSD Criterion: U 238.05 < 0.05

	Optimization Results:
	Initial Try
		Obtained Intensity (Be 9): 12204.80
		Obtained Intensity (In 115): 62922.68
		Obtained Intensity (U 238): 52132.33
		Obtained Intensity (Bkgd 220): 0.07
		Obtained Formula (Ce++ 70 / Ce 140): 0.040 (=2058.68 / 52055.18) - <Target not achieved>
		Obtained Formula (CeO 156 / Ce 140): 0.029 (=1500.61 / 52055.18) - <Target not achieved>
		Obtained RSD (Be 9): 0.1187 - <Target not achieved>
		Obtained RSD (In 115): 0.0959 - <Target not achieved>
		Obtained RSD (U 238): 0.0877 - <Target not achieved>

		[Failed]
[Failed]

Torch Alignment
	Optimization Settings:
		Method: Torch Alignment.mth.
		Intensity Criterion: In 115 Maximum

	Optimization Results:
		Vertical	Horizontal	Intensity
[Passed]	0.85 mm	0.32 mm	66869.14

Nebulizer Gas Flow STD/KED [NEB]
	Optimization Settings:
		Method: Optimize.mth.
			Initial Try - Start/End/Step: 1/1.1/0.01.
		Intensity Criterion: In 115 Maximum
		Formula Criterion: CeO 156 / Ce 140 <= 0.025

	Optimization Results:
	Initial Try

		Obtained Intensity (In 115): 55247.62
		Obtained Formula (CeO 156 / Ce 140): 0.0198 (=895.03 / 45267.61)
[Passed] Optimum value(s): 1.05

Mass Calibration and Resolution
	Optimization Settings:
		Method: Tuning.mth.
		MassCal File: Default.tun
		Iterations: 6
		Target accuracy (+/- amu): 0.05 for Mass Cal. and 0.03 for Resolution
		Peak height (%) for Res. Opt.: 10

	Optimization Results:
	Initial Try
		Target/Obtained mass (7.016/7.025), Target/Obtained resolution (0.7/0.694)
		Target/Obtained mass (23.985/23.975), Target/Obtained resolution (0.7/0.722)
		Target/Obtained mass (114.904/114.925), Target/Obtained resolution (0.7/0.700)
		Target/Obtained mass (238.05/238.075), Target/Obtained resolution (0.7/0.691)
[Passed] Optimum value(s): N/A

QID STD/DRC
	Optimization Settings:
		Method: QID Calibration.mth.
			Initial Try - Start/End/Step: -20/0/0.5.

	Optimization Results:
	Initial Try

  Optimum value(s): Correlation Coefficient = 0.986; Intercept = -12.64

Analyte	Mass	Points	DAC	MaxIntensity
Li	7	41	-13	46692.2
Mg	24	41	-13	38527.9
In	115	41	-10.5	62138.9
Ce	140	41	-8.5	50790.1
Pb	208	41	-7.5	27129.7
U	238	41	-7.5	49509.6

End Time: 3/1/2023 3:06:38 PM

SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Wizard\SmartTune\ARIdaily_UCT.swz

Start Time: 3/1/2023 3:09:39 PM
End Time: 3/1/2023 3:10:46 PM

QID STD/DRC - Optimum value(s): Correlation Coefficient = 0.991; Intercept = -12.34

SmartTune Wizard - Details

Optimization Details

SmartTune file: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Wizard\SmartTune\ARIdaily_UCT.swz

Optimization Status

Start Time: 3/1/2023 3:09:39 PM

QID STD/DRC
Optimization Settings:
Method: QID Calibration.mth.
Initial Try - Start/End/Step: -20/0/0.5.

Optimization Results:
Initial Try

Optimum value(s): Correlation Coefficient = 0.991; Intercept = -12.34

Analyte	Mass	Points	DAC	MaxIntensity
Li	7	41	-13	42715.8
Mg	24	41	-13.5	37886.2
In	115	41	-10.5	59889.3
Ce	140	41	-8.5	50625.5
Pb	208	41	-7.5	27037.6
U	238	41	-7	50541.2

End Time: 3/1/2023 3:10:46 PM

SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Wizard\SmartTune\ARIdaily_UCT.swz

Start Time: 3/1/2023 3:10:58 PM
End Time: 3/1/2023 3:12:14 PM

KED Mode QID - Optimum value(s): Correlation Coefficient = 0.995; Intercept = -12.81

SmartTune Wizard - Details

Optimization Details

SmartTune file: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Wizard\SmartTune\ARIdaily_UCT.swz

Optimization Status

Start Time: 3/1/2023 3:10:58 PM

KED Mode QID

Optimization Settings:

Method: QID Calibration.mth.

Initial Try - Start/End/Step: -20/0/0.5.

Optimization Results:

Initial Try

Optimum value(s): Correlation Coefficient = 0.995; Intercept = -12.81

Analyte	Mass	Points	DAC	MaxIntensity
Li	7	41	-13	33880.1
Mg	24	41	-13	25258.3
In	115	41	-11	39827.4
Ce	140	41	-9	42523.2
Pb	208	41	-6.5	19605.4
U	238	41	-7	33964.3

End Time: 3/1/2023 3:12:14 PM

Performance Check Report

Sample ID: STD Performance Check

Sample Date/Time: Wednesday, March 01, 2023 15:17:37
Sample Description:
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\STD Performance Check.mth
Dataset File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\DataSet\Default\STD Performance Check.5307
MassCal File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Conditions File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Dual Detector Mode: Pulse
Acq. Dead Time (ns): 35
Current Dead Time (ns): 35
Torch Z position (mm): 0.00

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD	Mode
	Be	9.0	9161.3	9161.337	154.793	1.7	Standard
	In	114.9	52812.8	52812.779	380.312	0.7	Standard
	U	238.1	46018.4	46018.405	404.310	0.9	Standard
⌈	CeO	155.9	597.9	0.013	0.001	4.1	Standard
| >	Ce	139.9	45604.5	45604.544	162.699	0.4	Standard
⌊	Ce++	70.0	1252.9	0.027	0.000	1.7	Standard
	Bkgd	220.0	0.1	0.067	0.091	136.9	Standard

Current Conditions File Data

Current Value	Description
1.04	Nebulizer Gas Flow STD/KED [NEB]
1.20	Auxiliary Gas Flow
18.00	Plasma Gas Flow
-11.25	Deflector Voltage
1600.00	ICP RF Power
-1675.00	Analog Stage Voltage
1400.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-8.00	Cell Rod Offset STD [CRO]
12.00	Discriminator Threshold
-4.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.25	RPq
1.05	DRC Mode NEB
-10.00	DRC Mode QRO
-3.00	DRC Mode CRO
-7.00	DRC Mode Cell Entrance/Exit Voltage
0.60	Cell Gas A
0.00	Cell Gas B
250.00	Axial Field Voltage
-16.50	KED Mode CRO
-12.00	KED Mode QRO
-4.00	KED Mode Cell Entrance Voltage
-39.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
5.00	KED Cell Gas B
0.00	KED RPa
0.25	KED RPq
475.00	KED Mode Axial Field Voltage

SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Wizard\SmartTune\ARIdaily_UCT.swz

Start Time: 3/1/2023 3:17:35 PM
End Time: 3/1/2023 3:19:41 PM

STD Performance Check - [Passed] Optimum value(s): N/A
Obtained Intensity (Be 9): 9161.34
Obtained Intensity (In 115): 52812.78
Obtained Intensity (U 238): 46018.40
Obtained Intensity (Bkgd 220): 0.07
Obtained Formula (Ce++ 70 / Ce 140): 0.027 (=1252.85 / 45604.54)
Obtained Formula (CeO 156 / Ce 140): 0.013 (=597.88 / 45604.54)
Obtained RSD (Be 9): 0.0169
Obtained RSD (In 115): 0.0072
Obtained RSD (U 238): 0.0088

SmartTune Wizard - Details

Optimization Details

SmartTune file: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Wizard\SmartTune\ARIdaily_UCT.swz

Optimization Status

Start Time: 3/1/2023 3:17:35 PM

STD Performance Check
	Optimization Settings:
		Method: STD Performance Check.mth.
		Intensity Criterion: Be 9 > 2000
		Intensity Criterion: In 115 > 40000
		Intensity Criterion: U 238 > 30000
		Intensity Criterion: Bkgd 220 <= 1
		Formula Criterion: Ce++ 70 / Ce 140 <= 0.03
		Formula Criterion: CeO 156 / Ce 140 <= 0.025
		RSD Criterion: Be 9.0122 < 0.05
		RSD Criterion: In 114.904 < 0.05
		RSD Criterion: U 238.05 < 0.05

	Optimization Results:
	Initial Try
		Obtained Intensity (Be 9): 9161.34
		Obtained Intensity (In 115): 52812.78
		Obtained Intensity (U 238): 46018.40
		Obtained Intensity (Bkgd 220): 0.07
		Obtained Formula (Ce++ 70 / Ce 140): 0.027 (=1252.85 / 45604.54)
		Obtained Formula (CeO 156 / Ce 140): 0.013 (=597.88 / 45604.54)
		Obtained RSD (Be 9): 0.0169
		Obtained RSD (In 115): 0.0072
		Obtained RSD (U 238): 0.0088

[Passed] Optimum value(s): N/A

End Time: 3/1/2023 3:19:41 PM

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL1
Sample Dil Factor: DEL
Comments:
Sample Date/Time: Wednesday, March 01, 2023 15:54:34
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L				32629	1	Standard
	Cl	**37**		ug/L				3758523	1	Standard
⎡>	**Sc**	**45**		ug/L				435309	0	Standard
⎢	**Cr**	**52**		ug/L				12147	1	Standard
⎢	**Cr**	**53**		ug/L				106	9	Standard
⎣	**Mn**	**55**		ug/L				1152	3	Standard
⎡>	**Ge**	**72**		ug/L				27422	0	KED
⎢	**Ni**	**60**		ug/L				25	35	KED
⎢	**Ni**	**62**		ug/L				1	100	KED
⎢	**Cu**	**63**		ug/L				66	16	KED
⎢	**Cu**	**65**		ug/L				22	26	KED
⎢	**Zn**	**66**		ug/L				44	31	KED
⎢	**Zn**	**67**		ug/L				2	43	KED
⎢	**As**	**75**		ug/L				6	24	KED
⎣	**Se**	**78**		ug/L				12	19	KED
	Y	**89**		ug/L				271902	0	Standard
	Kr	**83**		ug/L				67	8	Standard
⎡>	**In-1**	**115**		ug/L				7697	2	KED
⎢	**Mo**	**98**		ug/L				10	39	KED
⎢	**Cd**	**111**		ug/L				3	25	KED
⎣	**Cd**	**114**		ug/L				0	245	KED
⎡>	**In**	**115**		ug/L				457197	1	Standard
⎢	**Ag**	**107**		ug/L				34	22	Standard
⎢	**Sb**	**121**		ug/L				60	4	Standard
⎣	**Sb**	**123**		ug/L				40	15	Standard
⎡>	**Tb**	**159**		ug/L				495809	2	Standard
⎢	**Tl**	**205**		ug/L				8	53	Standard
⎣	**Pb**	**208**		ug/L				118	9	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL2
Sample Dil Factor: DEL
Comments:
Sample Date/Time: Wednesday, March 01, 2023 15:59:25
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			32629	39973	0	Standard
	Cl	**37**		ug/L			3758523	3796523	0	Standard
⌈>	**Sc**	**45**		ug/L			435309	436341	0	Standard
|	**Cr**	**52**	**0.500**	ug/L	0.046	9	12147	19839	3	Standard
|	**Cr**	**53**	**0.500**	ug/L	0.021	4	106	973	3	Standard
⌊	**Mn**	**55**	**0.500**	ug/L	0.012	2	1152	11480	1	Standard
⌈>	**Ge**	**72**		ug/L			27422	27381	2	KED
|	**Ni**	**60**	**0.500**	ug/L	0.052	10	25	465	8	KED
|	**Ni**	**62**	**0.500**	ug/L	0.093	18	1	80	20	KED
|	**Cu**	**63**	**0.500**	ug/L	0.020	4	66	1309	6	KED
|	**Cu**	**65**	**0.500**	ug/L	0.038	7	22	674	9	KED
|	**Zn**	**66**	**6.000**	ug/L	0.202	3	44	1916	5	KED
|	**Zn**	**67**	**6.000**	ug/L	0.658	10	2	299	8	KED
|	**As**	**75**	**0.200**	ug/L	0.013	6	6	37	8	KED
⌊	**Se**	**78**	**0.500**	ug/L	0.334	66	12	19	27	KED
	Y	**89**		ug/L			271902	274734	1	Standard
	Kr	**83**		ug/L			67	60	28	Standard
⌈>	**In-1**	**115**		ug/L			7697	7642	2	KED
|	**Mo**	**98**	**0.200**	ug/L	0.030	14	10	135	14	KED
|	**Cd**	**111**	**0.100**	ug/L	0.040	40	3	22	32	KED
⌊	**Cd**	**114**	**0.100**	ug/L	0.015	14	0	48	12	KED
⌈>	**In**	**115**		ug/L			457197	472553	1	Standard
|	**Ag**	**107**	**0.200**	ug/L	0.009	4	34	2113	3	Standard
|	**Sb**	**121**	**0.200**	ug/L	0.002	1	60	1822	2	Standard
⌊	**Sb**	**123**	**0.200**	ug/L	0.003	1	40	1402	0	Standard
⌈>	**Tb**	**159**		ug/L			495809	500720	2	Standard
|	**Tl**	**205**	**0.200**	ug/L	0.008	4	8	5562	1	Standard
⌊	**Pb**	**208**	**0.100**	ug/L	0.006	6	118	3812	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL3
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, March 01, 2023 16:04:16

DEL

Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File:

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			32629	42725	1	Standard
Cl	37		ug/L			3758523	3900248	1	Standard
> Sc	45		ug/L			435309	455622	2	Standard
Cr	52	10.000	ug/L	0.547	5	12147	171584	4	Standard
Cr	53	10.001	ug/L	0.447	4	106	18758	3	Standard
Mn	55	10.000	ug/L	0.431	4	1152	221202	3	Standard
> Ge	72		ug/L			27422	27017	4	KED
Ni	60	10.001	ug/L	0.332	3	25	8962	1	KED
Ni	62	9.999	ug/L	0.419	4	1	1488	1	KED
Cu	63	10.002	ug/L	0.462	4	66	26389	2	KED
Cu	65	10.001	ug/L	0.479	4	22	13263	1	KED
Zn	66	10.244	ug/L	0.358	3	44	3422	2	KED
Zn	67	10.455	ug/L	0.377	3	2	587	2	KED
As	75	10.000	ug/L	0.298	2	6	1647	2	KED
Se	78	10.003	ug/L	0.497	4	12	182	3	KED
Y	89		ug/L			271902	288108	1	Standard
Kr	83		ug/L			67	55	3	Standard
> In-1	115		ug/L			7697	7890	3	KED
Mo	98	10.000	ug/L	0.912	9	10	7057	7	KED
Cd	111	10.000	ug/L	0.674	6	3	1727	4	KED
Cd	114	10.000	ug/L	0.638	6	0	4249	5	KED
> In	115		ug/L			457197	485026	1	Standard
Ag	107	10.000	ug/L	0.450	4	34	109546	5	Standard
Sb	121	10.000	ug/L	0.252	2	60	94907	3	Standard
Sb	123	10.000	ug/L	0.153	1	40	72736	2	Standard
> Tb	159		ug/L			495809	524277	2	Standard
Tl	205	10.000	ug/L	0.329	3	8	290550	4	Standard
Pb	208	10.000	ug/L	0.219	2	118	380973	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL4

DEL

Sample Dil Factor:

Comments:

Sample Date/Time: Wednesday, March 01, 2023 16:09:21

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			32629	42835	0	Standard
	Cl	**37**		ug/L			3758523	3938510	1	Standard
⌈>	**Sc**	**45**		ug/L			435309	440750	1	Standard
|	**Cr**	**52**	**19.962**	ug/L	0.520	2	12147	316888	3	Standard
|	**Cr**	**53**	**19.953**	ug/L	0.386	1	106	35780	3	Standard
⌊	**Mn**	**55**	**19.955**	ug/L	0.781	3	1152	422379	5	Standard
⌈>	**Ge**	**72**		ug/L			27422	28413	1	KED
|	**Ni**	**60**	**19.763**	ug/L	0.618	3	25	17777	1	KED
|	**Ni**	**62**	**19.871**	ug/L	0.813	4	1	3034	2	KED
|	**Cu**	**63**	**19.744**	ug/L	0.533	2	66	52117	1	KED
|	**Cu**	**65**	**19.626**	ug/L	0.817	4	22	25477	2	KED
|	**Zn**	**66**	**19.855**	ug/L	0.437	2	44	6794	1	KED
|	**Zn**	**67**	**19.663**	ug/L	0.770	3	2	1107	5	KED
|	**As**	**75**	**19.830**	ug/L	0.313	1	6	3318	1	KED
⌊	**Se**	**78**	**19.899**	ug/L	0.492	2	12	362	0	KED
	Y	**89**		ug/L			271902	280996	3	Standard
	Kr	**83**		ug/L			67	62	15	Standard
⌈>	**In-1**	**115**		ug/L			7697	7798	1	KED
|	**Mo**	**98**	**20.043**	ug/L	0.482	2	10	14113	3	KED
|	**Cd**	**111**	**20.186**	ug/L	0.492	2	3	3579	1	KED
⌊	**Cd**	**114**	**20.093**	ug/L	0.491	2	0	8608	3	KED
⌈>	**In**	**115**		ug/L			457197	475284	1	Standard
|	**Ag**	**107**	**19.923**	ug/L	0.627	3	34	210618	4	Standard
|	**Sb**	**121**	**19.969**	ug/L	0.596	2	60	184504	3	Standard
⌊	**Sb**	**123**	**19.926**	ug/L	0.455	2	40	139891	2	Standard
⌈>	**Tb**	**159**		ug/L			495809	512600	2	Standard
|	**Tl**	**205**	**19.953**	ug/L	1.169	5	8	560822	3	Standard
⌊	**Pb**	**208**	**19.920**	ug/L	0.984	4	118	729573	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL5

DEL

Sample Dil Factor:

Comments:

Sample Date/Time: Wednesday, March 01, 2023 16:14:36

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			32629	35346	2	Standard
	Cl	**37**		ug/L			3758523	4115545	3	Standard
⌈>	**Sc**	**45**		ug/L			435309	437539	0	Standard
|	**Cr**	**52**	**50.072**	ug/L	0.790	1	12147	775999	1	Standard
|	**Cr**	**53**	**49.994**	ug/L	1.613	3	106	88768	3	Standard
⌊	**Mn**	**55**	**50.102**	ug/L	1.326	2	1152	1061499	3	Standard
⌈>	**Ge**	**72**		ug/L			27422	27426	0	KED
|	**Ni**	**60**	**49.875**	ug/L	2.026	4	25	42734	3	KED
|	**Ni**	**62**	**49.690**	ug/L	2.059	4	1	7103	3	KED
|	**Cu**	**63**	**49.803**	ug/L	2.132	4	66	124347	3	KED
|	**Cu**	**65**	**49.792**	ug/L	1.244	2	22	61110	1	KED
|	**Zn**	**66**	**49.648**	ug/L	1.742	3	44	15814	2	KED
|	**Zn**	**67**	**50.059**	ug/L	2.304	4	2	2731	3	KED
|	**As**	**75**	**49.787**	ug/L	1.883	3	6	7865	2	KED
⌊	**Se**	**78**	**50.089**	ug/L	1.077	2	12	869	1	KED
	Y	**89**		ug/L			271902	277494	3	Standard
	Kr	**83**		ug/L			67	69	31	Standard
⌈>	**In-1**	**115**		ug/L			7697	7690	4	KED
|	**Mo**	**98**	**49.770**	ug/L	4.188	8	10	33715	7	KED
|	**Cd**	**111**	**49.698**	ug/L	4.149	8	3	8424	8	KED
⌊	**Cd**	**114**	**49.628**	ug/L	4.323	8	0	20179	7	KED
⌈>	**In**	**115**		ug/L			457197	455869	0	Standard
|	**Ag**	**107**	**50.234**	ug/L	1.682	3	34	521430	3	Standard
|	**Sb**	**121**	**50.375**	ug/L	1.218	2	60	463733	3	Standard
⌊	**Sb**	**123**	**50.295**	ug/L	1.054	2	40	348921	2	Standard
⌈>	**Tb**	**159**		ug/L			495809	504937	3	Standard
|	**Tl**	**205**	**50.075**	ug/L	1.635	3	8	1397608	1	Standard
⌊	**Pb**	**208**	**50.104**	ug/L	1.385	2	118	1827848	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL6
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, March 01, 2023 16:21:30

DEL

Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			32629	42864	3	Standard
	Cl	**37**		ug/L			3758523	4239160	3	Standard
⌈>	**Sc**	**45**		ug/L			435309	457930	1	Standard
|	**Cr**	**52**	**100.084**	ug/L	4.197	4	12147	1614514	2	Standard
|	**Cr**	**53**	**99.910**	ug/L	4.257	4	106	184953	3	Standard
⌊	**Mn**	**55**	**100.986**	ug/L	5.410	5	1152	2313146	4	Standard
⌈>	**Ge**	**72**		ug/L			27422	27996	2	KED
|	**Ni**	**60**	**100.500**	ug/L	5.778	5	25	89371	5	KED
|	**Ni**	**62**	**99.586**	ug/L	4.165	4	1	14329	3	KED
|	**Cu**	**63**	**99.445**	ug/L	2.977	2	66	248814	3	KED
|	**Cu**	**65**	**100.074**	ug/L	3.653	3	22	125674	4	KED
|	**Zn**	**66**	**99.711**	ug/L	2.015	2	44	32080	3	KED
|	**Zn**	**67**	**98.966**	ug/L	3.419	3	2	5329	4	KED
|	**As**	**75**	**100.349**	ug/L	3.851	3	6	16367	4	KED
⌊	**Se**	**78**	**99.984**	ug/L	4.230	4	12	1757	4	KED
	Y	**89**		ug/L			271902	291114	1	Standard
	Kr	**83**		ug/L			67	73	10	Standard
⌈>	**In-1**	**115**		ug/L			7697	7507	0	KED
|	**Mo**	**98**	**102.182**	ug/L	3.186	3	10	72943	2	KED
|	**Cd**	**111**	**101.296**	ug/L	1.134	1	3	17528	0	KED
⌊	**Cd**	**114**	**101.795**	ug/L	1.167	1	0	43040	0	KED
⌈>	**In**	**115**		ug/L			457197	480624	1	Standard
|	**Ag**	**107**	**98.582**	ug/L	1.708	1	34	1030178	3	Standard
|	**Sb**	**121**	**99.202**	ug/L	0.723	0	60	937696	1	Standard
⌊	**Sb**	**123**	**99.502**	ug/L	1.692	1	40	715783	2	Standard
⌈>	**Tb**	**159**		ug/L			495809	535970	3	Standard
|	**Tl**	**205**	**100.750**	ug/L	4.723	4	8	3061053	3	Standard
⌊	**Pb**	**208**	**99.139**	ug/L	4.256	4	118	3732614	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL1

DEL

Sample Dil Factor:

Comments:

Sample Date/Time: Wednesday, March 01, 2023 16:29:05

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			32629	38322	1	Standard
	Cl	**37**		ug/L			3758523	4048138	2	Standard
⌈>	**Sc**	**45**		ug/L			435309	423106	5	Standard
|	**Cr**	**52**	**0.049**	ug/L	0.030	62	12147	12515	2	Standard
|	**Cr**	**53**	**0.010**	ug/L	0.004	40	106	121	8	Standard
⌊	**Mn**	**55**	**-0.007**	ug/L	0.002	26	1152	963	2	Standard
⌈>	**Ge**	**72**		ug/L			27422	28161	2	KED
|	**Ni**	**60**	**-0.001**	ug/L	0.011	845	25	24	38	KED
|	**Ni**	**62**	**0.052**	ug/L	0.001	2	1	9	0	KED
|	**Cu**	**63**	**0.003**	ug/L	0.003	99	66	75	9	KED
|	**Cu**	**65**	**0.015**	ug/L	0.010	67	22	41	29	KED
|	**Zn**	**66**	**-0.002**	ug/L	0.014	824	44	45	8	KED
|	**Zn**	**67**	**0.105**	ug/L	0.143	136	2	8	93	KED
|	**As**	**75**	**0.006**	ug/L	0.011	193	6	7	24	KED
⌊	**Se**	**78**	**-0.079**	ug/L	0.089	112	12	11	12	KED
	Y	**89**		ug/L			271902	265740	6	Standard
	Kr	**83**		ug/L			67	59	25	Standard
⌈>	**In-1**	**115**		ug/L			7697	7601	1	KED
|	**Mo**	**98**	**0.013**	ug/L	0.006	44	10	19	20	KED
|	**Cd**	**111**	**0.006**	ug/L	0.011	192	3	4	40	KED
⌊	**Cd**	**114**	**0.013**	ug/L	0.012	86	0	6	78	KED
⌈>	**In**	**115**		ug/L			457197	451819	6	Standard
|	**Ag**	**107**	**0.006**	ug/L	0.001	7	34	97	3	Standard
|	**Sb**	**121**	**0.199**	ug/L	0.017	8	60	1817	2	Standard
⌊	**Sb**	**123**	**0.207**	ug/L	0.012	5	40	1437	1	Standard
⌈>	**Tb**	**159**		ug/L			495809	480761	6	Standard
|	**Tl**	**205**	**0.003**	ug/L	0.000	3	8	88	3	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.001	71	118	162	17	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL1
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, March 01, 2023 16:36:39
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L				34622	3	Standard
	Cl	**37**		ug/L				3977931	0	Standard
⎡>	**Sc**	**45**		ug/L				439931	0	Standard
⎢	**Cr**	**52**		ug/L				12483	2	Standard
⎢	**Cr**	**53**		ug/L				120	12	Standard
⎣	**Mn**	**55**		ug/L				1073	2	Standard
⎡>	**Ge**	**72**		ug/L				28119	1	KED
⎢	**Ni**	**60**		ug/L				28	17	KED
⎢	**Ni**	**62**		ug/L				5	21	KED
⎢	**Cu**	**63**		ug/L				42	27	KED
⎢	**Cu**	**65**		ug/L				27	52	KED
⎢	**Zn**	**66**		ug/L				29	30	KED
⎢	**Zn**	**67**		ug/L				8	44	KED
⎢	**As**	**75**		ug/L				7	35	KED
⎣	**Se**	**78**		ug/L				11	32	KED
	Y	**89**		ug/L				276255	3	Standard
	Kr	**83**		ug/L				52	10	Standard
⎡>	**In-1**	**115**		ug/L				7782	2	KED
⎢	**Mo**	**98**		ug/L				8	11	KED
⎢	**Cd**	**111**		ug/L				4	48	KED
⎣	**Cd**	**114**		ug/L				5	31	KED
⎡>	**In**	**115**		ug/L				475417	1	Standard
⎢	**Ag**	**107**		ug/L				135	24	Standard
⎢	**Sb**	**121**		ug/L				596	6	Standard
⎣	**Sb**	**123**		ug/L				475	10	Standard
⎡>	**Tb**	**159**		ug/L				499801	1	Standard
⎢	**Tl**	**205**		ug/L				224	12	Standard
⎣	**Pb**	**208**		ug/L				359	13	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL2
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, March 01, 2023 16:41:30
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			34622	39551	0	Standard
	Cl	**37**		ug/L			3977931	3956290	2	Standard
⎡>	**Sc**	**45**		ug/L			439931	447141	4	Standard
⎢	**Cr**	**52**	**0.500**	ug/L	0.022	4	12483	20397	2	Standard
⎢	**Cr**	**53**	**0.500**	ug/L	0.030	5	120	959	4	Standard
⎣	**Mn**	**55**	**0.500**	ug/L	0.023	4	1073	11365	1	Standard
⎡>	**Ge**	**72**		ug/L			28119	28400	1	KED
⎢	**Ni**	**60**	**0.500**	ug/L	0.059	11	28	450	11	KED
⎢	**Ni**	**62**	**0.500**	ug/L	0.112	22	5	69	20	KED
⎢	**Cu**	**63**	**0.500**	ug/L	0.025	4	42	1295	3	KED
⎢	**Cu**	**65**	**0.500**	ug/L	0.037	7	27	669	6	KED
⎢	**Zn**	**66**	**6.000**	ug/L	0.120	1	29	2012	0	KED
⎢	**Zn**	**67**	**6.000**	ug/L	1.064	17	8	309	17	KED
⎢	**As**	**75**	**0.200**	ug/L	0.042	20	7	34	15	KED
⎣	**Se**	**78**	**0.500**	ug/L	0.107	21	11	17	8	KED
	Y	**89**		ug/L			276255	280837	4	Standard
	Kr	**83**		ug/L			52	64	19	Standard
⎡>	**In-1**	**115**		ug/L			7782	7574	5	KED
⎢	**Mo**	**98**	**0.200**	ug/L	0.037	18	8	136	13	KED
⎢	**Cd**	**111**	**0.100**	ug/L	0.028	28	4	16	15	KED
⎣	**Cd**	**114**	**0.100**	ug/L	0.021	21	5	56	15	KED
⎡>	**In**	**115**		ug/L			475417	485072	1	Standard
⎢	**Ag**	**107**	**0.200**	ug/L	0.014	7	135	2166	7	Standard
⎢	**Sb**	**121**	**0.200**	ug/L	0.011	5	596	2045	2	Standard
⎣	**Sb**	**123**	**0.200**	ug/L	0.006	2	475	1596	1	Standard
⎡>	**Tb**	**159**		ug/L			499801	507887	4	Standard
⎢	**Tl**	**205**	**0.200**	ug/L	0.010	4	224	5595	2	Standard
⎣	**Pb**	**208**	**0.100**	ug/L	0.008	7	359	3805	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL3
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, March 01, 2023 16:46:22
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			34622	44416	1	Standard
	Cl	**37**		ug/L			3977931	4060221	1	Standard
⌈>	**Sc**	**45**		ug/L			439931	465233	1	Standard
|	**Cr**	**52**	**10.000**	ug/L	0.308	3	12483	176102	1	Standard
|	**Cr**	**53**	**10.002**	ug/L	0.420	4	120	18808	2	Standard
⌊	**Mn**	**55**	**10.001**	ug/L	0.347	3	1073	224356	3	Standard
⌈>	**Ge**	**72**		ug/L			28119	28465	2	KED
|	**Ni**	**60**	**10.002**	ug/L	0.190	1	28	9296	3	KED
|	**Ni**	**62**	**10.004**	ug/L	0.240	2	5	1506	0	KED
|	**Cu**	**63**	**10.002**	ug/L	0.145	1	42	27032	2	KED
|	**Cu**	**65**	**10.000**	ug/L	0.077	0	27	13069	2	KED
|	**Zn**	**66**	**10.058**	ug/L	0.216	2	29	3416	3	KED
|	**Zn**	**67**	**10.301**	ug/L	0.776	7	8	573	7	KED
|	**As**	**75**	**10.001**	ug/L	0.370	3	7	1700	3	KED
⌊	**Se**	**78**	**10.010**	ug/L	0.544	5	11	196	2	KED
	Y	**89**		ug/L			276255	288797	3	Standard
	Kr	**83**		ug/L			52	53	23	Standard
⌈>	**In-1**	**115**		ug/L			7782	7880	3	KED
|	**Mo**	**98**	**10.000**	ug/L	0.473	4	8	7207	1	KED
|	**Cd**	**111**	**10.000**	ug/L	0.286	2	4	1792	0	KED
⌊	**Cd**	**114**	**10.000**	ug/L	0.458	4	5	4531	3	KED
⌈>	**In**	**115**		ug/L			475417	490666	1	Standard
|	**Ag**	**107**	**10.000**	ug/L	0.061	0	135	110729	1	Standard
|	**Sb**	**121**	**10.001**	ug/L	0.231	2	596	94911	2	Standard
⌊	**Sb**	**123**	**10.001**	ug/L	0.143	1	475	72086	2	Standard
⌈>	**Tb**	**159**		ug/L			499801	522161	1	Standard
|	**Tl**	**205**	**10.000**	ug/L	0.441	4	224	292727	2	Standard
⌊	**Pb**	**208**	**10.000**	ug/L	0.315	3	359	385984	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL4
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, March 01, 2023 16:51:26
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			34622	43117	1	Standard
	Cl	**37**		ug/L			3977931	4193559	3	Standard
⌈>	**Sc**	**45**		ug/L			439931	465884	2	Standard
|	**Cr**	**52**	**19.868**	ug/L	0.855	4	12483	329233	5	Standard
|	**Cr**	**53**	**19.890**	ug/L	0.550	2	120	36554	3	Standard
⌊	**Mn**	**55**	**19.888**	ug/L	0.608	3	1073	435915	3	Standard
⌈>	**Ge**	**72**		ug/L			28119	28827	1	KED
|	**Ni**	**60**	**19.769**	ug/L	0.596	3	28	17757	2	KED
|	**Ni**	**62**	**19.914**	ug/L	0.637	3	5	2981	1	KED
|	**Cu**	**63**	**19.820**	ug/L	0.956	4	42	52304	3	KED
|	**Cu**	**65**	**19.868**	ug/L	0.531	2	27	25587	1	KED
|	**Zn**	**66**	**19.893**	ug/L	0.752	3	29	6706	2	KED
|	**Zn**	**67**	**19.735**	ug/L	1.392	7	8	1063	5	KED
|	**As**	**75**	**19.863**	ug/L	0.882	4	7	3321	3	KED
⌊	**Se**	**78**	**19.763**	ug/L	0.258	1	11	364	0	KED
	Y	**89**		ug/L			276255	285464	1	Standard
	Kr	**83**		ug/L			52	60	27	Standard
⌈>	**In-1**	**115**		ug/L			7782	8151	1	KED
|	**Mo**	**98**	**19.661**	ug/L	1.960	9	8	13722	8	KED
|	**Cd**	**111**	**19.773**	ug/L	1.672	8	4	3503	7	KED
⌊	**Cd**	**114**	**19.548**	ug/L	1.826	9	5	8399	8	KED
⌈>	**In**	**115**		ug/L			475417	488111	0	Standard
|	**Ag**	**107**	**19.899**	ug/L	0.845	4	135	214730	4	Standard
|	**Sb**	**121**	**20.002**	ug/L	0.415	2	596	188313	2	Standard
⌊	**Sb**	**123**	**20.066**	ug/L	0.658	3	475	145331	3	Standard
⌈>	**Tb**	**159**		ug/L			499801	526054	2	Standard
|	**Tl**	**205**	**19.921**	ug/L	0.334	1	224	578340	2	Standard
⌊	**Pb**	**208**	**19.879**	ug/L	0.671	3	359	754369	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL5
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, March 01, 2023 16:56:41
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			34622	35813	1	Standard
	Cl	**37**		ug/L			3977931	4208332	0	Standard
⌈>	**Sc**	**45**		ug/L			439931	462748	1	Standard
|	**Cr**	**52**	**49.831**	ug/L	1.387	2	12483	786820	1	Standard
|	**Cr**	**53**	**49.874**	ug/L	2.019	4	120	89695	3	Standard
⌊	**Mn**	**55**	**49.795**	ug/L	2.629	5	1073	1060387	4	Standard
⌈>	**Ge**	**72**		ug/L			28119	28180	3	KED
|	**Ni**	**60**	**50.253**	ug/L	1.995	3	28	45209	2	KED
|	**Ni**	**62**	**49.748**	ug/L	3.129	6	5	7088	3	KED
|	**Cu**	**63**	**49.919**	ug/L	2.123	4	42	127632	1	KED
|	**Cu**	**65**	**49.979**	ug/L	2.099	4	27	62733	3	KED
|	**Zn**	**66**	**49.893**	ug/L	3.532	7	29	16220	4	KED
|	**Zn**	**67**	**50.434**	ug/L	3.363	6	8	2753	5	KED
|	**As**	**75**	**50.001**	ug/L	1.858	3	7	8159	1	KED
⌊	**Se**	**78**	**50.163**	ug/L	2.514	5	11	901	1	KED
	Y	**89**		ug/L			276255	287871	2	Standard
	Kr	**83**		ug/L			52	65	21	Standard
⌈>	**In-1**	**115**		ug/L			7782	7894	1	KED
|	**Mo**	**98**	**50.102**	ug/L	5.500	10	8	34191	9	KED
|	**Cd**	**111**	**50.012**	ug/L	4.750	9	4	8583	8	KED
⌊	**Cd**	**114**	**50.130**	ug/L	4.360	8	5	21125	7	KED
⌈>	**In**	**115**		ug/L			475417	484697	2	Standard
|	**Ag**	**107**	**49.794**	ug/L	1.304	2	135	522439	2	Standard
|	**Sb**	**121**	**49.956**	ug/L	1.431	2	596	463941	2	Standard
⌊	**Sb**	**123**	**49.833**	ug/L	1.439	2	475	351747	3	Standard
⌈>	**Tb**	**159**		ug/L			499801	523883	1	Standard
|	**Tl**	**205**	**49.874**	ug/L	1.527	3	224	1423464	2	Standard
⌊	**Pb**	**208**	**49.774**	ug/L	1.082	2	359	1839185	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL6
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, March 01, 2023 17:03:36
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			34622	42916	1	Standard
	Cl	**37**		ug/L			3977931	4269449	2	Standard
⎡>	**Sc**	**45**		ug/L			439931	460214	1	Standard
⎢	**Cr**	**52**	**100.678**	ug/L	5.876	5	12483	1603098	4	Standard
⎢	**Cr**	**53**	**100.731**	ug/L	5.728	5	120	184482	4	Standard
⎣	**Mn**	**55**	**101.320**	ug/L	7.255	7	1073	2242760	5	Standard
⎡>	**Ge**	**72**		ug/L			28119	27666	1	KED
⎢	**Ni**	**60**	**100.635**	ug/L	3.202	3	28	90799	1	KED
⎢	**Ni**	**62**	**101.088**	ug/L	4.662	4	5	14678	2	KED
⎢	**Cu**	**63**	**100.302**	ug/L	0.940	0	42	254504	1	KED
⎢	**Cu**	**65**	**100.650**	ug/L	3.154	3	27	126776	1	KED
⎢	**Zn**	**66**	**100.271**	ug/L	4.462	4	29	32291	3	KED
⎢	**Zn**	**67**	**99.887**	ug/L	6.102	6	8	5329	5	KED
⎢	**As**	**75**	**100.528**	ug/L	4.094	4	7	16391	2	KED
⎣	**Se**	**78**	**100.300**	ug/L	6.966	6	11	1775	5	KED
	Y	**89**		ug/L			276255	287419	3	Standard
	Kr	**83**		ug/L			52	81	14	Standard
⎡>	**In-1**	**115**		ug/L			7782	7757	0	KED
⎢	**Mo**	**98**	**102.074**	ug/L	0.495	0	8	73597	1	KED
⎢	**Cd**	**111**	**101.188**	ug/L	0.763	0	4	17777	1	KED
⎣	**Cd**	**114**	**100.768**	ug/L	1.563	1	5	42844	1	KED
⎡>	**In**	**115**		ug/L			475417	470636	0	Standard
⎢	**Ag**	**107**	**100.549**	ug/L	6.868	6	135	1043377	6	Standard
⎢	**Sb**	**121**	**100.938**	ug/L	3.822	3	596	939093	3	Standard
⎣	**Sb**	**123**	**100.770**	ug/L	2.927	2	475	708378	2	Standard
⎡>	**Tb**	**159**		ug/L			499801	526976	1	Standard
⎢	**Tl**	**205**	**101.120**	ug/L	3.341	3	224	3015821	3	Standard
⎣	**Pb**	**208**	**99.748**	ug/L	4.550	4	359	3676239	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL1
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, March 01, 2023 17:11:11
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			34622	38959	2	Standard
	Cl	**37**		ug/L			3977931	4146111	2	Standard
⎡>	**Sc**	**45**		ug/L			439931	445194	1	Standard
⎢	**Cr**	**52**	**0.016**	ug/L	0.036	223	12483	12877	4	Standard
⎢	**Cr**	**53**	**-0.015**	ug/L	0.001	7	120	96	2	Standard
⎣	**Mn**	**55**	**-0.009**	ug/L	0.001	10	1073	887	1	Standard
⎡>	**Ge**	**72**		ug/L			28119	27892	2	KED
⎢	**Ni**	**60**	**-0.009**	ug/L	0.003	36	28	20	14	KED
⎢	**Ni**	**62**	**0.005**	ug/L	0.014	285	5	5	33	KED
⎢	**Cu**	**63**	**0.017**	ug/L	0.002	13	42	84	5	KED
⎢	**Cu**	**65**	**0.015**	ug/L	0.003	19	27	46	6	KED
⎢	**Zn**	**66**	**-0.003**	ug/L	0.006	198	29	28	6	KED
⎢	**Zn**	**67**	**-0.033**	ug/L	0.104	313	8	6	78	KED
⎢	**As**	**75**	**-0.002**	ug/L	0.003	189	7	6	8	KED
⎣	**Se**	**78**	**0.245**	ug/L	0.252	102	11	15	27	KED
	Y	**89**		ug/L			276255	289127	3	Standard
	Kr	**83**		ug/L			52	59	6	Standard
⎡>	**In-1**	**115**		ug/L			7782	8011	4	KED
⎢	**Mo**	**98**	**0.011**	ug/L	0.005	51	8	17	28	KED
⎢	**Cd**	**111**	**0.006**	ug/L	0.007	108	4	5	20	KED
⎣	**Cd**	**114**	**-0.005**	ug/L	0.005	97	5	3	51	KED
⎡>	**In**	**115**		ug/L			475417	490055	3	Standard
⎢	**Ag**	**107**	**-0.004**	ug/L	0.001	24	135	93	12	Standard
⎢	**Sb**	**121**	**0.148**	ug/L	0.006	4	596	2043	2	Standard
⎣	**Sb**	**123**	**0.146**	ug/L	0.016	10	475	1559	3	Standard
⎡>	**Tb**	**159**		ug/L			499801	514005	3	Standard
⎢	**Tl**	**205**	**-0.002**	ug/L	0.001	24	224	166	7	Standard
⎣	**Pb**	**208**	**-0.006**	ug/L	0.000	3	359	158	1	Standard

Sample Information

Sample Date/Time: Wednesday, March 01, 2023 17:03:36
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED
Mass Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Conditions File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

Calibration

Analyte	Mass	**r Corr Coef**	Slope	Std 1 Conc	Std 2 Conc	Std 3 Conc	Std 4 Conc	Std 5 Conc
C	13							
Cl	37							
Sc	45							
Cr	52	**0.9999**	0.034	0.50	10	20	50	100
Cr	53	**0.9999**	0.004	0.50	10	20	50	100
Mn	55	**0.9997**	0.048	0.50	10	20	50	100
Ge	72							
Ni	60	**0.9999**	0.033	0.50	10	20	50	100
Ni	62	**0.9998**	0.005	0.50	10	20	50	100
Cu	63	**1.0000**	0.092	0.50	10	20	50	100
Cu	65	**0.9999**	0.046	0.50	10	20	50	100
Zn	66	**1.0000**	0.012	6.00	10	20	50	100
Zn	67	**0.9999**	0.002	6.00	10	20	50	100
As	75	**0.9999**	0.006	0.20	10	20	50	100
Se	78	**1.0000**	0.001	0.50	10	20	50	100
Y	89							
Kr	83							
In-1	115							
Mo	98	**0.9993**	0.093	0.20	10	20	50	100
Cd	111	**0.9998**	0.023	0.10	10	20	50	100
Cd	114	**0.9999**	0.055	0.10	10	20	50	100
In	115							
Ag	107	**0.9999**	0.022	0.20	10	20	50	100
Sb	121	**0.9999**	0.020	0.20	10	20	50	100
Sb	123	**0.9999**	0.015	0.20	10	20	50	100
Tb	159							
Tl	205	**0.9998**	0.057	0.20	10	20	50	100
Pb	208	**1.0000**	0.070	0.10	10	20	50	100

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-ICV1
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, March 01, 2023 17:23:47
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			34622	44483	3	Standard
	Cl	**37**		ug/L			3977931	4235656	2	Standard
⎡>	**Sc**	**45**		ug/L			439931	482193	0	Standard
⎢	**Cr**	**52**	**48.648**	ug/L	0.852	1	12483	819093	1	Standard
⎢	**Cr**	**53**	**49.010**	ug/L	1.430	2	120	94149	2	Standard
⎣	**Mn**	**55**	**47.189**	ug/L	2.060	4	1073	1095471	3	Standard
⎡>	**Ge**	**72**		ug/L			28119	28500	1	KED
⎢	**Ni**	**60**	**49.075**	ug/L	2.669	5	28	45648	5	KED
⎢	**Ni**	**62**	**49.977**	ug/L	2.548	5	5	7481	5	KED
⎢	**Cu**	**63**	**50.870**	ug/L	1.744	3	42	133001	3	KED
⎢	**Cu**	**65**	**50.589**	ug/L	2.096	4	27	65675	4	KED
⎢	**Zn**	**66**	**48.502**	ug/L	1.365	2	29	16112	3	KED
⎢	**Zn**	**67**	**49.036**	ug/L	1.000	2	8	2699	1	KED
⎢	**As**	**75**	**45.888**	ug/L	0.722	1	7	7715	2	KED
⎣	**Se**	**78**	**72.781**	ug/L	0.745	1	11	1331	1	KED
	Y	**89**		ug/L			276255	292405	1	Standard
	Kr	**83**		ug/L			52	83	13	Standard
⎡>	**In-1**	**115**		ug/L			7782	7938	1	KED
⎢	**Mo**	**98**	**48.044**	ug/L	1.202	2	8	35458	3	KED
⎢	**Cd**	**111**	**49.916**	ug/L	0.398	0	4	8976	1	KED
⎣	**Cd**	**114**	**49.692**	ug/L	0.568	1	5	21623	1	KED
⎡>	**In**	**115**		ug/L			475417	481756	0	Standard
⎢	**Ag**	**107**	**51.232**	ug/L	1.167	2	135	544301	1	Standard
⎢	**Sb**	**121**	**50.219**	ug/L	0.748	1	596	478593	0	Standard
⎣	**Sb**	**123**	**50.153**	ug/L	2.005	3	475	361102	3	Standard
⎡>	**Tb**	**159**		ug/L			499801	530940	2	Standard
⎢	**Tl**	**205**	**48.973**	ug/L	2.030	4	224	1471426	3	Standard
⎣	**Pb**	**208**	**50.809**	ug/L	2.163	4	359	1886404	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-ICB1
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, March 01, 2023 17:31:22
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			34622	36105	1	Standard
	Cl	**37**		ug/L			3977931	3991572	1	Standard
⌈>	**Sc**	**45**		ug/L			439931	446866	1	Standard
|	**Cr**	**52**	**0.006**	ug/L	0.036	620	12483	12767	4	Standard
|	**Cr**	**53**	**-0.010**	ug/L	0.005	45	120	105	7	Standard
⌊	**Mn**	**55**	**-0.008**	ug/L	0.002	20	1073	907	3	Standard
⌈>	**Ge**	**72**		ug/L			28119	28033	1	KED
|	**Ni**	**60**	**-0.014**	ug/L	0.009	60	28	15	50	KED
|	**Ni**	**62**	**0.035**	ug/L	0.032	92	5	10	47	KED
|	**Cu**	**63**	**0.004**	ug/L	0.002	50	42	51	9	KED
|	**Cu**	**65**	**0.001**	ug/L	0.009	871	27	28	41	KED
|	**Zn**	**66**	**0.030**	ug/L	0.021	71	29	39	16	KED
|	**Zn**	**67**	**-0.011**	ug/L	0.042	390	8	8	26	KED
|	**As**	**75**	**0.003**	ug/L	0.010	325	7	7	21	KED
⌊	**Se**	**78**	**0.273**	ug/L	0.227	83	11	16	22	KED
	Y	**89**		ug/L			276255	278459	1	Standard
	Kr	**83**		ug/L			52	60	14	Standard
⌈>	**In-1**	**115**		ug/L			7782	7741	4	KED
|	**Mo**	**98**	**0.001**	ug/L	0.001	144	8	9	12	KED
|	**Cd**	**111**	**-0.005**	ug/L	0.008	142	4	3	45	KED
⌊	**Cd**	**114**	**-0.000**	ug/L	0.011	5628	5	5	89	KED
⌈>	**In**	**115**		ug/L			475417	473143	1	Standard
|	**Ag**	**107**	**-0.006**	ug/L	0.001	12	135	71	12	Standard
|	**Sb**	**121**	**-0.020**	ug/L	0.001	5	596	410	1	Standard
⌊	**Sb**	**123**	**-0.020**	ug/L	0.003	17	475	334	7	Standard
⌈>	**Tb**	**159**		ug/L			499801	500782	3	Standard
|	**Tl**	**205**	**-0.005**	ug/L	0.000	8	224	69	17	Standard
⌊	**Pb**	**208**	**-0.007**	ug/L	0.001	7	359	128	10	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV1
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, March 01, 2023 17:37:21
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			34622	37025	0	Standard
	Cl	**37**		ug/L			3977931	4272691	1	Standard
⎡>	**Sc**	**45**		ug/L			439931	463378	0	Standard
⎢	**Cr**	**52**	**50.586**	ug/L	0.311	0	12483	818018	1	Standard
⎢	**Cr**	**53**	**50.950**	ug/L	1.707	3	120	94078	4	Standard
⎣	**Mn**	**55**	**50.009**	ug/L	1.807	3	1073	1115982	4	Standard
⎡>	**Ge**	**72**		ug/L			28119	28827	1	KED
⎢	**Ni**	**60**	**48.716**	ug/L	2.406	4	28	45814	3	KED
⎢	**Ni**	**62**	**50.264**	ug/L	0.662	1	5	7610	0	KED
⎢	**Cu**	**63**	**49.266**	ug/L	2.212	4	42	130233	3	KED
⎢	**Cu**	**65**	**48.731**	ug/L	1.504	3	27	63977	2	KED
⎢	**Zn**	**66**	**49.698**	ug/L	2.285	4	29	16692	3	KED
⎢	**Zn**	**67**	**50.245**	ug/L	2.038	4	8	2797	3	KED
⎢	**As**	**75**	**49.197**	ug/L	1.399	2	7	8364	1	KED
⎣	**Se**	**78**	**48.075**	ug/L	1.630	3	11	893	2	KED
	Y	**89**		ug/L			276255	288629	1	Standard
	Kr	**83**		ug/L			52	74	38	Standard
⎡>	**In-1**	**115**		ug/L			7782	8014	0	KED
⎢	**Mo**	**98**	**47.901**	ug/L	0.748	1	8	35684	1	KED
⎢	**Cd**	**111**	**49.398**	ug/L	0.457	0	4	8968	1	KED
⎣	**Cd**	**114**	**50.408**	ug/L	0.480	0	5	22146	1	KED
⎡>	**In**	**115**		ug/L			475417	487619	0	Standard
⎢	**Ag**	**107**	**49.462**	ug/L	1.827	3	135	531817	2	Standard
⎢	**Sb**	**121**	**49.073**	ug/L	1.493	3	596	473312	2	Standard
⎣	**Sb**	**123**	**49.183**	ug/L	2.233	4	475	358388	3	Standard
⎡>	**Tb**	**159**		ug/L			499801	532905	2	Standard
⎢	**Tl**	**205**	**47.899**	ug/L	1.440	3	224	1444572	2	Standard
⎣	**Pb**	**208**	**50.671**	ug/L	1.352	2	359	1888618	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB1
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, March 01, 2023 17:44:36
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			34622	35100	3	Standard
	Cl	**37**		ug/L			3977931	4089462	2	Standard
⎡>	**Sc**	**45**		ug/L			439931	452770	1	Standard
⎢	**Cr**	**52**	**0.004**	ug/L	0.022	518	12483	12914	2	Standard
⎢	**Cr**	**53**	**-0.012**	ug/L	0.006	47	120	102	10	Standard
⎣	**Mn**	**55**	**-0.012**	ug/L	0.002	13	1073	840	2	Standard
⎡>	**Ge**	**72**		ug/L			28119	28008	3	KED
⎢	**Ni**	**60**	**-0.010**	ug/L	0.011	106	28	19	55	KED
⎢	**Ni**	**62**	**0.005**	ug/L	0.027	578	5	5	66	KED
⎢	**Cu**	**63**	**-0.000**	ug/L	0.003	727	42	41	17	KED
⎢	**Cu**	**65**	**-0.002**	ug/L	0.008	476	27	25	41	KED
⎢	**Zn**	**66**	**0.007**	ug/L	0.033	438	29	32	36	KED
⎢	**Zn**	**67**	**0.037**	ug/L	0.059	158	8	10	26	KED
⎢	**As**	**75**	**-0.001**	ug/L	0.017	1423	7	6	43	KED
⎣	**Se**	**78**	**0.108**	ug/L	0.112	103	11	13	18	KED
	Y	**89**		ug/L			276255	282656	2	Standard
	Kr	**83**		ug/L			52	53	16	Standard
⎡>	**In-1**	**115**		ug/L			7782	7929	2	KED
⎢	**Mo**	**98**	**0.002**	ug/L	0.004	209	8	10	30	KED
⎢	**Cd**	**111**	**0.007**	ug/L	0.017	243	4	5	53	KED
⎣	**Cd**	**114**	**-0.000**	ug/L	0.007	1803	5	5	57	KED
⎡>	**In**	**115**		ug/L			475417	472621	0	Standard
⎢	**Ag**	**107**	**-0.006**	ug/L	0.000	6	135	74	6	Standard
⎢	**Sb**	**121**	**0.068**	ug/L	0.002	2	596	1231	2	Standard
⎣	**Sb**	**123**	**0.066**	ug/L	0.002	3	475	940	2	Standard
⎡>	**Tb**	**159**		ug/L			499801	508988	1	Standard
⎢	**Tl**	**205**	**-0.004**	ug/L	0.001	16	224	103	20	Standard
⎣	**Pb**	**208**	**-0.006**	ug/L	0.001	13	359	135	23	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CRL1
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, March 01, 2023 17:49:27
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			34622	37348	1	Standard
	Cl	**37**		ug/L			3977931	4057711	1	Standard
⌈>	**Sc**	**45**		ug/L			439931	464021	0	Standard
|	**Cr**	**52**	**0.446**	ug/L	0.038	8	12483	20263	2	Standard
|	**Cr**	**53**	**0.480**	ug/L	0.020	4	120	1014	3	Standard
⌊	**Mn**	**55**	**0.461**	ug/L	0.014	3	1073	11426	2	Standard
⌈>	**Ge**	**72**		ug/L			28119	28719	3	KED
|	**Ni**	**60**	**0.452**	ug/L	0.046	10	28	452	9	KED
|	**Ni**	**62**	**0.429**	ug/L	0.087	20	5	69	19	KED
|	**Cu**	**63**	**0.492**	ug/L	0.039	7	42	1341	10	KED
|	**Cu**	**65**	**0.460**	ug/L	0.021	4	27	629	5	KED
|	**Zn**	**66**	**6.168**	ug/L	0.339	5	29	2090	5	KED
|	**Zn**	**67**	**5.395**	ug/L	0.718	13	8	307	13	KED
|	**As**	**75**	**0.185**	ug/L	0.010	5	7	38	2	KED
⌊	**Se**	**78**	**0.260**	ug/L	0.159	61	11	16	19	KED
	Y	**89**		ug/L			276255	286887	3	Standard
	Kr	**83**		ug/L			52	55	15	Standard
⌈>	**In-1**	**115**		ug/L			7782	7914	2	KED
|	**Mo**	**98**	**0.176**	ug/L	0.012	6	8	137	4	KED
|	**Cd**	**111**	**0.071**	ug/L	0.015	21	4	16	14	KED
⌊	**Cd**	**114**	**0.079**	ug/L	0.003	4	5	39	4	KED
⌈>	**In**	**115**		ug/L			475417	487172	1	Standard
|	**Ag**	**107**	**0.192**	ug/L	0.007	3	135	2195	2	Standard
|	**Sb**	**121**	**0.167**	ug/L	0.009	5	596	2216	3	Standard
⌊	**Sb**	**123**	**0.165**	ug/L	0.010	6	475	1685	3	Standard
⌈>	**Tb**	**159**		ug/L			499801	514479	2	Standard
|	**Tl**	**205**	**0.191**	ug/L	0.007	3	224	5784	3	Standard
⌊	**Pb**	**208**	**0.098**	ug/L	0.006	5	359	3904	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IFA1
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, March 01, 2023 17:55:01
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			34622	156038	2	Standard
	Cl	**37**		ug/L			3977931	10037429	1	Standard
⌈>	**Sc**	**45**		ug/L			439931	483663	0	Standard
|	**Cr**	**52**	**0.839**	ug/L	0.063	7	12483	27662	3	Standard
|	**Cr**	**53**	**4.405**	ug/L	0.210	4	120	8609	4	Standard
⌊	**Mn**	**55**	**0.098**	ug/L	0.009	8	1073	3462	5	Standard
⌈>	**Ge**	**72**		ug/L			28119	27476	1	KED
|	**Ni**	**60**	**0.083**	ug/L	0.013	15	28	102	12	KED
|	**Ni**	**62**	**0.212**	ug/L	0.012	5	5	35	6	KED
|	**Cu**	**63**	**0.074**	ug/L	0.004	4	42	226	2	KED
|	**Cu**	**65**	**0.063**	ug/L	0.016	24	27	105	16	KED
|	**Zn**	**66**	**0.338**	ug/L	0.063	18	29	137	13	KED
|	**Zn**	**67**	**0.218**	ug/L	0.192	88	8	20	51	KED
|	**As**	**75**	**0.035**	ug/L	0.018	51	7	12	20	KED
⌊	**Se**	**78**	**0.221**	ug/L	0.057	25	11	15	4	KED
	Y	**89**		ug/L			276255	294819	3	Standard
	Kr	**83**		ug/L			52	114	13	Standard
⌈>	**In-1**	**115**		ug/L			7782	7910	3	KED
|	**Mo**	**98**	**371.210**	ug/L	29.988	8	8	272476	5	KED
|	**Cd**	**111**	**0.073**	ug/L	0.049	66	4	17	47	KED
⌊	**Cd**	**114**	**0.049**	ug/L	0.012	23	5	27	15	KED
⌈>	**In**	**115**		ug/L			475417	487505	1	Standard
|	**Ag**	**107**	**-0.002**	ug/L	0.001	72	135	118	13	Standard
|	**Sb**	**121**	**-0.004**	ug/L	0.001	24	596	576	2	Standard
⌊	**Sb**	**123**	**-0.004**	ug/L	0.004	92	475	455	7	Standard
⌈>	**Tb**	**159**		ug/L			499801	545008	0	Standard
|	**Tl**	**205**	**0.014**	ug/L	0.000	2	224	679	2	Standard
⌊	**Pb**	**208**	**0.024**	ug/L	0.002	9	359	1315	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IFA1
Sample Dil Factor:
Comments: DEL
Sample Date/Time: Wednesday, March 01, 2023 18:03:09
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			34622	154600	2	Standard
	Cl	**37**		ug/L			3977931	10085967	1	Standard
⌈>	**Sc**	**45**		ug/L			439931	482115	1	Standard
|	**Cr**	**52**	**0.821**	ug/L	0.015	1	12483	27270	2	Standard
|	**Cr**	**53**	**4.607**	ug/L	0.018	0	120	8969	1	Standard
⌊	**Mn**	**55**	**0.091**	ug/L	0.005	5	1073	3278	2	Standard
⌈>	**Ge**	**72**		ug/L			28119	28029	1	KED
|	**Ni**	**60**	**0.088**	ug/L	0.010	10	28	109	8	KED
|	**Ni**	**62**	**0.169**	ug/L	0.049	28	5	29	22	KED
|	**Cu**	**63**	**0.068**	ug/L	0.004	6	42	217	5	KED
|	**Cu**	**65**	**0.072**	ug/L	0.028	39	27	118	29	KED
|	**Zn**	**66**	**0.188**	ug/L	0.075	40	29	90	26	KED
|	**Zn**	**67**	**0.107**	ug/L	0.045	41	8	14	15	KED
|	**As**	**75**	**0.018**	ug/L	0.010	55	7	10	17	KED
⌊	**Se**	**78**	**0.150**	ug/L	0.174	115	11	14	22	KED
	Y	**89**		ug/L			276255	291487	0	Standard
	Kr	**83**		ug/L			52	126	14	Standard
⌈>	**In-1**	**115**		ug/L			7782	7883	6	KED
|	**Mo**	**98**	**363.037**	ug/L	46.057	12	8	264541	6	KED
|	**Cd**	**111**	**0.066**	ug/L	0.012	18	4	15	12	KED
⌊	**Cd**	**114**	**0.041**	ug/L	0.008	20	5	23	12	KED
⌈>	**In**	**115**		ug/L			475417	482286	1	Standard
|	**Ag**	**107**	**-0.002**	ug/L	0.001	42	135	113	8	Standard
|	**Sb**	**121**	**-0.007**	ug/L	0.003	40	596	540	3	Standard
⌊	**Sb**	**123**	**-0.008**	ug/L	0.001	16	475	424	2	Standard
⌈>	**Tb**	**159**		ug/L			499801	535044	2	Standard
|	**Tl**	**205**	**0.012**	ug/L	0.001	5	224	608	5	Standard
⌊	**Pb**	**208**	**0.023**	ug/L	0.001	3	359	1230	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IFB1
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, March 01, 2023 18:08:23
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			34622	160306	3	Standard
	Cl	**37**		ug/L			3977931	10182077	2	Standard
⌈>	**Sc**	**45**		ug/L			439931	491587	1	Standard
|	**Cr**	**52**	**19.858**	ug/L	0.784	3	12483	349007	2	Standard
|	**Cr**	**53**	**23.335**	ug/L	0.404	1	120	45769	0	Standard
⌊	**Mn**	**55**	**18.675**	ug/L	0.442	2	1073	442706	0	Standard
⌈>	**Ge**	**72**		ug/L			28119	28754	0	KED
|	**Ni**	**60**	**19.627**	ug/L	0.503	2	28	18434	2	KED
|	**Ni**	**62**	**20.592**	ug/L	1.633	7	5	3114	8	KED
|	**Cu**	**63**	**19.273**	ug/L	0.722	3	42	50870	4	KED
|	**Cu**	**65**	**19.304**	ug/L	0.434	2	27	25304	2	KED
|	**Zn**	**66**	**19.020**	ug/L	0.837	4	29	6394	5	KED
|	**Zn**	**67**	**16.721**	ug/L	1.084	6	8	935	7	KED
|	**As**	**75**	**18.233**	ug/L	0.780	4	7	3097	4	KED
⌊	**Se**	**78**	**0.174**	ug/L	0.112	64	11	15	12	KED
	Y	**89**		ug/L			276255	298499	2	Standard
	Kr	**83**		ug/L			52	93	13	Standard
⌈>	**In-1**	**115**		ug/L			7782	7703	2	KED
|	**Mo**	**98**	**388.577**	ug/L	2.838	0	8	278202	3	KED
|	**Cd**	**111**	**18.832**	ug/L	0.165	0	4	3288	2	KED
⌊	**Cd**	**114**	**19.267**	ug/L	0.498	2	5	8139	3	KED
⌈>	**In**	**115**		ug/L			475417	485066	2	Standard
|	**Ag**	**107**	**17.996**	ug/L	0.544	3	135	192521	0	Standard
|	**Sb**	**121**	**-0.014**	ug/L	0.004	30	596	474	11	Standard
⌊	**Sb**	**123**	**-0.016**	ug/L	0.003	17	475	366	7	Standard
⌈>	**Tb**	**159**		ug/L			499801	537347	1	Standard
|	**Tl**	**205**	**0.013**	ug/L	0.002	16	224	638	11	Standard
⌊	**Pb**	**208**	**0.035**	ug/L	0.002	6	359	1697	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-HCV1
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, March 01, 2023 18:13:14
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			34622	45098	3	Standard
	Cl	**37**		ug/L			3977931	4480126	2	Standard
⎡>	**Sc**	**45**		ug/L			439931	473478	1	Standard
⎢	**Cr**	**52**	**200.923**	ug/L	4.711	2	12483	3280763	4	Standard
⎢	**Cr**	**53**	**195.319**	ug/L	0.468	0	120	368103	1	Standard
⎣	**Mn**	**55**	**196.446**	ug/L	1.264	0	1073	4475473	2	Standard
⎡>	**Ge**	**72**		ug/L			28119	27306	1	KED
⎢	**Ni**	**60**	**199.686**	ug/L	7.524	3	28	177831	3	KED
⎢	**Ni**	**62**	**202.956**	ug/L	6.733	3	5	29090	2	KED
⎢	**Cu**	**63**	**199.185**	ug/L	3.167	1	42	498696	0	KED
⎢	**Cu**	**65**	**202.481**	ug/L	3.428	1	27	251789	2	KED
⎢	**Zn**	**66**	**199.828**	ug/L	6.951	3	29	63493	2	KED
⎢	**Zn**	**67**	**198.172**	ug/L	7.097	3	8	10427	3	KED
⎢	**As**	**75**	**201.281**	ug/L	5.306	2	7	32398	2	KED
⎣	**Se**	**78**	**195.778**	ug/L	4.846	2	11	3412	2	KED
	Y	**89**		ug/L			276255	292341	1	Standard
	Kr	**83**		ug/L			52	110	12	Standard
⎡>	**In-1**	**115**		ug/L			7782	7650	4	KED
⎢	**Mo**	**98**	**194.536**	ug/L	17.279	8	8	137985	5	KED
⎢	**Cd**	**111**	**191.134**	ug/L	15.870	8	4	33037	4	KED
⎣	**Cd**	**114**	**192.597**	ug/L	15.525	8	5	80577	4	KED
⎡>	**In**	**115**		ug/L			475417	474061	2	Standard
⎢	**Ag**	**107**	**194.208**	ug/L	10.137	5	135	2030868	6	Standard
⎢	**Sb**	**121**	**197.884**	ug/L	5.055	2	596	1854032	3	Standard
⎣	**Sb**	**123**	**199.424**	ug/L	5.352	2	475	1411955	4	Standard
⎡>	**Tb**	**159**		ug/L			499801	540259	3	Standard
⎢	**Tl**	**205**	**191.949**	ug/L	5.737	2	224	5865866	2	Standard
⎣	**Pb**	**208**	**197.655**	ug/L	7.062	3	359	7463526	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-HCV2
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, March 01, 2023 18:18:08
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			34622	44120	2	Standard
	Cl	**37**		ug/L			3977931	4504029	0	Standard
>	**Sc**	**45**		ug/L			439931	461060	4	Standard
	Cr	**52**	**301.181**	ug/L	15.552	5	12483	4776364	3	Standard
	Cr	**53**	**297.067**	ug/L	15.094	5	120	544423	2	Standard
	Mn	**55**	**296.634**	ug/L	12.569	4	1073	6572383	0	Standard
>	**Ge**	**72**		ug/L			28119	26423	2	KED
	Ni	**60**	**290.355**	ug/L	14.197	4	28	250005	1	KED
	Ni	**62**	**291.950**	ug/L	9.590	3	5	40476	1	KED
	Cu	**63**	**285.178**	ug/L	13.913	4	42	690381	2	KED
	Cu	**65**	**284.823**	ug/L	12.703	4	27	342433	2	KED
	Zn	**66**	**277.844**	ug/L	11.752	4	29	85367	1	KED
	Zn	**67**	**276.489**	ug/L	8.447	3	8	14069	0	KED
	As	**75**	**287.242**	ug/L	10.876	3	7	44707	0	KED
	Se	**78**	**269.644**	ug/L	14.601	5	11	4539	2	KED
	Y	**89**		ug/L			276255	288834	4	Standard
	Kr	**83**		ug/L			52	179	12	Standard
>	**In-1**	**115**		ug/L			7782	7228	2	KED
	Mo	**98**	**296.693**	ug/L	23.766	8	8	199100	5	KED
	Cd	**111**	**275.144**	ug/L	24.609	8	4	44989	7	KED
	Cd	**114**	**279.578**	ug/L	22.483	8	5	110650	6	KED
>	**In**	**115**		ug/L			475417	456363	1	Standard
	Ag	**107**	**296.839**	ug/L	10.556	3	135	2986005	2	Standard
	Sb	**121**	**309.869**	ug/L	11.005	3	596	2793766	2	Standard
	Sb	**123**	**310.233**	ug/L	20.152	6	475	2112564	5	Standard
>	**Tb**	**159**		ug/L			499801	523106	2	Standard
	Tl	**205**	**294.797**	ug/L	10.541	3	224	8722318	0	Standard
	Pb	**208**	**305.523**	ug/L	8.397	2	359	11173066	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL2
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, March 01, 2023 18:25:42
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			34622	40508	2	Standard
	Cl	**37**		ug/L			3977931	4384884	2	Standard
>	**Sc**	**45**		ug/L			439931	460596	1	Standard
	Cr	**52**	**0.028**	ug/L	0.035	123	12483	13511	3	Standard
	Cr	**53**	**0.063**	ug/L	0.005	8	120	241	2	Standard
	Mn	**55**	**0.059**	ug/L	0.003	4	1073	2432	1	Standard
>	**Ge**	**72**		ug/L			28119	28580	3	KED
	Ni	**60**	**0.000**	ug/L	0.006	4656	28	29	20	KED
	Ni	**62**	**0.008**	ug/L	0.019	239	5	6	45	KED
	Cu	**63**	**0.030**	ug/L	0.004	14	42	122	11	KED
	Cu	**65**	**0.028**	ug/L	0.004	12	27	64	10	KED
	Zn	**66**	**0.258**	ug/L	0.010	4	29	116	4	KED
	Zn	**67**	**0.149**	ug/L	0.100	67	8	17	29	KED
	As	**75**	**0.079**	ug/L	0.040	50	7	20	28	KED
	Se	**78**	**0.177**	ug/L	0.173	98	11	15	16	KED
	Y	**89**		ug/L			276255	289312	2	Standard
	Kr	**83**		ug/L			52	54	2	Standard
>	**In-1**	**115**		ug/L			7782	8002	5	KED
	Mo	**98**	**0.058**	ug/L	0.013	22	8	52	24	KED
	Cd	**111**	**-0.004**	ug/L	0.009	238	4	3	41	KED
	Cd	**114**	**-0.001**	ug/L	0.009	1674	5	5	62	KED
>	**In**	**115**		ug/L			475417	489551	0	Standard
	Ag	**107**	**0.004**	ug/L	0.001	19	135	180	4	Standard
	Sb	**121**	**0.431**	ug/L	0.005	1	596	4779	0	Standard
	Sb	**123**	**0.428**	ug/L	0.017	3	475	3616	2	Standard
>	**Tb**	**159**		ug/L			499801	519076	2	Standard
	Tl	**205**	**0.023**	ug/L	0.001	2	224	917	4	Standard
	Pb	**208**	**0.031**	ug/L	0.002	6	359	1503	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL3
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, March 01, 2023 18:32:27
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			34622	39744	2	Standard
	Cl	**37**		ug/L			3977931	4245422	1	Standard
⎡>	**Sc**	**45**		ug/L			439931	464965	3	Standard
⎢	**Cr**	**52**	**0.010**	ug/L	0.016	163	12483	13344	2	Standard
⎢	**Cr**	**53**	**0.052**	ug/L	0.009	17	120	223	4	Standard
⎣	**Mn**	**55**	**0.054**	ug/L	0.007	13	1073	2336	4	Standard
⎡>	**Ge**	**72**		ug/L			28119	28423	0	KED
⎢	**Ni**	**60**	**0.002**	ug/L	0.009	547	28	30	28	KED
⎢	**Ni**	**62**	**0.034**	ug/L	0.029	87	5	10	43	KED
⎢	**Cu**	**63**	**0.034**	ug/L	0.010	28	42	132	19	KED
⎢	**Cu**	**65**	**0.026**	ug/L	0.006	23	27	61	12	KED
⎢	**Zn**	**66**	**0.299**	ug/L	0.008	2	29	128	2	KED
⎢	**Zn**	**67**	**0.230**	ug/L	0.122	53	8	21	30	KED
⎢	**As**	**75**	**0.018**	ug/L	0.009	47	7	10	14	KED
⎣	**Se**	**78**	**0.152**	ug/L	0.096	62	11	14	11	KED
	Y	**89**		ug/L			276255	287271	4	Standard
	Kr	**83**		ug/L			52	62	9	Standard
⎡>	**In-1**	**115**		ug/L			7782	7929	2	KED
⎢	**Mo**	**98**	**0.018**	ug/L	0.018	99	8	21	58	KED
⎢	**Cd**	**111**	**-0.002**	ug/L	0.015	634	4	3	75	KED
⎣	**Cd**	**114**	**-0.006**	ug/L	0.002	36	5	2	35	KED
⎡>	**In**	**115**		ug/L			475417	490136	1	Standard
⎢	**Ag**	**107**	**-0.003**	ug/L	0.000	14	135	102	5	Standard
⎢	**Sb**	**121**	**0.089**	ug/L	0.004	4	596	1473	2	Standard
⎣	**Sb**	**123**	**0.086**	ug/L	0.006	7	475	1120	2	Standard
⎡>	**Tb**	**159**		ug/L			499801	517847	3	Standard
⎢	**Tl**	**205**	**0.005**	ug/L	0.000	10	224	366	3	Standard
⎣	**Pb**	**208**	**0.029**	ug/L	0.002	6	359	1433	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV2
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, March 01, 2023 18:39:13
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			34622	38115	2	Standard
	Cl	**37**		ug/L			3977931	4530209	1	Standard
⎡>	**Sc**	**45**		ug/L			439931	481697	2	Standard
⎢	**Cr**	**52**	**49.508**	ug/L	1.869	3	12483	832783	5	Standard
⎢	**Cr**	**53**	**49.486**	ug/L	1.968	3	120	95010	5	Standard
⎣	**Mn**	**55**	**47.816**	ug/L	1.647	3	1073	1109573	5	Standard
⎡>	**Ge**	**72**		ug/L			28119	28015	1	KED
⎢	**Ni**	**60**	**49.556**	ug/L	1.375	2	28	45320	4	KED
⎢	**Ni**	**62**	**49.995**	ug/L	1.491	2	5	7359	4	KED
⎢	**Cu**	**63**	**50.387**	ug/L	1.503	2	42	129495	3	KED
⎢	**Cu**	**65**	**51.120**	ug/L	1.209	2	27	65247	3	KED
⎢	**Zn**	**66**	**50.163**	ug/L	1.170	2	29	16382	3	KED
⎢	**Zn**	**67**	**48.758**	ug/L	0.774	1	8	2638	0	KED
⎢	**As**	**75**	**49.345**	ug/L	1.340	2	7	8156	4	KED
⎣	**Se**	**78**	**47.931**	ug/L	1.612	3	11	866	4	KED
	Y	**89**		ug/L			276255	304203	1	Standard
	Kr	**83**		ug/L			52	64	30	Standard
⎡>	**In-1**	**115**		ug/L			7782	8064	1	KED
⎢	**Mo**	**98**	**46.569**	ug/L	4.736	10	8	34884	9	KED
⎢	**Cd**	**111**	**47.404**	ug/L	4.464	9	4	8655	8	KED
⎣	**Cd**	**114**	**48.130**	ug/L	4.989	10	5	21262	9	KED
⎡>	**In**	**115**		ug/L			475417	500424	1	Standard
⎢	**Ag**	**107**	**49.010**	ug/L	0.758	1	135	540990	2	Standard
⎢	**Sb**	**121**	**48.692**	ug/L	1.791	3	596	482140	4	Standard
⎣	**Sb**	**123**	**49.070**	ug/L	1.793	3	475	367143	4	Standard
⎡>	**Tb**	**159**		ug/L			499801	535189	2	Standard
⎢	**Tl**	**205**	**48.209**	ug/L	0.304	0	224	1460538	2	Standard
⎣	**Pb**	**208**	**51.464**	ug/L	0.256	0	359	1926841	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB2
Sample Dil Factor:
Comments:
DEL
Sample Date/Time: Wednesday, March 01, 2023 18:46:48
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			34622	37364	0	Standard
	Cl	**37**		ug/L			3977931	4308539	2	Standard
>	**Sc**	**45**		ug/L			439931	453557	6	Standard
	Cr	**52**	**-0.020**	ug/L	0.019	94	12483	12548	4	Standard
	Cr	**53**	**0.018**	ug/L	0.003	17	120	156	4	Standard
	Mn	**55**	**0.007**	ug/L	0.003	45	1073	1255	3	Standard
>	**Ge**	**72**		ug/L			28119	28418	2	KED
	Ni	**60**	**-0.014**	ug/L	0.005	32	28	15	30	KED
	Ni	**62**	**-0.013**	ug/L	0.027	204	5	3	124	KED
	Cu	**63**	**-0.001**	ug/L	0.005	797	42	41	26	KED
	Cu	**65**	**-0.002**	ug/L	0.014	871	27	25	68	KED
	Zn	**66**	**0.012**	ug/L	0.010	78	29	34	9	KED
	Zn	**67**	**-0.036**	ug/L	0.023	64	8	6	15	KED
	As	**75**	**0.006**	ug/L	0.013	207	7	8	26	KED
	Se	**78**	**0.029**	ug/L	0.217	737	11	12	30	KED
	Y	**89**		ug/L			276255	285927	6	Standard
	Kr	**83**		ug/L			52	59	27	Standard
>	**In-1**	**115**		ug/L			7782	7767	1	KED
	Mo	**98**	**0.013**	ug/L	0.009	71	8	17	37	KED
	Cd	**111**	**0.002**	ug/L	0.012	599	4	4	44	KED
	Cd	**114**	**-0.006**	ug/L	0.007	120	5	3	100	KED
>	**In**	**115**		ug/L			475417	476078	7	Standard
	Ag	**107**	**-0.003**	ug/L	0.002	60	135	107	8	Standard
	Sb	**121**	**0.107**	ug/L	0.028	26	596	1588	8	Standard
	Sb	**123**	**0.107**	ug/L	0.015	14	475	1231	1	Standard
>	**Tb**	**159**		ug/L			499801	498943	8	Standard
	Tl	**205**	**0.000**	ug/L	0.001	573	224	228	9	Standard
	Pb	**208**	**-0.005**	ug/L	0.001	14	359	166	10	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB2
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, March 01, 2023 18:51:39
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			34622	37595	1	Standard
	Cl	**37**		ug/L			3977931	4191187	2	Standard
⎡>	**Sc**	**45**		ug/L			439931	452308	0	Standard
⎢	**Cr**	**52**	**-0.030**	ug/L	0.010	33	12483	12368	0	Standard
⎢	**Cr**	**53**	**0.026**	ug/L	0.004	16	120	171	4	Standard
⎣	**Mn**	**55**	**0.003**	ug/L	0.002	75	1073	1162	4	Standard
⎡>	**Ge**	**72**		ug/L			28119	27995	1	KED
⎢	**Ni**	**60**	**-0.013**	ug/L	0.001	11	28	16	6	KED
⎢	**Ni**	**62**	**0.030**	ug/L	0.046	153	5	9	72	KED
⎢	**Cu**	**63**	**0.000**	ug/L	0.002	3638	42	42	14	KED
⎢	**Cu**	**65**	**0.006**	ug/L	0.005	90	27	34	20	KED
⎢	**Zn**	**66**	**0.032**	ug/L	0.017	54	29	40	14	KED
⎢	**Zn**	**67**	**0.000**	ug/L	0.051	57339	8	8	32	KED
⎢	**As**	**75**	**0.006**	ug/L	0.016	265	7	8	31	KED
⎣	**Se**	**78**	**0.091**	ug/L	0.091	99	11	13	12	KED
	Y	**89**		ug/L			276255	286290	1	Standard
	Kr	**83**		ug/L			52	60	32	Standard
⎡>	**In-1**	**115**		ug/L			7782	7792	1	KED
⎢	**Mo**	**98**	**0.007**	ug/L	0.004	54	8	14	21	KED
⎢	**Cd**	**111**	**0.023**	ug/L	0.012	51	4	8	26	KED
⎣	**Cd**	**114**	**0.004**	ug/L	0.000	3	5	7	0	KED
⎡>	**In**	**115**		ug/L			475417	485943	1	Standard
⎢	**Ag**	**107**	**-0.006**	ug/L	0.001	21	135	71	21	Standard
⎢	**Sb**	**121**	**-0.006**	ug/L	0.001	13	596	549	2	Standard
⎣	**Sb**	**123**	**-0.012**	ug/L	0.001	4	475	396	1	Standard
⎡>	**Tb**	**159**		ug/L			499801	506292	2	Standard
⎢	**Tl**	**205**	**-0.004**	ug/L	0.000	5	224	100	7	Standard
⎣	**Pb**	**208**	**-0.007**	ug/L	0.001	8	359	129	17	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, March 01, 2023 19:00:48
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			34622	51234	2	Standard
Cl	37		ug/L			3977931	4266346	1	Standard
> Sc	45		ug/L			439931	481305	2	Standard
[redacted]	52	[redacted]	ug/L	0.015	24	12483	14656	3	Standard
Cr	53	0.075	ug/L	0.007	9	120	275	3	Standard
[redacted]	55	[redacted]	ug/L	0.000	22	1073	1212	1	Standard
> Ge	72		ug/L			28119	28560	2	KED
[redacted]	60	[redacted]	ug/L	0.008	60	28	17	40	KED
Ni	62	-0.005	ug/L	0.031	594	5	4	107	KED
[redacted]	63	[redacted]	ug/L	0.005	15	42	128	9	KED
Cu	65	0.019	ug/L	0.007	34	27	52	17	KED
[redacted]	66	[redacted]	ug/L	0.031	23	29	74	12	KED
Zn	67	0.126	ug/L	0.079	62	8	15	24	KED
[redacted]	75	[redacted]	ug/L	0.014	136	7	9	29	KED
Se	78	0.175	ug/L	0.119	68	11	15	13	KED
Y	89		ug/L			276255	297339	4	Standard
Kr	83		ug/L			52	50	28	Standard
> In-1	115		ug/L			7782	7979	4	KED
Mo	98	0.017	ug/L	0.004	23	8	21	17	KED
Cd	111	0.001	ug/L	0.011	959	4	4	44	KED
Cd	114	-0.001	ug/L	0.008	1467	5	5	61	KED
> In	115		ug/L			475417	495755	0	Standard
Ag	107	-0.005	ug/L	0.001	23	135	91	13	Standard
[redacted]	121	[redacted]	ug/L	0.004	17	596	824	4	Standard
Sb	123	0.022	ug/L	0.003	11	475	661	2	Standard
> Tb	159		ug/L			499801	523298	2	Standard
Tl	205	-0.004	ug/L	0.001	17	224	126	17	Standard
[redacted]	208	[redacted]	ug/L	0.000	7	359	248	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, March 01, 2023 19:05:39
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			34622	52552	4	Standard
Cl	37		ug/L			3977931	4256415	0	Standard
> Sc	45		ug/L			439931	460928	2	Standard
[redacted]	52	[redacted]	ug/L	1.434	5	12483	419698	4	Standard
Cr	53	25.311	ug/L	0.720	2	120	46530	1	Standard
[redacted]	55	[redacted]	ug/L	1.195	4	1073	560292	3	Standard
> Ge	72		ug/L			28119	28793	1	KED
[redacted]	60	[redacted]	ug/L	0.856	3	28	23847	2	KED
Ni	62	26.103	ug/L	0.949	3	5	3950	3	KED
[redacted]	63	[redacted]	ug/L	0.428	1	42	68819	1	KED
Cu	65	26.472	ug/L	0.828	3	27	34731	3	KED
[redacted]	66	[redacted]	ug/L	2.168	2	29	29369	1	KED
Zn	67	78.076	ug/L	4.786	6	8	4339	7	KED
[redacted]	75	[redacted]	ug/L	0.816	3	7	4331	2	KED
Se	78	79.341	ug/L	3.165	3	11	1465	3	KED
Y	89		ug/L			276255	290344	0	Standard
Kr	83		ug/L			52	57	16	Standard
> In-1	115		ug/L			7782	7904	3	KED
Mo	98	24.723	ug/L	1.254	5	8	18164	5	KED
Cd	111	24.762	ug/L	2.186	8	4	4435	9	KED
Cd	114	25.468	ug/L	1.746	6	5	11038	7	KED
> In	115		ug/L			475417	490069	1	Standard
Ag	107	25.840	ug/L	0.949	3	135	279277	2	Standard
[redacted]	121	[redacted]	ug/L	0.873	3	596	250980	2	Standard
Sb	123	25.980	ug/L	0.759	2	475	190529	2	Standard
> Tb	159		ug/L			499801	509418	1	Standard
Tl	205	25.976	ug/L	0.959	3	224	748868	2	Standard
[redacted]	208	[redacted]	ug/L	0.811	2	359	975137	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Wednesday, March 01, 2023 19:10:30
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			34622	42076	2	Standard
Cl	37		ug/L			3977931	4369905	0	Standard
> Sc	45		ug/L			439931	471780	1	Standard
[redacted]	52	[redacted]	ug/L	0.017	26	12483	14443	2	Standard
Cr	53	0.100	ug/L	0.008	8	120	317	6	Standard
[redacted]	55	[redacted]	ug/L	0.267	3	1073	202815	4	Standard
> Ge	72		ug/L			28119	28404	0	KED
[redacted]	60	[redacted]	ug/L	0.016	13	28	142	11	KED
Ni	62	0.230	ug/L	0.058	25	5	39	21	KED
[redacted]	63	[redacted]	ug/L	0.565	2	42	55637	2	KED
Cu	65	21.332	ug/L	0.600	2	27	27613	2	KED
Zn	66	843.857	ug/L	41.090	4	29	278846	4	KED
Zn	67	768.664	ug/L	18.933	2	8	42051	2	KED
As	75	0.011	ug/L	0.010	93	7	9	18	KED
Se	78	-0.041	ug/L	0.196	477	11	11	30	KED
Y	89		ug/L			276255	292821	3	Standard
Kr	83		ug/L			52	51	32	Standard
> In-1	115		ug/L			7782	8013	1	KED
Mo	98	0.018	ug/L	0.007	35	8	22	21	KED
Cd	111	0.387	ug/L	0.098	25	4	74	22	KED
Cd	114	0.394	ug/L	0.015	3	5	178	4	KED
> In	115		ug/L			475417	495728	0	Standard
Ag	107	-0.002	ug/L	0.001	29	135	115	6	Standard
Sb	121	0.013	ug/L	0.004	32	596	750	5	Standard
Sb	123	0.013	ug/L	0.002	17	475	591	2	Standard
> Tb	159		ug/L			499801	518342	3	Standard
Tl	205	-0.004	ug/L	0.000	4	224	119	6	Standard
[redacted]	208	[redacted]	ug/L	0.005	7	359	2810	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]RE1
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Wednesday, March 01, 2023 19:18:12
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			34622	42343	2	Standard
	Cl	**37**		ug/L			3977931	4218070	1	Standard
⌈>	**Sc**	**45**		ug/L			439931	464815	1	Standard
|	**Cr**	**52**	**-0.023**	ug/L	0.021	92	12483	12831	3	Standard
|	**Cr**	**53**	**0.011**	ug/L	0.006	52	120	148	7	Standard
⌊	**Mn**	**55**	**0.824**	ug/L	0.019	2	1073	19551	3	Standard
⌈>	**Ge**	**72**		ug/L			28119	28179	2	KED
|	**Ni**	**60**	**0.014**	ug/L	0.016	117	28	41	34	KED
|	**Ni**	**62**	**0.018**	ug/L	0.040	227	5	7	75	KED
|	**Cu**	**63**	**2.129**	ug/L	0.064	3	42	5543	2	KED
|	**Cu**	**65**	**2.077**	ug/L	0.102	4	27	2689	2	KED
|	**Zn**	**66**	**80.801**	ug/L	4.735	5	29	26509	5	KED
|	[redacted]	[redacted]	[redacted]	ug/L	4.528	6	8	4020	4	KED
|	**As**	**75**	**-0.011**	ug/L	0.004	34	7	5	13	KED
⌊	**Se**	**78**	**-0.065**	ug/L	0.069	107	11	10	9	KED
	Y	**89**		ug/L			276255	282427	1	Standard
	Kr	**83**		ug/L			52	59	6	Standard
⌈>	**In-1**	**115**		ug/L			7782	7772	3	KED
|	**Mo**	**98**	**-0.002**	ug/L	0.008	428	8	7	76	KED
|	**Cd**	**111**	**0.025**	ug/L	0.008	32	4	8	19	KED
⌊	**Cd**	**114**	**0.037**	ug/L	0.019	52	5	21	40	KED
⌈>	**In**	**115**		ug/L			475417	491966	0	Standard
|	**Ag**	**107**	**-0.007**	ug/L	0.002	32	135	63	37	Standard
|	**Sb**	**121**	**-0.037**	ug/L	0.002	5	596	259	8	Standard
⌊	**Sb**	**123**	**-0.041**	ug/L	0.004	9	475	191	14	Standard
⌈>	**Tb**	**159**		ug/L			499801	507820	2	Standard
|	**Tl**	**205**	**-0.007**	ug/L	0.000	7	224	33	44	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.001	188	359	386	8	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23C0004-01
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, March 01, 2023 19:23:03

DEL

Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			34622	53509	4	Standard
	Cl	**37**		ug/L			3977931	4446857	1	Standard
⌈>	**Sc**	**45**		ug/L			439931	472570	2	Standard
|	**Cr**	**52**	**0.488**	ug/L	0.017	3	12483	21324	2	Standard
|	**Cr**	**53**	**0.363**	ug/L	0.020	5	120	813	7	Standard
⌊	**Mn**	**55**	**2.160**	ug/L	0.011	0	1073	50250	3	Standard
⌈>	**Ge**	**72**		ug/L			28119	29307	1	KED
|	**Ni**	**60**	**0.253**	ug/L	0.031	12	28	271	9	KED
|	**Ni**	**62**	**0.234**	ug/L	0.049	21	5	41	18	KED
|	**Cu**	**63**	**0.010**	ug/L	0.003	25	42	71	8	KED
|	**Cu**	**65**	**0.017**	ug/L	0.014	81	27	51	37	KED
|	**Zn**	**66**	**0.393**	ug/L	0.025	6	29	165	3	KED
|	**Zn**	**67**	**0.398**	ug/L	0.068	17	8	31	12	KED
|	**As**	**75**	**0.008**	ug/L	0.012	138	7	8	22	KED
⌊	**Se**	**78**	**0.046**	ug/L	0.129	282	11	13	19	KED
	Y	**89**		ug/L			276255	289924	0	Standard
	Kr	**83**		ug/L			52	59	27	Standard
⌈>	**In-1**	**115**		ug/L			7782	7706	2	KED
|	**Mo**	**98**	**0.061**	ug/L	0.015	25	8	52	22	KED
|	**Cd**	**111**	**-0.011**	ug/L	0.003	26	4	2	24	KED
⌊	**Cd**	**114**	**0.003**	ug/L	0.013	450	5	6	84	KED
⌈>	**In**	**115**		ug/L			475417	486999	1	Standard
|	**Ag**	**107**	**-0.008**	ug/L	0.000	3	135	55	3	Standard
|	**Sb**	**121**	**-0.039**	ug/L	0.000	0	596	240	2	Standard
⌊	**Sb**	**123**	**-0.042**	ug/L	0.002	5	475	185	9	Standard
⌈>	**Tb**	**159**		ug/L			499801	513732	2	Standard
|	**Tl**	**205**	**-0.006**	ug/L	0.000	5	224	46	20	Standard
⌊	**Pb**	**208**	**-0.002**	ug/L	0.001	31	359	283	8	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23B0511-01
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, March 01, 2023 19:28:47

DEL

Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			34622	24632	0	Standard
Cl	37		ug/L			3977931	184645048	2	Standard
> Sc	45		ug/L			439931	180994	0	Standard
Cr	52	2.454	ug/L	0.064	2	12483	20384	2	Standard
Cr	53	106.740	ug/L	2.165	2	120	76916	1	Standard
Mn	55	11.418	ug/L	0.348	3	1073	99841	2	Standard
> Ge	72		ug/L			28119	6847	2	KED
Ni	60	0.806	ug/L	0.111	13	28	186	11	KED
Ni	62	21.977	ug/L	0.841	3	5	791	4	KED
Cu	63	12.177	ug/L	0.549	4	42	7650	2	KED
Cu	65	4.089	ug/L	0.184	4	27	1281	4	KED
Zn	66	6.789	ug/L	0.468	6	29	548	8	KED
Zn	67	7.928	ug/L	0.616	7	8	106	7	KED
As	75	2.645	ug/L	0.318	12	7	108	12	KED
Se	78	8.937	ug/L	1.165	13	11	41	10	KED
Y	89		ug/L			276255	110443	1	Standard
Kr	83		ug/L			52	582334	4	Standard
> In-1	115		ug/L			7782	2264	1	KED
Mo	98	10.013	ug/L	0.491	4	8	2108	3	KED
Cd	111	0.088	ug/L	0.036	40	4	5	33	KED
Cd	114	0.015	ug/L	0.040	273	5	3	145	KED
> In	115		ug/L			475417	155828	1	Standard
Ag	107	0.014	ug/L	0.002	12	135	93	6	Standard
Sb	121	0.874	ug/L	0.090	10	596	2883	7	Standard
Sb	123	0.564	ug/L	0.021	3	475	1467	1	Standard
> Tb	159		ug/L			499801	203821	3	Standard
Tl	205	0.003	ug/L	0.001	20	224	123	7	Standard
Pb	208	0.080	ug/L	0.005	5	359	1279	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL4
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, March 01, 2023 19:35:23
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			34622	36397	2	Standard
	Cl	**37**		ug/L			3977931	5576847	3	Standard
⎡>	**Sc**	**45**		ug/L			439931	443056	3	Standard
⎢	**Cr**	**52**	**0.243**	ug/L	0.030	12	12483	16264	1	Standard
⎢	**Cr**	**53**	**5.155**	ug/L	0.170	3	120	9202	0	Standard
⎣	**Mn**	**55**	**0.023**	ug/L	0.004	17	1073	1574	3	Standard
⎡>	**Ge**	**72**		ug/L			28119	32434	0	KED
⎢	**Ni**	**60**	**-0.024**	ug/L	0.003	12	28	7	43	KED
⎢	**Ni**	**62**	**1.252**	ug/L	0.033	2	5	219	1	KED
⎢	**Cu**	**63**	**0.106**	ug/L	0.007	6	42	364	5	KED
⎢	**Cu**	**65**	**0.044**	ug/L	0.010	23	27	95	15	KED
⎢	**Zn**	**66**	**0.043**	ug/L	0.028	64	29	50	20	KED
⎢	**Zn**	**67**	**-0.083**	ug/L	0.036	43	8	5	43	KED
⎢	**As**	**75**	**0.001**	ug/L	0.019	2139	7	8	43	KED
⎣	**Se**	**78**	**0.186**	ug/L	0.052	28	11	17	7	KED
	Y	**89**		ug/L			276255	281758	2	Standard
	Kr	**83**		ug/L			52	139	13	Standard
⎡>	**In-1**	**115**		ug/L			7782	9265	3	KED
⎢	**Mo**	**98**	**-0.006**	ug/L	0.002	37	8	4	39	KED
⎢	**Cd**	**111**	**0.005**	ug/L	0.005	85	4	6	18	KED
⎣	**Cd**	**114**	**-0.010**	ug/L	0.004	38	5	1	112	KED
⎡>	**In**	**115**		ug/L			475417	476768	1	Standard
⎢	**Ag**	**107**	**-0.009**	ug/L	0.000	5	135	42	11	Standard
⎢	**Sb**	**121**	**-0.053**	ug/L	0.003	4	596	102	22	Standard
⎣	**Sb**	**123**	**-0.056**	ug/L	0.002	3	475	79	15	Standard
⎡>	**Tb**	**159**		ug/L			499801	570437	2	Standard
⎢	**Tl**	**205**	**-0.003**	ug/L	0.000	3	224	147	3	Standard
⎣	**Pb**	**208**	**0.010**	ug/L	0.002	16	359	794	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Wednesday, March 01, 2023 19:41:17
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			34622	81027	2	Standard
Cl	37		ug/L			3977931	4687506	2	Standard
Sc	45		ug/L			439931	439055	4	Standard
[redacted]	52	[redacted]	ug/L	0.064	4	12483	35789	2	Standard
Cr	53	4.514	ug/L	0.142	3	120	7999	1	Standard
[redacted]	55	[redacted]	ug/L	0.058	0	1073	172905	5	Standard
Ge	72		ug/L			28119	31321	1	KED
[redacted]	60	[redacted]	ug/L	0.081	8	28	1033	9	KED
Ni	62	1.488	ug/L	0.076	5	5	250	3	KED
[redacted]	63	[redacted]	ug/L	0.007	8	42	281	8	KED
Cu	65	0.051	ug/L	0.012	23	27	102	17	KED
[redacted]	66	[redacted]	ug/L	0.094	7	29	470	8	KED
Zn	67	1.407	ug/L	0.258	18	8	94	14	KED
As	75	0.054	ug/L	0.015	28	7	17	16	KED
Se	78	0.031	ug/L	0.193	616	11	13	27	KED
Y	89		ug/L			276255	275213	3	Standard
Kr	83		ug/L			52	60	25	Standard
In-1	115		ug/L			7782	9218	2	KED
Mo	98	0.181	ug/L	0.021	11	8	165	13	KED
Cd	111	0.002	ug/L	0.005	210	4	5	20	KED
Cd	114	0.003	ug/L	0.006	182	5	8	34	KED
In	115		ug/L			475417	457733	2	Standard
Ag	107	-0.008	ug/L	0.001	13	135	53	21	Standard
Sb	121	-0.007	ug/L	0.004	59	596	512	6	Standard
Sb	123	-0.013	ug/L	0.002	13	475	367	1	Standard
Tb	159		ug/L			499801	552209	2	Standard
Tl	205	-0.004	ug/L	0.000	12	224	137	12	Standard
[redacted]	208	[redacted]	ug/L	0.001	14	359	718	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Wednesday, March 01, 2023 19:46:07
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			34622	40081	0	Standard
Cl	37		ug/L			3977931	13510903	2	Standard
> Sc	45		ug/L			439931	434835	1	Standard
Cr	52	0.543	ug/L	0.059	10	12483	20460	5	Standard
Cr	53	15.214	ug/L	0.478	3	120	26450	4	Standard
Mn	55	0.273	ug/L	0.013	4	1073	6771	5	Standard
> Ge	72		ug/L			28119	28319	3	KED
Ni	60	0.007	ug/L	0.009	135	28	34	25	KED
Ni	62	0.430	ug/L	0.072	16	5	69	17	KED
[redacted]	63	[redacted]	ug/L	0.002	1	42	450	3	KED
Cu	65	0.117	ug/L	0.012	10	27	179	11	KED
[redacted]	66	[redacted]	ug/L	0.026	8	29	128	7	KED
Zn	67	0.197	ug/L	0.040	20	8	19	11	KED
As	75	0.055	ug/L	0.022	39	7	16	24	KED
Se	78	0.160	ug/L	0.156	97	11	14	18	KED
Y	89		ug/L			276255	261674	3	Standard
Kr	83		ug/L			52	243	3	Standard
> In-1	115		ug/L			7782	8105	4	KED
Mo	98	0.146	ug/L	0.013	9	8	119	4	KED
Cd	111	-0.001	ug/L	0.022	3026	4	4	96	KED
Cd	114	-0.004	ug/L	0.002	52	5	4	24	KED
> In	115		ug/L			475417	449605	1	Standard
Ag	107	-0.008	ug/L	0.001	13	135	46	23	Standard
Sb	121	-0.051	ug/L	0.003	6	596	112	25	Standard
Sb	123	-0.053	ug/L	0.003	4	475	96	16	Standard
> Tb	159		ug/L			499801	554212	2	Standard
Tl	205	-0.006	ug/L	0.000	4	224	51	16	Standard
[redacted]	208	[redacted]	ug/L	0.001	30	359	485	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL5
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, March 01, 2023 19:50:59
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			34622	37253	3	Standard
	Cl	**37**		ug/L			3977931	4648127	3	Standard
⎡>	**Sc**	**45**		ug/L			439931	434881	2	Standard
⎢	**Cr**	**52**	**0.251**	ug/L	0.025	9	12483	16090	4	Standard
⎢	**Cr**	**53**	**2.239**	ug/L	0.022	0	120	3993	2	Standard
⎣	**Mn**	**55**	**0.004**	ug/L	0.002	65	1073	1137	2	Standard
⎡>	**Ge**	**72**		ug/L			28119	30870	1	KED
⎢	**Ni**	**60**	**-0.015**	ug/L	0.006	38	28	16	33	KED
⎢	**Ni**	**62**	**0.216**	ug/L	0.045	20	5	40	18	KED
⎢	**Cu**	**63**	**0.021**	ug/L	0.005	24	42	104	12	KED
⎢	**Cu**	**65**	**0.013**	ug/L	0.009	65	27	48	25	KED
⎢	**Zn**	**66**	**0.010**	ug/L	0.005	48	29	36	5	KED
⎢	**Zn**	**67**	**-0.046**	ug/L	0.038	81	8	6	31	KED
⎢	**As**	**75**	**-0.006**	ug/L	0.014	221	7	6	37	KED
⎣	**Se**	**78**	**0.093**	ug/L	0.108	116	11	14	15	KED
	Y	**89**		ug/L			276255	270896	0	Standard
	Kr	**83**		ug/L			52	56	24	Standard
⎡>	**In-1**	**115**		ug/L			7782	8913	1	KED
⎢	**Mo**	**98**	**-0.004**	ug/L	0.004	118	8	6	55	KED
⎢	**Cd**	**111**	**-0.005**	ug/L	0.012	261	4	3	66	KED
⎣	**Cd**	**114**	**-0.003**	ug/L	0.006	207	5	5	57	KED
⎡>	**In**	**115**		ug/L			475417	471128	0	Standard
⎢	**Ag**	**107**	**-0.010**	ug/L	0.000	2	135	34	6	Standard
⎢	**Sb**	**121**	**-0.056**	ug/L	0.001	2	596	69	17	Standard
⎣	**Sb**	**123**	**-0.059**	ug/L	0.002	3	475	59	21	Standard
⎡>	**Tb**	**159**		ug/L			499801	550657	1	Standard
⎢	**Tl**	**205**	**-0.000**	ug/L	0.001	119	224	232	5	Standard
⎣	**Pb**	**208**	**0.000**	ug/L	0.001	243	359	408	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV3
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, March 01, 2023 19:56:54
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			34622	35203	4	Standard
	Cl	**37**		ug/L			3977931	4264691	3	Standard
>	**Sc**	**45**		ug/L			439931	441518	2	Standard
	Cr	**52**	**49.081**	ug/L	1.394	2	12483	756671	4	Standard
	Cr	**53**	**51.136**	ug/L	1.976	3	120	89947	4	Standard
	Mn	**55**	**48.173**	ug/L	1.845	3	1073	1024074	4	Standard
>	**Ge**	**72**		ug/L			28119	30252	2	KED
	Ni	**60**	**45.749**	ug/L	1.420	3	28	45144	0	KED
	Ni	**62**	**46.991**	ug/L	0.927	1	5	7465	0	KED
	Cu	**63**	**47.207**	ug/L	0.687	1	42	130970	1	KED
	Cu	**65**	**47.344**	ug/L	0.915	1	27	65226	1	KED
	Zn	**66**	**47.641**	ug/L	2.101	4	29	16787	2	KED
	Zn	**67**	**49.230**	ug/L	1.140	2	8	2876	0	KED
	As	**75**	**48.728**	ug/L	0.490	1	7	8694	1	KED
	Se	**78**	**48.312**	ug/L	1.603	3	11	942	3	KED
	Y	**89**		ug/L			276255	277390	4	Standard
	Kr	**83**		ug/L			52	60	32	Standard
>	**In-1**	**115**		ug/L			7782	8509	1	KED
	Mo	**98**	**44.603**	ug/L	1.085	2	8	35269	0	KED
	Cd	**111**	**48.329**	ug/L	1.745	3	4	9311	1	KED
	Cd	**114**	**48.067**	ug/L	1.587	3	5	22414	2	KED
>	**In**	**115**		ug/L			475417	463955	2	Standard
	Ag	**107**	**54.272**	ug/L	1.332	2	135	555455	4	Standard
	Sb	**121**	**48.557**	ug/L	1.447	2	596	445856	4	Standard
	Sb	**123**	**49.154**	ug/L	1.249	2	475	340898	3	Standard
>	**Tb**	**159**		ug/L			499801	550353	3	Standard
	Tl	**205**	**44.583**	ug/L	1.086	2	224	1388065	1	Standard
	Pb	**208**	**46.929**	ug/L	0.642	1	359	1806255	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB3
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, March 01, 2023 20:04:29
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			34622	34019	4	Standard
	Cl	**37**		ug/L			3977931	4135642	2	Standard
⌈>	**Sc**	**45**		ug/L			439931	411756	1	Standard
|	**Cr**	**52**	**0.015**	ug/L	0.029	187	12483	11901	3	Standard
|	**Cr**	**53**	**1.566**	ug/L	0.018	1	120	2678	1	Standard
⌊	**Mn**	**55**	**-0.007**	ug/L	0.003	43	1073	870	5	Standard
⌈>	**Ge**	**72**		ug/L			28119	28669	1	KED
|	**Ni**	**60**	**-0.024**	ug/L	0.003	13	28	6	41	KED
|	**Ni**	**62**	**0.075**	ug/L	0.044	58	5	16	40	KED
|	**Cu**	**63**	**0.008**	ug/L	0.003	33	42	64	11	KED
|	**Cu**	**65**	**-0.002**	ug/L	0.003	137	27	24	15	KED
|	**Zn**	**66**	**0.014**	ug/L	0.013	96	29	34	11	KED
|	**Zn**	**67**	**-0.050**	ug/L	0.078	158	8	6	69	KED
|	**As**	**75**	**-0.009**	ug/L	0.010	103	7	5	30	KED
⌊	**Se**	**78**	**0.073**	ug/L	0.171	233	11	13	22	KED
	Y	**89**		ug/L			276255	263926	2	Standard
	Kr	**83**		ug/L			52	46	6	Standard
⌈>	**In-1**	**115**		ug/L			7782	7680	12	KED
|	**Mo**	**98**	**0.003**	ug/L	0.002	53	8	11	21	KED
|	**Cd**	**111**	**0.005**	ug/L	0.009	166	4	5	39	KED
⌊	**Cd**	**114**	**-0.005**	ug/L	0.004	76	5	3	51	KED
⌈>	**In**	**115**		ug/L			475417	455687	2	Standard
|	**Ag**	**107**	**-0.007**	ug/L	0.000	6	135	60	7	Standard
|	**Sb**	**121**	**0.047**	ug/L	0.005	10	596	993	6	Standard
⌊	**Sb**	**123**	**0.042**	ug/L	0.006	14	475	744	3	Standard
⌈>	**Tb**	**159**		ug/L			499801	525379	1	Standard
|	**Tl**	**205**	**0.004**	ug/L	0.001	20	224	350	5	Standard
⌊	**Pb**	**208**	**-0.003**	ug/L	0.000	19	359	283	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Wednesday, March 01, 2023 20:09:21
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			34622	49689	3	Standard
Cl	37		ug/L			3977931	4256608	1	Standard
> Sc	45		ug/L			439931	433106	0	Standard
[redacted]	52	[redacted]	ug/L	0.128	1	12483	116914	0	Standard
Cr	53	8.342	ug/L	0.150	1	120	14494	1	Standard
Mn	55	7.707	ug/L	0.223	2	1073	161598	2	Standard
> Ge	72		ug/L			28119	26837	0	KED
[redacted]	60	[redacted]	ug/L	0.092	12	28	662	11	KED
Ni	62	1.029	ug/L	0.168	16	5	149	16	KED
[redacted]	63	[redacted]	ug/L	0.082	6	42	3209	6	KED
Cu	65	1.285	ug/L	0.040	3	27	1595	2	KED
[redacted]	66	[redacted]	ug/L	0.199	6	29	930	6	KED
Zn	67	2.685	ug/L	0.376	14	8	147	13	KED
[redacted]	75	[redacted]	ug/L	0.018	32	7	15	18	KED
Se	78	0.159	ug/L	0.114	72	11	13	13	KED
Y	89		ug/L			276255	271733	3	Standard
Kr	83		ug/L			52	68	12	Standard
> In-1	115		ug/L			7782	8104	3	KED
Mo	98	4.756	ug/L	0.302	6	8	3592	7	KED
Cd	111	0.014	ug/L	0.009	65	4	6	28	KED
Cd	114	0.006	ug/L	0.003	43	5	8	11	KED
> In	115		ug/L			475417	440296	2	Standard
Ag	107	-0.006	ug/L	0.001	14	135	66	13	Standard
Sb	121	0.119	ug/L	0.002	1	596	1592	3	Standard
Sb	123	0.137	ug/L	0.015	10	475	1343	9	Standard
> Tb	159		ug/L			499801	524667	2	Standard
Tl	205	-0.002	ug/L	0.001	67	224	186	18	Standard
[redacted]	208	[redacted]	ug/L	0.000	9	359	443	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Wednesday, March 01, 2023 20:14:12
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			34622	49326	2	Standard
Cl	37		ug/L			3977931	4251960	1	Standard
> Sc	45		ug/L			439931	434771	2	Standard
[redacted]	52	[redacted]	ug/L	0.296	6	12483	81592	4	Standard
Cr	53	5.891	ug/L	0.281	4	120	10304	3	Standard
Mn	55	6.215	ug/L	0.278	4	1073	130938	1	Standard
> Ge	72		ug/L			28119	27508	0	KED
[redacted]	60	[redacted]	ug/L	0.034	5	28	570	4	KED
Ni	62	0.858	ug/L	0.044	5	5	128	4	KED
[redacted]	63	[redacted]	ug/L	0.021	1	42	4029	1	KED
Cu	65	1.560	ug/L	0.069	4	27	1980	4	KED
[redacted]	66	[redacted]	ug/L	0.159	7	29	676	8	KED
Zn	67	2.016	ug/L	0.148	7	8	115	7	KED
[redacted]	75	[redacted]	ug/L	0.015	20	7	18	11	KED
Se	78	0.252	ug/L	0.113	44	11	15	12	KED
Y	89		ug/L			276255	260735	1	Standard
Kr	83		ug/L			52	55	22	Standard
> In-1	115		ug/L			7782	8141	4	KED
Mo	98	5.387	ug/L	0.133	2	8	4084	5	KED
Cd	111	0.016	ug/L	0.007	43	4	7	15	KED
Cd	114	0.000	ug/L	0.009	2656	5	5	65	KED
> In	115		ug/L			475417	430946	2	Standard
Ag	107	-0.007	ug/L	0.002	28	135	54	33	Standard
Sb	121	0.117	ug/L	0.010	8	596	1534	6	Standard
Sb	123	0.112	ug/L	0.002	1	475	1149	2	Standard
> Tb	159		ug/L			499801	527191	3	Standard
Tl	205	-0.004	ug/L	0.001	14	224	121	11	Standard
[redacted]	208	[redacted]	ug/L	0.001	62	359	333	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Wednesday, March 01, 2023 20:19:02
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			34622	49155	2	Standard
Cl	37		ug/L			3977931	4355160	3	Standard
> Sc	45		ug/L			439931	447008	3	Standard
[redacted]	52	[redacted]	ug/L	0.406	4	12483	139073	3	Standard
Cr	53	9.153	ug/L	0.363	3	120	16387	2	Standard
Mn	55	7.190	ug/L	0.159	2	1073	155654	3	Standard
> Ge	72		ug/L			28119	27136	1	KED
[redacted]	60	[redacted]	ug/L	0.021	3	28	505	3	KED
Ni	62	0.814	ug/L	0.189	23	5	120	21	KED
[redacted]	63	[redacted]	ug/L	0.003	0	42	4750	1	KED
Cu	65	1.878	ug/L	0.039	2	27	2346	3	KED
[redacted]	66	[redacted]	ug/L	0.146	6	29	747	6	KED
Zn	67	1.827	ug/L	0.204	11	8	104	11	KED
[redacted]	75	[redacted]	ug/L	0.010	11	7	20	6	KED
Se	78	0.299	ug/L	0.234	78	11	16	23	KED
Y	89		ug/L			276255	271224	3	Standard
Kr	83		ug/L			52	63	35	Standard
> In-1	115		ug/L			7782	7993	1	KED
Mo	98	5.752	ug/L	0.156	2	8	4280	1	KED
Cd	111	-0.009	ug/L	0.006	62	4	2	43	KED
Cd	114	0.006	ug/L	0.009	154	5	8	48	KED
> In	115		ug/L			475417	438691	3	Standard
Ag	107	-0.007	ug/L	0.001	16	135	52	19	Standard
Sb	121	0.100	ug/L	0.006	5	596	1413	1	Standard
Sb	123	0.099	ug/L	0.004	3	475	1085	1	Standard
> Tb	159		ug/L			499801	533073	2	Standard
Tl	205	-0.004	ug/L	0.001	12	224	104	15	Standard
[redacted]	208	[redacted]	ug/L	0.001	27	359	544	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, March 01, 2023 20:23:53
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			34622	58549	1	Standard
	Cl	**37**		ug/L			3977931	4387395	1	Standard
>	**Sc**	**45**		ug/L			439931	444110	0	Standard
	Cr	**52**	**0.866**	ug/L	0.029	3	12483	25812	1	Standard
	Cr	**53**	**2.181**	ug/L	0.036	1	120	3975	1	Standard
	Mn	**55**	**7.995**	ug/L	0.254	3	1073	171865	2	Standard
>	**Ge**	**72**		ug/L			28119	29188	4	KED
	Ni	**60**	**0.480**	ug/L	0.073	15	28	484	10	KED
	Ni	**62**	**0.586**	ug/L	0.116	19	5	94	14	KED
	[redacted]	**63**	[redacted]	ug/L	0.104	2	42	11952	2	KED
	Cu	**65**	**4.400**	ug/L	0.319	7	27	5865	4	KED
	Zn	**66**	**169.695**	ug/L	12.869	7	29	57530	3	KED
	[redacted]	[redacted]	[redacted]	ug/L	9.329	6	8	8676	3	KED
	As	**75**	**1.248**	ug/L	0.105	8	7	221	5	KED
	Se	**78**	**0.121**	ug/L	0.161	133	11	14	19	KED
	Y	**89**		ug/L			276255	281823	0	Standard
	Kr	**83**		ug/L			52	47	4	Standard
>	**In-1**	**115**		ug/L			7782	8488	3	KED
	Mo	**98**	**0.206**	ug/L	0.037	17	8	171	13	KED
	Cd	**111**	**0.059**	ug/L	0.005	8	4	15	9	KED
	Cd	**114**	**0.056**	ug/L	0.012	20	5	32	18	KED
>	**In**	**115**		ug/L			475417	468227	0	Standard
	Ag	**107**	**-0.005**	ug/L	0.001	27	135	80	17	Standard
	Sb	**121**	**0.612**	ug/L	0.024	3	596	6247	2	Standard
	Sb	**123**	**0.619**	ug/L	0.026	4	475	4796	2	Standard
>	**Tb**	**159**		ug/L			499801	545374	3	Standard
	Tl	**205**	**-0.004**	ug/L	0.000	11	224	118	14	Standard
	Pb	**208**	**0.421**	ug/L	0.016	3	359	16429	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, March 01, 2023 20:28:44
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			34622	65218	2	Standard
	Cl	**37**		ug/L			3977931	8179615	5	Standard
>	**Sc**	**45**		ug/L			439931	464512	1	Standard
	Cr	**52**	**13.467**	ug/L	0.366	2	12483	228006	3	Standard
	Cr	**53**	**19.435**	ug/L	0.443	2	120	36050	2	Standard
	Mn	**55**	**69.085**	ug/L	0.159	0	1073	1544849	1	Standard
>	**Ge**	**72**		ug/L			28119	26831	1	KED
	Ni	**60**	**5.236**	ug/L	0.292	5	28	4610	6	KED
	Ni	**62**	**5.584**	ug/L	0.193	3	5	791	2	KED
	[redacted]	**63**	[redacted]	ug/L	0.468	1	42	76122	2	KED
	Cu	**65**	**30.632**	ug/L	0.987	3	27	37454	3	KED
	[redacted]	**66**	[redacted]	ug/L	3.585	2	29	40359	3	KED
	Zn	**67**	**126.904**	ug/L	1.513	1	8	6565	1	KED
	As	**75**	**2.132**	ug/L	0.131	6	7	343	6	KED
	Se	**78**	**0.416**	ug/L	0.097	23	11	18	10	KED
	Y	**89**		ug/L			276255	290776	2	Standard
	Kr	**83**		ug/L			52	107	13	Standard
>	**In-1**	**115**		ug/L			7782	7932	1	KED
	Mo	**98**	**3.190**	ug/L	0.187	5	8	2359	4	KED
	Cd	**111**	**0.145**	ug/L	0.034	23	4	30	19	KED
	Cd	**114**	**0.140**	ug/L	0.038	27	5	66	24	KED
>	**In**	**115**		ug/L			475417	454572	1	Standard
	Ag	**107**	**0.038**	ug/L	0.004	11	135	507	9	Standard
	Sb	**121**	**4.765**	ug/L	0.071	1	596	43367	2	Standard
	Sb	**123**	**4.781**	ug/L	0.183	3	475	32910	5	Standard
>	**Tb**	**159**		ug/L			499801	548292	1	Standard
	Tl	**205**	**0.001**	ug/L	0.001	47	224	288	5	Standard
	Pb	**208**	**6.988**	ug/L	0.162	2	359	268305	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, March 01, 2023 20:33:34
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			34622	62708	3	Standard
Cl	37		ug/L			3977931	8752734	5	Standard
> Sc	45		ug/L			439931	473938	2	Standard
Cr	52	6.262	ug/L	0.182	2	12483	115376	4	Standard
Cr	53	13.111	ug/L	0.137	1	120	24857	2	Standard
Mn	55	63.430	ug/L	1.167	1	1073	1447539	3	Standard
> Ge	72		ug/L			28119	28351	1	KED
Ni	60	4.878	ug/L	0.173	3	28	4539	3	KED
Ni	62	5.162	ug/L	0.504	9	5	772	8	KED
[redacted]	63	[redacted]	ug/L	0.528	4	42	32804	3	KED
Cu	65	12.311	ug/L	0.344	2	27	15918	2	KED
[redacted]	66	[redacted]	ug/L	1.732	5	29	11314	4	KED
Zn	67	34.716	ug/L	0.756	2	8	1904	2	KED
As	75	0.672	ug/L	0.025	3	7	119	3	KED
Se	78	0.117	ug/L	0.143	122	11	13	17	KED
Y	89		ug/L			276255	289378	1	Standard
Kr	83		ug/L			52	101	2	Standard
> In-1	115		ug/L			7782	8024	0	KED
Mo	98	2.611	ug/L	0.190	7	8	1956	7	KED
Cd	111	0.048	ug/L	0.022	44	4	13	29	KED
Cd	114	0.051	ug/L	0.014	26	5	28	20	KED
> In	115		ug/L			475417	469895	1	Standard
Ag	107	0.006	ug/L	0.001	22	135	192	5	Standard
Sb	121	2.386	ug/L	0.124	5	596	22731	3	Standard
Sb	123	2.396	ug/L	0.095	3	475	17276	3	Standard
> Tb	159		ug/L			499801	561480	2	Standard
Tl	205	-0.003	ug/L	0.000	11	224	153	5	Standard
Pb	208	2.231	ug/L	0.119	5	359	87933	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Wednesday, March 01, 2023 20:38:25
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			34622	59166	1	Standard
Cl	37		ug/L			3977931	4366663	2	Standard
> Sc	45		ug/L			439931	442851	1	Standard
[redacted]	52	[redacted]	ug/L	0.269	3	12483	147636	4	Standard
Cr	53	9.918	ug/L	0.156	1	120	17599	2	Standard
[redacted]	55	[redacted]	ug/L	0.309	4	1073	165556	5	Standard
> Ge	72		ug/L			28119	26966	3	KED
[redacted]	60	[redacted]	ug/L	0.023	2	28	940	1	KED
Ni	62	1.251	ug/L	0.133	10	5	182	13	KED
[redacted]	63	[redacted]	ug/L	0.106	6	42	3925	7	KED
Cu	65	1.558	ug/L	0.093	5	27	1941	9	KED
[redacted]	66	[redacted]	ug/L	0.113	3	29	1196	4	KED
Zn	67	2.942	ug/L	0.558	18	8	161	18	KED
[redacted]	75	[redacted]	ug/L	0.021	37	7	15	22	KED
Se	78	0.461	ug/L	0.088	18	11	19	10	KED
Y	89		ug/L			276255	267963	1	Standard
Kr	83		ug/L			52	60	14	Standard
> In-1	115		ug/L			7782	7816	2	KED
Mo	98	4.237	ug/L	0.312	7	8	3083	4	KED
Cd	111	0.027	ug/L	0.011	40	4	8	22	KED
Cd	114	0.003	ug/L	0.007	266	5	6	43	KED
> In	115		ug/L			475417	436948	1	Standard
Ag	107	-0.008	ug/L	0.001	14	135	46	23	Standard
[redacted]	121	[redacted]	ug/L	0.006	4	596	1694	2	Standard
Sb	123	0.134	ug/L	0.012	8	475	1313	5	Standard
> Tb	159		ug/L			499801	532505	1	Standard
Tl	205	-0.004	ug/L	0.000	11	224	123	10	Standard
[redacted]	208	[redacted]	ug/L	0.001	16	359	634	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Wednesday, March 01, 2023 20:43:16
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			34622	59602	5	Standard
Cl	37		ug/L			3977931	4339532	4	Standard
> Sc	45		ug/L			439931	449298	1	Standard
[redacted]	52	[redacted]	ug/L	0.538	6	12483	143667	6	Standard
Cr	53	9.203	ug/L	0.407	4	120	16581	5	Standard
[redacted]	55	[redacted]	ug/L	0.462	6	1073	166180	7	Standard
> Ge	72		ug/L			28119	27542	0	KED
[redacted]	60	[redacted]	ug/L	0.049	4	28	991	4	KED
Ni	62	1.200	ug/L	0.149	12	5	178	11	KED
[redacted]	63	[redacted]	ug/L	0.096	6	42	4034	5	KED
Cu	65	1.640	ug/L	0.057	3	27	2083	3	KED
[redacted]	66	[redacted]	ug/L	0.112	3	29	1203	2	KED
Zn	67	3.535	ug/L	0.284	8	8	196	7	KED
[redacted]	75	[redacted]	ug/L	0.014	23	7	16	14	KED
Se	78	0.159	ug/L	0.038	23	11	14	5	KED
Y	89		ug/L			276255	276901	3	Standard
Kr	83		ug/L			52	65	32	Standard
> In-1	115		ug/L			7782	8014	2	KED
Mo	98	4.416	ug/L	0.218	4	8	3296	3	KED
Cd	111	0.014	ug/L	0.015	110	4	6	37	KED
Cd	114	0.005	ug/L	0.010	197	5	8	56	KED
> In	115		ug/L			475417	452259	2	Standard
Ag	107	-0.009	ug/L	0.001	8	135	39	22	Standard
[redacted]	121	[redacted]	ug/L	0.016	13	596	1636	6	Standard
Sb	123	0.120	ug/L	0.019	15	475	1264	8	Standard
> Tb	159		ug/L			499801	535416	4	Standard
Tl	205	-0.005	ug/L	0.000	6	224	99	11	Standard
[redacted]	208	[redacted]	ug/L	0.001	18	359	553	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Wednesday, March 01, 2023 20:48:06
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			34622	57246	2	Standard
Cl	37		ug/L			3977931	4422043	1	Standard
> Sc	45		ug/L			439931	449988	4	Standard
[redacted]	52	[redacted]	ug/L	0.531	2	12483	344963	1	Standard
Cr	53	22.281	ug/L	0.805	3	120	39980	1	Standard
[redacted]	55	[redacted]	ug/L	0.505	2	1073	441950	2	Standard
> Ge	72		ug/L			28119	27458	0	KED
[redacted]	60	[redacted]	ug/L	0.638	4	28	12163	4	KED
Ni	62	13.485	ug/L	0.410	3	5	1948	3	KED
[redacted]	63	[redacted]	ug/L	0.457	3	42	35801	2	KED
Cu	65	14.091	ug/L	0.124	0	27	17643	0	KED
[redacted]	66	[redacted]	ug/L	1.343	3	29	13771	2	KED
Zn	67	40.408	ug/L	1.239	3	8	2145	3	KED
[redacted]	75	[redacted]	ug/L	0.249	1	7	2148	1	KED
Se	78	40.807	ug/L	1.522	3	11	724	3	KED
Y	89		ug/L			276255	273960	2	Standard
Kr	83		ug/L			52	71	5	Standard
> In-1	115		ug/L			7782	7791	1	KED
Mo	98	17.449	ug/L	1.254	7	8	12642	7	KED
Cd	111	12.057	ug/L	0.573	4	4	2131	5	KED
Cd	114	11.953	ug/L	0.814	6	5	5107	5	KED
> In	115		ug/L			475417	449823	4	Standard
Ag	107	12.930	ug/L	0.583	4	135	128259	3	Standard
[redacted]	121	[redacted]	ug/L	0.520	3	596	118746	1	Standard
Sb	123	13.375	ug/L	0.481	3	475	90171	0	Standard
> Tb	159		ug/L			499801	527856	5	Standard
Tl	205	11.697	ug/L	0.410	3	224	349231	2	Standard
[redacted]	208	[redacted]	ug/L	0.534	4	359	451736	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL6
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, March 01, 2023 20:52:58
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			34622	38738	2	Standard
	Cl	**37**		ug/L			3977931	4534043	1	Standard
⎡>	**Sc**	**45**		ug/L			439931	446014	2	Standard
⎢	**Cr**	**52**	**0.210**	ug/L	0.036	17	12483	15871	1	Standard
⎢	**Cr**	**53**	**0.670**	ug/L	0.058	8	120	1310	6	Standard
⎣	**Mn**	**55**	**-0.005**	ug/L	0.001	14	1073	972	4	Standard
⎡>	**Ge**	**72**		ug/L			28119	29719	3	KED
⎢	**Ni**	**60**	**-0.021**	ug/L	0.002	9	28	9	20	KED
⎢	**Ni**	**62**	**0.027**	ug/L	0.002	7	5	9	0	KED
⎢	**Cu**	**63**	**0.016**	ug/L	0.004	27	42	88	14	KED
⎢	**Cu**	**65**	**0.005**	ug/L	0.002	48	27	35	8	KED
⎢	**Zn**	**66**	**-0.018**	ug/L	0.031	169	29	25	43	KED
⎢	**Zn**	**67**	**-0.087**	ug/L	0.075	86	8	4	98	KED
⎢	**As**	**75**	**-0.003**	ug/L	0.014	412	7	6	37	KED
⎣	**Se**	**78**	**0.025**	ug/L	0.063	248	11	12	5	KED
	Y	**89**		ug/L			276255	279642	0	Standard
	Kr	**83**		ug/L			52	48	19	Standard
⎡>	**In-1**	**115**		ug/L			7782	8251	4	KED
⎢	**Mo**	**98**	**-0.003**	ug/L	0.005	165	8	7	55	KED
⎢	**Cd**	**111**	**0.007**	ug/L	0.015	207	4	5	50	KED
⎣	**Cd**	**114**	**-0.002**	ug/L	0.006	275	5	4	58	KED
⎡>	**In**	**115**		ug/L			475417	478122	2	Standard
⎢	**Ag**	**107**	**-0.008**	ug/L	0.001	15	135	53	21	Standard
⎢	**Sb**	**121**	**-0.054**	ug/L	0.000	0	596	86	4	Standard
⎣	**Sb**	**123**	**-0.057**	ug/L	0.000	0	475	71	0	Standard
⎡>	**Tb**	**159**		ug/L			499801	535219	2	Standard
⎢	**Tl**	**205**	**-0.005**	ug/L	0.000	2	224	79	4	Standard
⎣	**Pb**	**208**	**-0.006**	ug/L	0.000	3	359	174	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV4
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, March 01, 2023 20:58:53
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			34622	37816	3	Standard
	Cl	**37**		ug/L			3977931	4403381	2	Standard
⎡>	**Sc**	**45**		ug/L			439931	452241	2	Standard
⎢	**Cr**	**52**	**49.572**	ug/L	1.369	2	12483	782863	4	Standard
⎢	**Cr**	**53**	**50.023**	ug/L	0.796	1	120	90155	3	Standard
⎣	**Mn**	**55**	**49.088**	ug/L	0.628	1	1073	1069012	2	Standard
⎡>	**Ge**	**72**		ug/L			28119	29062	2	KED
⎢	**Ni**	**60**	**48.616**	ug/L	1.531	3	28	46115	4	KED
⎢	**Ni**	**62**	**49.510**	ug/L	1.452	2	5	7561	5	KED
⎢	**Cu**	**63**	**48.764**	ug/L	0.859	1	42	130012	3	KED
⎢	**Cu**	**65**	**49.640**	ug/L	0.750	1	27	65733	4	KED
⎢	**Zn**	**66**	**50.570**	ug/L	0.945	1	29	17132	4	KED
⎢	**Zn**	**67**	**50.977**	ug/L	3.031	5	8	2864	8	KED
⎢	**As**	**75**	**50.218**	ug/L	0.977	1	7	8609	3	KED
⎣	**Se**	**78**	**49.018**	ug/L	1.376	2	11	918	3	KED
	Y	**89**		ug/L			276255	289364	1	Standard
	Kr	**83**		ug/L			52	49	19	Standard
⎡>	**In-1**	**115**		ug/L			7782	8529	0	KED
⎢	**Mo**	**98**	**46.587**	ug/L	1.492	3	8	36930	2	KED
⎢	**Cd**	**111**	**48.715**	ug/L	0.656	1	4	9411	0	KED
⎣	**Cd**	**114**	**49.261**	ug/L	1.944	3	5	23029	3	KED
⎡>	**In**	**115**		ug/L			475417	482001	1	Standard
⎢	**Ag**	**107**	**51.838**	ug/L	3.224	6	135	550819	5	Standard
⎢	**Sb**	**121**	**48.429**	ug/L	2.059	4	596	461630	3	Standard
⎣	**Sb**	**123**	**48.407**	ug/L	2.248	4	475	348588	2	Standard
⎡>	**Tb**	**159**		ug/L			499801	555388	1	Standard
⎢	**Tl**	**205**	**45.594**	ug/L	2.238	4	224	1432878	3	Standard
⎣	**Pb**	**208**	**47.478**	ug/L	1.846	3	359	1844224	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB4
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, March 01, 2023 21:06:28
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			34622	35668	2	Standard
	Cl	**37**		ug/L			3977931	4278360	1	Standard
>	**Sc**	**45**		ug/L			439931	431623	2	Standard
	Cr	**52**	**0.033**	ug/L	0.025	76	12483	12730	1	Standard
	Cr	**53**	**0.585**	ug/L	0.017	2	120	1122	1	Standard
	Mn	**55**	**-0.018**	ug/L	0.001	4	1073	681	1	Standard
>	**Ge**	**72**		ug/L			28119	28774	0	KED
	Ni	**60**	**-0.026**	ug/L	0.003	11	28	4	65	KED
	Ni	**62**	**0.016**	ug/L	0.012	78	5	7	25	KED
	Cu	**63**	**0.005**	ug/L	0.001	23	42	55	5	KED
	Cu	**65**	**-0.001**	ug/L	0.006	631	27	26	31	KED
	Zn	**66**	**-0.002**	ug/L	0.008	396	29	29	9	KED
	Zn	**67**	**-0.027**	ug/L	0.034	127	8	7	25	KED
	As	**75**	**-0.011**	ug/L	0.010	86	7	5	30	KED
	Se	**78**	**0.080**	ug/L	0.102	127	11	13	14	KED
	Y	**89**		ug/L			276255	275778	4	Standard
	Kr	**83**		ug/L			52	40	21	Standard
>	**In-1**	**115**		ug/L			7782	8195	2	KED
	Mo	**98**	**0.003**	ug/L	0.007	205	8	11	42	KED
	Cd	**111**	**0.007**	ug/L	0.015	204	4	5	50	KED
	Cd	**114**	**0.009**	ug/L	0.006	69	5	10	27	KED
>	**In**	**115**		ug/L			475417	465068	2	Standard
	Ag	**107**	**-0.005**	ug/L	0.001	14	135	78	10	Standard
	Sb	**121**	**0.045**	ug/L	0.011	24	596	993	9	Standard
	Sb	**123**	**0.048**	ug/L	0.012	25	475	794	8	Standard
>	**Tb**	**159**		ug/L			499801	516034	1	Standard
	Tl	**205**	**-0.004**	ug/L	0.000	6	224	111	5	Standard
	Pb	**208**	**-0.006**	ug/L	0.000	3	359	165	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Wednesday, March 01, 2023 21:11:20
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			34622	47915	2	Standard
Cl	37		ug/L			3977931	4378636	2	Standard
Sc	45		ug/L			439931	459171	4	Standard
[redacted]	52	[redacted]	ug/L	0.024	53	12483	13714	2	Standard
Cr	53	0.539	ug/L	0.027	4	120	1109	0	Standard
Mn	55	-0.013	ug/L	0.001	10	1073	827	1	Standard
Ge	72		ug/L			28119	30027	3	KED
Ni	60	0.040	ug/L	0.023	58	28	70	35	KED
Ni	62	0.114	ug/L	0.026	22	5	23	18	KED
[redacted]	63	[redacted]	ug/L	0.003	39	42	64	8	KED
Cu	65	0.006	ug/L	0.004	62	27	37	11	KED
[redacted]	66	[redacted]	ug/L	0.067	19	29	149	13	KED
Zn	67	0.297	ug/L	0.083	28	8	26	18	KED
[redacted]	75	[redacted]	ug/L	0.007	47	7	5	21	KED
Se	78	0.042	ug/L	0.173	410	11	13	20	KED
Y	89		ug/L			276255	286258	2	Standard
Kr	83		ug/L			52	42	32	Standard
In-1	115		ug/L			7782	8468	3	KED
Mo	98	-0.001	ug/L	0.007	504	8	8	69	KED
Cd	111	-0.004	ug/L	0.017	432	4	3	90	KED
Cd	114	-0.004	ug/L	0.008	232	5	4	91	KED
In	115		ug/L			475417	479005	2	Standard
[redacted]	107	[redacted]	ug/L	0.003	34	135	55	53	Standard
Sb	121	-0.026	ug/L	0.007	26	596	357	17	Standard
Sb	123	-0.028	ug/L	0.002	8	475	280	4	Standard
Tb	159		ug/L			499801	545206	1	Standard
Tl	205	-0.005	ug/L	0.000	9	224	103	13	Standard
[redacted]	208	[redacted]	ug/L	0.001	11	359	218	9	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Wednesday, March 01, 2023 21:16:10
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			34622	46986	0	Standard
Cl	37		ug/L			3977931	4431271	0	Standard
Sc	45		ug/L			439931	456397	1	Standard
[redacted]	52	[redacted]	ug/L	1.042	4	12483	419630	2	Standard
Cr	53	26.333	ug/L	0.671	2	120	47930	0	Standard
Mn	55	25.802	ug/L	1.040	4	1073	567374	2	Standard
Ge	72		ug/L			28119	29668	0	KED
Ni	60	25.232	ug/L	0.622	2	28	24443	1	KED
Ni	62	25.646	ug/L	0.801	3	5	3999	2	KED
[redacted]	63	[redacted]	ug/L	0.215	0	42	69519	0	KED
Cu	65	25.528	ug/L	0.580	2	27	34516	2	KED
[redacted]	66	[redacted]	ug/L	0.278	0	29	27646	0	KED
Zn	67	76.062	ug/L	1.341	1	8	4354	1	KED
[redacted]	75	[redacted]	ug/L	0.350	1	7	4343	1	KED
Se	78	78.467	ug/L	5.151	6	11	1493	6	KED
Y	89		ug/L			276255	286491	3	Standard
Kr	83		ug/L			52	57	24	Standard
In-1	115		ug/L			7782	8600	2	KED
Mo	98	0.004	ug/L	0.003	60	8	13	15	KED
Cd	111	24.487	ug/L	1.055	4	4	4770	3	KED
Cd	114	24.559	ug/L	1.525	6	5	11577	5	KED
In	115		ug/L			475417	486689	0	Standard
[redacted]	107	[redacted]	ug/L	0.935	3	135	289807	3	Standard
Sb	121	-0.043	ug/L	0.002	5	596	198	11	Standard
Sb	123	-0.043	ug/L	0.005	10	475	175	19	Standard
Tb	159		ug/L			499801	543743	1	Standard
Tl	205	24.449	ug/L	0.296	1	224	752699	2	Standard
[redacted]	208	[redacted]	ug/L	0.177	0	359	989034	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Wednesday, March 01, 2023 21:21:01
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			34622	62144	4	Standard
Cl	37		ug/L			3977931	4446967	1	Standard
> Sc	45		ug/L			439931	572313	1	Standard
Cr	52	13.483	ug/L	0.293	2	12483	281138	0	Standard
Cr	53	13.919	ug/L	0.453	3	120	31843	1	Standard
Mn	55	134.324	ug/L	6.256	4	1073	3697844	3	Standard
> Ge	72		ug/L			28119	30377	1	KED
Ni	60	11.114	ug/L	0.198	1	28	11042	2	KED
Ni	62	11.539	ug/L	0.513	4	5	1845	4	KED
Cu	63	55.880	ug/L	1.319	2	42	155713	3	KED
Cu	65	54.802	ug/L	0.733	1	27	75822	1	KED
Zn	66	172.532	ug/L	1.826	1	29	61004	1	KED
Zn	67	161.741	ug/L	4.971	3	8	9473	4	KED
[redacted]	75	[redacted]	ug/L	0.092	0	7	3171	1	KED
Se	78	0.972	ug/L	0.080	8	11	31	6	KED
Y	89		ug/L			276255	466927	0	Standard
Kr	83		ug/L			52	95	19	Standard
> In-1	115		ug/L			7782	8729	0	KED
Mo	98	0.890	ug/L	0.071	8	8	732	8	KED
Cd	111	0.211	ug/L	0.045	21	4	46	19	KED
Cd	114	0.193	ug/L	0.039	19	5	98	19	KED
> In	115		ug/L			475417	510904	0	Standard
Ag	107	0.126	ug/L	0.008	6	135	1564	5	Standard
Sb	121	0.139	ug/L	0.005	3	596	2044	2	Standard
Sb	123	0.141	ug/L	0.006	4	475	1590	3	Standard
> Tb	159		ug/L			499801	602200	3	Standard
Tl	205	0.036	ug/L	0.003	7	224	1490	3	Standard
Pb	208	53.735	ug/L	2.771	5	359	2261310	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Wednesday, March 01, 2023 21:25:52
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			34622	64955	2	Standard
	Cl	**37**		ug/L			3977931	4491560	0	Standard
⌈>	**Sc**	**45**		ug/L			439931	548399	1	Standard
|	**Cr**	**52**	**14.289**	ug/L	0.106	0	12483	284599	0	Standard
|	**Cr**	**53**	**14.704**	ug/L	0.035	0	120	32234	0	Standard
⌊	**Mn**	**55**	**86.501**	ug/L	2.667	3	1073	2283590	3	Standard
⌈>	**Ge**	**72**		ug/L			28119	30558	0	KED
|	**Ni**	**60**	**8.900**	ug/L	0.194	2	28	8900	1	KED
|	**Ni**	**62**	**8.671**	ug/L	0.420	4	5	1396	4	KED
|	**Cu**	**63**	**24.338**	ug/L	0.459	1	42	68244	1	KED
|	**Cu**	**65**	**24.170**	ug/L	0.095	0	27	33660	0	KED
|	**Zn**	**66**	**62.261**	ug/L	1.830	2	29	22166	2	KED
|	**Zn**	**67**	**60.212**	ug/L	1.458	2	8	3552	2	KED
|	[redacted]	**75**	[redacted]	ug/L	0.140	1	7	1618	1	KED
⌊	**Se**	**78**	**0.872**	ug/L	0.061	7	11	29	4	KED
	Y	**89**		ug/L			276255	444361	1	Standard
	Kr	**83**		ug/L			52	80	23	Standard
⌈>	**In-1**	**115**		ug/L			7782	8851	0	KED
|	**Mo**	**98**	**0.530**	ug/L	0.040	7	8	445	6	KED
|	**Cd**	**111**	**0.078**	ug/L	0.019	24	4	20	18	KED
⌊	**Cd**	**114**	**0.068**	ug/L	0.037	55	5	39	46	KED
⌈>	**In**	**115**		ug/L			475417	499389	1	Standard
|	**Ag**	**107**	**0.060**	ug/L	0.006	9	135	807	6	Standard
|	**Sb**	**121**	**0.027**	ug/L	0.002	7	596	892	3	Standard
⌊	**Sb**	**123**	**0.024**	ug/L	0.003	12	475	677	2	Standard
⌈>	**Tb**	**159**		ug/L			499801	586539	0	Standard
|	**Tl**	**205**	**0.029**	ug/L	0.001	3	224	1212	2	Standard
⌊	**Pb**	**208**	**14.038**	ug/L	0.194	1	359	576284	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Wednesday, March 01, 2023 21:30:42
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			34622	56435	5	Standard
	Cl	**37**		ug/L			3977931	4502333	0	Standard
⌈>	**Sc**	**45**		ug/L			439931	528873	0	Standard
|	**Cr**	**52**	**8.945**	ug/L	0.304	3	12483	177447	3	Standard
|	**Cr**	**53**	**9.481**	ug/L	0.472	4	120	20097	5	Standard
⌊	**Mn**	**55**	**60.106**	ug/L	0.617	1	1073	1530470	1	Standard
⌈>	**Ge**	**72**		ug/L			28119	30383	1	KED
|	**Ni**	**60**	**4.824**	ug/L	0.121	2	28	4809	1	KED
|	**Ni**	**62**	**4.942**	ug/L	0.321	6	5	793	6	KED
|	**Cu**	**63**	**10.308**	ug/L	0.246	2	42	28769	3	KED
|	**Cu**	**65**	**10.326**	ug/L	0.242	2	27	14314	2	KED
|	**Zn**	**66**	**20.085**	ug/L	0.768	3	29	7129	2	KED
|	**Zn**	**67**	**19.193**	ug/L	0.924	4	8	1132	3	KED
|	[redacted]	**75**	[redacted]	ug/L	0.095	3	7	436	4	KED
⌊	**Se**	**78**	**0.668**	ug/L	0.059	8	11	25	4	KED
	Y	**89**		ug/L			276255	393194	0	Standard
	Kr	**83**		ug/L			52	69	28	Standard
⌈>	**In-1**	**115**		ug/L			7782	8475	4	KED
|	**Mo**	**98**	**0.585**	ug/L	0.007	1	8	470	4	KED
|	**Cd**	**111**	**0.005**	ug/L	0.002	40	4	5	10	KED
⌊	**Cd**	**114**	**0.009**	ug/L	0.007	79	5	10	30	KED
⌈>	**In**	**115**		ug/L			475417	495358	1	Standard
|	**Ag**	**107**	**0.029**	ug/L	0.003	11	135	452	6	Standard
|	**Sb**	**121**	**-0.036**	ug/L	0.001	4	596	274	6	Standard
⌊	**Sb**	**123**	**-0.041**	ug/L	0.002	5	475	190	7	Standard
⌈>	**Tb**	**159**		ug/L			499801	581407	1	Standard
|	**Tl**	**205**	**0.013**	ug/L	0.001	8	224	700	4	Standard
⌊	**Pb**	**208**	**8.568**	ug/L	0.278	3	359	348699	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Wednesday, March 01, 2023 21:35:33
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			34622	62179	3	Standard
Cl	37		ug/L			3977931	4521367	1	Standard
> Sc	45		ug/L			439931	568209	3	Standard
Cr	52	15.292	ug/L	0.265	1	12483	314415	3	Standard
Cr	53	15.650	ug/L	0.167	1	120	35538	3	Standard
Mn	55	106.977	ug/L	1.175	1	1073	2925087	3	Standard
> Ge	72		ug/L			28119	31225	1	KED
Ni	60	16.049	ug/L	0.857	5	28	16365	3	KED
Ni	62	16.480	ug/L	1.072	6	5	2705	4	KED
[redacted]	63	[redacted]	ug/L	2.037	2	42	199475	1	KED
Cu	65	69.809	ug/L	2.008	2	27	99260	2	KED
Zn	66	100.947	ug/L	6.152	6	29	36678	4	KED
[redacted]	[redacted]	[redacted]	ug/L	4.453	4	8	5655	3	KED
[redacted]	75	[redacted]	ug/L	0.286	6	7	849	4	KED
Se	78	1.037	ug/L	0.145	14	11	33	9	KED
Y	89		ug/L			276255	487185	3	Standard
Kr	83		ug/L			52	100	8	Standard
> In-1	115		ug/L			7782	7951	11	KED
Mo	98	1.076	ug/L	0.100	9	8	798	1	KED
Cd	111	0.243	ug/L	0.027	10	4	48	21	KED
Cd	114	0.267	ug/L	0.069	26	5	120	18	KED
> In	115		ug/L			475417	498835	3	Standard
[redacted]	107	[redacted]	ug/L	0.012	4	135	3452	6	Standard
Sb	121	0.009	ug/L	0.002	17	596	717	5	Standard
Sb	123	0.005	ug/L	0.006	115	475	534	7	Standard
> Tb	159		ug/L			499801	592669	1	Standard
Tl	205	0.034	ug/L	0.002	5	224	1408	4	Standard
[redacted]	208	[redacted]	ug/L	1.413	4	359	1387593	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Wednesday, March 01, 2023 21:40:24
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			34622	68291	1	Standard
Cl	37		ug/L			3977931	4556678	2	Standard
> Sc	45		ug/L			439931	563835	2	Standard
Cr	52	16.418	ug/L	0.217	1	12483	333784	0	Standard
Cr	53	16.918	ug/L	0.440	2	120	38096	0	Standard
Mn	55	98.690	ug/L	3.016	3	1073	2677033	1	Standard
> Ge	72		ug/L			28119	31117	3	KED
Ni	60	12.443	ug/L	0.672	5	28	12645	2	KED
Ni	62	12.932	ug/L	0.452	3	5	2117	4	KED
[redacted]	63	[redacted]	ug/L	2.887	5	42	164348	3	KED
Cu	65	58.031	ug/L	1.919	3	27	82199	1	KED
Zn	66	92.607	ug/L	3.217	3	29	33535	1	KED
[redacted]	[redacted]	[redacted]	ug/L	5.600	6	8	5078	4	KED
[redacted]	75	[redacted]	ug/L	0.191	4	7	814	4	KED
Se	78	0.814	ug/L	0.194	23	11	29	13	KED
Y	89		ug/L			276255	487288	0	Standard
Kr	83		ug/L			52	97	8	Standard
> In-1	115		ug/L			7782	8897	2	KED
Mo	98	0.946	ug/L	0.103	10	8	793	12	KED
Cd	111	0.194	ug/L	0.020	10	4	43	11	KED
Cd	114	0.159	ug/L	0.033	20	5	83	19	KED
> In	115		ug/L			475417	504858	2	Standard
[redacted]	107	[redacted]	ug/L	0.010	6	135	1783	3	Standard
Sb	121	0.001	ug/L	0.002	157	596	646	2	Standard
Sb	123	-0.004	ug/L	0.009	212	475	472	11	Standard
> Tb	159		ug/L			499801	588547	1	Standard
Tl	205	0.030	ug/L	0.001	4	224	1267	1	Standard
[redacted]	208	[redacted]	ug/L	0.683	2	359	1190495	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Wednesday, March 01, 2023 21:45:15
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			34622	64776	3	Standard
Cl	37		ug/L			3977931	4521602	2	Standard
> Sc	45		ug/L			439931	563778	2	Standard
Cr	52	37.826	ug/L	1.077	2	12483	747976	1	Standard
Cr	53	38.246	ug/L	1.239	3	120	85911	1	Standard
Mn	55	125.664	ug/L	3.931	3	1073	3409571	4	Standard
> Ge	72		ug/L			28119	30846	5	KED
Ni	60	40.947	ug/L	3.617	8	28	41113	5	KED
Ni	62	41.911	ug/L	2.706	6	5	6779	4	KED
[redacted]	63	[redacted]	ug/L	4.907	5	42	262903	1	KED
Cu	65	92.096	ug/L	4.639	5	27	129212	4	KED
Zn	66	217.827	ug/L	13.770	6	29	78040	2	KED
[redacted]	[redacted]	[redacted]	ug/L	9.928	5	8	11779	2	KED
[redacted]	75	[redacted]	ug/L	1.688	6	7	5076	2	KED
Se	78	71.275	ug/L	2.476	3	11	1410	3	KED
Y	89		ug/L			276255	482839	3	Standard
Kr	83		ug/L			52	100	25	Standard
> In-1	115		ug/L			7782	8596	2	KED
Mo	98	1.362	ug/L	0.077	5	8	1096	4	KED
Cd	111	25.488	ug/L	0.704	2	4	4963	0	KED
Cd	114	25.932	ug/L	0.524	2	5	12219	0	KED
> In	115		ug/L			475417	502680	0	Standard
[redacted]	107	[redacted]	ug/L	1.193	4	135	286735	4	Standard
Sb	121	0.076	ug/L	0.008	10	596	1381	5	Standard
Sb	123	0.070	ug/L	0.007	9	475	1030	4	Standard
> Tb	159		ug/L			499801	591238	2	Standard
Tl	205	22.447	ug/L	0.406	1	224	751223	2	Standard
[redacted]	208	[redacted]	ug/L	1.720	2	359	2799473	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Wednesday, March 01, 2023 21:50:05
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			34622	62020	1	Standard
Cl	37		ug/L			3977931	4552692	0	Standard
> Sc	45		ug/L			439931	554030	2	Standard
Cr	52	37.189	ug/L	2.587	6	12483	722270	4	Standard
Cr	53	37.827	ug/L	2.154	5	120	83462	3	Standard
Mn	55	136.371	ug/L	6.723	4	1073	3633069	3	Standard
> Ge	72		ug/L			28119	30527	0	KED
Ni	60	38.543	ug/L	1.465	3	28	38396	3	KED
Ni	62	38.639	ug/L	3.360	8	5	6194	7	KED
[redacted]	63	[redacted]	ug/L	1.804	2	42	240579	1	KED
Cu	65	87.287	ug/L	2.896	3	27	121334	2	KED
Zn	66	207.846	ug/L	9.584	4	29	73828	3	KED
[redacted]	[redacted]	[redacted]	ug/L	3.435	1	8	11244	1	KED
[redacted]	75	[redacted]	ug/L	1.107	3	7	5169	3	KED
Se	78	73.529	ug/L	3.002	4	11	1440	3	KED
Y	89		ug/L			276255	476808	1	Standard
Kr	83		ug/L			52	118	16	Standard
> In-1	115		ug/L			7782	8496	7	KED
Mo	98	1.028	ug/L	0.135	13	8	817	8	KED
Cd	111	24.737	ug/L	2.831	11	4	4734	4	KED
Cd	114	25.334	ug/L	2.433	9	5	11745	3	KED
> In	115		ug/L			475417	492036	2	Standard
[redacted]	107	[redacted]	ug/L	0.919	3	135	293799	2	Standard
Sb	121	0.018	ug/L	0.003	17	596	787	4	Standard
Sb	123	0.019	ug/L	0.008	38	475	634	6	Standard
> Tb	159		ug/L			499801	571706	4	Standard
Tl	205	23.219	ug/L	0.945	4	224	750906	3	Standard
[redacted]	208	[redacted]	ug/L	2.164	3	359	2204924	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Wednesday, March 01, 2023 21:54:56
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			34622	64280	2	Standard
Cl	37		ug/L			3977931	4588002	3	Standard
Sc	45		ug/L			439931	577213	4	Standard
Cr	52	37.216	ug/L	0.702	1	12483	753986	4	Standard
Cr	53	37.446	ug/L	0.739	1	120	86146	4	Standard
Mn	55	125.032	ug/L	1.790	1	1073	3474210	5	Standard
Ge	72		ug/L			28119	31360	1	KED
Ni	60	40.882	ug/L	2.967	7	28	41821	6	KED
Ni	62	42.397	ug/L	2.618	6	5	6980	4	KED
[redacted]	63	[redacted]	ug/L	6.308	6	42	275008	5	KED
Cu	65	95.280	ug/L	5.900	6	27	136000	4	KED
Zn	66	175.495	ug/L	10.704	6	29	64015	4	KED
[redacted]	[redacted]	[redacted]	ug/L	9.949	6	8	10006	4	KED
[redacted]	75	[redacted]	ug/L	1.643	5	7	5277	4	KED
Se	78	73.674	ug/L	3.361	4	11	1482	3	KED
Y	89		ug/L			276255	489985	5	Standard
Kr	83		ug/L			52	112	7	Standard
In-1	115		ug/L			7782	8799	3	KED
Mo	98	0.921	ug/L	0.015	1	8	763	3	KED
Cd	111	24.101	ug/L	0.314	1	4	4807	3	KED
Cd	114	24.333	ug/L	0.289	1	5	11738	1	KED
In	115		ug/L			475417	500347	2	Standard
[redacted]	107	[redacted]	ug/L	0.761	2	135	304310	5	Standard
Sb	121	0.008	ug/L	0.001	15	596	711	0	Standard
Sb	123	0.001	ug/L	0.006	483	475	510	9	Standard
Tb	159		ug/L			499801	581396	3	Standard
Tl	205	22.947	ug/L	0.439	1	224	755297	3	Standard
[redacted]	208	[redacted]	ug/L	1.655	2	359	2395967	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV5
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, March 01, 2023 22:00:52
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			34622	41609	1	Standard
	Cl	**37**		ug/L			3977931	4797575	4	Standard
>	**Sc**	**45**		ug/L			439931	485378	1	Standard
	Cr	**52**	**49.576**	ug/L	1.036	2	12483	840000	2	Standard
	Cr	**53**	**49.968**	ug/L	1.826	3	120	96623	3	Standard
	Mn	**55**	**48.875**	ug/L	1.536	3	1073	1142271	3	Standard
>	**Ge**	**72**		ug/L			28119	30581	4	KED
	Ni	**60**	**49.623**	ug/L	3.341	6	28	49426	2	KED
	Ni	**62**	**50.354**	ug/L	3.611	7	5	8072	2	KED
	Cu	**63**	**49.914**	ug/L	3.304	6	42	139748	2	KED
	Cu	**65**	**49.743**	ug/L	3.806	7	27	69139	3	KED
	Zn	**66**	**50.749**	ug/L	3.826	7	29	18047	3	KED
	Zn	**67**	**50.202**	ug/L	4.858	9	8	2957	5	KED
	As	**75**	**49.118**	ug/L	4.453	9	7	8837	4	KED
	Se	**78**	**49.362**	ug/L	3.871	7	11	970	3	KED
	Y	**89**		ug/L			276255	296616	2	Standard
	Kr	**83**		ug/L			52	55	10	Standard
>	**In-1**	**115**		ug/L			7782	8382	1	KED
	Mo	**98**	**46.491**	ug/L	3.096	6	8	36231	7	KED
	Cd	**111**	**47.258**	ug/L	3.362	7	4	8975	7	KED
	Cd	**114**	**47.944**	ug/L	4.513	9	5	22034	9	KED
>	**In**	**115**		ug/L			475417	491152	2	Standard
	Ag	**107**	**53.317**	ug/L	1.917	3	135	577719	5	Standard
	Sb	**121**	**48.619**	ug/L	0.703	1	596	472487	3	Standard
	Sb	**123**	**48.839**	ug/L	1.031	2	475	358587	3	Standard
>	**Tb**	**159**		ug/L			499801	557297	3	Standard
	Tl	**205**	**46.361**	ug/L	1.486	3	224	1461640	2	Standard
	Pb	**208**	**49.350**	ug/L	1.487	3	359	1922803	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB5
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, March 01, 2023 22:08:27
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			34622	40003	3	Standard
	Cl	**37**		ug/L			3977931	4598071	1	Standard
⎡>	**Sc**	**45**		ug/L			439931	460440	1	Standard
⎢	**Cr**	**52**	**-0.024**	ug/L	0.032	136	12483	12691	4	Standard
⎢	**Cr**	**53**	**0.305**	ug/L	0.008	2	120	684	3	Standard
⎣	**Mn**	**55**	**-0.013**	ug/L	0.001	4	1073	828	3	Standard
⎡>	**Ge**	**72**		ug/L			28119	29278	3	KED
⎢	**Ni**	**60**	**-0.022**	ug/L	0.002	11	28	8	26	KED
⎢	**Ni**	**62**	**0.003**	ug/L	0.024	890	5	5	66	KED
⎢	**Cu**	**63**	**0.001**	ug/L	0.003	302	42	46	16	KED
⎢	**Cu**	**65**	**-0.003**	ug/L	0.006	195	27	24	32	KED
⎢	**Zn**	**66**	**-0.007**	ug/L	0.021	291	29	28	23	KED
⎢	**Zn**	**67**	**0.017**	ug/L	0.043	257	8	10	21	KED
⎢	**As**	**75**	**0.001**	ug/L	0.024	1949	7	7	54	KED
⎣	**Se**	**78**	**-0.037**	ug/L	0.060	161	11	11	11	KED
	Y	**89**		ug/L			276255	285004	1	Standard
	Kr	**83**		ug/L			52	49	38	Standard
⎡>	**In-1**	**115**		ug/L			7782	8229	3	KED
⎢	**Mo**	**98**	**0.006**	ug/L	0.005	74	8	14	29	KED
⎢	**Cd**	**111**	**0.007**	ug/L	0.014	190	4	5	44	KED
⎣	**Cd**	**114**	**-0.003**	ug/L	0.011	321	5	4	113	KED
⎡>	**In**	**115**		ug/L			475417	482433	1	Standard
⎢	**Ag**	**107**	**-0.006**	ug/L	0.002	33	135	75	27	Standard
⎢	**Sb**	**121**	**0.043**	ug/L	0.006	13	596	1014	4	Standard
⎣	**Sb**	**123**	**0.037**	ug/L	0.007	18	475	751	5	Standard
⎡>	**Tb**	**159**		ug/L			499801	526817	1	Standard
⎢	**Tl**	**205**	**-0.003**	ug/L	0.000	7	224	148	4	Standard
⎣	**Pb**	**208**	**-0.006**	ug/L	0.000	4	359	158	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Wednesday, March 01, 2023 22:13:18
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	**13**		ug/L			34622	47669	0	Standard
Cl	**37**		ug/L			3977931	4537436	0	Standard
Sc	**45**		ug/L			439931	466549	1	Standard
Cr	**52**	**-0.001**	ug/L	0.050	4715	12483	13217	5	Standard
Cr	**53**	**0.308**	ug/L	0.008	2	120	699	1	Standard
Mn	**55**	**-0.002**	ug/L	0.002	116	1073	1097	3	Standard
Ge	**72**		ug/L			28119	30086	1	KED
Ni	**60**	**-0.014**	ug/L	0.007	48	28	16	43	KED
Ni	**62**	**0.026**	ug/L	0.021	79	5	9	34	KED
[redacted]	**63**	[redacted]	ug/L	0.005	56	42	71	18	KED
Cu	**65**	**0.007**	ug/L	0.007	105	27	38	25	KED
Zn	**66**	**0.180**	ug/L	0.047	25	29	95	19	KED
Zn	**67**	**0.110**	ug/L	0.054	48	8	15	18	KED
As	**75**	**-0.001**	ug/L	0.009	793	7	7	22	KED
Se	**78**	**0.107**	ug/L	0.255	237	11	14	32	KED
Y	**89**		ug/L			276255	286234	3	Standard
Kr	**83**		ug/L			52	63	45	Standard
In-1	**115**		ug/L			7782	8539	1	KED
Mo	**98**	**0.003**	ug/L	0.003	83	8	12	18	KED
Cd	**111**	**0.013**	ug/L	0.007	57	4	6	20	KED
Cd	**114**	**-0.003**	ug/L	0.008	304	5	4	82	KED
In	**115**		ug/L			475417	491227	1	Standard
Ag	**107**	**-0.007**	ug/L	0.000	4	135	63	4	Standard
Sb	**121**	**-0.032**	ug/L	0.000	1	596	308	1	Standard
Sb	**123**	**-0.034**	ug/L	0.003	7	475	245	8	Standard
Tb	**159**		ug/L			499801	541317	5	Standard
Tl	**205**	**-0.004**	ug/L	0.000	10	224	123	14	Standard
Pb	**208**	**-0.006**	ug/L	0.000	5	359	160	12	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Wednesday, March 01, 2023 22:18:09
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			34622	49558	3	Standard
	Cl	**37**		ug/L			3977931	4566885	2	Standard
⎡>	**Sc**	**45**		ug/L			439931	485923	1	Standard
⎢	**Cr**	**52**	**12.597**	ug/L	0.516	4	12483	223943	3	Standard
⎢	**Cr**	**53**	**12.993**	ug/L	0.465	3	120	25256	4	Standard
⎣	**Mn**	**55**	**12.728**	ug/L	0.904	7	1073	298518	5	Standard
⎡>	**Ge**	**72**		ug/L			28119	30689	1	KED
⎢	**Ni**	**60**	**12.058**	ug/L	0.798	6	28	12090	4	KED
⎢	**Ni**	**62**	**12.629**	ug/L	0.836	6	5	2038	5	KED
⎢	[redacted]	**63**	[redacted]	ug/L	0.586	4	42	34822	2	KED
⎢	**Cu**	**65**	**12.549**	ug/L	0.638	5	27	17556	3	KED
⎢	**Zn**	**66**	**40.088**	ug/L	1.898	4	29	14337	2	KED
⎢	**Zn**	**67**	**36.238**	ug/L	4.564	12	8	2148	10	KED
⎢	**As**	**75**	**11.958**	ug/L	0.678	5	7	2169	3	KED
⎣	**Se**	**78**	**37.955**	ug/L	1.994	5	11	753	3	KED
	Y	**89**		ug/L			276255	298385	2	Standard
	Kr	**83**		ug/L			52	49	26	Standard
⎡>	**In-1**	**115**		ug/L			7782	8394	0	KED
⎢	**Mo**	**98**	**0.000**	ug/L	0.007	2018	8	9	59	KED
⎢	**Cd**	**111**	**13.221**	ug/L	0.289	2	4	2517	1	KED
⎣	**Cd**	**114**	**12.962**	ug/L	0.532	4	5	5969	4	KED
⎡>	**In**	**115**		ug/L			475417	500605	0	Standard
⎢	**Ag**	**107**	**13.476**	ug/L	0.795	5	135	148852	5	Standard
⎢	**Sb**	**121**	**-0.044**	ug/L	0.002	4	596	195	8	Standard
⎣	**Sb**	**123**	**-0.045**	ug/L	0.004	9	475	165	19	Standard
⎡>	**Tb**	**159**		ug/L			499801	536353	2	Standard
⎢	**Tl**	**205**	**12.582**	ug/L	0.574	4	224	381874	2	Standard
⎣	**Pb**	**208**	**13.176**	ug/L	0.693	5	359	494209	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Wednesday, March 01, 2023 22:23:00
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			34622	51076	2	Standard
Cl	37		ug/L			3977931	4627395	0	Standard
> Sc	45		ug/L			439931	533130	2	Standard
[redacted]	52	[redacted]	ug/L	0.011	10	12483	16984	1	Standard
Cr	53	0.762	ug/L	0.021	2	120	1763	2	Standard
Mn	55	303.045	ug/L	9.613	3	1073	7769273	1	Standard
> Ge	72		ug/L			28119	30785	1	KED
Ni	60	0.456	ug/L	0.055	12	28	489	11	KED
Ni	62	0.590	ug/L	0.039	6	5	100	6	KED
Cu	63	0.189	ug/L	0.007	3	42	579	4	KED
Cu	65	0.188	ug/L	0.021	11	27	293	9	KED
Zn	66	0.459	ug/L	0.021	4	29	196	2	KED
Zn	67	0.489	ug/L	0.110	22	8	38	17	KED
As	75	5.476	ug/L	0.422	7	7	1001	8	KED
Se	78	0.144	ug/L	0.176	122	11	15	23	KED
Y	89		ug/L			276255	310856	0	Standard
Kr	83		ug/L			52	62	25	Standard
> In-1	115		ug/L			7782	8562	2	KED
Mo	98	0.195	ug/L	0.030	15	8	165	15	KED
Cd	111	-0.010	ug/L	0.005	51	4	2	43	KED
Cd	114	0.007	ug/L	0.005	68	5	9	21	KED
> In	115		ug/L			475417	506739	3	Standard
Ag	107	-0.006	ug/L	0.000	5	135	73	3	Standard
Sb	121	-0.042	ug/L	0.001	2	596	215	7	Standard
Sb	123	-0.048	ug/L	0.003	6	475	146	17	Standard
> Tb	159		ug/L			499801	555681	1	Standard
Tl	205	-0.003	ug/L	0.000	15	224	166	6	Standard
Pb	208	0.010	ug/L	0.001	7	359	804	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Wednesday, March 01, 2023 22:27:50
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	**13**		ug/L			34622	52437	2	Standard
Cl	**37**		ug/L			3977931	4642789	1	Standard
Sc	**45**		ug/L			439931	541732	2	Standard
[redacted]	**52**	[redacted]	ug/L	0.020	12	12483	18305	1	Standard
Cr	**53**	**0.800**	ug/L	0.024	3	120	1872	2	Standard
Mn	**55**	**752.507**	ug/L	22.742	3	1073	19601625	1	Standard
Ge	**72**		ug/L			28119	29796	0	KED
Ni	**60**	**0.393**	ug/L	0.013	3	28	412	3	KED
Ni	**62**	**0.505**	ug/L	0.007	1	5	84	1	KED
Cu	**63**	**0.255**	ug/L	0.021	8	42	742	6	KED
Cu	**65**	**0.263**	ug/L	0.006	2	27	386	2	KED
Zn	**66**	**0.442**	ug/L	0.038	8	29	184	7	KED
Zn	**67**	**0.566**	ug/L	0.168	29	8	41	23	KED
As	**75**	**1.813**	ug/L	0.067	3	7	326	4	KED
Se	**78**	**0.203**	ug/L	0.025	12	11	16	3	KED
Y	**89**		ug/L			276255	307567	2	Standard
Kr	**83**		ug/L			52	73	18	Standard
In-1	**115**		ug/L			7782	8350	0	KED
Mo	**98**	**0.452**	ug/L	0.022	4	8	360	4	KED
Cd	**111**	**0.010**	ug/L	0.010	102	4	6	31	KED
Cd	**114**	**-0.005**	ug/L	0.004	80	5	3	53	KED
In	**115**		ug/L			475417	495667	1	Standard
Ag	**107**	**-0.007**	ug/L	0.000	2	135	69	4	Standard
Sb	**121**	**-0.042**	ug/L	0.001	1	596	215	3	Standard
Sb	**123**	**-0.047**	ug/L	0.003	5	475	150	12	Standard
Tb	**159**		ug/L			499801	554360	3	Standard
Tl	**205**	**-0.003**	ug/L	0.000	7	224	142	7	Standard
Pb	**208**	**0.060**	ug/L	0.001	2	359	2742	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Wednesday, March 01, 2023 22:32:41
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			34622	73546	4	Standard
Cl	37		ug/L			3977931	4413905	2	Standard
> Sc	45		ug/L			439931	507739	0	Standard
[redacted]	52	[redacted]	ug/L	0.399	1	12483	516291	1	Standard
Cr	53	28.887	ug/L	0.430	1	120	58499	1	Standard
Mn	55	7.078	ug/L	0.243	3	1073	174103	3	Standard
> Ge	72		ug/L			28119	30803	1	KED
[redacted]	60	[redacted]	ug/L	0.036	19	28	212	16	KED
Ni	62	0.236	ug/L	0.052	21	5	43	19	KED
[redacted]	63	[redacted]	ug/L	0.049	9	42	1564	7	KED
Cu	65	0.534	ug/L	0.047	8	27	779	7	KED
[redacted]	66	[redacted]	ug/L	2.730	6	29	15771	5	KED
Zn	67	39.724	ug/L	2.212	5	8	2365	4	KED
As	75	0.037	ug/L	0.007	17	7	14	8	KED
Se	78	0.006	ug/L	0.179	2887	11	13	28	KED
Y	89		ug/L			276255	307619	0	Standard
Kr	83		ug/L			52	48	22	Standard
> In-1	115		ug/L			7782	8757	6	KED
Mo	98	0.042	ug/L	0.011	27	8	44	19	KED
Cd	111	0.271	ug/L	0.022	8	4	58	11	KED
Cd	114	0.268	ug/L	0.065	24	5	133	17	KED
> In	115		ug/L			475417	512781	1	Standard
Ag	107	0.006	ug/L	0.002	31	135	216	11	Standard
Sb	121	-0.031	ug/L	0.003	8	596	328	6	Standard
Sb	123	-0.033	ug/L	0.002	5	475	258	4	Standard
> Tb	159		ug/L			499801	560671	1	Standard
Tl	205	-0.006	ug/L	0.000	2	224	74	7	Standard
[redacted]	208	[redacted]	ug/L	0.003	6	359	2029	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Wednesday, March 01, 2023 22:37:32
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			34622	52670	3	Standard
	Cl	**37**		ug/L			3977931	4456043	2	Standard
>	**Sc**	**45**		ug/L			439931	520555	2	Standard
	Cr	**52**	**0.259**	ug/L	0.032	12	12483	19401	5	Standard
	Cr	**53**	**0.552**	ug/L	0.026	4	120	1286	6	Standard
	Mn	**55**	**4.311**	ug/L	0.145	3	1073	109259	5	Standard
>	**Ge**	**72**		ug/L			28119	31337	1	KED
	Ni	**60**	**0.400**	ug/L	0.050	12	28	440	10	KED
	Ni	**62**	**0.356**	ug/L	0.082	22	5	64	18	KED
	[redacted]	**63**	[redacted]	ug/L	0.027	7	42	1120	5	KED
	Cu	**65**	**0.356**	ug/L	0.038	10	27	538	10	KED
	Zn	**66**	**0.525**	ug/L	0.078	14	29	224	10	KED
	Zn	**67**	**0.425**	ug/L	0.024	5	8	35	3	KED
	As	**75**	**0.190**	ug/L	0.017	9	7	43	9	KED
	Se	**78**	**0.092**	ug/L	0.111	120	11	14	12	KED
	Y	**89**		ug/L			276255	318951	3	Standard
	Kr	**83**		ug/L			52	53	14	Standard
>	**In-1**	**115**		ug/L			7782	8772	4	KED
	Mo	**98**	**0.022**	ug/L	0.006	25	8	28	18	KED
	Cd	**111**	**-0.007**	ug/L	0.006	79	4	3	34	KED
	Cd	**114**	**0.002**	ug/L	0.003	185	5	7	26	KED
>	**In**	**115**		ug/L			475417	525615	1	Standard
	Ag	**107**	**-0.002**	ug/L	0.002	89	135	123	20	Standard
	Sb	**121**	**-0.043**	ug/L	0.002	4	596	217	9	Standard
	Sb	**123**	**-0.045**	ug/L	0.005	10	475	176	20	Standard
>	**Tb**	**159**		ug/L			499801	567335	1	Standard
	Tl	**205**	**-0.007**	ug/L	0.001	8	224	41	42	Standard
	Pb	**208**	**0.043**	ug/L	0.001	1	359	2120	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Wednesday, March 01, 2023 22:42:22
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			34622	53546	2	Standard
	Cl	**37**		ug/L			3977931	4323243	2	Standard
>	**Sc**	**45**		ug/L			439931	506634	1	Standard
	Cr	**52**	**0.322**	ug/L	0.042	13	12483	19976	2	Standard
	Cr	**53**	**0.559**	ug/L	0.018	3	120	1265	1	Standard
	Mn	**55**	**4.398**	ug/L	0.080	1	1073	108415	2	Standard
>	**Ge**	**72**		ug/L			28119	31380	2	KED
	Ni	**60**	**0.380**	ug/L	0.008	2	28	420	1	KED
	Ni	**62**	**0.369**	ug/L	0.083	22	5	66	22	KED
	[redacted]	**63**	[redacted]	ug/L	0.038	10	42	1059	8	KED
	Cu	**65**	**0.372**	ug/L	0.032	8	27	561	6	KED
	Zn	**66**	**0.457**	ug/L	0.078	17	29	200	14	KED
	Zn	**67**	**0.625**	ug/L	0.073	11	8	47	6	KED
	As	**75**	**0.198**	ug/L	0.005	2	7	44	4	KED
	Se	**78**	**-0.021**	ug/L	0.097	454	11	12	13	KED
	Y	**89**		ug/L			276255	305470	3	Standard
	Kr	**83**		ug/L			52	46	22	Standard
>	**In-1**	**115**		ug/L			7782	8826	2	KED
	Mo	**98**	**0.031**	ug/L	0.008	25	8	35	20	KED
	Cd	**111**	**0.002**	ug/L	0.010	498	4	5	39	KED
	Cd	**114**	**-0.007**	ug/L	0.005	64	5	2	79	KED
>	**In**	**115**		ug/L			475417	517494	1	Standard
	Ag	**107**	**-0.003**	ug/L	0.001	39	135	107	15	Standard
	Sb	**121**	**-0.046**	ug/L	0.003	5	596	181	13	Standard
	Sb	**123**	**-0.047**	ug/L	0.003	7	475	151	16	Standard
>	**Tb**	**159**		ug/L			499801	556197	0	Standard
	Tl	**205**	**-0.006**	ug/L	0.001	8	224	48	32	Standard
	Pb	**208**	**0.045**	ug/L	0.002	3	359	2168	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Wednesday, March 01, 2023 22:47:13
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			34622	52357	1	Standard
Cl	37		ug/L			3977931	4411339	0	Standard
Sc	45		ug/L			439931	512589	2	Standard
Cr	52	12.186	ug/L	0.779	6	12483	228871	4	Standard
Cr	53	12.501	ug/L	0.808	6	120	25623	5	Standard
Mn	55	16.550	ug/L	0.843	5	1073	409121	3	Standard
Ge	72		ug/L			28119	30330	6	KED
Ni	60	12.827	ug/L	0.616	4	28	12704	5	KED
Ni	62	13.373	ug/L	0.555	4	5	2132	5	KED
[redacted]	63	[redacted]	ug/L	0.143	1	42	35916	7	KED
Cu	65	12.949	ug/L	0.599	4	27	17903	6	KED
Zn	66	40.612	ug/L	0.931	2	29	14357	5	KED
Zn	67	38.506	ug/L	1.323	3	8	2258	7	KED
As	75	12.307	ug/L	0.277	2	7	2206	5	KED
Se	78	36.554	ug/L	0.551	1	11	718	7	KED
Y	89		ug/L			276255	313157	0	Standard
Kr	83		ug/L			52	60	25	Standard
In-1	115		ug/L			7782	8498	2	KED
Mo	98	0.040	ug/L	0.011	28	8	40	19	KED
Cd	111	12.039	ug/L	0.353	2	4	2320	1	KED
Cd	114	12.172	ug/L	0.299	2	5	5673	1	KED
In	115		ug/L			475417	519349	1	Standard
Ag	107	12.904	ug/L	0.556	4	135	147875	3	Standard
Sb	121	-0.047	ug/L	0.002	3	596	167	9	Standard
Sb	123	-0.048	ug/L	0.001	2	475	149	5	Standard
Tb	159		ug/L			499801	563624	1	Standard
Tl	205	11.493	ug/L	0.490	4	224	366681	2	Standard
Pb	208	12.343	ug/L	0.600	4	359	486662	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL7
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, March 01, 2023 22:52:04
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			34622	42792	2	Standard
	Cl	**37**		ug/L			3977931	4289242	2	Standard
⎡>	**Sc**	**45**		ug/L			439931	475949	1	Standard
⎢	**Cr**	**52**	**-0.013**	ug/L	0.011	83	12483	13289	3	Standard
⎢	**Cr**	**53**	**0.213**	ug/L	0.027	12	120	533	7	Standard
⎣	**Mn**	**55**	**-0.004**	ug/L	0.001	14	1073	1068	0	Standard
⎡>	**Ge**	**72**		ug/L			28119	30412	1	KED
⎢	**Ni**	**60**	**-0.024**	ug/L	0.005	21	28	7	66	KED
⎢	**Ni**	**62**	**-0.011**	ug/L	0.000	3	5	3	0	KED
⎢	**Cu**	**63**	**0.012**	ug/L	0.002	18	42	80	9	KED
⎢	**Cu**	**65**	**0.004**	ug/L	0.009	230	27	34	35	KED
⎢	**Zn**	**66**	**-0.002**	ug/L	0.021	1299	29	31	24	KED
⎢	**Zn**	**67**	**-0.056**	ug/L	0.067	118	8	6	62	KED
⎢	**As**	**75**	**-0.013**	ug/L	0.008	62	7	5	25	KED
⎣	**Se**	**78**	**0.024**	ug/L	0.257	1055	11	13	36	KED
	Y	**89**		ug/L			276255	292426	0	Standard
	Kr	**83**		ug/L			52	53	10	Standard
⎡>	**In-1**	**115**		ug/L			7782	8660	2	KED
⎢	**Mo**	**98**	**-0.006**	ug/L	0.006	101	8	4	103	KED
⎢	**Cd**	**111**	**-0.012**	ug/L	0.012	99	4	2	107	KED
⎣	**Cd**	**114**	**0.001**	ug/L	0.008	653	5	6	58	KED
⎡>	**In**	**115**		ug/L			475417	495036	1	Standard
⎢	**Ag**	**107**	**-0.008**	ug/L	0.000	0	135	54	2	Standard
⎢	**Sb**	**121**	**-0.056**	ug/L	0.001	1	596	72	9	Standard
⎣	**Sb**	**123**	**-0.060**	ug/L	0.002	3	475	53	29	Standard
⎡>	**Tb**	**159**		ug/L			499801	531431	1	Standard
⎢	**Tl**	**205**	**-0.007**	ug/L	0.000	6	224	30	45	Standard
⎣	**Pb**	**208**	**-0.006**	ug/L	0.001	8	359	154	11	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV6
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, March 01, 2023 22:56:56
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			34622	42224	3	Standard
	Cl	**37**		ug/L			3977931	4741313	2	Standard
⌈>	**Sc**	**45**		ug/L			439931	499103	0	Standard
|	**Cr**	**52**	**46.778**	ug/L	2.606	5	12483	815894	5	Standard
|	**Cr**	**53**	**47.309**	ug/L	2.972	6	120	94098	6	Standard
⌊	**Mn**	**55**	**45.516**	ug/L	2.357	5	1073	1094097	5	Standard
⌈>	**Ge**	**72**		ug/L			28119	30746	0	KED
|	**Ni**	**60**	**48.826**	ug/L	2.011	4	28	49002	4	KED
|	**Ni**	**62**	**49.109**	ug/L	1.404	2	5	7932	3	KED
|	**Cu**	**63**	**49.382**	ug/L	0.497	1	42	139282	1	KED
|	**Cu**	**65**	**49.506**	ug/L	0.639	1	27	69338	1	KED
|	**Zn**	**66**	**50.417**	ug/L	1.473	2	29	18069	3	KED
|	**Zn**	**67**	**49.300**	ug/L	3.698	7	8	2929	8	KED
|	**As**	**75**	**48.902**	ug/L	0.996	2	7	8870	2	KED
⌊	**Se**	**78**	**50.006**	ug/L	2.492	4	11	991	5	KED
	Y	**89**		ug/L			276255	302033	0	Standard
	Kr	**83**		ug/L			52	62	30	Standard
⌈>	**In-1**	**115**		ug/L			7782	8652	1	KED
|	**Mo**	**98**	**47.919**	ug/L	0.532	1	8	38540	2	KED
|	**Cd**	**111**	**48.934**	ug/L	0.915	1	4	9592	3	KED
⌊	**Cd**	**114**	**50.988**	ug/L	0.442	0	5	24184	2	KED
⌈>	**In**	**115**		ug/L			475417	496220	1	Standard
|	**Ag**	**107**	**49.141**	ug/L	3.435	6	135	537505	5	Standard
|	**Sb**	**121**	**47.192**	ug/L	2.905	6	596	463077	4	Standard
⌊	**Sb**	**123**	**46.478**	ug/L	2.871	6	475	344609	4	Standard
⌈>	**Tb**	**159**		ug/L			499801	548988	0	Standard
|	**Tl**	**205**	**45.930**	ug/L	1.618	3	224	1427203	3	Standard
⌊	**Pb**	**208**	**48.585**	ug/L	1.852	3	359	1865896	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB6
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, March 01, 2023 23:04:31
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			34622	40331	2	Standard
	Cl	**37**		ug/L			3977931	4610347	2	Standard
⌈>	**Sc**	**45**		ug/L			439931	488594	0	Standard
|	**Cr**	**52**	**-0.007**	ug/L	0.006	90	12483	13748	1	Standard
|	**Cr**	**53**	**0.210**	ug/L	0.010	4	120	542	3	Standard
⌊	**Mn**	**55**	**-0.014**	ug/L	0.001	3	1073	859	0	Standard
⌈>	**Ge**	**72**		ug/L			28119	28918	5	KED
|	**Ni**	**60**	**-0.021**	ug/L	0.009	40	28	9	87	KED
|	**Ni**	**62**	**0.008**	ug/L	0.034	406	5	6	75	KED
|	**Cu**	**63**	**-0.001**	ug/L	0.005	570	42	41	27	KED
|	**Cu**	**65**	**-0.004**	ug/L	0.007	183	27	22	36	KED
|	**Zn**	**66**	**-0.002**	ug/L	0.006	259	29	29	7	KED
|	**Zn**	**67**	**-0.062**	ug/L	0.088	141	8	5	88	KED
|	**As**	**75**	**-0.008**	ug/L	0.000	4	7	6	4	KED
⌊	**Se**	**78**	**0.314**	ug/L	0.136	43	11	17	18	KED
	Y	**89**		ug/L			276255	293437	0	Standard
	Kr	**83**		ug/L			52	48	19	Standard
⌈>	**In-1**	**115**		ug/L			7782	8272	0	KED
|	**Mo**	**98**	**-0.001**	ug/L	0.005	743	8	8	41	KED
|	**Cd**	**111**	**0.005**	ug/L	0.008	143	4	5	26	KED
⌊	**Cd**	**114**	**0.003**	ug/L	0.011	314	5	7	65	KED
⌈>	**In**	**115**		ug/L			475417	497215	2	Standard
|	**Ag**	**107**	**-0.006**	ug/L	0.001	14	135	74	12	Standard
|	**Sb**	**121**	**0.045**	ug/L	0.005	10	596	1065	3	Standard
⌊	**Sb**	**123**	**0.042**	ug/L	0.008	19	475	805	7	Standard
⌈>	**Tb**	**159**		ug/L			499801	532664	1	Standard
|	**Tl**	**205**	**-0.005**	ug/L	0.000	1	224	73	1	Standard
⌊	**Pb**	**208**	**-0.006**	ug/L	0.001	14	359	154	19	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Wednesday, March 01, 2023 23:09:23
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			34622	58337	2	Standard
Cl	37		ug/L			3977931	4694940	2	Standard
> Sc	45		ug/L			439931	559288	1	Standard
Cr	52	0.160	ug/L	0.042	25	12483	18943	3	Standard
Cr	53	0.373	ug/L	0.002	0	120	982	0	Standard
Mn	55	0.166	ug/L	0.009	5	1073	5830	3	Standard
> Ge	72		ug/L			28119	31647	1	KED
Ni	60	0.079	ug/L	0.011	13	28	113	10	KED
Ni	62	0.107	ug/L	0.058	54	5	23	41	KED
[redacted]	63	[redacted]	ug/L	0.033	7	42	1334	6	KED
Cu	65	0.462	ug/L	0.044	9	27	695	8	KED
Zn	66	1.379	ug/L	0.115	8	29	540	7	KED
Zn	67	1.212	ug/L	0.182	14	8	83	12	KED
As	75	0.006	ug/L	0.013	207	7	9	25	KED
Se	78	-0.003	ug/L	0.100	3983	11	13	14	KED
Y	89		ug/L			276255	340054	2	Standard
Kr	83		ug/L			52	49	21	Standard
> In-1	115		ug/L			7782	9243	6	KED
Mo	98	0.029	ug/L	0.008	27	8	35	21	KED
Cd	111	-0.006	ug/L	0.006	100	4	3	31	KED
Cd	114	-0.004	ug/L	0.007	187	5	4	74	KED
> In	115		ug/L			475417	538825	1	Standard
Ag	107	0.005	ug/L	0.002	36	135	217	9	Standard
Sb	121	-0.007	ug/L	0.002	28	596	605	4	Standard
Sb	123	-0.008	ug/L	0.004	46	475	478	5	Standard
> Tb	159		ug/L			499801	583406	2	Standard
Tl	205	-0.005	ug/L	0.000	6	224	86	12	Standard
Pb	208	0.053	ug/L	0.003	6	359	2577	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Wednesday, March 01, 2023 23:14:13
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			34622	55356	3	Standard
Cl	37		ug/L			3977931	4646416	1	Standard
> Sc	45		ug/L			439931	550586	0	Standard
Cr	52	12.281	ug/L	0.650	5	12483	247709	3	Standard
Cr	53	12.470	ug/L	0.580	4	120	27461	3	Standard
Mn	55	12.336	ug/L	0.461	3	1073	328000	2	Standard
> Ge	72		ug/L			28119	32244	1	KED
Ni	60	12.442	ug/L	0.125	1	28	13115	0	KED
Ni	62	12.578	ug/L	0.571	4	5	2134	3	KED
[redacted]	63	[redacted]	ug/L	0.191	1	42	37336	0	KED
Cu	65	12.814	ug/L	0.235	1	27	18841	0	KED
Zn	66	33.569	ug/L	0.840	2	29	12624	1	KED
Zn	67	30.174	ug/L	0.297	0	8	1883	1	KED
As	75	10.289	ug/L	0.024	0	7	1963	1	KED
Se	78	27.117	ug/L	0.529	1	11	569	2	KED
Y	89		ug/L			276255	341294	2	Standard
Kr	83		ug/L			52	54	15	Standard
> In-1	115		ug/L			7782	9241	0	KED
Mo	98	0.041	ug/L	0.009	21	8	45	16	KED
Cd	111	10.414	ug/L	0.261	2	4	2183	2	KED
Cd	114	10.380	ug/L	0.377	3	5	5263	3	KED
> In	115		ug/L			475417	535148	1	Standard
Ag	107	12.765	ug/L	0.255	2	135	150796	3	Standard
Sb	121	-0.033	ug/L	0.002	7	596	326	9	Standard
Sb	123	-0.034	ug/L	0.004	11	475	260	11	Standard
> Tb	159		ug/L			499801	580093	1	Standard
Tl	205	11.889	ug/L	0.473	3	224	390559	3	Standard
Pb	208	12.430	ug/L	0.361	2	359	504645	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Wednesday, March 01, 2023 23:19:04
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			34622	58181	0	Standard
Cl	37		ug/L			3977931	4481657	1	Standard
> Sc	45		ug/L			439931	600978	1	Standard
Cr	52	2.764	ug/L	0.081	2	12483	74097	3	Standard
Cr	53	3.062	ug/L	0.095	3	120	7488	4	Standard
Mn	55	39.684	ug/L	0.998	2	1073	1148912	3	Standard
> Ge	72		ug/L			28119	32165	0	KED
Ni	60	3.924	ug/L	0.140	3	28	4148	3	KED
Ni	62	4.317	ug/L	0.188	4	5	734	3	KED
[redacted]	63	[redacted]	ug/L	0.165	5	42	9289	4	KED
Cu	65	3.196	ug/L	0.131	4	27	4711	3	KED
Zn	66	3.399	ug/L	0.085	2	29	1306	3	KED
Zn	67	4.110	ug/L	0.222	5	8	264	5	KED
As	75	0.558	ug/L	0.015	2	7	113	2	KED
Se	78	0.326	ug/L	0.123	37	11	20	12	KED
Y	89		ug/L			276255	371012	0	Standard
Kr	83		ug/L			52	70	24	Standard
> In-1	115		ug/L			7782	9249	1	KED
Mo	98	0.045	ug/L	0.012	26	8	48	22	KED
Cd	111	0.002	ug/L	0.003	108	4	5	10	KED
Cd	114	0.008	ug/L	0.007	83	5	10	29	KED
> In	115		ug/L			475417	541878	1	Standard
Ag	107	0.004	ug/L	0.002	48	135	206	12	Standard
Sb	121	-0.020	ug/L	0.001	3	596	469	1	Standard
Sb	123	-0.024	ug/L	0.003	10	475	350	6	Standard
> Tb	159		ug/L			499801	585989	2	Standard
Tl	205	0.001	ug/L	0.001	58	224	307	7	Standard
Pb	208	0.447	ug/L	0.018	4	359	18727	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Wednesday, March 01, 2023 23:23:55
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			34622	60185	1	Standard
Cl	37		ug/L			3977931	4475271	1	Standard
> Sc	45		ug/L			439931	599778	1	Standard
Cr	52	2.649	ug/L	0.091	3	12483	71569	1	Standard
Cr	53	2.901	ug/L	0.144	4	120	7085	3	Standard
Mn	55	38.488	ug/L	2.182	5	1073	1111489	4	Standard
> Ge	72		ug/L			28119	31797	3	KED
Ni	60	3.969	ug/L	0.021	0	28	4148	3	KED
Ni	62	4.109	ug/L	0.240	5	5	690	2	KED
[redacted]	63	[redacted]	ug/L	0.128	3	42	9952	0	KED
Cu	65	3.423	ug/L	0.028	0	27	4986	2	KED
Zn	66	3.513	ug/L	0.188	5	29	1332	3	KED
Zn	67	4.683	ug/L	0.386	8	8	297	10	KED
As	75	0.586	ug/L	0.082	13	7	118	15	KED
Se	78	0.024	ug/L	0.182	747	11	13	23	KED
Y	89		ug/L			276255	357458	2	Standard
Kr	83		ug/L			52	66	3	Standard
> In-1	115		ug/L			7782	9287	1	KED
Mo	98	0.035	ug/L	0.009	25	8	40	18	KED
Cd	111	-0.010	ug/L	0.008	81	4	2	57	KED
Cd	114	0.003	ug/L	0.008	235	5	8	46	KED
> In	115		ug/L			475417	533466	2	Standard
Ag	107	0.008	ug/L	0.002	26	135	243	11	Standard
Sb	121	0.020	ug/L	0.010	50	596	875	10	Standard
Sb	123	0.015	ug/L	0.006	40	475	653	5	Standard
> Tb	159		ug/L			499801	583055	3	Standard
Tl	205	0.002	ug/L	0.001	74	224	314	10	Standard
Pb	208	0.431	ug/L	0.021	4	359	17991	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Wednesday, March 01, 2023 23:28:45
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			34622	57345	1	Standard
Cl	37		ug/L			3977931	4554457	2	Standard
> Sc	45		ug/L			439931	639325	3	Standard
Cr	52	14.391	ug/L	0.572	3	12483	334146	6	Standard
Cr	53	14.900	ug/L	0.717	4	120	38098	7	Standard
Mn	55	59.562	ug/L	2.033	3	1073	1834178	6	Standard
> Ge	72		ug/L			28119	32070	0	KED
Ni	60	17.606	ug/L	0.486	2	28	18447	2	KED
Ni	62	17.851	ug/L	0.452	2	5	3011	2	KED
[redacted]	63	[redacted]	ug/L	0.411	2	42	48838	2	KED
Cu	65	16.517	ug/L	0.322	1	27	24148	1	KED
Zn	66	36.750	ug/L	1.139	3	29	13744	2	KED
Zn	67	35.807	ug/L	2.127	5	8	2221	5	KED
As	75	10.768	ug/L	0.251	2	7	2043	1	KED
Se	78	27.598	ug/L	0.335	1	11	576	0	KED
Y	89		ug/L			276255	380471	5	Standard
Kr	83		ug/L			52	61	25	Standard
> In-1	115		ug/L			7782	9112	1	KED
Mo	98	0.044	ug/L	0.004	8	8	47	7	KED
Cd	111	10.821	ug/L	0.383	3	4	2237	4	KED
Cd	114	10.765	ug/L	0.217	2	5	5382	0	KED
> In	115		ug/L			475417	539893	2	Standard
Ag	107	12.901	ug/L	0.228	1	135	153760	3	Standard
Sb	121	-0.019	ug/L	0.003	16	596	470	8	Standard
Sb	123	-0.025	ug/L	0.003	10	475	338	6	Standard
> Tb	159		ug/L			499801	598416	5	Standard
Tl	205	12.046	ug/L	0.413	3	224	407732	2	Standard
Pb	208	13.167	ug/L	0.278	2	359	551111	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL8
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, March 01, 2023 23:33:37
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			34622	43832	1	Standard
	Cl	**37**		ug/L			3977931	4374346	3	Standard
⌈>	**Sc**	**45**		ug/L			439931	479674	2	Standard
|	**Cr**	**52**	**-0.060**	ug/L	0.042	70	12483	12603	3	Standard
|	**Cr**	**53**	**0.176**	ug/L	0.001	0	120	467	2	Standard
⌊	**Mn**	**55**	**0.002**	ug/L	0.003	171	1073	1203	3	Standard
⌈>	**Ge**	**72**		ug/L			28119	29561	0	KED
|	**Ni**	**60**	**-0.025**	ug/L	0.006	23	28	5	100	KED
|	**Ni**	**62**	**0.010**	ug/L	0.049	476	5	6	110	KED
|	**Cu**	**63**	**0.012**	ug/L	0.001	7	42	77	3	KED
|	**Cu**	**65**	**0.008**	ug/L	0.005	66	27	39	18	KED
|	**Zn**	**66**	**0.009**	ug/L	0.006	74	29	34	5	KED
|	**Zn**	**67**	**-0.019**	ug/L	0.039	206	8	8	26	KED
|	**As**	**75**	**0.002**	ug/L	0.003	123	7	7	6	KED
⌊	**Se**	**78**	**-0.007**	ug/L	0.224	3123	11	12	35	KED
	Y	**89**		ug/L			276255	291420	1	Standard
	Kr	**83**		ug/L			52	54	21	Standard
⌈>	**In-1**	**115**		ug/L			7782	8242	5	KED
|	**Mo**	**98**	**-0.000**	ug/L	0.001	471	8	9	2	KED
|	**Cd**	**111**	**-0.003**	ug/L	0.009	269	4	3	50	KED
⌊	**Cd**	**114**	**0.001**	ug/L	0.002	404	5	6	16	KED
⌈>	**In**	**115**		ug/L			475417	492781	2	Standard
|	**Ag**	**107**	**-0.008**	ug/L	0.001	17	135	52	27	Standard
|	**Sb**	**121**	**-0.056**	ug/L	0.001	1	596	72	9	Standard
⌊	**Sb**	**123**	**-0.060**	ug/L	0.001	1	475	51	11	Standard
⌈>	**Tb**	**159**		ug/L			499801	519307	3	Standard
|	**Tl**	**205**	**-0.007**	ug/L	0.000	3	224	34	17	Standard
⌊	**Pb**	**208**	**-0.006**	ug/L	0.001	8	359	138	13	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV7
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, March 01, 2023 23:38:28
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			34622	43693	0	Standard
	Cl	**37**		ug/L			3977931	4808320	1	Standard
⌈>	**Sc**	**45**		ug/L			439931	499683	3	Standard
|	**Cr**	**52**	**48.449**	ug/L	2.057	4	12483	844761	1	Standard
|	**Cr**	**53**	**48.145**	ug/L	1.196	2	120	95838	3	Standard
⌊	**Mn**	**55**	**48.346**	ug/L	1.642	3	1073	1162693	2	Standard
⌈>	**Ge**	**72**		ug/L			28119	30446	1	KED
|	**Ni**	**60**	**47.682**	ug/L	1.790	3	28	47387	4	KED
|	**Ni**	**62**	**49.415**	ug/L	0.941	1	5	7904	2	KED
|	**Cu**	**63**	**48.764**	ug/L	2.355	4	42	136188	4	KED
|	**Cu**	**65**	**48.550**	ug/L	1.596	3	27	67338	3	KED
|	**Zn**	**66**	**48.791**	ug/L	1.985	4	29	17313	4	KED
|	**Zn**	**67**	**49.585**	ug/L	3.095	6	8	2917	6	KED
|	**As**	**75**	**48.108**	ug/L	1.489	3	7	8640	3	KED
⌊	**Se**	**78**	**48.501**	ug/L	2.069	4	11	952	3	KED
	Y	**89**		ug/L			276255	307772	2	Standard
	Kr	**83**		ug/L			52	60	39	Standard
⌈>	**In-1**	**115**		ug/L			7782	8179	0	KED
|	**Mo**	**98**	**47.503**	ug/L	3.304	6	8	36116	6	KED
|	**Cd**	**111**	**48.572**	ug/L	2.787	5	4	8999	5	KED
⌊	**Cd**	**114**	**49.098**	ug/L	3.687	7	5	22014	7	KED
⌈>	**In**	**115**		ug/L			475417	503044	2	Standard
|	**Ag**	**107**	**50.271**	ug/L	3.263	6	135	557285	4	Standard
|	**Sb**	**121**	**47.500**	ug/L	2.167	4	596	472478	3	Standard
⌊	**Sb**	**123**	**47.017**	ug/L	2.457	5	475	353353	3	Standard
⌈>	**Tb**	**159**		ug/L			499801	560652	2	Standard
|	**Tl**	**205**	**45.571**	ug/L	3.445	7	224	1444629	5	Standard
⌊	**Pb**	**208**	**48.467**	ug/L	3.276	6	359	1899070	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB7
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, March 01, 2023 23:46:04
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			34622	41947	2	Standard
	Cl	**37**		ug/L			3977931	4602678	1	Standard
⌈>	**Sc**	**45**		ug/L			439931	475576	2	Standard
|	**Cr**	**52**	**-0.049**	ug/L	0.041	83	12483	12689	4	Standard
|	**Cr**	**53**	**0.193**	ug/L	0.031	15	120	495	10	Standard
⌊	**Mn**	**55**	**-0.009**	ug/L	0.000	5	1073	957	3	Standard
⌈>	**Ge**	**72**		ug/L			28119	29738	2	KED
|	**Ni**	**60**	**-0.017**	ug/L	0.003	16	28	13	20	KED
|	**Ni**	**62**	**0.002**	ug/L	0.012	547	5	5	33	KED
|	**Cu**	**63**	**0.004**	ug/L	0.000	4	42	55	3	KED
|	**Cu**	**65**	**-0.004**	ug/L	0.004	83	27	22	22	KED
|	**Zn**	**66**	**0.002**	ug/L	0.007	274	29	32	5	KED
|	**Zn**	**67**	**-0.075**	ug/L	0.051	68	8	5	57	KED
|	**As**	**75**	**-0.003**	ug/L	0.010	312	7	6	27	KED
⌊	**Se**	**78**	**-0.113**	ug/L	0.059	51	11	10	8	KED
	Y	**89**		ug/L			276255	294762	3	Standard
	Kr	**83**		ug/L			52	50	31	Standard
⌈>	**In-1**	**115**		ug/L			7782	8258	0	KED
|	**Mo**	**98**	**0.005**	ug/L	0.006	123	8	13	35	KED
|	**Cd**	**111**	**0.000**	ug/L	0.012	2972	4	4	49	KED
⌊	**Cd**	**114**	**-0.002**	ug/L	0.003	114	5	4	23	KED
⌈>	**In**	**115**		ug/L			475417	491722	2	Standard
|	**Ag**	**107**	**-0.006**	ug/L	0.002	25	135	75	23	Standard
|	**Sb**	**121**	**0.043**	ug/L	0.002	3	596	1035	3	Standard
⌊	**Sb**	**123**	**0.042**	ug/L	0.008	18	475	797	7	Standard
⌈>	**Tb**	**159**		ug/L			499801	519915	1	Standard
|	**Tl**	**205**	**-0.005**	ug/L	0.001	13	224	95	20	Standard
⌊	**Pb**	**208**	**-0.005**	ug/L	0.001	12	359	193	13	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: RINSE
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, March 01, 2023 23:50:54
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			34622	49350	1	Standard
	Cl	**37**		ug/L			3977931	4710430	1	Standard
⎡>	**Sc**	**45**		ug/L			439931	584834	0	Standard
⎢	**Cr**	**52**	**0.004**	ug/L	0.025	667	12483	16667	2	Standard
⎢	**Cr**	**53**	**0.145**	ug/L	0.020	13	120	497	8	Standard
⎣	**Mn**	**55**	**0.004**	ug/L	0.002	38	1073	1544	3	Standard
⎡>	**Ge**	**72**		ug/L			28119	31601	1	KED
⎢	**Ni**	**60**	**-0.022**	ug/L	0.007	30	28	9	72	KED
⎢	**Ni**	**62**	**0.008**	ug/L	0.023	311	5	6	56	KED
⎢	**Cu**	**63**	**0.003**	ug/L	0.004	131	42	55	18	KED
⎢	**Cu**	**65**	**0.005**	ug/L	0.007	138	27	38	26	KED
⎢	**Zn**	**66**	**-0.015**	ug/L	0.011	71	29	27	15	KED
⎢	**Zn**	**67**	**-0.070**	ug/L	0.033	46	8	5	33	KED
⎢	**As**	**75**	**-0.004**	ug/L	0.009	231	7	7	24	KED
⎣	**Se**	**78**	**0.016**	ug/L	0.166	1045	11	13	25	KED
	Y	**89**		ug/L			276255	353157	2	Standard
	Kr	**83**		ug/L			52	62	23	Standard
⎡>	**In-1**	**115**		ug/L			7782	9431	2	KED
⎢	**Mo**	**98**	**-0.006**	ug/L	0.002	26	8	5	25	KED
⎢	**Cd**	**111**	**-0.003**	ug/L	0.003	117	4	4	12	KED
⎣	**Cd**	**114**	**0.006**	ug/L	0.003	43	5	10	11	KED
⎡>	**In**	**115**		ug/L			475417	557206	2	Standard
⎢	**Ag**	**107**	**-0.008**	ug/L	0.000	3	135	64	4	Standard
⎢	**Sb**	**121**	**-0.012**	ug/L	0.005	43	596	570	9	Standard
⎣	**Sb**	**123**	**-0.013**	ug/L	0.004	27	475	448	8	Standard
⎡>	**Tb**	**159**		ug/L			499801	593603	3	Standard
⎢	**Tl**	**205**	**-0.006**	ug/L	0.000	2	224	56	7	Standard
⎣	**Pb**	**208**	**-0.008**	ug/L	0.000	1	359	108	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: RINSE
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, March 01, 2023 23:55:46
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			34622	50160	2	Standard
	Cl	**37**		ug/L			3977931	4766555	2	Standard
⎡>	**Sc**	**45**		ug/L			439931	589999	0	Standard
⎢	**Cr**	**52**	**0.002**	ug/L	0.032	1399	12483	16791	4	Standard
⎢	**Cr**	**53**	**0.139**	ug/L	0.008	5	120	487	3	Standard
⎣	**Mn**	**55**	**0.003**	ug/L	0.002	62	1073	1534	4	Standard
⎡>	**Ge**	**72**		ug/L			28119	32345	0	KED
⎢	**Ni**	**60**	**-0.025**	ug/L	0.006	22	28	6	83	KED
⎢	**Ni**	**62**	**0.018**	ug/L	0.007	37	5	8	12	KED
⎢	**Cu**	**63**	**0.013**	ug/L	0.003	25	42	88	10	KED
⎢	**Cu**	**65**	**0.006**	ug/L	0.000	2	27	40	0	KED
⎢	**Zn**	**66**	**-0.025**	ug/L	0.009	33	29	24	13	KED
⎢	**Zn**	**67**	**-0.052**	ug/L	0.093	177	8	6	83	KED
⎢	**As**	**75**	**-0.016**	ug/L	0.009	56	7	5	35	KED
⎣	**Se**	**78**	**0.083**	ug/L	0.067	80	11	15	8	KED
	Y	**89**		ug/L			276255	359116	1	Standard
	Kr	**83**		ug/L			52	51	9	Standard
⎡>	**In-1**	**115**		ug/L			7782	9469	1	KED
⎢	**Mo**	**98**	**-0.006**	ug/L	0.006	95	8	5	94	KED
⎢	**Cd**	**111**	**-0.011**	ug/L	0.007	60	4	2	57	KED
⎣	**Cd**	**114**	**-0.004**	ug/L	0.011	310	5	4	119	KED
⎡>	**In**	**115**		ug/L			475417	558067	1	Standard
⎢	**Ag**	**107**	**-0.009**	ug/L	0.001	12	135	50	28	Standard
⎢	**Sb**	**121**	**-0.037**	ug/L	0.001	2	596	293	2	Standard
⎣	**Sb**	**123**	**-0.041**	ug/L	0.002	5	475	214	6	Standard
⎡>	**Tb**	**159**		ug/L			499801	599290	3	Standard
⎢	**Tl**	**205**	**-0.007**	ug/L	0.000	5	224	28	40	Standard
⎣	**Pb**	**208**	**-0.008**	ug/L	0.000	2	359	103	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: RINSE
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, March 02, 2023 00:00:37
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			34622	49902	4	Standard
	Cl	**37**		ug/L			3977931	4617602	1	Standard
⌈>	**Sc**	**45**		ug/L			439931	557678	2	Standard
|	**Cr**	**52**	**0.017**	ug/L	0.026	147	12483	16154	3	Standard
|	**Cr**	**53**	**0.157**	ug/L	0.007	4	120	501	1	Standard
⌊	**Mn**	**55**	**0.005**	ug/L	0.002	35	1073	1497	1	Standard
⌈>	**Ge**	**72**		ug/L			28119	32092	1	KED
|	**Ni**	**60**	**-0.023**	ug/L	0.001	4	28	8	13	KED
|	**Ni**	**62**	**0.015**	ug/L	0.013	91	5	8	26	KED
|	**Cu**	**63**	**0.010**	ug/L	0.003	29	42	78	9	KED
|	**Cu**	**65**	**0.007**	ug/L	0.014	185	27	41	48	KED
|	**Zn**	**66**	**-0.049**	ug/L	0.011	22	29	15	24	KED
|	**Zn**	**67**	**-0.093**	ug/L	0.035	37	8	4	49	KED
|	**As**	**75**	**-0.012**	ug/L	0.004	31	7	5	12	KED
⌊	**Se**	**78**	**0.206**	ug/L	0.070	33	11	17	9	KED
	Y	**89**		ug/L			276255	345131	5	Standard
	Kr	**83**		ug/L			52	47	4	Standard
⌈>	**In-1**	**115**		ug/L			7782	9254	2	KED
|	**Mo**	**98**	**-0.002**	ug/L	0.007	265	8	8	69	KED
|	**Cd**	**111**	**-0.013**	ug/L	0.010	76	4	2	89	KED
⌊	**Cd**	**114**	**-0.003**	ug/L	0.004	117	5	4	41	KED
⌈>	**In**	**115**		ug/L			475417	533941	4	Standard
|	**Ag**	**107**	**-0.009**	ug/L	0.001	7	135	50	11	Standard
|	**Sb**	**121**	**-0.047**	ug/L	0.002	3	596	170	13	Standard
⌊	**Sb**	**123**	**-0.049**	ug/L	0.002	3	475	147	10	Standard
⌈>	**Tb**	**159**		ug/L			499801	570747	6	Standard
|	**Tl**	**205**	**-0.007**	ug/L	0.000	4	224	24	46	Standard
⌊	**Pb**	**208**	**-0.008**	ug/L	0.000	1	359	97	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: DI
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, March 02, 2023 00:05:28
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			34622	44295	0	Standard
	Cl	**37**		ug/L			3977931	4400153	0	Standard
⎡>	**Sc**	**45**		ug/L			439931	456064	1	Standard
⎢	**Cr**	**52**	**-0.060**	ug/L	0.033	55	12483	11996	3	Standard
⎢	**Cr**	**53**	**0.158**	ug/L	0.005	3	120	412	2	Standard
⎣	**Mn**	**55**	**0.004**	ug/L	0.001	28	1073	1198	1	Standard
⎡>	**Ge**	**72**		ug/L			28119	28952	3	KED
⎢	**Ni**	**60**	**-0.025**	ug/L	0.002	8	28	5	33	KED
⎢	**Ni**	**62**	**-0.005**	ug/L	0.006	118	5	4	24	KED
⎢	**Cu**	**63**	**-0.006**	ug/L	0.006	103	42	28	52	KED
⎢	**Cu**	**65**	**-0.014**	ug/L	0.003	21	27	10	39	KED
⎢	**Zn**	**66**	**-0.040**	ug/L	0.007	17	29	17	11	KED
⎢	**Zn**	**67**	**-0.153**	ug/L	0.020	13	8	0	173	KED
⎢	**As**	**75**	**-0.009**	ug/L	0.002	26	7	5	4	KED
⎣	**Se**	**78**	**0.093**	ug/L	0.033	35	11	13	2	KED
	Y	**89**		ug/L			276255	280137	0	Standard
	Kr	**83**		ug/L			52	48	8	Standard
⎡>	**In-1**	**115**		ug/L			7782	7958	3	KED
⎢	**Mo**	**98**	**0.002**	ug/L	0.002	63	8	10	9	KED
⎢	**Cd**	**111**	**0.007**	ug/L	0.006	94	4	5	20	KED
⎣	**Cd**	**114**	**-0.000**	ug/L	0.014	97933	5	5	102	KED
⎡>	**In**	**115**		ug/L			475417	476446	1	Standard
⎢	**Ag**	**107**	**-0.009**	ug/L	0.001	7	135	42	18	Standard
⎢	**Sb**	**121**	**-0.056**	ug/L	0.001	2	596	69	17	Standard
⎣	**Sb**	**123**	**-0.059**	ug/L	0.003	5	475	57	39	Standard
⎡>	**Tb**	**159**		ug/L			499801	517769	4	Standard
⎢	**Tl**	**205**	**-0.005**	ug/L	0.000	3	224	72	4	Standard
⎣	**Pb**	**208**	**-0.009**	ug/L	0.000	2	359	34	22	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: DI
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, March 02, 2023 00:10:19
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			34622	44233	1	Standard
	Cl	**37**		ug/L			3977931	4378829	1	Standard
⎡>	**Sc**	**45**		ug/L			439931	465793	1	Standard
⎢	**Cr**	**52**	**-0.061**	ug/L	0.025	40	12483	12232	2	Standard
⎢	**Cr**	**53**	**0.160**	ug/L	0.005	3	120	424	0	Standard
⎣	**Mn**	**55**	**-0.003**	ug/L	0.001	23	1073	1068	1	Standard
⎡>	**Ge**	**72**		ug/L			28119	28885	1	KED
⎢	**Ni**	**60**	**-0.027**	ug/L	0.004	14	28	3	100	KED
⎢	**Ni**	**62**	**-0.009**	ug/L	0.013	136	5	3	50	KED
⎢	**Cu**	**63**	**-0.006**	ug/L	0.006	101	42	27	55	KED
⎢	**Cu**	**65**	**-0.010**	ug/L	0.004	43	27	14	39	KED
⎢	**Zn**	**66**	**-0.042**	ug/L	0.043	101	29	16	85	KED
⎢	**Zn**	**67**	**-0.073**	ug/L	0.086	117	8	5	94	KED
⎢	**As**	**75**	**-0.011**	ug/L	0.005	41	7	5	13	KED
⎣	**Se**	**78**	**0.212**	ug/L	0.085	40	11	15	10	KED
	Y	**89**		ug/L			276255	280463	3	Standard
	Kr	**83**		ug/L			52	52	15	Standard
⎡>	**In-1**	**115**		ug/L			7782	8053	3	KED
⎢	**Mo**	**98**	**0.004**	ug/L	0.006	123	8	12	31	KED
⎢	**Cd**	**111**	**-0.001**	ug/L	0.017	1548	4	4	81	KED
⎣	**Cd**	**114**	**-0.005**	ug/L	0.007	157	5	3	86	KED
⎡>	**In**	**115**		ug/L			475417	478778	2	Standard
⎢	**Ag**	**107**	**-0.009**	ug/L	0.001	7	135	36	19	Standard
⎢	**Sb**	**121**	**-0.058**	ug/L	0.001	0	596	48	8	Standard
⎣	**Sb**	**123**	**-0.062**	ug/L	0.002	2	475	37	33	Standard
⎡>	**Tb**	**159**		ug/L			499801	508950	4	Standard
⎢	**Tl**	**205**	**-0.005**	ug/L	0.000	4	224	72	13	Standard
⎣	**Pb**	**208**	**-0.009**	ug/L	0.000	3	359	42	20	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: DI
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, March 02, 2023 00:15:10
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			34622	43698	2	Standard
	Cl	**37**		ug/L			3977931	4312994	2	Standard
⎡>	**Sc**	**45**		ug/L			439931	442849	1	Standard
⎢	**Cr**	**52**	**-0.032**	ug/L	0.026	82	12483	12074	3	Standard
⎢	**Cr**	**53**	**0.166**	ug/L	0.015	8	120	414	5	Standard
⎣	**Mn**	**55**	**-0.005**	ug/L	0.000	1	1073	978	1	Standard
⎡>	**Ge**	**72**		ug/L			28119	29282	1	KED
⎢	**Ni**	**60**	**-0.025**	ug/L	0.006	23	28	6	86	KED
⎢	**Ni**	**62**	**-0.014**	ug/L	0.007	51	5	3	34	KED
⎢	**Cu**	**63**	**-0.008**	ug/L	0.000	3	42	23	4	KED
⎢	**Cu**	**65**	**-0.009**	ug/L	0.006	61	27	15	48	KED
⎢	**Zn**	**66**	**-0.043**	ug/L	0.008	18	29	16	17	KED
⎢	**Zn**	**67**	**-0.108**	ug/L	0.019	17	8	3	34	KED
⎢	**As**	**75**	**-0.001**	ug/L	0.003	400	7	7	7	KED
⎣	**Se**	**78**	**0.295**	ug/L	0.080	27	11	17	8	KED
	Y	**89**		ug/L			276255	277365	0	Standard
	Kr	**83**		ug/L			52	40	4	Standard
⎡>	**In-1**	**115**		ug/L			7782	8119	1	KED
⎢	**Mo**	**98**	**-0.007**	ug/L	0.004	61	8	3	83	KED
⎢	**Cd**	**111**	**-0.015**	ug/L	0.008	53	4	1	91	KED
⎣	**Cd**	**114**	**0.001**	ug/L	0.003	327	5	6	17	KED
⎡>	**In**	**115**		ug/L			475417	471298	1	Standard
⎢	**Ag**	**107**	**-0.010**	ug/L	0.001	7	135	32	21	Standard
⎢	**Sb**	**121**	**-0.058**	ug/L	0.001	1	596	47	14	Standard
⎣	**Sb**	**123**	**-0.062**	ug/L	0.001	2	475	38	25	Standard
⎡>	**Tb**	**159**		ug/L			499801	505983	3	Standard
⎢	**Tl**	**205**	**-0.006**	ug/L	0.001	10	224	60	24	Standard
⎣	**Pb**	**208**	**-0.009**	ug/L	0.000	1	359	36	18	Standard

INITIAL CALIBRATION DATA

EPA 6020B

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GC00021	Instrument:	ICPMS1
Calibration Date:	03/06/2023 13:12		

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF
Silver-107	0	0	0.2	17805	10	18779.4	20	18032	50	18176.18	100	17247.94
Chromium-52	0	0	0.5	80658	10	28363.1	20	26427.5	50	25143.74	100	23697.46
Chromium-53	0	0	0.5	3312	10	2946.9	20	2867.6	50	2883.06	100	2763.11
Lead-208	0	0	0.1	64340	10	63240.7	20	62056.65	50	62465.22	100	60657.47

INITIAL CALIBRATION DATA

EPA 6020B

Laboratory: Analytical Resources, LLC
Instrument: ICPMS1
Calibration: GC00021
Calibration Date: 3/6/2023

COMPOUND	Mean RF	RF RSD	Linear COD	Quad COD	COD Limit	Q
Silver-107	15006.75	49.1	0.9993		0.998	
Chromium-52	30714.97	86.7	0.9993		0.998	
Chromium-53	2462.112	49.6	0.9996		0.998	
Lead-208	52126.67	49.0	0.9998		0.998	

INITIAL CALIBRATION DATA

EPA 6020B UCT-KED

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GC00021	Instrument:	ICPMS1
Calibration Date:	03/06/2023 13:12		

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF
Arsenic-75a	0	0	0.2	265	10	237	20	234.1	50	229.18	100	232.76
Cadmium-111	0	0	0.1	250	10	251.7	20	249.85	50	243.72	100	238.61
Cadmium-114	0	0	0.1	660	10	594.1	20	601	50	596.42	100	590.77
Copper-63	0	0	0.5	4344	10	4175.6	20	4137.4	50	3904.58	100	4002.94
Copper-65	0	0	0.5	2028	10	2062.8	20	1985.05	50	1933.84	100	1914.29
Zinc-66	0	0	6	493.8333	10	494.2	20	483.8	50	466.36	100	474.45
Zinc-67	0	0	6	75	10	82	20	81.3	50	77.2	100	78.33

INITIAL CALIBRATION DATA

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
Instrument: ICPMS1
Calibration: GC00021
Calibration Date: 3/6/2023

COMPOUND	Mean RF	RF RSD	Linear COD	Quad COD	COD Limit	Q
Arsenic-75a	199.6733	49.4	0.9999		0.998	
Cadmium-111	205.6467	49.0	0.9998		0.998	
Cadmium-114	507.0483	49.3	1.0000		0.998	
Copper-63	3427.42	49.2	0.9997		0.998	
Copper-65	1653.997	49.1	0.9999		0.998	
Zinc-66	402.1072	49.1	0.9999		0.998	
Zinc-67	65.63833	49.1	0.9998		0.998	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS 02 SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 3/6/23 **Analyst:** MS **Sequence:** SLCØØ78 **Cal:** GCØØØ21

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		SEQ-CAL1	L2232		
		-CAL2	L22ØØ		
		-CAL3	L22Ø1		
		-CAL4	L22Ø2		
		-CAL5	L22Ø3		
		-CAL6	L22Ø4		Sc+group SL noisy-%R int, R-Values + QC OK
		-IBL1	—		
		-ICV1	LØ243		Sc+group SL noisy-%R+Analytes OK
		-ICB1	L2232		Ge, In, Tb SL. noisy-%R+Analytes OK
		-CCV1	L22Ø3		
		-CCB1	L2232		
		-CRL1	L22ØØ		Tb SL. noisy-%R+Analytes OK
	✓	-IFA1	—		Cr↑
		-IFB1	L2ØØ7		
		-HCV1	L2ØØ8		
		-HCV2	L2ØØ9		Pb↓ - Pb<200
		-IBL2	—		
		-IFA1	L2ØØ6		Cr^{53}↑
		-IBL3	—		
		-CCV2			Sc SL. noisy-%R+Analytes OK
		-CCB2			
	✓	-CAL1			
		-CCV3			
		-CCB3			

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ICP/MS 02 SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 3/6/23 **Analyst:** MB **Sequence:** — **Cal:** —

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		BLCΦΦΦ8-BLK2	REN		Cd only
		↓ -BS2	↓		↓
		BLCΦΦ45-BLK1	↓		
		↓ -BS1	↓		
		23CΦΦ26-Φ1	↓	2	
		23CΦΦ27-Φ1	↓	↓	
		23CΦΦΦ4-Φ1	↓	5	Cd only
		23BΦ551-Φ1	↓	10	↓
		23CΦΦ95-Φ1	↓	20	
		SEQ-IBL4	↓	↓	↓
		↓ -CCV4	↓	↓	↓
		↓ -CCB4	↓	↓	↓
		BLCΦ1Φ8-BLK1	REN	↓	↓
		↓ -BS1	↓	↓	↓
		23BΦ5Φ1-Φ2	↓	2	Cd only
		↓ -Φ3	↓	↓	↓
		↓ -Φ4	↓	↓	↓
		↓ -Φ1	↓	↓	↓
		BLCΦΦΦ8-DUP2	↓	↓	↓
		↓ -MS2	↓	↓	↓
		23BΦ33Φ-29	↓	5	As only
		SEQ-IBL5	↓	↓	↓
		↓ -CCV5	↓	↓	↓
		↓ -CCB5	↓	↓	↓

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ICP/MS 02 SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 3/6/23 **Analyst:** MB **Sequence:** ——— **Cal:** ———

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		23CΦΦ47-Φ1	REN		Zn↑ Zn NR
		23CΦΦ48-Φ1			
		↓ -Φ2			
		23BΦ556-Φ2		2	
		-Φ3			
		-Φ4			
		↓ -Φ1			
		BLCΦ1Φ8-DUP1			
		↓ -MS1			
		23CΦΦ47-Φ1RE1		5	Zn only
		SEQ-CCV6			
		-CCB6			
		BLCΦΦ83-BLK1	REN		
		↓ -BS1			Scsl. noisy - %R+ Analytes OK
	✓	23BΦ581-Φ1		20	Zn↑
	✓	-Φ2			Re-run to Check C.O.
		↓ -Φ3			
		BLCΦΦ45-DUP1			
		↓ -MS1			Cu, Zn STL
		23BΦ387-Φ1		50	Cd only
		23CΦΦ37-Φ1		2	
		SEQ-IBL7			
		-CCV7			
		↓ -CCB7			Ge, Tb sl. noisy - %R & Analytes OK

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ICP/MS 02 SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 3/6/23 **Analyst:** MB **Sequence:** ——— **Cal:** ———

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		BLBØSØ8-BLK1	SWN	20	
		↓ -BS1	↓	↓	
		BLBØS18-BLK2			Cd only
		↓ -BS2			↓
		23AØØ32-Ø1			Cd, Cr only
		BLBØS18-DUP2			↓
		-MS2			
		-MSD2			
		↓ -PS2	↓	↓	60 mL K7409 ↓
		SEQ-IBL8			
		-CCV8			
		↓ -CCB8			
		BLCØØ446-BLK1	REN		Mn↑ Re-run to confirm — No Mn
		↓ -BS1	↓		↓
		BLBØ615-BLK1	SWN	20	
		↓ -BS1			
		23AØØ31-Ø2			
		BLBØ5Ø8-DUP1			
		-MS1			Ag %R↓
		-MSD1			↓
		↓ -PS1	↓	↓	60 mL K7409
		SEQ-IBL9			
		-CCV9			
		↓ -CCB9			

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ICP/MS 02 SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 3/6/23 **Analyst:** MB **Sequence:** — **Cal:** —

All corrections made by analyst unless otherwise noted. MB 3/6/23

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		23BΦ379-Φ2	REN		
		↓ -Φ4	↓		
		23BΦ388-Φ3		2	~~No Mn~~
		↓ -Φ1		5	Tb sl. noisy - %R + Analytes OK
		BLCΦΦ83-DUP1		↓	
		↓ -MS1	↓		
		23BΦ217-Φ2	SWN	20	
		BLBΦ615-DUP1	↓	↓	
		↓ -MS1			
		↓ -MSD1	↓		
		SEQ-CCVA			Cu 65 sl. noisy - value OK + consistent
		↓ -CCBA			Sc sl. noisy / Tb no. sy - %R + Analytes OK
	✓	↓ -CAL1			
		↓ -CCVB			
		↓ -CCBB			Tb sl. noisy - %R + Analytes OK
		BLBΦ6Φ7-BLK1	SWN	20	
		↓ -BS1	↑	↓	Tb sl. noisy - %R + Analytes OK
		↓ -SRL1		100	
		23BΦ411Φ-Φ1		20	Sc ↑ Not Needed
		BLBΦ6Φ7-DUP1		↓	↓ / Ca sl. noisy - %R + Analytes OK / Matches parent
		↓ -MS1			
		↓ -MSD1			
		↓ -PS1		↓	↓ / 60mL K7409
		↓ -SRM1	↓	~~X~~50	

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ICP/MS 02 SAMPLE RUN LOG

PE Nexlon ICP-MS Serial No. 81DN1050201

Analysis Date: 3/6/23 **Analyst:** MB **Sequence:** ——— **Cal:** ———

All corrections made by analyst unless otherwise noted. MB 3/6/23

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		SEQ-IBLC			
		-CCVC			
		-CCBC			
		BLBΦ687-BLK1	SWN	20	
		-BS1		↓	
		-SRL1		100	
DEL Extra Φ		23BΦ411-Φ1		20	Sc↑ - Not Needed
		BLBΦ687-DUP1			Tb sl. noisy - %R + Analytes OK
		-MS1			
		-MSD1			
		-PS1			60 mL K7409
		-SRM1		50	
		SEQ-IBLD			
		-CCVD			Std Mode sl. noisy - Values OK
		-CCBD			
		23BΦ388-Φ4	REN		Mn↑ No Mn
		-Φ2			
		BLCΦΦ46-DUP1			
		-MS1			
		23AΦΦ31-Φ1	SWN	20	
		-Φ3			
		-Φ4			
		-Φ5			Sc↑ No Cr
		-Φ6			

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ICP/MS 02 SAMPLE RUN LOG

PE Nexlon ICP-MS Serial No. 81DN1050201

Analysis Date: 3/6/23 **Analyst:** MB **Sequence:** — **Cal:** —

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		23AΦΦ31-Φ7	SWN	20	
		SEQ-CCVE			
		↓ -CCBE			
		23AΦΦ31-Φ8	SWN	20	
		-Φ9	↓	↓	
		-1Φ			
		-11			
		-12			
		-13			
		-14			
		-15			
		-16			
		↓ -17	↓	↓	
		SEQ-CCVF			
		↓ -CCBF			
		23AΦΦ31-18	SWN	20	
		-19	↓	↓	
		-2Φ			
		↓ -21			
		23AΦΦ32-Φ5			
		-Φ6			
		-Φ7			
		-Φ8			
		↓ -11	↓	↓	

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ICP/MS 02 SAMPLE RUN LOG

PE Nexlon ICP-MS Serial No. 81DN1050201

Analysis Date: 3/6/23 **Analyst:** MB **Sequence:** ——— **Cal:** ———

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		23BΦ276-Φ1	SWN	20	
		SEQ-CCVG			
		-CCBG			
	✓	-CAL1			
		-CCVH			
		-CCBH			
		23BΦ396-Φ1	REN	5	
		23BΦ430-Φ1	↓	2	
		23BΦ450-Φ1	↓	↓	
		23AΦ171-Φ1	SWN	20	Sc↑ No Cr
		-Φ2	↓	↓	↓ ↓
		-Φ3	↓	↓	
		-Φ4	↓	↓	
		23BΦΦ51-Φ1	↓	↓	Sc↑/Pb↑ No Cr, Pb
		-Φ2	↓	↓	↓ No Cr
		-Φ3	↓	↓	
		SEQ-CCVI			
		-CCBI			
		23BΦ217-Φ3	SWN	20	
		-Φ4	↓	↓	
		-Φ5	↓	↓	
		-Φ6	↓	↓	
		23BΦ429-Φ1	REN		
		23BΦ446-Φ3	↓		

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ICP/MS 02 SAMPLE RUN LOG

PE Nexlon ICP-MS Serial No. 81DN1050201

Analysis Date: 3/6/23 **Analyst:** MB **Sequence:** — **Cal:** —

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		23BΦ446-Φ1	REN	2	
		23BΦ448-Φ1	↓	↓	
		↓ -Φ3	↓		
		SEQ-IBLJ			
		↓ -CCVJ			
		↓ -CCBJ			
		23BΦ469-Φ1	REN		
		↓ -Φ2	↓		
		↓ -Φ3			
		23BΦ421-Φ1			
		↓ -Φ3			
		-Φ5			
		-Φ7			
		-Φ9			
		↓ -11	↓		
		SEQ-IBLK			
		↓ -CCVK			
		↓ -CCBK			Gesl. noisy- %R ↓ Analytes OK
		23BΦ421-13	REN		
		↓ -15	↓		
		SEQ-IBLM			
		23BΦ581-Φ2	REN	20	
		↓ -Φ1	↓	200	
		SEQ-IBLL			

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ICP/MS 02 SAMPLE RUN LOG

PE Nexlon ICP-MS Serial No. 81DN1050201

Analysis Date: ~~6/3~~ 3/6/23 **Analyst:** MS **Sequence:** — **Cal:** —

All corrections made by analyst unless otherwise noted. ~~MS 6/3~~ MS 3/6/23

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		SEQ-CCVL			
		↓ -CCBL			
		Rinse/DI			
			MS 3/6/23		

Performance Check Report

Sample ID: STD Performance Check
Sample Date/Time: Monday, March 06, 2023 12:21:11
Sample Description:
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\STD Performance Check.mth
Dataset File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\DataSet\Default\STD Performance Check.5367
MassCal File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Conditions File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Dual Detector Mode: Pulse
Acq. Dead Time (ns): 35
Current Dead Time (ns): 35
Torch Z position (mm): 0.00

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD	Mode
	Be	9.0	5866.3	5866.338	149.884	2.6	Standard
	In	114.9	62491.3	-674380.777	1360.321	0.2	Standard
	U	238.1	58721.0	58721.005	1104.489	1.9	Standard
⌈	CeO	155.9	457.9	0.009	0.000	4.9	Standard
| >	Ce	139.9	53371.3	53371.269	936.684	1.8	Standard
⌊	Ce++	70.0	1057.2	0.020	0.001	2.8	Standard
	Bkgd	220.0	0.2	0.167	0.167	100.0	Standard

Current Conditions File Data

Current Value	Description
1.04	Nebulizer Gas Flow STD/KED [NEB]
1.20	Auxiliary Gas Flow
18.00	Plasma Gas Flow
-11.25	Deflector Voltage
1600.00	ICP RF Power
-1712.00	Analog Stage Voltage
1500.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-8.00	Cell Rod Offset STD [CRO]
12.00	Discriminator Threshold
-4.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.25	RPq
1.05	DRC Mode NEB
-10.00	DRC Mode QRO
-3.00	DRC Mode CRO
-7.00	DRC Mode Cell Entrance/Exit Voltage
0.60	Cell Gas A
0.00	Cell Gas B
250.00	Axial Field Voltage
-16.50	KED Mode CRO
-12.00	KED Mode QRO
-4.00	KED Mode Cell Entrance Voltage
-39.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
5.00	KED Cell Gas B
0.00	KED RPa
0.25	KED RPq
475.00	KED Mode Axial Field Voltage

SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Wizard\SmartTune\ARIdaily_UCT.swz

Start Time: 3/6/2023 12:21:06 PM
End Time: 3/6/2023 12:24:17 PM

STD Performance Check - [Passed] Optimum value(s): N/A
Obtained Intensity (Be 9): 5866.34
Obtained Intensity (In 115): 62491.30
Obtained Intensity (U 238): 58721.01
Obtained Intensity (Bkgd 220): 0.17
Obtained Formula (Ce++ 70 / Ce 140): 0.020 (=1057.17 / 53371.27)
Obtained Formula (CeO 156 / Ce 140): 0.009 (=457.94 / 53371.27)
Obtained RSD (Be 9): 0.0255
Obtained RSD (In 115): 0.0020
Obtained RSD (U 238): 0.0188

Torch Alignment - [Passed]

Vertical	Horizontal	Intensity
0.56 mm	0.46 mm	56221.41

SmartTune Wizard - Details

Optimization Details

SmartTune file: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Wizard\SmartTune\ARIdaily_UCT.swz

Optimization Status

Start Time: 3/6/2023 12:21:06 PM

STD Performance Check
	Optimization Settings:
		Method: STD Performance Check.mth.
		Intensity Criterion: Be 9 > 2000
		Intensity Criterion: In 115 > 40000
		Intensity Criterion: U 238 > 30000
		Intensity Criterion: Bkgd 220 <= 1
		Formula Criterion: Ce++ 70 / Ce 140 <= 0.03
		Formula Criterion: CeO 156 / Ce 140 <= 0.025
		RSD Criterion: Be 9.0122 < 0.05
		RSD Criterion: In 114.904 < 0.05
		RSD Criterion: U 238.05 < 0.05

	Optimization Results:
	Initial Try
		Obtained Intensity (Be 9): 5866.34
		Obtained Intensity (In 115): 62491.30
		Obtained Intensity (U 238): 58721.01
		Obtained Intensity (Bkgd 220): 0.17
		Obtained Formula (Ce++ 70 / Ce 140): 0.020 (=1057.17 / 53371.27)
		Obtained Formula (CeO 156 / Ce 140): 0.009 (=457.94 / 53371.27)
		Obtained RSD (Be 9): 0.0255
		Obtained RSD (In 115): 0.0020
		Obtained RSD (U 238): 0.0188

[Passed] Optimum value(s): N/A

Torch Alignment
	Optimization Settings:
		Method: Torch Alignment.mth.
		Intensity Criterion: In 115 Maximum

	Optimization Results:
		Vertical	Horizontal	Intensity
[Passed]	0.56 mm	0.46 mm	56221.41

End Time: 3/6/2023 12:24:17 PM

Performance Check Report

Sample ID: STD Performance Check
Sample Date/Time: Monday, March 06, 2023 12:30:59
Sample Description:
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\STD Performance Check.mth
Dataset File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\DataSet\Default\STD Performance Check.5374
MassCal File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Conditions File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Dual Detector Mode: Pulse
Acq. Dead Time (ns): 35
Current Dead Time (ns): 35
Torch Z position (mm): 0.00

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD	Mode
	Be	9.0	11005.7	11005.706	250.649	2.3	Standard
	In	114.9	97967.1	97967.095	2154.932	2.2	Standard
	U	238.1	87812.5	87812.503	1251.614	1.4	Standard
⌈	CeO	155.9	1988.4	0.026	0.001	3.9	Standard
| >	Ce	139.9	75549.9	75549.857	1678.922	2.2	Standard
⌊	Ce++	70.0	2723.7	0.036	0.001	1.4	Standard
	Bkgd	220.0	0.1	0.067	0.091	136.9	Standard

Current Conditions File Data

Current Value	Description
1.07	Nebulizer Gas Flow STD/KED [NEB]
1.20	Auxiliary Gas Flow
18.00	Plasma Gas Flow
-11.25	Deflector Voltage
1600.00	ICP RF Power
-1712.00	Analog Stage Voltage
1500.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-8.00	Cell Rod Offset STD [CRO]
12.00	Discriminator Threshold
-4.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.25	RPq
1.07	DRC Mode NEB
-10.00	DRC Mode QRO
-3.00	DRC Mode CRO
-7.00	DRC Mode Cell Entrance/Exit Voltage
0.60	Cell Gas A
0.00	Cell Gas B
250.00	Axial Field Voltage
-16.50	KED Mode CRO
-12.00	KED Mode QRO
-4.00	KED Mode Cell Entrance Voltage
-39.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
5.00	KED Cell Gas B
0.00	KED RPa
0.25	KED RPq
475.00	KED Mode Axial Field Voltage

SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Wizard\SmartTune\ARIdaily_UCT.swz

Start Time: 3/6/2023 12:24:28 PM
End Time: 3/6/2023 12:33:03 PM

Torch Alignment - [Passed]

Vertical	Horizontal	Intensity
0.75 mm	0.41 mm	69565.97

Nebulizer Gas Flow STD/KED [NEB] - [Passed] Optimum value(s): 1.07
Obtained Intensity (In 115): 94505.57
Obtained Formula (CeO 156 / Ce 140): 0.0231 (=1660.10 / 71954.76)

Mass Calibration and Resolution - [Passed] Optimum value(s): N/A
Target/Obtained mass (7.016/7.025), Target/Obtained resolution (0.7/0.685)
Target/Obtained mass (23.985/23.975), Target/Obtained resolution (0.7/0.701)
Target/Obtained mass (114.904/114.925), Target/Obtained resolution (0.7/0.698)
Target/Obtained mass (238.05/238.075), Target/Obtained resolution (0.7/0.705)

QID STD/DRC - Optimum value(s): Correlation Coefficient = 0.997; Intercept = -13.25

KED Mode QID - Optimum value(s): Correlation Coefficient = 1.000; Intercept = -13.46

STD Performance Check - [Failed]
Obtained Intensity (Be 9): 11005.71
Obtained Intensity (In 115): 97967.10
Obtained Intensity (U 238): 87812.50
Obtained Intensity (Bkgd 220): 0.07
Obtained Formula (Ce++ 70 / Ce 140): 0.036 (=2723.66 / 75549.86) - <Target not achieved>
Obtained Formula (CeO 156 / Ce 140): 0.026 (=1988.41 / 75549.86) - <Target not achieved>
Obtained RSD (Be 9): 0.0228
Obtained RSD (In 115): 0.0220
Obtained RSD (U 238): 0.0143

SmartTune Wizard - Details

Optimization Details

SmartTune file: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Wizard\SmartTune\ARIdaily_UCT.swz

Optimization Status

Start Time: 3/6/2023 12:24:28 PM

Torch Alignment
	Optimization Settings:
		Method: Torch Alignment.mth.
		Intensity Criterion: In 115 Maximum

	Optimization Results:
		Vertical	Horizontal	Intensity
[Passed]	0.75 mm	0.41 mm	69565.97

Nebulizer Gas Flow STD/KED [NEB]
	Optimization Settings:
		Method: Optimize.mth.
			Initial Try - Start/End/Step: 1/1.1/0.01.
		Intensity Criterion: In 115 Maximum
		Formula Criterion: CeO 156 / Ce 140 <= 0.025

	Optimization Results:
	Initial Try

		Obtained Intensity (In 115): 94505.57
		Obtained Formula (CeO 156 / Ce 140): 0.0231 (=1660.10 / 71954.76)
[Passed] Optimum value(s): 1.07

Mass Calibration and Resolution
	Optimization Settings:
		Method: Tuning.mth.
		MassCal File: Default.tun
		Iterations: 6
		Target accuracy (+/- amu): 0.05 for Mass Cal. and 0.03 for Resolution
		Peak height (%) for Res. Opt.: 10

	Optimization Results:
	Initial Try
		Target/Obtained mass (7.016/7.025), Target/Obtained resolution (0.7/0.685)
		Target/Obtained mass (23.985/23.975), Target/Obtained resolution (0.7/0.701)
		Target/Obtained mass (114.904/114.925), Target/Obtained resolution (0.7/0.698)
		Target/Obtained mass (238.05/238.075), Target/Obtained resolution (0.7/0.705)
[Passed] Optimum value(s): N/A

QID STD/DRC
	Optimization Settings:
		Method: QID Calibration.mth.
			Initial Try - Start/End/Step: -20/0/0.5.

	Optimization Results:
	Initial Try

  Optimum value(s): Correlation Coefficient = 0.997; Intercept = -13.25

	Analyte	Mass	Points	DAC	MaxIntensity

Li	7	41	-13.5	41307.6
Mg	24	41	-13.5	52383.9
In	115	41	-10.5	103320
Ce	140	41	-9	76777.8
Pb	208	41	-7.5	49140.4
U	238	41	-7	89954.3

KED Mode QID

Optimization Settings:

Method: QID Calibration.mth.

Initial Try - Start/End/Step: -20/0/0.5.

Optimization Results:

Initial Try

Optimum value(s): Correlation Coefficient = 1.000; Intercept = -13.46

Analyte	Mass	Points	DAC	MaxIntensity
Li	7	41	-13.5	34212.9
Mg	24	41	-13.5	36779.3
In	115	41	-11.5	81475.7
Ce	140	41	-10.5	68499.8
Pb	208	41	-8	32785.6
U	238	41	-7.5	57065.8

STD Performance Check

Optimization Settings:

Method: STD Performance Check.mth.

Intensity Criterion: Be 9 > 2000

Intensity Criterion: In 115 > 40000

Intensity Criterion: U 238 > 30000

Intensity Criterion: Bkgd 220 <= 1

Formula Criterion: Ce++ 70 / Ce 140 <= 0.03

Formula Criterion: CeO 156 / Ce 140 <= 0.025

RSD Criterion: Be 9.0122 < 0.05

RSD Criterion: In 114.904 < 0.05

RSD Criterion: U 238.05 < 0.05

Optimization Results:

Initial Try

Obtained Intensity (Be 9): 11005.71

Obtained Intensity (In 115): 97967.10

Obtained Intensity (U 238): 87812.50

Obtained Intensity (Bkgd 220): 0.07

Obtained Formula (Ce++ 70 / Ce 140): 0.036 (=2723.66 / 75549.86) - <Target not achieved>

Obtained Formula (CeO 156 / Ce 140): 0.026 (=1988.41 / 75549.86) - <Target not achieved>

Obtained RSD (Be 9): 0.0228

Obtained RSD (In 115): 0.0220

Obtained RSD (U 238): 0.0143

[Failed]

[Failed]

End Time: 3/6/2023 12:33:03 PM

SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Wizard\SmartTune\ARIdaily_UCT.swz

Start Time: 3/6/2023 12:35:44 PM
End Time: 3/6/2023 12:37:50 PM

STD Performance Check - [Passed] Optimum value(s): N/A
Obtained Intensity (Be 9): 9180.42
Obtained Intensity (In 115): 88143.84
Obtained Intensity (U 238): 80298.60
Obtained Intensity (Bkgd 220): 0.00
Obtained Formula (Ce++ 70 / Ce 140): 0.028 (=1994.47 / 70619.00)
Obtained Formula (CeO 156 / Ce 140): 0.015 (=1043.97 / 70619.00)
Obtained RSD (Be 9): 0.0165
Obtained RSD (In 115): 0.0194
Obtained RSD (U 238): 0.0118

SmartTune Wizard - Details

Optimization Details

SmartTune file: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Wizard\SmartTune\ARIdaily_UCT.swz

Optimization Status

Start Time: 3/6/2023 12:35:44 PM

STD Performance Check
	Optimization Settings:
		Method: STD Performance Check.mth.
		Intensity Criterion: Be 9 > 2000
		Intensity Criterion: In 115 > 40000
		Intensity Criterion: U 238 > 30000
		Intensity Criterion: Bkgd 220 <= 1
		Formula Criterion: Ce++ 70 / Ce 140 <= 0.03
		Formula Criterion: CeO 156 / Ce 140 <= 0.025
		RSD Criterion: Be 9.0122 < 0.05
		RSD Criterion: In 114.904 < 0.05
		RSD Criterion: U 238.05 < 0.05

	Optimization Results:
	Initial Try
		Obtained Intensity (Be 9): 9180.42
		Obtained Intensity (In 115): 88143.84
		Obtained Intensity (U 238): 80298.60
		Obtained Intensity (Bkgd 220): 0.00
		Obtained Formula (Ce++ 70 / Ce 140): 0.028 (=1994.47 / 70619.00)
		Obtained Formula (CeO 156 / Ce 140): 0.015 (=1043.97 / 70619.00)
		Obtained RSD (Be 9): 0.0165
		Obtained RSD (In 115): 0.0194
		Obtained RSD (U 238): 0.0118

[Passed] Optimum value(s): N/A

End Time: 3/6/2023 12:37:50 PM

Performance Check Report

Sample ID: STD Performance Check
Sample Date/Time: Monday, March 06, 2023 12:35:45
Sample Description:
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\STD Performance Check.mth
Dataset File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\DataSet\Default\STD Performance Check.5376
MassCal File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Conditions File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Dual Detector Mode: Pulse
Acq. Dead Time (ns): 35
Current Dead Time (ns): 35
Torch Z position (mm): 0.00

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD	Mode
	Be	9.0	9180.4	9180.416	151.259	1.6	Standard
	In	114.9	88143.8	88143.839	1713.217	1.9	Standard
	U	238.1	80298.6	80298.601	949.439	1.2	Standard
⌈	CeO	155.9	1044.0	0.015	0.001	4.1	Standard
| >	Ce	139.9	70619.0	70619.003	854.502	1.2	Standard
⌊	Ce++	70.0	1994.5	0.028	0.000	1.4	Standard
	Bkgd	220.0	0.0	0.000	0.000		Standard

Current Conditions File Data

Current Value	Description
1.05	Nebulizer Gas Flow STD/KED [NEB]
1.20	Auxiliary Gas Flow
18.00	Plasma Gas Flow
-11.25	Deflector Voltage
1600.00	ICP RF Power
-1712.00	Analog Stage Voltage
1500.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-8.00	Cell Rod Offset STD [CRO]
12.00	Discriminator Threshold
-4.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.25	RPq
1.07	DRC Mode NEB
-10.00	DRC Mode QRO
-3.00	DRC Mode CRO
-7.00	DRC Mode Cell Entrance/Exit Voltage
0.60	Cell Gas A
0.00	Cell Gas B
250.00	Axial Field Voltage
-16.50	KED Mode CRO
-12.00	KED Mode QRO
-4.00	KED Mode Cell Entrance Voltage
-39.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
5.00	KED Cell Gas B
0.00	KED RPa
0.25	KED RPq
475.00	KED Mode Axial Field Voltage

NEB FLOW MANUALLY LOWERED.
-MB 3/6/23

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL1
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, March 06, 2023 13:12:22
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L				42851	0	Standard
	Cl	**37**		ug/L				4641047	3	Standard
⎡>	**Sc**	**45**		ug/L				806788	2	Standard
⎢	**Cr**	**52**		ug/L				28671	5	Standard
⎢	**Cr**	**53**		ug/L				315	6	Standard
⎣	**Mn**	**55**		ug/L				1039	4	Standard
⎡>	**Ge**	**72**		ug/L				41788	5	KED
⎢	**Ni**	**60**		ug/L				39	26	KED
⎢	**Ni**	**62**		ug/L				6	41	KED
⎢	**Cu**	**63**		ug/L				158	20	KED
⎢	**Cu**	**65**		ug/L				78	13	KED
⎢	**Zn**	**66**		ug/L				90	3	KED
⎢	**Zn**	**67**		ug/L				14	27	KED
⎣	**As**	**75**		ug/L				9	26	KED
	Y	**89**		ug/L				514828	2	Standard
	Kr	**83**		ug/L				66	28	Standard
⎡>	**In-1**	**115**		ug/L				11154	4	KED
⎢	**Cd**	**111**		ug/L				4	48	KED
⎣	**Cd**	**114**		ug/L				4	22	KED
⎡>	**In**	**115**		ug/L				844649	2	Standard
⎣	**Ag**	**107**		ug/L				74	32	Standard
⎡>	**Tb**	**159**		ug/L				720612	4	Standard
⎣	**Pb**	**208**		ug/L				363	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL2
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, March 06, 2023 13:16:50
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			42851	42811	4	Standard
	Cl	**37**		ug/L			4641047	4723029	1	Standard
⎡>	**Sc**	**45**		ug/L			806788	782332	4	Standard
⎢	**Cr**	**52**	**0.500**	ug/L	0.001	0	28671	40329	4	Standard
⎢	**Cr**	**53**	**0.500**	ug/L	0.019	3	315	1656	6	Standard
⎣	**Mn**	**55**	**0.500**	ug/L	0.006	1	1039	18231	4	Standard
⎡>	**Ge**	**72**		ug/L			41788	43607	4	KED
⎢	**Ni**	**60**	**0.500**	ug/L	0.075	14	39	725	13	KED
⎢	**Ni**	**62**	**0.500**	ug/L	0.070	14	6	123	17	KED
⎢	**Cu**	**63**	**0.500**	ug/L	0.012	2	158	2172	2	KED
⎢	**Cu**	**65**	**0.500**	ug/L	0.029	5	78	1014	0	KED
⎢	**Zn**	**66**	**6.000**	ug/L	0.387	6	90	2963	2	KED
⎢	**Zn**	**67**	**6.000**	ug/L	0.252	4	14	450	7	KED
⎣	**As**	**75**	**0.200**	ug/L	0.010	5	9	53	8	KED
	Y	**89**		ug/L			514828	515614	3	Standard
	Kr	**83**		ug/L			66	62	5	Standard
⎡>	**In-1**	**115**		ug/L			11154	11426	1	KED
⎢	**Cd**	**111**	**0.100**	ug/L	0.015	15	4	25	14	KED
⎣	**Cd**	**114**	**0.100**	ug/L	0.012	12	4	66	10	KED
⎡>	**In**	**115**		ug/L			844649	832415	4	Standard
⎣	**Ag**	**107**	**0.200**	ug/L	0.014	6	74	3561	5	Standard
⎡>	**Tb**	**159**		ug/L			720612	729902	3	Standard
⎣	**Pb**	**208**	**0.100**	ug/L	0.006	6	363	6434	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL3
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, March 06, 2023 13:21:18
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			42851	55129	1	Standard
	Cl	**37**		ug/L			4641047	4800852	4	Standard
⎡>	**Sc**	**45**		ug/L			806788	802585	2	Standard
⎢	**Cr**	**52**	**10.000**	ug/L	0.282	2	28671	283631	4	Standard
⎢	**Cr**	**53**	**10.001**	ug/L	0.218	2	315	29469	3	Standard
⎣	**Mn**	**55**	**10.001**	ug/L	0.259	2	1039	365595	2	Standard
⎡>	**Ge**	**72**		ug/L			41788	44698	0	KED
⎢	**Ni**	**60**	**10.000**	ug/L	0.056	0	39	14082	0	KED
⎢	**Ni**	**62**	**9.999**	ug/L	0.288	2	6	2287	3	KED
⎢	**Cu**	**63**	**10.000**	ug/L	0.253	2	158	41756	2	KED
⎢	**Cu**	**65**	**10.002**	ug/L	0.112	1	78	20628	0	KED
⎢	**Zn**	**66**	**9.965**	ug/L	0.096	0	90	4942	1	KED
⎢	**Zn**	**67**	**10.210**	ug/L	0.440	4	14	820	3	KED
⎣	**As**	**75**	**10.000**	ug/L	0.143	1	9	2370	1	KED
	Y	**89**		ug/L			514828	528569	3	Standard
	Kr	**83**		ug/L			66	71	6	Standard
⎡>	**In-1**	**115**		ug/L			11154	11711	1	KED
⎢	**Cd**	**111**	**10.000**	ug/L	0.148	1	4	2517	1	KED
⎣	**Cd**	**114**	**10.000**	ug/L	0.298	2	4	5941	2	KED
⎡>	**In**	**115**		ug/L			844649	842700	1	Standard
⎣	**Ag**	**107**	**10.000**	ug/L	0.207	2	74	187794	3	Standard
⎡>	**Tb**	**159**		ug/L			720612	757028	2	Standard
⎣	**Pb**	**208**	**10.000**	ug/L	0.330	3	363	632407	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL4
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, March 06, 2023 13:25:59
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			42851	53262	0	Standard
	Cl	**37**		ug/L			4641047	5046059	3	Standard
⎡>	**Sc**	**45**		ug/L			806788	803834	2	Standard
⎢	**Cr**	**52**	**19.912**	ug/L	0.308	1	28671	528550	3	Standard
⎢	**Cr**	**53**	**19.905**	ug/L	0.217	1	315	57352	3	Standard
⎣	**Mn**	**55**	**19.855**	ug/L	0.339	1	1039	705630	3	Standard
⎡>	**Ge**	**72**		ug/L			41788	44064	2	KED
⎢	**Ni**	**60**	**19.941**	ug/L	0.554	2	39	27325	3	KED
⎢	**Ni**	**62**	**19.989**	ug/L	0.435	2	6	4491	4	KED
⎢	**Cu**	**63**	**20.028**	ug/L	0.404	2	158	82748	3	KED
⎢	**Cu**	**65**	**19.911**	ug/L	0.163	0	78	39701	2	KED
⎢	**Zn**	**66**	**19.996**	ug/L	0.682	3	90	9676	4	KED
⎢	**Zn**	**67**	**20.182**	ug/L	0.785	3	14	1626	4	KED
⎣	**As**	**75**	**20.018**	ug/L	0.279	1	9	4682	0	KED
	Y	**89**		ug/L			514828	522988	3	Standard
	Kr	**83**		ug/L			66	66	15	Standard
⎡>	**In-1**	**115**		ug/L			11154	11832	1	KED
⎢	**Cd**	**111**	**19.932**	ug/L	0.615	3	4	4997	2	KED
⎣	**Cd**	**114**	**20.007**	ug/L	0.246	1	4	12020	0	KED
⎡>	**In**	**115**		ug/L			844649	853632	4	Standard
⎣	**Ag**	**107**	**19.784**	ug/L	0.147	0	74	360640	3	Standard
⎡>	**Tb**	**159**		ug/L			720612	770789	4	Standard
⎣	**Pb**	**208**	**19.853**	ug/L	0.543	2	363	1241133	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL5
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, March 06, 2023 13:30:51
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			42851	42010	2	Standard
	Cl	**37**		ug/L			4641047	5093756	2	Standard
⎡>	**Sc**	**45**		ug/L			806788	794447	4	Standard
⎢	**Cr**	**52**	**49.923**	ug/L	0.350	0	28671	1257187	3	Standard
⎢	**Cr**	**53**	**50.131**	ug/L	0.151	0	315	144153	4	Standard
⎣	**Mn**	**55**	**50.114**	ug/L	1.270	2	1039	1779002	5	Standard
⎡>	**Ge**	**72**		ug/L			41788	43166	3	KED
⎢	**Ni**	**60**	**49.780**	ug/L	1.625	3	39	65352	5	KED
⎢	**Ni**	**62**	**49.620**	ug/L	1.255	2	6	10514	5	KED
⎢	**Cu**	**63**	**49.705**	ug/L	1.067	2	158	195229	5	KED
⎢	**Cu**	**65**	**49.925**	ug/L	0.479	0	78	96692	4	KED
⎢	**Zn**	**66**	**49.905**	ug/L	1.641	3	90	23318	5	KED
⎢	**Zn**	**67**	**49.848**	ug/L	0.865	1	14	3860	4	KED
⎣	**As**	**75**	**50.007**	ug/L	1.063	2	9	11459	5	KED
	Y	**89**		ug/L			514828	527443	5	Standard
	Kr	**83**		ug/L			66	82	27	Standard
⎡>	**In-1**	**115**		ug/L			11154	11544	1	KED
⎢	**Cd**	**111**	**49.974**	ug/L	0.916	1	4	12186	1	KED
⎣	**Cd**	**114**	**50.146**	ug/L	1.043	2	4	29821	0	KED
⎡>	**In**	**115**		ug/L			844649	846109	3	Standard
⎣	**Ag**	**107**	**50.050**	ug/L	1.681	3	74	908809	4	Standard
⎡>	**Tb**	**159**		ug/L			720612	775069	3	Standard
⎣	**Pb**	**208**	**49.946**	ug/L	1.320	2	363	3123261	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL6
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, March 06, 2023 13:37:22
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			42851	46844	1	Standard
	Cl	**37**		ug/L			4641047	5067111	3	Standard
⌈>	**Sc**	**45**		ug/L			806788	752435	6	Standard
|	**Cr**	**52**	**100.117**	ug/L	0.867	0	28671	2369746	5	Standard
|	**Cr**	**53**	**100.365**	ug/L	1.640	1	315	276311	6	Standard
⌊	**Mn**	**55**	**100.029**	ug/L	0.416	0	1039	3364769	6	Standard
⌈>	**Ge**	**72**		ug/L			41788	42888	2	KED
|	**Ni**	**60**	**100.598**	ug/L	1.269	1	39	133800	3	KED
|	**Ni**	**62**	**100.940**	ug/L	1.302	1	6	21924	3	KED
|	**Cu**	**63**	**100.600**	ug/L	2.010	1	158	400294	3	KED
|	**Cu**	**65**	**99.886**	ug/L	3.608	3	78	191429	5	KED
|	**Zn**	**66**	**100.563**	ug/L	2.163	2	90	47445	2	KED
|	**Zn**	**67**	**100.470**	ug/L	1.100	1	14	7833	1	KED
⌊	**As**	**75**	**100.528**	ug/L	0.731	0	9	23276	2	KED
	Y	**89**		ug/L			514828	499954	5	Standard
	Kr	**83**		ug/L			66	99	6	Standard
⌈>	**In-1**	**115**		ug/L			11154	11600	2	KED
|	**Cd**	**111**	**99.386**	ug/L	1.101	1	4	23861	1	KED
⌊	**Cd**	**114**	**99.733**	ug/L	1.205	1	4	59077	2	KED
⌈>	**In**	**115**		ug/L			844649	815926	4	Standard
⌊	**Ag**	**107**	**99.653**	ug/L	0.793	0	74	1724794	4	Standard
⌈>	**Tb**	**159**		ug/L			720612	766683	5	Standard
⌊	**Pb**	**208**	**99.549**	ug/L	2.083	2	363	6065747	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL1
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, March 06, 2023 13:44:35
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			42851	43609	2	Standard
	Cl	**37**		ug/L			4641047	4994341	2	Standard
⎡>	**Sc**	**45**		ug/L			806788	781760	5	Standard
⎢	**Cr**	**52**	**0.094**	ug/L	0.046	48	28671	30052	5	Standard
⎢	**Cr**	**53**	**-0.005**	ug/L	0.012	239	315	289	8	Standard
⎣	**Mn**	**55**	**0.032**	ug/L	0.001	3	1039	2109	3	Standard
⎡>	**Ge**	**72**		ug/L			41788	42374	3	KED
⎢	**Ni**	**60**	**0.053**	ug/L	0.014	25	39	109	15	KED
⎢	**Ni**	**62**	**0.045**	ug/L	0.037	81	6	16	43	KED
⎢	**Cu**	**63**	**0.037**	ug/L	0.008	21	158	303	9	KED
⎢	**Cu**	**65**	**0.033**	ug/L	0.007	20	78	142	12	KED
⎢	**Zn**	**66**	**0.528**	ug/L	0.033	6	90	337	7	KED
⎢	**Zn**	**67**	**0.344**	ug/L	0.029	8	14	41	5	KED
⎣	**As**	**75**	**0.009**	ug/L	0.004	41	9	12	4	KED
	Y	**89**		ug/L			514828	510336	6	Standard
	Kr	**83**		ug/L			66	68	34	Standard
⎡>	**In-1**	**115**		ug/L			11154	11105	4	KED
⎢	**Cd**	**111**	**0.006**	ug/L	0.005	87	4	5	20	KED
⎣	**Cd**	**114**	**0.004**	ug/L	0.008	214	4	6	59	KED
⎡>	**In**	**115**		ug/L			844649	856392	4	Standard
⎣	**Ag**	**107**	**0.022**	ug/L	0.001	6	74	482	1	Standard
⎡>	**Tb**	**159**		ug/L			720612	747153	6	Standard
⎣	**Pb**	**208**	**0.013**	ug/L	0.001	5	363	1154	3	Standard

Sample Information

Sample Date/Time: Monday, March 06, 2023 13:37:22
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED
Mass Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Conditions File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Calibration

Analyte	Mass	**r Corr Coef**	Slope	Std 1 Conc	Std 2 Conc	Std 3 Conc	Std 4 Conc	Std 5 Conc
C	13							
Cl	37							
Sc	45							
Cr	52	**1.0000**	0.031	0.50	10	20	50	100
Cr	53	**1.0000**	0.004	0.50	10	20	50	100
Mn	55	**1.0000**	0.045	0.50	10	20	50	100
Ge	72							
Ni	60	**0.9999**	0.031	0.50	10	20	50	100
Ni	62	**0.9998**	0.005	0.50	10	20	50	100
Cu	63	**0.9999**	0.093	0.50	10	20	50	100
Cu	65	**1.0000**	0.045	0.50	10	20	50	100
Zn	66	**0.9999**	0.011	6.00	10	20	50	100
Zn	67	**0.9999**	0.002	6.00	10	20	50	100
As	75	**1.0000**	0.005	0.20	10	20	50	100
Y	89							
Kr	83							
In-1	115							
Cd	111	**0.9999**	0.021	0.10	10	20	50	100
Cd	114	**1.0000**	0.051	0.10	10	20	50	100
In	115							
Ag	107	**1.0000**	0.021	0.20	10	20	50	100
Tb	159							
Pb	208	**1.0000**	0.080	0.10	10	20	50	100

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-ICV1
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, March 06, 2023 13:53:41
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			42851	42919	2	Standard
	Cl	**37**		ug/L			4641047	4867225	3	Standard
⎡>	**Sc**	**45**		ug/L			806788	771596	6	Standard
⎢	**Cr**	**52**	**50.883**	ug/L	0.562	1	28671	1248843	6	Standard
⎢	**Cr**	**53**	**49.104**	ug/L	0.748	1	315	138840	6	Standard
⎣	**Mn**	**55**	**51.191**	ug/L	0.306	0	1039	1766758	6	Standard
⎡>	**Ge**	**72**		ug/L			41788	45024	1	KED
⎢	**Ni**	**60**	**50.838**	ug/L	0.787	1	39	70985	1	KED
⎢	**Ni**	**62**	**50.654**	ug/L	0.903	1	6	11553	3	KED
⎢	**Cu**	**63**	**50.484**	ug/L	0.592	1	158	210943	1	KED
⎢	**Cu**	**65**	**50.350**	ug/L	0.684	1	78	101298	1	KED
⎢	**Zn**	**66**	**49.233**	ug/L	0.913	1	90	24431	0	KED
⎢	**Zn**	**67**	**49.032**	ug/L	1.646	3	14	4022	4	KED
⎣	**As**	**75**	**46.973**	ug/L	0.817	1	9	11422	1	KED
	Y	**89**		ug/L			514828	513980	8	Standard
	Kr	**83**		ug/L			66	82	14	Standard
⎡>	**In-1**	**115**		ug/L			11154	10969	4	KED
⎢	**Cd**	**111**	**49.469**	ug/L	0.911	1	4	11228	2	KED
⎣	**Cd**	**114**	**49.909**	ug/L	0.409	0	4	27963	5	KED
⎡>	**In**	**115**		ug/L			844649	830395	4	Standard
⎣	**Ag**	**107**	**51.521**	ug/L	0.463	0	74	907841	5	Standard
⎡>	**Tb**	**159**		ug/L			720612	768575	2	Standard
⎣	**Pb**	**208**	**51.113**	ug/L	1.206	2	363	3124462	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-ICB1
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, March 06, 2023 14:00:53
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			42851	40181	1	Standard
	Cl	**37**		ug/L			4641047	4697704	3	Standard
⌈>	**Sc**	**45**		ug/L			806788	761018	5	Standard
|	**Cr**	**52**	**0.097**	ug/L	0.035	36	28671	29315	4	Standard
|	**Cr**	**53**	**-0.015**	ug/L	0.008	54	315	255	3	Standard
⌊	**Mn**	**55**	**0.001**	ug/L	0.002	157	1039	1019	8	Standard
⌈>	**Ge**	**72**		ug/L			41788	43343	7	KED
|	**Ni**	**60**	**-0.013**	ug/L	0.005	37	39	24	32	KED
|	**Ni**	**62**	**-0.013**	ug/L	0.013	97	6	4	65	KED
|	**Cu**	**63**	**-0.001**	ug/L	0.005	485	158	160	18	KED
|	**Cu**	**65**	**-0.008**	ug/L	0.010	127	78	65	27	KED
|	**Zn**	**66**	**-0.081**	ug/L	0.037	45	90	55	29	KED
|	**Zn**	**67**	**-0.110**	ug/L	0.052	47	14	6	62	KED
⌊	**As**	**75**	**-0.015**	ug/L	0.011	76	9	6	40	KED
	Y	**89**		ug/L			514828	502581	6	Standard
	Kr	**83**		ug/L			66	73	9	Standard
⌈>	**In-1**	**115**		ug/L			11154	11644	3	KED
|	**Cd**	**111**	**-0.001**	ug/L	0.002	303	4	4	13	KED
⌊	**Cd**	**114**	**0.002**	ug/L	0.008	454	4	6	78	KED
⌈>	**In**	**115**		ug/L			844649	841313	7	Standard
⌊	**Ag**	**107**	**0.012**	ug/L	0.001	8	74	294	1	Standard
⌈>	**Tb**	**159**		ug/L			720612	745815	6	Standard
⌊	**Pb**	**208**	**-0.000**	ug/L	0.001	157	363	351	12	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV1
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, March 06, 2023 14:05:20
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			42851	41748	1	Standard
	Cl	**37**		ug/L			4641047	5088464	2	Standard
⌈>	**Sc**	**45**		ug/L			806788	797438	4	Standard
|	**Cr**	**52**	**50.349**	ug/L	0.903	1	28671	1276995	2	Standard
|	**Cr**	**53**	**48.442**	ug/L	0.612	1	315	141493	2	Standard
⌊	**Mn**	**55**	**49.870**	ug/L	0.397	0	1039	1778915	4	Standard
⌈>	**Ge**	**72**		ug/L			41788	45004	2	KED
|	**Ni**	**60**	**49.345**	ug/L	0.507	1	39	68870	2	KED
|	**Ni**	**62**	**49.359**	ug/L	2.511	5	6	11244	3	KED
|	**Cu**	**63**	**49.041**	ug/L	1.605	3	158	204773	3	KED
|	**Cu**	**65**	**49.144**	ug/L	1.320	2	78	98818	3	KED
|	**Zn**	**66**	**49.928**	ug/L	1.439	2	90	24755	0	KED
|	**Zn**	**67**	**50.753**	ug/L	0.801	1	14	4159	2	KED
⌊	**As**	**75**	**49.488**	ug/L	1.093	2	9	12025	1	KED
	Y	**89**		ug/L			514828	528519	4	Standard
	Kr	**83**		ug/L			66	74	16	Standard
⌈>	**In-1**	**115**		ug/L			11154	12203	1	KED
|	**Cd**	**111**	**49.139**	ug/L	1.514	3	4	12410	1	KED
⌊	**Cd**	**114**	**49.099**	ug/L	1.799	3	4	30585	1	KED
⌈>	**In**	**115**		ug/L			844649	876872	2	Standard
⌊	**Ag**	**107**	**50.176**	ug/L	0.220	0	74	933483	2	Standard
⌈>	**Tb**	**159**		ug/L			720612	807960	2	Standard
⌊	**Pb**	**208**	**49.677**	ug/L	1.926	3	363	3190510	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB1
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, March 06, 2023 14:12:12
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			42851	39029	0	Standard
	Cl	**37**		ug/L			4641047	4958094	2	Standard
⌈>	**Sc**	**45**		ug/L			806788	765568	4	Standard
|	**Cr**	**52**	**0.094**	ug/L	0.010	10	28671	29451	4	Standard
|	**Cr**	**53**	**-0.011**	ug/L	0.006	54	315	268	10	Standard
⌊	**Mn**	**55**	**0.000**	ug/L	0.001	171	1039	1000	6	Standard
⌈>	**Ge**	**72**		ug/L			41788	44225	1	KED
|	**Ni**	**60**	**-0.012**	ug/L	0.009	77	39	24	50	KED
|	**Ni**	**62**	**-0.007**	ug/L	0.038	543	6	5	145	KED
|	**Cu**	**63**	**-0.005**	ug/L	0.005	97	158	147	14	KED
|	**Cu**	**65**	**-0.012**	ug/L	0.010	80	78	59	30	KED
|	**Zn**	**66**	**-0.092**	ug/L	0.016	17	90	51	16	KED
|	**Zn**	**67**	**-0.098**	ug/L	0.084	86	14	7	90	KED
⌊	**As**	**75**	**-0.016**	ug/L	0.004	23	9	6	12	KED
	Y	**89**		ug/L			514828	513097	3	Standard
	Kr	**83**		ug/L			66	73	33	Standard
⌈>	**In-1**	**115**		ug/L			11154	11591	2	KED
|	**Cd**	**111**	**0.001**	ug/L	0.013	1511	4	4	65	KED
⌊	**Cd**	**114**	**-0.002**	ug/L	0.006	281	4	3	89	KED
⌈>	**In**	**115**		ug/L			844649	854918	3	Standard
⌊	**Ag**	**107**	**0.015**	ug/L	0.002	10	74	354	9	Standard
⌈>	**Tb**	**159**		ug/L			720612	748990	0	Standard
⌊	**Pb**	**208**	**0.000**	ug/L	0.001	269	363	389	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CRL1
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, March 06, 2023 14:16:39
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			42851	43903	3	Standard
	Cl	**37**		ug/L			4641047	4790219	1	Standard
⌈>	**Sc**	**45**		ug/L			806788	780075	2	Standard
|	**Cr**	**52**	**0.579**	ug/L	0.024	4	28671	41794	3	Standard
|	**Cr**	**53**	**0.465**	ug/L	0.011	2	315	1631	3	Standard
⌊	**Mn**	**55**	**0.484**	ug/L	0.003	0	1039	17873	3	Standard
⌈>	**Ge**	**72**		ug/L			41788	44773	0	KED
|	**Ni**	**60**	**0.451**	ug/L	0.019	4	39	667	3	KED
|	**Ni**	**62**	**0.468**	ug/L	0.011	2	6	113	2	KED
|	**Cu**	**63**	**0.483**	ug/L	0.017	3	158	2176	3	KED
|	**Cu**	**65**	**0.483**	ug/L	0.021	4	78	1050	3	KED
|	**Zn**	**66**	**6.040**	ug/L	0.332	5	90	3065	4	KED
|	**Zn**	**67**	**5.582**	ug/L	0.215	3	14	469	4	KED
⌊	**As**	**75**	**0.185**	ug/L	0.033	18	9	55	14	KED
	Y	**89**		ug/L			514828	508372	3	Standard
	Kr	**83**		ug/L			66	74	4	Standard
⌈>	**In-1**	**115**		ug/L			11154	11578	2	KED
|	**Cd**	**111**	**0.096**	ug/L	0.012	12	4	27	8	KED
⌊	**Cd**	**114**	**0.108**	ug/L	0.011	9	4	69	11	KED
⌈>	**In**	**115**		ug/L			844649	863871	3	Standard
⌊	**Ag**	**107**	**0.207**	ug/L	0.003	1	74	3864	4	Standard
⌈>	**Tb**	**159**		ug/L			720612	762701	6	Standard
⌊	**Pb**	**208**	**0.100**	ug/L	0.004	4	363	6445	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IFA1
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, March 06, 2023 14:21:07

DEL

Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			42851	135309	3	Standard
	Cl	**37**		ug/L			4641047	12203010	5	Standard
⌈>	**Sc**	**45**		ug/L			806788	804955	6	Standard
|	**Cr**	**52**	**1.013**	ug/L	0.018	1	28671	53964	5	Standard
|	**Cr**	**53**	**2.863**	ug/L	0.032	1	315	8737	5	Standard
⌊	**Mn**	**55**	**0.087**	ug/L	0.003	3	1039	4175	6	Standard
⌈>	**Ge**	**72**		ug/L			41788	43336	3	KED
|	**Ni**	**60**	**0.062**	ug/L	0.009	14	39	123	12	KED
|	**Ni**	**62**	**0.142**	ug/L	0.058	40	6	38	30	KED
|	**Cu**	**63**	**0.048**	ug/L	0.004	8	158	354	2	KED
|	**Cu**	**65**	**0.041**	ug/L	0.006	14	78	161	9	KED
|	**Zn**	**66**	**0.099**	ug/L	0.021	21	90	140	3	KED
|	**Zn**	**67**	**0.099**	ug/L	0.149	150	14	22	50	KED
⌊	**As**	**75**	**0.030**	ug/L	0.020	65	9	17	29	KED
	Y	**89**		ug/L			514828	524761	4	Standard
	Kr	**83**		ug/L			66	161	4	Standard
⌈>	**In-1**	**115**		ug/L			11154	11572	1	KED
|	**Cd**	**111**	**0.068**	ug/L	0.045	65	4	20	53	KED
⌊	**Cd**	**114**	**0.049**	ug/L	0.013	27	4	34	24	KED
⌈>	**In**	**115**		ug/L			844649	840466	4	Standard
⌊	**Ag**	**107**	**0.012**	ug/L	0.001	4	74	289	7	Standard
⌈>	**Tb**	**159**		ug/L			720612	812019	4	Standard
⌊	**Pb**	**208**	**0.034**	ug/L	0.001	3	363	2605	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IFB1
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, March 06, 2023 14:25:34
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			42851	135121	1	Standard
	Cl	**37**		ug/L			4641047	12351805	1	Standard
⌈>	**Sc**	**45**		ug/L			806788	810549	2	Standard
|	**Cr**	**52**	**20.054**	ug/L	0.080	0	28671	534586	2	Standard
|	**Cr**	**53**	**22.295**	ug/L	0.442	1	315	66399	3	Standard
⌊	**Mn**	**55**	**19.652**	ug/L	0.435	2	1039	712991	3	Standard
⌈>	**Ge**	**72**		ug/L			41788	43650	2	KED
|	**Ni**	**60**	**20.185**	ug/L	0.184	0	39	27349	1	KED
|	**Ni**	**62**	**20.030**	ug/L	0.399	1	6	4432	2	KED
|	**Cu**	**63**	**19.518**	ug/L	0.500	2	158	79139	0	KED
|	**Cu**	**65**	**19.600**	ug/L	0.211	1	78	38276	1	KED
|	**Zn**	**66**	**18.722**	ug/L	0.352	1	90	9066	2	KED
|	**Zn**	**67**	**16.965**	ug/L	0.776	4	14	1360	6	KED
⌊	**As**	**75**	**19.173**	ug/L	0.169	0	9	4527	2	KED
	Y	**89**		ug/L			514828	534352	3	Standard
	Kr	**83**		ug/L			66	151	5	Standard
⌈>	**In-1**	**115**		ug/L			11154	11521	2	KED
|	**Cd**	**111**	**19.158**	ug/L	0.374	1	4	4570	0	KED
⌊	**Cd**	**114**	**18.639**	ug/L	0.620	3	4	10966	2	KED
⌈>	**In**	**115**		ug/L			844649	852393	2	Standard
⌊	**Ag**	**107**	**18.571**	ug/L	0.200	1	74	335871	2	Standard
⌈>	**Tb**	**159**		ug/L			720612	840357	4	Standard
⌊	**Pb**	**208**	**0.042**	ug/L	0.001	1	363	3218	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-HCV1
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, March 06, 2023 14:30:02
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			42851	40715	1	Standard
	Cl	**37**		ug/L			4641047	5030512	1	Standard
⎡>	**Sc**	**45**		ug/L			806788	764286	2	Standard
⎢	**Cr**	**52**	**195.134**	ug/L	1.733	0	28671	4667631	2	Standard
⎢	**Cr**	**53**	**194.875**	ug/L	4.533	2	315	545008	4	Standard
⎣	**Mn**	**55**	**196.425**	ug/L	1.682	0	1039	6710570	1	Standard
⎡>	**Ge**	**72**		ug/L			41788	42605	2	KED
⎢	**Ni**	**60**	**196.562**	ug/L	2.019	1	39	259674	3	KED
⎢	**Ni**	**62**	**192.606**	ug/L	1.244	0	6	41549	3	KED
⎢	**Cu**	**63**	**185.632**	ug/L	3.788	2	158	733529	3	KED
⎢	**Cu**	**65**	**188.244**	ug/L	3.258	1	78	358274	4	KED
⎢	**Zn**	**66**	**188.703**	ug/L	3.078	1	90	88389	4	KED
⎢	**Zn**	**67**	**187.386**	ug/L	4.391	2	14	14508	4	KED
⎣	**As**	**75**	**198.166**	ug/L	0.575	0	9	45575	2	KED
	Y	**89**		ug/L			514828	513598	0	Standard
	Kr	**83**		ug/L			66	152	7	Standard
⎡>	**In-1**	**115**		ug/L			11154	11396	2	KED
⎢	**Cd**	**111**	**197.360**	ug/L	3.963	2	4	46535	1	KED
⎣	**Cd**	**114**	**196.681**	ug/L	5.433	2	4	114401	1	KED
⎡>	**In**	**115**		ug/L			844649	844350	2	Standard
⎣	**Ag**	**107**	**190.674**	ug/L	1.004	0	74	3415510	2	Standard
⎡>	**Tb**	**159**		ug/L			720612	838766	3	Standard
⎣	**Pb**	**208**	**183.786**	ug/L	4.311	2	363	12250266	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-HCV2
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, March 06, 2023 14:34:29
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			42851	42044	1	Standard
	Cl	**37**		ug/L			4641047	5071309	0	Standard
⌈>	**Sc**	**45**		ug/L			806788	762123	1	Standard
|	**Cr**	**52**	**291.369**	ug/L	4.644	1	28671	6936269	1	Standard
|	**Cr**	**53**	**291.419**	ug/L	1.617	0	315	812270	0	Standard
⌊	**Mn**	**55**	**291.664**	ug/L	5.250	1	1039	9935736	1	Standard
⌈>	**Ge**	**72**		ug/L			41788	41249	0	KED
|	**Ni**	**60**	**290.970**	ug/L	8.055	2	39	372074	2	KED
|	**Ni**	**62**	**289.452**	ug/L	10.072	3	6	60444	3	KED
|	**Cu**	**63**	**279.465**	ug/L	16.441	5	158	1069094	5	KED
|	**Cu**	**65**	**282.472**	ug/L	8.519	3	78	520327	2	KED
|	**Zn**	**66**	**277.107**	ug/L	8.301	2	90	125589	2	KED
|	**Zn**	**67**	**275.880**	ug/L	5.432	1	14	20665	1	KED
⌊	**As**	**75**	**296.477**	ug/L	5.337	1	9	66006	1	KED
	Y	**89**		ug/L			514828	513061	2	Standard
	Kr	**83**		ug/L			66	202	4	Standard
⌈>	**In-1**	**115**		ug/L			11154	11000	1	KED
|	**Cd**	**111**	**289.384**	ug/L	3.122	1	4	65878	0	KED
⌊	**Cd**	**114**	**286.993**	ug/L	5.827	2	4	161175	1	KED
⌈>	**In**	**115**		ug/L			844649	838215	0	Standard
⌊	**Ag**	**107**	**278.597**	ug/L	6.879	2	74	4953728	2	Standard
⌈>	**Tb**	**159**		ug/L			720612	868323	2	Standard
⌊	**Pb**	**208**	**259.262**	ug/L	7.053	2	363	17891538	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL2
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, March 06, 2023 14:41:40
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			42851	39707	0	Standard
	Cl	**37**		ug/L			4641047	5115939	2	Standard
⎡>	**Sc**	**45**		ug/L			806788	796782	1	Standard
⎢	**Cr**	**52**	**0.083**	ug/L	0.040	47	28671	30379	4	Standard
⎢	**Cr**	**53**	**0.013**	ug/L	0.009	70	315	348	7	Standard
⎣	**Mn**	**55**	**0.033**	ug/L	0.001	3	1039	2208	3	Standard
⎡>	**Ge**	**72**		ug/L			41788	44927	4	KED
⎢	**Ni**	**60**	**-0.004**	ug/L	0.004	114	39	36	11	KED
⎢	**Ni**	**62**	**0.026**	ug/L	0.037	146	6	13	65	KED
⎢	**Cu**	**63**	**0.003**	ug/L	0.001	43	158	182	3	KED
⎢	**Cu**	**65**	**-0.001**	ug/L	0.003	443	78	83	2	KED
⎢	**Zn**	**66**	**0.036**	ug/L	0.037	104	90	114	13	KED
⎢	**Zn**	**67**	**0.072**	ug/L	0.013	17	14	21	5	KED
⎣	**As**	**75**	**-0.003**	ug/L	0.022	662	9	9	52	KED
	Y	**89**		ug/L			514828	508202	4	Standard
	Kr	**83**		ug/L			66	67	25	Standard
⎡>	**In-1**	**115**		ug/L			11154	12086	1	KED
⎢	**Cd**	**111**	**0.012**	ug/L	0.013	103	4	7	43	KED
⎣	**Cd**	**114**	**0.006**	ug/L	0.004	64	4	8	25	KED
⎡>	**In**	**115**		ug/L			844649	917118	3	Standard
⎣	**Ag**	**107**	**0.043**	ug/L	0.003	5	74	917	8	Standard
⎡>	**Tb**	**159**		ug/L			720612	810033	3	Standard
⎣	**Pb**	**208**	**0.015**	ug/L	0.001	4	363	1382	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IFA1
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, March 06, 2023 14:48:03
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			42851	129779	3	Standard
	Cl	**37**		ug/L			4641047	12265210	4	Standard
>	**Sc**	**45**		ug/L			806788	806746	2	Standard
	Cr	**52**	**0.960**	ug/L	0.046	4	28671	52759	0	Standard
	Cr	**53**	**3.224**	ug/L	0.101	3	315	9826	4	Standard
	Mn	**55**	**0.091**	ug/L	0.007	7	1039	4315	6	Standard
>	**Ge**	**72**		ug/L			41788	44050	2	KED
	Ni	**60**	**0.130**	ug/L	0.016	12	39	219	10	KED
	Ni	**62**	**0.288**	ug/L	0.029	9	6	71	10	KED
	Cu	**63**	**0.041**	ug/L	0.003	7	158	335	1	KED
	Cu	**65**	**0.059**	ug/L	0.012	21	78	199	13	KED
	Zn	**66**	**0.434**	ug/L	0.054	12	90	306	10	KED
	Zn	**67**	**0.450**	ug/L	0.084	18	14	51	14	KED
	As	**75**	**0.029**	ug/L	0.021	73	9	17	26	KED
	Y	**89**		ug/L			514828	527149	3	Standard
	Kr	**83**		ug/L			66	153	11	Standard
>	**In-1**	**115**		ug/L			11154	11262	1	KED
	Cd	**111**	**0.056**	ug/L	0.022	38	4	17	29	KED
	Cd	**114**	**0.067**	ug/L	0.020	29	4	43	27	KED
>	**In**	**115**		ug/L			844649	880162	1	Standard
	Ag	**107**	**0.032**	ug/L	0.002	6	74	667	5	Standard
>	**Tb**	**159**		ug/L			720612	859222	1	Standard
	Pb	**208**	**0.031**	ug/L	0.001	2	363	2555	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL3
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, March 06, 2023 14:52:58
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			42851	38811	1	Standard
	Cl	**37**		ug/L			4641047	4879002	2	Standard
⎡>	**Sc**	**45**		ug/L			806788	778378	2	Standard
⎢	**Cr**	**52**	**0.091**	ug/L	0.016	17	28671	29880	3	Standard
⎢	**Cr**	**53**	**0.070**	ug/L	0.011	15	315	504	4	Standard
⎣	**Mn**	**55**	**0.036**	ug/L	0.001	1	1039	2253	2	Standard
⎡>	**Ge**	**72**		ug/L			41788	45723	0	KED
⎢	**Ni**	**60**	**-0.001**	ug/L	0.005	391	39	41	17	KED
⎢	**Ni**	**62**	**0.008**	ug/L	0.016	201	6	9	40	KED
⎢	**Cu**	**63**	**0.007**	ug/L	0.003	51	158	200	7	KED
⎢	**Cu**	**65**	**0.005**	ug/L	0.001	13	78	96	1	KED
⎢	**Zn**	**66**	**0.030**	ug/L	0.033	109	90	114	14	KED
⎢	**Zn**	**67**	**0.006**	ug/L	0.047	747	14	16	24	KED
⎣	**As**	**75**	**-0.009**	ug/L	0.012	129	9	8	33	KED
	Y	**89**		ug/L			514828	513878	3	Standard
	Kr	**83**		ug/L			66	64	28	Standard
⎡>	**In-1**	**115**		ug/L			11154	12092	1	KED
⎢	**Cd**	**111**	**0.002**	ug/L	0.018	806	4	5	92	KED
⎣	**Cd**	**114**	**0.001**	ug/L	0.005	355	4	6	49	KED
⎡>	**In**	**115**		ug/L			844649	891573	2	Standard
⎣	**Ag**	**107**	**0.009**	ug/L	0.001	10	74	255	9	Standard
⎡>	**Tb**	**159**		ug/L			720612	806752	3	Standard
⎣	**Pb**	**208**	**0.014**	ug/L	0.001	7	363	1316	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV2
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, March 06, 2023 14:59:20
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			42851	39185	2	Standard
	Cl	**37**		ug/L			4641047	5120715	2	Standard
⎡>	**Sc**	**45**		ug/L			806788	774135	6	Standard
⎢	**Cr**	**52**	**50.655**	ug/L	0.201	0	28671	1247500	5	Standard
⎢	**Cr**	**53**	**49.212**	ug/L	1.300	2	315	139451	4	Standard
⎣	**Mn**	**55**	**51.377**	ug/L	1.325	2	1039	1777432	4	Standard
⎡>	**Ge**	**72**		ug/L			41788	46422	0	KED
⎢	**Ni**	**60**	**48.758**	ug/L	0.962	1	39	70202	1	KED
⎢	**Ni**	**62**	**49.191**	ug/L	0.759	1	6	11567	2	KED
⎢	**Cu**	**63**	**49.130**	ug/L	0.341	0	158	211670	0	KED
⎢	**Cu**	**65**	**49.223**	ug/L	1.245	2	78	102116	2	KED
⎢	**Zn**	**66**	**49.688**	ug/L	0.647	1	90	25425	0	KED
⎢	**Zn**	**67**	**51.055**	ug/L	0.601	1	14	4317	1	KED
⎣	**As**	**75**	**48.993**	ug/L	0.428	0	9	12284	1	KED
	Y	**89**		ug/L			514828	526122	4	Standard
	Kr	**83**		ug/L			66	74	22	Standard
⎡>	**In-1**	**115**		ug/L			11154	12144	2	KED
⎢	**Cd**	**111**	**50.441**	ug/L	1.398	2	4	12677	0	KED
⎣	**Cd**	**114**	**49.967**	ug/L	1.642	3	4	30975	1	KED
⎡>	**In**	**115**		ug/L			844649	891161	2	Standard
⎣	**Ag**	**107**	**48.827**	ug/L	0.505	1	74	923060	2	Standard
⎡>	**Tb**	**159**		ug/L			720612	832730	4	Standard
⎣	**Pb**	**208**	**48.928**	ug/L	1.740	3	363	3237335	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB2
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, March 06, 2023 15:06:32
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			42851	37000	4	Standard
	Cl	**37**		ug/L			4641047	4869651	4	Standard
⌈>	**Sc**	**45**		ug/L			806788	756537	3	Standard
|	**Cr**	**52**	**0.112**	ug/L	0.019	16	28671	29526	4	Standard
|	**Cr**	**53**	**-0.001**	ug/L	0.012	992	315	293	13	Standard
⌊	**Mn**	**55**	**0.013**	ug/L	0.001	4	1039	1414	2	Standard
⌈>	**Ge**	**72**		ug/L			41788	45076	2	KED
|	**Ni**	**60**	**-0.008**	ug/L	0.009	120	39	31	38	KED
|	**Ni**	**62**	**0.003**	ug/L	0.013	408	6	8	35	KED
|	**Cu**	**63**	**-0.008**	ug/L	0.002	23	158	135	4	KED
|	**Cu**	**65**	**-0.005**	ug/L	0.001	17	78	75	3	KED
|	**Zn**	**66**	**-0.096**	ug/L	0.024	24	90	50	21	KED
|	**Zn**	**67**	**-0.045**	ug/L	0.082	181	14	12	55	KED
⌊	**As**	**75**	**-0.006**	ug/L	0.008	130	9	9	21	KED
	Y	**89**		ug/L			514828	509651	4	Standard
	Kr	**83**		ug/L			66	63	14	Standard
⌈>	**In-1**	**115**		ug/L			11154	12250	1	KED
|	**Cd**	**111**	**-0.005**	ug/L	0.002	37	4	3	17	KED
⌊	**Cd**	**114**	**0.003**	ug/L	0.003	133	4	6	32	KED
⌈>	**In**	**115**		ug/L			844649	886483	3	Standard
⌊	**Ag**	**107**	**0.017**	ug/L	0.001	5	74	407	5	Standard
⌈>	**Tb**	**159**		ug/L			720612	797382	5	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.001	90	363	442	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL1
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, March 06, 2023 15:12:38
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L				36323	3	Standard
	Cl	**37**		ug/L				4837250	1	Standard
>	**Sc**	**45**		ug/L				768932	1	Standard
	Cr	**52**		ug/L				29685	2	Standard
	Cr	**53**		ug/L				273	6	Standard
	Mn	**55**		ug/L				1379	6	Standard
>	**Ge**	**72**		ug/L				45127	2	KED
	Ni	**60**		ug/L				27	24	KED
	Ni	**62**		ug/L				5	33	KED
	Cu	**63**		ug/L				118	8	KED
	Cu	**65**		ug/L				63	17	KED
	Zn	**66**		ug/L				40	11	KED
	Zn	**67**		ug/L				5	0	KED
	As	**75**		ug/L				7	21	KED
	Y	**89**		ug/L				512697	2	Standard
	Kr	**83**		ug/L				65	14	Standard
>	**In-1**	**115**		ug/L				11342	6	KED
	Cd	**111**		ug/L				6	28	KED
	Cd	**114**		ug/L				4	51	KED
>	**In**	**115**		ug/L				888503	0	Standard
	Ag	**107**		ug/L				236	7	Standard
>	**Tb**	**159**		ug/L				797843	4	Standard
	Pb	**208**		ug/L				255	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV3
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, March 06, 2023 15:17:06
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			36323	37598	0	Standard
	Cl	**37**		ug/L			4837250	5126483	2	Standard
⌈>	**Sc**	**45**		ug/L			768932	801390	1	Standard
|	**Cr**	**52**	**49.089**	ug/L	1.077	2	29685	1254622	0	Standard
|	**Cr**	**53**	**48.693**	ug/L	0.967	1	273	142917	0	Standard
⌊	**Mn**	**55**	**50.109**	ug/L	1.657	3	1379	1795738	2	Standard
⌈>	**Ge**	**72**		ug/L			45127	45912	1	KED
|	**Ni**	**60**	**50.385**	ug/L	0.062	0	27	71733	1	KED
|	**Ni**	**62**	**48.787**	ug/L	0.835	1	5	11344	2	KED
|	**Cu**	**63**	**48.115**	ug/L	0.438	0	118	204956	0	KED
|	**Cu**	**65**	**48.892**	ug/L	1.263	2	63	100277	1	KED
|	**Zn**	**66**	**50.399**	ug/L	1.372	2	40	25452	4	KED
|	**Zn**	**67**	**49.568**	ug/L	1.250	2	5	4135	3	KED
⌊	**As**	**75**	**49.752**	ug/L	0.820	1	7	12334	1	KED
	Y	**89**		ug/L			512697	531171	4	Standard
	Kr	**83**		ug/L			65	73	21	Standard
⌈>	**In-1**	**115**		ug/L			11342	12004	2	KED
|	**Cd**	**111**	**50.645**	ug/L	1.375	2	6	12584	0	KED
⌊	**Cd**	**114**	**49.897**	ug/L	1.589	3	4	30577	1	KED
⌈>	**In**	**115**		ug/L			888503	895335	3	Standard
⌊	**Ag**	**107**	**47.844**	ug/L	1.106	2	236	908483	0	Standard
⌈>	**Tb**	**159**		ug/L			797843	846222	4	Standard
⌊	**Pb**	**208**	**48.885**	ug/L	1.526	3	255	3286449	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB3
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, March 06, 2023 15:24:18
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			36323	35916	1	Standard
	Cl	**37**		ug/L			4837250	4928206	0	Standard
⎡>	**Sc**	**45**		ug/L			768932	763038	1	Standard
⎢	**Cr**	**52**	**0.003**	ug/L	0.004	119	29685	29537	1	Standard
⎢	**Cr**	**53**	**0.000**	ug/L	0.000	330	273	271	1	Standard
⎣	**Mn**	**55**	**-0.004**	ug/L	0.002	36	1379	1222	4	Standard
⎡>	**Ge**	**72**		ug/L			45127	43480	4	KED
⎢	**Ni**	**60**	**-0.006**	ug/L	0.004	59	27	18	29	KED
⎢	**Ni**	**62**	**0.006**	ug/L	0.019	309	5	6	62	KED
⎢	**Cu**	**63**	**0.003**	ug/L	0.004	160	118	125	12	KED
⎢	**Cu**	**65**	**0.000**	ug/L	0.001	610	63	61	4	KED
⎢	**Zn**	**66**	**0.002**	ug/L	0.015	706	40	40	14	KED
⎢	**Zn**	**67**	**-0.029**	ug/L	0.015	52	5	3	34	KED
⎣	**As**	**75**	**0.005**	ug/L	0.007	137	7	8	13	KED
	Y	**89**		ug/L			512697	507479	2	Standard
	Kr	**83**		ug/L			65	83	12	Standard
⎡>	**In-1**	**115**		ug/L			11342	12073	3	KED
⎢	**Cd**	**111**	**-0.007**	ug/L	0.008	113	6	5	36	KED
⎣	**Cd**	**114**	**0.010**	ug/L	0.006	59	4	10	36	KED
⎡>	**In**	**115**		ug/L			888503	872208	0	Standard
⎣	**Ag**	**107**	**0.009**	ug/L	0.000	1	236	401	0	Standard
⎡>	**Tb**	**159**		ug/L			797843	798551	2	Standard
⎣	**Pb**	**208**	**0.002**	ug/L	0.000	25	255	362	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, March 06, 2023 15:30:03
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			36323	52352	2	Standard
	Cl	**37**		ug/L			4837250	4651415	5	Standard
⌈>	**Sc**	**45**		ug/L			768932	728446	3	Standard
|	**Cr**	**52**	**0.097**	ug/L	0.031	32	29685	30316	4	Standard
|	**Cr**	**53**	**0.060**	ug/L	0.008	12	273	419	7	Standard
⌊	**Mn**	**55**	**0.011**	ug/L	0.001	11	1379	1662	5	Standard
⌈>	**Ge**	**72**		ug/L			45127	44586	1	KED
|	**Ni**	**60**	**-0.003**	ug/L	0.004	133	27	22	22	KED
|	**Ni**	**62**	**0.014**	ug/L	0.029	205	5	8	75	KED
|	**Cu**	**63**	**0.029**	ug/L	0.002	6	118	238	2	KED
|	**Cu**	**65**	**0.022**	ug/L	0.012	55	63	105	21	KED
|	**Zn**	**66**	**0.115**	ug/L	0.034	29	40	96	16	KED
|	**Zn**	**67**	**0.102**	ug/L	0.047	45	5	13	28	KED
⌊	**As**	**75**	**0.004**	ug/L	0.005	118	7	8	13	KED
	Y	**89**		ug/L			512697	473482	3	Standard
	Kr	**83**		ug/L			65	57	8	Standard
⌈>	**In-1**	**115**		ug/L			11342	11867	4	KED
|	[redacted]	**111**	[redacted]	ug/L	0.015	564	6	6	60	KED
⌊	**Cd**	**114**	**0.009**	ug/L	0.009	97	4	9	49	KED
⌈>	**In**	**115**		ug/L			888503	849760	3	Standard
⌊	**Ag**	**107**	**0.000**	ug/L	0.002	8395	236	226	13	Standard
⌈>	**Tb**	**159**		ug/L			797843	761228	6	Standard
⌊	**Pb**	**208**	**0.003**	ug/L	0.000	11	255	445	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, March 06, 2023 15:34:31
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			36323	53780	2	Standard
	Cl	**37**		ug/L			4837250	4822407	1	Standard
>	**Sc**	**45**		ug/L			768932	771041	3	Standard
	Cr	**52**	**25.660**	ug/L	0.505	1	29685	645199	2	Standard
	Cr	**53**	**25.182**	ug/L	0.820	3	273	71268	4	Standard
	Mn	**55**	**26.062**	ug/L	1.033	3	1379	899087	3	Standard
>	**Ge**	**72**		ug/L			45127	44846	0	KED
	Ni	**60**	**26.273**	ug/L	1.127	4	27	36554	4	KED
	Ni	**62**	**26.123**	ug/L	1.797	6	5	5936	7	KED
	Cu	**63**	**26.017**	ug/L	1.039	3	118	108314	3	KED
	Cu	**65**	**26.056**	ug/L	0.801	3	63	52238	3	KED
	Zn	**66**	**84.830**	ug/L	3.945	4	40	41815	5	KED
	Zn	**67**	**79.995**	ug/L	1.075	1	5	6516	2	KED
	As	**75**	**25.680**	ug/L	0.521	2	7	6222	2	KED
	Y	**89**		ug/L			512697	509052	1	Standard
	Kr	**83**		ug/L			65	76	17	Standard
>	**In-1**	**115**		ug/L			11342	11584	1	KED
	[redacted]	**111**	[redacted]	ug/L	0.635	2	6	6199	2	KED
	Cd	**114**	**25.303**	ug/L	0.162	0	4	14971	2	KED
>	**In**	**115**		ug/L			888503	901211	1	Standard
	Ag	**107**	**24.106**	ug/L	0.262	1	236	461096	1	Standard
>	**Tb**	**159**		ug/L			797843	796817	2	Standard
	Pb	**208**	**26.368**	ug/L	0.585	2	255	1670380	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, March 06, 2023 15:38:58
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	**13**		ug/L			36323	52661	2	Standard
Cl	**37**		ug/L			4837250	4812352	4	Standard
Sc	**45**		ug/L			768932	784101	3	Standard
[redacted]	**52**	[redacted]	ug/L	0.020	58	29685	31109	2	Standard
Cr	**53**	**0.008**	ug/L	0.000	5	273	302	3	Standard
Mn	**55**	**0.062**	ug/L	0.003	4	1379	3592	5	Standard
Ge	**72**		ug/L			45127	44793	3	KED
[redacted]	**60**	[redacted]	ug/L	0.005	188	27	31	24	KED
Ni	**62**	**0.003**	ug/L	0.004	135	5	6	17	KED
[redacted]	**63**	[redacted]	ug/L	0.004	22	118	200	6	KED
Cu	**65**	**0.009**	ug/L	0.008	91	63	80	18	KED
[redacted]	**66**	[redacted]	ug/L	0.022	11	40	133	4	KED
Zn	**67**	**0.180**	ug/L	0.053	29	5	20	21	KED
As	**75**	**0.013**	ug/L	0.017	126	7	11	38	KED
Y	**89**		ug/L			512697	511857	3	Standard
Kr	**83**		ug/L			65	60	14	Standard
In-1	**115**		ug/L			11342	12180	2	KED
[redacted]	**111**	[redacted]	ug/L	0.009	86	6	4	53	KED
Cd	**114**	**0.003**	ug/L	0.008	269	4	6	73	KED
In	**115**		ug/L			888503	888169	1	Standard
Ag	**107**	**0.007**	ug/L	0.001	18	236	366	5	Standard
Tb	**159**		ug/L			797843	797241	5	Standard
[redacted]	**208**	[redacted]	ug/L	0.000	10	255	518	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, March 06, 2023 15:43:26
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			36323	53362	1	Standard
	Cl	**37**		ug/L			4837250	4790194	3	Standard
>	**Sc**	**45**		ug/L			768932	768332	3	Standard
	[redacted]	**52**	[redacted]	ug/L	0.100	0	29685	634727	3	Standard
	Cr	**53**	**24.916**	ug/L	0.263	1	273	70253	2	Standard
	Mn	**55**	**25.569**	ug/L	0.319	1	1379	879439	3	Standard
>	**Ge**	**72**		ug/L			45127	45123	3	KED
	[redacted]	**60**	[redacted]	ug/L	0.665	2	27	35698	3	KED
	Ni	**62**	**24.550**	ug/L	1.553	6	5	5609	5	KED
	[redacted]	**63**	[redacted]	ug/L	0.746	2	118	104417	2	KED
	Cu	**65**	**25.327**	ug/L	0.692	2	63	51089	4	KED
	[redacted]	**66**	[redacted]	ug/L	5.293	6	40	40806	5	KED
	Zn	**67**	**75.946**	ug/L	2.746	3	5	6221	2	KED
	As	**75**	**25.187**	ug/L	0.981	3	7	6138	3	KED
	Y	**89**		ug/L			512697	518296	3	Standard
	Kr	**83**		ug/L			65	72	11	Standard
>	**In-1**	**115**		ug/L			11342	11221	4	KED
	[redacted]	**111**	[redacted]	ug/L	0.836	3	6	5923	2	KED
	Cd	**114**	**25.207**	ug/L	0.690	2	4	14434	2	KED
>	**In**	**115**		ug/L			888503	886652	2	Standard
	Ag	**107**	**24.843**	ug/L	0.735	2	236	467279	0	Standard
>	**Tb**	**159**		ug/L			797843	799457	4	Standard
	[redacted]	**208**	[redacted]	ug/L	1.160	4	255	1634878	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Monday, March 06, 2023 15:49:08
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			36323	920398	0	Standard
Cl	37		ug/L			4837250	5267311	2	Standard
> Sc	45		ug/L			768932	789749	3	Standard
Cr	52	4.316	ug/L	0.105	2	29685	136493	1	Standard
[redacted]	[redacted]	[redacted]	ug/L	0.059	4	273	4234	1	Standard
Mn	55	144.207	ug/L	4.033	2	1379	5089732	2	Standard
> Ge	72		ug/L			45127	41423	1	KED
[redacted]	60	[redacted]	ug/L	0.327	1	27	21543	1	KED
Ni	62	16.985	ug/L	0.292	1	5	3566	0	KED
[redacted]	63	[redacted]	ug/L	0.015	0	118	8368	1	KED
Cu	65	2.196	ug/L	0.044	1	63	4118	0	KED
[redacted]	66	[redacted]	ug/L	0.649	4	40	6507	4	KED
Zn	67	13.822	ug/L	0.793	5	5	1043	4	KED
As	75	0.070	ug/L	0.005	7	7	23	6	KED
Y	89		ug/L			512697	510979	2	Standard
Kr	83		ug/L			65	95	9	Standard
> In-1	115		ug/L			11342	11041	2	KED
[redacted]	111	[redacted]	ug/L	0.013	623	6	6	43	KED
Cd	114	0.023	ug/L	0.030	127	4	17	98	KED
> In	115		ug/L			888503	806545	1	Standard
Ag	107	0.005	ug/L	0.001	14	236	296	5	Standard
> Tb	159		ug/L			797843	780451	2	Standard
[redacted]	208	[redacted]	ug/L	0.001	0	255	11732	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Monday, March 06, 2023 15:53:35
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			36323	65154	2	Standard
Cl	37		ug/L			4837250	9771942	1	Standard
> Sc	45		ug/L			768932	753577	2	Standard
[redacted]	52	[redacted]	ug/L	1.863	1	29685	3203017	2	Standard
Cr	53	**136.794**	ug/L	0.938	0	273	377177	2	Standard
Mn	55	**2.867**	ug/L	0.026	0	1379	97908	1	Standard
> Ge	72		ug/L			45127	43753	4	KED
[redacted]	60	[redacted]	ug/L	0.058	3	27	2350	7	KED
Ni	62	**1.655**	ug/L	0.095	5	5	372	9	KED
[redacted]	63	[redacted]	ug/L	0.211	1	118	52684	2	KED
Cu	65	**12.930**	ug/L	0.082	0	63	25319	3	KED
[redacted]	66	[redacted]	ug/L	1.027	5	40	9370	1	KED
Zn	67	**18.426**	ug/L	0.871	4	5	1467	3	KED
As	75	**0.149**	ug/L	0.010	6	7	43	9	KED
Y	89		ug/L			512697	490049	2	Standard
Kr	83		ug/L			65	93	34	Standard
> In-1	115		ug/L			11342	11152	2	KED
[redacted]	111	[redacted]	ug/L	0.081	8	6	224	7	KED
Cd	114	**0.891**	ug/L	0.032	3	4	511	2	KED
> In	115		ug/L			888503	822468	2	Standard
Ag	107	**0.027**	ug/L	0.000	1	236	693	1	Standard
> Tb	159		ug/L			797843	787600	3	Standard
[redacted]	208	[redacted]	ug/L	0.010	2	255	20835	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Monday, March 06, 2023 16:02:08
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			36323	96867	0	Standard
	Cl	**37**		ug/L			4837250	5359172	2	Standard
⌈>	**Sc**	**45**		ug/L			768932	761990	3	Standard
|	**Cr**	**52**	**1.546**	ug/L	0.027	1	29685	66067	2	Standard
|	**Cr**	**53**	**1.437**	ug/L	0.016	1	273	4273	2	Standard
⌊	**Mn**	**55**	**8.575**	ug/L	0.167	1	1379	293315	1	Standard
⌈>	**Ge**	**72**		ug/L			45127	44342	1	KED
|	**Ni**	**60**	**1.060**	ug/L	0.046	4	27	1483	5	KED
|	**Ni**	**62**	**1.159**	ug/L	0.089	7	5	266	9	KED
|	**Cu**	**63**	**0.055**	ug/L	0.011	19	118	342	11	KED
|	**Cu**	**65**	**0.051**	ug/L	0.003	6	63	162	6	KED
|	**Zn**	**66**	**1.296**	ug/L	0.108	8	40	671	8	KED
|	**Zn**	**67**	**1.460**	ug/L	0.082	5	5	123	6	KED
⌊	**As**	**75**	**0.053**	ug/L	0.017	32	7	20	17	KED
	Y	**89**		ug/L			512697	505092	4	Standard
	Kr	**83**		ug/L			65	73	9	Standard
⌈>	**In-1**	**115**		ug/L			11342	12273	2	KED
|	[redacted]	**111**	[redacted]	ug/L	0.005	1807	6	7	19	KED
⌊	**Cd**	**114**	**0.013**	ug/L	0.008	65	4	12	41	KED
⌈>	**In**	**115**		ug/L			888503	869423	4	Standard
⌊	**Ag**	**107**	**-0.004**	ug/L	0.000	8	236	165	3	Standard
⌈>	**Tb**	**159**		ug/L			797843	797520	5	Standard
⌊	**Pb**	**208**	**0.017**	ug/L	0.001	6	255	1309	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Monday, March 06, 2023 16:06:45
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			36323	52609	1	Standard
	Cl	**37**		ug/L			4837250	5446094	2	Standard
>	**Sc**	**45**		ug/L			768932	758893	3	Standard
	Cr	**52**	**0.116**	ug/L	0.013	11	29685	32034	4	Standard
	Cr	**53**	**0.126**	ug/L	0.005	3	273	617	2	Standard
	Mn	**55**	**8.780**	ug/L	0.074	0	1379	299226	3	Standard
>	**Ge**	**72**		ug/L			45127	44798	3	KED
	Ni	**60**	**0.124**	ug/L	0.017	13	27	200	13	KED
	Ni	**62**	**0.179**	ug/L	0.035	19	5	46	20	KED
	Cu	**63**	**20.719**	ug/L	0.577	2	118	86189	3	KED
	Cu	**65**	**20.827**	ug/L	0.350	1	63	41710	1	KED
	Zn	**66**	**809.569**	ug/L	20.545	2	40	398237	3	KED
	Zn	**67**	**734.327**	ug/L	17.353	2	5	59719	4	KED
	As	**75**	**0.012**	ug/L	0.021	167	7	10	44	KED
	Y	**89**		ug/L			512697	499107	1	Standard
	Kr	**83**		ug/L			65	64	1	Standard
>	**In-1**	**115**		ug/L			11342	11741	3	KED
	[redacted]	**111**	[redacted]	ug/L	0.012	2	6	104	2	KED
	Cd	**114**	**0.382**	ug/L	0.023	6	4	233	8	KED
>	**In**	**115**		ug/L			888503	867992	2	Standard
	Ag	**107**	**-0.003**	ug/L	0.001	46	236	184	13	Standard
>	**Tb**	**159**		ug/L			797843	782343	1	Standard
	Pb	**208**	**0.072**	ug/L	0.003	3	255	4755	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Monday, March 06, 2023 16:14:57
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			36323	107306	3	Standard
Cl	37		ug/L			4837250	5124158	2	Standard
Sc	45		ug/L			768932	757553	3	Standard
[redacted]	52	[redacted]	ug/L	0.413	1	29685	947453	4	Standard
Cr	53	38.599	ug/L	0.471	1	273	107159	3	Standard
[redacted]	55	[redacted]	ug/L	0.288	1	1379	601625	4	Standard
Ge	72		ug/L			45127	43975	4	KED
[redacted]	60	[redacted]	ug/L	0.069	4	27	2210	0	KED
Ni	62	1.645	ug/L	0.138	8	5	371	8	KED
[redacted]	63	[redacted]	ug/L	0.020	1	118	4914	4	KED
Cu	65	1.151	ug/L	0.053	4	63	2319	2	KED
Zn	66	70.896	ug/L	3.332	4	40	34224	1	KED
[redacted]	[redacted]	[redacted]	ug/L	0.672	1	5	5162	5	KED
As	75	0.046	ug/L	0.020	42	7	18	28	KED
Y	89		ug/L			512697	492067	6	Standard
Kr	83		ug/L			65	80	9	Standard
In-1	115		ug/L			11342	11986	0	KED
[redacted]	111	[redacted]	ug/L	0.034	7	6	118	8	KED
Cd	114	0.452	ug/L	0.037	8	4	280	7	KED
In	115		ug/L			888503	850951	2	Standard
Ag	107	0.023	ug/L	0.003	14	236	639	10	Standard
Tb	159		ug/L			797843	778582	1	Standard
[redacted]	208	[redacted]	ug/L	0.003	3	255	5764	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL4
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, March 06, 2023 16:22:42
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			36323	38303	4	Standard
	Cl	**37**		ug/L			4837250	5200536	2	Standard
⎡>	**Sc**	**45**		ug/L			768932	719832	2	Standard
⎢	**Cr**	**52**	**0.001**	ug/L	0.028	3133	29685	27819	4	Standard
⎢	**Cr**	**53**	**0.014**	ug/L	0.006	43	273	291	2	Standard
⎣	**Mn**	**55**	**0.020**	ug/L	0.001	3	1379	1948	2	Standard
⎡>	**Ge**	**72**		ug/L			45127	43283	2	KED
⎢	**Ni**	**60**	**0.078**	ug/L	0.016	20	27	131	18	KED
⎢	**Ni**	**62**	**0.079**	ug/L	0.011	13	5	22	8	KED
⎢	**Cu**	**63**	**0.035**	ug/L	0.002	5	118	252	2	KED
⎢	**Cu**	**65**	**0.036**	ug/L	0.006	17	63	129	6	KED
⎢	**Zn**	**66**	**0.605**	ug/L	0.044	7	40	326	6	KED
⎢	**Zn**	**67**	**0.612**	ug/L	0.169	27	5	53	22	KED
⎣	**As**	**75**	**0.003**	ug/L	0.012	485	7	8	37	KED
	Y	**89**		ug/L			512697	486089	3	Standard
	Kr	**83**		ug/L			65	65	16	Standard
⎡>	**In-1**	**115**		ug/L			11342	11675	3	KED
⎢	**Cd**	**111**	**-0.009**	ug/L	0.010	115	6	4	52	KED
⎣	**Cd**	**114**	**0.015**	ug/L	0.021	136	4	13	93	KED
⎡>	**In**	**115**		ug/L			888503	836995	2	Standard
⎣	**Ag**	**107**	**-0.007**	ug/L	0.001	16	236	106	21	Standard
⎡>	**Tb**	**159**		ug/L			797843	749818	3	Standard
⎣	**Pb**	**208**	**0.013**	ug/L	0.001	6	255	1029	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV4
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, March 06, 2023 16:27:10
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			36323	39074	1	Standard
	Cl	**37**		ug/L			4837250	5092335	2	Standard
⎡>	**Sc**	**45**		ug/L			768932	731594	2	Standard
⎢	**Cr**	**52**	**49.723**	ug/L	0.894	1	29685	1159898	1	Standard
⎢	**Cr**	**53**	**49.387**	ug/L	0.758	1	273	132328	0	Standard
⎣	**Mn**	**55**	**50.381**	ug/L	0.590	1	1379	1648795	2	Standard
⎡>	**Ge**	**72**		ug/L			45127	43855	2	KED
⎢	**Ni**	**60**	**49.385**	ug/L	0.786	1	27	67176	3	KED
⎢	**Ni**	**62**	**49.584**	ug/L	1.000	2	5	11016	4	KED
⎢	**Cu**	**63**	**49.160**	ug/L	1.439	2	118	200087	4	KED
⎢	**Cu**	**65**	**48.519**	ug/L	0.783	1	63	95090	3	KED
⎢	**Zn**	**66**	**50.197**	ug/L	0.339	0	40	24211	3	KED
⎢	**Zn**	**67**	**51.496**	ug/L	0.704	1	5	4104	3	KED
⎣	**As**	**75**	**49.976**	ug/L	0.455	0	7	11836	3	KED
	Y	**89**		ug/L			512697	489719	2	Standard
	Kr	**83**		ug/L			65	62	6	Standard
⎡>	**In-1**	**115**		ug/L			11342	11947	3	KED
⎢	**Cd**	**111**	**49.184**	ug/L	0.324	0	6	12166	2	KED
⎣	**Cd**	**114**	**48.890**	ug/L	0.290	0	4	29824	2	KED
⎡>	**In**	**115**		ug/L			888503	834557	1	Standard
⎣	**Ag**	**107**	**48.460**	ug/L	0.832	1	236	858013	0	Standard
⎡>	**Tb**	**159**		ug/L			797843	783434	2	Standard
⎣	**Pb**	**208**	**50.276**	ug/L	1.028	2	255	3131118	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB4
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, March 06, 2023 16:34:22
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			36323	35305	4	Standard
	Cl	**37**		ug/L			4837250	4924624	4	Standard
⎡>	**Sc**	**45**		ug/L			768932	702333	4	Standard
⎢	**Cr**	**52**	**-0.003**	ug/L	0.016	561	29685	27045	3	Standard
⎢	**Cr**	**53**	**-0.007**	ug/L	0.006	81	273	231	8	Standard
⎣	**Mn**	**55**	**-0.011**	ug/L	0.001	13	1379	925	2	Standard
⎡>	**Ge**	**72**		ug/L			45127	43804	2	KED
⎢	**Ni**	**60**	**-0.003**	ug/L	0.004	128	27	22	24	KED
⎢	**Ni**	**62**	**0.004**	ug/L	0.028	779	5	6	96	KED
⎢	**Cu**	**63**	**0.000**	ug/L	0.001	334	118	116	6	KED
⎢	**Cu**	**65**	**0.001**	ug/L	0.007	638	63	63	18	KED
⎢	**Zn**	**66**	**0.021**	ug/L	0.015	70	40	49	15	KED
⎢	**Zn**	**67**	**0.010**	ug/L	0.051	490	5	6	62	KED
⎣	**As**	**75**	**0.004**	ug/L	0.006	124	7	8	12	KED
	Y	**89**		ug/L			512697	466151	3	Standard
	Kr	**83**		ug/L			65	74	24	Standard
⎡>	**In-1**	**115**		ug/L			11342	12072	1	KED
⎢	**Cd**	**111**	**-0.014**	ug/L	0.008	54	6	3	56	KED
⎣	**Cd**	**114**	**0.001**	ug/L	0.006	1101	4	4	78	KED
⎡>	**In**	**115**		ug/L			888503	834288	2	Standard
⎣	**Ag**	**107**	**0.003**	ug/L	0.001	16	236	276	4	Standard
⎡>	**Tb**	**159**		ug/L			797843	733768	3	Standard
⎣	**Pb**	**208**	**0.001**	ug/L	0.000	2	255	307	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, March 06, 2023 16:38:51
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	**13**		ug/L			36323	43448	1	Standard
Cl	**37**		ug/L			4837250	4981370	4	Standard
Sc	**45**		ug/L			768932	717289	5	Standard
[redacted]	**52**	[redacted]	ug/L	0.032	68	29685	28724	3	Standard
Cr	**53**	**0.041**	ug/L	0.010	23	273	360	2	Standard
[redacted]	**55**	[redacted]	ug/L	0.001	10	1379	1646	3	Standard
Ge	**72**		ug/L			45127	44597	0	KED
[redacted]	**60**	[redacted]	ug/L	0.006	550	27	28	30	KED
Ni	**62**	**-0.002**	ug/L	0.018	727	5	5	78	KED
[redacted]	**63**	[redacted]	ug/L	0.008	62	118	166	18	KED
Cu	**65**	**0.005**	ug/L	0.003	60	63	71	8	KED
[redacted]	**66**	[redacted]	ug/L	0.016	8	40	129	5	KED
Zn	**67**	**0.299**	ug/L	0.034	11	5	29	9	KED
[redacted]	**75**	[redacted]	ug/L	0.007	92	7	9	17	KED
Y	**89**		ug/L			512697	478520	5	Standard
Kr	**83**		ug/L			65	64	21	Standard
In-1	**115**		ug/L			11342	11167	1	KED
[redacted]	**111**	[redacted]	ug/L	0.012	234	6	5	53	KED
Cd	**114**	**0.006**	ug/L	0.007	111	4	7	52	KED
In	**115**		ug/L			888503	840548	1	Standard
Ag	**107**	**-0.002**	ug/L	0.001	29	236	179	9	Standard
Tb	**159**		ug/L			797843	746259	4	Standard
[redacted]	**208**	[redacted]	ug/L	0.000	6	255	365	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, March 06, 2023 16:43:18
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	**13**		ug/L			36323	43184	3	Standard
Cl	**37**		ug/L			4837250	4816248	0	Standard
Sc	**45**		ug/L			768932	693333	1	Standard
[redacted]	**52**	[redacted]	ug/L	0.477	1	29685	568116	0	Standard
Cr	**53**	**25.104**	ug/L	0.181	0	273	63882	1	Standard
[redacted]	**55**	[redacted]	ug/L	0.328	1	1379	801823	0	Standard
Ge	**72**		ug/L			45127	44971	2	KED
[redacted]	**60**	[redacted]	ug/L	0.298	1	27	33976	2	KED
Ni	**62**	**23.887**	ug/L	0.654	2	5	5441	1	KED
[redacted]	**63**	[redacted]	ug/L	0.893	3	118	101878	3	KED
Cu	**65**	**24.737**	ug/L	0.402	1	63	49727	1	KED
[redacted]	**66**	[redacted]	ug/L	1.021	1	40	40087	1	KED
Zn	**67**	**75.333**	ug/L	2.232	2	5	6151	2	KED
[redacted]	**75**	[redacted]	ug/L	0.373	1	7	5978	0	KED
Y	**89**		ug/L			512697	461551	0	Standard
Kr	**83**		ug/L			65	61	18	Standard
In-1	**115**		ug/L			11342	11412	0	KED
[redacted]	**111**	[redacted]	ug/L	0.333	1	6	5789	0	KED
Cd	**114**	**24.856**	ug/L	0.308	1	4	14487	0	KED
In	**115**		ug/L			888503	812652	1	Standard
Ag	**107**	**25.097**	ug/L	0.394	1	236	432834	1	Standard
Tb	**159**		ug/L			797843	736413	3	Standard
[redacted]	**208**	[redacted]	ug/L	0.873	3	255	1524977	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Monday, March 06, 2023 16:48:17
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			36323	54730	2	Standard
	Cl	**37**		ug/L			4837250	4950452	3	Standard
⌈>	**Sc**	**45**		ug/L			768932	750962	4	Standard
|	**Cr**	**52**	**6.436**	ug/L	0.168	2	29685	179305	4	Standard
|	**Cr**	**53**	**6.537**	ug/L	0.159	2	273	18206	3	Standard
⌊	**Mn**	**55**	**7.587**	ug/L	0.181	2	1379	255909	3	Standard
⌈>	**Ge**	**72**		ug/L			45127	40447	6	KED
|	**Ni**	**60**	**0.788**	ug/L	0.017	2	27	1012	4	KED
|	**Ni**	**62**	**0.904**	ug/L	0.036	3	5	190	9	KED
|	**Cu**	**63**	**1.310**	ug/L	0.086	6	118	5006	1	KED
|	**Cu**	**65**	**1.351**	ug/L	0.061	4	63	2491	1	KED
|	**Zn**	**66**	**3.186**	ug/L	0.266	8	40	1447	5	KED
|	**Zn**	**67**	**2.929**	ug/L	0.155	5	5	219	2	KED
⌊	**As**	**75**	**0.090**	ug/L	0.028	30	7	26	17	KED
	Y	**89**		ug/L			512697	490405	3	Standard
	Kr	**83**		ug/L			65	83	3	Standard
⌈>	**In-1**	**115**		ug/L			11342	11102	1	KED
|	[redacted]	**111**	[redacted]	ug/L	0.012	336	6	5	50	KED
⌊	**Cd**	**114**	**0.011**	ug/L	0.002	16	4	10	9	KED
⌈>	**In**	**115**		ug/L			888503	805676	3	Standard
⌊	**Ag**	**107**	**0.004**	ug/L	0.002	60	236	280	14	Standard
⌈>	**Tb**	**159**		ug/L			797843	765640	4	Standard
⌊	**Pb**	**208**	**0.011**	ug/L	0.001	8	255	906	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Monday, March 06, 2023 16:53:05
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			36323	54419	2	Standard
	Cl	**37**		ug/L			4837250	4877569	4	Standard
⌈>	**Sc**	**45**		ug/L			768932	740406	2	Standard
|	**Cr**	**52**	**4.338**	ug/L	0.112	2	29685	128477	0	Standard
|	**Cr**	**53**	**4.389**	ug/L	0.035	0	273	12143	2	Standard
⌊	**Mn**	**55**	**6.489**	ug/L	0.176	2	1379	216061	3	Standard
⌈>	**Ge**	**72**		ug/L			45127	40661	2	KED
|	**Ni**	**60**	**0.630**	ug/L	0.039	6	27	819	7	KED
|	**Ni**	**62**	**0.778**	ug/L	0.054	6	5	165	4	KED
|	**Cu**	**63**	**1.552**	ug/L	0.056	3	118	5956	2	KED
|	**Cu**	**65**	**1.580**	ug/L	0.056	3	63	2927	5	KED
|	**Zn**	**66**	**2.112**	ug/L	0.144	6	40	978	3	KED
|	**Zn**	**67**	**2.224**	ug/L	0.219	9	5	169	11	KED
⌊	**As**	**75**	**0.075**	ug/L	0.013	16	7	23	11	KED
	Y	**89**		ug/L			512697	495058	2	Standard
	Kr	**83**		ug/L			65	81	29	Standard
⌈>	**In-1**	**115**		ug/L			11342	11221	0	KED
|	[redacted]	**111**	[redacted]	ug/L	0.019	149	6	9	45	KED
⌊	**Cd**	**114**	**0.003**	ug/L	0.007	243	4	5	68	KED
⌈>	**In**	**115**		ug/L			888503	814572	2	Standard
⌊	**Ag**	**107**	**-0.004**	ug/L	0.000	9	236	142	2	Standard
⌈>	**Tb**	**159**		ug/L			797843	782784	4	Standard
⌊	**Pb**	**208**	**0.006**	ug/L	0.000	3	255	650	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Monday, March 06, 2023 16:57:32
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			36323	54306	0	Standard
	Cl	**37**		ug/L			4837250	4888239	2	Standard
⎡>	**Sc**	**45**		ug/L			768932	754263	4	Standard
⎢	**Cr**	**52**	**7.859**	ug/L	0.063	0	29685	213518	3	Standard
⎢	**Cr**	**53**	**7.812**	ug/L	0.287	3	273	21792	2	Standard
⎣	**Mn**	**55**	**7.506**	ug/L	0.139	1	1379	254264	2	Standard
⎡>	**Ge**	**72**		ug/L			45127	41199	0	KED
⎢	**Ni**	**60**	**0.550**	ug/L	0.011	2	27	727	2	KED
⎢	**Ni**	**62**	**0.763**	ug/L	0.089	11	5	164	11	KED
⎢	**Cu**	**63**	**1.622**	ug/L	0.040	2	118	6303	1	KED
⎢	**Cu**	**65**	**1.612**	ug/L	0.072	4	63	3023	4	KED
⎢	**Zn**	**66**	**2.220**	ug/L	0.170	7	40	1040	6	KED
⎢	**Zn**	**67**	**2.291**	ug/L	0.024	1	5	176	1	KED
⎣	**As**	**75**	**0.079**	ug/L	0.010	12	7	24	8	KED
	Y	**89**		ug/L			512697	482266	4	Standard
	Kr	**83**		ug/L			65	69	13	Standard
⎡>	**In-1**	**115**		ug/L			11342	10775	1	KED
⎢	[redacted]	**111**	[redacted]	ug/L	0.017	296	6	7	50	KED
⎣	**Cd**	**114**	**0.017**	ug/L	0.007	42	4	13	29	KED
⎡>	**In**	**115**		ug/L			888503	812679	2	Standard
⎣	**Ag**	**107**	**-0.005**	ug/L	0.002	31	236	123	20	Standard
⎡>	**Tb**	**159**		ug/L			797843	786820	1	Standard
⎣	**Pb**	**208**	**0.011**	ug/L	0.000	3	255	948	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Monday, March 06, 2023 17:02:41
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			36323	63577	0	Standard
	Cl	**37**		ug/L			4837250	4809964	1	Standard
>	**Sc**	**45**		ug/L			768932	759932	4	Standard
	Cr	**52**	**8.456**	ug/L	0.266	3	29685	229109	2	Standard
	Cr	**53**	**8.529**	ug/L	0.228	2	273	23945	2	Standard
	Mn	**55**	**7.901**	ug/L	0.242	3	1379	269546	3	Standard
>	**Ge**	**72**		ug/L			45127	44161	1	KED
	Ni	**60**	**1.032**	ug/L	0.064	6	27	1438	4	KED
	Ni	**62**	**1.091**	ug/L	0.051	4	5	249	5	KED
	Cu	**63**	**1.516**	ug/L	0.059	3	118	6326	4	KED
	Cu	**65**	**1.525**	ug/L	0.032	2	63	3069	2	KED
	Zn	**66**	**3.481**	ug/L	0.118	3	40	1727	2	KED
	Zn	**67**	**3.385**	ug/L	0.173	5	5	276	4	KED
	As	**75**	**0.070**	ug/L	0.013	18	7	24	12	KED
	Y	**89**		ug/L			512697	503794	5	Standard
	Kr	**83**		ug/L			65	83	32	Standard
>	**In-1**	**115**		ug/L			11342	11438	2	KED
	[redacted]	**111**	[redacted]	ug/L	0.013	241	6	5	56	KED
	Cd	**114**	**-0.000**	ug/L	0.005	1283	4	4	70	KED
>	**In**	**115**		ug/L			888503	818529	3	Standard
	Ag	**107**	**-0.006**	ug/L	0.001	23	236	111	18	Standard
>	**Tb**	**159**		ug/L			797843	795337	0	Standard
	Pb	**208**	**0.014**	ug/L	0.001	5	255	1151	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Monday, March 06, 2023 17:10:49
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			36323	59590	2	Standard
	Cl	**37**		ug/L			4837250	4878587	1	Standard
⎡>	**Sc**	**45**		ug/L			768932	756031	3	Standard
⎢	**Cr**	**52**	**8.728**	ug/L	0.213	2	29685	234379	1	Standard
⎢	**Cr**	**53**	**8.713**	ug/L	0.171	1	273	24340	2	Standard
⎣	**Mn**	**55**	**8.190**	ug/L	0.063	0	1379	278078	3	Standard
⎡>	**Ge**	**72**		ug/L			45127	42040	2	KED
⎢	**Ni**	**60**	**1.014**	ug/L	0.032	3	27	1346	3	KED
⎢	**Ni**	**62**	**1.285**	ug/L	0.062	4	5	278	4	KED
⎢	**Cu**	**63**	**1.563**	ug/L	0.008	0	118	6202	2	KED
⎢	**Cu**	**65**	**1.565**	ug/L	0.042	2	63	2997	5	KED
⎢	**Zn**	**66**	**3.644**	ug/L	0.052	1	40	1719	2	KED
⎢	**Zn**	**67**	**3.213**	ug/L	0.214	6	5	250	4	KED
⎣	**As**	**75**	**0.068**	ug/L	0.009	13	7	22	11	KED
	Y	**89**		ug/L			512697	494113	0	Standard
	Kr	**83**		ug/L			65	78	19	Standard
⎡>	**In-1**	**115**		ug/L			11342	11080	0	KED
⎢	[redacted]	**111**	[redacted]	ug/L	0.019	247	6	8	52	KED
⎣	**Cd**	**114**	**0.011**	ug/L	0.002	20	4	10	11	KED
⎡>	**In**	**115**		ug/L			888503	832424	1	Standard
⎣	**Ag**	**107**	**-0.006**	ug/L	0.000	6	236	110	7	Standard
⎡>	**Tb**	**159**		ug/L			797843	798751	2	Standard
⎣	**Pb**	**208**	**0.013**	ug/L	0.001	4	255	1058	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Monday, March 06, 2023 17:15:16
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			36323	60175	1	Standard
	Cl	**37**		ug/L			4837250	4897829	3	Standard
⌈>	**Sc**	**45**		ug/L			768932	745906	2	Standard
|	**Cr**	**52**	**21.269**	ug/L	0.788	3	29685	522220	2	Standard
|	**Cr**	**53**	**21.151**	ug/L	0.628	2	273	57915	1	Standard
⌊	**Mn**	**55**	**20.963**	ug/L	0.603	2	1379	700092	2	Standard
⌈>	**Ge**	**72**		ug/L			45127	42269	5	KED
|	**Ni**	**60**	**13.420**	ug/L	0.465	3	27	17588	1	KED
|	**Ni**	**62**	**13.775**	ug/L	0.459	3	5	2953	6	KED
|	**Cu**	**63**	**13.878**	ug/L	0.120	0	118	54505	5	KED
|	**Cu**	**65**	**14.082**	ug/L	0.676	4	63	26593	0	KED
|	**Zn**	**66**	**41.067**	ug/L	1.059	2	40	19088	4	KED
|	**Zn**	**67**	**40.045**	ug/L	0.688	1	5	3075	4	KED
⌊	**As**	**75**	**12.922**	ug/L	0.475	3	7	2951	1	KED
	Y	**89**		ug/L			512697	505764	4	Standard
	Kr	**83**		ug/L			65	73	27	Standard
⌈>	**In-1**	**115**		ug/L			11342	11214	0	KED
|	[redacted]	**111**	[redacted]	ug/L	0.244	1	6	2883	1	KED
⌊	**Cd**	**114**	**12.481**	ug/L	0.082	0	4	7151	1	KED
⌈>	**In**	**115**		ug/L			888503	826743	3	Standard
⌊	**Ag**	**107**	**11.854**	ug/L	0.162	1	236	208070	1	Standard
⌈>	**Tb**	**159**		ug/L			797843	804394	1	Standard
⌊	**Pb**	**208**	**12.232**	ug/L	0.321	2	255	782436	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Monday, March 06, 2023 17:20:16
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			36323	49546	3	Standard
	Cl	**37**		ug/L			4837250	4980830	1	Standard
⌈>	**Sc**	**45**		ug/L			768932	804430	1	Standard
|	**Cr**	**52**	**0.084**	ug/L	0.033	38	29685	33158	2	Standard
|	**Cr**	**53**	**0.469**	ug/L	0.009	2	273	1663	0	Standard
⌊	**Mn**	**55**	**311.846**	ug/L	5.412	1	1379	11214553	2	Standard
⌈>	**Ge**	**72**		ug/L			45127	44290	4	KED
|	**Ni**	**60**	**0.471**	ug/L	0.016	3	27	673	1	KED
|	**Ni**	**62**	**0.485**	ug/L	0.069	14	5	114	13	KED
|	**Cu**	**63**	**0.174**	ug/L	0.013	7	118	830	1	KED
|	**Cu**	**65**	**0.171**	ug/L	0.012	7	63	400	5	KED
|	**Zn**	**66**	**0.504**	ug/L	0.060	11	40	285	13	KED
|	**Zn**	**67**	**0.521**	ug/L	0.191	36	5	47	34	KED
⌊	[redacted]	**75**	[redacted]	ug/L	0.188	3	7	1331	5	KED
	Y	**89**		ug/L			512697	523590	0	Standard
	Kr	**83**		ug/L			65	77	14	Standard
⌈>	**In-1**	**115**		ug/L			11342	11851	1	KED
|	**Cd**	**111**	**-0.005**	ug/L	0.008	157	6	5	33	KED
⌊	**Cd**	**114**	**0.011**	ug/L	0.008	78	4	11	45	KED
⌈>	**In**	**115**		ug/L			888503	885860	1	Standard
⌊	**Ag**	**107**	**-0.001**	ug/L	0.000	15	236	209	0	Standard
⌈>	**Tb**	**159**		ug/L			797843	837291	5	Standard
⌊	**Pb**	**208**	**0.018**	ug/L	0.002	8	255	1492	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL5
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, March 06, 2023 17:25:59
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			36323	40702	1	Standard
	Cl	**37**		ug/L			4837250	4570526	4	Standard
⌈>	**Sc**	**45**		ug/L			768932	725752	5	Standard
|	**Cr**	**52**	**-0.019**	ug/L	0.006	29	29685	27587	4	Standard
|	**Cr**	**53**	**-0.007**	ug/L	0.006	89	273	240	8	Standard
⌊	**Mn**	**55**	**-0.001**	ug/L	0.001	209	1379	1280	2	Standard
⌈>	**Ge**	**72**		ug/L			45127	44113	3	KED
|	**Ni**	**60**	**0.001**	ug/L	0.003	351	27	27	17	KED
|	**Ni**	**62**	**0.029**	ug/L	0.022	75	5	12	39	KED
|	**Cu**	**63**	**0.002**	ug/L	0.002	139	118	122	8	KED
|	**Cu**	**65**	**-0.006**	ug/L	0.004	72	63	50	14	KED
|	**Zn**	**66**	**0.029**	ug/L	0.041	140	40	53	34	KED
|	**Zn**	**67**	**0.145**	ug/L	0.007	4	5	17	0	KED
⌊	**As**	**75**	**0.003**	ug/L	0.006	221	7	8	18	KED
	Y	**89**		ug/L			512697	473979	5	Standard
	Kr	**83**		ug/L			65	71	12	Standard
⌈>	**In-1**	**115**		ug/L			11342	12007	2	KED
|	**Cd**	**111**	**-0.007**	ug/L	0.016	236	6	5	73	KED
⌊	**Cd**	**114**	**0.008**	ug/L	0.013	155	4	9	80	KED
⌈>	**In**	**115**		ug/L			888503	848007	5	Standard
⌊	**Ag**	**107**	**-0.008**	ug/L	0.001	12	236	90	20	Standard
⌈>	**Tb**	**159**		ug/L			797843	770768	6	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	40	255	289	10	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV5
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, March 06, 2023 17:30:27
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			36323	37807	5	Standard
	Cl	**37**		ug/L			4837250	5067098	1	Standard
⎡>	**Sc**	**45**		ug/L			768932	746244	2	Standard
⎢	**Cr**	**52**	**49.382**	ug/L	0.558	1	29685	1175606	3	Standard
⎢	**Cr**	**53**	**49.556**	ug/L	0.900	1	273	135497	4	Standard
⎣	**Mn**	**55**	**50.457**	ug/L	0.701	1	1379	1684658	3	Standard
⎡>	**Ge**	**72**		ug/L			45127	44514	2	KED
⎢	**Ni**	**60**	**48.454**	ug/L	1.164	2	27	66908	4	KED
⎢	**Ni**	**62**	**48.364**	ug/L	0.674	1	5	10903	2	KED
⎢	**Cu**	**63**	**47.535**	ug/L	0.590	1	118	196367	3	KED
⎢	**Cu**	**65**	**49.014**	ug/L	0.129	0	63	97488	2	KED
⎢	**Zn**	**66**	**49.413**	ug/L	0.434	0	40	24189	2	KED
⎢	**Zn**	**67**	**50.004**	ug/L	0.472	0	5	4045	3	KED
⎣	**As**	**75**	**49.964**	ug/L	0.139	0	7	12009	2	KED
	Y	**89**		ug/L			512697	494633	1	Standard
	Kr	**83**		ug/L			65	78	20	Standard
⎡>	**In-1**	**115**		ug/L			11342	11726	3	KED
⎢	**Cd**	**111**	**49.670**	ug/L	0.853	1	6	12056	2	KED
⎣	**Cd**	**114**	**49.294**	ug/L	1.170	2	4	29509	2	KED
⎡>	**In**	**115**		ug/L			888503	877456	3	Standard
⎣	**Ag**	**107**	**49.037**	ug/L	0.387	0	236	913139	3	Standard
⎡>	**Tb**	**159**		ug/L			797843	816464	3	Standard
⎣	**Pb**	**208**	**48.582**	ug/L	1.859	3	255	3152115	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB5
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, March 06, 2023 17:37:38
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			36323	37355	3	Standard
	Cl	**37**		ug/L			4837250	4968764	3	Standard
⌈>	**Sc**	**45**		ug/L			768932	751076	3	Standard
|	**Cr**	**52**	**-0.053**	ug/L	0.007	12	29685	27754	3	Standard
|	**Cr**	**53**	**-0.012**	ug/L	0.002	17	273	232	6	Standard
⌊	**Mn**	**55**	**-0.011**	ug/L	0.001	10	1379	963	0	Standard
⌈>	**Ge**	**72**		ug/L			45127	44522	4	KED
|	**Ni**	**60**	**-0.002**	ug/L	0.002	81	27	23	12	KED
|	**Ni**	**62**	**0.014**	ug/L	0.010	68	5	8	24	KED
|	**Cu**	**63**	**-0.001**	ug/L	0.001	127	118	113	1	KED
|	**Cu**	**65**	**-0.004**	ug/L	0.006	153	63	54	23	KED
|	**Zn**	**66**	**0.001**	ug/L	0.016	1440	40	40	19	KED
|	**Zn**	**67**	**0.000**	ug/L	0.068	145185	5	5	100	KED
⌊	**As**	**75**	**0.003**	ug/L	0.012	412	7	8	36	KED
	Y	**89**		ug/L			512697	489285	3	Standard
	Kr	**83**		ug/L			65	74	14	Standard
⌈>	**In-1**	**115**		ug/L			11342	11821	4	KED
|	**Cd**	**111**	**-0.011**	ug/L	0.007	60	6	4	35	KED
⌊	**Cd**	**114**	**-0.003**	ug/L	0.002	56	4	2	43	KED
⌈>	**In**	**115**		ug/L			888503	862033	2	Standard
⌊	**Ag**	**107**	**0.003**	ug/L	0.001	30	236	288	4	Standard
⌈>	**Tb**	**159**		ug/L			797843	785569	5	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.001	58	255	304	8	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, March 06, 2023 17:43:02
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			36323	51983	0	Standard
	Cl	**37**		ug/L			4837250	5180464	0	Standard
>	**Sc**	**45**		ug/L			768932	758073	1	Standard
	Cr	**52**	**4.915**	ug/L	0.120	2	29685	145170	0	Standard
	Cr	**53**	**5.300**	ug/L	0.037	0	273	14957	1	Standard
	Mn	**55**	**76.769**	ug/L	2.516	3	1379	2601461	1	Standard
>	**Ge**	**72**		ug/L			45127	45237	1	KED
	Ni	**60**	**5.015**	ug/L	0.247	4	27	7056	4	KED
	Ni	**62**	**5.206**	ug/L	0.239	4	5	1197	3	KED
	[redacted]	**63**	[redacted]	ug/L	0.223	0	118	103730	0	KED
	Cu	**65**	**24.687**	ug/L	0.482	1	63	49923	1	KED
	Zn	**66**	**319.781**	ug/L	9.139	2	40	158846	2	KED
	Zn	**67**	**299.869**	ug/L	4.777	1	5	24620	0	KED
	As	**75**	**2.058**	ug/L	0.043	2	7	510	2	KED
	Y	**89**		ug/L			512697	510032	0	Standard
	Kr	**83**		ug/L			65	73	22	Standard
>	**In-1**	**115**		ug/L			11342	12014	1	KED
	Cd	**111**	**0.074**	ug/L	0.008	10	6	25	7	KED
	Cd	**114**	**0.076**	ug/L	0.009	11	4	51	8	KED
>	**In**	**115**		ug/L			888503	864626	3	Standard
	Ag	**107**	**0.028**	ug/L	0.001	3	236	735	5	Standard
>	**Tb**	**159**		ug/L			797843	804697	3	Standard
	Pb	**208**	**7.451**	ug/L	0.148	1	255	476778	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, March 06, 2023 17:48:30
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			36323	56792	1	Standard
	Cl	**37**		ug/L			4837250	5464306	3	Standard
⎡>	**Sc**	**45**		ug/L			768932	771306	5	Standard
⎢	**Cr**	**52**	**0.498**	ug/L	0.030	6	29685	41691	3	Standard
⎢	**Cr**	**53**	**0.870**	ug/L	0.017	1	273	2725	3	Standard
⎣	**Mn**	**55**	**4.796**	ug/L	0.109	2	1379	166606	3	Standard
⎡>	**Ge**	**72**		ug/L			45127	45003	3	KED
⎢	**Ni**	**60**	**0.764**	ug/L	0.011	1	27	1094	4	KED
⎢	**Ni**	**62**	**0.797**	ug/L	0.066	8	5	187	8	KED
⎢	[redacted]	**63**	[redacted]	ug/L	0.077	1	118	22168	3	KED
⎢	**Cu**	**65**	**5.371**	ug/L	0.131	2	63	10849	1	KED
⎢	[redacted]	**66**	[redacted]	ug/L	0.096	0	40	10153	3	KED
⎢	**Zn**	**67**	**20.208**	ug/L	0.477	2	5	1655	1	KED
⎣	**As**	**75**	**2.255**	ug/L	0.072	3	7	555	5	KED
	Y	**89**		ug/L			512697	493953	3	Standard
	Kr	**83**		ug/L			65	73	19	Standard
⎡>	**In-1**	**115**		ug/L			11342	11563	0	KED
⎢	**Cd**	**111**	**0.002**	ug/L	0.008	391	6	7	27	KED
⎣	**Cd**	**114**	**0.011**	ug/L	0.006	58	4	10	35	KED
⎡>	**In**	**115**		ug/L			888503	860549	2	Standard
⎣	**Ag**	**107**	**-0.003**	ug/L	0.002	61	236	180	16	Standard
⎡>	**Tb**	**159**		ug/L			797843	787210	3	Standard
⎣	**Pb**	**208**	**0.340**	ug/L	0.011	3	255	21500	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, March 06, 2023 17:54:10
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			36323	58766	2	Standard
	Cl	**37**		ug/L			4837250	5175977	1	Standard
⌈>	**Sc**	**45**		ug/L			768932	745333	0	Standard
|	**Cr**	**52**	**1.028**	ug/L	0.029	2	29685	52614	2	Standard
|	**Cr**	**53**	**1.374**	ug/L	0.018	1	273	4009	1	Standard
⌊	**Mn**	**55**	**20.434**	ug/L	0.564	2	1379	682078	2	Standard
⌈>	**Ge**	**72**		ug/L			45127	43770	2	KED
|	**Ni**	**60**	**0.895**	ug/L	0.012	1	27	1240	1	KED
|	**Ni**	**62**	**1.019**	ug/L	0.052	5	5	231	2	KED
|	[redacted]	**63**	[redacted]	ug/L	0.223	3	118	23900	5	KED
|	**Cu**	**65**	**6.131**	ug/L	0.112	1	63	12041	1	KED
|	[redacted]	**66**	[redacted]	ug/L	0.733	1	40	26500	2	KED
|	**Zn**	**67**	**52.298**	ug/L	0.857	1	5	4159	2	KED
⌊	**As**	**75**	**0.883**	ug/L	0.117	13	7	215	10	KED
	Y	**89**		ug/L			512697	495568	0	Standard
	Kr	**83**		ug/L			65	65	11	Standard
⌈>	**In-1**	**115**		ug/L			11342	11488	4	KED
|	**Cd**	**111**	**0.007**	ug/L	0.019	279	6	8	52	KED
⌊	**Cd**	**114**	**0.017**	ug/L	0.010	55	4	14	35	KED
⌈>	**In**	**115**		ug/L			888503	872590	1	Standard
⌊	**Ag**	**107**	**0.001**	ug/L	0.000	53	236	248	3	Standard
⌈>	**Tb**	**159**		ug/L			797843	788106	3	Standard
⌊	**Pb**	**208**	**0.542**	ug/L	0.017	3	255	34168	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Monday, March 06, 2023 17:58:51
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			36323	46074	1	Standard
Cl	37		ug/L			4837250	4911930	0	Standard
Sc	45		ug/L			768932	732797	1	Standard
[redacted]	52	[redacted]	ug/L	0.122	1	29685	228019	0	Standard
Cr	53	**8.689**	ug/L	0.016	0	273	23538	1	Standard
Mn	55	**6.189**	ug/L	0.099	1	1379	204003	1	Standard
Ge	72		ug/L			45127	43044	2	KED
[redacted]	60	[redacted]	ug/L	0.037	8	27	634	10	KED
Ni	62	**0.507**	ug/L	0.080	15	5	116	17	KED
[redacted]	63	[redacted]	ug/L	0.004	0	118	6169	2	KED
Cu	65	**1.560**	ug/L	0.073	4	63	3056	3	KED
[redacted]	66	[redacted]	ug/L	0.068	4	40	764	5	KED
Zn	67	**1.637**	ug/L	0.022	1	5	133	2	KED
[redacted]	75	[redacted]	ug/L	0.005	7	7	23	4	KED
Y	89		ug/L			512697	489167	2	Standard
Kr	83		ug/L			65	75	7	Standard
In-1	115		ug/L			11342	11076	1	KED
[redacted]	111	[redacted]	ug/L	0.003	72	6	7	7	KED
Cd	114	**0.009**	ug/L	0.009	104	4	9	56	KED
In	115		ug/L			888503	810765	1	Standard
Ag	107	**-0.007**	ug/L	0.000	6	236	100	6	Standard
Tb	159		ug/L			797843	775134	3	Standard
[redacted]	208	[redacted]	ug/L	0.001	7	255	888	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Monday, March 06, 2023 18:03:46
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			36323	47016	2	Standard
Cl	37		ug/L			4837250	4896120	2	Standard
Sc	45		ug/L			768932	740379	3	Standard
[redacted]	52	[redacted]	ug/L	0.061	0	29685	281907	3	Standard
Cr	53	10.936	ug/L	0.157	1	273	29861	2	Standard
Mn	55	6.346	ug/L	0.071	1	1379	211374	3	Standard
Ge	72		ug/L			45127	41477	0	KED
[redacted]	60	[redacted]	ug/L	0.040	7	27	671	6	KED
Ni	62	0.682	ug/L	0.104	15	5	148	15	KED
[redacted]	63	[redacted]	ug/L	0.026	1	118	7090	1	KED
Cu	65	1.837	ug/L	0.019	1	63	3460	1	KED
[redacted]	66	[redacted]	ug/L	0.117	5	40	1048	4	KED
Zn	67	2.022	ug/L	0.079	3	5	157	4	KED
[redacted]	75	[redacted]	ug/L	0.013	15	7	25	10	KED
Y	89		ug/L			512697	492492	2	Standard
Kr	83		ug/L			65	73	18	Standard
In-1	115		ug/L			11342	10914	0	KED
[redacted]	111	[redacted]	ug/L	0.007	240	6	5	28	KED
Cd	114	0.004	ug/L	0.008	186	4	6	67	KED
In	115		ug/L			888503	813085	3	Standard
Ag	107	-0.009	ug/L	0.000	1	236	64	5	Standard
Tb	159		ug/L			797843	785881	3	Standard
[redacted]	208	[redacted]	ug/L	0.001	6	255	961	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Monday, March 06, 2023 18:08:14
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			36323	53297	1	Standard
Cl	37		ug/L			4837250	4617066	2	Standard
Sc	45		ug/L			768932	709740	5	Standard
[redacted]	52	[redacted]	ug/L	0.107	2	29685	136037	3	Standard
Cr	53	4.873	ug/L	0.083	1	273	12889	4	Standard
Mn	55	8.300	ug/L	0.086	1	1379	264494	4	Standard
Ge	72		ug/L			45127	43081	3	KED
[redacted]	60	[redacted]	ug/L	0.063	7	27	1222	8	KED
Ni	62	0.928	ug/L	0.033	3	5	207	0	KED
[redacted]	63	[redacted]	ug/L	0.064	4	118	6284	3	KED
Cu	65	1.555	ug/L	0.048	3	63	3053	6	KED
[redacted]	66	[redacted]	ug/L	0.076	3	40	1162	6	KED
Zn	67	2.336	ug/L	0.107	4	5	187	2	KED
[redacted]	75	[redacted]	ug/L	0.021	25	7	26	16	KED
Y	89		ug/L			512697	468191	3	Standard
Kr	83		ug/L			65	73	22	Standard
In-1	115		ug/L			11342	10875	2	KED
[redacted]	111	[redacted]	ug/L	0.016	164	6	8	40	KED
Cd	114	0.002	ug/L	0.003	158	4	5	35	KED
In	115		ug/L			888503	805947	4	Standard
Ag	107	-0.008	ug/L	0.001	11	236	82	13	Standard
Tb	159		ug/L			797843	776455	4	Standard
[redacted]	208	[redacted]	ug/L	0.001	9	255	751	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Monday, March 06, 2023 18:12:41
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			36323	45424	3	Standard
	Cl	**37**		ug/L			4837250	4878398	2	Standard
>	**Sc**	**45**		ug/L			768932	751057	3	Standard
	[redacted]	**52**	[redacted]	ug/L	0.098	1	29685	235381	3	Standard
	Cr	**53**	**8.867**	ug/L	0.104	1	273	24607	3	Standard
	[redacted]	**55**	[redacted]	ug/L	0.069	1	1379	228197	4	Standard
>	**Ge**	**72**		ug/L			45127	41689	2	KED
	[redacted]	**60**	[redacted]	ug/L	0.042	7	27	773	8	KED
	Ni	**62**	**0.625**	ug/L	0.092	14	5	137	13	KED
	[redacted]	**63**	[redacted]	ug/L	0.059	3	118	7020	4	KED
	Cu	**65**	**1.812**	ug/L	0.065	3	63	3430	1	KED
	[redacted]	**66**	[redacted]	ug/L	0.123	4	40	1219	2	KED
	Zn	**67**	**2.442**	ug/L	0.167	6	5	189	4	KED
	[redacted]	**75**	[redacted]	ug/L	0.005	8	7	20	3	KED
	Y	**89**		ug/L			512697	500899	4	Standard
	Kr	**83**		ug/L			65	88	6	Standard
>	**In-1**	**115**		ug/L			11342	11348	3	KED
	[redacted]	**111**	[redacted]	ug/L	0.001	110	6	6	7	KED
	Cd	**114**	**0.007**	ug/L	0.006	90	4	8	47	KED
>	**In**	**115**		ug/L			888503	835895	2	Standard
	Ag	**107**	**-0.008**	ug/L	0.001	9	236	73	18	Standard
>	**Tb**	**159**		ug/L			797843	799584	3	Standard
	[redacted]	**208**	[redacted]	ug/L	0.005	6	255	4800	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Monday, March 06, 2023 18:17:09
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			36323	44368	1	Standard
Cl	37		ug/L			4837250	4850987	4	Standard
> Sc	45		ug/L			768932	737703	2	Standard
[redacted]	52	[redacted]	ug/L	0.228	2	29685	233697	0	Standard
Cr	53	8.881	ug/L	0.207	2	273	24204	0	Standard
[redacted]	55	[redacted]	ug/L	0.173	2	1379	221444	4	Standard
> Ge	72		ug/L			45127	42854	2	KED
[redacted]	60	[redacted]	ug/L	0.025	4	27	698	2	KED
Ni	62	0.578	ug/L	0.021	3	5	130	3	KED
[redacted]	63	[redacted]	ug/L	0.077	4	118	7164	3	KED
Cu	65	1.787	ug/L	0.050	2	63	3479	2	KED
[redacted]	66	[redacted]	ug/L	0.078	4	40	836	6	KED
Zn	67	1.672	ug/L	0.187	11	5	135	8	KED
[redacted]	75	[redacted]	ug/L	0.013	22	7	21	15	KED
Y	89		ug/L			512697	490486	2	Standard
Kr	83		ug/L			65	66	17	Standard
> In-1	115		ug/L			11342	11147	1	KED
[redacted]	111	[redacted]	ug/L	0.004	55	6	4	20	KED
Cd	114	0.006	ug/L	0.008	127	4	7	58	KED
> In	115		ug/L			888503	833121	3	Standard
Ag	107	-0.008	ug/L	0.000	2	236	88	6	Standard
> Tb	159		ug/L			797843	798747	2	Standard
[redacted]	208	[redacted]	ug/L	0.000	2	255	880	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Monday, March 06, 2023 18:21:36
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			36323	43206	1	Standard
Cl	37		ug/L			4837250	4782817	1	Standard
Sc	45		ug/L			768932	740891	1	Standard
[redacted]	52	[redacted]	ug/L	0.252	1	29685	509785	1	Standard
Cr	53	20.534	ug/L	0.370	1	273	55886	2	Standard
[redacted]	55	[redacted]	ug/L	0.425	2	1379	626441	3	Standard
Ge	72		ug/L			45127	40732	3	KED
[redacted]	60	[redacted]	ug/L	0.351	2	27	15707	5	KED
Ni	62	12.351	ug/L	0.246	1	5	2551	3	KED
[redacted]	63	[redacted]	ug/L	0.202	1	118	51134	2	KED
Cu	65	13.612	ug/L	0.264	1	63	24824	5	KED
[redacted]	66	[redacted]	ug/L	0.262	0	40	17683	3	KED
Zn	67	34.742	ug/L	1.416	4	5	2572	4	KED
[redacted]	75	[redacted]	ug/L	0.181	1	7	2819	2	KED
Y	89		ug/L			512697	485622	3	Standard
Kr	83		ug/L			65	81	8	Standard
In-1	115		ug/L			11342	10677	2	KED
[redacted]	111	[redacted]	ug/L	0.096	0	6	2736	2	KED
Cd	114	12.366	ug/L	0.313	2	4	6744	2	KED
In	115		ug/L			888503	827549	2	Standard
Ag	107	11.058	ug/L	0.035	0	236	194338	2	Standard
Tb	159		ug/L			797843	792415	4	Standard
[redacted]	208	[redacted]	ug/L	0.454	3	255	755243	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Monday, March 06, 2023 18:27:22
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			36323	38434	3	Standard
	Cl	**37**		ug/L			4837250	4745715	1	Standard
⎡>	**Sc**	**45**		ug/L			768932	733738	2	Standard
⎢	**Cr**	**52**	**1.023**	ug/L	0.047	4	29685	51665	2	Standard
⎢	**Cr**	**53**	**1.116**	ug/L	0.029	2	273	3253	4	Standard
⎣	**Mn**	**55**	**16.437**	ug/L	0.230	1	1379	540232	1	Standard
⎡>	**Ge**	**72**		ug/L			45127	45219	2	KED
⎢	**Ni**	**60**	**1.052**	ug/L	0.027	2	27	1501	3	KED
⎢	**Ni**	**62**	**1.013**	ug/L	0.063	6	5	237	5	KED
⎢	**Cu**	**63**	**4.908**	ug/L	0.154	3	118	20691	2	KED
⎢	**Cu**	**65**	**4.975**	ug/L	0.165	3	63	10106	3	KED
⎢	[redacted]	**66**	[redacted]	ug/L	1.677	2	40	32565	3	KED
⎢	**Zn**	**67**	**60.066**	ug/L	0.421	0	5	4934	2	KED
⎣	**As**	**75**	**0.442**	ug/L	0.026	5	7	115	5	KED
	Y	**89**		ug/L			512697	489928	2	Standard
	Kr	**83**		ug/L			65	64	2	Standard
⎡>	**In-1**	**115**		ug/L			11342	11664	1	KED
⎢	**Cd**	**111**	**0.009**	ug/L	0.013	146	6	8	32	KED
⎣	**Cd**	**114**	**0.022**	ug/L	0.012	56	4	17	42	KED
⎡>	**In**	**115**		ug/L			888503	868513	3	Standard
⎣	**Ag**	**107**	**0.002**	ug/L	0.001	44	236	273	9	Standard
⎡>	**Tb**	**159**		ug/L			797843	798880	1	Standard
⎣	**Pb**	**208**	**1.578**	ug/L	0.025	1	255	100491	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV6
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, March 06, 2023 18:31:50
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			36323	36306	2	Standard
	Cl	**37**		ug/L			4837250	4973842	3	Standard
⎡>	**Sc**	**45**		ug/L			768932	749653	2	Standard
⎢	**Cr**	**52**	**50.179**	ug/L	0.633	1	29685	1199349	2	Standard
⎢	**Cr**	**53**	**48.812**	ug/L	0.554	1	273	134031	1	Standard
⎣	**Mn**	**55**	**49.713**	ug/L	0.121	0	1379	1667052	1	Standard
⎡>	**Ge**	**72**		ug/L			45127	44540	2	KED
⎢	**Ni**	**60**	**47.074**	ug/L	1.165	2	27	65034	4	KED
⎢	**Ni**	**62**	**46.681**	ug/L	1.328	2	5	10534	4	KED
⎢	**Cu**	**63**	**46.529**	ug/L	0.236	0	118	192314	3	KED
⎢	**Cu**	**65**	**46.900**	ug/L	0.800	1	63	93362	4	KED
⎢	**Zn**	**66**	**48.860**	ug/L	1.969	4	40	23922	3	KED
⎢	**Zn**	**67**	**47.916**	ug/L	2.029	4	5	3876	2	KED
⎣	**As**	**75**	**49.023**	ug/L	1.304	2	7	11790	3	KED
	Y	**89**		ug/L			512697	503204	2	Standard
	Kr	**83**		ug/L			65	77	21	Standard
⎡>	**In-1**	**115**		ug/L			11342	11276	2	KED
⎢	**Cd**	**111**	**49.313**	ug/L	0.592	1	6	11512	1	KED
⎣	**Cd**	**114**	**48.996**	ug/L	1.402	2	4	28204	1	KED
⎡>	**In**	**115**		ug/L			888503	875077	2	Standard
⎣	**Ag**	**107**	**48.394**	ug/L	0.393	0	236	898596	2	Standard
⎡>	**Tb**	**159**		ug/L			797843	838095	2	Standard
⎣	**Pb**	**208**	**47.470**	ug/L	1.838	3	255	3161992	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB6
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, March 06, 2023 18:39:02
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			36323	35843	3	Standard
	Cl	**37**		ug/L			4837250	4897188	3	Standard
⎡>	**Sc**	**45**		ug/L			768932	717811	4	Standard
⎢	**Cr**	**52**	**-0.013**	ug/L	0.035	266	29685	27398	2	Standard
⎢	**Cr**	**53**	**-0.013**	ug/L	0.004	27	273	221	2	Standard
⎣	**Mn**	**55**	**-0.013**	ug/L	0.000	2	1379	885	4	Standard
⎡>	**Ge**	**72**		ug/L			45127	43729	2	KED
⎢	**Ni**	**60**	**-0.001**	ug/L	0.008	1082	27	25	43	KED
⎢	**Ni**	**62**	**0.024**	ug/L	0.022	92	5	10	44	KED
⎢	**Cu**	**63**	**-0.002**	ug/L	0.004	172	118	106	16	KED
⎢	**Cu**	**65**	**-0.009**	ug/L	0.005	57	63	43	24	KED
⎢	**Zn**	**66**	**0.003**	ug/L	0.006	229	40	40	7	KED
⎢	**Zn**	**67**	**0.042**	ug/L	0.014	32	5	8	12	KED
⎣	**As**	**75**	**0.005**	ug/L	0.012	234	7	8	30	KED
	Y	**89**		ug/L			512697	464424	3	Standard
	Kr	**83**		ug/L			65	47	16	Standard
⎡>	**In-1**	**115**		ug/L			11342	11739	2	KED
⎢	**Cd**	**111**	**-0.004**	ug/L	0.015	421	6	6	59	KED
⎣	**Cd**	**114**	**0.006**	ug/L	0.008	129	4	8	55	KED
⎡>	**In**	**115**		ug/L			888503	851050	1	Standard
⎣	**Ag**	**107**	**0.005**	ug/L	0.002	34	236	319	10	Standard
⎡>	**Tb**	**159**		ug/L			797843	778054	4	Standard
⎣	**Pb**	**208**	**0.000**	ug/L	0.000	38	255	274	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, March 06, 2023 18:47:30
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	**13**		ug/L			36323	46201	2	Standard
Cl	**37**		ug/L			4837250	4520303	2	Standard
Sc	**45**		ug/L			768932	655694	2	Standard
[redacted]	**52**	[redacted]	ug/L	0.025	28	29685	27080	2	Standard
Cr	**53**	**0.035**	ug/L	0.004	11	273	317	6	Standard
Mn	**55**	**0.205**	ug/L	0.009	4	1379	7190	2	Standard
Ge	**72**		ug/L			45127	44334	1	KED
[redacted]	**60**	[redacted]	ug/L	0.007	52	27	46	24	KED
Ni	**62**	**0.026**	ug/L	0.026	99	5	11	50	KED
[redacted]	**63**	[redacted]	ug/L	0.006	27	118	212	10	KED
Cu	**65**	**0.020**	ug/L	0.007	36	63	102	12	KED
[redacted]	**66**	[redacted]	ug/L	0.077	15	40	278	11	KED
Zn	**67**	**0.410**	ug/L	0.127	30	5	38	28	KED
[redacted]	**75**	[redacted]	ug/L	0.004	56	7	9	8	KED
Y	**89**		ug/L			512697	433082	3	Standard
Kr	**83**		ug/L			65	71	16	Standard
In-1	**115**		ug/L			11342	11567	1	KED
[redacted]	**111**	[redacted]	ug/L	0.013	1930	6	6	49	KED
Cd	**114**	**0.005**	ug/L	0.003	66	4	7	27	KED
In	**115**		ug/L			888503	798265	3	Standard
Ag	**107**	**-0.003**	ug/L	0.001	50	236	168	11	Standard
Tb	**159**		ug/L			797843	729482	5	Standard
[redacted]	**208**	[redacted]	ug/L	0.001	8	255	940	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, March 06, 2023 18:51:57
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			36323	51223	1	Standard
	Cl	**37**		ug/L			4837250	4791702	1	Standard
>	**Sc**	**45**		ug/L			768932	708931	7	Standard
	[redacted]	**52**	[redacted]	ug/L	0.993	3	29685	604674	4	Standard
	Cr	**53**	**25.627**	ug/L	1.342	5	273	66496	2	Standard
	Mn	**55**	**26.594**	ug/L	1.057	3	1379	842268	3	Standard
>	**Ge**	**72**		ug/L			45127	43145	1	KED
	[redacted]	**60**	[redacted]	ug/L	0.367	1	27	32709	0	KED
	Ni	**62**	**24.409**	ug/L	1.055	4	5	5333	2	KED
	[redacted]	**63**	[redacted]	ug/L	0.599	2	118	98511	1	KED
	Cu	**65**	**24.903**	ug/L	0.318	1	63	48029	1	KED
	[redacted]	**66**	[redacted]	ug/L	1.847	2	40	38476	2	KED
	Zn	**67**	**75.022**	ug/L	0.818	1	5	5878	0	KED
	[redacted]	**75**	[redacted]	ug/L	0.538	2	7	5864	0	KED
	Y	**89**		ug/L			512697	456441	4	Standard
	Kr	**83**		ug/L			65	77	19	Standard
>	**In-1**	**115**		ug/L			11342	11505	0	KED
	[redacted]	**111**	[redacted]	ug/L	0.860	3	6	6016	2	KED
	Cd	**114**	**25.018**	ug/L	0.413	1	4	14702	1	KED
>	**In**	**115**		ug/L			888503	833784	7	Standard
	Ag	**107**	**26.498**	ug/L	0.961	3	236	468127	4	Standard
>	**Tb**	**159**		ug/L			797843	764678	4	Standard
	[redacted]	**208**	[redacted]	ug/L	0.488	1	255	1590907	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23B0581-01
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, March 06, 2023 18:57:59

DEL

Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			36323	44244	1	Standard
	Cl	**37**		ug/L			4837250	4678563	5	Standard
⌈>	**Sc**	**45**		ug/L			768932	718125	3	Standard
|	**Cr**	**52**	**4.794**	ug/L	0.100	2	29685	134796	1	Standard
|	**Cr**	**53**	**4.890**	ug/L	0.050	1	273	13090	2	Standard
⌊	**Mn**	**55**	**25.609**	ug/L	0.250	0	1379	823448	4	Standard
⌈>	**Ge**	**72**		ug/L			45127	44190	3	KED
|	**Ni**	**60**	**4.410**	ug/L	0.126	2	27	6064	1	KED
|	**Ni**	**62**	**15.576**	ug/L	0.749	4	5	3493	7	KED
|	**Cu**	**63**	**4728.574**	ug/L	92.566	1	118	19371217	2	KED
|	**Cu**	**65**	**4751.937**	ug/L	61.037	1	63	9373760	2	KED
|	**Zn**	**66**	**1322.209**	ug/L	14.808	1	40	641430	2	KED
|	**Zn**	**67**	**1219.150**	ug/L	18.452	1	5	97749	2	KED
⌊	**As**	**75**	**0.227**	ug/L	0.010	4	7	61	1	KED
	Y	**89**		ug/L			512697	474615	4	Standard
	Kr	**83**		ug/L			65	76	12	Standard
⌈>	**In-1**	**115**		ug/L			11342	12014	2	KED
|	**Cd**	**111**	**0.055**	ug/L	0.021	39	6	20	25	KED
⌊	**Cd**	**114**	**0.056**	ug/L	0.016	28	4	38	22	KED
⌈>	**In**	**115**		ug/L			888503	830094	2	Standard
⌊	**Ag**	**107**	**1.073**	ug/L	0.004	0	236	19124	2	Standard
⌈>	**Tb**	**159**		ug/L			797843	788416	4	Standard
⌊	**Pb**	**208**	**28.078**	ug/L	0.750	2	255	1759102	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23B0581-02
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, March 06, 2023 19:03:38

DEL

Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			36323	43198	1	Standard
	Cl	**37**		ug/L			4837250	5265614	1	Standard
⌈>	**Sc**	**45**		ug/L			768932	719952	1	Standard
|	**Cr**	**52**	**0.024**	ug/L	0.015	63	29685	28334	2	Standard
|	**Cr**	**53**	**0.696**	ug/L	0.010	1	273	2086	1	Standard
⌊	**Mn**	**55**	**12.389**	ug/L	0.280	2	1379	400032	3	Standard
⌈>	**Ge**	**72**		ug/L			45127	44662	0	KED
|	**Ni**	**60**	**0.243**	ug/L	0.010	4	27	363	4	KED
|	**Ni**	**62**	**0.304**	ug/L	0.043	14	5	74	12	KED
|	**Cu**	**63**	**19.093**	ug/L	0.116	0	118	79195	0	KED
|	**Cu**	**65**	**19.347**	ug/L	0.342	1	63	38641	0	KED
|	**Zn**	**66**	**34.041**	ug/L	0.484	1	40	16732	1	KED
|	**Zn**	**67**	**30.929**	ug/L	0.411	1	5	2512	2	KED
⌊	**As**	**75**	**0.015**	ug/L	0.015	100	7	11	31	KED
	Y	**89**		ug/L			512697	468631	1	Standard
	Kr	**83**		ug/L			65	70	16	Standard
⌈>	**In-1**	**115**		ug/L			11342	11587	3	KED
|	**Cd**	**111**	**0.021**	ug/L	0.030	144	6	11	59	KED
⌊	**Cd**	**114**	**0.009**	ug/L	0.002	20	4	9	12	KED
⌈>	**In**	**115**		ug/L			888503	819761	2	Standard
⌊	**Ag**	**107**	**0.004**	ug/L	0.001	32	236	289	10	Standard
⌈>	**Tb**	**159**		ug/L			797843	764333	3	Standard
⌊	**Pb**	**208**	**0.941**	ug/L	0.030	3	255	57376	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Monday, March 06, 2023 19:08:06
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			36323	45217	3	Standard
Cl	37		ug/L			4837250	4944947	2	Standard
> Sc	45		ug/L			768932	738112	1	Standard
[redacted]	52	[redacted]	ug/L	0.012	308	29685	28407	1	Standard
Cr	53	0.412	ug/L	0.013	3	273	1374	3	Standard
Mn	55	23.545	ug/L	0.273	1	1379	778066	1	Standard
> Ge	72		ug/L			45127	43050	1	KED
[redacted]	60	[redacted]	ug/L	0.015	1	27	1735	2	KED
Ni	62	1.237	ug/L	0.061	4	5	274	3	KED
[redacted]	63	[redacted]	ug/L	0.153	1	118	56301	2	KED
Cu	65	14.394	ug/L	0.701	4	63	27740	6	KED
Zn	66	91.347	ug/L	2.482	2	40	43228	4	KED
[redacted]	[redacted]	[redacted]	ug/L	1.516	1	5	6386	3	KED
As	75	0.018	ug/L	0.013	73	7	11	26	KED
Y	89		ug/L			512697	471097	2	Standard
Kr	83		ug/L			65	73	19	Standard
> In-1	115		ug/L			11342	11509	3	KED
[redacted]	111	[redacted]	ug/L	0.014	146	6	8	32	KED
Cd	114	0.007	ug/L	0.002	29	4	8	12	KED
> In	115		ug/L			888503	864199	3	Standard
Ag	107	0.006	ug/L	0.001	16	236	340	6	Standard
> Tb	159		ug/L			797843	793908	5	Standard
[redacted]	208	[redacted]	ug/L	0.006	2	255	17651	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Monday, March 06, 2023 19:13:58
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			36323	43214	2	Standard
Cl	37		ug/L			4837250	4930770	1	Standard
Sc	45		ug/L			768932	718657	0	Standard
[redacted]	52	[redacted]	ug/L	0.021	201	29685	27978	2	Standard
Cr	53	0.442	ug/L	0.014	3	273	1416	1	Standard
Mn	55	24.667	ug/L	0.789	3	1379	793487	2	Standard
Ge	72		ug/L			45127	45215	1	KED
[redacted]	60	[redacted]	ug/L	0.028	2	27	1904	3	KED
Ni	62	1.335	ug/L	0.042	3	5	311	1	KED
[redacted]	63	[redacted]	ug/L	0.118	0	118	57505	0	KED
Cu	65	13.563	ug/L	0.126	0	63	27448	2	KED
Zn	66	95.397	ug/L	2.375	2	40	47409	3	KED
[redacted]	[redacted]	[redacted]	ug/L	1.199	1	5	7057	0	KED
As	75	0.019	ug/L	0.001	7	7	12	2	KED
Y	89		ug/L			512697	475446	1	Standard
Kr	83		ug/L			65	67	4	Standard
In-1	115		ug/L			11342	11838	1	KED
[redacted]	111	[redacted]	ug/L	0.015	1000	6	7	49	KED
Cd	114	0.009	ug/L	0.011	120	4	9	67	KED
In	115		ug/L			888503	858556	1	Standard
Ag	107	0.005	ug/L	0.002	32	236	323	9	Standard
Tb	159		ug/L			797843	786043	3	Standard
[redacted]	208	[redacted]	ug/L	0.009	3	255	17867	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Monday, March 06, 2023 19:18:25
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			36323	45644	3	Standard
Cl	37		ug/L			4837250	5099374	0	Standard
> Sc	45		ug/L			768932	726175	1	Standard
[redacted]	52	[redacted]	ug/L	0.022	1	29685	57028	1	Standard
Cr	53	1.735	ug/L	0.036	2	273	4861	0	Standard
Mn	55	25.550	ug/L	0.782	3	1379	830343	1	Standard
> Ge	72		ug/L			45127	44771	1	KED
[redacted]	60	[redacted]	ug/L	0.047	1	27	3516	1	KED
Ni	62	2.548	ug/L	0.122	4	5	582	3	KED
[redacted] STL	63	[redacted]	ug/L	0.262	1	118	59942	2	KED
Cu	65	14.680	ug/L	0.335	2	63	29404	1	KED
Zn	66	98.653	ug/L	0.835	0	40	48531	0	KED
[redacted] STL [redacted]		[redacted]	ug/L	1.481	1	5	7154	1	KED
As	75	1.313	ug/L	0.083	6	7	325	6	KED
Y	89		ug/L			512697	467599	0	Standard
Kr	83		ug/L			65	63	12	Standard
> In-1	115		ug/L			11342	10568	6	KED
[redacted]	111	[redacted]	ug/L	0.120	9	6	280	9	KED
Cd	114	1.241	ug/L	0.055	4	4	672	4	KED
> In	115		ug/L			888503	841674	2	Standard
Ag	107	1.281	ug/L	0.011	0	236	23088	1	Standard
> Tb	159		ug/L			797843	774003	3	Standard
[redacted]	208	[redacted]	ug/L	0.069	4	255	95864	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Monday, March 06, 2023 19:25:34
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			36323	66691	3	Standard
	Cl	**37**		ug/L			4837250	4623715	2	Standard
>	**Sc**	**45**		ug/L			768932	730713	3	Standard
	Cr	**52**	**29.860**	ug/L	0.493	1	29685	706847	1	Standard
	Cr	**53**	**29.089**	ug/L	0.307	1	273	77955	2	Standard
	Mn	**55**	**7.438**	ug/L	0.118	1	1379	244152	1	Standard
>	**Ge**	**72**		ug/L			45127	43569	1	KED
	Ni	**60**	**0.208**	ug/L	0.011	5	27	306	5	KED
	Ni	**62**	**0.185**	ug/L	0.046	24	5	46	21	KED
	Cu	**63**	**0.519**	ug/L	0.012	2	118	2212	3	KED
	Cu	**65**	**0.524**	ug/L	0.031	5	63	1080	4	KED
	Zn	**66**	**42.097**	ug/L	0.586	1	40	20176	2	KED
	Zn	**67**	**38.811**	ug/L	1.255	3	5	3073	2	KED
	As	**75**	**0.042**	ug/L	0.004	9	7	17	6	KED
	Y	**89**		ug/L			512697	478702	3	Standard
	Kr	**83**		ug/L			65	64	10	Standard
>	**In-1**	**115**		ug/L			11342	12299	1	KED
	[redacted]	**111**	[redacted]	ug/L	0.007	2	6	80	2	KED
	Cd	**114**	**0.252**	ug/L	0.040	15	4	162	14	KED
>	**In**	**115**		ug/L			888503	851740	3	Standard
	Ag	**107**	**0.009**	ug/L	0.003	32	236	393	13	Standard
>	**Tb**	**159**		ug/L			797843	783671	5	Standard
	Pb	**208**	**0.051**	ug/L	0.003	5	255	3426	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Monday, March 06, 2023 19:31:25
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	**13**		ug/L			36323	44244	0	Standard
Cl	**37**		ug/L			4837250	4763650	1	Standard
Sc	**45**		ug/L			768932	732730	2	Standard
[redacted]	**52**	[redacted]	ug/L	0.015	1	29685	54359	3	Standard
Cr	**53**	**1.454**	ug/L	0.046	3	273	4152	0	Standard
Mn	**55**	**2.930**	ug/L	0.069	2	1379	97225	0	Standard
Ge	**72**		ug/L			45127	43779	3	KED
[redacted]	**60**	[redacted]	ug/L	0.128	7	27	2439	6	KED
Ni	**62**	**1.959**	ug/L	0.142	7	5	439	6	KED
[redacted]	**63**	[redacted]	ug/L	0.218	2	118	39323	1	KED
Cu	**65**	**9.754**	ug/L	0.538	5	63	19108	3	KED
[redacted]	**66**	[redacted]	ug/L	0.321	4	40	3765	2	KED
Zn	**67**	**7.388**	ug/L	0.180	2	5	592	3	KED
As	**75**	**0.136**	ug/L	0.015	10	7	39	7	KED
Y	**89**		ug/L			512697	470099	0	Standard
Kr	**83**		ug/L			65	73	23	Standard
In-1	**115**		ug/L			11342	11631	2	KED
Cd	**111**	**0.006**	ug/L	0.009	152	6	8	24	KED
Cd	**114**	**0.005**	ug/L	0.005	88	4	7	38	KED
In	**115**		ug/L			888503	832833	3	Standard
Ag	**107**	**-0.003**	ug/L	0.001	41	236	168	9	Standard
Tb	**159**		ug/L			797843	783398	4	Standard
Pb	**208**	**0.063**	ug/L	0.001	2	255	4169	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL7
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, March 06, 2023 19:36:18
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			36323	38930	3	Standard
	Cl	**37**		ug/L			4837250	4672291	3	Standard
⌈>	**Sc**	**45**		ug/L			768932	710436	3	Standard
|	**Cr**	**52**	**0.088**	ug/L	0.047	53	29685	29365	4	Standard
|	**Cr**	**53**	**0.007**	ug/L	0.009	116	273	271	4	Standard
⌊	**Mn**	**55**	**0.006**	ug/L	0.001	19	1379	1473	3	Standard
⌈>	**Ge**	**72**		ug/L			45127	43866	0	KED
|	**Ni**	**60**	**0.011**	ug/L	0.008	74	27	41	27	KED
|	**Ni**	**62**	**0.038**	ug/L	0.018	47	5	13	28	KED
|	**Cu**	**63**	**0.006**	ug/L	0.002	39	118	140	6	KED
|	**Cu**	**65**	**0.004**	ug/L	0.006	152	63	69	18	KED
|	**Zn**	**66**	**0.128**	ug/L	0.026	20	40	100	12	KED
|	**Zn**	**67**	**0.185**	ug/L	0.068	36	5	20	27	KED
⌊	**As**	**75**	**0.000**	ug/L	0.009	3422	7	7	27	KED
	Y	**89**		ug/L			512697	464398	4	Standard
	Kr	**83**		ug/L			65	66	38	Standard
⌈>	**In-1**	**115**		ug/L			11342	11641	2	KED
|	**Cd**	**111**	**-0.006**	ug/L	0.010	165	6	5	44	KED
⌊	**Cd**	**114**	**-0.001**	ug/L	0.008	1112	4	4	114	KED
⌈>	**In**	**115**		ug/L			888503	841345	3	Standard
⌊	**Ag**	**107**	**-0.008**	ug/L	0.000	3	236	73	6	Standard
⌈>	**Tb**	**159**		ug/L			797843	766194	0	Standard
⌊	**Pb**	**208**	**0.003**	ug/L	0.001	37	255	418	15	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV7
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, March 06, 2023 19:40:46
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			36323	36282	0	Standard
	Cl	**37**		ug/L			4837250	5031983	3	Standard
⎡>	**Sc**	**45**		ug/L			768932	720219	4	Standard
⎢	**Cr**	**52**	**49.729**	ug/L	1.287	2	29685	1141835	3	Standard
⎢	**Cr**	**53**	**48.829**	ug/L	1.193	2	273	128789	3	Standard
⎣	**Mn**	**55**	**50.224**	ug/L	0.580	1	1379	1617562	3	Standard
⎡>	**Ge**	**72**		ug/L			45127	43458	2	KED
⎢	**Ni**	**60**	**48.047**	ug/L	0.356	0	27	64742	2	KED
⎢	**Ni**	**62**	**48.543**	ug/L	0.754	1	5	10681	1	KED
⎢	**Cu**	**63**	**47.674**	ug/L	0.181	0	118	192253	3	KED
⎢	**Cu**	**65**	**48.759**	ug/L	0.394	0	63	94663	2	KED
⎢	**Zn**	**66**	**49.393**	ug/L	0.752	1	40	23606	3	KED
⎢	**Zn**	**67**	**49.738**	ug/L	0.572	1	5	3927	2	KED
⎣	**As**	**75**	**49.889**	ug/L	0.628	1	7	11705	1	KED
	Y	**89**		ug/L			512697	467578	4	Standard
	Kr	**83**		ug/L			65	67	7	Standard
⎡>	**In-1**	**115**		ug/L			11342	11589	2	KED
⎢	**Cd**	**111**	**49.432**	ug/L	1.010	2	6	11861	2	KED
⎣	**Cd**	**114**	**49.381**	ug/L	1.348	2	4	29215	1	KED
⎡>	**In**	**115**		ug/L			888503	835486	3	Standard
⎣	**Ag**	**107**	**49.695**	ug/L	0.193	0	236	880974	3	Standard
⎡>	**Tb**	**159**		ug/L			797843	777862	4	Standard
⎣	**Pb**	**208**	**48.899**	ug/L	1.314	2	255	3022147	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB7
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, March 06, 2023 19:47:58
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			36323	33392	3	Standard
	Cl	**37**		ug/L			4837250	4785494	2	Standard
>	**Sc**	**45**		ug/L			768932	679825	5	Standard
	Cr	**52**	**-0.005**	ug/L	0.006	124	29685	26143	6	Standard
	Cr	**53**	**-0.001**	ug/L	0.007	551	273	238	11	Standard
	Mn	**55**	**-0.001**	ug/L	0.001	37	1379	1176	7	Standard
>	**Ge**	**72**		ug/L			45127	42203	6	KED
	Ni	**60**	**-0.001**	ug/L	0.006	552	27	24	31	KED
	Ni	**62**	**0.005**	ug/L	0.007	145	5	6	17	KED
	Cu	**63**	**0.004**	ug/L	0.001	20	118	125	6	KED
	Cu	**65**	**-0.000**	ug/L	0.005	1033	63	58	16	KED
	Zn	**66**	**0.180**	ug/L	0.011	6	40	121	2	KED
	Zn	**67**	**0.185**	ug/L	0.062	33	5	19	29	KED
	As	**75**	**0.002**	ug/L	0.006	239	7	7	15	KED
	Y	**89**		ug/L			512697	446284	6	Standard
	Kr	**83**		ug/L			65	61	21	Standard
>	**In-1**	**115**		ug/L			11342	11546	3	KED
	Cd	**111**	**0.012**	ug/L	0.014	125	6	9	36	KED
	Cd	**114**	**0.002**	ug/L	0.006	332	4	5	68	KED
>	**In**	**115**		ug/L			888503	803040	5	Standard
	Ag	**107**	**0.003**	ug/L	0.000	3	236	267	5	Standard
>	**Tb**	**159**		ug/L			797843	732756	7	Standard
	Pb	**208**	**0.003**	ug/L	0.000	5	255	424	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Monday, March 06, 2023 19:52:26
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			36323	48889	0	Standard
Cl	37		ug/L			4837250	4890062	1	Standard
Sc	45		ug/L			768932	729968	0	Standard
[redacted]	52	[redacted]	ug/L	0.023	66	29685	28967	2	Standard
Cr	53	0.002	ug/L	0.011	544	273	264	11	Standard
Mn	55	-0.010	ug/L	0.000	0	1379	972	0	Standard
Ge	72		ug/L			45127	43022	1	KED
Ni	60	0.047	ug/L	0.019	40	27	88	29	KED
Ni	62	0.089	ug/L	0.040	44	5	24	35	KED
[redacted]	63	[redacted]	ug/L	0.007	1062	118	110	25	KED
Cu	65	-0.003	ug/L	0.007	227	63	54	22	KED
[redacted]	66	[redacted]	ug/L	0.052	32	40	113	21	KED
Zn	67	0.207	ug/L	0.018	8	5	21	5	KED
[redacted]	75	[redacted]	ug/L	0.006	94	7	9	15	KED
Y	89		ug/L			512697	470502	2	Standard
Kr	83		ug/L			65	54	16	Standard
In-1	115		ug/L			11342	11324	3	KED
[redacted]	111	[redacted]	ug/L	0.014	165	6	4	69	KED
Cd	114	0.010	ug/L	0.007	73	4	9	39	KED
In	115		ug/L			888503	857828	1	Standard
[redacted]	107	[redacted]	ug/L	0.002	106	236	198	16	Standard
Tb	159		ug/L			797843	772827	3	Standard
[redacted]	208	[redacted]	ug/L	0.000	4	255	612	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Monday, March 06, 2023 19:56:54
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			36323	47994	0	Standard
Cl	37		ug/L			4837250	4899199	2	Standard
Sc	45		ug/L			768932	715433	3	Standard
[redacted]	52	[redacted]	ug/L	0.644	2	29685	625358	2	Standard
Cr	53	26.768	ug/L	0.952	3	273	70220	0	Standard
Mn	55	26.994	ug/L	0.431	1	1379	864223	1	Standard
Ge	72		ug/L			45127	43893	1	KED
Ni	60	25.663	ug/L	0.552	2	27	34935	1	KED
Ni	62	26.107	ug/L	0.538	2	5	5806	3	KED
[redacted]	63	[redacted]	ug/L	0.432	1	118	104273	1	KED
Cu	65	25.946	ug/L	0.283	1	63	50918	2	KED
[redacted]	66	[redacted]	ug/L	0.166	0	40	38629	1	KED
Zn	67	75.821	ug/L	2.180	2	5	6045	3	KED
[redacted]	75	[redacted]	ug/L	0.290	1	7	6010	2	KED
Y	89		ug/L			512697	472721	2	Standard
Kr	83		ug/L			65	61	11	Standard
In-1	115		ug/L			11342	11751	3	KED
[redacted]	111	[redacted]	ug/L	0.596	2	6	6273	1	KED
Cd	114	25.331	ug/L	1.073	4	4	15187	1	KED
In	115		ug/L			888503	843478	3	Standard
[redacted]	107	[redacted]	ug/L	0.837	3	236	479510	0	Standard
Tb	159		ug/L			797843	771170	4	Standard
[redacted]	208	[redacted]	ug/L	0.623	2	255	1646985	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Monday, March 06, 2023 20:01:21
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			36323	47090	2	Standard
	Cl	**37**		ug/L			4837250	4820773	3	Standard
⎡>	**Sc**	**45**		ug/L			768932	691403	2	Standard
⎢	**Cr**	**52**	**0.058**	ug/L	0.026	45	29685	27927	2	Standard
⎢	**Cr**	**53**	**0.001**	ug/L	0.010	1297	273	247	13	Standard
⎣	**Mn**	**55**	**-0.005**	ug/L	0.001	18	1379	1082	4	Standard
⎡>	**Ge**	**72**		ug/L			45127	42810	1	KED
⎢	**Ni**	**60**	**0.009**	ug/L	0.003	27	27	38	10	KED
⎢	**Ni**	**62**	**0.033**	ug/L	0.022	64	5	12	37	KED
⎢	**Cu**	**63**	**0.005**	ug/L	0.004	68	118	133	11	KED
⎢	**Cu**	**65**	**-0.000**	ug/L	0.009	34651	63	60	30	KED
⎢	**Zn**	**66**	**0.330**	ug/L	0.028	8	40	193	6	KED
⎢	**Zn**	**67**	**0.388**	ug/L	0.075	19	5	35	15	KED
⎣	**As**	**75**	**0.000**	ug/L	0.017	3485	7	7	50	KED
	Y	**89**		ug/L			512697	449571	3	Standard
	Kr	**83**		ug/L			65	55	20	Standard
⎡>	**In-1**	**115**		ug/L			11342	11653	1	KED
⎢	[redacted]	**111**	[redacted]	ug/L	0.009	150	6	5	40	KED
⎣	**Cd**	**114**	**0.007**	ug/L	0.003	38	4	8	20	KED
⎡>	**In**	**115**		ug/L			888503	815391	3	Standard
⎣	**Ag**	**107**	**0.007**	ug/L	0.001	11	236	340	7	Standard
⎡>	**Tb**	**159**		ug/L			797843	755451	6	Standard
⎣	**Pb**	**208**	**0.005**	ug/L	0.000	9	255	533	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Monday, March 06, 2023 20:05:49
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			36323	46438	2	Standard
	Cl	**37**		ug/L			4837250	4810102	1	Standard
>	**Sc**	**45**		ug/L			768932	703198	7	Standard
	Cr	**52**	**25.454**	ug/L	0.400	1	29685	583814	6	Standard
	Cr	**53**	**24.727**	ug/L	0.095	0	273	63832	7	Standard
	Mn	**55**	**25.119**	ug/L	0.194	0	1379	790488	6	Standard
>	**Ge**	**72**		ug/L			45127	42538	2	KED
	Ni	**60**	**24.718**	ug/L	0.476	1	27	32609	2	KED
	Ni	**62**	**24.244**	ug/L	0.290	1	5	5226	4	KED
	Cu	**63**	**24.979**	ug/L	0.288	1	118	98643	2	KED
	Cu	**65**	**25.220**	ug/L	0.373	1	63	47953	2	KED
	Zn	**66**	**77.344**	ug/L	2.959	3	40	36154	4	KED
	Zn	**67**	**73.220**	ug/L	2.667	3	5	5655	3	KED
	As	**75**	**24.076**	ug/L	0.315	1	7	5533	1	KED
	Y	**89**		ug/L			512697	450015	5	Standard
	Kr	**83**		ug/L			65	65	20	Standard
>	**In-1**	**115**		ug/L			11342	11505	3	KED
	[redacted]	**111**	[redacted]	ug/L	0.935	3	6	5897	3	KED
	Cd	**114**	**24.788**	ug/L	0.073	0	4	14567	3	KED
>	**In**	**115**		ug/L			888503	826129	4	Standard
	Ag	**107**	**25.210**	ug/L	0.802	3	236	442264	7	Standard
>	**Tb**	**159**		ug/L			797843	755542	1	Standard
	Pb	**208**	**25.496**	ug/L	1.002	3	255	1532175	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Monday, March 06, 2023 20:10:17
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	**13**		ug/L			36323	53727	1	Standard
Cl	**37**		ug/L			4837250	4854531	2	Standard
Sc	**45**		ug/L			768932	811768	2	Standard
[redacted]	**52**	[redacted]	ug/L	0.230	1	29685	420377	1	Standard
Cr	**53**	**15.345**	ug/L	0.133	0	273	45825	2	Standard
Mn	**55**	**104.730**	ug/L	0.430	0	1379	3801655	3	Standard
Ge	**72**		ug/L			45127	43694	1	KED
Ni	**60**	**15.464**	ug/L	0.191	1	27	20969	0	KED
Ni	**62**	**15.867**	ug/L	0.488	3	5	3515	3	KED
Cu	**63**	**66.421**	ug/L	0.907	1	118	269275	2	KED
Cu	**65**	**67.898**	ug/L	1.102	1	63	132533	2	KED
Zn	**66**	**96.047**	ug/L	1.970	2	40	46108	0	KED
Zn	**67**	**92.027**	ug/L	2.147	2	5	7303	3	KED
As	**75**	**4.678**	ug/L	0.082	1	7	1110	2	KED
Y	**89**		ug/L			512697	716086	3	Standard
Kr	**83**		ug/L			65	109	26	Standard
In-1	**115**		ug/L			11342	11258	2	KED
[redacted]	**111**	[redacted]	ug/L	0.034	13	6	66	10	KED
Cd	**114**	**0.238**	ug/L	0.014	5	4	140	5	KED
In	**115**		ug/L			888503	814312	3	Standard
Ag	**107**	**0.295**	ug/L	0.011	3	236	5307	2	Standard
Tb	**159**		ug/L			797843	806920	1	Standard
Pb	**208**	**33.220**	ug/L	1.173	3	255	2131184	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Monday, March 06, 2023 20:14:44
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			36323	63112	1	Standard
	Cl	**37**		ug/L			4837250	4858792	0	Standard
⎡>	**Sc**	**45**		ug/L			768932	817493	4	Standard
⎢	[redacted]	**52**	[redacted]	ug/L	0.271	1	29685	462904	3	Standard
⎢	**Cr**	**53**	**16.784**	ug/L	0.536	3	273	50412	2	Standard
⎣	**Mn**	**55**	**99.395**	ug/L	3.113	3	1379	3630959	3	Standard
⎡>	**Ge**	**72**		ug/L			45127	44147	1	KED
⎢	**Ni**	**60**	**12.359**	ug/L	0.340	2	27	16938	2	KED
⎢	**Ni**	**62**	**12.620**	ug/L	0.129	1	5	2825	1	KED
⎢	**Cu**	**63**	**56.341**	ug/L	0.978	1	118	230810	3	KED
⎢	**Cu**	**65**	**57.637**	ug/L	1.306	2	63	113689	3	KED
⎢	**Zn**	**66**	**91.493**	ug/L	2.074	2	40	44385	2	KED
⎢	**Zn**	**67**	**88.420**	ug/L	0.882	0	5	7088	0	KED
⎣	**As**	**75**	**4.425**	ug/L	0.201	4	7	1061	3	KED
	Y	**89**		ug/L			512697	728232	2	Standard
	Kr	**83**		ug/L			65	107	25	Standard
⎡>	**In-1**	**115**		ug/L			11342	11555	1	KED
⎢	[redacted]	**111**	[redacted]	ug/L	0.048	23	6	55	19	KED
⎣	**Cd**	**114**	**0.195**	ug/L	0.048	24	4	119	24	KED
⎡>	**In**	**115**		ug/L			888503	829081	3	Standard
⎣	**Ag**	**107**	**0.139**	ug/L	0.002	1	236	2665	3	Standard
⎡>	**Tb**	**159**		ug/L			797843	807704	1	Standard
⎣	**Pb**	**208**	**29.326**	ug/L	1.188	4	255	1882721	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Monday, March 06, 2023 20:19:12
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	**13**		ug/L			36323	58787	1	Standard
Cl	**37**		ug/L			4837250	4853890	1	Standard
Sc	**45**		ug/L			768932	816489	4	Standard
[redacted]	**52**	[redacted]	ug/L	0.779	2	29685	1007184	2	Standard
Cr	**53**	**38.755**	ug/L	0.688	1	273	115922	2	Standard
Mn	**55**	**125.027**	ug/L	1.685	1	1379	4562689	3	Standard
Ge	**72**		ug/L			45127	44396	2	KED
Ni	**60**	**40.379**	ug/L	0.781	1	27	55580	1	KED
Ni	**62**	**40.758**	ug/L	1.683	4	5	9159	1	KED
Cu	**63**	**87.557**	ug/L	2.065	2	118	360589	3	KED
Cu	**65**	**89.618**	ug/L	2.723	3	63	177669	2	KED
Zn	**66**	**211.435**	ug/L	6.187	2	40	103058	1	KED
Zn	**67**	**197.711**	ug/L	3.461	1	5	15930	1	KED
As	**75**	**28.173**	ug/L	0.422	1	7	6756	1	KED
Y	**89**		ug/L			512697	722696	2	Standard
Kr	**83**		ug/L			65	122	5	Standard
In-1	**115**		ug/L			11342	11366	4	KED
[redacted]	**111**	[redacted]	ug/L	0.554	2	6	5668	2	KED
Cd	**114**	**23.855**	ug/L	0.711	2	4	13836	1	KED
In	**115**		ug/L			888503	825518	4	Standard
Ag	**107**	**24.594**	ug/L	0.742	3	236	430894	5	Standard
Tb	**159**		ug/L			797843	814211	4	Standard
Pb	**208**	**67.397**	ug/L	2.180	3	255	4359752	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Monday, March 06, 2023 20:23:39
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			36323	58301	0	Standard
	Cl	**37**		ug/L			4837250	4875998	3	Standard
>	**Sc**	**45**		ug/L			768932	820960	2	Standard
	[redacted]	**52**	[redacted]	ug/L	1.089	2	29685	976406	1	Standard
	Cr	**53**	**36.793**	ug/L	0.923	2	273	110681	0	Standard
	Mn	**55**	**130.742**	ug/L	1.795	1	1379	4797949	1	Standard
>	**Ge**	**72**		ug/L			45127	43840	1	KED
	Ni	**60**	**37.531**	ug/L	0.994	2	27	51039	4	KED
	Ni	**62**	**37.200**	ug/L	0.684	1	5	8260	1	KED
	Cu	**63**	**80.305**	ug/L	1.154	1	118	326624	2	KED
	Cu	**65**	**81.583**	ug/L	1.426	1	63	159792	3	KED
	Zn	**66**	**195.558**	ug/L	3.300	1	40	94182	3	KED
	Zn	**67**	**184.291**	ug/L	2.506	1	5	14669	3	KED
	As	**75**	**28.198**	ug/L	0.414	1	7	6679	3	KED
	Y	**89**		ug/L			512697	720837	3	Standard
	Kr	**83**		ug/L			65	131	16	Standard
>	**In-1**	**115**		ug/L			11342	11572	1	KED
	[redacted]	**111**	[redacted]	ug/L	0.615	2	6	5847	1	KED
	Cd	**114**	**24.141**	ug/L	0.233	0	4	14268	1	KED
>	**In**	**115**		ug/L			888503	826783	2	Standard
	Ag	**107**	**24.651**	ug/L	0.558	2	236	432454	1	Standard
>	**Tb**	**159**		ug/L			797843	812976	2	Standard
	Pb	**208**	**52.596**	ug/L	1.091	2	255	3399311	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Monday, March 06, 2023 20:28:07
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	**13**		ug/L			36323	59134	0	Standard
Cl	**37**		ug/L			4837250	5017441	1	Standard
Sc	**45**		ug/L			768932	848200	1	Standard
[redacted]	**52**	[redacted]	ug/L	0.661	1	29685	1035017	1	Standard
Cr	**53**	**36.925**	ug/L	0.742	2	273	114786	0	Standard
Mn	**55**	**124.924**	ug/L	3.493	2	1379	4736256	1	Standard
Ge	**72**		ug/L			45127	44369	1	KED
Ni	**60**	**39.921**	ug/L	0.337	0	27	54933	1	KED
Ni	**62**	**40.517**	ug/L	1.105	2	5	9103	1	KED
Cu	**63**	**91.195**	ug/L	1.467	1	118	375330	1	KED
Cu	**65**	**92.437**	ug/L	1.050	1	63	183182	0	KED
Zn	**66**	**172.253**	ug/L	2.966	1	40	83941	0	KED
Zn	**67**	**161.759**	ug/L	5.232	3	5	13029	3	KED
As	**75**	**28.326**	ug/L	0.197	0	7	6790	1	KED
Y	**89**		ug/L			512697	733108	2	Standard
Kr	**83**		ug/L			65	119	15	Standard
In-1	**115**		ug/L			11342	11710	3	KED
[redacted]	**111**	[redacted]	ug/L	0.663	2	6	5911	1	KED
Cd	**114**	**23.877**	ug/L	0.131	0	4	14279	3	KED
In	**115**		ug/L			888503	838918	0	Standard
Ag	**107**	**25.501**	ug/L	0.423	1	236	454067	2	Standard
Tb	**159**		ug/L			797843	829581	3	Standard
Pb	**208**	**57.153**	ug/L	0.976	1	255	3768861	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL8
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, March 06, 2023 20:32:35
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			36323	39968	1	Standard
	Cl	**37**		ug/L			4837250	4672191	1	Standard
⌈>	**Sc**	**45**		ug/L			768932	671414	1	Standard
|	**Cr**	**52**	**-0.036**	ug/L	0.053	146	29685	25174	5	Standard
|	**Cr**	**53**	**-0.013**	ug/L	0.008	58	273	205	10	Standard
⌊	**Mn**	**55**	**0.006**	ug/L	0.002	42	1379	1379	6	Standard
⌈>	**Ge**	**72**		ug/L			45127	42138	2	KED
|	**Ni**	**60**	**0.010**	ug/L	0.007	70	27	38	22	KED
|	**Ni**	**62**	**0.019**	ug/L	0.017	89	5	9	40	KED
|	**Cu**	**63**	**0.007**	ug/L	0.004	56	118	140	13	KED
|	**Cu**	**65**	**0.009**	ug/L	0.003	31	63	76	6	KED
|	**Zn**	**66**	**0.131**	ug/L	0.023	17	40	98	8	KED
|	**Zn**	**67**	**0.228**	ug/L	0.061	26	5	22	22	KED
⌊	**As**	**75**	**0.005**	ug/L	0.001	25	7	8	5	KED
	Y	**89**		ug/L			512697	450712	2	Standard
	Kr	**83**		ug/L			65	71	8	Standard
⌈>	**In-1**	**115**		ug/L			11342	10927	2	KED
|	**Cd**	**111**	**-0.003**	ug/L	0.006	197	6	5	28	KED
⌊	**Cd**	**114**	**0.004**	ug/L	0.008	228	4	6	72	KED
⌈>	**In**	**115**		ug/L			888503	807877	1	Standard
⌊	**Ag**	**107**	**0.006**	ug/L	0.001	21	236	310	8	Standard
⌈>	**Tb**	**159**		ug/L			797843	734096	5	Standard
⌊	**Pb**	**208**	**0.006**	ug/L	0.001	9	255	606	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV8
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, March 06, 2023 20:37:03
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			36323	35864	2	Standard
	Cl	**37**		ug/L			4837250	4993448	2	Standard
⎡>	**Sc**	**45**		ug/L			768932	682275	4	Standard
⎢	**Cr**	**52**	**51.483**	ug/L	1.142	2	29685	1118673	2	Standard
⎢	**Cr**	**53**	**50.510**	ug/L	1.536	3	273	126224	4	Standard
⎣	**Mn**	**55**	**52.307**	ug/L	1.525	2	1379	1595552	3	Standard
⎡>	**Ge**	**72**		ug/L			45127	42389	1	KED
⎢	**Ni**	**60**	**48.593**	ug/L	0.799	1	27	63863	0	KED
⎢	**Ni**	**62**	**49.273**	ug/L	1.712	3	5	10574	2	KED
⎢	**Cu**	**63**	**48.029**	ug/L	0.475	0	118	188888	0	KED
⎢	**Cu**	**65**	**47.775**	ug/L	0.393	0	63	90480	1	KED
⎢	**Zn**	**66**	**49.765**	ug/L	1.729	3	40	23191	2	KED
⎢	**Zn**	**67**	**50.547**	ug/L	2.057	4	5	3893	3	KED
⎣	**As**	**75**	**50.488**	ug/L	0.827	1	7	11555	1	KED
	Y	**89**		ug/L			512697	451636	4	Standard
	Kr	**83**		ug/L			65	68	10	Standard
⎡>	**In-1**	**115**		ug/L			11342	11438	0	KED
⎢	**Cd**	**111**	**48.957**	ug/L	0.097	0	6	11596	0	KED
⎣	**Cd**	**114**	**48.165**	ug/L	0.620	1	4	28134	1	KED
⎡>	**In**	**115**		ug/L			888503	800659	2	Standard
⎣	**Ag**	**107**	**50.410**	ug/L	2.143	4	236	856103	3	Standard
⎡>	**Tb**	**159**		ug/L			797843	752553	2	Standard
⎣	**Pb**	**208**	**49.902**	ug/L	2.310	4	255	2983807	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB8
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, March 06, 2023 20:44:15
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			36323	34073	2	Standard
	Cl	**37**		ug/L			4837250	4940498	3	Standard
⎡>	**Sc**	**45**		ug/L			768932	698052	1	Standard
⎢	**Cr**	**52**	**-0.017**	ug/L	0.010	55	29685	26577	1	Standard
⎢	**Cr**	**53**	**-0.027**	ug/L	0.011	40	273	178	17	Standard
⎣	**Mn**	**55**	**-0.004**	ug/L	0.001	16	1379	1116	2	Standard
⎡>	**Ge**	**72**		ug/L			45127	42005	4	KED
⎢	**Ni**	**60**	**-0.002**	ug/L	0.005	248	27	22	22	KED
⎢	**Ni**	**62**	**0.002**	ug/L	0.019	947	5	5	66	KED
⎢	**Cu**	**63**	**0.001**	ug/L	0.001	94	118	114	1	KED
⎢	**Cu**	**65**	**0.009**	ug/L	0.005	52	63	76	15	KED
⎢	**Zn**	**66**	**0.132**	ug/L	0.025	18	40	99	15	KED
⎢	**Zn**	**67**	**0.105**	ug/L	0.008	7	5	13	0	KED
⎣	**As**	**75**	**0.001**	ug/L	0.004	435	7	7	16	KED
	Y	**89**		ug/L			512697	456306	3	Standard
	Kr	**83**		ug/L			65	57	17	Standard
⎡>	**In-1**	**115**		ug/L			11342	10942	1	KED
⎢	**Cd**	**111**	**-0.003**	ug/L	0.008	247	6	5	28	KED
⎣	**Cd**	**114**	**0.010**	ug/L	0.010	101	4	9	59	KED
⎡>	**In**	**115**		ug/L			888503	821257	1	Standard
⎣	**Ag**	**107**	**0.004**	ug/L	0.002	53	236	291	11	Standard
⎡>	**Tb**	**159**		ug/L			797843	736335	2	Standard
⎣	**Pb**	**208**	**0.004**	ug/L	0.000	11	255	454	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, March 06, 2023 20:48:44
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	**13**		ug/L			36323	47525	3	Standard
Cl	**37**		ug/L			4837250	4697038	1	Standard
Sc	**45**		ug/L			768932	667435	0	Standard
[redacted]	**52**	[redacted]	ug/L	0.068	43	29685	28971	4	Standard
Cr	**53**	**0.118**	ug/L	0.012	10	273	524	5	Standard
Mn	**55**	**3.154**	ug/L	0.087	2	1379	95267	2	Standard
Ge	**72**		ug/L			45127	40032	2	KED
Ni	**60**	**0.019**	ug/L	0.008	41	27	47	22	KED
Ni	**62**	**0.022**	ug/L	0.008	38	5	9	20	KED
[redacted]	**63**	[redacted]	ug/L	0.009	34	118	207	17	KED
Cu	**65**	**0.022**	ug/L	0.007	33	63	95	15	KED
[redacted]	**66**	[redacted]	ug/L	0.079	3	40	1106	4	KED
Zn	**67**	**1.985**	ug/L	0.084	4	5	149	3	KED
[redacted]	**75**	[redacted]	ug/L	0.004	842	7	7	11	KED
Y	**89**		ug/L			512697	435446	1	Standard
Kr	**83**		ug/L			65	57	12	Standard
In-1	**115**		ug/L			11342	11149	2	KED
Cd	**111**	**-0.004**	ug/L	0.001	18	6	5	0	KED
Cd	**114**	**0.007**	ug/L	0.010	146	4	8	72	KED
In	**115**		ug/L			888503	776387	2	Standard
Ag	**107**	**-0.002**	ug/L	0.000	20	236	173	5	Standard
Tb	**159**		ug/L			797843	722653	4	Standard
Pb	**208**	**0.004**	ug/L	0.001	12	255	477	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, March 06, 2023 20:53:11
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	**13**		ug/L			36323	49716	2	Standard
Cl	**37**		ug/L			4837250	5013281	0	Standard
Sc	**45**		ug/L			768932	707187	3	Standard
[redacted]	**52**	[redacted]	ug/L	0.233	0	29685	597538	2	Standard
Cr	**53**	**25.090**	ug/L	0.487	1	273	65096	1	Standard
Mn	**55**	**25.387**	ug/L	0.239	0	1379	803640	2	Standard
Ge	**72**		ug/L			45127	39613	7	KED
Ni	**60**	**25.768**	ug/L	1.834	7	27	31551	2	KED
Ni	**62**	**25.883**	ug/L	2.268	8	5	5172	2	KED
[redacted]	**63**	[redacted]	ug/L	1.819	7	118	91501	1	KED
Cu	**65**	**25.724**	ug/L	1.838	7	63	45389	1	KED
[redacted]	**66**	[redacted]	ug/L	7.068	8	40	36664	1	KED
Zn	**67**	**79.280**	ug/L	6.048	7	5	5683	2	KED
[redacted]	**75**	[redacted]	ug/L	1.985	7	7	5532	1	KED
Y	**89**		ug/L			512697	447707	2	Standard
Kr	**83**		ug/L			65	64	15	Standard
In-1	**115**		ug/L			11342	10658	0	KED
Cd	**111**	**24.535**	ug/L	0.369	1	6	5418	1	KED
Cd	**114**	**23.853**	ug/L	0.404	1	4	12986	2	KED
In	**115**		ug/L			888503	814606	1	Standard
Ag	**107**	**24.961**	ug/L	0.344	1	236	431613	3	Standard
Tb	**159**		ug/L			797843	771034	1	Standard
Pb	**208**	**24.679**	ug/L	0.839	3	255	1512754	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Monday, March 06, 2023 20:57:39
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			36323	51024	2	Standard
Cl	37		ug/L			4837250	4774647	1	Standard
Sc	45		ug/L			768932	689205	2	Standard
[redacted]	52	[redacted]	ug/L	0.011	24	29685	27530	1	Standard
Cr	53	-0.010	ug/L	0.009	88	273	218	9	Standard
Mn	55	-0.007	ug/L	0.001	13	1379	1027	1	Standard
Ge	72		ug/L			45127	41519	4	KED
[redacted]	60	[redacted]	ug/L	0.009	56	27	45	22	KED
Ni	62	0.060	ug/L	0.038	63	5	17	43	KED
[redacted]	63	[redacted]	ug/L	0.004	141	118	97	12	KED
Cu	65	-0.001	ug/L	0.004	316	63	56	15	KED
Zn	66	0.114	ug/L	0.003	2	40	89	3	KED
Zn	67	0.131	ug/L	0.107	81	5	15	54	KED
[redacted]	75	[redacted]	ug/L	0.014	607	7	7	39	KED
Y	89		ug/L			512697	445325	2	Standard
Kr	83		ug/L			65	58	15	Standard
In-1	115		ug/L			11342	11007	1	KED
[redacted]	111	[redacted]	ug/L	0.006	1095	6	6	22	KED
Cd	114	0.003	ug/L	0.004	125	4	6	39	KED
In	115		ug/L			888503	805817	1	Standard
[redacted]	107	[redacted]	ug/L	0.001	15	236	273	5	Standard
Tb	159		ug/L			797843	739924	2	Standard
[redacted]	208	[redacted]	ug/L	0.000	4	255	429	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Monday, March 06, 2023 21:02:06
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			36323	48596	3	Standard
Cl	37		ug/L			4837250	4859357	0	Standard
> Sc	45		ug/L			768932	711965	0	Standard
[redacted]	52	[redacted]	ug/L	0.661	2	29685	617169	2	Standard
Cr	53	26.041	ug/L	0.133	0	273	68036	0	Standard
Mn	55	26.132	ug/L	0.425	1	1379	832816	1	Standard
> Ge	72		ug/L			45127	41730	4	KED
[redacted]	60	[redacted]	ug/L	0.598	2	27	33241	1	KED
Ni	62	25.951	ug/L	1.033	3	5	5484	4	KED
[redacted]	63	[redacted]	ug/L	0.738	2	118	98492	1	KED
Cu	65	25.723	ug/L	0.379	1	63	47969	2	KED
Zn	66	80.013	ug/L	1.391	1	40	36679	2	KED
Zn	67	76.930	ug/L	1.843	2	5	5827	1	KED
[redacted]	75	[redacted]	ug/L	0.382	1	7	5718	2	KED
Y	89		ug/L			512697	452315	2	Standard
Kr	83		ug/L			65	69	22	Standard
> In-1	115		ug/L			11342	11603	2	KED
[redacted]	111	[redacted]	ug/L	0.471	1	6	5937	1	KED
Cd	114	24.668	ug/L	0.874	3	4	14610	0	KED
> In	115		ug/L			888503	839144	2	Standard
[redacted]	107	[redacted]	ug/L	1.255	4	236	456369	2	Standard
> Tb	159		ug/L			797843	758949	2	Standard
[redacted]	208	[redacted]	ug/L	0.870	3	255	1589031	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Monday, March 06, 2023 21:06:34
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			36323	55920	3	Standard
Cl	37		ug/L			4837250	4664386	2	Standard
Sc	45		ug/L			768932	799680	2	Standard
[redacted]	52	[redacted]	ug/L	0.042	0	29685	342538	2	Standard
Cr	53	12.632	ug/L	0.130	1	273	37217	3	Standard
Mn	55	140.550	ug/L	0.355	0	1379	5024965	2	Standard
Ge	72		ug/L			45127	43086	3	KED
Ni	60	11.002	ug/L	0.132	1	27	14717	2	KED
Ni	62	11.215	ug/L	0.195	1	5	2451	3	KED
[redacted]	63	[redacted]	ug/L	0.493	1	118	100521	4	KED
Cu	65	25.494	ug/L	0.304	1	63	49096	2	KED
[redacted]	66	[redacted]	ug/L	0.444	0	40	22928	3	KED
Zn	67	47.698	ug/L	0.508	1	5	3735	4	KED
[redacted]	75	[redacted]	ug/L	0.054	0	7	1362	3	KED
Y	89		ug/L			512697	667904	3	Standard
Kr	83		ug/L			65	113	23	Standard
In-1	115		ug/L			11342	11368	1	KED
[redacted]	111	[redacted]	ug/L	0.023	14	6	43	13	KED
Cd	114	0.196	ug/L	0.027	13	4	117	13	KED
In	115		ug/L			888503	792174	1	Standard
[redacted]	107	[redacted]	ug/L	0.005	3	236	2387	4	Standard
Tb	159		ug/L			797843	786015	2	Standard
[redacted]	208	[redacted]	ug/L	0.302	2	255	774916	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Monday, March 06, 2023 21:11:02
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	**13**		ug/L			36323	55209	2	Standard
Cl	**37**		ug/L			4837250	4671977	2	Standard
Sc	**45**		ug/L			768932	792731	5	Standard
[redacted]	**52**	[redacted]	ug/L	0.400	3	29685	345612	5	Standard
Cr	**53**	**12.623**	ug/L	0.137	1	273	36852	4	Standard
Mn	**55**	**143.607**	ug/L	3.856	2	1379	5086404	4	Standard
Ge	**72**		ug/L			45127	40454	1	KED
Ni	**60**	**11.083**	ug/L	0.382	3	27	13921	3	KED
Ni	**62**	**11.332**	ug/L	0.505	4	5	2326	5	KED
[redacted]	**63**	[redacted]	ug/L	0.400	1	118	95597	2	KED
Cu	**65**	**25.307**	ug/L	0.394	1	63	45768	1	KED
[redacted]	**66**	[redacted]	ug/L	1.272	2	40	22184	3	KED
Zn	**67**	**49.481**	ug/L	1.059	2	5	3637	2	KED
[redacted]	**75**	[redacted]	ug/L	0.091	1	7	1318	1	KED
Y	**89**		ug/L			512697	660994	3	Standard
Kr	**83**		ug/L			65	104	7	Standard
In-1	**115**		ug/L			11342	10512	3	KED
[redacted]	**111**	[redacted]	ug/L	0.023	10	6	53	11	KED
Cd	**114**	**0.180**	ug/L	0.022	12	4	100	8	KED
In	**115**		ug/L			888503	782983	4	Standard
[redacted]	**107**	[redacted]	ug/L	0.002	1	236	2655	5	Standard
Tb	**159**		ug/L			797843	764153	3	Standard
[redacted]	**208**	[redacted]	ug/L	0.237	1	255	731491	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Monday, March 06, 2023 21:15:29
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			36323	54209	3	Standard
Cl	37		ug/L			4837250	4807991	2	Standard
Sc	45		ug/L			768932	816331	4	Standard
[redacted]	52	[redacted]	ug/L	0.691	1	29685	932973	3	Standard
Cr	53	35.096	ug/L	0.502	1	273	104993	2	Standard
Mn	55	166.761	ug/L	0.741	0	1379	6085819	4	Standard
Ge	72		ug/L			45127	41392	1	KED
Ni	60	36.841	ug/L	0.804	2	27	47299	3	KED
Ni	62	36.695	ug/L	1.065	2	5	7696	4	KED
[redacted]	63	[redacted]	ug/L	0.861	1	118	193654	0	KED
Cu	65	51.465	ug/L	0.755	1	63	95179	2	KED
[redacted]	66	[redacted]	ug/L	0.777	0	40	59016	1	KED
Zn	67	123.844	ug/L	1.180	0	5	9307	0	KED
[redacted]	75	[redacted]	ug/L	0.232	0	7	6930	0	KED
Y	89		ug/L			512697	676175	5	Standard
Kr	83		ug/L			65	125	5	Standard
In-1	115		ug/L			11342	10749	0	KED
[redacted]	111	[redacted]	ug/L	0.160	0	6	5627	0	KED
Cd	114	25.569	ug/L	0.507	1	4	14038	1	KED
In	115		ug/L			888503	809012	2	Standard
[redacted]	107	[redacted]	ug/L	0.246	1	236	321262	3	Standard
Tb	159		ug/L			797843	786378	0	Standard
[redacted]	208	[redacted]	ug/L	0.736	2	255	2263773	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Monday, March 06, 2023 21:19:57
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			36323	53544	0	Standard
Cl	37		ug/L			4837250	4774320	2	Standard
Sc	45		ug/L			768932	831894	0	Standard
[redacted]	52	[redacted]	ug/L	0.214	0	29685	935192	0	Standard
Cr	53	35.560	ug/L	0.541	1	273	108455	2	Standard
Mn	55	163.670	ug/L	4.565	2	1379	6087883	3	Standard
Ge	72		ug/L			45127	42993	1	KED
Ni	60	36.245	ug/L	0.274	0	27	48330	1	KED
Ni	62	36.124	ug/L	0.807	2	5	7868	3	KED
[redacted]	63	[redacted]	ug/L	2.035	4	118	198939	4	KED
Cu	65	50.755	ug/L	0.578	1	63	97499	1	KED
[redacted]	66	[redacted]	ug/L	3.088	2	40	60228	2	KED
Zn	67	122.649	ug/L	2.403	1	5	9573	0	KED
[redacted]	75	[redacted]	ug/L	0.200	0	7	7246	0	KED
Y	89		ug/L			512697	699326	2	Standard
Kr	83		ug/L			65	127	6	Standard
In-1	115		ug/L			11342	10810	3	KED
[redacted]	111	[redacted]	ug/L	0.091	0	6	5644	4	KED
Cd	114	25.106	ug/L	0.889	3	4	13850	1	KED
In	115		ug/L			888503	791958	1	Standard
[redacted]	107	[redacted]	ug/L	0.330	2	236	251134	3	Standard
Tb	159		ug/L			797843	792205	4	Standard
[redacted]	208	[redacted]	ug/L	1.588	4	255	2325090	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Monday, March 06, 2023 21:24:24
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			36323	60645	0	Standard
Cl	37		ug/L			4837250	4831104	0	Standard
Sc	45		ug/L			768932	842197	0	Standard
[redacted]	52	[redacted]	ug/L	0.647	1	29685	945821	2	Standard
Cr	53	33.901	ug/L	0.820	2	273	104679	2	Standard
Mn	55	160.830	ug/L	3.131	1	1379	6055268	1	Standard
Ge	72		ug/L			45127	42512	1	KED
Ni	60	36.383	ug/L	1.460	4	27	47950	2	KED
Ni	62	36.459	ug/L	0.455	1	5	7850	1	KED
[redacted]	63	[redacted]	ug/L	0.015	0	118	200401	1	KED
Cu	65	50.756	ug/L	1.186	2	63	96379	0	KED
[redacted]	66	[redacted]	ug/L	4.488	3	40	59968	1	KED
Zn	67	121.436	ug/L	2.760	2	5	9375	3	KED
[redacted]	75	[redacted]	ug/L	0.387	1	7	7198	1	KED
Y	89		ug/L			512697	689557	0	Standard
Kr	83		ug/L			65	113	14	Standard
In-1	115		ug/L			11342	11613	2	KED
[redacted]	111	[redacted]	ug/L	0.371	1	6	5932	1	KED
Cd	114	24.550	ug/L	0.611	2	4	14555	1	KED
In	115		ug/L			888503	823095	2	Standard
[redacted]	107	[redacted]	ug/L	0.554	2	236	456692	0	Standard
Tb	159		ug/L			797843	807655	2	Standard
[redacted]	208	[redacted]	ug/L	1.209	3	255	2340002	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL9
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, March 06, 2023 21:28:53
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			36323	39890	1	Standard
	Cl	**37**		ug/L			4837250	4640255	4	Standard
⌈>	**Sc**	**45**		ug/L			768932	675789	3	Standard
⎢	**Cr**	**52**	**-0.069**	ug/L	0.009	13	29685	24646	2	Standard
⎢	**Cr**	**53**	**-0.014**	ug/L	0.003	17	273	204	3	Standard
⌊	**Mn**	**55**	**0.006**	ug/L	0.002	30	1379	1380	6	Standard
⌈>	**Ge**	**72**		ug/L			45127	42726	4	KED
⎢	**Ni**	**60**	**0.010**	ug/L	0.008	84	27	38	24	KED
⎢	**Ni**	**62**	**0.037**	ug/L	0.002	6	5	13	0	KED
⎢	**Cu**	**63**	**0.008**	ug/L	0.006	75	118	143	16	KED
⎢	**Cu**	**65**	**-0.001**	ug/L	0.005	647	63	58	13	KED
⎢	**Zn**	**66**	**0.108**	ug/L	0.021	19	40	89	14	KED
⎢	**Zn**	**67**	**0.113**	ug/L	0.088	77	5	13	43	KED
⌊	**As**	**75**	**0.005**	ug/L	0.005	98	7	8	11	KED
	Y	**89**		ug/L			512697	442853	2	Standard
	Kr	**83**		ug/L			65	70	18	Standard
⌈>	**In-1**	**115**		ug/L			11342	11137	0	KED
⎢	**Cd**	**111**	**0.001**	ug/L	0.011	1982	6	6	37	KED
⌊	**Cd**	**114**	**0.016**	ug/L	0.006	36	4	13	24	KED
⌈>	**In**	**115**		ug/L			888503	815611	1	Standard
⌊	**Ag**	**107**	**0.001**	ug/L	0.002	132	236	238	13	Standard
⌈>	**Tb**	**159**		ug/L			797843	740374	4	Standard
⌊	**Pb**	**208**	**0.005**	ug/L	0.000	8	255	560	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV9
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, March 06, 2023 21:33:21
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			36323	35943	1	Standard
	Cl	**37**		ug/L			4837250	4963083	0	Standard
⎡>	**Sc**	**45**		ug/L			768932	705397	0	Standard
⎢	**Cr**	**52**	**49.950**	ug/L	1.747	3	29685	1123369	2	Standard
⎢	**Cr**	**53**	**49.215**	ug/L	0.335	0	273	127176	1	Standard
⎣	**Mn**	**55**	**49.479**	ug/L	0.232	0	1379	1561294	1	Standard
⎡>	**Ge**	**72**		ug/L			45127	41999	3	KED
⎢	**Ni**	**60**	**48.993**	ug/L	1.156	2	27	63779	1	KED
⎢	**Ni**	**62**	**47.539**	ug/L	0.524	1	5	10112	3	KED
⎢	**Cu**	**63**	**46.644**	ug/L	0.335	0	118	181766	2	KED
⎢	**Cu**	**65**	**48.397**	ug/L	1.030	2	63	90778	1	KED
⎢	**Zn**	**66**	**48.343**	ug/L	1.214	2	40	22319	1	KED
⎢	**Zn**	**67**	**50.462**	ug/L	1.446	2	5	3850	2	KED
⎣	**As**	**75**	**50.032**	ug/L	0.144	0	7	11347	3	KED
	Y	**89**		ug/L			512697	458482	1	Standard
	Kr	**83**		ug/L			65	65	21	Standard
⎡>	**In-1**	**115**		ug/L			11342	11316	2	KED
⎢	**Cd**	**111**	**50.032**	ug/L	1.825	3	6	11717	1	KED
⎣	**Cd**	**114**	**49.065**	ug/L	0.794	1	4	28352	2	KED
⎡>	**In**	**115**		ug/L			888503	816543	2	Standard
⎣	**Ag**	**107**	**49.530**	ug/L	0.724	1	236	857950	1	Standard
⎡>	**Tb**	**159**		ug/L			797843	770824	4	Standard
⎣	**Pb**	**208**	**48.663**	ug/L	1.773	3	255	2979435	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB9
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, March 06, 2023 21:40:33
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			36323	33553	1	Standard
	Cl	**37**		ug/L			4837250	4732619	0	Standard
⎡>	**Sc**	**45**		ug/L			768932	655340	2	Standard
⎢	**Cr**	**52**	**-0.012**	ug/L	0.031	263	29685	25048	0	Standard
⎢	**Cr**	**53**	**-0.018**	ug/L	0.006	34	273	189	7	Standard
⎣	**Mn**	**55**	**-0.004**	ug/L	0.001	29	1379	1069	0	Standard
⎡>	**Ge**	**72**		ug/L			45127	40414	1	KED
⎢	**Ni**	**60**	**-0.002**	ug/L	0.006	359	27	22	34	KED
⎢	**Ni**	**62**	**0.021**	ug/L	0.027	128	5	9	60	KED
⎢	**Cu**	**63**	**0.012**	ug/L	0.008	65	118	152	20	KED
⎢	**Cu**	**65**	**0.009**	ug/L	0.010	119	63	72	25	KED
⎢	**Zn**	**66**	**0.135**	ug/L	0.059	43	40	96	27	KED
⎢	**Zn**	**67**	**0.224**	ug/L	0.050	22	5	21	18	KED
⎣	**As**	**75**	**0.007**	ug/L	0.010	147	7	8	25	KED
	Y	**89**		ug/L			512697	426647	1	Standard
	Kr	**83**		ug/L			65	56	14	Standard
⎡>	**In-1**	**115**		ug/L			11342	10839	4	KED
⎢	**Cd**	**111**	**-0.006**	ug/L	0.006	99	6	5	21	KED
⎣	**Cd**	**114**	**0.004**	ug/L	0.004	112	4	6	35	KED
⎡>	**In**	**115**		ug/L			888503	786015	2	Standard
⎣	**Ag**	**107**	**0.004**	ug/L	0.001	18	236	280	4	Standard
⎡>	**Tb**	**159**		ug/L			797843	714750	4	Standard
⎣	**Pb**	**208**	**0.004**	ug/L	0.001	14	255	466	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, March 06, 2023 21:45:02
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			36323	58384	2	Standard
	Cl	**37**		ug/L			4837250	10204001	2	Standard
⌈>	**Sc**	**45**		ug/L			768932	690227	2	Standard
|	**Cr**	**52**	**8.848**	ug/L	0.310	3	29685	216557	0	Standard
|	**Cr**	**53**	**12.105**	ug/L	0.345	2	273	30778	0	Standard
⌊	**Mn**	**55**	**25.303**	ug/L	0.440	1	1379	781637	0	Standard
⌈>	**Ge**	**72**		ug/L			45127	39688	1	KED
|	**Ni**	**60**	**2.126**	ug/L	0.048	2	27	2638	2	KED
|	**Ni**	**62**	**2.188**	ug/L	0.112	5	5	444	4	KED
|	[redacted]	**63**	[redacted]	ug/L	0.098	1	118	33990	2	KED
|	**Cu**	**65**	**9.101**	ug/L	0.130	1	63	16185	2	KED
|	[redacted]	**66**	[redacted]	ug/L	1.159	3	40	16092	4	KED
|	**Zn**	**67**	**37.819**	ug/L	1.811	4	5	2729	5	KED
⌊	**As**	**75**	**1.233**	ug/L	0.071	5	7	270	4	KED
	Y	**89**		ug/L			512697	443831	2	Standard
	Kr	**83**		ug/L			65	93	10	Standard
⌈>	**In-1**	**115**		ug/L			11342	10404	5	KED
|	**Cd**	**111**	**0.055**	ug/L	0.033	59	6	18	41	KED
⌊	**Cd**	**114**	**0.051**	ug/L	0.011	20	4	31	13	KED
⌈>	**In**	**115**		ug/L			888503	777365	2	Standard
⌊	**Ag**	**107**	**0.007**	ug/L	0.002	29	236	320	8	Standard
⌈>	**Tb**	**159**		ug/L			797843	743750	4	Standard
⌊	**Pb**	**208**	**0.399**	ug/L	0.013	3	255	23816	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, March 06, 2023 21:49:29
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			36323	59284	1	Standard
	Cl	**37**		ug/L			4837250	10012121	2	Standard
⌈>	**Sc**	**45**		ug/L			768932	670808	1	Standard
|	**Cr**	**52**	**4.853**	ug/L	0.135	2	29685	127164	1	Standard
|	**Cr**	**53**	**10.136**	ug/L	0.040	0	273	25098	2	Standard
⌊	**Mn**	**55**	**55.979**	ug/L	0.219	0	1379	1679693	2	Standard
⌈>	**Ge**	**72**		ug/L			45127	38141	1	KED
|	**Ni**	**60**	**3.968**	ug/L	0.108	2	27	4713	1	KED
|	**Ni**	**62**	**4.072**	ug/L	0.057	1	5	791	2	KED
|	[redacted]	**63**	[redacted]	ug/L	0.157	2	118	22930	3	KED
|	**Cu**	**65**	**6.814**	ug/L	0.130	1	63	11657	0	KED
|	[redacted]	**66**	[redacted]	ug/L	0.234	1	40	6173	0	KED
|	**Zn**	**67**	**16.202**	ug/L	0.243	1	5	1126	2	KED
⌊	**As**	**75**	**0.470**	ug/L	0.067	14	7	103	12	KED
	Y	**89**		ug/L			512697	432536	0	Standard
	Kr	**83**		ug/L			65	92	13	Standard
⌈>	**In-1**	**115**		ug/L			11342	10683	2	KED
|	**Cd**	**111**	**0.028**	ug/L	0.009	32	6	12	15	KED
⌊	**Cd**	**114**	**0.022**	ug/L	0.012	55	4	15	42	KED
⌈>	**In**	**115**		ug/L			888503	757189	1	Standard
⌊	**Ag**	**107**	**0.002**	ug/L	0.001	47	236	231	5	Standard
⌈>	**Tb**	**159**		ug/L			797843	733299	3	Standard
⌊	**Pb**	**208**	**0.451**	ug/L	0.013	2	255	26518	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Monday, March 06, 2023 21:53:57
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			36323	46319	1	Standard
	Cl	**37**		ug/L			4837250	5050734	1	Standard
>	**Sc**	**45**		ug/L			768932	806666	2	Standard
	[redacted]	**52**	[redacted]	ug/L	0.021	1	29685	65545	2	Standard
	Cr	**53**	**1.906**	ug/L	0.022	1	273	5907	2	Standard
	Mn	**55**	**224.501**	ug/L	2.534	1	1379	8097493	3	Standard
>	**Ge**	**72**		ug/L			45127	41531	1	KED
	Ni	**60**	**1.466**	ug/L	0.025	1	27	1912	0	KED
	Ni	**62**	**1.547**	ug/L	0.148	9	5	330	10	KED
	Cu	**63**	**3.309**	ug/L	0.039	1	118	12854	2	KED
	Cu	**65**	**3.308**	ug/L	0.037	1	63	6191	0	KED
	Zn	**66**	**19.090**	ug/L	0.497	2	40	8740	1	KED
	Zn	**67**	**18.504**	ug/L	1.365	7	5	1400	8	KED
	[redacted]	**75**	[redacted]	ug/L	0.044	11	7	95	11	KED
	Y	**89**		ug/L			512697	482247	0	Standard
	Kr	**83**		ug/L			65	67	5	Standard
>	**In-1**	**115**		ug/L			11342	10442	4	KED
	Cd	**111**	**0.039**	ug/L	0.018	46	6	14	30	KED
	Cd	**114**	**0.039**	ug/L	0.020	50	4	24	38	KED
>	**In**	**115**		ug/L			888503	815271	4	Standard
	Ag	**107**	**0.138**	ug/L	0.003	1	236	2595	3	Standard
>	**Tb**	**159**		ug/L			797843	777276	4	Standard
	Pb	**208**	**4.000**	ug/L	0.139	3	255	247221	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Monday, March 06, 2023 21:58:18
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			36323	40442	0	Standard
Cl	37		ug/L			4837250	4755858	1	Standard
> Sc	45		ug/L			768932	734926	4	Standard
[redacted]	52	[redacted]	ug/L	0.044	4	29685	50021	3	Standard
Cr	53	1.182	ug/L	0.025	2	273	3434	3	Standard
Mn	55	68.457	ug/L	1.130	1	1379	2249237	3	Standard
> Ge	72		ug/L			45127	42458	1	KED
[redacted]	60	[redacted]	ug/L	0.108	10	27	1395	11	KED
Ni	62	1.174	ug/L	0.093	7	5	257	8	KED
[redacted]	63	[redacted]	ug/L	0.024	0	118	10483	1	KED
Cu	65	2.738	ug/L	0.071	2	63	5251	2	KED
[redacted]	66	[redacted]	ug/L	0.190	1	40	4628	3	KED
Zn	67	9.837	ug/L	0.245	2	5	763	1	KED
[redacted]	75	[redacted]	ug/L	0.059	18	7	81	17	KED
Y	89		ug/L			512697	455425	2	Standard
Kr	83		ug/L			65	58	29	Standard
> In-1	115		ug/L			11342	10239	2	KED
[redacted]	111	[redacted]	ug/L	0.020	27	6	21	22	KED
Cd	114	0.080	ug/L	0.015	19	4	45	20	KED
> In	115		ug/L			888503	786623	2	Standard
Ag	107	0.000	ug/L	0.001	688	236	212	8	Standard
> Tb	159		ug/L			797843	753450	6	Standard
[redacted]	208	[redacted]	ug/L	0.155	4	255	191334	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Monday, March 06, 2023 22:02:46
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			36323	40264	1	Standard
Cl	37		ug/L			4837250	4725028	2	Standard
> Sc	45		ug/L			768932	729502	2	Standard
[redacted]	52	[redacted]	ug/L	0.077	8	29685	49441	3	Standard
Cr	53	1.134	ug/L	0.067	5	273	3281	4	Standard
Mn	55	66.831	ug/L	1.696	2	1379	2180366	3	Standard
> Ge	72		ug/L			45127	42866	2	KED
[redacted]	60	[redacted]	ug/L	0.036	3	27	1353	3	KED
Ni	62	1.108	ug/L	0.021	1	5	245	1	KED
[redacted]	63	[redacted]	ug/L	0.019	0	118	10072	3	KED
Cu	65	2.564	ug/L	0.028	1	63	4967	1	KED
[redacted]	66	[redacted]	ug/L	0.599	6	40	4602	3	KED
Zn	67	9.391	ug/L	0.612	6	5	736	8	KED
[redacted]	75	[redacted]	ug/L	0.020	6	7	81	7	KED
Y	89		ug/L			512697	464110	0	Standard
Kr	83		ug/L			65	66	15	Standard
> In-1	115		ug/L			11342	11361	1	KED
[redacted]	111	[redacted]	ug/L	0.041	53	6	24	38	KED
Cd	114	0.068	ug/L	0.027	40	4	43	38	KED
> In	115		ug/L			888503	802681	1	Standard
Ag	107	0.000	ug/L	0.000	233	236	215	2	Standard
> Tb	159		ug/L			797843	749573	1	Standard
[redacted]	208	[redacted]	ug/L	0.090	2	255	185001	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Monday, March 06, 2023 22:07:08
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			36323	41649	2	Standard
Cl	37		ug/L			4837250	4759151	1	Standard
> Sc	45		ug/L			768932	737379	1	Standard
[redacted]	52	[redacted]	ug/L	0.174	2	29685	161918	2	Standard
Cr	53	5.964	ug/L	0.035	0	273	16339	1	Standard
Mn	55	74.985	ug/L	0.760	1	1379	2472884	2	Standard
> Ge	72		ug/L			45127	42728	2	KED
[redacted]	60	[redacted]	ug/L	0.160	2	27	7920	0	KED
Ni	62	6.000	ug/L	0.118	1	5	1303	4	KED
[redacted]	63	[redacted]	ug/L	0.073	0	118	29285	2	KED
Cu	65	7.491	ug/L	0.088	1	63	14352	2	KED
[redacted]	66	[redacted]	ug/L	0.379	1	40	12340	1	KED
Zn	67	24.833	ug/L	0.520	2	5	1931	4	KED
[redacted]	75	[redacted]	ug/L	0.052	0	7	1260	2	KED
Y	89		ug/L			512697	456384	3	Standard
Kr	83		ug/L			65	62	0	Standard
> In-1	115		ug/L			11342	10751	1	KED
[redacted]	111	[redacted]	ug/L	0.248	4	6	1201	5	KED
Cd	114	5.177	ug/L	0.013	0	4	2845	1	KED
> In	115		ug/L			888503	807031	1	Standard
Ag	107	5.122	ug/L	0.148	2	236	87911	3	Standard
> Tb	159		ug/L			797843	761757	4	Standard
[redacted]	208	[redacted]	ug/L	0.261	3	255	503572	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Monday, March 06, 2023 22:12:59
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			36323	56833	0	Standard
Cl	37		ug/L			4837250	4842868	0	Standard
Sc	45		ug/L			768932	758039	0	Standard
[redacted]	52	[redacted]	ug/L	0.226	1	29685	401722	1	Standard
Cr	53	15.840	ug/L	0.105	0	273	44167	0	Standard
Mn	55	86.903	ug/L	0.808	0	1379	2945727	0	Standard
Ge	72		ug/L			45127	42938	1	KED
[redacted]	60	[redacted]	ug/L	0.671	5	27	16485	3	KED
Ni	62	12.449	ug/L	0.328	2	5	2710	2	KED
[redacted]	63	[redacted]	ug/L	0.920	3	118	97579	2	KED
Cu	65	24.490	ug/L	1.077	4	63	46988	2	KED
Zn	66	58.856	ug/L	1.914	3	40	27775	1	KED
Zn	67	56.543	ug/L	1.781	3	5	4410	2	KED
[redacted]	75	[redacted]	ug/L	0.070	2	7	738	2	KED
Y	89		ug/L			512697	565209	1	Standard
Kr	83		ug/L			65	76	11	Standard
In-1	115		ug/L			11342	11286	0	KED
[redacted]	111	[redacted]	ug/L	0.010	2	6	102	2	KED
Cd	114	0.395	ug/L	0.037	9	4	231	8	KED
In	115		ug/L			888503	811942	1	Standard
[redacted]	107	[redacted]	ug/L	0.003	4	236	1282	3	Standard
Tb	159		ug/L			797843	780043	2	Standard
[redacted]	208	[redacted]	ug/L	0.421	2	255	917764	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Monday, March 06, 2023 22:17:27
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	**13**		ug/L			36323	52168	3	Standard
Cl	**37**		ug/L			4837250	4867414	4	Standard
Sc	**45**		ug/L			768932	721305	4	Standard
[redacted]	**52**	[redacted]	ug/L	0.125	0	29685	371334	4	Standard
Cr	**53**	**15.555**	ug/L	0.163	1	273	41279	5	Standard
Mn	**55**	**95.813**	ug/L	3.104	3	1379	3092257	7	Standard
Ge	**72**		ug/L			45127	42006	0	KED
[redacted]	**60**	[redacted]	ug/L	0.158	1	27	16675	1	KED
Ni	**62**	**12.630**	ug/L	0.585	4	5	2690	3	KED
[redacted]	**63**	[redacted]	ug/L	0.146	0	118	111911	1	KED
Cu	**65**	**29.613**	ug/L	0.506	1	63	55599	1	KED
Zn	**66**	**62.751**	ug/L	0.998	1	40	28977	1	KED
Zn	**67**	**58.338**	ug/L	2.246	3	5	4451	3	KED
[redacted]	**75**	[redacted]	ug/L	0.097	3	7	713	3	KED
Y	**89**		ug/L			512697	554816	7	Standard
Kr	**83**		ug/L			65	80	13	Standard
In-1	**115**		ug/L			11342	10745	3	KED
[redacted]	**111**	[redacted]	ug/L	0.010	2	6	107	5	KED
Cd	**114**	**0.359**	ug/L	0.041	11	4	201	12	KED
In	**115**		ug/L			888503	787911	4	Standard
[redacted]	**107**	[redacted]	ug/L	0.004	7	236	1194	1	Standard
Tb	**159**		ug/L			797843	768125	3	Standard
[redacted]	**208**	[redacted]	ug/L	0.659	4	255	834433	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Monday, March 06, 2023 22:21:54
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			36323	52292	1	Standard
Cl	37		ug/L			4837250	4775313	0	Standard
Sc	45		ug/L			768932	727204	1	Standard
[redacted]	52	[redacted]	ug/L	1.087	2	29685	919090	2	Standard
Cr	53	38.651	ug/L	0.338	0	273	103010	0	Standard
Mn	55	121.586	ug/L	1.261	1	1379	3952872	0	Standard
Ge	72		ug/L			45127	42265	1	KED
[redacted]	60	[redacted]	ug/L	0.749	2	27	48932	3	KED
Ni	62	36.836	ug/L	1.034	2	5	7887	3	KED
[redacted]	63	[redacted]	ug/L	0.916	1	118	205241	2	KED
Cu	65	53.108	ug/L	1.190	2	63	100284	2	KED
Zn	66	138.919	ug/L	2.102	1	40	64509	2	KED
Zn	67	131.193	ug/L	1.324	1	5	10068	1	KED
[redacted]	75	[redacted]	ug/L	0.399	1	7	6393	2	KED
Y	89		ug/L			512697	569042	2	Standard
Kr	83		ug/L			65	99	6	Standard
In-1	115		ug/L			11342	11474	2	KED
[redacted]	111	[redacted]	ug/L	0.505	1	6	6046	0	KED
Cd	114	25.232	ug/L	0.099	0	4	14786	2	KED
In	115		ug/L			888503	794875	0	Standard
[redacted]	107	[redacted]	ug/L	0.568	2	236	425397	1	Standard
Tb	159		ug/L			797843	763244	2	Standard
[redacted]	208	[redacted]	ug/L	0.736	1	255	2521673	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Monday, March 06, 2023 22:26:16
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			36323	50546	1	Standard
Cl	37		ug/L			4837250	4914230	2	Standard
Sc	45		ug/L			768932	757276	2	Standard
[redacted]	52	[redacted]	ug/L	0.385	1	29685	924907	2	Standard
Cr	53	37.849	ug/L	0.615	1	273	105060	3	Standard
Mn	55	113.287	ug/L	1.395	1	1379	3835449	2	Standard
Ge	72		ug/L			45127	42017	4	KED
[redacted]	60	[redacted]	ug/L	0.984	2	27	48382	2	KED
Ni	62	37.353	ug/L	1.398	3	5	7943	3	KED
[redacted]	63	[redacted]	ug/L	1.236	2	118	195727	3	KED
Cu	65	51.669	ug/L	1.520	2	63	96965	4	KED
Zn	66	137.576	ug/L	2.368	1	40	63477	3	KED
Zn	67	128.203	ug/L	2.119	1	5	9783	5	KED
[redacted]	75	[redacted]	ug/L	0.552	1	7	6420	2	KED
Y	89		ug/L			512697	565375	3	Standard
Kr	83		ug/L			65	86	11	Standard
In-1	115		ug/L			11342	11172	2	KED
[redacted]	111	[redacted]	ug/L	0.560	2	6	5790	3	KED
Cd	114	25.416	ug/L	0.789	3	4	14505	4	KED
In	115		ug/L			888503	811148	0	Standard
[redacted]	107	[redacted]	ug/L	0.856	3	236	428342	3	Standard
Tb	159		ug/L			797843	788288	3	Standard
[redacted]	208	[redacted]	ug/L	1.348	3	255	2354734	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVA
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, March 06, 2023 22:32:09
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			36323	36241	4	Standard
	Cl	**37**		ug/L			4837250	5023926	2	Standard
⌈>	**Sc**	**45**		ug/L			768932	680485	1	Standard
|	**Cr**	**52**	**50.281**	ug/L	0.535	1	29685	1090836	2	Standard
|	**Cr**	**53**	**49.598**	ug/L	1.046	2	273	123603	0	Standard
⌊	**Mn**	**55**	**49.973**	ug/L	0.484	0	1379	1521116	1	Standard
⌈>	**Ge**	**72**		ug/L			45127	41219	5	KED
|	**Ni**	**60**	**47.581**	ug/L	1.222	2	27	60762	3	KED
|	**Ni**	**62**	**47.492**	ug/L	0.969	2	5	9907	3	KED
|	**Cu**	**63**	**47.077**	ug/L	0.139	0	118	180036	5	KED
|	**Cu**	**65**	**47.167**	ug/L	1.606	3	63	86894	7	KED
|	**Zn**	**66**	**48.366**	ug/L	1.453	3	40	21908	4	KED
|	**Zn**	**67**	**49.971**	ug/L	1.823	3	5	3738	2	KED
⌊	**As**	**75**	**50.034**	ug/L	1.004	2	7	11128	3	KED
	Y	**89**		ug/L			512697	448715	3	Standard
	Kr	**83**		ug/L			65	64	7	Standard
⌈>	**In-1**	**115**		ug/L			11342	10800	2	KED
|	**Cd**	**111**	**49.222**	ug/L	1.244	2	6	11007	2	KED
⌊	**Cd**	**114**	**49.406**	ug/L	1.060	2	4	27245	1	KED
⌈>	**In**	**115**		ug/L			888503	799518	2	Standard
⌊	**Ag**	**107**	**48.704**	ug/L	1.911	3	236	826105	3	Standard
⌈>	**Tb**	**159**		ug/L			797843	757392	0	Standard
⌊	**Pb**	**208**	**48.770**	ug/L	0.776	1	255	2937092	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBA
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, March 06, 2023 22:39:21
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			36323	33303	3	Standard
	Cl	**37**		ug/L			4837250	4666560	3	Standard
⌈>	**Sc**	**45**		ug/L			768932	631352	7	Standard
|	**Cr**	**52**	**-0.021**	ug/L	0.030	141	29685	23975	9	Standard
|	**Cr**	**53**	**-0.002**	ug/L	0.013	738	273	218	6	Standard
⌊	**Mn**	**55**	**-0.004**	ug/L	0.002	46	1379	1019	3	Standard
⌈>	**Ge**	**72**		ug/L			45127	42086	1	KED
|	**Ni**	**60**	**0.002**	ug/L	0.003	182	27	27	15	KED
|	**Ni**	**62**	**0.043**	ug/L	0.027	61	5	14	39	KED
|	**Cu**	**63**	**0.006**	ug/L	0.004	76	118	132	13	KED
|	**Cu**	**65**	**0.012**	ug/L	0.016	138	63	81	38	KED
|	**Zn**	**66**	**0.159**	ug/L	0.019	12	40	111	6	KED
|	**Zn**	**67**	**0.188**	ug/L	0.013	7	5	19	5	KED
⌊	**As**	**75**	**0.001**	ug/L	0.014	1721	7	7	43	KED
	Y	**89**		ug/L			512697	406421	7	Standard
	Kr	**83**		ug/L			65	59	27	Standard
⌈>	**In-1**	**115**		ug/L			11342	10675	2	KED
|	**Cd**	**111**	**0.006**	ug/L	0.005	83	6	7	12	KED
⌊	**Cd**	**114**	**0.009**	ug/L	0.009	101	4	8	53	KED
⌈>	**In**	**115**		ug/L			888503	761976	4	Standard
⌊	**Ag**	**107**	**0.005**	ug/L	0.000	6	236	282	3	Standard
⌈>	**Tb**	**159**		ug/L			797843	698069	9	Standard
⌊	**Pb**	**208**	**0.004**	ug/L	0.000	11	255	455	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL1
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, March 06, 2023 22:43:49
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L				35047	1	Standard
	Cl	**37**		ug/L				4819880	3	Standard
⎡>	**Sc**	**45**		ug/L				670326	4	Standard
⎢	**Cr**	**52**		ug/L				26049	3	Standard
⎢	**Cr**	**53**		ug/L				231	8	Standard
⎣	**Mn**	**55**		ug/L				1028	4	Standard
⎡>	**Ge**	**72**		ug/L				40960	3	KED
⎢	**Ni**	**60**		ug/L				23	16	KED
⎢	**Ni**	**62**		ug/L				6	75	KED
⎢	**Cu**	**63**		ug/L				124	17	KED
⎢	**Cu**	**65**		ug/L				56	22	KED
⎢	**Zn**	**66**		ug/L				80	30	KED
⎢	**Zn**	**67**		ug/L				19	22	KED
⎣	**As**	**75**		ug/L				7	17	KED
	Y	**89**		ug/L				440630	3	Standard
	Kr	**83**		ug/L				56	10	Standard
⎡>	**In-1**	**115**		ug/L				11294	0	KED
⎢	**Cd**	**111**		ug/L				6	39	KED
⎣	**Cd**	**114**		ug/L				7	47	KED
⎡>	**In**	**115**		ug/L				792758	1	Standard
⎣	**Ag**	**107**		ug/L				158	17	Standard
⎡>	**Tb**	**159**		ug/L				735738	1	Standard
⎣	**Pb**	**208**		ug/L				406	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVB
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, March 06, 2023 22:48:17
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35047	35424	2	Standard
	Cl	**37**		ug/L			4819880	5035791	1	Standard
⎡>	**Sc**	**45**		ug/L			670326	690633	2	Standard
⎢	**Cr**	**52**	**50.090**	ug/L	1.293	2	26049	1102727	0	Standard
⎢	**Cr**	**53**	**49.992**	ug/L	1.409	2	231	126409	0	Standard
⎣	**Mn**	**55**	**50.336**	ug/L	0.632	1	1028	1554564	1	Standard
⎡>	**Ge**	**72**		ug/L			40960	40175	3	KED
⎢	**Ni**	**60**	**48.127**	ug/L	0.473	0	23	59945	2	KED
⎢	**Ni**	**62**	**47.601**	ug/L	0.608	1	6	9689	4	KED
⎢	**Cu**	**63**	**47.383**	ug/L	0.364	0	124	176628	2	KED
⎢	**Cu**	**65**	**47.887**	ug/L	0.910	1	56	85928	1	KED
⎢	**Zn**	**66**	**49.451**	ug/L	1.419	2	80	21903	5	KED
⎢	**Zn**	**67**	**49.634**	ug/L	1.227	2	19	3638	4	KED
⎣	**As**	**75**	**50.253**	ug/L	0.359	0	7	10901	2	KED
	Y	**89**		ug/L			440630	439073	2	Standard
	Kr	**83**		ug/L			56	76	15	Standard
⎡>	**In-1**	**115**		ug/L			11294	11002	3	KED
⎢	**Cd**	**111**	**49.813**	ug/L	1.772	3	6	11342	3	KED
⎣	**Cd**	**114**	**49.833**	ug/L	0.809	1	7	28008	4	KED
⎡>	**In**	**115**		ug/L			792758	790337	1	Standard
⎣	**Ag**	**107**	**49.867**	ug/L	0.361	0	158	836273	2	Standard
⎡>	**Tb**	**159**		ug/L			735738	752232	3	Standard
⎣	**Pb**	**208**	**49.542**	ug/L	1.405	2	406	2961691	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBB
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, March 06, 2023 22:55:29
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35047	33132	2	Standard
	Cl	**37**		ug/L			4819880	4815821	0	Standard
⌈>	**Sc**	**45**		ug/L			670326	646292	1	Standard
|	**Cr**	**52**	**-0.004**	ug/L	0.014	340	26049	25028	0	Standard
|	**Cr**	**53**	**0.000**	ug/L	0.007	30344	231	223	7	Standard
⌊	**Mn**	**55**	**0.001**	ug/L	0.001	142	1028	1006	2	Standard
⌈>	**Ge**	**72**		ug/L			40960	41305	1	KED
|	**Ni**	**60**	**0.003**	ug/L	0.009	336	23	27	44	KED
|	**Ni**	**62**	**0.012**	ug/L	0.030	242	6	8	68	KED
|	**Cu**	**63**	**-0.001**	ug/L	0.002	384	124	123	4	KED
|	**Cu**	**65**	**-0.000**	ug/L	0.006	3752	56	56	19	KED
|	**Zn**	**66**	**0.059**	ug/L	0.056	94	80	107	22	KED
|	**Zn**	**67**	**-0.044**	ug/L	0.091	204	19	16	40	KED
⌊	**As**	**75**	**-0.001**	ug/L	0.006	590	7	7	16	KED
	Y	**89**		ug/L			440630	421089	5	Standard
	Kr	**83**		ug/L			56	66	23	Standard
⌈>	**In-1**	**115**		ug/L			11294	10932	0	KED
|	**Cd**	**111**	**0.004**	ug/L	0.015	397	6	6	49	KED
⌊	**Cd**	**114**	**0.002**	ug/L	0.005	319	7	7	36	KED
⌈>	**In**	**115**		ug/L			792758	766559	5	Standard
⌊	**Ag**	**107**	**0.006**	ug/L	0.001	24	158	248	6	Standard
⌈>	**Tb**	**159**		ug/L			735738	701754	6	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.001	47	406	460	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Monday, March 06, 2023 22:59:58
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	**13**		ug/L			35047	43878	1	Standard
Cl	**37**		ug/L			4819880	4844313	2	Standard
Sc	**45**		ug/L			670326	694466	0	Standard
Cr	**52**	**0.027**	ug/L	0.031	113	26049	27574	2	Standard
Cr	**53**	**-0.001**	ug/L	0.008	927	231	237	8	Standard
Mn	**55**	**0.000**	ug/L	0.001	306	1028	1079	3	Standard
Ge	**72**		ug/L			40960	41718	3	KED
Ni	**60**	**0.011**	ug/L	0.004	39	23	38	13	KED
Ni	**62**	**0.011**	ug/L	0.018	156	6	8	44	KED
[redacted]	**63**	[redacted]	ug/L	0.004	217	124	119	10	KED
Cu	**65**	**0.003**	ug/L	0.001	42	56	63	4	KED
[redacted]	**66**	[redacted]	ug/L	0.038	60	80	111	18	KED
Zn	**67**	**-0.032**	ug/L	0.171	540	19	17	76	KED
[redacted]	**75**	[redacted]	ug/L	0.014	113	7	10	25	KED
Y	**89**		ug/L			440630	450333	1	Standard
Kr	**83**		ug/L			56	53	39	Standard
In-1	**115**		ug/L			11294	11096	2	KED
[redacted]	**111**	[redacted]	ug/L	0.005	36	6	9	11	KED
Cd	**114**	**-0.003**	ug/L	0.007	218	7	5	75	KED
In	**115**		ug/L			792758	821842	2	Standard
Ag	**107**	**-0.000**	ug/L	0.001	1065	158	162	8	Standard
Tb	**159**		ug/L			735738	745863	3	Standard
[redacted]	**208**	[redacted]	ug/L	0.001	219	406	433	8	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Monday, March 06, 2023 23:04:25
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35047	41547	2	Standard
	Cl	**37**		ug/L			4819880	4751760	3	Standard
⌈>	**Sc**	**45**		ug/L			670326	658852	4	Standard
|	**Cr**	**52**	**25.403**	ug/L	0.416	1	26049	546381	4	Standard
|	**Cr**	**53**	**25.187**	ug/L	0.519	2	231	60915	5	Standard
⌊	**Mn**	**55**	**25.469**	ug/L	0.915	3	1028	751716	7	Standard
⌈>	**Ge**	**72**		ug/L			40960	40613	2	KED
|	**Ni**	**60**	**24.309**	ug/L	0.529	2	23	30625	3	KED
|	**Ni**	**62**	**23.968**	ug/L	0.890	3	6	4934	4	KED
|	[redacted]	**63**	[redacted]	ug/L	0.865	3	124	90931	5	KED
|	**Cu**	**65**	**24.695**	ug/L	0.407	1	56	44850	3	KED
|	[redacted]	**66**	[redacted]	ug/L	1.522	1	80	34228	3	KED
|	**Zn**	**67**	**75.714**	ug/L	0.518	0	19	5599	2	KED
⌊	[redacted]	**75**	[redacted]	ug/L	0.331	1	7	5300	3	KED
	Y	**89**		ug/L			440630	431010	4	Standard
	Kr	**83**		ug/L			56	72	5	Standard
⌈>	**In-1**	**115**		ug/L			11294	10981	3	KED
|	[redacted]	**111**	[redacted]	ug/L	0.235	0	6	5487	2	KED
⌊	**Cd**	**114**	**24.092**	ug/L	0.238	0	7	13516	3	KED
⌈>	**In**	**115**		ug/L			792758	791869	4	Standard
⌊	**Ag**	**107**	**24.812**	ug/L	0.643	2	158	417111	6	Standard
⌈>	**Tb**	**159**		ug/L			735738	723508	6	Standard
⌊	[redacted]	**208**	[redacted]	ug/L	0.445	1	406	1438393	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLB0607-SRL1
Sample Dil Factor: 100
Comments:
Sample Date/Time: Monday, March 06, 2023 23:08:53
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35047	40711	0	Standard
	Cl	**37**		ug/L			4819880	4705522	1	Standard
⌈>	**Sc**	**45**		ug/L			670326	743330	2	Standard
|	**Cr**	**52**	**4.128**	ug/L	0.074	1	26049	124338	1	Standard
|	**Cr**	**53**	**4.235**	ug/L	0.049	1	231	11765	1	Standard
⌊	**Mn**	**55**	**67.447**	ug/L	1.378	2	1028	2241402	0	Standard
⌈>	**Ge**	**72**		ug/L			40960	41535	1	KED
|	**Ni**	**60**	**3.678**	ug/L	0.086	2	23	4758	2	KED
|	**Ni**	**62**	**3.619**	ug/L	0.273	7	6	767	6	KED
|	**Cu**	**63**	**7.961**	ug/L	0.135	1	124	30792	2	KED
|	**Cu**	**65**	**8.084**	ug/L	0.093	1	56	15050	2	KED
|	**Zn**	**66**	**24.914**	ug/L	0.317	1	80	11442	1	KED
|	**Zn**	**67**	**24.442**	ug/L	1.251	5	19	1862	6	KED
⌊	**As**	**75**	**0.731**	ug/L	0.045	6	7	171	7	KED
	Y	**89**		ug/L			440630	532873	1	Standard
	Kr	**83**		ug/L			56	78	15	Standard
⌈>	**In-1**	**115**		ug/L			11294	11281	0	KED
|	**Cd**	**111**	**0.048**	ug/L	0.011	22	6	17	14	KED
⌊	**Cd**	**114**	**0.039**	ug/L	0.012	29	7	29	22	KED
⌈>	**In**	**115**		ug/L			792758	789003	2	Standard
⌊	**Ag**	**107**	**0.066**	ug/L	0.003	4	158	1253	2	Standard
⌈>	**Tb**	**159**		ug/L			735738	752088	3	Standard
⌊	**Pb**	**208**	**5.004**	ug/L	0.147	2	406	299404	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Monday, March 06, 2023 23:13:20
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			35047	55894	3	Standard
Cl	37		ug/L			4819880	4748392	1	Standard
> Sc	45		ug/L			670326	991370	1	Standard
Cr	52	17.059	ug/L	0.319	1	26049	564750	2	Standard
Cr	53	16.989	ug/L	0.309	1	231	61913	1	Standard
Mn	55	267.405	ug/L	2.901	1	1028	11850610	2	Standard
> Ge	72		ug/L			40960	40943	2	KED
Ni	60	18.861	ug/L	0.233	1	23	23961	2	KED
Ni	62	19.095	ug/L	1.102	5	6	3966	7	KED
[redacted]	63	[redacted]	ug/L	0.767	1	124	156182	1	KED
Cu	65	41.446	ug/L	1.364	3	56	75790	1	KED
[redacted]	66	[redacted]	ug/L	1.786	1	80	55542	1	KED
Zn	67	123.552	ug/L	3.733	3	19	9198	3	KED
[redacted]	75	[redacted]	ug/L	0.160	4	7	823	3	KED
Y	89		ug/L			440630	972182	0	Standard
Kr	83		ug/L			56	222	9	Standard
> In-1	115		ug/L			11294	10858	1	KED
[redacted]	111	[redacted]	ug/L	0.069	25	6	65	21	KED
Cd	114	0.269	ug/L	0.028	10	7	156	10	KED
> In	115		ug/L			792758	796002	0	Standard
Ag	107	0.293	ug/L	0.010	3	158	5112	2	Standard
> Tb	159		ug/L			735738	812307	3	Standard
[redacted]	208	[redacted]	ug/L	0.737	3	406	1572811	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Monday, March 06, 2023 23:17:48
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			35047	55829	2	Standard
Cl	37		ug/L			4819880	4871008	3	Standard
> Sc	45		ug/L			670326	998184	2	Standard
Cr	52	17.103	ug/L	0.475	2	26049	569750	1	Standard
Cr	53	17.283	ug/L	0.144	0	231	63413	2	Standard
Mn	55	280.895	ug/L	4.320	1	1028	12530662	0	Standard
> Ge	72		ug/L			40960	40752	6	KED
Ni	60	20.100	ug/L	0.740	3	23	25376	3	KED
Ni	62	19.895	ug/L	1.628	8	6	4099	4	KED
[redacted]	63	[redacted]	ug/L	1.486	3	124	158134	3	KED
Cu	65	43.374	ug/L	2.127	4	56	78825	2	KED
[redacted]	66	[redacted]	ug/L	5.691	4	80	61963	2	KED
Zn	67	135.491	ug/L	3.764	2	19	10039	6	KED
[redacted]	75	[redacted]	ug/L	0.217	5	7	855	1	KED
Y	89		ug/L			440630	985923	0	Standard
Kr	83		ug/L			56	219	14	Standard
> In-1	115		ug/L			11294	10845	2	KED
[redacted]	111	[redacted]	ug/L	0.045	17	6	62	17	KED
Cd	114	0.255	ug/L	0.004	1	7	147	1	KED
> In	115		ug/L			792758	792266	1	Standard
Ag	107	0.298	ug/L	0.005	1	158	5159	2	Standard
> Tb	159		ug/L			735738	820130	4	Standard
[redacted]	208	[redacted]	ug/L	1.118	4	406	1723893	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Monday, March 06, 2023 23:22:16
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			35047	49337	3	Standard
Cl	37		ug/L			4819880	4681831	2	Standard
> Sc	45		ug/L			670326	924891	3	Standard
Cr	52	35.305	ug/L	0.120	0	26049	1051850	2	Standard
Cr	53	34.267	ug/L	0.184	0	231	116204	3	Standard
Mn	55	306.165	ug/L	1.549	0	1028	12658104	3	Standard
> Ge	72		ug/L			40960	41671	2	KED
Ni	60	41.995	ug/L	1.785	4	23	54245	3	KED
Ni	62	42.156	ug/L	2.039	4	6	8894	3	KED
[redacted]	63	[redacted]	ug/L	1.316	2	124	252298	1	KED
Cu	65	65.752	ug/L	1.632	2	56	122406	3	KED
[redacted]	66	[redacted]	ug/L	4.094	1	80	95377	1	KED
Zn	67	203.532	ug/L	6.378	3	19	15404	0	KED
[redacted]	75	[redacted]	ug/L	0.478	1	7	5418	2	KED
Y	89		ug/L			440630	937934	3	Standard
Kr	83		ug/L			56	211	1	Standard
> In-1	115		ug/L			11294	10631	0	KED
[redacted]	111	[redacted]	ug/L	0.196	0	6	5327	0	KED
Cd	114	23.922	ug/L	0.129	0	7	12992	0	KED
> In	115		ug/L			792758	768466	2	Standard
Ag	107	22.020	ug/L	0.453	2	158	359080	2	Standard
> Tb	159		ug/L			735738	785049	6	Standard
[redacted]	208	[redacted]	ug/L	1.951	3	406	3084484	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Monday, March 06, 2023 23:26:43
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			35047	52869	3	Standard
Cl	37		ug/L			4819880	4835226	3	Standard
> Sc	45		ug/L			670326	959034	4	Standard
Cr	52	35.417	ug/L	0.746	2	26049	1093532	3	Standard
Cr	53	35.086	ug/L	0.340	0	231	123323	4	Standard
Mn	55	317.055	ug/L	3.013	0	1028	13593185	5	Standard
> Ge	72		ug/L			40960	41524	2	KED
Ni	60	41.550	ug/L	1.263	3	23	53482	2	KED
Ni	62	42.295	ug/L	0.961	2	6	8898	4	KED
[redacted]	63	[redacted]	ug/L	1.005	1	124	254798	3	KED
Cu	65	67.839	ug/L	1.022	1	56	125826	2	KED
[redacted]	66	[redacted]	ug/L	4.285	1	80	101122	4	KED
Zn	67	215.289	ug/L	0.897	0	19	16244	3	KED
[redacted]	75	[redacted]	ug/L	0.433	1	7	5336	1	KED
Y	89		ug/L			440630	955143	5	Standard
Kr	83		ug/L			56	200	10	Standard
> In-1	115		ug/L			11294	10778	2	KED
[redacted]	111	[redacted]	ug/L	0.709	2	6	5614	0	KED
Cd	114	23.773	ug/L	0.697	2	7	13086	2	KED
> In	115		ug/L			792758	795152	4	Standard
Ag	107	22.570	ug/L	0.185	0	158	380888	5	Standard
> Tb	159		ug/L			735738	808074	5	Standard
[redacted]	208	[redacted]	ug/L	1.746	3	406	3535216	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLB0607-PS1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, March 06, 2023 23:31:11
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35047	56760	3	Standard
	Cl	**37**		ug/L			4819880	4914381	3	Standard
>	**Sc**	**45**		ug/L			670326	993461	2	Standard
	Cr	**52**	**34.064**	ug/L	0.741	2	26049	1091167	0	Standard
	Cr	**53**	**33.668**	ug/L	0.224	0	231	122623	2	Standard
	Mn	**55**	**283.611**	ug/L	5.334	1	1028	12591001	0	Standard
>	**Ge**	**72**		ug/L			40960	43241	1	KED
	Ni	**60**	**40.595**	ug/L	0.728	1	23	54432	1	KED
	Ni	**62**	**41.566**	ug/L	0.073	0	6	9105	1	KED
	Cu	**63**	**62.926**	ug/L	1.530	2	124	252432	2	KED
	Cu	**65**	**64.078**	ug/L	1.040	1	56	123757	0	KED
	Zn	**66**	**188.857**	ug/L	2.389	1	80	89753	2	KED
	Zn	**67**	**184.281**	ug/L	2.317	1	19	14479	0	KED
	As	**75**	**25.839**	ug/L	0.182	0	7	6037	1	KED
	Y	**89**		ug/L			440630	986894	0	Standard
	Kr	**83**		ug/L			56	231	5	Standard
>	**In-1**	**115**		ug/L			11294	10702	0	KED
	Cd	**111**	**23.084**	ug/L	0.296	1	6	5118	1	KED
	Cd	**114**	**23.054**	ug/L	0.955	4	7	12605	4	KED
>	**In**	**115**		ug/L			792758	808404	2	Standard
	Ag	**107**	**23.162**	ug/L	0.554	2	158	397238	1	Standard
>	**Tb**	**159**		ug/L			735738	823955	2	Standard
	Pb	**208**	**45.002**	ug/L	1.111	2	406	2947411	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Monday, March 06, 2023 23:35:33
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35047	42875	0	Standard
	Cl	**37**		ug/L			4819880	4943075	1	Standard
>	**Sc**	**45**		ug/L			670326	705177	2	Standard
	Cr	**52**	**84.316**	ug/L	2.425	2	26049	1876743	1	Standard
	Cr	**53**	**83.537**	ug/L	2.227	2	231	215542	1	Standard
	Mn	**55**	**201.982**	ug/L	2.369	1	1028	6366295	1	Standard
>	**Ge**	**72**		ug/L			40960	40629	1	KED
	Ni	**60**	**127.209**	ug/L	2.866	2	23	160232	3	KED
	Ni	**62**	**129.650**	ug/L	3.454	2	6	26667	2	KED
	[redacted]	**63**	[redacted]	ug/L	0.520	1	124	190636	2	KED
	Cu	**65**	**51.718**	ug/L	0.599	1	56	93894	3	KED
	[redacted]	**66**	[redacted]	ug/L	1.297	2	80	26084	1	KED
	Zn	**67**	**66.209**	ug/L	2.810	4	19	4902	5	KED
	[redacted]	**75**	[redacted]	ug/L	0.338	1	7	6722	2	KED
	Y	**89**		ug/L			440630	567194	1	Standard
	Kr	**83**		ug/L			56	87	19	Standard
>	**In-1**	**115**		ug/L			11294	10784	0	KED
	[redacted]	**111**	[redacted]	ug/L	1.381	2	6	13235	1	KED
	Cd	**114**	**59.725**	ug/L	1.372	2	7	32897	3	KED
>	**In**	**115**		ug/L			792758	786341	1	Standard
	Ag	**107**	**20.088**	ug/L	0.165	0	158	335224	1	Standard
>	**Tb**	**159**		ug/L			735738	760923	3	Standard
	[redacted]	**208**	[redacted]	ug/L	3.652	3	406	5771109	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLC
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, March 06, 2023 23:40:01
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35047	38763	1	Standard
	Cl	**37**		ug/L			4819880	4655035	1	Standard
⌈>	**Sc**	**45**		ug/L			670326	670068	3	Standard
|	**Cr**	**52**	**-0.065**	ug/L	0.024	37	26049	24676	1	Standard
|	**Cr**	**53**	**-0.007**	ug/L	0.013	179	231	213	12	Standard
⌊	**Mn**	**55**	**0.013**	ug/L	0.001	6	1028	1405	2	Standard
⌈>	**Ge**	**72**		ug/L			40960	40003	1	KED
|	**Ni**	**60**	**0.016**	ug/L	0.003	17	23	43	9	KED
|	**Ni**	**62**	**0.038**	ug/L	0.033	85	6	13	47	KED
|	**Cu**	**63**	**0.004**	ug/L	0.002	65	124	135	7	KED
|	**Cu**	**65**	**0.010**	ug/L	0.005	52	56	73	11	KED
|	**Zn**	**66**	**0.038**	ug/L	0.018	46	80	95	7	KED
|	**Zn**	**67**	**-0.064**	ug/L	0.064	99	19	14	32	KED
⌊	**As**	**75**	**0.000**	ug/L	0.008	17419	7	7	25	KED
	Y	**89**		ug/L			440630	434570	2	Standard
	Kr	**83**		ug/L			56	58	23	Standard
⌈>	**In-1**	**115**		ug/L			11294	10629	3	KED
|	**Cd**	**111**	**-0.006**	ug/L	0.002	33	6	4	12	KED
⌊	**Cd**	**114**	**-0.002**	ug/L	0.007	388	7	5	68	KED
⌈>	**In**	**115**		ug/L			792758	786999	0	Standard
⌊	**Ag**	**107**	**0.008**	ug/L	0.001	11	158	283	5	Standard
⌈>	**Tb**	**159**		ug/L			735738	728895	3	Standard
⌊	**Pb**	**208**	**0.008**	ug/L	0.001	8	406	871	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVC
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, March 06, 2023 23:44:29
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35047	34869	4	Standard
	Cl	**37**		ug/L			4819880	4774961	2	Standard
⌈>	**Sc**	**45**		ug/L			670326	643386	3	Standard
|	**Cr**	**52**	**49.867**	ug/L	0.679	1	26049	1023133	2	Standard
|	**Cr**	**53**	**49.474**	ug/L	0.370	0	231	116581	2	Standard
⌊	**Mn**	**55**	**49.290**	ug/L	0.945	1	1028	1418844	4	Standard
⌈>	**Ge**	**72**		ug/L			40960	40024	4	KED
|	**Ni**	**60**	**47.780**	ug/L	0.773	1	23	59302	4	KED
|	**Ni**	**62**	**48.245**	ug/L	1.311	2	6	9777	3	KED
|	**Cu**	**63**	**46.954**	ug/L	0.456	0	124	174438	5	KED
|	**Cu**	**65**	**48.448**	ug/L	0.834	1	56	86604	2	KED
|	**Zn**	**66**	**50.061**	ug/L	2.005	4	80	22069	4	KED
|	**Zn**	**67**	**51.026**	ug/L	1.086	2	19	3723	2	KED
⌊	**As**	**75**	**49.995**	ug/L	0.549	1	7	10803	3	KED
	Y	**89**		ug/L			440630	415049	4	Standard
	Kr	**83**		ug/L			56	64	15	Standard
⌈>	**In-1**	**115**		ug/L			11294	10321	3	KED
|	**Cd**	**111**	**50.789**	ug/L	1.018	2	6	10850	2	KED
⌊	**Cd**	**114**	**49.198**	ug/L	0.755	1	7	25928	2	KED
⌈>	**In**	**115**		ug/L			792758	758658	2	Standard
⌊	**Ag**	**107**	**49.148**	ug/L	0.815	1	158	790900	1	Standard
⌈>	**Tb**	**159**		ug/L			735738	723555	2	Standard
⌊	**Pb**	**208**	**48.829**	ug/L	1.963	4	406	2807843	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBC
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, March 06, 2023 23:51:41
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35047	35779	0	Standard
	Cl	**37**		ug/L			4819880	4683477	0	Standard
⎡>	**Sc**	**45**		ug/L			670326	651477	3	Standard
⎢	**Cr**	**52**	**-0.022**	ug/L	0.017	77	26049	24875	2	Standard
⎢	**Cr**	**53**	**-0.010**	ug/L	0.008	81	231	202	6	Standard
⎣	**Mn**	**55**	**-0.002**	ug/L	0.001	55	1028	939	2	Standard
⎡>	**Ge**	**72**		ug/L			40960	41533	1	KED
⎢	**Ni**	**60**	**0.005**	ug/L	0.009	187	23	29	38	KED
⎢	**Ni**	**62**	**-0.006**	ug/L	0.005	78	6	5	21	KED
⎢	**Cu**	**63**	**-0.001**	ug/L	0.001	76	124	121	1	KED
⎢	**Cu**	**65**	**0.002**	ug/L	0.008	533	56	60	26	KED
⎢	**Zn**	**66**	**0.075**	ug/L	0.043	57	80	116	18	KED
⎢	**Zn**	**67**	**0.115**	ug/L	0.129	112	19	28	33	KED
⎣	**As**	**75**	**-0.005**	ug/L	0.013	249	7	6	44	KED
	Y	**89**		ug/L			440630	419807	3	Standard
	Kr	**83**		ug/L			56	61	23	Standard
⎡>	**In-1**	**115**		ug/L			11294	10978	3	KED
⎢	**Cd**	**111**	**-0.006**	ug/L	0.010	158	6	4	49	KED
⎣	**Cd**	**114**	**0.001**	ug/L	0.006	666	7	7	43	KED
⎡>	**In**	**115**		ug/L			792758	778274	3	Standard
⎣	**Ag**	**107**	**0.007**	ug/L	0.001	19	158	266	11	Standard
⎡>	**Tb**	**159**		ug/L			735738	716892	1	Standard
⎣	**Pb**	**208**	**0.001**	ug/L	0.001	53	406	453	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Monday, March 06, 2023 23:56:10
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35047	44236	3	Standard
	Cl	**37**		ug/L			4819880	4658290	2	Standard
⌈>	**Sc**	**45**		ug/L			670326	664322	5	Standard
|	**Cr**	**52**	**0.037**	ug/L	0.030	81	26049	26566	4	Standard
|	**Cr**	**53**	**0.017**	ug/L	0.004	24	231	269	1	Standard
⌊	**Mn**	**55**	**0.006**	ug/L	0.000	3	1028	1187	5	Standard
⌈>	**Ge**	**72**		ug/L			40960	41621	0	KED
|	**Ni**	**60**	**0.041**	ug/L	0.014	32	23	77	23	KED
|	**Ni**	**62**	**0.051**	ug/L	0.027	52	6	17	33	KED
|	[redacted]	**63**	[redacted]	ug/L	0.004	18	124	200	6	KED
|	**Cu**	**65**	**0.029**	ug/L	0.006	20	56	110	9	KED
|	[redacted]	**66**	[redacted]	ug/L	0.046	26	80	160	13	KED
|	**Zn**	**67**	**0.172**	ug/L	0.115	67	19	33	26	KED
⌊	[redacted]	**75**	[redacted]	ug/L	0.013	444	7	8	34	KED
	Y	**89**		ug/L			440630	428274	5	Standard
	Kr	**83**		ug/L			56	60	33	Standard
⌈>	**In-1**	**115**		ug/L			11294	10510	1	KED
|	[redacted]	**111**	[redacted]	ug/L	0.013	706	6	6	48	KED
⌊	**Cd**	**114**	**-0.000**	ug/L	0.002	714	7	6	17	KED
⌈>	**In**	**115**		ug/L			792758	788463	3	Standard
⌊	**Ag**	**107**	**0.004**	ug/L	0.000	11	158	219	6	Standard
⌈>	**Tb**	**159**		ug/L			735738	719179	1	Standard
⌊	[redacted]	**208**	[redacted]	ug/L	0.000	12	406	566	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Tuesday, March 07, 2023 00:00:37
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35047	41854	2	Standard
	Cl	**37**		ug/L			4819880	4696762	2	Standard
⌈>	**Sc**	**45**		ug/L			670326	663796	2	Standard
|	**Cr**	**52**	**25.353**	ug/L	0.220	0	26049	549481	3	Standard
|	**Cr**	**53**	**25.111**	ug/L	0.314	1	231	61177	3	Standard
⌊	**Mn**	**55**	**25.586**	ug/L	0.370	1	1028	760224	3	Standard
⌈>	**Ge**	**72**		ug/L			40960	39786	4	KED
|	**Ni**	**60**	**23.987**	ug/L	0.455	1	23	29610	5	KED
|	**Ni**	**62**	**23.960**	ug/L	0.754	3	6	4836	7	KED
|	[redacted]	**63**	[redacted]	ug/L	0.520	2	124	88482	5	KED
|	**Cu**	**65**	**24.360**	ug/L	0.543	2	56	43333	5	KED
|	[redacted]	**66**	[redacted]	ug/L	1.229	1	80	33693	3	KED
|	**Zn**	**67**	**73.016**	ug/L	0.997	1	19	5291	5	KED
⌊	[redacted]	**75**	[redacted]	ug/L	0.194	0	7	5245	4	KED
	Y	**89**		ug/L			440630	430052	6	Standard
	Kr	**83**		ug/L			56	62	8	Standard
⌈>	**In-1**	**115**		ug/L			11294	11147	3	KED
|	[redacted]	**111**	[redacted]	ug/L	0.864	3	6	5433	0	KED
⌊	**Cd**	**114**	**23.410**	ug/L	0.296	1	7	13328	2	KED
⌈>	**In**	**115**		ug/L			792758	782380	4	Standard
⌊	**Ag**	**107**	**24.693**	ug/L	0.248	1	158	410060	4	Standard
⌈>	**Tb**	**159**		ug/L			735738	725547	4	Standard
⌊	[redacted]	**208**	[redacted]	ug/L	0.586	2	406	1448356	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLB0687-SRL1
Sample Dil Factor: 100
Comments:
Sample Date/Time: Tuesday, March 07, 2023 00:05:05
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35047	42201	1	Standard
	Cl	**37**		ug/L			4819880	4754764	2	Standard
⌈>	**Sc**	**45**		ug/L			670326	746413	1	Standard
|	**Cr**	**52**	**4.467**	ug/L	0.065	1	26049	132737	1	Standard
|	**Cr**	**53**	**4.505**	ug/L	0.064	1	231	12551	1	Standard
⌊	**Mn**	**55**	**99.384**	ug/L	1.570	1	1028	3316273	0	Standard
⌈>	**Ge**	**72**		ug/L			40960	43068	1	KED
|	**Ni**	**60**	**3.703**	ug/L	0.131	3	23	4968	4	KED
|	**Ni**	**62**	**3.758**	ug/L	0.261	6	6	826	8	KED
|	**Cu**	**63**	**8.990**	ug/L	0.199	2	124	36042	3	KED
|	**Cu**	**65**	**8.947**	ug/L	0.074	0	56	17266	2	KED
|	**Zn**	**66**	**29.285**	ug/L	0.768	2	80	13928	0	KED
|	**Zn**	**67**	**29.919**	ug/L	1.232	4	19	2358	3	KED
⌊	**As**	**75**	**0.854**	ug/L	0.037	4	7	206	5	KED
	Y	**89**		ug/L			440630	548538	2	Standard
	Kr	**83**		ug/L			56	66	22	Standard
⌈>	**In-1**	**115**		ug/L			11294	10852	2	KED
|	**Cd**	**111**	**0.055**	ug/L	0.022	40	6	18	27	KED
⌊	**Cd**	**114**	**0.048**	ug/L	0.009	19	7	33	15	KED
⌈>	**In**	**115**		ug/L			792758	814213	3	Standard
⌊	**Ag**	**107**	**0.081**	ug/L	0.001	1	158	1558	4	Standard
⌈>	**Tb**	**159**		ug/L			735738	780083	3	Standard
⌊	**Pb**	**208**	**5.329**	ug/L	0.164	3	406	330715	0	Standard

ICP-MS Quantitative Analysis - Summary Report

23B0411

Sample ID: ~~23B00411~~ [redacted]

Sample Dil Factor: [redacted]

Comments:

Sample Date/Time: Tuesday, March 07, 2023 00:09:33

MB 3/6/23

Number of Replicates: 3

Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth

Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun

Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac

Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			35047	57372	0	Standard
Cl	37		ug/L			4819880	4754525	3	Standard
> Sc	45		ug/L			670326	957981	6	Standard
Cr	52	18.322	ug/L	0.212	1	26049	583099	5	Standard
Cr	53	18.124	ug/L	0.509	2	231	63741	3	Standard
Mn	55	400.780	ug/L	12.720	3	1028	17140018	3	Standard
> Ge	72		ug/L			40960	40782	2	KED
Ni	60	18.431	ug/L	0.725	3	23	23307	1	KED
Ni	62	18.569	ug/L	0.505	2	6	3838	2	KED
[redacted]	63	[redacted]	ug/L	0.682	1	124	172851	1	KED
Cu	65	45.428	ug/L	1.724	3	56	82758	3	KED
[redacted]	66	[redacted]	ug/L	1.938	1	80	63677	1	KED
Zn	67	139.968	ug/L	1.885	1	19	10380	3	KED
[redacted]	75	[redacted]	ug/L	0.240	5	7	909	3	KED
Y	89		ug/L			440630	989959	5	Standard
Kr	83		ug/L			56	200	15	Standard
> In-1	115		ug/L			11294	11030	3	KED
[redacted]	111	[redacted]	ug/L	0.050	16	6	74	15	KED
Cd	114	0.277	ug/L	0.025	9	7	162	5	KED
> In	115		ug/L			792758	784531	4	Standard
Ag	107	0.385	ug/L	0.008	2	158	6555	2	Standard
> Tb	159		ug/L			735738	812314	1	Standard
[redacted]	208	[redacted]	ug/L	0.672	2	406	1664722	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Tuesday, March 07, 2023 00:14:00
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			35047	53111	4	Standard
Cl	37		ug/L			4819880	4695128	4	Standard
> Sc	45		ug/L			670326	921671	6	Standard
Cr	52	17.872	ug/L	0.353	1	26049	548481	7	Standard
Cr	53	17.883	ug/L	0.217	1	231	60560	6	Standard
Mn	55	387.117	ug/L	4.278	1	1028	15946656	6	Standard
> Ge	72		ug/L			40960	40944	3	KED
Ni	60	18.156	ug/L	0.333	1	23	23056	1	KED
Ni	62	18.518	ug/L	0.676	3	6	3841	0	KED
[redacted]	63	[redacted]	ug/L	0.304	0	124	170712	3	KED
Cu	65	45.356	ug/L	0.492	1	56	82988	4	KED
[redacted]	66	[redacted]	ug/L	2.705	1	80	61279	1	KED
Zn	67	134.409	ug/L	3.739	2	19	10000	0	KED
[redacted]	75	[redacted]	ug/L	0.189	4	7	886	1	KED
Y	89		ug/L			440630	951802	5	Standard
Kr	83		ug/L			56	195	6	Standard
> In-1	115		ug/L			11294	11172	2	KED
[redacted]	111	[redacted]	ug/L	0.031	12	6	65	11	KED
Cd	114	0.295	ug/L	0.040	13	7	175	14	KED
> In	115		ug/L			792758	766047	4	Standard
Ag	107	0.380	ug/L	0.019	4	158	6332	9	Standard
> Tb	159		ug/L			735738	786493	7	Standard
[redacted]	208	[redacted]	ug/L	0.839	3	406	1546607	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Tuesday, March 07, 2023 00:18:28
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			35047	51876	1	Standard
Cl	37		ug/L			4819880	4738689	3	Standard
> Sc	45		ug/L			670326	916726	4	Standard
Cr	52	35.358	ug/L	1.166	3	26049	1043161	1	Standard
Cr	53	35.949	ug/L	1.172	3	231	120687	1	Standard
Mn	55	405.572	ug/L	10.907	2	1028	16606351	2	Standard
> Ge	72		ug/L			40960	40696	3	KED
Ni	60	42.129	ug/L	0.323	0	23	53160	2	KED
Ni	62	41.042	ug/L	1.047	2	6	8457	1	KED
[redacted]	63	[redacted]	ug/L	1.622	2	124	283792	2	KED
Cu	65	76.547	ug/L	0.896	1	56	139156	3	KED
[redacted]	66	[redacted]	ug/L	1.652	0	80	95683	2	KED
Zn	67	204.667	ug/L	0.495	0	19	15135	3	KED
[redacted]	75	[redacted]	ug/L	0.256	1	7	5461	3	KED
Y	89		ug/L			440630	934861	3	Standard
Kr	83		ug/L			56	203	6	Standard
> In-1	115		ug/L			11294	10731	3	KED
[redacted]	111	[redacted]	ug/L	0.131	0	6	5071	3	KED
Cd	114	22.300	ug/L	0.442	1	7	12220	1	KED
> In	115		ug/L			792758	762721	3	Standard
Ag	107	22.673	ug/L	0.856	3	158	366867	4	Standard
> Tb	159		ug/L			735738	791549	2	Standard
[redacted]	208	[redacted]	ug/L	0.727	1	406	2966534	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Tuesday, March 07, 2023 00:22:55
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			35047	50971	1	Standard
Cl	37		ug/L			4819880	4752791	1	Standard
> Sc	45		ug/L			670326	938365	3	Standard
Cr	52	36.309	ug/L	0.180	0	26049	1096453	3	Standard
Cr	53	35.931	ug/L	0.776	2	231	123646	5	Standard
Mn	55	427.621	ug/L	9.633	2	1028	17926209	1	Standard
> Ge	72		ug/L			40960	40310	5	KED
Ni	60	43.576	ug/L	2.074	4	23	54390	1	KED
Ni	62	44.245	ug/L	1.886	4	6	9021	1	KED
[redacted]	63	[redacted]	ug/L	2.182	3	124	257282	1	KED
Cu	65	70.535	ug/L	4.061	5	56	126793	2	KED
[redacted]	66	[redacted]	ug/L	12.512	5	80	97816	0	KED
Zn	67	217.245	ug/L	14.255	6	19	15876	1	KED
[redacted]	75	[redacted]	ug/L	1.330	5	7	5735	1	KED
Y	89		ug/L			440630	985822	1	Standard
Kr	83		ug/L			56	220	22	Standard
> In-1	115		ug/L			11294	10797	3	KED
[redacted]	111	[redacted]	ug/L	0.667	2	6	5295	0	KED
Cd	114	23.622	ug/L	0.654	2	7	13023	0	KED
> In	115		ug/L			792758	773766	2	Standard
Ag	107	22.754	ug/L	0.365	1	158	373630	2	Standard
> Tb	159		ug/L			735738	799559	3	Standard
[redacted]	208	[redacted]	ug/L	0.673	1	406	2971374	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLB0687-PS1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Tuesday, March 07, 2023 00:27:23
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35047	58227	0	Standard
	Cl	**37**		ug/L			4819880	4801820	1	Standard
>	**Sc**	**45**		ug/L			670326	928653	3	Standard
	Cr	**52**	**36.546**	ug/L	1.194	3	26049	1091334	0	Standard
	Cr	**53**	**35.966**	ug/L	0.933	2	231	122366	0	Standard
	Mn	**55**	**418.385**	ug/L	11.214	2	1028	17357966	0	Standard
>	**Ge**	**72**		ug/L			40960	41524	1	KED
	Ni	**60**	**42.012**	ug/L	1.209	2	23	54101	3	KED
	Ni	**62**	**41.954**	ug/L	0.359	0	6	8825	2	KED
	Cu	**63**	**67.826**	ug/L	0.901	1	124	261301	1	KED
	Cu	**65**	**69.169**	ug/L	2.465	3	56	128280	2	KED
	Zn	**66**	**215.653**	ug/L	2.658	1	80	98391	0	KED
	Zn	**67**	**206.080**	ug/L	2.376	1	19	15548	1	KED
	As	**75**	**28.013**	ug/L	0.157	0	7	6284	0	KED
	Y	**89**		ug/L			440630	989695	2	Standard
	Kr	**83**		ug/L			56	195	5	Standard
>	**In-1**	**115**		ug/L			11294	10801	0	KED
	Cd	**111**	**23.641**	ug/L	0.674	2	6	5290	2	KED
	Cd	**114**	**23.584**	ug/L	0.264	1	7	13013	0	KED
>	**In**	**115**		ug/L			792758	777328	3	Standard
	Ag	**107**	**23.777**	ug/L	0.689	2	158	391971	1	Standard
>	**Tb**	**159**		ug/L			735738	799816	4	Standard
	Pb	**208**	**48.055**	ug/L	2.178	4	406	3052333	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Tuesday, March 07, 2023 00:31:45
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35047	42144	0	Standard
	Cl	**37**		ug/L			4819880	4901800	2	Standard
⌈>	**Sc**	**45**		ug/L			670326	699303	1	Standard
|	**Cr**	**52**	**81.440**	ug/L	1.921	2	26049	1798975	2	Standard
|	**Cr**	**53**	**81.176**	ug/L	2.803	3	231	207810	4	Standard
⌊	**Mn**	**55**	**200.911**	ug/L	0.645	0	1028	6280849	1	Standard
⌈>	**Ge**	**72**		ug/L			40960	41877	3	KED
|	**Ni**	**60**	**124.698**	ug/L	0.705	0	23	161908	4	KED
|	**Ni**	**62**	**125.105**	ug/L	2.556	2	6	26514	1	KED
|	[redacted]	**63**	[redacted]	ug/L	1.251	2	124	187437	5	KED
|	**Cu**	**65**	**50.085**	ug/L	0.370	0	56	93710	3	KED
|	[redacted]	**66**	[redacted]	ug/L	1.723	3	80	25992	3	KED
|	**Zn**	**67**	**66.267**	ug/L	1.134	1	19	5056	4	KED
⌊	[redacted]	**75**	[redacted]	ug/L	0.900	2	7	6855	2	KED
	Y	**89**		ug/L			440630	548532	1	Standard
	Kr	**83**		ug/L			56	93	10	Standard
⌈>	**In-1**	**115**		ug/L			11294	10595	4	KED
|	[redacted]	**111**	[redacted]	ug/L	1.611	2	6	12859	2	KED
⌊	**Cd**	**114**	**58.879**	ug/L	1.779	3	7	31836	1	KED
⌈>	**In**	**115**		ug/L			792758	794009	1	Standard
⌊	**Ag**	**107**	**19.685**	ug/L	0.285	1	158	331669	0	Standard
⌈>	**Tb**	**159**		ug/L			735738	759919	1	Standard
⌊	[redacted]	**208**	[redacted]	ug/L	2.581	2	406	5662825	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLD
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, March 07, 2023 00:36:13
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35047	36920	1	Standard
	Cl	**37**		ug/L			4819880	4608545	0	Standard
⌈>	**Sc**	**45**		ug/L			670326	630760	3	Standard
|	**Cr**	**52**	**-0.061**	ug/L	0.009	14	26049	23325	4	Standard
|	**Cr**	**53**	**-0.008**	ug/L	0.008	89	231	198	6	Standard
⌊	**Mn**	**55**	**0.012**	ug/L	0.005	40	1028	1314	10	Standard
⌈>	**Ge**	**72**		ug/L			40960	39351	2	KED
|	**Ni**	**60**	**0.014**	ug/L	0.007	50	23	39	21	KED
|	**Ni**	**62**	**0.008**	ug/L	0.020	249	6	7	50	KED
|	**Cu**	**63**	**-0.000**	ug/L	0.006	3183	124	118	17	KED
|	**Cu**	**65**	**0.006**	ug/L	0.013	210	56	65	36	KED
|	**Zn**	**66**	**0.021**	ug/L	0.008	37	80	86	4	KED
|	**Zn**	**67**	**-0.026**	ug/L	0.065	253	19	17	29	KED
⌊	**As**	**75**	**0.006**	ug/L	0.018	313	7	8	45	KED
	Y	**89**		ug/L			440630	407241	3	Standard
	Kr	**83**		ug/L			56	56	1	Standard
⌈>	**In-1**	**115**		ug/L			11294	10359	2	KED
|	**Cd**	**111**	**0.005**	ug/L	0.007	142	6	6	24	KED
⌊	**Cd**	**114**	**0.006**	ug/L	0.002	41	7	9	11	KED
⌈>	**In**	**115**		ug/L			792758	756516	1	Standard
⌊	**Ag**	**107**	**0.008**	ug/L	0.002	30	158	273	12	Standard
⌈>	**Tb**	**159**		ug/L			735738	705940	4	Standard
⌊	**Pb**	**208**	**0.006**	ug/L	0.001	9	406	716	8	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVD
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, March 07, 2023 00:40:41
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35047	34874	3	Standard
	Cl	**37**		ug/L			4819880	4747412	3	Standard
⌈>	**Sc**	**45**		ug/L			670326	631975	8	Standard
|	**Cr**	**52**	**51.605**	ug/L	0.610	1	26049	1039416	8	Standard
|	**Cr**	**53**	**50.799**	ug/L	0.803	1	231	117532	7	Standard
⌊	**Mn**	**55**	**50.769**	ug/L	0.476	0	1028	1434341	7	Standard
⌈>	**Ge**	**72**		ug/L			40960	40560	1	KED
|	**Ni**	**60**	**46.622**	ug/L	0.964	2	23	58651	3	KED
|	**Ni**	**62**	**46.887**	ug/L	0.702	1	6	9634	2	KED
|	**Cu**	**63**	**47.089**	ug/L	0.055	0	124	177240	1	KED
|	**Cu**	**65**	**47.844**	ug/L	1.446	3	56	86730	4	KED
|	**Zn**	**66**	**48.545**	ug/L	1.122	2	80	21695	2	KED
|	**Zn**	**67**	**49.598**	ug/L	2.484	5	19	3672	6	KED
⌊	**As**	**75**	**49.590**	ug/L	0.300	0	7	10861	1	KED
	Y	**89**		ug/L			440630	418434	7	Standard
	Kr	**83**		ug/L			56	51	14	Standard
⌈>	**In-1**	**115**		ug/L			11294	10368	2	KED
|	**Cd**	**111**	**50.203**	ug/L	0.225	0	6	10777	2	KED
⌊	**Cd**	**114**	**49.607**	ug/L	1.322	2	7	26256	0	KED
⌈>	**In**	**115**		ug/L			792758	753525	6	Standard
⌊	**Ag**	**107**	**48.623**	ug/L	1.327	2	158	778022	8	Standard
⌈>	**Tb**	**159**		ug/L			735738	718651	7	Standard
⌊	**Pb**	**208**	**48.721**	ug/L	1.718	3	406	2780938	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBD
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, March 07, 2023 00:47:53
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35047	33946	1	Standard
	Cl	**37**		ug/L			4819880	4734517	2	Standard
⌈>	**Sc**	**45**		ug/L			670326	648763	3	Standard
|	**Cr**	**52**	**-0.039**	ug/L	0.020	52	26049	24423	1	Standard
|	**Cr**	**53**	**-0.018**	ug/L	0.005	25	231	182	8	Standard
⌊	**Mn**	**55**	**-0.002**	ug/L	0.002	86	1028	933	6	Standard
⌈>	**Ge**	**72**		ug/L			40960	40050	1	KED
|	**Ni**	**60**	**0.002**	ug/L	0.002	79	23	25	8	KED
|	**Ni**	**62**	**0.032**	ug/L	0.027	83	6	12	43	KED
|	**Cu**	**63**	**-0.006**	ug/L	0.003	50	124	100	9	KED
|	**Cu**	**65**	**0.004**	ug/L	0.008	193	56	62	24	KED
|	**Zn**	**66**	**0.037**	ug/L	0.050	135	80	95	23	KED
|	**Zn**	**67**	**-0.028**	ug/L	0.081	286	19	17	33	KED
⌊	**As**	**75**	**-0.001**	ug/L	0.008	602	7	7	22	KED
	Y	**89**		ug/L			440630	417562	1	Standard
	Kr	**83**		ug/L			56	65	8	Standard
⌈>	**In-1**	**115**		ug/L			11294	10351	5	KED
|	**Cd**	**111**	**0.009**	ug/L	0.012	143	6	7	32	KED
⌊	**Cd**	**114**	**0.003**	ug/L	0.010	321	7	8	58	KED
⌈>	**In**	**115**		ug/L			792758	766226	2	Standard
⌊	**Ag**	**107**	**0.008**	ug/L	0.002	28	158	284	15	Standard
⌈>	**Tb**	**159**		ug/L			735738	712126	3	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.001	133	406	437	14	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, March 07, 2023 00:52:22
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	**13**		ug/L			35047	53331	1	Standard
Cl	**37**		ug/L			4819880	4991802	1	Standard
Sc	**45**		ug/L			670326	797732	1	Standard
[redacted]	**52**	[redacted]	ug/L	0.010	4	26049	36066	1	Standard
Cr	**53**	**0.679**	ug/L	0.008	1	231	2254	0	Standard
Mn	**55**	**383.694**	ug/L	12.402	3	1028	13677199	1	Standard
Ge	**72**		ug/L			40960	39892	1	KED
Ni	**60**	**0.396**	ug/L	0.035	8	23	512	9	KED
Ni	**62**	**0.359**	ug/L	0.040	11	6	78	12	KED
Cu	**63**	**0.234**	ug/L	0.011	4	124	988	5	KED
Cu	**65**	**0.249**	ug/L	0.025	10	56	498	10	KED
Zn	**66**	**2.565**	ug/L	0.089	3	80	1201	1	KED
Zn	**67**	**3.262**	ug/L	0.127	3	19	255	2	KED
[redacted]	**75**	[redacted]	ug/L	0.012	5	7	51	5	KED
Y	**89**		ug/L			440630	452116	0	Standard
Kr	**83**		ug/L			56	68	20	Standard
In-1	**115**		ug/L			11294	9599	8	KED
Cd	**111**	**0.003**	ug/L	0.007	215	6	5	16	KED
Cd	**114**	**0.006**	ug/L	0.011	194	7	8	64	KED
In	**115**		ug/L			792758	769637	1	Standard
Ag	**107**	**0.004**	ug/L	0.001	37	158	213	10	Standard
Tb	**159**		ug/L			735738	748294	4	Standard
Pb	**208**	**0.781**	ug/L	0.038	4	406	46846	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, March 07, 2023 00:56:43
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	**13**		ug/L			35047	52306	1	Standard
Cl	**37**		ug/L			4819880	5037362	3	Standard
Sc	**45**		ug/L			670326	826774	3	Standard
[redacted]	**52**	[redacted]	ug/L	0.020	57	26049	33011	2	Standard
Cr	**53**	**0.544**	ug/L	0.025	4	231	1929	2	Standard
Mn	**55**	**241.783**	ug/L	9.710	4	1028	8928387	2	Standard
Ge	**72**		ug/L			40960	38808	2	KED
Ni	**60**	**0.825**	ug/L	0.037	4	23	1014	2	KED
Ni	**62**	**0.929**	ug/L	0.040	4	6	188	5	KED
[redacted]	**63**	[redacted]	ug/L	0.013	9	124	599	9	KED
Cu	**65**	**0.158**	ug/L	0.019	12	56	328	11	KED
[redacted]	**66**	[redacted]	ug/L	0.053	3	80	797	3	KED
Zn	**67**	**2.803**	ug/L	0.216	7	19	215	5	KED
[redacted]	**75**	[redacted]	ug/L	0.018	4	7	98	3	KED
Y	**89**		ug/L			440630	452662	4	Standard
Kr	**83**		ug/L			56	58	4	Standard
In-1	**115**		ug/L			11294	10092	3	KED
Cd	**111**	**0.014**	ug/L	0.001	8	6	8	6	KED
Cd	**114**	**0.003**	ug/L	0.015	559	7	7	97	KED
In	**115**		ug/L			792758	760729	4	Standard
Ag	**107**	**-0.001**	ug/L	0.001	139	158	142	5	Standard
Tb	**159**		ug/L			735738	736504	6	Standard
Pb	**208**	**0.742**	ug/L	0.035	4	406	43775	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, March 07, 2023 01:01:05
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35047	50876	2	Standard
	Cl	**37**		ug/L			4819880	4807651	0	Standard
⎡>	**Sc**	**45**		ug/L			670326	795129	2	Standard
⎢	[redacted]	**52**	[redacted]	ug/L	0.039	45	26049	32995	3	Standard
⎢	**Cr**	**53**	**0.581**	ug/L	0.018	3	231	1964	3	Standard
⎣	**Mn**	**55**	**246.414**	ug/L	3.431	1	1028	8758039	2	Standard
⎡>	**Ge**	**72**		ug/L			40960	39027	0	KED
⎢	**Ni**	**60**	**0.803**	ug/L	0.023	2	23	993	2	KED
⎢	**Ni**	**62**	**0.805**	ug/L	0.089	11	6	165	10	KED
⎢	[redacted]	**63**	[redacted]	ug/L	0.010	7	124	577	6	KED
⎢	**Cu**	**65**	**0.132**	ug/L	0.003	2	56	284	2	KED
⎢	[redacted]	**66**	[redacted]	ug/L	0.104	6	80	775	5	KED
⎢	**Zn**	**67**	**2.496**	ug/L	0.140	5	19	195	4	KED
⎣	[redacted]	**75**	[redacted]	ug/L	0.058	14	7	94	13	KED
	Y	**89**		ug/L			440630	435387	4	Standard
	Kr	**83**		ug/L			56	69	15	Standard
⎡>	**In-1**	**115**		ug/L			11294	10482	2	KED
⎢	**Cd**	**111**	**0.011**	ug/L	0.003	28	6	7	6	KED
⎣	**Cd**	**114**	**0.008**	ug/L	0.006	82	7	10	30	KED
⎡>	**In**	**115**		ug/L			792758	740664	2	Standard
⎣	**Ag**	**107**	**-0.002**	ug/L	0.001	36	158	110	11	Standard
⎡>	**Tb**	**159**		ug/L			735738	720594	2	Standard
⎣	**Pb**	**208**	**0.730**	ug/L	0.025	3	406	42197	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, March 07, 2023 01:05:56
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	**13**		ug/L			35047	51140	3	Standard
Cl	**37**		ug/L			4819880	5006972	2	Standard
Sc	**45**		ug/L			670326	831217	2	Standard
[redacted]	**52**	[redacted]	ug/L	0.075	0	26049	561198	2	Standard
Cr	**53**	**20.659**	ug/L	0.357	1	231	63073	3	Standard
Mn	**55**	**257.262**	ug/L	1.165	0	1028	9559834	2	Standard
Ge	**72**		ug/L			40960	38308	3	KED
Ni	**60**	**25.120**	ug/L	0.243	0	23	29856	3	KED
Ni	**62**	**25.243**	ug/L	0.301	1	6	4901	3	KED
[redacted]	**63**	[redacted]	ug/L	0.526	2	124	82503	4	KED
Cu	**65**	**23.839**	ug/L	0.057	0	56	40828	2	KED
[redacted]	**66**	[redacted]	ug/L	0.658	0	80	31227	2	KED
Zn	**67**	**70.025**	ug/L	1.116	1	19	4885	2	KED
[redacted]	**75**	[redacted]	ug/L	0.287	1	7	5285	3	KED
Y	**89**		ug/L			440630	444252	3	Standard
Kr	**83**		ug/L			56	89	9	Standard
In-1	**115**		ug/L			11294	9857	2	KED
Cd	**111**	**23.542**	ug/L	0.517	2	6	4806	1	KED
Cd	**114**	**23.489**	ug/L	0.256	1	7	11828	2	KED
In	**115**		ug/L			792758	752139	1	Standard
Ag	**107**	**23.482**	ug/L	0.576	2	158	374915	4	Standard
Tb	**159**		ug/L			735738	746562	5	Standard
Pb	**208**	**24.247**	ug/L	0.831	3	406	1438180	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Tuesday, March 07, 2023 01:11:48
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	**13**		ug/L			35047	58074	0	Standard
Cl	**37**		ug/L			4819880	4990733	1	Standard
Sc	**45**		ug/L			670326	826429	3	Standard
[redacted]	**52**	[redacted]	ug/L	0.285	2	26049	397641	1	Standard
Cr	**53**	**14.504**	ug/L	0.383	2	231	44086	1	Standard
Mn	**55**	**152.866**	ug/L	2.944	1	1028	5645855	1	Standard
Ge	**72**		ug/L			40960	41606	4	KED
Ni	**60**	**12.556**	ug/L	0.237	1	23	16212	3	KED
Ni	**62**	**12.885**	ug/L	0.258	2	6	2720	4	KED
[redacted]	**63**	[redacted]	ug/L	0.087	0	124	113589	4	KED
Cu	**65**	**28.884**	ug/L	0.369	1	56	53710	3	KED
[redacted]	**66**	[redacted]	ug/L	0.603	1	80	26364	3	KED
Zn	**67**	**57.271**	ug/L	1.329	2	19	4341	2	KED
[redacted]	**75**	[redacted]	ug/L	0.186	2	7	1424	1	KED
Y	**89**		ug/L			440630	710207	5	Standard
Kr	**83**		ug/L			56	146	19	Standard
In-1	**115**		ug/L			11294	11271	0	KED
[redacted]	**111**	[redacted]	ug/L	0.033	18	6	46	16	KED
Cd	**114**	**0.208**	ug/L	0.010	5	7	126	4	KED
In	**115**		ug/L			792758	802449	2	Standard
[redacted]	**107**	[redacted]	ug/L	0.001	0	158	2630	3	Standard
Tb	**159**		ug/L			735738	793266	2	Standard
[redacted]	**208**	[redacted]	ug/L	0.121	0	406	880027	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Tuesday, March 07, 2023 01:16:16
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			35047	53882	2	Standard
Cl	37		ug/L			4819880	4953607	1	Standard
> Sc	45		ug/L			670326	798471	0	Standard
[redacted]	52	[redacted]	ug/L	0.225	1	26049	368718	1	Standard
Cr	53	13.666	ug/L	0.248	1	231	40166	1	Standard
Mn	55	140.030	ug/L	3.638	2	1028	4998260	2	Standard
> Ge	72		ug/L			40960	40124	1	KED
Ni	60	10.775	ug/L	0.085	0	23	13424	1	KED
Ni	62	10.741	ug/L	0.251	2	6	2187	1	KED
[redacted]	63	[redacted]	ug/L	0.277	1	124	83056	0	KED
Cu	65	22.377	ug/L	0.309	1	56	40140	0	KED
[redacted]	66	[redacted]	ug/L	0.841	1	80	22439	1	KED
Zn	67	48.908	ug/L	1.193	2	19	3580	2	KED
[redacted]	75	[redacted]	ug/L	0.121	2	7	1036	2	KED
Y	89		ug/L			440630	660831	2	Standard
Kr	83		ug/L			56	109	2	Standard
> In-1	115		ug/L			11294	10911	1	KED
[redacted]	111	[redacted]	ug/L	0.036	28	6	34	21	KED
Cd	114	0.121	ug/L	0.006	4	7	74	6	KED
> In	115		ug/L			792758	790792	0	Standard
[redacted]	107	[redacted]	ug/L	0.006	6	158	1609	6	Standard
> Tb	159		ug/L			735738	773798	1	Standard
[redacted]	208	[redacted]	ug/L	0.249	2	406	568433	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Tuesday, March 07, 2023 01:20:43
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			35047	58028	0	Standard
Cl	37		ug/L			4819880	4907330	0	Standard
Sc	45		ug/L			670326	821203	2	Standard
[redacted]	52	[redacted]	ug/L	0.243	1	26049	349356	1	Standard
Cr	53	12.467	ug/L	0.116	0	231	37710	2	Standard
Mn	55	138.790	ug/L	0.801	0	1028	5095086	1	Standard
Ge	72		ug/L			40960	41932	1	KED
Ni	60	11.075	ug/L	0.339	3	23	14416	2	KED
Ni	62	11.131	ug/L	0.640	5	6	2369	5	KED
[redacted]	63	[redacted]	ug/L	0.061	0	124	92486	1	KED
Cu	65	23.936	ug/L	0.527	2	56	44869	1	KED
[redacted]	66	[redacted]	ug/L	1.074	2	80	21980	1	KED
Zn	67	46.105	ug/L	0.935	2	19	3528	0	KED
[redacted]	75	[redacted]	ug/L	0.145	2	7	1106	2	KED
Y	89		ug/L			440630	687915	2	Standard
Kr	83		ug/L			56	113	11	Standard
In-1	115		ug/L			11294	11309	2	KED
[redacted]	111	[redacted]	ug/L	0.035	29	6	33	22	KED
Cd	114	0.129	ug/L	0.015	11	7	81	12	KED
In	115		ug/L			792758	804093	1	Standard
[redacted]	107	[redacted]	ug/L	0.004	3	158	1879	2	Standard
Tb	159		ug/L			735738	800498	1	Standard
[redacted]	208	[redacted]	ug/L	0.204	2	406	563607	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Tuesday, March 07, 2023 01:25:11
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			35047	54887	2	Standard
Cl	37		ug/L			4819880	5009900	0	Standard
> Sc	45		ug/L			670326	838152	3	Standard
Cr	52	13.199	ug/L	0.259	1	26049	376639	1	Standard
Cr	53	13.080	ug/L	0.286	2	231	40354	1	Standard
Mn	55	142.958	ug/L	3.626	2	1028	5354435	1	Standard
> Ge	72		ug/L			40960	42363	1	KED
Ni	60	12.118	ug/L	0.163	1	23	15935	0	KED
Ni	62	12.213	ug/L	0.234	1	6	2625	2	KED
[redacted]	63	[redacted]	ug/L	0.037	0	124	93674	1	KED
Cu	65	23.826	ug/L	0.798	3	56	45133	4	KED
[redacted]	66	[redacted]	ug/L	0.209	0	80	23908	1	KED
Zn	67	50.332	ug/L	1.581	3	19	3890	3	KED
[redacted]	75	[redacted]	ug/L	0.024	0	7	1386	0	KED
Y	89		ug/L			440630	717062	2	Standard
Kr	83		ug/L			56	133	18	Standard
> In-1	115		ug/L			11294	11041	3	KED
[redacted]	111	[redacted]	ug/L	0.041	27	6	39	20	KED
Cd	114	0.132	ug/L	0.006	4	7	81	5	KED
> In	115		ug/L			792758	820851	1	Standard
[redacted]	107	[redacted]	ug/L	0.008	8	158	1888	6	Standard
> Tb	159		ug/L			735738	811244	3	Standard
[redacted]	208	[redacted]	ug/L	0.394	3	406	695803	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Tuesday, March 07, 2023 01:29:38
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	**13**		ug/L			35047	55174	3	Standard
Cl	**37**		ug/L			4819880	4902127	0	Standard
Sc	**45**		ug/L			670326	810700	2	Standard
[redacted]	**52**	[redacted]	ug/L	0.249	1	26049	359083	4	Standard
Cr	**53**	**12.904**	ug/L	0.281	2	231	38511	1	Standard
Mn	**55**	**136.817**	ug/L	0.412	0	1028	4958626	2	Standard
Ge	**72**		ug/L			40960	42602	1	KED
Ni	**60**	**11.340**	ug/L	0.352	3	23	14997	2	KED
Ni	**62**	**11.379**	ug/L	0.327	2	6	2461	4	KED
[redacted]	**63**	[redacted]	ug/L	0.073	0	124	91830	1	KED
Cu	**65**	**23.338**	ug/L	0.347	1	56	44452	1	KED
[redacted]	**66**	[redacted]	ug/L	0.299	0	80	23285	1	KED
Zn	**67**	**48.181**	ug/L	0.462	0	19	3745	1	KED
[redacted]	**75**	[redacted]	ug/L	0.240	4	7	1333	2	KED
Y	**89**		ug/L			440630	692465	1	Standard
Kr	**83**		ug/L			56	106	5	Standard
In-1	**115**		ug/L			11294	10766	5	KED
[redacted]	**111**	[redacted]	ug/L	0.013	8	6	39	1	KED
Cd	**114**	**0.178**	ug/L	0.035	19	7	104	12	KED
In	**115**		ug/L			792758	794622	2	Standard
[redacted]	**107**	[redacted]	ug/L	0.003	3	158	1759	4	Standard
Tb	**159**		ug/L			735738	785721	2	Standard
[redacted]	**208**	[redacted]	ug/L	0.272	2	406	602402	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Tuesday, March 07, 2023 01:34:00
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	**13**		ug/L			35047	56349	1	Standard
Cl	**37**		ug/L			4819880	4962518	0	Standard
Sc	**45**		ug/L			670326	801560	2	Standard
[redacted]	**52**	[redacted]	ug/L	0.149	1	26049	322068	2	Standard
Cr	**53**	**11.797**	ug/L	0.320	2	231	34839	2	Standard
Mn	**55**	**140.119**	ug/L	0.826	0	1028	5020806	2	Standard
Ge	**72**		ug/L			40960	41245	4	KED
Ni	**60**	**10.495**	ug/L	0.217	2	23	13436	2	KED
Ni	**62**	**10.532**	ug/L	0.557	5	6	2208	9	KED
[redacted]	**63**	[redacted]	ug/L	0.439	1	124	91213	5	KED
Cu	**65**	**24.413**	ug/L	0.381	1	56	45022	4	KED
[redacted]	**66**	[redacted]	ug/L	1.505	3	80	22042	1	KED
Zn	**67**	**47.976**	ug/L	0.245	0	19	3610	3	KED
[redacted]	**75**	[redacted]	ug/L	0.032	0	7	1386	3	KED
Y	**89**		ug/L			440630	679487	4	Standard
Kr	**83**		ug/L			56	128	11	Standard
In-1	**115**		ug/L			11294	10988	3	KED
[redacted]	**111**	[redacted]	ug/L	0.022	13	6	42	10	KED
Cd	**114**	**0.108**	ug/L	0.029	27	7	67	22	KED
In	**115**		ug/L			792758	801036	1	Standard
[redacted]	**107**	[redacted]	ug/L	0.004	3	158	1828	4	Standard
Tb	**159**		ug/L			735738	785141	0	Standard
[redacted]	**208**	[redacted]	ug/L	0.219	2	406	627516	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVE
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, March 07, 2023 01:39:53
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35047	35857	2	Standard
	Cl	**37**		ug/L			4819880	5037538	0	Standard
⎡>	**Sc**	**45**		ug/L			670326	677901	1	Standard
⎢	**Cr**	**52**	**50.049**	ug/L	0.472	0	26049	1082055	2	Standard
⎢	**Cr**	**53**	**49.255**	ug/L	0.847	1	231	122330	3	Standard
⎣	**Mn**	**55**	**50.190**	ug/L	0.796	1	1028	1521486	0	Standard
⎡>	**Ge**	**72**		ug/L			40960	40634	2	KED
⎢	**Ni**	**60**	**48.623**	ug/L	0.506	1	23	61272	3	KED
⎢	**Ni**	**62**	**48.716**	ug/L	1.133	2	6	10022	0	KED
⎢	**Cu**	**63**	**48.089**	ug/L	1.183	2	124	181268	1	KED
⎢	**Cu**	**65**	**48.232**	ug/L	0.862	1	56	87593	4	KED
⎢	**Zn**	**66**	**49.551**	ug/L	1.989	4	80	22202	6	KED
⎢	**Zn**	**67**	**50.717**	ug/L	1.691	3	19	3757	1	KED
⎣	**As**	**75**	**50.695**	ug/L	0.671	1	7	11122	1	KED
	Y	**89**		ug/L			440630	433564	3	Standard
	Kr	**83**		ug/L			56	54	12	Standard
⎡>	**In-1**	**115**		ug/L			11294	10669	5	KED
⎢	**Cd**	**111**	**50.436**	ug/L	0.788	1	6	11135	3	KED
⎣	**Cd**	**114**	**50.203**	ug/L	1.355	2	7	27331	3	KED
⎡>	**In**	**115**		ug/L			792758	784998	1	Standard
⎣	**Ag**	**107**	**49.457**	ug/L	1.268	2	158	823880	3	Standard
⎡>	**Tb**	**159**		ug/L			735738	752557	2	Standard
⎣	**Pb**	**208**	**49.261**	ug/L	1.388	2	406	2946972	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBE
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, March 07, 2023 01:47:05
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35047	35035	3	Standard
	Cl	**37**		ug/L			4819880	4928307	1	Standard
⎡>	**Sc**	**45**		ug/L			670326	665840	1	Standard
⎢	**Cr**	**52**	**-0.055**	ug/L	0.020	35	26049	24728	2	Standard
⎢	**Cr**	**53**	**-0.023**	ug/L	0.002	10	231	174	2	Standard
⎣	**Mn**	**55**	**-0.002**	ug/L	0.000	27	1028	968	0	Standard
⎡>	**Ge**	**72**		ug/L			40960	41019	0	KED
⎢	**Ni**	**60**	**-0.001**	ug/L	0.004	739	23	22	22	KED
⎢	**Ni**	**62**	**-0.000**	ug/L	0.014	53537	6	6	45	KED
⎢	**Cu**	**63**	**-0.009**	ug/L	0.003	32	124	91	11	KED
⎢	**Cu**	**65**	**-0.002**	ug/L	0.004	145	56	52	12	KED
⎢	**Zn**	**66**	**-0.055**	ug/L	0.017	31	80	55	13	KED
⎢	**Zn**	**67**	**-0.154**	ug/L	0.015	9	19	8	13	KED
⎣	**As**	**75**	**0.004**	ug/L	0.007	163	7	8	17	KED
	Y	**89**		ug/L			440630	439202	4	Standard
	Kr	**83**		ug/L			56	60	9	Standard
⎡>	**In-1**	**115**		ug/L			11294	10756	1	KED
⎢	**Cd**	**111**	**-0.007**	ug/L	0.006	86	6	4	35	KED
⎣	**Cd**	**114**	**0.002**	ug/L	0.005	281	7	7	36	KED
⎡>	**In**	**115**		ug/L			792758	805444	2	Standard
⎣	**Ag**	**107**	**0.006**	ug/L	0.002	35	158	262	16	Standard
⎡>	**Tb**	**159**		ug/L			735738	733870	4	Standard
⎣	**Pb**	**208**	**0.001**	ug/L	0.001	143	406	459	12	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Tuesday, March 07, 2023 01:51:33
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			35047	58420	0	Standard
Cl	37		ug/L			4819880	4832348	1	Standard
Sc	45		ug/L			670326	791587	4	Standard
[redacted]	52	[redacted]	ug/L	0.077	0	26049	351455	3	Standard
Cr	53	13.007	ug/L	0.454	3	231	37881	1	Standard
Mn	55	150.686	ug/L	3.168	2	1028	5329942	2	Standard
Ge	72		ug/L			40960	40973	0	KED
Ni	60	11.519	ug/L	0.295	2	23	14651	2	KED
Ni	62	12.073	ug/L	0.207	1	6	2510	2	KED
[redacted]	63	[redacted]	ug/L	1.228	2	124	233297	2	KED
Cu	65	62.575	ug/L	1.144	1	56	114543	2	KED
[redacted]	66	[redacted]	ug/L	0.569	1	80	24443	1	KED
Zn	67	52.122	ug/L	1.624	3	19	3895	3	KED
[redacted]	75	[redacted]	ug/L	0.200	2	7	1577	2	KED
Y	89		ug/L			440630	676304	5	Standard
Kr	83		ug/L			56	115	14	Standard
In-1	115		ug/L			11294	10651	1	KED
[redacted]	111	[redacted]	ug/L	0.007	4	6	41	5	KED
Cd	114	0.203	ug/L	0.008	4	7	117	4	KED
In	115		ug/L			792758	776120	4	Standard
[redacted]	107	[redacted]	ug/L	0.008	7	158	1914	6	Standard
Tb	159		ug/L			735738	765705	2	Standard
[redacted]	208	[redacted]	ug/L	0.148	1	406	676182	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Tuesday, March 07, 2023 01:56:01
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	**13**		ug/L			35047	58695	3	Standard
Cl	**37**		ug/L			4819880	4790534	1	Standard
Sc	**45**		ug/L			670326	807040	4	Standard
[redacted]	**52**	[redacted]	ug/L	0.096	0	26049	343129	4	Standard
Cr	**53**	**12.339**	ug/L	0.194	1	231	36670	2	Standard
Mn	**55**	**161.094**	ug/L	0.525	0	1028	5812008	3	Standard
Ge	**72**		ug/L			40960	41356	1	KED
Ni	**60**	**11.097**	ug/L	0.302	2	23	14246	1	KED
Ni	**62**	**11.230**	ug/L	0.230	2	6	2357	1	KED
[redacted]	**63**	[redacted]	ug/L	0.700	2	124	102279	1	KED
Cu	**65**	**27.421**	ug/L	0.677	2	56	50684	1	KED
[redacted]	**66**	[redacted]	ug/L	0.753	1	80	24874	1	KED
Zn	**67**	**51.956**	ug/L	1.177	2	19	3919	2	KED
[redacted]	**75**	[redacted]	ug/L	0.236	3	7	1558	2	KED
Y	**89**		ug/L			440630	680477	3	Standard
Kr	**83**		ug/L			56	123	7	Standard
In-1	**115**		ug/L			11294	11018	3	KED
[redacted]	**111**	[redacted]	ug/L	0.051	31	6	43	26	KED
Cd	**114**	**0.159**	ug/L	0.033	20	7	96	20	KED
In	**115**		ug/L			792758	788312	3	Standard
[redacted]	**107**	[redacted]	ug/L	0.003	2	158	2047	1	Standard
Tb	**159**		ug/L			735738	773936	1	Standard
[redacted]	**208**	[redacted]	ug/L	0.318	2	406	719921	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Tuesday, March 07, 2023 02:00:28
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			35047	57683	3	Standard
Cl	37		ug/L			4819880	4840430	1	Standard
Sc	45		ug/L			670326	804927	0	Standard
[redacted]	52	[redacted]	ug/L	0.311	2	26049	355719	2	Standard
Cr	53	12.839	ug/L	0.452	3	231	38064	3	Standard
Mn	55	171.386	ug/L	3.577	2	1028	6167103	2	Standard
Ge	72		ug/L			40960	42264	2	KED
Ni	60	10.980	ug/L	0.227	2	23	14404	2	KED
Ni	62	11.416	ug/L	0.401	3	6	2448	3	KED
[redacted]	63	[redacted]	ug/L	0.759	2	124	106755	3	KED
Cu	65	27.912	ug/L	0.889	3	56	52701	0	KED
[redacted]	66	[redacted]	ug/L	2.072	3	80	25211	3	KED
Zn	67	52.867	ug/L	3.201	6	19	4070	3	KED
[redacted]	75	[redacted]	ug/L	0.139	1	7	1609	0	KED
Y	89		ug/L			440630	696197	3	Standard
Kr	83		ug/L			56	140	25	Standard
In-1	115		ug/L			11294	10342	1	KED
[redacted]	111	[redacted]	ug/L	0.025	13	6	43	13	KED
Cd	114	0.174	ug/L	0.044	25	7	98	24	KED
In	115		ug/L			792758	781794	4	Standard
[redacted]	107	[redacted]	ug/L	0.003	2	158	2122	6	Standard
Tb	159		ug/L			735738	775533	3	Standard
[redacted]	208	[redacted]	ug/L	0.351	2	406	746425	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Tuesday, March 07, 2023 02:04:56
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	**13**		ug/L			35047	55674	1	Standard
Cl	**37**		ug/L			4819880	4857057	2	Standard
Sc	**45**		ug/L			670326	809975	0	Standard
[redacted]	**52**	[redacted]	ug/L	0.121	0	26049	346388	1	Standard
Cr	**53**	**12.414**	ug/L	0.082	0	231	37042	1	Standard
Mn	**55**	**135.075**	ug/L	4.874	3	1028	4891471	3	Standard
Ge	**72**		ug/L			40960	42024	1	KED
Ni	**60**	**10.941**	ug/L	0.272	2	23	14273	1	KED
Ni	**62**	**11.023**	ug/L	0.303	2	6	2351	3	KED
[redacted]	**63**	[redacted]	ug/L	0.519	2	124	90637	1	KED
Cu	**65**	**23.468**	ug/L	0.448	1	56	44097	2	KED
[redacted]	**66**	[redacted]	ug/L	0.982	1	80	24284	2	KED
Zn	**67**	**51.753**	ug/L	2.010	3	19	3966	3	KED
[redacted]	**75**	[redacted]	ug/L	0.160	2	7	1450	2	KED
Y	**89**		ug/L			440630	671134	2	Standard
Kr	**83**		ug/L			56	104	7	Standard
In-1	**115**		ug/L			11294	10924	3	KED
[redacted]	**111**	[redacted]	ug/L	0.039	20	6	48	15	KED
Cd	**114**	**0.154**	ug/L	0.021	13	7	93	14	KED
In	**115**		ug/L			792758	799906	1	Standard
[redacted]	**107**	[redacted]	ug/L	0.009	9	158	1759	8	Standard
Tb	**159**		ug/L			735738	791682	2	Standard
[redacted]	**208**	[redacted]	ug/L	0.240	1	406	803083	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Tuesday, March 07, 2023 02:09:24
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	**13**		ug/L			35047	56473	4	Standard
Cl	**37**		ug/L			4819880	4940574	2	Standard
Sc	**45**		ug/L			670326	813267	2	Standard
[redacted]	**52**	[redacted]	ug/L	0.215	1	26049	356091	2	Standard
Cr	**53**	**12.994**	ug/L	0.235	1	231	38905	0	Standard
Mn	**55**	**138.074**	ug/L	4.510	3	1028	5017712	0	Standard
Ge	**72**		ug/L			40960	40838	2	KED
Ni	**60**	**11.656**	ug/L	0.149	1	23	14779	3	KED
Ni	**62**	**11.820**	ug/L	1.009	8	6	2445	5	KED
[redacted]	**63**	[redacted]	ug/L	0.228	0	124	93082	3	KED
Cu	**65**	**25.015**	ug/L	0.147	0	56	45665	2	KED
[redacted]	**66**	[redacted]	ug/L	1.532	2	80	24422	1	KED
Zn	**67**	**51.462**	ug/L	1.132	2	19	3832	2	KED
[redacted]	**75**	[redacted]	ug/L	0.081	1	7	1471	1	KED
Y	**89**		ug/L			440630	672948	0	Standard
Kr	**83**		ug/L			56	116	13	Standard
In-1	**115**		ug/L			11294	11208	1	KED
[redacted]	**111**	[redacted]	ug/L	0.027	16	6	44	14	KED
Cd	**114**	**0.154**	ug/L	0.017	10	7	95	9	KED
In	**115**		ug/L			792758	811518	1	Standard
[redacted]	**107**	[redacted]	ug/L	0.005	5	158	1906	5	Standard
Tb	**159**		ug/L			735738	794912	2	Standard
[redacted]	**208**	[redacted]	ug/L	0.283	2	406	664035	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Tuesday, March 07, 2023 02:13:51
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			35047	55480	2	Standard
Cl	37		ug/L			4819880	4788648	2	Standard
> Sc	45		ug/L			670326	801374	2	Standard
[redacted]	52	[redacted]	ug/L	0.211	1	26049	348361	2	Standard
Cr	53	12.686	ug/L	0.129	1	231	37452	3	Standard
Mn	55	133.591	ug/L	2.625	1	1028	4786286	2	Standard
> Ge	72		ug/L			40960	40565	2	KED
Ni	60	11.419	ug/L	0.130	1	23	14381	2	KED
Ni	62	11.680	ug/L	0.454	3	6	2403	2	KED
[redacted]	63	[redacted]	ug/L	0.504	2	124	90257	0	KED
Cu	65	24.637	ug/L	0.244	0	56	44679	2	KED
[redacted]	66	[redacted]	ug/L	1.297	2	80	23547	3	KED
Zn	67	52.008	ug/L	1.020	1	19	3846	0	KED
[redacted]	75	[redacted]	ug/L	0.044	0	7	1281	1	KED
Y	89		ug/L			440630	689912	3	Standard
Kr	83		ug/L			56	102	31	Standard
> In-1	115		ug/L			11294	10785	2	KED
[redacted]	111	[redacted]	ug/L	0.024	15	6	40	11	KED
Cd	114	0.139	ug/L	0.028	20	7	83	18	KED
> In	115		ug/L			792758	791560	1	Standard
[redacted]	107	[redacted]	ug/L	0.006	5	158	1764	6	Standard
> Tb	159		ug/L			735738	784664	4	Standard
[redacted]	208	[redacted]	ug/L	0.406	3	406	785101	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Tuesday, March 07, 2023 02:18:19
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	**13**		ug/L			35047	57000	2	Standard
Cl	**37**		ug/L			4819880	4764040	2	Standard
Sc	**45**		ug/L			670326	756718	2	Standard
[redacted]	**52**	[redacted]	ug/L	0.299	2	26049	311410	1	Standard
Cr	**53**	**12.185**	ug/L	0.151	1	231	33970	2	Standard
Mn	**55**	**124.906**	ug/L	1.220	0	1028	4225817	2	Standard
Ge	**72**		ug/L			40960	41108	0	KED
Ni	**60**	**9.830**	ug/L	0.256	2	23	12549	2	KED
Ni	**62**	**9.978**	ug/L	0.059	0	6	2082	1	KED
[redacted]	**63**	[redacted]	ug/L	0.122	0	124	72065	0	KED
Cu	**65**	**18.911**	ug/L	0.113	0	56	34767	0	KED
[redacted]	**66**	[redacted]	ug/L	0.656	1	80	19708	0	KED
Zn	**67**	**43.510**	ug/L	0.569	1	19	3265	1	KED
[redacted]	**75**	[redacted]	ug/L	0.099	1	7	1106	2	KED
Y	**89**		ug/L			440630	658371	3	Standard
Kr	**83**		ug/L			56	104	8	Standard
In-1	**115**		ug/L			11294	10110	3	KED
[redacted]	**111**	[redacted]	ug/L	0.003	2	6	32	5	KED
Cd	**114**	**0.100**	ug/L	0.020	19	7	58	15	KED
In	**115**		ug/L			792758	775119	3	Standard
[redacted]	**107**	[redacted]	ug/L	0.008	5	158	2388	2	Standard
Tb	**159**		ug/L			735738	766431	3	Standard
[redacted]	**208**	[redacted]	ug/L	0.174	2	406	465539	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Tuesday, March 07, 2023 02:22:46
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	**13**		ug/L			35047	56933	2	Standard
Cl	**37**		ug/L			4819880	4771191	2	Standard
Sc	**45**		ug/L			670326	757022	2	Standard
[redacted]	**52**	[redacted]	ug/L	0.060	0	26049	310688	2	Standard
Cr	**53**	**11.988**	ug/L	0.174	1	231	33448	3	Standard
Mn	**55**	**121.522**	ug/L	1.085	0	1028	4113071	2	Standard
Ge	**72**		ug/L			40960	41418	2	KED
Ni	**60**	**10.916**	ug/L	0.306	2	23	14032	1	KED
Ni	**62**	**11.030**	ug/L	0.628	5	6	2317	3	KED
[redacted]	**63**	[redacted]	ug/L	0.450	2	124	73257	2	KED
Cu	**65**	**19.240**	ug/L	0.418	2	56	35629	0	KED
[redacted]	**66**	[redacted]	ug/L	0.666	1	80	23103	0	KED
Zn	**67**	**50.961**	ug/L	3.205	6	19	3846	4	KED
[redacted]	**75**	[redacted]	ug/L	0.309	4	7	1689	1	KED
Y	**89**		ug/L			440630	642412	3	Standard
Kr	**83**		ug/L			56	100	1	Standard
In-1	**115**		ug/L			11294	11140	1	KED
[redacted]	**111**	[redacted]	ug/L	0.024	18	6	36	16	KED
Cd	**114**	**0.122**	ug/L	0.022	18	7	76	18	KED
In	**115**		ug/L			792758	798233	2	Standard
[redacted]	**107**	[redacted]	ug/L	0.003	4	158	1367	4	Standard
Tb	**159**		ug/L			735738	777487	5	Standard
[redacted]	**208**	[redacted]	ug/L	0.349	3	406	651908	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Tuesday, March 07, 2023 02:27:14
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	**13**		ug/L			35047	57266	1	Standard
Cl	**37**		ug/L			4819880	4755393	2	Standard
Sc	**45**		ug/L			670326	780471	4	Standard
[redacted]	**52**	[redacted]	ug/L	0.353	2	26049	327036	3	Standard
Cr	**53**	**12.324**	ug/L	0.399	3	231	35408	2	Standard
Mn	**55**	**142.739**	ug/L	2.741	1	1028	4977762	2	Standard
Ge	**72**		ug/L			40960	41488	2	KED
Ni	**60**	**11.047**	ug/L	0.313	2	23	14234	4	KED
Ni	**62**	**11.047**	ug/L	0.203	1	6	2325	0	KED
[redacted]	**63**	[redacted]	ug/L	0.432	1	124	84062	0	KED
Cu	**65**	**22.112**	ug/L	0.239	1	56	41022	2	KED
[redacted]	**66**	[redacted]	ug/L	1.451	3	80	21253	4	KED
Zn	**67**	**45.457**	ug/L	1.472	3	19	3442	3	KED
[redacted]	**75**	[redacted]	ug/L	0.061	0	7	1429	2	KED
Y	**89**		ug/L			440630	664692	3	Standard
Kr	**83**		ug/L			56	93	6	Standard
In-1	**115**		ug/L			11294	10854	0	KED
[redacted]	**111**	[redacted]	ug/L	0.023	12	6	48	10	KED
Cd	**114**	**0.134**	ug/L	0.016	11	7	81	10	KED
In	**115**		ug/L			792758	785073	2	Standard
[redacted]	**107**	[redacted]	ug/L	0.003	3	158	1671	4	Standard
Tb	**159**		ug/L			735738	778189	5	Standard
[redacted]	**208**	[redacted]	ug/L	0.321	3	406	649507	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Tuesday, March 07, 2023 02:31:35
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			35047	57643	2	Standard
Cl	37		ug/L			4819880	4716029	0	Standard
Sc	45		ug/L			670326	784300	2	Standard
[redacted]	52	[redacted]	ug/L	0.282	2	26049	330306	1	Standard
Cr	53	12.128	ug/L	0.309	2	231	35034	0	Standard
Mn	55	140.215	ug/L	4.788	3	1028	4914488	2	Standard
Ge	72		ug/L			40960	41854	2	KED
Ni	60	10.586	ug/L	0.354	3	23	13751	1	KED
Ni	62	10.817	ug/L	0.703	6	6	2297	5	KED
[redacted]	63	[redacted]	ug/L	0.146	0	124	95419	1	KED
Cu	65	24.936	ug/L	0.593	2	56	46676	4	KED
[redacted]	66	[redacted]	ug/L	1.412	2	80	26887	1	KED
Zn	67	55.824	ug/L	1.665	2	19	4258	1	KED
[redacted]	75	[redacted]	ug/L	0.104	1	7	1540	2	KED
Y	89		ug/L			440630	662493	3	Standard
Kr	83		ug/L			56	102	16	Standard
In-1	115		ug/L			11294	10674	1	KED
[redacted]	111	[redacted]	ug/L	0.021	12	6	45	12	KED
Cd	114	0.158	ug/L	0.015	9	7	92	10	KED
In	115		ug/L			792758	792901	1	Standard
[redacted]	107	[redacted]	ug/L	0.004	4	158	1749	4	Standard
Tb	159		ug/L			735738	781857	1	Standard
[redacted]	208	[redacted]	ug/L	0.201	1	406	662490	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVF
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, March 07, 2023 02:37:28
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35047	37415	2	Standard
	Cl	**37**		ug/L			4819880	5039637	3	Standard
⎡>	**Sc**	**45**		ug/L			670326	679526	4	Standard
⎢	**Cr**	**52**	**50.190**	ug/L	1.618	3	26049	1086510	1	Standard
⎢	**Cr**	**53**	**49.782**	ug/L	1.960	3	231	123792	2	Standard
⎣	**Mn**	**55**	**50.635**	ug/L	1.624	3	1028	1537389	1	Standard
⎡>	**Ge**	**72**		ug/L			40960	40795	1	KED
⎢	**Ni**	**60**	**49.077**	ug/L	0.732	1	23	62076	0	KED
⎢	**Ni**	**62**	**47.717**	ug/L	2.130	4	6	9857	3	KED
⎢	**Cu**	**63**	**47.653**	ug/L	0.310	0	124	180388	0	KED
⎢	**Cu**	**65**	**48.441**	ug/L	1.077	2	56	88280	1	KED
⎢	**Zn**	**66**	**50.208**	ug/L	0.234	0	80	22569	1	KED
⎢	**Zn**	**67**	**50.500**	ug/L	0.581	1	19	3757	0	KED
⎣	**As**	**75**	**51.120**	ug/L	0.272	0	7	11261	0	KED
	Y	**89**		ug/L			440630	434640	2	Standard
	Kr	**83**		ug/L			56	55	12	Standard
⎡>	**In-1**	**115**		ug/L			11294	10857	1	KED
⎢	**Cd**	**111**	**49.788**	ug/L	1.115	2	6	11190	0	KED
⎣	**Cd**	**114**	**49.139**	ug/L	1.460	2	7	27239	1	KED
⎡>	**In**	**115**		ug/L			792758	777024	1	Standard
⎣	**Ag**	**107**	**50.570**	ug/L	0.205	0	158	833725	1	Standard
⎡>	**Tb**	**159**		ug/L			735738	745339	5	Standard
⎣	**Pb**	**208**	**49.905**	ug/L	2.165	4	406	2953446	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBF
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, March 07, 2023 02:44:40
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35047	35090	2	Standard
	Cl	**37**		ug/L			4819880	4858779	1	Standard
⎡>	**Sc**	**45**		ug/L			670326	661549	0	Standard
⎢	**Cr**	**52**	**-0.018**	ug/L	0.030	170	26049	25346	2	Standard
⎢	**Cr**	**53**	**-0.015**	ug/L	0.002	14	231	192	2	Standard
⎣	**Mn**	**55**	**-0.003**	ug/L	0.002	65	1028	919	6	Standard
⎡>	**Ge**	**72**		ug/L			40960	40101	1	KED
⎢	**Ni**	**60**	**-0.002**	ug/L	0.001	31	23	20	5	KED
⎢	**Ni**	**62**	**0.016**	ug/L	0.010	60	6	9	20	KED
⎢	**Cu**	**63**	**-0.008**	ug/L	0.002	23	124	92	6	KED
⎢	**Cu**	**65**	**0.001**	ug/L	0.000	32	56	57	1	KED
⎢	**Zn**	**66**	**-0.057**	ug/L	0.026	46	80	53	21	KED
⎢	**Zn**	**67**	**-0.151**	ug/L	0.017	11	19	8	13	KED
⎣	**As**	**75**	**-0.003**	ug/L	0.013	465	7	6	38	KED
	Y	**89**		ug/L			440630	437392	2	Standard
	Kr	**83**		ug/L			56	64	14	Standard
⎡>	**In-1**	**115**		ug/L			11294	11036	2	KED
⎢	**Cd**	**111**	**-0.004**	ug/L	0.002	67	6	5	10	KED
⎣	**Cd**	**114**	**0.003**	ug/L	0.008	320	7	8	55	KED
⎡>	**In**	**115**		ug/L			792758	788269	1	Standard
⎣	**Ag**	**107**	**0.004**	ug/L	0.002	44	158	220	12	Standard
⎡>	**Tb**	**159**		ug/L			735738	717419	3	Standard
⎣	**Pb**	**208**	**0.001**	ug/L	0.000	40	406	448	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Tuesday, March 07, 2023 02:49:09
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	**13**		ug/L			35047	56808	2	Standard
Cl	**37**		ug/L			4819880	4776344	3	Standard
Sc	**45**		ug/L			670326	782353	0	Standard
[redacted]	**52**	[redacted]	ug/L	0.145	1	26049	346199	1	Standard
Cr	**53**	**12.809**	ug/L	0.304	2	231	36912	2	Standard
Mn	**55**	**148.111**	ug/L	5.059	3	1028	5181114	4	Standard
Ge	**72**		ug/L			40960	40505	3	KED
Ni	**60**	**11.157**	ug/L	0.249	2	23	14037	5	KED
Ni	**62**	**11.578**	ug/L	0.279	2	6	2379	1	KED
[redacted]	**63**	[redacted]	ug/L	0.634	2	124	93646	5	KED
Cu	**65**	**25.349**	ug/L	0.038	0	56	45902	3	KED
[redacted]	**66**	[redacted]	ug/L	0.591	1	80	26189	3	KED
Zn	**67**	**55.401**	ug/L	1.019	1	19	4092	4	KED
[redacted]	**75**	[redacted]	ug/L	0.365	1	7	4659	4	KED
Y	**89**		ug/L			440630	644591	4	Standard
Kr	**83**		ug/L			56	116	9	Standard
In-1	**115**		ug/L			11294	10547	3	KED
[redacted]	**111**	[redacted]	ug/L	0.022	14	6	39	10	KED
Cd	**114**	**0.165**	ug/L	0.006	3	7	95	1	KED
In	**115**		ug/L			792758	772951	2	Standard
[redacted]	**107**	[redacted]	ug/L	0.003	2	158	1774	5	Standard
Tb	**159**		ug/L			735738	766990	4	Standard
[redacted]	**208**	[redacted]	ug/L	0.434	3	406	781385	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Tuesday, March 07, 2023 02:53:36
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	**13**		ug/L			35047	57612	0	Standard
Cl	**37**		ug/L			4819880	4796554	1	Standard
Sc	**45**		ug/L			670326	786201	2	Standard
[redacted]	**52**	[redacted]	ug/L	0.127	0	26049	350207	3	Standard
Cr	**53**	**13.083**	ug/L	0.212	1	231	37866	1	Standard
Mn	**55**	**137.429**	ug/L	0.046	0	1028	4830509	2	Standard
Ge	**72**		ug/L			40960	40809	3	KED
Ni	**60**	**11.638**	ug/L	0.512	4	23	14735	3	KED
Ni	**62**	**11.628**	ug/L	0.175	1	6	2408	3	KED
[redacted]	**63**	[redacted]	ug/L	0.418	1	124	96763	4	KED
Cu	**65**	**26.209**	ug/L	1.196	4	56	47775	3	KED
[redacted]	**66**	[redacted]	ug/L	2.118	4	80	23203	1	KED
Zn	**67**	**49.668**	ug/L	0.934	1	19	3696	1	KED
[redacted]	**75**	[redacted]	ug/L	0.099	1	7	1388	2	KED
Y	**89**		ug/L			440630	676106	3	Standard
Kr	**83**		ug/L			56	87	15	Standard
In-1	**115**		ug/L			11294	11145	0	KED
[redacted]	**111**	[redacted]	ug/L	0.033	17	6	49	15	KED
Cd	**114**	**0.172**	ug/L	0.016	9	7	105	9	KED
In	**115**		ug/L			792758	795966	3	Standard
[redacted]	**107**	[redacted]	ug/L	0.004	3	158	1953	4	Standard
Tb	**159**		ug/L			735738	775434	3	Standard
[redacted]	**208**	[redacted]	ug/L	0.510	4	406	742602	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Tuesday, March 07, 2023 02:58:04
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	**13**		ug/L			35047	60504	1	Standard
Cl	**37**		ug/L			4819880	4839236	1	Standard
Sc	**45**		ug/L			670326	794208	1	Standard
[redacted]	**52**	[redacted]	ug/L	0.322	1	26049	525437	0	Standard
Cr	**53**	**19.933**	ug/L	0.341	1	231	58145	0	Standard
Mn	**55**	**147.258**	ug/L	4.415	2	1028	5227295	1	Standard
Ge	**72**		ug/L			40960	39991	2	KED
Ni	**60**	**11.405**	ug/L	0.033	0	23	14160	2	KED
Ni	**62**	**11.329**	ug/L	0.667	5	6	2301	8	KED
[redacted]	**63**	[redacted]	ug/L	0.272	1	124	100805	2	KED
Cu	**65**	**27.707**	ug/L	0.120	0	56	49532	2	KED
[redacted]	**66**	[redacted]	ug/L	0.624	1	80	24282	2	KED
Zn	**67**	**53.639**	ug/L	1.657	3	19	3911	2	KED
[redacted]	**75**	[redacted]	ug/L	0.157	2	7	1467	0	KED
Y	**89**		ug/L			440630	688006	1	Standard
Kr	**83**		ug/L			56	114	11	Standard
In-1	**115**		ug/L			11294	10690	2	KED
[redacted]	**111**	[redacted]	ug/L	0.039	23	6	42	19	KED
Cd	**114**	**0.198**	ug/L	0.022	11	7	115	9	KED
In	**115**		ug/L			792758	785142	0	Standard
[redacted]	**107**	[redacted]	ug/L	0.004	3	158	2451	3	Standard
Tb	**159**		ug/L			735738	787710	2	Standard
[redacted]	**208**	[redacted]	ug/L	0.254	1	406	807835	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Tuesday, March 07, 2023 03:02:31
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			35047	53026	1	Standard
Cl	37		ug/L			4819880	4790270	1	Standard
Sc	45		ug/L			670326	763133	3	Standard
[redacted]	52	[redacted]	ug/L	0.453	3	26049	359015	3	Standard
Cr	53	14.064	ug/L	0.166	1	231	39497	2	Standard
Mn	55	241.076	ug/L	6.190	2	1028	8219850	1	Standard
Ge	72		ug/L			40960	40579	1	KED
Ni	60	13.969	ug/L	0.172	1	23	17593	1	KED
Ni	62	13.839	ug/L	0.698	5	6	2847	3	KED
[redacted]	63	[redacted]	ug/L	0.388	1	124	136746	1	KED
Cu	65	37.509	ug/L	0.163	0	56	68021	2	KED
Zn	66	115.392	ug/L	2.365	2	80	51481	1	KED
[redacted]	[redacted]	[redacted]	ug/L	1.644	1	19	7971	0	KED
[redacted]	75	[redacted]	ug/L	0.280	1	7	4372	1	KED
Y	89		ug/L			440630	631756	2	Standard
Kr	83		ug/L			56	115	10	Standard
In-1	115		ug/L			11294	11137	3	KED
[redacted]	111	[redacted]	ug/L	0.021	22	6	27	16	KED
Cd	114	0.112	ug/L	0.030	26	7	70	22	KED
In	115		ug/L			792758	784005	2	Standard
[redacted]	107	[redacted]	ug/L	0.001	1	158	1265	1	Standard
Tb	159		ug/L			735738	769284	4	Standard
[redacted]	208	[redacted]	ug/L	0.409	2	406	1203750	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Tuesday, March 07, 2023 03:06:59
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	**13**		ug/L			35047	57901	3	Standard
Cl	**37**		ug/L			4819880	4833291	2	Standard
Sc	**45**		ug/L			670326	778861	3	Standard
[redacted]	**52**	[redacted]	ug/L	0.350	2	26049	342072	3	Standard
Cr	**53**	**12.726**	ug/L	0.402	3	231	36483	0	Standard
Mn	**55**	**85.876**	ug/L	1.924	2	1028	2989344	0	Standard
Ge	**72**		ug/L			40960	41577	0	KED
Ni	**60**	**9.682**	ug/L	0.054	0	23	12501	0	KED
Ni	**62**	**9.772**	ug/L	0.261	2	6	2063	2	KED
[redacted]	**63**	[redacted]	ug/L	0.286	1	124	72845	2	KED
Cu	**65**	**18.953**	ug/L	0.250	1	56	35243	1	KED
[redacted]	**66**	[redacted]	ug/L	0.944	2	80	21377	2	KED
Zn	**67**	**44.716**	ug/L	0.779	1	19	3394	2	KED
[redacted]	**75**	[redacted]	ug/L	0.098	2	7	1086	1	KED
Y	**89**		ug/L			440630	662008	3	Standard
Kr	**83**		ug/L			56	98	17	Standard
In-1	**115**		ug/L			11294	10833	2	KED
[redacted]	**111**	[redacted]	ug/L	0.020	7	6	66	5	KED
Cd	**114**	**0.254**	ug/L	0.015	5	7	147	6	KED
In	**115**		ug/L			792758	792983	3	Standard
[redacted]	**107**	[redacted]	ug/L	0.011	4	158	4489	2	Standard
Tb	**159**		ug/L			735738	772837	4	Standard
[redacted]	**208**	[redacted]	ug/L	0.446	2	406	1017330	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Tuesday, March 07, 2023 03:11:27
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35047	55305	1	Standard
	Cl	**37**		ug/L			4819880	4803429	1	Standard
⌈>	**Sc**	**45**		ug/L			670326	763673	2	Standard
|	**Cr**	**52**	**11.664**	ug/L	0.339	2	26049	306706	0	Standard
|	**Cr**	**53**	**11.613**	ug/L	0.386	3	231	32670	1	Standard
⌊	**Mn**	**55**	**113.101**	ug/L	2.913	2	1028	3860220	0	Standard
⌈>	**Ge**	**72**		ug/L			40960	40347	2	KED
|	**Ni**	**60**	**11.348**	ug/L	0.305	2	23	14213	2	KED
|	**Ni**	**62**	**11.172**	ug/L	0.475	4	6	2286	2	KED
|	**Cu**	**63**	**30.997**	ug/L	0.428	1	124	116074	1	KED
|	**Cu**	**65**	**31.397**	ug/L	0.625	1	56	56600	0	KED
|	**Zn**	**66**	**43.552**	ug/L	1.025	2	80	19366	1	KED
|	**Zn**	**67**	**43.624**	ug/L	0.882	2	19	3213	3	KED
⌊	[redacted]	**75**	[redacted]	ug/L	0.106	2	7	1024	2	KED
	Y	**89**		ug/L			440630	625667	3	Standard
	Kr	**83**		ug/L			56	102	28	Standard
⌈>	**In-1**	**115**		ug/L			11294	10828	1	KED
|	**Cd**	**111**	**0.044**	ug/L	0.011	24	6	15	15	KED
⌊	**Cd**	**114**	**0.035**	ug/L	0.019	53	7	26	38	KED
⌈>	**In**	**115**		ug/L			792758	801768	0	Standard
⌊	**Ag**	**107**	**0.044**	ug/L	0.003	6	158	914	6	Standard
⌈>	**Tb**	**159**		ug/L			735738	772601	4	Standard
⌊	**Pb**	**208**	**58.283**	ug/L	2.427	4	406	3576551	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Tuesday, March 07, 2023 03:15:54
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35047	59321	4	Standard
	Cl	**37**		ug/L			4819880	4758698	1	Standard
⌈>	**Sc**	**45**		ug/L			670326	805264	3	Standard
|	**Cr**	**52**	**14.280**	ug/L	0.224	1	26049	388974	1	Standard
|	**Cr**	**53**	**14.275**	ug/L	0.160	1	231	42314	4	Standard
⌊	**Mn**	**55**	**136.885**	ug/L	0.242	0	1028	4927964	3	Standard
⌈>	**Ge**	**72**		ug/L			40960	41698	0	KED
|	**Ni**	**60**	**11.547**	ug/L	0.336	2	23	14946	2	KED
|	**Ni**	**62**	**11.372**	ug/L	0.458	4	6	2406	3	KED
|	**Cu**	**63**	**24.704**	ug/L	0.835	3	124	95640	2	KED
|	**Cu**	**65**	**25.276**	ug/L	0.835	3	56	47113	2	KED
|	**Zn**	**66**	**56.791**	ug/L	0.485	0	80	26081	0	KED
|	**Zn**	**67**	**54.266**	ug/L	2.524	4	19	4126	5	KED
⌊	[redacted]	**75**	[redacted]	ug/L	0.017	0	7	1348	0	KED
	Y	**89**		ug/L			440630	691896	4	Standard
	Kr	**83**		ug/L			56	102	7	Standard
⌈>	**In-1**	**115**		ug/L			11294	11000	1	KED
|	**Cd**	**111**	**0.167**	ug/L	0.051	30	6	43	26	KED
⌊	**Cd**	**114**	**0.150**	ug/L	0.022	14	7	91	14	KED
⌈>	**In**	**115**		ug/L			792758	779237	2	Standard
⌊	**Ag**	**107**	**0.139**	ug/L	0.002	1	158	2446	2	Standard
⌈>	**Tb**	**159**		ug/L			735738	766393	2	Standard
⌊	**Pb**	**208**	**16.670**	ug/L	0.539	3	406	1015622	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Tuesday, March 07, 2023 03:20:22
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	**13**		ug/L			35047	56191	2	Standard
Cl	**37**		ug/L			4819880	4694147	1	Standard
Sc	**45**		ug/L			670326	826962	3	Standard
[redacted]	**52**	[redacted]	ug/L	0.145	1	26049	366291	3	Standard
Cr	**53**	**13.013**	ug/L	0.175	1	231	39617	2	Standard
Mn	**55**	**140.492**	ug/L	3.043	2	1028	5191624	1	Standard
Ge	**72**		ug/L			40960	40446	3	KED
Ni	**60**	**12.840**	ug/L	0.279	2	23	16122	4	KED
Ni	**62**	**13.364**	ug/L	0.311	2	6	2741	3	KED
[redacted]	**63**	[redacted]	ug/L	0.187	0	124	87623	4	KED
Cu	**65**	**23.609**	ug/L	0.330	1	56	42687	3	KED
[redacted]	**66**	[redacted]	ug/L	0.906	1	80	24004	3	KED
Zn	**67**	**52.769**	ug/L	1.509	2	19	3890	1	KED
[redacted]	**75**	[redacted]	ug/L	0.101	1	7	1246	3	KED
Y	**89**		ug/L			440630	738053	1	Standard
Kr	**83**		ug/L			56	123	9	Standard
In-1	**115**		ug/L			11294	10660	1	KED
[redacted]	**111**	[redacted]	ug/L	0.018	7	6	56	6	KED
Cd	**114**	**0.211**	ug/L	0.049	23	7	121	20	KED
In	**115**		ug/L			792758	777934	3	Standard
[redacted]	**107**	[redacted]	ug/L	0.007	4	158	3000	6	Standard
Tb	**159**		ug/L			735738	778372	5	Standard
[redacted]	**208**	[redacted]	ug/L	0.337	2	406	838211	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Tuesday, March 07, 2023 03:24:50
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	**13**		ug/L			35047	62120	3	Standard
Cl	**37**		ug/L			4819880	4812629	1	Standard
Sc	**45**		ug/L			670326	788530	2	Standard
[redacted]	**52**	[redacted]	ug/L	0.178	1	26049	399289	3	Standard
Cr	**53**	**15.015**	ug/L	0.218	1	231	43566	3	Standard
Mn	**55**	**162.712**	ug/L	4.995	3	1028	5737444	4	Standard
Ge	**72**		ug/L			40960	40518	2	KED
Ni	**60**	**13.738**	ug/L	0.246	1	23	17275	2	KED
Ni	**62**	**14.324**	ug/L	0.157	1	6	2943	1	KED
[redacted]	**63**	[redacted]	ug/L	0.552	1	124	126929	4	KED
Cu	**65**	**34.276**	ug/L	0.507	1	56	62053	1	KED
[redacted]	**66**	[redacted]	ug/L	0.707	0	80	35965	2	KED
Zn	**67**	**76.970**	ug/L	1.952	2	19	5681	4	KED
[redacted]	**75**	[redacted]	ug/L	0.142	2	7	1423	3	KED
Y	**89**		ug/L			440630	689971	2	Standard
Kr	**83**		ug/L			56	111	4	Standard
In-1	**115**		ug/L			11294	10654	2	KED
[redacted]	**111**	[redacted]	ug/L	0.023	14	6	41	12	KED
Cd	**114**	**0.180**	ug/L	0.007	4	7	104	3	KED
In	**115**		ug/L			792758	789461	1	Standard
[redacted]	**107**	[redacted]	ug/L	0.002	1	158	1885	2	Standard
Tb	**159**		ug/L			735738	775987	4	Standard
[redacted]	**208**	[redacted]	ug/L	0.512	3	406	972280	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Tuesday, March 07, 2023 03:29:11
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			35047	56553	3	Standard
Cl	37		ug/L			4819880	4882332	0	Standard
Sc	45		ug/L			670326	830635	0	Standard
[redacted]	52	[redacted]	ug/L	0.281	2	26049	373421	1	Standard
Cr	53	13.313	ug/L	0.177	1	231	40717	1	Standard
Mn	55	134.964	ug/L	2.615	1	1028	5011949	1	Standard
Ge	72		ug/L			40960	41333	1	KED
Ni	60	12.738	ug/L	0.119	0	23	16343	1	KED
Ni	62	12.974	ug/L	0.108	0	6	2720	1	KED
[redacted]	63	[redacted]	ug/L	0.547	2	124	92937	3	KED
Cu	65	24.612	ug/L	0.104	0	56	45479	1	KED
[redacted]	66	[redacted]	ug/L	1.508	2	80	22982	2	KED
Zn	67	50.802	ug/L	0.489	0	19	3830	1	KED
[redacted]	75	[redacted]	ug/L	0.100	1	7	1199	2	KED
Y	89		ug/L			440630	726422	1	Standard
Kr	83		ug/L			56	123	1	Standard
In-1	115		ug/L			11294	10630	1	KED
[redacted]	111	[redacted]	ug/L	0.017	10	6	42	9	KED
Cd	114	0.143	ug/L	0.017	11	7	84	11	KED
In	115		ug/L			792758	786572	2	Standard
[redacted]	107	[redacted]	ug/L	0.002	1	158	2240	1	Standard
Tb	159		ug/L			735738	776101	4	Standard
[redacted]	208	[redacted]	ug/L	0.526	3	406	1005040	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVG
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, March 07, 2023 03:35:04
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35047	36866	3	Standard
	Cl	**37**		ug/L			4819880	4984462	1	Standard
⎡>	**Sc**	**45**		ug/L			670326	671185	0	Standard
⎢	**Cr**	**52**	**51.807**	ug/L	1.368	2	26049	1108100	3	Standard
⎢	**Cr**	**53**	**49.769**	ug/L	0.545	1	231	122363	1	Standard
⎣	**Mn**	**55**	**50.342**	ug/L	0.202	0	1028	1511287	0	Standard
⎡>	**Ge**	**72**		ug/L			40960	40913	1	KED
⎢	**Ni**	**60**	**49.105**	ug/L	2.082	4	23	62282	3	KED
⎢	**Ni**	**62**	**48.708**	ug/L	1.251	2	6	10096	4	KED
⎢	**Cu**	**63**	**48.047**	ug/L	0.859	1	124	182416	2	KED
⎢	**Cu**	**65**	**48.770**	ug/L	1.225	2	56	89147	2	KED
⎢	**Zn**	**66**	**49.546**	ug/L	0.602	1	80	22335	1	KED
⎢	**Zn**	**67**	**50.435**	ug/L	0.866	1	19	3764	2	KED
⎣	**As**	**75**	**50.239**	ug/L	1.108	2	7	11100	2	KED
	Y	**89**		ug/L			440630	438466	0	Standard
	Kr	**83**		ug/L			56	64	16	Standard
⎡>	**In-1**	**115**		ug/L			11294	10751	1	KED
⎢	**Cd**	**111**	**49.647**	ug/L	0.973	1	6	11050	0	KED
⎣	**Cd**	**114**	**49.147**	ug/L	0.649	1	7	26985	1	KED
⎡>	**In**	**115**		ug/L			792758	767679	0	Standard
⎣	**Ag**	**107**	**50.057**	ug/L	0.820	1	158	815329	1	Standard
⎡>	**Tb**	**159**		ug/L			735738	734951	4	Standard
⎣	**Pb**	**208**	**50.410**	ug/L	1.511	2	406	2944117	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBG
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, March 07, 2023 03:42:16
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35047	34882	2	Standard
	Cl	**37**		ug/L			4819880	4858427	2	Standard
⌈>	**Sc**	**45**		ug/L			670326	669224	1	Standard
|	**Cr**	**52**	**-0.021**	ug/L	0.017	80	26049	25566	1	Standard
|	**Cr**	**53**	**-0.029**	ug/L	0.005	18	231	160	9	Standard
⌊	**Mn**	**55**	**-0.004**	ug/L	0.001	14	1028	920	1	Standard
⌈>	**Ge**	**72**		ug/L			40960	40521	2	KED
|	**Ni**	**60**	**-0.000**	ug/L	0.005	1557	23	22	28	KED
|	**Ni**	**62**	**0.007**	ug/L	0.020	287	6	7	50	KED
|	**Cu**	**63**	**-0.005**	ug/L	0.003	54	124	103	12	KED
|	**Cu**	**65**	**-0.003**	ug/L	0.003	106	56	50	10	KED
|	**Zn**	**66**	**-0.057**	ug/L	0.027	47	80	54	22	KED
|	**Zn**	**67**	**-0.162**	ug/L	0.023	14	19	7	25	KED
⌊	**As**	**75**	**0.004**	ug/L	0.003	78	7	8	9	KED
	Y	**89**		ug/L			440630	421971	2	Standard
	Kr	**83**		ug/L			56	54	7	Standard
⌈>	**In-1**	**115**		ug/L			11294	10646	1	KED
|	**Cd**	**111**	**-0.001**	ug/L	0.002	165	6	5	10	KED
⌊	**Cd**	**114**	**0.000**	ug/L	0.005	69425	7	6	42	KED
⌈>	**In**	**115**		ug/L			792758	783641	2	Standard
⌊	**Ag**	**107**	**0.004**	ug/L	0.001	24	158	226	4	Standard
⌈>	**Tb**	**159**		ug/L			735738	722490	4	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.001	91	406	466	11	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL1
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, March 07, 2023 03:46:44
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L				35520	2	Standard
	Cl	**37**		ug/L				4716783	0	Standard
⎡>	**Sc**	**45**		ug/L				639427	2	Standard
⎢	**Cr**	**52**		ug/L				24054	2	Standard
⎢	**Cr**	**53**		ug/L				172	13	Standard
⎣	**Mn**	**55**		ug/L				973	0	Standard
⎡>	**Ge**	**72**		ug/L				40737	2	KED
⎢	**Ni**	**60**		ug/L				20	32	KED
⎢	**Ni**	**62**		ug/L				6	62	KED
⎢	**Cu**	**63**		ug/L				114	6	KED
⎢	**Cu**	**65**		ug/L				63	22	KED
⎢	**Zn**	**66**		ug/L				93	24	KED
⎢	**Zn**	**67**		ug/L				17	19	KED
⎣	**As**	**75**		ug/L				10	17	KED
	Y	**89**		ug/L				414325	2	Standard
	Kr	**83**		ug/L				60	3	Standard
⎡>	**In-1**	**115**		ug/L				10806	2	KED
⎢	**Cd**	**111**		ug/L				7	25	KED
⎣	**Cd**	**114**		ug/L				9	55	KED
⎡>	**In**	**115**		ug/L				759938	2	Standard
⎣	**Ag**	**107**		ug/L				119	12	Standard
⎡>	**Tb**	**159**		ug/L				700907	4	Standard
⎣	**Pb**	**208**		ug/L				382	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVH
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, March 07, 2023 03:51:12
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35520	36500	0	Standard
	Cl	**37**		ug/L			4716783	5009674	1	Standard
⎡>	**Sc**	**45**		ug/L			639427	668261	1	Standard
⎢	**Cr**	**52**	**51.416**	ug/L	0.872	1	24054	1093998	0	Standard
⎢	**Cr**	**53**	**50.565**	ug/L	0.580	1	172	123703	0	Standard
⎣	**Mn**	**55**	**50.444**	ug/L	0.770	1	973	1507467	0	Standard
⎡>	**Ge**	**72**		ug/L			40737	40357	2	KED
⎢	**Ni**	**60**	**48.929**	ug/L	0.422	0	20	61219	1	KED
⎢	**Ni**	**62**	**48.654**	ug/L	1.241	2	6	9950	5	KED
⎢	**Cu**	**63**	**47.294**	ug/L	0.956	2	114	177170	4	KED
⎢	**Cu**	**65**	**47.375**	ug/L	1.170	2	63	85436	3	KED
⎢	**Zn**	**66**	**48.227**	ug/L	0.826	1	93	21466	3	KED
⎢	**Zn**	**67**	**49.897**	ug/L	2.148	4	17	3673	6	KED
⎣	**As**	**75**	**50.742**	ug/L	0.224	0	10	11061	2	KED
	Y	**89**		ug/L			414325	429633	0	Standard
	Kr	**83**		ug/L			60	66	31	Standard
⎡>	**In-1**	**115**		ug/L			10806	10781	2	KED
⎢	**Cd**	**111**	**49.842**	ug/L	0.703	1	7	11126	1	KED
⎣	**Cd**	**114**	**48.997**	ug/L	1.064	2	9	26974	1	KED
⎡>	**In**	**115**		ug/L			759938	778578	1	Standard
⎣	**Ag**	**107**	**49.369**	ug/L	1.259	2	119	815321	1	Standard
⎡>	**Tb**	**159**		ug/L			700907	736282	2	Standard
⎣	**Pb**	**208**	**50.165**	ug/L	1.532	3	382	2935705	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBH
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, March 07, 2023 03:58:24
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35520	34772	0	Standard
	Cl	**37**		ug/L			4716783	4784249	1	Standard
⌈>	**Sc**	**45**		ug/L			639427	640187	1	Standard
|	**Cr**	**52**	**0.044**	ug/L	0.009	19	24054	24964	1	Standard
|	**Cr**	**53**	**-0.006**	ug/L	0.004	69	172	157	8	Standard
⌊	**Mn**	**55**	**-0.004**	ug/L	0.001	27	973	860	4	Standard
⌈>	**Ge**	**72**		ug/L			40737	40535	1	KED
|	**Ni**	**60**	**0.002**	ug/L	0.003	213	20	22	17	KED
|	**Ni**	**62**	**0.006**	ug/L	0.005	75	6	8	13	KED
|	**Cu**	**63**	**-0.005**	ug/L	0.003	49	114	94	9	KED
|	**Cu**	**65**	**-0.005**	ug/L	0.002	41	63	54	8	KED
|	**Zn**	**66**	**-0.080**	ug/L	0.029	36	93	57	20	KED
|	**Zn**	**67**	**-0.068**	ug/L	0.015	21	17	12	9	KED
⌊	**As**	**75**	**-0.001**	ug/L	0.009	719	10	9	18	KED
	Y	**89**		ug/L			414325	418633	2	Standard
	Kr	**83**		ug/L			60	65	17	Standard
⌈>	**In-1**	**115**		ug/L			10806	10740	0	KED
|	**Cd**	**111**	**0.006**	ug/L	0.013	218	7	8	32	KED
⌊	**Cd**	**114**	**-0.003**	ug/L	0.006	186	9	7	44	KED
⌈>	**In**	**115**		ug/L			759938	771868	1	Standard
⌊	**Ag**	**107**	**0.007**	ug/L	0.001	18	119	235	7	Standard
⌈>	**Tb**	**159**		ug/L			700907	697972	3	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.001	61	382	428	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Tuesday, March 07, 2023 04:02:53
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			35520	106970	2	Standard
Cl	37		ug/L			4716783	5010968	1	Standard
Sc	45		ug/L			639427	700644	3	Standard
[redacted]	52	[redacted]	ug/L	0.107	0	24054	274187	2	Standard
Cr	53	11.084	ug/L	0.330	2	172	28569	2	Standard
Mn	55	14.073	ug/L	0.412	2	973	441574	1	Standard
Ge	72		ug/L			40737	40691	0	KED
[redacted]	60	[redacted]	ug/L	0.017	0	20	2462	0	KED
Ni	62	1.973	ug/L	0.045	2	6	413	2	KED
[redacted]	63	[redacted]	ug/L	0.014	2	114	2388	2	KED
Cu	65	0.600	ug/L	0.046	7	63	1153	6	KED
[redacted]	66	[redacted]	ug/L	0.709	3	93	9687	2	KED
Zn	67	19.493	ug/L	0.176	0	17	1456	1	KED
As	75	0.064	ug/L	0.011	16	10	24	9	KED
Y	89		ug/L			414325	465449	2	Standard
Kr	83		ug/L			60	63	34	Standard
In-1	115		ug/L			10806	10894	1	KED
[redacted]	111	[redacted]	ug/L	0.026	25	7	30	17	KED
Cd	114	0.095	ug/L	0.032	33	9	62	29	KED
In	115		ug/L			759938	804393	3	Standard
Ag	107	0.010	ug/L	0.000	2	119	298	2	Standard
Tb	159		ug/L			700907	745973	4	Standard
[redacted]	208	[redacted]	ug/L	0.001	2	382	3346	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Tuesday, March 07, 2023 04:07:44
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			35520	49662	1	Standard
Cl	37		ug/L			4716783	14953173	3	Standard
Sc	45		ug/L			639427	663296	1	Standard
[redacted]	52	[redacted]	ug/L	0.023	2	24054	41404	0	Standard
Cr	53	8.718	ug/L	0.092	1	172	21320	1	Standard
Mn	55	20.420	ug/L	0.387	1	973	606394	2	Standard
Ge	72		ug/L			40737	37780	2	KED
Ni	60	0.606	ug/L	0.022	3	20	727	1	KED
Ni	62	0.727	ug/L	0.048	6	6	145	5	KED
[redacted]	63	[redacted]	ug/L	0.321	1	114	75982	1	KED
Cu	65	22.301	ug/L	0.335	1	63	37671	0	KED
[redacted]	66	[redacted]	ug/L	2.624	4	93	25955	2	KED
Zn	67	58.915	ug/L	1.846	3	17	4053	2	KED
As	75	0.311	ug/L	0.036	11	10	72	11	KED
Y	89		ug/L			414325	438537	0	Standard
Kr	83		ug/L			60	121	13	Standard
In-1	115		ug/L			10806	9561	1	KED
Cd	111	0.217	ug/L	0.033	15	7	49	11	KED
Cd	114	0.228	ug/L	0.023	9	9	119	7	KED
In	115		ug/L			759938	733069	0	Standard
Ag	107	0.008	ug/L	0.001	15	119	234	7	Standard
Tb	159		ug/L			700907	711769	3	Standard
[redacted]	208	[redacted]	ug/L	0.013	3	382	20364	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Tuesday, March 07, 2023 04:12:36
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			35520	44945	2	Standard
Cl	37		ug/L			4716783	5418432	2	Standard
Sc	45		ug/L			639427	715318	3	Standard
[redacted]	52	[redacted]	ug/L	0.072	559	24054	27156	2	Standard
Cr	53	1.042	ug/L	0.041	3	172	2916	0	Standard
Mn	55	114.380	ug/L	6.015	5	973	3653575	2	Standard
Ge	72		ug/L			40737	39775	1	KED
[redacted]	60	[redacted]	ug/L	0.063	5	20	1454	6	KED
Ni	62	1.155	ug/L	0.074	6	6	239	6	KED
[redacted]	63	[redacted]	ug/L	0.006	3	114	779	4	KED
Cu	65	0.188	ug/L	0.024	12	63	395	11	KED
[redacted]	66	[redacted]	ug/L	0.098	10	93	507	9	KED
Zn	67	2.017	ug/L	0.321	15	17	162	15	KED
[redacted]	75	[redacted]	ug/L	0.047	15	10	75	12	KED
Y	89		ug/L			414325	446473	1	Standard
Kr	83		ug/L			60	62	6	Standard
In-1	115		ug/L			10806	10644	1	KED
Cd	111	-0.007	ug/L	0.013	195	7	6	48	KED
Cd	114	0.016	ug/L	0.014	92	9	17	45	KED
In	115		ug/L			759938	773461	1	Standard
Ag	107	-0.002	ug/L	0.001	56	119	93	18	Standard
Tb	159		ug/L			700907	731790	3	Standard
[redacted]	208	[redacted]	ug/L	0.001	6	382	1230	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Tuesday, March 07, 2023 04:17:28
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			35520	56741	2	Standard
Cl	37		ug/L			4716783	5035640	0	Standard
> Sc	45		ug/L			639427	799933	2	Standard
Cr	52	11.949	ug/L	0.157	1	24054	327476	2	Standard
Cr	53	11.968	ug/L	0.203	1	172	35225	3	Standard
Mn	55	146.192	ug/L	0.998	0	973	5228100	2	Standard
> Ge	72		ug/L			40737	41471	1	KED
Ni	60	10.441	ug/L	0.232	2	20	13443	3	KED
Ni	62	10.182	ug/L	0.210	2	6	2144	0	KED
[redacted]	63	[redacted]	ug/L	0.413	1	114	96826	1	KED
Cu	65	25.416	ug/L	0.312	1	63	47128	1	KED
[redacted]	66	[redacted]	ug/L	1.578	3	93	21568	4	KED
Zn	67	44.660	ug/L	1.272	2	17	3378	2	KED
[redacted]	75	[redacted]	ug/L	0.121	1	10	1541	2	KED
Y	89		ug/L			414325	669403	1	Standard
Kr	83		ug/L			60	116	21	Standard
> In-1	115		ug/L			10806	10487	1	KED
[redacted]	111	[redacted]	ug/L	0.037	20	7	45	16	KED
Cd	114	0.158	ug/L	0.005	3	9	93	1	KED
> In	115		ug/L			759938	799357	3	Standard
[redacted]	107	[redacted]	ug/L	0.006	5	119	1982	8	Standard
> Tb	159		ug/L			700907	784803	3	Standard
[redacted]	208	[redacted]	ug/L	0.308	2	382	670355	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Tuesday, March 07, 2023 04:21:55
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			35520	60315	0	Standard
Cl	37		ug/L			4716783	5070454	1	Standard
> Sc	45		ug/L			639427	808147	0	Standard
Cr	52	12.645	ug/L	0.108	0	24054	348365	1	Standard
Cr	53	12.605	ug/L	0.272	2	172	37464	2	Standard
Mn	55	154.513	ug/L	1.638	1	973	5582841	1	Standard
> Ge	72		ug/L			40737	40329	2	KED
Ni	60	10.599	ug/L	0.157	1	20	13268	2	KED
Ni	62	10.520	ug/L	0.132	1	6	2155	3	KED
[redacted]	63	[redacted]	ug/L	0.276	0	114	103928	3	KED
Cu	65	28.279	ug/L	0.208	0	63	50986	2	KED
[redacted]	66	[redacted]	ug/L	0.811	1	93	23180	1	KED
Zn	67	49.833	ug/L	1.433	2	17	3665	5	KED
[redacted]	75	[redacted]	ug/L	0.191	2	10	1784	1	KED
Y	89		ug/L			414325	665317	1	Standard
Kr	83		ug/L			60	121	15	Standard
> In-1	115		ug/L			10806	10541	4	KED
[redacted]	111	[redacted]	ug/L	0.039	21	7	47	22	KED
Cd	114	0.188	ug/L	0.015	7	9	109	4	KED
> In	115		ug/L			759938	804065	2	Standard
[redacted]	107	[redacted]	ug/L	0.003	2	119	2362	2	Standard
> Tb	159		ug/L			700907	781248	4	Standard
[redacted]	208	[redacted]	ug/L	0.514	4	382	774094	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Tuesday, March 07, 2023 04:26:23
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			35520	60555	3	Standard
Cl	37		ug/L			4716783	5032975	1	Standard
> Sc	45		ug/L			639427	819654	2	Standard
Cr	52	12.946	ug/L	0.447	3	24054	360789	1	Standard
Cr	53	12.941	ug/L	0.470	3	172	38976	1	Standard
Mn	55	137.808	ug/L	4.420	3	973	5047242	1	Standard
> Ge	72		ug/L			40737	41054	1	KED
Ni	60	11.011	ug/L	0.175	1	20	14030	0	KED
Ni	62	11.125	ug/L	0.052	0	6	2318	0	KED
[redacted]	63	[redacted]	ug/L	0.631	2	114	105403	1	KED
Cu	65	28.330	ug/L	0.224	0	63	51996	1	KED
[redacted]	66	[redacted]	ug/L	0.892	1	93	24631	0	KED
Zn	67	54.674	ug/L	0.204	0	17	4090	1	KED
[redacted]	75	[redacted]	ug/L	0.149	1	10	1710	1	KED
Y	89		ug/L			414325	687499	3	Standard
Kr	83		ug/L			60	121	11	Standard
> In-1	115		ug/L			10806	10508	1	KED
[redacted]	111	[redacted]	ug/L	0.038	20	7	48	18	KED
Cd	114	0.204	ug/L	0.025	12	9	118	11	KED
> In	115		ug/L			759938	794929	2	Standard
[redacted]	107	[redacted]	ug/L	0.005	4	119	2179	1	Standard
> Tb	159		ug/L			700907	778611	3	Standard
[redacted]	208	[redacted]	ug/L	0.241	1	382	753295	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Tuesday, March 07, 2023 04:30:51
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	**13**		ug/L			35520	55348	3	Standard
Cl	**37**		ug/L			4716783	4885751	1	Standard
Sc	**45**		ug/L			639427	793332	3	Standard
[redacted]	**52**	[redacted]	ug/L	0.075	0	24054	329814	4	Standard
Cr	**53**	**12.018**	ug/L	0.083	0	172	35068	3	Standard
Mn	**55**	**131.923**	ug/L	0.929	0	973	4679245	3	Standard
Ge	**72**		ug/L			40737	40144	0	KED
Ni	**60**	**10.880**	ug/L	0.303	2	20	13556	2	KED
Ni	**62**	**11.119**	ug/L	0.230	2	6	2266	1	KED
[redacted]	**63**	[redacted]	ug/L	0.310	1	114	94039	0	KED
Cu	**65**	**25.912**	ug/L	0.576	2	63	46507	2	KED
[redacted]	**66**	[redacted]	ug/L	1.512	3	93	22074	2	KED
Zn	**67**	**48.441**	ug/L	1.235	2	17	3545	2	KED
[redacted]	**75**	[redacted]	ug/L	0.240	3	10	1461	3	KED
Y	**89**		ug/L			414325	683448	3	Standard
Kr	**83**		ug/L			60	107	13	Standard
In-1	**115**		ug/L			10806	10700	1	KED
[redacted]	**111**	[redacted]	ug/L	0.022	12	7	46	11	KED
Cd	**114**	**0.135**	ug/L	0.013	9	9	82	7	KED
In	**115**		ug/L			759938	782733	1	Standard
[redacted]	**107**	[redacted]	ug/L	0.004	3	119	1844	4	Standard
Tb	**159**		ug/L			700907	762010	5	Standard
[redacted]	**208**	[redacted]	ug/L	0.409	3	382	619849	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Tuesday, March 07, 2023 04:35:18
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			35520	55048	0	Standard
Cl	37		ug/L			4716783	4971969	2	Standard
> Sc	45		ug/L			639427	811115	3	Standard
Cr	52	**55.820**	ug/L	1.280	2	24054	1438627	1	Standard
Cr	53	**54.371**	ug/L	1.576	2	172	161362	1	Standard
Mn	55	**156.576**	ug/L	3.165	2	973	5675894	2	Standard
> Ge	72		ug/L			40737	39285	4	KED
Ni	60	**14.885**	ug/L	0.595	3	20	18126	1	KED
Ni	62	**14.938**	ug/L	0.685	4	6	2974	2	KED
[redacted]	63	[redacted]	ug/L	2.127	5	114	140665	1	KED
Cu	65	**38.542**	ug/L	2.045	5	63	67572	1	KED
[redacted]	66	[redacted]	ug/L	3.929	2	93	61178	1	KED
Zn	67	**139.463**	ug/L	8.148	5	17	9945	2	KED
[redacted]	75	[redacted]	ug/L	0.373	4	10	1675	0	KED
Y	89		ug/L			414325	708974	2	Standard
Kr	83		ug/L			60	118	6	Standard
> In-1	115		ug/L			10806	10789	2	KED
[redacted]	111	[redacted]	ug/L	0.395	5	7	1533	2	KED
Cd	114	**6.892**	ug/L	0.156	2	9	3804	1	KED
> In	115		ug/L			759938	791012	1	Standard
[redacted]	107	[redacted]	ug/L	0.007	2	119	4412	2	Standard
> Tb	159		ug/L			700907	779302	2	Standard
Pb	208	**311.566**	ug/L	9.520	3	382	19296981	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Tuesday, March 07, 2023 04:39:46
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			35520	54863	1	Standard
Cl	37		ug/L			4716783	4907280	2	Standard
> Sc	45		ug/L			639427	815388	1	Standard
Cr	52	15.754	ug/L	0.226	1	24054	430312	1	Standard
Cr	53	15.579	ug/L	0.240	1	172	46653	0	Standard
Mn	55	136.835	ug/L	1.257	0	973	4988376	2	Standard
> Ge	72		ug/L			40737	40652	1	KED
Ni	60	11.662	ug/L	0.281	2	20	14718	3	KED
Ni	62	11.783	ug/L	0.154	1	6	2431	2	KED
[redacted]	63	[redacted]	ug/L	0.298	1	114	93065	1	KED
Cu	65	25.073	ug/L	0.710	2	63	45567	2	KED
Zn	66	96.253	ug/L	1.646	1	93	43058	2	KED
[redacted]	[redacted]	[redacted]	ug/L	2.762	3	17	6529	4	KED
[redacted]	75	[redacted]	ug/L	0.989	0	10	29130	1	KED
Y	89		ug/L			414325	737983	3	Standard
Kr	83		ug/L			60	112	1	Standard
> In-1	115		ug/L			10806	10298	3	KED
[redacted]	111	[redacted]	ug/L	0.015	3	7	100	3	KED
Cd	114	0.408	ug/L	0.063	15	9	222	12	KED
> In	115		ug/L			759938	795879	1	Standard
[redacted]	107	[redacted]	ug/L	0.007	3	119	3750	2	Standard
> Tb	159		ug/L			700907	765604	2	Standard
[redacted]	208	[redacted]	ug/L	0.366	1	382	1199498	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Tuesday, March 07, 2023 04:44:08
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	**13**		ug/L			35520	52912	1	Standard
Cl	**37**		ug/L			4716783	4817756	0	Standard
Sc	**45**		ug/L			639427	786453	0	Standard
[redacted]	**52**	[redacted]	ug/L	0.216	1	24054	490710	1	Standard
Cr	**53**	**18.887**	ug/L	0.347	1	172	54514	1	Standard
Mn	**55**	**135.276**	ug/L	1.948	1	973	4756007	0	Standard
Ge	**72**		ug/L			40737	40118	2	KED
Ni	**60**	**13.987**	ug/L	0.181	1	20	17410	1	KED
Ni	**62**	**13.349**	ug/L	0.218	1	6	2718	3	KED
[redacted]	**63**	[redacted]	ug/L	0.261	1	114	90816	1	KED
Cu	**65**	**25.363**	ug/L	0.391	1	63	45502	3	KED
Zn	**66**	**141.943**	ug/L	0.734	0	93	62609	1	KED
[redacted]	[redacted]	[redacted]	ug/L	1.329	0	17	9872	3	KED
[redacted]	**75**	[redacted]	ug/L	0.163	0	10	5932	1	KED
Y	**89**		ug/L			414325	706347	3	Standard
Kr	**83**		ug/L			60	115	13	Standard
In-1	**115**		ug/L			10806	10588	0	KED
[redacted]	**111**	[redacted]	ug/L	0.050	9	7	120	9	KED
Cd	**114**	**0.505**	ug/L	0.090	17	9	281	16	KED
In	**115**		ug/L			759938	784805	1	Standard
[redacted]	**107**	[redacted]	ug/L	0.010	4	119	3859	4	Standard
Tb	**159**		ug/L			700907	772252	2	Standard
[redacted]	**208**	[redacted]	ug/L	1.057	3	382	1951693	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVI
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, March 07, 2023 04:50:00
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35520	36939	2	Standard
	Cl	**37**		ug/L			4716783	5187477	0	Standard
⎡>	**Sc**	**45**		ug/L			639427	662798	1	Standard
⎢	**Cr**	**52**	**51.190**	ug/L	0.651	1	24054	1080582	1	Standard
⎢	**Cr**	**53**	**50.972**	ug/L	0.456	0	172	123703	2	Standard
⎣	**Mn**	**55**	**51.696**	ug/L	0.516	0	973	1532527	2	Standard
⎡>	**Ge**	**72**		ug/L			40737	40666	1	KED
⎢	**Ni**	**60**	**47.833**	ug/L	0.538	1	20	60317	1	KED
⎢	**Ni**	**62**	**48.172**	ug/L	1.263	2	6	9922	2	KED
⎢	**Cu**	**63**	**46.921**	ug/L	0.957	2	114	177033	1	KED
⎢	**Cu**	**65**	**48.483**	ug/L	0.383	0	63	88100	1	KED
⎢	**Zn**	**66**	**50.054**	ug/L	0.416	0	93	22440	0	KED
⎢	**Zn**	**67**	**51.322**	ug/L	1.919	3	17	3803	2	KED
⎣	**As**	**75**	**50.133**	ug/L	1.231	2	10	11011	2	KED
	Y	**89**		ug/L			414325	444474	2	Standard
	Kr	**83**		ug/L			60	53	7	Standard
⎡>	**In-1**	**115**		ug/L			10806	10852	2	KED
⎢	**Cd**	**111**	**48.369**	ug/L	1.143	2	7	10869	2	KED
⎣	**Cd**	**114**	**48.555**	ug/L	0.893	1	9	26909	0	KED
⎡>	**In**	**115**		ug/L			759938	782303	2	Standard
⎣	**Ag**	**107**	**49.093**	ug/L	1.011	2	119	814501	0	Standard
⎡>	**Tb**	**159**		ug/L			700907	731613	2	Standard
⎣	**Pb**	**208**	**51.023**	ug/L	2.162	4	382	2966456	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBI
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, March 07, 2023 04:57:12
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35520	36206	1	Standard
	Cl	**37**		ug/L			4716783	4954864	1	Standard
⎡>	**Sc**	**45**		ug/L			639427	648939	2	Standard
⎢	**Cr**	**52**	**0.047**	ug/L	0.004	9	24054	25363	2	Standard
⎢	**Cr**	**53**	**0.019**	ug/L	0.004	22	172	219	5	Standard
⎣	**Mn**	**55**	**0.001**	ug/L	0.002	123	973	1025	3	Standard
⎡>	**Ge**	**72**		ug/L			40737	41061	1	KED
⎢	**Ni**	**60**	**0.003**	ug/L	0.002	71	20	24	13	KED
⎢	**Ni**	**62**	**0.003**	ug/L	0.024	847	6	7	66	KED
⎢	**Cu**	**63**	**0.000**	ug/L	0.003	1095	114	116	8	KED
⎢	**Cu**	**65**	**-0.005**	ug/L	0.005	92	63	54	16	KED
⎢	**Zn**	**66**	**-0.102**	ug/L	0.006	5	93	48	4	KED
⎢	**Zn**	**67**	**-0.113**	ug/L	0.029	25	17	8	24	KED
⎣	**As**	**75**	**-0.005**	ug/L	0.005	97	10	8	12	KED
	Y	**89**		ug/L			414325	434800	2	Standard
	Kr	**83**		ug/L			60	64	11	Standard
⎡>	**In-1**	**115**		ug/L			10806	10632	2	KED
⎢	**Cd**	**111**	**0.000**	ug/L	0.008	1714	7	7	25	KED
⎣	**Cd**	**114**	**0.005**	ug/L	0.014	285	9	11	65	KED
⎡>	**In**	**115**		ug/L			759938	778407	2	Standard
⎣	**Ag**	**107**	**0.005**	ug/L	0.000	4	119	204	3	Standard
⎡>	**Tb**	**159**		ug/L			700907	714153	2	Standard
⎣	**Pb**	**208**	**0.002**	ug/L	0.000	17	382	517	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Tuesday, March 07, 2023 05:01:41
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	**13**		ug/L			35520	50458	1	Standard
Cl	**37**		ug/L			4716783	4925466	3	Standard
Sc	**45**		ug/L			639427	748942	3	Standard
[redacted]	**52**	[redacted]	ug/L	0.431	3	24054	357633	3	Standard
Cr	**53**	**13.972**	ug/L	0.467	3	172	38441	2	Standard
Mn	**55**	**95.872**	ug/L	1.581	1	973	3209812	2	Standard
Ge	**72**		ug/L			40737	41589	1	KED
[redacted]	**60**	[redacted]	ug/L	0.293	2	20	16766	0	KED
Ni	**62**	**13.362**	ug/L	0.263	1	6	2819	2	KED
[redacted]	**63**	[redacted]	ug/L	0.975	3	114	110589	2	KED
Cu	**65**	**29.134**	ug/L	0.475	1	63	54158	0	KED
Zn	**66**	**59.711**	ug/L	1.816	3	93	27353	1	KED
Zn	**67**	**56.512**	ug/L	2.484	4	17	4281	3	KED
[redacted]	**75**	[redacted]	ug/L	0.079	2	10	837	0	KED
Y	**89**		ug/L			414325	577550	2	Standard
Kr	**83**		ug/L			60	80	5	Standard
In-1	**115**		ug/L			10806	10796	1	KED
[redacted]	**111**	[redacted]	ug/L	0.068	14	7	109	13	KED
Cd	**114**	**0.445**	ug/L	0.059	13	9	254	11	KED
In	**115**		ug/L			759938	810104	1	Standard
[redacted]	**107**	[redacted]	ug/L	0.003	3	119	1378	4	Standard
Tb	**159**		ug/L			700907	766850	1	Standard
[redacted]	**208**	[redacted]	ug/L	0.413	2	382	955269	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Tuesday, March 07, 2023 05:06:09
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	**13**		ug/L			35520	54194	2	Standard
Cl	**37**		ug/L			4716783	4968990	1	Standard
Sc	**45**		ug/L			639427	754219	2	Standard
[redacted]	**52**	[redacted]	ug/L	0.080	0	24054	394141	2	Standard
Cr	**53**	**15.610**	ug/L	0.242	1	172	43253	3	Standard
Mn	**55**	**134.204**	ug/L	1.962	1	973	4526292	3	Standard
Ge	**72**		ug/L			40737	41777	1	KED
[redacted]	**60**	[redacted]	ug/L	0.532	3	20	22731	2	KED
Ni	**62**	**18.241**	ug/L	0.416	2	6	3864	2	KED
[redacted]	**63**	[redacted]	ug/L	2.852	2	114	445430	2	KED
Cu	**65**	**117.357**	ug/L	0.876	0	63	218972	0	KED
Zn	**66**	**55.923**	ug/L	0.926	1	93	25743	0	KED
Zn	**67**	**54.215**	ug/L	0.588	1	17	4127	0	KED
[redacted]	**75**	[redacted]	ug/L	0.138	4	10	707	3	KED
Y	**89**		ug/L			414325	597101	1	Standard
Kr	**83**		ug/L			60	74	9	Standard
In-1	**115**		ug/L			10806	10811	1	KED
[redacted]	**111**	[redacted]	ug/L	0.016	8	7	53	8	KED
Cd	**114**	**0.251**	ug/L	0.005	1	9	147	1	KED
In	**115**		ug/L			759938	795756	1	Standard
[redacted]	**107**	[redacted]	ug/L	0.007	8	119	1562	9	Standard
Tb	**159**		ug/L			700907	766466	2	Standard
[redacted]	**208**	[redacted]	ug/L	0.403	3	382	689288	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Tuesday, March 07, 2023 05:10:36
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	**13**		ug/L			35520	49074	0	Standard
Cl	**37**		ug/L			4716783	4920125	1	Standard
Sc	**45**		ug/L			639427	756538	1	Standard
[redacted]	**52**	[redacted]	ug/L	0.242	1	24054	350626	0	Standard
Cr	**53**	**13.494**	ug/L	0.250	1	172	37524	2	Standard
Mn	**55**	**140.349**	ug/L	3.303	2	973	4745733	0	Standard
Ge	**72**		ug/L			40737	41441	0	KED
[redacted]	**60**	[redacted]	ug/L	0.238	1	20	22838	1	KED
Ni	**62**	**17.767**	ug/L	0.602	3	6	3733	2	KED
[redacted]	**63**	[redacted]	ug/L	0.391	2	114	64297	1	KED
Cu	**65**	**16.994**	ug/L	0.254	1	63	31509	1	KED
Zn	**66**	**28.705**	ug/L	0.866	3	93	13157	3	KED
Zn	**67**	**27.557**	ug/L	1.793	6	17	2089	6	KED
[redacted]	**75**	[redacted]	ug/L	0.055	2	10	422	2	KED
Y	**89**		ug/L			414325	637780	3	Standard
Kr	**83**		ug/L			60	94	3	Standard
In-1	**115**		ug/L			10806	11083	1	KED
[redacted]	**111**	[redacted]	ug/L	0.021	15	7	39	13	KED
Cd	**114**	**0.158**	ug/L	0.021	13	9	98	11	KED
In	**115**		ug/L			759938	800455	2	Standard
[redacted]	**107**	[redacted]	ug/L	0.001	3	119	848	4	Standard
Tb	**159**		ug/L			700907	769110	4	Standard
[redacted]	**208**	[redacted]	ug/L	0.230	3	382	385625	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Tuesday, March 07, 2023 05:15:04
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			35520	50649	1	Standard
Cl	37		ug/L			4716783	4853614	1	Standard
> Sc	45		ug/L			639427	727392	1	Standard
[redacted]	52	[redacted]	ug/L	0.215	1	24054	287582	2	Standard
Cr	53	11.378	ug/L	0.148	1	172	30450	0	Standard
Mn	55	106.818	ug/L	0.735	0	973	3474032	1	Standard
> Ge	72		ug/L			40737	39549	2	KED
[redacted]	60	[redacted]	ug/L	0.304	2	20	17033	0	KED
Ni	62	13.428	ug/L	0.238	1	6	2694	2	KED
[redacted]	63	[redacted]	ug/L	0.660	0	114	447705	1	KED
Cu	65	125.813	ug/L	0.565	0	63	222244	2	KED
Zn	66	107.640	ug/L	3.009	2	93	46813	0	KED
Zn	67	101.493	ug/L	0.578	0	17	7300	2	KED
[redacted]	75	[redacted]	ug/L	0.092	2	10	673	1	KED
Y	89		ug/L			414325	572217	2	Standard
Kr	83		ug/L			60	81	20	Standard
> In-1	115		ug/L			10806	10185	2	KED
[redacted]	111	[redacted]	ug/L	0.024	8	7	67	7	KED
Cd	114	0.265	ug/L	0.057	21	9	146	20	KED
> In	115		ug/L			759938	791040	2	Standard
[redacted]	107	[redacted]	ug/L	0.001	1	119	1311	3	Standard
> Tb	159		ug/L			700907	750633	3	Standard
[redacted]	208	[redacted]	ug/L	0.724	4	382	952243	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, March 07, 2023 05:19:55
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35520	87700	3	Standard
	Cl	**37**		ug/L			4716783	8115695	1	Standard
⌈>	**Sc**	**45**		ug/L			639427	656192	0	Standard
|	**Cr**	**52**	**0.934**	ug/L	0.043	4	24054	43753	2	Standard
|	**Cr**	**53**	**1.606**	ug/L	0.056	3	172	4029	2	Standard
⌊	**Mn**	**55**	**519.859**	ug/L	12.648	2	973	15245949	1	Standard
⌈>	**Ge**	**72**		ug/L			40737	37222	1	KED
|	**Ni**	**60**	**3.950**	ug/L	0.221	5	20	4574	4	KED
|	**Ni**	**62**	**3.822**	ug/L	0.123	3	6	726	2	KED
|	[redacted]	**63**	[redacted]	ug/L	0.005	0	114	5890	1	KED
|	**Cu**	**65**	**1.711**	ug/L	0.034	2	63	2900	1	KED
|	[redacted]	**66**	[redacted]	ug/L	0.280	5	93	2070	6	KED
|	**Zn**	**67**	**6.527**	ug/L	0.324	4	17	456	4	KED
⌊	**As**	**75**	**5.148**	ug/L	0.052	1	10	1043	2	KED
	Y	**89**		ug/L			414325	455275	1	Standard
	Kr	**83**		ug/L			60	101	12	Standard
⌈>	**In-1**	**115**		ug/L			10806	10057	0	KED
|	**Cd**	**111**	**0.019**	ug/L	0.027	141	7	11	51	KED
⌊	**Cd**	**114**	**0.013**	ug/L	0.013	104	9	15	45	KED
⌈>	**In**	**115**		ug/L			759938	709522	2	Standard
⌊	**Ag**	**107**	**0.003**	ug/L	0.001	37	119	151	8	Standard
⌈>	**Tb**	**159**		ug/L			700907	697355	2	Standard
⌊	**Pb**	**208**	**0.127**	ug/L	0.007	5	382	7424	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, March 07, 2023 05:24:23
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35520	57829	1	Standard
	Cl	**37**		ug/L			4716783	8334961	2	Standard
>	**Sc**	**45**		ug/L			639427	690103	2	Standard
	Cr	**52**	**9.141**	ug/L	0.071	0	24054	222223	1	Standard
	Cr	**53**	**11.402**	ug/L	0.115	1	172	28950	1	Standard
	Mn	**55**	**36.622**	ug/L	0.854	2	973	1130378	1	Standard
>	**Ge**	**72**		ug/L			40737	38765	1	KED
	Ni	**60**	**3.971**	ug/L	0.161	4	20	4789	3	KED
	Ni	**62**	**4.084**	ug/L	0.448	10	6	807	8	KED
	[redacted]	**63**	[redacted]	ug/L	0.286	1	114	53956	1	KED
	Cu	**65**	**15.447**	ug/L	0.394	2	63	26793	2	KED
	[redacted]	**66**	[redacted]	ug/L	1.301	2	93	25541	2	KED
	Zn	**67**	**59.128**	ug/L	0.849	1	17	4175	2	KED
	As	**75**	**1.554**	ug/L	0.048	3	10	334	4	KED
	Y	**89**		ug/L			414325	436813	1	Standard
	Kr	**83**		ug/L			60	71	24	Standard
>	**In-1**	**115**		ug/L			10806	10316	3	KED
	Cd	**111**	**0.073**	ug/L	0.010	14	7	22	12	KED
	Cd	**114**	**0.057**	ug/L	0.014	24	9	38	19	KED
>	**In**	**115**		ug/L			759938	755369	2	Standard
	Ag	**107**	**0.013**	ug/L	0.001	5	119	325	2	Standard
>	**Tb**	**159**		ug/L			700907	716924	0	Standard
	Pb	**208**	**3.106**	ug/L	0.035	1	382	177429	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Tuesday, March 07, 2023 05:28:51
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35520	49770	3	Standard
	Cl	**37**		ug/L			4716783	6234992	3	Standard
⌈>	**Sc**	**45**		ug/L			639427	682379	1	Standard
|	**Cr**	**52**	**6.638**	ug/L	0.204	3	24054	166643	4	Standard
|	**Cr**	**53**	**7.621**	ug/L	0.084	1	172	19198	2	Standard
⌊	**Mn**	**55**	**42.760**	ug/L	0.510	1	973	1305411	2	Standard
⌈>	**Ge**	**72**		ug/L			40737	39536	0	KED
|	**Ni**	**60**	**3.440**	ug/L	0.114	3	20	4235	2	KED
|	**Ni**	**62**	**3.456**	ug/L	0.182	5	6	698	5	KED
|	[redacted]	**63**	[redacted]	ug/L	0.189	1	114	55981	1	KED
|	**Cu**	**65**	**15.148**	ug/L	0.209	1	63	26801	0	KED
|	[redacted]	**66**	[redacted]	ug/L	0.846	1	93	29866	0	KED
|	**Zn**	**67**	**68.457**	ug/L	2.436	3	17	4928	3	KED
⌊	**As**	**75**	**1.066**	ug/L	0.097	9	10	237	8	KED
	Y	**89**		ug/L			414325	439681	2	Standard
	Kr	**83**		ug/L			60	64	19	Standard
⌈>	**In-1**	**115**		ug/L			10806	10012	2	KED
|	**Cd**	**111**	**0.054**	ug/L	0.035	65	7	18	37	KED
⌊	**Cd**	**114**	**0.076**	ug/L	0.014	17	9	47	13	KED
⌈>	**In**	**115**		ug/L			759938	765881	2	Standard
⌊	**Ag**	**107**	**0.013**	ug/L	0.000	3	119	329	0	Standard
⌈>	**Tb**	**159**		ug/L			700907	726720	4	Standard
⌊	**Pb**	**208**	**4.516**	ug/L	0.143	3	382	261055	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Tuesday, March 07, 2023 05:33:19
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35520	49030	0	Standard
	Cl	**37**		ug/L			4716783	6116348	2	Standard
>	**Sc**	**45**		ug/L			639427	659183	2	Standard
	Cr	**52**	**7.295**	ug/L	0.134	1	24054	174441	3	Standard
	Cr	**53**	**8.227**	ug/L	0.051	0	172	20005	2	Standard
	Mn	**55**	**50.246**	ug/L	0.387	0	973	1481585	2	Standard
>	**Ge**	**72**		ug/L			40737	39209	3	KED
	Ni	**60**	**2.753**	ug/L	0.147	5	20	3361	1	KED
	Ni	**62**	**2.800**	ug/L	0.158	5	6	563	9	KED
	[redacted]	**63**	[redacted]	ug/L	0.275	1	114	60636	3	KED
	Cu	**65**	**16.981**	ug/L	0.225	1	63	29801	5	KED
	[redacted]	**66**	[redacted]	ug/L	2.324	3	93	32236	0	KED
	Zn	**67**	**72.253**	ug/L	1.194	1	17	5155	2	KED
	As	**75**	**1.160**	ug/L	0.012	0	10	255	4	KED
	Y	**89**		ug/L			414325	433122	4	Standard
	Kr	**83**		ug/L			60	60	24	Standard
>	**In-1**	**115**		ug/L			10806	10488	0	KED
	Cd	**111**	**0.083**	ug/L	0.034	40	7	25	28	KED
	Cd	**114**	**0.050**	ug/L	0.032	64	9	35	47	KED
>	**In**	**115**		ug/L			759938	761992	0	Standard
	Ag	**107**	**0.015**	ug/L	0.001	7	119	362	5	Standard
>	**Tb**	**159**		ug/L			700907	722766	4	Standard
	Pb	**208**	**5.072**	ug/L	0.197	3	382	291581	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, March 07, 2023 05:37:46
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35520	54462	0	Standard
	Cl	**37**		ug/L			4716783	7461768	1	Standard
>	**Sc**	**45**		ug/L			639427	668986	2	Standard
	Cr	**52**	**10.648**	ug/L	0.137	1	24054	246761	2	Standard
	Cr	**53**	**12.330**	ug/L	0.164	1	172	30330	2	Standard
	Mn	**55**	**48.816**	ug/L	1.118	2	973	1460348	2	Standard
>	**Ge**	**72**		ug/L			40737	38285	1	KED
	Ni	**60**	**3.133**	ug/L	0.043	1	20	3736	1	KED
	Ni	**62**	**3.211**	ug/L	0.221	6	6	629	8	KED
	[redacted]	**63**	[redacted]	ug/L	0.272	1	114	67095	2	KED
	Cu	**65**	**18.908**	ug/L	0.353	1	63	32387	3	KED
	[redacted]	**66**	[redacted]	ug/L	0.809	0	93	35378	0	KED
	Zn	**67**	**79.679**	ug/L	1.221	1	17	5552	3	KED
	As	**75**	**1.654**	ug/L	0.096	5	10	351	6	KED
	Y	**89**		ug/L			414325	436506	1	Standard
	Kr	**83**		ug/L			60	78	24	Standard
>	**In-1**	**115**		ug/L			10806	10611	2	KED
	Cd	**111**	**0.093**	ug/L	0.024	25	7	27	19	KED
	Cd	**114**	**0.073**	ug/L	0.022	30	9	48	22	KED
>	**In**	**115**		ug/L			759938	736034	3	Standard
	Ag	**107**	**0.020**	ug/L	0.001	3	119	421	0	Standard
>	**Tb**	**159**		ug/L			700907	712374	2	Standard
	Pb	**208**	**4.564**	ug/L	0.006	0	382	258896	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLJ
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, March 07, 2023 05:42:15
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35520	36344	1	Standard
	Cl	**37**		ug/L			4716783	4767559	0	Standard
⌈>	**Sc**	**45**		ug/L			639427	622690	2	Standard
|	**Cr**	**52**	**0.048**	ug/L	0.040	83	24054	24353	4	Standard
|	**Cr**	**53**	**0.172**	ug/L	0.016	9	172	559	5	Standard
⌊	**Mn**	**55**	**0.019**	ug/L	0.002	11	973	1482	2	Standard
⌈>	**Ge**	**72**		ug/L			40737	39959	1	KED
|	**Ni**	**60**	**0.012**	ug/L	0.004	34	20	34	14	KED
|	**Ni**	**62**	**0.035**	ug/L	0.011	30	6	13	15	KED
|	**Cu**	**63**	**0.006**	ug/L	0.004	66	114	135	10	KED
|	**Cu**	**65**	**0.002**	ug/L	0.006	328	63	65	16	KED
|	**Zn**	**66**	**-0.019**	ug/L	0.029	150	93	83	15	KED
|	**Zn**	**67**	**-0.004**	ug/L	0.040	916	17	16	17	KED
⌊	**As**	**75**	**-0.009**	ug/L	0.018	200	10	7	49	KED
	Y	**89**		ug/L			414325	407120	4	Standard
	Kr	**83**		ug/L			60	64	21	Standard
⌈>	**In-1**	**115**		ug/L			10806	10408	2	KED
|	**Cd**	**111**	**-0.010**	ug/L	0.013	124	7	5	54	KED
⌊	**Cd**	**114**	**-0.002**	ug/L	0.004	249	9	7	29	KED
⌈>	**In**	**115**		ug/L			759938	750705	2	Standard
⌊	**Ag**	**107**	**-0.003**	ug/L	0.001	27	119	62	24	Standard
⌈>	**Tb**	**159**		ug/L			700907	696184	3	Standard
⌊	**Pb**	**208**	**0.003**	ug/L	0.001	28	382	536	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVJ
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, March 07, 2023 05:46:43
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35520	35275	4	Standard
	Cl	**37**		ug/L			4716783	4989690	2	Standard
⎡>	**Sc**	**45**		ug/L			639427	633071	4	Standard
⎢	**Cr**	**52**	**51.323**	ug/L	1.989	3	24054	1034421	4	Standard
⎢	**Cr**	**53**	**50.989**	ug/L	1.976	3	172	118133	4	Standard
⎣	**Mn**	**55**	**51.559**	ug/L	1.525	2	973	1460323	5	Standard
⎡>	**Ge**	**72**		ug/L			40737	40124	2	KED
⎢	**Ni**	**60**	**46.871**	ug/L	1.931	4	20	58283	2	KED
⎢	**Ni**	**62**	**47.485**	ug/L	0.904	1	6	9648	0	KED
⎢	**Cu**	**63**	**47.147**	ug/L	1.141	2	114	175477	0	KED
⎢	**Cu**	**65**	**48.218**	ug/L	1.494	3	63	86421	2	KED
⎢	**Zn**	**66**	**48.916**	ug/L	1.139	2	93	21634	0	KED
⎢	**Zn**	**67**	**49.312**	ug/L	0.938	1	17	3607	2	KED
⎣	**As**	**75**	**50.193**	ug/L	1.316	2	10	10874	1	KED
	Y	**89**		ug/L			414325	417823	4	Standard
	Kr	**83**		ug/L			60	58	13	Standard
⎡>	**In-1**	**115**		ug/L			10806	9926	3	KED
⎢	**Cd**	**111**	**50.416**	ug/L	2.561	5	7	10352	2	KED
⎣	**Cd**	**114**	**49.918**	ug/L	2.377	4	9	25280	1	KED
⎡>	**In**	**115**		ug/L			759938	751892	4	Standard
⎣	**Ag**	**107**	**49.867**	ug/L	1.091	2	119	795818	5	Standard
⎡>	**Tb**	**159**		ug/L			700907	718748	0	Standard
⎣	**Pb**	**208**	**49.883**	ug/L	1.394	2	382	2851464	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBJ
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, March 07, 2023 05:53:55
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35520	35660	4	Standard
	Cl	**37**		ug/L			4716783	4803743	5	Standard
⌈>	**Sc**	**45**		ug/L			639427	625913	1	Standard
|	**Cr**	**52**	**0.046**	ug/L	0.025	53	24054	24436	0	Standard
|	**Cr**	**53**	**0.052**	ug/L	0.009	17	172	287	8	Standard
⌊	**Mn**	**55**	**0.003**	ug/L	0.002	72	973	1029	6	Standard
⌈>	**Ge**	**72**		ug/L			40737	39283	3	KED
|	**Ni**	**60**	**-0.006**	ug/L	0.004	58	20	12	36	KED
|	**Ni**	**62**	**0.017**	ug/L	0.011	65	6	10	21	KED
|	**Cu**	**63**	**-0.005**	ug/L	0.005	92	114	92	20	KED
|	**Cu**	**65**	**-0.007**	ug/L	0.010	156	63	49	36	KED
|	**Zn**	**66**	**-0.108**	ug/L	0.050	46	93	43	52	KED
|	**Zn**	**67**	**-0.073**	ug/L	0.065	88	17	11	44	KED
⌊	**As**	**75**	**-0.006**	ug/L	0.009	153	10	8	26	KED
	Y	**89**		ug/L			414325	416616	3	Standard
	Kr	**83**		ug/L			60	53	10	Standard
⌈>	**In-1**	**115**		ug/L			10806	10618	1	KED
|	**Cd**	**111**	**0.002**	ug/L	0.018	813	7	7	48	KED
⌊	**Cd**	**114**	**-0.002**	ug/L	0.007	405	9	8	48	KED
⌈>	**In**	**115**		ug/L			759938	748270	0	Standard
⌊	**Ag**	**107**	**0.006**	ug/L	0.001	15	119	208	7	Standard
⌈>	**Tb**	**159**		ug/L			700907	692970	2	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	5	382	419	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, March 07, 2023 05:58:23
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35520	58357	2	Standard
	Cl	**37**		ug/L			4716783	5486062	1	Standard
⌈>	**Sc**	**45**		ug/L			639427	687447	3	Standard
|	**Cr**	**52**	**0.398**	ug/L	0.024	6	24054	34368	2	Standard
|	**Cr**	**53**	**1.153**	ug/L	0.011	0	172	3081	2	Standard
⌊	**Mn**	**55**	**3.787**	ug/L	0.131	3	973	117323	0	Standard
⌈>	**Ge**	**72**		ug/L			40737	39358	2	KED
|	**Ni**	**60**	**0.611**	ug/L	0.046	7	20	763	4	KED
|	**Ni**	**62**	**0.547**	ug/L	0.082	15	6	115	12	KED
|	[redacted]	**63**	[redacted]	ug/L	0.059	3	114	6299	2	KED
|	**Cu**	**65**	**1.757**	ug/L	0.056	3	63	3150	5	KED
|	[redacted]	**66**	[redacted]	ug/L	0.068	0	93	3081	3	KED
|	**Zn**	**67**	**7.544**	ug/L	0.168	2	17	555	4	KED
⌊	**As**	**75**	**0.404**	ug/L	0.012	2	10	95	4	KED
	Y	**89**		ug/L			414325	441434	1	Standard
	Kr	**83**		ug/L			60	61	1	Standard
⌈>	**In-1**	**115**		ug/L			10806	10102	2	KED
|	**Cd**	**111**	**-0.002**	ug/L	0.012	514	7	6	37	KED
⌊	**Cd**	**114**	**0.007**	ug/L	0.006	86	9	12	23	KED
⌈>	**In**	**115**		ug/L			759938	780920	1	Standard
⌊	**Ag**	**107**	**0.002**	ug/L	0.001	52	119	163	12	Standard
⌈>	**Tb**	**159**		ug/L			700907	726047	1	Standard
⌊	[redacted]	**208**	[redacted]	ug/L	0.006	6	382	6282	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, March 07, 2023 06:02:51
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35520	56465	1	Standard
	Cl	**37**		ug/L			4716783	6114035	3	Standard
⌈>	**Sc**	**45**		ug/L			639427	685311	7	Standard
|	**Cr**	**52**	**0.412**	ug/L	0.089	21	24054	34457	2	Standard
|	**Cr**	**53**	**2.509**	ug/L	0.070	2	172	6464	5	Standard
⌊	**Mn**	**55**	**65.494**	ug/L	4.965	7	973	2003201	7	Standard
⌈>	**Ge**	**72**		ug/L			40737	39831	2	KED
|	**Ni**	**60**	**1.096**	ug/L	0.026	2	20	1372	1	KED
|	**Ni**	**62**	**1.034**	ug/L	0.120	11	6	215	10	KED
|	[redacted]	**63**	[redacted]	ug/L	0.031	2	114	5187	2	KED
|	**Cu**	**65**	**1.415**	ug/L	0.099	7	63	2576	4	KED
|	[redacted]	**66**	[redacted]	ug/L	0.315	1	93	10948	1	KED
|	**Zn**	**67**	**24.089**	ug/L	1.003	4	17	1756	1	KED
⌊	**As**	**75**	**1.080**	ug/L	0.036	3	10	241	3	KED
	Y	**89**		ug/L			414325	421058	7	Standard
	Kr	**83**		ug/L			60	58	13	Standard
⌈>	**In-1**	**115**		ug/L			10806	10222	2	KED
|	**Cd**	**111**	**0.008**	ug/L	0.021	270	7	8	50	KED
⌊	**Cd**	**114**	**0.020**	ug/L	0.017	86	9	19	49	KED
⌈>	**In**	**115**		ug/L			759938	737891	5	Standard
⌊	**Ag**	**107**	**-0.000**	ug/L	0.002	406	119	109	18	Standard
⌈>	**Tb**	**159**		ug/L			700907	712673	3	Standard
⌊	[redacted]	**208**	[redacted]	ug/L	0.024	5	382	26664	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, March 07, 2023 06:07:19
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35520	58361	2	Standard
	Cl	**37**		ug/L			4716783	5428675	3	Standard
⌈>	**Sc**	**45**		ug/L			639427	730497	5	Standard
|	**Cr**	**52**	**0.842**	ug/L	0.029	3	24054	46597	4	Standard
|	**Cr**	**53**	**2.452**	ug/L	0.084	3	172	6738	2	Standard
⌊	**Mn**	**55**	**215.914**	ug/L	5.294	2	973	7044632	3	Standard
⌈>	**Ge**	**72**		ug/L			40737	40804	1	KED
|	**Ni**	**60**	**1.586**	ug/L	0.038	2	20	2025	1	KED
|	**Ni**	**62**	**1.672**	ug/L	0.178	10	6	352	10	KED
|	[redacted]	**63**	[redacted]	ug/L	0.041	3	114	4946	4	KED
|	**Cu**	**65**	**1.286**	ug/L	0.067	5	63	2406	4	KED
|	[redacted]	**66**	[redacted]	ug/L	0.206	2	93	3806	1	KED
|	**Zn**	**67**	**9.519**	ug/L	0.338	3	17	721	2	KED
⌊	**As**	**75**	**2.898**	ug/L	0.008	0	10	648	0	KED
	Y	**89**		ug/L			414325	443137	3	Standard
	Kr	**83**		ug/L			60	66	17	Standard
⌈>	**In-1**	**115**		ug/L			10806	10528	0	KED
|	**Cd**	**111**	**0.027**	ug/L	0.008	31	7	13	14	KED
⌊	**Cd**	**114**	**0.006**	ug/L	0.008	142	9	12	37	KED
⌈>	**In**	**115**		ug/L			759938	770967	3	Standard
⌊	**Ag**	**107**	**0.001**	ug/L	0.001	144	119	137	19	Standard
⌈>	**Tb**	**159**		ug/L			700907	732043	5	Standard
⌊	[redacted]	**208**	[redacted]	ug/L	0.024	3	382	42072	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, March 07, 2023 06:11:40
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35520	50170	1	Standard
	Cl	**37**		ug/L			4716783	4711127	2	Standard
⌈>	**Sc**	**45**		ug/L			639427	690476	6	Standard
|	**Cr**	**52**	**0.566**	ug/L	0.018	3	24054	38118	5	Standard
|	**Cr**	**53**	**1.579**	ug/L	0.081	5	172	4163	2	Standard
⌊	**Mn**	**55**	**33.214**	ug/L	1.389	4	973	1024206	2	Standard
⌈>	**Ge**	**72**		ug/L			40737	37928	0	KED
|	**Ni**	**60**	**0.514**	ug/L	0.028	5	20	622	4	KED
|	**Ni**	**62**	**0.439**	ug/L	0.040	9	6	90	7	KED
|	**Cu**	**63**	**0.855**	ug/L	0.023	2	114	3112	2	KED
|	**Cu**	**65**	**0.859**	ug/L	0.011	1	63	1514	1	KED
|	**Zn**	**66**	**1.517**	ug/L	0.045	2	93	718	2	KED
|	**Zn**	**67**	**2.065**	ug/L	0.122	5	17	158	5	KED
⌊	[redacted]	**75**	[redacted]	ug/L	0.032	3	10	193	3	KED
	Y	**89**		ug/L			414325	413367	4	Standard
	Kr	**83**		ug/L			60	66	8	Standard
⌈>	**In-1**	**115**		ug/L			10806	10318	0	KED
|	**Cd**	**111**	**-0.001**	ug/L	0.017	1195	7	6	51	KED
⌊	**Cd**	**114**	**-0.005**	ug/L	0.002	39	9	6	14	KED
⌈>	**In**	**115**		ug/L			759938	735605	4	Standard
⌊	**Ag**	**107**	**0.000**	ug/L	0.001	623	119	117	10	Standard
⌈>	**Tb**	**159**		ug/L			700907	692475	6	Standard
⌊	**Pb**	**208**	**0.181**	ug/L	0.010	5	382	10346	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, March 07, 2023 06:16:08
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35520	50869	1	Standard
	Cl	**37**		ug/L			4716783	4843634	2	Standard
⌈>	**Sc**	**45**		ug/L			639427	721013	3	Standard
|	**Cr**	**52**	**0.503**	ug/L	0.056	11	24054	38395	3	Standard
|	**Cr**	**53**	**1.619**	ug/L	0.030	1	172	4461	3	Standard
⌊	**Mn**	**55**	**69.141**	ug/L	1.428	2	973	2228948	3	Standard
⌈>	**Ge**	**72**		ug/L			40737	37958	2	KED
|	**Ni**	**60**	**0.719**	ug/L	0.047	6	20	866	8	KED
|	**Ni**	**62**	**0.644**	ug/L	0.085	13	6	130	11	KED
|	**Cu**	**63**	**1.104**	ug/L	0.036	3	114	3995	4	KED
|	**Cu**	**65**	**1.152**	ug/L	0.054	4	63	2011	4	KED
|	**Zn**	**66**	**4.499**	ug/L	0.269	5	93	1960	3	KED
|	**Zn**	**67**	**4.883**	ug/L	0.263	5	17	352	6	KED
⌊	[redacted]	**75**	[redacted]	ug/L	0.063	7	10	189	7	KED
	Y	**89**		ug/L			414325	437604	1	Standard
	Kr	**83**		ug/L			60	53	8	Standard
⌈>	**In-1**	**115**		ug/L			10806	10198	3	KED
|	**Cd**	**111**	**0.010**	ug/L	0.019	188	7	9	39	KED
⌊	**Cd**	**114**	**0.005**	ug/L	0.011	208	9	11	52	KED
⌈>	**In**	**115**		ug/L			759938	767234	2	Standard
⌊	**Ag**	**107**	**-0.000**	ug/L	0.001	425	119	116	15	Standard
⌈>	**Tb**	**159**		ug/L			700907	722208	5	Standard
⌊	**Pb**	**208**	**0.137**	ug/L	0.004	3	382	8274	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, March 07, 2023 06:20:35
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35520	52437	1	Standard
	Cl	**37**		ug/L			4716783	4817379	1	Standard
⌈>	**Sc**	**45**		ug/L			639427	706100	3	Standard
|	**Cr**	**52**	**0.727**	ug/L	0.043	5	24054	42511	2	Standard
|	**Cr**	**53**	**1.818**	ug/L	0.013	0	172	4884	3	Standard
⌊	**Mn**	**55**	**14.816**	ug/L	0.309	2	973	468536	2	Standard
⌈>	**Ge**	**72**		ug/L			40737	40050	1	KED
|	**Ni**	**60**	**0.460**	ug/L	0.011	2	20	590	2	KED
|	**Ni**	**62**	**0.449**	ug/L	0.093	20	6	97	18	KED
|	**Cu**	**63**	**0.568**	ug/L	0.010	1	114	2223	2	KED
|	**Cu**	**65**	**0.609**	ug/L	0.012	2	63	1151	1	KED
|	**Zn**	**66**	**0.951**	ug/L	0.039	4	93	509	2	KED
|	**Zn**	**67**	**1.514**	ug/L	0.231	15	17	126	14	KED
⌊	[redacted]	**75**	[redacted]	ug/L	0.078	11	10	156	11	KED
	Y	**89**		ug/L			414325	435285	1	Standard
	Kr	**83**		ug/L			60	59	20	Standard
⌈>	**In-1**	**115**		ug/L			10806	10560	2	KED
|	**Cd**	**111**	**0.004**	ug/L	0.015	418	7	8	40	KED
⌊	**Cd**	**114**	**-0.002**	ug/L	0.006	285	9	7	39	KED
⌈>	**In**	**115**		ug/L			759938	779005	4	Standard
⌊	**Ag**	**107**	**-0.002**	ug/L	0.000	16	119	94	5	Standard
⌈>	**Tb**	**159**		ug/L			700907	739954	5	Standard
⌊	**Pb**	**208**	**0.136**	ug/L	0.004	2	382	8385	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, March 07, 2023 06:25:03
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35520	50264	1	Standard
	Cl	**37**		ug/L			4716783	4696611	0	Standard
⌈>	**Sc**	**45**		ug/L			639427	698298	1	Standard
|	**Cr**	**52**	**0.670**	ug/L	0.014	2	24054	40827	1	Standard
|	**Cr**	**53**	**1.594**	ug/L	0.022	1	172	4258	2	Standard
⌊	**Mn**	**55**	**47.144**	ug/L	0.954	2	973	1472462	2	Standard
⌈>	**Ge**	**72**		ug/L			40737	39374	1	KED
|	**Ni**	**60**	**0.627**	ug/L	0.014	2	20	784	1	KED
|	**Ni**	**62**	**0.604**	ug/L	0.119	19	6	126	17	KED
|	**Cu**	**63**	**0.943**	ug/L	0.023	2	114	3554	1	KED
|	**Cu**	**65**	**1.016**	ug/L	0.022	2	63	1846	1	KED
|	**Zn**	**66**	**1.830**	ug/L	0.014	0	93	881	1	KED
|	**Zn**	**67**	**2.744**	ug/L	0.088	3	17	212	4	KED
⌊	[redacted]	**75**	[redacted]	ug/L	0.030	3	10	215	2	KED
	Y	**89**		ug/L			414325	420850	0	Standard
	Kr	**83**		ug/L			60	60	9	Standard
⌈>	**In-1**	**115**		ug/L			10806	10280	0	KED
|	**Cd**	**111**	**-0.001**	ug/L	0.003	226	7	6	7	KED
⌊	**Cd**	**114**	**0.009**	ug/L	0.005	51	9	13	17	KED
⌈>	**In**	**115**		ug/L			759938	748940	0	Standard
⌊	**Ag**	**107**	**-0.001**	ug/L	0.000	45	119	107	3	Standard
⌈>	**Tb**	**159**		ug/L			700907	713532	2	Standard
⌊	**Pb**	**208**	**0.299**	ug/L	0.008	2	382	17371	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, March 07, 2023 06:29:55
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35520	48985	0	Standard
	Cl	**37**		ug/L			4716783	4750013	2	Standard
⌈>	**Sc**	**45**		ug/L			639427	700012	2	Standard
|	**Cr**	**52**	**0.627**	ug/L	0.030	4	24054	39975	1	Standard
|	**Cr**	**53**	**1.562**	ug/L	0.029	1	172	4184	2	Standard
⌊	**Mn**	**55**	**86.541**	ug/L	0.948	1	973	2708203	1	Standard
⌈>	**Ge**	**72**		ug/L			40737	39310	2	KED
|	**Ni**	**60**	**0.618**	ug/L	0.019	3	20	772	4	KED
|	**Ni**	**62**	**0.678**	ug/L	0.014	2	6	141	2	KED
|	**Cu**	**63**	**0.993**	ug/L	0.037	3	114	3730	4	KED
|	**Cu**	**65**	**1.017**	ug/L	0.012	1	63	1846	3	KED
|	**Zn**	**66**	**2.415**	ug/L	0.120	4	93	1131	2	KED
|	**Zn**	**67**	**2.854**	ug/L	0.495	17	17	219	14	KED
⌊	[redacted]	**75**	[redacted]	ug/L	0.031	2	10	226	1	KED
	Y	**89**		ug/L			414325	426162	1	Standard
	Kr	**83**		ug/L			60	67	21	Standard
⌈>	**In-1**	**115**		ug/L			10806	10614	1	KED
|	**Cd**	**111**	**-0.002**	ug/L	0.017	800	7	6	51	KED
⌊	**Cd**	**114**	**0.004**	ug/L	0.011	263	9	11	52	KED
⌈>	**In**	**115**		ug/L			759938	758913	0	Standard
⌊	**Ag**	**107**	**-0.001**	ug/L	0.001	178	119	109	16	Standard
⌈>	**Tb**	**159**		ug/L			700907	726284	2	Standard
⌊	**Pb**	**208**	**0.338**	ug/L	0.011	3	382	19903	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, March 07, 2023 06:35:46
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35520	49305	1	Standard
	Cl	**37**		ug/L			4716783	4703058	2	Standard
>	**Sc**	**45**		ug/L			639427	687996	0	Standard
	Cr	**52**	**0.524**	ug/L	0.007	1	24054	37102	1	Standard
	Cr	**53**	**1.365**	ug/L	0.022	1	172	3619	1	Standard
	Mn	**55**	**184.815**	ug/L	1.539	0	973	5684367	1	Standard
>	**Ge**	**72**		ug/L			40737	40466	3	KED
	Ni	**60**	**0.633**	ug/L	0.037	5	20	813	4	KED
	Ni	**62**	**0.637**	ug/L	0.079	12	6	137	9	KED
	Cu	**63**	**0.840**	ug/L	0.028	3	114	3265	1	KED
	Cu	**65**	**0.863**	ug/L	0.040	4	63	1621	1	KED
	Zn	**66**	**2.245**	ug/L	0.094	4	93	1090	4	KED
	Zn	**67**	**2.943**	ug/L	0.154	5	17	233	4	KED
	[redacted]	**75**	[redacted]	ug/L	0.072	7	10	207	10	KED
	Y	**89**		ug/L			414325	419716	1	Standard
	Kr	**83**		ug/L			60	69	26	Standard
>	**In-1**	**115**		ug/L			10806	9933	3	KED
	Cd	**111**	**-0.016**	ug/L	0.013	83	7	3	75	KED
	Cd	**114**	**0.008**	ug/L	0.008	98	9	12	35	KED
>	**In**	**115**		ug/L			759938	741787	1	Standard
	Ag	**107**	**-0.001**	ug/L	0.001	76	119	100	10	Standard
>	**Tb**	**159**		ug/L			700907	709650	2	Standard
	Pb	**208**	**0.287**	ug/L	0.009	3	382	16561	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLK
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, March 07, 2023 06:40:09
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35520	37893	1	Standard
	Cl	**37**		ug/L			4716783	4595487	0	Standard
⎡>	**Sc**	**45**		ug/L			639427	641014	4	Standard
⎢	**Cr**	**52**	**0.059**	ug/L	0.049	83	24054	25261	2	Standard
⎢	**Cr**	**53**	**0.127**	ug/L	0.012	9	172	469	2	Standard
⎣	**Mn**	**55**	**0.015**	ug/L	0.002	9	973	1410	1	Standard
⎡>	**Ge**	**72**		ug/L			40737	40617	1	KED
⎢	**Ni**	**60**	**0.008**	ug/L	0.001	16	20	30	6	KED
⎢	**Ni**	**62**	**0.015**	ug/L	0.014	87	6	10	28	KED
⎢	**Cu**	**63**	**0.007**	ug/L	0.004	55	114	140	8	KED
⎢	**Cu**	**65**	**-0.008**	ug/L	0.004	47	63	49	13	KED
⎢	**Zn**	**66**	**-0.023**	ug/L	0.030	129	93	82	14	KED
⎢	**Zn**	**67**	**-0.017**	ug/L	0.061	357	17	15	30	KED
⎣	**As**	**75**	**-0.014**	ug/L	0.013	95	10	6	39	KED
	Y	**89**		ug/L			414325	418605	0	Standard
	Kr	**83**		ug/L			60	38	5	Standard
⎡>	**In-1**	**115**		ug/L			10806	10612	2	KED
⎢	**Cd**	**111**	**-0.001**	ug/L	0.003	308	7	7	7	KED
⎣	**Cd**	**114**	**0.002**	ug/L	0.007	425	9	9	39	KED
⎡>	**In**	**115**		ug/L			759938	782491	2	Standard
⎣	**Ag**	**107**	**-0.004**	ug/L	0.001	23	119	63	19	Standard
⎡>	**Tb**	**159**		ug/L			700907	720337	5	Standard
⎣	**Pb**	**208**	**0.000**	ug/L	0.000	92	382	407	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVK
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, March 07, 2023 06:44:37
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35520	36379	1	Standard
	Cl	**37**		ug/L			4716783	4989590	1	Standard
⎡>	**Sc**	**45**		ug/L			639427	665656	2	Standard
⎢	**Cr**	**52**	**50.981**	ug/L	1.754	3	24054	1080307	1	Standard
⎢	**Cr**	**53**	**49.980**	ug/L	0.229	0	172	121813	2	Standard
⎣	**Mn**	**55**	**50.463**	ug/L	0.645	1	973	1502059	1	Standard
⎡>	**Ge**	**72**		ug/L			40737	40697	0	KED
⎢	**Ni**	**60**	**47.824**	ug/L	0.764	1	20	60352	1	KED
⎢	**Ni**	**62**	**48.154**	ug/L	0.721	1	6	9927	1	KED
⎢	**Cu**	**63**	**47.435**	ug/L	2.006	4	114	179148	4	KED
⎢	**Cu**	**65**	**47.876**	ug/L	1.208	2	63	87067	2	KED
⎢	**Zn**	**66**	**49.525**	ug/L	0.201	0	93	22222	0	KED
⎢	**Zn**	**67**	**49.891**	ug/L	1.416	2	17	3702	3	KED
⎣	**As**	**75**	**50.641**	ug/L	0.820	1	10	11132	1	KED
	Y	**89**		ug/L			414325	428633	1	Standard
	Kr	**83**		ug/L			60	55	13	Standard
⎡>	**In-1**	**115**		ug/L			10806	10643	1	KED
⎢	**Cd**	**111**	**50.857**	ug/L	1.136	2	7	11208	1	KED
⎣	**Cd**	**114**	**50.253**	ug/L	1.110	2	9	27316	1	KED
⎡>	**In**	**115**		ug/L			759938	767969	1	Standard
⎣	**Ag**	**107**	**49.646**	ug/L	0.822	1	119	808829	1	Standard
⎡>	**Tb**	**159**		ug/L			700907	750333	1	Standard
⎣	**Pb**	**208**	**49.201**	ug/L	1.125	2	382	2935217	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBK
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, March 07, 2023 06:51:49
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35520	35719	4	Standard
	Cl	**37**		ug/L			4716783	4885399	1	Standard
⌈>	**Sc**	**45**		ug/L			639427	647076	0	Standard
|	**Cr**	**52**	**0.063**	ug/L	0.010	16	24054	25615	1	Standard
|	**Cr**	**53**	**0.072**	ug/L	0.010	13	172	345	6	Standard
⌊	**Mn**	**55**	**-0.005**	ug/L	0.000	3	973	831	0	Standard
⌈>	**Ge**	**72**		ug/L			40737	38069	8	KED
|	**Ni**	**60**	**0.002**	ug/L	0.007	285	20	21	35	KED
|	**Ni**	**62**	**0.006**	ug/L	0.020	323	6	7	50	KED
|	**Cu**	**63**	**-0.001**	ug/L	0.005	366	114	102	18	KED
|	**Cu**	**65**	**-0.010**	ug/L	0.005	54	63	41	20	KED
|	**Zn**	**66**	**-0.096**	ug/L	0.010	10	93	46	4	KED
|	**Zn**	**67**	**-0.151**	ug/L	0.066	43	17	5	88	KED
⌊	**As**	**75**	**0.004**	ug/L	0.006	141	10	10	20	KED
	Y	**89**		ug/L			414325	423802	1	Standard
	Kr	**83**		ug/L			60	48	15	Standard
⌈>	**In-1**	**115**		ug/L			10806	10598	3	KED
|	**Cd**	**111**	**-0.001**	ug/L	0.009	1028	7	7	30	KED
⌊	**Cd**	**114**	**-0.009**	ug/L	0.004	44	9	4	50	KED
⌈>	**In**	**115**		ug/L			759938	795763	0	Standard
⌊	**Ag**	**107**	**0.004**	ug/L	0.001	16	119	192	6	Standard
⌈>	**Tb**	**159**		ug/L			700907	718925	3	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.001	95	382	434	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, March 07, 2023 06:56:18
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35520	55773	0	Standard
	Cl	**37**		ug/L			4716783	4951043	1	Standard
⌈>	**Sc**	**45**		ug/L			639427	710476	0	Standard
|	**Cr**	**52**	**0.340**	ug/L	0.010	2	24054	34244	1	Standard
|	**Cr**	**53**	**1.091**	ug/L	0.030	2	172	3025	1	Standard
⌊	**Mn**	**55**	**22.099**	ug/L	0.561	2	973	702887	3	Standard
⌈>	**Ge**	**72**		ug/L			40737	39654	2	KED
|	**Ni**	**60**	**0.816**	ug/L	0.034	4	20	1022	3	KED
|	**Ni**	**62**	**0.846**	ug/L	0.012	1	6	176	1	KED
|	**Cu**	**63**	**1.428**	ug/L	0.036	2	114	5360	1	KED
|	**Cu**	**65**	**1.433**	ug/L	0.047	3	63	2598	3	KED
|	**Zn**	**66**	**4.117**	ug/L	0.087	2	93	1883	4	KED
|	**Zn**	**67**	**5.558**	ug/L	0.183	3	17	416	1	KED
⌊	[redacted]	**75**	[redacted]	ug/L	0.032	8	10	89	7	KED
	Y	**89**		ug/L			414325	444882	2	Standard
	Kr	**83**		ug/L			60	57	23	Standard
⌈>	**In-1**	**115**		ug/L			10806	10643	2	KED
|	**Cd**	**111**	**0.016**	ug/L	0.006	38	7	11	13	KED
⌊	**Cd**	**114**	**0.012**	ug/L	0.004	35	9	15	12	KED
⌈>	**In**	**115**		ug/L			759938	778785	3	Standard
⌊	**Ag**	**107**	**0.003**	ug/L	0.001	40	119	175	10	Standard
⌈>	**Tb**	**159**		ug/L			700907	730546	5	Standard
⌊	**Pb**	**208**	**0.246**	ug/L	0.015	5	382	14659	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, March 07, 2023 07:00:39
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35520	49085	3	Standard
	Cl	**37**		ug/L			4716783	4736452	3	Standard
⌈>	**Sc**	**45**		ug/L			639427	704678	3	Standard
|	**Cr**	**52**	**0.515**	ug/L	0.035	6	24054	37789	1	Standard
|	**Cr**	**53**	**1.279**	ug/L	0.027	2	172	3484	3	Standard
⌊	**Mn**	**55**	**186.160**	ug/L	0.490	0	973	5864154	3	Standard
⌈>	**Ge**	**72**		ug/L			40737	39581	2	KED
|	**Ni**	**60**	**0.654**	ug/L	0.031	4	20	821	2	KED
|	**Ni**	**62**	**0.631**	ug/L	0.080	12	6	133	12	KED
|	**Cu**	**63**	**1.698**	ug/L	0.024	1	114	6343	1	KED
|	**Cu**	**65**	**1.781**	ug/L	0.040	2	63	3209	3	KED
|	**Zn**	**66**	**2.296**	ug/L	0.030	1	93	1088	2	KED
|	**Zn**	**67**	**3.078**	ug/L	0.263	8	17	238	10	KED
⌊	[redacted]	**75**	[redacted]	ug/L	0.065	7	10	204	7	KED
	Y	**89**		ug/L			414325	420565	5	Standard
	Kr	**83**		ug/L			60	69	15	Standard
⌈>	**In-1**	**115**		ug/L			10806	10419	0	KED
|	**Cd**	**111**	**0.003**	ug/L	0.009	338	7	7	24	KED
⌊	**Cd**	**114**	**-0.001**	ug/L	0.004	452	9	8	25	KED
⌈>	**In**	**115**		ug/L			759938	746157	2	Standard
⌊	**Ag**	**107**	**0.001**	ug/L	0.001	128	119	126	7	Standard
⌈>	**Tb**	**159**		ug/L			700907	724989	4	Standard
⌊	**Pb**	**208**	**0.287**	ug/L	0.005	1	382	16950	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLM
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, March 07, 2023 07:05:02
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35520	36261	1	Standard
	Cl	**37**		ug/L			4716783	4558749	2	Standard
⌈>	**Sc**	**45**		ug/L			639427	640854	0	Standard
|	**Cr**	**52**	**0.064**	ug/L	0.026	41	24054	25388	2	Standard
|	**Cr**	**53**	**0.067**	ug/L	0.005	7	172	330	3	Standard
⌊	**Mn**	**55**	**0.012**	ug/L	0.001	10	973	1321	2	Standard
⌈>	**Ge**	**72**		ug/L			40737	40269	0	KED
|	**Ni**	**60**	**0.004**	ug/L	0.002	57	20	25	11	KED
|	**Ni**	**62**	**0.004**	ug/L	0.016	458	6	7	43	KED
|	**Cu**	**63**	**0.002**	ug/L	0.001	25	114	122	2	KED
|	**Cu**	**65**	**0.001**	ug/L	0.013	906	63	65	36	KED
|	**Zn**	**66**	**-0.026**	ug/L	0.041	154	93	80	21	KED
|	**Zn**	**67**	**-0.032**	ug/L	0.091	283	17	14	45	KED
⌊	**As**	**75**	**-0.013**	ug/L	0.005	38	10	6	15	KED
	Y	**89**		ug/L			414325	419602	1	Standard
	Kr	**83**		ug/L			60	58	12	Standard
⌈>	**In-1**	**115**		ug/L			10806	10582	1	KED
|	**Cd**	**111**	**-0.009**	ug/L	0.011	121	7	5	44	KED
⌊	**Cd**	**114**	**0.005**	ug/L	0.015	268	9	11	65	KED
⌈>	**In**	**115**		ug/L			759938	776861	2	Standard
⌊	**Ag**	**107**	**-0.002**	ug/L	0.000	10	119	82	7	Standard
⌈>	**Tb**	**159**		ug/L			700907	714160	3	Standard
⌊	**Pb**	**208**	**-0.000**	ug/L	0.000	4223	382	389	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Tuesday, March 07, 2023 07:09:30
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35520	37808	2	Standard
	Cl	**37**		ug/L			4716783	5335959	3	Standard
⌈>	**Sc**	**45**		ug/L			639427	652440	5	Standard
|	**Cr**	**52**	**0.092**	ug/L	0.049	53	24054	26385	2	Standard
|	**Cr**	**53**	**1.516**	ug/L	0.046	3	172	3789	4	Standard
⌊	**Mn**	**55**	**12.754**	ug/L	0.553	4	973	372459	3	Standard
⌈>	**Ge**	**72**		ug/L			40737	41598	1	KED
|	**Ni**	**60**	**0.246**	ug/L	0.012	5	20	338	3	KED
|	**Ni**	**62**	**0.299**	ug/L	0.088	29	6	69	25	KED
|	**Cu**	**63**	**19.088**	ug/L	0.344	1	114	73738	0	KED
|	**Cu**	**65**	**18.921**	ug/L	0.331	1	63	35202	0	KED
|	[redacted]	**66**	[redacted]	ug/L	0.411	1	93	15707	1	KED
|	**Zn**	**67**	**31.727**	ug/L	1.246	3	17	2411	2	KED
⌊	**As**	**75**	**0.005**	ug/L	0.017	306	10	11	32	KED
	Y	**89**		ug/L			414325	427761	4	Standard
	Kr	**83**		ug/L			60	46	6	Standard
⌈>	**In-1**	**115**		ug/L			10806	10804	2	KED
|	**Cd**	**111**	**-0.000**	ug/L	0.004	78908	7	7	12	KED
⌊	**Cd**	**114**	**-0.001**	ug/L	0.014	1383	9	8	90	KED
⌈>	**In**	**115**		ug/L			759938	776057	4	Standard
⌊	**Ag**	**107**	**0.004**	ug/L	0.002	39	119	188	12	Standard
⌈>	**Tb**	**159**		ug/L			700907	733370	5	Standard
⌊	**Pb**	**208**	**0.750**	ug/L	0.024	3	382	44073	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: [redacted]
Sample Dil Factor: [redacted]
Comments:
Sample Date/Time: Tuesday, March 07, 2023 07:13:58
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35520	36799	0	Standard
	Cl	**37**		ug/L			4716783	4457525	3	Standard
⌈>	**Sc**	**45**		ug/L			639427	635342	3	Standard
|	**Cr**	**52**	**0.546**	ug/L	0.034	6	24054	34686	2	Standard
|	**Cr**	**53**	**0.620**	ug/L	0.011	1	172	1611	5	Standard
⌊	**Mn**	**55**	**2.665**	ug/L	0.052	1	973	76628	3	Standard
⌈>	**Ge**	**72**		ug/L			40737	41086	1	KED
|	**Ni**	**60**	**0.428**	ug/L	0.035	8	20	565	8	KED
|	**Ni**	**62**	**1.494**	ug/L	0.141	9	6	317	7	KED
|	**Cu**	**63**	**470.806**	ug/L	13.240	2	114	1793282	0	KED
|	**Cu**	**65**	**480.962**	ug/L	3.409	0	63	882340	1	KED
|	**Zn**	**66**	**134.324**	ug/L	3.889	2	93	60666	1	KED
|	[redacted]	[redacted]	[redacted]	ug/L	1.359	1	17	9114	2	KED
⌊	**As**	**75**	**0.011**	ug/L	0.014	128	10	12	25	KED
	Y	**89**		ug/L			414325	426746	3	Standard
	Kr	**83**		ug/L			60	57	16	Standard
⌈>	**In-1**	**115**		ug/L			10806	10935	1	KED
|	**Cd**	**111**	**0.001**	ug/L	0.010	942	7	7	27	KED
⌊	**Cd**	**114**	**0.004**	ug/L	0.012	328	9	11	58	KED
⌈>	**In**	**115**		ug/L			759938	774782	1	Standard
⌊	**Ag**	**107**	**0.108**	ug/L	0.004	3	119	1890	3	Standard
⌈>	**Tb**	**159**		ug/L			700907	717036	2	Standard
⌊	**Pb**	**208**	**2.960**	ug/L	0.128	4	382	169082	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLL
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, March 07, 2023 07:18:27
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35520	36702	2	Standard
	Cl	**37**		ug/L			4716783	4437151	2	Standard
⎡>	**Sc**	**45**		ug/L			639427	634737	2	Standard
⎢	**Cr**	**52**	**0.069**	ug/L	0.034	50	24054	25226	1	Standard
⎢	**Cr**	**53**	**0.063**	ug/L	0.015	23	172	316	8	Standard
⎣	**Mn**	**55**	**0.012**	ug/L	0.001	9	973	1315	0	Standard
⎡>	**Ge**	**72**		ug/L			40737	39357	4	KED
⎢	**Ni**	**60**	**0.015**	ug/L	0.007	45	20	37	17	KED
⎢	**Ni**	**62**	**0.018**	ug/L	0.027	149	6	10	47	KED
⎢	**Cu**	**63**	**0.013**	ug/L	0.005	37	114	157	6	KED
⎢	**Cu**	**65**	**0.005**	ug/L	0.008	140	63	70	16	KED
⎢	**Zn**	**66**	**-0.024**	ug/L	0.037	152	93	80	22	KED
⎢	**Zn**	**67**	**-0.064**	ug/L	0.033	51	17	12	24	KED
⎣	**As**	**75**	**0.002**	ug/L	0.008	410	10	10	22	KED
	Y	**89**		ug/L			414325	418029	2	Standard
	Kr	**83**		ug/L			60	49	13	Standard
⎡>	**In-1**	**115**		ug/L			10806	10185	1	KED
⎢	**Cd**	**111**	**0.016**	ug/L	0.004	23	7	10	9	KED
⎣	**Cd**	**114**	**-0.001**	ug/L	0.006	474	9	8	35	KED
⎡>	**In**	**115**		ug/L			759938	765959	1	Standard
⎣	**Ag**	**107**	**-0.002**	ug/L	0.001	25	119	82	10	Standard
⎡>	**Tb**	**159**		ug/L			700907	713004	4	Standard
⎣	**Pb**	**208**	**0.000**	ug/L	0.000	102	382	414	9	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVL
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, March 07, 2023 07:22:55
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35520	36336	0	Standard
	Cl	**37**		ug/L			4716783	4868620	0	Standard
⎡>	**Sc**	**45**		ug/L			639427	639998	1	Standard
⎢	**Cr**	**52**	**50.893**	ug/L	1.822	3	24054	1037245	2	Standard
⎢	**Cr**	**53**	**49.986**	ug/L	1.103	2	172	117122	1	Standard
⎣	**Mn**	**55**	**50.742**	ug/L	1.502	2	973	1452274	2	Standard
⎡>	**Ge**	**72**		ug/L			40737	40415	0	KED
⎢	**Ni**	**60**	**48.800**	ug/L	0.268	0	20	61155	1	KED
⎢	**Ni**	**62**	**48.212**	ug/L	1.187	2	6	9869	1	KED
⎢	**Cu**	**63**	**47.146**	ug/L	0.534	1	114	176806	0	KED
⎢	**Cu**	**65**	**47.910**	ug/L	1.289	2	63	86531	3	KED
⎢	**Zn**	**66**	**49.578**	ug/L	0.544	1	93	22091	0	KED
⎢	**Zn**	**67**	**49.830**	ug/L	0.699	1	17	3671	1	KED
⎣	**As**	**75**	**51.063**	ug/L	0.822	1	10	11147	1	KED
	Y	**89**		ug/L			414325	418483	2	Standard
	Kr	**83**		ug/L			60	59	14	Standard
⎡>	**In-1**	**115**		ug/L			10806	10542	3	KED
⎢	**Cd**	**111**	**49.691**	ug/L	1.423	2	7	10843	1	KED
⎣	**Cd**	**114**	**49.014**	ug/L	0.491	1	9	26390	2	KED
⎡>	**In**	**115**		ug/L			759938	766074	1	Standard
⎣	**Ag**	**107**	**48.623**	ug/L	0.584	1	119	790262	1	Standard
⎡>	**Tb**	**159**		ug/L			700907	729279	2	Standard
⎣	**Pb**	**208**	**49.537**	ug/L	0.992	2	382	2872011	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBL
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, March 07, 2023 07:30:07
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35520	34541	1	Standard
	Cl	**37**		ug/L			4716783	4744194	1	Standard
⎡>	**Sc**	**45**		ug/L			639427	640418	0	Standard
⎢	**Cr**	**52**	**0.025**	ug/L	0.009	37	24054	24582	1	Standard
⎢	**Cr**	**53**	**0.040**	ug/L	0.002	4	172	265	1	Standard
⎣	**Mn**	**55**	**-0.003**	ug/L	0.001	26	973	876	2	Standard
⎡>	**Ge**	**72**		ug/L			40737	39767	3	KED
⎢	**Ni**	**60**	**0.003**	ug/L	0.004	121	20	23	16	KED
⎢	**Ni**	**62**	**-0.022**	ug/L	0.014	64	6	2	114	KED
⎢	**Cu**	**63**	**-0.005**	ug/L	0.004	77	114	92	11	KED
⎢	**Cu**	**65**	**-0.010**	ug/L	0.001	6	63	45	6	KED
⎢	**Zn**	**66**	**-0.081**	ug/L	0.041	50	93	55	32	KED
⎢	**Zn**	**67**	**-0.110**	ug/L	0.036	32	17	8	32	KED
⎣	**As**	**75**	**-0.003**	ug/L	0.010	391	10	9	26	KED
	Y	**89**		ug/L			414325	418682	3	Standard
	Kr	**83**		ug/L			60	54	14	Standard
⎡>	**In-1**	**115**		ug/L			10806	10492	0	KED
⎢	**Cd**	**111**	**0.002**	ug/L	0.013	509	7	7	34	KED
⎣	**Cd**	**114**	**-0.000**	ug/L	0.008	1726	9	8	51	KED
⎡>	**In**	**115**		ug/L			759938	788827	3	Standard
⎣	**Ag**	**107**	**0.005**	ug/L	0.001	23	119	203	9	Standard
⎡>	**Tb**	**159**		ug/L			700907	706710	3	Standard
⎣	**Pb**	**208**	**0.001**	ug/L	0.000	48	382	434	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: RINSE
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, March 07, 2023 07:34:35
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35520	39710	2	Standard
	Cl	**37**		ug/L			4716783	4966062	2	Standard
⌈>	**Sc**	**45**		ug/L			639427	756050	3	Standard
|	**Cr**	**52**	**0.074**	ug/L	0.007	8	24054	30182	3	Standard
|	**Cr**	**53**	**0.037**	ug/L	0.010	26	172	305	5	Standard
⌊	**Mn**	**55**	**0.024**	ug/L	0.002	6	973	1959	1	Standard
⌈>	**Ge**	**72**		ug/L			40737	42789	0	KED
|	**Ni**	**60**	**-0.005**	ug/L	0.003	60	20	15	25	KED
|	**Ni**	**62**	**0.019**	ug/L	0.009	48	6	11	16	KED
|	**Cu**	**63**	**0.010**	ug/L	0.003	30	114	161	8	KED
|	**Cu**	**65**	**0.010**	ug/L	0.002	22	63	85	5	KED
|	**Zn**	**66**	**-0.109**	ug/L	0.012	10	93	46	12	KED
|	**Zn**	**67**	**-0.134**	ug/L	0.050	37	17	7	50	KED
⌊	**As**	**75**	**-0.017**	ug/L	0.003	20	10	6	12	KED
	Y	**89**		ug/L			414325	492489	2	Standard
	Kr	**83**		ug/L			60	53	14	Standard
⌈>	**In-1**	**115**		ug/L			10806	11910	2	KED
|	**Cd**	**111**	**-0.015**	ug/L	0.004	29	7	4	20	KED
⌊	**Cd**	**114**	**-0.008**	ug/L	0.005	71	9	5	57	KED
⌈>	**In**	**115**		ug/L			759938	854601	1	Standard
⌊	**Ag**	**107**	**0.005**	ug/L	0.001	13	119	224	6	Standard
⌈>	**Tb**	**159**		ug/L			700907	783273	2	Standard
⌊	**Pb**	**208**	**0.000**	ug/L	0.000	288	382	434	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: RINSE
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, March 07, 2023 07:39:03
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35520	40602	1	Standard
	Cl	**37**		ug/L			4716783	5004986	2	Standard
⌈>	**Sc**	**45**		ug/L			639427	770633	3	Standard
|	**Cr**	**52**	**0.077**	ug/L	0.039	50	24054	30808	2	Standard
|	**Cr**	**53**	**0.036**	ug/L	0.008	23	172	308	8	Standard
⌊	**Mn**	**55**	**0.023**	ug/L	0.001	5	973	1967	1	Standard
⌈>	**Ge**	**72**		ug/L			40737	42180	1	KED
|	**Ni**	**60**	**-0.000**	ug/L	0.006	5923	20	20	36	KED
|	**Ni**	**62**	**-0.013**	ug/L	0.022	167	6	4	107	KED
|	**Cu**	**63**	**0.008**	ug/L	0.003	32	114	150	7	KED
|	**Cu**	**65**	**0.003**	ug/L	0.004	132	63	71	11	KED
|	**Zn**	**66**	**-0.122**	ug/L	0.009	7	93	40	9	KED
|	**Zn**	**67**	**-0.149**	ug/L	0.038	25	17	6	45	KED
⌊	**As**	**75**	**-0.003**	ug/L	0.008	267	10	9	18	KED
	Y	**89**		ug/L			414325	507128	1	Standard
	Kr	**83**		ug/L			60	66	24	Standard
⌈>	**In-1**	**115**		ug/L			10806	11743	1	KED
|	**Cd**	**111**	**-0.005**	ug/L	0.016	285	7	6	55	KED
⌊	**Cd**	**114**	**-0.004**	ug/L	0.005	123	9	7	44	KED
⌈>	**In**	**115**		ug/L			759938	880943	1	Standard
⌊	**Ag**	**107**	**0.001**	ug/L	0.002	304	119	149	21	Standard
⌈>	**Tb**	**159**		ug/L			700907	804919	3	Standard
⌊	**Pb**	**208**	**-0.002**	ug/L	0.001	34	382	339	8	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: RINSE
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, March 07, 2023 07:43:31
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35520	39699	1	Standard
	Cl	**37**		ug/L			4716783	4886543	2	Standard
⌈>	**Sc**	**45**		ug/L			639427	734616	0	Standard
|	**Cr**	**52**	**0.078**	ug/L	0.027	34	24054	29419	2	Standard
|	**Cr**	**53**	**0.041**	ug/L	0.001	2	172	307	0	Standard
⌊	**Mn**	**55**	**0.023**	ug/L	0.002	6	973	1864	2	Standard
⌈>	**Ge**	**72**		ug/L			40737	41722	0	KED
|	**Ni**	**60**	**0.001**	ug/L	0.004	615	20	21	22	KED
|	**Ni**	**62**	**0.008**	ug/L	0.022	275	6	8	53	KED
|	**Cu**	**63**	**0.010**	ug/L	0.003	28	114	156	6	KED
|	**Cu**	**65**	**0.008**	ug/L	0.012	159	63	79	29	KED
|	**Zn**	**66**	**-0.130**	ug/L	0.015	11	93	36	18	KED
|	**Zn**	**67**	**-0.165**	ug/L	0.028	17	17	5	43	KED
⌊	**As**	**75**	**-0.019**	ug/L	0.003	16	10	6	12	KED
	Y	**89**		ug/L			414325	473419	1	Standard
	Kr	**83**		ug/L			60	58	13	Standard
⌈>	**In-1**	**115**		ug/L			10806	11350	2	KED
|	**Cd**	**111**	**-0.007**	ug/L	0.010	135	7	6	37	KED
⌊	**Cd**	**114**	**-0.005**	ug/L	0.004	81	9	6	31	KED
⌈>	**In**	**115**		ug/L			759938	837026	1	Standard
⌊	**Ag**	**107**	**-0.001**	ug/L	0.001	65	119	107	13	Standard
⌈>	**Tb**	**159**		ug/L			700907	789752	3	Standard
⌊	**Pb**	**208**	**-0.001**	ug/L	0.000	11	382	349	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: DI
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, March 07, 2023 07:47:59
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35520	34824	1	Standard
	Cl	**37**		ug/L			4716783	4352077	0	Standard
⎡>	**Sc**	**45**		ug/L			639427	566338	1	Standard
⎢	**Cr**	**52**	**0.013**	ug/L	0.021	164	24054	21524	0	Standard
⎢	**Cr**	**53**	**0.031**	ug/L	0.011	34	172	217	9	Standard
⎣	**Mn**	**55**	**0.015**	ug/L	0.000	2	973	1246	0	Standard
⎡>	**Ge**	**72**		ug/L			40737	37514	4	KED
⎢	**Ni**	**60**	**-0.001**	ug/L	0.006	702	20	17	43	KED
⎢	**Ni**	**62**	**-0.017**	ug/L	0.006	36	6	3	34	KED
⎢	**Cu**	**63**	**-0.013**	ug/L	0.002	14	114	60	5	KED
⎢	**Cu**	**65**	**-0.020**	ug/L	0.005	25	63	24	38	KED
⎢	**Zn**	**66**	**-0.164**	ug/L	0.010	6	93	18	26	KED
⎢	**Zn**	**67**	**-0.204**	ug/L	0.001	0	17	1		KED
⎣	**As**	**75**	**-0.004**	ug/L	0.004	89	10	8	13	KED
	Y	**89**		ug/L			414325	379516	1	Standard
	Kr	**83**		ug/L			60	53	26	Standard
⎡>	**In-1**	**115**		ug/L			10806	9533	2	KED
⎢	**Cd**	**111**	**0.009**	ug/L	0.006	61	7	8	11	KED
⎣	**Cd**	**114**	**0.011**	ug/L	0.009	80	9	13	32	KED
⎡>	**In**	**115**		ug/L			759938	699388	0	Standard
⎣	**Ag**	**107**	**-0.004**	ug/L	0.001	14	119	46	20	Standard
⎡>	**Tb**	**159**		ug/L			700907	650430	1	Standard
⎣	**Pb**	**208**	**-0.005**	ug/L	0.000	2	382	85	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: DI
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, March 07, 2023 07:52:27
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35520	35291	1	Standard
	Cl	**37**		ug/L			4716783	4276240	3	Standard
⌈>	**Sc**	**45**		ug/L			639427	565442	2	Standard
|	**Cr**	**52**	**0.023**	ug/L	0.013	55	24054	21676	3	Standard
|	**Cr**	**53**	**0.028**	ug/L	0.009	30	172	210	5	Standard
⌊	**Mn**	**55**	**0.009**	ug/L	0.002	17	973	1085	1	Standard
⌈>	**Ge**	**72**		ug/L			40737	37970	2	KED
|	**Ni**	**60**	**-0.002**	ug/L	0.011	730	20	17	80	KED
|	**Ni**	**62**	**-0.014**	ug/L	0.010	69	6	3	50	KED
|	**Cu**	**63**	**-0.016**	ug/L	0.001	7	114	51	7	KED
|	**Cu**	**65**	**-0.014**	ug/L	0.006	45	63	34	30	KED
|	**Zn**	**66**	**-0.154**	ug/L	0.016	10	93	22	30	KED
|	**Zn**	**67**	**-0.139**	ug/L	0.044	31	17	6	45	KED
⌊	**As**	**75**	**-0.006**	ug/L	0.008	131	10	8	17	KED
	Y	**89**		ug/L			414325	375393	1	Standard
	Kr	**83**		ug/L			60	55	10	Standard
⌈>	**In-1**	**115**		ug/L			10806	9488	1	KED
|	**Cd**	**111**	**0.016**	ug/L	0.005	30	7	9	11	KED
⌊	**Cd**	**114**	**-0.001**	ug/L	0.000	18	9	7	0	KED
⌈>	**In**	**115**		ug/L			759938	707290	1	Standard
⌊	**Ag**	**107**	**-0.004**	ug/L	0.001	12	119	46	16	Standard
⌈>	**Tb**	**159**		ug/L			700907	656160	3	Standard
⌊	**Pb**	**208**	**-0.006**	ug/L	0.000	4	382	70	19	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: DI
Sample Dil Factor:
Comments:
Sample Date/Time: Tuesday, March 07, 2023 07:56:55
Number of Replicates: 3
Method File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Method\200.8_DailyMethod_KED+UCT.mth
Tuning File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\MassCal\Default.tun
Optimization File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\Conditions\Default.dac
Calibration File: C:\Users\metals\Documents\PerkinElmer Syngistix\ICPMS_metals\System\030623.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35520	35496	2	Standard
	Cl	**37**		ug/L			4716783	4160662	0	Standard
⎡>	**Sc**	**45**		ug/L			639427	547812	3	Standard
⎢	**Cr**	**52**	**0.019**	ug/L	0.023	122	24054	20927	3	Standard
⎢	**Cr**	**53**	**0.035**	ug/L	0.004	10	172	218	1	Standard
⎣	**Mn**	**55**	**0.006**	ug/L	0.002	31	973	973	3	Standard
⎡>	**Ge**	**72**		ug/L			40737	36484	3	KED
⎢	**Ni**	**60**	**0.003**	ug/L	0.007	257	20	20	32	KED
⎢	**Ni**	**62**	**0.001**	ug/L	0.017	2137	6	6	45	KED
⎢	**Cu**	**63**	**-0.012**	ug/L	0.004	30	114	63	22	KED
⎢	**Cu**	**65**	**-0.019**	ug/L	0.002	11	63	26	16	KED
⎢	**Zn**	**66**	**-0.154**	ug/L	0.032	20	93	22	60	KED
⎢	**Zn**	**67**	**-0.193**	ug/L	0.018	9	17	2	43	KED
⎣	**As**	**75**	**-0.001**	ug/L	0.015	1121	10	8	36	KED
	Y	**89**		ug/L			414325	358411	2	Standard
	Kr	**83**		ug/L			60	66	11	Standard
⎡>	**In-1**	**115**		ug/L			10806	9459	0	KED
⎢	**Cd**	**111**	**-0.003**	ug/L	0.010	313	7	6	32	KED
⎣	**Cd**	**114**	**-0.006**	ug/L	0.007	128	9	5	64	KED
⎡>	**In**	**115**		ug/L			759938	676405	1	Standard
⎣	**Ag**	**107**	**-0.004**	ug/L	0.001	19	119	48	23	Standard
⎡>	**Tb**	**159**		ug/L			700907	636729	2	Standard
⎣	**Pb**	**208**	**-0.005**	ug/L	0.000	1	382	79	4	Standard

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS2
Calibration: GC00005
Control Limt: +/- 10.00%
Sequence: SLC0028

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SLC0028-ICV1	Arsenic-75a	50.000	45.9	91.8	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	50.9	102	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	50.6	101	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	48.5	97.0	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	49.0	98.1	ug/L	PA 6020B UCT-KE
SLC0028-CCV1	Arsenic-75a	50.000	49.2	98.4	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	49.3	98.5	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	48.7	97.5	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	49.7	99.4	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	50.2	100	ug/L	PA 6020B UCT-KE
SLC0028-CCV2	Arsenic-75a	50.000	49.3	98.7	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	50.4	101	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	51.1	102	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	50.2	100	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	48.8	97.5	ug/L	PA 6020B UCT-KE
SLC0028-CCV3	Arsenic-75a	50.000	48.7	97.5	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	47.2	94.4	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	47.3	94.7	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	47.6	95.3	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	49.2	98.5	ug/L	PA 6020B UCT-KE
SLC0028-CCV4	Arsenic-75a	50.000	50.2	100	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	48.8	97.5	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	49.6	99.3	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	50.6	101	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	51.0	102	ug/L	PA 6020B UCT-KE
SLC0028-CCV5	Arsenic-75a	50.000	49.1	98.2	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	49.9	99.8	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	49.7	99.5	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	50.7	101	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	50.2	100	ug/L	PA 6020B UCT-KE
SLC0028-CCV6	Arsenic-75a	50.000	48.9	97.8	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	49.4	98.8	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	49.5	99.0	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	50.4	101	ug/L	PA 6020B UCT-KE

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS2
Calibration: GC00005
Control Limt: +/- 10.00%
Sequence: SLC0028

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SLC0028-CCV6	Zinc-67	50.000	49.3	98.6	ug/L	PA 6020B UCT-KE
SLC0028-CCV7	Arsenic-75a	50.000	48.1	96.2	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	48.8	97.5	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	48.6	97.1	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	48.8	97.6	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	49.6	99.2	ug/L	PA 6020B UCT-KE

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS1
Calibration: GC00021
Control Limt: +/- 10.00%
Sequence: SLC0078

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SLC0078-ICV1	Arsenic-75a	50.000	47.0	93.9	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	49.5	98.9	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	49.9	99.8	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	50.5	101	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	50.4	101	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	49.2	98.5	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	49.0	98.1	ug/L	PA 6020B UCT-KE
SLC0078-CCV1	Arsenic-75a	50.000	49.5	99.0	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	49.1	98.3	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	49.1	98.2	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	49.0	98.1	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	49.1	98.3	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	49.9	99.9	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	50.8	102	ug/L	PA 6020B UCT-KE
SLC0078-CCV2	Arsenic-75a	50.000	49.0	98.0	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	50.4	101	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	50.0	99.9	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	49.1	98.3	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	49.2	98.4	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	49.7	99.4	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	51.1	102	ug/L	PA 6020B UCT-KE
SLC0078-CCV3	Arsenic-75a	50.000	49.8	99.5	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	50.6	101	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	49.9	99.8	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	48.1	96.2	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	48.9	97.8	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	50.4	101	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	49.6	99.1	ug/L	PA 6020B UCT-KE
SLC0078-CCV4	Arsenic-75a	50.000	50.0	100	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	49.2	98.4	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	48.9	97.8	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	49.2	98.3	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	48.5	97.0	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	50.2	100	ug/L	PA 6020B UCT-KE

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS1
Calibration: GC00021
Control Limt: +/- 10.00%
Sequence: SLC0078

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SLC0078-CCV4	Zinc-67	50.000	51.5	103	ug/L	PA 6020B UCT-KE
SLC0078-CCV5	Arsenic-75a	50.000	50.0	99.9	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	49.7	99.3	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	49.3	98.6	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	47.5	95.1	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	49.0	98.0	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	49.4	98.8	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	50.0	100	ug/L	PA 6020B UCT-KE
SLC0078-CCV6	Arsenic-75a	50.000	49.0	98.0	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	49.3	98.6	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	49.0	98.0	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	46.5	93.1	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	46.9	93.8	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	48.9	97.7	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	47.9	95.8	ug/L	PA 6020B UCT-KE
SLC0078-CCV7	Arsenic-75a	50.000	49.9	99.8	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	49.4	98.9	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	49.4	98.8	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	47.7	95.3	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	48.8	97.5	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	49.4	98.8	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	49.7	99.5	ug/L	PA 6020B UCT-KE
SLC0078-CCV8	Arsenic-75a	50.000	50.5	101	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	49.0	97.9	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	48.2	96.3	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	48.0	96.1	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	47.8	95.6	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	49.8	99.5	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	50.5	101	ug/L	PA 6020B UCT-KE
SLC0078-CCV9	Arsenic-75a	50.000	50.0	100	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	50.0	100	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	49.1	98.1	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	46.6	93.3	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	48.4	96.8	ug/L	PA 6020B UCT-KE

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS1
Calibration: GC00021
Control Limt: +/- 10.00%
Sequence: SLC0078

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SLC0078-CCV9	Zinc-66	50.000	48.3	96.7	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	50.5	101	ug/L	PA 6020B UCT-KE
SLC0078-CCVA	Arsenic-75a	50.000	50.0	100	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	49.2	98.4	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	49.4	98.8	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	47.1	94.2	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	47.2	94.3	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	48.4	96.7	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	50.0	99.9	ug/L	PA 6020B UCT-KE
SLC0078-CCVB	Arsenic-75a	50.000	50.3	101	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	49.8	99.6	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	49.8	99.7	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	47.4	94.8	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	47.9	95.8	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	49.5	98.9	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	49.6	99.3	ug/L	PA 6020B UCT-KE
SLC0078-CCVC	Arsenic-75a	50.000	50.0	100	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	50.8	102	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	49.2	98.4	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	47.0	93.9	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	48.4	96.9	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	50.1	100	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	51.0	102	ug/L	PA 6020B UCT-KE
SLC0078-CCVD	Arsenic-75a	50.000	49.6	99.2	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	50.2	100	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	49.6	99.2	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	47.1	94.2	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	47.8	95.7	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	48.5	97.1	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	49.6	99.2	ug/L	PA 6020B UCT-KE
SLC0078-CCVE	Arsenic-75a	50.000	50.7	101	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	50.4	101	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	50.2	100	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	48.1	96.2	ug/L	PA 6020B UCT-KE

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS1
Calibration: GC00021
Control Limt: +/- 10.00%
Sequence: SLC0078

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SLC0078-CCVE	Copper-65	50.000	48.2	96.5	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	49.6	99.1	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	50.7	101	ug/L	PA 6020B UCT-KE
SLC0078-CCVF	Arsenic-75a	50.000	51.1	102	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	49.8	99.6	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	49.1	98.3	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	47.7	95.3	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	48.4	96.9	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	50.2	100	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	50.5	101	ug/L	PA 6020B UCT-KE
SLC0078-CCVG	Arsenic-75a	50.000	50.2	100	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	49.6	99.3	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	49.1	98.3	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	48.0	96.1	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	48.8	97.5	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	49.5	99.1	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	50.4	101	ug/L	PA 6020B UCT-KE
SLC0078-CCVH	Arsenic-75a	50.000	50.7	101	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	49.8	99.7	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	49.0	98.0	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	47.3	94.6	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	47.4	94.8	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	48.2	96.5	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	49.9	99.8	ug/L	PA 6020B UCT-KE
SLC0078-CCVI	Arsenic-75a	50.000	50.1	100	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	48.4	96.7	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	48.6	97.1	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	46.9	93.8	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	48.5	97.0	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	50.1	100	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	51.3	103	ug/L	PA 6020B UCT-KE
SLC0078-CCVJ	Arsenic-75a	50.000	50.2	100	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	50.4	101	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	49.9	99.8	ug/L	PA 6020B UCT-KE

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS1
Calibration: GC00021
Control Limt: +/- 10.00%
Sequence: SLC0078

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SLC0078-CCVJ	Copper-63	50.000	47.1	94.3	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	48.2	96.4	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	48.9	97.8	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	49.3	98.6	ug/L	PA 6020B UCT-KE
SLC0078-CCVK	Arsenic-75a	50.000	50.6	101	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	50.9	102	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	50.3	101	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	47.4	94.9	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	47.9	95.8	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	49.5	99.1	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	49.9	99.8	ug/L	PA 6020B UCT-KE
SLC0078-CCVL	Arsenic-75a	50.000	51.1	102	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	49.7	99.4	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	49.0	98.0	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	47.1	94.3	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	47.9	95.8	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	49.6	99.2	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	49.8	99.7	ug/L	PA 6020B UCT-KE

* Values outside of QC limits

INSTRUMENT BLANKS
EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS2
Sequence: SLC0028

SDG: 23B0276
Project: AOC5 MR Phase 1
Calibration: GC00005
Date Analyzed: 03/01/23 17:11

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLC0028-IBL1	Arsenic-75a	-0.00200	0.0373	0.200	ug/L	
SLC0028-IBL1	Copper-63	0.0170	0.173	0.500	ug/L	
SLC0028-IBL1	Copper-65	0.0150	0.35	0.500	ug/L	
SLC0028-IBL1	Zinc-66	-0.0030	2.92	6.00	ug/L	
SLC0028-IBL1	Zinc-67	-0.0330	0.94	6.00	ug/L	
SLC0028-ICB1	Arsenic-75a	0.00300	0.0373	0.200	ug/L	
SLC0028-ICB1	Copper-63	0.00400	0.173	0.500	ug/L	
SLC0028-ICB1	Copper-65	0.00100	0.35	0.500	ug/L	
SLC0028-ICB1	Zinc-66	0.0300	2.92	6.00	ug/L	
SLC0028-ICB1	Zinc-67	-0.0110	0.94	6.00	ug/L	
SLC0028-CCB1	Arsenic-75a	-0.00100	0.0373	0.200	ug/L	
SLC0028-CCB1	Copper-63	0.00	0.173	0.500	ug/L	
SLC0028-CCB1	Copper-65	-0.00200	0.35	0.500	ug/L	
SLC0028-CCB1	Zinc-66	0.0070	2.92	6.00	ug/L	
SLC0028-CCB1	Zinc-67	0.0370	0.94	6.00	ug/L	
SLC0028-IBL2	Arsenic-75a	0.0790	0.0373	0.200	ug/L	
SLC0028-IBL2	Copper-63	0.0300	0.173	0.500	ug/L	
SLC0028-IBL2	Copper-65	0.0280	0.35	0.500	ug/L	
SLC0028-IBL2	Zinc-66	0.258	2.92	6.00	ug/L	
SLC0028-IBL2	Zinc-67	0.149	0.94	6.00	ug/L	
SLC0028-IBL3	Arsenic-75a	0.0180	0.0373	0.200	ug/L	
SLC0028-IBL3	Copper-63	0.0340	0.173	0.500	ug/L	
SLC0028-IBL3	Copper-65	0.0260	0.35	0.500	ug/L	
SLC0028-IBL3	Zinc-66	0.299	2.92	6.00	ug/L	
SLC0028-IBL3	Zinc-67	0.230	0.94	6.00	ug/L	
SLC0028-CCB2	Arsenic-75a	0.00600	0.0373	0.200	ug/L	
SLC0028-CCB2	Copper-63	0.00	0.173	0.500	ug/L	
SLC0028-CCB2	Copper-65	0.00600	0.35	0.500	ug/L	
SLC0028-CCB2	Zinc-66	0.0320	2.92	6.00	ug/L	
SLC0028-CCB2	Zinc-67	0.00	0.94	6.00	ug/L	
SLC0028-IBL4	Arsenic-75a	0.00100	0.0373	0.200	ug/L	
SLC0028-IBL4	Copper-63	0.106	0.173	0.500	ug/L	
SLC0028-IBL4	Copper-65	0.0440	0.35	0.500	ug/L	
SLC0028-IBL4	Zinc-66	0.0430	2.92	6.00	ug/L	
SLC0028-IBL4	Zinc-67	-0.0830	0.94	6.00	ug/L	

INSTRUMENT BLANKS
EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS2
Sequence: SLC0028

SDG: 23B0276
Project: AOC5 MR Phase 1
Calibration: GC00005
Date Analyzed: 03/01/23 19:50

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLC0028-IBL5	Arsenic-75a	-0.00600	0.0373	0.200	ug/L	
SLC0028-IBL5	Copper-63	0.0210	0.173	0.500	ug/L	
SLC0028-IBL5	Copper-65	0.0130	0.35	0.500	ug/L	
SLC0028-IBL5	Zinc-66	0.0100	2.92	6.00	ug/L	
SLC0028-IBL5	Zinc-67	-0.0460	0.94	6.00	ug/L	
SLC0028-CCB3	Arsenic-75a	-0.00900	0.0373	0.200	ug/L	
SLC0028-CCB3	Copper-63	0.00800	0.173	0.500	ug/L	
SLC0028-CCB3	Copper-65	-0.00200	0.35	0.500	ug/L	
SLC0028-CCB3	Zinc-66	0.0140	2.92	6.00	ug/L	
SLC0028-CCB3	Zinc-67	-0.0500	0.94	6.00	ug/L	
SLC0028-IBL6	Arsenic-75a	-0.00300	0.0373	0.200	ug/L	
SLC0028-IBL6	Copper-63	0.0160	0.173	0.500	ug/L	
SLC0028-IBL6	Copper-65	0.00500	0.35	0.500	ug/L	
SLC0028-IBL6	Zinc-66	-0.0180	2.92	6.00	ug/L	
SLC0028-IBL6	Zinc-67	-0.0870	0.94	6.00	ug/L	
SLC0028-CCB4	Arsenic-75a	-0.0110	0.0373	0.200	ug/L	
SLC0028-CCB4	Copper-63	0.00500	0.173	0.500	ug/L	
SLC0028-CCB4	Copper-65	-0.00100	0.35	0.500	ug/L	
SLC0028-CCB4	Zinc-66	-0.0020	2.92	6.00	ug/L	
SLC0028-CCB4	Zinc-67	-0.0270	0.94	6.00	ug/L	
SLC0028-CCB5	Arsenic-75a	0.00100	0.0373	0.200	ug/L	
SLC0028-CCB5	Copper-63	0.00100	0.173	0.500	ug/L	
SLC0028-CCB5	Copper-65	-0.00300	0.35	0.500	ug/L	
SLC0028-CCB5	Zinc-66	-0.0070	2.92	6.00	ug/L	
SLC0028-CCB5	Zinc-67	0.0170	0.94	6.00	ug/L	
SLC0028-IBL7	Arsenic-75a	-0.0130	0.0373	0.200	ug/L	
SLC0028-IBL7	Copper-63	0.0120	0.173	0.500	ug/L	
SLC0028-IBL7	Copper-65	0.00400	0.35	0.500	ug/L	
SLC0028-IBL7	Zinc-66	-0.0020	2.92	6.00	ug/L	
SLC0028-IBL7	Zinc-67	-0.0560	0.94	6.00	ug/L	
SLC0028-CCB6	Arsenic-75a	-0.00800	0.0373	0.200	ug/L	
SLC0028-CCB6	Copper-63	-0.00100	0.173	0.500	ug/L	
SLC0028-CCB6	Copper-65	-0.00400	0.35	0.500	ug/L	
SLC0028-CCB6	Zinc-66	-0.0020	2.92	6.00	ug/L	
SLC0028-CCB6	Zinc-67	-0.0620	0.94	6.00	ug/L	
SLC0028-IBL8	Arsenic-75a	0.00200	0.0373	0.200	ug/L	

INSTRUMENT BLANKS
EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS2
Sequence: SLC0028

SDG: 23B0276
Project: AOC5 MR Phase 1
Calibration: GC00005
Date Analyzed: 03/01/23 23:33

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLC0028-IBL8	Copper-63	0.0120	0.173	0.500	ug/L	
SLC0028-IBL8	Copper-65	0.00800	0.35	0.500	ug/L	
SLC0028-IBL8	Zinc-66	0.0090	2.92	6.00	ug/L	
SLC0028-IBL8	Zinc-67	-0.0190	0.94	6.00	ug/L	
SLC0028-CCB7	Arsenic-75a	-0.00300	0.0373	0.200	ug/L	
SLC0028-CCB7	Copper-63	0.00400	0.173	0.500	ug/L	
SLC0028-CCB7	Copper-65	-0.00400	0.35	0.500	ug/L	
SLC0028-CCB7	Zinc-66	0.0020	2.92	6.00	ug/L	
SLC0028-CCB7	Zinc-67	-0.0750	0.94	6.00	ug/L	

INSTRUMENT BLANKS
EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS1
Sequence: SLC0078

SDG: 23B0276
Project: AOC5 MR Phase 1
Calibration: GC00021
Date Analyzed: 03/06/23 13:44

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLC0078-IBL1	Arsenic-75a	0.00900	0.0373	0.200	ug/L	
SLC0078-IBL1	Cadmium-111	0.00600	0.03	0.100	ug/L	
SLC0078-IBL1	Cadmium-114	0.00400	0.04	0.100	ug/L	
SLC0078-IBL1	Copper-63	0.0370	0.173	0.500	ug/L	
SLC0078-IBL1	Copper-65	0.0330	0.35	0.500	ug/L	
SLC0078-IBL1	Zinc-66	0.528	2.92	6.00	ug/L	
SLC0078-IBL1	Zinc-67	0.344	0.94	6.00	ug/L	
SLC0078-ICB1	Arsenic-75a	-0.0150	0.0373	0.200	ug/L	
SLC0078-ICB1	Cadmium-111	-0.00100	0.03	0.100	ug/L	
SLC0078-ICB1	Cadmium-114	0.00200	0.04	0.100	ug/L	
SLC0078-ICB1	Copper-63	-0.00100	0.173	0.500	ug/L	
SLC0078-ICB1	Copper-65	-0.00800	0.35	0.500	ug/L	
SLC0078-ICB1	Zinc-66	-0.0810	2.92	6.00	ug/L	
SLC0078-ICB1	Zinc-67	-0.110	0.94	6.00	ug/L	
SLC0078-CCB1	Arsenic-75a	-0.0160	0.0373	0.200	ug/L	
SLC0078-CCB1	Cadmium-111	0.00100	0.03	0.100	ug/L	
SLC0078-CCB1	Cadmium-114	-0.00200	0.04	0.100	ug/L	
SLC0078-CCB1	Copper-63	-0.00500	0.173	0.500	ug/L	
SLC0078-CCB1	Copper-65	-0.0120	0.35	0.500	ug/L	
SLC0078-CCB1	Zinc-66	-0.0920	2.92	6.00	ug/L	
SLC0078-CCB1	Zinc-67	-0.0980	0.94	6.00	ug/L	
SLC0078-IBL2	Arsenic-75a	-0.00300	0.0373	0.200	ug/L	
SLC0078-IBL2	Cadmium-111	0.0120	0.03	0.100	ug/L	
SLC0078-IBL2	Cadmium-114	0.00600	0.04	0.100	ug/L	
SLC0078-IBL2	Copper-63	0.00300	0.173	0.500	ug/L	
SLC0078-IBL2	Copper-65	-0.00100	0.35	0.500	ug/L	
SLC0078-IBL2	Zinc-66	0.0360	2.92	6.00	ug/L	
SLC0078-IBL2	Zinc-67	0.0720	0.94	6.00	ug/L	
SLC0078-IBL3	Arsenic-75a	-0.00900	0.0373	0.200	ug/L	
SLC0078-IBL3	Cadmium-111	0.00200	0.03	0.100	ug/L	
SLC0078-IBL3	Cadmium-114	0.00100	0.04	0.100	ug/L	
SLC0078-IBL3	Copper-63	0.00700	0.173	0.500	ug/L	
SLC0078-IBL3	Copper-65	0.00500	0.35	0.500	ug/L	
SLC0078-IBL3	Zinc-66	0.0300	2.92	6.00	ug/L	
SLC0078-IBL3	Zinc-67	0.0060	0.94	6.00	ug/L	

INSTRUMENT BLANKS
EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS1
Sequence: SLC0078

SDG: 23B0276
Project: AOC5 MR Phase 1
Calibration: GC00021
Date Analyzed: 03/06/23 15:06

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLC0078-CCB2	Arsenic-75a	-0.00600	0.0373	0.200	ug/L	
SLC0078-CCB2	Cadmium-111	-0.00500	0.03	0.100	ug/L	
SLC0078-CCB2	Cadmium-114	0.00300	0.04	0.100	ug/L	
SLC0078-CCB2	Copper-63	-0.00800	0.173	0.500	ug/L	
SLC0078-CCB2	Copper-65	-0.00500	0.35	0.500	ug/L	
SLC0078-CCB2	Zinc-66	-0.0960	2.92	6.00	ug/L	
SLC0078-CCB2	Zinc-67	-0.0450	0.94	6.00	ug/L	
SLC0078-CCB3	Arsenic-75a	0.00500	0.0373	0.200	ug/L	
SLC0078-CCB3	Cadmium-111	-0.00700	0.03	0.100	ug/L	
SLC0078-CCB3	Cadmium-114	0.0100	0.04	0.100	ug/L	
SLC0078-CCB3	Copper-63	0.00300	0.173	0.500	ug/L	
SLC0078-CCB3	Copper-65	0.00	0.35	0.500	ug/L	
SLC0078-CCB3	Zinc-66	0.0020	2.92	6.00	ug/L	
SLC0078-CCB3	Zinc-67	-0.0290	0.94	6.00	ug/L	
SLC0078-IBL4	Arsenic-75a	0.00300	0.0373	0.200	ug/L	
SLC0078-IBL4	Cadmium-111	-0.00900	0.03	0.100	ug/L	
SLC0078-IBL4	Cadmium-114	0.0150	0.04	0.100	ug/L	
SLC0078-IBL4	Copper-63	0.0350	0.173	0.500	ug/L	
SLC0078-IBL4	Copper-65	0.0360	0.35	0.500	ug/L	
SLC0078-IBL4	Zinc-66	0.605	2.92	6.00	ug/L	
SLC0078-IBL4	Zinc-67	0.612	0.94	6.00	ug/L	
SLC0078-CCB4	Arsenic-75a	0.00400	0.0373	0.200	ug/L	
SLC0078-CCB4	Cadmium-111	-0.0140	0.03	0.100	ug/L	
SLC0078-CCB4	Cadmium-114	0.00100	0.04	0.100	ug/L	
SLC0078-CCB4	Copper-63	0.00	0.173	0.500	ug/L	
SLC0078-CCB4	Copper-65	0.00100	0.35	0.500	ug/L	
SLC0078-CCB4	Zinc-66	0.0210	2.92	6.00	ug/L	
SLC0078-CCB4	Zinc-67	0.0100	0.94	6.00	ug/L	
SLC0078-IBL5	Arsenic-75a	0.00300	0.0373	0.200	ug/L	
SLC0078-IBL5	Cadmium-111	-0.00700	0.03	0.100	ug/L	
SLC0078-IBL5	Cadmium-114	0.00800	0.04	0.100	ug/L	
SLC0078-IBL5	Copper-63	0.00200	0.173	0.500	ug/L	
SLC0078-IBL5	Copper-65	-0.00600	0.35	0.500	ug/L	
SLC0078-IBL5	Zinc-66	0.0290	2.92	6.00	ug/L	
SLC0078-IBL5	Zinc-67	0.145	0.94	6.00	ug/L	
SLC0078-CCB5	Arsenic-75a	0.00300	0.0373	0.200	ug/L	

INSTRUMENT BLANKS
EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS1
Sequence: SLC0078

SDG: 23B0276
Project: AOC5 MR Phase 1
Calibration: GC00021
Date Analyzed: 03/06/23 17:37

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLC0078-CCB5	Cadmium-111	-0.0110	0.03	0.100	ug/L	
SLC0078-CCB5	Cadmium-114	-0.00300	0.04	0.100	ug/L	
SLC0078-CCB5	Copper-63	-0.00100	0.173	0.500	ug/L	
SLC0078-CCB5	Copper-65	-0.00400	0.35	0.500	ug/L	
SLC0078-CCB5	Zinc-66	0.0010	2.92	6.00	ug/L	
SLC0078-CCB5	Zinc-67	0.00	0.94	6.00	ug/L	
SLC0078-CCB6	Arsenic-75a	0.00500	0.0373	0.200	ug/L	
SLC0078-CCB6	Cadmium-111	-0.00400	0.03	0.100	ug/L	
SLC0078-CCB6	Cadmium-114	0.00600	0.04	0.100	ug/L	
SLC0078-CCB6	Copper-63	-0.00200	0.173	0.500	ug/L	
SLC0078-CCB6	Copper-65	-0.00900	0.35	0.500	ug/L	
SLC0078-CCB6	Zinc-66	0.0030	2.92	6.00	ug/L	
SLC0078-CCB6	Zinc-67	0.0420	0.94	6.00	ug/L	
SLC0078-IBL7	Arsenic-75a	0.00	0.0373	0.200	ug/L	
SLC0078-IBL7	Cadmium-111	-0.00600	0.03	0.100	ug/L	
SLC0078-IBL7	Cadmium-114	-0.00100	0.04	0.100	ug/L	
SLC0078-IBL7	Copper-63	0.00600	0.173	0.500	ug/L	
SLC0078-IBL7	Copper-65	0.00400	0.35	0.500	ug/L	
SLC0078-IBL7	Zinc-66	0.128	2.92	6.00	ug/L	
SLC0078-IBL7	Zinc-67	0.185	0.94	6.00	ug/L	
SLC0078-CCB7	Arsenic-75a	0.00200	0.0373	0.200	ug/L	
SLC0078-CCB7	Cadmium-111	0.0120	0.03	0.100	ug/L	
SLC0078-CCB7	Cadmium-114	0.00200	0.04	0.100	ug/L	
SLC0078-CCB7	Copper-63	0.00400	0.173	0.500	ug/L	
SLC0078-CCB7	Copper-65	0.00	0.35	0.500	ug/L	
SLC0078-CCB7	Zinc-66	0.180	2.92	6.00	ug/L	
SLC0078-CCB7	Zinc-67	0.185	0.94	6.00	ug/L	
SLC0078-IBL8	Arsenic-75a	0.00500	0.0373	0.200	ug/L	
SLC0078-IBL8	Cadmium-111	-0.00300	0.03	0.100	ug/L	
SLC0078-IBL8	Cadmium-114	0.00400	0.04	0.100	ug/L	
SLC0078-IBL8	Copper-63	0.00700	0.173	0.500	ug/L	
SLC0078-IBL8	Copper-65	0.00900	0.35	0.500	ug/L	
SLC0078-IBL8	Zinc-66	0.131	2.92	6.00	ug/L	
SLC0078-IBL8	Zinc-67	0.228	0.94	6.00	ug/L	
SLC0078-CCB8	Arsenic-75a	0.00100	0.0373	0.200	ug/L	
SLC0078-CCB8	Cadmium-111	-0.00300	0.03	0.100	ug/L	

INSTRUMENT BLANKS
EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS1
Sequence: SLC0078

SDG: 23B0276
Project: AOC5 MR Phase 1
Calibration: GC00021
Date Analyzed: 03/06/23 20:44

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLC0078-CCB8	Cadmium-114	0.0100	0.04	0.100	ug/L	
SLC0078-CCB8	Copper-63	0.00100	0.173	0.500	ug/L	
SLC0078-CCB8	Copper-65	0.00900	0.35	0.500	ug/L	
SLC0078-CCB8	Zinc-66	0.132	2.92	6.00	ug/L	
SLC0078-CCB8	Zinc-67	0.105	0.94	6.00	ug/L	
SLC0078-IBL9	Arsenic-75a	0.00500	0.0373	0.200	ug/L	
SLC0078-IBL9	Cadmium-111	0.00100	0.03	0.100	ug/L	
SLC0078-IBL9	Cadmium-114	0.0160	0.04	0.100	ug/L	
SLC0078-IBL9	Copper-63	0.00800	0.173	0.500	ug/L	
SLC0078-IBL9	Copper-65	-0.00100	0.35	0.500	ug/L	
SLC0078-IBL9	Zinc-66	0.108	2.92	6.00	ug/L	
SLC0078-IBL9	Zinc-67	0.113	0.94	6.00	ug/L	
SLC0078-CCB9	Arsenic-75a	0.00700	0.0373	0.200	ug/L	
SLC0078-CCB9	Cadmium-111	-0.00600	0.03	0.100	ug/L	
SLC0078-CCB9	Cadmium-114	0.00400	0.04	0.100	ug/L	
SLC0078-CCB9	Copper-63	0.0120	0.173	0.500	ug/L	
SLC0078-CCB9	Copper-65	0.00900	0.35	0.500	ug/L	
SLC0078-CCB9	Zinc-66	0.135	2.92	6.00	ug/L	
SLC0078-CCB9	Zinc-67	0.224	0.94	6.00	ug/L	
SLC0078-CCBA	Arsenic-75a	0.00100	0.0373	0.200	ug/L	
SLC0078-CCBA	Cadmium-111	0.00600	0.03	0.100	ug/L	
SLC0078-CCBA	Cadmium-114	0.00900	0.04	0.100	ug/L	
SLC0078-CCBA	Copper-63	0.00600	0.173	0.500	ug/L	
SLC0078-CCBA	Copper-65	0.0120	0.35	0.500	ug/L	
SLC0078-CCBA	Zinc-66	0.159	2.92	6.00	ug/L	
SLC0078-CCBA	Zinc-67	0.188	0.94	6.00	ug/L	
SLC0078-CCBB	Arsenic-75a	-0.00100	0.0373	0.200	ug/L	
SLC0078-CCBB	Cadmium-111	0.00400	0.03	0.100	ug/L	
SLC0078-CCBB	Cadmium-114	0.00200	0.04	0.100	ug/L	
SLC0078-CCBB	Copper-63	-0.00100	0.173	0.500	ug/L	
SLC0078-CCBB	Copper-65	0.00	0.35	0.500	ug/L	
SLC0078-CCBB	Zinc-66	0.0590	2.92	6.00	ug/L	
SLC0078-CCBB	Zinc-67	-0.0440	0.94	6.00	ug/L	
SLC0078-IBLC	Arsenic-75a	0.00	0.0373	0.200	ug/L	
SLC0078-IBLC	Cadmium-111	-0.00600	0.03	0.100	ug/L	
SLC0078-IBLC	Cadmium-114	-0.00200	0.04	0.100	ug/L	

INSTRUMENT BLANKS
EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS1
Sequence: SLC0078

SDG: 23B0276
Project: AOC5 MR Phase 1
Calibration: GC00021
Date Analyzed: 03/06/23 23:40

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLC0078-IBLC	Copper-63	0.00400	0.173	0.500	ug/L	
SLC0078-IBLC	Copper-65	0.0100	0.35	0.500	ug/L	
SLC0078-IBLC	Zinc-66	0.0380	2.92	6.00	ug/L	
SLC0078-IBLC	Zinc-67	-0.0640	0.94	6.00	ug/L	
SLC0078-CCBC	Arsenic-75a	-0.00500	0.0373	0.200	ug/L	
SLC0078-CCBC	Cadmium-111	-0.00600	0.03	0.100	ug/L	
SLC0078-CCBC	Cadmium-114	0.00100	0.04	0.100	ug/L	
SLC0078-CCBC	Copper-63	-0.00100	0.173	0.500	ug/L	
SLC0078-CCBC	Copper-65	0.00200	0.35	0.500	ug/L	
SLC0078-CCBC	Zinc-66	0.0750	2.92	6.00	ug/L	
SLC0078-CCBC	Zinc-67	0.115	0.94	6.00	ug/L	
SLC0078-IBLD	Arsenic-75a	0.00600	0.0373	0.200	ug/L	
SLC0078-IBLD	Cadmium-111	0.00500	0.03	0.100	ug/L	
SLC0078-IBLD	Cadmium-114	0.00600	0.04	0.100	ug/L	
SLC0078-IBLD	Copper-63	0.00	0.173	0.500	ug/L	
SLC0078-IBLD	Copper-65	0.00600	0.35	0.500	ug/L	
SLC0078-IBLD	Zinc-66	0.0210	2.92	6.00	ug/L	
SLC0078-IBLD	Zinc-67	-0.0260	0.94	6.00	ug/L	
SLC0078-CCBD	Arsenic-75a	-0.00100	0.0373	0.200	ug/L	
SLC0078-CCBD	Cadmium-111	0.00900	0.03	0.100	ug/L	
SLC0078-CCBD	Cadmium-114	0.00300	0.04	0.100	ug/L	
SLC0078-CCBD	Copper-63	-0.00600	0.173	0.500	ug/L	
SLC0078-CCBD	Copper-65	0.00400	0.35	0.500	ug/L	
SLC0078-CCBD	Zinc-66	0.0370	2.92	6.00	ug/L	
SLC0078-CCBD	Zinc-67	-0.0280	0.94	6.00	ug/L	
SLC0078-CCBE	Arsenic-75a	0.00400	0.0373	0.200	ug/L	
SLC0078-CCBE	Cadmium-111	-0.00700	0.03	0.100	ug/L	
SLC0078-CCBE	Cadmium-114	0.00200	0.04	0.100	ug/L	
SLC0078-CCBE	Copper-63	-0.00900	0.173	0.500	ug/L	
SLC0078-CCBE	Copper-65	-0.00200	0.35	0.500	ug/L	
SLC0078-CCBE	Zinc-66	-0.0550	2.92	6.00	ug/L	
SLC0078-CCBE	Zinc-67	-0.154	0.94	6.00	ug/L	
SLC0078-CCBF	Arsenic-75a	-0.00300	0.0373	0.200	ug/L	
SLC0078-CCBF	Cadmium-111	-0.00400	0.03	0.100	ug/L	
SLC0078-CCBF	Cadmium-114	0.00300	0.04	0.100	ug/L	
SLC0078-CCBF	Copper-63	-0.00800	0.173	0.500	ug/L	

INSTRUMENT BLANKS
EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS1
Sequence: SLC0078

SDG: 23B0276
Project: AOC5 MR Phase 1
Calibration: GC00021
Date Analyzed: 03/07/23 02:44

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLC0078-CCBF	Copper-65	0.00100	0.35	0.500	ug/L	
SLC0078-CCBF	Zinc-66	-0.0570	2.92	6.00	ug/L	
SLC0078-CCBF	Zinc-67	-0.151	0.94	6.00	ug/L	
SLC0078-CCBG	Arsenic-75a	0.00400	0.0373	0.200	ug/L	
SLC0078-CCBG	Cadmium-111	-0.00100	0.03	0.100	ug/L	
SLC0078-CCBG	Cadmium-114	0.00	0.04	0.100	ug/L	
SLC0078-CCBG	Copper-63	-0.00500	0.173	0.500	ug/L	
SLC0078-CCBG	Copper-65	-0.00300	0.35	0.500	ug/L	
SLC0078-CCBG	Zinc-66	-0.0570	2.92	6.00	ug/L	
SLC0078-CCBG	Zinc-67	-0.162	0.94	6.00	ug/L	
SLC0078-CCBH	Arsenic-75a	-0.00100	0.0373	0.200	ug/L	
SLC0078-CCBH	Cadmium-111	0.00600	0.03	0.100	ug/L	
SLC0078-CCBH	Cadmium-114	-0.00300	0.04	0.100	ug/L	
SLC0078-CCBH	Copper-63	-0.00500	0.173	0.500	ug/L	
SLC0078-CCBH	Copper-65	-0.00500	0.35	0.500	ug/L	
SLC0078-CCBH	Zinc-66	-0.0800	2.92	6.00	ug/L	
SLC0078-CCBH	Zinc-67	-0.0680	0.94	6.00	ug/L	
SLC0078-CCBI	Arsenic-75a	-0.00500	0.0373	0.200	ug/L	
SLC0078-CCBI	Cadmium-111	0.00	0.03	0.100	ug/L	
SLC0078-CCBI	Cadmium-114	0.00500	0.04	0.100	ug/L	
SLC0078-CCBI	Copper-63	0.00	0.173	0.500	ug/L	
SLC0078-CCBI	Copper-65	-0.00500	0.35	0.500	ug/L	
SLC0078-CCBI	Zinc-66	-0.102	2.92	6.00	ug/L	
SLC0078-CCBI	Zinc-67	-0.113	0.94	6.00	ug/L	
SLC0078-IBLJ	Arsenic-75a	-0.00900	0.0373	0.200	ug/L	
SLC0078-IBLJ	Cadmium-111	-0.0100	0.03	0.100	ug/L	
SLC0078-IBLJ	Cadmium-114	-0.00200	0.04	0.100	ug/L	
SLC0078-IBLJ	Copper-63	0.00600	0.173	0.500	ug/L	
SLC0078-IBLJ	Copper-65	0.00200	0.35	0.500	ug/L	
SLC0078-IBLJ	Zinc-66	-0.0190	2.92	6.00	ug/L	
SLC0078-IBLJ	Zinc-67	-0.0040	0.94	6.00	ug/L	
SLC0078-CCBJ	Arsenic-75a	-0.00600	0.0373	0.200	ug/L	
SLC0078-CCBJ	Cadmium-111	0.00200	0.03	0.100	ug/L	
SLC0078-CCBJ	Cadmium-114	-0.00200	0.04	0.100	ug/L	
SLC0078-CCBJ	Copper-63	-0.00500	0.173	0.500	ug/L	
SLC0078-CCBJ	Copper-65	-0.00700	0.35	0.500	ug/L	

INSTRUMENT BLANKS
EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS1
Sequence: SLC0078

SDG: 23B0276
Project: AOC5 MR Phase 1
Calibration: GC00021
Date Analyzed: 03/07/23 05:53

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLC0078-CCBJ	Zinc-66	-0.108	2.92	6.00	ug/L	
SLC0078-CCBJ	Zinc-67	-0.0730	0.94	6.00	ug/L	
SLC0078-IBLK	Arsenic-75a	-0.0140	0.0373	0.200	ug/L	
SLC0078-IBLK	Cadmium-111	-0.00100	0.03	0.100	ug/L	
SLC0078-IBLK	Cadmium-114	0.00200	0.04	0.100	ug/L	
SLC0078-IBLK	Copper-63	0.00700	0.173	0.500	ug/L	
SLC0078-IBLK	Copper-65	-0.00800	0.35	0.500	ug/L	
SLC0078-IBLK	Zinc-66	-0.0230	2.92	6.00	ug/L	
SLC0078-IBLK	Zinc-67	-0.0170	0.94	6.00	ug/L	
SLC0078-CCBK	Arsenic-75a	0.00400	0.0373	0.200	ug/L	
SLC0078-CCBK	Cadmium-111	-0.00100	0.03	0.100	ug/L	
SLC0078-CCBK	Cadmium-114	-0.00900	0.04	0.100	ug/L	
SLC0078-CCBK	Copper-63	-0.00100	0.173	0.500	ug/L	
SLC0078-CCBK	Copper-65	-0.0100	0.35	0.500	ug/L	
SLC0078-CCBK	Zinc-66	-0.0960	2.92	6.00	ug/L	
SLC0078-CCBK	Zinc-67	-0.151	0.94	6.00	ug/L	
SLC0078-IBLM	Arsenic-75a	-0.0130	0.0373	0.200	ug/L	
SLC0078-IBLM	Cadmium-111	-0.00900	0.03	0.100	ug/L	
SLC0078-IBLM	Cadmium-114	0.00500	0.04	0.100	ug/L	
SLC0078-IBLM	Copper-63	0.00200	0.173	0.500	ug/L	
SLC0078-IBLM	Copper-65	0.00100	0.35	0.500	ug/L	
SLC0078-IBLM	Zinc-66	-0.0260	2.92	6.00	ug/L	
SLC0078-IBLM	Zinc-67	-0.0320	0.94	6.00	ug/L	
SLC0078-IBLL	Arsenic-75a	0.00200	0.0373	0.200	ug/L	
SLC0078-IBLL	Cadmium-111	0.0160	0.03	0.100	ug/L	
SLC0078-IBLL	Cadmium-114	-0.00100	0.04	0.100	ug/L	
SLC0078-IBLL	Copper-63	0.0130	0.173	0.500	ug/L	
SLC0078-IBLL	Copper-65	0.00500	0.35	0.500	ug/L	
SLC0078-IBLL	Zinc-66	-0.0240	2.92	6.00	ug/L	
SLC0078-IBLL	Zinc-67	-0.0640	0.94	6.00	ug/L	
SLC0078-CCBL	Arsenic-75a	-0.00300	0.0373	0.200	ug/L	
SLC0078-CCBL	Cadmium-111	0.00200	0.03	0.100	ug/L	
SLC0078-CCBL	Cadmium-114	0.00	0.04	0.100	ug/L	
SLC0078-CCBL	Copper-63	-0.00500	0.173	0.500	ug/L	
SLC0078-CCBL	Copper-65	-0.0100	0.35	0.500	ug/L	
SLC0078-CCBL	Zinc-66	-0.0810	2.92	6.00	ug/L	

INSTRUMENT BLANKS
EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS1
Sequence: SLC0078

SDG: 23B0276
Project: AOC5 MR Phase 1
Calibration: GC00021
Date Analyzed: 03/07/23 07:30

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLC0078-CCBL	Zinc-67	-0.110	0.94	6.00	ug/L	

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0028	Instrument:	ICPMS2
		Calibration:	GC00005

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
CAL 0	SLC0028-CAL1	XDT_m2230301-013	NA	03/01/23 16:36
CAL 1 - LOW CHECK	SLC0028-CAL2	XDT_m2230301-014	NA	03/01/23 16:41
CAL 2	SLC0028-CAL3	XDT_m2230301-015	NA	03/01/23 16:46
CAL 3	SLC0028-CAL4	XDT_m2230301-016	NA	03/01/23 16:51
CAL 4	SLC0028-CAL5	XDT_m2230301-017	NA	03/01/23 16:56
CAL 5	SLC0028-CAL6	XDT_m2230301-018	NA	03/01/23 17:03
RINSE	SLC0028-IBL1	XDT_m2230301-019	NA	03/01/23 17:11
Initial Cal Check	SLC0028-ICV1	XDT_m2230301-021	NA	03/01/23 17:23
Initial Cal Blank	SLC0028-ICB1	XDT_m2230301-022	NA	03/01/23 17:31
Calibration Check	SLC0028-CCV1	XDT_m2230301-023	NA	03/01/23 17:37
Calibration Blank	SLC0028-CCB1	XDT_m2230301-024	NA	03/01/23 17:44
Instrument RL Check	SLC0028-CRL1	XDT_m2230301-025	NA	03/01/23 17:49
Interference Check A	SLC0028-IFA1	XDT_m2230301-026	NA	03/01/23 17:55
Interference Check B	SLC0028-IFB1	XDT_m2230301-028	NA	03/01/23 18:08
LR200	SLC0028-HCV1	XDT_m2230301-029	NA	03/01/23 18:13
LR300	SLC0028-HCV2	XDT_m2230301-030	NA	03/01/23 18:18
Instrument Blank	SLC0028-IBL2	XDT_m2230301-031	NA	03/01/23 18:25
Instrument Blank	SLC0028-IBL3	XDT_m2230301-032	NA	03/01/23 18:32
Calibration Check	SLC0028-CCV2	XDT_m2230301-033	NA	03/01/23 18:39
Calibration Blank	SLC0028-CCB2	XDT_m2230301-035	NA	03/01/23 18:51
ZZZZZ	BLC0008-BLK1	XDT_m2230301-036	Water	03/01/23 19:00
ZZZZZ	BLC0008-BS1	XDT_m2230301-037	Water	03/01/23 19:05
Instrument Blank	SLC0028-IBL4	XDT_m2230301-042	NA	03/01/23 19:35
Instrument Blank	SLC0028-IBL5	XDT_m2230301-045	NA	03/01/23 19:50
Calibration Check	SLC0028-CCV3	XDT_m2230301-046	NA	03/01/23 19:56
Calibration Blank	SLC0028-CCB3	XDT_m2230301-047	NA	03/01/23 20:04
ZZZZZ	23B0501-01	XDT_m2230301-054	Water	03/01/23 20:38
ZZZZZ	BLC0008-DUP1	XDT_m2230301-055	Water	03/01/23 20:43
ZZZZZ	BLC0008-MS1	XDT_m2230301-056	Water	03/01/23 20:48

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Sequence: SLC0028

SDG: 23B0276
Project: AOC5 MR Phase 1
Instrument: ICPMS2
Calibration: GC00005

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Instrument Blank	SLC0028-IBL6	XDT_m2230301-057	NA	03/01/23 20:52
Calibration Check	SLC0028-CCV4	XDT_m2230301-058	NA	03/01/23 20:58
Calibration Blank	SLC0028-CCB4	XDT_m2230301-059	NA	03/01/23 21:06
Blank	BLB0518-BLK1	XDT_m2230301-060	Solid	03/01/23 21:11
LCS	BLB0518-BS1	XDT_m2230301-061	Solid	03/01/23 21:16
ZZZZZ	23A0032-02	XDT_m2230301-062	Solid	03/01/23 21:21
ZZZZZ	23A0032-03	XDT_m2230301-063	Solid	03/01/23 21:25
ZZZZZ	23A0032-04	XDT_m2230301-064	Solid	03/01/23 21:30
ZZZZZ	23A0032-01	XDT_m2230301-065	Solid	03/01/23 21:35
ZZZZZ	23A0032-01	XDT_m2230301-065	Solid	03/01/23 21:35
ZZZZZ	23A0032-01	XDT_m2230301-065	Solid	03/01/23 21:35
Calibration Check	SLC0028-CCV5	XDT_m2230301-070	NA	03/01/23 22:00
Calibration Blank	SLC0028-CCB5	XDT_m2230301-071	NA	03/01/23 22:08
Instrument Blank	SLC0028-IBL7	XDT_m2230301-080	NA	03/01/23 22:52
Calibration Check	SLC0028-CCV6	XDT_m2230301-081	NA	03/01/23 22:56
Calibration Blank	SLC0028-CCB6	XDT_m2230301-082	NA	03/01/23 23:04
Instrument Blank	SLC0028-IBL8	XDT_m2230301-088	NA	03/01/23 23:33
Calibration Check	SLC0028-CCV7	XDT_m2230301-089	NA	03/01/23 23:38
Calibration Blank	SLC0028-CCB7	XDT_m2230301-090	NA	03/01/23 23:46

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0078	Instrument:	ICPMS1
		Calibration:	GC00021

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
CAL 0	SLC0078-CAL1	XDT_m2230306-006	NA	03/06/23 13:12
CAL 1 - LOW CHECK	SLC0078-CAL2	XDT_m2230306-007	NA	03/06/23 13:16
CAL 2	SLC0078-CAL3	XDT_m2230306-008	NA	03/06/23 13:21
CAL 3	SLC0078-CAL4	XDT_m2230306-009	NA	03/06/23 13:25
CAL 4	SLC0078-CAL5	XDT_m2230306-010	NA	03/06/23 13:30
CAL 5	SLC0078-CAL6	XDT_m2230306-011	NA	03/06/23 13:37
RINSE	SLC0078-IBL1	XDT_m2230306-012	NA	03/06/23 13:44
Initial Cal Check	SLC0078-ICV1	XDT_m2230306-014	NA	03/06/23 13:53
Initial Cal Blank	SLC0078-ICB1	XDT_m2230306-015	NA	03/06/23 14:00
Calibration Check	SLC0078-CCV1	XDT_m2230306-016	NA	03/06/23 14:05
Calibration Blank	SLC0078-CCB1	XDT_m2230306-017	NA	03/06/23 14:12
Instrument RL Check	SLC0078-CRL1	XDT_m2230306-018	NA	03/06/23 14:16
Interference Check B	SLC0078-IFB1	XDT_m2230306-020	NA	03/06/23 14:25
LR200	SLC0078-HCV1	XDT_m2230306-021	NA	03/06/23 14:30
LR300	SLC0078-HCV2	XDT_m2230306-022	NA	03/06/23 14:34
Instrument Blank	SLC0078-IBL2	XDT_m2230306-023	NA	03/06/23 14:41
Interference Check A	SLC0078-IFA1	XDT_m2230306-024	NA	03/06/23 14:48
Instrument Blank	SLC0078-IBL3	XDT_m2230306-025	NA	03/06/23 14:52
Calibration Check	SLC0078-CCV2	XDT_m2230306-026	NA	03/06/23 14:59
Calibration Blank	SLC0078-CCB2	XDT_m2230306-027	NA	03/06/23 15:06
Calibration Check	SLC0078-CCV3	XDT_m2230306-029	NA	03/06/23 15:17
Calibration Blank	SLC0078-CCB3	XDT_m2230306-030	NA	03/06/23 15:24
ZZZZZ	BLC0008-BLK2	XDT_m2230306-031	Water	03/06/23 15:30
ZZZZZ	BLC0008-BS2	XDT_m2230306-032	Water	03/06/23 15:34
ZZZZZ	BLC0045-BLK1	XDT_m2230306-033	Water	03/06/23 15:38
ZZZZZ	BLC0045-BS1	XDT_m2230306-034	Water	03/06/23 15:43
Instrument Blank	SLC0078-IBL4	XDT_m2230306-040	NA	03/06/23 16:22
Calibration Check	SLC0078-CCV4	XDT_m2230306-041	NA	03/06/23 16:27
Calibration Blank	SLC0078-CCB4	XDT_m2230306-042	NA	03/06/23 16:34

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0078	Instrument:	ICPMS1
		Calibration:	GC00021

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	23B0501-01	XDT_m2230306_PRE-048	Water	03/06/23 17:02
ZZZZZ	BLC0008-DUP2	XDT_m2230306-049	Water	03/06/23 17:10
ZZZZZ	BLC0008-MS2	XDT_m2230306-050	Water	03/06/23 17:15
Instrument Blank	SLC0078-IBL5	XDT_m2230306-052	NA	03/06/23 17:25
Calibration Check	SLC0078-CCV5	XDT_m2230306-053	NA	03/06/23 17:30
Calibration Blank	SLC0078-CCB5	XDT_m2230306-054	NA	03/06/23 17:37
Calibration Check	SLC0078-CCV6	XDT_m2230306-065	NA	03/06/23 18:31
Calibration Blank	SLC0078-CCB6	XDT_m2230306-066	NA	03/06/23 18:39
ZZZZZ	23B0581-03	XDT_m2230306-071	Water	03/06/23 19:08
ZZZZZ	BLC0045-DUP1	XDT_m2230306-072	Water	03/06/23 19:13
ZZZZZ	BLC0045-MS1	XDT_m2230306-073	Water	03/06/23 19:18
Instrument Blank	SLC0078-IBL7	XDT_m2230306-076	NA	03/06/23 19:36
Calibration Check	SLC0078-CCV7	XDT_m2230306-077	NA	03/06/23 19:40
Calibration Blank	SLC0078-CCB7	XDT_m2230306-078	NA	03/06/23 19:47
ZZZZZ	BLB0508-BLK1	XDT_m2230306-079	Solid	03/06/23 19:52
ZZZZZ	BLB0508-BS1	XDT_m2230306-080	Solid	03/06/23 19:56
Blank	BLB0518-BLK2	XDT_m2230306-081	Solid	03/06/23 20:01
LCS	BLB0518-BS2	XDT_m2230306-082	Solid	03/06/23 20:05
ZZZZZ	23A0032-01	XDT_m2230306-083	Solid	03/06/23 20:10
Instrument Blank	SLC0078-IBL8	XDT_m2230306-088	NA	03/06/23 20:32
Calibration Check	SLC0078-CCV8	XDT_m2230306-089	NA	03/06/23 20:37
Calibration Blank	SLC0078-CCB8	XDT_m2230306-090	NA	03/06/23 20:44
ZZZZZ	BLB0615-BLK1	XDT_m2230306-093	Solid	03/06/23 20:57
ZZZZZ	BLB0615-BS1	XDT_m2230306-094	Solid	03/06/23 21:02
ZZZZZ	23A0031-02	XDT_m2230306-095	Solid	03/06/23 21:06
ZZZZZ	23A0031-02	XDT_m2230306-095	Solid	03/06/23 21:06
ZZZZZ	23A0031-02	XDT_m2230306-095	Solid	03/06/23 21:06
ZZZZZ	23A0031-02	XDT_m2230306-095	Solid	03/06/23 21:06
ZZZZZ	BLB0508-DUP1	XDT_m2230306-096	Solid	03/06/23 21:11

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLC0078
Instrument: ICPMS1
Calibration: GC00021

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	BLB0508-MS1	XDT_m2230306-097	Solid	03/06/23 21:15
ZZZZZ	BLB0508-MSD1	XDT_m2230306-098	Solid	03/06/23 21:19
Instrument Blank	SLC0078-IBL9	XDT_m2230306-100	NA	03/06/23 21:28
Calibration Check	SLC0078-CCV9	XDT_m2230306-101	NA	03/06/23 21:33
Calibration Blank	SLC0078-CCB9	XDT_m2230306-102	NA	03/06/23 21:40
ZZZZZ	23B0217-02	XDT_m2230306-109	Solid	03/06/23 22:12
ZZZZZ	23B0217-02	XDT_m2230306-109	Solid	03/06/23 22:12
ZZZZZ	23B0217-02	XDT_m2230306-109	Solid	03/06/23 22:12
ZZZZZ	23B0217-02	XDT_m2230306-109	Solid	03/06/23 22:12
ZZZZZ	23B0217-02	XDT_m2230306-109	Solid	03/06/23 22:12
ZZZZZ	BLB0615-DUP1	XDT_m2230306-110	Solid	03/06/23 22:17
ZZZZZ	BLB0615-MS1	XDT_m2230306-111	Solid	03/06/23 22:21
ZZZZZ	BLB0615-MSD1	XDT_m2230306-112	Solid	03/06/23 22:26
Calibration Check	SLC0078-CCVA	XDT_m2230306-113	NA	03/06/23 22:32
Calibration Blank	SLC0078-CCBA	XDT_m2230306-114	NA	03/06/23 22:39
Calibration Check	SLC0078-CCVB	XDT_m2230306-116	NA	03/06/23 22:48
Calibration Blank	SLC0078-CCBB	XDT_m2230306-117	NA	03/06/23 22:55
ZZZZZ	BLB0607-BLK1	XDT_m2230306-118	Solid	03/06/23 22:59
ZZZZZ	BLB0607-BS1	XDT_m2230306-119	Solid	03/06/23 23:04
ZZZZZ	BLB0607-SRL1	XDT_m2230306-120	Solid	03/06/23 23:08
ZZZZZ	23B0410-01	XDT_m2230306-121	Solid	03/06/23 23:13
ZZZZZ	23B0410-01	XDT_m2230306-121	Solid	03/06/23 23:13
ZZZZZ	23B0410-01	XDT_m2230306-121	Solid	03/06/23 23:13
ZZZZZ	23B0410-01	XDT_m2230306-121	Solid	03/06/23 23:13
ZZZZZ	BLB0607-DUP1	XDT_m2230306-122	Solid	03/06/23 23:17
ZZZZZ	BLB0607-MS1	XDT_m2230306-123	Solid	03/06/23 23:22
ZZZZZ	BLB0607-MSD1	XDT_m2230306-124	Solid	03/06/23 23:26
ZZZZZ	BLB0607-SRM1	XDT_m2230306-126	Solid	03/06/23 23:35
Instrument Blank	SLC0078-IBLC	XDT_m2230306-127	NA	03/06/23 23:40

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Sequence: SLC0078

SDG: 23B0276
Project: AOC5 MR Phase 1
Instrument: ICPMS1
Calibration: GC00021

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Calibration Check	SLC0078-CCVC	XDT_m2230306-128	NA	03/06/23 23:44
Calibration Blank	SLC0078-CCBC	XDT_m2230306-129	NA	03/06/23 23:51
ZZZZZ	BLB0687-BLK1	XDT_m2230306-130	Solid	03/06/23 23:56
ZZZZZ	BLB0687-BS1	XDT_m2230306-131	Solid	03/07/23 00:00
ZZZZZ	BLB0687-SRL1	XDT_m2230306-132	Solid	03/07/23 00:05
ZZZZZ	23B0411-01	XDT_m2230306-133	Solid	03/07/23 00:09
ZZZZZ	23B0411-01	XDT_m2230306-133	Solid	03/07/23 00:09
ZZZZZ	23B0411-01	XDT_m2230306-133	Solid	03/07/23 00:09
ZZZZZ	23B0411-01	XDT_m2230306-133	Solid	03/07/23 00:09
ZZZZZ	BLB0687-DUP1	XDT_m2230306-134	Solid	03/07/23 00:14
ZZZZZ	BLB0687-MS1	XDT_m2230306-135	Solid	03/07/23 00:18
ZZZZZ	BLB0687-MSD1	XDT_m2230306-136	Solid	03/07/23 00:22
ZZZZZ	BLB0687-SRM1	XDT_m2230306-138	Solid	03/07/23 00:31
Instrument Blank	SLC0078-IBLD	XDT_m2230306-139	NA	03/07/23 00:36
Calibration Check	SLC0078-CCVD	XDT_m2230306-140	NA	03/07/23 00:40
Calibration Blank	SLC0078-CCBD	XDT_m2230306-141	NA	03/07/23 00:47
ZZZZZ	23A0031-01	XDT_m2230306-146	Solid	03/07/23 01:11
ZZZZZ	23A0031-01	XDT_m2230306-146	Solid	03/07/23 01:11
ZZZZZ	23A0031-01	XDT_m2230306-146	Solid	03/07/23 01:11
ZZZZZ	23A0031-01	XDT_m2230306-146	Solid	03/07/23 01:11
ZZZZZ	23A0031-03	XDT_m2230306-147	Solid	03/07/23 01:16
ZZZZZ	23A0031-03	XDT_m2230306-147	Solid	03/07/23 01:16
ZZZZZ	23A0031-03	XDT_m2230306-147	Solid	03/07/23 01:16
ZZZZZ	23A0031-03	XDT_m2230306-147	Solid	03/07/23 01:16
ZZZZZ	23A0031-04	XDT_m2230306-148	Solid	03/07/23 01:20
ZZZZZ	23A0031-04	XDT_m2230306-148	Solid	03/07/23 01:20
ZZZZZ	23A0031-04	XDT_m2230306-148	Solid	03/07/23 01:20
ZZZZZ	23A0031-04	XDT_m2230306-148	Solid	03/07/23 01:20
ZZZZZ	23A0031-05	XDT_m2230306-149	Solid	03/07/23 01:25

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLC0078
Instrument: ICPMS1
Calibration: GC00021

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	23A0031-05	XDT_m2230306-149	Solid	03/07/23 01:25
ZZZZZ	23A0031-05	XDT_m2230306-149	Solid	03/07/23 01:25
ZZZZZ	23A0031-05	XDT_m2230306-149	Solid	03/07/23 01:25
ZZZZZ	23A0031-06	XDT_m2230306-150	Solid	03/07/23 01:29
ZZZZZ	23A0031-06	XDT_m2230306-150	Solid	03/07/23 01:29
ZZZZZ	23A0031-06	XDT_m2230306-150	Solid	03/07/23 01:29
ZZZZZ	23A0031-06	XDT_m2230306-150	Solid	03/07/23 01:29
ZZZZZ	23A0031-07	XDT_m2230306-151	Solid	03/07/23 01:34
ZZZZZ	23A0031-07	XDT_m2230306-151	Solid	03/07/23 01:34
ZZZZZ	23A0031-07	XDT_m2230306-151	Solid	03/07/23 01:34
ZZZZZ	23A0031-07	XDT_m2230306-151	Solid	03/07/23 01:34
Calibration Check	SLC0078-CCVE	XDT_m2230306-152	NA	03/07/23 01:39
Calibration Blank	SLC0078-CCBE	XDT_m2230306-153	NA	03/07/23 01:47
ZZZZZ	23A0031-08	XDT_m2230306-154	Solid	03/07/23 01:51
ZZZZZ	23A0031-08	XDT_m2230306-154	Solid	03/07/23 01:51
ZZZZZ	23A0031-08	XDT_m2230306-154	Solid	03/07/23 01:51
ZZZZZ	23A0031-08	XDT_m2230306-154	Solid	03/07/23 01:51
ZZZZZ	23A0031-09	XDT_m2230306-155	Solid	03/07/23 01:56
ZZZZZ	23A0031-09	XDT_m2230306-155	Solid	03/07/23 01:56
ZZZZZ	23A0031-09	XDT_m2230306-155	Solid	03/07/23 01:56
ZZZZZ	23A0031-09	XDT_m2230306-155	Solid	03/07/23 01:56
ZZZZZ	23A0031-10	XDT_m2230306-156	Solid	03/07/23 02:00
ZZZZZ	23A0031-10	XDT_m2230306-156	Solid	03/07/23 02:00
ZZZZZ	23A0031-10	XDT_m2230306-156	Solid	03/07/23 02:00
ZZZZZ	23A0031-10	XDT_m2230306-156	Solid	03/07/23 02:00
ZZZZZ	23A0031-11	XDT_m2230306-157	Solid	03/07/23 02:04
ZZZZZ	23A0031-11	XDT_m2230306-157	Solid	03/07/23 02:04
ZZZZZ	23A0031-11	XDT_m2230306-157	Solid	03/07/23 02:04
ZZZZZ	23A0031-11	XDT_m2230306-157	Solid	03/07/23 02:04

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLC0078
Instrument: ICPMS1
Calibration: GC00021

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	23A0031-12	XDT_m2230306-158	Solid	03/07/23 02:09
ZZZZZ	23A0031-12	XDT_m2230306-158	Solid	03/07/23 02:09
ZZZZZ	23A0031-12	XDT_m2230306-158	Solid	03/07/23 02:09
ZZZZZ	23A0031-12	XDT_m2230306-158	Solid	03/07/23 02:09
ZZZZZ	23A0031-13	XDT_m2230306-159	Solid	03/07/23 02:13
ZZZZZ	23A0031-13	XDT_m2230306-159	Solid	03/07/23 02:13
ZZZZZ	23A0031-13	XDT_m2230306-159	Solid	03/07/23 02:13
ZZZZZ	23A0031-13	XDT_m2230306-159	Solid	03/07/23 02:13
ZZZZZ	23A0031-14	XDT_m2230306-160	Solid	03/07/23 02:18
ZZZZZ	23A0031-14	XDT_m2230306-160	Solid	03/07/23 02:18
ZZZZZ	23A0031-14	XDT_m2230306-160	Solid	03/07/23 02:18
ZZZZZ	23A0031-14	XDT_m2230306-160	Solid	03/07/23 02:18
ZZZZZ	23A0031-15	XDT_m2230306-161	Solid	03/07/23 02:22
ZZZZZ	23A0031-15	XDT_m2230306-161	Solid	03/07/23 02:22
ZZZZZ	23A0031-15	XDT_m2230306-161	Solid	03/07/23 02:22
ZZZZZ	23A0031-15	XDT_m2230306-161	Solid	03/07/23 02:22
ZZZZZ	23A0031-16	XDT_m2230306-162	Solid	03/07/23 02:27
ZZZZZ	23A0031-16	XDT_m2230306-162	Solid	03/07/23 02:27
ZZZZZ	23A0031-16	XDT_m2230306-162	Solid	03/07/23 02:27
ZZZZZ	23A0031-16	XDT_m2230306-162	Solid	03/07/23 02:27
ZZZZZ	23A0031-17	XDT_m2230306-163	Solid	03/07/23 02:31
ZZZZZ	23A0031-17	XDT_m2230306-163	Solid	03/07/23 02:31
ZZZZZ	23A0031-17	XDT_m2230306-163	Solid	03/07/23 02:31
ZZZZZ	23A0031-17	XDT_m2230306-163	Solid	03/07/23 02:31
Calibration Check	SLC0078-CCVF	XDT_m2230306-164	NA	03/07/23 02:37
Calibration Blank	SLC0078-CCBF	XDT_m2230306-165	NA	03/07/23 02:44
ZZZZZ	23A0031-18	XDT_m2230306-166	Solid	03/07/23 02:49
ZZZZZ	23A0031-18	XDT_m2230306-166	Solid	03/07/23 02:49
ZZZZZ	23A0031-18	XDT_m2230306-166	Solid	03/07/23 02:49

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Sequence: SLC0078
SDG: 23B0276
Project: AOC5 MR Phase 1
Instrument: ICPMS1
Calibration: GC00021

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	23A0031-18	XDT_m2230306-166	Solid	03/07/23 02:49
ZZZZZ	23A0031-19	XDT_m2230306-167	Solid	03/07/23 02:53
ZZZZZ	23A0031-19	XDT_m2230306-167	Solid	03/07/23 02:53
ZZZZZ	23A0031-19	XDT_m2230306-167	Solid	03/07/23 02:53
ZZZZZ	23A0031-19	XDT_m2230306-167	Solid	03/07/23 02:53
ZZZZZ	23A0031-20	XDT_m2230306-168	Solid	03/07/23 02:58
ZZZZZ	23A0031-20	XDT_m2230306-168	Solid	03/07/23 02:58
ZZZZZ	23A0031-20	XDT_m2230306-168	Solid	03/07/23 02:58
ZZZZZ	23A0031-20	XDT_m2230306-168	Solid	03/07/23 02:58
ZZZZZ	23A0031-21	XDT_m2230306-169	Solid	03/07/23 03:02
ZZZZZ	23A0031-21	XDT_m2230306-169	Solid	03/07/23 03:02
ZZZZZ	23A0031-21	XDT_m2230306-169	Solid	03/07/23 03:02
ZZZZZ	23A0031-21	XDT_m2230306-169	Solid	03/07/23 03:02
ZZZZZ	23A0032-05	XDT_m2230306-170	Solid	03/07/23 03:06
ZZZZZ	23A0032-05	XDT_m2230306-170	Solid	03/07/23 03:06
ZZZZZ	23A0032-05	XDT_m2230306-170	Solid	03/07/23 03:06
ZZZZZ	23A0032-05	XDT_m2230306-170	Solid	03/07/23 03:06
ZZZZZ	23A0032-06	XDT_m2230306-171	Solid	03/07/23 03:11
ZZZZZ	23A0032-07	XDT_m2230306-172	Solid	03/07/23 03:15
ZZZZZ	23A0032-08	XDT_m2230306-173	Solid	03/07/23 03:20
ZZZZZ	23A0032-08	XDT_m2230306-173	Solid	03/07/23 03:20
ZZZZZ	23A0032-08	XDT_m2230306-173	Solid	03/07/23 03:20
ZZZZZ	23A0032-08	XDT_m2230306-173	Solid	03/07/23 03:20
ZZZZZ	23A0032-11	XDT_m2230306-174	Solid	03/07/23 03:24
ZZZZZ	23A0032-11	XDT_m2230306-174	Solid	03/07/23 03:24
ZZZZZ	23A0032-11	XDT_m2230306-174	Solid	03/07/23 03:24
ZZZZZ	23A0032-11	XDT_m2230306-174	Solid	03/07/23 03:24
LDW23-SC1150B	23B0276-01	XDT_m2230306-175	Solid	03/07/23 03:29
LDW23-SC1150B	23B0276-01	XDT_m2230306-175	Solid	03/07/23 03:29

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLC0078
Instrument: ICPMS1
Calibration: GC00021

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
LDW23-SC1150B	23B0276-01	XDT_m2230306-175	Solid	03/07/23 03:29
LDW23-SC1150B	23B0276-01	XDT_m2230306-175	Solid	03/07/23 03:29
Calibration Check	SLC0078-CCVG	XDT_m2230306-176	NA	03/07/23 03:35
Calibration Blank	SLC0078-CCBG	XDT_m2230306-177	NA	03/07/23 03:42
Calibration Check	SLC0078-CCVH	XDT_m2230306-179	NA	03/07/23 03:51
Calibration Blank	SLC0078-CCBH	XDT_m2230306-180	NA	03/07/23 03:58
ZZZZZ	23A0171-01	XDT_m2230306-184	Solid	03/07/23 04:17
ZZZZZ	23A0171-01	XDT_m2230306-184	Solid	03/07/23 04:17
ZZZZZ	23A0171-01	XDT_m2230306-184	Solid	03/07/23 04:17
ZZZZZ	23A0171-01	XDT_m2230306-184	Solid	03/07/23 04:17
ZZZZZ	23A0171-02	XDT_m2230306-185	Solid	03/07/23 04:21
ZZZZZ	23A0171-02	XDT_m2230306-185	Solid	03/07/23 04:21
ZZZZZ	23A0171-02	XDT_m2230306-185	Solid	03/07/23 04:21
ZZZZZ	23A0171-02	XDT_m2230306-185	Solid	03/07/23 04:21
ZZZZZ	23A0171-03	XDT_m2230306-186	Solid	03/07/23 04:26
ZZZZZ	23A0171-03	XDT_m2230306-186	Solid	03/07/23 04:26
ZZZZZ	23A0171-03	XDT_m2230306-186	Solid	03/07/23 04:26
ZZZZZ	23A0171-03	XDT_m2230306-186	Solid	03/07/23 04:26
ZZZZZ	23A0171-04	XDT_m2230306-187	Solid	03/07/23 04:30
ZZZZZ	23A0171-04	XDT_m2230306-187	Solid	03/07/23 04:30
ZZZZZ	23A0171-04	XDT_m2230306-187	Solid	03/07/23 04:30
ZZZZZ	23A0171-04	XDT_m2230306-187	Solid	03/07/23 04:30
ZZZZZ	23B0051-01	XDT_m2230306-188	Solid	03/07/23 04:35
ZZZZZ	23B0051-01	XDT_m2230306-188	Solid	03/07/23 04:35
ZZZZZ	23B0051-01	XDT_m2230306-188	Solid	03/07/23 04:35
ZZZZZ	23B0051-01	XDT_m2230306-188	Solid	03/07/23 04:35
ZZZZZ	23B0051-02	XDT_m2230306-189	Solid	03/07/23 04:39
ZZZZZ	23B0051-02	XDT_m2230306-189	Solid	03/07/23 04:39
ZZZZZ	23B0051-02	XDT_m2230306-189	Solid	03/07/23 04:39

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLC0078
Instrument: ICPMS1
Calibration: GC00021

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	23B0051-02	XDT_m2230306-189	Solid	03/07/23 04:39
ZZZZZ	23B0051-03	XDT_m2230306-190	Solid	03/07/23 04:44
ZZZZZ	23B0051-03	XDT_m2230306-190	Solid	03/07/23 04:44
ZZZZZ	23B0051-03	XDT_m2230306-190	Solid	03/07/23 04:44
ZZZZZ	23B0051-03	XDT_m2230306-190	Solid	03/07/23 04:44
Calibration Check	SLC0078-CCVI	XDT_m2230306-191	NA	03/07/23 04:50
Calibration Blank	SLC0078-CCBI	XDT_m2230306-192	NA	03/07/23 04:57
ZZZZZ	23B0217-03	XDT_m2230306-193	Solid	03/07/23 05:01
ZZZZZ	23B0217-03	XDT_m2230306-193	Solid	03/07/23 05:01
ZZZZZ	23B0217-03	XDT_m2230306-193	Solid	03/07/23 05:01
ZZZZZ	23B0217-03	XDT_m2230306-193	Solid	03/07/23 05:01
ZZZZZ	23B0217-03	XDT_m2230306-193	Solid	03/07/23 05:01
ZZZZZ	23B0217-04	XDT_m2230306-194	Solid	03/07/23 05:06
ZZZZZ	23B0217-04	XDT_m2230306-194	Solid	03/07/23 05:06
ZZZZZ	23B0217-04	XDT_m2230306-194	Solid	03/07/23 05:06
ZZZZZ	23B0217-04	XDT_m2230306-194	Solid	03/07/23 05:06
ZZZZZ	23B0217-04	XDT_m2230306-194	Solid	03/07/23 05:06
ZZZZZ	23B0217-05	XDT_m2230306-195	Solid	03/07/23 05:10
ZZZZZ	23B0217-05	XDT_m2230306-195	Solid	03/07/23 05:10
ZZZZZ	23B0217-05	XDT_m2230306-195	Solid	03/07/23 05:10
ZZZZZ	23B0217-05	XDT_m2230306-195	Solid	03/07/23 05:10
ZZZZZ	23B0217-05	XDT_m2230306-195	Solid	03/07/23 05:10
ZZZZZ	23B0217-06	XDT_m2230306-196	Solid	03/07/23 05:15
ZZZZZ	23B0217-06	XDT_m2230306-196	Solid	03/07/23 05:15
ZZZZZ	23B0217-06	XDT_m2230306-196	Solid	03/07/23 05:15
ZZZZZ	23B0217-06	XDT_m2230306-196	Solid	03/07/23 05:15
ZZZZZ	23B0217-06	XDT_m2230306-196	Solid	03/07/23 05:15
Instrument Blank	SLC0078-IBLJ	XDT_m2230306-202	NA	03/07/23 05:42
Calibration Check	SLC0078-CCVJ	XDT_m2230306-203	NA	03/07/23 05:46

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0078	Instrument:	ICPMS1
		Calibration:	GC00021

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Calibration Blank	SLC0078-CCBJ	XDT_m2230306-204	NA	03/07/23 05:53
Instrument Blank	SLC0078-IBLK	XDT_m2230306-214	NA	03/07/23 06:40
Calibration Check	SLC0078-CCVK	XDT_m2230306-215	NA	03/07/23 06:44
Calibration Blank	SLC0078-CCBK	XDT_m2230306-216	NA	03/07/23 06:51
Instrument Blank	SLC0078-IBLM	XDT_m2230306-219	NA	03/07/23 07:05
ZZZZZ	23B0581-02	XDT_m2230306-220	Water	03/07/23 07:09
ZZZZZ	23B0581-01	XDT_m2230306-221	Water	03/07/23 07:13
Instrument Blank	SLC0078-IBLL	XDT_m2230306-222	NA	03/07/23 07:18
Calibration Check	SLC0078-CCVL	XDT_m2230306-223	NA	03/07/23 07:22
Calibration Blank	SLC0078-CCBL	XDT_m2230306-224	NA	03/07/23 07:30

ICP INTERFERENCE CHECK SAMPLE

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS2
Calibration: GC00005
Sequence: SLC0028
Standard ID: L002006

Lab Sample ID	Analyte	True	Found	%R	Units
SLC0028-IFA1	Arsenic-75a	0	0.0350		ug/L
	Copper-63	0	0.0740		ug/L
	Copper-65	0	0.0630		ug/L
	Zinc-66	0	0.3380		ug/L
	Zinc-67	0	0.2180		ug/L

* Indicates %R outside of QC limits

NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.

ICP INTERFERENCE CHECK SAMPLE

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS2
Calibration: GC00005
Sequence: SLC0028
Standard ID: L002006

Lab Sample ID	Analyte	True	Found	%R	Units
SLC0028-IFB1	Arsenic-75a	20.000	18.233	91.2	ug/L
	Copper-63	20.000	19.273	96.4	ug/L
	Copper-65	20.000	19.304	96.5	ug/L
	Zinc-66	20.000	19.020	95.1	ug/L
	Zinc-67	20.000	16.721	83.6	ug/L

* Indicates %R outside of QC limits
NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.

ICP INTERFERENCE CHECK SAMPLE

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS1
Calibration: GC00021
Sequence: SLC0078
Standard ID: L002006

Lab Sample ID	Analyte	True	Found	%R	Units
SLC0078-IFA1	Arsenic-75a	0	0.0290		ug/L
	Cadmium-111	0	0.0560		ug/L
	Cadmium-114	0	0.0670		ug/L
	Copper-63	0	0.0410		ug/L
	Copper-65	0	0.0590		ug/L
	Zinc-66	0	0.4340		ug/L
	Zinc-67	0	0.4500		ug/L

* Indicates %R outside of QC limits

NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.

ICP INTERFERENCE CHECK SAMPLE

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS1
Calibration: GC00021
Sequence: SLC0078
Standard ID: L002006

Lab Sample ID	Analyte	True	Found	%R	Units
SLC0078-IFB1	Arsenic-75a	20.000	19.173	95.9	ug/L
	Cadmium-111	20.000	19.158	95.8	ug/L
	Cadmium-114	20.000	18.639	93.2	ug/L
	Copper-63	20.000	19.518	97.6	ug/L
	Copper-65	20.000	19.600	98.0	ug/L
	Zinc-66	20.000	18.722	93.6	ug/L
	Zinc-67	20.000	16.965	84.8	ug/L

* Indicates %R outside of QC limits

NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.

DETECTION LEVEL STANDARD
EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS2
Calibration: GC00005
Sequence: SLC0028
Lab Sample ID: SLC0028-CRL1

Analyte	True	Found	%R	Units	QC Limts
Arsenic-75a	0.20000	0.185	92.5	ug/L	50 - 150
Copper-63	0.50000	0.492	98.4	ug/L	50 - 150
Copper-65	0.50000	0.460	92.0	ug/L	50 - 150
Zinc-66	6.0000	6.17	103	ug/L	50 - 150
Zinc-67	6.0000	5.40	89.9	ug/L	50 - 150

* Values outside of QC limits

DETECTION LEVEL STANDARD
EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS1
Calibration: GC00021
Sequence: SLC0078
Lab Sample ID: SLC0078-CRL1

Analyte	True	Found	%R	Units	QC Limts
Arsenic-75a	0.20000	0.185	92.5	ug/L	50 - 150
Cadmium-111	0.10000	0.0960	96.0	ug/L	50 - 150
Cadmium-114	0.10000	0.108	108	ug/L	50 - 150
Copper-63	0.50000	0.483	96.6	ug/L	50 - 150
Copper-65	0.50000	0.483	96.6	ug/L	50 - 150
Zinc-66	6.0000	6.04	101	ug/L	50 - 150
Zinc-67	6.0000	5.58	93.0	ug/L	50 - 150

* Values outside of QC limits

HIGH-CONCENTRATION CALIBRATION VERIFICATION

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GC00005
Laboratory ID: SLC0028-HCV1
Sequence: SLC0028
Standard ID: L002008

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Arsenic-75a	200.00	201	0.6	10.00
Copper-63	200.00	199	-0.4	10.00
Copper-65	200.00	202	1.2	10.00
Zinc-66	200.00	200	-0.09	10.00
Zinc-67	200.00	198	-0.9	10.00

* Values outside of QC limits

HIGH-CONCENTRATION CALIBRATION VERIFICATION

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GC00005
Laboratory ID: SLC0028-HCV2
Sequence: SLC0028
Standard ID: L002009

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Arsenic-75a	300.00	287	-4.3	10.00
Copper-63	300.00	285	-4.9	10.00
Copper-65	300.00	285	-5.1	10.00
Zinc-66	300.00	278	-7.4	10.00
Zinc-67	300.00	276	-7.8	10.00

* Values outside of QC limits

HIGH-CONCENTRATION CALIBRATION VERIFICATION

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GC00021
Laboratory ID: SLC0078-HCV1
Sequence: SLC0078
Standard ID: L002008

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Arsenic-75a	200.00	198	-0.9	10.00
Cadmium-111	200.00	197	-1.3	10.00
Cadmium-114	200.00	197	-1.7	10.00
Copper-63	200.00	186	-7.2	10.00
Copper-65	200.00	188	-5.9	10.00
Zinc-66	200.00	189	-5.6	10.00
Zinc-67	200.00	187	-6.3	10.00

* Values outside of QC limits

HIGH-CONCENTRATION CALIBRATION VERIFICATION

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GC00021
Laboratory ID: SLC0078-HCV2
Sequence: SLC0078
Standard ID: L002009

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Arsenic-75a	300.00	296	-1.2	10.00
Cadmium-111	300.00	289	-3.5	10.00
Cadmium-114	300.00	287	-4.3	10.00
Copper-63	300.00	279	-6.8	10.00
Copper-65	300.00	282	-5.8	10.00
Zinc-66	300.00	277	-7.6	10.00
Zinc-67	300.00	276	-8.0	10.00

* Values outside of QC limits

HOLDING TIME SUMMARY

Analysis: EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC SDG: 23B0276

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

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
LDW23-SC1150B 23B0276-01	12/14/22 09:03	12/14/22 16:47	02/24/23 16:23	72	365	03/07/23 03:29	83	365	

* Indicates hold time exceedance.

METHOD DETECTION AND REPORTING LIMITS

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Instrument: ICPMS1

Analyte	MDL	RL	Units
Arsenic-75a	0.04	0.20	mg/kg
Cadmium-111	0.03	0.10	mg/kg
Cadmium-114	0.04	0.10	mg/kg
Copper-63	0.17	0.50	mg/kg
Copper-65	0.35	0.50	mg/kg
Zinc-66	2.9	6.0	mg/kg
Zinc-67	0.9	6.0	mg/kg

METHOD DETECTION AND REPORTING LIMITS

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Instrument: ICPMS2

Analyte	MDL	RL	Units
Arsenic-75a	0.04	0.20	mg/kg
Copper-63	0.17	0.50	mg/kg
Copper-65	0.35	0.50	mg/kg
Zinc-66	2.9	6.0	mg/kg
Zinc-67	0.9	6.0	mg/kg

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCU10
Lot Number:	P2-CU682108
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Copper
Starting Material:	Cu Metal
Starting Material Lot#:	2095
Starting Material Purity:	99.9996%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10013 ± 30 µg/mL

Density: 1.032 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9977 ± 50 µg/mL**
ICP Assay NIST SRM 3114 Lot Number: 121207

Assay Method #2 **10024 ± 26 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10007 ± 46 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.007542	M	Eu	<	0.000942	O	Na		0.001434	M	Se	<	0.016971	M	Zn	<	0.005657
O	Al	<	0.000609	O	Fe		0.008700	M	Nb	<	0.000942	O	Si		0.003052	M	Zr	<	0.000942
M	As	<	0.010371	M	Ga	<	0.000942	M	Nd	<	0.000942	M	Sm	<	0.000942				
M	Au	<	0.001885	M	Gd	<	0.000942	M	Ni		0.003781	M	Sn	<	0.005657				
O	B		0.003663	M	Ge	<	0.005657	M	Os	<	0.000942	M	Sr	<	0.000942				
M	Ba		0.004253	M	Hf	<	0.000942	O	P	<	0.031668	M	Ta	<	0.000942				
M	Be	<	0.000942	O	Hg	<	0.007064	M	Pb		0.005789	M	Tb	<	0.000942				
M	Bi	<	0.000942	M	Ho	<	0.000942	M	Pd	<	0.000942	M	Te	<	0.004714				
O	Ca		0.002304	M	In	<	0.000942	M	Pr	<	0.000942	M	Th	<	0.000942				
M	Cd	<	0.000942	M	Ir	<	0.000942	M	Pt	<	0.000942	O	Ti	<	0.002801				
M	Ce	<	0.000942	O	K		0.000763	M	Rb	<	0.000942	M	Tl	<	0.000942				
M	Co		0.001890	M	La	<	0.000942	M	Re	<	0.000942	M	Tm	<	0.000942				
M	Cr	<	0.005657	O	Li	<	0.000243	i	Rh	<		M	U	<	0.000942				
M	Cs	<	0.000942	M	Lu	<	0.000942	M	Ru	<	0.039588	M	V	<	0.003771				
s	Cu	<		O	Mg		0.000320	O	S		0.007174	M	W	<	0.005657				
M	Dy	<	0.000942	O	Mn		0.000793	M	Sb	<	0.001885	M	Y	<	0.000942				
M	Er	<	0.000942	M	Mo	<	0.005657	M	Sc	<	0.000942	M	Yb	<	0.000942				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 63.55 +2 6 $Cu(H_2O)_6^{2+}$

Chemical Compatibility -Stable in HCl, HNO_3, H_2SO_4, HF, H_3PO_4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO_3 / LDPE container.

Cu Containing Samples (Preparation and Solution) -Metal (soluble in HNO_3); Oxides (Soluble in HCl); Ores (Dissolve in HCl / HNO_3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 63 amu	10 ppt	n/a	40Ar23Na 47Ti16O, 14N12C37Cl, 16O12C35Cl, 23Na40Ca
ICP-OES 219.958 nm	0.01/.002 µg/mL	1	Th, Ta, Nb, U, Hf
ICP-OES 224.700 nm	0.01/.001 µg/mL	1	Pb, Ir, Ni, W
ICP-OES 324.754 nm	0.06/.001 µg/mL		Nb, U, Th, Mo, Hf

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 24, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **August 24, 2023**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

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Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGPB10
Lot Number:	S2-PB713228
Matrix:	0.5% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Lead
Starting Material:	Lead Nitrate
Starting Material Lot#:	2343
Starting Material Purity:	99.9995%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10042 ± 31 µg/mL

Density: 1.015 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10024 ± 41 µg/mL**
ICP Assay NIST SRM 3128 Lot Number: 101026

Assay Method #2 **10054 ± 32 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000310	M	Eu	<	0.000310	M	Na		0.001470	M	Se	<	0.009100	O	Zn	0.006155
O	Al		0.017098	O	Fe		0.002496	M	Nb	<	0.000310	O	Si		0.003761	O	Zr	< 0.001700
M	As	<	0.003100	M	Ga	<	0.000310	M	Nd	<	0.000310	M	Sm	<	0.000310			
M	Au	<	0.000910	M	Gd	<	0.000310	O	Ni		0.001709	M	Sn	<	0.001300			
O	B	<	0.005600	M	Ge	<	0.002200	M	Os	<	0.000310	O	Sr		0.000444			
O	Ba		0.007865	M	Hf	<	0.000310	O	P	<	0.038000	M	Ta	<	0.000310			
O	Be	<	0.000320	M	Hg	<	0.002200	s	Pb	<		M	Tb	<	0.000610			
M	Bi	<	0.028000	M	Ho	<	0.000310	M	Pd	<	0.000610	M	Te	<	0.000310			
O	Ca		0.019834	M	In	<	0.000310	M	Pr	<	0.000310	M	Th	<	0.000310			
O	Cd	<	0.000630	M	Ir	<	0.000310	M	Pt	<	0.000910	O	Ti		0.005129			
M	Ce		0.004787	O	K		0.008207	M	Rb	<	0.006700	M	Tl	<	0.016000			
M	Co	<	0.000610	M	La	<	0.001900	M	Re	<	0.000310	M	Tm	<	0.000310			
O	Cr	<	0.001500	O	Li	<	0.000110	O	Rh	<	0.007700	M	U	<	0.000310			
M	Cs	<	0.006100	M	Lu	<	0.000310	M	Ru	<	0.001300	M	V	<	0.001600			
M	Cu	<	0.001600	O	Mg		0.003317	O	S	<	0.052000	M	W	<	0.000910			
M	Dy	<	0.000310	O	Mn	<	0.001600	O	Sb	<	0.015000	M	Y	<	0.000310			
M	Er	<	0.000310	M	Mo	<	0.000610	O	Sc	<	0.000630	M	Yb	<	0.000310			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 207.20 +2 6 $Pb(H_2O)_6^{+2}$

Chemical Compatibility - Soluble in HCl, HF and HNO_3. Avoid H_2SO_4. Stable with most metals and inorganic anions forming insoluble carbonate, borate, sulfate, sulfite, sulfide, phosphate, oxalate, chromate, tannate, iodate, and cyanide in neutral aqueous media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO_3 / LDPE container.

Pb Containing Samples (Preparation and Solution) -Metal (Best dissolved in 1:1 H_2O / HNO_3); Oxides (The many different Pb oxides are soluble in HNO_3 with the exception of PbO_2 which is soluble in HCl or HF); Ores and Alloys (Best attacked using 1:1 H_2O / HNO_3); Organic Matrices (Dry ash and dissolve in dilute HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 208 amu	5 ppt	n/a	192Pt16O, 192Os16O
ICP-OES 168.215 nm	0.03 / 0.003 µg/mL	1	Co
ICP-OES 217.000 nm	0.09 / 0.03 µg/mL	1	W, Ir, Hf, Sb, Th
ICP-OES 220.353 nm	0.04 / 0.006 µg/mL	1	Bi, Nb

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 10, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 10, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

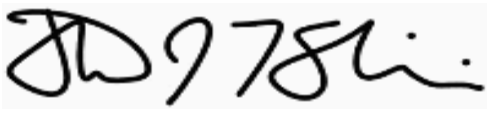
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGZN10
Lot Number:	S2-ZN711249
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Zinc
Starting Material:	Zinc Metal
Starting Material Lot#:	2349
Starting Material Purity:	99.9988%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9992 ± 30 µg/mL

Density: 1.029 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9981 ± 56 µg/mL**
ICP Assay NIST SRM 3168a Lot Number: 120629

Assay Method #2 **9987 ± 32 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10002 ± 32 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.002000	M	Eu	<	0.000500	O	Na		0.008713	M	Se	<	0.048000	s	Zn	<
O	Al	<	0.011000	O	Fe		0.015467	M	Nb	<	0.000500	O	Si		0.007842	M	Zr	< 0.000500
O	As	<	0.012000	M	Ga	<	0.004900	M	Nd	<	0.000500	M	Sm	<	0.000500			
M	Au	<	0.006500	M	Gd	<	0.000500	O	Ni		0.003049	M	Sn		0.002614			
O	B	<	0.019000	M	Ge	<	0.009100	M	Os	<	0.000500	M	Sr	<	0.000500			
M	Ba	<	0.000500	M	Hf	<	0.000500	O	P	<	0.059000	M	Ta	<	0.000500			
O	Be	<	0.000230	O	Hg	<	0.003800	M	Pb		0.016774	M	Tb	<	0.000500			
M	Bi	<	0.002400	M	Ho	<	0.000500	M	Pd	<	0.001000	M	Te	<	0.017000			
O	Ca		0.052283	M	In	<	0.003500	M	Pr	<	0.000500	M	Th	<	0.000500			
O	Cd		0.000588	M	Ir	<	0.001000	M	Pt	<	0.000500	M	Ti	<	0.002000			
M	Ce	<	0.000500	O	K		0.017209	M	Rb	<	0.002500	M	Tl	<	0.000500			
M	Co		0.000653	M	La	<	0.000500	M	Re	<	0.000500	M	Tm	<	0.000500			
O	Cr		0.001089	O	Li	<	0.000230	M	Rh	<	0.000500	M	U	<	0.000500			
M	Cs	<	0.000500	M	Lu	<	0.000500	M	Ru	<	0.005000	M	V	<	0.000500			
O	Cu		0.001938	O	Mg		0.000871	O	S	<	0.048000	M	W	<	0.001000			
M	Dy	<	0.000500	O	Mn		0.000172	M	Sb	<	0.004300	M	Y	<	0.000500			
M	Er	<	0.000500	M	Mo	<	0.001500	O	Sc	<	0.000900	M	Yb	<	0.000500			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 65.39 +2 4 Zn(OH)(aq)1+
Chemical Compatibility -Stable in HCl, HNO3, H2SO4 ,HF, H3PO4. Avoid basic media forming insoluble carbonate and hydroxide. Stable with most metals and inorganic anions in acidic media.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.
Zn Containing Samples (Preparation and Solution) -Metal (soluble in HNO3); Oxides (Soluble in HCl); Ores (Dissolve in HCl / HNO3); Organic based (dry ash at 4500C and dissolve ash in HCl) (sulfuric/peroxide acid digestion)
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 66 amu	7 ppt	N/A	50Ti16O,50Cr16O, 50V16O, 34S16O2, 32S16O18O, 32S17O2, 33S16O17O, 32S34S, 33S2
ICP-OES 202.548 nm	0.004/0.0002 µg/mL	1	Nb, Cu, Co, Hf
ICP-OES 206.200 nm	0.006/0.0006 µg/mL	1	Sb, Ta, Bi, Os
ICP-OES 213.856 nm	0.002/0.0004 µg/mL	1	Ni, Cu, V

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

November 22, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **November 22, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

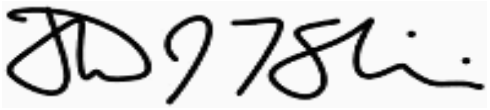
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSE10
Lot Number:	S2-SE711004
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Selenium
Starting Material:	Se Metal
Starting Material Lot#:	1962
Starting Material Purity:	99.9991%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9955 ± 61 µg/mL

Density: 1.035 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9955 ± 50 µg/mL**
ICP Assay NIST SRM 3149 Lot Number: 100901

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.002242	M	Eu	<	0.000373	O	Na		0.013654	s	Se	<		O	Zn		0.002374
M	Al		0.004450	M	Fe		0.008478	O	Nb	<	0.002975	O	Si		0.006249	M	Zr	<	0.001868
O	As	<	0.022040	M	Ga	<	0.000373	M	Nd	<	0.000373	M	Sm	<	0.000373				
M	Au	<	0.000373	M	Gd	<	0.000373	O	Ni		0.001843	M	Sn		0.000847				
O	B	<	0.007714	M	Ge	<	0.002616	M	Os	<	0.000373	M	Sr	<	0.001121				
M	Ba	<	0.001495	M	Hf	<	0.000373	O	P	<	0.022040	M	Ta	<	0.000373				
M	Be	<	0.001495	M	Hg	<	0.002240	M	Pb		0.006358	M	Tb	<	0.006353				
M	Bi	<	0.000373	M	Ho	<	0.000373	M	Pd	<	0.000373	M	Te	<	0.012707				
O	Ca		0.006530	M	In	<	0.000373	M	Pr	<	0.001495	M	Th	<	0.002990				
M	Cd		0.001165	M	Ir	<	0.000373	M	Pt	<	0.000373	M	Ti	<	0.003363				
M	Ce	<	0.000373	O	K		0.001999	M	Rb	<	0.001868	M	Tl		0.008584				
M	Co	<	0.000373	M	La	<	0.001121	M	Re	<	0.000373	M	Tm	<	0.000373				
M	Cr		0.002861	O	Li		0.000062	M	Rh	<	0.000373	M	U	<	0.000373				
M	Cs	<	0.001121	M	Lu	<	0.000373	M	Ru	<	0.001493	M	V	<	0.000747				
M	Cu	<	0.000747	O	Mg		0.001156	O	S		0.024591	M	W	<	0.002242				
M	Dy	<	0.000373	M	Mn	<	0.000373	M	Sb	<	0.002242	M	Y	<	0.000373				
M	Er	<	0.000373	O	Mo	<	0.003195	M	Sc	<	0.001121	M	Yb	<	0.000373				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 78.96 +4 6 H_2SeO_3

Chemical Compatibility -Soluble in HCl, HNO_3,H_3PO_4, H_2SO_4 and HF aqueous matrices and water. It is stable with most inorganic anions but many cationic metals form the insoluble selenites under pH neutral conditions. When fluorinated and/or under acidic conditions precipitation is typically not a problem at moderate to low concentrations.

Stability - 2-100 ppb levels stable for months alone or mixed with other elements at equivalent levels in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO_3 / LDPE container.

Se Containing Samples (Preparation and Solution) -Metal (soluble in HNO_3); Oxides (readily soluble in water); Minerals and alloys (acid digestion with HNO_3or HNO_3 / HF); Organic Matrices (acid digestion with hot concentrated H_2SO_4 accompanied by the careful dropwise addition of H_2O_2 until clear).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 82 amu	200 ppt	N/A	12C35Cl2
ICP-OES 196.026 nm	0.08/0.006 µg/mL	1	Fe
ICP-OES 203.985 nm	0.2/0.05 µg/mL	1	Sb, Ir, Cr, Ta
ICP-OES 206.279 nm	0.3/0.16 µg/mL	1	Cr, Pt

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

November 17, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **November 17, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Supervisor, Product Documentation

Certificate Approved By:

Michael Booth
Director, Technical

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGMO10
Lot Number:	S2-MO706255
Matrix:	H2O tr. NH4OH
Value / Analyte(s):	10 000 µg/mL ea: Molybdenum
Starting Material:	Ammonium Molybdate
Starting Material Lot#:	2361
Starting Material Purity:	99.9893%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10026 ± 47 µg/mL

Density: 1.011 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10032 ± 68 µg/mL**
ICP Assay NIST SRM 3134 Lot Number: 130418

Assay Method #2 **10020 ± 65 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000590	M	Eu	<	0.000300	M	Na		0.008739	M	Se	<	0.008000	M	Zn		0.005942
M	Al		0.005592	M	Fe	<	0.006500	M	Nb	<	0.029000	i	Si	<		M	Zr	<	0.001800
M	As	<	0.002100	M	Ga	<	0.000300	i	Nd	<		M	Sm	<	0.000300				
M	Au	<	0.000300	M	Gd	<	0.000300	M	Ni	<	0.008000	M	Sn	<	0.008900				
M	B	<	0.003300	M	Ge	<	0.000300	M	Os	<	0.000590	M	Sr		0.001747				
M	Ba		0.016778	M	Hf	<	0.001800	i	P	<		M	Ta	<	0.004200				
M	Be	<	0.000890	M	Hg	<	0.003300	M	Pb	<	0.000300	M	Tb	<	0.000300				
M	Bi	<	0.000890	M	Ho	<	0.000300	M	Pd	<	0.001800	M	Te	<	0.021000				
O	Ca		0.062920	M	In	<	0.032000	M	Pr	<	0.013000	M	Th	<	0.000300				
O	Cd	<	0.026000	M	Ir	<	0.000300	M	Pt	<	0.000300	O	Ti	<	0.032000				
M	Ce	<	0.008300	M	K		1.293372	M	Rb		0.045442	M	Tl		0.012584				
M	Co		0.005942	M	La	<	0.000300	M	Re	<	0.000300	M	Tm	<	0.000300				
M	Cr		0.005243	O	Li		0.000594	M	Rh	<	0.000300	M	U	<	0.005300				
M	Cs		0.005243	M	Lu	<	0.000300	M	Ru	<	0.079000	M	V	<	0.000890				
M	Cu		0.022371	M	Mg		0.005592	i	S	<		M	W		0.873900				
M	Dy	<	0.000300	M	Mn	<	0.005900	M	Sb		0.015031	M	Y	<	0.000300				
M	Er	<	0.000300	s	Mo	<		M	Sc	<	0.001200	M	Yb	<	0.000300				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 95.94 +6 6,7,8,9 [MoO4]-2(chemical form as received)

Chemical Compatibility -Mo is received in a NH4OH matrix giving the operator the option of using HCl or HF to stabilize acidic solutions. The [MoO4]-2 is soluble in concentrated HCl [MoOCl5]-2, dilute HF / HNO3 [MoOF5]-2 and basic media [MoO4]-2. Stable at ppm levels with some metals provided it is fluorinated. Do not mix with Alkaline or Rare Earths when HF is present. Stable with most inorganic anions provided it is in the [MoO4]-2 chemical form.

Stability - 2-100 ppb levels stable (alone or mixed with all other metals that are at comparable levels) as the [MoOF5]-2 for months in 1% HNO3 / LDPE container. 1-10,000 ppm single element solutions as the [MoO4]-2 chemically stable for years in 1% NH4OH in a LDPE container.

Mo Containing Samples (Preparation and Solution) -Metal (Soluble in HF / HNO3 or hot dilute HCl); Oxide (soluble in HF or NH4OH) ; Organic Matrices (Dry ash at 450EC in Pt0 and dissolve oxide with HF or HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 95 amu	3 ppt	n/a	40Ar39K16O,79Br16O,190Os2+,190Pt2+
ICP-OES 202.030 nm	0.008 / 0.0002 µg/mL	1	Os, Hf
ICP-OES 203.844 nm	0.012 / 0.002 µg/mL	1	
ICP-OES 204.598 nm	0.012 / 0.001 µg/mL	1	Ir, Ta

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 04, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **July 04, 2025**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGTL10
Lot Number:	T2-TL714687
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Thallium
Starting Material:	TlNO3
Starting Material Lot#:	2118
Starting Material Purity:	99.9998%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10030 ± 42 µg/mL

Density: 1.036 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10040 ± 43 µg/mL**
ICP Assay NIST SRM 3158 Lot Number: 151215

Assay Method #2 **10010 ± 65 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL(

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000200	M	Eu	<	0.000200	O	Na		0.002489	M	Se	<	0.011019	O	Zn		0.002298
O	Al	<	0.004184	O	Fe	<	0.002824	M	Nb	<	0.000200	O	Si		0.003760	M	Zr	<	0.000200
M	As	<	0.002003	M	Ga	<	0.000200	M	Nd	<	0.000200	M	Sm	<	0.000200				
O	Au	<	0.002824	M	Gd	<	0.000200	M	Ni		0.001724	M	Sn	<	0.000601				
O	B	<	0.004184	M	Ge	<	0.000801	M	Os	<	0.000198	O	Sr	<	0.000313				
M	Ba	<	0.000400	M	Hf	<	0.000200	O	P	<	0.010460	M	Ta	<	0.000200				
O	Be	<	0.000104	M	Hg	<	0.000794	M	Pb		0.000811	M	Tb	<	0.000200				
M	Bi	<	0.005209	M	Ho	<	0.000200	M	Pd	<	0.000400	M	Te	<	0.005008				
O	Ca		0.002436	M	In	<	0.000200	M	Pr	<	0.000200	M	Th	<	0.000200				
M	Cd		0.001318	M	Ir	<	0.000198	M	Pt	<	0.000801	O	Ti	<	0.001255				
M	Ce	<	0.000200	O	K		0.006175	M	Rb	<	0.000200	s	Tl	<					
M	Co	<	0.000601	M	La	<	0.000200	M	Re	<	0.000200	M	Tm	<	0.000200				
M	Cr	<	0.000801	O	Li	<	0.000177	M	Rh	<	0.000200	M	U	<	0.000200				
M	Cs	<	0.003606	M	Lu	<	0.000200	M	Ru	<	0.000397	M	V	<	0.002203				
M	Cu	<	0.001001	O	Mg		0.000529	O	S	<	0.015690	M	W	<	0.000601				
M	Dy	<	0.000200	M	Mn	<	0.000801	M	Sb	<	0.000400	M	Y	<	0.000200				
M	Er	<	0.000200	M	Mo	<	0.001202	O	Sc	<	0.000711	M	Yb	<	0.000200				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 204.38 +1 6 Tl(H2O)61+
Chemical Compatibility - Soluble in HCl, HNO3, and H2SO4. Stable with most metals and inorganic anions. The sulfite, thiocyanate and oxalate are moderately soluble; the phosphate and arsenite are slightly soluble and the sulfide is insoluble.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.
Tl Containing Samples)Preparation and Solution) -Metal (Best dissolved in HNO3 which forms chiefly the Tl1+ ion.); Oxide (The thallous oxide is readily soluble in water. The thallic oxide requires high levels of acid); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Sulfuric/peroxide digestion or dry ash and dissolution in HCl).
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 205 amu	2 ppt	N/A	189Os16O
ICP-OES 190.864 nm	0.04 / 0.004 µg/mL	1	V, Ti
ICP-OES 276.787 nm	0.1 / 0.01 µg/mL	1	Ta, V, Fe, Cr
ICP-OES 351.924 nm	0.2 / 0.02 µg/mL	1	Th, Ce, Zr

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

February 08, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **February 08, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

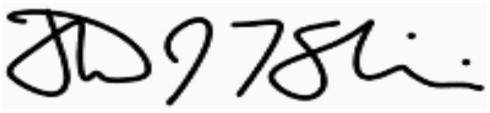
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

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F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCD10
Lot Number:	S2-CD710508
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Cadmium
Starting Material:	Cd Metal
Starting Material Lot#:	1953
Starting Material Purity:	99.9995%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10008 ± 30 µg/mL

Density: 1.029 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10010 ± 32 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #2 **10011 ± 30 µg/mL**
ICP Assay NIST SRM 3108 Lot Number: 130116

Assay Method #3 **10003 ± 30 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

O	Ag	<	0.003200	O	Eu	<	0.002500	O	Na		0.005499	M	Se	<	0.005700	O	Zn	<	0.001100
O	Al		0.008903	O	Fe		0.000602	M	Nb	<	0.000400	O	Si		0.016758	O	Zr	<	0.002600
M	As	<	0.003600	M	Ga	<	0.001200	M	Nd	<	0.000800	M	Sm	<	0.000400				
M	Au	<	0.000810	M	Gd	<	0.000400	M	Ni	<	0.003600	M	Sn	<	0.003200				
O	B		0.004189	O	Ge	<	0.012000	M	Os	<	0.000810	O	Sr	<	0.000330				
M	Ba	<	0.002400	M	Hf	<	0.000400	O	P	<	0.022000	M	Ta	<	0.000800				
M	Be	<	0.000400	M	Hg	<	0.001700	M	Pb	<	0.002400	M	Tb	<	0.000400				
M	Bi	<	0.000400	M	Ho	<	0.000400	M	Pd	<	0.001200	M	Te	<	0.008000				
O	Ca		0.011259	O	In	<	0.013000	M	Pr	<	0.000400	M	Th	<	0.000400				
s	Cd	<		M	Ir	<	0.000410	M	Pt	<	0.000400	O	Ti		0.000602				
M	Ce	<	0.000400	O	K		0.005237	M	Rb	<	0.004400	M	Tl		0.000523				
M	Co	<	0.000400	M	La	<	0.000400	M	Re	<	0.000400	M	Tm	<	0.000400				
O	Cr	<	0.005100	O	Li	<	0.000054	M	Rh	<	0.000400	M	U	<	0.000400				
M	Cs	<	0.002400	M	Lu	<	0.000400	M	Ru	<	0.002500	M	V	<	0.002000				
O	Cu	<	0.004800	O	Mg		0.000288	O	S	<	0.022000	M	W	<	0.000400				
M	Dy	<	0.000400	O	Mn	<	0.000860	O	Sb	<	0.018000	M	Y	<	0.000400				
M	Er	<	0.000400	M	Mo	<	0.001600	O	Sc	<	0.000430	M	Yb	<	0.000400				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 112.41 +2 4 Cd2(OH) (aq)3+ and Cd(OH)(aq)

Chemical Compatibility -Stable in HCl, HNO3, H2SO4 , and HF. Avoid basic media forming insoluble carbonate and hydroxide.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5 % HNO3 / LDPE container.

Cd Containing Samples (Preparation and Solution) -Metal (soluble in HNO3); Oxides (soluble in HCl or HNO3); Ores (dissolve in HCl /HNO3 then take to fumes with H2SO4. The silica and lead sulfate are filtered off after the addition of water); Organic based (dry ash at 450°C and dissolve ash in HCl), (sulfuric / peroxide acid digestion).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 111 amu	11 ppt	n/a	95Mo16O
ICP-OES 214.438 nm	0.003 / 0.0003 µg/mL	1	Pt, Ir
ICP-OES 226.502 nm	0.003 / 0.0003 µg/mL	1	Ir
ICP-OES 228.802 nm	0.003 / 0.0003 µg/mL	1	Co, Ir, As, Pt

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

November 01, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **November 01, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGMN10
Lot Number:	S2-MN704240
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Manganese
Starting Material:	Mn Metal
Starting Material Lot#:	2275
Starting Material Purity:	99.9909%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10011 ± 30 µg/mL

Density: 1.035 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9989 ± 69 µg/mL**
ICP Assay NIST SRM 3132 Lot Number: 050429

Assay Method #2 **10011 ± 25 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10024 ± 47 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001500	M	Eu	<	0.000730	O	Na		0.176097	M	Se	<	0.006600	M	Zn		0.009925
O	Al		0.004322	M	Fe	<	0.650000	M	Nb	<	0.000730	O	Si		0.097654	M	Zr	<	0.000730
M	As	<	0.008000	M	Ga		0.004322	M	Nd	<	0.001500	M	Sm	<	0.000730				
M	Au	<	0.000730	M	Gd	<	0.000730	M	Ni		0.024013	M	Sn	<	0.002200				
M	B		0.068838	M	Ge	<	0.004400	M	Os	<	0.000730	O	Sr		0.000928				
M	Ba	<	0.001500	M	Hf	<	0.000730	i	P	<		M	Ta	<	0.000730				
M	Be	<	0.000730	M	Hg	<	0.002200	M	Pb		0.007364	M	Tb	<	0.000730				
M	Bi	<	0.003000	M	Ho	<	0.000730	M	Pd	<	0.000730	M	Te	<	0.019000				
O	Ca		0.062434	M	In	<	0.003000	M	Pr	<	0.000730	M	Th	<	0.000730				
M	Cd	<	0.001500	M	Ir	<	0.000730	M	Pt	<	0.000730	O	Ti	<	0.006500				
M	Ce	<	0.007300	O	K		0.006403	M	Rb	<	0.006600	M	Tl	<	0.000730				
O	Co		0.014728	M	La	<	0.003000	M	Re	<	0.000730	M	Tm	<	0.000730				
O	Cr		0.272151	O	Li		0.000416	M	Rh	<	0.003000	M	U	<	0.001500				
M	Cs	<	0.000730	M	Lu	<	0.000730	M	Ru	<	0.004400	M	V	<	0.000730				
O	Cu		0.007684	O	Mg		0.320177	i	S	<		M	W	<	0.004400				
M	Dy	<	0.001500	s	Mn	<		M	Sb	<	0.021000	O	Y		0.001360				
M	Er	<	0.001500	M	Mo		0.010245	O	Sc	<	0.004100	M	Yb	<	0.000730				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 54.94 +2 6 $Mn(H_2O)_6^{2+}$

Chemical Compatibility -Stable in HCl, HNO_3, H_2SO_4 ,HF, H_3PO_4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5 % HNO_3/LDPE container.

Mn Containing Samples (Preparation and Solution) -Metal (Soluble in dilute acids); Oxides (Soluble in dilute acids); Ores (Dissolve with HCl. If silica is present add HF and then fume off silica by adding H_2SO_4 and heat to SO_3 fumes - dense white fumes).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 55 amu	10 ppt	n/a	40Ar14N1H,39K16O,37Cl18O,40Ar15N,38Ar17O,36Ar18O1H ,38Ar16O1H,37Cl17O1H,23Na32S
ICP-OES 257.610 nm	0.0014 / 0.00002 µg/mL	1	Ce, W, Re
ICP-OES 259.373 nm	0.0016 / 0.00002 µg/mL	1	U, Ta, Mo, Fe, Nb
ICP-OES 260.569 nm	0.0021 / 0.00002 µg/mL	1	Co

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 17, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **April 17, 2025**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSB10
Lot Number:	R2-SB688559
Matrix:	3% (v/v) HNO3 3% (w/v) tartaric acid
Value / Analyte(s):	10 000 µg/mL ea: Antimony
Starting Material:	Antimony Metal
Starting Material Lot#:	1857
Starting Material Purity:	99.9894%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10003 ± 47 µg/mL

Density: 1.061 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10003 ± 41 µg/mL**
ICP Assay NIST SRM 3102a Lot Number: 140911

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

$CRM/RM\ Expanded\ Uncertainty\ (\pm) = U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

$CRM/RM\ Expanded\ Uncertainty\ (\pm) = U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000200	M	Eu	<	0.000300	O	Na		0.140000	M	Se	<	0.007300	O	Zn		0.005000
M	Al		0.003200	O	Fe		0.060000	M	Nb	<	0.000100	O	Si		0.150000	O	Zr	<	0.006300
M	As	<	0.004400	M	Ga	<	0.000400	M	Nd	<	0.000100	M	Sm	<	0.000100				
M	Au	<	0.000210	M	Gd	<	0.000100	O	Ni		0.004800	M	Sn	<	0.001800				
M	B	<	0.011000	M	Ge	<	0.000600	M	Os	<	0.000110	O	Sr		0.000750				
O	Ba	<	0.004900	M	Hf	<	0.000100	O	P		0.540000	M	Ta		0.003300				
M	Be	<	0.000400	M	Hg	<	0.000110	M	Pb	<	0.000400	M	Tb	<	0.000100				
M	Bi	<	0.000200	M	Ho	<	0.000100	M	Pd	<	0.000210	M	Te	<	0.000600				
O	Ca		0.110000	M	In	<	0.000100	M	Pr	<	0.001600	M	Th	<	0.000100				
M	Cd	<	0.000200	M	Ir	<	0.000110	M	Pt	<	0.000600	M	Ti	<	0.002800				
M	Ce		0.006500	O	K		0.020000	M	Rb	<	0.001000	M	Tl	<	0.000100				
M	Co	<	0.000200	O	La	<	0.016000	M	Re	<	0.000100	M	Tm	<	0.000100				
M	Cr		0.006900	O	Li	<	0.000430	M	Rh	<	0.000300	M	U	<	0.000100				
M	Cs	<	0.000200	M	Lu	<	0.000100	M	Ru	<	0.000310	M	V	<	0.000800				
M	Cu	<	0.000600	O	Mg		0.021000	n	S	<		M	W	<	0.000200				
M	Dy	<	0.000100	O	Mn		0.001900	s	Sb	<		M	Y	<	0.000100				
M	Er	<	0.000100	M	Mo	<	0.000500	O	Sc	<	0.002300	M	Yb	<	0.000100				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 121.75 +3 6 Sb(O)C4H4O6-1

Chemical Compatibility -Stable in conc. HCl, dilute or conc. HF. Stable in dilute HNO3 as the fluoride or tartrate complex. Avoid basic media. Stable with most metals and inorganic anions in acidic media as the tartrate provided the acidity is not too high or the acid is oxidizing causing loss of the stabilizing tartrate ion. The fluoride complex of antimony is stable in strong acid but you should only mix with other metals that are fluorinated.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-2% HNO3 / LDPE container.

Sb Containing Samples (Preparation and Solution) -Metal and alloys (Soluble in H2O / HF / HNO3 mixture); Oxides (Soluble in HCl and tartaric acid or H2O / HF / HNO3 mixtures); Ores (fusion with Na2CO3 in Pt0 followed by dissolving the fuseate in a H2O / HF / HNO3 mixture); Organic based (sulfuric acid / hydrogen peroxide digestion)

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 121 amu	5 ppt	N/A	105Pd16O, 89Y16O2
ICP-OES 206.833 nm	0.03/0.003 µg/mL	1	Ta, Cr, Ge, Hf
ICP-OES 217.581 nm	0.05/0.005 µg/mL	1	Nb, W, Re, Fe
ICP-OES 231.147 nm	0.06/0.006 µg/mL	1	Ni, Co, Pt

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 30, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **April 30, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGAS10
Lot Number:	T2-AS718260
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Arsenic
Starting Material:	As Metal
Starting Material Lot#:	2208
Starting Material Purity:	99.9971%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10060 ± 40 µg/mL

Density: 1.037 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10062 ± 46 µg/mL**
ICP Assay NIST SRM 3103a Lot Number: 100818

Assay Method #2 **10055 ± 76 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	< 0.003200	M	Eu	< 0.000530	O	Na	0.032544	M	Se	< 0.006300	O	Zn	0.001952			
M	Al	0.007593	O	Fe	0.001475	O	Nb	< 0.012000	O	Si	0.238658	O	Zr	< 0.004100			
s	As	<	M	Ga	< 0.000530	M	Nd	< 0.000530	M	Sm	< 0.000530						
M	Au	< 0.003100	M	Gd	< 0.000530	M	Ni	< 0.002100	M	Sn	< 0.000530						
M	B	0.026035	M	Ge	< 0.001600	M	Os	< 0.000520	M	Sr	< 0.000530						
M	Ba	< 0.000530	M	Hf	< 0.000530	O	P	< 0.043000	M	Ta	< 0.000530						
O	Be	< 0.000360	M	Hg	< 0.001600	M	Pb	< 0.002100	M	Tb	< 0.000530						
M	Bi	< 0.000530	M	Ho	< 0.000530	M	Pd	< 0.001100	M	Te	< 0.004700						
O	Ca	0.004339	M	In	< 0.023000	M	Pr	< 0.005300	M	Th	< 0.000530						
M	Cd	< 0.001100	M	Ir	< 0.000520	M	Pt	< 0.000530	O	Ti	< 0.002300						
M	Ce	< 0.000530	O	K	0.002061	M	Rb	< 0.000530	M	Tl	< 0.000530						
M	Co	< 0.000530	M	La	< 0.001100	M	Re	< 0.000530	M	Tm	< 0.000530						
O	Cr	< 0.001800	O	Li	< 0.000120	M	Rh	< 0.000530	M	U	< 0.000530						
M	Cs	< 0.005300	M	Lu	< 0.000530	M	Ru	< 0.000520	M	V	< 0.002700						
M	Cu	< 0.001600	O	Mg	0.000154	O	S	0.028205	M	W	< 0.012000						
M	Dy	< 0.000530	O	Mn	0.000154	M	Sb	< 0.000530	M	Y	< 0.000530						
M	Er	< 0.000530	M	Mo	< 0.000530	O	Sc	< 0.001700	M	Yb	< 0.000530						

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 74.92 ; mix of +3 and +5 ; 6 ; H3AsO4 and HAsO2

Chemical Compatibility - Arsenic has no cationic chemistry. It is soluble in HCl, HNO3,H3PO4, H2SO4 and HF aqueous matrices water and NH4OH . It is stable with most inorganic anions (forms arsenate when boiled with chromate) but many cationic metals form the insoluble arsenates under pH neutral conditions. When fluorinated and / or under acidic conditions arsenate formation is typically not a problem at moderate to low concentrations.

Stability - 2-100 ppb levels stable for months alone or mixed with other elements at equivalent levels in 1% HNO3 / LDPE container.

As Containing Samples (Preparation and Solution) - Metal (soluble in 1:1 H2O / HNO3); Oxides (the oxide exists in crystalline and amorphous forms where the amorphic form is more water soluble. The oxides typically dissolve in dilute acidic solutions when boiled); Minerals (one gram of powered sample is fused in a Ni crucible with 10 grams of a 1:1 mix of K2CO3 and KNO3 and the melt extracted with hot water); Organic Matrices (0.2 to 0.5 grams of sample are fused with 15 grams of a 1:1 Na2CO3 / Na2O2 mix in a Ni crucible. The fuseate is extracted with water and acidified with HNO3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 75 amu	20 ppt	N/A	40Ar35Cl, 59Co16O, 36Ar38Ar1H,8Ar37Cl,Ar39K, 150Nd2+,150Sm2+
ICP-OES 189.042 nm	0.05/0.005 µg/mL	1	Cr
ICP-OES 193.696 nm	0.1/0.01 µg/mL	1	V, Ge
ICP-OES 228.812 nm	0.1/0.01 µg/mL	1	Cd, Pt, Ir, Co

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

May 10, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **May 10, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Supervisor, Product Documentation

Certificate Approved By:

Michael Booth
Director, Technical

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGBA10
Lot Number:	R2-BA692576
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Barium
Starting Material:	Barium Nitrate
Starting Material Lot#:	1969
Starting Material Purity:	99.9982%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10022 ± 30 µg/mL

Density: 1.025 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1	**10018 ± 50 µg/mL** ICP Assay NIST SRM 3104a Lot Number: 140909
Assay Method #2	**10023 ± 31 µg/mL** Gravimetric NIST SRM Lot Number: See Sec. 4.2
Assay Method #3	**10023 ± 30 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000410	O	Eu	<	0.005200	O	Na		0.004610	M	Se	<	0.003700	O	Zn		0.000658
M	Al	<	0.003100	O	Fe		0.015707	M	Nb	<	0.000210	O	Si		0.005573	M	Zr	<	0.001300
M	As	<	0.001300	M	Ga	<	0.000210	M	Nd	<	0.000210	O	Sm	<	0.021000				
M	Au	<	0.001300	M	Gd	<	0.000210	M	Ni	<	0.000810	M	Sn	<	0.000410				
O	B	<	0.005200	M	Ge	<	0.002500	M	Os	<	0.000410	O	Sr		0.003850				
s	Ba	<		M	Hf	<	0.000810	O	P	<	0.026000	M	Ta	<	0.000410				
O	Be	<	0.000320	M	Hg	<	0.000210	M	Pb	<	0.002300	M	Tb	<	0.000210				
M	Bi	<	0.000210	M	Ho	<	0.000210	M	Pd	<	0.000210	M	Te	<	0.001900				
O	Ca		0.007093	M	In	<	0.000210	M	Pr	<	0.000210	M	Th	<	0.000210				
M	Cd	<	0.000210	M	Ir	<	0.000210	M	Pt	<	0.000210	M	Ti	<	0.002100				
M	Ce	<	0.001300	O	K		0.035467	M	Rb	<	0.002100	M	Tl	<	0.000210				
M	Co	<	0.000410	O	La	<	0.005200	M	Re	<	0.000210	M	Tm	<	0.000410				
M	Cr	<	0.001700	O	Li	<	0.000630	M	Rh	<	0.000210	M	U	<	0.000210				
M	Cs	<	0.003300	M	Lu	<	0.001700	M	Ru	<	0.000210	O	V	<	0.005200				
M	Cu	<	0.001300	O	Mg		0.000861	O	S		0.268539	M	W	<	0.000410				
M	Dy	<	0.000210	M	Mn	<	0.000410	M	Sb	<	0.001300	O	Y	<	0.005200				
M	Er	<	0.001300	M	Mo	<	0.000410	M	Sc	<	0.000410	M	Yb	<	0.001300				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 137.33 +2 6 $Ba(H_2O)_6^{+2}$
Chemical Compatibility - Soluble in HCl, and HNO_3. Avoid H_2SO_4, HF and neutral to basic media. Stable with most metals and inorganic anions forming insoluble silicate, carbonate, hydroxide, oxide, fluoride, sulfate, oxalate, chromate, arsenate, iodate, molybdate, sulfite and tungstate in neutral aqueous media.
Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1 -10,000 ppm solutions chemically stable for years in 1-3.5% HNO_3 / LDPE container.
Ba Containing Samples (Preparation and Solution) -Metal(is best dissolved in diluted HNO_3); Ores(Carbonate fusion in Pt0 followed by HCl dissolution. If sulfate is present dissolve the fuseate using HCl / tartaric acid to prevent $BaSO_4$ precipitate); Organic Matrices (dry ash and dissolve in dilute HCl.)
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 138 amu	1 ppt	N/A	122Sn16O, 122Te16O
ICP-OES 230.424 nm	0.004/0.0005 µg/mL	1	Mo, Ir, Co
ICP-OES 233.527 nm	0.004/0.0003 µg/mL	1	
ICP-OES 455.403 nm	0.002/0.0001 µg/mL	1	Zr, U

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

May 11, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **May 11, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGBE10
Lot Number:	R2-BE692992
Matrix:	6% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Beryllium
Starting Material:	Beryllium Acetate
Starting Material Lot#:	2281
Starting Material Purity:	99.9998%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10032 ± 41 µg/mL

Density: 1.128 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10042 ± 67 µg/mL**
ICP Assay NIST SRM 3105a Lot Number: 090514

Assay Method #2 **10025 ± 51 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001100	M	Eu	<	0.000270	O	Na		0.040962	M	Se	<	0.005000	M	Zn		0.013054
O	Al		0.016205	O	Fe		0.015754	M	Nb	<	0.000270	O	Si		0.024307	O	Zr	<	0.001900
M	As	<	0.002900	M	Ga	<	0.000270	M	Nd	<	0.000270	M	Sm	<	0.000270				
M	Au	<	0.000520	M	Gd	<	0.000270	M	Ni	<	0.003700	M	Sn	<	0.000790				
M	B	<	0.091000	M	Ge	<	0.000270	M	Os	<	0.000260	M	Sr		0.000630				
M	Ba		0.002700	M	Hf	<	0.000270	O	P	<	0.066000	M	Ta	<	0.000270				
s	Be	<		M	Hg	<	0.000520	M	Pb	<	0.000270	M	Tb	<	0.000270				
M	Bi	<	0.000530	M	Ho	<	0.000270	M	Pd	<	0.000520	M	Te	<	0.003700				
O	Ca		0.072022	M	In	<	0.000790	M	Pr	<	0.000270	M	Th	<	0.000270				
M	Cd	<	0.000790	M	Ir	<	0.000260	M	Pt	<	0.000270	O	Ti	<	0.000400				
M	Ce	<	0.000270	O	K		0.045014	M	Rb	<	0.000270	M	Tl	<	0.000790				
O	Co	<	0.003200	M	La	<	0.000270	M	Re	<	0.000270	M	Tm	<	0.000270				
O	Cr	<	0.001800	O	Li	<	0.000660	M	Rh	<	0.001100	M	U	<	0.000270				
M	Cs		0.001440	M	Lu	<	0.000270	M	Ru	<	0.000260	M	V	<	0.000790				
M	Cu	<	0.002100	O	Mg		0.016205	i	S	<		M	W	<	0.000530				
M	Dy	<	0.000270	M	Mn		0.001215	M	Sb	<	0.000270	M	Y	<	0.000270				
M	Er	<	0.000270	M	Mo	<	0.000530	O	Sc	<	0.000930	M	Yb	<	0.000270				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 9.01 +2 4 $Be(H_2O)_4^{+2}$

Chemical Compatibility -Soluble in HCl, HNO_3, H_2SO_4 and HF aqueous matrices. Stable with all metals and inorganic anions.

Stability - 2-100 ppb levels stable for months in 1 % HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 5-10 % HNO_3 / LDPE container.

Be Containing Samples (Preparation and Solution) - Meta l(is best dissolved in diluted H_2SO_4); BeO (boiling nitric, hydrochloric, or sulfuric acids or KHSO4 fusion); Ores (H_2SO_4/HF digestion or carbonate fusion in Pt0); Organic Matrices (sulfuric/peroxide digestion or nitric/sulfuric/perchloric acid decomposition, or dry ash and dissolution according to the BeO procedure above).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 9 amu	4 ppt	N/A	
ICP-OES 234.861 nm	0.0003/0.00016 µg/mL	1	Fe, Ta, Mo
ICP-OES 313.042 nm	0.0003/0.00009 µg/mL	1	V, Ce, U
ICP-OES 313.107 nm	0.0007/0.0005 µg/mL	1	Ce, Th, Tm

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION, PERIOD OF VALIDITY AND REVISION HISTORY

11.1 Certification Issue Date

May 13, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **May 13, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

11.4 Revision Status

- Revision 1 - Revised on Thursday, Jan 14, 2021 by utruong. Revision was made for the following reason: Modified Section 7 Chemical Form in Solution.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCO10
Lot Number:	R2-CO695285
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Cobalt
Starting Material:	Co Metal
Starting Material Lot#:	2326
Starting Material Purity:	99.9934%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10012 ± 31 µg/mL

Density: 1.056 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10031 ± 67 µg/mL**
ICP Assay NIST SRM 3113 Lot Number: 190630

Assay Method #2 **10019 ± 32 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10000 ± 35 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	0.014660	M	Eu	<	0.000590	O	Na	0.007534	M	Se	<	0.019000	M	Zn	0.003461	
M	Al	< 0.024000	M	Fe	0.050905	M	Nb	<	0.000590	O	Si	0.075340	M	Zr	<	0.001200	
i	As	<	M	Ga	<	0.000590	M	Nd	<	0.000590	M	Sm	<	0.000590			
M	Au	< 0.004100	M	Gd	<	0.000590	O	Ni	0.427608	M	Sn	<	0.001200				
M	B	< 0.031000	M	Ge	<	0.003000	M	Os	<	0.000590	O	Sr	<	0.000260			
M	Ba	< 0.000590	M	Hf	<	0.000590	n	P	<		M	Ta	<	0.001200			
O	Be	< 0.001300	M	Hg	<	0.001800	M	Pb	0.003257	M	Tb	<	0.000590				
M	Bi	< 0.003000	M	Ho	<	0.000590	M	Pd	<	0.000590	M	Te	<	0.005300			
O	Ca	0.010588	M	In	<	0.001200	M	Pr	<	0.000590	M	Th	<	0.000590			
M	Cd	< 0.004700	M	Ir	<	0.001200	M	Pt	<	0.002400	M	Ti	<	0.014000			
M	Ce	< 0.000590	O	K	0.008144	M	Rb	<	0.000590	M	Tl	0.002647					
s	Co	<	M	La	<	0.000590	M	Re	<	0.000590	M	Tm	<	0.000590			
M	Cr	< 0.021000	O	Li	<	0.000130	M	Rh	<	0.000590	M	U	<	0.000590			
M	Cs	< 0.002400	M	Lu	<	0.000590	M	Ru	<	0.007100	O	V	<	0.000880			
M	Cu	0.189369	O	Mg	0.001893	n	S	<		M	W	<	0.000590				
M	Dy	< 0.000590	M	Mn	<	0.001800	M	Sb	<	0.003600	M	Y	<	0.000590			
M	Er	< 0.000590	M	Mo	<	0.002400	O	Sc	<	0.001600	M	Yb	<	0.000590			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 58.93 +2 6 $Co(H_2O)_6^{2+}$

Chemical Compatibility -Stable in HCl, HNO_3, H_2SO_4 ,HF, H_3PO_4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO_3 / LDPE container.

Co Containing Samples (Preparation and Solution) - Metal (soluble in HNO_3); Oxides (Soluble in HCl); Ores (dissolve in HCl / HNO_3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 59 amu	2 ppt	n/a	42Ca16O1H , 40Ar18O1H , 36Ar23Na, 43Ca16O, 24Mg35Cl
ICP-OES 228.616 nm	0.01/0.001 µg/mL	1	
ICP-OES 237.862 nm	0.01/0.002 µg/mL	1	W, Re, Al, Ta
ICP-OES 238.892 nm	0.01/0.002 µg/mL	1	Fe, W, Ta

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 04, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **August 04, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGAG10
Lot Number:	S2-AG712977
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Silver
Starting Material:	Ag Shot
Starting Material Lot#:	2289
Starting Material Purity:	99.9951%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10051 ± 30 µg/mL

Density: 1.056 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1	**10051 ± 52 µg/mL** ICP Assay NIST SRM 3151 Lot Number: 160729
Assay Method #2	**10051 ± 19 µg/mL** Volhard NIST SRM 999c Lot Number: 999c
Assay Method #3	**10049 ± 31 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

s	Ag	<		M	Eu	<	0.000260	O	Na		0.003811	M	Se	<	0.003900	O	Zn		0.048146
M	Al		0.002688	O	Fe		0.006419	M	Nb	<	0.000260	O	Si		0.005215	M	Zr	<	0.000260
M	As	<	0.001100	M	Ga	<	0.000260	M	Nd	<	0.000260	M	Sm	<	0.000260				
M	Au	<	0.000260	M	Gd	<	0.000260	O	Ni		0.001765	M	Sn		0.020060				
O	B	<	0.004300	M	Ge	<	0.002300	M	Os	<	0.001100	O	Sr	<	0.000110				
M	Ba	<	0.000520	M	Hf	<	0.000260	O	P	<	0.017000	M	Ta	<	0.000260				
O	Be	<	0.001100	M	Hg	<	0.000770	M	Pb	<	0.003600	M	Tb	<	0.000260				
M	Bi		0.004814	M	Ho	<	0.000260	M	Pd		0.044134	M	Te	<	0.009000				
O	Ca		0.005215	M	In		0.003691	M	Pr	<	0.000260	M	Th	<	0.000260				
M	Cd	<	0.000260	M	Ir	<	0.000520	M	Pt	<	0.001100	O	Ti	<	0.000440				
M	Ce	<	0.002100	O	K	<	0.008700	M	Rb	<	0.001100	M	Tl	<	0.004100				
O	Co	<	0.000330	M	La	<	0.000260	M	Re	<	0.000260	M	Tm	<	0.000260				
O	Cr	<	0.002500	O	Li	<	0.000110	M	Rh	<	0.000520	M	U	<	0.000260				
M	Cs	<	0.002600	M	Lu	<	0.000260	M	Ru	<	0.000260	M	V	<	0.000260				
O	Cu		0.357085	O	Mg		0.001203	O	S	<	0.017000	M	W	<	0.000260				
M	Dy	<	0.000260	O	Mn	<	0.000220	M	Sb	<	0.014000	M	Y	<	0.000260				
M	Er	<	0.000260	M	Mo	<	0.000260	O	Sc	<	0.000220	M	Yb	<	0.000260				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 107.87 +1 6 $Ag(H_2O)_6^+$

Chemical Compatibility -Stable in HNO_3, and HF. Avoid basic media. Ag forms more insoluble salts than any other metal. It also is subject to photochemical reduction to the metal in HCl media although 10 µg/mL solutions in 10% HCl [$AgCl_{x1-x}$] are commonly used in the analytical laboratory. The most common solubility problems exist with arsenate, arsenite , bromide, chloride, iodide, carbonate , chromate, cyanide, iodate, oxalate, oxide, sulfate, sulfide, tartrate, and thiocyanate in aqueous media. The addition of nitric acid renders many of these salts soluble.

Stability - 2-100 ppb levels stable for 75+ days when mixed with equivalent levels of all other elements including the precious metals (where chloride is present) when in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO_3 / LDPE container.

Ag Containing Samples (Preparation and Solution) -Metal (Soluble in HNO_3); Oxides (Soluble in HNO_3); Ores (Digestion with conc. HNO_3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 107 amu	1 ppt	N/A	91Zr16O
ICP-OES 243.779 nm	0.12/0.01 µg/mL	1	Mn, Th, Ni, Rh
ICP-OES 328.068 nm	0.007/0.0007 µg/mL	1	Ce, Rh, V
ICP-OES 338.289 nm	0.013/0.001 µg/mL	1	Ce, Cr, Th

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 28, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **December 28, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Supervisor, Product Documentation

Certificate Approved By:

Michael Booth
Director, Technical

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCR(3)10
Lot Number:	S2-CR709784
Matrix:	10% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Chromium
Starting Material:	Cr Metal
Starting Material Lot#:	2328
Starting Material Purity:	99.9951%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10027 ± 41 µg/mL

Density: 1.072 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10027 ± 40 µg/mL**
ICP Assay NIST SRM 3112a Lot Number: 170630

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001700	M	Eu	<	0.003400	O	Na		0.090372	M	Se	<	0.012000	O	Zn	<	0.006100
M	Al		0.034916	O	Fe		0.246471	M	Nb	<	0.017000	n	Si	<		M	Zr	<	0.007800
M	As	<	0.028000	O	Ga	<	0.013000	M	Nd	<	0.013000	M	Sm	<	0.006900				
M	Au	<	0.001700	M	Gd	<	0.000560	M	Ni		0.016020	M	Sn		0.006983				
O	B	<	0.025000	O	Ge	<	0.014000	M	Os	<	0.000560	M	Sr		0.006367				
M	Ba	<	0.008900	M	Hf	<	0.000560	i	P	<		M	Ta	<	0.000560				
M	Be	<	0.013000	M	Hg	<	0.001700	M	Pb		0.010064	M	Tb	<	0.000560				
M	Bi	<	0.002300	M	Ho	<	0.000560	M	Pd	<	0.021000	M	Te	<	0.010000				
O	Ca		0.075995	M	In	<	0.000560	M	Pr	<	0.001700	M	Th	<	0.000560				
M	Cd	<	0.000560	M	Ir	<	0.000560	M	Pt	<	0.001200	O	Ti		0.013555				
M	Ce	<	0.001200	O	K		0.043132	i	Rb	<		M	Tl	<	0.000560				
M	Co	<	0.002600	M	La	<	0.001200	M	Re	<	0.001200	O	Tm	<	0.013000				
s	Cr	<		O	Li		0.000390	M	Rh	<	0.095000	M	U	<	0.000560				
M	Cs	<	0.007800	M	Lu	<	0.000560	M	Ru	<	0.087000	O	V		0.014993				
O	Cu		0.007599	O	Mg		0.000883	i	S	<		M	W	<	0.049000				
M	Dy	<	0.000560	M	Mn		0.008626	M	Sb	<	0.003400	M	Y	<	0.001700				
M	Er	<	0.019000	M	Mo	<	0.032000	M	Sc		0.003080	M	Yb	<	0.000560				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 52.00 +3 6 $Cr(H_2O)_6^{3+}$

Chemical Compatibility -Stable in HCl, HNO_3, H_2SO_4, HF, H_3PO_4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO_3 / LDPE container.

Cr3 Containing Samples (Preparation and Solution) -Metal (soluble in HCl); Oxides/Ores (Chrome ore/oxides are very difficult to dissolve. The following procedures [A-D] are commonly used: A. Fusion with $KHSO_4$ and extraction with hot KCl. The residue fused with Na_2CO_3 and $KClO_3$, 3:1. B. Fusion with $NaKSO_4$ and NaF 2:1, C. Fusion with magnesia or lime and sodium or potassium carbonates, 4:1. D. Fusion with Na_2O_2 or NaOH and KNO_3 or NaOH and Na_2O_2. Nickel, iron, copper, or silver crucibles should be used for D. Platinum may be used for A, <, C); Organic Matrices (ash at 4500C followed by one of the fusion methods above or sulfuric/hydrogen peroxide acid digestions may be applicable to non oxide containing samples).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 52 amu	40 ppt	N/A	36S16O, 36Ar16O - The 50Cr, 53Cr, 54Cr lines suffer from many more potential interferences from sulfur, chlorine and argon compounds of oxygen, nitrogen and carbon.
ICP-OES 205.552 nm	0.006/0.0008 µg/mL	1	Os
ICP-OES 276.654 nm	0.01/0.001 µg/mL	1	Cu, Ta, V
ICP-OES 284.325 nm	0.008/0.0007 µg/mL	1	

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

October 26, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **October 26, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGNI10
Lot Number:	P2-NI686384
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Nickel
Starting Material:	Ni Metal
Starting Material Lot#:	2277 and 2282
Starting Material Purity:	99.9992%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9979 ± 30 µg/mL

Density: 1.038 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9971 ± 54 µg/mL**
ICP Assay NIST SRM 3136 Lot Number: 120619

Assay Method #2 **9970 ± 32 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **9993 ± 33 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag		0.002606	M	Eu	<	0.001100	O	Na		0.004965	O	Se	<	0.067000	M	Zn		0.006578
M	Al	<	0.013000	O	Fe		0.018618	M	Nb	<	0.001100	O	Si		0.010923	M	Zr	<	0.001100
O	As	<	0.067000	M	Ga	<	0.001100	M	Nd	<	0.001100	M	Sm	<	0.001100				
M	Au	<	0.002100	M	Gd	<	0.001100	s	Ni	<		M	Sn	<	0.016000				
M	B	<	0.017000	M	Ge	<	0.004200	M	Os		0.002110	O	Sr	<	0.000940				
M	Ba	<	0.001100	M	Hf	<	0.001100	i	P	<		M	Ta	<	0.001100				
O	Be	<	0.000410	M	Hg		0.014895	M	Pb		0.006578	M	Tb	<	0.001100				
M	Bi	<	0.004200	M	Ho	<	0.001100	M	Pd	<	0.001100	M	Te	<	0.015000				
O	Ca		0.003351	M	In	<	0.001100	M	Pr	<	0.001100	M	Th	<	0.001100				
M	Cd		0.001365	M	Ir		0.004716	M	Pt	<	0.001100	M	Ti	<	0.004200				
M	Ce	<	0.001100	O	K		0.004716	M	Rb	<	0.001100	M	Tl	<	0.001100				
O	Co		0.017377	M	La	<	0.001100	M	Re		0.001737	M	Tm	<	0.001100				
O	Cr	<	0.006700	O	Li	<	0.000140	M	Rh	<	0.006300	M	U	<	0.001100				
M	Cs	<	0.007300	M	Lu	<	0.001100	M	Ru	<	0.019000	M	V	<	0.002100				
M	Cu		0.004096	O	Mg		0.000372	i	S	<		M	W	<	0.006300				
M	Dy	<	0.001100	O	Mn	<	0.001900	M	Sb		0.005833	O	Y	<	0.000540				
M	Er	<	0.001100	M	Mo	<	0.008400	M	Sc	<	0.002100	M	Yb	<	0.001100				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 58.69 +2 6 Ni(H2O)62+
Chemical Compatibility -Stable in HCl, HNO3, H2SO4 ,HF, H3PO4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.
Ni Containing Samples (Preparation and Solution) -Metal (Soluble in HNO3); Oxides (Soluble in HCl); Ores (Dissolve in HCl / HNO3).
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 60 amu	100 ppt	n/a	43Ca16O1H , 44Ca16O, 23Na37Cl
ICP-OES 221.647 nm	0.01 / 0.0009 µg/mL	1	Si
ICP-OES 231.604 nm	0.02 / 0.002 µg/mL	1	Sb, Ta, Co
ICP-OES 232.003 nm	0.02 / 0.006 µg/mL	1	Cr, Re, Os, Nb, Ag, Pt, Fe

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 02, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **December 02, 2023**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

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Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGV10
Lot Number:	S2-V711005
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Vanadium
Starting Material:	Vanadium Pentoxide
Starting Material Lot#:	1782
Starting Material Purity:	99.9877%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10014 ± 30 µg/mL

Density: 1.104 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10017 ± 42 µg/mL**
ICP Assay NIST SRM 3165 Lot Number: 160906

Assay Method #2 **10013 ± 30 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000110	M	Eu	<	0.000110	O	Na		0.120000	M	Se	<	0.009400	M	Zn		0.009400
O	Al		0.120000	O	Fe		0.460000	M	Nb	<	0.001300	O	Si		0.270000	M	Zr	<	0.002900
M	As	<	0.000210	M	Ga	<	0.009300	M	Nd	<	0.000610	M	Sm	<	0.000110				
M	Au	<	0.004700	M	Gd	<	0.000110	M	Ni		0.012000	M	Sn		0.003900				
M	B		0.051000	M	Ge	<	0.000410	M	Os	<	0.000110	O	Sr		0.007100				
M	Ba		0.003600	M	Hf	<	0.000110	O	P	<	0.034000	M	Ta	<	0.000110				
O	Be	<	0.000560	M	Hg	<	0.000410	M	Pb		0.001400	M	Tb	<	0.000110				
M	Bi	<	0.000210	M	Ho	<	0.000110	M	Pd	<	0.000410	M	Te	<	0.000110				
O	Ca		0.730000	M	In	<	0.000110	M	Pr	<	0.000110	M	Th	<	0.000210				
M	Cd	<	0.000610	M	Ir	<	0.000110	M	Pt	<	0.000110	M	Ti		0.017000				
M	Ce	<	0.000610	M	K		0.052000	M	Rb	<	0.000310	M	Tl	<	0.000110				
M	Co	<	0.001300	M	La	<	0.000410	M	Re		0.001700	M	Tm	<	0.000110				
O	Cr		0.170000	M	Li	<	0.000810	M	Rh	<	0.000110	M	U	<	0.000410				
M	Cs		0.005600	M	Lu	<	0.000110	M	Ru	<	0.000110	s	V	<					
M	Cu	<	0.001300	M	Mg		0.053000	i	S	<		M	W		0.002000				
M	Dy	<	0.000110	M	Mn		0.007900	M	Sb		0.078000	M	Y	<	0.000110				
M	Er	<	0.000110	M	Mo		0.094000	M	Sc	<	0.000410	M	Yb	<	0.000110				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 50.94 +5 6 H2V10O284-

Chemical Compatibility -Soluble in HCl, HNO3, H2SO4, HF, H3PO4 and strong basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.

V Containing Samples (Preparation and Solution) -Metal (Fusion with NaOH or KOH in Ni0 or Na2CO3 / KNO3); Oxides (V2O3 - use HCl, V2O4 - use HCl or HNO3, V2O5 - use concentrated acids); Ores (Na2CO3 / KNO3 in Pt0 caution - nitrates attack Pto followed by water extraction of fuseate); Organic Matrices (Ash at 450 EC followed by dissolving according to V2O5 above) .

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 51 amu	4 ppt	N/A	34S16O1H, 35Cl16O, 38Ar13C, 36Ar15N, 36Ar14N1H, 37Cl14N,36S15N, 33S18O, 34S17O, 102Ru+2,02Pd+2
ICP-OES 290.882 nm	0.008 / 0.0008 µg/mL	1	Hf, Nb
ICP-OES 292.402 nm	0.006 / 0.001 µg/mL	1	Th
ICP-OES 309.311 nm	0.005 / 0.001 µg/mL	1	Mg, U, Th

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 28, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **December 28, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

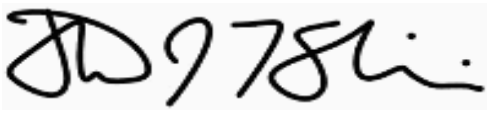
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGAL10
Lot Number:	T2-AL716102
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Aluminum
Starting Material:	Aluminum Nitrate Nonahydrate
Starting Material Lot#:	2460
Starting Material Purity:	99.9938%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10049 ± 31 µg/mL

Density: 1.087 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10059 ± 40 µg/mL**
ICP Assay NIST SRM 3101a Lot Number: 140903

Assay Method #2 **10044 ± 26 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10049 ± 35 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.002100	M	Eu	<	0.002100	O	Na		0.352819	M	Se	<	0.005200	M	Zn	0.006018
s	Al	<		O	Fe		0.074714	M	Nb	<	0.000520	O	Si		0.017848	O	Zr	0.004358
M	As		0.008716	O	Ga		0.112072	M	Nd	<	0.000520	M	Sm	<	0.000520			
M	Au	<	0.008400	M	Gd	<	0.001100	O	Ni	<	0.006000	M	Sn		0.000747			
O	B	<	0.014000	M	Ge	<	0.005200	M	Os	<	0.000650	O	Sr		0.000518			
O	Ba		0.012867	M	Hf	<	0.004100	n	P	<		M	Ta	<	0.000520			
O	Be	<	0.000270	M	Hg	<	0.002000	M	Pb		0.002282	M	Tb	<	0.000520			
M	Bi		0.001930	M	Ho	<	0.000520	M	Pd	<	0.000520	M	Te	<	0.001100			
O	Ca		0.076790	M	In	<	0.002100	M	Pr	<	0.000520	M	Th	<	0.000520			
M	Cd	<	0.000520	M	Ir	<	0.000650	M	Pt	<	0.000520	O	Ti		0.001930			
M	Ce	<	0.001100	O	K		0.043583	M	Rb	<	0.000520	M	Tl	<	0.000520			
O	Co	<	0.005400	M	La	<	0.002100	M	Re	<	0.000520	M	Tm	<	0.000520			
O	Cr		0.006018	O	Li		0.000112	M	Rh	<	0.000520	M	U	<	0.000520			
M	Cs		0.000643	M	Lu	<	0.000520	M	Ru	<	0.002000	M	V		0.001286			
O	Cu	<	0.008300	O	Mg		0.068488	i	S	<		M	W	<	0.009800			
M	Dy	<	0.002100	O	Mn		0.000913	M	Sb	<	0.003100	M	Y	<	0.001100			
M	Er	<	0.000520	M	Mo		0.005396	O	Sc	<	0.000950	M	Yb	<	0.000520			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 26.98 +3 6 Al(H2O)6+3
Chemical Compatibility -Soluble in HCl, HNO3, v F and v 2SO4. Avoid neutral media. Soluble in strongly basic NaOH forming the Al(OH)4(H2O)21- species. Stable with most metals and inorganic anions. The phosphate is insoluble in water and only slightly soluble in acid.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.
Al Containing Samples (Preparation and Solution) -Metal (Best dissolved in HCl / HNO3); a- Al2O3 (Na2CO3 fusion in Pt0);
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 27 amu	30 ppt	N/A	12C15N, 13C14N, 1H12C14N, 11B16O, 54Cr2+, 54Fe2+
ICP-OES 167.078 nm	0.1/0.009 µg/mL	1	Fe
ICP-OES 394.401 nm	0.05/0.006 µg/mL	1	U, Ce
ICP-OES 396.152 nm	0.03/0.006 µg/mL	1	Mo, Zr, Ce

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 22, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **March 22, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

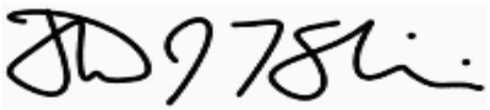
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGK10
Lot Number:	S2-K711973
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Potassium
Starting Material:	KNO3
Starting Material Lot#:	2313
Starting Material Purity:	99.9971%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9992 ± 30 µg/mL

Density: 1.024 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1	**9987 ± 24 µg/mL** Gravimetric NIST SRM Lot Number: See Sec. 4.2
Assay Method #2	**10004 ± 84 µg/mL** ICP Assay NIST SRM 3141a Lot Number: 140813
Assay Method #3	**10007 ± 45 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001400	M	Eu	<	0.000660	O	Na		0.246220	M	Se	<	0.007900	O	Zn	0.018056
O	Al		0.001592	O	Fe		0.005909	M	Nb	<	0.000660	O	Si		0.011490	O	Zr	< 0.001600
M	As	<	0.005300	M	Ga	<	0.000660	M	Nd	<	0.000660	M	Sm	<	0.000660			
M	Au	<	0.002000	M	Gd	<	0.000660	O	Ni	<	0.004900	M	Sn	<	0.000660			
O	B	<	0.005600	M	Ge	<	0.002000	M	Os	<	0.003300	O	Sr		0.000055			
O	Ba	<	0.000860	M	Hf	<	0.000660	O	P	<	0.032000	M	Ta	<	0.000660			
O	Be	<	0.000082	M	Hg	<	0.002000	M	Pb	<	0.002300	M	Tb	<	0.000660			
M	Bi	<	0.006600	M	Ho	<	0.000660	M	Pd	<	0.000660	M	Te	<	0.017000			
O	Ca		0.031187	M	In	<	0.000660	M	Pr	<	0.000660	M	Th	<	0.000660			
O	Cd	<	0.000450	M	Ir	<	0.000660	M	Pt	<	0.002700	M	Ti	<	0.000660			
M	Ce	<	0.000660	s	K	<		M	Rb		0.476026	M	Tl	<	0.000660			
O	Co	<	0.000780	M	La	<	0.000660	M	Re	<	0.000660	M	Tm	<	0.000660			
O	Cr		0.000541	O	Li	<	0.000084	M	Rh	<	0.000660	M	U	<	0.000660			
M	Cs	<	0.000660	M	Lu	<	0.000660	M	Ru	<	0.000660	O	V	<	0.001100			
M	Cu	<	0.002700	O	Mg		0.006237	O	S		0.027905	M	W	<	0.000660			
M	Dy	<	0.000660	O	Mn		0.000476	M	Sb	<	0.000660	M	Y	<	0.000660			
M	Er	<	0.000660	M	Mo	<	0.000660	O	Sc	<	0.000340	O	Yb	<	0.000270			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 39.10 +1 (6) K+(aq)
Chemical Compatibility -Soluble in HCl, HNO3, H2SO4 and HF aqueous matrices. Avoid use of HClO4 due to insolubility of the perchlorate. Stable with all metals and inorganic anions except ClO4-.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.
K Containing Samples (Preparation and Solution) - Metal (Dissolves very rapidly in water); Ores (Sodium carbonate fusion in Pt0 followed by HCl dissolution-blank levels of K in sodium carbonate critical); Organic Matrices (Sulfuric/peroxide digestion)
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 39 amu	10 ppt	n/a	38ArH, 23Na16O, 78Se
ICP-OES 404.721 nm	1.1 / 0.05 µg/mL	1	U, Ce
ICP-OES 766.490 nm	0.4 / 0.001 µg/mL	1	2nd order radiation from R.E.s on some optical designs
ICP-OES 771.531 nm	1.0 / 0.03 µg/mL	1	2nd order radiation from R.E.s on some optical designs

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 10, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **December 10, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

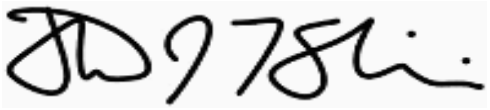
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES™
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Certificate of Analysis

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Christiansburg, VA 24073 USA
inorganicventures.com

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1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGMG10
Lot Number:	S2-MG704239
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Magnesium
Starting Material:	Magnesium Metal
Starting Material Lot#:	2168
Starting Material Purity:	99.9984%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10053 ± 30 µg/mL

Density: 1.053 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10022 ± 62 µg/mL**
ICP Assay NIST SRM 3131a Lot Number: 140110

Assay Method #2 **10078 ± 26 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10033 ± 26 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

O	Ag		0.002106	M	Eu	<	0.000910	O	Na		0.071075	O	Se	<	0.048000	O	Zn		0.003299
M	Al		0.003553	M	Fe		0.002538	M	Nb	<	0.000460	O	Si	<	0.032000	O	Zr	<	0.002700
M	As	<	0.001400	M	Ga	<	0.000460	M	Nd	<	0.000910	M	Sm	<	0.000460				
M	Au	<	0.001400	M	Gd	<	0.000460	O	Ni	<	0.001600	M	Sn	<	0.002300				
O	B		0.006853	M	Ge	<	0.001400	M	Os	<	0.000460	O	Sr		0.000279				
O	Ba		0.000964	M	Hf	<	0.000460	O	P		0.015230	M	Ta	<	0.000460				
O	Be	<	0.000120	M	Hg	<	0.000460	M	Pb	<	0.000460	M	Tb	<	0.000460				
M	Bi	<	0.000460	M	Ho	<	0.000460	M	Pd	<	0.003200	M	Te	<	0.007300				
O	Ca		0.053306	M	In	<	0.000460	M	Pr	<	0.000460	M	Th	<	0.000460				
O	Cd	<	0.000360	M	Ir	<	0.000460	M	Pt	<	0.001900	O	Ti	<	0.001700				
M	Ce	<	0.002300	M	K		0.048229	M	Rb		0.002411	M	Tl		0.003046				
M	Co	<	0.000910	M	La	<	0.002800	M	Re	<	0.000460	M	Tm	<	0.000460				
M	Cr	<	0.002300	O	Li		0.027922	M	Rh	<	0.000460	M	U	<	0.000460				
M	Cs		0.001040	M	Lu	<	0.000460	M	Ru	<	0.000460	M	V	<	0.000460				
O	Cu	<	0.003000	s	Mg	<		O	S	<	0.190000	M	W	<	0.000460				
M	Dy	<	0.000460	O	Mn		0.015230	M	Sb		0.020814	O	Y	<	0.000720				
M	Er	<	0.000460	M	Mo	<	0.000910	O	Sc	<	0.000480	M	Yb	<	0.000460				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 24.31 +2 6 Mg(H2O)6+2
Chemical Compatibility -Soluble in HCl, HNO3, and H2SO4 avoid HF, H3PO4 and neutral to basic media. Stable with most metals and inorganic anions forming insoluble silicates, carbonates, hydroxides, oxides, and tungstates in neutral and slightly acidic media.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-10% HNO3 / LDPE container.
Mg Containing Samples (Preparation and Solution) -Metal (Best dissolved in diluted HNO3); Oxide (Readily soluble in above compatible aqueous acidic solutions); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Sulfuric / peroxide digestion or nitric / sulfuric / perchloric acid decomposition, or dry ash and dissolution in dilute HCl).
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 24 amu	42 ppt	n/a	7Li17O, 48Ti+2 , 48Ca+2
ICP-OES 279.553 nm	0.0002 / 0.00003 µg/mL	1	Th
ICP-OES 280.270 nm	0.0003 / 0.00005 µg/mL	1	U, V
ICP-OES 285.213 nm	0.002 / 0.00003 µg/mL	1	U, Hf, Cr, Zr

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 23, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **April 23, 2025**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

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1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCA10
Lot Number:	T2-CA716103
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Calcium
Starting Material:	CaCO3
Starting Material Lot#:	2472
Starting Material Purity:	99.9950%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10005 ± 30 µg/mL

Density: 1.039 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10005 ± 45 µg/mL**
ICP Assay NIST SRM 3109a Lot Number: 130213

Assay Method #2 **10005 ± 25 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10005 ± 31 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001200	M	Eu	<	0.001200	O	Na		0.006112	M	Se	<	0.024000	M	Zn		0.005362
M	Al		0.065419	O	Fe		0.009115	M	Nb	<	0.001200	O	Si		0.139417	O	Zr	<	0.006700
O	As	<	0.013000	M	Ga	<	0.015000	M	Nd	<	0.020000	M	Sm	<	0.001200				
M	Au	<	0.017000	M	Gd	<	0.004800	O	Ni		0.000793	M	Sn	<	0.003600				
O	B		0.001179	M	Ge	<	0.003600	M	Os	<	0.001200	M	Sr		0.081505				
O	Ba		0.002788	M	Hf	<	0.001200	O	P	<	0.041000	M	Ta	<	0.001200				
O	Be	<	0.000410	M	Hg	<	0.004800	M	Pb		0.001608	M	Tb	<	0.001200				
M	Bi		0.001608	M	Ho	<	0.001200	M	Pd	<	0.001200	M	Te	<	0.003600				
s	Ca	<		M	In	<	0.001200	M	Pr		0.000257	M	Th	<	0.001200				
O	Cd	<	0.001300	M	Ir	<	0.001200	M	Pt	<	0.003600	O	Ti	<	0.001900				
M	Ce		0.001029	O	K		0.009759	M	Rb	<	0.001200	M	Tl	<	0.001200				
O	Co		0.000418	M	La		0.001823	M	Re	<	0.001200	M	Tm	<	0.001200				
O	Cr		0.003324	O	Li	<	0.007300	M	Rh	<	0.001200	M	U		0.002144				
M	Cs		0.007399	M	Lu		0.000128	M	Ru	<	0.001200	M	V		0.001286				
O	Cu	<	0.011000	M	Mg		1.286934	O	S		0.055767	O	W	<	0.024000				
M	Dy	<	0.002400	O	Mn		0.004611	M	Sb	<	0.009600	O	Y		0.000536				
M	Er	<	0.002400	M	Mo		0.003539	O	Sc	<	0.001400	M	Yb	<	0.001200				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 40.08 +2 6 Ca(H2O)6+2
Chemical Compatibility - Soluble in HCl and HNO3. Avoid H2SO4, vF, v3PO4 and neutral to basic media. Stable with most metals and inorganic anions forming insoluble silicate, carbonate, hydroxide, oxide, fluoride, sulfate, oxalate, chromate, arsenate, and tungstate in neutral aqueous media.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-10% HNO3 / LDPE container.
Ca Containing Samples)Preparation and Solution) -Metal (best dissolved in diluted HNO3); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (dry ash and dissolution in dilute HCl. Do not heat when dissolving to avoid precipitation of SiO2). The oxide, hydroxide, carbonate, phosphate, and fluoride of calcium are soluble in % levels of HCl or HNO3. The sulfates (gypsum, anhydrite, etc.), certain silicates, and complex compounds require fusion with Na2CO3 followed by HCl / water dissolution. Note that contamination is a very real problem when analyzing for trace levels.
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 44 amu	1200 ppt	n/a	16O212C, 28Si16O, 88Sr
ICP-OES 393.366 nm	0.0002 / 0.00004 µg/mL	1	U, Ce
ICP-OES 396.847 nm	0.0005 / 0.00006 µg/mL	1	Th
ICP-OES 422.673 nm	0.01 / 0.001 µg/mL	1	Ge

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 14, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **March 14, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

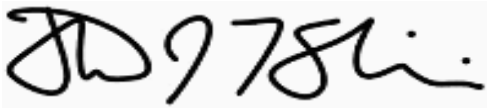
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGNA10
Lot Number:	T2-NA717221
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Sodium
Starting Material:	Na2CO3
Starting Material Lot#:	2358 and 2453
Starting Material Purity:	99.9977%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9977 ± 30 µg/mL

Density: 1.033 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9974 ± 18 µg/mL**
Gravimetric NIST SRM Lot Number: See Sec. 4.2

Assay Method #2 **9977 ± 34 µg/mL**
ICP Assay NIST SRM 3152a Lot Number: 200413

Assay Method #3 **9987 ± 31 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000930	M	Eu	<	0.000930	s	Na	<		M	Se	<	0.003800	O	Zn	0.000138
M	Al		0.004409	O	Fe		0.002393	M	Nb	<	0.000930	O	Si		0.056696	O	Zr	< 0.003200
O	As	<	0.023000	M	Ga	<	0.000930	M	Nd	<	0.000930	M	Sm	<	0.000930			
O	Au	<	0.004100	M	Gd	<	0.000930	O	Ni	<	0.003000	M	Sn	<	0.002800			
O	B		0.001385	M	Ge	<	0.004700	M	Os	<	0.000930	O	Sr		0.000251			
M	Ba		0.004031	M	Hf	<	0.000930	O	P		0.010205	M	Ta	<	0.000930			
O	Be	<	0.000130	M	Hg	<	0.000930	M	Pb	<	0.000930	M	Tb	<	0.000930			
M	Bi	<	0.000930	M	Ho	<	0.000930	M	Pd	<	0.000930	M	Te	<	0.001900			
O	Ca		0.176388	M	In	<	0.000930	M	Pr	<	0.000930	M	Th		0.000352			
O	Cd	<	0.000860	M	Ir	<	0.000930	M	Pt	<	0.000930	O	Ti		0.000592			
M	Ce	<	0.001900	O	K		0.302380	M	Rb	<	0.000930	M	Tl	<	0.000930			
O	Co	<	0.001800	O	La	<	0.002100	M	Re	<	0.000930	M	Tm	<	0.000930			
M	Cr	<	0.002800	O	Li		0.000031	M	Rh	<	0.000930	M	U	<	0.000930			
M	Cs	<	0.000930	M	Lu	<	0.000930	M	Ru	<	0.001900	O	V	<	0.001600			
O	Cu	<	0.003900	O	Mg		0.026458	O	S		0.040317	O	W	<	0.028000			
M	Dy	<	0.000930	O	Mn	<	0.000740	M	Sb	<	0.000930	O	Y	<	0.000860			
M	Er	<	0.000930	O	Mo	<	0.003600	O	Sc	<	0.000610	O	Yb	<	0.000250			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 22.99 +1 (6) Na+(aq) largely ionic in nature

Chemical Compatibility -Soluble in HCl, HNO3, H2SO4 and HF aqueous matrices. Stable with all metals and inorganic anions.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.

Na Containing Samples (Preparation and Solution) - Metal (Dissolves very rapidly in water); Ores (Lithium carbonate fusion in graphite crucible followed by HCl dissolution - blank levels of Na in lithium carbonate critical); Organic Matrices (Sulfuric / peroxide digestion or nitric/sulfuric/perchloric acid decomposition).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 23 amu	310 ppt	n/a	46Ti+2 , 46Ca+2
ICP-OES 330.237 nm	2.0 / 0.09 µg/mL	1	Pd, Zn
ICP-OES 588.995 nm	0.03 / 0.006 µg/mL	1	2nd order radiation from R.E.s on some optical designs
ICP-OES 589.595 nm	0.07 / 0.00009 µg/mL	1	2nd order radiation from R.E.s on some optical designs

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 20, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **April 20, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

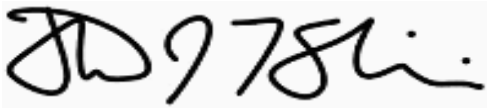
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Christiansburg, VA 24073 USA
inorganicventures.com

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info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGU1
Lot Number:	S2-U707914
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Uranium
Starting Material:	Uranyl Nitrate Hexahydrate
Starting Material Lot#:	P2-2322
Starting Material Purity:	99.9997%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 999 ± 5 µg/mL

Density: 1.010 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **998 ± 5 µg/mL**
ICP Assay NIST SRM 3164 Lot Number: 080521

Assay Method #2 **1001 ± 6 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope	Atom %
Uranium 238U	99.8 ± 0.1
Uranium 235U	0.19 ± 0.05

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000270	M	Eu	<	0.000270	M	Na	<	0.011000	M	Se	<	0.009300	M	Zn	0.002358
M	Al	<	0.011000	M	Fe		0.003222	M	Nb	<	0.000270	M	Si	<	0.160000	M	Zr	< 0.001100
M	As	<	0.002400	M	Ga	<	0.000270	M	Nd	<	0.000270	M	Sm	<	0.000270			
M	Au	<	0.000270	M	Gd	<	0.000270	M	Ni	<	0.020000	M	Sn	<	0.011000			
M	B	<	0.000270	M	Ge	<	0.000800	M	Os	<	0.001900	M	Sr	<	0.000270			
M	Ba	<	0.003800	M	Hf	<	0.000270	i	P	<		M	Ta	<	0.000270			
M	Be	<	0.000270	M	Hg	<	0.000540	M	Pb	<	0.002200	M	Tb	<	0.000270			
M	Bi	<	0.000270	M	Ho	<	0.000270	M	Pd	<	0.000540	M	Te	<	0.003800			
M	Ca	<	0.140000	M	In	<	0.000270	M	Pr	<	0.000270	M	Th		0.000129			
M	Cd	<	0.000270	M	Ir	<	0.000270	M	Pt	<	0.000270	M	Ti	<	0.002700			
M	Ce	<	0.000540	O	K	<	0.250000	M	Rb	<	0.000800	M	Tl	<	0.000270			
M	Co	<	0.000800	M	La		0.000117	M	Re	<	0.064000	M	Tm	<	0.000270			
M	Cr		0.000943	M	Li	<	0.003000	M	Rh	<	0.000270	s	U	<				
M	Cs		0.000106	M	Lu	<	0.000270	M	Ru	<	0.000540	M	V	<	0.000540			
M	Cu	<	0.001100	M	Mg	<	0.003000	i	S	<		M	W	<	0.000540			
M	Dy	<	0.000270	M	Mn	<	0.006900	M	Sb	<	0.000270	M	Y	<	0.000270			
M	Er	<	0.000270	M	Mo	<	0.006400	M	Sc	<	0.000540	M	Yb	<	0.000270			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 238.03 +6 8 UO22+(uranyl)
Chemical Compatibility - Soluble in HCl and HNO3. Avoid H3PO4. H2SO4 and HF matrices should not be a problem depending upon [U]. Although the UO22+ ion is distinctly basic, any U+4 will precipitate in basic media. UO22+salts are generally soluble in water and UO22+ is stable with most metals and inorganic anions. The uranyl phosphate is insoluble in water. UF4 and UF6 are water soluble.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.
U Containing Samples (Preparation and Solution) -Metal (Dissolves rapidly in HCl and HNO3); Oxide (Soluble in HNO3); Ores (Digest for 1-2 hours with 1 gram of ore to 30 mL 1:1 HNO3. Silica insolubles are removed by filtration after bringing the sample to fumes with conc. H2SO4.)
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 238 amu	2 ppt	N/A	206Pb16O2
ICP-OES 263.553 nm	0.3 / 0.01 µg/mL	1	Ce, Ir, Th, Rh, W, Zr, Ta, Ti, V, Hf, Fe, Re, Ru
ICP-OES 367.007 nm	0.3 / 0.02 µg/mL	1	Th, Ce
ICP-OES 385.958 nm	0.3 / 0.01 µg/mL	1	Th, Fe

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 28, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **August 28, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	AR-ICVMS-2
Lot Number:	T2-MEB719895
Matrix:	3% (v/v) HNO3 tr. HF
Value / Analyte(s):	2.5 µg/mL ea: Molybdenum, Antimony

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	**2.499 ± 0.015 µg/mL**	**Molybdenum, Mo**	**2.500 ± 0.017 µg/mL**

Density: 1.014 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Mo	ICP Assay	3134	130418
Mo	Calculated		See Sec. 4.2
Sb	ICP Assay	3102a	140911
Sb	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 06, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **June 06, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

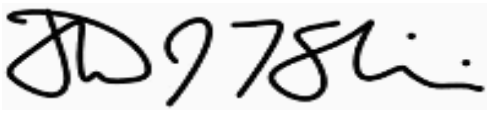
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	AR-ICVMS-3
Lot Number:	T2-MEB719896
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	250 µg/mL ea:

Aluminum, Calcium,
Iron, Potassium,
Magnesium, Sodium,

4 µg/mL ea:
Selenium,

2.5 µg/mL ea:

Thorium,	Thallium,
Uranium,	Vanadium,
Zinc,	Manganese,
Cadmium,	Cobalt,
Chromium,	Copper,
Arsenic,	Barium,
Beryllium,	Nickel,
Lead,	Silver

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	250.0 ± 0.9 µg/mL	Arsenic, As	2.500 ± 0.018 µg/mL
Barium, Ba	2.501 ± 0.013 µg/mL	Beryllium, Be	2.501 ± 0.015 µg/mL
Cadmium, Cd	2.501 ± 0.013 µg/mL	Calcium, Ca	250.0 ± 1.3 µg/mL
Chromium, Cr	2.500 ± 0.015 µg/mL	Cobalt, Co	2.500 ± 0.014 µg/mL
Copper, Cu	2.500 ± 0.014 µg/mL	Iron, Fe	250.0 ± 1.0 µg/mL
Lead, Pb	2.500 ± 0.013 µg/mL	Magnesium, Mg	250.0 ± 1.3 µg/mL
Manganese, Mn	2.500 ± 0.014 µg/mL	Nickel, Ni	2.500 ± 0.014 µg/mL
Potassium, K	250.0 ± 1.2 µg/mL	Selenium, Se	4.002 ± 0.024 µg/mL
Silver, Ag	2.501 ± 0.017 µg/mL	Sodium, Na	250.0 ± 1.2 µg/mL
Thallium, Tl	2.500 ± 0.017 µg/mL	Thorium, Th	2.499 ± 0.013 µg/mL
Uranium, U	2.501 ± 0.015 µg/mL	Vanadium, V	2.500 ± 0.014 µg/mL
Zinc, Zn	2.500 ± 0.014 µg/mL		

Density: 1.042 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Ag	Calculated		See Sec. 4.2
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
Ba	ICP Assay	3104a	140909
Ba	Calculated		See Sec. 4.2
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Cd	Calculated		See Sec. 4.2
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Co	Calculated		See Sec. 4.2
Cr	ICP Assay	3112a	170630
Cr	Calculated		See Sec. 4.2
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Cu	Calculated		See Sec. 4.2
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Mn	Calculated		See Sec. 4.2
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Ni	Calculated		See Sec. 4.2
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Pb	Calculated		See Sec. 4.2
Se	ICP Assay	3149	100901
Se	Calculated		See Sec. 4.2
Th	EDTA	928	928
Th	Calculated		See Sec. 4.2
Tl	ICP Assay	3158	151215
Tl	Calculated		See Sec. 4.2
U	ICP Assay	3164	080521
U	Calculated		See Sec. 4.2

V	ICP Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928
Zn	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope	Atom %
Uranium 238U	99.8 ± 0.1
Uranium 235U	0.19 ± 0.05

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Note: This solution contains Silver (Ag), please refer to our Sample Preparation Guide for more information.

https://www.inorganicventures.com/sample-preparation-guide/samples-containing-silver

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 06, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **June 06, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

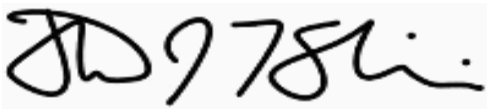
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

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ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	AR-6020ICS-0A10
Lot Number:	T2-MEB719898
Matrix:	1.4% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Chloride,
	200 µg/mL ea: Carbon,
	100 µg/mL ea: Calcium, Aluminum, Iron, Potassium, Magnesium, Sodium, Phosphorus, Sulfur,
	2 µg/mL ea: Titanium, Molybdenum

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	**100.0 ± 0.4 µg/mL**	**Calcium, Ca**	**100.0 ± 0.5 µg/mL**
Carbon, C	**200.1 ± 0.5 µg/mL**	**Chloride, Cl**	**1 000 ± 5 µg/mL**
Iron, Fe	**100.0 ± 0.5 µg/mL**	**Magnesium, Mg**	**100.0 ± 0.5 µg/mL**
Molybdenum, Mo	**2.001 ± 0.014 µg/mL**	**Phosphorus, P**	**100.0 ± 0.6 µg/mL**
Potassium, K	**100.0 ± 0.5 µg/mL**	**Sodium, Na**	**100.0 ± 0.5 µg/mL**
Sulfur, S	**100.0 ± 0.5 µg/mL**	**Titanium, Ti**	**2.001 ± 0.015 µg/mL**

Density: 1.009 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
C	Acidimetric	84L	84L
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cl	Acidimetric	84L	84L
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mo	ICP Assay	3134	130418
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
S	Acidimetric	84L	84L
S	ICP Assay	traceable to 3154	P2-S680745
Ti	ICP Assay	3162a	130925

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 07, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **June 07, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

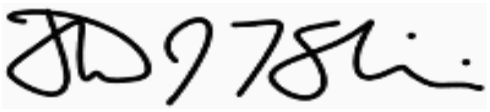
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 7471B

Total Metals

LDW23-SC1150B

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23B0276-01 C	SDG:	23B0276
Sampled:	12/14/22 09:03	Prepared:	02/23/23 11:49	File ID:	SMM 02-27-23-063
% Solids:	63.20	Preparation:	SMM EPA 7471B	Analyzed:	02/27/23 13:10
Batch:	BLB0517	Sequence:	SLB0365	Initial/Final:	0.27 g Wet / 50 mL
Instrument:	HYDRA			Calibration:	GB00073

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.0993	1	0.00615	0.0293	

PREPARATION BATCH SUMMARY

EPA 7471B

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Batch: BLB0517 Batch Matrix: Solid
Preparation: SMM EPA 7471B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SC1150B	23B0276-01	SMM 02-27-23-063	02/23/23 11:49	FROZEN VOLUME USED
Blank	BLB0517-BLK1	SMM 02-27-23-046	02/23/23 11:49	
LCS	BLB0517-BS1	SMM 02-27-23-047	02/23/23 11:49	
Reference	BLB0517-SRM1	SMM 02-27-23-066	02/23/23 11:49	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Mercury Digestion Log

Prep Code: SMM | Balance ID: 10 | Matrix: Soil
Analyst: ML | Block ID: 9 | Date: 02/23/23
Bath Temp: 95 | Start Time: 1048 | End Time: 1149

ARI Sample ID	Sample Bottle #	pH<2	Initial Weight (g) Volume (mL)	Final Volume (mL)	# $KMnO_4$ Aliquots	CLP	Comments
23A0032-05	A		0.241	50	1		
-08	C		0.285				
-11	B		0.213				
23A0171-01			0.249				
-02			0.291				
-03			0.200				
-04			0.258				
23B0051-01	A		0.215				
-02			~~0.244~~ ①				
-03			0.252				
23B0276-01	C		0.270				
23B0SIT-BLK1	—		—				
-BS1	—		—				
-DUP1	—		0.245				23A0032-05
-MS1	—		0.246				
-MSD1	—		0.246				
-SRM	—		0.207				

ML 02/23/23

Chemical/Reagent ID:
HNO_3: L492 | H_2SO_4: L112 | HCl: —
5% $K_2S_2O_8$: L437 | 5% $KMnO_4$: K11727 | Digest Tube Lot: 220816S

① 0.246

Form I

METHOD BLANK DATA SHEET

EPA 7471B

Total Metals

Blank

Laboratory: Analytical Resources, LLC | SDG: 23B0276

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

Batch: BLB0517 | Laboratory ID: BLB0517-BLK1 | Prepared: 02/23/23 11:49

Matrix: Solid | Preparation: SMM EPA 7471B | Analyzed: 02/27/23 12:30

Sequence: SLB0365 | Calibration: GB00073 | Instrument: HYDRA

CAS NO.	Analyte	Concentration (mg/kg wet)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	ND	1	0.00525	0.0250	U

LCS / LCS DUPLICATE RECOVERY

EPA 7471B

Total Metals

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	02/27/23 12:32
Batch:	BLB0517	Laboratory ID:	BLB0517-BS1
Preparation:	SMM EPA 7471B	Sequence Name:	LCS
Initial/Final:	0.2 g / 50 mL		

COMPOUND	SPIKE ADDED (mg/kg wet)	LCS CONCENTRATION (mg/kg wet)	Q	LCS % REC. #	QC LIMITS REC.
Mercury	0.500	0.453		90.6	80 - 120

* Indicates values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

STANDARD REFERENCE MATERIAL RECOVERY

EPA 7471B

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Laboratory ID: BLB0517-SRM1
Batch: BLB0517
Initial/Final: 0.207 g / 50 mL
Preparation: SMM EPA 7471B
Analyzed: 02/27/2023 13:17
Standard ID: K008376
Expires: 04/20/2025
Standard Lot#: D112-540
Description: Metals In Soil

ANALYTE	TRUE (mg/kg wet)	FOUND (mg/kg wet)	MDL	MRL	Q	SRM % REC.	QC LIMITS REC.
Mercury	3.3100	3.69	0.0507	0.242	D	112	86.1 - 139.9

* Values outside of QC limits

INITIAL CALIBRATION DATA

EPA 7471B

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GB00073	Instrument:	HYDRA
Calibration Date:	02/27/2023 16:35		

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF
Mercury	0	0	0.0001	6920000	0.0005	6610000	0.001	6467000	0.002	6401000	0.005	6280600

INITIAL CALIBRATION DATA

EPA 7471B

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GB00073	Instrument:	HYDRA
Calibration Date:	02/27/2023 16:35		

COMPOUND	Mean RF	RF RSD	Linear COD	Quad COD	COD Limit	Q
Mercury	5446433	49.2	0.9999		0.99	

Method: ARI 5 ppb (NO 0.05) Operator: Admin

SMM 02-27-23

5LB0365 LBB00073

Date of Analysis: 27 Feb 2023 10:15:47

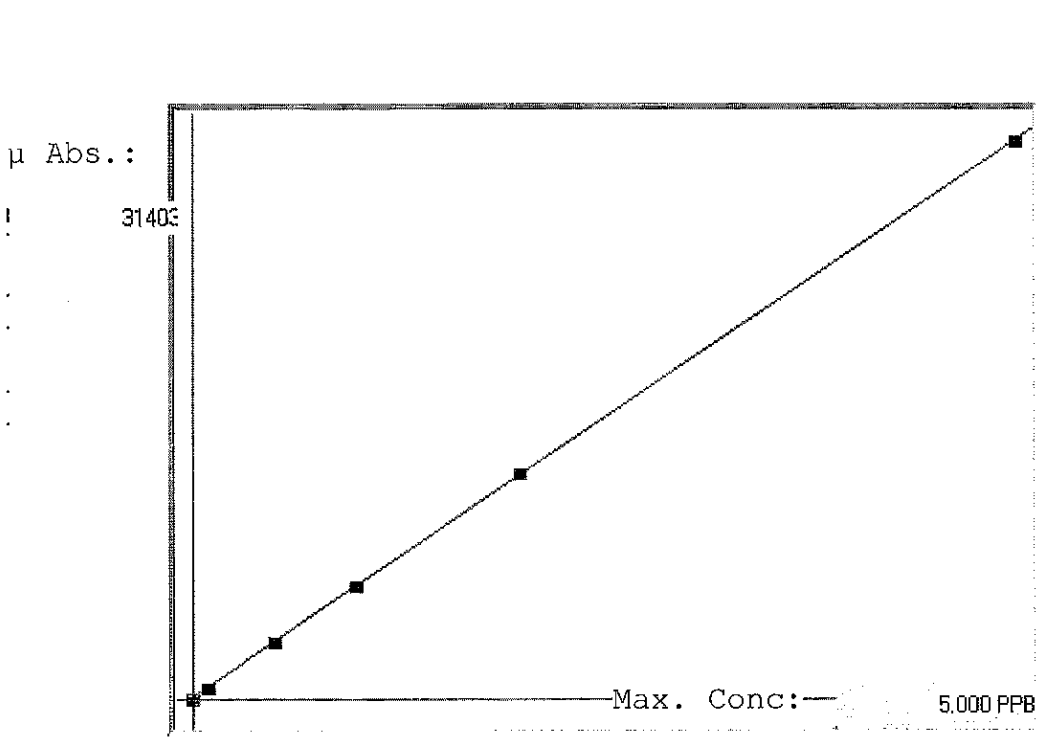
Sample ID	Mean	Units		Date	Method
SEQ-CAL1	70	PPB		27 Feb 2023 10:17:58	ARI 5 ppb (NO 0.05)
SEQ-CAL2	692	PPB		27 Feb 2023 10:20:19	ARI 5 ppb (NO 0.05)
SEQ-CAL3	3305	PPB		27 Feb 2023 10:22:41	ARI 5 ppb (NO 0.05)
SEQ-CAL4	6467	PPB		27 Feb 2023 10:25:01	ARI 5 ppb (NO 0.05)
SEQ-CAL5	12802	PPB		27 Feb 2023 10:27:22	ARI 5 ppb (NO 0.05)
SEQ-CAL6	31403	PPB		27 Feb 2023 10:29:42	ARI 5 ppb (NO 0.05)
SEQ-ICV	103.3% 4.1310	PPB	✓	27 Feb 2023 10:34:09	ARI 5 ppb (NO 0.05)
SEQ-ICB	-0.0218	PPB	✓	27 Feb 2023 10:36:28	ARI 5 ppb (NO 0.05)
SEQ-CRL	81.5% 0.0815	PPB	✓	27 Feb 2023 10:38:50	ARI 5 ppb (NO 0.05)
SEQ-CCV	104.1% 4.1620	PPB	✓	27 Feb 2023 10:41:11	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0242	PPB	✓	27 Feb 2023 10:43:29	ARI 5 ppb (NO 0.05)
BLB0507-BLK1	-0.0210	PPB		27 Feb 2023 10:45:51	ARI 5 ppb (NO 0.05)
BLB0507-BS1	1.8784	PPB	✓	27 Feb 2023 10:48:10	ARI 5 ppb (NO 0.05)
SEQ-CCV	104.3% 4.1724	PPB	✓	27 Feb 2023 10:50:29	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0236	PPB	✓	27 Feb 2023 10:52:47	ARI 5 ppb (NO 0.05)
SEQ-CCV	101.8% 4.0732	PPB	✓	27 Feb 2023 11:20:43	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0234	PPB	✓	27 Feb 2023 11:23:01	ARI 5 ppb (NO 0.05)
23A0031-01	0.4658	PPB		27 Feb 2023 11:25:23	ARI 5 ppb (NO 0.05)
BLB0507-DUP1	0.3509	PPB		27 Feb 2023 11:27:42	ARI 5 ppb (NO 0.05)
BLB0507-MS1	1.5444	PPB	✓	27 Feb 2023 11:30:01	ARI 5 ppb (NO 0.05)
BLB0507-MSD1	1.5029	PPB	✓	27 Feb 2023 11:32:20	ARI 5 ppb (NO 0.05)
23A0031-03	0.2027	PPB		27 Feb 2023 11:34:39	ARI 5 ppb (NO 0.05)
23A0031-04	0.3273	PPB		27 Feb 2023 11:36:58	ARI 5 ppb (NO 0.05)
23A0031-05	0.3475	PPB		27 Feb 2023 11:39:18	ARI 5 ppb (NO 0.05)
23A0031-06	0.2598	PPB		27 Feb 2023 11:41:37	ARI 5 ppb (NO 0.05)
23A0031-07	0.2847	PPB		27 Feb 2023 11:43:57	ARI 5 ppb (NO 0.05)
23A0031-08	0.4059	PPB		27 Feb 2023 11:46:17	ARI 5 ppb (NO 0.05)
SEQ-CCV	103.2% 4.1289	PPB	✓	27 Feb 2023 11:48:37	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0229	PPB	✓	27 Feb 2023 11:50:55	ARI 5 ppb (NO 0.05)
23A0031-09	0.3516	PPB		27 Feb 2023 11:53:17	ARI 5 ppb (NO 0.05)
23A0031-10	0.3750	PPB		27 Feb 2023 11:55:38	ARI 5 ppb (NO 0.05)
23A0031-11	0.3578	PPB		27 Feb 2023 11:57:59	ARI 5 ppb (NO 0.05)
23A0031-12	0.3277	PPB		27 Feb 2023 12:00:18	ARI 5 ppb (NO 0.05)
23A0031-13	0.3034	PPB		27 Feb 2023 12:02:37	ARI 5 ppb (NO 0.05)
23A0031-14	0.2277	PPB		27 Feb 2023 12:04:56	ARI 5 ppb (NO 0.05)
23A0031-15	0.2295	PPB		27 Feb 2023 12:07:15	ARI 5 ppb (NO 0.05)
23A0031-16	0.3961	PPB		27 Feb 2023 12:09:34	ARI 5 ppb (NO 0.05)
23A0031-17	0.3510	PPB		27 Feb 2023 12:11:53	ARI 5 ppb (NO 0.05)
23A0031-18	0.3295	PPB		27 Feb 2023 12:14:12	ARI 5 ppb (NO 0.05)
SEQ-CCV	102.4% 4.0975	PPB	✓	27 Feb 2023 12:16:32	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0232	PPB	✓	27 Feb 2023 12:18:51	ARI 5 ppb (NO 0.05)
23A0031-19	0.3130	PPB		27 Feb 2023 12:21:13	ARI 5 ppb (NO 0.05)
23A0031-20	0.2795	PPB		27 Feb 2023 12:23:33	ARI 5 ppb (NO 0.05)
23A0031-21	0.1490	PPB		27 Feb 2023 12:25:54	ARI 5 ppb (NO 0.05)
BLB0507-SRM1	1.5829	PPB	✓	27 Feb 2023 12:28:14	ARI 5 ppb (NO 0.05)
BLB0517-BLK1	-0.0169	PPB		27 Feb 2023 12:30:35	ARI 5 ppb (NO 0.05)
BLB0517-BS1	1.8111	PPB	✓	27 Feb 2023 12:32:54	ARI 5 ppb (NO 0.05)
23A0032-05	0.4565	PPB		27 Feb 2023 12:35:14	ARI 5 ppb (NO 0.05)
BLB0517-DUP1	0.3581	PPB		27 Feb 2023 12:37:33	ARI 5 ppb (NO 0.05)
BLB0517-MS1	1.5873	PPB	✓	27 Feb 2023 12:39:52	ARI 5 ppb (NO 0.05)
BLB0517-MSD1	1.5496	PPB	✓	27 Feb 2023 12:42:12	ARI 5 ppb (NO 0.05)
SEQ-CCV	103.0% 4.1197	PPB	✓	27 Feb 2023 12:44:31	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0212	PPB	✓	27 Feb 2023 12:46:50	ARI 5 ppb (NO 0.05)
23A0032-08	0.3399	PPB		27 Feb 2023 12:49:11	ARI 5 ppb (NO 0.05)
23A0032-11	0.2981	PPB		27 Feb 2023 12:51:30	ARI 5 ppb (NO 0.05)
23A0171-01	0.4313	PPB		27 Feb 2023 12:53:51	ARI 5 ppb (NO 0.05)
23A0171-02	0.4172	PPB		27 Feb 2023 12:56:10	ARI 5 ppb (NO 0.05)
23A0171-03	0.3359	PPB		27 Feb 2023 12:58:31	ARI 5 ppb (NO 0.05)
23A0171-04	0.3962	PPB		27 Feb 2023 13:00:51	ARI 5 ppb (NO 0.05)
23B0051-01	0.5168	PPB		27 Feb 2023 13:03:13	ARI 5 ppb (NO 0.05)

SMM 02-27-23

Method: ARI 5 ppb (NO 0.05) Operator: Admin Date of Analysis: 27 Feb 2023 10:15:47

Sample ID	Mean	Units		Date	Method
23B0051-02	0.5256	PPB		27 Feb 2023 13:05:33	ARI 5 ppb (NO 0.05)
23B0051-03	0.5067	PPB		27 Feb 2023 13:07:52	ARI 5 ppb (NO 0.05)
23B0276-01	0.3388	PPB		27 Feb 2023 13:10:11	ARI 5 ppb (NO 0.05)
SEQ-CCV	101.2% 4.0490	PPB	✓	27 Feb 2023 13:12:30	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0224	PPB	✓	27 Feb 2023 13:14:49	ARI 5 ppb (NO 0.05)
BLB0517-SRM1	1.5296	PPB	✓	27 Feb 2023 13:17:11	ARI 5 ppb (NO 0.05)
BLB0595-BLK1	-0.0132	PPB		27 Feb 2023 13:19:30	ARI 5 ppb (NO 0.05)
BLB0595-BS1	1.8365	PPB	✓	27 Feb 2023 13:21:49	ARI 5 ppb (NO 0.05)
23B0261-01	0.1046	PPB		27 Feb 2023 13:24:09	ARI 5 ppb (NO 0.05)
BLB0595-DUP1	0.1114	PPB		27 Feb 2023 13:26:29	ARI 5 ppb (NO 0.05)
BLB0595-MS1	1.1135	PPB	✓	27 Feb 2023 13:28:49	ARI 5 ppb (NO 0.05)
BLB0595-MSD1	1.1221	PPB	✓	27 Feb 2023 13:31:10	ARI 5 ppb (NO 0.05)
23A0598-01	0.9669	PPB		27 Feb 2023 13:33:31	ARI 5 ppb (NO 0.05)
23B0194-01	1.3587	PPB		27 Feb 2023 13:35:53	ARI 5 ppb (NO 0.05)
23B0227-04	0.8879	PPB		27 Feb 2023 13:38:12	ARI 5 ppb (NO 0.05)
SEQ-CCV	101.8% 4.0733	PPB	✓	27 Feb 2023 13:40:32	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0236	PPB	✓	27 Feb 2023 13:42:50	ARI 5 ppb (NO 0.05)
23B0261-04	0.1087	PPB		27 Feb 2023 13:45:11	ARI 5 ppb (NO 0.05)
23B0261-07	0.1433	PPB		27 Feb 2023 13:47:31	ARI 5 ppb (NO 0.05)
23B0261-10	0.1464	PPB		27 Feb 2023 13:49:50	ARI 5 ppb (NO 0.05)
23B0261-13	0.1699	PPB		27 Feb 2023 13:52:10	ARI 5 ppb (NO 0.05)
23B0261-16	0.2121	PPB		27 Feb 2023 13:54:30	ARI 5 ppb (NO 0.05)
23B0261-19	0.1623	PPB		27 Feb 2023 13:56:50	ARI 5 ppb (NO 0.05)
23B0261-22	0.1618	PPB		27 Feb 2023 13:59:10	ARI 5 ppb (NO 0.05)
23B0261-25	0.1510	PPB		27 Feb 2023 14:01:30	ARI 5 ppb (NO 0.05)
23B0261-28	0.1307	PPB		27 Feb 2023 14:03:50	ARI 5 ppb (NO 0.05)
23B0261-31	0.1460	PPB		27 Feb 2023 14:06:11	ARI 5 ppb (NO 0.05)
SEQ-CCV	100.2% 4.0095	PPB		27 Feb 2023 14:08:31	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0234	PPB		27 Feb 2023 14:10:49	ARI 5 ppb (NO 0.05)
~~SEQ-CCV~~	~~102.9% 4.1169~~	~~PPB~~	Del	27 Feb 2023 14:13:11	ARI 5 ppb (NO 0.05)
~~23B0335-01~~	~~-0.0228~~	~~PPB~~		27 Feb 2023 14:15:29	ARI 5 ppb (NO 0.05)
23B0261-34	0.1321	PPB		27 Feb 2023 14:15:46	ARI 5 ppb (NO 0.05)
23B0335-01	0.9609	PPB		27 Feb 2023 14:18:06	ARI 5 ppb (NO 0.05)
BLB0595-SRM1	1.6074	PPB		27 Feb 2023 14:20:26	ARI 5 ppb (NO 0.05)
BLB0614-BLK1	-0.0145	PPB		27 Feb 2023 14:22:45	ARI 5 ppb (NO 0.05)
BLB0614-BS1	1.8795	PPB	✓	27 Feb 2023 14:25:05	ARI 5 ppb (NO 0.05)
23B0217-02	0.2389	PPB		27 Feb 2023 14:27:25	ARI 5 ppb (NO 0.05)
BLB0614-DUP1	0.2499	PPB		27 Feb 2023 14:29:45	ARI 5 ppb (NO 0.05)
BLB0614-MS1	1.4459	PPB	✓	27 Feb 2023 14:32:05	ARI 5 ppb (NO 0.05)
BLB0614-MSD1	1.3678	PPB	✓	27 Feb 2023 14:34:25	ARI 5 ppb (NO 0.05)
23B0217-03	0.2419	PPB		27 Feb 2023 14:36:45	ARI 5 ppb (NO 0.05)
SEQ-CCV	103.4% 4.1348	PPB	✓	27 Feb 2023 14:39:07	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0229	PPB	✓	27 Feb 2023 14:41:25	ARI 5 ppb (NO 0.05)
23B0217-04	0.3339	PPB		27 Feb 2023 14:43:47	ARI 5 ppb (NO 0.05)
23B0217-05	0.2869	PPB		27 Feb 2023 14:46:08	ARI 5 ppb (NO 0.05)
23B0217-06	0.6728	PPB		27 Feb 2023 14:48:29	ARI 5 ppb (NO 0.05)
SEQ-CCV	101.4% 4.0569	PPB	✓	27 Feb 2023 14:50:50	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0218	PPB	✓	27 Feb 2023 14:53:09	ARI 5 ppb (NO 0.05)

ARI 5 ppb (NO 0.05)



Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
SEQ-CAL1 - Blank	0.000	-0.012	-0.012	69	4.110	65	69	75		
SEQ-CAL2 - 0.1 PPB	0.100	0.088	-0.012	691	0.6 %	694	695	686		
SEQ-CAL3 - 0.5 PPB	0.500	0.505	0.005	3305	1.6 %	3341	3343	3231		
SEQ-CAL4 - 1.0 PPB	1.000	1.009	0.009	6466	1.4 %	6353	6472	6575		
SEQ-CAL5 - 2.0 PPB	2.000	2.021	0.021	12802	0.6 %	12849	12870	12687		
SEQ-CAL6 - 5.0 PPB	5.000	4.990	-0.010	31403	0.7 %	31099	31643	31467		

Mercury Analysis Log

Analyst: MV
Instrument: HYDRA

Date: 02/27/23
Page: 1 of 4

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments
SEQ -CAL1	SMM	1X		
-CAL2				
-CAL3				
-CAL4				
-CAL5				
-CAL6				
-ICV			✓ 4.13	
-ICB			✓ -0.02	
-CRL			✓ 0.081	
-CCV			✓ 4.16	
-CCB			✓ -0.02	
BLB0507 -BLK1				
-BS1			✓ 1.878	93.9% R
SEQ -CCV			✓ 4.17	
-CCB			✓ -0.02	
-CCV			✓ 4.07	
-CCB			✓ -0.02	
23A0031 -02				
BLB0507 -DUP1				NO RPD
-MS1			✓ 1.544	107.8% R
-MSD1			✓ 1.502	103.7% R
23A0031 -03				
-04				
-05				
-06				
-07				
-08				
SEQ -CCV			✓ 4.12	
-CCB			✓ -0.02	
23A0031 -09				

Chemical/Reagent ID:
10% $SnCl_2$: L2064
14% NH_2OH/NaCl: L716
Standard ID:
Standard: L2056 - L2061
ICV/CCV: L2053

Mercury Analysis Log

Analyst: ML
Instrument: HYDRA

Date: —
Page: 2 of 4

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments
-10	S'			
-11				
-12				
-13				
-14				
-15				
-16				
-17				
-18				
SEQ -CCV			✓4.09	
↓ -CCB			✓-0.02	
23A0031 -19				
-20				
↓ -21		↓		
BLB0507 -SRM1		10X	✓1.58	118 %R
BLB0517 -BLK1		1X		
↓ -BS1			✓1.811	
23A0032 -05				
BLB0517 -DUP1				NO RPD
-MS1			✓1.587	113 %R
↓ -MSD1			✓1.549	109.3 %R
SEQ -CCV			✓4.11	
↓ -CCB			✓-0.021	
23A0032 -08				
↓ -11				
23A0171 -01				
-02				
-03				
↓ -04				
23B0051 -01				

Chemical/Reagent ID:
10% $SnCl_2$: —
14% NH_2OH/NaCl: —
Standard ID:
Standard: —
ICV/CCV: —

Mercury Analysis Log

Analyst: ← Date: —

Instrument: — Page: 3 of 4

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments
-02				
-03				
23B0276 -01				
SEQ -CCV			✓4.04	
-CCB			✓-0.02	
BLB0517 -SRM1		10X	✓1.529	112 %R
BLB0595 -BLK1		1X		
-BS1			✓1.836	91.8 %R
23B0261 -01				
BLB0595 -DUP1				RPD= 0.29
-MS1			✓1.113	
-MSD1			✓1.122	
23A0598 -01				
23B0194 -01				
23B0227 -04				
SEQ -CCV			✓4.07	
-CCB			✓-0.02	
23B0261 -04				
-07				
-10				
-13				
-16				
-19				
-22				
-25				
-28				
-31				
SEQ -CCV			✓4.00	
-CCB			✓-0.02	
-CCV			✓4.11	

Chemical/Reagent ID:

10% $SnCl_2$: — 14% NH_2OH/NaCl: —

Standard ID:

Standard: — ICV/CCV: —

Mercury Analysis Log

Analyst: —
Instrument: —

Date: —
Page: 4 of 4

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments
23B0335 -01				No read; del
23B0261 -34				
23B0335 -01				
BLB0595 -SRM1		10X	✓ 1.607	120.1%R
BLB0614 -BLK1		1X		
↓ -BS1			1.879	93.9%R
23B0217 -02				
BLB0614 -DUP1				RPD=4.50
↓ -MS1			✓ 1.445	120.7%R
-MSD1			✓ 1.367	112.8%R
23B0217 -03				
SEQ -CCV			✓ 4.13	
↓ -CCB			✓ -0.02	
23B0217 -04				
↓ -05				
-06				
SEQ -CCV				
↓ -CCB	↓	↓		

AM 024-1123

Chemical/Reagent ID:
10% $SnCl_2$: —

14% $NH_2OH/NaCl$: —

Standard ID:
Standard: —

ICV/CCV: —

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 7471B

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: HYDRA
Calibration: GB00073
Control Limt: +/- 20.00%
Sequence: SLB0365

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SLB0365-ICV1	Mercury	0.0040000	0.00413	103	mg/L	EPA 7471B
SLB0365-CCV1	Mercury	0.0040000	0.00416	104	mg/L	EPA 7471B
SLB0365-CCV2	Mercury	0.0040000	0.00417	104	mg/L	EPA 7471B
SLB0365-CCV3	Mercury	0.0040000	0.00407	102	mg/L	EPA 7471B
SLB0365-CCV4	Mercury	0.0040000	0.00413	103	mg/L	EPA 7471B
SLB0365-CCV5	Mercury	0.0040000	0.00410	102	mg/L	EPA 7471B
SLB0365-CCV6	Mercury	0.0040000	0.00412	103	mg/L	EPA 7471B
SLB0365-CCV7	Mercury	0.0040000	0.00405	101	mg/L	EPA 7471B
SLB0365-CCV8	Mercury	0.0040000	0.00407	102	mg/L	EPA 7471B
SLB0365-CCV9	Mercury	0.0040000	0.00401	100	mg/L	EPA 7471B
SLB0365-CCVA	Mercury	0.0040000	0.00413	103	mg/L	EPA 7471B
SLB0365-CCVB	Mercury	0.0040000	0.00406	101	mg/L	EPA 7471B

* Values outside of QC limits

INSTRUMENT BLANKS
EPA 7471B

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: HYDRA
Sequence: SLB0365

SDG: 23B0276
Project: AOC5 MR Phase 1
Calibration: GB00073
Date Analyzed: 02/27/23 10:36

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLB0365-ICB1	Mercury	-0.000022	0.000021	0.000100	mg/L	
SLB0365-CCB1	Mercury	-0.000024	0.000021	0.000100	mg/L	
SLB0365-CCB2	Mercury	-0.000024	0.000021	0.000100	mg/L	
SLB0365-CCB3	Mercury	-0.000023	0.000021	0.000100	mg/L	
SLB0365-CCB4	Mercury	-0.000023	0.000021	0.000100	mg/L	
SLB0365-CCB5	Mercury	-0.000023	0.000021	0.000100	mg/L	
SLB0365-CCB6	Mercury	-0.000021	0.000021	0.000100	mg/L	
SLB0365-CCB7	Mercury	-0.000022	0.000021	0.000100	mg/L	
SLB0365-CCB8	Mercury	-0.000024	0.000021	0.000100	mg/L	
SLB0365-CCB9	Mercury	-0.000023	0.000021	0.000100	mg/L	
SLB0365-CCBA	Mercury	-0.000023	0.000021	0.000100	mg/L	
SLB0365-CCBB	Mercury	-0.000022	0.000021	0.000100	mg/L	

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 7471B

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLB0365
Instrument: HYDRA
Calibration: GB00073

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Cal Standard	SLB0365-CAL1	SMM 02-27-23-001	NA	02/27/23 10:17
Cal Standard	SLB0365-CAL2	SMM 02-27-23-002	NA	02/27/23 10:20
Cal Standard	SLB0365-CAL3	SMM 02-27-23-003	NA	02/27/23 10:22
Cal Standard	SLB0365-CAL4	SMM 02-27-23-004	NA	02/27/23 10:25
Cal Standard	SLB0365-CAL5	SMM 02-27-23-005	NA	02/27/23 10:27
Cal Standard	SLB0365-CAL6	SMM 02-27-23-006	NA	02/27/23 10:29
Initial Cal Check	SLB0365-ICV1	SMM 02-27-23-007	NA	02/27/23 10:34
Initial Cal Blank	SLB0365-ICB1	SMM 02-27-23-008	NA	02/27/23 10:36
Instrument RL Check	SLB0365-CRL1	SMM 02-27-23-009	NA	02/27/23 10:38
Calibration Check	SLB0365-CCV1	SMM 02-27-23-010	NA	02/27/23 10:41
Calibration Blank	SLB0365-CCB1	SMM 02-27-23-011	NA	02/27/23 10:43
Calibration Check	SLB0365-CCV2	SMM 02-27-23-014	NA	02/27/23 10:50
Calibration Blank	SLB0365-CCB2	SMM 02-27-23-015	NA	02/27/23 10:52
Calibration Check	SLB0365-CCV3	SMM 02-27-23-016	NA	02/27/23 11:20
Calibration Blank	SLB0365-CCB3	SMM 02-27-23-017	NA	02/27/23 11:23
Calibration Check	SLB0365-CCV4	SMM 02-27-23-028	NA	02/27/23 11:48
Calibration Blank	SLB0365-CCB4	SMM 02-27-23-029	NA	02/27/23 11:50
Calibration Check	SLB0365-CCV5	SMM 02-27-23-040	NA	02/27/23 12:16
Calibration Blank	SLB0365-CCB5	SMM 02-27-23-041	NA	02/27/23 12:18
Blank	BLB0517-BLK1	SMM 02-27-23-046	Solid	02/27/23 12:30
LCS	BLB0517-BS1	SMM 02-27-23-047	Solid	02/27/23 12:32
Calibration Check	SLB0365-CCV6	SMM 02-27-23-052	NA	02/27/23 12:44
Calibration Blank	SLB0365-CCB6	SMM 02-27-23-053	NA	02/27/23 12:46
LDW23-SC1150B	23B0276-01	SMM 02-27-23-063	Solid	02/27/23 13:10
Calibration Check	SLB0365-CCV7	SMM 02-27-23-064	NA	02/27/23 13:12
Calibration Blank	SLB0365-CCB7	SMM 02-27-23-065	NA	02/27/23 13:14
Reference	BLB0517-SRM1	SMM 02-27-23-066	Solid	02/27/23 13:17
Calibration Check	SLB0365-CCV8	SMM 02-27-23-076	NA	02/27/23 13:40
Calibration Blank	SLB0365-CCB8	SMM 02-27-23-077	NA	02/27/23 13:42

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 7471B

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Sequence: SLB0365

SDG: 23B0276
Project: AOC5 MR Phase 1
Instrument: HYDRA
Calibration: GB00073

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Calibration Check	SLB0365-CCV9	SMM 02-27-23-088	NA	02/27/23 14:08
Calibration Blank	SLB0365-CCB9	SMM 02-27-23-089	NA	02/27/23 14:10
Calibration Check	SLB0365-CCVA	SMM 02-27-23-102	NA	02/27/23 14:39
Calibration Blank	SLB0365-CCBA	SMM 02-27-23-103	NA	02/27/23 14:41
Calibration Check	SLB0365-CCVB	SMM 02-27-23-107	NA	02/27/23 14:50
Calibration Blank	SLB0365-CCBB	SMM 02-27-23-108	NA	02/27/23 14:53

DETECTION LEVEL STANDARD
EPA 7471B

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: HYDRA
Calibration: GB00073
Sequence: SLB0365
Lab Sample ID: SLB0365-CRL1

Analyte	True	Found	%R	Units	QC Limts
Mercury	0.000100	0.000082	81.5	mg/L	70 - 130

* Values outside of QC limits

HOLDING TIME SUMMARY

Analysis: EPA 7471B

Laboratory: Analytical Resources, LLC SDG: 23B0276

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

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
LDW23-SC1150B 23B0276-01	12/14/22 09:03	12/14/22 16:47	02/23/23 11:49	71	365	02/27/23 13:10	75	365	

* Indicates hold time exceedance.

METHOD DETECTION AND REPORTING LIMITS

EPA 7471B

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Instrument: HYDRA

Analyte	MDL	RL	Units
Mercury	0.00525	0.0250	mg/kg

INORGANIC VENTURES
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGHG1
Lot Number:	S2-HG711246
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Mercury
Starting Material:	Hg Metal
Starting Material Lot#:	1959
Starting Material Purity:	99.9993%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1000 ± 3 µg/mL

Density: 1.026 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **1004 ± 6 µg/mL**
ICP Assay NIST SRM 3133 Lot Number: 160921

Assay Method #2 **998 ± 3 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **1001 ± 3 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000210	M	Eu	<	0.000210	O	Na		0.000626	M	Se	<	0.008100	M	Zn	<	0.000810
M	Al		0.000161	O	Fe	<	0.001600	M	Nb	<	0.000410	O	Si		0.000626	M	Zr	<	0.000410
M	As	<	0.002500	M	Ga	<	0.000210	M	Nd	<	0.000210	M	Sm	<	0.000210				
O	Au	<	0.001700	M	Gd	<	0.000210	O	Ni	<	0.001400	M	Sn	<	0.000410				
M	B	<	0.008500	M	Ge	<	0.000410	M	Os	<	0.003900	O	Sr	<	0.000110				
M	Ba	<	0.000210	M	Hf	<	0.000210	O	P	<	0.029000	M	Ta	<	0.000210				
O	Be	<	0.000110	s	Hg	<		M	Pb	<	0.000210	M	Tb	<	0.000210				
M	Bi	<	0.001100	M	Ho	<	0.000210	M	Pd	<	0.003500	M	Te	<	0.005700				
O	Ca		0.004754	M	In	<	0.000210	M	Pr	<	0.000210	M	Th	<	0.000210				
M	Cd	<	0.000210	M	Ir	<	0.000210	M	Pt	<	0.000210	O	Ti	<	0.000430				
M	Ce	<	0.000210	O	K		0.000731	M	Rb	<	0.000210	O	Tl	<	0.005400				
M	Co	<	0.000210	M	La	<	0.000210	M	Re	<	0.000210	M	Tm	<	0.000210				
O	Cr	<	0.003300	O	Li	<	0.000110	M	Rh	<	0.001100	M	U	<	0.000410				
M	Cs	<	0.000410	M	Lu	<	0.000210	M	Ru	<	0.000810	M	V	<	0.000210				
M	Cu	<	0.000810	O	Mg		0.000104	O	S	<	0.022000	M	W	<	0.001100				
M	Dy	<	0.000210	O	Mn	<	0.000430	M	Sb	<	0.000210	M	Y	<	0.000210				
M	Er	<	0.000210	M	Mo	<	0.000210	M	Sc	<	0.000210	M	Yb	<	0.000210				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 200.59 +2 4 Hg(OH)(aq) 1+
Chemical Compatibility - Stable in HNO3. Avoid basic media forming insoluble carbonate. The sulfide, basic carbonate, oxalate, phosphate, arsenite, arsenate and iodide are insoluble in water.
Stability - 2-100 ppb levels not stable in 1% HNO3 / LDPE container, stable in 10% HNO3 packaged in borosilicate glass. 1-100 ppm levels stable in 7% HNO3 packaged in borosilicate glass. 1000-10,000 ppm solutions are chemically stable for years in 5-10% HNO3 / LDPE container.
Hg Containing Samples (Preparation and Solution) - Metal (soluble in HNO3); Oxide (Soluble in HNO3); Ores and Organic based (The literature has more references to the preparation of Hg containing samples than any other element. Please consult the literature for your specific sample type, since such preparations are prone to error. Or e-mail our technical staff and we will contact you to discuss your particular sample preparation questions in further detail.).
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 202 amu	9 ppt	n/a	186W16O
ICP-OES 184.950 nm	0.03 / 0.005 µg/mL	1	
ICP-OES 194.227 nm	0.03 / 0.005 µg/mL	1	V
ICP-OES 253.652 nm	0.1 / 0.03 µg/mL	1	Ta, Co, Th ,Rh , Fe, U

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

November 18, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **November 18, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Supervisor, Product Documentation

Certificate Approved By:

Michael Booth
Director, Technical

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	QCP-QCS-4
Lot Number:	R2-MEB695951
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	5 µg/mL ea: Mercury

Second Source: Whenever possible, this solution was manufactured from a second set of concentrates in our manufacturing facility.

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Mercury, Hg	**5.011 ± 0.023 µg/mL**		

Density: 1.035 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Hg	ICP Assay	3133	061204
Hg	EDTA	928	928
Hg	Calculated		See Sec. 4.2

The follow ing equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 20, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **August 20, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

K8376

Certified Reference Material

▪ Certificate of Analysis ▪

1. The **Certified Values** are the actual gravimetric/volumetric "made-to" concentrations confirmed by ERA analytical verification. The certified values are monitored and purchasers will be notified of any significant changes resulting in recertification or withdrawal of this certified reference material during the period of validity of this certificate.

2. The **Uncertainty** represents an expanded uncertainty and approximates a 95% confidence interval. The uncertainty is based on the characterization, homogeneity and stability characteristics of the product, multiplied by a coverage factor (k=2). The uncertainty applies to the product as supplied and does not take into account any required or optional dilution and/or preparations the laboratory may perform while using this product. The formula used to calculate the expanded uncertainty is:
$U_{expanded} = k * SQRT((U_{char}^2) + (U_{homogen}^2) + (U_{LTS}^2) + (U_{STS}^2) + (U_{RSS}^2))$

Where:

$U_{expanded}$ = Expanded uncertainty.
k = Coverage factor.
U_{char} = Combined standard uncertainty of the manufacturing and/or analytical verification assessment.
$U_{homogen}$ = Standard uncertainty of the homogeneity assessment.
U_{LTS} = Standard uncertainty associated with long-term stability.
U_{STS} = Standard uncertainty associated with short-term (transport) stability.
U_{RSS} = Standard uncertainty associated with repeated sampling of the product (where permitted by product use instructions).

3. The **QC Performance Acceptance Limits (QC PALs™)** are based on actual historical data collected in ERA's Proficiency Testing program. The QC PALs™ reflect any inherent biases in the methods used to establish the limits and closely approximate a 95% confidence interval of the performance that experienced laboratories should achieve using accepted environmental methods. Use the QC PALs™ to realistically evaluate your performance against your peers.

4. The **PT Performance Acceptance Limits (PT PALs™)** are calculated using the regression equations and fixed acceptance criteria specified in the NELAC proficiency testing requirements. Use the PT PALs™ when analyzing this certified reference material alongside USEPA and NELAC compliant PT study materials. Please note that many PT study acceptance limits are concentration dependent (some non-linearly) and therefore, the acceptance limits of this certified reference material and any PT study material may differ relative to their difference in concentrations.

5. The **PT Performance Data** include the mean value, percent recovery and number of data points reported by laboratories in our Proficiency Testing study compared to the Certified Values. In the event this lot was not used in a proficiency testing scheme, the data displayed was generated internally by ERA.

6. Where NIST Standard Reference Materials (SRMs) are available, each analyte has been analytically traced to the NIST SRM listed. **Analytical Traceability Recovery (%)** = [(% recovery ERA certified reference material)/(% recovery NIST SRM)]*100
The traceability data shown were compiled by analyzing this ERA certified reference material and/or it's associated stock solution(s) against the applicable NIST SRMs.

7. **Metrological Traceability.** This certified reference material is metrologically traceable to NIST mass reference materials through an unbroken chain of comparisons.

8. For additional information on this product such as intended use, storage information, instructions for use, minimum sample size, and safety information, please refer to the Product Use Instructions provided.

If you have any questions or need technical assistance, please call ERA technical assistance at 1-800-372-0122 or send an email to info@eraqc.com.

Certifying Officer

Brian Miller

Brian Miller

Quality Officer

Matthew Seebeck

16341 Table Mountain Pkwy ▪ Golden, CO 80403 ▪ T: 800.372.0122 ▪ 303.431.8454 ▪ www.eraqc.com

ANALYTICAL VERIFICATION

Parameter	Certified Value[1]	Proficiency Testing Study			NIST Traceability	
		Mean	Recovery[5]	n	SRM Number[6]	Recovery
	mg/kg	mg/kg	%			%
Aluminum	10100	7970	78.9	144	-	-
Antimony	277	136	49.1	161	-	-
Arsenic	101	87.4	86.6	188	-	-
Barium	411	347	84.5	173	-	-
Beryllium	124	103	82.8	162	-	-
Boron	220	133	60.4	105	-	-
Cadmium	212	160	75.5	190	-	-
Calcium	5190	4100	79.0	131	-	-
Chromium	282	231	82.0	184	-	-
Cobalt	310	241	77.8	166	-	-
Copper	165	144	87.4	188	-	-
Iron	15000	14200	94.7	144	-	-
Lead	289	266	92.1	196	-	-
Lithium	6.42	6.37	99.2	33	-	-
Magnesium	2570	2220	86.5	132	-	-
Manganese	670	555	82.8	165	-	-
Mercury	3.31	3.74	113	117	-	-
Molybdenum	253	211	83.6	158	-	-
Nickel	458	350	76.5	187	-	-
Potassium	2420	1940	80.2	136	-	-
Selenium	154	130	84.7	174	-	-
Silver	65.0	57.1	87.9	166	-	-
Sodium	161	117	73.0	123	-	-
Strontium	98.8	84.5	85.5	113	-	-
Thallium	87.4	75.4	86.3	163	-	-
Tin	112	93.8	83.8	114	-	-
Titanium	463	333	71.8	115	-	-
Uranium	208	186	89.5	43	-	-
Vanadium	103	88.6	86.0	161	-	-
Zinc	187	160	85.5	186	-	-

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ERA

A Waters Company

Certified Reference Material

▪ Certificate of Analysis ▪

Product: Metals in Soil
Catalog Number: 540
Lot No. D115-540
Certificate Issue Date: September 14, 2021
Expiration Date: April 20, 2025
Revision Number: Original

Product use instructions are included as part of the certification packet and are paginated separately from this Certificate of Analysis. Please reference the product use instructions for catalog #540 revision 090119.

CERTIFICATION

Parameter	Certified Value[1]	Reference Value	Uncertainty[2]	QC Performance Acceptance Limits[3]	PT Performance Acceptance Limits[4]
	mg/kg	mg/kg	%	mg/kg	mg/kg
Aluminum	10100	7970	10.4	3760 - 12200	3960 - 12000
Antimony	277	136	11.1	D.L. - 275	27.7 - 339
Arsenic	101	87.4	14.2	71.5 - 103	61.2 - 114
Barium	411	347	9.45	279 - 415	261 - 452
Beryllium	124	103	6.07	83.1 - 122	77.0 - 136
Boron	220	133	32.2	84.5 - 181	79.7 - 242
Cadmium	212	160	8.65	127 - 193	120 - 233
Calcium	5190	4100	11.2	3220 - 4970	2940 - 5710
Chromium	282	231	14.9	184 - 279	162 - 310
Cobalt	310	241	12.8	193 - 289	181 - 341
Copper	165	144	13.1	119 - 170	108 - 182
Iron	15000	14200	19.2	8600 - 19800	5010 - 23400
Lead	289	266	34.5	217 - 315	197 - 335
Lithium	6.42	6.37	18.0	4.19 - 8.54	3.13 - 9.60
Magnesium	2570	2220	6.94	1660 - 2780	1360 - 3080
Manganese	670	555	10.5	439 - 670	429 - 737
Mercury	3.31	3.74	7.72	2.85 - 4.63	2.24 - 5.23
Molybdenum	253	211	26.1	167 - 256	151 - 278
Nickel	458	350	19.3	277 - 424	245 - 504
Potassium	2420	1940	6.65	1330 - 2550	1130 - 2750
Selenium	154	130	5.42	101 - 160	87.0 - 174
Silver	65.0	57.1	9.66	44.8 - 69.5	40.1 - 74.1
Sodium	161	117	23.8	79.3 - 156	35.7 - 199
Strontium	98.8	84.5	9.49	66.6 - 102	60.3 - 109

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▪ Certificate of Analysis ▪

Parameter	Certified Value[1]	Reference Value	Uncertainty[2]	QC Performance Acceptance Limits[3]	PT Performance Acceptance Limits[4]
	mg/kg	mg/kg	%	mg/kg	mg/kg
Thallium	87.4	75.4	4.33	60.1 - 90.7	48.5 - 102
Tin	112	93.8	10.1	71.9 - 116	52.7 - 135
Titanium	463	333	10.9	54.7 - 610	14.7 - 650
Uranium	208	186	7.30	137 - 235	125 - 247
Vanadium	103	88.6	12.2	68.6 - 109	58.1 - 119
Zinc	187	160	8.03	126 - 194	112 - 208

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Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
SM 2540 G-97

LDW23-SC1150B

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23B0276-01 C	SDG:	23B0276
Sampled:	12/14/22 09:03	Prepared:	02/14/23 15:24	File ID:	
% Solids:	62.57	Preparation:	No Prep Wet Chem	Analyzed:	02/14/23 15:26
Batch:	BLB0363	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	62.57	1	0.04	0.04	

PREPARATION BATCH SUMMARY

SM 2540 G-97

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Batch: BLB0363 Batch Matrix: Solid
Preparation: No Prep Wet Chem

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SC1150B	23B0276-01		02/14/23 15:24	
Blank	BLB0363-BLK1		02/14/23 15:24	

TOTAL SOLIDS/VOLATILE SOLIDS (TS / TVS) BENCHSHEET for Solid samples

Method: PSEP 1986, SM2540, EPA 160.1

(dry at 104 (12-24 hr) then combust at 550 (30 min))

Batch:	BLB0363
Date:	2/14/2023 15:26
Analyst:	UW

Instrumentation

Drying Ovens:	12	**Analytical Balance:**	BAL2
Muffle Furnace:	2		

Batch drying time

record times as mm/dd/yy hh:mm

date/time in oven:	2/14/2023 18:02	
date/time out:	2/15/2023 9:10	
elapsed hrs =	15.1	OK

TS (%) calculated as:
Final dry wt (g) = (Dry Wt - Tare Wt)
TS = (Final Dry Wt)/ (grams Sample-Tare)

Oven Temps, °C	
Start Temp	111
Dry Cycle 1	101
Dry Cycle 2	
Dry Cycle 3	

TVS (mg/kg dry wt) calculated as:
Final ash wt (g) = (min ash wt - tare wt)
TVS (mg/kg) = [(Dry wt-Ash wt)/ (dry weight)] *1,000,000
if ash wt > dry wt, "Chk for Err"
if dry wt-ash wt < 0.001 g, "< (1/dry wt)*1,000,000

Balance Calibration Check

Record weights to 4 places

Cal Weight ID:	CV-02	CV-02	CV-02	CV-02	CV-02		CV-02	CV-02	CV-02		
Date & Time:	2/14/23 16:57	2/14/23 17:14	2/15/23 10:15				2/15/23 12:45	2/15/23 17:10			
Cal Wt (g): 10.0000	10.0000	10.0000	10.0000				10.0000	10.0000			
	Cal OK!	Cal OK!	Cal OK!	Cal OK!			Cal OK!	Cal OK!			

Sample ID	Dish #	Tare Wt. (g)	Dish & Sample (g)	Dry Wt 104C (grams) 1	2	3	dry Wt (g)	TS (%)	Notes	ASH WT 550C (grams) 1	2	3	Ash Wt (g)	TVS (mg/kg)	TVS (%)	Notes	Fixed (%)
BLB0363-BLK1	1	0.8165	0.0000	0.8164			-0.0001	0.01%		0.8163	0.8164	STOP	-0.0002	(1,000,000)	-100.00%		200.00
23B0132-02	2	0.8080	7.7567	6.2917			5.4837	78.92%									
23B0186-02	3	0.7976	7.6119	2.1886			1.3910	20.41%									
23B0201-04	4	0.8178	8.7379	0.8578			0.0400	0.51%									
23B0217-02	5	0.7970	9.9528	7.8559			7.0589	77.10%		7.7296	7.7242	STOP	6.9272	18,657	1.87%		98.13
BLB0363-DUP1	6	0.8191	8.8818	6.9830			6.1639	76.45%	RPD=0.8	6.8768	6.8740	STOP	6.0549	17,684	1.77%	RPD=5.4	98.23
BLB0363-DUP2	7	0.8274	9.7658	7.6926			6.8652	76.81%	RSD=0.4	7.5774	7.5745	STOP	6.7471	17,203	1.72%	RSD=4.2	98.28
23B0217-03	8	0.7801	8.5405	6.4880			5.7079	73.55%									
23B0217-04	9	0.7882	8.2467	6.0610			5.2728	70.70%									
23B0217-05	10	0.7791	9.9661	7.8837			7.1046	77.33%									
23B0217-06	11	0.8327	8.8414	6.9735			6.1408	76.68%									
23B0228-01	12	0.8155	9.5531	6.6730			5.8575	67.04%									
23B0229-01	13	0.8069	6.7036	3.7901			2.9832	50.59%									
23B0229-02	14	0.7832	6.4483	3.8997			3.1165	55.01%									
23B0229-03	15	0.8288	7.6607	4.4594			3.6306	53.14%									
23B0229-04	16	0.8370	7.3723	4.2251			3.3881	51.84%									
23B0229-05	17	0.8489	6.9526	3.7079			2.8590	46.84%									
23B0229-06	18	0.8065	6.6629	3.6930			2.8865	49.29%									
23B0229-07	19	0.8210	9.6116	6.9955			6.1745	70.24%									
23B0229-08	20	0.7915	6.8197	3.8895			3.0980	51.39%									
23B0276-01	21	0.8121	9.6147	6.3198			5.5077	62.57%									
23B0278-01	22	0.8155	6.9050	3.4122			2.5967	42.64%		3.1587	3.1583	STOP	2.3428	97,778	9.78%		90.22
23B0278-02	23	0.7992	7.0762	3.4903			2.6911	42.87%		3.2454	3.2440	STOP	2.4448	91,524	9.15%		90.85

NOTE: Do not enter data in blue shaded cells as they are calculated fields. Green shaded cells MAY be altered if a rewigh is called for.

TOTAL SOLIDS (TS) BENCHSHEET for Solid samples

Method: Total Solids, Metals Correction

dry at 104°C (12-24 hr)

Batch:	BLB0470
Date:	2/17/2023 15:09
Analyst:	AR

Instrumentation

Drying Oven: OVEN07

Analytical Balance: BAL10

Batch drying time

record times as mm/dd/yy hh:mm

date/time in oven: 2/17/2023 16:09

date/time out: 2/18/2023 14:23

elapsed hrs = 22.2 OK

Temp in: 104 °C

Temp out: 102 °C

TS (%) calculated as:
Final dry wt (g) = (Dry Wt - Tare Wt)
TS = (Final Dry Wt)/ (grams Sample-Tare)

Sample ID	Tare Weight (g)	Tare + Sample Weight (g)	Tare + Sample Dry Weight @ 104°C (g) 1	2	3	dry Wt (g)	TS (%)	Notes
23A0624-71	0.9990	10.0360	8.3660			7.3670	81.52%	
23A0624-72	1.0240	10.0610	8.1860			7.1620	79.25%	
23A0624-73	1.0280	10.0850	8.9650			7.9370	87.63%	
23A0624-74	1.0180	10.0800	9.1660			8.1480	89.91%	
23A0624-75	1.0470	10.0680	8.8580			7.8110	86.59%	
23A0624-76	1.0270	10.0140	8.6390			7.6120	84.70%	
23A0624-77	0.9970	10.0970	8.4280			7.4310	81.66%	
23A0624-78	1.0190	10.0330	8.5090			7.4900	83.09%	
23A0624-79	1.0520	10.0610	9.0900			8.0380	89.22%	
23A0624-80	1.0560	10.0300	7.5120			6.4560	71.94%	
23A0624-81	1.0460	10.0880	8.0700			7.0240	77.68%	
23A0624-82	1.0420	10.0140	9.3470			8.3050	92.57%	
23A0624-83	1.0460	10.0310	7.6450			6.5990	73.44%	
23A0624-84	1.0390	10.0120	8.3370			7.2980	81.33%	
23A0624-85	1.0510	10.0230	9.1010			8.0500	89.72%	
23B0194-01	1.0300	10.0130	7.8820			6.8520	76.28%	
23B0214-01	1.0360	10.0710	9.6940			8.6580	95.83%	
23B0214-02	1.0660	10.0210	9.7770			8.7110	97.28%	
23B0214-03	1.0790	10.0360	9.4640			8.3850	93.61%	
23B0214-04	1.0790	10.0390	9.0620			7.9830	89.10%	
23B0214-05	1.0080	10.0360	9.6400			8.6320	95.61%	
23B0217-02	1.0050	10.0860	7.7370			6.7320	74.13%	
23B0217-03	1.0400	10.0380	7.7930			6.7530	75.05%	
23B0217-04	0.9990	10.0330	7.0510			6.0520	66.99%	
23B0217-05	1.0430	10.0510	8.2200			7.1770	79.67%	
23B0217-06	1.0340	10.0710	7.4840			6.4500	71.37%	
23B0263-01	1.0250	10.0230	9.2110			8.1860	90.98%	
23B0276-01	1.0190	10.0600	6.7330			5.7140	63.20%	

Form I

METHOD BLANK DATA SHEET

SM 2540 G-97

TotalAnalytes

Blank

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Batch: BLB0363
Laboratory ID: BLB0363-BLK1
Prepared: 02/14/23 15:24
Matrix: Solid
Preparation: No Prep Wet Chem
Analyzed: 02/14/23 15:26
Sequence:
Calibration:
Instrument: BAL2

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	ND	1	0.04	0.04	U

HOLDING TIME SUMMARY

Analysis: SM 2540 G-97

Laboratory: Analytical Resources, LLC SDG: 23B0276

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

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
LDW23-SC1150B 23B0276-01	12/14/22 09:03	12/14/22 16:47	02/14/23 15:24	62	180	02/14/23 15:26	62	180	

* Indicates hold time exceedance.

METHOD DETECTION AND REPORTING LIMITS

SM 2540 G-97

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Instrument:

Analyte	MDL	RL	Units
Total Solids	0.04	0.04	%

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW23-SC1150B

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23B0276-01 C	SDG:	23B0276
Sampled:	12/14/22 09:03	Prepared:	02/14/23 12:18	File ID:	CubeData_02162023@1136-032
% Solids:	62.57	Preparation:	PSEP 1986 (modified)	Analyzed:	02/15/23 11:16
Batch:	BLB0342	Sequence:	SLB0179	Initial/Final:	0.3188 g Wet / 0.3188 mL
Instrument:	TOC Cube			Calibration:	FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	1.17	1	0.02	0.02	

PREPARATION BATCH SUMMARY

EPA 9060A m

Laboratory:	Analytical Resources, LLC			SDG:	23B0276
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Batch:	BLB0342	Batch Matrix:	Solid	Preparation:	PSEP 1986 (modified)

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SC1150B	23B0276-01	eData_02162023@1136-	02/14/23 12:18	
Blank	BLB0342-BLK1	eData_02162023@1136-	02/14/23 12:18	
LCS	BLB0342-BS1	eData_02162023@1136-	02/14/23 12:18	
MRL Check	BLB0342-MRL1	eData_02162023@1136-	02/14/23 12:18	
Reference	BLB0342-SRM1	eData_02162023@1136-	02/14/23 12:18	

Form I

METHOD BLANK DATA SHEET

EPA 9060A m

TotalAnalytes

Blank

Laboratory: Analytical Resources, LLC | SDG: 23B0276

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

Batch: BLB0342 | Laboratory ID: BLB0342-BLK1 | Prepared: 02/14/23 12:18

Matrix: Solid | Preparation: PSEP 1986 (modified) | Analyzed: 02/14/23 22:09

Sequence: SLB0179 | Calibration: FD00070 | Instrument: TOC Cube

CAS NO.	Analyte	Concentration (% wet)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	ND	1	0.02	0.02	U

LCS / LCS DUPLICATE RECOVERY

EPA 9060A m

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	02/14/23 22:39
Batch:	BLB0342	Laboratory ID:	BLB0342-BS1
Preparation:	PSEP 1986 (modified)	Sequence Name:	LCS
Initial/Final:	0.021 g / 0.021 mL		

COMPOUND	SPIKE ADDED (% wet)	LCS CONCENTRATION (% wet)	Q	LCS % REC. #	QC LIMITS REC.
Total Organic Carbon	44.4	44.0		99.0	80 - 120

* Indicates values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 9060A m

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Sequence: SKD0371

SDG: 23B0276
Project: AOC5 MR Phase 1
Instrument: TOC Cube
Calibration: FD00070

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Cal Standard	SKD0371-CAL1	CubeData_04272022@1136-001	NA	04/26/22 12:30
Cal Standard	SKD0371-CAL2	CubeData_04272022@1136-002	NA	04/26/22 13:00
Cal Standard	SKD0371-CAL3	CubeData_04272022@1136-003	NA	04/26/22 13:30
Cal Standard	SKD0371-CAL4	CubeData_04272022@1136-004	NA	04/26/22 14:00
Cal Standard	SKD0371-CAL5	CubeData_04272022@1136-005	NA	04/26/22 14:30
Cal Standard	SKD0371-CAL6	CubeData_04272022@1136-006	NA	04/26/22 15:00
Cal Standard	SKD0371-CAL7	CubeData_04272022@1136-007	NA	04/26/22 15:30
Cal Standard	SKD0371-CAL8	CubeData_04272022@1136-008	NA	04/26/22 16:00
Cal Standard	SKD0371-CAL9	CubeData_04272022@1136-009	NA	04/26/22 16:30
Cal Standard	SKD0371-CALA	CubeData_04272022@1136-010	NA	04/26/22 17:00
Cal Standard	SKD0371-CALB	CubeData_04272022@1136-011	NA	04/26/22 17:30
Cal Standard	SKD0371-CALC	CubeData_04272022@1136-012	NA	04/26/22 18:00
Cal Standard	SKD0371-CALD	CubeData_04272022@1136-013	NA	04/26/22 18:30
Cal Standard	SKD0371-CALE	CubeData_04272022@1136-014	NA	04/26/22 19:00
Cal Standard	SKD0371-CALF	CubeData_04272022@1136-015	NA	04/26/22 19:31
Cal Standard	SKD0371-CALG	CubeData_04272022@1136-016	NA	04/26/22 20:01
Cal Standard	SKD0371-CALH	CubeData_04272022@1136-017	NA	04/26/22 20:31
Cal Standard	SKD0371-CALI	CubeData_04272022@1136-018	NA	04/26/22 21:01
Cal Standard	SKD0371-CALJ	CubeData_04272022@1136-019	NA	04/26/22 21:31
Cal Standard	SKD0371-CALK	CubeData_04272022@1136-020	NA	04/26/22 22:01
Initial Cal Check	SKD0371-ICV1	CubeData_04272022@1136-027	NA	04/27/22 02:03
Initial Cal Blank	SKD0371-ICB1	CubeData_04272022@1136-028	NA	04/27/22 02:33
Cal Standard	SKD0371-CALL	CubeData_04272022@1136-021	NA	04/27/22 11:08
Cal Standard	SKD0371-CALM	CubeData_04272022@1136-022	NA	04/27/22 11:08
Cal Standard	SKD0371-CALN	CubeData_04272022@1136-023	NA	04/27/22 11:09
Cal Standard	SKD0371-CALO	CubeData_04272022@1136-024	NA	04/27/22 11:09

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

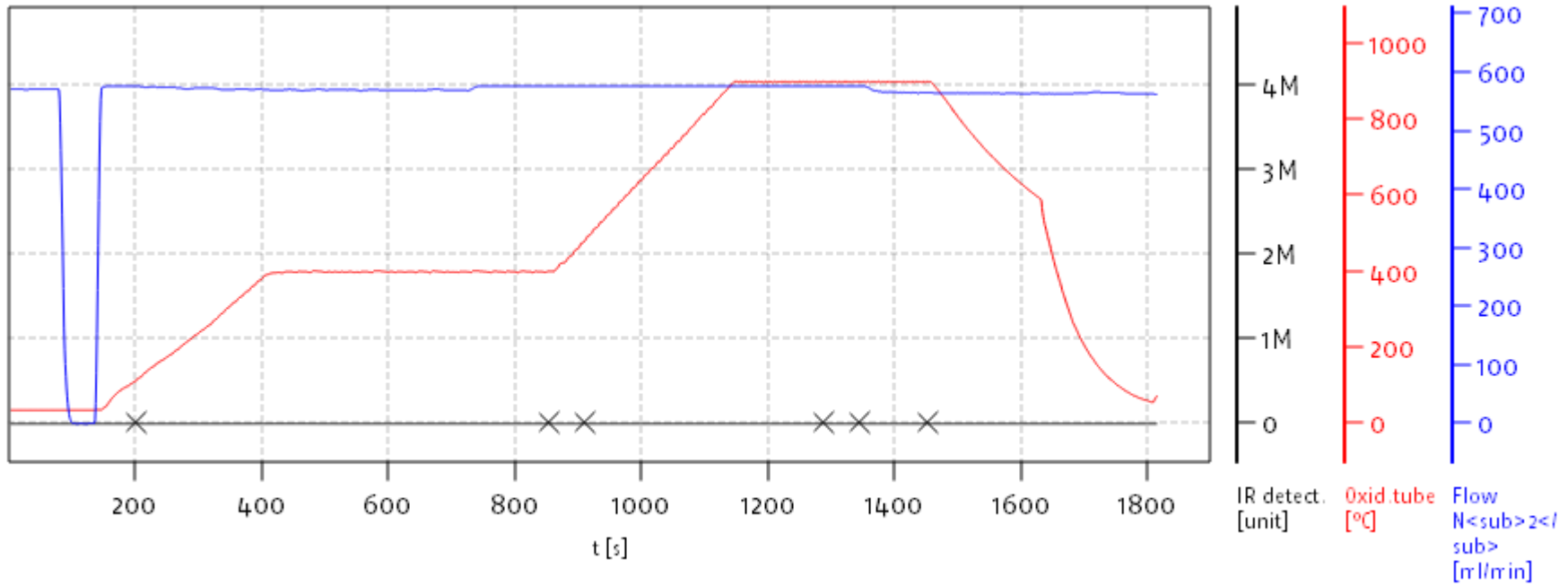
EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLB0179
Instrument: TOC Cube
Calibration: FD00070

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Initial Cal Blank	SLB0179-ICB1	CubeData_02162023@1136-003	NA	02/14/23 20:39
Initial Cal Check	SLB0179-ICV1	CubeData_02162023@1136-004	NA	02/14/23 21:09
MRL Check	BLB0342-MRL1	CubeData_02162023@1136-005	Solid	02/14/23 21:39
Blank	BLB0342-BLK1	CubeData_02162023@1136-006	Solid	02/14/23 22:09
LCS	BLB0342-BS1	CubeData_02162023@1136-007	Solid	02/14/23 22:39
Reference	BLB0342-SRM1	CubeData_02162023@1136-008	Solid	02/14/23 23:09
Calibration Check	SLB0179-CCV1	CubeData_02162023@1136-015	NA	02/15/23 02:41
Calibration Blank	SLB0179-CCB1	CubeData_02162023@1136-016	NA	02/15/23 03:11
Calibration Check	SLB0179-CCV2	CubeData_02162023@1136-027	NA	02/15/23 08:44
Calibration Blank	SLB0179-CCB2	CubeData_02162023@1136-028	NA	02/15/23 09:15
LDW23-SC1150B	23B0276-01	CubeData_02162023@1136-032	Solid	02/15/23 11:16
Calibration Check	SLB0179-CCV3	CubeData_02162023@1136-039	NA	02/15/23 14:49
Calibration Blank	SLB0179-CCB3	CubeData_02162023@1136-040	NA	02/15/23 15:20
Calibration Check	SLB0179-CCV4	CubeData_02162023@1136-050	NA	02/15/23 20:54
Calibration Blank	SLB0179-CCB4	CubeData_02162023@1136-051	NA	02/15/23 21:25
Calibration Check	SLB0179-CCV5	CubeData_02162023@1136-061	NA	02/16/23 02:27
Calibration Blank	SLB0179-CCB5	CubeData_02162023@1136-062	NA	02/16/23 02:57

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
1	1	BLANK	1.00		CARBON	2/ 14/2023 7:08 PM	bl	0.000	10 608	0.000	0.000	1 451	3 787	0.000	0.000	1.0000	1.0000



Name:

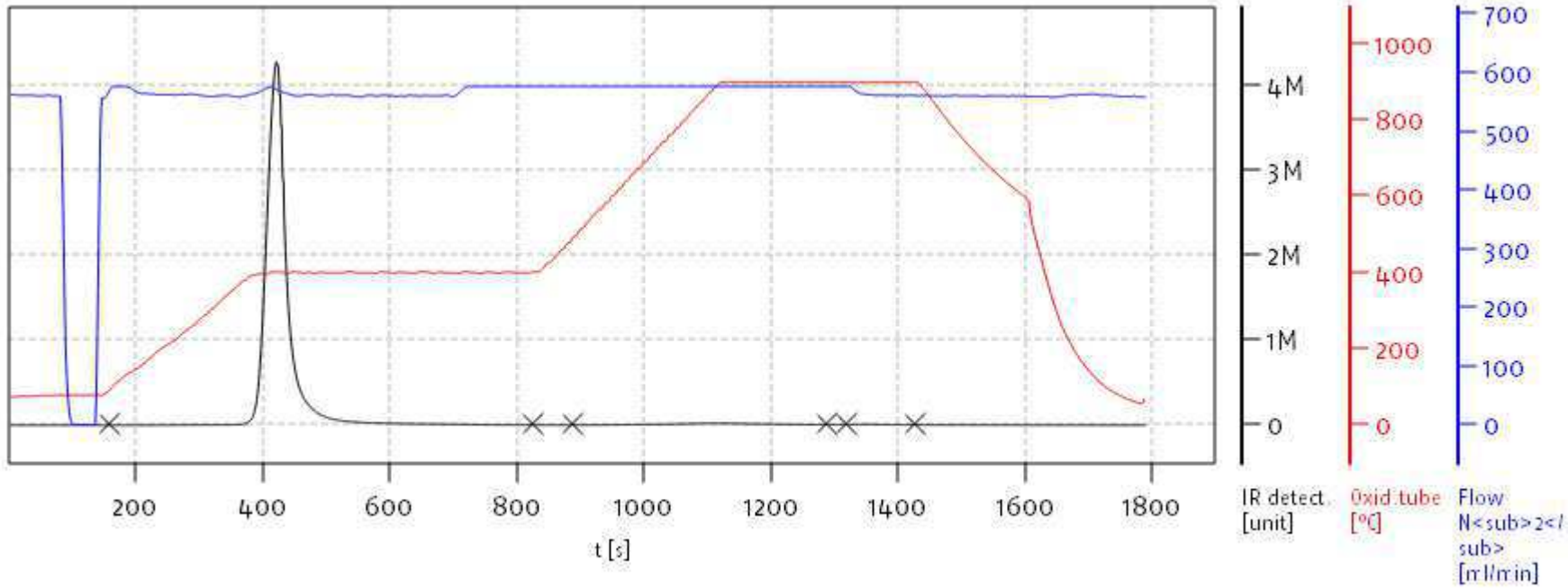
Access: soliTOC superuser

Date: Thu Feb 16 09:54:06 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
2	2	Dfactor	20.90		CARBON	2/14/2023 7:38 PM	bl	44.453	5 993 916	45.420	0.007	27 491	157 171	44.446	0.968	1.0056	1.0000



Name:

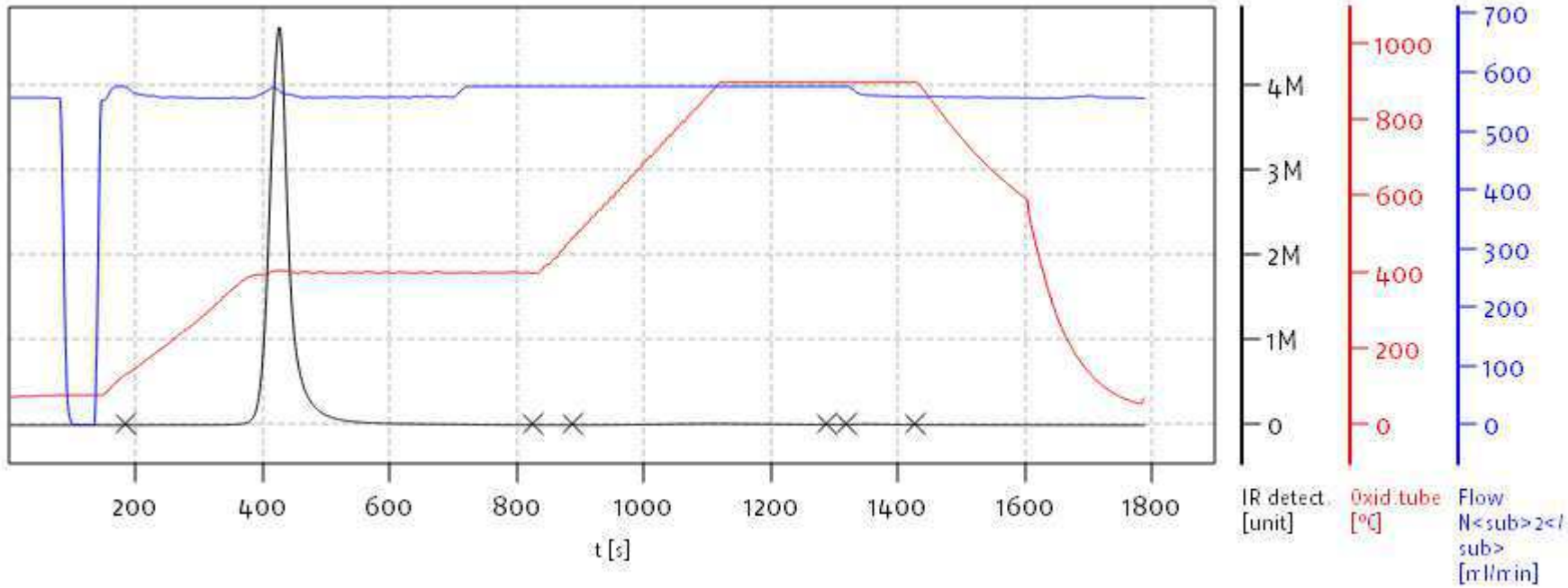
Access: soliTOC superuser

Date: Thu Feb 16 09:54:06 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
3	3	Dfactor	22.50		CARBON	2/14/2023 8:09 PM	bl	44.467	6 549 206	45.223	0.021	29 644	136 354	44.446	0.756	0.9904	1.0000



Name:

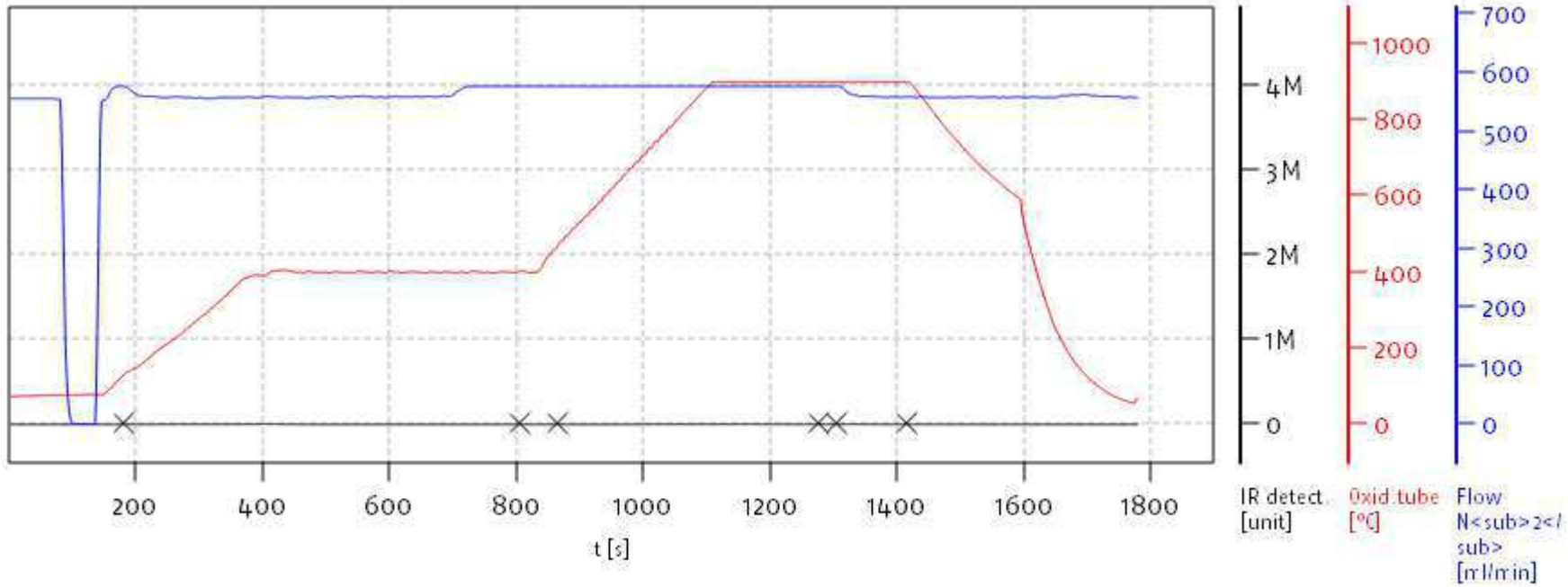
Access: soliTOC superuser

Date: Thu Feb 16 09:54:06 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
4	4	SLB0179-ICB1	588.60		CARBON	2/14/2023 8:39 PM	bl	0.000	20 033	0.000	0.000	6 480	22 611	0.000	0.000	0.9980	1.0000



Name:

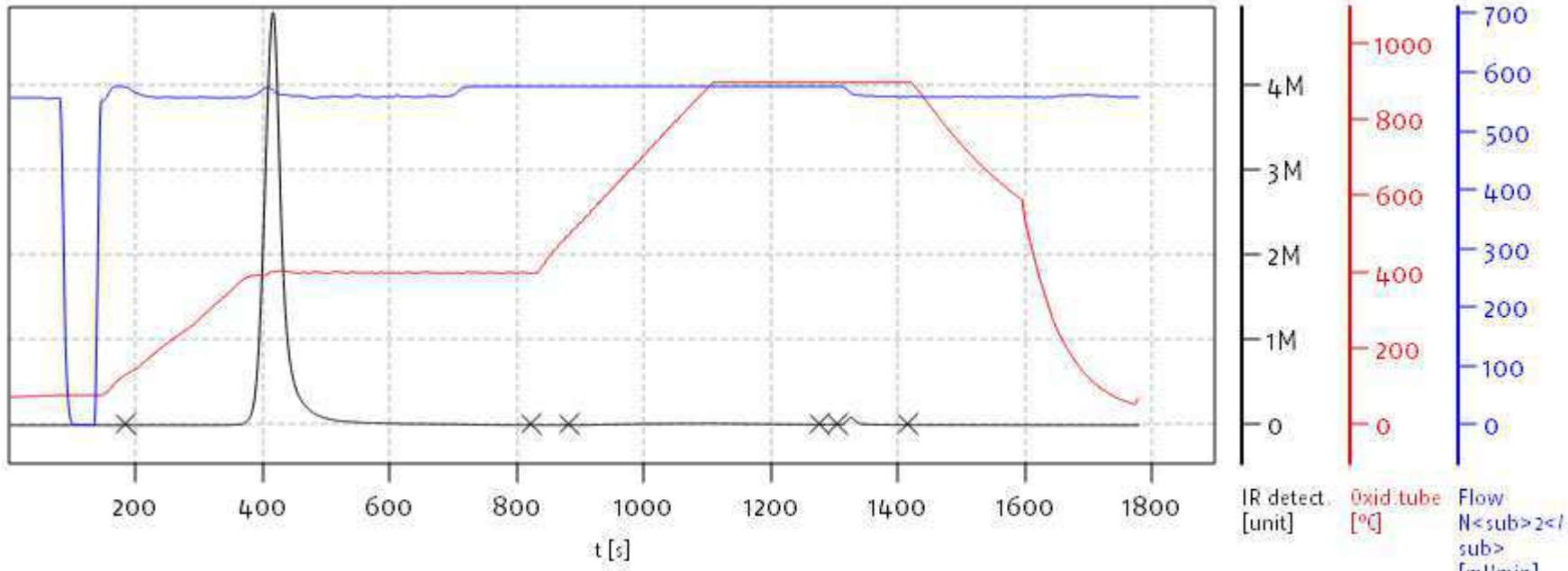
Access: soliTOC superuser

Date: Thu Feb 16 09:54:06 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
5	5	SLB0179-ICV1	21.60		CARBON	2/14/2023 9:09 PM	bl	44.469	6 196 734	45.652	0.338	73 702	191 618	44.131	1.183	0.9980	1.0000



Name:

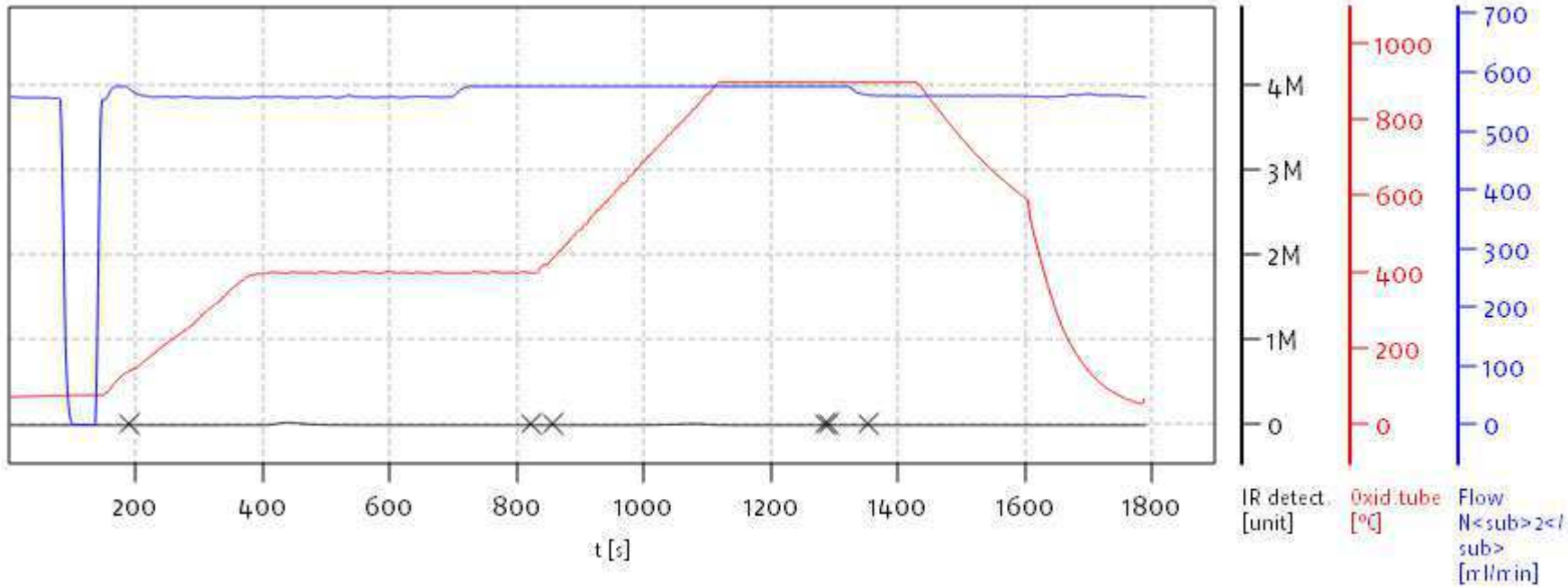
Access: soliTOC superuser

Date: Thu Feb 16 09:54:06 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
6	6	BLB0342-MRL1	512.00		CARBON	2/14/2023 9:39 PM	bl,C2u	0.010	61 085	0.013	0.000	533	34 485	0.010	0.002	0.9980	1.0000



Name:

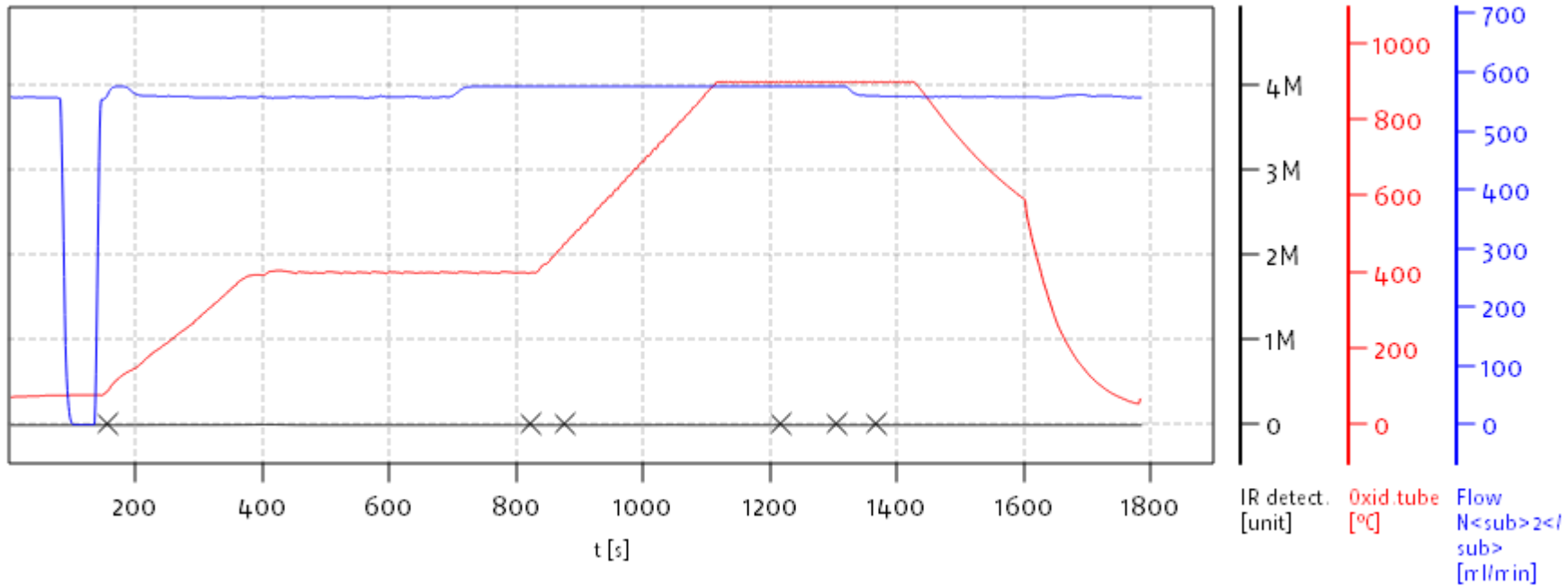
Access: soliTOC superuser

Date: Thu Feb 16 09:54:06 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
7	7	BLB0342-BLK1	506.90		CARBON	2/14/2023 10:09 PM	bl,C2u	0.001	28 499	0.001	0.000	614	5 905	0.001	0.000	0.9980	1.0000



Name:

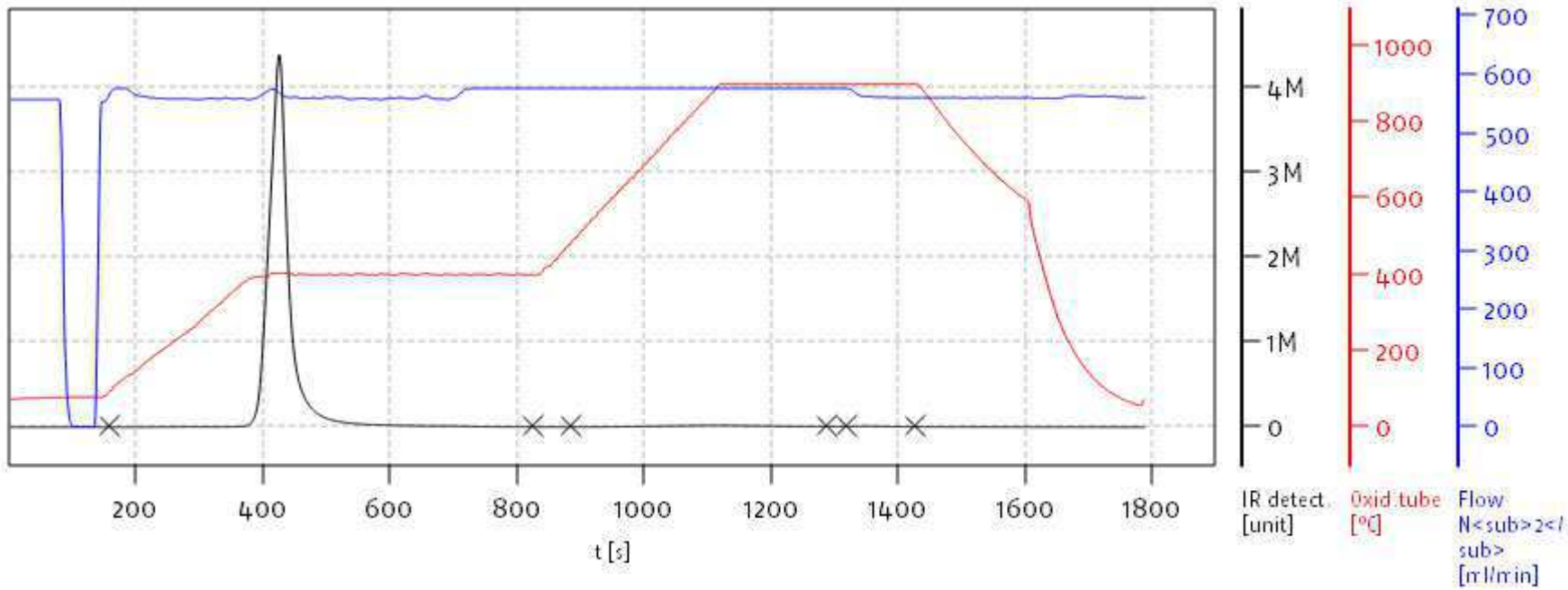
Access: soliTOC superuser

Date: Thu Feb 16 09:54:06 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
8	8	BLB0342-BS1	21.00		CARBON	2/14/2023 10:39 PM	bl	43.984	6 001 444	44.965	0.029	30 418	159 564	43.955	0.981	0.9980	1.0000



Name:

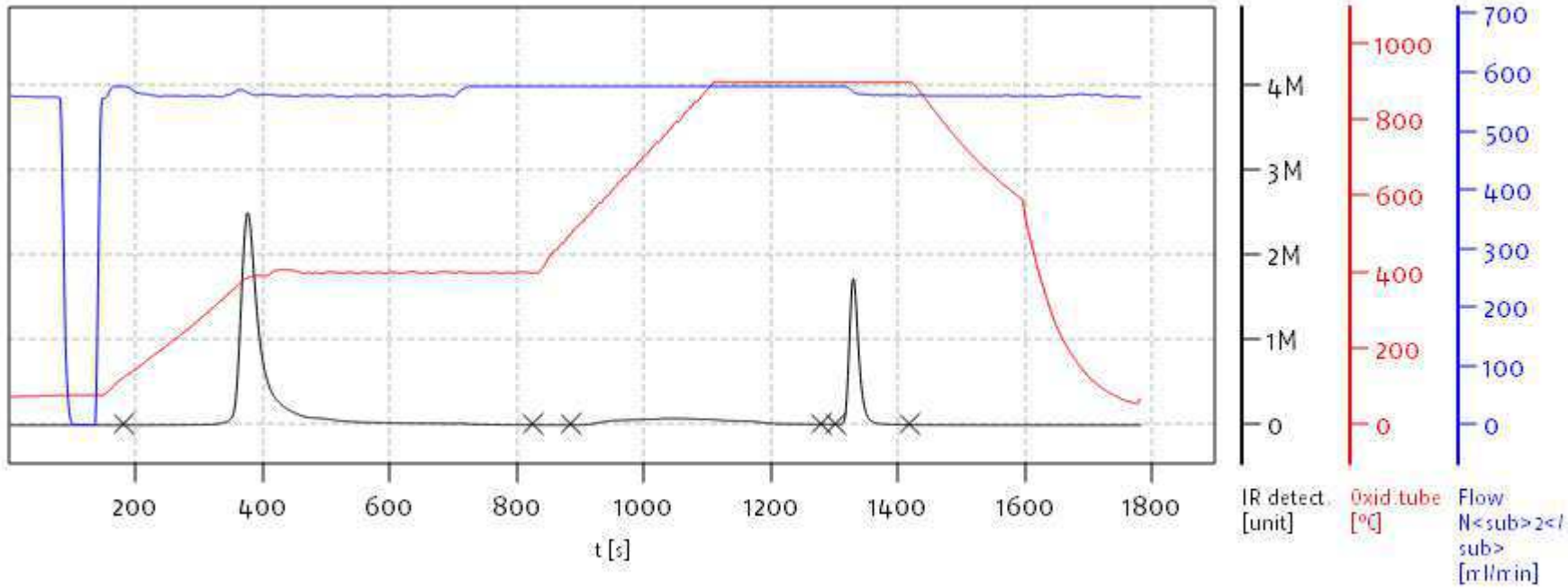
Access: soliTOC superuser

Date: Thu Feb 16 09:54:06 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
9	9	BLB0342-SRM1	251.00		CARBON	2/14/2023 11:09 PM	bl	2.928	3 668 443	3.316	0.687	1 140 084	655 139	2.242	0.388	0.9980	1.0000



Name:

Access: soliTOC superuser

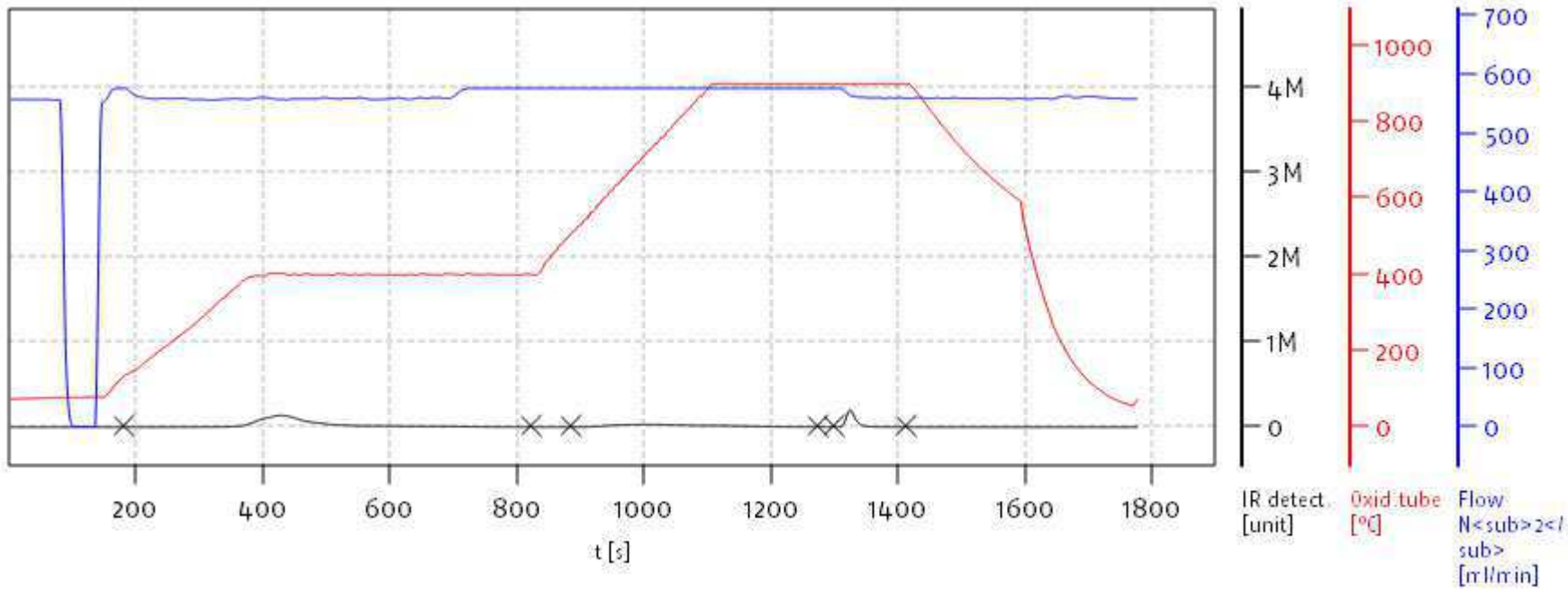
Date: Thu Feb 16 09:54:06 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
10	10	23B0217-02	383.80		CARBON	2/14/2023 11:39 PM	bl	0.256	557 402	0.332	0.043	132 325	214 017	0.214	0.076	0.9980	1.0000



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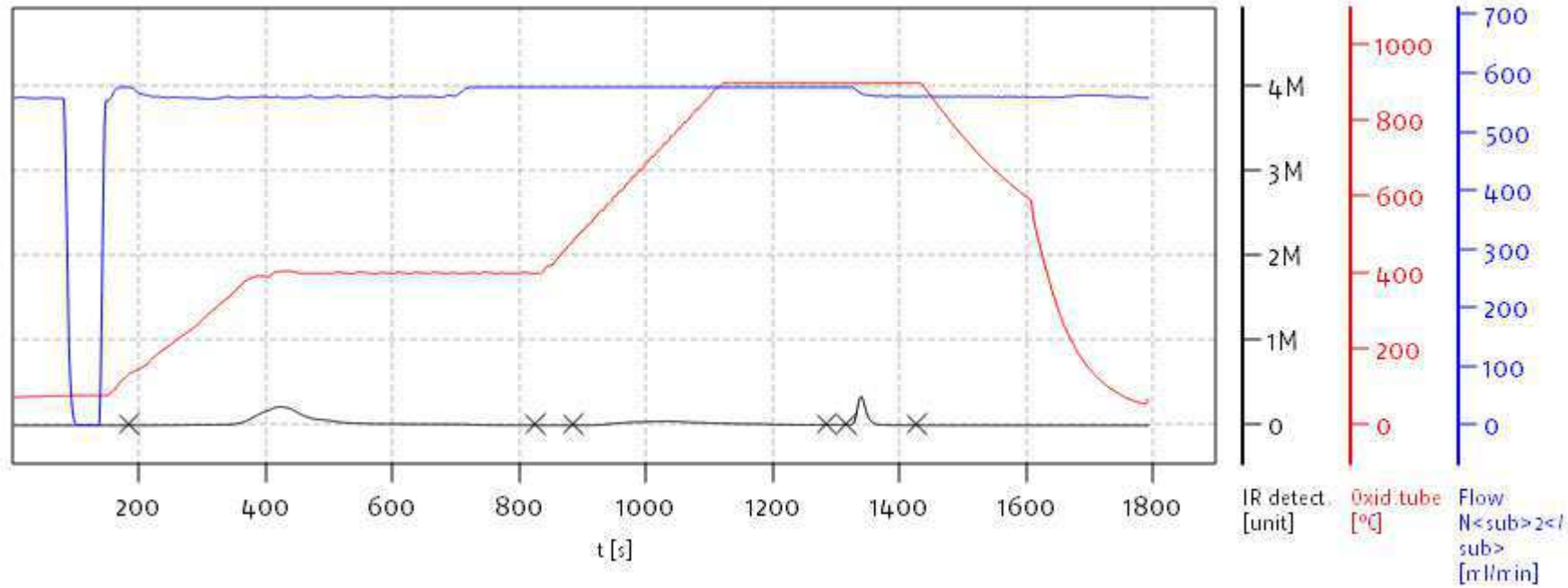
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
11	11	BLB0342-DUP1	432.10		CARBON	2/15/2023 12:10 AM	bl	0.377	891 368	0.486	0.068	216 067	330 289	0.309	0.109	0.9980	1.0000



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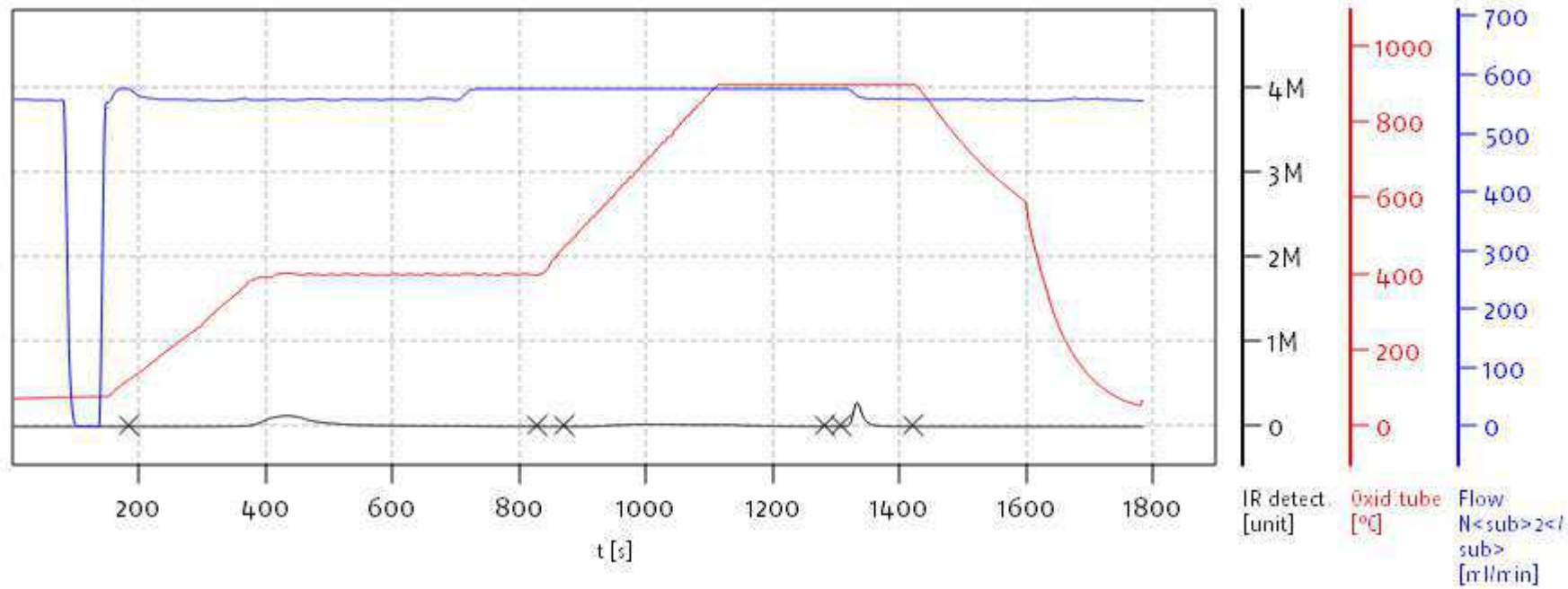
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
12	12	BLB0342-DUP2	319.90		CARBON	2/15/2023 12:40 AM	bl	0.316	517 775	0.404	0.079	190 263	206 800	0.237	0.087	0.9980	1.0000



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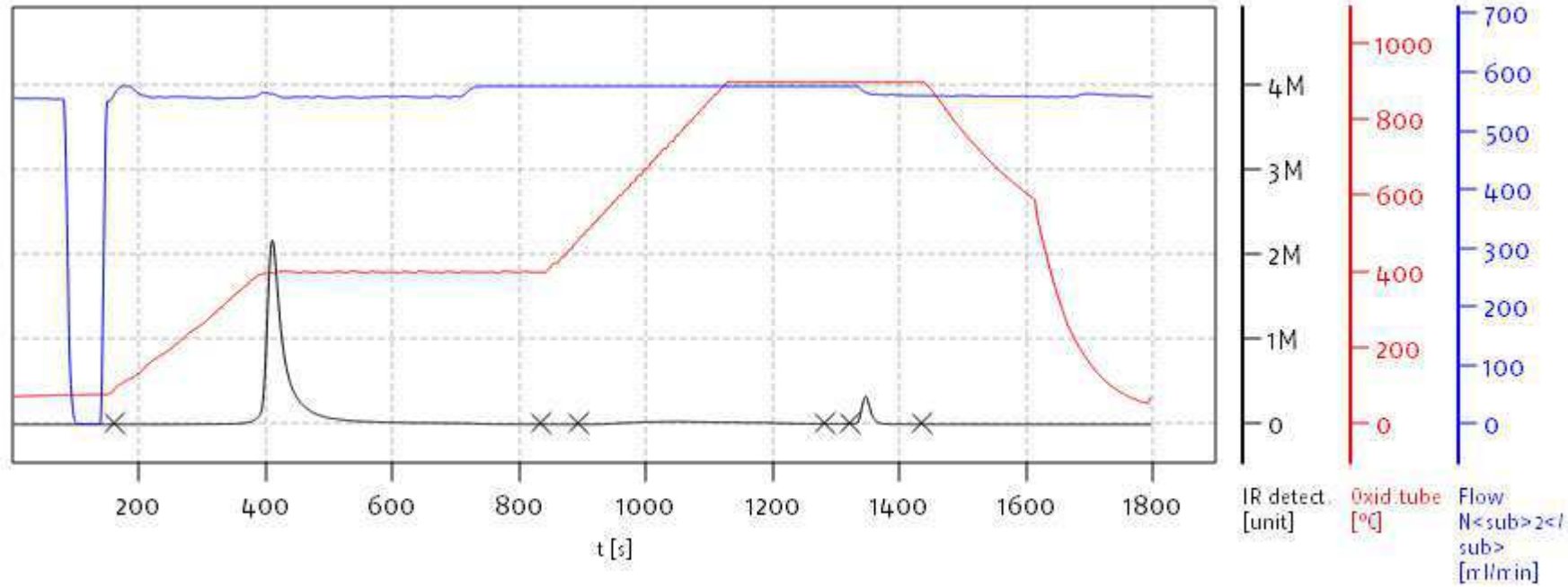
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
13	13	BLB0342-MS1	309.50	0.0076	CARBON	2/15/2023 1:10 AM	bl	1.476	2 802 271	1.599	0.091	207 478	273 023	1.386	0.123	0.9980	1.0000



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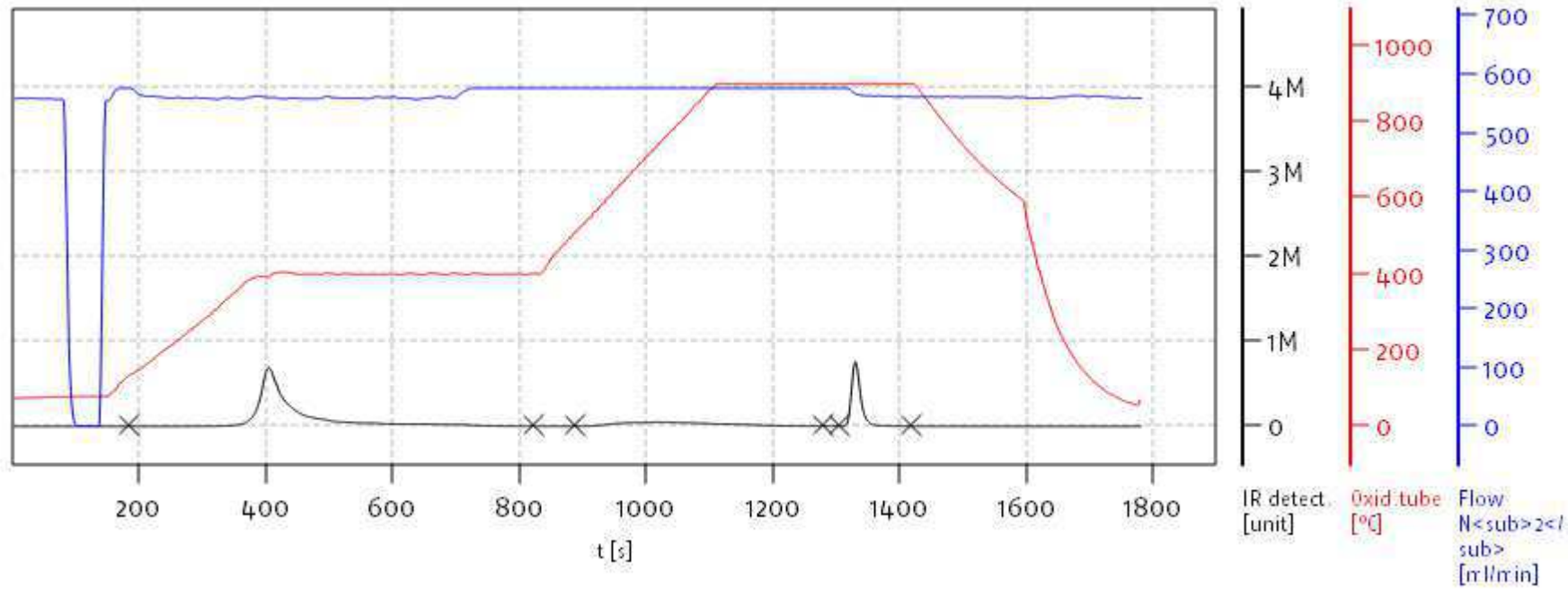
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
14	14	23B0217-03	490.10		CARBON	2/15/2023 1:40 AM	bl	0.627	1 559 048	0.732	0.144	480 893	360 878	0.483	0.106	0.9980	1.0000



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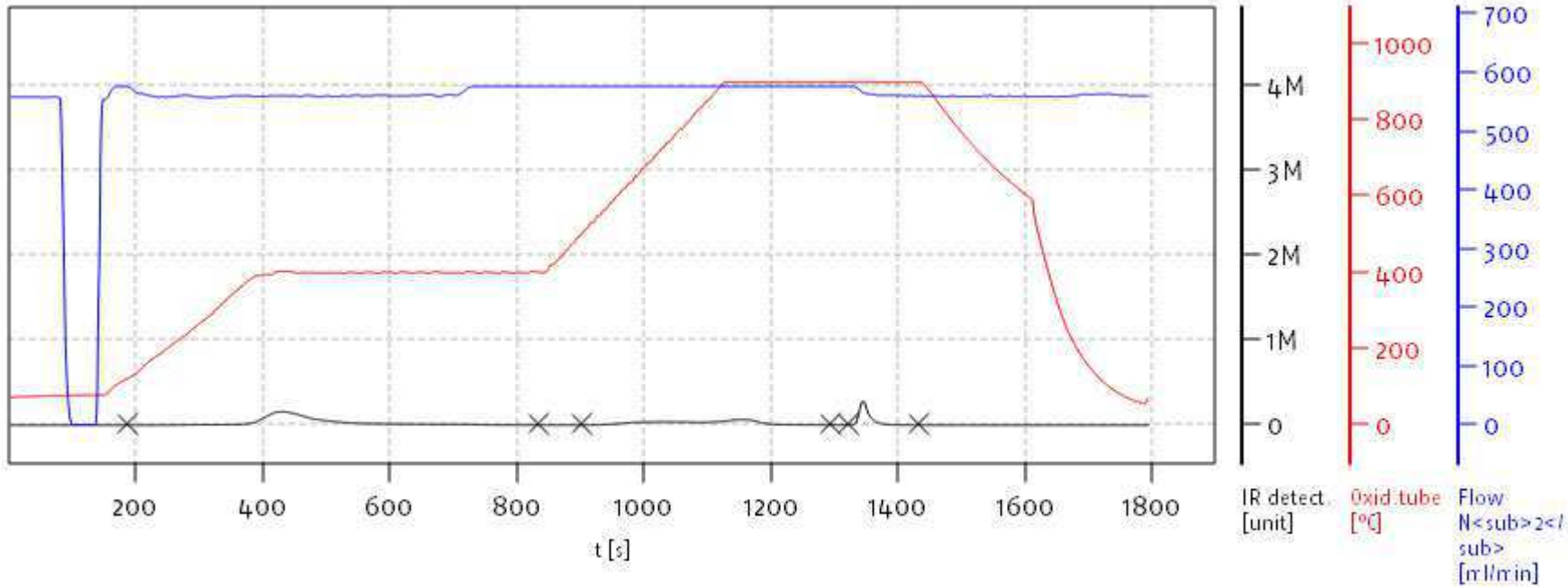
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
15	15	23B0217-04	289.10		CARBON	2/15/2023 2:11 AM	bl	0.425	650 205	0.613	0.091	197 245	378 527	0.333	0.188	0.9980	1.0000



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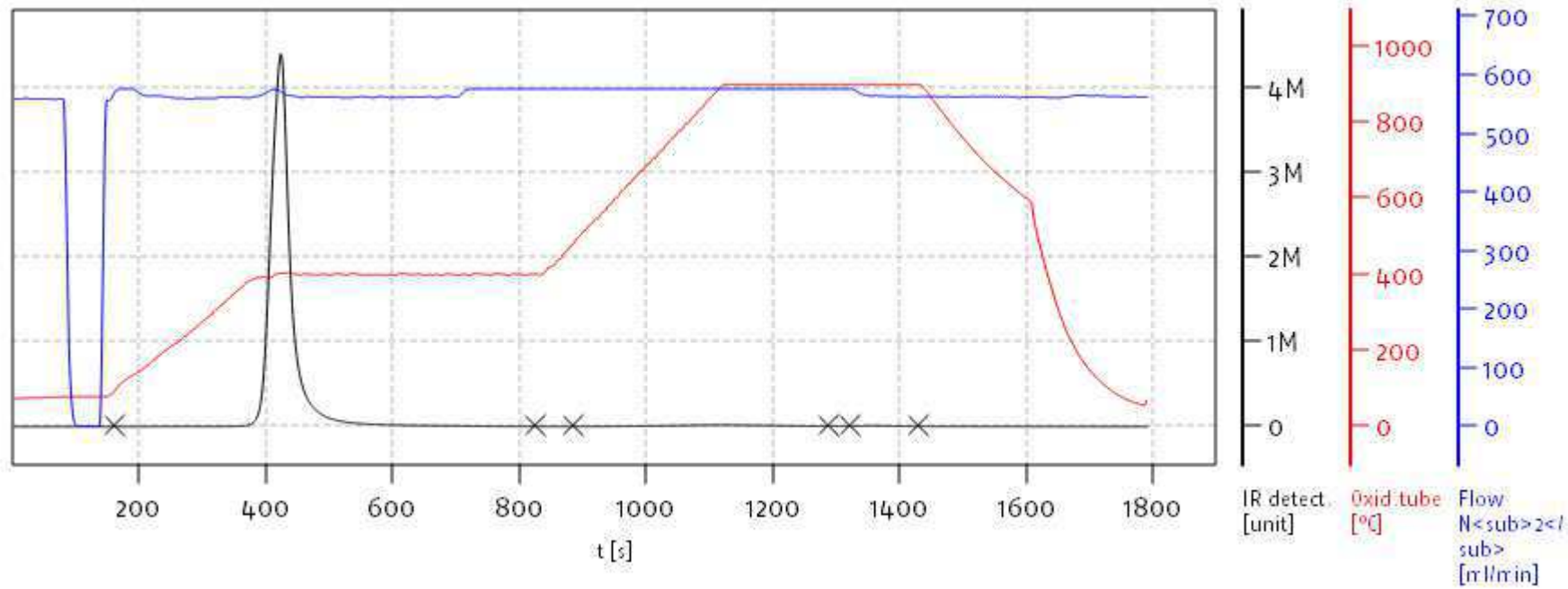
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
16	16	SLB0179-CCV1	21.20		CARBON	2/15/2023 2:41 AM	bl	44.105	6 076 864	45.007	0.015	28 563	150 077	44.090	0.902	0.9980	1.0000



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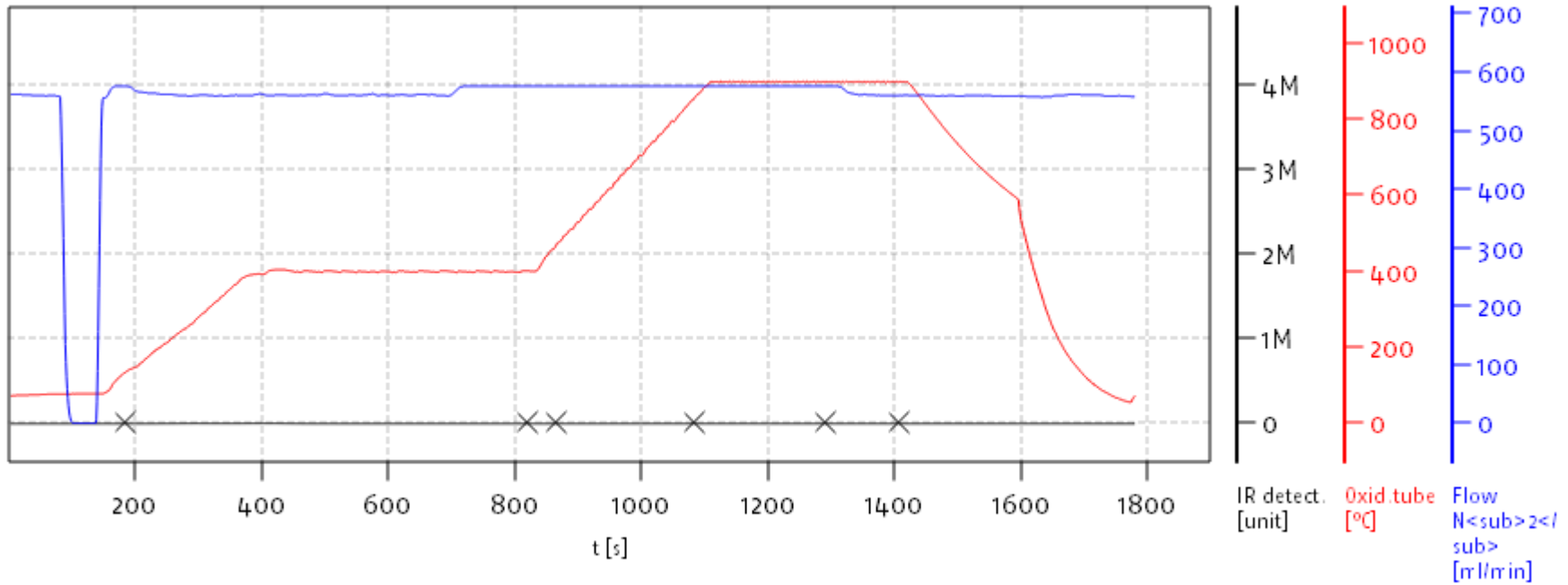
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
17	17	SLB0179-CCB1	523.40		CARBON	2/15/2023 3:11 AM	bl,C3u,C2u	0.000	20 220	0.000	0.000	1 738	1 544	0.000	0.000	0.9980	1.0000



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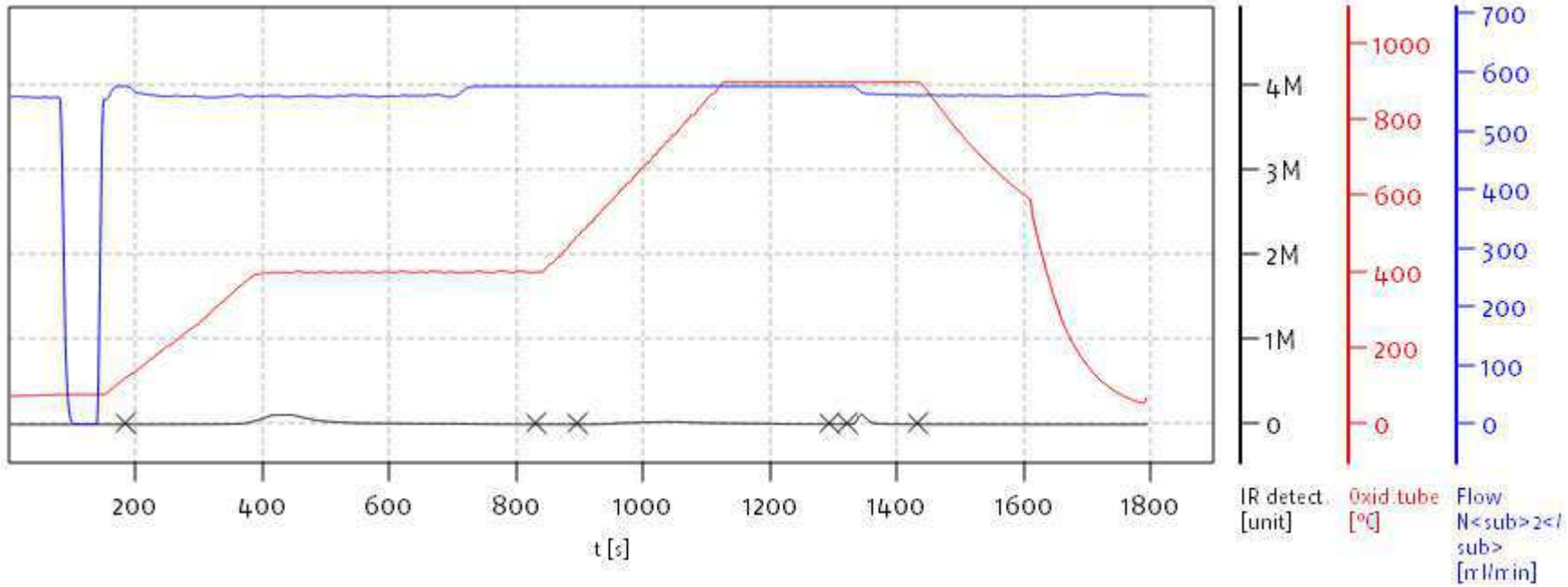
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
18	18	23B0217-05	422.70		CARBON	2/15/2023 3:41 AM	bl	0.194	497 048	0.256	0.022	85 646	198 248	0.172	0.063	0.9980	1.0000



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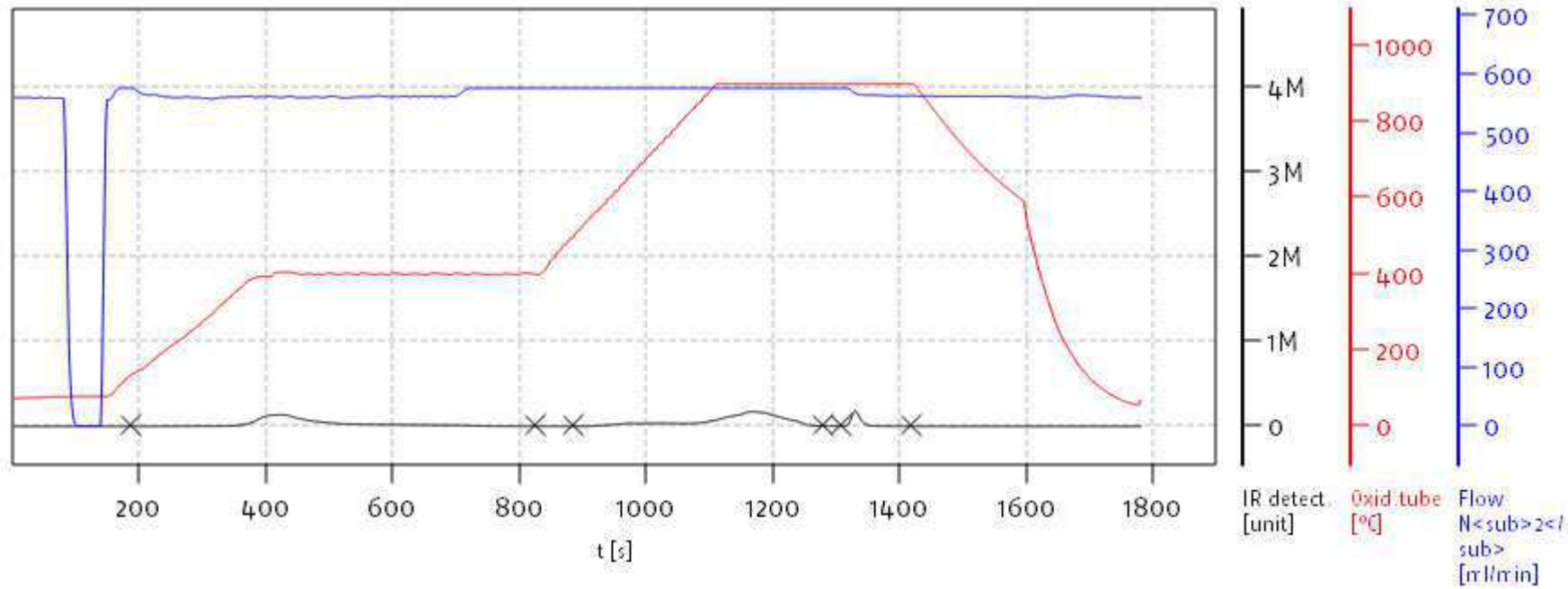
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
19	19	23B0217-06	361.10		CARBON	2/15/2023 4:11 AM	bl	0.304	646 451	0.668	0.039	117 855	874 979	0.265	0.364	0.9980	1.0000



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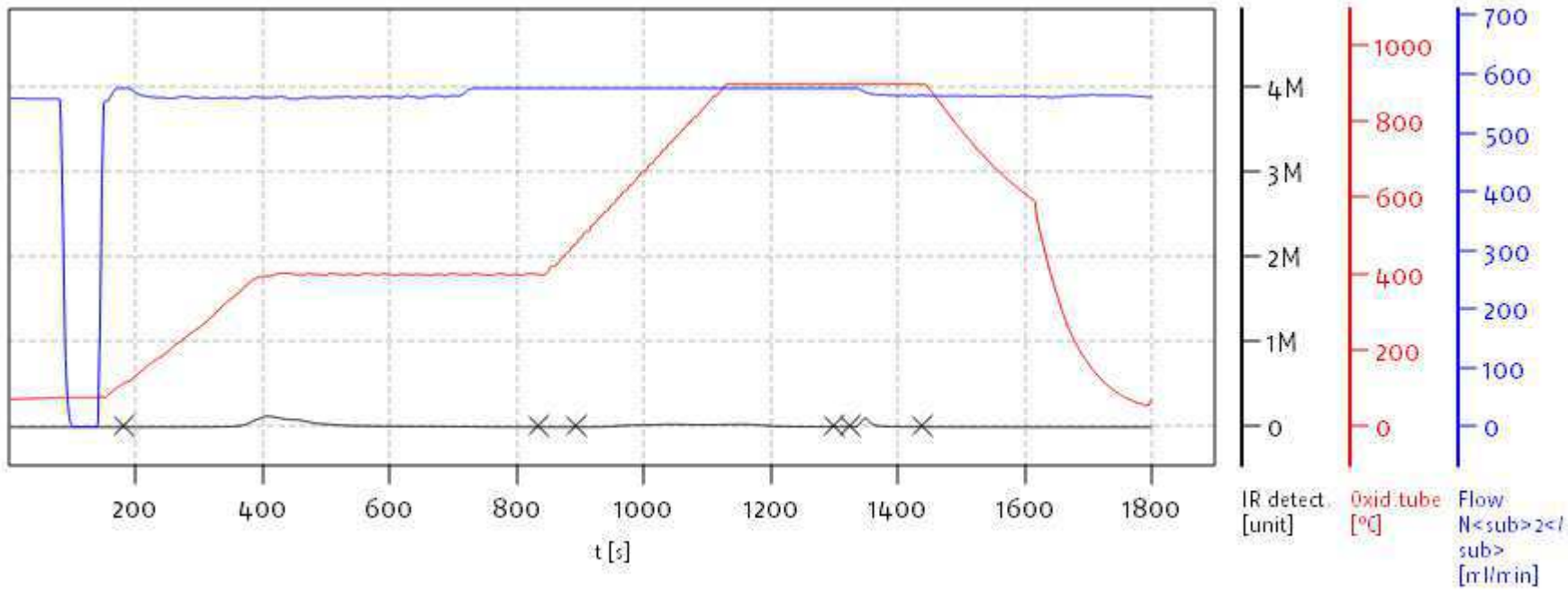
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
20	20	23B0228-01	138.70		CARBON	2/15/2023 4:42 AM	bl	0.612	522 480	0.887	0.060	80 222	272 936	0.552	0.275	0.9980	1.0000



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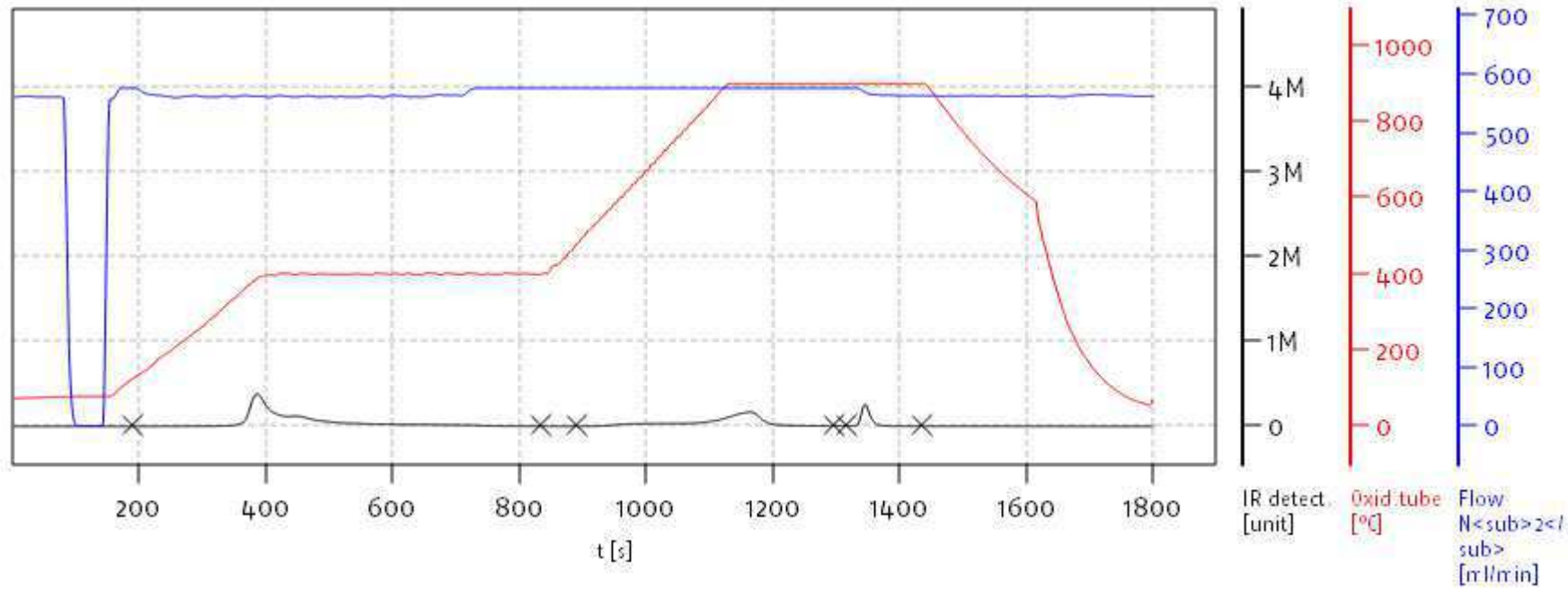
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
21	21	23B0229-01	172.40		CARBON	2/15/2023 5:12 AM	bl	1.038	1 043 446	1.581	0.127	167 687	631 198	0.911	0.543	0.9980	1.0000



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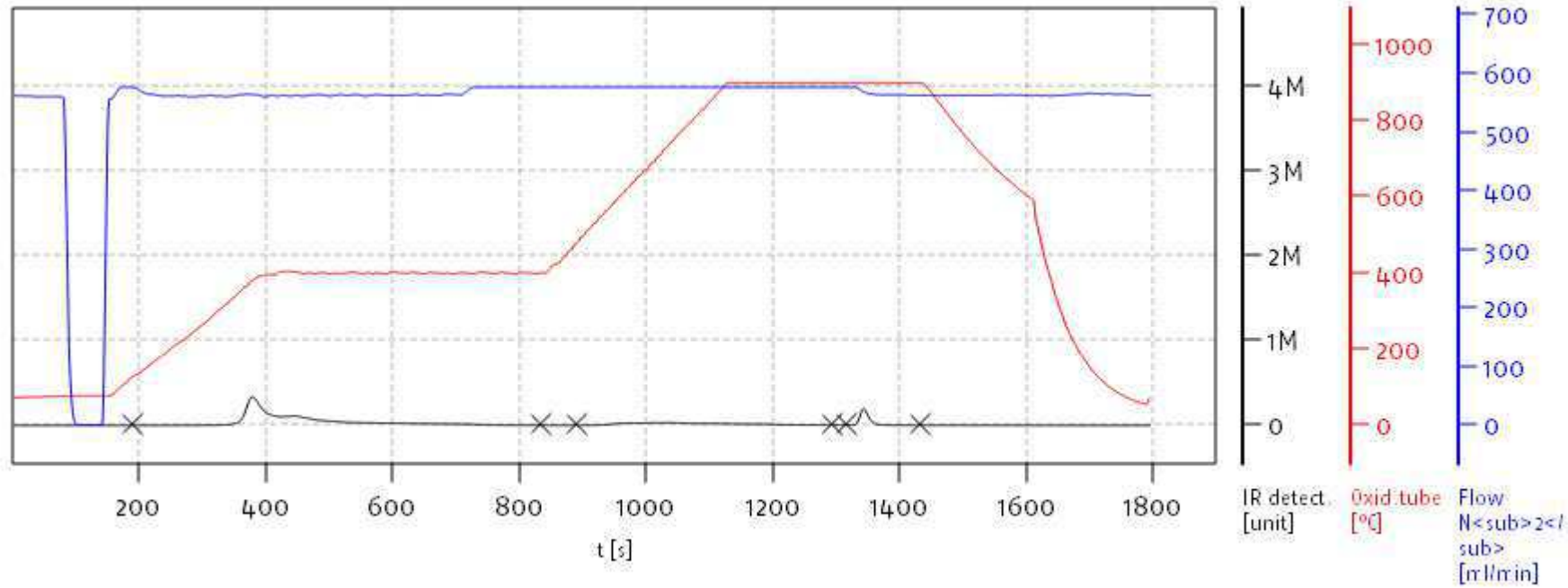
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
22	22	BLB0342-DUP3	140.70		CARBON	2/15/2023 5:42 AM	bl	1.127	952 068	1.370	0.111	127 008	247 413	1.016	0.243	0.9980	1.0000



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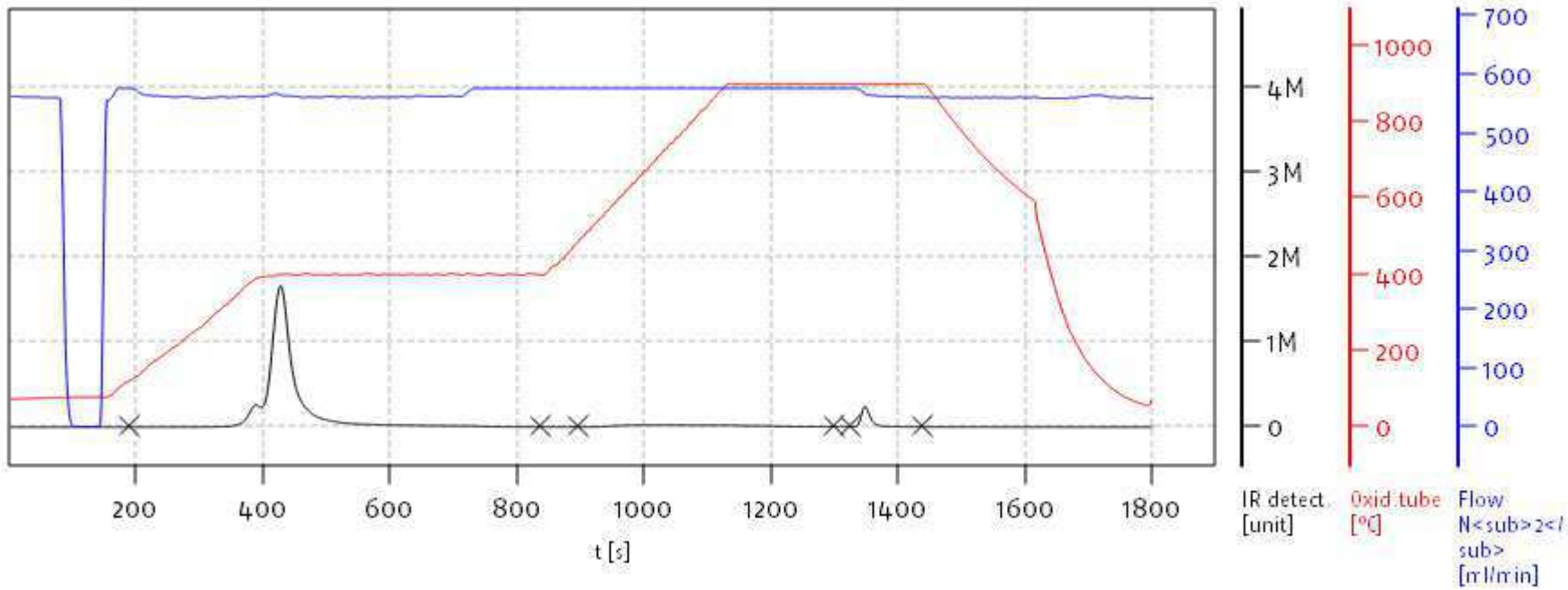
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
23	23	BLB0342-MS2	114.80	0.0074	CARBON	2/15/2023 6:13 AM	bl	3.914	2 797 159	4.177	0.185	163 756	221 672	3.729	0.263	0.9980	1.0000



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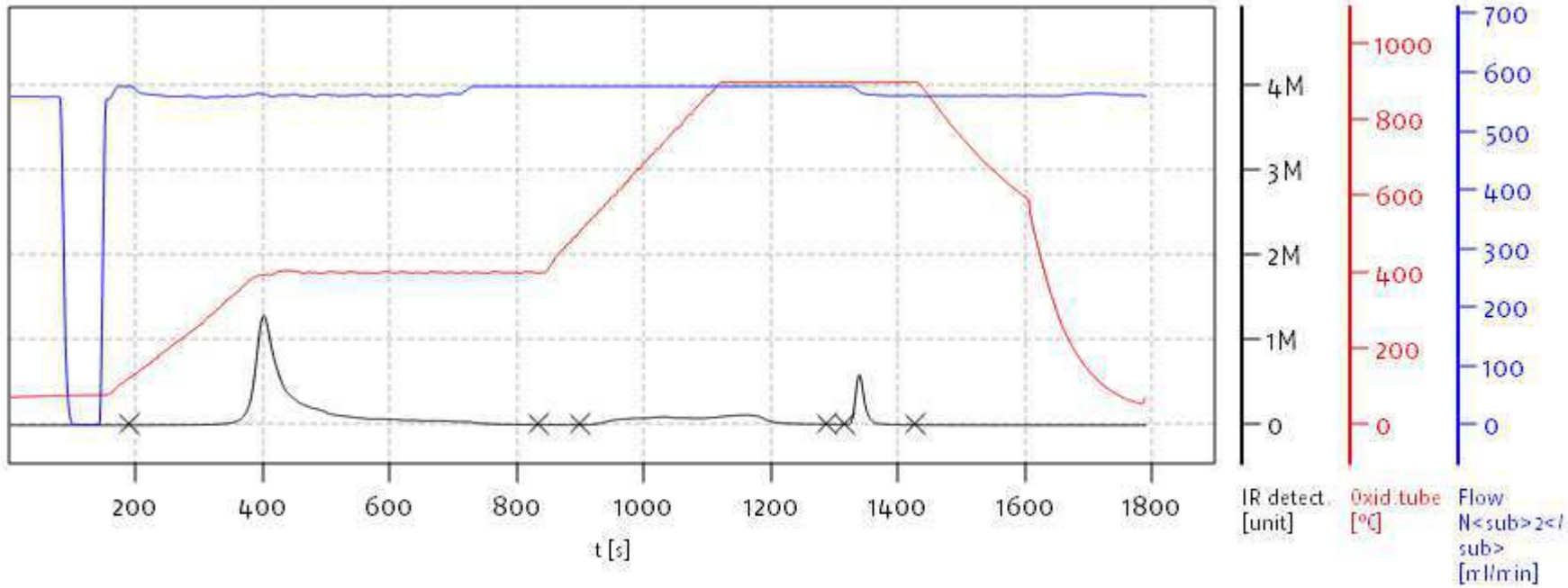
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
24	24	23B0229-02	545.20		CARBON	2/15/2023 6:43 AM	bl	0.962	3 065 347	1.221	0.101	383 385	937 641	0.861	0.259	0.9980	1.0000



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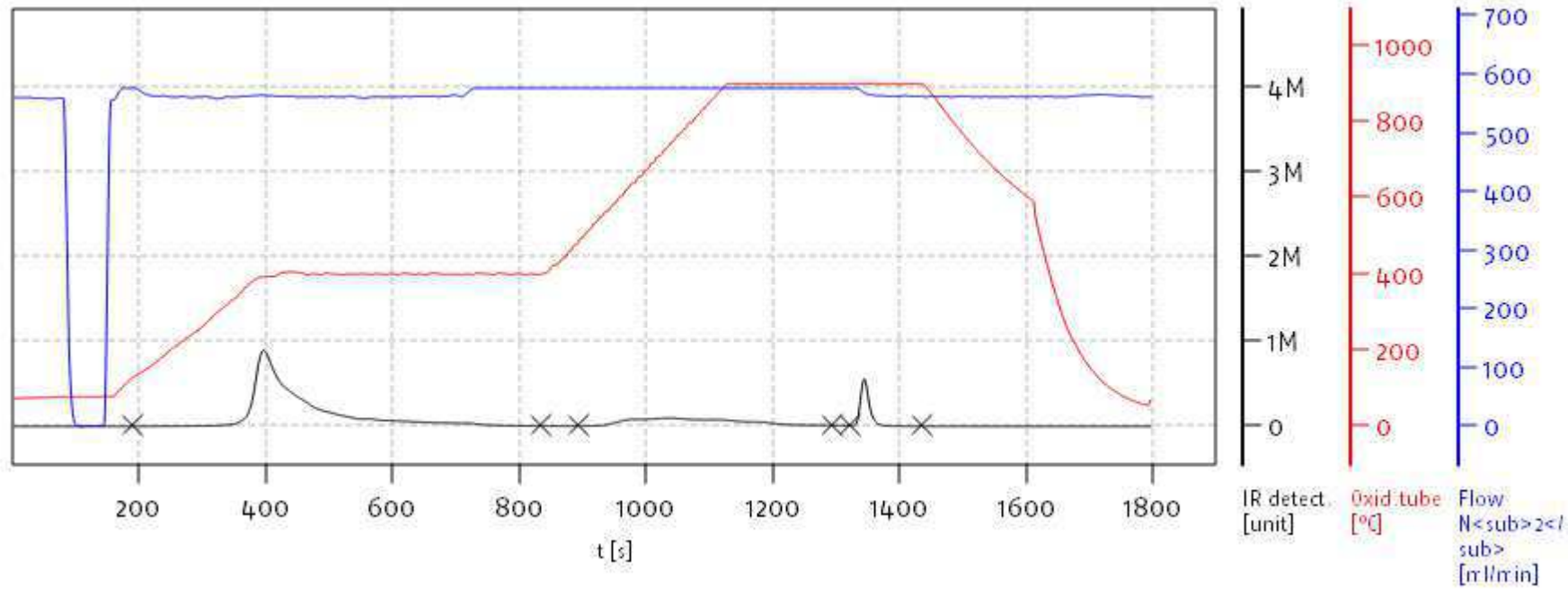
25	25	23B0229-03	535.10		CARBON	2/15/2023 7:13 AM	bl	0.902	2 830 500	1.121	0.092	345 796	784 577	0.810	0.219	0.9980	1.0000



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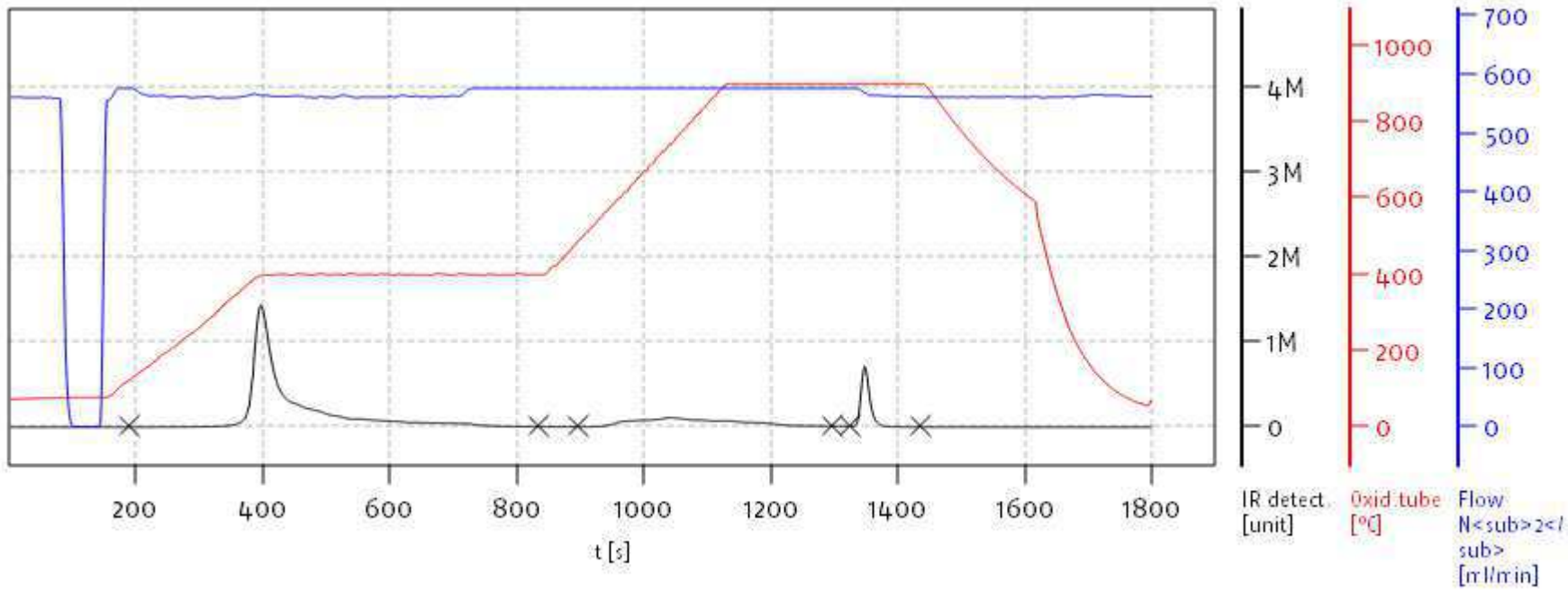
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
26	26	23B0229-04	530.30		CARBON	2/15/2023 7:44 AM	bl	1.015	3 101 276	1.238	0.120	436 533	789 711	0.896	0.223	0.9980	1.0000



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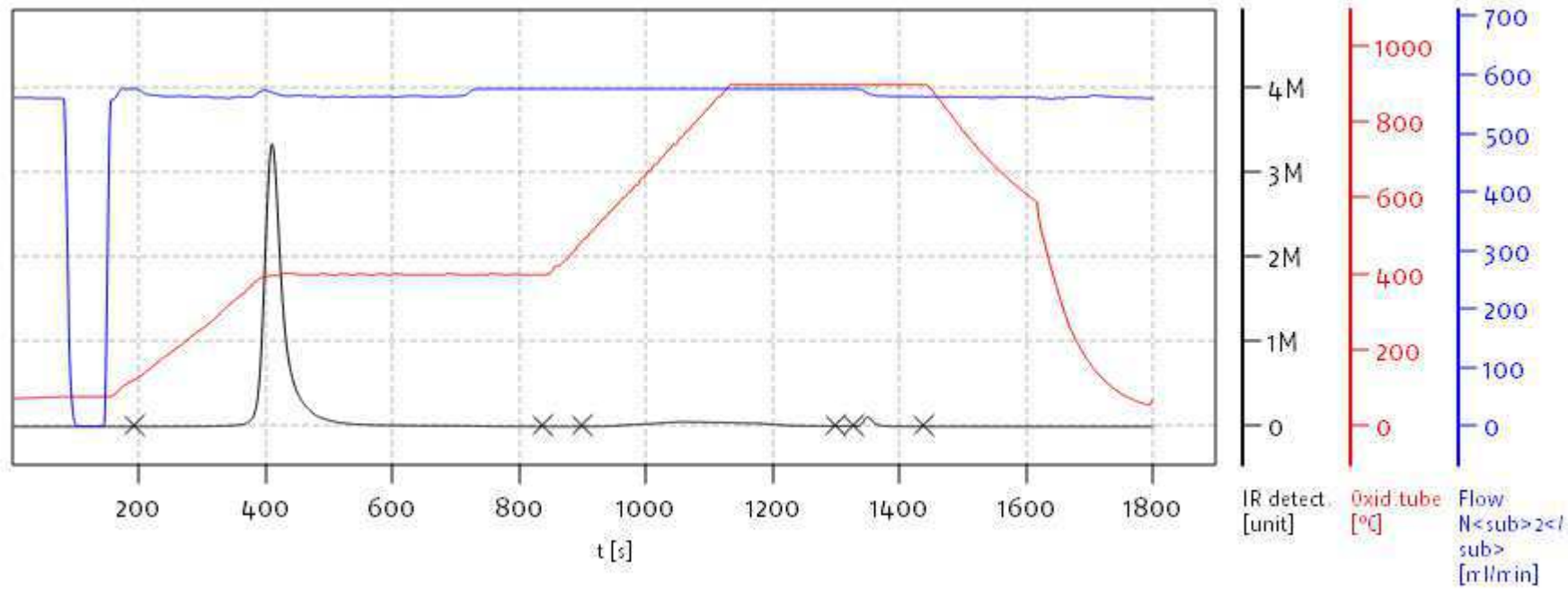
27	27	23B0229-05	510.00		CARBON	2/15/2023 8:14 AM	bl	1.379	4 525 832	1.500	0.016	80 200	424 399	1.363	0.121	0.9980	1.0000



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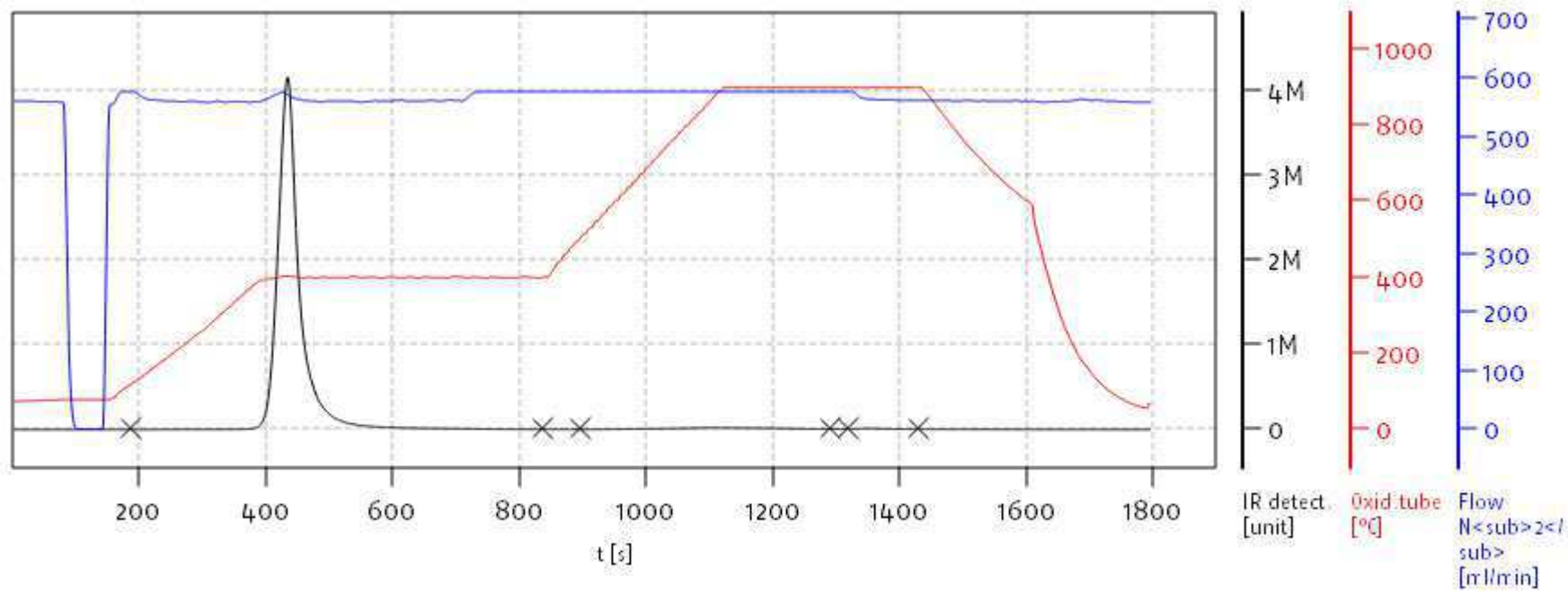
28	28	SLB0179-CCV2	21.60		CARBON	2/15/2023 8:44 AM	bl	43.878	6 156 431	44.893	0.035	31 425	168 155	43.843	1.015	0.9980	1.0000



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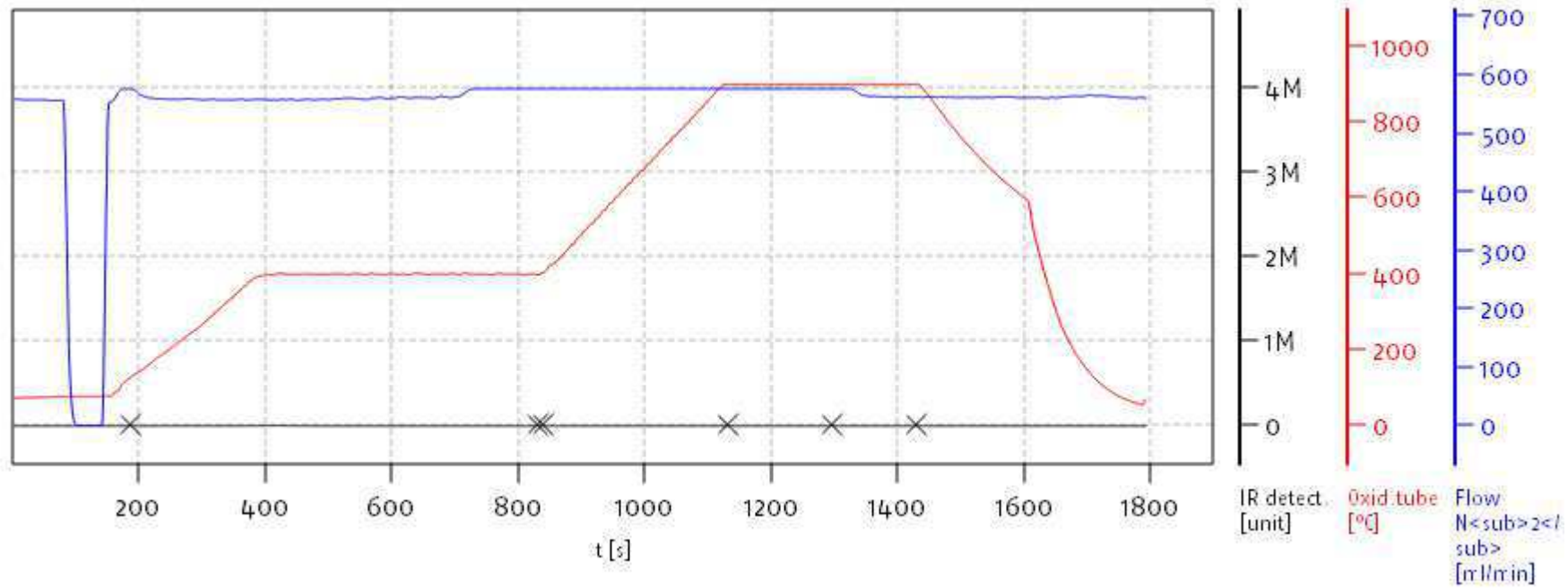
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
29	29	SLB0179-CCB2	543.60		CARBON	2/15/2023 9:15 AM	bl,C3u,C2u	0.000	15 405	0.000	0.000	818	567	0.000	0.000	0.9980	1.0000



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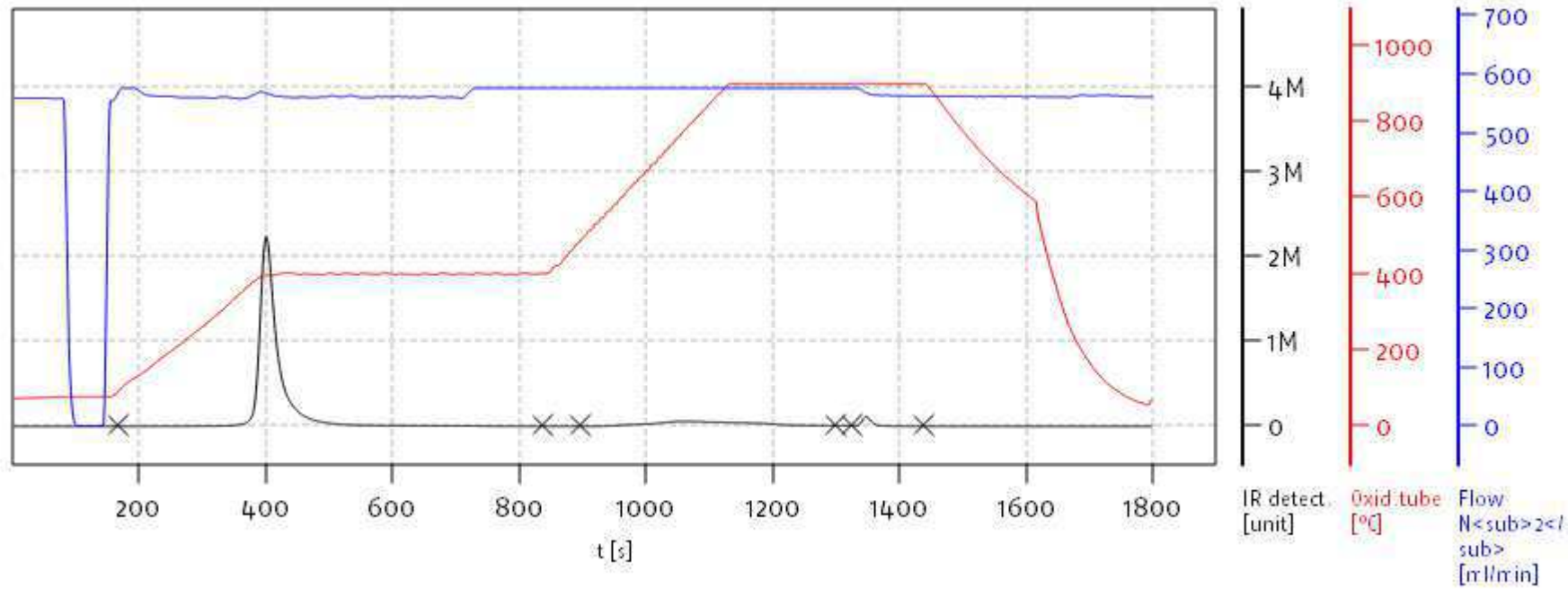
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
30	30	23B0229-06	300.70		CARBON	2/15/2023 9:45 AM	bl	1.458	2 809 984	1.666	0.028	80 672	431 065	1.430	0.208	0.9980	1.0000



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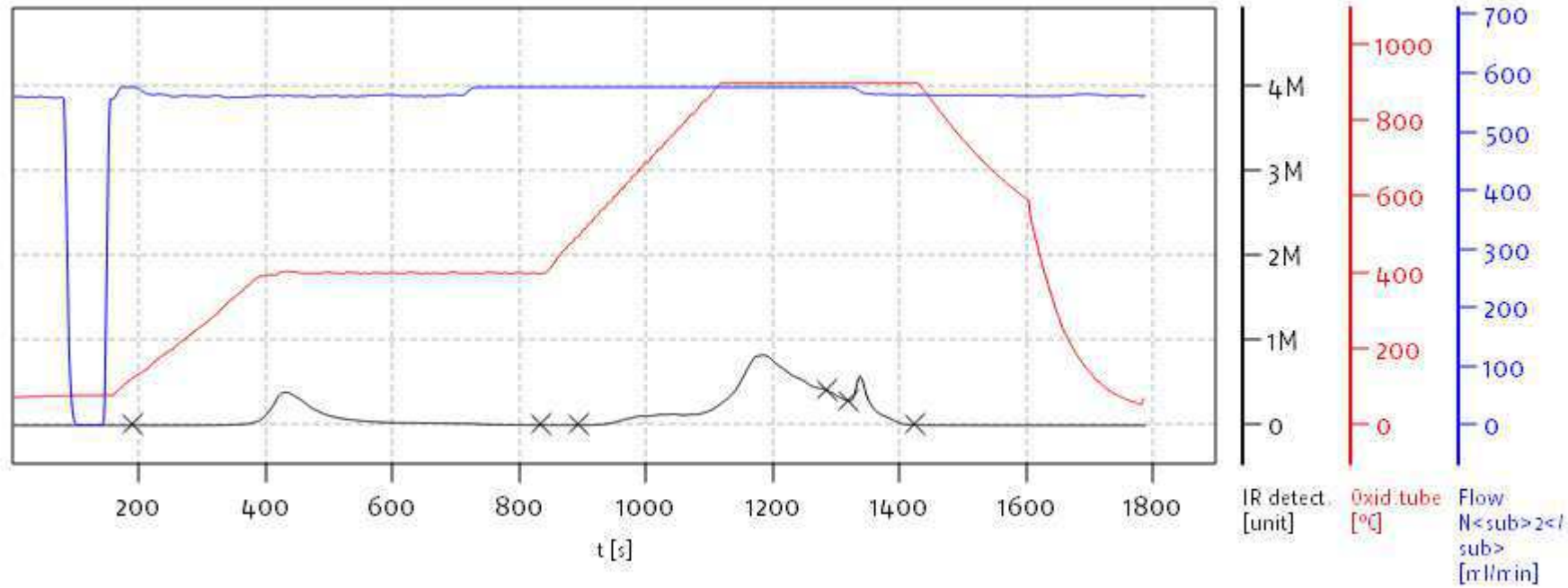
Access: soliTOC superuser

Date: Thu Feb 16 09:54:06 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
31	31	23B0229-07	543.30		CARBON	2/15/2023 10:15 AM	bl	0.598	1 428 248	1.865	0.199	725 642	4 473 906	0.399	1.267	0.9980	1.0000



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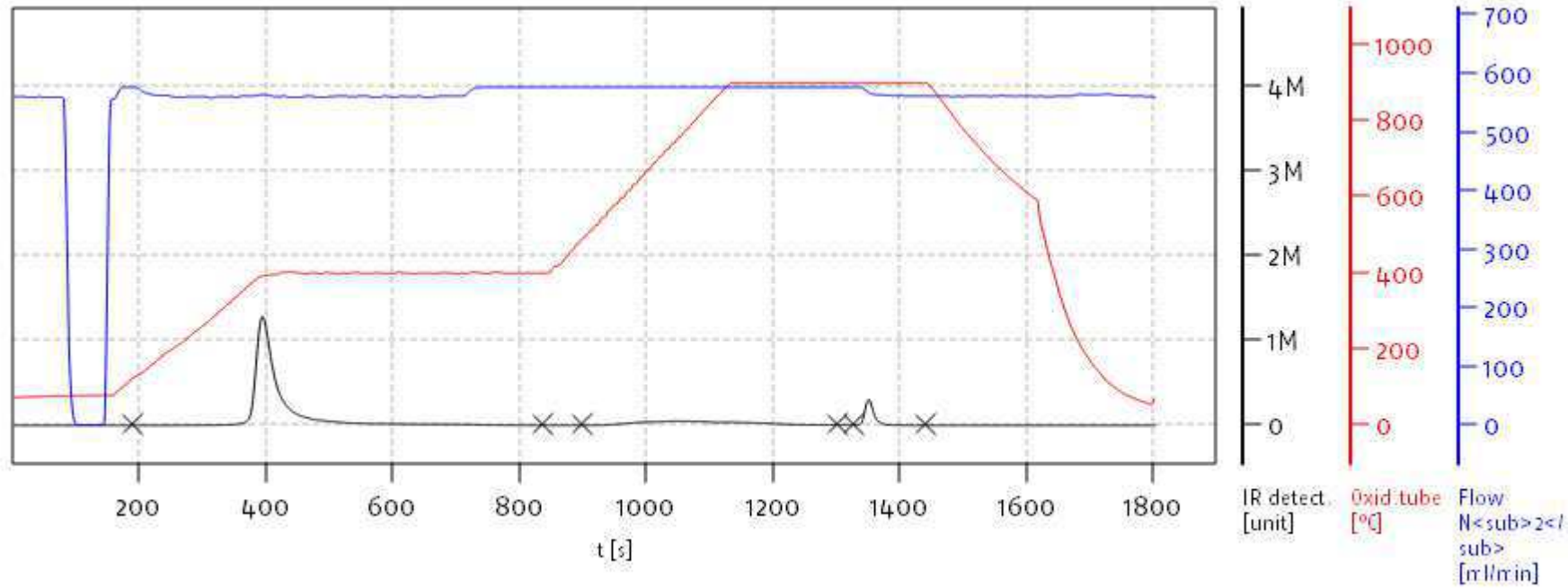
Date: Thu Feb 16 09:54:06 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
32	32	23B0229-08	250.80		CARBON	2/15/2023 10:46 AM	bl	1.292	1 958 370	1.514	0.102	191 221	386 503	1.190	0.222	0.9980	1.0000



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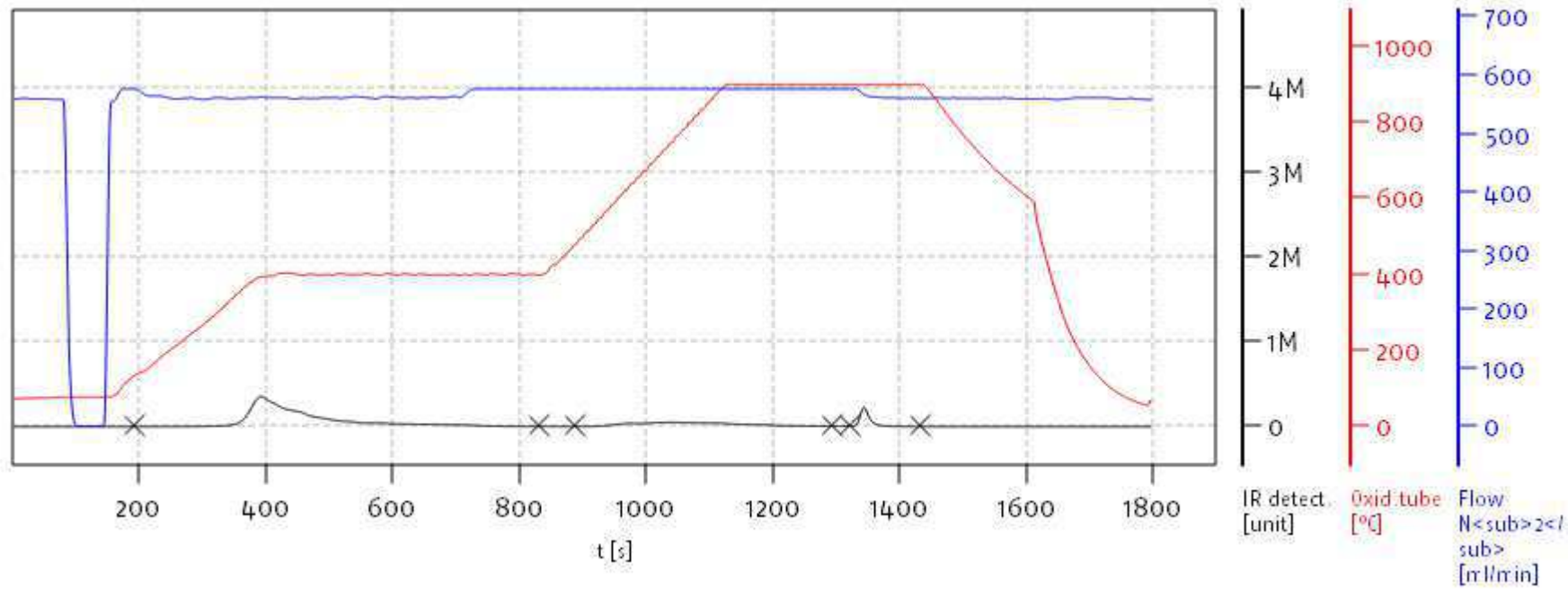
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
33	33	23B0276-01	318.80		CARBON	2/15/2023 11:16 AM	bl	0.731	1 409 861	0.909	0.061	152 108	393 180	0.670	0.178	0.9980	1.0000



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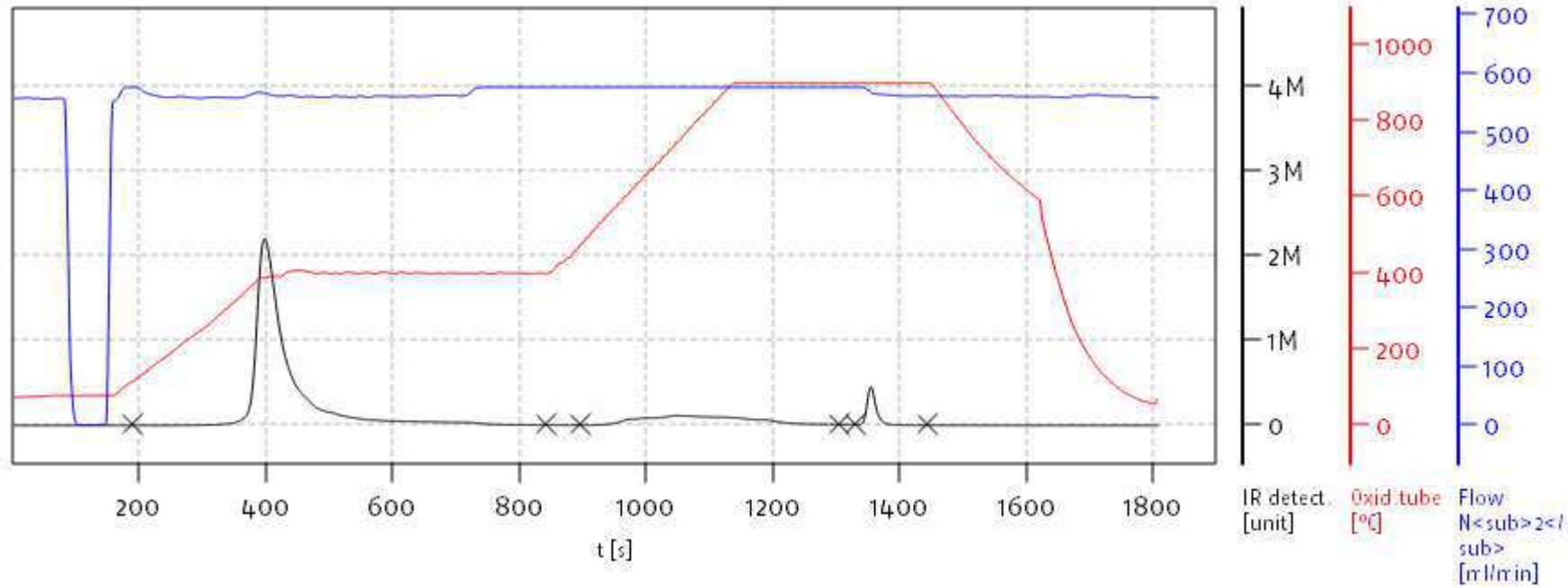
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
34	34	23B0278-01	556.70		CARBON	2/15/2023 11:47 AM	bl	1.332	4 562 988	1.579	0.073	288 540	917 343	1.259	0.248	0.9980	1.0000



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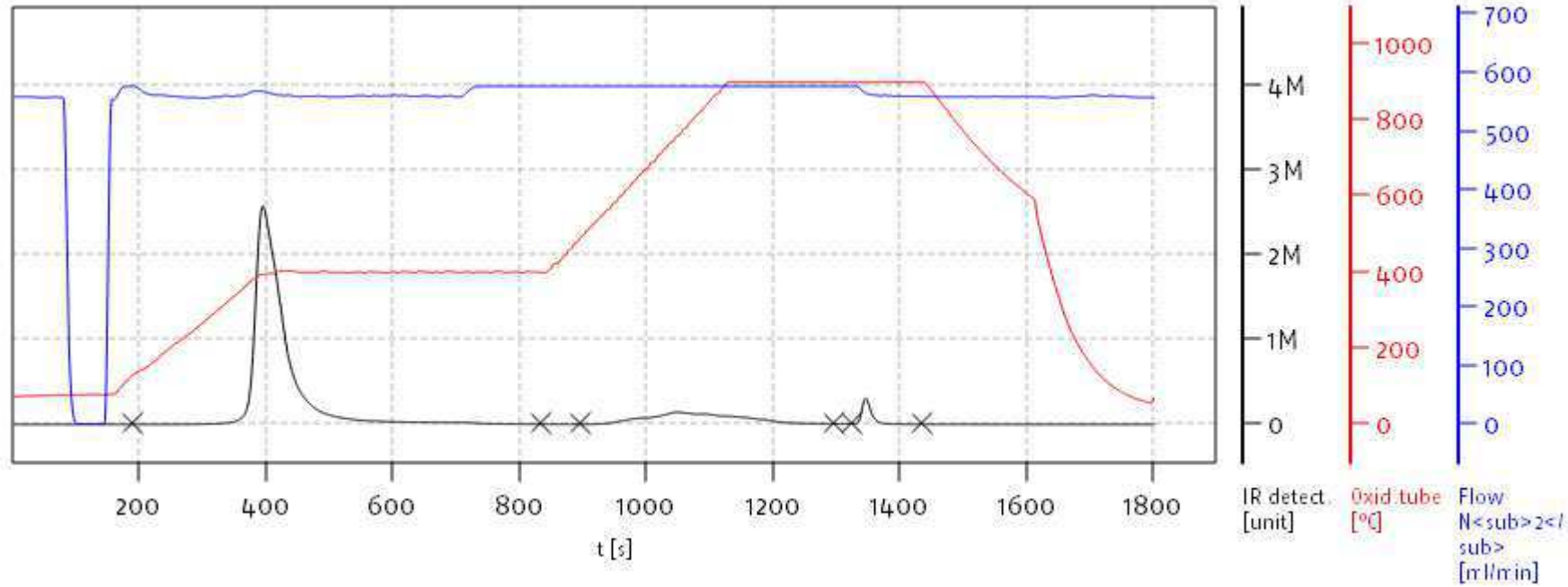
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
35	35	23B0278-02	656.80		CARBON	2/15/2023 12:17 PM	bl	1.239	5 115 792	1.452	0.042	204 070	931 409	1.197	0.213	0.9980	1.0000



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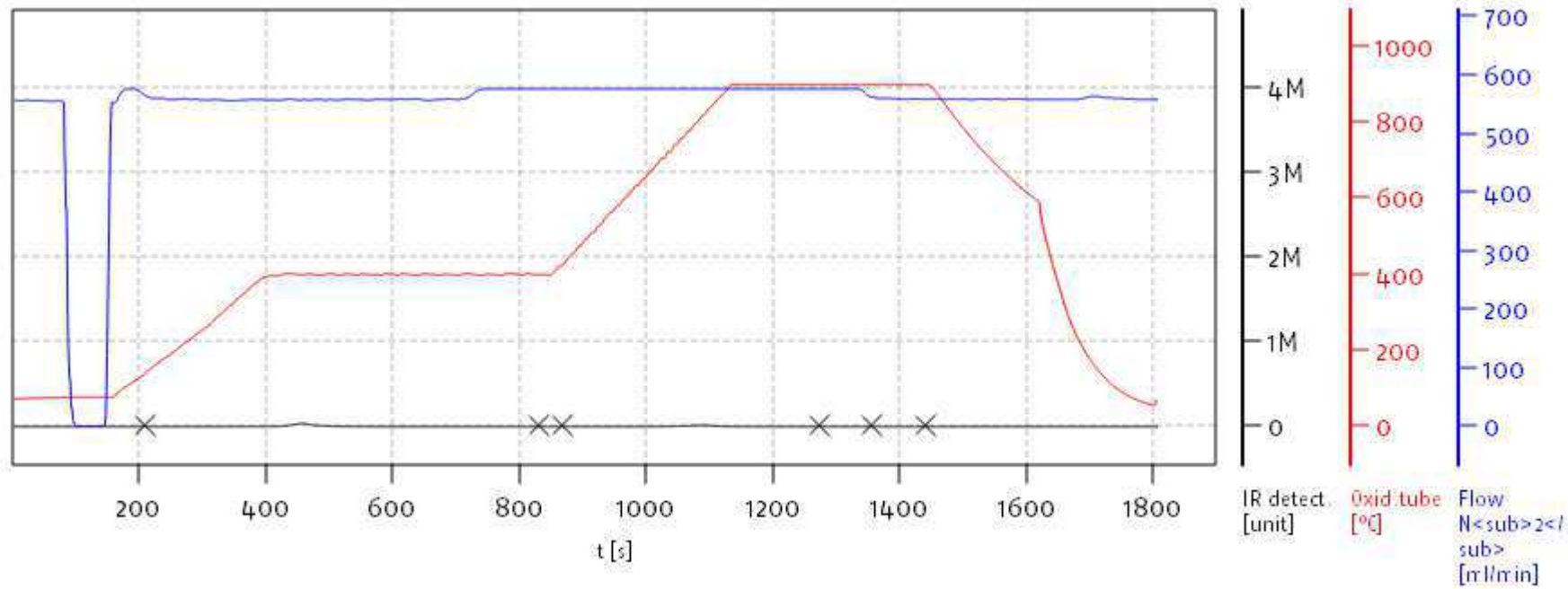
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
36	36	BLB0343-MRL1	503.80		CARBON	2/15/2023 12:48 PM	bl,C2u	0.013	67 319	0.015	0.000	336	35 633	0.013	0.003	0.9980	1.0000



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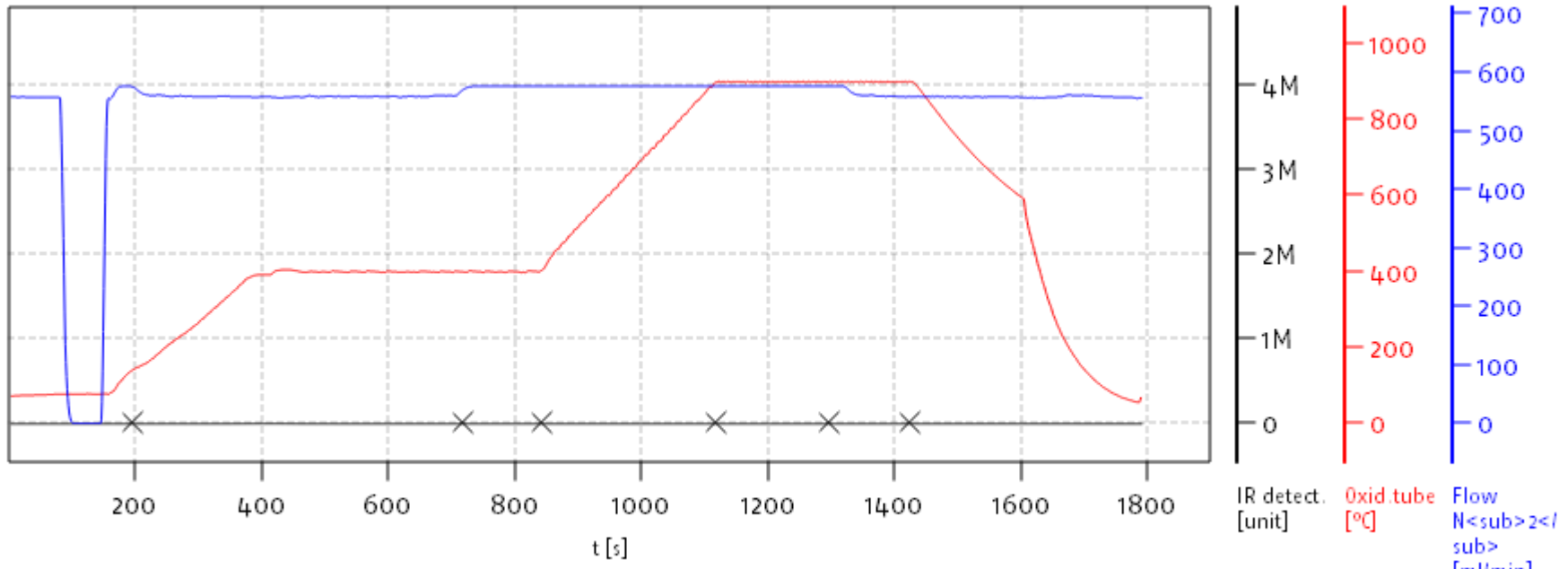
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
37	37	BLB0343-BLK1	538.40		CARBON	2/15/2023 1:18 PM	bl,C3u,C2u	0.000	8 610	0.000	0.000	496	523	0.000	0.000	0.9980	1.0000



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Serial No: 0300.181017
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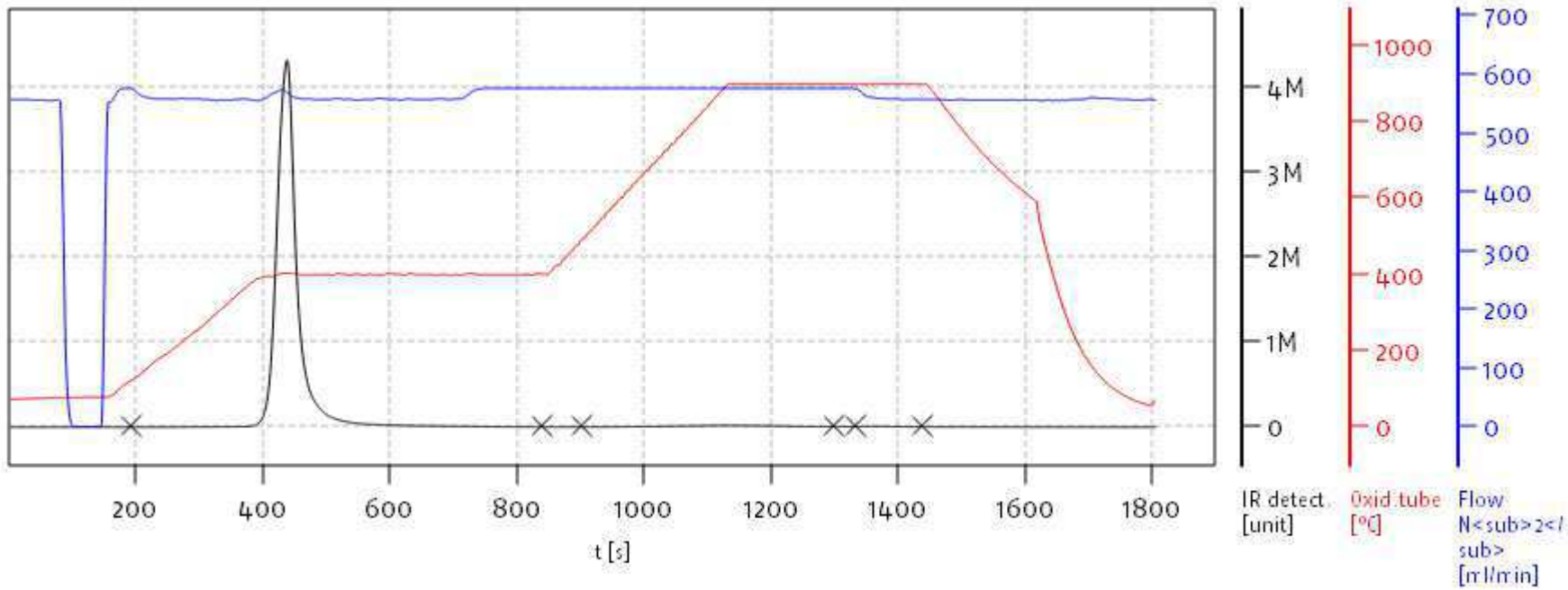
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
38	38	BLB0343-BS1	20.70		CARBON	2/15/2023 1:48 PM	bl	44.682	6 013 389	45.637	0.000	24 346	154 255	44.682	0.955	0.9980	1.0000



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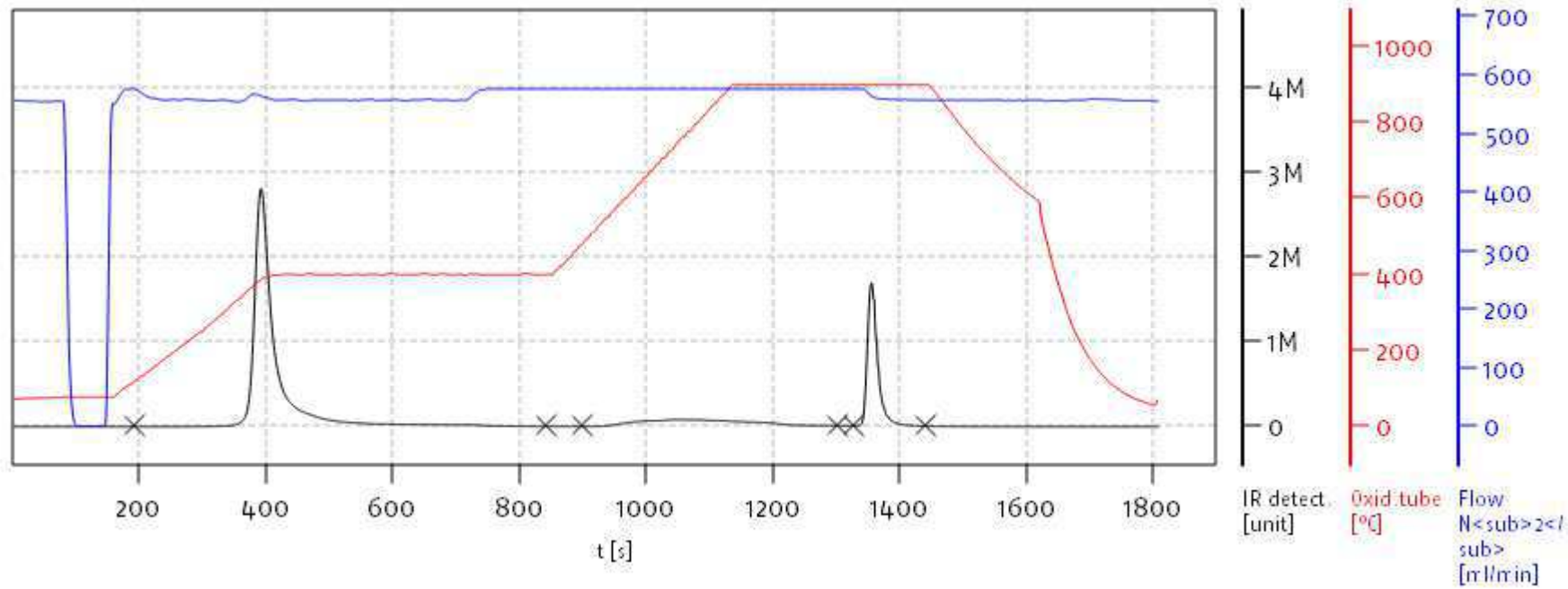
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
39	39	BLB0343-SRM1	264.40		CARBON	2/15/2023 2:19 PM	bl	2.932	3 852 487	3.316	0.697	1 216 919	681 526	2.236	0.383	0.9980	1.0000



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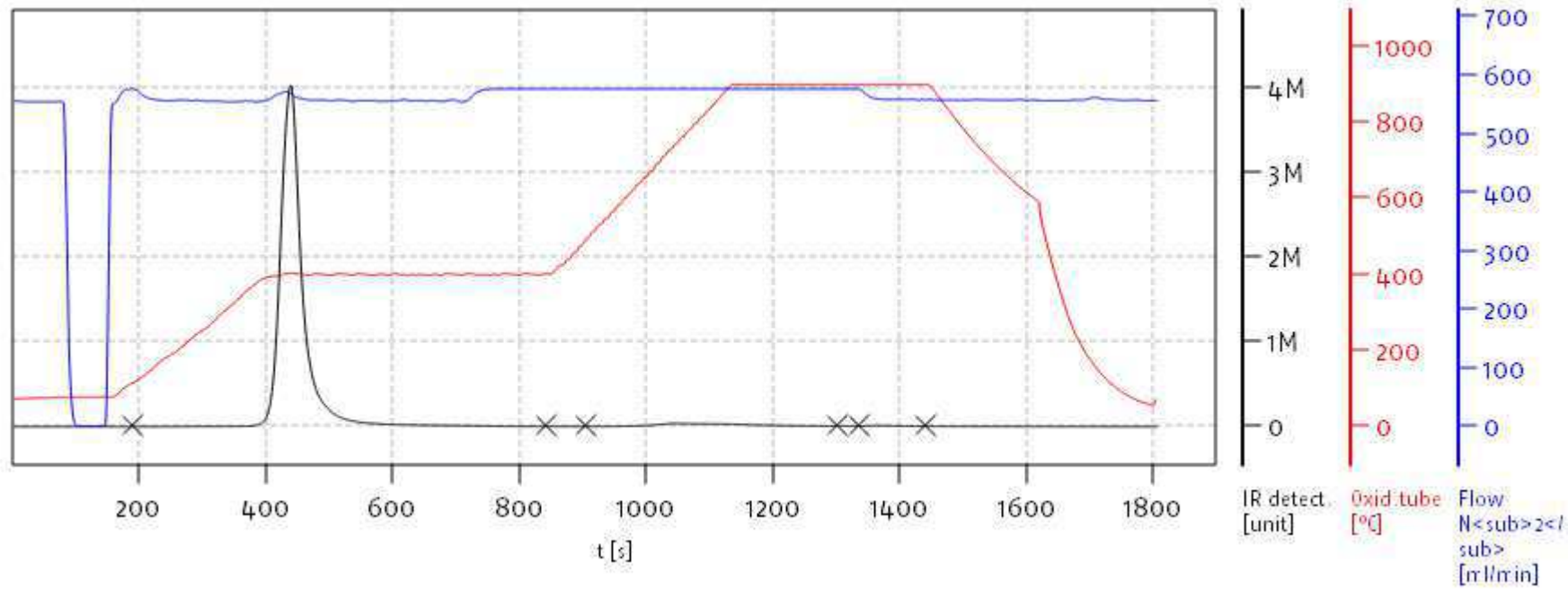
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
40	40	SLB0179-CCV3	21.30		CARBON	2/15/2023 2:49 PM	bl	43.937	6 079 243	45.614	0.036	31 541	257 273	43.901	1.677	0.9980	1.0000



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soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
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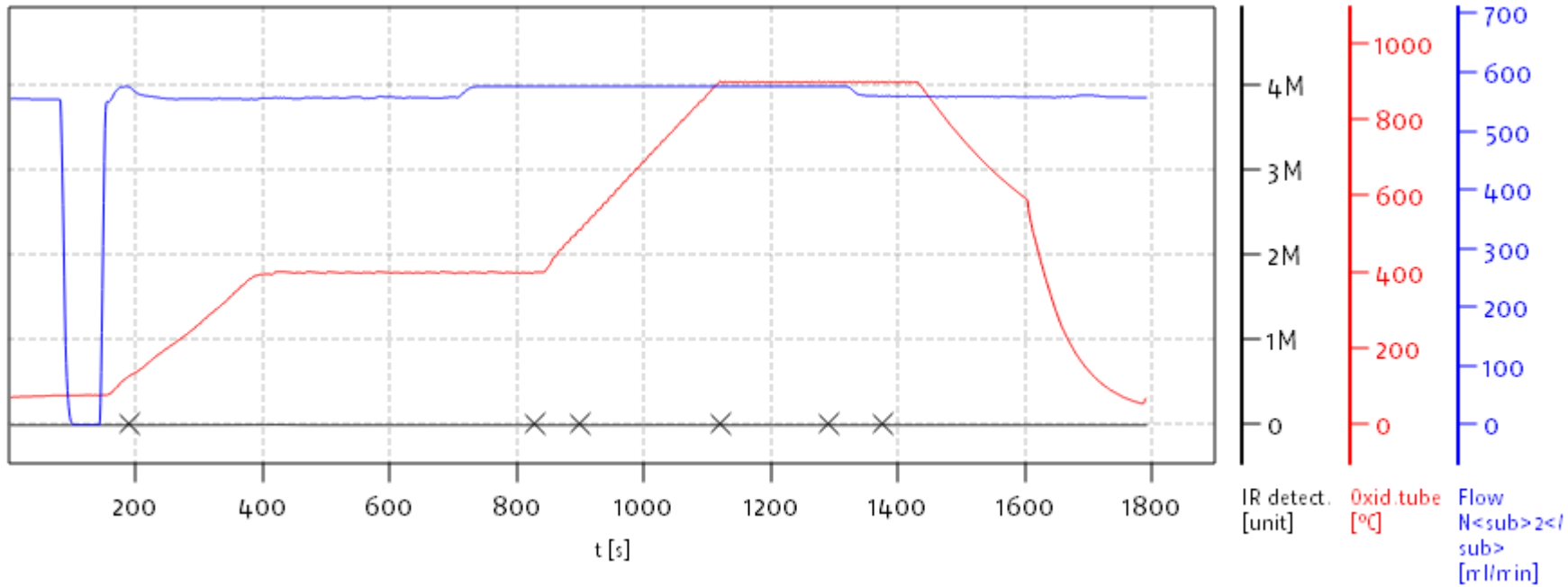
elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
41	41	SLB0179-CCB3	572.00		CARBON	2/15/2023 3:20 PM	bl,C2u	0.000	18 649	0.000	0.000	739	2 992	0.000	0.000	0.9980	1.0000



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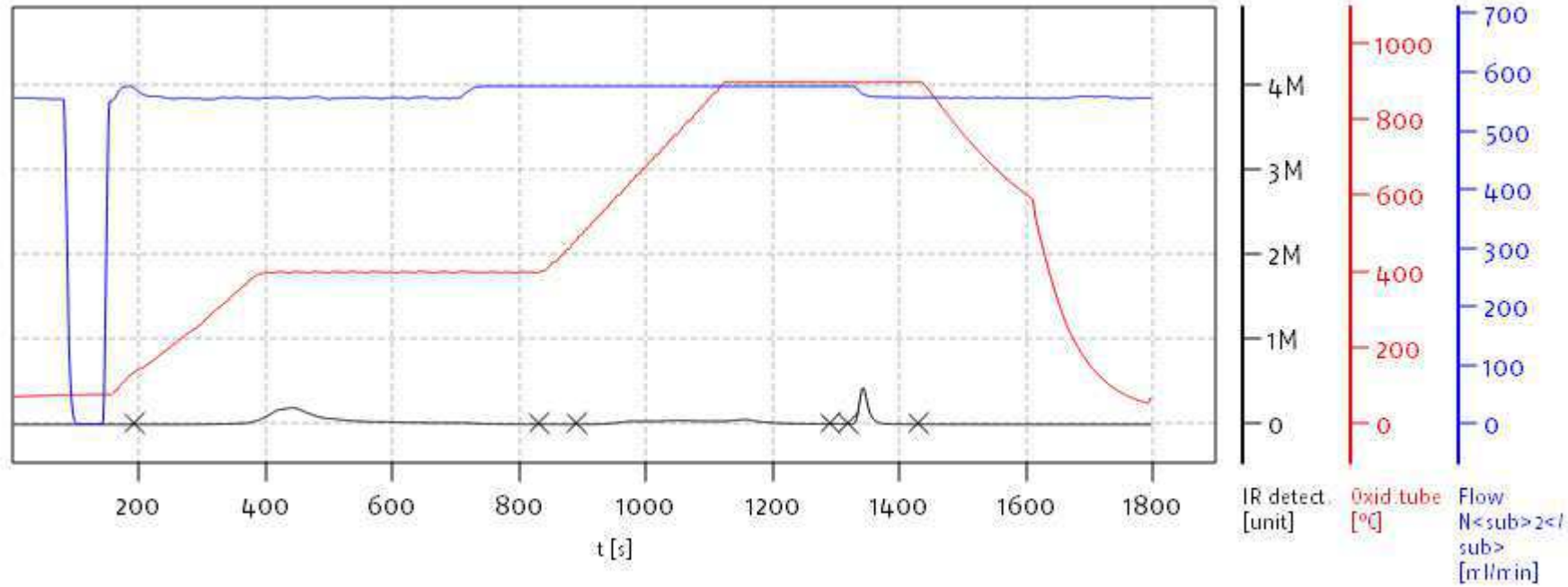
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
42	42	23B0261-01	680.40		CARBON	2/15/2023 3:50 PM	bl	0.248	870 514	0.335	0.056	274 641	408 373	0.192	0.087	0.9980	1.0000



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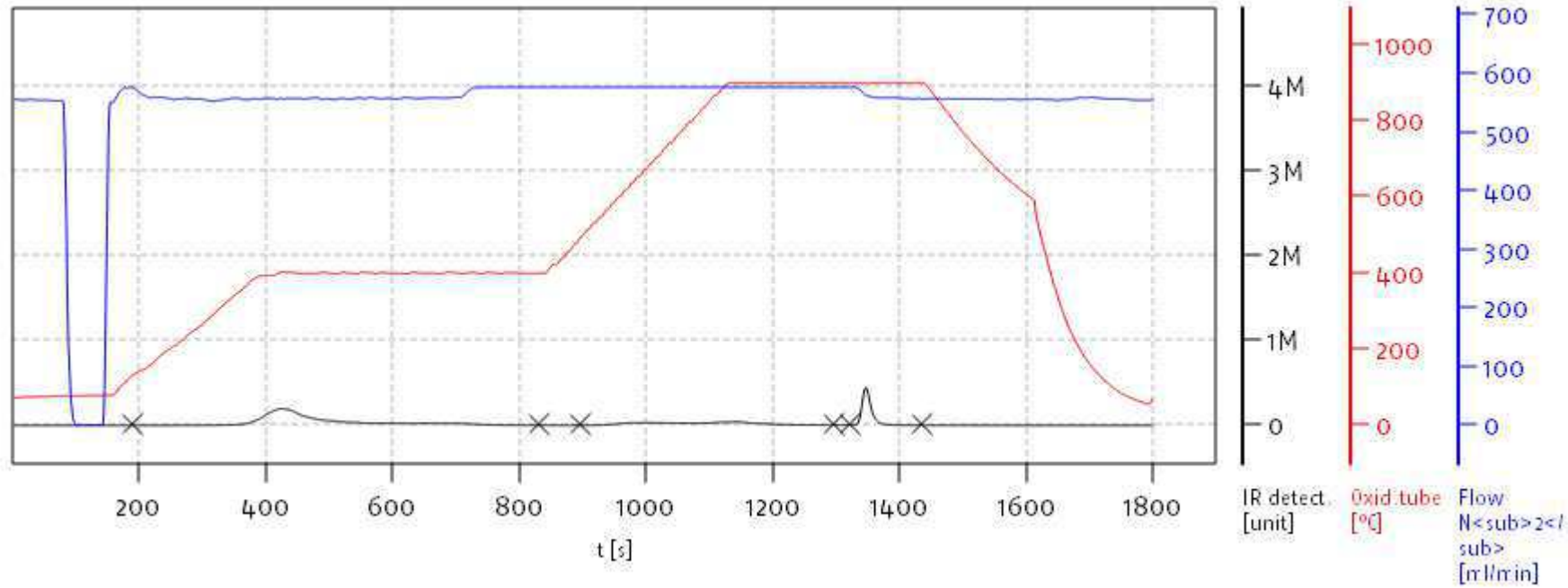
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
43	43	BLB0343-DUP1	561.90		CARBON	2/15/2023 4:20 PM	bl	0.294	836 206	0.371	0.071	284 487	306 972	0.223	0.077	0.9980	1.0000



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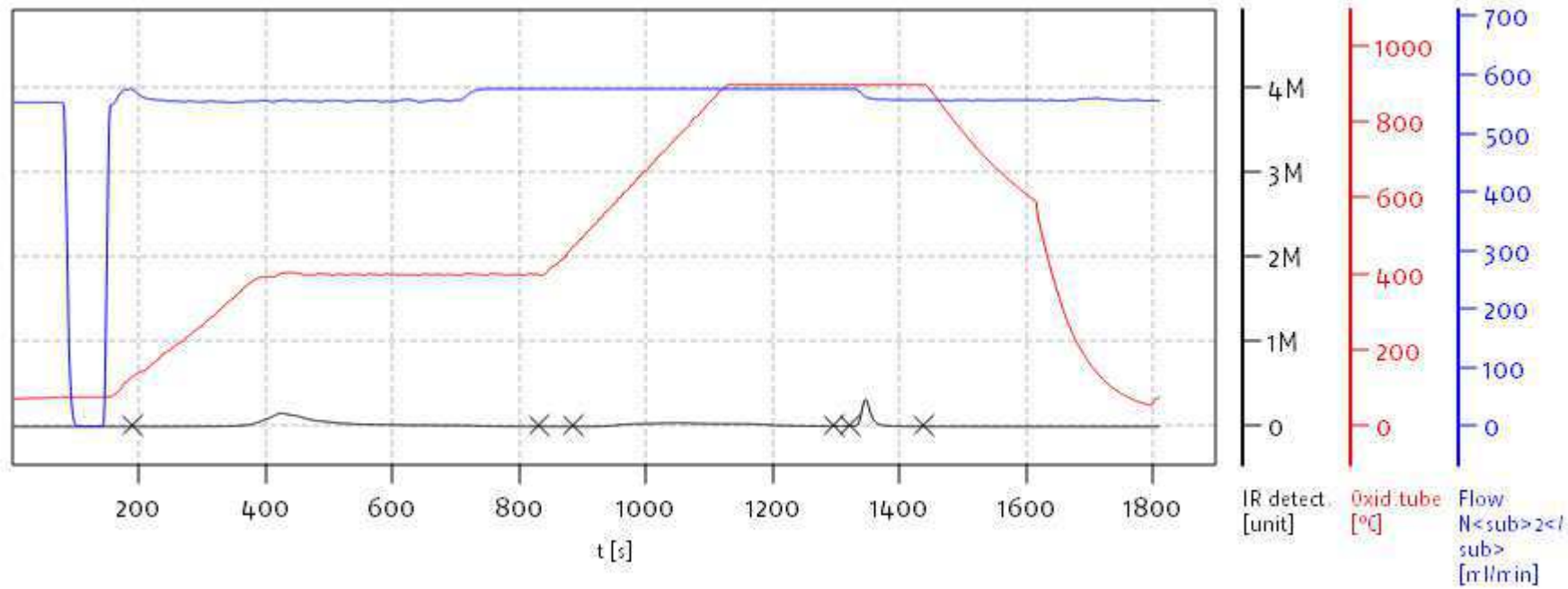
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
44	44	BLB0343-DUP2	529.70		CARBON	2/15/2023 4:51 PM	bl	0.245	679 891	0.339	0.054	211 702	349 909	0.191	0.095	0.9980	1.0000



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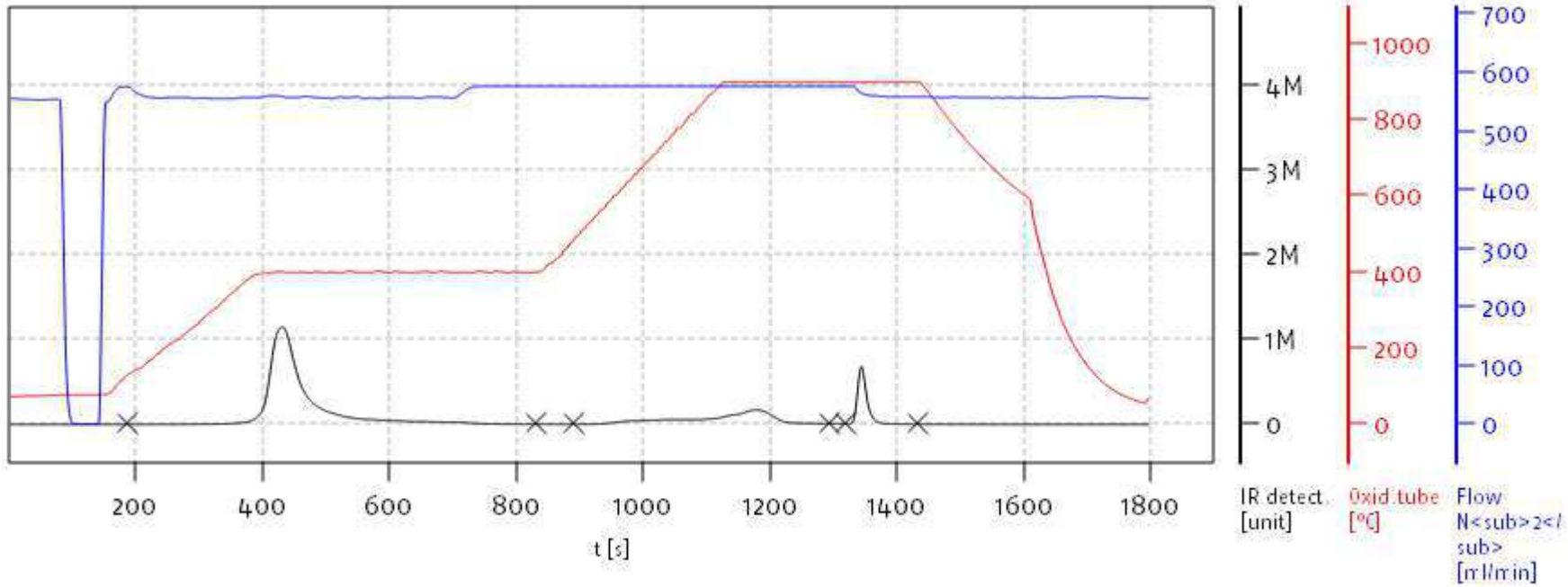
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
45	45	BLB0343-MS1	581.10	0.0075	CARBON	2/15/2023 5:21 PM	bl	0.838	2 764 614	1.052	0.110	440 273	831 006	0.728	0.214	0.9980	1.0000



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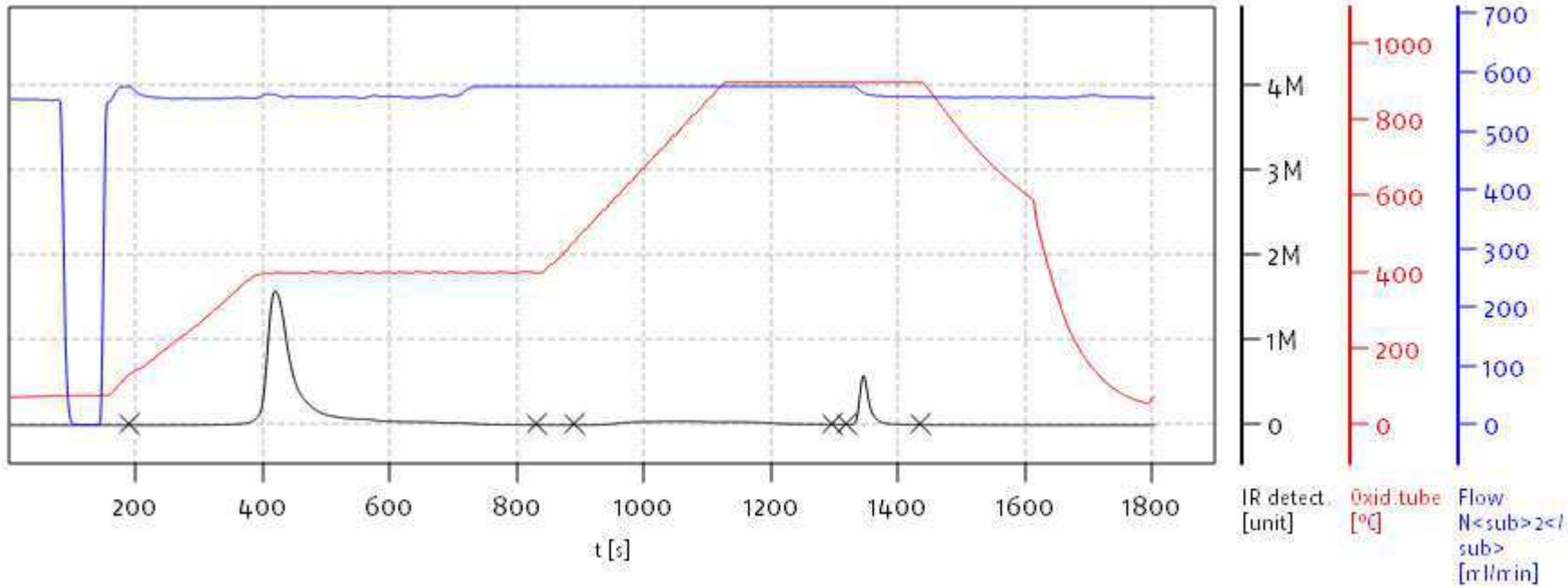
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
46	46	BLB0343-MSD1	596.70	0.0085	CARBON	2/15/2023 5:52 PM	bl	0.887	3 074 299	0.983	0.097	402 116	398 555	0.789	0.097	0.9980	1.0000



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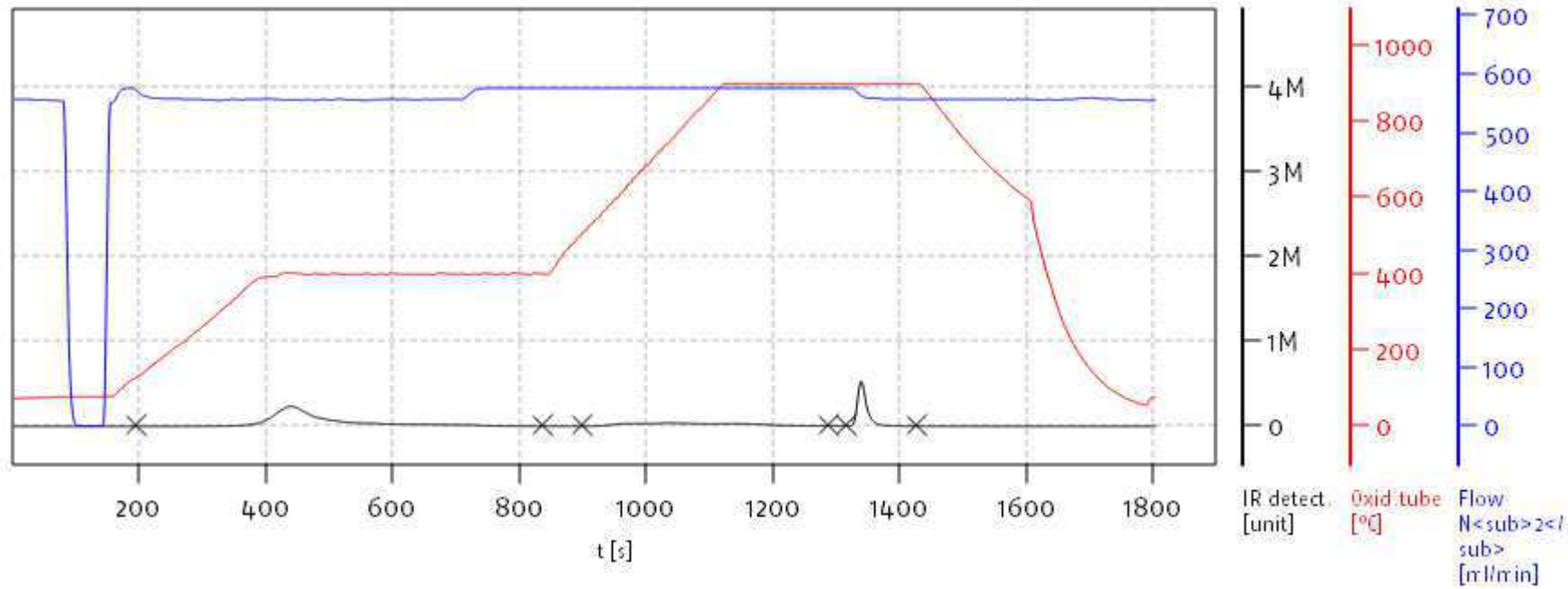
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
47	47	23B0261-04	579.40		CARBON	2/15/2023 6:22 PM	bl	0.322	914 409	0.403	0.085	346 012	329 277	0.237	0.081	0.9980	1.0000



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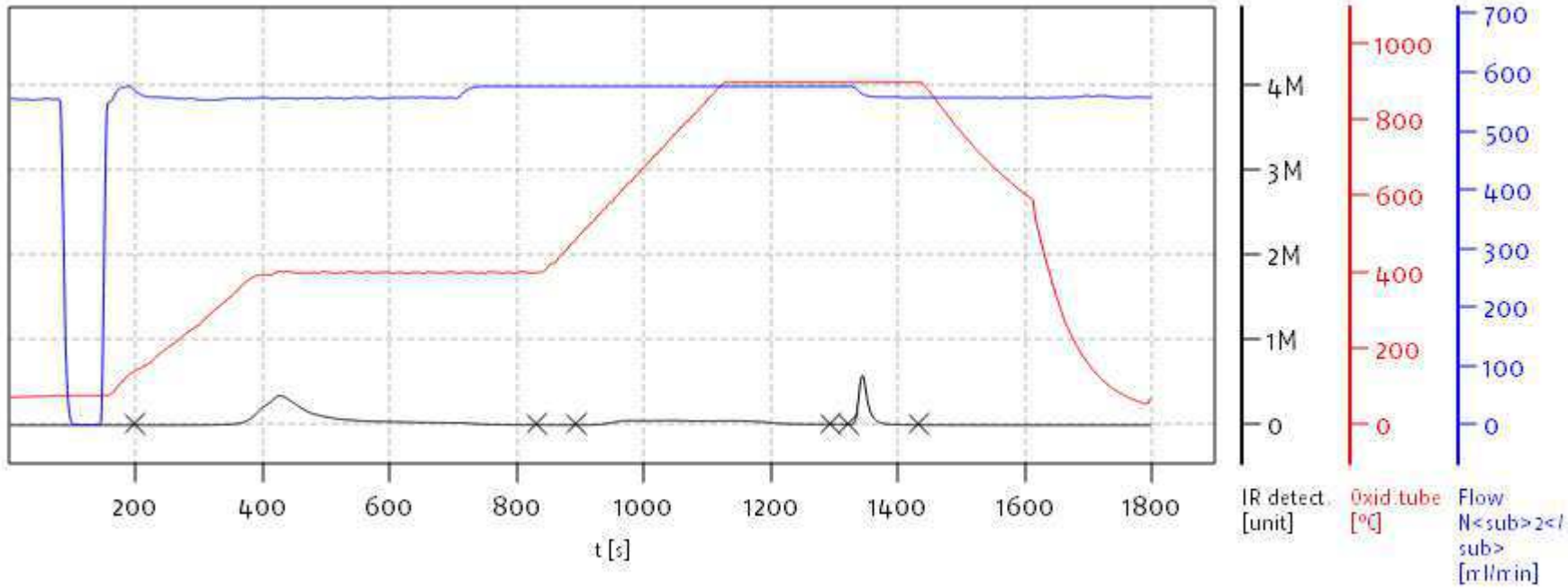
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
48	48	23B0261-07	756.10		CARBON	2/15/2023 6:53 PM	bl	0.352	1 388 012	0.454	0.074	388 266	524 043	0.278	0.102	0.9980	1.0000



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Balance: BAL3
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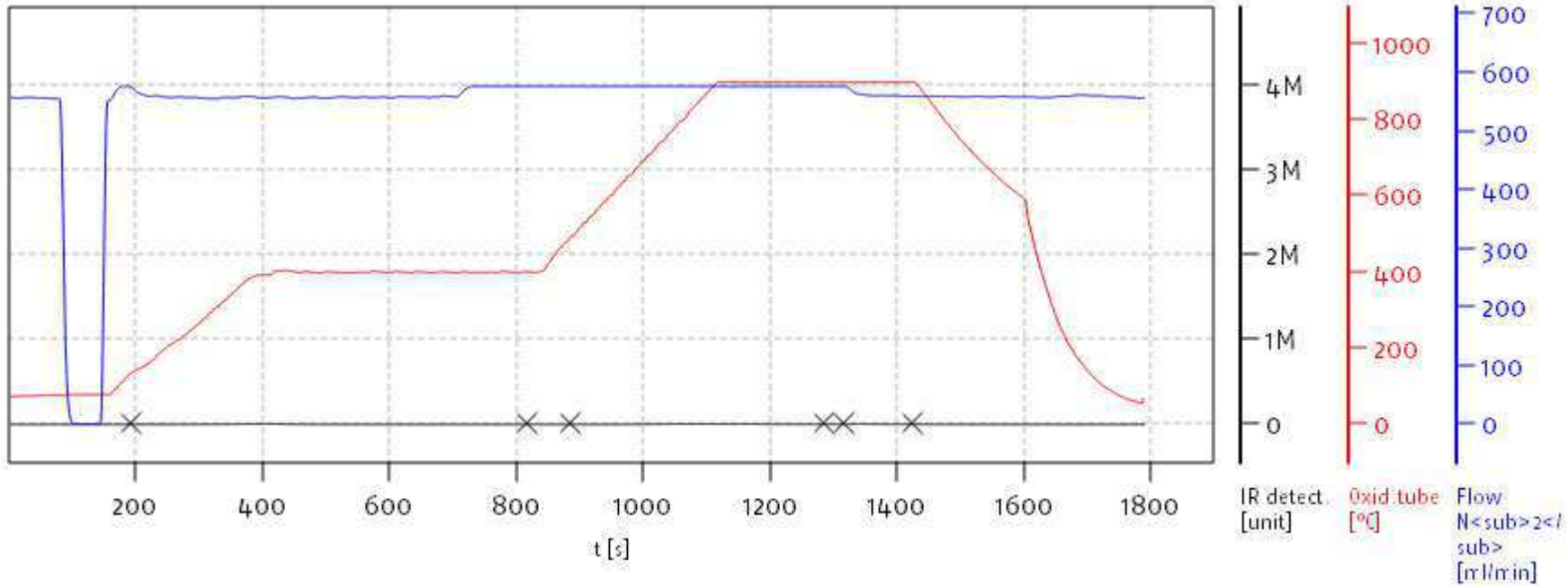
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
49	49	BLANK	1.00		CARBON	2/ 15/2023 7:23 PM	bl	0.000	23 894	0.000	0.000	11 636	42 728	0.000	0.000	0.9980	1.0000



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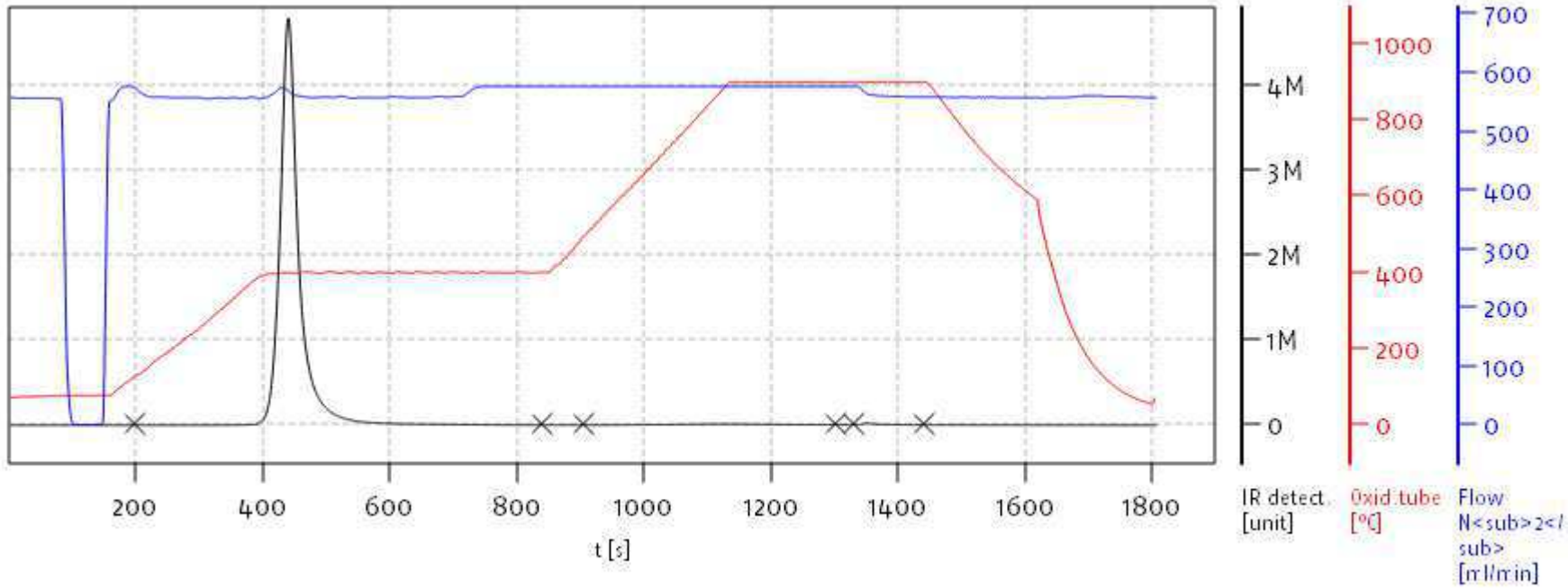
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
50	50	Dfactor	21.20		CARBON	2/15/2023 7:53 PM	bl	44.489	6 201 675	45.060	0.044	32 495	104 682	44.446	0.571	0.9857	1.0000



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Soli TOC Cube, Carbon
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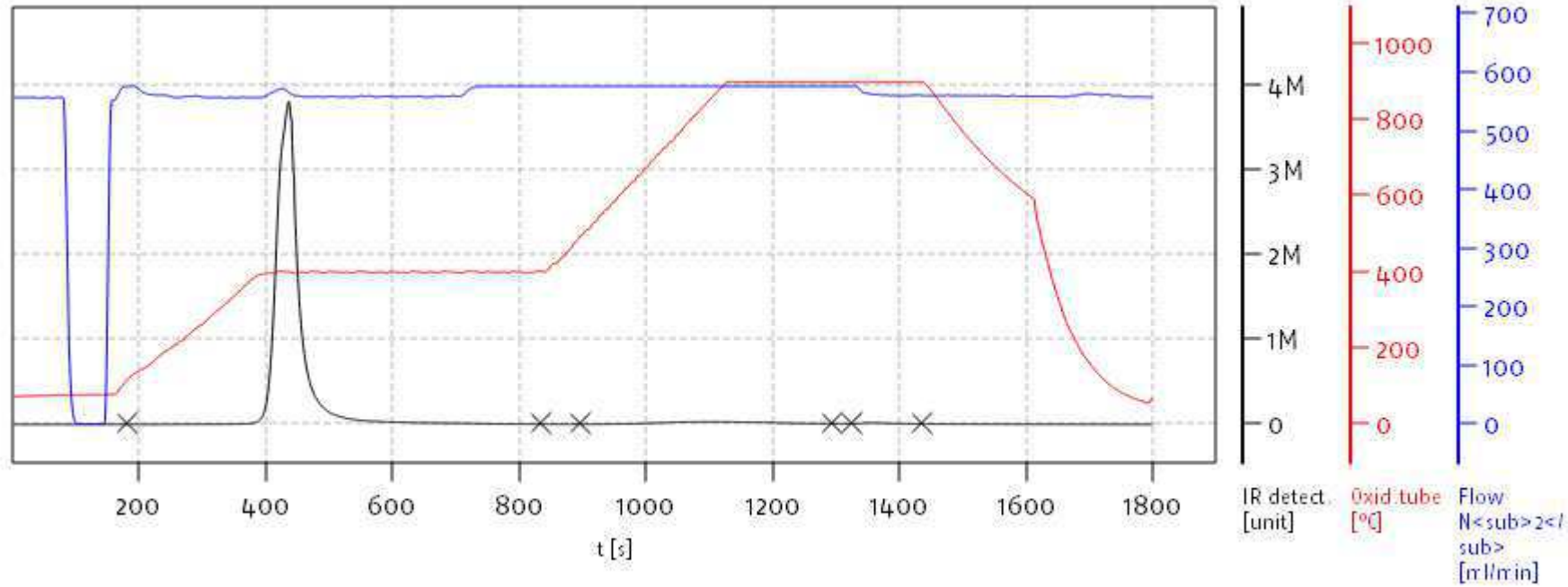
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
51	51	Dfactor	21.10		CARBON	2/15/2023 8:24 PM	bl	44.590	5 917 188	46.325	0.144	46 192	263 072	44.446	1.735	1.0284	1.0000



Name:

Access: soliTOC superuser

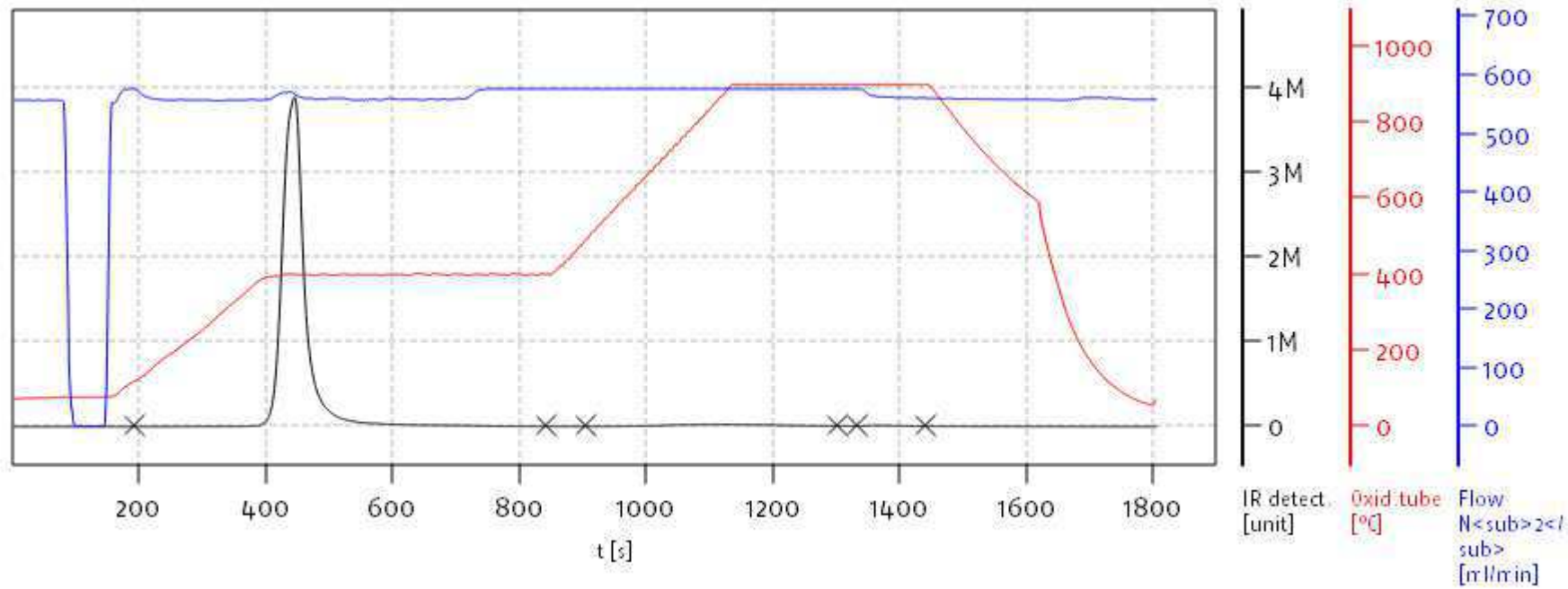
Date: Thu Feb 16 09:54:06 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
52	52	SLB0179-CCV4	21.20		CARBON	2/15/2023 8:54 PM	bl	44.288	6 041 039	45.622	0.060	34 808	209 199	44.228	1.334	1.0070	1.0000



Name:

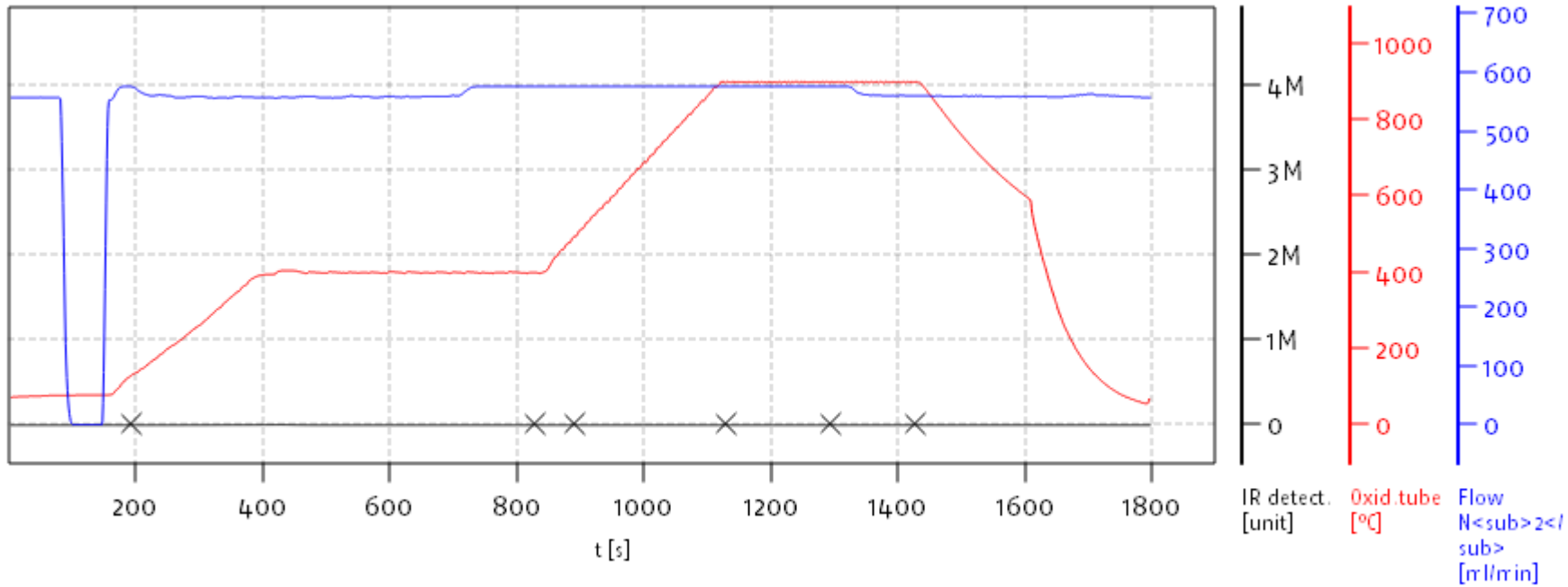
Access: soliTOC superuser

Date: Thu Feb 16 09:54:06 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
53	53	SLB0179-CCB4	503.10		CARBON	2/15/2023 9:25 PM	bl,C3u,C2u	0.000	17 489	0.000	0.000	1 332	681	0.000	0.000	1.0070	1.0000



Name:

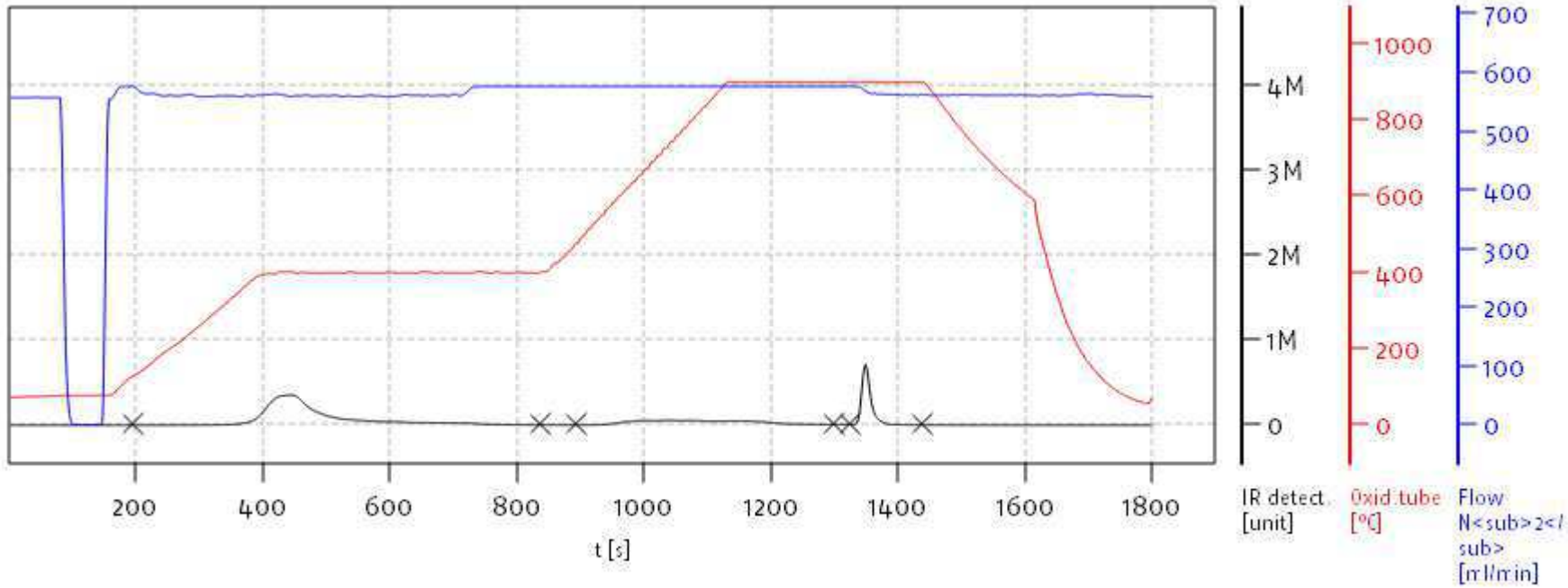
Access: soliTOC superuser

Date: Thu Feb 16 09:54:06 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
54	54	23B0261-10	657.40		CARBON	2/15/2023 9:55 PM	bl	0.442	1 465 969	0.554	0.101	455 974	499 447	0.341	0.111	1.0070	1.0000



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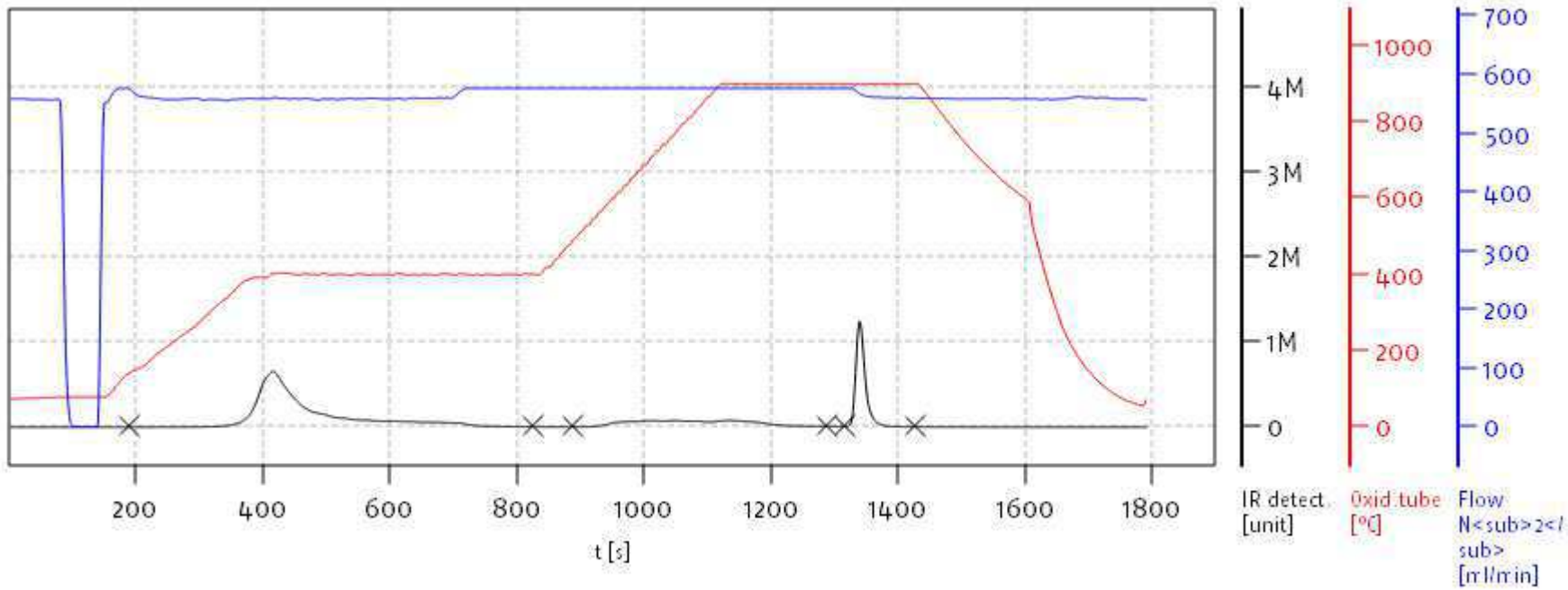
Access: soliTOC superuser

Date: Thu Feb 16 09:54:06 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
55	55	23B0261-13	778.20		CARBON	2/15/2023 10:25 PM	bl	0.625	2 364 647	0.760	0.157	813 579	706 276	0.468	0.135	1.0070	1.0000



Name:

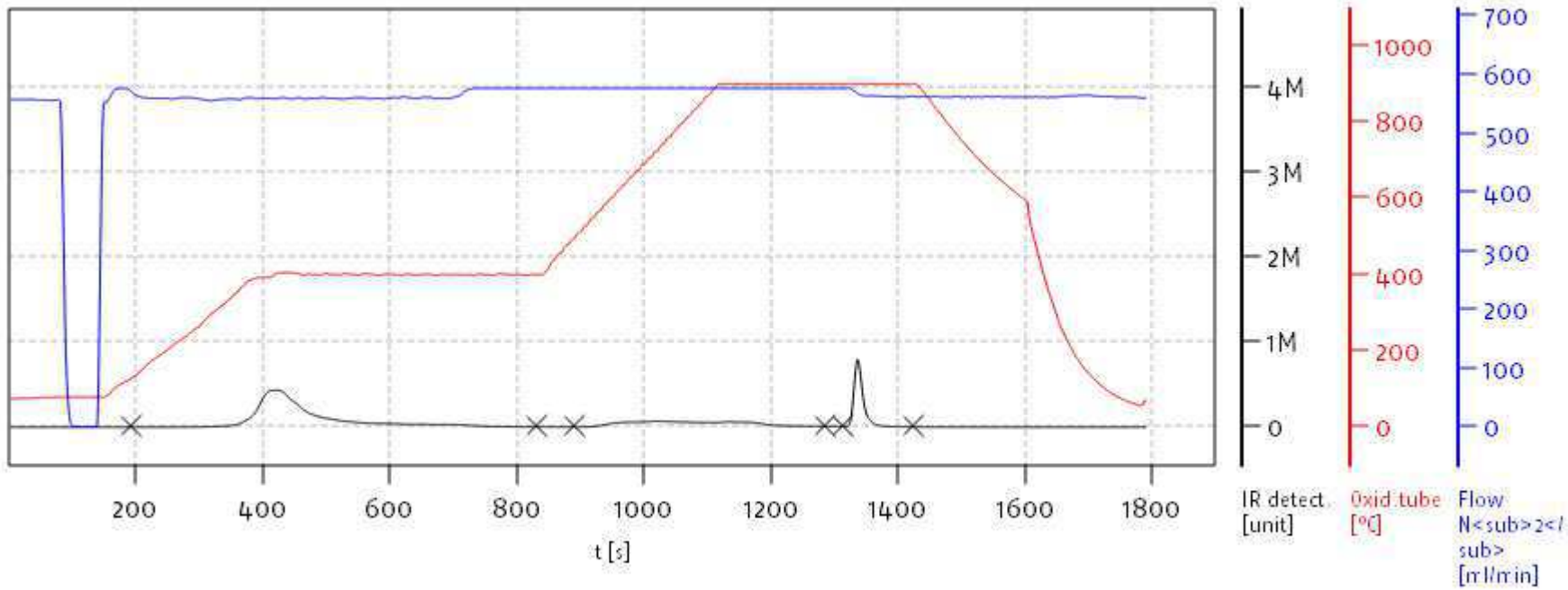
Access: soliTOC superuser

Date: Thu Feb 16 09:54:06 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
56	56	23B0261-16	604.40		CARBON	2/15/2023 10:55 PM	bl	0.552	1 693 186	0.701	0.122	504 599	605 648	0.430	0.148	1.0070	1.0000



Name:

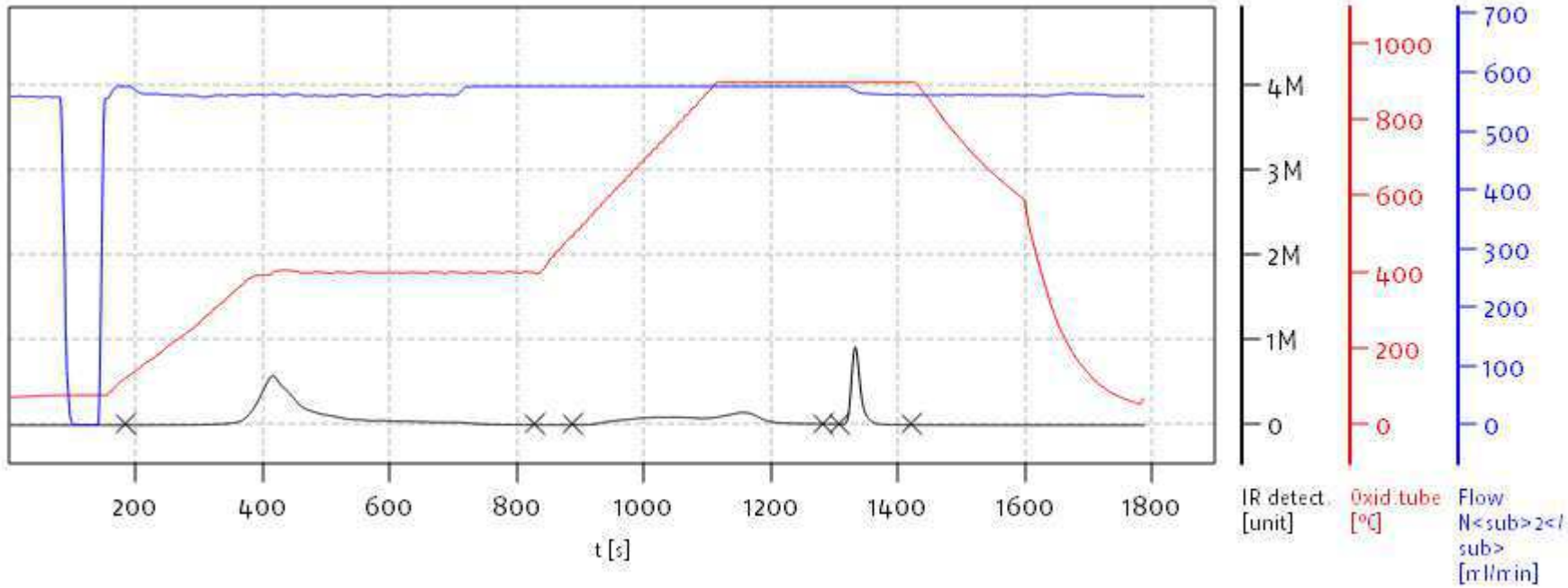
Access: soliTOC superuser

Date: Thu Feb 16 09:54:06 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
57	57	23B0261-19	615.40		CARBON	2/15/2023 11:26 PM	bl	0.634	1 971 384	0.871	0.141	586 560	970 047	0.493	0.237	1.0070	1.0000



Name:

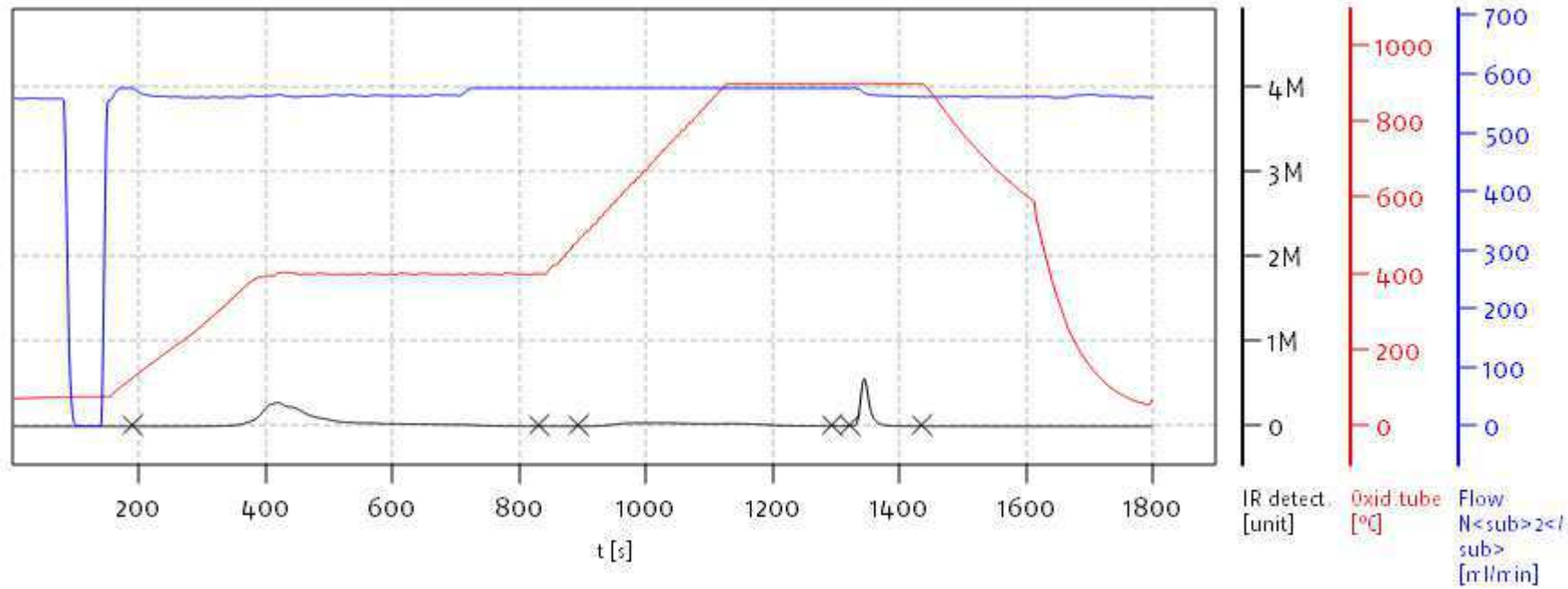
Access: soliTOC superuser

Date: Thu Feb 16 09:54:06 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
58	58	23B0261-22	543.70		CARBON	2/15/2023 11:56 PM	bl	0.414	1 145 800	0.503	0.093	352 539	339 988	0.321	0.089	1.0070	1.0000



Name:

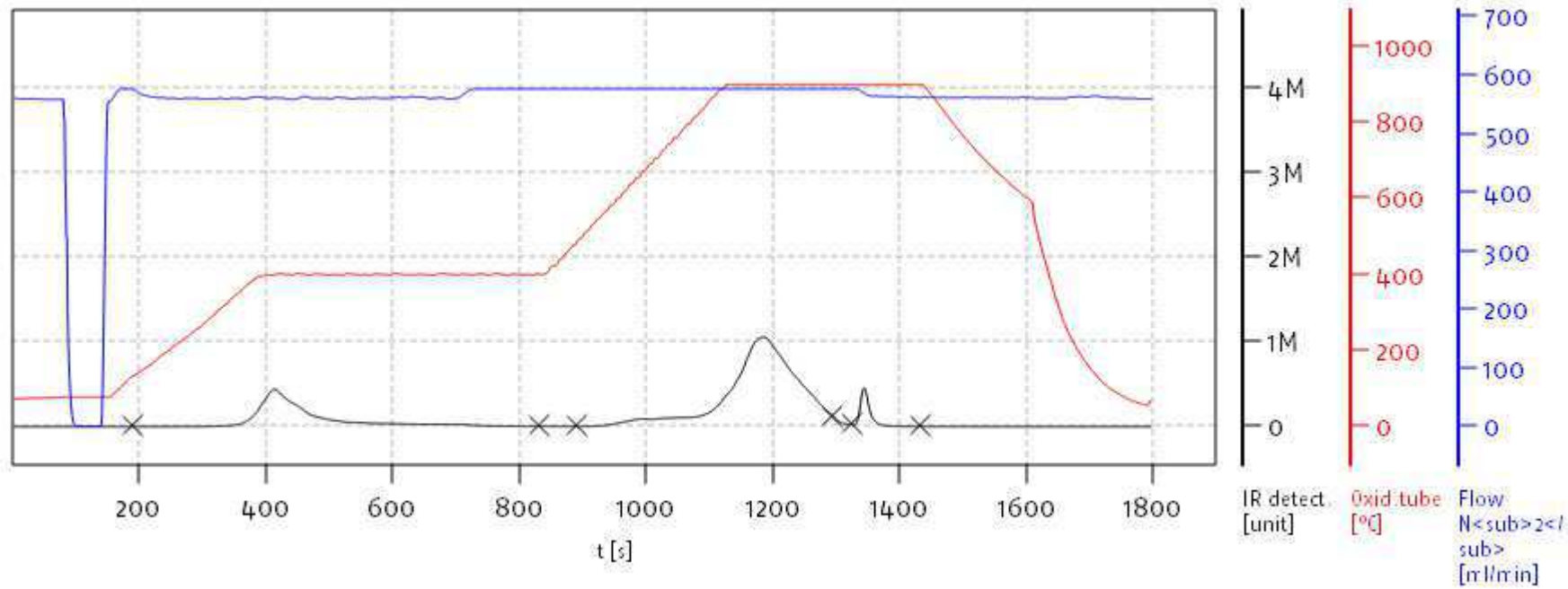
Access: soliTOC superuser

Date: Thu Feb 16 09:54:06 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
59	59	23B0261-25	511.20		CARBON	2/16/2023 12:26 AM	bl	0.537	1 516 036	1.986	0.083	300 506	4 811 456	0.454	1.449	1.0070	1.0000



Name:

Access: soliTOC superuser

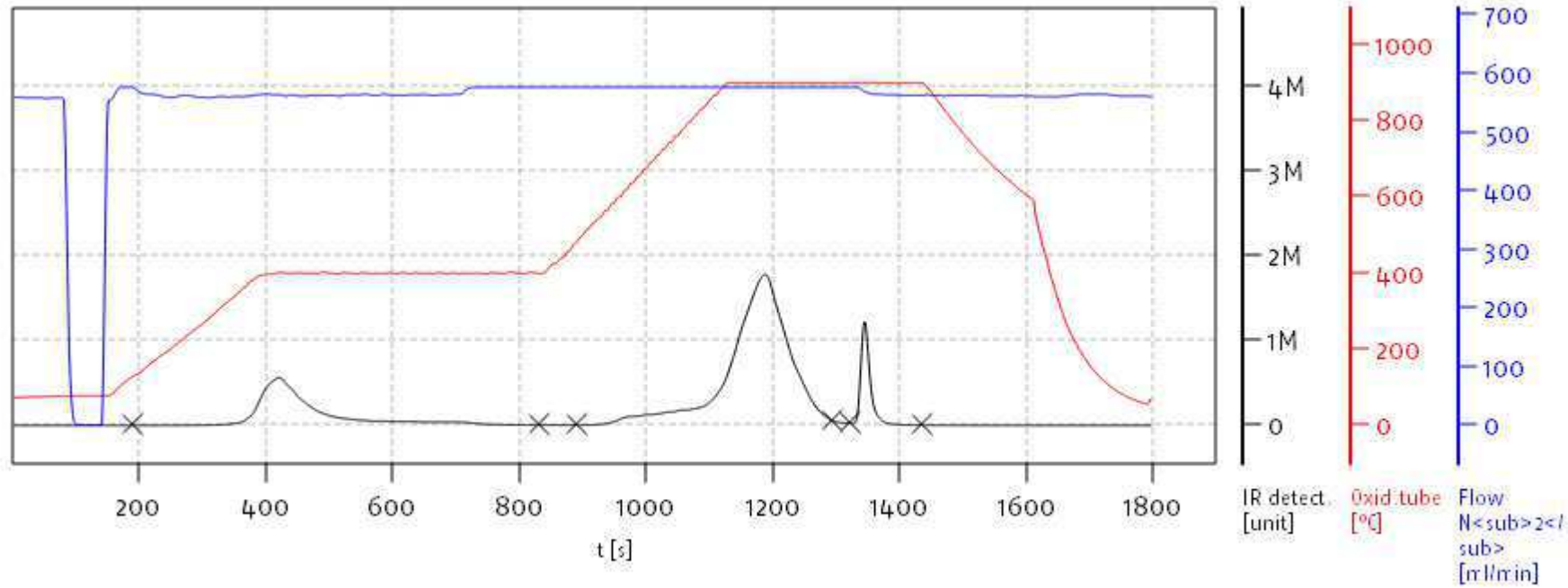
Date: Thu Feb 16 09:54:06 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
60	60	23B0261-28	628.50		CARBON	2/16/2023 12:57 AM	bl	0.704	2 100 096	2.432	0.190	797 201	7 042 242	0.514	1.728	1.0070	1.0000



Name:

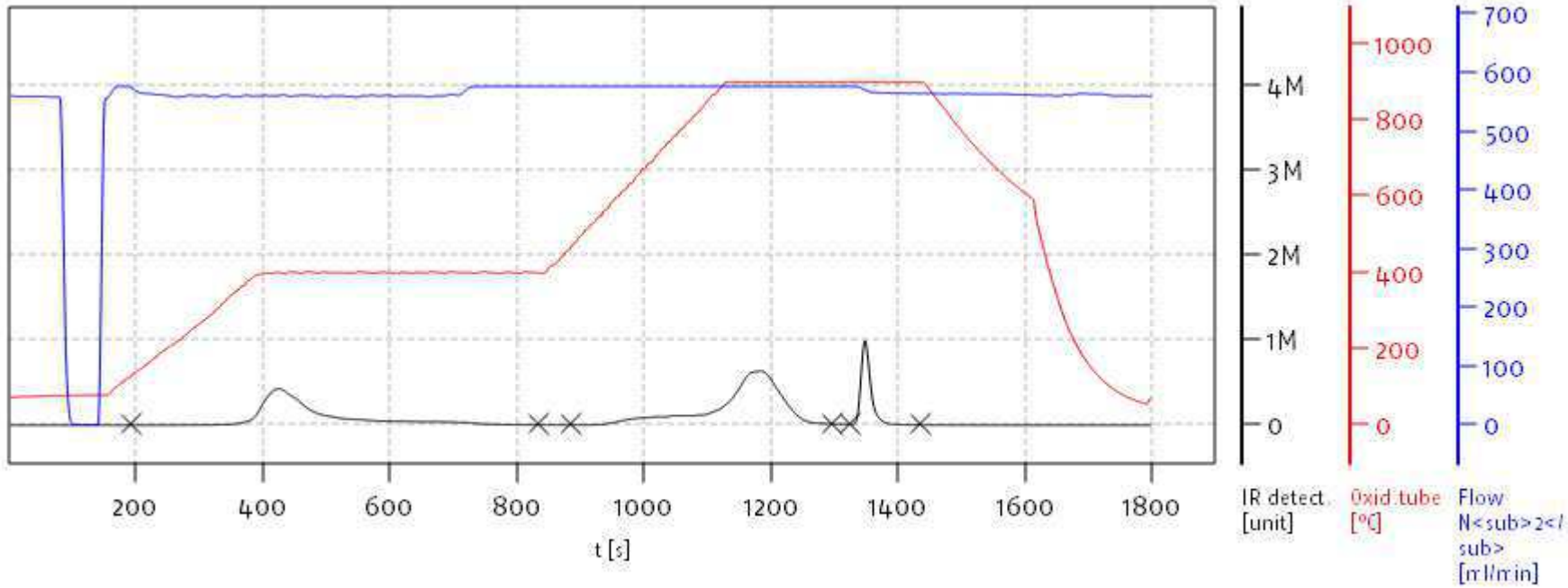
Access: soliTOC superuser

Date: Thu Feb 16 09:54:06 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
61	61	23B0261-31	670.80		CARBON	2/16/2023 1:27 AM	bl	0.536	1 688 816	1.141	0.149	673 914	2 648 509	0.386	0.605	1.0070	1.0000



Name:

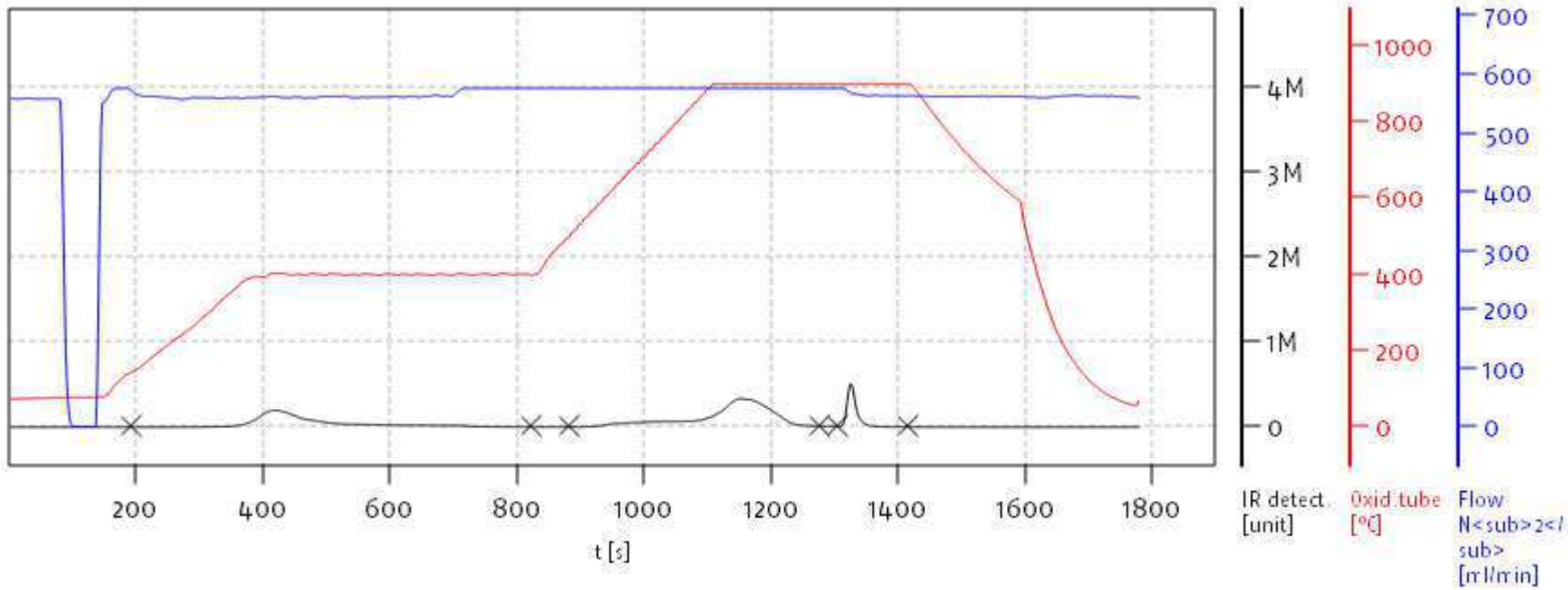
Access: soliTOC superuser

Date: Thu Feb 16 09:54:06 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
62	62	23B0261-34	565.70		CARBON	2/16/2023 1:57 AM	bl	0.307	844 868	0.712	0.082	325 279	1 504 175	0.226	0.404	1.0070	1.0000



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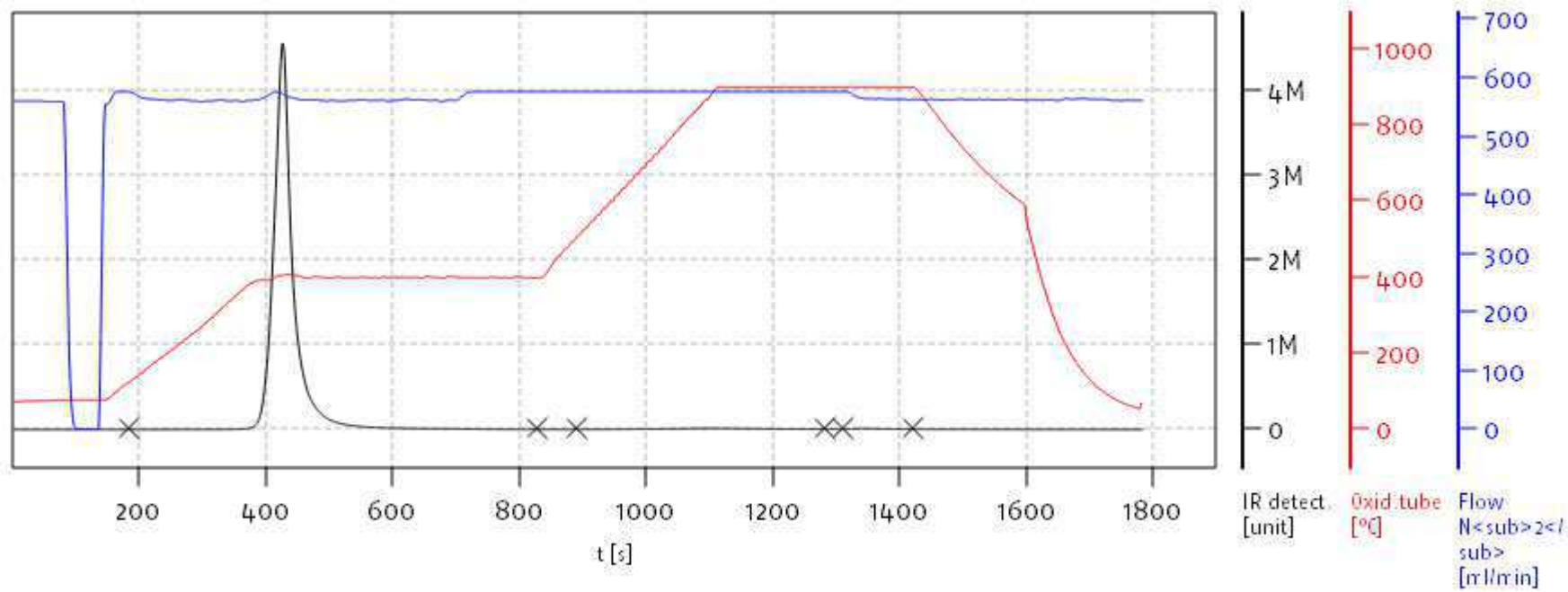
Access: soliTOC superuser

Date: Thu Feb 16 09:54:06 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
63	63	SLB0179-CCV5	21.00		CARBON	2/16/2023 2:27 AM	bl	44.511	6 021 245	45.088	0.009	27 764	104 806	44.502	0.577	1.0070	1.0000



Name:

Access: soliTOC superuser

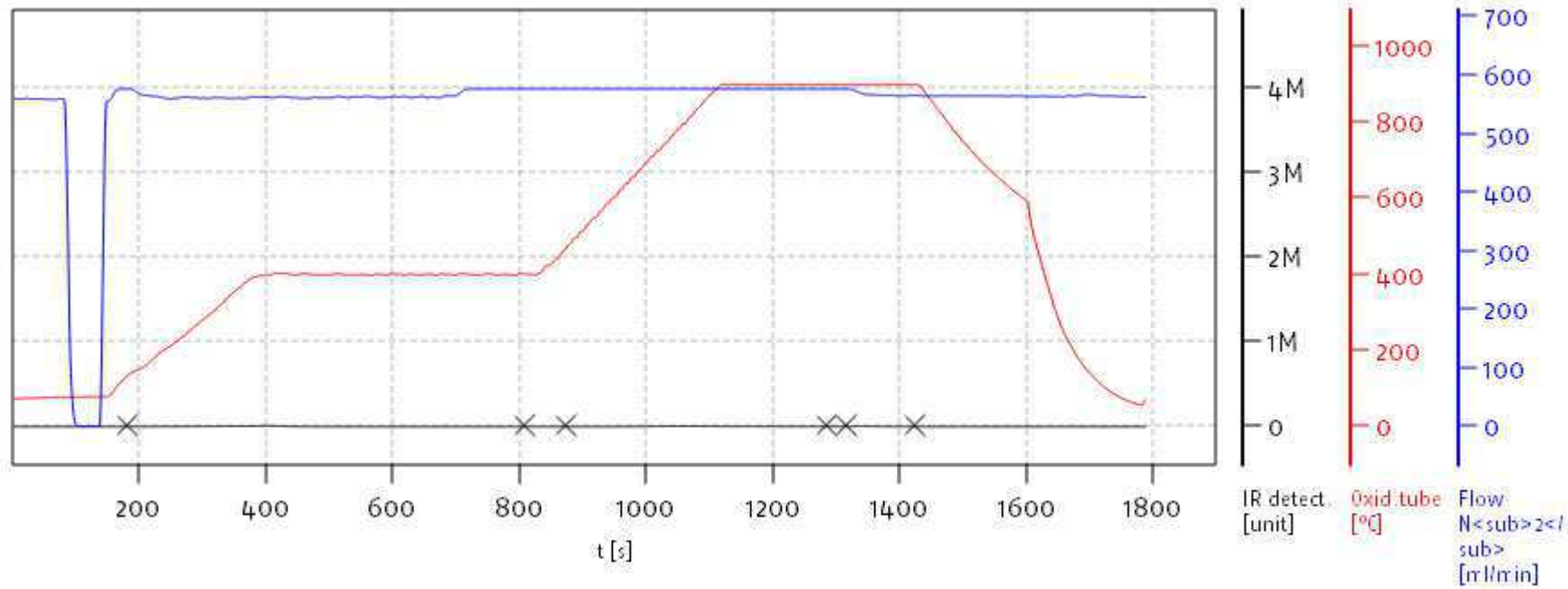
Date: Thu Feb 16 09:54:06 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Document: 021423 CDE from: 2/16/2023 9:52 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: CDE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
64	64	SLB0179-CCB5	503.00		CARBON	2/16/2023 2:57 AM	bl	0.004	39 774	0.008	0.000	8 642	38 438	0.004	0.004	1.0070	1.0000



Name:

Access: soliTOC superuser

Date: Thu Feb 16 09:54:06 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

INITIAL CALIBRATION DATA

EPA 9060A m

Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FD00070	Instrument:	TOC Cube
Calibration Date:	04/26/2022 11:29		

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF
Total Organic Carbon	0.0080973	1449743	0.014695	1300238	0.021293	1292913	0.02939	1293535	0.044385	2094063	0.05878	1400085
Total Carbon	0.0080973	1449743	0.014695	1300238	0.021293	1292913	0.02939	1293535	0.044385	2094063	0.05878	1400085
Total Inorganic Carbon	0.0080973	1449743	0.014695	1300238	0.021293	1292913	0.02939	1293535	0.044385	2094063	0.05878	1400085
% Soot	0.0080973	1449743	0.014695	1300238	0.021293	1292913	0.02939	1293535	0.044385	2094063	0.05878	1400085

INITIAL CALIBRATION DATA

EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: FD00070
Instrument: TOC Cube
Calibration Date: 04/26/2022 11:29

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF
Total Organic Carbon	0.074075	1370638	0.08937	1351930	0.12056	2158544	0.14995	1559046	0.24	1346463	0.288	1430135
Total Carbon	0.074075	1370638	0.08937	1351930	0.12056	2158544	0.14995	1559046	0.24	1346463	0.288	1430135
Total Inorganic Carbon	0.074075	1370638	0.08937	1351930	0.12056	2158544	0.14995	1559046	0.24	1346463	0.288	1430135
% Soot	0.074075	1370638	0.08937	1351930	0.12056	2158544	0.14995	1559046	0.24	1346463	0.288	1430135

INITIAL CALIBRATION DATA

EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: FD00070
Instrument: TOC Cube
Calibration Date: 04/26/2022 11:29

Compound	Level 13		Level 14		Level 15		Level 16		Level 17		Level 18	
	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF
Total Organic Carbon	0.414	1337053	0.606	1385937	0.894	1382774	1.188	1379790	1.5	1375927	1.818	1372882
Total Carbon	0.414	1337053	0.606	1385937	0.894	1382774	1.188	1379790	1.5	1375927	1.818	1372882
Total Inorganic Carbon	0.414	1337053	0.606	1385937	0.894	1382774	1.188	1379790	1.5	1375927	1.818	1372882
% Soot	0.414	1337053	0.606	1385937	0.894	1382774	1.188	1379790	1.5	1375927	1.818	1372882

INITIAL CALIBRATION DATA

EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: FD00070
Instrument: TOC Cube
Calibration Date: 04/26/2022 11:29

Compound	Level 19		Level 20		Level 21		Level 22		Level 23		Level 24	
	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF
Total Organic Carbon	2.49	1398606	2.982	1376871	4.188	1256057	4.818	1279542	5.406	1283358	7.2	1301408
Total Carbon	2.49	1398606	2.982	1376871	4.188	1256057	4.818	1279542	5.406	1283358	7.2	1301408
Total Inorganic Carbon	2.49	1398606	2.982	1376871	4.188	1256057	4.818	1279542	5.406	1283358	7.2	1301408
% Soot	2.49	1398606	2.982	1376871	4.188	1256057	4.818	1279542	5.406	1283358	7.2	1301408

INITIAL CALIBRATION DATA

EPA 9060A m

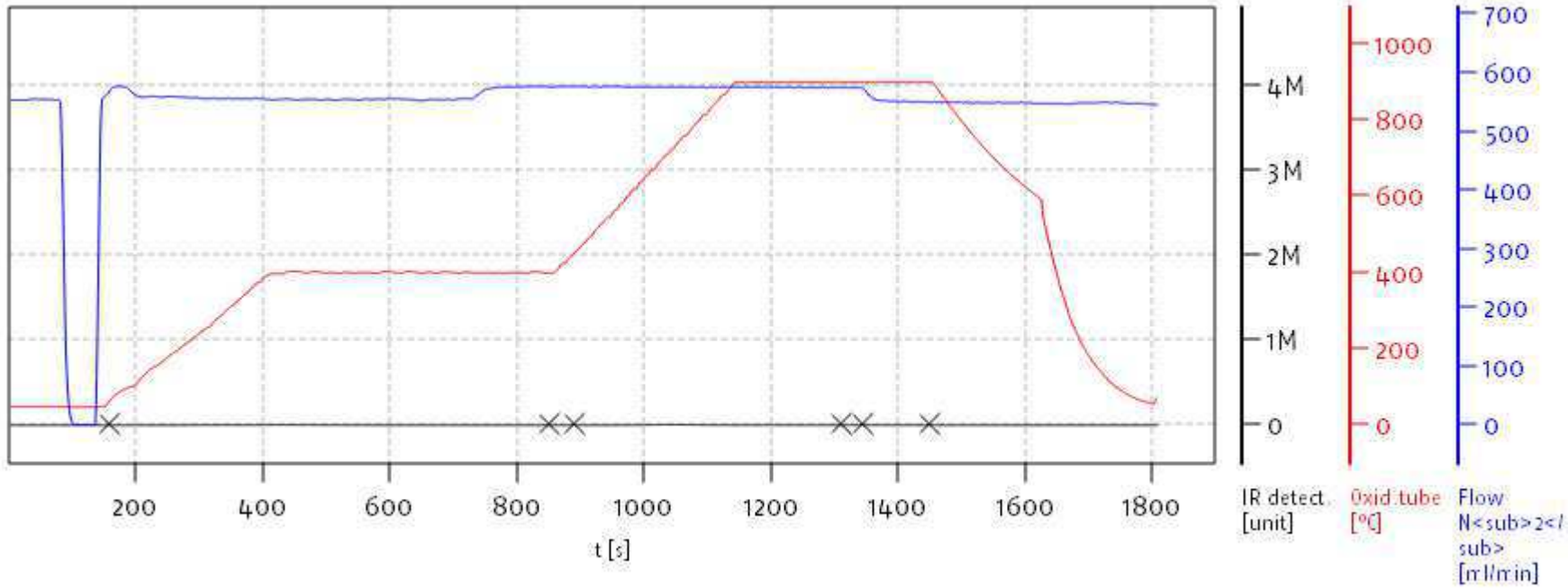
Laboratory:	Analytical Resources, LLC	SDG:	23B0276
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FD00070	Instrument:	TOC Cube
Calibration Date:	04/26/2022 11:29		

COMPOUND	Mean RF	RF RSD	Linear COD	Quad COD	COD Limit	Q
Total Organic Carbon	1424064	15.9	0.9988			
Total Carbon	1424064	15.9	0.9988			
Total Inorganic Carbon	1424064	15.9	0.9988			
% Soot	1424064	15.9	0.9988			

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

Analytical Resources, Incorporated
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
1	1	BLANK	1.00		1.00	CARBON	4/26/2022 11:29 AM	0.000	0.000	0.000	bl	29 049	30 612	3 899	1.0000	1.0000



Name:

Access: soliTOC superuser

Date: Wed Apr 27 11:07:12 2022

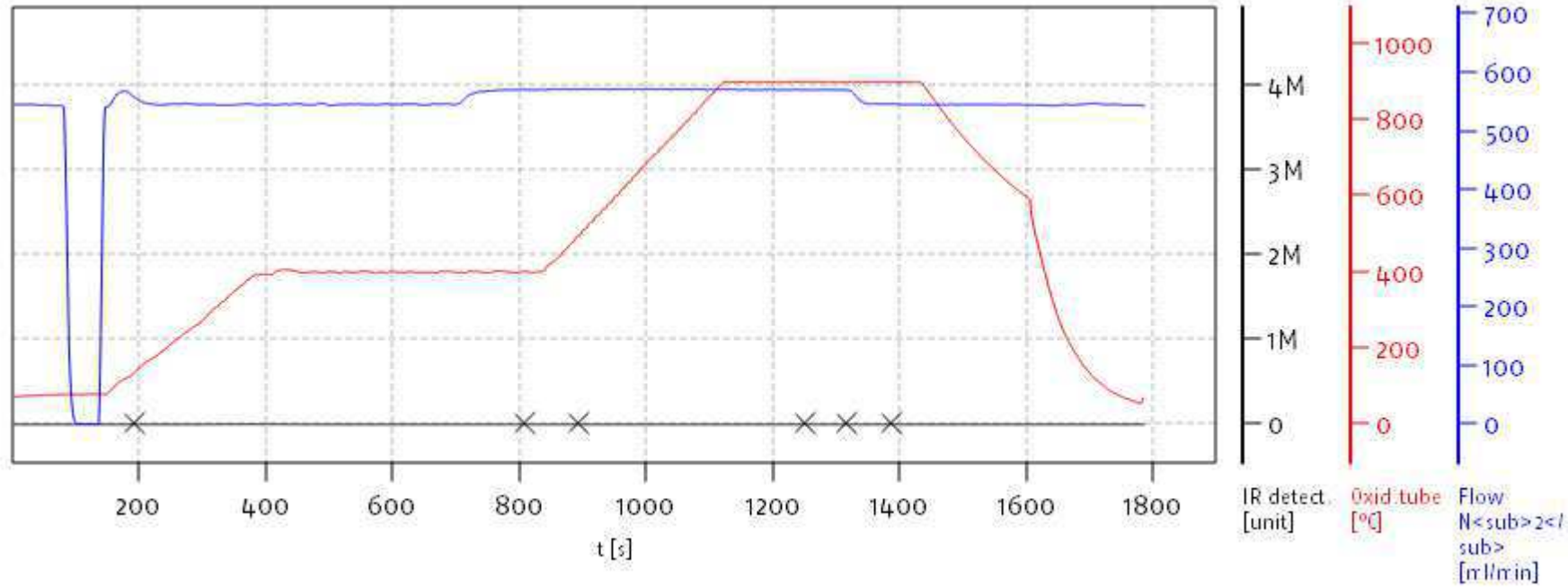
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 042622 DOE CALIBRATION from: 4/27/2022 11:05 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
2	2	BLANK	1.00		1.00	CARBON	4/26/2022 12:00 PM	0.000	0.000	0.000	bl	11 115	60	8	1.0000	1.0000



Name:

Access: soliTOC superuser

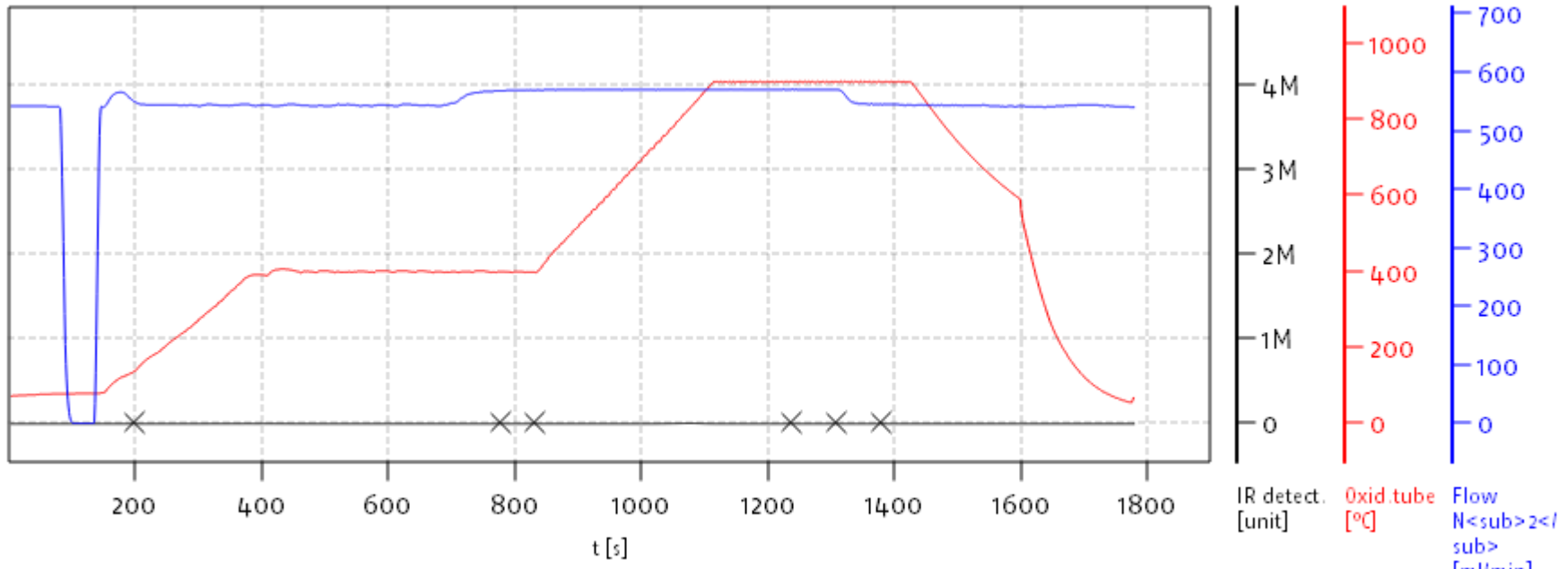
Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
3	3	SEQ-CAL1	200.00	0.0027	1.00	CARBON	4/26/2022 12:30 PM	0.010	0.008	0.018	bl,C1u,C2u	7 294	11 739	22	1.0000	0.7425



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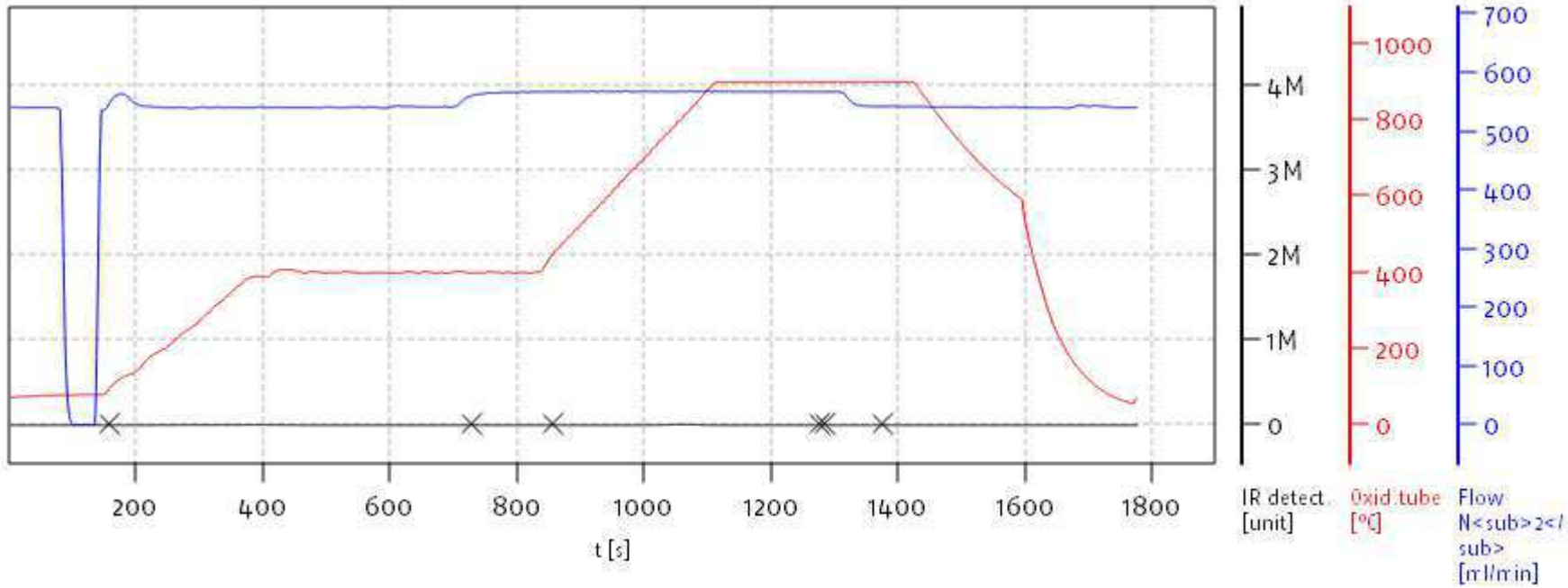
Access: soliTOC superuser

Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
4	4	SEQ-CAL2	200.00	0.0049	1.00	CARBON	4/26/2022 1:00 PM	0.023	0.015	0.038	bl,C2u	23 296	19 107	47	1.0000	0.8936



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Access: soliTOC superuser

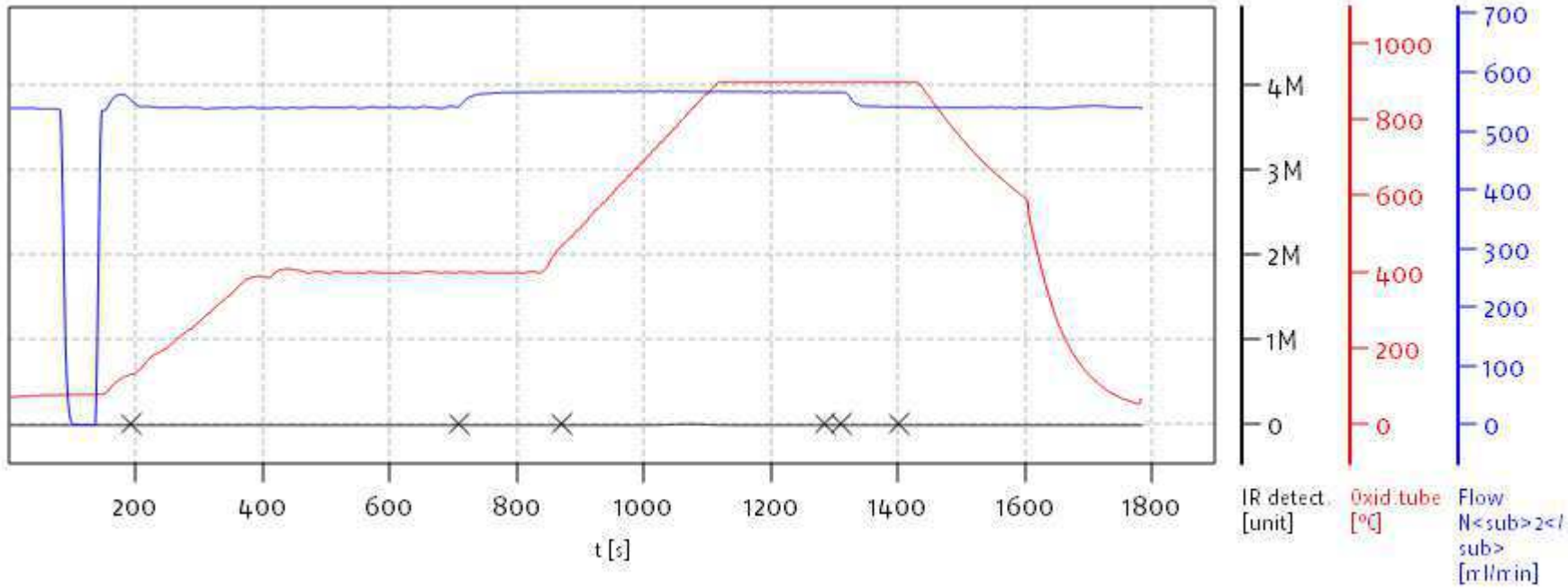
Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
5	5	SEQ-CAL3	200.00	0.0071	1.00	CARBON	4/26/2022 1:30 PM	0.006	0.022	0.028	bl,C1u,C2u	2 319	27 530	170	1.0000	0.9343



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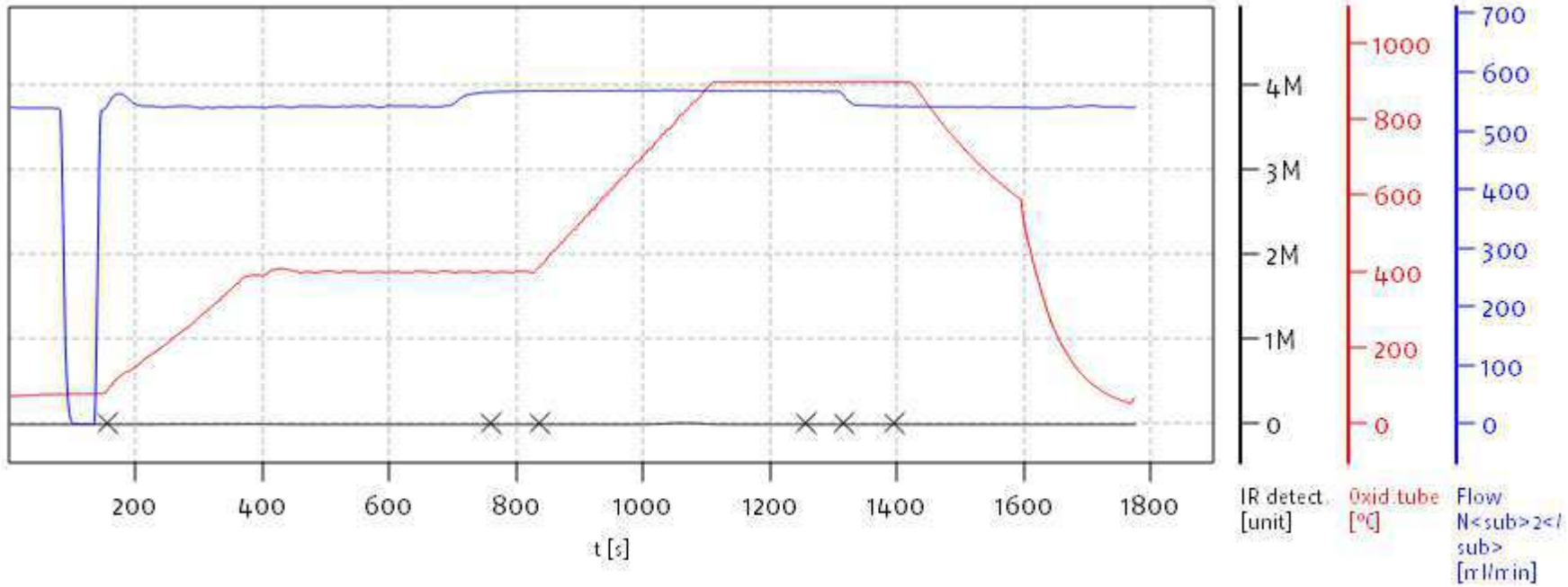
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
6	6	SEQ-CAL4	200.00	0.0098	1.00	CARBON	4/26/2022 2:00 PM	0.020	0.030	0.050	bl,C2u	19 746	38 017	109	1.0000	0.9461



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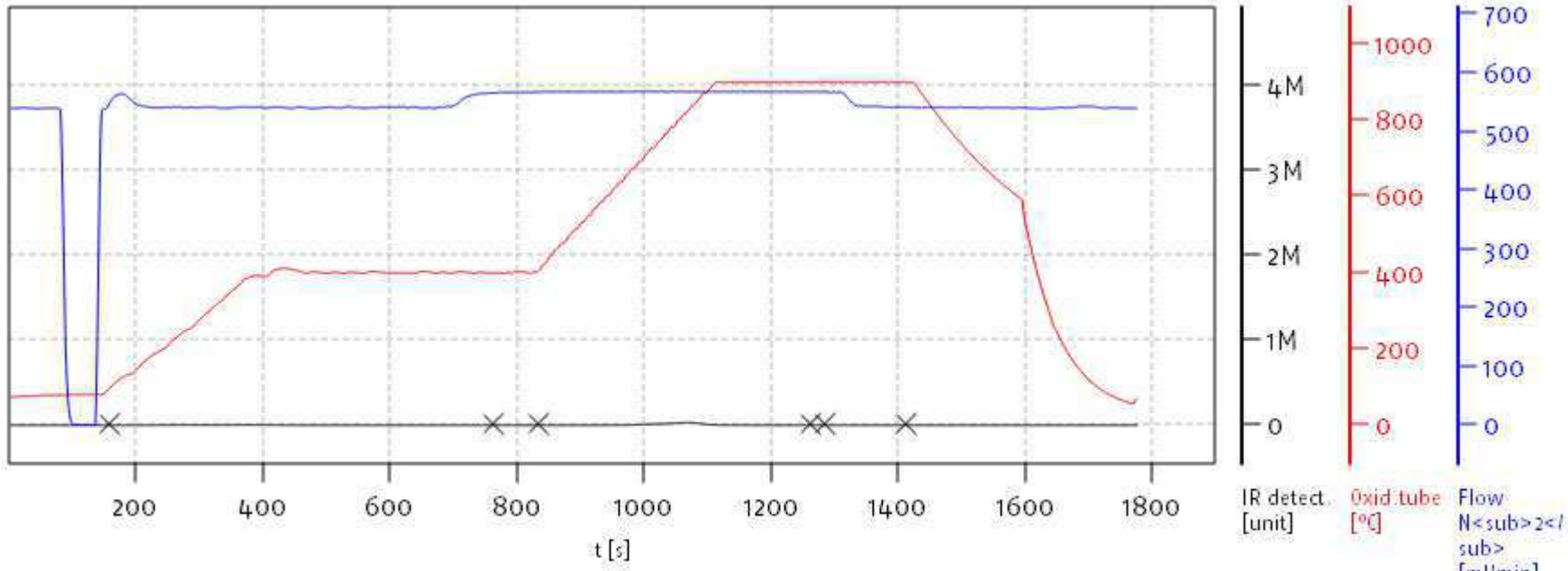
elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
7	7	SEQ-CAL5	200.00	0.0148	1.00	CARBON	4/26/2022 2:30 PM	0.021	0.045	0.066	bl,C2u	20 951	92 945	236	1.0000	0.5975



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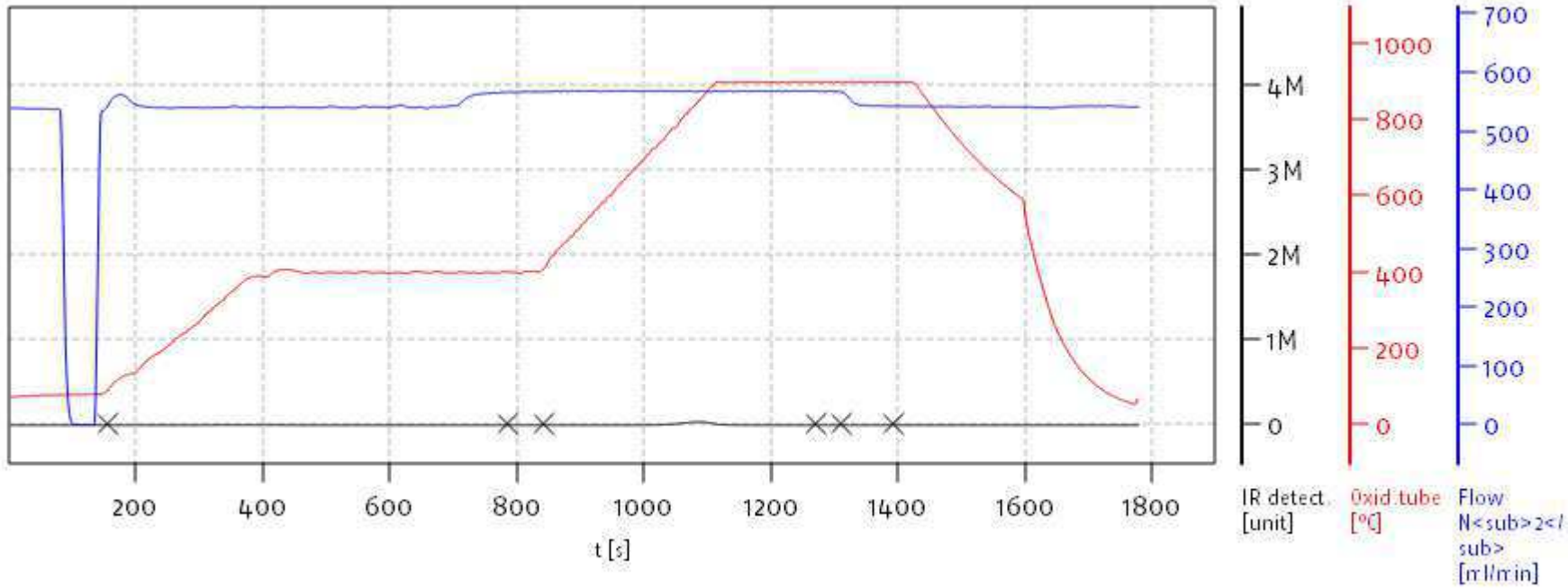
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
8	8	SEQ-CAL6	200.00	0.0196	1.00	CARBON	4/26/2022 3:00 PM	0.012	0.061	0.073	bl,C2u	10 118	82 297	59	1.0000	0.9144



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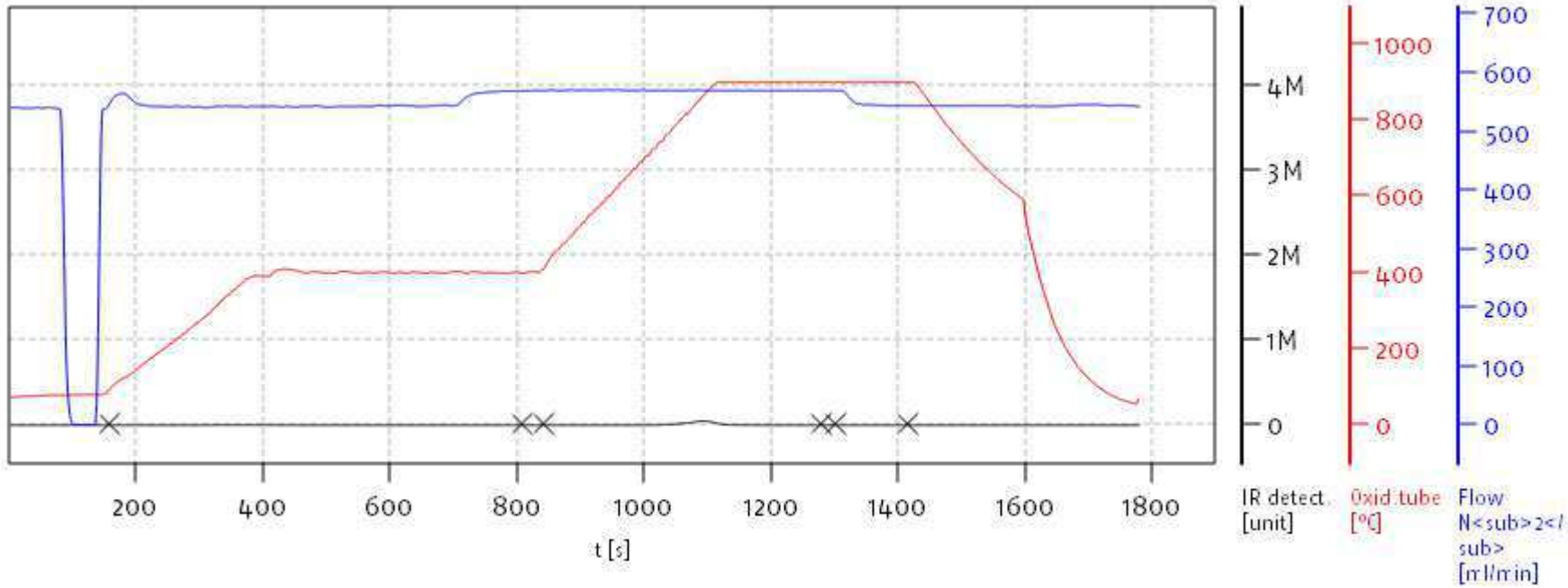
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
9	9	SEQ-CAL7	200.00	0.0247	1.00	CARBON	4/26/2022 3:30 PM	0.013	0.075	0.088	bl,C2u	10 555	101 530	292	1.0000	0.9173



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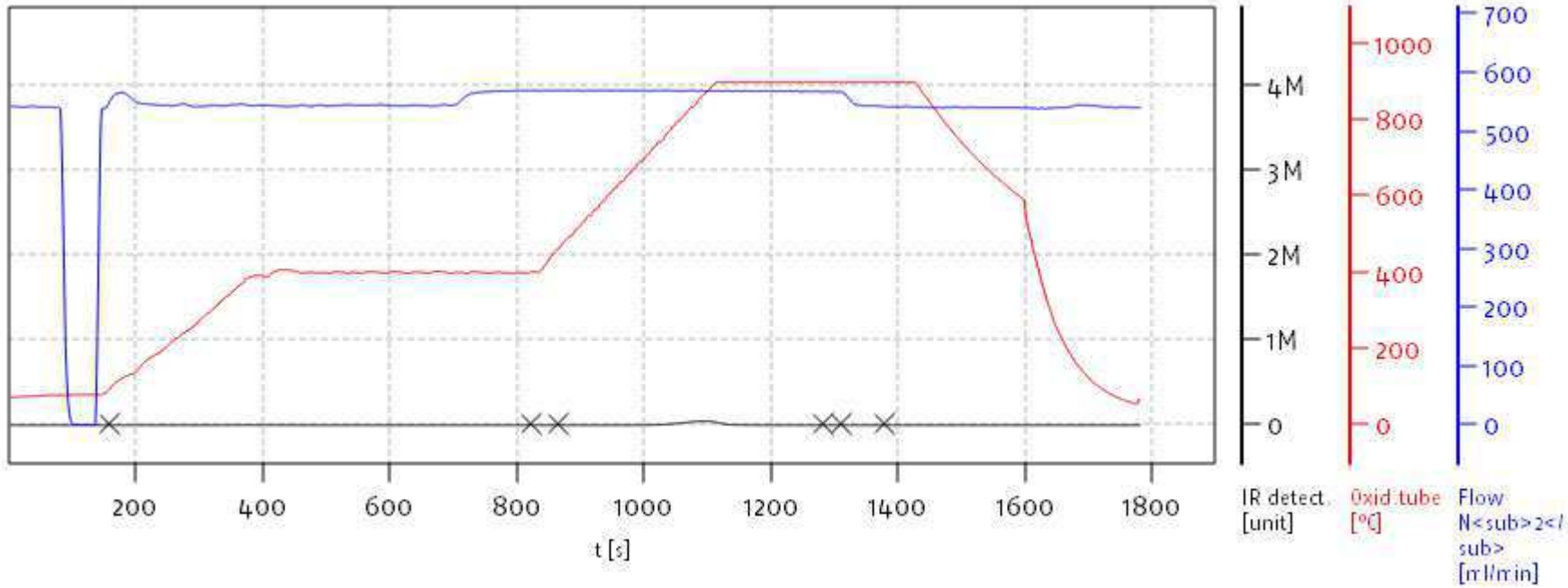
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
10	10	SEQ-CAL8	200.00	0.0298	1.00	CARBON	4/26/2022 4:00 PM	0.009	0.091	0.100	bl,C1u,C2u	6 668	120 822	116	1.0000	0.9312



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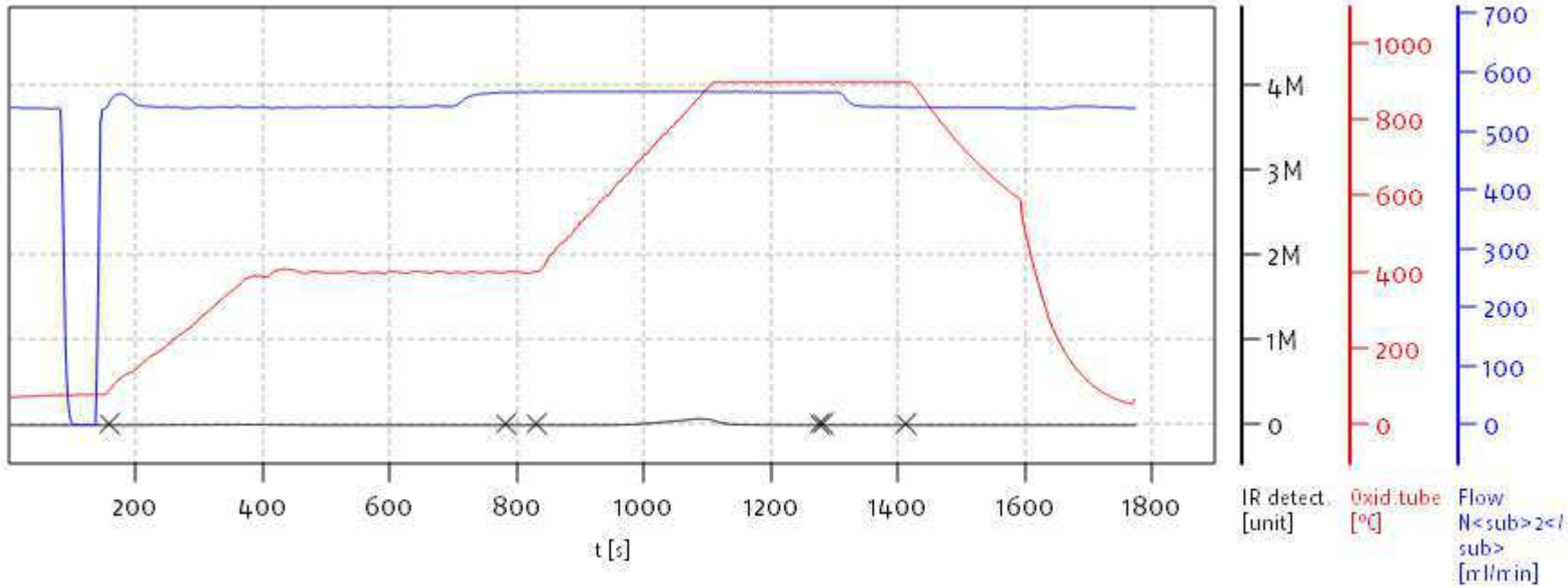
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
11	11	SEQ-CAL9	200.00	0.0402	1.00	CARBON	4/26/2022 4:30 PM	0.031	0.120	0.151	bl,C2u	32 999	260 234	1 044	1.0000	0.5792



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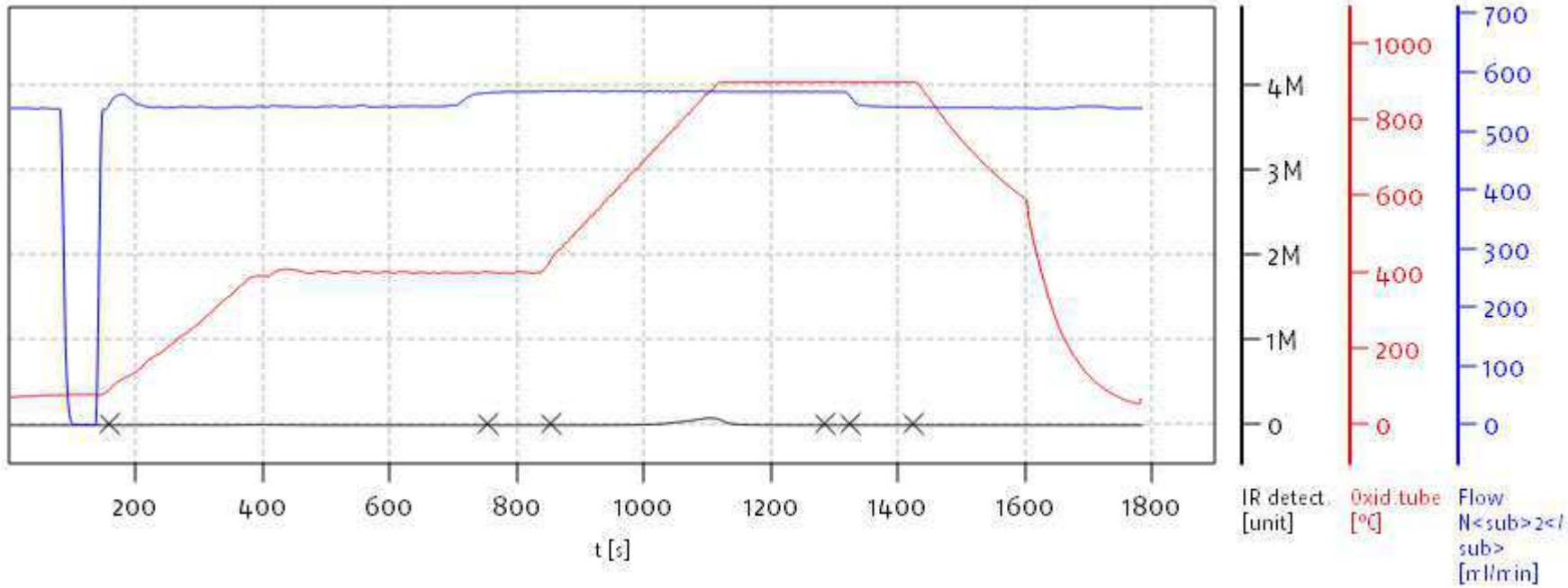
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
12	12	SEQ-CALA	200.00	0.0500	1.00	CARBON	4/26/2022 5:00 PM	0.021	0.151	0.172	bl,C2u	20 147	233 779	913	1.0000	0.8099



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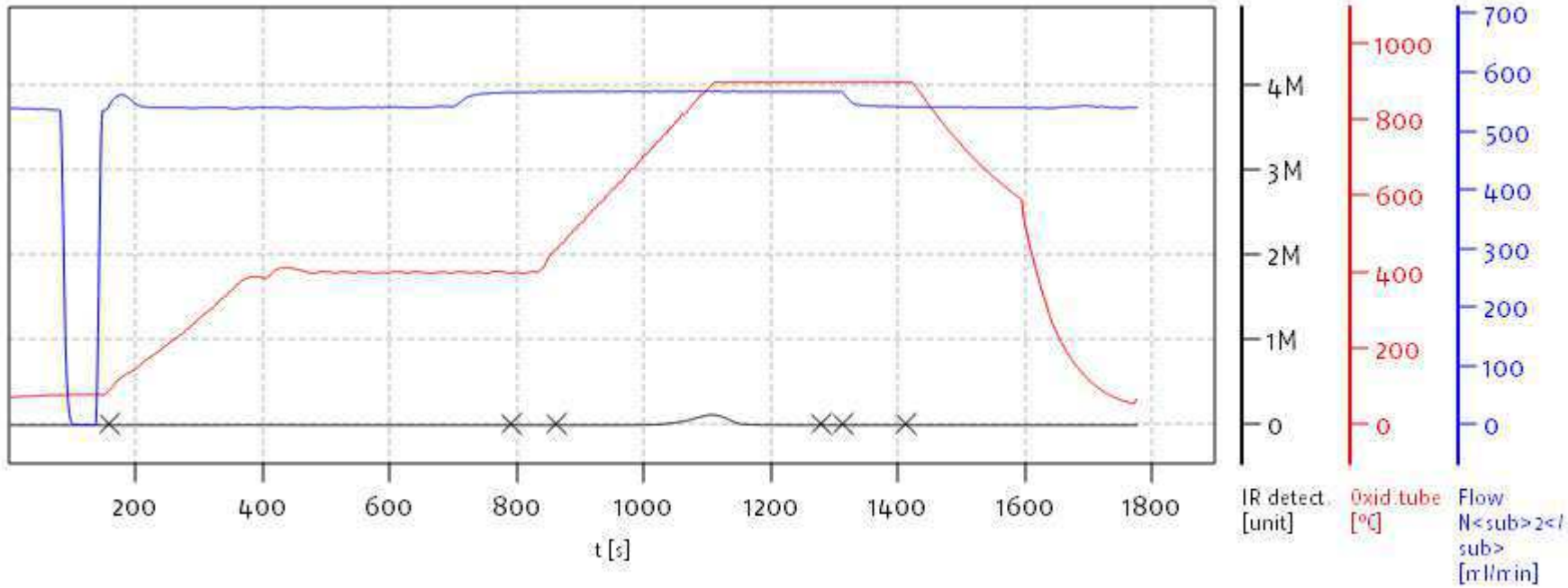
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
13	13	SEQ-CALB	200.00	0.0040	1.00	CARBON	4/26/2022 5:30 PM	0.010	0.258	0.268	bl,C1u,C2u	7 070	323 151	663	1.0000	1.0048



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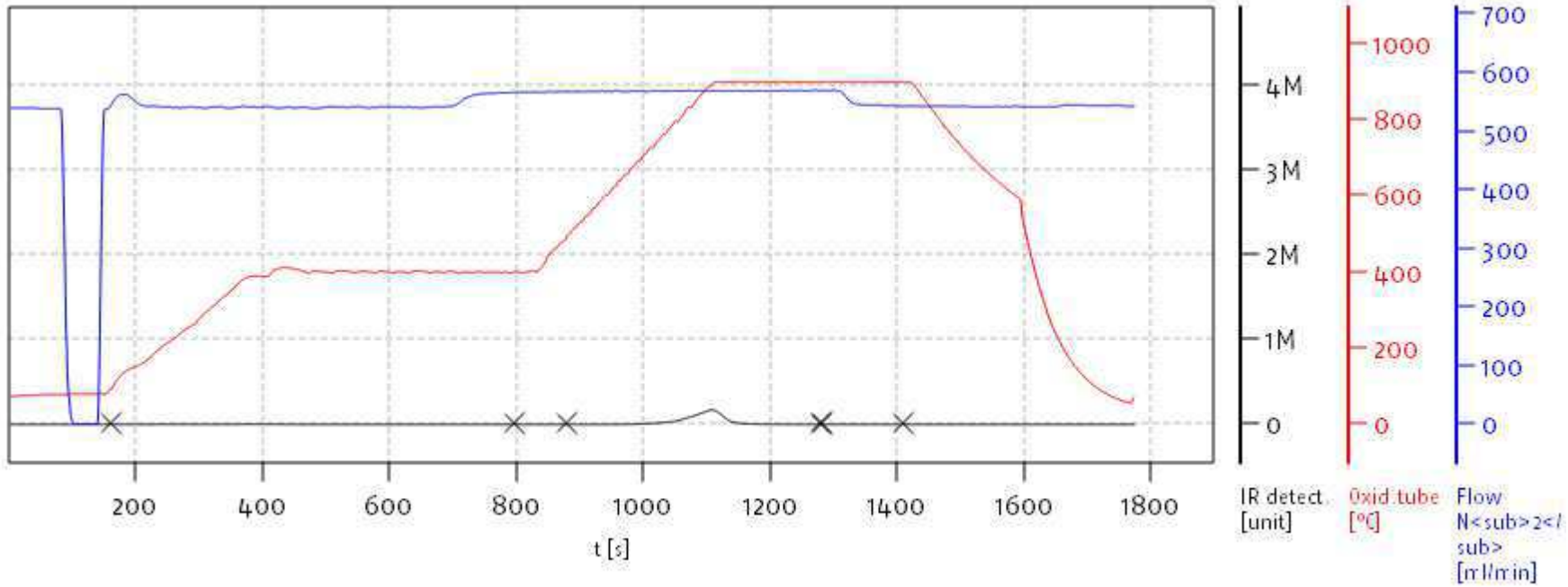
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
14	14	SEQ-CALC	200.00	0.0048	1.00	CARBON	4/26/2022 6:00 PM	0.015	0.324	0.339	bl,C2u	13 785	411 879	575	1.0000	0.9917



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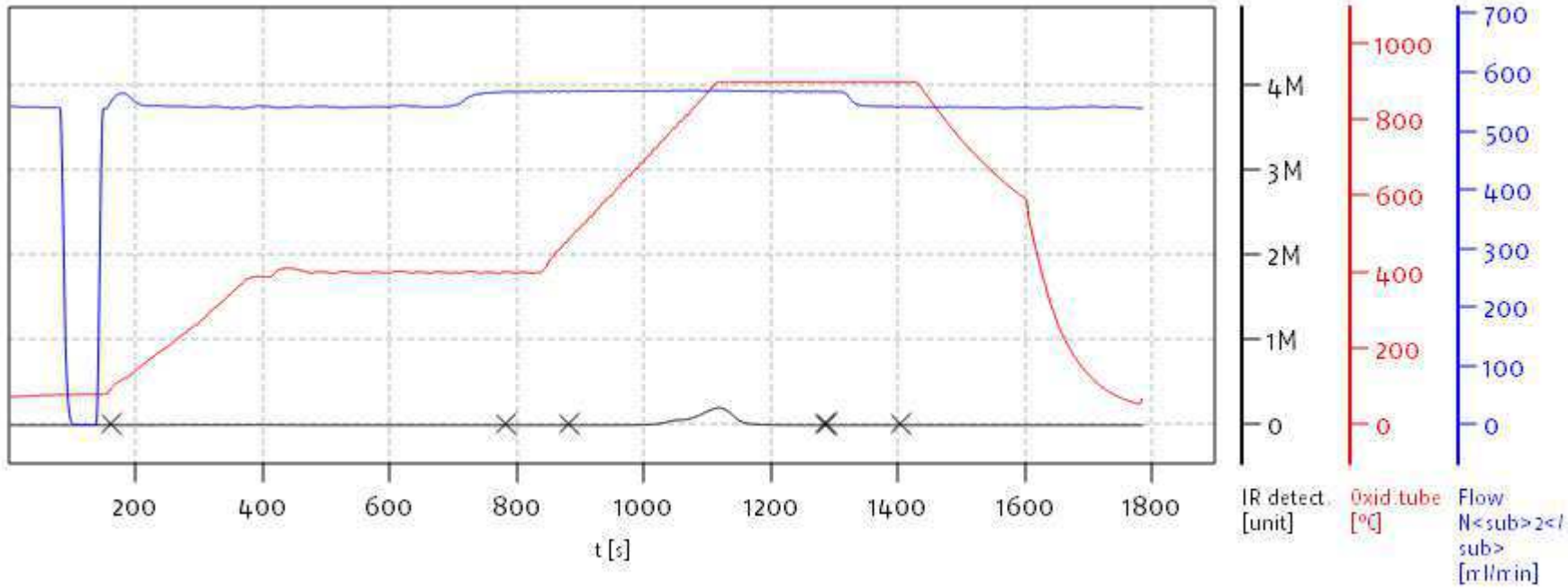
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
15	15	SEQ-CALD	200.00	0.0069	1.00	CARBON	4/26/2022 6:30 PM	0.019	0.444	0.463	bl,C2u	18 465	553 540	263	1.0000	1.0129



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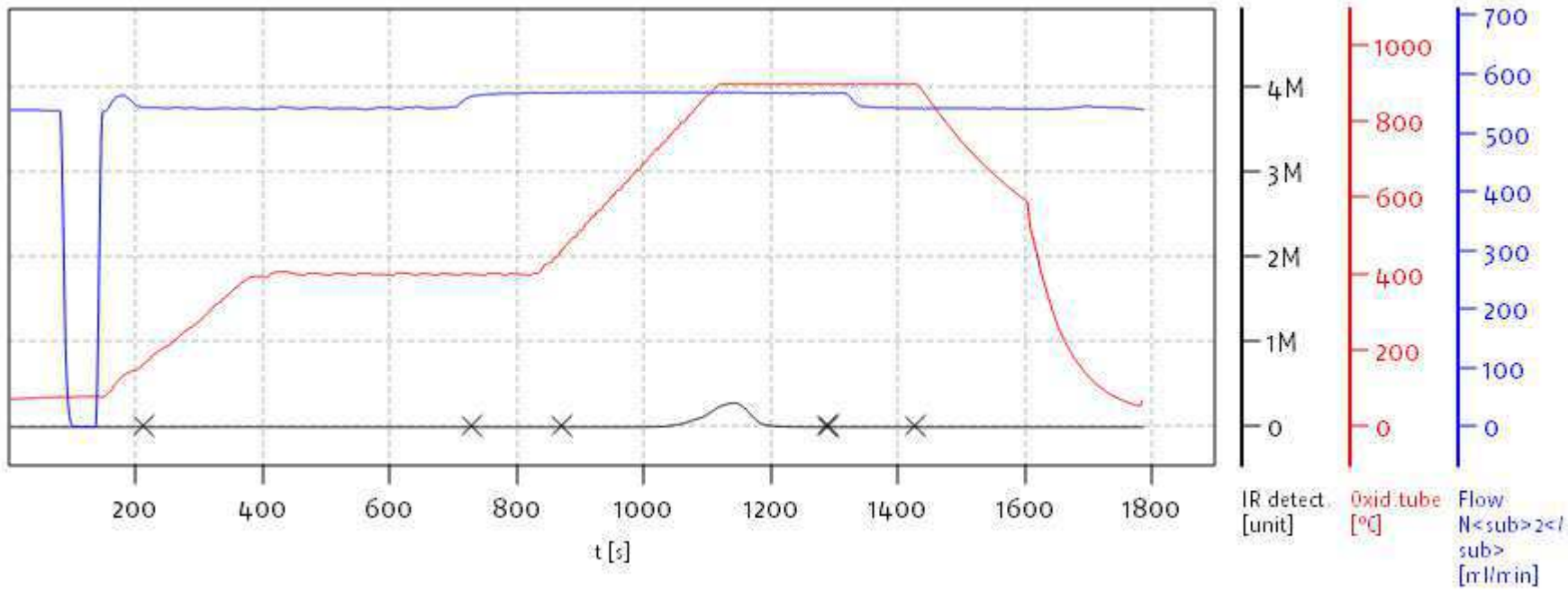
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
16	16	SEQ-CALE	200.00	0.0101	1.00	CARBON	4/26/2022 7:00 PM	0.009	0.600	0.609	bl,C1u,C2u	5 485	839 878	536	1.0000	0.9036



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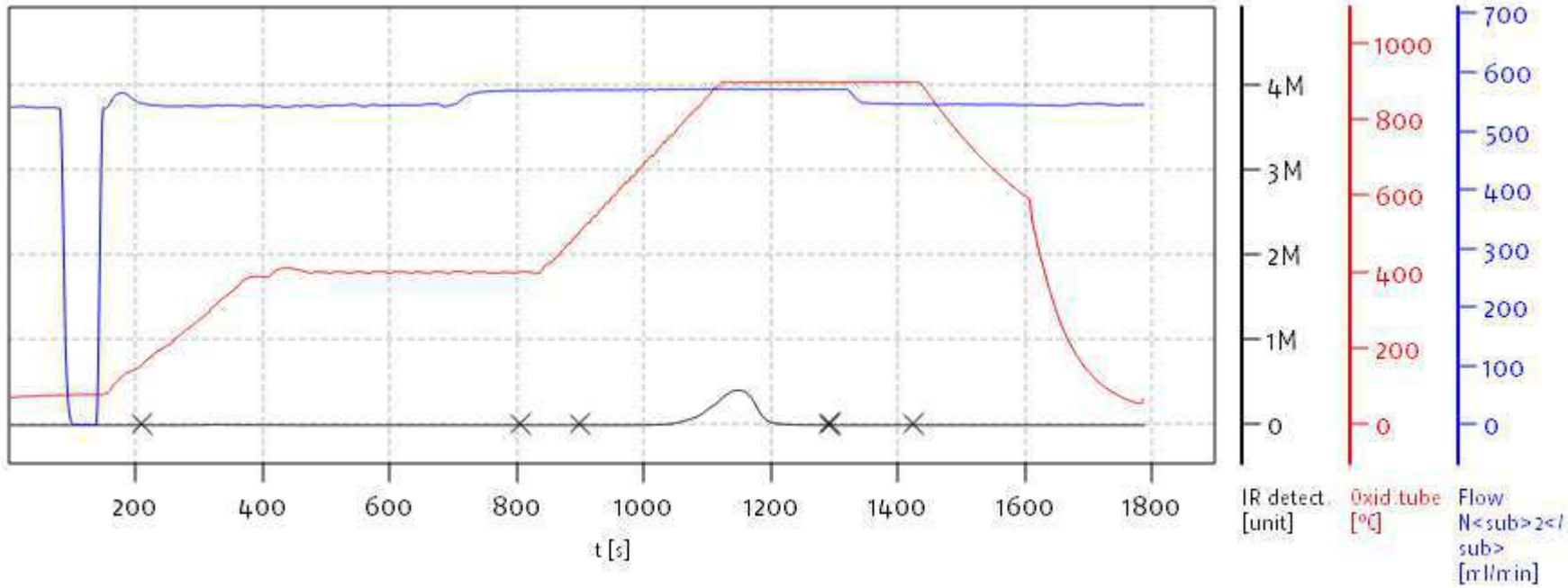
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
17	17	SEQ-CALF	200.00	0.0149	1.00	CARBON	4/26/2022 7:31 PM	0.019	0.906	0.925	bl,C2u	17 439	1 236 200	814	1.0000	0.9279



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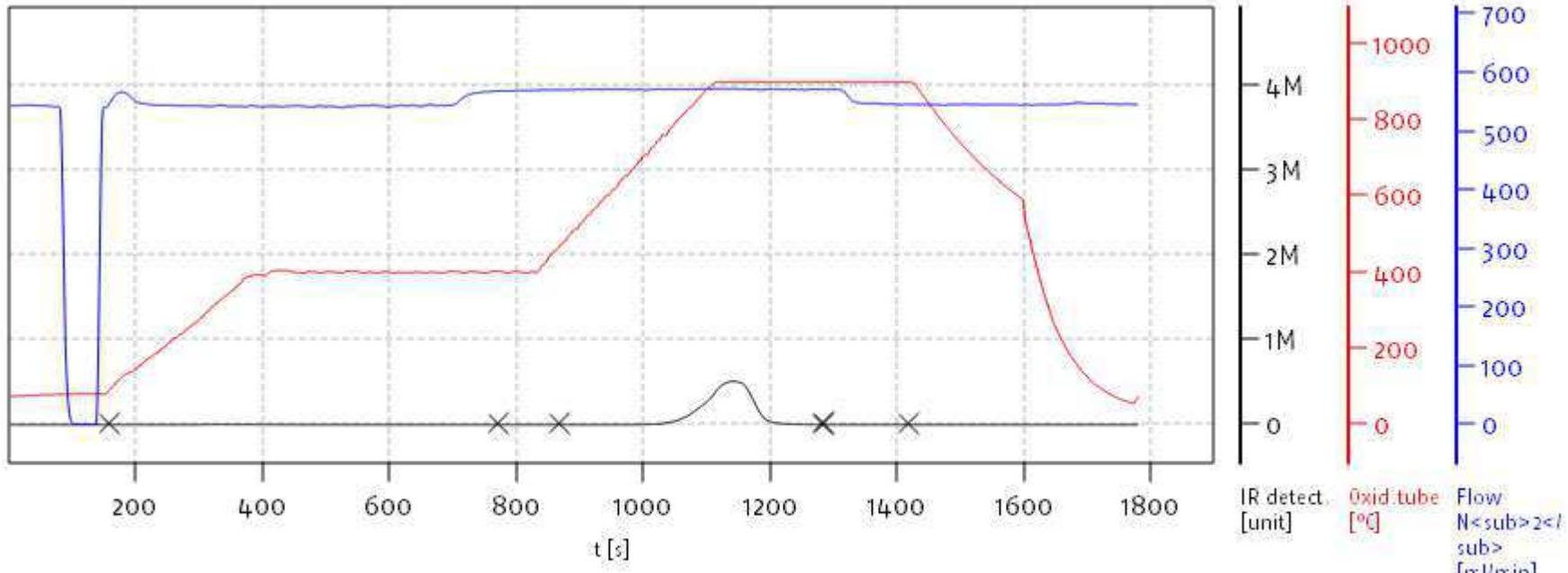
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
18	18	SEQ-CALG	200.00	0.0198	1.00	CARBON	4/26/2022 8:01 PM	0.015	1.206	1.221	bl,C2u	12 557	1 639 190	1 295	1.0000	0.9320



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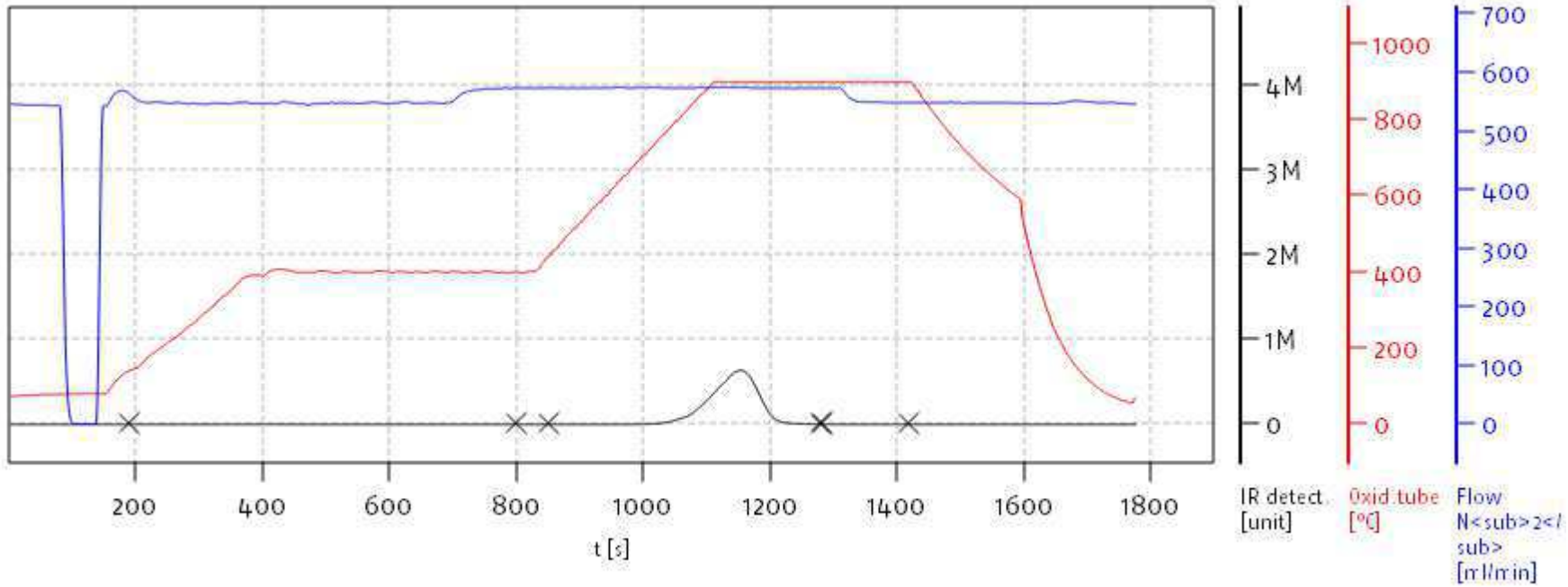
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
19	19	SEQ-CALH	200.00	0.0250	1.00	CARBON	4/26/2022 8:31 PM	0.009	1.524	1.533	bl,C1u,C2u	4 029	2 063 890	2 225	1.0000	0.9357



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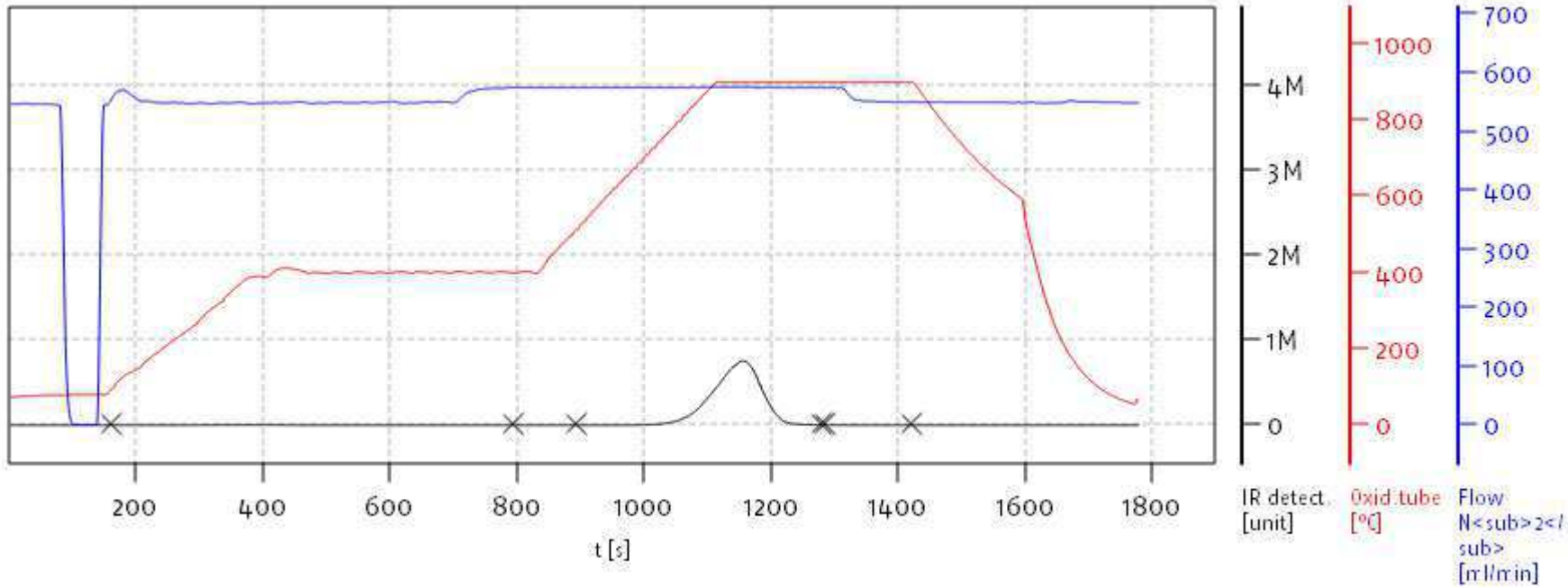
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
20	20	SEQ-CALI	200.00	0.0303	1.00	CARBON	4/26/2022 9:01 PM	0.017	1.800	1.817	bl,C2u	13 926	2 495 900	2 903	1.0000	0.9140



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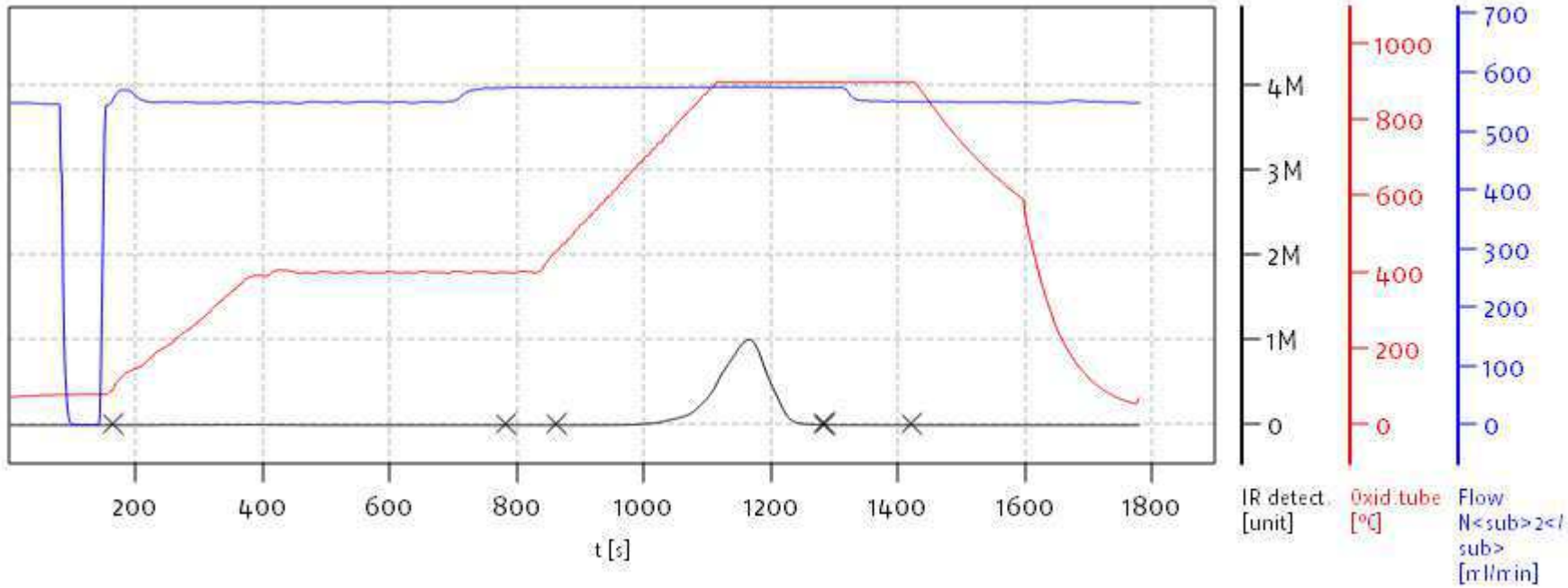
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
21	21	SEQ-CALJ	200.00	0.0415	1.00	CARBON	4/26/2022 9:31 PM	0.031	2.400	2.431	bl,C2u	28 786	3 482 530	5 351	1.0000	0.8737



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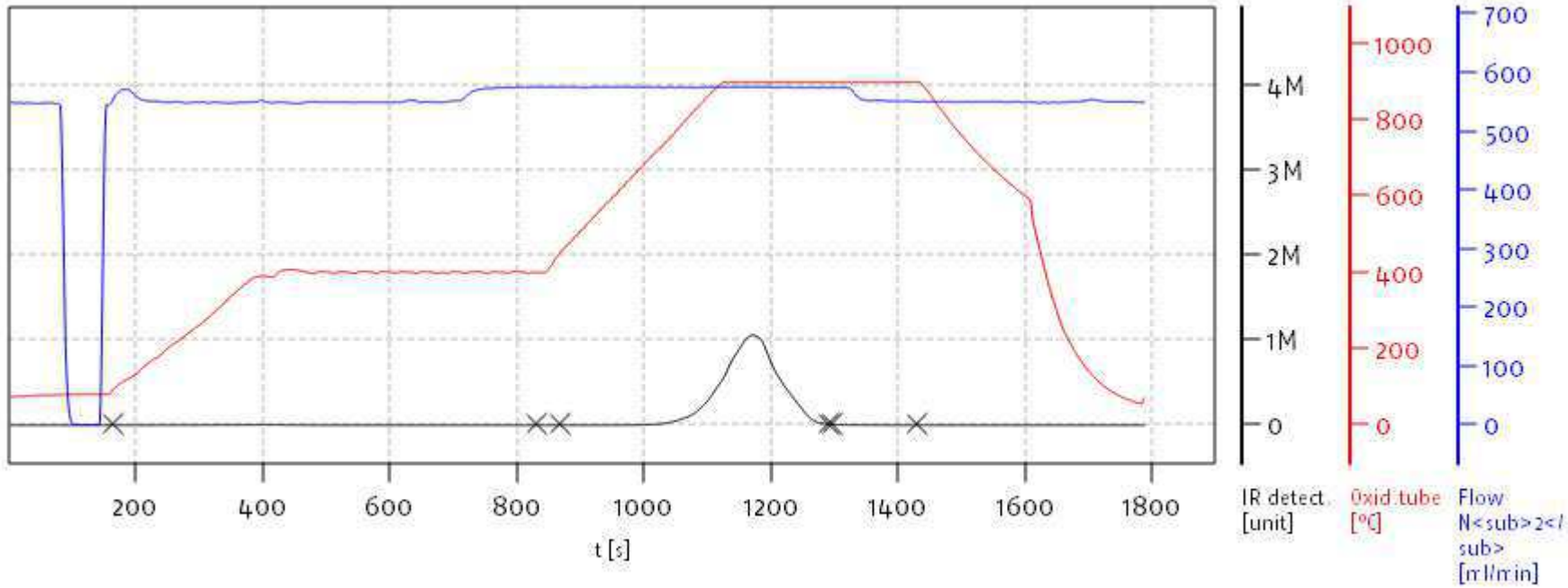
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
22	22	SEQ-CALK	200.00	0.0497	1.00	CARBON	4/26/2022 10:01 PM	0.031	3.012	3.043	bl	23 732	4 105 830	9 736	1.0000	0.9301



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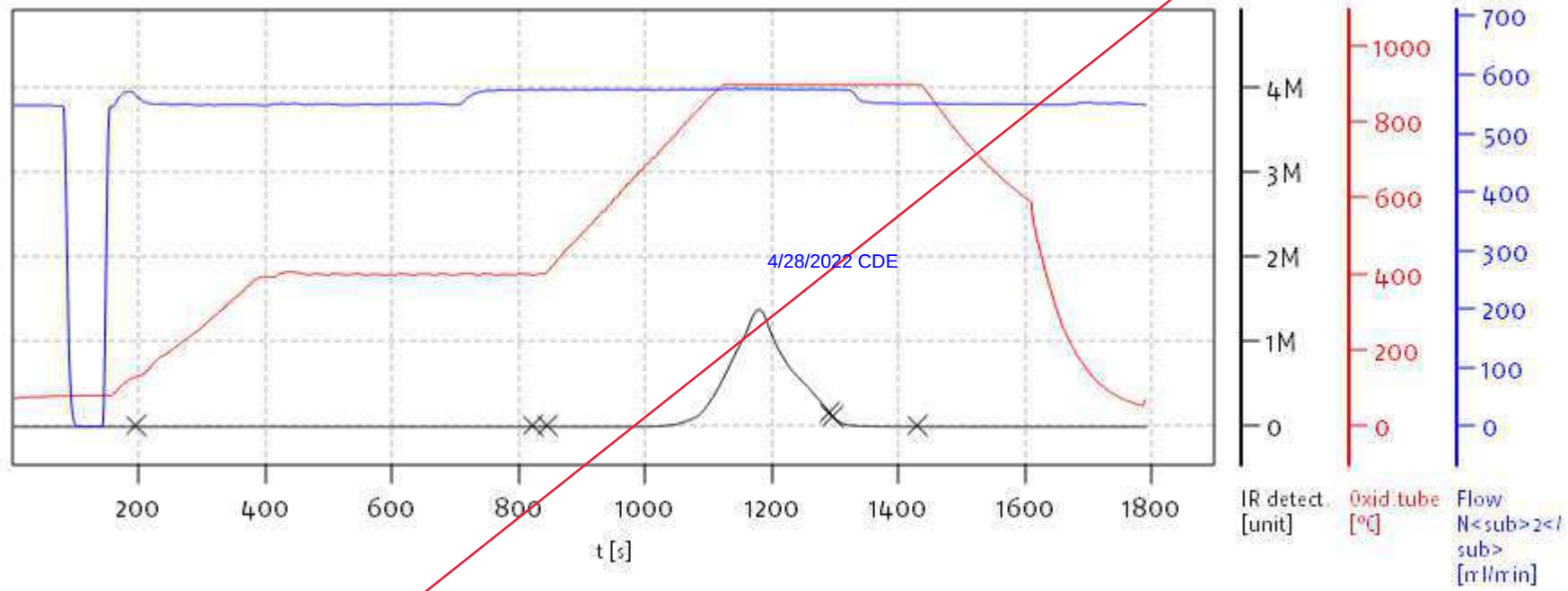
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
23	23	SEQ-CALL	200.00	0.0698	1.00	CARBON	4/26/2022 10:31 PM	0.005	3.805	3.810	bl,C1u	3 605	5 648 620	71 970	1.0000	0.9443



Name:

Access: soliTOC superuser

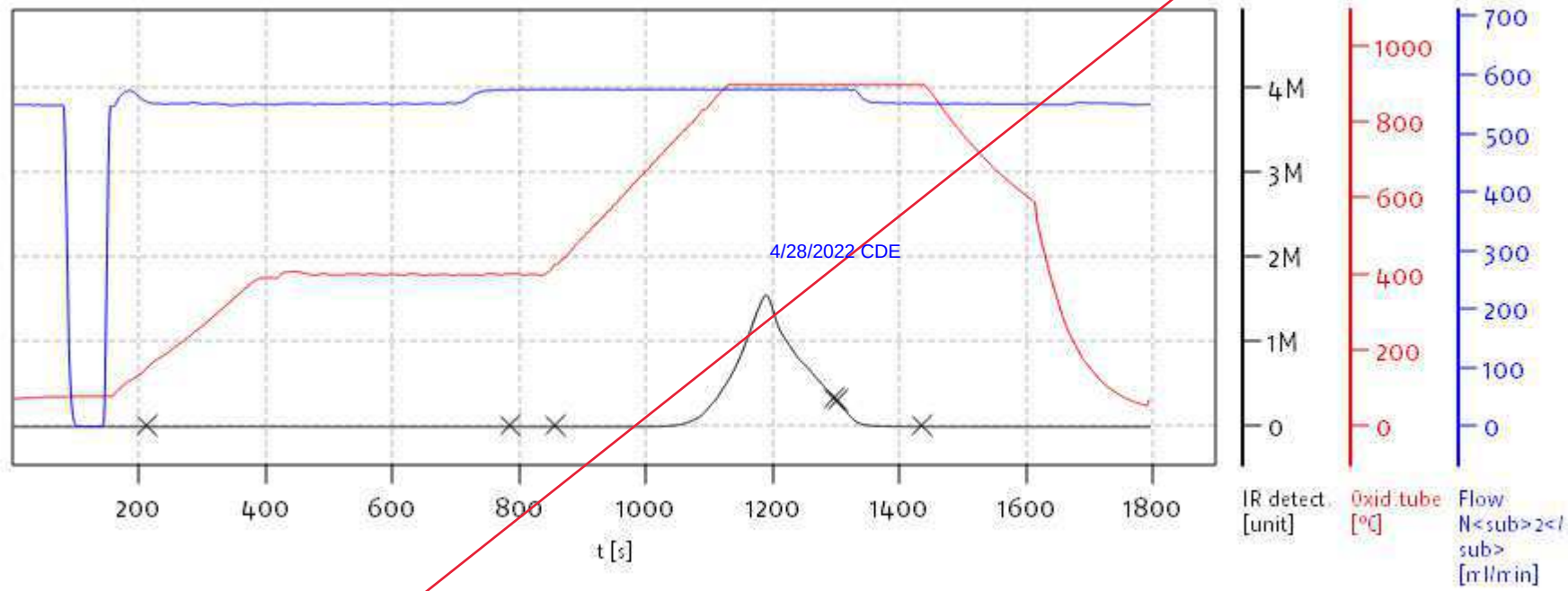
Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
24	24	SEQ-CALM	200.00	0.0803	1.00	CARBON	4/26/2022 11:02 PM	0.010	4.637	4.647	bl	10 023	6 397 530	228 171	1.0000	0.9539



Name:

Access: soliTOC superuser

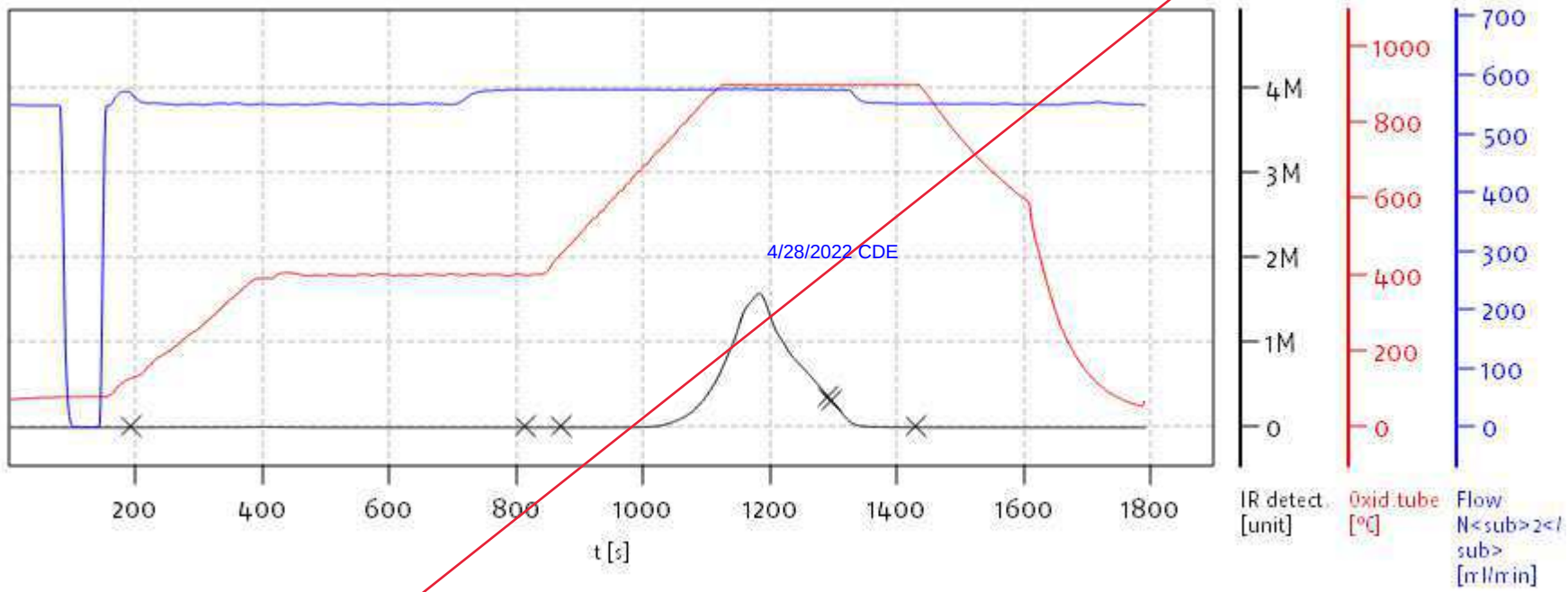
Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
25	25	SEQ-CALN	200.00	0.0901	1.00	CARBON	4/26/2022 11:32 PM	0.020	5.219	5.239	bl	23 354	7 186 580	239 986	1.0000	0.9540



Name:

Access: soliTOC superuser

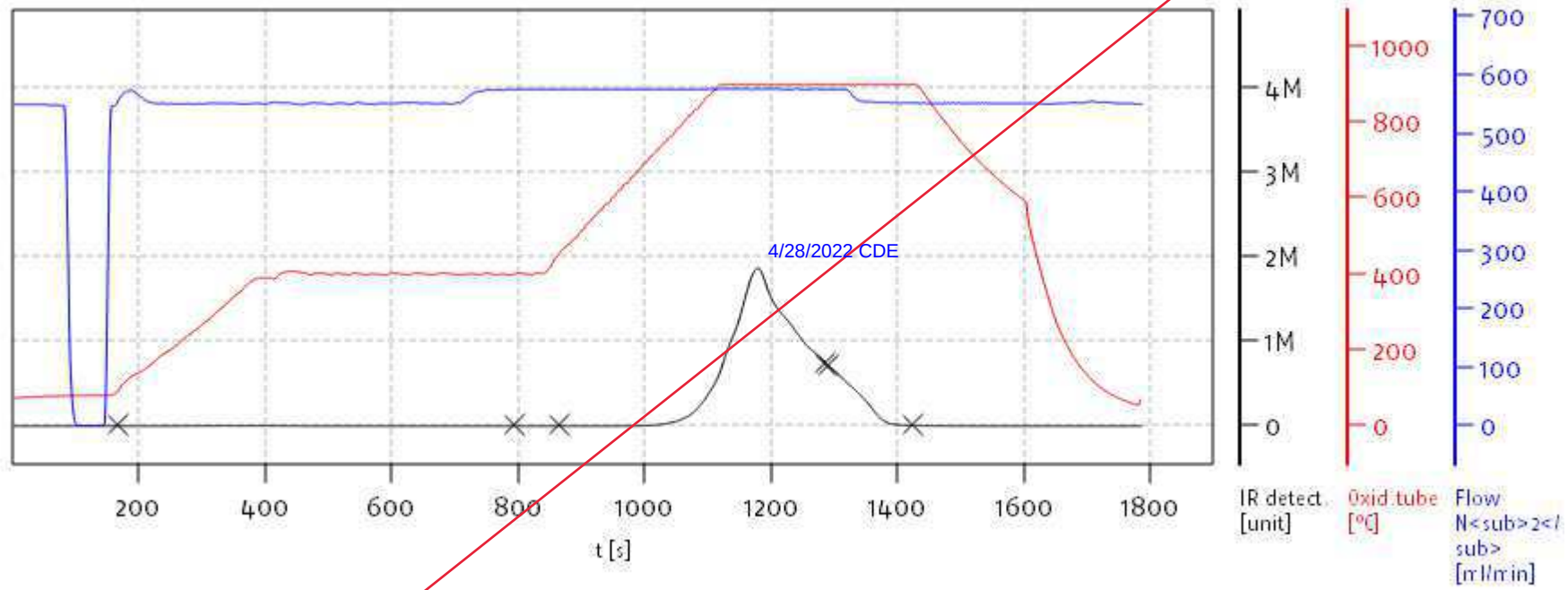
Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
26	26	SEQ-CALO	200.00	0.1200	1.00	CARBON	4/27/2022 12:02 AM	0.019	7.915	7.934	bl,C3o	21 248	8 544 610	1 334 580	1.0000	1.0714



Name:

Access: soliTOC superuser

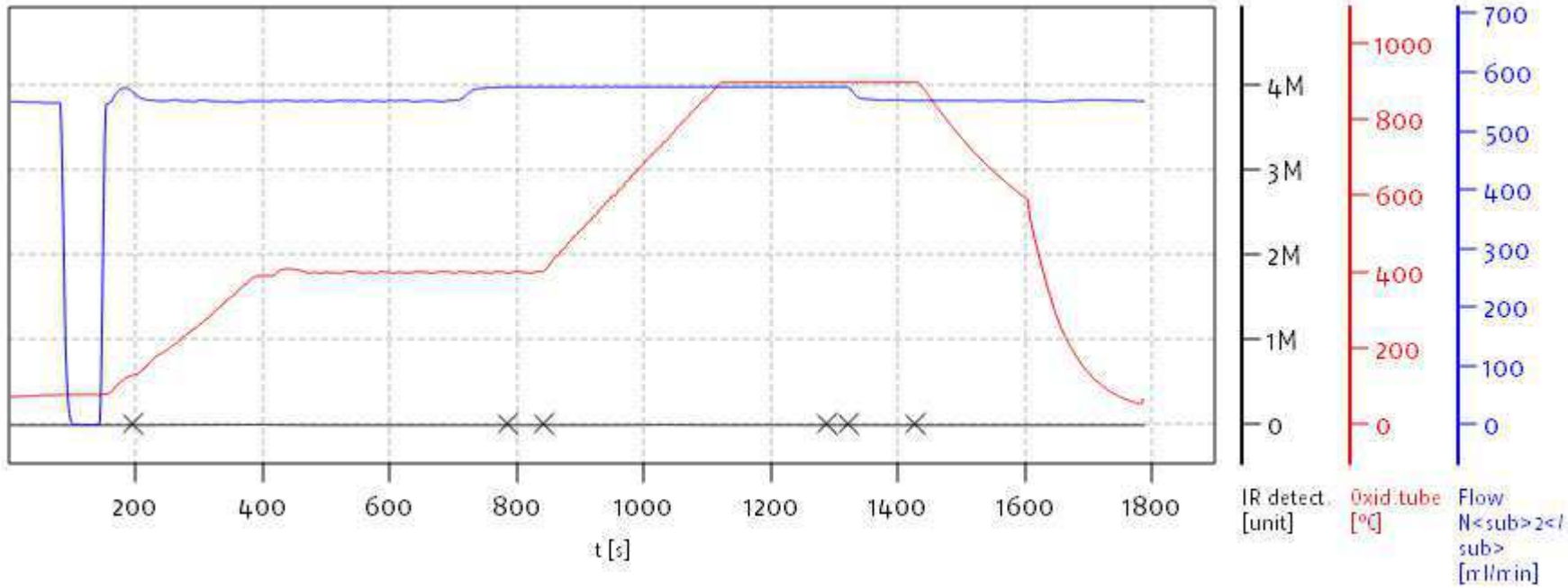
Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
27	27	BLANK	1.00		1.00	CARBON	4/27/2022 12:32 AM	0.000	0.000	0.000	bl	29 766	19 596	1 205	1.0000	0.9007



Name:

Access: soliTOC superuser

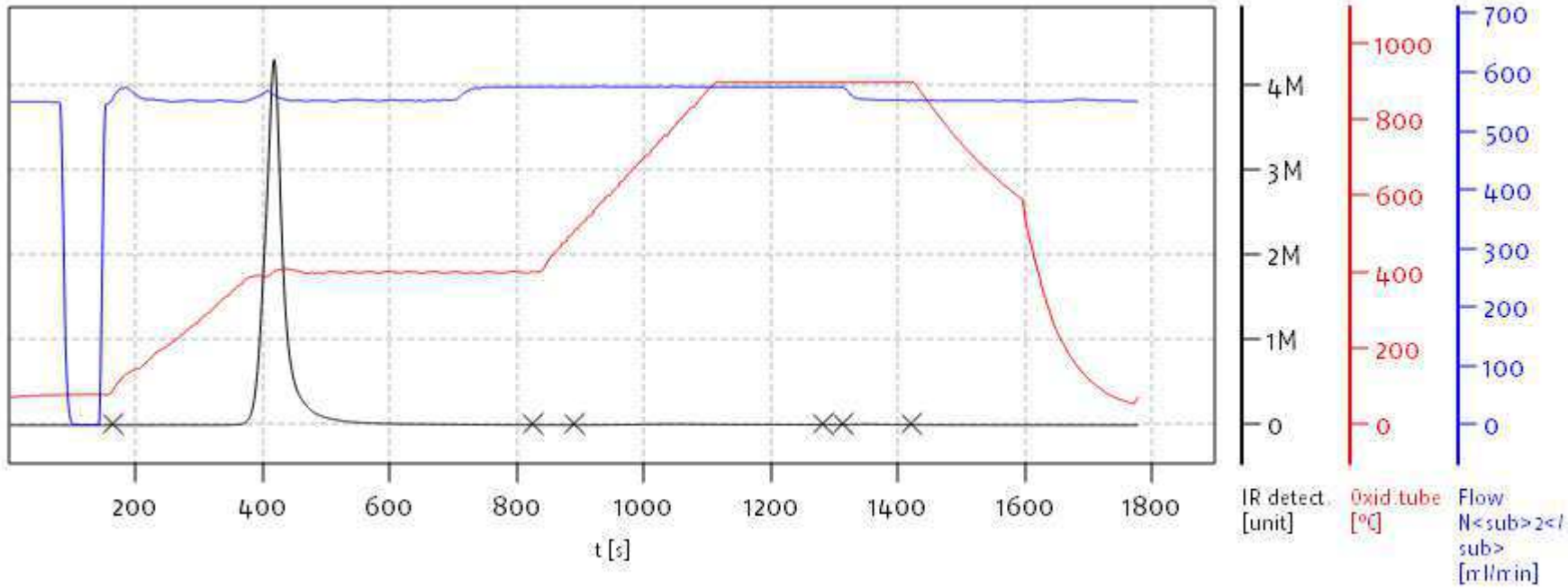
Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
28	28	Dfactor	19.00		1.00	CARBON	4/27/2022 1:02 AM	44.678	0.893	45.571	bl	5 588 680	104 999	25 384	0.9581	1.0000



Name:

Access: soliTOC superuser

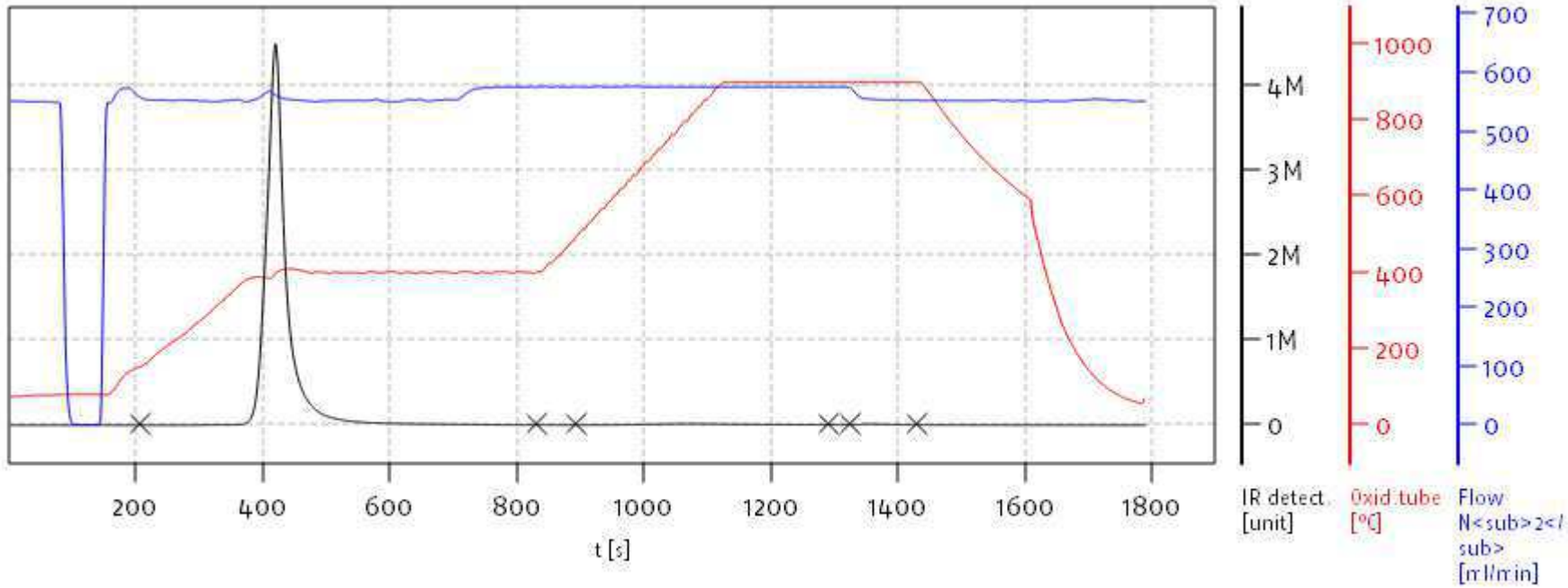
Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
29	29	Dfactor	20.80		1.00	CARBON	4/27/2022 1:32 AM	44.694	0.937	45.631	bl	6 076 750	120 961	30 224	0.9647	1.0000



Name:

Access: soliTOC superuser

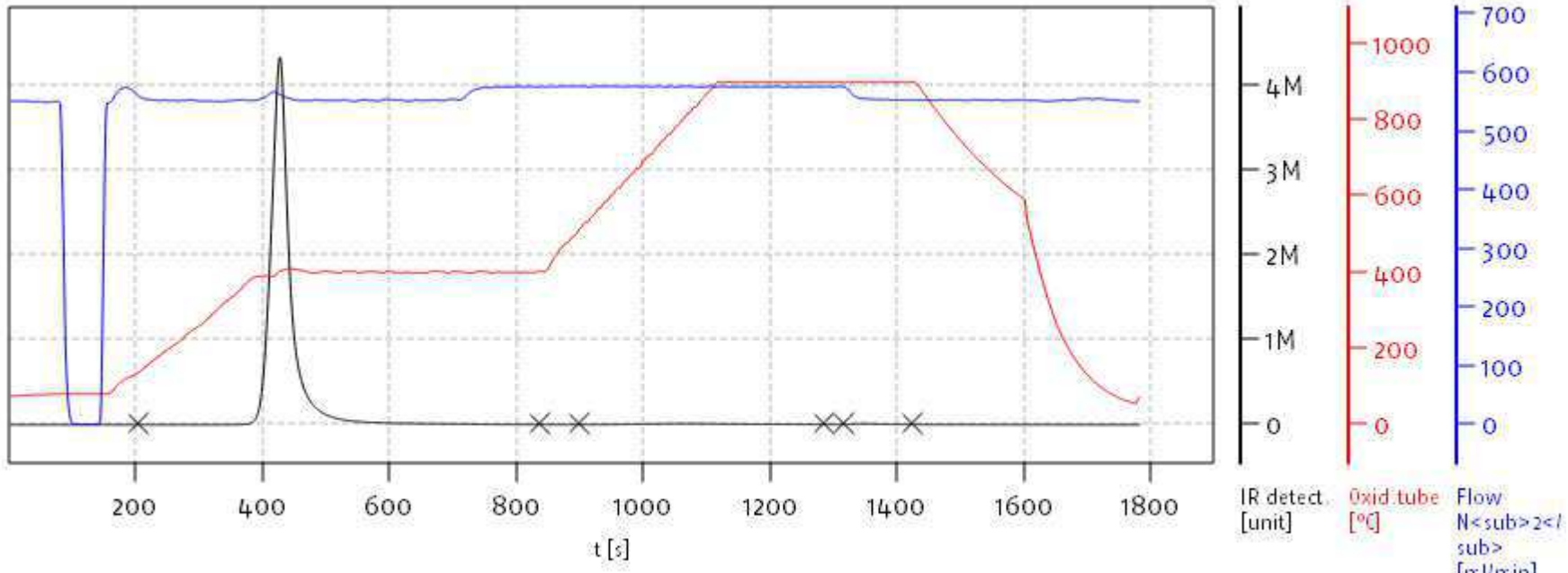
Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
30	30	SEQ-ICV1	19.40		1.00	CARBON	4/27/2022 2:03 AM	44.964	0.742	45.706	bl	5 722 450	98 735	27 054	0.9614	0.9007



Name:

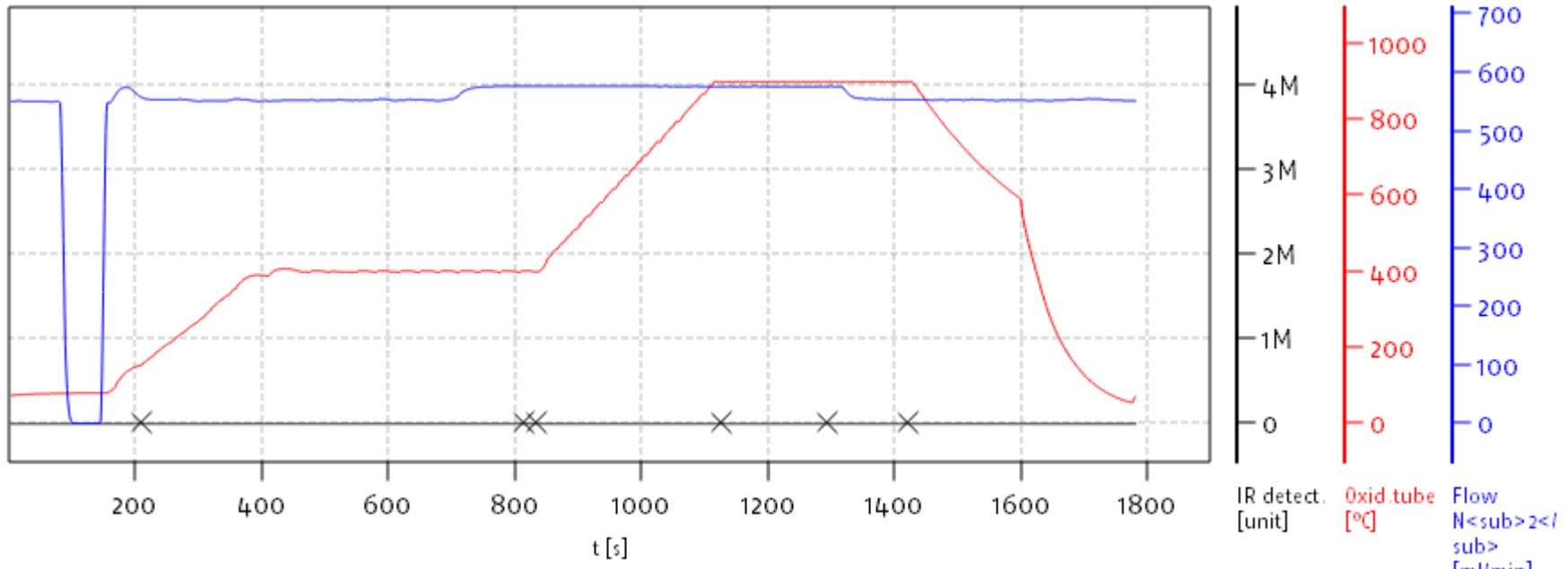
Access: soliTOC superuser

Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
31	31	SEQ-ICB1	501.10		1.00	CARBON	4/27/2022 2:33 AM	0.002	0.001	0.003	bl,C1u,C3u,C2u	2 158	225	165	0.9614	0.9007



Name:

Access: soliTOC superuser

Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

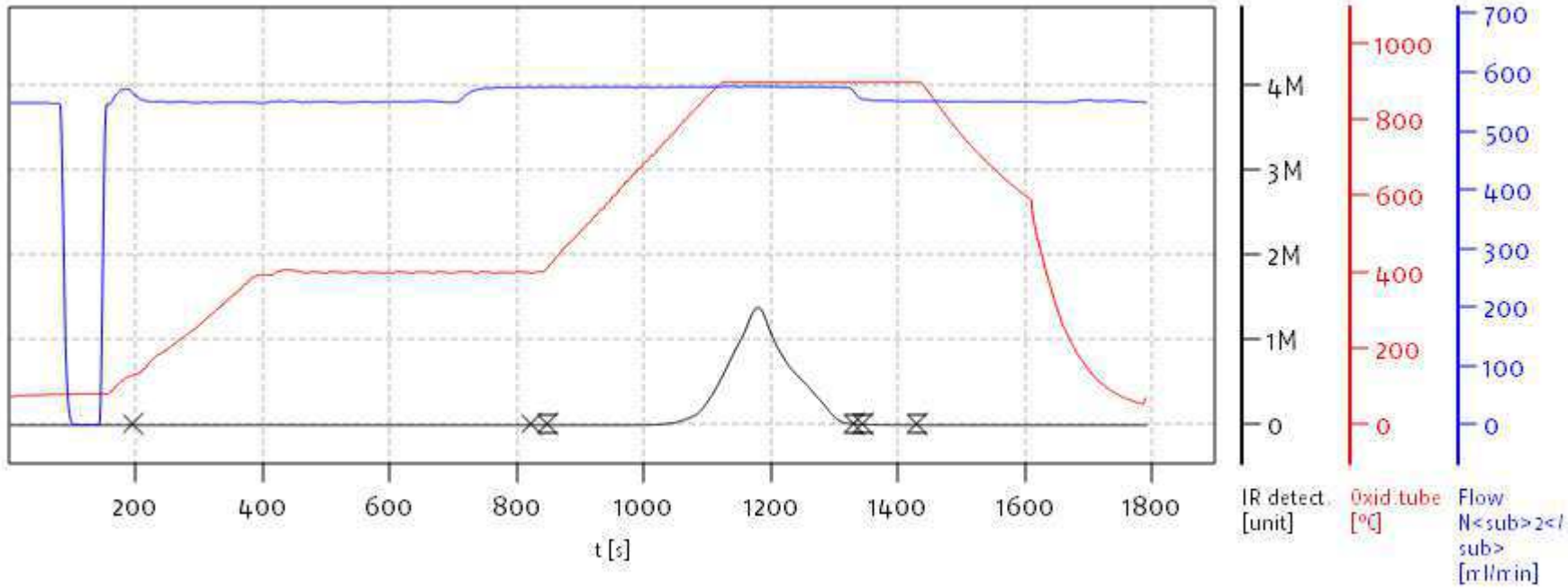
elementar
EXCELLENCE IN ELEMENTS

Document: 042622 DOE CALIBRATION from: 4/27/2022 11:05 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

Analytical Resources, Incorporated
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
23	23	SEQ-CALL	200.00	0.0698	1.00	CARBON	4/27/2022 11:08 AM	0.005	3.917	3.922	bl,C1u	3 605	**5 260 365**	**0**	1.0000	0.9443



Name:

Access: soliTOC superuser

Date: Wed Apr 27 11:10:16 2022

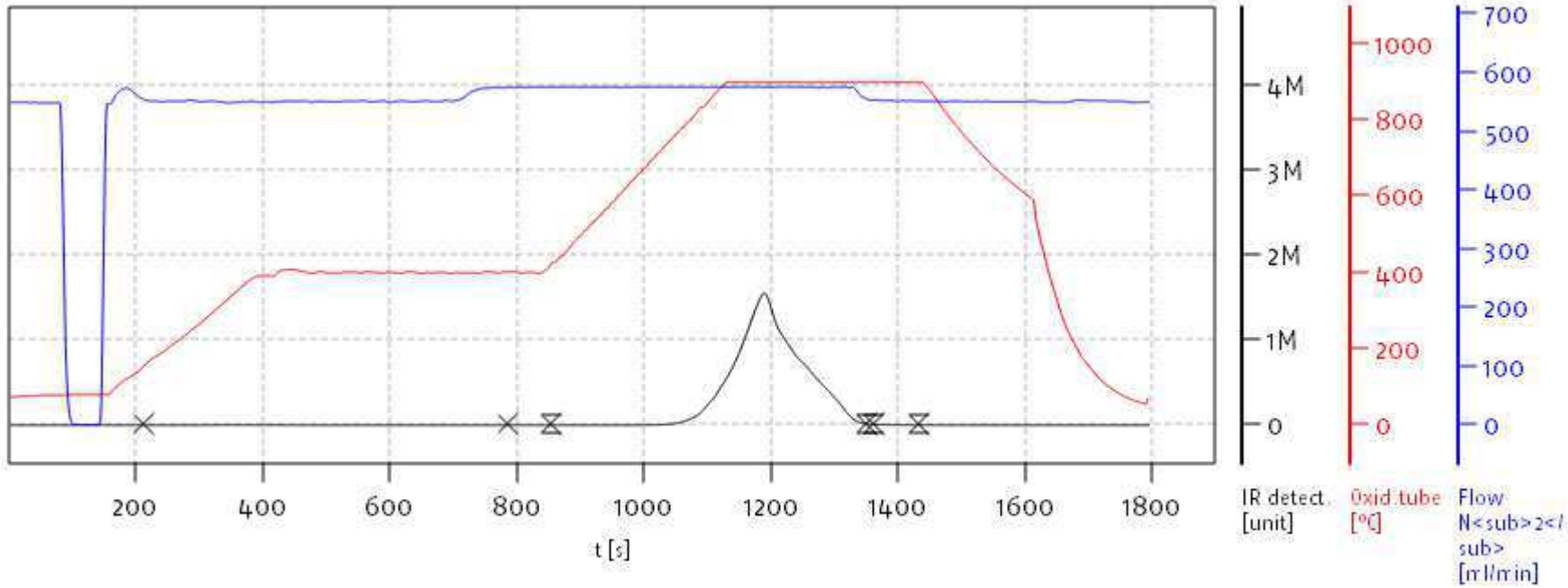
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 042622 DOE CALIBRATION from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
24	24	SEQ-CALM	200.00	0.0803	1.00	CARBON	4/27/2022 11:08 AM	0.010	4.637	4.647	bl	10 023	**6 164 833**	**0**	1.0000	0.9539



Name:

Access: soliTOC superuser

Date: Wed Apr 27 11:10:16 2022

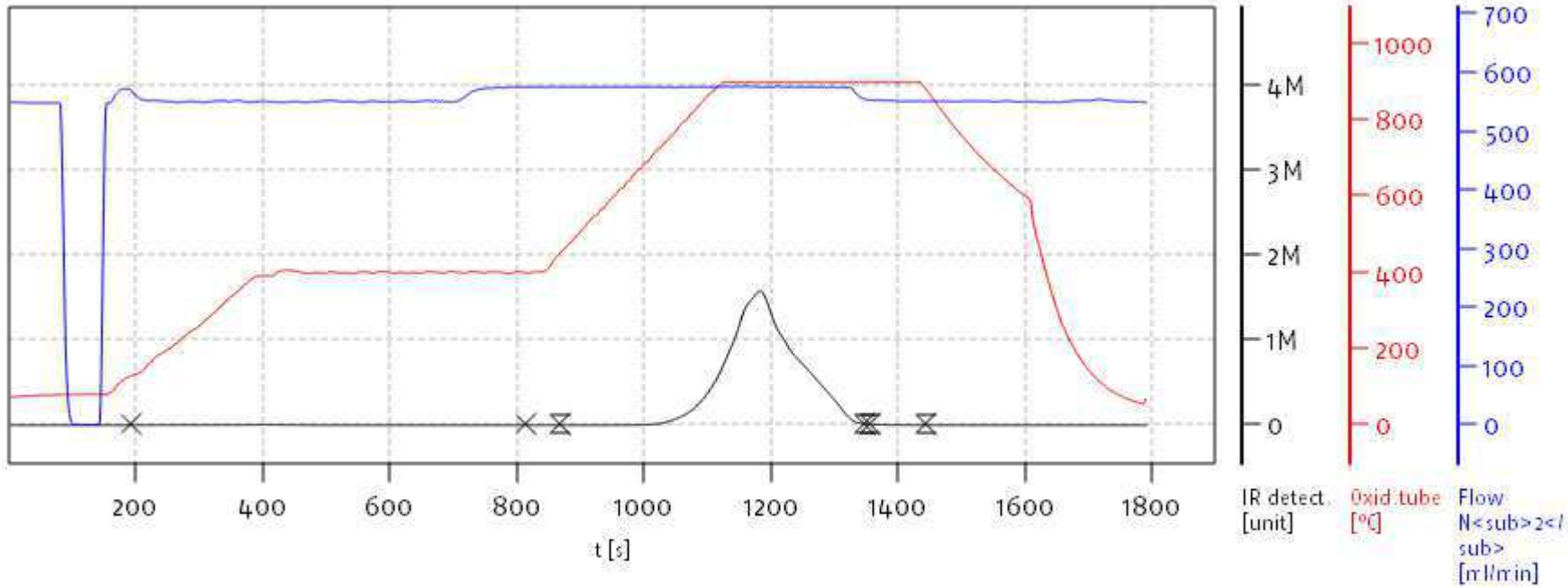
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 042622 DOE CALIBRATION from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
25	25	SEQ-CALN	200.00	0.0901	1.00	CARBON	4/27/2022 11:09 AM	0.020	5.219	5.239	bl	23 354	**6 937 833**	**0**	1.0000	0.9540



Name:

Access: soliTOC superuser

Date: Wed Apr 27 11:10:16 2022

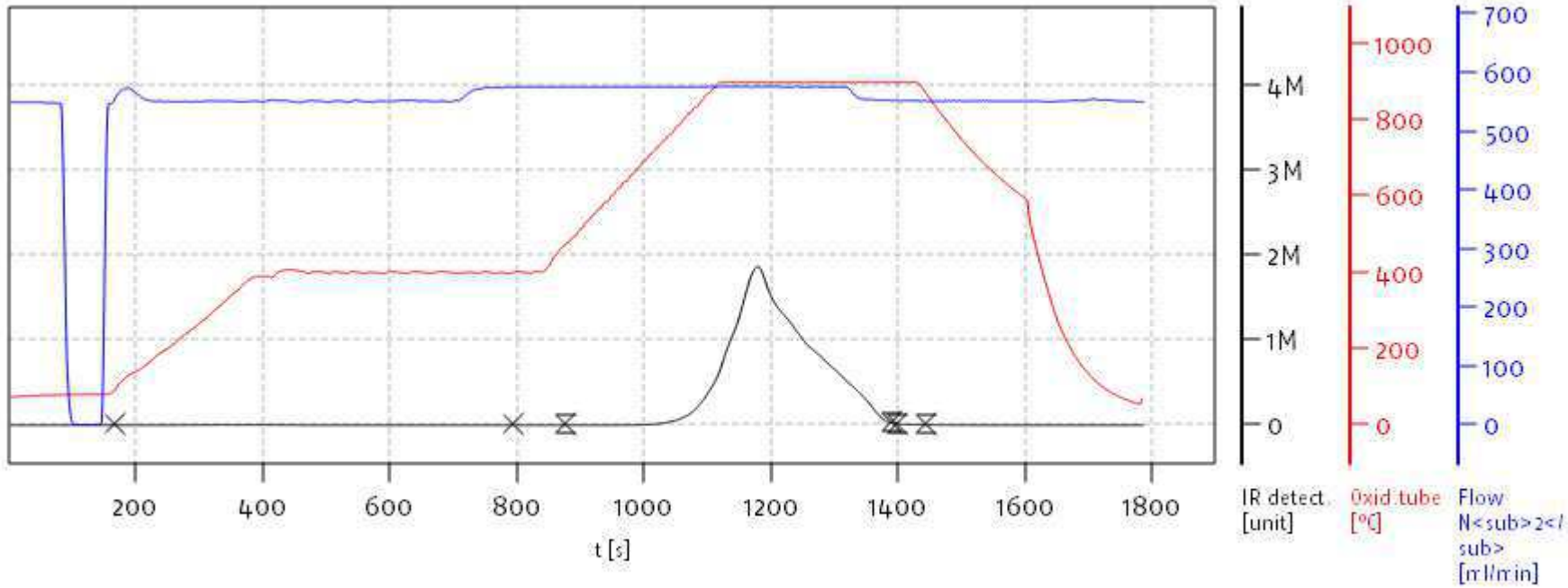
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 042622 DOE CALIBRATION from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
26	26	SEQ-CALO	200.00	0.1200	1.00	CARBON	4/27/2022 11:09 AM	0.019	7.915	7.934	bl,C3o	21 248	9 370 139	0	1.0000	1.0714



Name:

Access: soliTOC superuser

Date: Wed Apr 27 11:10:16 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

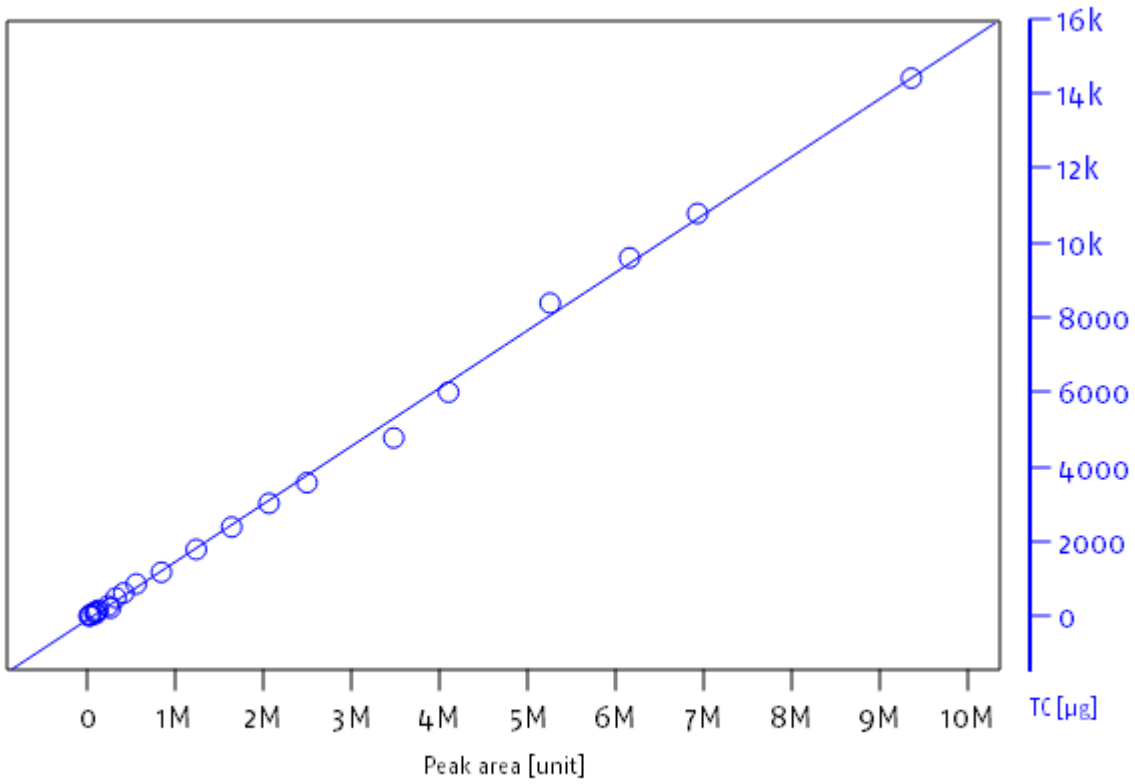
elementar
EXCELLENCE IN ELEMENTS

Document: 042622 DOE CALIBRATION from: --.--.-- (modified)

Calibration parameters TC, Whole range

a	-4.107546e-02
b	+1.548032e-06
c	+0.000000e+00
d	+0.000000e+00
e	+0.000000e+00
r	0.998372
r_old	0.998372
Proc.-SD	166.070255 µg

Calibration graph TC, Whole range



INSTRUMENT BLANKS
EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: TOC Cube
Calibration: FD00070
Sequence: SKD0371
Date Analyzed: 04/27/22 02:33

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SKD0371-ICB1	Total Organic Carbon	0.00	0.02	0.02	%	

INSTRUMENT BLANKS
EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: TOC Cube
Calibration: FD00070
Sequence: SLB0179
Date Analyzed: 02/14/23 20:39

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLB0179-ICB1	Total Organic Carbon	0.00	0.02	0.02	%	
SLB0179-CCB1	Total Organic Carbon	0.00	0.02	0.02	%	
SLB0179-CCB2	Total Organic Carbon	0.00	0.02	0.02	%	
SLB0179-CCB3	Total Organic Carbon	0.00	0.02	0.02	%	
SLB0179-CCB4	Total Organic Carbon	0.00	0.02	0.02	%	
SLB0179-CCB5	Total Organic Carbon	0.004	0.02	0.02	%	

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: TOC Cube
Calibration: FD00070
Control Limt: +/- 10.00%
Sequence: SKD0371

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SKD0371-ICV1	Total Organic Carbon	44.446	43.7	98.3	%	EPA 9060A m
	Total Carbon	44.446	44.1	99.2	%	EPA 9060A m
	Total Inorganic Carbon	0.0000	0.40		%	EPA 9060A m
	% Soot	0.0000	0.004		%	EPA 9060A m

* Values outside of QC limits

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: TOC Cube
Calibration: FD00070
Control Limt: +/- 10.00%
Sequence: SLB0179

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SLB0179-ICV1	Total Organic Carbon	44.446	44.5	100	%	EPA 9060A m
SLB0179-CCV1	Total Organic Carbon	44.446	44.1	99.2	%	EPA 9060A m
SLB0179-CCV2	Total Organic Carbon	44.446	43.9	98.7	%	EPA 9060A m
SLB0179-CCV3	Total Organic Carbon	44.446	43.9	98.9	%	EPA 9060A m
SLB0179-CCV4	Total Organic Carbon	44.446	44.3	99.6	%	EPA 9060A m
SLB0179-CCV5	Total Organic Carbon	44.446	44.5	100	%	EPA 9060A m

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

STANDARD REFERENCE MATERIAL RECOVERY

EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Laboratory ID: BLB0342-SRM1
Batch: BLB0342
Initial/Final: 0.251 g / 0.251 mL
Preparation: PSEP 1986 (modified)
Analyzed: 02/14/2023 23:09
Standard ID: L000790
Expires: 05/19/2024
Standard Lot#: NA
Description: 1941B - Organics in Marine Sediment (Conv

ANALYTE	TRUE (% wet)	FOUND (% wet)	MDL	MRL	Q	SRM % REC.	QC LIMITS REC.
Total Organic Carbon	2.9900	2.93	0.02	0.02		97.9	80 - 120

* Values outside of QC limits

HOLDING TIME SUMMARY

Analysis: EPA 9060A m

Laboratory: Analytical Resources, LLC SDG: 23B0276

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

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
LDW23-SC1150B 23B0276-01	12/14/22 09:03	12/14/22 16:47	02/14/23 12:18	62	180	02/15/23 11:16			

* Indicates hold time exceedance.

METHOD DETECTION AND REPORTING LIMITS

EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 23B0276
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Instrument: TOC Cube

Analyte	MDL	RL	Units
Total Organic Carbon	0.02	0.02	%

National Institute of Standards & Technology

Certificate of Analysis

Standard Reference Material® 1941b

Organics in Marine Sediment

This Standard Reference Material (SRM) is marine sediment collected at the mouth of the Baltimore (MD) Harbor. SRM 1941b is intended for use in evaluating analytical methods for the determination of selected polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyl (PCB) congeners, and chlorinated pesticides in marine sediment and similar matrices. Information values are also provided for total organic carbon (TOC), total carbon, hydrogen, and nitrogen. All of the constituents for which certified, reference, and information values are provided in SRM 1941b were naturally present in the sediment before processing. A unit of SRM 1941b consists of a bottle containing 50 g of radiation-sterilized, freeze-dried sediment.

Certified Mass Fraction Values: Certified mass fraction values for PAHs, PCB congeners, and chlorinated pesticides are provided in Table 1 through Table 3. The certified values for the PAHs, PCB congeners, and chlorinated pesticides are based on the agreement of results obtained at NIST from two or more chemically independent analytical techniques along with results from an interlaboratory comparison study [1]. A NIST certified value is a value for which NIST has the highest confidence in its accuracy in that all known or suspected sources of bias have been investigated or taken into account [1].

Reference Mass Fraction Values: Reference mass fraction values for additional PAHs (some in combination), additional PCB congeners, and additional chlorinated pesticides are provided in Table 4 through Table 7. Reference values for alkylated PAH groups are provided in Table 8 and for selected hopanes and steranes in Table 9. A reference value for total organic carbon is provided in Table 10. Reference values are noncertified values that are the best estimate of the true value; however, the values do not meet the NIST criteria for certification and are provided with associated uncertainties that may reflect only measurement precision, may not include all sources of uncertainty, or may reflect a lack of sufficient statistical agreement among multiple analytical methods [1].

Information Mass Fraction Values: Information mass fraction values are provided in Table 11 for carbon, hydrogen, and nitrogen. An information value is considered to be a value that will be of use to the SRM user, but insufficient information is available to assess the uncertainty associated with the value [1]. Information values cannot be used to establish metrological traceability.

Expiration of Certification: The certification of **SRM 1941b** is valid, within the measurement uncertainty specified, until **01 October 2020**, provided the SRM is handled and stored in accordance with the instructions given in this certificate (see "Instructions for Handling, Storage, and Use"). This certification is nullified if the SRM is damaged, contaminated, or otherwise modified.

Maintenance of SRM Certification: NIST will monitor this SRM over the period of its certification. If substantive technical changes occur that affect the certification before the expiration of this certificate, NIST will notify the purchaser. Registration (see attached sheet or register online) will facilitate notification.

Coordination of the technical measurements leading to the certification of this material was under the leadership of M.M. Schantz and S.A. Wise of the NIST Chemical Sciences Division.

Analytical measurements for the certification of SRM 1941b were performed at NIST by J.R. Kucklick, B.J. Porter, D.L. Poster, M.M. Schantz, P. Schubert, S. Tutschku, and L.L. Yu of the NIST Chemical Sciences Division.

Carlos A. Gonzalez, Chief
Chemical Sciences Division

Gaithersburg, MD 20899
Certificate Issue Date: 16 January 2015

Robert L. Watters, Jr., Director
Office of Reference Materials

Measurements for TOC were provided by a commercial laboratory and T.L. Wade of the Geochemical and Environmental Research Group, Texas A&M University (College Station, TX). The carbon, hydrogen, and nitrogen data were provided by a commercial laboratory. Results for the PAHs, PCBs, and chlorinated pesticides from 38 laboratories (see Appendix A) that participated in an interlaboratory comparison exercise coordinated by NIST were used. Results for the alkylated PAH groups, hopanes, and steranes from 33 laboratories (see Appendix B) that participated in another interlaboratory comparison exercise coordinated by NIST were also used.

Collection and preparation of SRM 1941b were performed by M.P. Cronise and C.N. Fales of the NIST Office of Reference Materials and B.J. Porter and M.M. Schantz of the NIST Chemical Sciences Division. The sediment material was collected with the assistance of G.G. Lauenstein, J. Collier, and J. Lewis (National Oceanic and Atmospheric Administration, Silver Spring, MD).

Consultation on the statistical design of the experimental work and evaluation of the data were provided by S.D. Leigh and J.H. Yen of the NIST Statistical Engineering Division.

Support aspects involved in the issuance of this SRM were coordinated through the NIST Office of Reference Materials.

INSTRUCTIONS FOR HANDLING, STORAGE, AND USE

Handling: This material is naturally occurring marine sediment from an urban area and may contain constituents of unknown toxicities; therefore, caution and care should be exercised during its handling and use.

Storage: SRM 1941b must be stored in its original bottle at temperatures less than 30 °C and away from direct sunlight.

Use: Prior to removal of subsamples for analysis, the contents of the bottle should be mixed. The mass fractions of constituents in SRM 1941b are reported on a dry-mass basis. The SRM, as received, contains a mass fraction of approximately 2.4 % moisture (see "Conversion to Dry-Mass Basis"). The sediment sample should be dried to a constant mass before weighing for analysis; or a separate subsample of the sediment should be removed from the bottle at the time of analysis and dried to determine the mass fraction on a dry-mass basis. If the constituents of interest are volatile, then the moisture must be determined with a separate subsample.

PREPARATION AND ANALYSIS[1]

Sample Collection and Preparation: The sediment used to prepare this SRM was collected from the Chesapeake Bay at the mouth of the Baltimore (MD) Harbor near the Francis Scott Key Bridge (39°12.3'N and 76°31.4'W). This location is very near the site where SRM 1941 and SRM 1941a were collected. The sediment was collected using a Kynar-coated modified Van Veen-type grab sampler. A total of approximately 3300 kg of wet sediment was collected from the site. The sediment was freeze-dried, sieved at 150 μm (100 % passing), homogenized in a cone blender, radiation sterilized (^{60}Co), and then packaged in screw-capped amber glass bottles each containing approximately 50 g.

Conversion to Dry-Mass Basis: The results for the constituents in SRM 1941b are reported on a dry-mass basis; however, the material "as received" contains residual moisture. The amount of moisture in SRM 1941b was determined by measuring the mass loss after freeze-drying subsamples of 1.1 g to 1.3 g for four days at 1 Pa with a –10 °C shelf temperature and a –50 °C condenser temperature. The moisture content in SRM 1941b at the time of the certification analyses was 2.39 % ± 0.08 % (95 % confidence level). Analytical results for the organic constituents were determined on an as-received basis and then converted to a dry-mass basis by dividing by the conversion factor of 0.9761 (gram dry mass per gram as-received mass).

Polycyclic Aromatic Hydrocarbons: The general approach used for the value assignment of the PAHs in SRM 1941b was similar to that reported in detail elsewhere [2]. The approach consisted of combining results from analyses using various combinations of different extraction techniques and solvents, clean-up/isolation procedures, and chromatographic separation and detection techniques: Soxhlet extraction and pressurized-fluid extraction (PFE) using dichloromethane (DCM) or a hexane/acetone mixture, cleanup of the extracts using solid-phase extraction (SPE) or normal-phase liquid chromatography (LC), followed by analysis using the following techniques: (1) reversed-phase liquid chromatography with fluorescence detection (LC-FL) analysis of the total PAH fraction, (2) reversed-phase

[1] Certain commercial equipment, instruments or materials are identified in this certificate to adequately specify the experimental procedure. Such identification does not imply recommendation or endorsement by the National Institute of Standards

LC-FL analysis of isomeric PAH fractions isolated by normal-phase LC (i.e., multidimensional LC), (3) gas chromatography/mass spectrometry (GC/MS) analysis of the PAH fraction on three stationary phases of different selectivity, i.e., a 5 % (all column compositions are given as mole fractions in %) phenyl-substituted methylpolysiloxane phase, a 50 % phenyl-substituted methylpolysiloxane phase, and a relatively non-polar proprietary phase.

Three sets of GC/MS results, designated as GC/MS (I), GC/MS (II), and GC/MS (III), were obtained using three columns with different selectivities for the separation of PAHs. For GC/MS (I) analyses, duplicate subsamples of approximately 1 g from ten bottles of SRM 1941b were extracted using PFE with DCM. Copper powder was added to the extract to remove elemental sulfur. The concentrated extract was passed through an aminopropyl SPE cartridge and eluted with 2 % DCM in hexane (all solvent concentrations are given as volume fractions in %). The processed extract was then analyzed by GC/MS using a 0.25 mm i.d. × 60 m fused silica capillary column with a 5 % phenyl-substituted methylpolysiloxane phase (0.25 μm film thickness; DB-5 MS, J&W Scientific, Folsom, CA). The GC/MS (II) analyses were performed using 5 g subsamples from six bottles of SRM 1941b. These samples were extracted using PFE with DCM. The high molecular mass compounds were removed from the extracts using size exclusion chromatography (SEC) with a preparative-scale divinylbenzene-polystyrene column (10 μm particle size with 10 nm diameter pores), and the sulfur was removed from the extracts by adding copper powder. The concentrated extract was passed through an aminopropyl SPE cartridge and eluted with 10 % DCM in hexane. The analysis was by GC/MS using a 0.25 mm i.d. × 60 m fused silica capillary column with a 50 % phenyl-substituted methylpolysiloxane phase (0.25 μm film thickness; DB-17 MS, J&W Scientific). For the GC/MS (III), 9 g subsamples from six bottles of SRM 1941b were Soxhlet-extracted for 18 h with 250 mL of a mixture of 50 % hexane/50 % acetone. Copper powder was added to the extract to remove elemental sulfur, and the concentrated extract was passed through a silica SPE cartridge and eluted with 10 % DCM in hexane. The processed extract was then analyzed by GC/MS using a 0.25 mm i.d. × 60 m fused silica capillary column with a relatively non-polar proprietary phase (0.25 μm film thickness; DB-XLB, J&W Scientific).

Two sets of LC-FL results, designated as LC-FL (total) and LC-FL (isomer), were used in the certification process. For the LC-FL (total), subsamples of approximately 1 g from six bottles of SRM 1941b were extracted using PFE with a mixture of 50 % hexane/50 % acetone. The extracts were concentrated and then processed through an aminopropylsilane SPE cartridge using 2 % DCM in hexane to obtain the total PAH fraction. For the LC-FL (isomer), a 5 g subsample from the six bottles was extracted using PFE with DCM and processed through an aminopropylsilane SPE cartridge using 10 % DCM in hexane; the PAH fraction was then fractionated further on a semi-preparative aminopropylsilane column (μBondapak NH_2, 9 mm i.d. × 30 cm, Waters Associates, Milford, MA) to isolate isomeric PAH fractions as described previously [3–6]. The total PAH fraction and the isomeric PAH fractions were analyzed using a 5 μm particle-size polymeric octadecylsilane (C_{18}) column (4.6 mm i.d. × 25 cm, Hypersil-PAH, Keystone Scientific, Inc., Bellefonte, PA) with wavelength-programmed fluorescence detection [4,5].

For the GC/MS and LC-FL measurements described above, selected perdeuterated PAHs were added to the sediment prior to solvent extraction for use as internal standards for quantification purposes.

In addition to the analyses performed at NIST, SRM 1941b was used in an interlaboratory comparison exercise in 1999 as part of the NIST Intercomparison Exercise Program for Organic Contaminants in the Marine Environment [7]. Results from 38 laboratories that participated in this exercise were used as the sixth data set in the determination of the certified values for PAHs in SRM 1941b. The laboratories participating in this exercise used the analytical procedures routinely used in their laboratories to measure the analytes of interest.

Homogeneity Assessment for PAHs: The homogeneity of SRM 1941b was assessed by analyzing duplicate samples of approximately 1 g from ten bottles selected by stratified random sampling. Samples were extracted, processed, and analyzed as described above for GC/MS (I). No statistically significant differences among bottles were observed for the PAHs at this sample size.

PAH Isomers of Molecular Mass 300 and 302: For the determination of the molecular mass 300 and 302 isomers, three subsamples of approximately 5 g each were extracted using PFE with DCM. The extracts were then concentrated with a solvent change to hexane and passed through an aminopropyl SPE cartridge and eluted with 10 % DCM in hexane. The processed extract was then analyzed by GC/MS using a 0.25 mm i.d. × 60 m fused silica capillary column with a 50 % phenyl-substituted methylpolysiloxane phase (0.25 μm film thickness; DB-17MS, J&W Scientific). Perdeuterated dibenzo[*a,i*]pyrene was added to the sediment prior to extraction for use as an internal standard [8].

PCBs and Chlorinated Pesticides: The general approach used for the determination of PCBs and chlorinated pesticides in SRM 1941b consisted of combining results from analyses using various combinations of different extraction techniques and solvents, cleanup/isolation procedures, and chromatographic separation and detection techniques. Techniques and solvents included Soxhlet extraction and PFE using DCM or a hexane/acetone mixture.

clean-up/isolation using SPE or LC, followed by analysis using GC/MS and gas chromatography with electron capture detection (GC-ECD) on two columns with different selectivity for the separation of PCBs and chlorinated pesticides. The analytical methods are described in detail elsewhere [2].

Six sets of results were obtained and designated as GC-ECD (I) A and B, GC/MS (I) A and B, GC/MS (II), and Interlaboratory Comparison Exercise. For the GC-ECD (I) analyses, approximately 10 g subsamples from six bottles of SRM 1941b were extracted using PFE with DCM. Copper powder was added to the extract to remove elemental sulfur, and SEC, as described above, was used to remove the high molecular mass compounds. The concentrated extract was then fractionated on a semi-preparative aminopropylsilane column to isolate two fractions containing: (1) the PCBs and lower-polarity pesticides and (2) the more polar pesticides. GC-ECD analyses of the two fractions were performed on two columns of different selectivities for PCB separations: 0.25 mm × 60 m fused silica capillary column with a 5 % phenyl-substituted methylpolysiloxane phase (0.25 μm film thickness; DB-5, J&W Scientific), and a 0.25 mm × 60 m fused silica capillary column with a non-polar proprietary phase (0.25 μm film thickness; DB-XLB, J&W Scientific). The results from the 5 % phenyl phase are designated as GC-ECD (IA) and the results from the proprietary phase are designated as GC-ECD (IB). For the GC-ECD analyses, two PCB congeners that are not significantly present in the sediment extract (PCB 103 and PCB 198 [9,10]) and endosulfan I-d_4, 4,4'-DDE-d_8, 4,4'-DD-d_8, and 4,4'-DDT-d_8 were added to the sediment prior to extraction for use as internal standards for quantification purposes.

Two sets of results were obtained by GC/MS. For GC/MS (I), approximately 9 g subsamples from six bottles were Soxhlet- extracted with a mixture of 50 % hexane/50 % acetone for approximately 18 h. Copper powder was added to the extract to remove elemental sulfur, and the concentrated extract was passed through a silica SPE cartridge and eluted with 10 % DCM in hexane. The processed extract was then analyzed by GC/MS with two ionization modes, electron impact (EI) and negative ion chemical ionization (NICI). The GC/MS EI method, GC/MS (IA), used a 0.25 mm i.d. × 60 m fused silica capillary column with a relatively non-polar proprietary phase (0.25 μm film thickness; DB-XLB, J&W Scientific). The GC/MS NICI method, GC/MS (IB), used a 0.25 mm i.d. × 60 m fused silica capillary column with a 5 % phenyl-substituted methylpolysiloxane phase (0.25 μm film thickness; DB-5MS, J&W Scientific). The GC/MS (II) results were obtained in the same manner as the GC/MS (IA) analyses except that three subsamples were Soxhlet-extracted with DCM for approximately 18 h. For the GC/MS analyses, selected carbon-13 labeled PCB congeners and chlorinated pesticides were added to the sediment prior to extraction for use as internal standards for quantification purposes.

In addition to the analyses performed at NIST, SRM 1941b was used in an interlaboratory comparison exercise in 1999 as part of the NIST Intercomparison Exercise Program for Organic Contaminants in the Marine Environment [7]. Results from 38 laboratories that participated in this exercise were used as the sixth data set in the determination of the certified values for PCB congeners and chlorinated pesticides in SRM 1941b. The laboratories participating in this exercise used the analytical procedures routinely used in their laboratories to measure the analytes of interest.

The reference value for PCB 77 was determined from a separate fraction. The samples were extracted and processed as for GC-ECD (I) above. The first (PCB and lower-polarity pesticide) fraction from the semi-preparative aminopropylsilane column was further fractionated using a Cosmosil PYE (pyrenylethyl group bonded) column (5 μm particle size, 4.6 mm i.d. × 25 cm ; Phenomenex, Torrance, CA) [11]. Three fractions were collected: the first fraction contained the pesticides and multi-*ortho* PCBs, the second fraction contained the polychlorinated naphthalenes, non-*ortho* PCB congeners, and some mono-*ortho* PCB congeners, and the third fraction removed the residual planar compounds from the column. The second fraction was analyzed by GC/MS NICI using the same column as GC/MS (IB) above. Carbon-13 labeled PCB 77 was used as an internal standard for quantification purposes.

Alkylated PAH Groups, Hopanes, and Steranes: SRM 1941b was used in an interlaboratory comparison exercise in 2011 [12]. Results from 33 laboratories that participated in this exercise were used in the determination of the reference values for alkylated PAH groups, hopanes, and steranes in SRM 1941b. Note that not all laboratories returned data for each analyte. The laboratories participating in this exercise used the analytical procedures routinely used in their laboratories to measure the analytes of interest. For the alkylated PAHs, the majority of the laboratories (>90 %) used the parent PAH for determination of the response factor for the corresponding alkylated group.

Total Organic Carbon (TOC): Two laboratories provided results for TOC using similar procedures. Briefly, subsamples of approximately 200 mg were reacted with 6 mol/L hydrochloric acid and rinsed with deionized water prior to combustion in a gas fusion furnace. The carbon monoxide and carbon dioxide produced were measured and compared to a blank for calculation of the percent TOC. Each laboratory analyzed subsamples from three bottles of SRM 1941b. One of the laboratories also analyzed three subsamples from three bottles of SRM 1941b for carbon, hydrogen, and nitrogen.

Table 1. Certified Mass Fraction Values for PAHs in SRM 1941b

PAHs	Mass Fractions[a] (µg/kg)		
Naphthalene[b,c,d,e,f,g]	848	±	95[h]
Fluorene[b,c,d,e,f,g]	85	±	15[h]
Phenanthrene[b,c,d,e,f,g]	406	±	44[h]
Anthracene[b,c,d,e,f,g]	184	±	18[h]
3-Methylphenanthrene[b,c,d]	105	±	13[h]
2-Methylphenathrene[b,c,d]	128	±	14[h]
1-Methylphenanthrene[b,c,d,g]	73.2	±	5.9[h]
Fluoranthene[b,c,d,e,f,g]	651	±	50[h]
Pyrene[b,c,d,e,f,g]	581	±	39[h]
Benz[*a*]anthracene[b,c,d,e,f,g]	335	±	25[h]
Chrysene[d,f]	291	±	31[h]
Triphenylene[d,f]	108	±	5[i]
Benzo[*b*]fluoranthene[c,e]	453	±	21[h]
Benzo[*k*]fluoranthene[b,c,d,e]	225	±	18[h]
Benzo[*e*]pyrene[b,c,d,g]	325	±	25[h]
Benzo[*a*]pyrene[b,c,d,f,g]	358	±	17[h]
Perylene[b,c,d,f,g]	397	±	45[h]
Benzo[*ghi*]perylene[b,c,d,f,g]	307	±	45[h]
Indeno[1,2,3-*cd*]pyrene[b,c,d,f,g]	341	±	57[h]
Dibenz[*a,j*]anthracene[b,c,d,f]	48.9	±	4.6[h]
Dibenz[*a,c*]anthracene[c,f]	36.7	±	5.2[h]
Dibenz[*a,h*]anthracene[c,f]	53	±	10[h]
Benzo[*b*]chrysene[b,c,d,f]	53	±	12[h]
Picene[b,c,d]	46.6	±	4.7[h]

[a] Mass fractions reported on dry-mass basis; material as received contains approximately 2.4 % moisture.
[b] GC/MS (I) on 5 % phenyl-substituted methylpolysiloxane phase after PFE with DCM.
[c] GC/MS (II) on 50 % phenyl-substituted methylpolysiloxane phase after PFE with DCM.
[d] GC/MS (III) on a relatively non-polar proprietary phase after Soxhlet extraction with 50 % hexane/50 % acetone mixture.
[e] LC-FL (total) of total PAH fraction after PFE with DCM.
[f] LC-FL (isomer) of isomeric PAH fractions after PFE with DCM.
[g] 1999 Interlaboratory Comparison Study [7] with 21 to 29 laboratories submitting data for each PAH.
[h] Certified values are weighted means of the results from two to six analytical methods [13]. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2 (approximately 95 % confidence), calculated by combining a between-method variance incorporating inter-method bias with a pooled within-method variance following the ISO/JCGM Guide [14,15]. The measurand is the total mass fraction of the constituent listed and the values are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.
[i] The certified value is an unweighted mean of the results from two analytical methods. The uncertainty listed with the value is an expanded uncertainty about the mean, with coverage factor 2, calculated by combining a between-method variance [16] with a pooled, within-method variance following the ISO/JCGM Guide [14,15]. The measurand is the total mass fraction of the constituent listed and the value is metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.

Table 2. Certified Mass Fraction Values for PCB Congeners[a] in SRM 1941b

PCB Congeners			Mass Fractions[b] (µg/kg)		
PCB	8	(2,4'-Dichlorobiphenyl)[c,d,e,f,g]	1.65	±	0.19[h]
PCB	18	(2,2',5-Trichlorobiphenyl)[c,d,e,f,g]	2.39	±	0.29[h]
PCB	28	(2,4,4'-Trichlorobiphenyl)[c,d,e,f,g]	4.52	±	0.57[h]
PCB	31	(2,4',5-Trichlorobiphenyl)[c,e,f]	3.18	±	0.41[h]
PCB	44	(2,2'3,5'-Tetrachlorobiphenyl)[c,d,e,f,g]	3.85	±	0.20[i]
PCB	49	(2,2'4,5'-Tetrachlorobiphenyl)[c,d,e,f]	4.34	±	0.28[i]
PCB	52	(2,2',5,5'-Tetrachlorobiphenyl)[c,d,e,f,g]	5.24	±	0.28[i]
PCB	66	(2,3',4,4'-Tetrachlorobiphenyl)[c,e,f,g,j]	4.96	±	0.53[i]
PCB	87	(2,2',3,4,5'-Pentachlorobiphenyl)[c,d,f,j]	1.14	±	0.16[h]
PCB	95	(2,2',3,5',6-Pentachlorobiphenyl)[c,e,f,g]	3.93	±	0.62[i]
PCB	99	(2,2',4,4',5-Pentachlorobiphenyl)[c,d,e,f,g]	2.90	±	0.36[i]
PCB	101	(2,2',4,5,5'-Pentachlorobiphenyl)[c,e,f,g,j]	5.11	±	0.34[i]
PCB	105	(2,3,3',4,4'-Pentachlorobiphenyl)[c,d,e,f,g,j]	1.43	±	0.10[i]
PCB	110	(2,3,3',4',6-Pentachlorobiphenyl)[c,e,f,j]	4.62	±	0.36[i]
PCB	118	(2,3',4,4',5-Pentachlorobiphenyl)[c,d,e,f,g,j]	4.23	±	0.19[i]
PCB	128	(2,2',3,3',4,4'-Hexachlorobiphenyl)[c,d,e,f,g,j]	0.696	±	0.044[i]
PCB	138	(2,2',3,4,4',5'-Hexachlorobiphenyl)[c,e,f,j]	3.60	±	0.28[i]
PCB	149	(2,2',3,4',5',6-Hexachlorobiphenyl)[c,d,e,j]	4.35	±	0.26[h]
PCB	153	(2,2',4,4',5,5'-Hexachlorobiphenyl)[c,d,e,f,g,j]	5.47	±	0.32[i]
PCB	156	(2,3,3',4,4',5-Hexachlorobiphenyl)[c,d,e,f,j]	0.507	±	0.090[h]
PCB	170	(2,2',3,3',4,4',5-Heptachlorobiphenyl)[c,d,e,f,g,j]	1.35	±	0.09[i]
PCB	180	(2,2',3,4,4',5,5'-Heptachlorobiphenyl)[c,d,e,f,g,j]	3.24	±	0.51[i]
PCB	183	(2,2',3,4,4',5',6-Heptachlorobiphenyl)[c,d,e,j]	0.979	±	0.087[h]
PCB	187	(2,2',3,4',5,5',6-Heptachlorobiphenyl)[c,d,e,f,g,j]	2.17	±	0.22[i]
PCB	194	(2,2',3,3',4,4',5,5'-Octachlorobiphenyl)[c,d,e,j]	1.04	±	0.06[h]
PCB	195	(2,2',3,3',4,4',5,6-Octachlorbiphenyl)[c,e,g,j]	0.645	±	0.060[i]
PCB	201	(2,2',3,3',4,5',6,6'-Octachlorobiphenyl)[c,e,j]	0.777	±	0.034[h]
PCB	206	(2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl)[c,e,f,g,j]	2.42	±	0.19[i]
PCB	209	Decachlorobiphenyl[c,d,e,f,g,j]	4.86	±	0.45[i]

[a] PCB congeners are numbered according to the scheme proposed by Ballschmiter and Zell [9] and later revised by Schulte and Malisch [10] to conform to IUPAC rules, except PCB 201. Under the Ballschmiter and Zell numbering system, the IUPAC PCB 201 is listed as PCB 200.

[b] Mass fractions reported on dry-mass basis; material as received contains approximately 2.4 % moisture.

[c] GC/MS (IA) on a relatively non-polar proprietary phase after Soxhlet extraction with 50 % hexane/50 % acetone mixture.

[d] GC-ECD (IA) on 5 % phenyl-substituted methylpolysiloxane phase after PFE extraction with DCM.

[e] GC-ECD (IB) on a relatively non-polar proprietary phase; same extracts analyzed as in GC-ECD (IA).

[f] GC/MS (II) on a relatively non-polar proprietary phase after Soxhlet extraction with DCM.

[g] 1999 Interlaboratory Comparison Study [7] with 13 to 31 laboratories submitting data for each PCB congener.

[h] Certified values are unweighted means of the results from three to five analytical methods. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2, calculated by combining a between-method variance [16] with a pooled, within method variance following the ISO/JCGM Guide [14,15]. The measurand is the total mass fraction of the constituent listed and the values are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.

[i] Certified values are weighted means of the results from three to six analytical methods [13]. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2 (approximately 95 % confidence), calculated by combining a between-method variance incorporating inter-method bias with a pooled within-method variance following the ISO/JCGM Guide [14,15]. The measurand is the total mass fraction of the constituent listed and the values are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.

[j] GC/MS (IB) on 5 % phenyl-substituted methylpolysiloxane phase; same extracts analyzed as in GC/MS (IA).

Table 3. Certified Mass Fraction Values for Chlorinated Pesticides in SRM 1941b

Chlorinated Pesticides	Mass Fractions[a] (µg/kg)
Hexachlorobenzene[b,c,d,e]	5.83 ± 0.38[f]
cis-Chlordane[b,c,d,e,g]	0.85 ± 0.11[h]
trans-Chlordane[b,c,e]	0.566 ± 0.093[f]
cis-Nonachlor[b,e,g]	0.378 ± 0.053[h]
trans-Nonachlor[b,c,d,e,g]	0.438 ± 0.073[f]
4,4'-DDE[b,d,e,g]	3.22 ± 0.28[h]
4,4'-DDD[b,d,e,g]	4.66 ± 0.46[h]

[a] Mass fractions reported on dry-mass basis; material as received contains approximately 2.4 % moisture.
[b] GC/MS (IA) on a relatively non-polar proprietary phase after Soxhlet extraction with 50 % hexane/50 % acetone mixture.
[c] GC/MS (IB) on 5 % phenyl-substituted methylpolysiloxane phase; same extracts analyzed as in GC/MS (IA).
[d] GC/MS (II) on a relatively non-polar proprietary phase after Soxhlet extraction with DCM.
[e] 1999 Interlaboratory Comparison Study [7] with 13 to 31 laboratories submitting data for each pesticide.
[f] Certified values are unweighted means of the results from three to five analytical methods. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2, calculated by combining a between-method variance [16] with a pooled, within-method variance following the ISO/JCGM Guide [14,15]. The measurand is the total mass fraction of the constituent listed and the values are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.
[g] GC-ECD (IA) on 5 % phenyl-substituted methylpolysiloxane phase after PFE extraction with DCM.
[h] Certified values are weighted means of the results from three to five analytical methods [13]. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2 (approximately 95 % confidence), calculated by combining a between-method variance incorporating inter-method bias with a pooled within-method variance following the ISO/JCGM Guide [14,15]. The measurand is the total mass fraction of the chlorinated pesticides listed and the values listed are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.

Table 4. Reference Mass Fraction Values for PAHs in SRM 1941b

PAHs	Mass Fractions[a] (µg/kg)		
1-Methylnaphthalene[b,c,d,e]	127	±	14[f]
2-Methylnaphthalene[b,c,d,e]	276	±	53[f]
2,6-Dimethylnaphthalene[b,c,d,e]	75.9	±	4.5[f]
2,3,5-Trimethylnaphthalene[b,c,d,e]	25.5	±	5.1[f]
Biphenyl[b,c,d,e]	74.0	±	8.0[f]
Acenaphthylene[b,c,d,e]	53.3	±	6.4[f]
Acenaphthene[b,c,d,e]	38.4	±	5.2[f]
9-Methylphenanthrene[c]	63.5	±	2.5[g]
4-Methylphenanthrene and 9-Methylphenanthrene[b,d]	80.1	±	4.8[f]
2-Methylanthracene[c,d]	36	±	15[f]
8-Methylfluoranthene[b]	49.5	±	2.7[g]
7-Methylfluoranthene[b]	45.4	±	1.5[g]
1-Methylfluoranthene[b]	42.4	±	2.1[g]
3-Methylfluoranthene[b]	28.8	±	1.3[g]
2-Methylpyrene[b]	78.7	±	4.0[g]
4-Methylpyrene[b]	66.4	±	2.6[g]
1-Methylpyrene[b]	52.5	±	2.3[g]
Acephenanthrene[d]	30.5	±	1.9[g]
Benzo[*c*]phenanthrene[b,c,d]	58	±	15[f]
Benzo[*a*]fluoranthene[b,c,d]	73	±	18[f]
Benzo[*j*]fluoranthene[c]	217	±	5[g]
Indeno[1,2,3-*cd*]fluoranthene[d]	9.63	±	0.34[g]
Pentaphene[d]	25.3	±	1.0[g]

[a] Mass fractions reported on dry-mass basis; material as received contains approximately 2.4 % moisture.
[b] GC/MS (I) on 5 % phenyl-substituted methylpolysiloxane phase after PFE with DCM.
[c] GC/MS (II) on 50 % phenyl-substituted methylpolysiloxane phase after PFE with DCM.
[d] GC/MS (III) on a relatively non-polar proprietary phase after Soxhlet extraction with 50 % hexane/50 % acetone mixture.
[e] 1999 Interlaboratory Comparison Study [7] with 14 to 26 laboratories submitting data for each PAH.
[f] Reference values are weighted means of the results from two to four analytical methods [13]. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2 (approximately 95 % confidence), calculated by combining a between-method variance incorporating inter-method bias with a pooled within-method variance following the ISO/JCGM Guide [14,15]. The measurand is the total mass fraction of PAHs listed as determined by the methods indicted. The values are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.
[g] Reference values are the means of results obtained by NIST using one analytical technique. The expanded uncertainty, U, is calculated as $U = ku_c$, where u_c is one standard deviation of the analyte mean, and the coverage factor, k, is determined from the Student's t-distribution for the associated degrees of freedom (19 for footnote b and 5 for footnotes c and d) and 95 % confidence level for each analyte. The measurand is the total mass fraction of the PAHs listed as determined by the method indicted. The values listed are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.

Table 5. Reference Mass Fraction Values for PAHs of Molecular Mass 300 and 302 in SRM 1941b

PAHs of Molecular Mass 300 and 302	Mass Fractions[a,b,c] (µg/kg)		
Coronene	72.6	±	4.7
Dibenzo[*b,e*]fluoranthene	10.3	±	0.3
Naphtho[1,2-*b*]fluoranthene	91.0	±	3.1
Naphtho[1,2-*k*]fluoranthene and Naphtho[2,3-*j*]fluoranthene	79.8	±	2.5
Naphtho[2,3-*b*]fluoranthene	23.5	±	0.3
Dibenzo[*b,k*]fluoranthene	95.6	±	3.1
Dibenzo[*a,k*]fluoranthene	26.6	±	0.4
Dibenzo[*j,l*]fluoranthene	63.8	±	1.8
Dibenzo[*a,l*]pyrene	11.1	±	1.0
Naphtho[2,3-*k*]fluoranthene	10.7	±	0.6
Naphtho[1,2-*a*]pyrene	16.7	±	1.4
Naphtho[2,3-*e*]pyrene	33.2	±	2.3
Dibenzo[*a,e*]pyrene	76.1	±	3.6
Naphtho[2,1-*a*]pyrene	59.2	±	1.8
Dibenzo[*e,i*]pyrene	35.0	±	2.4
Naphtho[2,3-*a*]pyrene	16.5	±	0.6
Benzo[*b*]perylene	38.2	±	1.2
Dibenzo[*a,i*]pyrene	25.5	±	1.0
Dibenzo[*a,h*]pyrene	6.94	±	0.29

[a] Mass fractions reported on dry-mass basis; material as received contains approximately 2.4 % moisture.

[b] Reference values are the means of results obtained by NIST using one analytical technique. The expanded uncertainty, U, is calculated as $U = ku_c$, where u_c is one standard deviation of the analyte mean, and the coverage factor, k, is determined from the Student's t-distribution for two degrees of freedom and 95 % confidence level for each analyte. The measurand is the total mass fraction of the constituent listed as determined by the method indicted. The values are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.

[c] GC/MS on 50 % phenyl-substituted methylpolysiloxane phase after PFE with DCM [8].

Table 6. Reference Mass Fraction Values for PCB Congeners[a] in SRM 1941b

PCB Congeners			Mass Fractions[b,c] (µg/kg)		
PCB	45	(2,2',3,6-Tetrachlorobiphenyl)[d,e]	0.73	±	0.12
PCB	56	(2,3,3',4'-Tetrachlorobiphenyl)[d,f,g]	1.21	±	0.11
PCB	63	(2,3,4',5-Tetrachlorobiphenyl)[e,f,g]	0.213	±	0.040
PCB	70	(2,3',4',5-Tetrachlorobiphenyl)[e,f,g]	4.99	±	0.29
PCB	74	(2,4,4',5-Tetrachlorobiphenyl)[e,f,g]	2.04	±	0.15
PCB	77	(3,3',4,4'-Tetrachlorobiphenyl)[h]	0.31	±	0.03
PCB	107	(2,3,3',4',5-Pentachlorobiphenyl)[d,e,f,g]	0.628	±	0.028
PCB	132	(2,2',3,3',4,6'-Hexachlorobiphenyl)[d,f,g]	1.28	±	0.27
PCB	146	(2,2',3,4',5,5'-Hexachlorobiphenyl)[e,f,g]	1.22	±	0.12
PCB	158	(2,3,3',4,4',6-Hexachlorobiphenyl)[d,e,f,g]	0.65	±	0.15
PCB	163	(2,3,3',4',5,6-Hexachlorobiphenyl)[e,f,g]	1.28	±	0.06
PCB	174	(2,2',3,3',4,5,6'-Heptachlorobiphenyl)[d,e,f,g]	1.51	±	0.39
PCB	193	(2,3,3',4',5,5',6-Heptachlorobiphenyl)[d,e,f,g]	0.292	±	0.075

[a] PCB congeners are numbered according to the scheme proposed by Ballschmiter and Zell [9] and later revised by Schulte and Malisch [10] to conform with IUPAC rules, except PCB 107. Under the Ballschmiter and Zell numbering system, the IUPAC PCB 107 is listed as PCB 108.

[b] Mass fractions reported on dry-mass basis; material as received contains approximately 2.4 % moisture.

[c] For these PCB congeners except PCB 77, the reference values are unweighted means of the results from two to four analytical methods. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2, calculated by combining a between-method variance [16] with a pooled within-method variance following the ISO/JCGM Guide [14,15]. For PCB 77, the reference value is the mean of results obtained by NIST using one analytical technique. The expanded uncertainty, U, is calculated as $U = ku_c$, where u_c is one standard deviation of the analyte mean, and the coverage factor, k, is determined from the Student's t-distribution corresponding to two degrees of freedom and 95 % confidence level for PCB 77. The measurand is the total mass fraction of the PCB Congeners listed as determined by the method or methods indicted. The values listed are metrologically traceable to the SI unit of mass, expressed as microgram per kilogram on a dry-mass basis.

[d] GC-ECD (IA) on 5 % phenyl-substituted methylpolysiloxane phase after PFE extraction with DCM.

[e] GC-ECD (IB) on a relatively non-polar proprietary phase; same extracts analyzed as in GC-ECD (IA).

[f] GC/MS (IA) on a relatively non-polar proprietary phase after Soxhlet extraction with 50 % hexane/50 % acetone mixture.

[g] GC/MS (IB) on 5 % phenyl-substituted methylpolysiloxane phase; same extracts analyzed as in GC/MS (IA).

[h] GC/MS NICI on a 5 % phenyl-substituted methylpolysiloxane phase; same extracts analyzed as in GC-ECD (I) fractionated using a PYE column.

Table 7. Reference Mass Fraction Values for Selected Chlorinated Pesticides in SRM 1941b

Chlorinated Pesticides	Mass Fractions[a,b] (µg/kg)		
2,4'-DDE[c,d]	0.38	±	0.12
4,4'-DDT[e,f]	1.12	±	0.42

[a] Mass Fractions reported on dry-mass basis; material as received contains approximately 2.4 % moisture.
[b] The reference values are unweighted means of the results from two analytical methods. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2, calculated by combining a between-method variance [16] with a pooled, within-method variance following the ISO/JCGM Guide [14,15]. The measurand is the total mass fraction of the chlorinated pesticides listed as determined by the methods indicted. The values listed are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.
[c] GC/MS (IB) on 5 % phenyl-substituted methylpolysiloxane phase; same extracts analyzed as in GC/MS (IA).
[d] GC-ECD (IB) on a relatively non-polar proprietary phase; same extracts analyzed as in GC-ECD (IA).
[e] GC/MS (II) on a relatively non-polar proprietary phase after Soxhlet extraction with DCM.
[f] 1999 Interlaboratory Comparison Study [7] with 10 laboratories submitting data for 4,4'-DDT.

Table 8. Reference Mass Fraction Values for Alkylated PAH Groups in SRM 1941b

Alkylated PAH Group	Mass Fraction[a,b] (µg/kg)		
C2-decalins	18	±	5
C4-decalins	41	±	4
C2-naphthalenes	187	±	53
C3-naphthalenes	158	±	42
C1-benzothiophenes	25	±	14
C2-benzothiophenes	20	±	11
C3-benzothiophenes	22	±	13
C4-benzothiophenes	18	±	5
C1-fluorenes	57	±	18
C2-fluorenes	122	±	43
C3-fluorenes	128	±	31
C1-phenanthrenes/anthracenes	313	±	99
C2-phenanthrenes/anthracenes	247	±	62
C3-phenanthrenes/anthracenes	165	±	46
C4-phenanthrenes/anthracenes	87	±	36
C1-dibenzothiophenes	54	±	13
C2-dibenzothiophenes	91	±	18
C3-dibenzothiophenes	84	±	15
C4-dibenzothiophenes	57	±	13
C1-fluoranthenes/pyrenes	252	±	48
C2-fluoranthenes/pyrenes	205	±	38
C3-fluoranthenes/pyrenes	102	±	22
C4-fluoranthenes/pyrenes	121	±	59
C1-benzanthraces/chrysenes/triphenylenes	208	±	43
C2-benzanthraces/chrysenes/triphenylenes	120	±	24
C3-benzanthraces/chrysenes/triphenylenes	73	±	31
C4-benzanthraces/chrysenes/triphenylenes	41	±	11

[a] The reference mass fraction value reported on a dry-mass basis is the median of results using one analytical technique. The expanded uncertainty, U, is calculated as $U = ku_c$, where u_c is one standard deviation of the median, and the coverage factor, $k = 2$. The measurand is the total mass fraction of the alkylated PAH groups listed as determined by the interlaboratory study methods. The values listed are metrologically traceable to the SI unit of mass fraction, expressed as micrograms per kilogram on a dry-mass basis.
[b] Data from the interlaboratory study [12].

Table 9. Reference Mass Fraction Values for Hopanes and Steranes in SRM 1941b

Hopane or Sterane	Mass Fraction[a,b] (µg/kg)
17α(H)-22,29,30-Trisnorhopane	54 ± 18
17α(H)-21β(H)-30-Norhopane	137 ± 21
17α(H)-21β(H)-30-Hopane	215 ± 44
17α(H)-21β(H)-22R-Homohopane	44 ± 10
17α(H)-21β(H)-22S-Homohopane	48 ± 13
5α(H)-14α(H),17α(H)-Cholestane 20R	41 ± 11
5α(H)-14β(H),17β(H)-Cholestane 20R	27 ± 6
5α(H)-14β(H),17β(H)-24-Methylcholestane 20R	21 ± 8
5α(H)-14α(H),17α(H)-24-Ethylcholestane 20R	19 ± 5
5α(H)-14β(H),17β(H)-24-Ethylcholestane 20R	41 ± 9

[a] The reference mass fraction value reported on a dry-mass basis is the median of results using one analytical technique. The expanded uncertainty, U, is calculated as $U = ku_c$, where u_c is one standard deviation of the median, and the coverage factor, $k = 2$. The measurand is the total mass fraction of the constituent listed as determined by the methods used during the interlaboratory study. The values are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.
[b] Data from the interlaboratory study [12].

Table 10. Reference Mass Fraction Value for Total Organic Carbon in SRM 1941b

Total Organic Carbon (TOC)	2.99 % ± 0.24 %[a,b]

[a] Mass fraction is reported on a dry-mass basis; material as received contains approximately 2.4 % moisture.
[b] The reference value for total organic carbon is a weighted mean value from routine measurements made by two laboratories [21]. The uncertainty listed is an expanded uncertainty about the mean, with coverage factor 2 (approximately 95 % confidence), calculated by combining a between-method variance incorporating inter-method bias with a pooled within-method variance. The reporting follows the ISO/JCGM Guides [2]. The measurand is the total mass fraction of TOC listed as determined by the methods indicted. The values listed are metrologically traceable to the SI unit of mass, expressed as a percent on a dry-mass basis.

Table 11. Information Mass Fraction Values for Carbon, Hydrogen, and Nitrogen in SRM 1941b

Elements	Mass Fractions[a] (%)
Carbon	3.3
Hydrogen	1.2
Nitrogen	<0.5

[a] Mass fraction is reported on a dry-mass basis; material as received contains approximately 2.4 % moisture.

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Certificate Revision History: 16 January 2015 (Corrected IUPAC name for PCB-56 and PCB-107; editorial changes); 10 June 2014 (Units corrected from mg/kg to µg/kg in Tables 8 and 9; editorial changes); 10 April 2012 (Reference value added for alkylated PAH groups, hopanes, and steranes; extension of certification period; editorial changes); 16 August 2004 (Reference values for the butyl tins removed; editorial changes); 15 July 2002 (Original certificate date).

Users of this SRM should ensure that the Certificate of Analysis in their possession is current. This can be accomplished by contacting the SRM Program: telephone (301) 975-2200; fax (301) 948-3730; e-mail srminfo@nist.gov; or via the Internet at http://www.nist.gov/srm.

APPENDIX A

The laboratories listed below performed measurements that contributed to the certification of PAHs, PCBs, and chlorinated pesticides in SRM 1941b Organics in Marine Sediment.

Arthur D. Little, Inc; Cambridge, MA
Axys Analytical Services; Sidney, BC, Canada
B & B Laboratories; College Station, TX
Battelle Ocean Sciences; Duxbury, MA
Bedford Institute of Oceanography; Dartmouth, NS, Canada
California Department of Fish and Game; Rancho Cordova, CA
Central Contra Costa Sanitary District; Martinez, CA
Chesapeake Biological Laboratory; Solomons, MD
Centro de Investigacionies Energeticas Medioambientales y Tecnologicas; Madrid, Spain
City of Los Angeles Environmental Monitoring Division; Playa del Rey, CA
City of San Jose Environmental Services Department; San Jose, CA
Columbia Analytical Services; Kelso, WA
East Bay Municipal Utility District; Oakland, CA
Florida Department of Environmental Protection; Tallahassee, FL
Manchester Environmental Laboratory; Port Orchard, WA
Murray State University; Murray, KY
Massachusetts Water Resources Authority Central Lab; Winthrop, MA
National Research Council of Canada; Ottawa, Ontario, Canada
National Oceanic and Atmospheric Association (NOAA), National Marine Fisheries Service (NMFS), Auke Bay Laboratory; Juneau, AK
NOAA, National Ocean Service/Center for Coastal Environmental Health and Biomolecular Research; Charleston, SC
NOAA, NMFS, Sandy Hook Marine Laboratory; Highlands, NJ
NOAA, NMFS, Northwest Fisheries Science Center; Seattle, WA
Orange County Sanitation District; Fountain Valley, CA
Philip Analytical Services; Burlington, Ontario, Canada
Serv de Hidrografia Naval; Buenos Aires, Argentina
Skidaway Institute of Technology; Savannah, GA
Southwest Laboratory of Oklahoma; Broken Arrow, OK
Severn Trent Knoxville Laboratory; Knoxville, TN
Texas A&M University, Geochemical and Environmental Research Group; College Station, TX
Texas Parks and Wildlife Department; San Marcos, TX
University of California at Los Angeles, Institute of Geophysics and Planetary Physics; Los Angeles, CA
University of Connecticut, Environmental Research Institute; Storrs, CT
University of Rhode Island, Graduate School of Oceanography; Narragansett, RI
US Department of Agriculture, Environmental Chemistry Laboratory; Beltsville, MD
US Environmental Protection Agency, Atlantic Ecology Division; Narragansett, RI
US Geological Survey, National Water Quality Laboratory; Denver, CO
Woods Hole Group Environmental Lab; Raynham, MA
Wright State University; Dayton, OH

APPENDIX B

The laboratories listed below performed measurements that contributed to the certification of alkylated PAH groups, hopanes, and steranes in SRM 1941b Organics in Marine Sediment.

Alpha Analytical, Inc.; Mansfield, MA
Analytical Resources, Inc.; Tukwila, WA
Axys Analytical Services; Sydney, BC, Canada
Battelle Analytical & Environmental Chemistry Laboratory; Duxbury, MA
Center for Laboratory Sciences; Pasco, WA
Columbia Analytical Services; Jacksonville, FL
Columbia Analytical Services; Rochester, NY
Columbia Analytical Services, Kelso, WA
Florida Department of Environmental Protection; Tallahassee, FL
Florida International University; North Miami, FL
Michigan Department of Natural Resources and Environment; Lansing, MI
Mississippi State Chemical Laboratory; Mississippi State, MS
NIST; Charleston, SC
NIST; Gaithersburg, MD
NOAA/NCCOS/NOS; Charleston, SC
NOAA/NMFS/Alaska Fisheries Science Center; Juneau, AK
NY State Department of Health; Albany, NY
Pace Analytical Services, Inc. Minneapolis; Minneapolis, MN
RJ Lee Group, Inc; Monroeville, PA
TDI/B&B Laboratories, Inc.; College Station, TX
TestAmerica Laboratories; Mobile, AL
TestAmerica Laboratories; West Sacramento, CA
TestAmerica Laboratories; University Park, IL
TestAmerica Laboratories; Schriever, LA
TestAmerica Laboratories; Edison, NJ
TestAmerica Laboratories; Knoxville, TN
TestAmerica Laboratories; Pittsburgh, PA
TestAmerica Laboratories; South Burlington, VT
TestAmerica Laboratories; Tacoma, WA
US Army Engineer Research and Development Center; Vicksburg, MS
USGS Columbia Environmental Research Center; Columbia, MO
University of Iowa, State Hygienic Laboratory; Iowa City, IO
Washington State Public Health Laboratories; Shoreline, WA

NIST

Date of Issue:
31 March 2014

SAFETY DATA SHEET

1. Substance and Source Identification

Product Identifier

SRM Number: 1941b
SRM Name: Organics in Marine Sediment
Other Means of Identification: Not applicable.

Recommended Use of This Material and Restrictions of Use

This Standard Reference Material (SRM) is marine sediment collected at the mouth of the Baltimore (MD) Harbor. SRM 1941b is intended for use in evaluating analytical methods for the determination of selected polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyl (PCB) congeners, and chlorinated pesticides in marine sediment and similar matrices. All of the constituents for which certified, reference, and information values are provided in SRM 1941b were naturally present in the sediment before processing. A unit of SRM 1941b consists of a bottle containing 50 g of radiation-sterilized, freeze-dried sediment.

Company Information

National Institute of Standards and Technology
Standard Reference Materials Program
100 Bureau Drive, Stop 2300
Gaithersburg, Maryland 20899-2300

Telephone: 301-975-2200
FAX: 301-948-3730
E-mail: SRMMSDS@nist.gov
Website: http://www.nist.gov/srm

Emergency Telephone ChemTrec:
1-800-424-9300 (North America)
+1-703-527-3887 (International)

2. Hazards Identification

Classification

Physical Hazard: Not classified.
Health Hazard: Not classified.

Label Elements
Symbol
No Symbol/Pictogram

Signal Word
Not applicable.

Hazard Statement(s): Not applicable.

Precautionary Statement(s): Not applicable.

Hazards Not Otherwise Classified: Not applicable.

Ingredients(s) with Unknown Acute Toxicity: Not applicable.

3. Composition and Information on Hazardous Ingredients

Substance: Marine sediment

Other Designations: Sediment.

This material is naturally occurring marine sediment from an urban area. The material contains trace amounts of polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyl (PCB) congeners, and should be handled with care. Components are listed in compliance with OSHA's 29 CFR 1910.1200; for the actual values see the Certificate of Analysis.

Hazardous Component(s)	CAS Number	EC Number (EINECS)	Nominal Mass Concentration (%)
Marine Sediment	Not available	Not available	100

4. First Aid Measures

Description of First Aid Measures:

Inhalation: If adverse effects occur, remove to uncontaminated area. If not breathing, give artificial respiration or oxygen by qualified personnel. Seek immediate medical attention.

Skin Contact: Wash skin with soap and water.

Eye Contact: Flush eyes with water for at least 15 minutes. If necessary, seek medical attention.

Ingestion: If adverse effects occur after ingestion, seek medical treatment.

Most Important Symptoms/Effects, Acute and Delayed: May cause irritation.

Indication of any immediate medical attention and special treatment needed, if necessary: If any of the above symptoms are present, seek medical attention if needed.

5. Fire Fighting Measures

Fire and Explosion Hazards: Negligible fire hazard. Avoid generating dust. See Section 9, "Physical and Chemical Properties" for flammability properties.

Extinguishing Media:
Suitable: Use extinguishing media appropriate for surrounding fire.
Unsuitable: None listed.

Specific Hazards Arising from the Chemical: None listed.

Special Protective Equipment and Precautions for Fire-Fighters: Avoid inhalation of material or combustion byproducts. Wear full protective clothing and NIOSH approved self-contained breathing apparatus (SCBA).

NFPA Ratings (0 = Minimal; 1 = Slight; 2 = Moderate; 3 = Serious; 4 = Severe)

Health = 1 Fire = 0 Reactivity = 0

6. Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures: Any accumulated material on surfaces should be removed and properly disposed of. Use suitable protective equipment; see Section 8, "Exposure Controls and Personal Protection".

Methods and Materials for Containment and Clean up: Collect spilled material in appropriate container for disposal. Keep out of water supplies and sewers. Keep unnecessary people away, isolate hazard area and deny entry.

7. Handling and Storage

Safe Handling Precautions: Minimize dust generation and accumulation on surfaces. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. See Section 8, "Exposure Controls and Personal Protection".

Storage: Store and handling in accordance with all current regulations and standards.

8. Exposure Controls and Personal Protection

Exposure Limits: No occupational exposure limits have been established for marine sediment. This material is a particulate matter and adequate inhalation/respiratory protection should be used to minimize exposure. The exposure limits for Particulates Not Otherwise Regulated (PNOR) are applicable.

OSHA (PEL): 15 mg/m^3 (TWA, total particulates not otherwise regulated)
OSHA (PEL) 5 mg/m^3 (TWA, respirable particulates not otherwise regulated)

NIOSH (REL): 10 mg/m^3 (TWA, total particulates not otherwise regulated, 8 h)
NIOSH (REL): 5 mg/m^3 (TWA, respirable particulates not otherwise regulated)

Engineering Controls: Provide local exhaust or process enclosure ventilation system. Ensure compliance with applicable exposure limits.

Personal Protection: In accordance with OSHA 29 CFR 1910.132, subpart I, wear appropriate Personal Protective Equipment (PPE) to minimize exposure to this material.

Respiratory Protection: If workplace conditions warrant a respirator, a respiratory protection program that meets OSHA 29CFR 1910.134 must be followed. Refer to NIOSH 42 CFR 84 for applicable certified respirators.

Eye/Face Protection: Wear splash resistant safety goggles with a face shield. An eye wash station should be readily available near areas of use.

Skin and Body Protection: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Chemical-resistant gloves should be worn at all times when handling chemicals.

9. PHYSICAL AND CHEMICAL PROPERTIES

Descriptive Properties:

Appearance (physical state, color, etc.):	amorphous powder
Molecular Formula:	not applicable
Molar Mass (g/mol):	not applicable
Odor:	not available
Odor threshold:	not available
pH:	not available
Evaporation rate:	not applicable
Melting point/freezing point (°C):	not available
Specific Gravity (water=1)	not available
Vapor Pressure (mmHg):	not applicable
Vapor Density (air = 1):	not applicable
Viscosity (cP):	not applicable
Solubility(ies):	not available
Partition coefficient (n-octanol/water):	not available
Particle Size:	<150 µm

Thermal Stability Properties:

Autoignition Temperature (°C):	not available
Thermal Decomposition (°C):	not available
Initial boiling point and boiling range (°C):	not available
Explosive Limits, LEL (Volume %):	not available
Explosive Limits, UEL (Volume %):	not available
Flash Point (°C):	not available
Flammability (solid, gas):	not available

10. STABILITY AND REACTIVITY

Reactivity: Stable at normal temperatures and pressure.

Stability: X Stable _____ Unstable

Possible Hazardous Reactions: None listed.

Conditions to Avoid: Avoid generating dust.

Incompatible Materials: None listed.

Fire/Explosion Information: See Section 5, "Fire Fighting Measures".

Hazardous Decomposition: Thermal decomposition will produce oxides of carbon.

Hazardous Polymerization: _____ Will Occur X Will Not Occur

11. TOXICOLOGICAL INFORMATION

Route of Exposure: __X__ Inhalation __X__ Skin _____ Ingestion

Symptoms Related to the Physical, Chemical and Toxicological Characteristics: Generated dust may cause irritation if inhaled.

Potential Health Effects (Acute, Chronic and Delayed):

Inhalation: Generated dust may cause irritation.

Skin Contact: May cause mechanical irritation.

Eye Contact: May cause mechanical irritation.

Ingestion: No data available.

Numerical Measures of Toxicity:

Acute Toxicity: Not classified; no data available.

Skin Corrosion/Irritation: Not classified; no data available.

Serious Eye damage/ Eye irritation: Not classified; no data available.

Respiratory Sensitization: Not classified; no data available.

Skin Sensitization: Not classified; no data available.

Germ Cell Mutagenicity: Not classified; no data available.

Carcinogenicity: Not classified.

Listed as a Carcinogen/Potential Carcinogen _____ Yes __X__ No
Marine sediment is not listed by NTP, IARC or OSHA as a carcinogen.

Reproductive Toxicity: Not classified; no data available.

Specific Target Organ Toxicity, Single Exposure: Not classified; no data available.

Specific Target Organ Toxicity, Repeated Exposure: Not classified; no data available.

Aspiration Hazard: Not classified; no data available.

12. ECOLOGICAL INFORMATION

Ecotoxicity Data: No data available.

Persistence and Degradability: No data available.

Bioaccumulative Potential: No data available.

Mobility in Soil: No data available.

Other Adverse effects: No data available.

13. DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose of waste in accordance with all applicable federal, state, and local regulations.

14. TRANSPORTATION INFORMATION

U.S. DOT and IATA: Not regulated by DOT or IATA.

15. REGULATORY INFORMATION

U.S. Regulations:

CERCLA Sections 102a/103 (40 CFR 302.4): Not regulated.

SARA Title III Section 302 (40 CFR 355.30): Not regulated.

SARA Title III Section 304 (40 CFR 355.40): Not regulated.

SARA Title III Sections 311/312 Hazardous Categories (40 CFR 370.21):

ACUTE HEALTH:	No.
CHRONIC HEALTH:	No.
FIRE:	No.
REACTIVE:	No.
PRESSURE:	No.

State Regulations:
California Proposition 65: Not listed.

U.S. TSCA Inventory: Not listed.

TSCA 12(b), Export Notification: Not listed.

Canadian Regulations:
WHMIS Information: Not provided for this material.

16. OTHER INFORMATION

Issue Date: 31 March 2014

Sources: 29 CFR Occupational Health and Safety Office (OSHA) 1910.1000, *Limits for Air Contaminants*, Table Z-1; available at http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9992 (accessed Mar 2014).

Center for Disease Control (CDC) NIOSH Pocket Guide to Chemical Hazards, *Particulates not otherwise regulated*; available at http://www.cdc.gov/niosh/npg/npgd0480.html (accessed Mar 2014).

Key of Acronyms:

ACGIH	American Conference of Governmental Industrial Hygienists	NRC	Nuclear Regulatory Commission
ALI	Annual Limit on Intake	NTP	National Toxicology Program
CAS	Chemical Abstracts Service	OSHA	Occupational Safety and Health Administration
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	PEL	Permissible Exposure Limit
CFR	Code of Federal Regulations	RCRA	Resource Conservation and Recovery Act
DOT	Department of Transportation	REL	Recommended Exposure Limit
EC50	Effective Concentration, 50 %	RM	Reference Material
EINECS	European Inventory of Existing Commercial Chemical Substances	RQ	Reportable Quantity
EPCRA	Emergency Planning and Community Right-to-Know Act	RTECS	Registry of Toxic Effects of Chemical Substances
IARC	International Agency for Research on Cancer	SARA	Superfund Amendments and Reauthorization Act
IATA	International Air Transportation Agency	SCBA	Self-Contained Breathing Apparatus
IDLH	Immediately Dangerous to Life and Health	SRM	Standard Reference Material
LC50	Lethal Concentration, 50 %	STEL	Short Term Exposure Limit
LD50	Lethal Dose, 50 %	TLV	Threshold Limit Value
LEL	Lower Explosive Limit	TPQ	Threshold Planning Quantity
MSDS	Material Safety Data Sheet	TSCA	Toxic Substances Control Act
NFPA	National Fire Protection Association	TWA	Time Weighted Average
NIOSH	National Institute for Occupational Safety and Health	UEL	Upper Explosive Limit
NIST	National Institute of Standards and Technology	WHMIS	Workplace Hazardous Materials Information System

Disclaimer: Physical and chemical data contained in this SDS are provided only for use in assessing the hazardous nature of the material. The SDS was prepared carefully, using current references; however, NIST does not certify the data in the SDS. The certified values for this material are given in the NIST Certificate of Analysis.

Users of this SRM should ensure that the SDS in their possession is current. This can be accomplished by contacting the SRM Program: telephone (301) 975-2200; fax (301) 948-3730; Internet at http://www.nist.gov/srm.

Bill to:	Ship to:
68455 DAVE MITCHELL ANALYTICAL RESOURCES INC 4611 S 134TH PLACE SUITE 100 TUKWILA, WA 98168-3240 1 (206)695-6205	68456 DAVE MITCHELL ANALYTICAL RESOURCES INC 4611 S 134TH PLACE SUITE 100 TUKWILA, WA 98168-3240 1 (206)695-6205

Ship via	UPS Ground	Description		Ship from	
Salesmen	MCMIDM2	Instructions		Blanket	
Contact	DAVE MITCHELL	Pro#		Truck#	

Order discrepancies (other than back ordered items) must be reported to our Customer Relations Department at 301-975-6776 within 5 days of receipt of shipment or this order will be considered complete. NIST SRMs/RMs are generally not returnable - with the exception of defective goods or shipments made in error by NIST. To return a SRM/RM, please call for instructions and a Return SRM/RM Authorization Number before shipment. Returns WILL NOT BE ACCEPTED without prior authorization.

Order	UOM	Ship	UOM	B/O	UOM	Item	Description
1	EACH	1	EACH	0	EACH	1941B	Organics in Marine Sediment
						Total qty:	1 / EACH
							NOT FOR HUMAN CONSUMPTION, LABORATORY USE ONLY.

9/21/16
04:04 PM

1700101

Picked by	
Packed by	
# of pieces	
Weight	

MP Biomedicals, LLC

29525 Fountain Parkway
Solon, Ohio 44139

Telephone: 440/337-1200
Toll Free: 800/854-0530

Fax: 440/337-1180
web: www.mpbio.com

Certificate of Analysis

Product Description: Microcrystalline Cellulose Powder_
Catalog Number: 191499_
Lot: Q9483_

Formula: $(C_6H_{10}O_5)n$	**Formula Weight:** N/A
CAS #: 9004-34-6	**Storage:** 15 - 30°C
Physical Description: White Powder	

Test	Specification	Result
Identity Test	Passes	Passes
Purity	97.0 - 102.0%	97.0 - 102.0%
Moisture	<5.0%	3.4%
Particle Size/Mesh +60 mesh +200 mesh	Wt % <8% >45%	 <1% 55%
pH	5 - 7	6.73
Residue on Ignition	<0.05%	<0.05%
Water Soluble Substances	<12.0 mg/5 g	4.5 mg/5 g
Heavy Metals	<10 ppm	<10 ppm

H001822
Microcrystalline Cellulose Powder (TOC)
Expires 11/30/2022
Prepared By Casey English 2/22/2019

Identification A & B: Passes
Bulk Density: 0.29 g/ml
Bulk Density (graduated cylinder): 0.31 g/ml
Conductivity: 18 µS/cm
Starch: Negative
Ether Soluble Substances: 0.01%
Total Aerobic microbial Count: 100 cfu/g
Total Mold and Yeast Count: 20 cfu/g
Staphylococcus aureus: Absent/1 g
Pseudomonas aeruginosa: Absent/1 g
E. coli: Absent/1 g
Salmonella: Absent/10 g
Particle size:

- 450 mesh: 77%
- d10: 37 um
- d50: 139 um
- d90: 271 um

TUP: <9/600 cm^2
Degree of brightness: >88%
Powder flow-angle of repose: <42°
Recommended Retest Date: 11/30/2022

07/26/2018 - *John Huang, PhD*
MP Biomedicals, LLC.
Quality Control Manager

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TOTAL SOLIDS BENCHSHEET

Method: PSEP 1986

(dry at 103-105 C)

Batch:	BLB0338
Date:	2/14/2023 10:00
Analyst:	YL
Drying Oven:	15
Analytical Balance:	B146462614

Instrumentation

Batch drying time					
Record times as mm/dd/yy hh:mm			Oven Temp, C	TS (%) calculated as:	Oven Temps, °C
Date/time in oven:	2/14/2023 14:30		106	Final dry wt (g) = (Dry Wt - Tare Wt)	Start Temp: 106
Date/time out:	4/15/2023 9:34		106	TS = (Final Dry Wt X 100)/ (sample & dish -dish tare)	End Temp: 106
Elapsed hrs:	1435.1	> 24 hr			

SAMPLE ID	Dish Tare Wt (g)	Dish with Sample (g)	Dry Wt (g)	Solids Wt (g)	TS (%)	Sample Decanted
23B0261-01	0.7700	11.7300	8.8400	8.07	**73.63%**	Yes
23B0261-04	0.8100	11.4400	8.6500	7.84	**73.75%**	Yes
23B0261-07	0.7700	12.1400	9.3900	8.62	**75.81%**	Yes
23B0261-10	0.8200	12.1500	8.8800	8.06	**71.14%**	Yes
23B0261-13	0.8200	11.7900	8.0500	7.23	**65.91%**	Yes
23B0261-16	0.8000	12.0700	7.9300	7.13	**63.27%**	Yes
23B0261-19	0.8100	11.9500	7.9500	7.14	**64.09%**	Yes
23B0261-22	0.7800	12.0500	8.5300	7.75	**68.77%**	Yes
23B0261-25	0.8000	12.5100	8.8500	8.05	**68.74%**	Yes
23B0261-28	0.8000	11.9000	8.1200	7.32	**65.95%**	Yes
23B0261-31	0.8000	11.9900	8.6900	7.89	**70.51%**	Yes
23B0261-34	0.8200	11.6500	8.8800	8.06	**74.42%**	Yes
23B0276-01	0.8000	11.6600	7.7100	6.91	**63.63%**	Yes

TOTAL SOLIDS BENCHSHEET

Method: PSEP 1986

(dry at 103-105 C)

Batch:	BLB0338
Date:	2/14/2023 10:00
Analyst:	VC
Drying Oven:	ϕ15
Analytical Balance:	B14646261 4

Instrumentation

Batch drying time

Record times as mm/dd/yy hh:mm

			Oven Temp, C
Date/time in oven:	ϕ2/14/23	14:3ϕ	1ϕ6
Date/time out:	ϕ2/15/23	ϕ9:34	106
Elapsed hrs:	0.0		

TS (%) calculated as:

Final dry wt (g) = (Dry Wt - Tare Wt)

TS = (Final Dry Wt X 100)/ (sample & dish -dish tare)

Oven Temps, °C	
Start Temp:	1ϕ6
End Temp:	1ϕ6

SAMPLE ID	Dish Tare Wt (g)	Dish with Sample (g)	Dry Wt (g)	Solids Wt (g)	TS (%)	Sample Decanted
23B0261-01	ϕ.77	11.73	8.84			No ~~Ye~~
23B0261-04	ϕ.81	11.44	8.65			No ~~Ye~~
23B0261-07	ϕ.7ϕ	12.1ϕ	9.39			No ~~Ye~~
23B0261-10	ϕ.82	12.15	8.88			No ~~Ye~~
23B0261-13	ϕ.82	11.79	8.05			No ~~Ye~~
23B0261-16	ϕ.8ϕ	12.07	7.93			No ~~Ye~~
23B0261-19	ϕ.81	11.95	7.95			No ~~Ye~~
23B0261-22	ϕ.78	12.ϕ5	8.53			No ~~Ye~~
23B0261-25	ϕ.8ϕ	12.57	8.85			No ~~Ye~~
23B0261-28	ϕ.8ϕ	11.9ϕ	8.12			No ~~Ye~~
23B0261-31	ϕ.8ϕ	11.99	8.69			No ~~Ye~~
23B0261-34	ϕ.82	11.65	8.88			No ~~Ye~~
23B0276-01	ϕ.8ϕ	11.66	7.71			No ~~Ye~~

T/S + Screens

2 copies

TOTAL SOLIDS BENCHSHEET							Batch:	BLB0154
Method: PSEP 1986							Date:	2/7/2023 10:16
(dry at 103-105 C)							Analyst:	YL
Instrumentation							Drying Oven:	15
							Analytical Balance:	B146462614

Batch drying time					
Record times as mm/dd/yy hh:mm		Oven Temp, C	TS (%) calculated as:	Oven Temps, °C	
Date/time in oven:	2/14/2023 13:35	106	Final dry wt (g) = (Dry Wt - Tare Wt)	Start Temp:	106
Date/time out:	2/15/2023 9:34	106	TS = (Final Dry Wt X 100)/ (sample & dish -dish tare)	End Temp:	106
Elapsed hrs:	20.0				

SAMPLE ID	Dish Tare Wt (g)	Dish with Sample (g)	Dry Wt (g)	Solids Wt (g)	TS (%)	Sample Decanted
23A0420-01	0.8400	12.6300	7.2900	6.45	**54.71%**	Yes
23A0420-02	0.8300	12.3500	7.0000	6.17	**53.56%**	Yes
23A0420-03	0.8200	12.3500	7.2700	6.45	**55.94%**	Yes
23A0420-04	0.7900	12.0200	8.7100	7.92	**70.53%**	Yes
23A0420-05	0.7900	12.5300	7.2100	6.42	**54.68%**	Yes
23A0420-06	0.7800	12.4500	7.4600	6.68	**57.24%**	Yes
23A0420-07	0.8500	12.1400	6.6400	5.79	**51.28%**	Yes
23A0420-08	0.8100	12.0800	7.5600	6.75	**59.89%**	Yes
23A0420-09	0.8100	11.9200	7.3500	6.54	**58.87%**	Yes

Done